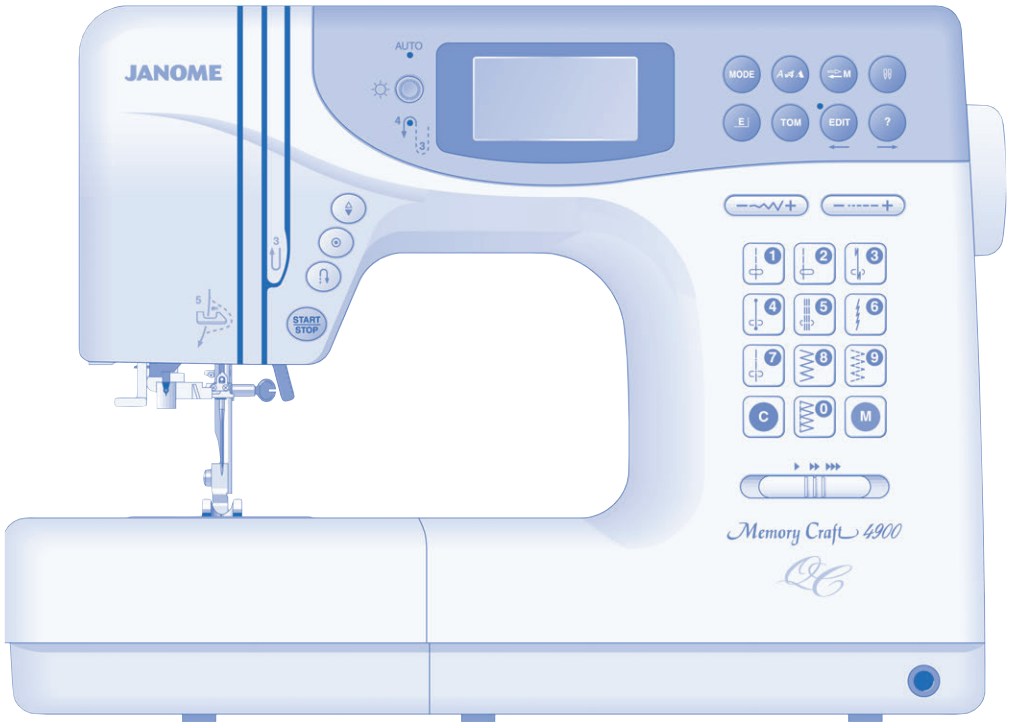
# Instruction Book

# Memory Craft 4900 QC



# IMPORTANT SAFETY INSTRUCTIONS

When using an electrical appliance, basic safety precautions should always be followed, including the following:
Read all instructions before using this appliance.

**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.
2. Always unplug before replacing a sewing machine bulb. Replace bulb with same type rated 12 V, 5 Watts.

**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 instruction book.
   Use only attachments recommended by the manufacturer as contained in this instruction book.
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.
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, 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 instruction book.

# SAVE THESE INSTRUCTIONS

Designs and specifications are subject to change without prior notice.

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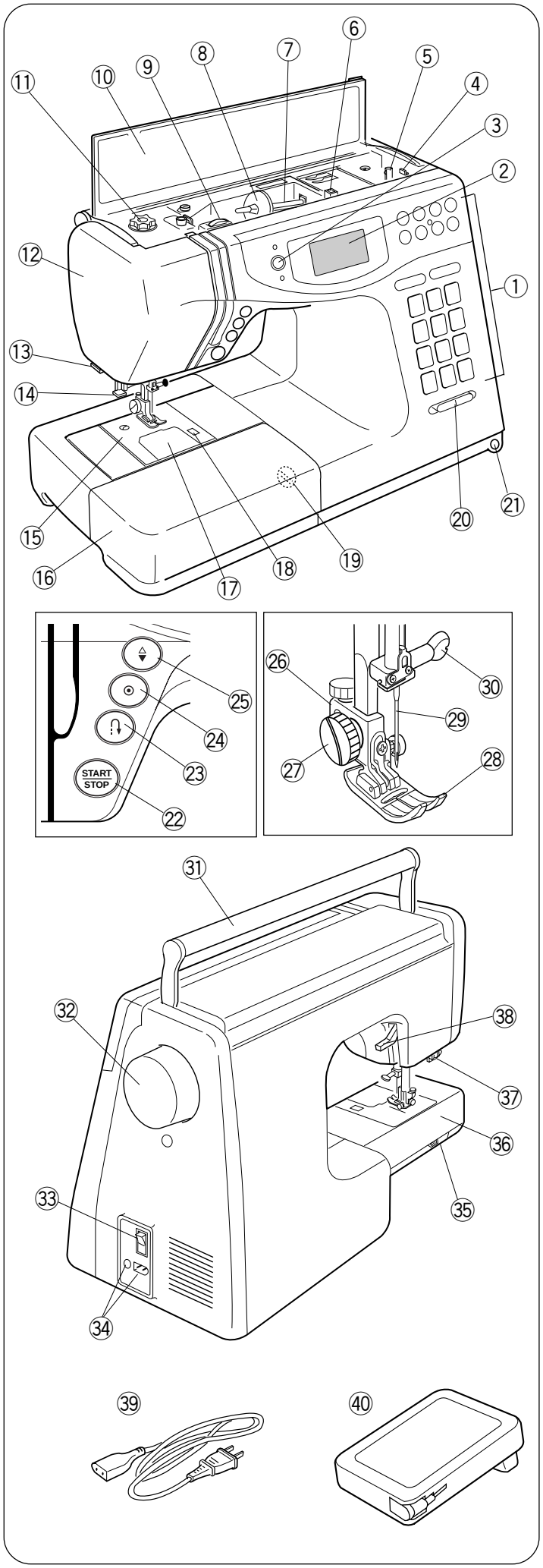
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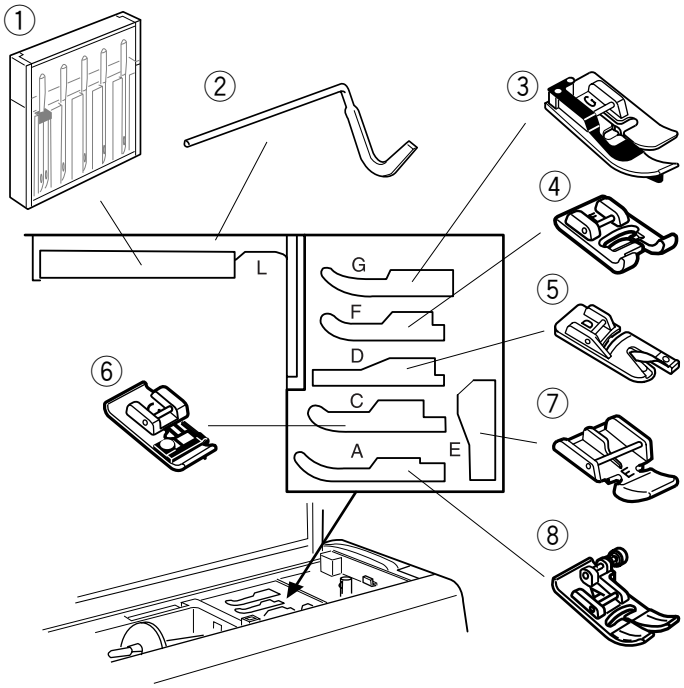
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# NAME OF PARTS

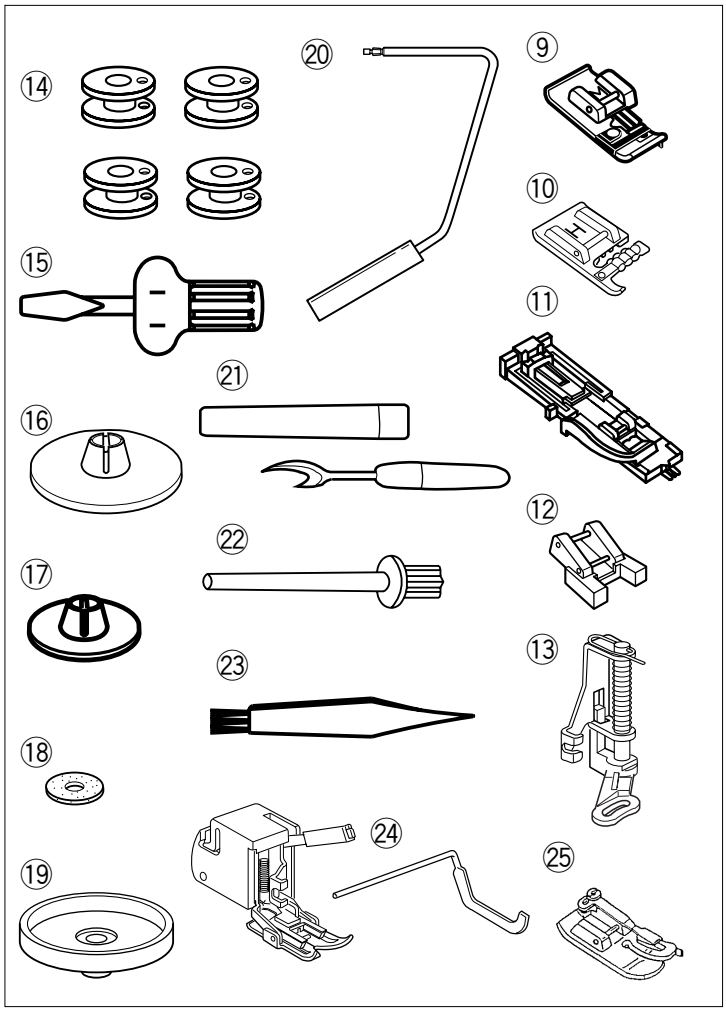
## Name of parts

① Function keys
② Liquid crystal display
③ Screen sharpness adjustment dial
④ Bobbin winder stopper
⑤ Bobbin winder spindle
⑥ Hole for additional spool pin
⑦ Spool pin
⑧ Large spool holder
⑨ Thread tension dial
⑩ Reference chart
⑪ Foot pressure dial
⑫ Face cover
⑬ Thread cutter
⑭ Needle threader
⑮ Needle plate
⑯ Extension table (Accessory box)
⑰ Hook cover plate
⑱ Hook cover release button
⑲ Feed balancing dial
⑳ Speed control slider
㉑ Knee lifter socket
㉒ Start/stop button
㉓ Reverse stitch button
㉔ Auto-lock button
㉕ Up/down needle position button
㉖ Presser foot holder
㉗ Thumb screw
㉘ Presser foot
㉙ Needle
㉚ Needle clamp screw
㉛ Carrying handle
㉜ Handwheel
㉝ Power switch
㉞ Machine sockets
㉟ Drop feed dog lever
㊱ Free-arm
㊲ Buttonhole lever
㊳ Presser foot lifter
㊴ Power supply cord
㊵ Foot control

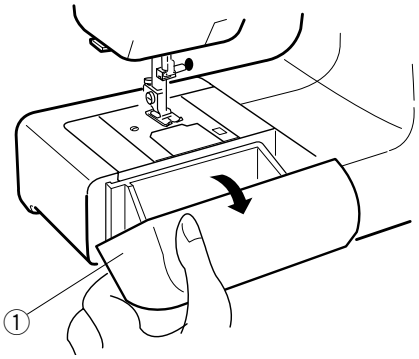



## Standard Accessories

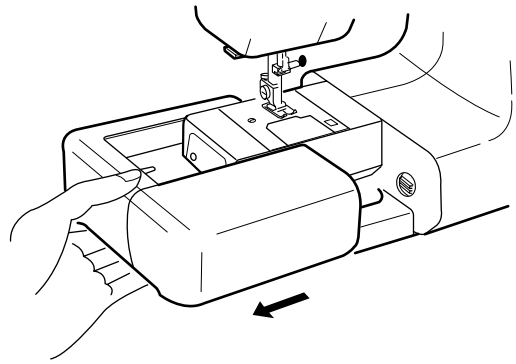
① Assorted needles
② L: Quilting bar
③ G: Blind hem foot
④ F: Satin stitch foot
⑤ D: Hemmer foot
⑥ C: Overedge foot
⑦ E: Zipper foot
⑧ A: Zigzag foot (attached to the machine)
These accessories can be stored in the compartment under the top cover.

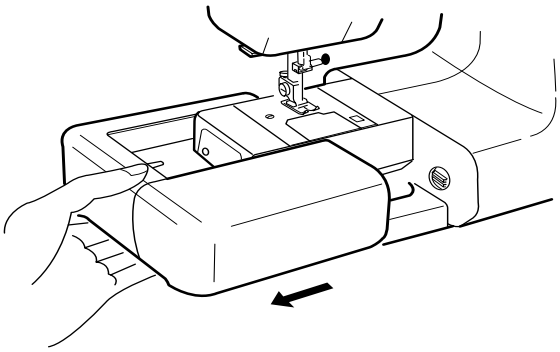


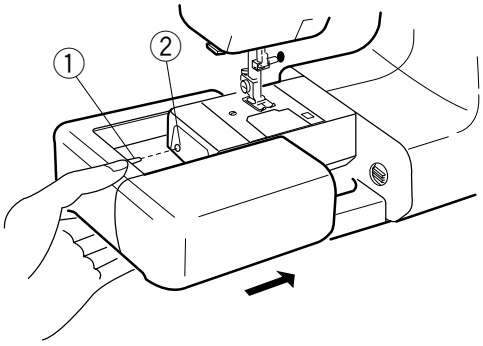

⑨ M: Overcasting foot
⑩ H: Cording foot
⑪ R: Automatic buttonhole foot
⑫ T: Button sewing foot
⑬ P: Darning foot
⑭ Bobbins
⑮ Screwdriver
⑯ Large spool holder (attached to the machine)
⑰ Small spool holder
⑱ Felt
⑲ Spool stand
⑳ Knee lifter
㉑ Seam ripper/buttonhole opener
㉒ Additional spool pin
㉓ Brush
㉔ Even foot and quilting bar
㉕ 1/4˝ seam foot




* Sewing accessories are stored in the extension table. To open, lift the cover towards you as illustrated.
① Extension table








## Extension Table

The extension table provides an extra surface for sewing bulky materials, and can be removed for free-arm sewing.

### Detaching the table

Pull the table away from the machine as illustrated.

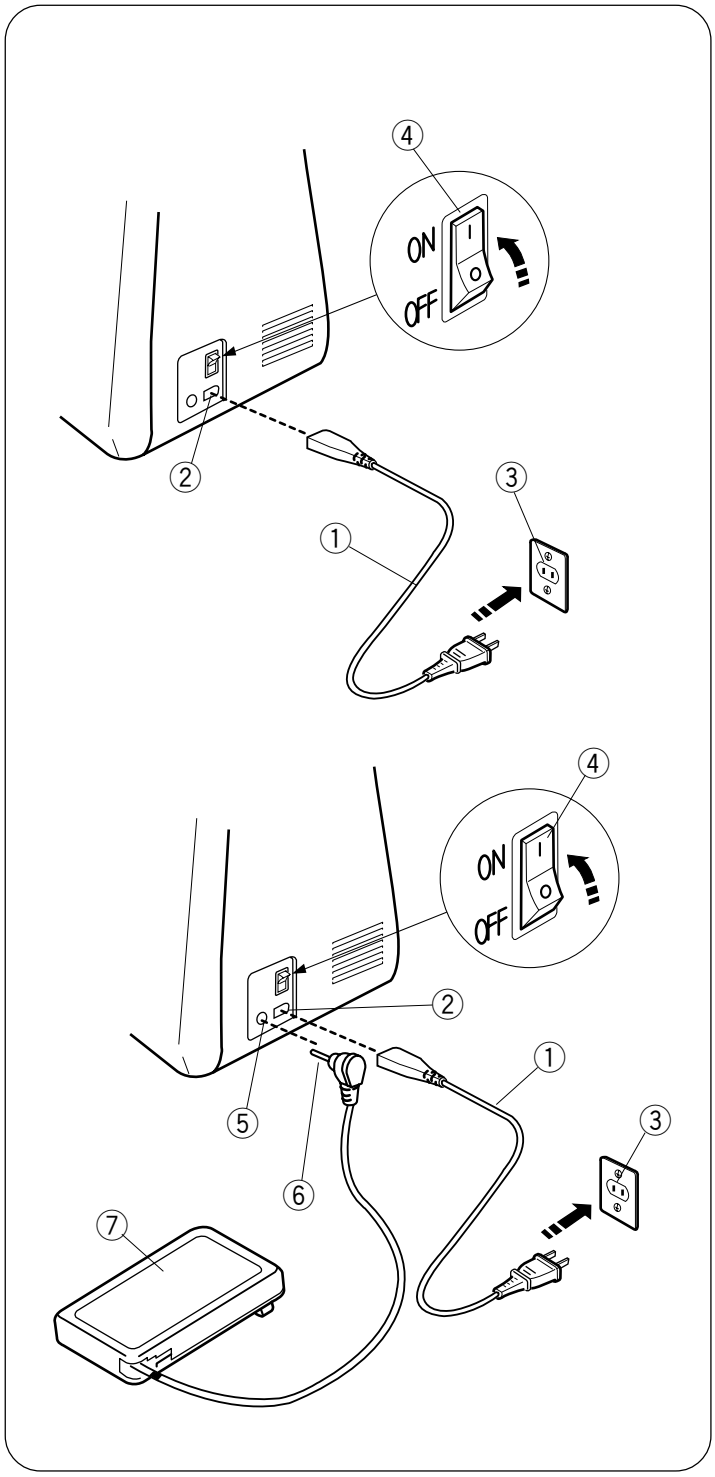
### Free-arm sewing can be used for:

Stitching sleeves, waistbands, pant legs or any tubular garment area, darning socks as well as mending knees, elbows or children's wear.

### Attaching the table

Push the extension table until it snaps into the machine.

① Pin
② Hole




# GETTING READY TO SEW

## Connecting the Power Supply

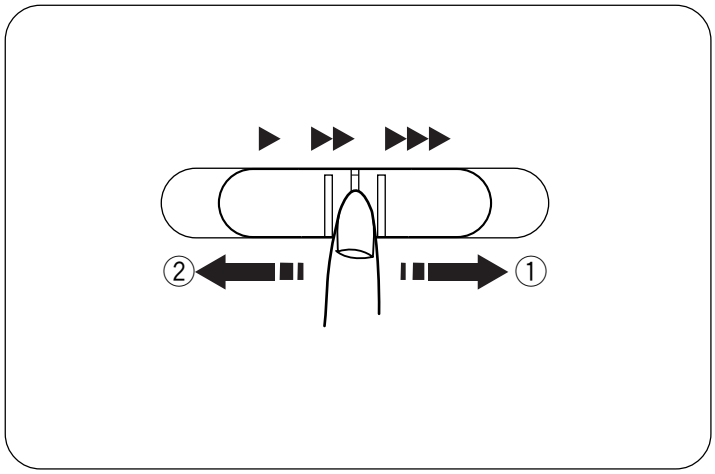
**CAUTION**
Always turn the power switch off and unplug the sewing machine from the electrical outlet when the machine is not in use.

**To use start/stop button**
Turn off the power switch, then insert the machine plug into the machine and the power supply plug into the wall outlet.
Turn on the power switch.

**To use foot control**
Turn off the power switch, insert the foot control plug and machine plug into the machine, then the power supply plug into the wall outlet in this order.
Turn on the power switch.

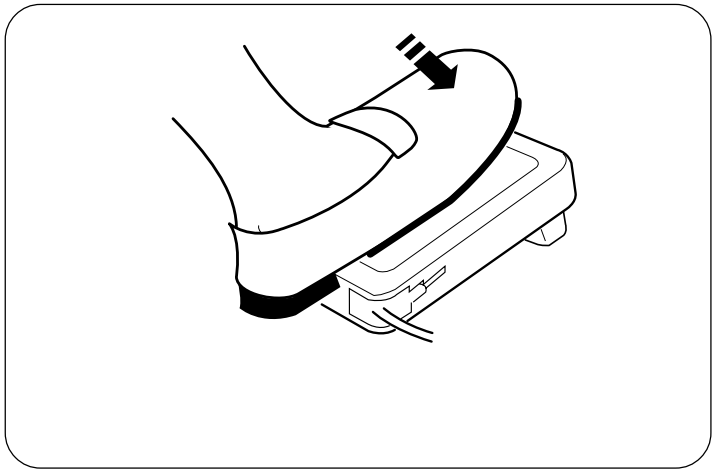
**NOTE:**
The start/stop button cannot be used when the foot control is connected to the machine.

① Power supply cord
② Machine socket for power supply cord
③ Outlet
④ Power switch
⑤ Machine socket for foot control plug
⑥ Foot control plug
⑦ Foot control




## Speed control slider

Sewing speed can be varied according to your sewing needs with the speed control slider.
① To increase sewing speed, slide it to the right.
② To decrease sewing speed, slide it to the left.



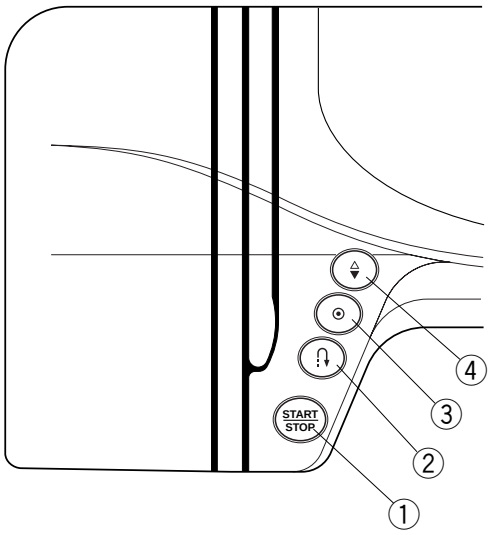
## Foot control

Sewing speed is varied by the foot control.
The harder you press down on the foot control, the faster the machine runs.

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

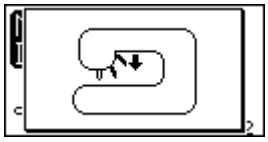
**Operating Instructions:**
The symbol “O” on a switch indicates the "off" position of a switch.
For appliances with a polarized plug (one blade wider than the other): To reduce the risk of electric shock, this plug is intended to fit in a polarized outlet only one way. If it does not fit fully in the 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.
* Foot control model 21371 is used with sewing machine model MC 4900.

# FUNCTION BUTTONS

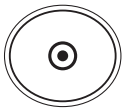



(A)

① 

② 

③ 

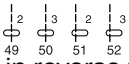
④ 

## ① Start/stop button

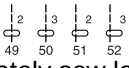
Press this button to start or stop the machine. The machine starts running slowly for the first few stitches, it then runs at the speed set by the speed control slider.

**NOTE:**
- Start/stop button cannot be used when the foot control is connected to the machine.
- If you start the machine with the presser foot up, the LCD screen will advise you to lower the foot.
  Lower the foot then restart the machine.

## ② Reverse stitch button

When stitches  (mode 1)  (mode 2) are selected, the machine will sew in reverse while the reverse stitch button is pressed.
If you press the reverse stitch button when sewing any other stitches, the machine will immediately sew locking stitches and automatically stop.

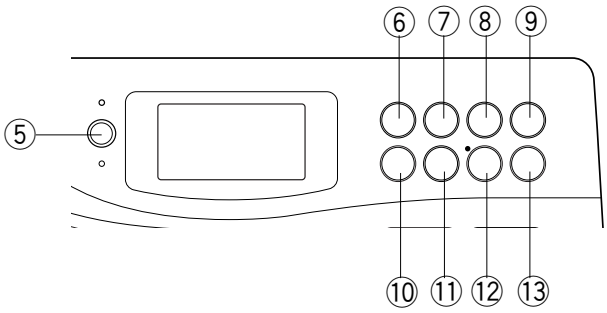
## ③ Auto-lock button

When stitches  (mode 1)  (mode 2) are selected, the machine will immediately sew locking stitches when the Auto-lock button is pressed, then automatically stop. When sewing any other stitches, the machine will sew locking stitches at the end of the current pattern and automatically stop.

## ④ Up/down needle position button

Press this button to bring the needle up or down. The machine will stop with the needle up or down depending on the needle position determined by this button.

**NOTE:**
The needle will always stop in the up position after sewing buttonholes, bartacks, eyelets and darning.




⑤

⑥ MODE

⑦ A

⑧ M

⑨

⑩ E

⑪ TOM

⑫ EDIT

⑬ ?

### ⑤ Screen brightness adjustment dial
Use this dial to adjust the brightness of the liquid crystal display. If the screen is not clear, adjust the screen brightness with this dial.

### ⑥ Mode key (see page 11)
When the power switch is turned on, the direct pattern selection (mode 1) is set automatically.
Press the mode key to change the mode.

### ⑦ Monogramming key (see page 11)
Press this key to change the monogram font.

### ⑧ Stock/Call key (see page 29, 79)
When you press the Stock/Call key after memorizing or editing patterns, the pattern combination will be stored. You can also recall stored patterns by pressing the Stock/Call key.

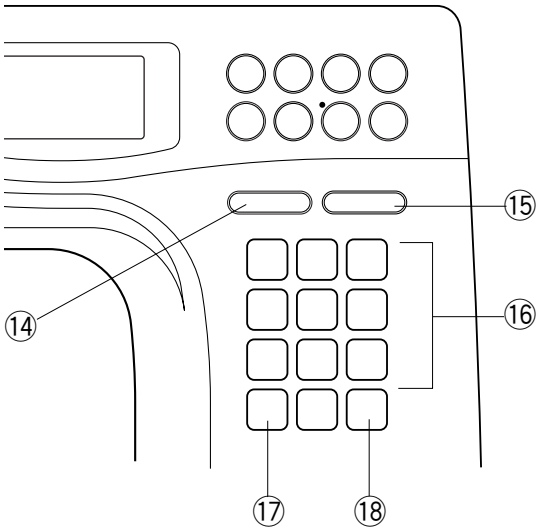
### ⑨ Twin needle key (see page 64)
Press this key for twin needle sewing.

### ⑩ Elongation key (see page 68)
Satin stitches can be elongated up to five times their original length by pressing this key.

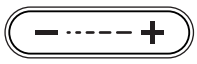
### ⑪ Turnover memory key (see pages 67, 68)
A mirror image of the selected pattern will be memorized.
* Programmed letters or numbers will be reduced to 2/3 of their original size when you press the turnover memory key.

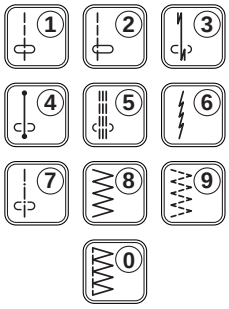
### ⑫ Edit key (see pages 73, 77)
This key can be used for changing combinations and monograms before sewing. In the editing mode, this key is used to shift the cursor to the left.

### ⑬ Help key (see pages 27, 77)
Press this key to view alternative applications of certain stitches. In the editing mode, this key is used to shift the cursor to the right.














### ⑭ Stitch width adjustment key (see page 28, 29, 34)

Press “+” or “–” to change the stitch width.

### ⑮ Stitch length adjustment key (see page 28, 29, 34)

Press “+” or “–” to change the stitch length.

### ⑯ Function touchpad (see page 12)

- **Direct pattern selection**
  You can select the stitch patterns from ① to ⑨ directly in mode 1 (direct pattern selection mode).
- **Number keys**
  Enter the 2-digit pattern number to select the desired stitch pattern in mode 2, 3 and monogramming.

### ⑰ Clear key (see page 77)

When this key is pressed, the last memorized stitch or the stitch that is above the cursor will be deleted.
Press and hold the “C” key to clear the entire pattern combination.
If this key is pressed after sewing a pattern combination, the sequence will be deleted.

### ⑱ Memory key (see page 29, 65, 67)

The memory key will memorize your pattern selection. Press the memory key after you selected the stitch pattern. (You can program up to 50 patterns in the memory.)

## Mode selection

When you switch on the machine, the direct select mode (mode 1) is activated. Press the mode key to change the mode.

### 1 Mode 1

### Screen indication

You can select 10 of the most commonly used patterns directly by pressing the pattern keys.
The LCD screen shows the following information:

① Pattern number and image of the selected stitch.
② Recommended setting for needle thread tension.
③ Recommended presser foot.
④ Stitch width or needle drop position.
⑤ Stitch length.
⑥ Recommended foot pressure
⑦ Twin or single needle (See page 64).

### 2 Mode 2 and 3

You can select stitch patterns from #01 to #99.
Patterns #01 to #10 in mode 2 are programmable patterns equivalent to the patterns in mode 1.

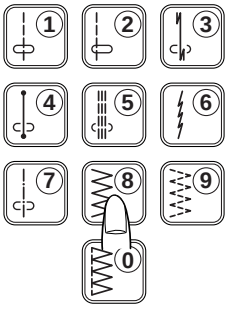
### 3 Monogramming mode

Press this button to change the monogram font.

① Block style letters
② Block style European letters
③ Script style letters
④ Script style European letters
⑤ Broadway style letters
⑥ Broadway style European letters

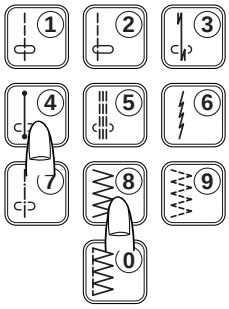
## Pattern Selection

1






2



①




②




③




### 1 Mode 1

**Pattern selection and screen indication**

You can select the stitch patterns below directly by pressing the pattern keys.



### 2 Mode 2, 3 and Monogramming

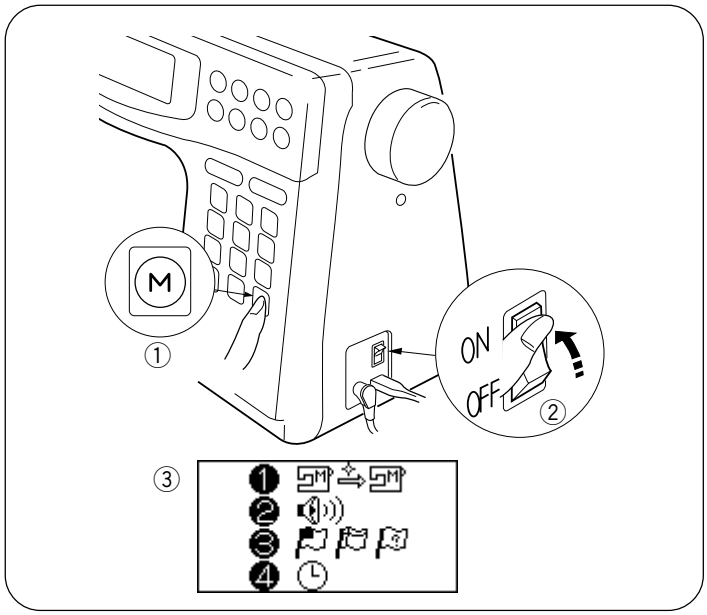
To select a pattern, enter the 2-digit number of the desired stitch pattern with the number keys.

The LCD screen will show the pattern number, stitch image then the main display for the selected pattern.

**Example: stitch pattern 48**

① Pattern number
② Stitch image
③ Main display

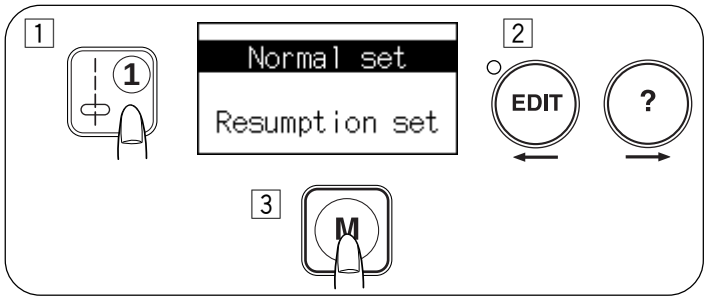
* See page 65 for stitch pattern combinations.




## CUSTOMIZING MACHINE SETTINGS

You can customize the machine settings to your preference. Turn on the power switch ② while pressing the memory key ①. The machine setting window will appear.

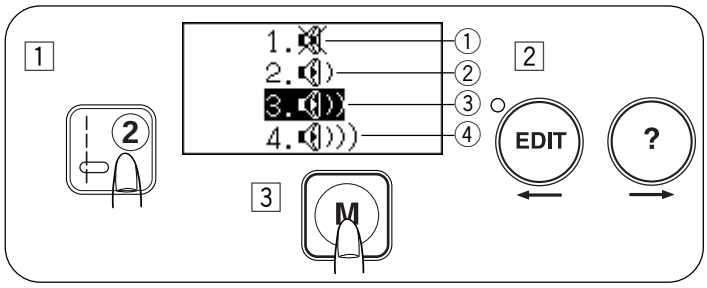
① Memory key
② Power switch
③ Machine setting window




### Resumption setting

The last pattern sewn before turning the power off will be recalled when the power is turned on again.

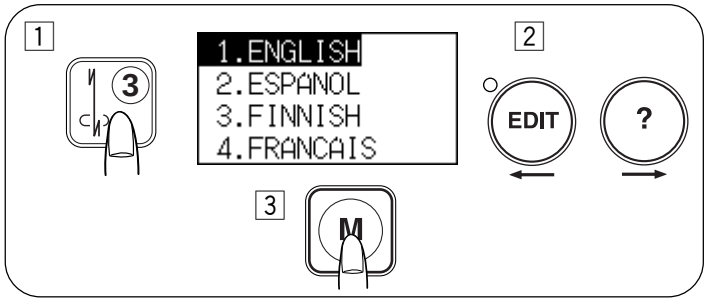
1 Press the key to select Nomal/Resumption setting mode.
2 Press the edit or help key to select either Normal or Resumption setting.
3 Press the memory key to enable the setting.




### Sound setting

You can set the buzzer volume.

1 Press the key. The LCD screen shows the sound setting mode.
2 Press the edit or help key to select the sound setting.
3 Press the memory key to enable the setting.
① Mute
② Minimum
③ Normal
④ Maximum

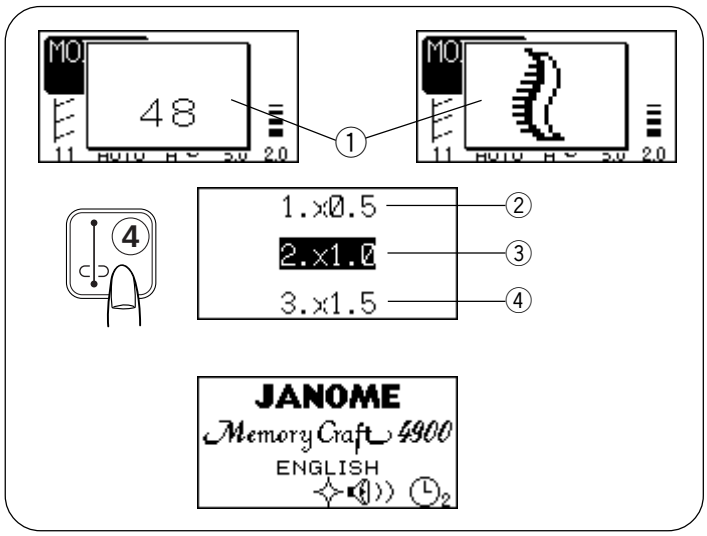



### Language setting

You can choose one of 10 languages for the screen display.

| | | | | |
|---|---|---|---|---|
| 1 English | 2 Spanish | 3 Finnish | 4 French | 5 German |
| 6 Italian | 7 Dutch | 8 Portuguese | 9 Russian | 10 Swedish |

1 Press the key. The LCD screen shows language setting mode.
2 Press the edit or help key to select a language.
3 Press the memory key to set the language.



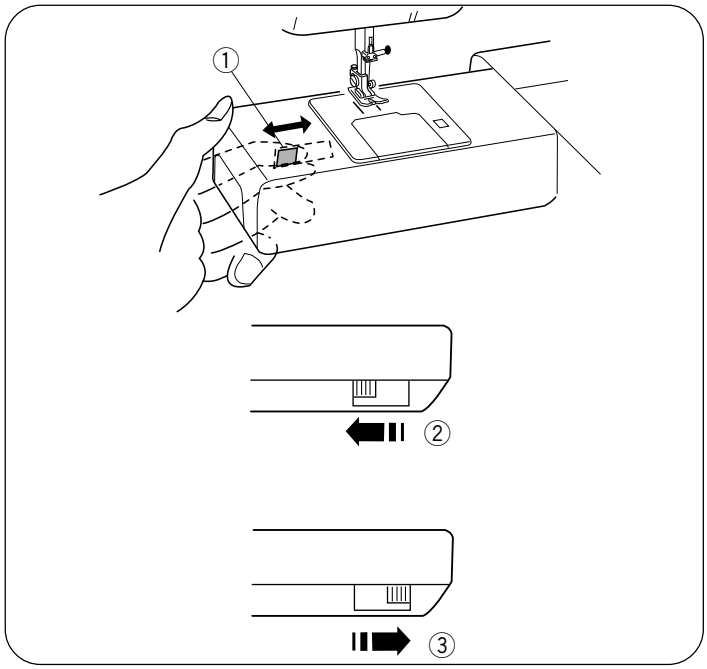

### Window duration time setting

A window will appear when selecting patterns, altering stitch length or width.
The duration of window displayed can be set.
The default setting is 2 x1.0 (2 seconds).

① Window
② x 0.5.....1 second
③ x 1.0.....2 seconds
④ x 1.5.....3 seconds

1 Press the key. The LCD screen shows the window duration time setting display.
2 Press the edit or help key to select the duratioin.
3 Press the memory key to enable the setting.

* The opening window shows the customized settings that you have made.



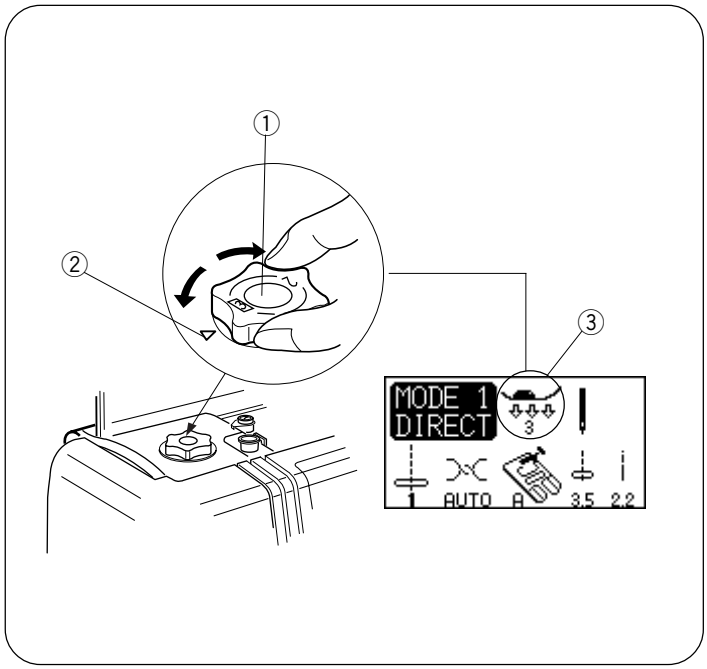

## To drop or raise the feed dog

① Drop feed dog lever
② To drop the feed dog
③ To raise the feed dog

The drop feed dog lever is located underneath the free arm bed on the back side of the machine.

- To drop the feed dog, push the lever in the direction of the arrow ②, as illustrated.

- To raise the feed dog, push the lever in the direction of the arrow ③, as illustrated, and turn the handwheel toward you. The feed dog must be up for normal sewing.




## Pressure dial

① Pressure dial
② Setting mark
③ Pressure dial setting

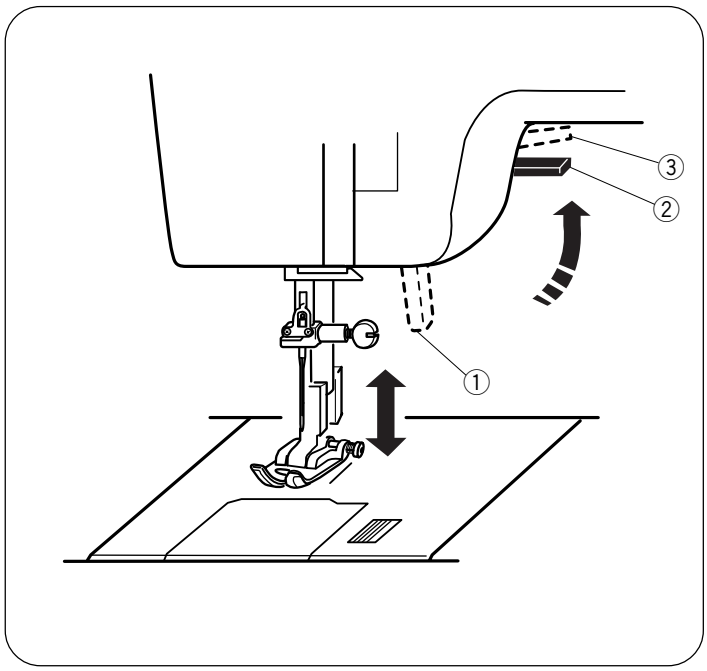
The pressure dial should be set at “3” for regular sewing.

Reduce the pressure to “2” for applique, cut work, drawn work, basting and embroidery.

Set the pressure to “1” when sewing chiffon, lace, organdy and other fine fabrics.

Velour and knits with a lot of stretch may also require a “1” setting.

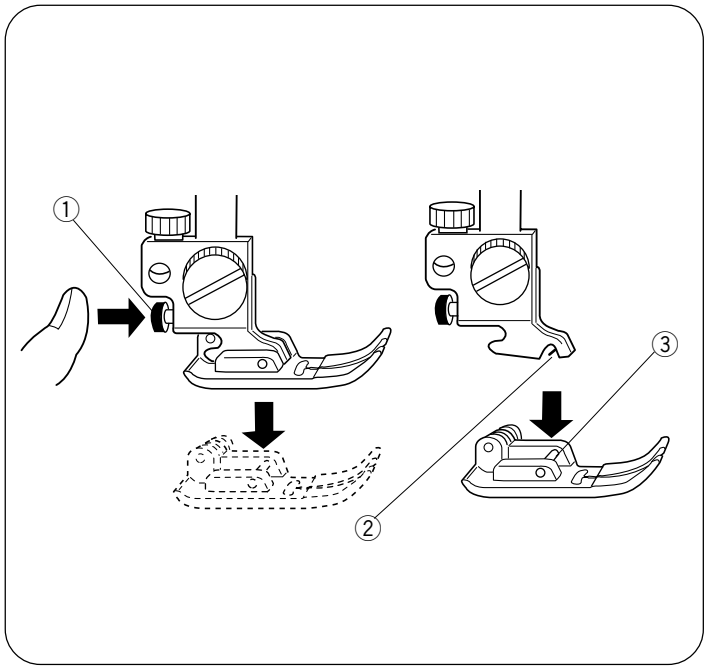
Turn the pressure dial ① and set the desired number at the setting ②.




## Presser foot lifter

① Presser foot lifter
② Normal up position
③ Highest position

The presser foot lifter ① raises and lowers the presser foot. You can raise it about 1/4˝ (0.6 cm) higher than the normal up position ② for easy removal of the presser foot, or to help you place thick material under the foot.



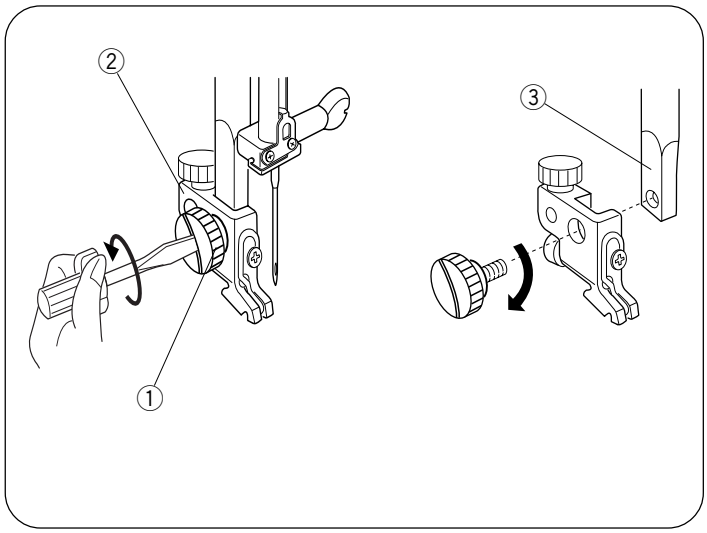

## Changing the presser foot

① Snap-on button (red button)
② Groove
③ Pin

**CAUTION:**
Turn off the power switch before changing the foot. Always use the proper foot for the selected pattern. The wrong foot can cause the needle to break.

- **To remove**
  Raise the needle to its highest position by turning the handwheel counterclockwise. Raise the presser foot, and press the red button ① on the back of the foot holder.

- **To attach**
  Place the selected presser foot so that the pin ③ on the foot lies just under the groove ② on the foot holder. Lower the presser bar to lock the foot into place.

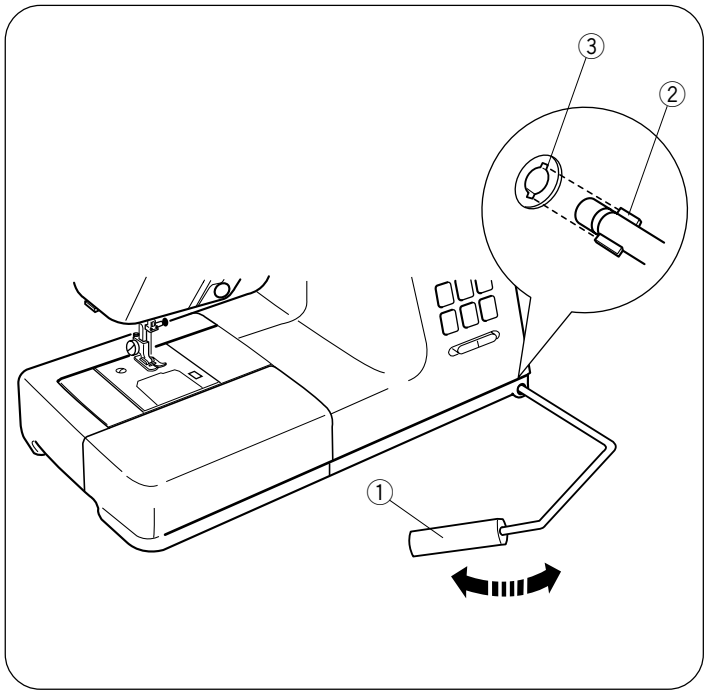



## To remove and attach the foot holder

① Thumb screw
② Foot holder
③ Presser bar

- **To remove**
  Remove the thumb screw ① by turning it counterclockwise with a screwdriver.

- **To attach**
  Match the hole in the foot holder ② with the threaded hole in the presser bar ③. Fit the thumb screw ① into the hole. Tighten the screw ① by turning it clockwise with a screwdriver.



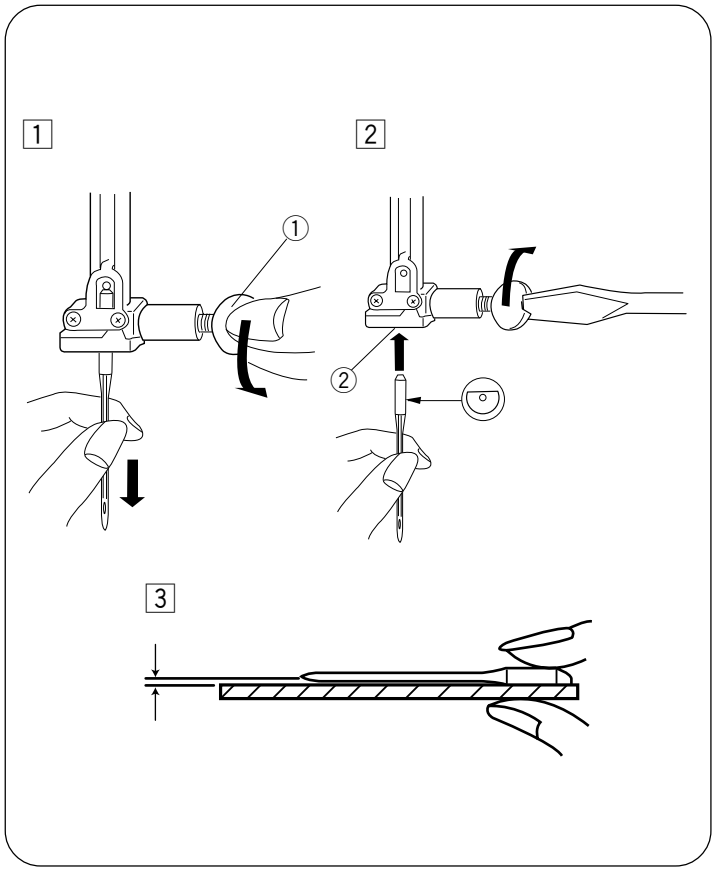

## Knee Lifter

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

Match the ribs on the knee lifter with the notches in the knee lifter socket and insert the knee lifter.
① Knee lifter
② Ribs
③ Notches

Push the knee lifter with your knee to raise and lower the presser foot.

**NOTE:**
Do not touch the knee lifter while sewing, otherwise the fabric will not be fed smoothly.




## Changing the needle

① Needle clamp screw
② Needle clamp

**CAUTION**
Always make sure to turn the power switch off and disconnect the machine from power supply before changing the needle.

1 Turn off the power switch.
Raise the needle to its highest position by turning the handwheel counterclockwise, and lowering the presser foot. Loosen the needle clamp screw ① by turning it counterclockwise. Remove the needle from the needle clamp ②.

2 Insert a new needle into the needle clamp ② with the flat side to the rear. When inserting the needle into the needle clamp ②, push it up as far as it goes. Tighten the needle clamp screw ① firmly by turning it clockwise.

3 To see if the needle is good, place the flat side of the needle onto something flat (needle plate, glass, etc.). The gap between the needle and the flat surface should be consistent. Never use a bent or blunt needle.
A damaged needle can cause permanent snags or runs in knits, fine silks and silk-like fabrics.

**Thread and Needle Chart**

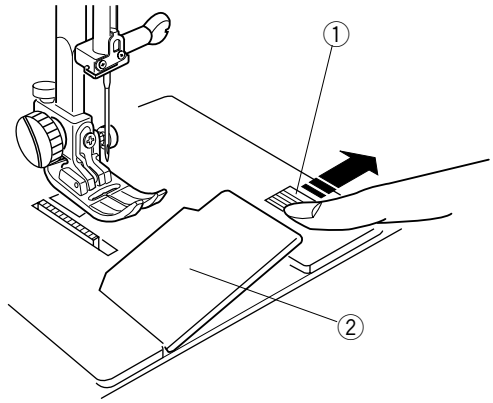
| WEIGHT | FABRIC | TYPE of NEEDLE | NEEDLE SIZE |
|---|---|---|---|
| Very Light | Chiffon, Georgette, Fine Lace, Organdy<br>Net, Tulle | Universal<br>Ball Point | 9 (65)<br>9 (65) |
| Light | Batiste, Voile, Lawn, Pure Silk, Crepe de Chine, Sheer Crepe, Chambray, Handkerchief Linen, Gingham, Challis, Percale, Wool Crepe, Peau de Soie, Taffeta, Satin, Silk Surah, Satin-backed Crepe, Qiana | Blue Tipped Needle<br>Universal | 11 (75)<br>11 (75)<br>12 (80) |
| | Single Knits, Jersey, Swimwear, and Tricot | Blue Tipped Needle<br>Ball Point | 11 (75)<br>11 (75) |
| | Leather Suede | Wedge Point<br>Leather Needle | 11 (75) |
| Medium | Flannel, Velour, Velvet, Muslin, Velveteen, Poplin, Corduroy, Broadcloth, Linen, Chintz, Gabardine, Felt, Terry, Burlap, Quilted Fabrics | Universal | 14 (90) |
| | Double Knits, (synthetic and natural) Stretch Velour, Stretch Terry, Sweater Knits | Ball Point | 14 (90) |
| | Leather, Vinyl, Suede | Wedge Point<br>Leather Needle | 14 (90) |
| Heavy | Denim, Sailcloth, Ticking | Denim Needle | 16 (100) |
| | Double Faced Wool, Heavy Coating, Fake Fur, Drapery Fabrics | Universal | 16 (100) |
| | Leather, Suede | Wedge Point<br>Leather Needle | 16 (100)<br>18 (110) |
| Very Heavy | Canvas, Duck, Upholstery Fabrics | Universal | 16 (100) |
| | Topstitching for Special Finishes | Topstitching Needle | 14 (90) |

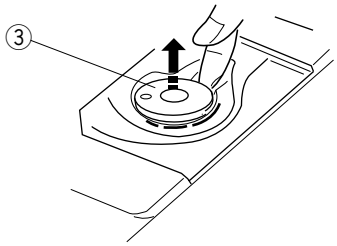
## Bobbin Winding

**• Removing the bobbin**

① Hook cover plate release button
② Hook cover plate
③ Bobbin

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

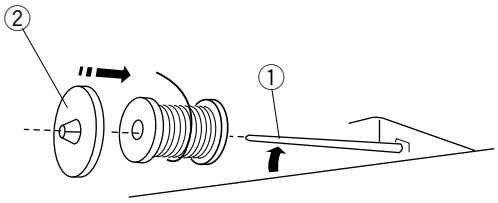


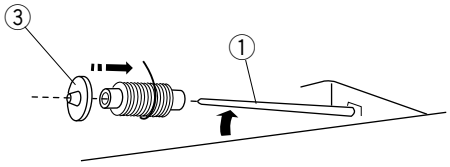

Lift out the bobbin ③ from the bobbin holder.

**• Setting the spool of thread**

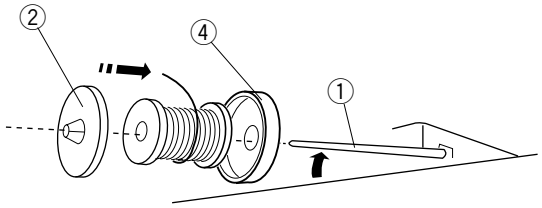
① Spool pin
② Large spool holder
③ Small spool holder
④ Spool stand




Lift up the spool pin ①. Place a spool of thread on the spool pin with the thread coming off the spool as shown. Attach the large spool holder ②, and press it firmly against the spool of thread.



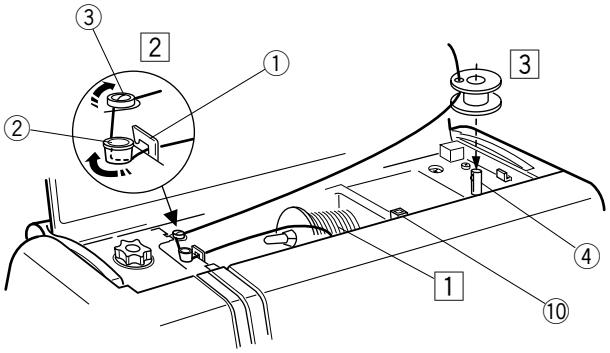

The small spool holder ③ is used with narrow or small spools of thread.




If the thread slips off the spool and jams around the spool pin, use the spool stand ④.

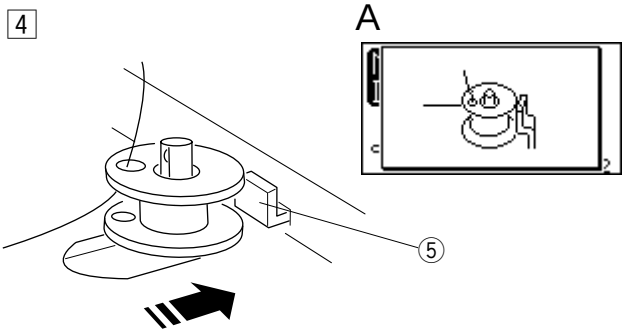
## Bobbin Winding

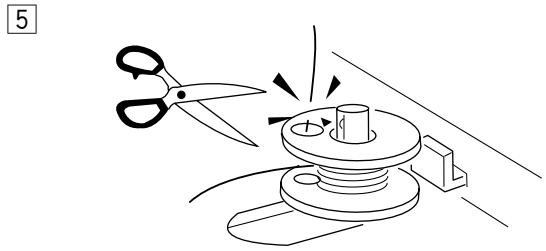
**NOTE:**
Set the speed control slider at its fastest position for bobbin winding.



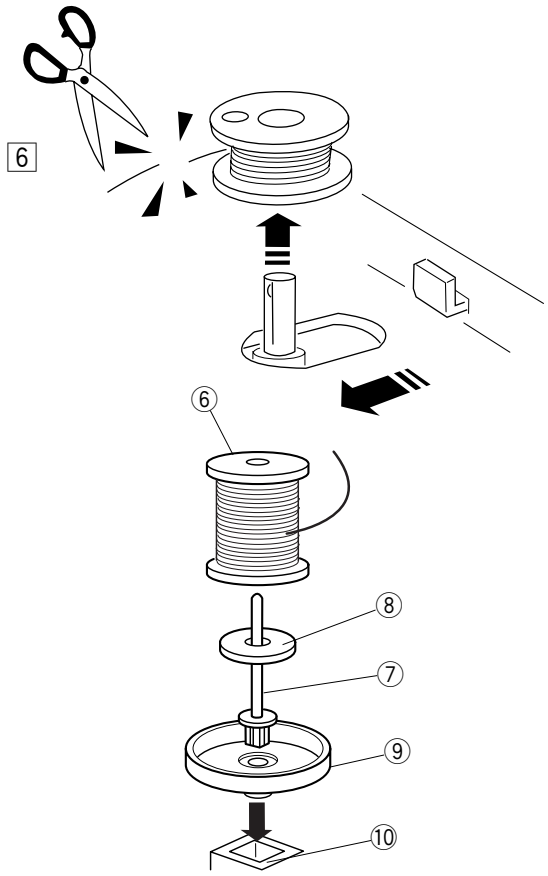

① Upper thread guide (A)
② Upper thread guide (B)
③ Bobbin winding tension disk
④ Bobbin winder spindle
⑤ Bobbin winder stopper

1 Draw the thread from the spool.
2 Guide the thread around the upper thread guide (A) ①, upper thread guide (B) ② and bobbin winding tension disk ③.
3 Insert the thread through the hole in the bobbin, threading from the inside to the outside. Put the bobbin on the bobbin winder spindle ④.
4 Push the bobbin winder spindle ④ to the right. The LCD screen shows A.




5 With the free end of the thread held in your hand, depress the foot control. Stop the machine when the bobbin has made a few turns, and cut the thread close to the hole on the bobbin.




6 Depress the foot control again. When the bobbin is fully wound, it will stop automatically. Return the bobbin to its original position by moving the spindle to the left, and cut the thread as shown.

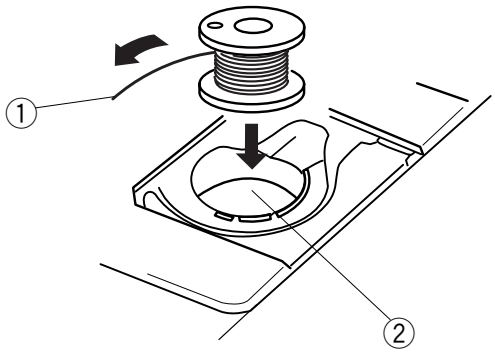
**• Additional spool pin**

⑥ Spool
⑦ Additional spool pin
⑧ Spool pin felt
⑨ Spool stand
⑩ Spool pin hole

The additional spool pin ⑦ is for bobbin winding, without unthreading the machine, and for twin needle sewing.
Insert the additional spool pin ⑦ into spool stand ⑨ and the hole ⑩.
Place the felt ⑧ and a spool ⑥ on the pin as illustrated.

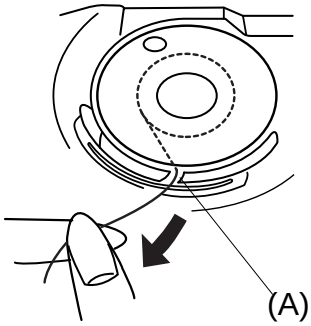
## Inserting the bobbin

1



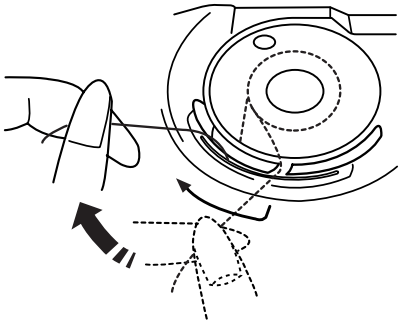

1 Place the bobbin in the bobbin holder with the thread running off counterclockwise.
① Thread
② Bobbin holder

2



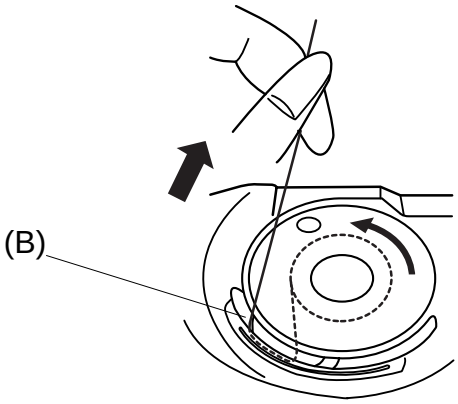

2 Guide the thread into notch (A) on the front of the bobbin holder.

3



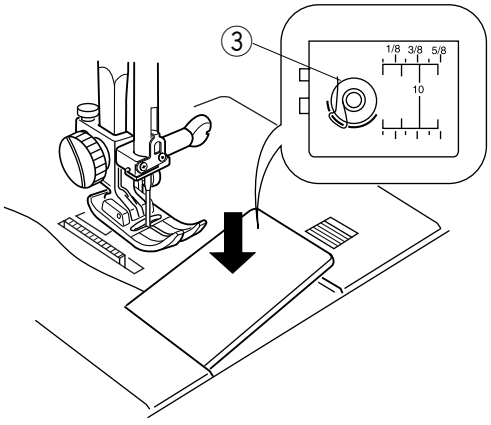
3 Draw the thread to the left, sliding it between the tension spring blades.

4



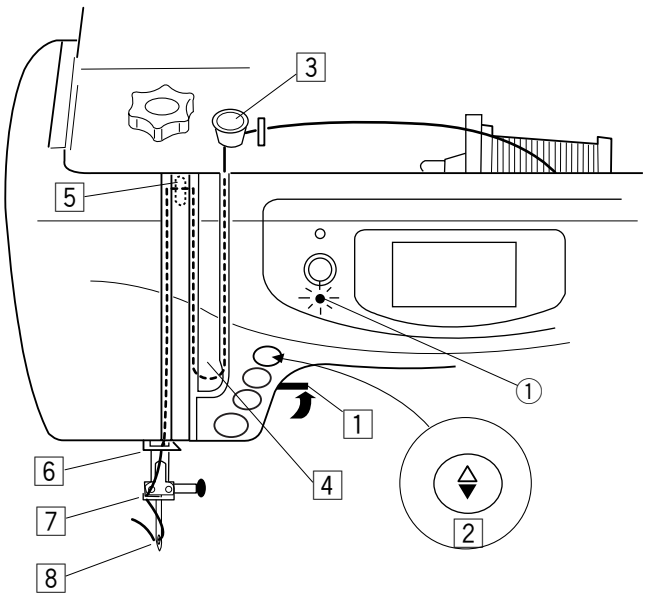

4 Continue to draw the thread lightly until the thread slips into side notch (B).

5



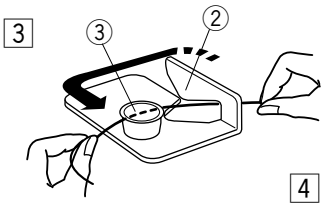

5 Pull out about 10 cm (4″) of thread to the rear.
Refer to the threading chart shown on the hook cover plate. Attach the hook cover plate.
③ Threading chart

## Threading the machine

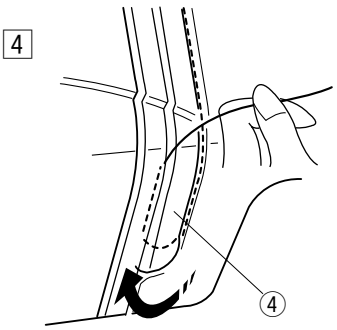



1 Raise the presser foot lifter.
2 Turn the power switch on. Press the up/down needle position button twice to raise the needle. The threading light will light up.
① Threading light

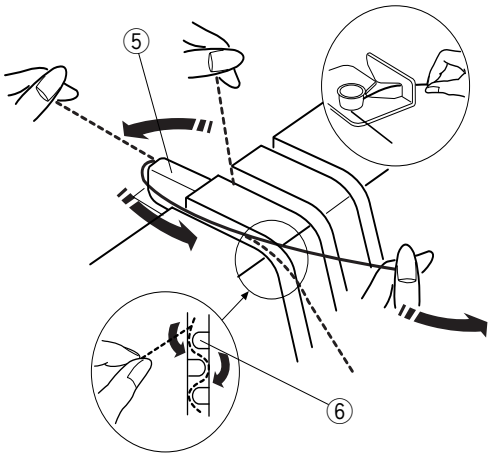
**NOTE:**
If you want to use the handwheel to raise the needle, make sure the threading light is on when threading. Otherwise the machine will not be threaded properly.



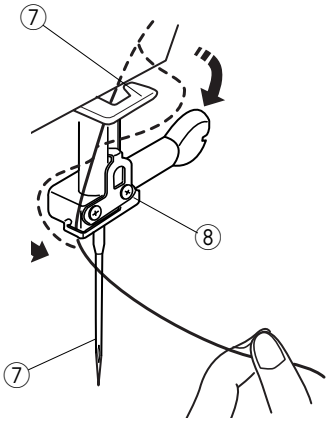

3 Draw the thread around the upper thread guide (A) ② and the upper thread guide (B) ③.
② Upper thread guide (A)
③ Upper thread guide (B)




4 Draw the thread down along the right channel. Then down around the bottom of the guide plate ④.
④ Guide plate




5 Firmly draw the thread up along the center channel to the thread guide ⑤.While holding it with your right hand behind the upper thread guide (A), firmly draw the thread from right to left over the thread guide ⑤ and down into the chicane ⑥.
⑤ Thread guide
⑥ Chicane




6 Then down through the lower thread guide ⑦.
⑦ Lower thread guide

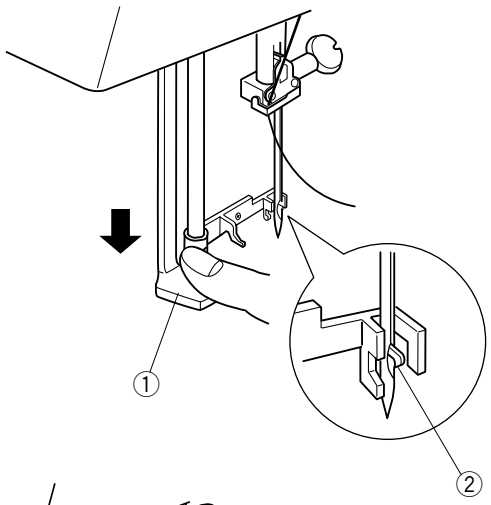
7 Slide the thread behind the needle bar thread guide ⑧ on the left. Thread the needle from front to back or use the needle threader.
⑧ Needle bar thread guide.

## Built-in needle threader

**NOTE:**

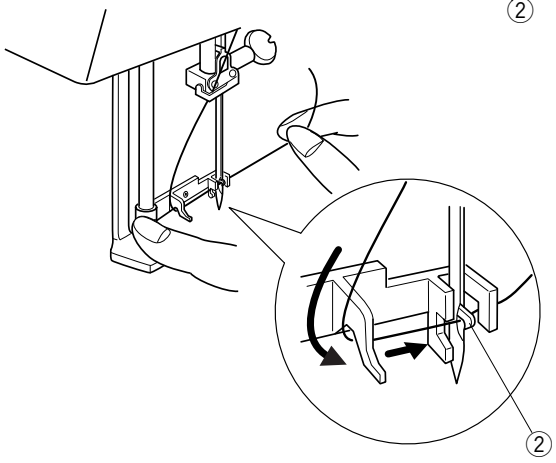
The needle threader can be used with a #11 to #16 needle, or a #11 Blue needle.
Thread size 50 to 90 is recommended.

1



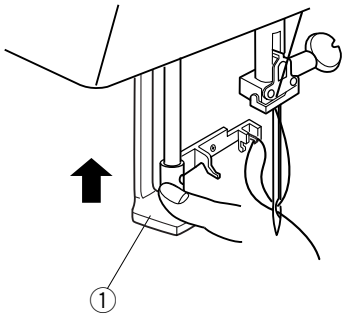

1 Raise the presser foot. Raise the needle to its highest position. Push down the needle threader knob ① as far as it will go.
The hook comes out through the needle eye from behind.
① Knob
② Hook

2



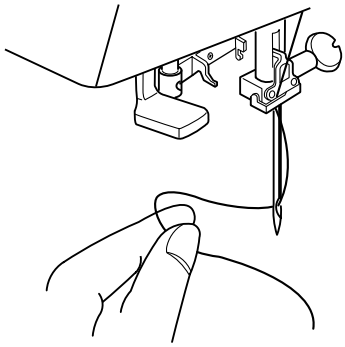

2 Draw the thread around the guide and under the hook ②.

3




3 Release the knob slowly while holding the thread end with your hand.

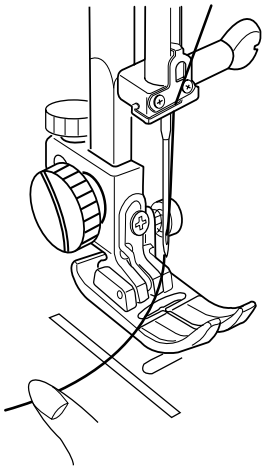
4



4 A loop of the thread is pulled up through the needle eye.

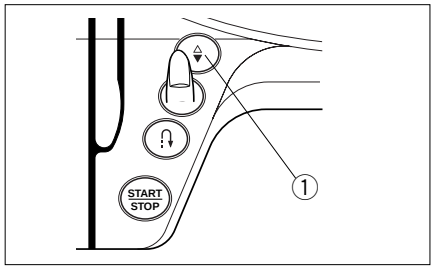
## Drawing up bobbin thread

1



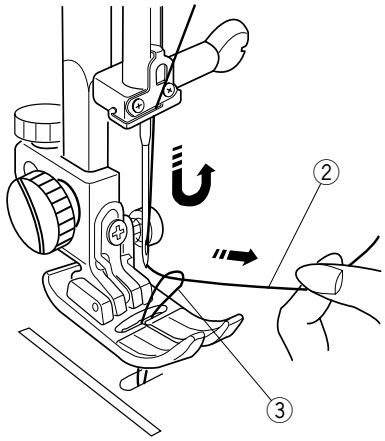
1 Raise the presser foot. Hold the needle thread lightly with your left hand.

2

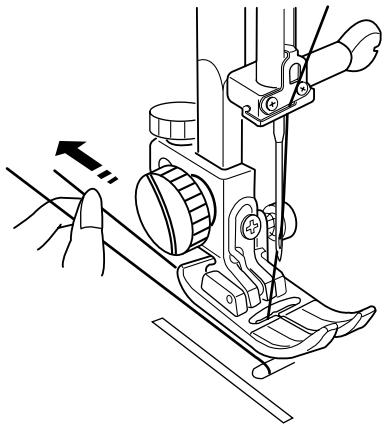



2 Press the up/down needle position button ① twice to lower and raise the needle to pick up the bobbin thread ③.

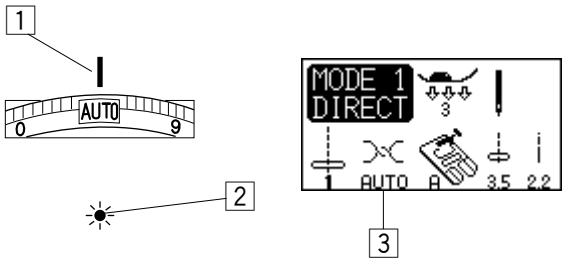
① Up/down needle position button
② Needle thread
③ Bobbin thread

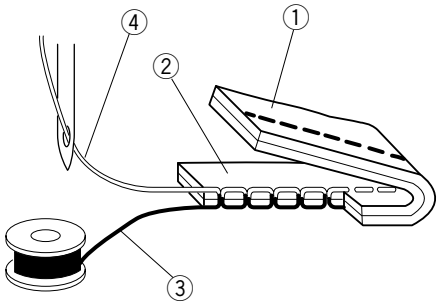



3



3 Pull both threads 4˝ to 6˝ (10 to 15 cm) under and behind the presser foot.



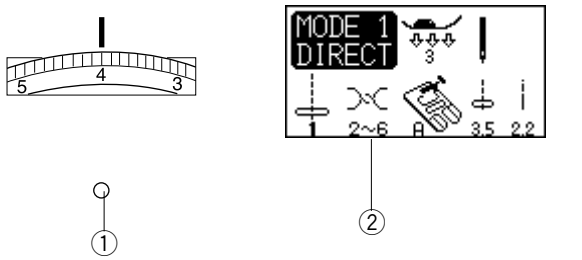




## Balancing thread tension

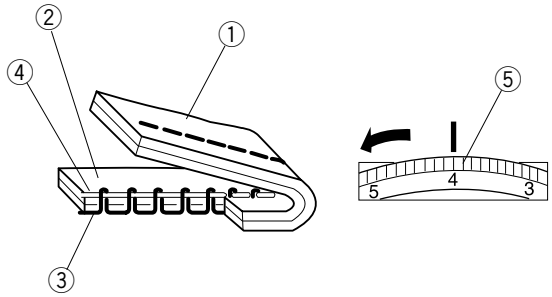
- **Auto-thread tension**
  When the thread tension dial is set at AUTO for automatic thread tension, the green light will be on. For general sewing, set the tension dial at AUTO, which covers a wide range of sewing conditions.

1 Align the AUTO mark of the thread tension dial with the indication line.
2 The green light is on.
3 Dispaly screen shows “AUTO”.

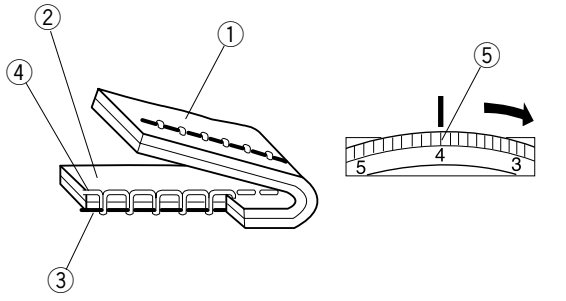
- **Balanced thread tension**
  For straight stitch sewing, both needle and bobbin threads will join at the middle of the fabric.
  For zigzag stitch sewing, the needle thread will appear slightly on the wrong side of the fabric.
  ① Wrong side of fabric
  ② Right side of fabric
  ③ Bobbin thread
  ④ Needle thread (Top thread)




- **Manual thread tension adjustment**
  You should adjust the tension manually if the green light ① blinks when a specific stitch is selected. The screen shows the recommended tension setting ② for the selected stitch.
  ① Green light
  ② Recommended tension setting

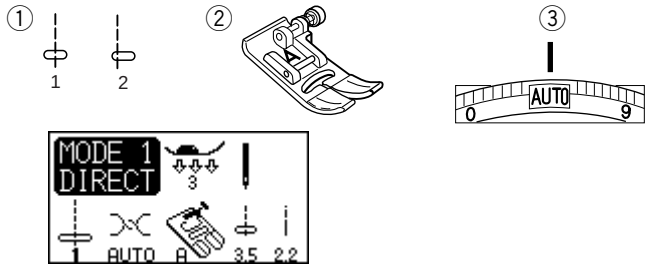



If the needle thread is too tight, the bobbin thread appears on the right of the fabric.
① Wrong side of fabric
② Right side of fabric
③ Bobbin thread
④ Needle thread (Top thread)
⑤ Tension dial
Turn the thread tension dial in the direction of the arrow to decrease the thread tension.




If the needle thread is too loose, the needle thread loops on the underside of the fabric.
① Wrong side of fabric
② Right side of fabric
③ Bobbin thread
④ Needle thread (Top thread)
⑤ Tension dial
Turn the thread tension dial in the direction of the arrow to increase the thread tension.

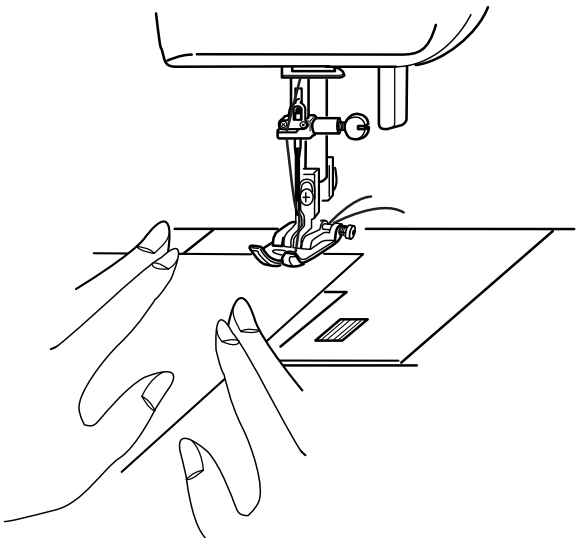
# BASIC STITCHES (MODE 1)




## Straight stitch

**Machine settings**

| | |
|---|---|
| ① Pattern: | 1 or 2 (mode 1) |
| ② Presser foot: | Zigzag foot A |
| ③ Thread tension: | AUTO |

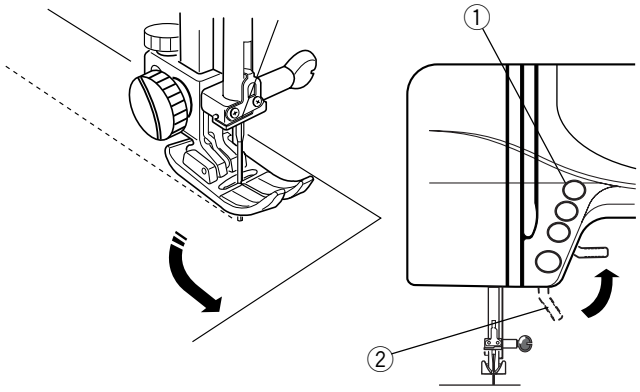


**To sew**

Raise the presser foot and position the fabric next to a seam guide line on the needle plate. Lower the needle to the point where you wish to start.

Pull the needle and bobbin threads toward the rear.
Lower the presser foot.

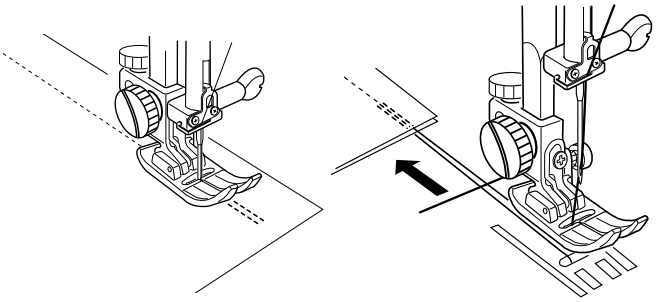
Depress the foot control to start sewing. Gently guide the fabric along the seam guide line letting the fabric feed naturally.




## Changing sewing direction

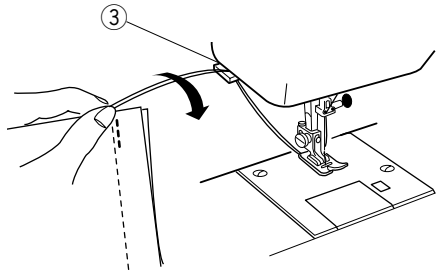
Stop the machine and bring the needle down into the fabric by pressing the up/down needle position button.
Raise the presser foot.
Pivot the fabric around the needle to change sewing direction as desired. Lower the presser foot.

① Up/down needle position button
② Presser foot lifter



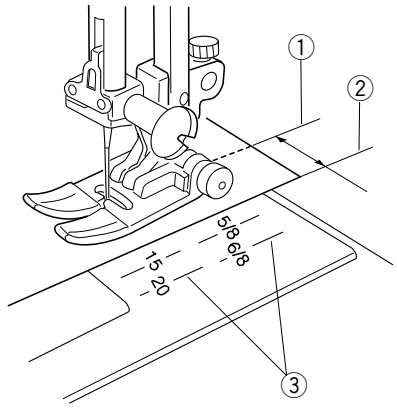
## Securing a seam

For fastening the end of seam, press the reverse button and sew several reverse stitches.
The machine sews in reverse as long as you press and hold the reverse button.
Press the reverse button once when sewing the Lock-a-Matic stitch (pattern 3) or locking stitch (pattern 4) so the machine will lock the stitch off and stop automatically.




Cut the thread by using the thread cutter.
The threads are cut the proper length for starting the next seam.

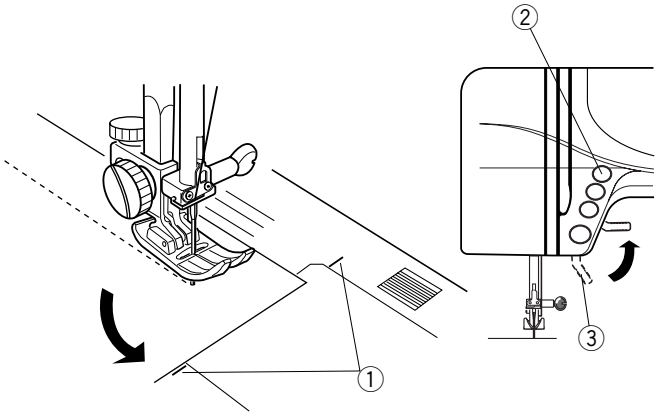
③ Thread cutter




## Using the seam guides on the needle plate

① Needle drop position
② Edge of fabric
③ Needle plate guide lines

The seam guides on the needle plate are engraved to help you measure seam width. The number on the needle plate indicates the distance between the center needle position and the edge of the fabric. The lines are 1/8″ (0.3 cm) apart, and engraved at 3/8″, 4/8″, 5/8″ and 6/8″. The lines in millimeters are 5 mm apart, and are engraved at 10 mm, 15 mm and 20 mm.

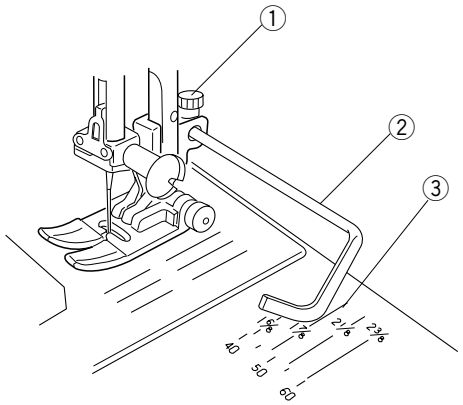



## Turning a square corner

① Cornering guide
② Up/down needle position button
③ Presser foot lifter

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

1. Stop sewing when the front edge of fabric reaches the cornering guide lines ①.
2. Lower the needle by pressing the up/down needle position button ②.
3. Raise the presser foot ③ and turn the fabric counterclockwise 90°.
4. Lower the presser foot, and begin stitching in the new direction.



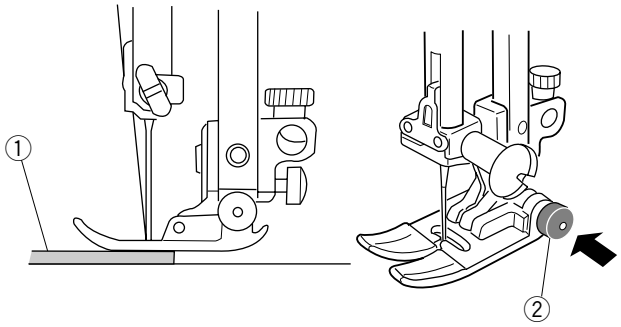

## Using the quilting guide

① Quilting bar holding screw
② Quilting bar
③ Seam guide line

Use the seam guide lines on the needle plate, and the free-arm, to help determine the distance between quilting stitches. The quilting bar will help keep the seam lines parallel and evenly spaced.

1 Loosen the quilting bar holding screw ① on the back of the presser foot as shown.
2 Slide the quilting ② into the hole under the screw to the space of quilting stitches you desire.
3 Tighten the screw ①.
4 Sew guiding the quilting over the previous row of stitching.

See page 57 for quilting stitch instructions.




## Sewing on heavy fabric

① Fabric
② Black button

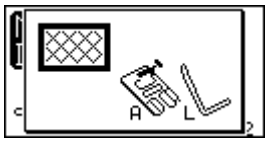
The black button on foot A will lock the foot in a horizontal position if you push it in before lowering the presser foot. This ensures even feeding at the beginning of seams and helps when sewing many layers of fabric such as sewing over welt seams when hemming jeans.
When you reach a point of increased thickness, lower the needle and raise the presser foot. Press the toe of the foot and push in the black button, then lower the foot and continue sewing. The button will be released after a few stitches.



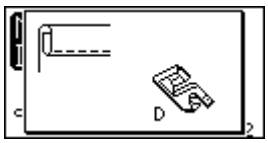




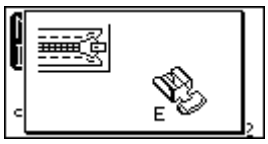
1




2




3




## Help button

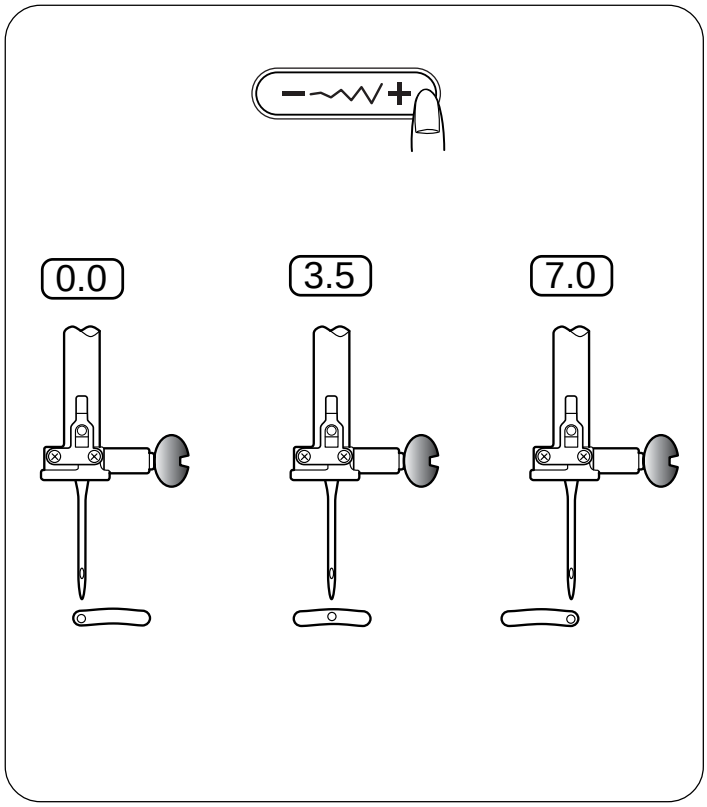
Pressing this button will show alternative applications of the selected pattern when patterns 0, 1, 8, 9 (mode 1) or 11, 12, 13, 14, 15, 27, 32 (mode 2) have been selected.

**Example:** When pattern 1 has been selected.
Each time you press the help key, the LCD screen will show as follows:

1 The zigzag foot and quilting bar for quilting will be shown.

2 The rolled hem foot for a rolled hem will be shown.

3 The zipper foot for zipper sewing will be shown.

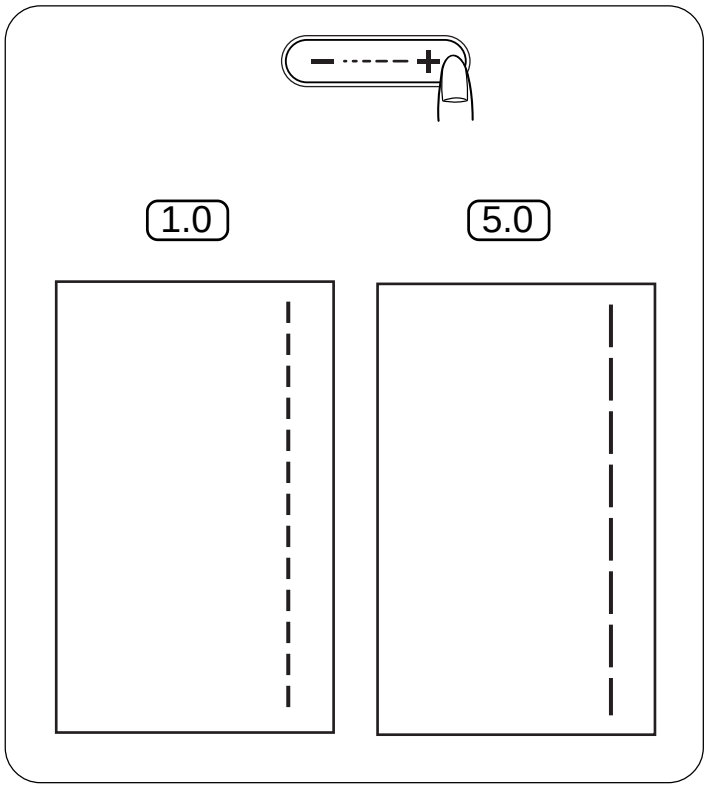



## Adjusting the needle drop position

The needle drop position can be altered by pressing the stitch width adjustment button.

Press the right side of the button (+ sign) to move the needle bar to the right.

Press the left side of the button (– sign) to move the needle bar to the left.




## Adjusting the stitch length

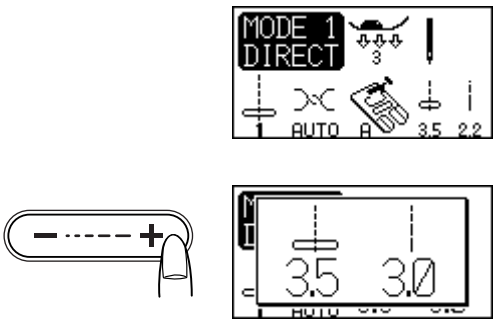
The stitch length can be altered by pressing the stitch length adjustment button.
The stitch length indication will change as the button is pressed.

Press the right side of the button (+ sign) to increase the stitch length.

Press the left side of the button (- sign) to decrease the stitch length.

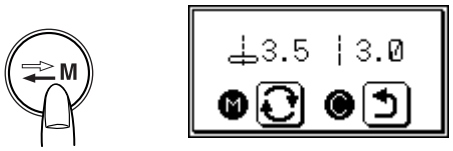
## To customize the preset values for the stitch length and width

The stitch patterns in the direct mode (mode 1), and for buttonholes, eyelets, darnning, bartacks and basting have their own original settings for the stitch length and stitch width.
These original settings are called preset values.
You can modify and save these preset value so that you do not have to change the setting each time you turn the power switch on.

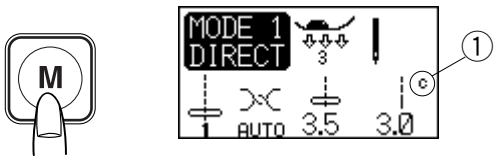



**Example: To change the preset value for the stitch length**

Select the stitch pattern you want to change the preset value for.
Press “–” or “+” to change the stitch length.
To decrease the stitch length, press “–”
To increase the stitch length, press “+”.

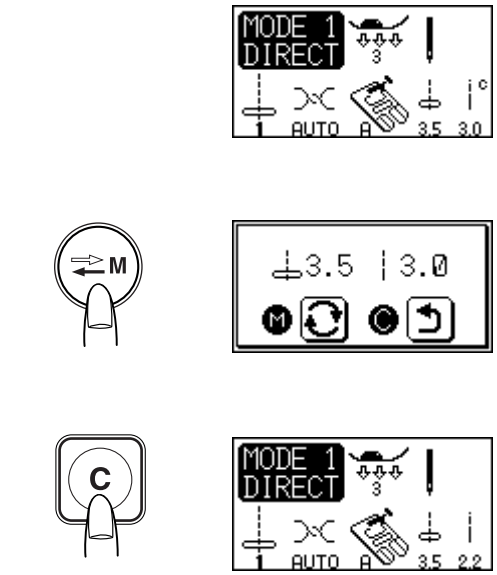



Press the stock/call key.




Press the memory button to save your personal setting.
A symbol “C” ① appears on LCD screen to indicate the stitch has been altered from the factory default settings.
① Symbol “C”

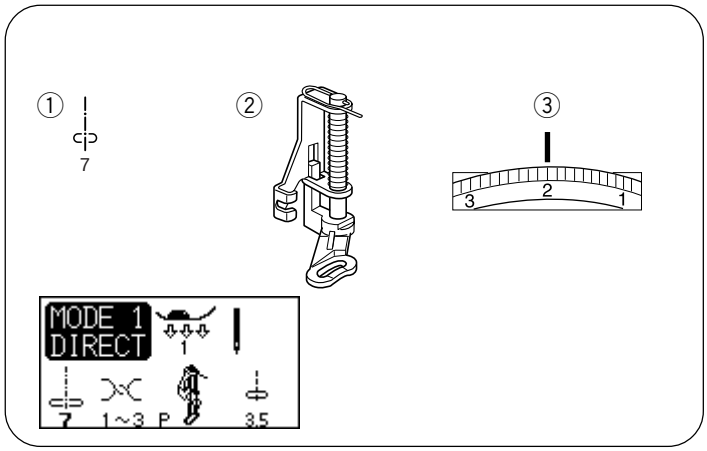
## Restoring the original settings




Select the pattern that you have changed the settings of.

Press the stock/call key. The LCD screen will show the current settings.

Press the “C” key. The symbol “C” disappears and the preset values will return to the original settings (the same settings when you have purchased the machine).



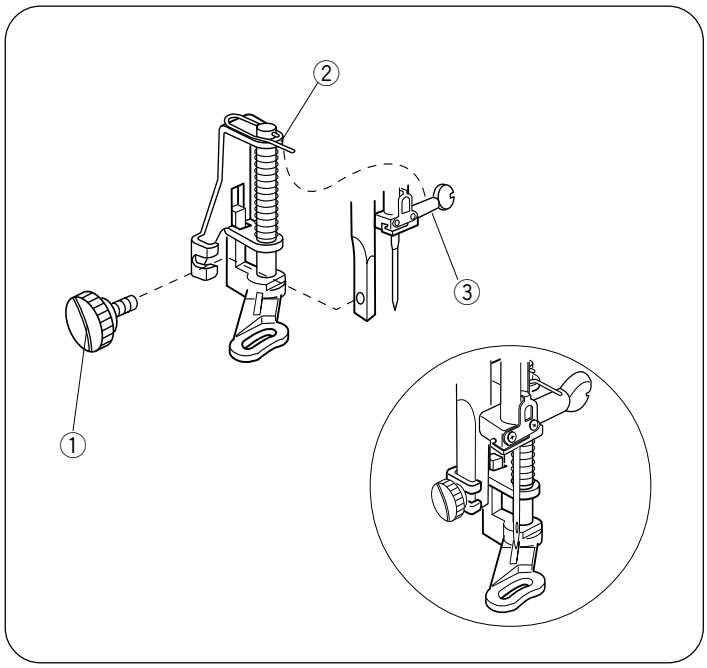

## Basting

**Machine settings**

① Pattern: 7 (mode 1)
② Presser foot: Darning foot P
③ Thread tension: 1-3

* Feed dog: Dropped

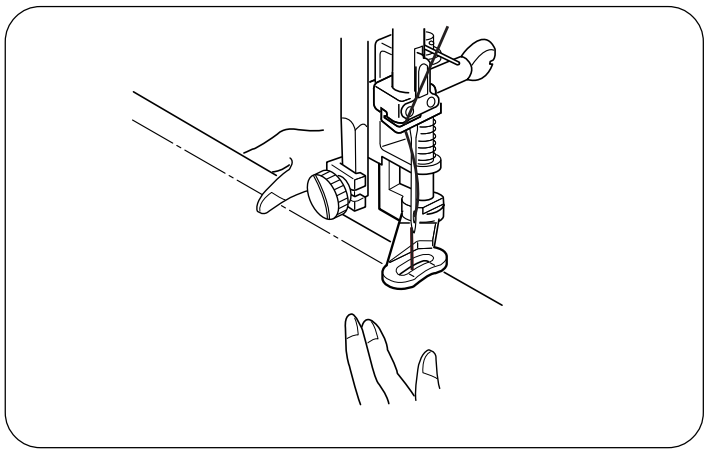
The basting stitch is used to hold fabric layers together during fitting.




**Attaching the darning foot P**

Loosen the thumbscrew and remove the foot holder.
Attach the darning foot P to the presser bar putting the pin on the needle clamp screw.
Tighten the thumbscrew firmly with the screwdriver.

① Thumbscrew
② Pin
③ Needle clamp screw



**To sew**:

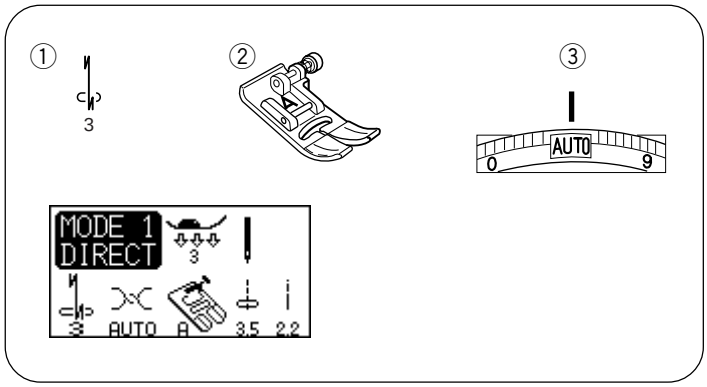
Lower the feed dog.
Draw the both needle and bobbin thread to the back.
Depress the foot control. The machine will sew one stitch and stop automatically.

Release the foot control.

Hold the fabric taut and slide it to where you want to sew the next stitch.

**CAUTION:**

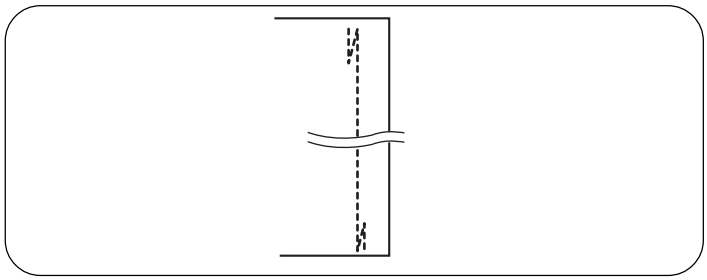
Do not pull the fabric while stitching. It may deflect the needle causing it to break.




## Lock-a-Matic stitch

**Machine settings**

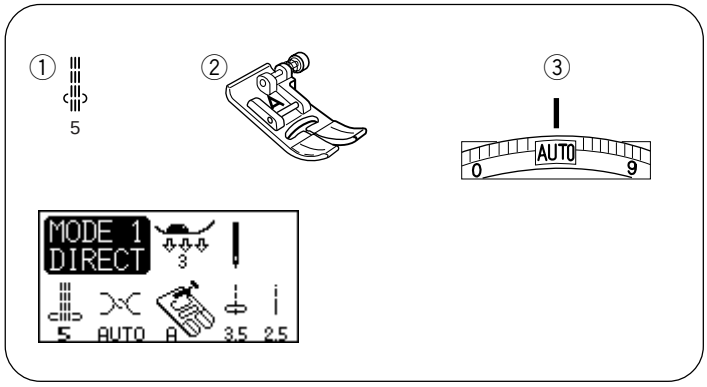
① Pattern: 3 (mode 1)
② Presser foot: Zigzag foot A
③ Thread tension: AUTO



Use it to reinforce areas such as crotch and armhole seams, as well as when constructing items such as back-packs for extra strength.

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

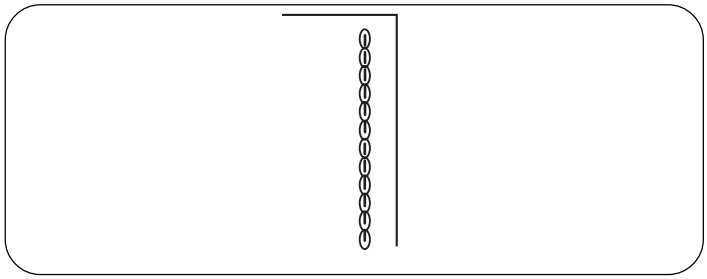
The machine will sew four reverse stitches, four forward stitches, and then stop sewing automatically.



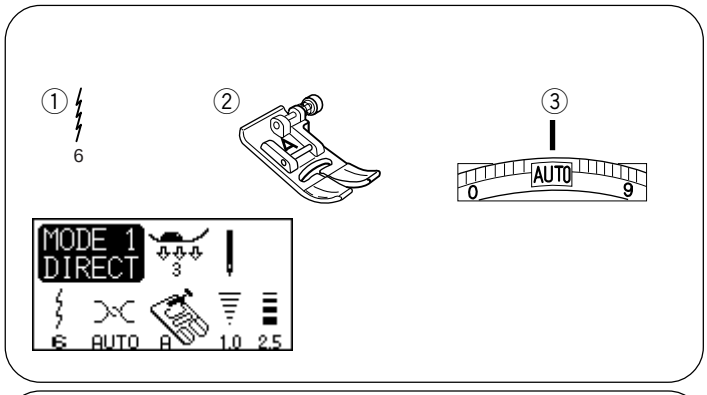

## Triple stretch stitch

**Machine settings**

① Pattern: 5 (mode 1)
② Presser foot: Zigzag foot A
③ Thread tension: AUTO



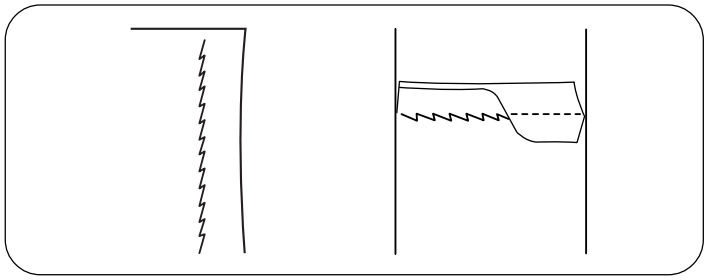
This strong, durable stitch is recommended for areas where both elasticity and strength are needed to ensure comfort and durability.
Use it to reinforce areas such as crotch and armhole seams.
Also use it when constructing items such as backpacks for extra strength.



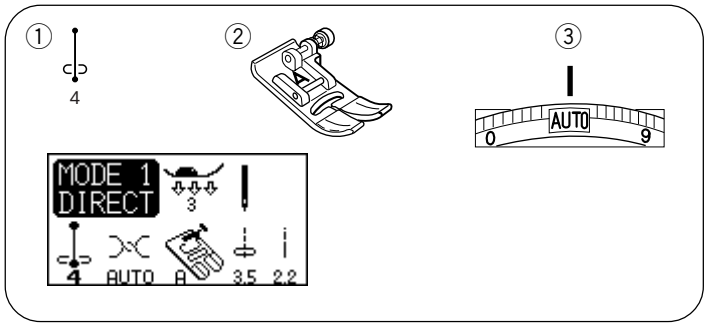

## Stretch stitch

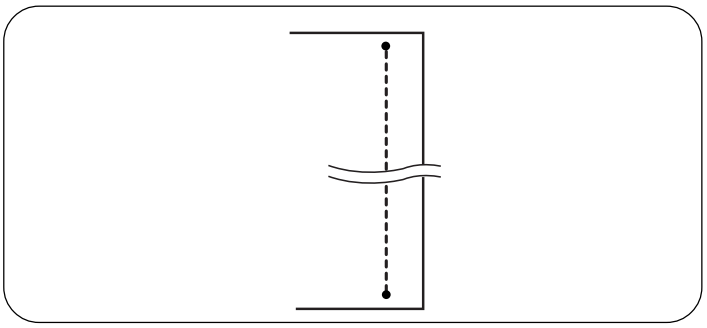
**Machine settings**

① Pattern: 6 (mode 1)
② Presser foot: Zigzag foot A
③ Thread tension: AUTO



This is a narrow stretch stitch designed to eliminate puckering on knit fabrics and bias seams, while permitting the seam to be pressed completely open and flat.



## Locking stitch

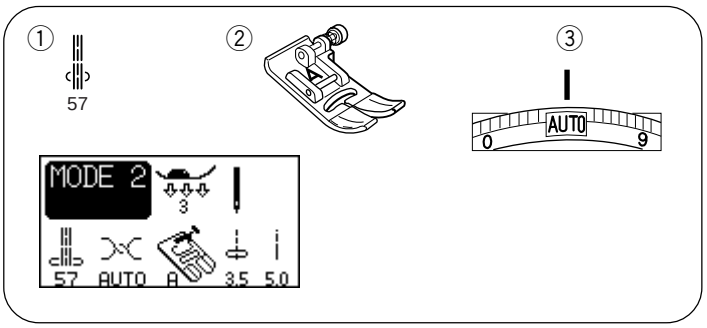
**Machine settings**

① Pattern: 4 (mode 1)
② Presser foot: Zigzag foot A
③ Thread tension: AUTO

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

Lower the needle close to the front edge of the fabric.
The machine will sew several locking stitches in place and continue sewing forward.

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

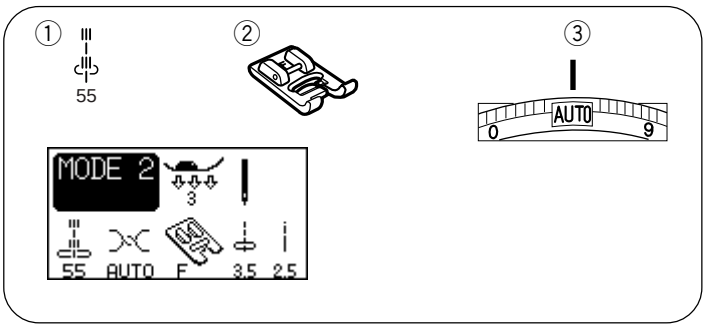



## Saddle stitch

**Machine settings**

① Pattern: 57 (mode 2)
② Presser foot: Zigzag foot A
③ Thread tension: AUTO

This saddle stitch is formed with one stitch forward, two stitches backward, and a fourth stitch forward.
You can achieve a lovely hand-worked look when topstitching suits, blazers, jumpers and denim outfits with the saddle stitch.

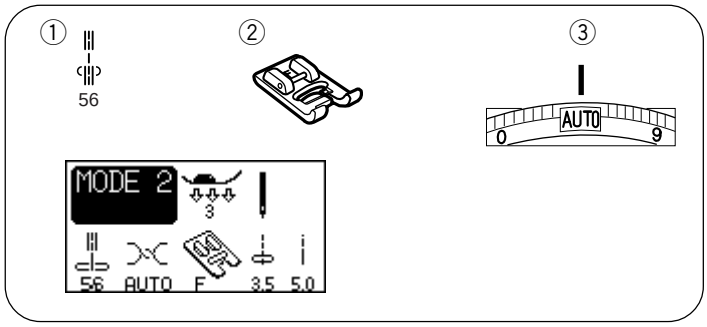



## New sculpture stitch

**Machine settings**

① Pattern: 55 (mode 2)
② Presser foot: Satin stitch foot F
③ Thread tension: AUTO

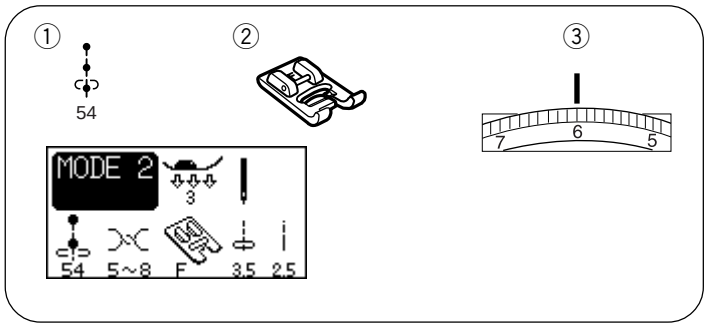
This decorative stitch adds a three dimensional effect when outlining designs.




## Decorative stitch

**Machine settings**

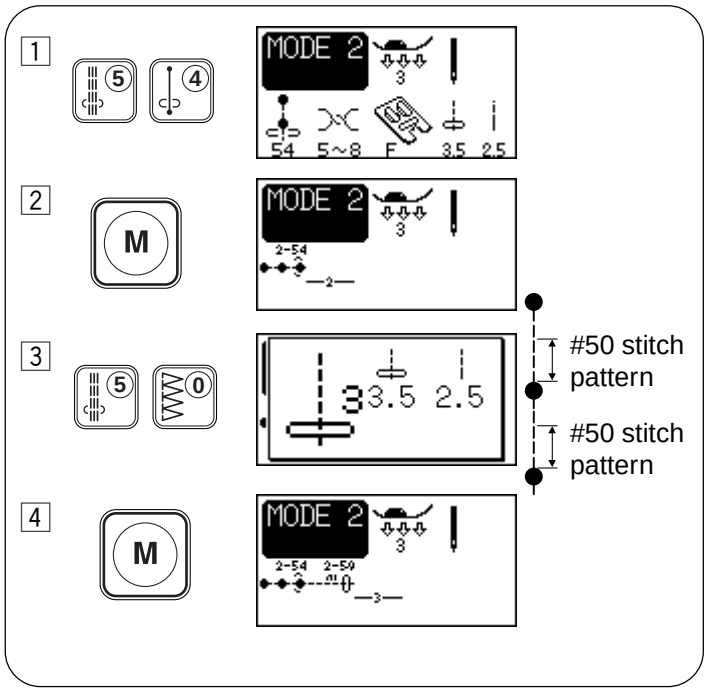
① Pattern: 56 (mode 2)
② Presser foot: Satin stitch foot F
③ Thread tension: AUTO
* Stitch pattern 58 (mode 2) can also be used.
Use this stitch for quilting or decorative stitching.




## French knot

**Machine settings**

① Pattern: 54 (mode 2)
② Presser foot: Satin stitch foot
③ Thread tension: 5–8



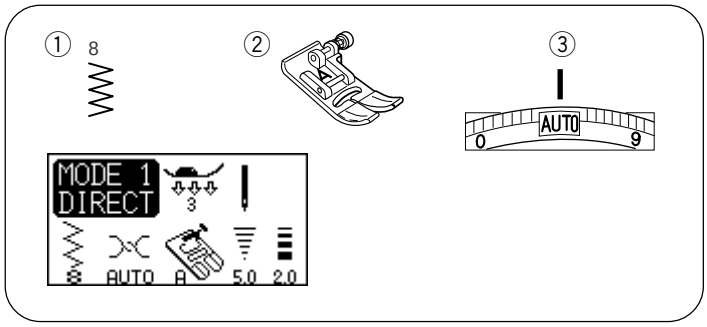

**Programming French knots**
**Example: Combination of patterns 54 and 50**

1 Select stitch pattern 54 (mode 2).

2 Press the memory key.

3 Select stitch pattern 50 (mode 2).

4 Press the memory key.
Three counts of straight stitch will be inserted between knots.

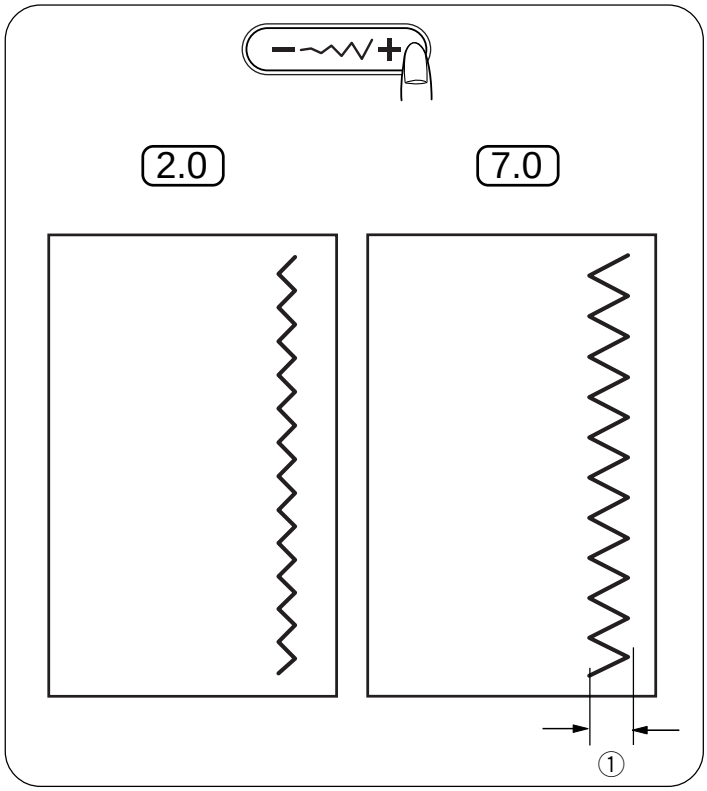



## Zigzag stitch

**Machine settings**

| | |
|---|---|
| ① Pattern: | 8 (mode 1) |
| ② Presser foot: | Zigzag foot A |
| ③ Thread tension: | AUTO |

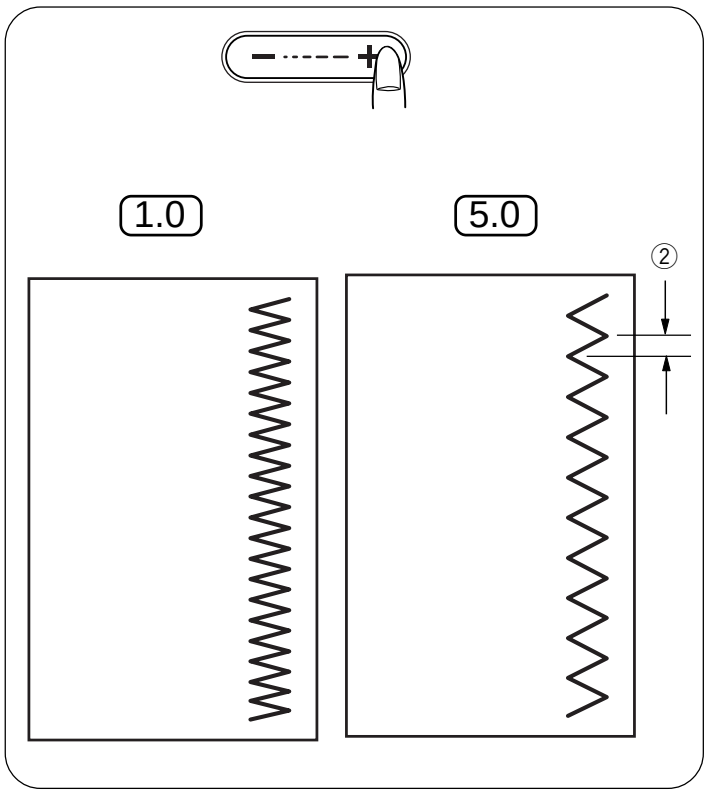
Zigzag stitch is used for various sewing needs including overcasting. It can be used on most woven fabrics.
A dense zigzag stitch can also be used for appliqué.




### Adjusting the stitch width

Press the right side of the button (+ sign) to increase the stitch width.

Press the left side of the button (– sign) to decrease the stitch width.
① Stitch Width

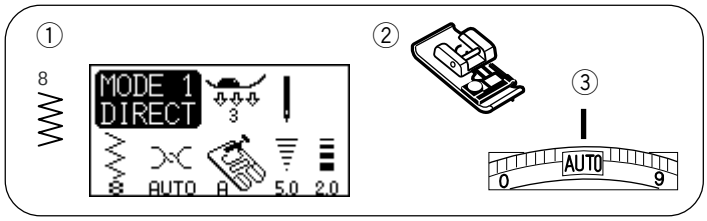



### Adjusting the stitch length

Press the right side of the button (+ sign) to increase the stitch length.

Press the left side of the button (– sign) to decrease the stitch length.
② Stitch length

**NOTE:**
The stitch length and width can be altered while stitching.

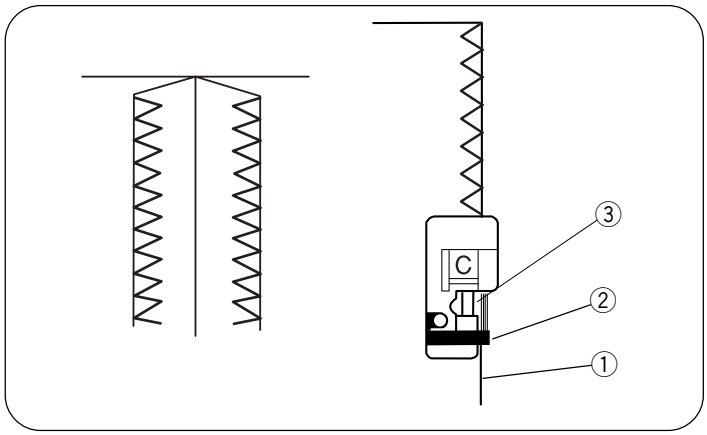



## Types of Overcasting Stitches

## Overcasting with zigzag stitch

**Machine settings**

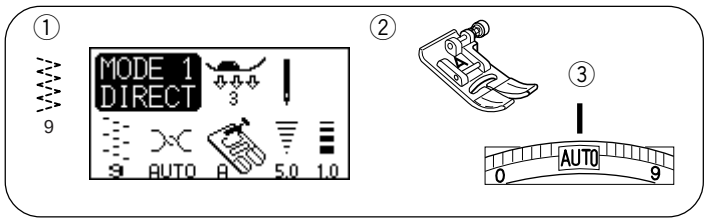
| | |
|---|---|
| ① Pattern: | 8 (mode 1) |
| ② Presser foot: | Overedge foot C |
| ③ Thread tension: | AUTO |




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

① Edge of Fabrics
② Guide
③ Wires on Foot

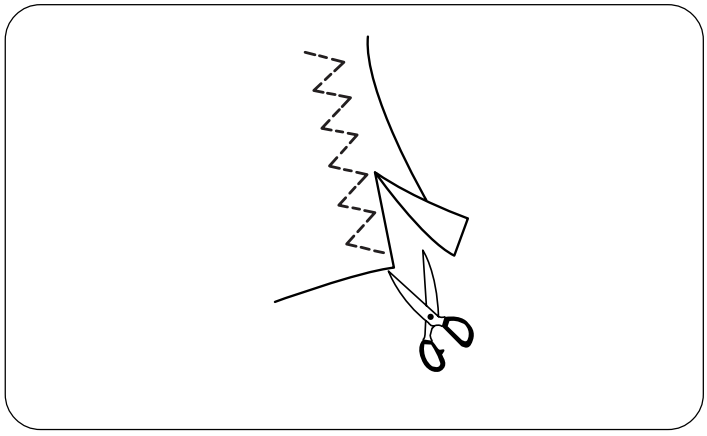
**CAUTION:**
When you use the overedge foot C, you must set the zigzag width at 5.0 or wider to prevent the needle from hitting the wires on the foot.



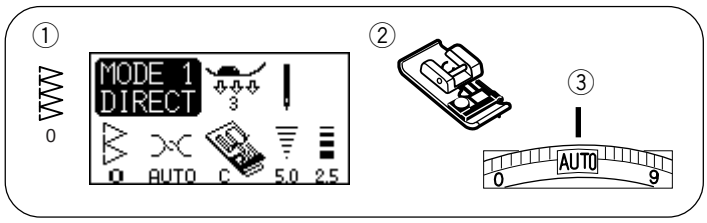

## Multiple zigzag stitch (Tricot stitch)

**Machine settings**

| | |
|---|---|
| ① Pattern: | 9 (mode 1) |
| ② Presser foot: | Zigzag foot A |
| ③ Thread tension: | AUTO |



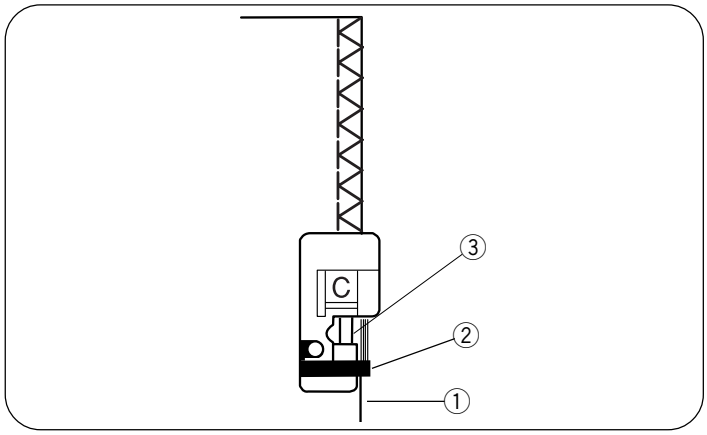
This stitch is used to finish the raw edges of synthetics and other stretch fabrics that tend to pucker.
Sew along the fabric edge leaving an adequate seam allowance.
After sewing, trim the seam allowance close to the stitches.




## Overcasting stitch

**Machine settings**

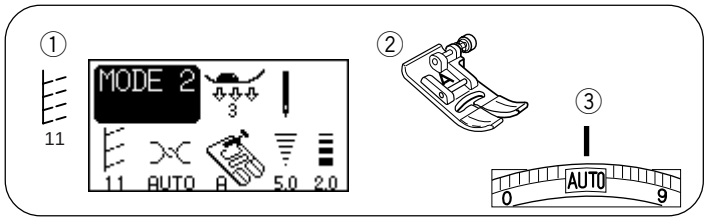
| | |
|---|---|
| ① Pattern: | 0 (mode 1) |
| ② Presser foot: | Overedge foot C |
| ③ Thread tension: | AUTO |




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 then sew.

① Edge of fabrics
② Guide
③ Wires on foot

**CAUTION:**
When you use the overedge foot C, you must set the zigzag width at 5.0 or wider to prevent the needle from hitting the wires on the foot.

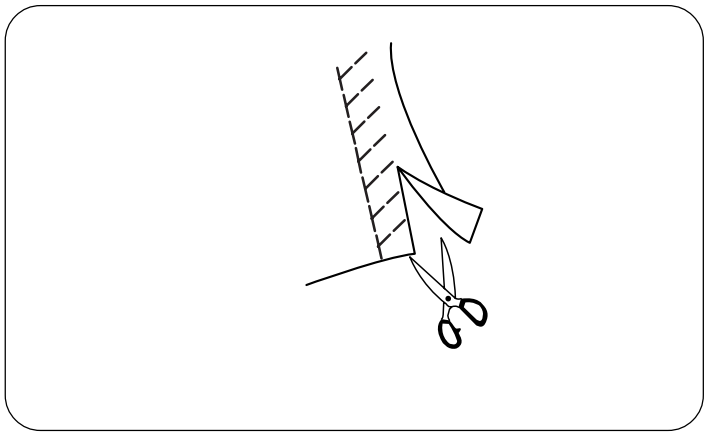


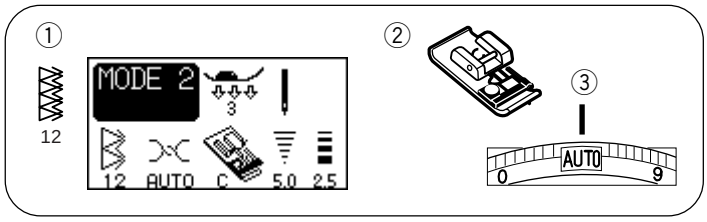

## Knit stitch

**Machine settings**

① Pattern: 11 (mode 2)
② Presser foot: Zigzag foot A
③ Thread tension: AUTO

This stitch is recommended for sewing such fabrics as synthetic knits and stretch velour, as it provides the greatest amount of elasticity and strength.
Sew along the fabric edge leaving an adequate seam allowance.
After sewing, trim the seam allowance close to the stitches.



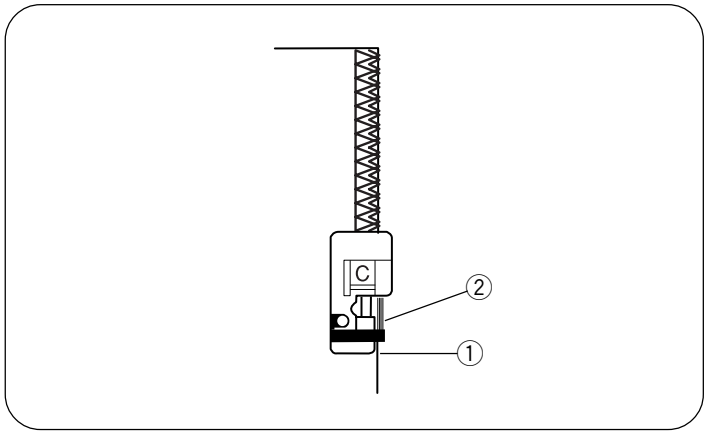



## Double overedge stitch

**Machine settings**

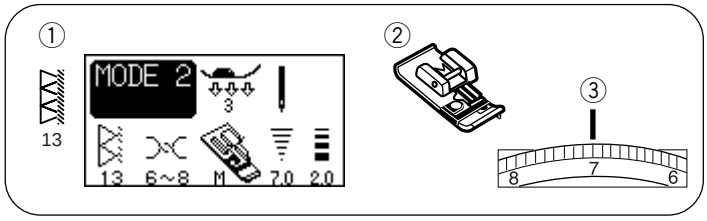
① Pattern: 12 (mode 2)
② Presser foot: Overedge foot C
③ Thread tension: AUTO

This is an excellent stitch for fabrics that tend to ravel extensively such as linens and gabardines.
Two rows of zigzag stitches are simultaneously sewn over the edge to insure that fabric will not ravel.
Place the fabric edge next to the guide of the foot and then sew.




① Fabric edge
② Guide

**CAUTION:**
When you use the overedge foot C, you must set the zigzag width at 5.0 or wider to prevent the needle from hitting the wires on the foot.

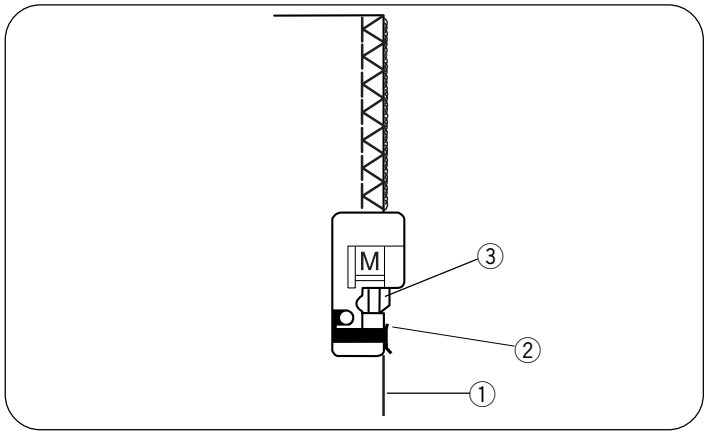



## Overlock stitch

**Machine settings**

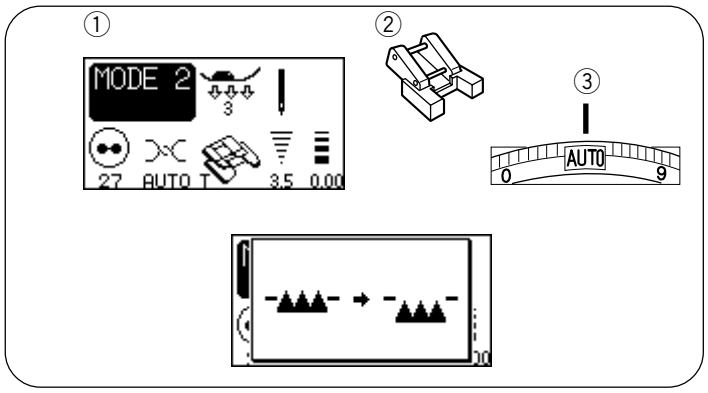
① Pattern: 13 (mode 2)
② Presser foot: Overcasting foot M
③ Thread tension: 6–8

This stitch finishes the edges of fabric similar to a commercial overlocking machine for a professional look.
Place the fabric edge next to the guide of the foot and then sew.




**CAUTION:**
When you use the overcasting foot M, you must set the zigzag width at 5.0 or wider to prevent the needle from hitting the wires on the foot.

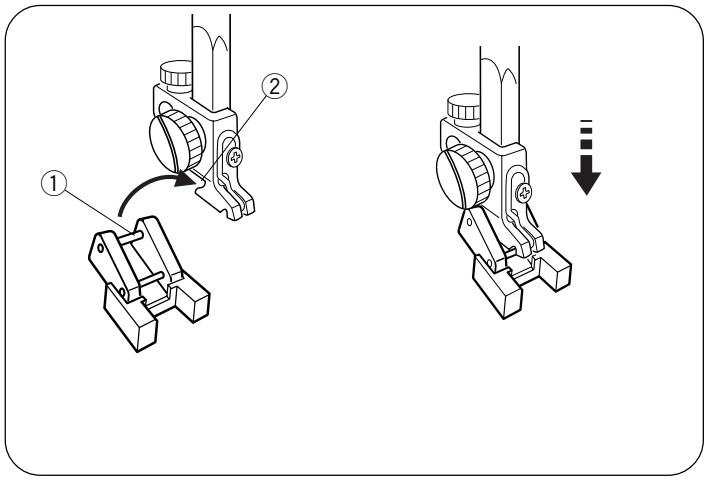
① Edge of Fabrics
② Guide
③ Wires on Foot




## Button sewing

### Machine settings

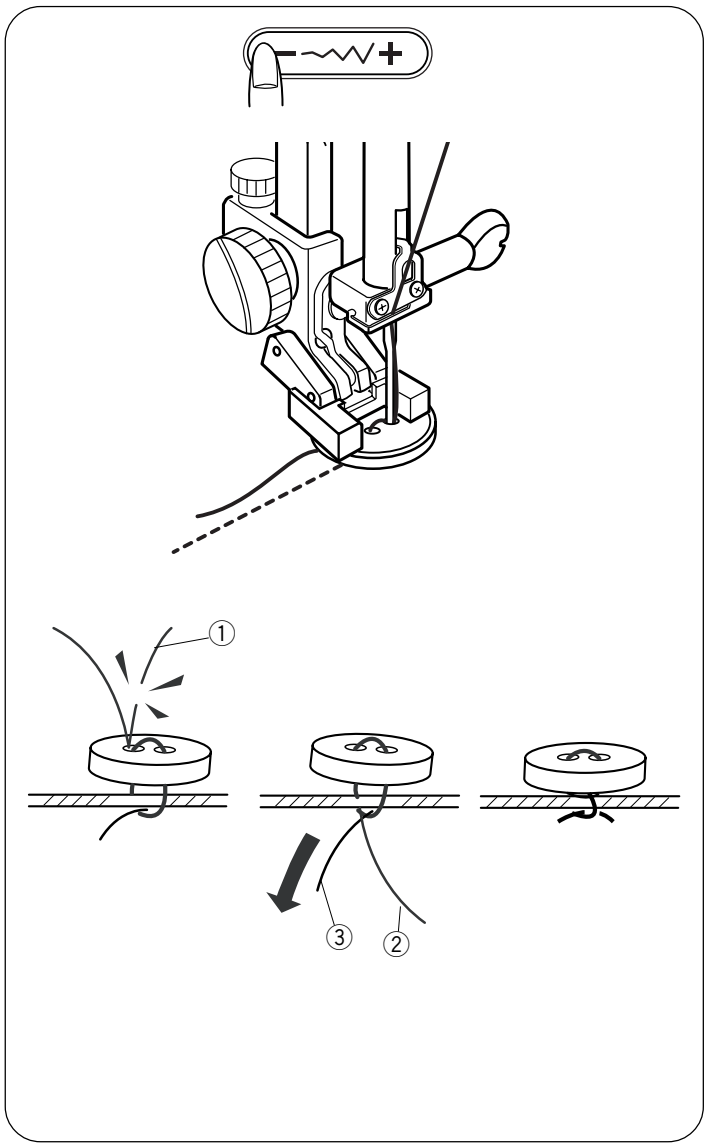
① Pattern: 27 (mode 2)
② Presser foot: Button sewing foot T
③ Thread tension: AUTO
* Lower the feed dog (see page 14)




### Attaching the button sewing foot T

Insert the rear pin on the foot into the groove of the foot holder.
Gently lower the presser foot lifter while holding the foot with your fingers.

① Rear pin
② Groove of the foot holder.




### To sew

1 Place a button on the fabric and lower the needle by turning the handwheel with your hand, so that the needle enters through the left hole in the button.

2 Align the direction of button and lower the button sewing foot T to hold the button in place.

3 Press the up/down needle button to bring the needle up to the highest position. Adjust the stitch width, so that the zigzag width matches the span of holes in the button.

4 Press the start/stop button to sew and the machine will stop automatically.

5 Cut the needle thread at the beginning.
① Needle thread at the beginning

6 Pull the bobbin thread to pull the needle thread to the wrong side off the fabric.
② Needle thread
③ Bobbin thread

7 Tie both threads together.

* Raise the feed dog after sewing.

## Variations of Buttonholes


17

### 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.

---


18

### Round-end Buttonhole
This buttonhole is used on fine to medium weight fabrics especially for blouses and children's clothes.

---


19

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

---


20

### Keyhole Buttonhole
The Keyhole Buttonhole is widely used on medium to heavy weight fabrics. It is also suitable for large and thick buttons.

---


21

### Round Keyhole Buttonhole
A variation of the classic buttonhole.

---


22

### Tailor-made Buttonhole
This buttonhole is ideal for heavyweight fabrics and large and thick buttons.

---


23

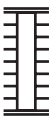
### Stretch Buttonhole
This buttonhole can be used on stretch fabrics. It can also be used as a decorative buttonhole.

---


24

### Knit Buttonhole
This buttonhole is suitable for knit fabrics. It can be used as a decorative buttonhole.

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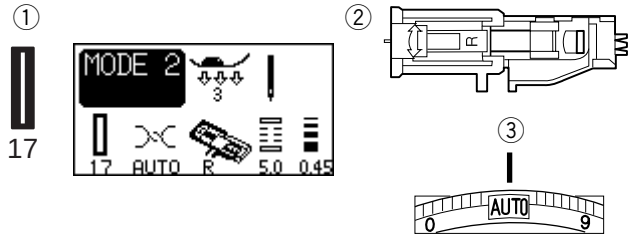

25

### Faux Chain Buttonhole
Resembles a "Hand Worked" buttonhole. Ideal on fine fabrics featured in Heirloom sewing or for couture fashions.

---


26

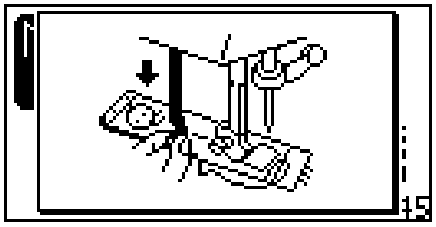
### Welted Buttonhole
Made through the garment and interfacing before the facing is applied, resulting in finished fabric edges, giving a custom-tailored touch. Often found on garments made from natural fibers.




# Square buttonhole

**Machine settings**

① Pattern: 17 (Mode 2)
② Presser foot: Automatic buttonhole foot R
③ Thread tension: 1–5

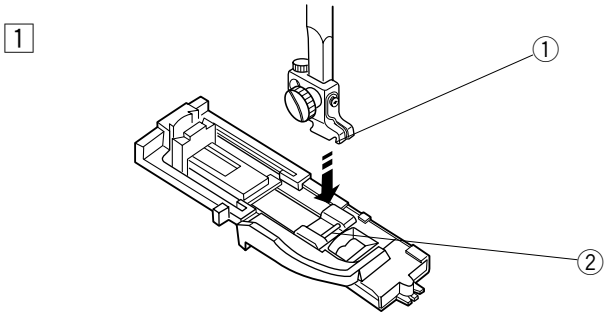


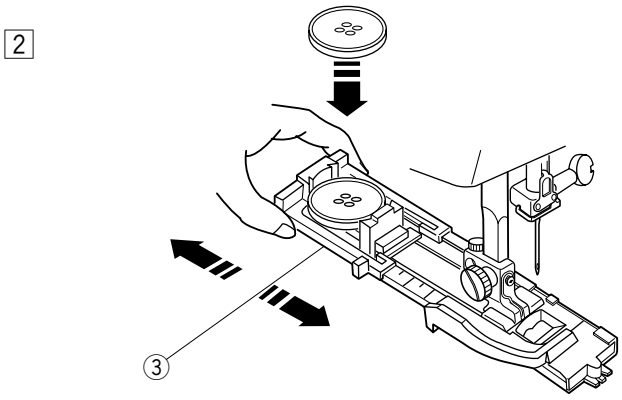

**NOTE:**

The size of the buttonhole is automatically set by placing a button in the rear of automatic buttonhole foot R.
The button holder of the foot takes a button size of 0.5 cm (3/16˝) to 2.5 cm (1˝) in diameter.
It is sometimes necessary to change buttonhole size to match certain heavy or specific fabrics and threads.
Make a test buttonhole on an extra piece of the fabric to check your settings.
The preset width of the buttonhole is suitable for ordinary buttons.
Apply an interfacing to stretch or fine fabrics.

**To sew**

1 Press the up/down needle position button to raise the needle.
Attach the automatic buttonhole foot R snapping the pin into the groove of the foot holder.
① Groove
② Pin



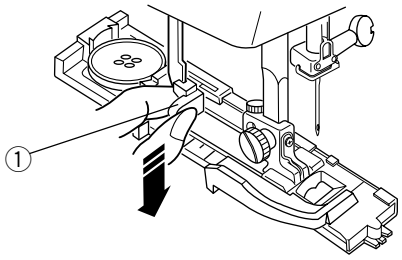



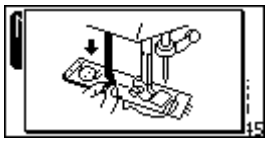

2 Pull the button holder to the back, and place the button in it. Push it together tightly to the button.

**NOTE:**

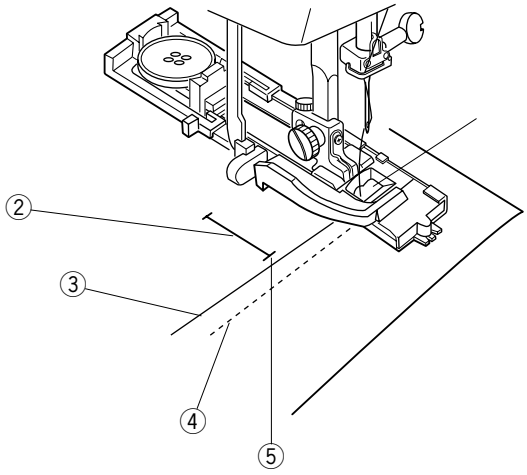
If the button is extremely thick, make a test buttonhole on an extra piece of the fabric.
If it is difficult to fit the button through the test buttonhole, you can lengthen the buttonhole by pulling the button holder back a little. The length of the buttonhole will be increased.
③ Button holder

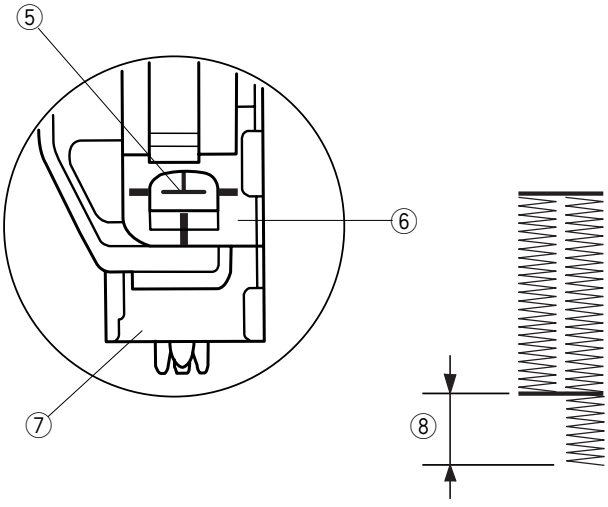
3



4



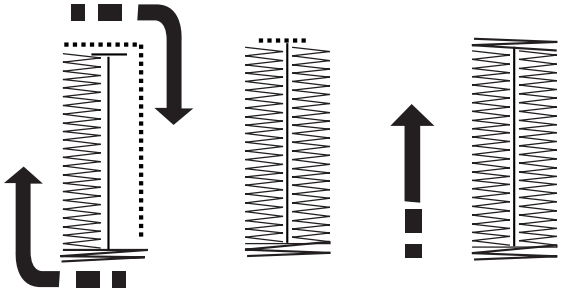

3 Pull the buttonhole lever down as far as it will go.
① Buttonhole lever

**NOTE:**
If you start sewing without pulling down the buttonhole lever, the LCD screen will show a warning and the machine will stop after a few stitches. Pull the buttonhole lever down and restart the machine.

4 Insert the corner of the fabric under the foot. Press the up/down needle button twice.
Remove the fabric to the left to draw the needle thread through the hole of the foot.
Place the garment under the foot, and lower the needle at the starting point of the buttonhole mark.
Then lower the automatic buttonhole foot R.
② Buttonhole mark
③ Needle thread
④ Bobbin thread
⑤ Starting point

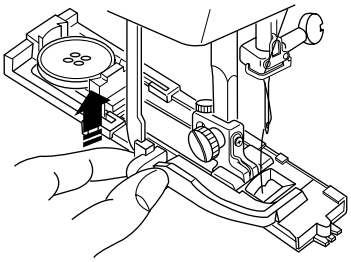
**NOTE:**
Make sure there is no gap between the slider and front stopper, otherwise the left and right lengths will be different.
⑥ Slider
⑦ Front stopper
⑧ Sewing gap

5



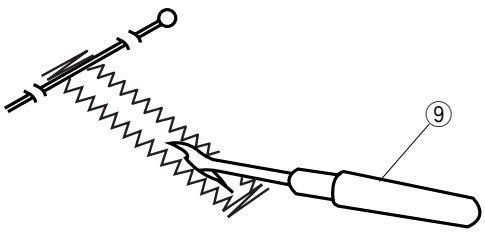
5 Start the machine to sew the buttonhole.
The buttonhole will be automatically sewn.

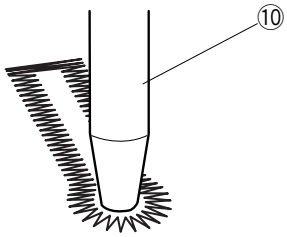
6



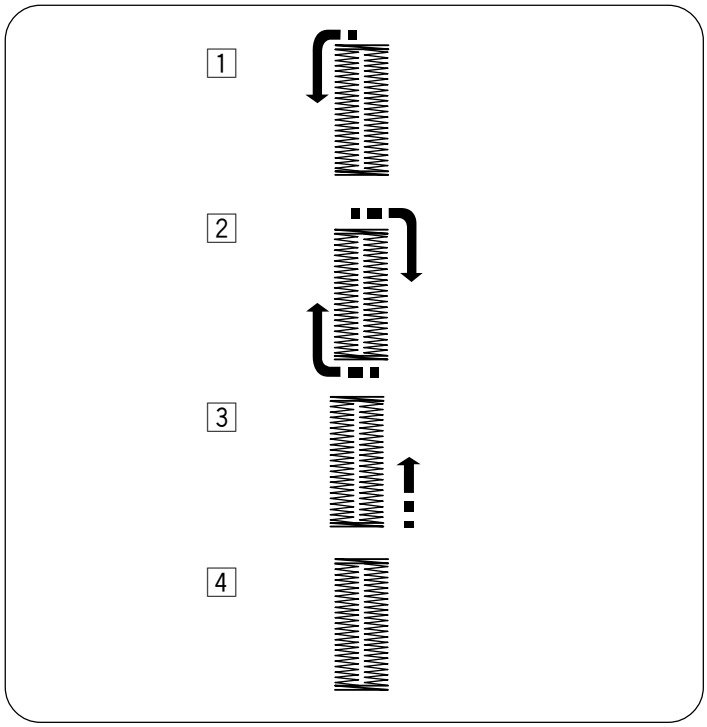
6 When buttonhole sewing is finished, push the buttonhole lever upward as far as it will go.

7



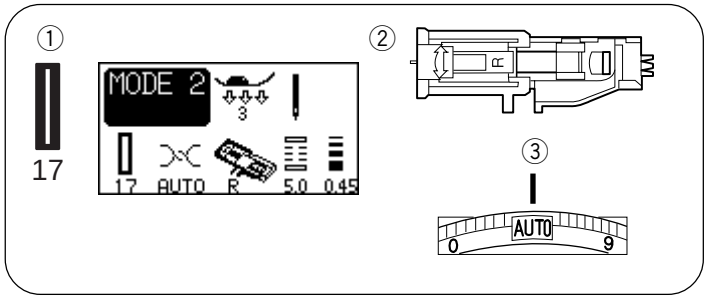

7 Remove the fabric and place a pin just below the bartack at each end to prevent accidentally cutting stitches. Cut the opening with the seam ripper.
Use an Eyelet puncher to open a keyhole buttonhole
⑨ Seam ripper
⑩ Eyelet puncher




## Double layer buttonhole

To make a solid and sturdy buttonhole, sew another layer of buttonhole over the previous stitches.
After the buttonhole is finished, simply start the machine again.
Do not raise the foot or buttonhole lever.
The machine will sew another buttonhole in the following order and stop automatically when it is completed:

1 Step 1: Straight stitching in reverse to go back to the starting point
2 Step 2: Front bartack and left row
3 Step 3: Right row
4 Step 4: Back bartack and locking stitches at the end

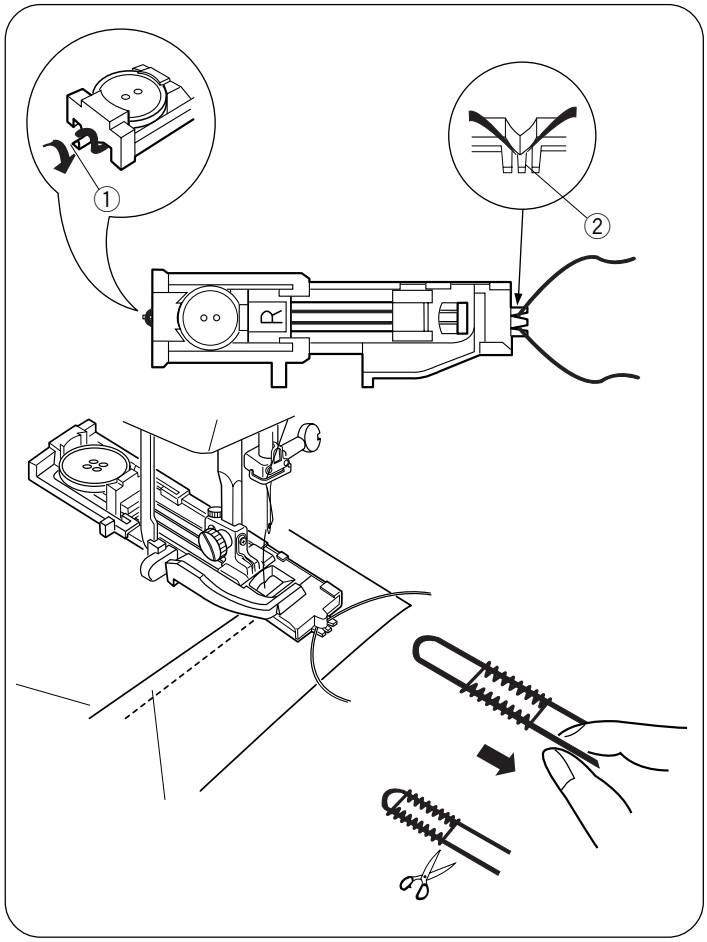



## Corded buttonhole

**Machine settings**

① Pattern: 17 (mode 2)
② Presser foot: Automatic buttonhole foot R
③ Thread tension: AUTO

To sew a corded buttonhole, follow the same procedure as for a square buttonhole.




1 With the automatic buttonhole foot R raised, hook the filler cord on the spur at the back of the buttonhole foot.

2 Bring the ends of cord toward you under the buttonhole foot clearing the front end.

3 Hook the ends of the filler cord into the forks on the front of buttonhole foot to hold them tight.
① Spur
② Forks

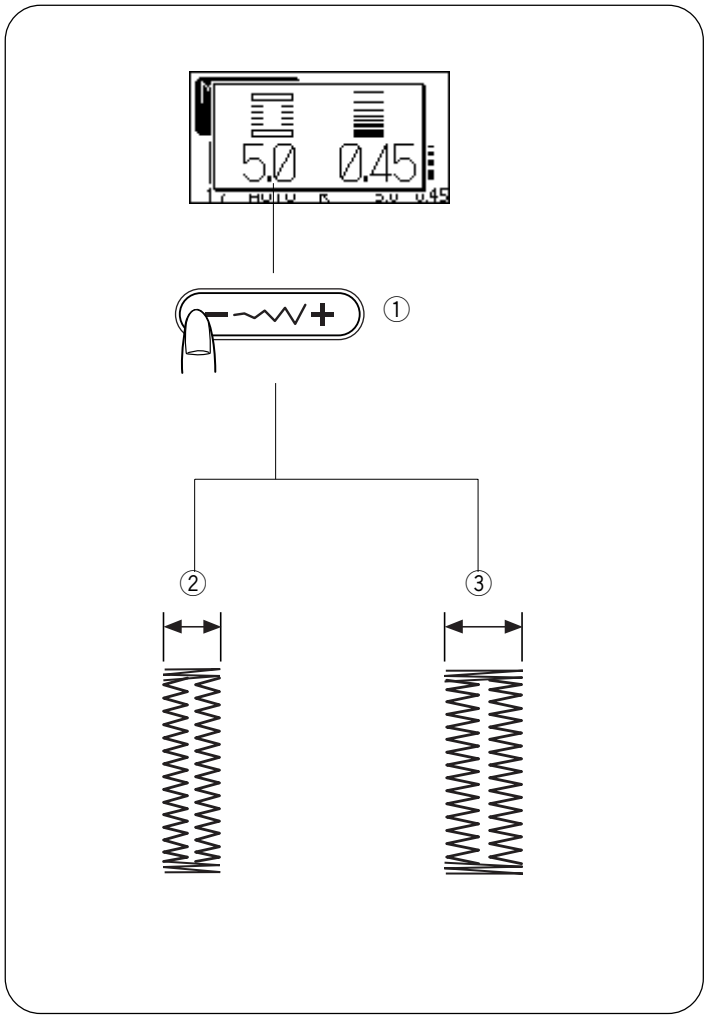
4 Lower the needle into the garment where the buttonhole will start and lower the foot.

5 Lower the buttonhole lever and buttonhole foot. Start the machine and sew the buttonhole over the filler cord. The machine stops automatically when finished.

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

7 Pull the left end of the filler cord to tighten it. Thread the end of the cord through a darning needle and draw it to the wrong side of the fabric and cut.

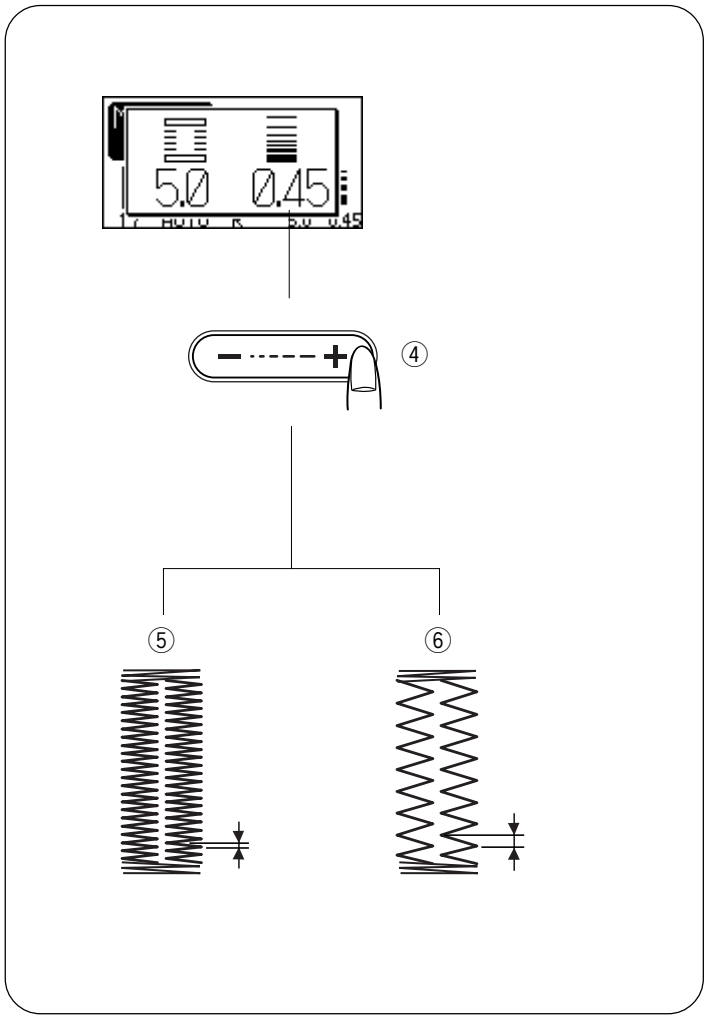
**NOTE:**
Set the stitch width in accordance with the thickness of the filler cord used.
To cut the buttonhole opening, refer to page 41.




## Adjusting buttonhole width

Press the stitch width adjustment key and the adjustment window opens.
Press on “+“ to increase the buttonhole width.
Press on “–“ to decrease the buttonhole width.

① Stitch width adjustment key
② Narrower buttonhole
③ Wider buttonhole

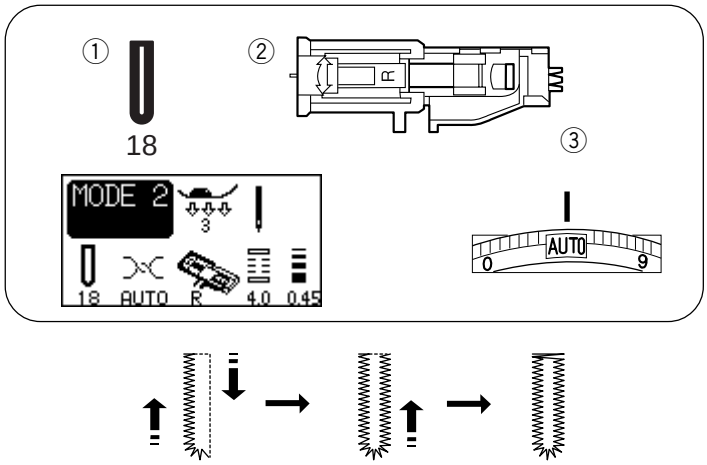



## Adjusting stitch density

Press the stitch length adjustment key, the adjustment window opens.
Press on “+” to make the buttonhole stitch coarser.
Press on “–“ to make the buttonhole stitch denser.

④ Stitch length adjustment key
⑤ Denser buttonhole
⑥ Coarser buttonhole

**NOTE:**
To alter the buttonhole width and density while sewing a test buttonhole, stop the machine at the left or right row of the buttonhole then adjust the stitch width and density to find the appropriate settings.
Press the memory key so that you can sew a buttonhole with the new settings.
The setting will return to the preset value when the power switch is turned off or selecting another stitch.



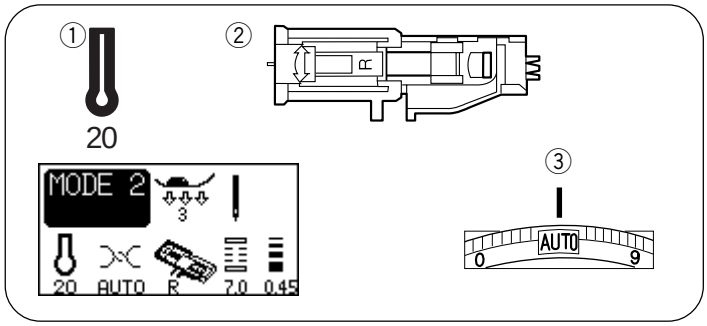


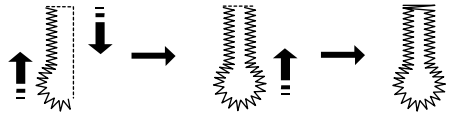

## Round-end buttonholes (#18)

**Machine settings**

① Pattern: 18 (mode 2)
② Presser foot: Automatic buttonhole foot R
③ Thread tension: AUTO

* The sewing procedue is same as buttonhole #17 (see pages 39 to 41).



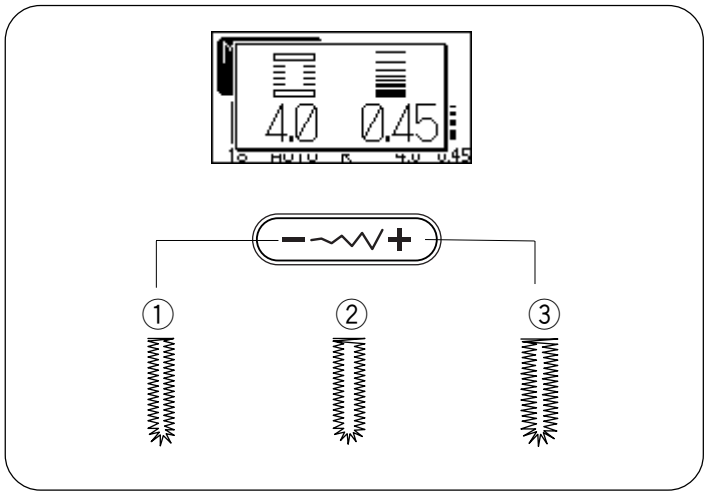



## Keyhole buttonholes (#20)

**Machine settings**

① Pattern: 20 (Mode 2)
② Presser foot: Automatic buttonhole foot R
③ Thread tension: AUTO

* The same sewing sequence (Buttonholes 18 and 20) applies to buttonholes 19, 21, 22

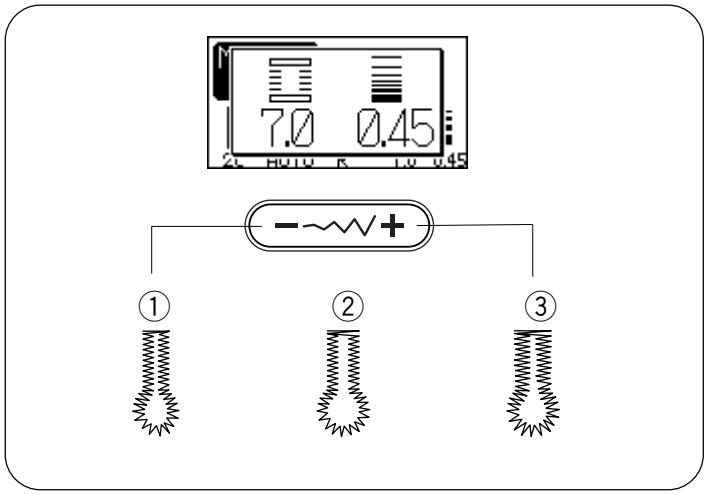



## Adjusting buttonhole width on stitch pattern #18

Press the stitch width adjustment key, the adjustment window opens.
Press “+” to make the buttonhole wider.
Press “–“ to make the buttonhole narrower.

① Stitch width 2.5
② Stitch width 4.0
③ Stitch width 5.5

* The stitch width should be adjusted between 5.5 to 7.0.

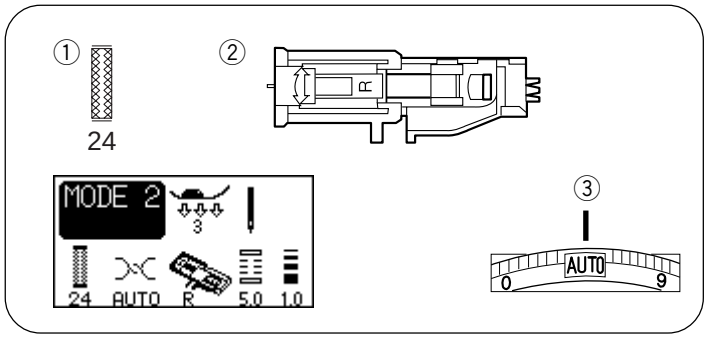



## Adjusting buttonhole width on stitch pattern #20

Press the stitch width adjustment key, the adjustment window opens.
Press “+” to make the buttonhole wider.
Press “–“ to make the buttonhole narrower.

① Stitch width 5.5
② Stitch width 6.5
③ Stitch width 7.0

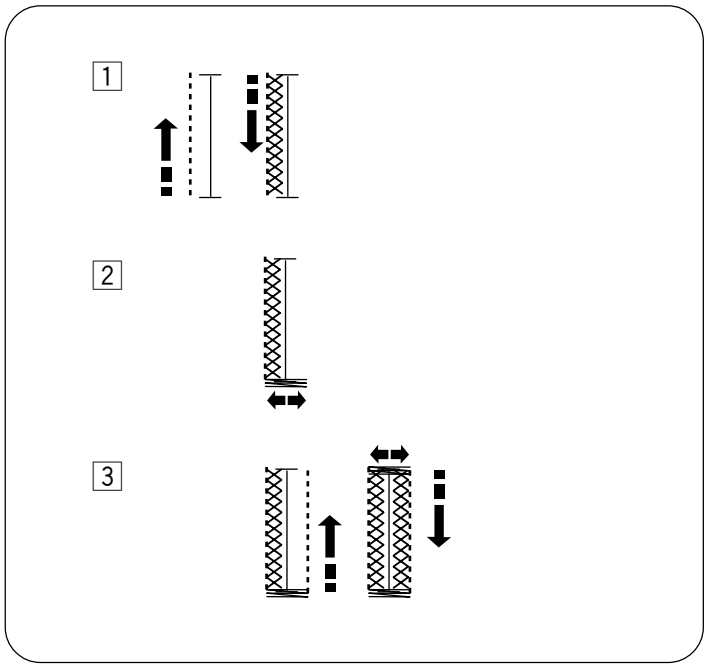
* The stitch width should be adjusted between 5.5 to 7.0.




## Knit buttonhole (#24)

**Machine settings**

① Pattern: 24 (mode 2)
② Presser foot: Automatic buttonhole foot R
③ Thread tension: AUTO

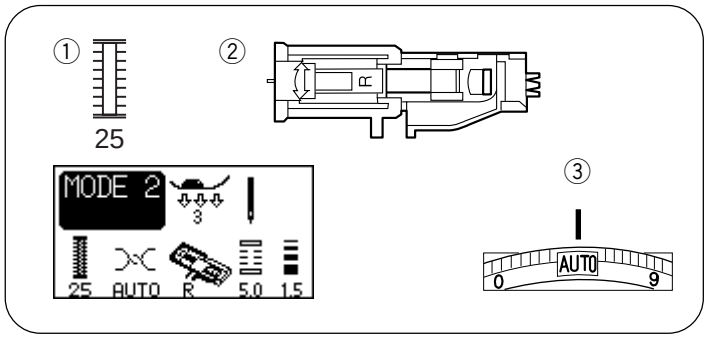



1 Sew the left row.

2 Sew the front bartack.

3 Sew the rear bartack and right row. The machine will automatically stop when buttonhole sewing is finished.

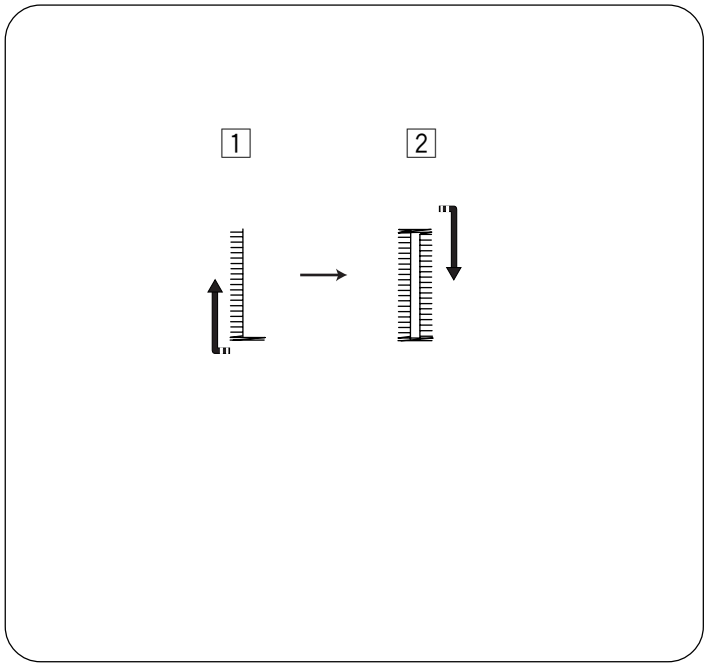
**NOTE:**
If the last few stitches of the right row extend beyond the bartack, make the stitch length shorter to correct it.




## Faux chain buttonhole (#25)

**Machine settings**

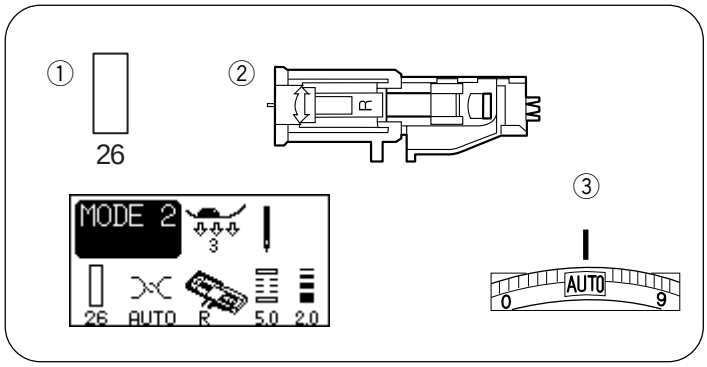
① Pattern: 25 (mode 2)
② Presser foot: Automatic buttonhole foot R
③ Thread tension: AUTO




1 Sew the front bartack and left row.

2 Sew the rear bartack and right row.

**NOTE:**
If the last few stitches of the right row extend beyond the bartack, make the stitch length shorter to correct it.

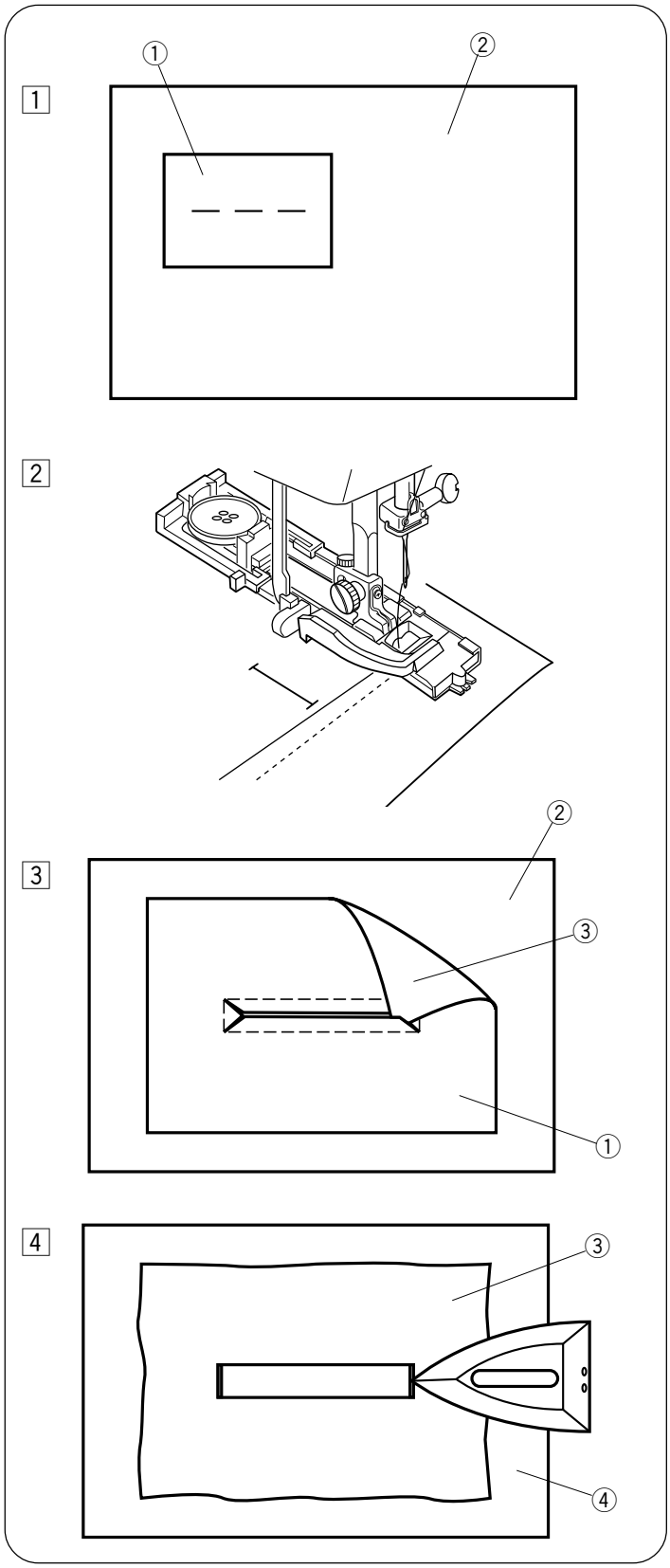



## Welted buttonhole

**Machine settings**

① Pattern: 26 (mode 2)
② Presser foot: Automatic buttonhole foot R
③ Thread tension: AUTO

A welted buttonhole is made by stitching a strip or patch of fabric to the buttonhole.
Welted buttonholes are particularly suited to tailored garments, but are not recommended for sheer or delicate fabrics where the patch might show through or add bulk.



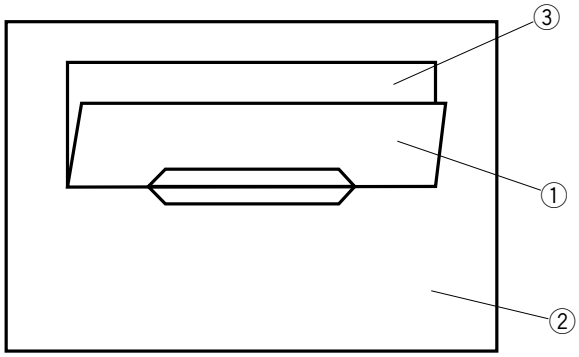

1 Baste a patch to the garment fabric with the right sides together.
① Wrong side of patch
② Right side of garment fabric

2 Select pattern 26. Sew the welted buttonhole on both fabrics together (see pages 39–41 for sewing procedure.)

3 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

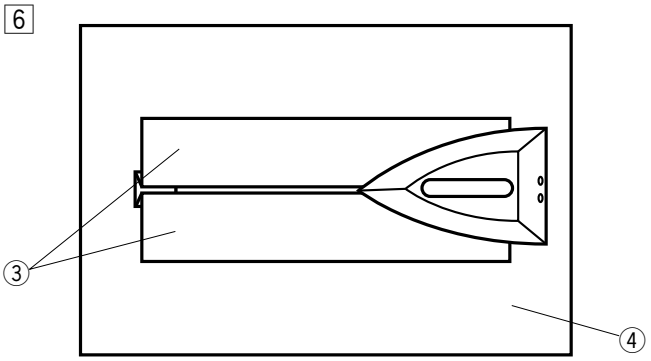
4 Pull out the patch until the right side of the patch is showing. Use an iron to press both corner ends until they are squared off.
③ Right side of patch
④ Wrong side of garment fabric

5



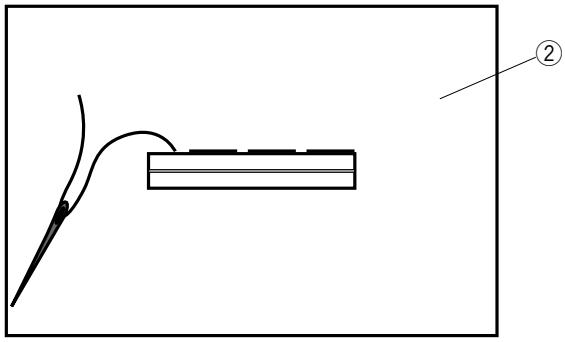

5 Fold back each side of the patch to form buttonhole lips.
① Wrong side of patch
② Right side of garment fabric
③ Right side of patch

6



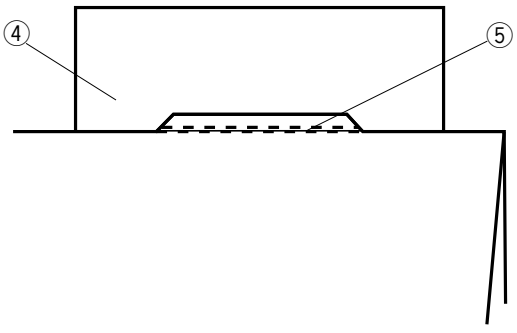

6 Press both folds with an iron.
③ Right side of patch
④ Wrong side of garment fabric

7



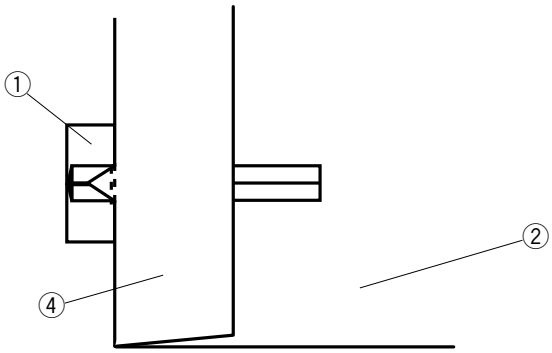

7 Baste both edges of the seam with a needle and thread as shown.
② Right side of garment fabric

8



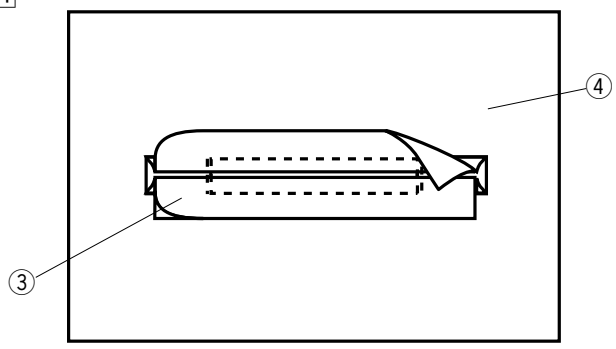

8 Fold over the length of the garment fabric, sew back and forth beside the original seam to secure flaps of the patch.
④ Wrong side of garment fabric
⑤ Sew back and forth

9



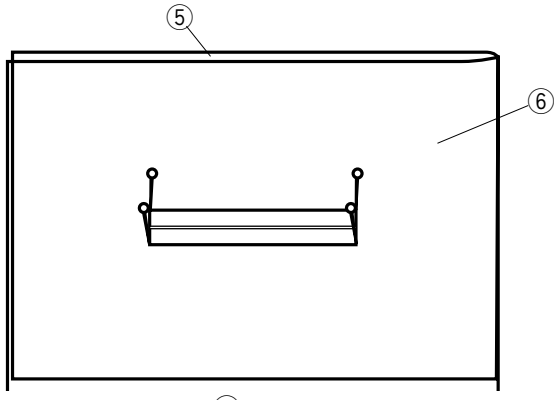

9 Fold over the end of fabric and sew back and forth three times over the triangular end.
① Wrong side of patch
② Right side of garment fabric
④ Wrong side of garment fabric

11



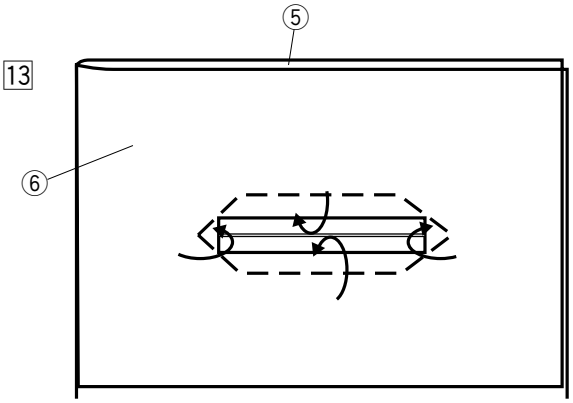

11 The patch should be cut 1 to 1.5 cm (7/16˝ – 10/16˝) away from the hole. The corners should be cut rounded off as shown.
③ Right side of patch
④ Wrong side of garment fabric

12



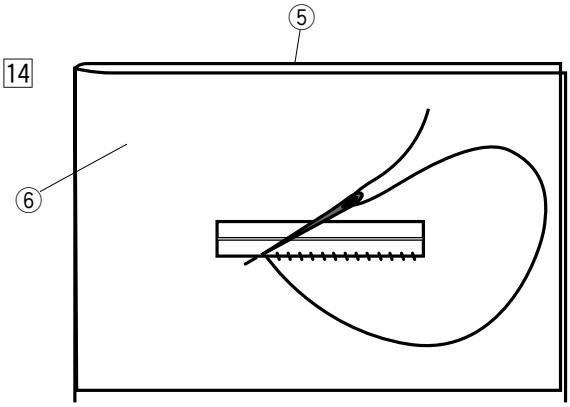

12 Place the facing on the wrong side of the garment fabric. Mark the 4 corners with pins as shown.
⑤ Facing
⑥ Garment fabric

13



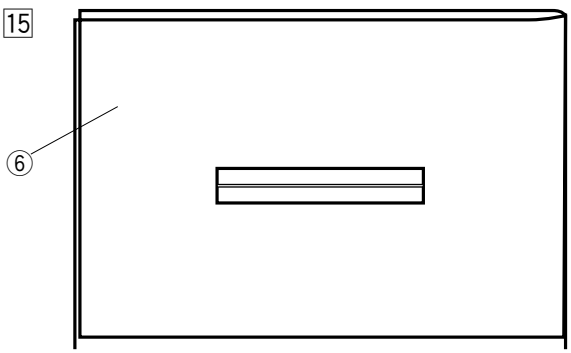

13 Turn all the layers over and cut the buttonhole opening on the facing in the same way as step 3.
Four marker pins show you the corner points on the facing. Fold back each flap between the facing and patch.
⑤ Facing
⑥ Garment fabric

14

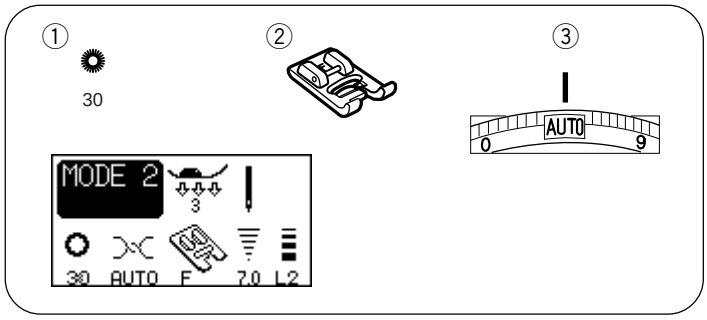



14 Stitch around the opening with a needle and thread as shown.
⑤ Facing
⑥ Garment fabric

15




15 Welted buttonhole is complete.
⑥ Garment fabric

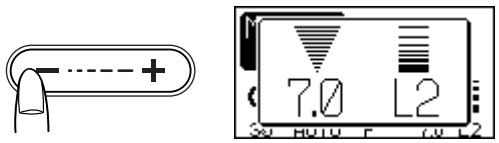



## Eyelet

**Machine settings**

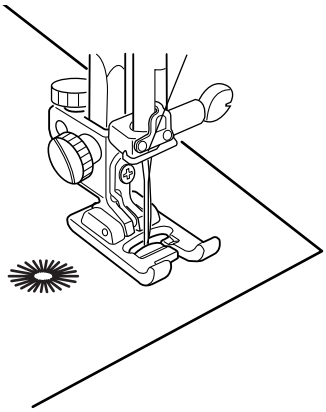
① Pattern: 30 (mode 2)
② Presser foot: Satin stitch foot F
③ Thread tension: AUTO

The eyelet is used for belt holes etc.




**To sew**

Depress the foot control to sew.
The machine will sew an eyelet and stop automatically when completed.
Open the eyelet with an awl, punch or pointed scissors.

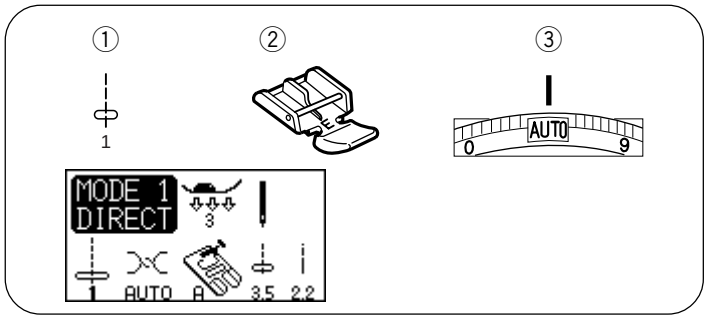


**Adjusting the shape of an eyelet**

Correct the shape of the eyelet as follows:
If the eyelet gap opens, press “–“ on the stitch length adjustment button.
If the eyelet overlaps, press “+“ on the stitch length adjustment button.

**NOTE:**

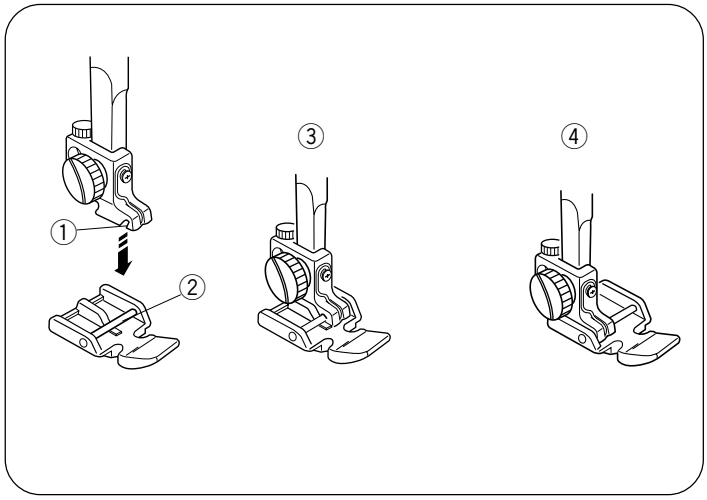
The shape can be adjusted within L1 to L3 (default setting is L2).




## Zipper sewing

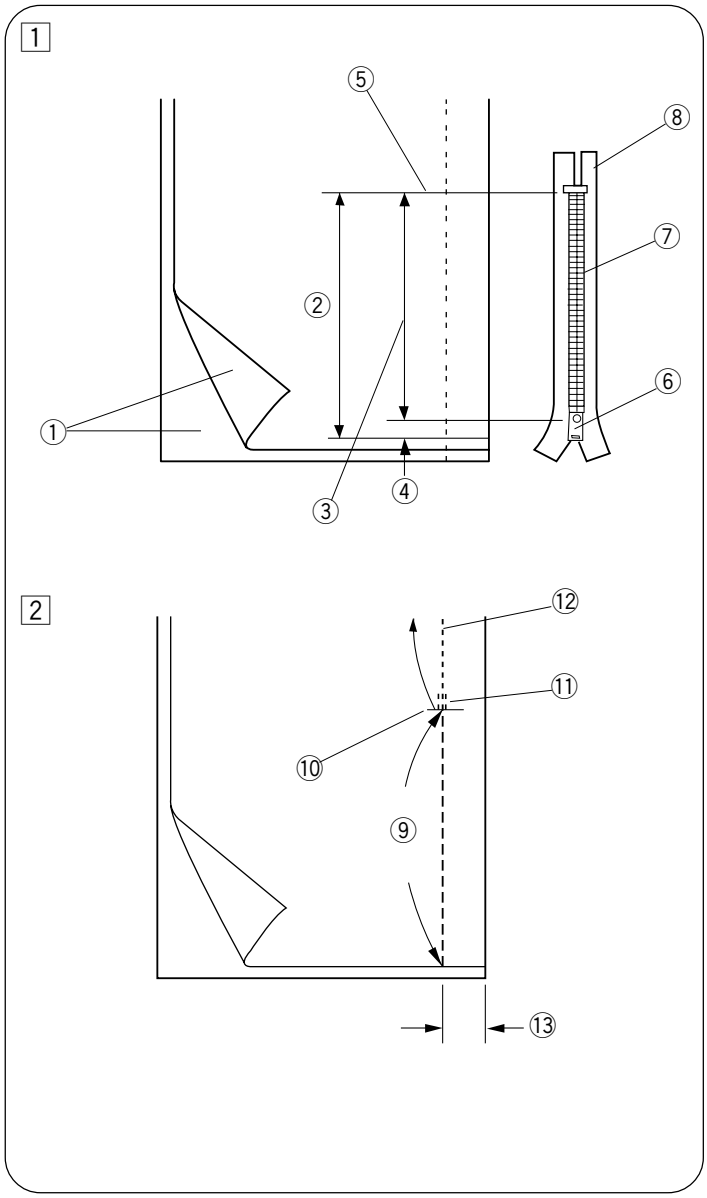
**Machine settings**

| | |
|---|---|
| ① Pattern: | 1 (Mode 1) |
| ② Presser foot: | Zipper foot E |
| ③ Thread tension: | AUTO |




To sew on the left side of the zipper, attach the foot holder to the right pin on the zipper foot.
To sew on the right side of the zipper, attach the foot holder to the left pin on the zipper foot.

① Groove
② Pin
③ To sew left side
④ To sew right side




**Fabric preparation**

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

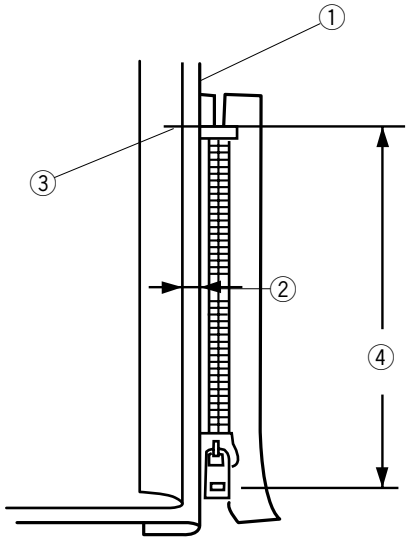
① Right sides of the fabric
② Opening size
③ Zipper size
④ 3/8˝ (1 cm)
⑤ End of opening
⑥ Slider
⑦ Zipper teeth
⑧ Zipper tape
⑨ Basting

2 Place the right sides of the fabric together and sew to the end of the opening with a 2 cm (13/16˝) seam allowance. Reverse Stitch to lock the seams.
Manually increase the stitch length to 5.0 and baste the zipper opening with the thread tension loosened.

⑩ End of the Zipper Opening
⑪ Reverse Stitches
⑫ Seam Stitches
⑬ 2 cm (13/16˝) Seam Allowance

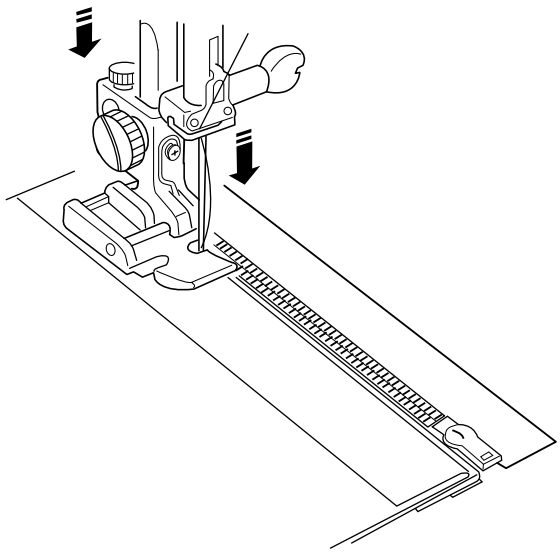
**To sew**

3



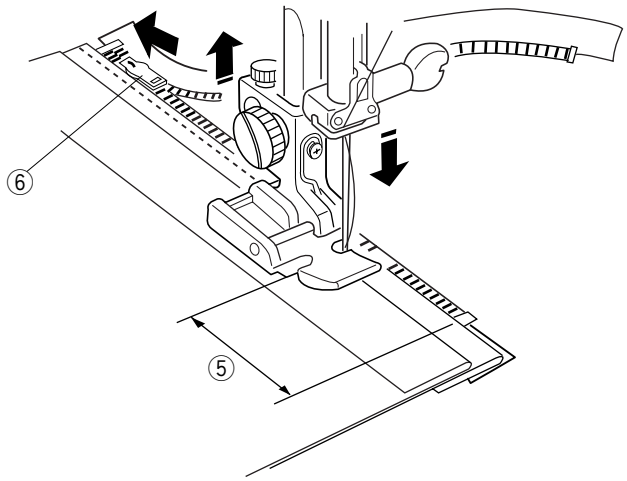

3 Fold back the left seam allowance. Turn the right seam allowance under to form a 0.2 to 0.3 cm (1/8″) fold. Place the zipper teeth next to the fold and pin it in place.
Set the stitch length and thread tension back to the original setting.
① Lower fabric
② 0.2 to 0.3 cm (1/8″) fold
③ End of the opening
④ Opening size

4



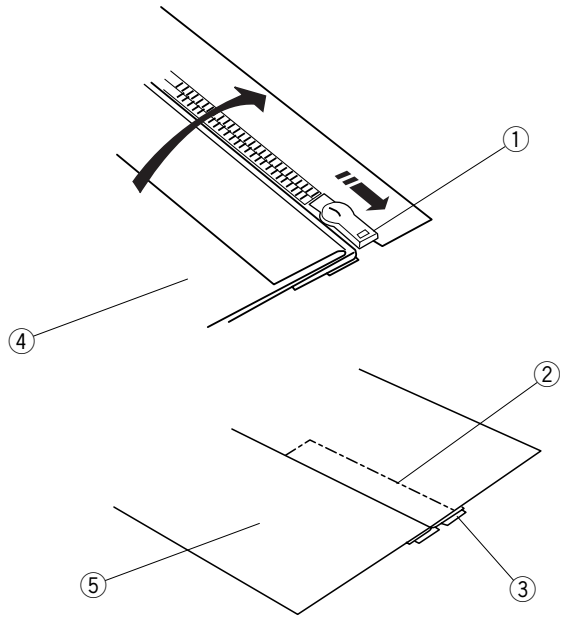
4 Attach zipper foot E with the pin on the right hand side.
Lower the foot onto the topside at the bottom of the zipper so that the needle pierces the fabric next to the fold and the zipper tape.
Sew along the zipper guiding the zipper teeth along the bottom edge of the foot.

5



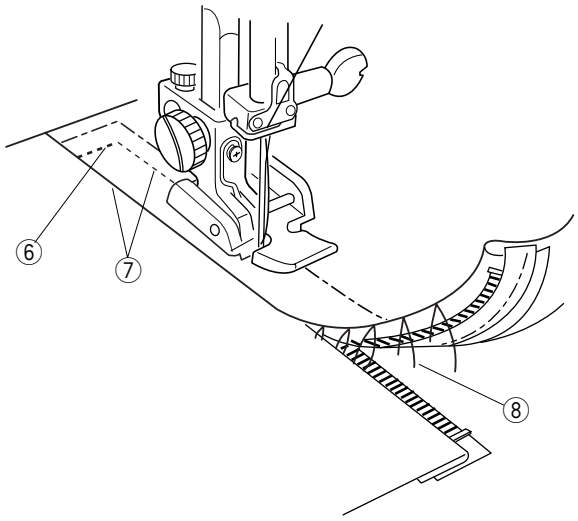

5 Sew through all layers next to the fold.
Stop 5 cm (2″) ⑤ before zipper foot E reaches the slider on the zipper tape.
Lower the needle slightly into the fabric.
Raise the foot and open the zipper. Lower the foot and stitch the remainder of the seam.
⑤ 5 cm (2″)
⑥ Slider

6



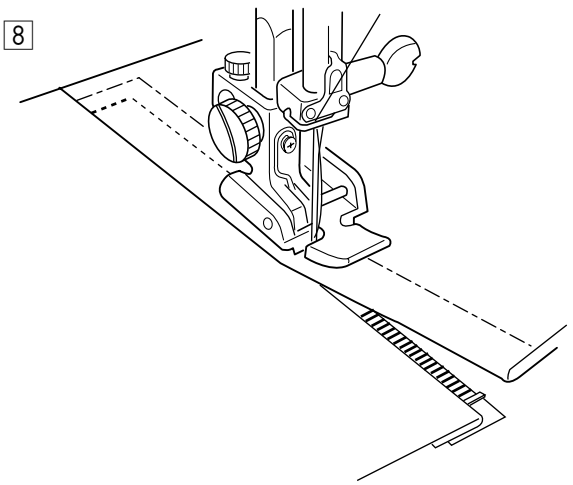

6 Close the zipper ① and spread the fabric open flat with the right side facing up.
Baste the opened fabric and zipper tape ③ together.
① Zipper
② Basting stitches
③ Zipper tape
④ Wrong side of fabric
⑤ Right side of fabric

7

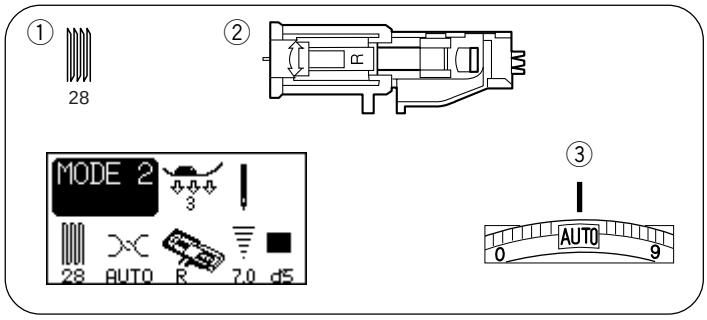



7 Re-attach the zipper foot E with the left pin.
Backstitch across the end of opening to 0.7 – 1 cm (3/8˝).
Stitch through the garment and zipper tape, guiding the zipper teeth along the bottom edge on the foot.
Stop about 5 cm (2˝) from the top of the zipper.
Unfasten the basting stitches.
⑥ End of Opening
⑦ 0.7 – 1 cm (3/8”)
⑧ Basting Stitches

8



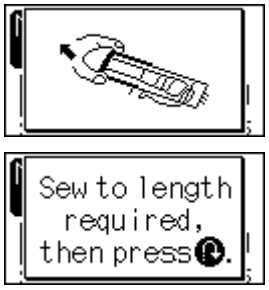
8 Lower the needle into the fabric, raise the foot, and open the zipper.
Lower the foot and stitch the remainder of the seam, making sure the fold is even.
Remove the basting threads after seaming.

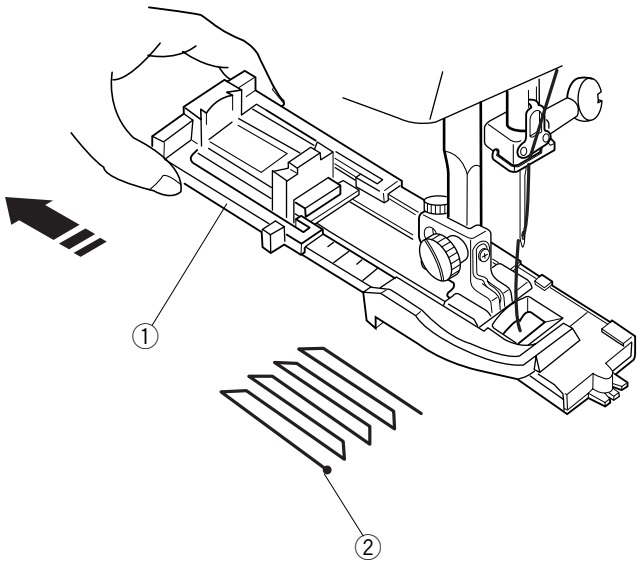


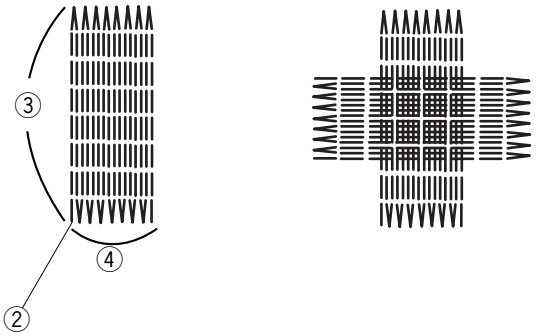

## Darning

**Machine settings**

| | |
|---|---|
| ① Pattern: | 28 (mode 2) |
| ② Presser foot: | Automatic buttonhole foot R |
| ③ Thread tension: | AUTO |




1 Pull the button holder to the rear as far as it will go.
① Button holder

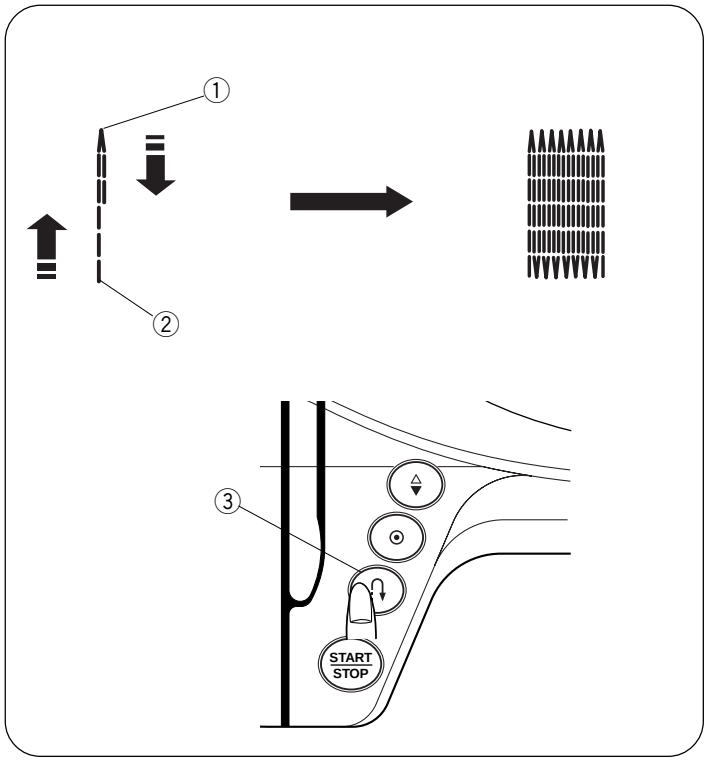
2 Place the garment under the foot.
Press the up/down needle position button twice.
Remove the fabric to the left to draw both threads under the foot and place the fabric back under the foot.

3 Lower the needle at the starting point, then lower the foot.
② Starting point

4 Depress the foot control and the machine will sew a darning 2 cm (3/4˝) long and stop automatically.

Repeat sewing in a different direction until the darning covers the rip or hole.

**NOTE:**
The maximum size of darning is 2 cm (3/4˝) long and 0.7 cm (1/4˝) wide.
③ Maximum length 2 cm (3/4˝)
④ Maximum width 0.7 cm (1/4˝)
⑤ Starting point

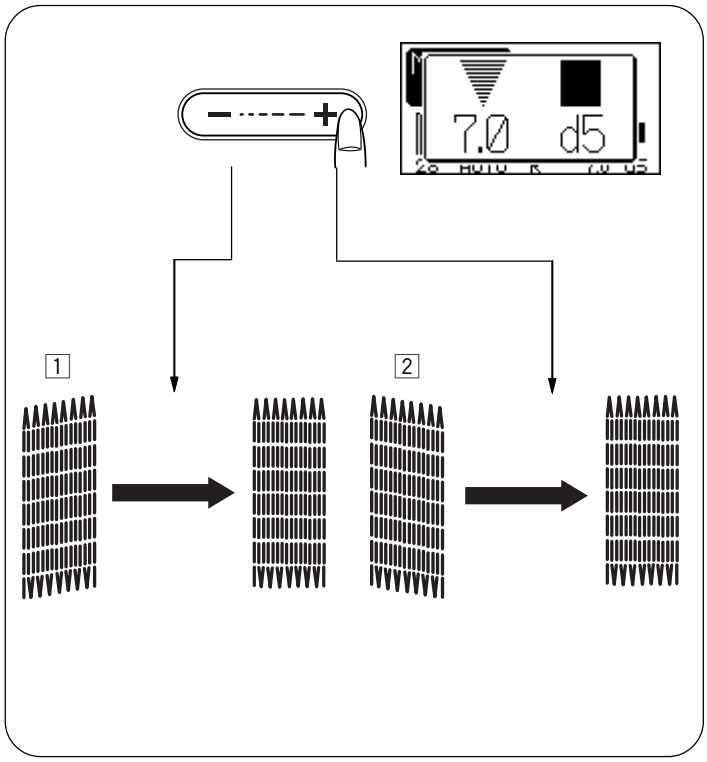



**To sew a shorter darning**
To sew a darning shorter than 2 cm (3/4˝), first stop the machine after sewing the required length, then press the reverse button.
The required length has been determined.

Restart the machine and continue sewing until the machine stops automatically.
① Required length
② Starting point
③ Reverse stitch button

**To sew the same size darning**
Simply restart the machine to sew another darning at the same size.

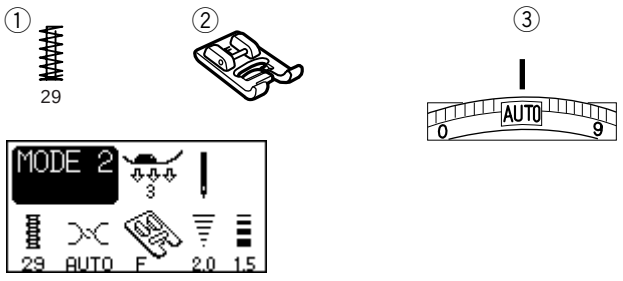
**To sew the darning at a different size**
Press the memory key and start sewing from the beginning.




**To adjust the evenness of darning**
The evenness of darning may vary depending on the sewing conditions, such as type of fabrics, number of layers etc. You can correct the unevenness of darning with the stitch length adjustment button.

1 If the left corner is lower than the right side, press "–" to correct it.
2 If the right corner is lower than the left side, press "+" to correct it.

**NOTE:**
The evenness can be adjusted within d1 to d9 (default setting is d5).

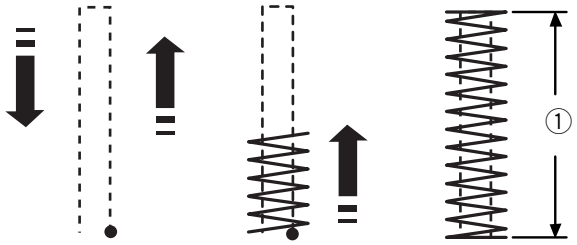



## Tacking

**Machine settings**

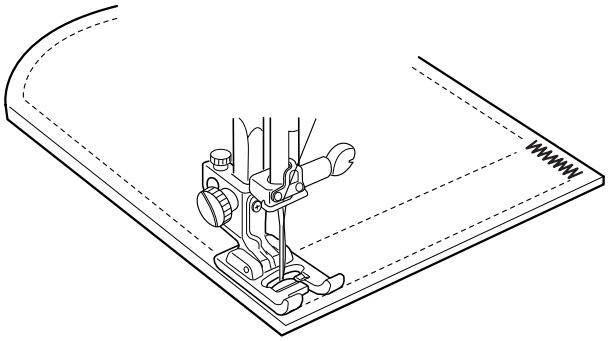
| | |
|---|---|
| ① Pattern: | 29 (mode 2) |
| ② Thread tension: | Satin stitch foot F |
| ③ Presser foot: | 3–6 |

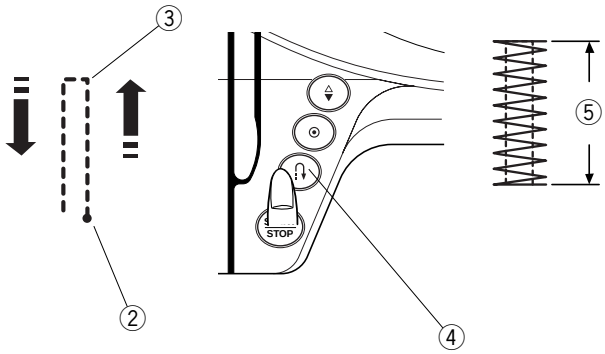
Tacking is used to reinforce pockets, crotches and belt carriers where extra strength is needed.




**To sew**

Depress the foot control until the machine stops automatically.
The machine will sew a tacking 1.5 cm (9/16˝) long automatically.
① 1.5 cm (9/16 ˝)






**To sew a shorter tack**

To sew a tack shorter than 1.5 cm (9/16˝), first stop the machine after sewing the required length ③, and then press the reverse stitch button ④.
The required length has been determined.

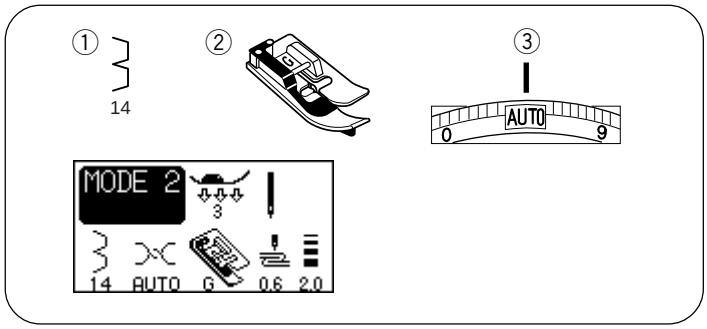
Restart the machine and continue sewing until the machine stops automatically.
② Starting point
③ Required length
④ Reverse stitch button
⑤ Tack length

**To sew the same size tack**

To sew another tack at the same size, simply restart the machine and it will stop automatically when finished sewing.

**To sew a tack at a different size**

To sew the next tack in a different size, press the memory key and start sewing. Press the reverse stitch button after sewing the required length.
The required length has been determined.



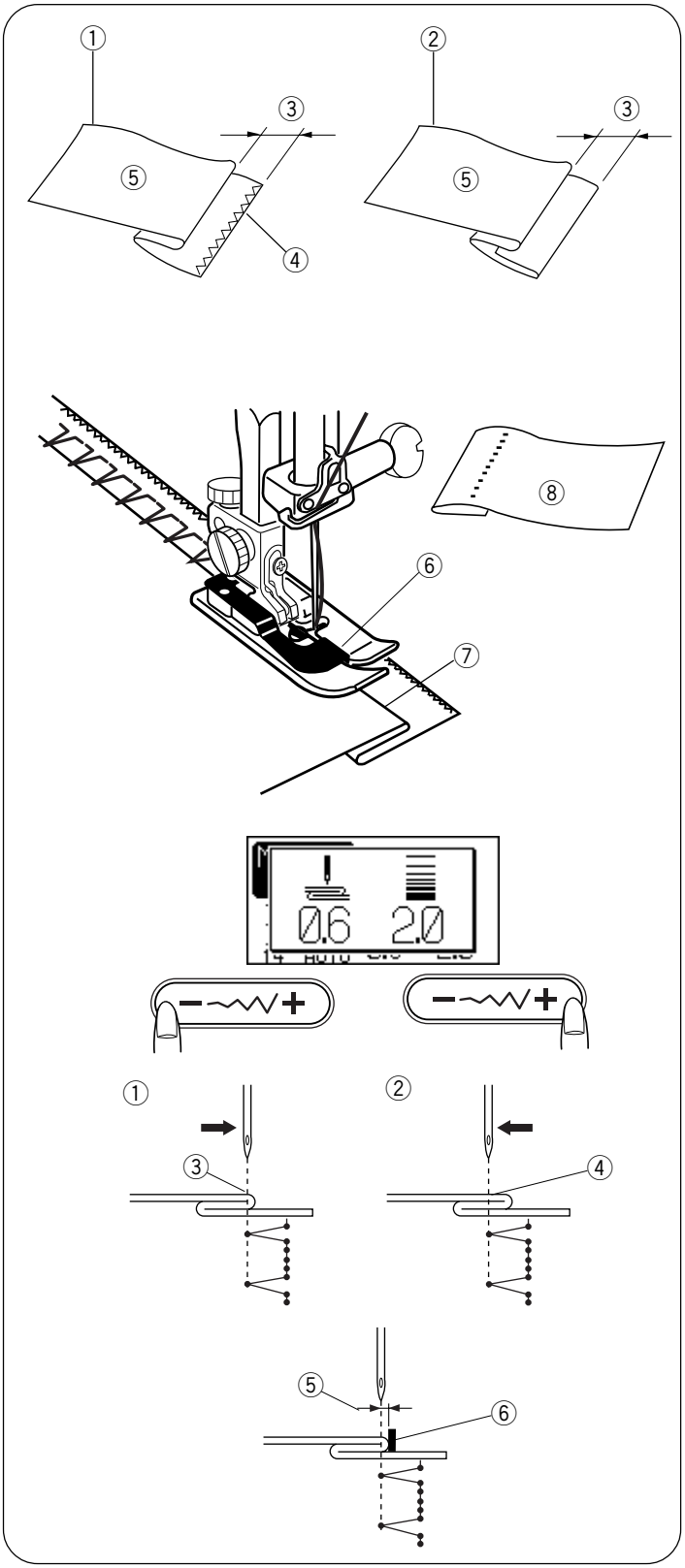

## Blind hem

### Machine settings

① Pattern: 14 (mode 2)
② Presser foot: Blind hem foot G
③ Thread tension: AUTO

Select pattern 14 for woven fabrics or pattern 15 for elastic fabrics.

**NOTE:**
The stitch width of the patterns 14 and 15 cannot be changed, but the needle drop position will move.




### How to fold the fabric

Fold the fabric to make a hem as shown.
① Heavy fabric
② Fine to medium fabric
③ 0.4–0.7 cm (3/16″–1/4″)
④ Overcasted edge of fabric
⑤ Wrong side of fabric

### To sew

Position the fabric so that the fold comes to the left side of the guide on the foot.
Lower the presser foot.
Adjust the position of the needle swing with the stitch width adjustment button so that the needle just pierces the folded edge of the fabric when the needle comes over to the left side.

Sew guiding the fold along the guide.
⑥ Guide on the foot
⑦ Fold

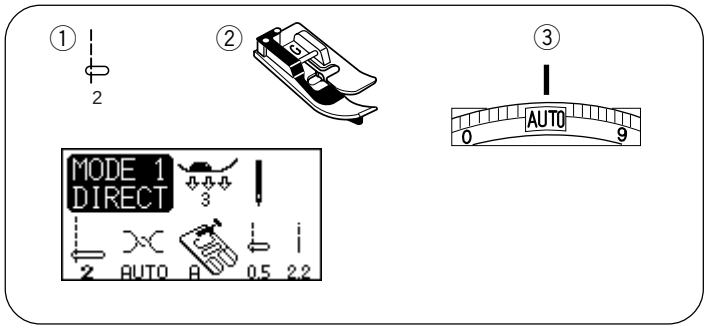
Open the fabric with the right side up.
The stitches on the right side of the fabric are almost invisible.
⑧ Right side of the fabric

### Changing needle drop position

Press the stitch width adjustment button.
The LCD screen shows the left needle position from the guide in millimeters.

① Press “–“ to move the needle to the right.
② Press “+” to move the needle to the left.

③ Left needle drop position
④ Right needle drop position
⑤ Guide on foot
⑥ Distance between the left needle position and the guide

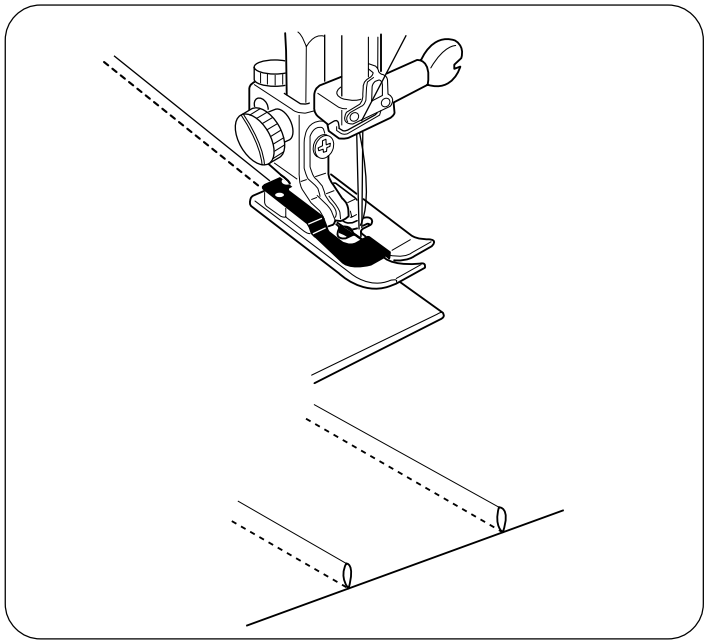



## DECORATIVE STITCHES

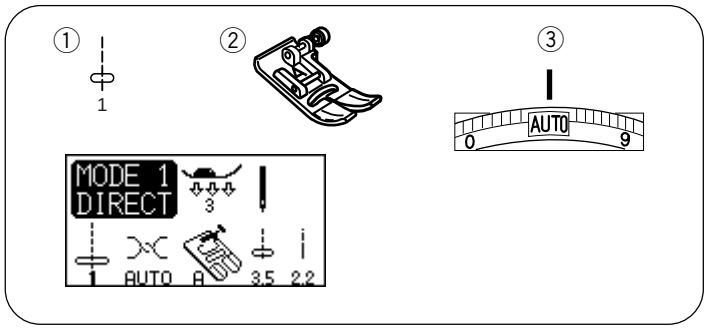
## Pintucking

**Machine settings**

① Pattern: 2 (mode 1)
② Presser foot: Blind hem foot G
③ Thread tension: AUTO



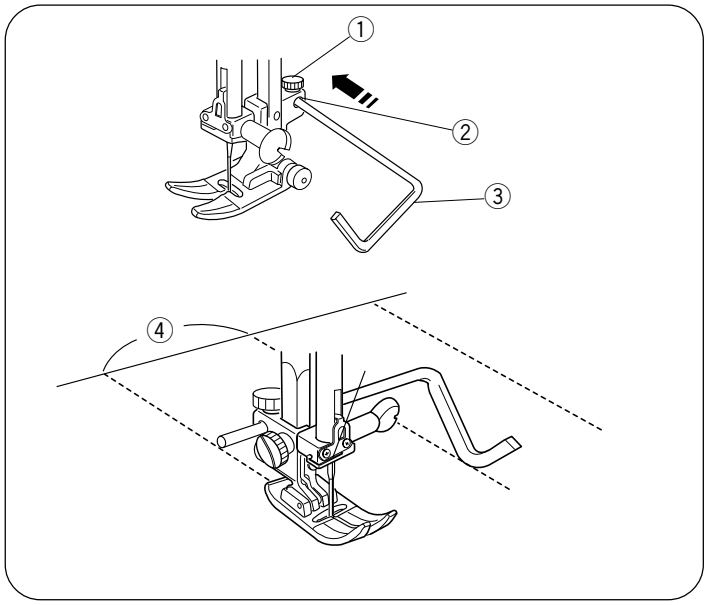
Fold a fabric with the right side together.
Place the folded fabric under the blind hem foot.
Align the edge of the fold with the guide on the foot, and lower the foot.
Sew while guiding the edge of the fold along the guide.
Open the fabric and press the tuck to one side.




## Quilting

**Machine settings**

① Pattern: 1 (mode 1)
② Presser foot: Zigzag foot A
③ Thread tension: AUTO




**To sew**

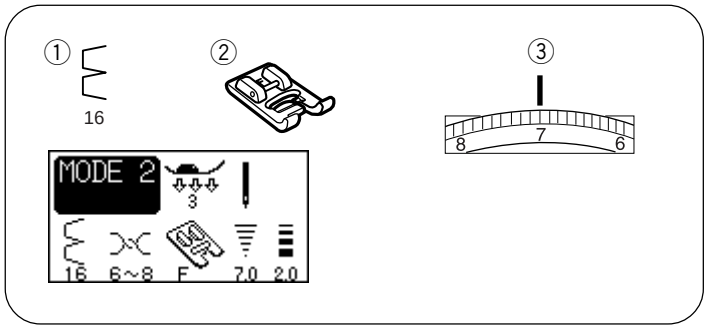
① Quilter screw
② Hole
③ Quilting bar
④ Width of quilting stitch

Loosen the quilter screw ① on the back of the presser foot as shown.

Slide the quilting bar ③ into the hole ② under the screw to the width of quilting stitches you desire.

Tighten the screw ①.

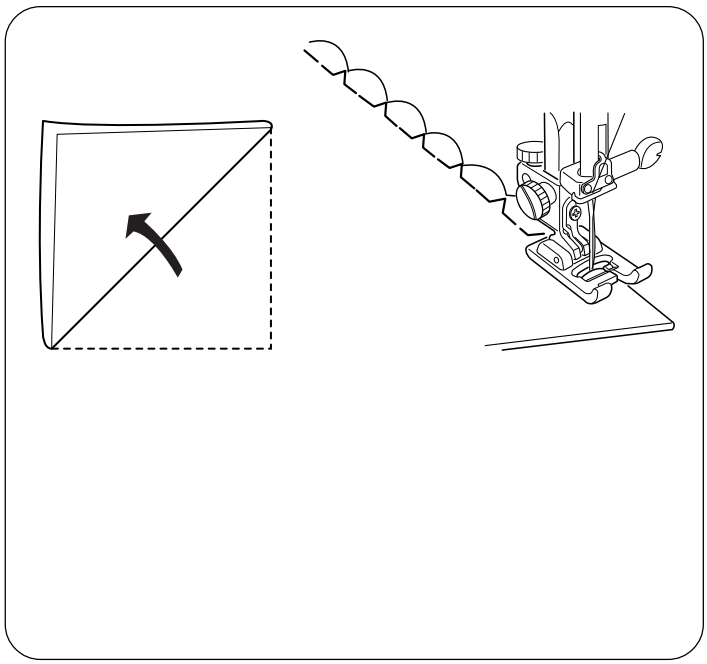
Sew guiding the quilter over the previous row of stitching.




## Shell tuck

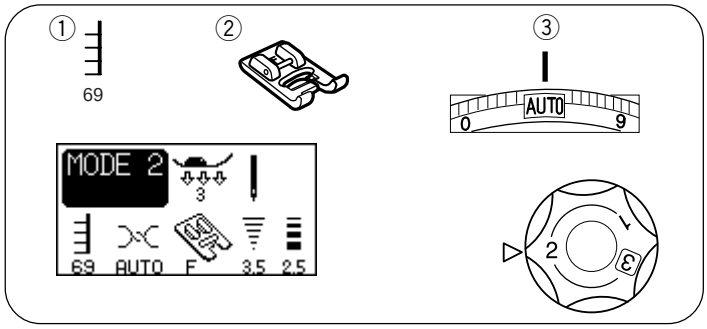
**Machine settings**

| | |
|---|---|
| ① Pattern: | 16 (mode 2) |
| ② Presser foot: | Satin stitch foot F |
| ③ Thread tension: | 6–8 |



Use a light weight fabric (tricot, for example). Fold the fabric as shown and stitch on the fold. Allow the needle to just clear the folded edge to create a shelled edge. You may need to increase the needle thread tension slightly.

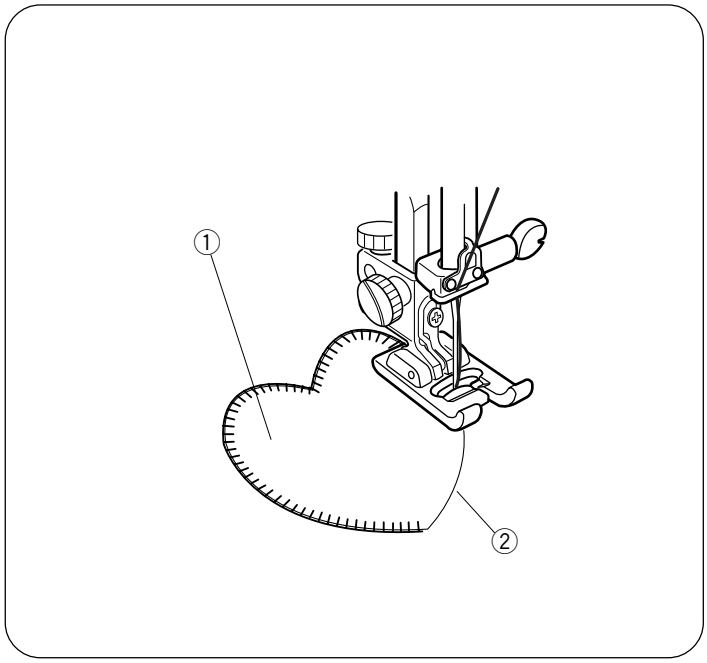
If you sew rows of shell stitches, space the rows at least 5/8˝ (1.5 cm) apart. You can also sew shell stitches on knits or soft silky woven fabrics, in any direction.




## Applique

**Machine settings**

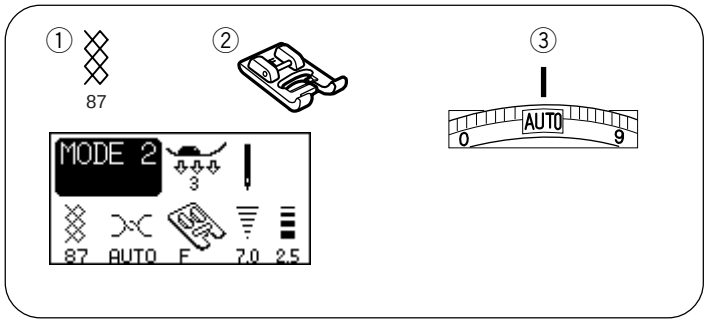
| | |
|---|---|
| ① Pattern: | 69 (mode 2) |
| ② Presser foot: | Satin stitch foot F |
| ③ Thread tension: | AUTO |
| ④ Foot pressure dial: | 2 |




Applique, a technique for stitching fabric shapes onto another fabric, opens limitless design possibilities. Dimension and texture can be added by lightly stuffing all or part of design.
This machine has several different patterns that can be used to enhance your applique.

① Applique piece
② Edge of the applique

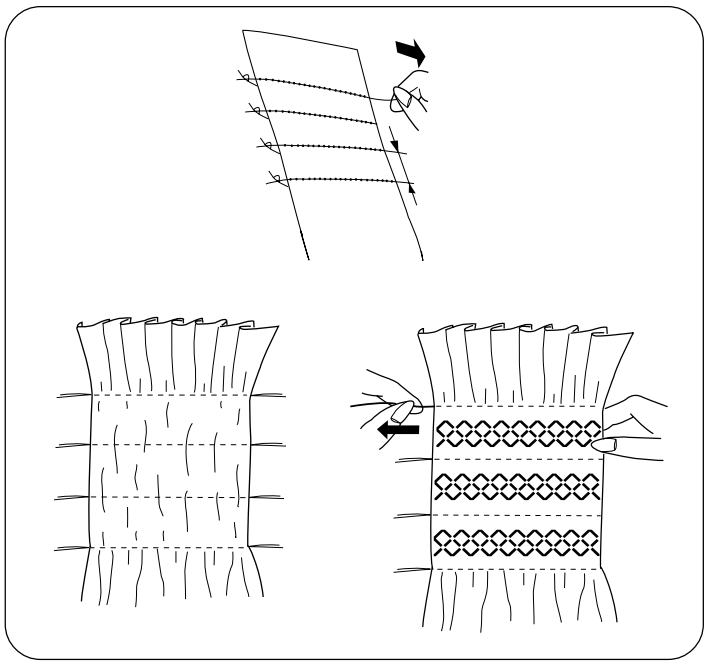
In this type of applique, raw edges are folded under. First cut the applique design out of card board. Next, place the cardboard design on the fabric. Then cut the fabric slightly larger than the cardboard. Fold the fabric raw edge around the cardboard and press to form a perfectly shaped design. Remove the cardboard. Tape or pin the applique in place and sew, using the slit on the satin stitch foot as a guide next to the folded edge of the applique.




## Smocking

**Machine settings**

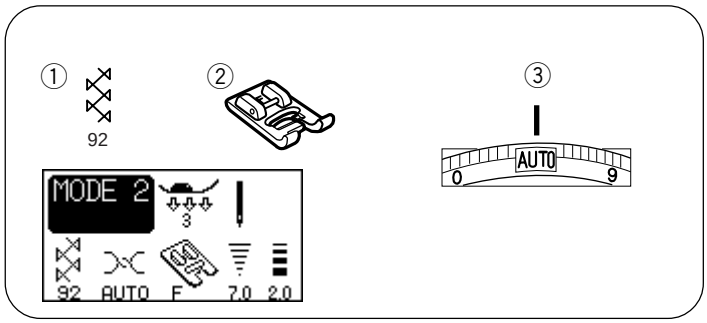
| | |
|---|---|
| ① Pattern: | 87 (mode 2) |
| ② Presser foot: | Satin stitch foot F |
| ③ Thread tension: | AUTO |



Smocking is a delicate decorative treatment used on children's clothes or women's blouses.

Choose a soft and lightweight fabric such as batiste, gingham or challis. Cut the fabric three times wider than the projected width. Set stitch length at "4" and sew rows of straight stitches 3/8˝ (1.0 cm) apart across the area to be smocked.
Knot the threads along one edge. From the other edge, pull the bobbin threads (bottom threads) to distribute the gathers evenly.

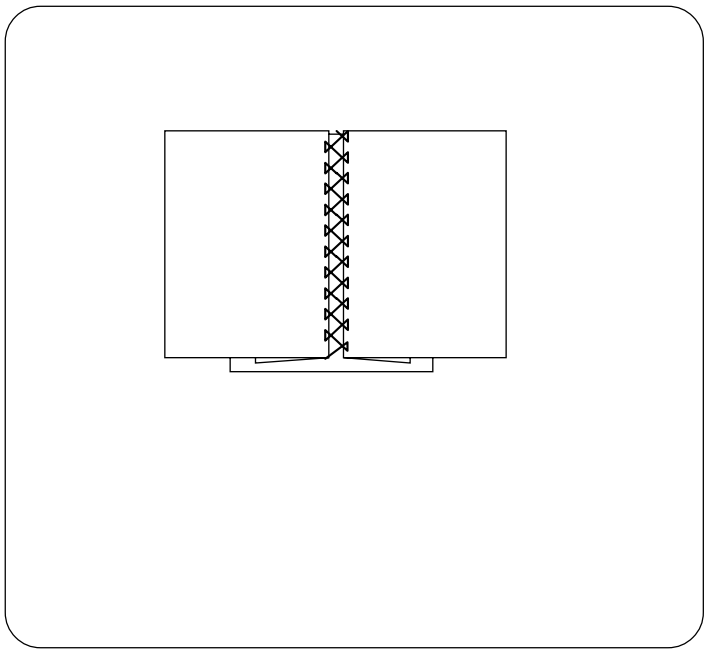
Sew the smocking stitches between the gathered rows. Remove the straight stitches between the gathered rows.



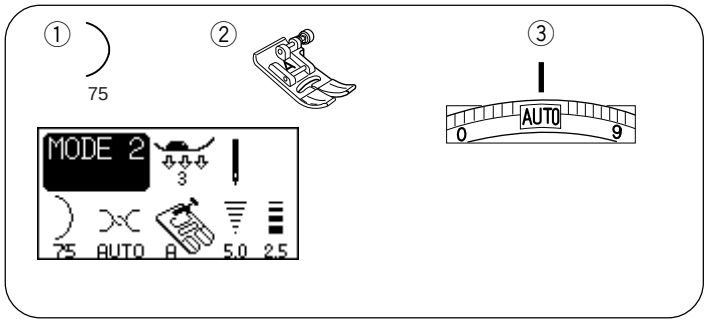

## Fagoting

**Machine settings**

| | |
|---|---|
| ① Pattern: | 92, 84, 85 or 93 (mode 2) |
| ② Presser foot: | Satin stitch foot F |
| ③ Thread tension: | AUTO |



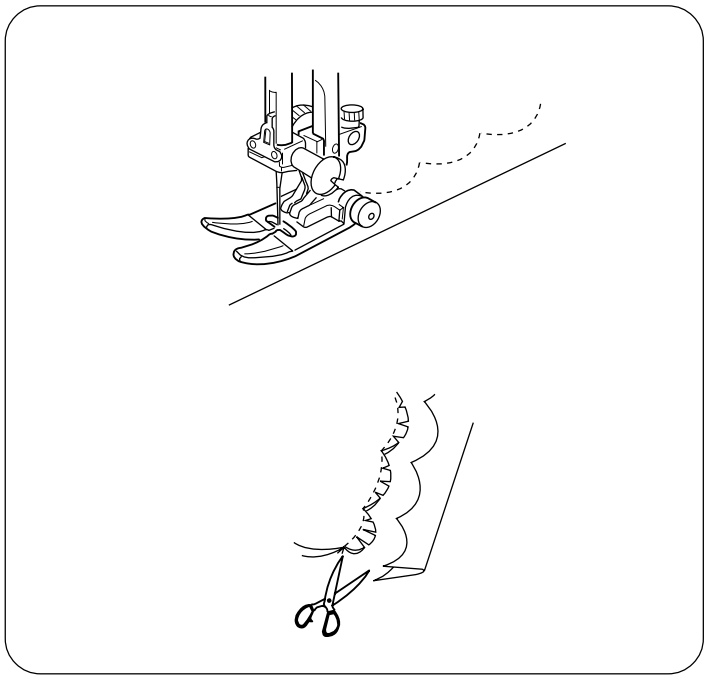
Use this stitch to join two pieces of fabric to create an open work appearance and add design interest.
Fold under each fabric edge 5/8˝ (1.5 cm) and press. Pin the two edges to paper or tear away backing 1/8˝ apart. Sew slowly, guiding the fabric so the needle catches the folded edge on each side.
After finishing sewing, tear away the paper.




## Scallop (A)

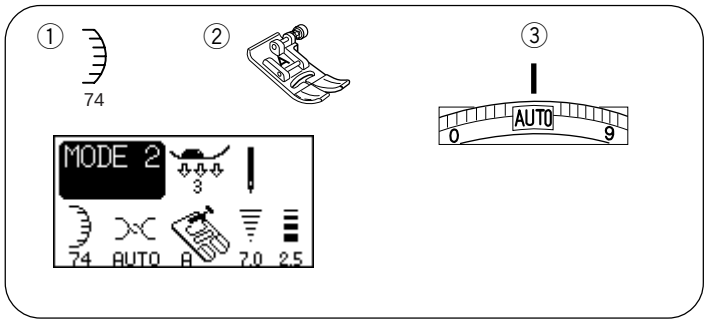
**Machine settings**

| | |
|---|---|
| ① Pattern: | 75 (mode 2) |
| ② Presser foot: | Zigzag foot A |
| ③ Thread tension: | AUTO |



Fold the fabric with right sides together. Sew scallops 3/8″ (1 cm) from folded edge.

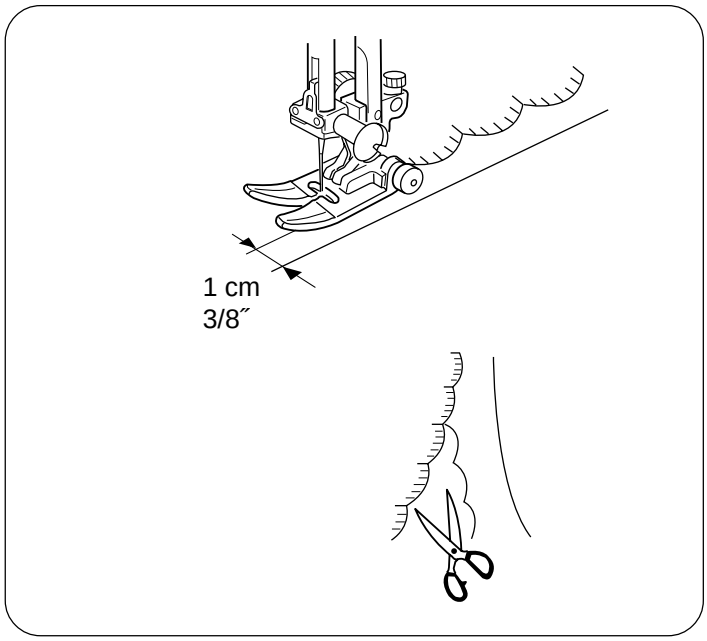
Trim close to stitching leaving 1/8″ (0.3 cm) seam allowance.
Clip seams as shown or trim with pinking shears.
Turn the scallops out to right side and press.




## Scallop (B)

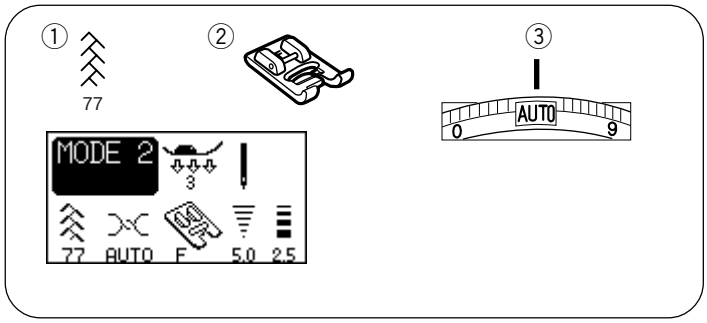
**Machine settings**

| | |
|---|---|
| ① Pattern: | 74 (mode 2) |
| ② Presser foot: | Zigzag foot A |
| ③ Thread tension: | AUTO |




Sew the stitches approximately 3/8″ (1 cm) inside of the edge of fabric.

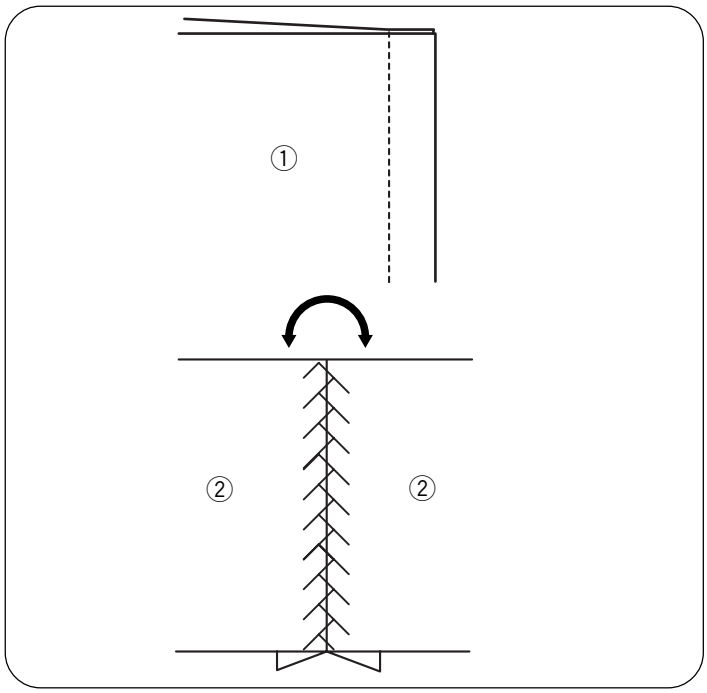
Trim the outside of the stitches as shown. Make sure not to cut the thread.




## Patchwork

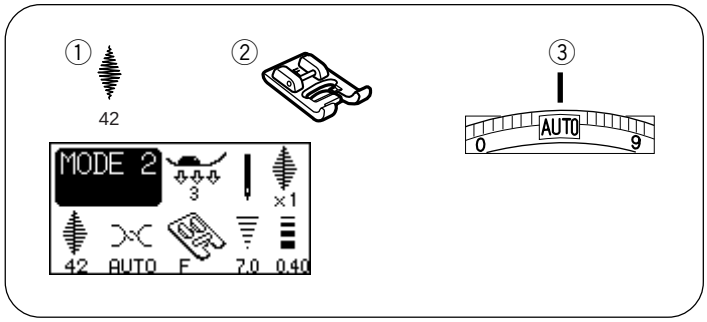
**Machine settings**

| | |
|---|---|
| ① Pattern: | 77, 78 (mode 2) or 88–91 (mode 3) |
| ② Presser foot: | Satin stitch foot F |
| ③ Thread tension: | AUTO |




Sew the fabrics right sides together with straight stitch 01. Press seam allowance open. Sew pattern stitch 77 on right side of garment centering over the seam line.

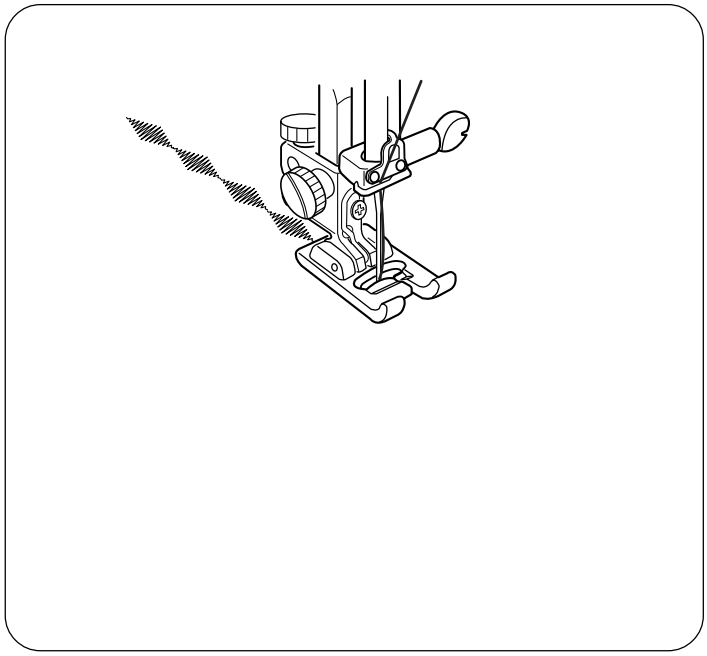
① Wrong side of fabric
② Right side of fabric




## Satin stitch

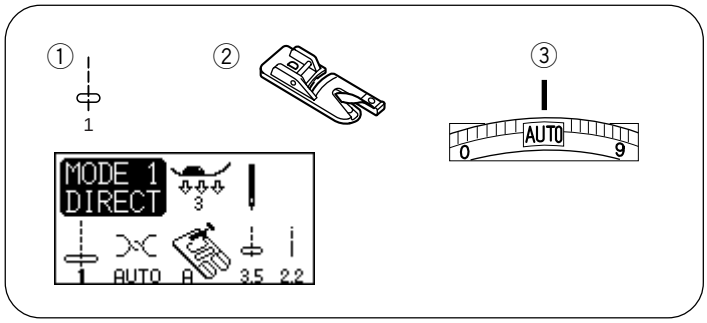
**Machine settings**

| | |
|---|---|
| ① Pattern: | 31–45 (mode 2) |
| ② Presser foot: | Satin stitch foot F |
| ③ Thread tension: | AUTO |



Satin stitches are used for decorative stitches on table linens, etc. For the best sewing results, carefully align and guide the fabric when you sew with decorative stitches. Use a tear-away backing if necessary.

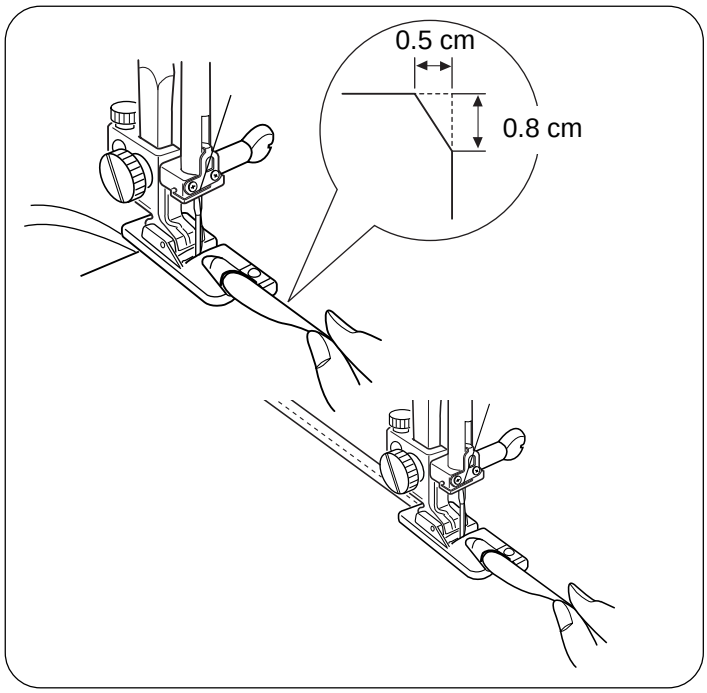
Press the auto-lock button so the machine will stop automatically when the last pattern is completed.




## Rolled hem

**Machine settings**

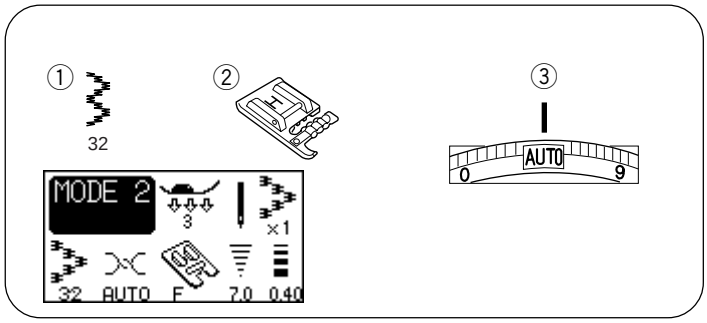
① Pattern: 1 (mode 1)
② Presser foot: Hemmer foot D
③ Thread tension: AUTO




**To sew:**

Fold the edge of the fabric twice, 6 cm (2 3/8″) in length and 0.3 cm (1/8″) in width.
Trim the corner 0.5 cm (3/16″) by 0.8 cm (1/4″) for easier insertion of the hem into the foot.

Position the fabric aligning the edge of hem with the guide on the foot.
Lower the foot and sew 1–2 cm (1/2″ – 1″) while pulling both threads to the back.
Stop the machine with the needle down in the fabric.
Raise the foot and insert the folded portion of the fabric into the curl of the foot.
Lower the foot, and then sew by lifting up the edge of the fabric to keep it feeding smoothly and evenly.



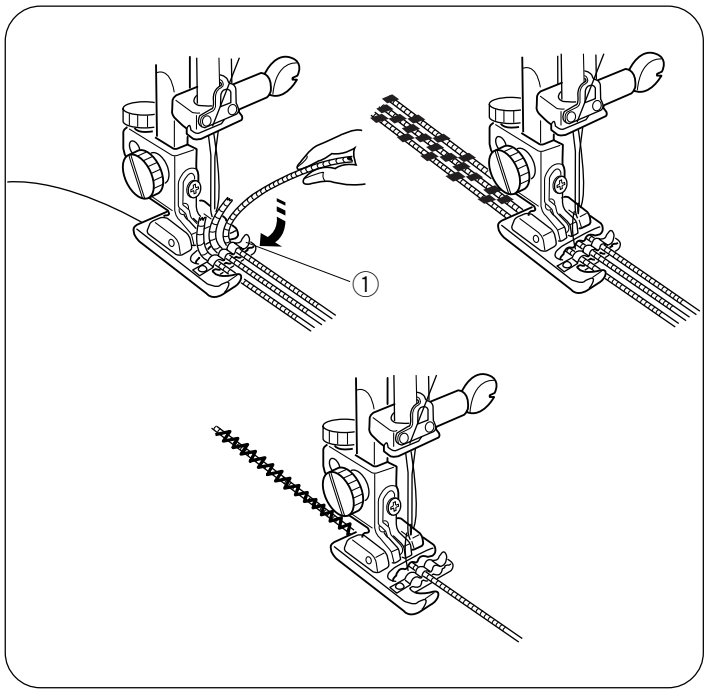

## Cording

**Machine settings**

① Pattern: 32 (mode 2)
② Presser foot: Cording foot H
③ Thread tension: AUTO
Attach the cording foot H

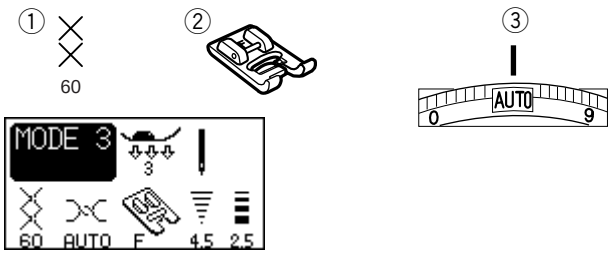
**3-strand cording**

Insert 3 strands of cording under the spring of the foot and draw them under the foot to the rear.
Hold the three strands parallel for even sewing and be sure to sew over the strands
Stitch slowly and smoothly, guiding the fabric as you sew.
① Spring




**1-strand cording**

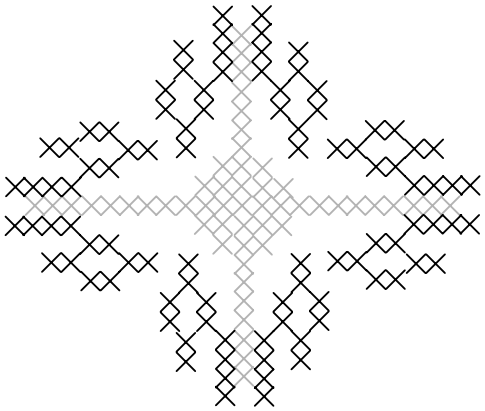
Insert 1 strand of cording under the spring of the foot and draw it under the foot to the rear (use the center slot of the spring).
Select pattern 8 (mode 1), then decrease the stitch width and sew.



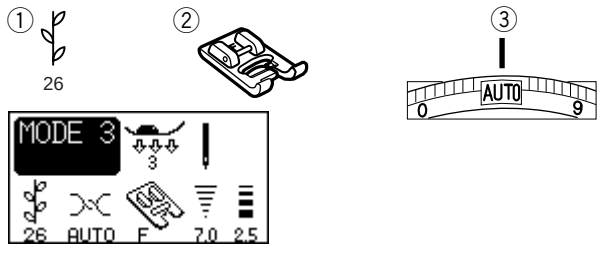

## Cross stitch

**Machine settings**

| | |
|---|---|
| ① Pattern: | 60 to 70 (mode 3) |
| ② Presser foot: | Satin foot F |
| ③ Thread tension: | AUTO |



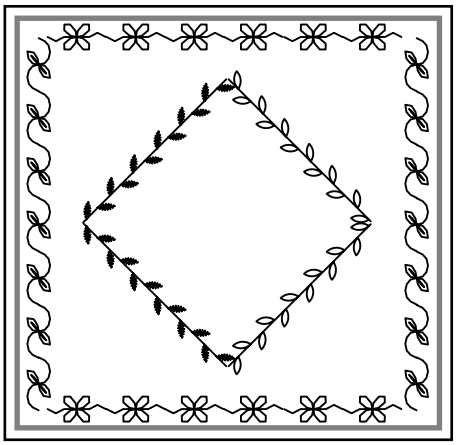
You'll love the beautiful designs you can make with this craft stitch pattern, and in half the time it would take if embroidered by hand.
Cross stitches can be effectively combined with other craft patterns to produce attractive samplers and for other sewing projects.
A plain close weave such as linen or wool flannel makes the best background fabric.
Support lightweight fabrics with a stabilizer bakcing.
The size of cross stitch can be adjusted by pressing the stitch width "+" or "–" key.



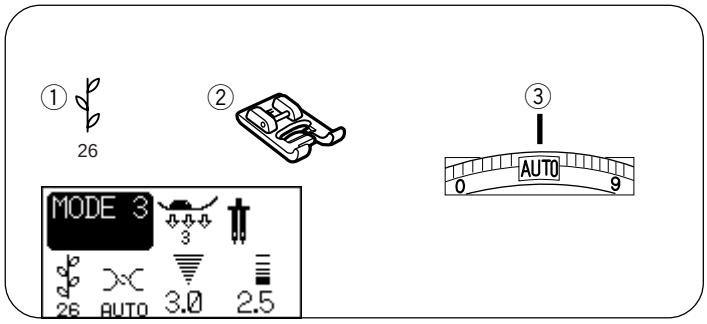

## Decorative stitch

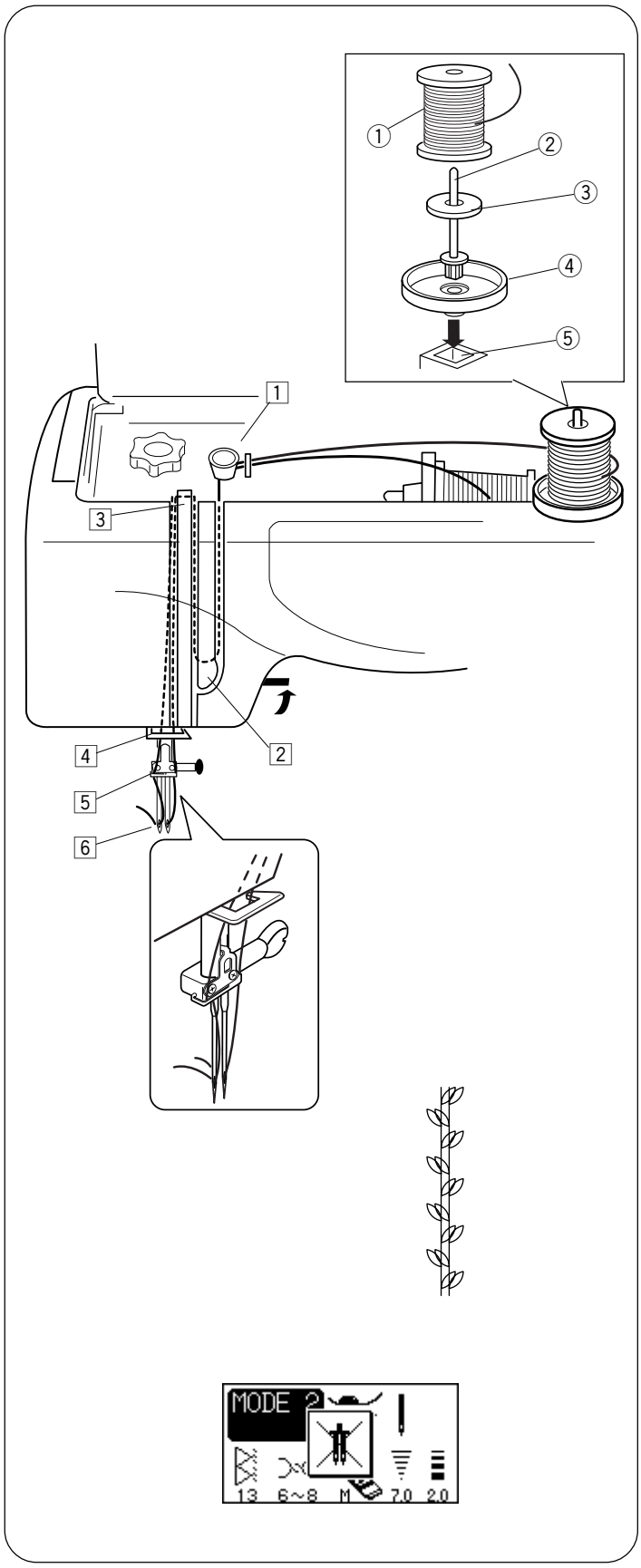
**Machine settings**

| | |
|---|---|
| ① Pattern: | 26 (mode 3) |
| ② Presser foot: | Satin foot F |
| ③ Thread tension: | AUTO |



Satin stitches are used for decorative stitches on table linens, etc. For the best sewing results, carefully align and guide the fabric when you sew with decorative stitches.
Use a tear-away backing if necessary.




## Twin needle sewing

**Machine settings**

① Pattern: 26 (example)
② Presser foot: Satin stitch foot F
③ Thread tension: AUTO

**NOTES:**

* When you sew patterns with the twin needle, press the twin needle button ⑪ and test the stitches first before you begin to sew.
* Use the zigzag foot A or satin stitch foot F for twin needle sewing.
* Turn off the machine before changing the needle.
* Use #60 or finer threads for twin needle sewing.

Use the additional spool pin and spool stand.
Turn on the power switch and press the twin needle button ⑪. Select a pattern and sew.

* The stitch width is limited to 3 mm or less.

① Spool
② Additional spool pin
③ Felt
④ Spool stand
⑤ Hole for additional spool pin

**Threading the machine for twin needle sewing**

Place two spools of thread on the spool stand.
Draw both threads from the spools and thread them through the points from 1 to 6.
Make sure that the two strands of thread do not get tangled.

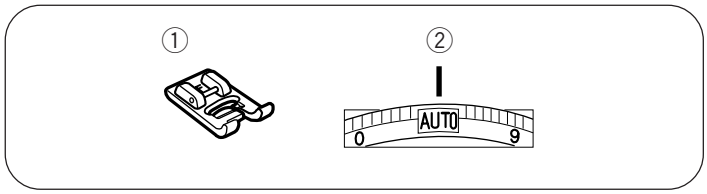
Slip one of the threads in the needle bar thread guide on the left, and the other on the right.

Thread the needles from the front to back with your hand.

**NOTES:**

Threading from 1 to 4 is the same as for a single needle.
The automatic needle threader cannot be used for the twin needle.

**NOTE:**
If you select a pattern not suitable for twin needle sewing, the LCD screen will show a warning message.

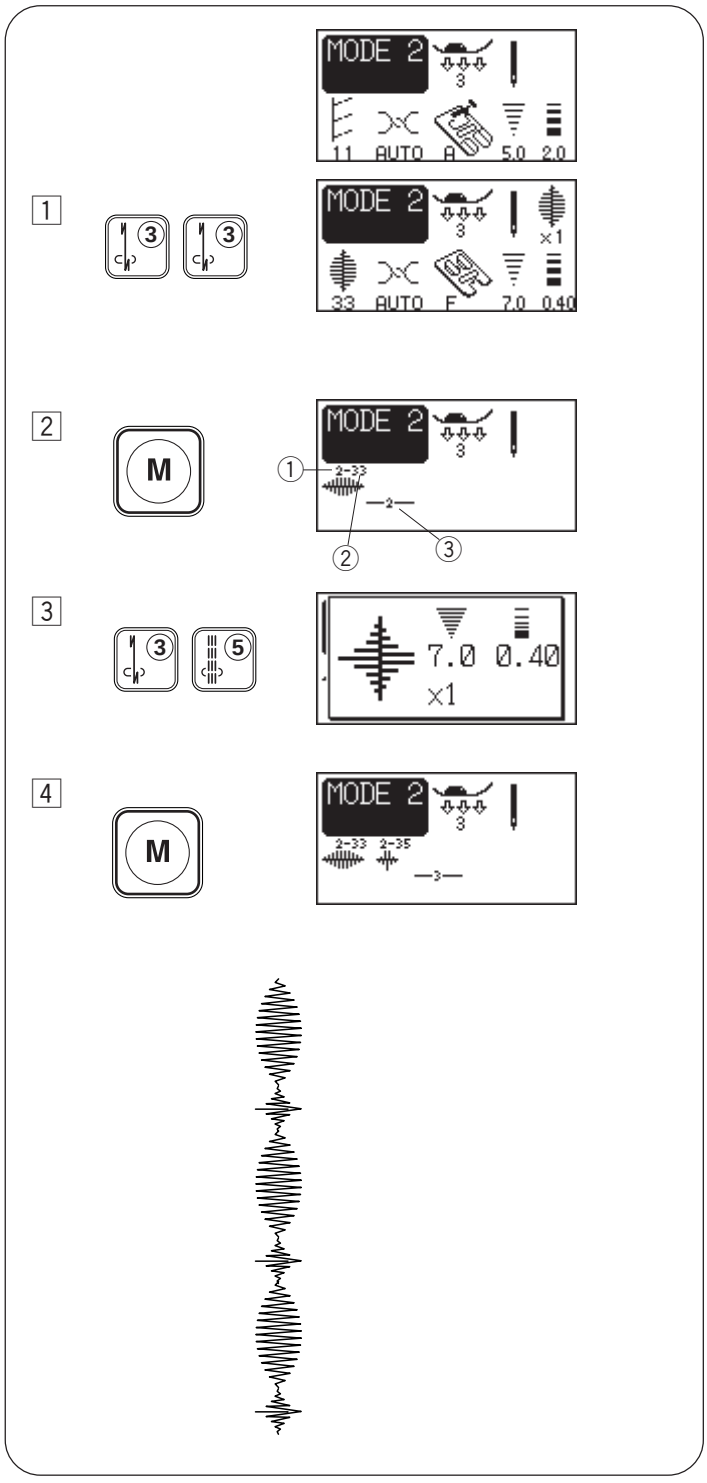



## Pattern combination 1

**Example: Programming patterns 33 and 35**

**Machine settings**

① Presser foot: Satin stitch foot
② Thread tension: AUTO

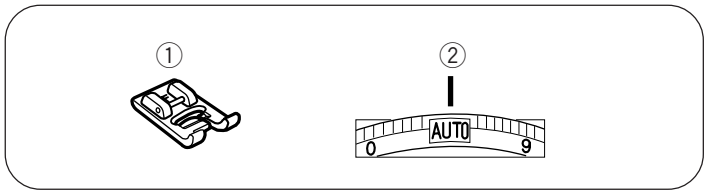



1 Selet pattern 33 (mode 2).

2 Press the memory key.
① Mode
② Pattern number
③ The number of programmed patterns

3 Select the pattern 35 (mode 2).

4 Press the memory key.
Start to sew.
If you press the auto-lock button while sewing a pattern, the machine will stop automatically after the current pattern is completed.

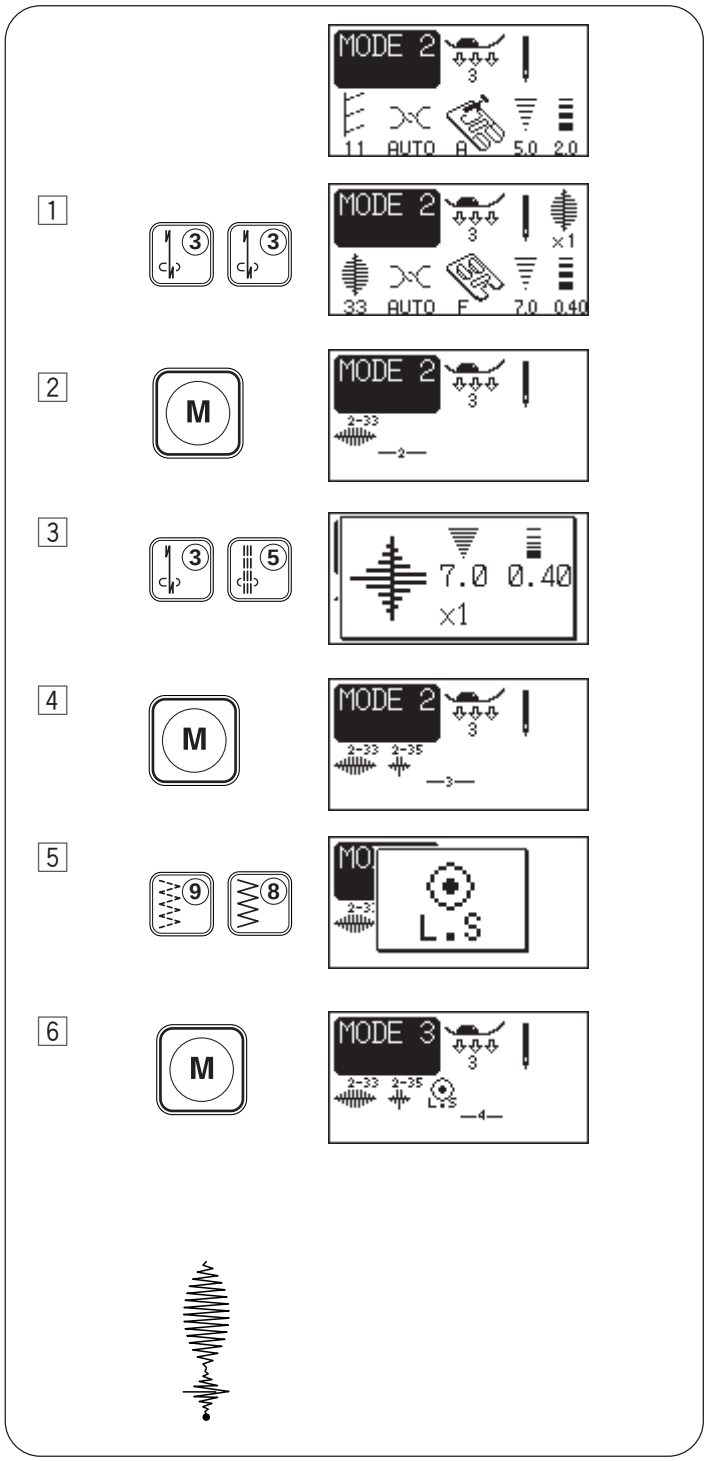



## Pattern combination 2

**Example: Programming patterns 33, 35 and 39**

**Machine settings**

① Presser foot: Satin stitch foot
② Thread tension: AUTO




1 Select pattern 33 in mode 2.

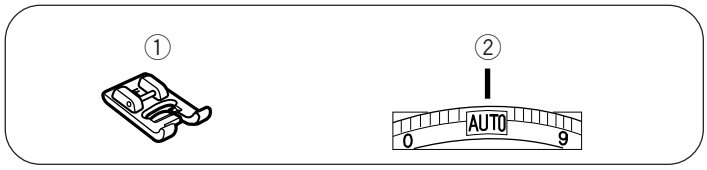
2 Press the memory key.

3 Select pattern 35.

4 Press the memory key.

5 Select pattern 98 in mode 3 (locking stitch).
* The machine cannot memorize any stitch patterns after the locking stitch has been memorized.

6 Press the memory key.
Start sewing. Sew the stitch patterns until the machine stops automatically.

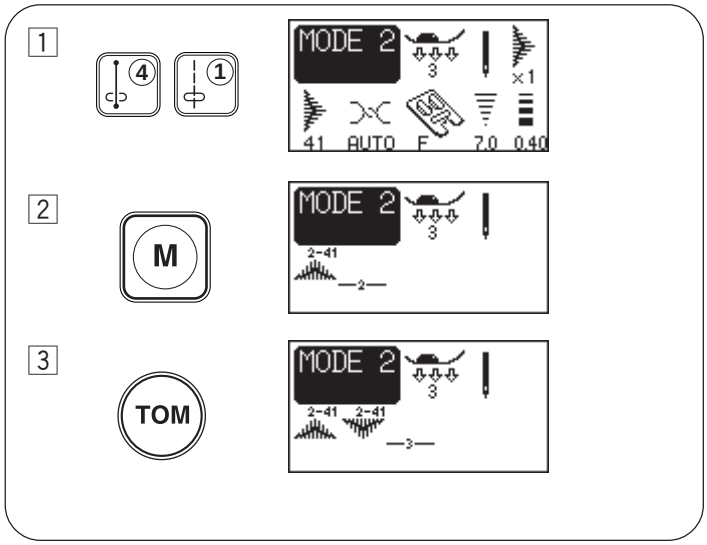



## Combinations for a mirror image

**Example: Programming pattern 41 and its mirror image**

**Machine settings**

① Presser foot: Satin stitch foot F
② Thread tension: AUTO

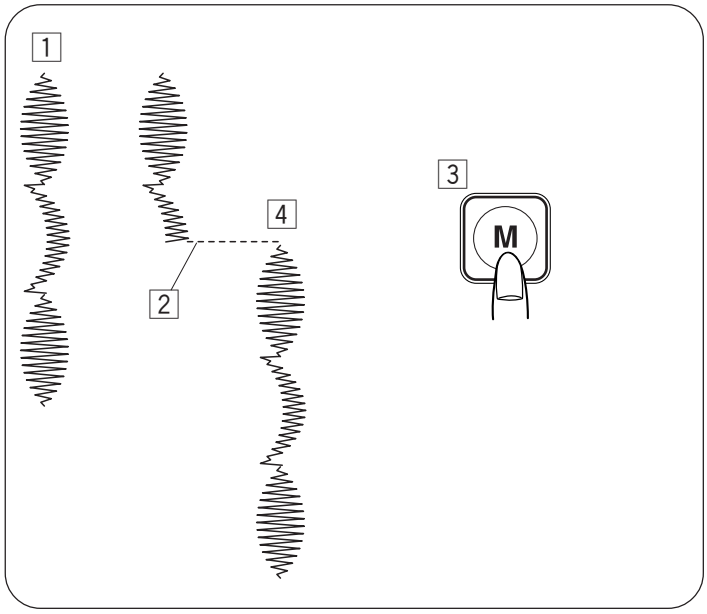



1 Select pattern 41 in mode 2.

2 Press the memory key.

3 Press the turnover memory key.

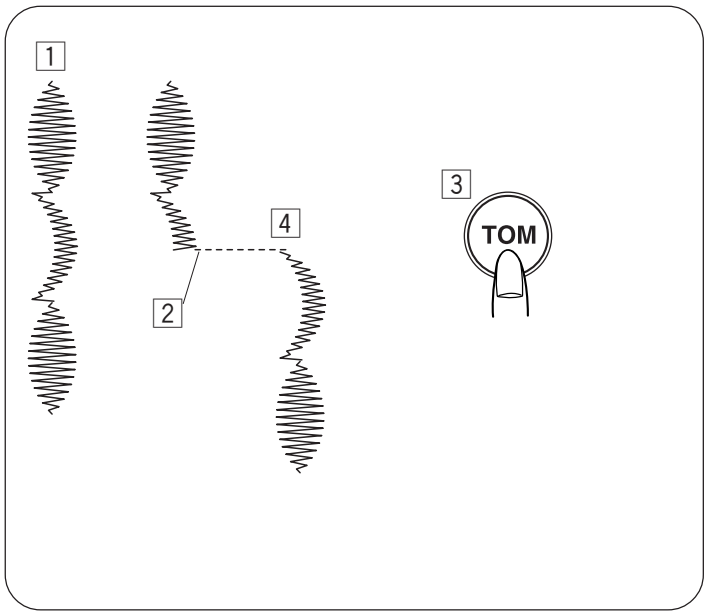
4 Start sewing.




## Sewing a pattern combination from the beginning

If you have to stop sewing a pattern combination and wish to sew it over again, press the memory button to sew the pattern combination from the beginning.

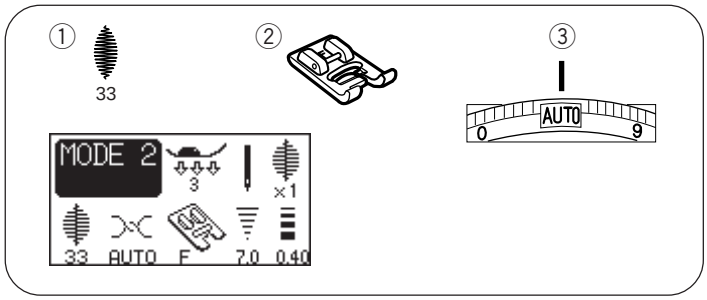
1 Programmed pattern combinaiton.
2 Stop sewing.
3 Press the memory key.
4 Machine sews the pattern combination from the beginning.




## Sewing the current pattern from the beginning

If you have to stop sewing a pattern combination and wish to sew from the incomplete pattern, press the turn over memory key to sew from the beginning of the pattern last sewn.

1 Programmed pattern combinaiton.
2 Stop sewing.
3 Press the turnover memory key.
4 Machine sews the pattern combination from the beginning of the current pattern.

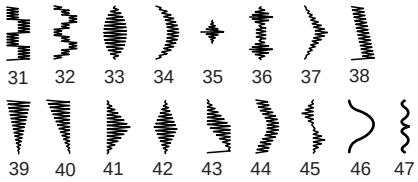



## Pattern Elongation

**Machine settings**

① Stitch pattern 33 (mode 2)
② Presser foot: Satin stitch foot F
③ Thread tension: AUTO

Patterns number 31–47 (mode 2) can be elongated.



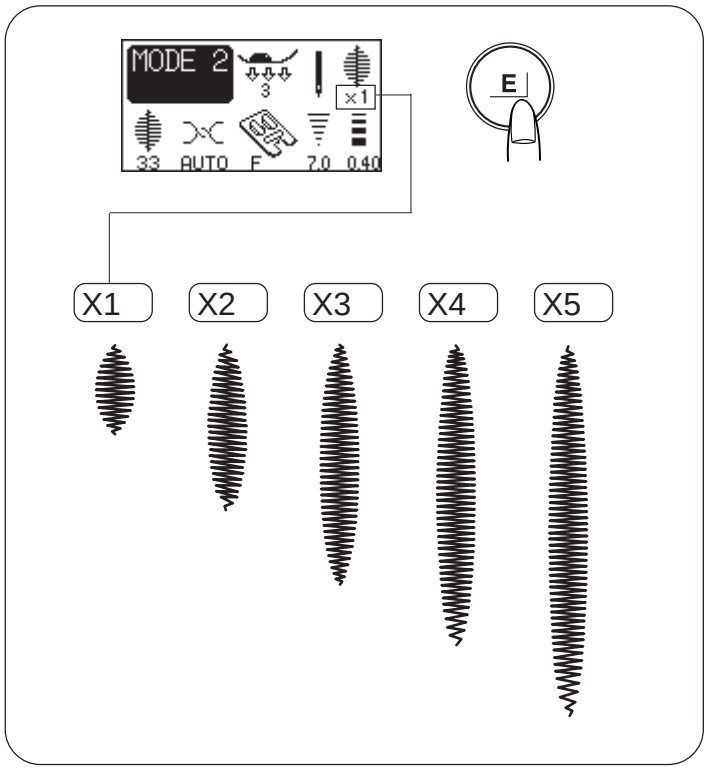

Example: Pattern 33

Select pattern 33 (mode 2).

Press the elongation key to change the elongation ratio. Elongation ratio is indicated in multiples of the original pattern length.

Start to sew.

**NOTE:**
If you press the auto-lock button while sewing a pattern, the machine will stop automatically after the current pattern is completed.

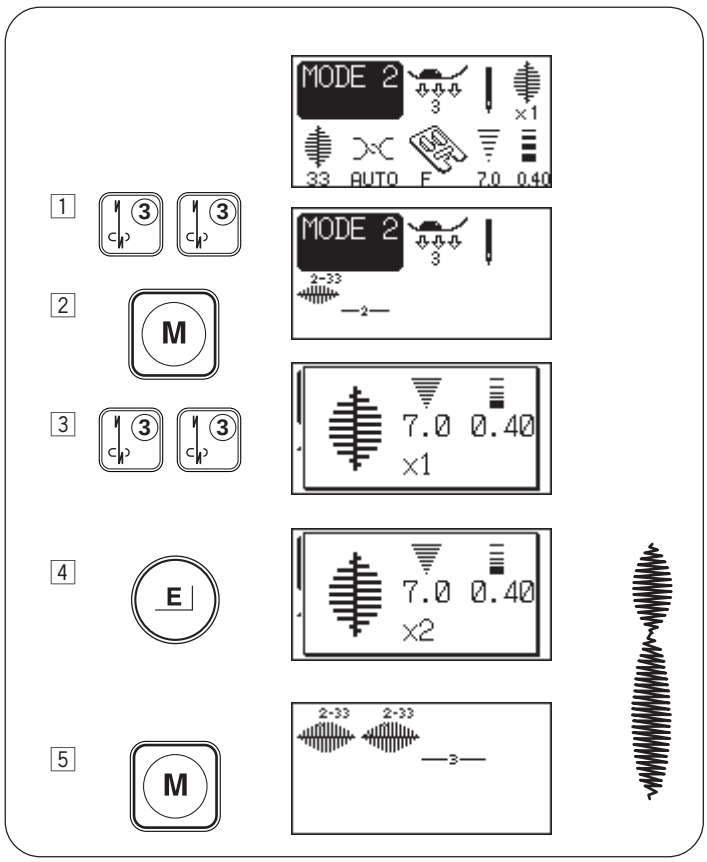


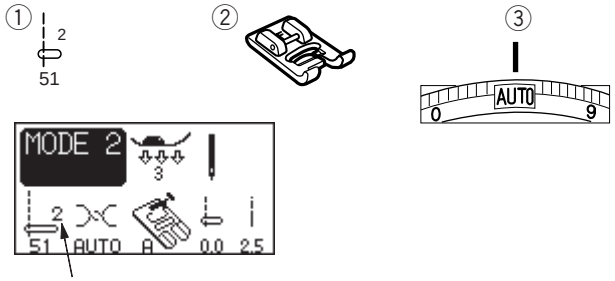

## Programming a pattern combination with an elongated pattern

**Example:** Programming pattern 33 and its elongated image.

1 Select pattern 33 in the mode 2.
2 Press the memory key.
3 Select pattern 33 in the mode 2.
4 Press the elongation key to change its elongation ratio to X2.
5 Press the memory key. Start sewing.

**NOTE:**
If you press the auto-lock button while sewing, the machine will stop automatically after the current pattern is completed.






The number of the extender stitches

## Extender stitches

### Machine settings

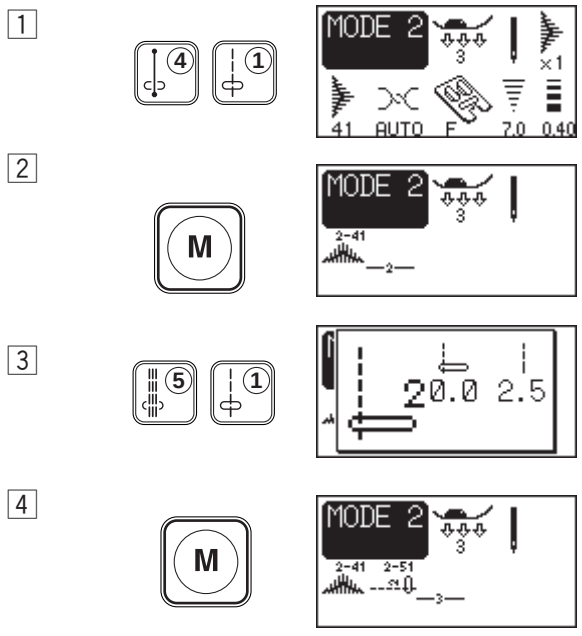
① Stitch pattern 51 (mode 2)

* The stitches 49 50 52 53 can also be used.

② Presser foot: Zigzag foot A or Satin stitch foot F
③ Thread tension: AUTO

The extender stitch is used to insert straight stitches between stitch patterns.

**Example: Inserting 2 counts of the straight stitch after pattern 41**



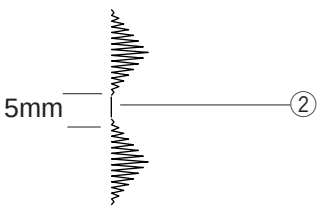

1 Select pattern 41(mode 2).

2 Press the memory key.

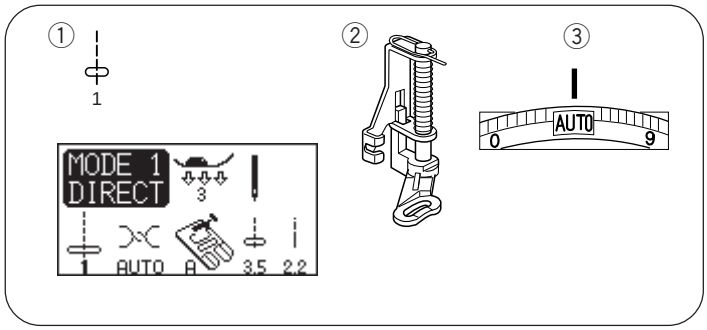
3 Select pattern 51(mode 2).

4 Press the memory key.

5 Start sewing.
① pattern 51



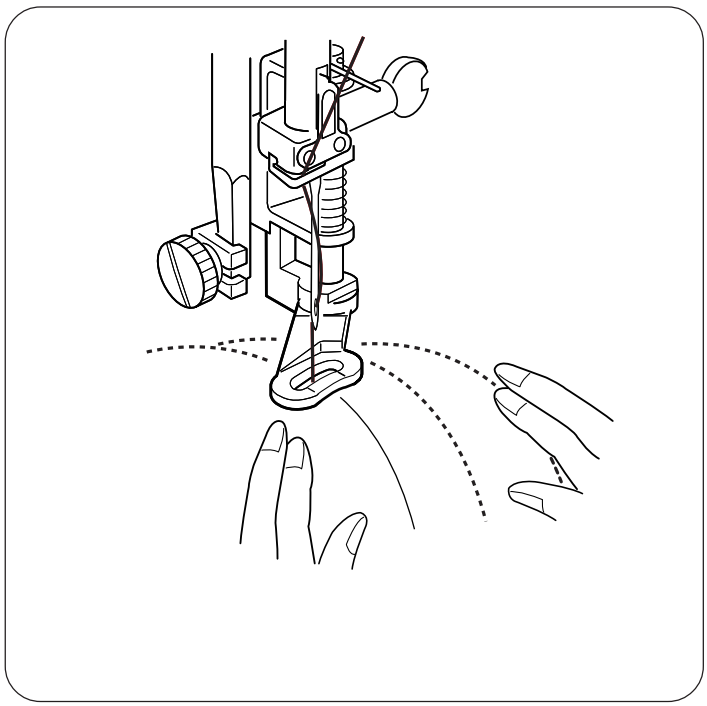

**To insert a space between patterns:**
Use pattern 99 (mode 3) instead of pattern 51 (mode 2) in procedure 3 above.
A 5 mm space will be inserted between the patterns.
② pattern 99




## Free-motion quilting

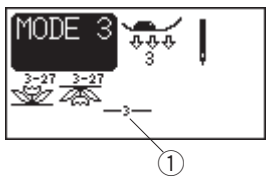
**Machine Settings**

| | |
|---|---|
| ① Pattern: | 1 (mode 1) |
| ② Presser foot: | Darning foot P |
| ③ Thread tension: | Auto |
| Feed dog: | Dropped |

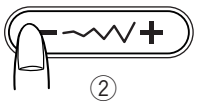


Attach the darning/embroidery foot P (refer to page 30 for how to attach it).

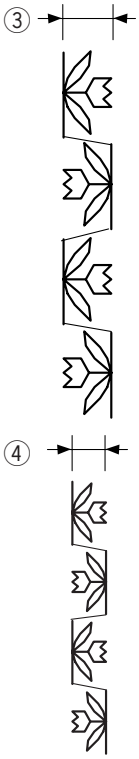
Baste or pin the quilt layers. Draw a quilt design on the top fabric with a washable marker.
Move the quilt layers slowly and evenly while stitching on the marked design.




①



②



③

④

## Editing program

**Uniform stitch adjustment (Modes 2 and 3 only)**

The stitch width and length of the programmed stitch patterns can be uniformly altered.

**Example 1:** To alter the stitch width of the programmed pattern 27 and its mirror image in mode 3.

1 Shift the cursor to the right of the last programmed pattern ①.

2 Press the stitch width adjustment button to alter the stitch width ②.

**NOTE:**

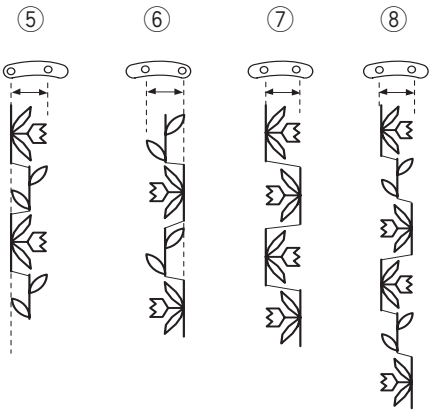
Stitch length can also be uniformly altered when patterns of the same category (satin stitches or stretch stitches) have been programmed.

Start sewing. The programmed patterns will be sewn in the uniform width.

③ Default width (7.0)

④ Uniformly altered width (5.0)

If you wish to alter the stitch length or width after sewing the programmed patterns, press the edit key then follow steps 1 and 2 above.



⑤ ⑥ ⑦ ⑧

## Unified needle drop position

The needle drop position of the programmed patterns will vary depending on the combination:

⑤ Unified to the left when combining the patterns with the left needle position and the center needle position.

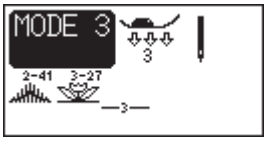
⑥ Unified to the right when combining the patterns with the right needle position and the center needle position.

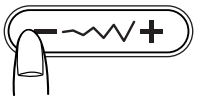
⑦ Unified to the center when combining the patterns with the left needle position and the right needle position.

⑧ Unified to the center when combining the patterns with the left, right and center needle positions.

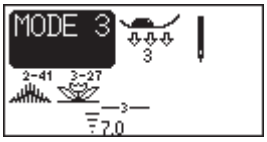
## Combining satin and decorative stitches

**Example: combination of patterns 41 and 27**




1 

1 Press the stitch width adjustment key.

2 


2 The stitch width will be applied to all memorized patterns.

3 Start sewing.

* You cannot adjust the stitch length setting when you combine satin stitches and decorative stitches.

## Custom stitch adjustment (Mode 2 and 3 only)

The stitch width and length can be individually altered for each pattern in the programmed combination.

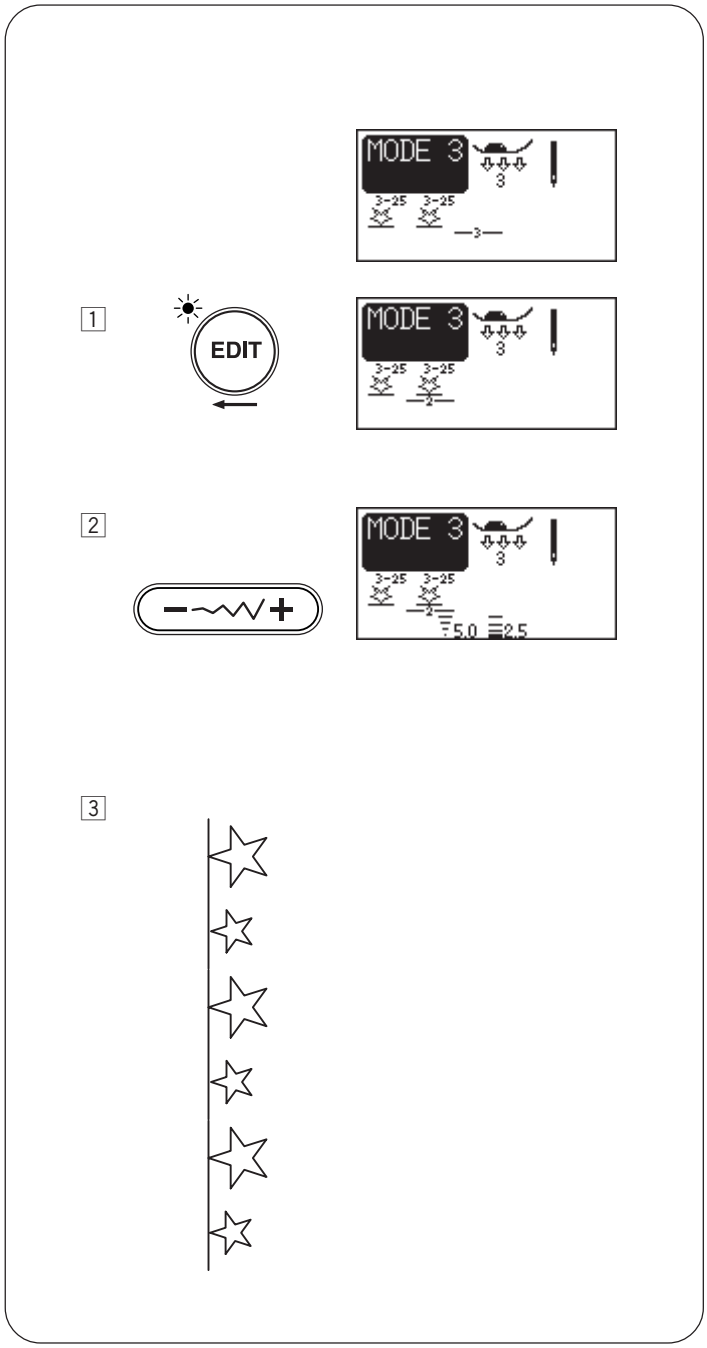
**Example:** To alter the stitch width and length of a single pattern in the combination

1 Press the edit key to shift the cursor under the pattern you wish to alter.

2 Press the stitch width adjustment key to reduce the width to “5.0”.

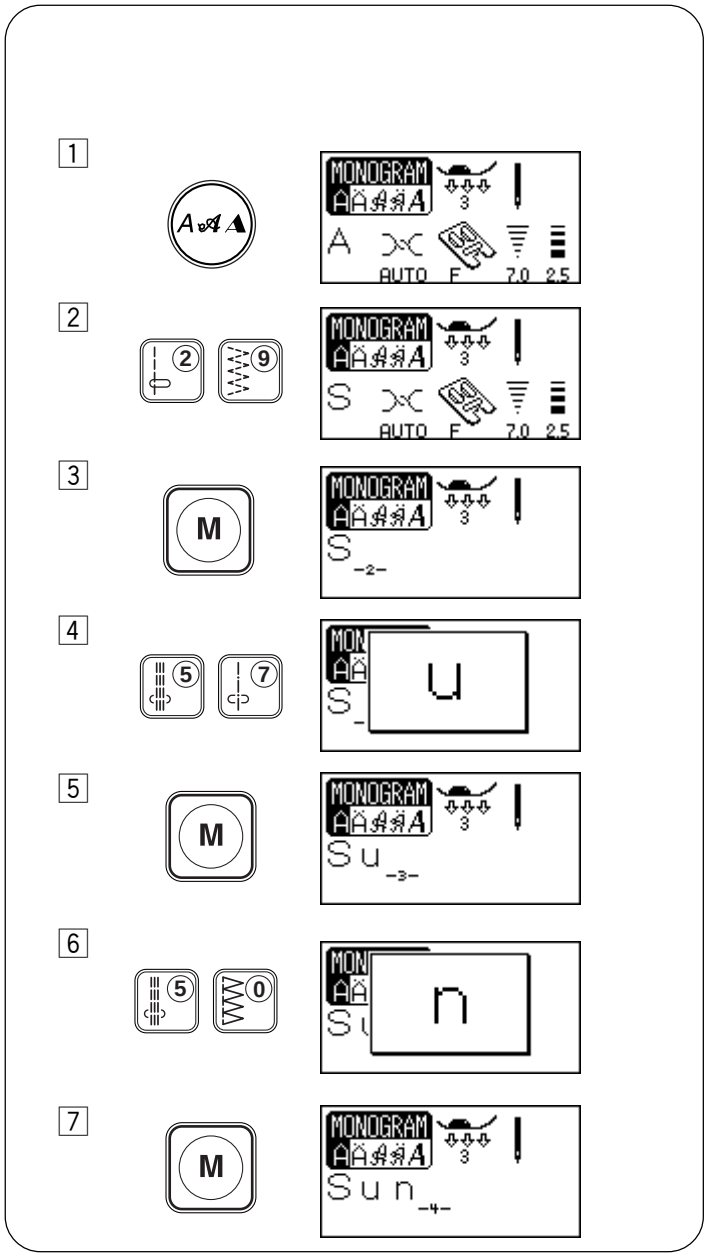
* The stitch length of the pictorial patterns will proportionally change by pressing the stitch width adjustment key.
  However, you can alter the stitch length with the stitch length adjustment key as desired.

**NOTE:**
To view the stitch setting of each pattern, shift the cursor under the desired pattern then press the stitch width or length adjustment key. The settings will be displayed at the bottom center of the LCD screen.
If you press the stitch width or length adjustment key when the cursor is at the right of the last programmed pattern, the custom adjustment will be canceled and uniform adjustment will be applied.



## Programming a monogram (1)

**Example:** To program “**Sun**” in Block font.




1 Press the monogramming key to select Block font.

2 Select the uppercase letter “**S**” (pattern 29).

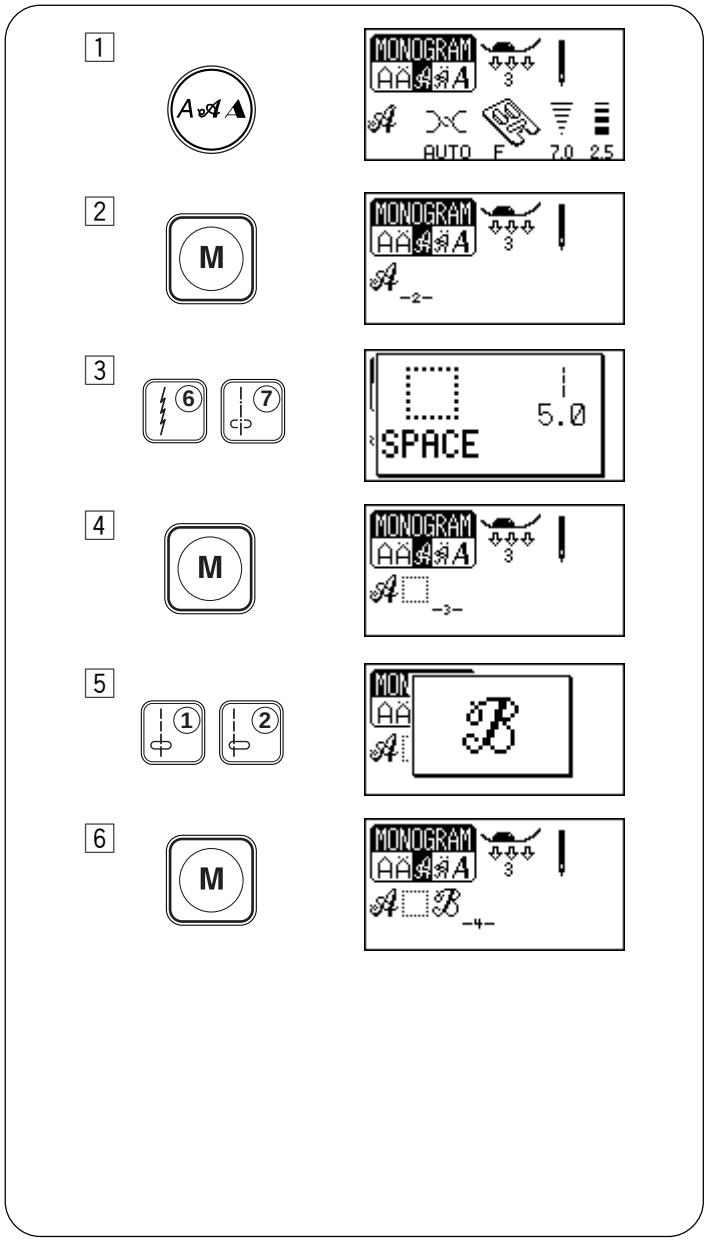
3 Press the memory key.
The uppercase letter “**S**” will be memorized.

4 Select the lowercase letter “**u**” (pattern 57).

5 Press the memory key.

6 Select the lowercase letter “**n**” (pattern 50).

7 Press the memory key.
* Use a Janome blue needle when sewing monograms.




## Programming a monogram (2)

**Example:** To program “**A_B**” in the Script font. (with a space between letters)

1 Press the monogramming key to select the Script font.

2 Press the memory key.
The uppercase letter “A” will be memorized.

3 Select the space ( ) (pattern 67).

4 Press the memory key.

5 Select the letter “B” (pattern 12).

6 Press the memory key.

## Reducing the size of a monogram

Press the turnover memory key. The selected letter will be decreased to 2/3 of its original size.

1 

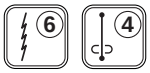



Press the monogramming key.
Select Broadway style

2 




Press the memory key.

3 

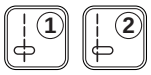



Select “&” (pattern 64).

4 




Press turnover memory key. The selected letter will be decreased to its 2/3 size.

5 




Select upper case letter “B” (pattern 12).

6 




Press the memory key.

## Viewing a long text

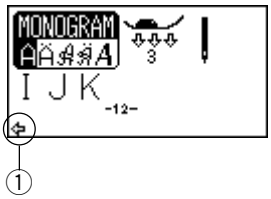
1 


2 





3 

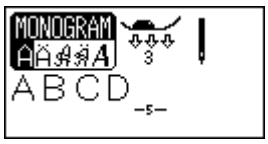




1 The LCD screen only shows 8 characters of a monogram at a time.
If the entire text is not displayed, press the edit key or help key to scroll the text.

2 Pressing the edit key shifts the cursor and scrolls the text to the left.

3 Pressing the help key shifts the cursor and scrolls the text to the right.

**NOTE:**
Arrows ⇦ ⇨ under a charratcter indicate that there are remaining characters in that direction.
① Arrow















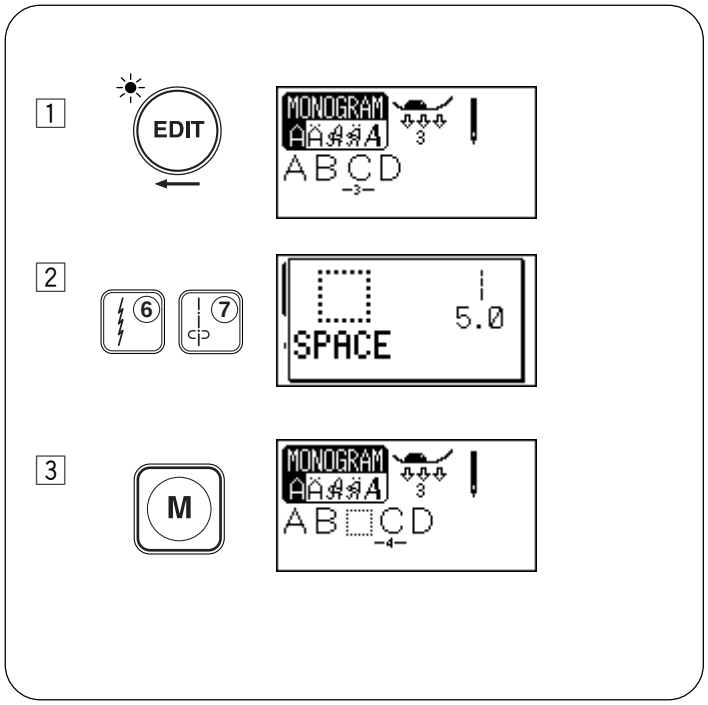

## Editing the programmed patterns
## Deleting a letter (character)

**Example: To delete “C” from “ABCD”**

Press the edit key to shift the cursor under letter ”C”.

Press the clear key. Letter “C” will be deleted.

**NOTE:**
Pressing and holding the clear key will delete all the programmed patterns and the LCD screen will return to the initial display of the selected mode.




## Inserting a letter (character)

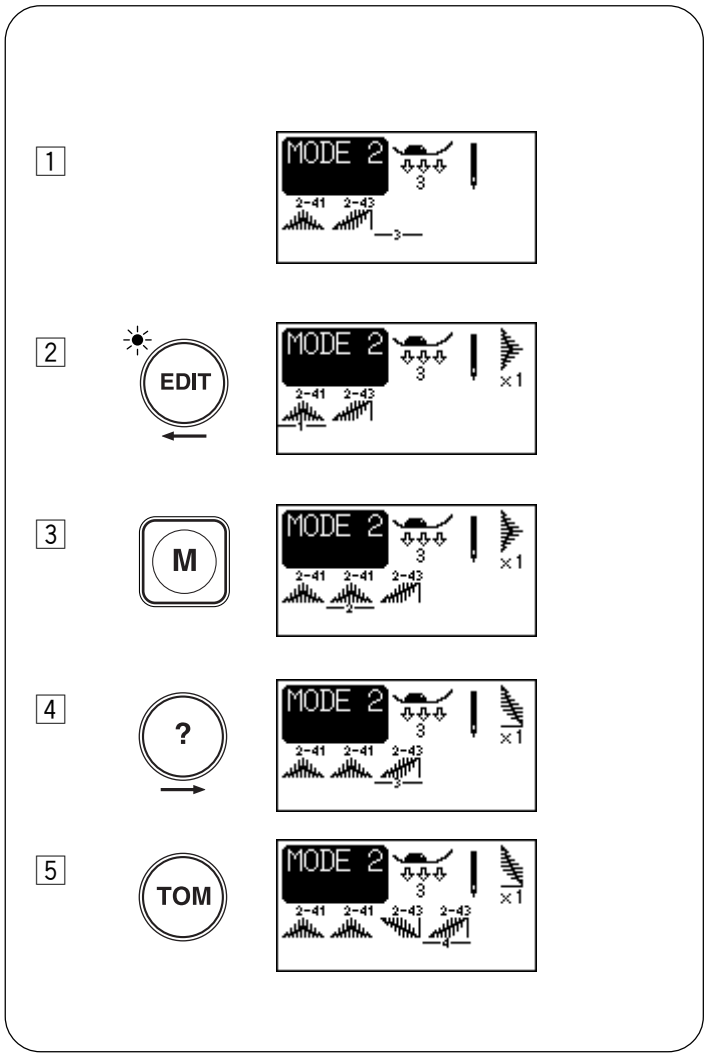
**Example: To insert a space between "B" and "C" in "ABCD"**

1 Press the edit key to shift the cursor under letter "C".

2 Select the space ( ) pattern 67.

3 Press the memory button and a space will be inserted before letter "C".

**NOTE:**
The program can be edited when the LED signal lights up.




## Duplicating a pattern

1 Press stitch patterns 41 and 43.

2 Press the edit key to shift the cursor under stitch pattern 41.

**• To duplicate the stitch pattern**
3 Press the memory key to memorize the stitch pattern.

**• To duplicate the stitch pattern in mirror image**
4 Press the help key to shift the cursor under stitch pattern 43.

5 Press the turnover memory key to memorize the stitch pattern in mirror image.

## To store and call stitch pattern combinations

It is possible to retain a pattern combination for future use even if the machine is turned off. Simply save the pattern combination in one of the five memory addresses.
A combination of up to 50 patterns can be saved in each memory address.

**NOTE:**
Stock/call function is not available in mode 1.

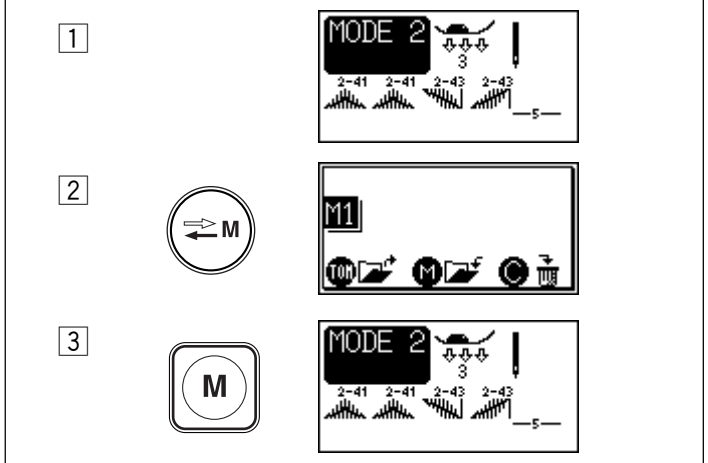
**To stock memory**

1 Program the desired pattern combination.

2 Press the stock/call key.

3 Press the memory key to store the stitch pattern combination.

* The machine beeps and an hourglass appears on the LCD screen while the machine is saving the stitch pattern combination.
  Do not turn the power switch off while the machine is beeping.
* You can access other memory address (M2 to M5) by pressing the stock/call key.
* To exit from the stock/call mode, press any key except the memory, clear, turnover memory, edit or help key.

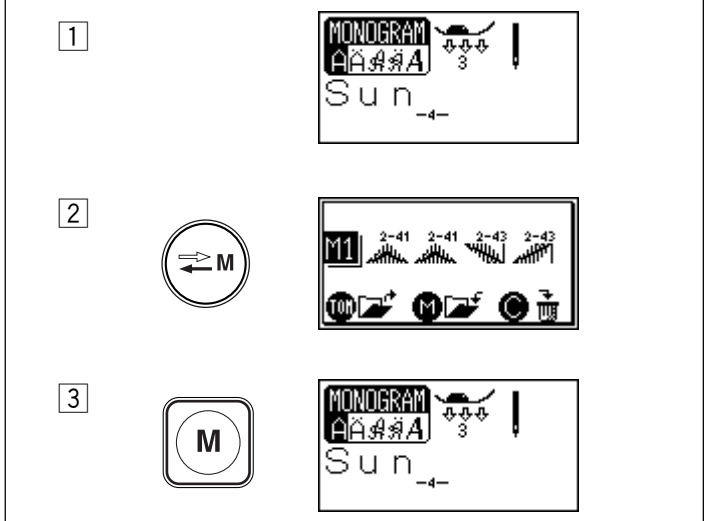



## Overwriting a stored combination

1 Program the desired combination.

2 Press the stock/call key to select the desired memory address. The LCD screen will show the pattern combination already stored.

3 Press the memory key and the stored combination will be replaced with the new combination.



## Recalling a stored combination

Select mode 2, 3 or monogramming.

1







1 Press the stock/call key to select the desired memory address..

2







2 Press the turnover memory key to recall the stored combination.

## Deleting a stored combination

1







1 Press the stock/call key to select the desired memory address.

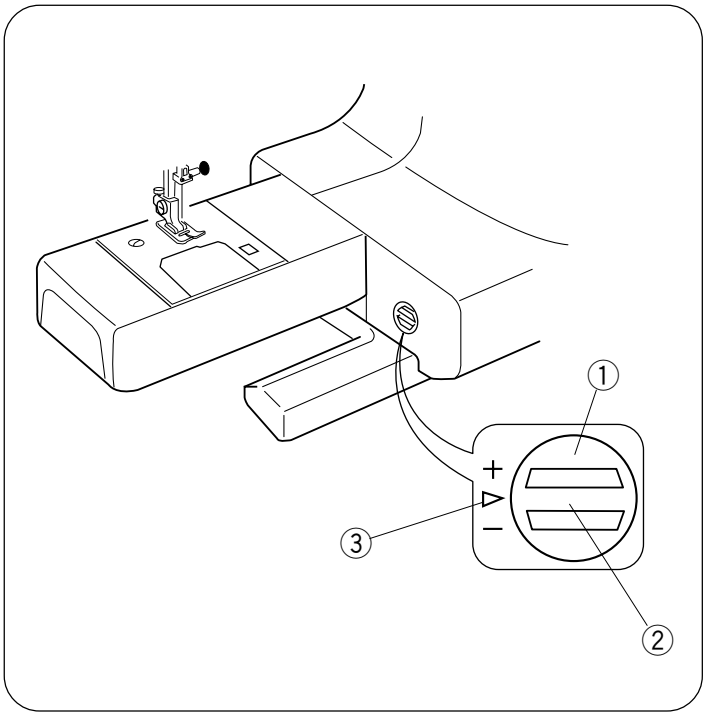
2







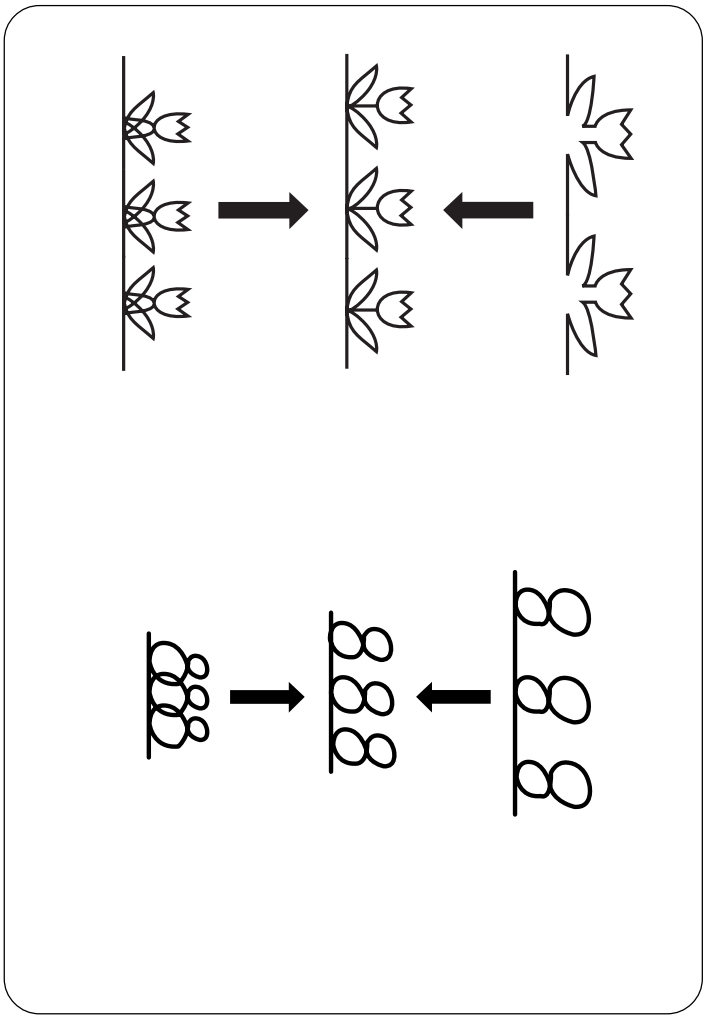
2 Press the clear key to delete the stored combination.




## Correcting distorted stitch patterns

The sewing results of the stretch 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 stretch patterns, letters or numbers are distorted, correct it with the feed balancing dial.

① Feed balancing dial
② Neutral position
③ Setting mark



### Stretch stitch pattern

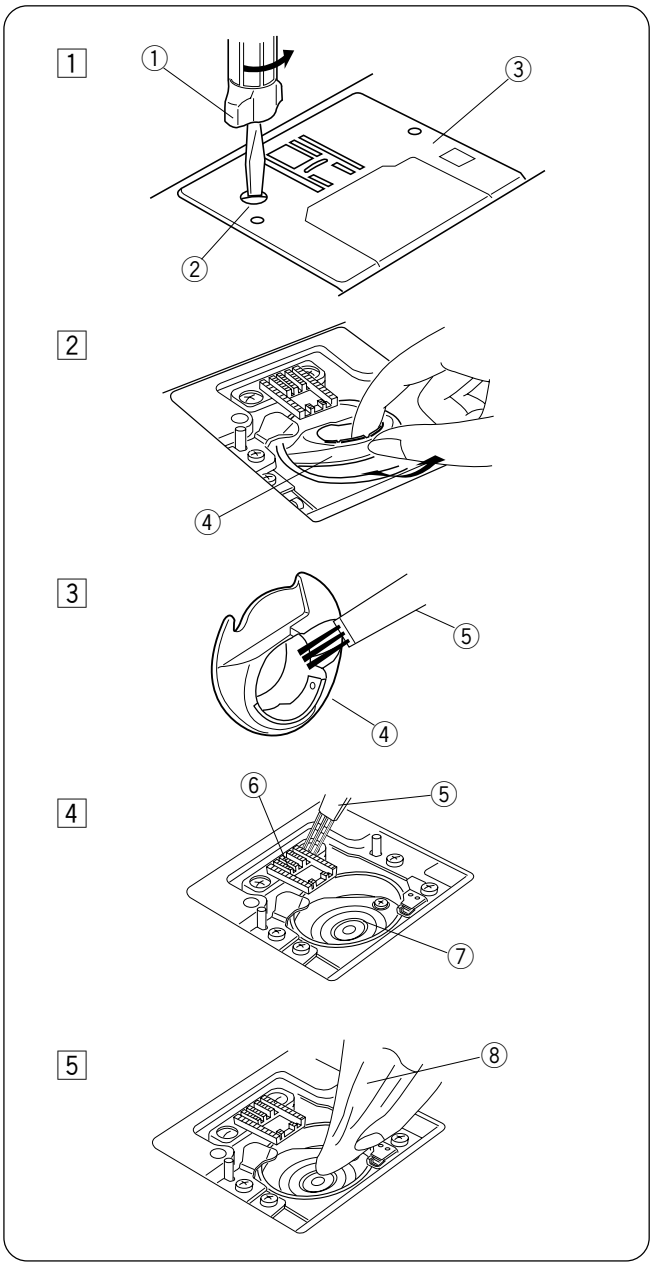
**Example:**
If the pattern is compressed, turn the feed balancing dial in the direction of “+”.
If the pattern is drawn out, turn the feed balancing dial in the direction of “–”.

### Letters and numbers

**Example:**
If the pattern is compressed, turn the feed balancing dial in the direction of “+”.
If the pattern is drawn out, turn the feed balancing dial in the direction of “–”.

# CARE AND MAINTENANCE

## Cleaning the hook race and feed dog




**WARNING:**
Turn the power switch off and unplug the machine before cleaning.

**NOTE:**
Do not dismantle the machine in any way other than what is explained in this section.

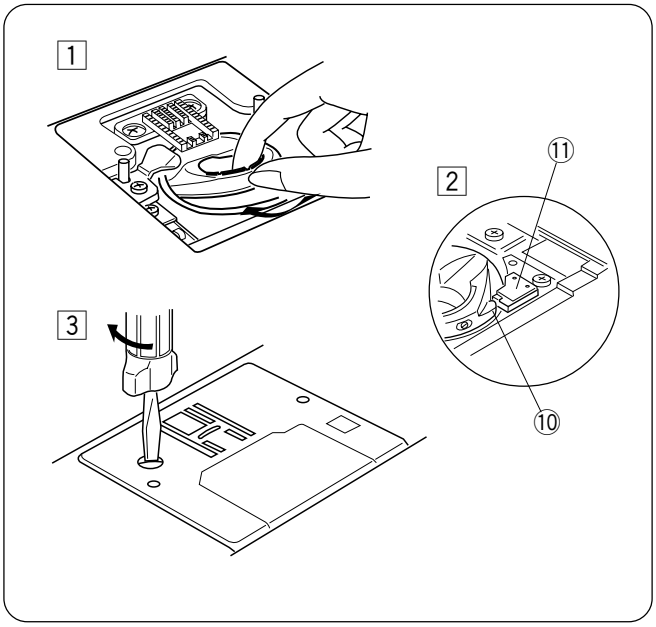
1 Remove the needle and presser foot. Remove the setscrews and remove the needle plate.

2 Take out the bobbin. Lift up the bobbin holder and remove it.

3 Clean the bobbin holder with a lint brush and soft dry cloth.

4 Clean the feed dog, auto thread cutter mechanism and hook race with the lint brush.

5 Clean the hook race with a dry cloth. (You may also use a vacuum cleaner.)
- ① Screwdriver
- ② Setscrew
- ③ Needle plate
- ④ Bobbin holder
- ⑤ Lint brush
- ⑥ Feed dog
- ⑦ Hook race
- ⑧ Soft dry cloth



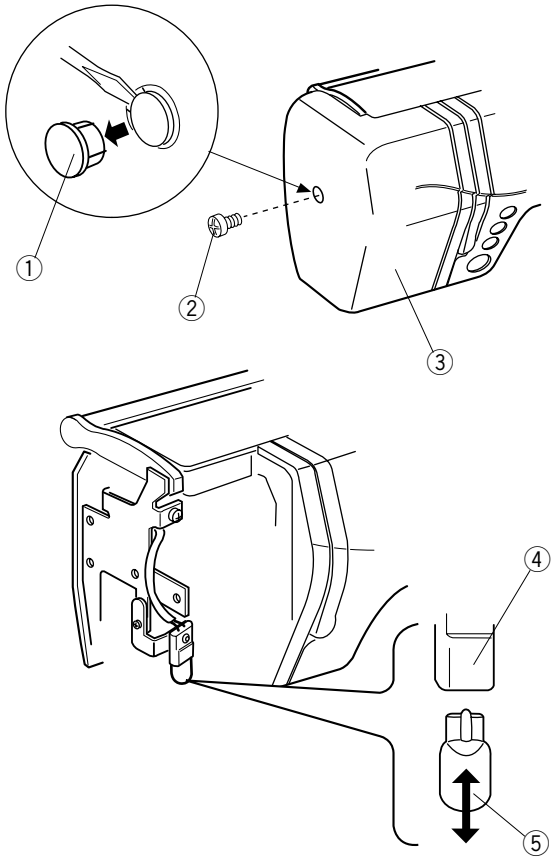

## Inserting the bobbin holder

1 Insert the bobbin holder.
2 The knob of the bobbin holder should fit next to the stopper on the hook race.

3 Reattach the needle plate and tighten the screws.
- ⑩ Knob
- ⑪ Stopper

**NOTE:**
After cleaning the machine, attach the needle and presser foot.

## Replacing the light bulb



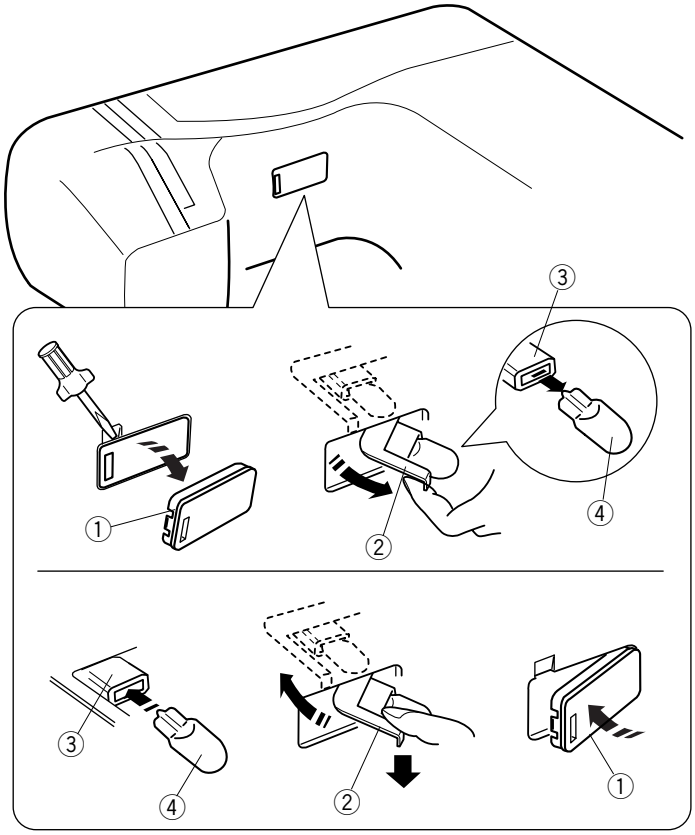

**WARNING:**
Turn the power off before replacing the light bulb.
The bulb could be HOT, wait until it has cooled down before touching it.

**To remove:**
Remove the cap ①.
Remove the setscrew ②.
Remove the face cover ③.
Pull out the bulb ⑤ from the lamp socket ④.

**To replace:**
Insert a new bulb into the opening of the socket.
Attach the faceplate with the setscrew and cap.
① Cap
② Setscrew
③ Face cover
④ Lamp socket
⑤ Light bulb

Replace the bulb with the same type, rated 12 V, 5 W.

## Replacing the light bulb on the underside of the sewing arm

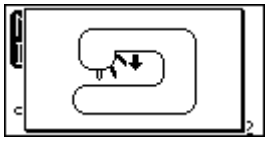
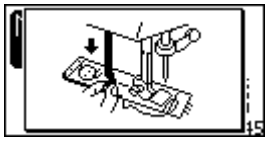


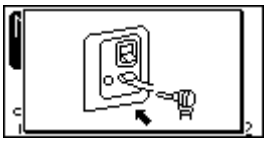
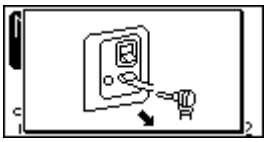
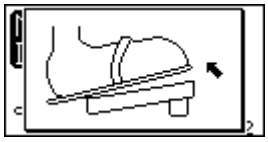
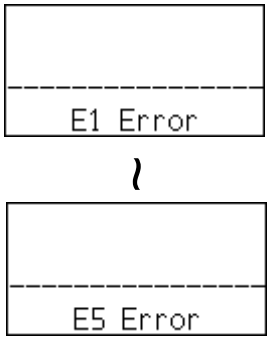

Lay the machine on its back.
Remove the clear window ① with the screwdriver as shown.
Pull out the lamp holder from the opening by hooking the holder plate ② with your fingertip.
Pull out the light bulb ④ from the socket ③.
Insert a new bulb into the socket ③.
Push the lampholder back into the opening.
Attach the window into the opening on the machine.
① Clear window
② Holder plate
③ Lamp socket
④ Light bulb
⑤ Pins

Replace the bulb with the same type, rated 12 V, 5 W.

## Warning Messages

If a buzzer sounds and the LCD screen shows one of these messages, follow the guidance below.

| Message | Problem/Cause | Try this |
|---|---|---|
|  | • The machine is started with the presser foot up.<br>• The machine will stop if the presser foot is raised while sewing. | Lower the presser foot and restart the machine. |
|  | • The machine will stop after several stitches if the buttonhole is sewn without lowering the buttonhole lever. | Lower the buttonhole lever and restart the machine. |
|  | • The twin needle key is pressed when a pattern unsuitable for twin needle sewing has been selected.<br>• An unsuitable pattern is selected when the twin needle mode has been activated. | Cancel the twin needle mode, and sew with a single needle. |
|  | • The machine is stopped while sewing a locking stitch. | Sew until it automatically stops. |
|  | • The elongation key is pressed when a pattern that cannot be elongated has been selected. | Select satin stiches to be elongated. |
| <br> | • The turnover key or memory key is pressed while in the direct pattern selection mode (mode 1). | Select the equivalent patterns from mode 2. |

| Message | Problem/Cause | Try this |
|---|---|---|
|  | The foot control is disconnected while sewing. | Turn OFF the power and connect the foot control. |
|  | • The start/stop button is pressed after the foot control has been connected. | Disconnect the foot control and restart the machine. |
|  | • Power switch is turned on while depressing the foot control. | Release the foot control. |
|  | • The machine is started soon after it has halted due to overloading.<br>• Bobbin winder spindle locks during bobbin winding. | Wait for at least 15 seconds to restart.<br>If thread jamming causes overload, remove the tangled threads.<br>Turn off the power and remove tangled thread. |
|  | The machine is malfunctioning due to a problem in its electronic components. | Contact the service center or the store from where the machine was purchased. |
| | The LCD screen shows an abnormal display. | Turn the power switch off and turn it on again. |

**Audible Signals**

| BEEP | Beep sounds during: |
|---|---|
| pip | Normal operation |
| pip-pip-pip | Invalid operation |

## Troubleshooting

| Condition | Cause | Reference |
|---|---|---|
| **The needle thread breaks.** | 1. The needle thread is not threaded properly. | See page 21 |
| | 2. The needle thread tension is too tight. | See page 24 |
| | 3. The needle is bent or blunt. | See page 16 |
| | 4. The needle is incorrectly inserted. | See page 16 |
| | 5. The needle thread and the bobbin thread are not set under the presser foot when starting sewing. | See page 25 |
| | 6. The threads are not drawn to the rear after sewing. | See page 82 |
| | 7. The thread is either too heavy or too fine for the needle. | See page 17 |
| **The bobbin thread breaks.** | 1. The bobbin thread is not threaded properly in the bobbin holder. | See page 20 |
| | 2. Lint has collected in the bobbin holder. | See page 82 |
| | 3. The bobbin is damaged and doesn't turn smoothly. | Exchange bobbin. |
| **The needle breaks.** | 1. The needle is incorrectly inserted. | See page 16 |
| | 2. The needle clamp screw is loose. | See page 16 |
| | 3. The threads are not drawn to the rear after sewing. | See page 25 |
| | 4. The needle is too fine for the fabric being used. | See page 17 |
| **Skipped stitches** | 1. The needle is bent, blunt or incorrectly inserted. | See page 16 |
| | 2. The needle and/or fabrics are not suitable for the work being sewn. | See page 17 |
| | 3. A Blue Tip needle is not being used when sewing stretch, very fine fabrics or synthetics. | See page 17 |
| | 4. The needle thread is not threaded properly. | See page 21 |
| | 5. A poor quality needle is being used. | Change the needle. |
| **Seam puckering** | 1. The needle thread tension is too tight. | See page 24 |
| | 2. The needle thread is not threaded properly. | See page 21 |
| | 3. The needle is too heavy for the fabric being sewn. | See page 17 |
| | 4. The stitch length is too long for the fabric. | Make the stitch coarser |
| **The cloth is not feeding smoothly.** | 1. The feed dog is packed with lint. | See page 78 |
| | 2. The stitches are too fine. | Make the stitch coarser. |
| | 3. The feed dog is not raised after "drop feed" sewing. | See page 14 |
| **Stitches form loops below the fabric.** | 1. The needle thread tension is too loose. | See page 24 |
| | 2. The needle is either too heavy or too fine for the thread. | See page 17 |
| **The machine does not work.** | 1. The machine is not plugged in. | See page 6 |
| | 2. Thread has been caught in the hook race. | See page 82 |
| | 3. The bobbin winder spindle is not returned to the left after bobbin winding. | See page 19 |
| **Buttonhole is not sewn properly.** | 1. The stitch density is not suitable for the fabric being sewn. | See page 43 |
| | 2. A suitable interface material has not been used for stretch or synthetic fabric. | See page 17 |
| **The machine does not run smoothly and is noisy.** | 1. Thread has been caught in the hook race. | See page 82 |
| | 2. Lint has built up in the hook race or bobbin holder. | See page 82 |

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