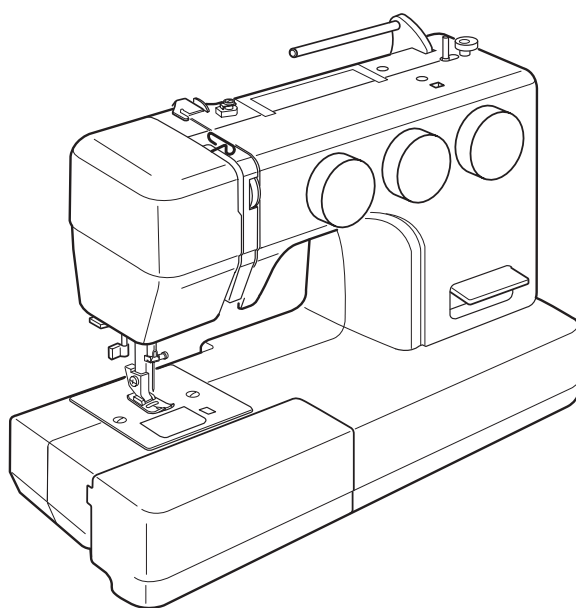


INSTRUCTION BOOK



IMPORTANT SAFETY INSTRUCTIONS

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

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

Read all instructions before using this sewing machine.

DANGER — To reduce the risk of electric shock:

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

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

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

SAVE THESE INSTRUCTIONS

For Europe only:

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

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

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



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

Table of contents

SECTION 1. ESSENTIAL PARTS

Names of Parts.....	2
Setting the Spool Pin.....	2
Standard Accessories	3
Extension Table.....	3
Free-arm Sewing.....	3

SECTION 2. GETTING READY TO SEW

Connecting the Power Supply	4
Controlling the Sewing Speed	5
Reverse Stitch Lever	5
To Drop or Raise the Feed Dogs.....	5
Presser Foot Lifter.....	6
Changing the Presser Foot	6
Removing and Attaching the Presser Foot Holder	6
Changing Needles.....	7
Fabric and Needle Chart	8
Winding the Bobbin	9-10
Inserting the Bobbin	11
Threading the Machine.....	12
Needle Threader	13
Drawing up the Bobbin Thread	13
Selecting the Stitch Pattern	14
Stitch Length Dial	14
Adjusting Stretch Stitch Balance	15
Stitch Width Dial.....	15
Balancing Needle Thread Tension	16

SECTION 3. BASIC SEWING

Straight Stitch	17
Changing the Sewing Direction.....	17
Using the Seam Guide Lines.....	18
Turning a Square Corner	18
Variable Needle Position	18

SECTION 4. UTILITY STITCHES

Basic Zigzag.....	19
Overcasting	19
Knit Stitch	20
Tricot Stitch.....	20
Straight Stretch Stitch.....	21
Zigzag Stretch Stitch	21
Button Sewing	22
4-Step Buttonhole	23
Corded Buttonhole	24
Zipper Application	25-27
Blind Stitch Hemming.....	28

SECTION 5. DECORATIVE STITCHES

Smocking.....	29
Pin Tucking	30
Shell Tuck	30
Patchwork.....	31
Satin Stitches	31
Decorative Stretch Stitches	32

SECTION 6. CARE AND MAINTENANCE

Cleaning the Hook Race and Feed Dogs.....	33
Replacing the Bobbin Holder	34
Troubleshooting.....	35

SECTION 1. ESSENTIAL PARTS

Names of Parts

- ① Bobbin winder stopper
- ② Bobbin winder spindle
- ③ Spool pin
- ④ Bobbin winder thread guide
- ⑤ Thread guide
- ⑥ Thread take-up lever
- ⑦ Face cover
- ⑧ Thread cutter
- ⑨ Needle threader
- ⑩ Needle plate
- ⑪ Extension table (Accessory storage)
- ⑫ Hook cover plate
- ⑬ Hook cover plate release button
- ⑭ Thread tension dial
- ⑮ Reverse stitch lever
- ⑯ Stitch width dial
- ⑰ Stitch length dial
- ⑱ Pattern selector dial
- ⑲ Presser foot
- ⑳ Needle
- ㉑ Needle clamp screw
- ㉒ Foot holder
- ㉓ Setscrew
- ㉔ Carrying handle
- ㉕ Handwheel
- ㉖ Power switch
- ㉗ Machine socket
- ㉘ Drop feed lever
- ㉙ Free-arm
- ㉚ Presser foot lifter
- ㉛ Foot control*

NOTE:

To carry the sewing machine, hold the carrying handle with your hand, and support the sewing machine with the other hand.

NOTE:

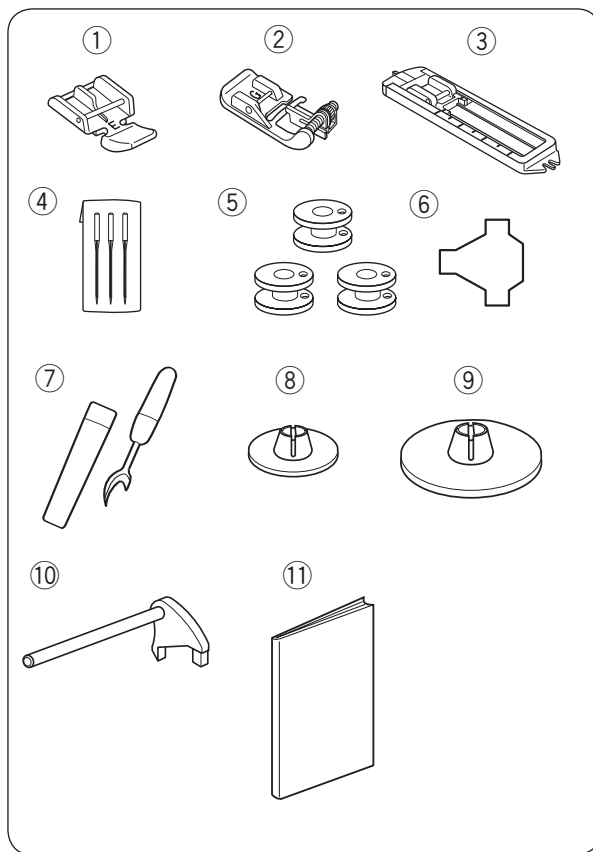
Design and specifications are subject to change without prior notice.

* The foot control included may differ from the illustration.

Setting the Spool Pin

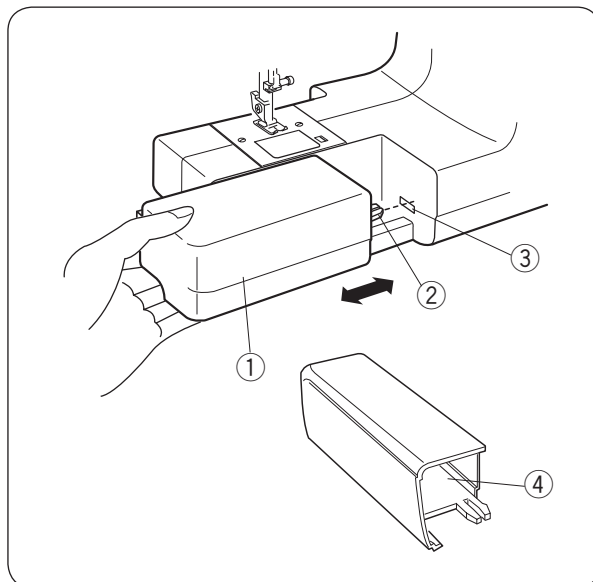
Insert the spool pin into the hole as shown.

- ① Spool pin
- ② Hole



Standard Accessories

- ① Zipper foot E
- ② Blind hem foot G
- ③ Sliding buttonhole foot
- ④ Needle set
- ⑤ Bobbin x 3
- ⑥ Screwdriver
- ⑦ Seam ripper (buttonhole opener)
- ⑧ Spool holder (small)
- ⑨ Spool holder (large)
- ⑩ Spool pin
- ⑪ Instruction book



Extension Table

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

The accessories can be stored in the table.

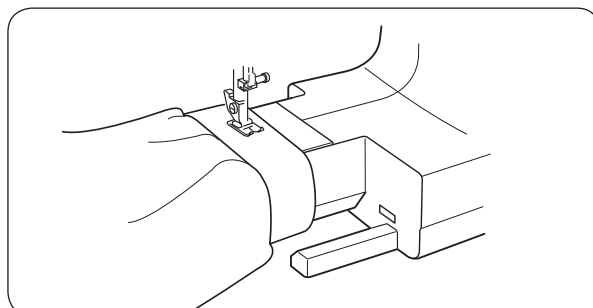
Detaching the table:

Pull the table away from the machine, as illustrated.

Attaching the table:

Push the extension table, inserting the tab into the slot until the table snaps into the machine.

- ① Extension table
- ② Tab
- ③ Slot
- ④ Accessory storage



Free-arm Sewing

Free-arm sewing is used for stitching sleeves, waistbands, pant legs or any other tubular garments. It is also useful for darning socks or mending knees or elbows.

SECTION 2. GETTING READY TO SEW

Connecting the Power Supply

- ① Turn the power switch off.
- ② Insert the machine plug into the machine socket.
- ③ Insert the power supply plug into the wall outlet.
- ④ Turn the power switch on.
 - ① Power switch
 - ② Machine plug
 - ③ Machine socket
 - ④ Power supply plug
 - ⑤ Wall outlet

NOTE:

- Before connecting to the power supply, make sure the voltage shown on the machine conforms to your electrical power.
- Before using your sewing machine for the first time, place a scrap of fabric under the presser foot and run the machine with thread for a few minutes. Wipe away any oil which may appear.



WARNING:

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

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

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

Do not place anything on the foot control, otherwise the machine will run intermittently.

Operating Instructions:

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

For an appliance with a polarized plug (one blade wider than the other):

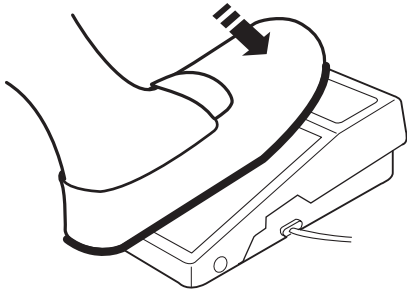
To reduce the risk of electrical shock, this plug is intended to fit in a polarized outlet only one way. If it does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not modify the plug in any way.

The foot controller Model YC-482J or TJC-150 is used with this sewing machine (USA market only).

Controlling the Sewing Speed

Foot control

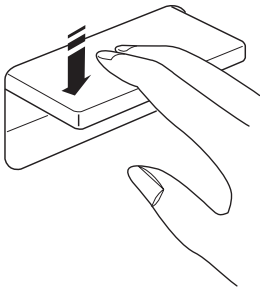
Sewing speed can be varied by the foot control. The harder you depress the foot control, the faster the machine runs.



Reverse Stitch Lever

Push the reverse stitch lever down to sew in reverse.

The machine will sew in reverse while the lever is pushed.



To Drop or Raise the Feed Dogs

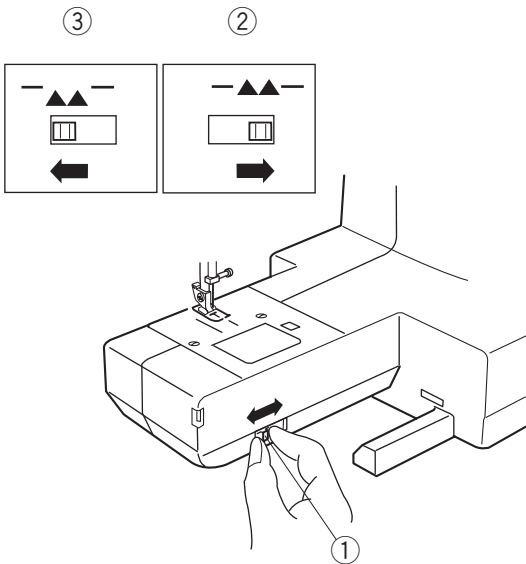
The drop feed lever is located underneath the free-arm bed on the front side of the machine.

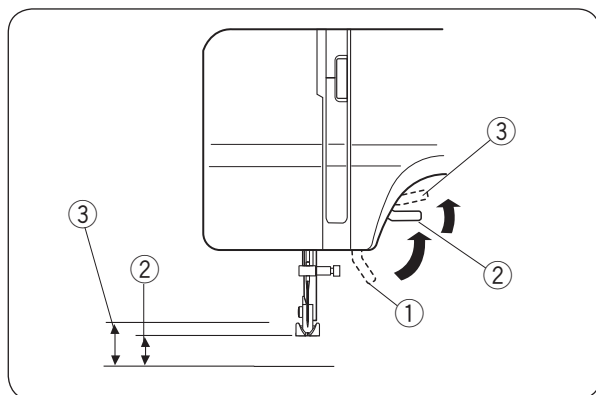
To drop the feed dog, push the lever in the direction of the arrow, as illustrated.

To raise the feed dog, push the lever in the direction of the arrow, as illustrated, and turn the handwheel toward you.

The feed dog must be up for normal sewing.

- ① Drop feed lever
- ② Raised position
- ③ Lowered position



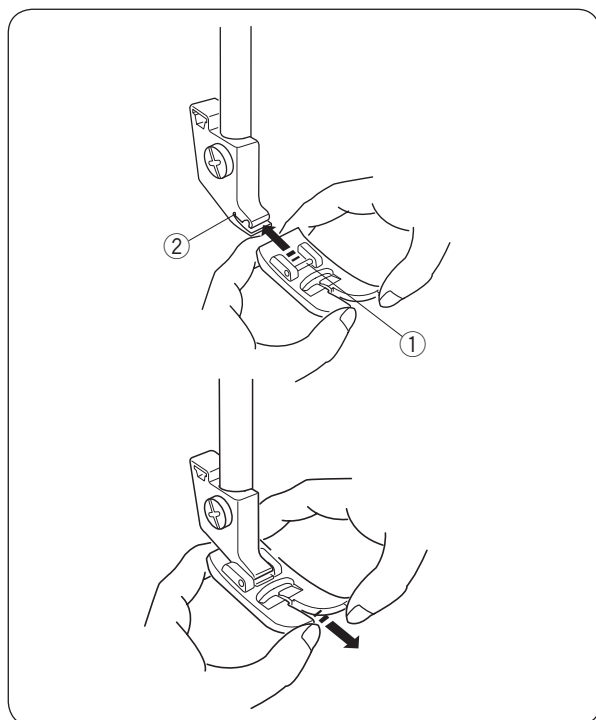


Presser Foot Lifter

The presser foot lifter raises and lowers the presser foot.

You can raise it about 1/4" (0.6 cm) higher than the normal up position for easy removal of the presser foot, or to help you place heavy fabric under the foot.

- ① Lowered position
- ② Normal up position
- ③ Highest position



Changing the Presser Foot

! CAUTION:

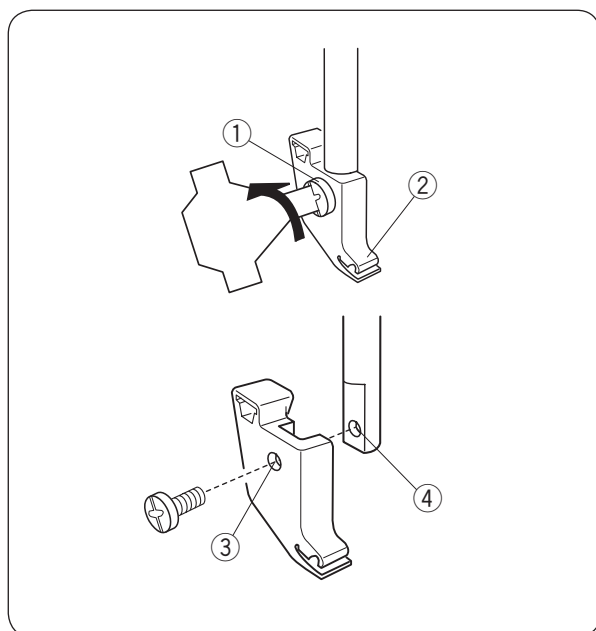
Turn OFF the power switch before changing the foot. Always use the proper foot for the selected pattern. The wrong foot can cause the needle to break. Do not push the lever down to prevent it from being broken.

To attach:

Insert the presser foot pin ① into the slit ② of the presser holder and push the presser foot to lock it in place.

To remove:

Pull the foot in the direction of arrow to remove the presser foot.



Removing and Attaching the Presser Foot Holder

! CAUTION:

Turn OFF the power switch before detaching or attaching the presser foot holder.

To remove:

Remove the setscrew by turning it counterclockwise with a screwdriver and remove the presser foot holder from the presser bar.

To attach:

Match the hole in the presser foot holder with the threaded hole in the presser bar. Fit the setscrew into the hole. Tighten the screw by turning it clockwise with a screwdriver.

- ① Setscrew
- ② Presser foot holder
- ③ Hole
- ④ Threaded hole

Changing Needles



CAUTION:

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

Raise the needle by turning the handwheel and lower the presser foot.

Turn off the power switch.

- ① Loosen the needle clamp screw by turning it counterclockwise.

Remove the needle from the clamp.

① Needle clamp screw

- ② Insert a new needle into the needle clamp with the flat side of the needle to the rear.

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

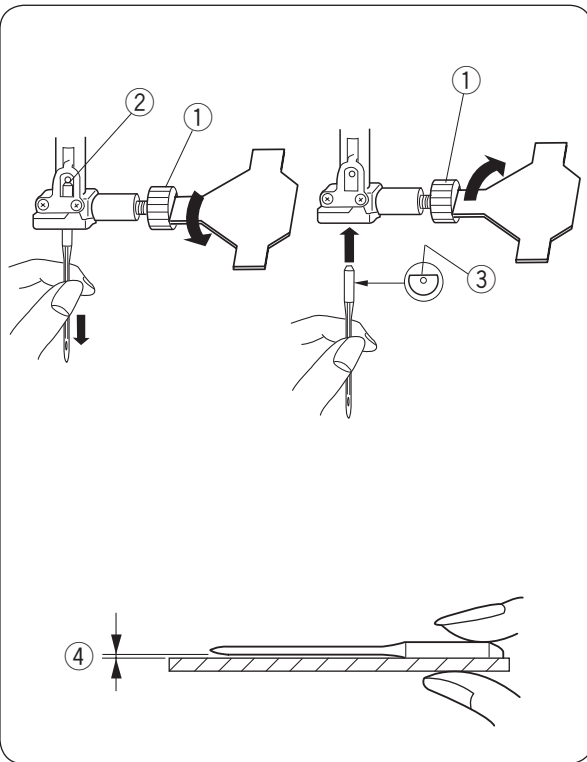
② Stopper pin

③ Flat side

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

Never use a blunt needle.

④ Gap



Fabric and Needle Chart

- For general sewing, use needle size 11/75 or 14/90.
- A fine thread and needle should be used for sewing lightweight fabrics, so the fabric will not be marred.
- Heavy fabrics require a needle large enough to pierce the fabric without fraying the needle thread.
- Always test the needle size on a small scrap of the fabric that will be used for actual sewing.
- In general, use the same thread for the needle and bobbin.

NOTE:

When sewing stretch fabrics, very fine fabrics and synthetics, use a blue tip needle (Part No. 990311000, sold separately). The blue tip needle effectively prevents skipped stitches.

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

NOTE:

3 x #14/90 needles are included in the envelop. (Part No. 639804000).

Winding the Bobbin

Setting the spool

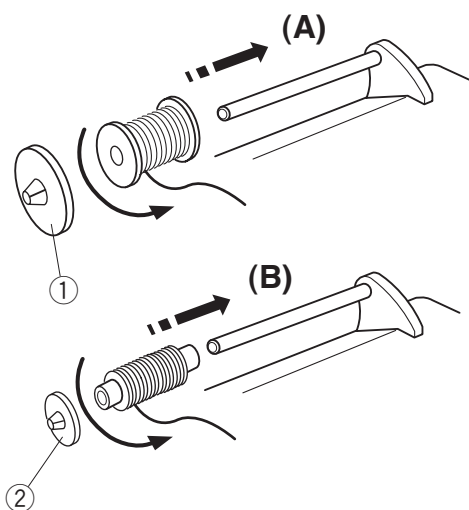
Place a spool of thread on the spool pin with the thread coming off the spool as illustrated.

A: Press the large spool holder firmly against the spool of thread.

① Large spool holder

B: For a small spool, use the small spool holder.

② Small spool holder



Removing the bobbin

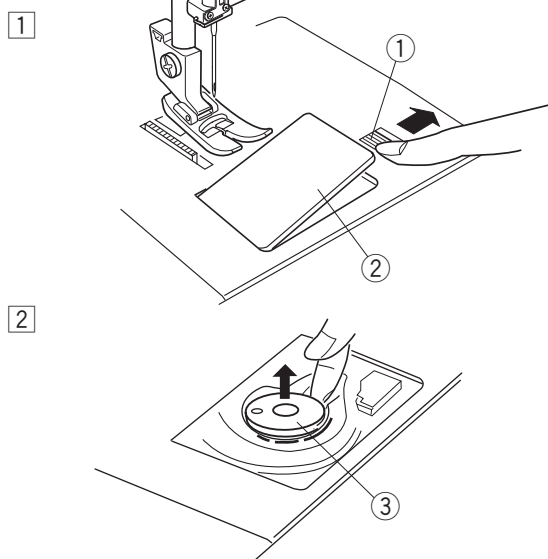
① Push the hook cover plate release button to the right and remove the cover plate.

① Hook cover plate release button

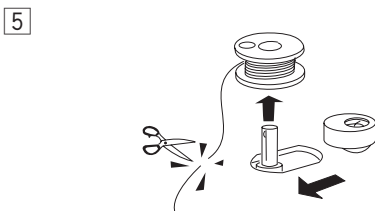
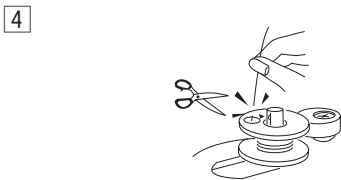
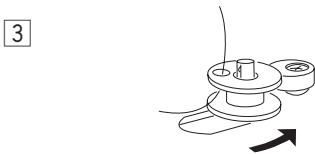
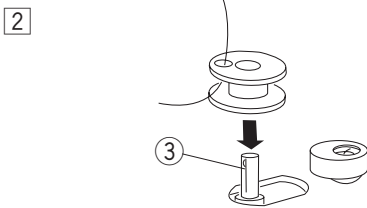
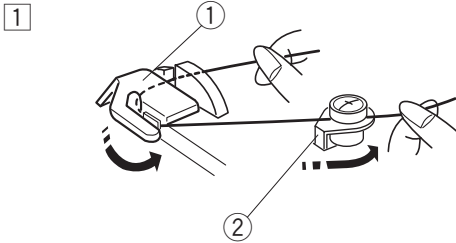
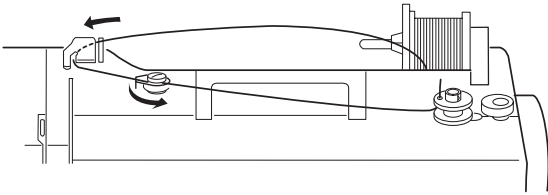
② Hook cover plate

② Lift out the bobbin.

③ Bobbin



Winding the bobbin



- 1 Hold the thread with both hands and guide the thread from back to front under the thread guide.

① Thread guide

Guide the thread into the bobbin winder thread guide as illustrated.

② Bobbin winder thread guide

- 2 Pass the thread through the hole in the bobbin from the inside to the outside. Put the bobbin on the bobbin winder spindle. Hold top of the bobbin winder spindle and rotate the bobbin until it clicks into place.

③ Bobbin winder spindle

- 3 Push the bobbin winder spindle to the right.

- 4 Hold the free end of the thread in your hand and start the machine. Stop the machine when the bobbin has been wound a few layers, and cut the thread close to the bobbin.

- 5 Start the machine again. When the bobbin is fully wound, it will stop automatically. Stop the machine and return the bobbin winder spindle to its original position by moving it to the left, and cut the thread with a pair of scissors. Remove the bobbin from the bobbin winder spindle.

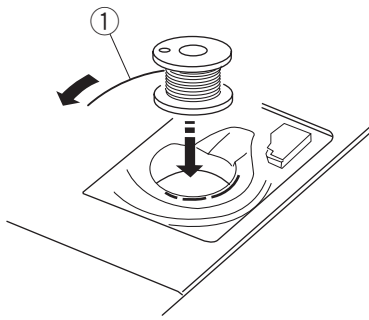
NOTE:

The machine will not sew until the spindle has been returned to the left.

Inserting the Bobbin

- 1 Place the bobbin in the bobbin holder with the thread running off as illustrated.

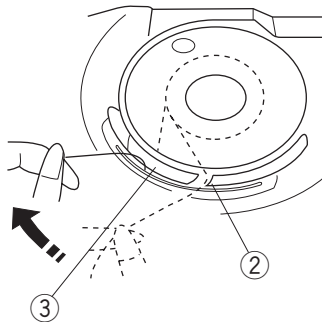
① Thread



- 2 Guide the thread into the front notch on the front side of the bobbin holder. Draw the thread to the left, sliding it between the tension spring blades.

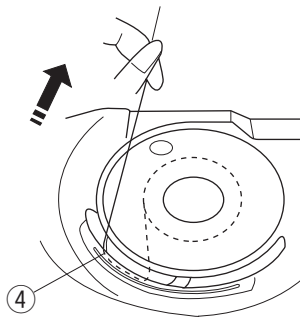
② Front notch

③ Tension spring blade



- 3 Continue to draw the thread lightly until the thread slips into the side notch.

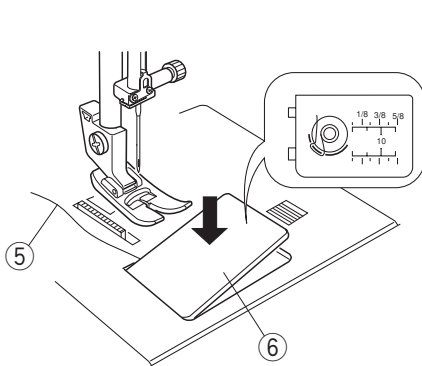
④ Side notch



- 4 Pull out about 4" (10 cm) of thread. Attach the hook cover plate. Check the threading by referring to the chart shown on the hook cover plate.

⑤ Thread

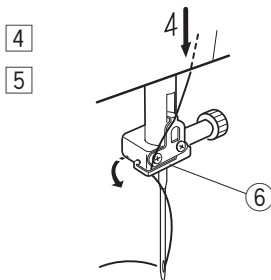
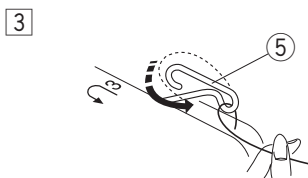
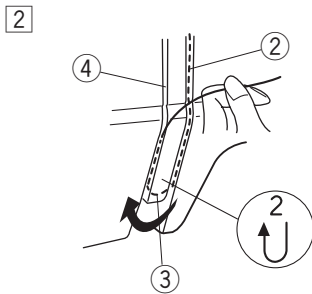
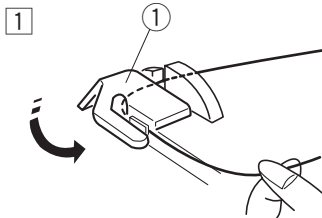
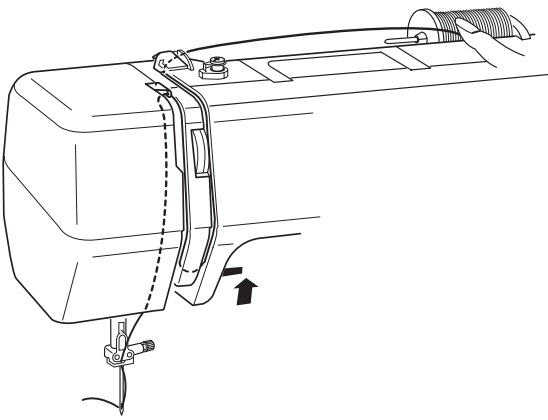
⑥ Hook cover plate



Threading the Machine

Raise the presser foot.

Turn the handwheel toward you to raise the thread take-up lever to its highest position.



- 1 Draw the thread from the spool and pass it under the thread guide.

① Thread guide

- 2 Draw the thread down along the right channel and pull it up around the bottom of the thread guide plate.

Pull the thread up along the left channel.

② Right channel

③ Thread guide plate

④ Left channel

- 3 Firmly draw the thread from right to left over the thread take-up lever and down into the take-up lever eye.

⑤ Thread take-up lever

- 4 Draw the thread down along the left channel and slip the thread behind the needle bar thread guide from the left.

⑥ Needle bar thread guide

- 5 Pass the thread through the needle eye from the front.

Needle Threader

- 1 Raise the needle to its highest position.
Pull down the needle threader knob as far as it will go.

① Threader knob

- 2 Turn the knob in the direction of the arrow in the illustration, then insert hook into the needle eye.

Lead the thread around guide and under hook.

② Hook

③ Guide

- 3 Turn the knob in the direction of the arrow in the illustration, drawing the thread loop through the needle.

Gently let the needle threader goes up to pull the thread loop up. Pull the thread through the needle eye.

NOTE:

The needle threader can be used with a #11 to #16 needle or a blue tipped needle. Thread size 50 to 90 should also work well.

Drawing up the Bobbin Thread

- 1 Raise the presser foot and hold the needle thread lightly with your left hand.

① Needle thread

- 2 Turn the handwheel slowly toward you one complete turn. Bring the bobbin thread up by pulling the needle thread as illustrated.

② Bobbin thread

- 3 Pull 4" (10 cm) of both threads back and under the presser foot.

Selecting the Stitch Pattern

Raise the needle to its highest position.

Pattern selector dial

Turn the pattern selector dial to set the symbol of the desired stitch pattern at the setting mark.

- ① Pattern selector dial
- ② Setting mark

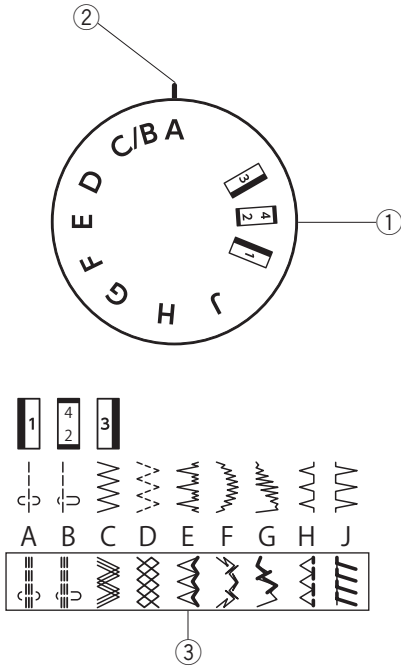


CAUTION:

Do not turn the pattern selector dial while the needle is in the fabric, otherwise the needle may bend or break.

To select the stretch stitch patterns, set the stitch length dial at S.S.

- ③ Stretch stitch patterns



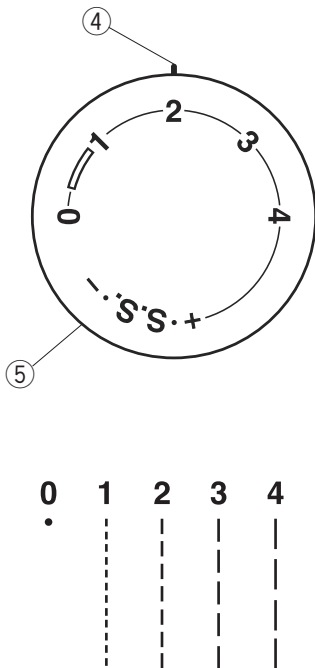
Stitch Length Dial

Turn the stitch length dial to set the desired stitch length number at the setting mark.

The higher the number, the longer the stitch

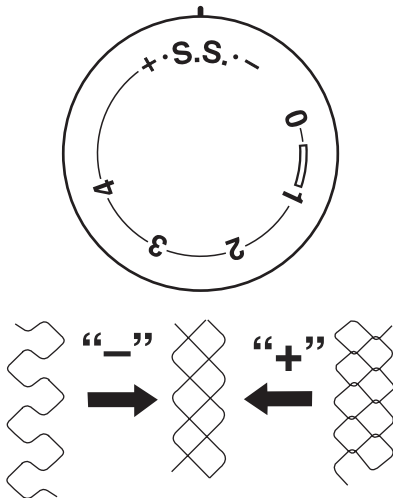
The “” mark shows the adjustment range when sewing the buttonhole.

- ④ Setting mark
- ⑤ Stitch length dial



Adjusting Stretch Stitch Balance

If the stretch stitch patterns are uneven when you sew on a particular fabric, correct them by turning the stitch length dial.



If the patterns are drawn out, correct them by setting the dial to the “-” side.

If the patterns are compressed, correct them by setting the dial to the “+” side.

Stitch Width Dial

Turn the stitch width dial to set the desired stitch width at the setting mark .

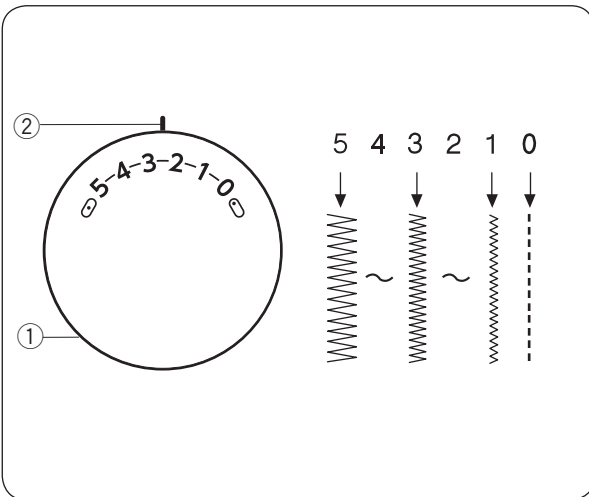
The higher the number, the wider the stitch width.

① Stitch width dial

② Setting mark

NOTE:

Raise the needle above the fabric, when you turn the stitch width dial.



Balancing Needle Thread Tension

The thread tension should be adjusted depending on the sewing materials, layers of fabric and sewing method.

To adjust the thread tension, turn the tension dial.

① Tension dial

Balanced tension:

The ideal straight stitch has threads locked between two layers of fabric, as illustrated.

For an ideal zigzag stitch, the bobbin thread does not show on the right side (top side) of the fabric, and the needle thread shows slightly on the wrong side (bottom side) of the fabric.

- ② Needle thread (Top thread)
- ③ Bobbin thread (Bottom thread)
- ④ Right side (Top side) of fabric
- ⑤ Wrong side (Bottom side) of fabric

Needle thread tension is too tight:

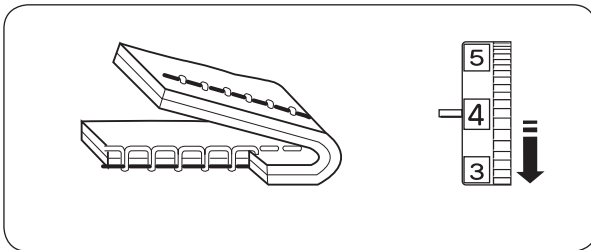
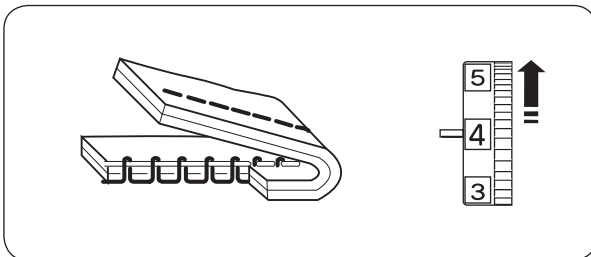
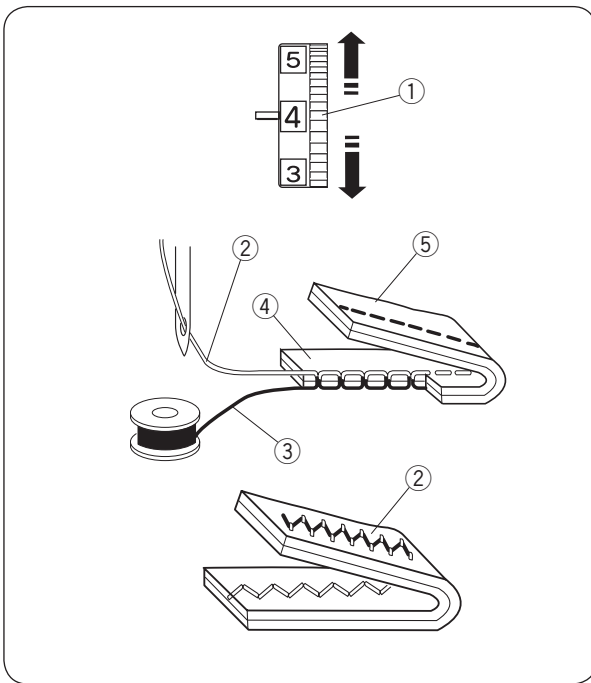
The bobbin thread (bottom thread) will appear on the right side (top side) of the fabric.

Loosen the needle thread tension by moving the dial to a lower number.

Needle thread tension is too loose:

The needle thread (top thread) will form loops on the wrong side (bottom side) of the fabric.

Tighten the needle thread tension by moving the dial to a higher number.



SECTION 3. BASIC SEWING

Straight Stitch Machine setting

- | | |
|--------------------|---------------|
| ① Stitch selector: | A or B |
| ② Presser foot: | Zigzag foot A |
| ③ Thread tension: | 2 – 6 |
| ④ Stitch length: | 1.5 – 4 |
| ⑤ Stitch width: | 0 or 5 |

NOTE:

Set the stitch width dial at “0” when the straight stitch (pattern B) is selected.

Starting to sew

Raise the presser foot and position the fabric next to a seam guide line on the needle plate (5/8" (1.6 cm) is most common). Lower the needle to the point where you want to start. Lower the presser foot and pull the threads toward the back. Depress the foot control.

NOTE:

Draw the threads to the left when sewing with the sliding buttonhole foot.

To fasten the beginning of the seam, first sew several stitches in reverse then sew forward.

Gently guide the fabric along a seam guide line letting the fabric feed naturally.



CAUTION:

Do not place fingers near to the presser foot when guiding fabric, or the needle clamp screw may strike and injure your fingers.

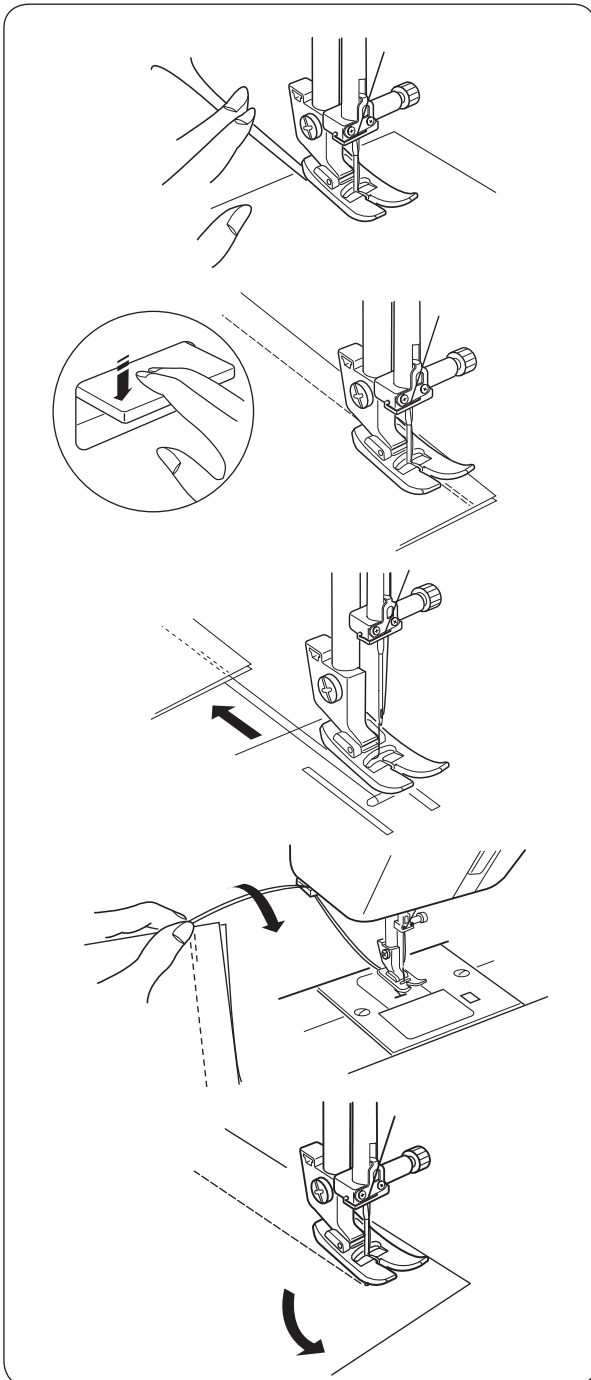
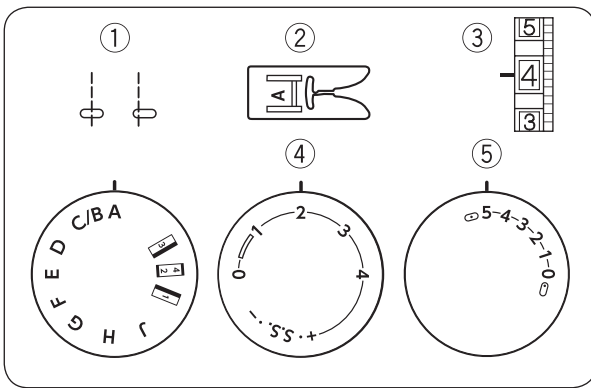
Finishing sewing

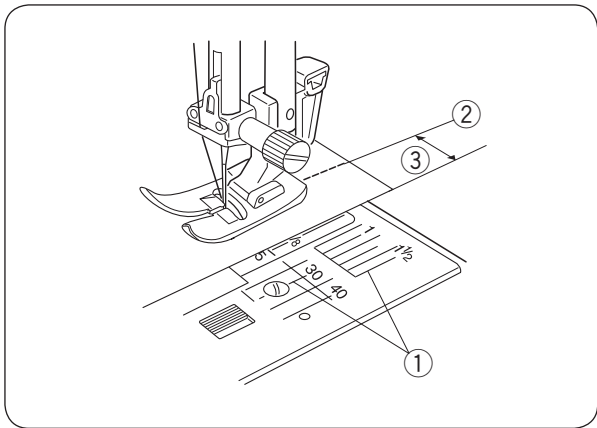
To fasten the ends of a seam, press the reverse stitch lever and sew several reverse stitches. Raise the presser foot. Remove the fabric, draw the threads to the back and cut them with the thread cutter. The threads are now the proper length to begin sewing the next seam.

Changing the Sewing Direction

Stop the machine and turn the handwheel toward you to bring the needle down into the fabric. Raise the presser foot.

Pivot the fabric around the needle to change sewing direction as desired. Lower the presser foot and continue sewing in the new direction.



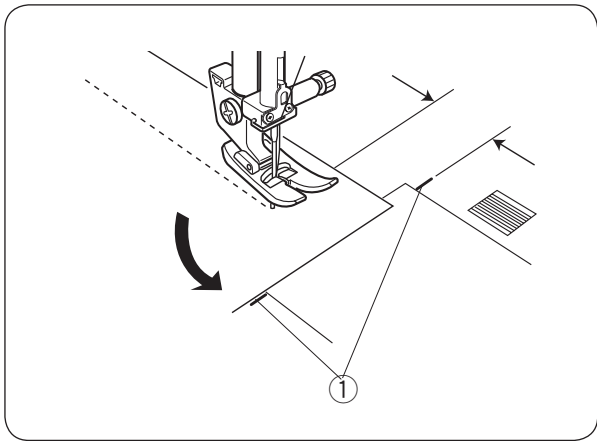


Using the Seam Guide Lines

The seam guides on the needle plate and hook cover help you to measure seam allowance.

Numbers	10	15	30	40	3/8	1/2	5/8	1	1 1/2
Distance (cm)	1	1.5	3	4	—	—	—	—	—
Distance (inch)	—	—	—	—	3/8	1/2	5/8	1	1 1/2

- ① Guide lines
- ② Center needle position
- ③ Distance from the center needle position



Turning a Square Corner

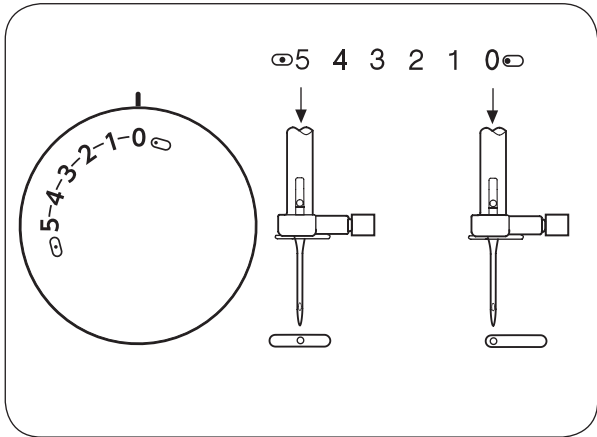
The cornering guide helps you maintain a 5/8" (1.6 cm) seam allowance when sewing a corner.

When the fabric edge facing you lines up with the cornering guide as illustrated, stop stitching and lower the needle into the fabric by turning the handwheel toward you.

Raise the presser foot and pivot the fabric so the edge of the fabric will align with the 5/8" (1.6 cm) seam guide.

Lower the presser foot and start stitching in the new direction.

- ① Cornering guide



Variable Needle Position

When the straight stitch (pattern A) is selected, you can move the needle between center and left needle position by turning the stitch width dial.

SECTION 4. UTILITY STITCHES

Basic Zigzag Machine setting

- | | |
|--------------------|---------------|
| ① Stitch selector: | C |
| ② Presser foot: | Zigzag foot A |
| ③ Thread tension: | 2 – 5 |
| ④ Stitch length: | 0.5 – 4 |
| ⑤ Stitch width: | 1 – 5 |

Simple zigzag stitching is widely used for overcasting, sewing on buttons etc.

Adjust the stitch length to suit your sewing needs.

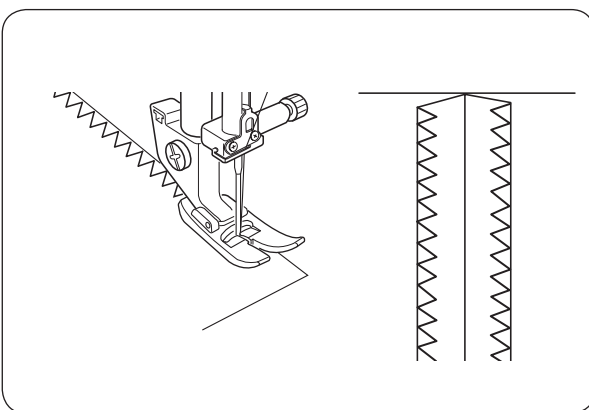
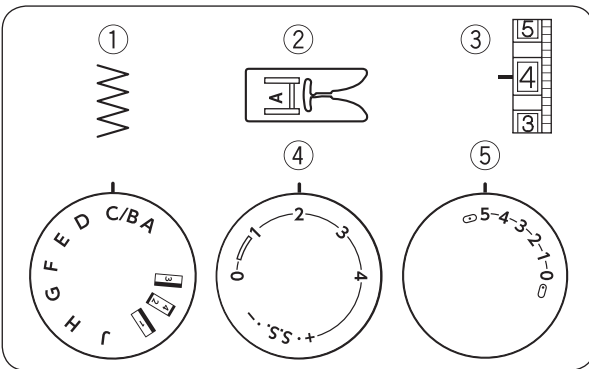
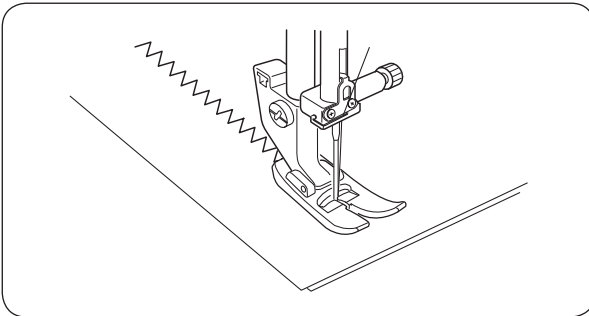
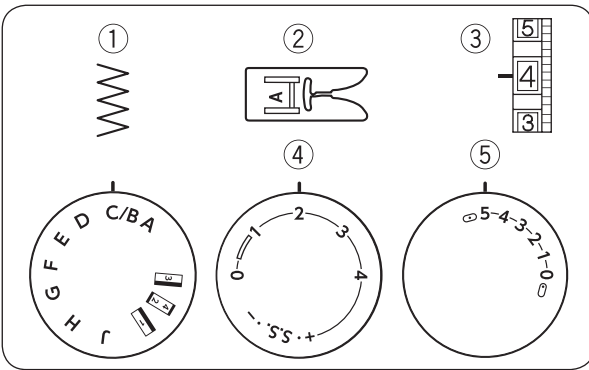
NOTE:

Use a stabilizer for stretch fabrics such as tricot and knits to prevent puckering.

Overcasting Machine setting

- | | |
|--------------------|---------------|
| ① Stitch selector: | C |
| ② Presser foot: | Zigzag foot A |
| ③ Thread tension: | 2 – 5 |
| ④ Stitch length: | 0.5 – 4 |
| ⑤ Stitch width: | 1 – 5 |

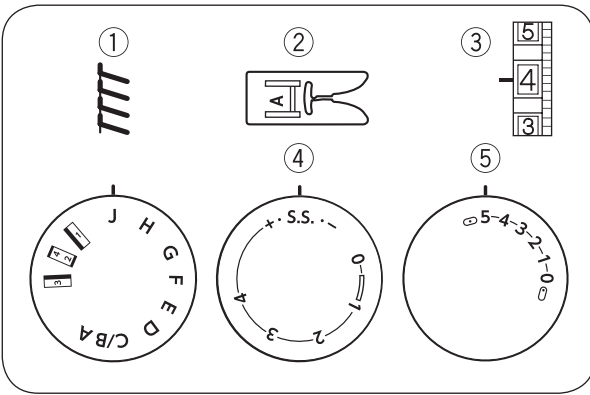
The zigzag stitch is used on the seam allowance to prevent fabric from fraying at raw edges.



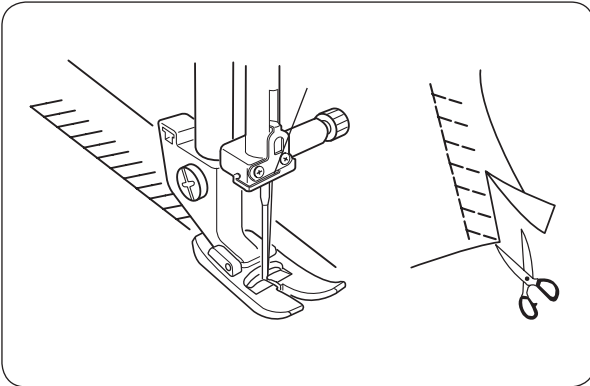
Knit Stitch

Machine setting

- | | |
|--------------------|---------------|
| ① Stitch selector: | J |
| ② Presser foot: | Zigzag foot A |
| ③ Thread tension: | 3 – 7 |
| ④ Stitch length: | S.S. |
| ⑤ Stitch width: | 5 |



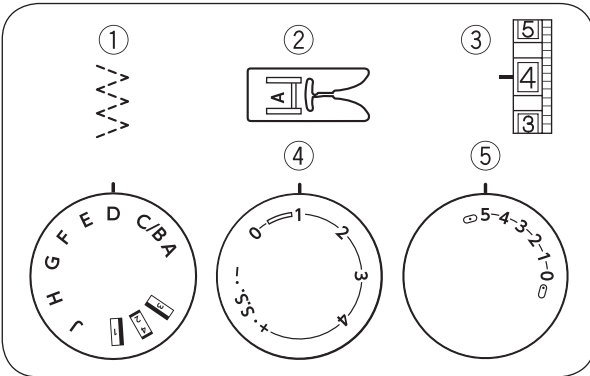
This knit stitch is ideal for sewing swimwear and stretch velour because it provides the greatest amount of elasticity and strength. Place your fabric to allow a 5/8" (1.6 cm) seam. Trim the seam allowance after sewing.



Tricot Stitch

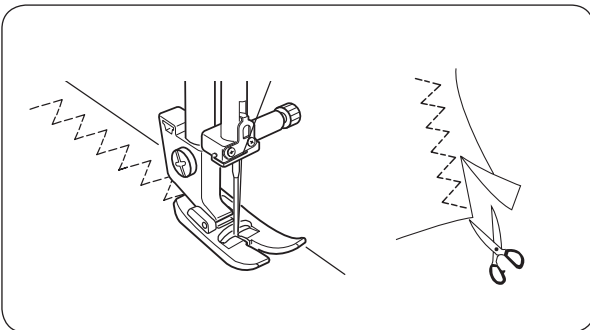
Machine setting

- | | |
|--------------------|---------------|
| ① Stitch selector: | D |
| ② Presser foot: | Zigzag foot A |
| ③ Thread tension: | 3 – 6 |
| ④ Stitch length: | 0.5–1.5 |
| ⑤ Stitch width: | 5 |



This stitch is used to finish a raw edge on synthetics and other fabrics that tend to pucker. Place the fabric to leave a 5/8" (1.6 cm) allowance. Trim the extra allowance after sewing.

It is also used for mending tears. Use a short stitch length (0 – 1) for mending tears.



Straight Stretch Stitch

Machine setting

- ① Stitch selector: A or B
- ② Presser foot: Zigzag foot A
- ③ Thread tension: 3 – 7
- ④ Stitch length: S.S.
- ⑤ Stitch width: 0 or 5

NOTE:

Set the stitch width dial at “0” when the straight stretch stitch (pattern B) is selected.

The pattern is sewn with two stitches forward and one stitch backward, forming a seam that does not rip easily.

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

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

Carefully guide the fabric while sewing as the fabric moves back and forth.

Zigzag Stretch Stitch

Machine setting

- ① Stitch selector: C
- ② Presser foot: Zigzag foot A
- ③ Thread tension: 2 – 5
- ④ Stitch length: S.S.
- ⑤ Stitch width: 1 – 5

Sew on stretch fabrics in any area that you might use a zigzag stitch.

This stitch is used as a decorative topstitch as well.

Button Sewing Machine setting

- | | |
|--------------------|---------------------|
| ① Stitch selector: | C |
| ② Presser foot: | Zigzag foot A |
| ③ Thread tension: | 3 – 7 |
| ④ Stitch length: | Any |
| ⑤ Stitch width: | Adjust as necessary |
| ⑥ Feed dog: | Lowered |

Unthread the needle. Adjust the stitch width to match it with the span of the holes in the button. Turn the handwheel to check if the needle enters into each hole in the button. Lower the foot to hold the button in place. The holes in the button should align with the slot of the foot.

A pin can be placed on the foot to form a shank. Make sure to check if the needle enters into both holes in the button.

① Pin

Re-thread the needle and sew about 10 stitches and cut the needle and bobbin threads at the beginning.

Raise the presser foot and remove the fabric. Cut the needle and bobbin threads leaving 8" (20 cm) tails.

Bring the needle thread between the button and fabric through the holes in the button.

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

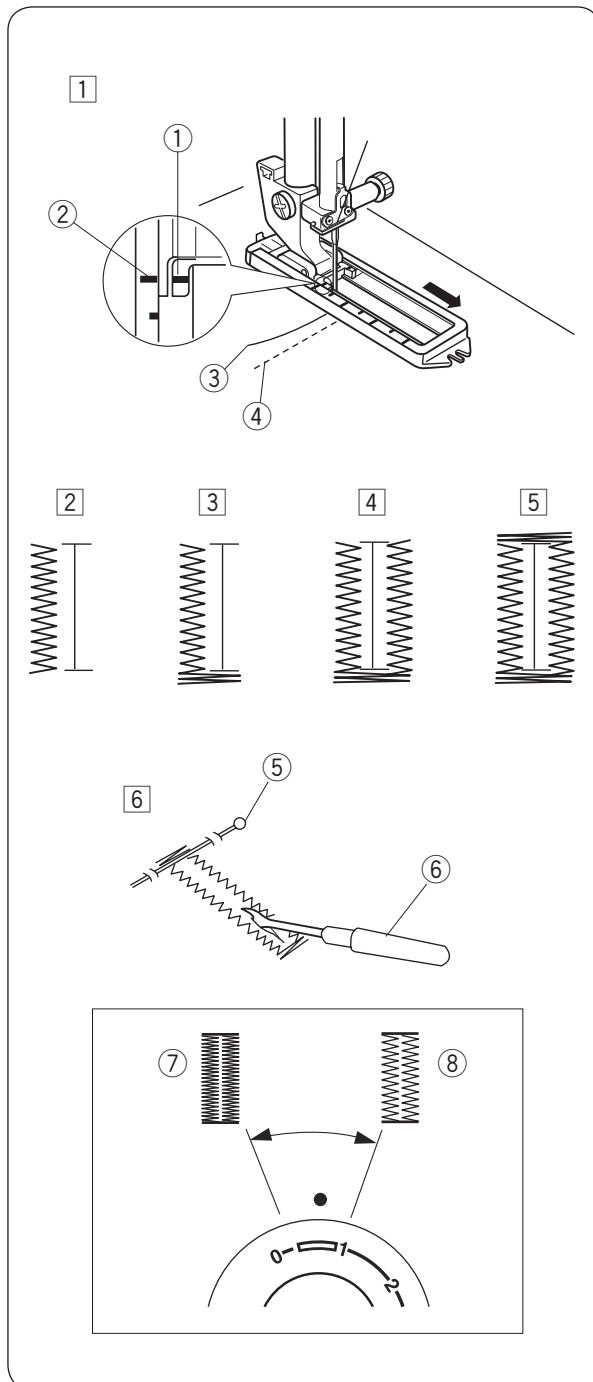
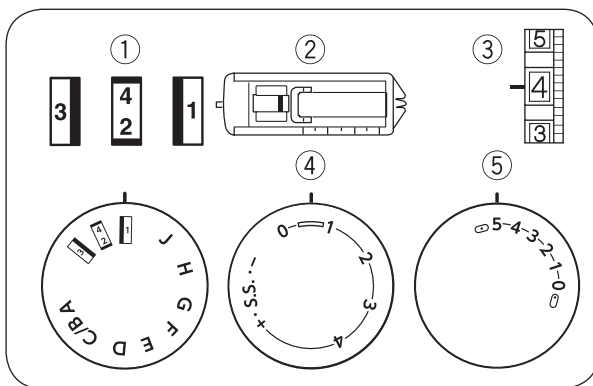
Wind the threads to form a shank and tie them together.

② Needle thread

③ Bobbin thread

NOTE:

Raise the feed dog after sewing.



4-Step Buttonhole Machine setting

- ① Stitch selector:
- ② Presser foot: Sliding buttonhole
- ③ Thread tension: 1 – 5
- ④ Stitch length: 0.5 – 1
- ⑤ Stitch width: 3 – 5

- ① Set the pattern selector dial at “1”. Carefully mark buttonhole length on fabric. Place the fabric under the foot with the buttonhole marking running toward you. Draw both of needle and bobbin thread to the left. Move the slider toward you so that the top mark ② on the slider meets the start mark ①.

- ① Start mark
- ② Top mark
- ③ Needle thread
- ④ Bobbin thread

NOTE:

The scale on the slider is engraved in centimeters.

- ② Sew forward until you reach the front marking of your buttonhole. Stop sewing at a left stitch.
- ③ Raise the needle to its highest position. Set the pattern selector dial at “2”. Sew 5 stitches, then stop sewing at a right stitch.
- ④ Raise the needle to its highest position. Set the pattern selector dial at “3”. Sew until the needle reaches the back marking of the buttonhole.
- ⑤ Raise the needle to its highest position. Set the pattern selector dial at “4”. Sew 5 stitches, then stop sewing with the needle above the fabric. Set the stitch length dial to “0” and the pattern selector dial at straight sewing (B setting). Sew a few locking stitches.
- ⑥ Raise the needle and presser foot. Remove the fabric from the machine and cut the sewing thread. Insert a pin inside the bartack. Then cut the opening with a seam ripper. Take care not to cut the stitches.
 - ⑤ Pin
 - ⑥ Seam ripper

To adjust buttonhole stitch density:

Set the stitch length dial between “” to adjust the buttonhole stitch density.

- ⑦ Denser buttonhole
- ⑧ Coarser buttonhole

Corded Buttonhole

Machine setting

- | | |
|--------------------|--------------------|
| ① Stitch selector: | |
| ② Presser foot: | Sliding buttonhole |
| ③ Thread tension: | 1 – 5 |
| ④ Stitch length: | 0.5 – 1 |
| ⑤ Stitch width: | 3 – 5 |

- ① With the buttonhole foot raised, hook the filler cord on the spur at the back of the foot. Bring the ends toward you under the foot, clearing the front end. Hook the filler cord into the forks on the front of the foot to hold them tight.

- ① Spur
- ② Forks

- ② Draw both of needle and bobbin thread to the left.

Move the slider toward you so that the top mark ④ on the slider meets the start mark ③.

- ③ Start mark
- ④ Top mark
- ⑤ Needle thread
- ⑥ Bobbin thread

Lower the needle into the fabric at the starting point and lower the foot.

Depress the foot control gently and sew the buttonhole over the cord.

The sewing sequence is the same as the 4-step buttonhole.

- ③ Pull the left end of the filler cord to tighten it and cut the excess tails.

To cut the buttonhole opening, refer to the instructions on page 23.

Zipper Application Machine setting

- | | |
|--------------------|---------------|
| ① Stitch selector: | A |
| ② Presser foot: | Zipper foot E |
| ③ Thread tension: | 3 – 6 |
| ④ Stitch length: | 1.5 – 4 |
| ⑤ Stitch width: | 5 |

Attaching the zipper foot

A: To sew the left side of the zipper, attach zipper foot with the right side pin.

B: To sew the right side of zipper, attach the zipper foot with the left side pin.

- ① Groove
- ② Pin

Fabric preparation

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

- ① Right side of the fabric
- ② 3/8" (1 cm)
- ③ Opening size
- ④ Zipper size
- ⑤ Slider
- ⑥ Zipper teeth
- ⑦ Zipper tape
- ⑧ Wrong side of the fabric
- ⑨ End of the opening

2 Place the right (top) sides of the fabric together. Sew a bottom seam 5/8" (2 cm) from the right edge to the zipper bottom stop position. Sew a few stitches in reverse to lock. Increase the stitch length to "4", set needle thread tension to "1", and baste the entire length of the fabric.

- ⑩ 5/8" (2 cm)
- ⑪ Basting
- ⑫ Reverse stitch
- ⑬ End of the opening
- ⑭ Bottom seam

To sew

- 1 Attach zipper foot with the right side pin. Fold back the upper layer seam allowance. Fold back the lower layer seam allowance to leave a 1/8" (0.4 cm) margin of fabric.

- ① Lower layer
- ② End of the opening
- ③ Zipper teeth
- ④ 1/8" (0.4 cm) margin
- ⑤ Upper layer
- ⑥ Opening size
- ⑦ Folded edge
- ⑧ Basting

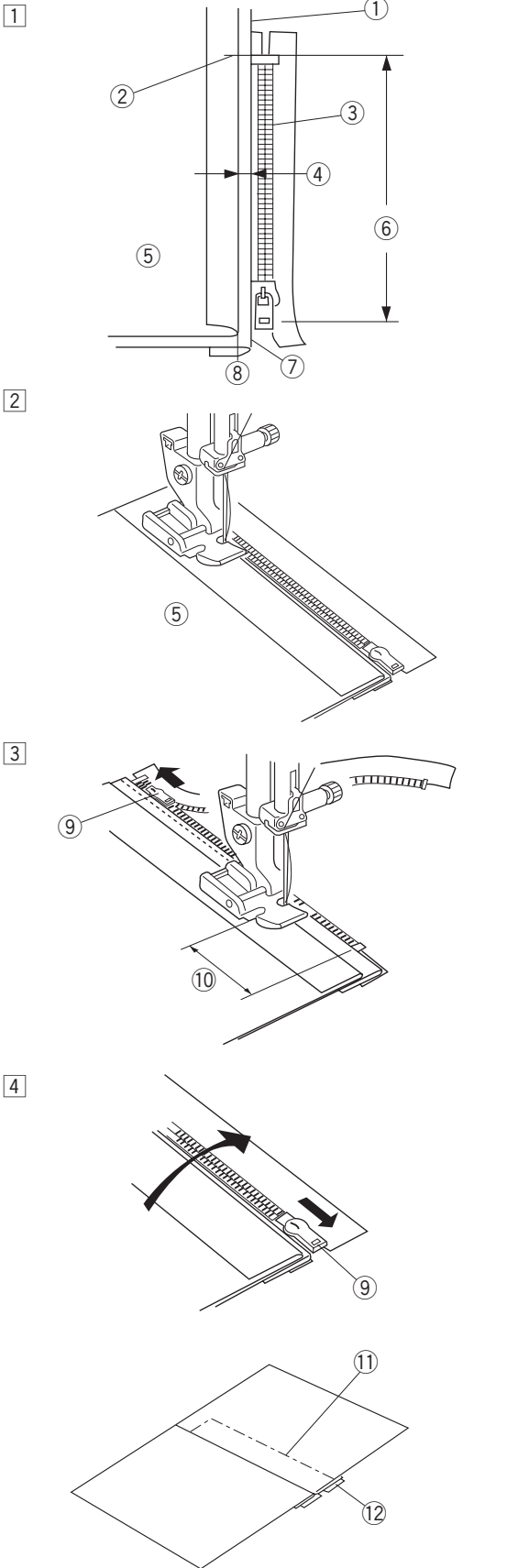
- 2 Place zipper teeth next to margin edge and baste the zipper tape to the lower fabric layer. Align zipper foot with margin edge. Return thread tension and stitch length to original settings. Sew a seam the entire length of zipper tape.

- 3 Stop the machine 2" (5 cm) before reaching the slider, with needle in the fabric and raise the foot, then unzip a few inches to clear a path for stitching.

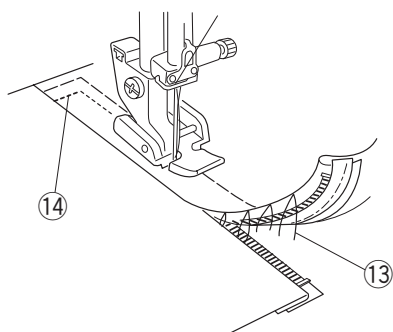
- ⑨ Slider
- ⑩ 2" (5 cm)

- 4 Remove fabric and close zipper. Take the upper fabric layer and lay it flat over the zipper. Baste the zipper tape to the upper fabric layer.

- ⑪ Basting
- ⑫ Zipper tape



5



- 5 Raise and release the foot, and re-attach it with the left side pin.

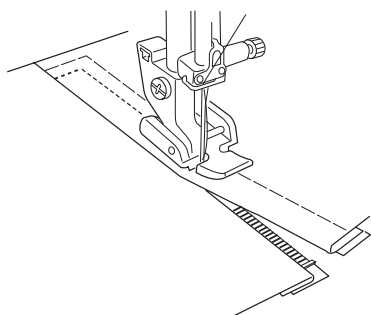
Starting just below zipper bottom stop, sew across fabric to about 3/8" (1 cm) distance from the basting line.

Turn fabric 90 degrees and sew a seam the entire length of the zipper tape. Before reaching the slider, stop the machine with needle in fabric and raise the foot. Use seam ripper to open a few inches of basting stitch.

13 Unstitch basting

14 3/8" (1 cm)

6



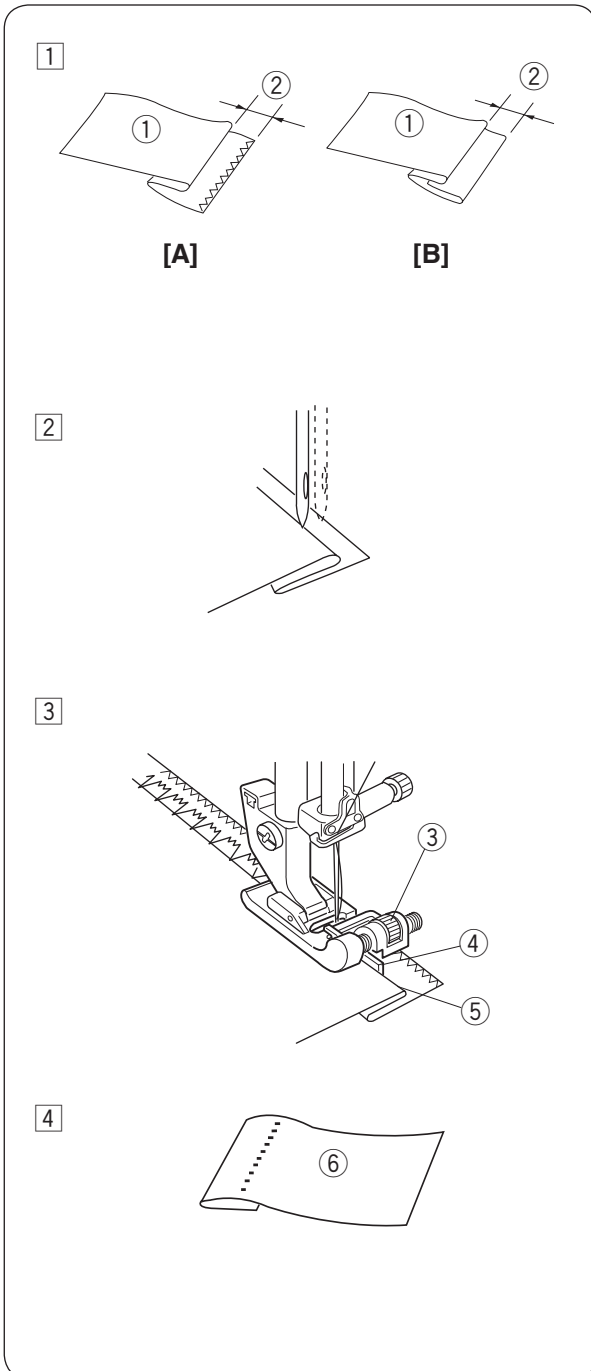
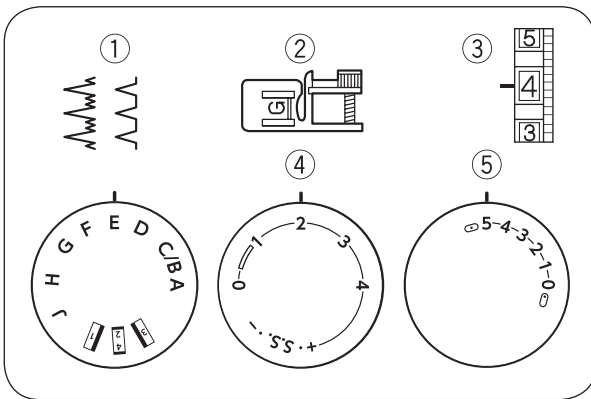
- 6 Unzip a few inches to clear a path for stitching.

At end of seam, sew a few stitches in reverse to lock. Once both sides of zipper are sewn, use the seam ripper to open the basting stitch.

Blind Stitch Hemming

Machine setting

- | | |
|--------------------|----------------------|
| ① Stitch selector: | E or H |
| ② Presser foot: | Blind hemming foot G |
| ③ Thread tension: | 2 – 4 |
| ④ Stitch length: | 2 – 3 |
| ⑤ Stitch width: | 5 |



- ① On heavy weight fabrics that ravel, the raw edge should be overcast first.
Fold the hem under the fabric as illustrated for fine or medium fabrics.

Fold a hem with the wrong side up forming a 1/8" (0.5 cm) allowance.

A: Heavy weight fabric

B: Fine or medium weight fabric

① Wrong side of the fabric

② 1/8" (0.5 cm)

- ② Place the fabric so that the needle just pierces the folded edge when the needle comes over the extreme left side.
Lower the presser foot.

- ③ Turn the screw to align the guide on the foot with the folded edge so that the needle just pierces the fold.
If the needle pierces too far left, move the guide slightly to the left.
If the needle misses the fold, move the guide slightly to the right.
Sew slowly while guiding the folded edge along the guide.

③ Screw

④ Guide

⑤ Folded edge

- ④ Open and press the fabric after sewing is finished.

⑥ Right side of the fabric

NOTE:

If the needle drops too far left, the stitches will be apparent on the right side of the fabric.

SECTION 5. DECORATIVE STITCHES

Smocking

Machine setting

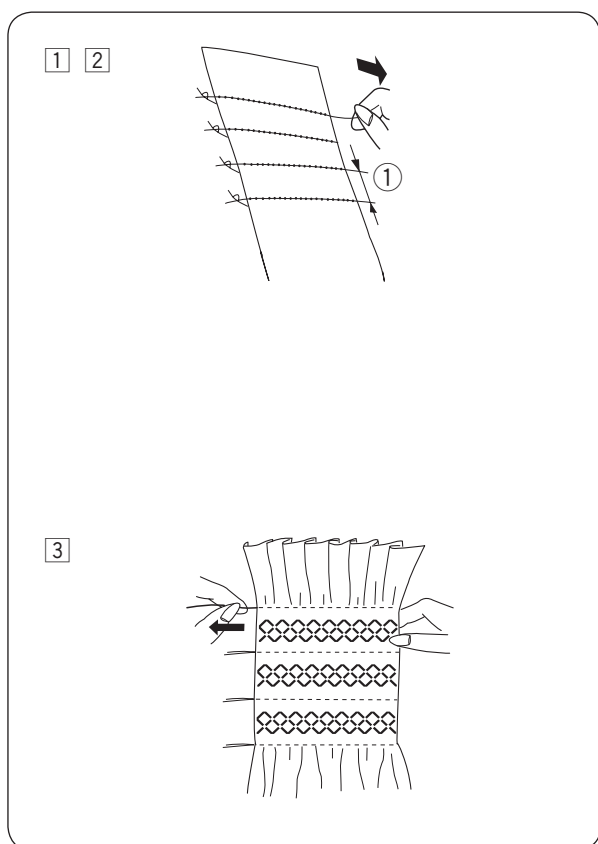
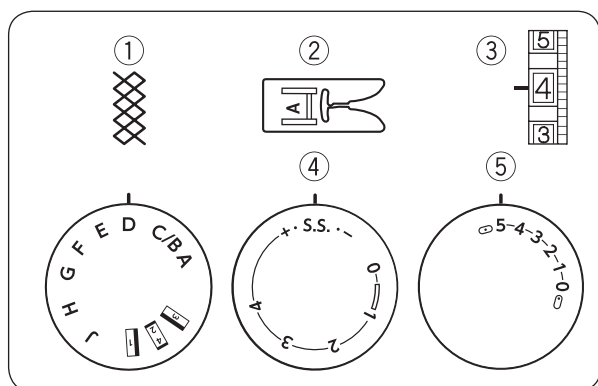
- | | |
|--------------------|---------------|
| ① Stitch selector: | D |
| ② Presser foot: | Zigzag foot A |
| ③ Thread tension: | 1 – 4 |
| ④ Stitch length: | S.S. |
| ⑤ Stitch width: | 5 |

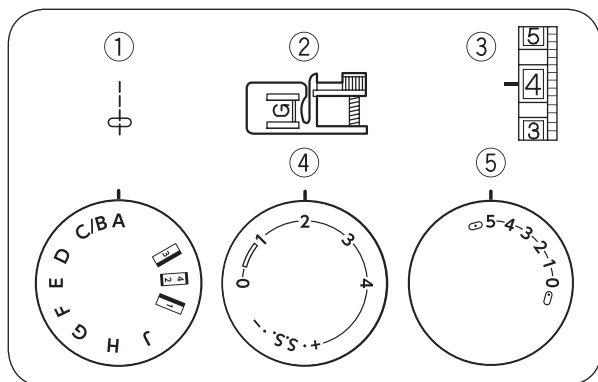
- ① Choose a soft and lightweight fabric such as batiste, gingham or challis. Cut the fabric three times wider than the project width. Increase the stitch length to “4” and loosen thread tension to “1”. Sew rows of straight stitches 3/8” (1 cm) apart across the area to be smocked.

① 3/8” (1 cm)

- ② Knot the threads along one end. From the other end, pull the bobbin threads to distribute gathers evenly and secure the threads. Return the thread tension to the original setting.

- ③ Sew rows of the smocking stitch between the gathering stitches. Remove the gathering stitches after finished.

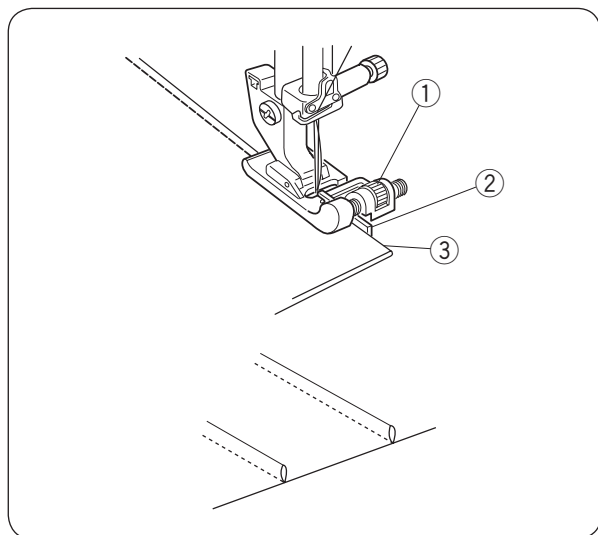




Pin Tucking

Machine setting

- ① Stitch selector: A
- ② Presser foot: Blind hemming foot G
- ③ Thread tension: 2 – 6
- ④ Stitch length: 1.5 – 4
- ⑤ Stitch width: 5



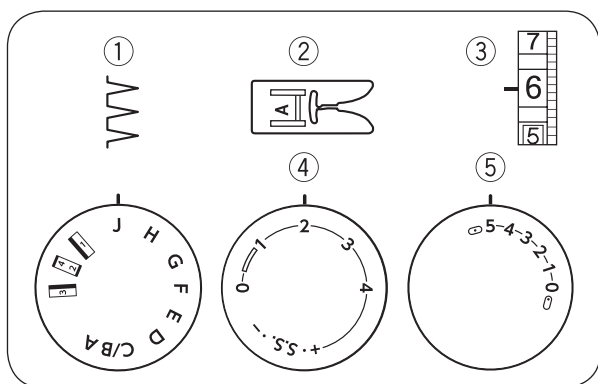
Fold a fabric wrong side together and Lower the needle into the fabric 0.1 – 0.2 cm inside the folded edge.

Lower the foot and turn the screw to align the guide on the foot with the folded edge.

Sew slowly while guiding the folded edge along the guide.

Open the fabric and iron press the tucks.

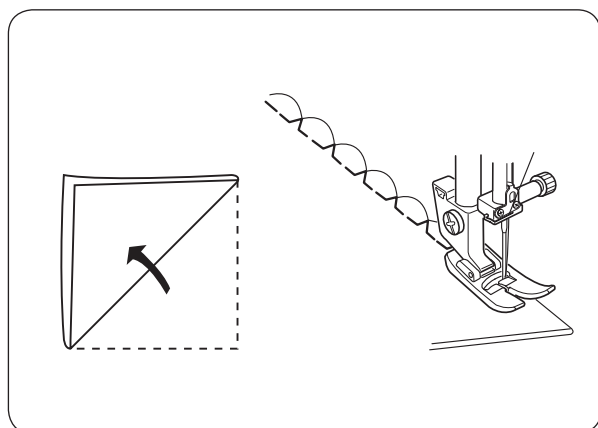
- ① Screw
- ② Guide
- ③ Folded edge



Shell Tuck

Machine setting

- ① Stitch selector: J
- ② Presser foot: Zigzag foot A
- ③ Thread tension: 6 – 8
- ④ Stitch length: 2 – 3
- ⑤ Stitch width: 5



Use a lightweight fabric (tricot, for example).

Fold and stitch on the bias.

When the needle swings to the right, allow the needle to just clear the folded edge of the fabric.

After stitching, open the fabric and iron press the tacks flat to one side.

NOTE:

Increase the needle thread tension to form prominent tucks.

Patchwork

Machine setting

- | | |
|--------------------|---------------|
| ① Stitch selector: | D |
| ② Presser foot: | Zigzag foot A |
| ③ Thread tension: | 1 – 4 |
| ④ Stitch length: | 1 – 3 |
| ⑤ Stitch width: | 5 |

Place two layers of the fabric with the right side together. Seam along the edges with the straight stitch.

Open fabrics flat and fold each seam allowances. Place the fabric under the foot so that the seam line matches the center of the foot width. Lower the foot and sew the pattern along the seam line.

- ① Right side of the fabric

Satin Stitches

Machine setting

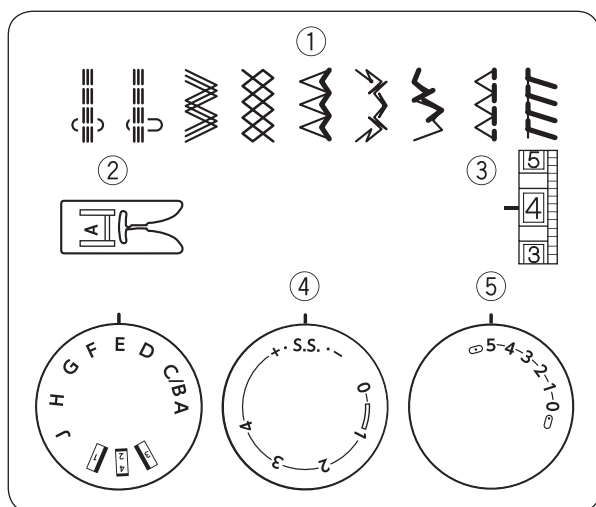
- | | |
|--------------------|---------------|
| ① Stitch selector: | F or G |
| ② Presser foot: | Zigzag foot A |
| ③ Thread tension: | 1 – 4 |
| ④ Stitch length: | 0.5 – 1 |
| ⑤ Stitch width: | 3 – 5 |

For a delicate appearance on fabric such as chiffon, use a single layer with a tear-away backing, if necessary.

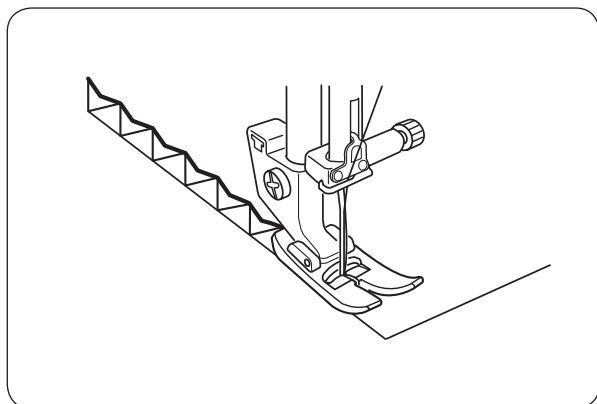
Decorative Stretch Stitches

Machine setting

- | | |
|--------------------|---------------|
| ① Stitch selector: | A – J |
| ② Presser foot: | Zigzag foot A |
| ③ Thread tension: | 2 – 4 |
| ④ Stitch length: | S.S. |
| ⑤ Stitch width: | 3 – 5 |



Decorative stretch patterns are used for adding a creative and personalized touch to items. Carefully guide the fabric while sewing as the fabric moves back and forth.



SECTION 6. CARE AND MAINTENANCE



WARNING:

Turn the power switch off and unplug the machine before cleaning.

NOTE:

- Do not dismantle the machine other than as explained in this section.
- Do not store the machine in a high-humidity area, near a heat radiator, or in direct sunlight.
- Clean the outside of the machine with a soft cloth and mild soap.

Cleaning the Hook Race and Feed Dogs

- 1 Remove the presser foot and needle. Remove screw on the needle plate with the screwdriver. Remove the needle plate and take out the bobbin.

① Screw

- 2 Lift up the bobbin holder and remove it.

② Bobbin holder

- 3 Brush out dust and lint.

③ Lint brush

- 4 Clean the feed dogs and hook area with the lint brush.

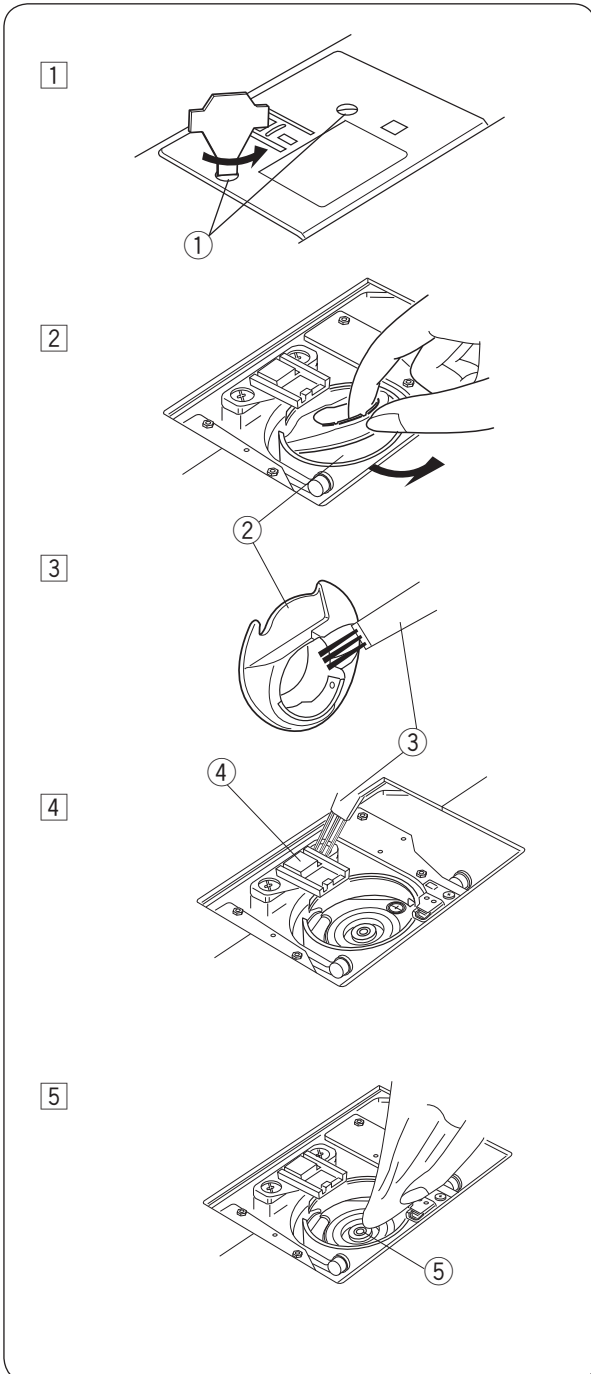
④ Feed dogs

- 5 Wipe the hook race with a soft, dry cloth.

⑤ Hook race

NOTE:

You may also use a vacuum cleaner.



Replacing the Bobbin Holder

① Insert the bobbin holder into the hook race.

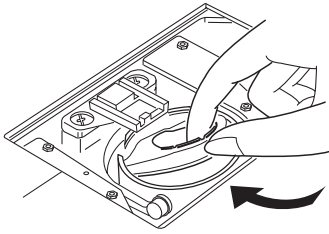
② Make sure the knob of the bobbin holder fits next to the stopper on the race.

- ① Knob
- ② Stopper

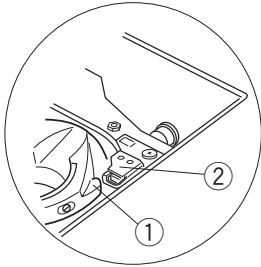
③ Replace the bobbin.
Attach the needle plate.
Tighten the screw firmly with the screwdriver.

- ③ Screw

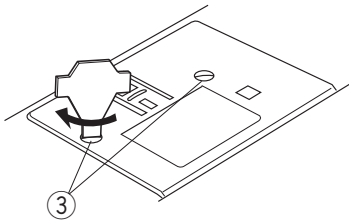
①



②



③



Troubleshooting

Condition	Cause	Reference
The needle thread breaks	1. The needle thread is not threaded properly. 2. The needle thread tension is too tight. 3. The needle is bent or blunt. 4. The needle is incorrectly inserted. 5. The needle thread and the bobbin thread are not set under the presser foot when start sewing. 6. The threads were not drawn to the rear after sewing. 7. The thread is too heavy or too fine for the needle.	Page 12 Page 16 Page 7 Page 7 Page 17 Page 17 Page 8.
The bobbin thread breaks	1. The bobbin thread is not threaded properly in the bobbin holder. 2. Lint has collected in the bobbin holder. 3. The bobbin is damaged and does not turn smoothly.	Page 11 Page 33 Change the bobbin.
The needle breaks	1. The needle is incorrectly inserted. 2. The needle clamp screw is loose. 3. The needle is too fine for the fabric being sewn. 4. An inappropriate presser foot is used.	Page 7 Page 7 Page 8 Use the correct foot.
Skipped stitches	1. The needle is incorrectly inserted, bent or blunt. 2. The needle and/or threads are not suitable for the work being sewn. 3. A blue tip needle is not being used for sewing stretch, very fine fabrics and synthetics. 4. The needle thread is not threaded properly. 5. A poor quality needle is used.	Page 7 Page 8 Page 8 Page 12 Change the needle.
Seam puckering	1. The needle thread tension is too tight. 2. The needle thread or bobbin thread is not threaded properly. 3. The needle is too heavy for the fabric being sewn. 4. The stitch length is too long for the fabric. * Use a stabilizer for very fine fabrics.	Page 16 Page 11, 12 Page 8 Make stitch shorter.
The fabric is not feeding smoothly	1. The feed dog is packed with lint. 2. The stitches are too fine. 3. The feed dog is lowered.	Page 33 Make stitch longer. Page 5
Stitch form loops below the work	1. The needle thread tension is too loose. 2. The needle is too thick or too fine for the fabric.	Page 16 Page 8
The machine does not work	1. The machine is not plugged in or foot control is not connected. 2. Thread has been caught in the hook race. 3. The clutch is disengaged.	Page 4 Page 33 Page 10
Buttonhole sewing is not sewn properly	1. The stitch density is not suitable for the fabric being sewn. 2. The interfacing has not been used for the stretch or synthetic fabric.	Page 23 Apply an interfacing.
The machine is noisy	1. Thread has been caught in the hook race. 2. Lint has built up in the hook race or bobbin holder.	Page 33 Page 33

