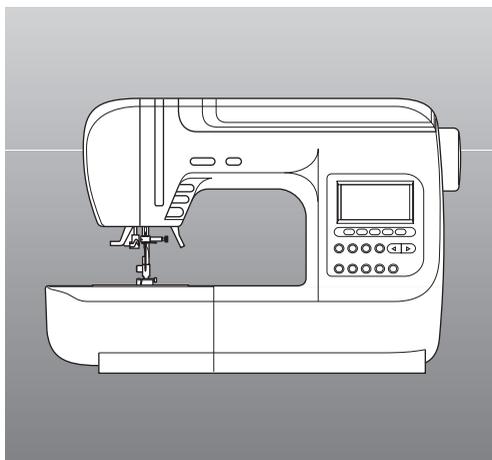


INSTRUCTION MANUAL

9970



SINGER®

INSTRUCTION MANUAL

This sewing machine is intended for household use.

This sewing machine is not intended for use by young children or infirm persons without supervision.

IMPORTANT SAFETY INSTRUCTIONS

When using a sewing machine, basic safety precautions should always be followed, including the following.

Read all instructions before using.

DANGER - To reduce the risk of electric shock:

Never leave unattended when plugged in. Always unplug this 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 sewing machine only for its intended use as described in this manual. Use only attachments recommended by the manufacturer as contained in this 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 the sewing machine to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.
4. Never operate the sewing machine with any air openings blocked. Keep ventilation openings of the sewing machine and foot controller free from the 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 the power switch to the off position (symbol "O"), 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 the sewing machine off (symbol "O") when making any adjustments in the needle area, such as threading needle, changing needle, threading bobbin, or changing presser foot.
15. Always unplug sewing machine from the electrical outlet when removing covers, lubricating, or when making any other user servicing adjustments mentioned in the instruction manual.
16. Handle the foot controller with care and avoid dropping it on the floor. Be sure not to place anything on top of it.
17. Use only the handle to lift and move the machine.
18. Do not expose the machine or machine case to sunlight directly. Also, do not keep it in a very warm or damp place.

SAVE THESE INSTRUCTIONS

Servicing should be performed by an authorized service representative.

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MODEL 9970

PREFACE

Thank you for your purchase of this sewing machine.

This machine intended for household use will provide you with excellent performance in sewing from light to heavy material.

Please refer to this booklet for proper use and optimum service. To get the most out of your sewing machine, read the entire instruction manual before attempting to operate the machine. Then familiarize yourself with the machine by following the instruction manual page by page.

To ensure that you are always provided with the most modern sewing capabilities, the manufacturer reserves the right to change the appearance, design or accessories of this sewing machine when considered necessary without notification or obligation.



EU only



1. 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 or the appliance by a person responsible for their safety.
2. Children should be supervised to ensure that they do not play with the appliance.

FOR EUROPEAN AND SIMILAR TERRITORIES:

This product is suppressed for radio and television interference with the International Electrotechnical Commission requirements of the CISPR.

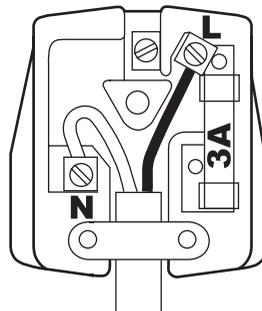
The wires in this mains lead are colored in accordance with the following code.

Blue: neutral (N) Brown: live (L)

As the colors of the wires in the mains lead of this appliance may not correspond with the colored markings identifying the terminals in your plug, proceed as follows:

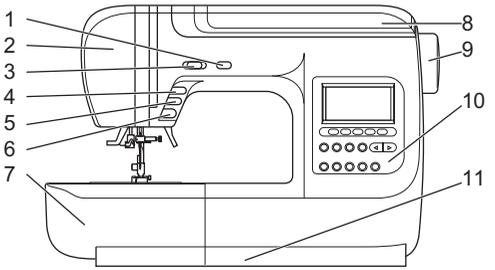
The wire which is colored blue must be connected to the terminal which is marked with the letter N or colored black. The wire which is colored brown must be connected to the terminal which is marked with letter L or colored red. If a 13 Amp. (BS 1363) plug is used, a 3 Amp. Fuse must be fitted, or if any other type of plug is used, a 5 Amp. fuse must be fitted either in the plug or adaptor or at the distribution board.

Neither cord is to be connected to the earth terminal of a three-pin plug.

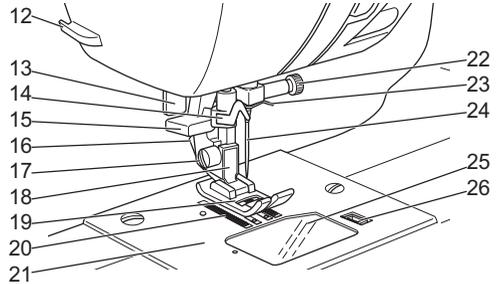


MAIN PARTS

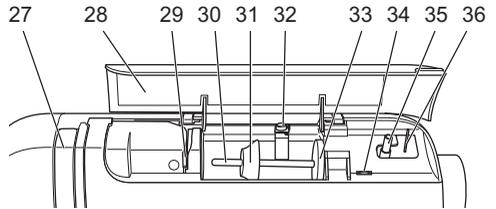
1. Thread Cutter Button
2. Face Plate
3. Speed Control Button
4. Needle Up-Down / Slow Button
5. Reverse Button
6. Start/Stop Button
7. Removable extension table
8. Top Cover
9. Hand Wheel
10. Control Panel
11. Stitch Balance Adjusting Screw (underneath machine)



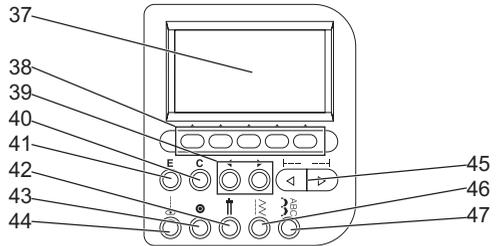
12. Thread Cutter
13. Buttonhole Lever
14. Needle Threader
15. Needle Threader Lever
16. Presser Foot Release Lever
17. Presser Foot Thumb Screw
18. Presser Foot Holder
19. Presser Foot
20. Feed Dogs
21. Needle Plate
22. Needle Clamp Screw
23. Needle Thread Guide
24. Needle
25. Bobbin Cover
26. Bobbin Cover Latch



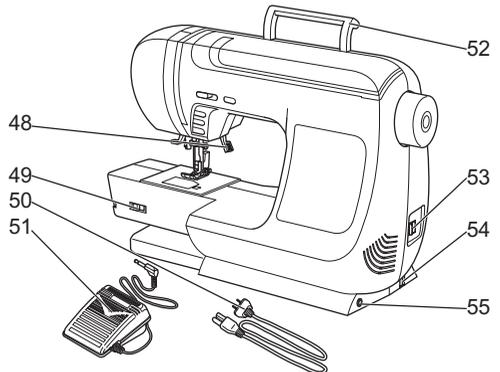
27. Thread Take-Up Lever (Inside)
28. Pattern Chart
29. Thread Guide Plate
30. Spool Pin
31. Spool Cap
32. Bobbin Winder Thread Guide
33. Felt Washer
34. LCD Contrast Control
35. Bobbin Winder Shaft
36. Bobbin Winder Stop



37. Liquid Crystal Display (LCD)
38. Function Buttons (F1 - F5)
39. Cursor Buttons
40. Clear Button
41. Edit Button
42. Twin Needle Button
43. Tack Button
44. Straight Stitch Button
45. Scroll Buttons
46. Utility Stitch Button
47. Decorative Stitch & Letter Button



48. Presser Foot Lifter
49. Drop Feed Lever
50. Power Line Cord
51. Foot Controller
52. Handle
53. Power Switch
54. Terminal Box
55. Controller Jack



ACCESSORIES

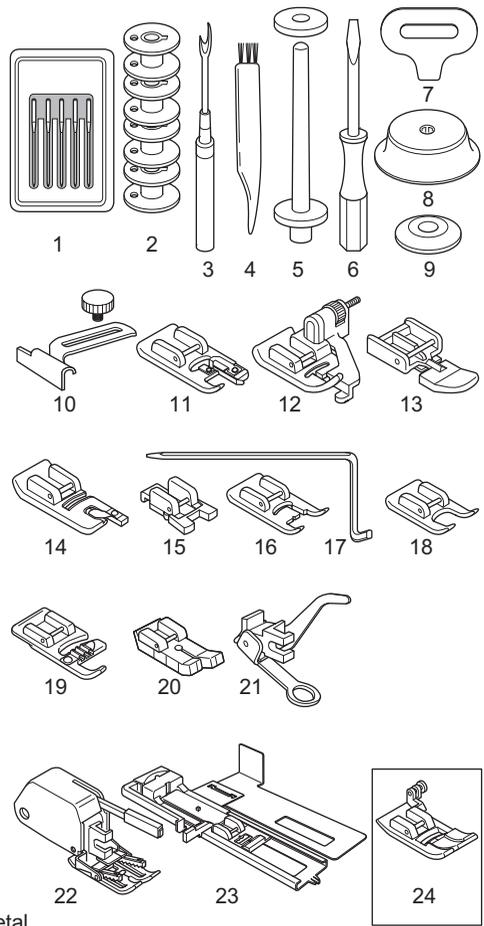
Accessories are provided in the accessory case. (See next page, [REMOVABLE EXTENSION TABLE])

1. Needle Pack
2. 4 Bobbins Class 15 (1 is in the machine)
3. Seam Ripper
4. Brush
5. Auxiliary Spool Pin with Felt Washer
6. Screw Driver
7. Driver for Needle Plate
8. Thread Cap (On the machine when delivered)
9. Small Thread Cap
10. Seam Guide and Screw
11. Overcasting Foot (C)
12. Blind Hem Foot (D)
13. Zipper Foot (E)
14. Rolled Hem Foot
15. Button Sewing Foot
16. Satin Foot (B)
17. Quilting Bar
18. Open Toe Foot
19. Cording Foot
20. Straight Stitch / Patch Quilting Foot
21. Darning Embroidery Foot
22. Even-feed Foot
23. Buttonhole Foot (F) and Under Plate
24. General Purpose Foot (On machine when delivered) (A)

- An Extra Wide Table is provided with this machine. (See Page 11)

OPTIONAL ACCESSORIES

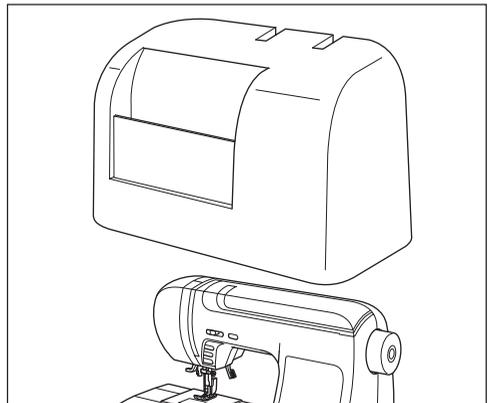
- | | |
|----------------------------|--|
| 1. Invisible Zipper Foot | 8. Shank w/o metal |
| 2. Snap on Gathering Foot | 9. Adjustable Bias Binder |
| 3. Parallel Sewing Foot | 10. Braiding Foot |
| 4. Edge Joining Foot | 11. Braiding Guide |
| 5. Clear Seam Guide Foot | 12. Fancy Trim Foot |
| 6. Chenille Stitching Foot | 13. Stitch in the Ditch Foot/ Quilt Foot with Center Guide |
| 7. Non Stick Glide Foot | 14. Clearance Plate |



DUST COVER

Cover the machine with dust cover when it is not being used.
The manual may be stored in the compartment of the dust cover.

Do not remove the styrofoam located inside of this cover.



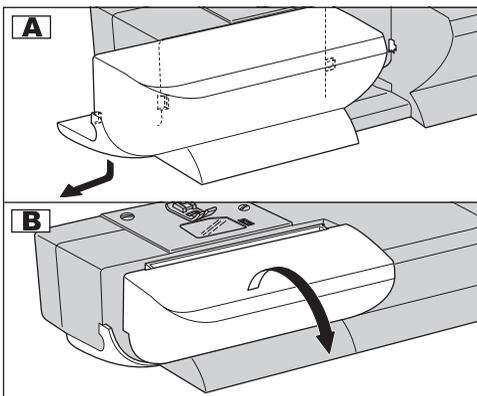
REMOVABLE EXTENSION TABLE

A. REMOVING THE EXTENSION TABLE

Hook your finger to the left bottom side of the removable extension table and slide it to the left. To attach, insert to the right.

B. OPENING THE ACCESSORY CASE

Hook your finger to the left side of accessory case and pull toward you.



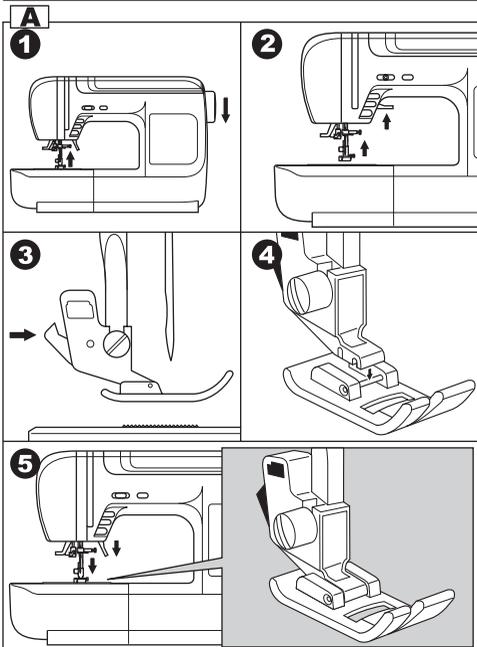
CHANGING THE PRESSER FOOT

The presser foot must be changed according to the stitch you sew, or work you do.

CAUTION: To prevent accidents. Turn off the power switch before you change the presser foot.

A. CHANGING THE PRESSER FOOT

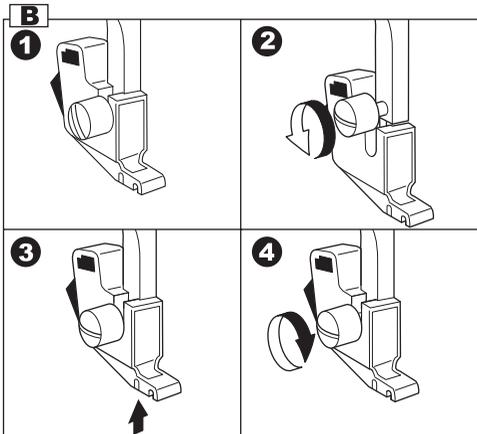
1. Turn the hand wheel toward you until the needle is at its highest point.
2. Raise the presser foot lifter.
3. Remove the presser foot by pushing the presser foot release lever toward you.
4. Place desired foot with its pin directly under the slot in presser foot holder.
5. Lower the presser foot lifting lever and the presser foot will snap into place.



B. REMOVING THE PRESSER FOOT HOLDER

When attaching presser feet that have their own shank, or when cleaning the machine, you should remove the presser foot holder.

1. Remove the presser foot.
2. Loosen the presser foot thumb screw and remove the presser foot holder.
3. To replace the holder, pull up the holder as far as it will go from bottom of presser bar.
4. Tighten the thumb screw.



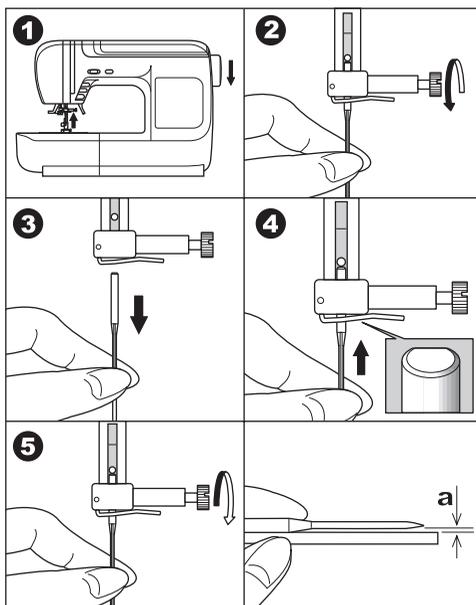
INSERTING THE NEEDLE

Select a needle of the right type and size for the fabric to be sewn.



CAUTION: To prevent accidents.
Turn off the power before removing the needle.

1. Turn the hand wheel toward you until the needle is at its highest point.
 2. Loosen the needle clamp screw.
 3. Remove the needle.
 4. Insert new needle into needle clamp with the flat side to the back and push it up as far as it will go.
 5. Tighten the needle clamp screw.
- a. Do not use the bent or blunt needle. Place needle on a flat plate to check straightness.



FABRIC, THREAD AND NEEDLE TABLE

Select size of thread and needle in accordance with fabric to be sewn.

Type of Fabric	Thread Size	Needle Type	Needle Size
Light Weight - thin georgette, organdy, voile, taffeta, silk, etc.	All-purpose polyester, fine cotton, silk	2000 gray shank	9/70-11/80
Medium Weight - gingham, pique, linen, cotton, satin, thin corduroy, velvet	All-purpose polyester, fine cotton, machine quilting	2000 gray shank	11/80-14/90
Heavy Weight - gabardine, tweed, denim, corduroy	All-purpose polyester, heavy duty, topstitching thread	2000 gray shank	14/90-16/100
Stretch - double knit, tricot, spandex, jersey	All purpose polyester	2001 green shank	11/80-14/90 Needle for knit and synthetic fabric
Sweatshirt, Swim-wear, Double Knit, Sweater Knit	All purpose polyester	2001 green shank	
Leather	All purpose polyester, heavy duty, topstitching thread	2032 Leather	

SINGER brand needles are recommended for this machine.

CONNECTING THE MACHINE

⚠ DANGER: To reduce the risk of electric shock.

Never leave unattended when plugged in. Always unplug this machine from the electric outlet immediately after using and before maintenance.

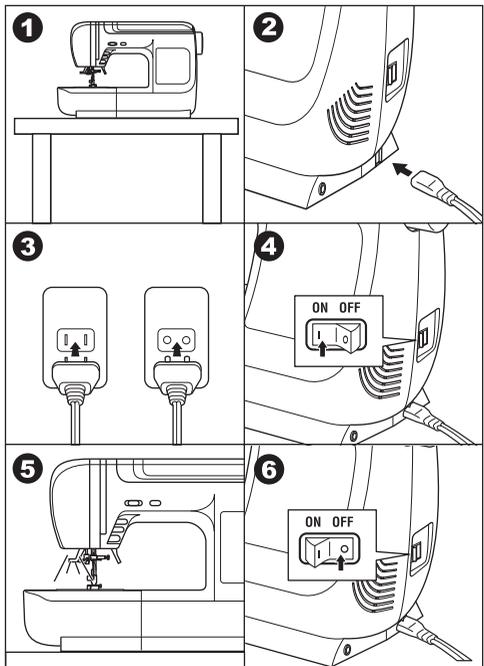
⚠ WARNING: To reduce the risk of burns, fire, electric shock, or injury to persons.

Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.

1. Place machine on stable table.
2. Connect the power line cord to the machine by inserting the 2-hole plug into the terminal box.
3. Connect the power line plug to the electric outlet.
4. Turn on the power switch.
5. A lamp will light up when switch is turned on.
6. To disconnect, turn the power switch to the off position (symbol **O**), then remove plug from outlet.

FOR UNITED STATES AND CANADA USERS: POLARIZED PLUG INFORMATION

This appliance has 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 the plug 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 CONTROLLER

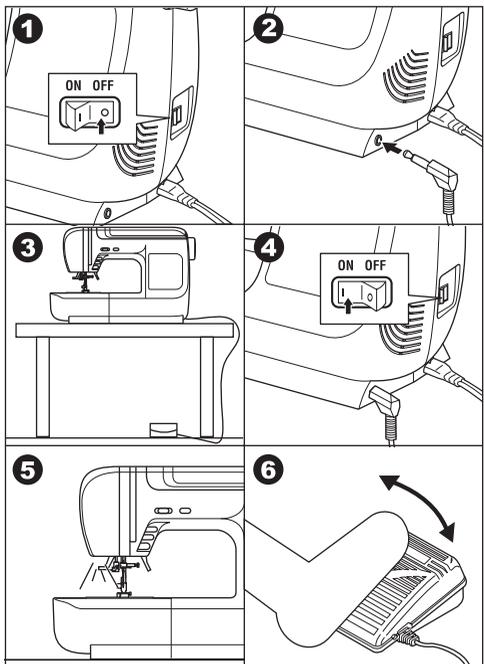
Use of foot controller will permit control of start, stop and speed with your foot.

When the foot controller is connected, start/stop button will be deactivated. (See page 10)

1. Turn off the power switch. (symbol **O**)
2. Push foot controller plug into the jack on machine.
3. Place foot controller at your feet.
4. Turn on the power switch.
5. A lamp will light up when switch is turned on.
6. The harder you press the foot controller, the faster the machine will sew. The machine will stop when foot controller is released.

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

1. Turn off the power when connecting the foot controller to the machine.
2. Handle the foot controller with care and avoid dropping it on the floor. Be sure not to place anything on top of it.
3. Use only foot controller provided with this machine. (Type 4C-337B)



FUNCTION OF EACH PART

A. START/STOP BUTTON

The machine will start running when start/stop button is pressed and will stop when pressed the second time. The machine will rotate slowly at start of sewing.

Note:

When the foot controller is connected, start/stop button will be deactivated.

MONITOR LAMP

Green Light "ON"

Ready to sew or bobbin winding.

Red Light "ON"

Presser foot is not in down position or buttonhole lever is not lowered.

If the red light is on, the machine will not start even when start/stop button is pressed.

B. REVERSE STITCH BUTTON

The machine will continue to sew in reverse at low speed while this button is pressed and stop when this button is released.

Note:

When the foot controller is connected, machine will sew in reverse while this button is pressed. When released, machine will sew forward.

C. NEEDLE UP-DOWN / SLOW BUTTON

Pressing this button when the machine is stopped, will change the needle position from down to up or from up to down.

While sewing, by pressing this button, machine will sew in slow speed. Pressing this button again, the speed will return.

D. SPEED CONTROL BUTTON

The machine will sew faster when the button is slid to the right, and sew slower when the button is slid to the left.

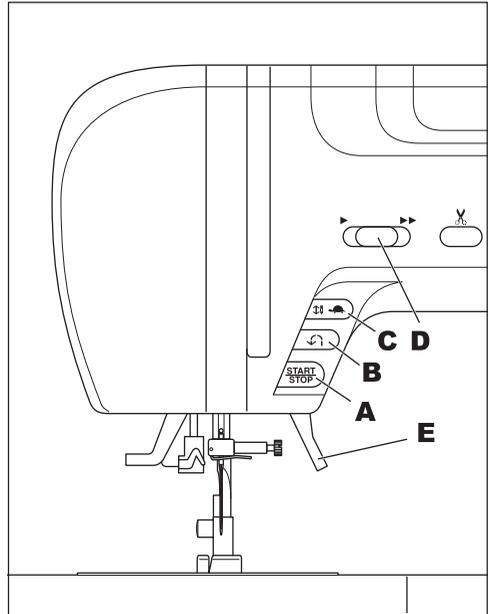
Note:

When the foot controller is connected, this button limits the maximum speed.

E. PRESSER FOOT LIFTER

The presser foot is lifted up or down by this lever.

Note: Machine will not start when the presser foot is lifted. (Except for bobbin winding)



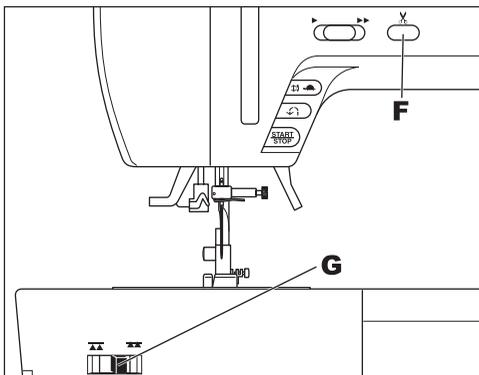
F. THREAD CUTTER BUTTON

Press this button after sewing to cut the upper and bobbin threads.

The machine will cut both threads automatically.

CAUTION

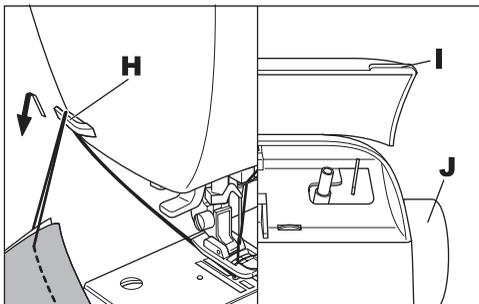
1. Do not press this button when there is no fabric in the machine or no need to cut the threads.
The thread may tangle, resulting in damage.
2. Do not use this button when cutting thread thicker than #30, nylon thread or other speciality threads.
In this case, use the thread cutter (H).



G. DROP FEED LEVER

The feed dogs project up through the needle plate, directly below the presser foot. Their function is to move the fabric being sewn. The drop feed lever controls the feed dogs.

For ordinary sewing, move the lever to the right. This raises feed dogs to their highest position. For most sewing, the lever should be in this position. For darning or free motion embroidery or whenever fabric is to be moved by hand, move the lever to the left to lower the feed dogs.



H. THREAD CUTTER

Use this cutter if the thread cutter button is not used.

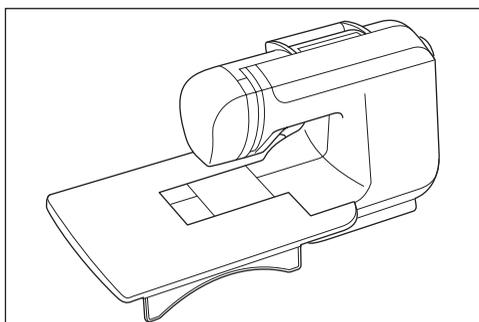
1. Raise the presser foot and bring fabric and threads backward after sewing.
2. Hook the threads to the thread cutter from back to front.
3. Pull fabric and cut threads.

I. TOP COVER

To open the top cover, lift up the right side of cover.

J. HAND WHEEL

By turning the hand wheel, the needle will raise or lower. You should always turn hand wheel toward you.

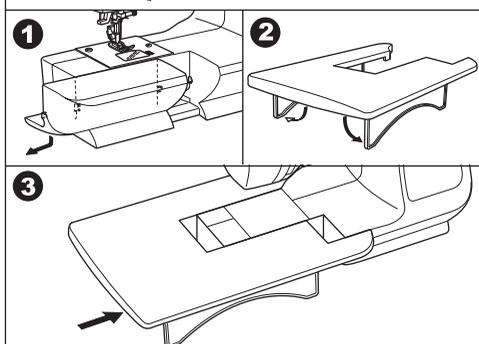


EXTRA WIDE TABLE

If you need wide sewing space, attach the extra wide table as shown.

Set the machine and extra wide table on a stable table.

1. Remove the extension table (See Page 7)
2. Stand up the two legs of extra wide table.
3. Insert wide table to the machine sliding to the right.

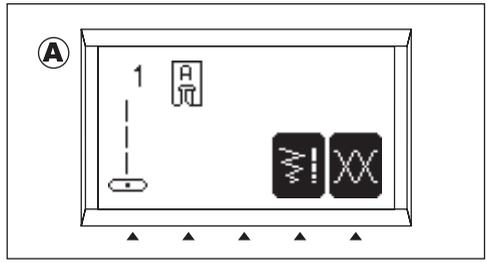


CONTROL PANEL

When you turn on the power, machine will select the straight stitch and indicate information of stitch on the LCD.

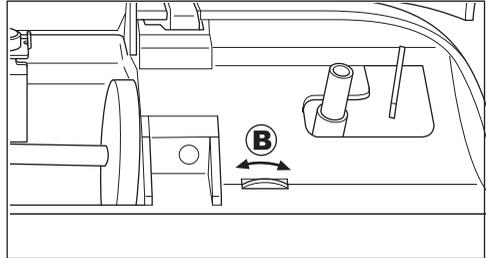
A. LCD DISPLAY

Stitch information is indicated on this display. According to the pattern or mode, information will be changed.



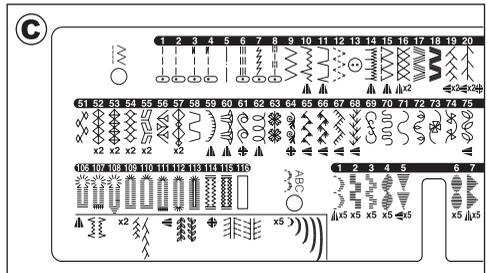
B. LCD CONTRAST CONTROL

The contrast of LCD is adjusted by turning this dial.



C. PATTERN CHART

Pattern chart is located inside of the top cover. Patterns and letters of this machine are indicated on this chart. They are separated: Utility stitches and Decorative & Letter stitches.



D. STRAIGHT STITCH BUTTON

By pressing this button, you can select straight stitch directly.

E. UTILITY STITCH BUTTON

By pressing this button, you may select a utility stitch pattern.

FOR SELECTING AND SETTING OF UTILITY STITCHES, SEE PAGE 22.

F. DECORATIVE & LETTER STITCH BUTTON

By pressing this button, you can select decorative & letter stitch patterns.

These patterns and letters are combined easily by selecting each pattern.

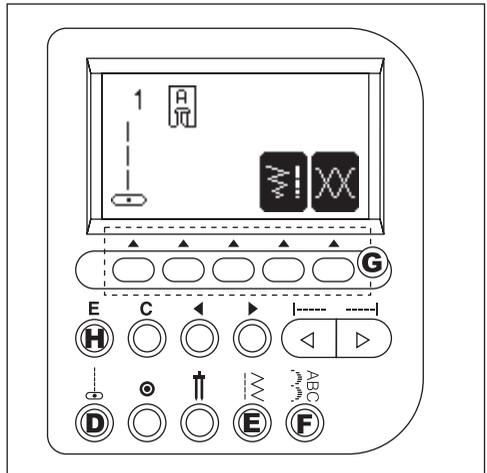
FOR SELECTING AND SETTING OF DECORATIVE & LETTER STITCH, SEE PAGE 44.

G. FUNCTION BUTTONS

Functions of these buttons are changed by selected stitch pattern and mode.

H. EDIT BUTTON

When selecting decorative & letter stitch, you can change the setting of each pattern by pressing this button.



I. CLEAR BUTTON

UTILITY STITCH SEWING

If you changed the setting (mirror/reverse, elongation, stitch width, length and thread tension) of utility stitch pattern, you can return to preset setting by pressing this button.

DECORATIVE & LETTER STITCH SEWING

By pressing this button, you can delete one combined stitch pattern or all stitch patterns.

J. SCROLL BUTTONS

During stitch pattern selection, 5 patterns or letters will scroll up or down by pressing these buttons.

K. CURSOR BUTTONS

When decorative & letter stitch sewing, you can check and edit combined patterns or letters by pressing these buttons.

L. TACK BUTTON

UTILITY STITCH SEWING

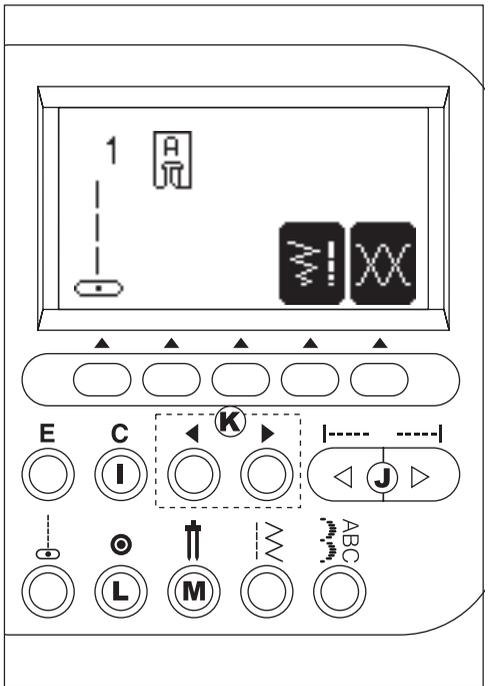
By pressing this button, you can sew a back tack stitch at the beginning and at the end of a stitch. (SEE PAGE 19)

DECORATIVE & LETTER STITCH SEWING

If this button is pressed at the end of a decorative stitch pattern, machine will stop automatically at the end of the stitch pattern and tie off the stitch with a locking stitch.

M. TWIN NEEDLE BUTTON

If you attach the twin needle, press this button. Machine will reduce the stitch width. (SEE PAGE 43)

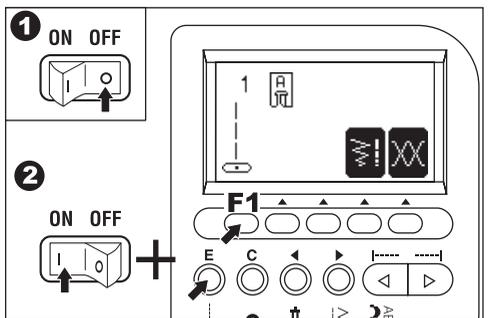


TO TURN OFF THE AUDIBLE BEEP

You can operate the machine without the audible beep.

1. Turn off the power switch.
2. Turn on the power switch while pressing the EDIT button and the function F1 button.
3. This function is kept off until the machine is turned off.

This function turns off the single beep only. Multiple beeps will not turn off.

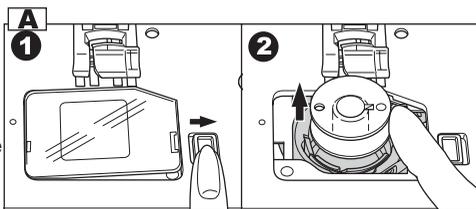


BOBBIN SETTING

Be sure to use only SINGER (Class 15) bobbins in this machine.

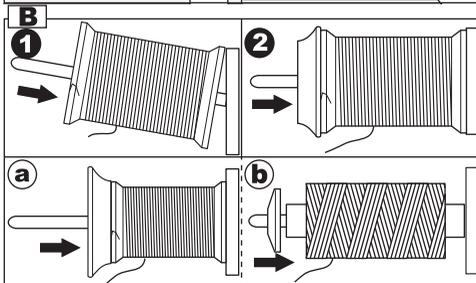
A. REMOVING THE BOBBIN

1. Pull the bobbin cover latch to the right and remove the bobbin cover.
2. Lift up the bobbin from the machine.



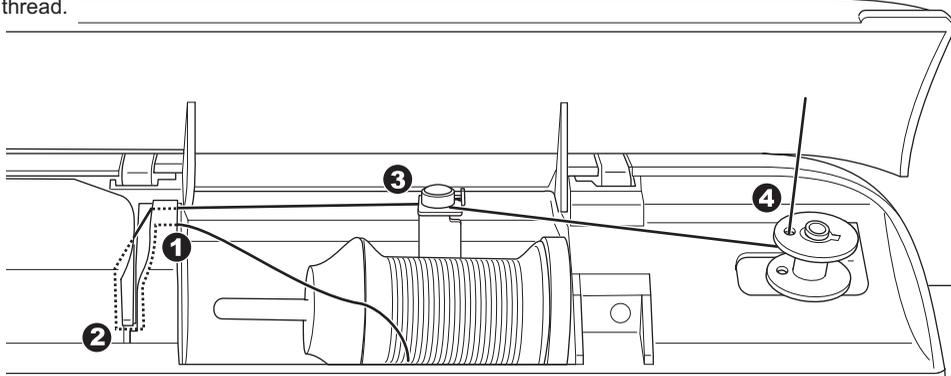
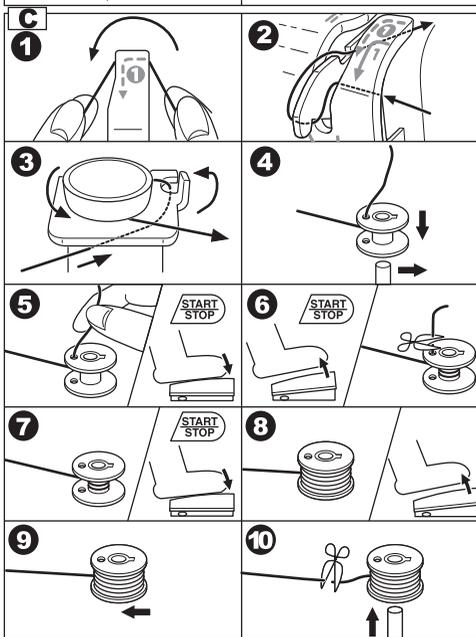
B. SETTING SPOOL OF THREAD ON SPOOL PIN

1. Pull up the left end of spool pin and set the spool of thread on spool pin so that the thread unrolls from the front of the spool.
2. Set the spool cap on spool pin as far as it will go.
 - a: Reverse spool cap direction according to the size of spool.
 - b. Use the small spool cap when you use cross wound thread. Leave small opening between cap and spool as illustration.



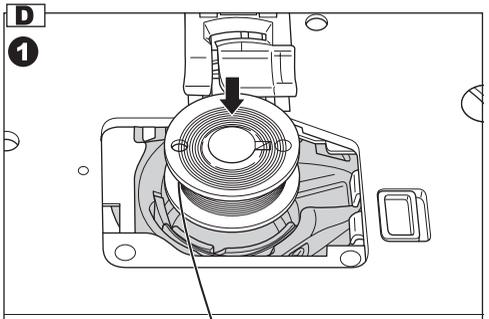
C. WINDING THE BOBBIN

1. Hold thread in both hands and hook thread to the guide from rear opening.
2. Bring thread forward and pass through the thread guide plate from right to left.
3. Bring thread to the right and pass thread to the thread guide from under side. Pass through under tension disc in counter-clockwise direction.
4. Insert thread through hole in bobbin and place the bobbin on bobbin winder spindle. Push bobbin to the right to engage bobbin winder. LCD will indicate the bobbin winding mode.
5. Hold the end of the thread and start the machine by pressing the start/stop button or pressing the foot controller pedal.
6. After the bobbin winds a few turns, stop the machine by pressing the start/stop button or releasing the foot controller pedal. Cut the thread near hole.
7. Start the machine again.
8. The bobbin winding will stop automatically when bobbin is full. (Release the pedal.)
9. Push the bobbin and spindle to the left.
10. Remove the bobbin from the spindle and cut the thread.

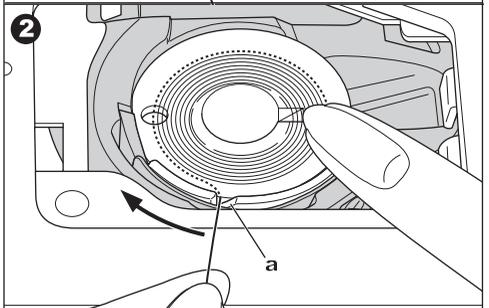


D. INSERTING THE BOBBIN

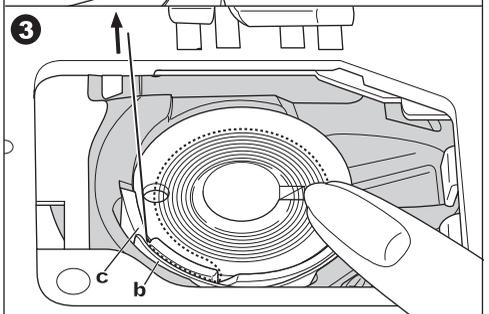
1. Place bobbin into bobbin holder with the thread unwinding counter clockwise.



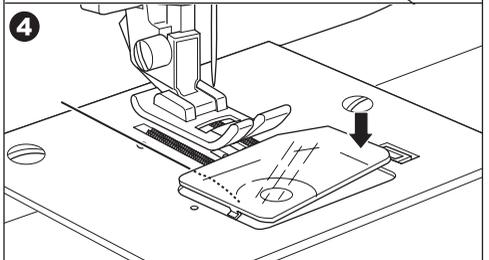
2. Draw thread into notch (a) while holding the bobbin.



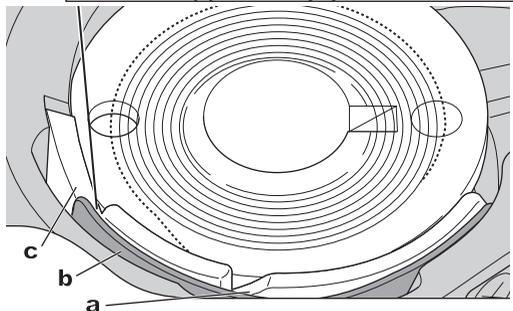
3. Pull thread toward the left and along the inside of spring (b) until it slips into notch (c) making sure that thread does not slip out of notch (a).



4. Pull thread out about 10 cm (4 inches). Replace the bobbin cover. Set the left tab into the hole in needle plate and push the right side of bobbin cover down until it clicks into place.



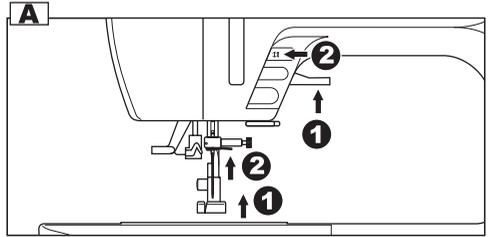
NOTE: Be sure to use only SINGER (Class 15) bobbins in this machine.



THREADING THE MACHINE

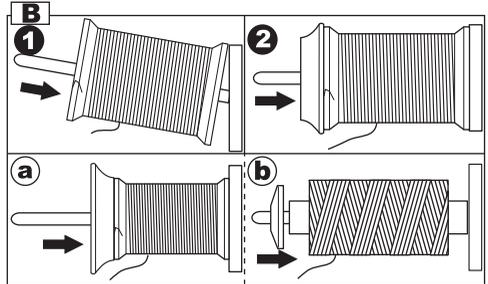
A. PREPARING TO THREAD MACHINE

1. Raise the presser foot lifter.
2. Press the needle up/down button and set the needle in up position.
(Keep this position until needle eye threading.)



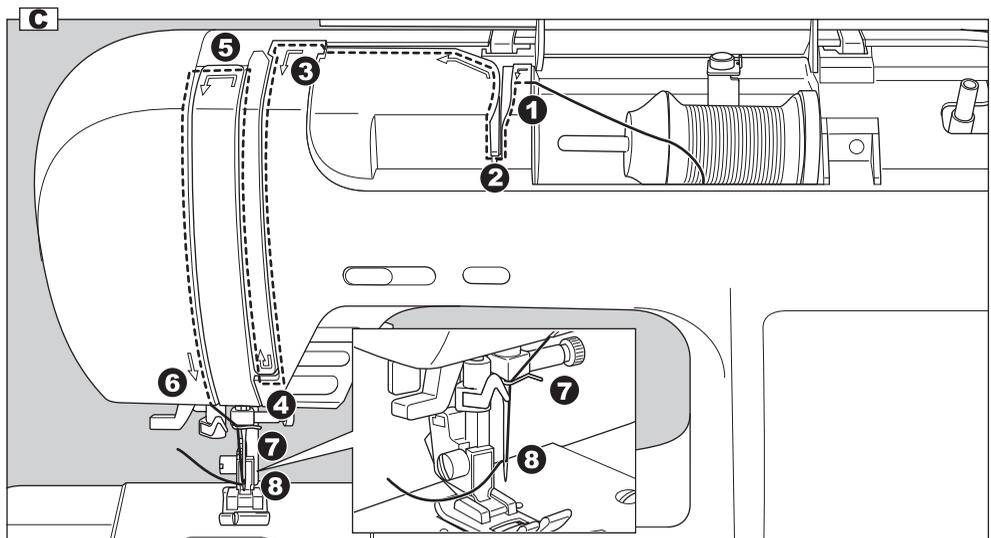
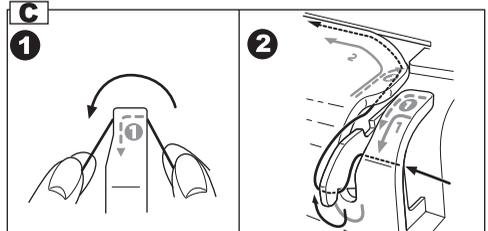
B. SETTING SPOOL OF THREAD ON SPOOL PIN

1. Pull up the left end of spool pin and set the spool of thread on spool pin so that the thread unrolls from the front of the spool.
2. Set the spool cap on spool pin as far as it will go.
 - a. Reverse spool cap direction according to the size of spool.
 - b. Use the small spool cap when you use cross wound thread. Leave small opening between cap and spool as illustration.



C. THREADING THE UPPER THREAD

1. Hold thread in both hands and pass thread to the guide from rear opening.
2. Bring thread frontward and pass through the thread guide plate from right to left.
3. Bring thread to the left and pull thread down toward you along the slit.
4. Pull up thread.
5. To thread the take-up lever, draw thread up and bring thread back down again from right to left along the slit.
6. Pull thread downward along the slit.
7. Draw thread through thread guide from right side opening.
8. Pass through needle eye from front to back.
Refer to next page for instructions on how to use needle threader.



D. THREADING THE NEEDLE EYE



CAUTION: To prevent accidents.

1. Keep fingers away from all moving parts.
Special care is required around the needle.
2. Do not lower the threader lever while machine is operating.

Note: The needle threader is used for needle sizes 11/80, 14/90, and 16/100.

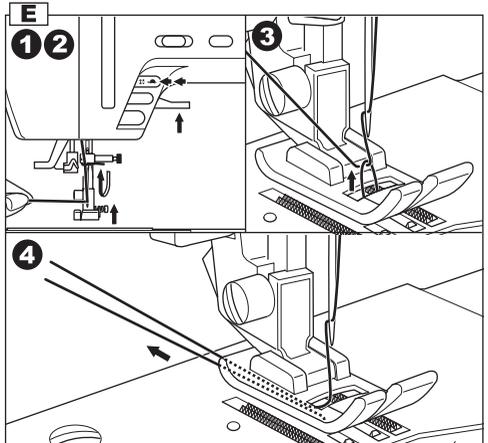
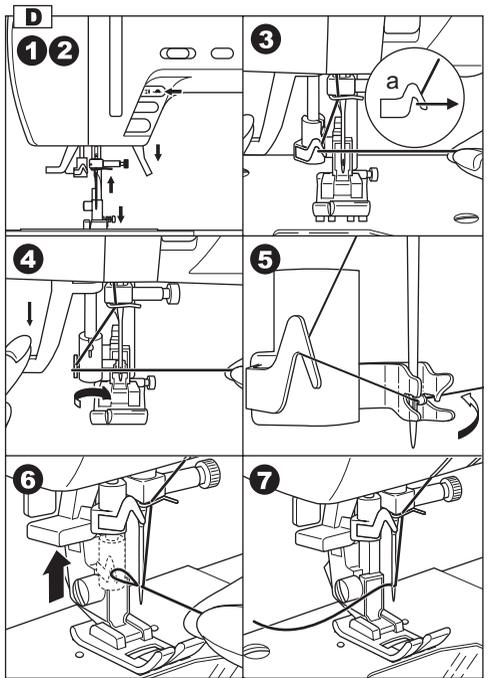
1. Lower the presser foot.
2. Check that the needle is raised.
If it is not so, raise needle by pressing needle up/down button.

Note:

- If desired, you can draw up the bobbin thread manually, by holding the upper thread loosely, then turning the hand wheel toward you one complete turn.
3. Lower the threader slowly and draw thread through thread guide (a) and pull toward the right.
4. Lower the lever as far as it will go. The threader will turn and the hook pin will go through the needle eye.
5. Draw thread into the guide.
6. Hold thread loosely and release the lever. Hook will turn and pass thread through needle eye while making a loop.
7. Pull thread out about 10 cm (4 inches) from needle eye.

E. DRAWING UP THE BOBBIN THREAD

1. Raise the presser foot.
2. Hold thread loosely and press needle up/down button twice from up position.
The hand wheel will turn one complete turn.
3. Pull upper thread lightly. Bobbin thread will come up in a loop.
4. Pull both upper and bobbin threads about 10 cm (4 inches) toward the back of presser foot.



STARTING TO SEW

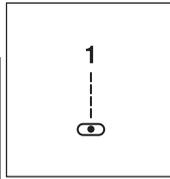
The machine will be set to sew straight stitch when power switch is turned on.



CAUTION: To prevent accidents.

While sewing, special care is required around the needle.

Machine automatically feeds the fabric, do not pull or push the fabric.



A. START AND END OF SEAM

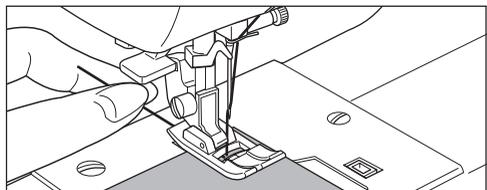
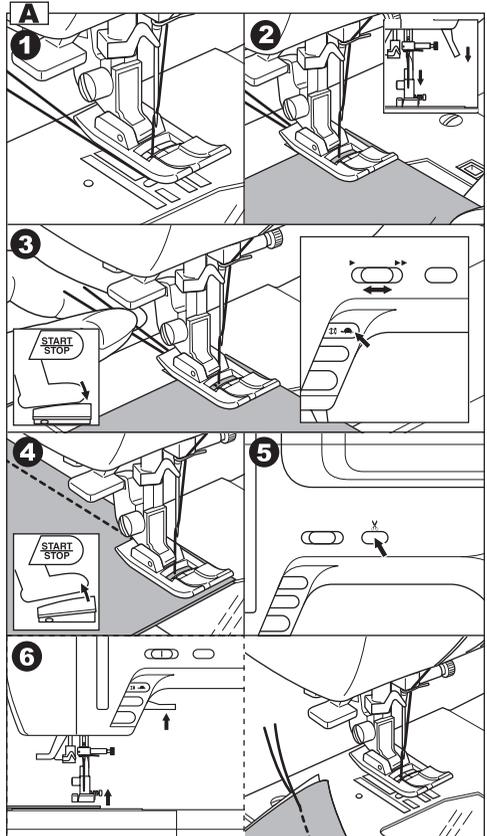
1. Check the presser foot (General Purpose Presser Foot). Refer to page 7 for changing the presser foot.
2. Place the fabric under the presser foot and lower the presser foot.
3. Hold back both threads and press the start/stop button or press the foot controller pedal. Keep holding threads after sewing a few stitches.
Lightly guide the fabric while sewing.
You can regulate the sewing speed by sliding the speed control button.
Also, you can reduce the sewing speed by pressing the slow button.
4. When you reach end of seam, press the start/stop button to stop sewing or release the foot controller pedal.
5. Press the thread cutter button.
6. Raise the presser foot lifter and remove the fabric.

CAUTION

1. Do not press the thread cutter button when there is no fabric in the machine or no need to cut the threads. The thread may tangle, resulting in damage.
2. Do not use the thread cutter button when cutting thread thicker than #30, nylon thread or other speciality threads.
In this case, use the thread cutter located on the left side of the machine. (See page 11)

NOTE

After you cut the threads by using the thread cutter button, hold upper thread only at the next starting of seam. (No need to draw up the bobbin thread)



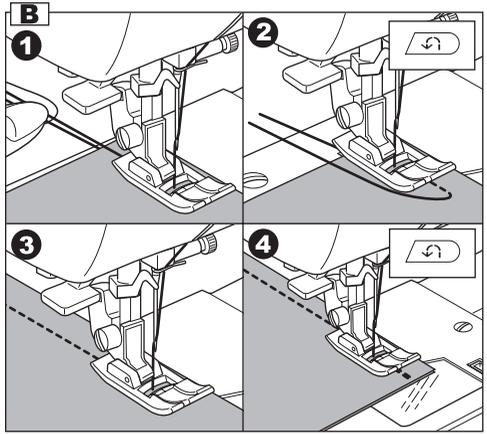
B. REVERSE STITCHING

Reverse stitching is used for reinforcing the ends of the seams.

1. Place the fabric in position where back stitching is to be made and lower the presser foot.
Sew 4-5 reverse stitch.
2. Press and hold the reverse button.
Sew 4-5 reverse stitch.
3. Release the reverse button and press the start/stop button (or press the pedal). Machine will change to forward sewing.
4. When you reach the end of seam, press and hold reverse button and sew 4-5 reverse stitches.

Note:

The pattern No. 3 and No. 4 have a built-in reverse stitch. See page 25 to sew these stitches.

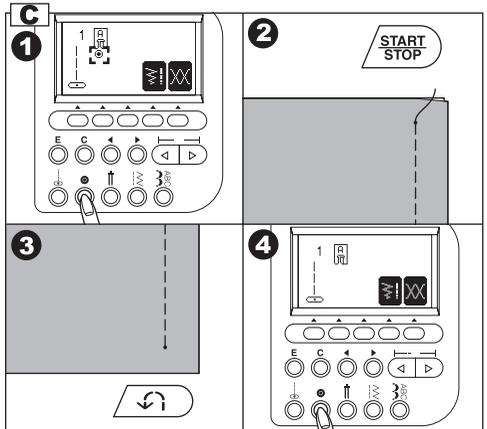


C. AUTO TACK STITCH

You may sew tack stitches at the beginning and end of the stitch.

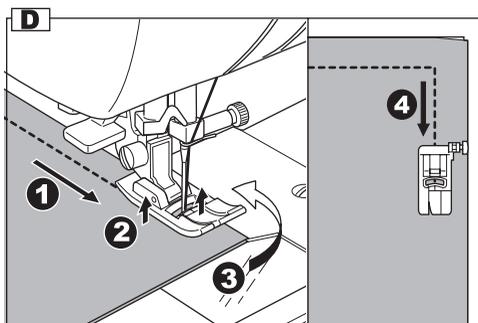
This function can be used with all utility patterns.

1. Press the Tack button.
Tack mark "⊙" will appear on the LCD.
2. Start to sew.
Machine will sew tacking stitches automatically and then start to sew the selected pattern.
3. When you reach the end of seam, press the reverse button once.
Machine will sew tacking stitches and stop automatically.
4. If you want to cancel this function, press the tack button again. Tack mark will disappear.



D. TURNING CORNERS

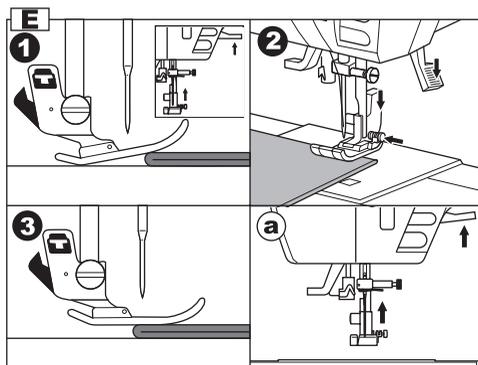
1. Stop the machine when you reach a corner.
The machine will stop the needle into the fabric.
2. Raise the presser foot.
3. Use the needle as a pivot and turn fabric.
4. Lower the presser foot and resume sewing.



E. SEWING HEAVY FABRIC

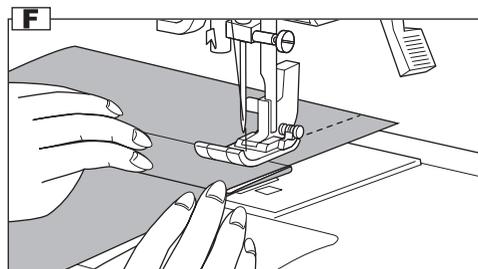
When sewing heavy fabrics, the toe end of presser foot tends to lift up and sewing cannot be started smoothly. In such case, set as follows.

1. Raise the presser foot.
 2. Push the lock button located on the right side of general purpose foot and lower the foot.
 3. Start sewing.
As presser foot hinge is locked, fabric will be fed smoothly.
- a. The presser bar lifter can be raised one step higher for placing heavy materials under the presser foot easily.



F. SEWING OVER OVERLAPPED AREAS

Guide the fabric with your hand when sewing over overlapped areas.

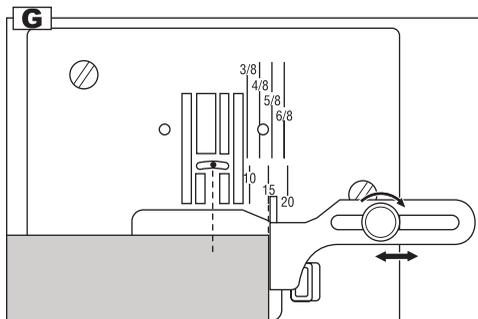


G. WIDTH OF SEAM ALLOWANCE

Guide lines on the needle plate indicate the distance from the center needle position. To keep the width of seam allowance, guide fabric edge aligning this guide line.

Seam Guide

Use the seam guide to guide the fabric. Attach the seam guide and screw to the needle plate.



THREAD TENSION

This machine adjusts the thread tension automatically when pattern is selected. However you can change the thread tension as follows.

1. Press the function F5 button directly under the tension mark.
LCD changes to the thread tension mode.
2. To increase the upper thread tension, press the function F5 (+) button.
To decrease the upper thread tension, press the function F4 (-) button.

Pre-set tension number is highlighted.
The mark "▼" is indicating the absolute thread tension.
By pressing the function F3 (AUTO) or clear "C" button, thread tension will return to pre-set.
By pressing the function F1 button, LCD return to the previous mode (Stitch information mode).
When another stitch pattern is selected, thread tension will return to pre-set.
You can start sewing at this mode and change tension while sewing.

A. Preset thread tension

Upper and bobbin thread will lock approximately in the middle of fabric.

B. When thread tension is increased.

Bobbin thread will appear on the top side of fabric.

C. When thread tension is decreased.

Upper thread will appear on the bottom side of fabric.

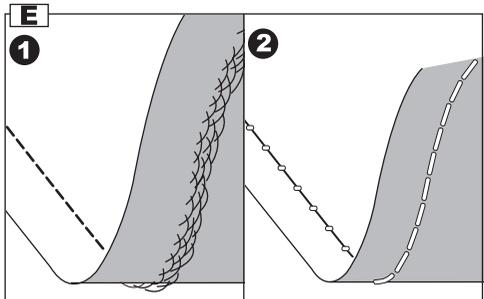
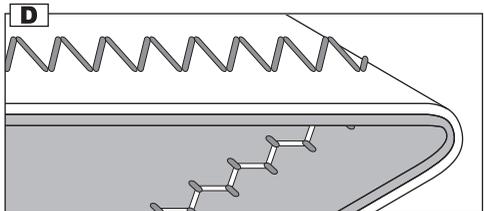
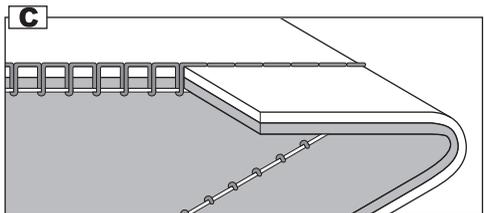
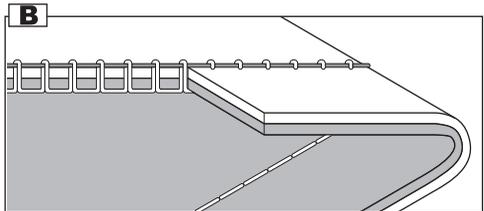
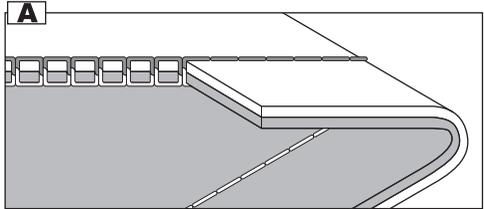
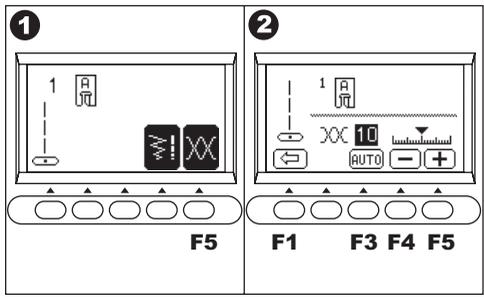
D. Thread tension except for straight stitch

Thread tension except for straight stitch is set to a slightly weaker tension than when sewing straight stitch.

You will obtain a nicer stitch when upper thread appears on bottom side of fabric.

E. Helpful Hints

1. If your sewing appears as shown on drawing, stitches on top side of fabric are good but bottom side looks very loopy, it could be that the upper thread is not threaded correctly. Refer to page 16 for correct threading.
2. If after checking the top thread and the bobbin thread is still showing on the top side, check the bobbin to see if it is set correctly. Refer to page 15 for the correct setting.

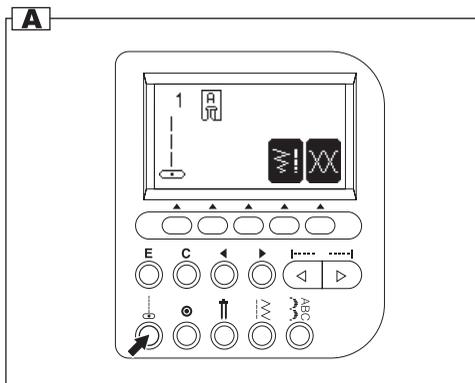


SELECTING UTILITY STITCH PATTERN

Utility stitches are indicated in the pattern chart located inside of the top cover. When you turn on the machine, straight stitch will be selected automatically. Select utility stitch pattern as follows.

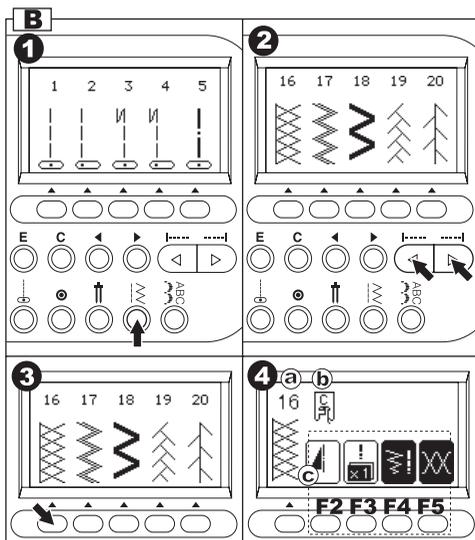
A. DIRECT STITCH PATTERN

You can select basic straight stitch pattern directly by pressing the Direct Stitch Selection Button.



B. SELECTING OTHER UTILITY STITCH PATTERNS

1. Press the utility button. Diagram B1
First 5 patterns will be indicated on the LCD.
2. Press the right scroll button, next 5 patterns will appear. Diagram B2
By pressing the left or right scroll button, you can scroll up or down in increments of 5 patterns. (You can also scroll down by pressing the utility button.)
3. To select a pattern, press the function button directly under the desired pattern. Diagram B3
4. When pattern is selected, LCD will indicate the information of selected pattern. Diagram B4
 - a. Stitch Number and pattern
 - b. Suitable presser foot
 - c. Function of function button
 - F2 Mirror/reverse
 - F3 Elongation
 - F4 Stitch Width, Length
 - F5 Thread Tension (See previous page)



If the function mark is not indicated, its function can not be used.

C. MIRROR/REVERSE STITCH

You can set the mirror stitch, or reverse stitch or mirror/reverse stitch.

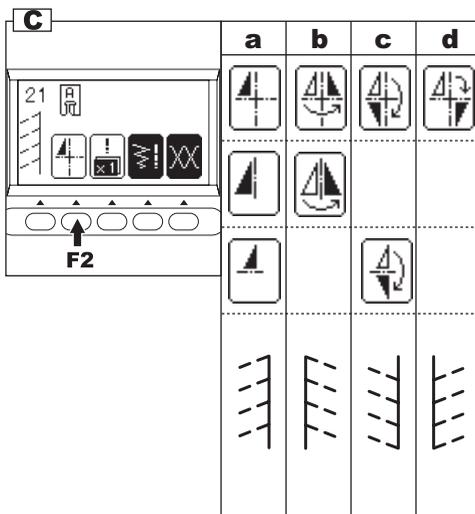
Pressing the function button (F2) directly under the mirror/reverse icon, stitch will flip from left to right or from front to back.

The icon on the LCD indicates the selected stitch as follows:

- a. Regular stitch (normal stitch)
- b. Mirror stitch (reverse left and right)
- c. Reverse stitch (reverse front and back)
- d. Mirror and Reverse stitch

If the mark is not indicated, the pattern cannot change to mirror or reverse stitch.

When you pressed clear "C" button, machine will return to regular stitch (also elongation will return to regular length.)



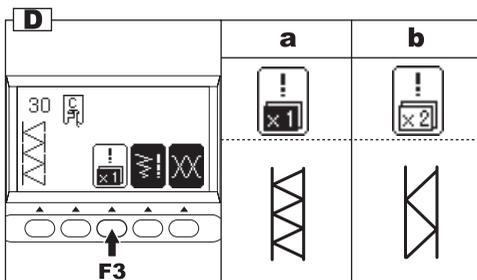
D. ELONGATION

Some patterns may be elongated from the original length. You may elongate the pattern by pressing the function button (F3) directly under the elongation icon.

- Regular length
- Elongated

A pattern cannot be elongated if the elongation icon is not indicated.

When you pressed clear "C" button, machine will return to regular length (also mirror/reverse will return to regular stitch.)



E. SETTING STITCH WIDTH AND LENGTH

Machine will set the stitch width and length suitable for the pattern.

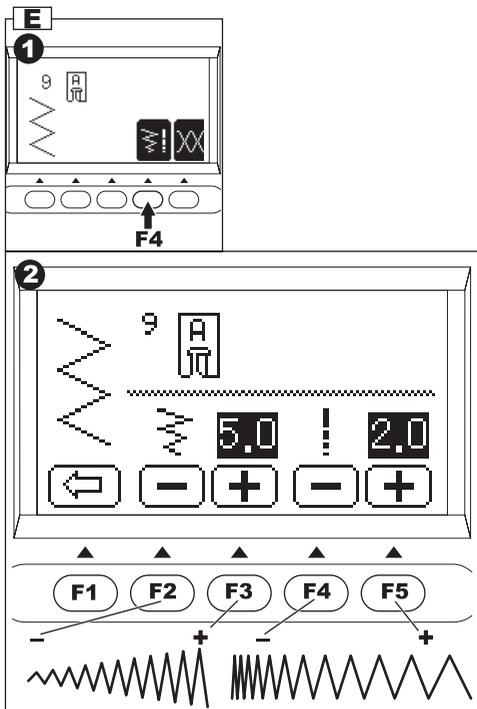
- You can make changes by pressing the function button (F4) directly under the width and length mark.
- LCD will change to show the stitch width and length.

For narrower width, press function button F2 (-).
 For wider width, press function button F3 (+).
 For shorter length, press function button F4 (-).
 For longer length, press function button F5 (+).

Pre-set stitch width and length will be indicated as a highlighted number.

When you pressed clear "C" button, machine will return to preset stitch width and length.

When you press the return button (F1), LCD will indicate previous mode (Stitch Information mode).



- For straight stitch patterns (No. 1, 2, 3, 4, 6, 8),
 Stitch width buttons will change the needle position.

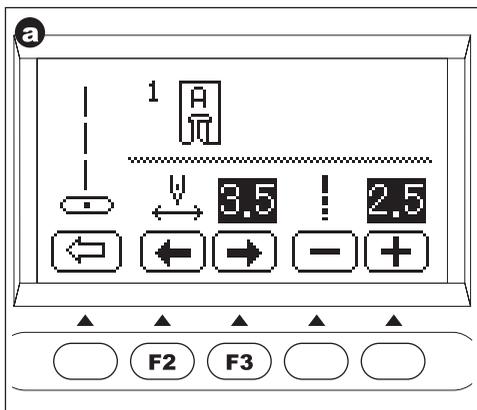
To shift the needle to the left, press function button F2.

To shift the needle to the right, press function button F3.

Note: When further width or length adjustments are not possible, machine will emit multiple audible beeps.

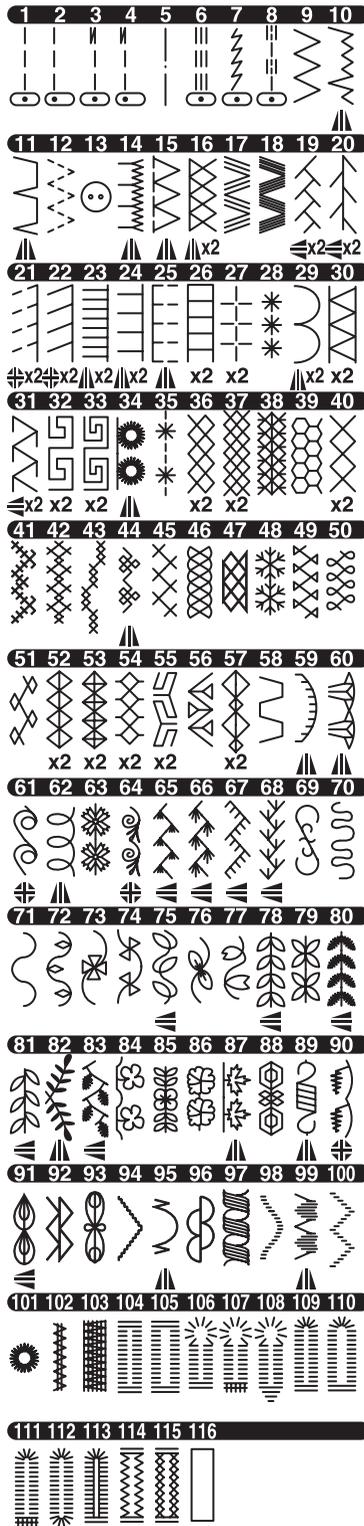
If the width, length or number icons are not indicated, the pattern cannot be changed.

Adjustments to the patterns may be made while sewing.



WHERE TO USE EACH STITCH

01. Straight stitch center needle position • For top stitching, for basic sewing, zipper sewing etc.
02. Straight stitch left needle position • For top stitching, for basic sewing etc.
03. Straight stitch with auto-reverse stitch center needle position
04. Straight stitch with auto-reverse stitch left needle position
05. Basting
06. Straight stretch stitch • Reinforcement straight stitch
07. Stem stitch for stretch fabrics
08. Hand-look quilting stitch
09. Zigzag stitch • For overcasting, applique, patch work etc.
10. Elastic blind hem
11. Blind Hem
12. Multiple stitch zigzag • For overcasting knit fabrics, elastic sewing, mending.
13. Button sewing
14. Decorative stitch
15. Overcasting
16. Overcasting of stretch fabric, decorative stitch
17. Ric Rac stitch
18. Double Ric Rac stitch
19. Feather stitch
20. Thorn stitch
- 21-100. Decorative and Functional stitches
101. Eyelet
102. Bar-tack
103. Darning
104. Bar-tack Buttonhole (Narrow)
105. Bar-tack Buttonhole (Wide)
106. Keyhole Buttonhole
107. Keyhole Buttonhole with cross bar
108. Tapered Keyhole Buttonhole
109. Round Ended Buttonhole (Narrow)
110. Round Ended Buttonhole (Wide)
111. Round Ended Buttonhole with cross bar
112. Both Round Ended Buttonhole
113. Decorative Buttonhole
114. Stretch Buttonhole
115. Heirloom Buttonhole
116. Bound Buttonhole



Description of Chart Symbols:

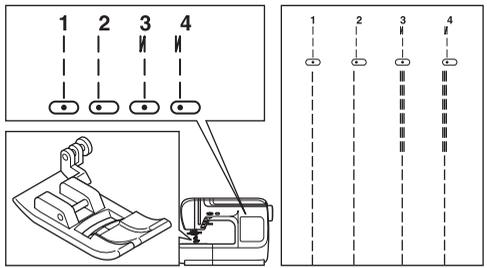
- ▲ Mirror Stitch possible
- ◄ Reverse Stitch possible
- ⊕ Mirror and Reverse stitches possible
- X2 Elongation possible

STRAIGHT STITCH SEWING

Straight stitch patterns should be selected to suit the type of fabric being sewn. Left needle position (No.2) is most suited for sewing light weight fabrics.

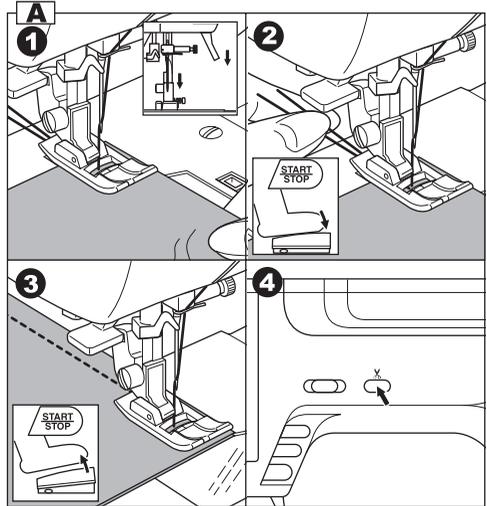
- No. 1. Center needle Position
- No. 2. Left needle Position
- No. 3. Center needle with built-in reverse stitch
- No. 4. Left needle with built-in reverse stitch

General Purpose Foot (A)



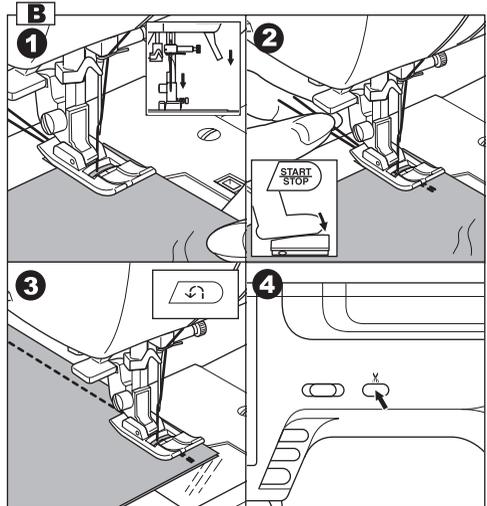
A. Straight Stitch

1. Position the fabric under the presser foot and lower it.
2. Hold the upper thread and bobbin thread loosely and start sewing. Place hand lightly on the fabric while sewing.
3. When you reach the end of seam, stop sewing.
4. Press the thread cutter button.



B. Straight Stitch With Auto-lock Stitch (Pattern No. 3, 4)

1. Position the fabric under the presser foot and lower it.
2. Hold the upper thread and bobbin thread loosely and start sewing. Machine will sew 4-5 stitches forward and sew 4-5 stitches backward and continue sewing forward.
3. When you reach the end of seam, press the reverse button. Machine will sew a few stitches backward and sew a few stitches forward and stop automatically.
4. Press the thread cutter button.



BASTING

Basting is temporary stitching, used for fitting garments, and for gathering and marking fabric.

No. 5 Basting Stitch

Darning/Embroidery Foot

A. ATTACHING THE DARNING/ EMBROIDERY FOOT

1. Lower the feed dogs by moving the drop feed lever to the left.
2. Remove the presser foot and holder. (See page 7)
3. The arm of darning/embroidery foot should ride onto the shaft of the needle clamp screw.
4. Slide the plastic attaching head from your left to right so that it is fitted into the presser bar.
5. Tighten the presser foot thumb screw.

B. BASTING

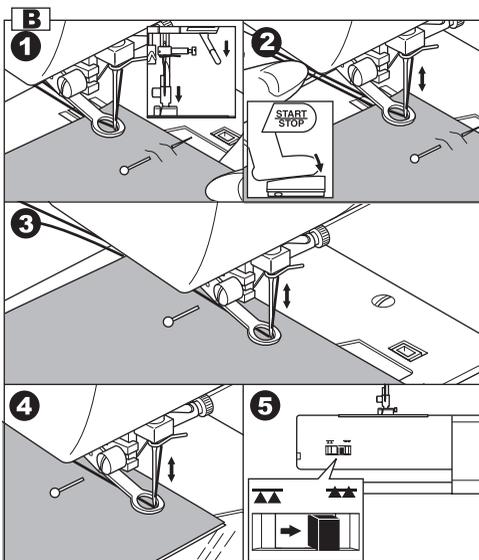
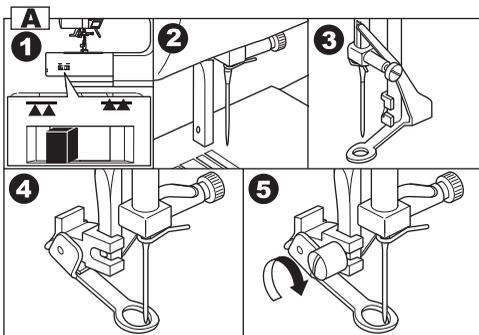
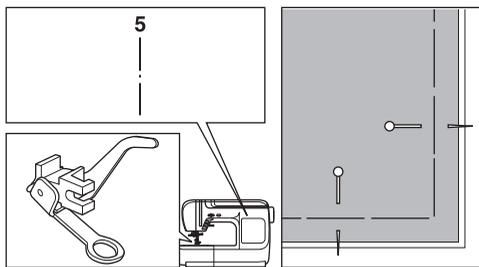
When this pattern is selected, thread tension will be reduced automatically.

1. Place the fabric under the presser foot and then lower the presser foot lifter.
2. Hold the upper thread and bobbin thread loosely and start to sew. Machine will make one stitch only.
3. Pull the fabric required amount to the rear and sew one stitch.
4. Repeat this as many times as you need to finish the row of stitching.
5. Raise the fabric feed dogs for next regular sewing.

Note:

To prevent the fabric layers from shifting, insert dress pins crosswise to the basting position. Pull the bobbin thread to remove the stitching.

CAUTION: To prevent accidents.
Be sure the needle does not hit the dress pin, while sewing.



ELASTIC STITCH SEWING

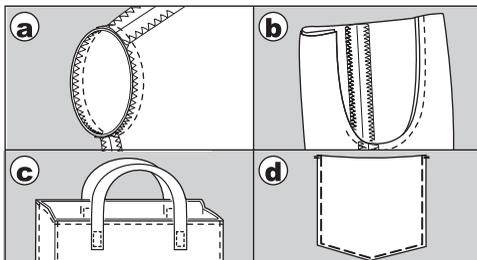
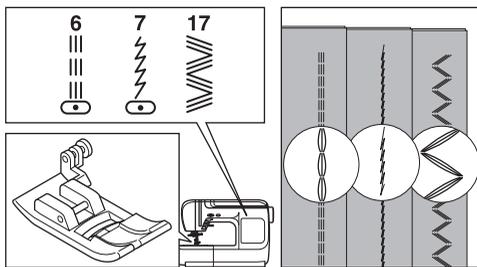
Elastic stitches are strong and flexible and will give with the fabric without breaking. Good for knit fabrics as well as joining durable fabrics such as denims.

- No. 6 Straight Stretch Stitch
- No. 7 Stem Stitch for Stretch fabrics
- No. 17 Ric-rac Stitch

General Purpose Foot (A)

We recommend that you use a needle for knit and synthetic fabrics to prevent skipping stitches and thread breakages.

- a. Jacket
- b. Trousers
- c. Bag
- d. Pocket

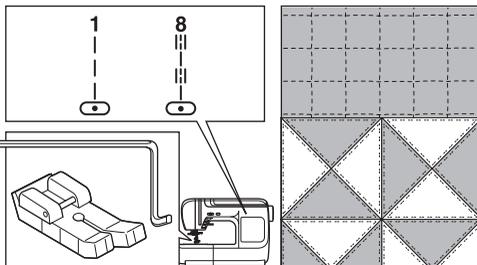


QUILTING

A quilt always consists of three layers of material. The topper, batting, and backing fabric. The top layer is formed by shaped pieces of fabrics joined together, creating the quilt topper.

- No. 1 Straight stitch (Center Needle Position)
- No. 8 Hand look Quilting Stitch

Straight Stitch / Patch Quilting Foot
Quilting Bar



CAUTION: To prevent accidents.
Do not change the needle position. Otherwise, needle could hit the presser foot and break.

A. Joining the pieces of fabric

Join the pieces of fabric using Pattern No. 1 with a seam allowance of 1/4 inch (6.3 mm)

B. Quilting

Sew three layers of material (topper, batting, backing).

Use quilting bar to sew successive rows. Insert quilting bar into the hole of presser foot holder and set the space as you desire.

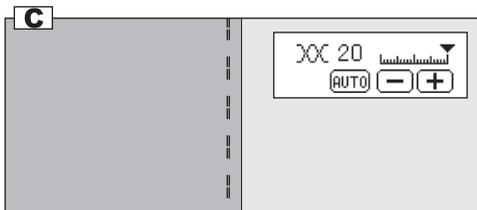
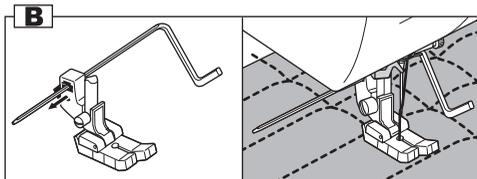
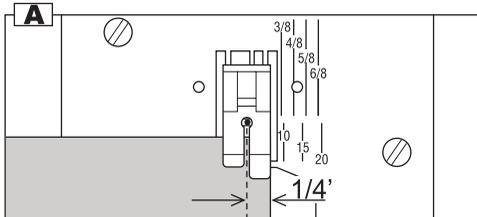
C. Hand Look Quilting Stitch (No. 8)

Use invisible nylon sewing thread or very lightweight thread that matches the fabric on top.

Place thread that contrasts to the color of the fabric on the bobbin.

Set the upper tension to maximum or near maximum.

When you sew, bobbin thread will pull to the top and give the appearance of a traditional hand quilting stitch.



ZIGZAG STITCH SEWING

Your machine can sew zigzag stitches of various widths and lengths by changing the settings of the stitch width and stitch length.

No. 9 Zigzag Stitch

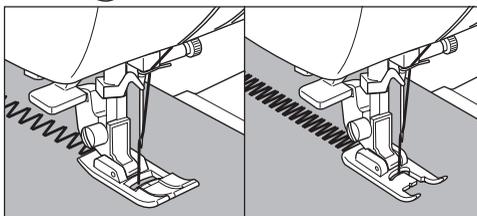
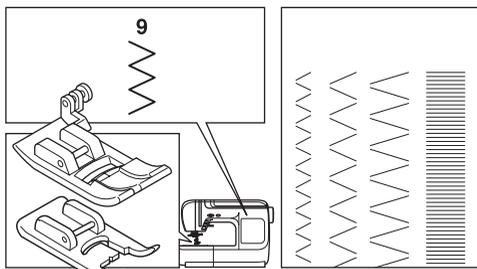
General or Satin Foot (A, B)

Zigzag stitches are very good for applique and decorative sewing.

SATIN STITCHING

To sew a satin stitch, shorten the stitch length and attach the Satin Foot (B).

Refer to next page for using the zig-zag to overcast.



MULTI-STITCH ZIGZAG

Used for sewing on elastic and overcast stitching.

No. 12 Multi-Stitch Zigzag

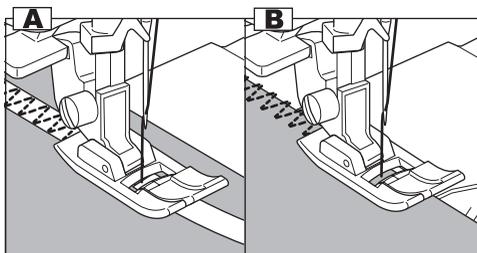
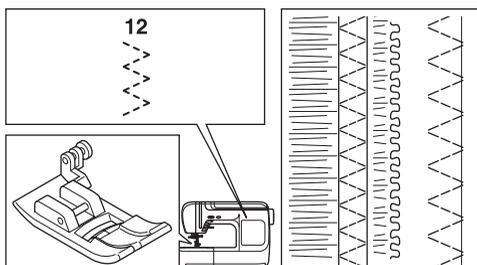
General Purpose Foot (A)

A. Elastic Band Sewing

Pull elastic in front and back of needle while sewing.

B. Overcast Stitching

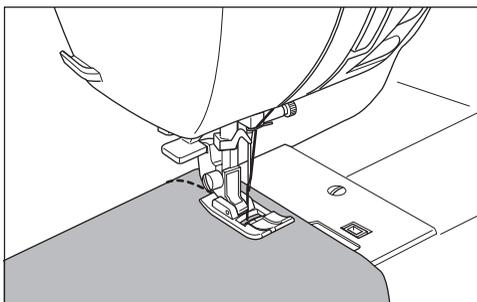
Used for easy to ravel and knit fabrics.
Needle should fall on extreme edge of fabric.
Refer to next page for overcasting.



FREE ARM SEWING

By simply removing the extension table, you can access the free arm, making it easier to stitch hard-to-reach areas like pant hems, sleeve cuffs and children's clothing.

Note: Refer to page 7 for Removing The Extension Table.



OVERCASTING- OVERLOCKING

A. USING THE OVERCASTING FOOT

No. 9 (Stitch Width 5.0)

No. 15, 16, 30 (Stitch Width 5.0-7.0)

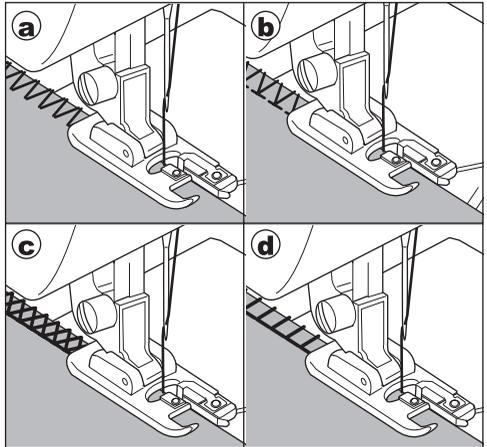
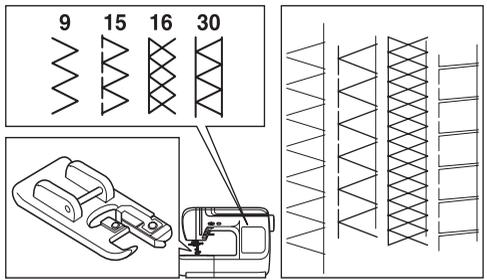
Overcasting Foot (C)

Press fabric against the guide plate of the overcasting foot so that needle falls near the edge of seam.

- a. No. 9 (Width=5.0) is used for preventing raveling of fabrics.
- b-d. No. 15, 16, 30 can sew overcasting and regular stitches at the same time. Therefore it is convenient for sewing easy to ravel and stretch fabrics.



CAUTION: To prevent accidents.
Overcasting foot should be used for sewing patterns 9, 15, 16, 30 only. Do not change the stitch mode or elongation. It is possible that the needle could hit the presser foot and break when sewing other patterns and widths.



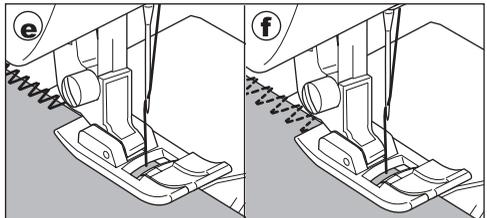
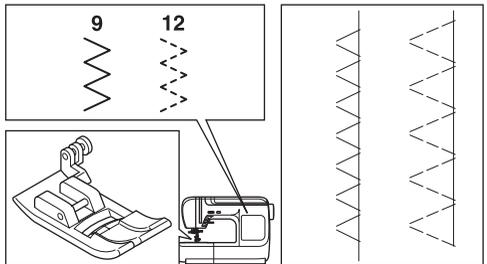
B. USING THE GENERAL PURPOSE FOOT

No. 9, 12

General Purpose Foot (A)

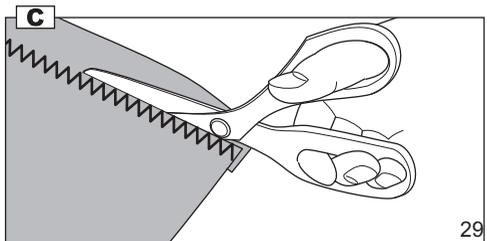
Place fabric so that needle will fall nearest to edge of fabric when using the General Purpose Foot.

- e. For narrower zigzag width (Width=2.0-4.5).
- f. Use No. 12 when sewing easy to ravel or stretch fabrics.



C. NOTE:

You can also cut off the excess material after sewing the inside of fabric.
Be careful not to cut thread when cutting excess fabric.



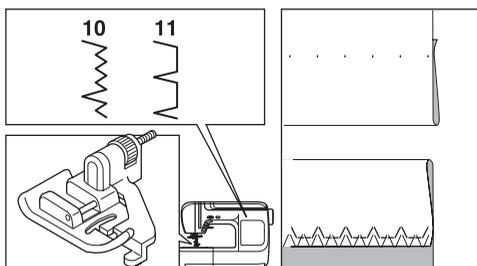
BLIND HEM STITCHING

The hem is sewn without stitches showing on right side of fabric.

No. 10 Blind hemming for stretch fabric.

No. 11 Blind hem for non-stretch fabric.

Blind Hem Foot (D)



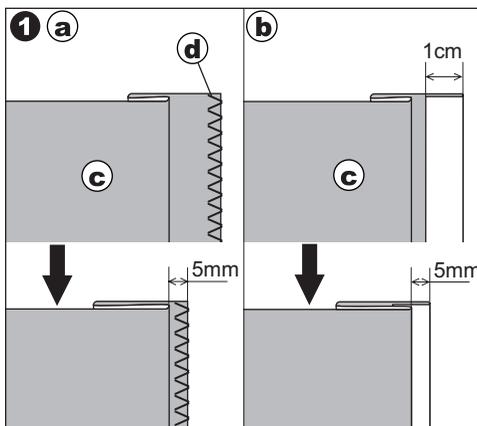
1. Fold the fabric as shown on drawing.

a. Medium, Heavy weight fabric

b. Light weight fabric

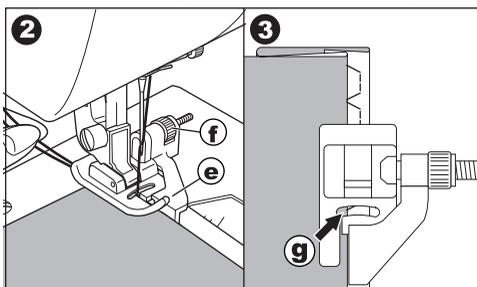
c. Wrong side of fabric

d. Overcasting



2. The guide (e) on the blind foot ensures even feeding of the fabric when blind hem stitching. The guide (e) is adjusted by turning the adjusting screw (f).

3. Place fabric so that the straight stitches (or small zigzag stitches) are on the protruding hem edge and the large zigzag stitches just catch one thread of the folded edge (g). Turn the screw so that the needle barely touches the folded edge of fabric.

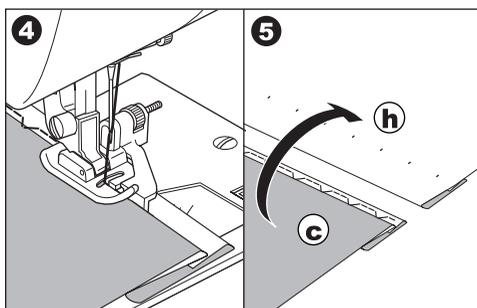


4. Lower the presser foot and sew hem, guiding fabric evenly along the guide.

5. Turn the fabric over when you have completed sewing.

c. Wrong side of fabric

h. Right side of fabric



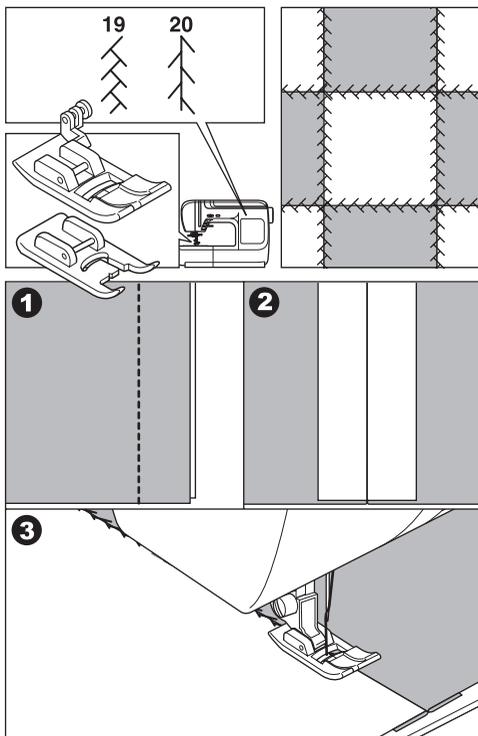
PATCH WORK

For additional decorative purposes, use different kind of materials.

No. 19, 20

General Purpose or Satin Foot (A, B)

1. Place two pieces of fabric right sides together and sew a long straight stitch.
2. Press the seam open.
3. Sew with the right side of the graphic facing up. Be sure that stitches fall on both sides of the seam.



APPLIQUE

No. 23, 24

Open Toe Foot



CAUTION: To prevent accidents.

Do not change the stitch width to wider than 5.0. Otherwise, needle could hit the presser foot and break.

1. Fix applique on fabric with fabric glue, fusible web or basting stitches.
2. Sew with the right side of the stitch following the right edge of the applique as closely as possible.

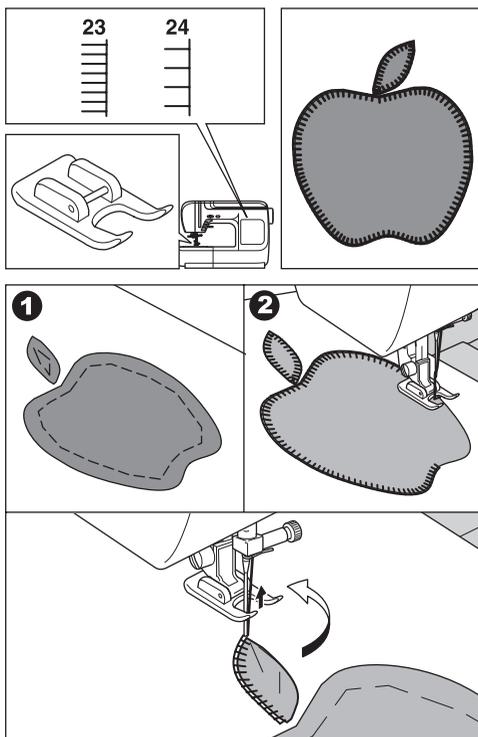
When sewing sharp angles or curves

Bring needle to lowest position and raise the presser foot.

Use needle as pivot and turn fabric.

Note:

Applique can also be done with a satin stitch using the Satin Foot (p. 28).

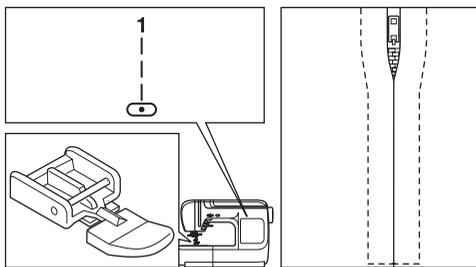


INSERTING ZIPPERS CENTERED INSERTION

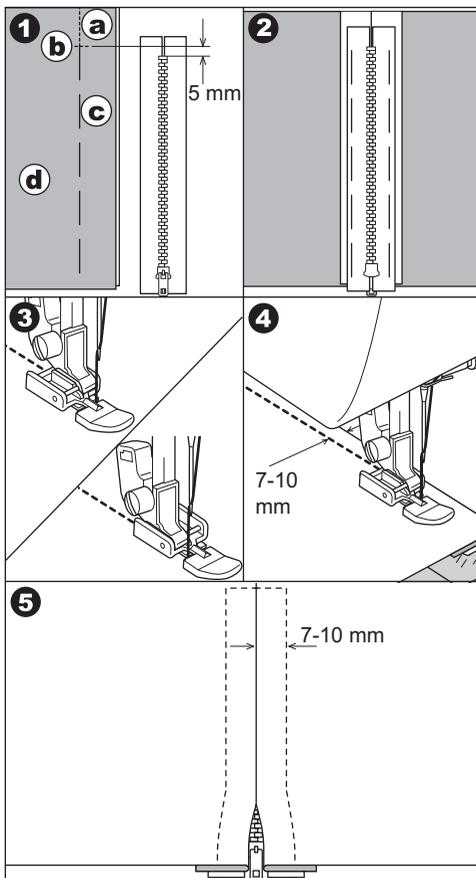
No. 1 Straight Stitch (Center Needle Position)

Zipper Foot (E)

CAUTION: To prevent accidents.
Zipper foot should be used for sewing center needle position straight stitch No. 1 only. It is possible that needle could hit the presser foot and break when sewing other patterns.



1. Baste the zipper opening to the seam line.
 - a: Straight stitch
 - b: End of opening
 - c: Basting
 - d: Wrong side of fabric
2. Press open the seam allowance. Place the open zipper face down on the seam allowance with the teeth against the seam line. Baste the zipper tape.
3. Attach the zipper foot. Attach the left side of the presser foot pin to the presser foot holder when sewing the right side of the zipper, and right side of the presser foot pin to the holder when sewing the left side of the zipper.
4. Stitch left side of the zipper from bottom to top.
5. Stitch across the lower end and right side of zipper. Remove the basting and press.

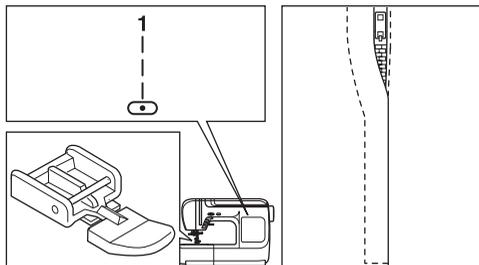


INSERTING ZIPPERS

LAPPED INSERTION

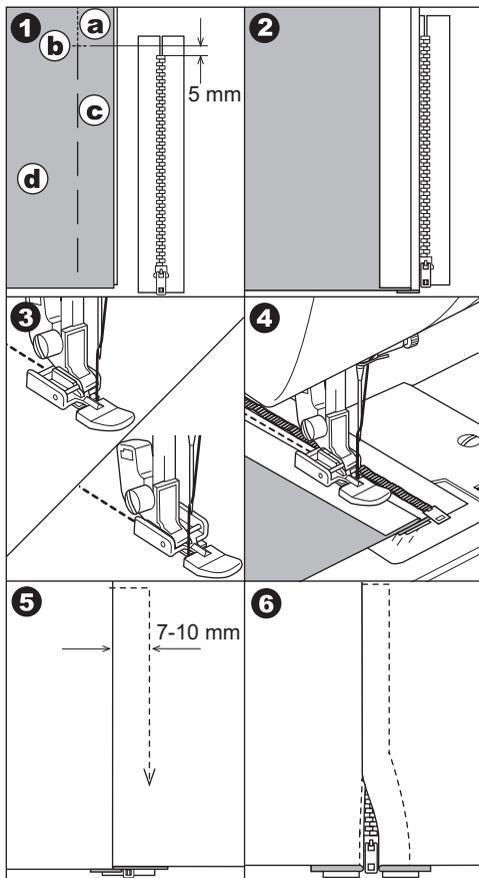
No. 1 Straight Stitch (Center Needle Position)

Zipper Foot (E)



CAUTION: To prevent accidents.
Zipper foot should be used for sewing center needle position straight stitch No. 1 only. It is possible that needle could hit the presser foot and break when sewing other patterns.

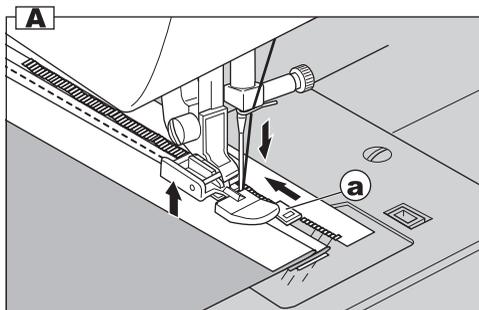
1. Baste the zipper opening to the seam line.
a: Straight stitch
b: End of opening
c: Basting
d: Wrong Side of fabric
2. Fold back to the left seam allowance.
Turn under the right seam allowance to form a 1/8" (3 mm) fold.
3. Attach the Zipper Foot.
Attach the left side of the presser foot pin to the presser foot holder when sewing the right side of the zipper, and right side of the presser foot pin to the holder when sewing the left side of the zipper.
4. Stitch the left side of zipper from bottom to top.
5. Turn the fabric right side out stitch across the lower end and right side of zipper.
6. Stop stitching with the needle down in the fabric when the zipper foot reaches the zipper tab, about 2" (5 cm) from the top of the zipper.



To stitch around the zipper tab: (Diagram A)

1. Stop stitching before you reach the zipper tab.
2. Lower the needle into fabric.
3. Raise the presser foot and slide the zipper tab backwards to clear the zipper foot.
4. Lower the presser foot and continue stitching.
5. Remove the basting stitches.

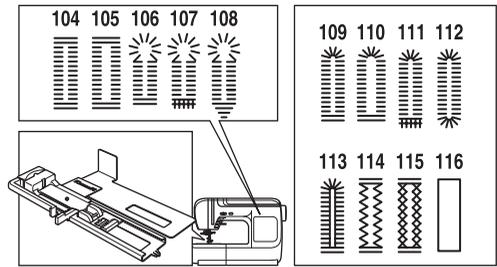
a. Zipper tab



BUTTONHOLE SEWING

Select the buttonhole style you want to sew.
This machine can sew 13 types of buttonholes.

- 104. Bar-tack Buttonhole (Narrow) for light to medium weight fabrics
- 105. Bar-tack Buttonhole (Wide) for large buttons
- 106. Keyhole Buttonhole for heavy weight fabrics
- 107. Keyhole Buttonhole with reinforced bar tack
- 108. Tapered Keyhole Buttonhole
- 109. Round Ended Buttonhole (Narrow) for light to medium weight fabrics
- 110. Round Ended Buttonhole (Wide) for large buttons
- 111. Round Ended Buttonhole with cross bar
- 112. Both Round Ended Buttonhole
- 113. Decorative Buttonhole
- 114. Stretch Buttonhole
- 115. Heirloom Buttonhole
- 116. Bound Buttonhole (See page 36)



Buttonhole Foot (F)

Note:

Density of the sides of the buttonhole may be adjusted with stitch length control.

1. Mark position and length of buttonhole on fabric.
2. Set button on the base.
If button does not fit on the base, adjust slide on base to diameter of button plus thickness of button.

$$a = \text{Length of button} + \text{thickness}$$

3. Pass upper thread through the hole of buttonhole foot and bring upper and bobbin threads to the left.
4. Position fabric under presser foot so that the center line mark is in the center of the buttonhole foot.
Lower the foot while pulling the frame of the buttonhole foot towards you.

Note:

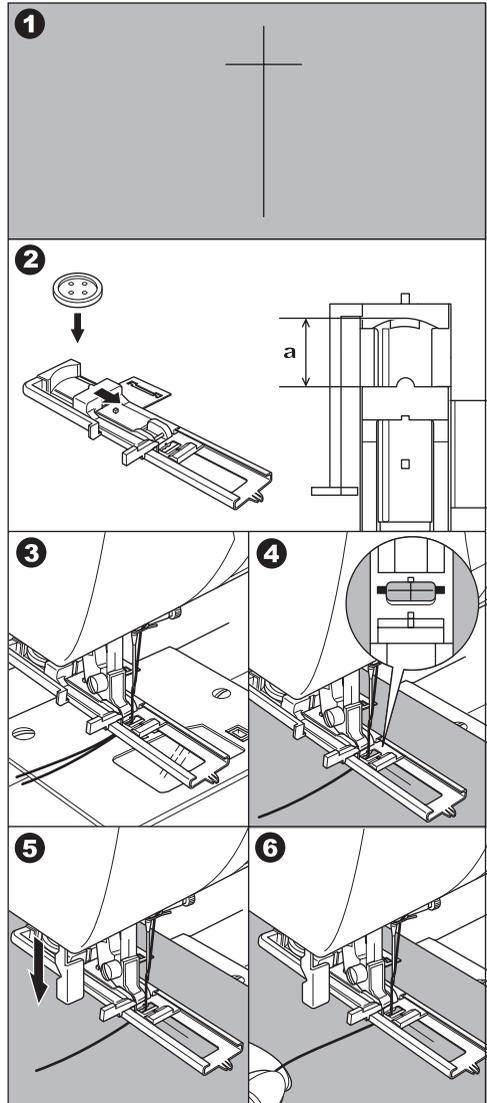
When sewing stretch fabrics, it is suggested that you use interfacing on the backside of the fabric.

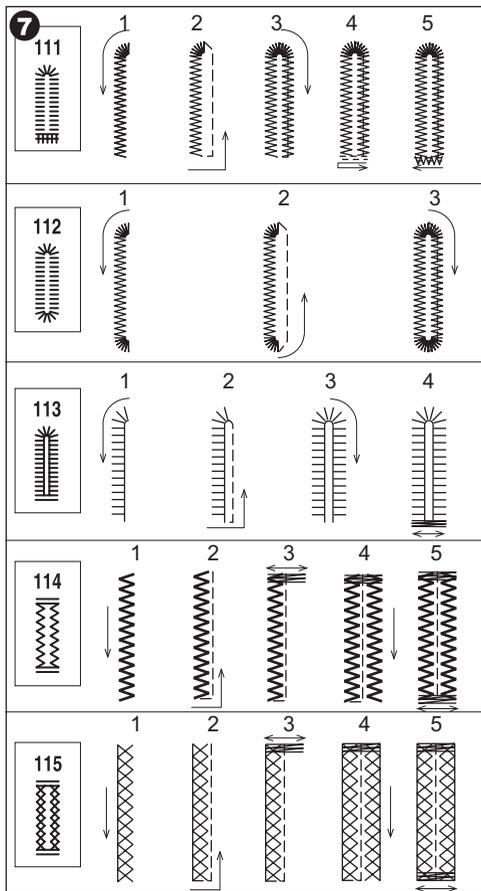
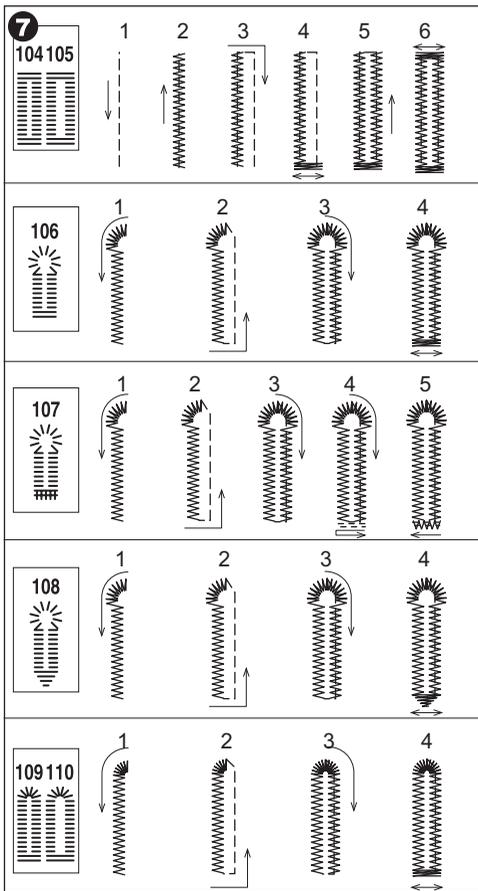
5. Lower the buttonhole lever completely.

Note:

Machine will not start to sew if buttonhole lever is not lowered properly or frame of buttonhole foot is not positioned all the way forward.

6. Hold upper thread lightly and start the machine.

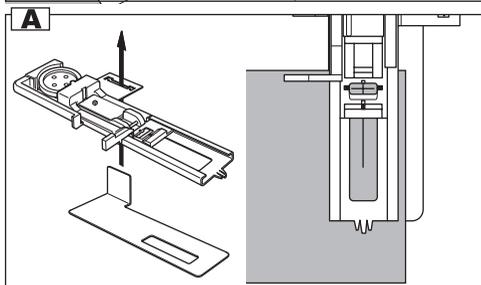
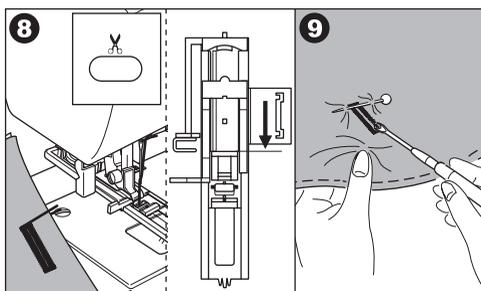




7. Machine will sew the buttonhole in the order as shown and stop automatically after sewing.

8. Press the thread cutter button and raise the presser foot to remove the fabric.
To sew over same buttonhole, raise presser foot to return to original position.

9. Cut center of buttonhole being careful not to cut stitches on either side. Use a pin as a stopper.



CAUTION: To prevent accidents.
When using seam ripper, do not put your finger in the path of ripper.

A. Note:

For sewing buttonholes on hard-to-sew fabrics or along the edge of multi-layered garments, install the underplate. Place the fabric between the underplate and buttonhole foot.

BOUND BUTTONHOLE

A bound buttonhole provides a professional tailored touch to tailored garments like dresses, suits and coats.

116. Bound Buttonhole

Buttonhole Foot (F)

- Cut a patch of fabric 1" (2.5 cm) wide, 1/3" (1 cm) longer than the finished buttonhole.
Baste a patch so that the center line of patch will align with the center line mark of buttonhole.

- a. Right side of fabric
- b. Wrong side of patch

- Lower the buttonhole lever and sew buttonhole.
(See previous page)
Machine will sew the buttonhole in the order as shown and stop automatically after sewing.

- Press the thread cutter button and raise the presser foot to remove the fabric.

- Carefully cut through the center of buttonhole to within 3 mm of each end. Cut diagonally to each corner as shown.
Remove the basting.

- Draw the patch through the opening to the underside.

- Turn the fabric and pull the patch through the buttonhole rectangle.
Press the patch.

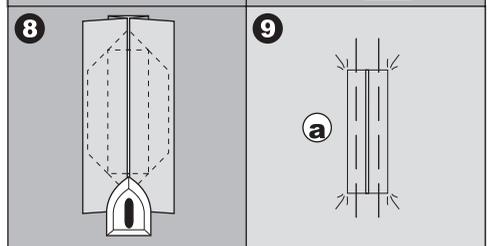
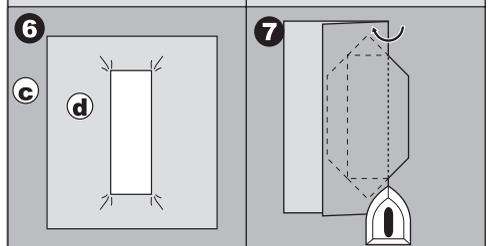
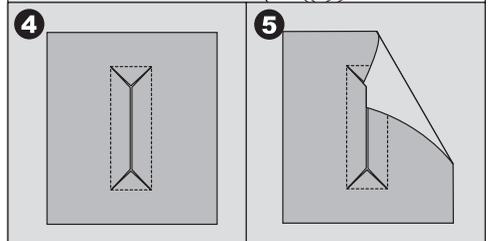
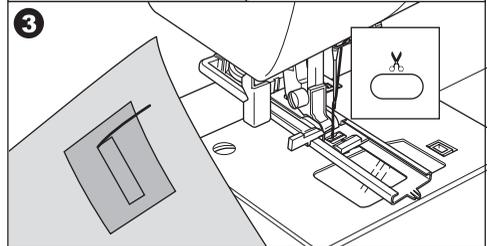
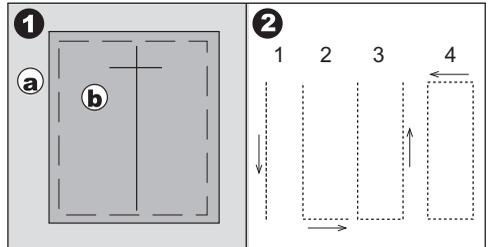
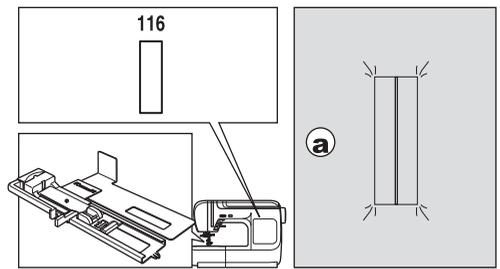
- c. Wrong side of fabric
- d. Right side of patch

- Turn the patch and press the side seam allowance.

- Fold each side of the patch to form pleats that meet at the center of the buttonhole and cover the opening. Press the patch.

- Turn the fabric to right side and baste along the center of each fold.

- a. Right side of fabric



10. Fold the fabric and stitch along the seams on each side, just a needle width from the original stitching line. Remove the basting.

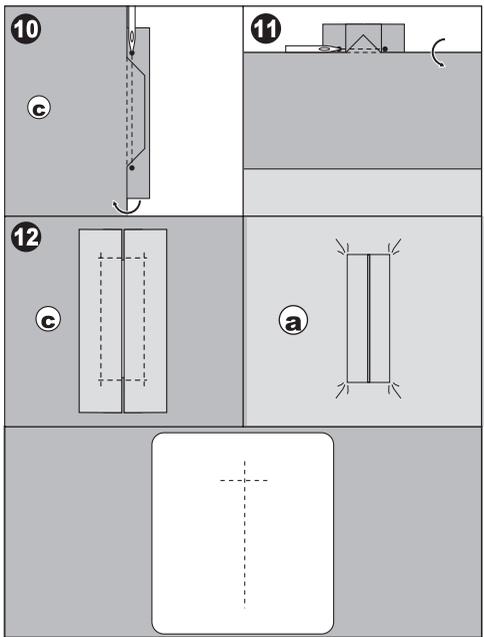
c. Wrong side of fabric

11. Fold the fabric along the buttonhole end and stitch triangular ends on the original stitching line.

12. Press and trim the patch to within 3/16" (5 mm) of the stitching.

a. Right side of fabric

c. Wrong side of fabric



NOTE:

When sewing weaker fabric, reinforce buttonhole area. Cut a patch of fusible interfacing 1 1/4" (3 cm) wider and 3/4" (2 cm) longer than the buttonhole. Fuse to wrong side over each buttonhole marking.

EYELET

This stitch pattern is used for making belt holes and other similar applications.

101 Eyelet

Satin Foot (B)

You can choose 3 sizes of eyelets by changing the stitch length.

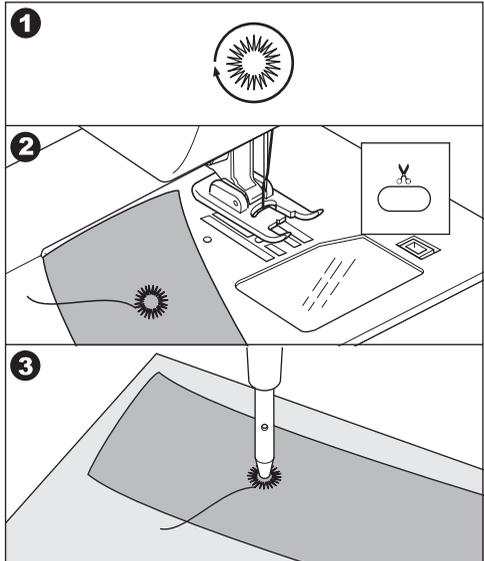
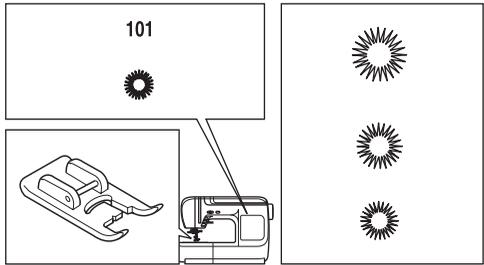
1. Place the fabric under the presser foot and lower the presser foot. Start the machine. Machine will sew the eyelet and stop automatically.

2. Press the thread cutter button and raise the presser foot.

3. Make a hole in the center of the eyelet.

Note:

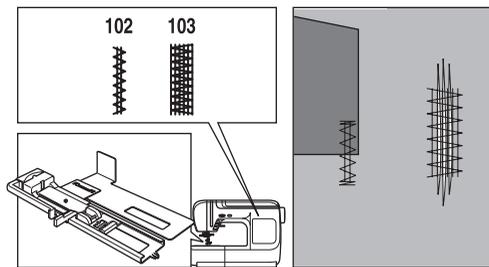
Eyelet punch is not provided with this machine.



AUTOMATIC BAR-TACK AND DARNING

You can sew automatic bar-tack and darning using the buttonhole foot.

No. 102 Bar-tack, to reinforce areas that will be subject to strain, such as pocket corners.
No.103 Darning, mending and other applications.



Buttonhole Foot (F)

1. Adjust slide on base according to the length of bar-tack or darning.

a = Length of bar-tack or darning

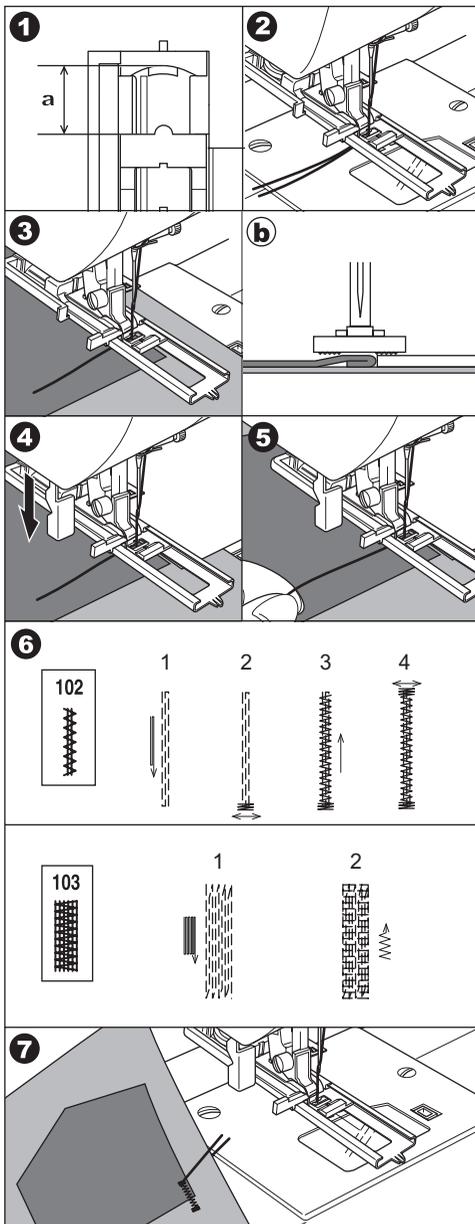
2. Pass upper thread through the hole of buttonhole foot and bring upper and bobbin threads to the left.
3. Position fabric under presser foot so that the starting point is on the thick area. Lower the foot.
- b. Sewing bar-tack on edge of thick fabric such as pocket, place same thickness fabric or cardboard beside the fabric.

4. Lower the buttonhole lever completely.

Note:

Machine will not start to sew if buttonhole lever is not lowered properly or buttonhole foot is not positioned correctly.

5. Hold upper thread lightly and start the machine.
6. Machine will sew bar-tack or darning stitch as shown. Machine will stop automatically when the pattern is finished.
7. Press the thread cutter button and raise the presser foot lifter to remove the fabric.



SEWING ON BUTTONS

No. 13

Button Sewing Foot

1. Lower the feed dogs by moving the drop feed lever to the left.
2. Attach the button sewing foot. Align two holes of the button with slot of presser foot and lower foot to hold the button securely.
3. Adjust the stitch width so that the needle enters the left hole of button.
4. Turn hand wheel by hand slowly so needle enters the second hole. You may need to adjust the stitch width again.

CAUTION: To prevent accidents.
Make sure that the needle does not hit the button during sewing. Otherwise needle may break.

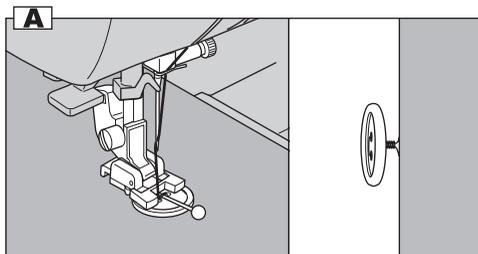
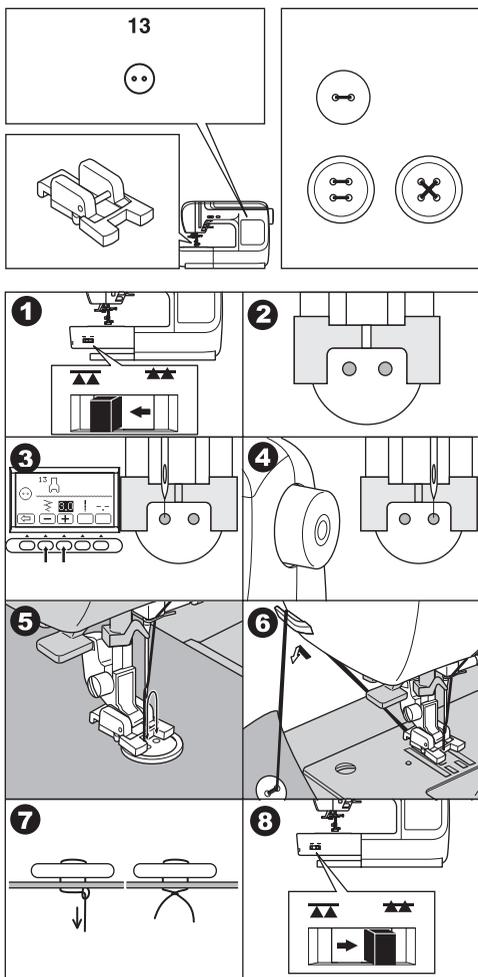
5. Sew approximately 10 stitches at slow speed.
6. Raise the foot and cut the threads remaining about 4" (10 cm) long.
7. Pull the end of bobbin thread and pull upper thread to the wrong side of fabric. Tie them together.
8. After sewing, move the drop feed lever to the right.

Note:

To sew a 4-hole button, follow the procedure above for the first two holes. Then lift presser foot slightly and move fabric to permit stitching the other two holes, either parallel or criss-cross over the first two holes.

A. Thread Shank

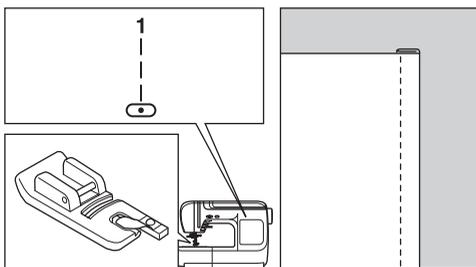
Buttons on coats and jackets should have a thread shank to make them stand away from the fabric. Insert a straight pin or sewing machine needle under the center slit of the foot from the front. Sew over the pin or needle. Pull thread to back of button and wind around stitches to form a firm shank. Tie thread ends securely.



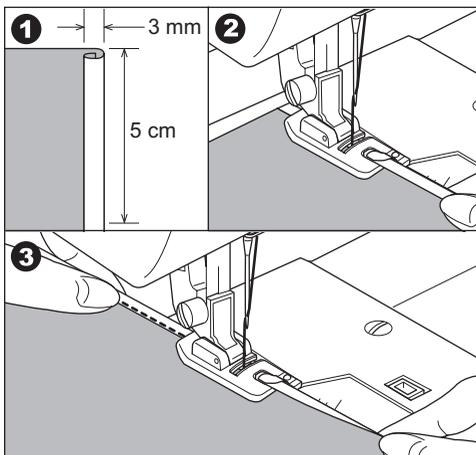
NARROW HEMMING

No. 1 Straight Stitch (Center Needle Position)

Rolled Hem Foot



1. Fold edge of fabric over about 1/8" (3 mm), then fold it over again 1/8" (3 mm) for about 2" (5 cm) along edge of fabric.
2. Insert needle into the fold by turning the hand wheel toward you, and lower the presser foot. Sew several stitches and raise the presser foot. Insert fabric fold into spiral of rolled hem foot. Move fabric back and forth until the fold forms a scrolled shape.
3. Lower the presser foot and start sewing slowly, while guiding raw edge of fabric scroll evenly into front of rolled hem foot.

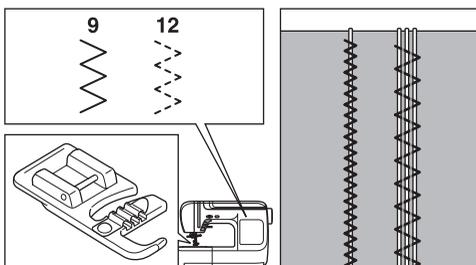


CORDING

No. 9 Zigzag Stitch for Single Cording

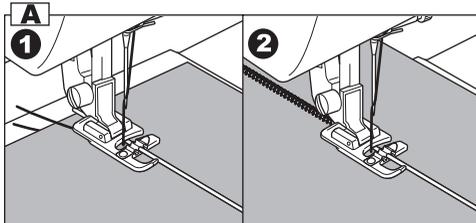
No. 12 Multi Zigzag for Triple Cording

Cording Foot



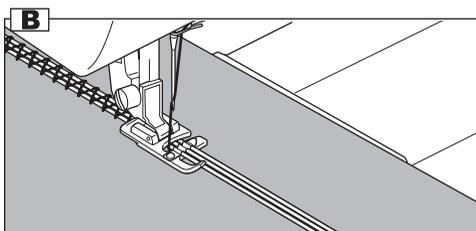
A. SINGLE CORDING

1. Set stitch pattern to No. 9. Insert the cord in the center groove of cording foot from the right side opening. Pull cord about 2" (5 cm) behind the foot.
2. Adjust the stitch width so that the stitches are just cover the cord. Lower the foot and sew slowly, guiding the cord.



B. TRIPLE CORDING

- Set the stitch pattern to No. 12 and set the stitch width to 6.0-7.0.
Insert three cords into the slots of cording foot.



CONTINUOUS DECORATIVE PATTERN

Use the Satin Foot for continuous decorative stitch patterns.

This foot has a full indentation on the underside to easily allow closely spaced zigzag stitches and fabric to feed freely under foot.

No. 19-100

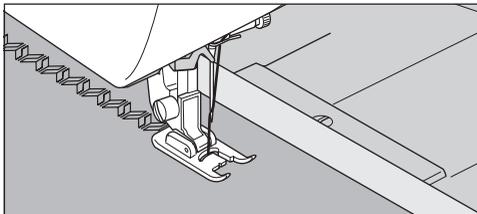
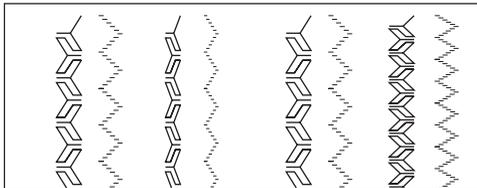
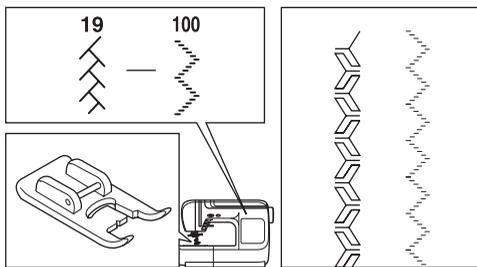
Satin Foot (B)

To customize the continuous decorative stitch pattern, you may adjust the length and width of pattern.

Experiment with fabric scraps until you get the desired length and width.

A. SEWING LIGHTWEIGHT FABRICS

When sewing lightweight fabrics, it is suggested that you use stabilizer on the backside of the fabric.



USING THE EVEN-FEED FOOT

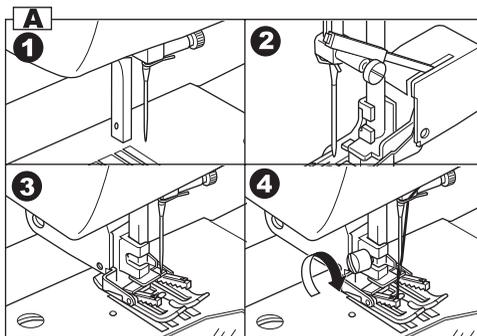
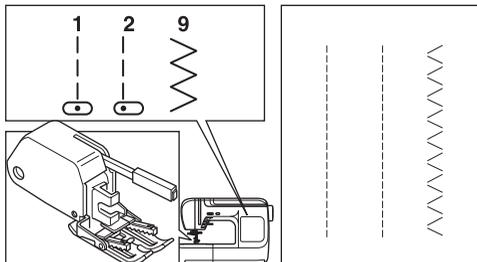
The Even-feed Foot accessory equalizes the feeding of the upper and lower layers of fabric and improves the matching of plaids, stripes, and patterns. This foot helps to prevent uneven feeding of very difficult fabrics. Use this foot also for sewing quilts.

No. 1, 2, or 9

Even-feed Foot

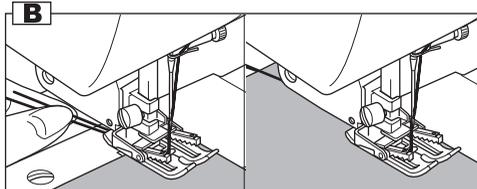
A. ATTACHING THE EVEN-FEED FOOT

1. Remove the presser foot and holder. (See page 7)
2. The arm of even-feed foot should rest on the shaft of the needle clamp screw.
3. Slide the attaching head from your left to right so that it is fitted into the presser bar.
4. Tighten the presser foot thumb screw.



B. SEWING

Hold both thread lightly at start of sewing and sew in slow (1/2) speed.



DARNING/FREE-HAND EMBROIDERY

No. 1.Center needle Position

Darning/Embroidery Foot

A. ATTACHING THE DARNING/ EMBROIDERY FOOT

1. Lower the feed dogs by moving the drop feed lever to the left.
2. Remove the presser foot and holder. (See page 7)
3. The arm of darning/embroidery foot should rest on the shaft of the needle clamp screw.
4. Slide the plastic attaching head from your left to right so that it is fitted into the presser bar.
5. Tighten the presser foot thumb screw.

B. DARNING

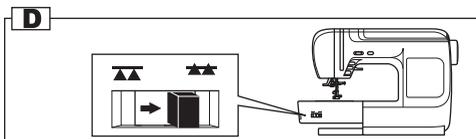
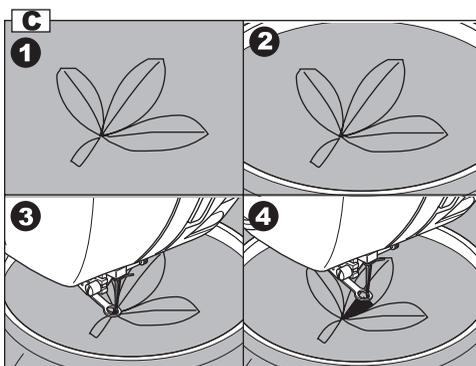
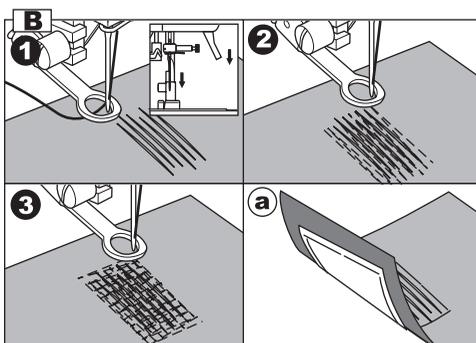
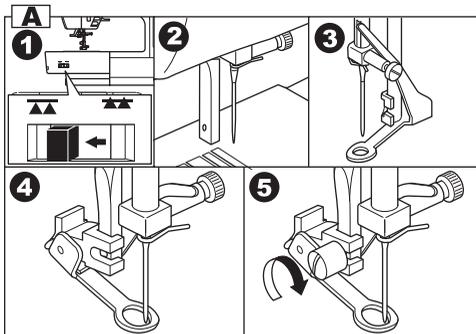
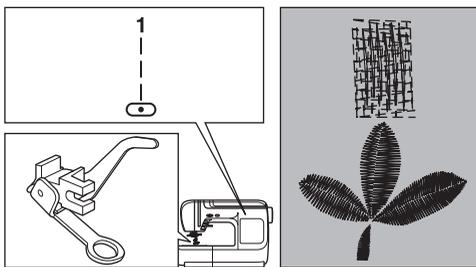
1. Place fabric under foot and lower the presser foot lifter.
 2. Grasp fabric firmly in front and back of area to be stitched. Start sewing, moving fabric by hand forward and backward with an even motion, stitching in closely spaced rows over the hole or worn area.
 3. When the area is filled with new stitches, move fabric from side to side in a similar manner to weave or reinforce the stitching.
- a. Note:
Reinforce open areas with an underlay; baste underlay in place before darning.

C. FREE-HAND EMBROIDERY

1. Outline the design for embroidery on the surface of the fabric.
2. Place design to be embroidered between the two sections of embroidery hoop.
Note:
Embroidery hoop is not included with this machine.
3. Set embroidery hoop under needle and lower the foot.
4. Start the machine at medium speed, guiding hoop carefully so needle moves along line of the pattern.

D. After darning or free-hand embroidery

Raise the feed dogs by moving the drop feed lever to the right.



OPTIONAL ACCESSORIES

Shank : This is an optional accessory.

This shank is also known as a presser foot holder and should be used when sewing with the following presser feet.

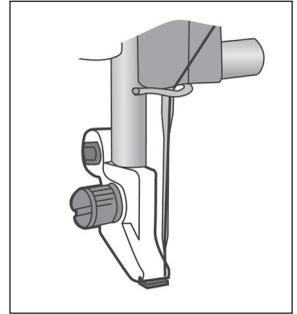
Adjustable Bias Binder, Braiding Foot, Chenille Stitching Foot, Edge Joining Foot, Fancy Trim Foot, Gathering Foot, Non-Stick Foot, Seam Guide Foot and Stitch in the Ditch Foot.

Machine Preparation

1. Remove the current shank (presser foot holder), by loosening the presser foot thumbscrew.
2. Put the new shank on the presser foot bar. Tighten the presser foot thumbscrew.

Sewing Instructions

1. Follow the instructions for Adjustable Bias Binder, Braiding Foot, Chenille Stitching Foot, Edge Joining Foot, Fancy Trim Foot, Gathering Foot, Non-Stick Foot, Seam Guide Foot or Stitch in the Ditch Foot.

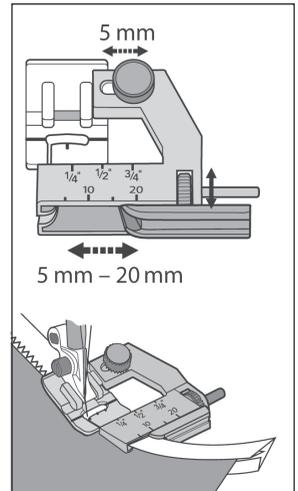


Adjustable Bias Binder Foot : This is an optional accessory.

The Adjustable Bias Binder Foot covers fabric edges with bias tapes.

This foot adjusts to fit bias tapes 1/4" to 3/4" in width.

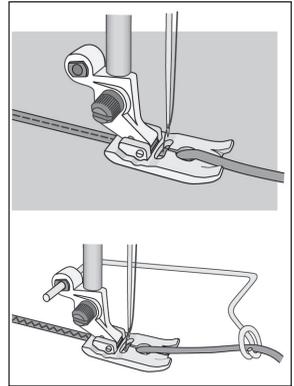
1. Thread the top of the machine and bobbin with all-purpose sewing thread.
2. Snap on the Adjustable Bias Binder Foot.
3. Use the screw on the right side of the bracket to adjust the width of the opening to fit the bias tape.
4. Cut the end of the bias tape to a 45 degree angle. Insert the bias tape from the outside of the bracket, into the slot that matches its width and pull it down under the presser foot.
5. Place the edge to be bound into the groove on the left side of the bracket.
6. Loosen the screw on top, in the back, and adjust the bracket as needed.
7. Select a narrow ZigZag, Straight or Decorative Stitch.
8. Sew slowly, keeping the fabric to be bound snugly under the groove as you sew.



Braiding Foot : This is an optional accessory. _____

The Braiding Foot is used to stitch trims, braids or cords for decorative embellishment.

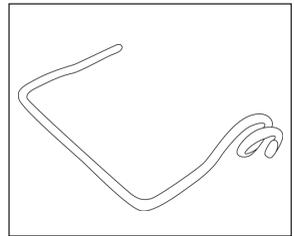
1. Thread the top of the machine and bobbin with all-purpose sewing thread.
If desired, you can use a contrasting or rayon thread for a decorative effect, or use a monofilament thread if you want only the braid to be visible.
2. Guide trim, braid or cord from the top of the foot into the guide hole and under the foot.
3. Stabilize the underside of the fabric as needed.
4. Select the ZigZag Stitch with a width set wide enough to stitch over the trim, braid or cord.
5. Lower the Braiding Foot and sew.



Braiding Guide : This is an optional accessory. _____

The Braiding Guide ensures that trims, braids and cording are smoothly fed into the Braiding Foot.

1. Place straight end of the Braiding Guide into the slot at the top of the presser foot ankle.
2. Thread the trim, braid or cord into the curly-Q end of the Guide and into the Braiding Foot.
3. As you sew, lightly support the trim, braid or cord as it enters the Guide.



Chenille Stitching Foot : This is an optional accessory. _____

The Chenille Stitching Foot is used to embellish projects with chenille effects.

1. Thread the top of the machine and bobbin with all-purpose sewing thread.
2. Prepare a minimum of three layers of chenille strips, 5/8" (16 mm), for best effect. Place the strips into the presser foot. You can also use narrower strips such as 3/8" (10 mm) wide.
3. Snap on the Chenille Stitching Foot.
4. Place the foundation fabric that will be embellished under the presser foot and strips.
5. Select a Straight Stitch.
6. Sew at a slow speed. The Chenille Stitch Foot will guide the strips over the foundation fabric where you want to have the chenille effect. For additional stability, use Tear Away Stabilizer underneath the foundation fabric.
7. Add strips in rows, as desired, to finish the project.
8. Machine wash on cold cycle, dry warm to help fray the edges of the chenille strips.

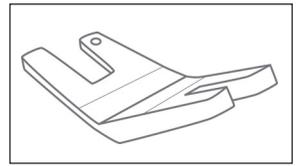


Alternative method: Spray with water, rub with stiff brush to fray strips, dry with hair dryer.

Clearance Plate : This is an optional accessory.

The Clearance Plate is used to help stitch over thick seams, such as when hemming jeans. The presser foot tilts as it sews on and off thick seams areas. The Clearance Plate keeps the presser foot level when stitching over thick areas, preventing the needle from hitting the opening in the presser foot.

The Clearance Plate is also used to aid in removing or replacing needles.

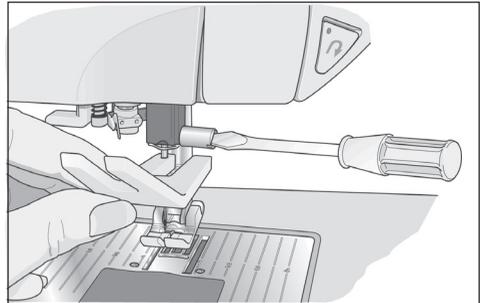


Sewing Denim Seams

1. Prepare the jeans hem and pin it in place.
2. Begin stitching the hem, but stop sewing when the presser foot starts to climb, but before the needle reaches the seam.
3. Turn the hand wheel toward you to lower the needle into the fabric, then raise the presser foot using the presser foot lifter.
4. From the back side of the presser foot, insert the Clearance Plate up to the seam allowance (you will notice that the presser foot is now level). Lower the presser foot.
5. Begin sewing slowly, and continue until you have stitched across the seam. Turn the hand wheel toward you to lower the needle into the fabric, then raise the presser foot.
6. Place the Clearance Plate now in front of the presser foot. Lower the presser foot and slowly sew a few stitches until the back side of the presser foot has cleared the thick seam.
7. Turn the hand wheel toward you to lower the needle into the fabric, then remove the Clearance Plate. Continue sewing.

Needle Replacement

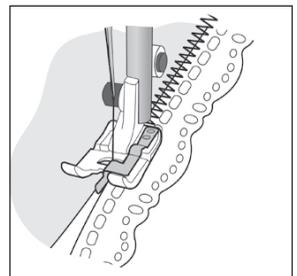
1. Use the hole in the Clearance Plate to hold the old needle while it is still on the machine. Slide the Clearance Plate up onto the needle, starting at the point of the needle and moving the tool upward on the needle.
2. While holding the old needle with the Clearance Plate, loosen the needle clamp screw. Remove the needle.
3. Insert the new needle into the hole in the Clearance Plate.
4. While holding the Clearance Plate, guide the needle into the needle slot, making sure that the flat side of the needle is toward the back of the machine.
5. Tighten with a screwdriver to secure, and then remove the Clearance Plate from the needle.



Edge Joining Foot : This is an optional accessory.

The Edge Joining Foot guides trims sewn to an edge.

1. Snap on the Edge Joining Foot.
2. Place the edge of the fabric against the left side of the Edge Joining Foot's guide.
3. Place the edge of the trim against the right side of the Edge Joining Foot's guide. Both pieces should have the right sides facing up.
4. Set the machine to ZigZag or Ladder Stitch.
5. Turn the hand wheel toward you, ensuring that the needle does not hit the guide.
6. Sew, keeping both the fabric and the trim next to the guide to join them together.

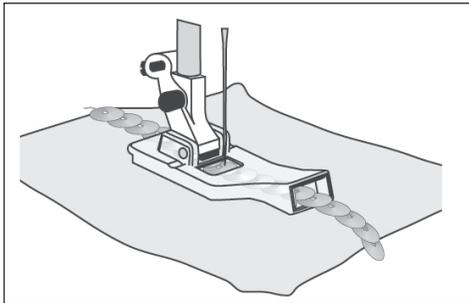


Fancy Trim Foot : This is an optional accessory.

Use the Fancy Trim Foot to decorate your projects with sequins. This foot guides the sequins through a groove at the front of the foot while your sewing machine stitches them in place.

Note: Use only circle round sequins. Make sure that the sequin trim flows freely through the opening on the foot.

1. Thread with invisible thread on top and all-purpose sewing thread in the bobbin.
2. Snap on the Fancy Trim Foot and select a Hand Look Appliqué Stitch. Adjust the stitch length to 2-3 and the width according to the width of the sequins. Make sure to use Tear-Away stabilizer underneath your fabric.
3. Slide the sequins into the groove at the front of the presser foot. Make sure you have pulled a piece of the sequin trim under the foot and through the back of the foot before you start to sew.
4. Test sew on a scrap of fabric.
5. Sew slowly to prevent sewing through sequins.

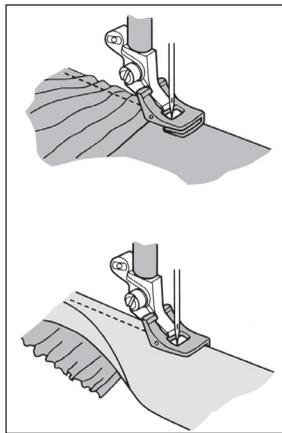


Gathering Foot : This is an optional accessory.

The Gathering Foot is used for gathering or shirring fabrics. It works best with lightweight fabrics.

Gathering Fabric

1. Remove the presser foot holder and attach the Gathering Foot. Tighten the side screw securely.
2. Place the fabric to be gathered under the presser foot.
3. Set the machine to Straight Stitch.
4. Lower the presser foot.
5. Sew a row of stitching. The pressure that is placed on the fabric from the back of the foot will cause the fabric to gather.
6. Adjust the upper thread tension dial to help achieve the amount of fullness desired. Less tension will result in softer gathers, more tension will result in fuller gathers. The stitch length dial can also be used to adjust fullness. The longer the stitch length setting, the more fullness that is achieved.



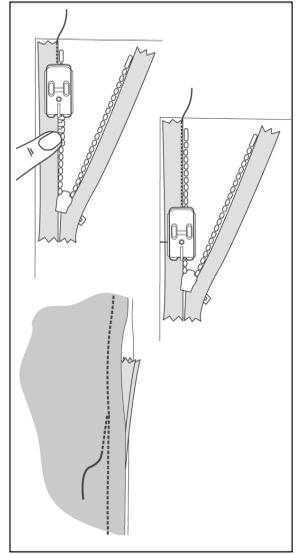
Gathering and Attaching Fabric in One Step

1. Remove the presser foot holder and attach the Gathering Foot. Tighten the side screw securely to ensure that the foot is properly attached.
2. Place the fabric to be gathered under the presser foot, right side up.
3. Place the top layer of the fabric right side down in the Gathering Foot's slot.
4. Set the machine to Straight Stitch.
5. Sew, guiding the two layers together.

Invisible Zipper Foot : This is an optional accessory.

This foot provides a hidden closing on skirts, dresses and other garments.

1. Attach the Invisible Zipper Foot. Select Straight Stitch. Verify that the needle will line up with the opening of the foot before starting to sew.
2. Before closing the seam on your project, use a fabric marker to mark the desired bottom end of the zipper on both sides of the zipper opening.
3. Fold in and press the seam allowances of both opening edges and open out the pressed edges.
4. With right sides together, place the first half of the opened zipper along the first edge of the opening, ensuring that the teeth of the zipper end at the creased edge.
5. Baste in place.
6. Place the fabric under the presser foot, so that the teeth of the zipper are lined up with the groove of the zipper foot. Topstitch the zipper in place, ensuring that the needle penetrates the tape of the zipper close to the teeth. Continue sewing until the presser foot reaches the zipper's slider, backstitching at the end.
7. On the opposite side, close the zipper. With right sides together, make sure the two sides of the zipper are properly aligned. Pin in place, open the zipper and baste in place.
8. Place the fabric under the presser foot, so that the teeth of the zipper are again lined up with the groove of the zipper foot. Topstitch the zipper in place, ensuring that the needle penetrates the tape of the zipper as close to the teeth as possible.
9. Continue sewing the second seam until the presser foot reaches the zipper's slider, backstitching at the end.
10. Finally, stitch the seam below the zipper closed.



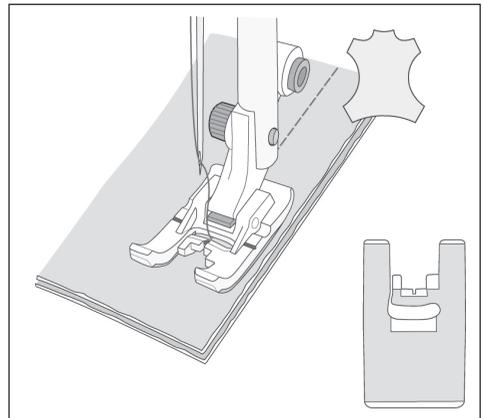
Non-Stick Foot : This is an optional accessory.

This foot is used when sewing fabrics such as leather or vinyl.

1. Snap on the Non-Stick Foot. Select desired stitch. Verify that the needle will line up with the opening of the foot before starting to sew.
2. Sew slowly and guide the layers.

Tip:

Try using paper clips to hold fabric layers together. Using pins will leave holes in leather and vinyl.

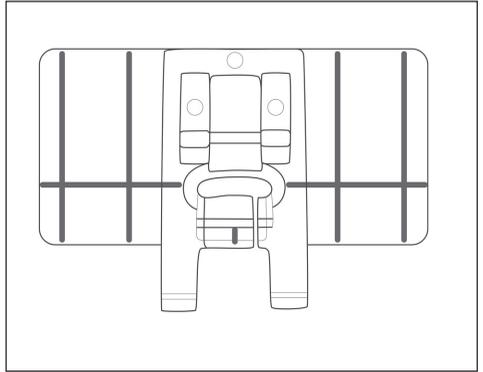


Parallel Sewing Foot : This is an optional accessory. _____

This foot is used for sewing rows of stitching in parallel rows.

1. Snap on the Parallel Sewing Foot.
2. Sew the first row of stitching.
3. Align the first row of stitching either between or on the red guideline markings on the foot, depending on the desired distance from the first row of stitching. Sew the next row of stitching, using the red guidelines as a reference.
4. Align the two rows sewn, following the red guideline markings on the foot, depending on the desired distance between rows of stitching. Sew the next row of stitching, using the red guideline markings as a reference.
5. Continue for as many rows as desired.

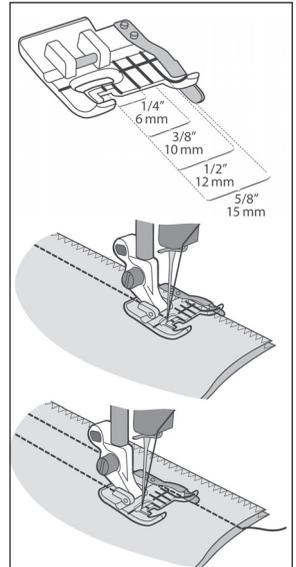
Note: The first vertical guideline, to either the left or right is 1/2" from the center needle position. The second guideline is approximately 1/4" from the first guideline on either side. There is a marking at the center front of the foot that can also be used a reference.



Seam Guide Foot : This is an optional accessory. _____

This foot guides the edge of the fabric as you sew a seam. Keep the seam allowances at the same distance from the edge throughout the project. The edge guide and red lines provide guidelines for various seam allowances.

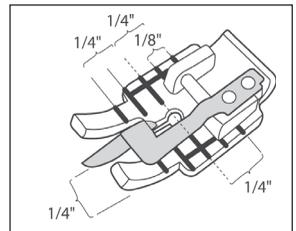
1. Thread the machine with all-purpose sewing thread on the top and in the bobbin.
 2. Snap on the Seam Guide Foot.
 3. Place fabric right sides together.
 4. Place the fabric under the presser foot with the metallic guide at the edge of the fabric for 5/8" seam allowance.
 5. Lower the presser foot. Sew. The guide will follow the edge of the fabric and the seam will be sewn with a perfectly straight seam allowance.
- Use the four other red marked lines on the presser foot for narrower seam allowances.



Stitch in the Ditch Foot : This is an optional accessory. _____

The Stitch in the Ditch Foot assists with sewing in the finished seam of a quilt or binding.

1. Snap on the Stitch in the Ditch Foot. Thread the top with invisible thread or thread to match the fabric. Thread the bobbin with thread that matches the fabric.
2. Place the fabric to be stitched under the presser foot, aligning the center guide with the seam. The guide will automatically fall on the low side of the seam and will stitch down the seam of your quilt or binding.
3. To pivot 1/4" from the end, stop sewing when the front line of the foot is even with the edge of the fabric.



TWIN NEEDLE SEWING

Interesting decorative stitches can be produced by using twin needles and threading the machine with two different colors of thread. Always make test samples to help you determine the settings best suited to a specific purpose.

All patterns except No. 101-116 may be sewn with a twin needle.

General Purpose Foot or Satin Foot (A, B)

Note:

A twin needle is not provided with this machine. Contact your authorized SINGER dealer to purchase.

CAUTION: To prevent accidents.

- Use only needle designed for this machine (SINGER Style 2025). Other needles may break.
- The needle threader cannot be used. Thread each needle eye manually.

- Remove the single needle and insert twin needle.
- Thread the first thread as usual, following threading route.
- Thread the left needle eye by hand from front to back.
- Place the Auxiliary Spool Pin with felt washer on bobbin winder spindle.
- Place second spool of thread
- Thread second thread the same as first.
- For better sewing results, do not place the thread into the needle bar thread guide. Thread right needle eye by hand from front to back.
- Press the twin needle button. LCD will indicate twin needle mark and the stitch width will be reduced automatically.

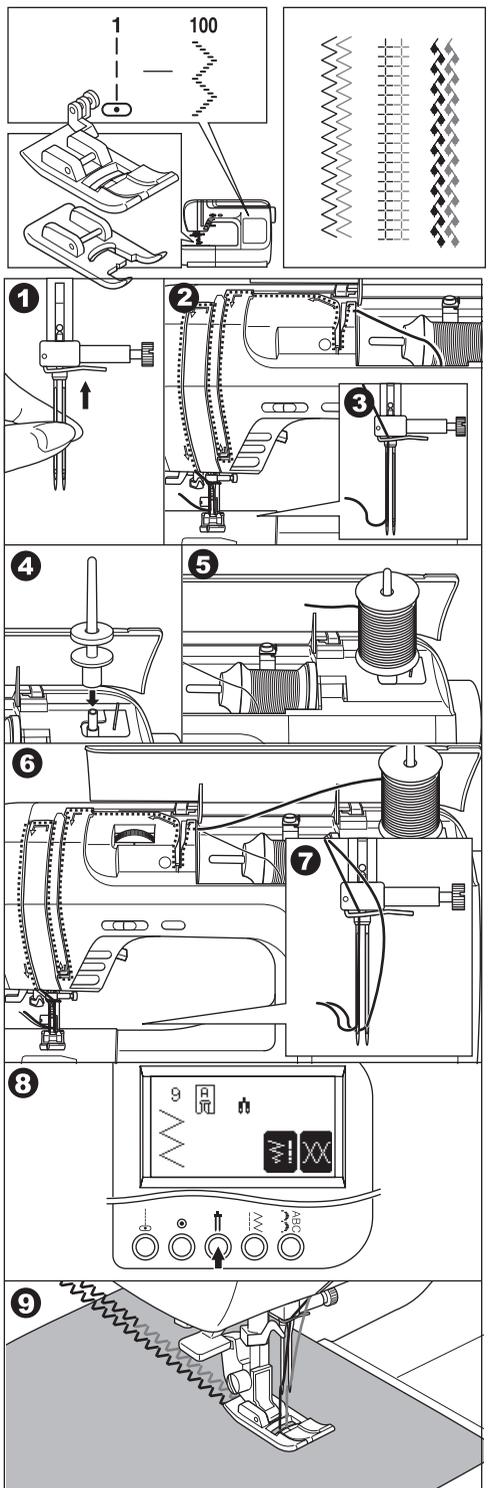
CAUTION: To prevent accidents.

If you did not switch to twin needle mode, needle may hit the needle plate and break.

- Always test sew selected stitch.
 - Sew project.
- Twin needle mode will remain until you press the twin needle button again or turn off the machine.

Note:

Twin needle sewing may be used with decorative & letter stitch patterns by pressing twin needle button. Twin needle icon will appear on the LCD.



DECORATIVE & LETTER STITCH SEWING

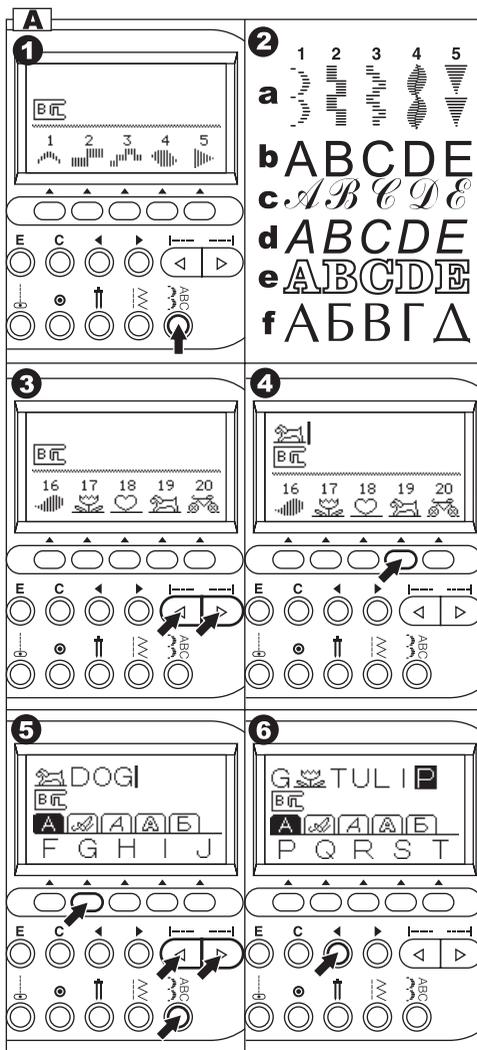
You can combine decorative & letter stitches into a sequence by selecting each pattern.

A. SELECTING DECORATIVE & LETTER STITCH (selecting mode)

- Press the decorative & letter stitch button. First 5 patterns of decorative patterns will be indicated on the lower line of LCD.
 - Decorative pattern
 - Gothic letter stitch
 - Script letter stitch
 - Italic letter stitch
 - Outline letter stitch
 - Russian letter stitch
- After you select the group, press the scroll down button. Next 5 patterns of selected group will appear. By pressing the scroll up or down button, you can scroll up or down in increments of 5 patterns.
- To select a pattern, press the function button directly under the indicated pattern. Selected pattern will be indicated on the top left side of LCD.
- Using this same procedure, select the next patterns. Patterns will appear at the top of the LCD in the order selected.
- As selected patterns over the indicating area, disappear from the screen, you can check them by pressing the cursor buttons. (See next page)

NOTE:

Machine can memorize a maximum of 60 patterns. You can combine the tack stitch by pressing the tack button. This is used for sewing a single combination of patterns. (See next page 48)



B. SHIFTING THE CURSOR

Additional patterns may be added to the end of a string of combined patterns. Shift the "I" cursor over to the right, following the pattern string and then select new patterns.

By pressing the cursor buttons, cursor will shift left or right. The cursor position will be highlighted.

- Press the cursor left button "<" and cursor will shift to the left.
- By pressing the cursor right ">" button, cursor will shift right.

The cursor is used to check selected patterns, insert patterns, delete patterns or editing of each pattern as described below.

If the settings of the highlighted pattern can be changed, it will be noted in the center line of the LCD.

C. TO CHECK SELECTED PATTERNS

As the length of the string increases, patterns will disappear from sight.

You can check patterns by shifting cursor to the left.

D. INSERTING PATTERN

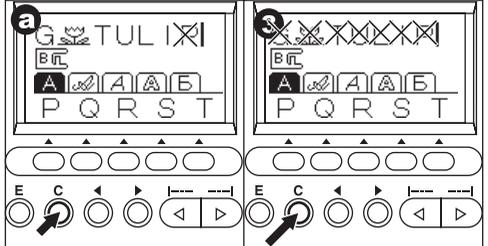
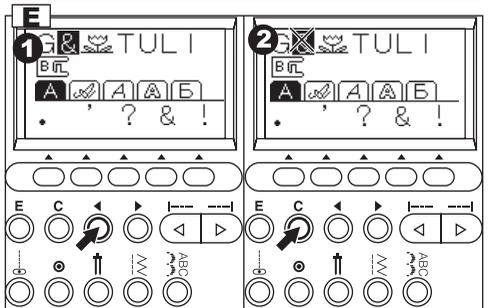
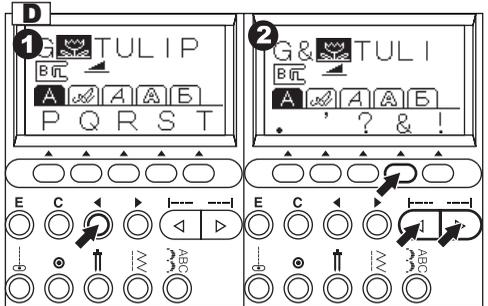
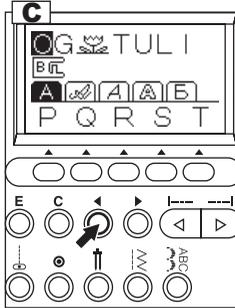
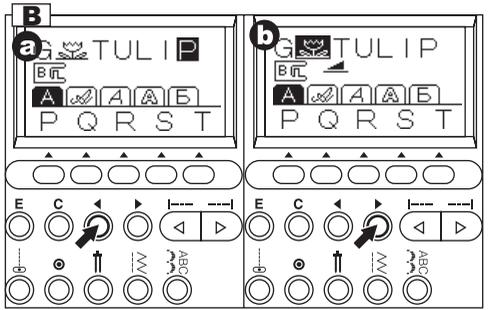
- Machine will insert a pattern to the left of the highlighted letter or pattern.
- Using the cursor buttons, move the cursor to highlight the pattern just before the desired position for the new pattern. Select the pattern.

E. TO DELETE PATTERN

- Shift the cursor to the pattern you want to delete.
- Press the clear "C" button quickly (less than 0.5 sec.).

Machine will delete the pattern and cursor will shift to next pattern.

- When the cursor is at furthest right side, machine will delete just before pattern.
 - If you want to delete all patterns, press and hold the clear "C" button (over 0.5 sec.).
- Machine will delete all selected patterns.



F. EDITING OF EACH PATTERN

You can change the stitch width, length, mirror/reverse stitch and elongation of stitch patterns. You can also change the thread tension of selected patterns.

1. Press the edit "E" button.
LCD will change to the editing mode.
2. As you shift the cursor, the setting of each pattern will be indicated.
3. By pressing each function button, you can change setting as below a-d.
4. After you have completed the editing, press the return button (F1) or edit "E" button.
Machine will return to selecting mode.

Note:

Letter stitches cannot change settings. (except for thread tension)

a. Mirror / Reverse stitch

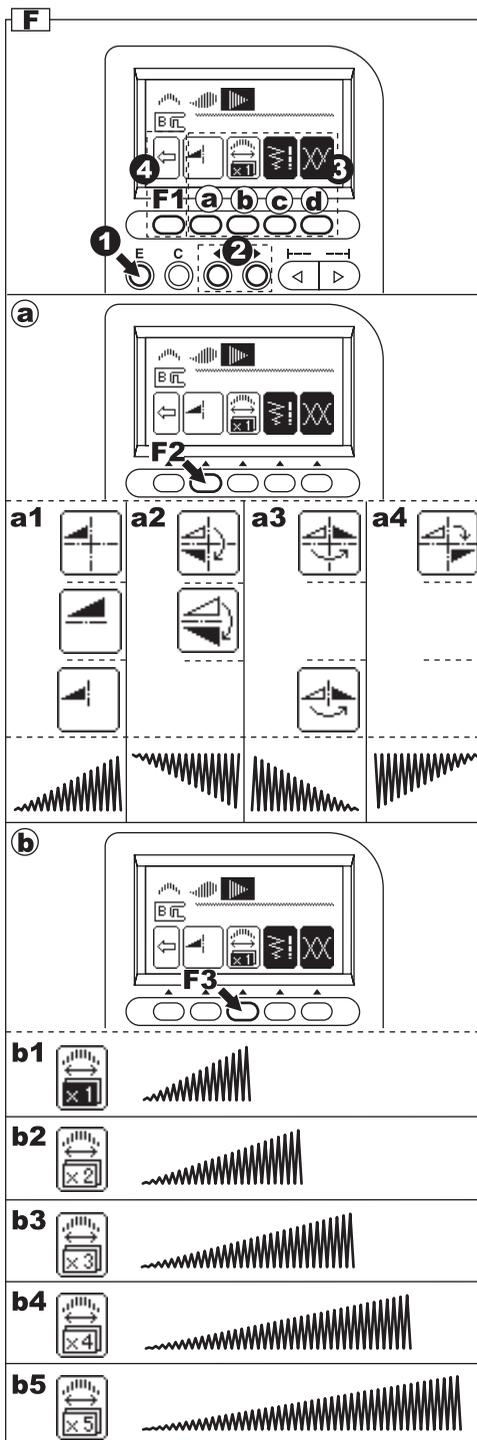
Press the function button (F2) directly under mirror/reverse icon, and the stitch will change alternately or in rotation. The descriptions of the mirror/reverse icons are below.

- a1. Regular stitch (normal stitch)
 - a2. Mirror stitch (flips from left to right)
 - a3. Reverse stitch (reverse front and back)
 - a4. Mirror and Reverse stitch, pattern will flip from left to right and from front to back.
- If symbol is not indicated, its pattern cannot change (mirror/reverse stitch).

b. Elongation

By pressing the function button (F3) directly under the elongation mark, stitch will elongate five different sizes. (b1-b5)

If symbol is not indicated, its pattern cannot elongate.



c. Setting the stitch width and length

Machine will pre-set the stitch width and length suitable for the pattern.

1. You can make changes by pressing the function button (F4) directly under the width and length mark.
2. For narrower width, press function button F2 (-).
For wider width, press function button F3 (+).
For shorter length, press function button F4 (-).
For longer length, press function button F5 (+).

Pre-set stitch width and length will be indicated as a highlighted number.

You can change the width and length of other patterns by shifting the position of the cursor. By pressing the return button (F1), machine will return to editing mode.

By pressing the edit "E" button, machine will return to selecting mode.

d. Setting the thread tension

By pressing the function button (F5) directly under the tension mark, LCD will indicate the tension mode.

This setting will change the thread tension of all combined patterns.

To increase the upper thread tension, press function button F5 (+).

To decrease the upper thread tension, press function button F4 (-).

Pre-set tension number is highlighted.

By pressing the function F3 (AUTO) button, thread tension will return to pre-set.

By pressing the return button (F1), machine will return to editing mode.

By pressing the edit "E" button, machine will return to selecting mode.

Note:

If you press the clear "C" button at editing mode, highlighted pattern will be deleted.

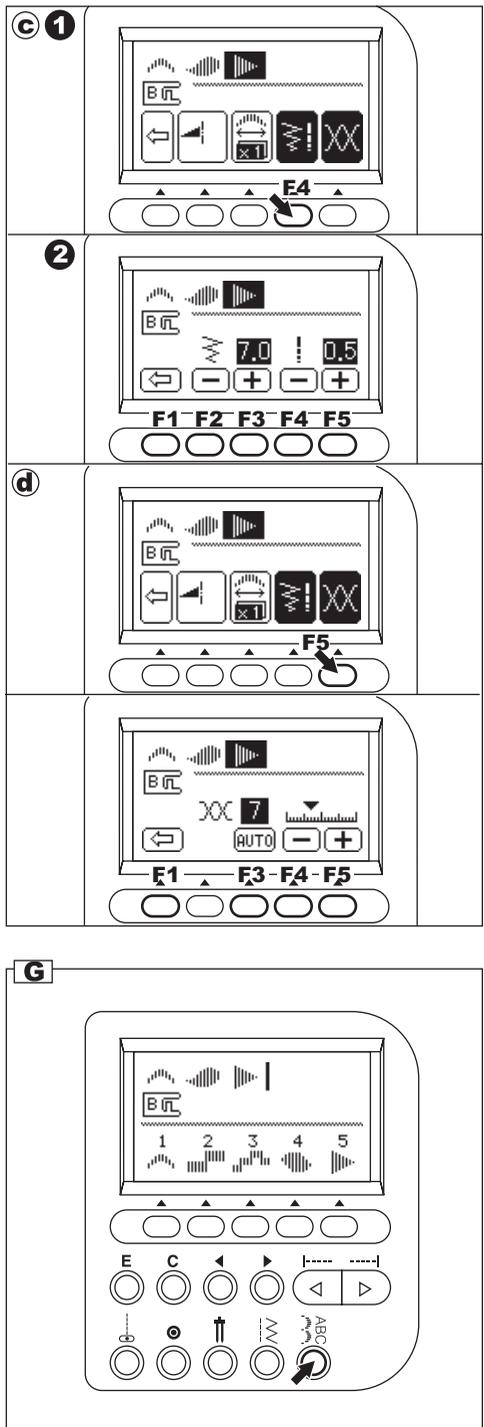
G. TO RECALL THE SELECTED PATTERNS

If you change the pattern to utility stitch, machine will retain the combination of patterns until the machine is turned off.

To recall these patterns, press the decorative & letter stitch button. Machine will recall the selected patterns.

(Thread tension will return to pre-set.)

To delete all patterns, press and hold the clear "C" button for a long time. (See page 45)



H. SEWING THE SELECTED PATTERNS

a. Single sewing

You can combine the tack stitch by pressing the tack button at selecting mode.

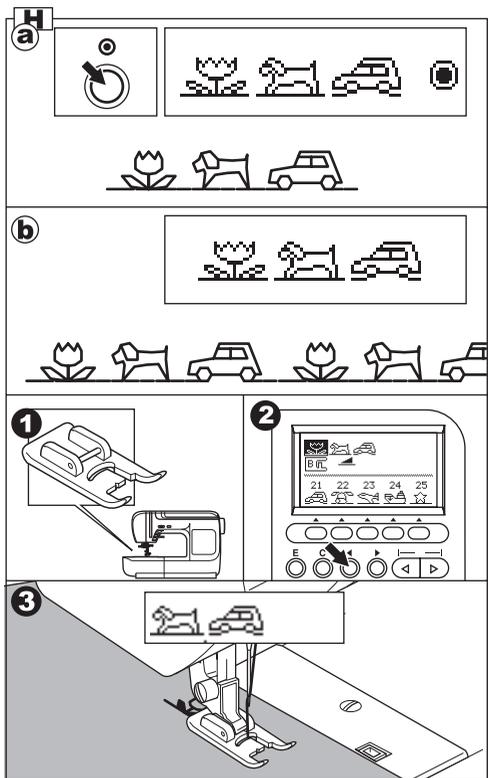
When you combined the tack stitch or letter stitch at the end of pattern, machine will stop automatically after sewing selected patterns.

b. Repeat sewing

The pattern combination will sew repeatedly without combining the tack stitch at the end of the pattern sequence.

SEWING

1. Attach the Satin Foot when sewing decorative & letter stitch.
2. Machine will start sewing from highlighted pattern. You must shift the cursor to the pattern where you wish to start sewing. (When the "I" mark cursor is indicated on the right side of selected patterns, machine will start from first pattern.)
3. Lower the presser foot and start sewing. Machine will indicate the sewing pattern on the top left side of LCD.



I. TO SEW PATTERN FROM BEGINNING

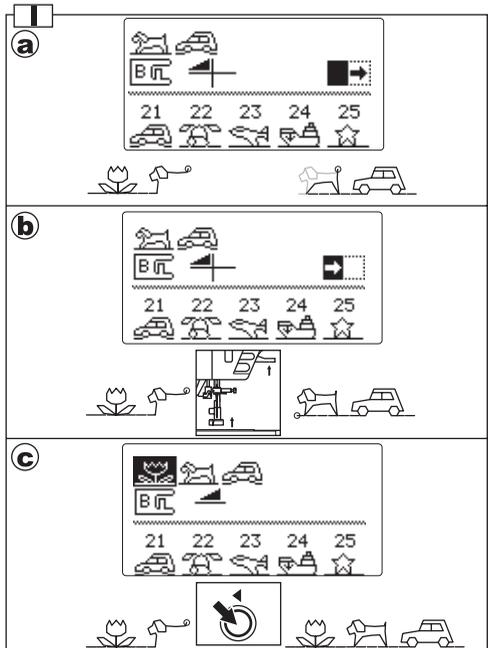
- a. When you stop sewing at the middle of selected patterns, LCD will indicate the setting of sewing pattern and the arrow mark "▶" on the second line.

This mark is meaning that sewing is interrupted. You can continue sewing by starting the machine again.

- b. When you stopped sewing at the middle of selected patterns, and if you have raised the presser foot lifter, the arrow mark will change to "▶".

In this time, when you start sewing again, machine will sew from the beginning of interrupted pattern.

- c. If you want to sew from the beginning of all patterns, shift the cursor by using the cursor buttons. (Arrow icon will disappear)

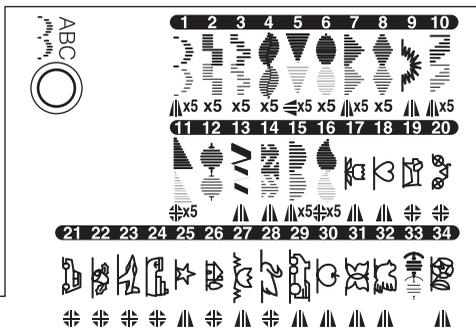


DECORATIVE AND LETTER STITCH CHART

The decorative patterns in bold print are one unit of the stitch pattern.

Description of Chart Symbols:

-  Mirror Stitch included
-  Reverse Stitch included
-  Mirror and Reverse stitch included
- X5 Elongation included



ABCDEF GHIJK LMNOP QRSTUVWXY ZÀÁÂ Æ Ç È É Ğ Ĩ Ö Ø Š Ÿ
 abcdefghijklmnopqrstuvwxyz àáâ æ ç è é ğ ĩ ö ø š Ÿ 0 1 2 3 4 5 6 7 8 9 . : - ' ? & ! /

*ABCDEF GHIJK LMNOP QRSTUVWXY ZÀÁÂ Æ Ç È É Ğ Ĩ Ö Ø Š Ÿ
 abcdefghijklmnopqrstuvwxyz àáâ æ ç è é ğ ĩ ö ø š Ÿ 0 1 2 3 4 5 6 7 8 9 . : - ' ? & ! /*

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 abcdefghijklmnopqrstuvwxyz àáâ æ ç è é ğ ĩ ö ø š Ÿ 0 1 2 3 4 5 6 7 8 9 . : - ' ? & ! /

ABCDEF GHIJK LMNOP QRSTUVWXY ZÀÁÂ Æ Ç È É Ğ Ĩ Ö Ø Š Ÿ
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ADJUSTING THE BALANCE OF THE STITCHES

Depending on the type of fabric you sew, it may be necessary to adjust the balance of the stitches.

The adjustment is needed when the decorative or letter stitch is distorted.

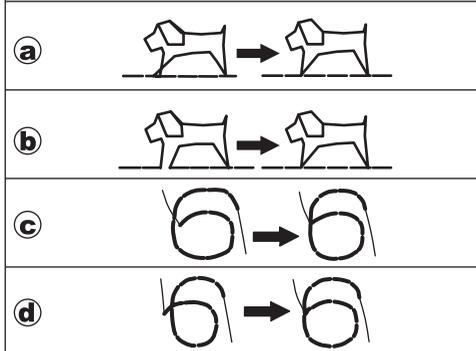
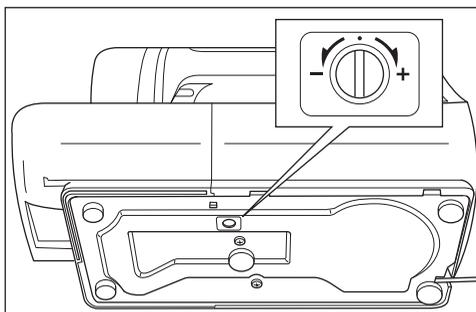
Turn screw which is located bottom of the machine in either direction as may be required.

DECORATIVE STITCH PATTERN

- If patterns are distorted as illustration (a), turn screw in direction of symbol (+).
- If patterns are distorted as illustration (b), turn screw in direction of symbol (-).

LETTER STITCH PATTERN

- If patterns are distorted as illustration (c), turn screw in direction of symbol (+).
- If patterns are distorted as illustration (d), turn screw in direction of symbol (-).



MAINTENANCE



DANGER: To reduce the risk of electric shock.

Disconnect the power line plug from electric outlet before carrying out any maintenance.

CLEANING

If lint and bits of thread accumulate in the hook, this will interfere with the smooth operation of the machine. Check regularly and clean the stitching mechanism when need.

A. Bobbin Holder

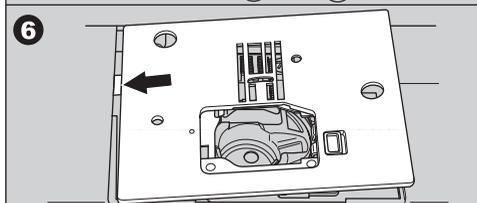
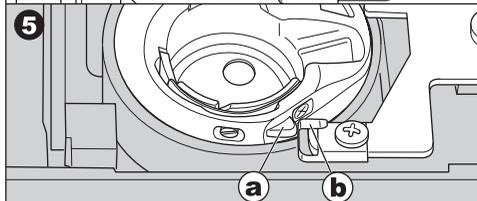
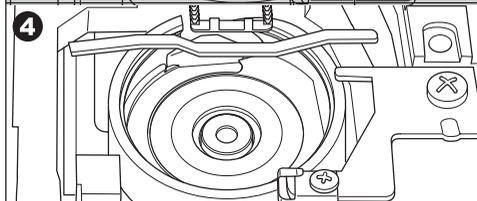
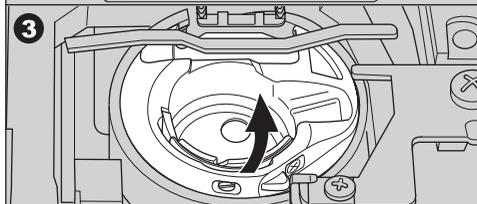
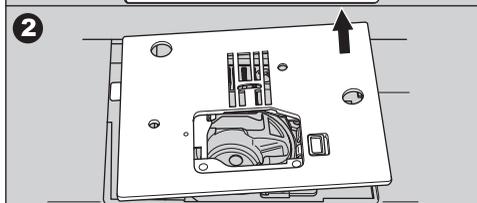
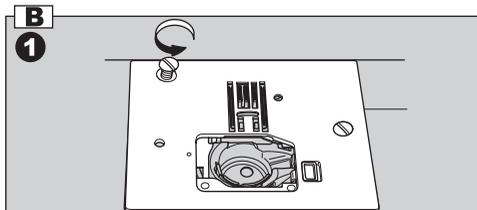
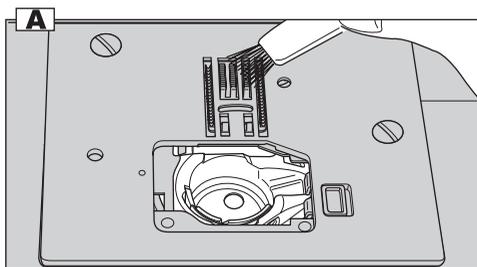
Remove the bobbin cover and bobbin.
Clean the bobbin holder with a brush.

B. Hook Race and Feed Dog

1. Remove the needle, presser foot and holder.
Remove the bobbin cover and bobbin. Remove the screws holding the needle plate.
2. Remove the needle plate by lifting up the right side of the plate.
3. Lift up the bobbin holder and remove it.
4. Clean the hook race, feed dogs and bobbin holder with a brush. Also clean them, using a soft, dry cloth.
5. Replace the bobbin holder into the hook race so that the tip (a) fits to the stopper (b) as shown.
6. Replace the needle plate inserting the hook into the machine. Replace the screws and tighten.

Note:

- * An LED lamp is used to illuminate the stitching area. It does not require replacement. In the unlikely event it does not light, call your authorized SINGER retailer for service.
- * There is no need to lubricate this machine.



HELPFUL HINTS

PROBLEM	CAUSE	CORRECTION	Page
Upper thread breaks	Machine not properly threaded.	Re-thread machine.	16
	Thread entwined around bobbin.	Remove entwined thread.	15
	Needle inserted incorrectly.	Re-insert needle.	8
	Thread tension too tight.	Readjust thread tension.	21
	Thread of incorrect size or poor quality.	Choose correct thread.	8
Lower thread breaks	Bobbin threaded incorrectly.	Re-thread the bobbin.	15
	Bobbin wound unevenly or too full.	Rewind the bobbin.	14
	Dirt or lint on the bobbin holder.	Clean the holder.	50
Machine skips stitches	Needle inserted incorrectly.	Re-insert needle.	8
	Bent or blunt needle.	Insert new needle.	8
	Incorrect size of needle. (on stretch fabric)	Choose correct size needle for fabric. (use stretch needle)	8
Fabric puckers	Machine not properly threaded.	Re-thread machine.	16
	Bobbin threaded incorrectly.	Re-thread the bobbin.	15
	Blunt needle.	Insert new needle.	8
	Thread tension too tight.	Readjust thread tension.	21
Machine makes loose stitches or loops	Bobbin threaded incorrectly.	Re-thread the bobbin.	15
	Machine not properly threaded.	Re-thread machine.	16
	Tension not adjusted properly.	Readjust thread tension.	21
Stitch pattern is distorted	Presser foot is not suited for the pattern.	Attach correct foot.	25-
	Thread tension is not balanced.	Adjust the thread tension.	21
	Stitch is not balanced.	Adjust the balance of the stitches.	49
Threader does not thread needle eye	Needle is not raised.	Raise the needle.	10
	Needle inserted incorrectly.	Re-insert needle.	8
	Bent needle.	Insert new needle.	8
Machine does not feed properly	Feed dogs are lowered	Raise the feed dogs	11
	Stitch length not suitable for fabric.	Regulate stitch length.	23
	Lint and dust accumulated around feed dog.	Clean the feed dog area.	50
Needle breaks	Fabric pulled while sewing.	Do not pull fabric.	18
	Needle is hitting the presser foot.	Select correct foot and pattern.	25-
	Needle inserted incorrectly.	Re-insert needle.	8
	Incorrect size needle or thread for fabric being sewn.	Choose correct size needle and thread.	8
Machine runs with difficulty	Dirt or lint accumulated in the hook race and feed dog.	Remove the needle plate and bobbin holder and clean the hook race and feed dog.	50
Machine will not run	Cord not plugged into electrical outlet.	Insert plug fully into outlet.	9
	Power switch is not turned on.	Turn on the switch.	9
	Bobbin winder spindle is pushed to the right.	Push spindle to the left.	14
	Presser foot is not lowered.	Lower the foot.	10
	Buttonhole Sewing Mode; * Buttonhole lever is not lowered completely.	Lower the buttonhole lever.	34
	* Buttonhole foot is not attached.	Attach the buttonhole foot.	34

Messages on LCD

1. Winding the bobbin.
2. Lower the buttonhole lever.
3. After sewing buttonhole, raise the presser foot lifter and set the frame of buttonhole foot to starting position.
4. Release the foot controller pedal.
5. Lower the presser foot.
6. Machine memory is full.
7. Select a pattern.
8. Release the reverse button.
9. Release the start/stop button.
10. Rethread the upper thread.
11. Foot controller is connected.
12. Release the needle up-down / slow button.
13. Release the thread cutter button.
14. Turn off the power switch.

