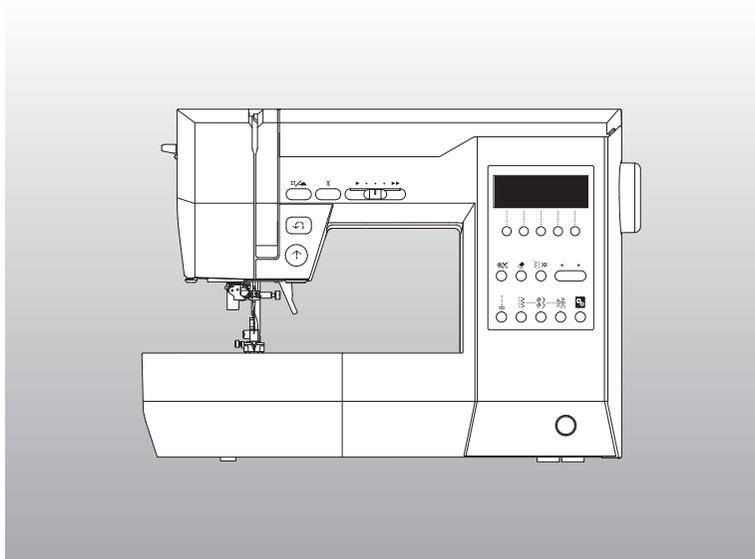


# COM-500



## Instruction Manual

**HappyJapan**

# INSTRUCTION MANUAL

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This sewing machine is intended for household use.

## 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 the instruction manual. Use only attachments recommended by the manufacturer as contained in the instruction 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 local dealer 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. Keep fingers away from all moving parts. Special care is required around the sewing machine needle.
6. Always use the proper needle plate. The wrong plate can cause the needle to break.
7. Do not use bent needles.
8. Do not pull or push fabric while stitching. It may deflect the needle causing it to break.
9. Switch the sewing machine off ("0") when making any adjustments in the needle area, such as threading needle, changing needle, threading bobbin, or changing presser foot, etc.
10. 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.
11. Never drop or insert any object into any opening.
12. Do not use out doors.
13. Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
14. To disconnect, turn the power switch to the off position ("0"), then remove plug from outlet.
15. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
16. If the power cord of this appliance is damaged, it must be replaced with a special cord by your authorized local dealer.
17. Don't use the machine if it's wet.
18. If the LED lamp is broken, it must be replaced by the manufacturer or its local dealer in order to avoid a hazard.
19. Never place anything on the foot control.
20. Keep the instruction at a suitable place that close to the machine, and hand it over if you give the machine to a third party.

## SAVE THESE INSTRUCTIONS

This sewing machine is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children being supervised not to play with the appliance.

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# SERVICING OF DOUBLE-INSULATED PRODUCTS

In a double-insulated product, two systems of insulation are provided instead of grounding. No grounding means is provided on a double-insulated product, nor should a means for grounding be added to the product. Servicing a double-insulated product requires extreme care and knowledge of the system, and should be done only by qualified service personnel. Replacement parts for a double-insulated product must be identical to the parts they replace. A double-insulated product is marked with the words "DOUBLE INSULATION" or "DOUBLE INSULATED." The symbol "□" (square within a square).



**Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.**

Please note that on disposal, this product must be safely recycled in accordance with relevant National legislation relating to electrical/electronic products.

Contact your local government for information regarding the collection systems available.

When replacing old appliances with new ones, the retailer may be legally obligated to take back your old appliance for disposal free of charge.

If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.

- \* In order to always provide you with the latest sewing performance, we may change the appearance, design, or accessories of this sewing machine without prior notice as necessary.
- \* Please note that it is prohibited to reproduce the contents of the "Instruction Manual" without permission.
- \* The contents of the "Instruction Manual" may be changed without prior notice as necessary.
- \* If you notice any suspicious points or errors regarding the contents of the "Instruction Manual," please contact your local dealer.
- \* Please contact your local dealer for information on repairs, warranty, and sold separately items for this sewing machine.

# INFORMATION FOR EMBROIDERY UNIT

This sewing machine can sew beautiful embroidery by attaching the embroidery unit. (Sold separately)

The embroidery unit can sew many embroideries such as one-point embroideries, large-size embroideries and can sew letter embroidery. (Built-in patterns are vary depending on the model.)

For models that support USB flash memory, you can also save the supported embroidery data to a USB flash memory and load it into an embroidery unit.

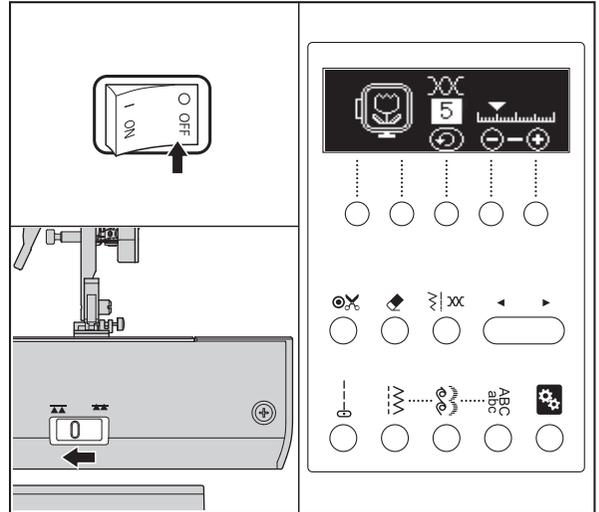
Ask for your local dealer for more information of the embroidery unit.

- When you attach the embroidery unit, turn off the power switch of sewing machine and lower the drop feed lever to the left.
- After attaching the embroidery unit to the sewing machine, turn on the machine.
- The thread tension when embroidering using the unit is displayed on the LCD screen of the sewing machine. You can adjust the thread tension using the buttons on the control panel.
- You can do the following operation on the sewing machine;
  - Start/Stop
  - Thread cut
  - Needle up-down/Slow
  - Speed control
  - Bobbin winding
  - Machine setting (LED light, Beep sound, Contrast of LCD screen)

If you attach the embroidery unit, the needle stop position will be set to the up position. Also, the needle position will set to the left.

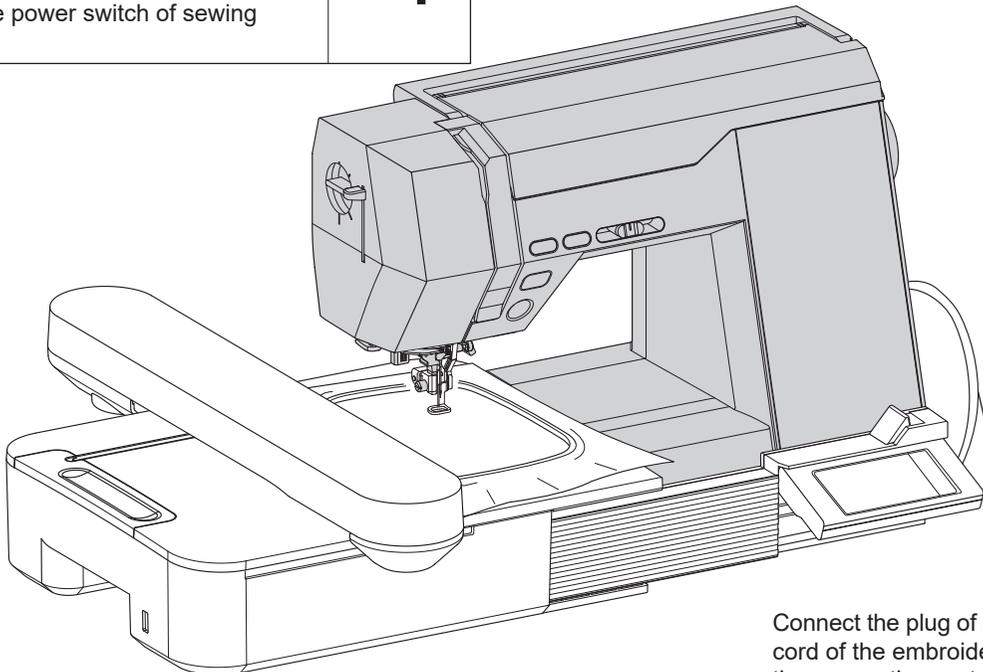
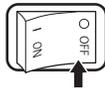
Refer to the instruction manual provided with the embroidery unit for more instruction.

After embroidery sewing, raise the drop feed lever to the right.



## CAUTION: To prevent injury to persons.

When you attach the embroidery unit, turn off the power switch of sewing machine.



Connect the plug of connecting cord of the embroidery unit to the connecting port of sewing machine.

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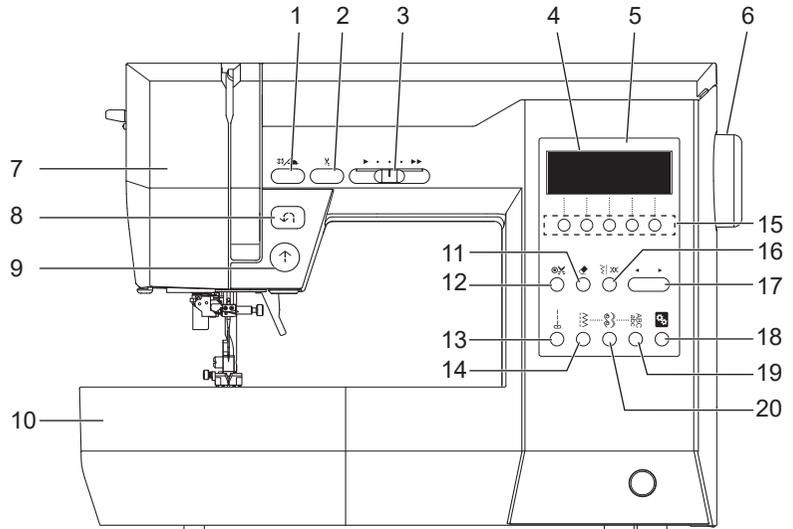
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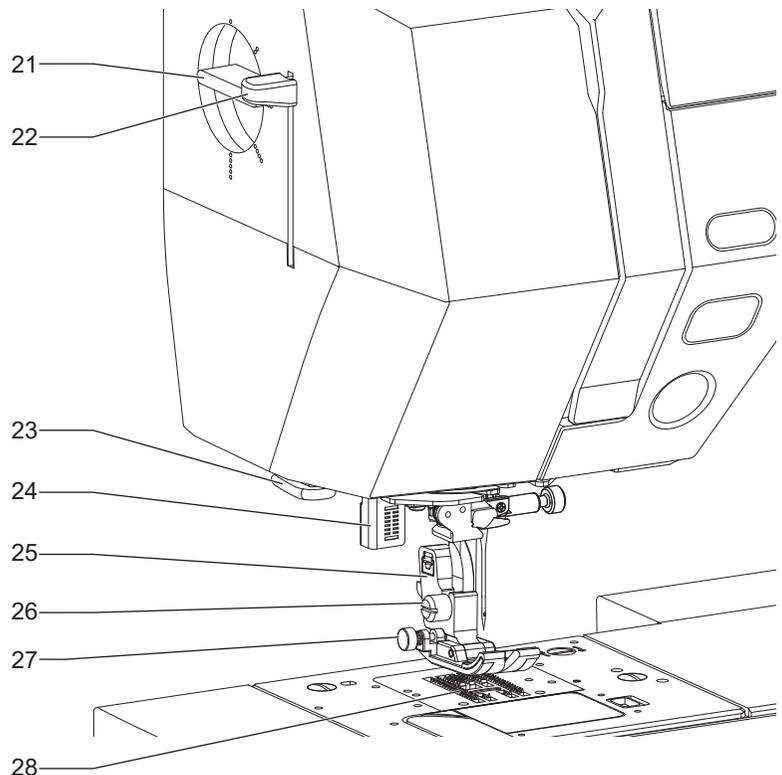
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# MAIN PARTS

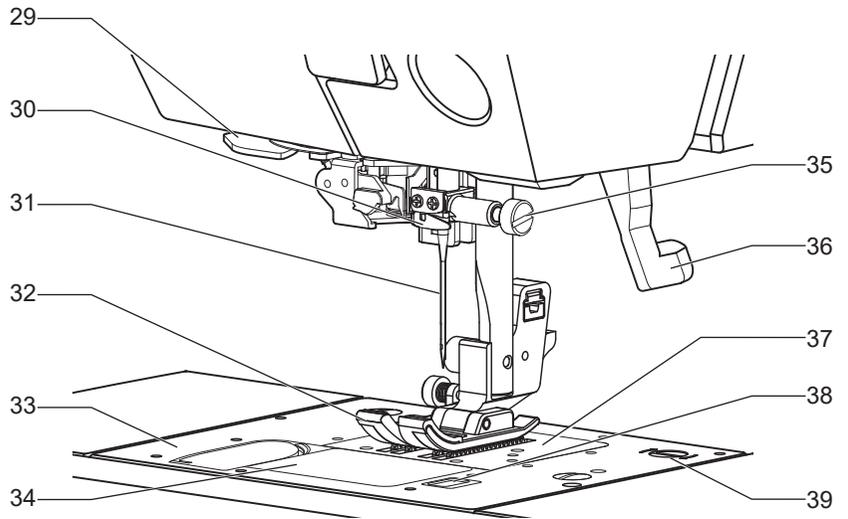
1. Needle Up-Down/Slow Button
2. Thread Cutter Button
3. Speed Control Button
4. LCD screen
5. Control Panel
6. Hand Wheel
7. Face Plate
8. Reverse Button
9. Start/Stop Button
10. Extension Table (Accessory Case)
11. Clear Button
12. Lock stitch/Cut Button
13. Straight Stitch Button
14. Utility Stitch Button
15. Function Buttons
16. Width/Length/Tension Button
17. Stitch Selection Buttons
18. Setting Button
19. Letter Stitch Button
20. Decorative Stitch Button



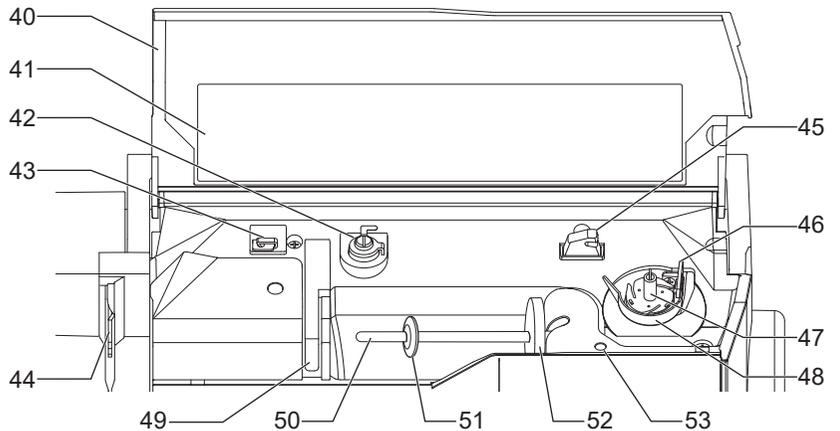
21. Pressure Regulator
22. Needle Threader Lever
23. Thread Cutter
24. Buttonhole Lever
25. Presser Foot Holder
26. Presser Foot Holder Screw
27. Lock Button
28. Feed Dog



- 29. Needle Threader Guide
- 30. Needle Bar Thread Guide
- 31. Needle
- 32. Presser Foot
- 33. Needle Plate
- 34. Bobbin Cover
- 35. Needle Clamp Screw
- 36. Presser Foot Lifter
- 37. Standard Needle Plate
- 38. Bobbin Cover Latch
- 39. Needle Plate Stopper Lever

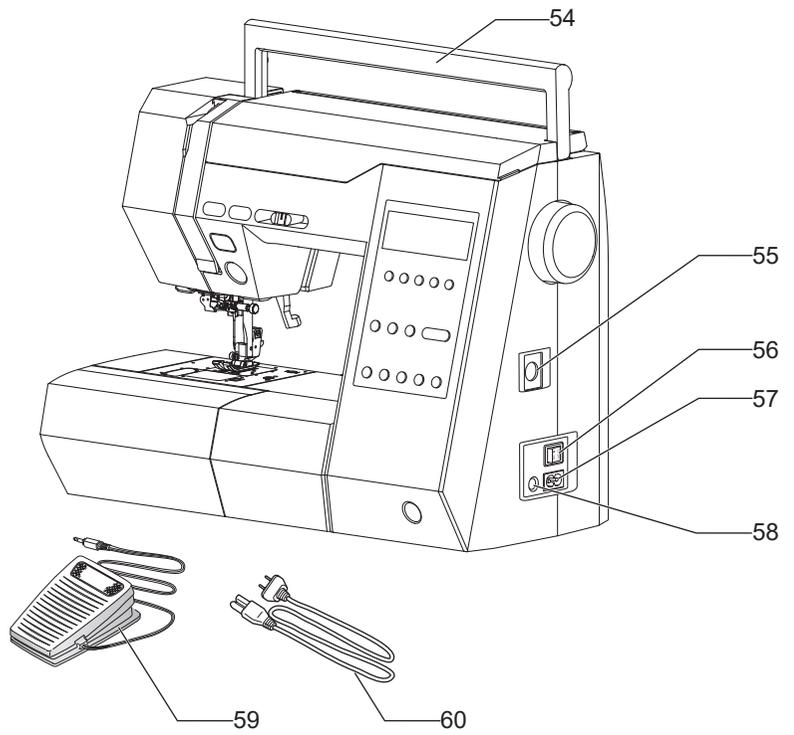


- 40. Top Cover
- 41. Pattern Chart
- 42. Bobbin Winder Thread Guide
- 43. Threading Guide
- 44. Thread Take-up lever (Inside)
- 45. Thread Cutter
- 46. Bobbin Winder Stop
- 47. Bobbin Winder Spindle
- 48. Bobbin Guide
- 49. Thread Guide
- 50. Spool Pin
- 51. Small Spool Cap
- 52. Felt Washer
- 53. Auxiliary Spool Holder



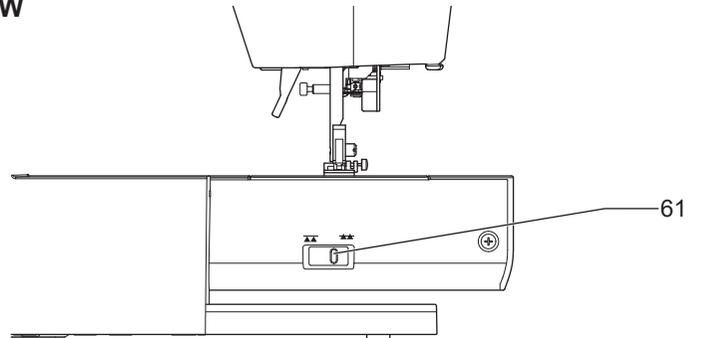
\* To open the top cover, lift up the front right side of cover.

- 54. Handle
- 55. Connecting Port for Embroidery Unit
- 56. Power Switch
- 57. Terminal Box
- 58. Foot Controller Jack
- 59. Foot Controller
- 60. Power Line Cord



- 61. Drop Feed Lever

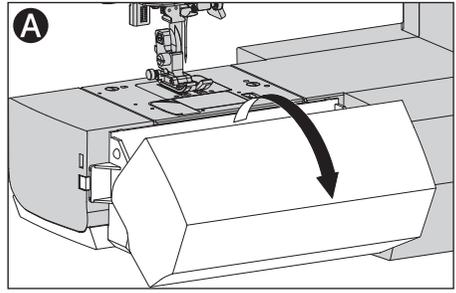
**REAR VIEW**



# EXTENSION TABLE

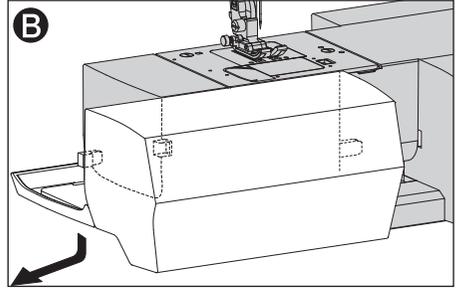
## A. OPENING THE ACCESSORY CASE

Hook your finger to upper front of accessory case and pull toward you.



## B. REMOVING THE EXTENSION TABLE

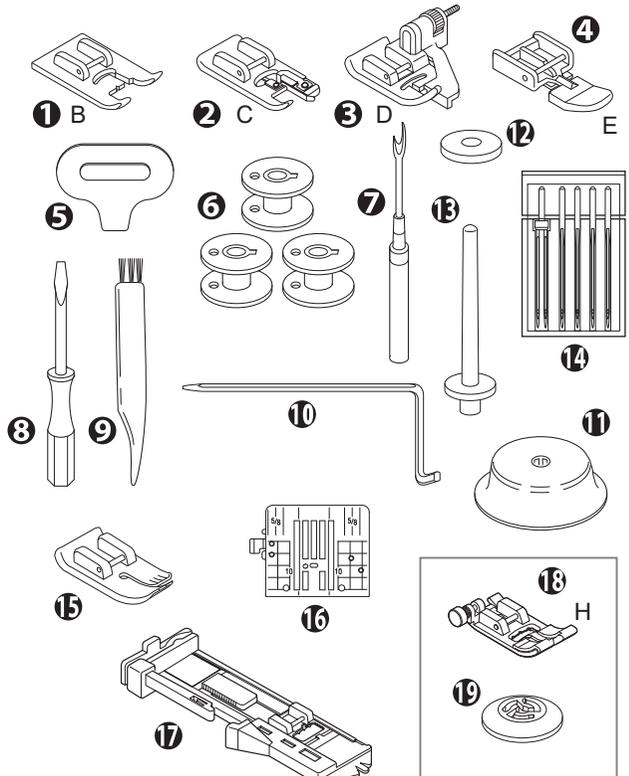
Hook your finger to the left bottom side of extension table and slide it to the left. To attach, insert to the right.



# ACCESSORIES

Accessories are provided in the accessory case.

1. Satin Foot (B)
2. Overcasting Foot (C)
3. Blind Foot (D)
4. Zipper Foot (E)
5. Driver for Needle Plate
6. 4 Bobbins (1 is in the machine)
7. Seam Ripper
8. Screw Driver
9. Brush
10. Quilting Bar
11. Spool Cap
12. Felt Washer
13. Auxiliary Spool Pin
14. Needle Pack
15. Straight Stitch Foot
16. Straight Stitch Needle Plate
17. Buttonhole Foot
18. Regular Foot (H) (On machine when delivered)
19. Small Spool Cap (On machine when delivered)



## CONNECTING THE MACHINE

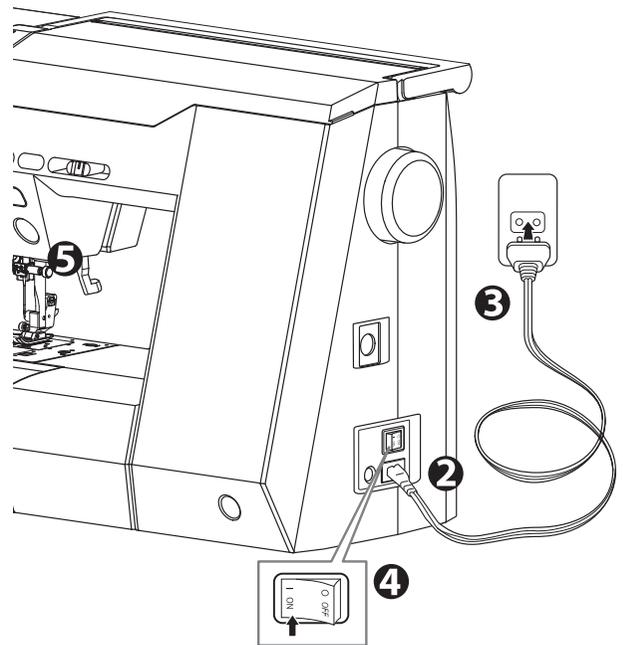
1. Place machine on stable table.
2. Connect the power line cord to the machine by inserting the 2-hole plug into the terminal box.
3. Connect the power line plug to the electric outlet.
4. Turn on the power switch.

**⚠ 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.



5. LED lights will light up when switch is turned on.  
Straight stitch (⋮) will be selected and indicated on the LCD screen.
6. To disconnect, turn the power switch to the off position (Symbol **O**), then remove plug from outlet.

# FOOT CONTROLLER

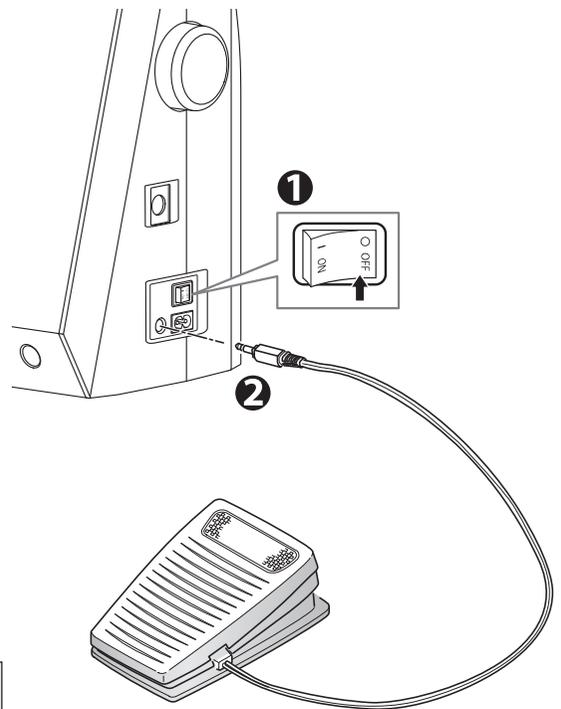
Use of foot controller will permit control of start, stop and speed with your foot.

When the foot controller is connected, start/stop button will be deactivated. (See page 11)

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. LED lights 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.

## NOTE:

- The speed control button adjusts the maximum speed. If you want to speed up, slide it to the right.
- The machine will not start unless you select a pattern and lower the presser foot. (See page 11)



## Tap Function

When you press and release the foot controller quickly, the needle position will be changed.

**NOTE:** Needle stop position will not be changed.



**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 C-9001 manufactured by CHIEN HUNG TAIWAN Ltd)

# FUNCTION OF EACH PART

## A. START/STOP BUTTON

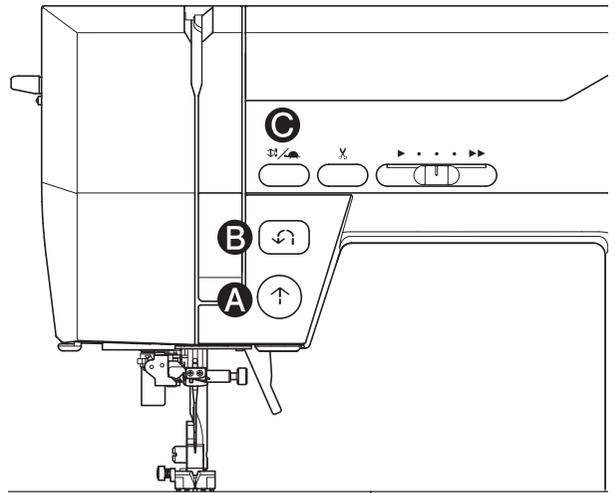
The machine will start running when start/stop button is pressed and will stop when pressed the second time. The machine will rotate slowly at start of sewing.

## MONITOR LAMP

**Green Light "ON":** Ready to sew or to wind the bobbin.

**Red Light "ON":** Presser foot is not in down position or buttonhole lever is not lowered.

If you do not lower the buttonhole lever properly, the monitor lamp lights red, it sews 2 or 3 stitches and stops. (See page 52, 56)  
If the red light is on, the machine will not start even when start/stop button is pressed.



If upper thread is not threaded, machine will stop after a few turns. (Upper thread sensor)

## NOTE:

- The upper thread sensor may also operate and stop the machine if the bobbin thread is not set correctly or if it runs out.
- When the foot controller is connected, start/stop button will be deactivated.

## B. REVERSE BUTTON

The machine will continue to sew in reverse at low speed while this button is pressed and stop when this button is released. See page 35.

## NOTE:

- When the foot controller is connected, the speed of the reverse stitch depending on the conditions when this button is pressed.

### **While stepping on the foot controller ;**

the speed of reverse stitch doesn't slow down. Adjust the speed with the foot controller.

### **While releasing the foot controller ;**

the speed of reverse stitch slows down.

- While stepping on the foot controller, sewing doesn't stop even if you release the reverse button. To stop sewing, release the foot controller.
- Depending on the speed, after you press the reverse button, the machine will sew half the stitch length and then the reverse stitch.

## C. NEEDLE UP-DOWN/SLOW BUTTON

**While NOT sewing,** needle position will be changed up or down by pressing this button.

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

## NOTE:

Needle stop position when sewing is finished or when sewing is stopped varies depending on the setting. To change the needle stop position, see page 20.

## D. THREAD CUTTER BUTTON

Press this button after sewing to cut the upper and lower bobbin threads. The machine will cut both threads automatically.

### CAUTION:

- Do not press this button when there is no fabric in the machine or if there is no need to cut the threads. The thread may tangle, resulting in damage.
- Do not use this button when cutting thread thicker than #30, nylon thread or other specialty threads. In this case, use the thread cutter (d). See page 38.

## E. SPEED CONTROL BUTTON

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

### NOTE:

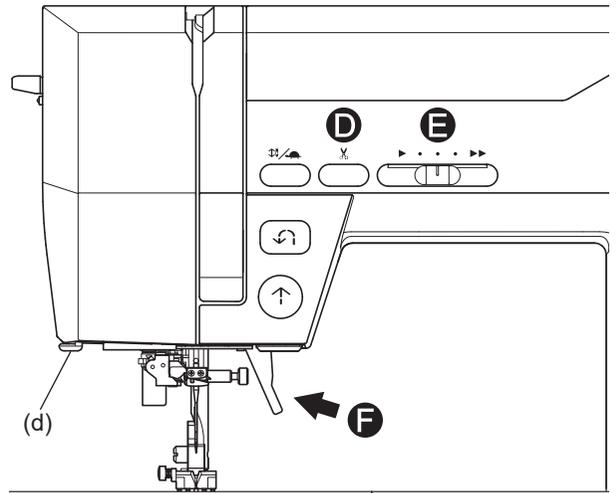
When the foot controller is connected, this button limit the maximum speed.

## F. 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)



## G. DROP FEED LEVER

### NOTE:

If you raise the feed dog, the feed dog will rise when you start sewing.

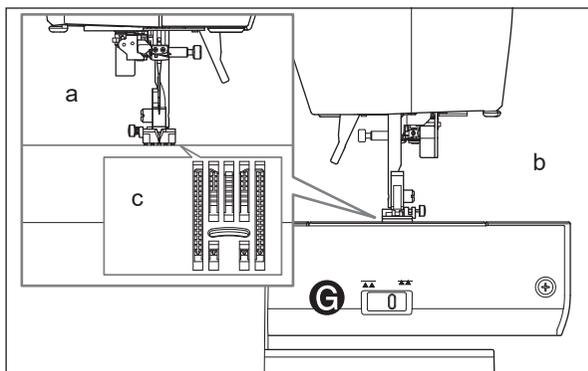
- a: View from frontward
- b: View from backward
- c: Feed dog

The feed dog 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 dog.

For ordinary sewing, move the lever to the right. This raises feed dog 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 dog.

Also, lower the feed dog when embroidering using the sold separately embroidery unit. (See page 2)



## H. PRESSURE REGULATOR

The correct pressure allows fabrics to feed properly while sewing. The setting of the presser foot pressure is determined mainly by the weight of the fabric being sewn.

For lightweight fabrics such as sheers, batiste, voile, etc. the pressure is decreased. For heavyweight fabrics like denim or canvas, the pressure is increased.

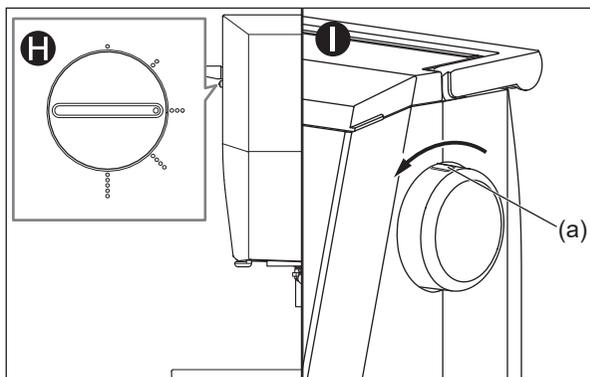
To increase the pressure, turn dial to 5. (○○○○○)

To decrease the pressure, turn dial to 1. (○)

For most fabrics, turn dial to 3. (○○○)

Turn the dial after lowering the presser foot.

After sewing with different pressing pressure, please return to 3. (○○○)



## I. HANDWHEEL

When you turn the handwheel towards you, the needle will move up and down. Use this when you want to manually move the needle up and down, such as when sewing one stitch at a time.

When the needle is in the upper position, the mark (a) on the hand wheel will also be in the upper position.

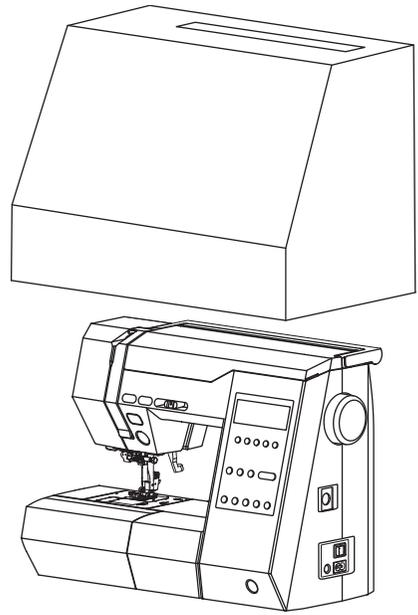
### NOTE:

Be sure to turn the handwheel toward you. Turning it in the opposite direction may cause the thread to become tangled.

## DUST COVER

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Cover the machine with dust cover when it is not in use.



## TO SELECT A PATTERN (UTILITY STITCH PATTERN)

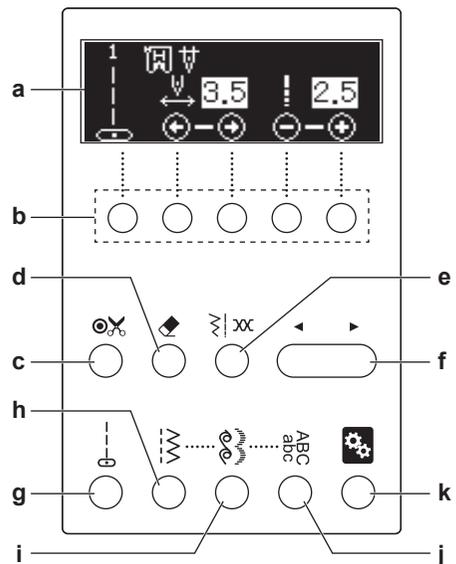
This machine can sew 45 utility stitch patterns. See inside of top cover and see "PATTERN CHART" on page 79.

When you turn on the machine, straight stitch (1) will be selected and indicated on the LCD screen.

### NOTE:

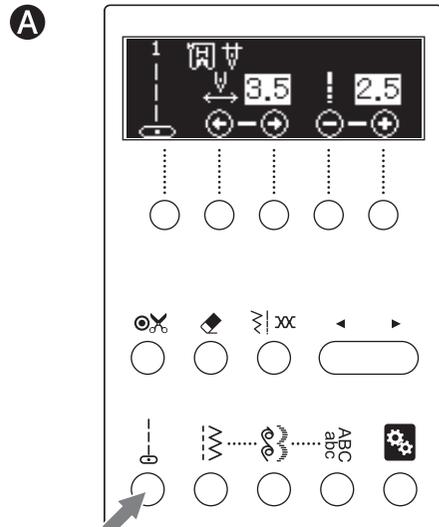
If the LCD screen can not be seen well, you can adjust the contrast. (See page 20)

- a: LCD screen
- b: Function Buttons (See page 15, 66)
- c: Lock stitch/Cut Button (See page 36, 68)
- d: Clear Button (See page 67)
- e: Width/Length/Tension Button (See page 16-19)
- f: Stitch Selection Buttons (See page 15, 66, 67)
- g: Straight Stitch Button (See page 15)
- h: Utility Stitch Button (See page 15)
- i: Decorative Stitch Button (See page 66)
- j: Letter Stitch Button (See page 66)
- k: Setting Button (See page 20)



### A. STRAIGHT STITCH BUTTON

Whenever you can select straight stitch directly by pressing this button.



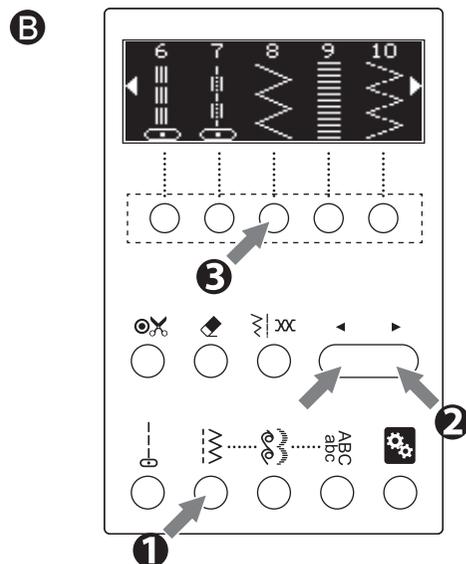
### B. UTILITY STITCH BUTTON

1. Press the utility stitch button. First 5 patterns of utility stitch will appear on the LCD screen.

#### NOTE:

You can also press the left or right stitch selection button (◀ or ▶) to display the utility stitch pattern selection screen.

2. By pressing the stitch selection buttons (◀ or ▶), 5 patterns will change incremental or decremental. Press these buttons until desired pattern will appear.
3. Press the function button directly under the desired pattern. The LCD screen will indicate the information of selected pattern.



To select decorative or letter stitch patterns, see page 66 "DECORATIVE AND LETTER STITCH SEWING".

## C. INFORMATIONS OF SELECTED PATTERN

When pattern is selected, LCD screen will indicate following information.

### a. Stitch Pattern

### b. Pattern Number

### c. Suitable Presser Foot

Indicated presser foot is one of suggested foot for normal sewing. You can use other presser foot according to the purpose of sewing described in instruction manual.

### d. Needle Stop Position

Indicates needle stop position by setting needle stop position.

Up position:  Down position: 

See page 20 to change the needle stop position.

### e. Stitch Width

Preset stitch width is indicated as a highlighted number.

For narrower stitch width, press the "-" (function button (g)).

For wider stitch width, press the "+" (function button (h)).



### e-1. Needle Position

Straight stitches (No.1, 2, 3, 6, 7) will change the needle position instead of the stitch width.

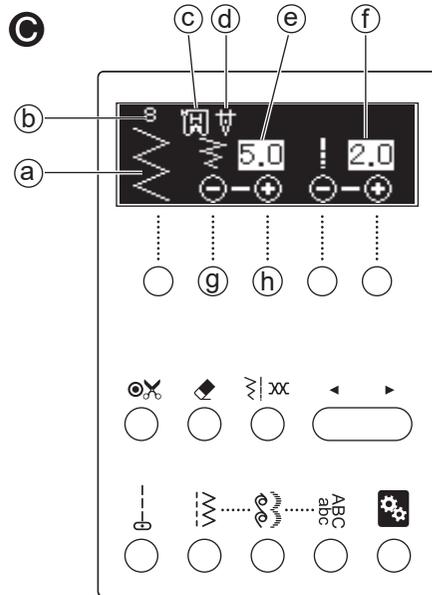
0.0: Left needle position

3.5: Center needle position

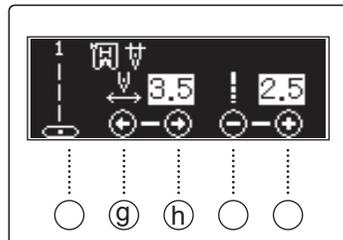
7.0: Right needle position

To move the needle position to the left, press the ← (function button (g)) button.

To move the needle position to the right, press the →(function button (h)) button.



### e-1



### CAUTION: To prevent injury to persons.

- When using the straight stitch foot, do not change the needle position from the automatic setting. It is dangerous for the needle to hit the presser foot.
- The needle position cannot be changed when the straight stitch needle plate is attached.

## f. Stitch Length

Preset stitch length is indicated as a highlighted number.

For finer stitch length, press the "-" (function button (i)).

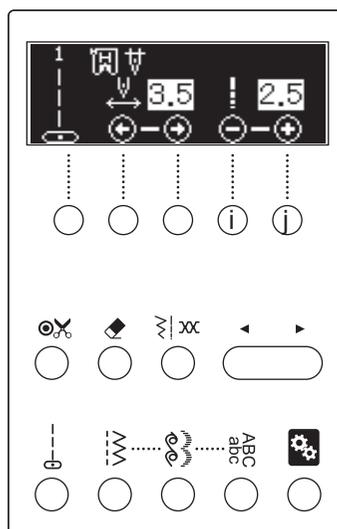
For coarser stitch length, press the "+" (function button (j)).



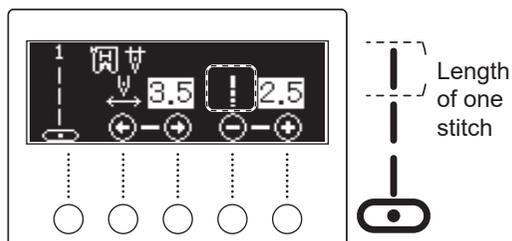
The stitch length display differs depending on the pattern.

 : The length of one stitch of the pattern is displayed. (f-1)

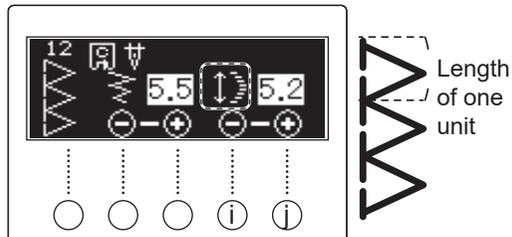
 : The overall length of the pattern (the length of one unit of the pattern) is displayed. (f-2)  
For one unit of each pattern, see "PATTERN CHART" on page 79. Press the function button (i) to make the stitches finer and shorten the overall length, and press (j) to make the stitches coarser and lengthen the overall length.



f-1



f-2



### NOTE:

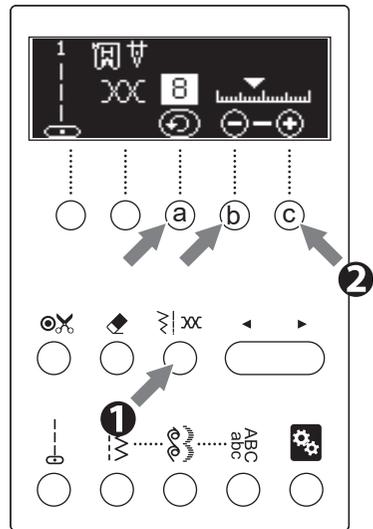
- When you reached the value maximum or minimum, beep sound will be generated. (If you set the buzzer so that it does not sound, it will not sound. For details, see "SETTING BUTTON (MACHINE SETTINGS)" on page 20.)
- The maximum and minimum values vary depending on the pattern.
- When the mode of stitch length or width is not appeared, its pattern cannot change these settings.
- You can change the stitch width/length with sewing.

# 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 width/length/tension button.  
The state of thread tension is displayed with numerical value and scale. (Thread tension screen)
2. Change the thread tension as follows:
  - To return to default tension, press the button (a).
  - To decrease the tension, press the button (b).
  - To increase the tension, press the button (c).

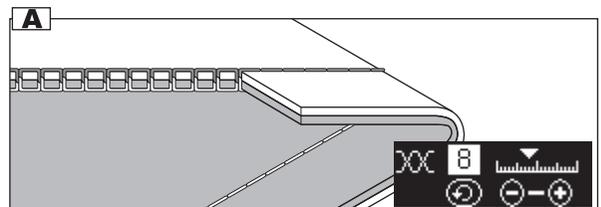
- \* Preset tension number is highlighted.
- \* You can start sewing on this thread tension screen as it is.
- \* Press the width/length/tension button again to return to the width/length screen. (The changed thread tension is saved.)
- \* When you reselect a pattern, tension will return to default.



## Thread Tension Guide

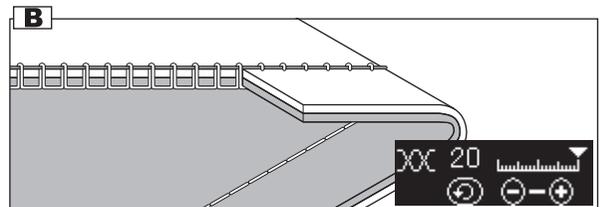
### A. Preset thread tension

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



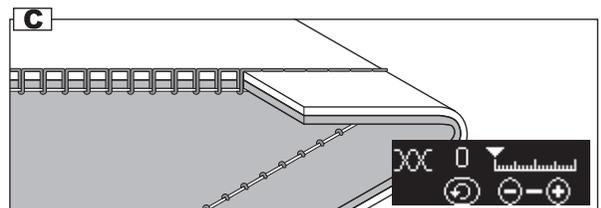
### B. When thread tension is increased.

Bobbin thread will appear on the right side of fabric.



### C. When thread tension is decreased.

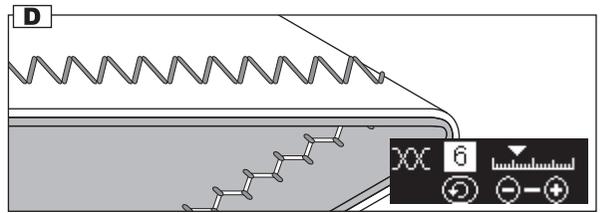
Upper thread will appear on the wrong side of fabric.



### D. Thread tension except for straight stitch

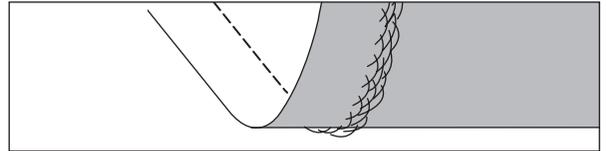
When sewing stitches other than straight stitch, thread tension is automatically adjusted to be decreased than when sewing a straight stitch.

This will cause upper thread to appear on the wrong side of fabric, resulting in better stitching.

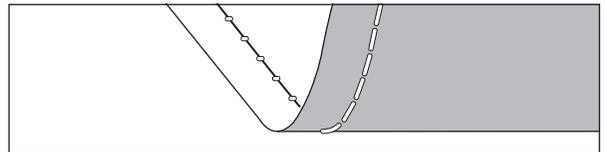


### Helpful Hints

If your sewing appears as shown on the right, (stitches on the right side of fabric are good but wrong side tends to look like a towel), it could be that the upper thread is not threaded correctly. See page 25 for correct threading.



\* Also, if the bobbin thread comes out on the front side of the fabric even though the thread tension is set to the automatic setting value, the way of setting bobbin is wrong. See page 24 and set the bobbin correctly.



# SETTING BUTTON (MACHINE SETTINGS)

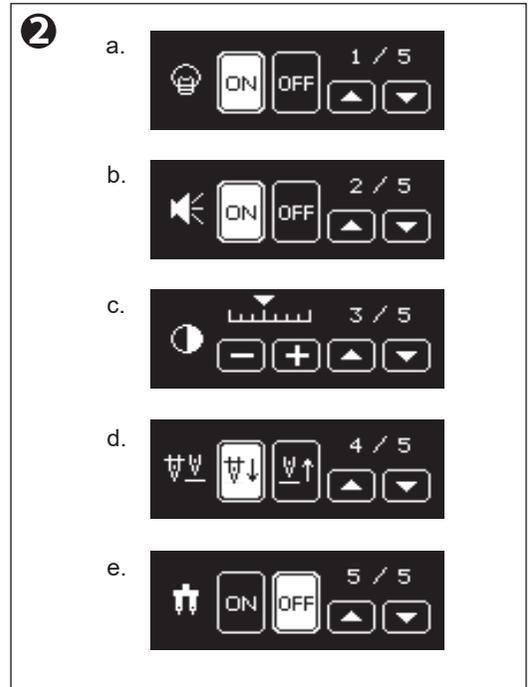
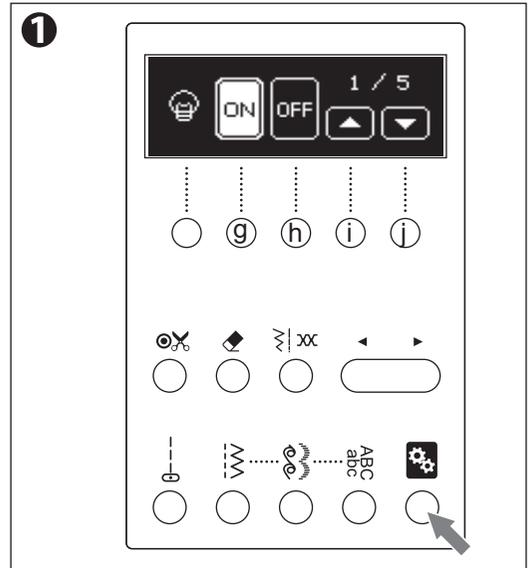
You can change the machine settings as below.

1. By pressing the setting button, you can select 5 setting items for this machine.  
Pressing the function button (j) to go to next item, pressing the (i) to go to previous item.  
You can change the mode of setting by pressing the function buttons (g) or (h).
2. Set each function as below.
  - a. LED light (1/5)  
Default setting: ON  
To turn on the LED light, press the function button (g).  
To turn off the LED light, press the function button (h).
  - b. Beep Sound (2/5)  
Default setting: ON  
To turn on the beep sound, press the function button (g).  
To turn off the beep sound, press the function button (h).

## CAUTION: To prevent injury to persons.

If you turn off beep, the warning sound will not sound when you operate the machine incorrectly. Pay attention to operation.

- c. Contrast of LCD screen (3/5)  
Default setting: 4  
Pressing the function button (g) or (h), ▼ of the scale will move and the contrast changes as below.  
To be low contrast, press the function button (g). (Blurred)  
To be high contrast, press the function button (h). (Clear)
- d. Needle Stop Position (4/5)  
The needle stop position is displayed on the LCD screen. (See page 16)  
Default setting: Down  
Pressing the function button (g), needle stop position is down.  
Pressing the function button (h), needle stop position is up.
- e. Twin needle mode (5/5)  
Twin needle mode will limit the stitch width to avoid that the twin needle hits the needle plate.  
Default setting: OFF  
To turn on the twin needle mode, press the function button (g).  
The twin needle icon will appear on the display at the sewing and selection mode.  
See page 64 "TWIN NEEDLE SEWING".  
To turn off the twin needle mode, press the function button (h).

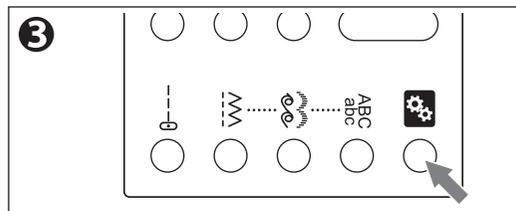


e-1. If you have attached the straight stitch needle plate, you cannot select the twin needle mode.

e-1.



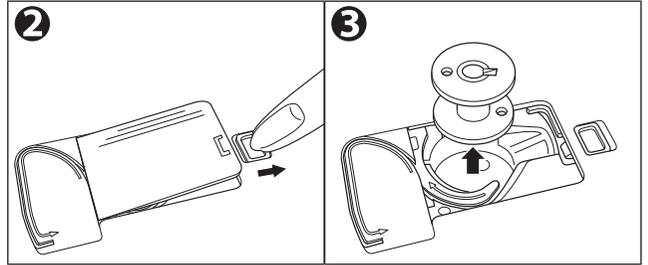
3. After completing the settings, press the setting button again to return to the sewing mode. These settings will remain even when the machine is powered off. If you turn off the power at setting mode, these settings are not remained.



# BOBBIN SETTING

## A. REMOVING THE BOBBIN

1. Raise the presser foot lifter.
2. Pull the bobbin cover latch to the right and remove the bobbin cover.
3. Lift up the bobbin from the machine.



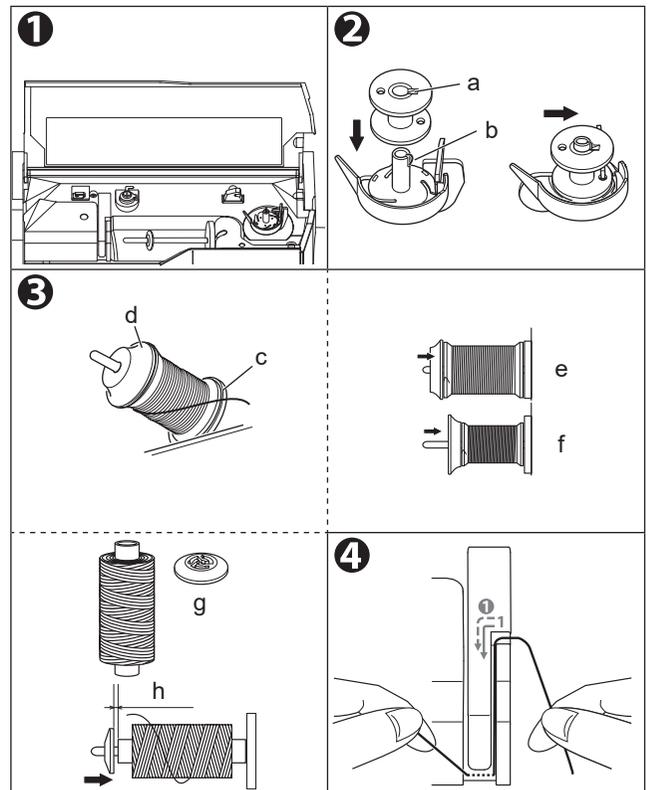
### NOTE:

Use the plastic bobbin dedicated to this model.

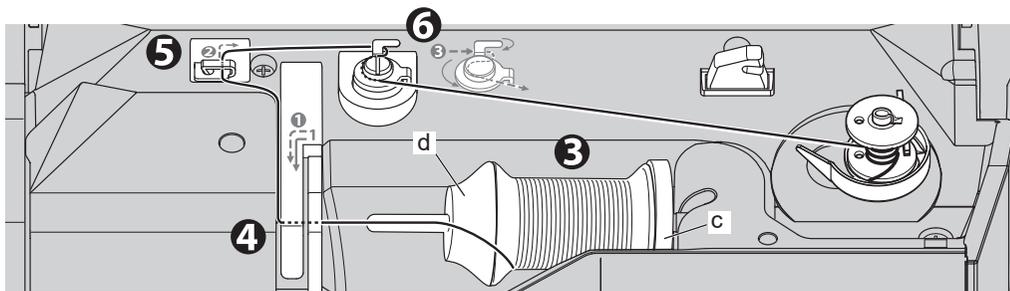
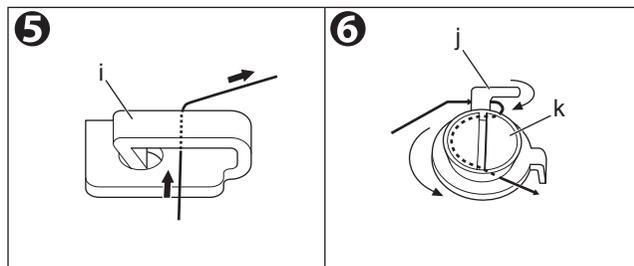


## B. WINDING THE BOBBIN

1. Open the top cover.
2. Place the bobbin on the bobbin winder spindle so that the groove (a) on the bobbin fits to the spring (b) on the spindle. Push bobbin to the right to engage bobbin winder. (LCD screen will indicate the bobbin winder mode.)
3. Set the felt washer (c) to the right side of spool. Set the spool of thread on spool pin so that the thread unrolls from the front of the spool. Set the spool cap (d) on spool pin as far as it will go. Reverse spool cap direction according to the size of spool.  
e: Large Spool f: Small Spool  
Use the small spool cap (g) when you use cross wound thread. Leave small opening between cap and spool as illustrated (h) for smooth thread feeding.
4. Hold thread in both hands and hook thread to the guide from rear opening. Bring thread frontward and pass through the thread guide from right to left.



5. Bring thread backward and pass through the threading guide (i) from left to right.
6. Bring thread to the right and pass thread through the thread guide (j) from rear side. Pass thread under tension disc (k) in counter clockwise direction.

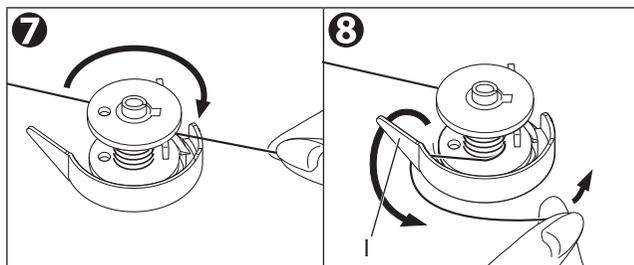


7. Hold the thread by your left hand and wind the thread to the bobbin 4-5 times clockwise.

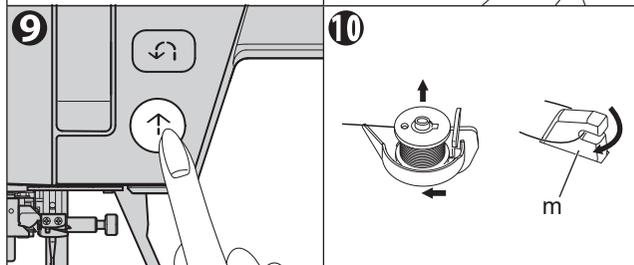
**NOTE:**

Be sure to wrap the thread clockwise. If you wind the thread in the opposite direction by mistake, the thread will not wind onto the bobbin.

8. Hook the thread under the front wing of the bobbin guide (l) from left to right and cut the thread.



9. Start the machine by pressing the start/stop button or pressing the foot controller. The bobbin winding will stop automatically when bobbin is full. (Release the foot controller.)



10. Push the bobbin and spindle to the left. Remove the bobbin from the spindle. Hook thread to the thread cutter (m).

## C. INSERTING THE BOBBIN

**CAUTION: To prevent injury to persons.**

Turn off the power before carrying out the below operation.

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

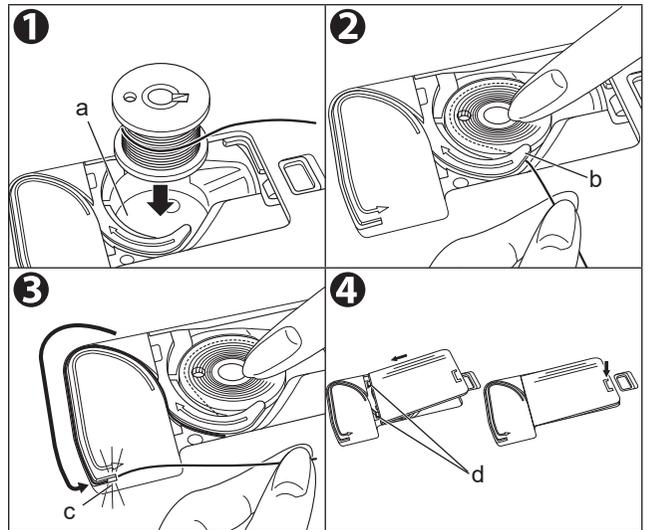
**NOTE:**

Be careful not to make a mistake in the direction of the thread.

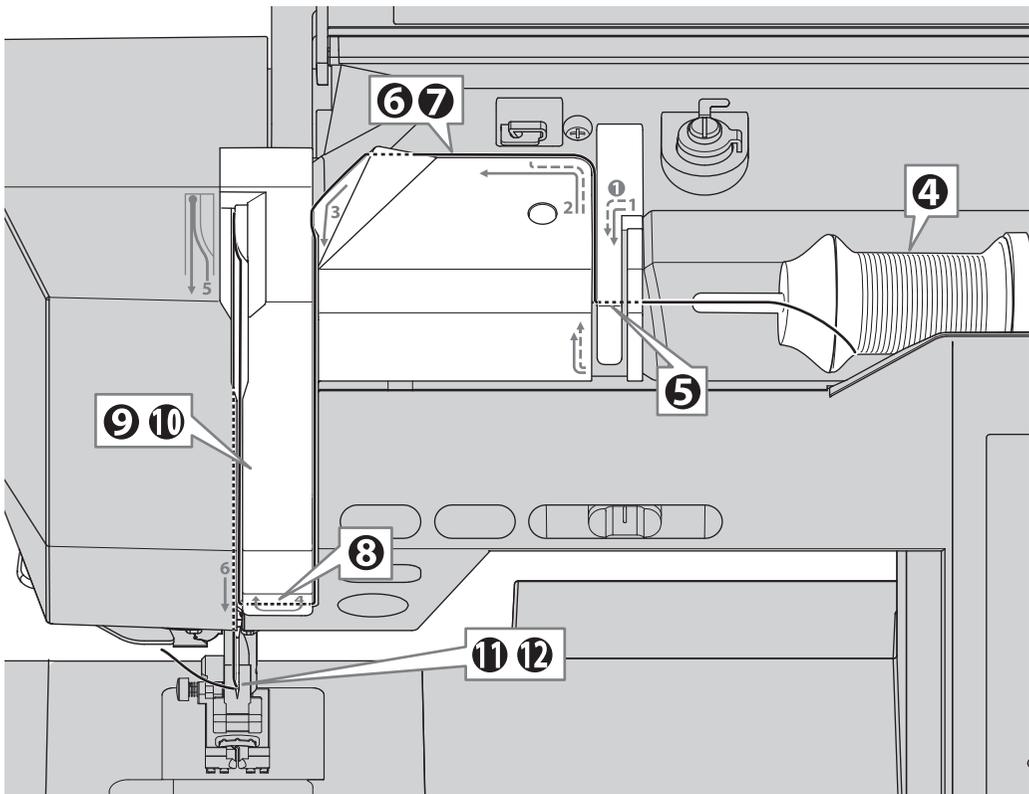
2. Draw thread into notch (b) with holding the bobbin.
3. Pull thread along the groove from up to down. Pull thread to the right to cut the thread (c).
4. Replace the bobbin cover. Set the left tabs (d) into the holes in needle plate and push the right side of bobbin cover down until it clicks into place.

**NOTE:**

This machine can start to sew without drawing up the bobbin thread.  
If you want to draw up the bobbin thread, see page 39.



# THREADING THE MACHINE



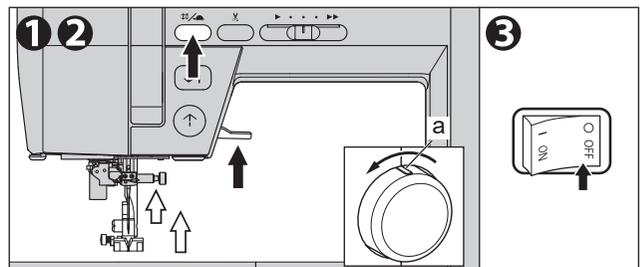
## A. PREPARING TO THREAD MACHINE

1. Raise the presser foot lifter.
2. Raise the needle to its highest position by pressing the needle up/down button or turning the hand wheel toward you.

When the needle is definitely up, the mark (a) on hand wheel will also be at the top.  
Be sure to check that the mark is on top.

(Keep this position until needle eye threading.)

3. Turn off the power switch. (Symbol **O**)



**CAUTION: To prevent injury to persons.**  
Failure to turn off the power switch may result in injury.

## B. SETTING SPOOL OF THREAD ON SPOOL PIN

4. Open the top cover and set spool as below.

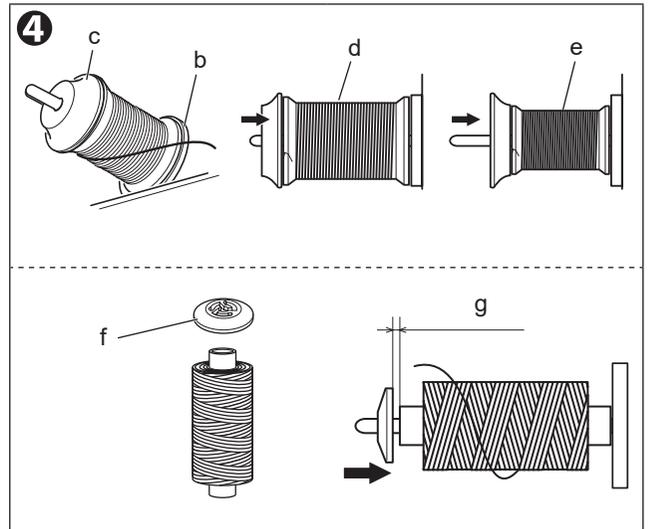
- Pull up the left end of spool pin.
- Set the spool of thread on spool pin so that the thread unrolls from the front of the spool.
- Set the spool cap on spool pin as far as it will go. (See illustration.)

b: Felt Washer      c: Spool Cap

Reverse spool cap direction according to the size of spool.

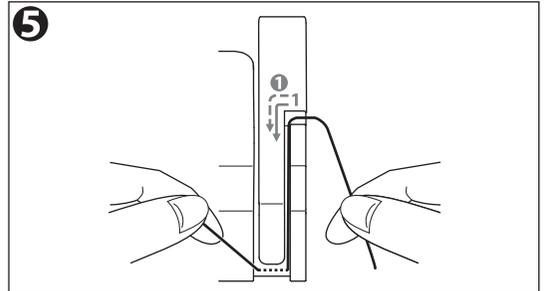
d: Large Spool      e: Small Spool

Use the small spool cap (f) when you use cross wound thread. When using the spool cap (c), the thread may not be cut by the thread cutter or the thread tension may not be adjusted properly. Leave small opening between cap and spool as illustrated (g) for smooth thread feeding.

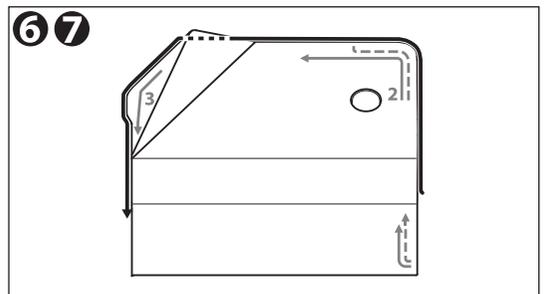


## C. THREADING THE UPPER THREAD

5. Hold thread in both hands and pass thread to the guide from rear opening and pass through front opening from right to left.

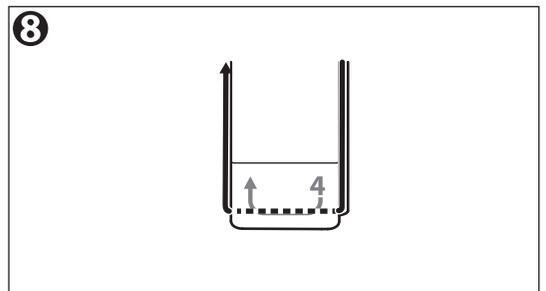


6. Bring thread backward and pass through from right to left.



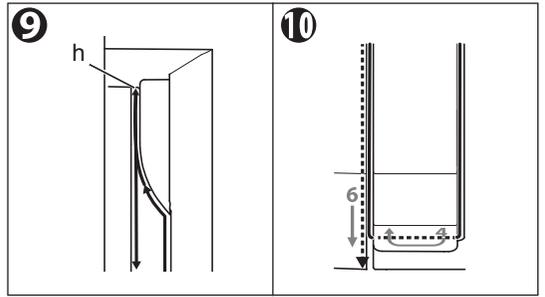
7. Bring thread to the left and pull-down thread toward you along the slit.

8. Bring thread right to left and pull up thread.

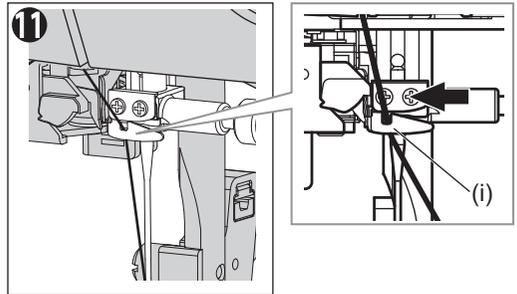


9. To thread the take-up lever, follow the arrow and pull the thread from bottom to top so that the thread hits (h).

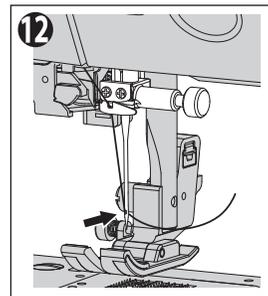
10. Pull thread downward along the slit.



11. Draw thread through the needle bar thread guide (i) from right side opening.



12. Pass through needle eye from front to back.  
See next section for instructions on how to use needle threader.



## D. THREADING THE NEEDLE EYE

### NOTE:

The needle threader is used for needle sizes 11/80 - 16/100 and thread sizes 50- 100.

### CAUTION: To prevent the accidents or the injury to persons.

- Do not put your fingers under the needle.
- Make sure the needle is installed correctly. If it is not installed correctly, threading may not be possible or it may cause malfunction. (See page 33)
- Do not rotate the hand wheel when needle threader lever is lowered.
- Needle threader cannot be used when using special threads such as transparent nylon threads.

#### 1. Raise the presser foot lifter and the needle.

When the needle is definitely up, the mark (a) on hand wheel will also be at the top.

Be sure to check that the mark is on top.

#### 2. Turn off the power switch. (Symbol )

### CAUTION: To prevent injury to persons.

Failure to turn off the power switch may result in injury.

#### 3. Pass the thread through the groove (b) of the needle bar thread guide from the right side when facing the front.

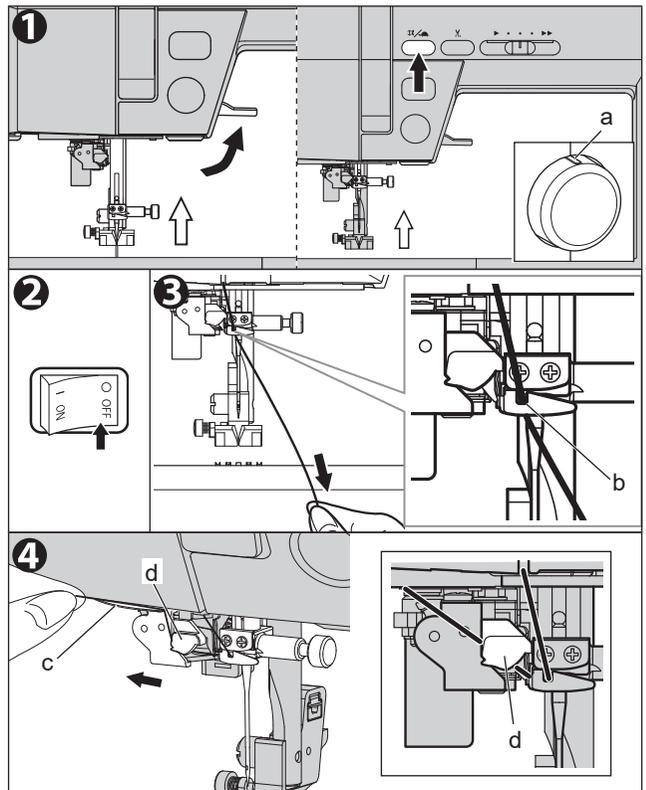
Pull thread from needle bar thread guide and continue gently pulling thread downwards until you reach the front of the extension table.

#### 4. Pull up the thread and pass it through the needle threader guide (c) from right to left.

At this time, if the thread is pulled taut, it will automatically pass through the thread holder (d).

### NOTE:

Make sure that the thread passes through the thread holder (d). If the thread does not pass through the thread holder, it will not enter the eye of the needle.



5. Hook the thread to the thread cutter (e) from back to front. Pull and cut thread.

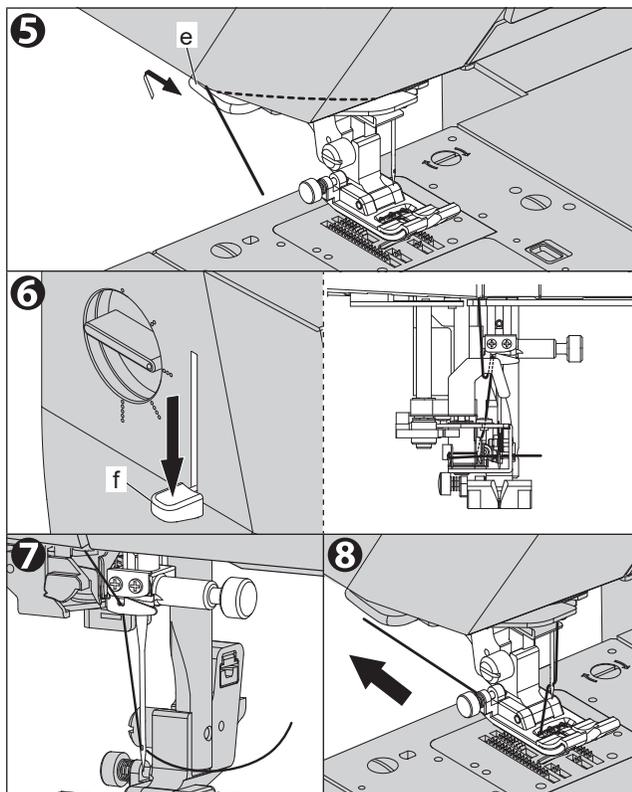
6. Lower the needle threader lever.  
Push the needle threader lever (f) all the way down.  
The needle threader equipment will go down and it will pass the thread through the needle eye.

7. Release the needle threader lever.  
The condition of the thread passing through the eye of the needle is;

A. looped:  
Pull the loop and pull out the thread end.

B. getting caught in the threader:  
Remove the caught thread from the threader and pull out the end of the thread.

8. Pass the thread under the presser foot, and pull it back about 10 cm.



# CHANGING THE PRESSER FOOT

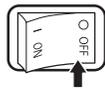
The presser foot must be changed according to the stitch you sew, or work you do.

## A. CHANGING THE PRESSER FOOT

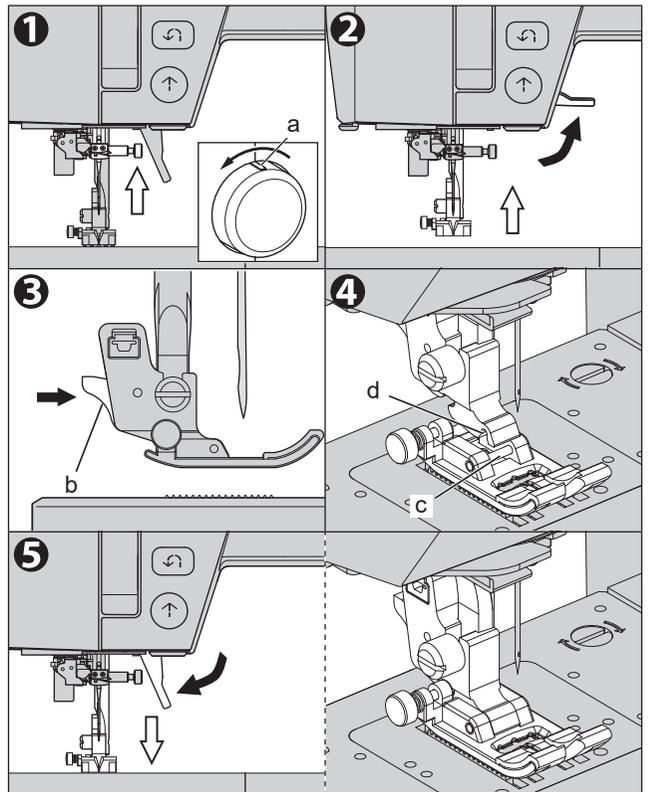
Use the appropriate presser foot for each sewing pattern or purpose. See page 40, confirm the presser foot for each pattern.

**CAUTION: To prevent injury to persons.**

Turn off the power switch before you change the presser foot.



1. Turn the hand wheel toward you until the needle is at its highest point.  
The mark (a) of hand wheel comes to the top.
2. Raise the presser foot lifter.
3. Remove the presser foot by pushing the presser foot release lever (b) toward you.  
Presser foot will come off.
4. Place desired foot with its pin (c) directly under the slot (d) in presser foot holder.
5. Lower the presser foot lifter and the presser foot will snap into place.  
The pin fits in the slot.  
If it does not fit completely, try pressing the presser foot release lever.

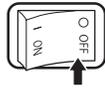


## B. REMOVING THE PRESSER FOOT HOLDER

Remove the presser foot holder when you clean the machine or attaching extra foot (option).

**CAUTION: To prevent injury to persons.**

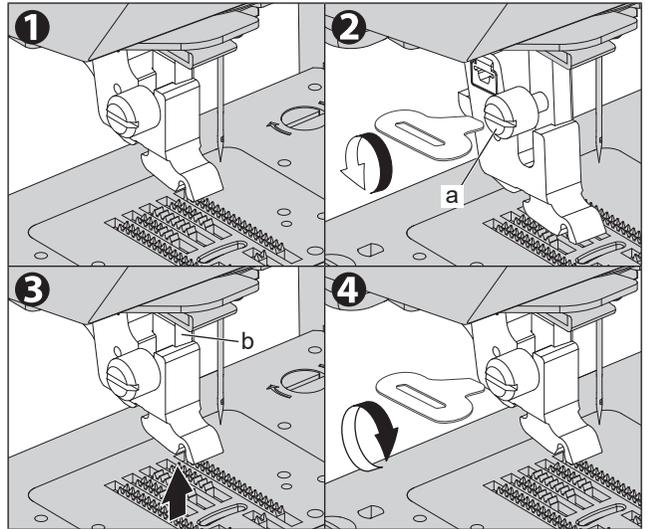
Turn off the power switch before carrying out the below operation.



1. Remove the presser foot.  
See the previous section "CHANGING THE PRESSER FOOT".
2. Loosen the presser foot holder screw (a) and remove the presser foot holder with driver for needle plate.  
Presser foot holder will come off.
3. To replace the holder, pull up the holder as far as it will go from bottom of presser bar (b).
4. Tighten the presser foot holder screw with driver for needle plate.

**NOTE:**

Do not tighten too strongly using a commercially available large screwdriver. It will be the cause of the failure.



## FABRIC, THREAD AND NEEDLE TABLE

Select thread size and needle size according to the type of fabric and thickness.

Type of Fabric		Thread Size	Needle Size
<b>Light Weight</b>	georgette, organdy, voile, taffeta, silk, etc.	Ctn #80 - 100 Silk 60 - 80 Syn 80 - 100	9/70-11/80
<b>Medium Weight</b>	gingham, pique, linen, cotton, satin, thin corduroy, velvet, etc.	Ctn 50 - 80 Silk 50 Syn 50 - 80	11/80-14/90
<b>Heavy Weight</b>	gabardine, tweed, denim, quilted fabric, corduroy, etc.	Ctn 30 - 50 Silk 50 Syn 30 - 60	14/90-16/100
<b>Stretch</b>	double knit, tricot, spandex, jersey, etc.	Syn 50 - 80 Silk 50 Thread for knit	11/80-14/90 Needle for knit and synthetic fabric

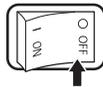
Use a Home sewing machine needle.

# INSERTING THE NEEDLE

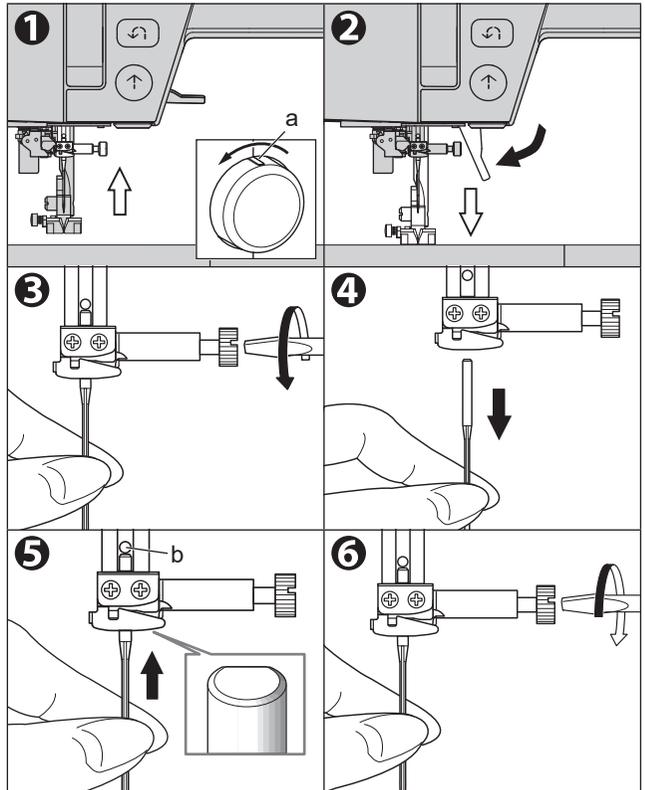
Putting a cloth over the needle plate prevents you from dropping the needle into the machine.

## CAUTION: To prevent injury to persons.

Turn off the power before carrying out the below operation.



1. Turn the hand wheel toward you until the needle is at its highest point.  
The mark (a) of the hand wheel comes to the top.
2. Lower the presser foot lifter.
3. While holding the needle with your left hand, loosen the needle clamp screw with the included screwdriver.
4. Remove the needle.
5. Insert new needle into needle clamp with the flat side to the back and push it up as far as it will go.  
**CAUTION:** Make sure the needle touches the pin (b).
6. After lightly tightening the needle clamp screw with your fingers, tighten the screw with the included screwdriver.  
**CAUTION:** Do not over-tighten with a commercial screwdriver.



## CAUTION: To prevent injury to persons.

- Do not use a bent needle or a needle with a collapsed tip.  
Before installing the needle, place the needle on a flat surface such as a needle plate and check for any problems.



- If the needle is not installed correctly, threading or sewing may not be possible, the needle may break, or the machine may malfunction.

# STARTING TO SEW

Turning on the machine, the straight stitch  (center) is selected.

## A. START AND END OF SEAM

1. Check the presser foot [Regular Foot (H)].  
See page 30 for changing the presser foot.

### NOTE:

When sewing straight stitch on thin or stretchy fabrics, you can use the straight stitch needle plate and the straight stitch foot to achieve a beautiful finish. See page 42.

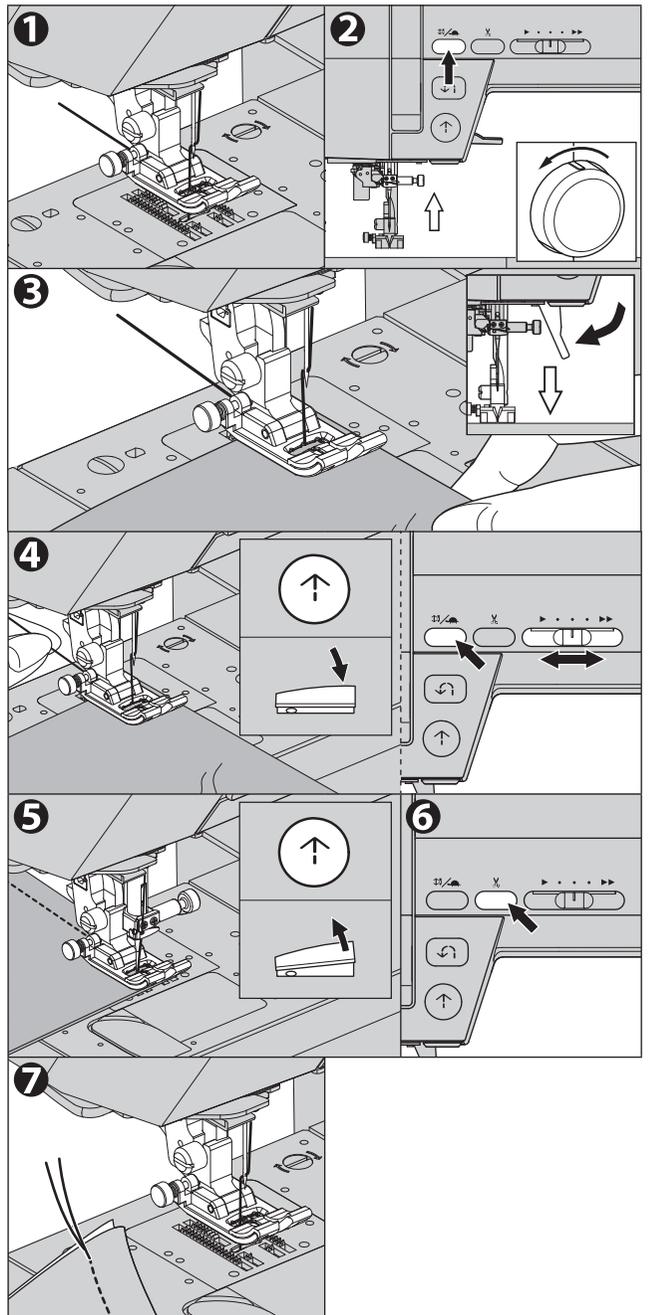
2. Raise up the needle by pressing the needle up-down button or turning the hand wheel toward you.
3. Place the fabric under the presser foot and lower the presser foot.  
The monitor lamp turns on green.
4. Hold back upper thread and press the start/stop button or press the foot controller.  
Keep holding thread after sewing a few stitches.  
Lightly guide the fabric while sewing.

You can regulate the sewing speed by sliding the speed control button even during sewing. Also, you can reduce the sewing speed by pressing the slow button.

### CAUTION: To prevent injury to persons.

- Pay attention to the point of the needle.
- Do not pull or push strongly as the cloth is automatically fed by the machine.

5. When you reach end of seam, press the start/stop button to stop sewing or release the foot controller.  
The stop position of the needle differs depending on the setting.
6. Press the thread cutter button.  
When needle stop position is
  - up: the needle down once, cuts the thread and goes up.
  - down: the threads are cut and the needle goes up.At this time, even if the needle rises upwards, the setting of the stop position does not change.
7. Raise the presser foot lifter and remove the fabric.



## Upper Thread Sensor

If upper thread is broken or missing, machine will stop automatically and message will appear. Rethread the upper thread and resume sewing.

### CAUTION: To prevent accidents.

- 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.
- Do not use the thread cutter button when cutting thread thicker than #30, nylon thread or other specialty threads.

In this case, use the thread cutter located on the left side of the machine. (See page 38)

## B. REVERSE STITCHING

Reverse stitching is used for reinforcing the beginning and ends of the stitch.

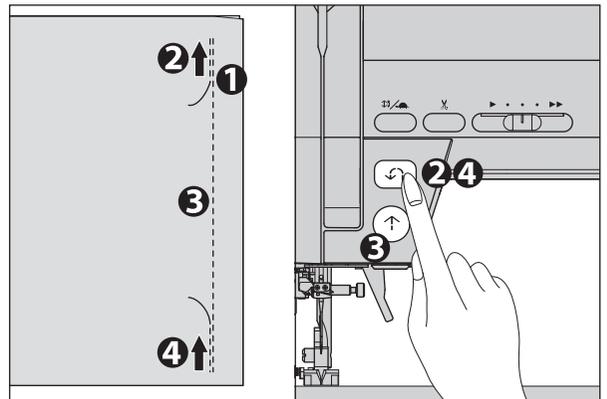
You can sew reverse stitch with the reverse button.

(The machine will continue sewing reverse stitching while you are pressing the button. When you release the button, reverse stitching will stop.)

1. Place the fabric in position where back stitching is to be made and lower the presser foot.
2. Press and hold the reverse button.  
Sew 4-5 reverse stitches.
3. Release the reverse button and press the start/stop button (or press the foot controller). 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:

- When the foot controller is connected and the pedal is pressed, machine will sew in reverse while this button is pressed. When released, machine will sew forward. (See page 10)
- Depending on the speed, after you press the reverse button, the machine will sew half the stitch length and then the reverse stitch.
- The utility stitch pattern No.3 is straight stitch with automatic reverse stitch. (See page 40)

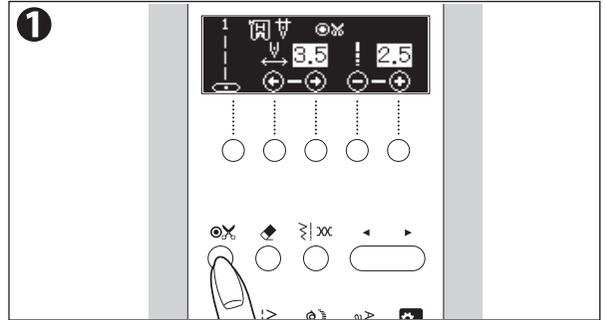


## C. AUTO LOCK STITCH, AUTO LOCK STITCH & CUT

You can sew lock stitch at the beginning and end of the stitch by pressing the lock stitch/cut button once. Also, you can cut threads automatically after the lock stitching end by pressing the lock stitch/cut button twice.

### 1. Select stitch pattern.

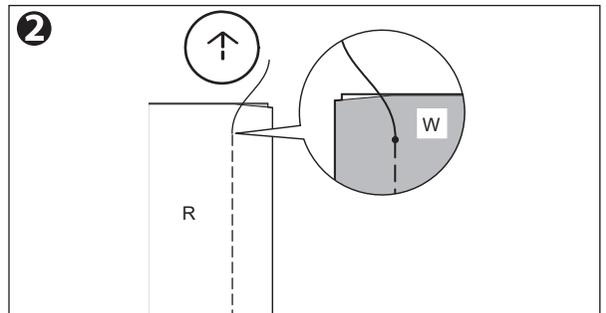
- Press the lock stitch/cut button once if you want to sew only lock stitch.  
 is displayed on the LCD screen.
- Press the lock stitch/cut button twice if you want to sew lock stitch and cut threads.  
 is displayed on the LCD screen.  
 You can cancel them by pressing this button again.



### 2. Start to sew.

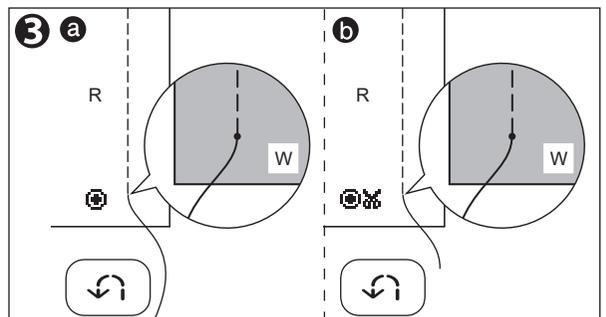
The machine will sew lock stitch automatically and start to sew the selected pattern. You can interrupt sewing by pressing the start/stop button.

R: Right side of fabric  
 W: Wrong side of fabric



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

- The machine will sew lock stitch and stop automatically.
- The machine will sew lock stitch, cut the thread and stop automatically.



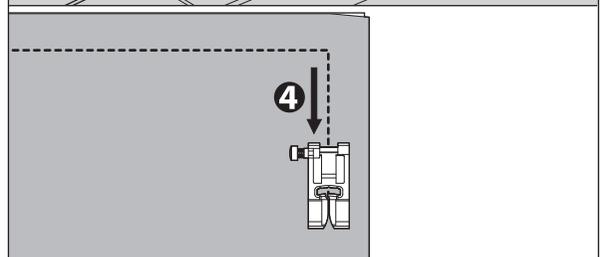
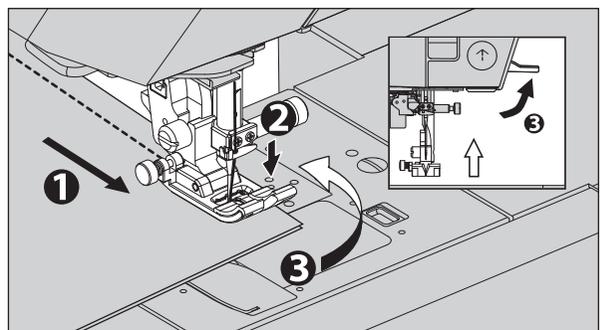
Utility stitch No.3, 33-45 are including the reverse stitch or lock stitch.

In these case, lock stitch/cut button will be set auto cut only.

See pages 40, 52-56, 61.

## D. TURNING CORNERS

- Stop the machine when you reach a corner.
- Lower the needle into the fabric by:  
 Pressing the needle up/down button or turning hand wheel toward you.
- Raise the presser foot.  
 Use the needle as a pivot, turn fabric and set toward you want to sew.
- Lower the presser foot and resume sewing.



## E. SEWING HEAVY FABRIC



**CAUTION: To prevent the accidents or the injury to persons.**

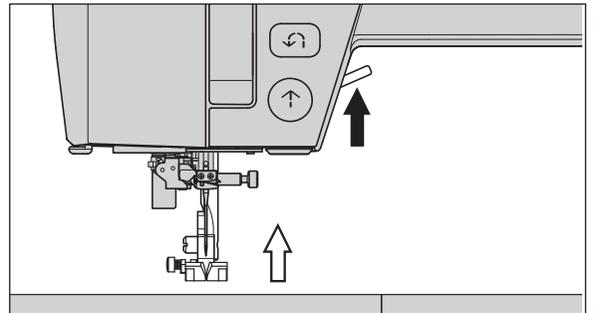
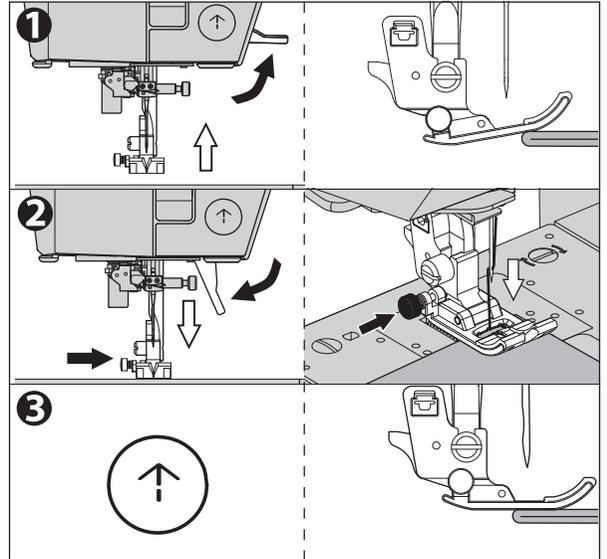
Forcing fabric with a thickness of 6 mm or more under the presser foot may cause the needle to break and cause injury.

### e-1. START SEWING THICK 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.

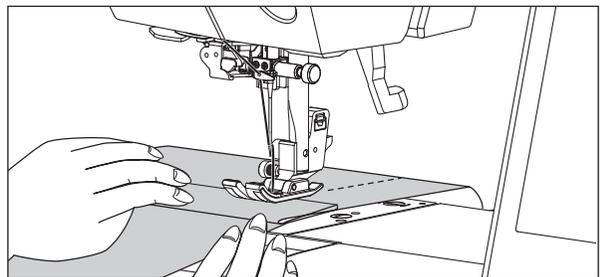
1. Raise the presser foot.
2. Push the lock button located on the left side of regular foot and lower the foot.
3. Start sewing.  
As presser foot hinge is locked, fabric will be fed smoothly.  
As sewing progresses, it will be unlocked automatically.

If you raise the presser foot lifter further and raise the foot further one step, you can easily sew a thick cloth. At this time, the raised presser foot is not fixed. When you release the presser foot lifter, the presser foot returns to the position raised in step 1.



### e-2. SEWING OVER OVERLAPPED AREAS

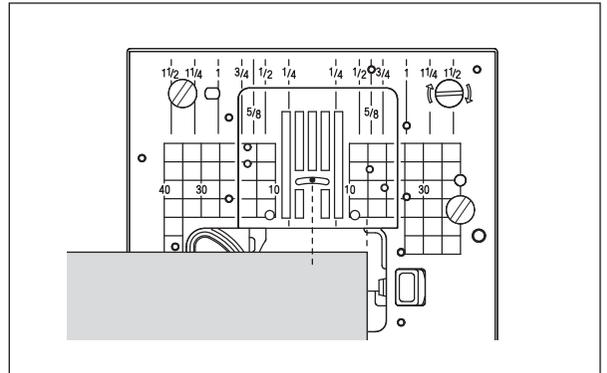
Guide the fabric with your hand when sewing the fabric overlaps or has differences.



## F. 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.



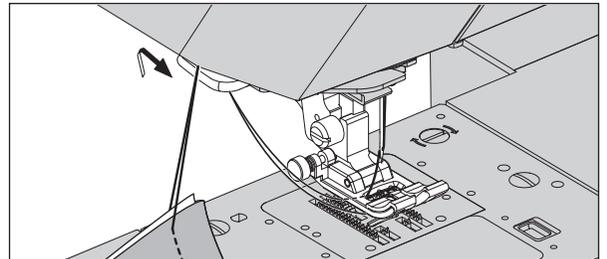
## G. THREAD CUTTER

After sewing, if you do not use the thread cutter button, you can cut threads using the thread cutter.

In the following cases, use the thread cutter to cut the thread instead of using the thread cutter button.

- When using thick thread thicker than #30.
- When using special thread such as nylon thread.
- When you want to take a long thread at the end of sewing.

1. Raise the presser foot and needle, 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.

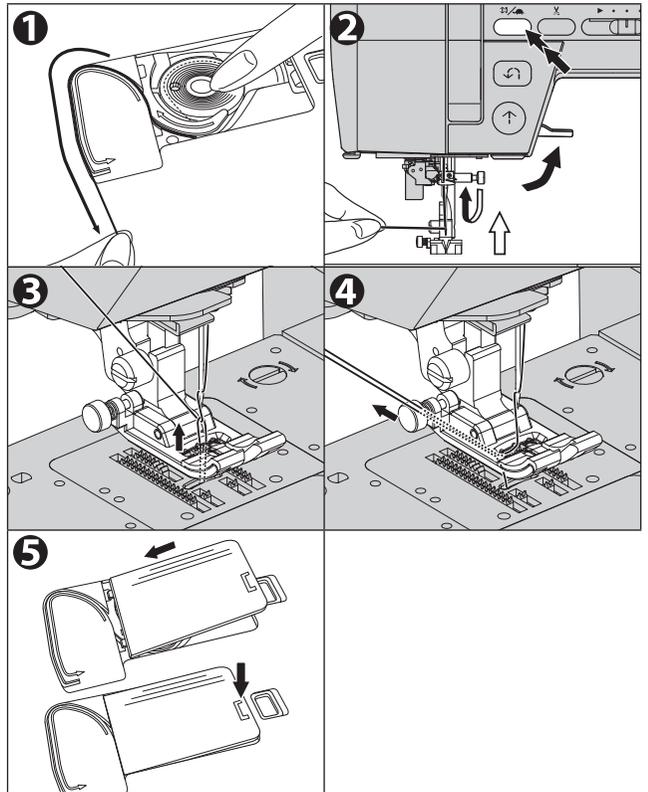


## H. IF YOU WANT TO DRAW UP THE BOBBIN THREAD

This machine can start to sew without drawing up the bobbin thread.

If you want to start sewing with longer bobbin thread, draw up the bobbin thread as follows.

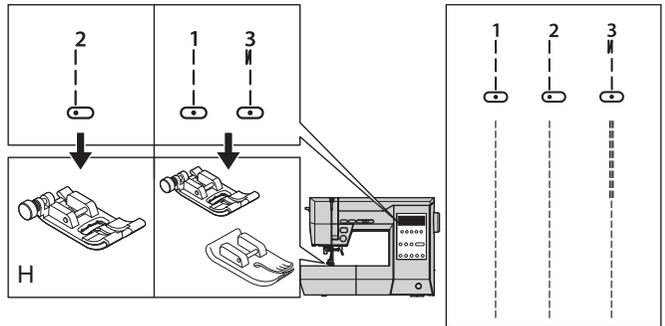
1. Insert the bobbin into the bobbin holder and pass thread as instructed on page 24. But do not cut the thread.
2. Raise the presser foot.  
Hold thread loosely and press the needle up-down button twice from up position.  
The hand wheel will make one revolution toward you.
3. Pull upper thread lightly. Bobbin thread will come up in a loop.
4. Pull both upper and bobbin threads about 10 cm toward the back of presser foot.
5. Replace the bobbin cover. (See page 24)



# STRAIGHT STITCH SEWING

Straight stitch patterns should be selected to suit the type of fabric being sewn.

Stitch		Presser Foot
2	Straight stitch (Left needle position)	Regular Foot (H)
1	Straight stitch (Center needle position)	Regular Foot (H)
3	Straight stitch with auto-reverse stitch (Center needle position)	Straight Stitch Foot



The needle position can be changed by adjusting the stitch width. (See page 16)



## CAUTION: To prevent injury to persons.

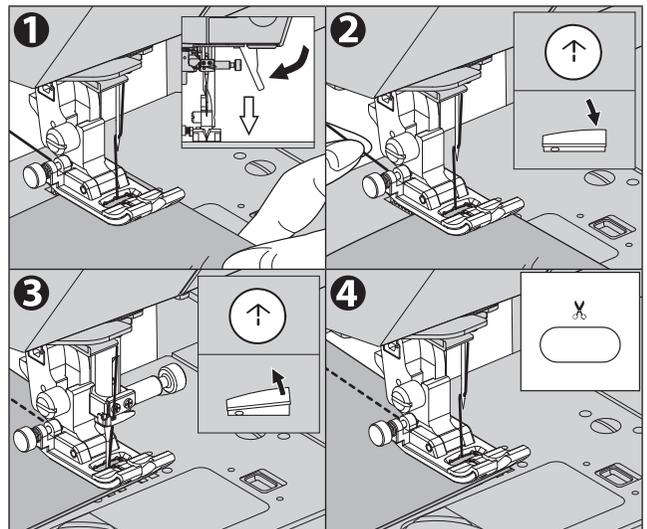
When using the straight stitch foot for utility stitch patterns No.1 and 3, do not change the needle position from the automatic setting. It is dangerous for the needle to hit the presser foot.

## A. STRAIGHT STITCH (No. 1, 2)

1. Position the fabric under the presser foot.  
Lower the presser foot.
2. Hold the upper 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.

### NOTE:

If you use the straight stitch needle plate, the fabric will not sink into the holes in the needle plate, and you will be able to finish more beautifully. For details on how to use it, see "STRAIGHT STITCH SEWING (WITH STRAIGHT STITCH NEEDLE PLATE)" on page 42.

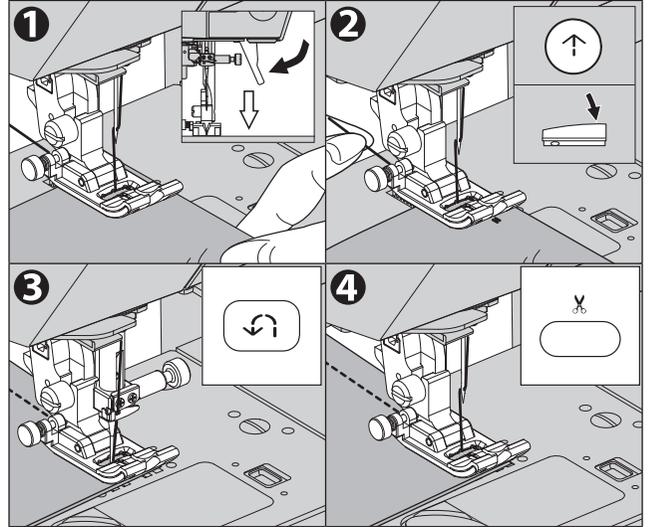


## B. STRAIGHT STITCH WITH AUTO-REVERSE STITCH (No. 3)

1. Position the fabric under the presser foot.  
Lower the presser foot.
2. Hold the upper thread loosely and start sewing.  
The 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 once.  
The machine will sew a few stitches backward  
and sew a few stitches forward and stop  
automatically.
4. Press the thread cutter button.

### NOTE:

If you press the lock stitch/cut button before start sewing, the machine will cut threads automatically at the end of seam. (LCD screen indicates  mark)



## STRAIGHT STITCH SEWING (WITH STRAIGHT STITCH NEEDLE PLATE)

When sewing straight stitch on thin or stretchy fabrics, using the straight stitch needle plate prevents the fabric from sinking into the hole in the needle plate, you can finish it better.

Stitch	Presser Foot
2 Straight stitch (Left needle position)	Regular Foot (H)
1 Straight stitch (Center needle position)	Straight Stitch Foot
3 Straight stitch with auto-reverse stitch (Center needle position)	
6*1 Straight stretch stitch (Center needle position)	
7*2 Hand look Quilting Stitch (Center needle position)	

\*1 Utility stitch pattern 6 is mainly used for stretch reinforcement stitches. For details, see "ELASTIC STITCH SEWING" on page 45.

\*2 Utility stitch pattern 7 is mainly used for quilt stitching. For details, see "HAND LOOK QUILTING STITCH" on page 47.

### CAUTION: To prevent injury to persons.

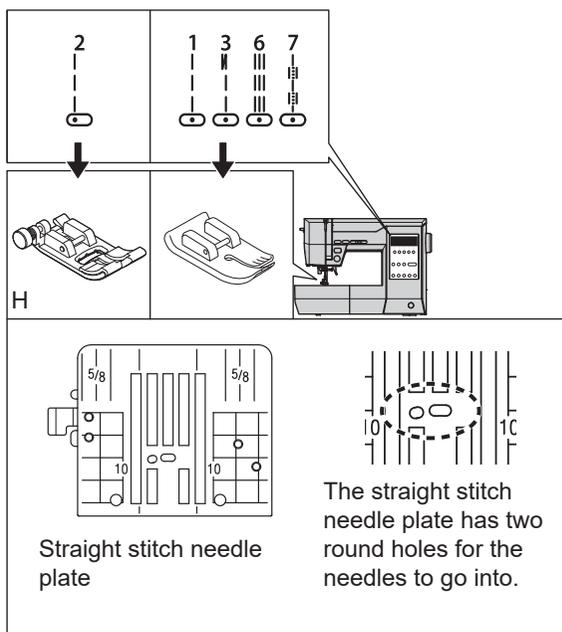
- The needle position cannot be changed when the straight stitch needle plate is attached.
- Before you start sewing, be sure to check that the correct presser foot is attached for the selected pattern. If the wrong presser foot is used, the needle may hit the presser foot and break, resulting in injury.

### NOTE:

Only usable patterns can be selected when the straight stitch needle plate is attached.

- If you select a pattern that cannot be used, a beep will sound to notify you. (If you set the operation sound to be silent, it will not sound. For details, see "SETTING BUTTON (MACHINE SETTINGS)" on page 20.)

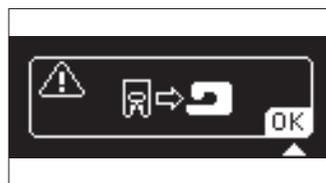
- If you select a pattern that cannot be used and attach the straight stitch needle plate, the LCD screen will change to display utility stitch No.1.



### CAUTION:

If you reselect the pattern, a message may appear asking you to check the presser foot.

- When changing from straight stitches 1, 3, 6, 7 of the center needle position to straight stitches 2 of the left needle position, the following message is displayed. Make sure the regular foot is attached. After confirming, press the function button directly below  to clear the message.



- The following message is displayed when changing from straight stitches 2 of left needle position to straight stitches 1, 3, 6, 7 of the center needle position. Make sure that the straight stitch foot is attached.



## A. HOW TO REMOVE THE STANDARD NEEDLE PLATE

1. Press the needle up/down button or turn the hand wheel toward you to raise the needle. At this time, the hand wheel mark will come up.
2. Turn off the power switch. (Symbol **O**)

**CAUTION: To prevent injury to persons.**  
Failure to turn off the power switch may result in injury.

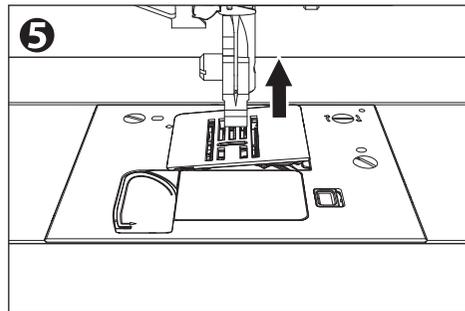
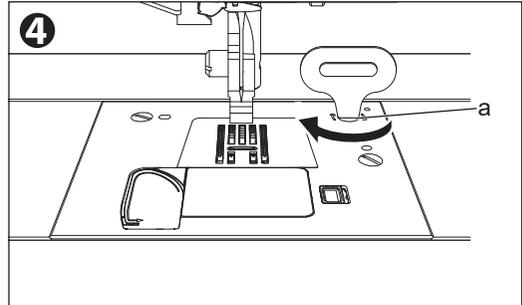
3. Raise the presser foot lifter and remove the presser foot. For how to remove the presser foot, see "CHANGING THE PRESSER FOOT" (page 30).
4. Using the included driver for needle plate, turn the needle plate stopper lever (a) clockwise (approximately 30°) until it stops rotating.

**CAUTION: To prevent the accidents or the injury to persons.**  
Do not turn the needle plate stopper lever (a) too hard. It may be damaged.

5. Lift the right side of the raised standard needle plate and remove it.

**CAUTION: To prevent the accidents or the injury to persons.**  
Be careful not to hit the feed dog with the standard needle plate. The feed dog may be chipped or crushed.

\*Follow the same procedure when removing the straight stitch needle plate.



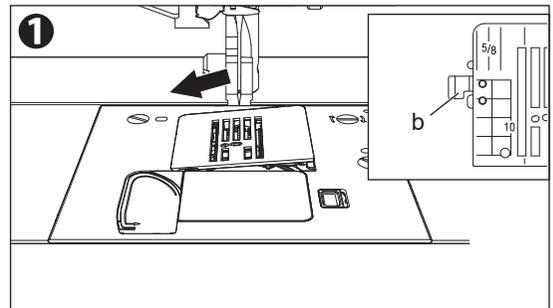
## B. HOW TO ATTACH THE STRAIGHT STITCH NEEDLE PLATE

1. Insert the tab (b) on the left side of the straight stitch needle plate into the needle plate.



**CAUTION: To prevent the accidents or the injury to persons.**

Be careful not to hit the feed dog with the straight stitch needle plate. The feed dog may be chipped or crushed.

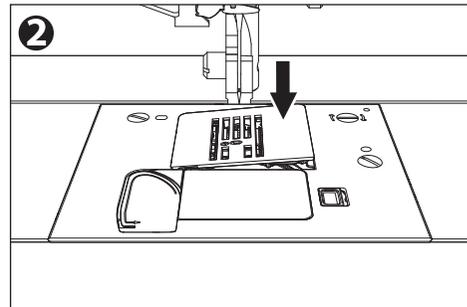


2. Push down the right side of the straight stitch needle plate that has floated up to fit it.



**CAUTION: To prevent the accidents or the injury to persons.**

After attaching the presser foot, turn on the power, select the pattern, slowly turn the hand wheel toward you, and check that the needle does not hit the presser foot and the straight stitch needle plate before starting sewing.



**NOTE:**

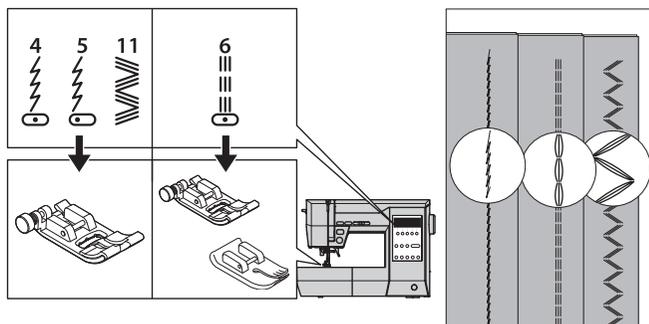
Press firmly until you hear a click.

\*Follow the same procedure when installing the standard needle plate.

# ELASTIC STITCH SEWING

It assures you of a stitch that is strong and flexible and will give with the fabric without breaking. Good for easy to ravel and knit fabrics. It is good for joining durable fabrics such as denims.

Stitch		Presser Foot
4	Stem stitch for stretch fabrics (Center needle position)	Regular Foot (H)
5	Stem stitch for stretch fabrics (Left needle position)	
11	Rick-rack Stitch	
6	Straight stretch stitch (Center needle position)	Regular Foot (H) Straight Stitch Foot



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

Examples of items that commonly use these fabrics are:

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

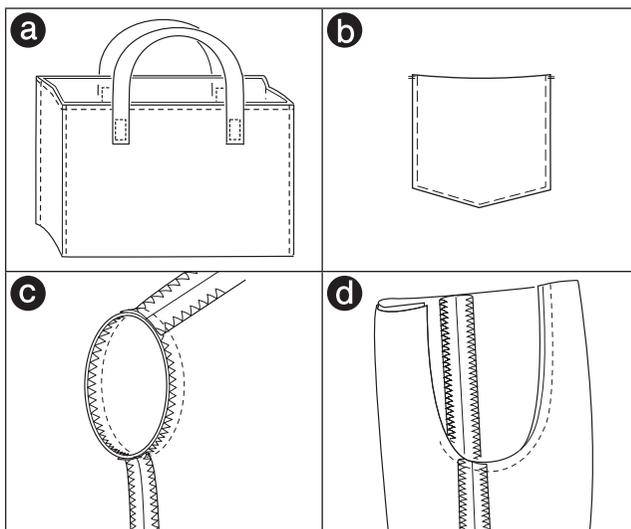
Utility stitch pattern No.6 can also be used with the straight stitch foot.

**⚠ CAUTION: To prevent injury to persons.**  
 When using the straight stitch foot for utility stitch pattern No.6, do not change the needle position from the preset value. The needle hits the presser foot and is dangerous.

**NOTE:**

When using utility stitch pattern No.6, if you use the straight stitch needle plate, the fabric will not sink into the holes in the needle plate, and you will be able to finish more beautifully. In this case, it is more effective to use the straight stitch foot for utility stitch pattern No.6.

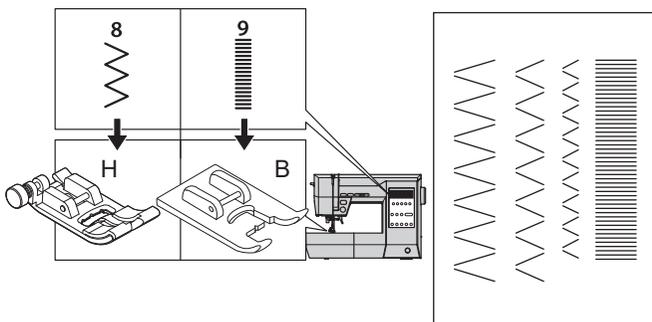
For details on how to use it, see "STRAIGHT STITCH SEWING (WITH STRAIGHT STITCH NEEDLE PLATE)" on page 42.



# ZIGZAG STITCH SEWING

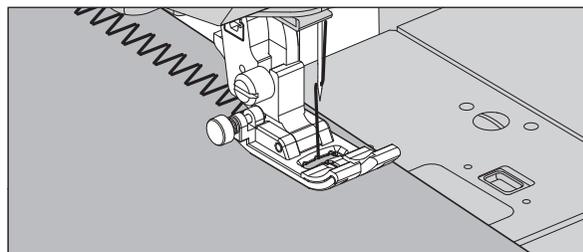
This machine can sew zigzag stitches of various widths and lengths by changing the settings of the stitch width and stitch length.

Stitch		Presser Foot
8	Zigzag stitch	Regular Foot (H)
9	Satin stitch	Satin Foot (B)



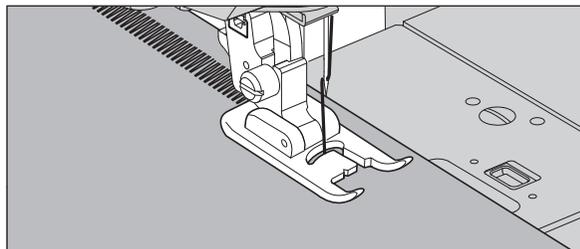
Zigzag stitches are suitable for joining two pieces of fabrics, overcasting and sewing various decorative stitch patterns.

See page 49 for overcasting.



## SATIN STITCHING (No. 9)

When you sew the satin stitch, it will preset to closer stitches than the normal zigzag stitch. Attach the satin foot for this stitch.



# HAND LOOK QUILTING STITCH

When using the hand look quilting stitch, use invisible nylon thread or very lightweight thread for the upper thread.

For bobbin thread, use the thread of color scheme matches the fabric.

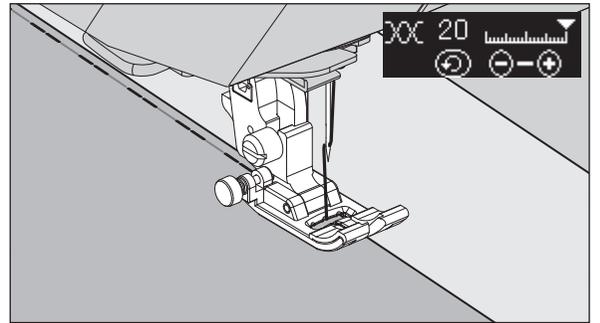
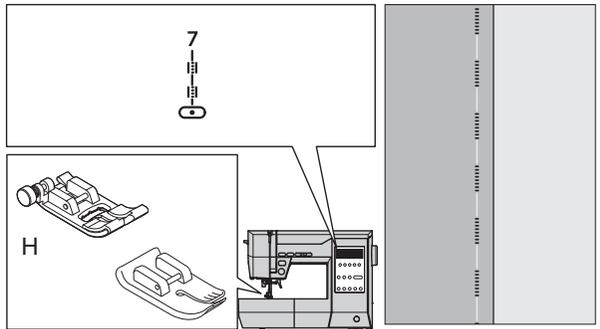
Increase the thread tension.

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

Stitch		Presser Foot
7	Hand look Quilting Stitch (Center needle position)	Regular Foot (H) Straight Stitch Foot

## NOTE:

- Use only for medium or heavy weight fabric because thread tension is strong.
- If you use the straight stitch needle plate, the fabric will not sink into the holes in the needle plate, and you will be able to finish more beautifully. For details on how to use it, see "STRAIGHT STITCH SEWING (WITH STRAIGHT STITCH NEEDLE PLATE)" on page 42.



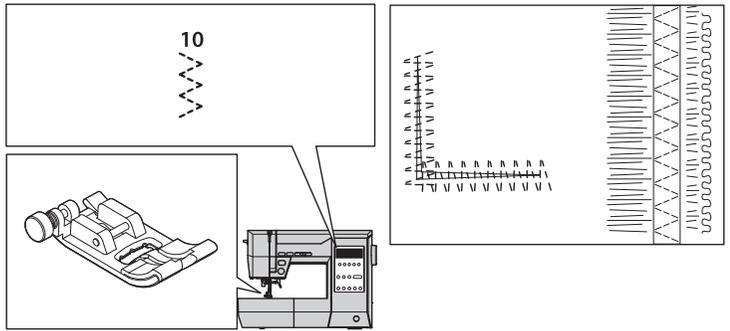
## **CAUTION: To prevent injury to persons.**

When using the straight stitch foot, do not change the needle position from the automatic setting. The needle hits the presser foot and is dangerous.

# MULTI-STITCH ZIGZAG

This stitch pattern is used to mend a broken fabric or to sew elastic bands.

Stitch	Presser Foot
10 Multi-Stitch Zigzag	Regular Foot (H)

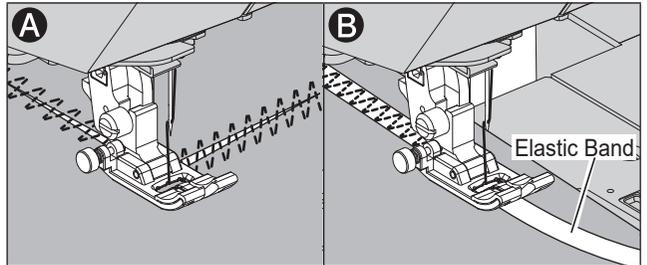


## A. MENDING

Shorten the length of the stitch and sew.

## B. ELASTIC BAND SEWING

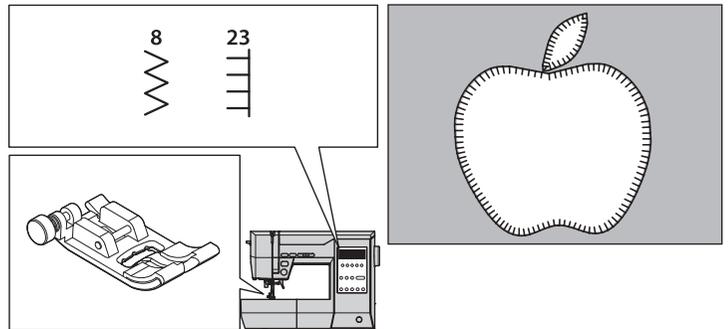
Pull elastic band in front and back of needle while sewing.



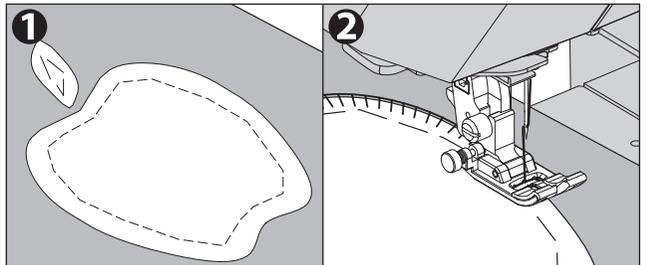
# APPLIQUE

Sew firmly a commercially available or self-made applique on the cloth.

Stitch	Presser Foot
8 Zigzag Stitch	Regular Foot (H)
23 Applique Stitch	

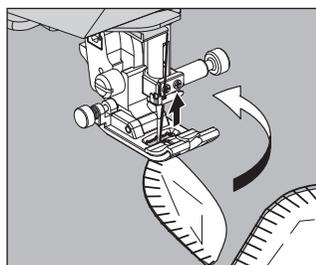


1. Fix applique on fabric.  
With fabric glue, fusible iron-on or basting stitches.
2. Sew the edge of the applique to the fabric like overcasting sewing.  
When the angle is steep, narrow the width of the stitch.



## When sewing sharp angles

Bring needle to lowest position and raise the presser foot. Use the needle as pivot and turn fabric.



# OVERCASTING-OVERLOCKING

Prevents fraying of the raw edge of all fabrics.

Stitch	Presser Foot
8, 12-16 (width: the automatic settings or over)	Overcasting Foot (C)
8(width: narrow), 10	Regular Foot (H)

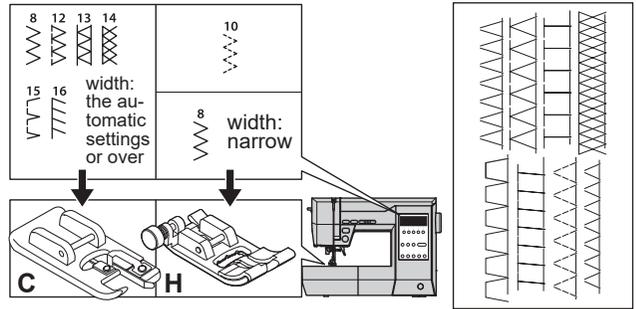


## CAUTION: To prevent injury to persons.

Overcasting foot should be used for sewing above patterns (No.8, 12-16). At this time, set the stitch width to a value greater than or equal to the automatic setting.

Before sewing, turn the hand wheel toward you and confirm the needle does not hit the presser foot.

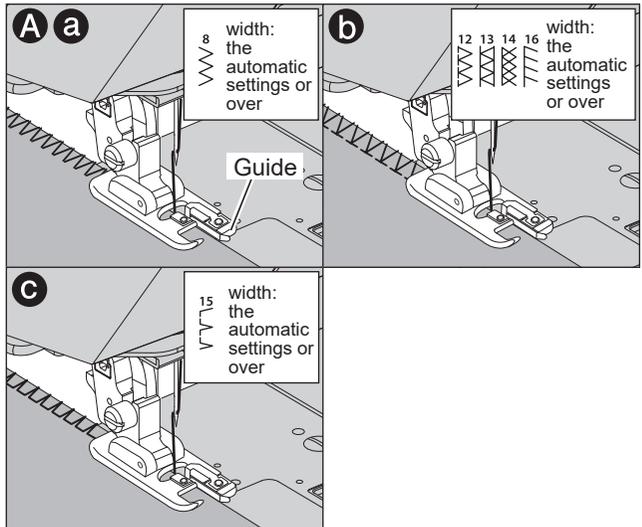
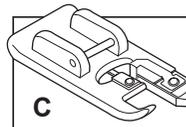
The needle may hit the presser foot and break when sewing other patterns and width.



## A. USING THE OVERCASTING FOOT

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

- Use as a fray stopping method.
- These patterns can sew overcasting and regular stitches at the same time. Use the regular foot for towel cloth or knitted fabric as the claw of the overcasting foot may get caught in the cloth.
- This pattern is suitable to prevent fraying of light-weight or medium-weight fabrics.



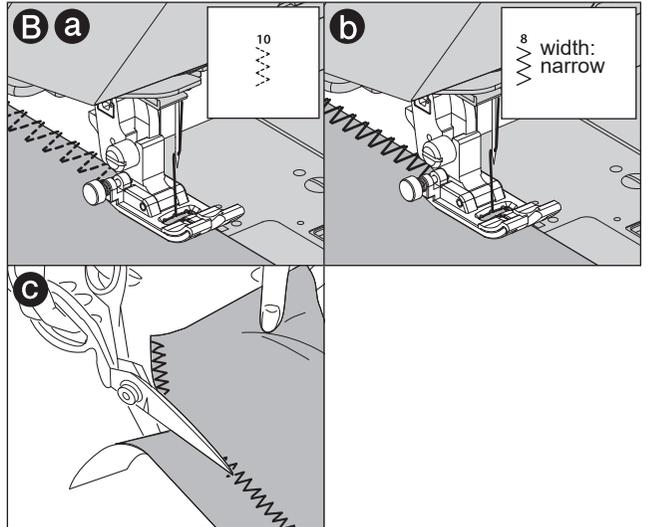
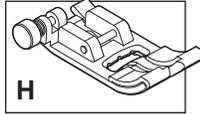
## B. USING THE REGULAR FOOT

Place fabric so that needle will fall nearest to edge of fabric when using the regular foot.

- a. Use for thick or stretch cloth.
- b. Use for narrow zigzag width.
- c. You can also cut off the excess material after sewing the inside of fabric.

### NOTE:

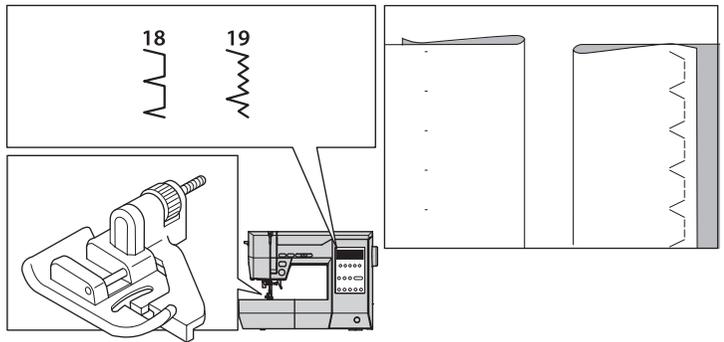
Be careful not to cut the sewn thread when cutting excess materials.



# BLIND HEM STITCHING

This stitch will sew without stitches showing on right side of fabric.  
We use this pattern for hemming the skirts and pants.

Stitch		Presser Foot
18	Blind hem for regular fabric	Blind Foot (D)
19	Blind hem for regular or stretch fabric	



1. Fold the fabric as shown on the right.

- a: Medium, Heavy weight fabric
- b: Light weight fabric
- c: Wrong side of fabric
- d: Overcasting

Be careful that the right and wrong side of the finished product to be correct.

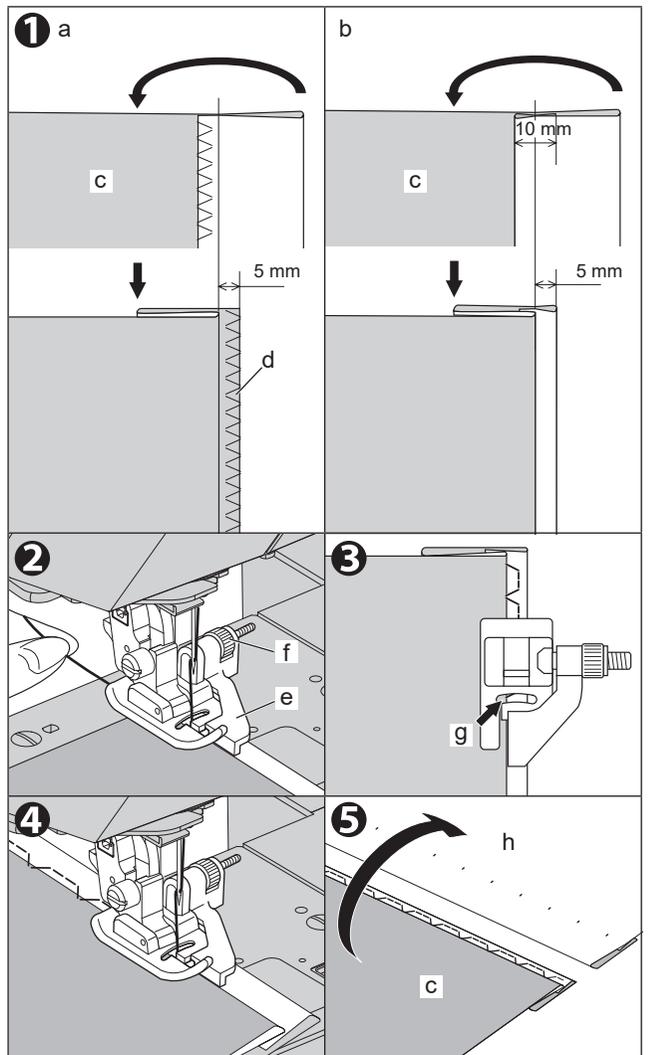
2. Set the fabric so that the guide (e) of the blind foot follows the fold line (g) of the fabric.  
The guide (e) is adjusted by turning the adjusting screw (f).

3. Adjust the position of guide so that the needle sticks slightly into the fold line (g) of the fabric when it comes to the most left side of fabric.  
When you turn the screw toward you, the guide will move to the right, turning it to the far side moves the guide to the left.

If select a pattern when the needle position is up, the needle comes to the most left side of fabric.

4. Sew edge along the guide.

5. Turn the fabric over when you have completed sewing.  
c: Wrong side of fabric  
h: Right side of fabric

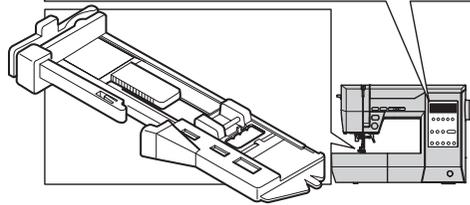
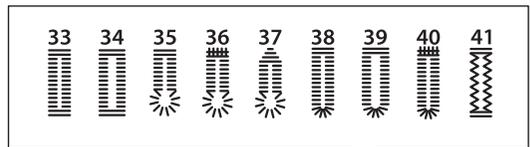


# BUTTONHOLE SEWING

You can sew 9 types of buttonholes.

You can change the width of each buttonhole in 2 - 3 steps.

Be sure to try sewing on the same fabric that you will actually be sewing to check the result.



Stitch	Presser Foot
33	Buttonhole Foot
34	
35	
36	
37	
38	
39	
40	
41	

1. Mark position and length of buttonhole on fabric.  
a: Starting position of the sewing

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.

b: Length of button + thickness

3. Pass upper thread through the hole of buttonhole foot and bring upper thread 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.

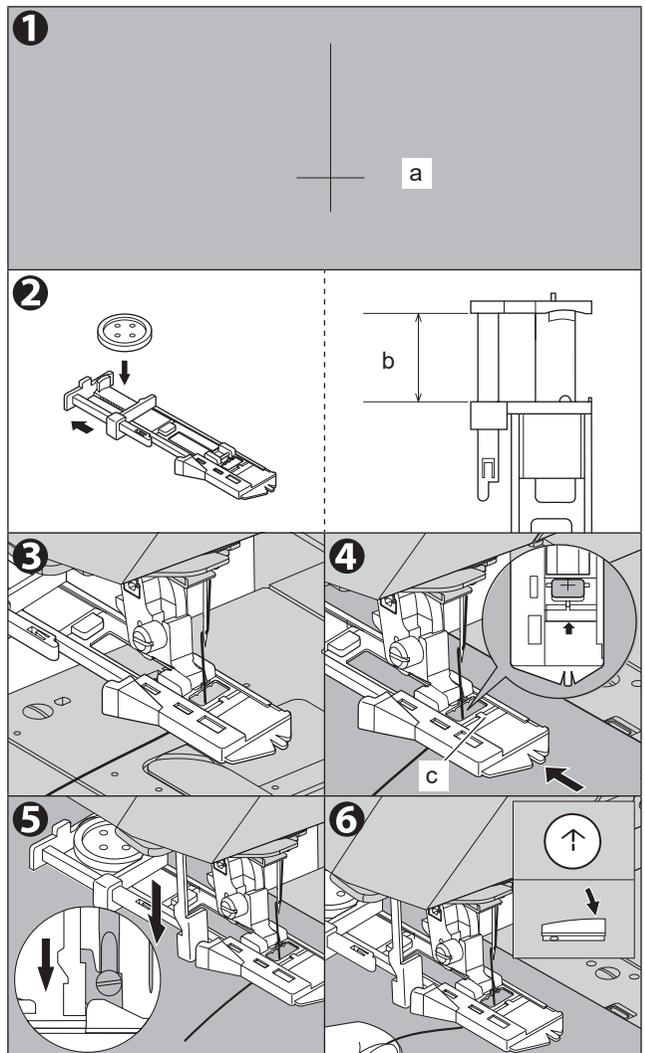
c: Push the frame of the presser foot to the backward so that there is no space between the frame and the presser foot.

5. Lower the buttonhole lever completely.

**NOTE:**

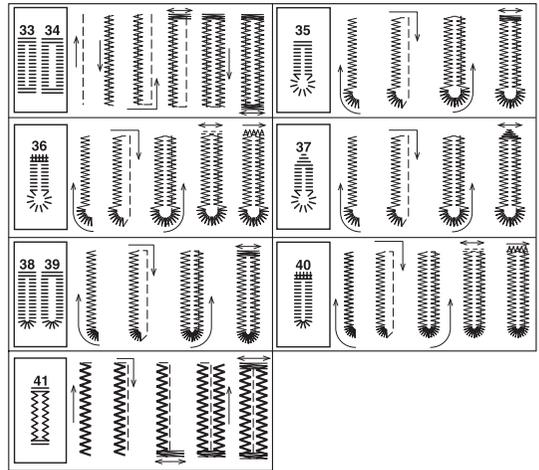
If you do not lower the buttonhole lever properly, the monitor lamp lights red, it sews 2 or 3 stitches and stops.

6. Hold upper thread lightly and start the machine.



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

7

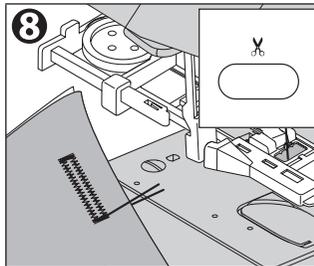


8. Press the thread cutter button and raise the presser foot to remove the fabric.

To sew over the same buttonhole, raise presser foot to return to original position.

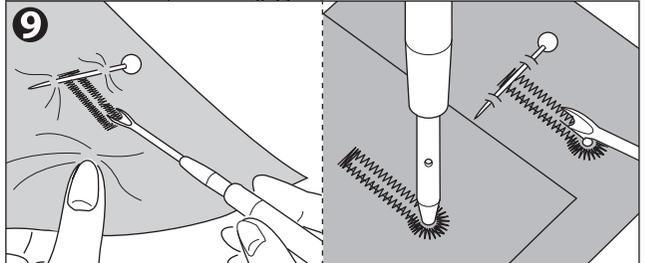
**NOTE:**

If you press the lock stitch/cut button before start sewing, the machine will cut threads automatically at the end of seam. (LCD screen indicates  mark)



9. Cut center of buttonhole being careful not to cut stitches on either side. Use a pin as a stopper. For utility stitch No.35 - 37, a hole is punched with a commercial eyelet punch and then cut with the seam ripper for a clean finish. When opening the keyhole, lay cardboard under the cloth.

No.41: Cut and remove the thread of center (jump-stitch).



**CAUTION: To prevent injury to persons.**

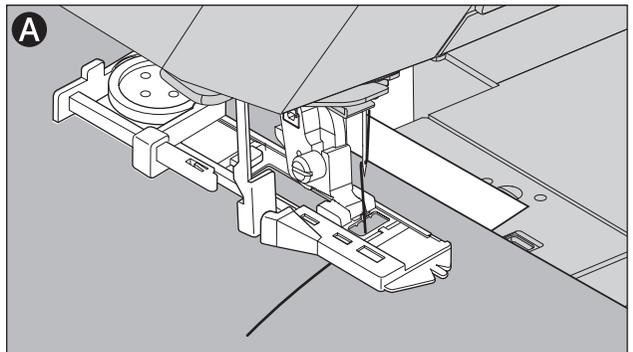
When using seam ripper, do not put your finger in the path of ripper.

**A. WHEN SEWING STRETCH FABRIC**

It is suggested that you use interfacing on the backside of the fabric.

**NOTE:**

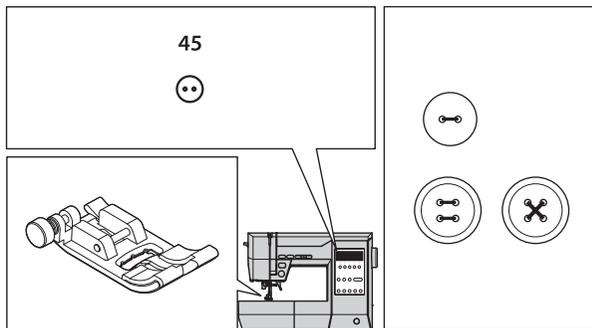
Density of buttonhole legs may be adjusted with stitch length control.



# SEWING ON BUTTONS

Stitch	Presser Foot
45	Regular Foot (H)

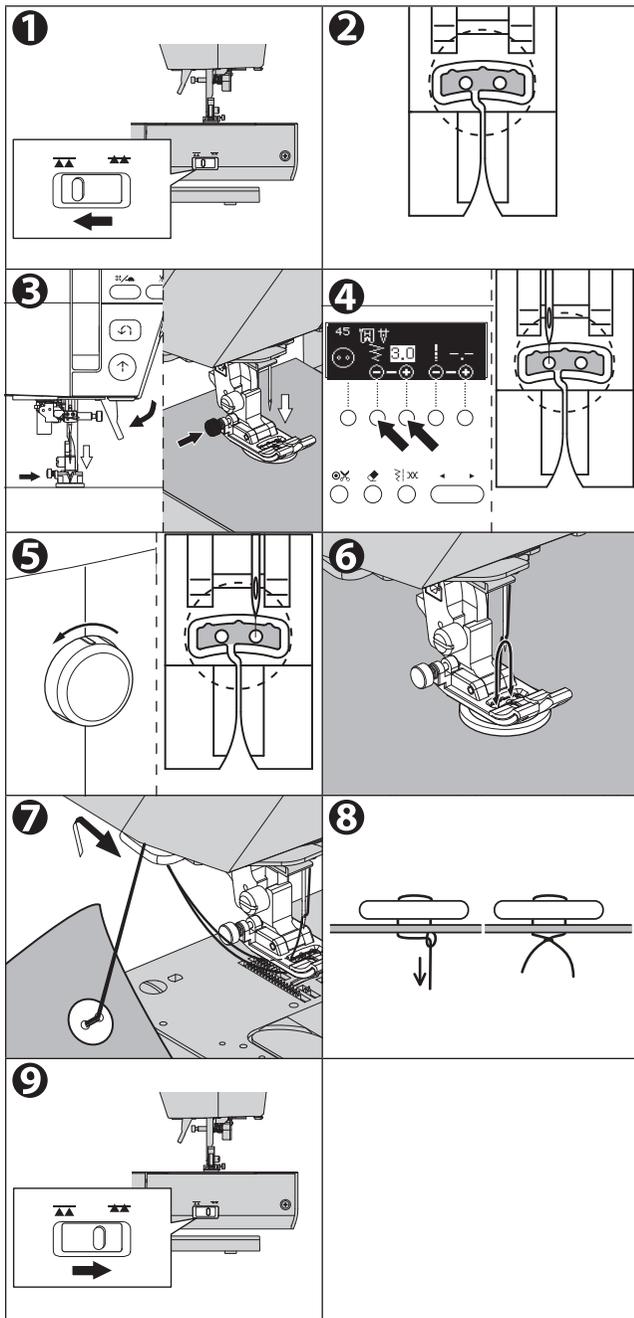
1. Lower the feed dog by moving the drop feed lever to the left.
2. Attach the regular foot and align two holes of button with slot of presser foot.
3. Push the button located on the left side of foot and lower the foot to hold the button securely.
4. Adjust the stitch width so that the needle enters the left hole of button.
5. Turn hand wheel by hand so needle enters the second hole. You may need to adjust the stitch width again.



**CAUTION: To prevent injury to persons.**  
Make sure that the needle does not hit the button during sewing. Otherwise needle may break.

6. Sew stitches at slow speed until machine stops automatically.
7. Raise the needle and foot, then cut the threads remaining about 10 cm to the fabric.
8. Pull the end of bobbin thread and pull upper thread to the wrong side of fabric. Tie them together.
9. 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 independently, or criss-cross over the first two holes.

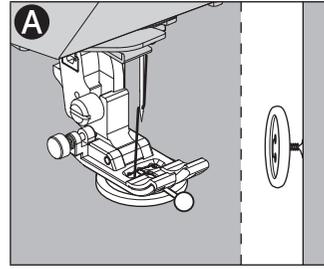


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## A. THREAD SHANK

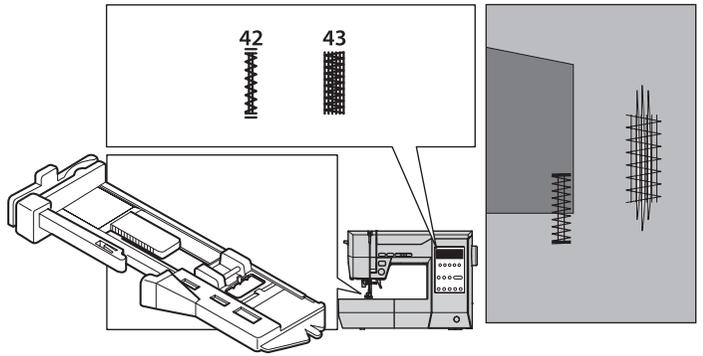
Sew-through buttons on coats and jackets should have a thread shank to make them stand away from the fabric. Place a straight pin or sewing machine needle on top of button between the holes, and sew over the pin or needle.

Pull thread to back of button and wind around stitches to form a firm shank. Tie thread ends securely.



# AUTOMATIC BAR-TACK/DARNING

Stitch	Presser Foot
42 Bar-tack, to reinforce areas that will be subject to strain, such as pocket corners.	Buttonhole Foot
43 Darning, mending and other applications.	



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 thread to the left.

3. Position fabric under presser foot so that the starting point comes this side.  
Lower the foot.

\* When you sew bar-tack on the edge of thick fabrics such as a pocket, place some fabric of the same thickness or a piece of cardboard (b) beside the fabric.

4. Lower the buttonhole lever completely.

**NOTE:**

If you do not lower the buttonhole lever properly, the monitor lamp lights red, it sews 2 or 3 stitches and stops.

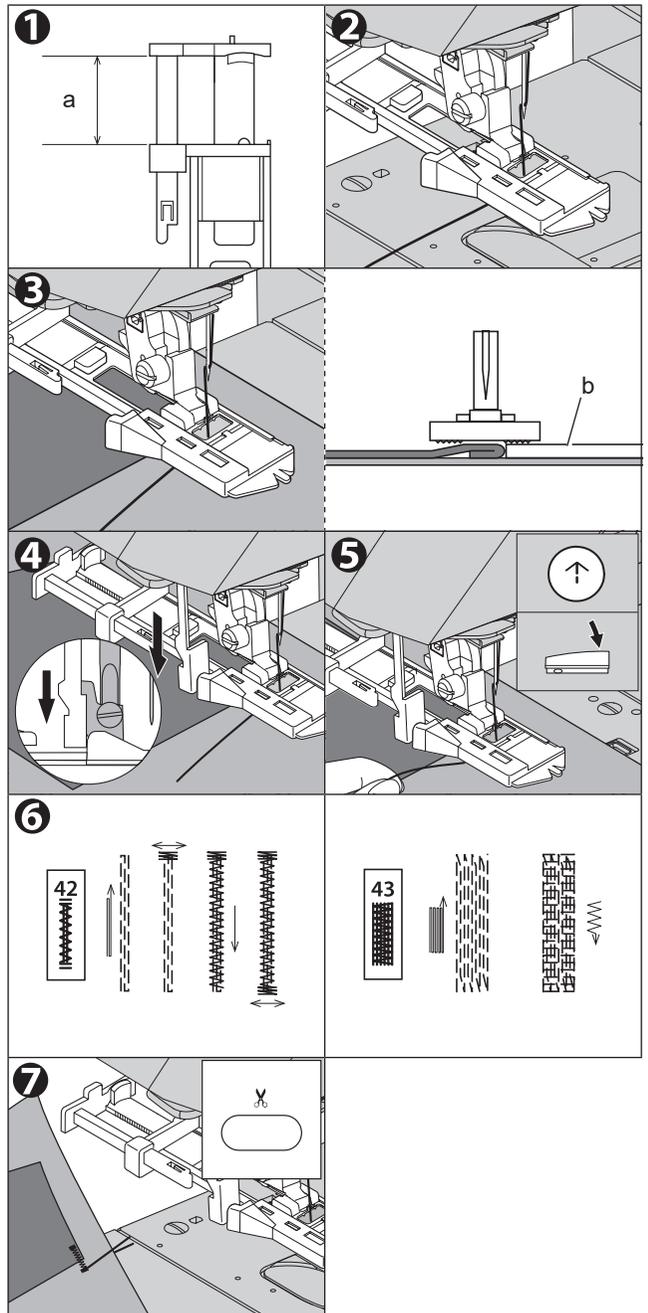
5. Hold upper thread lightly and start the machine.

6. The machine will sew bar-tack or darning as shown.  
And machine will stop automatically.

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

**NOTE:**

If you press the lock stitch/cut button before start sewing, the machine will cut threads automatically at the end of seam. (LCD screen indicates  mark)

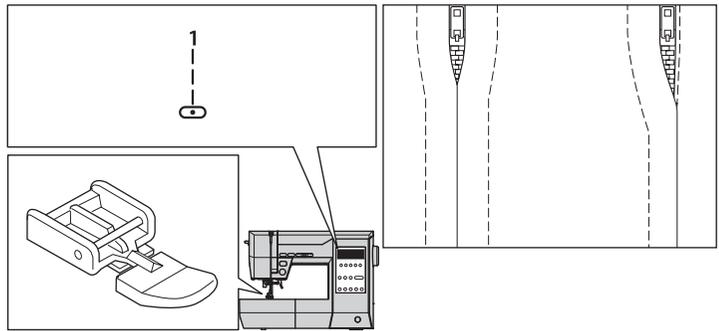


# INSERTING ZIPPERS (CENTERED INSERTION / LAPPED INSERTION)

Stitch	Presser Foot
1 Straight stitch (Center needle position)	Zipper Foot (E)

## NOTE: What is "baste"?

Before sewing the fabric with a sewing machine, temporarily sew it with long and loose stitches so that the fabric does not shift.



## CAUTION: To prevent injury to persons.

Zipper foot should be used for sewing center needle position straight stitch only. Do not change the needle position from the center, which is the automatic setting. Before sewing, turn the hand wheel toward you and confirm the needle does not hit the presser foot. It is possible that needle could hit the presser foot and break when sewing other patterns.

## A. CENTERED INSERTION

1. Baste the front sides of the fabrics so they face each other. Sew until end of opening.

- a: Top stitch
- b: End of opening
- c: Basting
- d: Wrong Side of fabric

2. Press open the seam allowance.

- Baste the zipper tape.
- d: Wrong Side of fabric
- e: Wrong Side of zipper

Place the zipper face down on the seam allowance. Match the center of the zipper with the seam line and baste it. Pull the slider toward you.

3. Attach the zipper foot.

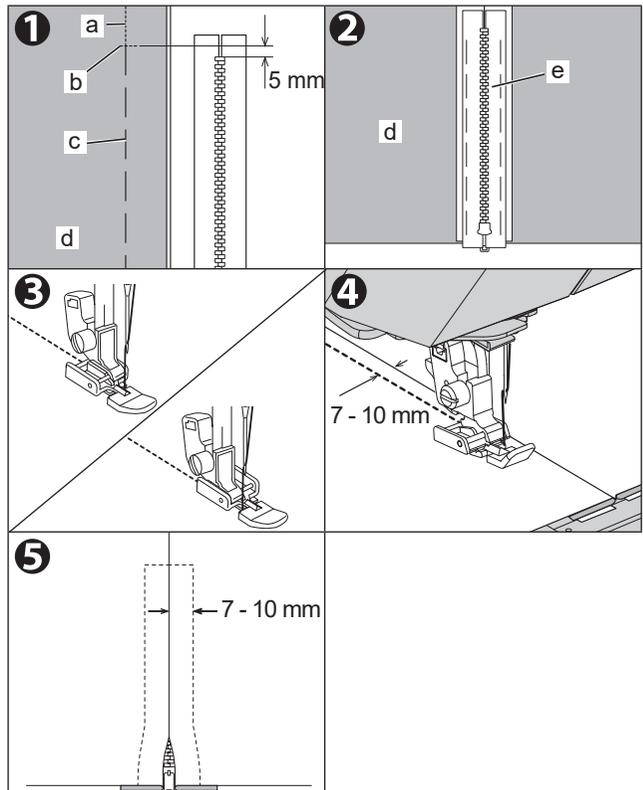
Attach the left side of the presser foot pin to the presser foot holder when sewing the right side of the zipper, and right side of the presser foot pin to the holder when sewing the left side of the zipper.

4. Stitch left side of the zipper from crotch end.

Sew a distance of 7 - 10 mm from the seam.

5. Stitch across the lower end and right side of zipper.

Remove the basting and press. Sew not only the left side but also the right side.



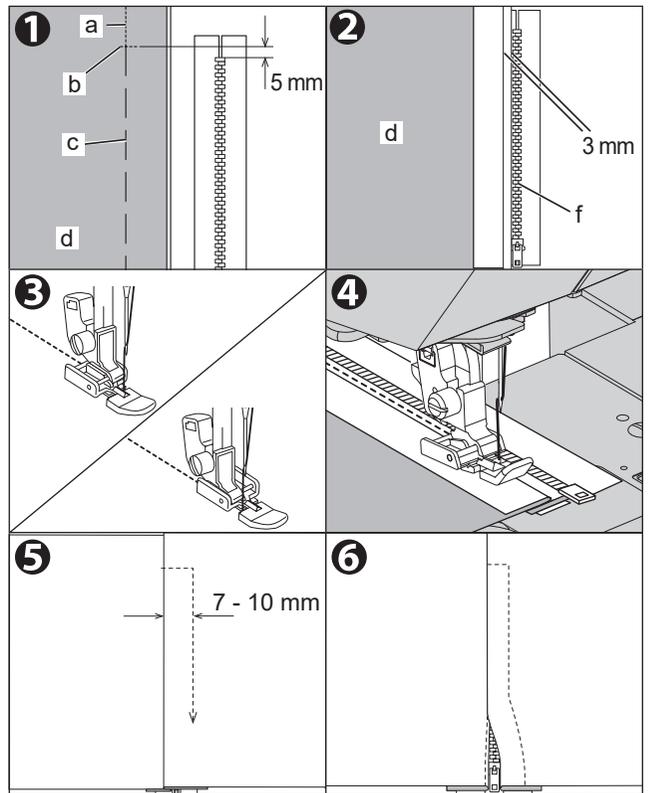
## NOTE:

If you use the straight stitch needle plate, the fabric will not sink into the holes in the needle plate, and you will be able to finish more beautifully.

For details on how to use it, see "STRAIGHT STITCH SEWING (WITH STRAIGHT STITCH NEEDLE PLATE)" on page 42.

## B. LAPPED INSERTION

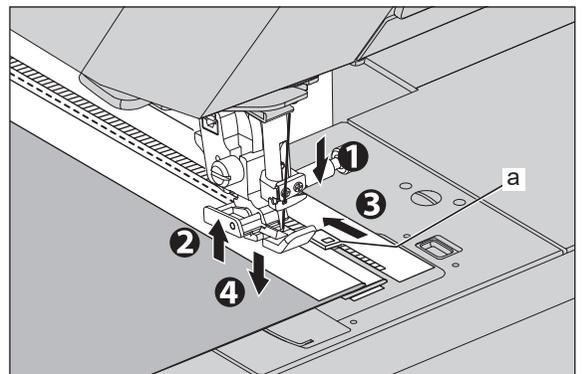
1. Baste the front sides of the fabrics face so they each other. Sew until end of opening.
  - a: Top stitch
  - b: End of opening
  - c: Basting
  - d: Wrong Side of fabric
2. Fold back to the left seam allowance. Turn under the right seam allowance to form a 3 mm fold.
3. Attach the zipper foot. Attach 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 left side of the zipper from end of opening. Sew so that the zipper foot does not hit teeth (f) of zipper.
5. Open the upper cloth, sew the lower end and the right side. On the right side, sew a distance of 7 - 10 mm from fold of the cloth.
6. Stop about 5 cm from the top of zipper. Remove the basting and open the zipper. Stitch the remainder of the seam.



## TO OPEN THE ZIPPER WHILE STITCHING

1. Stop stitching before you reach the slider. If the needle stop position is up position, lower the needle into fabric.
2. Raise the presser foot.
3. Open the zipper.
4. Lower the presser foot and continue stitching.

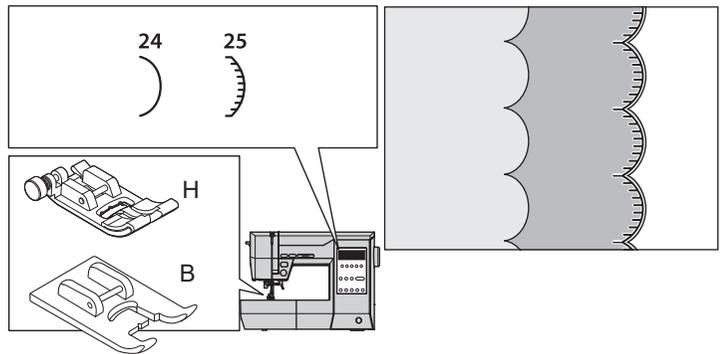
a: Slider



# SCALLOP STITCH

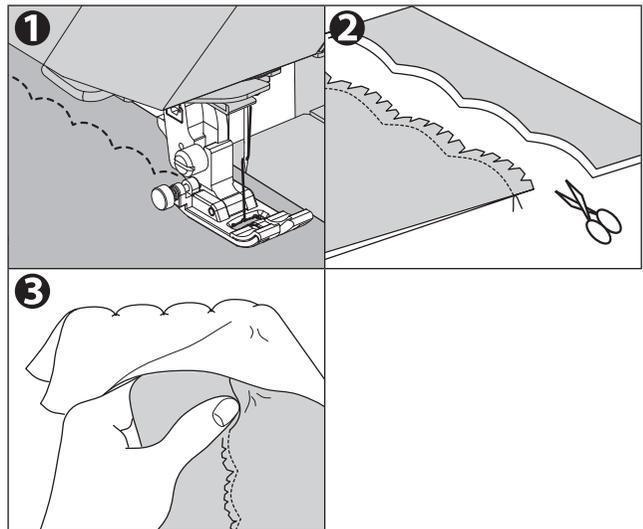
This stitch is used to sew edges on blouse collars and table cloths.

Stitch		Presser Foot
24	Scallop hem	Regular Foot (H) Satin Foot (B)
25	Scallop edging	



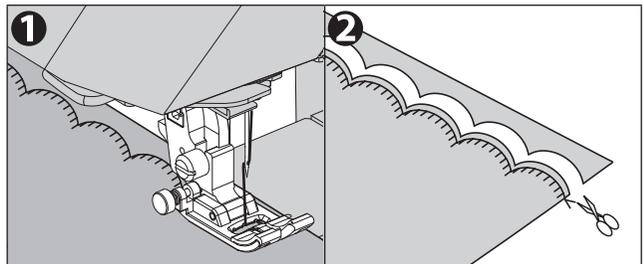
## A. SCALLOP HEM

1. Fold the fabric so that the right side is inward and sew the fabric along folded edge.
2. Cut the fabric along the seam leaving an allowance of 3 mm for seaming. Notch the allowance.
3. Turn fabric over, push out the curved seam to the surface and arrange by ironing.



## B. SCALLOP EDGING

1. Sew on hem line.  
Leave the edge of fabric so that the pattern is not over the edge.
2. Trim fabric close to stitching taking care not to cut the thread.

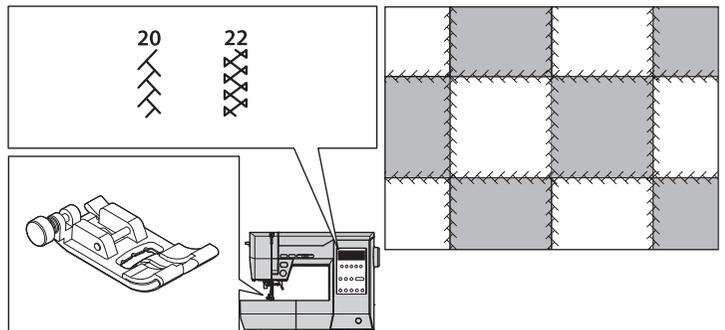


You can also sew scallop pattern with decorative stitch pattern No.41. In this case, use the satin foot. For details on how to select a decorative stitch pattern, see "DECORATIVE AND LETTER STITCH SEWING" on page 66.

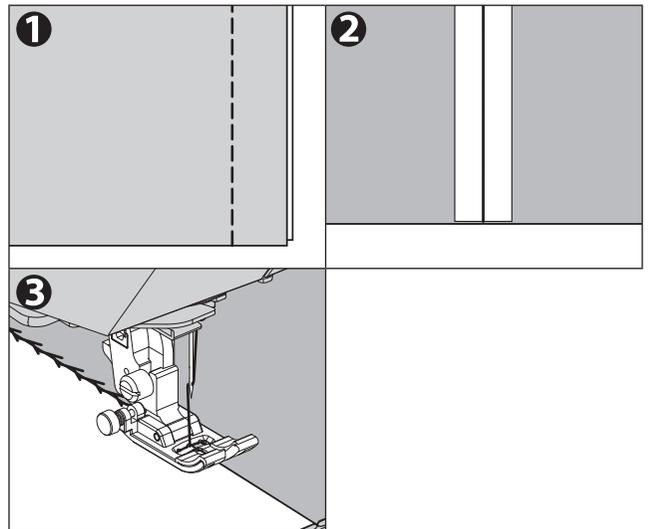
## PATCH WORK

Patch work is used to seam various fabrics and decorate them.

Stitch	Presser Foot
20, 22	Regular Foot (H)



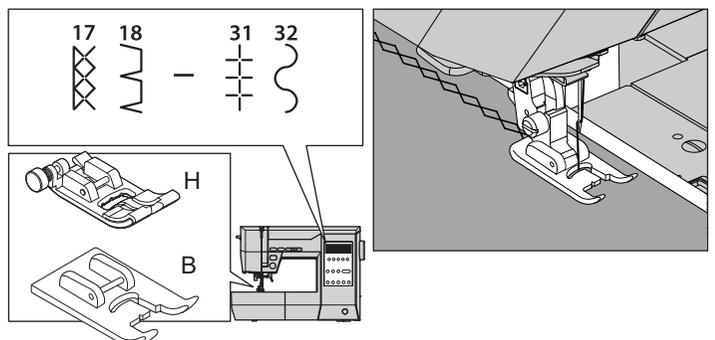
1. Face the two fabrics with their right sides facing each other and sew them.
2. Press open the seam allowance.
3. Sew so that the pattern extends over the both fabrics.



## UTILITY DECORATIVE STITCHES

Use for such as decorative hems and decorative stitching on shirt fronts. When sewing thin or elastic fabrics, use an interfacing.

Stitch	Presser Foot
17 - 32	Regular Foot (H)
	Satin Foot (B)



### NOTE:

The presser foot suitable for each pattern will be displayed in LCD screen.

# EYELET

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

Stitch	Presser Foot
44 Eyelet	Satin Foot (B)

You can choose the 3 sizes of eyelet by changing the stitch width.

1. Place the fabric under the presser foot and lower it.  
Start the machine.  
Machine will sew the eyelet and stop automatically.
2. Press the thread cutter button and raise the presser foot.

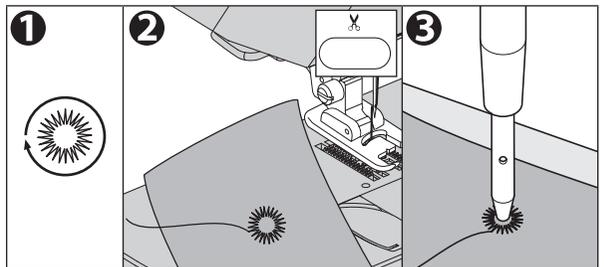
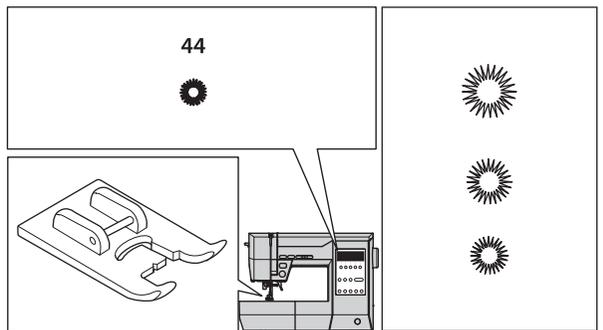
**NOTE:**

If you press the lock stitch/cut button before start sewing, the machine will cut threads automatically at the end of seam. (LCD screen indicates  mark)

3. Make a hole in the center of the eyelet.  
When opening the hole, lay cardboard under the cloth.

**NOTE:**

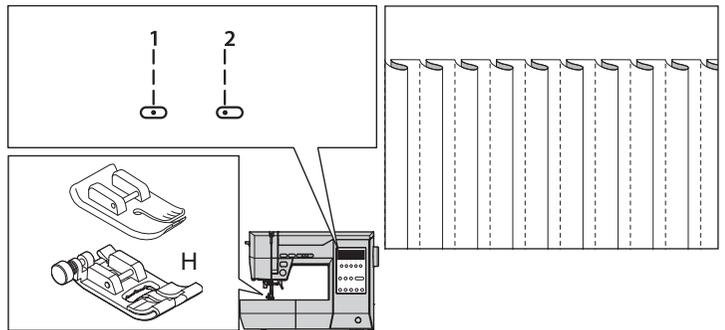
Eyelet punch is not provided with this machine.



# PIN TUCK

This pattern is used for decorate blouses etc.

Stitch		Presser Foot
1	Straight stitch (Center needle position)	Straight Stitch Foot Regular Foot (H)
2	Straight stitch (Left needle position)	Regular Foot (H)

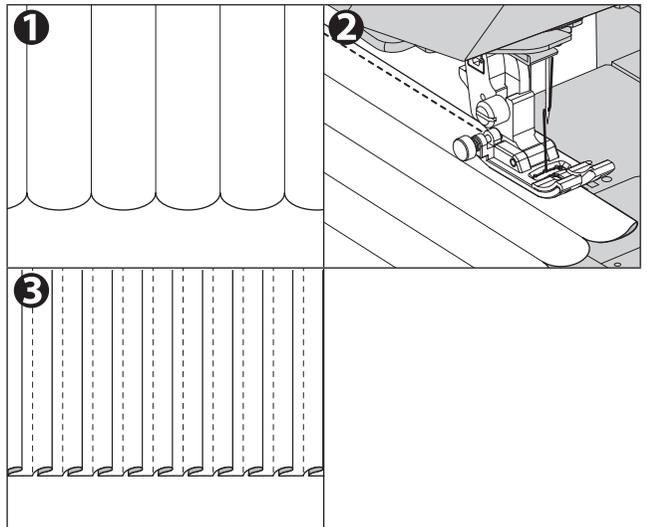


**CAUTION:** To prevent injury to persons. When using the straight stitch foot for utility stitch pattern No.1, do not change the needle position from the automatic setting. It is dangerous for the needle to hit the presser foot.

1. Arrange the fold of pin tuck by ironing.
2. Sew a pin tuck so as not to smooth out the fold.
3. Lay the folds in one direction by ironing.

**NOTE:**

If you use the straight stitch needle plate, the fabric will not sink into the holes in the needle plate, and you will be able to finish more beautifully. For details on how to use it, see "STRAIGHT STITCH SEWING (WITH STRAIGHT STITCH NEEDLE PLATE)" on page 42.



# QUILTING

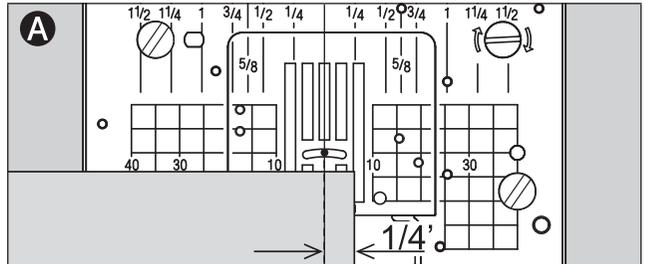
A quilt always consists of three layers of material. The top, middle and bottom. The top layer is formed by multiple geometrically shaped pieces of materials joined together.

Stitch	Presser Foot
1 Straight stitch (Center needle position)	Straight Stitch Foot Quilting Bar

**CAUTION: To prevent accidents.** Straight stitch foot should be used for sewing center needle position straight stitch only. Do not change the needle position from the center, which is the automatic setting. Before sewing, turn the hand wheel toward you and confirm the needle does not hit the presser foot. It is possible that needle could hit the presser foot and break when sewing other patterns.

## A. JOINING THE PIECES OF FABRIC

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

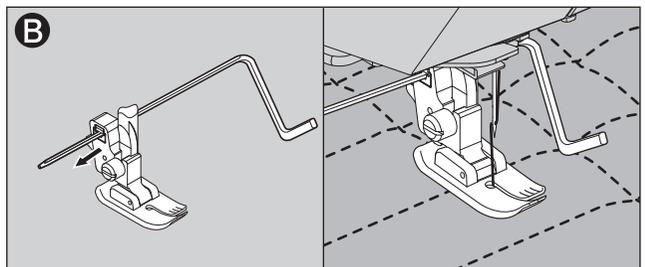
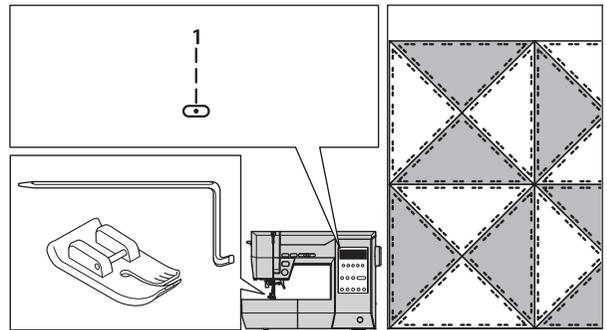


## B. QUILTING

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

### NOTE:

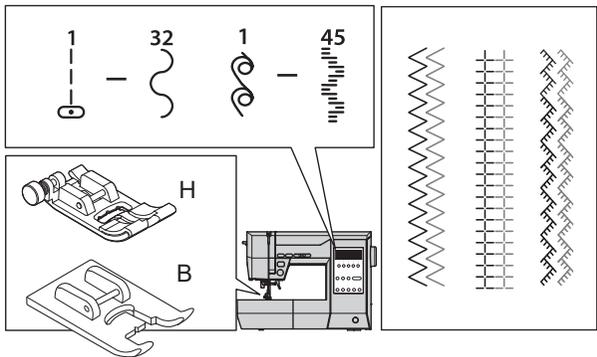
If you use the straight stitch needle plate, the fabric will not sink into the holes in the needle plate, and you will be able to finish more beautifully. For details on how to use it, see "STRAIGHT STITCH SEWING (WITH STRAIGHT STITCH NEEDLE PLATE)" on page 42.



# 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.

Stitch	Presser Foot
All utility patterns except No. 33-45 and all decorative stitch patterns may be sewn with a twin needle.	Regular Foot (H)
	Satin Foot (B)



## CAUTION: To prevent accidents.

- Use only needle designed for this machine. Other needles may break.
- The needle threader cannot be used. Thread each needle eye by hand.
- If the following messages a or b are displayed, be sure to replace the presser foot with a satin presser foot. Failure to use the satin presser foot may result in injury or malfunction. (See page 76)

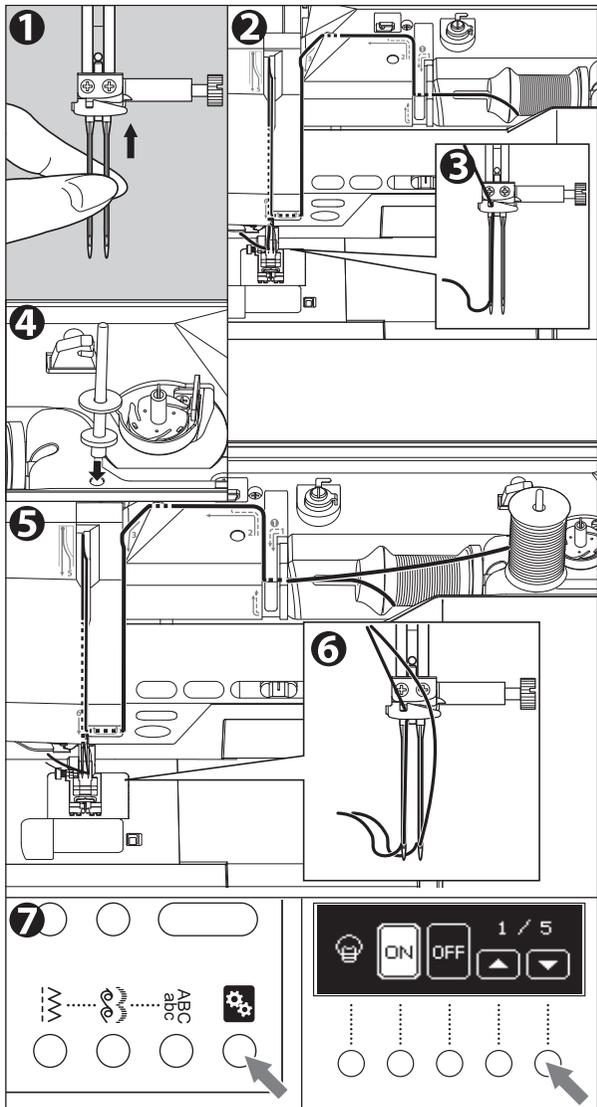
a.



b.

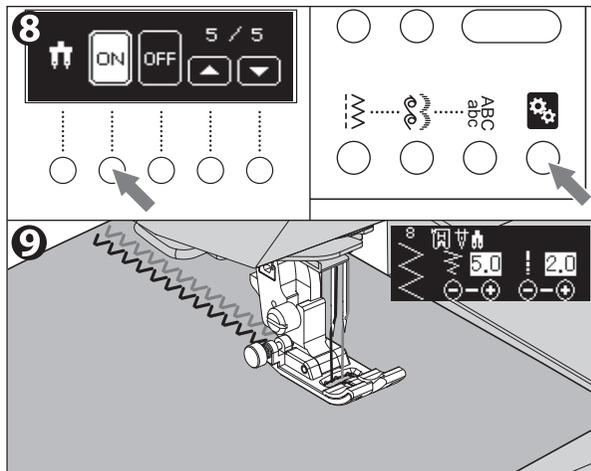


- Turn off the power whenever you change the needle or presser foot.



1. Remove the single needle and insert twin needle.
2. Thread the first thread as usual, following threading route.
3. Thread the left needle eye by hand from front to back.
4. Push the Auxiliary Spool Pin with felt washer into the hole.
5. Place second spool of thread and thread second thread the same as first.
6. 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.
7. Press the setting button, and then press the function button on the far right until the twin needle mode setting screen (5/5) is displayed.

8. Select ON and press the setting button.  
Twin needle mark will be indicated on the screen.  
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.

9. Always test sew selected stitch,

**NOTE:**

Some stitches look better than others sewn with a twin needle.

10. Sew project.

Twin needle mode will remain until you change it to OFF.

**CAUTION: To prevent accidents.**

If the machine power is turned off while the twin needle mode is ON, a message will be indicated the next time the power switch is turned on. Check if the attached needle and setting for the twin needle mode are matching. (See page 76)



**NOTE:**

- Decorative stitch pattern can also be sewn with a twin needle. Twin needle icon will appear on the LCD screen.
- Depending on the type of fabric, when sewing patterns have short stitches, the fabric may not be fed smoothly and the thread may get tangled.  
In this case, set the stitch length longer or lay interfacing under the fabric.
- Twin needle mode cannot be used if the following contains appears on the screen.

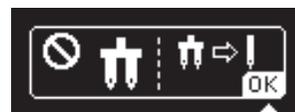
- a. While selecting unsuitable patterns, you are trying to turn on the twin needle mode. Return to sewing mode by pressing the setting button and select other pattern.

a.



- b. You have selected an unsuitable pattern even though the twin needle mode is ON. Follow steps below.

b.



1. Press OK (the function button on the far right). (See page 76)

2. Do one of the following:

2-a. Turn the power off and on again, and then select the pattern again.

2-b. If you want to sew with a single needle, change the twin needle to single needle and setting for twin needle mode to OFF.

# DECORATIVE AND LETTER STITCH SEWING

You can combine and sew decorative and letter stitches easily.

## A. TO SELECT DECORATIVE AND LETTER STITCH PATTERN

### 1. a. DECORATIVE STITCH PATTERN:

Press the decorative stitch button.

First 5 patterns of decorative stitch will appear on the lower line of LCD screen.

### b. LETTER STITCH PATTERN (Uppercase):

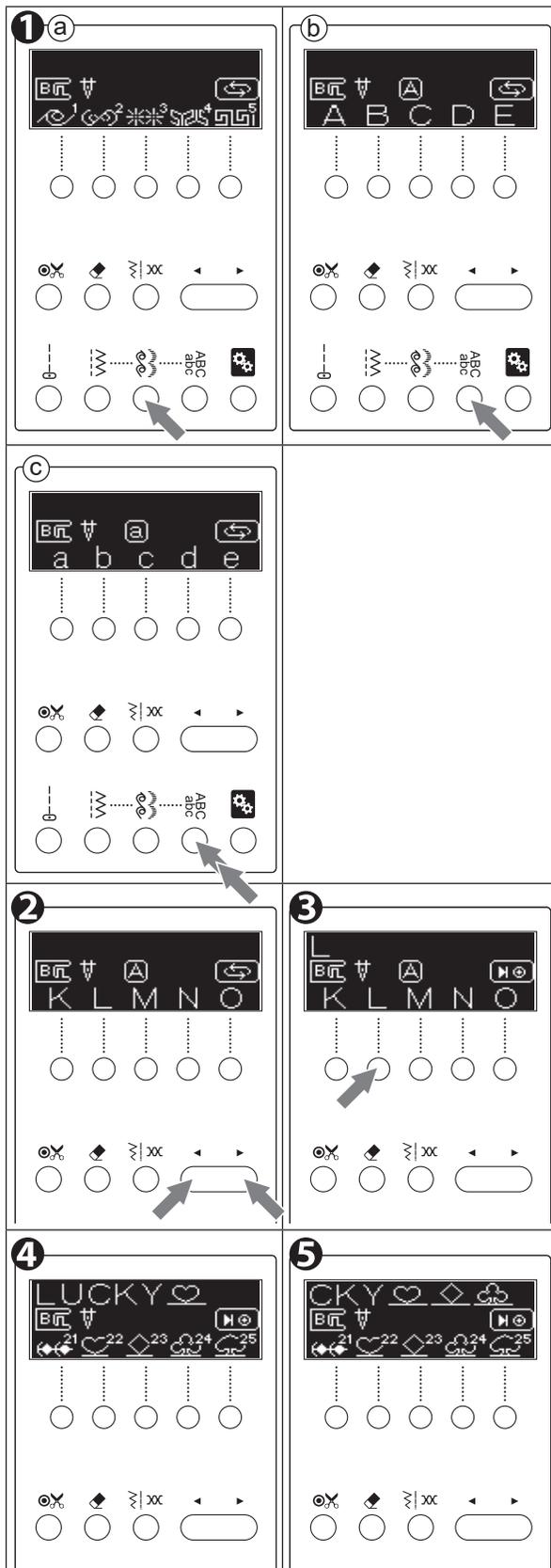
Press the letter stitch button once.

First 5 letters (A-E) of uppercase will appear.

### c. LETTER STITCH PATTERN (Lowercase):

Press the letter stitch button 2 times.

First 5 letters (a-e) of lowercase will appear.



- By pressing the stitch selection buttons (◀ or ▶), 5 patterns will change incremental or decremental. Press these buttons until desired pattern will appear.

- Press the function button to select the pattern you desire.

### NOTE:

One unit of decorative stitch pattern or one letter stitch pattern will be memorized.

Selected pattern (unit) will appear on the upper side of LCD screen.

One unit of decorative stitch pattern is indicated on the page 79.

- According to this procedure, select next patterns you desire.  
LCD screen will indicate selected patterns on top side in selected order.  
Machine can memorize 40 patterns maximum.

- As selected patterns over the indicating area, disappear from the screen, you can check them by pressing the width/length/tension button. (See next page)

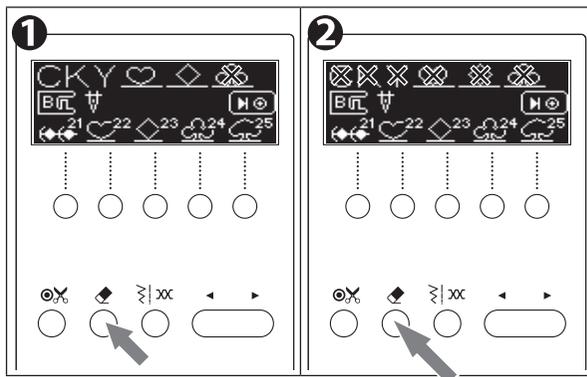
### NOTE:

The machine will change sewing mode automatically to "Single", "Single with Cut", "Repeat". (See page 69)

## B. TO DELETE SELECTED PATTERN

1. If you selected undesired pattern, press the clear button short time (less than 0.5 sec.).  
Machine will delete the last selected pattern.
2. If you want to delete all patterns, press the clear button long time (over 0.5 sec.).  
Machine will delete all selected patterns.

Also, you can delete the middle one of patterns by check mode as below.



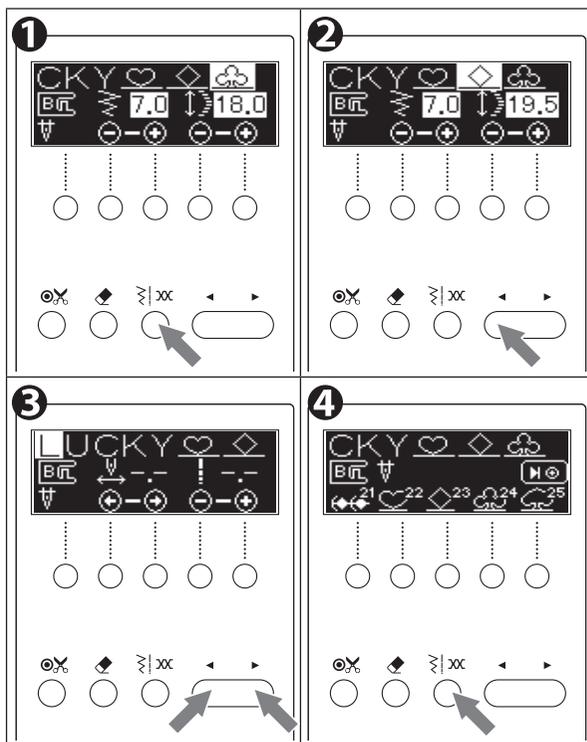
## C. TO CHECK SELECTED PATTERNS

You can check selected patterns as following.

1. Press the width/length/tension button.  
Last selected pattern will be highlighted.
2. Press the stitch selection button (◀).  
Highlight will move one pattern to the left.
3. Check selected patterns by pressing the stitch selection buttons (◀ or ▶).  
(You can delete highlighted pattern by pressing clear button at this time.)
4. Press the width/length/tension button once or twice to return to selecting mode.

### NOTE:

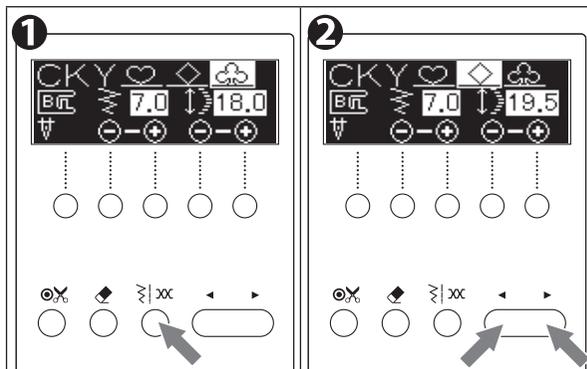
When you reached the value maximum or minimum, beep sound will be generated. (If you set the buzzer so that it does not sound, it will not sound. For details, see "SETTING BUTTON (MACHINE SETTINGS)" on page 20.)



## D. ADJUSTING STITCH WIDTH, LENGTH AND THREAD TENSION

You can adjust the stitch width and length of each decorative stitch pattern.  
And also, you can adjust the thread tension of combined patterns.

1. Press the width/length/tension button.
2. Select the pattern (highlight) you want to adjust by pressing the stitch selection buttons (◀ or ▶).



<<Continued on next page.>>

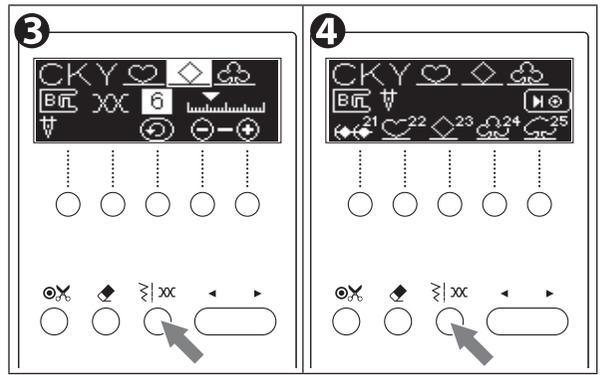
<<Continued from previous page.>>

3. Press the width/length/tension button again to adjust the thread tension.

**NOTE:**

- The procedures to adjust them are same as adjusting utility stitch, see page 16-19 to adjust the width, length and thread tension.
- The letter stitch patterns and some decorative stitch patterns can not change the width or length. In this case, width/length mode will not appear.

4. Press the width/length/tension button again to return to selecting mode.

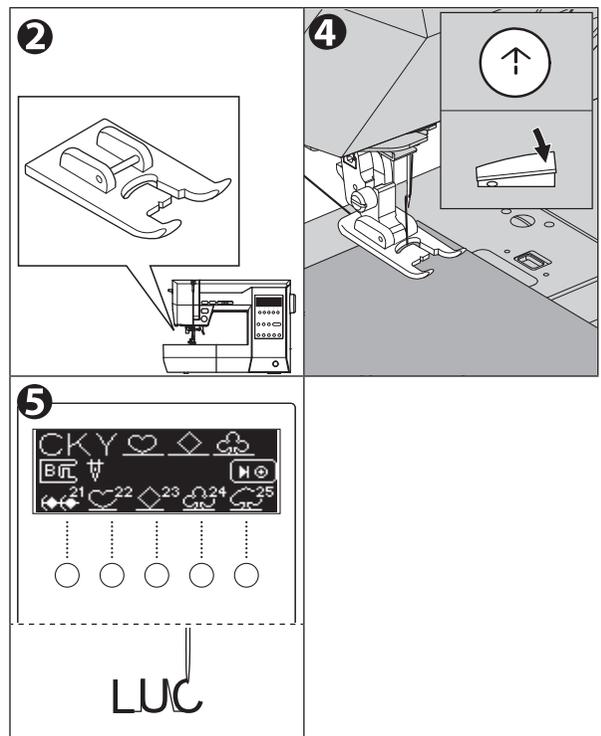


**E. TO SEW SELECTED PATTERNS**

**NOTE:**

- See "FABRIC, THREAD AND NEEDLE TABLE" on page 32 to select the appropriate thread and needle. Of the needles and threads that are suitable for the fabric, you may be able to sew more beautifully if you use a thinner ones.
- When sewing very thin fabrics, it is suggested that you use interfacing on the backside of fabric.

1. Select the decorative and letter stitch pattern you want to sew. (See page 66)
2. Attach the Satin Foot (B) when sewing decorative and letter stitch pattern. (See page 30)
3. Set the selected decorative and letter stitch pattern as necessary. (See page 67)
4. Lower the presser foot and start sewing.
5. The sewing machine sews the selected patterns in order from the beginning.
6. When you have finished sewing, raise the presser foot and pull out the fabric.



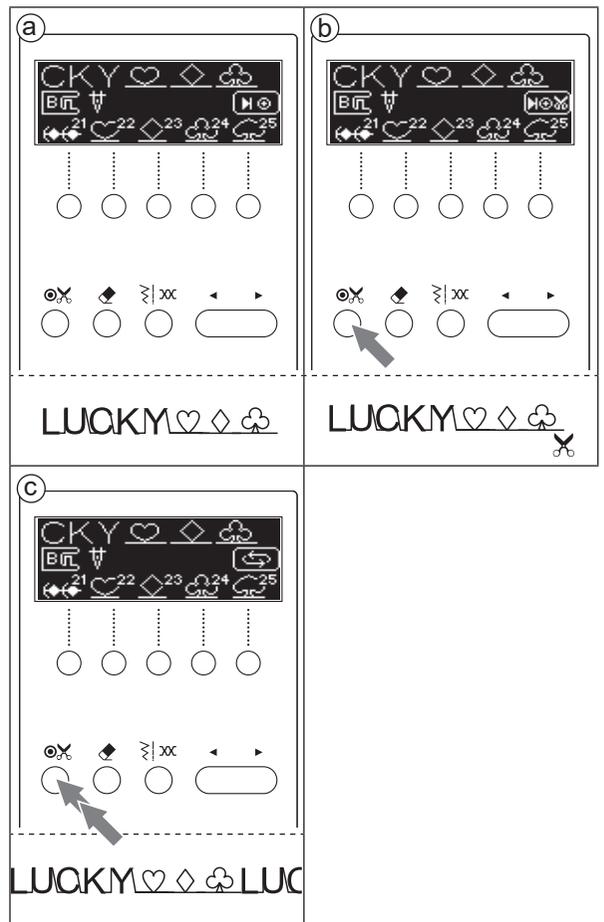
## Sewing mode (Single / Single with Cut / Repeat)

You can change the sewing mode by pressing the lock stitch/cut button repeatedly.

- Single mode (Pre-set when letter or 2 more decorative stitch patterns are memorized.)  
The mark  will appear on the LCD screen.  
The machine will stop automatically after sewing selected patterns once and lock stitch.
- Single with Cut mode  
The mark  will appear on the LCD screen.  
After sewing the selected patterns once and lock stitch, the machine will automatically cut threads and stop.
- Repeat mode (Pre-set when one decorative stitch pattern is memorized.)  
The mark  will appear on the LCD screen.  
The machine will sew selected patterns repeatedly until you stop the machine.  
Set to this mode when you sew one or more decorative stitch patterns repeatedly.

### NOTE:

- The direction in which decorative stitch patterns and letters are actually sewn is different from the direction in which they are displayed on the screen. Rotate the screen display 90 degrees clockwise and sew vertically.
- At single mode or single with cut mode, lock stitch will be sewn at top and end of stitches.
- If you change the sewing mode at the middle of sewing, stop sewing once. Change the sewing mode by touching the lock stitch/cut button and restart.
- When you turn off the power, all memorized decorative and letter stitch patterns will be deleted.



## F. TIPS

- a. To sew lock stitch immediately. (at repeat mode)  
Stop sewing and press the reverse button. When you restart sewing, the machine will sew lock stitch immediately.

### NOTE:

If you want to cancel the lock stitch, press the reverse button again without pressing the start/stop button. The lock stitch setting will be canceled.

- b. To sew lock stitch after one complete pattern. (at repeat mode)  
Press the reverse button while sewing memorized patterns.

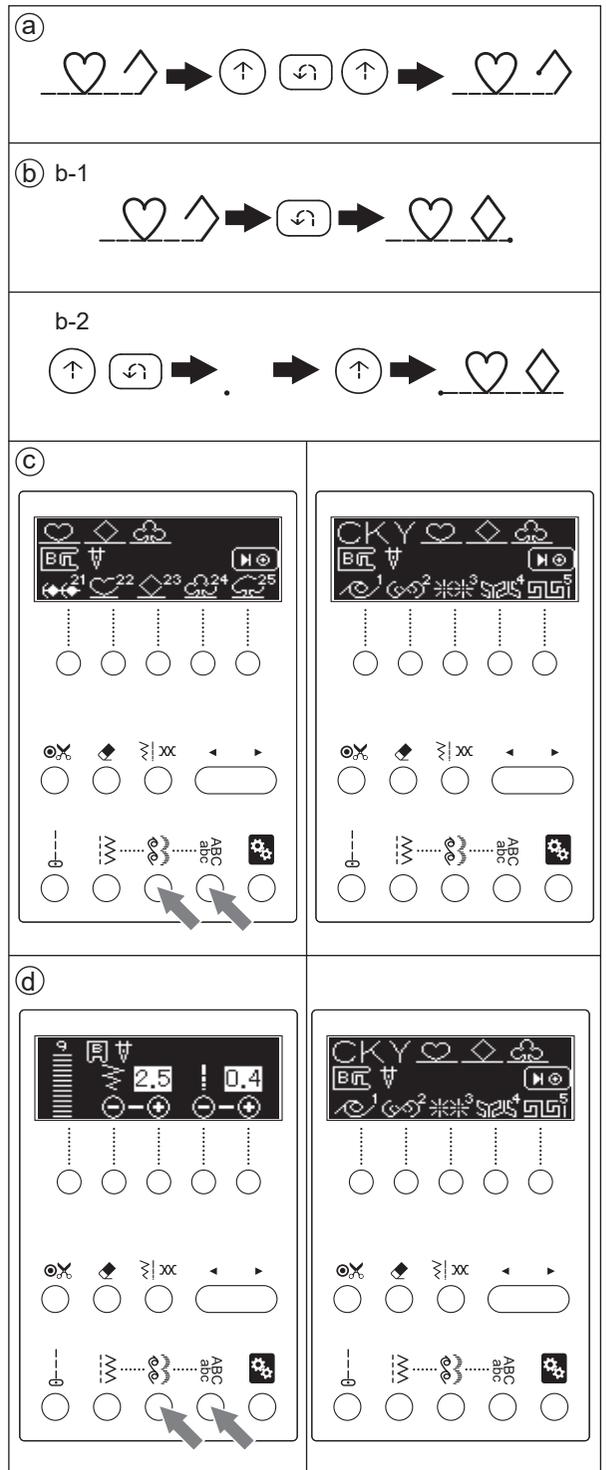
### NOTE:

If you want to cancel the lock stitch, press the reverse button again before finishing sewing the pattern. The lock stitch setting will be canceled.

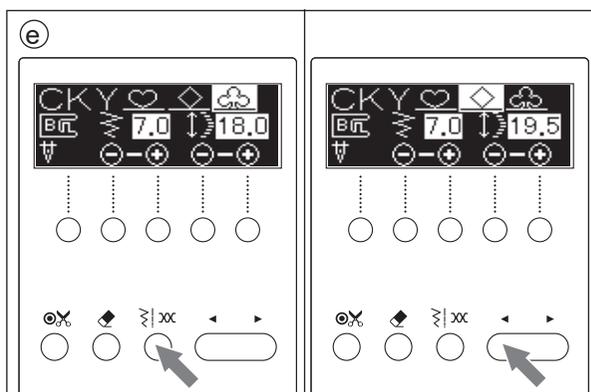
- b-1. The machine will sew one complete pattern and lock stitch.  
b-2. If you press the reverse button before you start sewing, you can also lock stitch at the beginning of sewing.
- c. To sew selected patterns from beginning.  
When you stop sewing at the middle of patterns, you may want to restart selected patterns.  
In such case, press the decorative or letter stitch button.
- d. To recall selected patterns.  
If you select and sew the utility patterns after sewing decorative or letter stitch patterns, the machine will retain the decorative or letter stitch patterns you selected.  
To recall these patterns, press the decorative or letter stitch button.  
Machine will recall selected patterns.

### NOTE:

- The changed thread tension will return to the automatic setting value.
- When you turn off the power, selected decorative and letter stitch patterns will be deleted.



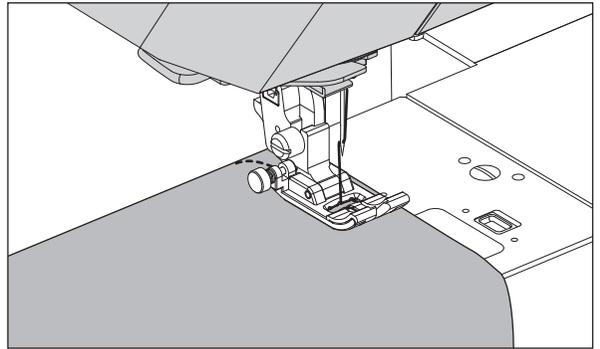
- e. To sew from middle of selected patterns.  
Press the width/length/tension button (check mode)  
and select the pattern you want to start (highlight).  
Start sewing at this mode. (See page 67)



## FREE ARM SEWING

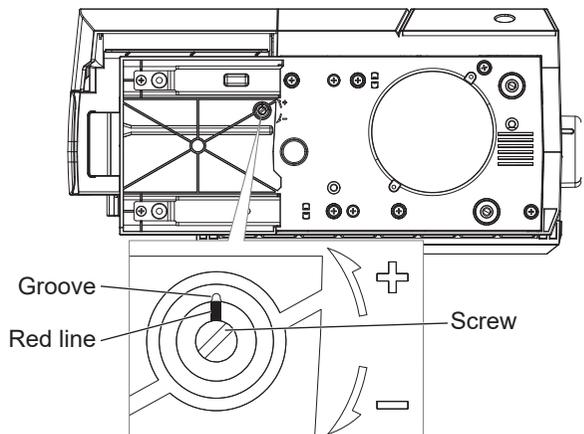
For free arm sewing, just remove the extension table. You can use this machine as a free arm machine. You can easily sew armhole, lower sleeve edge and hem of trousers etc.

- See page 8 for "REMOVING THE EXTENSION TABLE".
- See page 51 for "BLIND HEM STITCHING".



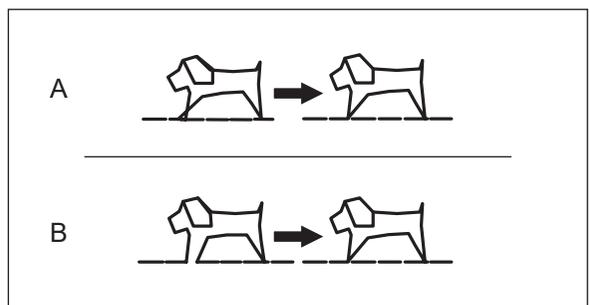
## ADJUSTING THE STITCH BALANCE

Depending on the type of fabric you sew, it may be necessary to adjust the stitch balance. This adjustment is needed when the decorative or the letter stitch pattern is misformed. Turn screw which is located bottom of the machine in either direction as may be required. Adjust it by turning the screw little by little using the red line and the outer groove as a guide.



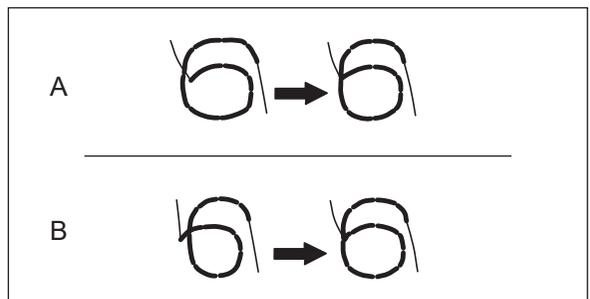
## DECORATIVE STITCH PATTERN

- If patterns are misformed as illustration (A), turn screw in direction of symbol (+).
- If patterns are misformed as illustration (B), turn screw in direction of symbol (-).



## LETTER STITCH PATTERN

- If patterns are misformed as illustration (A), turn screw in direction of symbol (+).
- If patterns are misformed as illustration (B), turn screw in direction of symbol (-).



# MAINTENANCE

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**DANGER: To reduce the risk of electric shock.**

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

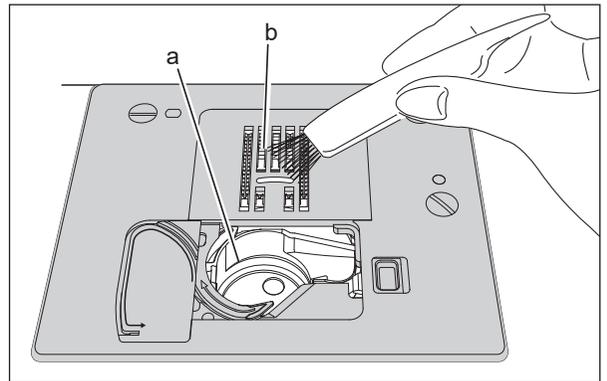
**NOTE:**

- \* This machine is using LED light to light up stitching area. If it is not light up, call your local dealer.
- \* There is no need to lubricate this machine.
- \* If the machine gets dirty, soak a soft cloth with a small amount of mild detergent and wipe well. Don't use thinner and benzine.

## A. BOBBIN HOLDER

Remove the bobbin cover and the bobbin, and clean them with the accessory brush.

- a: Bobbin holder
- b: Feed dog



## B. HOOK RACE AND FEED DOG

Remove the needle plate and clean the hook race and the feed dog regularly.

### CAUTION: To prevent injury to persons.

- There is a thread cutter device at the lower left of the feed dog under the needle plate.
- Pay attention because sharp parts are there.
- Do not touch the thread cutter device directly.
- Pay attention to the point of the needle.

1. Remove the following items.

- Extension table
- Needle
- Presser foot
- Presser foot holder
- Bobbin cover
- Bobbin

a: Driver for needle plate

b: 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 (c) and remove it.  
d: Thread cutter device

### CAUTION: To prevent the accidents or the injury to persons.

- Do not touch the thread cutter device (d).
- Do not remove the brush (e).

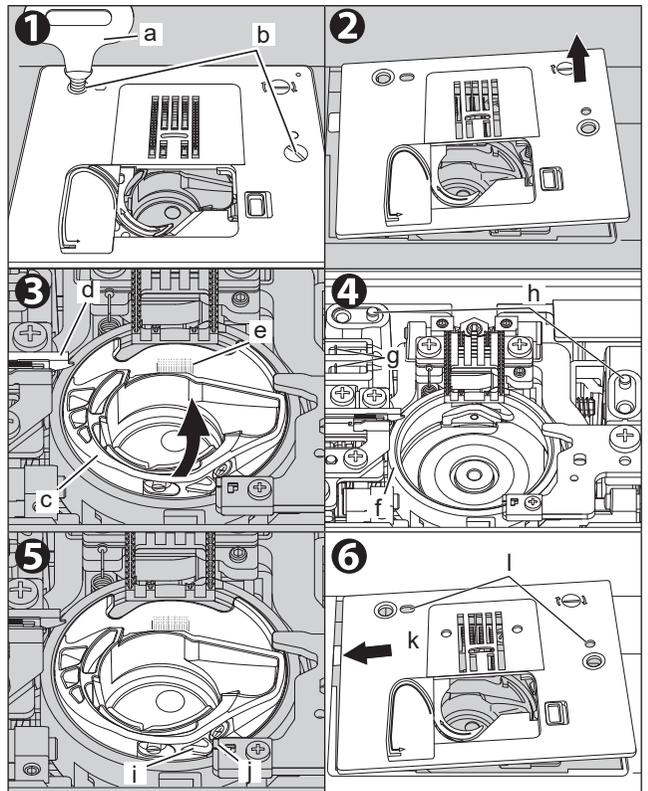
4. Clean the hook race (f), feed dog and bobbin holder. Also clean them, using a soft, dry cloth.  
g: Needle plate sensor  
h: Pins

### CAUTION: To prevent accidents.

Do not touch the needle plate sensor (g). The sensor may be damaged.

5. Replace the bobbin holder into the hook race so that the tip (i) fits to the stopper (j) as shown.

6. Replace the needle plate inserting the hook (k) and holes (l) into the machine. At that time, align the holes (l) with the pins (h). (See step 4)  
Retighten the screws.



# MESSAGE

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.	
5. Lower the presser foot.	
6. Machine cannot memory any more.	
7. Select a pattern.	
8. Release the reverse button.	
9. Release the start/stop button.	
10. Rethread the upper or bobbin 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 and rethread the machine.	
15. The straight stitch needle plate has been attached. Can only be used with utility stitch patterns No.1-3, 6-7. Attach a presser foot appropriate for the pattern. Overcasting foot and buttonhole foot cannot be used.	
16. The standard needle plate has been attached. Make sure you have the correct presser foot attached for the pattern you have selected.	
17. The standard needle plate or the straight stitch needle plate has been removed. Attach the appropriate one.	

<p>18. The standard needle plate or the straight stitch needle plate has been removed on the embroidery mode. Attach the appropriate one.</p> <p>* Displayed only when an embroidery unit (sold separately) is connected.</p>	
<p>19. A pattern other than a straight stitch was selected with the straight stitch needle plate attached.</p>	
<p>20. The standard needle plate has been attached in embroidery mode.</p> <p>* Displayed only when an embroidery unit (sold separately) is connected.</p>	
<p>21. Make sure that the straight stitch foot is attached. Because the pattern was changed from a straight stitch on the left needle position to a straight stitch on the center needle position. This will be displayed if the straight stitch needle plate is attached.</p>	
<p>22. Make sure that the regular foot is attached. Because the pattern was changed from a straight stitch on the center needle position to a straight stitch on the left needle position. This will be displayed if the straight stitch needle plate is attached.</p>	
<p>23. The straight stitch needle plate has been attached in twin needle mode. Remove the twin needle and replace the single needle.</p>	
<p>24. Twin needle mode is in progress. Press OK (the function button on the far right). (See page 65)</p> <p><b>⚠ CAUTION: To prevent accidents.</b> Check if the attached needle and setting for the twin needle mode are matching.</p>	
<p>25. The pattern you have selected or are about to select is not compatible with twin needles. Press OK (the function button on the far right). (See page 65)</p>	
<p>26. Change to the satin foot. The overcasting foot cannot be use. Change to the satin foot and press OK (the function button on the far right). (See page 64)</p> <p><b>⚠ CAUTION: To prevent the accidents or the injury to persons.</b> Be sure to use the satin foot to prevent injury or malfunction.</p>	
<p>27. Change to the satin foot. The blind foot cannot be use. Change to the satin foot and press OK (the function button on the far right). (See page 64)</p> <p><b>⚠ CAUTION: To prevent the accidents or the injury to persons.</b> Be sure to use the satin foot to prevent injury or malfunction.</p>	
<p>28. Turn off the power switch and reconnect the embroidery unit.</p> <p>* Displayed only when an embroidery unit (sold separately) is connected.</p>	
<p>29. System error. The thread winding switch inside the sewing machine is damaged. (Contact your local dealer)</p>	

## HELPFUL HINTS

PROBLEM	CAUSE	CORRECTION	PAGE
<b>Upper thread breaks</b>	Machine not properly threaded.	Re-thread machine.	25
	Thread entwined around the bobbin holder.	Remove entwined thread.	73, 74
	Needle inserted incorrectly.	Re-insert needle.	33
	Thread tension too tight.	Readjust thread tension.	18
	Thread of incorrect size or poor quality.	Choose correct thread.	32
<b>Bobbin thread breaks</b>	Bobbin threaded incorrectly.	Re-thread the bobbin.	24
	Thread entwined around the bobbin holder.	Remove entwined thread.	73, 74
	Dirt on the hook race.	Clean the hook race.	74
<b>Machine skips stitches</b>	Needle inserted incorrectly.	Re-insert needle.	33
	Bent or blunt needle.	Insert new needle.	33
	Incorrect size of needle.	Choose correct size needle for fabric.	32
	(on stretch fabric)	(use stretch needle)	
<b>Fabric puckers</b>	Machine not properly threaded.	Re-thread machine.	25
	Bobbin threaded incorrectly.	Re-thread the bobbin.	24
	Blunt needle.	Insert new needle.	33
	Thread tension too tight.	Readjust thread tension.	18
<b>Machine makes loose stitches or loops</b>	Bobbin threaded incorrectly.	Re-thread the bobbin.	24
	Machine not properly threaded.	Re-thread machine.	25
	Tension not adjusted properly.	Readjust thread tension.	18
<b>Stitch pattern is misformed</b>	Presser foot is not suited for the pattern.	Attach correct foot.	40-
	Thread tension is not balanced.	Adjust the thread tension.	18
	Stitch balance is not correct.	Adjust the stitch balance.	72
<b>Cannot select stitch patterns</b>	The straight stitch needle plate is attached.	Select a pattern that allows use of the straight stitch needle plate. (No.1 – 3, 6, 7) Or, replace the straight stitch needle plate with the standard needle plate.	42
<b>Threader does not thread needle eye</b>	Needle is not raised.	Raise the needle.	11, 13
	Needle inserted incorrectly.	Re-insert needle.	33
	Bent needle.	Insert new needle.	33
<b>Machine does not feed properly</b>	Feed dog are lowered.	Raise the feed dog.	13
	Stitch length not suitable for fabric.	Regulate stitch length.	17
	Lint and dust accumulated around feed dog.	Clean the feed dog area.	73, 74
<b>Needle breaks</b>	Fabric pulled while sewing.	Do not pull fabric.	34
	Needle is hitting the presser foot.	Select correct foot and pattern.	40-
	Needle inserted incorrectly.	Re-insert needle.	33
	Incorrect size needle or thread for fabric being sewn.	Choose correct size needle and thread.	32
<b>Machine runs with difficulty</b>	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.	73, 74

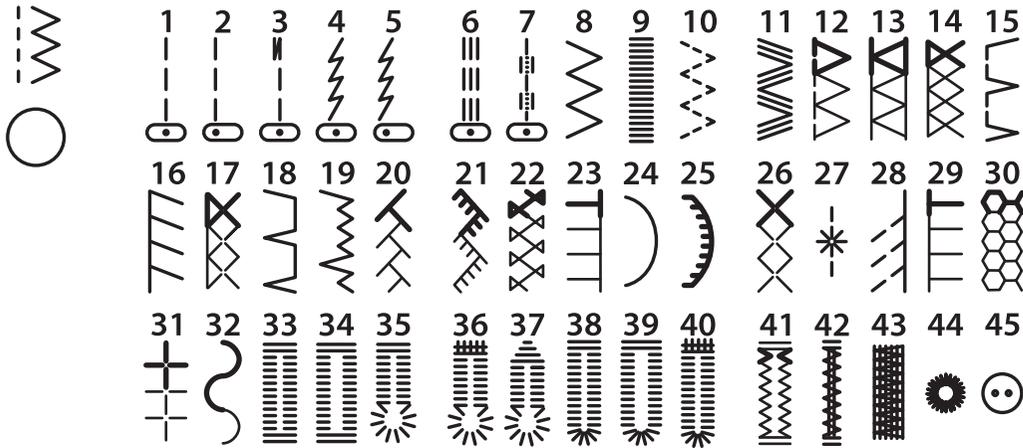
PROBLEM	CAUSE	CORRECTION	PAGE
<b>Machine will not run</b>  Monitor lamp ...Green Light ...Red Light ...Red Light	Cord not plugged into electrical outlet. Power switch is not turned on. Upper thread or bobbin thread has broken or missing. Bobbin winder spindle is pushed to the right. Presser foot is not lowered. Buttonhole Sewing Mode; - Buttonhole lever is not lowered completely. - Buttonhole foot is not attached.	Insert plug fully into outlet. Turn on the switch. Rethread the upper thread or bobbin thread. Push spindle to the left. Lower the foot.  Lower the buttonhole lever.  Attach the buttonhole foot.	9 9 24, 25  23 12  52, 56  52, 56
<b>LED not light</b> <b>Beep not sound</b>	Setting is turned OFF.	Turn on setting.	20

# PATTERN CHART

## Utility Stitch

The length of some utility stitch patterns is displayed as one unit length for each pattern. (See page 17)

The bold part below is one unit of each pattern. If the pattern does not have a bold part, the length of one stitch will be displayed on the screen.

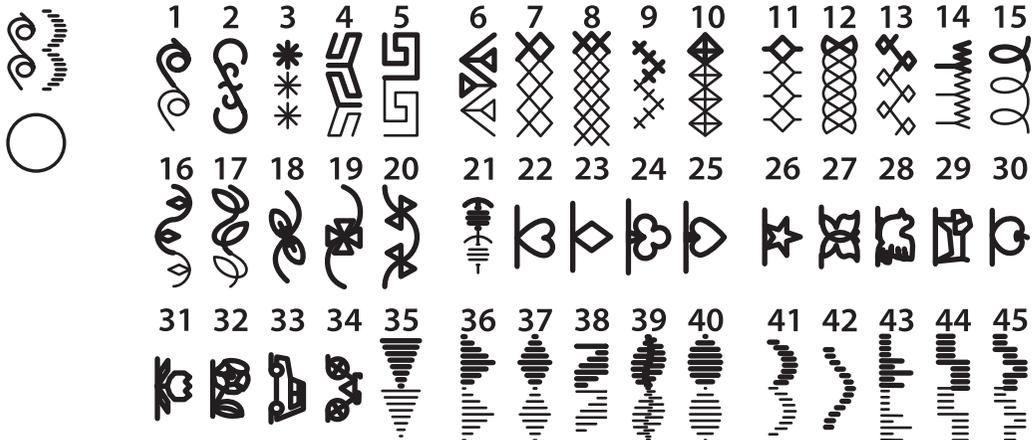


## Decorative Stitch

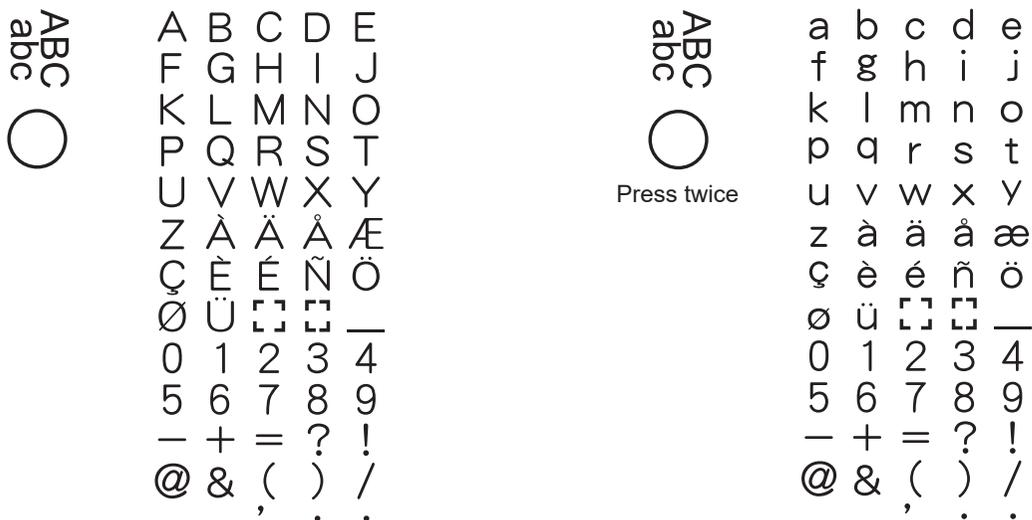
Bold part of decorative stitch pattern is one unit of pattern which will be memorized.

At the pattern (except for No.14, 35-45), stitch length is indicated as the length of one unit.

At pattern No.14, 35-45, stitch length is indicated as the length of one stitch. (See page 17)



## Letter Stitch



## SPECIFICATIONS

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<b>Rated voltage</b>	100–240V
<b>Nominal consumption</b>	55W
<b>Frequency</b>	50-60Hz
<b>Light</b>	LED
<b>Machine dimensions (mm)</b> Length x Width x Height	427 x 196 x 300
<b>Net weight (kg)</b>	8.0



