



USER'S GUIDE

H | CLASS™ 600E

IMPORTANT SAFETY INSTRUCTIONS

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

DANGER - To reduce the risk of electric shock:

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

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

- This sewing machine is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the sewing machine by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the sewing machine.
- Use this sewing machine only for its intended use as described in this manual. Use only attachments recommended by the manufacturer as contained in this manual.
- Never operate this sewing machine if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into water. Return the sewing machine to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.
- Never operate the sewing machine with any air openings blocked. Keep ventilation openings of the sewing machine and foot control free from the accumulation of lint, dust, and loose cloth.
- Never drop or insert any object into any opening.
- Do not use outdoors.
- Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
- To disconnect, turn switch to the off ("0") position, then remove plug from outlet.
- Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
- Keep fingers away from all moving parts. Special care is required around the sewing machine needle.
- Always use the proper needle plate. The wrong plate can cause the needle to break.
- Do not use bent needles.
- Do not pull or push fabric while stitching. It may deflect the needle causing it to break.
- Wear safety glasses.
- 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.
- 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.
- If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.
- Don't tie up in a bundle while in use. Remove the power cord from the sewing machine after usage and clean it with dry cloth and keep in a dry place with the sewing machine.

CAUTION

Moving parts: To reduce risk of injury, switch off before servicing. Close cover before operating machine.

SAVE THESE INSTRUCTIONS

This product is for household use, or equivalent.

This appliance complies with EEC Directive 2004/108/EC covering the electromagnetic compatibility.

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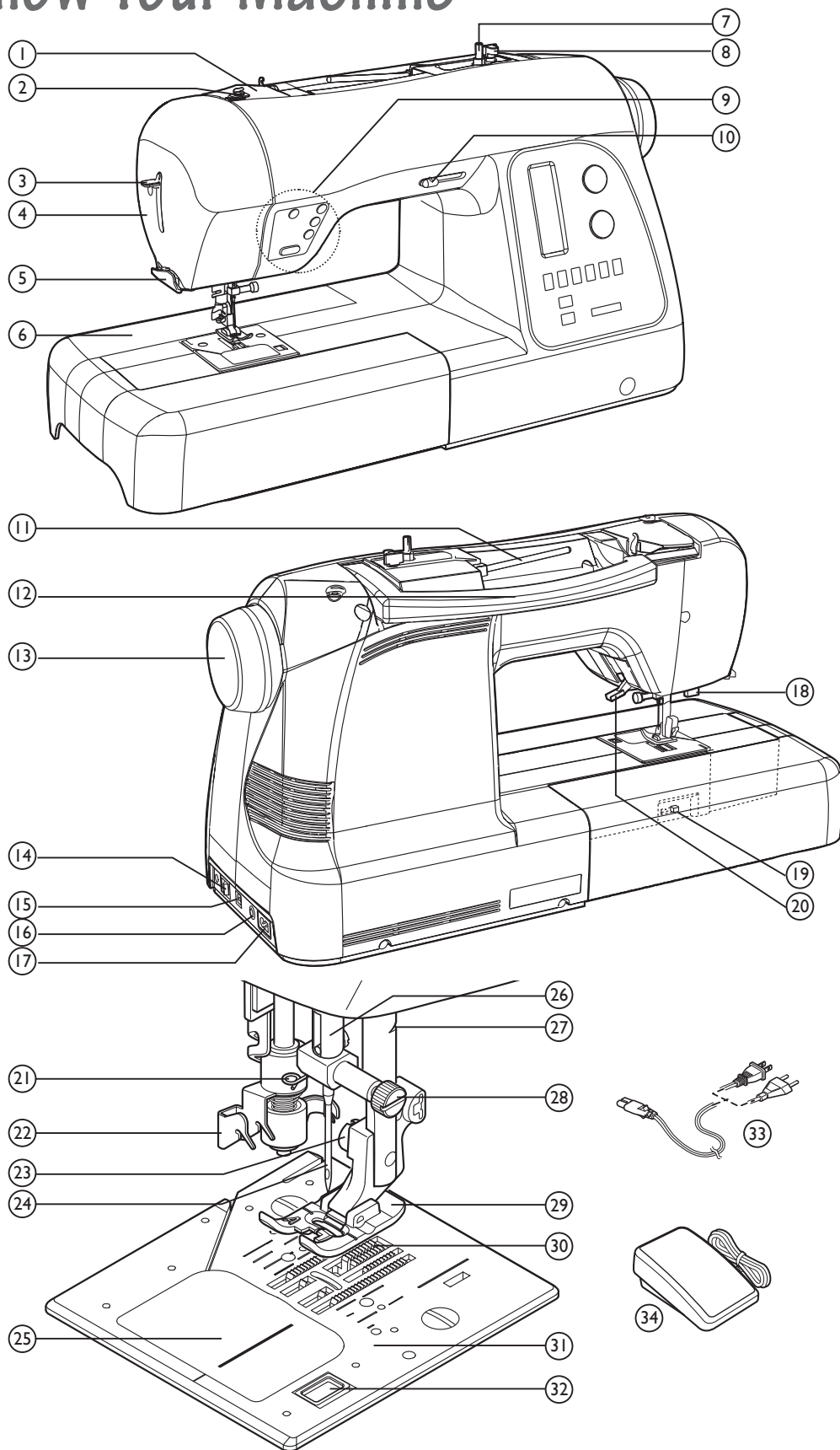
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Get to Know Your Machine

OVERVIEW

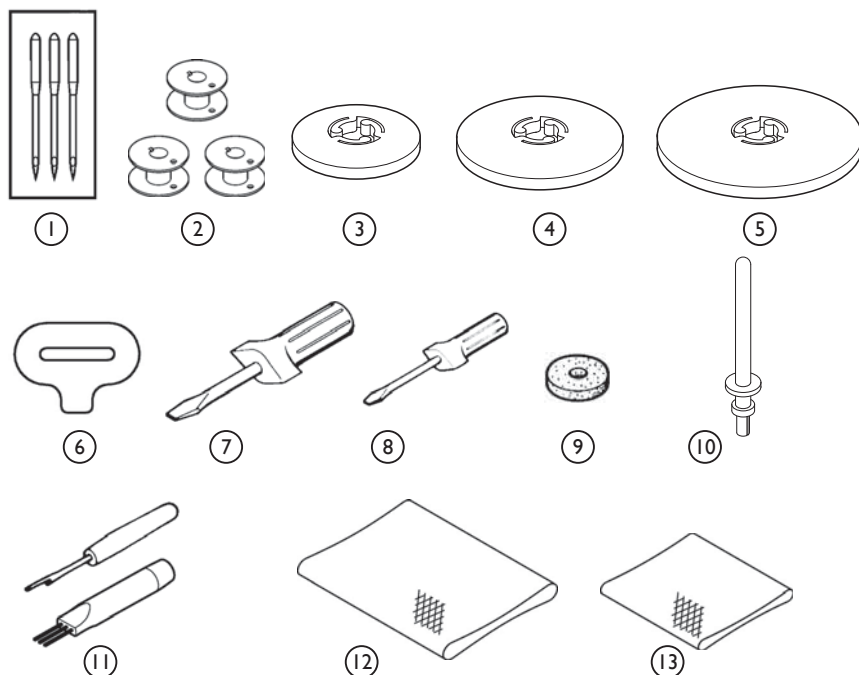
MACHINE

1. Pre-tension guide
2. Bobbin winding tension disc
3. Threading lever
4. Sewing head cover
5. Thread cutter/holder
6. Extension table/Accessory box
7. Bobbin winder
8. Bobbin winder lever
9. Function buttons
10. Speed control lever
11. Horizontal spool pin
12. Handle
13. Hand wheel
14. Power/light switch
15. USB port
16. Power cord socket
17. Foot control socket
18. Buttonhole lever
19. Feed teeth lever
20. Presser foot lifter
21. Thread guide
22. Twin thread guide
23. Presser foot screw
24. Needle
25. Bobbin cover plate
26. Needle bar
27. Thread cutter
28. Needle clamp screw
29. Presser foot
30. Feed teeth
31. Stitch plate
32. Bobbin cover release button
33. Power cord
34. Foot control



ACCESSORIES

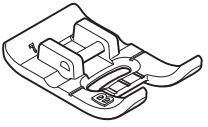
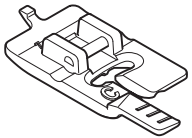
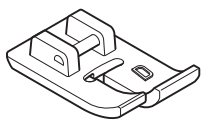
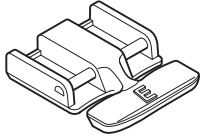
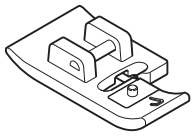
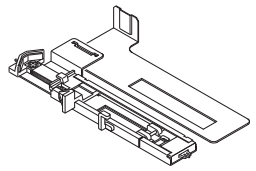
1. INSPIRA™ needles
2. Bobbins (4 total - one placed in bobbin case upon delivery)
3. Spool cap (small)
4. Spool cap (medium)
5. Spool cap (large)
6. Screwdriver for stitch plate
7. Screwdriver (large)
8. Screwdriver (small)
9. Felt pad
10. Vertical spool pin
11. Seam ripper/Brush
12. Thread spool net (long)
13. Thread spool net (short)
- Stitch chart (not pictured)



PRESSER FEET

Utility Foot A

Attached on the machine upon delivery (see previous page). This foot is used mainly for straight stitching and zigzag stitching with a stitch length longer than 1.0.

	Decorative Stitch Foot B When sewing decorative stitches or short zigzag stitches and other utility stitches with less than 1.0 mm stitch length, use this foot. The tunnel on the underside of the foot is designed to feed smoothly over the stitches.
	Buttonhole Foot C This foot is used for sewing buttonholes that measure larger than 1" (2.5cm) in diameter. Use the guide lines on the toe of the foot to position the garment edge. The two tunnels on the bottom of the foot ensures a smooth feed over the buttonhole columns. The finger on the back of the foot holds cording for corded buttonhole.
	Blind Hem Foot D This foot is used for blind hem stitches. The inner edge of this foot guides the fabric. The right toe of the foot is designed to ride along the hem edge.
	Zipper Foot E This foot can be snapped on either to the right or to the left of the needle, making it easy to sew close to both sides of the zipper teeth. Move needle position to right or left to sew closer to zipper teeth or for covering large cording.
	Edging Foot J This foot is used for overcasting and seam/overcasting. Stitches form over the pin which prevents puckering at the edge of the fabric.
	Buttonhole foot and underplate See instructions on page 30 on how to use the buttonhole foot.

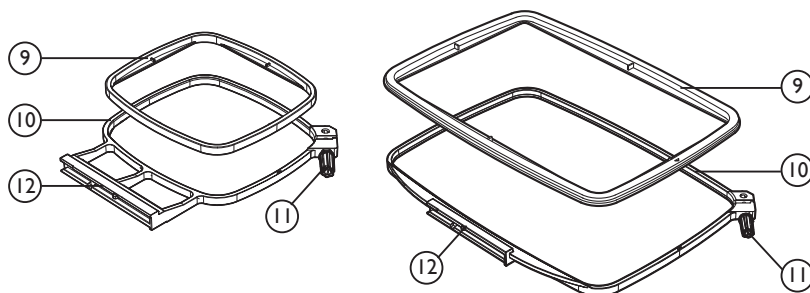
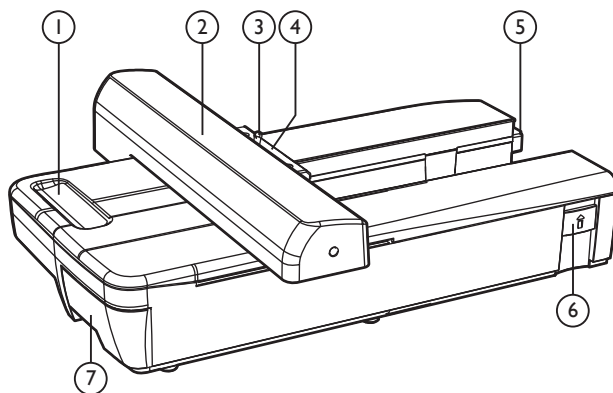
EMBROIDERY UNIT

1. Handle
2. Embroidery arm
3. Hoop release lever
4. Hoop attachment
5. Connector
6. Release lever
7. Accessory compartment

HOOPS

One small and one large hoop are included with the machine.

9. Inner frame
10. Outer frame
11. Hoop adjustment screw
12. Hoop connector



EMBROIDERY ACCESSORIES

13. Vinyl bag
14. Bobbins (3)

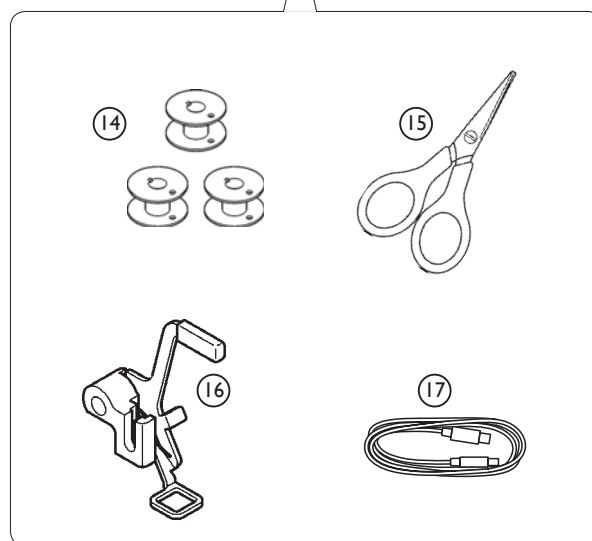
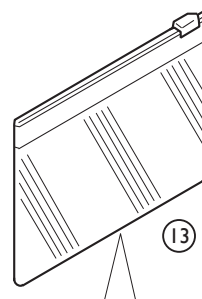
Note: When purchasing additional bobbins, make sure they are Class 15 J. INSPIRA™, #141001012 (4-pack)/#141001013 (12 pack).

15. Scissors
16. Embroidery foot
17. USB cable

Note: Be sure to use the USB cable included with your machine when doing embroidery.

- USB stick with Embroidery software (not pictured)




Note: H|CLASS™ 600E embroidery system is a software system providing powerful options and capabilities for embroidery. In order to install the software, see page 43 or consult the software manuals stored on the USB stick for further information.



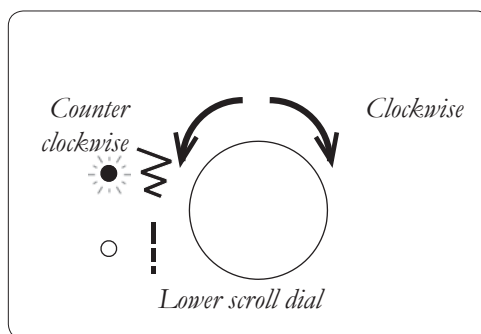
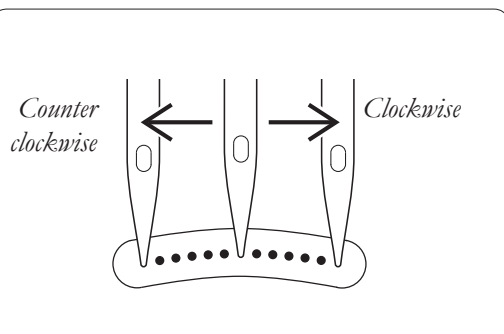
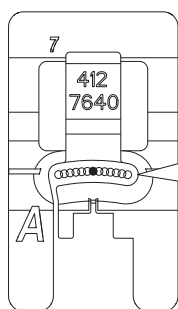
STITCH OVERVIEW









On the following pages you will find information on the stitches included in your machine. Next to each stitch you can find information about the stitch number and pre-set values (auto) for stitch width and length. Also provided are the levels between which you can manually adjust the length and width of a stitch. Whether or not a twin needle can be used is indicated in the table as well (○ = Yes, ✕ = No).































For details on how to adjust the stitch length and stitch width, see page 19.































STITCH	No.	LENGTH (mm)		NEEDLE POSITION		TWIN NEEDLE
		<i>Auto</i>	<i>Manual</i>	<i>Auto</i>	<i>Manual</i>	
	00	2.5	0.5 - 4.8	CENTER	LEFT - RIGHT*	○
	01	2.5	1.5 - 3.0	CENTER	LEFT - RIGHT*	○
	28	2.5	2.0 - 4.0	CENTER	-	○






























* Adjusting needle position for straight stitch 13 needle positions are available for quilting, top stitching etc.



STITCH	No.	LENGTH (mm)		WIDTH (mm)		TWIN NEEDLE	STITCH	No.	LENGTH (mm)		WIDTH (mm)		TWIN NEEDLE
		<i>Auto</i>	<i>Manual</i>	<i>Auto</i>	<i>Manual</i>				<i>Auto</i>	<i>Manual</i>	<i>Auto</i>	<i>Manual</i>	
	02	2.5	1.5 - 3.0	1.0	-	✕		06	1.5	0.3 - 2.5	6.0	2.5 - 7.0	○
	03	2.0	0.5 - 3.0	4.0	0-7.0	○		07	3.0	1.5 - 3.0	5.0	2.0 - 7.0	○
	04	2.0	0.5 - 3.0	4.0	0-7.0	✕		08	3.0	1.0 - 3.0	3.0	1.0 - 6.0	○
	05	2.0	0.5 - 3.0	4.0	0-7.0	✕		09	3.0	1.0 - 3.0	3.0	1.0 - 6.0	○

STITCH	No.	LENGTH (mm)		WIDTH (mm)		TWIN NEEDLE	STITCH	No.	LENGTH (mm)		WIDTH (mm)		TWIN NEEDLE
		<i>Auto</i>	<i>Manual</i>	<i>Auto</i>	<i>Manual</i>				<i>Auto</i>	<i>Manual</i>	<i>Auto</i>	<i>Manual</i>	
	10	2.0	1.0 - 3.0	3.0	2.0 - 7.0	○		25	0.5	0.5, 0.8	5.5	—	×
	11	2.5	1.5 - 3.0	6.0	3.5 - 7.0	○		26	0.5	0.5, 0.8	4.0	—	×
	12	3.0	1.0 - 3.0	6.0	1.0 - 7.0	○		27	0	—	3.0	2.0 - 4.5	×
	13	1.3	1.0 - 2.5	5.0	3.0 - 7.0	○		29	2.5	0.8 - 2.5	4.0	1.0 - 7.0	○
	14	2.5	0.8 - 2.5	3.5	1.0 - 6.0	○		30	2.5	1.5 - 2.5	7.0	3.5 - 7.0	○
	15	3.0	1.0 - 3.0	6.0	3.0 - 6.0	○		31	2.5	1.5 - 3.0	7.0	2.0 - 7.0	○
	16	2.5	1.5 - 2.5	7.0	3.0 - 7.0	○		32	2.5	1.5 - 2.5	7.0	3.0 - 7.0	○
	17	2.0	2.0 - 4.0	3.5	—	×		33	3.0	1.5 - 3.0	3.0	1.0 - 7.0	○
	18	0.5	0.5, 0.8	6.0	—	×		34	3.0	1.5 - 3.0	3.0	1.0 - 7.0	○
	19	—	—	—	—	×		35	3.0	1.5 - 3.0	4.5	1.0 - 7.0	○
	20	0.5	0.5, 0.8	6.0	—	×		36	3.0	1.5 - 3.0	4.5	1.0 - 7.0	○
	21	0.5	0.5, 0.8	5.5	—	×		37	2.0	0.8 - 2.5	3.5	1.0 - 6.0	○
	22	0.5	0.5, 0.8	3.5	—	×		38	2.5	1.5 - 3.0	6.0	3.0 - 6.0	○
	23	0.5	0.5, 0.8	5.5	—	×		39	2.5	1.5 - 2.5	6.0	3.0 - 6.0	○
	24	0.5	0.5, 0.8	3.5	—	×		40	2.5	1.5 - 2.5	5.0	3.5 - 7.0	○

STITCH	No.	LENGTH (mm)		WIDTH (mm)		TWIN NEEDLE	STITCH	No.	LENGTH (mm)		WIDTH (mm)		TWIN NEEDLE
		<i>Auto</i>	<i>Manual</i>	<i>Auto</i>	<i>Manual</i>				<i>Auto</i>	<i>Manual</i>	<i>Auto</i>	<i>Manual</i>	
	41	3.0	1.5 - 3.0	6.0	3.0 - 6.0	○		56	1.5	0.5 - 1.5	7.0	3.0 - 7.0	○
	42	3.0	1.0 - 3.0	6.0	2.0 - 6.0	○		57	1.8	1.0 - 4.0	7.0	3.5 - 7.0	○
	43	2.5	1.5 - 2.5	6.0	3.5 - 7.0	○		58	1.3	0.8 - 4.0	7.0	3.5 - 7.0	○
	44	2.5	1.5 - 2.5	6.0	3.5 - 7.0	○		59	1.3	0.8 - 4.0	7.0	3.5 - 7.0	○
	45	1.8	1.5 - 2.5	7.0	3.0 - 7.0	○		60	0.8	0.5 - 1.5	7.0	3.5 - 7.0	○
	46	2.5	1.5 - 3.0	6.0	3.5 - 7.0	○		61	0.8	0.5 - 1.5	7.0	3.5 - 7.0	○
	47	2.5	1.5 - 2.5	5.0	3.5 - 7.0	○		62	1.0	0.8 - 1.5	7.0	3.5 - 7.0	○
	48	2.5	1.8 - 3.0	4.5	3.5 - 7.0	×		63	1.0	0.8 - 1.5	7.0	3.5 - 7.0	○
	49	2.0	0.5 - 2.0	5.0	4.0 - 7.0	×		64	0.8	0.8 - 1.5	6.0	3.5 - 6.0	×
	50	2.5	1.5 - 2.5	6.0	3.0 - 6.0	○		65	0.8	0.5 - 1.3	6.0	3.0 - 6.0	○
	51	1.8	1.5 - 2.0	7.0	3.5, 7.0	○		66	0.8	0.5 - 1.3	7.0	3.0 - 7.0	○
	52	1.8	0.8 - 2.5	7.0	3.5, 7.0	○		67	0.8	0.5 - 1.5	5.0	3.5 - 7.0	○
	53	3.0	1.5 - 3.0	5.0	1.0 - 7.0	○		68	0.8	0.5 - 1.5	7.0	3.5 - 7.0	○
	54	2.5	1.5 - 2.5	6.0	4.0 - 7.0	×		69	0.8	0.5 - 1.5	7.0	3.5 - 7.0	○
	55	3.0	1.5 - 3.0	3.5	3.5 - 7.0	○		70	0.8	0.5 - 1.5	7.0	3.5 - 7.0	○

STITCH	No.	LENGTH (mm)		WIDTH (mm)		TWIN NEEDLE	STITCH	No.	LENGTH (mm)		WIDTH (mm)		TWIN NEEDLE
		<i>Auto</i>	<i>Manual</i>	<i>Auto</i>	<i>Manual</i>				<i>Auto</i>	<i>Manual</i>	<i>Auto</i>	<i>Manual</i>	
	71	0.8	0.5 - 3.0	7.0	3.0 - 7.0	○		86	2.0	—	6.0	3.5, 6.0	○
	72	0.8	0.5 - 3.0	7.0	3.0 - 7.0	○		87	2.0	—	6.0	3.5, 6.0	○
	73	0.8	0.5 - 1.5	7.0	3.5 - 7.0	○		88	3.0	1.5 - 3.0	7.0	3.5 - 7.0	○
	74	0.8	0.5 - 1.5	7.0	3.5 - 7.0	○		89	3.0	1.5 - 3.0	7.0	3.5 - 7.0	○
	75	0.8	0.5 - 1.5	7.0	3.5 - 7.0	○		90	2.5	1.5 - 2.5	5.0	3.0 - 7.0	○
	76	0.8	0.5 - 1.5	7.0	3.0 - 7.0	○		91	2.5	1.5 - 2.5	6.0	3.0 - 6.0	○
	77	0.8	0.5 - 1.5	7.0	3.0 - 7.0	○		92	2.5	1.5 - 2.5	7.0	3.5 - 7.0	○
	78	0.5	0.5 - 1.5	6.0	3.5 - 7.0	○		93	2.5	1.3 - 3.0	6.0	3.0 - 7.0	×
	79	0.8	0.5 - 1.5	7.0	3.0 - 7.0	○		94	2.5	1.5 - 2.5	7.0	3.5 - 7.0	○
	80	0.8	0.5 - 1.5	7.0	3.5 - 7.0	○		95	0.8	0.8 - 1.5	6.0	3.5 - 6.0	×
	81	2.5	1.5 - 2.5	7.0	3.5 - 7.0	○		96	1.0	1.0 - 2.0	6.3	3.8 - 6.3	×
	82	2.5	1.5 - 2.5	7.0	3.5 - 7.0	○		97	1.8	1.5 - 2.5	7.0	3.5 - 7.0	○
	83	1.5	—	6.0	—	×		98	0.5	0.5 - 1.0	5.0	2.0 - 6.0	○
	84	0.5	0.5 - 1.0	6.5	—	×		99	0.5	0.5, 0.8	5.0	2.0 - 7.0	○
	85	3.0	—	6.0	5.0, 6.0	×							

2 Set Up Your Machine

UNPACK THE MACHINE

Unpack the machine and place it on a flat table. Be sure to wipe off any surplus oil from stitch plate area before using your machine the first time.

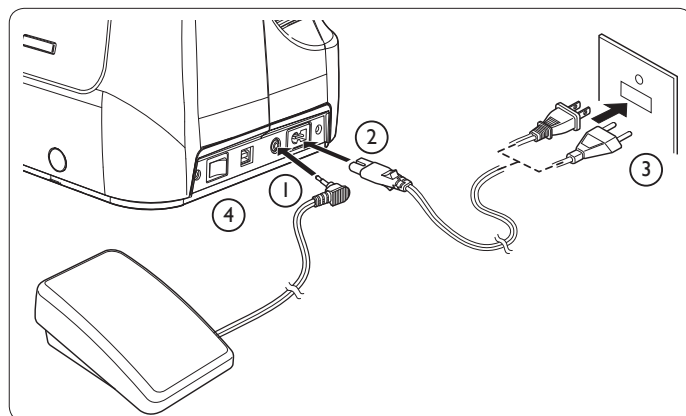
CONNECT THE POWER CORD AND FOOT CONTROL

Among the accessories you will find the power cord and the foot control.

Note: Before plugging in the foot control, check to ensure that it is type "YC-485 EC or Model JF-1000" (see underside of foot control).

1. Connect the foot control cord to the front socket on the bottom right side of the machine (1).
2. Connect the power cord to the rear socket on the bottom right side of the machine (2) and your wall outlet (3) as illustrated.
3. Press the ON/OFF switch to ON (I) to turn on power and light (4).

Note: In sewing mode, the machine can be operated either with or without the foot control (see page 21).

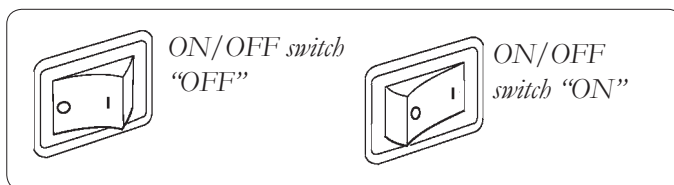


For the USA and Canada:

This sewing machine has a polarized plug (one blade wider than the other). To reduce the risk of electric shock, this plug is intended to fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. DO NOT modify the plug in any way!

PACK AWAY AFTER SEWING

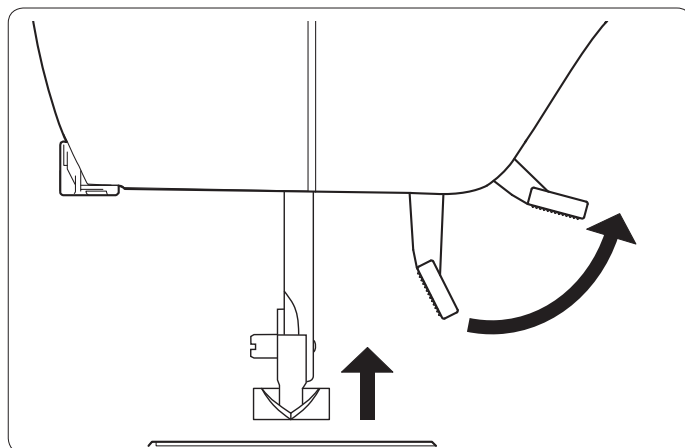
1. Press the ON/OFF (4) switch to OFF (O).
2. Unplug the cord from the wall socket (3) and then from the machine (2).
3. Unplug the foot control cord from the machine (1).
4. Place all accessories in the accessory tray. Slide the tray onto your machine around the free arm.



PRESSER FOOT LIFTER

There are three positions for your presser foot.

1. Lower the presser foot to sew.
2. Raise the lifter to the middle position to insert or remove fabric.
3. Lift it to its highest position to change the presser foot or to insert or remove thick fabric.



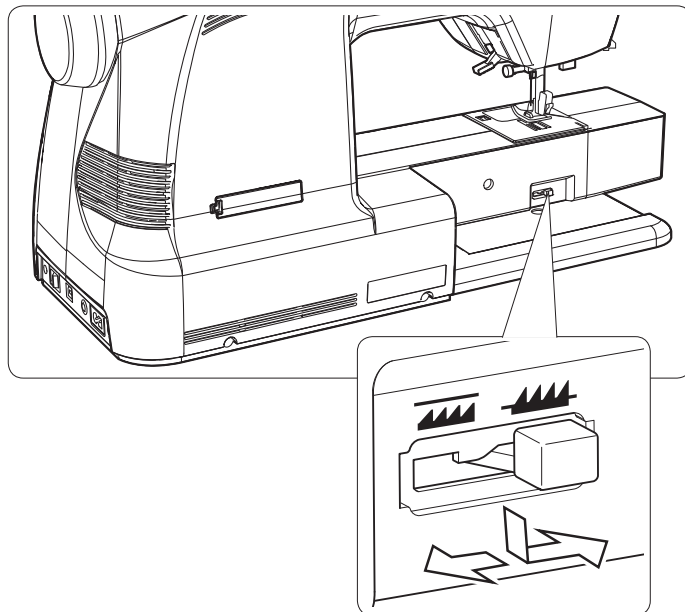
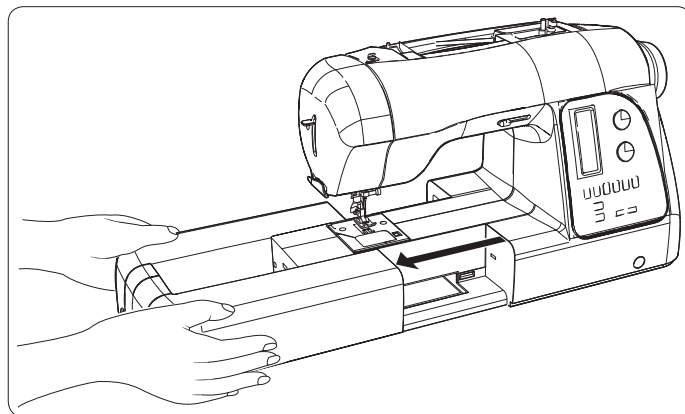
USING THE FREE ARM

Your machine can be used either as a flat-bed or as a free-arm model.

With the extension table/accessory box in position, it provides a large working surface as a standard flat-bed model.

To remove the extension table/accessory box, hold it firmly with both hands and pull it off to the left as shown. To replace, slide the extension table back into place until it clicks.

With the accessory box removed the machine has a slim free-arm used for children's clothes, cuffs, trouser legs, and when sewing in other hard-to-reach places.



LOWER/RAISE THE FEED TEETH

The feed teeth control the movement of the fabric when sewing. They should be raised for all general sewing and lowered for darning, freehand embroidery and monogramming so that you, not the feed teeth, are moving the fabric.

Note: The feed teeth are lowered automatically for machine embroidery when attaching the embroidery unit.

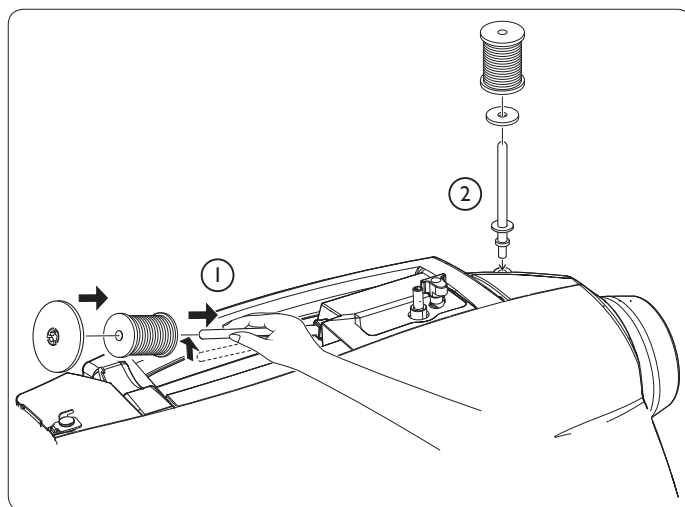
SPOOL PINS

HORIZONTAL SPOOL PIN for normal thread spool (1)

Place thread spool on the pin and secure with a spool cap to ensure smooth flow of thread.

VERTICAL SPOOL PIN for large thread spool (2)

Attach the spool pin. Place a felt pad over it. Place a thread spool on the spool pin.



THREADING THE TOP THREAD

Raise the presser foot.

Note: Always raise the presser foot lifter before threading the top thread. (If the presser foot lifter is not raised, correct thread tension cannot be obtained.)

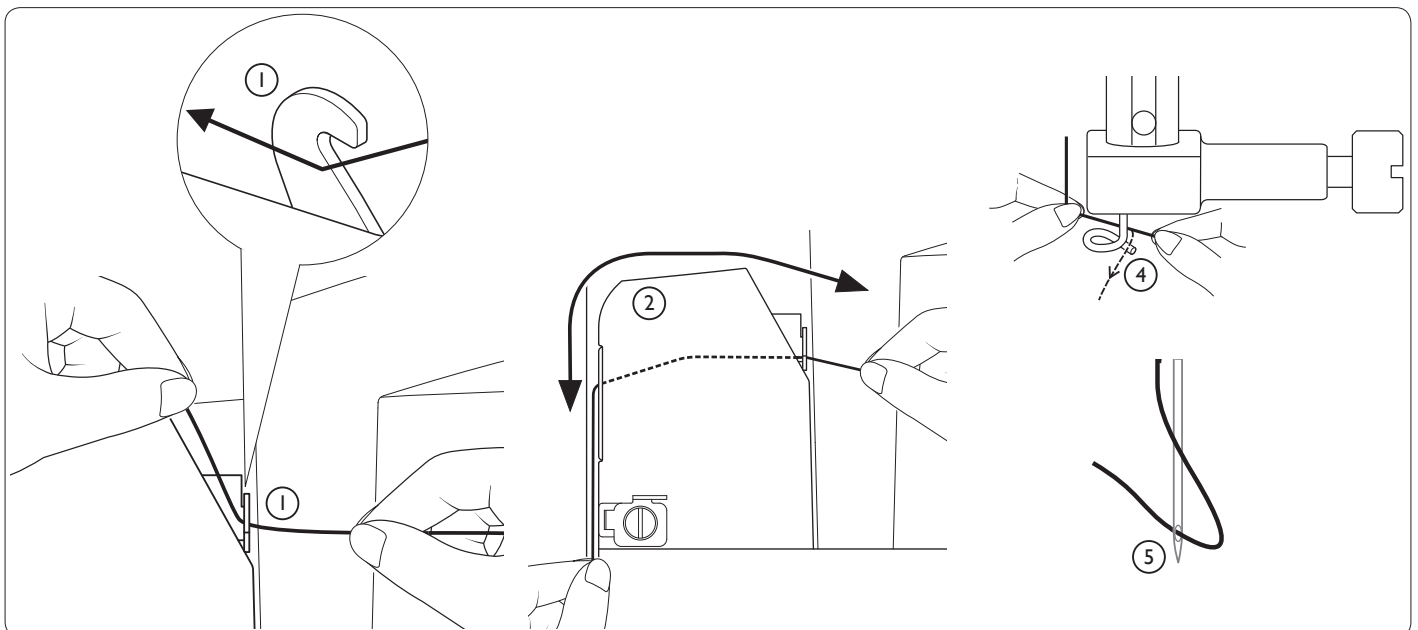
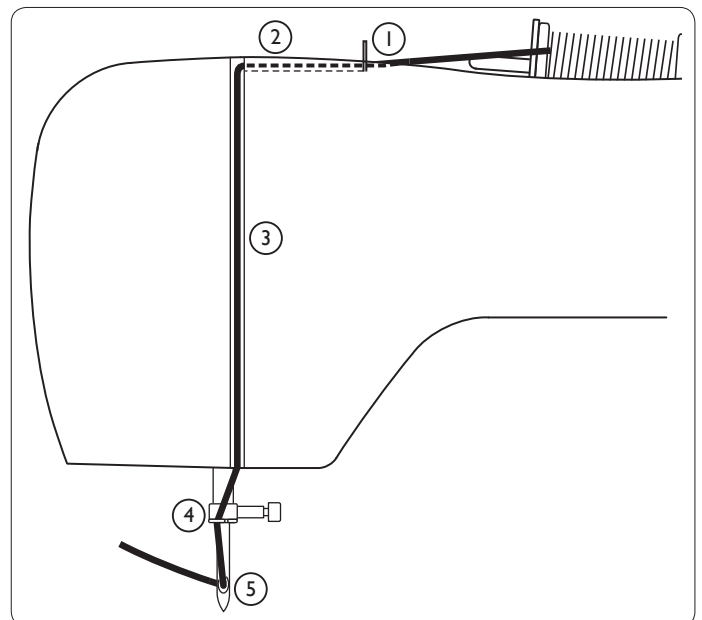
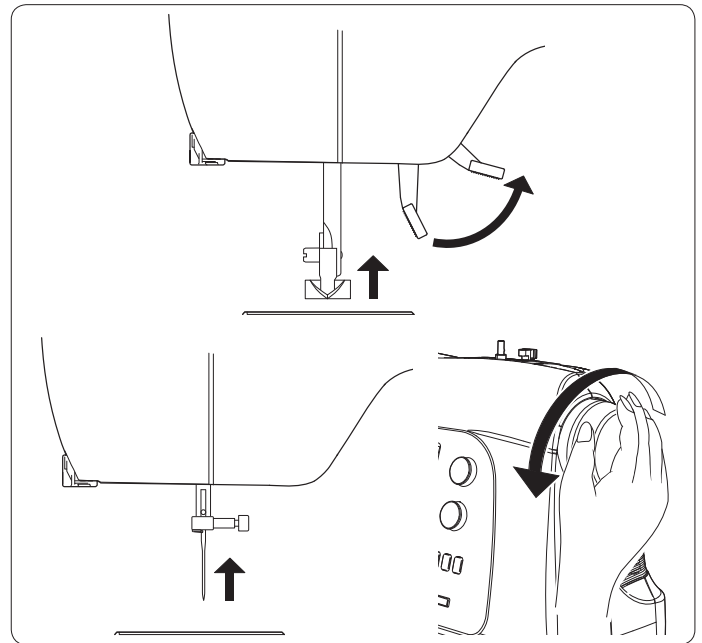
Turn the hand wheel counter clockwise (toward you) until the needle is in its highest position.

Thread the machine with your left hand while firmly gripping the thread with your right hand in the following order as illustrated.

Guide the thread through thread guides (1 & 2), and then pull it down along the groove (3).

Guide the thread into the thread guide (4).

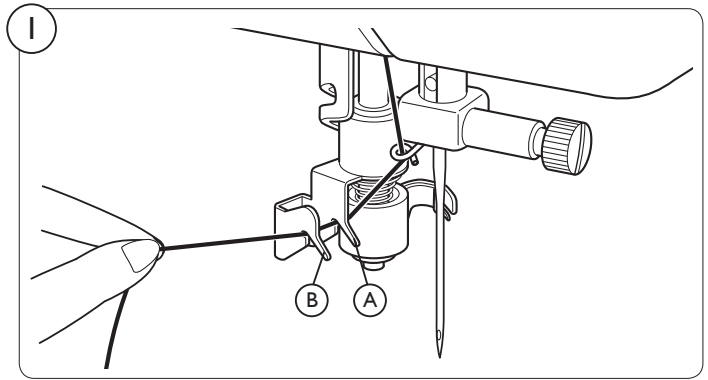
Use the needle threader (page 12) to thread the needle eye (5).



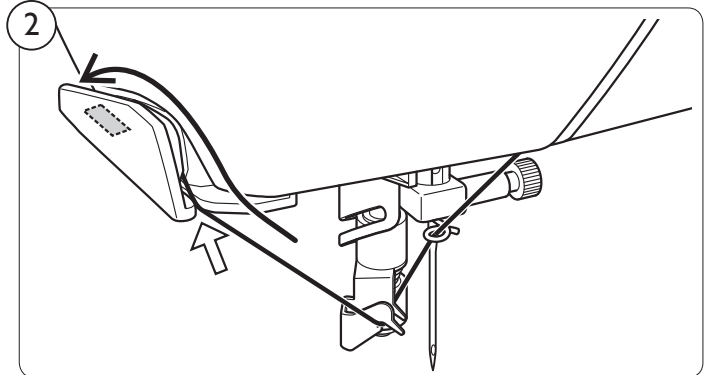
NEEDLE THREADER

The needle threader allows you to thread the needle automatically. The needle and presser foot lifter must be in the highest position to use the needle threader.

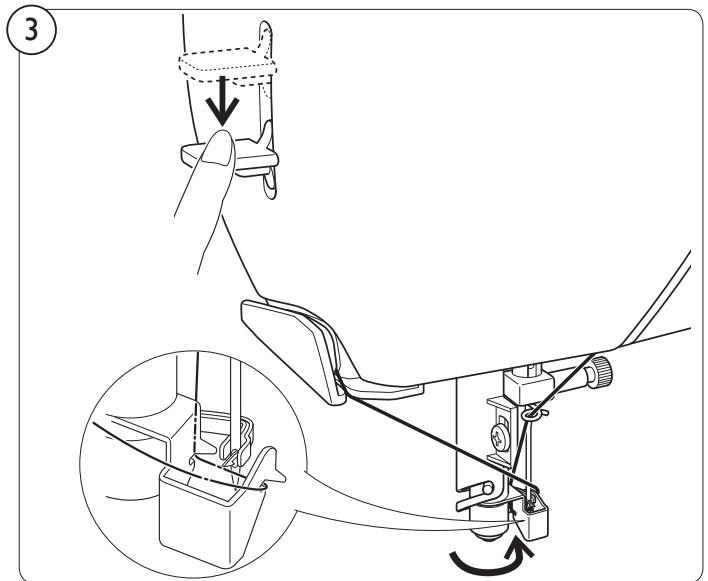
1. Hook thread into the twin thread guides (A and B).



2. Pull thread gently into the thread cutter/holder to cut and hold it in place.

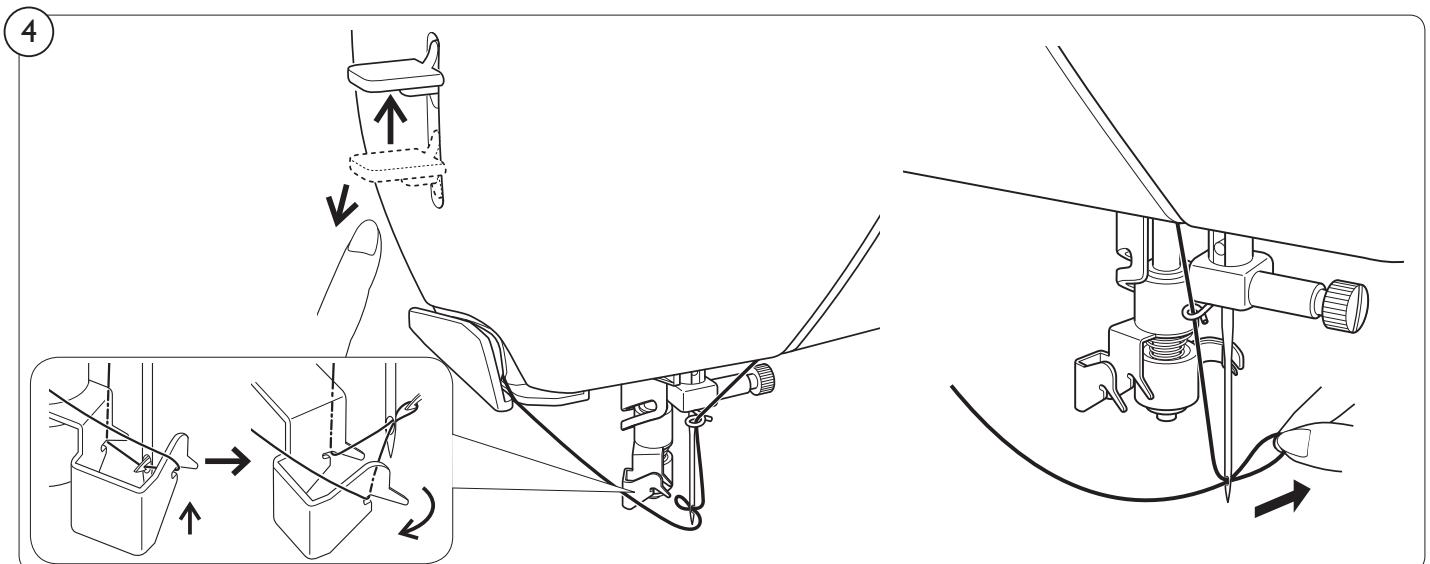


3. Pull down the threading lever to its lowest position until the twin thread guide rotates and stops. The threader hook swivels through the needle eye.



4. Release the threading lever. The hook pulls the thread through the needle eye and forms a loop behind the needle. Pull the thread loop out behind the needle.

Note: If the threading lever does not return to the original position when released, raise it gently by hand.



Note: For smooth threading, it is recommended that the machine is set for straight stitch (in center needle position) when using the needle threader.

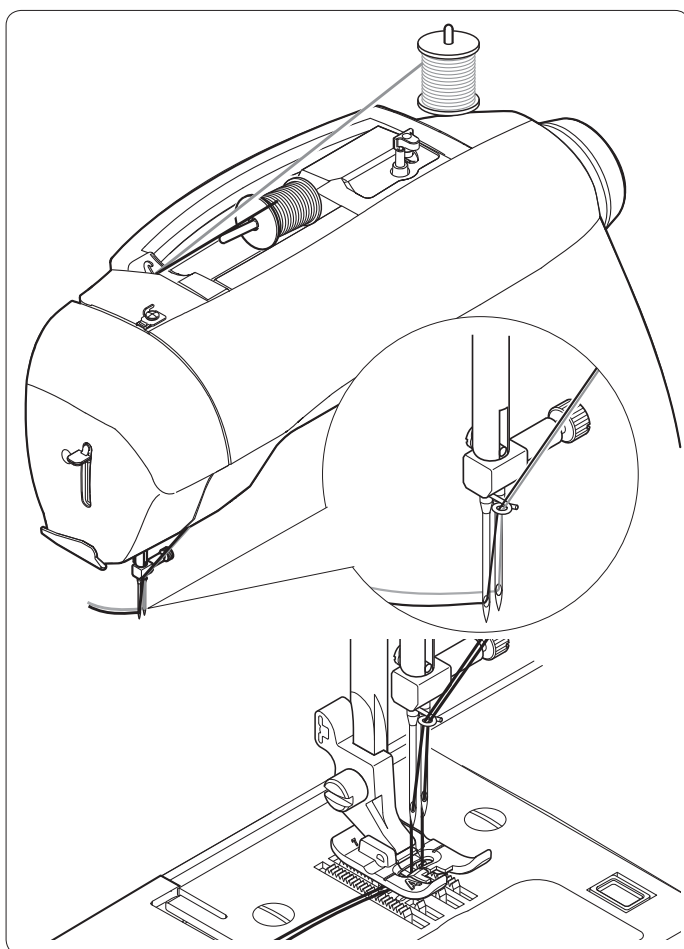
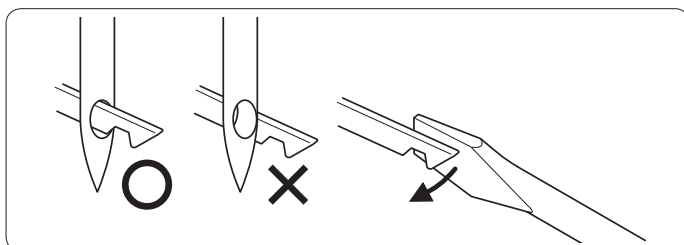
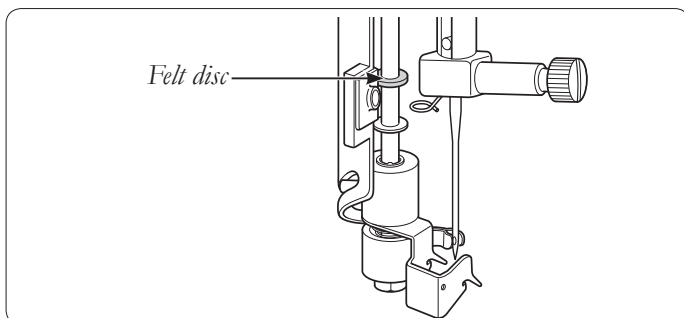
Note: The needle threader is designed to be used for size 70-120 needles. You cannot use the needle threader for needles size 60 or smaller, the wing needle, twin needle or when the Buttonhole foot is attached. There are also some optional accessories that require manual threading of the needle.

When threading the needle manually, make sure that the needle is threaded from front to back.

Helpful Hints:

Put a drop of sewing machine oil onto the felt disc (see picture), if the machine is used after a long interval.

If the threading hook is deviated from needle hole, adjust the position of the hook using a small screw driver.



THREADING FOR TWIN NEEDLE

A twin needle sews two rows of parallel stitches for pin tucks, double top stitching and decorative sewing.

When using twin needles, the stitch width should never be set above the twin needle limitation (see page 20), regardless of the stitch you have selected. Doing so will result in broken needles and possible damage to your machine.

The twin needle is an optional purchase.

Threading the Twin Needle

1. Place a spool on each spool pin. Thread the two threads as one. Draw one thread through each needle from front to back.
2. Pull up the bobbin thread as for single needle sewing. Pull the three threads together under the presser foot toward the left, leaving a thread end about 6" (15 cm) long.

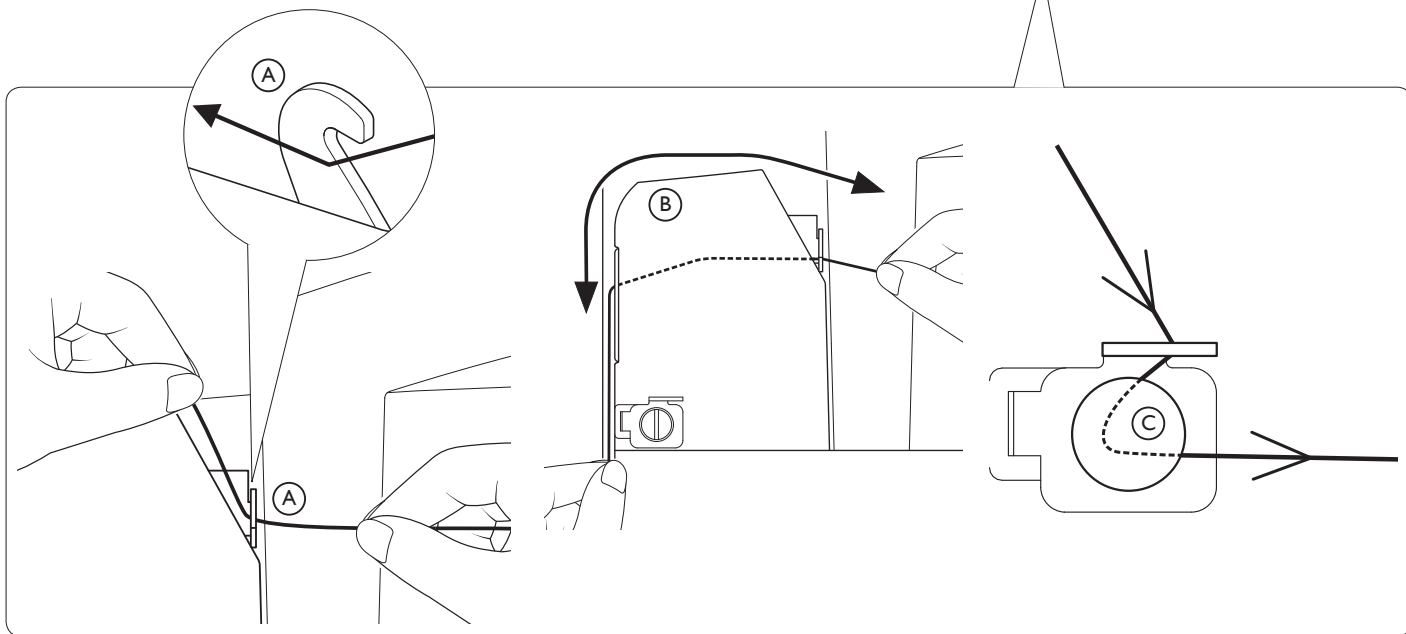
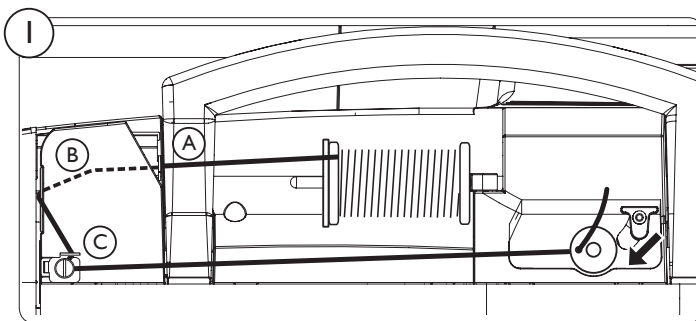
Note: Needle threader cannot be used to thread the twin needle.

Helpful Hints:

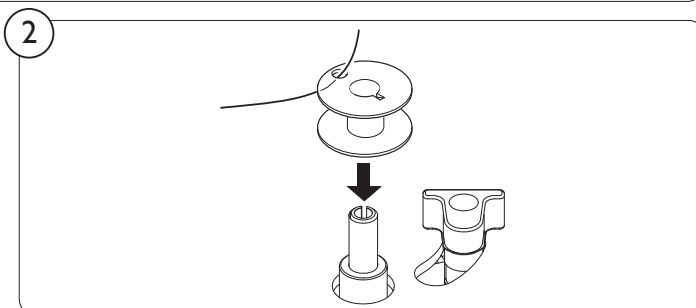
1. Always activate the Twin Needle Safety (see page 20) prior to selecting a stitch. This will preclude any possibility of the twin needle breaking.
2. Turning off the machine returns the machine to normal sewing mode. Twin Needle Safety is only active when the Twin Needle Safety button is lit red.

BOBBIN WINDING

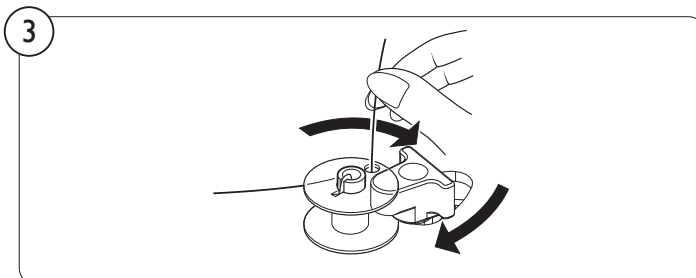
1. Place a spool of thread on the spool pin, and secure it with the spool cap. Pull the thread out from the spool and place it through thread guides A, B and C as illustrated.



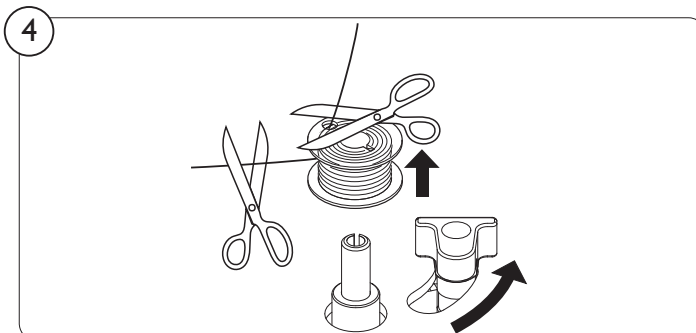
2. Pull the thread end through the hole in the bobbin as shown. Place the bobbin onto the bobbin winder as far down as it can go, with end of the thread coming up from top of the bobbin.



3. Holding onto the end of the thread, push the bobbin winder lever against the bobbin until it clicks and the bobbin starts to rotate.

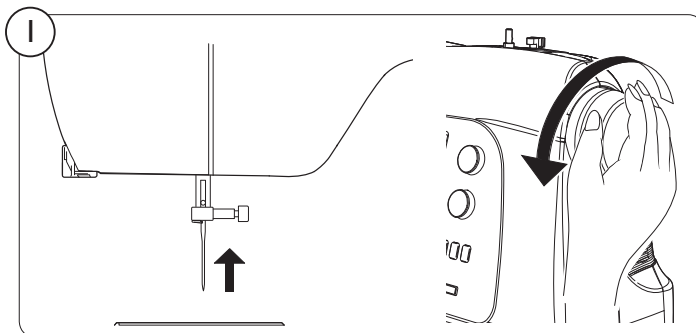


4. When the bobbin is full, the bobbin winder lever will move back and the winding will stop automatically. Remove the bobbin and cut the thread.

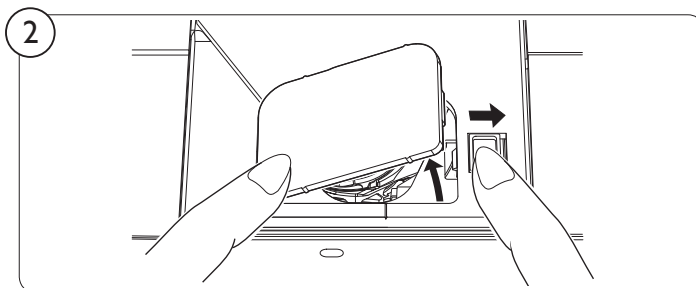


INSERTING THE BOBBIN

1. Raise the needle to its highest position by rotating the hand wheel counter clockwise (toward you).

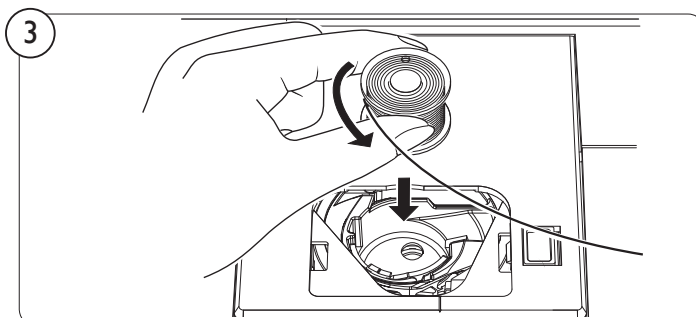


2. Remove the bobbin cover plate by pushing the release button to the right while pushing the left corner of plate.

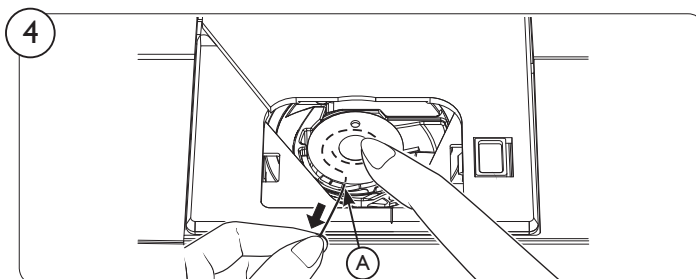


3. Insert the bobbin making sure it rotates counter-clockwise.

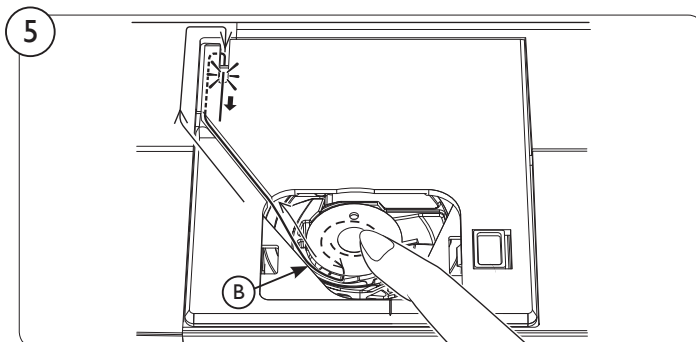
Note: This is a very important step. The bobbin must rotate counterclockwise when thread is pulled.



4. Pull thread through the slot (A) and then to the left.

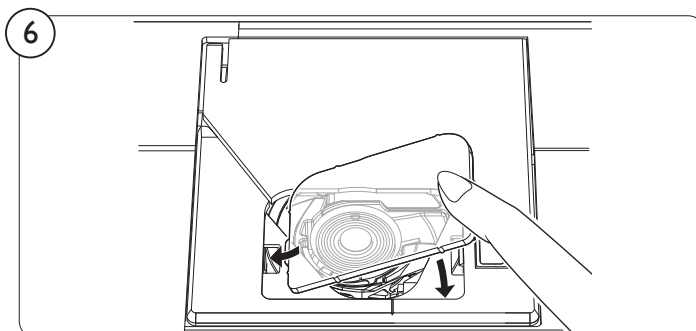


5. With a finger held gently on top of the bobbin, pull the thread until it stops in the slot (B). Then pull the thread along the groove on the stitch plate until it is snipped with cutter on the top left.



6. Replace the bobbin cover plate onto the stitch plate.

Note: Sewing can be started without having to pull up the bobbin thread.



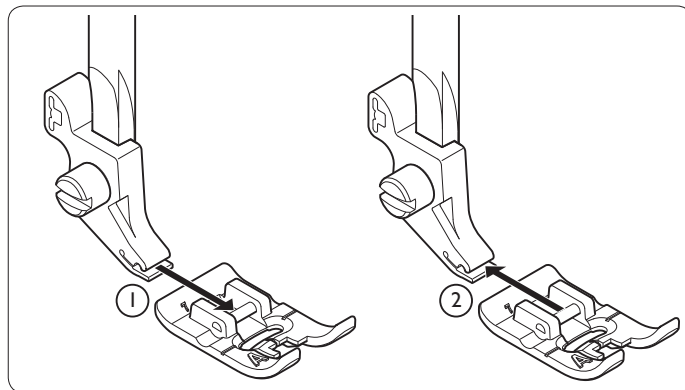
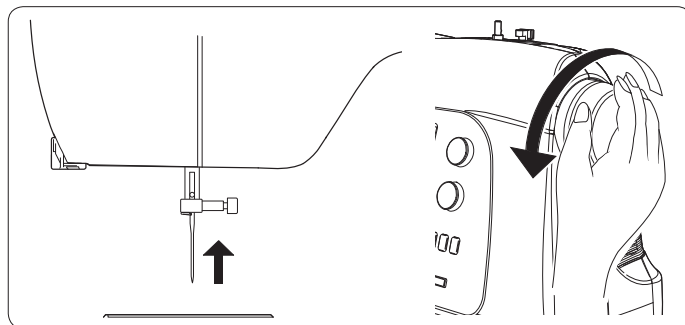
CHANGING THE PRESSER FOOT



Always be sure to turn off power to machine before changing presser foot.

Raise the needle to its highest position by rotating the hand wheel counter clockwise (toward you). Raise the presser foot lifter.

1. Pull the presser foot towards you.
2. Line up the cross pin on the foot with the gap in the presser foot holder. Push back until the foot snaps into place.

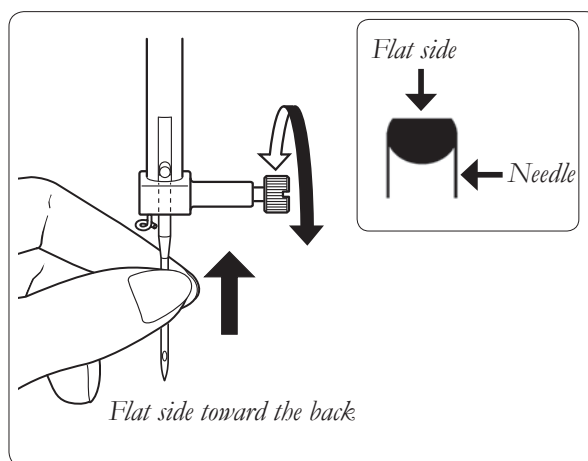


CHANGING THE NEEDLE



Always be sure to turn off power to machine before changing needle.

1. Raise the needle to its highest position by rotating the hand wheel counter clockwise (toward you).
2. Loosen the needle clamp screw by turning it toward you.
3. Remove the needle by pulling it downward.
4. Insert the new needle into the needle clamp with the flat side toward the back.
5. Push the needle up as far as it will go.
6. Tighten the needle clamp screw firmly with the screw driver.



NEEDLES

The sewing machine needle plays an important role in successful sewing. To ensure you will get a quality needle, we recommend *INSPIRA™* needles of system 130/705H. Below, find a description of the most frequently used needles for sewing on woven and stretch fabrics.

Universal needle (A)

Universal needles have a slightly rounded point and come in a variety of sizes. For general sewing in a variety of fabric types and weights.

Stretch needle (B)

Stretch needles have a special scarf to eliminate skipped stitches when there is a flex in the fabric. For knits, swimwear, fleece, synthetic suedes and leathers. Marked with a yellow band.

Embroidery needle (C)

Embroidery needles have a special scarf, a slightly rounded point and a slightly larger eye to avoid damage to thread and fabrics. Use with metallic and other specialty threads for embroidery and decorative sewing.

Denim needle (D)

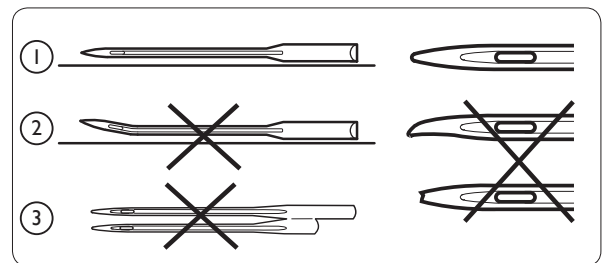
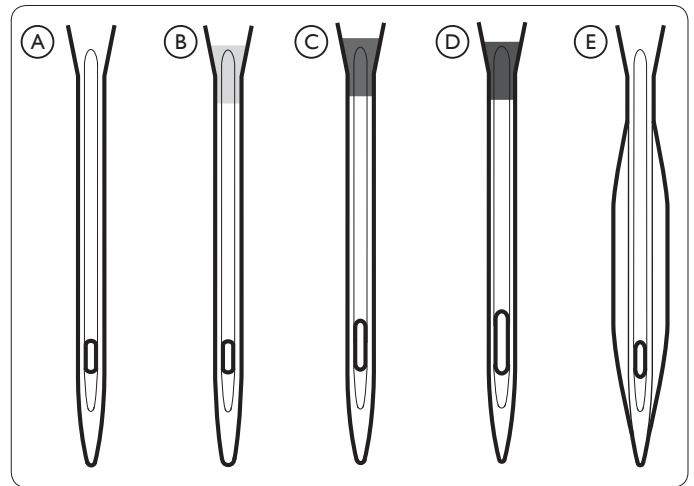
Denim needles have a sharp point to penetrate tightly woven fabrics without deflecting the needle. For canvas, denim, microfibers. Marked with a blue band.

Wing needle (E)

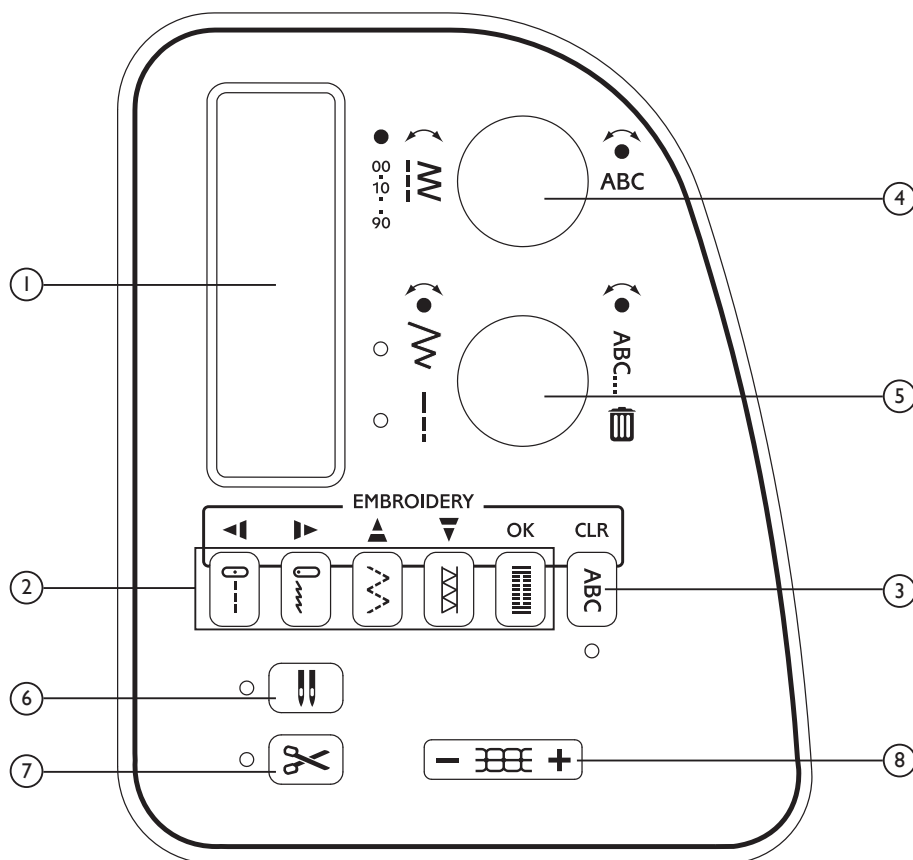
The Wing needle has wide wings on the side of the needle to poke holes in the fabric when sewing entredeux and other hemstitches on natural fiber fabrics.

Note: Change the needle often. Always use a straight needle with a sharp point (1). A damaged needle (2) can cause skipped stitches, breakage of needles or snapping of thread. A damaged needle can also damage the stitch plate.

Do not use asymmetrical twin needles (3) since they may damage your sewing machine.



3 Machine Functions

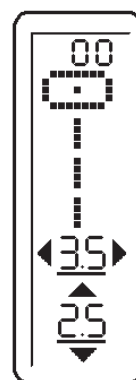


CONTROL PANEL FUNCTIONS

1. LCD DISPLAY

When turning on the machine without the embroidery unit attached, straight stitch number 00, is selected. The information on the display changes for regular sewing, programming and embroidering. For regular sewing, the LCD display shows the number of the selected stitch, an image of the stitch, and stitch width and stitch length settings.

See chapter 5 for information about the display when creating a stitch program, and chapter 6 for information about the display when embroidering.



2. DIRECT SELECTION BUTTONS

Frequently used stitches are available by the direct selection buttons. Simply press a button to select that stitch.

3. PROGRAM MODE BUTTON

Press this button to enter Program Mode. Read more about programming under 4 and 5 below, and in chapter 5.

4. STITCH SELECTION DIAL

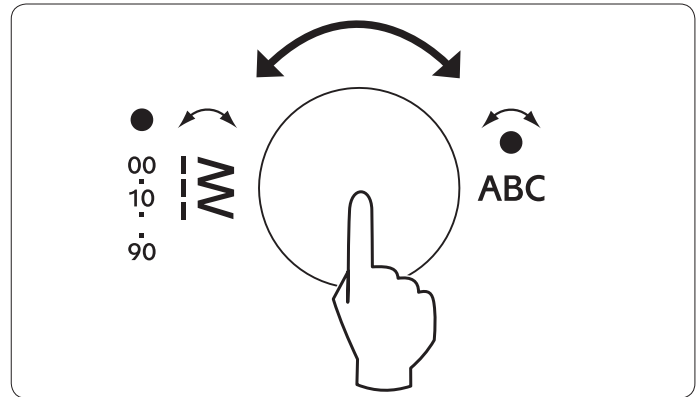
There are two main categories of stitches:

- utility and decorative stitches that are sewn continuously (buttonholes are also included here)
- stitches that are sewn in single repetitions and can be programmed into longer sequences.

Turn the dial to browse the available stitches one by one.
Press the center of the dial to step ten stitches at a time.

Example: To select stitch number 52, press the center of the dial five times and then turn the dial two steps clockwise.

When the Program Mode button has been pressed (see 3 above) turning the Stitch Selection Dial will browse through letters and other programmable stitches. Selected stitch will be sewn in one repetition only. Press the center of the dial to program selected stitch. Read more about programming in chapter 5.



5. STITCH SETTING/SCROLL AND DELETE PROGRAM DIAL

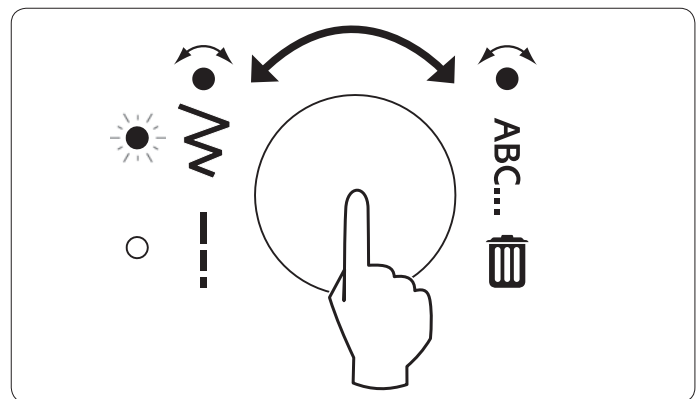
Setting Stitch Width and Stitch Length

In sewing mode, stitch width (needle position for straight stitch) and stitch length are displayed. Width and length are automatically set to default for all stitches when turning on the machine. Default numbers are underlined.

Press the center of the dial to toggle between stitch width and stitch length setting. A LED indicator is lit next to the selected setting. Turn the dial to adjust the selected setting. The numbers change on the display as you turn, and the underlining is removed, indicating that the new setting is not default.

Note: When an arrow on either side of the stitch width/stitch length value number disappear, the machine is set at maximum or minimum stitch width or length available for that particular stitch.

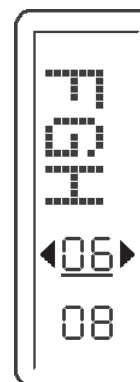
The settings made for each stitch are saved until the machine is turned off.



Scroll program and delete programmed stitches

When the Program Mode button has been pressed (see 3 above) turning the lower dial will scroll through the programmed letters and stitches, displaying your program as it will be stitched out.

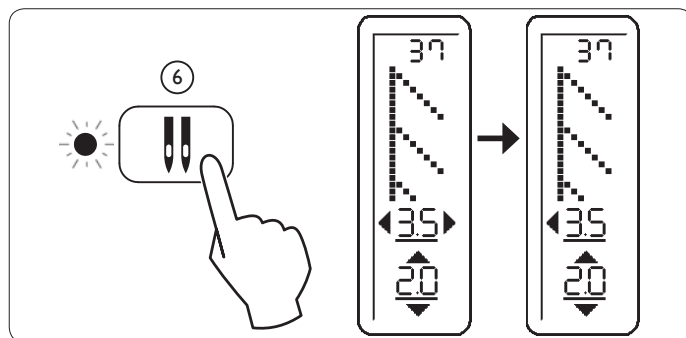
Press the center of the dial to delete the last stitch in the program. Press repeatedly or keep the center of the dial pressed to continue deleting letters and/or programmed stitches one at a time. Read more about programming in chapter 5.



6. TWIN NEEDLE SAFETY

When using twin needles, press the twin needle safety button regardless of the stitch you selected. Doing so will reduce the stitch width automatically and save broken needles and possible damage to your machine.

When the button is pressed, the LED indicator next to the button is lit, indicating that Twin Needle Safety is activated. When turning the Stitch Selection Dial, the machine now automatically skips all stitches that are not suitable for twin needle, and a beep will sound when selecting buttonhole pattern with the direct selection button, indicating that buttonholes cannot be sewn with twin needle.



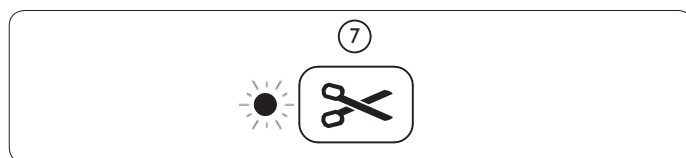
Note: Always select the Twin Needle Safety prior to selecting a pattern. This will preclude any possibility of the twin needle breaking.

To disengage Twin Needle Safety and return the machine to normal sewing mode, either press the Twin Needle Safety button again or turn the machine off. Twin Needle Safety is only active when the LED light next to the Twin Needle button is lit.

7. THREAD CUTTING MODE

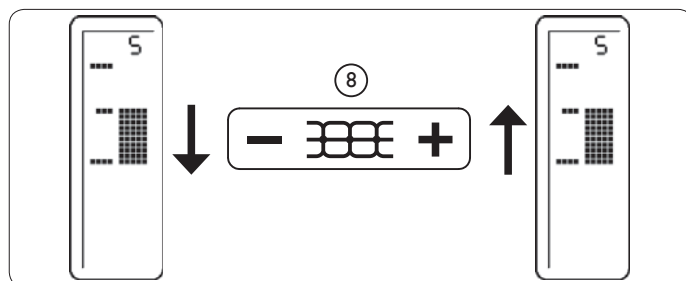
Press this button to activate Thread Cutting Mode. The machine will automatically cut the top and bobbin thread every time you stop sewing. When activated, the LED indicator next to the button is lit.

Note: Twin needle safety and Thread cutting mode cannot be enabled at the same time.



8. THREAD TENSION CONTROL BUTTON

Press - to decrease and + to increase thread tension. While pressing the button, thread tension adjustment mode is displayed on LCD screen.



ADJUST TOP THREAD TENSION

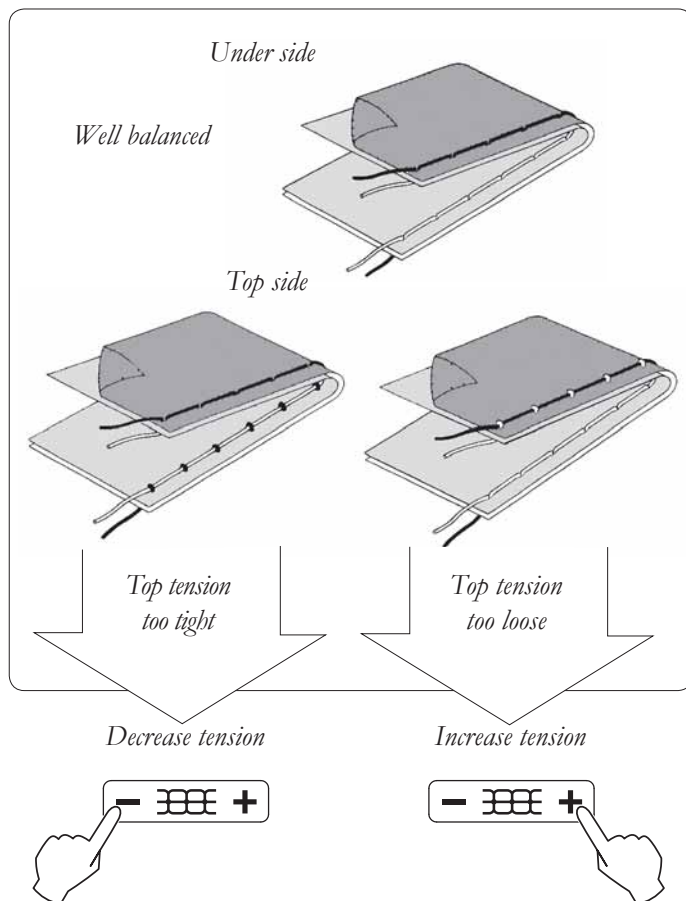
The correct appearance of your stitching is mainly determined by the balanced tension of both top and bobbin threads. The tension is well balanced when these two threads 'lock' in the middle of layers of the fabric you are using.

The thread tension is set automatically when a stitch is selected. If, when you start to sew, you realize that the stitching is irregular, the thread tension needs to be adjusted.

Make any adjustments of the thread tension with the presser foot lowered.

Bobbin Tension

The bobbin tension has been correctly set at the factory, so you do not need to adjust it.



FUNCTION BUTTONS

1. FIX

Press FIX and the sewing machine makes 4 tiny fixing stitches to tie off the sewing on all patterns. The position of the fixing stitches will be at the exact spot in the pattern where the FIX button is pushed. When the function is activated, the LED indicator next to the button is lit red.

2. Thread Cutter

Press Thread Cutter to automatically cut the top and bobbin threads.

3. Needle Stop Up/Down

Press Needle Stop Up/Down to move the needle up or down. The setting of the needle stop position is changed at the same time.

4. Reverse

Press Reverse button to sew in reverse. The machine will sew three stitches in reverse and then stop.

5. Start/Stop

Press Start/Stop to start sewing or embroidering without using the foot control.

Note: When the foot control is plugged in, the Start/Stop button is inactive.

6. LED indicator



LED Indicator

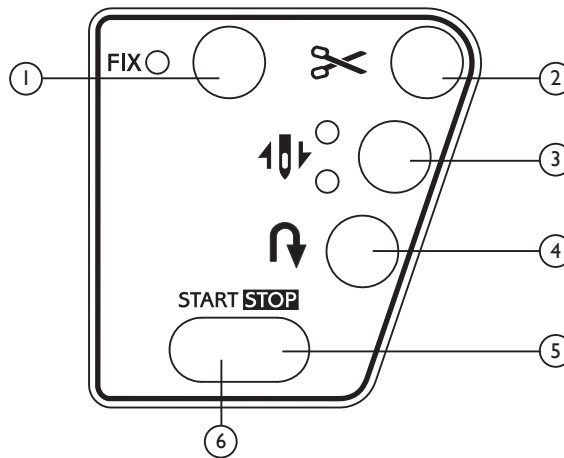
- Green light indicates that the machine is ready to start.
- Red light indicates that the machine is operating.
- Flashing red light indicates a problem or an error.

Flashing for 2 - 3 seconds shows that an incorrect operation was made.

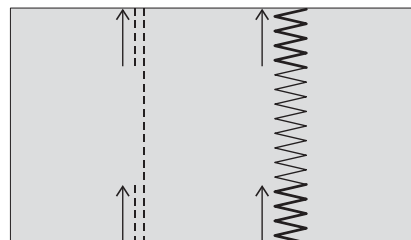
Continuous flashing indicates a machine malfunction.

7. Speed control lever

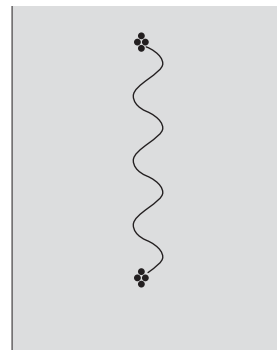
Sliding the lever sets desired sewing speed. When foot control is used, the lever serves as a top speed limiter.



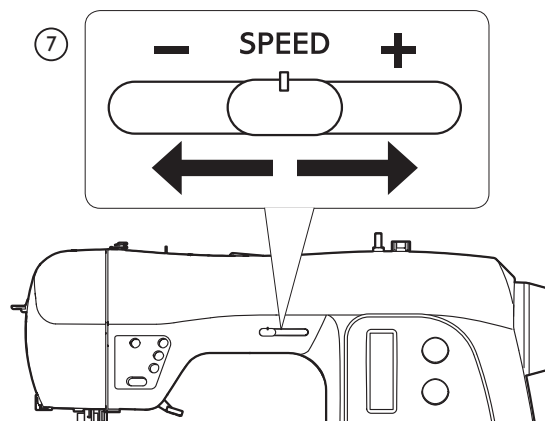
*Reverse stitch function
for straight and zigzag
stitches*



*FIX function for tie-off of
other stitches*



⑦



4 Sewing

UTILITY SEWING

STRAIGHT STITCH

The straight stitch is the stitch most frequently used. See below how to set the machine for basic straight stitch.

Select: Straight stitch (stitch no. 00).

Presser foot: Utility Foot A

- Thread your machine with top and bobbin thread. Pull both threads under the presser foot toward the left, leaving a 6" (15 cm) thread end.
- Place the fabric under the presser foot and lower the presser foot. Turn the hand wheel toward you until the needle enters the fabric. Start the machine by pressing the foot control. Guide the fabric gently with your hands. When reaching the edge of the fabric, stop sewing.
- Turn the handwheel until the needle is in its highest position, then raise the presser foot. Pull the fabric to the rear and cut off excess thread with the thread cutter located on the bottom of the sewing head, as shown.

Reverse

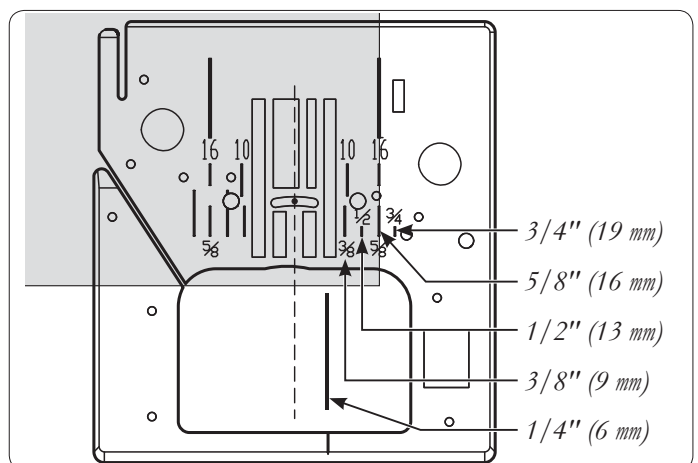
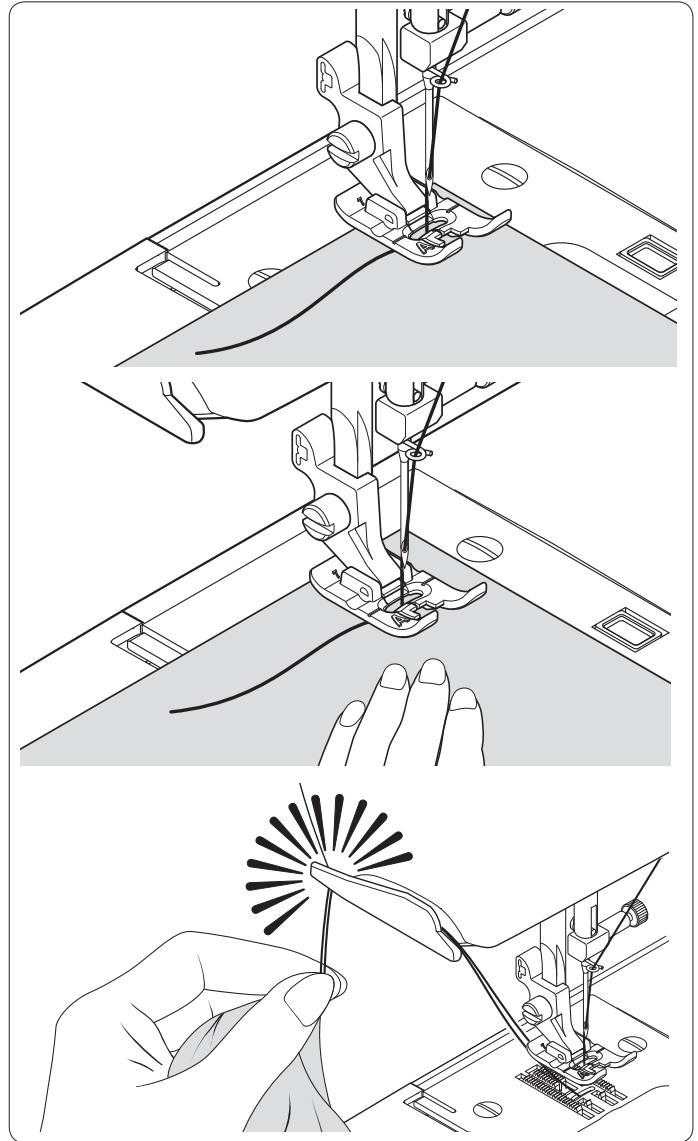
It is a good idea to begin and end seams with reverse stitches to reinforce the seams in order to prevent unraveling.

Press Reverse button. The machine will sew three stitches in reverse and then stop. Press the foot control to sew forwards.

Keeping Seams Straight

To keep the seam straight, use one of the numbered guide lines on the stitch plate. The numbers indicate distance from the needle at its center position.

The guide line on the bobbin cover plate is 1/4" (6mm) seam guide line, used for piecing quilt blocks or for sewing narrow seams.



INSERTING ZIPPERS AND PIPING

Use the Zipper Foot E to sew to the right or left of the zipper or to sew close to a cord.

Inserting Zippers

To sew down to the right side of the zipper, attach the left side of the zipper foot to the presser foot holder so that the needle passes through the opening on the left side of the foot.

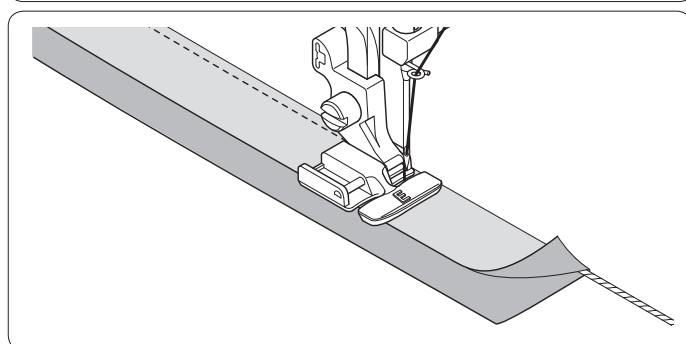
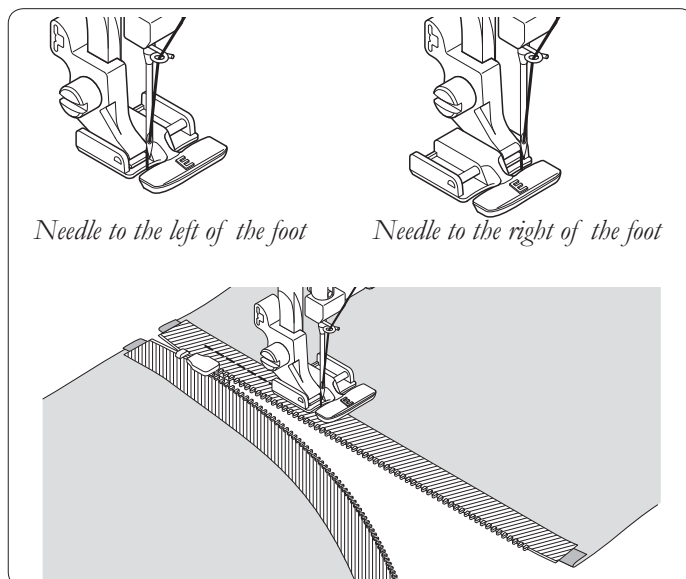
To sew down the left side, attach right side of the zipper foot to the presser foot holder.

Piping

Create a piping by covering a filler cord with a bias strip of fabric. Attach the right side of the zipper foot to the foot holder so that the needle passes through the right side of the zipper foot.

Baste the seam allowances together, enclosing the filler cord, forming a seam tape for the piping.

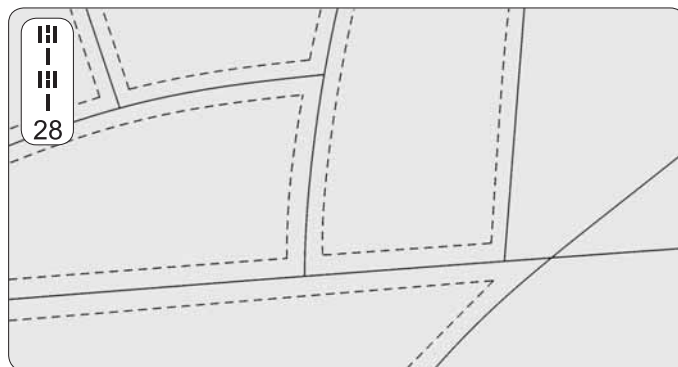
Helpful Hint: Slight adjustment of the needle position to sew closer to the piping may be accomplished with the Stitch Width Control.



HAND-LOOK QUILT STITCH

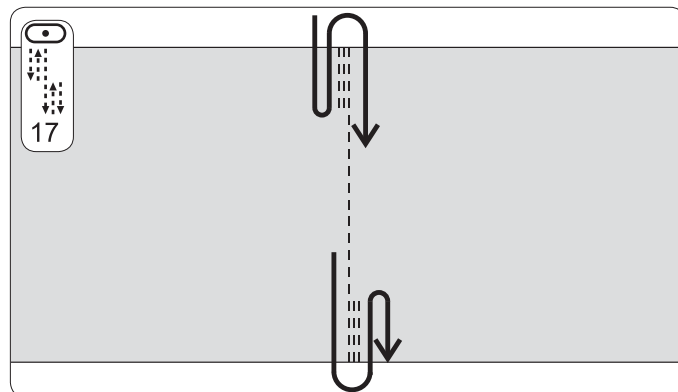
This stitch is designed to look hand made for topstitching and quilting.

1. The bobbin thread will be visible on top of the fabric, make sure to use bobbin thread in desired color.
2. Thread the needle with either invisible thread or with thread that is a color which blends in with the fabric color, so it doesn't show.
3. Increase the thread tension until you achieve the desired appearance.
4. Set the stitch length at 4 (maximum).
5. Start to sew.



STRAIGHT STITCH WITH AUTO TIE-OFF FUNCTION

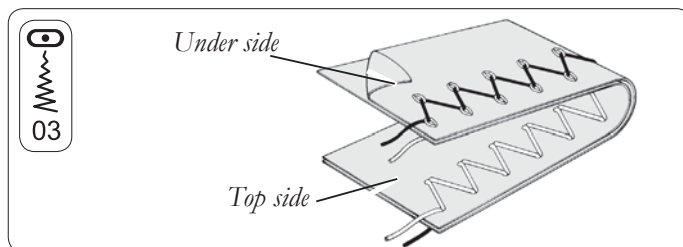
1. Press the foot control and the machine will sew 4 stitches forward and then 4 stitches in reverse and continue to sew forward until the foot control is released.
2. Press the reverse button and the machine will sew 4 stitches in reverse and then 4 stitches in forward and stop.



ZIGZAG

Presser foot: Utility Foot A

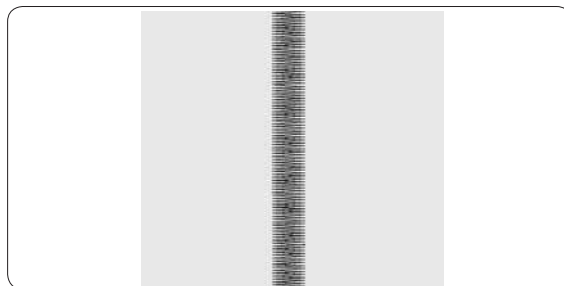
The top thread may appear on the bottom depending on the thread, fabric, type of stitch and sewing speed, but the bobbin thread must never appear on top of the fabric. Adjust thread tension as necessary.



Satin Stitch

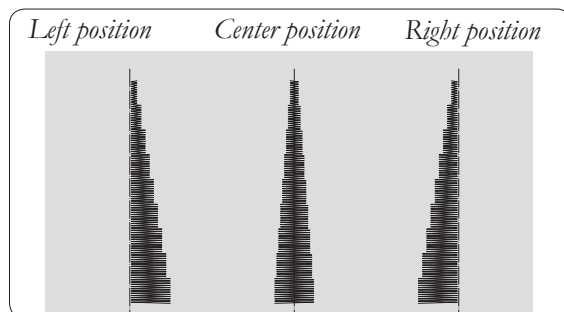
This is a closely spaced stitch used for appliqué, bar-tacking, etc. Slightly loosen the top thread tension for satin stitching. Set the stitch length between 0.5 and 2.0, depending on the weight of thread being used. Use a backing of stabilizer or interfacing to avoid puckering.

Set length between 0.5 and 2.0.



Placement of Patterns

Stitch width of pattern increases from selected needle position as illustrated.



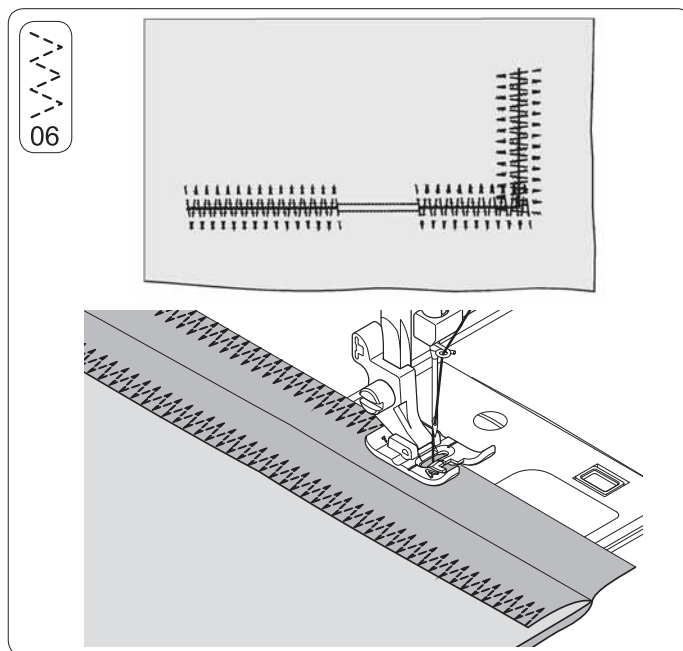
THREE-STEP ZIGZAG

Presser foot: Utility Foot A

This is a strong stitch since, it makes three short stitches where the normal zigzag makes only one.

For this reason it is highly recommended for overcasting all types of fabrics.

It is also ideal for mending tears, applying patches and inserting elastic.



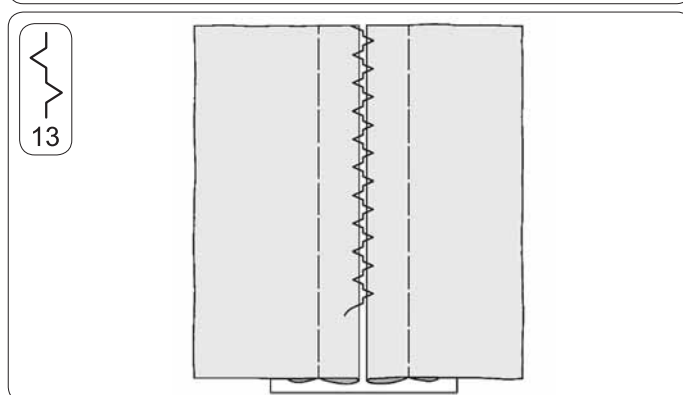
BRIDGING

Presser foot: Decorative Stitch Foot B

This is a popular decorative stitch (used in sleeves or fronts of blouses and dresses). To attach two separate pieces of fabric together, leave a little space in between.

To prepare the fabric:

Fold under the seam allowances on the cut edges, and press. Baste folded edges to light weight tear-away stabilizer with about 1/8" (0.3 cm) space between. Stitch over the 1/8" (3 mm) allowance, just catching the fabric fold on both sides with needle. Remove bastings and stabilizer; press.



BLIND HEM

Presser foot: Blind Hem Foot D

Stitch 08: Regular blind hem for normal fabrics

Stitch 10: Elastic blind hem for soft, stretch fabrics

1. First finish the raw edge. Do this by turning it under on fine fabrics or overcasting it on medium to heavyweight fabrics.

Then fold the hem up the required depth, press and pin in place.

2. Now fold the fabric as illustrated.

3. Place the fabric under the foot. Make sure the folded edge of the fabric follows the inside of the right “toe” of Blind Hem Foot D. The left swing of the needle should just catch the edge of the folded fabric. If necessary, adjust the stitch width as needed to barely “catch” the fold.

Sew slowly, guiding the fabric carefully along the edge of the guide.

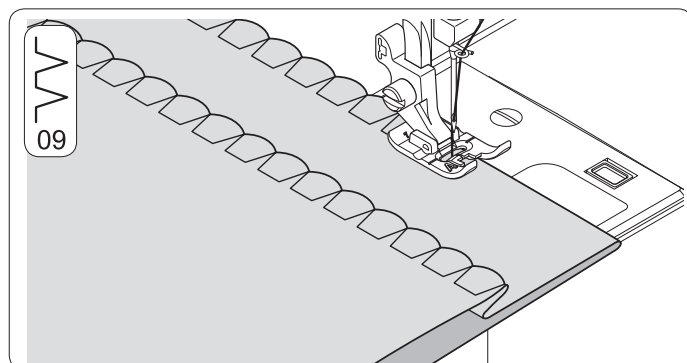
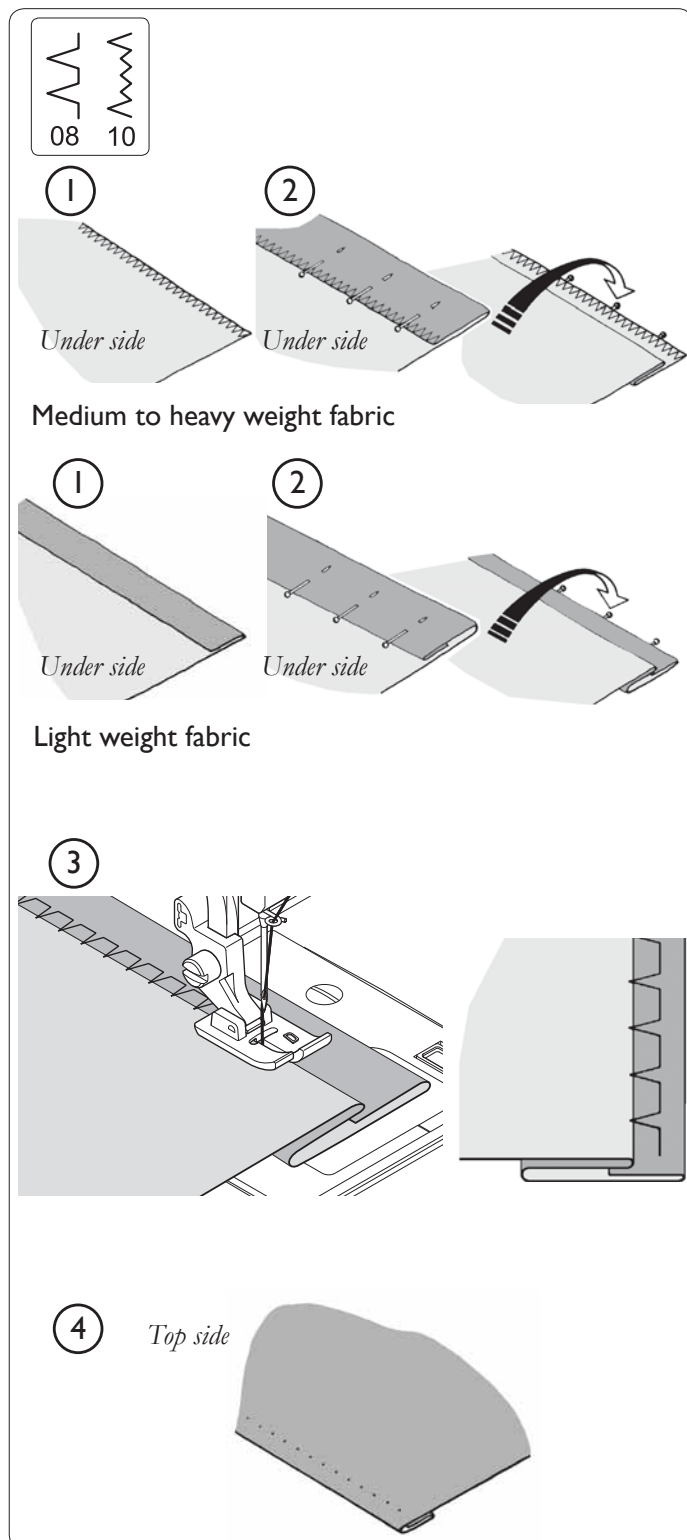
4. When completed, the stitching is almost invisible on the right side of the fabric.

Note: It takes practice to sew blind hems. Always make a sewing test first.

SHELL EDGE

Presser foot: Utility Foot A

Turn under the raw edge and press. Place the fabric right side up so that the zigzag part of the stitch sews just over the folded edge, pulling the fabric in to form a shell hem. Trim away excess fabric close to the stitching line.



STRETCH STITCHES

Presser foot: Utility Foot A

Stretch stitches are mainly for use on knit or stretchable fabrics, but can also be used on woven fabrics.

Straight Stretch Stitch

Straight stretch stitch is far stronger than an ordinary straight stitch because it locks three times - forwards, backwards and forwards.

It is particularly suitable for reinforcing the seams of sportswear in stretch and non-stretch fabrics, and for curved seams which take a lot of strain.

Use this stitch also to top-stitch lapels, collars and cuffs to give a professional finish to your garments.

Stretch stitches are mainly for use on knit, or stretchable fabrics, but can also be used on ordinary woven fabrics.

Overedge Stitch

This stitch is especially used for making sportswear. It sews and finishes the seam in one operation. It is very effective for repairing raw or worn edges as well.

Ric-Rac Stitch

The ric-rac stitch provides a bold topstitch for decorative borders. It is ideal for edging neck-bands, armholes, sleeves and hems.

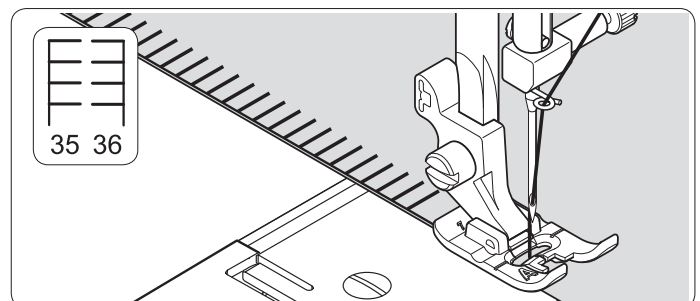
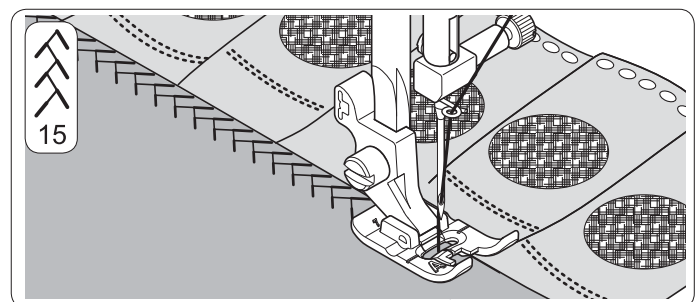
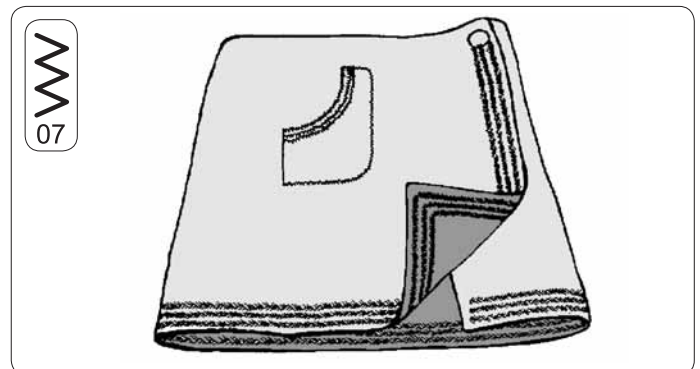
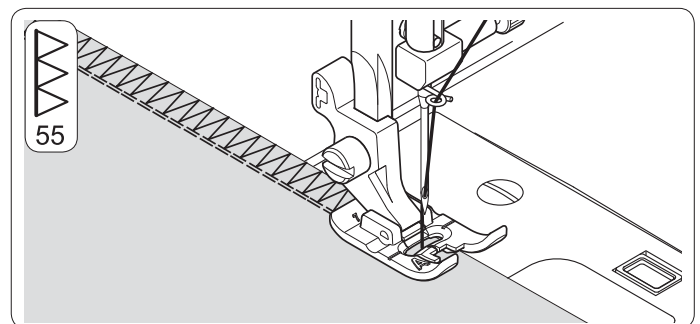
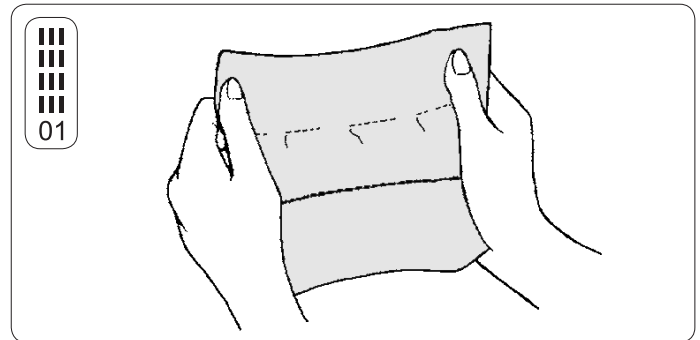
Feather Stitch

This stitch can be used for topstitching and for attaching lace and trims.

It is also ideal for quilting applications and for edge-joining.

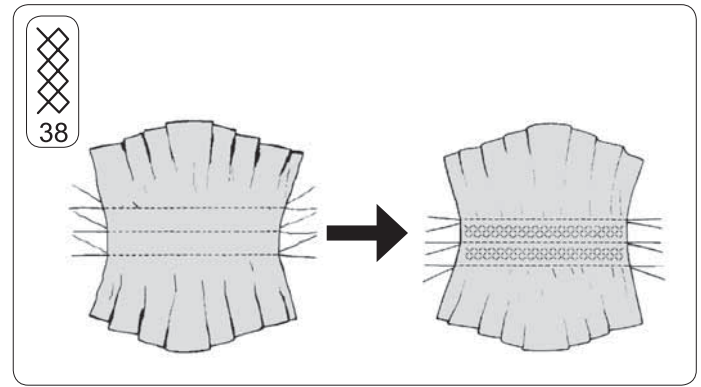
Blanket Stitch

The decorative appearance combined with practical use of this stitch enables it to be used for hemstitching and to applique a quilt.



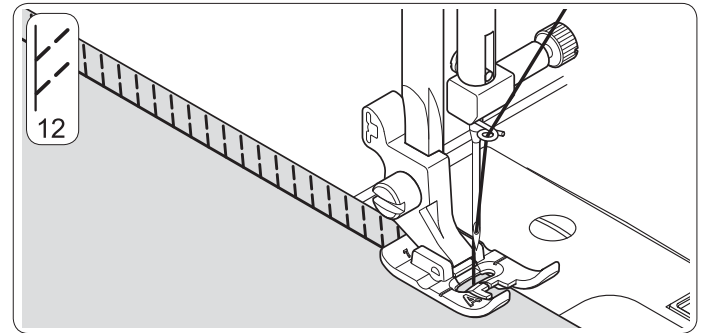
Honeycomb Stitch

1. Make several rows of gathers across the fabric that you wish to smock.
2. With a narrow strip of fabric directly under the line of gathering, stitch over the gathers. The design will be a series of small diamonds.



Slant Overedge Stitch

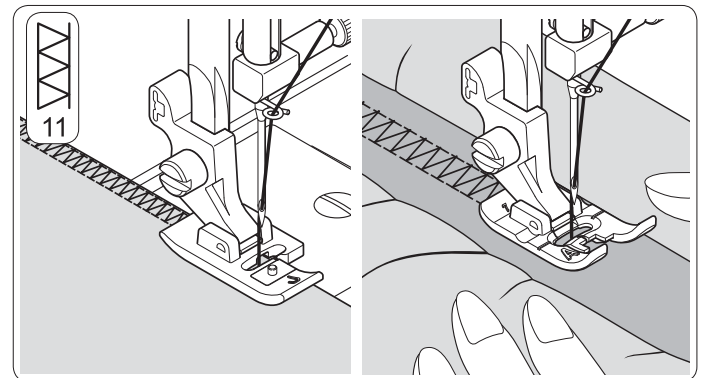
Seam and overcast in one operation to produce a narrow, supple seam, particularly suited to swimwear, sportswear, T-shirts, babywear in stretch nylon, stretch towelling, jersey and cotton jersey.



Turkish Stitch

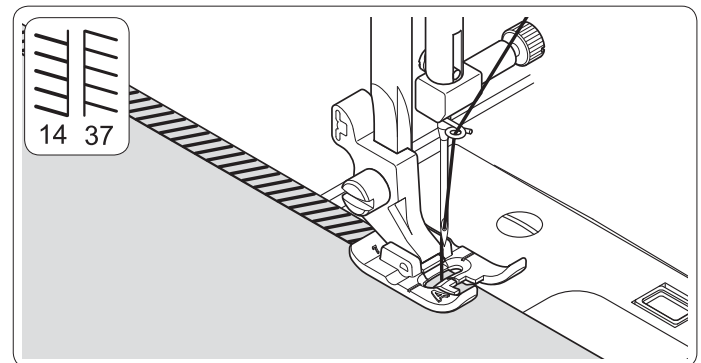
The turkish stitch has three main uses. It is perfect for attaching flat elastic when making or repairing lingerie; and for overcasting and for seaming and overcasting in one operation on slightly stretch fabrics and non-stretch ones such as linen, tweed, and medium to heavy-weight cotton.

Use Edging Foot J for overcasting and seaming/overcasting.



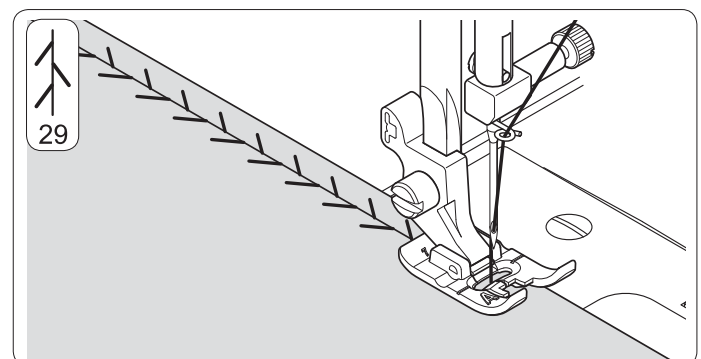
Slant Pin Stitch

Excellent for hemstitching table and bed covers with an elegant touch. Sew along the raw edge of fabric and trim close to the outside of the stitching.



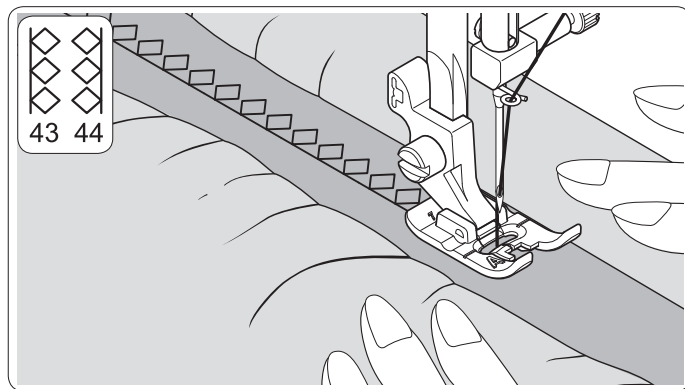
Thorn Stitch

It is a versatile stitch used for joining fabric pieces and as a decorative touch.



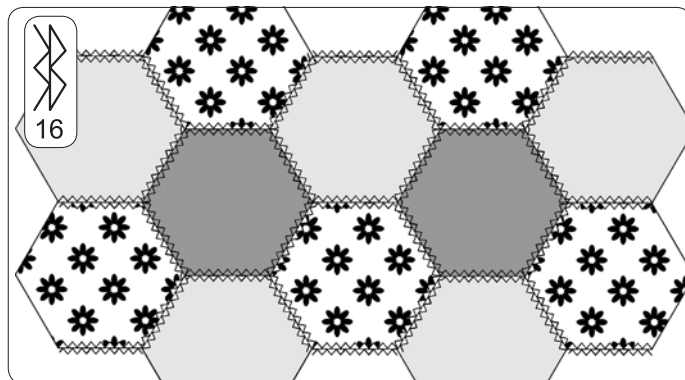
Reinforced Overedge Stitch

Both of these stitches are perfect for attaching flat elastic when making or repairing lingerie. They can also be used for smocking and as a seam finish.



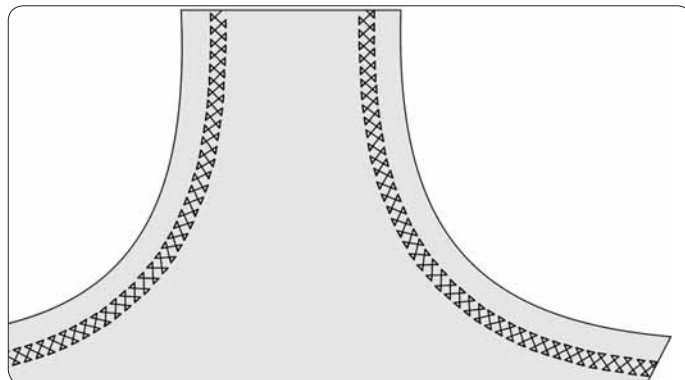
Wizard Stitch

Wizard stitch, as well as being a decorative stitch, is ideal for patching stretch fabrics such as jersey and knitwear.



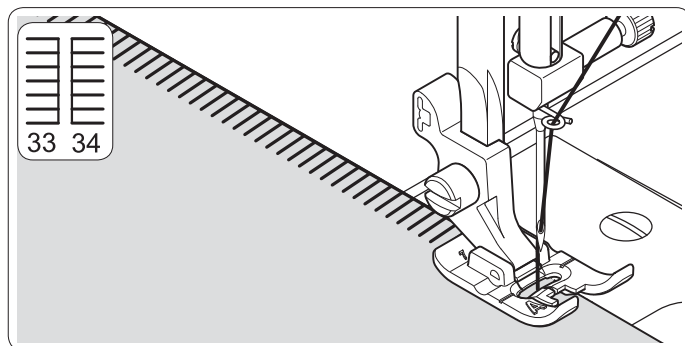
Crossed Stitch

Use to sew and finish elastic fabrics or for decoration of borders.



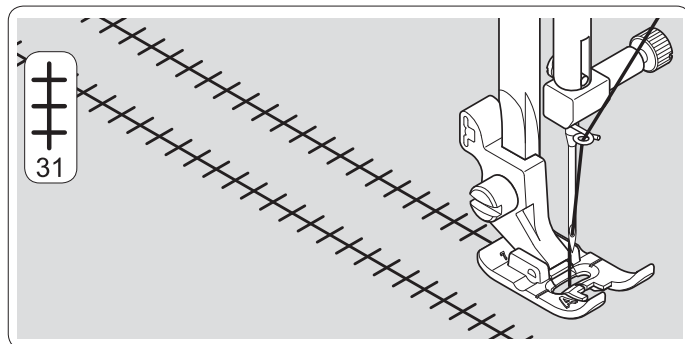
Pin Stitch

The Pin stitch is a traditional stitch used for picot like edges and for applique work.



Entredeux Stitch

Useful for decorative stitching on borders and for use in heirloom sewing. The entredeux stitch is most often sewn with a wing needle to create holes in the stitch pattern.



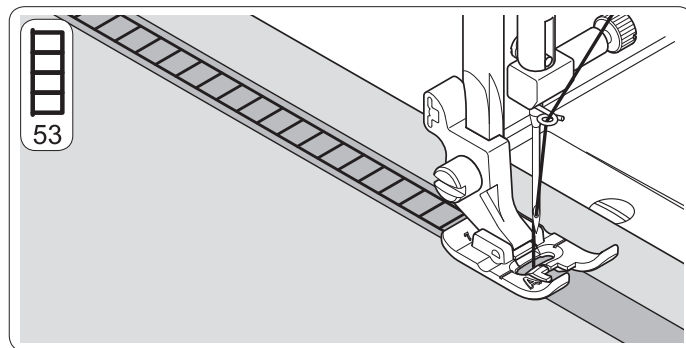
Ladder Stitch

The Ladder stitch is primarily used for drawn thread hemstitching. It can also be used for sewing over thin tape in an opposite or same color. Place the stitch in the center and a special effect will be obtained for decoration.

Another use for the ladder stitch is couching over narrow ribbon, yarn or elastic.

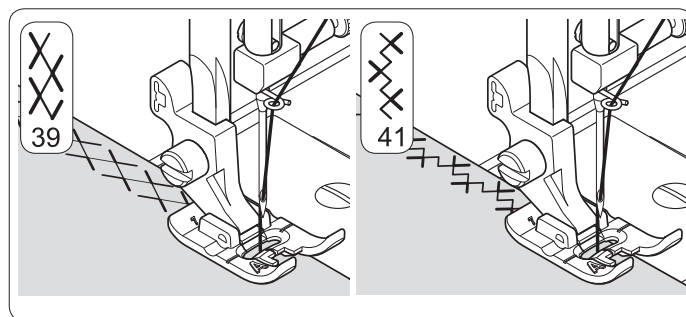
For drawn thread work, choose a medium to heavy weight linen-type fabric. After sewing, draw the thread out from within the ladder for an open, airy appearance.

Note: Be sure to sew accurately along the grain line, if you wish to draw out threads.



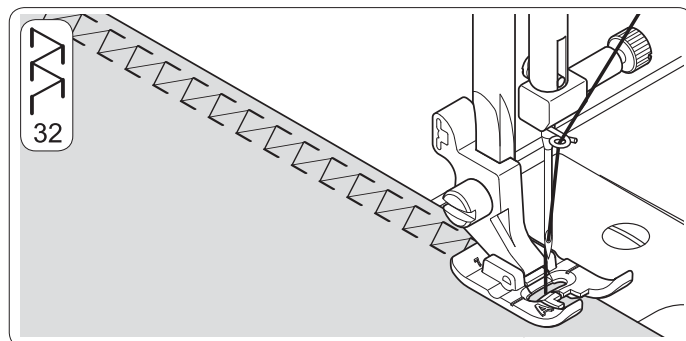
Criss-Cross Stitch

Used to sew and finish stretch fabrics or for decoration especially of borders.



Fishbone Stitch

Use to create decorative borders.



SEWING ON A BUTTON

Settings: Remove presser foot.

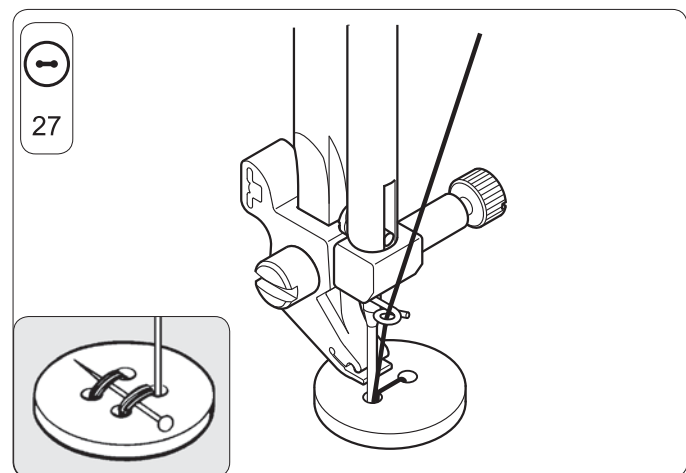
Stitch width: Adjust as necessary.

Feed teeth lever -

Mark the fabric where the button is to be located. Place the fabric under the presser foot ankle. Place the button on marking and lower the presser bar so that the presser foot ankle is between the holes of the button. Hold the thread ends to one side. Turn the handwheel and check to be sure that the needle goes into the holes of the button. Sew 6-8 stitches. Set the stitch width to 0 and lock the threads with a few stitches.

If a shank is required, place a darning needle on top of the button and sew over top of it.

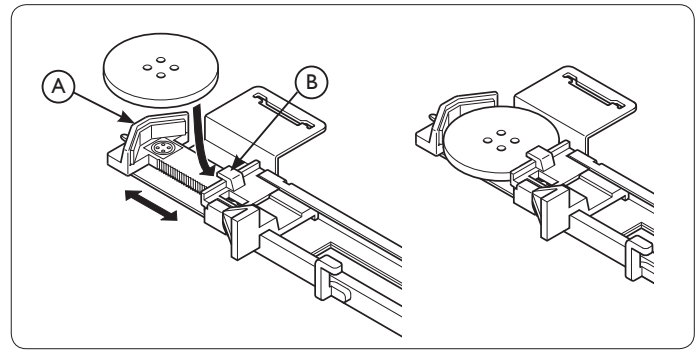
Note: Do not use this technique if the button is less than 1 cm (3/8") in diameter. Raise the feed teeth after button sewing.



BUTTONHOLES

Using the Buttonhole Foot

1. Insert a button in between tab A and tab B.
2. Buttonholes can be sewn to match the size of the button.



Procedure

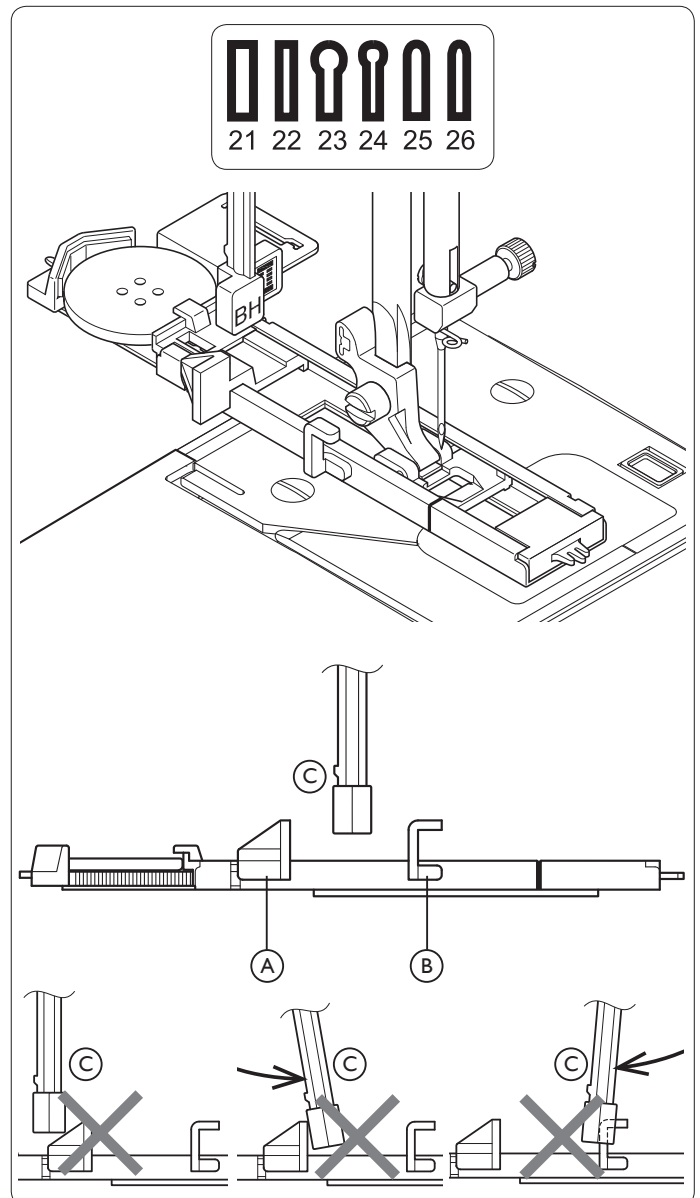
- Use stabilizer in the area of the garment where the buttonholes are placed. Stabilizer or regular interfacing can be used.
- Make a practice buttonhole on a scrap of the fabric you are using. Then try the buttonhole with the selected button.

1. Select one of the buttonholes, 21, 22, 23, 24, 25 or 26.

2. Attach the buttonhole foot.

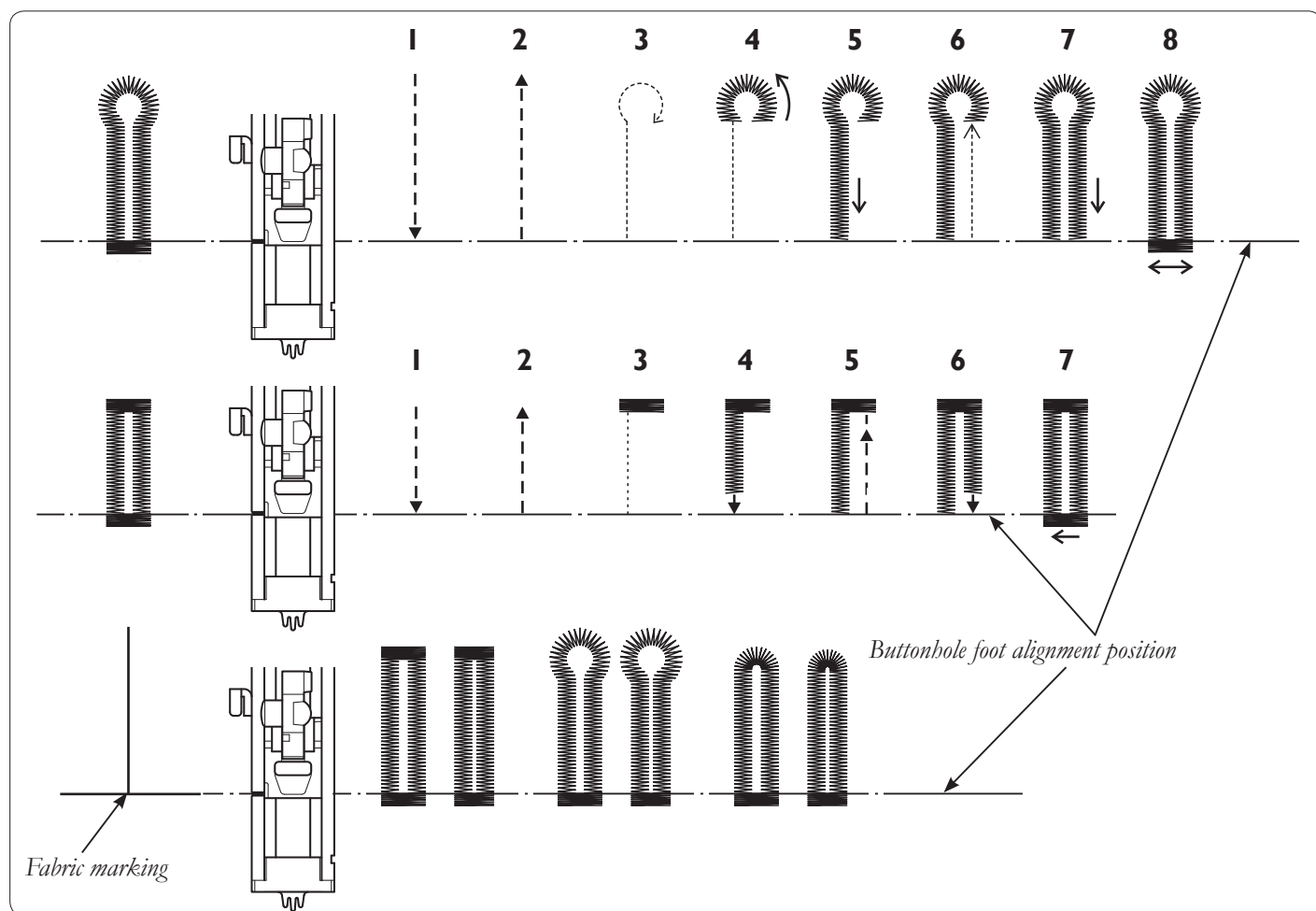
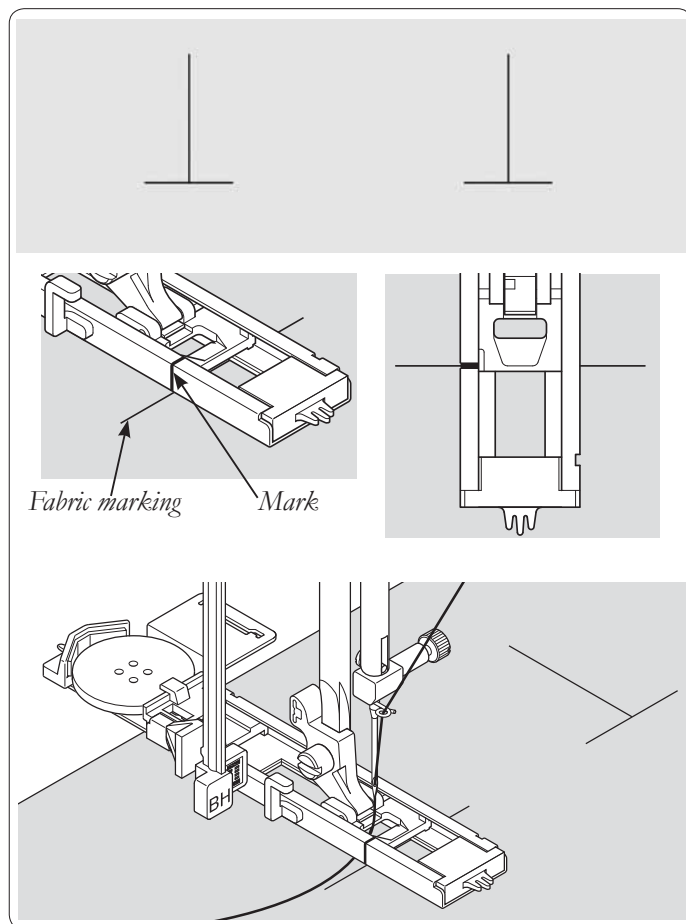
3. Insert the button into the buttonhole foot.

4. Set the buttonhole lever (C) so that it drops down vertically between the stoppers (A) and (B).



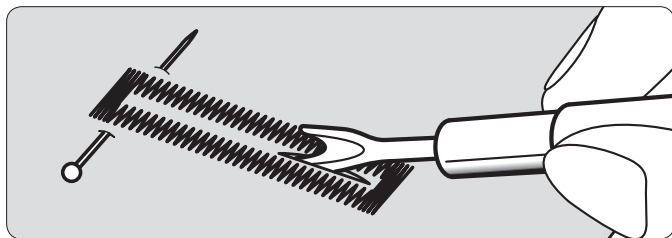
5. Carefully mark the position of the buttonhole on your garment.
6. Place the fabric under the foot. Pull out the bobbin thread underneath the fabric to a length of about 4" (10 cm).
7. Align the buttonhole mark on the fabric with the mark on the buttonhole foot, and then lower the buttonhole foot.
8. While holding the top thread, start the machine.

Sewing will be completed automatically in the following order.



9. When sewing is finished, use the seam ripper to open up the fabric in the center of the buttonhole.

Be careful not to cut any of the bartack threads.

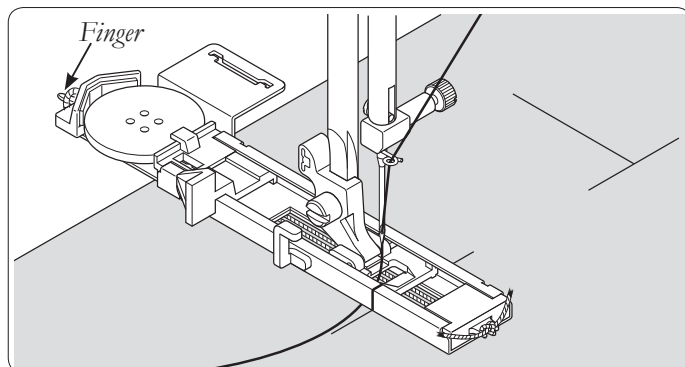


Corded Buttonholes

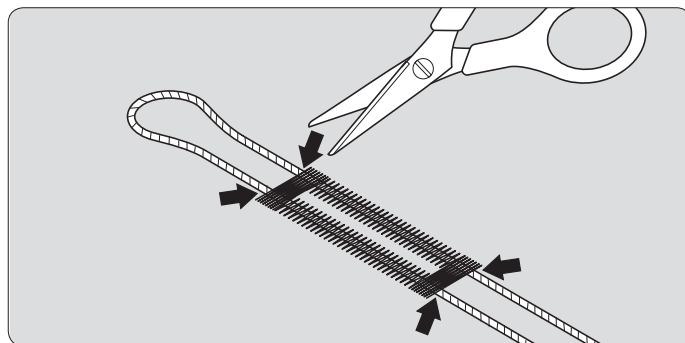
When sewing buttonholes in stretch fabrics we recommend cording the buttonhole to increase the stability and to keep the buttonhole from stretching out.

Loop a piece of heavy thread or pearl cotton over the finger at the back of the buttonhole foot. Pull both ends of the cord forward under the foot and tie off the cord as shown in the illustration.

Sew buttonhole so that zigzag stitches cover the cord.



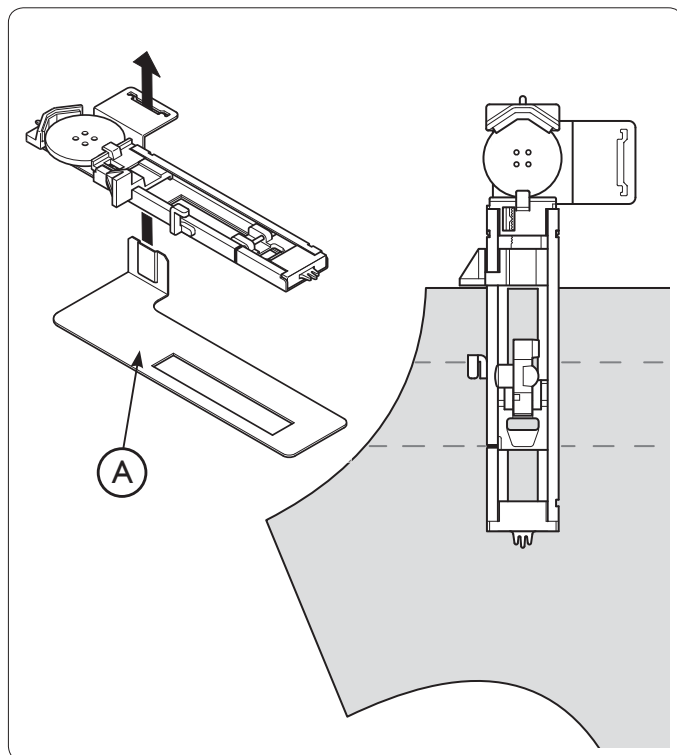
When completed, release the cord from foot and cut off excess cord.



Buttonholes in Hard-to-Sew Fabrics

When sewing buttonholes in hard-to-sew fabrics or along the edge of multi-layered garments, attach the under-plate (A) onto the buttonhole foot as illustrated.

Place the fabric between the under-plate and buttonhole foot.

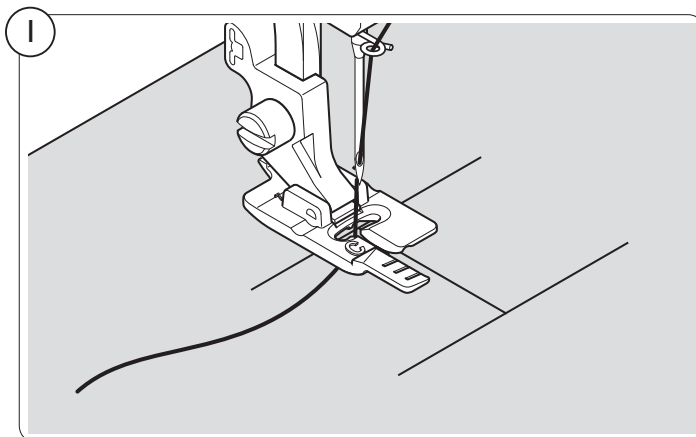


Manual Buttonhole

If the diameter of the button is more than 2.5 cm (1"), make the buttonhole manually as follows:

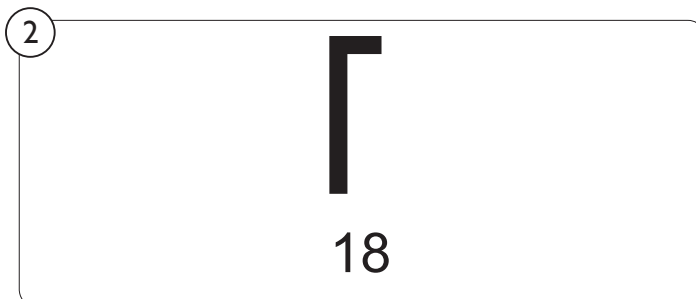
Presser foot: Buttonhole Foot C.

1. Mark the buttonhole length on your garment. Draw both needle and bobbin thread to the left. Lower the needle into the fabric where the buttonhole is to start, then lower the foot.

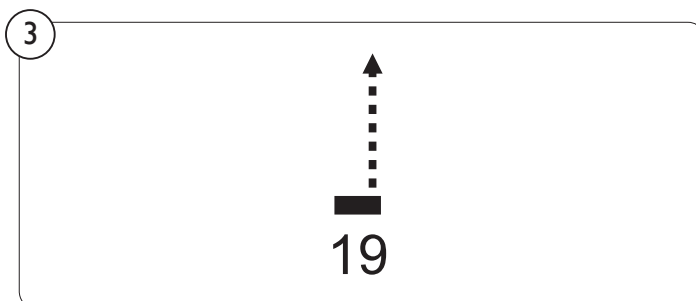


2. Select stitch 18 and start sewing. The machine sews the first bartack and the left buttonhole column. Sew desired length.

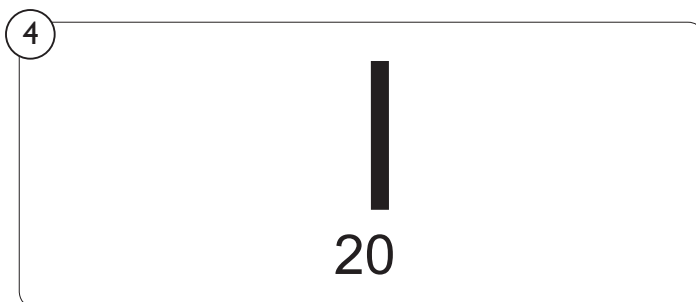
Note: If the stitch length (buttonhole density) for stitch 18 is set manually, remember to do the same setting on stitch 20 in step 4 below.



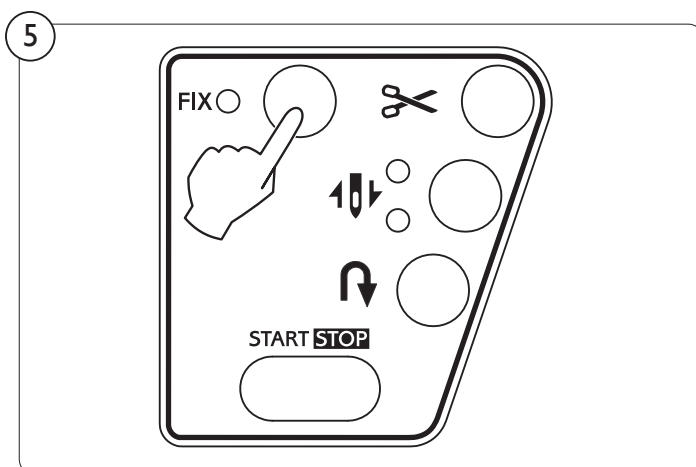
3. Select stitch 19 and start sewing. The machine sews the second bartack followed by a reversed straight stitch. Sew until reaching the beginning of the buttonhole.



4. Select stitch 20 and start sewing. The machine sews the right buttonhole column.



5. Stop sewing when you have completed the buttonhole and press FIX button to tie off.



DECORATIVE SEWING

Presser foot: Decorative Stitch Foot B.

55 different types of decorative stitches are available.

The following are examples of how to use and sew these stitches.

You can use other stitches in the same way.

- You should carry out a test sewing on a scrap piece of the fabric being sewn, to check the stitch pattern to be used.
- Before starting to sew, check that there is enough thread wound onto the bobbin to make sure that the thread will not run out during sewing.
- Slightly loosen top thread tension.

TIPS ON DESIGN STITCHING

Scallop Stitch (60)

This is an ideal decorative stitch for finishing the edges of fabrics, such as those used for table linens or children's clothing. When sewing this stitch on a fabric edge, first sew the stitch with a stabilizer underneath the fabric. Trim the edge of the fabric along the edge of the stitch, being careful not to cut into the stitching.

Pyramid (74)

This stitch can be used for embellishing bias binding or creating decorative borders on garments and home dec projects.

Arrowhead (68)

In addition to using this pattern as a decorative stitch, it can also be used as a triangular backtack stitch for reinforcing places which can easily unravel. This is particularly useful for sewing both edges of pockets..

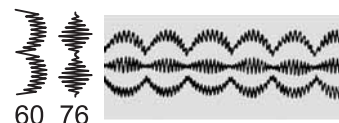
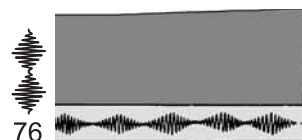
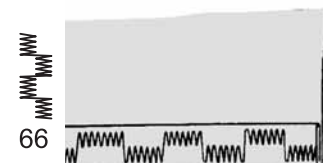
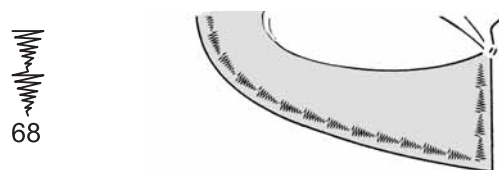
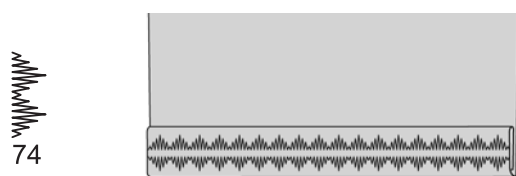
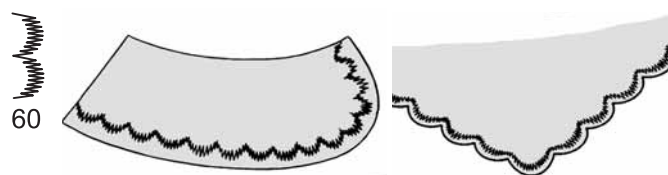
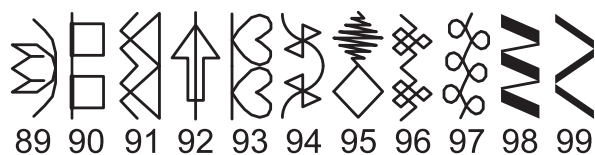
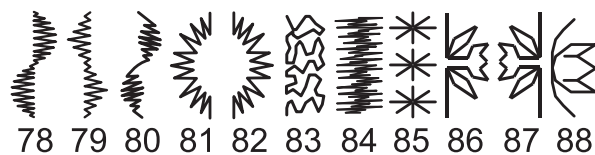
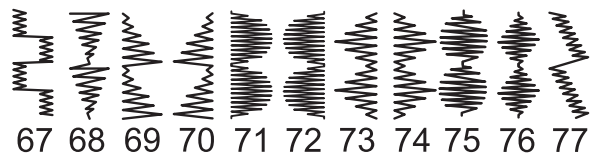
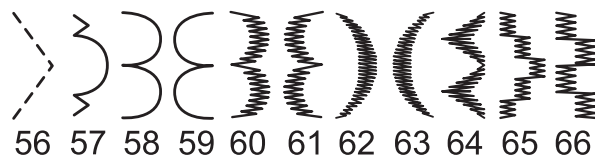
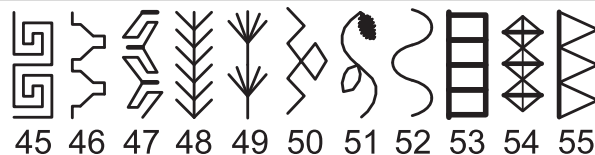
Checker Board Zigzag (65) and Checker Double (66)

Use a bias tape and fold back the edge. Sew the checker stitch on top of this.

Diamond (76)

Fold over the edge of the fabric and use this stitch to tidy up the edge.

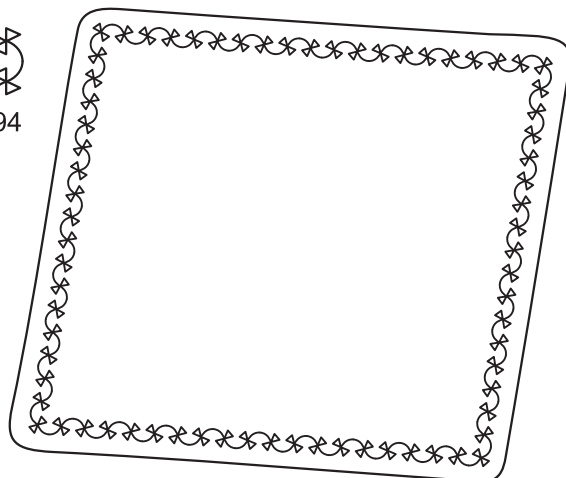
Scallop stitches and diamond stitches can be combined to create other attractive patterns.



MORE SEWING EXAMPLES

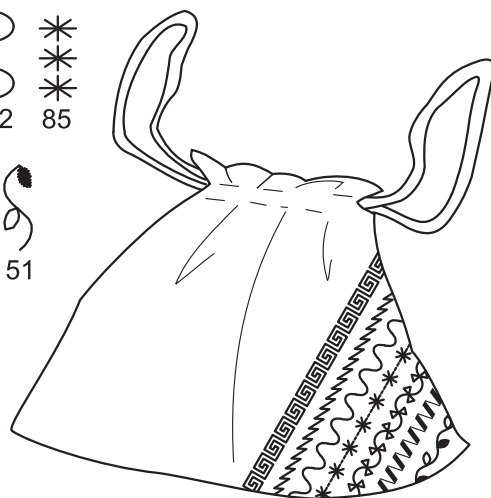
See examples to the right for more examples on how to use the decorative stitches.

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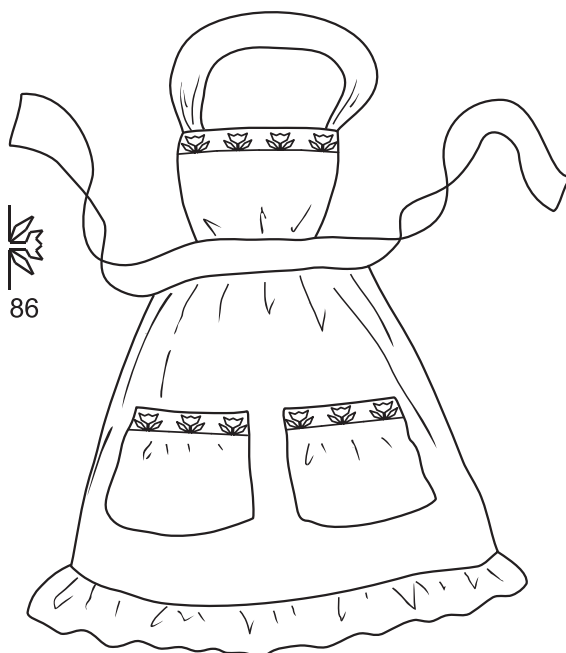


45 02 52 85

94 98 51

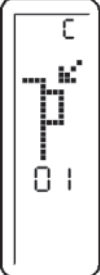




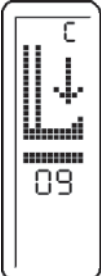



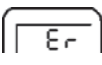


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ERROR MESSAGES WHEN SEWING

When your machine encounters problems when sewing, an error message consisting of a number and an illustration will appear on the display. Use the table below to identify and solve the problems.

Sewing machine display	Problem and solution	Sewing machine display	Problem and solution
	Machine is locked up due to thread entangled with bobbin case or rotation interrupted forcibly. <i>Turn off power switch and eliminate the problem that caused the machine to stop.</i>		Breakage of top thread is detected. <i>Supply top thread and restart.</i>
	Bobbin winder is locked up due to thread entangled around spindle or rotation interrupted forcibly. <i>Turn off power switch and eliminate the problem that caused the bobbin winder to stop.</i>		Breakage of bobbin thread is detected. <i>Supply bobbin thread and restart.</i>
	Buttonhole is selected on selection button, but buttonhole lever is raised. <i>Lower buttonhole lever and begin sewing buttonhole.</i>		Unable to start with presser foot lifted. <i>Lower presser foot and restart.</i>
	Buttonhole lever is not raised. <i>Raise buttonhole lever when sewing stitch patterns.</i>		Failure in thread trimming <i>Turn off power supply, raise needle and turn on power supply.</i>
	Foot control is connected while operating with Start/Stop button or Start/Stop button is pushed while foot control is connected. <i>Disconnect foot control or restart sewing by depressing foot control.</i> or Foreign particle like tip of needle, screw driver etc. is detected on machine socket for foot control. <i>Remove foreign particle.</i>	 1-17 (Error message number)	System error occurs. <i>Turn off and on power switch to eliminate the problem that caused the system error to occur. If the error number should not disappear, consult an authorized technician.</i>

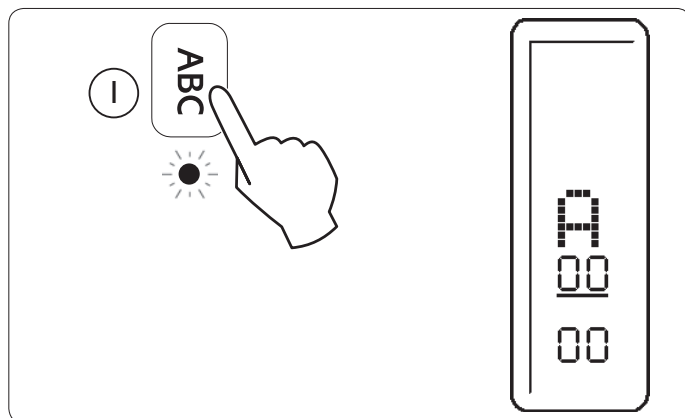
5 Program

PROGRAM

Presser foot: Decorative Stitch Foot B

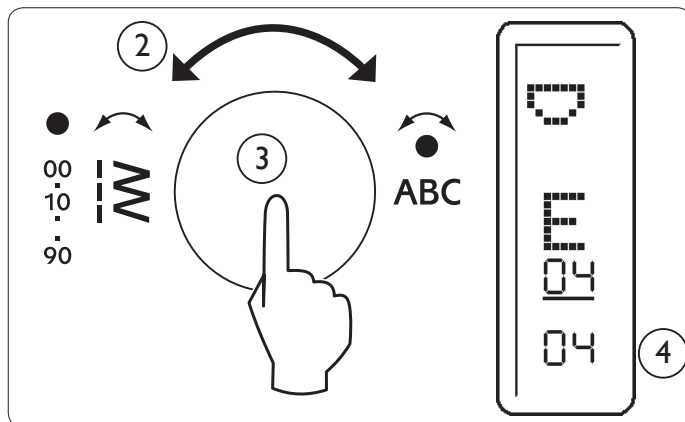
1. Press the Program Mode button. The LED light below the button is lit, indicating that Program Mode is active.

Note: Twin Needle Safety must be disabled to enter Program Mode.



2. Turn the Stitch Selection dial until desired stitch or letter appears on the display.
3. Press the center of the Stitch Selection dial to program the stitch. The programmed stitch is shown vertically on the display, as it will be stitched out.
4. Repeat step 2 and 3 until your stitch program is finished. The total number of stitches in the program is shown at the bottom of the display.

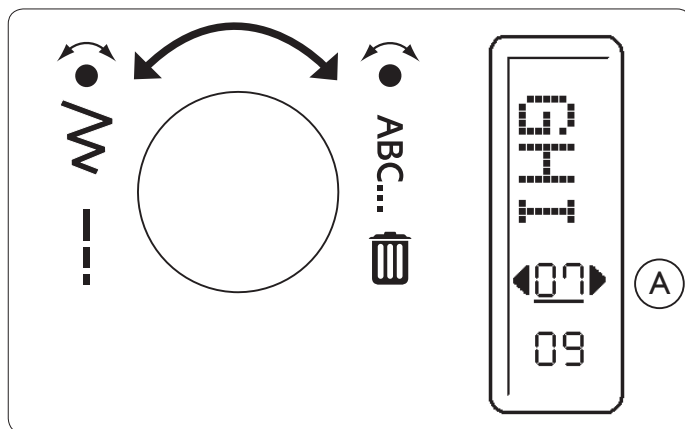
Note: A stitch program can contain a maximum of 40 stitches.



PROGRAM PREVIEW

To preview your stitch program, turn the Scroll Program Dial. Turn counter clockwise to scroll backward, and clockwise to scroll forward in the program.

The underlined number (A) in the display indicates which position in the program that is currently shown at the top of the display. A single arrow pointing right next to the number "01" indicates that the program is positioned at the first stitch and can only be scrolled forward.

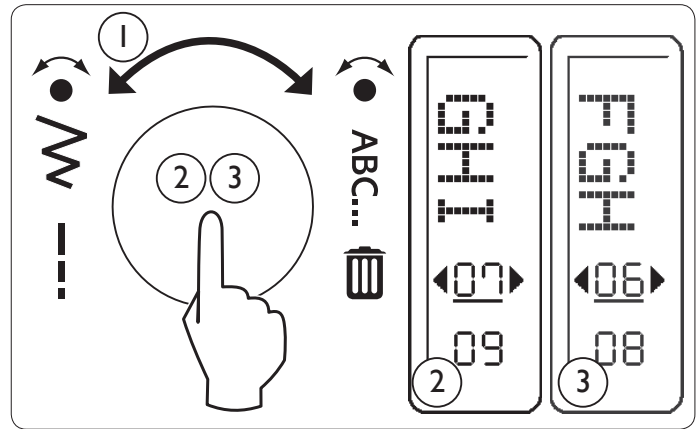


DELETE PROGRAMMED STITCHES

1. To delete a programmed stitch, turn the Scroll Program Dial to enter Preview mode.
2. Press the center of the Scroll Program Dial to go to Delete mode. The machine automatically steps to the end of the program.
3. Press the center of the dial again, and the last stitch in the sequence will be deleted. The stitch is removed from the display, and the total number of stitches at the bottom of the display is reduced by one.

Note: Stitches can only be deleted in the reverse order of which they were programmed. It is not possible to delete a stitch in the beginning or middle of a program.

4. Press repeatedly or keep the dial pressed to continue deleting stitches one by one.

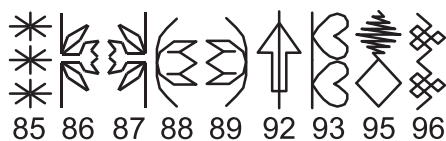
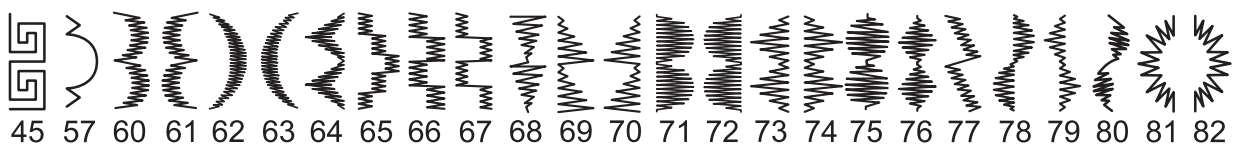


SAVE A STITCH PROGRAM

If you have created a stitch program but want to stitch it out later, press the Program Mode button or one of the direct selection buttons to save the program and go back to Sewing Mode. To retrieve your stitch program, press the Program Mode button.

Note: The stitch program is not saved when turning off the machine.

PROGRAMMABLE STITCHES



ABC	A	B	C	D	E	F	G	H	I	J	K	L	M	N
	O	P	Q	R	S	T	U	V	W	X	Y	Z	□	1
	2	3	4	5	6	7	8	9	0	-	.	,	?	!
	&	/	•	()	□	À	È	Ì	Ò	Ù	Ä	Ë	Ï
	Ö	Ü	Ñ	Î	Ô	É	Â	Ê	Ô	Æ	Ç	Ğ	İ	Ş
	Æ	Ø	Å	Á	Í	Ó	Ú	Њ	□	А	Б	В	Г	Д
	Е	Ё	Ж	З	И	Й	К	Л	М	Н	О	П	Р	С
	Т	У	Ф	Х	Ц	Ч	Ш	Щ	Ъ	Ы	Ь	Э	Ю	Я
	Ґ	Є	І	Ї	□									

6 Embroidery

NEEDLES

The correct needle for embroidery is dependent on the type of fabric and thread being used.

- Always use a new needle when starting an embroidery design.
- For basic embroidery use an INSPIRA™ size 80 Embroidery Needle. You can also use an INSPIRA™ size 80 Universal Needle with a ball point.

THREADS

- Embroidery threads create a smooth glossy appearance for embroidery and other decorative stitching. Any good quality 40 wt. embroidery thread will work well. You can use either rayon, which has a nice sheen to it or polyester, which holds up well during multiple washings.
- Specialty threads like metallic, 30 wt. cotton, etc. can be used but be sure to use a larger needle with a large eye like an INSPIRA™ size 90 Topstitch Needle. Thread the sewing machine with the spool in the vertical position and lower the embroidery speed.
- For the bobbin, special embroidery bobbin thread must be used for good embroidery results. Bobbin thread is finer in weight, so more will fit on the bobbin, and it will not build up bulk in the embroidery.
- Pre-wound bobbins are not recommended for your H|CLASS™ 600E sewing and embroidery machine.
- Regular sewing thread is usually not recommended for embroidery because it is heavier and builds up too much bulk as the design stitches out.

STABILIZERS

For the best embroidery results, always place a layer of stabilizer beneath the fabric. Which stabilizer you choose will depend on the nature of the fabric on which you are embroidering. There are a variety of stabilizers available: tear-away, cut-away, wash-away and those that are removed by applying heat.

Stabilizers are divided into two main types: Backings (which go in the hoop behind the fabric), and Toppers (which go on top of the fabric). Always follow the manufacturer's instructions on how to use and apply the stabilizer correctly.

Generally, the stabilizer should be larger in size than the hoop in which it is being used. When embroidery is completed, use a fine point scissor to carefully remove any excess stabilizer from the embroidery area.

Tear-away stabilizers

Tear-away stabilizers are used with stable woven fabrics. Place underneath fabric for decorative stitching or hoop with the fabric when embroidering. Tear away excess stabilizer after stitching.

Iron-on tear-away

Iron-on tear-away is a totally stable stabilizer that has a slick side that will iron on to fabric. It is recommended for knits and all unstable fabrics. Fuse it to the wrong side of the fabric before decorative stitching or hooping. Tear away excess stabilizer after stitching.

Cut-away stabilizer

Cut-away stabilizer does not tear so the excess has to be cut away. It is recommended for knits and all unstable fabrics, especially for hoop embroidery.

Water soluble stabilizer

Water soluble stabilizer is placed on top of the fabric when embellishing/embroidering napped and looped fabrics such as terry cloth. When embroidering cutwork, use it underneath the fabric. Place your work in water to dissolve the excess stabilizer. It is available in different thicknesses.

Disintegrating stabilizer

Disintegrating stabilizer is a stable, loosely woven fabric that is used for techniques such as cutwork and to crochet off the fabric edge. The stabilizer disappears with heat.

Sticky stabilizer

Sticky stabilizer is used for fabrics that cannot be hooped, such as velvet, leather, vinyl etc. and pieces of fabric that are too small to be hooped. Hoop the sticky stabilizer with the paper side up. Remove the paper and stick the fabric onto the sticky surface. Tear away sticky stabilizer after stitching.

GETTING STARTED

EMBROIDERING

1. ATTACH THE EMBROIDERY FOOT



Always be sure to turn off power to machine before changing presser foot.

- Raise presser foot lifter. Turn hand wheel toward you until needle is in its highest position.
- Remove presser foot screw, presser foot and foot holder.
- Attach the embroidery presser foot behind presser foot bar so that the drive lever is above the needle clamp. Secure it by tightening presser foot screw.
- Turn hand wheel toward you to move needle up and down, and check that the embroidery presser foot moves up and down together with the needle.

2. THREAD YOUR MACHINE

see page 11-15.

Thread your machine with top thread in the first color to be used in the embroidery.

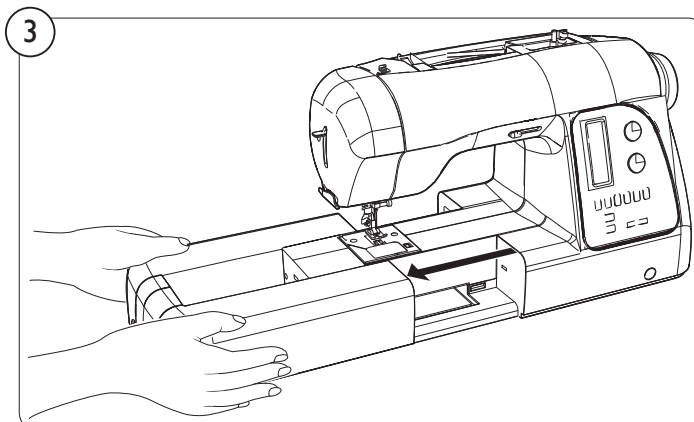
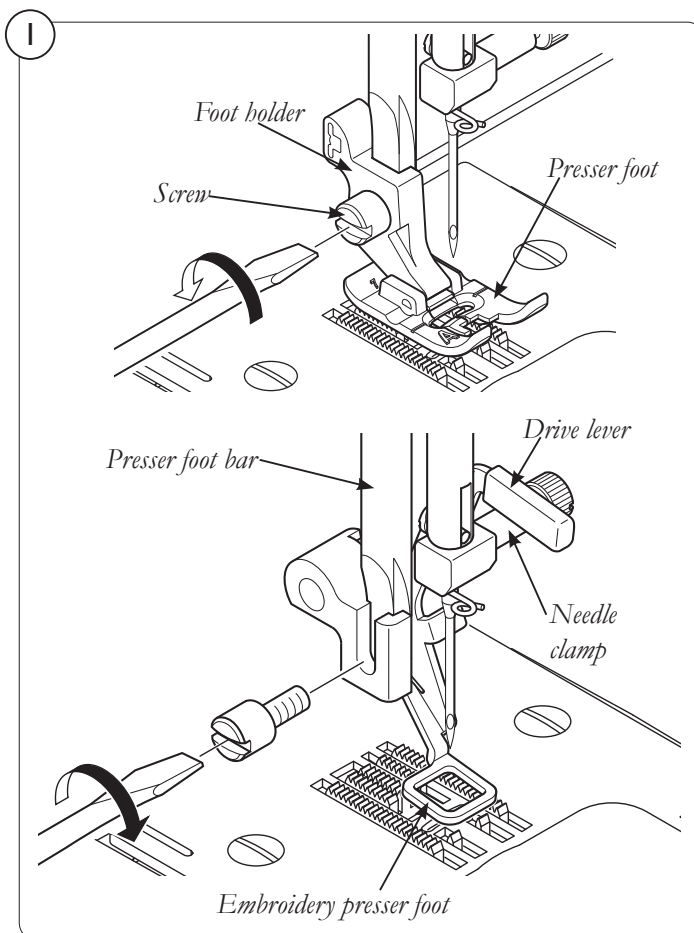
Note: It is recommended to thread the upper thread before transmitting a design to the machine for embroidery.

A large amount of thread is required for embroidering, so be sure to use full bobbin.

Tip: Wind more than one bobbin of embroidery bobbin thread before starting to embroider, if embroidering several or very large designs. This will save you time when you run out of bobbin thread.

3. REMOVE THE ACCESSORY BOX

Turn off power to machine. Slide the accessory box to the left to remove it from machine (*see page 10*).



4. ATTACH AND REMOVE THE EMBROIDERY UNIT

1. Turn off the power to the machine.

Turn the connector lid to the right to open it.

2. Slide the embroidery unit onto the machine fitting the connectors on the machine and the embroidery unit. Slide the embroidery unit as far as it will go to the right until it clicks into place.

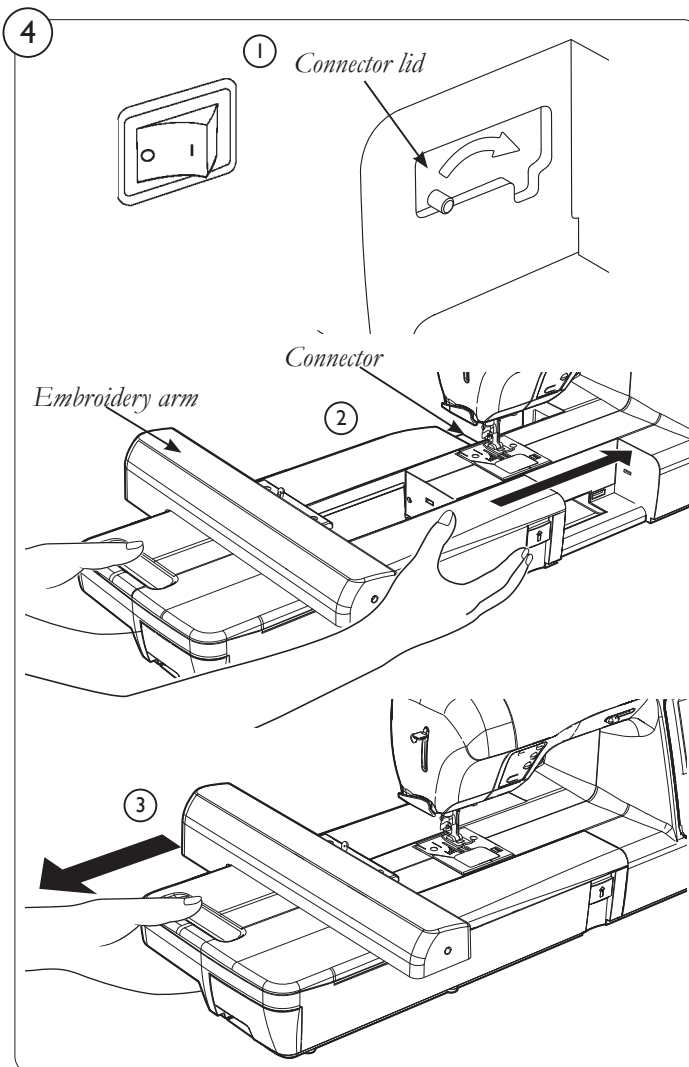
3. To make sure that the embroidery unit is fully engaged, hold the handle of the embroidery unit and pull it gently towards the left direction, checking that the embroidery unit does not detach.

Note: If embroidery unit is not securely installed, the finished embroidery may be distorted. Make sure that the embroidery unit is pushed in as far as it will go.



CAUTION

Don't push the embroidery arm nor put strong pressure on it when attaching or using the embroidery unit. It may result in damages on the embroidery unit.



Remove the Embroidery Unit

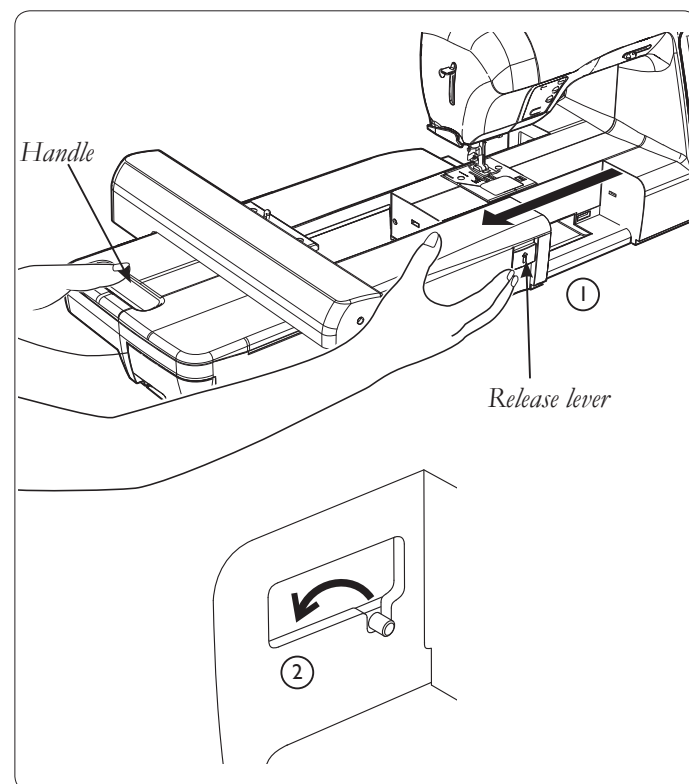
- Turn off the power to the machine.
- Remove embroidery hoop from machine (see page 42).

1. When holding the handle of the embroidery unit, carefully slide it towards the left while pressing release lever upward.

Note: Do not pull the embroidery arm when removing the embroidery unit.

2. Turn the connector lid to the left to close it.

Note: The connector lid must be closed for regular sewing.



5. HOOP THE FABRIC

Two hoops are supplied with the machine - one large (260x160mm) and one small (100x100mm).

For the best embroidery results, place a layer of stabilizer beneath the fabric. When hooping stabilizer and fabric make sure that they are smooth and securely hooped.

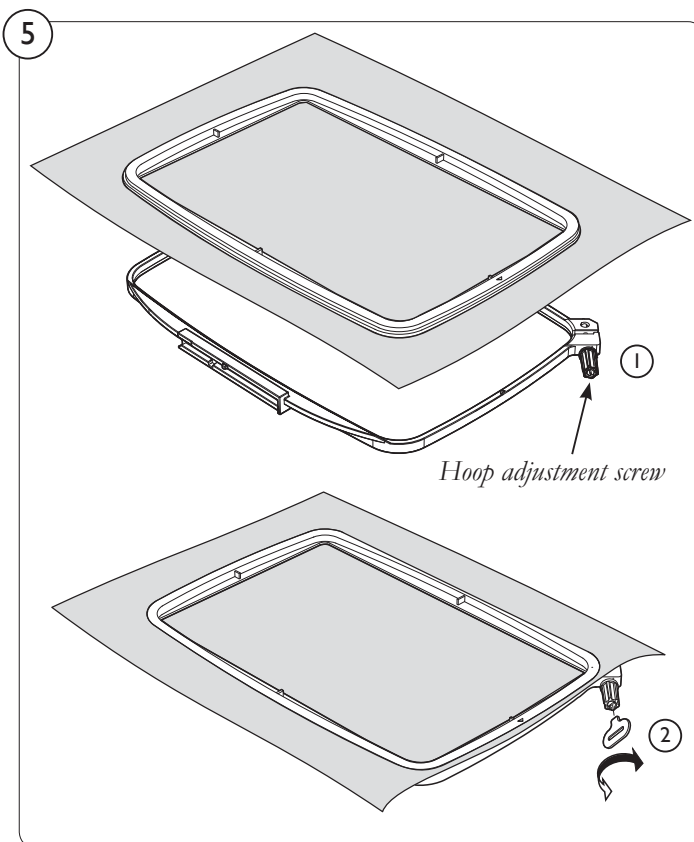
1. Loosen the hoop adjustment screw on the outer hoop and remove the inner hoop. Place the outer hoop on a firm flat surface.

Place the stabilizer and fabric, with the right sides facing up, on top of the outer hoop. Place the inner hoop on top of the fabric. Push the inner hoop firmly into the outer hoop.

2. Adjust the pressure of the outer hoop by turning the hoop adjustment screw.

Tighten the hoop adjustment screw, but do not overly tighten it.

The fabric should be taut in the hoop for the best results. Do not stretch the fabric in the hoop, it can cause distortion to the embroidery.



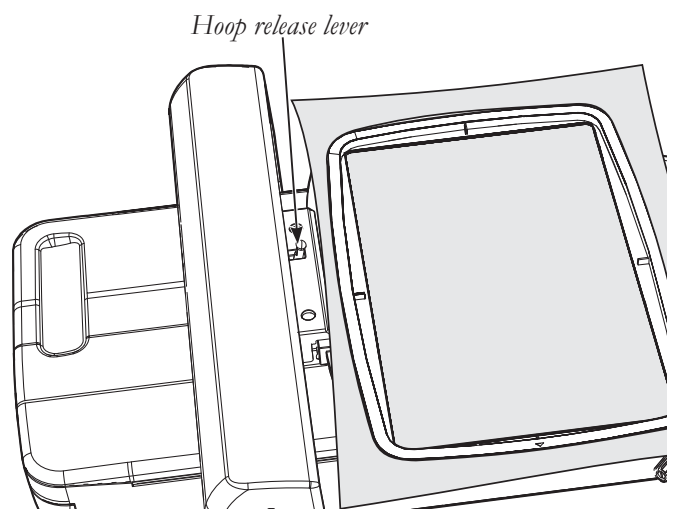
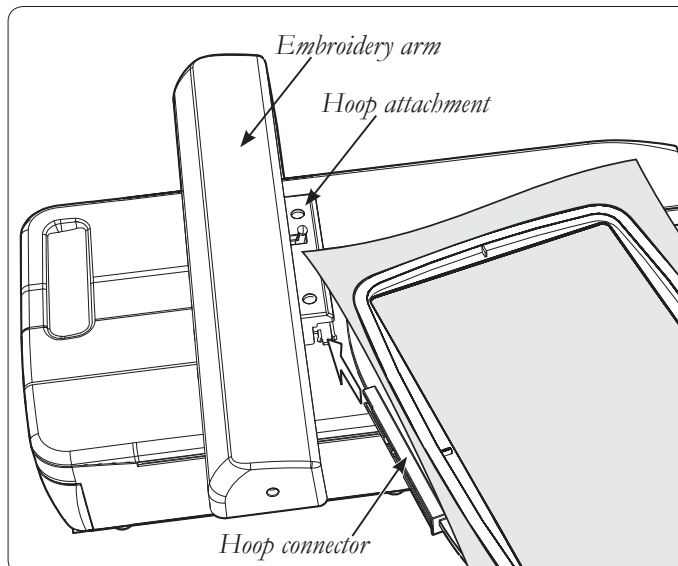
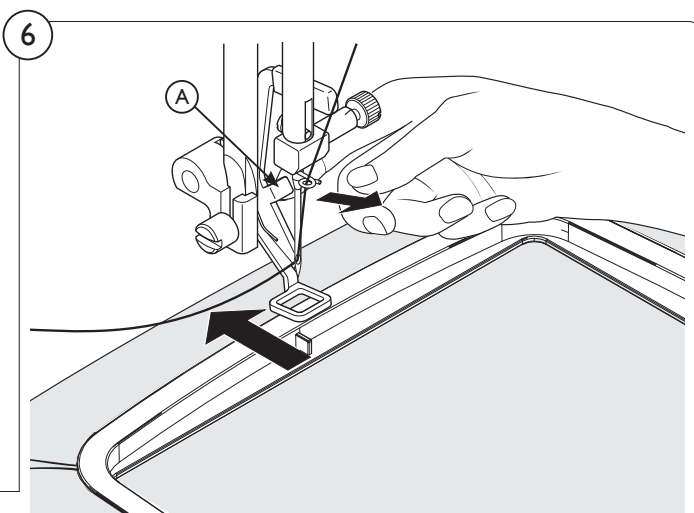
6. ATTACH AND REMOVE THE EMBROIDERY HOOP

1. Raise the presser foot and needle, and push up lever (A) of embroidery foot with your finger and pass embroidery hoop under it.

To remove, pull the hoop forward to slide it out from underneath the embroidery foot.

2. Slide the hoop connector into the hoop attachment on the embroidery arm until it clicks into place.

To remove the hoop from the embroidery arm, press the release lever and slide the hoop towards you.



7. INSTALL AND USE THE EMBROIDERY SOFTWARE

When embroidering, you need to have your machine connected to a PC (See below for system requirements). The embroidery designs are selected and transmitted to the machine using a special embroidery software and a USB-cable. Before embroidering for the first time install the H|CLASS™ 600E embroidery software to your PC.

How to install the software

The software comes on a USB memory stick. Insert the USB stick into a USB port in your PC. After some seconds, the Installation procedure of the software will start automatically. If after a short while, the software doesn't automatically start the installation process, you may start the installation procedure manually by browsing the contents of the USB memory stick and running the file named "HCLASS_Start.exe".

A window will appear with three options: start the installation, open the folder containing the software manuals, or view the contents of the USB memory stick section available for storing your own data.

Click on "Installation" to start the installation process and follow the instructions on the computer screen.

Detailed installation information is found in the H|CLASS™ 600E embroidery software manual located on the USB memory stick.

System Requirements

You can install and use the software on a PC which fulfills at least the specifications listed below:

- PC with 1 GHz Intel or AMD processor
- Windows OS: Windows 7 / XP / Vista
- 1 GB of RAM (or more recommended)
- 500 MB (or more recommended) of available hard-disk space for installation
- Color standard (1024x768 pixel; 65,000 colors recommended) VGA adapter connected with a color VGA monitor
- Microsoft compatible mouse
- USB 1.1 / 2.0

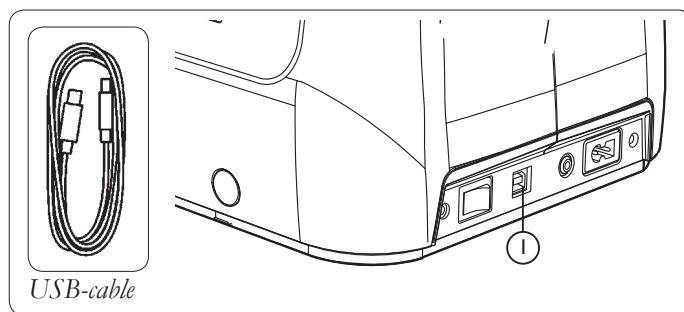


8. START EMBROIDERING

The following instructions must be followed precisely to start-up correctly. If problems occur, turn off the sewing machine and start over.

Start your computer, but do not open the H|CLASS™ 600E software. Next, attach the embroidery unit to your sewing machine and connect the USB cable between your computer and sewing machine (1).

1. Turn on your machine. Make sure the needle is in its highest position by turning the hand wheel toward you.
2. Attach the hoop that you plan to work with to your embroidery unit.
3. Double click on the embroidery software icon on your PC desktop to open up the H|CLASS™ 600E embroidery software.
4. You are now ready to select and transmit a design to your machine (see "How to" Tutorial in the Help menu in the H|CLASS™ 600E embroidery software, or the software manual on the USB memory stick).



Important: If you have embroidered using the small hoop, and you are now ready to use your large hoop, turn off your machine and close the H|CLASS™ 600E software. Start over by following steps 1 through 4 above.

LOCATING AND OPENING A DESIGN

USING THE DESIGN BROWSER

- To view the designs already on your hard drive, go to File: Design Browser.
- Click on the Folder where you have stored your designs. You can preview your designs saved in any of the formats that the software uses.
- Click on a design and you'll be able to preview it, see the color blocks and size of the design, as well as the stitch count. Click on Open, to select it for embroidery.

UNZIPPING FILES FROM THE INTERNET

- Before you begin, have a designated folder already set up for saving your designs. Designs downloaded from the internet are usually in zipped folders. For information on unzipping files, go to <http://www.husqvarnaviking.com/us/3078.htm>.
- To retrieve the design, open the H|CLASS™ 600E software. Go to File: Open and locate the folder where the design was saved. You will be able to see the design. Double click on it, OR, click once, then select OK, to open the design for embroidery.

USING A DESIGN FROM A CD

- To use an embroidery design from a collection on CD, insert the disk into your disk drive. Select a design, and then save it into a designated folder on your hard drive.
- To retrieve the design, open the H|CLASS™ 600E software program.
- Go to File: Open, then go to the folder where it was saved. To be sure your design appears, in the File Type drop-down-list, select All Embroidery Files.
- Click on the design, then click OK. The design will appear on screen.

PRINTING SOFTWARE MANUALS

- To view or print a manual for the main program or for the included software programs, open the H|CLASS™ 600E software program, then go to Help, then scroll to Open the Manual. Select the desired file to view or print.

FUNCTION BUTTONS WHEN EMBROIDERING

1. Thread Cutter

Press Thread Cutter to automatically cut the top and bobbin threads whenever the machine is stopped.

If Thread Cutting Mode is active (see page 20), the machine will automatically cut the top and bobbin thread every time the machine stops at the end of a color block.

2. Needle Stop Up/Down (Step Forward)

After the embroidery design has been transferred to the machine, the embroidery can be advanced one stitch at a time by pressing the Needle Stop Up/Down button.

To step forward continuously, press and hold the Needle Stop Up/Down button.

Note: The embroidery hoop will move as it is advancing through the design.

3. Reverse (Step Backwards)

To back up through a design that is already in progress, press the Reverse button. Pressing the button once will reverse one stitch at a time. To reverse continuously, press and hold this button. Design may be reversed all the way back to the first stitch of the design.

4. Start/Stop Button

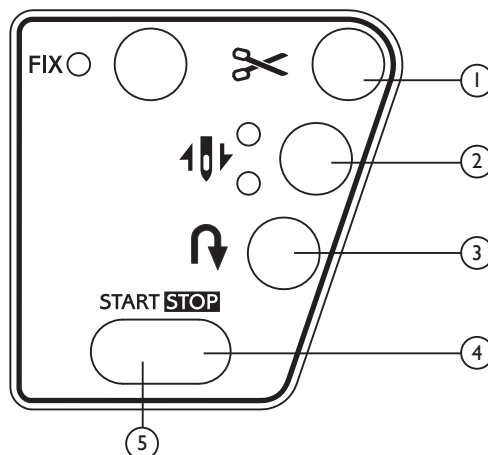
When the Start/Stop button is pressed, the machine starts embroidering slowly. To stop the machine, press the button again and the machine will stop sewing and the needle stops at its highest position.

5. LED Indicator



LED Indicator

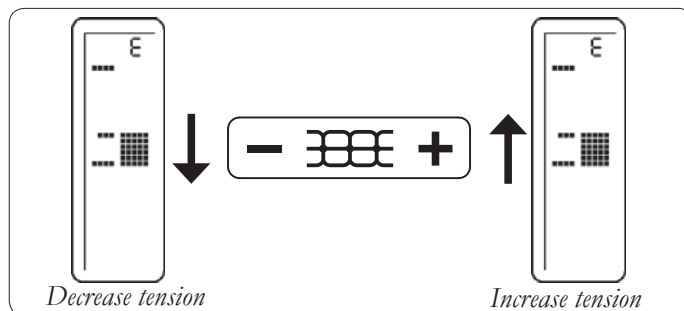
- Green light indicates machine is ready to start.
- Red light indicates machine is operating.
- Flashing red light indicates a problem or an error.
- Flashing for 2 - 3 seconds shows that an incorrect operation was made.
- Continuous flashing indicates that machine malfunctions.



THREAD TENSION CONTROL

Thread tension is automatically set at “E” for embroidery, when the embroidery unit is attached.

You may wish to re-adjust thread tension according to the type of fabric and thread being used.



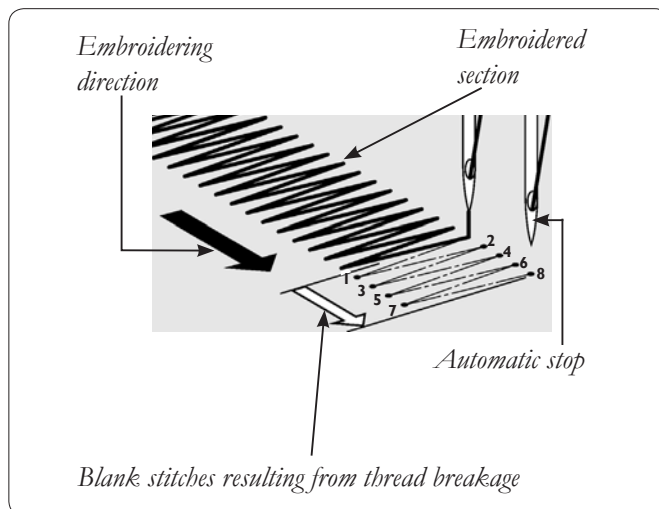
HELPFUL INFORMATION WHEN EMBROIDERING

If Stitches are Missing

If the embroidery machine detects that the thread has broken, it may continue to embroider up to about eight stitches without any thread (blank stitches) before it automatically stops.

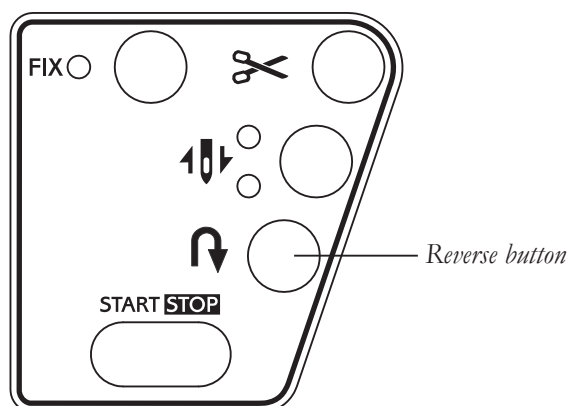
In such cases, use the following procedure to step back through the design to the point for continuing.

1. Press the Reverse button to step backwards in the embroidery data. The hoop will move back one stitch at a time. Step backwards until the blank area has been completely passed over.
2. Continue embroidering by pressing Start/Stop.



When Bobbin Runs Out of Thread while Embroidering

1. Follow the bobbin winding instructions on page 14.
2. Remove the hoop from the machine, replace the empty bobbin and then re-attach the hoop.
3. If your design moved forward a stitch or two when picking up the bobbin thread, use the Reverse button to move back to where the embroidery stopped.



Error message on machine display and computer screen says thread is broken, machine lights are flashing and making a beeping sound, but thread is not broken

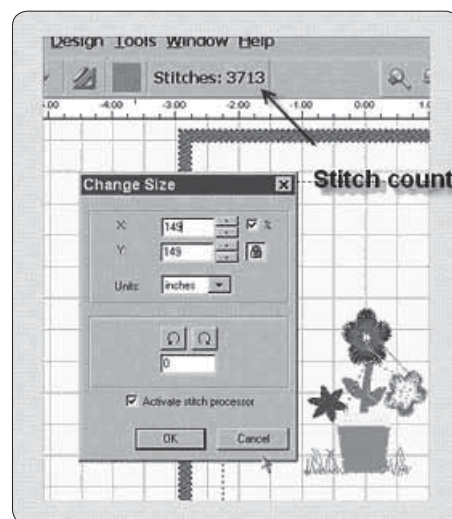
Upper thread is not in the thread tension. Rethread upper thread, (see page 11) Placing the small net that is supplied with the accessories over the spool of thread may ensure that the thread is unwinding properly.

After resizing a design, the density of the stitching is either too tight or not tight enough

The software will recalculate the stitch of an imported design when re-sizing, but only when using the DESIGN>CHANGE SIZE option. It does have a limitation of re-sizing up to 149% and down sizing to 51% and while still being able to re-calculate the stitches correctly.

Will the Density of a Design be Adjusted when Resizing It?

When sizing designs in the software you can resize designs from the Library in the hoop on screen and keep the design density. All other formats should be changed in the DESIGN/CHANGE SIZE menu in order to change the stitch count.

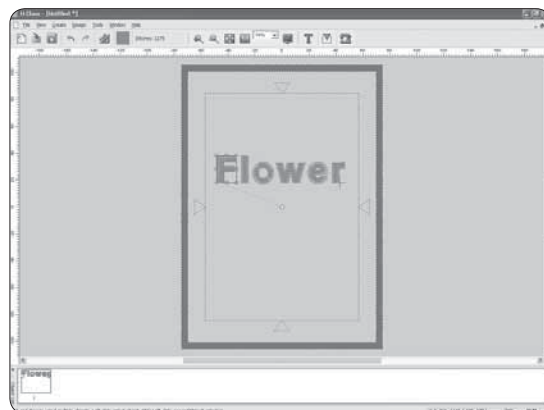


Resizing Individual Letters

You can resize individual letters after you have brought them into the hoop and exit the text window. Left click, drag a box around the desired letter, and size accordingly. Because the letters are built-in, the letter will keep the appropriate density.

Deleting Part of a Design

Left click and drag a box around the desired area. To select additional areas, hold down the CONTROL key and left click on next area. Once selected, touch the DELETE key on your keyboard.



Is there a Way to Increase the Density of the Lettering?

The density is set to a standard value of 4/10th of mm, which is usually the standard density used for Lettering. The value is not editable.

Why Does a Design Sometimes Split up Into Very Small Segments? A Color Block Can End up 'Divided' into Several Blocks.

The machine has a certain limit of stitches that it can accept. So what most probably happens is that these are large blocks that are cut after exceeding the limit, leaving a certain number of stitches (could possibly be only a few) as a separate block.

AutoPunch™ and graphic files - Vector Art vs. Bitmapped Art

There are many different types of images or formats of graphic files. AutoPunch™ gives the best results when using vector type images, such as .wmf. The software must be able to recognize a color (block) of information. A ". bmp" can be made of millions of colors making it impractical for use.

Clipart falls into two basic categories, Vector Art and Bitmapped Art.

The software is capable of vectorizing the ".bmp" image, but it may lose detail, depending on the image. It is essential to understand about the type of artwork or image used with AutoPunch™.

Vector Art is a clean "graphic" blocks of color – by simple definition. Some common formats - .wmf and .emf are two formats that the Auto Punch software can read.

Bitmapped Art is the type of "format" that is typically saved when scanning. The computer sees millions of colors to create the "realistic" type of image. Even a 3-color design that we see as simple has billions of pixels. Common formats recognized by the software: .bmp, .jpg, .tif, .pcx, .pcd, .tga, and .psd.

Tips for AutoPunch™:

- Scan art with a "high resolution" (200-300 DPI).
- Scan at 3-6 times larger than the intended output.

Lines that are too narrow to properly sew out are eliminated by the software when it cleans up the artwork.



Vector Art



Bitmapped Art

MULTIPLE HOOP EMBROIDERY

Multiple Hoop embroidery is a special feature in the H|CLASS™ 600E software that will allow embroidery data which is larger than a single embroidery hoop to be sent to the machine to stitch out, while making it easy to re-hoop the fabric so that each part of the design lines up exactly. This embroidery data may be a single design that is too large for the hoop or a combination of smaller embroidery elements and/or lettering, that when combined together make a much larger finished design.

The Multiple Hoop feature splits the design elements in up to four different parts, and then sews them precisely, matching one section to the other. When re-hooping the fabric, the Multiple Hoop feature will compensate for misalignment if the fabric has been placed slightly askew in the hoop.

When stitching an embroidery design that is too large for the hoop, it can be difficult to re-hoop the fabric with exact alignment. Multiple Hoop utilizes a system where three alignment points (A, B, and C) are input on cross lines that have been marked onto the fabric. When these points are input, they inform the machine exactly as to how the fabric is positioned into the hoop and will therefore sew the design to the alignment of the cross lines. If the fabric is slightly askew, this system will compensate for it and sew accordingly.

Note: The Multiple Hoop feature will only compensate for a slight misalignment in the vertical cross line. Please try to hoop the fabric as accurately as possible.



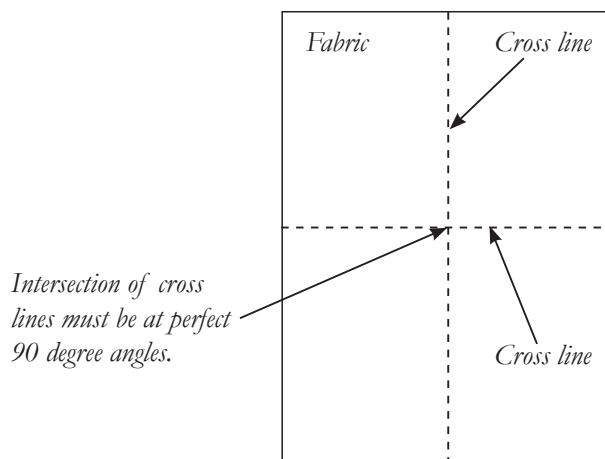
PREPARING THE FABRIC

Note: The fabric must be large enough to accommodate the amount of hoops that will be required to stitch out the design.

1. Using a very fine-lined water soluble marker, mark a line vertically down the center of the fabric.

Note: A thin line is very important to the accuracy of the final outcome of the embroidery.

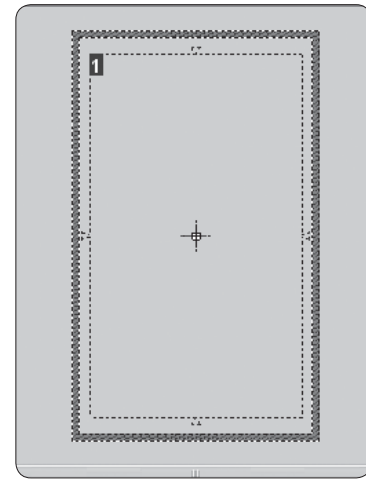
2. Mark a line horizontally across the center of the fabric. The vertical and horizontal lines must be at precise right angles to each other. These lines will now be referred to as the "cross lines". These cross lines will be used to set the fabric into the hoop according to the divided design layout.



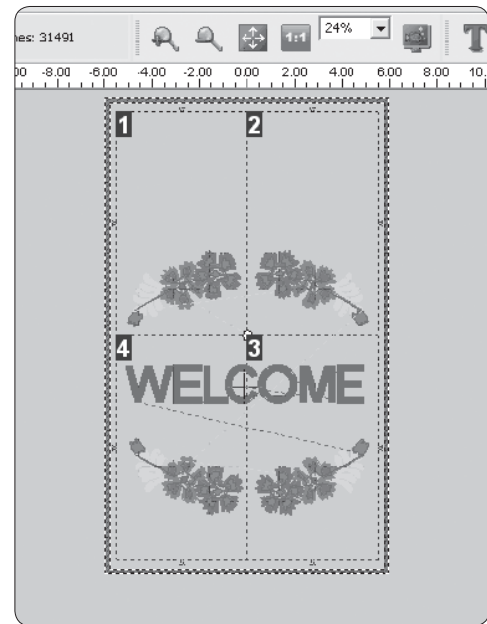
IN THE SOFTWARE

1. Select Tools from the horizontal tool bar, select Hoop and then select Multiple.
2. A single hoop appears on the screen marked with #1 in the upper left corner.

Note: Up to three additional hoops will appear as the design data requires.

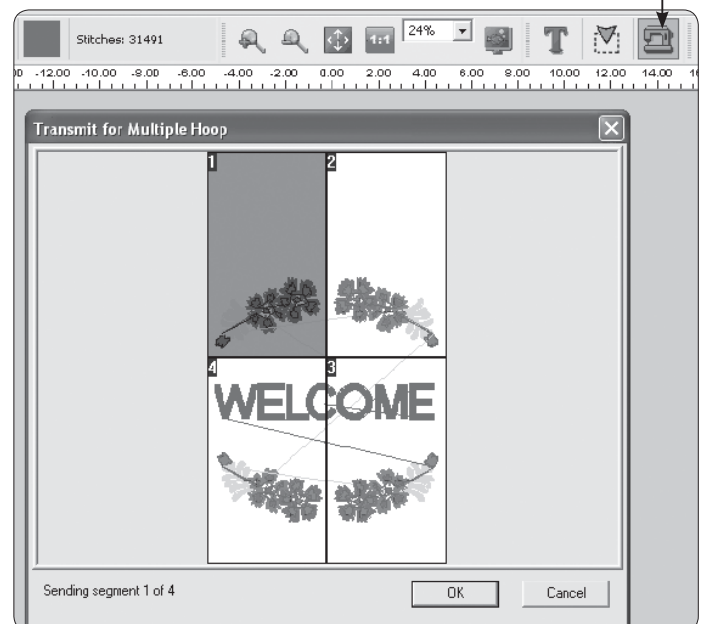


3. Select a large design or individual design elements and arrange them in the hoop area on the screen. The example shown uses lettering and designs from the Design Library that is built into the software. (Additional numbered hoops will appear as the design parts flow out of the first hoop section).



4. The design data is sent to the machine for sewing one section at a time. Click on the “Transmit to Machine” tool on the tool bar. The grey area (#1 Hoop) is the first of the embroidery data that is sent to the machine for sewing.

Transmit to machine

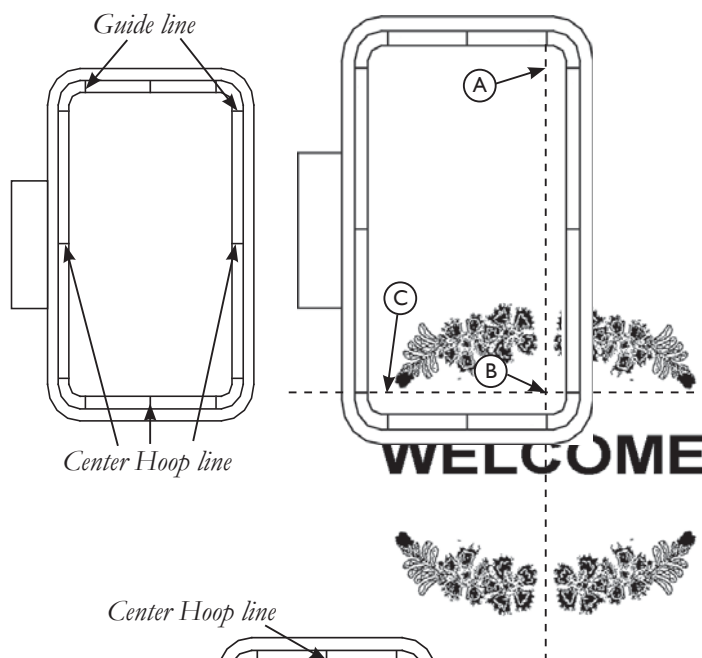


- Set fabric and stabilizer into the hoop, aligning cross lines of data 1 within the guide line markings of the hoop.

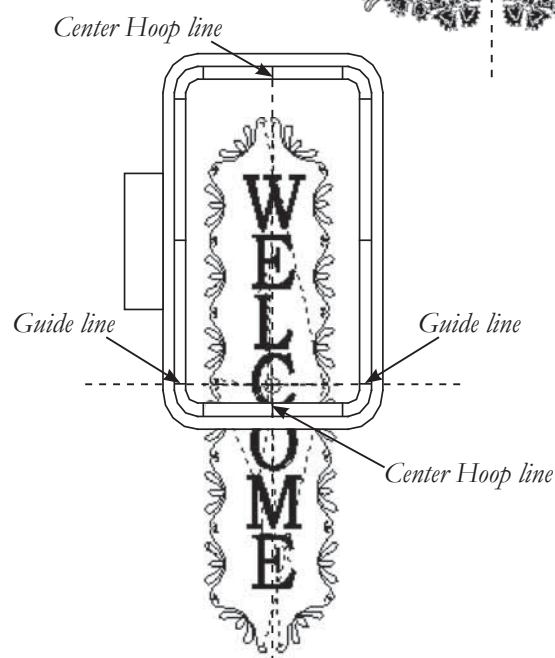
There are two sets of markings on the inner hoop.

On each side of the hoop there is a Center Hoop line which indicates the exact center of the hoop.

In each corner of the hoop there are markings which together define the maximum sewing area for Multiple Hooping. These marks are referred to as Guide lines. Guide lines are to be set on the horizontal and vertical cross lines on the fabric as shown.

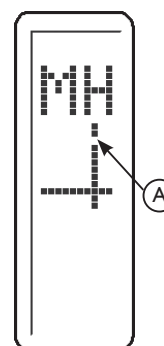
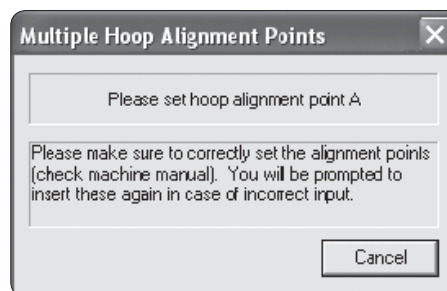


In the case of a 2 hoop design, where one hoop is stacked on top of the other, position the Guide lines on the horizontal cross line and the Center Hoop lines on the vertical cross line.



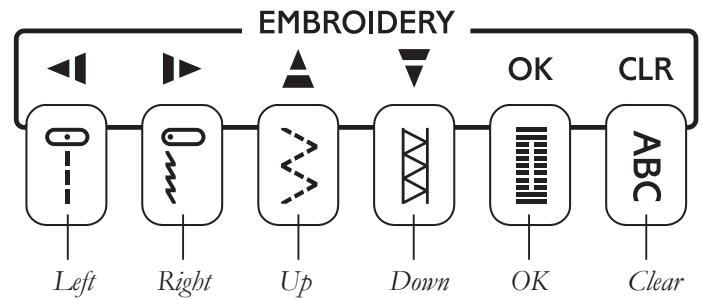
- The next screen prompts you to input the first of three alignment points, A, B, and C (see illustration on top of page). These alignment points will inform the machine exactly where the cross lines are positioned in the hoop. It is extremely important that the points are accurately input on the cross lines.

The machine display shows “MH” as illustrated, and the cross lines for data 1 with input point A blinking.



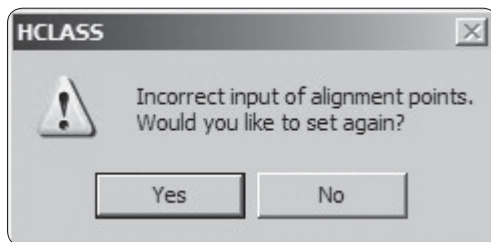
7. Use the shift buttons on the machine to move the hoop, until the needle comes to point A on the cross line, and push the OK button.

Note: If a mistake is made when entering the points, press the Clear button, to clear the point(s).

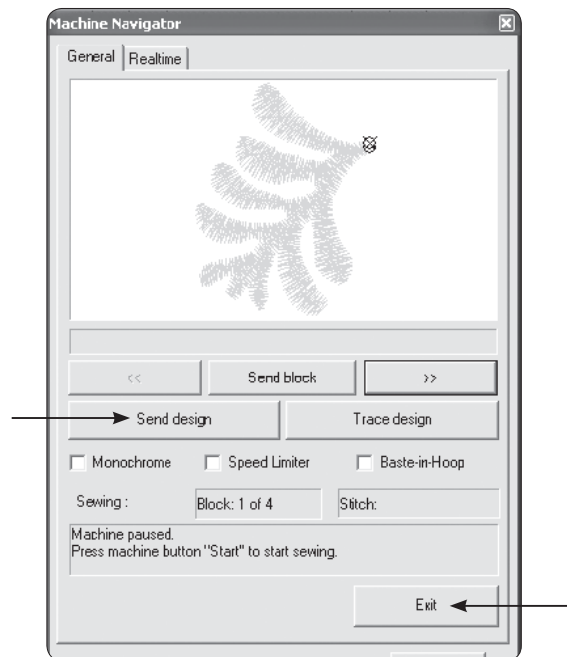


8. Once point A is entered, the PC screen and machine display will prompt you to enter in points B and C. Follow the same procedures for inputting points B and C.

In a case where the three points were input wrong, and they do not form an exact right angle, the software will show the following error message and give you an opportunity to enter the alignment points again.

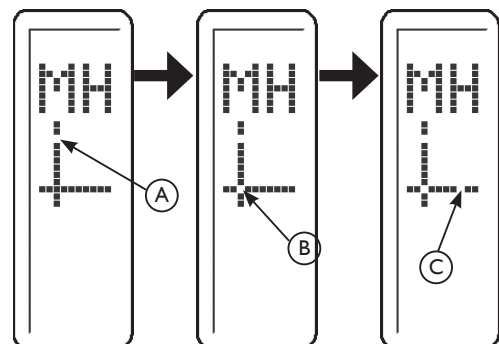


9. When all three points are input, click on Send design in the Machine Navigator Box to send design portion of data 1 to the machine. Embroider the design.
10. After all colors of the design from hoop 1 have been embroidered, click on Exit in the Machine Navigator box and the screen will prompt you to enter the information from the data 2 area. Use the same procedure to re-hoop the fabric, send the data 2 design to the machine and input the A, B and C points.



The machine display will show the “cross line” positions in the hoop for data 2 and the input points A, B and C blinking. Embroider the data 2 design.

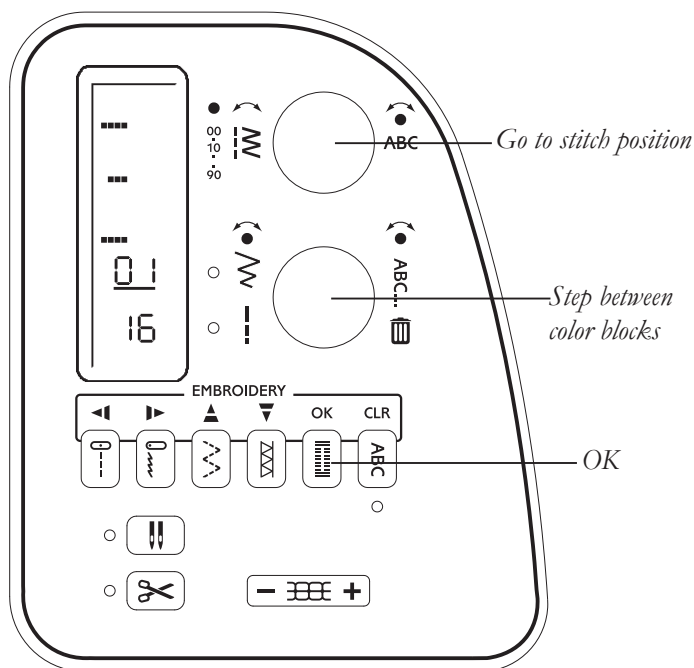
11. Follow the same procedure for data 3 and data 4.



CONTROL PANEL WHEN EMBROIDERING

When embroidering, the dials on the control panel are used to step through the design color by color and within a color block.

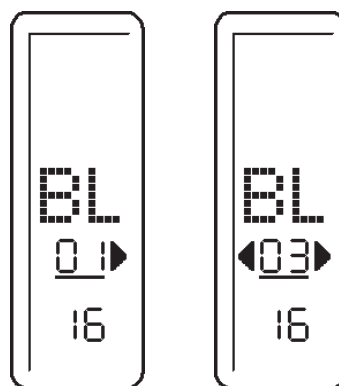
After transferring desired design(s) to your H|CLASS™ 600E sewing and embroidery machine, the display shows number of current color block and total number of color blocks as illustrated. The three horizontal lines indicate the beginning (bottom line), middle and end (top line) of the current color block. As the block is stitched out, a progress bar on the right side of the display will show the approximate current position in the color block.



STEP BETWEEN COLOR BLOCKS

To step between the transferred color blocks, press the center of the lower dial. “BL” is shown on the display. The arrows indicate which direction you can step between the color blocks.

Turn the lower dial. The current color block number changes. When having reached desired color block, press OK. The hoop moves to the position of the first stitch in selected color block.



GO TO APPROXIMATE STITCH POSITION WITHIN A COLOR BLOCK

To go to a certain part of current color block, press the center of the upper dial. The horizontal line on the display indicate the approximate current position in the color block.

Turn the upper dial clockwise to step forward, and counter-clockwise to step backward in the design. Each step equals one tenth of the color block.

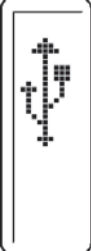
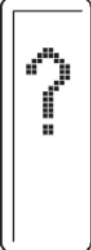
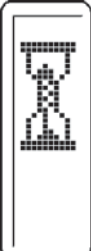

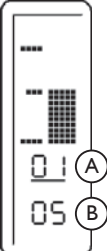
Example: If a color block contains 150 stitches, each step corresponds to 15 stitches.



When having reached desired position in the color block, press OK. The hoop moves to that position. Fine tune by using the Needle Stop Up/Down and Reverse buttons as described on page 45.

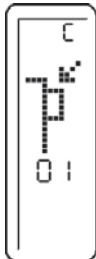
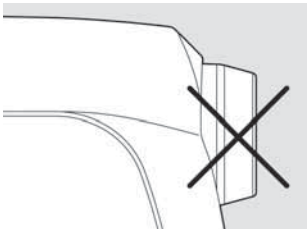
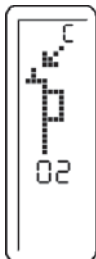
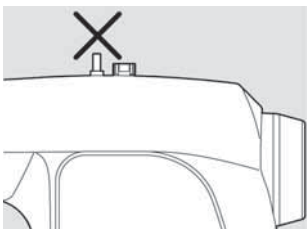

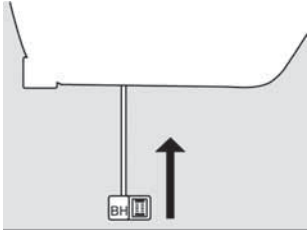
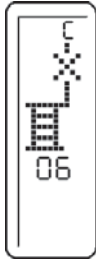
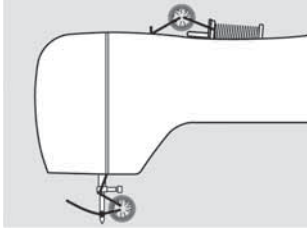

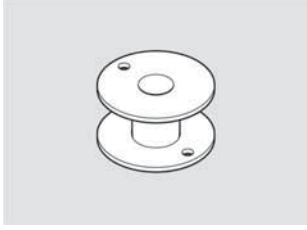
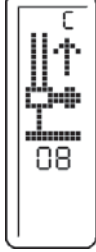
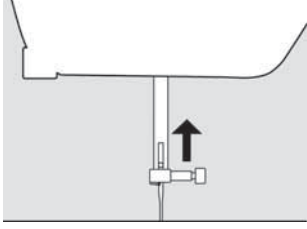


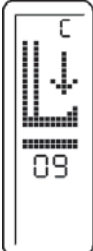
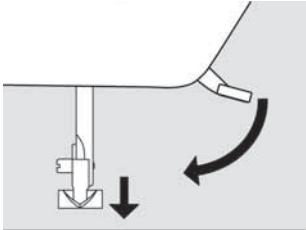
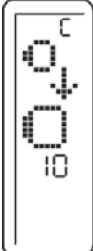
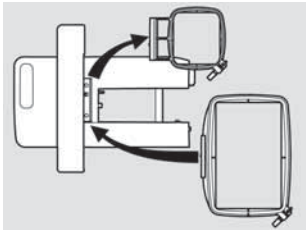
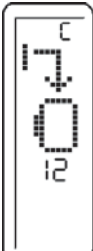
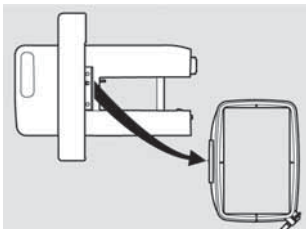



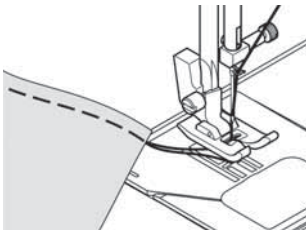

DISPLAY MESSAGES WHEN EMBROIDERING

Sewing machine display	Situation
	<p>Embroidery unit is attached, but USB cable is not connected.</p> <p><i>or</i></p> <p>USB cable is disconnected after transferring embroidery data. In this case, the image is displayed for a few seconds, and then changed back to normal display. The transferred embroidery data is still available in the machine.</p>
	<p>USB cable is connected, but embroidery data is not transferred yet.</p>
	<p>Embroidery data is being transferred.</p>
	<p>Embroidery data has been completely transferred.</p> <p>The number of the current color block (A) (number one directly after transferring) and total number of transferred color blocks (B) are shown on the display.</p>
	<p>Embroidery in progress.</p> <p>The number of the currently stitched out color block (A) and total number of transferred color blocks (B) are shown on the display. The status bar indicates how far in the color block the machine has embroidered.</p>

ERROR MESSAGES WHEN EMBROIDERING

Error messages are displayed on the sewing machine display and/or on the PC screen. When a message is displayed, fix the problem following the instruction in the message. The message will disappear, once the problem has been fixed.

Sewing machine display	PC screen	Problem and solution
		Machine is locked up due to thread entangled with bobbin case or rotation interrupted forcibly. <i>Turn off power switch and eliminate the problem that caused the machine to stop.</i>
		Bobbin winder is locked up due to thread entangled around spindle or rotation interrupted forcibly. <i>Turn off power switch and eliminate the problem that caused the bobbin winder to stop.</i>
		Buttonhole lever is not raised. <i>Raise buttonhole lever when embroidering.</i>
		Breakage of top thread is detected. <i>Supply top thread and restart.</i>
		Breakage of bobbin thread is detected. <i>Supply bobbin thread and restart.</i>
		Unable to start with needle lowered. <i>Raise needle and restart.</i>

Sewing machine display	PC screen	Problem and solution
		<p>Unable to start with presser foot lifted.</p> <p><i>Lower presser foot and restart.</i></p>
		<p>Hoop size is too small to move hoop to original position.</p> <p><i>Turn off power switch and attach larger hoop.</i></p>
		<p>Hoop size is smaller than embroidery data.</p> <p><i>Attach appropriate hoop and restart.</i></p>
		<p>Defect in sewing data.</p> <p><i>Transmit correct data.</i></p>
		<p>Failure in thread trimming</p> <p><i>Turn off power supply, raise needle and turn on power supply.</i></p>
 <p>1-17 (Error message number)</p>		<p>System error occurs.</p> <p><i>Turn off and on power switch to eliminate the problem that caused the system error to occur. If the error number should not disappear, consult an authorized technician.</i></p>

7

Care of Your Machine



When servicing the machine, or changing needles or lamps etc., machine must be disconnected from the power supply.



Always disconnect the machine from power supply by removing the plug from the wall outlet.

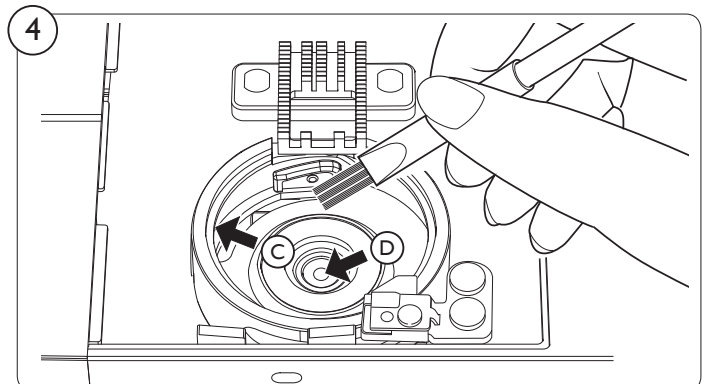
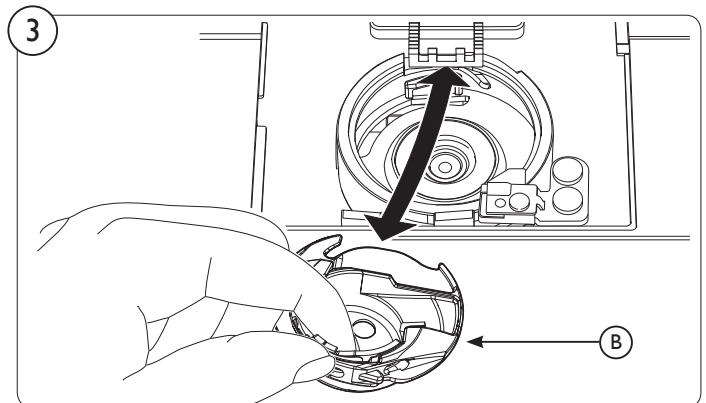
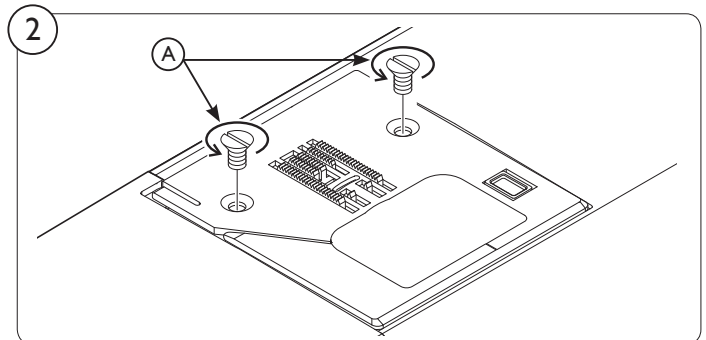
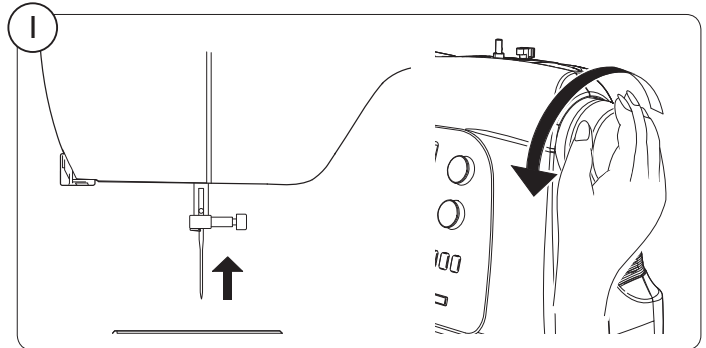
CLEANING THE MACHINE

Wipe the exterior surface of your machine with a soft cloth to remove any dust or lint built up.

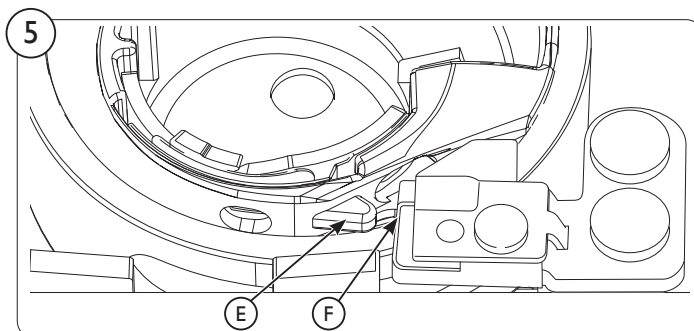
CLEANING AND OILING HOOK AREA AND FEED TEETH

To ensure the best possible operation of your machine, it is necessary to keep the essential parts clean at all times.

1. Raise the needle to its highest position.
2. Remove the two screws on the stitch plate (A) using the screwdriver for stitch plate, and slide the stitch plate toward you to remove it.
3. Remove the bobbin case (B).
4. Clean the feed dogs and hook area with the lint brush.
Put one drop of sewing machine oil on the hook race as indicated by the arrows (C, D).

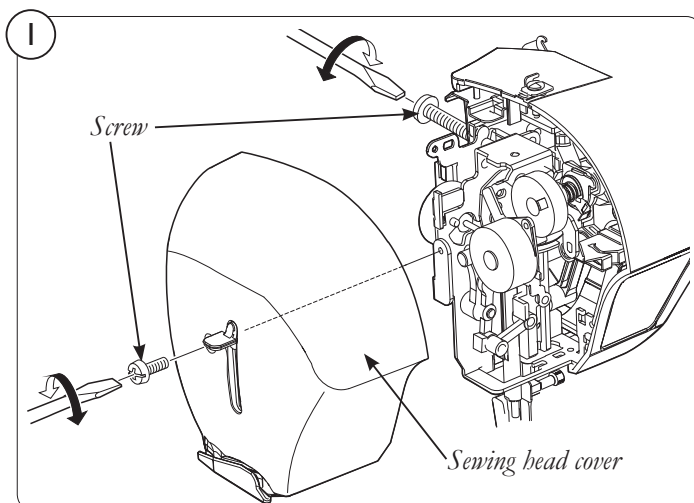


5. Replace the bobbin case with the projection (E) positioned against the spring (F). Replace the stitch plate.



OILING BEHIND THE SEWING HEAD COVER

1. Remove two screws and sewing head cover.

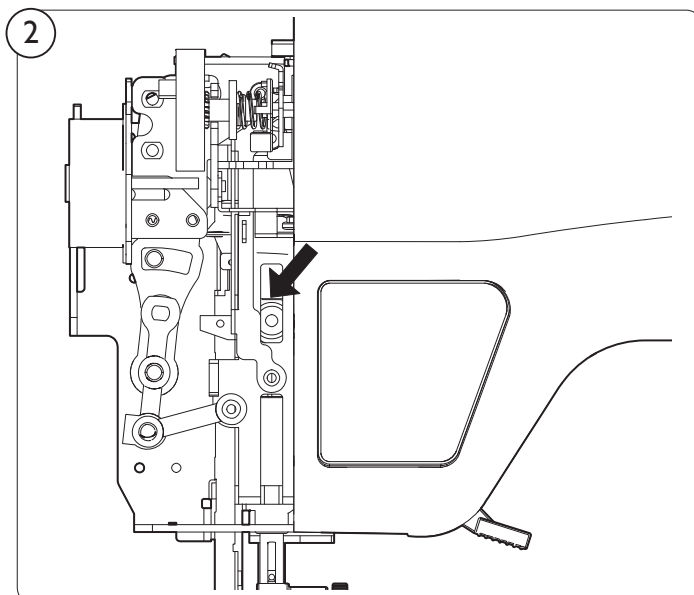


2. Put one drop of sewing machine oil to the point indicated by an arrow.

Helpful Hints: For a machine used frequently - oil regularly. For a machine used after a long interval - oil before use.

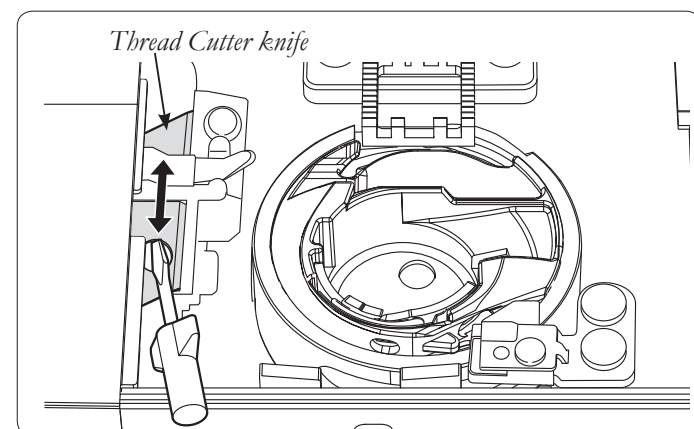
CAUTION: Always remove the dust and lint before oiling.

For best results always use high quality sewing machine oil. Use of oil other than sewing machine oil will cause damage to your machine.



ADJUSTING THE THREAD CUTTER KNIFE

When the Thread Cutter knife becomes dull at the current cutting point, adjust the position of the knife using a small screwdriver as illustrated.



TROUBLE SHOOTING

Machine Does Not Sew

- Power switch is turned off.- Turn on the switch (see page 9).

Machine Jams/Knocks

- Thread is caught in hook. - Clean hook (see page 56).
- Needle is damaged. - Replace needle (see page 16).

Fabric Does Not Move

- Stitch length is too short - increase stitch length (see page 19).
- Feed teeth are lowered - Raise feed teeth (see page 10).

Pieces of Thread or Fabric have Collected under the Stitch plate.

- Remove the thread or fabric bits (see page 56).

Machine Skips Stitches

- Needle is not all the way up into needle clamp (see page 16).
- Needle is bent or blunt. - Replace needle (see page 16).
- Machine is not threaded correctly (see page 11-15).
- Thread is caught in hook. - Clean hook (see page 56).
- Top thread tension is too tight. - Adjust thread tension (see page 20).

Stitches are Irregular

- Needle size is not correct for thread and fabric (see page 17).
- Machine is not threaded correctly (see page 11-15).
- Top thread tension is too loose (see page 20).
- Fabric is being pulled or pushed against machine feeding action. - Guide it gently.
- Bobbin has not been wound evenly. - Rewind bobbin (see page 14).

Needle breaks

- Fabric is being pulled or pushed against machine feeding action. - Guide it gently.
- Needle size is not correct for thread and fabric (see page 17).
- Needle is not all the way up into the needle clamp (see page 16).

Thread Bunches

- Top and bobbin threads are not drawn to the left under presser foot before starting seam. - Draw both threads to the left under presser foot about 4 inches (10 cm) and hold until a few stitches are formed (see page 22).

Needle Thread Breaks

- Machine is not threaded correctly (see page 11-15).
- Top thread tension is too tight (see page 20).
- Needle is bent. - Replace needle (see page 16).
- Needle size is not correct for thread and fabric (see page 17).
- Thread is tangled around spool holder.

Bobbin Thread Breaks

- Bobbin case is not threaded correctly (see page 15).
- Lint accumulates in bobbin case or hook. - Remove lint (see page 56).

Fabric Puckers

- Top thread tension is too tight. - Adjust thread tension (see page 20).
- Stitch length is too long for sheer or soft fabric. - Shorten stitch length (see page 19).

TROUBLE SHOOTING - EMBROIDERY

If your embroidery becomes distorted in any way, please check the possible causes and solutions below.

Machine Side

Embroidering Continues when Thread is Tangled

If the thread remains tangled, the fabric may pucker and ruin the finished embroidery. Stop embroidering, remove the hoop and untangle the thread.

Top Thread Tension is Too Tight

This can cause the fabric to pucker and result in uneven feeding, so reduce the thread tension (see page 45).

Needle Tip is Broken or Needle is Too Thick.

Select a correct needle (see page 16-17).

Thread is tangled somewhere along the thread path.

If the thread is tangled on the spool pin or somewhere along the thread path, it will increase the thread tension and cause the fabric to pucker, so check the thread (see page 11-15).

Top thread does not stay in the needle eye

If embroidering several color blocks in the same color the machine might cut the top thread too short. If that happens, deactivate Thread Cutting Mode (see page 20) to make sure the top thread stays in the needle eye.

Hoop Side

No Stabilizer Attached when using Light or Stretch Fabric

Always use stabilizer together with the fabric in the hoop.

Fabric has not been correctly Hooped

When hooping stabilizer and fabric make sure that they are smooth and securely hooped. (see page 42).

Embroidery Hoop is not Correctly Attached.

Slide the hoop connector into the hoop attachment on the embroidery arm until it clicks into place. (see page 42).

Hoop is Obstructed Against Free Motion.

Check around the hoop and remove things which cause obstruction.

SPECIFICATIONS

SEWING MACHINE

Dimensions: 567mm × 240mm × 317mm

Mass of the equipment: 10.8kg

EMBROIDERY UNIT

Dimensions: 504mm × 411mm × 141mm

Mass of the equipment: 3.0kg

Rated Voltage: 230 V AC / 120 V AC

Rated Frequency: 50 Hz / 60 Hz

Rated input: 64W

Using ambient temperature: Normal temperature

Acoustic noise level: less than 70 db(A)

We reserve the right to change the machine equipment and the assortment of accessories without prior notice, or make modifications to the performance or design. Such modifications, however, will always be to the benefit of the user and the product.

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



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