Reflection

Instruction and Reference Guide Model BLRT





FOR THE LOVE OF SEWING

To register your machine warranty and receive Baby Lock product updates and offers, go to <u>babylock.com/login</u>. If you have questions with registration, visit your Authorized Baby Lock Retailer.

Baby Lock Consumer Helpline: 800-313-4110

www.BabyLock.com

INTRODUCTION

Thank you for purchasing this machine. Before using this machine, carefully read the "IMPORTANT SAFETY INSTRUCTIONS", and then study this manual for the correct operation of the various functions. In addition, after you have finished reading this manual, store it where it can quickly be accessed for future reference.

IMPORTANT SAFETY INSTRUCTIONS

Please read these safety instructions before attempting to use the machine.

ADANGER

- To reduce the risk of electric shock
- 1 Always unplug the machine from the electrical outlet immediately after using, cleaning, making any user servicing adjustments mentioned in this manual, or if you are leaving the machine unattended.

▲WARNING

- To reduce the risk of burns, fire, electrical shock, or injury to persons.
- **2** Always unplug the machine from the electrical outlet, or when making any adjustments mentioned in the instruction manual.
- To unplug the machine, switch the machine to the symbol "O" position to turn it off, then grasp the plug and pull it out of the electrical outlet. Do not pull on the cord.
- Plug the machine directly into the electrical outlet. Do not use an extension cord.
- Always unplug your machine if there is a power failure.

3 Electrical Hazards:

- This machine should be connected to an AC power source within the range indicated on the rating label. Do not connect it to a DC power source or inverter. If you are not sure what kind of power source you have, contact a qualified electrician.
- This machine is approved for use in the country of purchase only.

4 Fire Hazards:

- Do not use flammable substances, any type of spray, or an organic solvent/liquid containing alcohol or ammonia to clean the inside or outside of the product. Doing so could cause a fire.
- 5 Never operate this machine if it has a damaged cord or plug, if it is not working properly, has been dropped or damaged, or water is spilled on the unit. Return the machine to the nearest authorized Baby Lock retailer for examination, repair, electrical or mechanical adjustment.
- While the machine is stored or in use if you notice anything unusual, such as an odor, heat, discoloration or deformation, stop using the machine immediately and unplug the power cord.
- When transporting the machine, be sure to carry it by its handle. Lifting the machine by any other part may damage the machine or result in the machine falling, which could cause injuries.
- When lifting the machine, be careful not to make any sudden or careless movements, which may cause a personal injury.

6 Always keep your work area clear:

- Do not install or use in areas where explosive or electrically conductive dusts are generated.
- Never operate the machine with any air openings blocked. Keep ventilation openings of the machine free from the build up of lint, dust, and loose cloth.
- Never drop or insert foreign object into any opening.
- Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
- Do not use the machine near a heat source, such as a stove or iron; otherwise, the machine, power cord or garment being embroidered may ignite, resulting in fire or an electric shock.
- Do not place this machine on an unstable surface, such as an unsteady or slanted table, otherwise the machine may fall, resulting in injuries.

7 Special care is required when embroidering:

- Always pay close attention to the needle. Do not use bent or damaged needles.
- Keep fingers away from all moving parts. Special care is required around the machine needle.
- Switch the machine to the symbol "O" position to turn it off when making any adjustments in the needle area.
- Do not use a damaged or incorrect needle plate, as it could cause the needle to break.
- Do not push or pull the fabric when embroidering.

8 This machine is not a toy:

- Your close attention is necessary when the machine is used by or near children.
- This product contains small parts. Keep the product out of the reach of children to prevent accidental ingestion of small parts.
- The plastic bag that this machine was supplied in should be kept out of the reach of children or disposed of. Never allow children to play with the bag due to the danger of suffocation.
- Do not use the seam ripper in any other way than how it is intended.
- Do not use outdoors.

9 For a longer service life:

- When using and storing this machine, avoid direct sunlight and high humidity locations. Do not use or store the machine near a space heater, iron, halogen lamp, or other hot objects.
- Do not use cleansers or organic solvents, such as thinner, petroleum ether or alcohol, to clean the machine. Otherwise, the finish may peel off or become scratched.
- Always consult the Instruction and Reference Guide when replacing or installing any assemblies, the presser feet, needle, or other parts to assure correct installation.

10 For repair or adjustment:

- If the light unit is damaged, it must be replaced by an authorized Baby Lock retailer.
- In the event a malfunction occurs or adjustment is required, first follow the troubleshooting table in the back of the Instruction and Reference Guide to inspect and adjust the machine yourself. If the problem persists, please consult your local authorized Baby Lock retailer.

Use this machine only for its intended use as described in the manual.

Use accessories recommended by the manufacturer as contained in this manual.

The contents of this manual and specifications of this product are subject to change without notice.

SAVE THESE INSTRUCTIONS This machine is intended for household use.

FOR USERS IN COUNTRIES EXCEPT EUROPEAN COUNTRIES

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

FOR USERS IN EUROPEAN COUNTRIES

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

FOR USERS IN THE UK, EIRE, MALTA AND CYPRUS ONLY

IMPORTANT

- In the event of replacing the plug fuse, use a fuse approved by ASTA to BS 1362, i.e. carrying the mark, rating as marked on plug.
- Always replace the fuse cover. Never use plugs with the fuse cover omitted.
- If the available electrical outlet is not suitable for the plug supplied with this equipment, you should contact your authorized Baby Lock retailer to obtain the correct lead.

Federal Communications Commission (FCC) Supplier's Declaration of Conformity (For U.S.A. Only)

Responsible Party: Tacony Corporation

1760 Gilsinn Lane, Fenton, Missouri 63026, U.S.A.

declares that the product

Product Name: Baby Lock Embroidery Machine

Model Number: BLRT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the authorized Baby Lock retailer or an experienced radio/TV technician for help.
- This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Important

Changes or modifications not expressly approved by Tacony Corporation could void the user's authority to operate the equipment.

This equipment complies with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment should be installed and operated keeping the radiator at least 20cm or more away from person's body.

For Users in Canada

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

This equipment complies with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment should be installed and operated keeping the radiator at least 20cm or more away from person's body.

For Users in Mexico

The operation of this equipment is subject to the following two conditions:

- (1) it is possible that this equipment or device may not cause harmful interference, and
- (2) this equipment or device must accept any interference, including interference that may cause undesired operation.

La operación de este equipo está sujeta a las siguientes dos condiciones:

- (1) es posible que este equipo o dispositivo no cause interferencias perjudiciales y
- (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

TRADEMARKS

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PRECAUTION FOR WIRELESS CONNECTION

Make sure you use a router or firewall when connecting your machine to the Internet to protect it against unauthorized access from the Internet.

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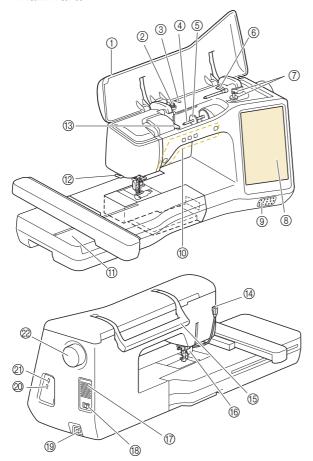
Chapter 1 GETTING READY

☆ Note -

 Be sure to install the latest software.
 Refer to "UPDATING YOUR MACHINE'S SOFTWARE" on page 99.

NAMES OF MACHINE PARTS

■ Main Parts



- ① Top cover
- ② Pretension disk (page 23)
- Thread guide for bobbin winding (page 23)
- 4 Spool pin (page 24)
- (5) Spool cap (page 22)
- (6) Supplemental spool pin (page 22)
- 7 Bobbin winder (page 22)
- 9 Speaker
- Operation buttons (page 8)
- (1) Embroidery unit (page 32)
- ① Thread cutter (page 28)
- (3) Thread guide plate (page 24)
- (4) Connector for the presser foot (page 89)
- (5) Handle

Carry the machine by its handle when transporting the machine.

(6) Presser foot lever

You cannot use the presser foot lever after the presser foot has been raised using ((Presser foot lifter button).

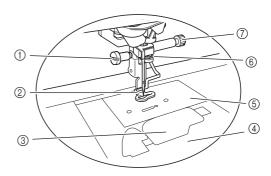
Air vent

The air vent allows the air surrounding the motor to circulate. Do not cover the air vent while the machine is being used.

- (8) Main power switch (page 11)
- (9) Power cord receptacle (page 12)
- ② USB port for mouse (page 22)
- 2 USB port
- Handwheel

Turn the handwheel toward you (counterclockwise) to raise and lower the needle.

■ Needle and Presser Foot Section

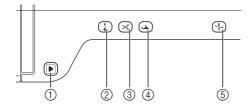


- Screw for embroidery foot (page 89)
- ② Embroidery foot

The embroidery foot helps control fabric flexibility for better stitch consistency.

- 3 Bobbin cover (page 25)
- 4 Needle plate cover (page 25)
- (5) Needle plate (page 88)
- 6 Needle bar thread guide (page 28)
- 7 Needle clamp screw (page 30)

■ Operation Buttons



① "Start/Stop" button

Press the "Start/Stop" button to start or stop embroidering. The button changes color according to the machine's operation mode.

Green: The machine is ready to embroider or is

embroidering.

Red: The machine is not ready to start

embroidering.

② Needle position button 4

Press the needle position button to raise or lower the needle position. Pressing the button twice embroiders a single stitch.

Thread cutter button (S)

Press the thread cutter button after embroidering to trim the excess thread.

4 Presser foot lifter button

needle.

Press the presser foot lifter button to lower the presser foot and apply pressure to the fabric. Press this button again to raise the presser foot.

(5) Automatic threading button (1)
Use the automatic threading button to automatically thread the

INCLUDED ACCESSORIES

Included Accessories

After opening the box, check that the following accessories are included. If any item is missing or damaged, contact your authorized Baby Lock retailer.

	Part Name		
	Part Code		
1.	Embroidery foot "W+" with LED pointer (on machine)		
W+	BLTY-EF		
2.	Needle set 75/11 6 needles: Ball point needle for embroidery		
	XC6469-001		
3.	Bobbin × 10 (One bobbin is in machine.)		
	X52800-120		
4.	Seam ripper		
	XF4967-001		
5.	Scissors		
	XF2052-101		
6.	Cleaning brush		
•	X59476-051		
7.	Screwdriver (small)		
<i>y</i>	X55468-051		
8.	Screwdriver (large)		
	XC4237-021		

	Part Name		
	Part Code		
9.	Disc-shaped screwdriver		
	XC1074-051		
10.	Spool cap (small)		
	130013-157		
11.	Spool cap (medium) × 2 (One spool cap is on machine.)		
	X55260-156		
12.	Spool cap (large)		
	130012-027		
13.	Thread spool insert (mini king thread spool)		
7	XA5752-121		
14.	Vertical spool pin		
	XC8619-052		
15.	Spool felt (on machine)		
٥	X57045-051		
16.	Spool net × 2		
	XA5523-050		
17.	Embroidery needle plate cover		
	XE5131-001		
18.	Touch pen (stylus)		
	XA9940-051		

	Part Name		
	Part Code		
19.	Bobbin case (on machine)		
	XC8167-651		
20.	Bobbin cover (on machine)		
	XE8992-101		
21.	Embroidery frame set 36 cm (H) × 24 cm (W) (approx. 14 inches (H) × 9-1/2 inches (W))		
	EF95: Frame EF96: Embroidery sheet		
22.	Embroidery frame set 18 cm (H) × 13 cm (W) (approx. 7 inches (H) × 5 inches (W))		
	EF75: Frame EF79: Embroidery sheet		
23.	Embroidery bobbin thread (#90, white)		
	BBTE-W		
24.	Stabilizer material		
	X81176-001		
25.	Bobbin center pin and instruction sheet		
	XF5048-001		
26.	Accessory bag		
	XC4487-021		
27.	Soft cover		
	XG0717-001		
28.	Power cord		
	XC6052-151		

	Part Name	
	Part Code	
29.	Instruction and Reference Guide	
	D03808-001	
30.	Quick Reference Guide	
	D0380F-001	

Memo -

 Please visit <u>www.babylock.com</u> to download the Embroidery Design Guide.

Options

The following are available as optional accessories to be purchased separately from your authorized Baby Lock retailer.

* These embroidery frames can be used for general embroidery but cannot be used with the application (IQ Intuition).

	Part Name	
	Part Code	
1.*	Embroidery frame set	
	30 cm (H) × 20 cm (W)	
	(approx. 12 inches (H) × 8 inches (W))	
	EF92: Frame EF94: Embroidery sheet	
2.*	Embroidery frame set	
	24 cm (H) × 24 cm (W)	
	(approx. 9-1/2 inches (H) × 9-1/2 inches (W))	
	EF97: Frame EF98: Embroidery sheet	
3.*	Embroidery frame set	
	20 cm (H) × 20 cm (W) (approx. 8 inches (H) × 8 inches (W))	
	· · · · · · · · · · · · · · · · · · ·	
	EF91: Frame EF93: Embroidery sheet	
4.*	Embroidery frame set	
	15 cm (H) × 15 cm (W) (approx. 6 inches (H) × 6 inches (W))	
	(4)	
	BLMA-150	
5.*	Embroidery frame set	
	10 cm (H) × 10 cm (W) (approx. 4 inches (H) × 4 inches (W))	
	(approx. 4 meries (ii) × 4 meries (vv))	
To the Control of the	EF74: Frame	
~	EF78: Embroidery sheet	
6.*	Embroidery frame set	
	2 cm (H) × 6 cm (W)	
	(approx. 1 inch (H) × 2-1/2 inches (W))	
	EF73: Frame	
	EF77: Embroidery sheet	
7.*	Border embroidery frame	
	30 cm (H) × 10 cm (W) (approx. 12 inches (H) × 4 inches (W))	
	(approx. 12 inches (n) x 4 inches (w))	
	BLMA-CBH	
8.	Magnetic frame	
	300 mm (H) × 180 mm (W) (approx. 12 inches (H) × 7 inches (W))	
	(approx. 12 inches (11) × 7 inches (w))	
	EMF300	
9.	Magnetic frame 18 cm (H) × 13 cm (W)	
	(approx. 7 inches (H) × 5 inches (W))	
	EMF180	
10		
10.	Magnifying lens	
\$		
	DI MA MI	
	BLMA-ML	

	Part Name
	Part Code
11.	Multi-purpose screwdriver
	BLMPD2
12.	Embroidery foot "W"
W	XF4012-101
13.	10 spool stand
	BLMA-TS
14.	Spool stand
	BLMA-STS

- To obtain optional accessories or parts, contact your authorized Baby Lock retailer or visit our site www.babylock.com.
- All specifications are correct at the time of printing.
 Please be aware that some specifications may change without notice.
- Visit your nearest authorized Baby Lock retailer or our site <u>www.babylock.com</u> for a complete listing of optional accessories available for your machine.
- Always use accessories recommended for this machine.

TURNING THE MACHINE ON/OFF

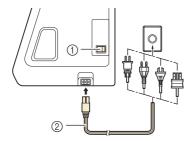
▲ WARNING

- Use only regular household electricity for the power source. Using other power sources may result in fire, electric shock, or damage to the machine.
- Do not touch the plug with wet hands. Electric shock may result.
- Make sure that the plugs on the power cord are firmly inserted into the electrical outlet and the power cord receptacle on the machine. Otherwise, a fire or electric shock may result.
- Turn the main power to OFF and remove the plug in the following circumstances:
 - When you are away from the machine
 - After using the machine
 - · When the power fails during use
 - When the machine does not operate correctly due to a bad connection or a disconnection
 - During electrical storms

A CAUTION

- Use only the power cord included with this machine.
- Do not use extension cords or multi-plug adapters with many other appliances plugged in to them. Fire or electric shock may result.
- When unplugging the machine, always turn the main power to OFF first. Always grasp the plug to remove it from the outlet. Pulling on the cord may damage the cord, or lead to fire or electric shock.
- Do not allow the power cord to be cut, damaged, modified, forcefully bent, pulled, twisted, or bundled. Do not place heavy objects on the cord. Do not subject the cord to heat. These things may damage the cord, or cause fire or electric shock. If the cord or plug is damaged, take the machine to your authorized Baby Lock retailer for repairs before continuing use.
- Unplug the power cord if the machine is not to be used for a long period of time. Otherwise, a fire may result.

- (For U.S.A only)
 This appliance has a polarized plug (one blade wider than the other). To reduce the risk of electrical shock, this plug is intended to fit in a polarized electrical outlet only one way. If the plug does not fit fully in the electrical outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper electrical outlet. Do not modify the plug in any way.
- Insert the power supply cord into the power cord receptacle, then insert the plug into a wall outlet.



- Main power switch
- ② Power supply cord
- Turn the main power switch to "I" to turn on the machine.



Memo

- The light, LCD and the "Start/Stop" button light up when the machine is turned on.
- When the machine is turned on, the opening movie is played. Touch anywhere on the screen.
- Turn the main power switch to "O" to turn off the machine.
- Setting Your Machine for the First Time

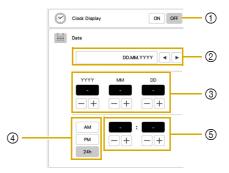
When you first turn on the machine, set the language and time/date to your language and local time/date.

Touch ◀ and ▶ to set your local language and then touch ○ .



- Touch ox to read end-user-license agreement (EULA).
 - * Read every page. Touch (∨) to turn the page.

- The message screen, confirming if you want to set time/date, appears. Touch ok.
- Touch or + to set time/date. And then touch



- 1) Select [ON] to display time/date on the screen.
- ② Touch ◀ or ▶ to select the date display format.
- ③ Set the year (YYYY), month (MM) and date (DD).
- ④ Select whether 24h or 12h setting will display.
- (5) Set the current time.
- → The clock starts from 0 second of the time you set.

Memo

- The time/date you set may be cleared, if you don't turn on the machine for an extended period of time.
- The following message about a wireless LAN connection appears. To set up a connection, touch

 ox , and then refer to steps 3 through 3 in "Using the Wizard to Set Up the Wireless Network Connection" on page 20 to finish setting up a wireless LAN connection.



7

LCD SCREEN

Touch the LCD screen or a key with your finger or the included touch pen to select a machine function.

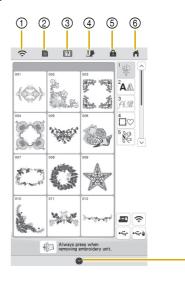
IMPORTANT

 Only touch the screen with your finger or the touch pen (stylus) included with the machine.
 Do not use a mechanical pencil, screwdriver or any other hard or sharp object. In addition, do not press the screen with extreme pressure.
 Otherwise the screen may be damaged.

☆ Note

 All or part of the screen may sometimes become darker or lighter due to changes in the surrounding temperature or other changes in the environment. This is not a sign of a malfunction. If the screen is difficult to read, adjust its brightness.

■ Home Page Screen



No.	Display	Explanation	Page
140.	Name	Explanation	
1	Wireless LAN key	Shows the machine's signal strength. Touch this key to specify the wireless settings. If there is a new update file, the key appears as .	15, 20
2	Machine settings key	Change the needle stop position, adjust the pattern or screen, and change other machine settings.	14
3	Machine help key	See explanations on how to use the machine. You can see the tutorial videos and also MP4 movie files that you have saved on USB media.	17
4	Presser foot/ Needle exchange key	Touch this key before changing the needle, the presser foot, etc. This key locks all key and button functions to prevent operation of the machine.	25, 29
⑤	Screen lock key	Lock the screen. When the screen is locked, you can still embroider, but cannot change any of the screen functions. Touch this key again to unlock the screen.	_
6	Home page screen key	Return to the home page screen at any time.	_
7	Time/Date key	Set the time/date.	12

Using the Machine Settings Key

Touch to change the default machine settings (needle stop position, embroidery speed, opening display, etc.). To display the different settings screens, touch for "General settings", for "Embroidery settings" or for "Wireless LAN settings".

[™] Note

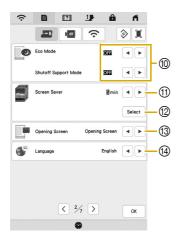
• The machine default setting is highlighted.



Touch \(\) or \(\) to display a different settings screen.

■ General Settings







IMPORTANT

- When [Upper and Bobbin Thread Sensor] is set to [OFF], the machine cannot detect tangled upper thread. Continuing to use the machine with tangled thread may cause damage.
- Select the needle stop position (the needle position when the machine is not operating) to be up or down.
- ② Select the operation of the 4 (Needle position button) from the following two sequences.

Each press of the (\bot) (Needle position button):

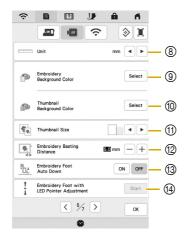
[ON]: Switches the needle position between being raised, stopped immediately before entering the fabric, or lowered.

[OFF]: Switches the needle position between being raised or lowered.

- ③ Select the shape of the pointer when a USB mouse is used.
- ① Turn both the upper and bobbin thread sensors [ON] or [OFF]. If it is turned [OFF], the machine can be used without thread.
- Select the speaker volume. Increase the number for louder volume, decrease for softer volume.
- Select the brightness of the work area lights.
- Select the screen display brightness.
- (3) You can save the current settings screen image in a USB media by touching this key when the USB media is inserted into the USB port. The files are saved in a folder labeled [bPocket].
- Reset settings on this page to original default. Some settings are not reset.
- (ii) Set the [Eco Mode] and the [Shutoff Support Mode] to save the machine power (page 16).
- (f) Select the length of time until the screen saver appears.
- ② Select the image of the screen saver (page 16).
- Select the initial screen that is displayed when the machine is turned on.
- (4) Select the display language.
- Shows the total number of stitches embroidered on this machine, which is a reminder to take your machine in for regular servicing. (Contact your authorized Baby Lock retailer for details.)
- ® Shows the internal machine number for this machine.
- Shows the program version.
- § Erase all saved data, customized settings and network information in the machine.

■ Embroidery Settings





- ① Select the embroidery frame to be used.
- ② Select the center point marker or grid lines.
- 3 Select the thread color display on the embroidery screen; thread number, color name. (page 77)
- Select the thread brand of the thread color display. (page 77)
- ⑤ Adjust the maximum embroidery speed (page 76).
- (§) Adjust the upper thread tension for embroidering (page 74).
- Select the height of the embroidery foot during embroidering (page 53).
- Select the display units for embroidering (mm/inch).
- Select the color of the background for the embroidery display area.
- Select the color of the background for the thumbnail area.
- 1) Select the size of pattern thumbnails.
- Adjust the distance between the pattern and the basting stitching. (page 69)
- When set to [ON], pressing the "Start/Stop" button when the embroidery foot is raised automatically lowers the embroidery foot before starting embroidering.
- Adjust the position and brightness of the embroidery foot "W+" with LED pointer (this setting is available if embroidery foot "W+" with LED pointer has been attached.) (page 57)

■ Wireless LAN Settings





- ① Enable/Disable the wireless LAN function (page 20).
- ② Shows the connected SSID.
- ③ Set the machine to connect wireless LAN function.
- ④ Shows the machine name used on the wireless network.
- ⑤ Change the machine name used on the wireless network.
- 6 Check the wireless LAN status.
- ⑦ Display other menus.
- ® Reset network operations.
- ⑤ Display the introduction to the applications. Touch the key of the app whose information you want to display. On smart devices with a QR reader app installed, scan the QR code to display a screen that shows how to install the app.



IQ Intuition Monitoring: The machine's embroidering status can be monitored from your smart device. For details, refer to "IQ INTUITION MONITORING APP" on page 84.

- If there is a new update program, download the update file. (page 99)
- (1) Display update program information. (page 99)

■ Setting the [Eco Mode] and the [Shutoff Support Mode]

You can save the machine power by setting the [Eco Mode] and the [Shutoff Support Mode].

If you leave the machine turned on without using it for the set period of time, the machine enters in each mode.

Touch to display [Eco Mode] and [Shutoff Support Mode]. (page 14)

[Eco Mode];

Machine will enter a sleep mode after the set period of time. Touch the screen or press the "Start/Stop" button to continue operating.

[Shutoff Support Mode];

Machine will enter the lower power mode after the set period of time. Turn the machine off and then back on to restart operating.

Memo

- If you turn off the machine while the machine is in the [Eco Mode] or the [Shutoff Support Mode], wait for about 5 seconds before turning on the machine again.
- For details on condition of the [Eco Mode] and [Shutoff Support Mode], refer to "SPECIFICATIONS" on page 97.

■ Changing the Screen Saver Image

Instead of the default image, you can select your own personal images for the screen saver of your machine. Before changing the screen saver image, prepare the image on USB media. For details on compatible image files, refer to "SPECIFICATIONS" on page 97.

- 1 Touch
 - \rightarrow The settings screen appears.
- **2** Touch **2**.
 - → The general settings screen appears.
- Display [Screen Saver] in the general settings screen.



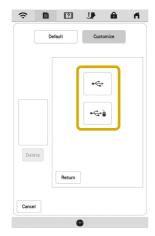
- Touch Select
- Touch Customize



- 6 Connect the USB media that contains your personal image to the USB port of the machine.
- Touch Customize 01 to select the first image.



Select the device that is connected.



- → A list of your personal images appears on the screen.
- * Delete the selected image.
- * Return to the previous page.
- Select a file name and then touch Set .



- → The selected image is stored on your machine.
- * Return to the previous page.
- Repeat steps 7 through 9 to set the remaining images.
- Touch or to return to the original screen.

Memo -

 Touch [Default] to select default images for the screen saver.



Using the Machine Help

Touch [?] to display the machine help screen. Functions are available from the screen shown below.



- ① Explanation for upper threading, winding the bobbin, preparing to embroider a pattern, and how to use the machine (page 17)
- Tutorial videos or MPEG-4 (MP4) videos (page 18, page 18)
- ③ Display the introduction to the applications. Touch the key of the app. On smart devices with a QR reader app installed, scan the QR code to display a screen that shows how to install the app.



IQ Intuition Monitoring: The machine's embroidering status can be monitored from your smart device. For details, refer to "IQ INTUITION MONITORING APP" on page 84.

4 End-user license agreements (EULA)

■ Using the Operation Guide Function

Touch observation Guide to display the screen shown below. Categories are displayed at the top of the screen. Touch a key to see more information about that category. Some of the functions are described in the movies. Watch these movies for a better understanding of the functions.

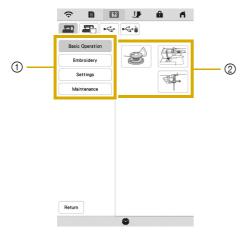


- Information about the main parts of the machine and their functions
- ② Information about the operation buttons
- ③ Information about threading the machine, changing needles, etc.
- ④ Information about attaching the embroidery unit, preparing fabric for embroidering, etc.
- ⑤ Information about troubleshooting
- ⑤ Information about cleaning the machine, etc.

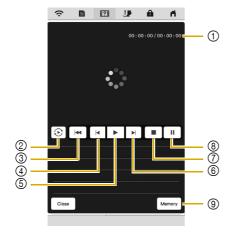
■ Playing a Tutorial Video

This machine provides tutorial videos on how to use the machine.

- Touch ?
- Touch Video
- Select the category and the tutorial video.



- Category
- ② Tutorial video
- Play the tutorial video.



- ① Number of seconds elapsed/Total number of seconds
- ② Repeat
- 3 Return to beginning
- ④ Skip back 10 seconds
- ⑤ Play
- 6 Skip forward 10 seconds
- Stop
- 8 Pause
- Save to machine (when playing from USB media).

A video can be saved to (favorites) of the machine, from where it can be played.

When playing from the machine's memory, Memory changes to Delete . Touch Delete to delete the video.

[™] Note

- The specifications shown in the movie may differ from the ones on the actual product, in details.
- The movie includes optional parts not included with this product.

After you are finished playing the video, touch Close

■ Playing MPEG-4 (MP4) Videos

Your MP4 videos can be played from USB media. In addition, the MP4 video can be saved to the machine so that a tutorial video on creating a project, for example, can be viewed at any time. For details on supported file extensions, refer to "SPECIFICATIONS" on page 97.

Memo -

- Some types of MP4 file cannot be played with the machine.
- Touch ?
- Touch Video
- Select the device where the video is saved.



- 1 Tutorial videos
- ② Videos saved on the machine (favorites)
- 3 Videos from USB media plugged into the USB port
- 4 Videos from USB media plugged into the USB port for mouse
- A Select the video that you want to play.



∀ Note

- Long file names may be shortened when they are displayed.
- ᇊ Play the video.
 - * Use the operation keys as described in "Playing a Tutorial Video" on page 18.
- 6 After you are finished playing the video, touch Close.

GETTING READY

WIRELESS NETWORK CONNECTION FUNCTIONS

Operations Available with a Wireless Network Connection

This machine supports a wireless network connection. The following useful operations will be available if the machine is connected to a wireless network.

■ For updating

Directly download the update file to the machine. (page 99)

• When an updated version of the software is available on our website, the wireless LAN key appears as





■ For embroidering

Conveniently check the operating status of the machine from your smart device by using the dedicated mobile application (IQ Intuition Monitoring).



- Wirelessly transfer an embroidery pattern from your computer to the machine by using the dedicated Windows application (Design Database Transfer). The application can be downloaded from the following URL.
 - https://www.babylock.com/accessories/software/ design-database-transfer
- Settings must be specified in Design Database Transfer. For more information, refer to the manual for Design Database Transfer.



- Wirelessly transfer to the machine an embroidery pattern edited with embroidery editing software (Palette version 11 or later) on a computer. Also, transfer to Palette an embroidery pattern edited on the machine.
- Settings must be specified in Palette. For more information, refer to the manual for Palette.



Enabling a Wireless Network Connection

The machine can be connected to your wireless network. Refer to "SPECIFICATIONS" on page 97 for requirements for a wireless network connection.



Set [Wireless LAN Enable] to [ON].



→ The machine begins to emit the wireless network signal.

Using the Wizard to Set Up the Wireless Network Connection

There are multiple ways to set up the wireless network connection. We recommend the method that uses the wizard on this machine.

In order to connect your machine to a wireless network, the security information (SSID and network key) for your home network will be required. The network key may also be called a password, security key or encryption key. First, find your security

SSID Network Key (Password)

Memo

information and note it.

- The wireless network connection cannot be set up if you do not have the security information.
- How to find the security information
 - Check the manual provided with your home network.
 - ② The default SSID may be the manufacturer's name or the model name.
 - ③ If you cannot find the security information, contact the manufacturer of the router, your network administrator or your Internet provider.
 - ④ Some SSIDs and network keys (passwords) are case (upper case and lower case) sensitive. Please properly record your information.





 \rightarrow A list of available SSIDs appears.

C Touch > beside the SSID that was noted.

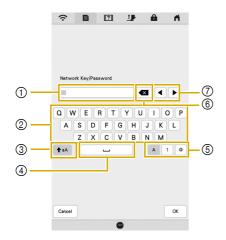


→ The screen for entering the network key (password) appears.

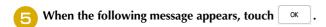
Memo -

- If the SSID that was noted does not appear in the list, touch Refresh.
- If the desired network SSID is not displayed, specify it as described below.
 - 1 Select New SSID .
 - 2 Enter the desired network SSID, and then touch $o_{\mathbf{K}}$
 - ③ Select the authentication method and encryption mode.
- If the machine had already been connected to the home network, touch Saved SSID, and then select the saved SSID.

Enter the network key (password) that was noted, and then touch ok.



- 1) Text input area
- ② Character keys
- 3 Caps key
- ④ Space key
- ⑤ Letters/numbers/symbols key
- (6) Backspace key (Deletes the character at the cursor's position.)
- ⑦ Cursor keys (Move the cursor to the left or right.)

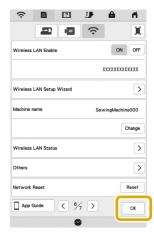




→ When a connection is established, the following message appears.







→ The name beside [Machine name] is the name that will be used when registering the machine with embroidery editing software (Palette version 11 or later) or Design Database Transfer in order to transfer files.

Memo −

- The name in the [Machine name] field will be used with the IQ Intuition Monitoring App.
- While connected, the signal strength is indicated by the icon in the upper-left corner of the display.
- Once a wireless network connection has been set up, a connection will be established each time the machine is turned on. However, [Wireless LAN Enable] in the network settings screen must remain set to [ON].

■ Using the [Others] Menu to Set Up the Wireless Network Connection

The [Others] menu contains the following items.



- 1 TCP/IP settings can be manually entered.
- ② Shows the MAC address.
- 3 Use when proxy settings are required.

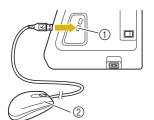
CONNECTING THE ACCESSORY TO THE MACHINE

Using a USB Mouse

A USB mouse, connected to the machine, can be used to perform a variety of operations in the screens. Connect a USB mouse to the USB port.

Memo ·

 Use a basic computer mouse to operate the machine functions. Some USB mouse devices may not be compatible with this machine.



- ① USB port
- ② USB mouse

☆ Note

- The left mouse button can be used to perform operations such as choosing a design and choosing menu keys.
- The mouse pointer does not appear in the screen saver or opening screen.

■ Clicking a Key

When the mouse is connected, the pointer appears on the screen. Move the mouse to position the pointer over the desired key, and then click the left mouse button.

Memo

• Double-clicking has no effect.



Pointer

WINDING/INSTALLING THE BOBBIN

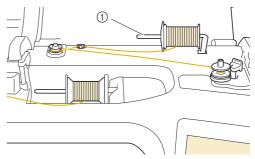
Winding the Bobbin

IMPORTANT

 Use the plastic bobbins that came with this machine or bobbins of the same type: 11.5 mm (approx. 7/16 inch) plastic Class 15 (A style) bobbins, which are available from your Baby Lock retailer.

■ Using the Supplemental Spool Pin

With this machine, you can wind the bobbin during embroidering. While using the main spool pin for embroidery, you can conveniently wind the bobbin using the supplemental spool pin.



- (1) Supplemental spool pin
- Turn the main power to ON and open the top cover.
- Align the groove in the bobbin with the spring on the bobbin winder shaft, and set the bobbin on the shaft.



- ① Groove in the bobbin
- ② Spring on the bobbin winder shaft
- Place the spool of thread for the bobbin and the spool cap onto the supplemental spool pin.

Slide the spool onto the supplemental spool pin so that the thread unwinds to the front from the bottom. Otherwise the thread may become tangled around the supplemental spool pin.



① The thread unwinds to the front from the bottom.

Slide the spool cap onto the spool pin as far as possible to the right, with the rounded side on the left.

IMPORTANT

- If the spool or the spool cap is not installed correctly, the thread may become tangled around the spool pin, and the machine may be damaged.
- Three spool cap sizes are available, allowing you to choose a spool cap that best fits the size of spool being used. If the spool cap is too small for the spool being used, the thread may catch on the slit in the spool or the machine may be damaged. When using mini king thread spool, use the thread spool insert.

For details on thread spool insert (mini king thread spool), refer to "Note" on page 23.





[™] Note

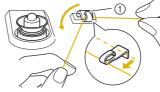
 When using the spool as shown below, use the thread spool insert (mini king thread spool). Make sure that the thread spool insert is firmly inserted. After installing it, pull out some thread, and check that the thread unwinds without getting caught.



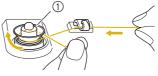
- Thread spool insert (mini king thread spool)
- ② Hole diameter 8.0 mm to 10.5 mm (approx. 5/16 inch to 13/32 inch)
- ③ Spool (crosswound thread)



With your right hand, hold the thread near the thread spool. With your left hand, hold the end of the thread, and use both hands to pass the thread through the thread guide.



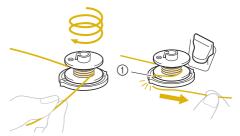
- 1) Thread guide
- Pass the thread around the pretension disk making sure that the thread is under the pretension disk.



- 1) Pretension disk
- → Make sure that the thread passes under the pretension disk.



- 2 Pretension disk
- 3 Pull it in as far as possible.
- → Check to make sure thread is securely set between pretension disks.
- Wind the thread clockwise around the bobbin 5 or 6 times, pass the thread through the guide slit in the bobbin winder seat, and then pull the thread to cut it.



 Guide slit in bobbin winder seat (with built-in cutter)

 Be sure to wind the thread clockwise around the bobbin, otherwise the thread may become wrapped around the bobbin winder shaft.

A CAUTION

 Be sure to cut the thread as described. If the bobbin is wound without cutting the thread using the cutter built into the guide slit in the bobbin winder seat, the thread may become tangled in the bobbin or the needle may break and cause injury when the bobbin thread starts to run out. 8

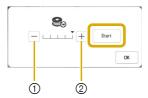
Set the bobbin winding switch to the left, until it clicks into place.



- Bobbin winding switch
- → The bobbin winding window appears.



Touch Start



- 1 Touch to decrease the winding speed.
- ② Touch to increase the winding speed.
- → Bobbin winding starts. Start changes to Stop while the bobbin is winding. The bobbin stops rotating when bobbin winding is completed. The bobbin winding switch will automatically return to its original position.

Memo

- Touch ok to minimize the bobbin winding window. Then, you can perform other operations, such as selecting a pattern or adjusting the thread tension, while the bobbin is being wound.
- Touch (in top right of the LCD screen) to display the bobbin winding window again.



- The sound of winding the bobbin with stiff thread, such as metallic thread for quilting, may be different from the one produced when winding normal thread; however, this is not a sign of a malfunction.
- After bobbin winding is finished, cut the thread with scissors and remove the bobbin.

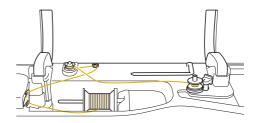


IMPORTANT

 When removing the bobbin, do not pull on the bobbin winder seat. Doing so could loosen or remove the bobbin winder seat, and could result in damage to the machine.

■ Using the Spool Pin

You can use the main spool pin to wind the bobbin before embroidering. You cannot use this spool pin to wind the bobbin while embroidering.

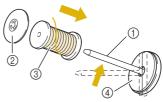


- Turn the main power to ON and open the top cover.
- Align the groove in the bobbin with the spring on the bobbin winder shaft, and set the bobbin on the shaft.



- ① Groove in the bobbin
- ② Spring on the bobbin winder shaft
- Remove the spool cap and place the spool of thread for the bobbin onto the spool pin.

Slide the spool onto the spool pin so that the thread unwinds to the front from the bottom.

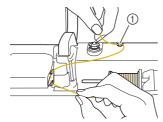


- 1) Spool pin
- ② Spool cap
- 3 Spool of thread
- Spool felt
- Slide the spool cap onto the spool pin as far as possible to the right, with the rounded side on the left.
- While holding the thread with both hands, pass the thread through grooves of the thread guide plate.



1) Thread guide plate

Pass the thread through the thread guide.



- ① Thread guide
- Pass the thread around the pretension disk making sure that the thread is under the pretension disk.

Pull the thread as far as possible.



- 1) Pretension disk
- ② Thread guide
- Follow steps 7 through 10 on page 23 through page 24.

Setting the Bobbin

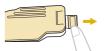
A CAUTION

 Use a bobbin that has been correctly wound with thread, otherwise the thread tension may be incorrect and the needle may break, causing injuries.

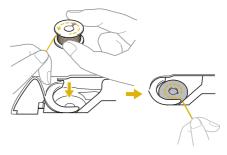




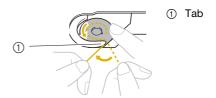
- Before inserting or changing the bobbin, be sure to touch in the LCD to lock all keys and buttons. Otherwise injuries may occur if the "Start/Stop" button or any other button is pressed and the machine starts embroidering.
- Touch **J** to lock all keys and buttons and raise the presser foot.
 - * If the message [OK to automatically lower the presser foot?] appears on the LCD screen, touch
 - ox to continue.
- Slide the bobbin cover latch to the right and remove the bobbin cover.



Insert the bobbin into the bobbin case so that the thread unwinds to the left.



Lightly hold down the bobbin with your right hand, and then guide the end of the thread around the tab of the needle plate cover with your left hand.



☆ Note

 Be sure to hold down the bobbin with your finger and unwind the bobbin thread correctly, otherwise the thread may break or the thread tension will be incorrect. 5

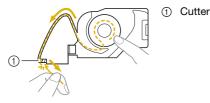
While lightly holding down the bobbin with your right hand, guide the thread through the slit in the needle plate cover and lightly pull it with your left hand.



① Slit

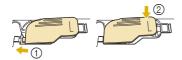
Memo

- By pulling the thread in this way, the thread will enter the tension spring of the bobbin case to apply the appropriate tension to the bobbin thread during embroidery.
- 6 While lightly holding down the bobbin with your right hand, continue guiding the thread through the slit with your left hand. Then, cut the thread with the cutter.



- → The cutter cuts the thread.
- Reattach the bobbin cover.

 Insert the tab of the bobbin cover into the notch of the needle plate cover, and then lightly press down on the right side.



R Touch I to unlock all keys and buttons.

UPPER THREADING

Upper Threading

A CAUTION

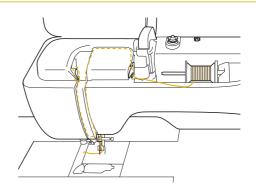
Be sure to thread the machine properly.
 Improper threading can cause the thread to tangle and break the needle, leading to injury.

IMPORTANT

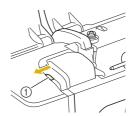
 When using 65/09 needle, manually thread the needle. If the automatic needle threading function is used, the unit may be damaged.

Memo •

- The automatic threading function can be used with home sewing machine needle size 75/11.
- When threads such as metallic thread or specialty threads are used, it is not recommended to use the needle threader.
- For most embroidery applications, the upper thread should be 40-weight rayon or polyester embroidery thread.



- Turn the main power to ON.
- Press (Presser foot lifter button) to raise the presser foot.
 - → The upper thread shutter opens so the machine can be threaded.



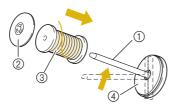
① Upper thread shutter

Press (1) (Needle position button) to raise the needle.

IMPORTANT

- Be sure to raise the needle before using the automatic needle threader. Otherwise, the needle may not thread correctly and the needle threader may be damaged.
- Remove the spool cap and place the spool of thread onto the spool pin.

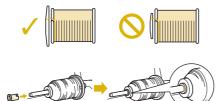
Slide the spool onto the spool pin so that the thread unwinds to the front from the bottom.



- Spool pin
- Spool cap
- ③ Spool of thread
- 4 Spool felt
- Slide the spool cap onto the spool pin as far as possible to the right, with the rounded side on the left.

CAUTION

• Choose a spool cap that best fits the size of spool being used. For more information, refer to "Note" on page 23.

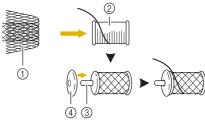


If the spool or the spool cap is not positioned correctly, the thread may become tangled around the spool pin, possibly causing the needle to break, resulting in injuries.

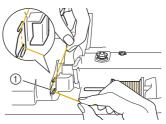
[™] Note

• When using thread that winds off quickly, such as metallic thread, place the spool net over the spool before placing the spool of thread onto the spool

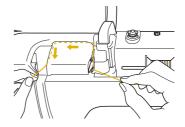
If the spool net is too long, fold it to fit the size of the spool.



- Spool net
- Thread spool
- Spool pin
- ④ Spool cap
- When threading the spool with the spool net on, make sure that 5-6cm (approx. 2 - 2-1/2 inches) of thread is pulled out.
- It may be necessary to adjust the thread tension when using the spool net.
- While holding the thread with both hands, pass the thread through grooves of the thread guide plate.



- 1) Thread guide plate
- While holding the thread in your right hand, pass the thread through the thread guide in the direction indicated.



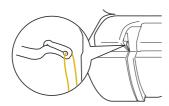


Guide the thread down, up, then down through the groove, as shown in the illustration.

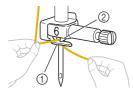


Memo

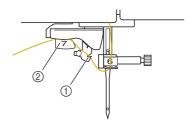
 Look in the upper groove area to check if the thread catches on the thread take-up lever visible inside the upper groove area.



Pass the thread through the needle bar thread guide (marked "6") by holding the thread with both hands and guiding it as shown in the illustration.



- Needle bar thread guide
- ② Tab
- Pass the thread through the notch in the thread guide. Then firmly pull the thread from front to back into the slit of the thread guide disk (marked "7").



- Notch in thread guide
- ② Thread guide disk
- Press (Presser foot lifter button) to lower presser foot.



Pull the thread up through the thread cutter to cut the thread, as shown in the illustration.



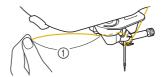
① Thread cutter

[™] Note

"7").

 When using thread that quickly winds off the spool, such as metallic thread, it may be difficult to thread the needle if the thread is cut.
 Therefore, instead of using the thread cutter, pull out about 8 cm (approx. 3 inches) of thread after

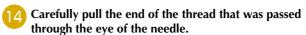
passing it through the thread guide disks (marked



- ① About 8 cm (approx. 3 inches) or more
- Press (+) (Automatic threading button) to have the machine automatically thread the needle.
 - → The thread passes through the eye of the needle.

Memo

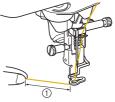
• When (Automatic threading button) is pressed, the presser foot will be automatically lowered. After threading is finished, the presser foot moves back to the position before (Automatic threading button) was pressed.



* If a loop was formed in the thread passed through the eye of the needle, carefully pull on the loop of thread through to the back of the needle.



Raise the presser foot lever and pull out about 10 cm (approx. 4 inches) of the thread, and then pass it under the presser foot toward the rear of the machine.



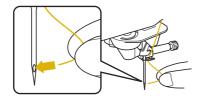
① About 10 cm (approx. 4 inches)

Memo

 If the needle could not be threaded or the thread was not passed through the needle bar thread guides, perform the procedure again starting from step 3.

[™] Note

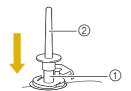
 Some needles and threads cannot be threaded with the needle threader. In this case, instead of using the needle threader after passing the thread through the needle bar thread guide (marked "6"), manually pass the thread through the eye of the needle from the front.



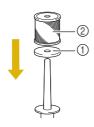
■ Using the Vertical Spool Pin

Use the vertical spool pin when using an irregularly shaped thread spool, and when embroidering with metallic thread.

Insert the vertical spool pin onto the bobbin winder shaft.



- Bobbin winder shaft
- ② Vertical spool pin
- Install the spool felt and the thread spool in that order, and then thread the upper thread.



- Spool felt
- ② Thread spool

Memo

- When setting the thread spool, set it so that the thread winds off from the front of the spool.
- This method keeps the thread from twisting as it comes off the spool pin.

CHANGING THE NEEDLE

A CAUTION

- Always touch on the screen to lock all keys and buttons before changing the needle.
 If is not touched and the "Start/Stop" button or another operation button is pressed accidentally, the machine will start and injury may result.
- Use only home sewing machine needles. Other needles may break and may cause injury.
- Never use a bent needle. This may cause injury.

■ Thread and Needle Number

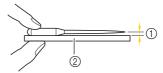
The lower the thread number is, the heavier the thread; the higher the needle number, the larger the needle.

■ Embroidery Needles

Use a ball point needle 75/11.

Memo ·

 To check the needle correctly, place the flat side of the needle on a flat surface. Check the needle from the top and the sides. Throw away any bent needles.



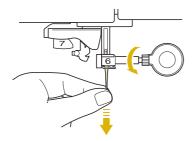
- 1) Parallel space
- ② Flat surface (bobbin cover, glass, etc.)
- The machine needles are consumables.
 Replace the needle in cases such as those described below.
 - If an unusual sound is produced when the needle enters the fabric. (The tip of the needle may be broken or dull.)
 - If stitches are skipped. (The needle may be bent.)

- Press (Needle position button) to raise the needle.
 - Touch to lock all keys and buttons.

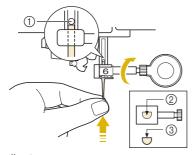
 * If the message [OK to automatically lower the
 - presser foot?] appears on the LCD screen, touch or to continue.

☆ Note

- Before replacing the needle, cover the hole in the needle plate with fabric or paper to prevent the needle from falling into the machine.
- Remove the presser foot. (page 89)
- Use the disc-shaped screwdriver to turn the needle clamp screw toward you (counterclockwise) to loosen the screw. Remove the needle.



With the flat side of the needle facing the back, insert the new needle all the way to the top of the needle stopper (viewing window) in the needle clamp. Use the disc-shaped screwdriver to securely tighten the needle clamp screw.



- Needle stopper
- ② Hole for inserting the needle
- 3 Flat side of the needle

A CAUTION

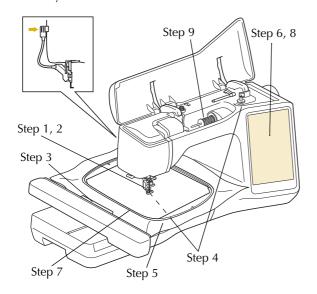
- Be sure to push in the needle until it touches the stopper, and securely tighten the needle clamp screw with the disc-shaped screwdriver. If the needle is not completely inserted or the needle clamp screw is loose, the needle may break and cause injury.
- Attach the presser foot. (page 89)
- 7 Touch 🎩 to unlock all keys and buttons.

Chapter 2 BASIC EMBROIDERY

BEFORE EMBROIDERING

Embroidery Step by Step

Follow the steps below to prepare the machine for embroidery.



Step #	Aim	Action	Page
1	Presser foot attachment	Attach embroidery foot "W+" with LED pointer.	89
2	Checking the needle	Use needle 75/11 for embroidery.	29
3	Embroidery unit attachment	Attach the embroidery unit.	31
4	Bobbin thread setup	For the bobbin thread, wind embroidery bobbin thread and set it in place.	22
5	Fabric preparation	Attach a stabilizer material to the fabric, and hoop it in the embroidery frame.	53
6	Pattern selection	Turn the main power to ON, and select an embroidery pattern.	33
7	Embroidery frame attachment	Attach the embroidery frame to the embroidery unit.	56
8	Checking the layout	Check and adjust the size and position of the embroidery.	57
9	Embroidery upper thread setup	Set up embroidery upper thread according to the pattern.	26

About the Embroidery Unit

A CAUTION

 Do not move the machine with the embroidery unit attached. The embroidery unit could fall off and cause injury.

IMPORTANT

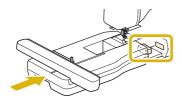
- Keep your hands and foreign objects away from the embroidery carriage and frame when the machine is embroidering. Damage or malfunction may result.
- Be sure to turn off the power before attaching or removing the embroidery unit. Otherwise, the machine may be damaged.
- Do not touch the inner connector of the embroidery unit. The pins on the embroidery unit connection may be damaged.
- Do not apply strong force to the embroidery unit carriage or pick up the unit by the carriage. Otherwise, the embroidery unit may be damaged.
- Do not push on the carriage when attaching the embroidery unit onto the machine. Moving the carriage may damage the embroidery unit.
- Make sure that there is enough space for the carriage of the embroidery unit to move. If the embroidery frame comes into contact with an object, the pattern may not be embroidered correctly, or damage may result.
- Do not touch the embroidery carriage until the initialization finishes.

→ Note

- To avoid distorting your embroidery design, do not touch the embroidery carriage and frame when the machine is embroidering.
- Store the embroidery unit in a safe place to prevent damage to the unit.

■ Attaching the Embroidery Unit

- Turn the main power to OFF.
- Insert the embroidery unit connection into the connection port of the machine until it snaps into place.



☆ Note

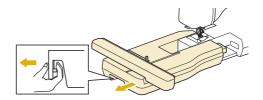
- Be sure there is no gap between the embroidery unit and the machine. If there is a gap, the embroidery patterns will not embroider with the correct registration.
- Turn the main power to ON.
 - → The following message will appear.



- Touch ox
 - → The carriage will move to the initialization position.

■ Removing the Embroidery Unit

- Remove the embroidery frame.
 - For details on removing the embroidery frame, refer to "Removing the Embroidery Frame" on page 56.
- Touch 📳 .
 - \rightarrow The carriage will move to the removal position.
- Turn the main power to OFF.
- Press the release button, and pull the embroidery unit away from the machine.



SELECTING PATTERNS

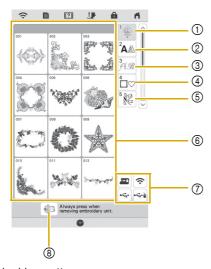
■ Copyright Information

The patterns stored in the machine and patterns sold separately are intended for private use only. Any public or commercial use of copyrighted patterns is an infringement of copyright law and is strictly prohibited.

■ About Embroidery Patterns

There are character and decorative embroidery built-in patterns (visit our website www.babylock.com to see the "Embroidery Design Guide" for a full summary of built-in patterns in the machine).

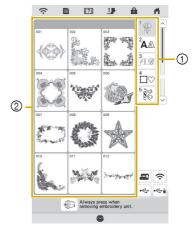
You can also use patterns sold separately.



- Embroidery patterns
- ② Character patterns
- ③ Decorative alphabet patterns
- 4 Frame patterns
- ⑤ Utility embroidery patterns
- 6 Pattern selection keys
- Patterns saved in the machine's memory, USB media, etc. (page 80)
- Touch this key to position the embroidery unit for storage.

Selecting Embroidery Patterns

Touch the category tab and then touch the pattern key you want to embroider.



- ① Pattern category tab
- ② Pattern selection keys
- Select a pattern.



C Touch **Set** to set the pattern.



- * Touch to darken the background color for the pattern image with bright thread colors, to get a clearer image.
- ightarrow The pattern is designated with a red box around it on the edit screen.
- Touch to edit the selected pattern. (page 39)



- Touch Embroidey.
 - → The embroidery screen appears.

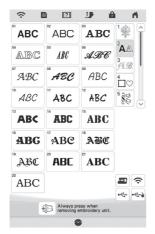
- Touch Layout to edit the pattern before embroidering. (page 51)
 - * To return to the edit screen, touch Return



Start embroidering. (page 63)

Selecting Character Patterns

- Touch AA.
- Touch the key of the font you want to embroider.



- - : View the previous page.
- Select the character category and then type in the text. (page 35)

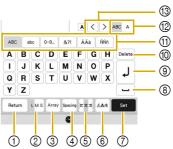


- 4 Touch Set .
 - \rightarrow The edit screen appears.
- Follow the steps from 4 to 7 of "Selecting Embroidery Patterns" on page 33.

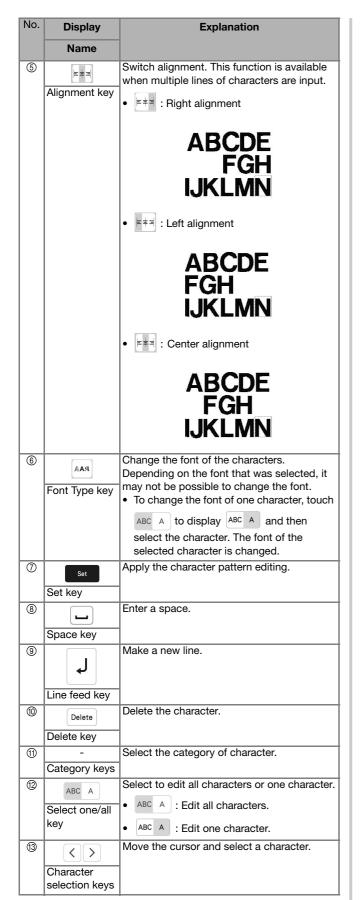
■ Character Pattern Input Keys

Memo -

 If a key display is grayed out, you cannot use that function with the selected pattern.

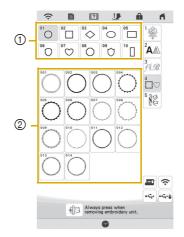


		(1) (2) (3) (4) (5) (6) (7)	
No.	Display	Explanation	
	Name		
1	Return	Return to the previous screen.	
	Return key		
2	Size key	Change the size of the character patterns. To change the size of one character, touch ABC A to display ABC A and then select the character. The size of the selected character is changed.	
3	Array key	Change the configuration of the character patterns. To arrange the character patterns on an arc, touch PR, RB, ROOM OF RB. Make the arc flatter. Make the arc rounder. To arrange the character patterns on an incline, touch RB. Change the incline counterclockwise. Change the incline clockwise.	
		Reset the layout.	
4	Spacing Character spacing key	Change the spacing of the character patterns. • *ABC* : Increase the character spacing. • *ABC* : Decrease the character spacing. • To change the spacing after one character, touch ABC A to display ABC A and then select the character. The spacing between the selected character and the next character is changed.	
		■ ABCD E ↔ ABCDE	
		■ ABCDE → ABCDE • ABC	



Selecting Frame Patterns

- Touch ♣□♡.
- Touch the key of the frame shape you want to embroider in the top part of the screen.



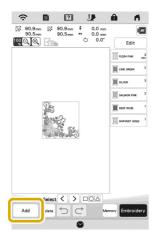
- 1) Frame shapes
- ② Frame patterns
- → Various frame patterns are displayed at the bottom part of the screen.
- Touch the key of the frame pattern you want to embroider.
 - \rightarrow The selected pattern is displayed on the screen.
- 7 Touch Set .
 - → The edit screen appears.
- Follow the steps from 4 to 7 of "Selecting Embroidery Patterns" on page 33.

Combining Patterns

Example:



- Select a pattern and then touch
- Touch Add



- 3 Touch A.
- 4 Select ABC and enter "ABCD".
 - → The characters you enter will be displayed in the center of the embroidery pattern area.
- 5 Touch Set
- Touch Edit and then touch Move
- Use () to move the characters.
 - * Characters can also be moved by directly dragging them with your finger or the touch pen.

- 8 Touch ok.
- Touch to change the color of the characters. (page 48)



- Touch OK
- When all editing is finished, touch Embroidey.

Memo

 Combined patterns will be embroidered in the order they were entered.

■ Selecting a Pattern

If multiple patterns have been combined, use

Select \(\) to select the pattern to be edited. Patterns
can also be selected by directly touching the screen with
your finger or touch pen.

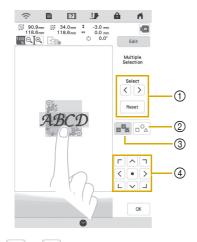


■ Selecting Multiple Patterns at the Same Time Multiple patterns can easily be edited, for example, when moving patterns, if they are all selected together.

Touch □□△.



Touch each pattern to be selected.



- ① Touch 〈 or 〉 to check the patterns to be selected, and then touch ⑤ set . The selected patterns are highlighted with a red box. To deselect the selected patterns, touch ⑤ Reset .
- ② Touch this key to deselect all selected patterns.
- 3 Touch this key to select all patterns in the pattern display area.
- 4 Patterns can be moved with this key.

Memo

• You can also select multiple patterns by dragging your finger to specify the area of selection.

Touch OK to return to the edit screen.

→ Each selected pattern is surrounded with a red box.

Memo

- The following functions are available while multiple patterns are selected.
 - Moving
 - Copying
 - Grouping
 - Stippling

■ Grouping Patterns

If the multiple patterns are grouped, they can be edited as a single pattern.

- Select patterns you want to group. (page 38)
- **2** Touch **3**.
 - \rightarrow The selected patterns are grouped.



* To ungroup a grouped pattern, select the grouped pattern, and then touch . At this time, multiple patterns are selected. To cancel the multiple selection, touch any other pattern or the blank area.

Memo

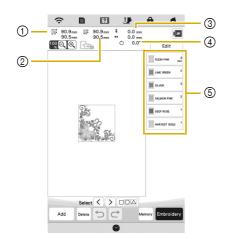
- The following functions are applied to all patterns in the grouped pattern.
 - Moving
 - Rotating
 - Appliqué
 - Border
 - Simple stippling
 - Thread color changing

EDITING PATTERNS

Using these keys, you can edit the pattern as you like.

Memo

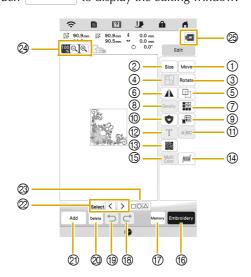
• If a key display is grayed out, you cannot use that function with the selected pattern.



- ① Size of the entire combined pattern
- ② Size of the pattern currently selected
- ③ Distance from the center of the frame to the center of the pattern currently selected
- ④ Degree of rotation for the pattern currently selected
- Color sequence and stitching times of each step of the pattern

■ Key Functions

Touch Edit to display the editing window.



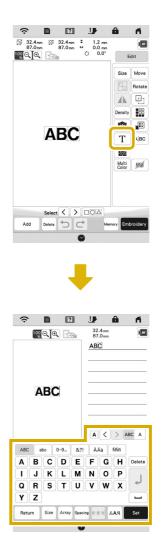
No.	Display	Explanation	Page
110.	Name		
1	Move key	Display the pattern moving window. • < • > : Move the pattern in the direction shown by the arrow. • : Center the pattern.	37

	Display	Fundametica De	
No.	Name	Explanation	Page
2	Size	Display the pattern sizing window.	42
	Size key	Decrease the pattern	
		proportionately.	
		Decrease the pattern	
		vertically.	
		Decrease the pattern horizontally.	
		Enlarge the pattern proportionately.	
		Stretch the pattern vertically.	
		• Stretch the pattern	
		horizontally.	
		Change the size of the character patterns.	
		•	
		character patterns.)	
		• < • >: Move the pattern in	
		the direction shown by the arrow.	
3	Rotate	Display the pattern rotating	_
	Rotate key	window.	
	. ioiaio iioy	Reset the position.	
		• < • >: Move the pattern in	
		the direction shown by the arrow.	
		You can also rotate the pattern by	
		dragging the red point at the corners of the pattern.	
4		Group selected multiple patterns.	38
ΙL			
5	Group key	Duplicate the pattern.	
1 1		Dapiloate the pattern.	_
6	Duplicate key	Change the pattern to a horizontal	
$ \parallel $		mirror image.	
	Horizontal		
	mirror image key		
7		Make and edit the repeated pattern.	42
	Border key	Allegan the theory of the St.	4.4
8	Density	Allows the thread density to change for some Alphabet	41
	Density key	characters and frame patterns.	
		Other patterns density can be modified after the pattern size is changed.	
9		Change the thread color.	49
	Thread palette		
	key		
10		Create an appliqué outline of the pattern.	70
	Appliqué key	<u> </u>	

	Display		
No.	Name	Explanation	Page
11)	ABC	Separate the continuous character	-
	Separate key	patterns to adjust the spacing or edit separately afterwards.	
	Separate key	• 🕶 : Select where the	
		patterns is to be separated.	
		Separate the patten. A	
		separated character pattern	
		cannot be combined again.	
12	T	Edit character patterns.	35, 40
	Letter Edit key		
13		Touch this key to create stippling,	82
	Stippling key	echo quilting, or decorative fill around a pattern.	
14		Touch this key to specify not to	46
	<i>J</i> /////	embroider the selected thread	
	Deselect region setting	color.	
	(no sew		
	setting) key		
15	Multi Color	Touch this key when you want to change the thread color, character	
	Multi color key	by character in character	
		embroidery. Since the machine	
		stops at the end of each character, the upper thread can be	
		changed as you embroider.	
16	Embroidey	Proceed to the embroidery screen.	_
	Embroidery		
	key		
1	Memory	Save a pattern in the machine's memory or USB media. The	79
	Memory key	pattern can also be transferred to	
		a computer via a wireless network connection.	
18		Redo the last operation that was	_
		undone.	
19	Redo key		
	5	Undo the last operation.	
	Undo key		
20	Delete	Delete the selected pattern (the pattern outlined by the red box).	_
L	Delete key	,	
2	Add	Add another pattern to the editing	37
	Add key	pattern.	
2	Select 〈 〉	Select the pattern to edit when	37
	Pattern select	there are multiple patterns.	
	key		
23		Make multiple patterns to be	38
	Multiple	selected at the same time.	
	selection key		
24	100 Q Q	Magnify the image.	-
	Magnify keys	Use	
	ag.my noys	scroll through the display in any	
		direction.	
		Demagnify the image	
		(minimum: 100%).	
		• Select the percent of	
		magnification.	

No.	Display	Explanation	Page
	Name		
8	mage key	Preview the embroidered image.	41

■ Editing Letters



For details on input keys, refer to "Character Pattern Input Keys" on page 35.

Memo -

• To edit character patterns with multiple lines in the edit screen, ungroup the pattern. (page 38)

Previewing the Pattern

Touch .



- → An image of the pattern as it will be embroidered appears.
- Touch Touch
 - * Frames displayed in gray cannot be selected.
 - * Touch \bigcirc \bigcirc to enlarge the image of the pattern.
 - * The pattern can be embroidered as it appears in the display.



3 Touch ____ to check the embroidering order.



 \rightarrow The stitch simulator screen appears.



- Simulation speed keys
- ② Operation keys
 - : Start the simulation at the set speed.
 - : Pause the simulation.
 - : Stop the simulation.

- * Touch _ to return to the embroidery frame selection screen.
- 4 Touch OK

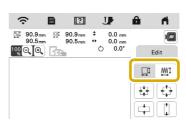
Changing the Size and the Density of the Pattern

If M1 is selected, you can change the pattern size while maintaining the thread density. The machine recalculates the stitch density automatically. With this function, the pattern will be enlarged or reduced at a larger ratio than with normal pattern resizing.





2 Select 📮 💆 in the size window.

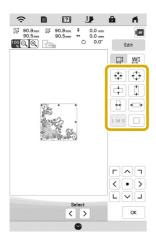


- * : Change the pattern size while maintaining the number of stitches. Enlarged patterns will be less dense, and reduced patterns will be more dense. In order to maintain embroidering quality, there is a limit to how much the embroidery pattern can be enlarged or reduced.

Memo -

- This function cannot be used with alphabet character patterns, frame patterns, repeated patterns or buttonhole patterns.
- Patterns with a large number of stitches (100,001 or more) cannot be resized while maintaining a thread density.
- You can also change the size by dragging the red point at the sides and corners of the pattern.

Select the direction in which to change the pattern size.



- When you select in step 2, touch , and then touch censity to change the thread density.
 - * : Make the pattern less dense.
 - * + : Make the pattern more dense.
- Touch ox.

Creating Repeated Patterns

Using the border function, you can create repeated patterns. You can also adjust the spacing of the patterns.

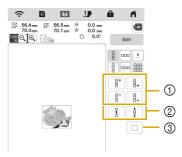
Touch Edit , and then touch ...



- Select the direction in which the pattern will be repeated.
 - * : Repeat the pattern above.
 - * \Box : Repeat the pattern below.

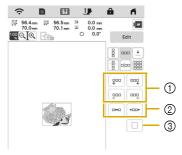
 - * B- : Delete below pattern.

Vertical direction

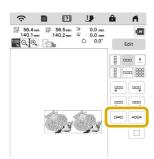


- Repeating and deleting keys
- ② Spacing keys
- 3 Key to cancel pattern repeating

Horizontal direction ===



- ① Repeating and deleting keys
- ② Spacing keys
- 3 Key to cancel pattern repeating
- Adjust the spacing of the repeated pattern.
 - * : Widen spacing.
 - * : Tighten spacing.



- Complete repeated patterns by repeating steps 2 through 3.
- 5 Touch ox.

■ Repeating Patterns Using the Matrix Copy

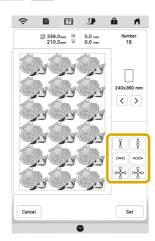
Place the pattern repeatedly throughout the embroidery area.

- Touch !!!.
- Prouch !!!.



→ The repeated pattern is displayed positioned throughout the area.

- Adjust the spacing of the repeated pattern.
 - * Diden spacing.
 - * Tighten spacing.



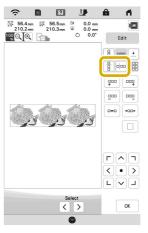
→ Every time the key is pressed, the pattern is automatically re-laid out.

- Touch Set .
- Touch OK

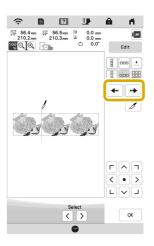
■ Repeating One Element of a Repeated Pattern

You can select one element of a repeated pattern and repeat only that single element. This function allows you to create complex repeated patterns.

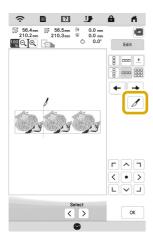
- Touch ...
- Choose the direction in which the repeated pattern will be cut.
 - * : Cut horizontally.
 - * cut vertically.



- → The pattern direction indicator will change depending on the direction selected.
- **3** Use ← and → to select the cut line.







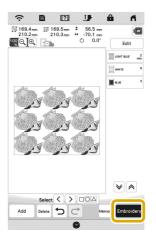
- ightarrow The repeated pattern will be divided into separate elements.
- 5 Touch .
- **6** Use **₹** and **>** to select the element to repeat.



- Repeat the selected element.
- 8 Touch ox.

■ Color Sorting Repeated Patterns

Touch Embroidey to automatically change the embroidering order of colors in combined border embroidery patterns so that the same color can be continuously embroidered. This allows you to continue embroidering without repeatedly changing the upper thread or changing the embroidering order manually.







Memo -

- When a grouped pattern is repeated, the embroidering order is changed in each pattern.
- If there are repeated patterns with other repeated patterns or other patterns, the embroidering order of only the repeated patterns is changed.

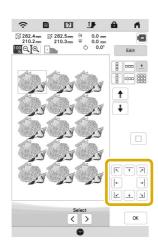
■ Assigning Thread Marks

By sewing thread marks, you can easily align patterns when rehooping the fabric to embroider a series. When embroidering is finished on a pattern, a thread mark in the shape of an arrow will be sewn using the final thread. When embroidering a series of patterns, use the point of this arrow for positioning the following designs to be embroidered.

- Touch ...
- Touch 🛂.



Touch to select the thread mark to be sewn.



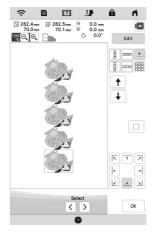
Memo

- When there are two or more elements, use or
 - to select an element to assign a thread mark(s) to.
- 4 Touch OK .

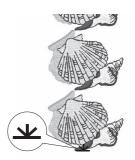
Embroidering the Pattern Repeatedly

After creating the repeated pattern, rehoop the embroidery frame and keep embroidering for the next pattern.

- Select the repeated pattern and assign the thread mark at the center of the bottom of the pattern.
 - * Refer to "Assigning Thread Marks" on page 45.



- **2** Touch OK, then Embroidey.
- Press the "Start/Stop" button to start embroidering.
 - → When embroidering is finished, the thread mark is embroidered with the last thread color.



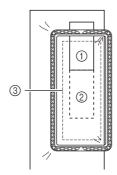
Remove the embroidery frame.



Rehoop the fabric in the embroidery frame.

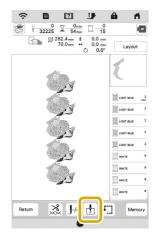
[™] Note

 Adjust the position of the fabric so that the embroidering area for the next pattern is within the embroidering area.

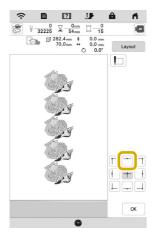


- (1) Pattern embroidered first
- ② Position of pattern to be embroidered next
- 3 Embroidering area
- 6 Attach the embroidery frame to the machine, and then

touch 掛.



Touch to set the starting point to the center top of the pattern.



- 8 Touch ox
- Touch Layout, and then touch Move.



to move the embroidery frame until

the thread mark on the fabric is aligned with the light of the LED pointer.

* To check the needle drop point with the light of the LED pointer, touch .

Memo -

 For the accurate needle drop point, slowly turn the handwheel toward you (counterclockwise) to lower the needle. Then, turn the handwheel away from you (clockwise) until the mark on the handwheel is at the top. The carriage cannot move if the mark on the handwheel is not at the top.



① Mark

- Touch OK .
- Remove the thread mark.
- 13 Start embroidering.

Deselect Region Setting (No Sew Setting)

The deselect region setting (which specifies that a thread color will not be embroidered) can be applied to a part of the pattern with a specific color.

Touch in the embroidering edit screen.



- From the thread color sequence display, select the thread color that will not be embroidered.
 - → The selected thread color is highlighted in blue.



- 3 Touch ...
 - → The mark appears to indicate that the selected thread color will not be embroidered.

 The parts of the pattern that will not be embroidered are hidden in the pattern preview screen.



Memo

• To cancel the setting, select the thread color and touch ...

- 4 If necessary, repeat steps 2 and 3 for all thread colors that will not be embroidered.
- Touch and then touch to check an enlarged image of the finished embroidery.
 - * After deselecting a region, check the image to be sure no previously hidden stitches are visible.



Memo

- When a pattern with the deselect region setting applied is saved, the deselect region setting is also saved. However, the pattern cannot be saved if the deselect region setting is applied to all thread colors.
- The parts with the deselect region setting applied are merely not displayed; they are not deleted. The embroidery area required to embroider the pattern is the same as for the original pattern.

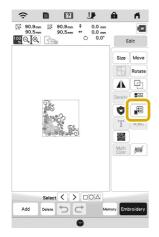


EDITING COLORS

Changing the Thread Color

You can change the thread color by moving the color to be changed to the top of the embroidering order and selecting a new color from the thread colors in the machine.

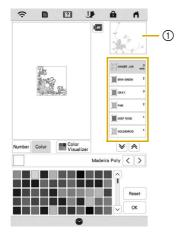




 \rightarrow The thread color palette appears.

Touch the color of the part to be changed.

- * Touch or to display the thread color that is not on the screen.
- \rightarrow The selected thread color image appears.

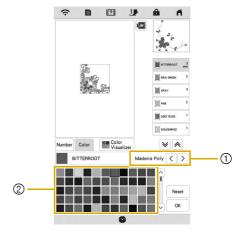


① Selected thread color image

Memo -

 When you directly touch a part of the pattern whose color is to be changed, the part can be selected and displayed. Select a new color from the thread color palette, and then touch ox.

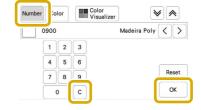
* To return to the original color, touch _______. If multiple colors have been changed, this command will return all colors to their original colors.



- 1 Thread brand for colors
- ② Thread color palette
- → The display shows the changed colors.

Memo

Touch Number to specify a thread color by entering its number. If you enter the wrong number, touch
 and then enter the correct number. After entering the number, touch

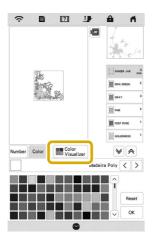


Finding New Color Schemes with the Color Visualizer Function

With the color visualizer function, the machine suggests new color schemes for the embroidery pattern that you have selected. After you select the desired effect ([Random], [Vivid], [Gradient] or [Soft]), sample color schemes for the selected effect are displayed.







Memo

- This function may not be available depending on the pattern you select (ex. a repeated pattern, licensed pattern).
- Select the thread brand for colors and the number of colors you want to create the pattern with.

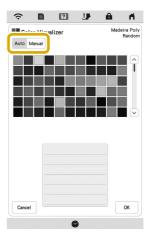


- 1 Thread brand for colors
- ② Number of colors to be used
- Select the desired effect.



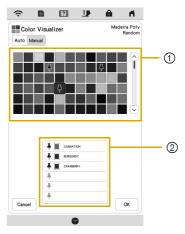
- ① Effects for schemes
- → If you select [Random] or [Gradient], the color specifying screen will appear.
- \rightarrow If you select [Vivid] or [Soft], proceed to step \bigcirc .

- Touch Auto Manual to set Manual and specify the thread color to use in the effect.
 - * If you don't need to specify the thread color, just set to Auto.



[Manual] setting for [Random]

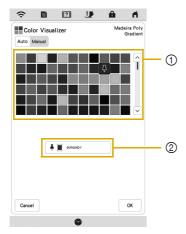
You can select up to 6 colors to be used in the [Random] effect. The effect will be created using the selected colors.



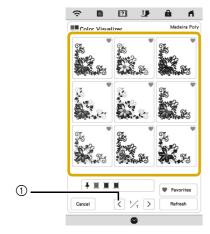
- ① Select colors from the palette.
- Selected colors are listed.

[Manual] setting for [Gradient]

You can select one color to be used in the [Gradient] effect. The effect will be created with a color you select.



- ① Select a color from the palette.
- ② Selected color is displayed.
- 6 Touch OK.
- Select the desired color scheme from samples.
 - * Touch Refresh to add the new schemes.

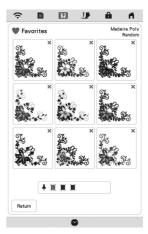


1 Touch to review the previous schemes.

Memo -

schemes.

- To temporarily register your favorite schemes, touch touch (to release your favorite schemes, touch again). 9 color schemes can be added. Touch
 Favorite to check the registered favorite
 - To cancel the registration, touch X.



- Maximum 20 pages of schemes can be reviewed.
- Select the displayed color scheme.
 - * Cancel : Return to the previous screen.
 - * < or > : Display the other color schemes.
 - * set : Select the displayed color scheme.



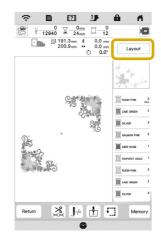
→ The thread color palette screen will appear.

Thread Color Sorting

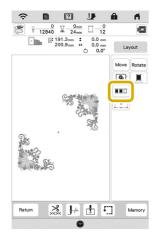
This function allows you to embroider while replacing the thread spool a minimal number of times.

Before starting to embroider, touch in the embroidery screen to rearrange the embroidery order and sort it by thread colors.

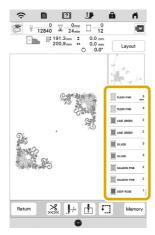
Touch Layout in the embroidery screen.



2 Touch .



* Touch Layout again to check the sorted thread colors.

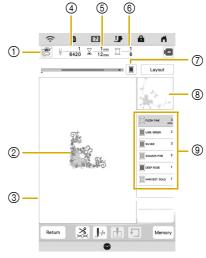


- → The embroidery color order is rearranged and sorted by thread colors.
- * Touch Layout , then III to cancel color sorting and embroider with the original embroidery color order.

☆ Note -

 This function does not work on overlapping patterns.

VIEWING THE EMBROIDERY SCREEN

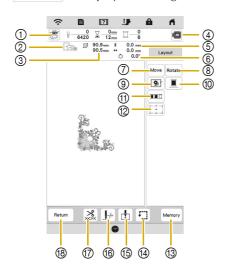


- * This screen appears when embroidery starts.
- ① The presser foot symbol Attach embroidery foot "W+" with LED pointer or embroidery foot "W" (sold separately) for all embroidery projects.
- A preview of the pattern
- ③ The boundary for embroidering with the selected frame in the settings screen
- ④ Total number of stitches in the selected pattern and number of stitches that have already been embroidered
- ⑤ The time necessary to embroider the pattern, and the time already spent embroidering the pattern (not including time for changing and automatically trimming the thread)
- The number of colors in the pattern, and the number of the color currently being embroidered
- Switch the progress bar (which shows the embroidering progress) between showing only one color or all colors. This key appears after starting embroidering or after touching the I ++key.
- The part of the embroidery pattern that will be embroidered with the thread color at the top of the list
- The order for thread color changes and the embroidering time for each thread color
- * The displayed time is the approximate time that will be required. The actual embroidering time may be longer than the displayed time, depending on the embroidery frame that is used. In addition, the amount of time required to change thread colors is not included.

■ Key Functions

Using these keys, you can move or rotate pattern, etc.

Touch Layout to display the editing window.



☆ Note -

 Some operations or functions are not available for certain patterns. If the key display is grayed out, you cannot use that function or operation with the selected pattern.

NI.	Display		D
No.	Name	Explanation	Page
1	Needle point check key	Turn on the light of the LED pointer. Touch this key to check the needle drop point with the light of the LED pointer.	57
2	Available frames	Shows the embroidery frames that can be used for the selected pattern. Be sure to use the proper frame.	54
3	90.9 _{mm} ‡ 90.5 _{mm} ↔ Pattern size	Shows the size of the selected pattern.	_
4	Image key	Preview the embroidery image.	41
(5)	0.0 mm 0.0 mm Distance	Shows the distance between the embroidering position and the center (when the embroidery pattern is moved).	-
6	🖒 0.0°	Shows the degree of rotation of the pattern.	_
7	Move key	Display the pattern moving window.	-
8	Rotate key	Display the pattern rotating window.	_
9	Basting key	Add the basting stitch around the pattern. You can select the distance from the pattern to the basting stitching.	15, 69

No.	Display	Explanation	Page
110.	Name		. ago
(1)	Uninterrupted embroidery key	Change the setting to embroider the pattern with a single color. Touch the key again to return to the original setting. Even if uninterrupted embroidering has been set, the automatic thread cutting function and the thread trimming function can be used. The icons of the spool of thread	-
		are grayed out.	50
100	Thread color sorting key	Touch this key to rearrange the stitching sequence for combined patterns.	50
1	2-point embroidery positioning function with a LED pointer on/off key	Switch on/off the 2-point embroidery positioning function with a LED pointer.	59
(3)	Memory key	Save the pattern to the machine's memory or USB media. The pattern can also be transferred to a computer via a wireless network connection.	79
(4)	Trace key	Check the position of the pattern. • Will: Move the carriage to trace the embroidery area of the pattern. This allows you to check that there is enough space to embroider the pattern. • Here is enough the carriage to the carriage to the selected position.	58
(5)	Starting point key	Specify the needle start position. It is Set the needle start position to the lower-left corner of the pattern. This setting is useful when connecting patterns since it allows you to continue embroidering until the first stitch of the next pattern. It is Move the carriage to the selected position.	77, 78
6	Forward/Back key	Move the needle forward or back in the pattern; useful if the thread breaks while embroidering or if you want to start again from the beginning.	66
17	Cut/Tension key	Set automatic thread cutting, thread trimming or the thread tension. For embroidery, these functions are set automatically.	73-76
18	Return key	Return to the edit screen.	

PREPARING THE FABRIC

A CAUTION

 Use fabrics with a thickness of less than 2 mm (approx. 1/16 inch). Using fabrics thicker than 2 mm (approx. 1/16 inch) may cause the needle to break and cause injury.

Memo

 When using layers with thicker batting etc., you can embroider more attractive finishes by adjusting the embroidery presser foot height in the embroidery settings screen.

Touch , and use , and + in the [Embroidery Foot Height] in the embroidery settings screen. Adjust the presser foot height for thick or puffy fabrics.

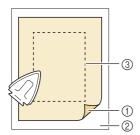


- To increase the space between the embroidery foot and the needle plate, set the [Embroidery Foot Height] to a larger number.
- In the case of thick terry cloth towels, we recommend that you place a piece of water soluble stabilizer on the top surface of the towel. This will help to reduce the nap of the toweling and result in more attractive embroidery.

Attaching Iron-on Stabilizers (Backing) to the Fabric

A CAUTION

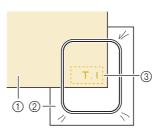
- Always use a stabilizer material for embroidery when embroidering on stretch fabrics, lightweight fabrics, fabrics with a coarse weave, or fabrics which cause pattern shrinkage. Otherwise, the needle may break and cause injury.
- Iron the iron-on stabilizer material to the wrong side of the fabric.
 - Use a piece of stabilizer which is larger than the embroidery frame being used.



- ① Fusible side of stabilizer
- ② Fabric (wrong side)
- Size of the embroidery frame

Memo

 When embroidering small pieces of fabric that cannot be hooped in an embroidery frame, use stabilizer material as a base. After lightly ironing the fabric to the stabilizer material, hoop it in the embroidery frame. If stabilizer material cannot be ironed onto the fabric, attach it with a basting stitch. After completing the embroidery, remove the stabilizer material carefully.



- ① Fabric
- Stabilizer
- 3 Basting

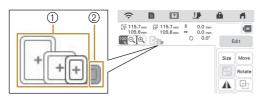
 When embroidering on thin fabrics such as organdy or lawn, or on napped fabrics such as towel or corduroy, use water soluble stabilizer (sold separately) for best results. The water soluble stabilizer material will dissolve completely in water, giving the project a more attractive finish.

Hooping the Fabric in the Embroidery Frame

■ Types of Embroidery Frames

Optional embroidery frames can be used. When choosing frames that do not appear on the screen, be sure to check the design size of the embroidery field of the optional frame. Check with your authorized Baby Lock retailer for frame compatibility.

Select a frame that matches the pattern size. Available frame options are displayed on the LCD.

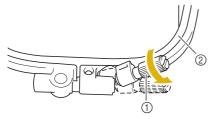


- Highlighted: Can be used
- Shaded: Cannot be used

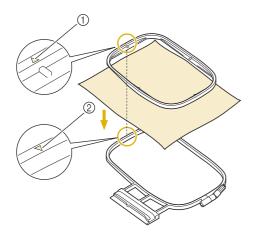
■ Inserting the Fabric

☆ Note -

- If the fabric is not securely held in the embroidery frame, the pattern will embroider out poorly. Insert the fabric on a level surface, and gently stretch the fabric taut in the frame.
- Lift-up and loosen the frame adjustment screw and remove the inner frame.



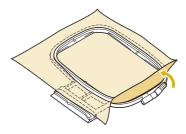
- Frame adjustment screw
- ② Inner frame
- Lay the fabric right side up on top of the outer frame.
- Insert the inner frame making sure to align the inner frame's \triangle with the outer frame's ∇ .



- Inner frame's △
- ② Outer frame's \(\nabla \)



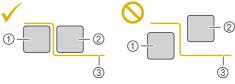
Slightly tighten the frame adjustment screw.



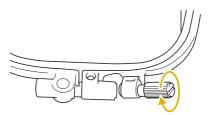
- Gently smooth out the fabric. Make sure fabric is flat and without wrinkles.
 - After stretching the fabric, make sure the fabric is taut.



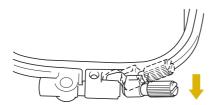
Make sure the inside and outside frames are even before you start embroidering.



- 1) Outer frame
- Inner frame
- Fabric
- Tighten the frame adjustment screw to keep the fabric from loosening while stitching.



Return the frame adjustment screw to its initial position.



Memo

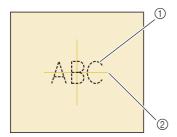
• You can use the disc-shaped screw driver, when you loosen or tighten the frame adjustment screw.



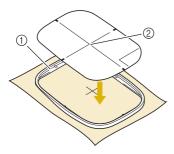
■ Using the Embroidery Sheet

When you want to embroider the pattern in a particular place, use the embroidery sheet with the frame.

With a chalk pencil, mark the area of the fabric you want to embroider.

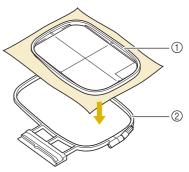


- ① Embroidery pattern
- ② Mark
- Place the embroidery sheet on the inner frame. Align the guide lines on the embroidery sheet with the mark you made on the fabric.

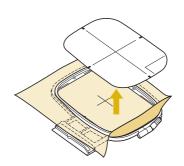


- 1 Inner frame
- ② Guide line

Gently stretch the fabric so there are no folds or wrinkles, and press the inner frame into the outer frame.



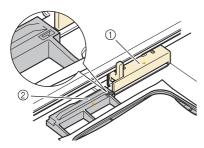
- ① Inner frame
- ② Outer frame
- Remove the embroidery sheet.



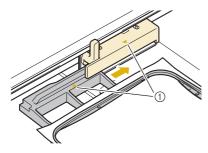
ATTACHING THE EMBROIDERY FRAME

[™] Note -

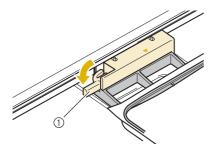
- Wind embroidery bobbin thread and insert the bobbin before attaching the embroidery frame.
 Check that there is enough thread in the bobbin.
- Make sure that the frame-securing lever is correctly lowered after the embroidery frame has been installed in the embroidery frame holder.
- Press (Presser foot lifter button) to raise the presser foot.
- Align the embroidery frame guide with the right edge of the embroidery frame holder.



- ① Embroidery frame holder
- ② Embroidery frame guide
- Slide the embroidery frame into the holder, making sure to align the embroidery frame's \triangle with the holder's ∇ .

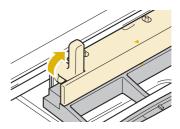


- ① Arrow mark
- Lower the frame-securing lever to be level with the frame to secure the embroidery frame in the embroidery frame holder.

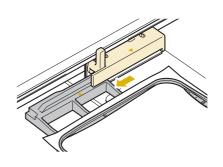


① Frame-securing lever

- **■** Removing the Embroidery Frame
- Press (Presser foot lifter button) to raise the presser foot.
- Raise the frame-securing lever.



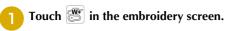
Pull the embroidery frame toward you.



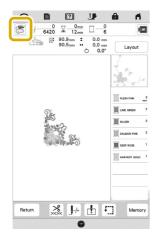
CONFIRMING THE PATTERN POSITION

The pattern is normally positioned in the center of the embroidery frame. If the pattern needs to be repositioned for better placement on the garment, you can check the layout before starting embroidery.

Checking the Needle Drop Point with the Embroidery Foot "W+" with LED Pointer



→ The LED pointer indicates the needle drop point.



- When the LED pointer turns on, the presser foot height is automatically adjusted according to the fabric thickness.
- appears when the embroidery foot "W+" with LED pointer is attached to the machine.
- If is not displayed, you cannot use the LED pointer.
- The LED pointer turns off automatically by lowering the presser foot or returning to the previous page.

[™] Note

- With spongy fabric, the position may not be accurate due to the various depths of the fabric.
- With fabric that has a very uneven surface such as quilting, the fabric thickness may not be correctly measured. In this case, the pointer indication should be used only as a reference.

■ Adjusting the LED Pointer

Adjust the LED pointer if it indicates a point different than the actual needle drop point. Before adjusting the LED pointer, mark the actual needle drop point on the fabric to be embroidered, and attach the embroidery frame.



→ The settings screen appears.



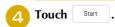
→ The embroidery settings screen appears.

Display [Embroidery Foot with LED Pointer Adjustment] in the embroidery setting screen.



[⋄] Note

 As a default, Start appears gray. After the embroidery foot "W+" with LED pointer is attached to the machine, the key becomes available and settings can be specified.



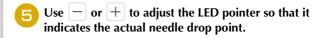
→ The Embroidery Foot "W+" with LED Pointer Adjustment screen appears.



① LED pointer adjustment

[™] Note

- The specified setting is saved in the machine's memory. This is useful for positioning during continuous embroidering.
- For normal use, return the setting to [00].



Memo -

- In order to more accurately check the needle drop point, turn the handwheel toward you (counterclockwise) to lower the needle.
- 6 Touch or to return to the original screen.

■ Adjusting the Brightness of the LED Pointer

- Follow the steps from 1 to 3 of "Adjusting the LED Pointer" on page 57 to display the embroidery foot with LED pointer adjustment screen.
- Use _ or + to adjust the brightness of the LED pointer.



3 Touch or to return to the original screen.

Checking the Pattern Position

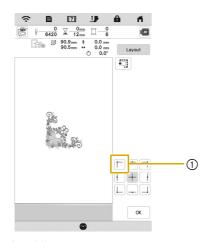
The carriage moves and shows the pattern position. Watch the embroidery frame closely to make sure the pattern will be embroidered in the right place.





From [++], touch the key for the position that you

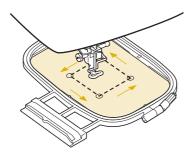
want to check.



- Selected position
- → The carriage will move to the selected position on the pattern.

Memo

• To see the entire embroidering area, touch [4]. The carriage moves and shows the embroidery area.



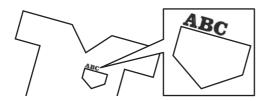
A CAUTION

• Do not lower the needle when the embroidery frame is moving. If the needle is down, it could break and result in injury.



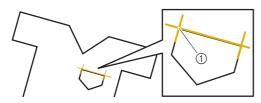
THE 2-POINT EMBROIDERY POSITIONING FUNCTION

By using the 2-point embroidery positioning function with a LED pointer, the embroidering position can easily be aligned. This is useful when embroidering in an area where it is necessary to align the pattern, as shown below.



Use a chalk pencil to mark the desired embroidering position.

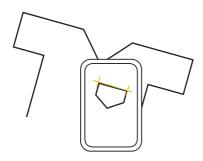
The line drawn for the reference direction should be longer.



① Chalk pencil mark

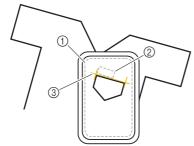
Memo -

- If the desired position of the pattern can be clearly established, such as when embroidering along a pocket, it is not necessary to mark the position with a chalk pencil.
- 2 Hoop the fabric in the embroidery frame.



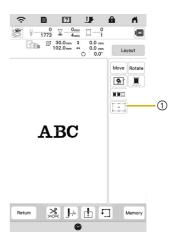
[™] Note

 When hooping the fabric in the embroidery frame, make sure that the embroidery pattern will fit within the embroidering area of the frame being used.



- ① Embroidering area
- 2 Embroidery pattern size
- 3 Chalk pencil mark

- **3** Select the pattern.
- 1 Touch Embroider to display the embroidery screen.
- Touch Layout and then touch

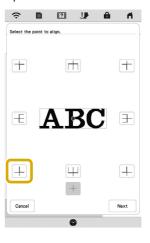


 Switch on/off the 2-point embroidery positioning function with a LED pointer.

Memo

- The LED pointer lights up to indicate the needle drop point.
- When the LED pointer is turned on, the embroidery foot height is automatically adjusted according to the fabric thickness.
- If the surface of the fabric is too uneven or rough, check and adjust the alignment of the light of the LED pointer and the needle drop point before starting to embroider.
- If a message appears, indicating that the move and rotate settings will return to the original ones, touch ok.
- From the reference points shown in the screen, select the point to be used for aligning the pattern.

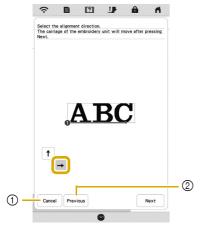
For this example, select the point in the lower-left corner of the pattern.





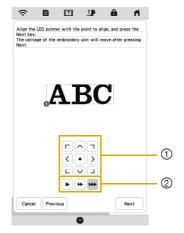
Select the direction (from the reference point) to be used as a reference for aligning the pattern.

For this example, select the arrow pointing to the right as the reference direction.

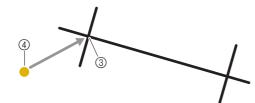


- ① Cancel the pattern alignment settings.
- ② Return to the previous screen.
- Touch Next
- Touch the positioning keys to move the embroidery frame until the position of the LED pointer and the center of the first mark are aligned.

To change the speed that the frame moves, use the frame movement speed keys. If it is difficult to make a precision alignment, touch a frame movement speed key for a slower speed.



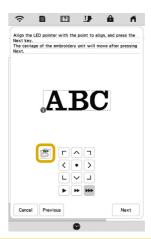
- ① Positioning keys
- ② Frame movement speed keys



- 3 Center of the first mark
- 4 Light of the LED pointer

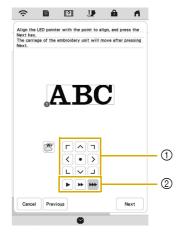
[™] Note —

 If is displayed to the left of the positioning keys, the LED pointer has shifted from its initial position.
 Touch to adjust the position.

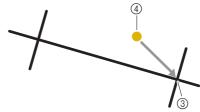


- Touch Next
- Touch the positioning keys to move the embroidery frame until the position of the LED pointer and the center of the second mark are aligned.

To change the speed that the frame moves, use the frame movement speed keys. If it is difficult to make a precision alignment, touch a frame movement speed key for a slower speed.



- Positioning keys
- ② Frame movement speed keys



- 3 Center of the second mark
- 4 Light of the LED pointer

☆ Note

- Set the position of the LED pointer to a position that is not too close to the first reference point. If it is too close, a message will appear, prompting you to reposition it.
- In order to increase the accuracy of the pattern alignment, align the position of the LED pointer above the second mark (③) and as far away from the center mark as possible.
- 14 Touch Set .
 - \rightarrow The pattern is repositioned.

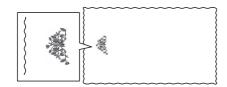


15 Press the "Start/Stop" button to start embroidering.

■ Another example

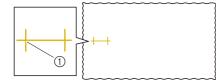
By specifying an alignment point and direction, embroidery patterns can be positioned and aligned for various purposes.

In this example, a pattern is aligned at the left center of the towel.



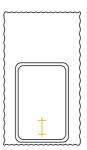
Use a chalk pencil to mark the desired embroidering position.

The line drawn for the reference direction should be longer.

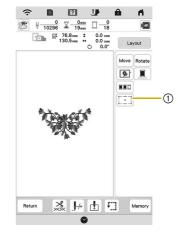


① Chalk pencil mark

Phoop the fabric in the embroidery frame.



- Select the pattern.
- 7 Touch Embroidey to display the embroidery screen.
- Touch Layout and then touch



- Switch on/off the 2-point embroidery positioning function with a LED pointer.
- If a message appears, indicating that the move and rotate settings will return to the original ones, touch ox .
- From the reference points shown in the screen, select the point to be used for aligning the pattern.

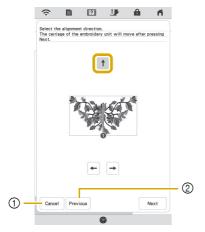
For this example, select the point in the lower-center of the pattern.





Select the direction (from the reference point) to be used as a reference for aligning the pattern.

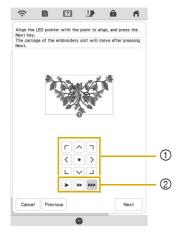
For this example, select the arrow pointing upward as the reference direction.



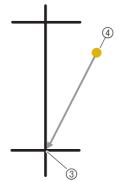
- ① Cancel the pattern alignment settings.
- ② Return to the previous screen.



Touch the positioning keys to move the embroidery frame until the position of the LED pointer and the center of the first mark are aligned.



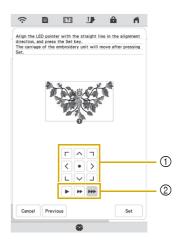
- Positioning keys
- ② Frame movement speed keys



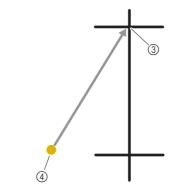
- 3 Center of the first mark
- 4 Light of the LED pointer



Touch the positioning keys to move the embroidery frame until the position of the LED pointer and the center of the second mark are aligned.



- Positioning keys
- ② Frame movement speed keys



- ③ Center of the second mark
- 4 Light of the LED pointer
- Touch Set .
 - \rightarrow The pattern is repositioned.



Press the "Start/Stop" button to start embroidering.

EMBROIDERING A PATTERN

Embroidering Attractive Finishes

Many factors are involved in achieving a beautiful embroidery result. Using the appropriate stabilizer (page 53) and hooping the fabric in the frame (page 54) are two important factors mentioned earlier. Another important point is the appropriateness of the needle and thread being used. See the explanation of threads below.

Thread	Upper thread	Use embroidery thread intended for use with this machine.
		Use embroidery bobbin thread intended for use with this machine.

Memo ·

 If you use threads other than those listed above, the embroidery may not embroider out correctly.

Bobbin case (recommended for embroidering with included 90 weight bobbin thread)



1 Bobbin case

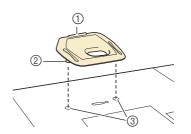
The included bobbin case is set for 90 weight bobbin thread. When you use different weights of bobbin thread, the tension screw on this bobbin case can be adjusted if necessary. For details, refer to "Adjusting the Bobbin Case" on page 74.

A CAUTION

 When embroidering on large items (especially jackets or quilts), do not let the fabric hang off of the table. Otherwise, the embroidery unit cannot move freely and the embroidery frame may strike the needle, causing the needle to break and possibly causing injury.

■ Embroidery Needle Plate Cover

Under some conditions, based on the type of fabric, stabilizer, or thread being used, there may be some looping in the upper thread. In this case, attach the included embroidery needle plate cover to the needle plate. Attach the cover by inserting the two projections on the underside of the cover into the notches on the needle plate as shown below.



- ① Groove
- ② Projection
- 3 Notch

To remove the embroidery needle plate cover, place your fingernail in the groove and lift the plate out.

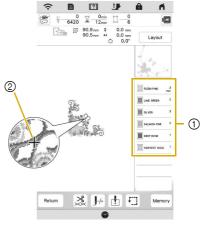
A CAUTION

 Push the embroidery needle plate cover as far as possible to attach it. If the embroidery needle plate cover is not securely attached, it may cause the needle to break and cause injury.

Embroidering Patterns

Prep

Prepare embroidery threads of the colors shown on the screen.

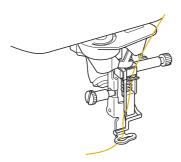


- ① Embroidery color order
- ② Cursor

• The [+] cursor moves over the pattern, showing which part of the pattern is being embroidered.



Using the automatic needle threader, thread the machine for the first color. (page 26)

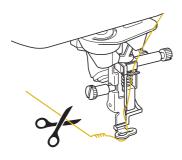


- Lower the presser foot, then press the "Start/Stop" button to start embroidering.
 - → When the first color is completely embroidered, the machine will automatically trim the threads and stop. The embroidery foot will then automatically be raised.

On the embroidery color order display, the next color will move to the top.

Memo

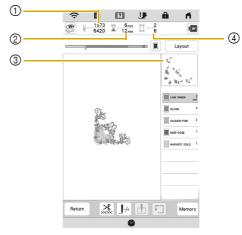
- If you want to get more attractive finishes, try the procedures below:
 - After 5-6 stitches, press the "Start/Stop" button again to stop the machine.
 - Trim the excess thread at the beginning of the pattern. If the excess thread tail is under the embroidery foot, raise the embroidery foot, then trim the excess thread.



- If there is thread left over from the beginning of embroidering, it may be embroidered over as you continue embroidering the pattern, making it very difficult to deal with the thread after the pattern is finished. Trim the threads at the beginning of each thread change.
- Remove the upper thread for the first color from the machine. Thread the machine with the next color.



Repeat the same steps for embroidering the remaining colors.



- ① Current stitch numbers/Total stitch numbers
- ② Current time/Total time
- 3 Part of pattern to be embroidered next
- (4) Embroidered colors/Total colors
- ightarrow When the last color is embroidered, [Finished embroidering] will appear on the display. Touch

ox , and the display will return to the original screen.

Memo

 The thread trimming function is originally set to trim excess thread jumps (threads linking parts of the pattern, etc.). Depending on the type of thread and fabric that are used, an end of upper thread may remain on the surface of the fabric at the beginning of the stitching. After embroidering is finished, cut off this excess thread.

If the setting has been turned off, trim the excess thread jumps using scissors after the pattern is finished. Refer to page 76 for information on the thread trimming function.

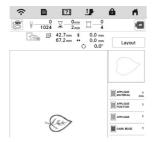
IMPORTANT

- Do not press (x) (Thread cutter button) after the threads have been cut. Doing so could tangle the thread or damage the machine.
- Do not press (⋈) (Thread cutter button) when there is no fabric set in the machine or during machine operation. The thread may tangle, possibly resulting in damage.

Using Appliqués

When the color embroidering order display shows

- [🗐 🥌 🤻 (APPLIQUE MATERIAL)],
- (APPLIQUE POSITION)] or
- (APPLIQUE)], follow the procedure below.



Required materials

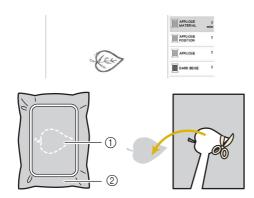
- Fabric for the appliqué piece
- Fabric for the appliqué base
- Stabilizer material
- Fabric glue or temporary spray adhesive
- Embroidery thread

[™] Note -

 The correct names and numbers of the thread colors to be used will not appear. Use the thread colors depending on those in the appliqué pattern.

■ 1. Creating an Appliqué Piece

- Attach stabilizer material to the wrong side of the fabric for the appliqué piece.
- Sew the cutting line of the appliqué piece. Remove the fabric for the appliqué piece from the embroidery frame, and then carefully cut along the sewn cutting line.



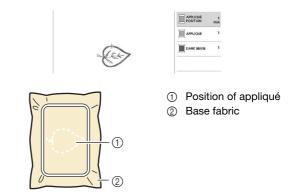
- ① Outline of appliqué
- ② Fabric for appliqué piece

☆ Note

- If the appliqué piece is cut out along the inside of the cutting line, it may not be correctly attached to the fabric. Therefore, carefully cut out the appliqué piece along the cutting line.
- After cutting out the appliqué piece, carefully remove the thread.

■ 2. Sewing the Appliqué Position on the Base Fabric

- Attach stabilizer material to the wrong side of the fabric for the appliqué base.
- Sew the appliqué position.



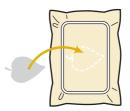
Remove the embroidery frame from the embroidery unit.

[™] Note

 Do not remove the base fabric from the embroidery frame until all embroidering is finished.

■ 3. Affixing the Appliqué Piece to the Base Fabric

Lightly apply fabric glue or temporary spray adhesive to the back of the appliqué piece, and then attach it to the base fabric within the outline of the position sewn in step ② of "2. Sewing the Appliqué Position on the Base Fabric".



[⋆] Note

- If the appliqué piece cannot be attached to the base fabric with fabric glue or temporary spray adhesive, securely baste it in place with basting stitches.
- If thin fabric is used for the appliqué piece, reinforce and secure it in place with an iron-on adhesive sheet. An iron can be used to attach the appliqué piece to the appliqué location.



After the appliqué piece is attached, attach the embroidery frame to the machine.

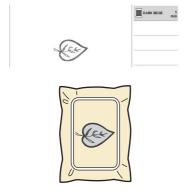
Thread the machine with the embroidery thread, lower the presser foot lever, and then press the "Start/Stop" button to embroider the appliqué.



■ 4. Embroidering the Remainder of the Pattern



Change the embroidery thread according to the embroidery color order display, and then finish embroidering the remainder of the pattern.



Memo

- Since glue may become attached to the presser foot, needle or needle plate, clean off any glue after finishing embroidering the appliqué pattern.
- For best results, trim all excess threads each time the thread color is changed.

ADJUSTMENTS DURING THE EMBROIDERY PROCESS

If the Thread Breaks or the Bobbin Runs out of Thread During Embroidering



Redo the upper threading or replace the bobbin.

If the upper thread breaks, stop the machine, trim the bobbin thread, and then rethread the machine.



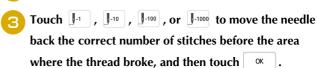
If the bobbin thread is almost empty or broken, touch of the displayed message, remove the embroidery frame, and then replace the bobbin.



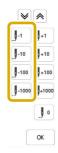
ö Note -

 If [Upper and Bobbin Thread Sensor] in the settings screen of the machine is set to [OFF], the message shown above does not appear.





• Touch 📗 o to restart from the beginning.



Memo

• If you cannot move back to the spot where the thread broke, touch work to select the color and move to the beginning position of that color, then use , , , , , or , or , to move ahead to slightly before where the thread broke.



Lower the presser foot and press the "Start/Stop" button to continue embroidering.

Resuming Embroidery after Turning off the Power

The current color and stitch number are saved when embroidery is stopped. The next time the machine is turned on, you have the option to continue or delete the pattern.



Chapter 3 ADVANCED EMBROIDERY

VARIOUS EMBROIDERING FUNCTIONS

Basting Embroidery

Before embroidering, basting stitches can be sewn along the outline of the pattern. This is useful for embroidering fabric that cannot have stabilizer material affixed with an iron or adhesive. Basting stitches can be used to attach material that cannot be hooped to stabilizer, making it possible to be embroidered.

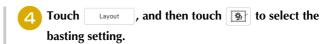
☆ Note

- It is recommended to finish combining and editing the pattern before selecting the basting setting. If the pattern is edited after selecting the basting setting, the basting and pattern may become misaligned, and the basting under the pattern may be difficult to remove after embroidering is complete.
- Touch 📋 .
- Use and to specify the distance from the pattern to the basting stitching.



Memo

- The higher the setting, the farther the basting is from the pattern.
- The setting remains selected even if the machine is turned off.
- **3** Touch ox to return to the embroidering screen.





[™] Note

- When is touched, the pattern is moved to the center. After selecting the basting setting, move the pattern to the desired position.
- → Basting is added to the beginning of the embroidering order.
- Press the "Start/Stop" button to start embroidering.
- 6 When embroidering is finished, remove the basting stitching.



Creating an Appliqué Piece

Creating an appliqué piece is convenient for fabrics that cannot be embroidered or when you wish to attach an appliqué to a garment.

■ Creating an Appliqué Piece

The following pattern will be used to create an appliqué piece.



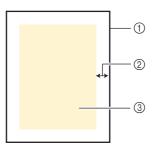
☆ Note

- Felt or denim fabrics are recommended to make the appliqué piece. Depending on the pattern and fabric used, lighter weight fabrics may cause the stitching to appear smaller.
- For best results, be sure to use stabilizer material for embroidering.
- When making appliqué pieces, do not use the optional border embroidery frame. Depending on the pattern density and fabric used, shrinkage of the stitching may occur.
- Select the pattern, and edit it if necessary.



[™] Note

- Finish combining and editing the pattern before selecting the appliqué setting. If the pattern is edited after selecting the appliqué setting, the appliqué stitching and pattern may become misaligned.
- Since an outline is added, the pattern for an appliqué piece (when the appliqué setting is selected) will be larger than the original pattern.
 First, adjust the size and position of the pattern as shown below.



- ① Embroidering area
- ② About 1cm (approx. 1/2 inch)
- 3) Pattern size
- **2** Touch Edit and then, touch .



Specify the distance between the pattern and the appliqué outline, and then touch ox.



→ The pattern and appliqué outline are grouped.

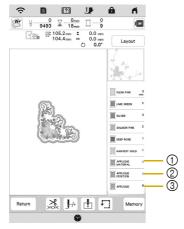
4

Touch Embroidey

→ The steps for creating the appliqué piece are added to the embroidering order.

Memo

 Three steps are added to the embroidering order: appliqué cutting line, position of pattern placement on the stabilizer material, and appliqué stitching.



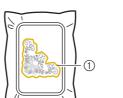
- ① Cutting line for appliqué
- Position of pattern placement on stabilizer material
- 3 Appliqué stitching
- When setting the [Thread color] to [#123] (thread number) in the settings screen, the following screen is displayed.



[™] Note -

 An appliqué piece cannot be created if the pattern is too large or too complicated or a combined pattern is separated. Even if the selected pattern fits within the embroidering area, the entire appliqué pattern may exceed the embroidering area when the outline is added. If an error message appears, select a different pattern or edit it.

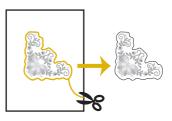
- Fuse or stick a piece of stabilizer to the back of the felt or denim fabric to be used as the appliqué piece.
- 6 Hoop the fabric for the appliqué piece in the embroidery frame, attach the embroidery frame to the machine, and then start embroidering.
- After the pattern is embroidered, thread the machine with the thread for the cutting line, and then sew the cutting line (APPLIQUE MATERIAL).



① Cutting line for appliqué

Memo

- We recommend using thread for the cutting line that is closest to the color of the fabric.
- Remove the fabric for the appliqué piece from the embroidery frame, and then carefully cut along the stitching. After cutting, carefully remove all of the cutting line thread.

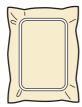


[⋆] Note

- Depending on the pattern density and fabric used, there may be shrinking of the pattern, or the appliqué may be misaligned with the placement line. We recommend cutting slightly outside of the cutting line.
- When using patterns that are vertically and horizontally symmetrical, use a chalk pencil to indicate the pattern orientation before cutting it out.
- Carefully cut out the pattern on the outline you just sewed. Do not cut inside the cutting line, otherwise the appliqué fabric will not be caught by the appliqué stitch.

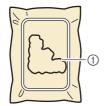


Use two layers of adhesive water soluble stabilizer material with their sticky sides together, and then hoop them in the embroidery frame.

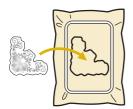


☆ Note

- If water soluble stabilizer is used, it is not necessary to remove the stabilizer material after sewing the appliqué outline. To reduce shrinkage of the pattern, we recommend using water soluble stabilizer.
- Put together two layers of water soluble stabilizer, otherwise the stabilizer material may tear during embroidering.
- Thread the machine with the thread for the outline, and then sew the placement line for the appliqué position (APPLIQUE POSITION).



- ① Pattern placement line
- Lightly apply glue or spray adhesive, and paste the appliqué piece so that it aligns with the placement line.



[⋆] Note

 Before pasting the appliqué piece down, make sure the appliqué piece is positioned correctly within the placement line.





 Outline of appliqué piece

Memo

- The outline is sewn using satin stitching.
- Since glue may become attached to the presser foot, needle or needle plate, clean off any glue after finishing embroidering the appliqué pattern.
- After embroidering is finished, remove the stabilizer material from the embroidery frame.
- Use scissors to cut the excess water soluble stabilizer from outside the appliqué outline.
- Soak the appliqué piece in water to dissolve the water soluble stabilizer.



16 Dry the appliqué piece, and then iron it if necessary.

[™] Note

 Do not apply a strong force when ironing, otherwise the stitching may be damaged.

MAKING EMBROIDERY ADJUSTMENTS

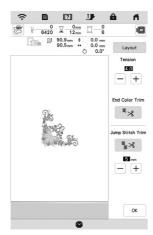
Adjusting Thread Tension

When embroidering, the thread tension should be set so that the upper thread can slightly be seen on the wrong side of the fabric.









Memo

• If the thread tension is changed from the default setting, the new setting will remain after turning the machine off and on. This new setting will apply to any selected design.

■ Correct Thread Tension

The pattern can be seen from the wrong side of the fabric. If the thread tension is not set correctly, the pattern will not finish well. The fabric may pucker or the thread may



- 1) Right side
- ② Wrong side

Follow the operations described below to adjust thread tension according to the situation.

☆ Note

• If the thread tension setting is made extremely loose, the machine may stop during embroidering. This is not the sign of a malfunction. Increase the thread tension slightly, and start embroidering again.

Memo

• If the thread tension is changed from the default setting, the new setting will remain after turning the machine off and on. This new setting will apply to any selected design.

■ Upper Thread Is Too Tight

The tension of the upper thread is too tight, resulting in the bobbin thread being visible from the right side of the fabric.

[™] Note

• If the bobbin thread was incorrectly threaded, the upper thread may be too tight. In this case, refer to "Setting the Bobbin" on page 25 and rethread the bobbin thread.

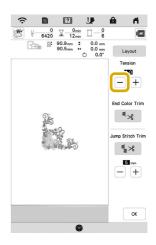




1) Right side

Wrong side

Touch — in **Tension** to weaken the upper thread tension. (The tension number will decrease.)



■ Upper Thread Is Too Loose

The tension of the upper thread is too loose, resulting in a loose upper thread, loose thread locks, or loops appearing on the right side of the fabric.

[™] Note -

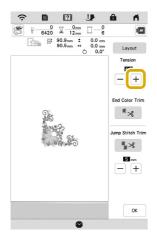
 If the upper thread was incorrectly threaded, the upper thread may be too loose. In this case, refer to "Upper Threading" on page 26 and rethread the upper thread.





- Right side
- ② Wrong side

Touch + in **Tension** to tighten the upper thread tension. (The tension number will increase.)



■ Adjusting Overall Upper Thread Tension

When embroidering, if the overall tension of the upper thread is too tight or too loose, adjust it from the setting screen. The selected setting will be applied to all patterns. If an individual embroidery pattern needs additional fine tuning, refer to "Adjusting Thread Tension" on page 73.

- 1 Touch
 - → The settings screen appears.
- **2** Touch **1**
 - → The embroidery settings screen appears.
- Display [Embroidery Tension] in the embroidery settings screen.
- Use + to adjust the upper thread tension.
 - * + : Tighten the upper thread tension.
 - * : Loosen the upper thread tension.

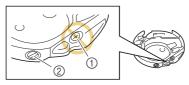




Adjusting the Bobbin Case

The bobbin case can be easily adjusted when bobbin tension changes are required to accommodate different bobbin threads. Refer to "Embroidering Attractive Finishes" on page 63

To adjust the bobbin tension for embroidery function, using the bobbin case, turn the slotted screw (-) with a (small) screwdriver.



- ① Do not turn a phillips screw (+).
- ② Adjust with a screwdriver (small).

■ Correct Tension

Upper thread slightly appears on the wrong side of fabric.



- ① Right side
- ② Wrong side

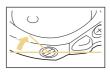
■ Bobbin Thread Is Too Loose

Bobbin thread appears slightly on the right side of fabric.



- ① Right side
- ② Wrong side

If this occurs, turn the slotted screw (-) clockwise, being careful not to over-tighten the screw, approximately 30-45 degrees to increase bobbin tension.



■ Bobbin Thread Is Too Tight

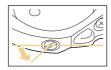
Upper thread on the right side of fabric seems to be lifting/looping and bobbin thread is not seen on the wrong side of fabric.





- ① Right side
- ② Wrong side

If this occurs, turn the slotted screw (-) counterclockwise, being careful not to over-loosen the screw, approximately 30-45 degrees to decrease bobbin tension.



IMPORTANT

- DO NOT adjust the position of the phillips (+) screw on the bobbin case as this may result in damage to the bobbin case, rendering it unusable.
- If the slotted screw (-) is difficult to turn, do not use force. Turning the screw too much or providing force in either (rotational) direction may cause damage to the bobbin case. Should damage occur, the bobbin case may not maintain proper tension.

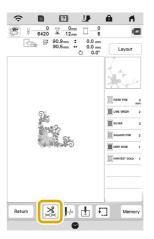
[™] Note -

 When adjusting the bobbin case, be sure to remove the bobbin from the bobbin case.

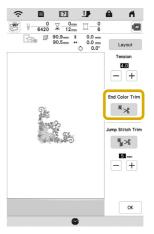
Using the Automatic Thread Cutting Function (End Color Trim)

* This setting returns to its default when the machine is turned off.





Touch to turn off the automatic thread cutting function.

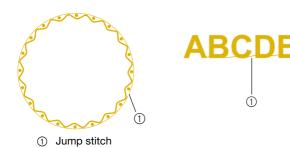


→ The key will display as Nhen one color thread is embroidered, the machine will stop without cutting the thread.

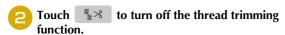
Using the Thread Trimming Function (Jump Stitch Trim)

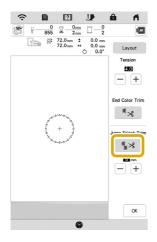
The thread trimming function will automatically trim any excess thread jumps within the color. This function is initially turned ON. To turn this function OFF, touch key and then .

 Your customized setting remains after turning the machine off and on.









→ The key will display as . The machine will not trim the thread before moving to the next stitching.

■ Selecting the Length Of Jump Stitch Not to

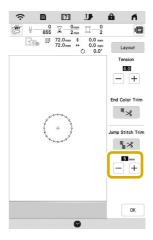
When the thread trimming function is turned on, you can select the length of the jump stitch.

Select a setting from 5 mm to 50 mm in 5 mm increments.

* Your customized setting remains after turning the machine off and on.

Touch + or - to select the length of jump stitch.

For example: Touch + to select 25 mm (approx. 1 inch) and the machine will not trim a jump stitch of 25 mm or less before moving to the next stitching.



[™] Note

- If design has many trims it is recommended to select a higher jump stitch trim setting in order to reduce the amount of excess tails on backside of fabric.
- The higher number of the jump stitch length selected, the fewer number of times the machine will trim. In this case, more jump stitches remain on the surface of the fabric.

Adjusting the Embroidery Speed



→ The settings screen appears.



→ The embroidery settings screen appears.

- Display [Max Embroidery Speed] in the embroidery settings screen.
- Use + to change the maximum embroidery speed.



Memo

- SPM is the number of stitches embroidered in one minute.
- Decrease the embroidery speed when embroidering on thin, thick, or heavy fabrics and when using a specialty thread like a metallic thread.
- The setting specified before the main power is set to OFF remains selected the next time that the machine is turned ON.



Changing the Thread Color Display

You can display the name of the thread colors or embroidery thread number.

Memo -

- Colors on the screen may vary slightly from actual spool colors.
- [Original], imported data remains the brand thread created with the software, is set as a default.
- 1 Touch 1 .
 - → The settings screen appears.
- P Touch
 - → The embroidery settings screen appears.
- Display [Thread Color] in the embroidery settings screen.
- Use to display the name of the thread colors or the embroidery thread number.



Use to select a thread brand.



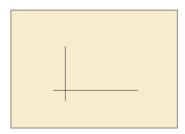


Aligning the Pattern and the Needle

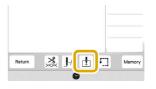
Example: Aligning the lower left side of a pattern and the needle



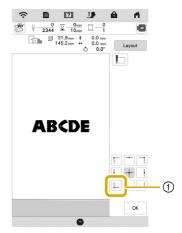
Mark the embroidery start position on the fabric, as shown.



2 Touch **1**.

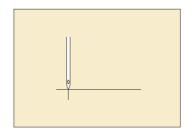


3 Touch □.



- ① Start position
- → The needle is positioned in the lower-left corner of the pattern. The carriage moves so that the needle is positioned correctly.
- Touch OK.
- Touch Layout and then, touch Move.
- Use () to align the needle and the mark on the

fabric, and start embroidering the pattern.



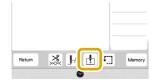
Embroidering Linked Characters

Follow the procedure described below to embroider linked characters in a single row when the entire pattern extends beyond the embroidery frame.

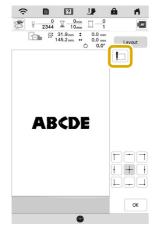
Example: Linking "FG" to the characters "ABCDE"

ABCDEFG

- Select the character patterns for "ABCDE".
- **2** Touch **1**.



3 Touch 📙.



→ The needle is positioned in the lower-left corner of the pattern. The carriage moves so that the needle is positioned correctly. The machine is set to embroider until the first stitch of the next character pattern (F).

[⋆] Note -

 To cancel the starting point setting and return the starting point to the center of the pattern, touch



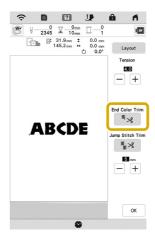
for embroidering. However, the starting point setting is canceled.







Touch to turn off the thread cutting function and then touch .



- Press the "Start/Stop" button.
- After the characters are embroidered, cut the threads to a generous length, remove the embroidery frame, reposition the fabric in the hoop so that the remaining characters ("FG") can be embroidered, and then attach the embroidery frame.



- ① End of the embroidering
- As in step 1, select the character patterns for "FG".
- Touch 🖶.

- **111** Touch □.
 - → The needle is positioned in the lower-left corner of the pattern. The carriage moves so that the needle is positioned correctly.



the needle with the end of embroidering for the previous pattern.



- Touch OK
- Press the "Start/Stop" button to start embroidering the remaining character patterns.

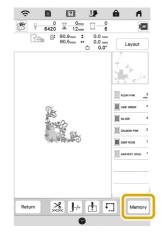


USING THE MEMORY FUNCTION

Saving Embroidery Patterns

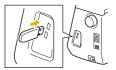
[™] Note

- Do not turn the main power to OFF while the [Saving...] screen is displayed. You will lose the pattern you are saving.
- Touch Memory when the pattern you want to save is in the embroidering screen.



Memo

- You can also save the pattern by touching hemory in the embroidery edit screen.
- When saving the embroidery pattern in a USB media, insert the USB media into the USB port on the machine.



Touch the desired destination to start saving.



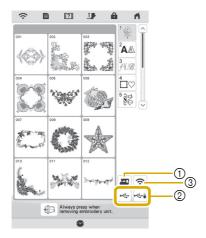
- ① Save to the machine's memory.
- ② Save to the USB media. The pattern is saved in a folder labeled [bPocket].
- ③ Save to the wireless function pocket. For the detailed procedure, refer to the manual for Palette (version 11 or later)

Retrieving Embroidery Patterns



When retrieving the embroidery patterns from a USB flash drive, insert the USB flash drive into the USB port on the machine.

To retrieve embroidery patterns via wireless network, use Palette (version 11 or later) or Design Database Transfer to transfer the patterns in advance. For details on transferring embroidery patterns, refer to the manual for Palette or Design Database Transfer.



- ① Retrieve from the machine's memory.
- ② Retrieve from a USB media.
- ③ Retrieve the pattern via the wireless network connection. For detailed procedures, refer to Palette manual (Version 11 or later).

Memo -

- If the embroidery pattern to be retrieved is in a folder of the USB media, touch the key for that folder. Touch to return to the previous screen.
- You can save all or multiple data to the machine by touching .



- To select multiple patterns, touch their thumbnails.
- Select all patterns.
- Select all patterns.
- [Memory]: Save the selected patterns to the machine.
- * To cancel the selection, touch 📭 again.



* Touch Delete to delete the embroidery pattern.

EMBROIDERY APPLICATIONS

Using a Frame Pattern To Make an Appliqué

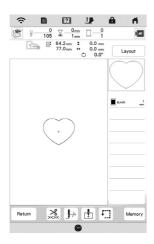
[™] Note -

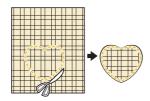
 If you change the size or position of the patterns when making an appliqué, make a note of the size and the location.

■ Method 1

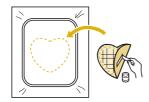
You can use framed patterns of the same size and shape to create an appliqué. Embroider one pattern with a straight stitch and one pattern with a satin stitch.

Select a straight stitch frame pattern. Embroider the pattern onto the fabric for the appliqué piece, then cut neatly around the outside of the shape.

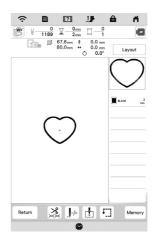




- Embroider the same pattern from step 1 onto the base fabric.
- Apply two-sided stabilizer material to the back of the fabric for the appliqué piece created in step 1. Attach the appliqué to the base fabric matching the shapes.



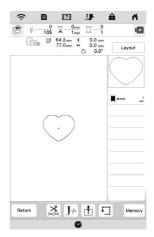
Select the satin stitch frame pattern of the same shape as the appliqué. Embroider over the fabric for the appliqué piece and base fabric from step (3) to create the appliqué.



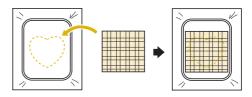


■ Method 2

Select a straight stitch frame pattern, and embroider the pattern onto the base fabric.

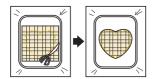


- Place the fabric for the appliqué piece over the pattern embroidered in step 1 and embroider the same pattern on the fabric for the appliqué piece.
 - * Be sure that the fabric for the appliqué piece completely covers the stitched line.



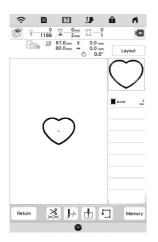


Remove the embroidery frame from the embroidery unit, and cut around the outside of the stitches of the fabric for the appliqué piece. And then, reattach the embroidery frame to the embroidery unit.



[™] Note

- Do not remove the fabric from the embroidery frame to cut it. Also, do not pull or push on the fabric. Otherwise, the fabric may loosen in the frame.
- Select the satin stitch frame pattern of the same shape as the appliqué and embroider the satin stitch pattern to create an appliqué.





Creating Stippling, Echo Quilting, or Decorative Fill Patterns around a Design

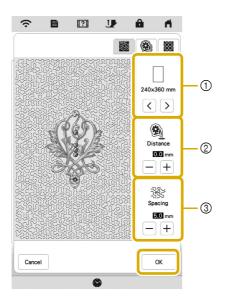
Stippling, echo quilting, and decorative fill patterns can be created around the machine's built-in patterns or original embroidery data.

Memo -

- If this simple stippling operation is used with batting sandwiched between two layers of fabric, the embroidery pattern and stippling may become misaligned.
- Select the pattern that stippling will be added around.
 - * To select multiple patterns, refer to "Selecting Multiple Patterns at the Same Time" on page 38.
- **2** Touch **1** in the embroidery edit screen.



 \rightarrow Stippling is automatically applied around the selected pattern.



- The stippling is added within the area of the selected frame size. If the pattern is larger than the selected frame size, the area indicating the frame size will appear in gray, and stippling will not be added.
- ② Specify the distance from the outline of the pattern to the stippling.
- ③ Specify the spacing for the stippling.
- * Touch in the stippling settings screen to create an echo quilting pattern.
- * Touch in the stippling settings screen to create a decorative fill pattern.





- ① Echo quilting pattern
- Decorative fill pattern

Embroidering Split Embroidery Patterns

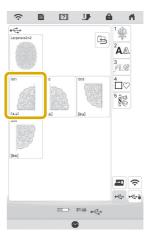
Split embroidery patterns created with Palette Ver. 7 or later can be embroidered. With split embroidery patterns, embroidery patterns larger than the embroidery frame are divided into multiple sections, which combine to create a single pattern after each section is embroidered.

For details on creating split embroidery patterns and for more detailed embroidery instructions, refer to the Instruction guide included with Palette Ver. 7 or later.

Insert the USB media containing the created split embroidery pattern, and then select the split embroidery pattern to be embroidered. (page 80)



Select section to be embroidered.







4 If necessary, touch Fdit and edit the pattern.

Touch Embroidey to display the embroidery screen.



- Embroider the pattern section.
- When embroidering is finished, the following screen appears. Touch ok.

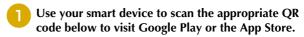


- → A screen appears so that a section of the split embroidery pattern can be selected.
- Repeat steps 2 through 5 to embroider the remaining sections of the pattern.

IQ INTUITION MONITORING APP

With the IQ Intuition Monitoring App installed on your smart device and the machine and smart device connected to the same wireless network, you can check the operating status of the machine. In addition, you can receive notifications when the machine stops.

■ Installing the App





Android:

https://www.babylock.com/IOIntuition MonitoringAndroid



iOS:

https://www.babylock.com/IQIntuition MonitoringiOS

Install [IQ Intuition Monitoring].



IQ Intuition Monitoring

Memo -

- To download and install the app, you can also search for [IQ Intuition Monitoring] in Google Play or the App Store.
- For more information on how to use this application, visit the following web site. https://www.babylock.com/support

■ Monitoring

Memo

- The app will be updated from time to time. The following descriptions may differ from the actual screens and operations.
- Connect the machine to your wireless network.
 - * Refer to "WIRELESS NETWORK CONNECTION FUNCTIONS" on page 19.
- Confirm that your smart device and your machine are connected to the same network.
- Tap the icon for [IQ Intuition Monitoring] on the smart device to start the app.
- Follow the instructions that appear in the app to connect the app to your machine.
 - * Select the name that appears beside [Machine name] in the settings screen on your machine.
 - \rightarrow The machine can now be monitored.

Chapter 4 APPENDIX

CARE AND MAINTENANCE

A CAUTION

Be sure to unplug the machine before cleaning it. Otherwise, injury may result.

Cleaning the LCD

If the surface of the LCD is dirty, lightly wipe it with a soft dry

Cleaning the machine surface

When wiping dirt off the machine, firmly wring a soft cloth soaked in (lukewarm) water.

After cleaning the machine, dry it with a soft, dry cloth.

Restrictions on Oiling

In order to prevent damaging this machine, it must not be oiled by the user. This machine was manufactured with the necessary amount of oil applied to ensure correct operation, making periodic oiling unnecessary.

If problems occur, such as difficulty turning the handwheel or an unusual noise, immediately stop using the machine, and contact your authorized Baby Lock retailer.

Precautions on Storing the Machine

Do not store the machine in any of the locations described below, otherwise damage to the machine may result, for example, rust caused by condensation.

- Exposed to extremely high temperatures
- Exposed to extremely low temperatures
- Exposed to extreme temperature changes
- Exposed to high humidity or steam
- Near a flame, heater or air conditioner
- Outdoors or exposed to direct sunlight
- Exposed to extremely dusty or oily environments

[™] Note

• In order to extend the life of this machine, periodically turn it on and use it. Storing this machine for an extended period of time without using it may reduce its efficiency.

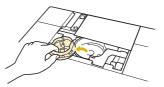
Cleaning the Race

- Press (\downarrow) (Needle position button) to raise the needle.
- Turn the main power to OFF, and then unplug the machine.
- Remove the needle and embroidery foot (page 29, page 89).
- Remove the bobbin cover.
- Slide the needle plate cover toward you to remove it.

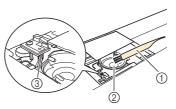


[⋆] Note

- If the embroidery unit is attached, the needle plate can be removed when the bobbin cover is removed.
- Grasp the bobbin case, and then gently lift out.



Use the cleaning brush or a vacuum cleaner to remove any lint and dust from the race and bobbin thread sensor and the surrounding area.



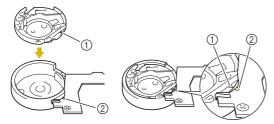
- Cleaning brush
- Race
- Bobbin thread sensor

IMPORTANT

Do not apply oil to the bobbin case.

Memo

- If lint or dust collects on the bobbin thread sensor, the sensor may not operate correctly.
- Insert the bobbin case so that the ▲ mark on the bobbin case aligns with the mark on the machine.



* Align the ▲ and ● marks.



- ▲ mark
 - mark
- 3 Bobbin case
- Make sure that the indicated points are aligned before installing the bobbin case.

A CAUTION

- Never use a bobbin case that is scratched or has a burr on it. Otherwise the upper thread may become tangled, and the needle may break and cause injury. For a new bobbin case, contact your nearest authorized Baby Lock retailer.
- Be sure that the bobbin case is correctly installed, otherwise the needle may break and cause injury.
- Insert the tabs on the needle plate cover into the needle plate, and then slide the cover back on.



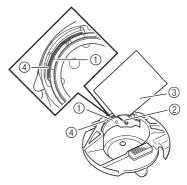
Reattach the bobbin cover.

Cleaning the Bobbin Case

Thread wax and dust easily collect around the notch in the tension spring on the bobbin case, resulting in an incorrect thread tension. Therefore, the bobbin case should be cleaned as necessary should tension problems arise.

When cleaning the bobbin case, use card stock or another type of paper of similar thickness and sturdiness in order to prevent pieces of paper tearing off and getting lodged in the bobbin case.

- Follow steps 1 to 6 in "Cleaning the Race" to remove the bobbin case.
- Using a piece of paper of adequate thickness and sturdiness, slide the paper between the tension plate base and the tension spring and also slide the paper behind the notch of the spring to remove any dirt or dust



- 1 Tension plate base
- Notch
- 3 Paper (e.g. business card type)
- 4 Tension spring

Memo

- Do not bend the tension spring. In addition, do not use anything other than recommended paper to clean the bobbin case.
- Use the cleaning brush to remove any lint and dust from inside the bobbin case.
- Replace the bobbin case and needle plate cover.

Cleaning the Cutter in the Bobbin Case Area

The cutter below the needle plate should be cleaned. If dust or lint accumulate on the cutter, it will be difficult to cut the

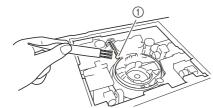
thread when (\prec) (Thread cutter button) is pressed or the automatic thread cutting function is used. Clean the cutter when the thread is not easily cut.

Follow steps 1 through 5 in "Cleaning the Race" to remove the needle plate cover.

Use the screwdriver included with the machine to unscrew and remove the needle plate.



Use the cleaning brush or a vacuum cleaner to remove any lint and dust from the cutter in the bobbin case area.



1) Cutter

A CAUTION

- Do not touch the cutter, otherwise injuries may result.
- Align the two screw holes in the needle plate with the two holes at the needle plate mounting base, and then fit the needle plate onto the machine.
- Lightly finger-tighten the screw on the right side of the needle plate. Then, use the screwdriver included to firmly tighten the screw on the left side. Finally, firmly tighten the screw on the right side.



Replace the bobbin case and the needle plate cover following steps 10 through 10 in "Cleaning the Race".

Changing Embroidery Foot "W+" with LED Pointer

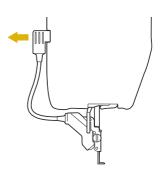
A CAUTION

- When attaching an embroidery foot, always touch on the screen. You may accidentally press the "Start/Stop" button and possibly cause injury.
- Be sure to use the embroidery foot "W+" with LED pointer when doing embroidery. Using another embroidery foot may cause the needle to strike the embroidery foot, causing the needle to break and possibly causing injury.

- \bigcap Press \bigoplus (Needle position button) to raise the needle.
- Touch to lock all keys and buttons.
 - * If the message [OK to automatically lower the presser foot?] appears on the LCD screen, touch ox to continue.

[™] Note

- Before replacing the needle, cover the hole in the needle plate with fabric or paper to prevent the needle from falling into the machine.
- Raise the presser foot lever.
- Remove the connector of the embroidery foot "W+" with LED pointer from the connector on the back of the machine.

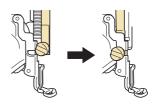


Use the included disc-shaped screwdriver to loosen the screw for the embroidery foot, and then remove the embroidery foot "W+" with LED pointer.



- 1) Screw for embroidery foot
- Position the embroidery foot "W+" with LED pointer on the presser foot bar by aligning the notch of the presser foot to the large screw.

Side view





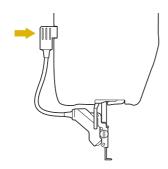
Hold the embroidery foot in place with your right hand, and then use the disc-shaped screwdriver to securely tighten the screw for the embroidery foot.



① Screw for embroidery foot

A CAUTION

- Use the disc-shaped screwdriver to firmly tighten the screw for the embroidery foot. If the screw is loose, the needle may strike the embroidery foot and break, possibly cause injury.
- Plug the connector of the embroidery foot "W+" with LED pointer into the jack on the back left side of your machine.



- Touch **J** to unlock all keys and buttons.
 - → All keys and operation buttons are unlocked, and the previous screen is displayed.

BEFORE LENDING OR DISPOSING OF THE PRODUCT

Please be sure to reset the settings of your machine to delete the following data.

- all saved data
- · customized settings
- · network information
- Touch , and then touch Reset beside [Reset to Default].



→ Note

• Do not turn the main power to OFF while the [Deleting...] screen is displayed.

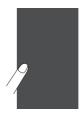
ADJUSTING THE SCREEN

Touch Panel is Malfunctioning

If the screen does not respond correctly when you touch a key (the machine does not perform the operation or performs a different operation), follow the steps below to make the proper adjustments.



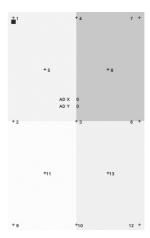
Holding your finger on the screen, turn the main power switch to OFF and back to ON.



→ The touch panel adjustment screen appears.



Using the included touch pen, lightly touch the center of each +, in order from 1 to 13.



[™] Note

- Only use the included touch pen to touch the screen. Do not use a mechanical pencil, pin, or other sharp object. Do not press too hard on the screen. Otherwise, damage may result.
- Turn the main power to OFF, then turn it back to ON.

☆ Note

 If you finish the screen adjustment and the screen still does not respond, or if you cannot do the adjustment, contact your authorized Baby Lock retailer.

TROUBLESHOOTING

If the machine stops operating correctly, check the following possible problems before requesting service. You can solve most problems by yourself.

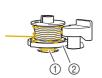
Visit us at www.babylock.com.

If the problem persists, contact your authorized Baby Lock retailer.

If the Thread Becomes Tangled Under the **Bobbin Winder Seat**

If the bobbin winding starts when the thread is not passed through the pretension disk correctly, the thread may become tangled beneath the bobbin winder seat.

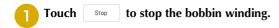
Wind off the thread according to the following procedure.



- ① Thread
- Bobbin winder seat

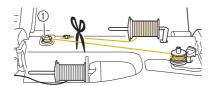
A CAUTION

Do not remove the bobbin winder seat even if the thread becomes tangled under the bobbin winder seat. The cutter in the bobbin winder seat may cause injury.





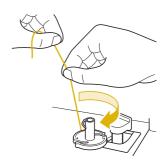
Cut the thread with scissors near the pretension disk.



- Pretension disk
- Push the bobbin winder switch to the right, and then remove the bobbin from the shaft and cut the thread leading to the bobbin in order to be able to completely remove the bobbin from shaft.



Hold the thread end with your left hand, and wind off the thread clockwise from under the bobbin winder seat with your right hand as shown below.



List of Symptoms

Check the following possible problems before requesting service. If the reference page is "*", contact your authorized Baby Lock retailer.

■ Getting Ready

Symptom, Cause/solution	Reference
Cannot thread the needle.	
Needle is not in the correct position.	8
Press (Needle position button) to raise the needle.	
Needle is installed incorrectly.	29
Needle is turned, bent or the point is dull.	29
Upper threading is incorrect.	26
The needle threader hook is bent and does not pass through the eye of the needle.	*
The needle threader lever cannot be moved or returned to its original position.	*
A size 65/9 needle is being used. The needle is incompatible with the needle threader. Manually pass the thread through the eye of the needle.	29

Cannot lower the presser foot with the presser lever.	er foot
Presser foot was raised using (Presser foot lifter button).	8
Press (Presser foot lifter button) to lower the presser foot.	

Bobbin thread does not wind neatly on the bobbin.	
The thread is not passed through the bobbin winding thread guide correctly.	23
Bobbin spins slowly.	24
The thread that was pulled out was not wound onto the bobbin correctly.	23

Symptom, Cause/solution	Reference
The empty bobbin was not set on the pin properly.	22

While winding the bobbin, the bobbin thread wound below the bobbin winder seat.	vas
You have not wound the bobbin thread properly when you initially wound thread on the bobbin. Ensure that the bobbin thread was properly set in the guides.	22

The bobbin thread cannot be pulled up.	
Needle is turned, bent or the point is dull.	29
Bobbin is set incorrectly.	25

Machine does not operate	
All keys and buttons have been locked by 🎩 .	29, 89

Nothing appears in the LCD.	
Main power switch is not turned on.	11
The plug of the power cord is not inserted into an electrical outlet.	12

The LCD screen does not look very clear.	
The brightness of the screen is not adjusted.	14

Nothing happens, even if the LCD display is touched	
Adjust the screen.	90
The screen has been locked. Touch either of the following keys to unlock the	_
screen.	

The LCD screen is fogged up.	
Condensation has formed on the LCD screen. • After a while, the cloudiness will disappear.	_

Embroidery unit does not operate.	
Embroidery unit is not attached correctly.	31
Embroidery frame was attached before the unit was initialized.	31

Symptom, Cause/solution	Reference
Pointer of the embroidery foot "W+" with LED pointer does not indicate the position correctly	
With thick elastic fabric, the position will be misaligned only at raised parts in the fabric.	57
With fabric having a very uneven surface, the position is not correctly aligned. The pointer indication should be used only as a reference.	-

■ While Operating

Symptom, Cause/solution	Reference
Machine does not operate.	
"Start/Stop" button was not pressed.	8
There is no pattern selected.	33
Presser foot is not lowered.	8

Needle breaks.	
Needle is installed incorrectly.	29
Needle clamp screw is not tightened.	30
Needle is turned or bent.	29
Using improper needle, thread or the fabric prepared insufficiently for embroidering.	29, 53, 63
Upper thread tension is too tight.	73
Fabric is pulled during embroidering.	_
Spool cap is set incorrectly.	26
There are scratches around the opening in the presser foot.	*
There are scratches on the bobbin case.	*
Needle is defective.	29
A bobbin designed specifically for this machine is not used.	22
Upper threading is incorrect.	26
Bobbin is set incorrectly.	25
Presser foot is attached incorrectly.	89
Stabilizer is not attached to fabric being embroidered.	53
Bobbin thread is incorrectly wound.	22

Upper thread breaks.	
Machine is not threaded correctly (used the wrong spool cap, spool cap is loose, the thread did not catch the needle bar threader, etc.)	26
Knotted or tangled thread is being used.	_
Upper thread tension is too tight.	73

Symptom, Cause/solution	Reference
Thread is twisted.	_
Needle is turned, bent or the point is dull.	29
Needle is installed incorrectly.	29
There are scratches around the opening in the presser foot.	*
There are scratches on the bobbin case.	*
Using improper needle or thread for the selected fabric.	29
A bobbin designed specifically for this machine is not used.	22

The thread is tangled on the wrong side of the fabric.	
Upper threading is incorrect.	26
Using improper needle or thread for the selected fabric.	29

The upper thread is too tight.	
The bobbin thread is incorrectly installed.	25

Bobbin thread breaks.	
Bobbin is set incorrectly.	25
Bobbin thread is incorrectly wound.	22
There are scratches on the bobbin or it doesn't rotate properly.	25
Thread is twisted.	_
A bobbin designed specifically for this machine is not used.	22

Fabric puckers.	
There is a mistake in the upper or bobbin threading.	25, 26
Spool cap is set incorrectly.	26
Using improper needle or thread for the selected fabric.	29
Needle is turned, bent or the point is dull.	29
Thread tension is set incorrectly.	73

The pattern is not embroidered correctly.	
The thread tension is incorrect.	73
The thread is tangled, for example, in the bobbin case.	87
Skipped stitches	
Machine is threaded incorrectly.	26

Symptom, Cause/solution	Reference
Using improper needle, thread or the fabric prepared insufficiently for embroidering.	29, 53, 63
Needle is turned, bent or the point is dull.	29
Needle is installed incorrectly.	29
Needle is defective.	29
Dust or lint has collected under the needle plate.	87
Not embroidering	
Needle is turned, bent or the point is dull.	29
Bobbin is set incorrectly.	25
Upper threading is incorrect.	26

High-pitched sound while embroidering	
Pieces of thread are caught in the race.	87
Upper threading is incorrect.	26
A bobbin designed specifically for this machine is not used.	22
There are needle holes or friction scratches in the bobbin case.	87

The needle contacts the needle plate.	
The needle clamp screw is loose.	29
Needle is turned, bent or the point is dull.	29

The handwheel feels sluggish when it is turne	ed.
Thread is tangled in the bobbin case.	87

■ After Embroidering

Symptom, Cause/solution	Reference
Thread tension is incorrect.	
Upper threading is incorrect.	26
Bobbin is set incorrectly.	25
Using improper needle, thread or the fabric prepared insufficiently for embroidering.	29, 53, 63
Thread tension is set incorrectly.	73
Bobbin thread is incorrectly wound.	22
Needle is turned, bent or the point is dull.	29
A bobbin designed specifically for this machine is not being used.	22

The pattern is not embroidered correctly.	
Thread is twisted.	_
Thread tension is set incorrectly.	73

Symptom, Cause/solution	Reference
Fabric was not inserted into the frame correctly (fabric was loose, etc.).	54
Stabilizing material was not attached. • Always use stabilizing material, especially with stretch fabrics, lightweight fabrics, fabrics with a coarse weave, or fabrics that often cause pattern shrinkage. See your authorized Baby Lock retailer for the proper stabilizer.	53
There was an object placed near the machine, and the carriage or embroidery frame hit the object during embroidering.	31
Fabric outside the frame edges interferes with the arm, so the embroidery unit cannot move. Reinsert the fabric in the embroidery frame so that the excess fabric is away from the arm, and rotate the pattern 180 degrees.	54
Fabric is too heavy, so the embroidery unit cannot move freely. Place a large thick book or similar object under the arm head to lightly lift the heavy side and keep it level.	-
Fabric is hanging off the table. • If the fabric is hanging off the table during embroidery, the embroidery unit will not move freely. Place the fabric so that it does not hang off the table or hold the fabric to keep it from dragging.	63
Fabric is snagged or caught on something. • Stop the machine and place the fabric so that it does not get caught or snagged.	_
Embroidery frame was removed during embroidering (for example, to reset the bobbin). The presser foot was bumped or moved while removing or attaching the embroidery frame, or the embroidery unit was moved.	66
Stabilizer is incorrectly attached, for example, it is smaller than the embroidery frame.	53

Loops appear on the surface of the fabric who embroidering	en
The thread tension is incorrectly set.	73
The tension of the upper thread is incorrectly set for the combination of the fabric, thread and pattern being used. • Use the embroidery needle plate cover.	63
The combination of the bobbin case and bobbin thread is incorrect.	63

ERROR MESSAGES

Below is an explanation of error messages. Refer to these when necessary (if you touch or do the operation correctly while the error message is displayed, the message disappears).

	Error messages	Cause/solution
1	Cannot change the configuration of the characters.	This message is displayed when there are too many characters and the curved character configuration is impossible.
2	Cannot recognize the data for the selected pattern. The data may be corrupted.	This message is displayed when there is a possibility that the data for the selected pattern is corrupted.
3	Change to a larger embroidery frame.	This message is displayed when the machine is in embroidery mode and the small frame is attached, and the selected pattern does not fit in the small frame.
4	Failed to save file.	This message is displayed when no more images can be saved on the USB media. In this case, delete a file from the USB media or use different USB media.
5	Includes a special pattern that cannot be saved to external memory. Save the pattern in the machine's memory.	This message is displayed when you try to save a copyright protected pattern to USB media. According to copyright laws, patterns that are illegal to reproduce or edit cannot be saved to USB media. If this message displays, save the pattern in the machine's memory.
6	Lower the presser foot lever.	This message is displayed when (Presser foot lifter button) is pressed while the presser foot lever is raised and the needle is lowered.
7	Not enough available memory to save the data. Delete some patterns or use a different media.	This message is displayed when the memory is full and the embroidery pattern cannot be saved.
8	OK to recall and resume previous memory?	This message appears if the machine is turned off while embroidering, then turned on again. Touch to return the machine to the condition (pattern position and number of stitches) when it was turned off. Follow the procedure described in "If the Thread Breaks or the Bobbin Runs out of Thread During Embroidering" on page 66 to align the needle position and embroider the remainder of the pattern.
9	OK to separate the combined border pattern?	This message is displayed when rotating a saved combined pattern in the embroidery screen.
10	Pattern extends to the outside of embroidery frame.	This message is displayed when the machine is in embroidery mode, and the character pattern combination is too large to fit in the embroidery frame.
11	Pattern extends to the outside of embroidery frame. If you plan to add more patterns, rotate the pattern combination.	This message is displayed when the machine is in embroidery mode and the combined character pattern is too large for the embroidery frame. You can rotate the pattern 90 degrees and continue combining characters.
12	Preventive maintenance is recommended.	This message is displayed when the machine needs to be maintained. Once this message appears, it is recommended to take your machine to an authorized Baby Lock retailer for a regular maintenance check. Although this message will disappear and the machine will continue to function once you touch ok the message will display several more times until the appropriate maintenance is performed.
13	Set the clock.	This message appears when the time/date is not set. Set time/date. (page 12)
14	The bobbin thread is almost empty.	This message is displayed when the bobbin thread is running out. Although a few stitches can be embroidered when the "Start/Stop" button is pressed, replace with a wound bobbin immediately. When embroidering, touch ok, remove the embroidery frame, and then replace the bobbin with one wound with plenty of embroidery bobbin thread.
		If [Upper and Bobbin Thread Sensor] in the general settings screen of the machine setting mode is set to [OFF], this message does not appear.
15	The bobbin winder safety device has activated. Is the thread tangled?	This message is displayed when the bobbin is being wound, and the motor locks because the thread is tangled, etc.

	Error messages	Cause/solution
16	The safety device was activated since the main shaft motor was heated. Is the thread tangled?	This message is displayed when the temperature of the motor increases, activating the safety device. Wait until the temperature decreases. If the error persists, contact your nearest authorized Baby Lock retailer.
17	The safety device was activated since the main shaft motor seized. Is the thread tangled?	This message is displayed when the motor locks due to tangled thread or for other reasons related to thread delivery.
18	The safety device was activated since the needle position sensor malfunctioned.	This message is displayed when an error in the needle position sensor is detected, activating the safety device. Turn the machine off, then on again. If the message continues to appear, the machine may be damaged. Contact your nearest authorized Baby Lock retailer.
19	There is no needle plate cover. Attach a needle plate cover.	This message is displayed when the needle plate cover is not attached.
20	This file cannot be used.	This message appears if the file format is incompatible with this machine. Check the list of compatible file formats. (page 97)
21	This file exceeds the data capacity and cannot be used. Use a suitable size file.	This message is displayed when the file size exceeds the data capacity of the machine. Confirm the file size and format. (page 97)
22	This USB media cannot be used.	This message is displayed when you try to use incompatible media. Use another USB media. For compatible USB media, refer to "SPECIFICATIONS" on page 97.
23	USB media error	This message is displayed when an error occurs with the USB media. For compatible USB media, refer to "SPECIFICATIONS" on page 97.

SPECIFICATIONS

Item		Specification	
Dimensions of machine	Approx. 612 mm (W) × 348 mm (approx. 24-3/32 inches (W) ×	n (H) × 321 mm (D) 13-11/16 inches (H) × 12-5/8 ir	nches (D))
Weight of machine	Approx. 15 kg (approx. 33.1 lb)		
Dimensions of machine with embroidery unit attached	Approx. 916 mm (W) × 348 mm (approx. 36-1/16 inches (W) ×	n (H) × 524 mm (D) 13-11/16 inches (H) × 20-5/8 ir	nches (D))
Weight of machine with embroidery unit attached	Approx. 19.8 kg (approx. 43.6	b)	
Maximum embroidery speed	1050 stitches per minute		
Interfaces	Wireless LAN*1		
Memory	Embroidery patterns	10 MB	
Data Types	Embroidery patterns*2	.pes .phc .phx .dst	
Maximum embroidering area	360 mm (H) x 240 mm (W) (app	prox. 14 inches (H) x 9-1/2 inches (W))	
Types of USB Devices/Media that can be Used	USB Flash drive (Type A) Supported formats: FAT32 Recommended size: 32 GB Some USB media may not be a size.	be usable with this machine.	
	USB External CD/DVD drive	* **	
Condition of the [Eco Mode] and [Shutoff Support Mode]	[Eco Mode]	Available time	OFF, 10 - 120 (minute)
[Onaton Support Mode]		"Start/Stop" button	Green flashing
		Suspended function	Machine light, Screen display, LED pointer
		After recovering	The machine starts from the previous operation.
	[Shutoff Support Mode]	Available time	OFF, 1 - 12 (hour)
		"Start/Stop" button	Green slow flashing
		Suspended function	All functions
		After recovering	An error message appears. You need to turn off and on the machine to restart.
Compatible image files of the Screen	Format	.jpg	
Saver Image	File size	Max. 150 KB for each image	
	File dimension	1280 × 1280 pixels or less (If pixels, the image will be displ	the width is between 800 and 1279 ayed at 800 pixels.)
	Number allowed	5 or less	
Videos that can be played	MP4 file format	Video - H.264/MPEG-4 AVC,	Audio – AAC
	Size	450 (H) × 800 (W)	
	Maximum file size	1 GB	

^{*1} The wireless network connection complies with IEEE 802.11b/g/n standards and uses the 2.4 GHz frequency. A wireless network cannot be set up with WPATM/WPA2TM Enterprise.
Use Design Database Transfer or Palette version 11 or later to transfer data from your computer to the machine. For the operating systems compatible with the software, visit our website www.babylock.com.

- *2 Using data other than that saved using our data design systems or this machine may cause this machine to malfunction. When the machine is used to save a file with any extension, it is saved as a .phx data file.
 - Since Tajima (.dst) data does not contain specific thread color information, it is displayed with our default thread color sequence. Check the preview and change the thread colors as desired.
 - Some type of .phx data may not be available with this machine.
- * Please be aware that some specifications may change without notice.

☆ Note ·

• We recommend using the 26 letters of the alphabet (uppercase and lowercase), the numbers 0 through 9, "-", and "_" for the name of the file/folder.

IMPORTANT

• When using embroidery data other than our original patterns, the thread or needle may break when embroidering with a stitch density that is too fine or when embroidering three or more overlapping stitches. In that case, use one of our original data design systems to edit the embroidery data.

Update Procedure Using Wireless LAN Connection

If the machine is connected to a wireless network with a strong, reliable connection, update files can be downloaded directly to the machine using this network.

For details on the wireless LAN connection, refer to page 20.

Update Procedure Using USB Media

UPDATING YOUR MACHINE'S

You can update your machine's software using the

When an update program is available on www.babylock.com, please download the files following the instructions on the website and steps below.

[™] Note

SOFTWARE

following two procedures.

- When using USB media to update the software, check that no data other than the update file is saved on the USB media being used before starting to update.
- While pressing (4-) (Automatic threading button), turn the main power to ON.
- **2** Touch ► .



Insert the USB media into the primary (top) USB port on the machine.



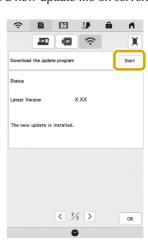
- Touch Load .
 - → When updating is finished, the completion message appears.
- Turn the machine off, remove the USB media, and turn the machine on again.

Memo -

 The machine periodically checks if there is a new update file on the server. When there is a new update file, the wireless LAN key is displayed as



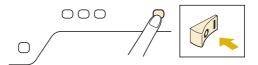
- Display page 7 of the settings screen.
- * The machine starts to download the update file, if there is a new update file on server.



When the wireless LAN key appears as , touching causes the machine to check if there is a new update file. If there is a new file, downloading begins.

Note

- Do not turn off the machine during the download.
- Touch Pause to pause the download. To restart, touch Resume .
- When downloading is finished, turn off the machine, then hold down (Automatic threading button) while turning on the machine.









* Do not turn off the machine during the update.

Memo -

• If there are changes or additions to functions, manuals available on the machine may be updated.

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Reflection



English 882-W87

