# brother

**Embroidery Machine** 

# **Operation Manual**

Product Code: 884-T20



Be sure to read this document before using the machine. We recommend that you keep this document nearby for future reference.

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# **Open Source Licensing Remarks**

This product includes open-source software.

To see the open source licensing remarks, please go to the manual download section on your model's home page of Brother Solutions Center at " http://s.brother/cpbac ".

# Introduction

Thank you for purchasing this embroidery 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.



f 1 Always unplug the machine from the electrical outlet immediately after using, when cleaning, when making any user servicing adjustments mentioned in this manual, or if you are leaving the machine unattended.



- 2 Always unplug the machine from the electrical outlet when lubricating it or when making any other user servicing adjustments mentioned in the operation 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 the power is cut.

### **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 Never operate this machine if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or water is spilled on the unit. Return the machine to the nearest authorized Brother dealer or service center for examination, repair, electrical or mechanical adjustment.

- To avoid electric shock or fire; do not use a damaged power supply plug or loose electrical outlet, and ensure that the power supply plug is fully inserted and secure.
- 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 lift it from the bottom positions. 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, otherwise you may injure your back or knees.
- While the machine is being transported, be careful not to touch the operation panel, thread guides or any other part, otherwise injuries may result.

### **5** Always keep your work area clear:

- 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.
- Do not use extension cords. Plug the machine directly into the electrical outlet.
- Never drop or insert any object into any opening.
- Keep fingers out of all machine openings, such as near the carriage, otherwise injuries may result.
- 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 sewn may ignite, resulting in fire or an electric shock.
- Do not use this machine near an open flame; the movement of the embroidery frame could cause the garment being sewn to catch fire.
- Do not place this machine on an unstable surface, such as an unsteady or slanted table, otherwise the machine may fall, resulting in injuries.
- While attaching or detaching an embroidery frame or other included accessory or while maintaining the machine, be careful not to hit the machine with your body or any other part of it.

### **6** Special care is required when sewing:

- 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.
- While the machine is in operation, keep your hands away from the needle bar case and all moving parts near the needle bar case, otherwise injuries may result.
- Switch the machine to the symbol "O" position to turn it off when making any adjustments in the needle area, such as changing the needle.
- Do not use a damaged or incorrect needle plate, as it could cause the needle to break.

### **7** This machine is not a toy:

- Your close attention is necessary when the machine is used by or near children.
- This machine is not intended for use by young children or infirm persons without supervision.
- Young children should be supervised to ensure that they do not play with this machine.
- Do not use the included scissors or seam ripper in any other way than how they are intended. In addition, when opening a hole with the seam ripper, do not place your hands or fingers in the cutting path, otherwise injuries may result if the seam ripper slips.
- 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 outdoors.

### **8** For a longer service life:

- When 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.
- Use only neutral soaps or detergents to clean the case. Benzene, thinner, and scouring powders can damage the case and machine, and should never be used.
- Always consult the operation manual when replacing or installing any assemblies, needle, or other parts to assure correct installation.

**9** For repair or adjustment:

- Do not try to disassemble, repair or alter this machine in any way, otherwise a fire, electric shock or injuries may result.
- If the light unit is damaged, it must be replaced by an authorized Brother dealer.
- In the event a malfunction occurs or adjustment is required, first follow the troubleshooting table in the back of the operation manual to inspect and adjust the machine yourself. If the problem persists, please consult your local authorized Brother dealer.

Use this machine only for its intended use as described in the manual. Use accessories recommended by the manufacturer as contained in this manual.

Use only the interface cable (USB cable) included with this machine.

Use only a mouse designed specifically for this machine.

The contents of this manual and specifications of this product are subject to change without notice. For additional product information and updates, visit our website at www.brother.com

# SAVE THESE INSTRUCTIONS

### This machine is intended for household use.

### FOR USERS IN COUNTRIES EXCEPT CENELEC 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 CENELEC 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 Brother dealer to obtain the correct lead.

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# Warning Labels

The following warning labels are on the machine. Be sure to observe the precautions described in the labels.

1

			<b>ATTENTION</b>	A PRECAUCIÓN	
le la	Carriage may cause injury. Do not put hands in carriage traveling path.	Um Verletzungen mit dem Stickarm zu vermeiden, nicht die Hände in die Nähe des Stickarms halten.	Le chariot peut provoquer des blessures. Ne pas mettre les mains dans le chemin du chariot.	El carro puede provocar lesiones. No poner las manos por donde pasa el carro.	O carro de transporte pode causar ferimentos. Não coloque as mãos sobre o trilho do carro de transporte.

De bo	orduurorm				
kan v veroo Houd buiter de bo	rerwondingen przaken. It uw handen n bereik van prduurarm.	Il carrello potrebbe ferirvi. Non appoggiate la mano nel percorso del carrello.	Движущаяся каретка может быть причиной травмы. Не кладите руки на пути движения каретки.	刺しゅう機のキャリッジ や刺しゅう枠が動いてい るときに、手や物を近づ けないでください。 ケガの原因になります。	在绣花机的导轨 或绣花框移动时, 为避免造成伤害, 请不要将手或物 品靠近。

2



Please put a drop of oil onto the hook once a day before use.

### Label locations



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# Names of Machine Parts and Their Functions

The names of the various parts of the sewing machine and their functions are described below. Before using the sewing machine, carefully read these descriptions to learn the names of the machine parts.

### Front view



① Thread tension knobs

Adjust the tension of the thread.

#### (2) Needle bar case Moves to the left and right to move the needle to the

- embroidering position.
- ③ Lower thread guide

### (4) Carriage

Attach the embroidery frame to the carriage. When the machine is turned on or when the machine is embroidering, the carriage moves forward, backward, left and right.

5 Hook cover/Hook

Open the hook cover, and then insert the bobbin case into the hook.

6 Feet

Use the feet to adjust the height of the legs.

### ⑦ Sewing light

The brightness of the sewing light can be adjusted in the settings screen.

- ⑧ Operation panel
- ③ Spool stand

Put 6 thread spools to embroider.

- Thread guide assembly support
- ① Thread guide
- ⑦ Upper thread guide pretension knob
- (3) Thread guide pins
- () Middle thread guide

-12

-(13)

-(14)

### Right-side/rear view



#### ① Touch pen holder

Use the touch pen holder to hold the touch pen when not in

### ② SD card slot

use.

Insert an SD card into the SD card slot in order to import/export embroidery pattern data.

### ③ USB port for media

In order to send patterns from/to USB media, plug the USB media directly into the USB port.

### ④ USB port for computer

In order to import/export patterns between a computer and the machine, plug the USB cable into the USB port.

### **(5)** Main power switch

Use the main power switch to turn the machine ON (I) and OFF (O).

Do not turn the power on soon after turning the power off. It is recommended that you wait 5 seconds before turning the power back on.

### 6 Power supply plug

Insert the plug on the power supply cord into the power supply plug.

### ⑦ Ventilation slots

#### **(8)** Handwheel

Rotate the handwheel to move the needle up and down. Be sure to rotate the handwheel toward the LCD panel (counterclockwise).

### **Operation panel**



### ① Start/Stop button

Press the start/stop button to start or stop the machine. The lighting status and color of the button changes depending on the operation condition of the machine.

Lit in red	:	When the machine cannot start sewing	
Flashing in green	:	When the machine can start sewing	
Lit in green	:	While the machine is sewing	
Flashing in orange	:	When the machine can cut the thread	
Off	:	When the machine is turned off	
Thread trimming button			

### ② Thread trimming button

Press the thread trimming button to trim both the upper and the bobbin threads.

### ③ Automatic needle-threading button Press the automatic needle threading button to thread the

- needle.
- ④ Speaker

### (5) LCD (touch panel)

Touch the keys that appear on the touch panel to select and edit patterns and confirm various information.

# Accessories

The accessories listed below are included with this machine. Make sure to use the accessories designed for this machine.

### **Included** accessories

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

	Part Name				
1	Part Code				
1.	Accessory case				
	XC6482-051				
2.	Needle set × 2				
	XC6469-001				
3.	Prewound bobbin × 6				
	XC6368-051				
4.	Spool net × 6				
<b>A</b>	\$34455-000				
5.	Seam ripper				
<u>I</u>	XF4967-001				
6. ØØ	Scissors				
har	XF2052-001				
7.	Tweezers				
	XC6542-051				
8.	Touch pen				
	XA9940-051				
9. X	Needle changing tool (Threader)				
	XF2212-001				
10.	Needle plate spacer				
	XC6499-151				
11.	Spacer (on machine)				
6	XF1978-001				
12.	Phillips screwdriver				
	XC6543-051				

	Part Name		
	Part Code		
13.	Standard screwdriver		
	X55468-051		
14.	Allen screwdriver		
	XC5159-051		
15. 》	Offset screwdriver		
	XC6545-051		
16.	Disc-shaped screwdriver		
O	XC1074-051		
17. S	Wrench 13 mm × 10 mm		
5	XC6159-051		
18.	Oiler		
	XZ0206-051 XG3677-001 (for Europe and Turkey)		
19.	Cleaning brush		
	X59476-051		
20.	Weight (L)		
	XC5974-151		
21.	Spool mat × 6		
0	XC7134-051		
22.	Spool cap × 6		
	130012-054		
23.	USB cable		
S.	XD1851-051		
24.	Embroidery frame (extra-large) 200 mm (H) × 300 mm (W) (7-7/8 inches (H) × 11-3/4 inches (W))		
	PRH300 (Americas) PRH300: XC6284-052 (Other area)		
1			

	Part Name
	Part Code
25.	Embroidery frame (large) 130 mm (H) × 180 mm (W) (5-1/8 inches (H) × 7-1/8 inches (W))
	PRH180 (Americas) PRH180: XC6285-052 (Other area)
26.	Embroidery frame (medium) 100 mm (H) × 100 mm (W) (4 inches (H) × 4 inches (W)) PRH100 (Americas)
27.	Embroidery frame (small) 40 mm (H) × 60 mm (W) (1-1/2 inches (H) × 2-3/8 inches (W)) PRH60 (Americas)
28.	PRH60: XC6287-052 (Other area) Embroidery sheet (extra-large) 200 mm (H) × 200 mm (M) (7 7/8 inches (H)
	x 11-3/4 inches (W)) XC5704-051
29.	Embroidery sheet (large) 130 mm (H) × 180 mm (W) (5-1/8 inches (H) × 7-1/8 inches (W))
20	XC5721-051
30.	100 mm (H) × 100 mm (W) (4 inches (H) × 4 inches (W)) XC5759-051
31.	Embroidery sheet (small) 40 mm (H) × 60 mm (W) (1-1/2 inches (H) × 2-3/8 inches (W))
32.	Embroidery frame holder A (with white corner cover)
	XF2222-001
33.	Embroidery frame holder B (with light gray corner cover) XF2223-001
34.	Operation Manual
$\bigcirc$	This manual
35.	Embroidery Design Guide
	XG8276-001
36.	Power cord
Q.	Visit your authorized Brother dealer.
37.	Bobbin case (on machine)
<b>D</b>	XC7206-001

# **A** CAUTION

• Be sure to use the included power cord for this machine. Using any other power cord may result in damage.

### Memo

 The included touch pen can be stored in the touch pen holder on the back of the operation panel. Refer to page 8.

# Accessories that are included in some countries or regions



# **Optional Accessories**

The following are available as optional accessories to be purchased separately.

	Part Namo		Part Name
			Part Code
1.	Advanced cap frame 2 set	10.	Round frame (Ø100 mm (4 inches))
	PRCF3 (Americas)		PRPRF100 (Americas) PRPRF100: XE8427-001 (Other area)
	XE2158-201 (Other area)	11.	Round frame (Ø130 mm (5 inches))
2.	Advanced cap frame 2 60 mm (H) × 130 mm (W) (2-3/8 in chec (H) × 5 1 (8 inches (M))		PRPRF130: XE8430-001 (Other area)
	PRCFH3 (Americas) PRCFH3: (Americas) PRCFH3: X52162.001 (Other area)	12.	Round frame ( $\emptyset$ 160 mm) (6 inches)) PRPRF160 (Americas)
3.	Advanced cap frame	aven 217	PRPRF160: XE8433-001 (Other area)
	50 mm (H) × 130 mm (W) (2 inches (H) × 5-1/8 inches (W))	13.	Embroidery frame holder C (with dark gray corner covers)
	PRCFH2 (Americas) PRCFH2: XC7610-052 (Other area)	₿ ₿	PRPARMC (Americas) PRPARMC: XE8436-001 (Other area)
4.	Mounting jig	14.	Flat frame 200 mm (H) × 300 mm (W) (7-7/8 inches (H) × 11-3/4 inches
	PRCFJ2: XC7611-052 (Other area)		(W)) PRF300 (Americas) PRF300: XE2086-001 (Other area)
	Cylinder frame set	15.	Clamp frame S straight set 24 mm (H) × 45 mm (W)
	PRCL1 (Americas) PRCL1: XE2166-001 (Other area)		(7/8 inch (H) × 1-3/4 inches (W)) PRCLP45B (Americas) PRCLP45B: XF2251-001 (Europe) PRCLP45B: XF2252-001 (Other area)
6.	Cylinder frame 80 mm (H) × 90 mm (W) (3 inches (H) × 3.1/2 inches (W))	16.	Clamp frames S L & R 24 mm (H) × 45 mm (W) (7/8 inch (H) × 1-3/4 inches (W))
	PRCLH1 (Americas) PRCLH1: XE2170-001 (Other area)		PRCLP45LR (Americas) PRCLP45LR: XF2255-001 (Europe) PRCLP45LR: XF2256-001 (Other area)
7.	Quilt frame 200 mm × 200 mm (7-7/8 inches × 7-7/8 inches)	17.	Clamp frame S straight 24 mm (H) × 45 mm (W) (7/8 inch (H) × 1-3/4 inches (W))
	PRPQF200 (Americas) PRPQF200: XE8411-001 (Other area)		PRCLP45S (Americas) PRCLP45S: XF2269-001 (Europe) PRCLP45S: XF2268-001 (Other area)
8.	Border frame 100 mm (H) × 300 mm (W) (4 inches (H) × 11-3/4 inches (W))		Clamp frames S L & R set 24 mm (H) × 45 mm (W) (7/8 inch (H) × 1-3/4 inches (W))
	PRPBF1 (Americas) PRPBF1: XE8414-001 (Other area)		PRCLP45LRD (Americas) PRCLP45LRD: XF2270-001 (Europe) PRCLP45LRD: XF2272-001 (Other area)
9.	Round frame set		,
	PRPRFK1 (Americas) PRPRFK1: XE8402-001 (Other area)		

	Part Name	
	Part Code	
	Clamp frame M set 100mm (H) × 100 mm (W) (4 inches (H) × 4 inches (W))	
	PRCLPM1 (Americas) PRCLP100B: 115D02E000B (Europe) PRCLPM1AP: 115D02E700B (Other area)	
	Compact frame set 70: 41 mm (H) × 70 mm (W) (1-5/8 inches (H) × 2-3/4 inches (W)) 50: 50 mm (H) × 50 mm (W) (2 inches (H) × 2 inches (W)) 44: 38 mm (H) × 44 mm (W) (1-1/2 inches (H) × 1-3/4 inches (W)) Portrait orientation: 33 mm (H) × 75 mm (W) (1-5/16 inches (H) × 2-15/16 inches (W)) PRHCK1 (Americas) PRSFK1: 115D02E000A (Europe) PRHCK1AP: 115D02E700A (Other area)	
21.	Sleeve frame 200 mm (H) × 70 mm (W) (7-7/8 inches (H) × 2-3/4 inches (W)) PRHSL200 (Americas) PRHSL200: 115D02E000C (Europe) PRHSL200AP: 115D02E700C (Other area)	
	Magnetic frame set 50 mm (H) x 50 mm (W) (2 inches (H) x 2 inches (W)) PRMHA50 (Americas) PRMFA50: 115D02E000E (Europe) PRMFA50AP: 115D02E700E (Other area)	
23.	Magnetic frame 50 mm (H) x 50 mm (W) (2 inches (H) x 2 inches (W)) PRMH50 (Americas) PRMF50: 115D02E000F (Europe) PRMF50AP: 115D02E700F (Other area)	
24.	Embroidery Table PRWT1 (Americas) PRWT1: XE8417-001 (Other area)	
25.	Embroidery Stand PRNSTD2 (Americas) VRPRNSTD: 115Z05E0005 (Europe) VRPRNSTD: 115Z05E7005 (Other area)	
26.	<b>Metal bobbin</b> 100376-051	
27.	Weight (S) XC6631-051	
28.		
	ХЕ5334-101	

### V Note

• Visit your nearest authorized Brother dealer for a complete listing of optional accessories for your machine.

### Memo

- Always use accessories recommended for this machine.
- All specifications are correct at the time of printing. Please be aware that some specifications may change without notice.

# Setting Up the Machine

The procedures for setting up the machine are described below. If the machine is not set up correctly, it may shake or produce loud noises and the embroidery will not be sewn correctly. An optional embroidery stand is also available.

### Setup and transporting precautions

# **A** CAUTION

- The temperature of the operating environment should be between 5 °C (40 °F) and 40 °C (104 °F). If the machine is operated in an environment that is either too cold or too hot, the machine may malfunction.
- Do not use the machine in a location where it will be exposed to direct sunlight, otherwise the machine may malfunction.
- Set up the machine with it's four adjustable feet completely in contact with the desk or table, so that the machine is level.
- Do not block the ventilation slots at the back and on the rear underside of the machine by such as putting anything under the embroidery machine, and do not allow lint or dust to accumulate in the ventilation slots, otherwise the machine's motor may overheat, resulting in a fire or in damage to the machine.
- The machine weight is approximately 38 kg (84 lb). The transporting or setting up of the embroidery machine should be performed by two people.
- When transporting the machine, be sure to have two people lift the machine from the bottom at the indicated slots (①). Lifting the machine from any other area may damage the machine or result in the machine falling, which could cause injuries.



- When lightning occurs, turn off the machine and unplug the power supply cord. Lightning may cause the machine to malfunction.
- Do not plug in the power supply cord until setup of the machine is completed, otherwise injuries may result if the start/stop button is accidentally pressed and the machine starts sewing.
- When lubricating the machine, wear protective eyeglasses and gloves to prevent the oil or grease from getting into your eyes or on your skin. Do not put the oil or grease into your mouth. Keep the oil and grease out of the reach of children.
- While attaching or detaching an embroidery frame or other included accessory or while maintaining the machine, be careful not to hit the machine with your body or any other part of it.



## Setting up the machine



# Adjusting the operation panel position



## Preparing the thread guide assembly



# Preparing the spool stand



# Attaching the embroidery frame holder



# **Operating Precautions**

The necessary points to ensure the correct operation of this machine are described below.

## Power supply precautions

Be sure to observe the following precautions concerning the power supply.

# A 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.
- Make sure that the plugs on the power supply cord are firmly inserted into the electrical outlet and the power supply cord receptacle on the machine. Otherwise, a fire or electrical shock may result.
- Do not insert the plug on the power supply cord into an electrical outlet that is in poor condition.
- If any of the following occur, turn off the embroidery machine and unplug the power supply cord, otherwise a fire, an electric shock or damage to the machine may result.
  - When you are away from the machine.
  - After using the machine.
  - If a power outage occurs while the machine is being operated.
  - If the machine is not operating properly, for example, when there is a loose or cut connection.
  - During electrical storms.

# **A** CAUTION

- Use only the power supply cord included with this machine.
- Do not plug this machine in with extension cords or multi-plug adapters with any other appliances plugged into them, otherwise a fire or an electric shock may result.
- Do not plug in or unplug the power supply cord with wet hands, otherwise an electric shock may result.
- When unplugging the power supply cord, be sure to first turn off the machine, and then grasp the plug when unplugging the cord. Pulling on the cord may damage it or result in a fire or an electric shock.
- Do not allow the power supply cord to be cut, damaged, modified, forcefully bent, pulled, twisted, or bundled. In addition, do not place heavy objects on the cord or expose it to heat, otherwise damage to the cord, fire or an electric shock may result. If the power supply cord or its plug is damaged, stop using the machine, and then take the machine to your authorized Brother dealer for repairs before continuing use.
- If the machine is not to be used for a long period of time, unplug the power supply cord, otherwise a fire may result.
- When leaving the machine unattended, either the main switch of the machine should be turned to OFF or the plug must be removed from the socket-outlet.
- When servicing the machine or when removing covers, the machine must be unplugged.
- 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 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.

### **Needle precautions**

Be sure to observe the following precautions concerning the correct choice of needle for your machine.

# 

- Your machine is designed to use household embroidery needles. The factory recommended needle is "HAX 130 EBBR" (Organ). Schmetz needles 130/705 H-E may be used as a substitute. Use of any other needles may break the needle or thread or damage the needle-threading mechanism or result in injuries.
- Never use bent needles. Bent needles can easily break, possibly resulting in injuries.

## Checking the needle

Sewing with a bent needle is extremely dangerous since the needle may break while the machine is operating.

Place the flat side of the needle on a flat surface and check that the distance between the needle and the flat surface is even. If the needle is bent or the tip of the needle is broken, replace the needle with a new one. (Refer to "Changing the needle" on page 40.)



### Bad needle

If the distance between the needle and the flat surface is not even, the needle is bent. Do not use a bent needle.

### **Bobbin precautions**

Be sure to observe the following precautions concerning the bobbin.



### Upper thread recommendations

Be sure to observe the following recommendations concerning the upper thread.

### 🟒 Note

• It is recommended that rayon or polyester embroidery thread be used (120 den x 2 / 135 dtex x 2 / 40 weight (in Americas and Europe) / #50 (in Japan)).

### **Fabric recommendations**

Be sure to observe the following recommendations concerning the fabric.

### Note

- Your machine can embroider fabric that is up to 2 mm (5/64 inch) thick. If thicker fabric is sewn, the needle may bend or break.
- When embroidering overlapping stitches, it is difficult for the needle to penetrate the fabric, possibly resulting in the needle bending or breaking.
- Attach stabilizers to thin or stretch fabrics.
- When embroidering large pieces of fabric, make sure that the fabric is not caught in the carriage.

### **Display recommendations**

Be sure to observe the following recommendations concerning the use of the operation panel display.

### 🗸 Note

• Only touch the display with your finger or included touch pen. Do not use a mechanical pencil, screwdriver or any other hard or sharp object. In addition, do not apply extreme pressure to the display screen, otherwise damage to the display screen may result.

# **Preparing for Starting the Embroidery**

## Playing a Tutorial Video



## Removing the bobbin case





## Installing the bobbin



# Installing the bobbin case



# Turning on the machine

# **A** CAUTION

• Make sure to keep your hands and other items away from the carriage, in order to prevent any injuries.



# Selecting the embroidery pattern

	F       23.2mm         93.3mm       Image: Constraint of the second	F       23.2 mm         30.3 mm       Image: Constraint of the second of the seco
AF 23.2mm 36.3mm	Fit         23.2mm           36.3mm         •••••	
	Reserve     min       N.M.M. GREAN     1       N.M. GREAN     1       N.	

# Checking a preview image



# Understanding the pattern type selection screen

In this screen, select a pattern category (type).



No	Display	- Function	
1.0.	Key Name		
1	Embroidery pattern key		The embroidery pattern for a design can be selected.
2	Frame pattern key		14 stitch types can be combined with 10 frame shapes, such as a circle and a square.
3	Monogram and frame key		Monogram designs can be created by combining two or three letters.
	AA	atterns	Uppercase and lowercase letters, numbers, symbols and
4	(4) Alphabet key		fonts can be selected in small, medium and large sizes. Japanese fonts can be selected in large and small sizes.
5	Utility embroidery pattern/Large buttonhole pattern key		Various utility embroidery patterns and large buttonhole patterns can be selected. Large buttonhole patterns can be selected from small, medium and large sizes.
6	Decorative		Various character patterns, such as floral characters, appliqué characters and so on, can be selected.
7	alphabet key ← USB media keys	Rec	calls patterns from USB media.

No	Display	Function
110.	Key Name	
		By using the included USB cable to connect a computer to the
	Computer (USB) key	embroidery machine, patterns can be recalled from the computer.
9		Recalls patterns from SD cards.
	SD card key	•
		Recalls patterns stored in the machine's memory.
10	Embroidery patterns stored in the machine memory key	
1	Return	This key is not displayed unless a pattern is selected. Touch this key to
	Return key	quit trying to add another pattern from the pattern type selection screen. Return to the pattern editing screen.

# Understanding the pattern list screen

In this screen, select the pattern.



No	Display	Function
110.	Key Name	
	II 73.0mm 66.6mm	Shows the size of the embroidery pattern currently displayed in the
1	Size	pattern display area. The top value shows the height and the bottom value shows the width. If the embroidery pattern consists of multiple patterns that have been combined, the size of the entire pattern, including all patterns, is shown.
6	□ 73.0 mm 66.6 mm	Shows the size of the pattern selected when its pattern key is touched. The
	Size	top value shows the height and the bottom value shows the width.
3	A Ö	An image of the pattern appears on the key. Touch the image to select
	Pattern keys	Drag your finger up and down in this area to scroll through the pages.
4	Return	Touch to leave the currently selected pattern category and choose a
	Return key	different category. Returns to the pattern type selection screen.

No	Display	Eunction
INU.	Key Name	Function
5	1.M	Displays an image of the pattern that is to be embroidered so it can be
	Preview key	previewed.
6	1 Number of thread colors	Shows the number of thread colors for the currently selected embroidery pattern.
	A B C ◀ ►	The character information of an entered character pattern can be character pattern will
0	Text preview area	and ► to change the input position.
8	Size key	Allows the size of the currently selected embroidery pattern to be changed.
	а ца	Touch to select a left, center or right
	Text alignment key	line character pattern.
10	set Set key	Touch after selecting the pattern. The selection of the pattern is confirmed and the pattern editing screen appears.
1	Array Array key	Touch this key to change the configuration of a character pattern.
12	Thumbnail size selection key	The size of the pattern thumbnails can be set to large, medium or small.
(3)	Previous page key	Touch this key to display the previous page.
14	Next page key	Touch this key to display the next page.
15	Horizontal mirror image key	Flips the pattern being selected horizontally.

\* Some patterns cannot be edited with (8), (9), (1) or (15).

## Understanding the pattern editing screen

In the pattern editing screen, patterns can be individually edited. (The entire pattern cannot be edited from this screen.) The pattern selected in the pattern display area can be repositioned, resized, rotated and rearranged, and its color scheme can be changed. In addition, multiple patterns can be selected and combined. Entered character patterns can also be edited in various ways.



No.	Display	Function
	Key Name	runction
	₽ 103.6 mm 94.9 mm	Shows the size of the embroidery pattern currently displayed in the
1	Pattern size	pattern display area. The top value shows the height and the bottom value shows the width. If the embroidery pattern consists of multiple patterns that have been combined, the size of the entire pattern, including all patterns, is shown.
	+ +	Shows the sizes of embroidery
2	Embroidery	frames that can be used to sew the embroidery pattern currently
	indicators	displayed in the pattern display area.
3	<b>46.9 mm</b> 55.2 mm	Shows the size of the pattern being edited. The top value shows the height and the bottom value shows the width.
	Size	
	Delete	Deletes the pattern. If touched, the
	Delete key	pattern being edited is deleted.
6	Add	Adds a pattern. If touched, the pattern group selection screen
	Add key	appears.
6	1 <i></i>	Displays an image of the pattern so
Ľ	Preview key	that it can be previewed.
7	\$+ 0.0 mm	Shows the vertical distance that the pattern being edited is moved.
	Distance from center (vertical)	

No.	Display	Eurotion
	Key Name	runction
	↔ + 0.0 mm	
8	Distance from center (horizontal)	Shows the horizontal distance that the pattern being edited is moved.
0	🖒 0.0°	Shows the rotation angle that the
<b>B</b>	Rotation angle	pattern being edited is rotated.
10	1	Shows the total number of thread
	Number of thread colors	colors for the pattern that is being edited.
1)	Г Л Л < • > L V J	Moves the sewing position of the pattern that is being edited in the
	Positioning keys	direction of the arrow. (If • is touched, the sewing position is moved to the center of the embroidering area.)
12	Select	Selects the pattern that is being edited when the embroidery pattern
	Pattern selection keys	consists of multiple patterns that have been combined.
13	Edit End key	Finish editing and continue to the embroidering settings screen.



No	Display	Function
110.	Key Name	T unction
1	100 C C C C C C C C C C C C C C C C C C	Select from 100%, 125%, 150% or 200% to adjust how the pattern being edited is displayed.
0	Rotate Rotate key	Rotates the pattern that is being edited.
3	size Size key	Changes the size of the pattern that is being edited.
4	Change thread color key	Changes the color of the pattern.
5	Border key	Makes and edits a repeating pattern.
6	Duplicate key	Duplicates the pattern.
0	Embroidery Appliqué key	Touch to change the pattern being edited into an appliqué pattern.
8	Mutti Color Multi Color key	Enables the thread color of each character in an alphabet pattern to be changed; can only be used when an alphabet is selected.
9	Array Array key	Changes the orientation of the characters in the alphabet pattern that is being edited.
10	Font Type Font Type key	Touch to change the font of the character pattern being edited.
1	Letter Edit key	Touch to change the size and font of individual characters in the character pattern being edited.

No.	Display Key Name	Function
12	A Horizontal mirror image key	Flips the pattern being edited horizontally.
(3)	Density Density key	Changes the density of the pattern that is being edited; can only be used if an alphabet or frame pattern is selected.
14	Grouping key	Touch to group the multiple selected patterns.
15	spacing Spacing key	Changes the spacing between the characters in the character pattern that is being edited.
6	<sup>▲</sup> ‰ <sup>°</sup> Thread trim setting key	Automatically trim any excess thread jumps within the letters of alphabet pattern.
0	Multiple selection key	Touch to select multiple patterns.
18	Text combining key	Touch to group the selected character patterns.
19	A BC Text dividing key	Touch to ungroup the selected character pattern.

## Understanding the embroidering settings screen

From this screen, the entire pattern can be edited and embroidering settings can be specified. In addition, the embroidering position can be checked and a pattern can be saved for later use. Keys available in this screen differ when you set "Manual Color Sequence" to "ON" in settings screen.



No.	Display	Function
	Key Name	
	PI103.6mm 94.9mm	Shows the size of the embroidery pattern currently displayed in the
1	Pattern size	pattern display area. The top value shows the height and the bottom value shows the width. If the embroidery pattern consists of multiple patterns that have been combined, the size of the entire pattern, including all patterns, is shown.
	+ +	Shows the sizes of embroidery
2	Embroidery	frames that can be used to sew the embroidery pattern currently displayed in the pattern display area.
	frame indicators	
	\$+ 0.0 mm	Shows the vertical distance that the pattern being combined/edited is moved.
3	Distance from center (vertical)	
	↔ + 0.0 mm	
(4)	Distance from	Shows the horizontal distance that the pattern being combined/edited is moved.
	center (horizontal)	
6	O.0°	Shows the rotation angle that the
9	Rotation angle	pattern being edited is rotated.
6	🗐 17	Shows the total number of thread colors for the pattern that is being edited.
	Number of	
	changes	



No	Display	Function
	Key Name	Tunction
1	Color sorting key	Specifies that the sewing sequence for multiple patterns that have been combined be rearranged by thread color.
2	Individual region setting key	Touch to change the setting the thread color individually, for example, pause function or deselect region function.
3	Embroidery basting key	When stabilizer material is not affixed to the fabric, sew basting stitches along the outline of the pattern to minimize shrinkage of the stitching and misaligned patterns.
4	Rotate Rotate key	Rotates the entire embroidery pattern when it consists of multiple patterns that have been combined.
5	Lock stitching (end) key	Specifies that automatic lock stitch is sewn when the thread is trimmed.
6	Lock stitching (beginning) key	Specifies that automatic lock stitch is sewn at the beginning of the pattern and at the beginning of sewing after thread trimming.
0	Edit Edit key	Touch to return to the pattern editing screen.
8	Memory Memory key	Save a pattern in the machine's memory, USB media or a computer.
9	Preview key	Displays an image of the pattern that is to be embroidered so it can be previewed.
1	Positioning keys	Moves the sewing position of the whole pattern in the direction of the arrow. (If • is touched, the sewing position is moved to the center of the embroidering area.)

	Display	Function
INO.	Key Name	
		Selects the speed to move the frame. Touch to move the frame by 0.1
1	Frame movement speed keys	Touch to move the frame by 0.5 mm.
		Keep touching to move the
		nume at maximum speed.
12	Starting/ ending position key	Specifies the needle position at the beginning of sewing and at the end.
	Embroidery	Finish all operations in the embroidering settings screen and continues to the embroidering screen.
(13)	Embroidery key	
14	Ŧ	Moves the embroidery frame so that
	Trial sewing key	checked.

### ■ In the "Manual Color Sequence" mode



No	Display	Function
	Key Name	runction
1	Manual color sequence mode icon	This illustration appears when the sewing machine is in the "Manual Color Sequence" mode.
2	Manual color sequence key	Touch to change the needle bar color setting. This key appears when you set "Manual Color Sequence" to "ON" in settings screen.

## Understanding the embroidering screen

From this screen, the total number of thread colors and the sewing time can be checked, the needle bar settings can be specified, and the needle placement forward or backward can be done. Keys available in this screen differ when you set "Manual Color Sequence" to "ON" in settings screen.



No	Display	Function
	Key Name	runction
1	0 17	The bottom value shows the total number of thread colors in the pattern and the top value shows the
	Sewing order	thread colors that is currently being sewn.
	C) 23	Shows the amount of time until the machine will stop. When the last
2	Time until the machine stops	number appears in red. If the thread color needs to be changed, this shows the time until the thread spool will need to be changed.
3		Shows the part of the pattern that will be sewn with the thread color shown
9	Region display	first in the thread color sequence display.
		Shows the order for the thread color changes. During embroidering, this display scrolls automatically so that the color of the thread currently being sewn appears at the top.
(4)	Thread color sequence display	
		This red line indicator shows when the thread spools will need to be
5	Spool change indicator	changed. The thread spools will need to be changed at the point between the two thread colors where the indicator is displayed.
6	1 2	Indicates the needle bar number where the thread color at the left is assigned.
	₃ Needle bar number	
0		The bottom value shows the total number of stitches in the pattern and
	Stitch count	the top value shows how many stitches have already been sewn.

No.	Display	Function	
	Key Name		
8	$\frac{0 \min}{23 \min}$	The bottom value shows the total amount of time required to sew the	
	Sewing time	pattern and the top value shows how much time has already passed sewing.	
9		The thread color sequence display shows the first seven thread colors. To check the sequence for the eighth	
	Scroll bar	and later thread colors, touch 💽 or 💽 , or touch the scroll bar.	



NIO	Display	Function	
INO.	Key Name	Function	
0		The embroidering progress is shown by the red mark in the indicator.	
	Progress bar	Touch 🔲 to display (in the indicator) only the thread color being embroidered.	
2	Reserve Stop	While sewing embroidery, touch this key for the machine to stop prior to the next color beginning.	
	Reserve Stop key		
	Switch spool	Change the needle bar settings from the screen without changing the	
3	(Not available		
	"Manual	thread spools on the machine.	
	Color Sequence"		
	mode)		
		Touch to sew the pattern in the same	
		changes. The entire thread color	
4	embroidery	sequence display will appear in the same color. The progress bar ① and thread color setup display ⑦ will show the original colors.	
	key/		
	Monochrome		
	Return	Touch this key to quit sewing and return to the embroidering settings screen.	
	Return key		
	Lock	Unlocks the machine so it can start sewing within 10 seconds. When this key is touched, the start/stop button	
6	Unlock key		
<u> </u>	, []]	Touch a key to move the needle bar	
7		number. Use when threading the needle with the automatic needle- threading mechanism.	
	Needle bar key		
		Shows the color and the thread color	
	Thread color	needle bar indicated on the key.	
	set up dispidy	Thread the machine as indicated here.	
L			

No.	Display	Function	
	Key Name		
8	Maximum sewing speed key	Specifies the maximum sewing speed.	
9	/-/+	Moves the needle forward or backward through the stitching. Use this key in the following situations:	
	Forward/ Backward stitch key	<ul> <li>If the thread breaks or runs out while embroidering</li> <li>To restart sewing from the beginning</li> <li>To continue sewing after the machine was turned off</li> </ul>	
10	Temporary needle bar settings key	Enables the needle bar settings to manually be specified.	



• The thread color numbers in the thread color sequence display and the thread color set up display can be changed, for example, to the color name or the thread color number for other brands.

# **Starting the Embroidery**

## Hooping the fabric in the embroidery frame



### Attaching the embroidery frame to the machine

# **A** CAUTION

- If the embroidery frame is not correctly attached it may hit the presser foot and damage the machine, or cause injury to the user.
- When attaching the embroidery frame, make sure that the start/stop button is lit in red. If the start/stop button is flashing in green, the embroidery machine may start sewing. If the embroidery machine accidentally starts operating, injuries may result.
- When attaching the embroidery frame, make sure that the embroidery frame does not hit any other part of the embroidery machine.



- ① Left arm of embroidery frame holder
- Move the arm of the embroidery frame holder to the left or right to adjust it to the size of the embroidery frame.
- ② Clip on embroidery frame holder Insert the embroidery frame into the clips on the embroidery frame holder.
- ③ Positioning pin
- ④ Holes
- 6 Positioning slots





### Checking the needle bars and thread colors



- ① Thread information for the first to sixth needle bars
- If no thread color name is displayed, that needle bar has not been used.
   If a thread color had been assigned to the needle bar on a previously sewn design, the needle bar will show the previously assigned color.
- ③ Change thread spools message. This message appears when it is necessary for the

thread spools to be changed. If <u>ok</u> ④ is not touched to close the message, embroidering cannot continue.

- ⑤ Thread color
- 6 Needle bar number
- ⑦ Thread color name or number

If the thread color number (#123) is selected in the settings screen, the thread brand will also displayed.

# Upper threading

# **A** CAUTION

• When threading the upper thread, carefully follow the instructions. If the upper threading is not performing correctly, the thread may break or become tangled, causing the needle to bend or break.





### Threading the needle

# **A** CAUTION

- If the needle is not fully inserted, the hook of the automatic needle-threading mechanism will not pass through the eye of the needle during automatic needle threading, and the hook may bend or the needle cannot be threaded.
- If the hook of the automatic needle-threading mechanism is bent or damaged, contact your authorized Brother dealer.
- While the hook of the automatic needle-threading mechanism is passed through the eye of the needle, do not rotate the handwheel, otherwise the automatic needle-threading mechanism may be damaged.



# Starting embroidering



## Removing the embroidery frame and fabric



## Turning off the machine



## Changing the needle

# **A** CAUTION

• Be sure to turn off the embroidery machine before replacing the needle, otherwise injuries may result if the machine starts embroidering.



# Appendix

## Checking the thread tension



## Oiling the race





# Oiling the needle bars

	<ul> <li>Note</li> <li>Put a drop of oil onto the hook once a day before use.</li> <li>Apply one drop of oil on the lower needle bar above the felt washer every 40 – 50 hours of embroider time.</li> <li>Apply only sewing machine oil. Use of any other type of oil may result in damage to the embroidery machine.</li> <li>Do not apply too much oil. Fabric or thread may get contaminated. If too much oil is applied, wipe off any excess with a rag.</li> <li>If the thread breaks while embroidering or the operating noise of the hook becomes loud, apply oil onto the race hook.</li> </ul>
<ul><li>① Apply oil here.</li><li>Too much oil may drip onto the project.</li></ul>	

## Cleaning the hook



# Cleaning around the needle plate



## Cleaning the thread guides



## Clean the tension dial



## **Basic Setting**





# **Upgrading Your Machine's Software**

### Note

- When an upgrade program is available on "http://s.brother/cpbac", please download the files following the instructions on the website and steps below.
- Check that no data other than the upgrade file is saved on the USB media being used for this upgrade.
- Compatible operating systems: Microsoft Windows7, Windows 8.1, Windows 10
- USB media is widely used, however some USB media may not be usable with this machine. Please visit our website for more details.

### Upgrade procedure





Please visit us at <u>http://s.brother/cpbac</u> where you can get product support and answers to frequently asked questions (FAQs).



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