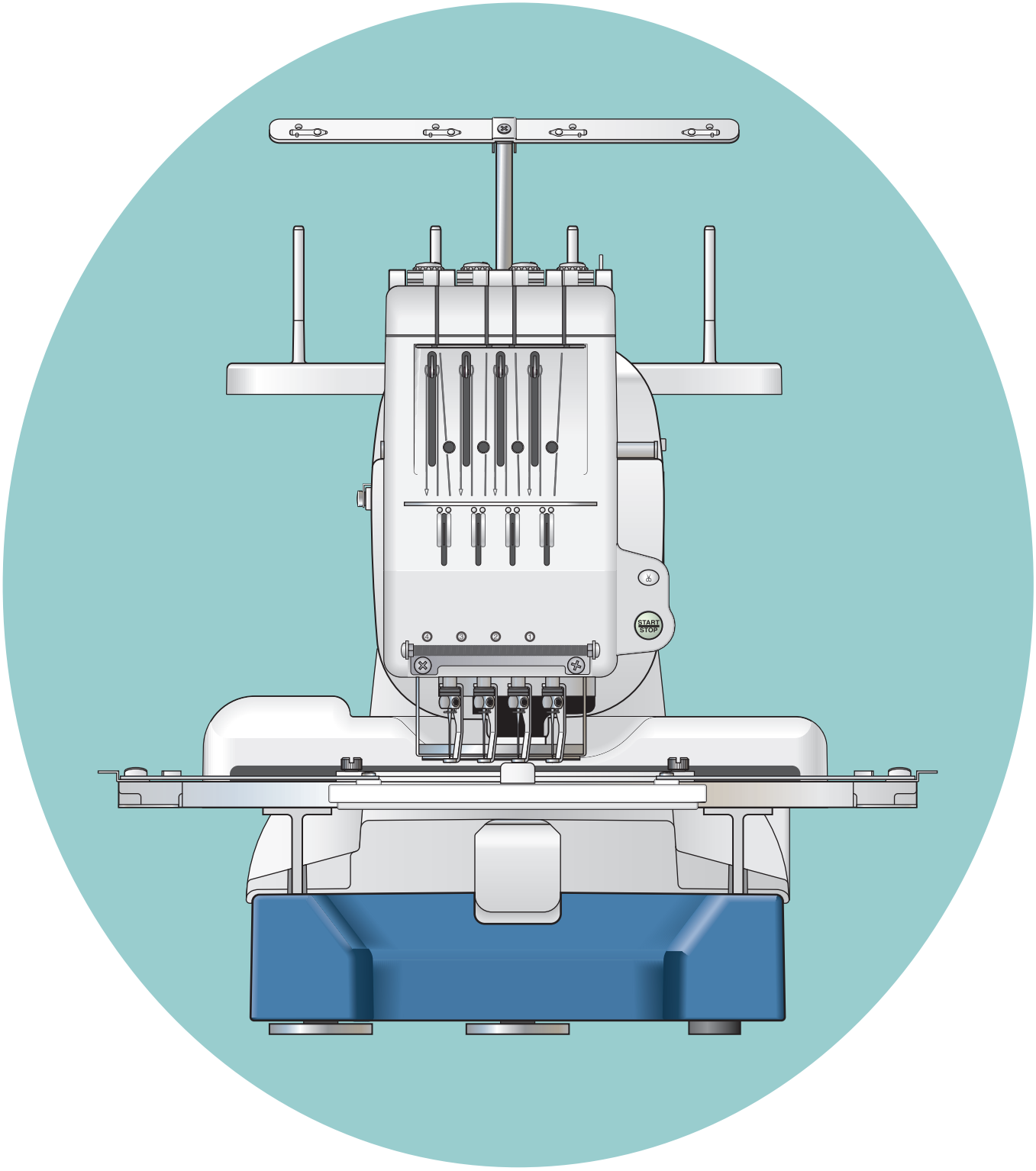
INSTRUCTION MANUAL



IMPORTANT SAFETY INSTRUCTIONS

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 this sewing machine.

This machine is designed and manufactured for household use.

When using an electrical appliance, basic safety precautions should always be followed, including the followings:

Read all instructions before using this machine.

DANGER —To reduce the risk of electric shock:

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

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

1. Do not allow the machine to be used as a toy. Close attention is necessary when this machine is used by or children.
2. Use this machine only for its intended use as described in this instruction book.
3. 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 dropped into water.
   Return this machine to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.
4. Never operate this machine with any air openings blocked. Keep ventilation openings of this machine free from accumulation of lint, dust and loose cloth.
5. Never drop or insert any object into any opening.
6. Do not use outdoors.
7. Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
8. Connect this machine to a properly grounded outlet only. See Grounding Instructions.
9. To disconnect, turn all controls to the off (“O”) position, then remove plug from outlet.
10. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
11. Keep fingers away from all moving parts. Special care is required around the machine needle.
12. Do not use bent needles.
13. Do not hold the embroidery hoop while stitching. It may deflect the needle causing it to break.
14. Switch the machine off (“o”) when making any adjustment in the needle area, such as threading the needle with your hand, changing the needle, inserting the bobbin, and the like.
15. Always unplug this machine from the electrical outlet when making any adjustments mentioned in this instruction book.

SAVE THESE INSTRUCTIONS

The design and specifications are subject to change without a prior notice.



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

GROUNDING INSTRUCTIONS

This product must be grounded. In the event of malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock.
This product is equipped with a cord having an equipment grounding conductor and a grounding plug.
The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

DANGER — Improper connection of the equipment-grounding conductor can result in a risk of electric shock.

1. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor.
2. If repair or replacement of the cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.
3. Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the product is properly grounded.
   Do not modify the plug provided with the product if it will not fit the outlet, have a proper outlet installed by a qualified electrician.
4. This product has a grounding plug that looks like the plug illustrated in Fig. A. A temporary adaptor, which looks like the adaptor illustrated in Fig. C, may be used to connect this plug to a 2-pole receptacle as shown in Fig B. If a properly grounded outlet is not available, the temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician.
   The green colored rigid ear, lug, and the like, extending from the adaptor must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adaptor is used, it must be held in place by the metal screw.

Fig. A

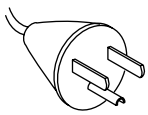


Fig.B

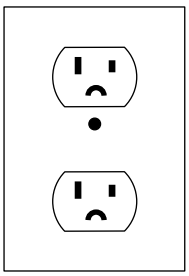


Fig.C

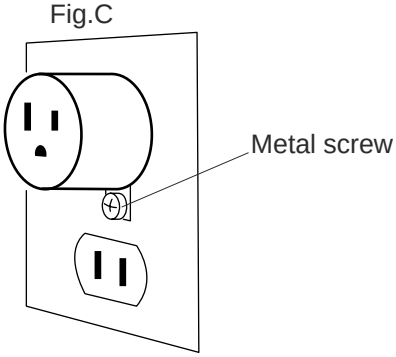


Fig.C

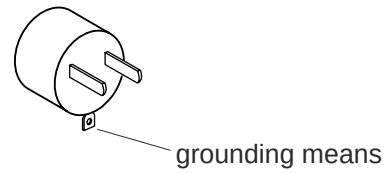


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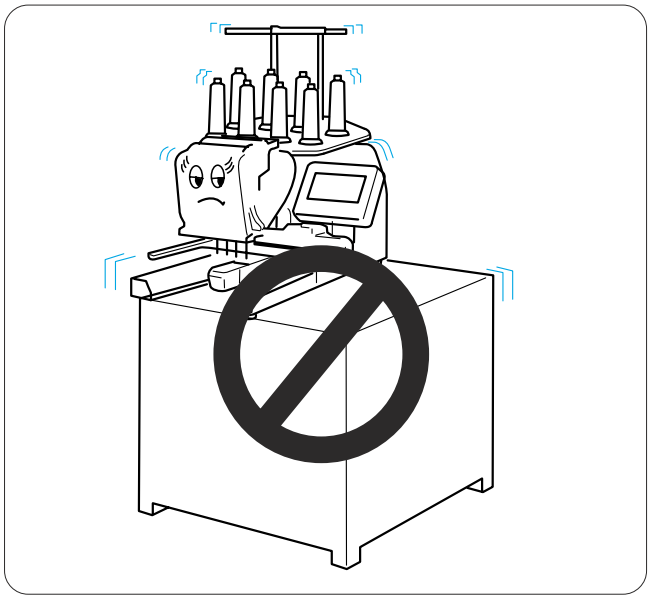
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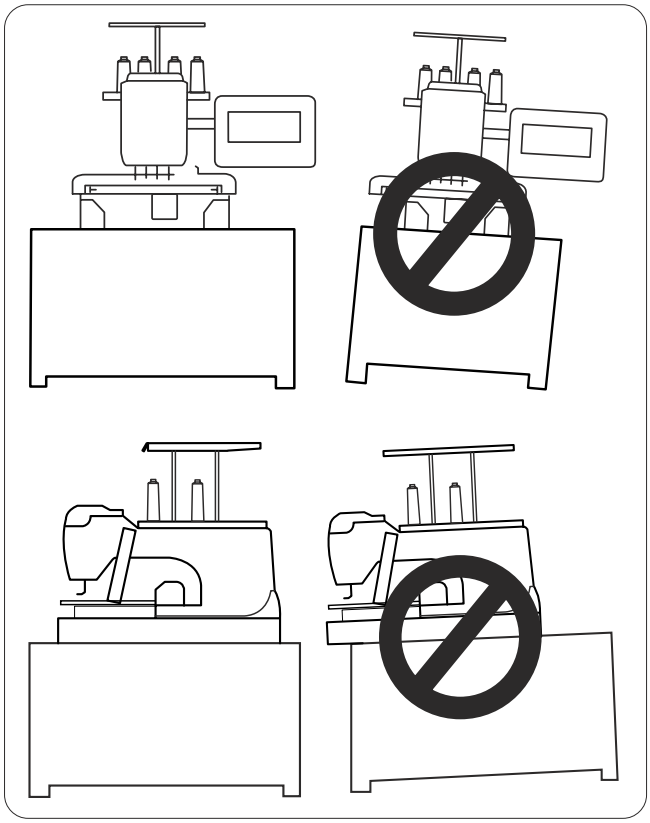
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SECTION 1. SETTING UP THE MACHINE

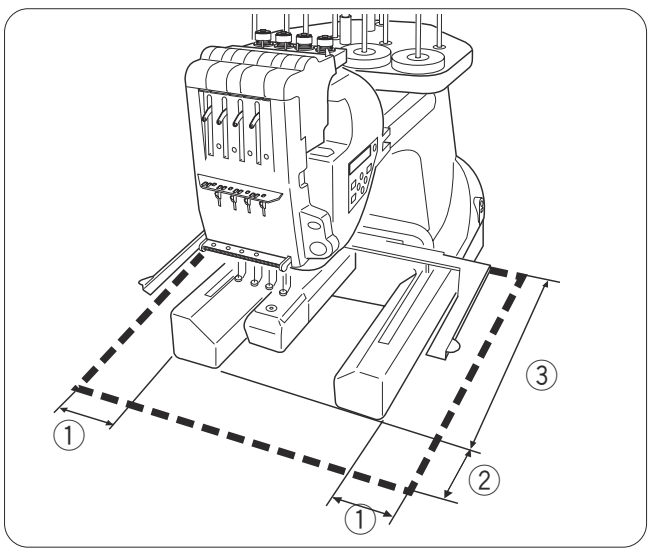
Installing the Machine



Place the machine on a flat and stable surface such as a sturdy table that could withstand the machine's weight and vibration.

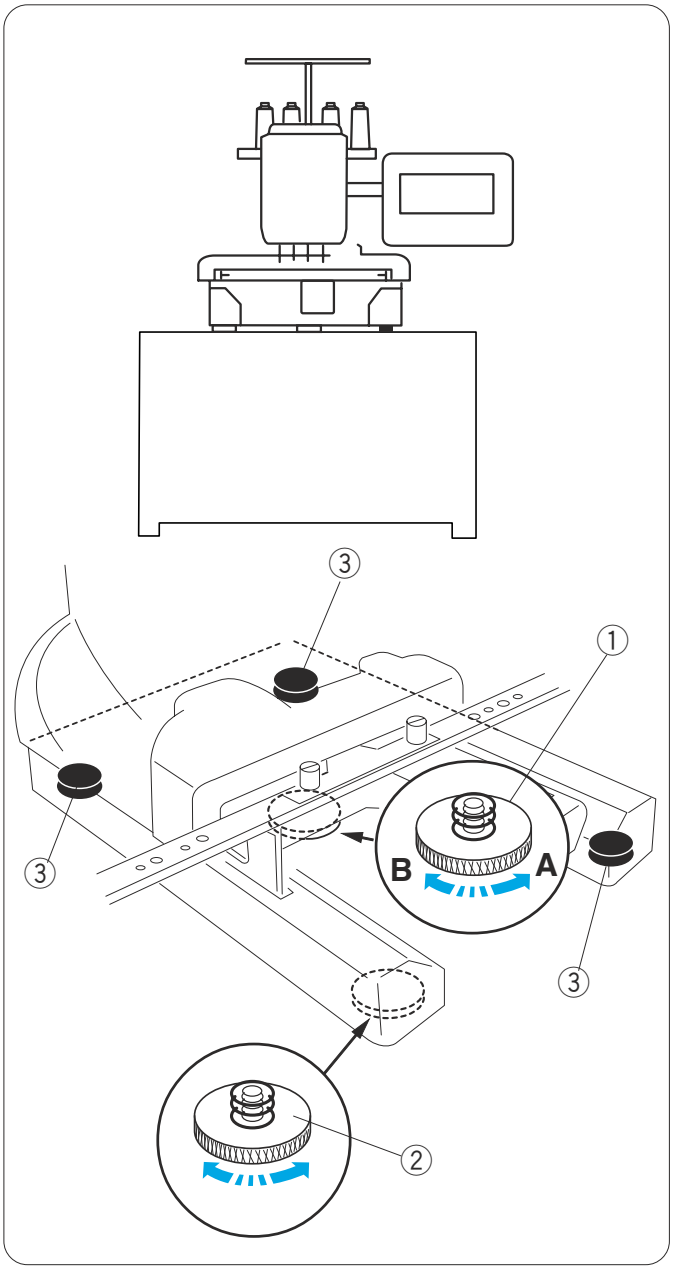


Place the machine on the flat and level surface.
Make sure that all the feet firmly contact the surface.



Provide a sufficient space around the machine to allow the hoop to move freely.

① 20 cm (7–7/8")
② 20 cm (7–7/8")
③ 30 cm (11–7/8")



Adjusting the feet

Turn the adjusting screw counterclockwise (in the direction of **A**) as much as possible, before placing the machine on a surface.

① Adjusting screw

Place the machine on a flat and level surface.

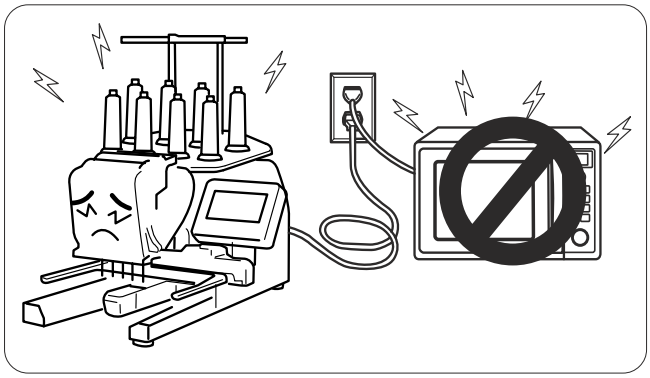
Turn the adjustable foot so the four feet firmly contact the surface.

② Adjustable foot

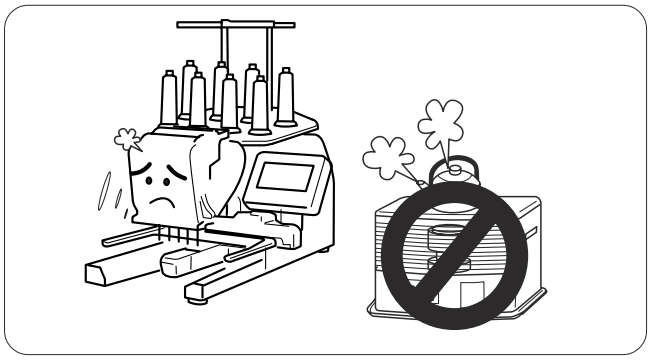
③ Foot

Turn the adjusting screw clockwise (in the direction **B**) until it contacts the surface.

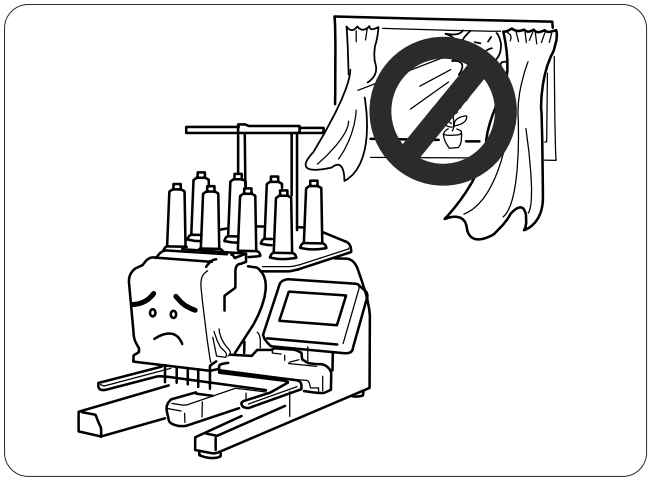
NOTE:
Make sure that the machine sits on the surface without shaking.



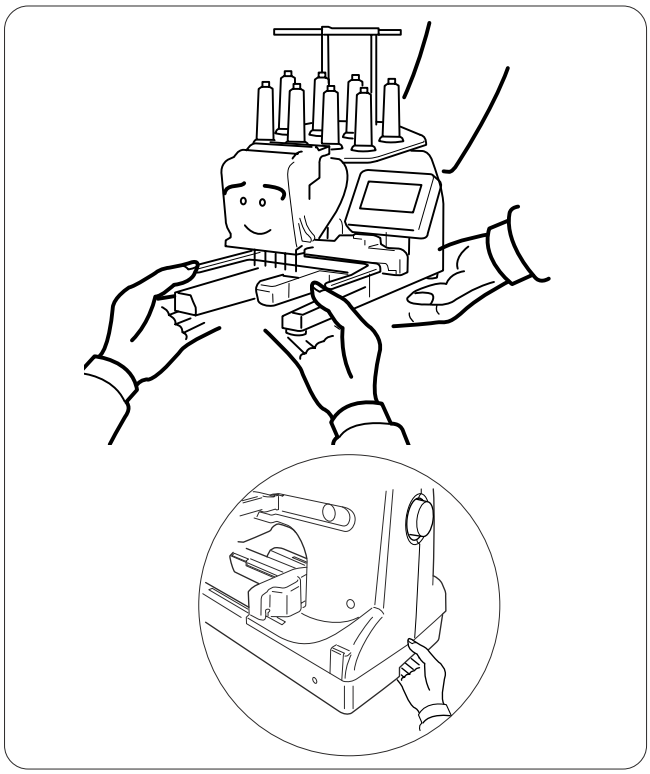
Do not use the machine near appliances that radiate electromagnetic noise such as a microwave oven, or do not plug in the machine to the same branch circuit where such appliances are connected.



Do not use or store the machine near a heat radiator or in a place with dust or high humidity.

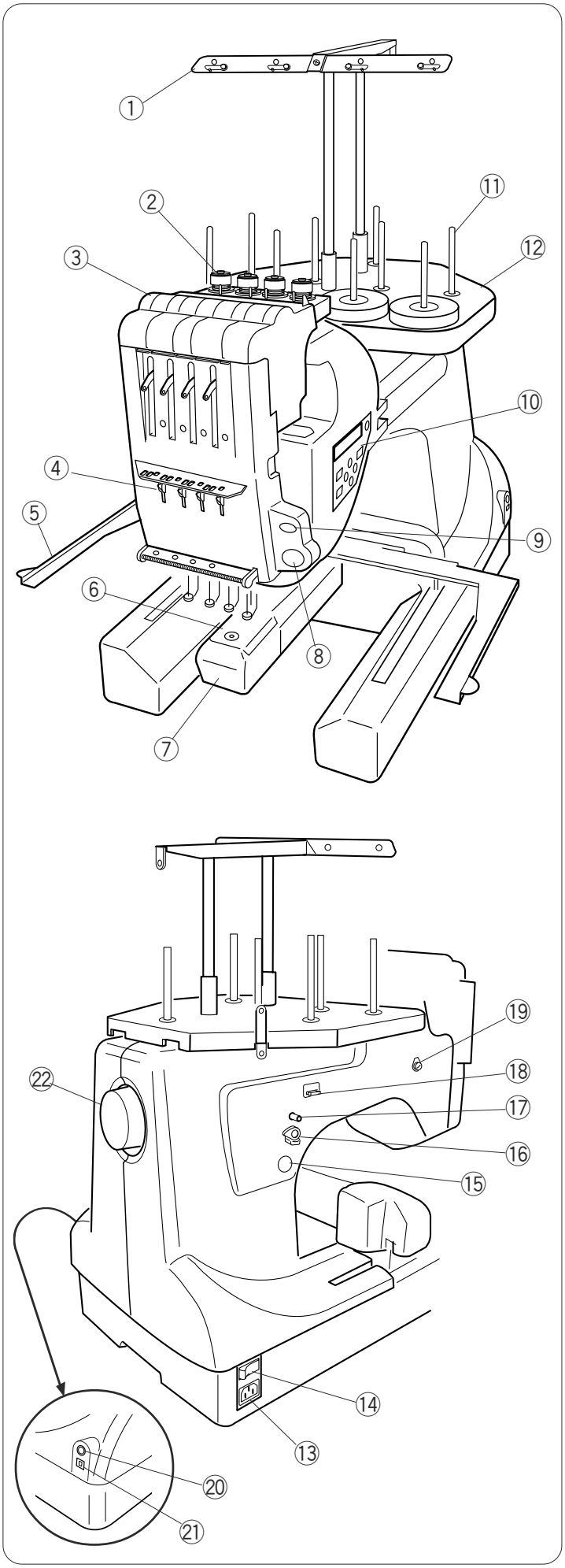


Do not expose the machine to direct sunlight or open air.



When transporting the machine, be sure it is lifted by two persons.
Hold the machine by the two legs and the hand grip on the bottom of the backside of the machine.

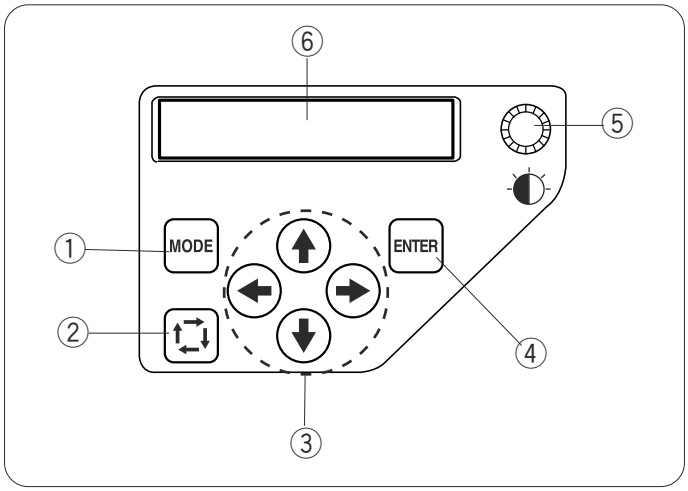
Remove the hoop supporter when transporting the machine to avoid damage by hitting the supporter.



Names of Parts

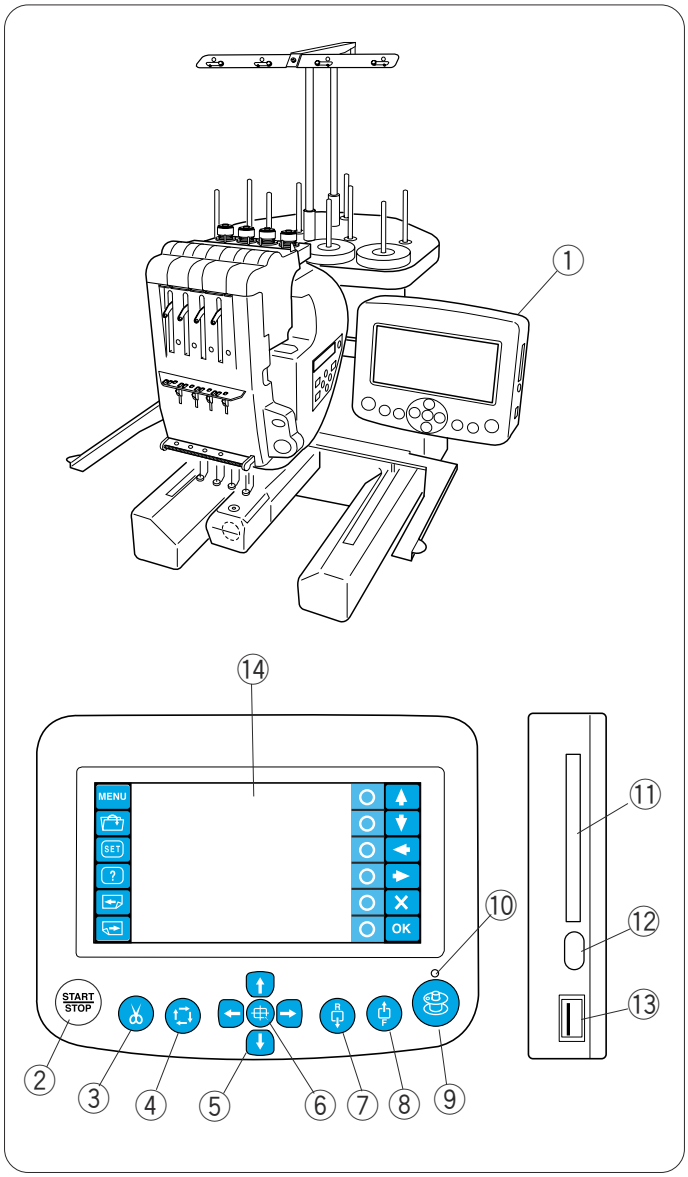
① Thread guide bar
② Pre-tension control
③ Tension control
④ Check spring
⑤ Hoop supporter
⑥ Needle plate
⑦ Hook cover
⑧ Start/Stop button
⑨ Auto thread cutter button
⑩ Sub control panel
⑪ Spool pins
⑫ Spool stand

⑬ Machine socket
⑭ Power switch
⑮ Bobbin winder button
⑯ Bobbin winder stopper
⑰ Bobbin winder spindle
⑱ Bobbin thread cutter
⑲ Bobbin winder thread guide
⑳ RCS connector socket
㉑ USB port
㉒ Handwheel



Sub control panel

① Mode button
② Trace button
③ Arrow buttons
④ Enter button
⑤ LCD brightness adjusting dial
⑥ LCD display

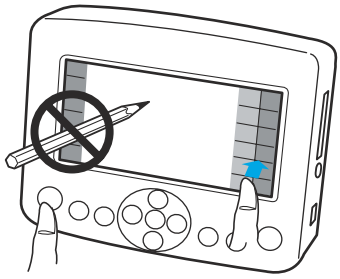


RCS unit (optional item)

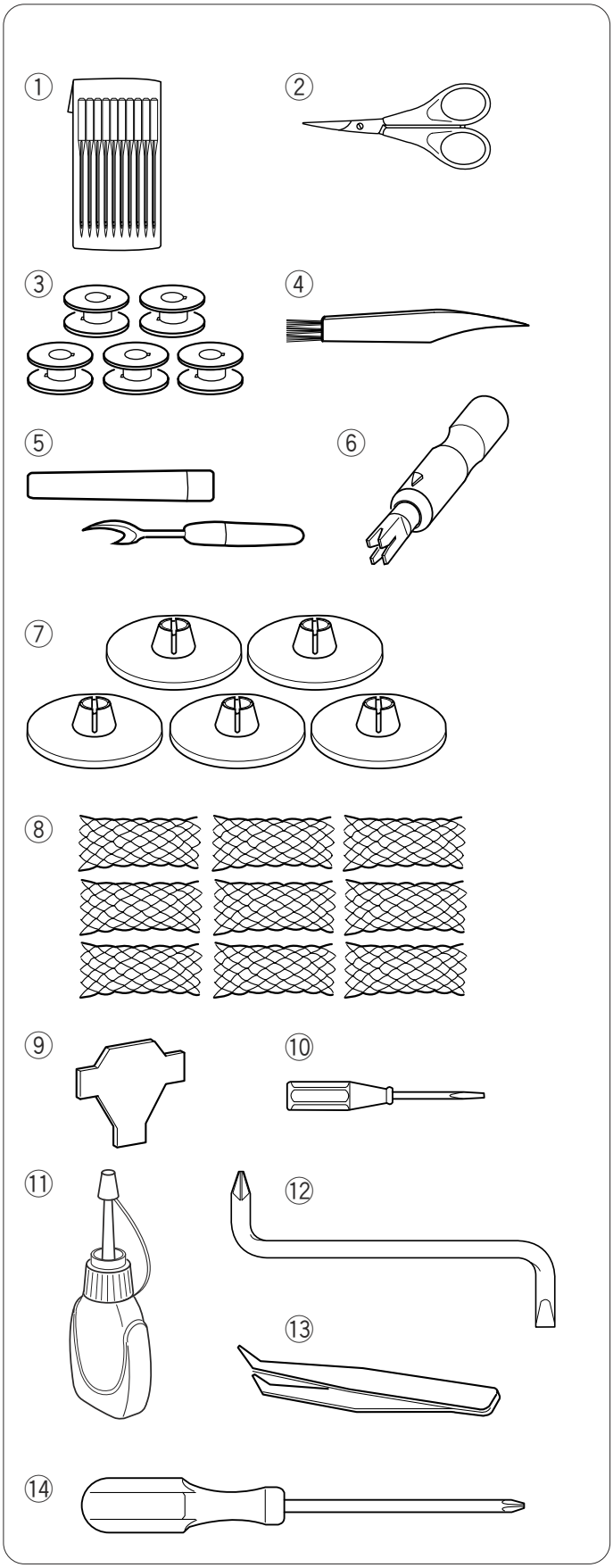
① RCS unit
② Start/Stop button
③ Auto thread cutter button
④ Trace button
⑤ Jog buttons
⑥ Carriage return button
⑦ Stitch back button
⑧ Stitch forward button
⑨ Bobbin winder button
⑩ Bobbin winder indicator
⑪ Card slot
⑫ Card ejector button
⑬ USB port
⑭ LCD touch panel

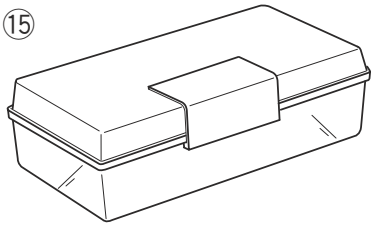
CAUTION:

Do not press the LCD touch panel with hard or sharp pointed objects like pencils, screwdrivers or the like.



Press the LCD touch panel and buttons gently. Rough or forceful pressing may damage the unit.

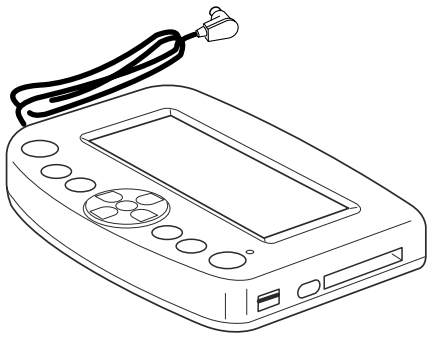


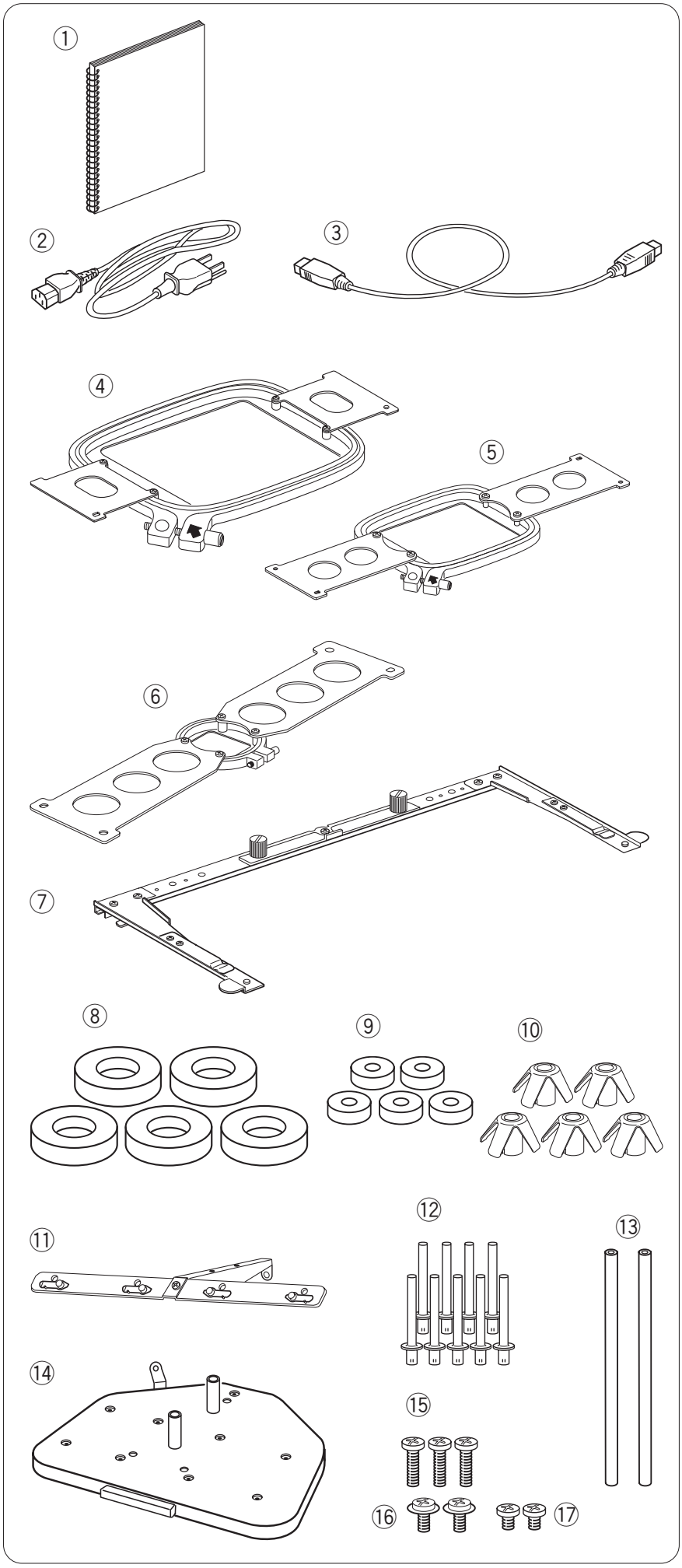


Standard Accessories

① Needle (DB x K5Q1-NY)
② Scissors
③ Bobbins
④ Lint brush
⑤ Seam ripper
⑥ Handy needle threader
⑦ Spool caps
⑧ Spool net
⑨ Screwdriver
⑩ Screwdriver (small)
⑪ Oiler
⑫ Offset screwdriver
⑬ Tweezers
⑭ Screwdriver (large)
⑮ Accessory box

Optional RCS unit





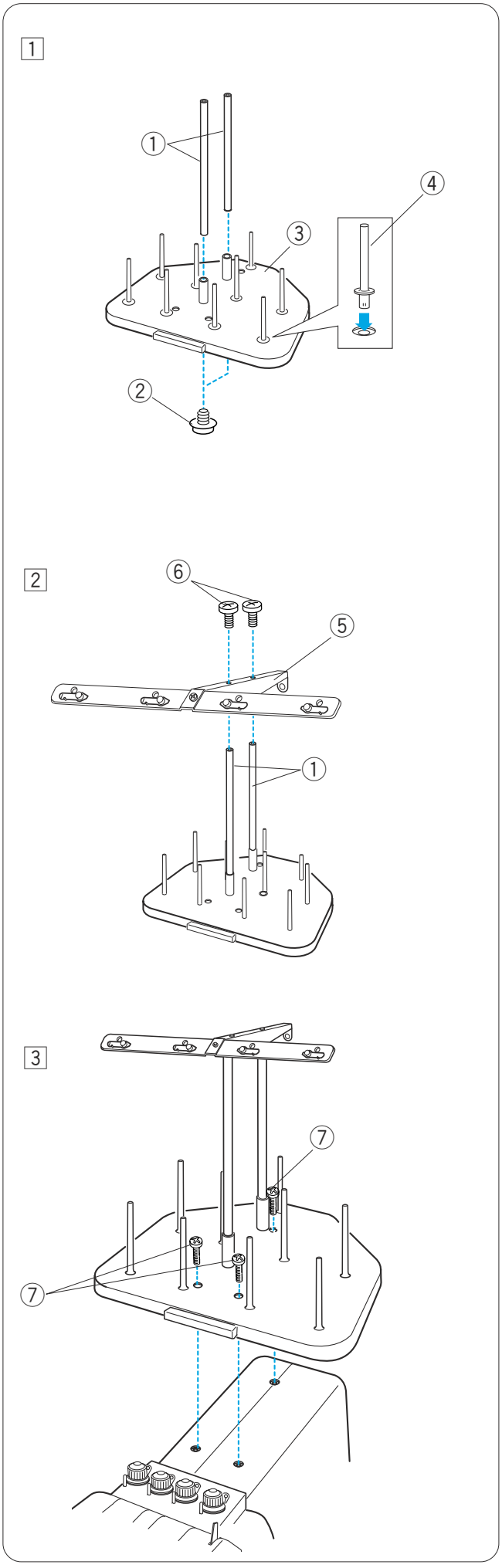
Standard Accessories

① Instruction book
② Power supply cable
③ USB cable
④ Hoop M1 (MB Hoop 240 X 200)
⑤ Hoop M2 (MB Hoop 126 X 110)
⑥ Hoop M3 (MB Hoop 50 X 50)
⑦ Hoop supporter
⑧ Felt ring (large)
⑨ Felt ring (small)
⑩ Spool rest
⑪ Thread guide bar
⑫ Spool pin
⑬ Thread guide pole
⑭ Spool stand
⑮ Setscrew (C)
⑯ Setscrew (A)
⑰ Setscrew (B)

Assembling the Spool Stand

1 Insert the thread guide poles into the sleeve of the spool stand. Secure the poles with setscrews (**A**) from the bottom.
Insert the spool pins into the spool stand.

① Thread guide poles
② Setscrews (**A**)
③ Spool stand
④ Spool pin



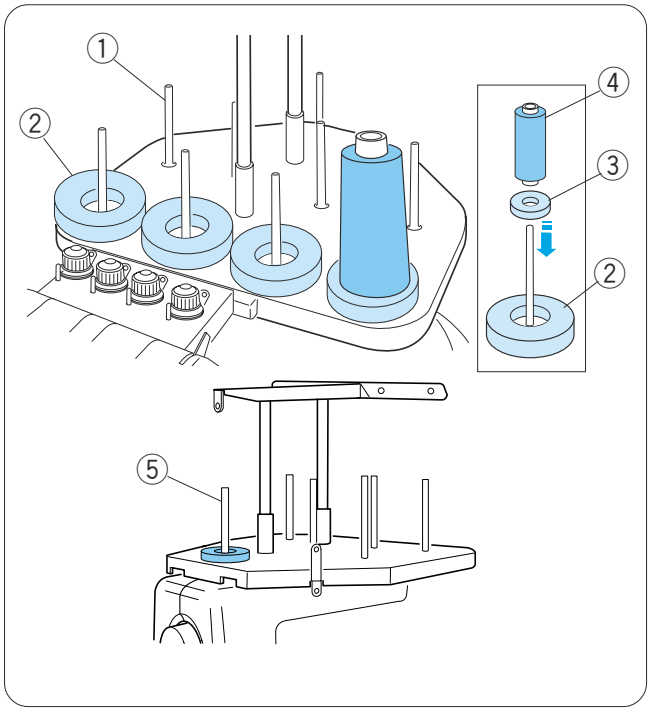
2 Attach the thread guide bar to the thread guide poles with the setscrews (**B**).

⑤ Thread guide bar
⑥ Setscrews (**B**)

3 Attach the assembled spool stand to the machine with the 3 setscrews (**C**).

⑦ Setscrews (**C**)

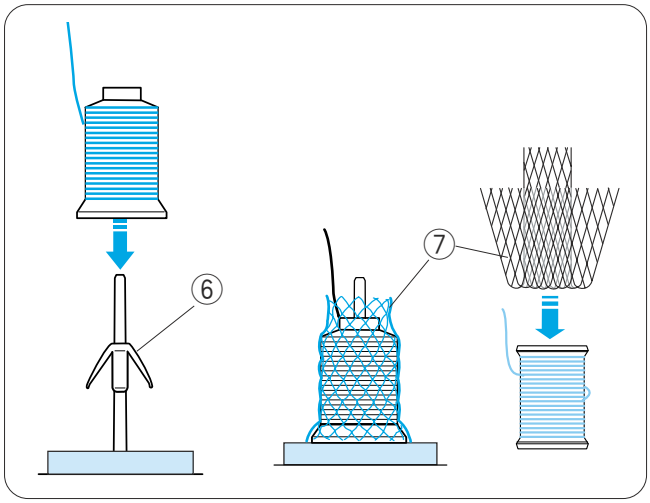
Setting the Thread Cones or Spools of Thread



Use the 4 spool pins in the front row for sewing, and second row spool pins are for the standby spools.
Use the rear most spool pin for bobbin winding.

Felt rings of two sizes are provided to accommodate various types of spools of thread and thread cones.
Use the large felt rings for large thread cones. For small thread cones or spools of thread, insert the small felt rings into the large rings.

① Spool pin
② Felt ring (large)
③ Felt ring (small)
④ Small spool of thread
⑤ Spool pin for bobbin winding

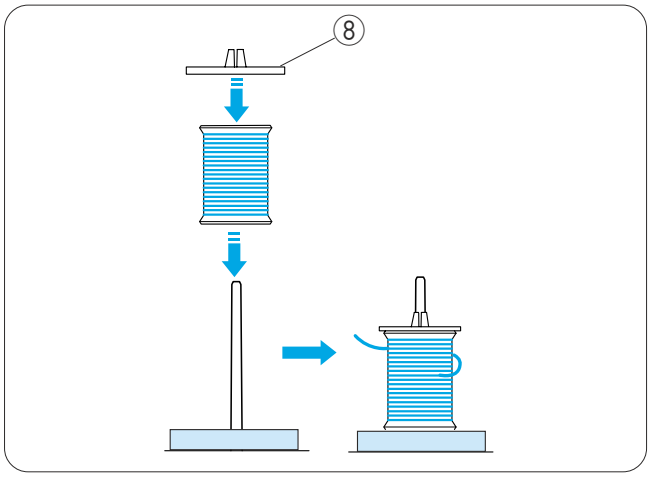


Setting the thread cone

Attach the spool rests on the spool pins.
Place the thread cones on the spool pins.

Cover the thread cone with the spool net if the thread is shaky or kinky when sewing.
If the net is too long for a spool, fold the net and place it on the spool.

⑥ Spool rest
⑦ Spool net

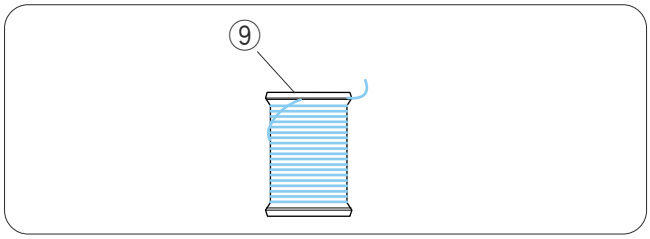


Setting the spool of thread

Place the spool of thread on the spool pin, with the thread coming out from the left backside.
Attach the spool cap and firmly press it against the spool.

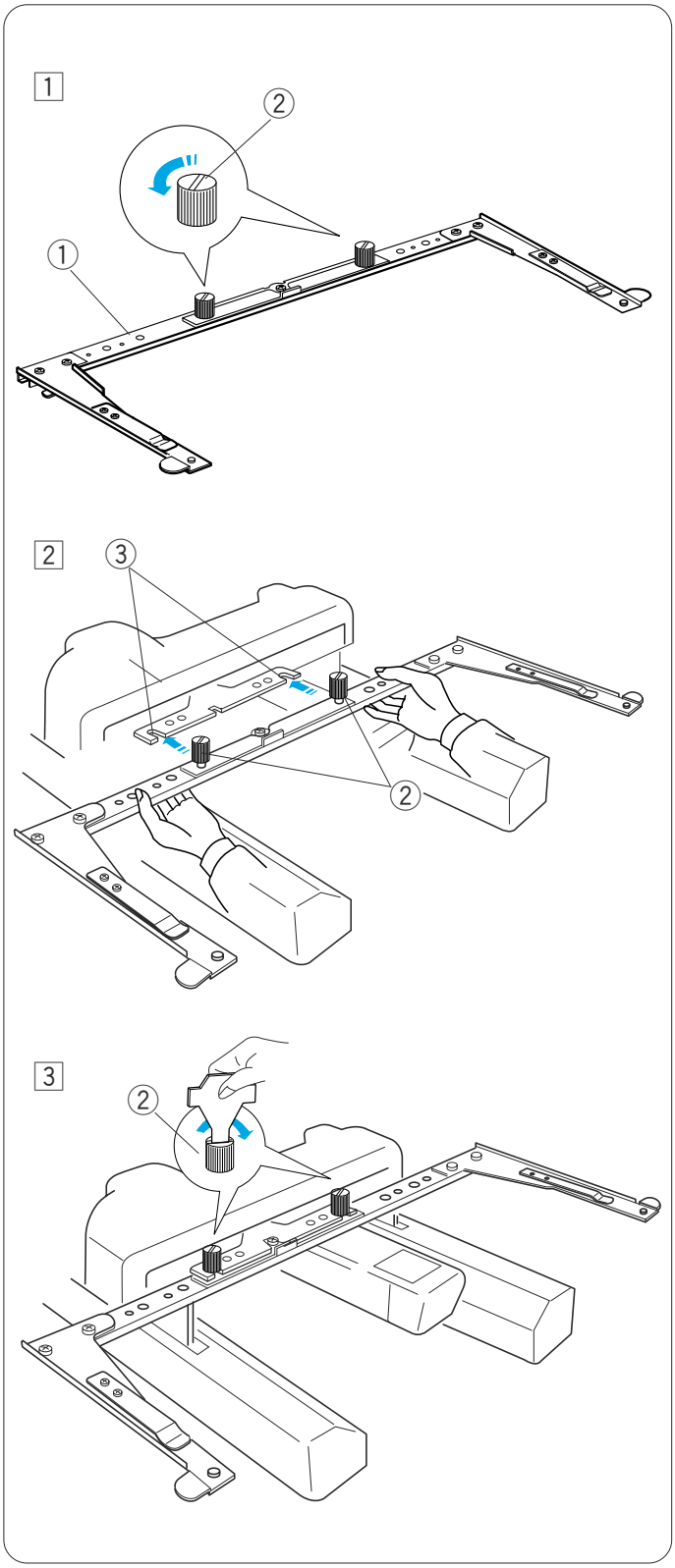
⑧ Spool cap

NOTE:
Rayon threads are recommended for needles to achieve a better result.



NOTE:
To prevent the thread from unraveling, leave the net on the thread cone or hook the thread end into the notch of the spool when it is not in use.

⑨ Notch



Installing the Hoop Supporter

1 Loosen the two thumbscrews on the hoop supporter.

① Hoop supporter

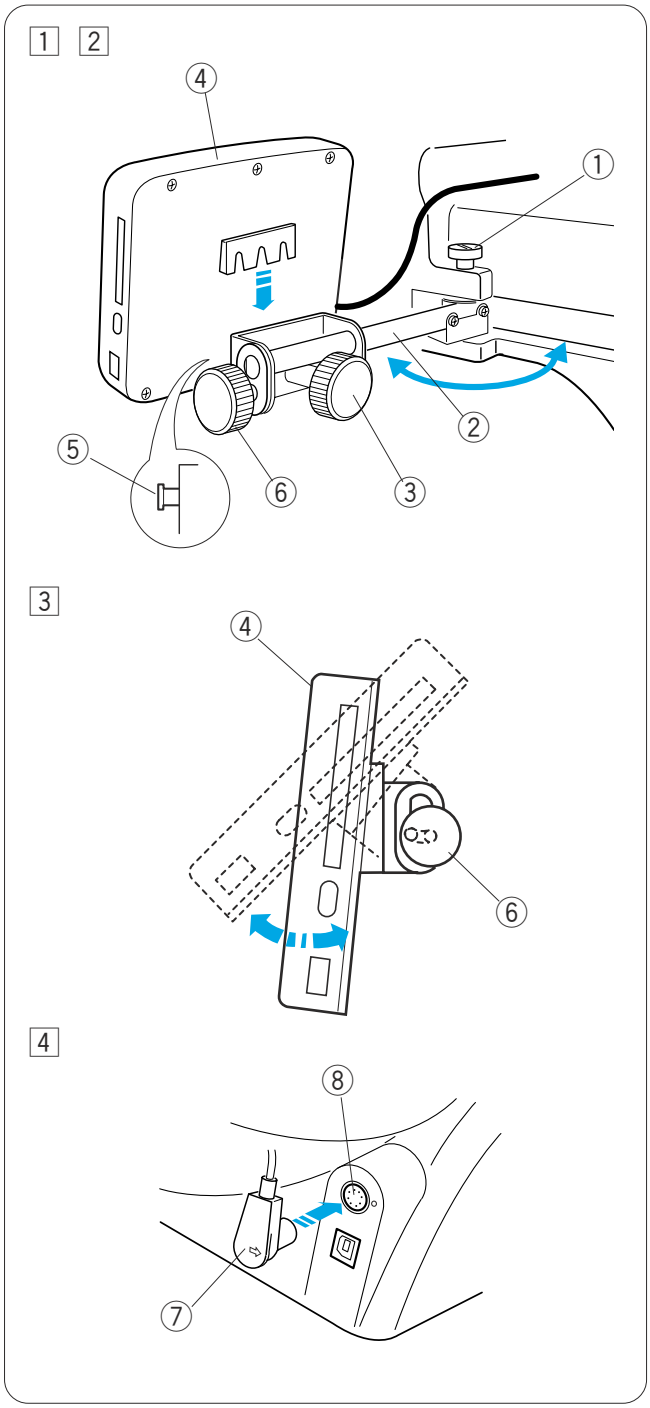
② Thumbscrew

2 Turn the power switch on and select an embroidery pattern (see pages 26, 38) to move the carriage to the center.
Hold the hoop supporter with both hands and place it under the carriage plate by inserting the necks of both thumbscrews into the slots in the carriage plate.

③ Slot in the carriage plate

3 Tighten the thumbscrews with the screwdriver to secure the hoop supporter.

Installing the RCS Unit (optional item)



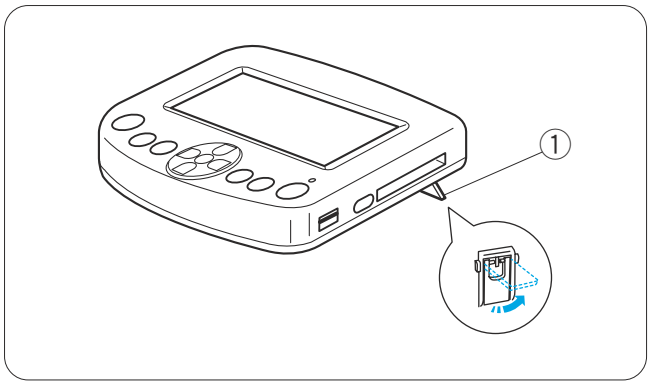
1 Loosen the thumbscrew and open the mounting arm.
- ① Thumbscrew
- ② Mounting arm

2 Loosen the screw knob **A** and set the RCS unit on the mounting arm by hooking the RCS unit on the pins.
Tighten the screw knob **A** to secure the RCS unit.
Adjust the angle of the mounting arm as desired and tighten the thumbscrew.
- ③ Screw knob **A**
- ④ RCS unit
- ⑤ Pin

3 Loosen the screw knob **B** on the end of the mounting arm and tilt the RCS unit to adjust the angle of the LCD screen for easier viewing.
Tighten the screw knob **B** to secure the RCS unit.
- ⑥ Screw knob **B**

4 Insert the connector into the connector socket on the back of the machine.
Fold the cable and put it under the spool stand.
- ⑦ Connector
- ⑧ Connector socket

NOTE:
You can connect the RCS unit when the machine is turned on. However do not connect the RCS unit while the machine is running or the LCD screen of the sub control panel is displaying a message.

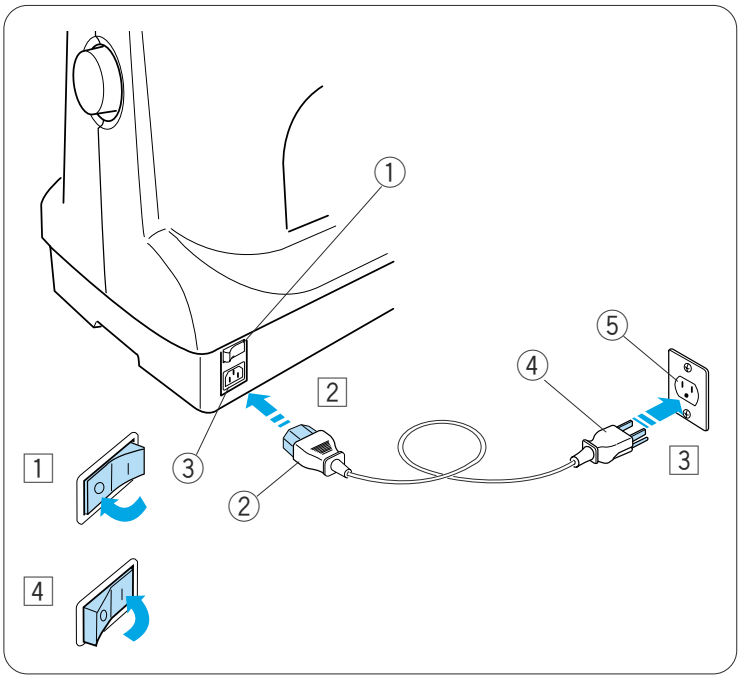


If you are using the RCS unit on the tabletop, simply insert the connector into the connector socket on the back of the machine.

Extend the two legs on the backside of the RCS unit so that it rests on an angle for easier viewing.
- ① Leg

Connecting the Power Supply

CAUTION:
Turn the power switch off before connecting the machine to the power supply.



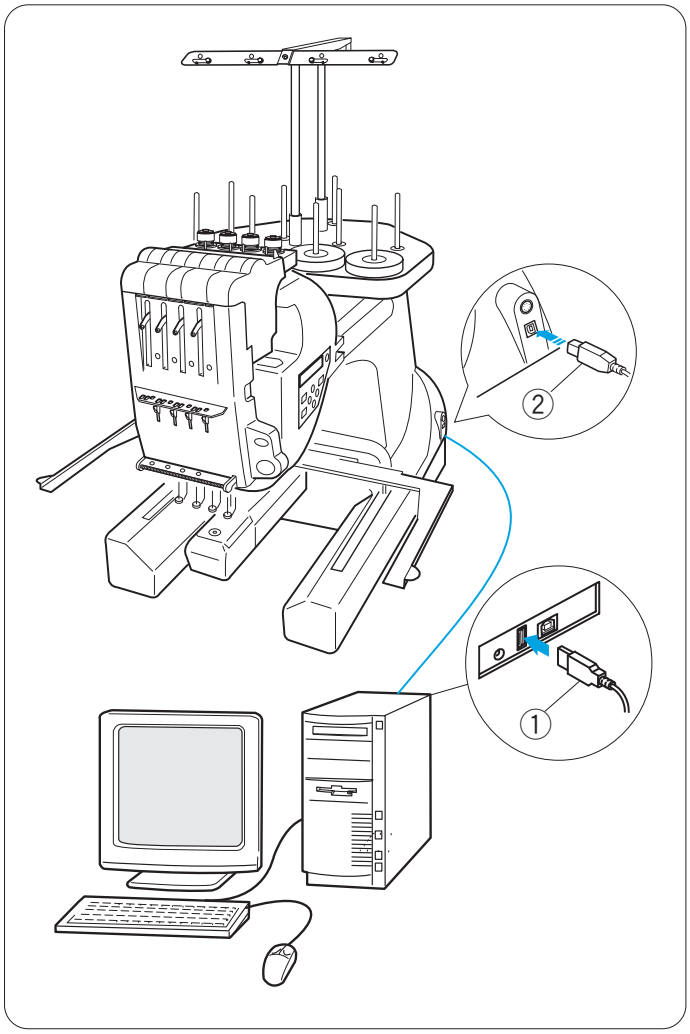
1 Turn the power switch off.
   ① Power switch

2 Insert the machine plug into the machine socket.
   ② Machine plug
   ③ Machine socket

3 Insert the power supply plug into the properly grounded outlet.
   ④ Power supply plug
   ⑤ Wall outlet (grounded)

4 Turn the power switch on.

Grounding Instructions:
This machine is equipped with a grounding cable and plug.
The plug must be plugged into an appropriate outlet that is properly installed and grounded.
If a properly grounded outlet is not available, contact a qualified electrician to install the properly grounded outlet.
Refer to page II for more instructions.



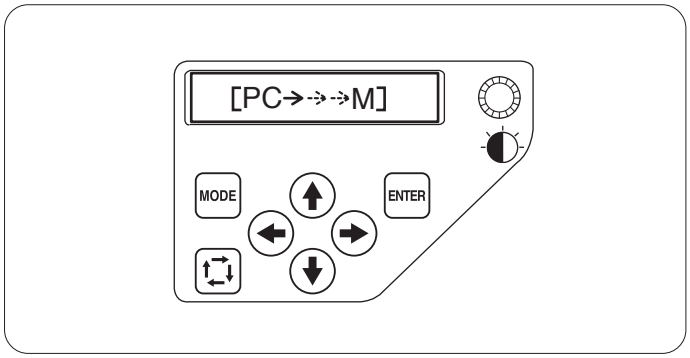
Direct PC-Link

This machine can be connected to the PC with the USB cable included as standard accessory.
You need **Digitizer MB for multi-needle** software (optional item) to operate the machine via direct PC-link.

Connecting the Machine and PC

Start up the machine and PC, and insert the type **A** USB connector in to the PC.
Insert the type **B** USB connector into the USB port on the machine.

① Type **A** USB connector
② Type **B** USB connector



Transfer the embroidery pattern data files between the machine and PC by using optional **Digitizer MB for multi-needle**.

After the data transfer is finished, the LCD screen will show the Ready to Sew mode display or return to the previous screen, depending on the setting you have made on **Digitizer MB for multi-needle**.

CAUTION:
Do not turn the power switch off or disconnect the USB cable while the data transfer is in progress. Otherwise the data will be lost or the memory will be damaged.

NOTE:
Refer to instruction book of optional **Digitizer MB for multi-needle** for further details.

Threads

Rayon threads are recommended for needle thread.

Cotton or spun polyester threads sizes 80 to 120 (74 to 100 dtex/2) are recommended for bobbin thread.

Do not use poor quality prewound bobbins.

Needles

Use the DB x K5Q1-NY, size 11 needles.
(Part number 770811000)

Stabilizers

To obtain the best quality embroidery, it is important to use stabilizers.

Types of stabilizer

Tear-away stabilizer:
Use tear-away stabilizers for stable woven fabrics.

Iron-on stabilizer:
Fuse it to the wrong side of the fabrics with an iron.

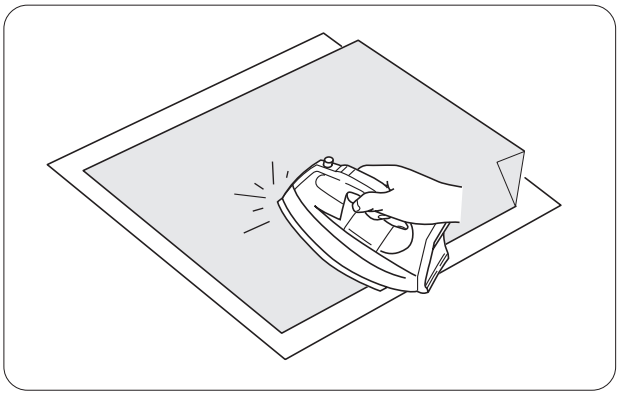
Cut-away stabilizer:
Use cutaway stabilizers for knits and all kinds of unstable fabrics.

Water soluble stabilizer:
Use this stabilizer for cutwork or lace embroidery, and also for the right side of looped fabrics such as toweling to avoid loops coming through the embroidery.

Sticky stabilizer:
This stabilizer is a sticky paper used for securing a small fabric or work that cannot be secured in the hoop.
It is also used for velvet and other napped fabric that would be permanently marked by the hoop.

Usage:

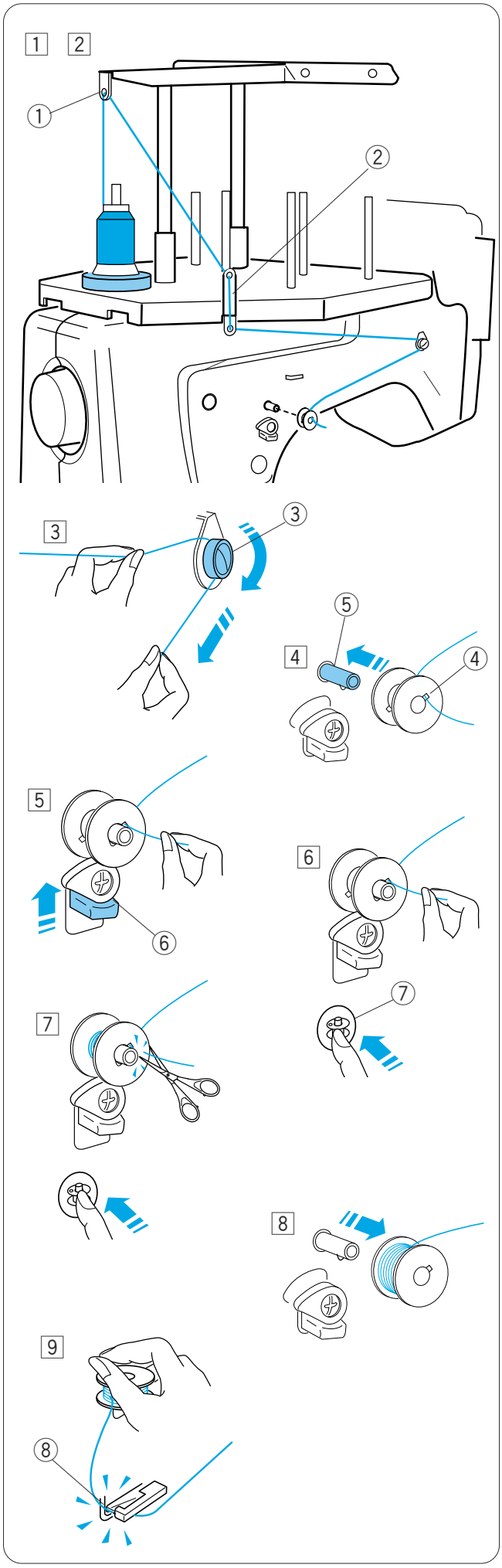
- The stabilizer should be attached to the wrong side of fabric.
- More than one layer may be required.
- Felt or stable fabrics do not need to be stabilized and you may embroider directly on them.
- For firm fabrics, you may place a thin paper under the fabric.
- The non-adhesive type should be used when embroidering fabric, which cannot be ironed or for sections, which are difficult to iron.
- Cut the stabilizer larger than the embroidery hoop and set it on the hoop so that the entire piece is fastened within the hoop to prevent looseness of the fabric.



Adhesive (Iron-on) Stabilizer
Place the Wrong side of fabric and the glossy side of the stabilizer together. Fold up a corner of the stabilizer and fuse it with an iron.

NOTES:

- Fold up a corner of the stabilizer, to make it easier to peel off the excess stabilizer after stitching.
- Ironing temperatures vary depending on kind of adhesive type stabilizer.



Winding the Bobbin

1 Place the thread cone (spool of thread) on the rear most spool pin.
Pass the thread through the thread guide **A**.
① Thread guide **A**

2 Pass the thread through the upper hole and lower hole in the thread guide **B**.
② Thread guide **B**

3 Draw the thread to the front.
Hold the thread with both hands and pass the thread firmly around and under the tension disk.
③ Tension disk

4 Pass the thread through the hole in the bobbin from the inside.
Put the bobbin on the bobbin winder spindle.
④ Hole in the bobbin
⑤ Bobbin winder spindle

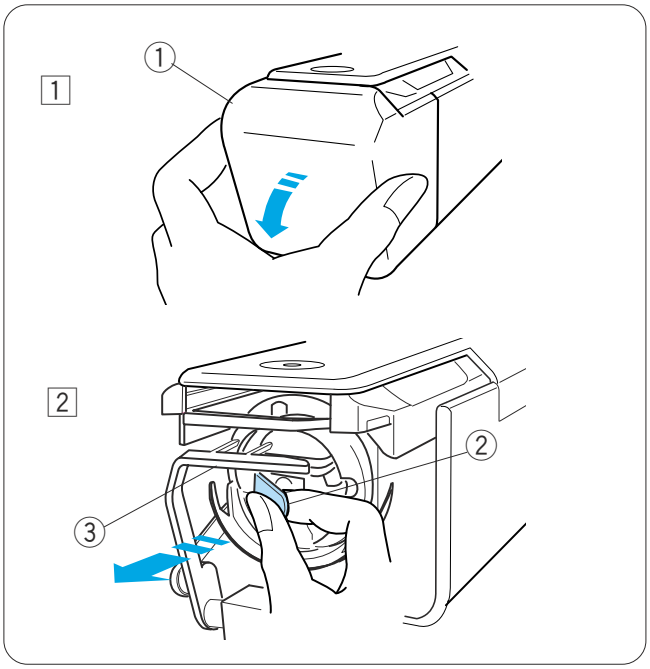
5 Push the bobbin winder stopper up against the bobbin.
⑥ Bobbin winder stopper

6 Press the bobbin winding button while holding the thread end.
⑦ Bobbin winder button

7 Press the bobbin winder button to stop the machine when the bobbin has wound a few layers.
Cut the thread close to the bobbin and press the bobbin winder button again.

8 When the bobbin is fully wound, the machine will stop automatically.
Remove the bobbin from the bobbin winder spindle.

9 Cut the thread with the bobbin thread cutter.
⑧ Bobbin thread cutter



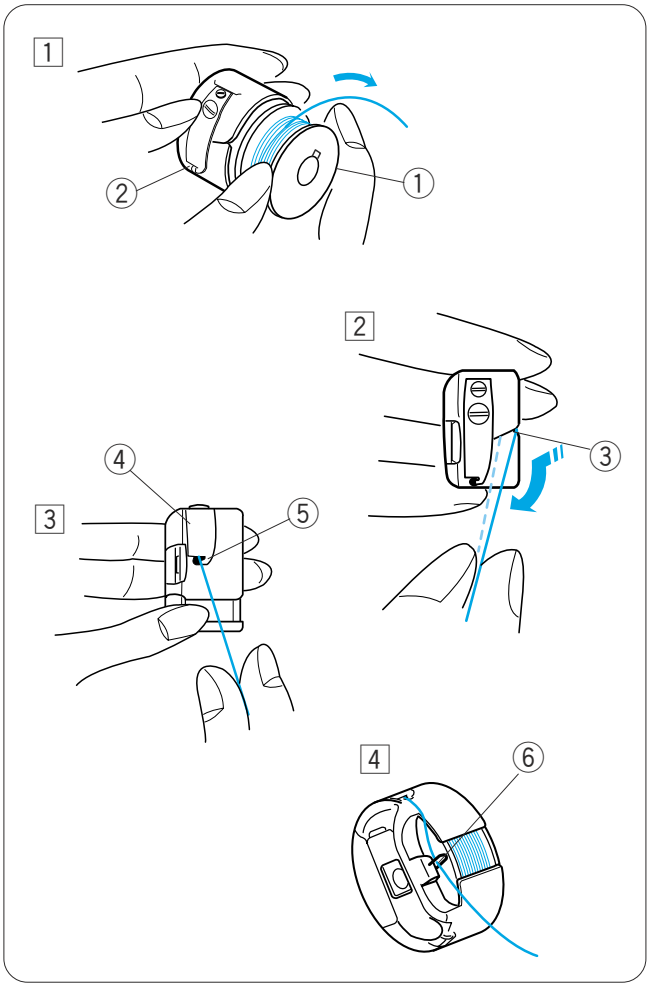
Removing the bobbin case

CAUTION:
Turn the power switch off before removing the bobbin case.

1 Open the hook cover toward you.
① Hook cover

2 Hold and open the latch of the bobbin case. Take the bobbin case out from the machine.
② Latch

NOTE:
Do not force to pull the thread keeper when you remove the bobbin case.
③ Thread keeper



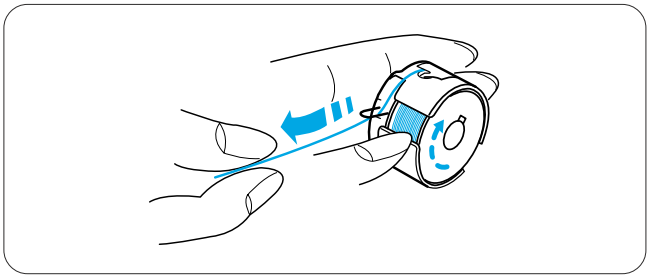
Inserting the bobbin

1 Insert the bobbin into the bobbin case leaving a 2” (5 cm) thread tail as illustrated.
① Bobbin
② Bobbin case

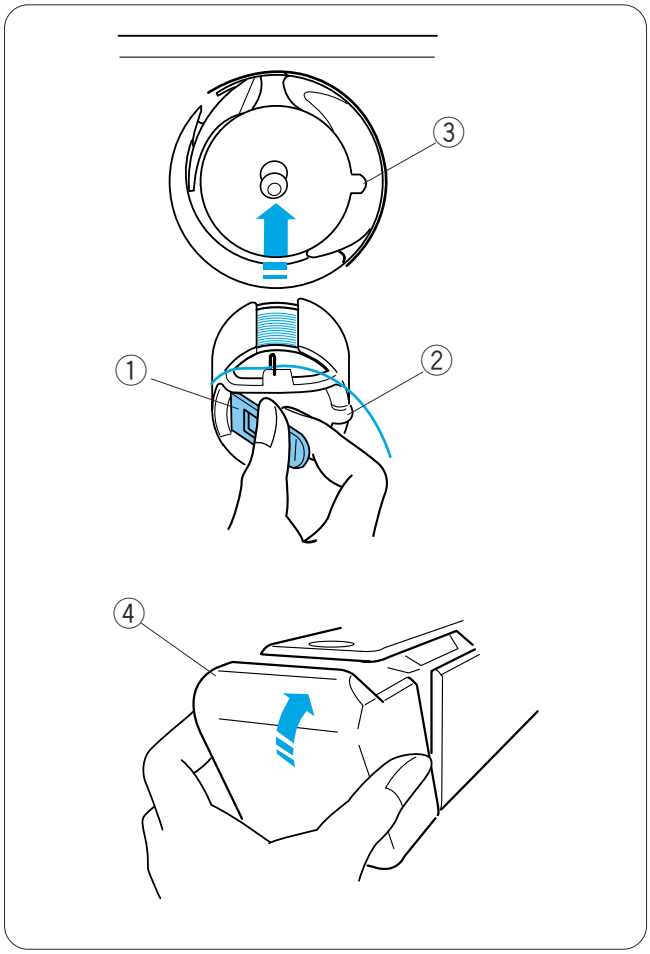
2 Draw the thread to slip it into the slit of the bobbin case.
③ Slit

3 Pull the thread to slide it under the tension blade until the thread comes out from the opening.
④ Tension blade
⑤ Opening

4 Pull the thread through the hook.
⑥ Hook



NOTE:
The bobbin should turn clockwise when the thread is pulled.



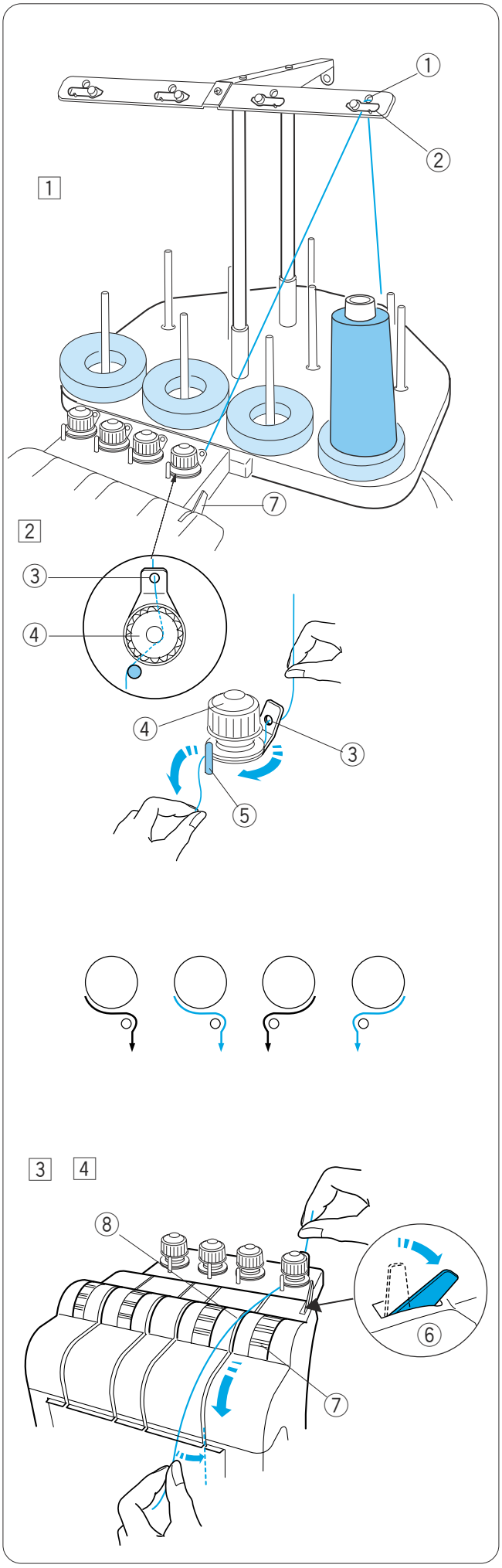
Inserting the bobbin case

Hold the bobbin case with the latch and insert the bobbin case into the hook, aligning the rib with the notch. Push the bobbin case as far as it will go and release the latch.

① Latch
② Rib
③ Notch

Close the hook cover.

④ Hook cover



Threading the Needle

The threading path of all needles is similar. Review the threading procedure of the first needle when threading other needles.

NOTE:
Rayon threads are recommended for needles to achieve a better result.

Threading needle No.1

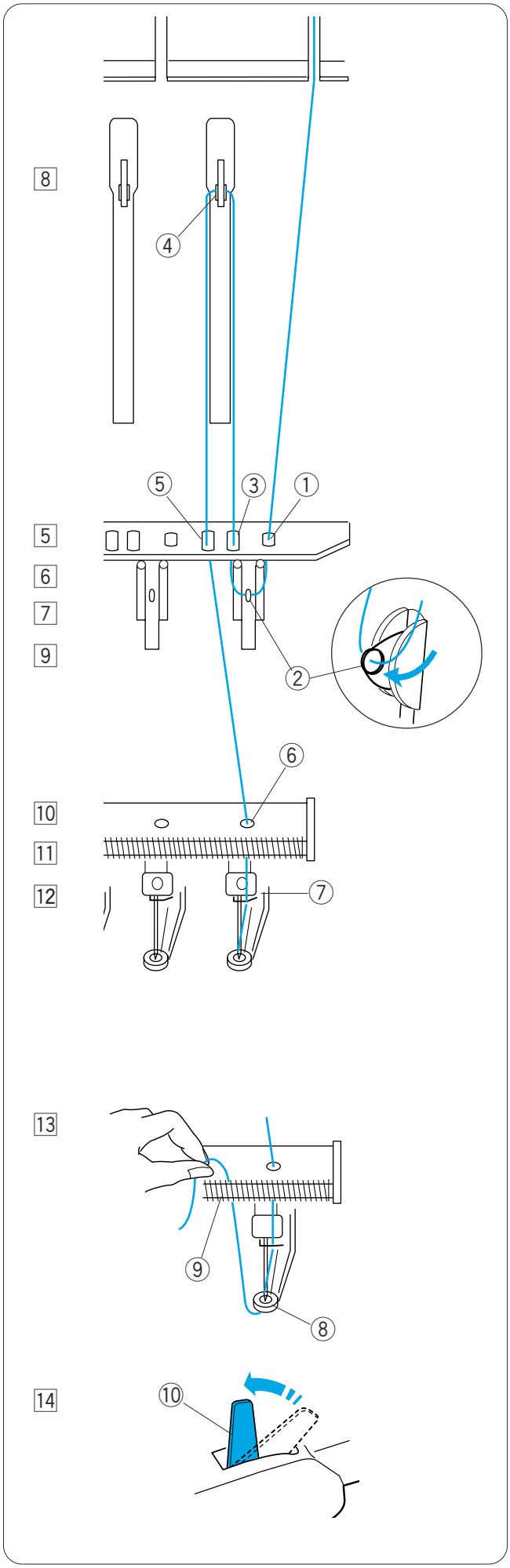
1 Place a thread cone on the front right spool pin.
Draw the thread up and pass it through the right hole in the thread guide bar from behind.
Slip the thread under the tension leaf.
- ① Hole in the thread guide bar
- ② Tension leaf

2 Draw the thread to the right pre-tension control.
Pass the thread through the guide hole from behind.
While holding the thread with both hands, slip the thread under the tension disk of the pre-tension control.
Hook the thread around the guide pin from right to left.
Make sure to insert the thread under the tension disk by tugging the thread.
- ③ Guide hole
- ④ Pre-tension control
- ⑤ Guide pin

NOTE:
Refer to the illustration for the thread path of each pre-tension.

3 Push back the tension release lever so the tension disk of the tension control will open.
- ⑥ Tension release lever
- ⑦ Tension control

4 Hold the thread with both hands and pull it down along the right channel.
- ⑧ Channel



5 Draw the thread down and pass it through the right hole in the guide plate.
① Right hole in the guide plate

6 Pass the thread through the eye of the right check spring.
② Eye of the check spring

7 Pull the thread up and pass it through the second hole from the right.
③ Second hole from the right

8 Continue to pull the thread up to the right take-up lever. Pass the thread through the eye of the take-up lever.
④ Take-up lever

9 Draw the thread down and pass it through the third hole from the right in the guide plate.
⑤ Third hole from the right

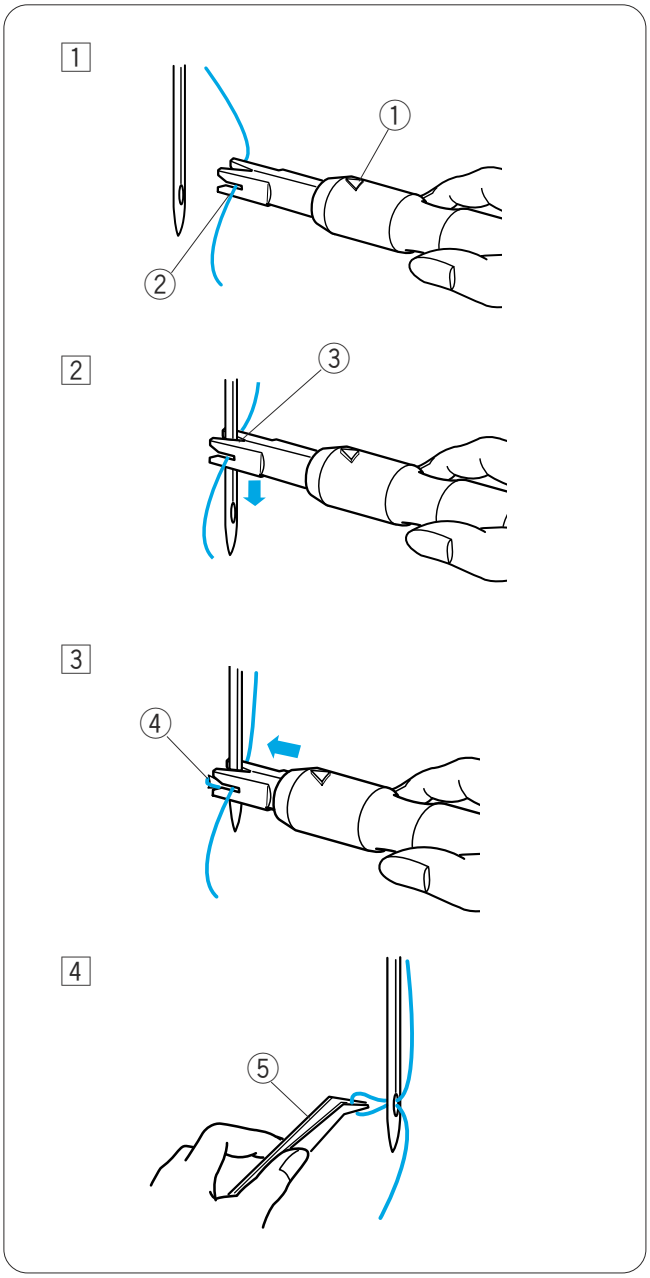
10 Continue to draw the thread down to the lower guide plate and pass the thread through the right hole.
⑥ Right hole in the lower guide plate

11 Hold the thread with both hand and slip the thread behind in the right needle bar thread guide.
⑦ Needle bar thread guide

12 Thread the needle with the handy needle threader (refer to the next page).

13 Pass the thread through the hole in the presser foot.
Draw the thread up and pinch the thread tail with the holder spring.
⑧ Hole in the presser foot
⑨ Holder spring

14 Pull up the tension release lever to close the tension disks.
⑩ Tension release lever



Threading the needle with the needle threader

1 Hold the needle threader with a triangle mark facing up. Insert the thread into the Y-notch of the threader from the right.

① Triangle mark

② Y-notch

2 Slide the threader down along the needle while pushing it gently until the threader pin goes into the needle eye.
Place the V-notch over the needle just above the needle eye.

③ V-notch

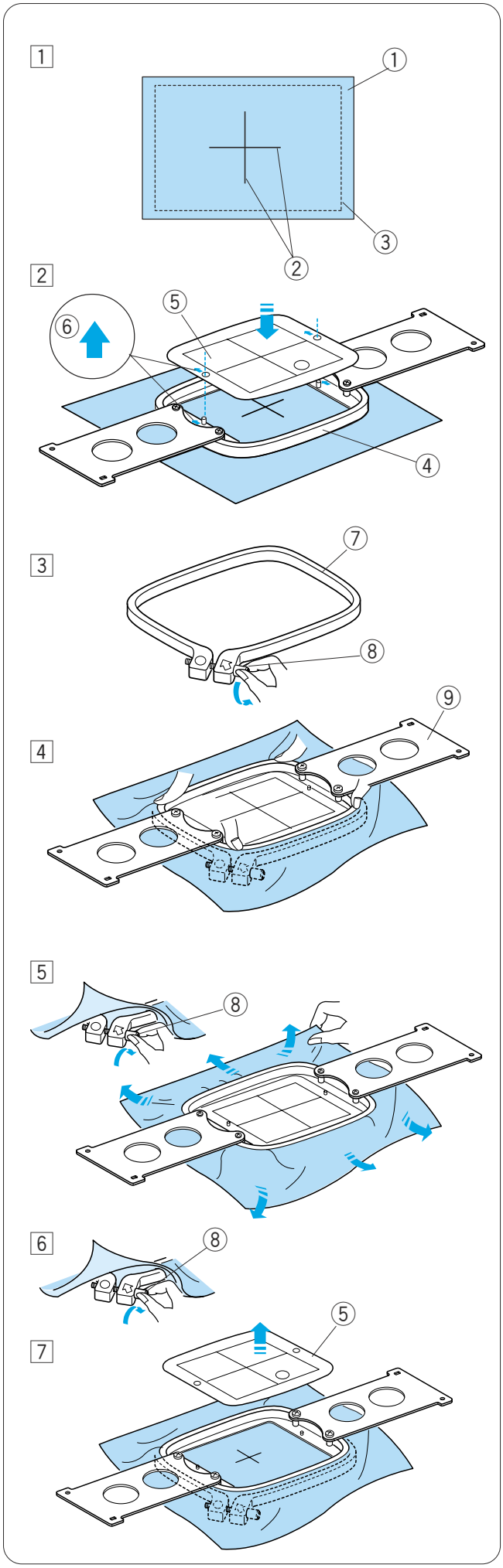
3 Push the threader until the threader pin comes out through the needle eye with a loop of thread.

④ Threader pin

4 Remove the threader from the needle slowly, leaving the thread loop behind the needle eye.
Using the tweezers, pull the loop of the thread out to the back.

⑤ Tweezers

Setting the Fabric in the Embroidery Hoop



1 Attach stabilizer to the wrong side of the fabric. Mark the centerlines for pattern placement on the right side of the fabric.
- ① Fabric
- ② Centerlines
- ③ Stabilizer

CAUTION:
Thick and hard materials such as multi-layer canvas may cause needle to warp or break.

2 Place the inner hoop with the template on the fabric. Make sure that the arrow marks on the hoop and template are facing away from you. Align the centerlines on the fabric and template.
- ④ Inner hoop
- ⑤ Template
- ⑥ Arrow mark

3 Loosen the hoop tightening screw on the outer hoop.
- ⑦ Outer hoop
- ⑧ Hoop tightening screw

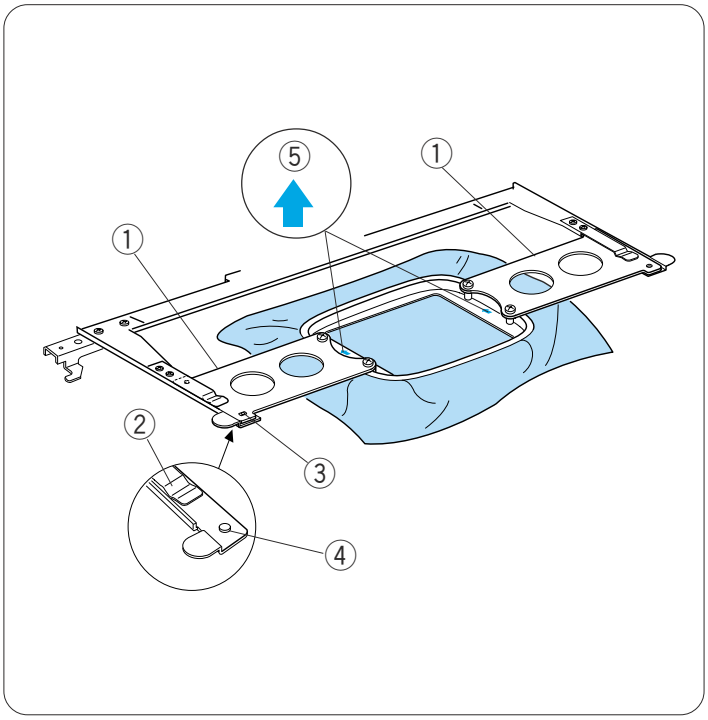
4 Hold the inner hoop and fabric together and push them into the outer hoop. Make sure to keep the centerlines aligned.
Do not push the setting plates, push the 4 corners of the inner hoop.
- ⑨ Setting plate

5 Tighten the hoop tightening screw slightly. Pull the edge of the fabric to stretch it drum-tight.

NOTE:
Make sure the bottom of the inner hoop is level with the outer hoop.

6 Tighten the hoop tightening screw securely.

7 Remove the template.



Setting the Embroidery Hoop

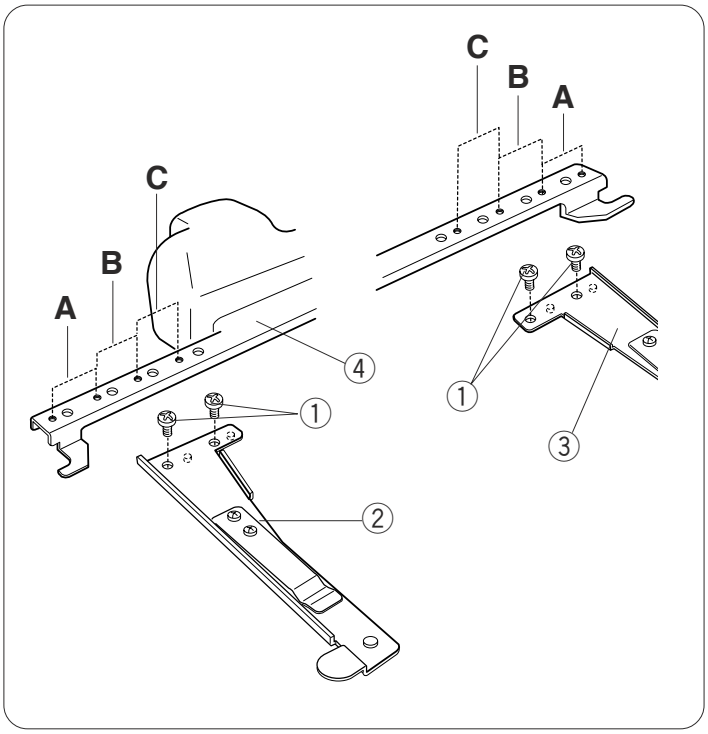
Hold the setting plate with both hands and insert them under the holder clips.
Slide the hoop on the hoop supporter until the holes catch the positioning pins on the hoop supporter.

① Setting plate
② Holder clip
③ Hole in the setting plate
④ Positioning pin

NOTES:
Do not set the hoop front-side back or upside down. The arrow mark on the inner hoop should face away from you.

⑤ Arrow mark

Be careful not to pinch the fabric edge under the hoop supporter.



Adjusting the Hoop Supporter for Optional Hoops

The hoop supporter provides 2 alternate positions to adapt optional hoops available on the market, such as Tajima's hoop.

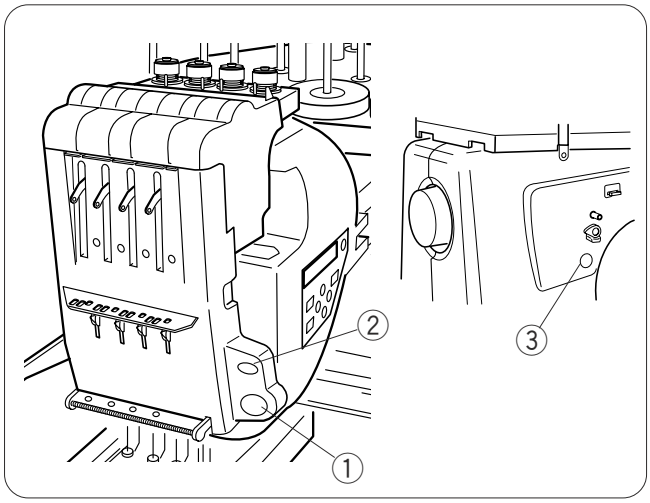
Remove setscrews on both left and right hoop supporter arms and remove them.

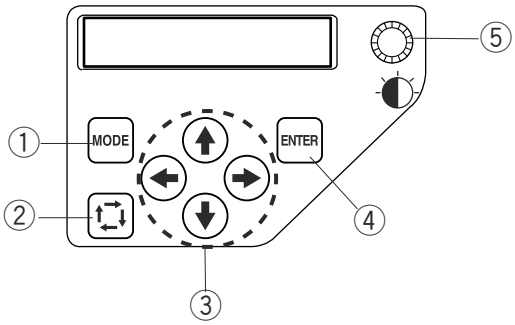
① Setscrew

Attach both hoop supporter arms to the hoop supporter bar in the position **B** or **C** depending on the hoop you wish to use.
Secure the supporter arms with the setscrews.

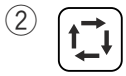
② Left hoop supporter arm
③ Right hoop supporter arm
④ Hoop supporter bar

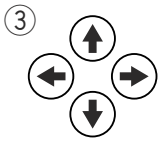
NOTE:
Position **A** is for the standard hoops.



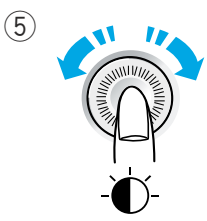












SECTION 2. BASIC OPERATION

Basic Operation with the Sub Control Panel

Machine operating buttons

① Start/Stop button
Press this button to start or stop the machine.
The button glows red when the machine is stitching, and green, when the machine has stopped.

② Auto thread cutter button
Press this button to trim the threads.

③ Bobbin winding button
Press this button to wind the bobbin.

Use the sub control panel to operate the machine without the RCS unit.

Function buttons

① MODE button
Press this button to select one of the following modes.

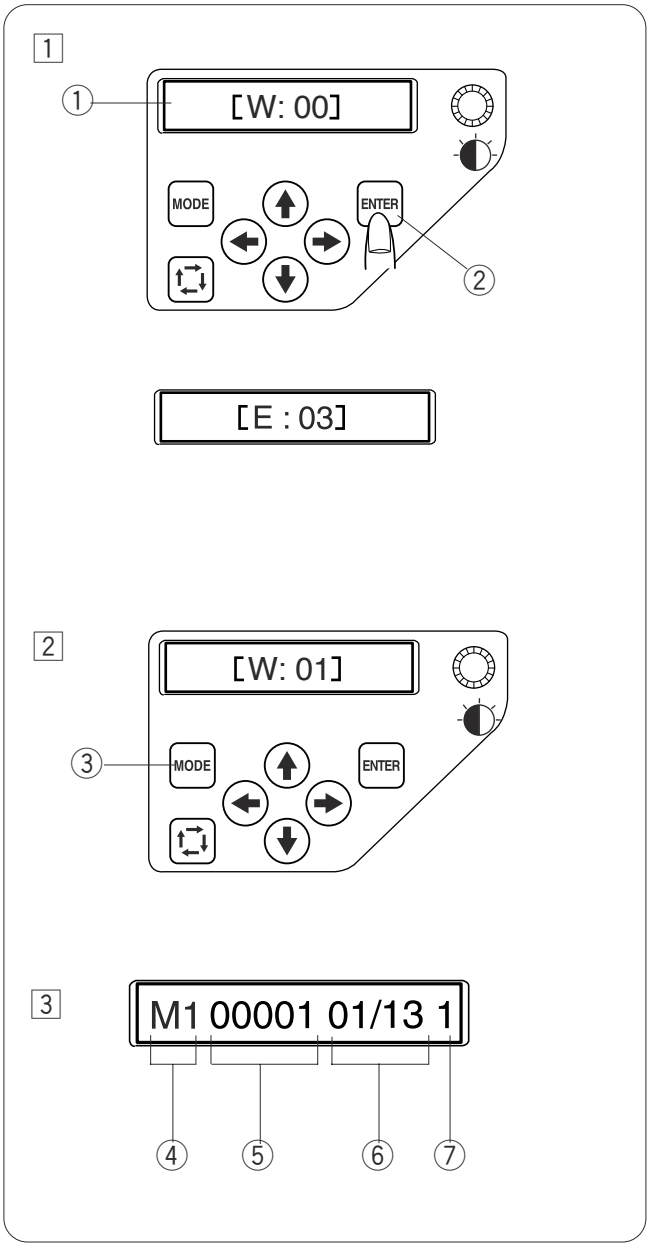
1. Ready to Sew
2. Stitch count setting
3. Color section setting
4. Needle bar number setting
5. Pattern selection
6. My setting

② Trace button
Press this button to trace the outline of the embroidery pattern without stitching.

③ Arrow buttons
These buttons can be used as Jog buttons in the Ready to Sew mode.
In other modes, these button are used for selecting the items.

④ ENTER button
Press this button to confirm your selection or register the settings.

⑤ LCD brightness adjusting dial
Turn this dial with your fingertip to adjust the brightness of the LCD screen.



LCD screen

1 When turning the power on, the LCD screen will show **[W:00]**.
Press the ENTER button and the hoop will move to the home position.

① LCD screen
② ENTER button

NOTE:
If the LCD screen shows **[E:03]**, press the ENTER button to initialize the needle bar position.
After initializing, the LCD screen will show **[W:00]**.

2 The LCD screen will show **[W:01]**.
Press the MODE button to start a new project or press the ENTER button if you wish to continue the last job before you turned the power off.

③ MODE button

3 The LCD screen will show the Ready to Sew mode display.
In the Ready to Sew mode, the LCD screen shows the following information.

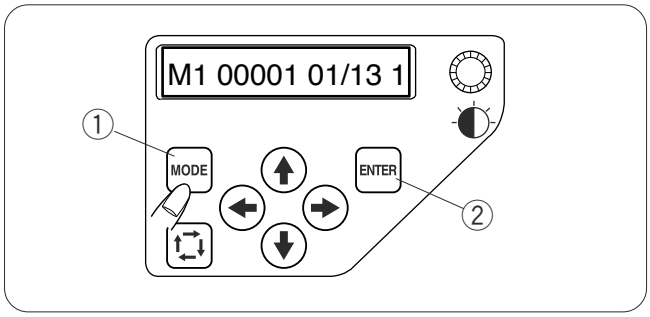
④ Hoop type
M1: MB Hoop 240 x 200
M2: MB Hoop 126 x 110
M3: MB Hoop 50 x 50

⑤ Stitch count

⑥ Color section
13: Total number of colors
01: Order number of the current color

⑦ Needle bar number

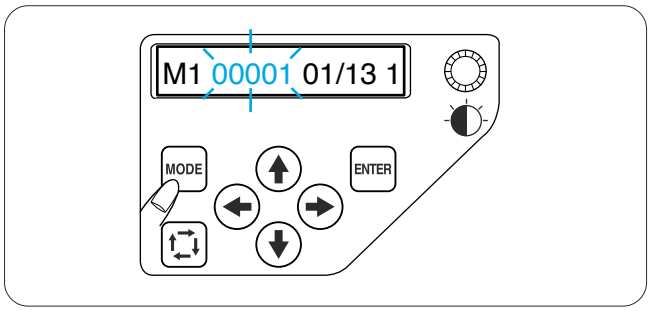
Machine Settings



Press the MODE button to select the item you wish to change the setting.
The selected item will blink.
Press the MODE button to select the next item or press the ENTER button to change the setting of the selected item.

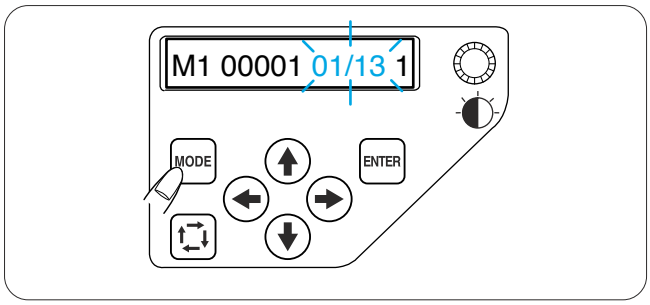
① MODE button
② ENTER button

Stitch count setting



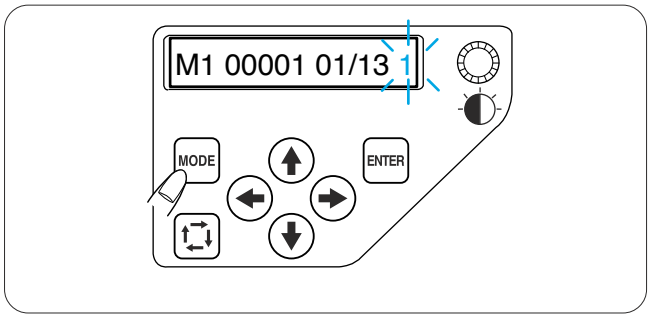
You can set the stitch count to where you wish to start sewing.
Press the MODE button to select the stitch count setting and press the ENTER button.
Press the upward or downward arrow buttons to change the stitch count value.
Press the ENTER button to register the new setting.

Color section (layer) setting



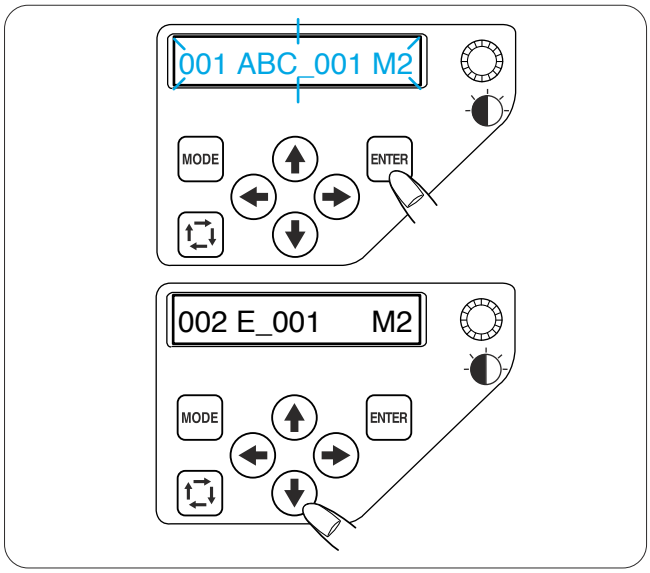
You can change the color section to where you wish to start sewing.
Press the MODE button to select the color section setting and press the ENTER button.
Press the upward or downward arrow buttons to select the desired section.
Press the ENTER button to register the new setting.

Needle bar number setting



You can select the needle bar to where you would like to begin sewing.
Press the MODE button to select the needle bar number setting and press the ENTER button.
Press the upward or downward arrow buttons to select the desired needle bar.
Press the ENTER button to register the new setting.

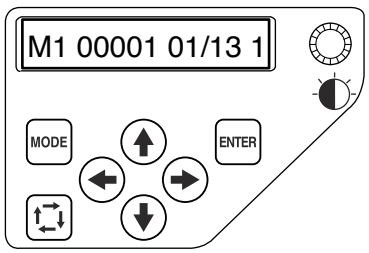
Selecting the Embroidery Pattern



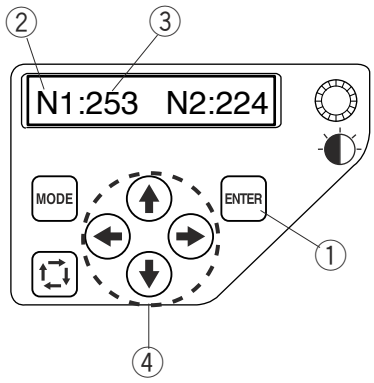
You need to save the data file of the embroidery pattern in the internal memory of the machine by using **Digitizer MB for multi-needle** or the RCS unit (optional items).

Press the MODE button to select the pattern selection mode and press the ENTER button.
Press the upward or downward arrow buttons to select the desired data file.
Press the ENTER button to confirm your selection.

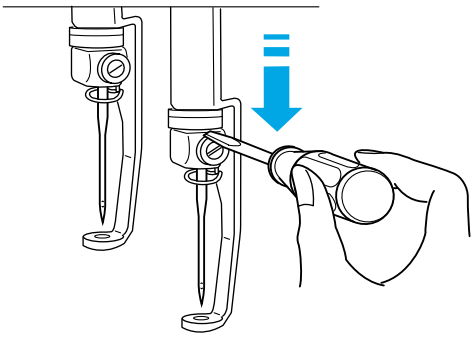
1



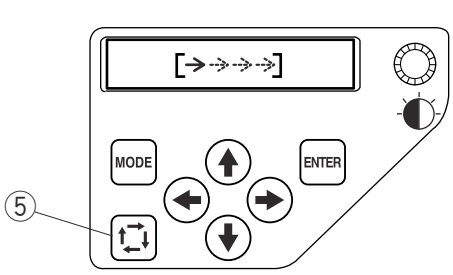
2

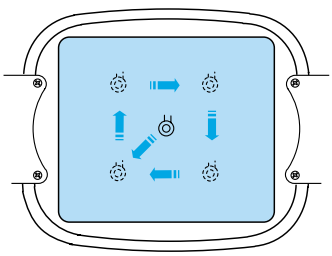


3



4





Starting to Embroider

1 Select the pattern you wish to sew. The LCD screen shows the Ready to sew mode display.

NOTE:
The embroidery result may vary depending on the fabric and threads used. Make a test embroidery using the same fabric and threads before sewing on the actual garment.

2 Press the ENTER button to check the thread color assigned to each needle bar. The screen will show the needle bar number and color code.

① ENTER button
② Needle bar number
③ Color code

Adjust the hoop position by pressing the arrow buttons if necessary.

④ Arrow buttons

3 To check the needle drop position, lower the needle bar with the small screwdriver so you can see the needle point closer to the fabric.

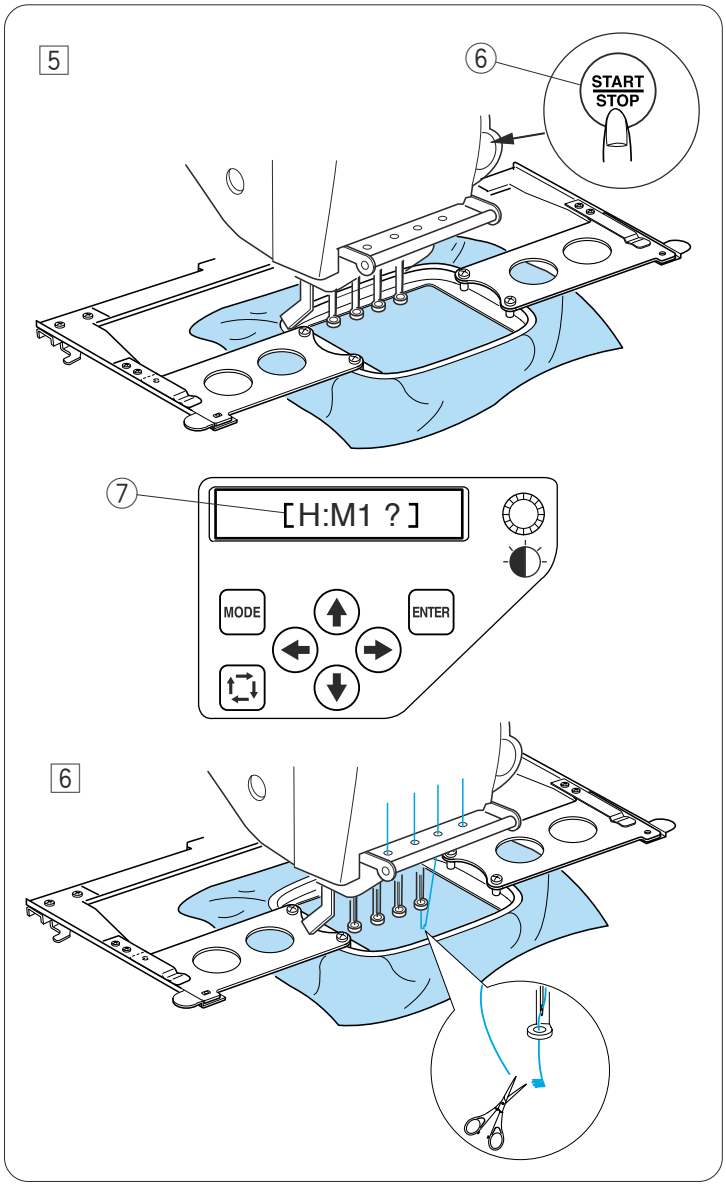
Push down the needle bar using the screwdriver while pressing it against the needle clamp as illustrated.
The needle bar can be lowered by turning the handwheel clockwise.

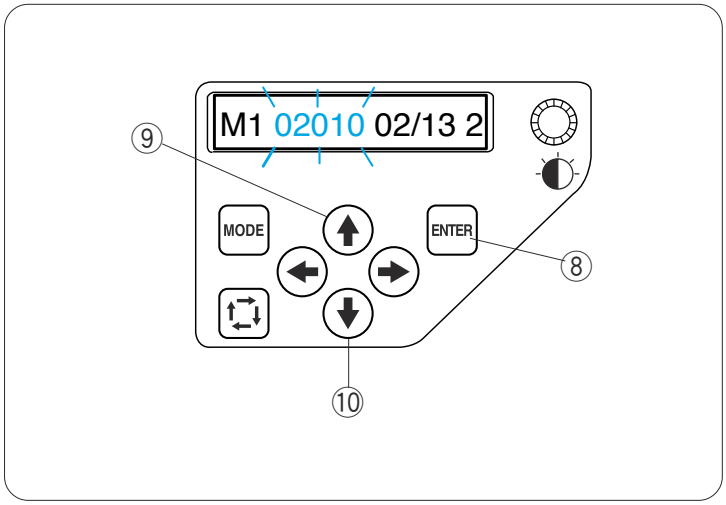
CAUTION:
Make sure to bring the needle bar and presser foot to the up position by pressing the auto thread cutter button before pressing the trace button or turning the machine off.

4 Press the trace button to check the size and position of the selected pattern against the hoop.

⑤ Trace button

NOTES:
If the embroidery area exceeds the hoop, replace the hoop with a larger one.
Check if the fabric edge will not obstruct the movement of the hoop.





5 Press the START/STOP button, the LCD screen will show the reminder asking you to confirm the hoop type to be used.

⑥ START/STOP button

⑦ Reminder display

NOTE:
If you press the START/STOP button when the tension release lever is in the open position, a warning sign [W:03] will appear.
Pull the tension release lever up to close the tension disk.

Check the hoop size and press the START/STOP button again to sew a few stitches.

6 Press the START/STOP button to stop the machine.
Trim the thread at the beginning.

Then, press the START/STOP button again. The machine will sew up to the fourth color and stop automatically.

Re-thread each needle with the next color and press the START/STOP button to continue sewing.

If the thread breaks or runs out while stitching, the machine will automatically stop and the hoop will go back to the position where the thread broke or ran out.
However, you can fine-tune the restarting position by moving the hoop.

Press the ENTER button to select the stitch count setting.

⑧ ENTER button

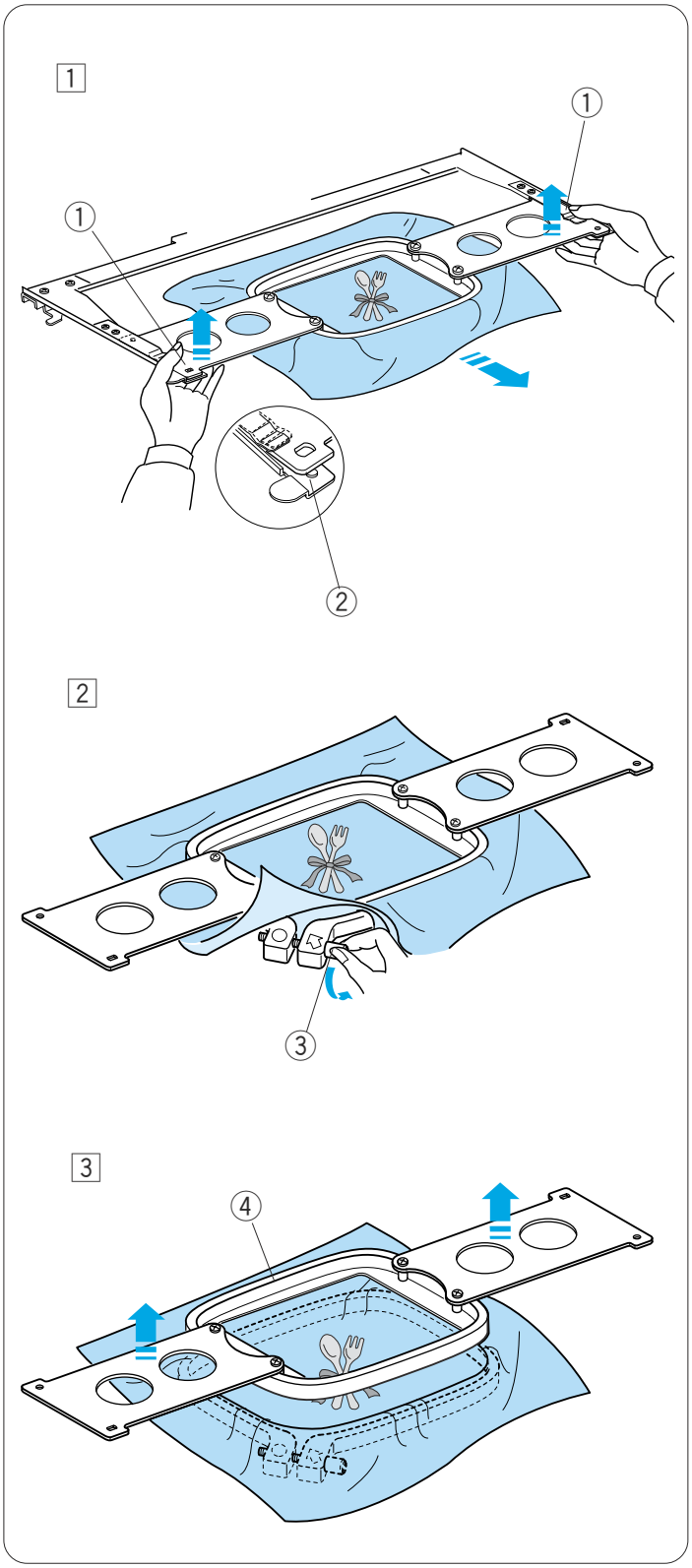
Press the upward arrow button to move the hoop forward. Press and hold the button to move the hoop faster.

⑨ Upward arrow button

Press the downward arrow button to move the hoop backward. Press and hold the button to move the hoop faster.

⑩ Downward arrow button

Removing the Hoop



1 Hold the setting plates with both hands and lift the front side of the setting plates to release them from the positioning pins. Slide the hoop toward you and remove it from the machine.

① Setting plate

② Positioning pin

2 Loosen the hoop tightening screw.

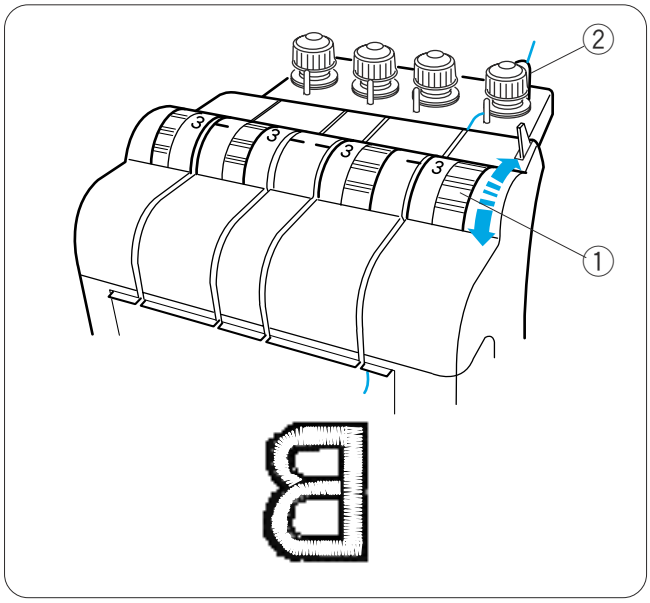
③ Hoop tightening screw

3 Remove the inner hoop and the fabric.

④ Inner hoop

NOTE:
Before you turn the machine off, make sure to bring the needle bar to up position by pressing the Auto thread cutter button.

Adjusting the Thread Tension



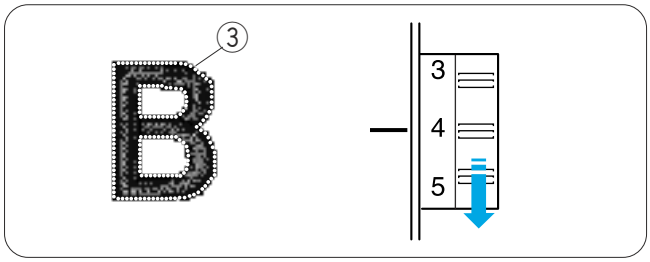
Adjusting the needle thread tension

Adjust the needle thread tension by turning the tension dial so that a small amount of the needle thread shows on the wrong side of the fabric.

① Tension dial

NOTE:
If the thread kinks while stitching, turn the pre-tension dial clockwise slightly to eliminate kinks.

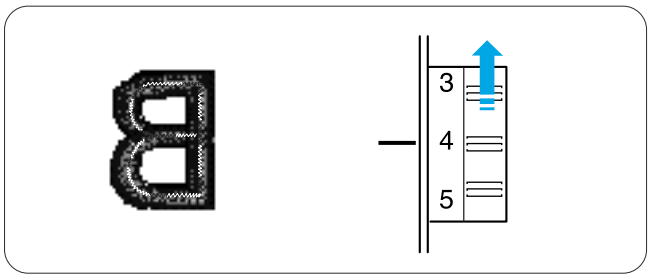
② Pre-tension dial



Tension is too tight

If the needle thread tension is too tight, the bobbin thread shows on the right side of the fabric.
Reduce the tension by turning the tension dial to a lower number.

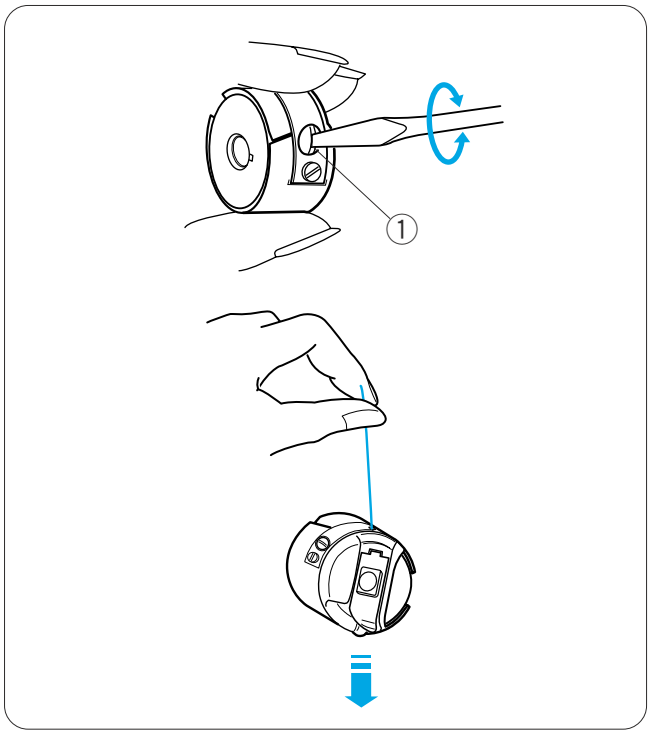
③ Bobbin thread



Tension is too loose

If the needle thread tension is too loose, the needle thread forms loops and the stitches look shaggy.
Tighten the tension by turning the tension dial to a higher number.

Adjusting the bobbin thread tension



To tighten the bobbin thread tension, turn the adjusting screw clockwise.

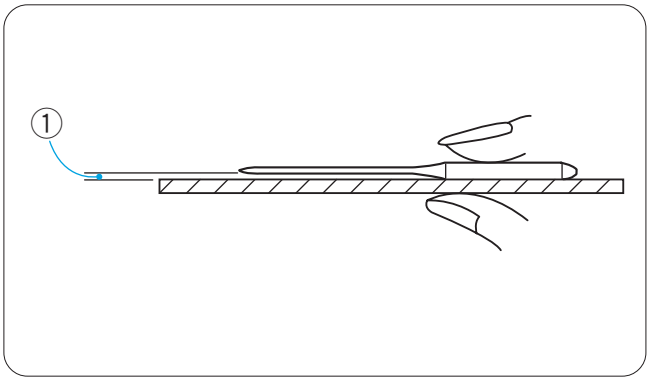
To loosen the bobbin thread tension, turn the adjusting screw counterclockwise.

After the adjustment, test the tension by jerking the bobbin case with the thread end held by hand.
The bobbin case should be falling slowly.

NOTE:
When adjusting the tension, turn the adjusting screw slightly since the adjustment is sensitive.

① Adjusting screw

Replacing the Needle



⚠ WARNING:
Always make sure to turn the power off before replacing the needle.

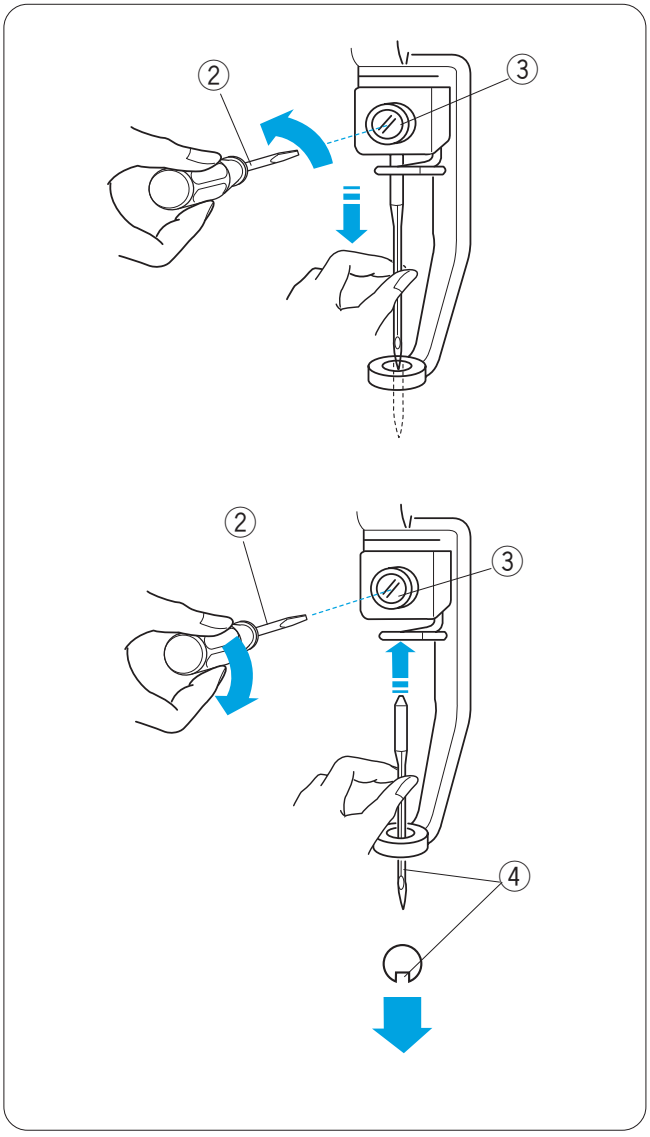
Checking the needle

Check the needle regularly and replace it with new one if it is bent or dull.

To check the straightness of the needle, place it onto something flat. The gap between the needle shaft and the flat surface should be consistent.

① Gap

⚠ CAUTION:
Do not use the bent or blunt needle.
The bent needle can cause it to break.



Replacing the needle

Loosen the needle clamp screw with the small screwdriver included in the standard accessory.
Pull the needle out from the needle clamp.

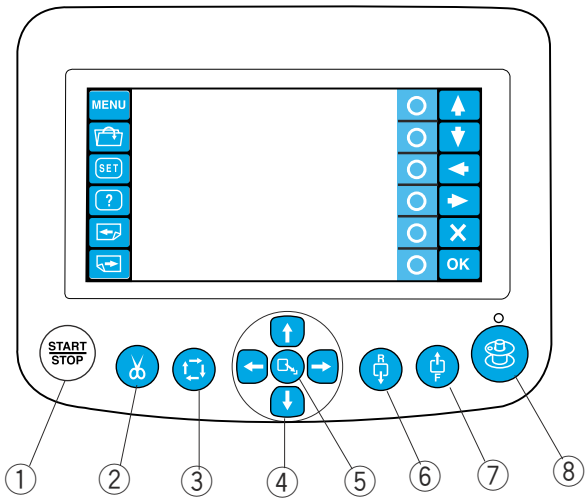
② Small screwdriver
③ Needle clamp screw

Insert a new needle into the needle clamp with the long groove facing you.
Push the needle up as far as it will go and tighten the needle clamp screw securely with the screwdriver.

④ Long groove

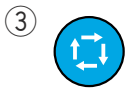
NOTE:
Use the DB x K5Q1-NY, size 11 needles.
(Part number 770811000)

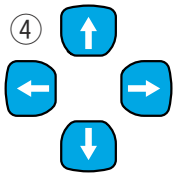
Machine operating buttons



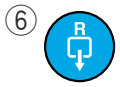


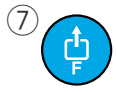


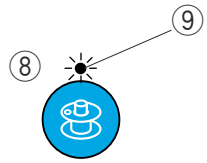












① Start/Stop button
Press this button to start or stop the machine.
The button glows red when the machine is stitching, and green, that the machine has stopped.

② Auto thread cutter button
Press this button to trim the threads.

③ Trace button
Press this button to trace the outline of the embroidery pattern without stitching.

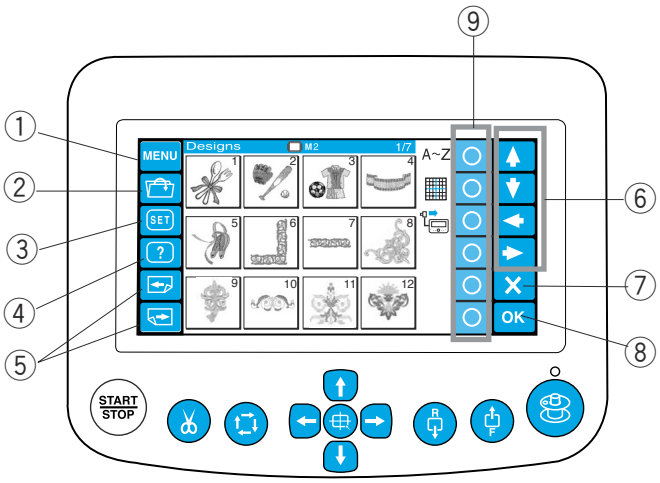
④ Jog buttons
Press these buttons to move the hoop for precise positioning.

⑤ Carriage centering button
Press this button to move the carriage to the center position.

⑥ Stitch back button
Press this button to move the hoop backward.
Press and hold the button to move the hoop faster.

⑦ Stitch forward button
Press this button to move the hoop forward.
Press and hold the button to move the hoop faster.

⑧ Bobbin winding button
Press this button to wind the bobbin.
The indicator lights up while winding the bobbin.
⑨ Indicator



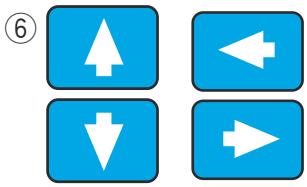












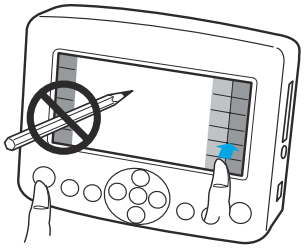






Function keys

CAUTION:
Do not press the LCD touch panel with hard or sharp pointed objects like pencils, screwdrivers or the like.



Press the LCD touch panel and buttons gently. Rough or forceful pressing may damage the unit.

① **MENU key**
Press this key to assign mode selection to the circle keys.
There are 4 modes available.
- Built-in design selection
- Monogramming
- Editing
- Disconnecting the RCS unit

② **File open key**
Press this key to open the embroidery data files saved in the various location.

③ **SET key**
Press this key to enter the My setting mode.

④ **Help key**
Press this key to open the help movie menu.

⑤ **Page keys**
Press the previous page key to show the previous display.
Press the next page key to show the next display.

⑥ **Arrow keys**
Press these keys to select the next item in the direction of arrow.

⑦ **Exit key**
Press this key to close the current window and return to the previous window.

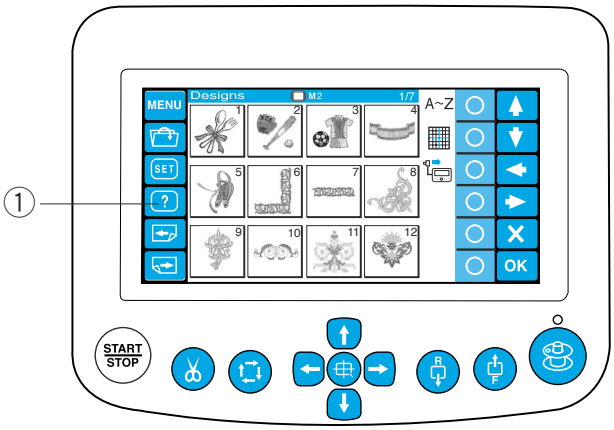
⑧ **OK key**
Press this key to confirm your selection or register the settings you have made.

⑨ **Circle keys (Function keys)**
The icon next to each circle key indicates the function assigned to that key.
These keys carry out different functions in different situations.

On-screen Help Movie

Press the help (?) key to open the help movie menu. You can view 6 help topics of essential operations.

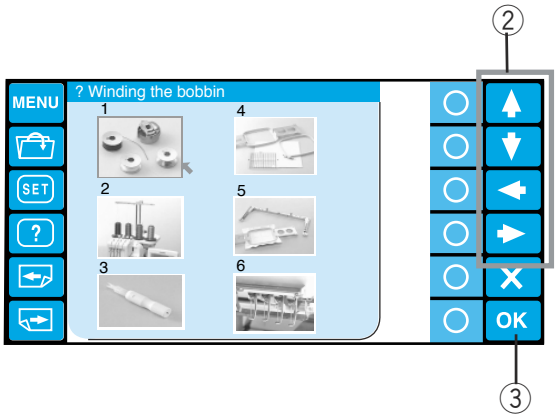
① Help key



Select the help topic you wish to view by pressing the arrow keys and press the OK key.

② Arrow keys

③ OK key



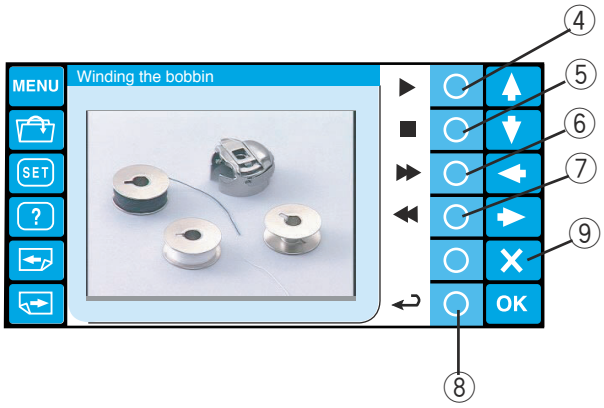
Press the circle key next to the playback icon to start the help movie. Press the circle key next to the stop icon to stop playing.
You can search the movie in forward or reverse direction by pressing the circle key next to the fast forward or rewind icon.

④ Circle key (playback)

⑤ Circle key (stop)

⑥ Circle key (fast forward)

⑦ Circle key (rewind)



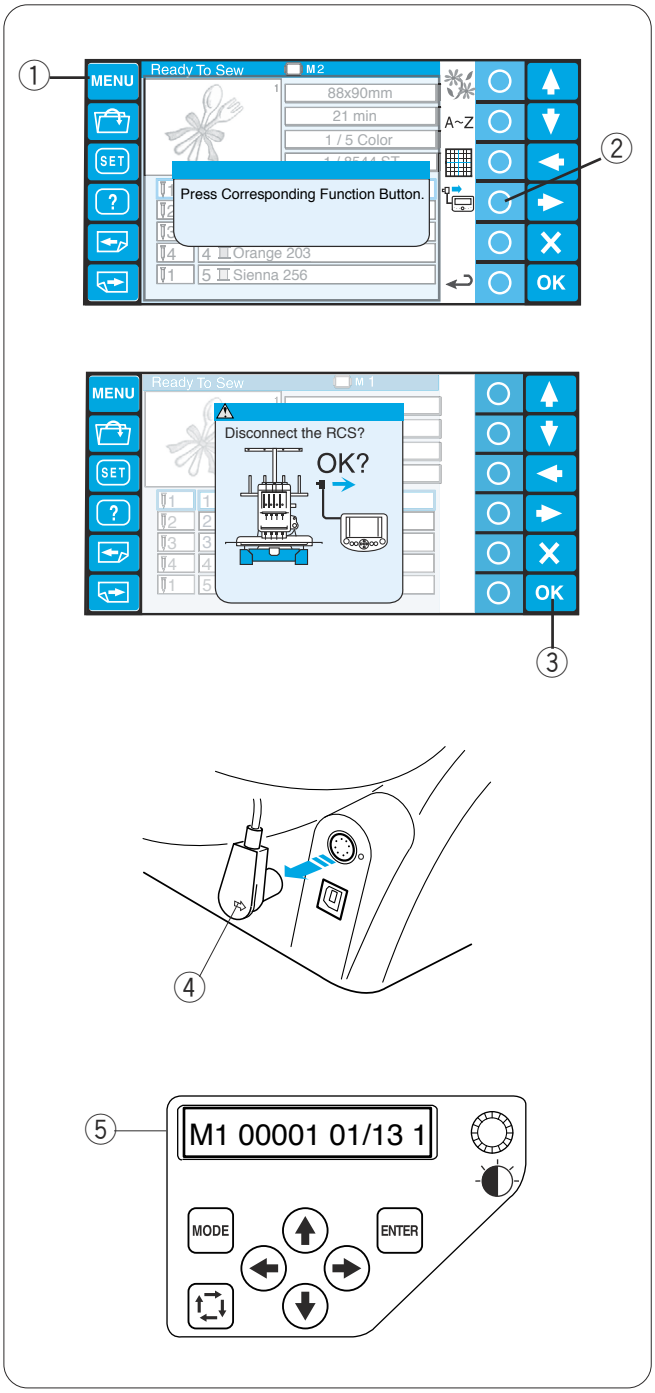
Press the circle key next to the return icon to go back to the help menu or press the exit (X) key to exit the help mode.

⑧ Circle key (return)

⑨ Exit key

NOTE:
The machine you have purchased may differ from the one depicted in the help movie due to updating or improvement.

Disconnecting the RCS Unit



You can use the RCS unit to control two or more machines.
After setting up the first machine, press the MENU key and press the circle key next to the RCS icon.

① MENU key
② Circle key (RCS)

The confirmation dialog box will open.
Press the OK key and the LCD touch panel turns off.

③ OK key

Disconnect the RCS connector from the machine.

④ RCS connector

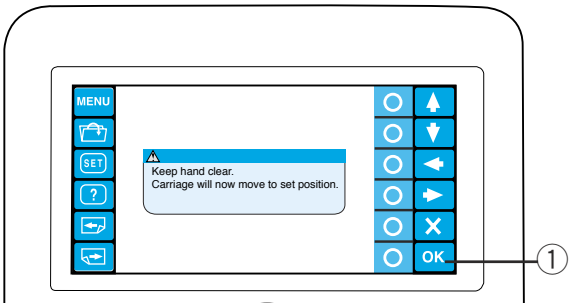
The LCD screen of the sub control panel will display the setting corresponding to the LCD touch panel of the RCS unit.

⑤ Sub control panel

SECTION 3. ADVANCED OPERATION WITH THE OPTIONAL RCS UNIT

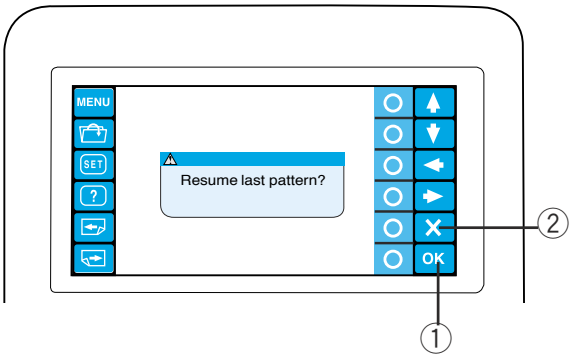
Selecting the Embroidery Patterns

When turning the power on, the LCD touch panel will show the opening window, then a warning message will appear after a few seconds.



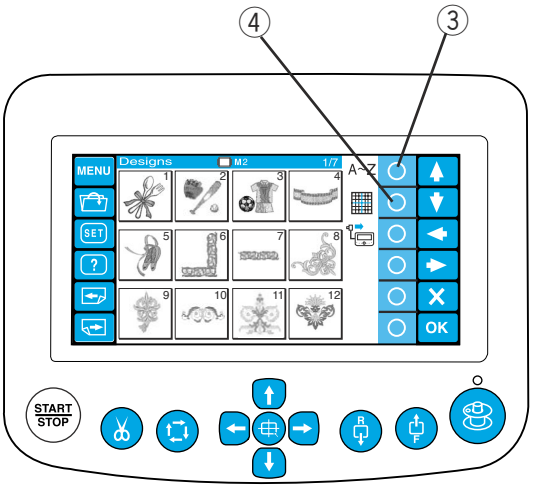
Press the OK key and the carriage will move to the home position. Keep your hands clear of the moving parts.

① OK key



The LCD touch panel will show a prompt asking you to resume the last pattern or not.
Press the OK key, if you wish to continue sewing the last pattern used before you turned the power off.
Or press the exit (X) key to start a new job.

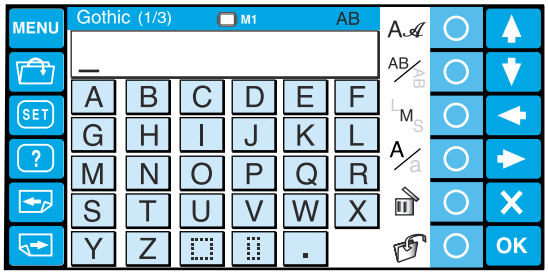
② Exit key (X)



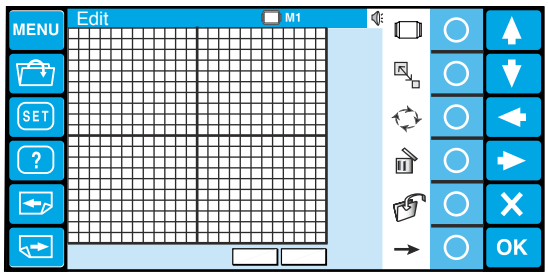
When you press the exit (X) key, the LCD touch panel will show the pattern selection window of the built-in designs.

To select the monogramming or editing mode, press the circle key next to the monogram or editing icon.

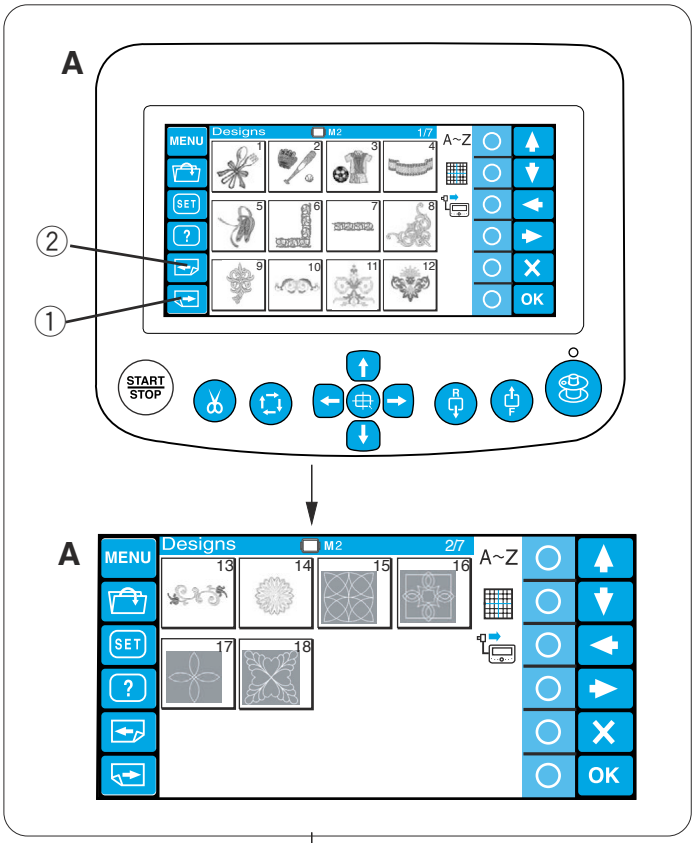
③ Circle key (monogramming)
④ Circle key (editing)

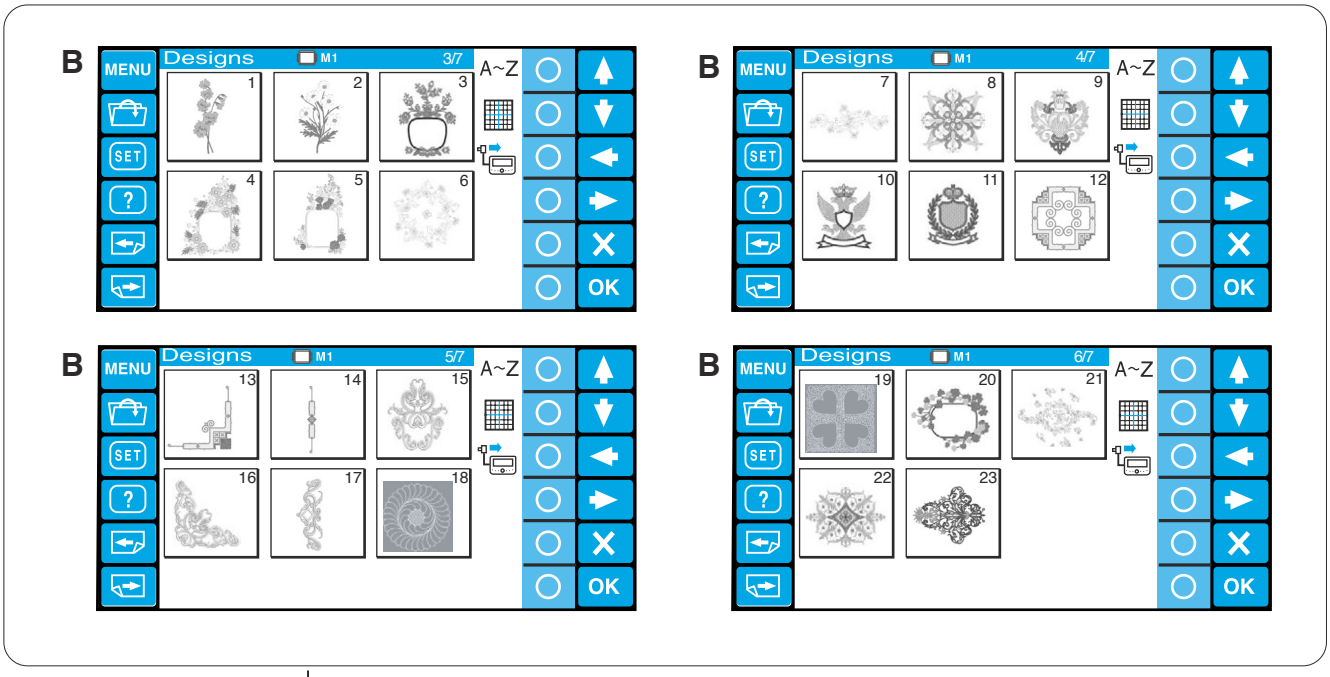


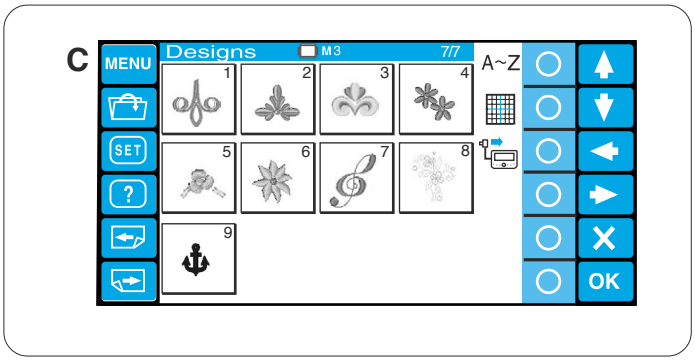
In the monogramming mode, you can select 10 styles of font, 2-letters, 3-letters and border patterns.



In the editing mode, you can modify and combine embroidery patterns imported from various sources including the built-in designs, PC-Design cards, CD-ROM and free design form Internet.







Selecting the built-in designs

There are 50 ready to sew embroidery designs categorized by hoop size.

To view the designs on the next page, press the next page key.

① Next page key

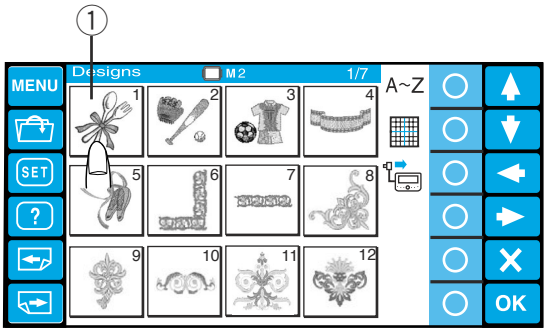
Press the previous page key to go back to the previous page.

② Previous page key

A: The designs on pages 1/7 to 2/7 are those for the hoop M2 (MB Hoop 126 x 110).

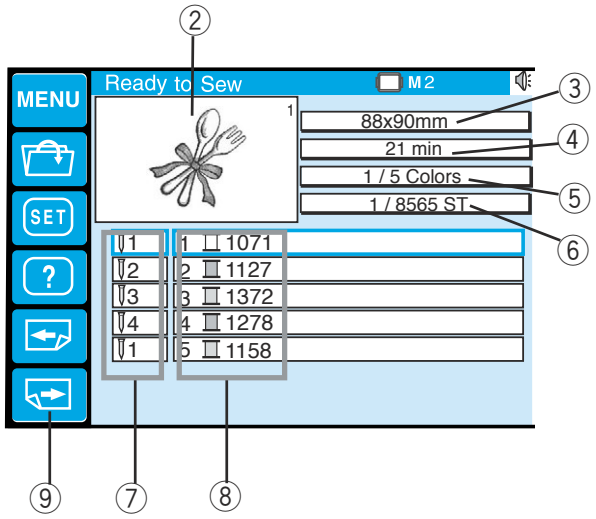
B: The designs on pages 3/7 to 6/7 are those for the hoop M1 (MB Hoop 240 x 200).

C: The designs on page 7/7 are those for the hoop M3 (MB Hoop 50 x 50).



Press the pattern selection key and the Ready to sew window will open.

① Pattern selection key

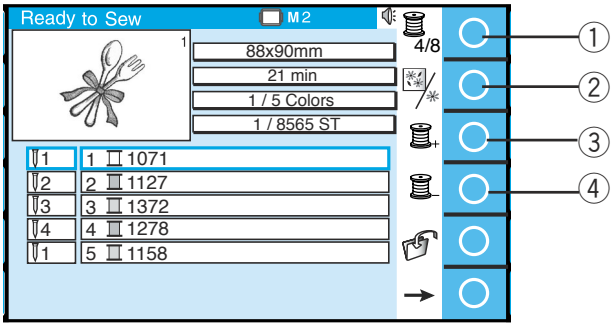


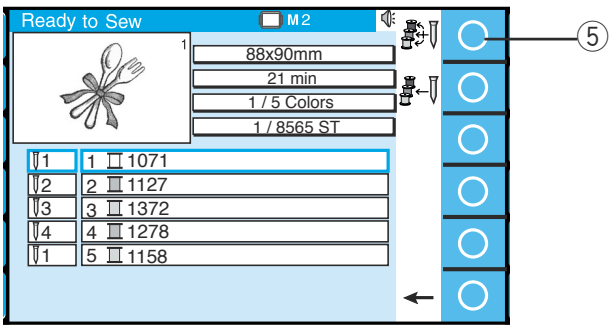
The stitch image of the selected pattern and a list of the thread color assignment to each needle bar along with the sewing information are displayed on the screen.

② Stitch image
③ Design size
④ Sewing time in minutes
⑤ Total thread colors required
⑥ Total stitch count
⑦ Needle bar number
⑧ Assigned thread color to the needle bar

Press the next page key to show the remaining colors of the list.

⑨ Next page key





Function keys (circle keys)

Color list option

Press the circle key next to the color list icon to switch display between 4 colors and 8 colors.

① Circle key (color list option)

Press the circle key next to the color section icon to show the complete stitch image or the selected color section only

② Circle key (color section)

Color section (layer) setting

You can select the color section from where you wish to start sewing.

Press the circle key next to the next section (a spool with "+") icon to select the next section.

③ Circle key (next section)

Press the circle key next to the previous section (a spool with "–") icon to select the previous section.

④ Circle key (previous section)

The selected color section will be indicated with a red frame.

Automatic color assignment

If you open a Tajima embroidery file (*.DST), which does not have color information, you need to assign the colors to all the sections.

To assign the colors automatically, press the circle key next to the auto color assignment icon.

⑤ Circle key (auto color assignment)

Manual color assignment

Thread colors are automatically assigned to the needle bar in the optimum order.
However, you can change the color assignment manually.

If a new pattern has a thread color that is same as one of the colors previously sewn, you may change the color assignment manually so you do not need to re-thread the needle bar which is already threaded with the color to be used in the new pattern.

1 Select the color section of which color is the same as that of the previously sewn pattern by pressing the circle key next to the next or previous color section icon.

① Circle keys (next/previous section)

2 Press the circle key next to the manual color assignment icon and the function assignment to the circle keys will change.

② Circle key (manual color assignment)

3 Press the circle key next to the icon of the needle bar to which you wish to assign the previously sewn color.

③ Circle key (needle bar)

4 To return to the previous function key assignment, press the circle key next to the return icon.

④ Circle key (return)

5 Select the color section where you wish to stop the machine for re-threading by pressing the circle key next to the next or previous color section icon.

① Circle keys (next/previous section)

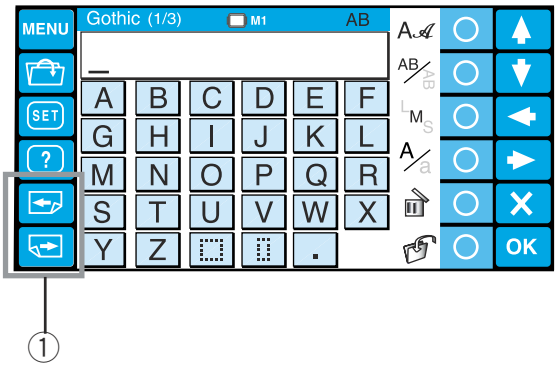
6 Press the circle key next to the manual color assignment icon, then press the circle key next to the stop icon.
The machine will stop for changing the threads to the next colors, after finishing the fourth color.

⑤ Circle key (stop)

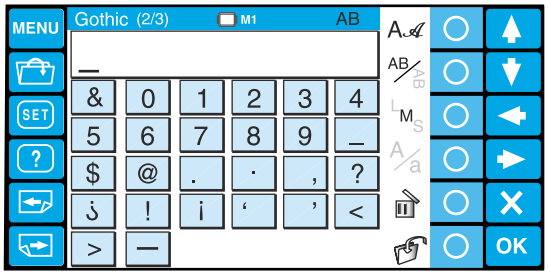
Monogramming

There are 3 pages of the monogramming window. Press the page key to show the next or previous page.

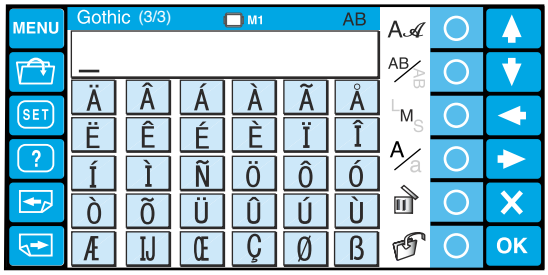
① Page keys



Page 1: Roman alphabets and spaces



Page 2: Numerals, punctuation marks and symbols



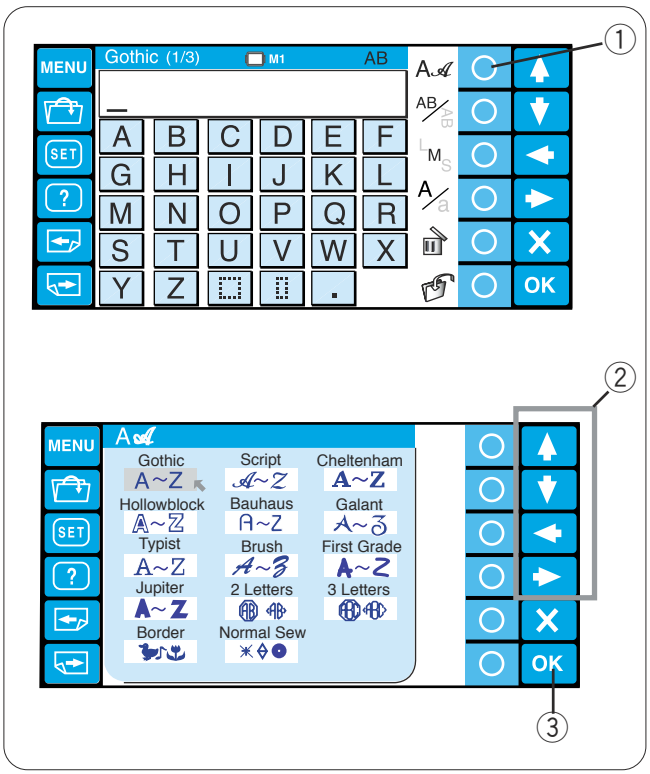
Page 3: Dieresis and European accented letters

Function keys

Font selection

Press the circle key next to font icon to open the font selection window.

① Circle key (font selection)



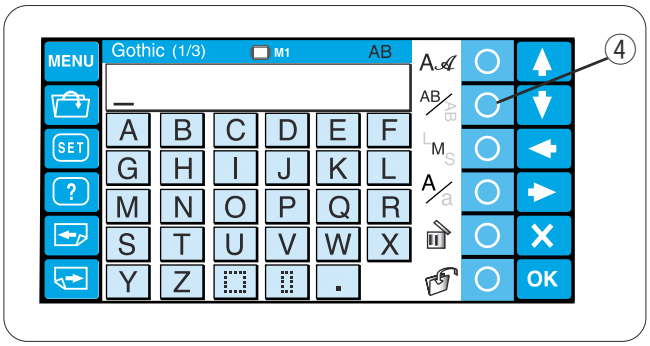
Press the arrow keys to select the desired font or border patterns.

The selected font will be indicated with a red arrow.

Press the OK key to confirm your selection.

② Arrow keys

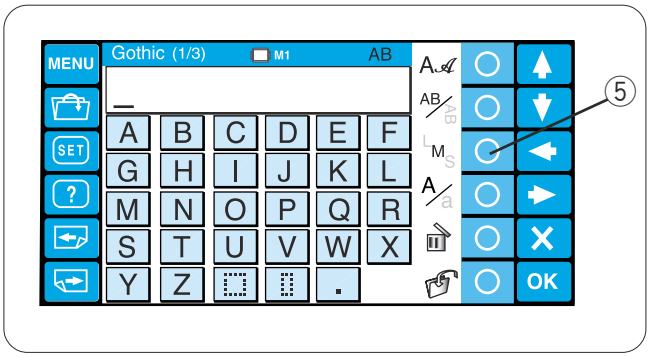
③ OK key



Lettering orientation

Press the circle key next to orientation icon to select horizontal or vertical orientation alternately.

④ Circle key (lettering orientation)



Letter size

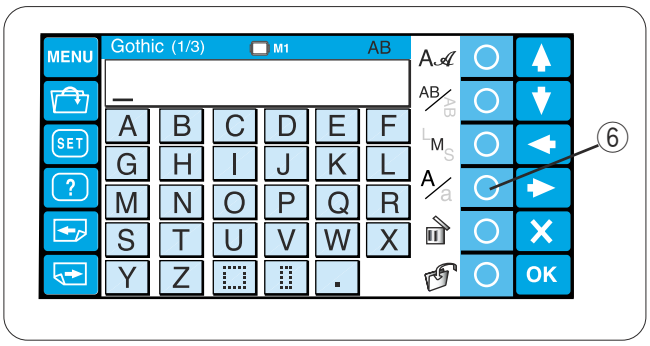
Press the circle key next to letter size icon (LMS) to select one of 3 sizes of lettering.

L: 30 mm

M: 20 mm

S: 10 mm

⑤ Circle key (letter size)

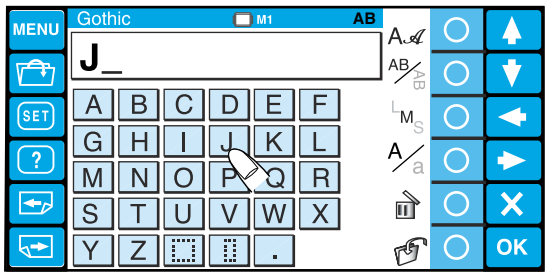


Letter case

Press the circle key next to letter case icon (A/a) to select upper or lower case letters alternately.

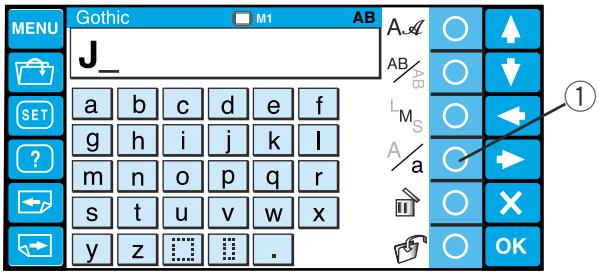
⑥ Circle key (letter case)

Entering the characters



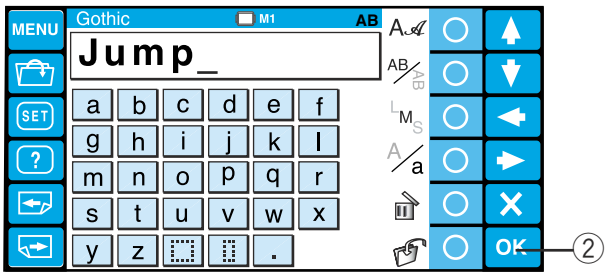
Example: **“Jump”** in Gothic font

Select Gothic font.
Press the desired alphabet key to enter characters.
Enter upper case **“J”**.



Press the circle key next to the letter case icon to switch to the lower case.

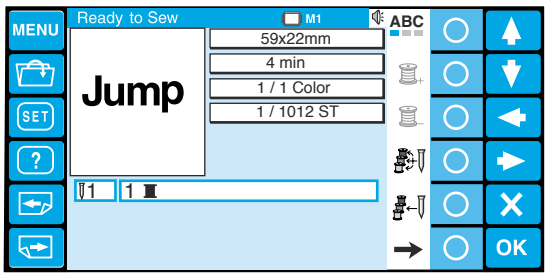
① Circle key (letter case)



Enter lower case **“u”**, **“m”** and **“p”**.
Press the OK key to sew the monogram.

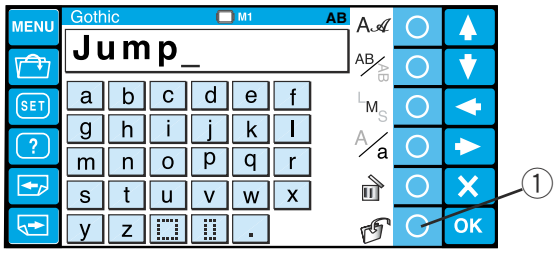
② OK key

NOTE:
To save the monogram, see below.



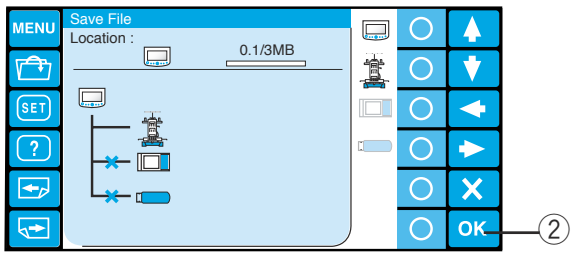
The Ready to sew window will open.

Saving the monogram



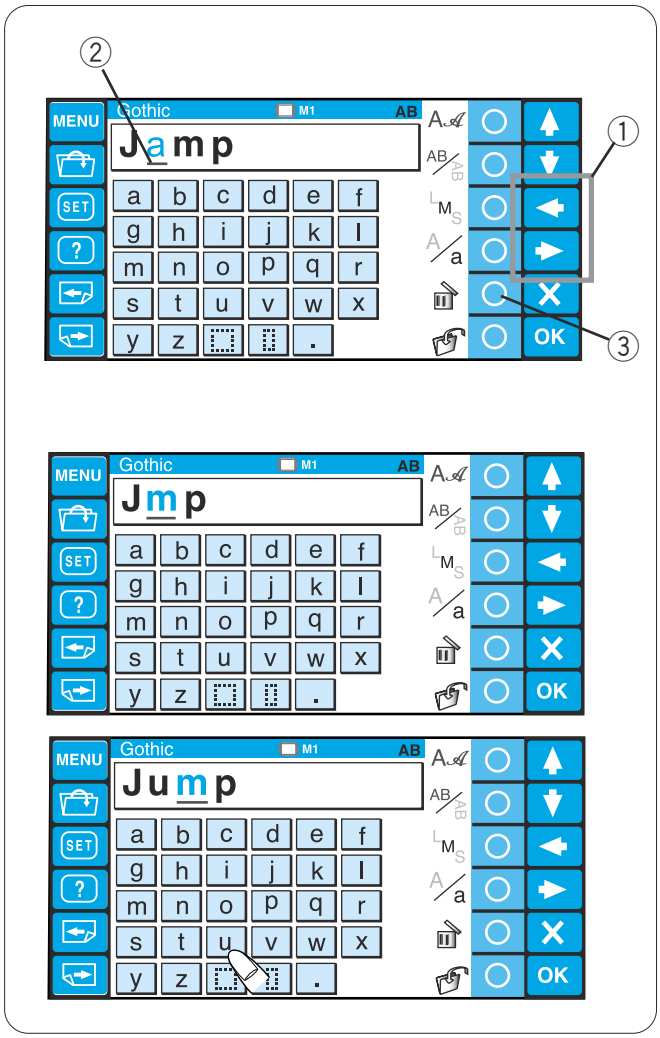
You may save the monogram as a data file.
After entering the characters, press the circle key next to the save file icon.

① Circle key (save file)



The save file window will open.
Select the memory location to where you wish to save the monogram and press the OK key (refer to pages 75-76 for more instructions).

② OK key



Correcting the text

To delete a character:

Press the arrow key to move the cursor under the character to delete.

Press the circle key next to the delete icon.

① Arrow keys

② Cursor

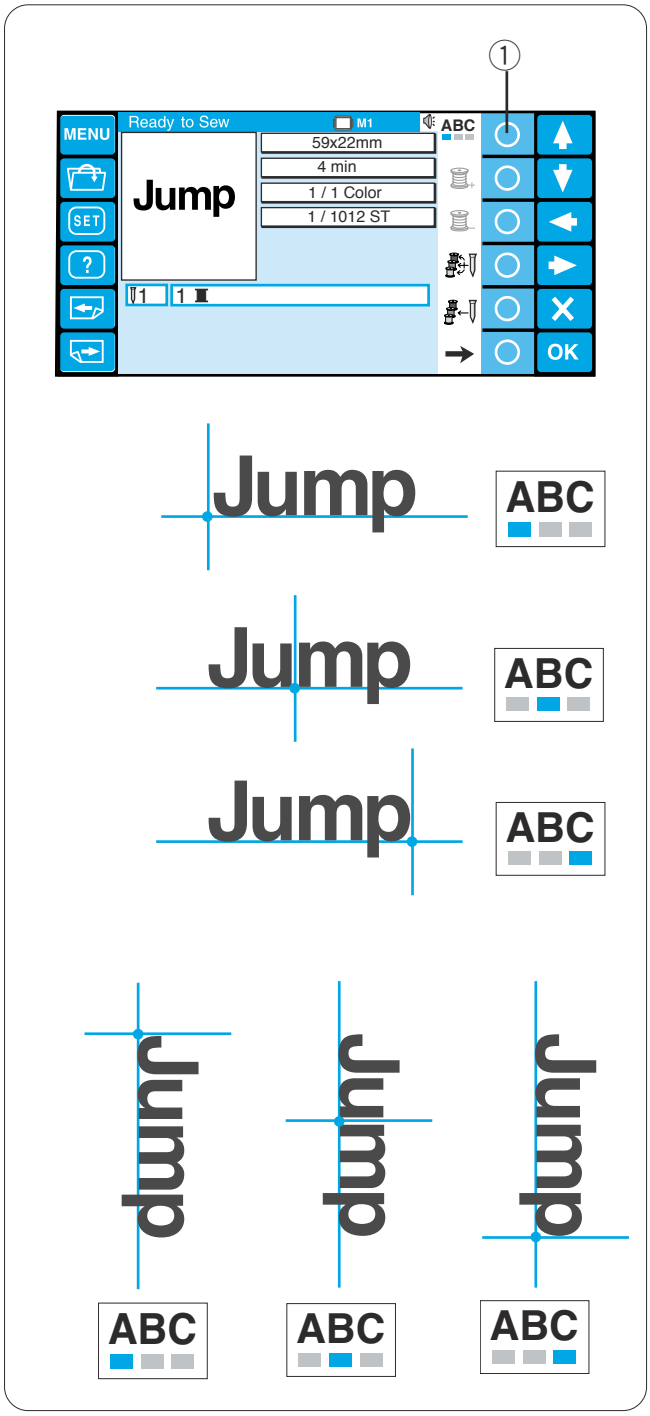
③ Circle key (delete)

To insert a character:

Press the arrow key to move the cursor under the character next to the place to where you wish to insert a character.

Enter the desired character.

The character will be inserted before the cursor.



Placement of monogramming

You can select from one of the 3 placements for monogramming.

Press the circle key next to the placement icon to select the left justify, center justify or right justify alternately.

① Circle key (delete)

Horizontal orientation

ABC : Left justify

ABC : Center justify

ABC : Right justify

Vertical orientation

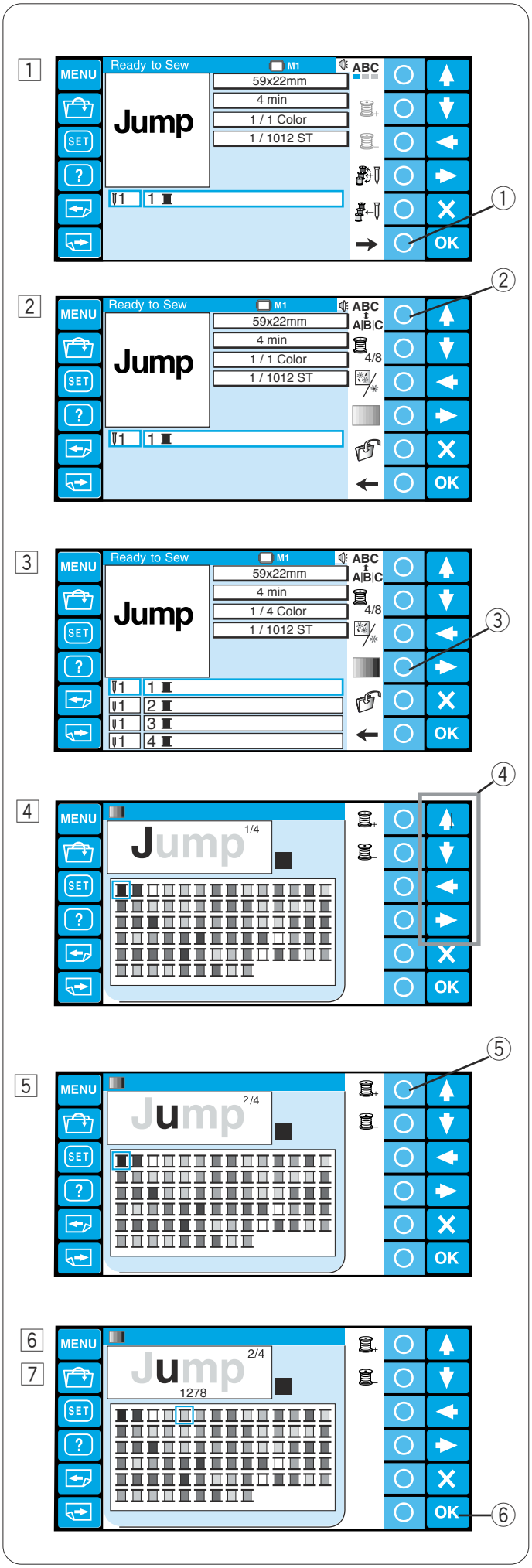
ABC : Top justify

ABC : Center justify

ABC : Bottom justify

Multi-color monogramming

You can sew a multi-color monogramming by assigning different thread color to each character.



1 Press the circle key next to the right arrow icon to show the alternate function key assignment.
① Circle key (right arrow)

2 Press the circle key next to the separation icon.
② Circle key (separation)

3 The color list will appear.
Press the circle key next to the automatic color assignment icon to assign temporary colors to the needle bars (refer to page 38).
Press the circle key next to the custom color icon.
③ Circle key (custom color)

4 The color palette will open.
Select the desired color from the color palette by pressing the arrow key.
④ Arrow keys
The icon of the selected color will be indicated with a red frame and the code number and name of the color will be displayed under the stitch image.

5 Press the circle key next to the next color section icon.
⑤ Circle key (next color section)

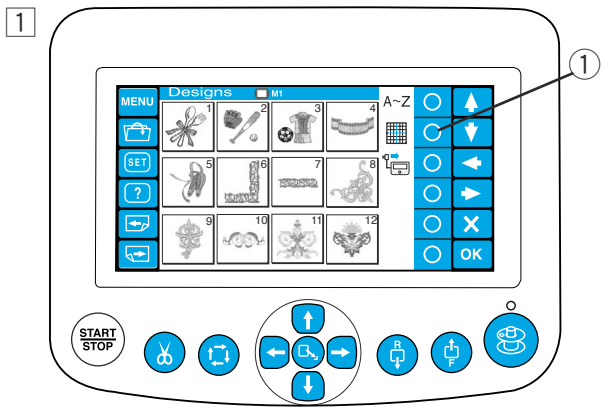
6 Select the desired color for the second color section.
Repeat the steps 5–6 to assign the colors to all characters.

7 Press the OK key to confirm the color setting.
⑥ OK key

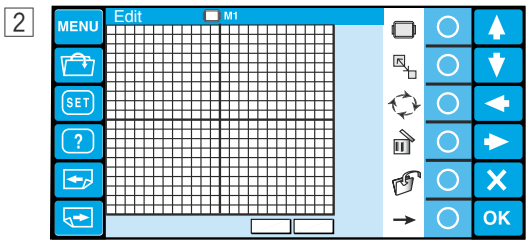
Editing

In the editing mode, you can modify and combine the embroidery patterns and monograms.

1 Press the circle key next to the editing icon.
① Circle key (editing)

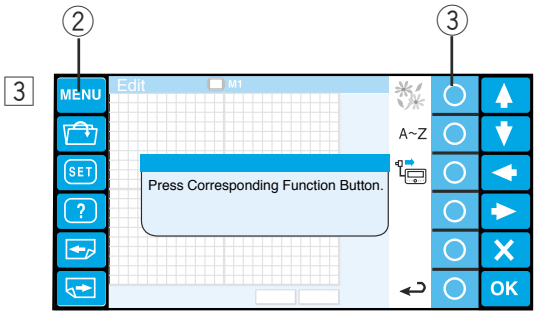


2 The editing window will open.

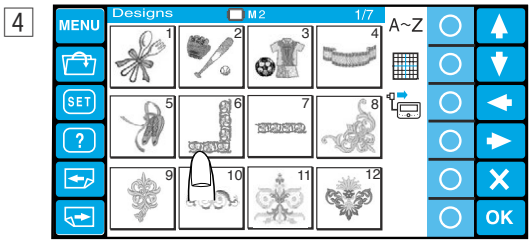


3 Press the MENU key and press the circle key next to the built-in icon to import the built-in patterns.
② MENU key
③ Circle key (built-in)

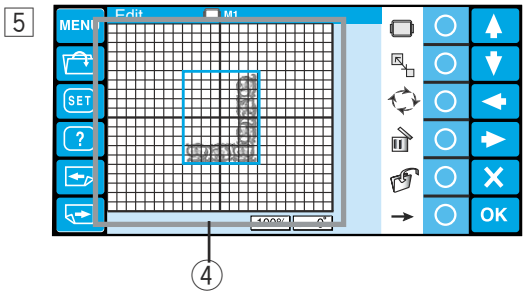
You can also import the monogramming and patterns from other sources such as the ATA PC card, USB etc.

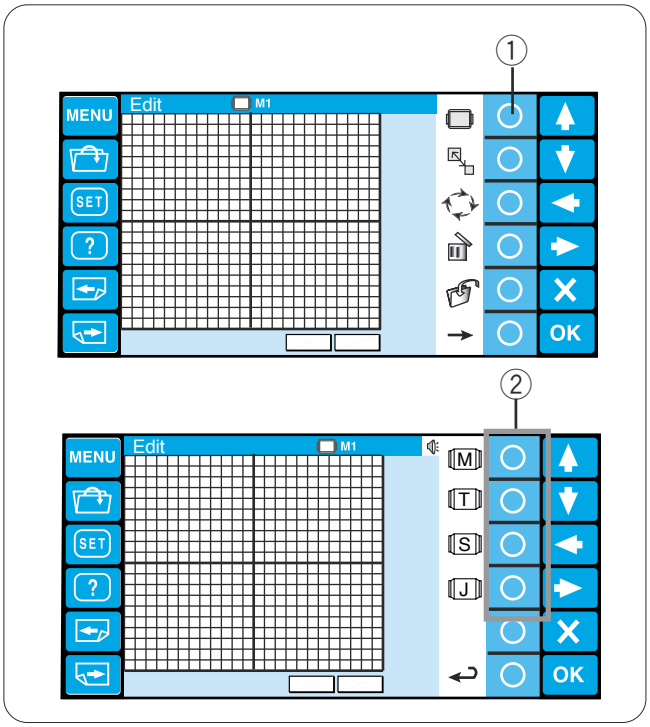


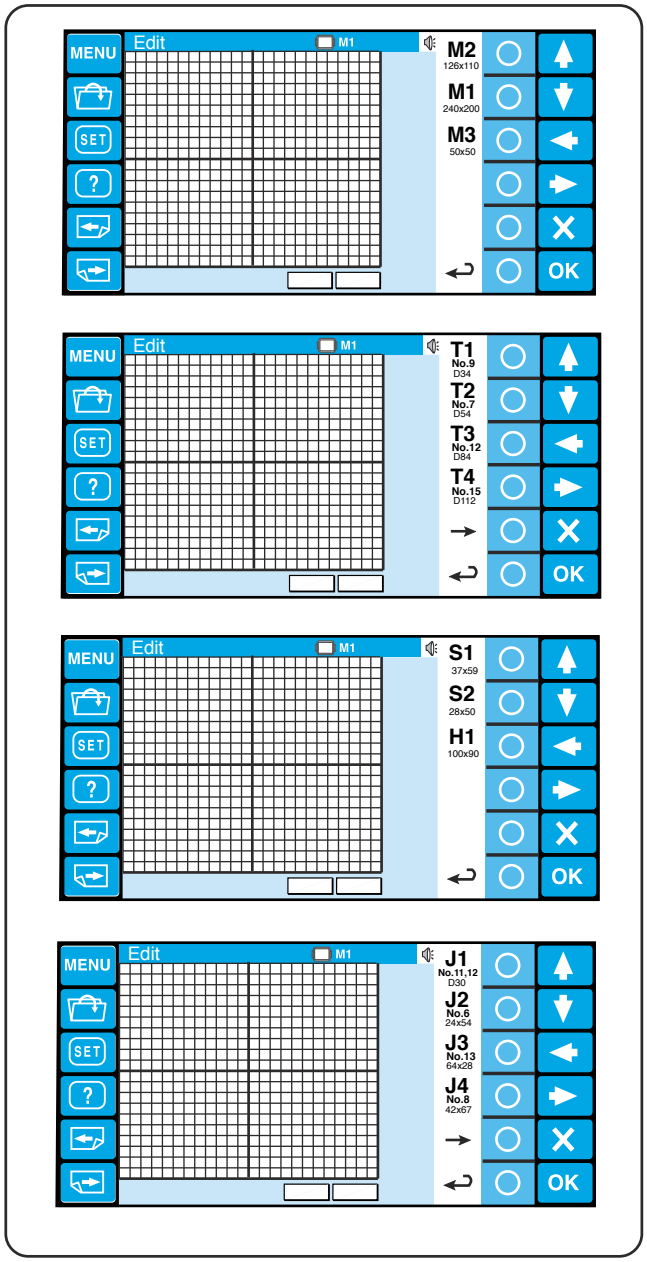
4 Select the desired pattern to import.



5 The editing window will open and the imported pattern will appear in the editing screen.
④ Editing screen







Editing Functions

Selecting the hoop

Press the circle key next to the hoop icon.

① Circle key (hoop)

The function key assignment will change to the hoop type selection.
The following hoop types are available:
Ⓜ : MB hoops
Ⓣ : Tajima hoops (optional item)
Ⓢ : Socks and Hat hoops (optional item)
Ⓙ : Monogram hoops (optional item)

Press the circle key next to the icon of the desired hoop type.

② Circle key (hoop type)

Then select the desired hoop by pressing the corresponding function key.
The editing screen will change to the selected hoop size.

The following hoops can be selected:

Standard hoops

M1: MB Hoop 240 x 200
M2: MB Hoop 126 x 110
M3: MB Hoop 50 x 50

⚠ CAUTION:
Select the appropriate hoop for the size and purpose of embroidery pattern.
Using a wrong hoop may result it hitting the foot.

Optional Tajima hoops

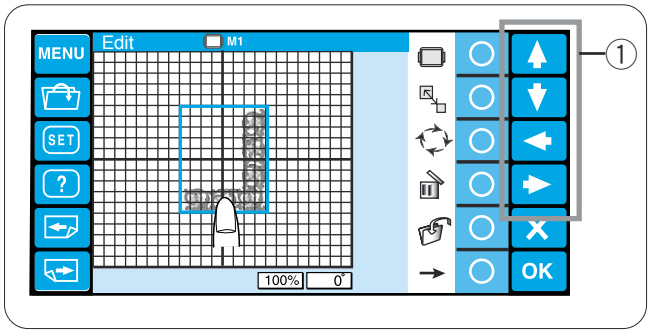
T1: Tajima hoop 34 mm dia. (933100239A00*)
T2: Tajima hoop 54 mm dia. (933100439A00*)
T3: Tajima hoop 84mm dia. (933100639A00*)
T4: Tajima hoop 112 mm dia. (933100839A00*)
T5: Tajima hoop 142 mm dia. (933101039A00*)
T6: Tajima hoop 78 x 168 mm (933200239A00*)
(*Tajima part number)

Optional special hoops

S1: Socks hoop 37 x 59 mm
S2: Socks hoop 28 x 50 mm
H1: Flat hat hoop 100 x 90 mm

Optional monogram hoops (hoop adapter reruired)

J1: No. 11Monogram hoop 30 mm dia.
J1: No. 12 Monogram hoop 30 mm dia.
J2: No. 6 Monogram hoop 24 x 54 mm
J3: No. 13 Monogram hoop 64 x 28 mm
J4: No. 8 Monogram hoop 42 x 67 mm
J5: No. 3 Monogram hoop 46 x 46 mm
J6: Nos. 2, 9 Monogram hoop 66 x 66 mm
J7: No. 1 Monogram hoop 110 x 95 mm
J8: No. 7 Monogram hoop 120 x 121 mm

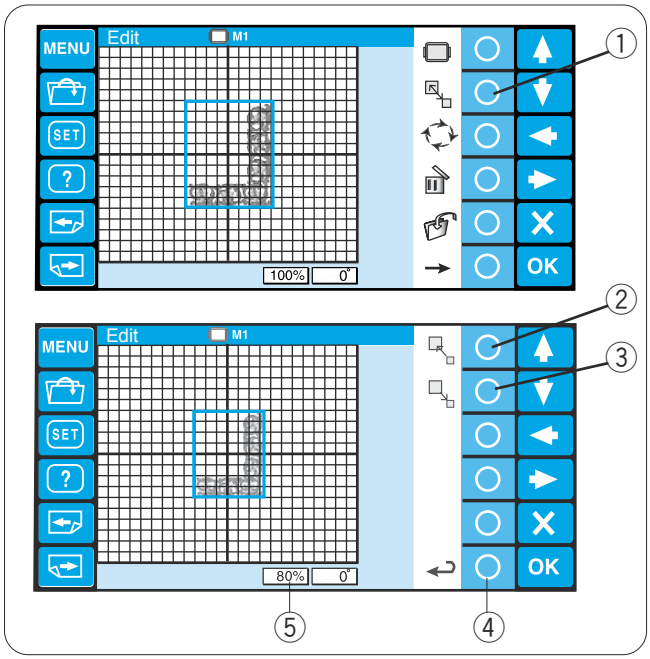


Moving the pattern

To move the pattern on the editing screen, press and drag the pattern to the desired location with your fingertip.

You can move the selected pattern also by pressing the arrow keys.

① Arrow keys



Resizing the pattern

Press the circle key next to resize icon and the function key assignment will change to resizing.

① Circle key (resize)

Press the circle key next to the enlarge icon to enlarge the pattern size.

② Circle key (enlarge)

Press the circle key next to the reduce icon to reduce the pattern size.

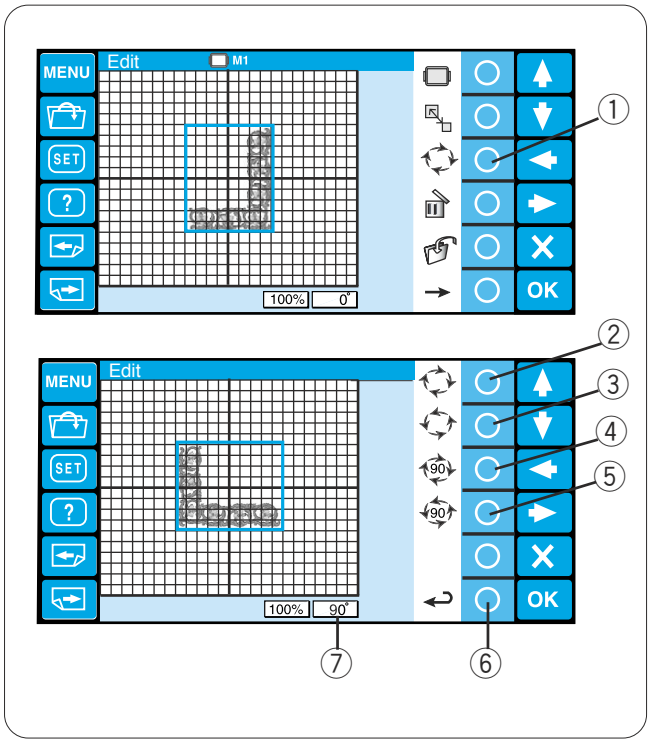
③ Circle key (reduce)

Press the circle key next to the return icon to go back to the previous display.

④ Circle key (return)

The pattern size will change from 80 to 120%.
The size of the pattern is indicated in the status box under the editing screen.

⑤ Status box



Rotating the pattern

Press the circle key next to the rotate icon and the function key assignment will change to rotation.

① Circle key (rotate)

Press the circle key next to the rotate clockwise icon to rotate the pattern 1 degree clockwise.

② Circle key (rotate CW 1 deg.)

Press the circle key next to the rotate counterclockwise icon to rotate the pattern 1 degree counterclockwise.

③ Circle key (rotate CCW 1 deg.)

Press the circle key next to the rotate clockwise 90 deg. icon to rotate the pattern 90 degrees clockwise.

④ Circle key (rotate CW 90 deg.)

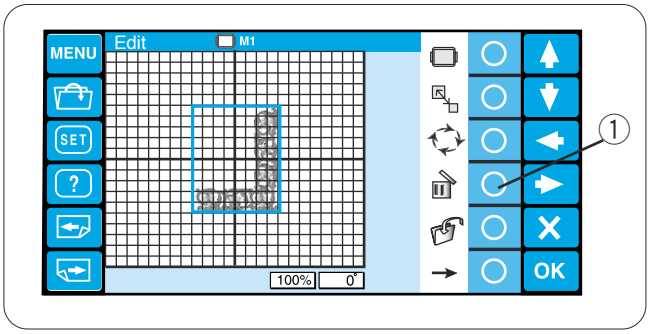
Press the circle key next to the rotate counterclockwise 90 deg. icon to rotate the pattern 90 degrees counterclockwise.

⑤ Circle key (rotate CCW 90 deg)

Press the circle key next to the return icon to go back to the previous display.
The angle of the pattern is indicated in the status box.

⑥ Circle key (return)

⑦ Status box

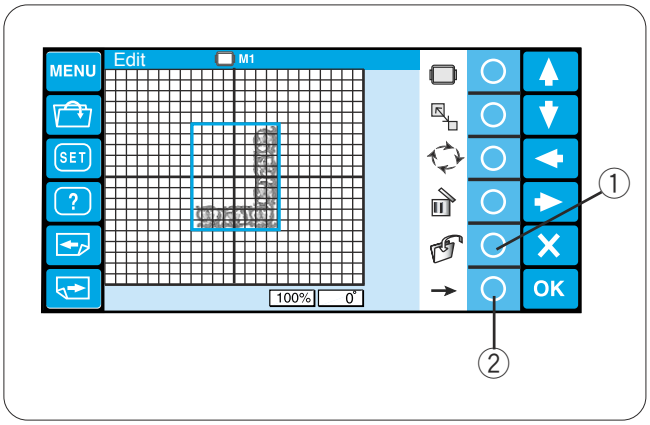


Deleting the pattern

Select the pattern to delete by pressing the pattern image in the editing screen.
The selected pattern is indicated with a green frame.

Press the circle key next to the delete icon to delete the selected pattern.

① Circle key (delete)



Saving the file

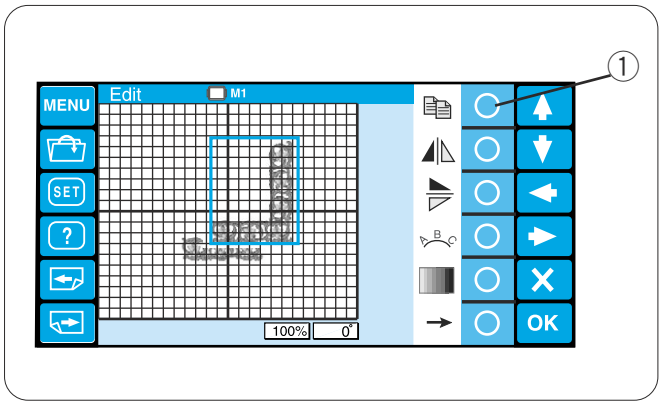
It is recommended to save the original pattern created in the editing mode for the future use.
The pattern will be saved as a data file in .jef+ format.

Press the circle key next to the file save icon and the file save window will open.
Refer to pages 75-76 for detailed instructions.

① Circle key (save)

To show the alternate function key assignment, press the circle key next to the right arrow icon.

② Circle key (right arrow)

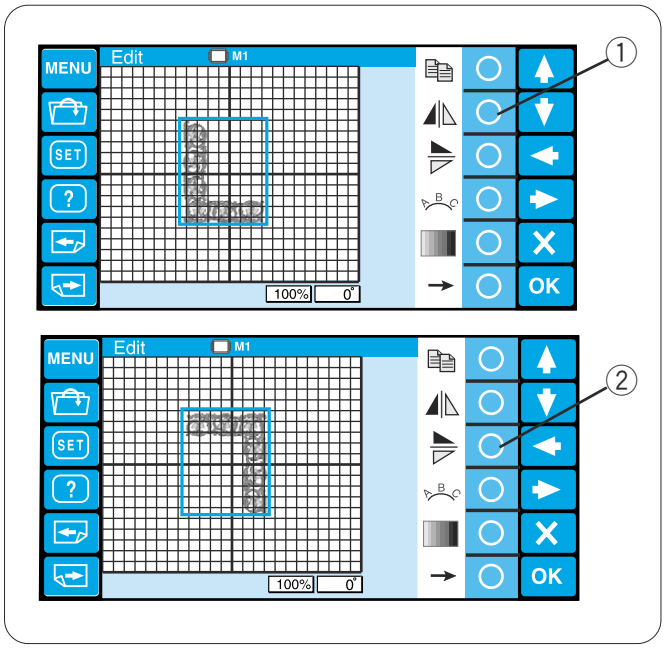


Duplicating the pattern

Press the circle key next to the copy icon to duplicate the pattern.

① Circle key (duplicate)

NOTE:
The original pattern will be superimposed with a copy. Move the copy to show the original pattern.



Flipping the pattern

To flip the pattern horizontally, press the circle key next to the flip horizontal icon.

① Circle key (flip horizontal)

To flip the pattern horizontally, press the circle key next to the flip horizontal icon.

② Circle key (flip horizontal)

Monogramming in an arc

You can make a monogramming in an upper or lower arc.

1 Enter the characters in the editing mode.
Press the circle key next to the arc icon.
① Circle key (arc)

2 The alternate function key assignment will appear.

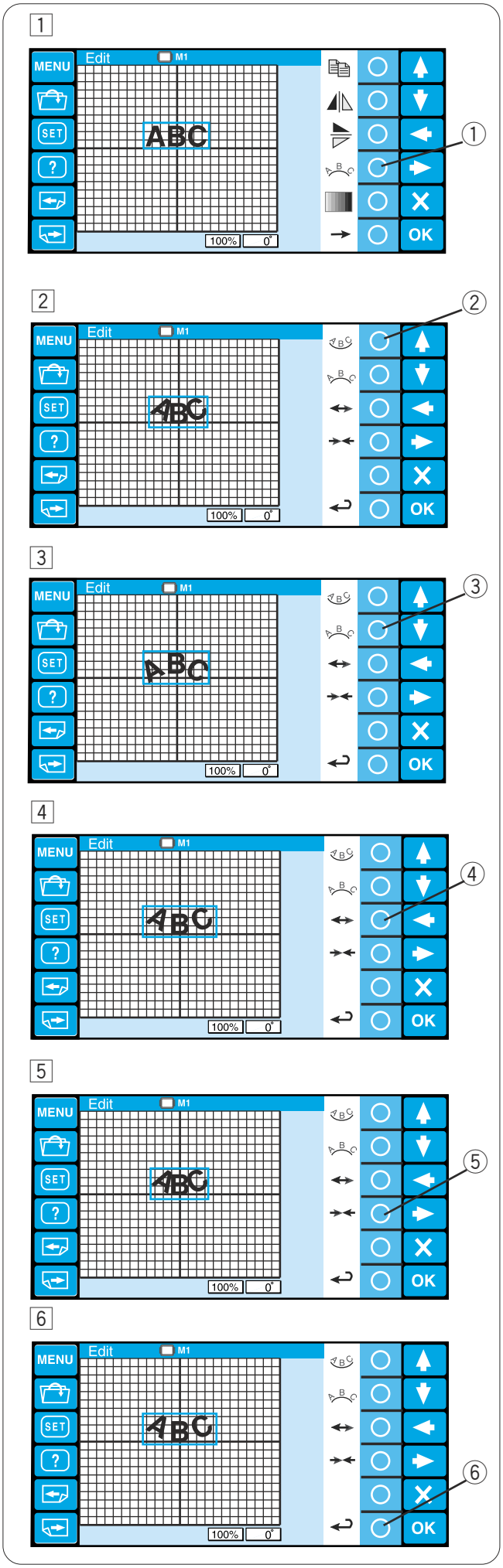
Press the circle key next to the lower arc icon to make a lower arc.
② Circle key (lower arc)

3 Press the circle key next to the upper arc icon to make a upper arc.
③ Circle key (upper arc)

4 Press the circle key next to the outward arrow icon to enlarge the arc.
④ Circle key (enlarge)

5 Press the circle key next to the inward arrow icon to shrink the arc.
⑤ Circle key (shrink)

6 After adjusting the arc shape, press the circle key next to the return icon to go back to the previous display.
⑥ Circle key (return)



Customizing the color setting

The background color of the editing screen and section color of the pattern image can be changed to simulate the actual colors of the fabric and threads.

1 Press the circle key next to the color icon and the color palette window will open.
① Circle key (color)

2 Press the circle key next to the screen/section icon to select the colors of the screen or pattern.
② Circle key (screen/section)

To customize the colors of the pattern image:

3 Press the desired color icon to choose and drag the slider to adjust the shade of the color.
③ Color icon
④ Slider

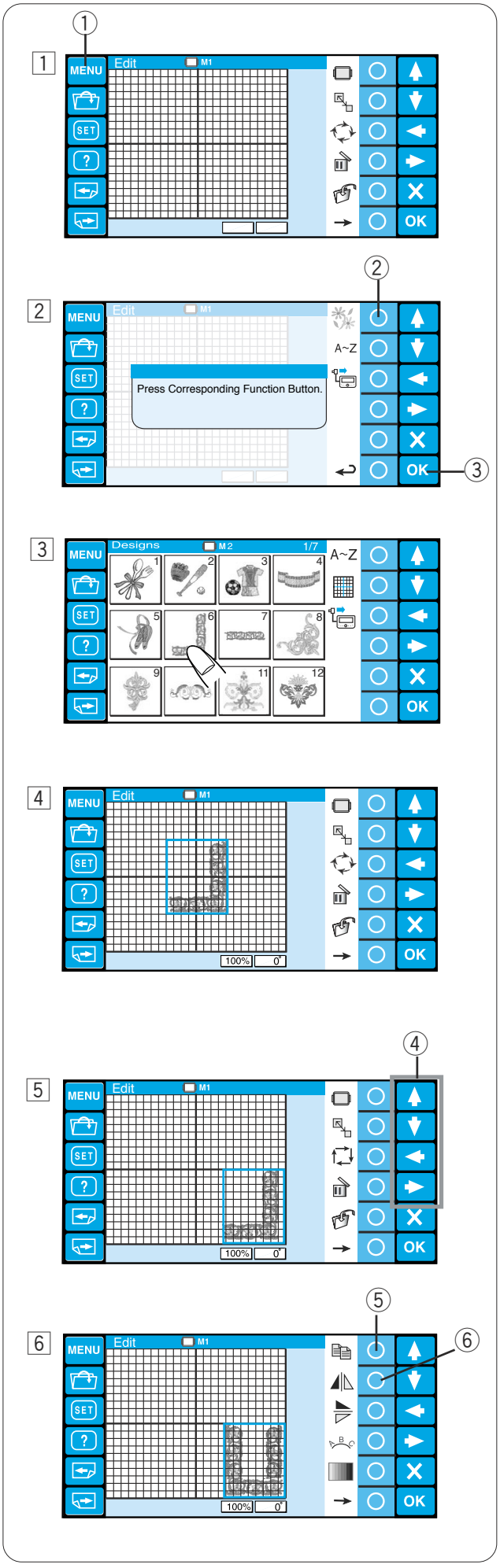
4 If you wish to assign a name to the customized color, press the circle key next to the Name icon. The keyboard window will open.
Enter the desired name and press the OK key.
⑤ Circle key (name)
⑥ OK key
To delete a wrong entry, press the circle key next to the delete icon. The last character will be deleted.
⑦ Circle key (delete)

5 Press the circle key next to the next section icon to select the second color section of the pattern.
⑧ Circle key (next section)
Repeat the above steps to change the colors of all the sections.
Press the OK key to confirm the setting.

6 The screen will return to the editing window.
Press the OK key .

7 The ready to sew window will open.
The pattern image will be shown in the new color and the color list will show the new color names that you have assigned.
⑨ Color list

Combining the Patterns and Lettering



1 Press the MENU key.
① MENU key

2 Press the circle key next to the built-in pattern icon.
② Circle key (built-in)
③ OK key

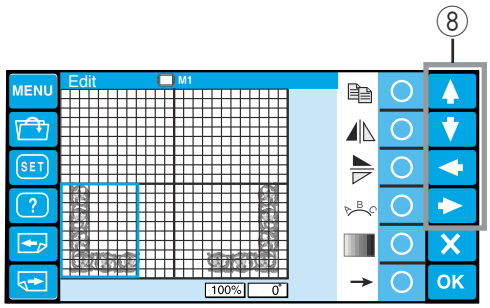
3 The pattern selection window will open.
Select pattern #6.

4 The editing window will open and the stitch image of the selected pattern will appear.

5 Move the pattern to the right bottom corner of the editing screen by using the arrow keys or by dragging it with your fingertip.
④ Arrow keys

6 Make a duplicate of the pattern by pressing the circle key next to the copy icon.
Flip the duplicated pattern horizontally by pressing the circle key next to the flip horizontal icon.
⑤ Circle key (copy)
⑥ Circle key (flip horizontal)

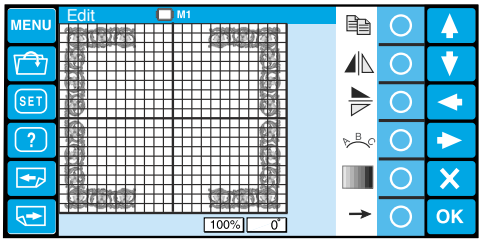
7



7 Move the flipped pattern to the left bottom corner of the editing screen by using the arrow keys or by dragging it with your fingertip.

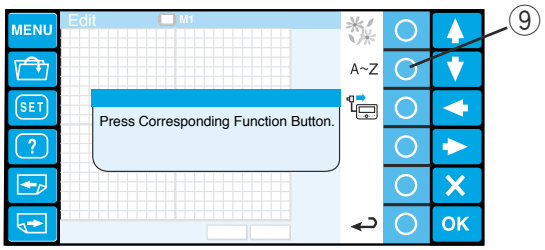
⑧ Arrow keys

8



8 Make a duplicate of the pattern and flip it vertically. Move the flipped pattern to the top left corner of the editing screen.
Make a duplicate and flip it horizontally. Move the pattern to the right top corner of the editing screen.

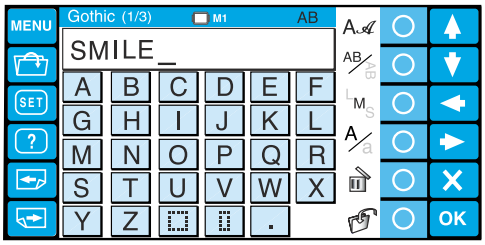
9



9 Press the MENU key. Press the circle key next to the monogram icon.

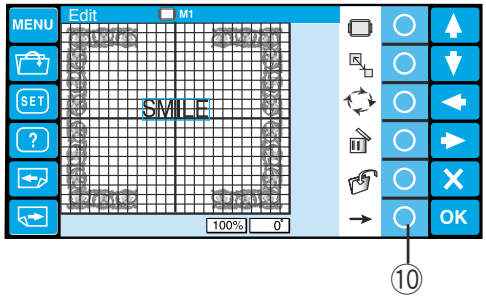
⑨ Circle key (monogram)

10



10 The monogram window will open.
Enter “SMILE” in the upper case of Gothic font and press the OK key.

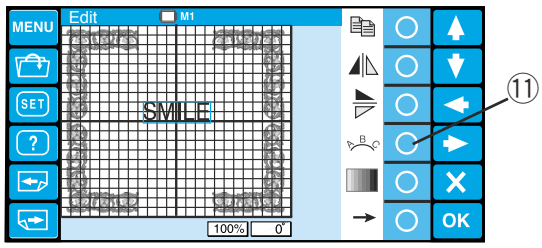
11



11 The screen will return to the editing window.
The stitch image of “SMILE” will appear in the center of the frame pattern.
Press the circle key next to the small arrow to show the alternate function key assignment.

⑩ Circle key (small arrow)

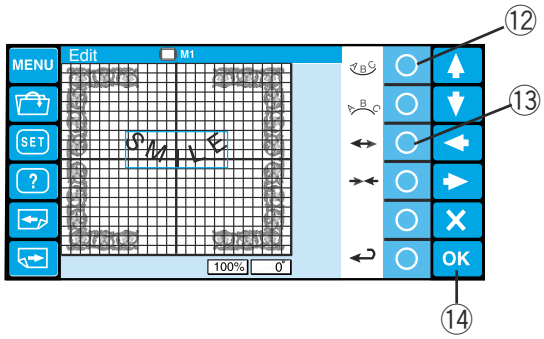
12



12 Press the circle key next to the arc icon.

⑪ Circle key (arc)

13



13 Press the circle key next to the lower arc icon to make a lower arc.

Press the circle key next to the outward arrow to make the arc larger.

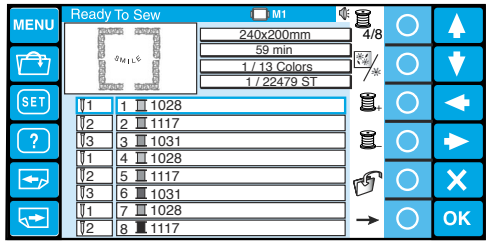
⑫ Circle key (lower arc)

⑬ Circle key (outward arrow)

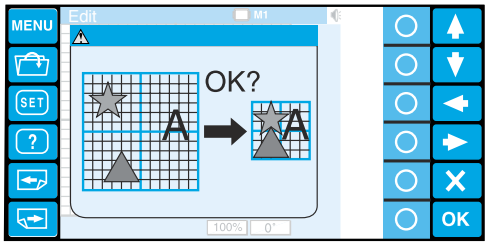
Press the OK key

⑭ OK key

14



14 The ready to sew window will open and the combined pattern image will appear.

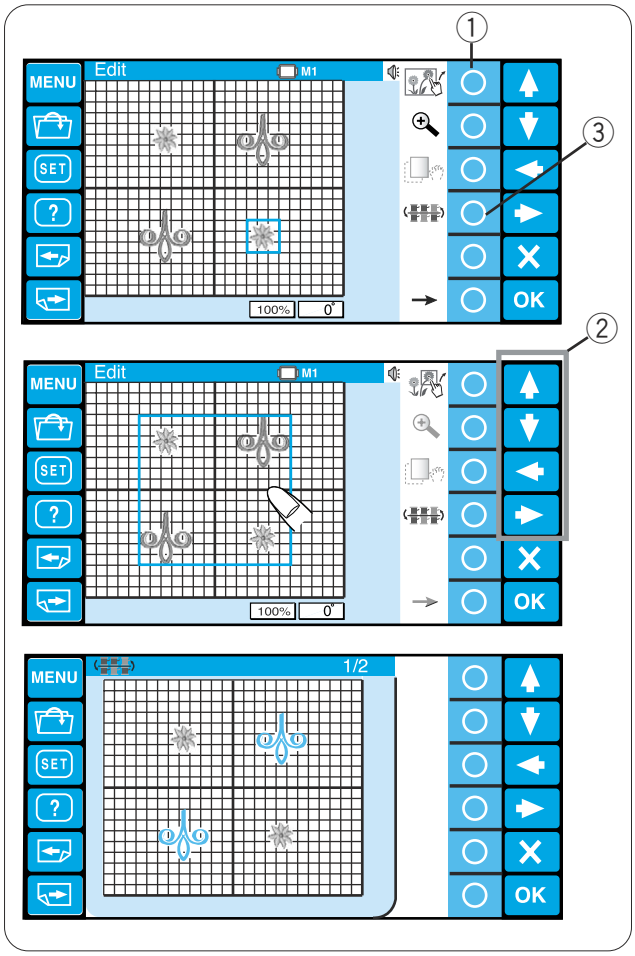


NOTE:

If you attempt to change the hoop to a smaller size, a warning message will appear.

In some cases, the patterns may overlap each other since the size of the patterns will not be reduced but spacing of the patterns will be reduced to fit in the smaller hoop.

You are not able to resume the original layout after pressing the OK key.



Grouping the patterns

You can move more than one pattern at one time by grouping the patterns.

Press the circle key next to the grouping icon.

① Circle key (grouping)

The patterns in the editing window will be combined as a single group.
Move the grouped patterns to the desired position with the arrow keys or by dragging with your finger tip.

② Arrow keys

To untie the patterns, press the circle key next to the grouping icon again.

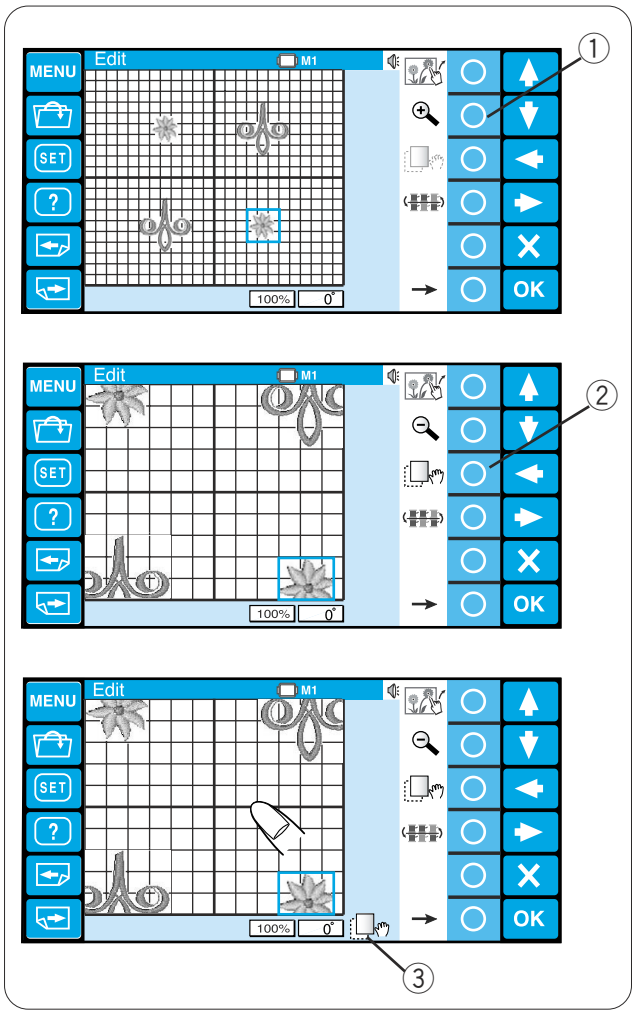
Color grouping

You can unite matching color sections to reduce the number of color layers when duplicating patterns.
Press the circle key next to the color grouping icon.

③ Circle key (color grouping)

Section of the patterns in the same color will be united into a single group.

NOTE:
If a user defined color is used, the pattern cannot be united.
A maximum of 200 color layers is available.



Zooming the editing window

Press the circle key next to the magnifier icon to zoom-in and zoom-out the editing window.

① Circle key (zoom)

To scroll the zoom-in window, press the circle key next to the scroll icon.

② Circle key (scroll)

The scroll icon on the bottom of the screen indicates that the window is in the scrolling mode.

③ Scroll icon

Drag the window to scroll in the desired direction.

Press the circle key next to the scroll icon again to exit the scrolling mode.

NOTE:
The pattern cannot be moved by dragging in the scrolling mode.

Starting to Embroider

1 Select the pattern you wish to sew. The LCD touch panel shows the Ready to sew window.

NOTE:
The embroidery result may vary depending on the fabric and threads used. Make a test embroidery using the same fabric and threads before sewing on the actual garment.

Adjust the hoop position by pressing the jog buttons if necessary.

① Jog buttons

2 To check the needle drop position, lower the needle bar with the small screwdriver so you can see the needle point closer to the fabric.

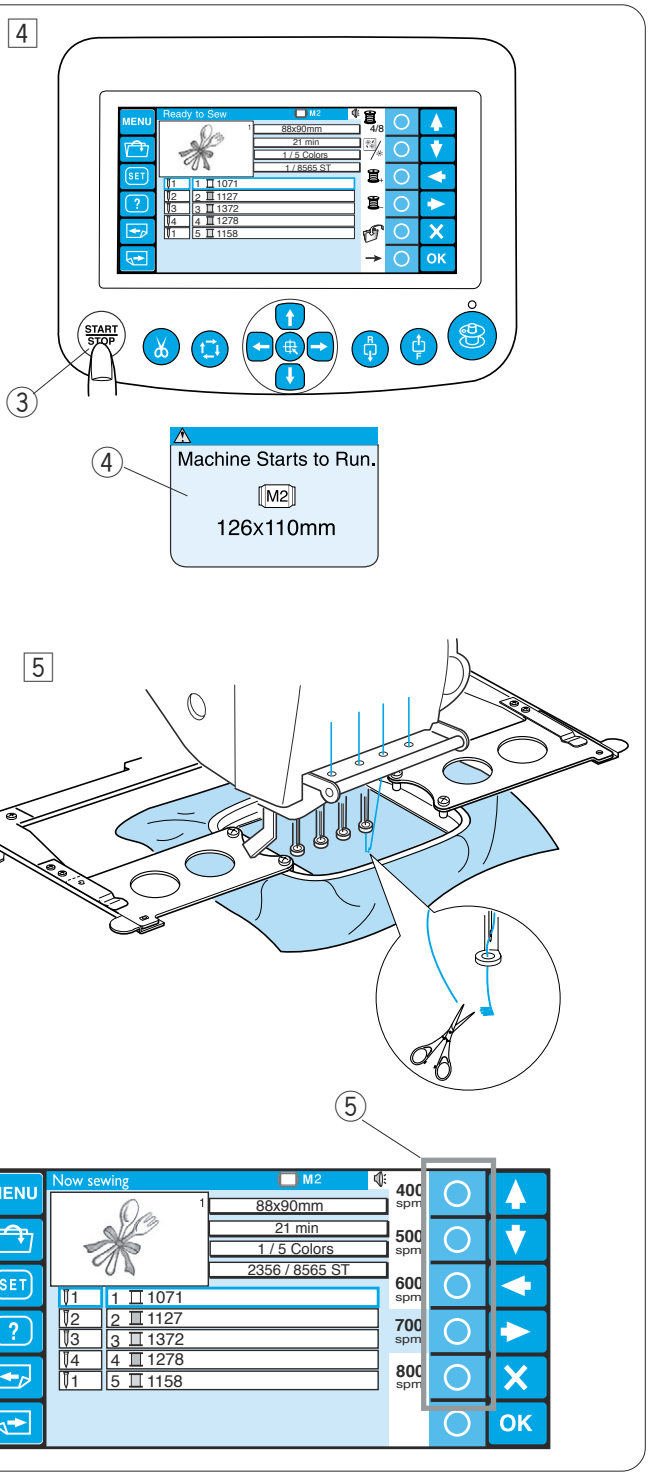
Push down the needle bar using the screwdriver as illustrated.
The needle bar can be lowered by turning the handwheel clockwise.

CAUTION:
Make sure to bring the needle bar and presser foot to the up position by pressing the auto thread cutter button before pressing the trace button or turning the machine off.

3 Press the trace button to check the size and position of the selected pattern against the hoop.

② Trace button

NOTE:
Check if the fabric edge will not obstruct the movement of the hoop.



4 Press the START/STOP button, the LCD screen will show the reminder asking you to confirm the hoop type to be used.

③ START/STOP button

④ Reminder message

NOTE:

If you press the START/STOP button when the tension release lever is in the open position, a warning message will appear.

Pull the tension release lever up to close the tension disk.

Check the hoop size and press the START/STOP button again to sew a few stitches.

5 Press the START/STOP button to stop the machine.

Trim the thread at the beginning.

Then, press the START/STOP button again. The machine will sew up to the fourth color and stop automatically.

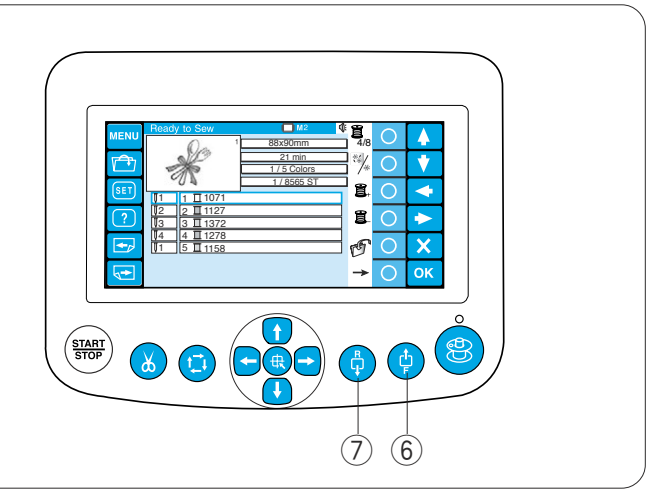
Re-thread each needle with the next color and press the START/STOP button to continue sewing.

Refer to page 29 for how to remove the hoop.

You can change the sewing speed while stitching.

Press the circle key next to the desired speed.

⑤ Circle keys (sewing speed)



If the thread breaks or runs out while stitching, the machine will automatically stop and the hoop will go back to the position where the thread broke or ran out.

However, you can fine-tune the restarting position by moving the hoop.

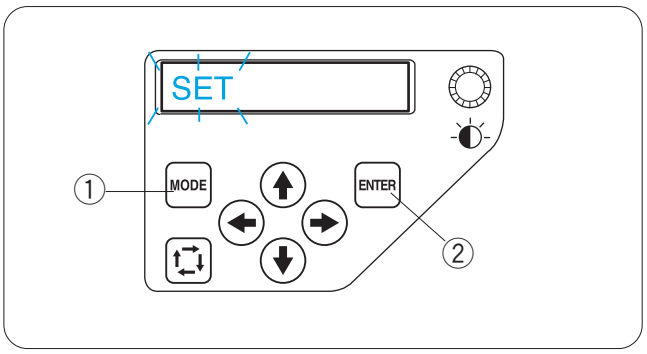
Press the stitch forward button to move the hoop forward.

⑥ Stitch forward button

Press the stitch back button to move the hoop backward.

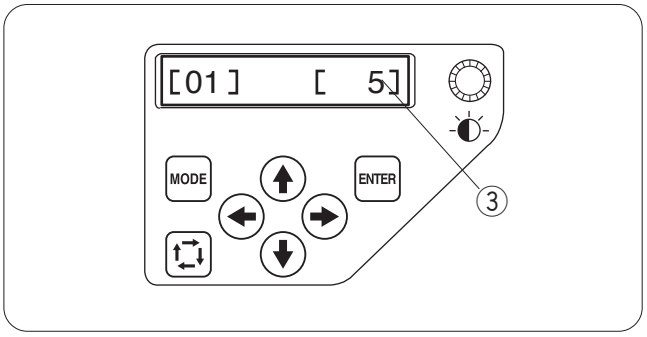
⑦ Stitch back button

Customizing the Settings with the Sub Control Panel



Press the MODE button until the LCD screen shows **SET** blinking.
Press the ENTER button to start the My setting mode.

① MODE button
② Enter button

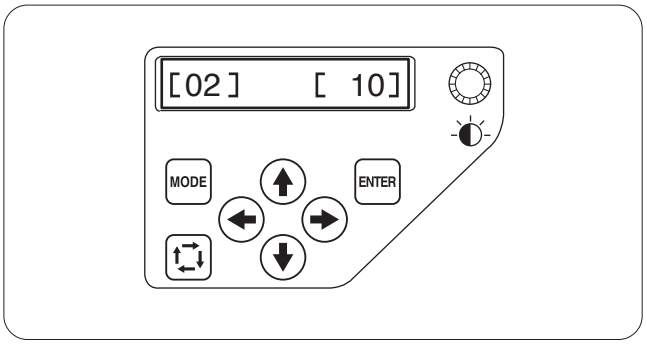


[01] Buzzer sound control

Press the right or left arrow button ➔ to adjust loudness of the buzzer.
To mute the buzzer, set the value to **[0]**.
Press the ENTER button to register the new setting or press the upward arrow button ↑ to go to the next setting.

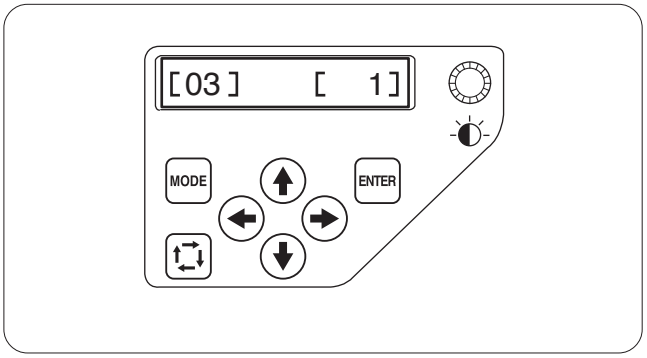
NOTE:
The value shown in the illustration is the default (preset) value of each setting.

③ Default value



[02] Eco mode setting

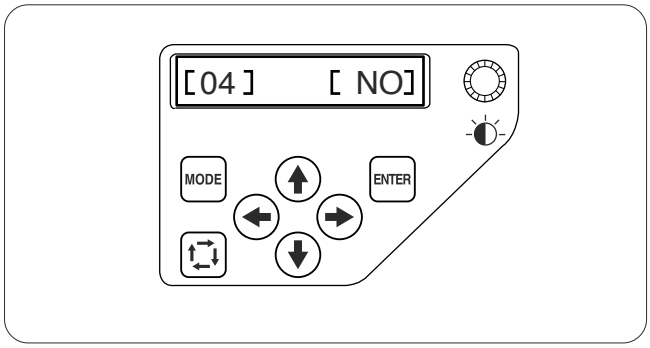
The sewing lights will turn off, and the LCD screen go dark if you have not used the machine for a while. Pressing any button will turn on the sewing lights and screen.
The eco mode timer can be set from 1 to 30 minutes by pressing the right or left arrow button ← →.
Press the ENTER button to register the new setting or press the upward arrow button ↑ to go to the next setting.



[03] Machine ID number

When connecting two or three units of the machine to the PC at the same time, you need to assign the identification number to each machine.
Press the right or left arrow button ← → to select the ID number.
Press the ENTER button to register the new setting or press the upward arrow button ↑ to go to the next setting.

NOTE:
Press the downward arrow button ↓ to go back to the previous setting.

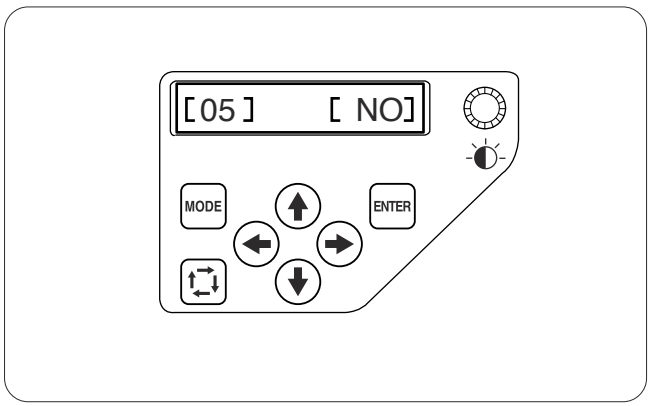


[04] Formatting the memory

If the internal memory does not function due to damage to the memory bank, you need to re-enable it by formatting the memory.

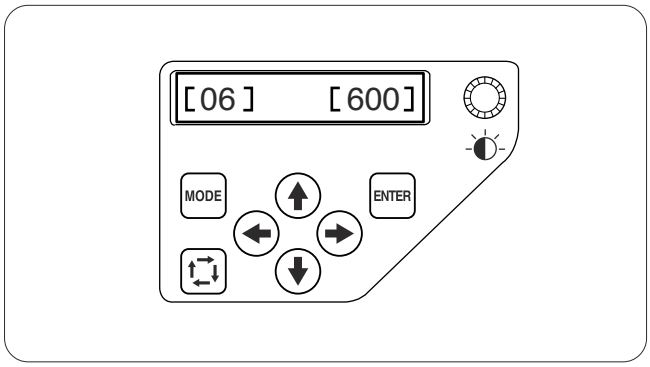
NOTE:
If you format all the data stored in the memory will be erased and cannot be restored.

Press the right arrow button (➔) to indicate **[YES]**.
Press the ENTER button to format the memory. If you do not wish to format, press the left arrow button (⬅) to change the indication to **[NO]**.
Press the ENTER button to register the new setting or press the upward arrow button (⬆) to go to the next setting.



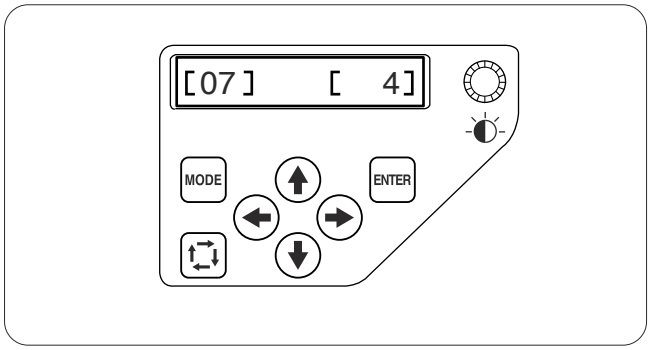
[05] Resetting all to defaults

All the parameters in the My setting mode can be reset to the original values (factory setting).
Press the right arrow (➔) button to indicate **[YES]**.
Press the ENTER button to reset the settings to defaults. If you do not wish to format, press the left arrow (⬅) button to change the indication to **[NO]**.
Press the ENTER button to register the new setting or press the upward arrow button (⬆) to go to the next setting.



[06] Maximum sewing speed

The maximum sewing speed can be set from 400 to 800 spm by 100 spm increments.
Press the right or left arrow button (⬅) (➔) to alter the sewing speed.
Press the ENTER button to register the new setting or press the upward arrow button (⬆) to go to the next setting.

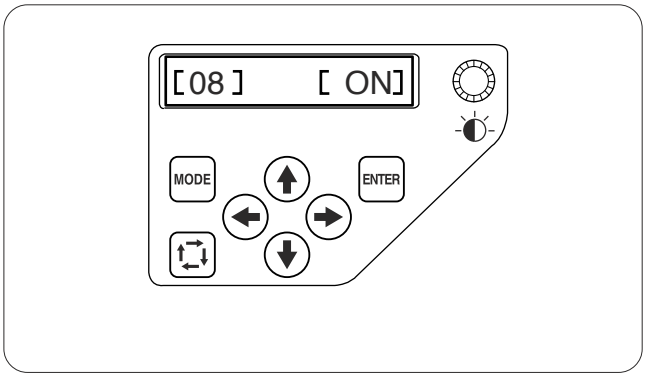


[07] Thread selection

There are 8 kinds of thread to choose from.
Press the right or left arrow button (⬅) (➔) to select the brand number. The color code of the selected brand will be shown in the Ready to sew mode display.
The brand numbers are as follows:

1 Janome
2 Gütermann Sulky (rayon 40)
3 Madeira (polyester 40)
4 Madeira (rayon 40)
5 Robison-Anton (polyester 40)
6 Robison-Anton (rayon 40)
7 Mettler (Poly Sheen)
8 Pearl Yocht (rayon)

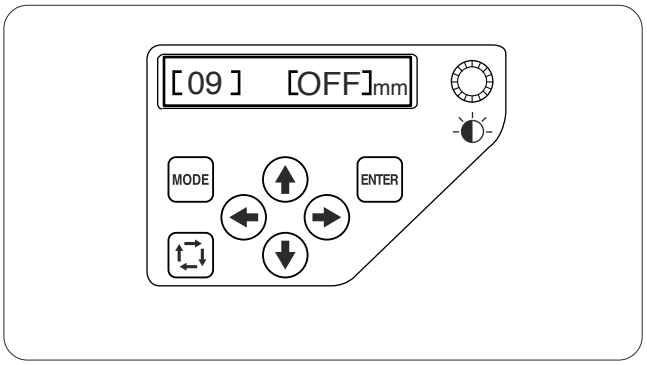
Press the ENTER button to register the new setting or press the upward arrow button (⬆) to go to the next setting.



[08] Reminder message ON/OFF

When you press the START/STOP button, a reminder message will appear on the LCD screen. However, you can turn off the reminder.

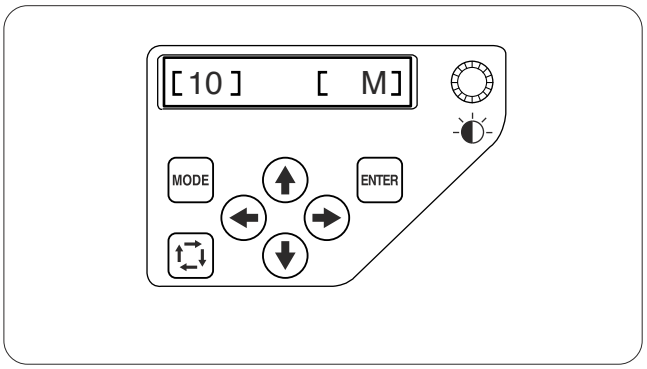
Press the right arrow button to indicate **[OFF]** to turn off the reminder.
Press the ENTER button to register the new setting or press the upward arrow button to go to the next setting.



[09] Ignoring short stitches

Very short stitches may cause the thread to break. To avoid this problem, turn on the ignoring short stitches function.

Press the right or left arrow button to set a stitch length to be ignored or select [OFF] to turn off the function.
Press the ENTER button to register the new setting or press the upward arrow button to go to the next setting.

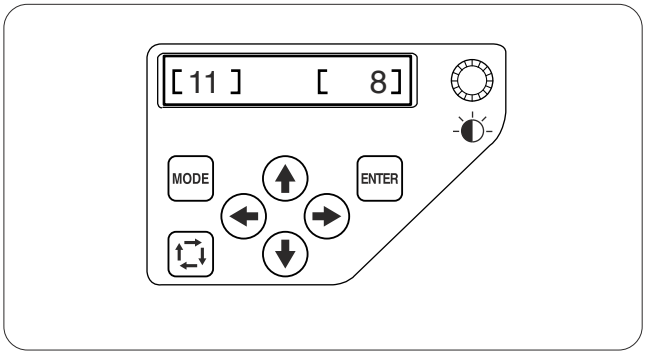


[10] Setting the trim tail length

Some times you need to adjust the tail length of the thread being trimmed depending on the thickness and type of the thread.
Press the right or left arrow button to adjust the trim length.
You can select one of the following options.

S: Short
M: Medium
L: Long

Press the ENTER button to register the new setting or press the upward arrow button to go to the next setting.



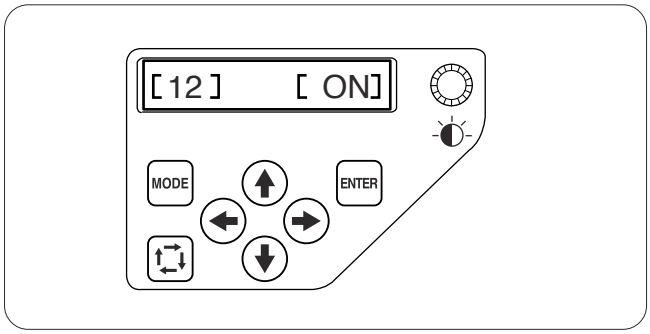
[11] Setting the thread breakage sensor

You can adjust the sensitivity of the thread breakage sensor by setting stitch count to judge thread breakage.

Press the right or left arrow button to adjust the sensitivity. The adjustable range is from 3 to 16. The higher the number, the lower the sensitivity.

Reduce the sensitivity to avoid false thread breakage due to short stitches.

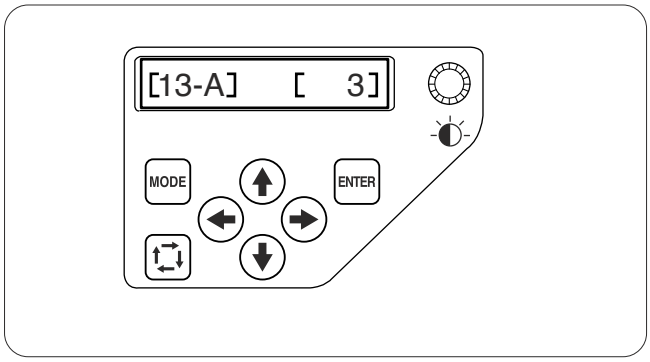
Press the ENTER button to register the new setting or press the upward arrow button to go to the next setting.



[12] Jump thread trimming ON/OFF

If you wish to trim jump threads automatically, press the right arrow button to indicate **[ON]**.
Press the left arrow button to disable the jump thread trimming.

Press the ENTER button to register the new setting or press the upward arrow button to go to the next setting.

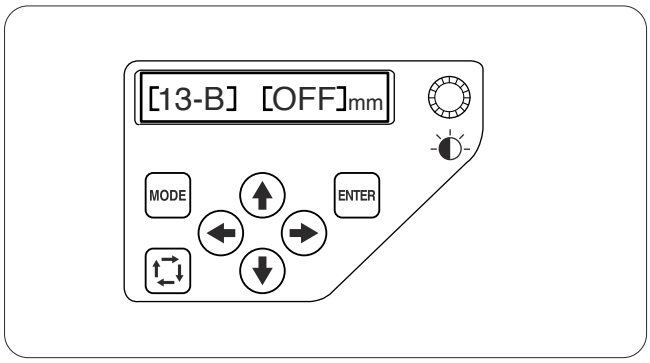


[13-A] Jump thread trimming threshold

If you insert jump codes when creating a custome design embroidery pattern using a digitizing software, you can adjust the position of jump thread trimming by setting the number of jump codes.
The machine will trim the jump thread automatically after the specified number of jump codes.
Press the right or left arrow button to adjust the number of jumps.
The default setting is 3 and adjustable range is from 1 to 8.
The lower the number, the shorter the jump thread trimmed.

NOTE:
Turn off the setting [13-B] when using this function.

Press the ENTER button to register the new setting or press the upward arrow button to go to the next setting.

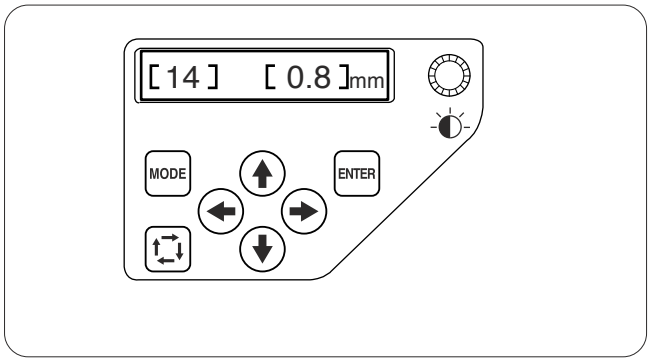


[13-B] Jump thread trimming threshold (length)

If you do not have a digitizing software, you can ajust jump thread trimming by length.
Press the right or left arrow button to set the minimum length of jump thread to cut. The machine will automatically cut jump threads longer than the length selected.
The adjustable range is from 1 mm to 30 mm.

NOTE:
Set the jump code number to 8 when using this function.

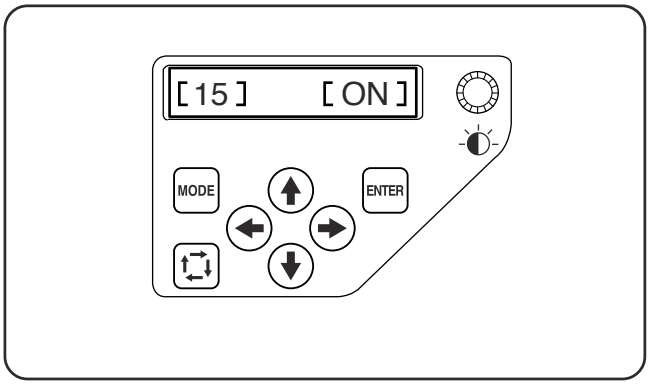
Press the ENTER button to register the new setting or press the upward arrow button to go to the next setting.



[14] Thread trimming position

If the machine fails to trim the threads properly, adjust the needle drop position where the threads being trimmed.
Press the right or left arrow button to set a distance between the thread trimming position and the last stitch of the pattern section or select **[OFF]** to turn off the function.
The adjustable range is from 0.5 to 1.0.

Press the ENTER button to register the new setting or press the upward arrow button to go to the next setting.

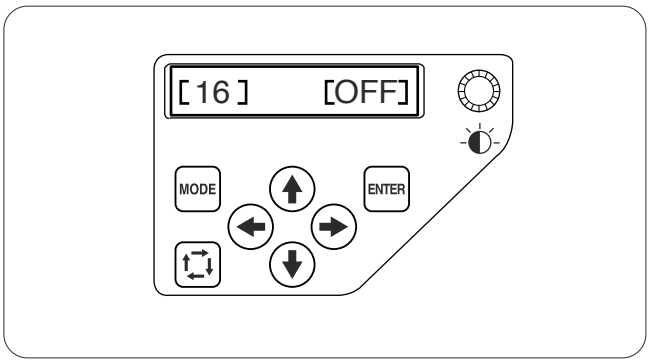


[15] Resume mode ON/OFF

When resume mode is enabled, the last stitch of the pattern sewn before turning the power off will be resumed when the power is turned on again.
Press the right or left arrow button ◀ ▶ to turn [ON] or [OFF] the resume mode.

NOTE:
When you turn the power on, the confirmation window will open.
Press the OK key to resume the last stitch of the pattern sewn.

Press the ENTER button to register the new setting or press the upward arrow button ▲ to go to the next setting.

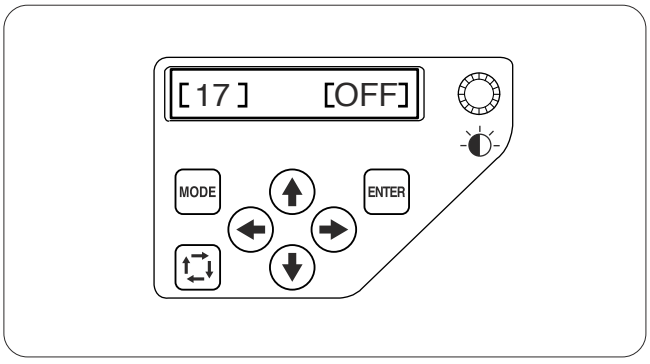


[16] Locking stitch ON/OFF (after color change)

The threads may ravel if the stitch data does not contain locking stitches at the beginning of each color section.
To avoid raveling, insert locking stitches at the beginning by pressing the right arrow button ▶ to indicate **[ON]**.

Press the left arrow button ◀ to disable this function.

Press the ENTER button to register the new setting or press the upward arrow button ▲ to go to the next setting.

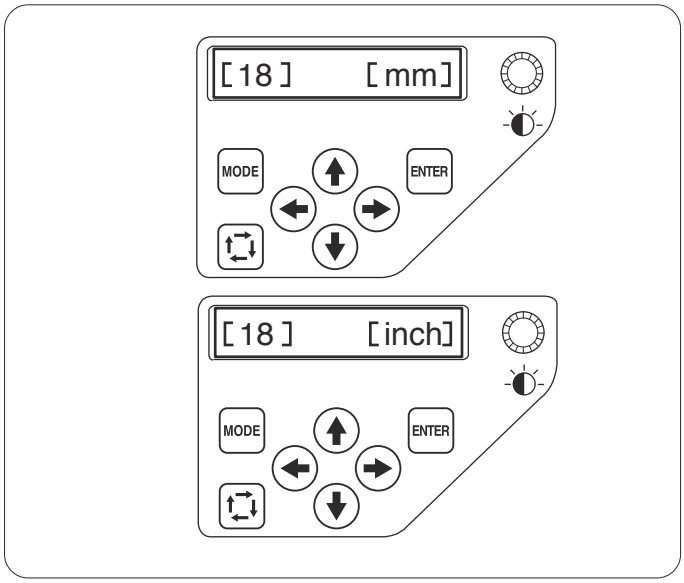


[17] Locking stitch ON/OFF (after thread trimming)

If you turn ON the jump thread trimming (refer to the previous page), insert locking stitches after the jump to avoid threads from raveling.
Press the right arrow button ▶ to indicate **[ON]**.

Press the left arrow button ◀ to disable this function.

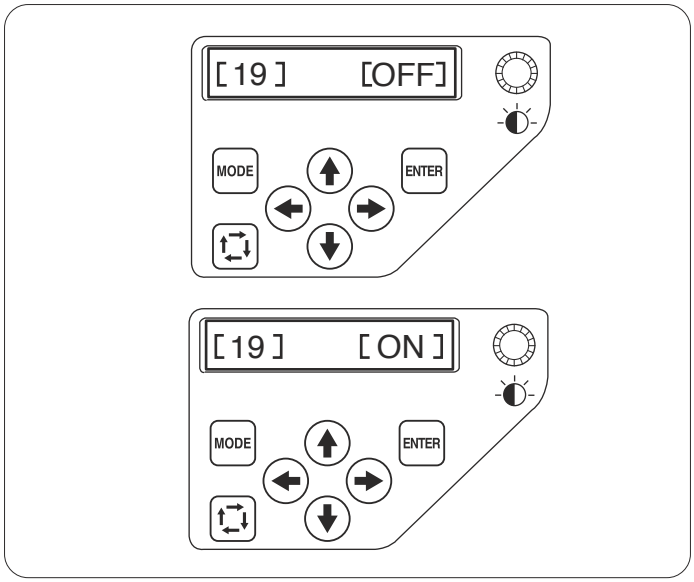
Press the ENTER button to register the new setting or press the upward arrow button ▲ to go to the next setting.



[18] mm/inch option

You can select “millimeter” or “inch” for measuring unit displayed on the screen. Press the right or left arrow button ◀ ▶ to select [mm] or [inch].

Press the ENTER button to register the new setting or press the upward arrow button ▲ to go to the next setting.



[19] Hoop position adjustment ON/OFF (after starting embroidery)

The hoop position can be adjusted before sewing each layer (section) or even in the middle of embroidering.

NOTES:
The adjusted hoop position will apply to the subsequent layers (sections).
Turn off this function when sewing ordinary embroidery designs.

Press the right or left arrow button ◀ ▶ to turn [ON] or [OFF] this function.

Press the ENTER button to register the new setting.

If you wish to cancel the changes, press the MODE button and LCD screen will return to the My setting mode display without registering the settings.

Customizing the Settings with the Optional RCS Unit

The machine settings and LCD screen display can be customized with the RCS unit.

Press the SET key and the setting mode window will open.

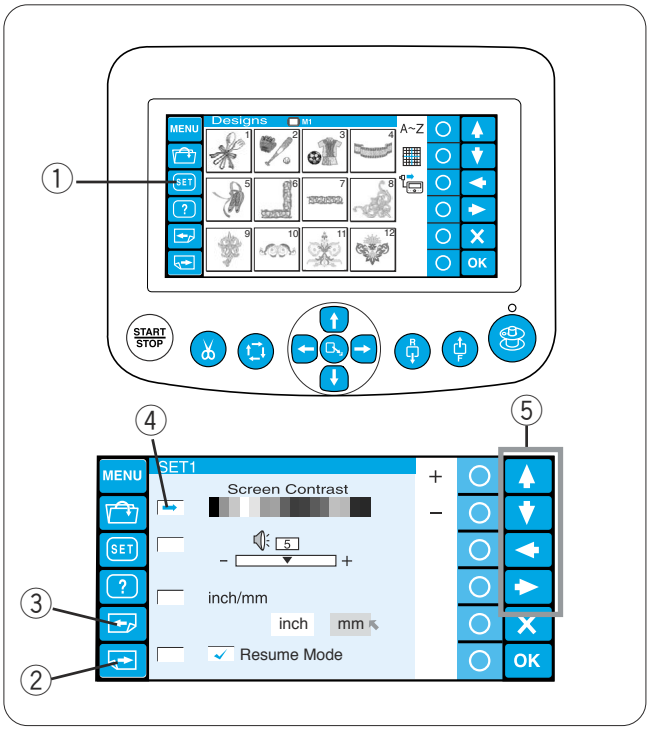
① SET key

There are 8 pages of display including the language selection in the setting mode.
To display the next page, press the next page key.
Press the previous page key to go back to the previous page.

② Next page key
③ Previous page key

The selected attribute is indicated with a pointer to the left.
To select the desired attribute, press the upward or downward arrow key to move the arrow up or down.

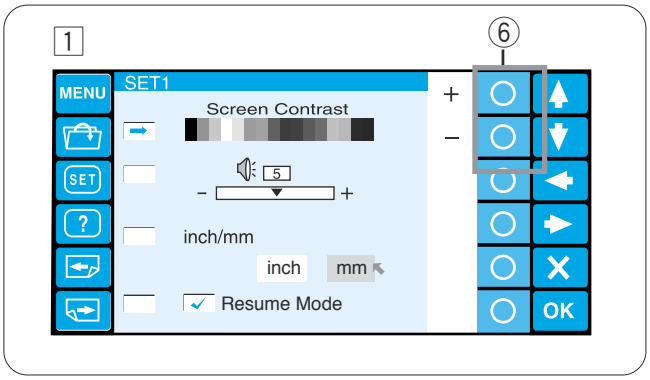
④ Pointer
⑤ Arrow keys



1 LCD brightness adjustment

Press the circle key next to the “+” or “–“ sign to adjust the screen brightness.

⑥ Circle keys (+, –)



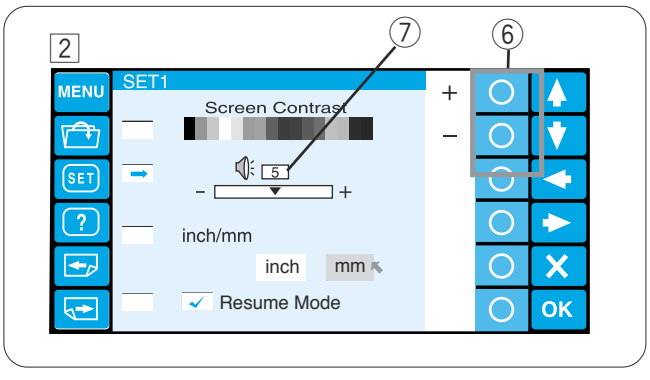
2 Buzzer sound control

Press the circle key next to the “+” or “–“ sign to adjust loudness of the buzzer.
To mute the buzzer, set the value to “0”.

NOTE:

The value shown in the illustration is the default (preset) value of each setting.

⑦ Default value



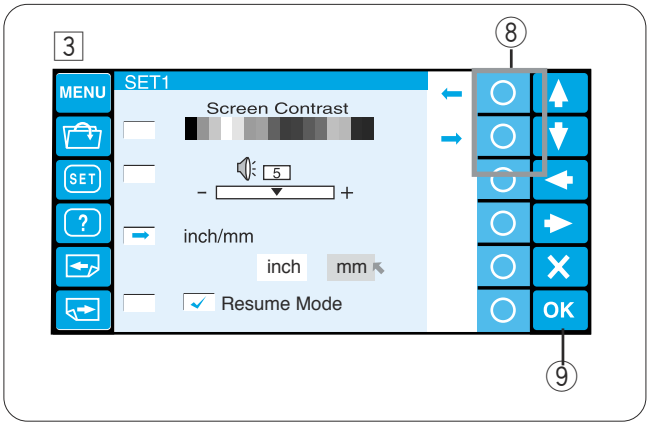
3 Inch/mm option

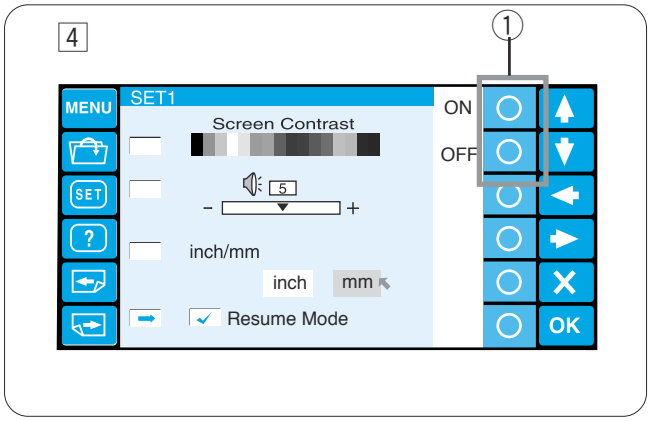
You can select “inch” or “millimeter” for measuring unit displayed on the screen.
Press the circle key next to the small arrow to select “inch” or “millimeter”.

⑧ Circle keys (small arrow)

Press the OK key to register the new settings.
Or press the next page key to go to the next page.

⑨ OK key



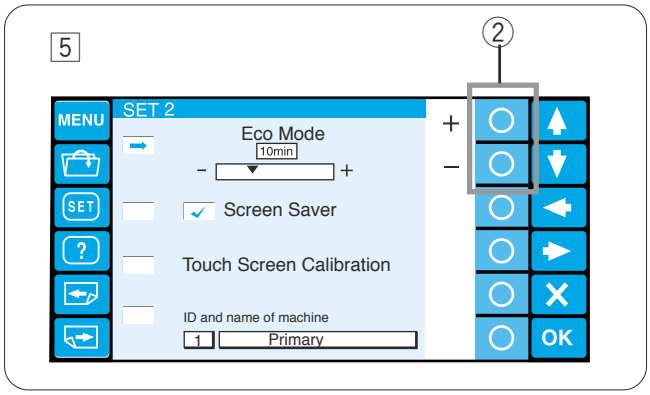


4 Resume mode ON/OFF

When resume mode is enabled, the last stitch of the pattern sewn before turning the power off will be resumed when the power is turned on again.
Press the circle key next to “ON” or “OFF” to turn on or off the resume mode.

① Circle keys (ON, OFF)

NOTE:
When you turn the power on, the confirmation window will open. Press the OK key to resume the last stitch of the pattern sewn.

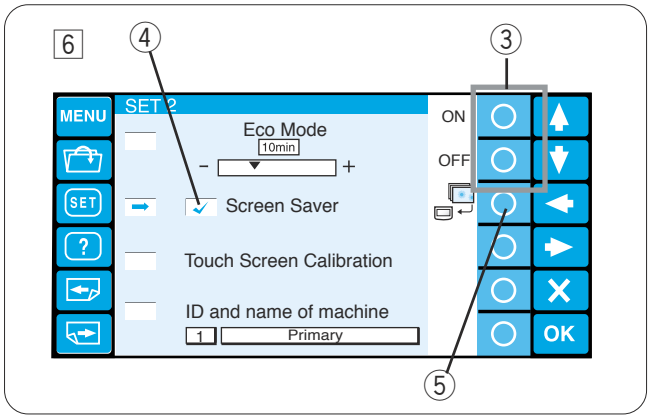


5 Eco mode setting

The sewing lights will turn off, and the LCD screen go dark if you have not used the machine for a while. Touching the screen will turn on the sewing lights and screen.
The Eco mode timer can be set from 1 to 30 minutes by pressing the circle key next to the “+” or “–“ sign.

② Circle keys (+, –)

To turn off the Eco mode, press the circle key next to the “+” sign until “OFF” is displayed in the box.



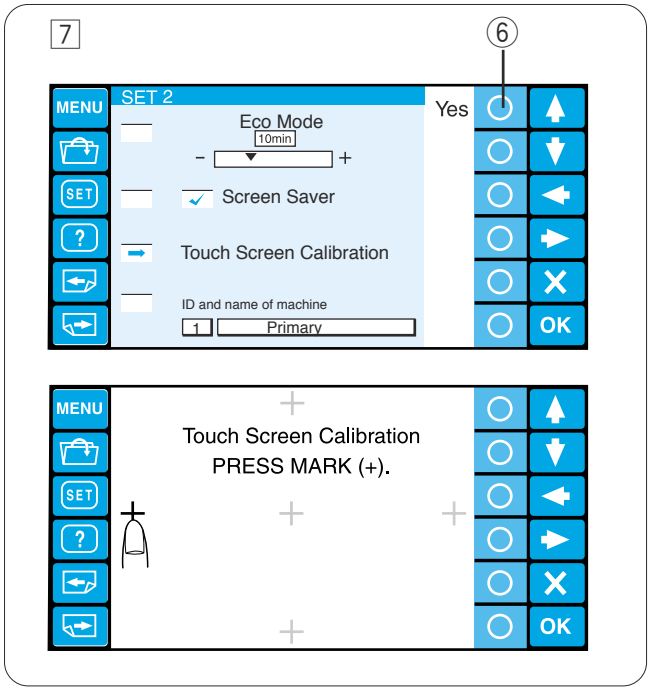
6 Screen saver

If the screen saver is activated, it will be shown on the LCD screen instead of entering the eco mode.
To activate the screen saver, press the circle key next to “ON”.
When it is activated, a check mark will appear in the box.
To inactivate the screen saver, press the circle key next to “OFF”.

③ Circle keys (ON, OFF)
④ Check mark

NOTE:
You can import the original screen saver via the ATA PC card or USB memory by pressing the circle key next to the machine icon.

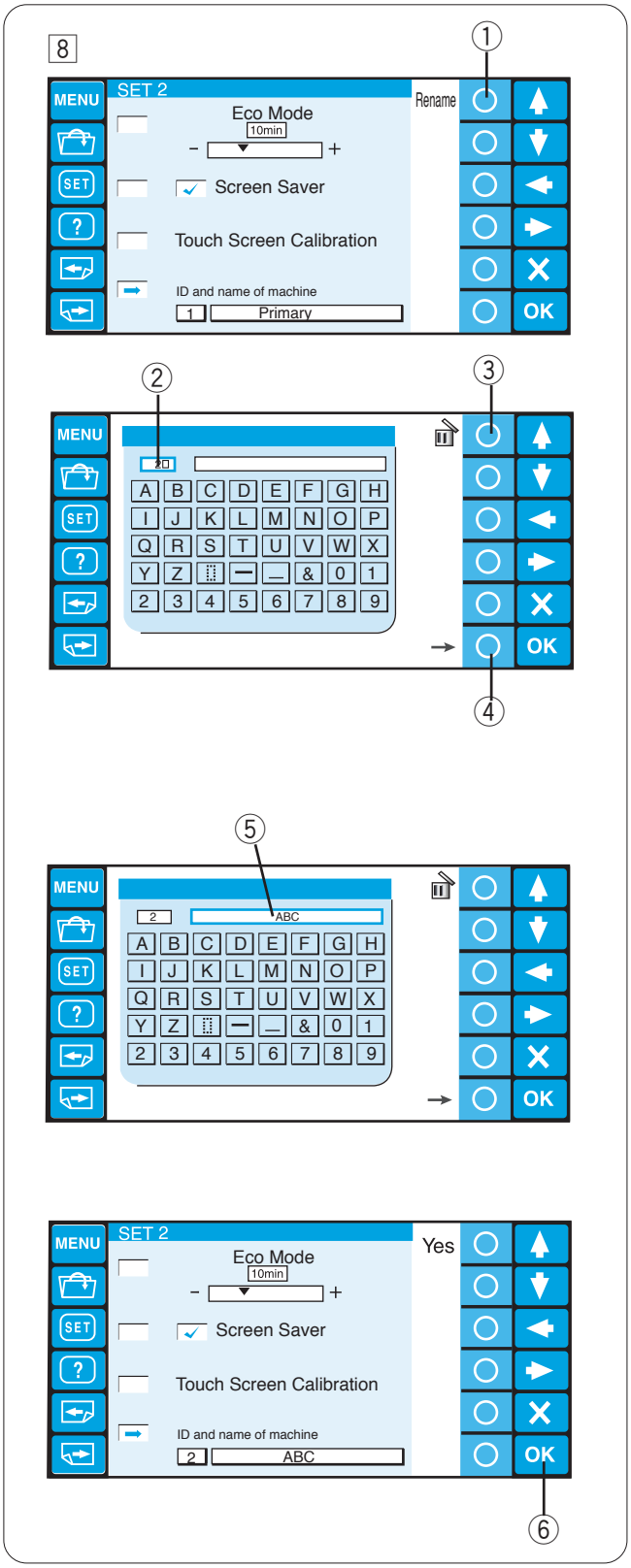
⑤ Circle keys (machine)



7 Touch screen calibration

If you feel the keys on the touch screen do not respond correctly, adjust the key position in this mode.
Press the circle key next to “Yes” and the touch screen calibration window will open.
Press the cross mark “+” with your fingertip in the order as they appear on the touch screen.
When you press the last cross mark, the finishing screen appears for a while and then the screen will return to the setting mode window.

⑥ Circle keys (Yes)



8 Machine ID and name

When connecting two or three units of the machine to the PC at the same time, you need to assign the identification number and name to each machine.
Press the circle key next to Rename and the keyboard window will open.

Enter the identification number.
Only 1 to 3 can be entered.
To delete the number, press the circle key next to the delete icon.

① Circle key (Rename)
② Identification number
③ Circle key (delete)

Press the circle key next to right arrow.

④ Circle key (right arrow)

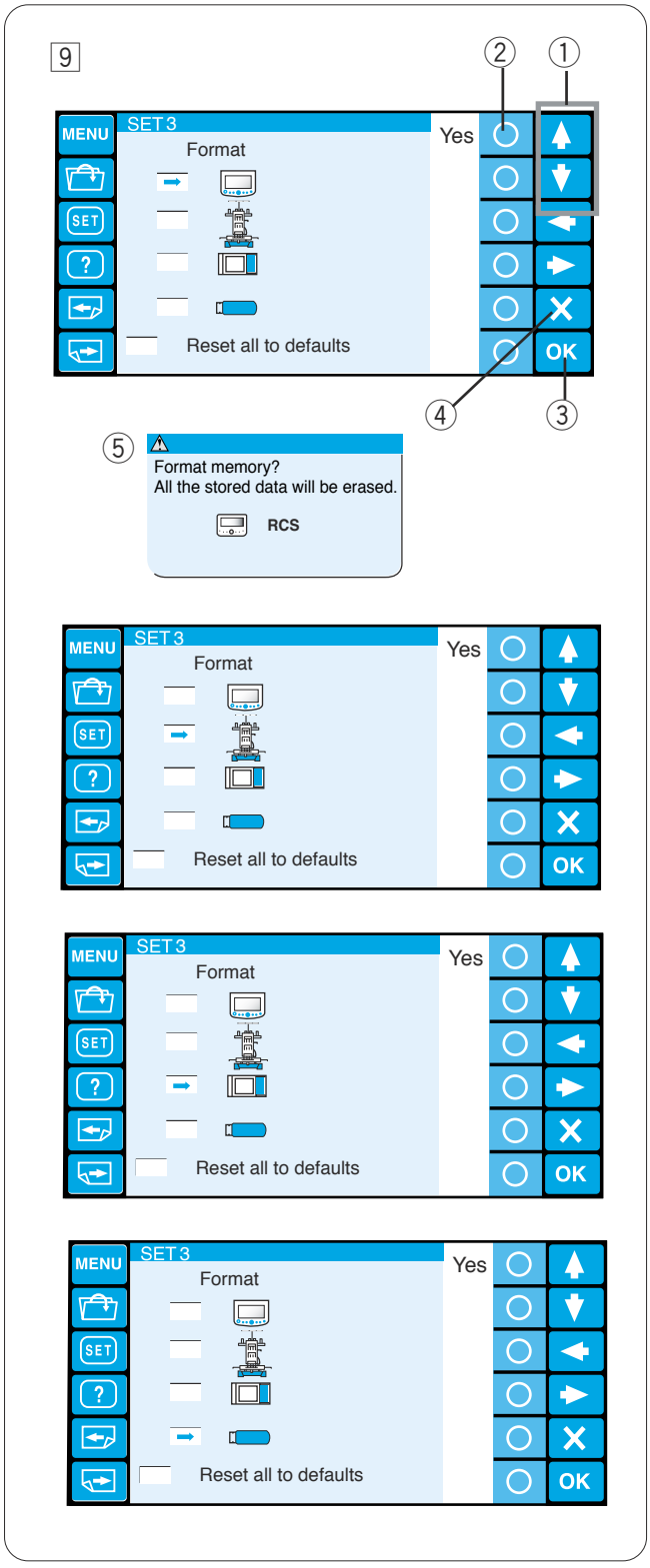
Enter the machine name and press the OK key and the key board window will close.
Up to 16 characters can be entered.

⑤ Machine name

To delete the character, press the circle key next to the delete icon and the last character will be deleted.

Press the OK key to register the new settings.
Or press the next page key to go to the next page.

⑥ OK key



9 Formatting the memory

If the internal memory or media does not function due to damage to the memory bank, you need to re-enable it by formatting the memory.

Press the arrow key (up or down) to select the desired memory location.

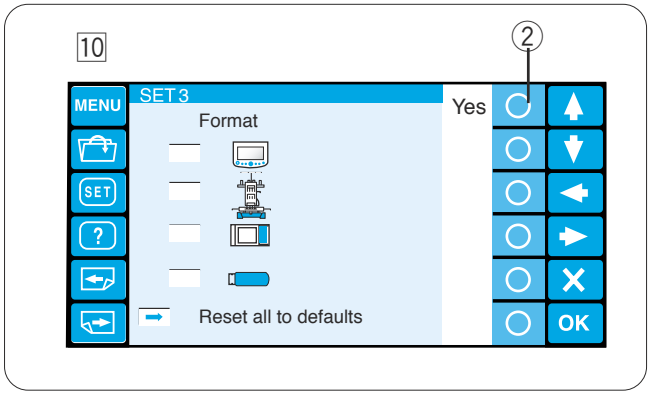
Press the circle key next to “Yes” and the confirmation message will appear.

Press the OK key to format the memory. If you do not wish to format, press the exit key.

① Arrow keys (up, down)
② Circle key (Yes)
③ OK key
④ Exit key (X)
⑤ Confirmation dialog box

NOTE:

If you format all the data stored in the memory will be erased and cannot be restored. You are recommended to save the data in other memory location before formatting.



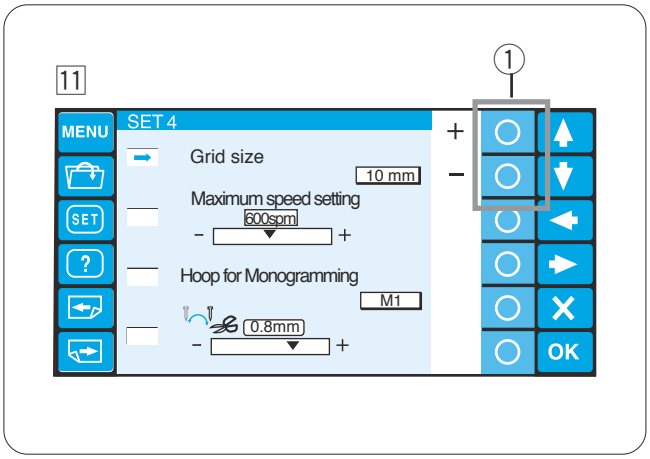
10 Resetting all to defaults

All the parameters in the setting mode, except for the language, will be reset to the original values (factory setting) by pressing the circle key next to “Yes”.

② Circle key (Yes)

Press the OK key to register the new settings.

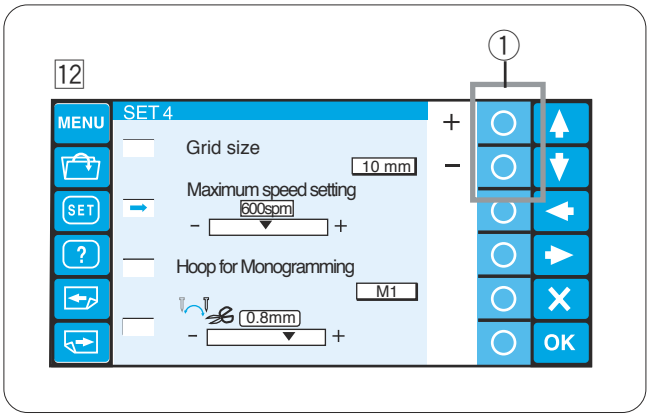
Or press the next page key to go to the next page.



11 Grid size

The grid size of the editing screen can be changed by pressing the circle key next to “+” or “–“.
You can select one of 3 sizes, 10 mm, 20 mm and 30 mm.
To hide the grid, select “OFF”.

① Circle keys (+, –)

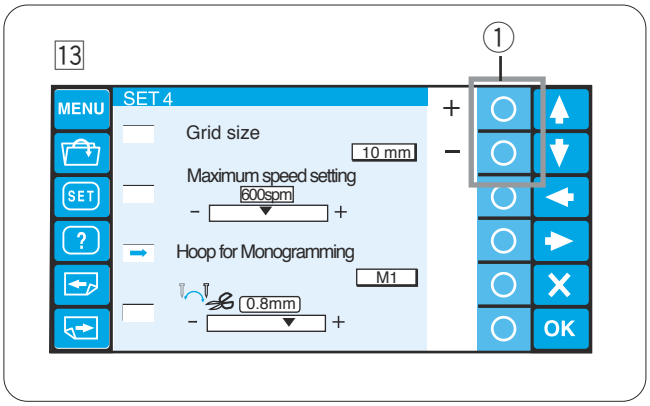


12 Maximum sewing speed

The maximum speed of embroidery can be changed from 400 to 800 spm by 100 spm intervals.

Press the circle key next to “+” or “–“ to select the desired speed.

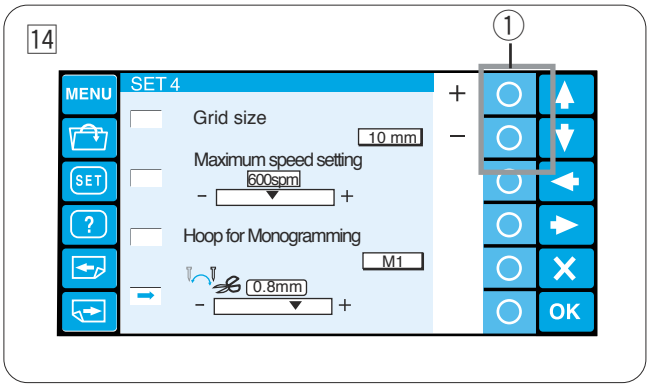
① Circle keys (+, –)



13 Hoop selection for monogramming

Press the circle key next to “+” or “–“ to select the default hoop for monogramming from the following.
M1 to M3
T1 to T6
S1, S2, H1
J1 to J8
Refer to page 47.

① Circle keys (+, –)



14 Thread trimming position

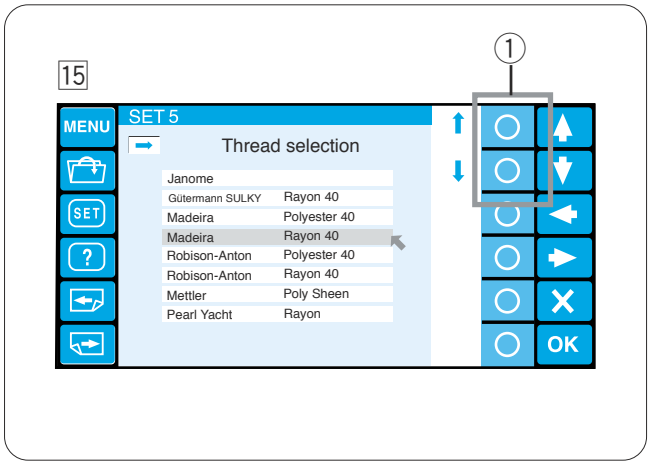
If threads are not trimmed properly, adjust the needle drop position where the threads being trimmed.

Press the circle key next to “+” or “–“ to set a distance between the thread trimming position and the last stitch of the pattern section or select **[OFF]** to turn off the function.

① Circle keys (+, –)

The adjustable range is from 0.5 to 1.0.

Press the OK key to register the new settings.
Or press the next page key to go to the next page.

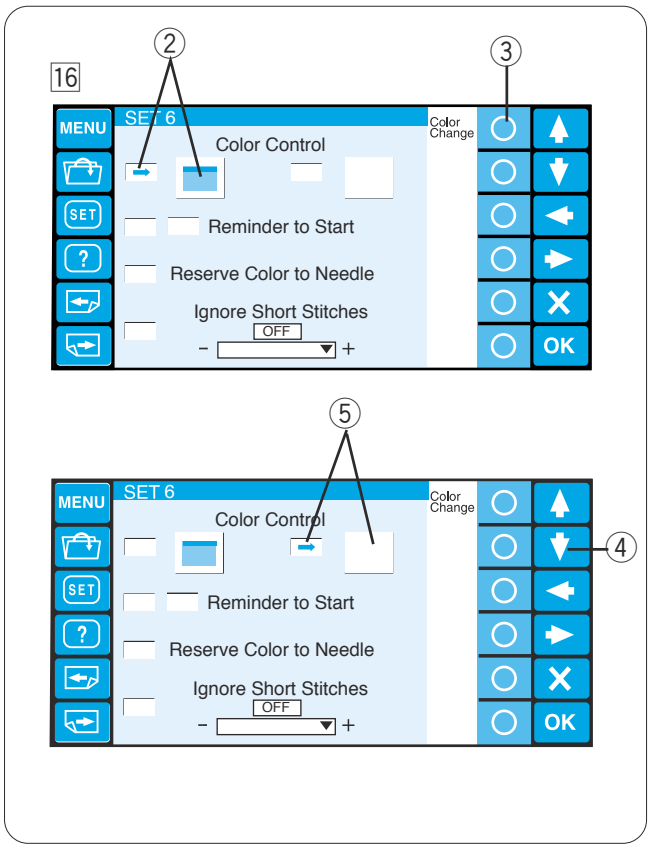


15 Selecting the thread brand

There are 8 kinds of embroidery threads to choose from.

Press the circle key next to the upward or downward arrow to move the cursor (red arrow) to select the desired brand.

① Circle keys (arrow)



16 Screen color options

You can change the color of the screen background and key icons.

Press the circle key next to “Color Change” to change the color of the screen background.

② Screen background selected

③ Circle key (Color Change)

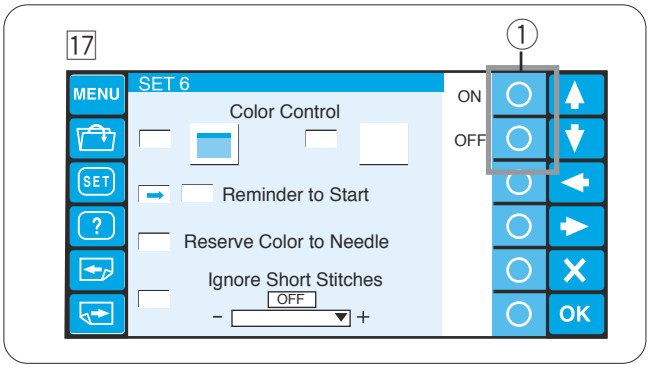
Press the downward arrow key to select the key icons and press the circle key next to “Color Change” to change the color.

④ Downward arrow key

⑤ Key icon selected

Press the OK key to register the new settings.

Or press the next page key to go to the next page.

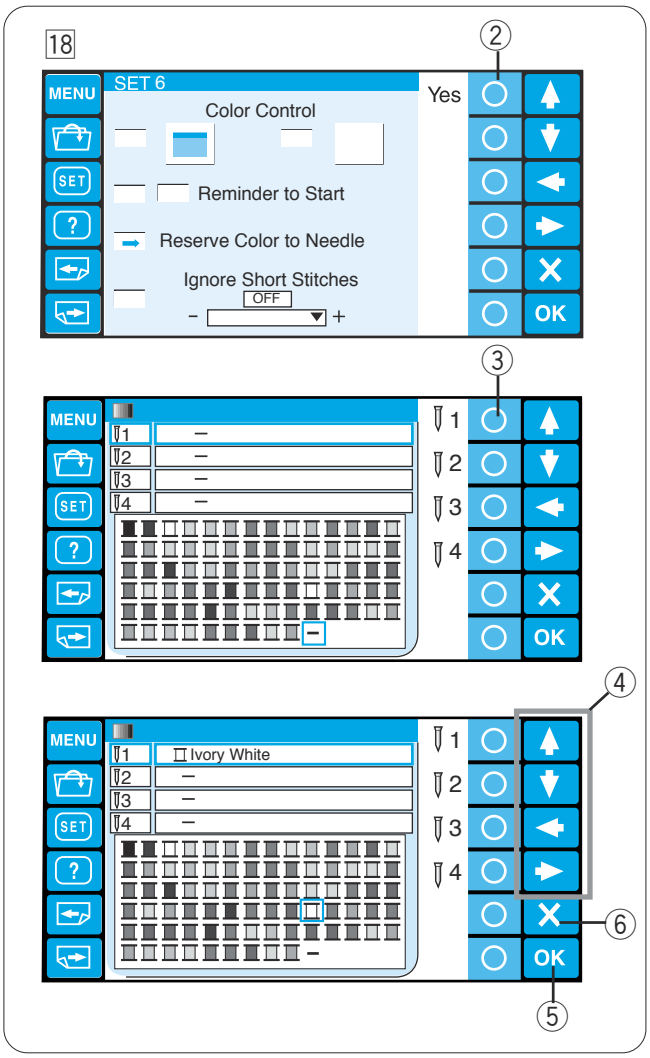


17 Reminder message ON/OFF

When you press the START/STOP button, a reminder message will appear on the LCD touch panel. However, you can turn off the reminder.

Press the circle key next to OFF to turn off the reminder.
To turn the reminder message on, press the circle key next to ON.

① Circle keys (ON, OFF)



18 Reserving the color for the needle bar

When you select a multi-color design, the machine will automatically assign the thread color to each needle bar. However, when you are sewing the second pattern that uses the color same as one of the first pattern used, you can reserve this color for the needle bar already threaded with this color.

If the first pattern uses Ivory white thread on needle bar No.1 and the second pattern uses Ivory white on needle bar No. 3, reserve Ivory white for needle bar No.1.
So you do not need to unthread needle bar No. 1.

Press the circle key next to “Yes”, the color setting window will open.

② Circle key (Yes)

Select needle bar No. 1 by pressing the circle key next to the needle bar icon No. 1.

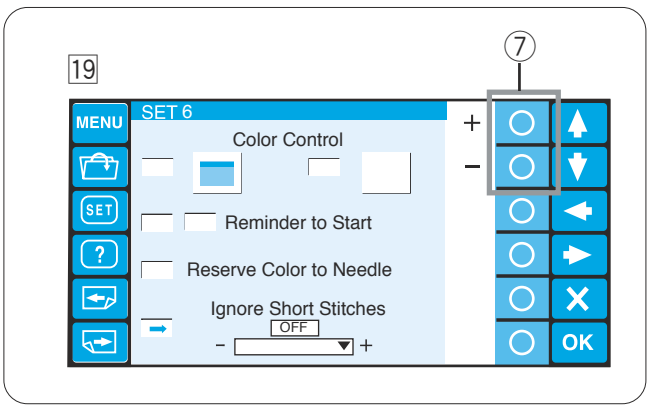
③ Circle key (needle bar No.1)

Press the arrow keys to select Ivory white from the color pallet and press the OK key to confirm your setting.

④ Arrow keys
⑤ OK key

To cancel the changes to setting, press the exit key.

⑥ Exit key (X)



19 Ignoring short stitches

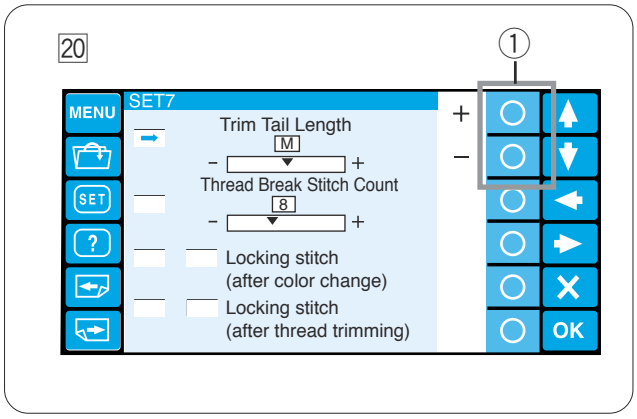
To avoid thread breakage due to short stitches, activate the ignoring short stitches function to eliminate short stitches from stitch data.

Press the circle key next to “+” or “–” to select the stitch length so the stitches shorter than the selected length will be eliminated.
The adjustable range is from 0 to 1.0 mm.

⑦ Circle keys (+, –)

To turn off this function, press the circle key next to “+” until OFF is indicated.

Press the OK key to register the new settings.
Or press the next page key to go to the next page.



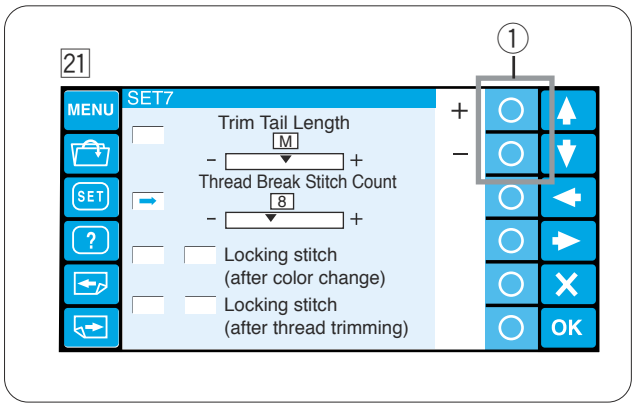
20 Setting the trim tail length

Some times you need to adjust the tail length of the thread being trimmed depending on the thickness and type of the thread.
Press the circle key next to “+” or “–“ to adjust the trim length.

① Circle keys (+, –)

You can select one of the following options.

S: Short
M: Medium
L: Long



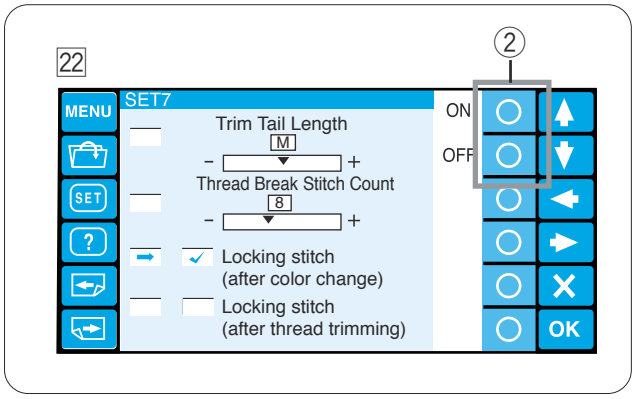
21 Setting the thread breakage sensor

You can adjust the sensitivity of the thread brakage sensor by setting stitch count to judge thread breakage. Press the circle key next to “+” or “–“ to adjust the sensitivity.

① Circle keys (+, –)

The adjustable range is from 3 to 16.
The higher the number, the lower the sensitivity.

Reduce the sensitivity to avoid false thread breakage due to short stitches.

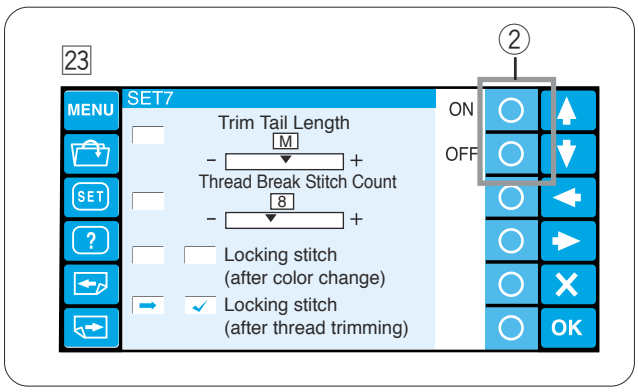


22 Locking stitch ON/OFF (after color change)

The threads may ravel if the stitch data does not contain locking stitches at the beginning of each color section.
To avoid raveling, insert locking stitches at the beginning by pressing the circle key next to “ON”.

Press the circle key next to “OFF” to disable this function.

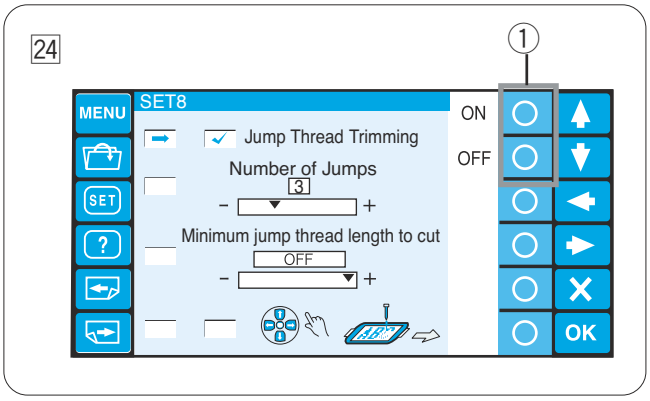
② Circle keys (ON, OFF)



23 Locking stitch ON/OFF (after thread trimming)

If you turn ON the jump thread trimming (refer to the previous page), insert locking stitches after the jump to avoid threads from raveling.
Press the circle key next to “ON” or “OFF” to turn on or off the function.

② Circle keys (ON, OFF)

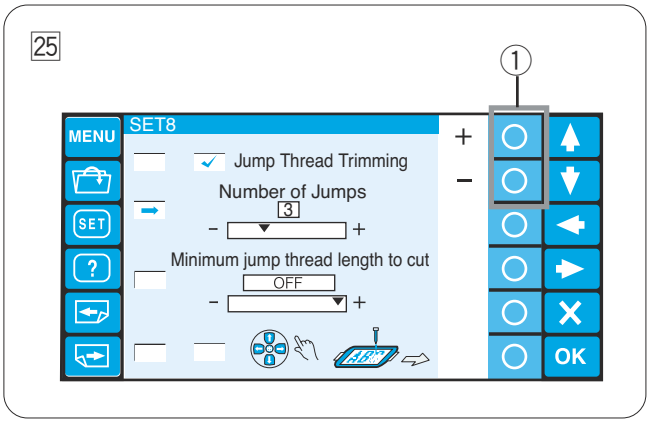


24 Jump thread trimming ON/OFF

If you wish to trim jump threads automatically, press the circle key next to “ON”.
A check mark will appear in the box.

Press the circle key next to “OFF” to disable the jump thread trimming.

① Circle keys (ON, OFF)



25 Jump thread trimming threshold

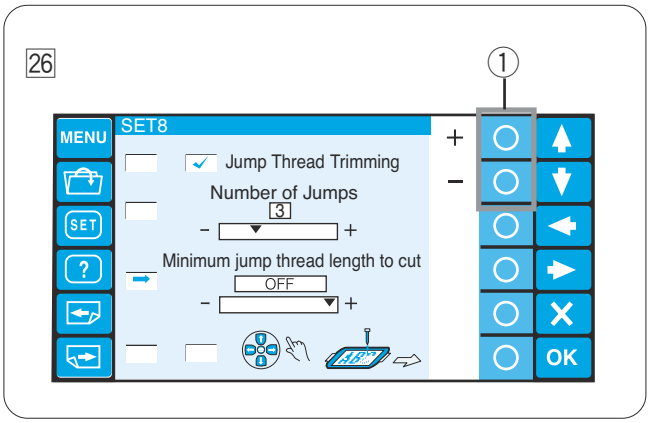
If you insert jump codes when creating a custome design embroidery pattern using a digitizing software, you can adjust the position of jump thread trimming by setting the number of jump codes.
The machine will trim the jump thread automatically after the specified number of jump codes.

Press the circle key next to “+” or “–“ to adjust the number of jumps.

① Circle keys (+, –)

The default setting is 3 and adjustable range is from 1 to 8.

NOTE:
Turn off the setting 26 below, when using this function.



26 Jump thread trimming threshold (length)

If you do not have a digitizing software, you can ajust jump thread trimming by length.

Press the circle key next to “+” or “–“ to set the minimum length of jump thread to cut .
The machine will automatically cut jump threads longer than the length selected.

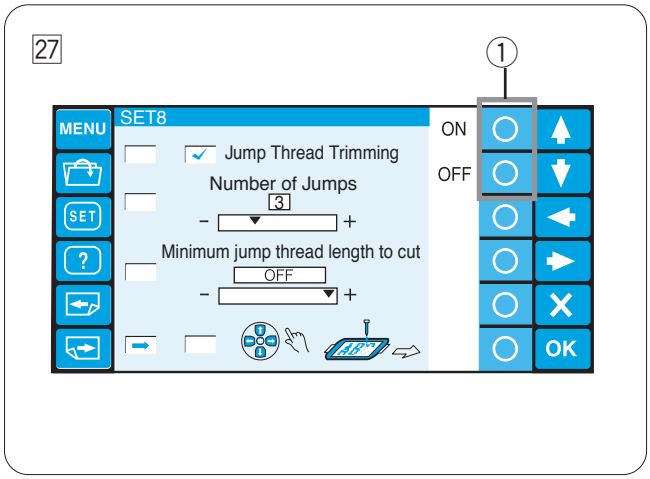
① Circle keys (+, –)

To turn this function off, press the circle key next to “+” until “OFF” is indicated.

The adjustable range is from 1 mm to 30 mm.

NOTE:
Set the jump code number to 8 when using this function.

Press the OK key to register the new settings.
Or press the next page key to go to the next page.



27 Hoop position adjustment ON/OFF (after starting embroidery)

The hoop position can be adjusted before sewing each layer (section) or even in the middle of embroidering.

NOTES:
The adjusted hoop position will apply to the subsequent layers (sections).
Turn off this function when sewing ordinary embroidery designs.

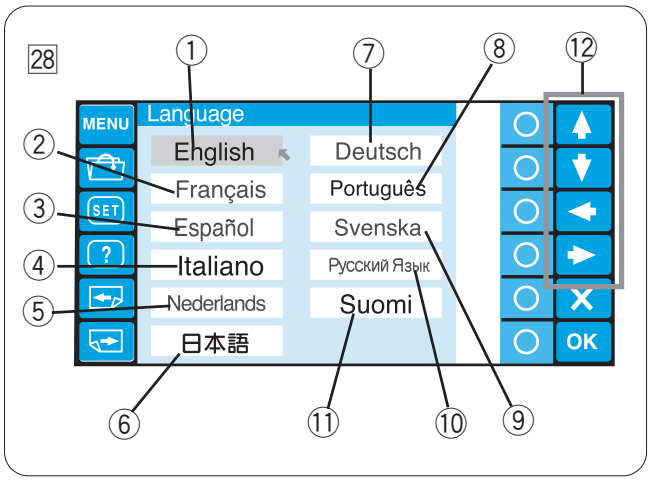
Press the circle key next to “ON”.
A check mark will appear in the box.

Press the circle key next to “OFF” to disable this function.

① Circle keys (ON, OFF)

Press the OK key to register the new setting.

Or press the exit key to close the setting mode window and return to the previous window.



28 Language selection

You can select one of the following languages for screen message.

① English	② French	③ Spanish
④ Italian	⑤ Dutch	⑥ Japanese
⑦ German	⑧ Portuguese	⑨ Swedish
⑩ Russian	⑪ Finnish	

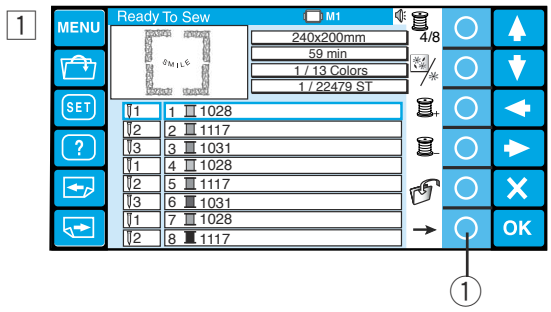
Press the arrow key to move the cursor (red arrow) to the language you wish to select.

⑫ Arrow keys

Press the OK key to confirm your selection.
Or press the exit key to close the setting mode window and return to the previous window.

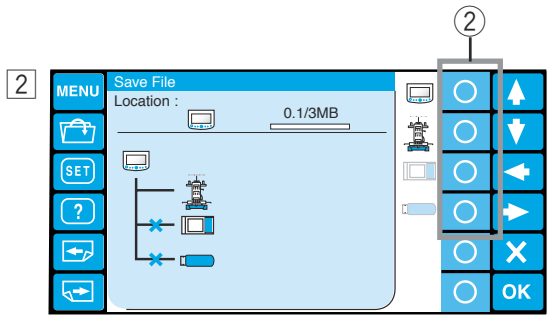
File Management

Saving the Pattern as a File



1 Press the circle key next to the save file icon in the Ready to Sew mode.

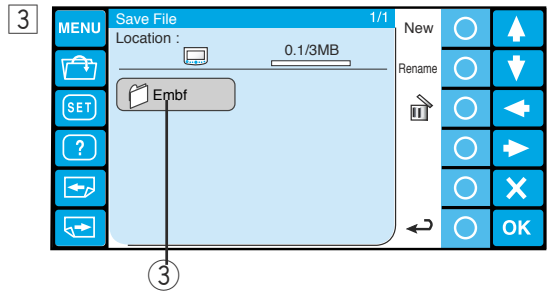
① Circle key (save file)



2 Press the circle key next to the icon of the memory location to where you wish to save the file.

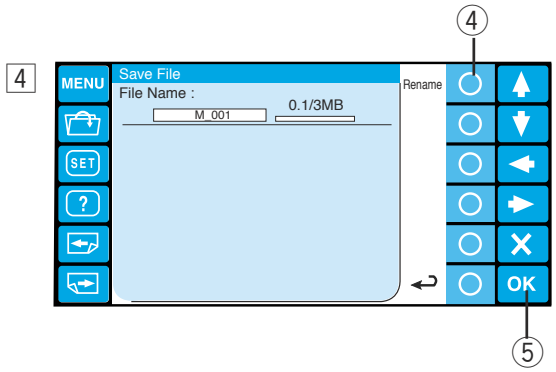
② Circle keys (memory location)

NOTE:
If the memory devices are not connected to the RCS unit, the icon of the device will be grayed out.



3 The folder list window of the selected memory location will open.
Press the desired folder icon to open.

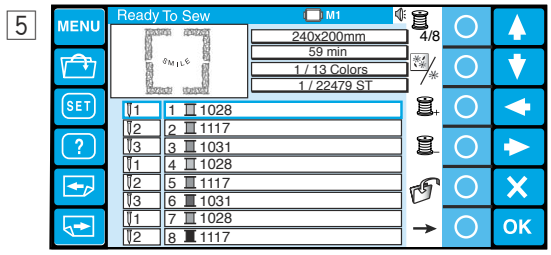
③ Folder icon



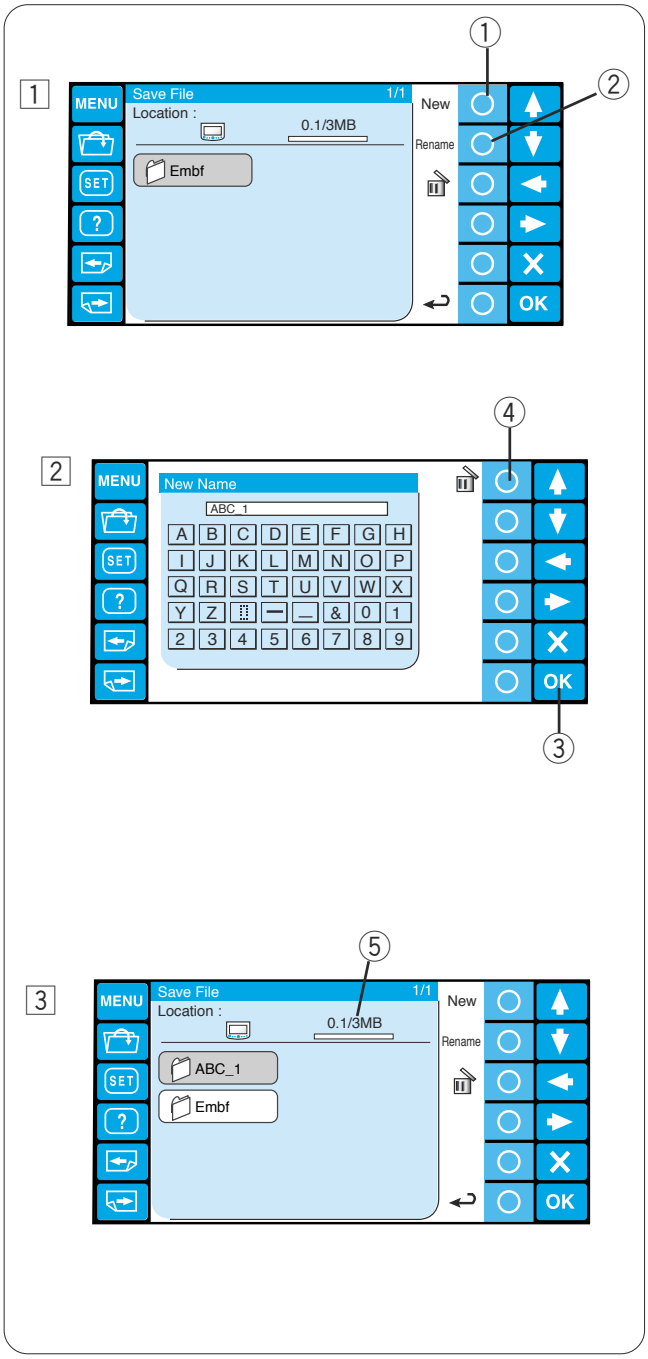
4 The file list window of the selected folder will open. If there is no file saved in the folder, a blank list will be displayed.
The file name will be automatically assigned from M_001. To assign the desired name to the file, press the circle key next to Rename (refer to next page).
Press the OK key to save the pattern as a file.

④ Circle key (Rename)

⑤ OK key



5 The screen will return to the Ready to Sew window and the file will be saved under the assigned name.



Creating a new folder

1 If you wish to create a new folder, press the circle key next to the New.

① Circle key (new)

NOTE:
If you wish to change the name of the existing folder or file, press the circle key next to Rename.

② Circle key (rename)

2 The keyboard window will open.
Enter the desired name and press the OK key.
Up to 8 characters can be entered.

③ OK key

NOTE:
To delete a wrong entry, press the circle key next to the delete icon. The last character will be deleted.

④ Circle key (delete)

3 A new folder with the assigned name will be displayed in the folder list window.

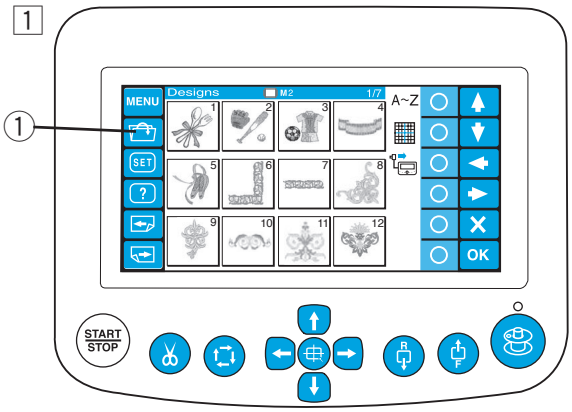
NOTE:
You can save as many folders and files as the available memory space allows.
The memory size is indicated with the scale bar.

⑤ Scale bar

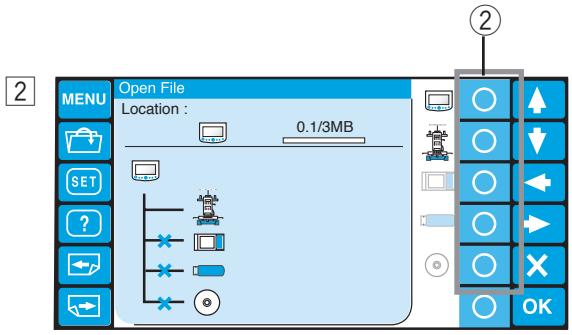
Opening a file

You can open embroidery data files from the internal memory of the machine, RCS unit and memory devices such as the optional ATA PC card, USB memory and CD-ROM drive.
The RCS unit is able to open embroidery data files in *.jef and *.dst format.

1 Press the open file key to the save file icon in the Ready to Sew mode.
① Open file key

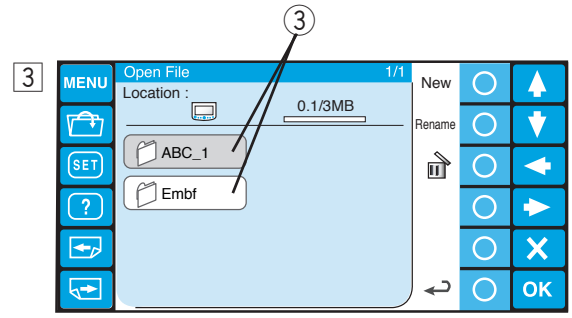


2 Press the circle key next to the icon of the memory location from where you wish to open the file.
② Circle keys (memory location)

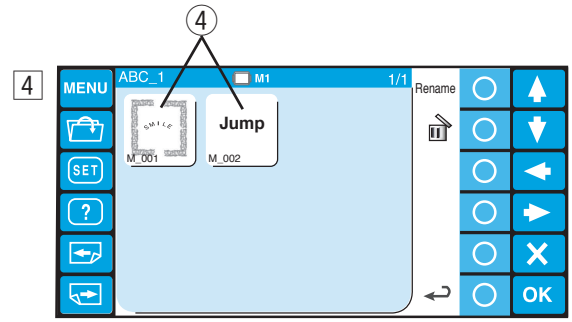


NOTE:
If the memory devices are not connected to the RCS unit, the icon of the device will be grayed out.

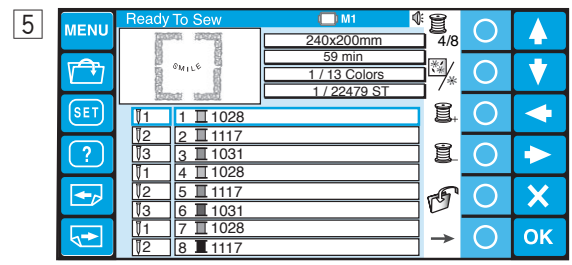
3 The folder list window of the selected memory location will open.
Press the desired folder icon to open.
③ Folder icon



4 The file list window of the selected folder will open. If there is no file saved in the folder, a blank list will be displayed.
Press the desired file icon to open.
④ File icon

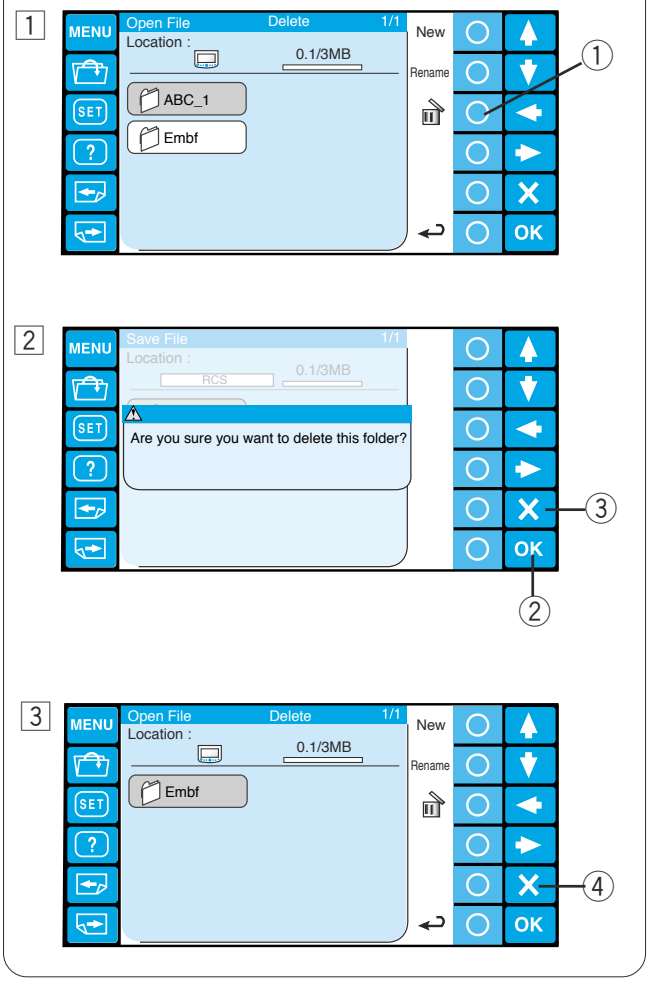


5 The screen will display to the Ready to Sew window.



NOTE:
When you open a Tajima *.dst file, you need to assign the thread colors to each sections (layers) since they do not have the thread color information.
Refer to page 52 for how to assign the thread color.
A Tajima *.dst file, which has more than 200 sections cannot be opened.

Deleting the folder



1 To delete the unnecessary folders, press the circle key next to the delete icon in the folder list window and press the folder icon you wish to delete.

① Circle key (delete)

2 A confirmation dialog box will open.
Press the OK key to delete the folder

② OK key

If you do not wish to delete the folder, press the Exit key (X) and the screen will return to the folder list window without deleting the folder

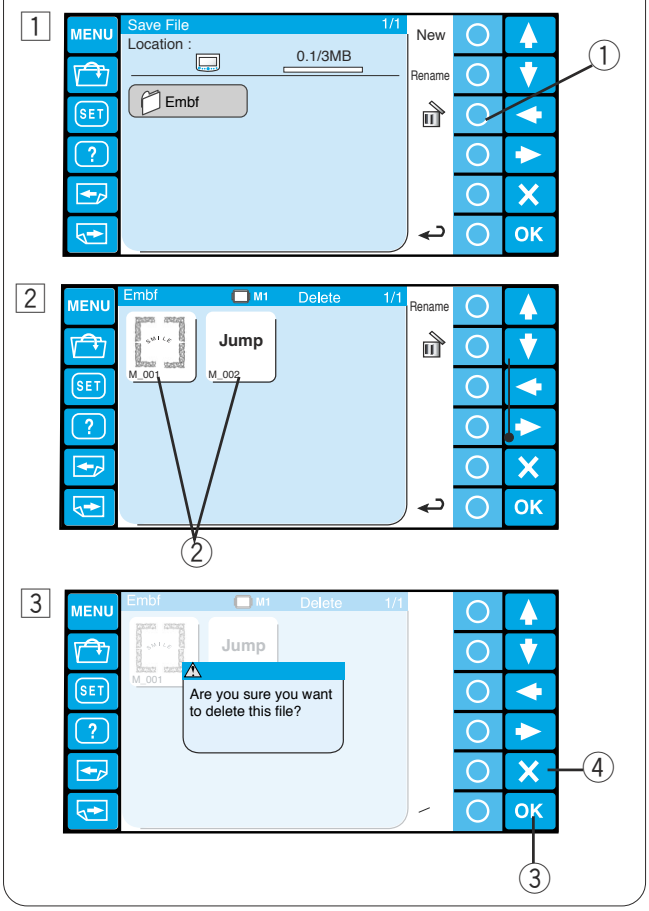
③ Exit key (X)

3 The selected folder will be deleted and screen will return to the folder list window.

Press the exit key to close the folder list window.

④ Exit key (X)

Deleting the file



1 To delete the unnecessary files, open the folder that contains the files to delete.

① Circle key (delete)

2 Press the circle key next to the delete icon in the file list window and press the file icon you wish to delete.

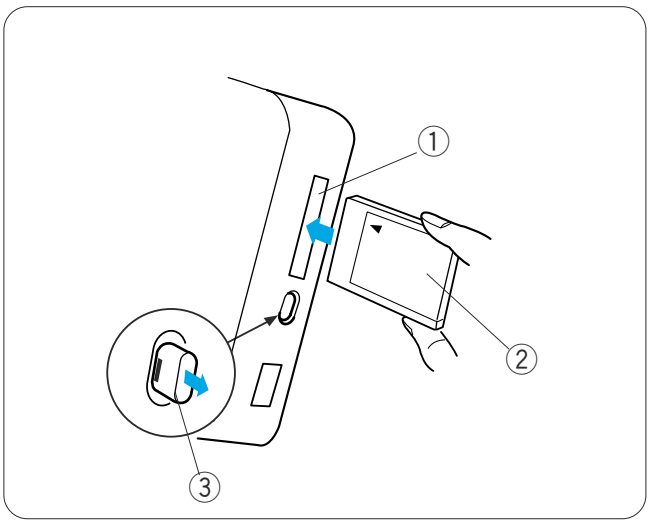
② File icon

3 A confirmation dialog box will open.
Press the OK key to delete the folder.

③ OK key

If you do not wish to delete the folder, press the Exit key (X) and the screen will return to the file list window without deleting the file.

④ Exit key (X)



SECTION 4. OPTIONAL ITEMS

PC Design Cards

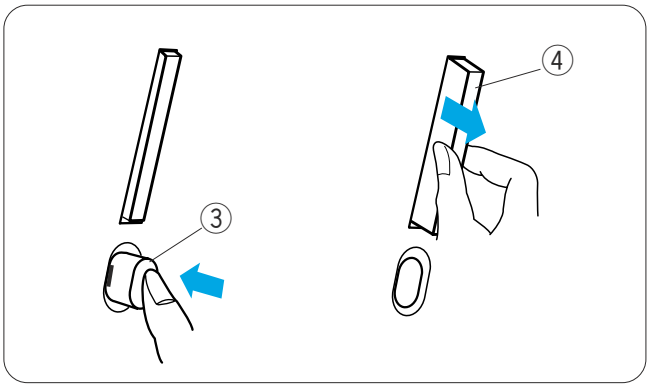
You can open embroidery patterns from the PC Design cards using the RCS unit.

Inserting the PC Design card

Insert the PC Design card into the card slot on the RCS unit with the front side of the card facing toward you.

Push the card in until the card ejector button pops out.

① Card slot
② Front side of the card
③ Card ejector button

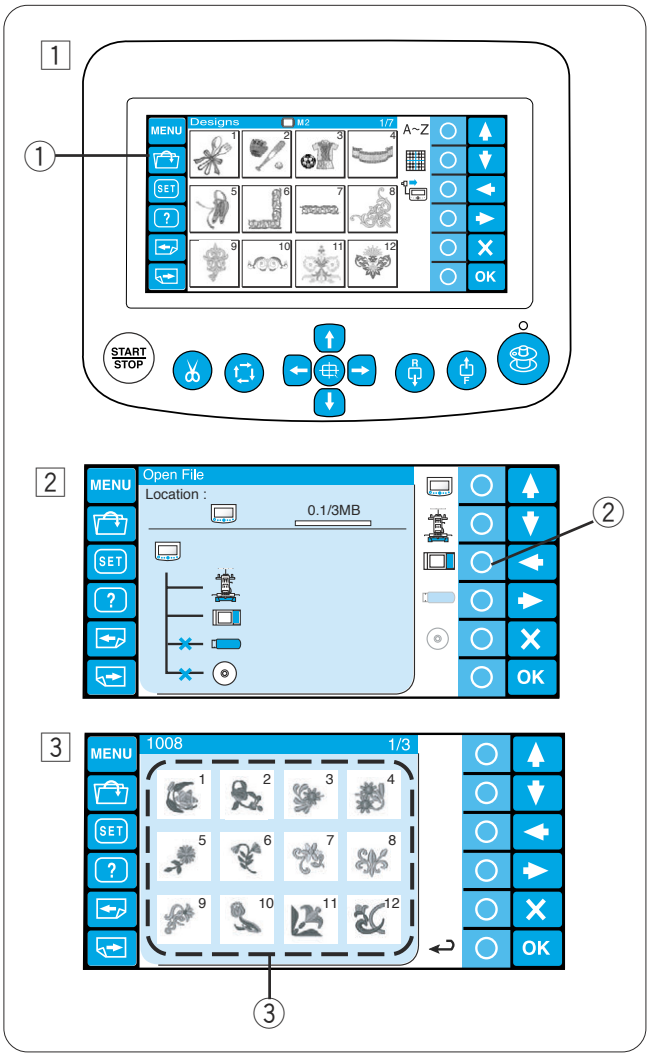


Ejecting the PC Design card

Press the card ejector button and the card will pop out. Take the card out from the RCS unit.

④ PC Design card

NOTE:
When turning the power on with the PC Design card inserted, it will take a few moments to start up the RCS unit.



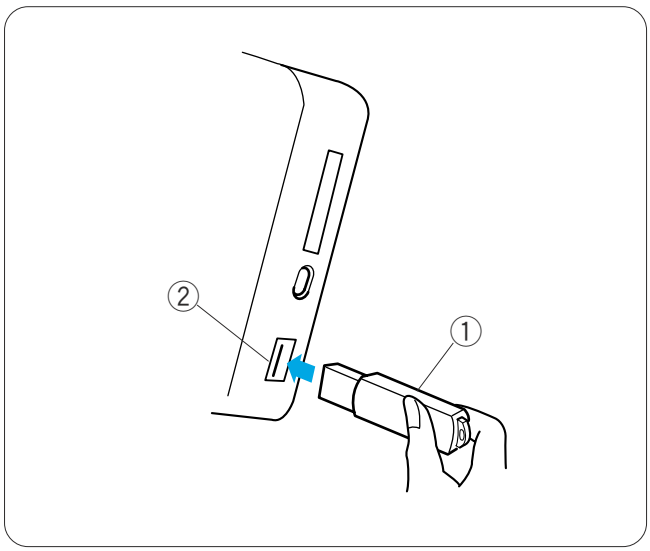
Opening the embroidery pattern from the PC Design card

1 Press the open file key.
① Open file key

2 Press the circle key next to the card icon.
② Circle key (PC card)

3 The file list window will open. Press the desired file icon to open.
③ File icon

NOTE:
The RCS unit is also compatible with ATA PC cards (CompactFlash and adapter).
Refer to pages 75-77 for how to save and open the file.



USB Memory

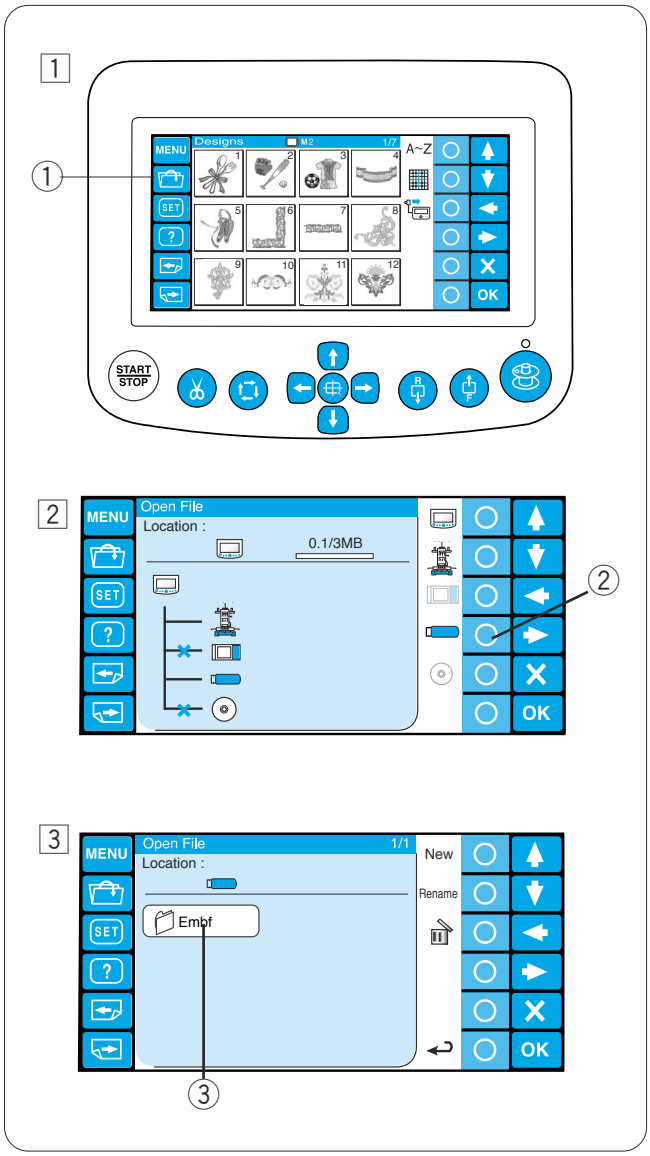
The RCS unit is compatible with the USB memory, which can be used to save and transfer the files between the machine and your PC.

The USB memory is available at camera shops, PC supplies stores etc. in various forms.

Insert the USB memory into the USB port on the RCS unit.
To remove the USB memory, pull it straight away from the RCS unit.

① USB memory
② USB port

NOTE:
When turning the power on with the USB memory inserted, it will take a few moments to start up the RCS unit.



Opening the embroidery pattern from the USB memory

1 Press the open file key.

① Open file key

2 Press the circle key next to the USB memory icon.

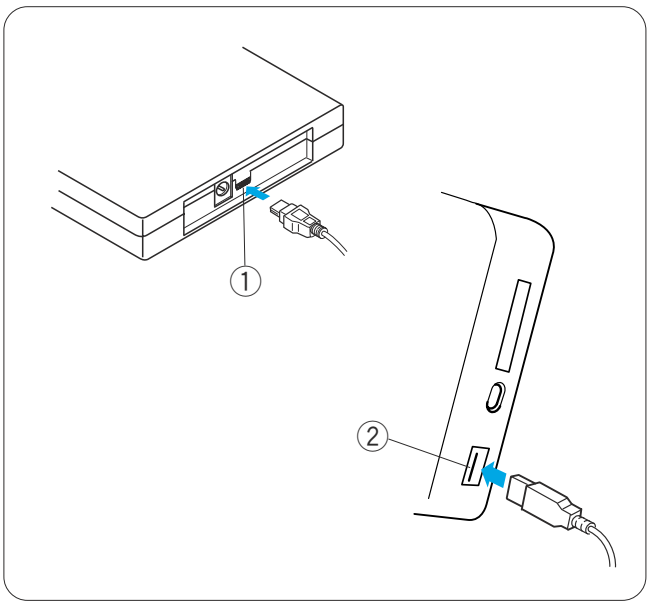
② Circle key (USB memory)

3 The folder list window will open. Press the Embf folder icon to open.

③ Folder icon

The file list window will open.
Press the desired file icon to open.

Refer to pages 75-77 for how to save and open the file.



CD-ROM Drive

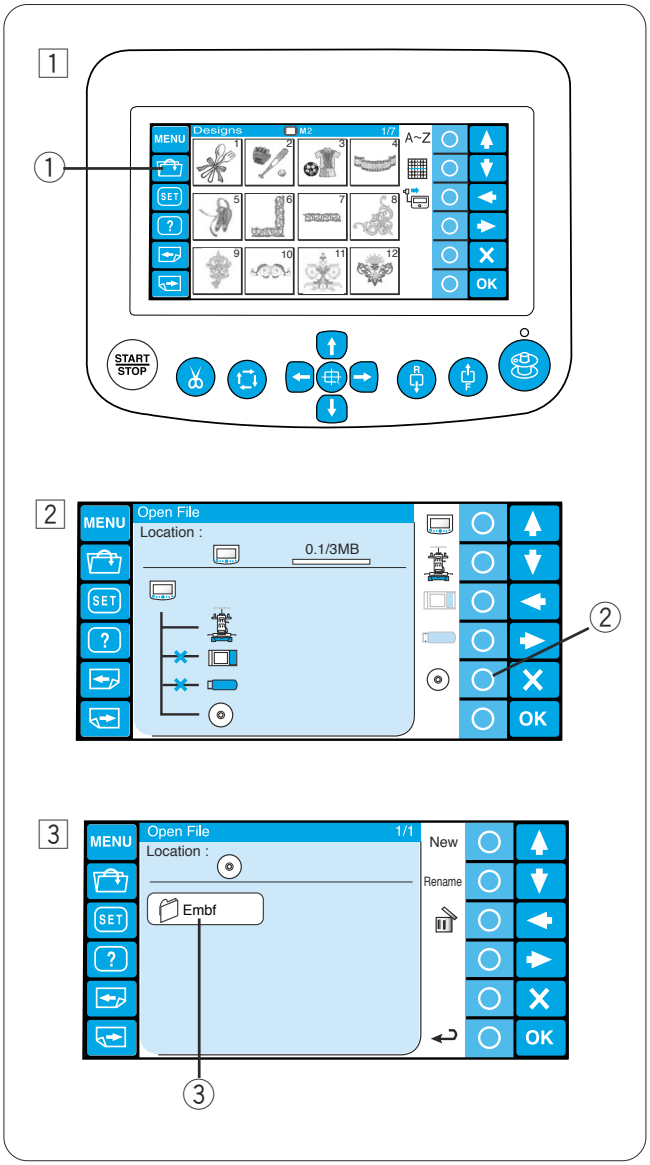
NOTE:
Do not use any other CD-ROM drive than the exclusive CD-ROM drive, which is available from authorized dealers.

Insert the mini USB connector into the USB port on the back of the CD-ROM drive.

① Mini USB port on the CD-ROM drive

Insert the USB connector into the USB port on the RCS unit. The CD-ROM drive does not need external power source since it is supplied from the RCS unit via the USB cable.

② USB port on the RCS unit



Opening the embroidery pattern from the CD-ROM

1 Press the open file key.

① Open file key

2 Press the circle key next to the CD-ROM icon.

② Circle key (CD-ROM)

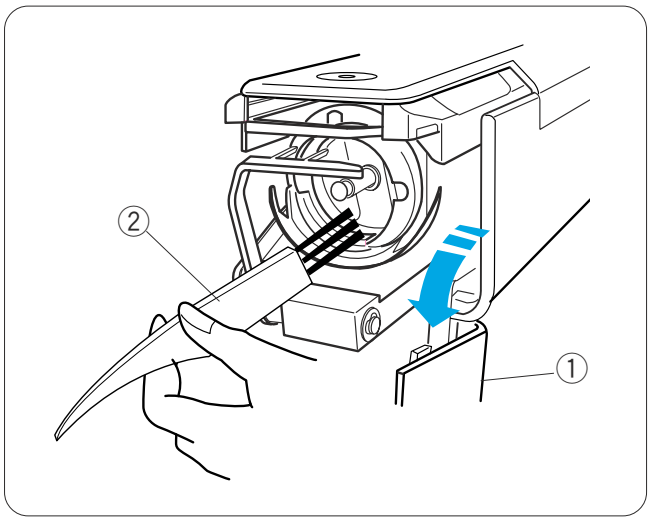
3 The folder list window will open. Press the Embf folder icon to open.

③ Folder icon

The file list window will open.
Press the desired file icon to open.

SECTION 5. CARE AND MAINTENANCE

Cleaning the Hook

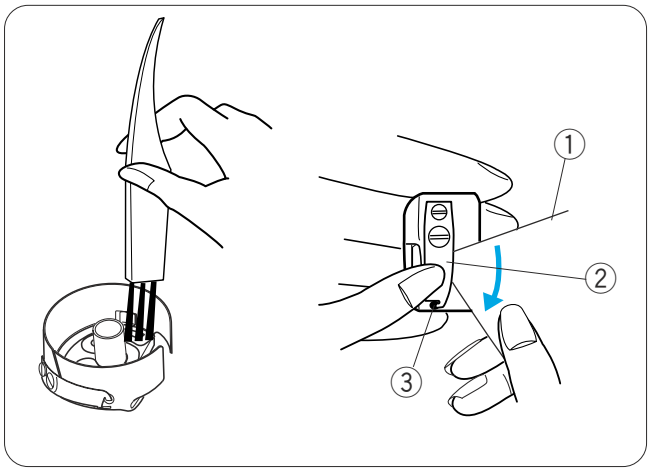


CAUTION:
Turn the power switch off before cleaning the hook area.

Open the hook cover and remove the bobbin case.
Clean the inside of the hook with the lint brush.

① Hook cover
② Lint brush

Cleaning the Bobbin Case

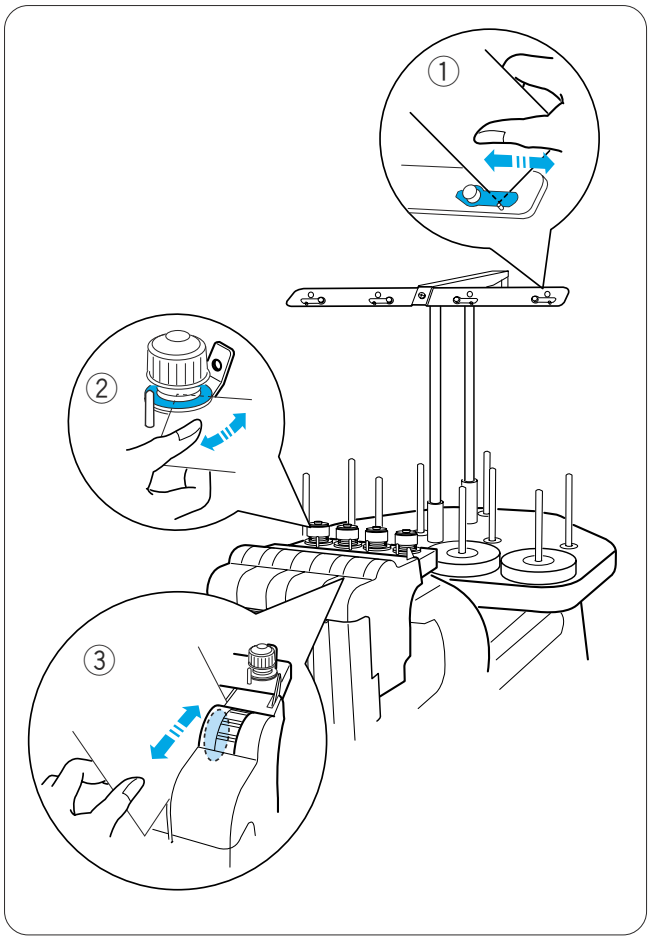


Remove the bobbin from the bobbin case.
Clean the inside of the bobbin case with the lint brush.

Insert a corner of a piece of paper under the tension blade and scrape out lint.
Clean the outside of the bobbin case and the opening with lint brush.

① Piece of paper
② Tension blade
③ Opening

Cleaning the Tension Leaves and Disks

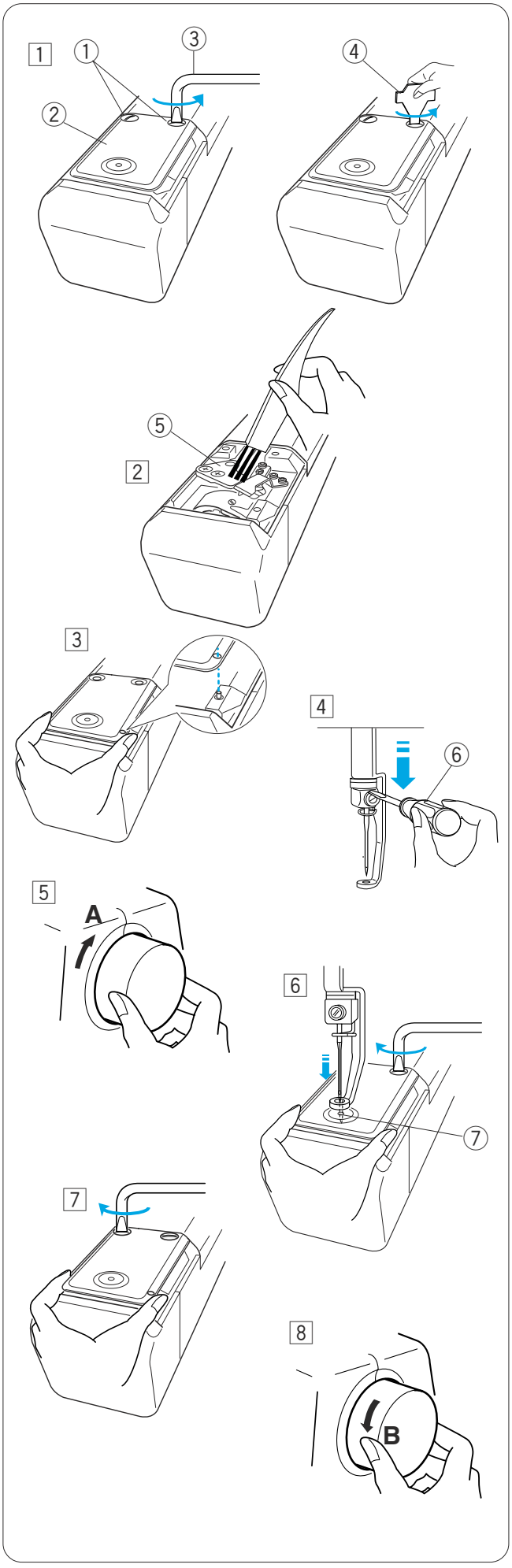


Clean lint and wax in the tension area with a piece of paper.
Insert a piece of paper under the tension leaf or between the tension disks and scrape out lint and wax.

① Tension leaf
② Pre tension disks
③ Tension disks

Cleaning the Auto Thread Cutter Mechanism

CAUTION:
Turn the power switch off before cleaning the auto thread cutter mechanism.



1 Loosen the 2 setscrews on the needle plate with the offset screwdriver.
Unscrew and remove the 2 setscrews with the screwdriver
① Setscrews
② Needle plate
③ Offset screwdriver
④ Screwdriver

2 Remove the needle plate.
Clean the auto thread cutter mechanism with the lint brush.
⑤ Auto thread cutter mechanism

3 Replace the needle plate and attach it with the 2 setscrews. Tighten the setscrew slightly.

4 Lower the needle bar by pushing it down with the small screwdriver.
⑥ Small screwdriver

5 Turn the handwheel in the direction of "**A**" to lower the needle into the hole in the needle plate.

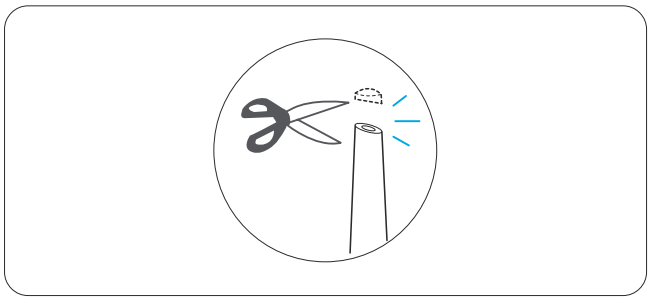
6 Adjust the position of the needle plate so that needle enters into the center of the hole.
⑦ Hole in the needle plate

7 Tighten the 2 setscrew securely with the offset screwdriver.

8 Turn the handwheel in the direction of "**B**" to raise the needle bar.

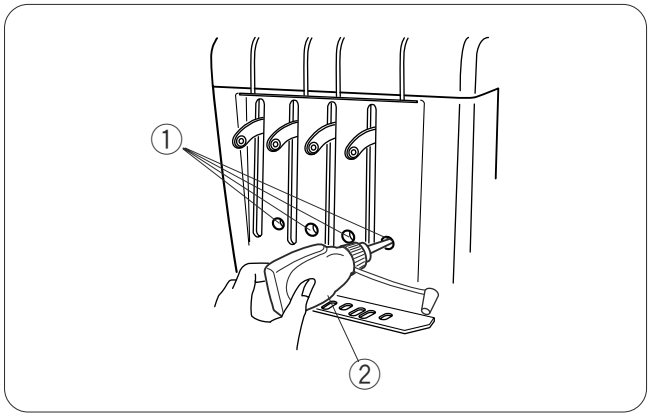
Oiling

CAUTION:
Turn the power switch off before oiling.



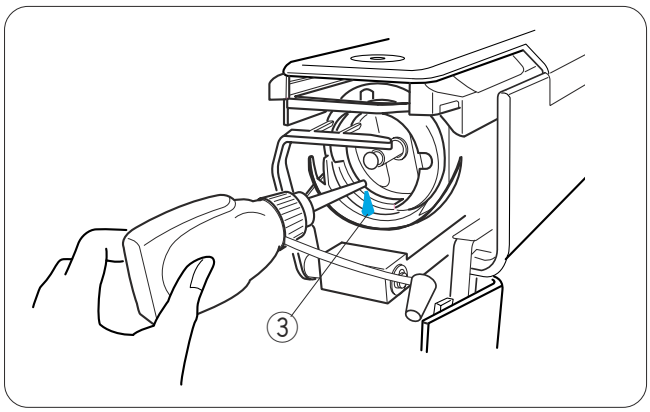
If you use the machine frequently, oil the needle bars every two weeks and oil the hook race every day.

Clip the tip of the oiler with scissors.



Apply a few drops of oil to the needle bar through the holes in the front cover.

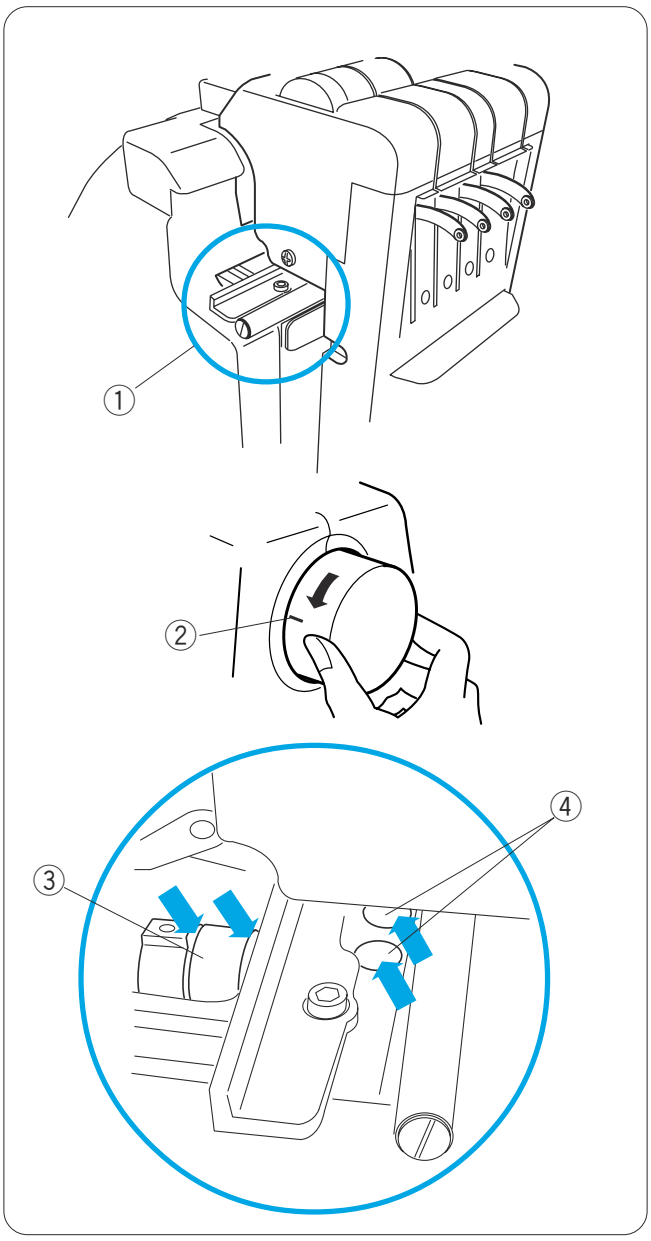
① Holes in the front cover
② Oiler



Open the hook cover and remove the bobbin case.
Clean the inside of the hook with the lint brush.

③ Hook race

NOTE:
Use only good quality sewing machine oil.
Do not apply too much oil, otherwise threads and fabric may be stained with excess oil.
Wipe off any excess oil with a waste cloth.

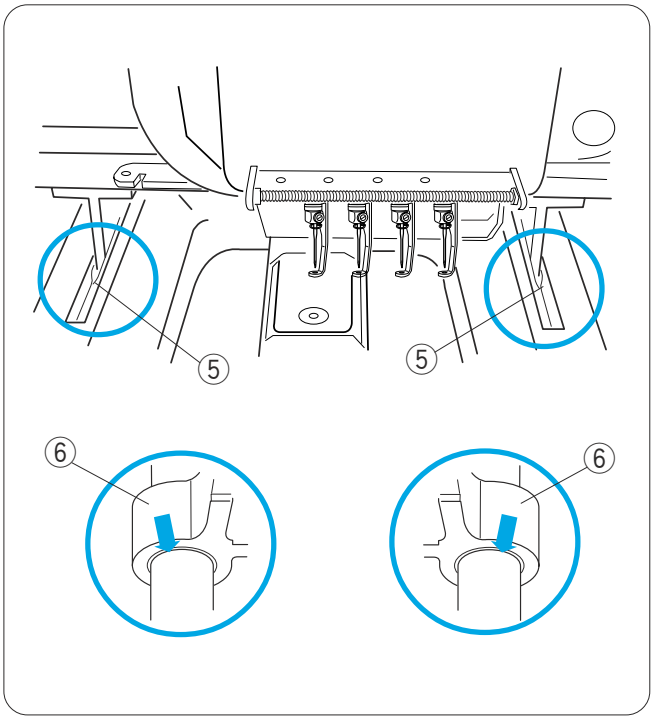


If you use the machine frequently, oil the following points every four months.

1 Turn the machine on and select pattern #1.
Move the head to the right most position by selecting needle bar #4.
The oiling points will be exposed.
Turn the machine off.
① Oiling points

2 Turn the hand wheel to set the hairline at 9 o'clock so the crank rod is accessible.
② Hairline

3 Apply a few drops of oil to the crank rod.
Apply a few drops of oil to the main shaft through the 2 holes.
③ Crank rod
④ Holes



4 Apply a few drops of oil to the Y-carriage bushings through the slit of the base cover.
⑤ Slit
⑥ Y-carriage bushing

NOTE:
Use only good quality sewing machine oil.
Apply oil only to the points indicated.
Do not apply too much oil, otherwise threads and fabric may be stained with excess oil.
Wipe off any excess oil with a waste cloth.

Error Messages

Error Message	Error Description	Remedy
[E : 00]	Communication error with the RCS unit	Turn the power switch off and turn it on again.
[E : 01]	Initializing error	Turn the power switch off and turn it on again.
[E : 02]	Needle bar switching error	Turn the power switch off and turn it on again.
[E : 03]	Needle bar stop position error	Press the ENTER button to reset the machine.
[E : 04]	Driving motor stops due to an overload.	After 15 seconds, the LCD screen will show the Ready to Sew mode display. Remove jamming threads or other cause of overloading.
[E : 05]	Needle thread broke or ran out.	Press the MODE key to return to the Ready to Sew mode and re-thread the needle.
[E : 06]	Needle bar setting error	Press the MODE button to return to the Ready to Sew mode then set the needle bar number.
[E : 07]	Auto thread cutting error	Turn the power switch off and turn it on again.
[E : 08]	Opening tension disks while stitching	Pull the tension release lever to close the tension disks. The LCD screen will show the Ready to Sew mode display.
[E : 09]	Upper shaft stop position error	Turn the power switch off and turn it on again.

Audible Signals

Audible signal	**The buzzer sounds when:**
pip	Normal operation
pip-pip-pip-pip	Invalid operation or malfunction
pip-pip	Thread color change
pip-peep pip-peep	Embroidery completed
peep	Malfunction

Troubleshooting

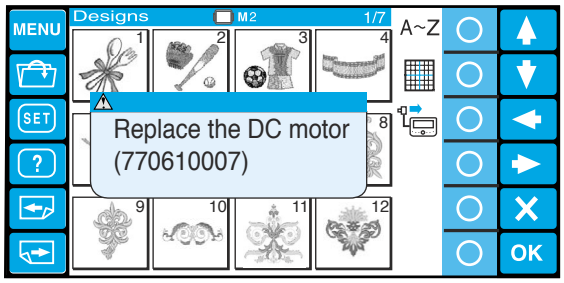
Problem	Cause	Reference
The machine does not run.	1. The machine is not plugged in correctly. 2. The threads are jammed in the hook or around the take-up lever. 3. A confirmation message or an error message is displayed. 4. The control system does not work correctly.	See page 13. Remove jamming threads. Follow the message to turn it off. Turn the power off and turn it on again.
The machine is noisy.	1. Lint has accumulated in the hook. 2. The machine runs out of oil.	See page 82. See page 84.
The needle thread breaks.	1. The needle thread is not threaded properly. 2. The needle thread tension is too tight. 3. The needle is bent or blunt. 4. The needle is not inserted properly. 5. Stitch density is too dense. 6. Poor quality threads are used. 7. The bobbin thread is not threaded properly.	See page 19. See page 30. See page 31. See page 31. Modify the pattern by using an embroidery software. Use a high quality threads. See page 17.
The bobbin thread breaks.	1. The bobbin thread is not threaded properly. 2. Lint has accumulated in the hook. 3. The bobbin is not inserted into the bobbin case properly. 4. The bobbin or bobbin case has a scratch or nick.	See page 17. See page 82. See page 17. Replace the bobbin or bobbin case.
The needle breaks.	1. The needle is not inserted properly. 2. The needle is bent or blunt. 3. The needle clamp screw is loose. 4. The needle thread tension is too tight. 5. Stitch density is too dense. 6. The needle thread is not threaded properly.	See page 31. See page 31. See page 31. See page 30. Modify the pattern by using an embroidery software. See page 19.
Skipped stitches	1. The needle is not inserted properly. 2. The needle is bent or blunt. 3. The needle thread is not threaded properly. 4. The fabric is not stretched tight enough in the hoop.	See page 31. See page 31. See page 19. See page 22.
Embroidery pattern is distorted or not aligned.	1. The needle thread tension is too tight. 2. The fabric is not stretched tight enough in the hoop. 3. A stabilizer is not used. 4. The fabric is caught or trapped while stitching. 5. The threads are tangled on the bottom side of the fabric. 6. Short stitches are eliminated with the “Ignore short stitches” setting.	See page 30. See page 22. See page 15. See page 27. Cut off and remove the tangled threads. See pages 61, 71.
The tread forms loops.	1. The needle thread tension is too loose. 2. The bobbin is not inserted properly. 3. A poor quality thread is used.	See page 30. See page 17. Use a high quality thread.

Troubleshooting

Problem	Cause	Reference
The fabric puckers.	1. The needle thread tension is too tight. 2. The fabric is not stretched tight enough in the hoop. 3. A stabilizer is not used.	See pages 30. See page 22. See page 15.
The LCD screen is not clear.	1. The brightness of the LCD screen is not adjusted properly.	 See pages 24, 66.
The touch panel keys do not work correctly.	1. The key position is out of alignment. 2. The control system does not work correctly.	See page 67. Turn the power off and turn it on again.
The PC card or USB memory does not work.	1. The PC card or USB memory is not inserted properly. 2. The memory bank of teh PC card or USB memory is damaged.	 See pages 79, 80. See page 68.
Communication with the PC does not work.	1. The USB cable is not connected properly. 2. The existing machine ID number is used.	See page 14. See pages 59, 67.
The thread breakage warning appears though the thread is not broken.	1. The thread detector sensitivity is too sensitive.	See pages 61, 72.

NOTE:
It is not abnormal that a slight humming sound is comming from the internal motors when the machine stands still.

DC Motor Replacement Message



When the total running time of the DC motor reaches 1,000 hours, a message will appear advising you to replace the DC motor.
If this message appears, contact the dealer from whom this machine was purchased.

It is recommended to replace the motor before it comes to the end of its operating life.

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