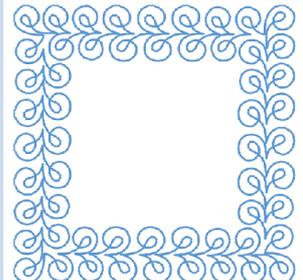
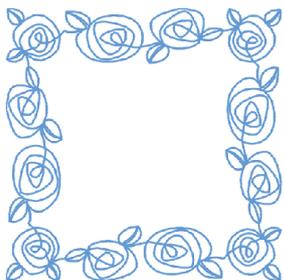
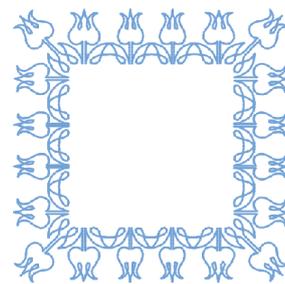
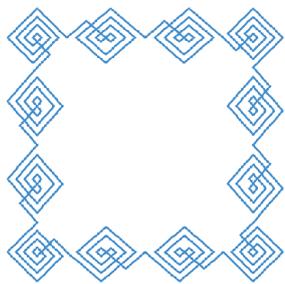
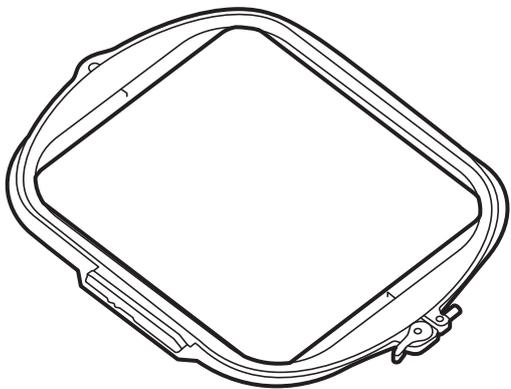


# Upgrade KIT I Operation Manual

Embroidery and Sewing Machine



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

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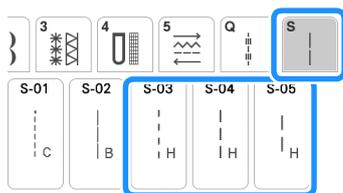
This manual provides details on the functions added/upgraded. Before using this manual, upgrade your machine according to the procedure in the Installation Guide. Before using the functions described in this manual, read the Operation Manual included with the machine.

The screen illustrations in this manual may differ from actual ones shown on the machine.

## Utility Stitches and Character/Decorative Stitches

### Quilting Stitch Patterns

Three utility stitches for quilting have been added. These stitch patterns are made up of several short stitches. Sew these stitch patterns using transparent nylon thread or lightweight thread with a color matching the fabric for the upper thread to give your project the look of hand sewing. If the bobbin thread has a color different from the fabric, the stitch pattern will stand out.

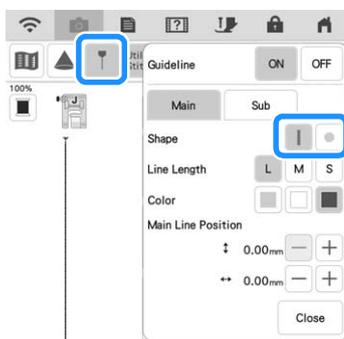


#### Note

- For most fabrics and threads, using a 90/14 needle will result in a clean finish.
- To bring up more of the bobbin thread, increase the thread tension.

### Shape of Guidelines

Select a line or point as the shape of the guidelines.



### Width of Stitches Created With MY CUSTOM STITCH

A utility stitch created with MY CUSTOM STITCH can be retrieved and edited to increase the stitch width up to 7 mm.

### Zigzag Couching

You can easily sew decorative effects using yarn.

## ⚠ CAUTION

- When using yarn, we recommend selecting yarn of weight 4 (MEDIUM ). Medium yarn is often referred to as worsted weight, 20 knitted stitches per 10cm, or 9-11 wraps per inch. The diameter of the yarn is approximately 2-3 mm (1/12-1/8 inch). If the yarn is extremely thin or thick, has an unusual shape (flat or furry), or more than 2 yarns, the best finishing results may not be achieved, or injuries or damage may result.



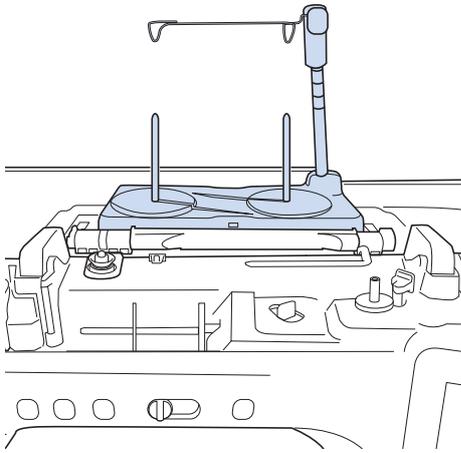
#### Note

- Sew test stitches on the fabric before sewing on your project.
- We recommend using a stabilizer material when sewing stretch fabrics, lightweight fabrics, fabrics with a coarse weave, or fabrics which are prone to fabric shrinkage.

## ■ Prepare for Zigzag Couching

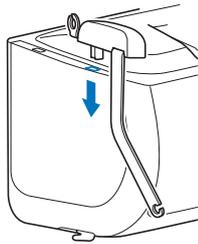
### 1 Attach the spool stand to the machine.

At this time, do not raise the telescopic thread guide shaft.



\* Refer to "Assembling the Spool Stand" in the machine's Operation Manual (Sewing).

### 2 Insert the yarn guide for zigzag couching into the slot on the top left of the machine.



#### Note

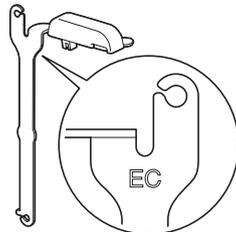
• There are two yarn guides: one for sewing couching and one for embroidery couching. Check the shape of the part, and then install the appropriate guide.

①



① Yarn guide for sewing couching

②



② Yarn guide for embroidery couching

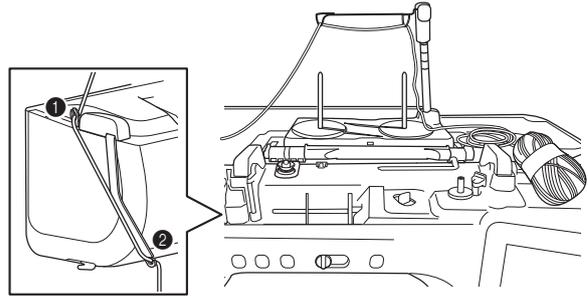
### 3 Press to lock all keys and buttons, and then raise the presser foot lever.

### 4 Attach the dual feed foot to the machine without attaching the sole of the couching dual feed foot.

\* Refer to "Attaching the Dual Feed Foot" in the machine's Operation Manual (Sewing).



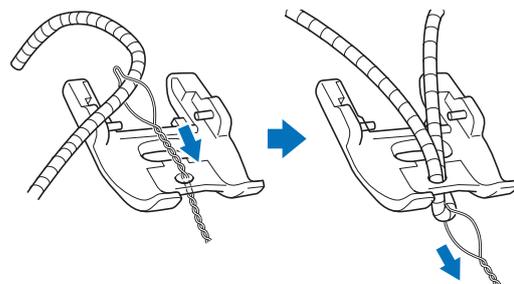
### 5 Pass the yarn through the telescopic thread guide and the yarn guide (①) to (②).



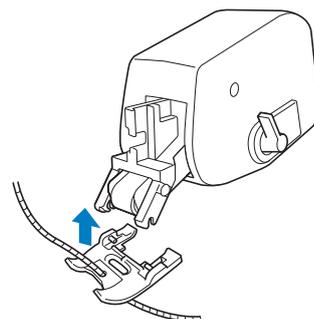
#### Note

• Make sure that the yarn does not become entangled as you work.

### 6 Thread the yarn through the couching sole. Pass the yarn through the loop in the yarn threader, and then pass the threader from top to bottom through the hole on the couching sole.



### 7 Attach the sole of the couching dual feed foot shown below to the dual feed foot.



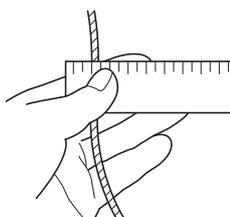
- 8 Pull out the yarn for about 10 cm (4 inches) to the back of the machine.
- 9 Press  to unlock all keys and buttons.
- 10 Thread the machine with the upper thread.

**Note**

- Do not use the spool stand for upper thread. Otherwise thread may tangle with yarn.

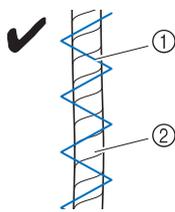
## ■ Sewing Zigzag Couching

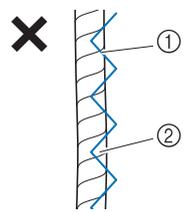
- 1 Select  (Stitch Pattern 1-10).
- 2 Measure the width of the yarn and set the stitch width according to the width of the yarn.



**Note**

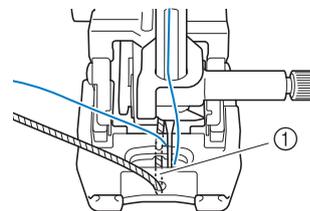
- Make sure that there is enough width to wrap over the yarn.
- You can adjust the stitch width while checking the camera view. Refer to “Checking the Needle Location in the Screen” in the machine’s Operation Manual (Sewing).





① Zigzag stitch  
② Yarn

- 3 Rotate the handwheel to set the needle in the sewing start position. Start sewing on the right side of the yarn.
- 4 Make sure that the yarn passes straight through the channel in the back of the sole of the couching dual feed foot, and then lower the presser foot.

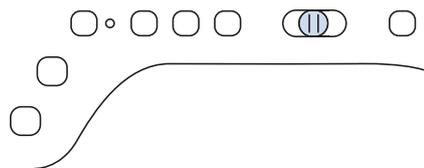


① Channel

**Note**

- Pull off an appropriate amount of yarn from the ball or skein so the yarn does not become taut.

- 5 Set the sewing speed to a medium speed.



- 6 Press “Start/Stop” button to start sewing.

\* While lightly holding down the fabric with both hands, adjust the sewing direction.

### Memo

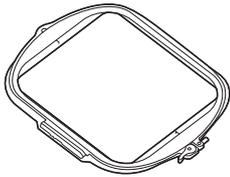
- The multi-function foot controller can also be very useful for sharp angle sewing when set to single stitch sewing. Refer to “Specifying the Multi-Function Foot Controller (Sold Separately)” in the machine’s Operation Manual (Sewing).
- Pivoting is also useful when rotating fabric with both hands.
- When guideline marker is set to on, it is easy to sew zigzag couching straight.

## Embroidery

- 75 built-in embroidery patterns have been added. For details, refer to the Embroidery Design Guide.

### Addition of 272 mm x 272 mm Frame

The machine has been upgraded to be compatible with the embroidery frame H 272 mm x W 272 mm (H 10-5/8 inches x W 10-5/8 inches).



For details on how to insert the fabric into the embroidery frame, refer to "Inserting Fabric into Embroidery Frame (408mm x 272 mm (approx. 16 inches x 10-5/8 inches))" in the machine's Operation Manual (Embroidery).

### Embroidering Couching Patterns

40 couching patterns for embroidering have been added. For details, refer to the Embroidery Design Guide.

Couching patterns can be embroidered using yarn.

#### ⚠ CAUTION

- When using yarn, we recommend selecting yarn of weight 4 (MEDIUM ). Medium yarn is often referred to as worsted weight, 20 knitted stitches per 10cm, or 9-11 wraps per inch. The diameter of the yarn is approximately 2-3 mm (1/12-1/8 inch). If the yarn is extremely thin or thick, has an unusual shape (flat or furry), or more than 2 yarns, the best finishing results may not be achieved, or injuries or damage may result.

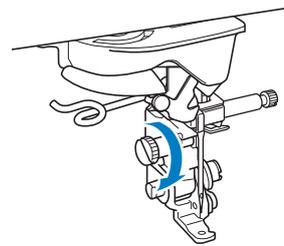


#### Note

- Before embroidering your project, do trial embroidery on a scrap piece of fabric that is the same as that used in your project.

### ■ Preparing for Embroidery Couching

- Turn off the machine.  
Attach the embroidery unit.
- Install a bobbin wound with embroidery bobbin thread.
- Turn on the machine.
- Press .
- Select , and then select the desired pattern from the category.  
And then press .
- Press  to lock all keys and buttons, and then raise the presser foot lever.
- Attach embroidery couching foot "Y".

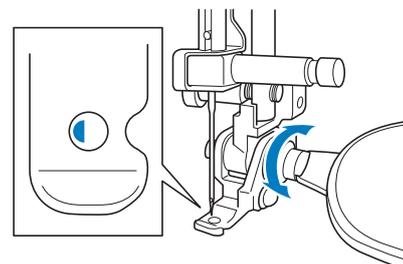


#### ⚠ CAUTION

- When using embroidery couching foot "Y", make sure the machine is in embroidery mode. Otherwise, the needle will strike the embroidery couching foot, causing the needle to break and possibly causing injury.

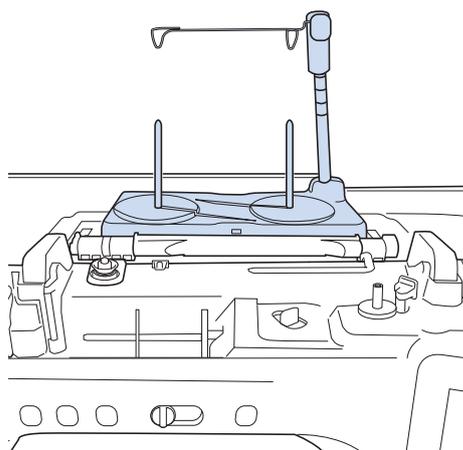
- Rotate the handwheel and check that the needle is in the left half of the hole in embroidery couching foot "Y".

If the needle is not in the left half, use the multi-purpose screwdriver to turn the screw of embroidery couching foot "Y" to adjust the position of the embroidery foot. Turn the screw toward you to move the embroidery foot to the right. Turn the screw toward the back to move the embroidery foot to the left. After making adjustments, rotate the handwheel and check that the needle does not touch the presser foot.



## 9 Attach the spool stand to the machine.

At this time, do not raise the telescopic thread guide shaft.



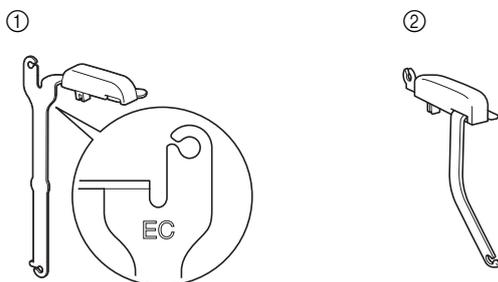
\* Refer to "Assembling the Spool Stand" in the machine's Operation Manual (Sewing).

## 10 Insert the yarn guide for embroidery couching into the slot on the top left of the machine.



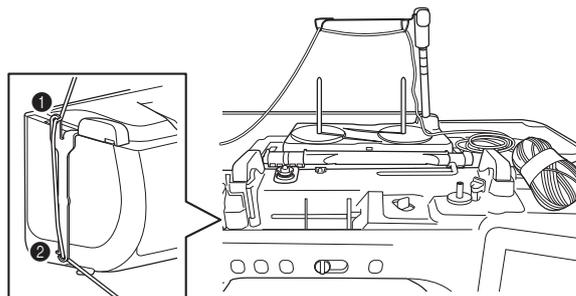
### Note

• There are two yarn guides: one for sewing couching and one for embroidery couching. Check the shape of the part, and then install the appropriate guide.



- ① Yarn guide for embroidery couching
- ② Yarn guide for sewing couching

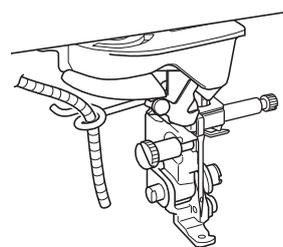
## 11 Pass the yarn through the telescopic thread guide and the yarn guide (1) to (2).



### Note

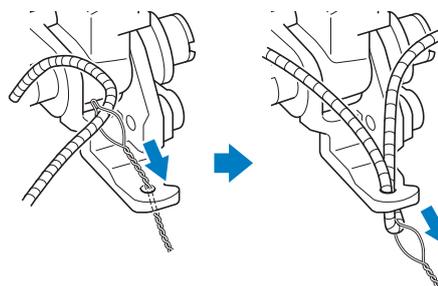
- Pull off an appropriate amount of yarn from the ball so that the yarn does not become taut.
- Make sure that the yarn does not become entangled as you work.

## 12 Pass the yarn through the guide on embroidery couching foot "Y".



## 13 Thread the yarn through embroidery couching foot "Y".

Pass the yarn through the loop in the yarn threader, and then pass the threader from top to bottom through the hole in embroidery couching foot "Y". Pull the yarn to the front of the machine.



### Memo

- Place a sheet of paper under the presser foot to smoothly pass the yarn threader through the hole in embroidery couching foot "Y".

**14** Press  to unlock all keys and buttons.

**15** Thread the machine with the upper thread.

**Note**

- Do not use the spool stand for upper thread. Otherwise thread may tangle with yarn.

**Memo**

- For best results, use an upper thread that is the same color as the yarn.

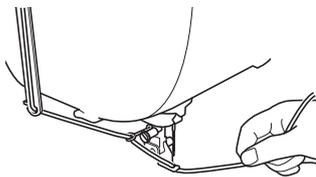
**16** Press the "Presser Foot Lifter" button twice to raise the presser foot and then attach the embroidery frame to the embroidery unit.

## ■ Embroidering a Couching Pattern

**1** Press .

**2** Make sure that about 20 cm (8 inches) of yarn is pulled to the front of the machine.

**3** While holding the yarn in your hand in front of you, press the "Start/Stop" button.



## ⚠ CAUTION

- Pulling the yarn upwards may cause it to catch on the needle, causing it to break. Be careful not to allow the yarn to catch on the needle.

**Note**

- Before embroidering, make sure that there is enough yarn, upper thread and bobbin thread.
- Make sure that the yarn passes smoothly through the guides. Unravel as much yarn from the ball as necessary so that the yarn does not become taut.
- Use yarn that has no knots.

**4** After embroidering several stitches, release the yarn.

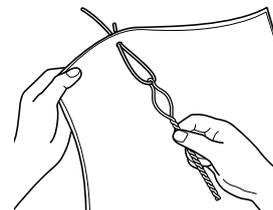
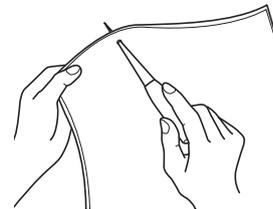
→ When embroidering is finished, the machine will automatically trim the threads and stop.

**Memo**

- When using a high-density yarn, the upper thread tension may be disturbed. If this happens, it is possible to improve it by raising the "Embroidery Foot Height" by about 1 mm on the settings screen.

**5** Cut the yarn, leaving about 20 cm (8 inches).

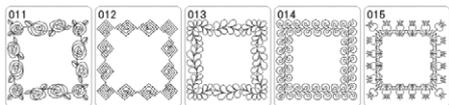
**6** Punch a hole through the fabric with an awl or tapestry needle and then use the yarn threader to pull the excess yarn to the wrong side of the fabric.



**7** Tie the end of the yarn so it cannot be pulled out, and then use scissors to cut off any excess yarn.

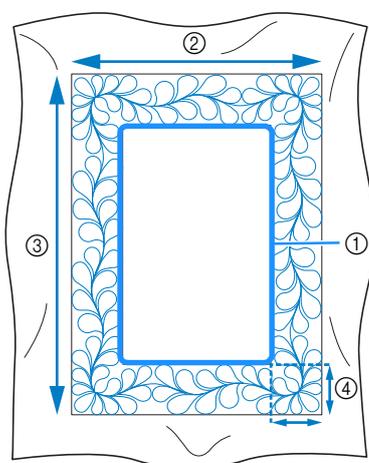
## Quilting Borders

Five quilting border patterns have been added.



### ■ Creating Quilting Border Data

- 1 With a chalk pencil, mark the fabric with the inner outline of the quilting border to be embroidered.  
Measure the size of the quilting border.



- ① Inner outline (used for positioning)
- ② Width
- ③ Height
- ④ Width of quilting border

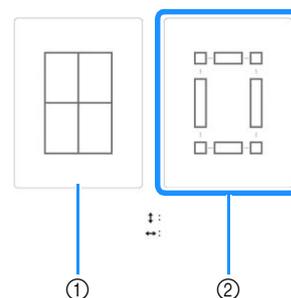
#### Memo

- Be sure to cut the fabric with an excess of about 10 cm (4 inches) so that it will extend to the edges of the embroidery frame.

- 2 Press  .

- 3 Select the pattern that you want to embroider, and then press  .

- 4 Select how to divide the pattern. For this example, select “Semi-Auto split quilt sash”.

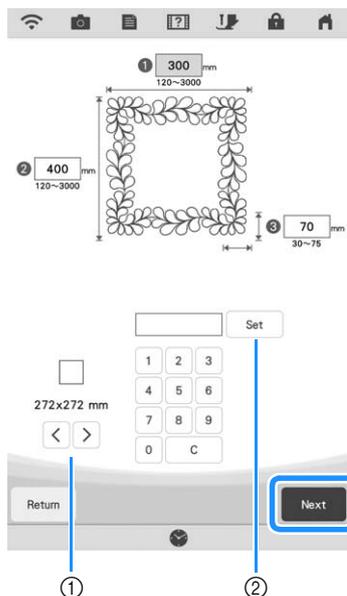


- ① Auto split quilt sash  
The pattern can be positioned using the built-in camera. A maximum quilting border of 760 mm × 500 mm (approx. 29-7/8 inches × 19-5/8 inches) can be made.  
For details on the procedure, refer to “Embroidering Quilting Border Patterns” in the Operation Manual (Embroidery).  
In the screen that appears after pressing this key, select the embroidery frame to be used.
- ② Semi-Auto split quilt sash  
By rehooping the fabric to embroider connecting patterns, a quilting border of 3 m × 3 m (approx. 118 inches × 118 inches) can be created.  
The pattern is positioned manually.

#### Note

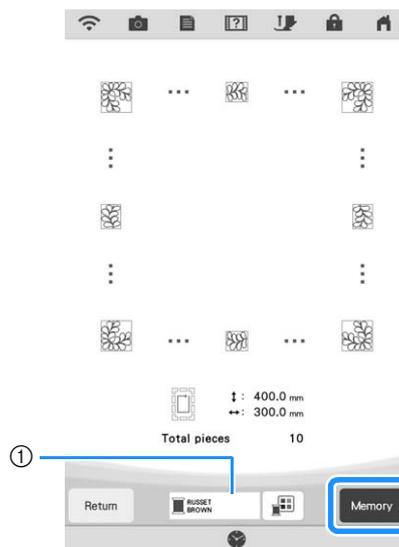
- The size of item that can be created differs depending on the type of split that was selected. Check the layout of “Auto split quilt sash”, and then select “Semi-Auto split quilt sash” if the layout did not appear as desired.

- 5** Specify the size of embroidery frame to be used and the size of the quilting border, and then press **Next**.



- ① Press **<** or **>** to select the embroidery frame size.
- ② Specify the width (①), height (②) and quilting border width (③), and then press **Set**.

- 6** Check the pattern, and then press **Memory** to save it.



- ① The thread colors can be changed.

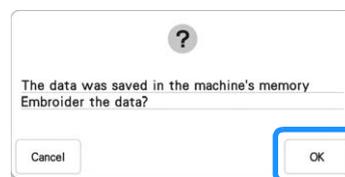


**Memo**

- The edges of the pattern may be shortened when they are displayed.

- 7** After the following message appears, press **OK**.

**OK**



→ A screen appears so that a pattern from the machine's memory can be selected.

**■ Embroidering a Quilting Border**

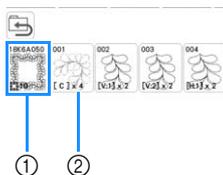
- 1** In the screen for selecting a pattern from the machine's memory, select the saved data.



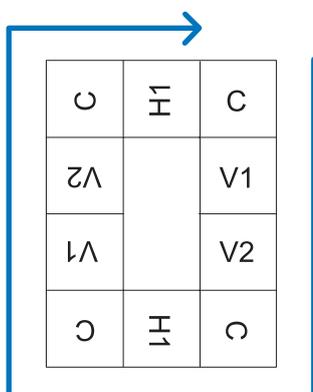
→ A thumbnail of the entire quilting border and thumbnails of the parts in each section appear.

- 2** For this example, since we will embroider the quilting border according to the on-screen instructions, select the thumbnail for the entire quilting border. And then press

Set.



- ① Press this key to embroider the quilting border according to the on-screen instructions. The number in the lower-left corner indicates the total number of segments for the quilt border.
- ② To embroider by visually aligning the pattern sections, press each pattern section to be embroidered. You can check where and how many times the part will be embroidered with the codes written on each key.



C: Corner

V1: The first part of the vertical side

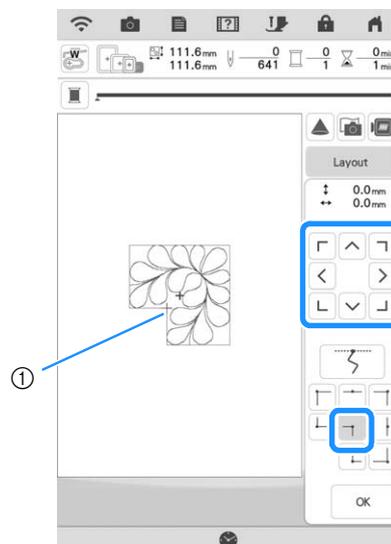
V2: The second part of the vertical side

H1: The first part of the horizontal side

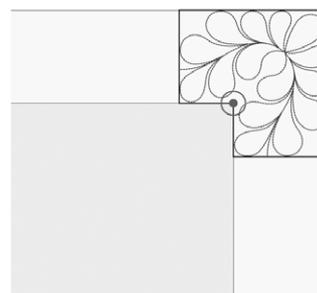
- 3** Hoop the fabric in the embroidery frame so that the upper-right corner of the quilting border is in the embroidering area, and then attach the embroidery frame.

- 4** Align the position for the part in the upper-right corner.

With  selected, move the needle to the inner corner. Use the move pattern keys to align the inside upper-right corner of the reference lines previously drawn on the fabric with the inner corner of the part projected by the projector.



- ① Inner corner



#### Note

- The needle drop point projected by the projector can be corrected on the settings screen. For the procedure, refer to "Needle Calibration Using the Built-in Camera" in the machine's Operation Manual (Sewing).



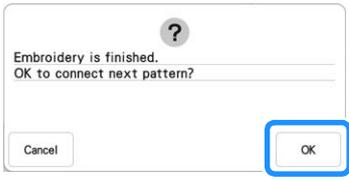
#### Memo

- If necessary, rotate the pattern so that it is aligned between the chalk reference lines.

- 5** Press  to display the embroidering screen.

- 6** Press the "Start/Stop" button to embroider the first part.

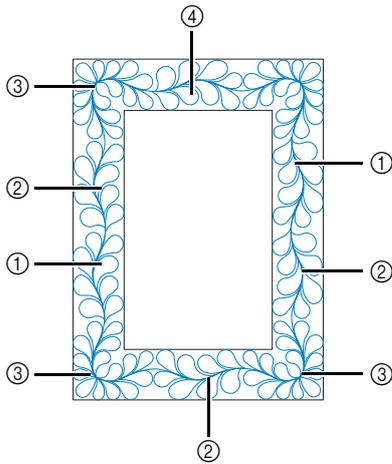
**7** When embroidering is finished and the following message appears, press **OK**.



→ The next part to be embroidered appears.

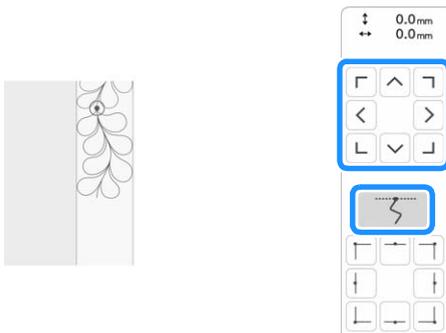
**8** Position each part and embroider it according to the on-screen instructions.

You will be prompted to align the starting point, rotate the design, and to rehoop the quilt when necessary.



**1** When embroidering the edge part

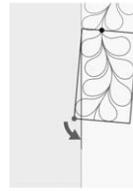
Use the move pattern keys to align the start point projected by the projector with the end point of the previous pattern, and then press **OK**.



**Note**

- For precise positioning of the start point, rotate the handwheel toward you to check the needle drop point. After checking the needle position, be sure to use the needle up/down key to return the needle to its highest position.

Rotate the pattern to align the corner with the reference line, and then press **OK**.

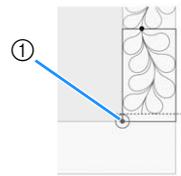


**2** When embroidering the edge part immediately before a corner

Use the move pattern keys to align the start point projected by the projector with the end point of the previous pattern, and then press **OK**.

Then, align the lower-left point (inner corner of the next pattern to be embroidered) with the lower-left corner of the reference lines. If the pattern is not angled correctly, rotate it. If the length of the pattern does not match, enlarge or reduce the pattern so that the lower-left point is at the lower-left corner of the reference lines.

After making adjustments, press **OK**.

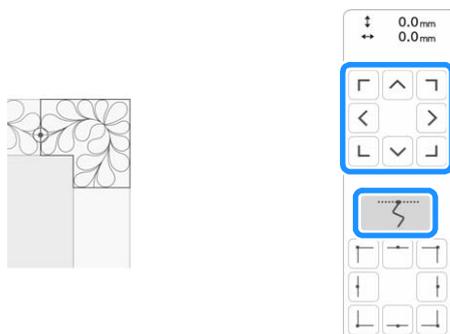


**1** Inner corner of next pattern to be embroidered

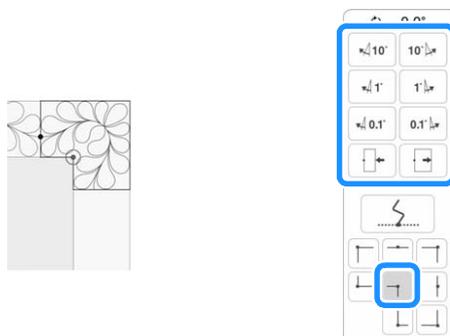
③ **When embroidering the corner part**

Rotate the fabric 90 degrees counterclockwise, rehoop it, and then attach the embroidery frame to the machine. Use the move pattern keys to align the start point projected by the projector with the end point of the previous pattern, and

then press .



Then, align the inner corner of the pattern with the corner of the reference lines.

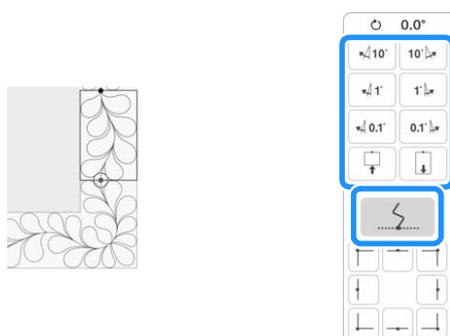


④ **When embroidering the last edge part**

Use the move pattern keys to align the start point projected by the projector with the end point of the previous pattern, and then press .

Then, align the end point of the part with the start point of the first part. If the pattern is not angled correctly, rotate it. If the length of the pattern does not match, enlarge or reduce the pattern.

After making adjustments, press .



## Selecting Multiple Characters for Editing a Line of Text

When re-editing the text, multiple characters can be selected individually.

- 1 Press  to display the editing window, and then press .



For details on displaying the editing window, refer to "KEY FUNCTIONS" in the machine's Operation Manual (Embroidery).

- 2 Press any of the following keys.



- 3 Press .

- 4 Press the character patterns to be selected. To cancel the selection, press the character pattern again.



- 5 Make the desired changes, and then press .

## Registering Favorite Color Schemes With the Color Shuffling Function

From the color schemes created using the Color Shuffling function, you can register your favorite color scheme as a favorite.

This is useful for comparing registered color schemes.

- 1 Press  in the upper-right corner of the thumbnail to register the color scheme as a favorite.

\* To remove a favorite color scheme, press  again.



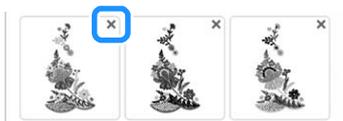
### Memo

- A maximum of nine color schemes can be registered as favorites.

- 2 Press  Favorite to display the color scheme favorites screen.

- 3 Select the desired color scheme.

\* Press  to remove the color scheme.



- 4 Press   to display other color schemes registered as favorites.

\* Press  to return to the favorites screen.



## Automatically Lowering the Presser Foot When Embroidering

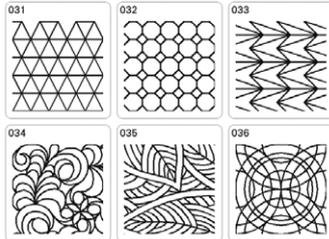
When "Embroidery Foot Auto Down" in the machine settings screen is set to "ON", pressing the "Start/Stop" button when the presser foot is raised automatically lowers the presser foot before starting embroidering.



# My Design Center

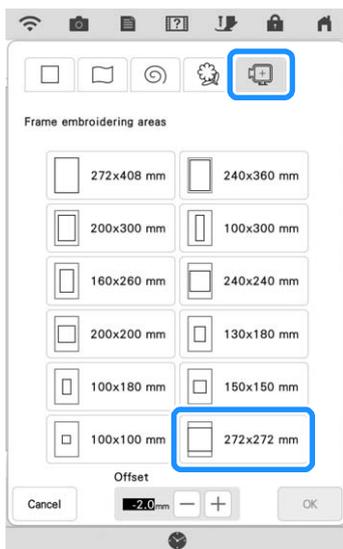
## Additional Patterns

Six decorative fill patterns have been added.



## Frame Stamp

Other frame embroidery areas (which appear when , then are pressed) have been added.



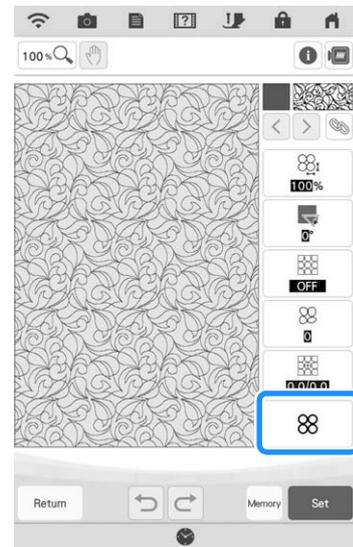
An offset can be specified for the frame stamps. Specify the size of the frame stamp according to the width of the motif pattern.



## Region Settings for Decorative Fill Patterns

By changing the number of times that the decorative fill pattern is sewn overlapping, the lines in the pattern can be made thicker or thinner.

1 Press .



2 Press or .



- ① Decorative fill
- ② Decorative light fill

## Additional Methods for Selecting an Area of the Design

Other methods for selecting an area of the design (which appear when (Select key) is pressed) have been added.

	Freestyle curve selection	Selects all objects within the curved line that is drawn.
	Automatic selection	Selects the pattern that is touched. This allows you to select only a single line or only the outer pattern of a donut shape.
	Select all	Selects all patterns.

# Other Functions

## Tutorial Videos

Four additional tutorial videos are available. Refer to "Playing a Tutorial Video" in the machine's Operation Manual (Sewing).

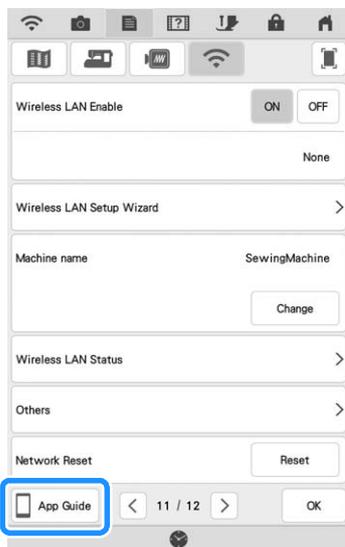
## Monitoring App

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

### 1 Connect the machine to your wireless network.

\* Refer to "Specifying Wireless Network Connection Settings" in the machine's Operation Manual (Sewing).

### 2 Press on settings screen.



### 3 Use a QR Reader app on your smart device to capture the appropriate QR code (Android™ or iOS) and visit the Google Play™ or App Store.

- \* Android and Google Play are trademarks of Google LLC.
- \* App Store is a service mark of Apple Inc.
- \* Brother products, related documents and any other materials are all trademarks or registered trademarks of those respective companies.

### 4 Install "My Stitch Monitor" to monitor embroidering.



My Stitch Monitor



#### Note

- The tutorial video for this function assists with operation. Refer to "Playing a Tutorial Video" in the machine's Operation Manual (Sewing). The specifications shown in the video may differ from the ones on the actual product, in details.

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