

BERNINA SEWING WORKBOOK

for BERNINA 7 Series, 5 Series, 4 Series, and 3 Series



BERNINA
made to create



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INTRODUCTION

Welcome to the Sewing Workbook for your BERNINA 3, 4, 5, or 7 Series sewing machine. Designed to complement your machine's manual, this workbook will guide you on a step-by-step journey to uncover your machine's full potential. Knowing all about your machine allows you to expand your sewing skills and enhance your creativity.

Included are a series of simple exercises designed to get you comfortable with your machine and expand your sewing skills. The exercises are directed toward the features most valuable for many sewing techniques. You will get the most out of your experience by working through each exercise.

Sew at your own pace. Once complete, keep your workbook nearby to use as a reference guide throughout your sewing journey. You can also follow along with the corresponding [BERNINA Skill Hub](#) online course for your machine. In that course, you will find helpful videos and unique learning tools. In addition to the workbooks, online courses, and classes from your BERNINA dealer, there are tutorials and helpful information built directly into the machine.

The machine display screens illustrated throughout this workbook are based on the 7 PRO Series models. Display interfaces on other machines may vary slightly.

Instructional video tutorials are available on the BERNINA website at bernina.com and the [BERNINA International YouTube channel](#). You will also find inspiring sewing projects and eBooks on the BERNINA website in the [Learn & Create](#) section.



PREPARING TO STITCH

EXERCISE MATERIALS

Fabric & Stabilizer

- Cut (16) 8" x 6" woven cotton fabric. Fold (14) in half, wrong sides together, to 4" x 6"
- Cut (4) 8" x 6" jersey knit or French terry fabric. Fold in half, wrong sides together, to 4" x 6"
- Cut (14) 4" x 6" strips of tear-away stabilizer
- Place one stabilizer strip in the middle of each fabric fold

Notions

- Mettler Silk Finish Cotton 50
- 80/12 Universal needle
- Button
- Ruler
- Temporary fabric marker

Presser Feet

To do the exercises that apply to your machine model, gather the feet listed below that came with your model. Not all presser feet listed are included with every model.

- Reverse Pattern Foot #1/1C/1D
- Overlock Foot #2/2A
- Buttonhole Foot #3/3C
- Automatic Buttonhole Foot #3A
- Open Embroidery Foot #20/20C
- Sideways Motion Foot #40C

MACHINE SETUP PREFERENCES

Before beginning the exercises, set up your machine for sewing. Review the manual and/or the following video references for your machine to attach the module and prepare for embroidery.



[3 Series](#)



[4 Series](#)



[5 Series](#)



[7 Series](#)

Presser Feet Selection

Presser feet with only a number have a maximum stitch width of 5.5 mm and are designed for 5.5 mm machines.

Presser feet with the letter C are coded feet that have a sensor informing the machine that the foot can accommodate a 9 mm stitch width. These feet are designed for 9 mm machines.

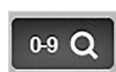
Presser feet with the letter D are Dual Feed feet that work with the Dual Feed mechanism, ensuring the top and bottom fabric feed evenly. These feet are designed for 9 mm machines equipped with Dual Feed.

Now that your machine is threaded, learn the basic BERNINA features that make sewing simple and easy for every project. From stitch editing to programming securing stitches, discover why BERNINA is known for giving you practical and creative options.

STITCH SELECTION



On the right side of your machine screen, in the Selection Menu, you will find all the BERNINA stitches that are programmed into your machine. These stitches are grouped into five menus: Practical Stitches, Decorative Stitches, Alphabets, Buttonholes, and Quilting Stitches.



Another way to select a stitch is by searching for the stitch number (found in the back of the manual) with the Stitch Selection by Number icon. This is a great method for locating your favorite stitches or following a tutorial or lesson that uses stitch numbers.

PRESSER FOOT RECOMMENDATION



Tap the Presser Foot icon to see the recommended presser feet for the selected stitch. Some models will display the recommended feet with a yellow star and allow you to select the desired foot. Additionally, some models may engage security features to prevent damage or breaking a needle.

SHORTCUT ICONS

There are shortcut icons, including Home, Quick Help, Setup, Tutorials, Creative Consultant, and/or Embroidery Consultant. You can access these functions from either the Home screen, sidebars, or bottom bar. To learn more about these functions, refer to your user manual.

BASIC SECURING STITCHES

BERNINA machines allow you to secure stitches in multiple ways. The method you choose will depend on your machine options, your sewing project, and personal preference.

Quick Reverse Button



The most common way to secure stitches is with a backstitch. The Quick Reverse Button on the front of your machine is within close reach of the needle area. Press and hold the Quick Reverse button to sew in reverse for a few stitches to secure.

Securing Function



On most machines, the Securing function is a physical button that allows you to secure stitches at any time during sewing. Depending on the model, you can program these stitches, as well as set the number of securing stitches.

The securing function for the B 590 and 570 is found in the Information Menu.

Securing Stitches at Pattern Begin



Securing Stitches at Pattern Begin is a feature available in the 7, 5, and 4 Series machines that makes securing stitches at the beginning of sewing. This feature is on by default but can be turned off as needed.

Setup » Sewing Settings » Securing Stitches

Automatic Thread Cutter Settings

The Thread Cutter button can be programmed to make small securing stitches before the threads are cut. In the settings, the options include securing four stitches in place or securing stitches in close succession (Fig. 1).

**Setup » Sewing Settings »
Program Buttons and Icons »
Automatic Thread Cutter » Securing Stitches**

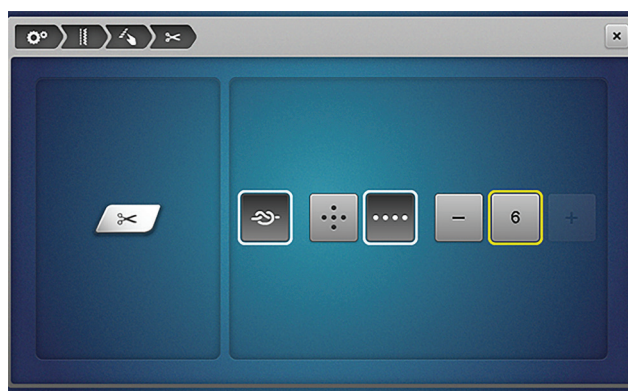


Fig. 1

Programmable Foot Control

The BERNINA Foot Control has a Back-kick feature activated by pressing your heel on the back edge. On select models, you can program it to sew securing stitches. In the Foot Control settings, select the

heart icon. Decide on the securing stitches best suited for your project (Fig. 2). Now, when you press the back of the Foot Control with your heel, the machine will sew securing stitches.

Setup » Sewing Settings » Foot Control

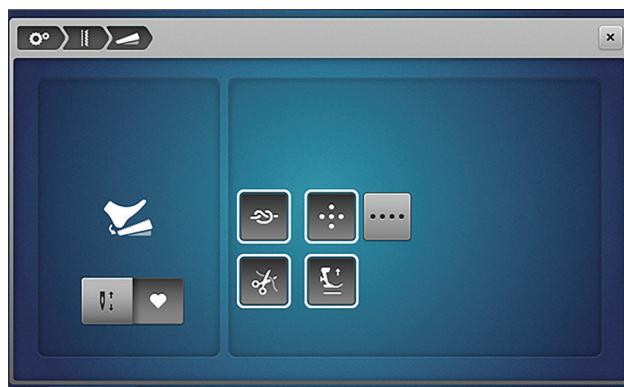


Fig. 2

FEATURE FOCUS

Pattern Begin & Pattern End



Pattern Begin is a feature that will instantly return you to the first stitch in a stitch pattern. It is great to use after you have stopped stitching in the middle of a pattern or sequence. On some machines, it appears on the screen as an icon after you begin sewing, while on other models, it is a physical button located on the front of the machine.



Tap Pattern End and the machine will stop stitching at the end of the stitch pattern. On some models, Pattern End can be programmed in Sewing Settings to secure, cut threads, and/or raise the presser foot.

Exercise 1

NEEDLE STOP DOWN & PIVOT

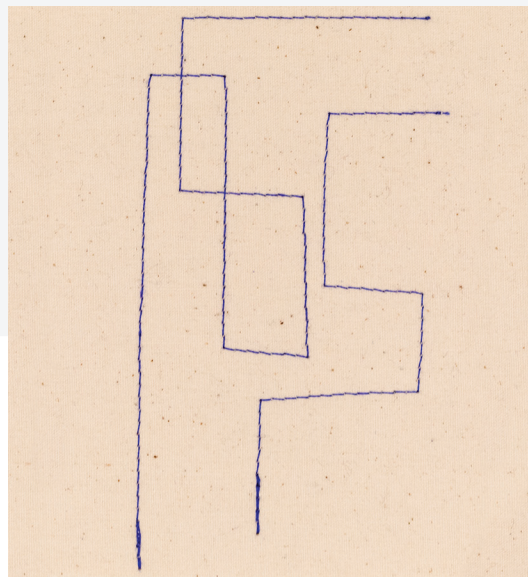
Materials & Machine Settings

 (1) 4" x 6" folded woven fabric with (1) 4" x 6" stabilizer sandwiched in the middle

 **Needle:** 80/12 Universal

 **Needle Position:** Center

 **Presser Foot:** Reverse Pattern Foot #1/1C/1D



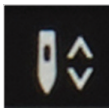
PART ONE: LOWER PRESSER FOOT

1. From the Selection Menu, select:

Practical Stitches » stitch #1

2. Place the fabric under the presser foot and use the Presser Foot Up/Down button or the Presser Foot Lever, depending on machine, to lower and raise the presser foot. If your machine does not have a manual Presser Foot Lever, lower the presser foot by pressing slowly on the Foot Control.
3. Sew a straight stitch down the length of your fabric.

PART TWO: NEEDLE UP/DOWN AND PIVOT

4.  With the presser foot down, press the Needle Up/Down button to lower the needle into the fabric.
5.  Set Needle to Stop Down using icon on the screen.
6. If available, insert the BERNINA Free Hand System (FHS) Knee Lifter and use it to raise the presser foot with your knee. Pivot the fabric 45° and then lower the presser foot again.
7. Sew halfway down the fabric. Notice the needle stops in the fabric.
8. Lift the foot with the FHS, pivot the fabric, and sew in a new direction. Notice how the FHS allows you to focus on where your fabric is versus focusing on lowering/raising the presser foot.
9.  Depending on your machine, cut thread with the cutter on the left side of the machine or press the Thread Cutter button.

TOTAL STITCH CONTROL

You can easily adjust the width and length settings for any stitch by turning the Multi-function Knobs or pressing the buttons on the front of the machine. The upper knob controls the Stitch Width and the lower knob controls the Stitch Length.

NEEDLE POSITION

Being able to move the needle to the left and right of center allows for very precise stitching. This feature is helpful for zippers, edge stitching, and appliqué. Your BERNINA machine has eleven needle positions, including center.

Try the following directions on your machine touch screen.

1. From the Selection Menu, select stitch #1.
2. Attach Zipper Foot #4/4D. If your machine has Presser Foot Recognition, select Zipper Foot #4/4D.
3. Move the Needle Position all the way to the right. Lower your needle with the handwheel. Notice how the needle will land precisely along the edge of the foot. Note: Some machines display incompatible stitches in red on the screen to indicate when a different foot or needle position is needed.

FEATURE FOCUS

Hover

**Setup » Sewing Settings »
External Buttons »
Needle Stop**

To raise the presser foot automatically during a sewing technique, like with machine appliqué, you may prefer to use the Hover feature. The position can be set to Low (the presser foot stays down; the default option), Medium (the presser foot raises several millimeters up from the fabric), or High (the presser foot raises to the highest position).

Note: Hover is only active if the Needle Stop Up/Down is in the down position.

FEATURE FOCUS

Stitch Plate Security/Recognition

When using a different stitch plate for your machine, such as a Straight Stitch Plate, select it from the stitch plate menu in the Status Bar. This will prevent the machine from sewing a stitch that is incompatible with the selected stitch plate.

On select models, stitch plates are automatically recognized by your machine. If a stitch is selected that is incompatible with the attached stitch plate (for example, a zigzag stitch with the Straight Stitch Plate attached), the machine's security will advise you to change the stitch or plate to prevent damage.

Exercise 2

BERNINA DUAL FEED

Materials & Machine Settings

 (2) 4" x 6" folded jersey knit fabric

 **Needle:** 80/12 Universal

 **Needle Position:** Center

 **Presser Foot:** Reverse Pattern Foot #1D

BERNINA Dual Feed is a valuable tool to help with even fabric feeding. Dual Feed presser feet have a notch in the back to accommodate additional feeding from above. This can aid in even fabric feeding from beginning to end.

BERNINA Dual Feed can only be used with Dual Feed presser feet. These feet have the letter "D" after the foot number.

1. Attach Reverse Pattern Foot #1D.
2. Engage the Dual Feed mechanism.
3. In Presser Foot Selection, select Foot #1D.
4. From the Selection Menu, select:

Practical Stitches » stitch #1

5. Sew down the 6" raw edge with a 3/8" seam allowance.
6. Cut the thread.



FEATURE FOCUS

Presser Foot Pressure



Presser Foot Pressure is another feature for controlling how fabric feeds through the machine. Depending on the machine model, this feature can be found as a physical dial on the machine or an icon on the touch screen. When the pressure increases, there is more hold on the fabric between the foot and the feed dog. Experiment with different presser foot pressure settings to find what works best for your project.

Exercise 3

ALTERED STITCHES

Materials & Machine Settings

 (1) 4" x 6" folded woven fabric with (1) 4" x 6" stabilizer sandwiched in the middle

 **Needle:** 80/12 Universal

 **Needle Position:** Center

 **Presser Foot:** Reverse Pattern Foot #1/1C/1D

1. From the Selection Menu, select:

Practical Stitches » stitch #2

2. Select Stitch Width and increase the stitch width to 5.5 mm (Fig. 3).
3. Select Stitch Length. Decrease the stitch length to .6 mm (Fig. 4). Notice how the number is now yellow. Any changes made to the default settings will be yellow.
4. Stitch out and cut the thread.
5. Select stitch #7, a triple zigzag stitch.
6. Decrease the stitch width to 5 mm and increase length to 4 mm.
7. Stitch out and cut the thread.
8. Go back to stitch #2. Notice your changes are still there.
9. Select the Stitch Width icon and tap the yellow highlighted number to reset back to default, then repeat for Stitch Length.

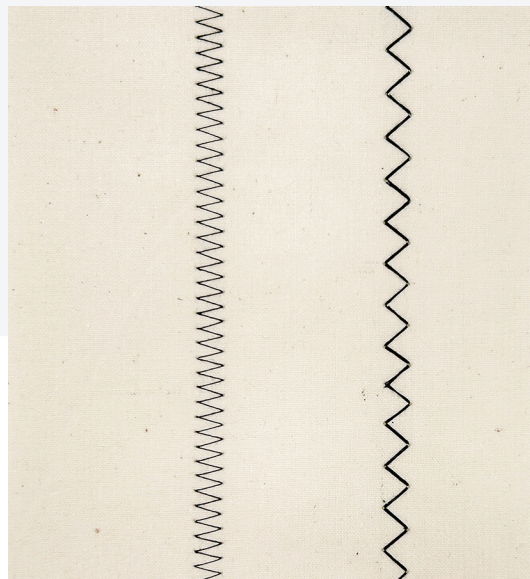


Fig. 3

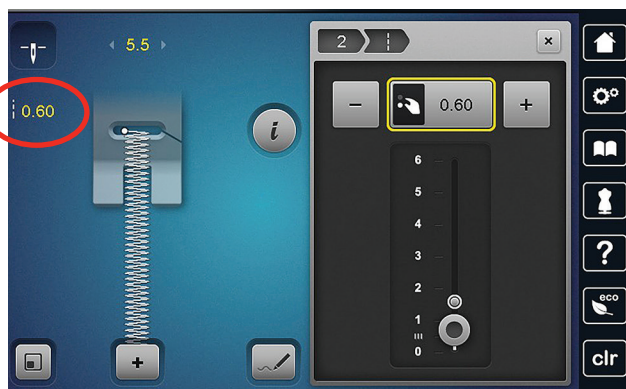


Fig. 4

INFORMATION MENU



BERNINA machines are designed with Total Stitch Control in mind, so you can easily adjust the stitch width, length, and needle position of every stitch. The Information Menu takes this further, allowing you to edit and optimize your stitches with additional features, such as Pattern Repeat and Mirror Image. Some models allow you to turn a stitch pattern into a triple stitch, change the density of satin stitches, and sew in any direction without turning the fabric.

What features are active depends on the selected stitch and whether you are in regular Sewing Mode or Combi Mode.

This chapter will summarize these options so you can become familiar with the features and navigation.

PATTERN REPEAT



Use this function to program a specific number of repeats for a stitch or combination of stitches. The 7 Series, B 590, and B 570 machines can repeat up to 99 times while all others repeat up to nine times.

1. Select Foot #1/1C/1D.
2. From the Selection Menu, select:

Decorative Stitches »
Folder 101 » stitch #104

3. Select Information Menu.
4. Select Pattern Repeat.
5. Depending on model, set Repeat to 3 by either tapping the icon twice more or typing the number 3.

Notice there are three flowers in the Stitch Altering Area, with both the Pattern Repeat icon and the Information Menu icon highlighted in yellow (Fig. 5). Also, notice the number of pattern repeats is shown to the left of the stitch.



Fig. 5

MIRROR IMAGE



With Mirror Image, you can change the direction of the selected stitch left or right and up or down.

1. With stitch #104 still open, select Mirror Image Left/Right. Notice the stitch pattern has changed direction.
2. Select Mirror Image Up/Down.
3. Tap each icon again to reset or press the Clear button.

TRIPLE STITCH



Some models offer the Triple Stitch feature, allowing you to easily make a stitch bolder and more distinct. This feature turns a single pass stitch into a triple so

that each stitch is sewn in a forward-back-forward pattern. Triple Stitch is great for hemming jeans, topstitching, and anytime your fabric needs extra strength. Some stitch patterns do not have this function available because of the proximity of the needle penetrations.

LONG STITCH



This feature enables the machine to stitch every other needle penetration. When applied to stitch #1, this makes a great basting stitch. If you increase the stitch length to 6 mm and tap Long Stitch, it becomes a 12 mm straight stitch. The Long Stitch feature can create interesting effects when applied to decorative stitches.

STITCH COUNTER



The Stitch Counter is a tool that records a seam length, allowing you to stitch the exact same seam length repeatedly until it is overwritten or cleared. This tool is particularly useful when chain-piecing repetitive seams.

REVERSE



The Reverse feature allows you to sew in reverse without having to hold the Quick Reverse button. You can keep both hands on your project.

BACKSTEP



Backstep allows you to sew in reverse precisely over the stitches sewn forward. This is a great option to make a stitch look more pronounced or to add securing stitches that are not noticeable.

BALANCE



The Balance feature helps correct stitches that are not aligning correctly due to thick fabric, heavy thread, or other factors. In the Balance dialogue box, the selected stitch is shown as it should look (Fig. 6). Use the Multi-function Knobs or buttons on the front of your machine to match what you see on your fabric. The machine will then adjust accordingly to balance your stitch.



Fig. 6

PATTERN EXTEND & STITCH DENSITY



The Pattern Extend and Stitch Density features are programmed within the same icon. Depending on the selected stitch, Pattern Extend shows in the dialogue box alone or with Stitch Density.

The Pattern Extend feature allows you to increase and decrease the length of a stitch pattern from 10% to 1000%, depending on the stitch. In this function, stitches are added into the stitch pattern.

The Stitch Density feature is available on stitches with satin or partial-satin components and controls how closely stitches are placed together. Higher values create denser, more filled-in stitching, while lower values create more open stitching. You can adjust in .05 mm increments to match your thread weight—heavyweight threads work better with more open satin stitching, while finer threads look better with denser stitching. This feature adjusts stitch spacing without changing the pattern length.

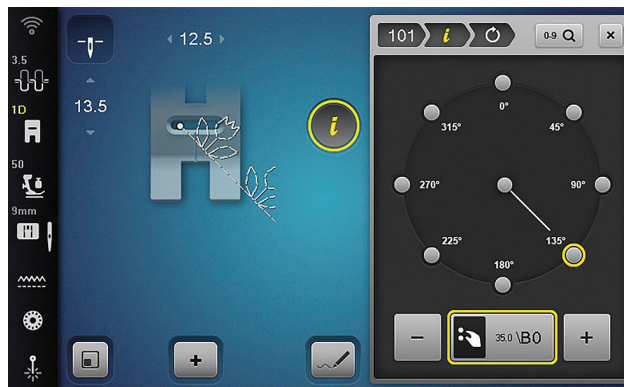


Fig. 7

MULTI-DIRECTIONAL SEWING



For models with Sideways Motion capability, the Multi-directional Sewing feature allows you to sew in any direction without turning the fabric. This is especially helpful on projects that will not easily pivot, such as sewing on a patch or down a pant leg. And sewing an “X” in a bag strap is much easier when you do not have to turn all the layers. You can even change directions with the Multi-function Knobs while sewing!

1. From the Selection Menu, select:

Decorative Stitches »
Folder 101 » stitch #101

2. Select the Information Menu, then Multi-directional Sewing.
3. Rotate the stitch on the compass (Fig. 7) or with the Multi-function Knobs.

Exercise 4

REVERSE AND BACKSTEP

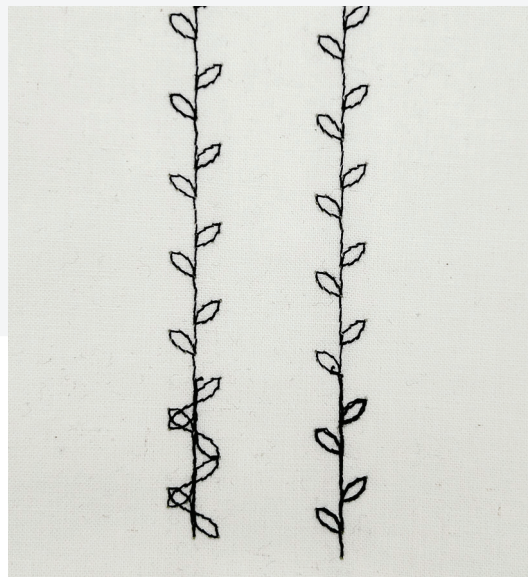
Materials & Machine Settings

 (1) 4" x 6" folded woven fabric with (1) 4" x 6" stabilizer sandwiched in the middle

 **Needle:** 80/12 Universal

 **Needle Position:** Center

 **Presser Foot:** Reverse Pattern Foot #1/1C/1D



PART ONE: REVERSE

1. From the Selection Menu, select:

Decorative Stitches » Folder 101 » stitch #113

2. Sew forward for about 2-3 inches.
3. Select the Information Menu.
4.  Tap Reverse and sew in reverse through one stitch pattern. Notice the machine sews backward but not in the pattern of the decorative stitch.
5. Tap Reverse again to deactivate.
6. Cut the threads.

PART TWO: BACKSTEP

B 7 Series and 5 Series Only

7. Again, with stitch #113, sew about 3 inches.
8.  Select Backstep and sew through one stitch pattern. Notice how the stitches match what was already sewn.
9. Select Backstep again to deactivate.
10. Cut the threads.

Exercise 5

BALANCE

Materials & Machine Settings

 (1) 4" x 6" folded jersey fabric with (1) 4" x 6" tear-away stabilizer sandwiched in the middle

 **Needle:** 80/12 Universal

 **Needle Position:** Center

 **Presser Foot:** Reverse Pattern Foot #1/1C/1D

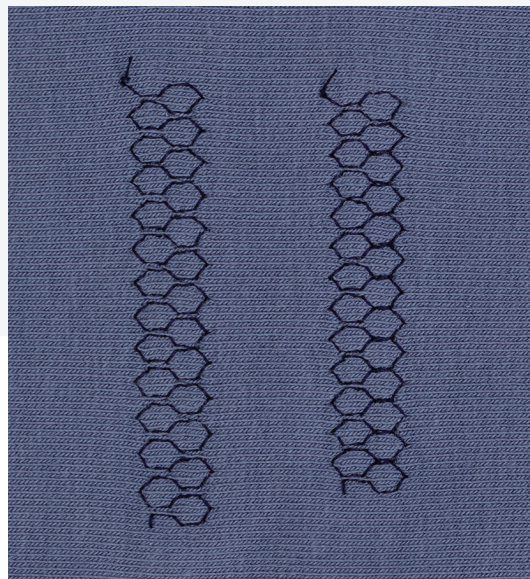
There are a wide variety of factors that affect your stitchout, such as fabric thickness, thread, or the complexity of the pattern. This tool is used to correct your fabric feeding if a decorative stitch pattern is not sewing out exactly right.

1. From the Selection Menu, select:

Practical Stitches » stitch #8

2. Sew the stitch on stretch fabric.
3. Cut threads.
4.  In the Information Menu, select Balance.

5. Edit the stitch to match what is on your fabric.
6. Stitch out again.



FEATURE FOCUS

Multi-function Knobs

Another exclusive BERNINA feature, the Multi-function Knobs, are on the 7 Series, 5 Series, and 4 Series machines. These knobs give you an easy and precise way to alter your stitches while working with many BERNINA features.

Exercise 6

STITCH DENSITY

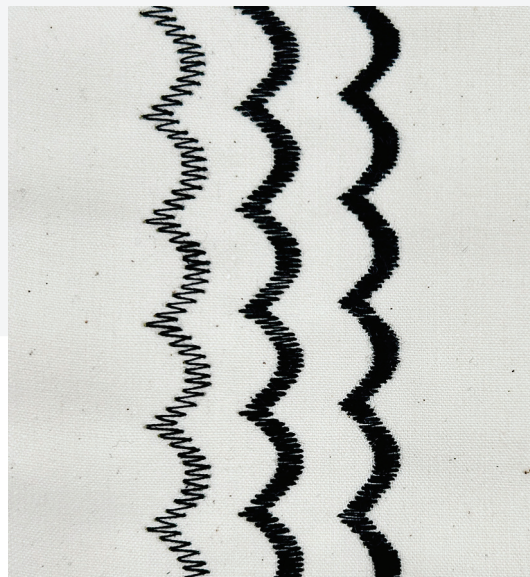
Materials & Machine Settings

 (1) 4" x 6" folded woven fabric with (1) 4" x 6" stabilizer sandwiched in the middle

 **Needle:** 80/12 Universal

 **Needle Position:** Center

 **Presser Foot:** Reverse Pattern Foot #20/20C



1. From the Selection Menu, select:

Decorative Stitches » Folder 401 » stitch #416

2. Sew the stitch and cut the thread.

3.  In the Information Menu, select Pattern Extend/Stitch Density.

4. Increase the stitch density to .60 mm (Fig. 8) and sew.
5. Decrease the stitch density to .25 mm and sew.
6. Compare the results.
7. Reset the Stitch Density to factory default.

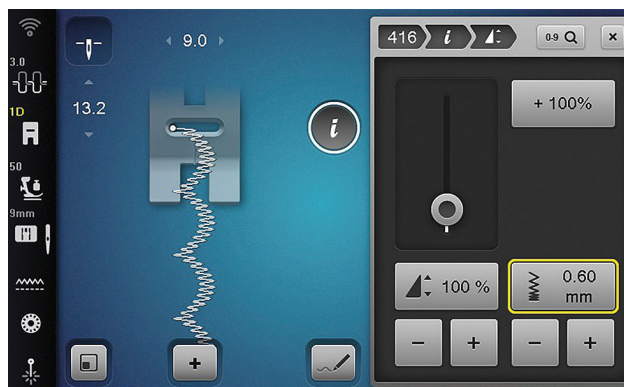


Fig. 8

FEATURE FOCUS

Temporary Altered Stitch Memory

Temporary Altered Stitch Memory is an exclusive BERNINA feature that retains your stitch edits made during a sewing session. If you return to a stitch that was previously edited, the changes will still be there. If you put your machine in Eco Mode, to sew later, the changes will still be there. Only when you turn off your machine will the stitches return to factory default.

COMBI MODE

BERNINA's Combi Mode opens up a whole new world of creative possibilities right at your fingertips. This personal design studio lets you mix and match decorative stitches, alphabets, or combinations of both to create patterns that are uniquely yours.

FEATURE FOCUS

Transition Bar

Tapping the Full Screen arrow (Fig. 9) opens the Transition Bar, allowing you to view your lettering horizontally (Fig. 10). Use the left and right cursor arrows to easily edit anywhere within your stitch combination.

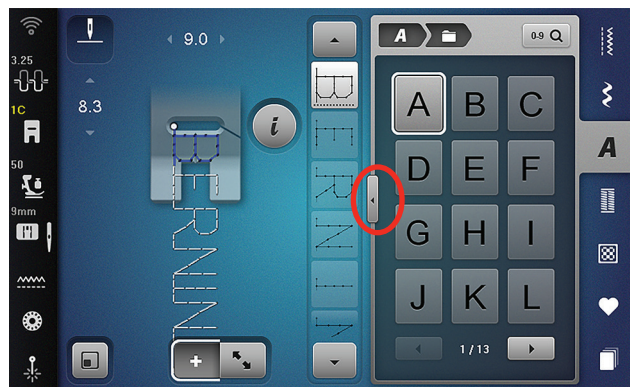


Fig. 9



Fig. 10

The new stitch is always added after the highlighted stitch. You can scroll through the pattern using the arrow icons in both screens. (Fig. 11).



Fig. 11

Exercise 7

COMBI MODE LETTERING

Materials & Machine Settings

 (1) 4" x 6" folded woven fabric with (1) 4" x 6" stabilizer sandwiched in the middle

 **Needle:** 80/12 Universal

 **Needle Position:** Center

 **Presser Foot:** Open Embroidery Foot #20/20C



To activate Combi Mode, tap the plus icon at the bottom of the Stitch Altering Area.

1. From the Selection Menu, select:

Alphabets Menu »

Folder 1 (Block Alphabet) » uppercase "I"

2. From the Selection Menu, select:

Decorative Stitches Menu »

Folder 401 » stitch #413

3. Go back to the Alphabets Menu, select the first folder again.
4. Spell BERNINA.
5. Tap the Information Menu.

6.  Select the Edit the Complete Combination icon.

7. Notice the Pattern Repeat icon is now active. Set the Pattern Repeat to 1 (Fig. 12).
8. Sew your stitch combination.

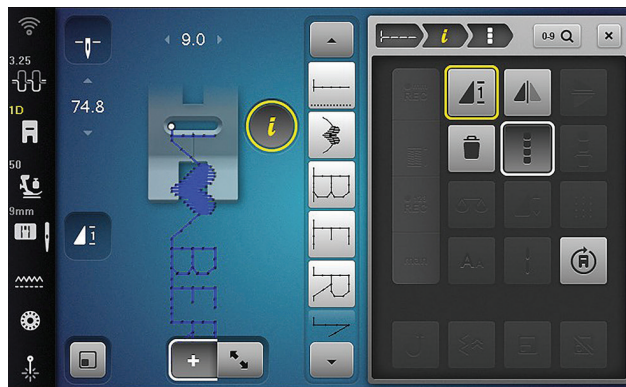
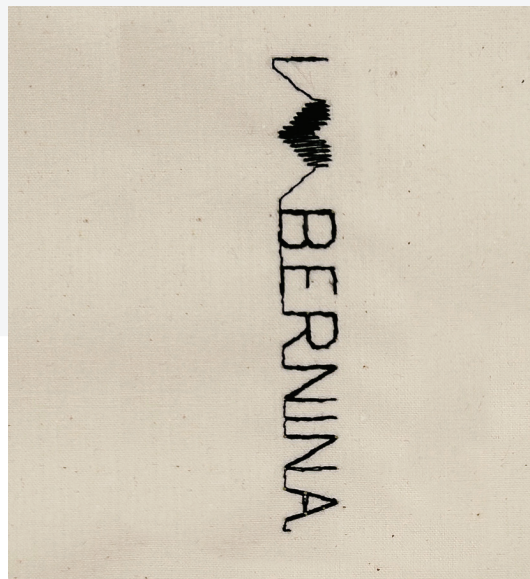


Fig. 12

Exercise 8

COMBI MODE FOR DECORATIVE STITCHES

Materials & Machine Settings

 (1) 4" x 6" folded woven fabric with (1) 4" x 6" stabilizer sandwiched in the middle

 **Needle:** 80/12 Universal

 **Needle Position:** Center

 **Presser Foot:** Open Embroidery
Foot #20/20C

Please note: this exercise is for 9 mm machines only.
With the 9 mm stitch width, you have more room to play with stitches. In this exercise, you will alter a 6 mm stitch with different needle positions to give it a wavy effect.

To activate Combi Mode, tap the plus icon at the bottom of the Stitch Altering Area.

1. From the Selection Menu, select:

Decorative Stitches »
Folder 401 » stitch #401

2. Move Needle Position to 5 (Fig. 13).
3. Select same stitch.
4. Move Needle Position to 2.
5. Select same stitch.
6. Move Needle Position to -2.
7. Select same stitch.
8. Change Needle Position to -5.
9. Select same stitch.
10. Change Needle Position to -2.
11. Select same stitch.
12. Change Needle Position to 2.
13. Sew your final stitch combination (Fig. 14).

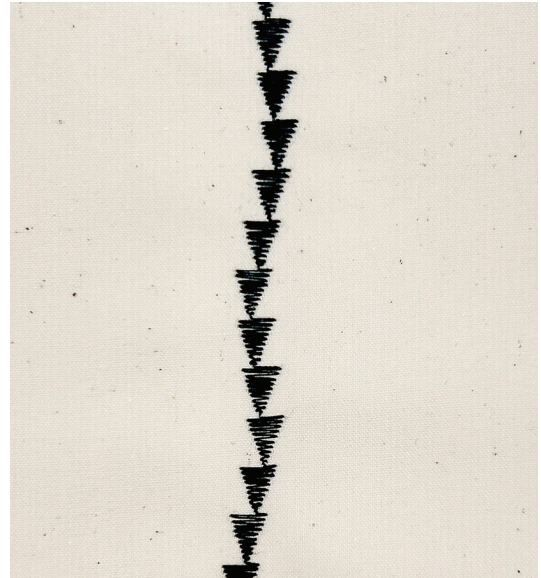


Fig. 13



Fig. 14

SAVING STITCHES

BERNINA offers several ways to save your custom stitches. You have learned about Temporary Altered Stitch Memory, which remembers your altered stitches during one sewing session. Saving stitches to Personal Memory means all your custom settings will be kept in the machine long term without having to reprogram it each time (Fig. 15).

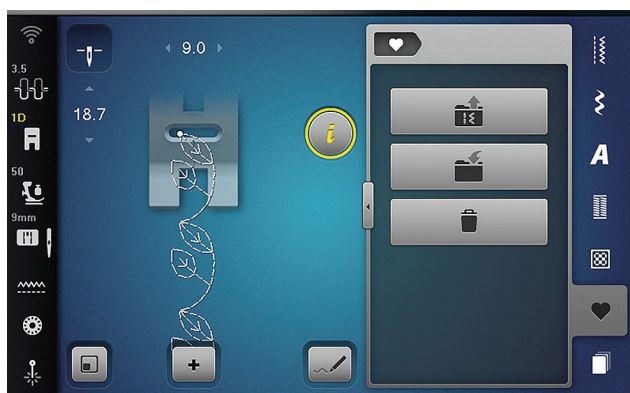
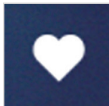


Fig. 15

SAVE TO PERSONAL MEMORY

1.  Select the Personal Memory Menu.
2.  Select the Save Stitch icon.
3. Select folder #1.
4. Confirm with the green check mark.

RETRIEVING STITCHES

1. Select the Personal Memory Menu.
2.  Select the Stitch Pattern Selection icon.
3. Select a folder.
4. Select the desired stitch.

DELETING STITCHES

1. Select the Personal Memory Menu.
2.  Select the Delete Stitch icon.
3. Select the folder, then the desired stitch.
4. Confirm with the green check mark.

RETRIEVING COMBI MODE STITCHES

Both regular sewing stitches and Combi Mode stitches are saved into the same folder, but retrieved in separate folders. When you are in Combi Mode, the Personal Memory Menu contains a second Stitch Pattern Selection icon (Fig. 16). Select this icon to retrieve Combi Mode stitches previously saved.

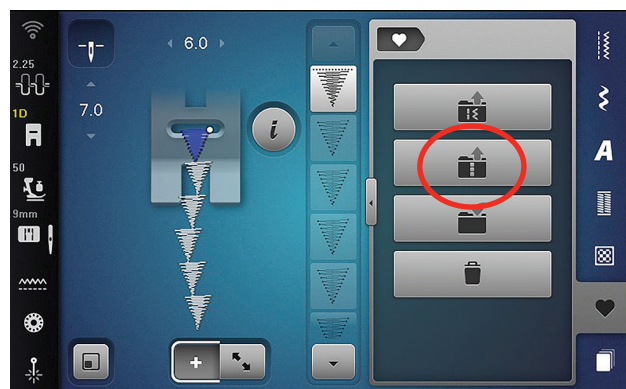


Fig. 16

SAVE AS NEW DEFAULT

This feature allows you to save your stitch modifications in the machine permanently as the new stitch default. This will remain the new stitch until you return the stitch back to default settings.

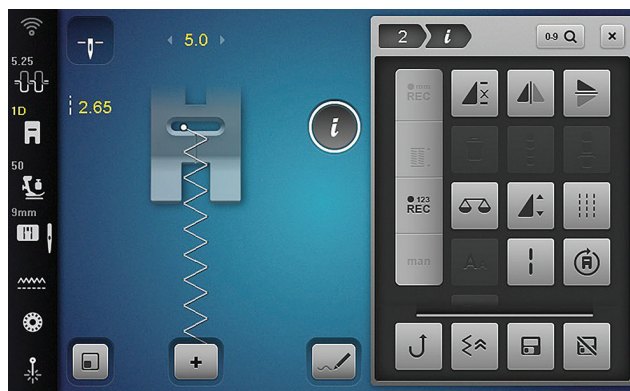


Fig. 17

1. From the Selection Menu, select:

Practical Stitch Menu » stitch #2

2. Adjust as desired (Fig. 17).
3. Select the Information Menu.
4.  Tap the Save icon to set as new default.

The stitch settings will remain until you select Return to Default Settings. The Clear icon will not reset to default nor will turning the machine off.

FEATURE FOCUS

History Stitches

History Stitches save the last fifteen sewn stitches, even if the machine is turned off. Edits to these stitches are remembered, as well (Fig. 18). This is a great feature when you use a stitch repeatedly and do not want to re-edit each time, or when you want to go back and forth between two stitches.



Fig. 18

FEATURE FOCUS

Undo/Redo

The Undo/Redo buttons available in sewing on some models allow you to retrace your steps and undo individual changes to a stitch pattern or through your stitch selection process. This is a convenient alternative to the CLR button, which will revert the selected stitch completely to default settings, or backtrack to find a stitch you selected but did not sew (and thus would be omitted from History Stitches.)

The BERNINA Buttonhole is a hallmark of the machine's stitch precision and quality. Depending on your model, there are many types of buttonholes to choose from, including standard, stretch, and keyhole. In this chapter, you will learn several ways to create a perfect buttonhole, while fine-tuning each one to fit different applications.

ADJUSTING BOBBIN TENSION

Increasing the bobbin thread tension helps to achieve a beautiful buttonhole. The higher tension in the bobbin pulls the top thread to the back, creating a pronounced, crisp finished look to the buttonhole. Depending on your machine model, there are a couple of different ways to increase the bobbin tension:



3 Series: With the CB hook, there is a "finger" on the bobbin case with a hole. Thread the bobbin thread through the hole.



7 Series, 5 Series, and 4 Series: With the BERNINA Hook, use the High Thread Tension Bobbin Case.

FEATURE FOCUS

Creative Consultant

The Creative Consultant recommends how to set up the machine for certain fabrics requiring specific sewing techniques. For example, if you want to sew buttonholes on denim fabric, the Consultant will help you get started. The machine will automatically apply the recommended changes when confirmed (the settings applied varies by model).

Try Creative Consultant on your machine following the simple path described below.

B 740, 5 Series, 4 Series, and 3 Series Only:

**Home Screen » Creative Consultant »
Fabric Type » Buttonhole**

B 790 ULTRA, 790 PRO, 770 QE PRO, 770 QE PLUS, 735 PRO, and 735 Only:

**Creative Consultant Tab »
Fabric Type » Buttonhole**

1. Select the fabric type of your sewing project.
2. Select the Buttonhole icon. The screen will display the recommended presser foot, needle, thread and stabilizer, if applicable.
3. Confirm with the green check mark. The recommended changes are automatically applied to the sewing screen.

Exercise 9

SEWING A BUTTONHOLE

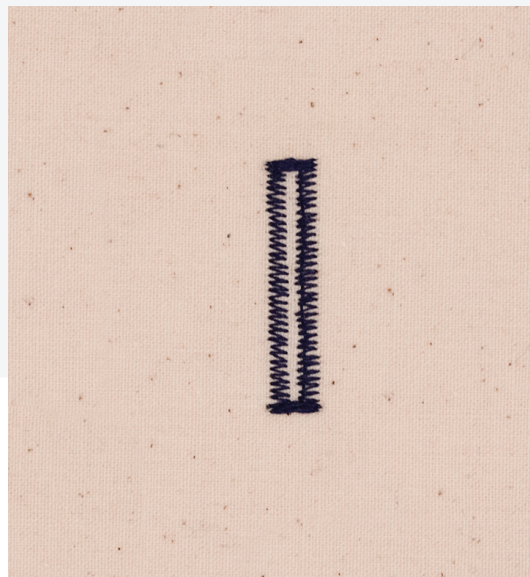
Materials & Machine Settings

 (1) 4" x 6" folded woven fabric with (1) 4" x 6" stabilizer sandwiched in the middle, (1) Button

 **Needle:** 80/12 Universal

 **Needle Position:** Center

 **Presser Foot:** Automatic Buttonhole Foot #3A or Buttonhole Foot #3



OPTION ONE: AUTOMATIC BUTTONHOLES

Automatic buttonholes are easy and fast to create! With the Automatic Buttonhole Foot #3A, you can make buttonholes up to 29 mm in length. Once you set the first buttonhole, the settings will stay in your machine's Temporary Altered Stitch Memory until you reset the stitch or turn off the machine.

1. From the Selection Menu, select:

Buttonholes » stitch #51

2. Select the Information Menu.

3.  Select the On-screen Button Measuring icon (Fig. 19).

4. Hold a button up to the measuring circle on the screen (Fig. 20). Then, turn the Multi-function Knob (with the B 3 Series, press the Stitch Width button) until the on-screen circle matches the button in size.
5. Sew the buttonhole using the Start/stop Button and slowing the speed of the machine with the Slide Speed Control.

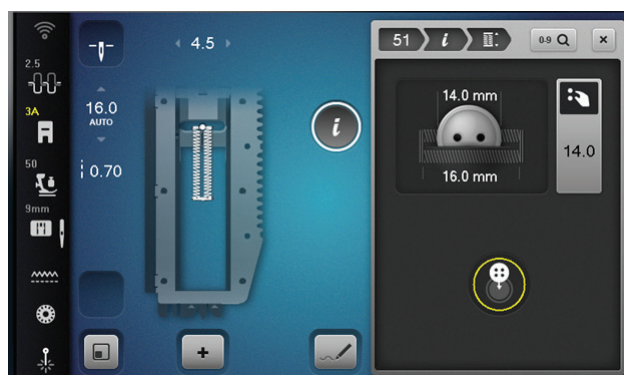


Fig. 19 : B 770 QE PRO Display Screen

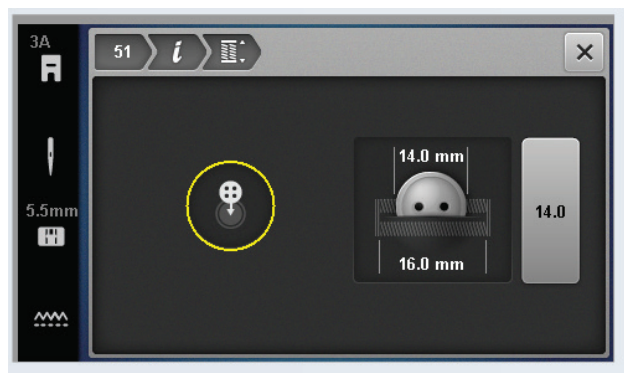


Fig. 20: B 335 Display Screen

FEATURE FOCUS

Button Slit Width

The 7 Series, 5 Series, B 485, and B 480 machines can also adjust the slit width of the buttonholes up to 2 mm before sewing.

1. Select the Information Menu.
2.  Select the Button Slit Width icon.
3. Turn the Multi-function Knobs to adjust the width (Fig. 21).
4. Sew the buttonhole.



Fig. 21

OPTION TWO: MANUAL BUTTONHOLES

You can create longer buttonholes by using the manual function with Buttonhole Foot #3/3C. Longer buttonholes are great for home decor projects like curtains or pillows.

1. Attach Buttonhole Foot #3/3C.
2. From the Selection Menu, select:

Buttonholes » stitch #51

3. Select the Information Menu.
4.  Tap the Manual icon. Depending on your model, the Buttonhole bar appears or up/down arrows.
5. Mark a buttonhole length on your fabric.
6. Each segment of the buttonhole is displayed in the Buttonhole bar (Fig. 22). To move through each segment, touch the Quick Reverse button on the front of the machine. Sew the buttonhole, being careful to follow your marked length.



Fig. 22

On the BERNINA 790 ULTRA, Sideways Motion is a creative tool to enhance your projects by allowing for stitches wider than 9 mm. This sewing technique may seem awkward at first because the fabric is moving side to side, while also moving forward and backward. You will guide the fabric, keeping it parallel to the presser foot. The presser foot designed for this type of motion is the Sideways Motion Foot #40C. Remember to use this foot when sewing anything over 9 mm.

Sideways Motion stitches are in the Decorative Stitches Menu. These specialty folders — Floral Stitches, Satin Stitches, Heirloom, Children, Filigree, and Quilting — have a small crosshair at the bottom right corner of the folder (Fig. 23).

JUMBO STITCH

This tool, located in the Information Menu, allows you to turn any decorative stitch pattern into a Sideways Motion Stitch. Jumbo Stitch can resize patterns up to 500% of the original size or make them smaller, down to 25%.

MONOGRAMS

The Alphabets Menu has a folder called Monograms (Fig. 24). This folder contains Sideways Motion letters that can be stitched out in three sizes: 30 mm, 20 mm, and 15 mm. This is a great alternative when you want to stitch out a quick letter without going to the embroidery side and you need something bigger than 9 mm stitch width.



Fig. 23



Fig. 24

Exercise 10

SIDEWAYS MOTION STITCHES

Materials & Machine Settings

 (1) 4" x 6" folded woven fabric with (1) 4" x 6" stabilizer sandwiched in the middle

 **Needle:** 80/12 Universal

 **Needle Position:** Center

 **Presser Foot:** Sideways Motion Foot #40C

1. From the Selection Menu (Fig. 25), select:

Decorative Stitches Menu »
Folder 1601 » stitch #1608

2. Draw three straight lines on fabric, 1" apart.
3. Align center of foot with the center line.
4. Sew, keeping the sides of the foot parallel with the drawn lines as the fabric moves side to side.
5. When you come close to the end of the fabric, press Pattern End to end with a completed design.
6. Cut thread.

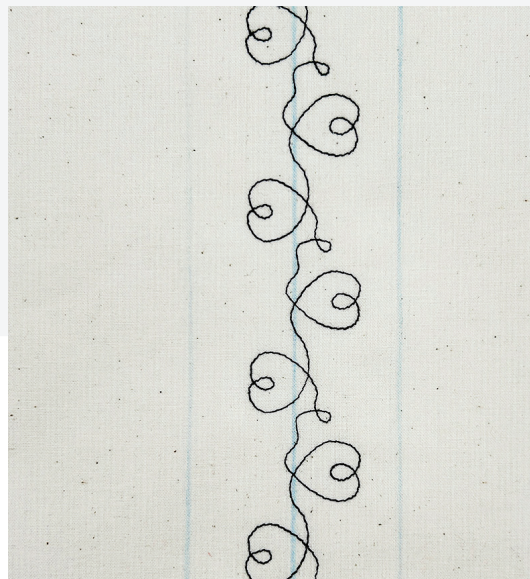


Fig. 25

Tip:

You can create your own Sideways Motion stitches in Stitch Designer! Either start from scratch to create a whole new stitch or use an existing stitch and make it wider than 9 mm!

Exercise 11

JUMBO STITCHES

Materials & Machine Settings

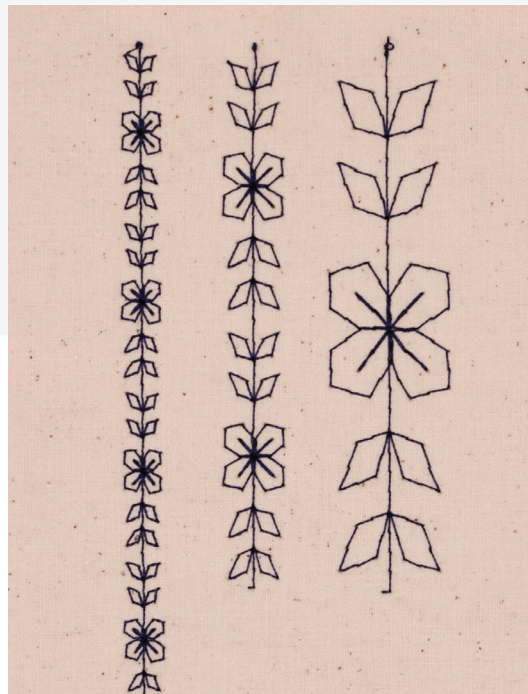
 (1) 4" x 6" folded woven fabric with (1) 4" x 6" stabilizer sandwiched in the middle

 **Needle:** 80/12 Universal

 **Needle Position:** Center

 **Presser Foot:** Sideways Motion Foot #40C

Resize any decorative stitch pattern with the versatile Jumbo Stitch tool and do so without comprising stitch quality. You can make small stitches dramatically bigger or make large ones more delicate by sizing them down.



1. From the Selection Menu (Fig. 25), select:

Decorative Stitches Menu »
Folder 101 » stitch #130

2. Select the Information Menu, then choose Repeat and enter 2.
3. Sew the stitch at the standard size down the middle of the fabric.
4. Tap Jumbo Stitch and then +100% once to increase size to 200% (locked proportions).
5. In the Information Menu, set the Repeat to 2 and sew the stitch to the side of first stitch.
6. Use the Multi-function Knobs or plus (+) or minus (-) icons to reduce the stitch size to about 61% (making the stitch 5.5 mm).
7. Sew the stitch with a Repeat of 4.

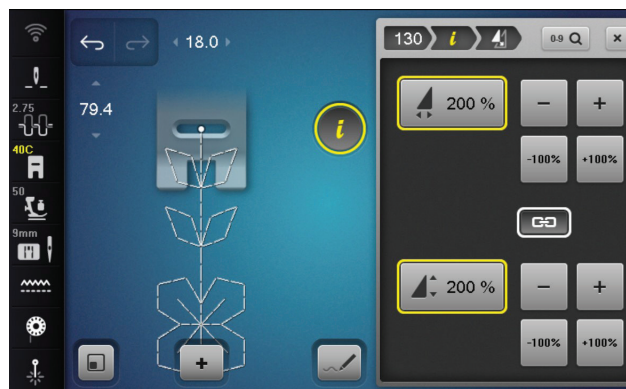


Fig. 26

Exercise 12

MONOGRAM

Materials & Machine Settings

 (1) 4" x 6" folded woven fabric with (1) 4" x 6" stabilizer sandwiched in the middle

 **Needle:** 80/12 Universal

 **Needle Position:** Center

 **Presser Foot:** Sideways Motion Foot #40C

1. From the Selection Menu, select:

Alphabets Menu » Monograms

2. Select your Monogram letter.

3.  Select Fit to Screen. Notice the start point, the white dot, and the end point, which is a red cross (Fig. 26).

4. Select Fit to Screen again to exit.

5. Select the Information Menu.

6.  Tap the Monogram Sizes icon three times to see the different sizes. Notice the placement of stitches in relation to the presser foot (Fig. 27).

7. Draw three parallel lines on fabric, 1" apart.

8. Stitch out in largest size, keeping the foot parallel to the marked lines.

Tip:

You will notice in the Stitch Altering Area that some letters start stitching in the middle of the letter. Pay attention to this when positioning your fabric. It is helpful to stitch one complete letter and cut it out to use as a placement guide.



Fig. 27

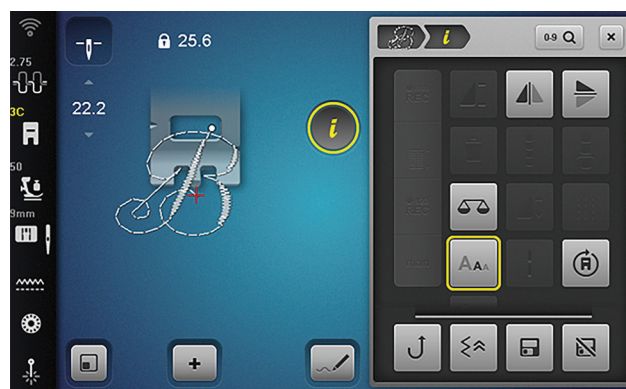


Fig. 28



Some machines come with a feature called Stitch Designer that enables you to create your own decorative stitch patterns or alter stitches. You already know BERNINA offers Total Stitch Control, but Stitch Designer takes this to a new level.

Patterns can be created freehand or with a grid on the touch screen using the stylus or fingertip (Fig. 28). You have the ability to undo/redo and there are no width limitations when designing beyond 9 mm. Even more, your designed stitches can be opened in embroidery.

Creating your own custom stitches in Stitch Designer is straightforward and opens up endless creative possibilities. The process begins by selecting "New" in Stitch Designer, then using helpful tools like Stitch Lock and Snap to Grid to keep your design precise and manageable. You'll work on a grid system where you can draw shapes, add lines, and build patterns using simple point-and-click actions. As you design, the Preview Screen shows you exactly how your stitch will look, letting you make adjustments before committing to fabric. Once you're satisfied with your creation, a simple confirmation saves your custom stitch, ready to be stitched out and added to your personal stitch library.

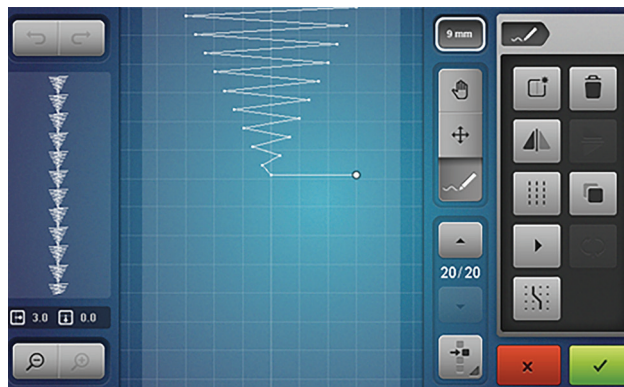


Fig. 29

FEATURE FOCUS

Snap to Grid and Stitch Run



With Snap to Grid, stitch points automatically land on the nearest grid intersections. The grid helps you create symmetrical patterns and maintain uniform spacing.



Select the Stitch Run icon to watch the new stitch pattern sew on screen. This feature allows you to see exactly where each needle penetration is landing in the stitch pattern.

Exercise 13

EDIT AN EXISTING STITCH

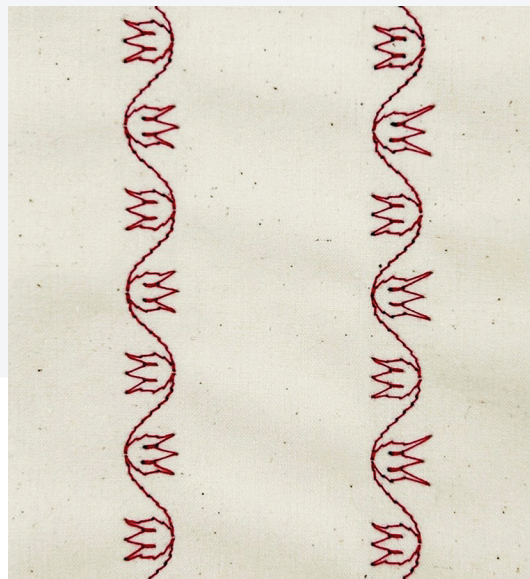
Materials & Machine Settings

 (1) 4" x 6" folded woven fabric with (1) 4" x 6" stabilizer sandwiched in the middle

 **Needle:** 80/12 Universal

 **Needle Position:** Center

 **Presser Foot:** Open Embroidery Foot #20C and Sideways Motion Foot #40C



PART ONE

1. Attach Open Embroidery Foot #20C.
2. From the Selection Menu, select:

Decorative Stitches Menu »
Folder 104 » stitch #104

3.  Select Stitch Designer.
4.  Activate Snap to Grid.
5.  Select Move Points and move flower petals (Fig. 29), as desired. Remember to Undo/Redo.
6.  Zoom Out.
7.  Tap the Select All Points icon (Fig. 30).
8.  Select Duplicate.

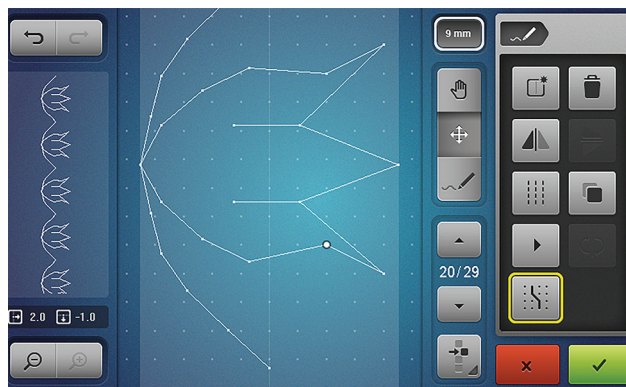


Fig. 30

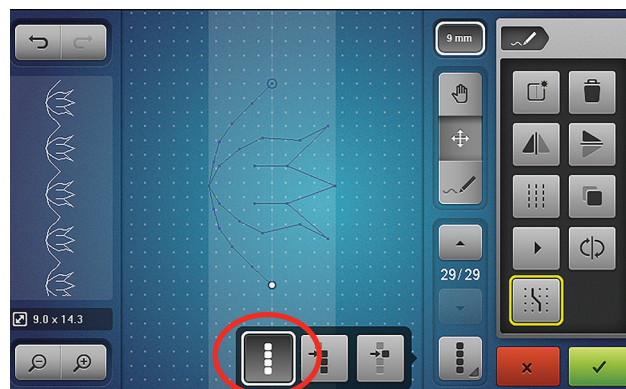


Fig. 31

9. Select Mirror Image Left/Right. Notice the wavy pattern in the Preview Bar on the left (Fig. 31).
10. Confirm with the green check mark and stitch out.

PART TWO

11. Attach Sideways Motion Foot #40C and reopen Stitch Designer.
12.  Turn off the 9 mm lock.
13.  Tap the Select a Single Point icon (Fig. 32).
14. Tap the Move Points icon and move individual points to make one of the flowers wider than 9 mm (Fig. 33).
15. Attach the Sideways Motion Foot #40C to machine.
16. Confirm with the green check mark and stitch out.

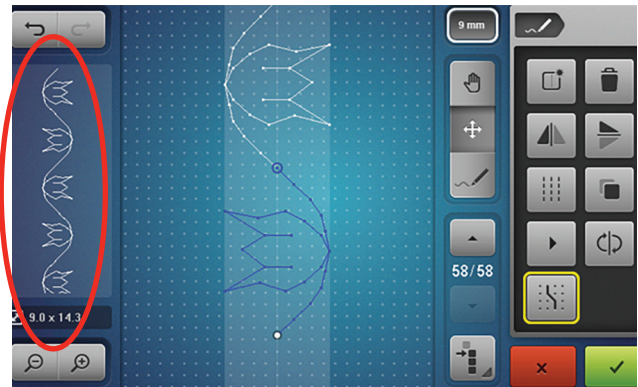


Fig. 32

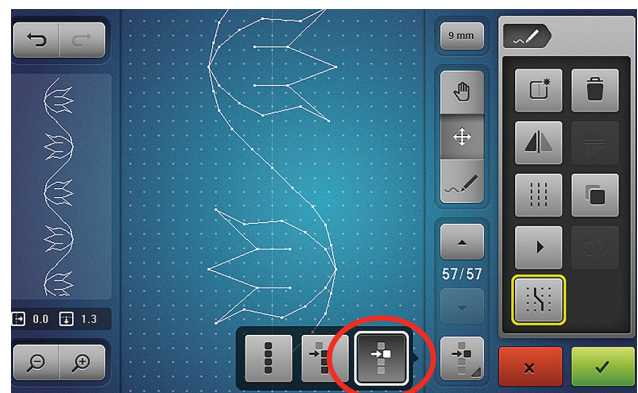


Fig. 33

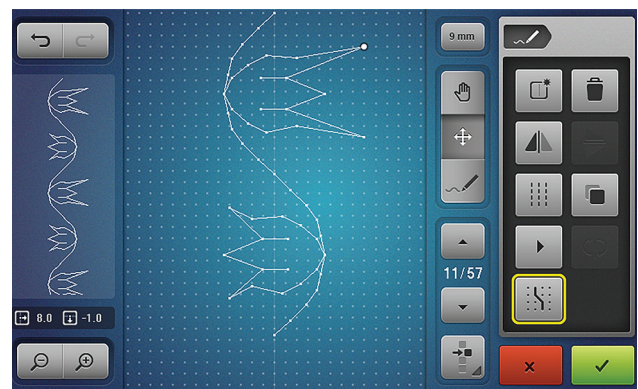


Fig. 34

MACHINE REFERENCE INDEX

This workbook encompasses a wide variety of machines and not all of the listed functions and exercises are applicable to every model. Please refer to this reference guide for all the functions and exercises that apply to your specific machine model before beginning.

Please note that the embroidery only models, the B 700 PRO, 700, and 500, are not included in this workbook.

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B 790 ULTRA

All functions and exercises in this workbook are applicable to the B 790 ULTRA.

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NOTES

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