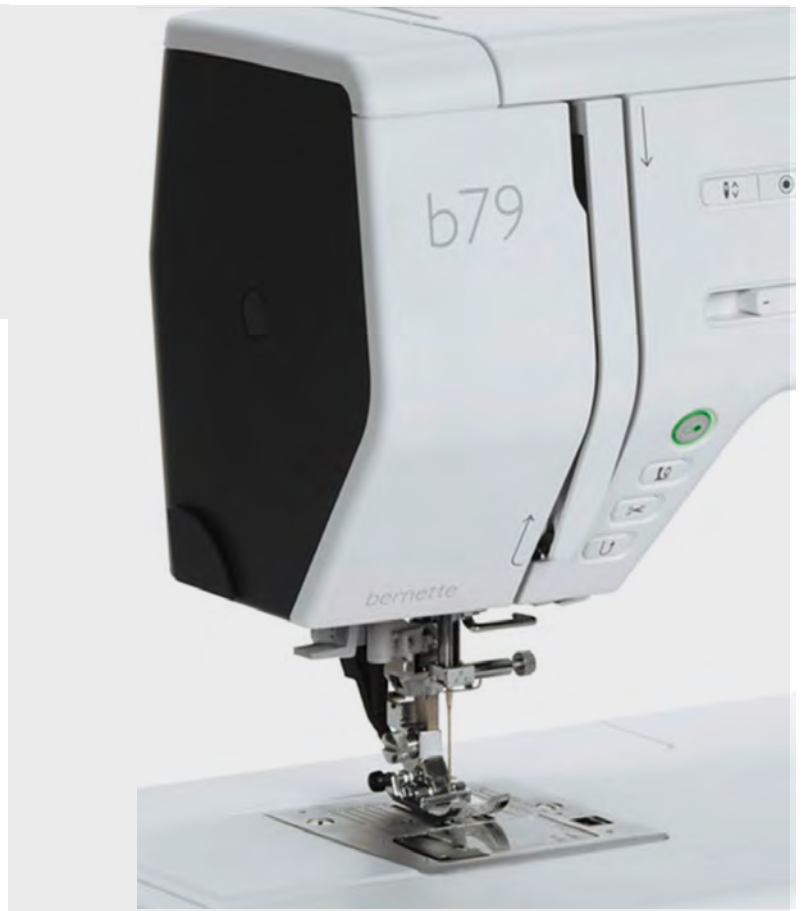# MY
bernette

b79

MASTERY
BOOK
SERIES

SEWING
MACHINE

bernette SEWING MACHINE WORKBOOK
For bernette 79 and bernette 77

b77

bernette SEWING MACHINE WORKBOOK

TABLE OF CONTENTS

INTRODUCTION

Congratulations on the purchase of your new bernette sewing machine. The information in this workbook will help you learn the basics of using your new machine.

This workbook is designed to be used as a step-by-step guide to familiarize you with the basic operation of your bernette sewing machine. Once you have completed the exercises designated for your machine, attach the sewn samples to the information pages (or add a facing page for mounting) and insert the pages into plastic page protectors to store in a 3-ring binder. They can then be used as a reference tool in the future as you use your machine and explore the creative possibilities it affords.

Stitch and function charts for each bernette model are found on Page 42. Each stitch exercise page has a graphic of the stitch(es) used so you can more easily locate it on your machine.

Some pages with a stitching exercise end with a "Sew How" box. This mini-quiz will let you test your knowledge and review the points related to the exercise.

Working through this workbook is just the first step. Using the information on a regular basis will help make it become part of your regular sewing skills.

Instructional videos, inspriring projects and machine information can be found on mybernette.com.

www.mybernette.com

The information in this workbook applies to the bernette 79 and bernette 77 sewing machines.

NOTE: *Some exercises apply only to certain models equipped with the feature being highlighted.*

Preparing to Stitch

CLEANING AND OILING

Keeping your machine clean and well oiled will keep your machine running smoothly. This is a crucial component for successful machine stitching. Refer to Page 41 for cleaning tips. Your machine manual will also give you detailed cleaning and oiling suggestions.

STITCH PLATE

Attach the 7 mm Stitch Plate. The machine will recognize the stitch plate that is attached.

RAISE FEED DOGS

The feed dog raise/drop control is a slider at the bottom of the free arm, just to the left of the bobbin area. The feed dog automatically raises on the b79 when the embroidery module is removed.

PRESSER FOOT

Attach the Zigzag Sole (DA) to the machine. Engage the Dual Feed mechanism.

THREAD THE BOBBIN FOR SEWING

1. Wind a bobbin.
2. Open the bobbin cover by pushing the release button to the right. (Diagram 1)
3. Insert the bobbin so that the thread runs counterclockwise. (Diagram 2)
4. Pull the thread into the slit. (Diagram 3 - See **1**)
5. Stabilize the bobbin by gently holding it in place.
6. Follow the arrow markings to bring the thread into the bobbin thread guide. (Diagram 4)
7. To cut the excess thread, take the thread end and pull it over the thread cutter. (Diagram 5 - See **2**)
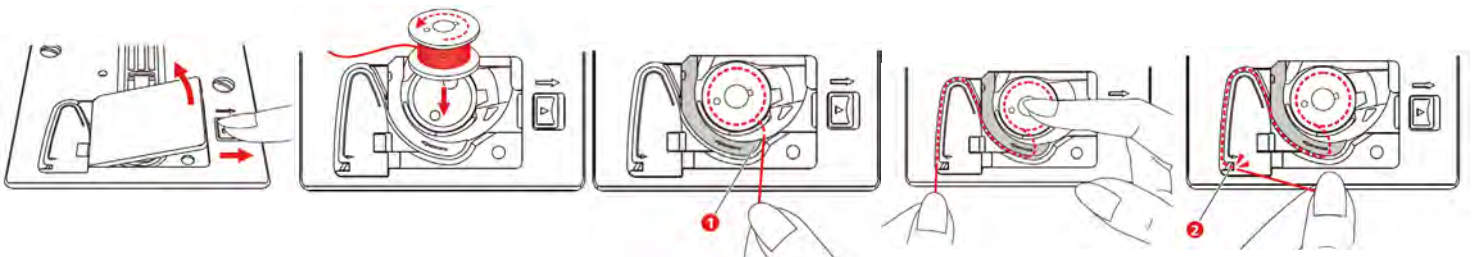8. Close the bobbin cover.

Diagram 1	Diagram 2	Diagram 3	Diagram 4	Diagram 5

INSERT AND THREAD NEEDLE (Refer to Page 37 and 38 for additional information on needles.)

- Use the proper needle for the thread and fabric being used. It is advisable to insert a new needle for each project, or after every 4 to 6 hours of sewing time.
- Always thread with the presser foot up. This opens the tension discs and allows the thread to seat properly.

THREADING TIPS FOR MODELS WITH BOTH HORIZONTAL AND VERTICAL SPOOL PINS:

- Use the horizontal spool pin with cross-wound threads; match spool cap size to end of spool.
- The smallest spool cap fits into the end of large cones/spools such as Isacord embroidery thread.
- Use the vertical spool pin with stacked threads and for some decorative threads (metallic threads); use the foam disc under the spool to avoid extra tension on the thread.

Personalize the Screen

You can personalize the display color to suit your individual tastes. Change the color in the Setup Program.
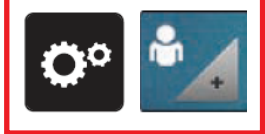
1. Touch the Setup icon.
2. Select Personal Settings and a display appears.
3. Select the desired color.
4. Close the screen (or use the setup breadcrumb path to navigate back to Setup).

Activate/Deactivate Beginning Tie-Off

Activate or deactivate the 4 securing stitches at the beginning of every stitch/stitch type. If activated, the tie-off stitches at the beginning of every stitch.
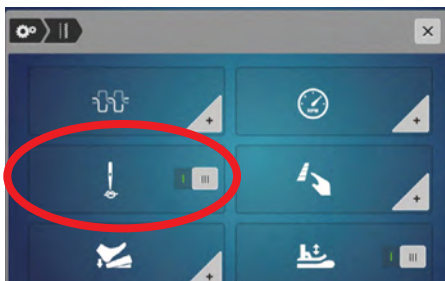
1. Select Setup.
2. Select Sewing Settings.
3. The slider next to the Securing Stitches at Pattern Begin will activate or deactivate the tie-off at the beginning of the stitch. (This is a switch for on/off.)
4. Toggle the switch to off for today's lesson.
5. Close the screen (or use the setup breadcrumb path to navigate back to Setup).

Program the Thread Cutter

The automatic securing can be programmed before the thread cut takes place.
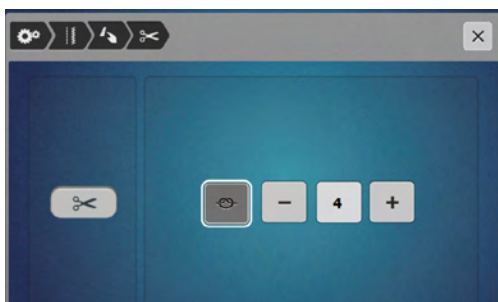
1. Select Setup. Select Sewing Settings.
2. Select Programmable Buttons, then the Thread Cutter icon.
3. Touch the Securing icon to activate 4 securing stitches before cutting. Touch the - / + icons to program the number of securing stitches. Touch the Securing icon again to deactivate automatic securing.
4. Leave this screen open and proceed to the next page.

Breadcrumbs

Learn to navigate within menus using the icons in the breadcrumb path rather than using the Close box to exit. This is a time-saving feature when setting preferences within several menus in Setup, embroidery motif selection, and the "i" menu in sewing and embroidery.

Setup **Sewing Settings** **Programmable Buttons** **Current Folder**
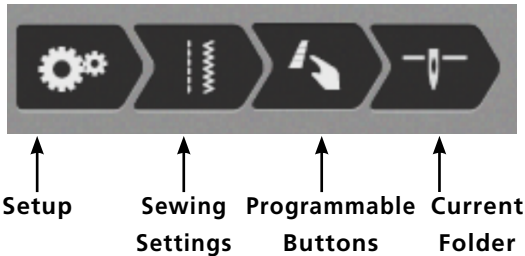
1. Note the breadcrumb path at the top of the display.

2. Touching any of the icons in the breadcrumb path will take you back to that particular menu. This is a time saver when changing multiple settings within a menu.

Programming the Securing Button

The number of securing stitches that are sewn when using the Securing Button on the machine can be programmed.

PRACTICAL STITCHES

DECORATIVE STITCHES   PATTERN END
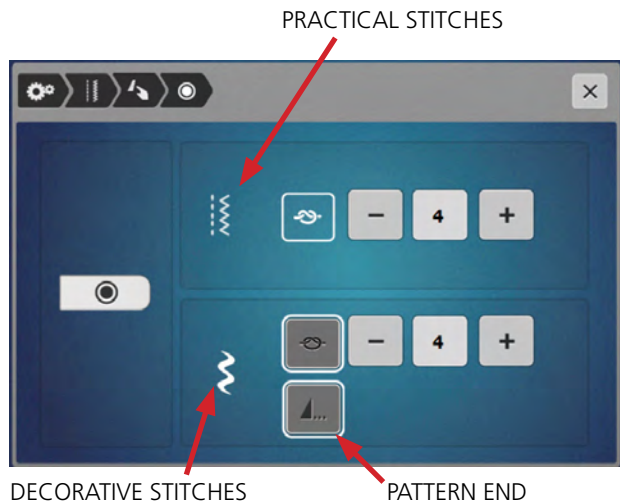
1. Select Programmable Buttons in the breadcrumb path.

2. Select the Securing icon.

3. In the Practical Stitches area, touch the - / + icons at the top of the display to program the number of securing stitches for practical stitches. For lessons in this Workbook, leave this at the default of 4.

4. Touch the Securing icon at the lower part of the display to activate automatic securing for decorative stitches and combined stitches.

   • Touch the - / + icons to program the number of securing stitches.

   • Touch the Securing icon again to deactivate automatic securing for decorative or combined stitches.

   For today's lessons, leave this at the default of 4.

5. Pattern End is activated by default (denoted by white outline). This will secure the stitches at the end of a stitch pattern. Leave this icon activated for this lesson.

Sew HOW

Do you know how to:
• **Use the breadcrumb path to navigate?**
• **Program automatic securing for practical and decorative stitches?**

Program Needle Stop Down and Hover

Take advantage of Hover when stitching with Needle Stop Down engaged. When the stitching stops with Needle Stop Down engaged, the machine can be programmed to stop with the presser foot down or to hover.

1. Select Programmable Buttons in the breadcrumb path..
2. Select the Needle Stop Down icon.
3. Touch the switch to activate Needle Stop Down.

   Note: *If you should wish to deactivate Hover entirely, this switch should be set to off.*

To set the height of the hover position:

1. Select Programmable Buttons in the breadcrumb path.
2. Select Program the Hovering Position of the Presser Foot.
3. Turn the Multunction knobs (or touch - / +) to adjust the distance between the stitch plate and the presser footfrom 1 mm to 6 mm. Leave the setting at the default of 2 mm for these lessons.

Program the bernette Foot Control

The bernette Foot Control with Back-kick can be programmed with desired settings. The Foot Control default setting is to raise or lower the needle when the heel of the foot control is depressed. The Programmable Foot Control back-kick options also allow the heel-down to signal a tie-off, cut the thread, and raise the presser foot.
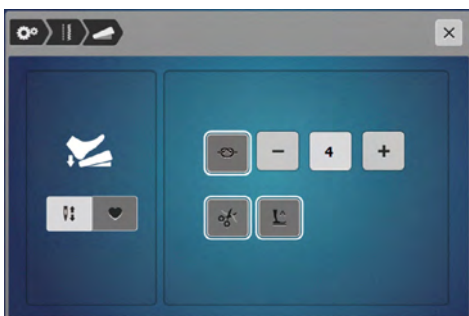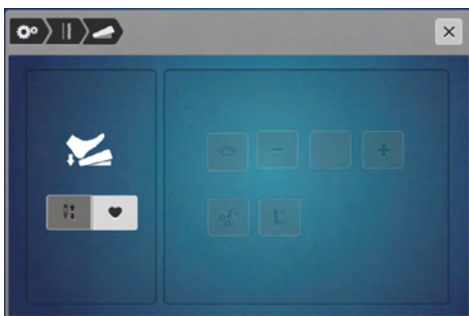
1. Using the breadcrumb path, navigate back to the Setup menu; select Sewing Settings.
2. Select the Foot Control icon.
3. If the Needle icon is selected, the back-kick will move the needle to the next position.
4. Select the Heart icon. The back-kick can be programmed in a number of ways:
   - When the Securing icon is selected, the number of securing stitches can be programmed for two to six securing stitches in place. The standard is 4 stitches.
   - When the Automatic Thread Cutter icon is selected, the upper and lower threads are cut automatically by the back-kick.
   - When the Presser Foot Lift icon is selected, the presser foot raises when using the back-kick.
5. For the class exercises, program the Foot Control to raise or lower the needle. Select the Needle Up/Down icon.
6. Exit the Setup menu.

Stitch Selection
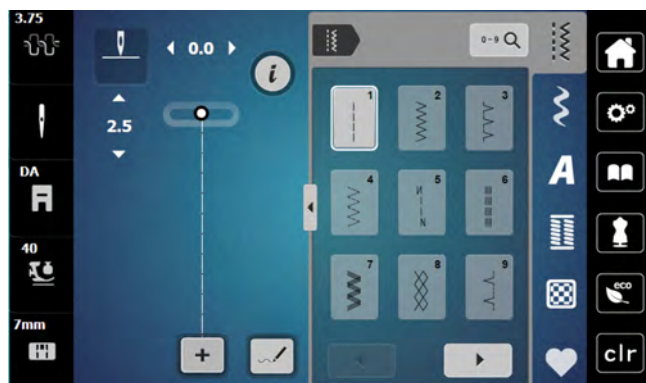
Selecting a Stitch

1. Select stitches by touch selection, or by using the Search by Number function. Use your finger or the stylus that came with the machine to access buttons on the screen.

2. Stitches are grouped into categories with some categories having multiple folders for selection.

3. Many categories have more than one screen.
   • Use the arrows at the bottom of the display to move forward and back in the stitch category.
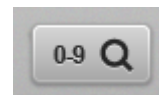
| 1	Practical Stitches	4	Buttonholes
2	Decorative Stitches	5	Quilt Stitches
3	Alphabets	6	bernette Personal Program
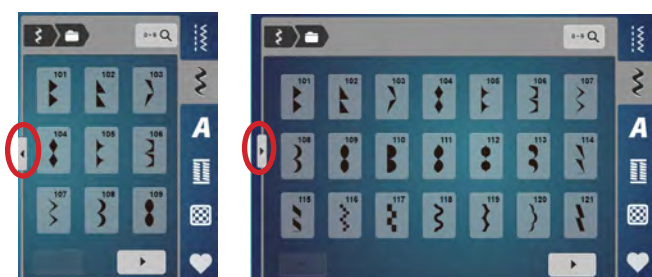
Transitions

1. View more stitches on screen by using the Transition. Select to view all folders or to see more stitches at one time.

2. Select Folder 101. Touch the Transition arrow to view the stitches in the category.

3. Some categories will have more than one screen. Use the arrows at the bottom of the screen or scroll to move forward or backward.

4. Touch the Transition icon to close the screen.

Presser Foot Sole Display

Selecting the Presser Foot Sole Display recommends a sole to be used according to the stitch selected. The recommended sole is denoted with a green check. Other soles that may be used depending on the application will feature a star in the upper right corner. On the b79, touching the sole icon will bring up a display with more information about that particular sole.

1. Select the Straight Stitch.
2. Select the Presser Foot Sole Display from the Status Bar.
3. Touch Sole DA on the display. On the b79, information about the sole will be displayed.
4. Read the information about the sole.
5. Touch the sole icon in the breadcrumb path at the top of the display.
6. Touch another sole and read the information about the sole and its applications.
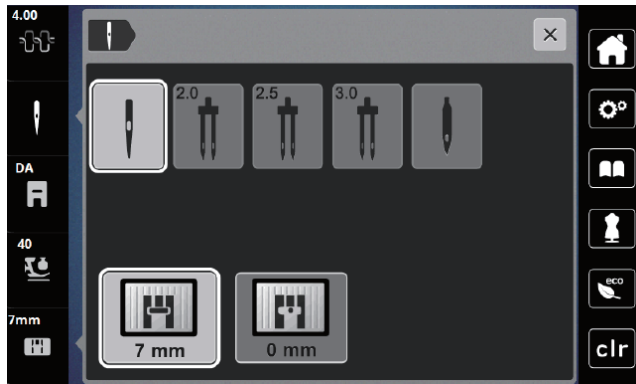7. Close the Presser Foot Sole Selection menu.
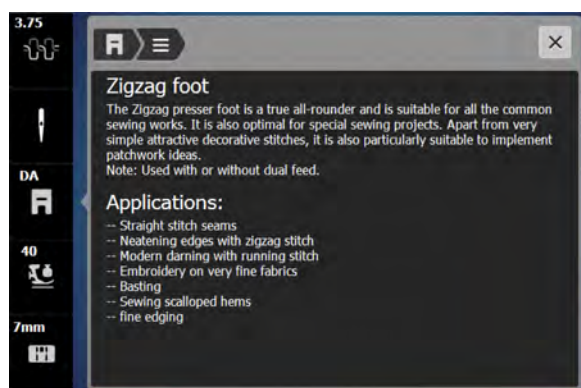
Notes:

• *The Presser Foot Sole Display on the b79 and b77 give suggested soles for certain stitches, but this is for informational purposes only. It does not limit the stitch properties.*

Security Program-Needle

Setting the Needle Security Program can be very helpful in sewing. It can prevent needle breakage and damage to your machine or presser foot. The function remains active even when the machine is turned off and on.

1. Touch the Needle Selection icon. A display will appear.
2. Select the Standard Needle.

Specialty Needles: *When selecting a specialty needle (such as a twin needle), it can be checked whether or not it can be used in combination with the attached stitch plate. If the needle is suitable with the attached stitch plate, sewing can be started. If the selected needle does not match the stitch plate, a red exclamation will appear on the display.*

For more information on needles, refer to Reference-Sewing Machine Needles on Pages 37 and 38.

Sew HOW

Do you know:
- **On the b79 and b77, the bernette Creative Consultant recommends the needle according to the fabric and technique.**

Security Program-Stitch Plate Selection

The b79 and b77 have a built-in sensor that detects which stitch plate is attached. If an inappropriate needle or stitch is selected, the machine will limit the width of any stitch to prevent needle breakage. The function remains active even when the machine is turned off and on.
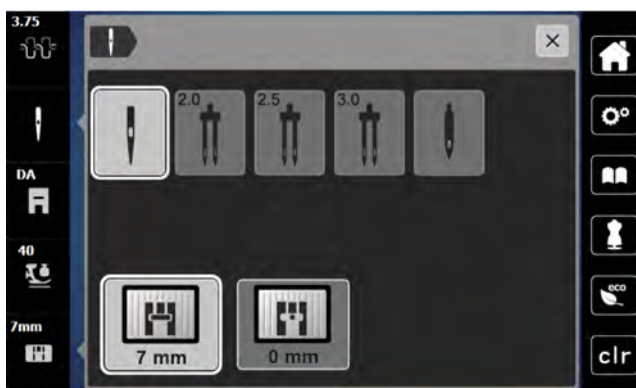
1. Touch the Stitch Plate Selection icon.
2. The machine automatically detects which stitch plate is attached.

0 mm: *This plate is used for embroidery. Many quilters prefer to use this stitch plate when piecing. This is also the plate to use when using the CutWork Tool. (The 0 mm Stitch Plate is an optional accessory for the b77.*

The 'i' menu

All creative functions that can be applied to a stitch are accessed through the Information ("i") menu.

1. Select Stitch #102.
2. Touch the "i" to access the Information menu.
   • Only icons relevant to the selected stitch are visible.
   • A different set of icons is available for practical stitches, decorative stitches, alphabets, quilting stitches or buttonholes.
   • When making multiple alterations within the "i" menu, use breadcrumb navigation to stay within the "i" menu until all changes have been set before closing.
   • Select the "i" in the breadcrumb path to go back one level.
3. Touch the stitch number in the breadcrumb path to return to the stitch selection menu.

bernette Dual Feed

The Dual Feed feeds the fabric from above and from beneath simultaneously. This provides an even and careful feed forward even for smooth and thin materials. Striped and checkered patterns can be matched perfectly by even feeding. Use only presser feet with the back opening when engaging the Dual Feed mechanism.


To engage dual feed:

1. Attach Zigzag Sole (DA).
2. Raise the presser foot.
3. Swing the Dual Feed mechanism forward under the back of the presser foot until it clicks in position.

To disengage dual feed:

1. Raise the presser foot.
2. Pull down the Dual Feed mechanism and swing it to the rear to disengage.

Needle Stop Up/Down-bernette Free Hand System

Firm woven fabric, 4" x 6", two pieces

80/12 Universal

Polyester or cotton embroidery thread

Center

Zigzag Sole (DA)-Dual Feed Engaged
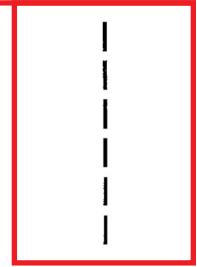
1. Select the Straight Stitch #1.
2. Touch the Needle Up/Down button on the machine. Each push of the button will raise or lower the needle.
3. To program the needle to stop in the down position, select the Needle Stop Up/Down icon on the screen.
4. Sew a line of stitching and stop in the middle of the fabric. Hover is turned on by default and the foot will raise 2.0 mm when the machine stops.

   NOTE: *Hover can be programmed from 1 mm (not raised at all) to 6 mm in height.*
5. Pivot to form at least 2 right angle corners and 2 additional corners.
   • When pivoting, use the bernette Free Hand System Knee Lfter to raise the presser foot.

How do I lower the presser foot for sewing?
• There is no presser foot lift in the back of the machine--use the button on the front of the machine to raise/lower the presser foot.
• Press the Foot Control to lower the foot and begin sewing.
• Press/tap the Start/Stop button to hover and re-position your work as needed.
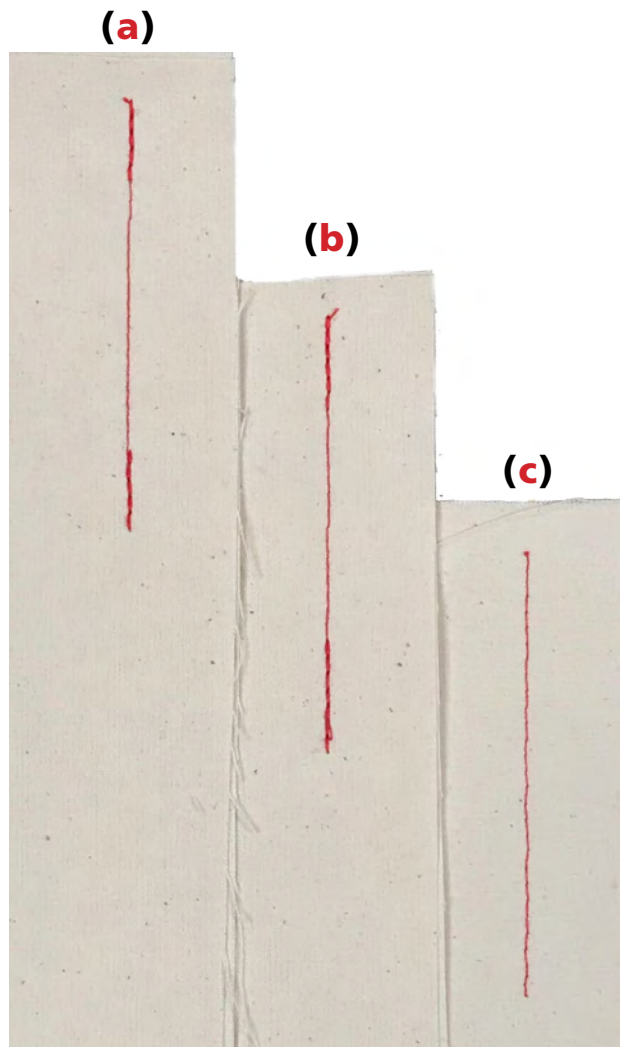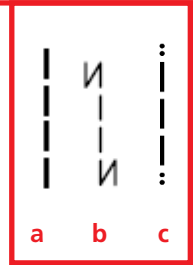
Sew HOW

Do you know how to:
• **Use the bernette Free Hand System?**
• **Use the back-kick on the bernette Foot Control to move the needle up or down?**

Securing Stitches

Firm fabric, 4" x 6", three pieces;
fold in half lengthwise to 2" x 6"

80/12 Universal

Polyester or cotton embroidery thread

Center

Zigzag Sole (DA)-Dual Feed Engaged

a   b   c

(a)

(b)

(c)

Straight Stitch/Reverse (a)

1. Place one fabric piece under the presser foot, aligning the 6" cut edge with the 5/8" guide line on the stitch plate.

2. Select the straight stitch. Sew a few stitches forward, then press and hold the Quick Reverse Button on the machine as you sew a few stitches backward; the machine will sew in reverse until the Quick Reverse Button is released.

3. Continue stitching the seam; secure the end in the same way.

Securing Program (b)

1. Select the Securing Program #5. Begin to sew on 2nd piece of fabric; the machine will automatically take six straight stitches forward and back at the beginning to secure the stitching.

2. At the end of the seam while the machine is still stitching, press and release the Securing button. The machine will automatically take five stitches backward, five stitches forward to secure the stitching, and then stop.

Quilter's Securing Program (c)

1. Select the Quilting Securing Program #1001. Begin to sew on 3rd piece of fabric; the machine will take 5 short stitches forward automatically when sewing is started. Then continue stitching forward.

2. At the end of the seam, press and release the Securing button. The machine will take 5 short stitches forward to secure and then stop.

Sew HOW

Do you know how to:
• **Activate the Securing Function at the beginning and end of a stitching pattern?**

Permanent Reverse/Backstepping

- **Firm woven fabric, 4" x 6"**
- **Lightweight tear-away stabilizer 4" x 6"**
- **80/12 Universal**
- **Polyester or cotton embroidery thread**
- **Default**
- **Zigzag Sole (DA)-Dual Feed Engaged**

NOTE:

- *The Quick Reverse button on the machine can be programmed in the setup menu to operate as Quick Reverse or Backstepping.*

Permanent (Continuous) Reverse sews the selected stitch pattern in reverse.

Backstepping is more precise, as it will retrace the last 200 needle penetrations to give accurate stitch-by-stitch reverse sewing.

This feature is great when you have a thread break or unknowingly run out of bobbin thread. You can re-thread and backstep to the exact location of the last sewn stitch.
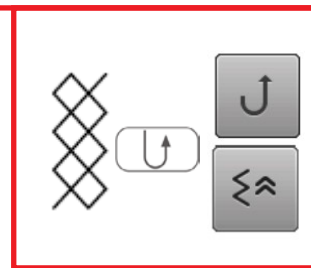
1. Place the stabilizer behind the fabric.
2. Select the Honeycomb Stitch #8. Engage the Needle Stop Down function.
3. Stitch about two inches on the fabric and stop with the needle down; do not move the fabric.
4. Select the "i" menu. From this menu, you can select Permanent/Continuous Reverse or Backstepping:
   - Permanent Reverse can be accessed either with the button on the machine, or by selecting "i"; Permanent Reverse Sewing.
   - Backstepping can be accessed by selecting "i"; Backstepping.
   - Backstepping can also be accessed with the button on the machine, depending on the setting.
5. Touch the Backstepping icon and continue stitching; the machine will now stitch backward, forming the stitches precisely on top of the previous ones.
6. Clip threads. Select the Backstepping icon again to disengage the function.

Sew HOW

Do you know how to:
- **Sew backward on your model?**

Mirror Image/Pattern Repeat

Firm woven fabric, 4" x 6"

Lightweight tear-away stabilizer 4" x 6"

80/12 Universal

Polyester or cotton embroidery thread

Default

Embroidery Sole-Sewing (JK)

Horizontal Mirror Image (Left/Right):
• Machine sews selected stitch in Horizontal Mirror Image.
• Right/left is determined by the sewing direction.

Vertical Mirror Image (Up/Down):
• Machine sews selected stitch in Vertical Mirror Image.
• Up/down is determined by the sewing direction.

1. Attach Embroidery Sole JK.
2. Place stabilizer behind fabric.

Left/Right Mirror Image:
1. Select Blanket Stitch #1008 from the Quilting Stitches menu.
2. Sew one row down length of fabric.
3. Engage Mirror Image Left/Right and sew a second row next to the first, using the side of the presser foot for spacing.

Pattern Repeat:
1. Select Stitch #113.
2. Select the "i". Change Pattern Repeat to 4x.

Up/Down Mirror Image:
1. Stitch one stitch pattern for a total of 4 paisleys. The machine will stop when the stitch pattern is complete.

   Tip: *To make sure you have a complete pattern, depress the foot control and do not lift your foot until the machine stops.*
2. Engage Mirror Image Up/Down. The entire stitch pattern of four paisleys will be mirror imaged.
3. Stitch one stitch pattern for a total of four paisleys.

Sew HOW

Do you know how to:
• **Tell the difference between Mirror Image Left/Right and Up/Down functions?**
• **Engage Pattern Repeat?**

Pattern Functions - Pattern Begin/End

Firm woven fabric, 4" x 6"

Lightweight tear-away stabilizer 4" x 6"

80/12 Universal

Polyester or cotton embroidery thread

Default

Embroidery Sole-Sewing (JK)

NOTE: *Refer to Page 40 Reference-Decorative Stitching for more tips on appropriate tools for decorative stitching.*

Tip: *To make sure you have a complete pattern, depress the foot control and do not lift your foot until the machine stops.*
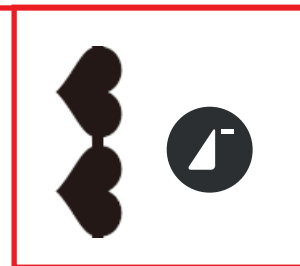
1. Place stabilizer behind the fabric.
2. Select the satin stitch hearts-Stitch #124.
3. Select the Presser Foot Sole Display. Notice the Sole JK is the recommended foot. Attach Embroidery Sole JK.
4. Sew 2½ patterns, stopping in the middle of the third pattern.
5. Lift the presser foot and move the fabric down about an inch; then begin sewing again. The pattern will start forming where you left off.
6. After completing the interrupted heart, start the final heart and press the Securing Button. The machine will stop stitching when the pattern is complete. **NOTE:** The Securing Button was programmed to complete a stitch pattern when pressed. (See Page 6 Programming Securing Button.)

7. Move to a new position and sew 2½ patterns, stopping in the middle of the third pattern. Lift the presser foot and move the fabric down about an inch.
8. Before starting to sew again, press Pattern Begin.

   NOTE: *The Pattern Begin icon appears on the screen in the stitch altering area only when the pattern is not at the beginning. To get to the beginning of the pattern, select the on-screen Pattern Begin icon. If it is not visible, then the needle is at the beginning of the stitch pattern.*

9. Start sewing; the pattern will start forming at the beginning. Again, press the Securing Button when you start stitching the final heart.

Sew **HOW**

Do you know how to:
• **Access Pattern Begin?**

Pattern Functions-Pattern Repeat/Extend

Firm woven fabric, 4" x 6"

Lightweight tear away stabilizer 4" x 6"

80/12 Universal

Polyester or cotton embroidery thread

Default

Embroidery Sole-Sewing (JK)

Pattern Repeat   Pattern Extend/Adjust Stitch Density
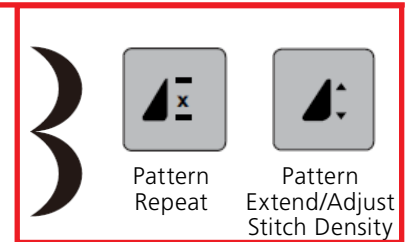
Notes:

• *The Stitch Density of a stitch can be increased or decreased by using the -/+ icons under Stitch Density. It can be changed in a decorative application to change the stitch as you prefer, and is most effective with satin stitches (Folder 101). Stitch Density is not available for every stitch.*

• *Pattern Extend allows you to increase or decrease the length of an entire stitch pattern in 100% increments without changing the stitch density. This feature is not available for every stitch.*

Pattern Repeat 1-9x

Program the b79 and b77 machines to stop at the end of 1 - 9 repeats of a single stitch or stitch combination.

1. Attach Embroidery Sole JK
2. Place the stabilizer behind the fabric.
3. Select the satin stitch scallop-Stitch #108; Open the "i" menu and change Pattern Repeat to 1x.
4. Sew until the machine stops; you will have one scallop.
5. Increase Pattern Repeat to 3x. Sew until the machine stops; you will have one stitch pattern.
   NOTE: *In this case, one stitch pattern equals the repeated group of three scallops.*

Pattern Extend

1. Change Pattern Repeat to 1x.
2. Select the Pattern Extend/Adjust Stitch Density icon.
3. Set Pattern Extend to 300% using the slider icon (or -/+).
4. Sew until the machine stops; you will have one stitch pattern.
   • In this case, one stitch pattern equals one extended scallop.
   • As the stitch pattern is elongated (stretched), the stitch density is maintained.
5. Select the "i" in the breadcrumb path to close the Pattern Extend display and return to the "i" menu.

Sew HOW

Do you know how to:
• **Recognize the two different pattern functions (which icon stands for each)?**

Altered Stitches

🧵 **Firm woven fabric, 4" x 6"**

🪡 **Lightweight tear-away stabilizer 4" x 6"**

🪡 **80/12 Universal**

🧵 **Polyester or cotton embroidery thread**

◀▶ **Default**

👟 **Embroidery Sole-Sewing (JK)**
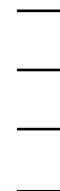
Row 1 Programmed settings	Row 2 4 mm width 3 mm length	Row 3 4 mm width Default length

1. Attach Embroidery Sole JK.

2. Place the stabilizer behind the fabric.

3. Select Blanket Stitch #1008 from the Quilting Stitches menu.

4. Sew a row of stitches. (Row 1)

5. Adjust stitch width to 4 mm and stitch length to 3mm. Sew a second row of stitching next to the first. (Row 2)

6. Touch the stitch length numeric value on screen. Tap the yellow highlighted box to revert the stitch length to the machine default stitch length setting of 2.5. Leave the stitch width at 4.0 mm.

7. Sew a third row of stitching next to the previously sewn rows. (Row 3)

8. Leave this stitch on the screen and go to the next page.

Sew HOW

Do you know how to:
- **Find the Quilting Stitch menus on your model?**
- **Reset the stitch length and width to the preprogrammed settings?**

Temporary Altered Memory

The bernette 79 and bernette 77 have Temporary Altered Memory. The machine will remember the last stitch alterations made to any stitch. These alterations will remain in effect until manually changed, until CLR is touched, or until the power to the machine is turned off.
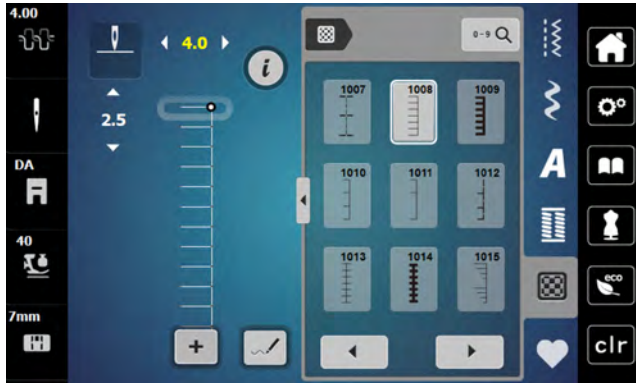
1. Using the stitch created on the previous page, notice that the stitch width has been changed. This is indicated by the yellow number.

2. Select Stitch #1.

3. Re-select Blanket Stitch #1008 from the Quilting Stitches menu. Notice that the stitch has retained the altered settings.

4. Leave the width at the altered setting.

Saving Stitches in bernette Personal Program

Use the bernette Personal Program to store your favorite stitches, most often used stitches, or perhaps a group of stitches needed for a particular technique or project.
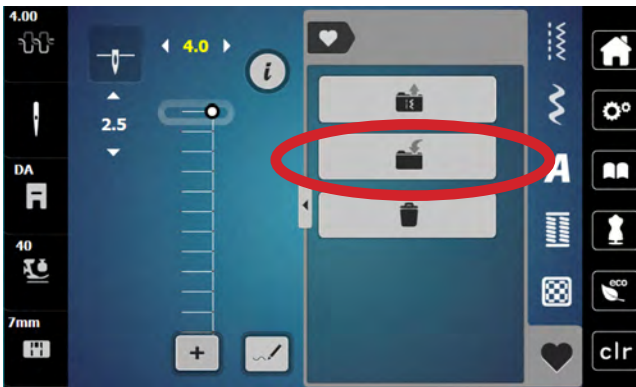
Creating a Personal Program

1. Select the desired stitch. For this exercise, select the altered Blanket Stitch from previous page.

2. Close the "i" display, if opened.

3. Touch Personal Program.

4. Select the Save to Personal Program (folder with arrow going in) icon.

5. The selected stitch has a yellow border around it. Select the highlighted stitch to save, or select the green check box with the check to add the stitch to the Personal Program folder.

6. The display closes.

Triple Straight Stitch

- Firm woven fabric, 4" x 6", two pieces
- 80/12 Universal
- Polyester or cotton embroidery thread
- As directed in instructions
- Zigzag Sole (DA)-Dual Feed Engaged
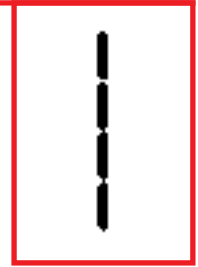
Notes:

The Triple Straight Stitch creates a very sturdy seam on items that will receive a lot of wear.

It also creates beautiful bold topstitching with regular weight thread that mimics the look of a heavier decorative topstitching thread.

1st Line   2nd Line

Triple Straight Stitch Seam

The triple straight stitch is optimal for reinforced seams in heavy fabrics.

1. Attach Zigzag Sole DA to the machine and engage the Dual Feed Mechanism.
2. Select the Triple Straight Stitch #6.
3. Place the fabric pieces right sides together.
4. Position the edge of the fabric along the 5/8" mark on the stitch plate.
5. Sew the seam and press it open.

Triple Straight Stitch Edgestitching

1. Adjust the needle position to the far right.
2. With the right side of the fabric up, place the right edge of the foot along the ditch of the seam. Sew the length of the seam from top to bottom (1st Line).
3. Adjust the needle position to the far left.
4. Stitch a second time with left side of the foot along the ditch of the seam. Sew in the same direction as before (2nd Line).

Sew HOW

Do you know how to:
- Adjust the needle position?
- Adjust the stitch length?

Vari-Overlock Stitch

⬤ Cotton interlock, 4" x 6", two pieces

⬤ 80/12 Universal
(Ballpoint or Stretch may also be used)

⬤ Polyester or cotton embroidery thread

⬤ As programmed

⬤ Overlock Sole (DI)-Dual Feed Engaged
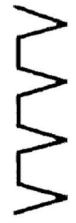
1. Attach Overlock Sole DI to the machine and engage the Dual Feed Mechanism.

2. Select the Vari-Overlock Stitch #3.

3. Engage the Needle Stop Down function..

4. Guide the raw edges of the fabric against the black guide on the foot and stitch the two layers together. The stitch will form over the pin and the edge of the fabric.

Notes:

Using the Overlock Foot and the Vari-Overlock Stitch will keep the edge of the fabric flat, not rolled.

This can be used as a seam finish on wovens, or as an actual seam on knit fabrics.

Other stitches that work with this presser foot are the Stretch Overlock Stitch and the Double Overlock Stitch.

When you select this stitch, and then select Presser Foot Sole Display, the Overlock Sole DI will be displayed with a green check indicating that it is the recommended presser foot for the stitch.
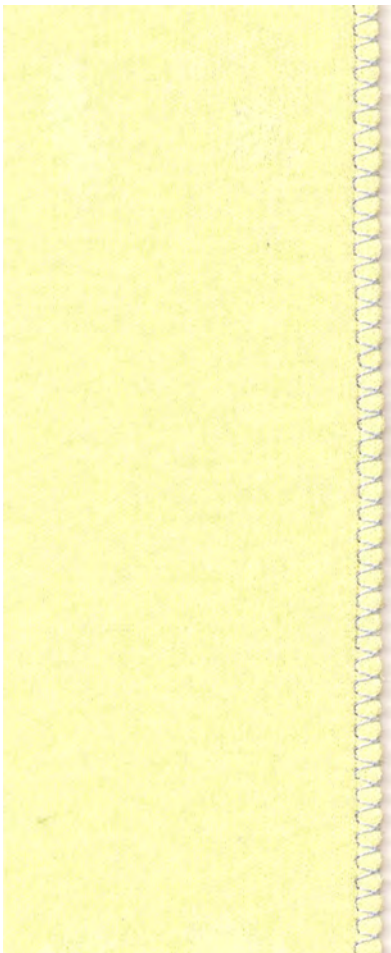
Sew HOW

Do you know how to:
- **Engage the Needle Stop Down feature?**
- **Position Overlock Foot on the fabric?**

Editing - Adding/Deleting Designs

Additional designs can be combined directly on screen of the machine. Unwanted designs can be deleted quickly and easily.
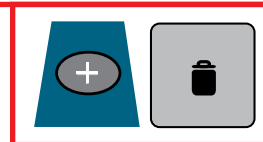
Adding a second design

1. To give more room to add designs, select the Large Hoop from the Hoop Selection menu.
2. With the design from the previous page on screen, touch the Add Motif (+) icon.

   Note: *The Add Motif icon is at the top of the Layer Panel. Scroll up if it is not visible on the screen.*
3. Select Design 12 from Folder 5.
4. The design opens on the screen.
5. Touch Add Motif (+) icon again; select Design 13 from Folder 5.
6. Touch the "i" icon; then Move Motif.
7. Move the designs around on the screen using the Multi-function knobs, or by dragging and dropping.

Deleting a design using Delete Motif icon

1. Select the daisy design in the Layer Panel.
2. Touch the "i" in the breadcrumb path; touch the Delete Motif (trashcan) icon.
3. A new screen will appear asking if you wish to delete the motif. Confirm by touching with the green check box.
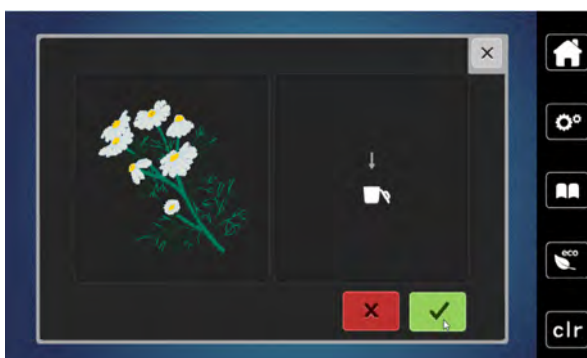
Move, rotate, mirror image as desired

1. Use the editing skills you learned from the previous exercises to position the designs as desired on the screen.
2. Proceed to the next page.
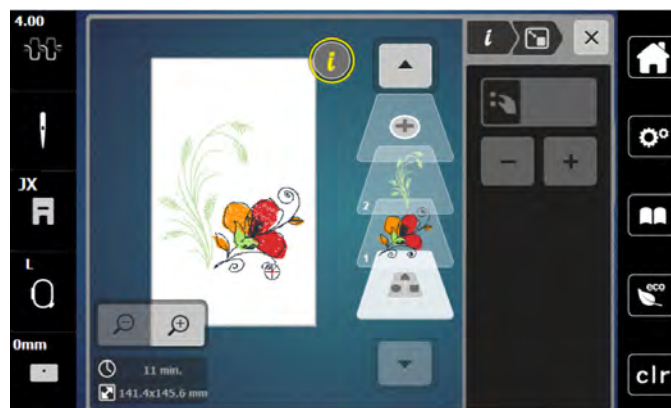
Centering a Combined Design In the Hoop

A new design that is opened on the screen will come in centered in the hoop. But if you have combined designs, or have perhaps moved the design around on the screen, the design will need to be centered in the hoop before sending the design to be stitched.
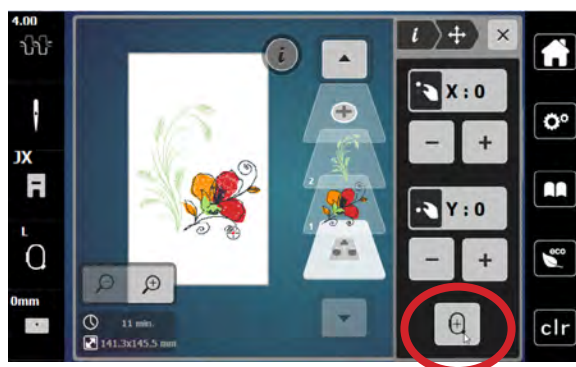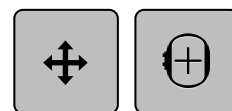
1. Using the same design from the previous page, select the bottom-most layer to select the entire design.
2. Touch the Move Motif icon.
3. Touch the Centering icon. (Alternatively, you could touch the X and Y icons to reset at 0.)
4. The design is now centered in the hoop.

Check Motif Size

Check, also known as Trace, is used to confirm the stitching area of a selected motif. After adjusting the position of a design within the hoop, use this feature to confirm that the design will stitch in the correct area and to verify placement of the embroidery motif on a project. Note: The b70 DECO also has a dedicated button on the outside of the machine to easily access this feature.
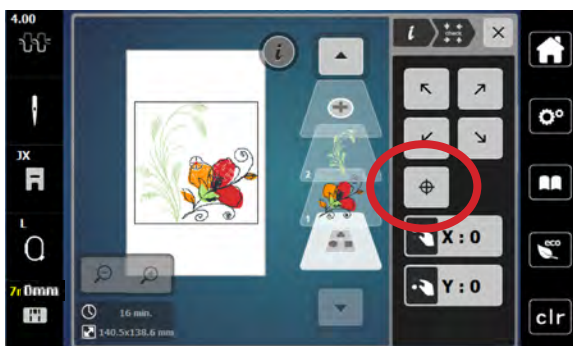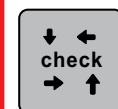
1. Fabric and stabilizer should be hooped. Attach the hoop to the machine.
2. Select "i"; then select Check Motif Size.
3. Touch each corner arrow to move the needle to the outer corners of the design in a box fashion. This provides a method to verify placement and size of the embroidery motif on a project. Use the Multi-function knobs to fine-tune placement.
4. Touch the Motif Center icon and the needle will move to the center of the design. Use the Multi-function knobs to fine-tune placement as you align the center needle position with marked center lines on the fabric.
5. Close the screen to return to the editing screen.
6. Proceed to next page.

Sew HOW

Do you know how to:
- **Access the check feature in the machine?**
- **Move the design to ensure correct placement?**

bernette EMBROIDERY MACHINE WORKBOOK   **17**

Placement: Absolute Check

The goal of Absolute Check is to check the points and boundaries of the design so that they embroider exactly where you want. You can check the location of any single stitch, even the most complex design.
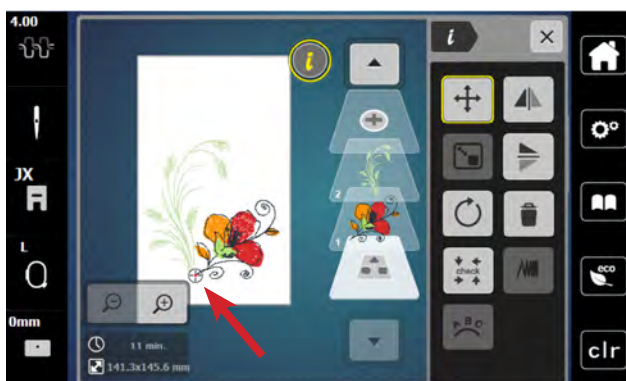
1. Use the design from the previous page. Fabric and stabilizer should still be hooped and attached to the machine. Select the bottom-most layer in the Layer Panel.

2. Draw a dot on the hooped stabilizer about 1" left of the center line in the lower part of the hoop

3. By default, the Absolute Check setting is active; therefore, when the motif is on the embroidery edit screen, reference points can be selected and checked for perfect placement.

4. Touch any point of the design on the screen and the needle will move to the location where that stitch would be taken on the hooped fabric. To fine tune placement, use the Move Motif icon.

5. Touch the screen at the bottom of the flower center as denoted by the cross hairs. The needle will move to the corresponding point on the hooped fabric.

   Tip: *Use the Zoom Tool (up to 9 levels) to zoom in to ensure the greatest accuracy.*

6. Select "i"; Move Motif. Use the Multi-function knobs (or drag and drop) to position the needle over the dot marked in Step 2. (The point that you touch in Step 5 will stitch exactly over the dot marked on the fabric when you stitch the design.)

7. Proceed to the next page.

Note: *Absolute Check is active by default. However, the Motif Center icon must be deactivated in order to apply Absolute Check. This can be double-checked by touching the Hoop Selection icon. Ensure that Motif Center is deactivated - that it is not outlined in yellow.*

Sew HOW

Do you know:
- **The difference between Check Motif Size and Absolute Check?**

Change Thread Color

Quickly change thread color to suit your project and view the changes on the screen.

1. Using the same design from the previous page, select the Color Information tab (palette icon).
2. You can view the individual colors in the design by using the up/down arrows beneath the motif, or by touching a color bar to the right of the motif. Scroll up or down if not all color bars are visible on the screen.
3. Select Color 5. Note that Color 5 is the green stem design. The color bar will be outlined in white, and the green stem will appear in color on the display.
4. Select the Change Color/Thread Brand icon on the right of color bar.
5. There are two ways to change the color.
   1. Use the left/right arrows to scroll and find a color.
   2. Touch the 0-9 Search icon and type in a color number.
6. Select the 0-9 Search icon and type 5830 (the same green that appears in the flower). Touch the color bar that appears at the bottom of the screen.
7. The new color is assigned. Select Edit (pencil) icon to view the changed design.

Change Thread Brand

Easily convert the thread colors in a design from one brand of thread to another.
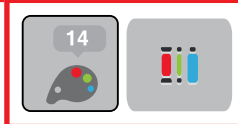
1. Select the Color tab (palette icon).
2. Select the Convert Thread Brand icon at the top right of the screen.
3. Use the left/right arrows below the thread brands to scroll until the desired thread brand name appears. They are arranged alphabetically.
4. Touch Confirm (green check).
5. The design colors have been reassigned with the closest color match for the particular brand you chose.
6. Repeat the process to change the thread brand back to Amann-Isacord.

Note: Thread brands can also be changed for individual colors by selecting the Color/Thread Brand icon on the right of the Color Bar.

Changing To Single Color Embroidery

To stitch a multi-colored design in one color, set your machine to bypass color changes by selecting the Single/Multi Color Motif icon. The machine will not stop at the end of the colors in the design. If the design is already a single color design, this icon will not be visible.
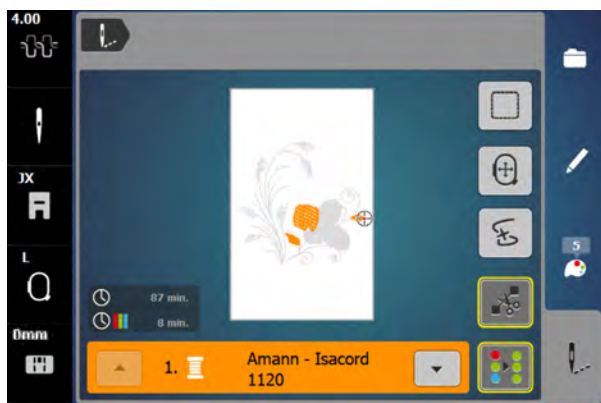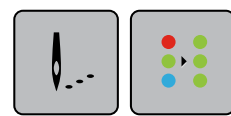
1. With the design from the previous page on the screen, touch the Embroidery menu (needle) icon.
2. Touch the Single/Multi Color Motif icon.
   • If the symbol is active, outlined in yellow, the machine will not stop at the color changes and the entire motif will be stitched with the color threaded into the machine.
   • If the symbol is inactive (no yellow outline), the machine will stop at color changes for thread changes.
3. Deactivate Single Color Embroidery (no yellow outline) so the design will be stitched in multiple colors.

Adding a Basting Box

Preprogrammed basting outlines stitch around a selected design. This serves as an additional anchoring to hold the fabric and stabilizer together. If using a water soluble stabilizer topping, it is helpful to baste it in place before embroidering.
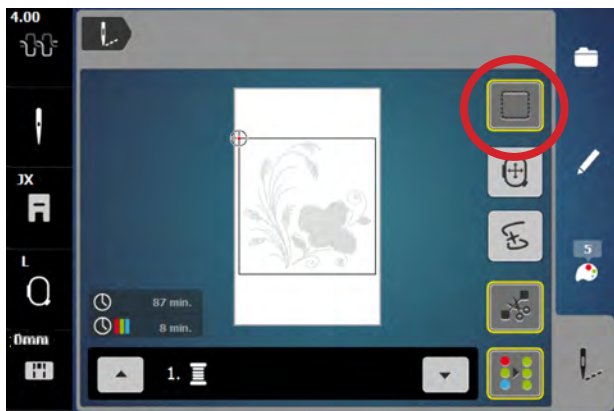
1. Touch the Basting Box icon.
2. Toggle the icon between the choices of basting. A yellow outline indicates basting is activated.
   • No basting (no yellow line)
   • Basting around the design
3. For this exercise, select No Basting (no yellow outline) and proceed to the next page.

Sew HOW

Do you know:
• **How to engage a design basting box?**
• **Stitch a design as a single color?**

Stitching a Design
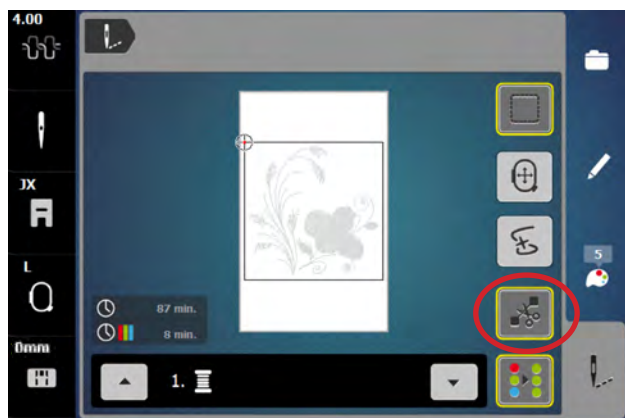
1. You should already be in the embroidery screen. If not, touch the Embroidery (needle) icon.

2. Engage the Cut Connecting Stitches icon (denoted by a yellow outline around the icon) so that the connecting stitches between the embroidery motifs will be cut.

3. While in the Embroidery screen, press the Start/Stop button to begin stitching.

   Note: *When stitching a design, the machine will stop after about 7 stitches and wait for the user to trim the thread tails. This feature can be turned off so that the machine will not stop. Select Setup > Embroidery Settings > Automatic Cut > Thread Cut After Starting Embroidery. Turn this feature off.*

4. Sometime during the stitching process, stop the machine and cut the thread to simulate a thread break. Follow the steps for using the Sequence Control function on the following pages.

5. Change thread as prompted on the screen.

6. When the motif is complete, touch the Confirm (green check) icon. The Edit screen will reappear.

IMPORTANT TIP:
A crucial factor in successful machine embroidery is regular cleaning and oiling. This will keep your machine running smoothly. Refer to your machine's manual and Page 30 of this workbook for more information. Follow your dealer's guidelines for routine checkups and maintenance.

Sequence Control

Use the Sequence Control function when the thread breaks to reposition the needle to start stitching again. The Sequence Control function is also used for advancing or backing up CutWork Designs.
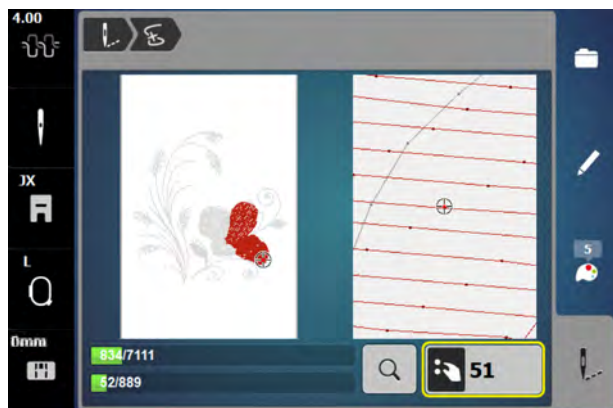
1. If a thread breaks during the embroidery process, the machine will stop and the Sequence Control screen will automatically appear.

2. For today's exercise, stop the machine sometime during the stitch out of the design from Page 21. Cut the thread using the Thread Cutter on the machine.

3. Touch the Sequence Control icon to open the Sequence Control screen. (This screen opens automatically if the machine detects a thread break.)

4. When the Sequence Control screen opens, the motif is enlarged for a better view of the exact place of the thread breakage and the Information Area appears.

5. Turn the Upper Multi-function (Width) knob counter-clockwise to move the embroidery hoop backward in the embroidery sequence. Turn the Upper Multi-function (Width) knob clockwise to move the embroidery hoop forward in the embroidery sequence.

6. Turn the stitch width knob slowly to move the hoop stitch by stitch.

7. Go back stitch by stitch to a position several stitches before thread breakage occurred to resume stitching.

8. To resume stitching, touch the Start/Stop button on the machine, or touch the Needle icon in the upper left corner of the display and the Embroidery screen reappears.

Tips:
The left portion of the display shows the position of the needle where it appears in the overall design. The right side of the display is an enlarged view of the position.

Use the Upper Multi-function (Width) knob to move the hoop slowly stitch by stitch as described above.

Use the Lower Multi-function (Length) knob to move the embroidery hoop in larger steps.

The number in the Information area shows the exact stitch number of the embroidery sequence. Touch the Selection of Stitch Position by Number (magnifier) icon, a screen appears where you can type in the exact stitch number to which you would like to move to.

Changing Lettering Size

Enter single letters or words and use the Resize Motif icon to resize the motif proportionally up to 20% larger or smaller.

NOTE: *Use the Stitch Properties icon to increase/decrease stitch density. Increasing density may be helpful on towels to prevent terry loops from coming through the embroidery. Refer to Page 26 and your machine's manual for more details.*

1. In the Selection menu, select the Embroidery Motif folder. Select Folder 1, Design 13. **Optional:** Select the Color Information tab (palette) and change the color to black (Isacord 0020).

2. Select the Add icon (+); Alphabets Folder; Alphabet #1.

3. Enter "hand" in all lower case letters; touch the green check box to Confirm. Move "hand" to the upper part of the frame using the stylus or the Multi-function knobs.

4. Select the Add icon (+); Aphabets Folder; Alphabet #1.

5. Enter "made" in all lower case letters; touch the green check box to Confirm. Move "made" to the lower part of the circle using the stylus or the Multi-function knobs.

6. With "made" still selected, touch the "i" icon and select the Change Motif Size icon. Use either the Upper or Lower Multi-function knob (or the - / + icons) to reduce the size proportionately to 90%.

7. Touch "hand" in the Layer Panel.

8. Use either the Upper or Lower Multi-function knob (or the - / + icons) to reduce the size proportionately to 90%.

Word Art - Changing Lettering Spacing

Although letters added to the screen are mathematically spaced, sometimes certain combinations of letters will appear to be too close together or too far apart. Using Word Art (Text Bending) will allow flexibility in the spacing of the lettering.
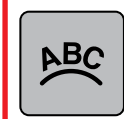
1. Notice that the "a" and the "n" appear too close together on the screen.

2. Select the word "hand" in the Layer Panel.

3. Touch the "i" in the breadcrumb path and select the Word Art icon.

4. Use the Upper (Width) Multi-function knob (or the -/+ icons in the upper area of the screen) to change the spacing.
   - Turning the knob to the left (or touching the - icon) decreases the spacing between the letters.
   - Turning the knob to the right (or touching the + icon) increases the spacing between the letters.

5. Increase the spacing to approximately 20, or until the spacing is visually pleasing.

6. Proceed to the next page.

Word Art

Use Word Art to create curved lettering baselines. You will use the Lower Multi-function (Length) knob or the lower set of -/+ icons to change the baseline.
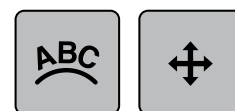
1. Word Art should still be open in the "i" menu.
2. The word "hand" should still be selected.
3. Turn the Lower Multi-function knob to the right (or use the + icon at the lower part of the screen) to bend the letters as shown (maximum of 100).

4. Select the word "made" in the Layer Panel.
5. Turn the Lower Multi-function knob to the left (or use the - icon at the lower part of the screen) to bend/arc the letters as shown (maximum of -100).

   NOTE: *You may need to move the words or change the spacing after bending the letters so there is no overlap.*

6. To center the combined design, select the bottommost layer in the panel (the layer with no number).
7. Select the "i" in the breadcrumb path and select Move Motif.
8. Select Center the Motif.

   NOTE: *a combined design should be centered before being stitched out.*
9. Follow the directions on Page 25 to save this design.
10. If desired, stitch this design out as homework.

Saving and Deleting Designs

Designs can be saved into the Personal Embroidery Motifs Folder on the machine or to a USB stick inserted into the machine. Saved designs can also be retrieved from the Personal Embroidery Motif folder or from the USB stick.
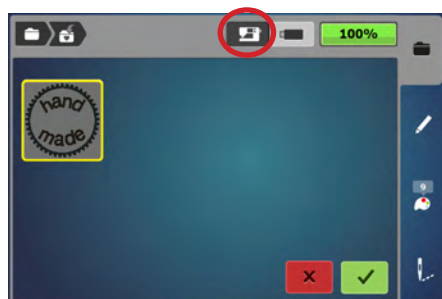
Saving a design to the machine:

1. The design you wish to save must be open on the embroidery screen. Touch the Selection menu; select the Save Motif icon. The motif to be saved is displayed with a yellow outline around it.
2. To save the design to the machine's Personal Embroidery Motifs folder, touch the Embroidery Machine icon at the top of the screen.
3. Touch the motif to be saved (outlined in yellow) or the Confirm icon. The design is saved in the machine and the Edit screen reappears.
4. Go through this process to save the design a second time so that one can be deleted in the Deleting a Design section below.

Saving a design to a USB stick:

1. In the Selection menu, select the Save Motif icon. The motif to be saved is displayed with a yellow border around it.
2. Insert a USB stick into the machine; touch USB Stick icon at the top of the screen.
3. Select the motif to be saved (outlined in yellow) or touch the Confirm icon. The embroidery motif is saved on the USB stick, and the Edit screen reappears.

Deleting a design:

1. Touch the Selection menu; select the Delete (trashcan) icon).
2. Select the folder that contains the motif to be deleted (Embroidery Machine>Personal Embroidery Motif Folder or the USB icon).
3. In this exercise, select the Embroidery Machine/Personal Embroidery Motifs Folder. Select one of the lettering motifs.
4. In the Delete screen, select the green check box to confirm; the motif is deleted. (If you did not wish to delete the chosen design, you would select the red x box.)
5. Touch the Edit (pencil) icon to return to the Edit screen.
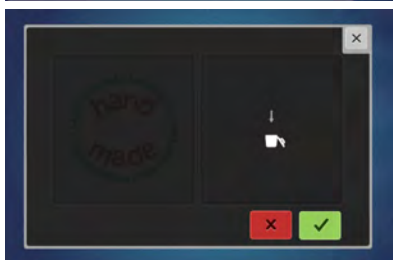
Retrieving a Saved Design

1. In the Selection menu, select Open New Motif and select either the USB Stick icon or Personal Embroidery Motif Folder.
2. Select design of choice and the Embroidery Edit screen opens with the selected design.

Note: *When opening a design from a USB stick, you have the choice to see a preview of the design or the design name.*

Note: *When saving a design and a USB stick is inserted, the save folder defaults to the Personal Designs Folder. You then have the choice to save to the Personal Designs Folder or to the USB Stick. If no USB stick is inserted, the default will be the Personal Embroidery Motif folder.*

Alter Stitch Density-Lettering

Change the stitch density of lettering to complement different fabric types. This is helpful when enlarging lettering. .

Stitch Density

1. Select the Alphabets Folder; select Alphabet #5.
2. Enter the letter B; touch Confirm (the green check box).
3. Touch the Hoop Selection icon and select the Large Hoop. Close the Hoop Selection menu.
4. Move the B to the left.
5. Select the Add Motif icon at the top of the Layer Panel.
6. Select the Alphabets Folder; select Alphabet #5. Type the letter "B" and Confirm.
7. Again select the Add Motif icon at the top of the Layer Panel.
8. Select the Alphabets Folder; select Alphabet #5. Type the letter "B"; Confirm.
9. Move this "B" to the right.
10. Visually align the three B's.

11. Touch the left B on the screen. Select "i"; select Embroidery Stitch Density; alter satin density to 60%.
12. Select the center B on the screen; leave density at 100%.
13. Touch the right B on the screen; alter satin density to 140 %

.

14. Select the Zoom icon and zoom in to notice the difference in the density of the letters.
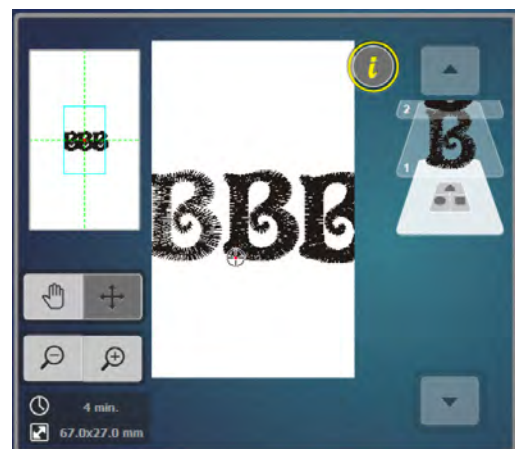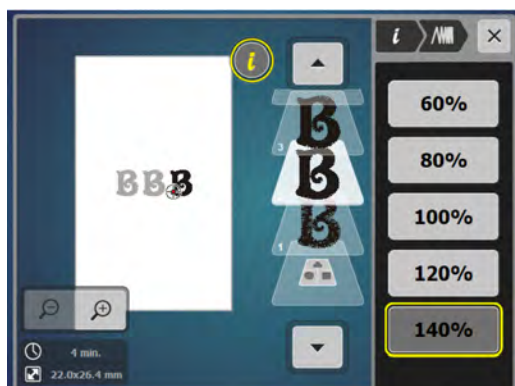
Reference - Embroidery Needles

For most embroidery, an embroidery needle is the best choice. These needles are designed with a larger eye than normal to prevent thread fraying, and are also designed to withstand the high speeds of the embroidery process.

Needle Use & Care
• Change needles every 2-3 hours or about every 50,000 stitches.
• Change the needle if you are experiencing looping or skipped stitches.
• Never use a bent needle or dull needle.

Needle Size
• 75/11 and 80/12 are the two most commonly used sizes.
• For heavy fabrics, use a larger needle (higher number).
• For lightweight fabrics, use a smaller needle (lower number).
• For dense designs, use a small needle so that it will slide into the stitches easier.

Universal Embroidery Needles
• These are the most widely used for embroidery. They have a slightly rounded ballpoint tip.

Ballpoint Embroidery Needles
• Ballpoint needles are designated by the letters SUK.
• They are shown to have positive results when embroidering with metallic thread. (Due to the wiry nature and memory of this type of thread, a traditional embroidery needle with a sharp point can cut the thread, causing breakage. Ballpoint needles are blunt enough to avoid this.)

Titanium-coated Embroidery needles:
• Last 3 times longer than regular embroidery needles.
• Work well with all embroidery designs and fabric types.
• Are especially useful when using an adhesive-coated stabilizer, because the coating resists adhesive build-up as the needle moves in and out of the fabric.
• Are often gold-colored.
• Should be changed after 90,000 or more stitches.

Specialty Needles
• Occasionally other needles may be recommended for specially digitized techniques, such as a Wing Needle for heirloom embroidery.

Reference - Embroidery Threads

EMBROIDERY THREAD

Most designs are digitized for 40-weight thread. 40-weight polyester thread is the most commonly used types by machine embroiderers.

Always select high-quality embroidery thread. Bargain brands may cause excessive thread breakage while stitching, and may produce undesirable final results.

Polyester Embroidery Thread
• Widely available
• Beautiful, rich look
• Colorfast
• Abrasion-resistant
• Great for children's clothing
• Generally more economical than rayon

Rayon Embroidery Thread
• Widely available
• Beautiful, rich look
• Higher sheen than polyester embroidery thread, but generally more fragile.

Specialty Embroidery Thread
These threads are more fragile and are most often using as accents rather than for full designs.
• Metallics
• Acrylics
• Silk

BOBBIN THREAD

For best results, use a high quality 60-wt thread in the bobbin.
• Lightweight thread helps avoid thread build-up on bottom side of the project.
• It is designed to withstand the high-speed stitching of an embroidery machine.
• Lightweight thread allows more bobbin to be wound on bobbins, so you will be changing bobbins less frequently than with heavier thread.
• It is more economical than regular embroidery thread.
• Use neutral thread color throughout design.
• White or off-white is the most commonly used color.
• Embroidery bobbin thread is readily available by a number of manufacturers.

Reference - Stabilizers

Stabilizers are an essential ingredient for successful embroidery. Stabilizers support the fabric as the design is embroidered to prevent puckering and tunneling of the stitches.

Stabilizers are classified as to how they are removed from the fabric after stitching.
• Cut Away
• Tear Away
• Wash Away

Cut Away Stabilizers
• Most commonly used stabilizer in commercial embroidery
• Support a large number of dense stitches
• Excess stabilizer is trimmed away after stitching, leaving about ¼" of stabilizer around the edges of the design
• Stabilizer remaining behind the stitches continues to support stitches throughout life of garment/project
• Available in several widths to fit different hoop sizes
• Available in white, black, and beige
• Available in several weights
• Available in fusible, non-fusible, and pressure-sensitive adhesive (sticky backed) versions

Tear Away Stabilizer
• Most commonly used type of stabilizer
• Excess stabilizer is carefully torn away after stitching is complete
• Available in light, medium and heavy weight
• Available in white and black
• Available in fusible, non-fusible, and pressure-sensitive adhesive (sticky backed) versions, as well as water-activated adhesive versions
• Available in several widths to fit different hoop sizes

Water-Soluble Stabilizer
• Used for backing and topping, in single or multiple layers
• Easily removed with water
• When used as a topping, keeps stitches from being lost in heavily napped fabrics such as velvet and corduroy
• Available in different weights, and also as an adhesive version

Stabilizer Tips:
Use a cut away stabilizer when working with knits or stretchy fabrics.

Use a tear away when you want most of the excess stabilizer on the back to be removed.

Use a water-soluble stabilizer when you want no traces of stabilizer to remain on the back of the project.

Use a water soluble stabilizer when creating stand-alone lace.

Keep a minimum of one roll or package of each of the three types so you'll be ready for almost any stitching situation.

For more information on stabilizers, refer to the Just Embroider It - e Book: All About Stabilizers on bernina.com.

Reference - Cleaning And Oiling

One of the most important parts of maintaining your machine is proper cleaning and oiling. Below are tips to follow, but more complete instructions for your specific model can be found in your machine's manual.

It is recommended that you clean and oil every other bobbin, or every 3-4 hours of actual sewing time. If you notice your machine sounding louder than usual, then it is time to clean and oil.

General Cleaning Steps
- Turn the machine off and disconnect it from the power supply system.
- Clean the display using a soft slightly damp microfiber cloth.
- Remove the needle. (It is recommended that you change your needle every 4-6 hours of sewing time.)
- Remove the stitch plate.
- Clean the hook race with a brush and remove all lint and threads, using the brush included with your machine..

Oiling the Needle Bar
If the needle bar lacks lubrication, the needle bar might not move smoothly.
If the machine is used often, the needle bar should be oiled every 6 months.
- Turn the machine off and disconnect it from the power supply.
- Remove the plug (1) and remove the screw (2).
- Remove the face cover (3). After removing the face cover, be careful of the moving parts.
- Put one drop of oil on the needle bar movement mechanism, including needle bar crank rod/needle bar bracket and needle bar supporter (add the oil on the area marked by arrow).
- Remove the presser foot.
- Turn the handwheel a few times and remove excess oil with a cloth.
- After oiling, the face cover must be remounted before plugging in the machine. Never reconnect the machine or make it run with the place cover removed.
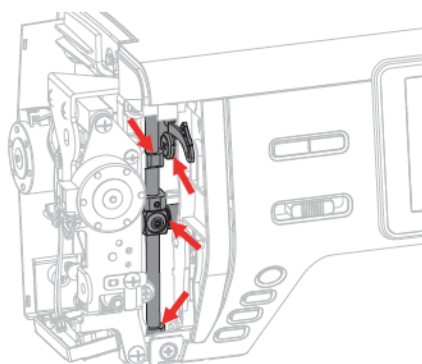
b79 and b70 DECO Embroidery Functions

External Buttons

1. Start/Stop
2. Presser Foot Up/Down
3. Auto Thread Cutter
4. Quick Reverse
5. Slide Speed Control
6. Thread Up Command
7. Securing

External Buttons

1. Start/Stop
2. Presser Foot Up/Down
3. Auto Thread Cutter
4. Light
5. Slide Speed Control
6. Thread Up Command
7. Check Motif Size

EMBROIDERY MOTIF SELECTION

	Alphabet Folder		Embroidery Motifs Folder		Personal Embroidery Motifs		
	Open New Motif		Add Motif		Save Motif		Delete Motif
	Embroidery Machine Select Motifs from Folders		USB Stick Select Motifs from Stick		Confirm		Cancel

EMBROIDERY FUNCTIONS

	Upper Thread Tension		Edit Embroidery Motifs		Zoom In (1-x times)		Embroidery OK
	Needle Selection		Add Motif		Zoom Out (1-x times)		Basting-Motif
	Presser Foot Display/ Presser Foot Selection		Information (i-dialog)		Moving the View		Move the Hoop
	Embroidery Hoop Display/ Selection		Move Motif		Color Tab		Sequence Control
	Stitch Plate Selection/Display		Center Motif in Hoop		Convert Thread Brand		Cut Connecting Stitches
	Home		Mirror Image Left/Right		Change Color/Thread Brand		Single/Multicolor Motif
	Setup		Mirror Image Up/Down		Confirm		Permanent Thread Tension
	bernette Embroidery Tutorial		Altering the Size		Close / Cancel		Securing Stitches On/Off
	Help		Rotate Motif		Selection by Number		Speed Adjustment in Setup
	Eco		Delete		Move Hoop to Center		Adjusting Thread Cut
	Clear - Back to Basic Setting		Check Motif Size		Move Hoop to Left		Automatic Cut After Thread Change
	Use Upper Multi-function Knob for Adjustment		Density		Grid On/Off		Thread Cut After Start of Embroidery
	Use Lower Multi-function Knob for Adjustment		Word Art / Bend Text		Motif Center		Fabric Thickness
	Use Either Multi-function Knob for Adjustment						

Absolute Check is a feature of both the b79 and b77. There is not an icon for this feature.