

MY BERNINA



EMBROIDERY

BERNINA EMBROIDERY WORKBOOK

For BERNINA 880 PLUS, 790 PRO, 790 PLUS, 770 QEE PLUS, 770 QEE, 735 E, 700, 590, 570 QEE, 535 E, and 500 EMBROIDERY MACHINES



made to create **BERNINA**

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B 880 PLUS



B 790 PRO



B 790 PLUS



B 770 QEE PLUS



B 770 QEE



B 735 E



B 700



B 590



B 570 QEE



B 535 E



B 500



The information in this workbook applies to the BERNINA Sewing Machine models shown above.

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

INTRODUCTION

Welcome! Learning to use your new embroidery machine to its fullest capabilities will let you enjoy your machine for many years to come.

This workbook is designed to be used in conjunction with the My BERNINA Classes offered at your BERNINA store, and contains a series of exercises intended to familiarize you with the features of your new BERNINA embroidery machine. Your machine manual is an invaluable source of information also.

In addition, you will learn about needles, threads, stabilizers, embroidery hoops and accessories, all of which will increase your knowledge of sewing and assist you in achieving success in all of your embroidery endeavors.

Once you have completed the exercises designated for your BERNINA machine, keep this workbook as a reference guide as you use your machine and explore the creative possibilities it affords.

BERNINA of America strives to provide its customers with quality sewing machines, as well as informative publications and classes. Instructional video tutorials are available on bernina.com and the BERNINA YouTube channel. You will also find inspiring sewing projects on the BERNINA website at www.bernina.com in the Experience Section.

www.bernina.com
www.weallsew.com

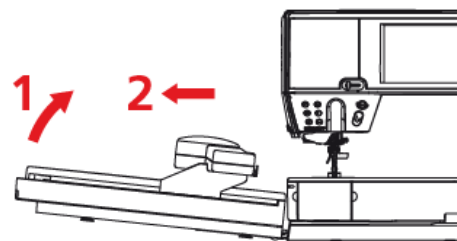
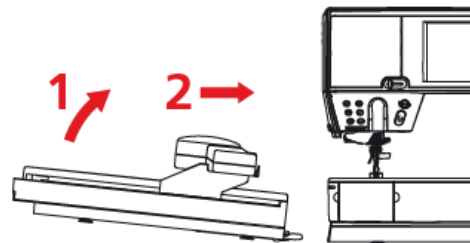


SETTING UP - MACHINE/MODULE

BERNINA 880 PLUS, 790 PRO, 790 PLUS, 770 QE PLUS, 770 QEE, 735 E, 700 Embroidery Modules

Attaching the Module:

- The slide-on table (optional accessory for the B 700) must not be attached while the embroidery module is being attached or removed.
- Make sure there is enough space around the machine and embroidery module to allow the unimpeded movement of the embroidery arm.
- Place the machine on a flat surface (such as a table or counter top) sturdy enough to support the weight of the machine without sagging.
- Lift the module at an angle on the left end.
- Carefully slide module from left to right into the sewing connection.
- Attaching the slide-on table is optional, but recommended when using the larger hoops to provide extra support.



Removing the Module:

- Remove the slide-on table (if used).
- Detach module by lifting left side of module end and sliding to the left.
- ALWAYS separate the module and sewing for transporting—never transport them as a single unit.

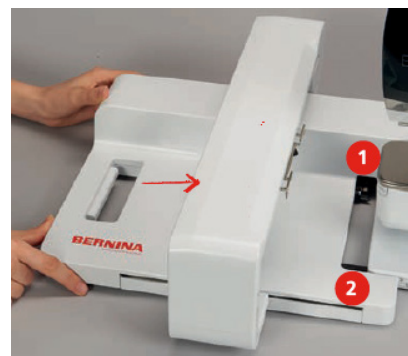


Click the icon for video:
8 Series Embroidery Setup

BERNINA 590, 570 QEE, 535 E, 500 Embroidery Modules

Attaching the Module:

- The slide-on table must not be attached while embroidery module is being attached or removed.
- Make sure that the module and the machine are placed on a stable, even surface.
- Make sure that there is enough space to allow the unimpeded movement of the embroidery arm.
- Carefully push the embroidery module from left to right into the embroidery module connection of the machine (1) and the guide rail (2).
- Attaching the slide-on table (optional, but recommended when using the larger hoops to provide extra support).



Removing the Module:

- Remove the Slide-on table (if used).
- Push the release lever (3) at the carrying handle of the embroidery module; keep it pressed and at the same time, move the embroidery module carefully to the left.
- ALWAYS separate the module and sewing machine for transporting—never transport them as a single unit.



Click the icon for video:
5 Series Embroidery Setup

SETTING UP - MACHINE

STITCH PLATE (Refer to Embroidery Setup videos on previous page)

Attach the appropriate stitch plate to the machine to reduce flagging of fabric, resulting in improved stitching.

- Straight Stitch/CutWork Plate: Standard accessory for B 880 PLUS, 790 PRO, 790 PLUS, 770 QEE PLUS, 735 E, 570 QEE, 590
- Embroidery Stitch Plate: Standard accessory for B 700, 500
- Straight Stitch Plate: Optional accessory for B 570 QEE, 535 E

PRESSER FOOT (Refer to Embroidery Setup videos on previous page)

Attach Drop-Shaped Embroidery Foot #26 (790 PRO will use #26L) to the machine.

LOWER FEED DOG (Refer to Embroidery Setup videos on previous page)

An animation will appear to remind you to do this on all machines with the exception of the B 880. The feed dog automatically lower when in embroidery for the B 880, but need to be manually lowered on all other machines.

MULTIPLE SPOOL HOLDER

Attach the Multiple Spool Holder to the B 700. (Optional accessory for other machines.)

THREAD NEEDLE

1. Use the proper needle for the thread and fabric being used; insert a new needle for each project. The most commonly used thread is a 40 wt. polyester embroidery thread. Refer to Page 45, Reference-Embroidery Needles for additional information on needles, and to Page 46, Reference - Embroidery Threads.
2. Always thread with the presser foot up. This releases tension and seats the thread into the tension disks.

Threading Tips for models with both a horizontal and vertical spool pin:

- 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.



Click the icon for video:
8 Series Threading the Needle



Click the icon for video:
7 Series Threading the Needle



Click the icon for video:
8 Series Removing Thread



Click the icon for video:
5/7 Series Threading the Needle



Click the icon for video:
5/7 Series Removing Thread

SETTING UP - MACHINE

THREAD THE BOBBIN FOR EMBROIDERY

1. Wind bobbin with 60 wt. bobbin thread. Refer to Page 46, Reference-Embroidery Threads for additional information on bobbin threads.
2. Insert the bobbin:
 - 7 and 5 Series: Insert the bobbin into bobbin case and bobbin case into the machine. The bobbin is threaded the same way for both embroidery and sewing.
 - B 880 PLUS: Pull the bobbin thread clockwise, guiding it into the slit on the right hand side of the hook area as shown (1). Then up (2) and down the curve of the retaining finger (3). Bring the thread back to the left, over the thread cutter and cut the thread (4).

Note: When going back and forth between sewing and embroidery on the B 880 PLUS, an animation will appear as a reminder to re-thread the bobbin case for embroidery. This does not indicate an error in threading.



Click the icon for video: 517 Series BERNINA Hook Bobbin Winding



Click the icon for video: 517 Series Inserting BERNINA Bobbin



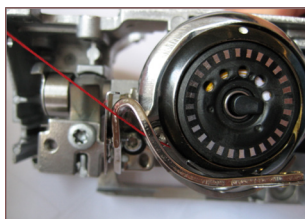
Click the icon for video: 7 Series BERNINA Hook Bobbin Winding



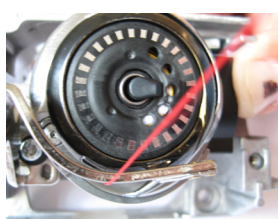
Click the icon for video: 7 Series Inserting BERNINA Bobbin



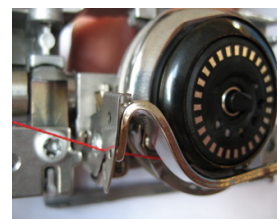
1



2



3

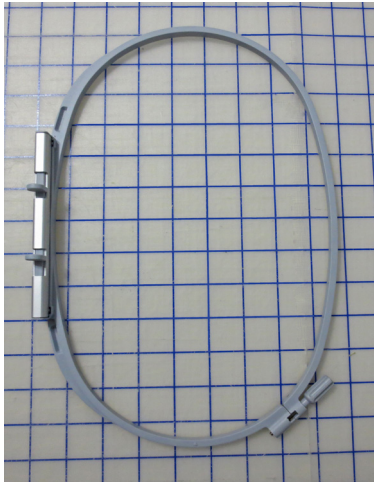


4



Click the icon for video: 8 Series Embroidery Bobbin Setup

SETTING UP - HOOPING FABRIC AND STABILIZER



HOOP FABRIC AND STABILIZER

1. Find the center of a 10" x 14" piece of fabric; mark the center horizontal and vertical axis.
2. Separate the inner and outer rings of the embroidery hoop.
3. Loosen the screw. It should be loose enough that fabric and stabilizer both will EASILY fit into the hoop.
4. Lay the outer ring of the hoop on a hard, flat surface.
5. Secure stabilizer to the back of the fabric by lightly spraying stabilizer with temporary adhesive spray. (See Hooping Tip below.)
6. Place fabric and stabilizer on a firm surface.
7. Place the hoop's plastic template inside the inner hoop.

Note: *The plastic clips should be attached to the plastic template for the Large Oval, Midi, Mega, Maxi, and Jumbo Hoops.*
8. Position inner ring of the hoop over fabric/stabilizer, aligning horizontal and vertical center lines of the hoop with those marked on the fabric.
9. Grasping both inner hoop ring and fabric/stabilizer, lift and insert them into the outer ring of the hoop, making sure that the arrows align at the edges of both the inner and outer rings of the hoop.
10. Tighten the screw on the hoop, but DO NOT DISTORT THE FABRIC as you do so.
 - Hooped fabric should be taut, but not stretched or distorted.
 - Place template into hoop to ensure that the design is centered in the hoop.
11. Remove the plastic template before stitching.
 - There are finger holes to facilitate easy removal of the small and medium hoop templates.
 - The special attachment clips are included with the Large Oval, Midi, Mega, and Jumbo hoop templates to facilitate easy removal.

Hooping Tip - Temporary Adhesive Spray:

For easier hooping of the layers, adhere the stabilizer to the fabric using a temporary spray adhesive.

- Great for basting or holding layers of fabric and/or batting together.
- Can be used as a repositionable spray, allowing items to stay sticky but be repositioned on other surfaces.
- Works well for securing "hard-to-hoop" items such as collars and cuffs to hooped stabilizer for embroidering.



Note: For best results, spray the stabilizer not the fabric.



Click the icon for video:
Hooping and Attaching the Hoop

Sew HOW

Do you know:

- How to properly hoop for embroidery?
- Why a temporary adhesive spray is beneficial to the hooping process?

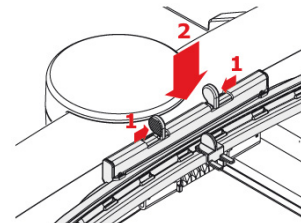
SETTING UP - ATTACHING BERNINA HOOPS

Attaching BERNINA Hoops

1. Raise the needle and the embroidery foot and guide the hoop underneath the foot. The needle should be in the highest position when attaching the hoop to prevent snagging fabric and/or bending the needle.
2. Press and hold both of the attaching mechanisms (1) of the hoop toward each other.
3. Position the center points of the hoop (small attachment clamps) over the bracket of the embroidery arm (2).
4. Press down until it clicks in position; then release the attaching mechanism of the hoop.



Click the icon for video:
Hooping and Attaching the Hoop



Removing BERNINA Hoops

1. Press both of the attaching mechanisms toward each other.
2. Lift the hoop to remove.

B 590, 570 QE PLUS, 570 QEE, 535 E, 500

Standard: Large Oval, Medium

Optional: Mega (with repositioning), Midi, Large Free Arm, Small Clamp, Small, Hoop 'N' Buddyz insert



Small Hoop
72mm x 50mm
(App. 2.7" x 2")



Medium Hoop
100mm x 130mm
(App. 3.9" x 5.1")

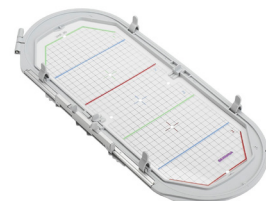
B 790 PRO, 790 PLUS, 770 QEE PLUS, 770 QEE, 735 E, 700

Standard: Large Oval, Medium, Small

Optional: Jumbo (partial field), Maxi, Mega, Medium Clamp (Partial Field), Midi, Large Freearm, Small Clamp, Hoop 'N' Buddyz insert



Hoop 'N' Buddyz



Mega Hoop
150mm x 400mm
(App. 6" x 15.75")

B 880 PLUS Hoops

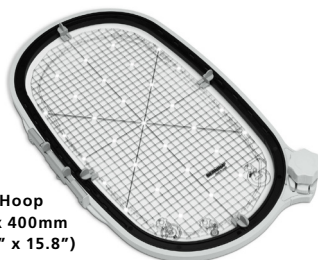
Standard: Large Oval, Medium, Small

Optional: Jumbo, Maxi, Mega, Midi, Large Freearm, Small Clamp Hoop, Hoop 'N' Buddyz

Note: All hoops come with a template for centering designs on projects.



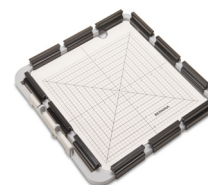
Midi Hoop
165mm x 265mm
(App. 6.5" x 10.5")



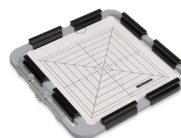
Maxi Hoop
210mm x 400mm
(App. 8.3" x 15.8")



Large Oval Hoop
145mm x 255mm
(App. 5.7" x 10")



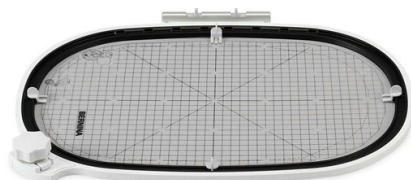
Medium Clamp Hoop
8 Series: 215mm x 215mm
(8.5 x 8.5")
7 Series: 210mm x 215mm
(8.25 x 8.5")
7 & 8 Series with Foot #43/44C:
200x200mm
(8" x 8")



Small Clamp Hoop
5 Series, 7 Series and 8 Series:
Foot #16: App. 165 mm x 065 mm
(6.5 x 6.5")
Foot #44C: App. 152.4 x 152.4 mm
(6" x 6")



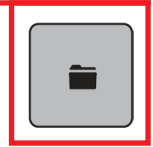
Large Freearm Hoop
145mm x 255mm
(App. 5.7" x 10")



Jumbo Hoop
260mm x 400mm
(App. 10.3" x 15.8")

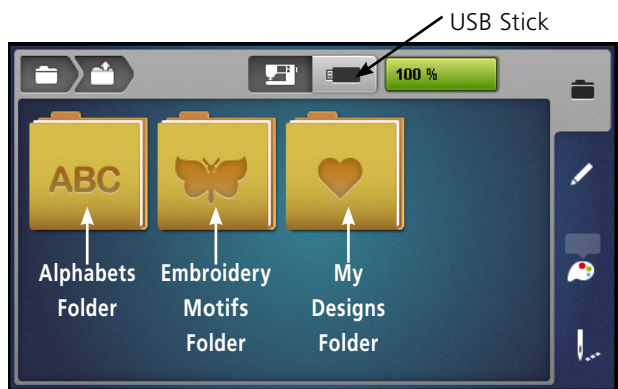
DESIGN LIBRARY

BERNINA embroidery machines come with alphabets and built-in designs. The number of each depends on the model of the machine. Some machines also are able to import sewing stitches into the embroidery side. All BERNINA machines are able to access designs that are stored on a USB Stick. All BERNINA machines have a folder to store your personally saved designs. As a general rule, the last design that was on the screen when the machine was turned off will appear on the screen when the machine is turned on.



B 880 PLUS, 790 PRO, 790 PLUS, 590

1. If in the embroidery Edit screen, touch the Selection (folder) icon; then touch the Open New Motif icon.
2. The following folders can be accessed:
 - Alphabets Folder
 - Embroidery Motifs Folder (built-in designs)
 - Stitch Patterns Folder (library of all sewing stitches)
 - My Motifs Folder (personally saved motifs)
3. Spend a few minutes looking through the design folders on your machine.



B 770 QEE PLUS, 770 QEE, 735 E, 700, 570 QEE, 535 E, 500

1. From the embroidery screen, touch the Selection (folder) icon, then touch the Open New Motif icon.
2. The following folders can be accessed:
 - Alphabets Folder
 - Embroidery Motifs Folder (built-in designs)
 - My Motifs Folder (personally saved motifs)
3. Spend a few minutes browsing through the design folders on your machine.

Design Formats

Note: B 880 PLUS, 790 PRO, 790 PLUS, 770 QEE PLUS, 770 QEE, 735 E, 700, 590, 570 QEE, 535 E, and 500 machines read multiple formats. The native format is the BERNINA exp format. Besides the actual exp embroidery file, the BERNINA exp format also includes a .BMP file, a preview of the embroidery motif, and an .INF file which provides the color information. If the .INF file is missing, the embroidery may not be displayed in the real color, but only in standard colors. In that case, simply follow the thread chart that is provided with most designs, or enter the colors manually in the color overview of the motif on the machine. See your machine's manual for more information.

Additionally, the following embroidery formats can be read by the machine: .PES, .PEC, .XXX, .PCS, .JEF, and .DST. The 790 PRO can also read and stitch .bqm quilting files.

BERNINA International AG cannot guarantee that embroidery motifs which have not been created or converted by the BERNINA Embroidery software will be correctly read and embroidered by the machine.



Click the icon for video:
Selecting a Design

Sew **HOW**

Do you know how to:

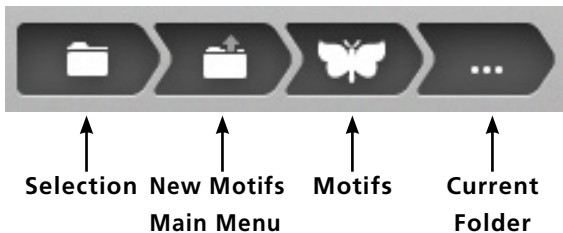
- Access built-in designs and alphabets?
- Open a design from a USB stick?

DESIGN SELECTION

Use your fingertip or the stylus that came with the machine to access buttons on the screen. (See note below for 5 series stylus information.) Learn to use the breadcrumbs in embroidery to move between embroidery menus easier & faster.



1. Select the Embroidery Motifs (butterfly) Folder.
2. Select a folder of your choice.
3. To navigate back a folder, touch the Embroidery Motifs (butterfly) icon in the breadcrumb.
4. Select any folder and any design of your choice. The design will open on the screen.
5. Proceed to next page.



Using Breadcrumbs (Navigation Path)

Notice the breadcrumb at the top of the screen. The dots indicate the folder you are in. Touch any of the icons in the breadcrumb to move to that menu.

Note: The 5 Series machines have a capacitive touch screen. These touch screens respond to a special capacitive stylus or your fingertip. Standard styluses, such as those supplied with the 7 or 8 Series machines will not work on this type of screen.

Sew **HOW**

Do you know how to:

- Access built-in designs and alphabets?
- Adjust the touch sensitivity by using the Display Calibration in Setup?

PRESSER FOOT SELECTION

In order to embroider a design, Presser Foot Selection and Stitch Plate Selection (0 mm or 0 mm/Cut) must be set. The machine knows what foot to expect by the design selected (or sequence/color number in the design) and the appropriate foot will be suggested.

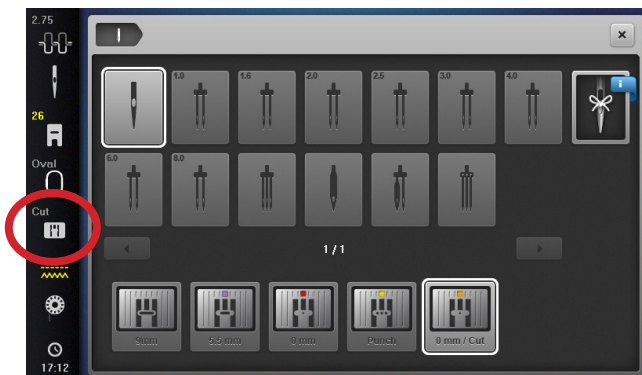
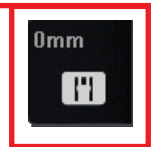


1. The machine will show which foot you had last selected as noted by the number above the Presser Foot Selection icon. A warning flag indicates that a wrong foot is selected in the menu.
2. Touch the Presser Foot Selection icon.
3. The suggested foot (#26 in this case) will be displayed with a star.
4. Touch the #26 foot on the screen; the star will be outlined in white and the number 26 will appear in yellow above the Presser Foot Selection icon indicating that the proper foot is attached.
5. Proceed to next section.

Note: If a PaintWork or CutWork design is selected, the Automatic Needle Threader on the B 880 PLUS will be disabled to prevent damage to the threader.

STITCH PLATE SELECTION

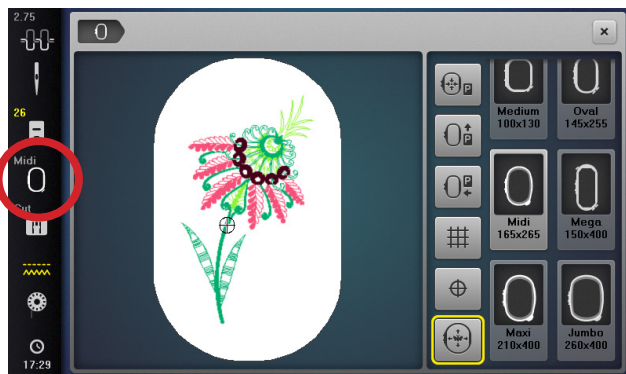
It is recommended that you always use a Straight Stitch Plate when embroidering. (Refer to Page 6 for information on the specific plate you would use for your machine.) If changing to this plate, it is imperative that you change this setting in order to prevent needle breakage when returning to the sewing side.



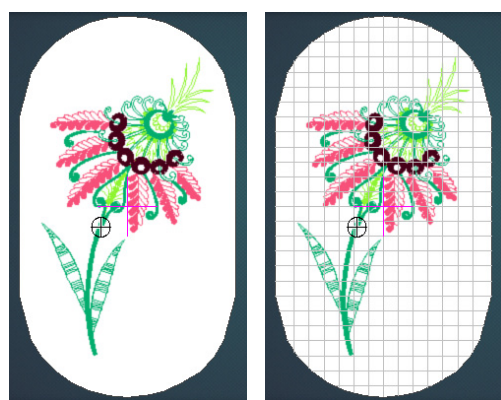
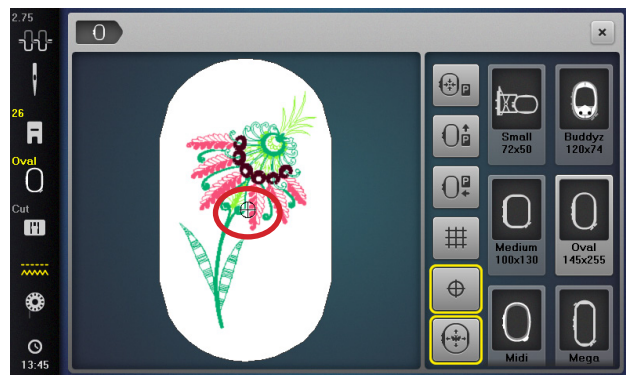
1. Select the Stitch Plate Selection icon.
Tip: There is no need to close the Presser Foot Selection screen to access the Stitch Plate Selection icon if you were in that screen. It will close automatically when you select Stitch Plate Selection.
2. Select the 0 mm/Cut stitch plate (or 0 mm stitch plate depending on your machine). The icon will be outlined in white.
3. Depending on your machine, you will now see 0mm or Cut above the Stitch Plate Selection icon.
4. Proceed to the next page.

HOOP SELECTION/DISPLAY MENU

For best embroidery results, you should embroider a design in the hoop that is closest in size to the design. Embroidery designs will automatically open in the hoop that is closest to the size of the design unless an embroidery hoop is already attached to the machine. However, it is easy to change the hoop to a different hoop.



Click the icon for video:
Hoop Selection and Display Menu



Click the icon for video:
Hoop Selection

1. When a design is opened, the suggested hoop is shown above the Hoop Selection icon in grey. (If a hoop is already attached to the machine, the name of the hoop attached will be indicated in yellow.)
2. Touch the Hoop Selection icon. (The Hoop Selection icon replaces the Presser Foot Pressure icon found in the sewing side.)

Note: The Hoop Selection menu changes depending on the active 'tab'. If accessed in Edit, the hoop reflects hoop icons related to on-screen editing. If accessed from the 'sew out' tab, the menu reflects options for stitch outs. The ability to park the embroidery arm is in both these screens.
3. Select the Midi Hoop. "Midi" now appears above the Hoop Selection icon in grey. (Midi Hoop will appear in yellow only after a Midi Hoop is actually attached to the machine.)

First Stitch/Design Center

1. Notice on the screen at the top left, the bullseye on the screen indicates where the first stitch that the design will be taken.
 - Touch the Motif Center icon and the bullseye will indicate the center of the design. The Motif Center icon now has a yellow outline.
 - Touch the Motif Center icon again and the bullseye will return to the first stitch of the design.
 - For this exercise, leave the bullseye at the First Stitch.

Grid Off/On

1. Touch the Grid on/off icon once. A red cross appears on the screen denoting the center of the design.
2. Touch the Grid icon a second time. A grid will appear. The grids are the same size as the grids on the hoop's plastic template and are helpful for positioning.
3. Touch the Grid on/off icon a third time and the design will have neither the grid or the center red cross indicator. Whichever mode you are in when you close the screen, will be the mode that appears on the editing screen. For today's exercise, leave the Grid in the off position.
4. Close the Hoop Selection screen.

HOOP CALIBRATION

The Oval, Mega, Maxi & Jumbo Hoops must be calibrated when they are new to the machine, and also after every update.

Calibration is essential because the variance of the basting box is only a couple a millimeters when selected to go around the hoop edge.

For the most accuracy in calibration, have fabric hooped (with fabric and stabilizer) when calibrating a hoop.



B 880 PLUS, 790 PRO, 790 PLUS, 770 QEE PLUS, 770 QEE, 735 E, 700



B 590, 570 QEE, 535 E, 500



1. Use the fabric and stabilizer hooped in the Large Oval Hoop from Page 7.
2. Place hoop's plastic template into the inner ring of the hoop.
3. Attach the hoop to the machine. Refer to Page 8.
4. Touch the Setup Program icon.
5. Select the Embroidery Settings icon.
6. Select Calibrate the Hoop icon. The machine will automatically recognize the hoop that is attached.
 - B 880 PLUS, 790 PRO, 790 PLUS: Touch the Delete icon (trash can) to delete the present calibration.
7. If the needle is not positioned exactly in the center of the template, it must be centered using the arrow icons.
8. Confirm with the green check box; the adjustment is saved.



Click the icon for video:
Hoop Calibration

Sew **HOW**

Do you know:

- When to calibrate the hoops?
- How to calibrate each of your embroidery hoops?

JUMP STITCH LENGTH

The Jump Stitch Cut Length can be programmed on some BERNINA embroidery machines. The default on the machines is 6 mm, which means that the machine will cut thread jumps that are 6 mm or longer. The Jump Stitch Length can be adjusted between 1 and 15 mm. Setting this to 1 means that there will be few, if any, jump stitches to cut on the top side of the project after the embroidery has been completed.



Tip: If you are already in the Setup menu, use the breadcrumb to navigate backwards in the path.



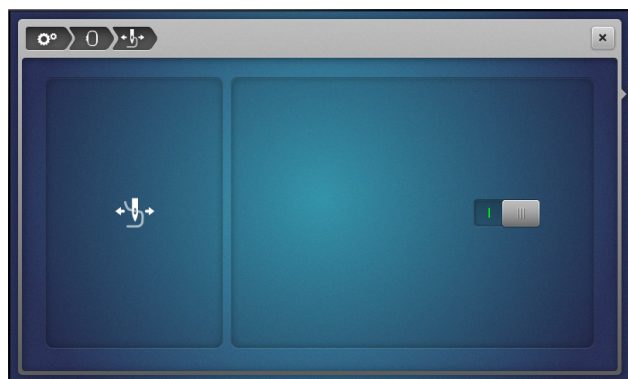
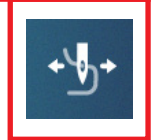
1. Select the Setup icon.
2. Select the Embroidery Settings (hoop) icon.
3. Select the Automatic Cut/Jump Stitch Length (scissors) icon.
4. Change the Jump Stitch Cut Length to a 1. This will cut all jump stitches in the design that are 1 mm or longer. (You will change to a higher number if you do not want the machine to cut jumps.)
5. Close the Setup program with the "x" in the upper right corner of the screen.

NOTE: When creating a design BERNINA V 9, it is recommended that Never Trim is selected in the Connections tab.

THREAD AWAY

B 880 PLUS, 790 PRO, 790 PLUS, 770 QE PLUS, 735 E, 700, 590, 570 QEE, 500 Only

The Thread Away feature causes a swift movement of the hoop after a thread has been cut that pulls the top thread up out of the fabric and brings it out of the way so the top-side embroidery project will be perfectly clean with no thread to clip.



1. Select the Setup icon.
2. Select Embroidery Settings (hoop) icon.
3. Select the Thread Away icon.
4. Touch the slider activate or deactivate the feature.
5. Ensure that the feature is active (green line showing) and close the Setup program.



NOTE: Thread Away is not available on the B 535 E.

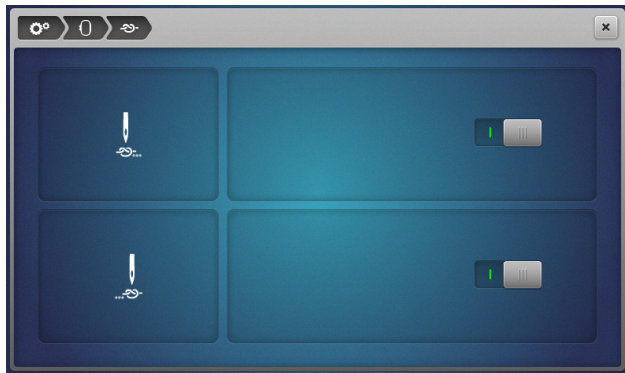
Tip: If you are already in the Setup menu, use the breadcrumb to navigate backwards in the path.



Click the icon for video:
Embroidery Setup for Page 15 and 16

SMART SECURE

Embroidery motifs are programmed either with or without securing stitches. The machine recognizes when no securing stitches are programmed and adds some. If securing stitches are not wanted, they can be deactivated.



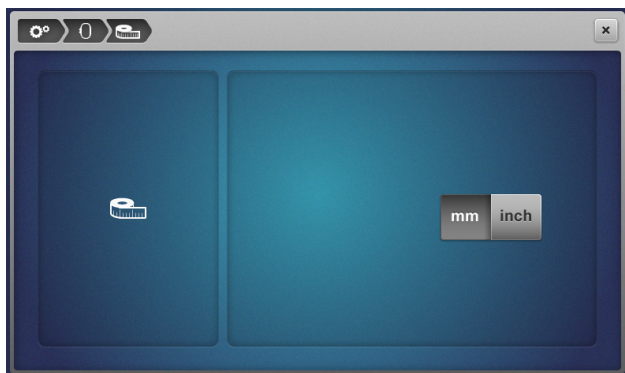
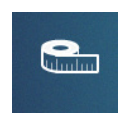
Tip: if you are already in the Setup menu, use the breadcrumb to navigate backwards in the path.



1. Select the Setup icon.
2. Select Embroidery settings (hoop) icon.
3. Select the Securing Stitches (needle) icon.
4. Press the switch in the upper right section to deactivate the securing stitches at the start.
 - If the embroidery motif has programmed securing stitches, they will be embroidered.
 - If the embroidery motif doesn't have any programmed securing stitches, none are embroidered.
5. Press the switch again to activate the securing stitches at the start.
 - If the embroidery motif has programmed securing stitches, they will be embroidered.
 - If the embroidery motif doesn't have any programmed securing stitches, the securing stitches are added and will be embroidered.
6. To change the settings for the ending securing stitches, repeat the process using the switch in the lower right.

CHANGING THE MEASURING UNIT

The measuring unit in the embroidery mode can be changed from mm to inches. The default setting is in mm's. The measuring unit will be reflected in the design size that appears on the screen when a design is opened, and in the hoop size in the Hoop menu.



Tip: if you are already in the Setup menu, use the breadcrumb at the top of the screen to navigate backwards in the path.



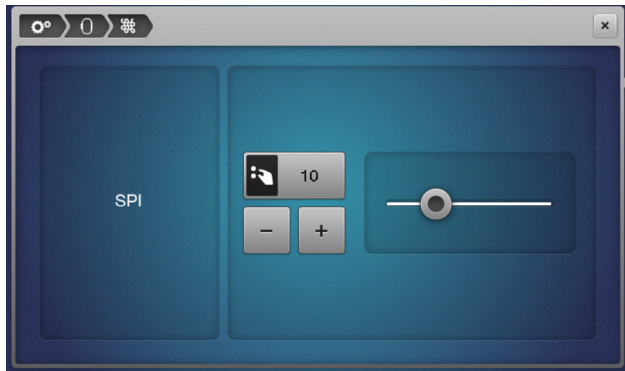
TO CHANGE THE MEASURING UNIT

1. Select the Setup icon.
2. Select Embroidery settings (hoop) icon.
3. Select the Change measuring unit icon.
4. Touch mm to show design size and hoop size in millimeters.
5. Touch inch to show design size and hoop size in inches.

QUILTING SPI

B 790 PRO Only

When using .bqm files for computerized quilting, or quilting in the hoop, the stitches per inch (SPI) can be set to create consistent stitches at any design size.



1. Select the Setup icon.
2. Select Embroidery settings (hoop) icon.
3. Select the SPI Setting icon.
4. Set the desired stitches per inch, between 4 and 24.

Tip: if you are already in the Setup menu, use the breadcrumb to navigate backwards in the path.

EDITING DESIGNS

Customize embroidery designs using functions found on your embroidery machine. You will use the functions shown in the chart to customize designs on your particular model of embroidery machine as we go through the editing features on the following pages.

Function	B 880 PLUS, 790 PRO, 790 PLUS, 770 QEE PLUS, 700, 735 E, 590, 500	B 770QEE, 570, 535 E
Move Motif		
Rotate Motif		
Change Motif Size		
Pinpoint Placement		-
Mirror Image (Up/Down)		
Mirror Image (Left/Right)		
Duplicate		
Endless Embroidery (not on 735 E)		-
Delete		
Word Art (Bend Text) (not on 735 E)		
Checking the Motif Size		
Group/Ungroup		-
Rearrange Stitch Order		-
Alignment (790 PRO Only)		-
Stitch Type/ Stitch Density		-

Resize/Rescale:

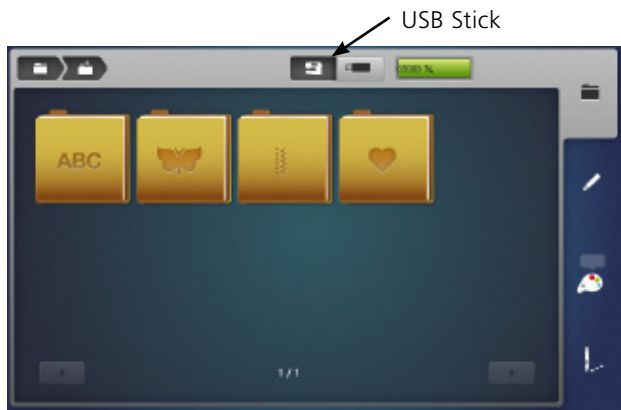
Select the Change the Motif Size icon. The Maintaining Proportions (lock) icon in the center is outlined in white; sizing changes will be made proportionately. Touch the Maintaining Proportions icon (the lock) and the outline will disappear. If there is no outline, the design can be resized disproportionately by using either the Upper (to change width) or Lower (to change height) Multi-function knobs.

Duplicate:

When designs are duplicated, it causes duplicated color stops. After selecting the sewout option, select the Color Resequene icon to group like color changes and consolidate the number of repeated color changes. The Color Resequene function only groups colors if it does not interfere with the artistic order of color arrangement.

SET UP FOR EDITING AND STITCHING

Use the features and functions just learned to set up a design, and then stitch it out as we proceed through the next pages. For this exercise, we will use a design that is on a USB stick has been inserted in the machine, but the same steps will apply to any design that you wish to stitch out.



Select the design

1. Select the USB icon at the top of the screen.
2. Select design #12485-08. The design will appear on the screen.
3. When starting a new design, it is best to check the hoop size. If a hoop is already on the machine, it will be selected. If no hoop is attached, the design opens in the hoop closest to the size of the design.
4. Check to make sure the proper foot is on the machine and is set up in the Presser Foot Selection menu. Check that the Stitch Plate Selection is properly set. Refer to Page 11 for more information.

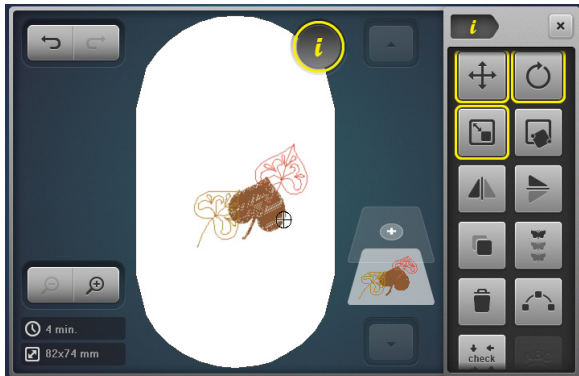
Sew **HOW**

Do you know to:

- Select a proper hoop?
- Access the Presser Foot Selection and the Stitch Plate Selection screens?

EDITING - ROTATE/RESIZE

Designs can be rotated in 90° increments using the +90° icon, or in single degree disproportionately on-screen. Increasing/decreasing in a range of +/- 20% provides the best results. Other ranges should be tested first.



NOTE: If an icon is outlined in yellow, that indicates that a change was made using that feature or function.



Tip: To save time and keep from having to close and reopen the "i" menu, use the "i" menu breadcrumb to navigate within the information menu. This will allow the Information menu to remain open (available) for onscreen editing.

Rotate Motif

1. Using design #12485-08, select "i" to open the Information screen.
2. Touch the Rotate Motif icon. Touch the +90° icon. The design rotates 90° to the right. Continue touching the icon as it rotates to 180°, 270°, then back to 0°.
3. Use either the Upper Multi-function (Width) knob or Lower Multi-function (Length) knob to rotate the design in 1° increments. Turning either knob to the right will rotate the design to the right. Turning either knob to the left will rotate the design to the left.
4. Rotate the design approximately 30° to the right.

Resize

1. Touch the "i" breadcrumb; touch the Change Motif Size icon.
2. Touch the Maintaining Proportion (lock) icon. The white outline disappears, and height and width can be resized independently.
 - Turning the Upper Multi-function (Width) knob to the right increases the width of the design; turning the knob to the left decreases the width of the design.
 - Turning the Lower Multifunction knob to the right increases the height of the design; turning the knob to the left decreases the height of the design.
 - Cancel any changes made by touching both of the boxes. The outline will disappear and the design will return to its original size.
4. Touch the Maintaining Proportion icon to lock it (surrounded by white outline) and use either Multifunction knob to resize the design to 95% by turning to the left. (Turning the knob to the right increases the design size.)
5. Proceed to next page.

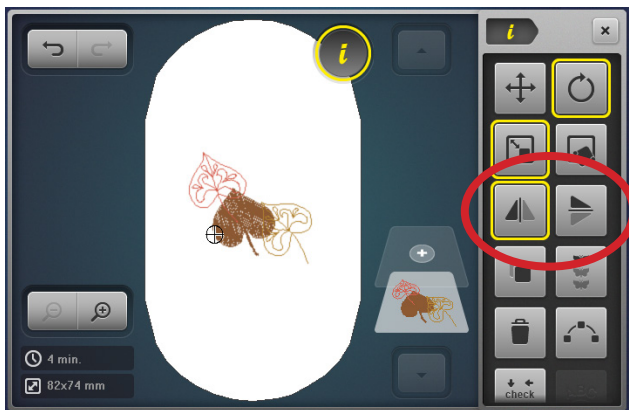
Do you know how to:

Sew HOW

- Rotate a design in single degree increments?
- Rescale a design in height only?
- Redo/undo changes on some machine models?

EDITING - MIRROR IMAGE

Design motifs can be mirror imaged both in the left/right position or up/down position.



Mirror Image (Left/Right)

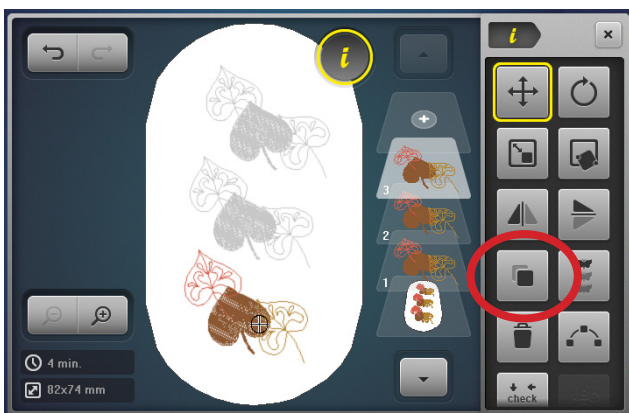
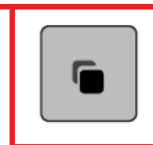
1. Using design #12485-08 (from previous page), select "i" to open the Information Screen.
2. Touch the Mirror Image Left/Right icon.

Mirror Image (Up/Down)

1. Touch the Mirror Image (Up/Down) icon.
2. Touch the icon a second time to return it to the upright position.

EDITING - DUPLICATE

A design can easily be duplicated using the Duplicate function in the "i" menu. Before stitching out a design that has been duplicated or moved on the screen, it is best to center the design.



Duplicate

1. Touch the Duplicate icon. If this icon is not visible, select the "i" breadcrumb.
2. Use your fingertip, stylus, or the Multi-function knobs to move the second set of leaves above the first set of leaves.
3. Touch Duplicate a second time. Move this duplicated design to the bottom of the screen.
4. Proceed to the next page.



Click the icon for video:
Basic Editing-Rotate, Resize, Mirror Image, Duplicate

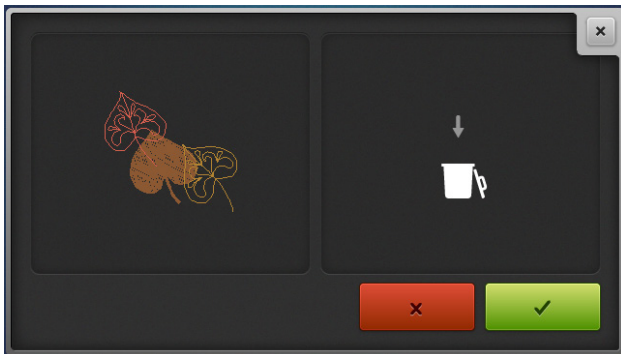
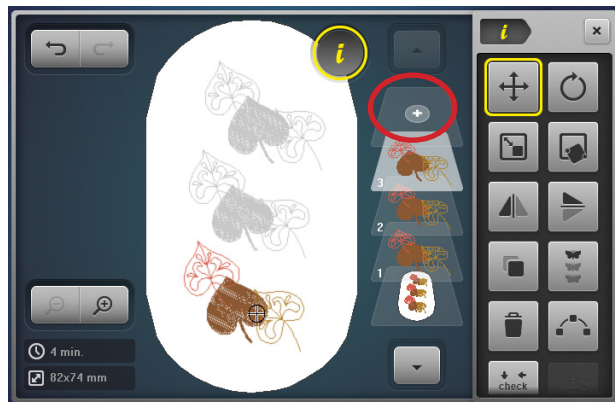
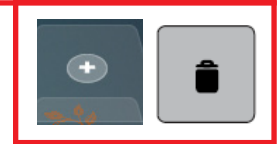
Sew HOW

Do you know how to:

- Use the breadcrumbs to navigate?
- Move a design on the screen?

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. With the design from the previous page on screen, touch the Add Motif (+) icon.
2. If the USB folder does not open, select the USB icon.
3. Select Design #12485-23.
4. The design opens on the screen. Leave the design where it is for now.

Deleting a design using Delete Motif icon

1. Select the last set of leaves that was added (from previous page) at the bottom of the screen by touching it on the screen, or by selecting the top leaf layer from the layer panel.
2. 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.

Deleting a design by swiping

1. Select the second duplicated set of leaves by selecting the top leaf layer from the layer panel.
2. With your finger on the leaf layer, swipe to the right or left.
NOTE: You must select the design in the layers panel, not the screen, when deleting by swiping.
3. A screen will appear asking if you wish to delete the design. Touch the green check box to confirm that you wish to delete the design.

Move, rotate, mirror image as desired

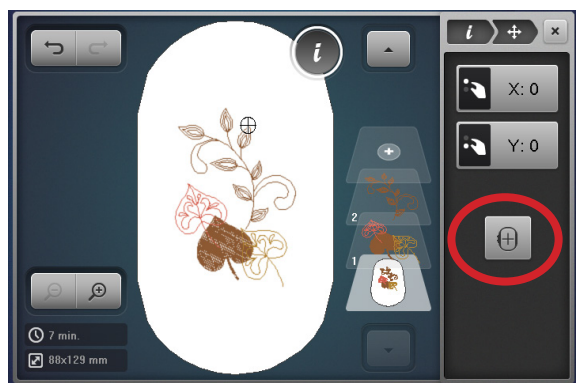
1. Use the editing skills you learned from the previous exercises to position the designs as desired on the screen.
2. Proceed to the next page.



Click the icon for video:
Adding and Deleting Designs

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.



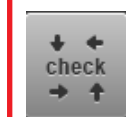
1. Using the same design from the previous page, select the bottom-most layer to select the entire design.
2. Touch the Move Motif icon.
3. Touch the Centering icon. (Alternatively, you could touch the X and Y icons to reset at 0.)
4. The design is now centered in the hoop.



*Click the icon for video:
Centering a Design*

CHECK/TRACE

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.



1. Fabric and stabilizer should be hooped, and the hoop attached to the machine.
2. Select "i"; then select Checking the Motif Size (Check/Trace).
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 Multifunction knobs to fine tune placement.
4. Touch the Motif Center icon and the needle will move to the center of the design. Use the Multifunction 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.



*Click the icon for video:
Check/Trace*

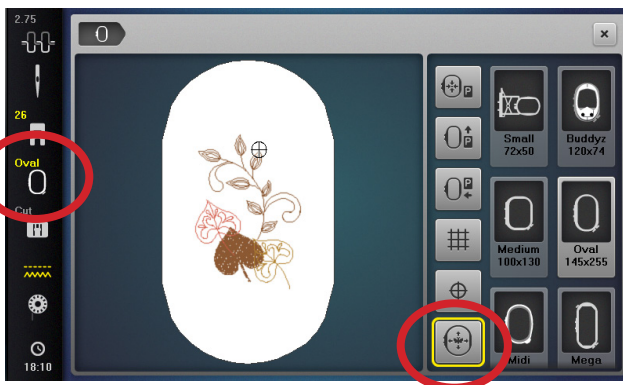
Sew HOW

Do you know how to:

- Access the check feature in the machine?
- Move the design to ensure correct placement?

VIRTUAL POSITIONING

The goal of Virtual Positioning (sometimes known as 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. Using the design from the previous page, fabric and stabilizer should be hooped and attached to the machine.
2. Draw a dot on the hooped stabilizer somewhere in the lower right quadrant of the hoop.
3. By default, the Virtual Positioning 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 leaf as denoted by the crosshairs. The needle will move to the corresponding point on the hooped fabric.
Tip: Use the Zoom Tool (up to 5 levels) to zoom in to ensure the greatest accuracy.
6. Select "i"; Move Motif. Use the Multifunction knobs 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: The Motif Center icon must be deactivated in order to apply Absolute Check. This can be double-checked by touching the Hoop Selection icon. Note that Motif Center is deactivated and Virtual Positioning is activated.



Click the icon for video:
[Virtual Positioning/Absolute Check](#)

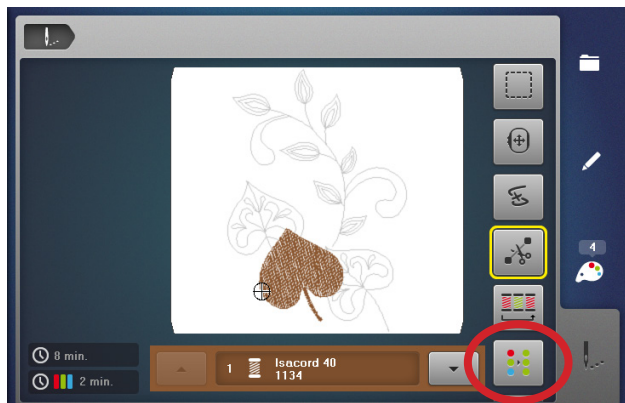
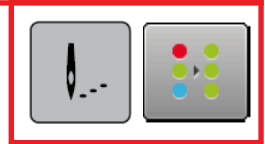
Sew HOW

Do you know:

- The difference between Check and Absolute Check?

CHANGING TO SINGLE COLOR EMBROIDERY

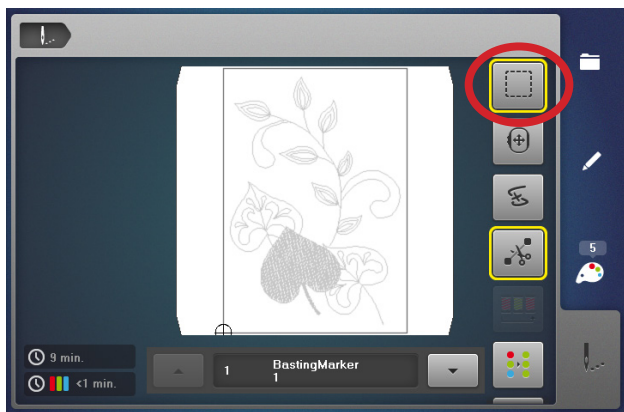
To stitch a multi-colored design in one color, set your machine to bypass color changes by selecting the Single/Multi Color Motif icon. The machine will not stop at the end of the colors in the design. If the design is already a single color design, this icon will not be visible.



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 white outline) so the design will be stitched in multiple colors.

ADDING A BASTING BOX

Preprogrammed basting outlines stitch along the inside of the hoop or around a selected design. This serves as an additional anchoring to hold the fabric and stabilizer together. It is also helpful to baste water-soluble topping in place before embroidering the design.



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
 - Basting around the hoop
3. For this exercise, select No Basting (no yellow outline) and proceed to the next page.



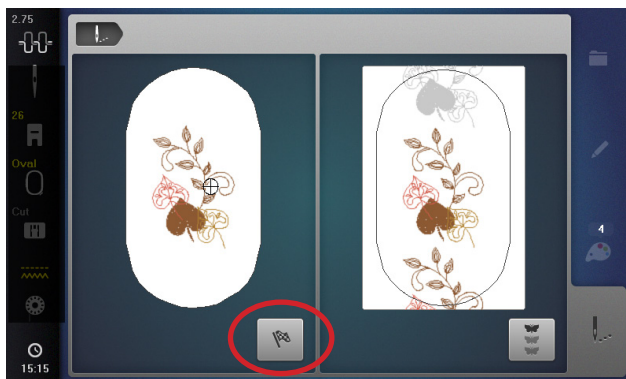
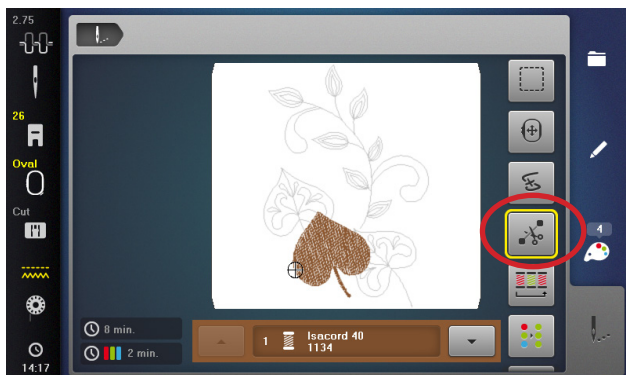
Click the icon for video:
Single Color Embroidery, Adding a Basting Box and Stitching the Design

Sew **HOW**

Do you know:

- How to engage a design basting box?
- How to engage a hoop basting box?

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. NOTE: The B 790 PRO does not have this feature.)
3. While in the Embroidery screen, press the Start/Stop button to begin stitching.

Note: The default for these machines (with the exception of the B 535 E) is that the thread cut after the start of embroidery is deactivated, since there is rarely a need to trim the thread tail. However, this feature can be activated in the Setup if desired. Select Setup > Embroidery Settings > Automatic cut/Jump stitch length > Thread cut after starting of embroidery.

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 Embroidery Finish (checkered flag) icon. The Edit screen will reappear.

IMPORTANT TIP:

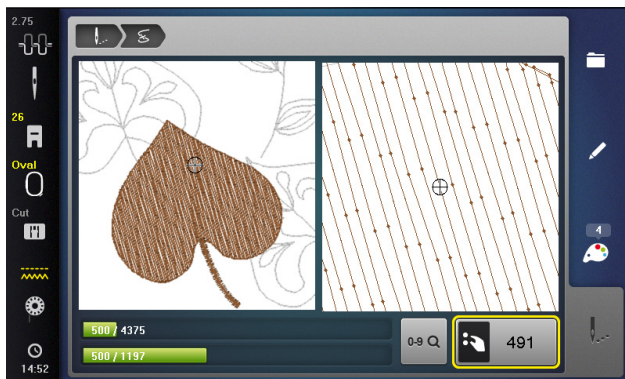
A crucial factor in successful machine embroidery is regular cleaning and oiling. This will keep your machine running smoothly. Refer to your machine's manual and Page 48 of this workbook for more information. Follow your dealer's guidelines for routine checkups and maintenance.



Click the icon for video:
Stitching the Design

SEQUENCE CONTROL

Use the Sequence Control function if repositioning of the needle is necessary (for example after thread breakage). The Sequence Control function is also used for advancing or backing up in PaintWork, CrystalWork and CutWork Designs.



*Click the icon for video:
Sequence Control*

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 26. 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 Multifunction (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.

Use the Lower Multi-function (Length) knob to move the embroidery hoop in larger steps (100 stitches at a time).

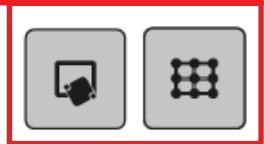
The number in the Information area shows the exact stitch number of the embroidery sequence. Touch the Selection of Stitch Position by Number (0-9) icon, a screen appears where you can type in the exact stitch number you would like to move to.

2-POINT PINPOINT PLACEMENT

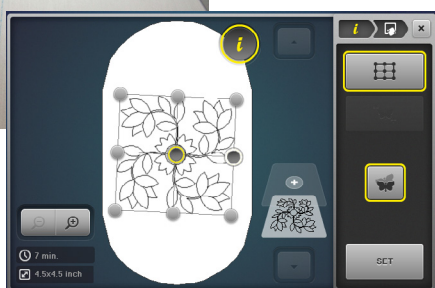
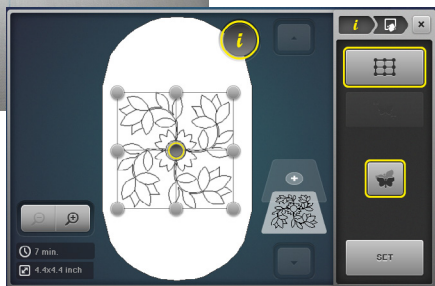
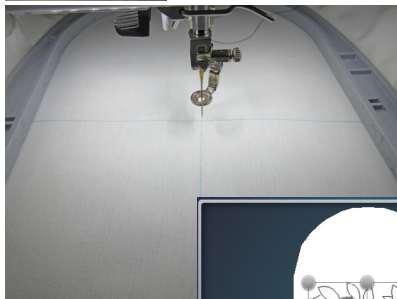
B 880 PLUS, 790 PRO, 790 PLUS, 770 QEE PLUS, 770 QEE with PLUS Upgrade, 735 E, 700, 590, 500 Only

Pinpoint Placement is a feature for easy positioning, resizing and aligning of embroidery designs without additional tools. Selecting two dots and aligning them with two marks on the fabric can compensate for incorrect hooping. Select the Grid option for linear motifs and select 'Position dots as desired' when the motif baseline is not straight.

B 770 QEE, 570 QEE, and 535 E: These machines do not have Pinpoint Placement. Mark and hoop fabric as carefully as possible following general hooping guidelines on Page 8. Open Design #12591-02 from the USB stick menu and follow instructions on Page 28 to bring the thread to the top for manual securing before stitching the design.



Click the icon for video:
*Pinpoint Placement and
Thread Up Command*

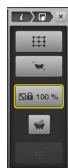


HOOP FABRIC AND STABILIZER

1. Mark the center vertical and horizontal lines on a 10" x 14" piece of fabric.
2. Hoop fabric and Ultra Clean & Tear stabilizer slightly crookedly in the Large Oval Hoop. Do not try to hoop perfectly, the Pinpoint Placement feature is designed to compensate for hooping errors.
3. Select the Selection icon; Open New Motif. Select Design #12591-02 from the USB Stick menu.
4. Select "i"; select Pinpoint Placement. **Note:** this feature is accessible with an external button on the B 700 and B 500 machines.
5. Select the Grid icon; touch the center dot. Use a stylus to ensure that you touch the correct dot. The dot will turn dark grey when selected.
 - Use either/or both the Upper (Width) Multi-function knob or the Lower (Length) Multi-function knob to move the needle position to the center mark on the fabric.
 - Touch Set to confirm placement. The dot is now outlined in yellow and the first point is set.
6. Touch the center right dot. The dot will turn dark grey.
 - Use *only* the Lower (Length) Multi-function knob to move the needle position to the horizontal line marked on the fabric.
 - Touch Set to confirm placement and the second point is set. Notice on the screen that the design appears "crooked". This "crookedness" will match the crooked way the fabric was hooped.
7. Close the Pinpoint Positioning screen; close the Information screen.
8. Touch the Embroidery (needle) icon to go to the embroidery window. Follow instructions on Page 28 to bring the thread to the top for manual securing before stitching the design.
9. Stitch the design.
10. Touch the Embroidery Finish (checked flag) icon when design is finished. The Edit Screen will appear.

Notes:

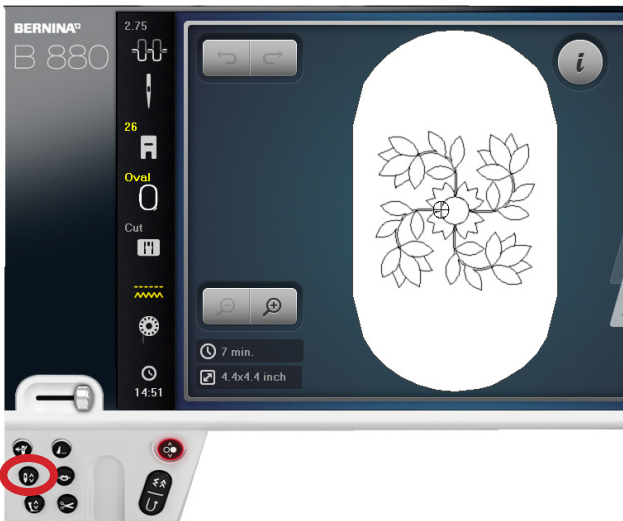
- If a mistake is made, use Reset (butterfly icon).
- If the dots are close together, select zoom to avoid selecting two dots inadvertently.



NOTE: The 790 PRO, 770 QEE PLUS, 770 QEE with PLUS Upgrade and 735 E have a Pinpoint Placement Maintain Size feature. Touching the icon will keep the design from being resized during the editing process.

THREAD-UP COMMAND

If you wish to bring the bobbin thread to the top to secure it manually with just one step, use the Thread-Up Command. This feature is particularly useful when quilting in-the-hoop or creating free-standing lace to prevent the bobbin thread tail from being caught in the stitches on the back side of the project.



1. Hold the upper thread as you push the Needle Up/Down button on the machine. The needle will make one complete revolution and the bobbin thread will be brought to the top for manual securing of the thread tails.
2. Start the machine, but use the Start/Stop button to stop after a few stitches have been taken. Clip the threads and stitch the remaining design.

Please note: This command is *ONLY* functional when in the embroidery-ready screen.



*Click the icon for video:
Pinpoint Placement and
Thread Up Command*

Sew **HOW**

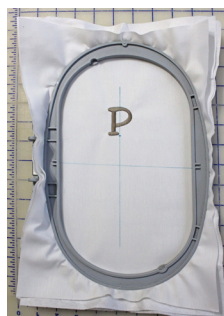
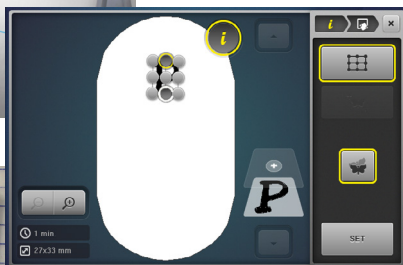
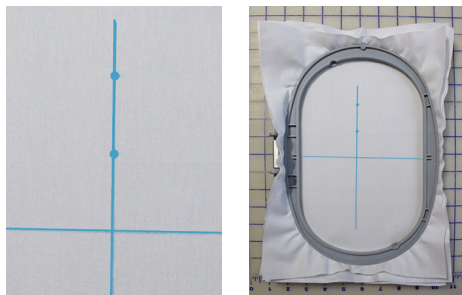
Do you know:

- When the Thread Up Command is functional?
- Why you would want to engage the Thread Up Command?

RESIZING BETWEEN TWO POINTS

BERNINA 880 PLUS, 790 PRO, 790 PLUS, 770 QEE PLUS, 770 QEE with PLUS Upgrade, 735 E, 700, 590, 500 Only

Pinpoint Placement also has a feature that allows you to resize a design between two marked points on a fabric. The design will be resized to fit, and the design will be aligned perfectly.



1. Mark a 10" x 14" piece of fabric as follows: (This will be used for this exercise, and also for the free point positioning exercise on the next page.)
 - Mark the horizontal and vertical centers of the fabric
 - Mark a dot on the vertical line 1 1/2" up from the horizontal line.
 - Mark a second dot 1 1/2" up from that dot.
2. Hoop the fabric with Ultra Clean & Tear Stabilizer. Do not try to be perfectly straight in the hoop.
3. Touch the Selection (folder) icon. If you are in the USB stick screen, touch the Embroidery Machine icon.
 - Select the Alphabets Folder.
 - Select the Happy Times font and type the letter P. (B 590 and 500 select the Guinevere font).
 - Touch the green check box to confirm.
4. Touch "i"; select Pinpoint Placement; select the Grid icon.

Note: B 700 and B 500 can also access this feature using a button on the machine. (On the B 770 QEE PLUS and B 770 QEE with PLUS, the Maintain Size icon should not be engaged. It should not have a yellow outline around it.)
5. Touch the upper center dot; use a stylus to ensure that you touch the correct dot. The dot will turn dark grey when selected.
 - Use the Upper and/or Lower Multifunction knobs to move the needle position to the top dot marked on the fabric.
 - Touch Set to confirm placement. The dot is now outlined in yellow.
 - Note that the size of the design is 24 x 31mm. (Change the setting to mm if you are showing inches by accessing Setup > Embroidery Settings > Measurement.
6. Touch the bottom center dot. The dot will turn dark grey.
 - Use the Upper and/or Lower Multifunction knobs to move the needle position to the bottom dot marked on the fabric.
 - Touch Set to confirm placement.
7. Note that the design is now *approximately* 30 x 38 mm. (The actual size will vary depending on the angle in which the fabric was hooped.) The design has been resized proportionately to fit between the two dots, and has been rotated to match the vertical line on the fabric.
8. Close the Pinpoint Placement menu; close the Information menu.
9. Select the Embroidery (needle) icon and stitch-out the letter.
10. Touch the Embroidery Finish (checked flag) icon when finished. The Edit screen will reappear.
11. Use the same hooped fabric for the exercise on the following page.

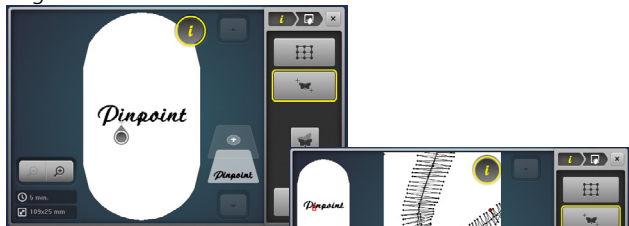


Click the icon for video:
Pinpoint Placement - Resize between two points

FREE POINT POSITIONING

BERNINA 880 PLUS, 790 PRO, 790 PLUS, 770 QEE PLUS, 770 QEE with PLUS Upgrade, 735 E, 700, 590, 500 Only

Free point positioning allows exact positioning of embroidery motifs or lettering on the fabric. The points can be defined as you like within the embroidery motif. In this exercise instead of aligning at the center or top/bottom, we would like to have the bottom of the lower case letters align on the horizontal line.



Click the icon for video:
Freepoint Positioning

1. Touch the Selection icon; Open New Motif. The screen will open in the Alphabets folder since that was where we last opened a design. Select the Lisa font. (B 590, 500 select the Guinevere font.)
 - Type Pinpoint with upper case P and the rest in lower case. Touch the green check box to confirm.
2. Select "i"; select Change the Motif Size.
3. With the Maintaining Proportions icon activated (outlined in white) reduce the size to 80%.

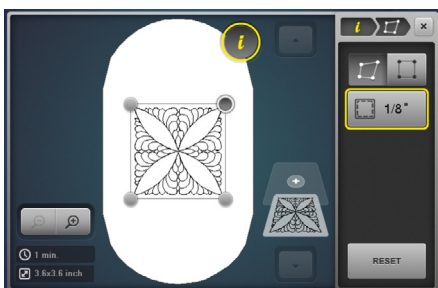
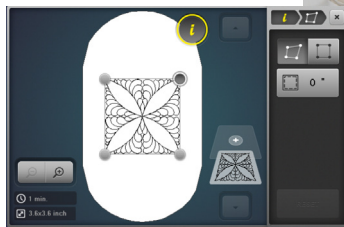
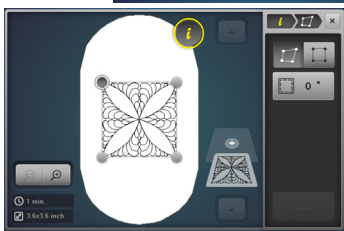
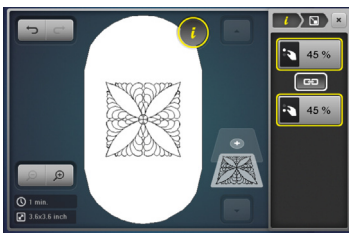
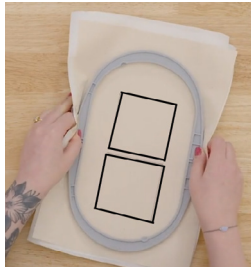
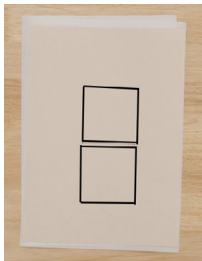
NOTE: Any editing such as resizing, mirror imaging, etc. should be done before using Pinpoint Placement features.
4. Align the center of the word Pinpoint to the crosshairs marked on the fabric used in the exercise on the previous page.
 - Touch the "i" breadcrumb; touch Checking the Motif Size.
 - Select the Motif Center icon. Use the Multifunction knobs to position the needle over the marked center on the fabric.
5. Touch the "i" breadcrumb; select Pinpoint Placement; select the Positioning Dots as Desired icon.
6. Touch the area below the letter "i". A teardrop shape will appear.
7. To ensure greatest accuracy, touch the Zoom icon and zoom in as far as possible (max 5 x) to confirm that the cross at the top of the teardrop is at the lowest part of the "i". If it is not, touch the screen at the desired spot (do not drag and drop).
 - Use ONLY the Lower Multifunction (Length) knob to align the needle along the drawn horizontal line.
 - Touch Set to confirm the placement.
8. Zoom out as much as possible (5 x) until you see the hoop; touch the screen below the "t".
9. Zoom in as much as possible (5 x) to confirm that the cross is at the lowest part of the letter "t". Select another spot if needed.
10. Use ONLY the Lower Multifunction (Length) knob to position the needle along the horizontal drawn line. Touch Set to confirm placement.
11. Zoom back out 5 times.
12. Close the Pinpoint Placement screen.
13. Select the Embroidery (needle) icon. Stitch out the word. Notice how the bottom of the lower case letters are aligned along the marked line.
14. When design has finished, touch the Embroidery Finish icon to return to the Edit screen.

NOTE: The 770 QEE PLUS, 770 QEE with PLUS Upgrade and 735 have a Pinpoint Placement Maintain Size feature. Touching the icon will keep the design from being resized during the editing process.

4-POINT PINPOINT PLACEMENT-MORPH

B 790 PRO Only

The B 790 PRO also has 4-Point Placement within Pinpoint Placement. There are two different ways that it can be done: Morph or Fit. We will start with Morph. It is not recommended to use Morph with traditional embroidery designs as Morph will skew the design and you may not get the desired result.



PREPARE FABRIC / HOOP FABRIC AND STABILIZER

1. Draw two 3 1/2" squares on a 10" x 14" piece of fabric. Purposely make the top one "not" a perfect square. Make the lower one a perfect square. Leave a gap between the two squares
2. Hoop fabric and Ultra Clean & Tear stabilizer roughly in the middle of the Large Oval Hoop. There is no need to hoop perfectly, the Pinpoint Placement feature is designed to compensate for hooping errors.
3. Before selecting the .bqm design, select the desired stitch length for the .bqm quilting design. (See Page 17) The .bqm designs do not have stitches built in to them. The machine will figure out where those stitches land based on the Stitches Per Inch calculator (SPI).
4. Touch the Selection icon; Open New Motif. Select Design Folder #2 which contains the customizable .bqm quilting designs. Select Design #7.
5. The design opens up at about 8" square. Select "i"; select Resize. Resize the design so that is roughly 45%.
6. Select the Large Oval Hoop.
7. Open Pinpoint Placement and select the 4-point Positioning icon.
8. Attach the hoop and engage the Pinpoint Laser icon.
9. You will see 4 points at the perimeter of the design. Select the upper left dot (you can choose the points in any order). The needle/laser moves to the upper left corner of the design. Use the Multi-function knob to position the dot of the laser at the upper left corner of the drawn square.
10. Select the upper right corner of the design on the screen. Use the Multi-function knobs to move the needle/laser light dot to the upper right corner of the drawn square.
11. Repeat the process for the bottom right and bottom left positions of the design.
12. All four corners are positioned to stitch precisely at the points on the drawn square.

MARGIN

13. Think of the square as a quilt block. If you were to stitch the design as is, the design would completely fill the block. If you would like space between the seam and the design, use Margin. Set the margin at 1/8". The Margin can be set from 1/8" to 1 1/2".

4-POINT PINPOINT PLACEMENT-FIT

B 790 PRO Only

The B 790 PRO also has the ability to fit a design perfectly within the given parameters to get the desired result. Use this method for quilting designs, traditional designs or lettering. Fit will perfectly center the design you have selected within the square drawn on the fabric without disturbing the design.



PREPARE FABRIC / HOOP FABRIC AND STABILIZER

1. Using the still hooped fabric from the previous lesson, we will position lettering in the lower square of the fabric.
2. Touch the Retrieve icon at the top of the Layer Panel. Touch the Folder icon in the Breadcrumb path and select Lettering.

MULTI-LINE LETTERING

3. Select Alphabet #3 (Deco). We will now type using the Multi-line feature. On the screen, type "SEW", touch return. Type "LIKE", touch return icon. Type "A" space "PRO". Touch the green checked box to return to the editing screen.
4. The lettering comes onto the screen centered in the hoop and larger than the area needed for the lower box. Resize and align first.
5. Open the "i" menu to resize the design before placing it in the lower box. Select Resize and resize the design down to 70%

ALIGNMENT AND LINE SPACING

6. Go back to the Information menu. Open Word Art. Touch Center to align the lines. Reduce the line spacing to approximately -20.
7. To position the design, use the Breadcrumb path to go back to the Information menu Open Pinpoint Placement and select the 4-point Positioning icon.
8. Select the Fit icon. You can use either the Margin with Fit or the Lock feature.
9. Select the upper left dot (you can choose the points in any order). The needle/laser moves to the upper left corner of the design. Use the Multi-function knob to position the dot of the laser at the upper left corner of the drawn square.
10. Select the upper right corner of the design on the screen. Use the Multi-function knobs to move the needle/laser light dot to the upper right corner of the drawn square.
11. Repeat the process for the bottom right and bottom left positions of the design.
12. The design is positioned to be perfectly centered within the drawn square.

CHANGING LETTERING SIZE

Enter single letters or words and use the icon to rescale the motif. When the Maintaining Proportions (lock) icon is outlined in white, the design will be resized proportionately. Touch the Maintaining Proportions icon and the design can be resized in height or width independently.



1. In the Selection menu, select Open New Motif; select the Alphabets Folder. Select the Swiss Block alphabet
2. Enter BERNINA; touch the green check box to confirm.
3. Touch the "i" icon and select the Change Motif Size icon. Use either the Upper or Lower Multifunction (Length) knob to reduce the size proportionately to 90%.)
4. Touch the Maintaining Proportion icon and the white outline will disappear. The width and height can now be resized disproportionately.) Use the Lower Multifunction (Length) knob to increase the lettering height to 95%.

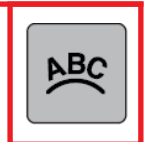
NOTE: Use the *Stitch Properties* icon to increase/decrease stitch density. Increasing density may be helpful on towels to prevent loops. Refer to Page 32 and your machine's manual for more details.



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 (also known as Bend Text) will allow flexibility in the spacing of the lettering.

Note: Word Art is not available on the or the B 770 QEE unless it has the PLUS Upgrade. It is not available on the B 735 E.



1. Notice that the I and the N appear too close together on the screen.
2. Touch the "i" breadcrumb and select the Word Art icon.
3. Use the Upper (Width) Multifunction knob to change the spacing.
 - Turning the knob to the left decreases the spacing between the letters.
 - Turning the knob to the right increases the spacing between the letters.
4. Increase the spacing to approximately 20 percent, or until the spacing is visually pleasing.
5. Proceed to the next page.

Note: Lettering that has been duplicated using the Duplicate function cannot then be manipulated in Word Art. If manipulating the same word, each word must be added separately in order to use the Word Art functions.



Click the icon for video:
Lettering, Changing Lettering Spacing

WORD ART

Add lettering to projects using vertical, horizontal, and curved baselines. Adjust letter spacing as desired using Word Art (also known as Bend Text or Letter Manipulation).

Note: Word Art is not available on the B 770 QEE unless it has the PLUS Upgrade. It is also not available on the B 735.



- Word Art should still be open in the “i” menu. Use the Lower Multifunction (Length) knob to change the baseline.
 - Turn this knob to the left to bend the letters downward.
 - Turn this knob to the right to bend the letters upwards.
- Turn the knob to the right approximately 30%.
- Move the word BERNINA to upper part of the screen.
- Touch the “i” breadcrumb and select the Rotate Motif icon.
- Turn either Multifunction knob to the right approximately 35%.
- Select Add Motif (+ icon) to add each of the following words one at a time, selecting a desired font and using upper and lowercase choices: Made; to; Create.
- Select each word and manipulate the character spacing and baseline using the Word Art function. Use the skills from previous exercises to resize, rotate and manipulate the words as desired.
- To center the combined design, select the bottom-most layer in the panel. Use the arrow at the bottom of the panel to scroll down if this layer is not visible. Select the “i”; Move Motif Icon and then select Center the Motif.

NOTE: a combined design should be centered before being stitched out.
- Follow the directions on Page 36 to save this design.
- If desired, stitch this design out as homework.



Click the icon for video:
Word Art

Notes:

- If you notice jump stitches between the letters as shown in the picture to the left, decrease the Jump Stitch Length in the Setup Menu > Embroidery Settings > Automatic cut/Jump stitch length > Reducing the length for thread cut of the connecting stitches. Change the number to 1.
- Lettering that has been duplicated using the Duplicate function cannot then be manipulated in Word Art. If manipulating the same word, each word must be added separately in order to use the Word Art functions.



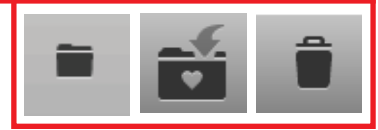
Tip for B 880 PLUS, 790 PRO, 790 PLUS, 700, 590, and 500 owners:

Remember if you make a change that you do not like, you can use Undo/Redo.

NOTE: The B 790 PRO also has multi-line lettering justification within Word Art. See Page 35

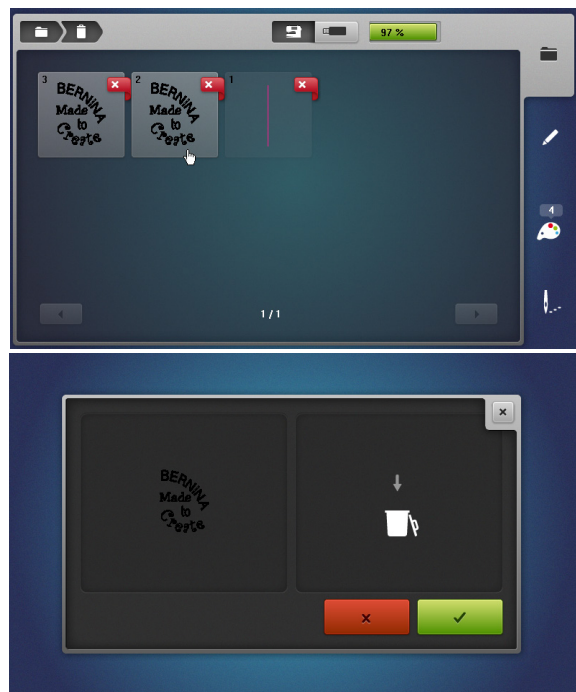
SAVING AND DELETING DESIGNS

Designs can be saved into the My Motifs Folder on the machine or to a USB stick inserted into the machine. Saved designs can also be retrieved from the My Motif's 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 a Motif icon. The motif to be saved is displayed with a yellow outline around it.
2. To save the design to the machine's My Motifs Folder, touch the Embroidery Machine icon at the top of the screen.
3. Touch the motif to be saved (outlined in yellow). 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 as 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). 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>My Motifs Folder or the USB icon).
3. In this exercise, select the Embroidery Machine/My Designs 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 My Designs/Motifs Folder.
2. Select design of choice and the Embroidery Edit screen opens with the selected design.

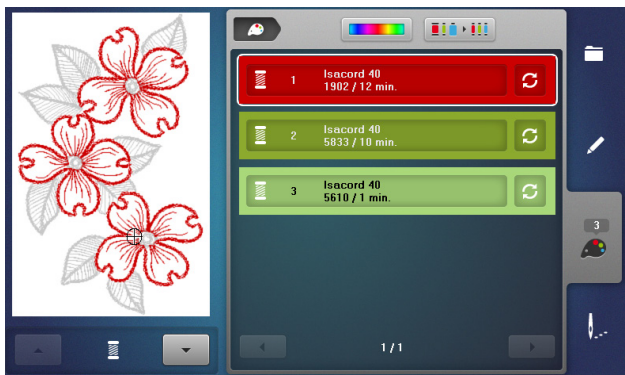
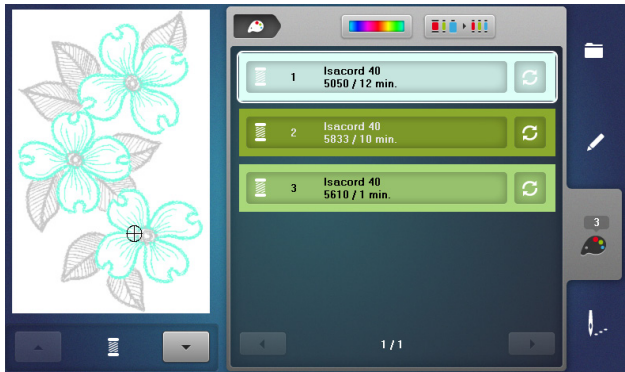
Note: When saving a design and a USB stick is inserted, the save folder defaults to the last place a design was saved. If no USB stick is inserted, the default will be the My Motifs folder.



Click the icon for video:
Save and Delete Designs

CHANGE THREAD COLOR

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

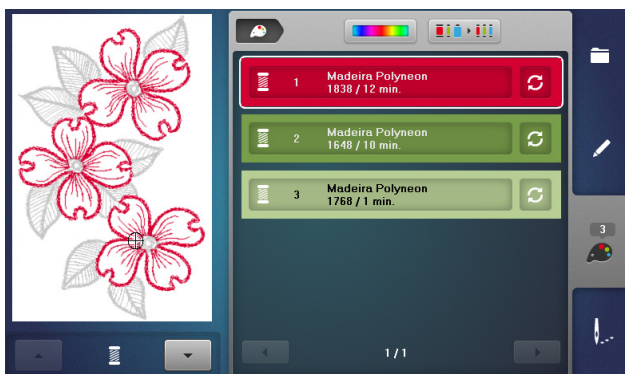


RE-ASSIGNING THREAD COLORS

1. In the Embroidery Menu, select the USB icon and select Design #FQ434_48.
2. Select the Color Information tab (palette icon).
3. 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. Use left/right scroll arrows if not all colors are visible on the screen.
4. Select Color 1 by touching the bar. Note that Color 1 will be the flowers.
5. Select the Change Color/Thread Brand icon on the right of the color bar.
6. 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 or Search icon and type in a color number.
7. Select the 0-9 or Search icon and type 1902. Touch the red color bar that appears at the bottom of the screen.
8. The new color is reallocated. 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.



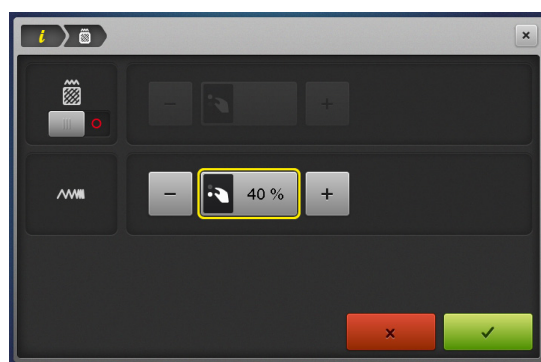
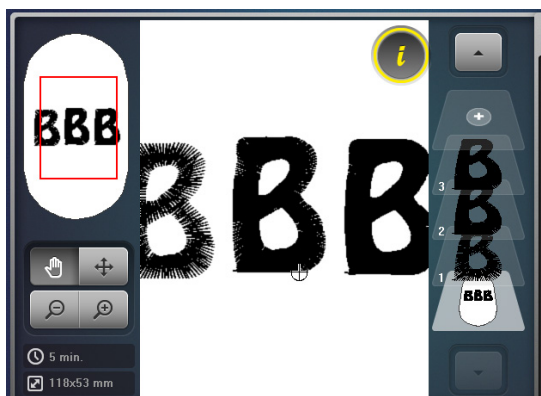
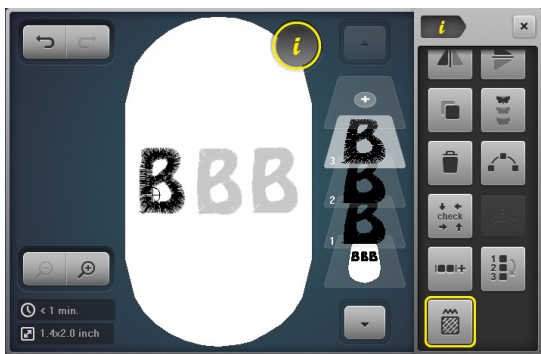
1. With the motif on the Edit screen, select the Color Information tab.
2. Select the Change Color/Thread Brand icon to the right of a color bar.
3. Use the left/right arrows above the thread color bars to scroll until the thread brand that you would like to change to appears.
4. Touch the Convert Thread Brand to Another icon.
5. The design colors have been reassigned with the closest color match for the particular brand you chose.



Click the icon for video:
Change Thread Color / Brand

ALTER STITCH DENSITY/STITCH TYPE

Change the stitch density of a design or lettering to complement different fabric types. Change a satin stitch to a fill stitch to minimize long satin stitches that might pull. This is especially helpful when enlarging lettering beyond the recommended guidelines.



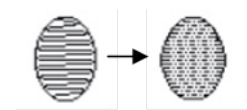
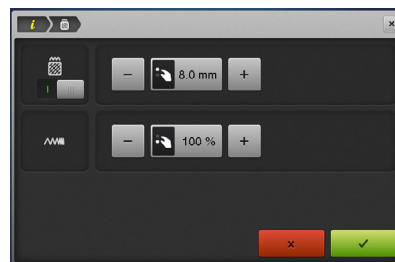
Click the icon for video:
Alter Stitch Density/Stitch Type

Stitch Density

1. Select the Alphabets Folder: select the Drifter alphabet. (B 570 and 535 E select Rounded Sans.)
2. Enter the letter B; touch the green check box to confirm.
3. Touch the Hoop Selection icon and select the Oval Hoop. Close the Hoop Selection menu.
4. Select "i"; select Change Motif Size icon and ensure that the Maintaining Proportions icon is engaged for proportional resizing. Increase the size of the letter to 200% using either Multifunction knob.
5. Select the "i" breadcrumb.
6. Duplicate the design 2 times so that there are 3 B's on screen.
7. Move motifs so that they are aligned left to right.
8. To center the set of 3 B's, select the bottom-most layer and touch the Center icon within the Move Motif menu.
9. Touch the left B on the screen or in the layer panel. Select Embroidery Stitch Density; alter satin density to 40%. Touch the green check box to confirm.
10. Select the right B in the layer; select Embroidery Stitch Density; change density to 160%. Touch the green check box to confirm.
11. Select the Zoom icon and zoom in to notice the difference in the density of the letters.

Stitch Type

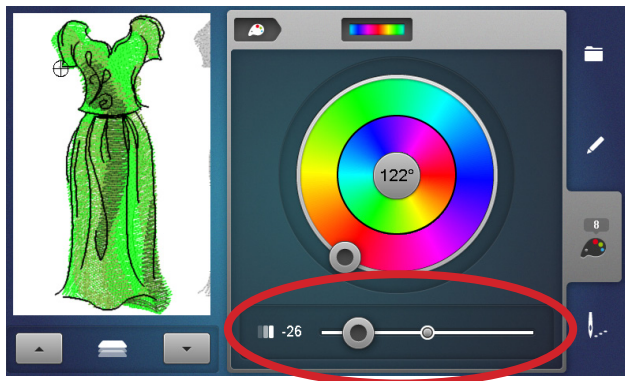
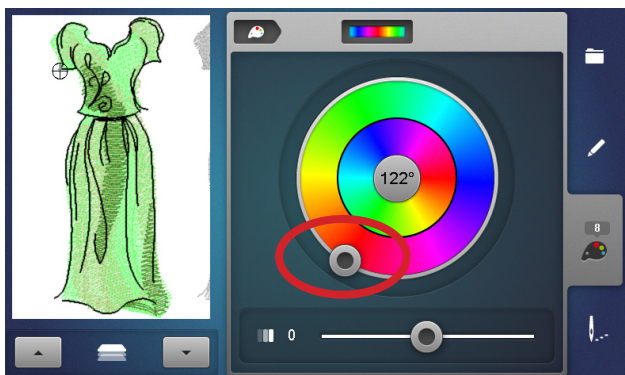
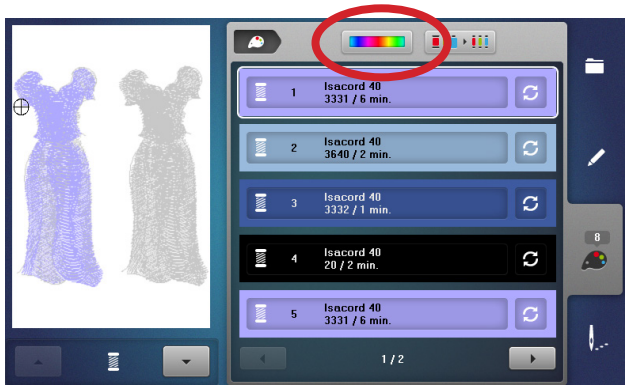
Satin stitching can be changed to step stitching. The length of the step stitch can be increased or decreased. Touch the slider under Stitch Type icon and then change the length as desired.



COLOR WHEEL

BERNINA 880 PLUS, 790 PRO, 790 PLUS, 700, 590, 500 Only

Change the hue and saturation of a design or designs on screen, translate the visual colors to thread colors, and convert to alternate thread libraries.



1. Open Design #12561-05 from the USB stick.
2. Select the Hoop Selection menu; select the Oval Hoop. Close the Hoop Selection menu.
3. Select the “i”; select Duplicate.
4. Position the designs so that they sit side by side.
5. Close the “i” menu.
6. Select the Color Information tab.
7. Select the Color Wheel icon.
8. The up/down arrows below the motifs are used to select the item(s) that are to be recolored. In this instance the choice would be: left dress design, right dress design; both designs as one unit. Scroll until you have chosen the dress design on the left.
9. Turn the slider on the center wheel clockwise using your touch screen stylus (or rotate the Stitch Width knob) to change the color palette of the design.
10. Adjust the brightness of the design by moving the slider at the bottom of the screen left (darker) or right (lighter).
11. Use the arrows under the motif to show both designs selected. Any alterations made at this time will be applied to both designs on the screen.
12. Touch the Color Information tab and notice that the new thread colors are automatically assigned.
13. Touch the Edit icon to return to the Editing screen. Make any further edits desired.

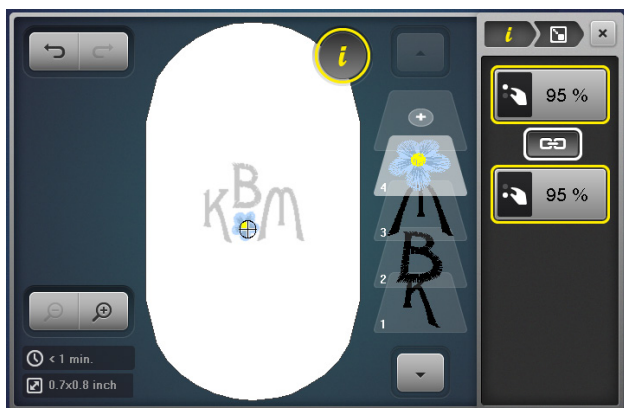
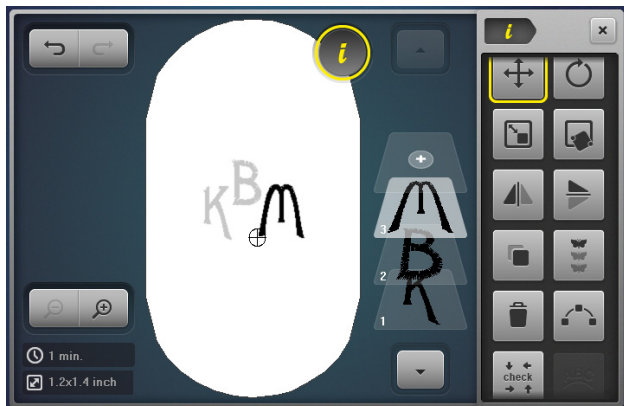
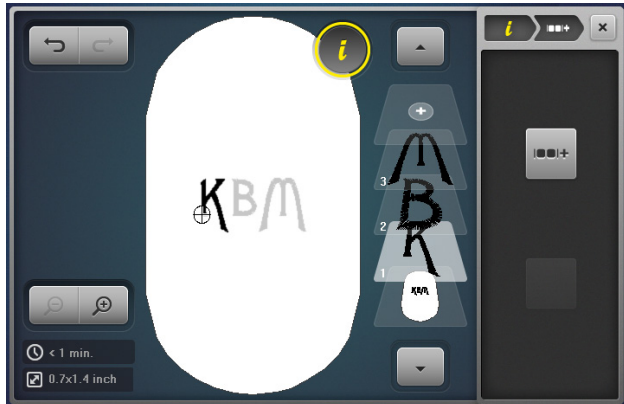
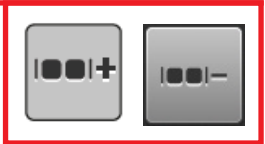


Click the icon for video:
Color Wheel

EDITING - GROUP/UNGROUP LETTERING & DESIGNS

B 880 PLUS, 790 PRO, 790 PLUS, 770 QEE PLUS, 770 QE with PLUS Upgrade, 735 E, 700, 590, 500 Only

Ungroup designs to edit individual pieces or parts of a design. Group two or more designs, or design elements and edit them as one unit. (Subject to design properties.)



NOTE: With Alphabets, the Jumpstitch Length must be adjusted to 1 in Setup so that ungrouping will work with all the letters.



Click the icon for video:
Group, Regroup, Rearrange

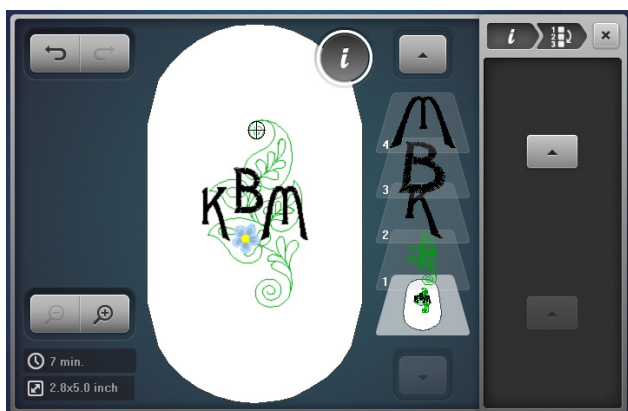
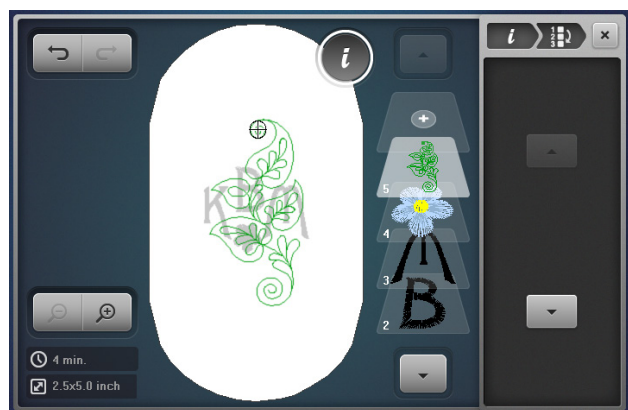
1. Touch the Selection icon; select Open New Motif. From the Selection menu, select the Alphabet folder; select desired horizontal font.
2. Enter first initial; last initial; middle initial. Touch check in the green check box to confirm.
3. If the design did not open in the Oval Hoop, select the Hoop Selection icon. Select the Oval Hoop. Close the Hoop Selection menu.
4. Select "i"; select Group Embroidery Motifs.
5. Select the Ungroup (- after the two boxes) icon. The 3 initials have now been ungrouped and will appear as 3 separate layers in the layer panel. The Ungroup icon is no longer visible since there is nothing left to ungroup.
6. To make the last name initial larger, select the last name initial in the layer panel or touch the letter on the screen.
7. Select the "i" breadcrumb; select Change Motif Size. With the Maintaining Proportions icon engaged (locked), use either Multifunction knob to resize the initial 120%. Move the last initial to desired position on the screen.
8. Select each individual initial in the layer panel; resize and position as desired. Select the bottom layer. Select Information in the Breadcrumb path. Scroll down to the Group icon, and select Group. All three initials are now grouped
9. Touch the Add Motif (+) icon and select the USB icon.
10. Select the Blue Flower design. The design opens in the center of the screen. Drag and drop the flower design to the lower part of the screen.
11. With the design flower selected, select the Group icon; then select Ungroup.
12. Select layer 4 (green leaves) in the layer panel. Swipe to the right or left; touch the green check box to confirm deletion.
13. To group the flower parts so that they can be edited as one unit, select the flower fill (Layer 4). Select Group icon, then select Group. The flower with its accent color is now grouped. Select Group again and the flower with its center is grouped.
14. With the flower selected, touch "i" breadcrumb and select Change Motif Size.
15. With the Maintaining Proportions icon locked, resize the design to 95%.
16. Position design as desired, then proceed to next page.

EDITING-REARRANGE STITCH ORDER

B 880 PLUS, 790 PRO, 790 PLUS, 770 QE PLUS, 770 QE with PLUS Upgrade, 735 E, 700, 590, 500 Only



When combining designs on the screen of the machine, the designs will stitch out in the order they were added. But you can easily change the stitching order when combining designs by changing the order of the layers with rearrange.



1. Using design from previous page, select the Add Motif (+) icon at the top of the layer panel. (Touch the up arrow at the top of the layer panel if you do not see the Add Motif icon.) Select Design #BD 562.
2. Scroll down if needed and touch the bottom-most layer to select all. Notice that in this case, the quilted leaf design is on top of the previous designs since the last design added will be the last to be stitched. We would like for the leaf design to stitch first.
3. Scroll up in the layer panel and select the leaf design using the arrow at the top of the layer panel if needed.
4. Select the "i" menu and scroll until you see the Rearrange Stitch Order icon. Touch the icon.
5. Use the down arrow and move the selected leaf design to layer 1.
6. Select the bottom-most layer (the one below layer 1). Note that the quilted leaf design will now stitch first in the design sequence and the lettering will be on top.
7. Make any adjustments that you wish to any of the elements by selecting the element in the layer panel.

790 PRO Only Align and Distribute:

Use Align and Distribute to position both design in the hoop. Select the Align icon. Select the Align Horizontally icon; then select Align Vertically. Both designs will be centered in the hoop.

8. Close the Information menu.
9. Select the Embroidery (needle) icon.
10. Stitch out the design.
11. Touch the Embroidery Finish (checkered flag) icon when embroidery is complete. The Edit screen will reappear.

Do you know:

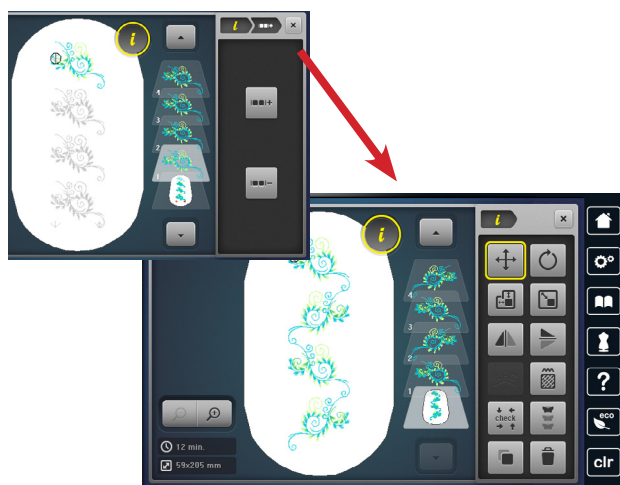
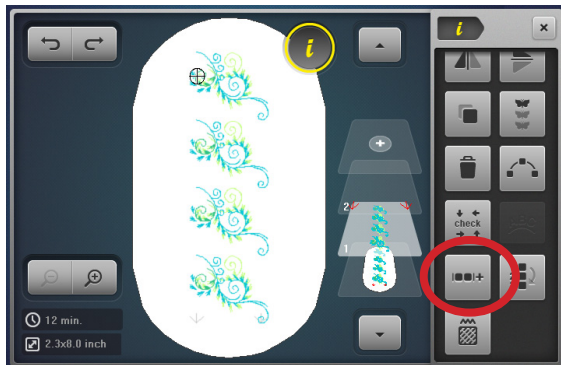
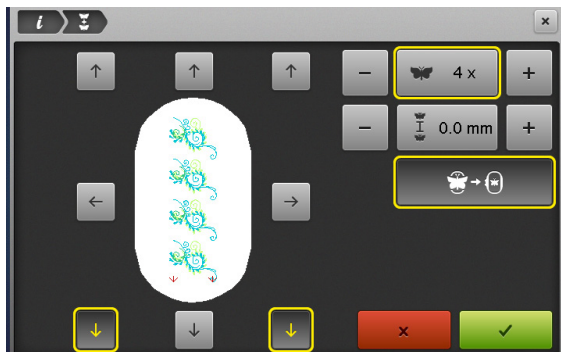
- Group or ungroup a design (on specific machines)?
- Reorder the stitching sequence in a design?

Sew HOW

ENDLESS EMBROIDERY

BERNINA 880 PLUS, 790 PRO, 790 PLUS, 700, 590, 500 Only

Endless Embroidery helps you line up embroidery designs, and allows for the most precise placement for borders and rehooping with the use of stitched registration marks.



1. Select Design #NB646_48.
2. Touch the Hoop Selection icon and select the Oval Hoop; Close the Hoop Selection menu.
3. Select "i"; select Rotate Motif. Rotate motif +15°.
4. Touch the "i" breadcrumb; select Endless Embroidery.
5. Set the Design Repeat to 4; select Fit to Hoop.
6. Touch the green check box to confirm.
Note: *The set of designs will be grouped into one unit. Any additional editing (resizing, rotating, etc.) will be applied to the entire unit unless the design is ungrouped.*
7. Edit the designs individually.
 - Select the "i" breadcrumb.
 - Select the Group icon; select Ungroup.
 - Select the Layer 2 motif and Mirror Image (Left/Right).
 - Select the Layer 4 motif and Mirror Image (Left/Right).
8. Close the Information screen. Select the Embroidery Stitch-out (needle) icon.
9. Select Color Resequene. Select the Basting Box Around the Hoop.
10. Optional: Stitch the design as homework.

Notes:

- The embroidery motif is duplicated as many times as possible to fill the selected hoop size.
- The lower reference points are the default. Side and upper reference points can be added.
- The number of motifs can be increased or reduced via the Stitch Width knob or the + or - icons.
- The space between each motif can be increased or decreased via the Stitch Length knob or the + or - icons.
- Should more motifs be entered manually than will fit in the hoop, the hoop appears in red. Select Fit to Hoop to automatically adjust the size of the motifs so they all fit in the hoop.
- Touch the field in the center to reset of any of these functions to reset.

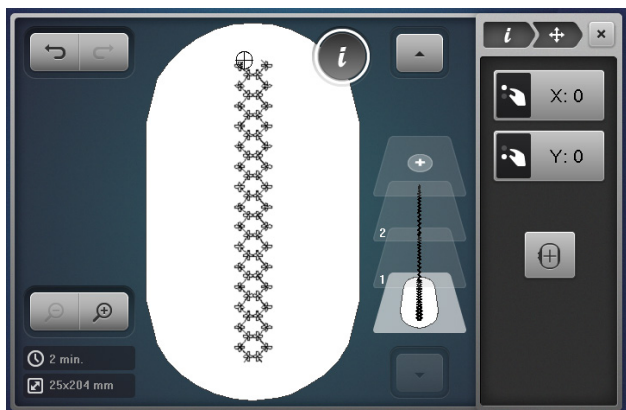
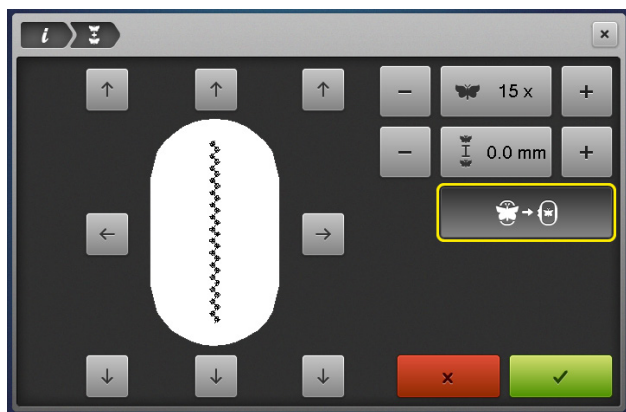
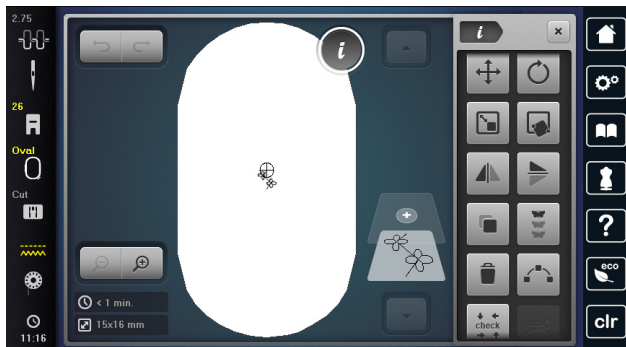


Click the icon for video:
Endless Embroidery

IMPORTING STITCHES

BERNINA 880 PLUS, 790 PRO, 790 PLUS, 590 Only

Importing stitches into embroidery offers the ability and precision of embroidering backgrounds of individual stitches and stitch combinations. Buttonholes and Sideways Motion stitches can be imported and embroidered with perfection.



Click the icon for video:
Importing Stitches

- In the Embroidery Menu, select the Sewing Stitches folder.
 - Select the Decorative Stitches folder.
 - Select Filigree Sideways Motion Stitches Folder #1201, Stitch 11. (B 590 use Menu 101; Stitch 31.)
 - The stitch will appear on the Embroidery Edit screen.
- Select the Hoop Selection icon and select the Oval Hoop. Select Close to return to the Edit screen.
- Touch "i"; select the Endless Embroidery icon.
- Select Fit to Hoop and deselect the Registration Marks.
- Touch the green check box to confirm.
- B 590 ONLY:** change the width only to 110% using techniques learned in earlier lessons.
- Touch "i" and select Duplicate, then Mirror Image Left/Right.
- Use Drop and Drag to move the second set into place as desired.
- To center the combined design, select the bottom grouped layer. Select the Move Motif Icon and select the Center icon.
- Close the Editing screen. Select the Embroidery (needle) icon to stitch-out.
- Select Single Color and deselect Cutting of jump stitches to minimize thread trims.
- OPTIONAL: Stitch the design now or as homework.

Notes:

- Stitches can be edited.
- Stitches can be used as single stitches or in combinations.
- In the B 880 PLUS and 790 PRO, try using stitches with the Shape Designer to create a wide variety of frames.

Sew HOW

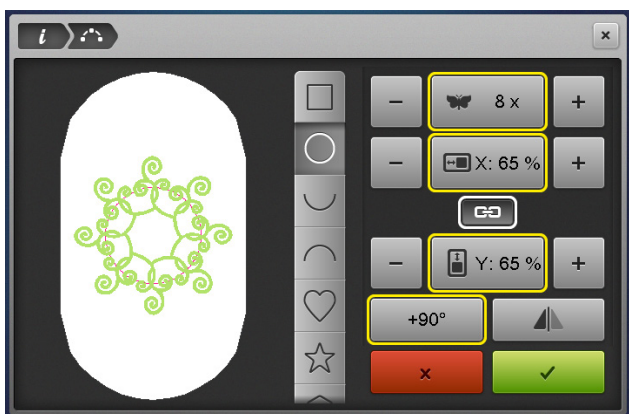
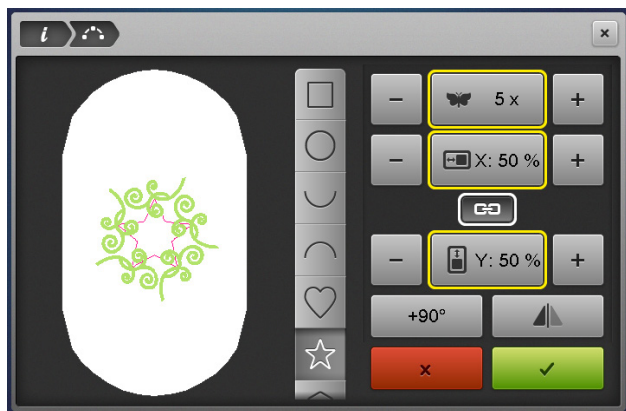
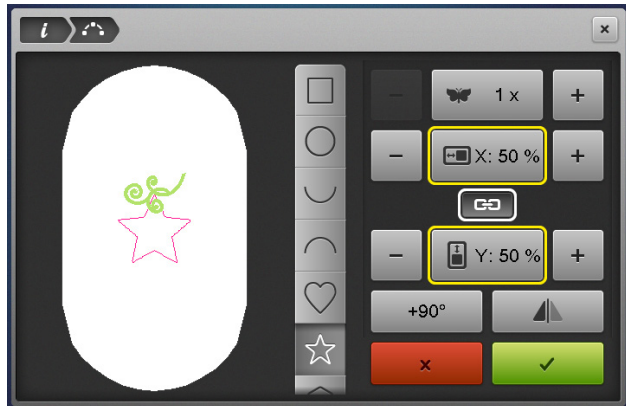
Do you know how to:

- Duplicate a design?
- Mirror Image a design?
- Change the width only of a design?

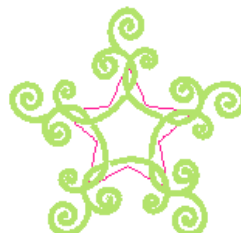
SHAPE DESIGNER

BERNINA 880, 790 PRO ONLY

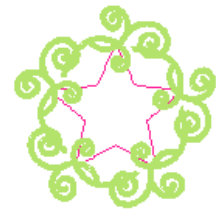
Arrange stitches, motifs and letters into nine or more shapes to form frames or decorative arrangements.



1. From the USB Folder, select the Swirl design from the USB Stick.
2. Note: From the Embroidery Motifs Folder, Folder 5 on the B 880 and Folder 8 on the B 790 PRO contain smaller designs that may be suitable when creating with the Stitch Designer.
3. Select the Hoop Selection icon; and select the Oval Hoop and close the hoop menu.
4. Select "i" and the Shaping icon.
5. Select the star shape.
6. Change the star size to 65%. With the lock engaged, the shape size is changed proportionately; unlock to change height and width independently. Changing the size of the shape can provide spacing between motifs.
7. Change number of motifs to 5.
8. Touch +90 one time. Rotate each design 90 degrees; selecting +90 again will provide a different arrangement.
9. Touch the green check box to confirm that you wish to keep the design and return to the Edit screen.



Touch +90 once.



Touch +90 again.

10. Touch the Undo icon to return to the single design.
11. Select "i"; select the Shaping icon.
12. Select the circle; change the size of the circle to 65%.
13. Change the number of motifs to 8.
14. Play with the Rotation and the Mirror Image icons until you have a pleasing arrangement.
15. Select other shapes. Play with the sizes, mirror image and number of designs.
16. Confirm with the green check box if you are pleased with an arrangement. If not, close the screen.

Notes:

- The size of shapes depends on the hoop selected.
- The Unlock feature can change squares to rectangles, circles to ovals and other skewed shapes.



Click the icon for video:
Shape Designer

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.

Light 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. 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 used 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 white, black, and beige
- Available in several weights
- Available in fusible, non-fusible, and pressure sensitive adhesive (sticky backed) versions
- Available in several widths to fit different hoop sizes

Tear Away Stabilizer

- Most commonly used type of stabilizer for the home market
- 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](#).

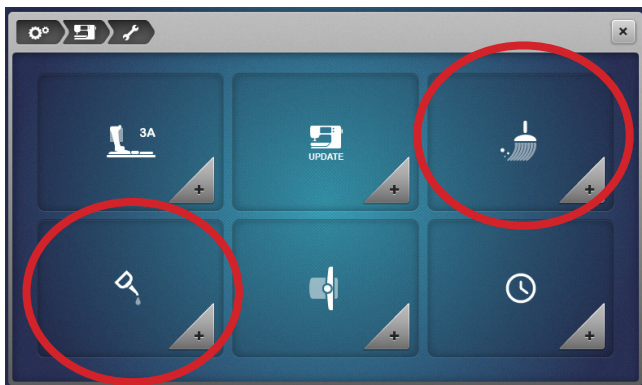
REFERENCE - CLEANING AND OILING

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

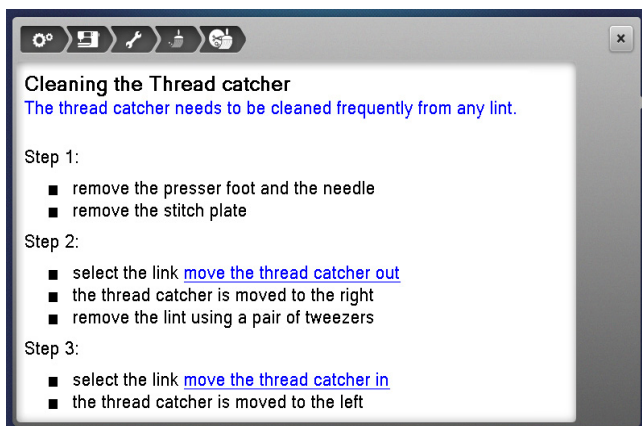
- Remove the needle. (It is recommended that you change your needle every 4-6 hours of sewing time.)
- Remove the stitch plate and remove all lint and threads, using the brush and/or the tweezers included with your machine.
- Clean the Thread Cutter (see below).
- Dust the lower thread indicator using the brush (on bobbin door).
- Remove the bobbin and clean and oil the bobbin area.



BERNINA has cleaning and oiling tutorials built into the Setup menu.

To access the tutorials, select the Setup icon >Machine Settings>Cleaning/Update.

Choose either the cleaning menu or the oiling menu and follow the steps shown. The menu may contain more than one page. Scroll with your fingertips or the stylus to access more information.



Keeping the Thread Cutter/Catcher clean and free of lint and thread tails is vital to the maintenance of the machine. The Thread Cutter needs to be cleaned frequently.

The Thread Cutter menu is interactive. Selecting the *move the thread catcher out* link on the screen will move the cutter to the right so that lint and threads can be removed with a pair of tweezers. Selecting the *move the thread catcher in* link returns the cutter to its normal position.

B 880 PLUS EMBROIDERY FUNCTIONS

EMBROIDERY MOTIF SELECTION							
	Alphabet Folder		Embroidery Motif Folder		Stitch Patterns Folder		My Designs Folder
	Open New Motif		Add Motif		Save Motif		Delete Motif
	Embroidery Machine - Select Motifs from Folder		USB Stick- Select Motifs from Stick		Confirm		Cancel
EMBROIDERY FUNCTIONS							
	Upper Thread Tension		Edit Embroidery Motifs		Duplicate		Virtual Positioning / Absolute Check
	Needle Selection		Undo		Add Motif		Basting Off/Motif/Hoop
	Needle Minder		Redo		Word Art		Sequence Control
	Presser Foot Selection / Presser Foot Display		Information (i Dialog)		Group / Ungroup		Cut Connecting Stitches
	Hoop Selection / Hoop Display		Cancel		Rearrange Stitch Order		Color Resequence
	Stitch Plate Selection		Move Motif		Checking the Motif Size		Single/Multi-color Motif
	Feed Dog Up/Down		Center the Motif in Hoop		Endless Embroidery		Engage Max. Speed
	Bobbin Filling with Low Level Status Indicator		Rotate Motif		Fit to Hoop		Embroidery Finish
	Clock/Alarm		Altering the Size		Shaping		Motif Center
	Home		Maintaining Proportion when altering size		Altering Stitch Type / Stitch Density		Grid On / Off
	Setup		Pinpoint Placement		Zoom In (1-5 times)		Move Hoop
	Tutorial		Grid (Pinpoint Placement)		Zoom Out (1-5 times)		Move Hoop to Back
	Embroidery Consultant		Free Point Positioning (Pinpoint Placement)		Moving the View		Move Hoop to Center
	Help		Reset (Pinpoint Placement)		Color Information		Move Hoop to Left
	Eco (Press long for slide show)		Set (Pinpoint Placement)		Color Wheel		Off-Center Positioning
	Back to Basic Setting		Mirror Image (Left/Right)		Convert Thread Brand to Another		Jump Stitch Length
	Thread Up Command		Mirror Image (Up/Down)		Change Color / Change Thread Brand		Thread Away On / Off
					Embroidery OK		Inch / mm Display
							Securing Stitches On / Off
							Fabric Thickness

B 790 PRO EMBROIDERY FUNCTIONS

EMBROIDERY MOTIF SELECTION							
	Alphabet Folder		Embroidery Motif Folder		Stitch Patterns Folder		My Designs Folder
	Open New Motif		Add Motif		Save Motif		Delete Motif
	Embroidery Machine - Select Motifs from Folder		USB Stick- Select Motifs from Stick		Confirm		Cancel
EMBROIDERY FUNCTIONS							
	WiFi		Edit Embroidery Motifs		Duplicate		Virtual Positioning
	Upper Thread Tension		Undo		Add Motif		Basting Off/Motif/Hoop
	Needle Selection / Stitch Plate Selection		Redo		Word Art		Sequence Control
	Needle Minder		Information (i Dialog)		Word Art Justification: Left, Center, Right		Quilting Stitch Out Settings
	Presser Foot Selection / Presser Foot Display		Cancel		Group / Ungroup		Color Resequencing
	Hoop Selection / Hoop Display		Move Motif		Rearrange Stitch Order		Single/Multi-color Motif
	Stitch Plate Selection		Center the Motif in Hoop		Checking the Motif Size		Engage Max. Speed
	Feed Dog Up/Down		Alignment Tool		Endless Embroidery		Embroidery Finish
	Bobbin Filling with Low Level Status Indicator		Rotate Motif		Fit to Hoop		Motif Center
	Pinpoint Laser		Altering the Size		Shaping		Grid On / Off
	Home		Maintaining Proportion when altering size		Altering Stitch Type / Stitch Density		Move Hoop
	Setup		2-Point Pinpoint Placement		Zoom In (1-5 times)		Move Hoop to Back
	Tutorial		Grid (Pinpoint Placement)		Zoom Out (1-5 times)		Move Hoop to Center
	Embroidery Consultant		Free Point Positioning (Pinpoint Placement)		Moving the View		Move Hoop to Left
	Help		Reset (Pinpoint Placement)		Color Information		Off-Center Positioning
	Eco (Press long for slide show)		Set (Pinpoint Placement)		Color Wheel		Jump Stitch Length
	Back to Basic Setting		4-Point Pinpoint Placement		Convert Thread Brand to Another		Thread Away On / Off
	Thread Up Command		4-Point Morph		Change Color / Change Thread Brand		Inch / mm Display
			4-Point Pinpoint Fit		Embroidery OK		Securing Stitches On / Off
			4-Point Pinpoint Margin				Fabric Thickness
			Mirror Image (Left/Right)				SPI (Stitches per inch) for bqm designs
			Mirror Image (Up/Down)				

B 790 PLUS EMBROIDERY FUNCTIONS

EMBROIDERY MOTIF SELECTION							
	Alphabet Folder		Embroidery Motif Folder		Stitch Patterns Folder		My Designs Folder
	Open New Motif		Add Motif		Save Motif		Delete Motif
	Embroidery Machine - Select Motifs from Folder		USB Stick- Select Motifs from Stick		Confirm		Cancel
EMBROIDERY FUNCTIONS							
	Upper Thread Tension		Edit Embroidery Motifs		Duplicate		Virtual Positioning / Absolute Check
	Needle Selection		Undo		Add Motif		Basting Off/Motif/Hoop
	Needle Minder		Redo		Word Art		Sequence Control
	Presser Foot Selection / Presser Foot Display		Information (i Dialog)		Group / Ungroup		Cut Connecting Stitches
	Hoop Selection / Hoop Display		Cancel		Rearrange Stitch Order		Color Resequence
	Stitch Plate Selection		Move Motif		Checking the Motif Size		Single/Multi-color Motif
	Feed Dog Up / Down		Center the Motif in Hoop		Endless Embroidery		Engage Max. Speed
	Bobbin Filling with Low Level Status Indicator		Rotate Motif		Fit to Hoop		Embroidery Finish
	Home		Altering the Size		Altering Stitch Type / Stitch Density		Motif Center
	Setup		Maintaining Proportion when altering size		Zoom In (1-5 times)		Grid On / Off
	Tutorial		Pinpoint Placement		Zoom Out (1-5 times)		Move Hoop
	Embroidery Consultant		Grid (Pinpoint Placement)		Moving the View		Move Hoop to Back
	Help		Free Point Positioning (Pinpoint Placement)		Color Information		Move Hoop to Center
	Eco		Reset (Pinpoint Placement)		Color Wheel		Move Hoop to Left
	Back to Basic Setting		Set (Pinpoint Placement)		Convert Thread Brand to Another		Off-Center Positioning
	Thread Up Command		Mirror Image (Left/Right)		Change Color / Change Thread Brand		Jump Stitch Length
			Mirror Image (Up/Down)		Embroidery OK		Thread Away On / Off
							Inch / mm Display
							Securing Stitches On / Off
							Fabric Thickness

B 770 QEE PLUS EMBROIDERY FUNCTIONS

EMBROIDERY MOTIF SELECTION							
	Alphabet Folder		Embroidery Motif Folder		Save Motif		My Designs Folder
	Open New Motif		Add Motif		Confirm		Delete Motif
	Embroidery Machine - Select Motifs from Folder		USB Stick- Select Motifs from Stick				Cancel
EMBROIDERY FUNCTIONS							
	Upper Thread Tension		Edit Embroidery Motifs		Duplicate		Virtual Positioning / Absolute Check
	Needle Selection		Information (i Dialog)		Add Motif		Basting Off/Motif/Hoop
	Needle Minder		Cancel		Word Art		Sequence Control
	Presser Foot Selection / Presser Foot Display		Move Motif		Group / Ungroup		Cut Connecting Stitches
	Hoop Selection / Hoop Display		Center the Motif in Hoop		Rearrange Stitch Order		Color Resequence
	Stitch Plate Selection		Rotate Motif		Checking the Motif Size		Single/Multi-color Motif
	Feed Dog Up / Down		Altering the Size		Endless Embroidery		Engage Max. Speed
	Bobbin Filling with Low Level Status Indicator		Maintaining Proportion when altering size		Fit to Hoop		Embroidery Finish
	Home		Pinpoint Placement		Altering Stitch Type / Stitch Density		Motif Center
	Setup		Grid (Pinpoint Placement)		Zoom In (1-5 times)		Grid On / Off
	Tutorial		Free Point Positioning (Pinpoint Placement)		Zoom Out (1-5 times)		Move Hoop
	Help		Reset (Pinpoint Placement)		Moving the View		Move Hoop to Back
	Eco		Pinpoint Placement Maintain Size		Color Information		Move Hoop to Center
	Back to Basic Setting		Set (Pinpoint Placement)		Convert Thread Brand to Another		Move Hoop to Left
	Thread Up Command		Mirror Image (Left/Right)		Change Color / Change Thread Brand		Off-Center Positioning
			Mirror Image (Up/Down)		Embroidery OK		Jump Stitch Length
							Thread Away On / Off
							Inch / mm Display
							Securing Stitches On / Off
							Fabric Thickness

B 770 QEE EMBROIDERY FUNCTIONS

EMBROIDERY MOTIF SELECTION							
	Alphabet Folder		Embroidery Motif Folder		My Designs Folder		Confirm
	Open New Motif		Save Motif		Save Motif		Delete Motif
	Embroidery Machine - Select Motifs from Folder		USB Stick- Select Motifs from Stick		Add Motif		Close
EMBROIDERY FUNCTIONS							
	Upper Thread Tension		Back to Basic Setting		Add Motif		Sequence Control
	Presser Foot Indicator		Thread Up Command		Checking the Motif Size		Cut Connecting Stitches
	Hoop Selection / Hoop Display		Edit Embroidery Motifs		Altering Stitch Type / Stitch Density		Single/Multi-color Motif
	Needle Selection/Stitch Plate Selection		Information (i Dialog)		Zoom In (1-5 times)		Engage Max. Speed
	Needle Minder		Cancel		Zoom Out (1-5 times)		Embroidery Finish
	Feed Dog Indicator		Move Motif		Moving the View		Motif Center
	Bobbin Filling with Low Level Status Indicator		Center the Motif in Hoop		Color Information		Grid On / Off
	Home		Rotate Motif		Convert Thread Brand to Another		Move Hoop
	Setup		Altering the Size		Change Color / Change Thread Brand		Move Hoop to Back
	Tutorial		Mirror Image (Left/Right)		Virtual Positioning / Absolute Check		Move Hoop to Center
	Help		Mirror Image (Up/Down)		Embroidery OK		Move Hoop to Left
	Eco		Duplicate		Basting Off/Motif/Hoop		Securing Stitches On / Off
							Fabric Thickness

B 735 E EMBROIDERY FUNCTIONS

EMBROIDERY MOTIF SELECTION							
	Alphabet Folder		Embroidery Motif Folder		Save Motif		My Designs Folder
	Open New Motif		Add Motif		Confirm		Delete Motif
			USB Stick- Select Motifs from Stick				Cancel

EMBROIDERY FUNCTIONS							
	Upper Thread Tension		Edit Embroidery Motifs		Duplicate		Virtual Positioning / Absolute Check
	Needle Selection		Information (i Dialog)		Add Motif		Basting Off/Motif/Hoop
	Needle Minder		Cancel		Group / Ungroup		Sequence Control
	Presser Foot Selection / Presser Foot Display		Move Motif		Rearrange Stitch Order		Cut Connecting Stitches
	Hoop Selection / Hoop Display		Center the Motif in Hoop		Checking the Motif Size		Color Resequence
	Stitch Plate Selection		Rotate Motif		Altering Stitch Type / Stitch Density		Single/Multi-color Motif
	Feed Dog Up / Down		Altering the Size		Zoom In (1-5 times)		Engage Max. Speed
	Bobbin Filling with Low Level Status Indicator		Maintaining Proportion when altering size		Zoom Out (1-5 times)		Embroidery Finish
	Home		Pinpoint Placement		Moving the View		Motif Center
	Setup		Grid (Pinpoint Placement)		Color Information		Grid On / Off
	Tutorial		Free Point Positioning (Pinpoint Placement)		Convert Thread Brand to Another		Move Hoop
	Embroidery Consultant		Reset (Pinpoint Placement)		Change Color / Change Thread Brand		Move Hoop to Back
	Help		Pinpoint Placement Maintain Size		Embroidery OK		Move Hoop to Center
	Eco		Set (Pinpoint Placement)				Move Hoop to Left
	Back to Basic Setting		Mirror Image (Left/Right)				Off-Center Positioning
	Thread Up Command		Mirror Image (Up/Down)				Jump Stitch Length
							Thread Away On / Off
							Inch / mm Display
							Securing Stitches On / Off
							Fabric Thickness





































































B 700 EMBROIDERY FUNCTIONS

EMBROIDERY MOTIF SELECTION							
	Alphabet Folder		Embroidery Motif Folder		My Designs Folder		Delete Motif
	Open New Motif		Add Motif		Save Motif		Cancel
	Embroidery Machine - Select Motifs from Folder		USB Stick- Select Motifs from Stick		Confirm		
EMBROIDERY FUNCTIONS							
	Upper Thread Tension		Edit Embroidery Motifs		Duplicate		Virtual Positioning / Absolute Check
	Needle Selection		Undo		Add Motif		Basting Off/Motif/Hoop
	Needle Minder		Redo		Word Art		Sequence Control
	Presser Foot Selection / Presser Foot Display		Information (i Dialog)		Group / Ungroup		Cut Connecting Stitches
	Hoop Selection / Hoop Display		Cancel		Rearrange Stitch Order		Color Resequence
	Stitch Plate Selection		Move Motif		Checking the Motif Size		Single/Multi-color Motif
	Bobbin Filling with Low Level Status Indicator		Center the Motif in Hoop		Endless Embroidery		Engage Max. Speed
	Home		Rotate Motif		Fit to Hoop		Embroidery Finish
	Setup		Altering the Size		Altering Stitch Type / Stitch Density		Motif Center
	Tutorial		Maintaining Proportion when altering size		Zoom In (1-5 times)		Grid On / Off
	Embroidery Consultant		Pinpoint Placement		Zoom Out (1-5 times)		Move Hoop
	Help		Grid (Pinpoint Placement)		Moving the View		Move Hoop to Back
	Eco		Free Point Positioning (Pinpoint Placement)		Color Information		Move Hoop to Center
	Back to Basic Setting		Reset (Pinpoint Placement)		Color Wheel		Move Hoop to Left
	Thread Up Command		Set (Pinpoint Placement)		Convert Thread Brand to Another		Off-Center Positioning
			Mirror Image (Left/Right)		Change Color / Change Thread Brand		Jump Stitch Length
			Mirror Image (Up/Down)		Embroidery OK		Thread Away On / Off
							Inch / mm Display
							Securing Stitches On / Off
							Fabric Thickness




































































B 590 EMBROIDERY FUNCTIONS

EMBROIDERY MOTIF SELECTION							
	Alphabet Folder		Embroidery Motif Folder		Stitch Patterns Folder		My Designs Folder
	Open New Motif		Add Motif		Save Motif		Delete Motif
	Embroidery Machine - Select Motifs from Folder		USB Stick- Select Motifs from Stick		Confirm		Cancel
EMBROIDERY FUNCTIONS							
	Upper Thread Tension		Edit Embroidery Motifs		Duplicate		Virtual Positioning / Absolute Check
	Presser Foot Selection / Presser Foot Display		Undo		Add Motif		Basting Off/Motif/Hoop
	Hoop Selection / Hoop Display		Redo		Word Art		Sequence Control
	Needle/Stitch Plate Selection		Information (i Dialog)		Group / Ungroup		Cut Connecting Stitches
	Needle Minder		Cancel		Rearrange Stitch Order		Color Resequence
	Feed Dog Up / Down		Move Motif		Checking the Motif Size		Single/Multi-color Motif
	Bobbin Filling with Low Level Status Indicator		Center the Motif in Hoop		Endless Embroidery		Engage Max. Speed
	Home		Rotate Motif		Fit to Hoop		Embroidery Finish
	Help		Altering the Size		Altering Stitch Type / Stitch Density		Motif Center
	Back to Basic Setting		Maintaining Proportion when altering size		Zoom In (1-5 times)		Grid On / Off
	Setup		Pinpoint Placement		Zoom Out (1-5 times)		Move Hoop
	Tutorial		Grid (Pinpoint Placement)		Moving the View		Move Hoop to Back
	Embroidery Consultant		Free Point Positioning (Pinpoint Placement)		Color Information		Move Hoop to Center
	Eco		Reset (Pinpoint Placement)		Color Wheel		Move Hoop to Left
	Thread Up Command		Set (Pinpoint Placement)		Convert Thread Brand to Another		Off-Center Positioning
			Mirror Image (Left/Right)		Change Color / Change Thread Brand		Jump Stitch Length
			Mirror Image (Up/Down)		Embroidery OK		Thread Away On / Off
							Inch / mm Display
							Securing Stitches On / Off
							Fabric Thickness

B 570 QEE EMBROIDERY FUNCTIONS

EMBROIDERY MOTIF SELECTION							
	Alphabet Folder		Embroidery Motif Folder		My Designs Folder		Delete Motif
	Open New Motif		Add Motif		Save Motif		Cancel
	Embroidery Machine - Select Motifs from Folder		USB Stick- Select Motifs from Stick		Confirm		
EMBROIDERY FUNCTIONS							
	Upper Thread Tension		Thread Up Command		Altering Stitch Type / Stitch Density		Single/Multi-color Motif
	Presser Foot Selection / Presser Foot Display		Edit Embroidery Motifs		Zoom In (1-5 times)		Engage Max. Speed
	Hoop Selection / Hoop Display		Information (i Dialog)		Zoom Out (1-5 times)		Embroidery Finish
	Needle/Stitch Plate Selection		Cancel		Moving the View		Motif Center
	Needle Minder		Move Motif		Color Information		Grid On / Off
	Feed Dog Up / Down		Center the Motif in Hoop		Color Wheel		Move Hoop
	Bobbin Filling with Low Level Status Indicator		Rotate Motif		Convert Thread Brand to Another		Move Hoop to Back
	Home		Altering the Size		Change Color / Change Thread Brand		Move Hoop to Center
	Help		Mirror Image (Left/Right)		Embroidery OK		Move Hoop to Left
	Back to Basic Setting		Mirror Image (Up/Down)		Virtual Positioning / Absolute Check		Off-Center Positioning
	Setup		Duplicate		Basting Off/Motif/Hoop		Jump Stitch Length
	Tutorial		Add Motif		Sequence Control		Thread Away On / Off
	Embroidery Consultant		Word Art		Cut Connecting Stitches		Inch / mm Display
	Eco		Checking the Motif Size		Color Resequence		Securing Stitches On / Off
							Fabric Thickness

B 535 E EMBROIDERY FUNCTIONS

EMBROIDERY MOTIF SELECTION							
	Alphabet Folder		Embroidery Motif Folder		My Designs Folder		Delete Motif
	Open New Motif		Add Motif		Save Motif		Cancel
	Embroidery Machine - Select Motifs from Folder		USB Stick- Select Motifs from Stick		Confirm		
EMBROIDERY FUNCTIONS							
	Upper Thread Tension		Thread Up Command		Altering Stitch Type / Stitch Density		Single/Multi-Color Motif
	Presser Foot Selection / Presser Foot Display		Edit Embroidery Motifs		Zoom In (1-5 times)		Engage Max. Speed
	Hoop Selection / Hoop Display		Information (i Dialog)		Zoom Out (1-5 times)		Embroidery Finish
	Needle/Stitch Plate Selection		Cancel		Moving the View		Motif Center
	Needle Minder		Move Motif		Color Information		Grid On / Off
	Feed Dog Up / Down		Center the Motif in Hoop		Color Wheel		Move Hoop
	Bobbin Filling with Low Level Status Indicator		Rotate Motif		Convert Thread Brand to Another		Move Hoop to Back
	Home		Altering the Size		Change Color / Change Thread Brand		Move Hoop to Center
	Help		Mirror Image (Left/Right)		Embroidery OK		Move Hoop to Left
	Back to Basic Setting		Mirror Image (Up/Down)		Virtual Positioning / Absolute Check		Off-Center Positioning
	Setup		Duplicate		Basting Off/Motif/Hoop		Jump Stitch Length
	Tutorial		Add Motif		Sequence Control		Inch / mm Display
	Embroidery Consultant		Word Art		Cut Connecting Stitches		Securing Stitches On / Off
	Eco		Checking the Motif Size		Color Resequence		Fabric Thickness

B 500 EMBROIDERY FUNCTIONS

EMBROIDERY MOTIF SELECTION							
	Alphabet Folder		Embroidery Motif Folder		My Designs Folder		Delete Motif
	Open New Motif		Add Motif		Save Motif		Cancel
	Embroidery Machine - Select Motifs from Folder		USB Stick- Select Motifs from Stick		Confirm		
EMBROIDERY FUNCTIONS							
	Upper Thread Tension		Edit Embroidery Motifs		Duplicate		Virtual Positioning / Absolute Check
	Presser Foot Selection / Presser Foot Display		Undo		Add Motif		Basting Off/Motif/Hoop
	Hoop Selection / Hoop Display		Redo		Word Art		Sequence Control
	Needle / Stitch Plate Selection		Information (i Dialog)		Group / Ungroup		Cut Connecting Stitches
	Needle Minder		Cancel		Rearrange Stitch Order		Color Resequence
	Bobbin Filling with Low Level Status Indicator		Move Motif		Checking the Motif Size		Single/Multi-color Motif
	Home		Center the Motif in Hoop		Endless Embroidery		Engage Max. Speed
	Setup		Rotate Motif		Fit to Hoop		Embroidery Finish
	Tutorial		Altering the Size		Altering Stitch Type / Stitch Density		Motif Center
	Embroidery Consultant		Maintaining Proportion when altering size		Zoom In (1-5 times)		Grid On / Off
	Help		Pinpoint Placement		Zoom Out (1-5 times)		Move Hoop
	Eco		Grid (Pinpoint Placement)		Moving the View		Move Hoop to Back
	Back to Basic Setting		Free Point Positioning (Pinpoint Placement)		Color Information		Move Hoop to Center
	Thread Up Command		Reset (Pinpoint Placement)		Color Wheel		Move Hoop to Left
			Set (Pinpoint Placement)		Convert Thread Brand to Another		Off-Center Positioning
			Mirror Image (Left/Right)		Change Color / Change Thread Brand		Jump Stitch Length
			Mirror Image (Up/Down)		Embroidery OK		Thread Away On / Off
							Inch / mm Display
							Securing Stitches On / Off
							Fabric Thickness