

# MY BERNINA



## OVERLOCKER

**WORKBOOK #1 – BASIC SERGER USE**  
For BERNINA Overlocker L 890



# TABLE OF CONTENTS

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INTRODUCTION .....	4
PREPARING TO STITCH .....	5
BASIC NAVIGATION .....	6
PERSONALIZE THE MACHINE .....	8
SELECTING A STITCH (DIRECT STITCH SELECTION) .....	9
MANUAL SETTINGS .....	10
STITCH VIEW .....	11
BALANCED STITCH .....	14
TENSION SETTINGS: UPPER LOOPER THREAD TENSIONS .....	15
TENSION SETTINGS: LOWER LOOPER THREAD TENSIONS ....	16
TENSION SETTINGS: RIGHT NEEDLE THREAD TENSIONS .....	17
TENSION SETTINGS: LEFT NEEDLE THREAD TENSIONS.....	18
STITCH LENGTH .....	19
CUTTING WIDTH.....	20
UNDERSTANDING DIFFERENTIAL FEED .....	21
DIFFERENTIAL FEED: STRETCHY FABRICS .....	22
PERSONAL MEMORY.....	23
3-THREAD OVERLOCK STITCH-WIDE.....	24
3-THREAD FLATLOCK - WIDE.....	25
3-THREAD OVERLOCK STITCH-NARROW .....	26
3-THREAD FLATLOCK - NARROW .....	27
3-THREAD ROLLED HEM .....	28
2-THREAD ROLLED HEM .....	29
2-THREAD FLATLOCK - NARROW .....	30
2-THREAD BLANKET STITCH NARROW .....	31
OVERLOCKER TECHNIQUES: SECURING SEAMS.....	32
OVERLOCKER TECHNIQUES: INSIDE CORNER .....	33

L 890



# TABLE OF CONTENTS

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OVERLOCKER TECHNIQUES: OUTSIDE CORNER ..... 34  
REFERENCE - OVERLOCKER NEEDLES..... 35  
REFERENCE - OVERLOCKER THREADS..... 36  
SUPPLIES..... 37

L 890



The information in this workbook applies to the BERNINA Overlocker Machine model shown above.

# INTRODUCTION

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Congratulations on the purchase of your new BERNINA overlocker. Learning to use your new machine to its fullest capabilities will let you enjoy your machine for many years. Understanding your machine's features will maximize your creativity. You'll learn the essentials to help you be successful with any project.

Your overlocker will speed your sewing in many ways, letting you produce more in less time. The speed of the overlocker is faster because it performs several operations (trimming, seaming, and overcasting) at the same time, so your project is finished faster and will produce neater and more professional results.

Even though the workings of the overlocker may appear be more complex than a sewing machine, it doesn't take long to learn the basics. The stitching exercises in this workbook use four, three, and two thread stitch formations.

Once you have completed the exercises designated for your BERNINA overlock machine, attach the sewn samples to the indicated pages, insert the pages into plastic page protectors and store them in a 3-ring binder. Use this workbook as a reference tool in the future as you learn to use your overlocker in new ways.

For more information on the BERNINA line of sewing machines and overlockers, as well as sewing projects, visit:

:

[www.bernina.com](http://www.bernina.com)



# PREPARING TO STITCH

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## CLEANING AND OILING

Keeping your overlocker clean will keep your machine running smoothly and is a crucial component for successful stitches. Serging creates a lot of lint which will build up in the machine, and oil will attract this lint to the moving parts of the machine—so it is important to not over-oil the overlocker. Your machine manual will also give you detailed cleaning and oiling suggestions..

## PRESSER FOOT

The L 890 comes with two presser feet. Standard Combo Foot #C11 is the standard foot and can be used for all basic overlock stitch groups and the Combo stitches. This foot can also be used for Cover-and Chainstitches. Chainstitch Foot #C13 is the cover-and chainstitch foot and provides a narrower profile for optimal coverstitches and chainstitching.

## NEEDLES

The L 8 Series overlockers are specified to needle system ELX705 needles. These needles have a groove on the front and back of the needle which reduces the friction on the thread, especially at high speeds. Other needles can be used in these machines, but tension adjustments may be required to achieve the desired stitch. Refer to Page 35 Reference - Overlocker Needles for more information.

**THREADING** (Refer to Page 36 Reference -Overlocker Threads for additional information about threads.)

Due to the One-Step BERNINA Air Threader, no specific sequence is required for threading the machine.

Thread with the presser foot raised, and the retractable thread guide fully extended.

Make sure needles are in the highest position—they are staggered.

- Follow the color-coded path for threading the desired stitch.
- To engage the air threader, turn the air threader connection to the left. Then press the foot control to activate the threading motor.
- If the air threading pipes do not close in the proper position, turn the handwheel before engaging the air threader. Now when you press on the foot control, the pulse-drive feature will slowly move the pipes into the correct position to close.
- Tools for changing needles are located conveniently inside the threading cover of the machine.

# BASIC NAVIGATION

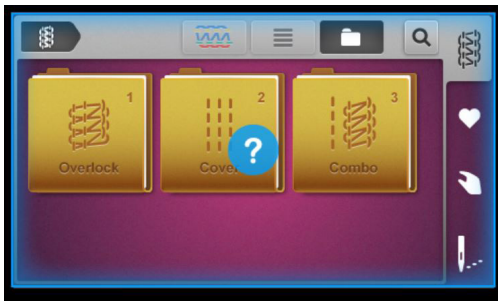
## Main Functions

Touch the Home button to switch between the Home Screen and the Sewing Screen (stitch view).

The button works like a toggle. Additional main screen functions are the Help and clr.



## Help Function



1. Touch the <?> button to activate the Help Function.
2. Touch the icon on the screen that you need more information on.
3. A text box with explanation will appear on screen.
4. Close the box to resume.

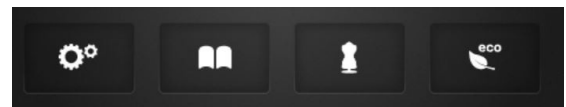
## clr

The <clr> button will reset any changed setting back to the default settings by simply tapping the button.



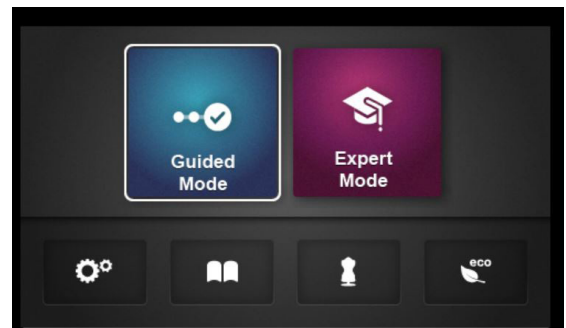
## Settings and Help Functions

The Home Screen has four buttons that allow you to launch the Setup Program and Help functions for the machine.



## Select User Mode

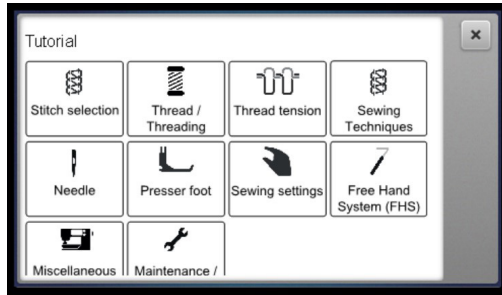
Additionally, from the Home Screen you can select two user modes: Guided and Expert. The Guided Mode will automatically prompt through a Setup Wizard for each step, eventually landing at the Stitch View screen. The Expert Mode shortens the operating steps and begins with the Manual Settings screen from which the Setup Wizard can be launched at any time. The user mode is selected based on preference. For this class we will operate in the **Expert Mode**.



# BASIC NAVIGATION

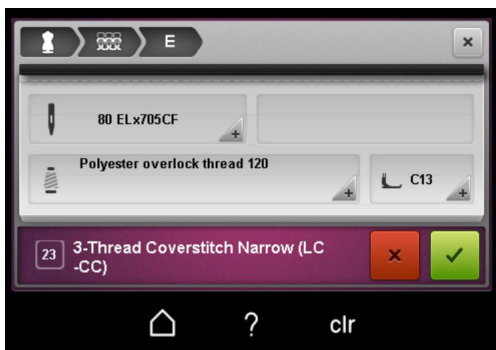
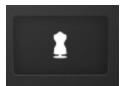
## Tutorials

The Tutorials button will open a built-in menu of basic machine operations with written descriptions and sometimes animations. This is like having the machine manual at your fingertips.



## Creative Consultant

You can use the Creative Consultant as a way to directly select a stitch with pre-determined stitch setting adjustments for specific textiles and techniques. Follow the menu prompts and use the Help Function to further identify materials and techniques for desired stitch. The Creative Consultant will recommend the optimal stitch in combination with needle, thread and presser foot based on the selections made.



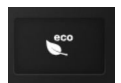
## Breadcrumbs

Learn to navigate within menus using the breadcrumb icons rather than using the Close box to exit. This is a time-saving feature when moving from textile and technique in Creative Consultant.



## Eco Mode

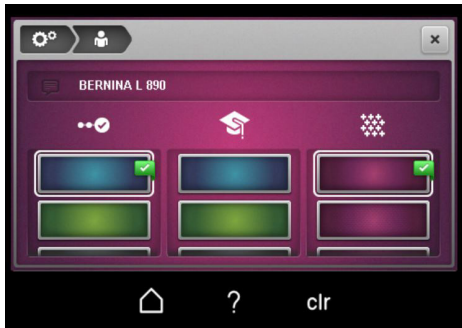
Eco Mode is a power saving option that will lock the screen and turn off the lights without totally powering off the machine. It is a great option if you need to move to another task like ironing or using a regular sewing machine and do not want to leave the overlocker on. Simply tap the button when you return and the machine picks up where you left off.



# PERSONALIZE THE MACHINE

## Personalize the Screen (Setup Menu)

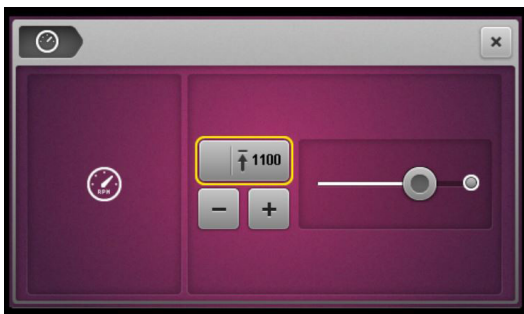
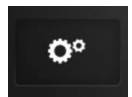
You can personalize the display and wallpaper color to suit your individual tastes for each user mode, Guided and Expert. The default color for Guided Mode is blue and for Expert Mode it is purple. Change the color as well as the texture in the Setup Program. A welcome text can also be programmed.



1. Touch the Setup icon.
2. Select Personal Settings and a display appears.
3. Select the color and texture.
4. Close the screen (or use the setup breadcrumb to navigate back to Setup).

## Program the Sewing Speed

You can customize the sewing speed of the L 890 for both top speed and low speed.



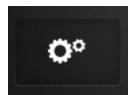
1. Touch the Setup icon.
2. Select Sewing Speed icon.
3. Adjust the slider controls to the desired maximum and minimum speed.
  - Changes are highlighted by yellow.
  - To reset to default speed select clr.
  - Sewing speeds have direct influence on the machine, regardless of the stitch selection.
4. Close the screen (or use the setup breadcrumb to navigate back to Setup).

In addition to sewing speed, you can also change and personalize the brightness of the screen, turn off the LED machine lights, change or turn off the audio touchscreen sound, and turn off the presser foot warning monitor.



## Machine Settings

There is other helpful information found in the Setup Menu under the machine Settings icon. Here you can set the language, check firmware version, recalibrate the touchscreen, restore factory settings, and launch a software update.



**Tip:** If you accidentally recalibrate the touch screen so that the touch sensation is incorrect, you may automatically launch the calibration by turning the machine off. Then touch and hold on the screen as you turn the machine back on. The calibration screen will show up and you can correct the touch points



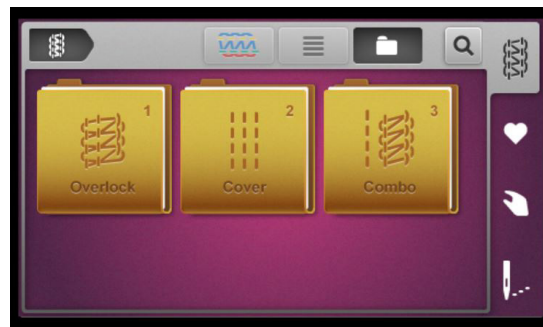
# SELECTING A STITCH (DIRECT STITCH SELECTION)

## Stitch Selection

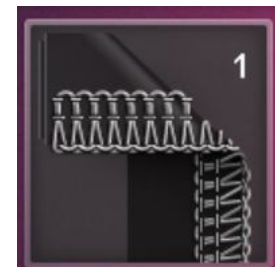
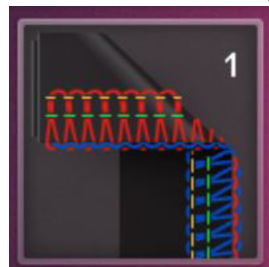
There are three different ways to select a stitch on the L 890 Navigation; direct selections, via Creative Consultant or from Personal Memory. We will begin by learning the Direct Stitch Selection that will take you to the Sewing Screen.



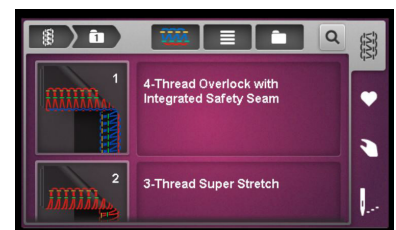
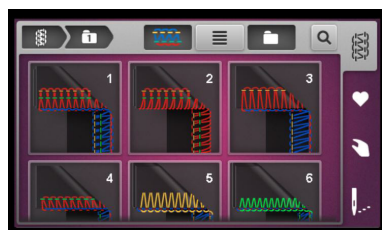
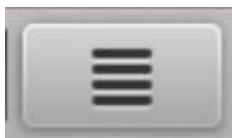
1. Select stitches by touching the Stitch Selection tab.
2. Select the stitch using the Search by Number or from Stitch Group Folder.



3. Select the folder for the stitch group and all stitches for that category will appear.
4. Touch the image of the stitch you want to select.
5. Change the view to Schematic View or True View (based on your preference).



6. Show stitches as tiles or as a list with names.



7. Once selected, the machine will prompt you to either the Manual Settings Screen (Expert Mode) or the Setup Wizard (Guided Mode).

# MANUAL SETTINGS

The Manual Settings Mode is prompted directly after a stitch is selected when in Expert Mode. This is the screen that outlines all the physical changes that need to be made to the machine when setting up the stitch. We will use a 4-thread overlock as our example.



The Wizard can be launched at any time from this screen by selecting the icon. This will walk you step-by-step through all the changes that need to be made for the stitch selected.



**Tip:** The L 890 will remember the last stitch sewn, and the prompts work from these assumptions for the suggested stitch changes.

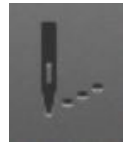
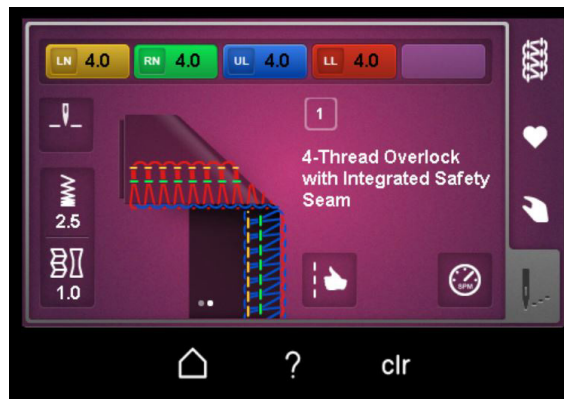
Once all manual settings have been checked or changed, select the green check mark and the machine will move to the Stitch View Screen.

## Manual Setting Icons

	Presser Foot Recommendation
	Looper Converter
	Knife On/Off
	Cutting Width
	Micro Thread Control

	Presser Foot Pressure
	Upper Looper Position
	Looper Insert
	Rolled Hem Selection Lever
	Needle Position

# STITCH VIEW



The Stitch View screen shows the electronic settings for each stitch, in addition to a few other important aspects of the stitch. You can see the stitch number, name and a schematic or realistic view illustration of the basic stitch structure.

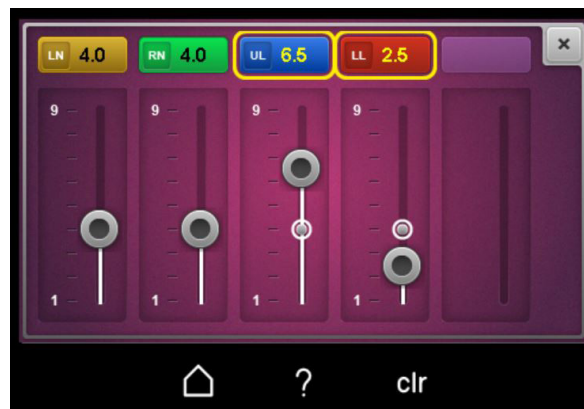
## Electronic Settings

### Thread Tension



The thread tension settings are easy to read across the top of the screen. In schematic view you will see both the number of the tension setting, as well as the abbreviation for the thread. In realistic view, you will only see the number and color code—no abbreviation. These numbers will start as recommended preset defaults for the stitch selected. When adjusted they will be outlined in yellow.

There are two ways to adjust the thread tensions on the L 890. You can do this directly through the touch screen by touching any tension button on the top of the touch screen and a new screen will open. Here you can use the electronic slider control to set the tension. Touch and hold while moving the slider control to the desired setting.

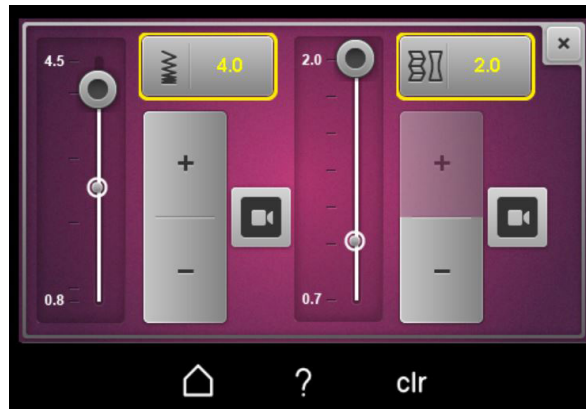


For more control of the tension settings, use the fine adjustment buttons located the front of the machine (manual button). Press the top button for a higher tension and the bottom button for a lower tension. This will move the tension in decimals of 1/10. Thread tension can be adjusted between 1-9 for each stitch. Changes made using the manual buttons will be reflected on the screen.

# STITCH VIEW

## Stitch Length and Differential Feed

There are no physical knobs for the Stitch Length and Differential Feed settings on the L 890. These settings are changed electronically through the Touch Screen Navigation from the Stitch View screen. The setting will start at the preset default for the stitch selected. To change the setting, touch either icon and the adjustment screen will appear.



The settings for Stitch Length and Differential Feed can be adjusted using the Slider Control, or for fine adjustments using the <+> and <-> icons. In addition, from this screen you can launch an animation that illustrates the changes to the stitch as various adjustments are made. If a change has been made to the setting, the number will appear in yellow.

Stitch Length is adjustable from 0.8 mm-4.5 mm.

Differential Feed is adjustable from 0.7-2.

All these settings have direct influence only on the stitch selected—meaning the settings are for this stitch only. If you have a setting that you will use often, consider saving it in the Personal Memory function of the machine (page 23).

## Needle Stop Up/Down and Maximum Sewing Speed



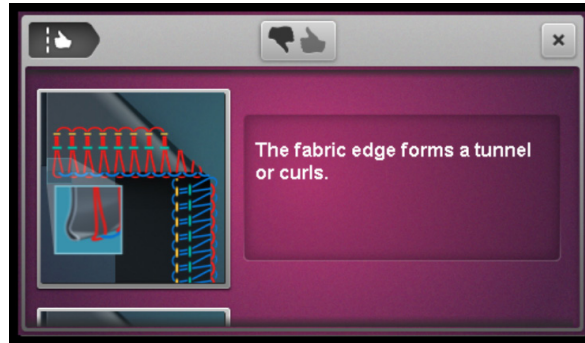
There are two settings that can be changed from the Stitch View screen that have direct influence on the machine—meaning that the adjustment will remain as selected for every stitch to follow. These are the Needle Stop Up/Down and the Maximum Sewing Speed. Needle Stop Up/Down works like a toggle and will change with a tap. Selecting Maximum Sewing Speed will open a screen with a Slider Control and Fine Adjustment icons.

**Tip:** Remember the sewing speed can also be set in the machine Setup Screen. From the Stitch View Screen, only the top speed can be changed and this change will also translate into the Setup Screen. Think of it as quick access to sewing speed.

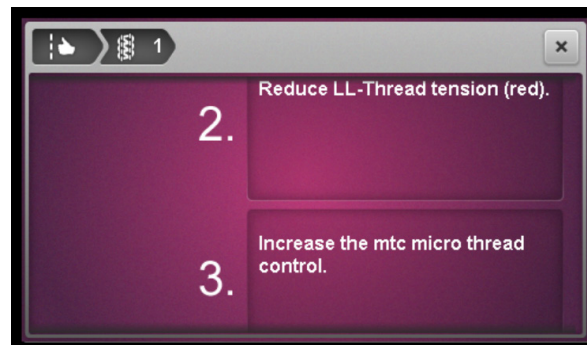
# STITCH VIEW

## Stitch Optimizer






The final button on the stitch view screen is the Stitch Optimizer. This is best understood as on-screen troubleshooting. The L 890 will begin each stitch with preset default settings (or settings that are saved from Personal Memory), but these settings can be fine-tuned to achieve a better stitch based on the textiles and techniques used. Always begin with test sewing the stitch. If the stitch is not as desired, then launch the Stitch Optimizer to troubleshoot the stitch.

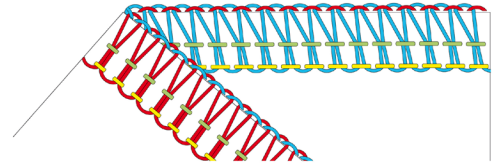
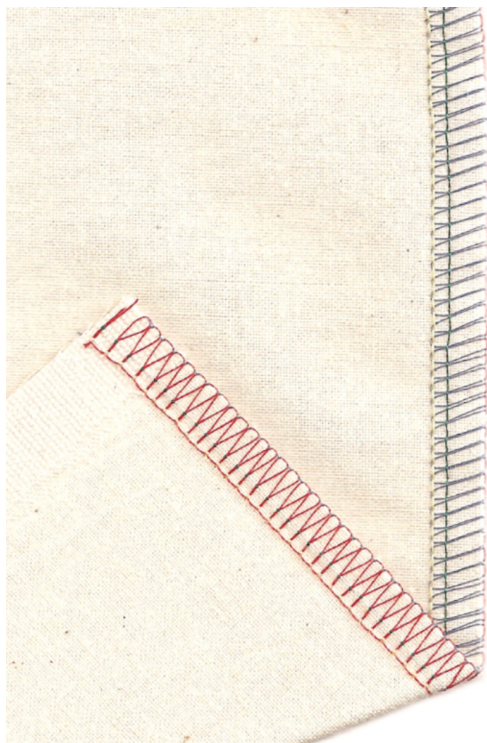


1. Tap the Stitch Optimizer icon using the 4-thread overlock stitch as an example.
2. Scroll through the stitch images until you discover the image that most resembles the stitch issue you have. (Ex. The fabric edge tunnels or curls.)
3. Touch the imperfect stitch image.
4. Read and perform the recommended actions one at a time until the stitch is corrected (5 possible adjustments that could be used to perfect this issue).



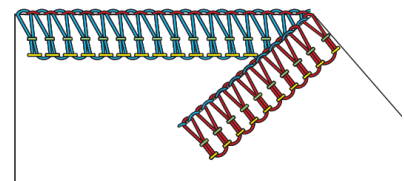
# BALANCED STITCH

-  Firm fabric, 10" x 10"
-  80/12 ELX705
-  4 Spools Serger Thread (B, R, G, Y)
-  4-Thread Overlock Stitch #1)
-  C11



1. Thread the overlocker for 4-thread overlock stitch using the colors to match the color-coded threading path on the machine. Select Stitch #1 and make all the recommended manual setting adjustments.
2. Fold the fabric in half lengthwise 5" x 10"
3. Sew the 4-thread overlock with preset default setting along the folded edge—trimming off the fold. Stitch off the edge of the fabric and continue until the thread chain is long enough to be cut in the thread cutter at the side of the machine (6"-8" approximately).
4. Examine the stitch formation and label the sample with the machine settings on the fabric.
5. Launch the Stitch Optimizer and determine if any corrective measures are needed.

-  Left Needle
-  Right Needle
-  Upper Loper
-  Lower Loper



## TENSION SETTINGS: UPPER LOOPER THREAD TENSIONS

 Firm fabric such as muslin, 10" x 10"

 80/12 ELX705

 4 Spools Serger Thread (B, R, G, Y)

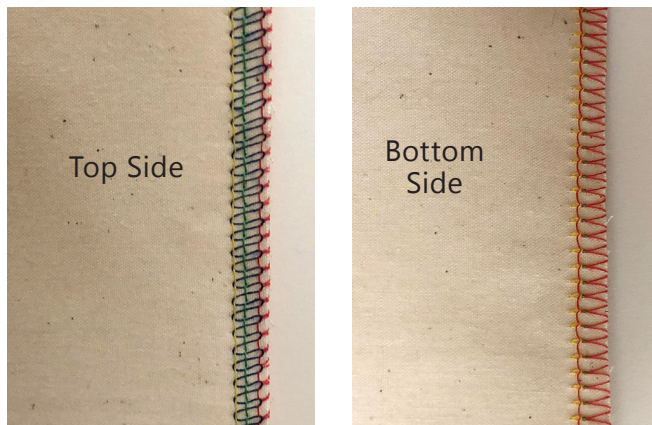
 4-Thread Overlock Stitch #1)

 C 11

Create some imperfect stitch formations by adjusting the thread tension settings for each stitch to extremes as follows below. Label each sample as it is sewn to identify the thread tension as: too loose or too tight. This will serve as a physical reference, much like the stitch optimizer, to help you identify the tension that needs correcting with future stitch issues.

Compare your sewn samples to the images in the Stitch Optimizer and consider the recommended corrective measure for each issue.

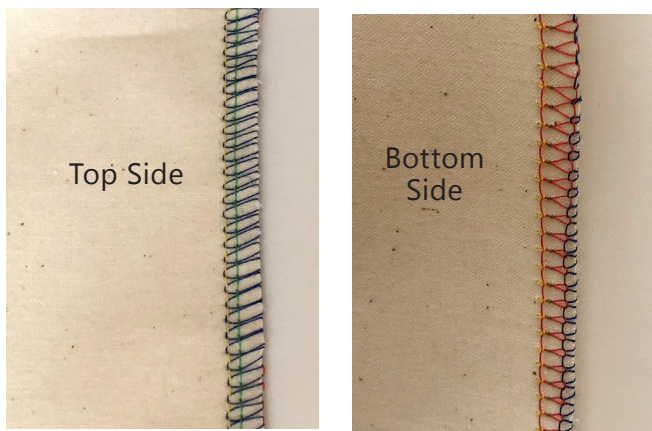
### Upper Looper Tension Too Tight



### Upper Looper Tension Too Tight

1. Adjust the upper looper tension to the highest setting of 9.
2. Fold the fabric in half to 5" x 10" and sew the seam along the fold, trimming off a slight amount.
3. Look at the stitch. You can see that when the tension is too tight the upper looper pulls the lower looper (red thread) over to the right side.
4. Label the sample "Upper Looper Tension Too Tight".

### Upper Looper Tension Too Loose



### Upper Looper Tension Too Loose

1. Now adjust the tension setting to the lowest setting of 1, and sew the seam on the opposite side.
2. Examine the stitch formation. When the upper looper is too loose, the blue thread is pulled to the back side of the fabric.
3. Label the sample "Upper Looper Too Loose".
4. Touch clr to put the upper looper setting back to the default of 4.

## TENSION SETTINGS: LOWER LOOPER THREAD TENSIONS

 Firm fabric such as muslin, 10" x 10"

 80/12 ELX705

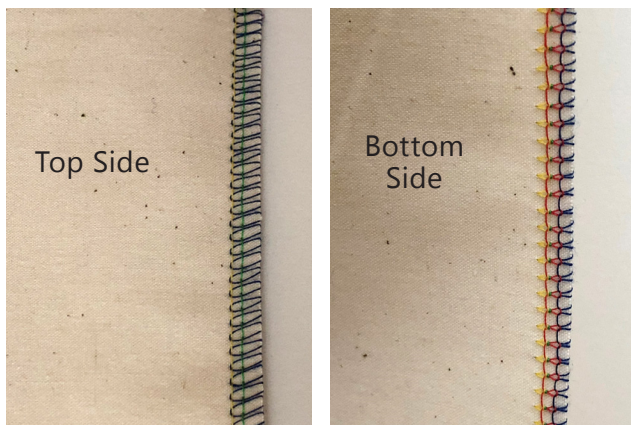
 4 Spools Serger Thread (B, R, G, Y)

 4-Thread Overlock Stitch #1

 C 11

Compare your sewn samples to the images in the Stitch Optimizer and consider the recommended corrective measure for each issue.

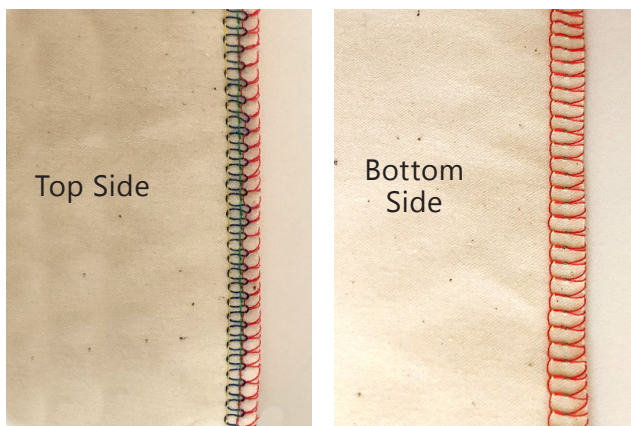
### Lower Looper Tension Too Tight



### Lower Looper Tension Too Tight

1. Adjust the lower looper tension to the highest setting of 9.
2. Fold the fabric in half to 5" x 10" and sew the seam along the fold, trimming off a slight amount.
3. Look at the stitch. When the lower looper is too tight, the upper thread (blue) is pulled to the back.
4. Label the sample "Lower Looper Tension Too Tight".

### Lower Looper Tension Too Loose








### Lower Looper Tension Too Loose

1. Now adjust the tension setting to the lowest setting of 1 and sew the seam on the opposite side.
2. Examine the stitch formation. When it is too loose, the lower looper (red) thread is pulled to the front.
3. Label the sample "Lower Looper Too Loose".
4. Touch clr to put the lower looper setting back to the default of 4.

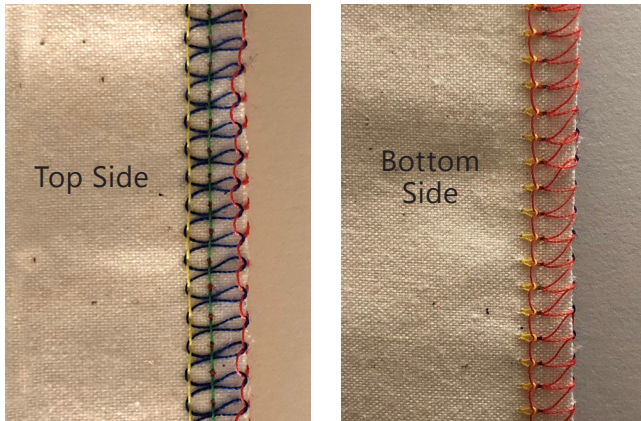


# TENSION SETTINGS: RIGHT NEEDLE THREAD TENSIONS

-  Firm fabric such as muslin, 10" x 10"
-  80/12 ELX705
-  4 Spools Serger Thread (B, R, G, Y)
-  4-Thread Overlock Stitch #1)
-  C 11

Compare your sewn samples to the images in the Stitch Optimizer and consider the recommended corrective measure for each issue.

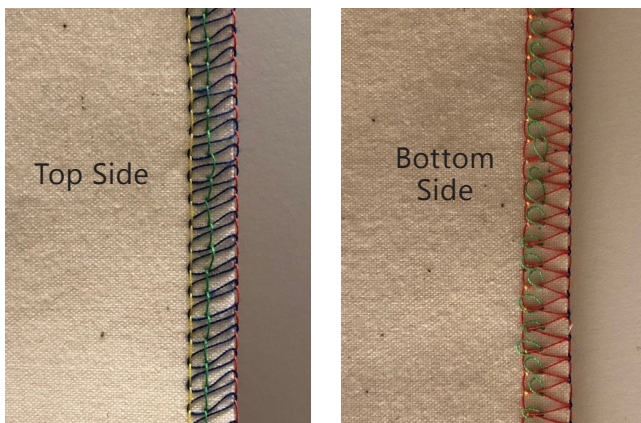
## Right Needle Tension Too Tight



## Right Needle Tension Too Tight

1. Adjust the right needle tension to the highest setting of 9.
2. Fold the fabric in half to 5" x 10" and sew the seam along the fold, trimming off a slight amount.
3. Look at the stitch. You might have noticed when you sewed the seam that the fabric wanted to pucker more. You might also notice a bit of the lower looper (red thread) showing up on the edge of the seam. From the bottom side, you may notice that the left needle thread is being pulled up.
4. Label the sample "Right Needle Tension Too Tight".

## Right Needle Tension Too Loose



## Right Needle Tension Too Loose

1. Now adjust the tension setting to the lowest setting of 1 and sew the seam on the opposite side.
2. Examine the stitch formation. Notice how you can now see the needle thread making loose loops on the front and on the back of the fabric.
3. Label the sample "Right Needle Tension Too Loose".
4. Touch clr to put the right needle tension setting back to the default of 4.

## TENSION SETTINGS: LEFT NEEDLE THREAD TENSIONS

 Firm fabric such as muslin, 10" x 10"

 80/12 ELX705

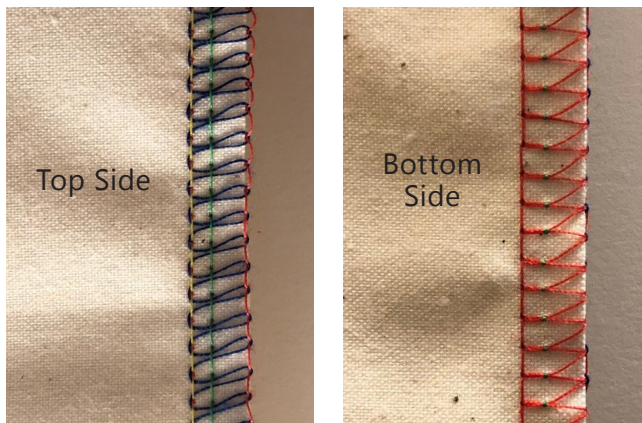
 4 Spools Serger Thread (B, R, G, Y)

 4-Thread Overlock Stitch #1

 C 11

Compare your sewn samples to the images in the Stitch Optimizer and consider the recommended corrective measure for each issue.

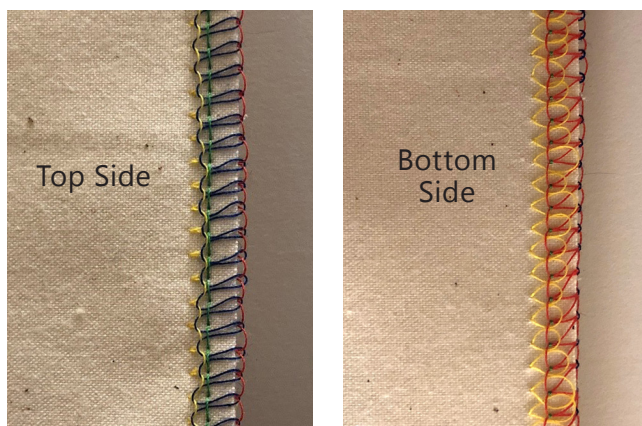
### Left Needle Tension Too Tight



### Left Needle Tension Too Tight

1. Adjust the left needle tension to the highest setting of 9.
2. Fold the fabric in half to 5" x 10" and sew the seam along the fold, trimming off a slight amount.
3. Look at the stitch. You may see some of the red thread showing up on the front side of the seam, but also the stitch will appear to "tunnel" or scrunch up more when sewing.
4. Label the sample "Left Needle Tension Too Tight".






### Left Needle Tension Too Loose

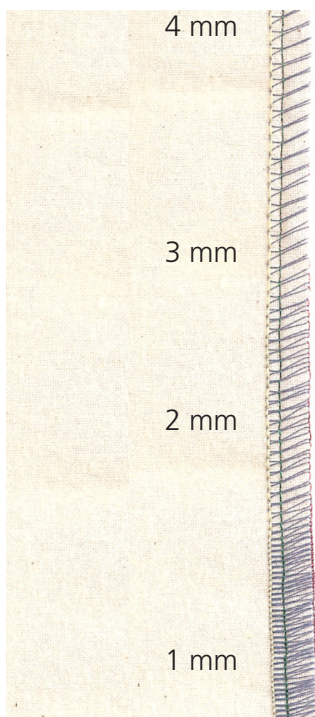
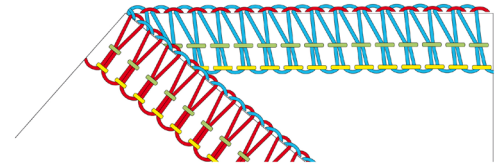


### Left Needle Tension Too Loose

1. Now adjust the tension setting to the lowest setting of 1 and sew the seam on the opposite side.
2. Examine the stitch formation. You will notice that on the back of the seam you will see the yellow thread being pulled by the loopers.
3. Label the sample "Left Needle Too Loose".
4. Touch clr to put the left needle tension setting back to the default of 4.

# STITCH LENGTH

-  Firm fabric such as muslin, 10" x 10"
-  80/12 ELX705
-  4 Spools Serger Thread (B, R, G, Y)
-  4-Thread Overlock Stitch #1
-  C 11








Using the balanced 4-thread overlock stitch from the previous exercise, follow the instructions below to adjust the stitch length.

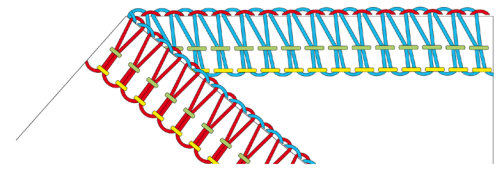
1. Fold the fabric in half to 5" x 10".
2. Using a fabric marker, divide the fabric into four equal sections along the folded edge.
3. Adjust the stitch length to 4.5 mm. Sew to the first mark along the folded edge, trimming folded edge a slight amount.
4. Adjust the stitch length to 3 mm and sew to the second mark.
5. Adjust the stitch length to 2 mm and sew to the third mark.
6. Adjust the stitch length to 1 mm and sew to the end.
7. Mark the stitch length settings on the fabric sample.
8. Touch clr to return stitch length to its normal setting of 2.5 mm.

**NOTE:** *Stitch length adjustments may be needed to accommodate thicker or thinner threads or different weights of fabric, as well as being used for decorative effects.*

General guidelines for stitch length settings	
2.5 mm	Standard setting
1-2 mm	Rolled hems and decorative edges
2.5-4 mm	Heavy weight fabrics
3-4 mm	Gathering and applying elastic

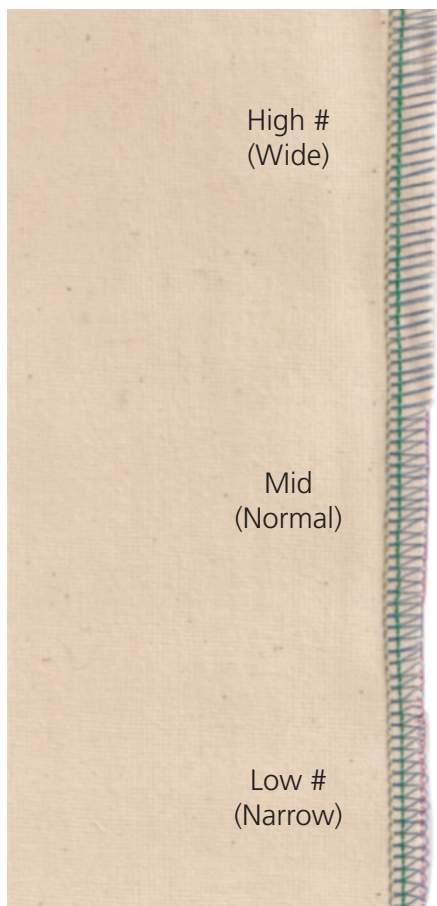
# CUTTING WIDTH

-  Firm fabric such as muslin, 10" x 10"
-  80/12 ELX705
-  4 Spools Serger Thread (B, R, G, Y)
-  4-Thread Overlock Stitch #1
-  C 11



Using the balanced 4-thread overlock stitch from the previous exercise, follow the instructions below to adjust the cutting width" overlocker should be threaded for a 4-thread overlock stitch using thread colors to match the color-coded threading path on the overlocker.

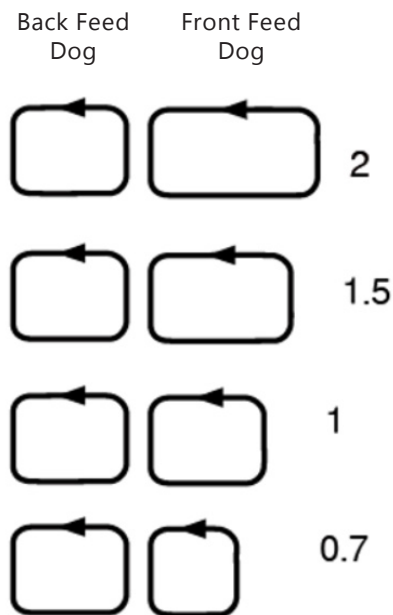
1. Fold the fabric in half to 5" x 10".
2. Using a fabric marker, divide the fabric into three equal sections along the folded edge.
3. Adjust the Cutting Width knob to the widest setting (9). Sew to the first mark on the fabric, stopping when the knife edge is on the mark.
4. Reduce the cutting width to 7 and overlock to the second mark.
5. Turn the dial again to adjust the cutting width to the lowest setting (5) and overlock to the end of the fabric.
6. Mark the cutting width settings on the fabric sample.
7. Return cutting width to its normal setting (6).



# UNDERSTANDING DIFFERENTIAL FEED






Differential feed is a feature found on most overlockers today, but it takes some understanding to fully comprehend the benefits for your sewing. Did you realize that your overlocker has two sets of feed dogs that move the fabric through the machine? This gives you a mechanical advantage for controlling the fabric and when you adjust differential feed, you are in fact adjusting the rate at which the front feed dog moves.

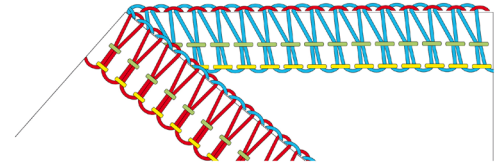
Look at the diagram and the Differential Feed Dial and settings together. When the differential feed is set at 2, the front feed dog is moving at twice the rate of the back feed dog. This can compensate for fabrics that want to stretch out or "wave" while stitching, or create a gathering effect on other fabrics.



Setting	Effect
2	Gathering or Stretching Compensation
1.5	Light Gathering
1	Neutral, no effect (Standard)
0.7	Stretching

# DIFFERENTIAL FEED: STRETCHY FABRICS

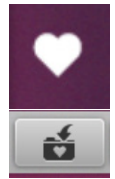
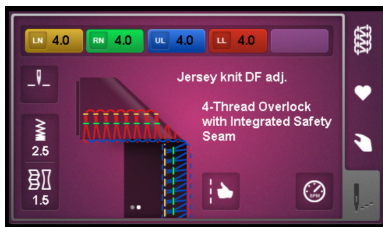
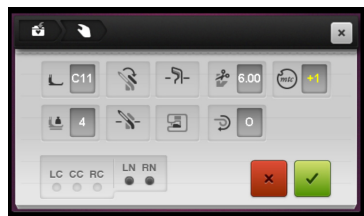
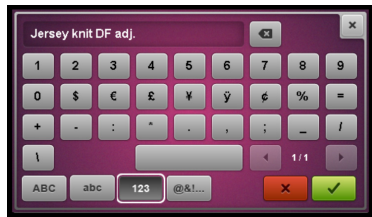
-  Jersey Knit, two pieces 10" x 10"
-  80/12 ELX705
-  4 Spools Serger Thread (B, R, G, Y)
-  4-Thread Overlock Stitch #1
-  C 11



Using the balanced 4-thread overlock stitch from the previous exercise, follow the instructions below to adjust the differential feed.

1. With the Differential Feed setting at 1 (normal preset), fold the fabric in half (5" x 10") and sew along the folded edge with the 4-thread overlock stitch.
2. Change the Differential Feed setting to 1.5, sew along the folded edge of the second fabric halfway to the end.
3. Adjust the differential feed setting to 2 and complete sewing the remainder of the fabric to the end.
4. Label the fabric samples with the differential feed settings and compare to find the ideal setting for the knit fabric you have.
5. Save the settings adjustments in Personal Memory using instructions on following page.






# PERSONAL MEMORY

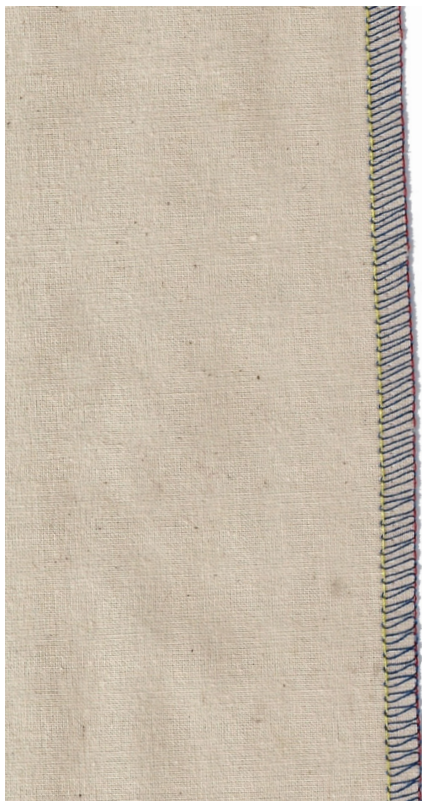
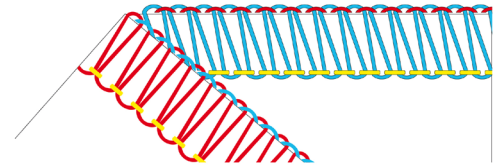


1. Select the Personal Memory tab.
2. Touch the Save to Folder icon.
3. Touch the stitch icon to give it a name.
4. Enter a stitch name for the stitch: Jersey Knit DF adjustment.
5. Touch the green check mark.
6. For practice: change the mtc setting on the manual settings screen to read +1 (any manual settings need to be recorded here for saved stitches—remember the machine does not do these things electronically, so this will serve as a reminder for you in the future). Navigate back to the manual settings in the breadcrumb path.
7. Touch the green check mark and you are redirected to the stitch view screen.
8. Touch the Personal Memory tab again to find your stitch and select your stitch.

**Tip:** Notice now that the Differential Feed settings and mtc setting are no longer yellow—as this is now registered as the default settings for your saved personal stitch.

# 3-THREAD OVERLOCK STITCH-WIDE

-  Firm fabric, 10" x 10"
-  80/12 ELX705
-  3 Spools Serger Thread (Y, R, B)
-  3-Thread Overlock Stitch #3)
-  C 11








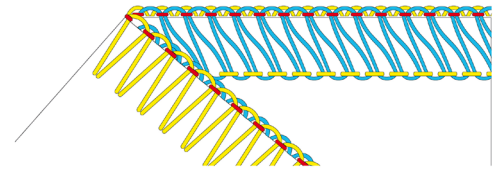
For this exercise, the overlocker will be threaded for a wide 3-thread overlock stitch using only the left needle and thread colors to match the color-coded threading path on the overlocker.

1. Select Stitch #3 and follow the steps in Guided Mode or make the noted manual settings in Expert Mode.
2. Using the small screwdriver and needle holder tool, remove the right needle and thread. Tighten the needle set screw after removing the right needle. The left needle will remain threaded.
3. Fold fabric in half to 5" x 10". Stitch along the folded edge of the fabric, trimming 1/4".



# 3-THREAD FLATLOCK - WIDE

-  Firm fabric, 10" x 10"
-  80/12 ELX705
-  3 Spools Serger Thread (Y, B, R)
-  3-Thread Flatlock Stitch (wide-Stitch #5)
-  C 11



For this exercise, the overlocker will be threaded for a wide 3-thread flatlock stitch using the left needle and thread colors to match the color-coded threading path on the overlocker.

*Note: If following the order of exercises in this Mastery book, the right needle was removed in the previous exercise so you will skip Step 2.*



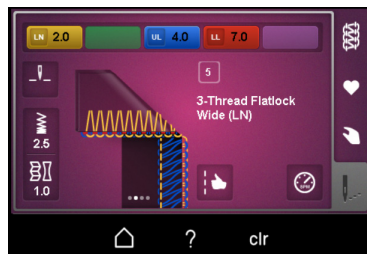
**Decorative Thread Tip:** A heavy thread such as YLI Jeans Stitch or Pearl Crown Rayon can be used in the looper for a more decorative look. When working with heavy decorative threads, loosen the upper looper tension and lengthen the stitch length as needed for the desired look.

1. Select Stitch #5 and follow the steps in Guided Mode or make the noted manual settings in Expert Mode.
2. Using the small screwdriver and needle holder tool, insert the left needle and remove the right needle. Tighten the needle set screw after inserting or removing needles.
3. Fold the fabric in half, wrong sides together, to 5" x 10".
4. Place the fold under the presser foot. Guide the fabric halfway between the left needle and the right edge of the stitch finger. This method allows the fabric to lay totally flat under the stitches.






Optionally, you may choose to trim the folded edge which will allow one fabric to lay on top of the other. This is the preferred method if using the flatlock stitch as a seam.

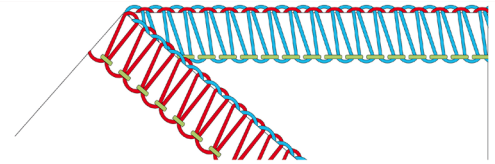
5. Slowly sew the fabric. The looper threads will extend beyond the fabric on the right side of fold.
6. Gently pull the fabric flat.

**Note:** The stitch preview of flatlock stitches show both the stitch "as stitched" and as it will look when pulled open. Touch the stitch preview to toggle between these views.



# 3-THREAD OVERLOCK STITCH-NARROW

-  Firm fabric, 10" x 10"
-  80/12 ELX705
-  3 Spools Serger Thread (Y, B, R)
-  3-Thread Overlock Stitch (narrow) Stitch #4
-  C 11








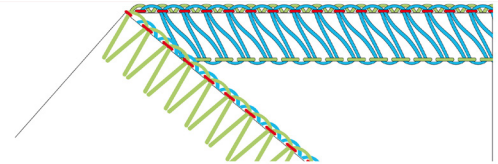
For this exercise, you will thread the overlocker for a 3-thread narrow overlock stitch using the right needle and thread colors to match the color-coded threading path on the overlocker. Adjust all thread tension settings for a balanced stitch as indicated below.

*Note: If following the order of activities in this Mastery book, the right needle was removed in the previous exercise. You will now be inserting the right needle and removing the left to complete this exercise.*

1. Select Stitch #4 and follow the steps in Guided Mode or make the noted manual settings in Expert Mode.
2. Using the small screwdriver and needle holder tool, loosen the right needle screw and insert the right needle. Tighten the needle set screw. Thread the needle.
3. Remove the left needle thread. Loosen the left needle set screw and remove the left needle.
4. Fold the fabric in half to a 5" x 10" rectangle and stitch along the fold of the fabric, trimming 1/4".
5. Using this same stitch, finish edge of one 10" side of the fabric to see how the stitch looks on a single layer.

# 3-THREAD FLATLOCK - NARROW

-  Firm fabric, 10" x 10"
-  80/12 ELX705
-  3 Spools Serger Thread (G, B, R)
-  3-Thread Flatlock Stitch (narrow) Stitch #6
-  C 11



For this exercise, the overlocker will be threaded for a narrow 3-thread flatlock stitch using the right needle and thread colors to match the color-coded threading path on the overlocker.

*Note: If following the order of activities in this Mastery book, the right needle was inserted and threaded, and the left needle and thread was removed in the previous exercise. If so, you will skip Steps 2 and 3.*








**Decorative Thread Tip:** A heavy thread such as YLI Jeans Stitch or Pearl Crown Rayon can be used in the looper for a more decorative look. When working with heavy decorative threads, loosen the upper looper tension and lengthen the stitch length as needed for the desired look.

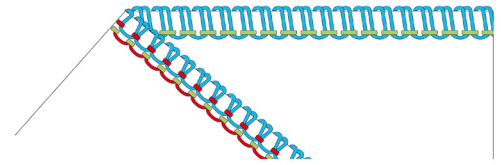
1. Select Stitch #6 and follow the steps in Guided Mode or make the noted manual settings in Expert Mode.
2. Using the small screwdriver and needle holder tool, loosen the right needle screw and insert the right needle. Tighten the needle set screw. Thread the needle.
3. Remove the left needle thread. Loosen the left needle set screw and remove the left needle.
4. Fold the fabric in half, wrong sides together, to 5" x 10".
5. Place the fold under the presser foot. Guide the fabric halfway between the left needle and the right edge of the stitch finger. This method allows the fabric to lay totally flat under the stitches.

Optionally, you may choose to trim the folded edge which will allow one fabric to lay on top of the other. This is the preferred method if using the flatlock stitch as a seam.

6. Slowly sew the fabric. The looper threads will extend beyond the fabric on the right side of fold.
7. Gently pull the fabric flat.

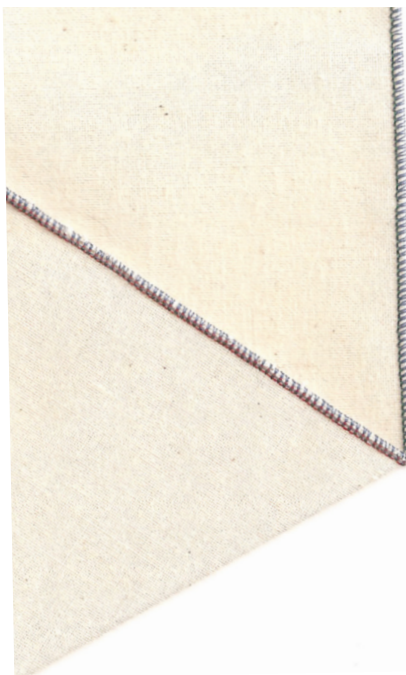
# 3-THREAD ROLLED HEM

-  Firm fabric, 10" x 10"
-  80/12 ELX705
-  3 Spools Serger Thread (B, R, G)
-  3-Thread Rolled Hem Stitch #8
-  C 11



For this exercise, the overlocker will be threaded for a narrow 3-thread rolled hem stitch using the right needle. Thread with colors to match the color-coded threading path on the overlocker.

*Note: If following the order of activities in this Mastery book, the right needle was inserted and threaded, and the left needle and thread was removed in a previous exercise. If so, you will skip Steps 2 and 3.*








- The Rolled Hem Selection Lever moves the stitch finger in and out of position.
- Push the lever forward (O on the L 850) for normal sewing so the stitch can form over it, keeping the fabric flat.
- Pull the lever toward you (R on the L 850) so the fabric edge can roll when stitching a rolled edge.

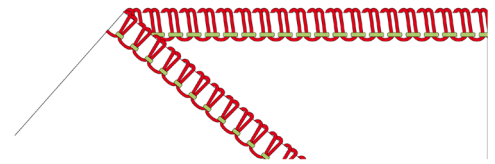
1. Select Stitch #8 and follow the steps in Guided Mode or make the noted manual settings in Expert Mode.
2. Using the small screwdriver and needle holder tool, loosen the right needle screw and insert the right needle. Tighten the needle set screw. Thread the needle.
3. Remove the left needle thread. Loosen the left needle set screw and remove the left needle.
4. Disengage the stitch finger by placing the Rolled Hem Selection Lever in the "R" position.
5. Start the machine and run a chain for several inches so that you have a thread tail to aid in getting the fabric started.
6. Place the fabric under the presser foot and sew along one 10" edge.
7. Return stitch length and thread tensions to their normal setting.
8. Return the Rolled Hem Selection Lever to normal sewing position.

Optional: Thread the Upper Loper with **texturized nylon thread** in the upper looper. Loosen the Upper Loper tension slightly from the settings listed below.



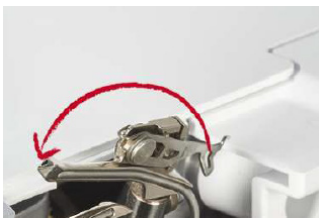
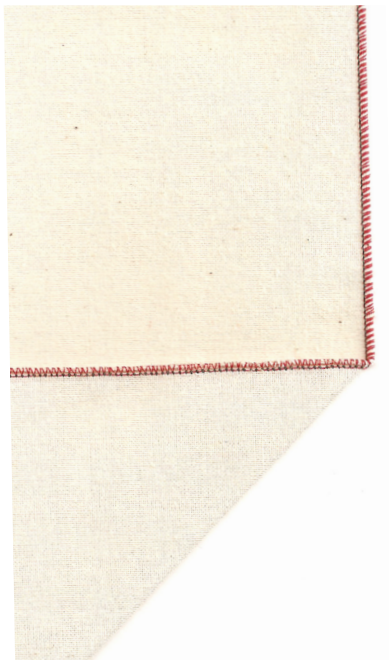
## 2-THREAD ROLLED HEM

-  Lightweight fabric, 5" x 10"
-  80/12 ELX705
-  3 Spools Serger Thread (R,G)
-  2-Thread Rolled Hem Stitch #13
-  C 11








For this exercise, the overlocker will be threaded for a 2-thread rolled hem stitch using the right needle and threaded with colors to match the color-coded threading path on the overlocker.

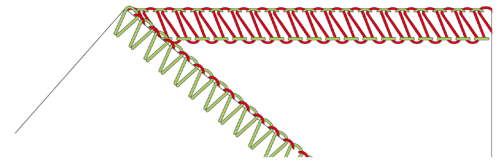
*Note: If following the order of activities in this Mastery book, the right needle was inserted and threaded, and the left needle and thread was removed in the previous exercise. If so, you will skip Steps 2 and 3.*



1. Select Stitch #13 and follow the steps in Guided Mode or make the noted manual settings in Expert Mode.
2. Using the small screwdriver and needle holder tool, loosen the right needle screw and insert the right needle. Tighten the needle set screw. Thread the needle.
3. Remove the left needle thread. Loosen the left needle set screw and remove the left needle.
4. Attach the Upper Looper Converter to the upper looper. See Diagram below.
5. Disengage the stitch finger by placing the Rolled Hem Selection Lever in the "R" position.
6. Start the machine and run a chain for several inches so that you have a thread tail to hold as an aid in getting the fabric started.
7. Place the fabric under the presser foot and sew along one 10" edge, trimming about 1/4" from the raw edge.
8. Return stitch length and thread tensions to their normal setting.
9. Return the Rolled Hem Selection Lever to normal sewing position.

## 2-THREAD FLATLOCK - NARROW

-  Firm fabric, 10" x 10"
-  80/12 ELX705
-  2 Spools Serger Thread (R, G)
-  2-Thread Flatlock Narrow Stitch #12
-  C 11



Thread the overlocker for a *narrow* 2-thread flatlock stitch using the right needle and threaded with colors to match the color-coded threading path on the overlocker.

*Note: If following the order of activities in this Mastery book, the right needle was inserted and threaded, and the left needle and thread was removed in the previous exercise. If so, you will skip Steps 2 and 3.*


1. Select Stitch #12 and follow the steps in Guided Mode or make the noted manual settings in Expert Mode.
2. Using the small screwdriver and needle insertion tool, insert the right needle. Remove the left needle. Tighten the needle set screw after removing the needle.
3. Attach the Upper Loooper Converter to the upper looper.
4. Fold the fabric in half to 5" x 10". Place the fold under the presser foot. Guide the fabric halfway between the left needle and the right edge of the stitch finger. This method allows the fabric to lay totally flat under the stitches.

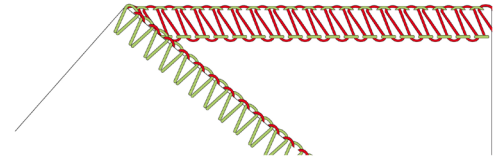
**Optionally**, you may choose to trim the folded edge which will allow one fabric to lay on top of the other. This is the preferred method if using the flatlock stitch as a seam.

5. Slowly stitch the fabric. The looper threads will extend beyond the fabric on the right side of fold.
6. Gently pull the fabric flat. Note: Before the fabric is pulled flat to create the flatlock stitch, the threads form a 2-thread balanced stitch with the threads connecting at the edge of the fabric. This stitch is not strong enough for seaming, but can be used as an edge finish for light to medium weight fabrics.



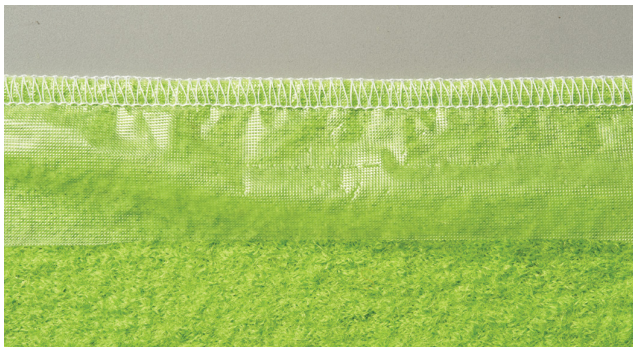
## 2-THREAD BLANKET STITCH NARROW

-  Fleece fabric, 5" x 10"  
5" x 10" SticH20
-  80/12 ELX705
-  2 Spools Serger Thread (R,G)
-  2-Thread Blanket Stitch #29 (narrow)
-  C 11








Thread the overlocker for a *narrow* 2-thread blanket stitch using the right needle and threaded with colors to match the color-coded threading path on the overlocker.

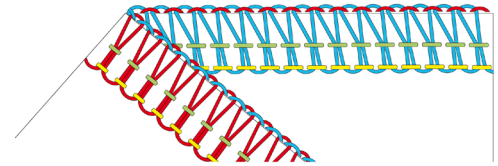
*Note: If following the order of activities in this Mastery book, the right needle was inserted and threaded, and the left needle and thread was removed in the previous exercise. If so, you will skip Steps 2 and 3.*



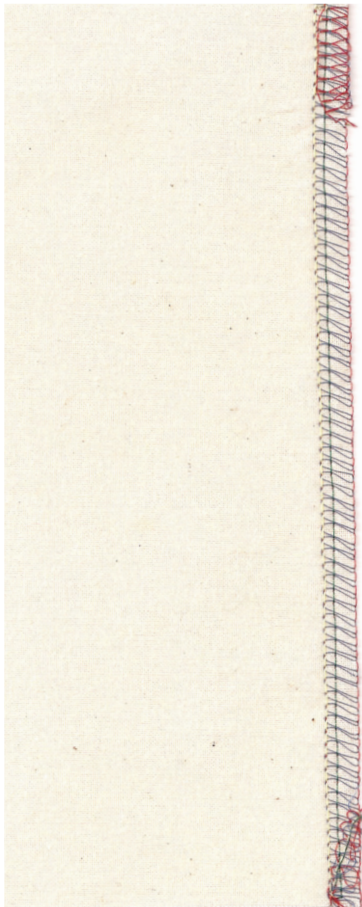
1. Select Stitch #29 and follow the steps in Guided Mode or make the noted manual settings in Expert Mode.
2. Using the small screwdriver and needle insertion tool, insert the right needle. Remove the left needle. Tighten the needle set screw after removing the needle. Attach the Upper Looper Converter to the upper looper.
3. Place the SticH20 on top of the fabric and under the presser foot. Guide the fabric so that a small amount of the fabric and SticH20 is cut off.
4. Slowly stitch the fabric.
5. Carefully and gently pull the SticH20 to the edge of the fabric. This will pull the needle thread to the edge of the fabric and the lower looper threads will appear on the top of the fabric, resembling a hand-stitched blanket stitch.
6. Wash away the water-soluble stabilizer.
7. Using the small screwdriver and needle insertion tool, insert the left needle. Tighten the needle set screw after inserting the needle.
8. Remove the Upper Looper Converter. Return stitch length and thread tension dials to normal.
9. Rethread the loopers and both needles.

# OVERLOCKER TECHNIQUES: SECURING SEAMS

-  Firm fabric, 10" x 10"
-  80/12 ELX705
-  4 Spools Serger Thread (B, R, G, Y)
-  4-Thread Overlock Stitch #1
-  C 11








Thread the overlocker for a 4-thread overlock stitch using thread colors to match the color-coded threading path on the machine.

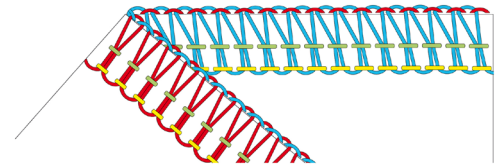


1. Select Stitch #1 and follow the steps in Guided Mode or make the noted manual settings in Expert Mode.
2. Sew a 2"-3" thread chain without fabric.
3. Fold fabric in half to 3" x "6" and place under the presser foot.
4. Take 2-3 stitches on the fabric. Lower the needles into the fabric. Raise the presser foot, and with your left hand gently pull the thread chain around and in front of the needles to the knife.
5. Lower the presser foot and sew over the thread chain approximately 1", and then trim the thread chain with the knife.
6. Continue stitching. At the end of the fabric, sew just off the edge of the fabric. Carefully pull the threads off the stitch finger by placing the Rolled Hem Selection Lever in the "R" position temporarily.
7. Raise the presser foot and carefully turn the fabric over so that the lower looper side of the previously stitched seam will be overstitched.
8. Place the fabric under the presser foot so that the first stitch will enter the fabric when you begin stitching.
9. Engage the stitch finger by placing the Rolled Hem Selection Lever back in the "N" position..
10. Sew for about 1", overstitching the previous stitching. Guide the fabric so as not to cut the previous stitching.
11. Raise the toe of the presser foot and rotate the fabric 90° clockwise.
12. Stitch off the edge of the fabric.



# OVERLOCKER TECHNIQUES: INSIDE CORNER

-  Firm fabric, 10" x 10"
-  80/12 ELX705
-  4 Spools Serger Thread (B, R, G, Y)
-  4-Thread Overlock Stitch #1
-  C 11



Thread the overlocker for a 4-thread overlock stitch using thread colors to match the color-coded threading path on the machine.

## INSIDE CORNER

**NOTE:** This technique works well for continuous plackets on sleeves and back neck openings.

1. Select Stitch #1 and follow the steps in Guided Mode or make the noted manual settings in Expert Mode.
2. Cut an inside corner into the fabric.
3. Snip into the corner about ¼" (the width of the stitching). See Image 1.
4. Sew until the knife reaches the end of the cut.
5. Use the handwheel to lower the needle into the fabric.
6. Lift the presser foot and straighten the corner placing the fabric in front of the presser foot. See Image 2.
7. Lower the presser foot; continue sewing in a straight line. See Image 3.

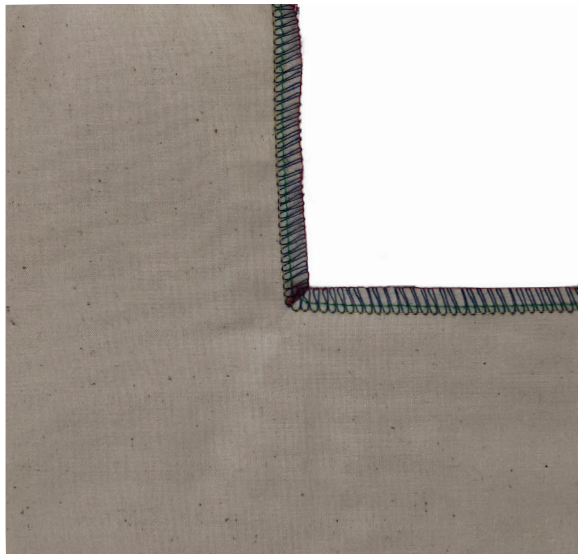


Image 1

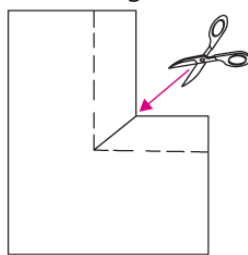


Image 2

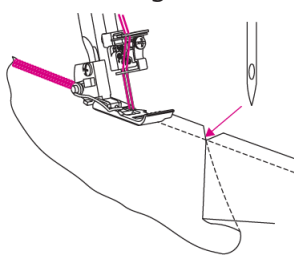
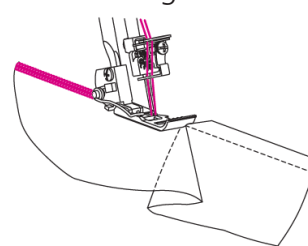





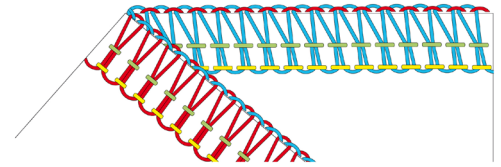


Image 3



# OVERLOCKER TECHNIQUES: OUTSIDE CORNER

-  80/12 ELX705
-  80/12 130/705H
-  4 Spools Serger Thread (B, R, G, Y)
-  3-Thread Overlock Stitch #1
-  C 11



Thread the overlocker for a 4-thread overlock stitch using thread colors to match the color-coded threading path on the machine.

## OUTSIDE CORNER: OPTION 1



## OUTSIDE CORNER: OPTION 2



### OutSIDE CORNER: OPTION 1

1. Select Stitch #1 and follow the steps in Guided Mode or make the noted manual settings in Expert Mode.
2. Sew one edge of the fabric, sewing off the end of the fabric.
3. Continue stitching around the square, crossing over previous stitching.
4. Use a seam sealant on the untrimmed thread tails (or use a tapestry needle to weave the thread tail back through the stitching). When the seam sealant is dry, trim the thread tails.

### OUTSIDE CORNER: OPTION 2

1. Before sewing, trim away the seam allowance ( $\frac{1}{4}$ " for about 2" on each corner of the square.
2. Beginning at one trimmed corner, stitch (trimming very slightly as you sew) to the end of the fabric. Take one stitch off the end of the fabric.
3. Release the stitch finger by placing the Rolled Hem Selection Lever into the "R" position.
4. Lift the presser foot and carefully pivot the fabric 90° clockwise.
5. Engage the stitch finger by returning the Rolled Hem Selection Lever to the "N" position.
6. Place the needle one stitch into the fabric and lower the presser foot.
7. Continue sewing until you are one stitch off the next corner. Repeat the turning procedure and continue stitching.

# REFERENCE - OVERLOCKER NEEDLES

## BERNINA Overlocker Needles

Along with thread, needles are very important to stitch formation. Many mechanical problems and damage to fabrics can be traced to a bent, damaged, or incorrect size or type needle.

When selecting the correct needle, consider the following:

- Recommended needle system for L 890 – ELX705. These needle are a flat shank needle. A pack of these needles is included with the overlocker.
- Recommended sizes for your overlocker are 70/11, 80/12 and 90/14. Larger needles can interfere with looper movement and cause damage; smaller needles may not form the stitches correctly.
- Needle point – assures proper stitch formation; avoids fabric damage
- You may use needle systems other than those recommended to accommodate the usage of certain specialty needles (stretch, Microtex, etc), but keep in mind that adjustments to tensions may be required for a proper stitch formation.

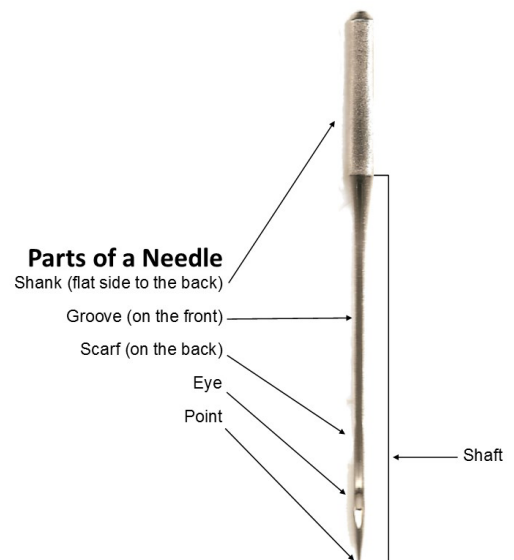
### Needle Size for Fabrics

- 70 – shirt-weight
- 80 – medium-weight
- 90 – denim and twill

## Need to Know

- Always make sure needles are fully inserted as high as possible, with the flat side to the back. The left needle will appear to be slightly higher than the right needle.
- Do not pull or push fabric while sewing. This can result in needle breakage or damage.
- Do not use bent or damaged needles.
- The needle is the most inexpensive part in your sewing machine, but it is crucial for getting good results and keeping your machine running well.
- The selected thread should fit in the groove on the front of the needle. If it isn't protected by the groove, a needle with a larger groove should be used.

**Tip:** If one needle breaks, it is a good habit to change both needles. Keeping the needle size and type the same results in a better formed stitch.



# REFERENCE - OVERLOCKER THREADS

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## Overlocker Threads

Overlocker threads are usually polyester and are finer (lighter weight) than many sewing machine threads to avoid thread build-up and excessive bulk in seams. It is important that the thread is smooth and without variations in diameter as it needs to feed smoothly through many thread guides for good stitch formation.

You also want a good-quality thread – such as Mettler Seracor – that is not “fuzzy” and does not leave excessive lint in the lower part of your overlocker. Overlocker threads are sold on larger spools for economy and convenience; regular spools of thread may be used but will not last very long when forming overlock stitches. Along with overlocker thread, there are applications that call for specialty and decorative threads.

Listed below are some of these threads commonly used in the overlocker:

- Texturized Nylon Thread – such as YLI Woolly Nylon, Maxi-Lock Stretch or Wonderfil SoftLoc—A very elastic thread with excellent coverage; perfect for rolled edges and knit seams.
- Topstitching Thread – such as YLI Jeans Stitch, Mettler Cordonnet, Aurifil 12wt Cotton and Wonderfil Spagetti – this heavy thread is used for decorative stitching (flatlocked seams and overcast edges). Also nice for cover and chain stitching. Topstitch thread can be polyester or cotton.
- Rayon Decorative Threads – such as YLI Pearl Crown Rayon & YLI Designer 6 – shiny threads for decorative applications. Pearl Crown Rayon is twisted, while Designer 6 is untwisted. Available in solid and variegated colors.
- Metallic Decorative Threads – add a bit of glitz to seams and edgings.
- Decorative Sewing Threads – sewing machine threads can also be used in the overlocker, and are particularly effective when several are used together as one thread.
- **TIP:** Avoid using threads with heavy wax coatings in the L 850 air threading system. Coated or waxed threads may lose some of their coating in the air threader pipes, resulting in permanent blocking of the pipes. Repair by a BERNINA dealer will be necessary.



# SUPPLIES

<b>NEEDLES AND THREADS</b>
80/12 ELX705 Needles
4 Spools Serger Thread (blue, red, green, yellow)
Texturized nylon thread (optional)
Pearl Crown Rayon thread (optional)

<b>FABRICS FOR EXERCISES PAGES 6 THROUGH 19</b>		
QUANTITY	SIZE	FABRIC
17	10" x 10"	Firm Fabric such as: <ul style="list-style-type: none"> <li>• Heavy muslin</li> <li>• High-quality quilting cotton</li> <li>• Medium weight denim</li> </ul>
2	10" x 10"	Lightweight tricot/fabric
1	5" x 10"	Lightweight Fabric
1	5" x 10"	Fleece

<b>FABRICS FOR OPTIONAL OVERLOCKER TECHNIQUE PAGES 32 THROUGH 34</b>		
QUANTITY	SIZE	FABRIC
3	10" x 10"	Firm Fabric such as: <ul style="list-style-type: none"> <li>• Heavy muslin</li> <li>• High-quality quilting cotton</li> <li>• Medium weight denim</li> </ul>
1	3" x 12"	Lightweight Fabric