



Education by Baby Lock & Designer's Gallery

EmbroideryWorks™ ADVANCED —

Fine Tuning Your Designs

Now that you have taken the “EmbroideryWorks Basics” class and have a good working knowledge of the basics in this incredible program, you are ready to move on and explore the additional features EmbroideryWorks Advanced has to offer. This class is designed to give you an overview of the additional features that help you fine tune and take your designs to the next level...and make them better serve your project vision. Some of the EmbroideryWorks Advanced features included in this class are Stitch Editor; Perfect Placement, StitchPerfect processor; Advanced Design Splitting; and MORE!

This class is an “Advanced” level class so it does get technical because of the nature of the options discussed.

This class assumes you have already taken the Sew at Home “EmbroideryWorks Basics” Part 1 & Part 2 classes before taking this class. The basic features may be used in the class exercises but the fine points on how and why are not discussed in this class or handout.

The designs used in the class exercises written in the handout are provided as part of the class unless otherwise indicated. They are provided as zipped files and you will need to unzip the files to use for class...you may even want to create a class folder so you know where to find your designs.

All instructions are written as a left mouse click less otherwise instructed.

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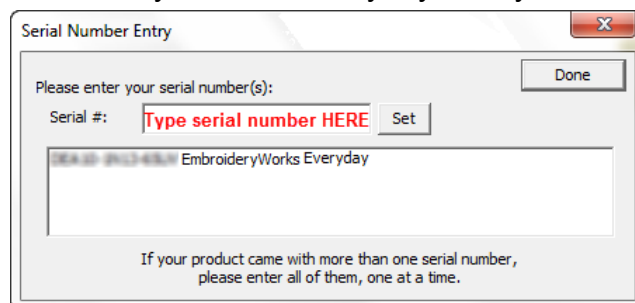
Opening Program:

1. Open the EmbroideryWorks program by **double clicking** on the **desktop**  icon.

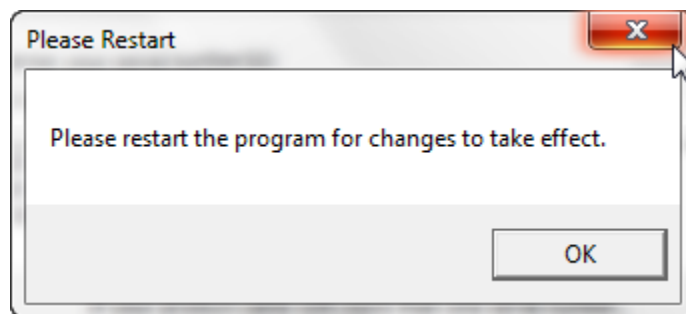
Activating your EmbroideryWorks Advanced features:

You started by installing the EmbroideryWorks™ Everyday program and then the EmbroideryWorks™ Advanced program...but you can't find the new advanced tools? You need to activate the license for the advanced tools using the advanced serial number to turn the additional tools on.

1. Click on **Help** menu then select **Serial Numbers....** The *Serial Number Entry* box will display.
 - If you have already activated the license for EmbroideryWorks™ Everyday then you would see the program and serial number listed in the box.
2. Place your cursor in the **Serial #** field and **enter** your EmbroideryWorks Advanced **serial number**.
3. Click the **Set** button.

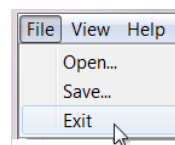


- If you are opening the program for the first time and the field is blank, you will need to enter the serial number for both programs and **Set** each one.
- 4. Click the **Done** button.
- 5. The *Please Restart* box will display. Click **OK** button.
- 6. There are two ways to close the program.
 - a. Select the **X** in the upper right corner of the program screen.



OR

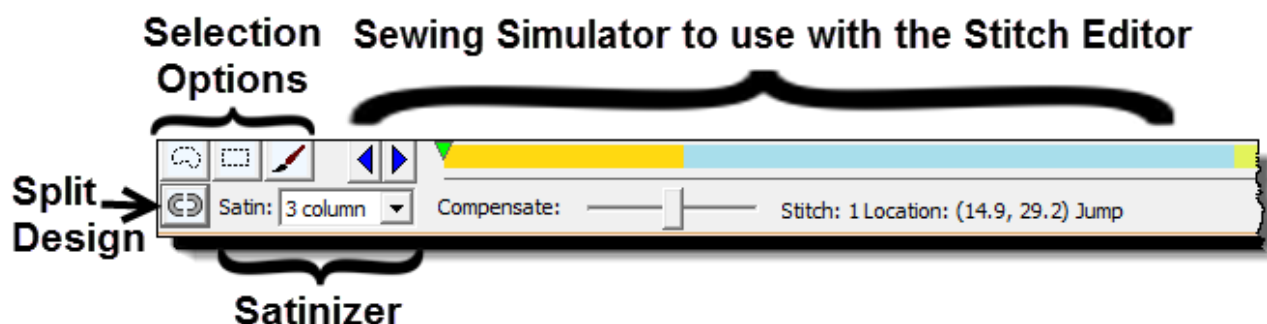
- b. Select **File** menu, then **Exit** from the drop down menu.



Stitch Editor:

The ability to edit individual stitches, change how a design section stitches out (fill vs. column) and/or easily split sections of a design into a separate design can all be very useful options...and EmbroideryWorks™ Advanced allows you to do these and more using stitch editing.

- Includes a variety of ways to select stitches including a sewing simulator.
- Includes the ability to split a selected set of stitches into separate design.
- Can change selected section stitching type to fill, satin, or 2 - 3 column fill.

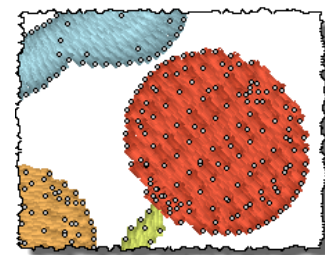



General information:

- When the Stitch Editor mode is on:
 - The *Tool Pane* changes to the *Stitch Edit controls*.
 - The stitch points display automatically in the design(s) on your workspace.

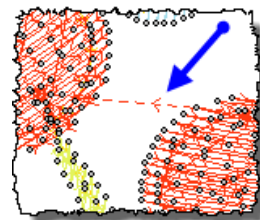
Good to know:


- The *Stitch Edit mode* can be turned on with or without a design on your workspace.



- If you turn off the 3D :




- ~ You will be able to see the jump-stitches.
- ~ There are also arrows displayed on the jump-stitch and other stitching lines to indicate the direction of the stitches. This helps determine 'before' or 'after'. The arrow on each stitch points toward the next stitch as the design would stitch.
- ~ There are times when it is easier to see and/or select the stitches you want with the 3D turned off.



- You may want to use such options as *Lock and Hide*  option in the *Object View* to make it easier to select the stitches you want.
- You must select one or more stitches or section of your design before using any of the stitch editing features.

Selection options:

There are 3 selection options:

-  **Freehand select**: this allows you to left click around a shape free-form. All stitches within the selected area are then highlighted (selected).
-  **Rectangle select**: this option allows you to left click and drag a selection box around desired stitches/areas.
-  **Brush select**: this option allows you to select stitches by holding down the left mouse button and sweeping the pointer along the stitches.
- **Sewing Simulator**: you can use the simulator to help select individual stitch points.

Move backward or forward stitch by stitch



Move arrow back and forth to move through the stitches

Good to Know:

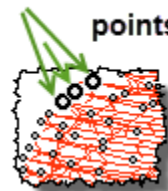
- Your mouse pointer does not change or look different when the different select options are selected. The one indented indicates the one selected.

For example here the *Brush select* is the one being used:




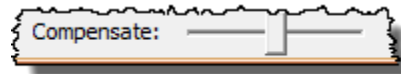
- When a stitch point is selected, it is displayed or highlighted as a circle.
- After stitch(s) are selected the selection tool automatically turns off.
- Notice that you can see the direction of the stitches when you are zoomed in.

Selected stitch points



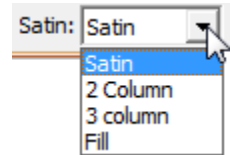
Other options on the Tool Pane:

-  **Split into stitches**: this option allows you to take the selected stitches and split them into a new/separate design.
- **Satinizer**: this option allows you to change selected section stitch type. There are 4 options- fill, satin, or 2 - 3 column fill
- There is a slider where you can adjust compensation to the selected



stitches or areas.

- ~ Adjusting this slider makes the outside stitches of stitches a bit longer (moving the slider to the right) or shorter (moving the slider to the left).



Good to Know

- *Compensate* can be useful when you have gaps in a stitch-out and would like to 'stretch' the stitches together, thus reducing or eliminating the gaps.
- You can also use *Compensate* to adjust the width of lettering you may have imported.

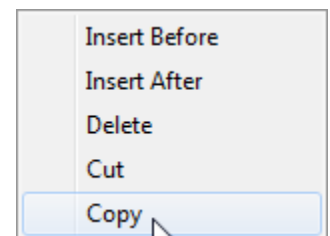
Individual Stitches:

- Once selected, a stitch(es) can be moved by click and dragging with a mouse movement.
- Once selected, a stitch(es) can be deleted by a right click menu








option or click the *Delete* button on your keyboard.

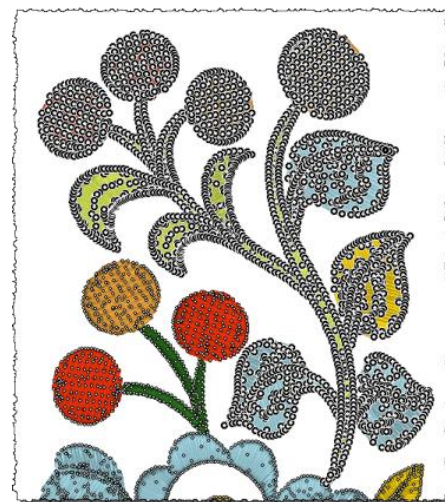
- You can add a stitch(es) before or after the selected stitch by using the correct right click menu option, *Insert Before*, *Insert After*.
- In the *Help* menu you will find under *Stitch Editing (Advanced)*, a "Keyboard Shortcuts" list. This list has all the ways you can use your key board to moved and select stitch points using your keyboard. You may want to print this out for reference if you like using key strokes as you work.



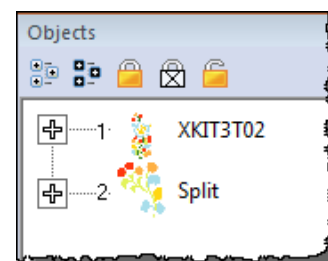
Exercise: Splitting a section into a new design:


1. Use either the **Open**  icon or **Merge stitch file**  icon on the Toolbar. Locate the embroidery designs given with the class download. Specifics on the difference and how the *Open* and *Merge stitch file* options work is discussed the "EmbroideryWorks Basics – Part 1", available both as an Interactive/Live or OnDemand/recorded Sew at Home class.
2. Select **XKIT3T02.pes (floral & berries)** design and click the **Open** or **Import** button as needed.
3. **Zoom** into the upper right hand section of the design using any zoom option needed. Zoom options are discussed the "EmbroideryWorks Basics – Part 1", available both as an Interactive/Live or OnDemand/recorded Sew at Home class.
4. Select the **Stitch Edit mode**  icon from the Toolbar.

5. Select the **Freehand select**  icon.
 - a. **Left click around** the top green stem of berries and leaves.
 - b. To de-select extra stitch points picked up by accident or to select a few you missed:
 - ~ Zoom in more as needed.
 - 1) Hold down the **CTRL**  key on your keyboard.
 - 2) **Click the stitch points** not wanted or were missed.
 - ~ You can also delete any extra stitches later.




6. Select the **Split into stitches**  icon.
 - Notice that there are now 2 designs listed in the *Objects* view.
 - The new design is named “Split”.
7. **Select the #2 Split** design in the *Objects* view.




8. Select the **Select Objects**  icon.
9. **Right click** on the workspace and choose **Copy** from the pop-up menu.


Good to Know:

- If you are still in *Stitch Edit mode* when you right click, the edit menu will be different. This menu will include a copy, but this will copy just the selected stitch(es) and not the whole design.

10. Select the **New**  icon to open a new design page.
11. **Right click** on the new page and choose **Paste** from the pop-up menu.
12. OPTIONAL as needed: delete sections or stitches not needed:

- a. Click the **+** next to the design in the *Objects* view.
- b. **Select** any **unwanted section(s)** and click the **Delete**  button on your keyboard.
- c. Use *Stitch Editing mode* options to delete individual stitches as needed.



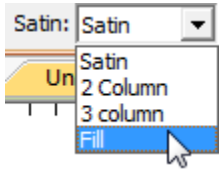
13. Save your new design version:



- a. Click the **Save**  icon.
- b. **Navigate** to where you want to save the design using the *Save in:* window.

- c. **Type** your design name in the *File name:* field. Use **Berries and Leaves** section for this design.
- d. Choose your **machine format**, if different than what you set in the *Preferences*, in the *Save as type:* field.
- e. Click the **Save** button.

Exercise: Converting stitches:

We're going to change how our new design segment will stitch out by using the Satinizer...to truly customize our new design.

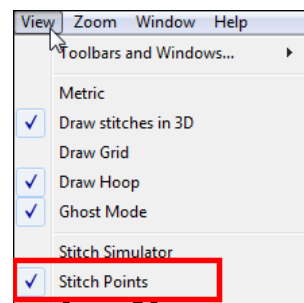
1. Select the **Stitch Edit mode**  icon from the *Tool Bar*.
2. Selecting the leaf sections:
 - a. Select segment **1:1** from the *Objects* view.
 - b. Hold down the **CTRL**  key on your keyboard and select segment **1:2** in the *Objects* view.
3. Select **Fill** from the *Satin:* menu.
 
 - Notice how the stitch points move.
 - Notice the stitch points are no longer selected.
4. Select segment **1:4** from the *Objects* view to select the red berries.
5. Select **2 Column** from the *Satin:* menu.
 - Notice how the stitch points move and there is a line of stitch points down the middle of each berry.
6. Select segment **1:5** from the *Objects* view to select the pumpkin berries.
 - Select **3 Column** from the *Satin:* menu.
 - Notice how the stitch points move and there are two lines of stitch points inside each berry.
7. To get a better look at how the design now looks:

- a. Select the **Select Objects**  icon.
- b. Click the *Objects* view **Select All**  icon.

WOW that so easy and look what a difference it made in how our design looks!

Good to Know:

- If your stitch points are still showing, then select the *View* menu, then de-select the *Stitch Points*.



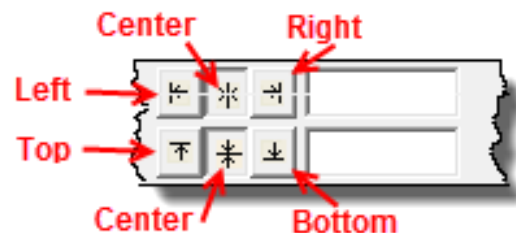
8. Save your revised design with a new name:
 - a. Click the **File** menu, then select **Save As... (Stitch and Working)** option.
 - b. **Navigate** to where you want to save the design using the *Save in:* window.
 - c. **Type revised** at the end of the current name making the new name “*Berries and Leaves section revised*” for this design.
 - d. Click the **Save** button.

Precise Position:

- This advanced feature allows you to automatically reposition and align designs based on the position of the original design and an x and y axis coordinate.
- There are 6 control buttons for Precise Position that helps determine where the selected design will be repositioned (left, right, center, top, bottom, and center).

General information:





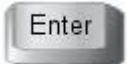


- You will want to start by selecting and displaying the hoop you are planning on using for your project. This will make it easier for you to figure out which *Precise Position* button you want to use.
- The three buttons on the top control the display of the x-axis (horizontal) position. The options are *Left*, *Center* and *Right*. For example if you selected the *Left* button, the display and placement will be based on left edge of the design.
- The three buttons on the bottom control the display of the y-axis (vertical) position. The options are *Top*, *Center* and *Bottom*. For example if you selected the *Bottom* button, the display and placement will be based on bottom edge of the design.
- The rulers along the top and left side of the design page can be VERY helpful in determining what you type into the blank position field.
 - ~ Notice the center of both rulers is “0”.
 - ~ To the left of center on the top ruler the numbers are all marked by a minus “-” and are considered negative numbers.
 - ~ To the right of center on the top ruler the numbers are considered positive numbers
 - ~ On the left ruler, below center the numbers are all marked by a minus “-” and are considered negative numbers.
 - ~ On the left ruler To the right of center on the top ruler the numbers are considered positive numbers

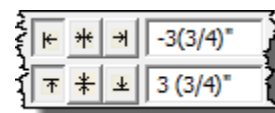
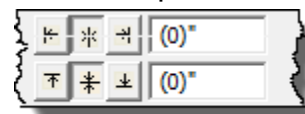


Good to Know:

- If you have your grid turned off, then with the hoop displayed you will see basically an “x and y” axis displayed. This can also be very helpful in figuring out which Precise Position button to use.

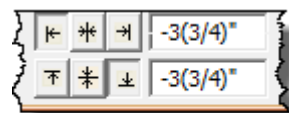
Exercise: General Precise Position example:

1. Select the **New**  icon to open a new design page.
2. If the hoop is not showing on the workspace, click **View** menu and then select **Draw Hoop**.
3. If on, turn off the grid by clicking on the **View** menu and then de-select **Draw Grid**.
4. Selecting the hoop:
 - a. Select the **Preferences**  icon.
 - b. Click **Normal** option for *Hoop Style*.
 - c. Select the machine format, if different from what you have been using. For our exercise, select **PES**.
 - d. Select the **200mm x 200mm**.
 - e. Click the **Apply** button, and then the **OK** button.
5. Use either the **Open**  icon or **Merge stitch file**  . Locate the embroidery designs given with the class download.
6. Select **Spring206.pes (frog)** design and click the **Open** or **Import** button as needed.
 - Notice the frog is in the center of the hoop, centered at the zero on both the top and left ruler.
7. Select the **frog** design.
 - Notice the *Precise Position* fields now also display 0" in both the horizontal and vertical fields. This is because it was placed in the center of the hoop.
8. To move the frog to the upper left portion of the hoop:
 - a. On the top row: select the **Center** button and type **-3.75** in the top field.
 - b. On the bottom row: select the **Center** button and type **+3.75** in the bottom field.
 - c. Click **Enter**  on your keyboard.
 - ~ Notice the frog has moved to the upper left corner but is shown on the hoop, not inside.
 - d. On the top row: select the **Left** button.
 - ~ Notice the number in the field changes automatically because it is representing the number that was already there but based on the new position.
 - e. Type **-3.75** in the bottom field and click **Enter**  on your keyboard.
 - f. On the bottom row: select the **Top** button and type **+3.75** in the bottom field.
 - g. Click **Enter**  on your keyboard.
 - ~ Notice the frog has moved to the upper left corner within the displayed hoop.



9. To move the frog to the lower left portion of the hoop:

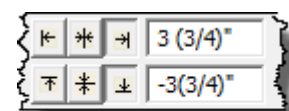
- On the top row: select the **Left** button and type **-3.75** in the top field.
- On the bottom row: select the **Bottom** button and type **-3.75** in the bottom field.



- Click **Enter**  on your keyboard.

10. To move the frog to the lower right portion of the hoop:

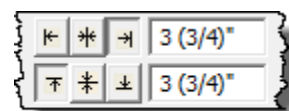
- On the top row: select the **Right** button and type **3.75** in the top field.
- On the bottom row: select the **Bottom** button and type **-3.75** in the bottom field.



- Click **Enter**  on your keyboard.

11. To move the frog to the upper right portion of the hoop:


- On the top row: select the **Right** button and type **+3.75** in the top field.
- On the bottom row: select the **Top** button and type **+3.75** in the bottom field.




- Click **Enter**  on your keyboard.

Exercise: Using Stitch Editing design with Precise Position

- Select the **Berries and Leaves section revised tab** to go back to that design page.
- Turn on the hoop display if not showing, click **View** menu and then select **Draw Hoop**.
- Selecting the hoop:

- Select the **Preferences**  icon.
- Select the machine format, if different from what you have been using. For our exercise, select **PES**.
- Select the **100mm x 100mm**.
- Click the **Apply** button, and then the **OK** button

4. If on, turn off the grid by clicking on the **View** menu and then de-select **Draw Grid**.

- Select the design and click the **Center design in hoop**  icon.
 - Don't worry if the *Precise Position* fields do not say 0". One of the other buttons beside *Center* may be selected.

6. Resize the design:

- Click on the **Scale proportionally**  icon to de-select .

- b. Type **85.0%** in the height field on the *Tool Pane*. Click **Enter**  on your keyboard.

7. Moving to upper right portion of the hoop:

- a. On the top row: select the **Right** button and type **+1.95** in the top field.
 b. On the bottom row: select the **Top** button and type **+1.95** in the bottom field.



- c. Click **Enter**  on your keyboard.

8. **Right click** and choose **Copy** from the pop-up menu. **Right click** and choose **Paste** from the pop-up menu.

9. Moving to upper left portion of the hoop:

- a. On the top row: select the **Left** button and type **-1.95** in the top field.
 b. On the bottom row: select the **Top** button and type **+1.95** in the bottom field.



- c. Click **Enter**  on your keyboard.

10. Click **Flip horizontal**  icon.

11. **Right click** and choose **Paste** from the pop-up menu.

- Remember you are pasting based on the original design placement in the upper right corner.

12. Moving to lower left portion of the hoop:

- a. On the top row: select the **Left** button and type **-1.95** in the top field.
 b. On the bottom row: select the **Bottom** button and type **-1.95** in the bottom field.



- c. Click **Enter**  on your keyboard.

13. Click **Flip horizontal**  icon.

14. Click **Flip vertically**  icon.

15. Moving to lower right portion of the hoop:

- a. On the top row: select the **Right** button and type **+1.95** in the top field.
 b. On the bottom row: select the **Bottom** button and type **-1.95** in the bottom field.



- c. Click **Enter**  on your keyboard.

16. Click **Flip vertically**  icon.

17. OPTIONAL: Use the *Color Sort* feature to eliminate extra color changes. This feature is discussed in the EmbroideryWorks Basics – Part 2 Sew at Home class.

18. OPTIONAL: Save the new design layout as desired.

WOW what a nice frame type design with perfectly aligned designs.

Advanced automatic stitch count adjustment tools:

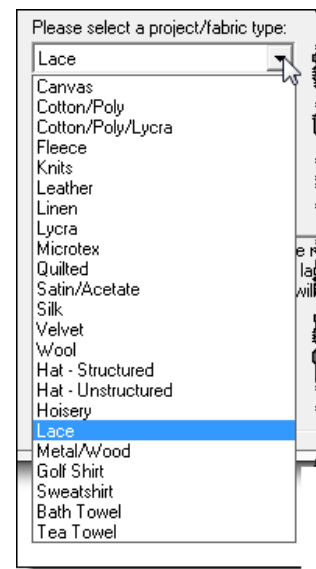
StitchPerfect:

When you purchase an embroidery design they don't really know what type of fabric you're going to stitch it on so they set the density, underlay and more based on an imaginary fabric called 'normal' fabric. The fabric you're stitching on may be quite different than that 'normal' fabric. This is where StitchPerfect is very useful because it automatically makes adjustments to your design.




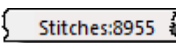
- The StitchPerfect system allows you to adjust your embroidery design so it will stitch out correctly based on a specific selected fabric type, fabric weight and stretch.
- The StitchPerfect option is found in the *Project Advisor*. For general information about the *Project Advisor* you may want to attend either the Live or OnDemand version of EmbroideryWorks Basics– Part 2 Sew at Home class.

Good to Know:


- There are 23 *project/fabric types* to choose from. You will want to choose the one that is close to the fabric you are planning on stitching on.
- There are 3 *Fabric thickness* (weights) to choose from: *Light*, *Medium*, and *Heavy*.
- There are 3 *Fabric stretch* amounts to choose from: *None*, *Some*, *A Lot*.
- There is a *StitchPerfect* button to apply the filters and one to 'un-do' the filters.
- Note, even though we are using just one design for our exercise, you could have many designs on the work space and StitchPerfect would make the adjustment for everything on the design page at the same time...you don't even have to have anything selected.

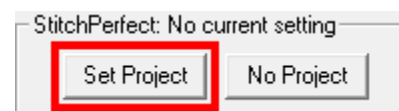


Exercise: StitchPerfect

1. Select the **New**  icon to open a new page.
2. Use either the **Open**  icon or **Merge stitch file**  icon. Locate the embroidery designs given with the class download.
3. Select **XKIT3T02.pes (floral & berries)** design and click the **Open** or **Import** button as needed.
 - Notice the status bar shows that the design currently has 8955 stitches. 

4. Using the *StitchPerfect* filter for Knit fabric:


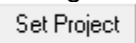
- a. Click on the **Project Advisor**  icon.
- b. Open the *project/fabric type:* menu and select **Knits**.
- c. Open the *Fabric thickness:* menu and select **Medium**.
- d. Open the *Fabric stretch:* menu and select **Some**.
 - ~ The information about the recommended needle type & size, thread, and stabilizers (Topping and/or Backing) is displayed.
 - ~ Other information about what and how to embroidery on knits is listed in the main window.
- e. Select the **Set Project** button in the *StitchPerfect* box.



~ Notice how the stitch count has changed.

Stitches:6897



5. Let's see another one, the *StitchPerfect* filter for Bath Towel:

- a. Click on the **Project Advisor**  icon.
- ~ Notice, the program still shows the last used fabric type- Knits
- b. Open the *project/fabric type:* menu and select **Bath Towel**.
 - ~ Notice, the program changed the *Fabric thickness* and *Fabric stretch* menus. We are going to leave these settings at default.
- c. Select the **Set Project**  button in the *StitchPerfect* box.

~ Notice how the stitch count has changed.

Stitches:8804

6. Let's see one more, the *StitchPerfect* filter for Lace:


- a. Click on the **Project Advisor**  icon.
- b. Open the *project/fabric type:* menu and select **Lace**. We're going to leave the other settings at default.
- c. Select the **Set Project**  button in the *StitchPerfect* box.

~ Notice how the stitch count has changed.

Stitches:6989

Good to Know:

- Each time you select the *StitchPerfect Set Project* button, EmbroideryWorks Advanced makes the adjustment based on the original design and not the already adjusted design so you get the best results possible.

- The *Stitches* tab in the *Properties* view includes controls (Use Automatic Settings, Limit Density) that use the project settings from the *Project Advisor* to also remove stitches.
 - When you select a new design page EmbroideryWorks remembers the last project setting chosen in the *Project Advisor* but will not make any changes to your design unless you chose *StitchPerfect* or one of the *Stitch* tab settings.
7. What if you change your mind and you want the design(s) back to original:
- a. Select the **No Project**  button.
 - ~ Notice how the stitch count adjusts again.
 - ~ Note, don't worry if the design stitch count is a few less stitches than the original design. This means that maybe another filter has removed the 'missing' stitches, but you won't miss them when it stitches out.

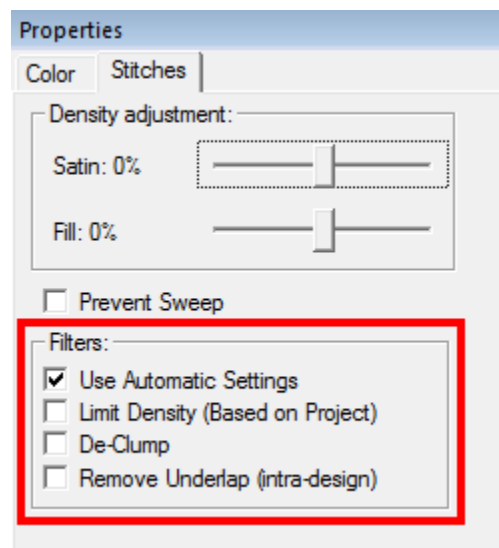
Additional Stitches tab options:

EmbroideryWorks Advanced offers some additional *Filters* on the *Stitch* tab in the *Properties* box. These *Filters* help give you more control to what type of stitch count is adjusted in a stitch file. Each one performs a different type of function.

- There are 4 *Filters* on the *Properties Stitches* tab.
- Two of the *Filters* work in conjunction with the setting chosen in the *Project Advisor* to adjust stitches: *Use Automatic Settings*, *Limit Density*.

General information:

- **Use Automatic Settings:** makes use of the *Project Advisor* project settings to identify the fabric type, thickness, and stretch. The needle penetrations/stitch count is adjusted according to these settings.
- **Limit Density:** looks for stitches too close together, based on *Project Advisor* project settings. It adjusts each part of your design if necessary to adjust the density for the selected fabric. If a design is digitized too dense for a certain project- this will help solve the problem. Keep in mind- certain combinations of fabric and stabilizer have 'limits' on the number of stitches it will support and too many stitches can cause poor stitch quality and/or puckered fabric. Using the *Project Advisor*, the *Limiter* will reduce the stitch counts in the affected regions.
- **De-Clump:** Within sewing a single color, areas sometimes have too many stitches overlapping and these areas form clumps of thread. This can cause a build-up on the back of the fabric and/or can cause loss of registration [where areas meet each other]. *De-Clump* reduces these stitches by removing stitches where a given color over sews itself.








- **Remove Underlap (intra-design):** A design can have sections that overlap for the purposes of registration. But many times these regions are a result of poor digitizing or over digitizing, what is often referred to as “Bulletproof Embroidery”. Within a design, as the stitching occurs in one area that will be covered by another later color/segment. Those overlapped stitches can often be removed and that is exactly what this option does.

Good to Know:

- *Remove Underlap* is different from the *Remove Hidden Stitches* feature. *Remove Underlap* removes stitches from within a design while *Remove Hidden Stitches* removes stitches where one design overlaps a completely different design.
- These options are the filters that the *Sweep* tool uses, except *Sweep* will look at the whole workspace, not just one design at a time. If after you run a *Sweep*, you can look at the *Stitches* tab and apply additional filters that the *Sweep* deemed not needed.
- You can select one or more of the *Filters* options as desired.
- These features are very similar to the found in a previous Designer’s Gallery® program called DensityWorks™.

Exercise: Adjusting stitches on the cardinal on a branch design

To see how each of the Stitches Filters are different, we are going to apply a different filter to the same design 4 times

1. Select the **New**  icon to open a new page.
2. If the hoop is not showing on the workspace: click **View** menu and then select **Draw Hoop**.
3. Selecting the hoop:
 - a. Select the **Preferences**  icon.
 - b. Click **Normal** option for *Hoop Style*.
 - c. Select the machine format, if different from what you have been using. For our exercise, select **PES**.
 - d. Select the **Jumbo Frame 14” x 14”**.
 - e. Click the **Apply** button, and then the **OK** button
4. Use either the **Open**  icon or **Merge stitch file**  icon on the toolbar. Locate the embroidery designs given with the class download.
5. Select **FA110.pes (cardinal on fruit branch)** design and click the **Open** or **Import** button as needed.
6. Select the design and click the **Rotate 90 degrees counter clockwise**  icon on the *Tool Pane*.

7. Moving the design to the top center of the hoop using *Precise Placement*:
 - a. On the top row: select the **Center** button and type **0** in the top field. Note this may be already there by default.
 - b. On the bottom row: select the **Top** button and type **6.80** in the bottom field.



- c. Click **Enter**  on your keyboard.

8. We want 4 of these designs:
 - a. **Right click** on the design and choose **Copy** from the pop-up menu.
 - b. Right click on the design and choose **Paste** from the pop-up menu.
 - c. Right click on the design and choose **Paste** from the pop-up menu.
 - d. Right click on the design and choose **Paste** from the pop-up menu.

~ Notice you now have 4 designs showing in the *Objects* view.

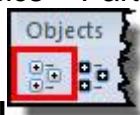
9. Moving the design to the bottom center of the hoop using *Precise Placement*:
 - a. Make sure you have the last pasted design selected.
 - b. On the top row: you will not need to make any changes.
 - c. On the bottom row: select the **Bottom** button and type **-6.80** in the bottom field.



- d. Click **Enter**  on your keyboard.

10. Evenly space the designs using the *Distribute* feature:

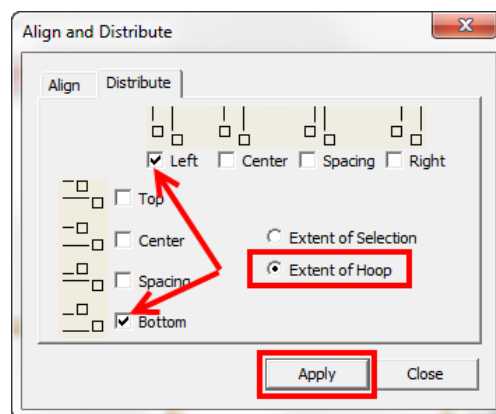
- More information is discussed about the *Align & Distribute* options in the EmbroideryWorks Basics – Part 1 Sew at Home class.



- a. Click on the **Select All**  icon in the *Objects* view.


- b. Select the **Align and Distribute**  icon

- 1) Select the **Distribute** tab.
- 2) Select the **Left** on the vertical options (top row).
- 3) Select the **Bottom** on the horizontal options (left row).
- 4) Select **Extent of hoop** option.
- 5) Click the **Apply** button.



11. Setting the *Project Advisor* for Linen fabric:



- a. Click on the **Project Advisor**  icon.
- b. Open the *project/fabric type*: menu and select **Linen**.

- c. We're going to leave the other settings at default.



- d. Select the **X** in the corner of the *Project Advisor* box to close.

12. Select the **#1** design from the *Objects* view.

13. Using the *Stitches* filters:

- a. Select the **Stitches** tab in the *Properties* box.

~ Notice that nothing is selected in the *Filters* section.

~ Notice the stitch count, 20779, on the status bar.

Stitches:20779

- b. Select **Use Automatic Settings** in the *Filters* section.

~ Notice the new stitch count has decreased.

~ Notice the options of *De-Clump* and *Remove Underlap* are no longer available. This is because these are part of the *Use Automatic Settings* option.

Stitches:19994

14. Select the **#2** design from the *Objects* view.

15. Using the *Stitches* filters:

- a. Select the **Stitches** tab in the *Properties* box.

~ Notice that the Use Automatic Settings is selected already in the *Filters* section, but has not been applied.

- b. **De-select Use Automatic Settings** in the *Filters* section.

- c. Select **Limit Density** in the *Filters* section.

~ Notice the new stitch count.

Stitches:19944

16. Select the **#3** design from the *Objects* view.

17. Using the *Stitches* filters:

- a. Select the **Stitches** tab in the *Properties* box.

- b. **De-select Limit Density** in the *Filters* section.

- c. Select **De-Clump** in the *Filters* section.

~ Notice the new stitch count.

Stitches:19586

18. Select the **#4** design from the *Objects* view.

- a. Select the **Stitches** tab in the *Properties* box.

- b. **De-select De-Clump** in the *Filters* section.

- c. Select **Remove Underlap** in the *Filters* section.

~ Notice the new stitch count.

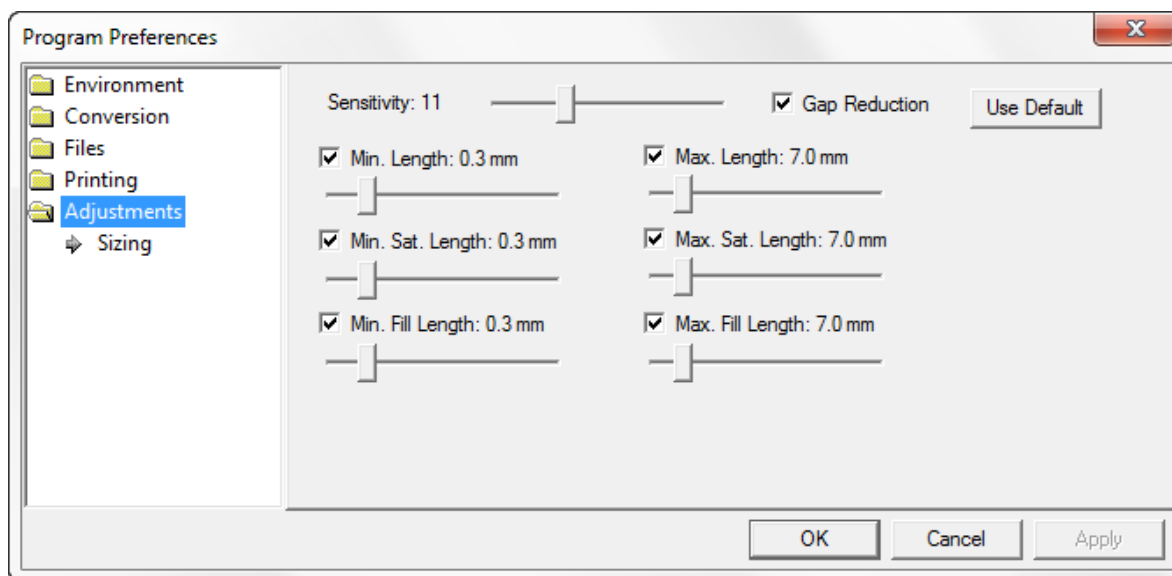
Stitches:15880

Now each of our 4 designs has a different stitch count, showing that each Filter has a different function and effect on the selected design.

Additional Program Preferences options:

Adjustments – Sizing:

When you resize a design in EmbroideryWorks, the program will automatically recalculate the stitches for you...more or less stitches accordingly. This recalculation of the stitches is very sophisticated and amazing bit of programming! With EmbroideryWorks Advanced there are some additional settings you can adjust so you can control the results for your specific project!

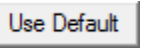


General information:

- **Sensitivity**: this slider is used to control how 'close' the program looks at the fills and satin stitched areas of the design.
- **Gap Reduction**: is a filter that proportionally expands fills past their ends so that gapping or spaces between fills are minimized when a design is increased in size. What this means is it helps adjacent areas lessen gaps that might be occur when designs are enlarged. This option is selected by default.
- The **stitch length filters**: these are used to prevent long and loopy stitches designs are enlarged; and when decreased, prevents small stitches from getting too small causing stitching in one placed or bunching up.
 - ~ There are 6 stitch length filters.
 - ~ The settings are broken out by stitch type because the handling of satin stitches differently from a fill pattern.
 - ~ There are separate slider adjustments for the minimum and maximum of each stitch type.
 - ~ **Sat. Length** is abbreviation for satin stitch length.
 - ~ **Fill Length** represents minimum or maximum stitching length in a filled stitch pattern.
 - ~ May not want to adjust the maximum *Sat. Length* longer than 10 mm.

- There is a *Use Defaults*  button to reset all adjustments back to ‘factory’ settings

Good to Know:

- If you have a design which has a lot of manually created special stitch effects [such as fancy fills], then you may want to adjust the *Sensitivity* higher.
- You may want to adjust the *Sensitivity* higher if there are blended effects or ‘feathered’ type stitching in the design.
- If you decrease the setting for *Max. Sat. Length*, when satin stitches are increased past this stitch width; the satin stitch will automatically turn the stitching into 2 row column stitching.
- **IMPORTANT:** remember to select *Use Defaults*  button after you have finished your design(s) and that workspace so the adjusted settings do not change other designs you resize on future projects.
- These features are very similar to the found in a previous Designer’s Gallery® program called SizeWorks™

Advanced Design Splitting options:

Refer to “EmbroideryWorks Basics – Part 2” class for the basics on how to split a design, how to print a placement template, and how to stitch things ‘back together’. In this section we are going to explore how EmbroideryWorks Advanced gives you the ability to create or customize your own hoop and hoop layouts.

- **‘Virtual’ or Multi-fabric hoop** means re-hooping the fabric multiple times as you embroider the different split design sections to complete the whole design or layout. When you create a new hoop, you can design it to simulate how you want to reposition your fabric for your stitching the ‘part’ back together.
- When creating a new hoop, there are options needed for use with different machine brands, models and formats.
- You can also edit an existing hoop.

Good to Know:

- You can create a new (regular hoop not for splitting) *Normal-Hoop Style* ‘fake’ or ‘virtual’ hoop to use in arranging your design(s) and then create the same hoop layout for splitting.
- Create a new regular ‘fake’ or ‘virtual’ hoop the overall size you want your design layout to be and then use the *Fit Hoop* option to do a quick resize of your design. *Fit Hoop* is discussed in the “EmbroideryWorks™ Basics – Part 1” Live or OnDemand Sew at Home class.
- May want to create one for ‘off brand’ hoops such as Magna Hoop.



Creating a basic Normal hoop:

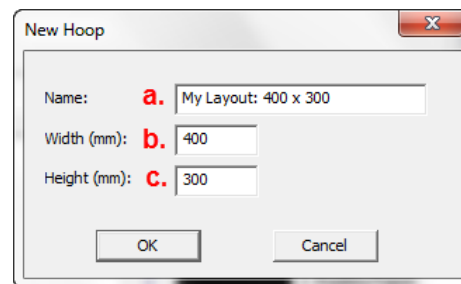
These are the basic steps to creating a new *Normal* basic hoop. Reasons you may want to create a ‘fake’ Normal hoop:

- It can be very useful to create ‘fake’ hoops when creating a layout or group of designs you want to fit into a certain size that may not be a real hoop size.

- So you can use the *Fit Hoop* feature to a specific size that is not an actual hoop.

Exercise: Creating a basic Normal hoop

1. Select the **Preferences**  icon.
2. Select **Normal** from the *Hoop Style* box.
3. Select the **New**  button and the *New Hoop* box will display.
4. Make the following changes in the *New Hoop* box:
 - a. Name: --type **My Layout: 400 x 300**
 - b. Width (mm): --type **400**
 - c. Height (mm): --type **300**
 - d. Click the **OK** button
 - Notice now this new hoop is in the main list and can be chosen like any other hoop in the list.




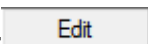
Good to Know:

- It can be very handy to name the hoop something that indicated this is a hoop you created, as we have called the one in this exercise “My Layout”.
- Use the name of the hoop brand.

Editing an existing Hoop:

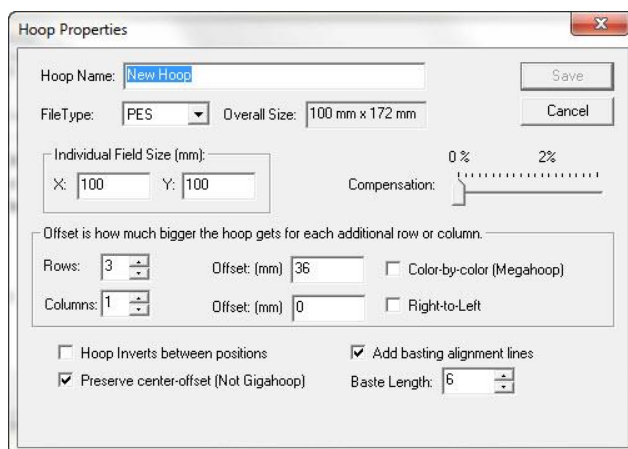
To edit an existing hoop, follow these basic steps.

Exercise: Editing a basic Normal hoop

1. Select the **Preferences**  icon.
2. Select **Normal** from the *Hoop Style* box, if not already selected.
3. Select the hoop you want to change from the main list. For this exercise select **My Layout: 400 x 300**.
4. Select the **Edit**  button and the *New Hoop* box will display.
5. Make the following changes in the *New Hoop* box:
 - a. Name: --type **My Layout: 300 x 400**
 - b. Width (mm): --type **300**
 - c. Height (mm): --type **400**
 - d. Click the **OK** button
 - Notice now this revised hoop is in the main list with the new name.
 - Remember that if later you want the *Height* and *Width* numbers reversed you can always use the *Rotate 90* option when choosing the hoop and don't have to edit it-we are just using this as an example for our exercise.

Creating a new Multi-Position Hoop and what these settings mean:

Remember, EmbroideryWorks Advanced program can be used in conjunction with most home and commercial machines. For that reason there are lots of options available when creating your own hoop layout. You may not need to use all of the options for the machine you embroidery on.



- **Hoop Name:** is just what it sounds like. Type in whatever name you want to use- something that makes sense to you.
 - ~ You may want to use some indication that this is a hoop you created and was not built in, such as “My” or your initials.
 - ~ You may want to include the overall sewing field number as part of your name.
 - ~ You may want to include the hoop used in your layout as part of the name.
 - ~ Don’t make the name too long or the whole name will not display in the hoop list. Use abbreviations and try not to use too many spaces.
- **File Type:** choose the format of the machine that you’re going to stitch the design on.
 - ~ This list contains all the file types that can be saved in EmbroideryWorks.
- **Overall Size:** You are trying to create a hoop layout that will accomidate your design size with at least a little extra room for the embroidery machine foot (known as foot clearance). EmbroideryWorks Advanced will do the math for you as you change settings in the *Hoop Properties* box.

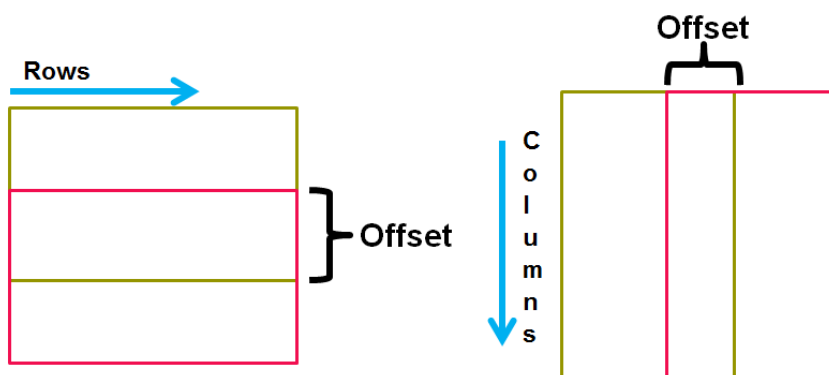
Good to Know:

- When naming a hoop, don’t make it too long or it will not completely display in the hoop window.
- You will need to know your overall design layout size in millimeters. If you keep your program set to display in inches, just double click on the size information displayed on the right side of the status bar and the information will then display in millimeters.
- I recommend giving yourself at least a 5-10mm foot clearance when considering the overall size of your new hoop layout. For example if your finished design layout is 256mm x 238mm, then you need the *Overall Size* to be at least 261mm x 243mm or larger.
- As examples, use can always look at the default hoops and their settings. Select the hoop you want to look at and then the *Edit* button.

- Remember you do not need to always use your largest machine hoop, depending on your design layout size, you may want to create a layout using a smaller hoop.
- It can be very helpful when creating your 'virtual' multi-fabric hoop, to use the *Split into Hoop* option to preview how the program is going to split your design. This option is discussed further in the “EmbroideryWorks™ Advanced – Exploring the Utility Menu” Sew at Home class.
- Individual Field Size (mm):** this is the embroidery field (in millimeters mm) of the hoop you are planning to use for the project you're creating the hoop for. It is often the largest hoop for your machine.
 - ~ NOTE: this must represent a single hoop position. You DO NOT want to use information for a multi-position hoop here-it still represents the actual embroidery field your machine stitches.
 - ~ If you are unsure about this size, consult your dealer or machine manual.
 - ~ You can set up your hoop based on how you're going to hoop your fabric, vertical or horizontal. For example, 200 x 300 OR 300 x 200. What you type here will change the information for the *Overall Size* setting and also whether you will want to use *Rows* or *Columns*.



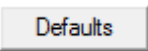
- Rows:** field specifies the number of times the hoop will be attached to your machine vertically.



Good to Know:

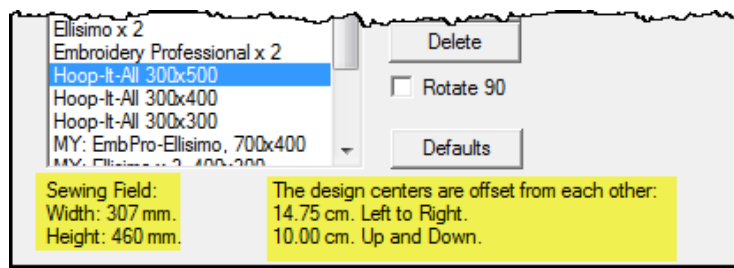
- For most multi-position hoops, the *Rows:* number is three.
- For sliding hoops such as those made by Hoop-It-All, you will have to determine how many sections you want to embroider in and keep in mind that there should be a good overlap between adjoining sections.

- **Columns:** field specifies the number of points at which the hoop can be attached to your machine sideways. For most multi-position hoops, this number is one, but there are exceptions on the market. These are usually described as “Double-Wide”. You can also use the columns to indicate that you want to divide the design into horizontally-tiled segments.
- **Offset:** this setting is how much each hooping will overlap the other hoopings...it is also the area where EmbroideryWorks Advanced will split the design. This is also known as the “separation value”.
 - ~ For example, the distance from needle-center of one hooping position to the needle-center of the next hoop position.
 - ~ The *Offset* value should be set to allow the greatest possible overlap between the hoopings to allow for better splitting.
 - ~ This number is taken into consideration by the program as it adjusts the *Overall Size* field information.
- **Right-to-Left:** field is used for multi-column hoops from manufacturers, sometimes known as “Double-Wide”. When selected it means that the initial direction the program will split the design will be right-to-left, as opposed to the standard, left-to-right. The use of this depends on the machine and hoop manufacturer. Some manufacturers have wide hoops that start by sewing the left side of the design upside-down, then you turn the hoop halfway around and embroider the other side (now the right side, and the design is right-side-up).
 - ~ **NOTE:** You can tell if your separation figure is correct! The manufacturer of the hoop should provide you with the number of positions used as well as the full size of the embroidering region of the hoop. As you adjust the offset, the field. “Overall Size” is calculated. If this matches the figure given to you by the manufacturer, you have correctly set your separation.
- **Compensation:** allows the final regions to be slightly increased in size. This forces the stitching of the regions to overlap each other. This is useful because as the machine adds stitches, the fabric pulls in and/or shifts slightly. You could have a gap between regions if no compensation is used.
 - ~ The amount of *Compensation* required depends on several factors: The size of the hoop, the fabric being embroidered, the number of stitches, the type of the stabilization, etc.
 - ~ The settings for our default program hoops worked well in our design testing. Please embroider some test designs with the desired hoop before tackling a final project. This will ensure that you have a reasonable *Compensation* setting for your specific project.
 - ~ Remember a LITTLE goes a long way!
- **Color-by-Color:** denotes a different type of file splitting. At the current version of the program and time, only the Viking Mega Hoop™ (a multi-position hoop) allows for this type of design splitting, so as a general rule, never check this box unless you’re using this hoop.
 - ~ The *Color-by-Color* method is for use in machines that can sew each color in all of the hoop regions before going on to the next color. When the machine operates this way, it will stitch in its current region until it no longer can. It will then stop and ask the user to reposition the hoop, it will continue stitching.

- ~ Because of how this works it can cause a lot of position switching as a specific color typically stitches objects out in a random fashion all over the design. The program will automatically 'sort' the stitch objects to reduce the number of position-switches required when this option is selected.
- **Invert Alternate Column**: this is used for “Double-Wide” hoops that get turned upside-down for their second row.
- **Add basting alignment lines**: this option means that the program will automatically add basting alignment stitching lines to your design segments when saved.
 - ~ In design #1 the basting as the last thing to stitch; design #2 will have the basting stitch as the first thing that stitches. If there are more hoopings in that same *Row* or *Column*, then design #2 will also have basting alignment stitching as the last item to stitch too. If there are more in hoopings in the same *Row* or *Column* then this will continue in this manner.
 - ~ When stitching make sure the basting stitching lines, align at both the ends and/or center points on the fabric. If the lines do not line up, then STOP stitching-restart your design-adjust your hoop/fabric position. If they are off just a little, then use the design movement arrows on your machine. Keep checking and repeat the repositioning if needed until they aligned perfectly.
- **Baste Length**: sets the stitch length of the alignment stitching line, in mm.
 - ~ Make this number larger (longer stitch length) if your fabric(s) is thicker.
 - ~ Make this number smaller (shorter stitch length) if your fabric(s) is thinner.
- **Default**: this button will erase all the hoops you have created or edited and leave you with the hoops found originally in the program. 



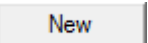
Good to Know:

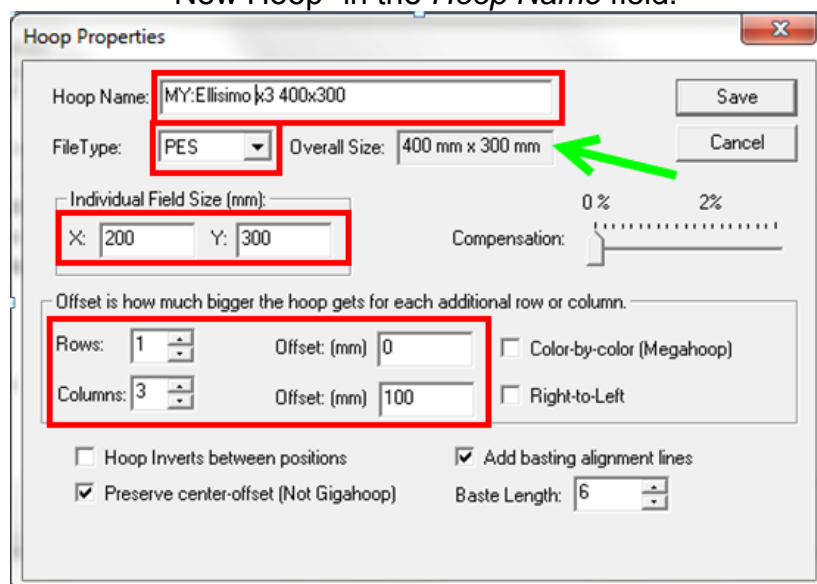
- When you have more than 2 rows or 2 columns, then some of the split design segments will have more than one basting alignment stitches because they need to 'connect' to more than one design section. You'll see this in our exercise split design.
- When you select a hoop from the *Multi-Position Hoop Style* list, the “Sewing Field” and “The design centers are offset from each other:” information is shown below the main hoop list.
- The offset is displayed here in Centimeters (cm.). To convert to millimeters (mm), move the decimal one place to the right.



Exercise: Creating a new hoop and splitting a design

The design used in this exercise was created by using two different stitch files from Amazing Designs™ and using an EmbroideryWorks Advanced feature called “Carousel”. Each design was taken into Carousel separately, the circular layouts created and then the two separate circular layouts were combined into one file. To learn more about the *Carousel* and other fun design layout features, you'll want to attend the “EmbroideryWorks™ -Fun Design Layouts and Appliqué” Sew at Home class.


1. Select the **Open**  icon. Locate the embroidery designs given with the class download.
2. Select **Scroll Carousel Layout.be** design and click the **Open**.
 - Notice when the design came in, it opened automatically a new workspace/tab.
 - On the lower right side of the status bar notice:
 - ~ This file came in with the hoop I saved the working file with, 400mm x 300mm [15(3/4)" x 11(13/16)".]
 - ~ Overall size of the actual design. You need this information in millimeters. See the “**Good to Know**” on page 21 of this handout for steps on how to quickly convert this number.
- We want to split this design using the Ellisimo/Ellisimo Gold large hoop, 200mm x 300mm and so based on previously discussed information, we need to create a new hoop layout that is at least 295mm x 283mm or larger.
3. Select the **Preferences**  icon.
4. Select **Multi-Position** from the *Hoop Style* box.
5. Select the **New**  button and the *Hoop Properties* box will display with a default “New Hoop” in the *Hoop Name* field.

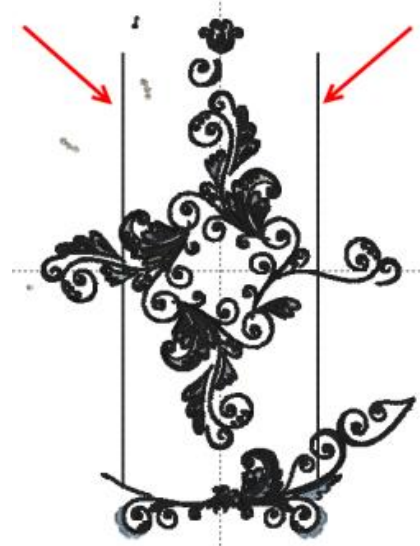


6. Make the following changes in the *Hoop Properties* box:
 - a. Hoop Name: --type **My:Ellisimo x 3 400x300**
 - b. File Type: --choose **PES** from the menu
 - c. Individual Field Size (mm): --**X: 200, Y: 300**
 - ~ Notice the *Overall Size* values are changing as you type.
 - d. Rows: --we're going to leave this on 1
 - e. Columns: --use arrows at the end of the field and change to **3**

- f. Offset: (mm) next to the *Column*: setting--type **100**
 - g. Offset: (mm) next to the *Rows*: setting--type **0**
 - ~ Notice the *Overall Size* field information changed (306 mm x 200 mm). Now our design

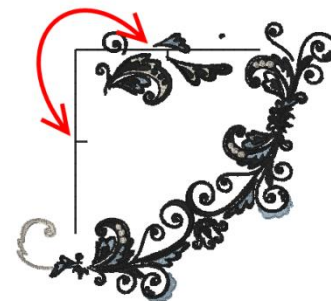
289.9mm x 276.9mm

 will fit in this new hoop layout.
 - h. OPTIONAL: Compensation: change as needed.
 - i. OPTIONAL: Baste Length: change as needed.
 - j. Click the **Save** button.
7. Select the **My:Ellisimo x 3, 400 x 300** new hoop from the hoops list.
 8. Click the **Apply**  button and then the **OK** button.
 9. Use the *Split into Hoop* to preview how EmbroideryWorks Advanced will split the design using your new hoop. This feature is discussed in the “EmbroideryWorks™ Advanced – Exploring the Utility Menu” Sew at Home class.
 - a. Select the **Utility** menu and then **Split into Hoop**.
 - ~ Notice a new tab opens with the design split into 3 segments.
 - ~ DO NOT save this design page because the alignment bastign stitches and the text file will not be saved.
 10. Save your split design files:
 - a. Select the **Scroll Carousel layout.be tab** again.
 - b. Select the **File** menu and then **Save As (Stitch and Working)**.
 - c. **Navigate** to where you want to save the design using the *Save in:* window.
 - d. **Type** your design name in the *File name:* field. Use **Scroll Carousel** in front of the automatic **Split Design** listed.
 - e. Click the **Save** button.
 11. Now let's look at what was created and saved:
 - 5 files named: “Scroll Carousel Split Design Center #1.pes”; “Scroll Carousel Split Design Center #2.pes”; “Scroll Carousel Split Design Center #3.pes”; “Scroll Carousel.txt; and the “Scroll Carousel Split Design.be”
 - The #2 design also has 2 basting alignment stitches added because it has to ‘connect’ on either side.



Good to Know:

- When you create a new multi-position hoop layout that has both rows and columns, EmbroideryWorks Advanced automatically adds perpendicular basting alignment stitches. See screen shot as an example.



**Other helpful suggestions for success:**

- Stitching of multi-fabric hooping designs can take some practice because you need to not only do you need to break your design into pieces [EmbroideryWorks does that for you], but you also need to be very accurate in placing your design segments in each of the re-hoopings.
- Most machines will give you the ability to display a grid behind the hoop on the screen. You can count the grids (usually 1 grid = 10mm) between the region marks to get the separation.
- It is highly suggested you print a placement template for each separate split design segment. Information on printing templates is discussed the “EmbroideryWorks Basics - Part 2” Sew at Home class, available both as Live or OnDemand/recorded.
- It may be helpful to recolor the segment that contains the basting alignment stitches to make them easier to see on the printed template and/or your fabric.
- If your machine has a Needle Cam™ or Sensor Pen, you will want to use that technology to help position where you are going to stitch your split design segments.
- Color Sort feature and design splitting information:
 - If you are using the same design repeated in your overall layout or the same exact thread color, you will want to use the *Color Sort* option on overall design layout BEFORE splitting. Color sorting may alter the way EmbroideryWorks splits a design because the stitching order and thread layering would be affected.
 - When you use *Color Sort* feature and *Save* button, you are saving just the stitch file and not the working file (.be). If you have already selected a *Hoop Style: Multi-Position* then the *Color Sort* save will save the machine formatted split design segments automatically.
 - DO NOT *Color Sort* the individual split segments because the design layering may be incorrect and you’ll end up with it not stitching out correctly.
- The use of ‘floating’ techniques for hooping can be helpful for repositioning quickly:
 - Not actually hooping the material itself, but rather hooping a stabilizer and attaching the fabric to stabilizer in some other manner. This will provides the least amount of distortion in the fabric while the overlapped regions of the design are being embroidered.
 - You can use an adhesive type stabilizer; spray adhesive, and/or a basting stitch to secure the design to the stabilizer.
- It is very important to mark your fabric before starting any embroidering. When the fabric is re-hooped it must be parallel and centered to the first hooping, so by marking a few vertical and horizontal lines on your fabric it will help you keep things straight...like horizon lines.

Deleting a hoop from the list:

If you ever want to remove any of the *Normal* or *Multi-Position Hoop Styles* you have created, follow these basic steps.

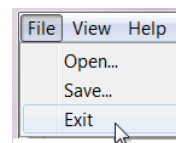
Exercise: Deleting a hoop

1. Select the **Preferences**  icon.
2. Select *Normal* or *Multi-Position* from the *Hoop Style* box, if not already selected. For this exercise select **Normal**.
3. Select the hoop you want to remove from the main list. For this exercise select **My Layout: 300 x 400**.
4. Select the **Delete**  button and the *New Hoop* box will display.
 - Notice now this hoop is no longer in the main list.

Closing EmbroideryWorks:

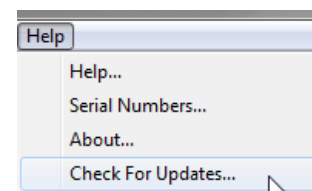
There are two ways to close the program.

1. Select the **X** in the upper right corner of the program screen.
- OR**
2. Select **File** menu, then **Exit** from the drop down menu.



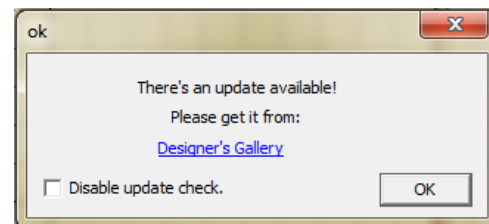
Additional support materials available:

- Online tutorial/projects using MasterWorks II on the Designer's Gallery website: www.designersgallerysoftware.com
- Also check the "Downloads" page on the Designer's Gallery® website for free updates to your program.



Good to Know:

- Under the *Help* menu, you can 'ask' EmbroideryWorks to check if your program is up-to-date by selecting *Check for Updates...* option.
- When opened, if your computer is online, it will check if there is an update available. A message will display letting your know to go download the update from the Designer's Gallery website: www.designersgallerysoftware.com
- Current and future **Sew at Home On Demand** and/or **Interactive** Online classes with more EmbroideryWorks functions discussed:
 - Link for the OnDemand/recorded class website: www.sewathomeclasses.com/
 - Link for the Interactive/live class website: www.babylock.com/sew-at-home/
 - EmbroideryWorks Basics – Part 1 & 2, if you have not already taken them



- EmbroideryWorks – Lettering
(for both EmbroideryWorks Everyday and EmbroideryWorks Advanced owners)
- EmbroideryWorks – Fun Design Layouts and Appliqué
(for both EmbroideryWorks Everyday and EmbroideryWorks Advanced owners)
- EmbroideryWorks Advanced – Exploring the Utility Menu
- Jumbo Hoop in Designer's Gallery
- **Learning Guides:** These are comprehensive lessons, in professionally printed spiral bound booklet form. They are based on the Sew at Home class of the same name. Learning Guides can be purchased at your Baby Lock® dealer or through the Designer's Gallery® website.
<http://www.designersgallerysoftware.com/products/learning-tools/learning-guide/>
- EmbroideryWorks Basics

