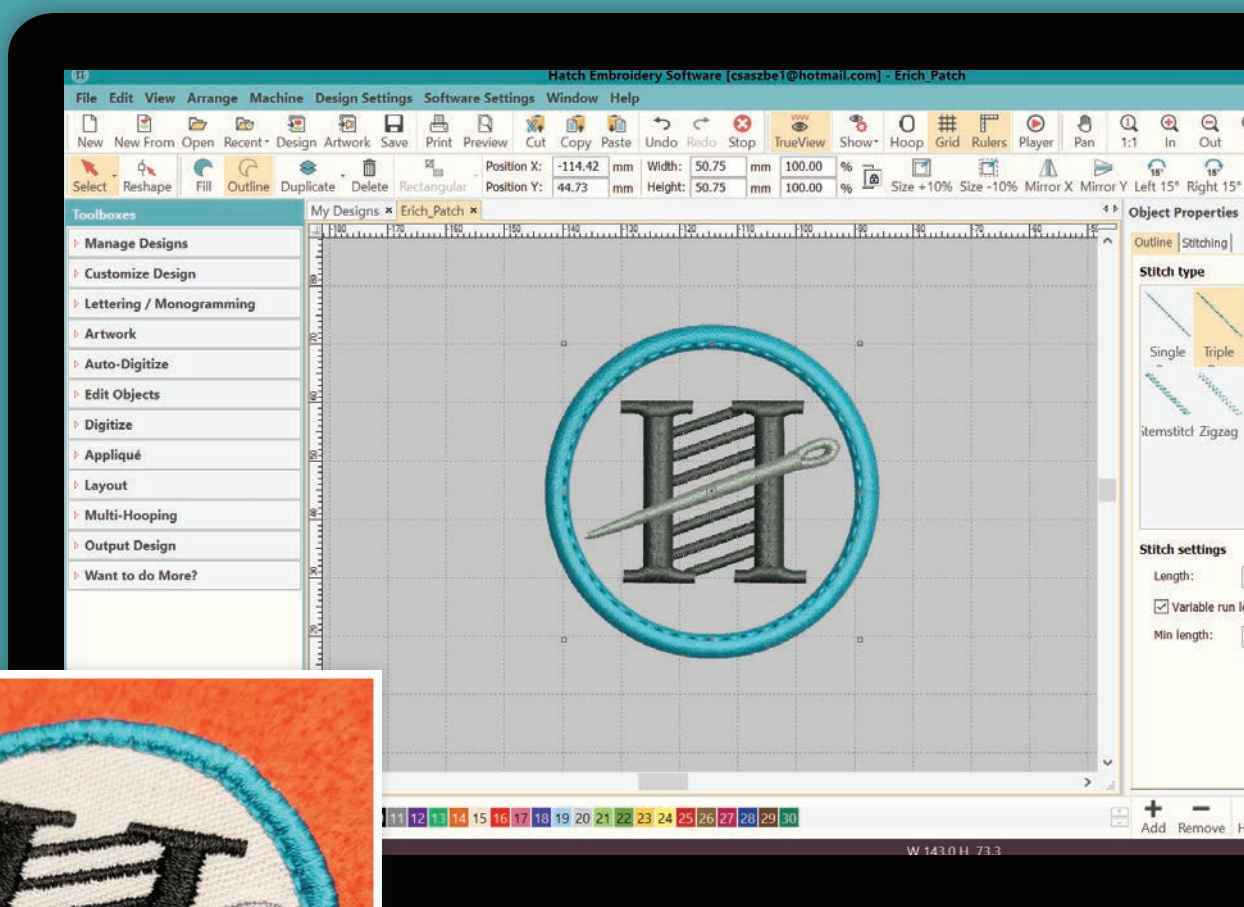




EARN YOUR HATCH PATCH

Hatch Badge with Erich Campbell

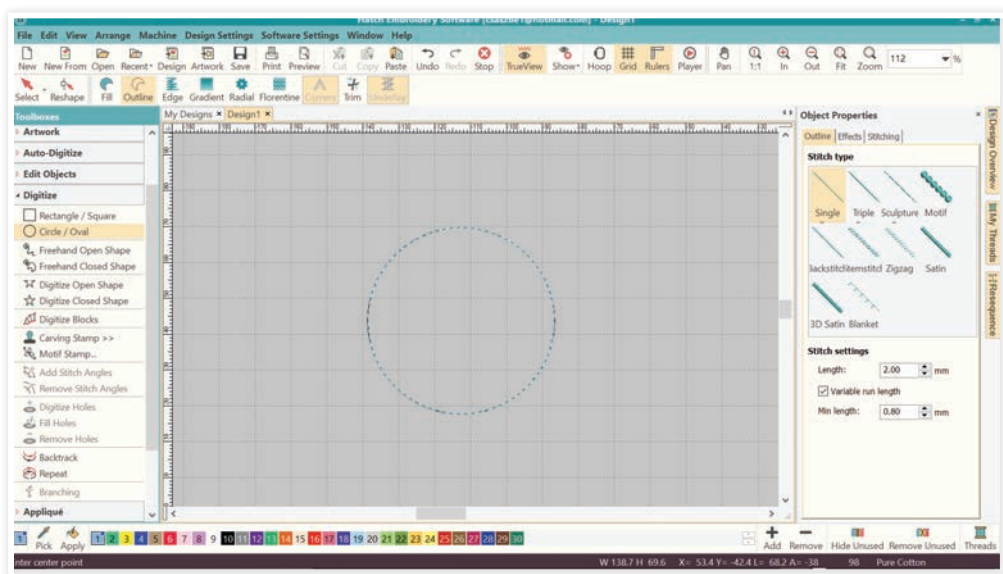


Digitizing the Badge

STEP 1.

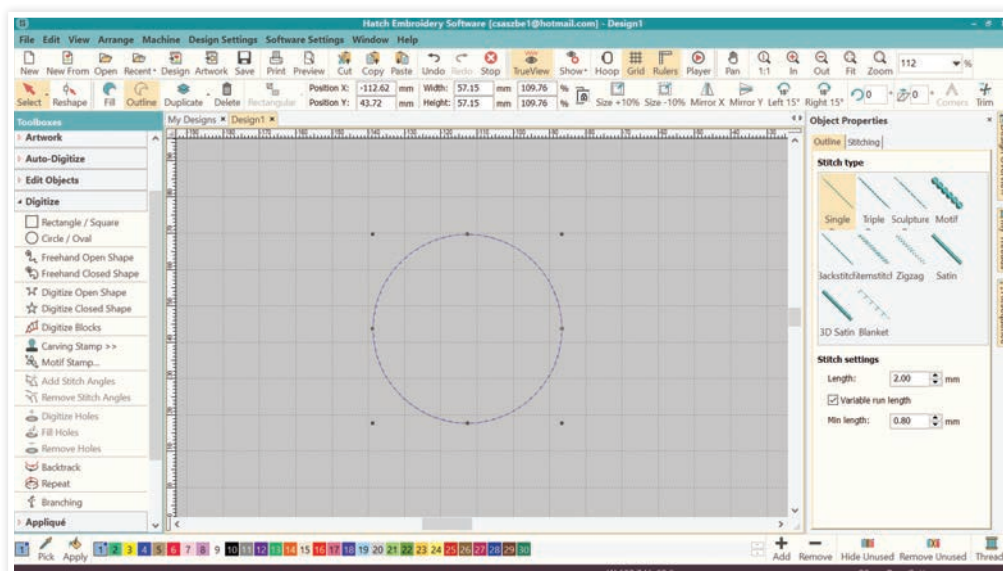
We'll start digitizing our merit badge by going to the 'Digitize' toolbox in the left hand menu. Click the 'Circle/Oval' tool, then look above your toolboxes and make sure that 'Outline' is selected. We're not going to worry about size until after we're done creating our circle. If we were making a custom shaped patch, we would start with a sized shape or drawing, but because we are making a perfect circle, we can just size it after we are finished creating the shape.

Click the left mouse button in your work area and drag the line upward a bit, don't worry about how much. Click again, then hit the Enter key. This will give us a perfect circle.



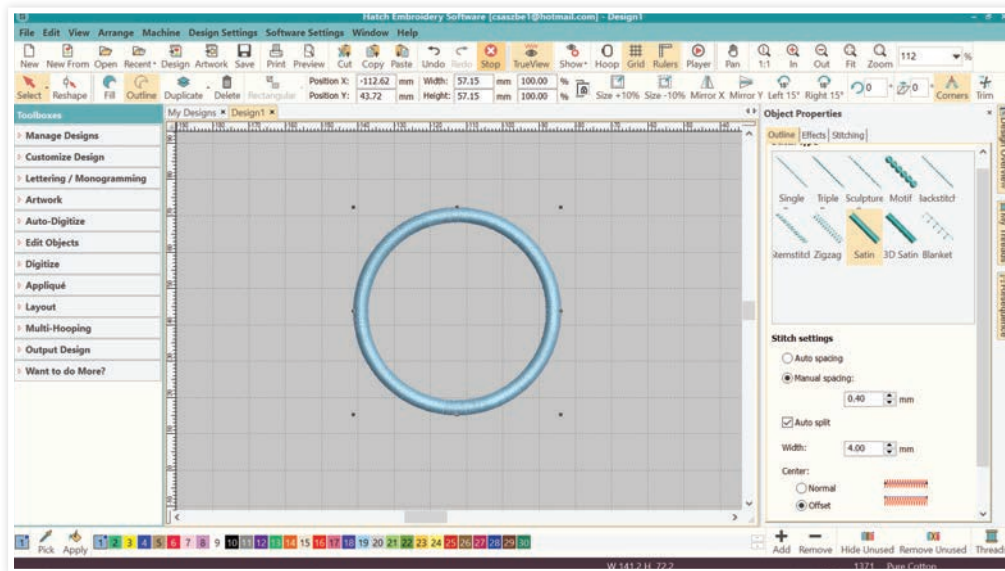
STEP 2.

Click the 'Select' tool above the toolboxes, then click the circle you created. Up above your workspace, you'll see the window with the 'Width' and 'Height' values. Make sure the lock to the right of those values is clicked and looks pushed in, then you can set your size value in either the height or width boxes; since you clicked the lock, the sizes will stay in the proper ratio to each other. For US measurements, enter 2.25 inches, for metrics, use 57.15 millimeters.



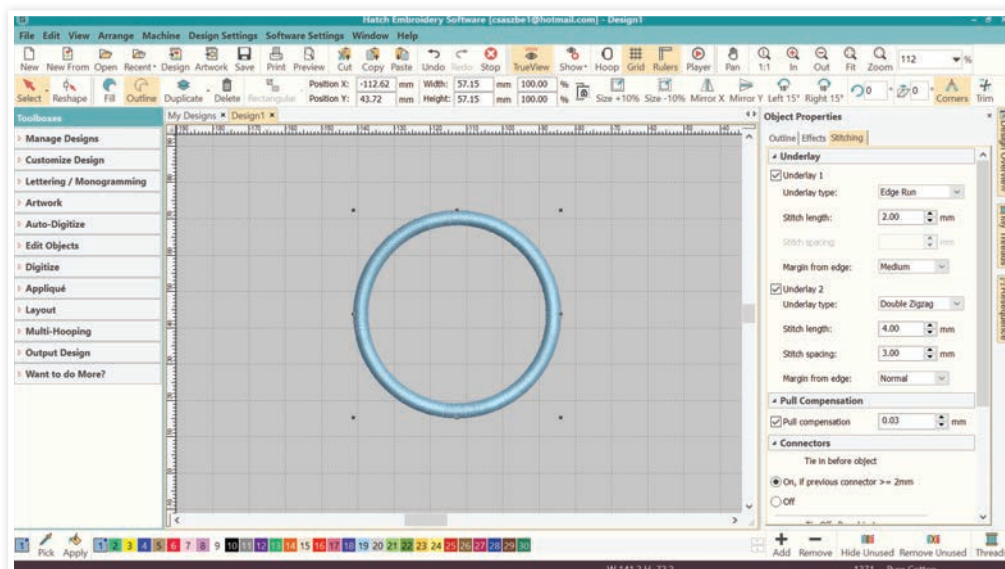
STEP 3.

Now, you'll want to set the properties with the 'Object Properties' tool. If your tool isn't open, right click on the circle you've created and then left click 'Object Properties' in the resulting menu. Once you do that, set your stitch type to 'Satin' in the 'Outline' tab, then move down to Spacing, click 'Manual spacing' and enter either 0.016 inches or 0.4 millimeters; this represents 'full' density. Under 'Width' enter 0.157 inches or 4mm. You can go thinner on patches, but less than 3mm is not likely to completely capture the edge of the material if what you use has any tendency to fray. For this patch, I'm choosing a nice, wide satin edge. Under 'Center' click 'Offset'; this will make all the stitch width move to the inside of our circle, leaving the outside at the 2.25 inch diameter we want for our finished product.



STEP 4.

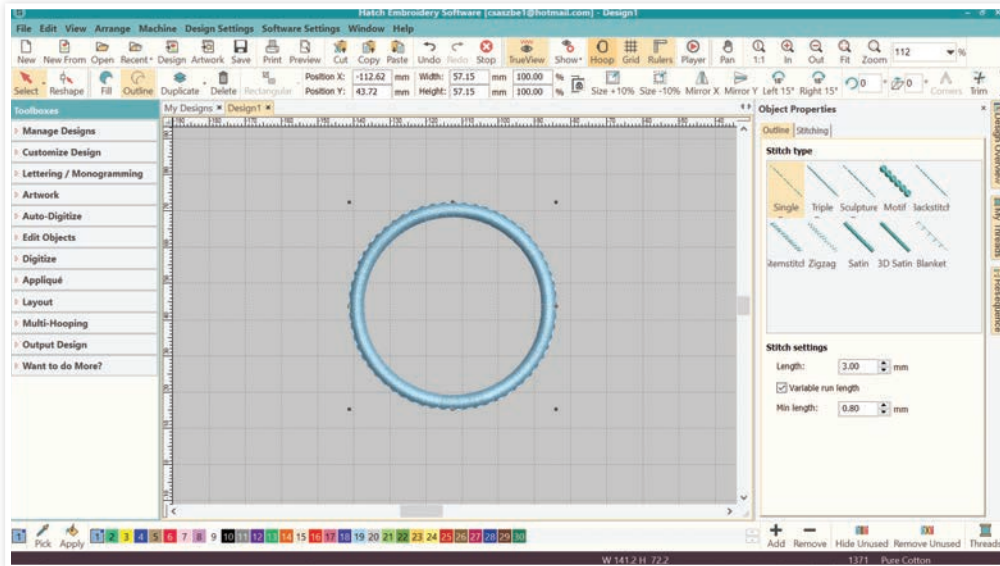
With the circle still selected, go to the 'Stitching' tab, turn on Underlay 1, and make the type 'Edge Run' with a stitch length of .079 inches or 2mm with the 'Margin from edge' set to 'Medium'. Turn on Underlay 2 and set it to 'Double Zigzag' with a stitch length of .0157 inches or 4 millimeters, the spacing set to .0118 inches or 3 millimeters, and the 'Margin from Edge' set to Normal. This makes the 'Double Zigzag' run just wider the edge walk run, so the zig-zag stitches catch on the edge runs like rails. The combination of the 'Edge Run' and 'Double Zigzag' underlay stitches the edge down firmly and creates a mesh-like structure both to hold up the top stitching and capture the edge of your cut patch material. Set your pull compensation to .0012 inches or 0.03 millimeters to account for a bit of pull distortion.



Placement and Cut Lines

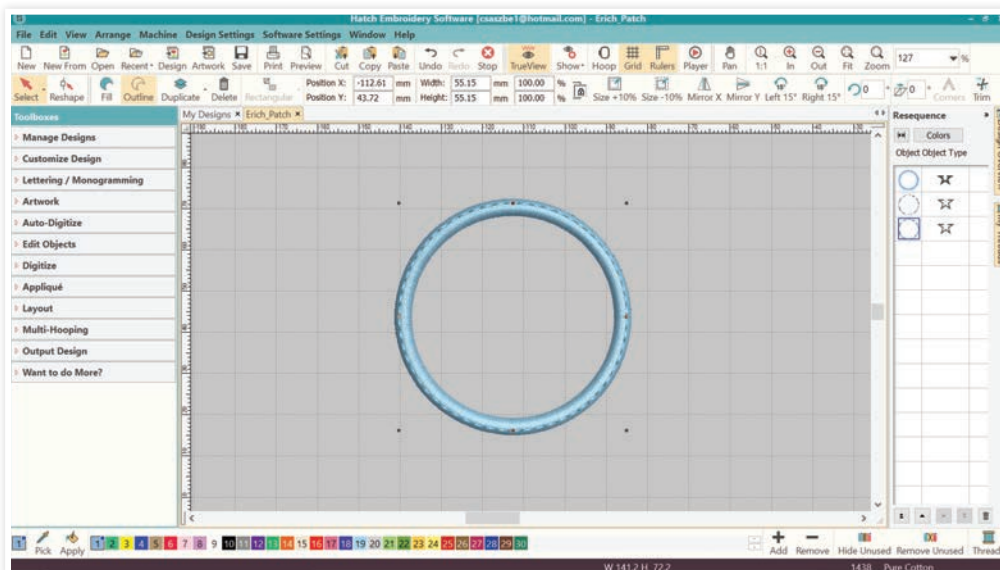
STEP 1.

Now that you have your border, it will be easier to create your placement and cut lines. Select your border, press Ctrl+D (or right click and select Duplicate) to duplicate the border. Select the duplicated copy (it should be sitting directly atop the original border) and go to the Outline tab of the Object Properties docker. Click 'Single Run' at the top and set the stitch length to 3mm below.



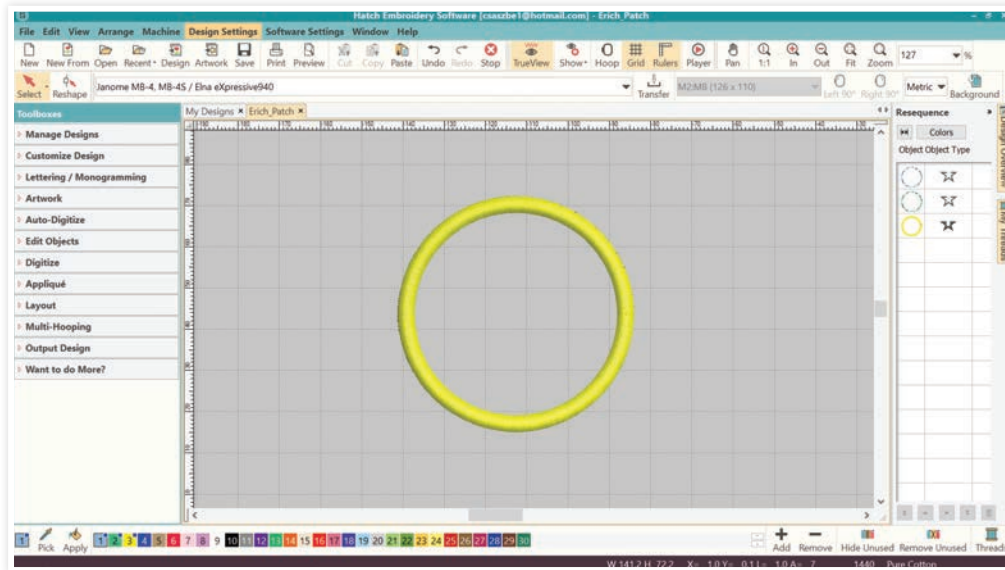
STEP 2.

We want to scale it down by roughly about 2mm, leaving a millimeter between the placement and cut lines and the edge of our final border. To do this we'll go up to the 'Width' and 'Height' boxes with this new run stitch circle selected, enter 55.14 mm (2.171 inches) in one of the boxes, and hit enter. Once that is done, select and duplicate the resulting run stitch circle by clicking Ctrl+D. We now have 2 smaller run stitch circles and our border in our design.



STEP 3.

At this point, they are all in the same color and entirely out of order. To set the proper color stops and to resequence the design, we'll go to our 'Resequence' docker (press Shift+L to open it, if it's not on your screen) and change the order of the lines. In the docker, click your thick satin border and either drag or move it down to the bottom of the order with the 'down' or 'bottom' button at the bottom of the docker list. When this is done, your run stitch lines are set to sew before your border. Now we need to set each line to its own color stop so that our machine will stop between each element. Click the second run stitch circle in the Resequence window, then go to the color bar at the bottom of the workspace and click color 2, then click the satin stitch circle and click color 3 in the bar. Now we have each element on its own color change with stop points at the end of each color. Don't worry at the moment that the thread color isn't correct; we can set those at any time.

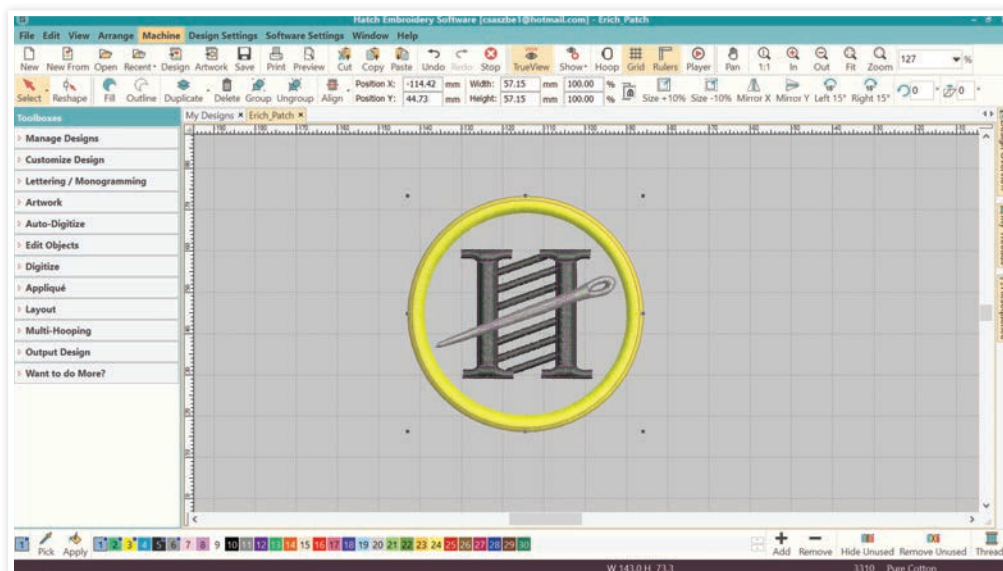


The Blank Patch

The elements we have at this stage are all we'd need to make a blank patch. The first stitch line is called the 'Placement' run, and shows you the area that you have to cover with your patch base fabric. If you were using a pre-cut piece, it would show you exactly where to place your cut piece. The second line is called your 'tack' and/or 'cut' line. Once you've laid down or placed your material, this line stitches it down and provides a line against which you can cut to remove excess material. If you were using a pre-cut piece, this will usually be a zig-zag run or a blanket stitch, in order to stitch down the loose edges of the pre-cut material. That said, since we're using a traditional cut-away applique method, a simple straight stitch will suffice. Then you have your full cover border to complete the patch. Now that I have my patch basics created, I'm going to pull in an existing design to decorate the center of my patch.

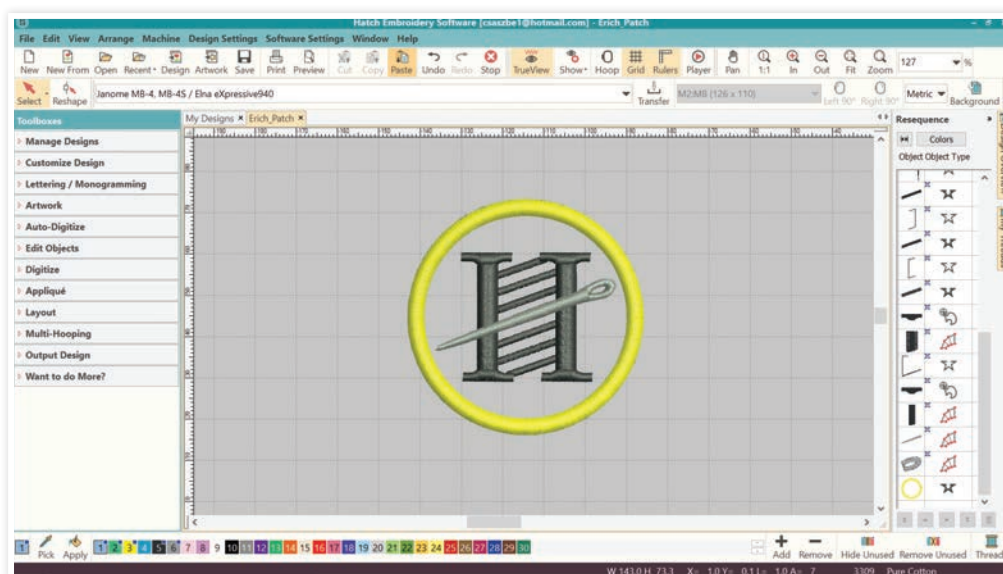
Adding the Central Design

I'll be using a Hatch logo that I had already digitized to decorate the merit badge. To insert a pre-digitized design, go to 'File' then 'Insert Design' and select the file on your drive. Once you insert the design, you need to center it inside your patch and make sure it fits properly within your border. Select all your objects, then click 'Align' and select 'Align Centers'.



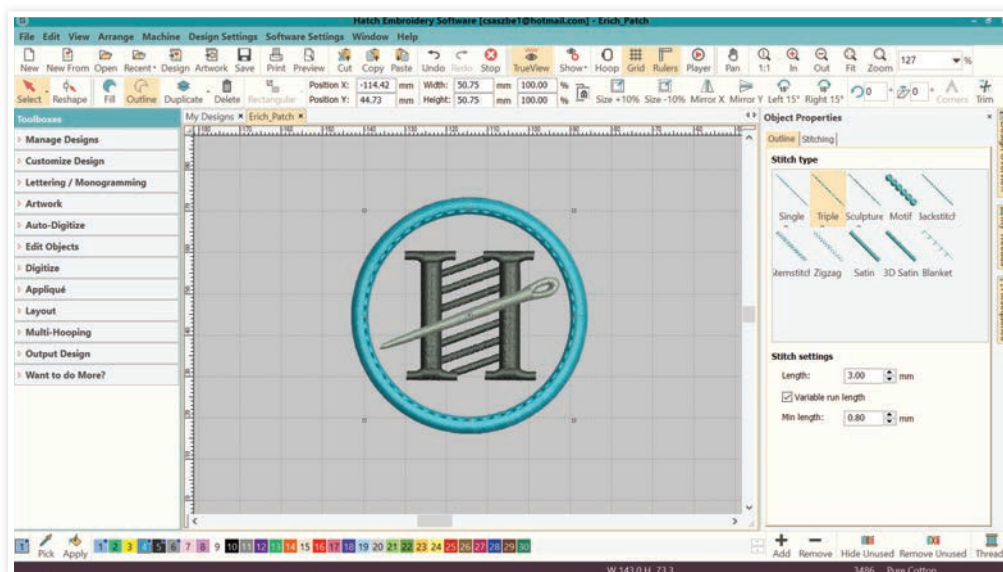
Completing the Border

Go back to the 'Resequence' docker, click your satin border, then use the 'Bottom' button at the bottom far right of the docker to move the border to the last position in the run sequence. At this stage, you could output the design and get right to stitching, but I want to make the border a little more decorative.



Adding Texture

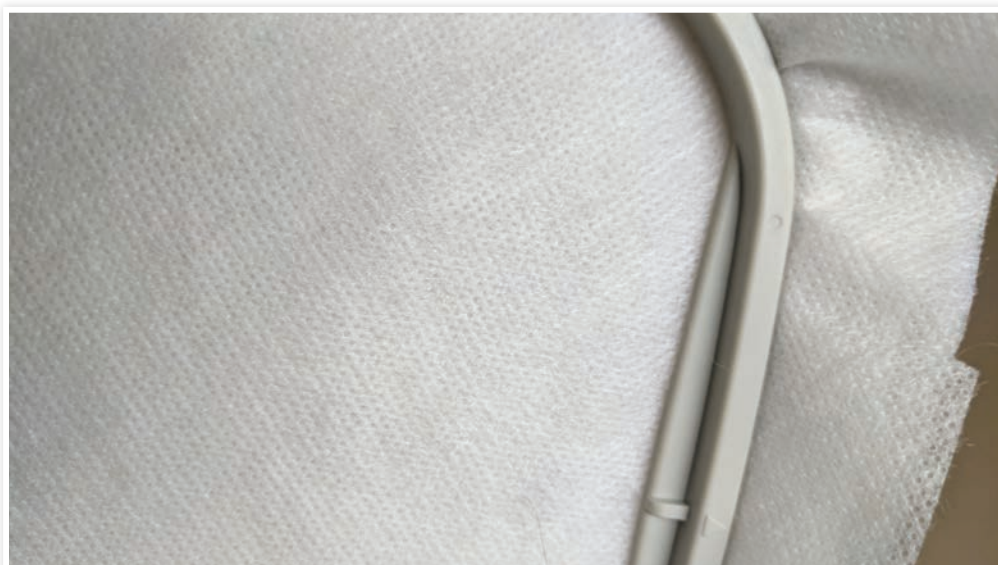
If you are like me, you enjoy a little decorative textural element on your border; for this patch, I decided on a classic line of thick stitching just inside the satin border. For this, I duplicated the border by selecting it and then clicking Ctrl+D, set the stitch type to 'Triple Run' with a length of 0.118 inches or 3 mm, and resized the circle to be just larger than the inner edge of the border, just under 2 inches or 50.75mm. The Triple Run ring will stitch last in the sequence. Make sure that the start and stop points are at the bottom, inner center of the satin stitch for both the border and the Triple Run circle to avoid trims and tie-off stitches on these elements. With our border decoration complete, we have our finished, properly sequenced design ready to export and run.



Stitching: Setup and Sequence

STEP 1.

Begin by hooping 2-3 layers of water-soluble stabilizer. I prefer the fibrous looking water soluble stabilizer. It's more durable than the film style stabilizers and doesn't tend to tear with a heavier designs and dense borders.



STEP 2.

Attach the hoop to the machine and load your design. Thread the same color as your border for these first 2 runs; I ran black in my sample images to make it easier to see, but using the same color as the top border makes it less likely you'll see the placement or cut lines through the top stitching. Once you are all set up, run the first color directly on the stabilizer.



Placing the Fabric

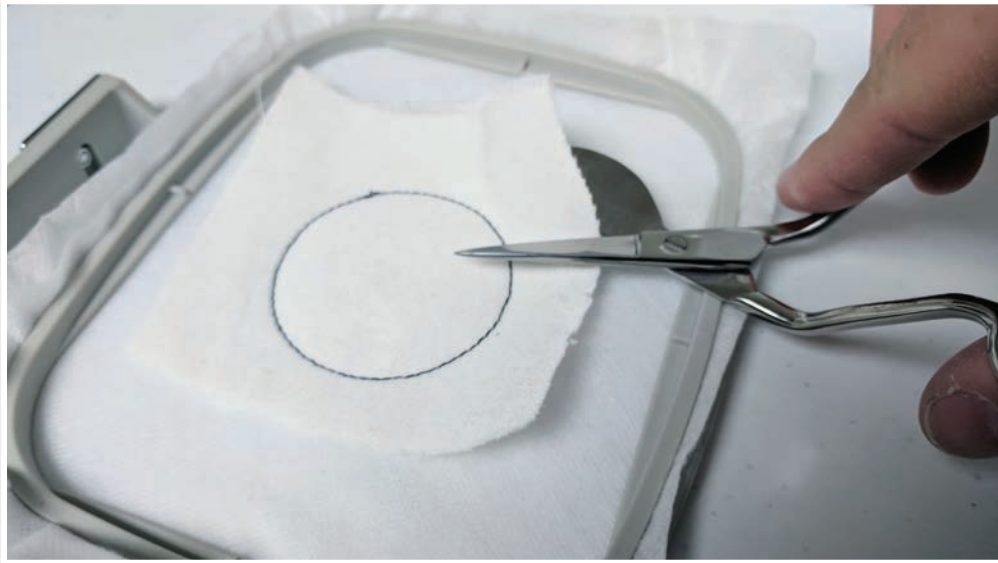
Once the machine stops, raise your presser foot and place a piece of stable material like the twill I used over the placement circle. Make sure you completely cover the area of the circle with some excess outside of the area. You may want to use a very light spritz of embroidery specific spray adhesive to hold the patch material in place, but for this small piece I had no trouble with the material carefully and smoothly placed in the hoop. Once the material is in place, lower your presser foot and stitch the cut line.



Cut away the excess

STEP 1.

Once the cut line is stitched, carefully remove the hoop from the machine and take your scissors and cut away the excess material as close to the cut line as possible. I like to use the applique scissors shown here, as the flat blade rides against the cut line while the small blade moves sideways over the cut, enabling me to cut very close to the line without the points of the scissor getting dangerously close to the stabilizer or patch material. That said, many embroiderers use sharp, pointed trimmers with curved blades to do the same work. In fact, pointed trimmers of that nature are better for patches with complex shapes.



STEP 2.

Once you've cut away the excess material, carefully place the hoop back on the machine without moving the carriage on which the hoop attaches, and run the rest of your design. As the design finishes and the border begins to stitch, you'll see how the underlay traps and secures the edges of the now cut material. Once the entire design and border is finished, you can remove the hoop and unhoop the stabilizer and patch.



Finishing

STEP 1.

Cut away as much of the excess stabilizer as you can without risking nicking the patch's edge. We don't want to get too close; after all, this material will entirely melt when rinsing. It's better to remove the excess to reduce the mess and the time it takes to rinse away the remaining stabilizer.



STEP 2.

Once you cut away the excess, rinse the patch. Even if you elect to soak the patch, I like to use running water after most of the stabilizer has melted in order to clear as much of it out of the patch as possible. If you don't completely rinse, the patch will dry stiff as if it were starched. If that happens, don't worry; that will wash out with normal laundering of the garment to which it is attached.



STEP 3.

I like to press the finished patch between paper towels to speed the drying process and to flatten the final piece.



YOUR PATCH IS NOW READY!

