

## Embroidered Hair Ribbons

### Intro:

This is a fun project I made at the TechShop ([www.techshop.ws](http://www.techshop.ws)). It is great for girls' sports teams who want to show their school/team spirit at games, competitions, or meets.

### Materials:

- ribbons
- embroidery thread
- bobbin thread
- water-soluble stabilizer (Vilene)
- fabric spray adhesive
- scissors
- large ruler
- CNC embroidery machine
- paper towels or scrap material

### Steps:

1. Cut the Ribbons
2. Cut the Stabilizer
3. Put the Stabilizer in the Hoop
4. Spray adhesive on Ribbons
5. Align the Ribbons
6. Program the Embroidery Machine
7. Center Your Text
8. Run Trace Repeatedly
9. Let it Run
10. Rinse off the Backing

### Step 1: Cut the Ribbons

Cut the ribbons to be 20" long. When cutting, angle your scissors to get a nice tapered end.

### Step 2: Cut the Stabilizer

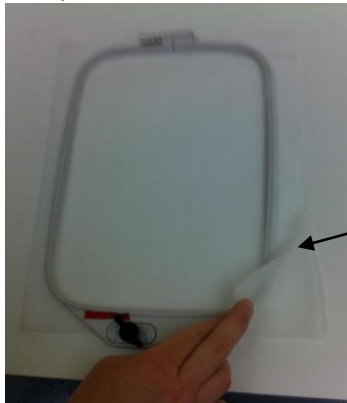
Cut the stabilizer to twice the size of the embroidery hoop plus some extra to hang over the edge.



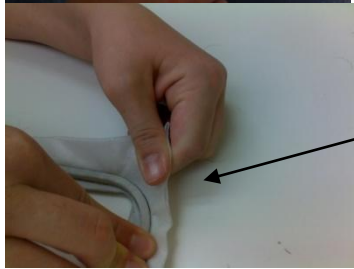
You should leave more of an edge than this so that it is easier to pull on the cloth to get it tight in the hoop.

### Step 3: Put the stabilizer in the hoop

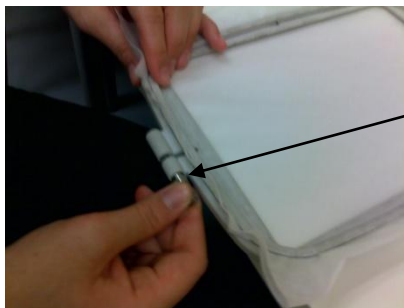
Now to make a sturdy backing for your ribbons while sewing, fold the stabilizer in half and insert it into the hoop. Make sure you pull hard to make the cloth drum-tight. The looser the cloth, the sloppier the final product will be.



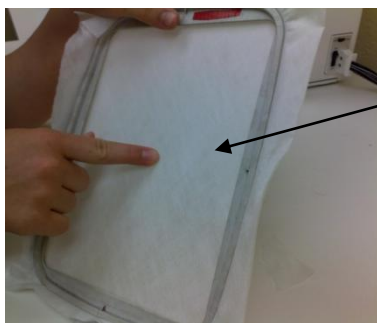
The cloth is now double thick.



Tug at each corner and side while holding the hoop down so it doesn't pop open



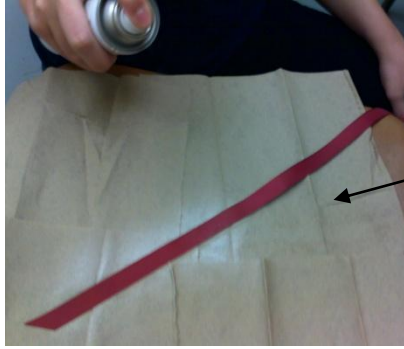
Keep tightening the hoop making sure to go around tugging on the fabric each time.



The fabric should be drum tight by the time you're done.

### Step 4: Spray Adhesive on the Ribbons

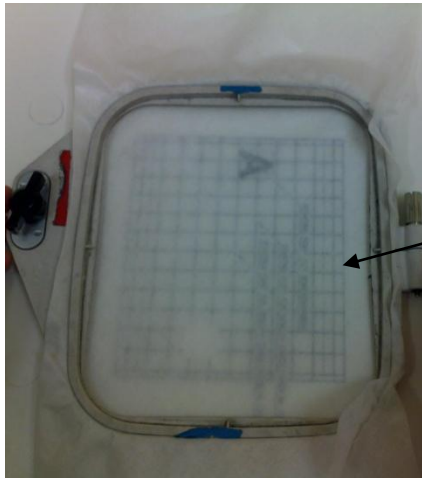
Lay out some paper towels or a large scrap of clothe to protect your work area. Spray the part of the ribbon that will be in the hoop liberally with fabric adhesive. The better stuck down it is the less your design will drift and fewer times you will have to stop the machine to realign the ribbons.



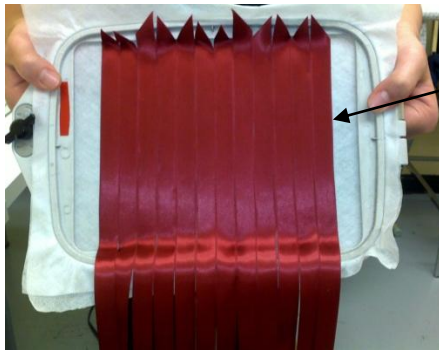
You will need something to protect your work area because the adhesive goes everywhere. I chose a temporary adhesive that comes out with soap and water in case it does make a mess.

### Step 5: Align the Ribbons

Using the plastic grid that should come with the embroidery hoop, lay out your ribbons as straight as possible along the grid lines. I put them as close together as possible without having them overlap. Also, make sure the long ends hang out the side of the hoop that will be on the outside of the embroidery machine.



The grid is important for aligning the ribbon and seeing where the printable area of your embroidery machine is.



The ribbons do not extend outside of the printable area, and the excess is on the outside so it hangs down off the machine.

### Step 6: Program the Machine

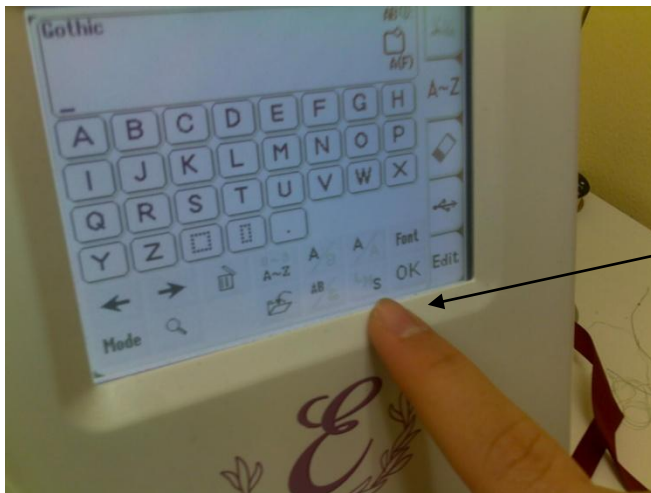
Make sure you are familiar with the embroidery machine you are using. You should know how to thread the machine, insert the embroidery hoop, and adjust the tension once you get started to make sure your bobbin thread isn't showing on top. To avoid this problem you can always use the same color bobbin and embroidery thread. Now it is time to enter the text you want on the ribbons, for example, your team's name.



Select the text option on the side of the touch screen.



Select the hoop size that you are using.



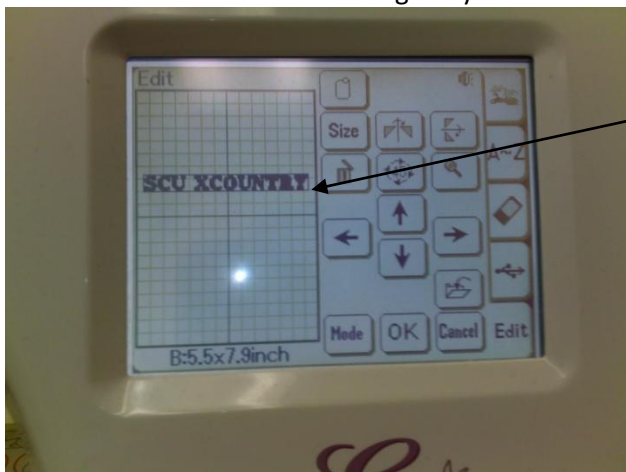
Select a text size. I found even small barely fit. You will be able to test to see if your font is too big later using the trace option and scale down to 90% or up to 110%.



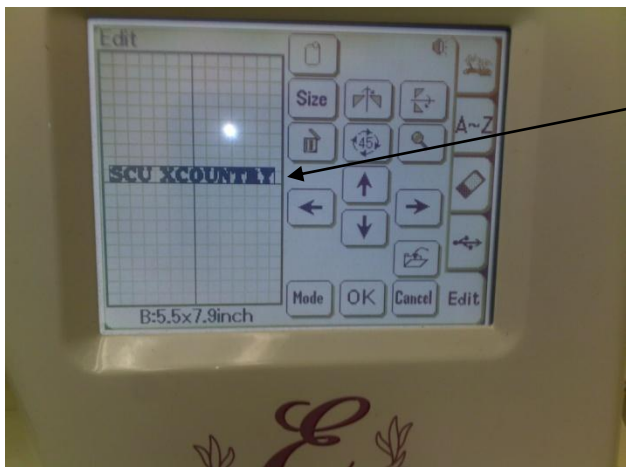
Select a font. (Cheltenham is shown).  
Type in your text and hit OK.

**Step 7: Center your text**

On the next screen, center your text with the bottom of the textbox on the center line. You may be tempted to place it at the top on the first ribbon, but for alignment purposes this will be difficult. The foot will always start at this center line, so in order to start alignment before pressing trace, you want this center line on the bottom edge of your text. You will be able to adjust where the foot starts later.



Text is not centered. Use the down arrow to align the bottom of the box with the center horizontal line.



Once the text is centered, select OK. You will still have the opportunity to adjust physically where the words will be embroidered.



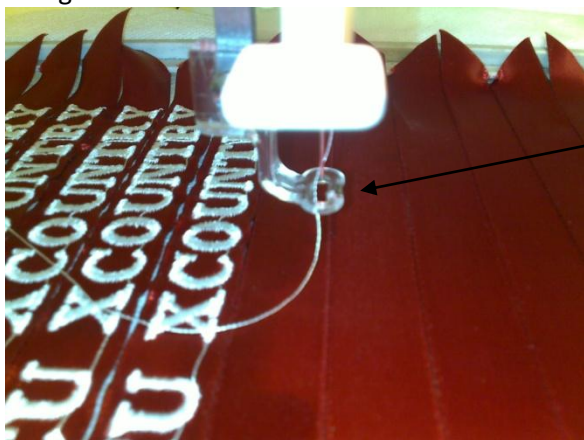
Depending on which way you put your ribbons, you may need to rotate your text to be sideways or upside down to ensure that the text reads down the ribbon.



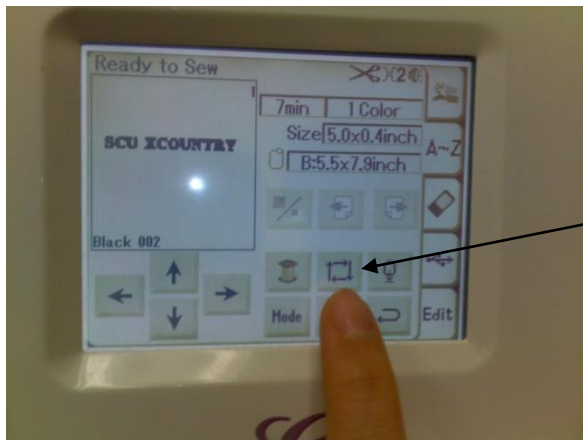
You will be asked to verify your hoop size. Hit this button then continue or go back and hit edit in the bottom-left corner to select a different hoop.

### Step 8: Run Trace Repeatedly

You will see the following screen. This time when you use the arrows it will physically move the hoop to change where the foot starts on the ribbons.



Use the arrows shown below to center the shadow of the bottom of the foot half on and half off the bottom of the ribbon.



Hit this trace button with the foot up to make the machine move in a rectangle above the area it will be embroidering. If this box is too big hit the size button above to scale everything down to 90%. If it goes off the top or bottom of the ribbon readjust using the arrows and trace again.

**Step 9: Let it run**

Make sure you stay and watch the embroidery machine to stop it in case the ribbon starts to bunch up or go crooked. Also, check the bobbin thread every few ribbons to make sure you don't run out in the middle of a ribbon. If you do need to stop the machine to straighten a ribbon, try to wait till the end of a letter otherwise it will cause imperfections.



You will need to restart from step 7 each time to reposition where the letters will print.

**Step 10: Rinse off the Backing**

Take the hoop off and put the entire piece into a bowl of hot soapy water. The dissolved backing will be sticky like glue so you will need to rinse each ribbon off in the sink. Finally, lay them out to dry and cut the little threads between the letters.



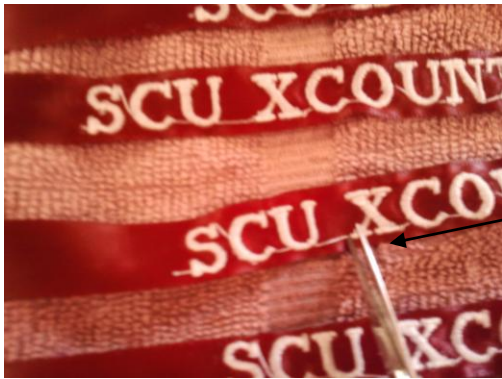
Bowl of hot soapy water in the sink to soak your piece in for 10min.



Use warm water to wash off any remaining stickiness.



Lay the ribbons out to dry.



Cut the small threads connecting the letters for a cleaner finish.