



HIGH MOUNTAIN GEAR

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There is some confusion about the mask shortage. There are lots of designs out there, and some are for different purposes. Some hospitals are currently asking for N95 mask covers. These are designed to extend the life of the few N95 masks they have currently. **The masks I am making are for those that do not have a N95 mask.** I usually work with outdoor equipment fabrics, and I don't have a governing body to test the efficacy of the embroidery stabilizer. If you look at it in person, you will see what I mean about it being more effective than just cotton! It also helps in ironing the pleats in keeping their shape.



1. One finished adult sized mask, and one child size. 2. Pellon Midweight Cut Away Stabilizer

The following pattern is my best working design, but not the fastest design. It requires significant pressing with an iron, but it is a forgiving pattern. Mistakes can be made and it will still be fully functional. The key element is the non-woven midweight CUT AWAY stabilizer, made by Pellon. This is available in all fabric stores! It is very similar to a vacuum cleaner bag but is designed to be used in clothing. I think they are similarly effective, while the stabilizer comes on a fabric bolt. Vacuum bags would be more difficult to fit multiple patterns and would create significant waste.

There are advantages to the design. The small amount of fabric in the "wings" allows the mask to conform to the face easier. A double hem (folding the fabric over twice) would create a pretty stiff turn and may not fit a face as easily as this design. Full disclosure, I have never made a pattern before. Some steps may seem vague. If you have questions about the pattern, reach out to me by email or phone and I will help you out! Enough talk, let's get to business.

Supplies!

- 100% quilters cotton. This can be had at Joanne's for about \$3 per yard in a 45" bolt. That means you are getting a 45"x36" piece. This makes approximately 8-10 masks.
- 30" of elastic, or shock cord. You could use non-stretchy material, but getting a tight fit that is comfortable is difficult. There is also a shortage of elastic in the area, so I think just sewing fabric ties in the back will eventually become necessary.
- A threading tool. It's designed to pull cord or elastic through tubes of fabric. It's flexible. You can also use a wire coathanger and some tape with varying results.
- An iron. There is a significant amount of pressing in this pattern to create a clean looking design. You could do without it, but I recommend it.
- Cutting and measuring devices.
- Sewing machine
- Thread
- Midweight CUT AWAY embroidery stabilizer. DO NOT USE tear away, it will flake with washing and be useless.

Other things that will help but not totally necessary are:

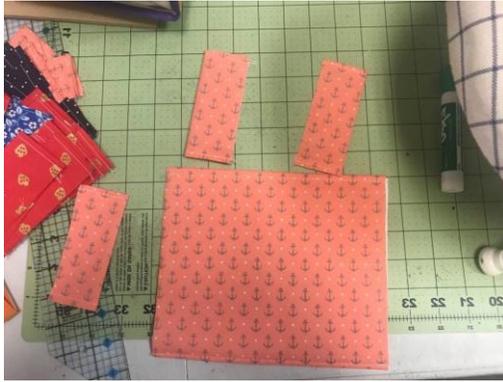
- A walking foot. If you don't have one don't sweat it.

1. Wash your fabric and dry it.
2. Iron it
3. Cut out one 8x14 rectangle, and two 3 1/2x5 rectangles from the cotton fabric.
4. Cut out one 8x6 7/8 piece of the stabilizer.
5. Fold the 8x14 piece hamburger style, insides out. You will be looking at a 8x7 folded piece of fabric. Line up the stabilizer's 8" edge with the cut 8" edges of the cotton fabric. Sew a 3/8" seam allowance down this edge. Be sure to backstitch both ends!



6. Turn the tube inside out, pushing the stabilizer to the inside. Push the seam flat. Done properly, the stabilizer will lay flat. Press with an iron.
7. Stitch both the folded edge and the seam edge down to keep the layers from moving around.

8. On to the wings! Iron a $\frac{1}{4}$ " fold on both of the short 3.5" edges. It's ok if they don't stay down well.
9. Sew Those $\frac{1}{4}$ " edges down. Backstitching unnecessary.
10. Fold and iron these pieces hot dog style. You will have a roughly 4 $\frac{1}{2}$ x1.75 folded piece. Set these aside!



11. This is a little confusing to make the pleats. Breathe. With the main portion of the mask, Put the raw edges on the sides. Mark points from the bottom on both sides at 1 $\frac{1}{2}$ " and 2 $\frac{1}{2}$ ". Turn the mask over. Flip up the bottom edge, looking for the first 1 $\frac{1}{2}$ " mark, finger press and iron. Turn the mask over again, index fingers under the crease and thumbs on top, match the fold to the SECOND mark. Iron flat. You should have one pleat!
12. I stopped measuring this section, and the size of the pleats should be adjusted so the mask is straight. This is where you can hide some of your mistakes! Turn the mask over again. Make a fold 1/2" past the last one press with an iron. Turn it to the right side again, and repeat making the pleat.
13. Repeat the previous step, your last pleat should be about 1/2" from the top. I have found the last pleat is tricky to keep all the layers folded neatly, and a heavy book while it cools after pressing helps to keep its shape.
14. Take the folded pleats and run a seam of stitches down the raw edges, holding all the pleats in place. All stitching here on out makes consumer machines angry if you go fast. Be patient, and hold those thread ends!!!
15. Take the wings and lay them raw edges matching on both sides. That is, both wing ends are facing the inside of the mask. Sew a row of stitches close to the end again for each.
16. With an iron press the wings out. Then, roll the wings to the other side of the mask. Let cool, then run a line of stitches down the $\frac{1}{4}$ " of rolled fabric.
17. Press the wing open again!
18. Topstitch the front edge of the wing down, next to the folded edge. If you made mistakes, just make sure there is enough tube for the elastic to go though. If it's real funky, just throw some zigzags in for good measure!
19. Use the threading tool to pass the cord/elastic through the tubes of fabric. The stitches you put in at the beginning of the wings keeps the threading tool from getting hung up inside. This design has you using a single piece of elastic through both sides. This is ACTUALLY adjustable, unlike masks with elastic over the ears. You'll never go back! Tie an overhand knot where you like, and you're done!

20. Wear it with pride, you made it!

Easier ideas? You could make the 8" measurement a bit wider, and double hem the edges to make a tube to thread the elastic. That would eliminate several steps, and likely be easier for a consumer sewing machine to handle. Just leave the stabilizer the same size, so you're not folding it up for the tubes.

Child's size is 5x12 and 3.75x4.5 Just make all the pleats shorter by eye after you made an adult mask. A clear measurement is difficult since it changes with the weight of the fabric. I will have to get back to you about the specific sizes of the wings for the kids masks, I have all the measurements at my studio.

I hope this works for you, and WASH YOUR HANDS!

Kyle Willis

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