

MakerMask: Origami (Beta v0.2)

The “**MakerMask: Origami (Beta)**” is designed as a stand-alone fitted mask with a number of features to improve accessibility. This mask is constructed without any seams in the central mask area and creates a 3-D shape around the face that gives extra space around the mouth and nose.



Features:

- Single latex-free silicone headband improves fit and accessibility
- Large breathable surface area!
- Compatible with Hearing Aids and Ear Buds
- Washable
- Available in multiple sizes
- Construction Time: 10 - 20 minutes

Technique: This mask is a sewn mask constructed from a square of fabric material (two or three layers) which is transformed into a 3-dimensional fitted mask by a series of pleats and origami folds. These folds are stitched into place, creating a padded trim around the circumference of the mask which both improves the seal to the face, and increases the comfort of the mask.

Materials:

- Two or Three Squares of Fabric – 9” x 9” each ([spunbond nonwoven polypropylene \[NWPP\] fabric](#) preferred for outermost layer/s; skin contacting layer may be NWPP or cotton).
- One Flexible Nose Piece (coffee tin ties preferred)
- One Head Band/Strap: (e.g., 9” x ¼” silicone kitchen band cut open to provide an 18” strip)
- Headband attachment loops (e.g., small loops made from 2-inch strips of grosgrain ribbon)

Equipment:

- Sewing machine (jeans needle or size 16 needle), scissors, ruler, paperclips or similar.

NOTE: This is a Beta Version of the Pattern & Instructions.

Check in with [MakerMask.org](https://makermask.org) for Updates.

These instructions do not guarantee protection against transmission of any diseases. Commercially available masks meet regulatory guidelines, but homemade masks may not. Mask designs have not been FDA approved or cleared. Homemade masks are to be used at your own risk. Due to variability of materials and construction, the mask's safety or effectiveness is not proven and cannot be assumed. Information and instructions are not guaranteed to be complete and accurate. Manufacturers and distributors are responsible for ensuring compliance with all applicable laws and regulations. Desperate times call for desperate measures. Stay safe.

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MakerMask: Origami
Makermask.org
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August 27, 2020
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Mask Instructions

Sew Layers Together

Step 1: Sew Layers Together

- Place all of the layers of fabric directly on top of each other, with the edges aligned.
- Sew the layers together along each of the 4 sides leaving a 2" section unsewn ($\frac{1}{4}$ " seam allowances used throughout).
- Trim excess fabric, especially at the corners and then turn the square inside out through the 2" unsewn section.



Add Nose Piece & Attachment Loops

Step 2: Add Flexible Nose Piece





- Turn Down the top $\frac{3}{4}$ " of fabric.
- Place the flexible nose bridge under the nose flap, so that it is centered around the midline of the mask.



Step 3: Add Attachment Loops & Sew Down

- Tuck attachment loops under fold.
- Sew the fold down, securing the nose piece and attachment loops in place



Add Pleats	
<p>Step 4: Add Two “Waterfall Pleats”</p> <p>A. Add two pleats, each $\frac{3}{4}$” wide and $\frac{3}{4}$” deep (Measure $\frac{3}{4}$” down from the bottom of the fold for the nose piece. To create the first $\frac{3}{4}$” deep pleat. Create the second $\frac{3}{4}$” pleat.)</p> <p>B. Use clips (or basting stitches) to hold pleats in place</p>	
Add Origami Folds	
<p>Step 5: Fold The Bottom 2 ½” Under</p> <p>A. Fold the bottom 2 ½” under (to the back)</p> <p>B. Turn the mask over</p>	
<p>Step 6: Fold $\frac{3}{4}$” Down</p> <p>A. Fold $\frac{3}{4}$” of the back down to create “trim”.</p>	
<p>Step 7: Create 3D Shape</p> <p>A. Fold the bottom corner up to create a right triangle that intersects with the top edge of the “trim”.</p> <p>B. Tuck the top edge of the triangle (step 7A) under the $\frac{3}{4}$” flap created in step 6A. Clip in place.</p> <p>C. Repeat for the other side.</p>	

Step 8: Sew The Final Seam

- A. Expand mask into 3D shape.
- B. Sew the “trim” in place, securing the trim and all the pleats in place. This trim will create the seal to the face along the cheeks and chin line. Extend the stitch line over the the attachment loops to reinforce the stitching

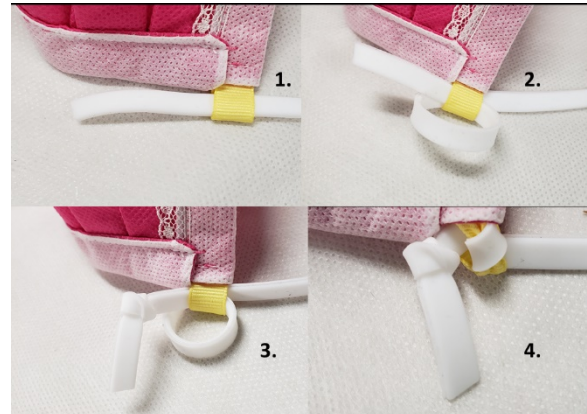


Attach Headband

Step 9: Attach Headband

- A. Thread silicone band through the attachment loops, adjust to desired length (~18 inches) and tie knots in the ends to hold in place.

To ensure that the band is held securely into place, loop the band through the attachment loop before tying (see photos).



Step 10: Expand Pleats and Enjoy!

