

LytW8.com Summer Quilt Instructions V1.0

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The following instructions detail the steps required to produce a lightweight sleeping quilt designed for summer use (40 degree nights). The LytW8 summer quilt is designed to be used flat or a footbox can be formed by Velcro and cinching the lower end closed. The quilt is 50" wide at the head and shoulders. It remains this width for the first 1/3 of the length. It then tapers straight over the remaining 2/3 of length to a 38" footbox.

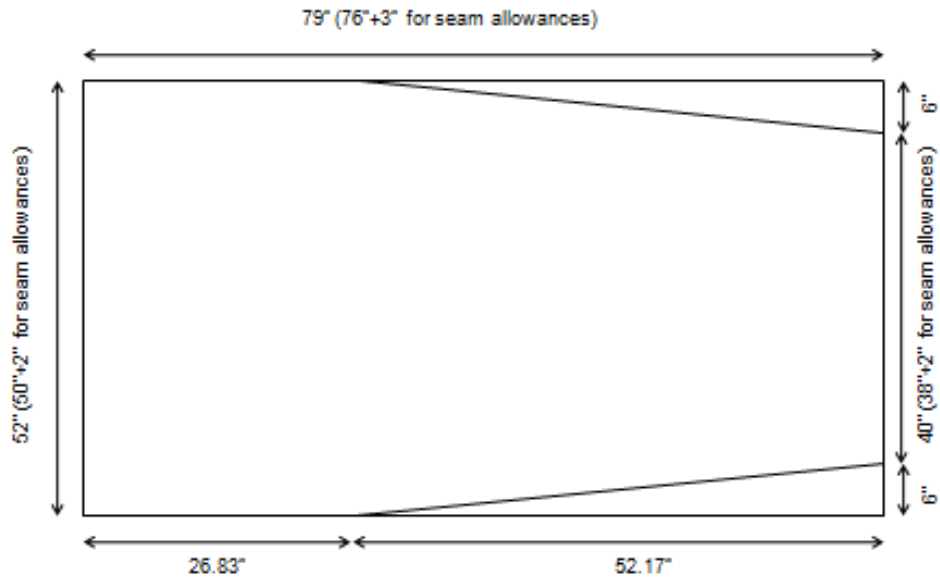
After much experimentation I believe this is a minimal width that is comfortable for an average sized man. I am 5'10" and weigh 160 lbs. The quilt is 76" long. To make construction as simple as possible it uses sewn through baffles spaced 6.33" apart. For each inch taller than 5'10" the user will want to increase the length, but this will require reworking the baffle and fill amounts (not covered in these instructions). I used an uncommon 10D downproof fabric sold as M50 from thru-hiker.com. The quilt is filled with 6 oz of 900 fill down and providing 1.5"+ loft. My final quilt weighed a meager 10.8 oz. A similar quilt made from M90 or 1.1 oz ripstop will add 2-2.5 oz for a finished weight of approximately 13 oz.

Warning, please check all dimensions for correctness. To the best of my knowledge all dimensions are correct, but the author is not responsible for any mistakes from errors in this document. Use the instructions at your own risk.

Materials Required:

- Down proof Breathable Nylon (5 yds.): M50 Fabric, Momentum 90 (thru-hiker.com), or 1.1 oz uncoated ripstop
- 800 or 900 fill down (6 ounces)
- 36" of 3/4" snag free Velcro
- 4 mini cord locks
- Grip Tease or other draw cord (100")
- 10" of 1/2" grosgrain ribbon

Please note that www.thru-hiker.com sells all of these supplies with the acceptance of the snag free Velcro.



1. Determine panel size, I started with a 52" by 79" inch rectangle drawn with a sharpie on the first panel. Calculate the diagonal and measure it to confirm you have a perfect rectangle (before drawing with sharpie). In my case it was 94.578" (pathagoreum theorem). With all measurements and lines measure twice and cut once.



Checking the length = 79" (76"+3" seam allowances)

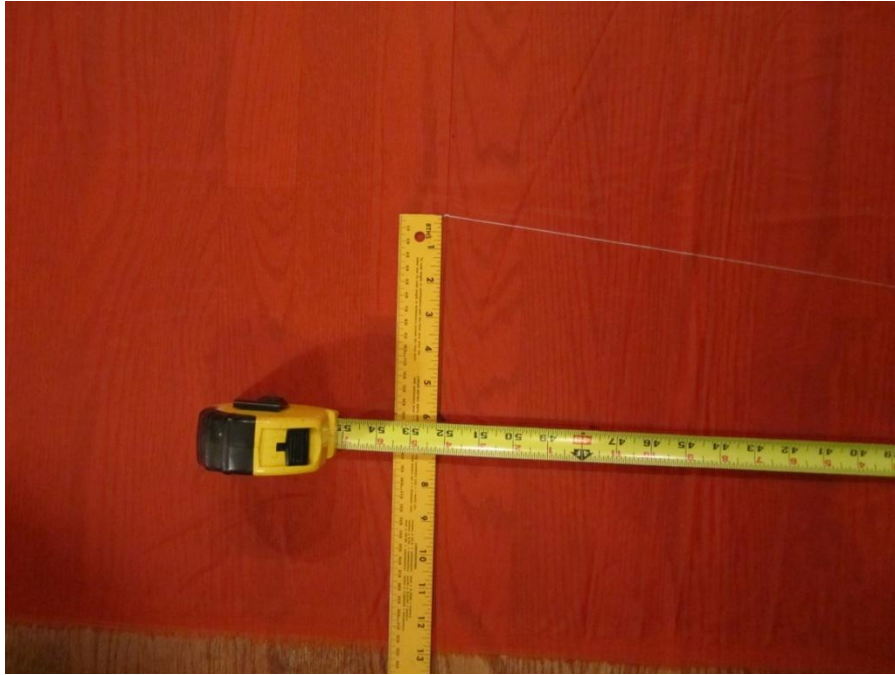


Checking the width = 52" (50" + 2" seam allowance)



Checking the diagonal = 94.6"

2. Draw the taper. Since I was going from 52 to 38 I needed the quilt to come in 6" on both sides at the bottom. I started the taper 1/3 from the top which is 26.83" (4x chambers of 6.33"+1.5" seam allowance).



Drawing the taper.

3. Cut out the first panel.



Finished panel

4. Layout the remaining fabric (dull side down) and place the first panel on top, dull side up (i.e. 2 shiny sides should be on inside, this is how they will be sewn together).
5. Mark all the 6 corners then connect with a straight edge (ie. draw lines with sharpie).



1st Panel lain on top of fabric to mark corner locations for second panel.

6. Cut out the second panel and flame sear all edges to prevent fraying.
7. Pin the edges, shiny sides to the inside, dull sides out. Sew the panels together with a seam 1/4" from the edge. ONLY sew the top and bottom edges (short edges) and one of the long edges. The 4th edge is left unsown because this is where the down will be inserted.



Pinning top and bottom panels together, dull sides out, shiny sides in.



Sewing top and bottom panels together, $\frac{1}{4}$ " from edge.

8. Lay the sewn panels down flat and mark the center baffle with CHALK (not a sharpie). Simply measure half way down or 39.5" from both the top and bottom. Pin the layers together and then sew on the chalk line.



Center baffle line is drawn and pinned (39.5" from top and bottom)

- Starting from the center layout the bottom half baffles with chalk (each 6.3333" apart). The last baffle line will be slightly farther from the top edge ($6.33 + 1.5 = 7.83$ "). This is because we will hem the cord chamber bringing the width back to 6.333". Sew the top baffles.



Center baffle is sewn and bottom half baffles have been drawn and pinned

- Repeat step 9 for the top half of the baffles.



Bottom half baffles have been sewn, top half baffles marked and pinned.

11. Sew a rolled hem on the long side that was already sewn. You want to fold over just slightly beyond the original sewn seam then fold again. The resulting hem should be $\frac{3}{8}$ "

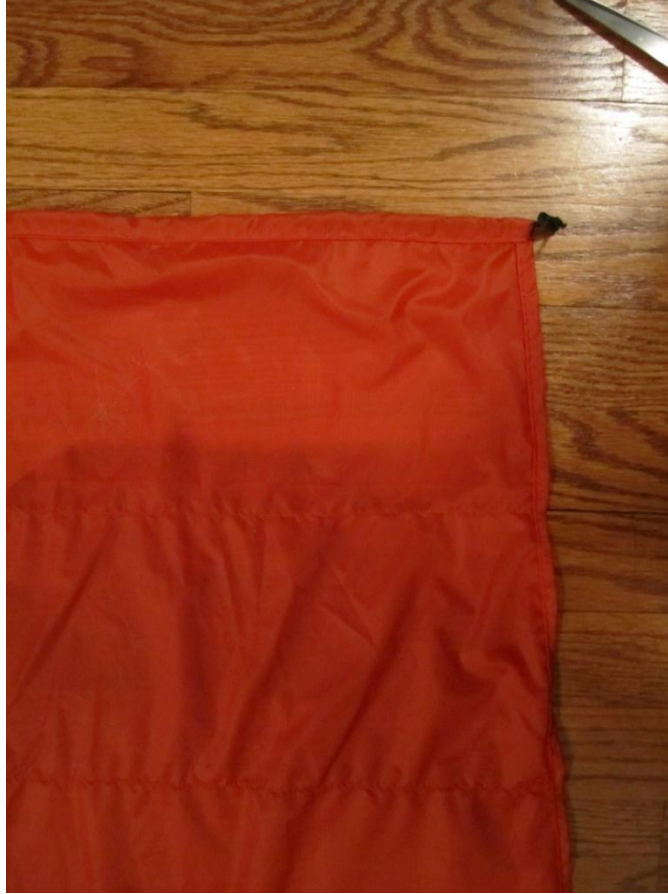


Hemming the long side.



Hemming side seam, $\frac{3}{8}$ " wide sewn $\frac{1}{4}$ " from edge.

12. Sew the draw cord chambers by hemming the top and bottom edges as in step 11, but increase the width of the second roll to $\frac{5}{8}$ " (large enough for the cord). The final seam should be $\frac{1}{8}$ " from the edge of the inside roll. **WARNING!** do not complete the last 2" near the opened edge. These need to be sewn after the long open edge is sewn and hemmed. Install grip tease (draw cord) in the chamber by attaching a small safety pin to the cord and pushing it through the chamber. Add 4 cord locks.



Side is hemmed and cord chambers finished.



Cord chamber detail of edge that is already hemmed.
Other side is left unsown for the 2" inches (not shown in picture)

13. Determine the total ounces of down to use (6 oz in my case) and calculate the percent of volume in each chamber (exact instructions are beyond the scope of this post). Apply the percents to the total then to get ounces per chamber, and then convert ounces to grams.

Summer Quilt Design (M50 + 2/3 taper + sewn baffles)

Chamber	top width width	bottom width	Area	sq yds	down oz	down calc grams	down adjusted grams	start weight grams	stop weight grams
1	50	50	316.7	0.2443	0.543	15.4	16.0	290	274
2	50	50	316.7	0.2443	0.543	15.4	16.0	274	258
3	50	50	316.7	0.2443	0.543	15.4	16.0	258	242
4	50	50	316.7	0.2443	0.543	15.4	16.0	242	226
5	50	48.5	311.9	0.2407	0.535	15.2	15.0	226	211
6	48.5	47	302.4	0.2333	0.519	14.7	15.0	211	196
7	47	45.5	292.9	0.2260	0.503	14.3	14.0	196	182
8	45.5	44	283.4	0.2187	0.486	13.8	14.0	182	168
9	44	42.5	273.9	0.2114	0.470	13.3	13.0	168	155
10	42.5	41	264.4	0.2040	0.454	12.9	13.0	155	142
11	41	39.5	254.9	0.1967	0.438	12.4	12.0	142	130
12	39.5	38	245.4	0.1894	0.421	11.9	12.0	130	118
			3496.0	2.8975	8.000	170.097	172.000		

Printout of spreadsheet showing down to use in each chamber. Start weigh includes down, bag, and box.

If you have used the same taper as I have then the following table can be used to determine the grams of down to put into each chamber.

Chamber	Grams of Down
1	16
2	16
3	16
4	16
5	15
6	15
7	14
8	14
9	13
10	13
11	12
12	12
Total	172g (6.07oz)

- Now fill each chamber using the scale (grams) and shop vac method. To do so, a shop vac has no-seeum taped over the extension attached to the hose. A second **clean** extension is attached to the first. The down is placed on a scale and vacuumed up. The no-seeum will keep the down in the second extension. When the vacuum begins to lose suction turn it off, remove the second extension, and press the down about an inch into the extension. Put the other end of the extension into the quilt chamber to fill. Blow hard and the down will move into the chamber. Continue the process, typically 4-5 times per chamber until the desired amount of down is transferred. Pin each chamber shut as it is filled. Pictures below show the process. Trust me, this method is slow but you lose NO down and make NO mess.



Quilt hung with open edge ready for filling



Down filling station: shop vac, scale, printout, down (in box).
Note that no-seeum netting is taped over next to last extension



Vacuuming the down into the extension. Down is stopped by the no-seeum netting



Separating the extension from the vacuum hose.



Push down into the extension.



Extension is ready to have down blown into quilt chamber.



Extension is placed into chamber and blown.



Down in chamber, extension is removed.



Nine chambers filled with down, three left to fill

15. Sew the final edge closed with a 1/4" seam



Sew the edge closed

16. Roll the final long edge and hem it just like the other long edge.



Roll hemming the final long edge.

17. Now finish sewing the draw cord chambers (the last 2" left previously unfinished) Optionally secure the draw cord in the middle by sewing back and forth 1/2" a couple of times through the chamber and draw cord (in middle of chamber).
18. Sew 18" of snag free Velcro (Omni tape) to the edges of the quilt at the footbox. I do a single seam all the way around the edge of the Velcro. Joanne's Fabric sells it in 36" length (expensive but good stuff).



Quilt with chamber full, edges hemmed, with Velcro place next to location for sewing.



Sewing the Velcro in place.

19. If you want under straps attach small grosgrain loops, see previous pics. Also if you want a tight fit around the neck you can add a snap to the top corners or use a plastic watch buckle and grosgrain.



Grosgrain loops for under cords (if desired)



Under cord, shock cord with a mini cord lock for adjustments.

20. That's it! To form the footbox, Velcro the edges together and cinch the draw cord together.



Velcro-ing the footbox.



Velcro attached to form footbox.



Cinch the footbox closed.



Finished quilt with footbox formed.



Trying it out.