

# Brian and Lis Green's Two Person Quilt Instructions

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## Introduction:

These instructions describe how we made a two pound, 15 degree, down sleeping quilt for backpacking. If you have found this to be helpful and are planning on doing some online shopping soon, check out our Links page (<http://www.brianandlis.com/links.php>). If you click our link to any of the companies listed and buy something, we get a little bit of money that will help pay for web hosting.

When we finished the John Muir Trail (<http://www.brianandlis.com/jmt>) in 2004, both of us were in need of new sleeping bags. Lis' old bag had lost a lot of loft and wasn't going to be warm enough for the Pacific Crest Trail and Brian's was a moderately priced down bag that wasn't going to be light enough for the PCT. After reading Ray Jardine's PCT Hiker's Handbook (out of print, but most of the concepts are in his Beyond Backpacking) we started thinking about using a quilt. While some of Jardine's ideas are pretty out there (opening doors in town with a paper napkin between you and the handle) he did make a fairly compelling case that a quilt would be warm and light. After realizing that we couldn't really buy what we wanted and it would probably be prohibitively expensive to do so if we could, we decided to make our own.

We found Jeremy Padgett's page (<http://thru-hiker.com/workshop.asp?subcat=5&cid=6>) on how he made his down quilt and used that as our inspiration. He leaves a few steps to your imagination in order to encourage modification, but we hope to fill in some of those steps. While we are just telling you what we did and you need to make changes as you see fit, hopefully this will help those with exuberance but not experience.

## Supplies we already had:

- Elna sewing machine
- Set of Gingher sewing scissors
- Basic sewing book (Simplicity's sewing)
- 100% polyester thread (No cotton or cotton core. Gutterman is a good brand and won't gum up the inside of your sewing machine. We used black and think that the contrast with the blue silnylon looks sharp.)
- A very small amount of sewing experience
- A lot of exuberance

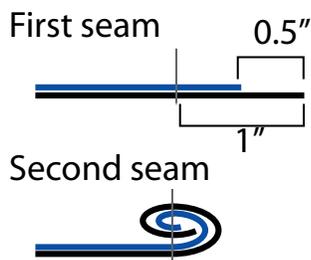
## Things we bought (first four items came as a kit from [www.thru-hiker.com](http://www.thru-hiker.com)):

- 1.1oz DWR silnylon in black for the inside (3 yards)
- 1.1oz Teflon DWR silnylon in Aegean blue for the outside (3 yards)
- no-see-um netting for the baffles (2 yards)
- 800+ fill down for the insulation (18 ounces, see below for calculation of amount)
- 70/10 needles (the smallest we could find)

## Things we found indispensable for dealing with silnylon:

- sharp sewing scissors (We use Gingher. Another note: never use sewing scissors to cut anything other than fabric- it will dull the blades much faster.)
- fabric weights (holds the slippery stuff still while you are cutting)
- lots of tape (to hold pieces together, instead of pins, which leave holes through which down can escape)

**Figure 1**



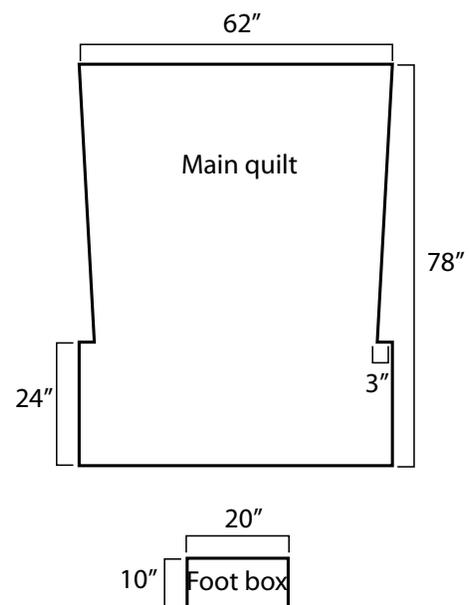
Silnylon tends to fray very easily on cut ends. It is possible to hot cut it to try to fuse it when cutting, but we did not try this. Basically we just made sure that a raw edge was never exposed on the quilt. We finished all of the outside seams on the quilt with a modified French seam (Figure 1). The first line of stitching joined the two pieces of fabric. We then rolled the seam over itself and taped it down with scotch tape. We sewed a second line of stitching (removing the tape before the sewing machine got to it) to keep the raw edges of the silnylon tucked inside the seam where they should not fray.

## How big should it be, and how much down should it have?

We did not make a mock-up of our quilt. We did spend some time measuring a sheet and wrapping up in it to figure out sizing. We were somewhat restricted in the width that we could make our quilt as the Teflon DWR silnylon was only 62 inches wide, but that was just enough for us. We decided to cut it 78 inches long, which means that after seam allowances and foot box volume are considered, the top comes up right around Brian's neck and chin. See Figure 2 for the dimensions that we used. For comparison purposes, Brian is 6 foot 3 inches, Lis is 5 foot 8 inches and we are both skinny.

For the down, we estimated that our quilt would be about 78 inches by 60 inches and we wanted 3 inches of loft. According to Jeremy Padgett's page at thru-hiker, 3 inches of loft should give a comfort rating of about 15 degrees. We have taken the quilt out in sub-20 degree weather and have been warm with two people in a tarp tent, with silk sleeping bag liners and wearing our planned PCT clothing. So, 78 x 60 x

**Figure 2**



3 is 14,040 or 17.5 ounces of 800 fill down. So, 78 x 60 x 3 is 14,040 or 17.5 ounces of 800 fill down. Usually it is recommended to buy 10% more down but since thru-hiker sold down in 3 ounce increments and we planned to transfer down with a method that would lose less down, we got 18 ounces.

### Cutting out fabric:

**Figure 3**



Cutting out the silnylon took several hours. We marked everything that we wanted to cut with a line of small segments of scotch tape. We cut the black, inner, layer to the dimensions that are in Figure 2. The blue, outer layer was cut 0.5 inches smaller along each edge. This is because we wanted to cut off the selvage on the 62 inch wide blue silnylon. Also, our modified French seam (Figure 1) was going to fold back over the blue side, giving a nice black trim to the edges. The 3 inch “notches” along the edge might not seem to be worth bothering with, but they seem to make the final quilt fit two people better.

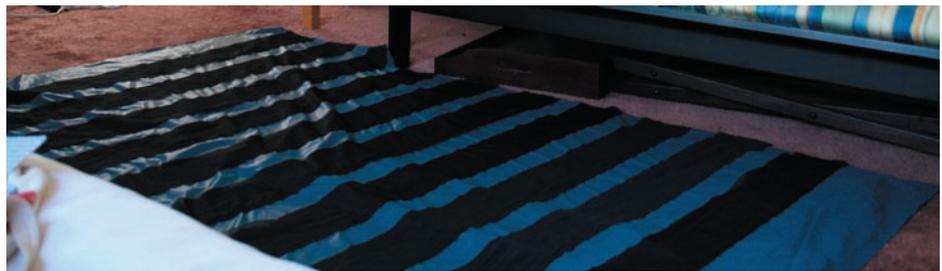
Next, we cut the no-see-um netting for baffles (Figure 3). We wanted to have 12 baffled regions. This is because the down came in three nearly equally sized bags and we wanted to divide each bag into fourths. Twelve baffled regions meant 11 baffles. The no-see-um netting was only 53 inches across, so we could not align it the same way as the silnylon. So, we turned it 90 degrees and needed to get 11 strips out of 53 inches, which came out to 4.75 inches per baffle. We wanted 0.75 inch seam allowances for sewing in the baffles and

figured our loft would be about 3 inches. Baffles 4.75 inches wide would give us 3.5 inches, so we were in good shape.

### Details of quilt construction:

We laid out the baffles on the outer (blue) fabric and taped them down, with 7 inch spacing (Figure 4). Remember the quilt will be 78” tall, so 11 baffles divided evenly among 78 inches is approximately 7 inches between each baffle. Once they were all

**Figure 4**



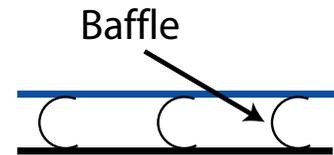
well taped down, we began sewing them to the silnylon. We left a 0.75” seam allowance and sewed the baffle onto the entire width of the silnylon. Be sure you remove the tape as you go, otherwise you’ll be stuck (hah!) with tape inside your bag, which isn’t good.

Once all of the baffles were sewn to the blue outer fabric, we had to sew each baffle to the inner black fabric. Attaching the baffles to the second piece of silnylon is a bit trickier than the first. You have the first piece attached and you need to deal with moving it around when you try to handle the rest of the

fabric. We sewed the inner, black piece second since we figured our lines might not be as straight on this step and it mattered less since it was the inside.

First we placed the blue silnylon flat on the floor, baffles up. We then placed the black inner fabric on top and straightened out the baffles. We sewed our baffles such that when viewed in cross section, they would form a “C” shape, not an “S” shape (Figure 5), but it probably doesn’t make any difference. When sewing on the second piece of silnylon, you can’t tape all of the baffles at once. So, we started at the foot area, lined up the outer black side on top and then flipped it back (very carefully) almost all of the way, to reveal the baffle closest to the foot. We taped that down and sewed along the no-see-um, removing the tape as we went. Next the quilt went back on the floor, blue side down, and the black side was lined up again. We taped the next baffle, sewed it, and continued until we got to the top.

**Figure 5**



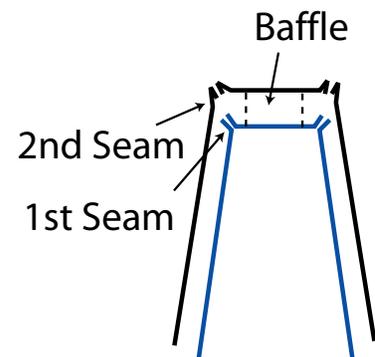
**Figure 6**



Next we made the bottom of the foot box of the quilt. We cut both the inner and outer fabrics to the same size (Figure 2). We then sewed a piece of no-see-um netting 2 inches in from the outside edge all the way around on the outer, blue, piece of fabric (Figure 6). We did not sew the two ends of the no-see-um netting together (which would have made a closed “circle” of no-see-um sewn on one edge to the foot box panel) as we would need to stuff down into that gap. We then sewed the inner, black piece to the other side of the no-see-um in the same manner.

It was now time to attach the bottom of the quilt to the rest of it. Figure 7 is a schematic of the two seams that need to be sewn to do this. We taped the blue pieces of fabric together inside out (Figure 8, with the outsides touching) and sewed around the edge.

**Figure 7**



**Figure 8**



We started and ended where the edges of the main quilt piece come together to form the seam running up the bottom of your legs. Although we did not do two lines of stitching along this seam since the frayed edges are contained in the bag, it might not be a bad idea. We then pulled the inner, black, pieces of fabric together. We tucked the frayed edges in and taped the seam (Figure 9), then ran a single line of stitching around starting and ending at the edge of the main quilt as before.

Since the edges of the main quilt had not been sewn together, we could still reach into the foot box to stuff it with down. We found this a bit hard to visualize, so make sure to stop and think about how you are going to stuff the down so you don’t accidentally sew up something you didn’t mean to.

Next we sewed one (and only one) edge of the main quilt to connect the inner and outer pieces of fabric. We ran all the way from the top of the quilt down to the point where the foot box is sewn in. Make sure to select the side that is opposite from the opening in the no-see-um netting sewn into the foot box. The no-see-um netting was sewn into this seam to prevent down from leaving each baffle. We sewed the seam shown in Figure 1 to finish it and give it a nice looking black strip on the outside edge of the outer blue fabric and prevent fraying. We next sewed the top of the quilt in the same manner.

**Figure 9**



### **Dealing with Down:**

Then the fun began - getting the down from the plastic bags into the quilt. There are two thoughts when it comes to down. The first is to deal with it in all of its fluffy glory and to try to contain it as best as possible in a tent or other enclosed space. We decided to take advantage of the fact that it is quite easy to work with when wet and opened the bags in a large bin of water. It was a bit trickier than we expected since down really doesn't like to get wet. A clump of down would get wet on the outside, but if you grabbed it, it would break open and totally dry down would try to escape. However, if you make a small opening in one end of the bag (with that edge of the bag held underwater) and slowly pull out small amounts of down and gently massage it under the water, you can get almost all of it wet with hardly any loss. We soaked one bag at a time, then used strainers to fish out the down and divided it into four equal portions (Figure 10).

**Figure 10**



The first clump of down was dropped into the foot box and then the no-see-um netting was sewn shut. Since you have to start and end sewing on the no-see-um netting, it is difficult to make a down proof seal right at the three way intersection of the two pieces of no-see-um netting and the piece of silnylon. Consequently, it is possible that a small amount of down might move between the two baffled regions at the bottom of the quilt, but we were OK with that. We then added the next three down clumps to the next three baffles. After we finished one bag of down, we would sew up the edge of the main quilt that we had not yet sewn. We continued with the other two bags of down.

This method of down dispersal resulted in remarkably even distribution. There is only one baffle that is slightly understuffed, at least as far as we can tell. We also did not notice any loss of oils on the down and after a long time in the drier, the down re-lofted really nicely. We also lost way less than 10% of the down. Based on the very few feathers that we had floating around the apartment, we guess that we lost a percent or two of the starting amount of down. That said, there are other ways of dealing with down and Jeremy Padgett talks about his method on his page.

## Finishing the quilt:

Once all 12 baffles were filled with down and sewn shut we folded the newly sewn seam over and finished it as before (Figure 1). The next step was to turn the quilt inside out at the foot box such that the black fabric was on the outside. Starting at the bottom of the foot box, we placed the two edges of the quilt together and sewed a single seam up through the edges of the quilt (Figure 11). Next we folded this seam over and ran another line of stitching along this seam to reinforce it.

Figure 11

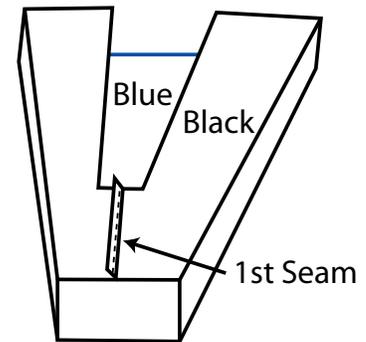


Figure 12



Since the top of this seam will get a lot of stress, we reinforced it twice. First, we made a small square of silnylon and folded over the edges and hemmed them to prevent fraying. The square was then folded over the top edge of the seam and sewn in place (Figure 12). Finally, we made a long rectangle in a similar manner and sewed that over the top of the seam and up over the edge of the notch. We trimmed any loose threads and dried the quilt for a very long time on very low heat at a laundromat.

And just like that we were done (Figure 13). At least with two people in it, the quilt really does live up to it's promise of about a 15 degree comfort rating. Hopefully this has been useful to you. If you have any questions or suggestions about how we can make this better, please send an e-mail to [webmaster@brianandlis.com](mailto:webmaster@brianandlis.com). Thanks!

Figure 13

