

# 2018 Windmill Rhomboid Box Class

Presented By Rob Pratt at the Oregon Kitemakers Retreat

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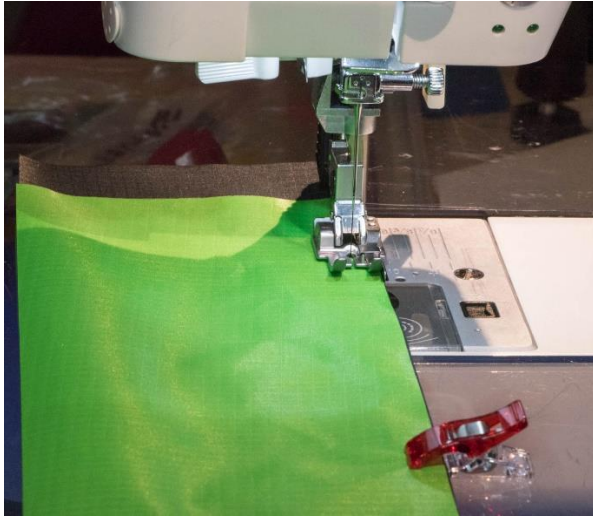
**Parts List**

7	4mm x1m	Fiberglass spars
16	.156"	Vinyl end caps
8	3 x 1"	Dacron pockets
8		Triangle tension reinforcements (cut from 2" sq. Dacron)
8	4"	80lb line for tension loops
1	48"	80lb Bridle line
1	12"	80lb line for tow point
4	24"	50lb line for tension lines
2	12 x 36.5"	White nylon for back
8	3.25 x 54	Nylon for design
		2 Colors 4 of each color
		3 Colors 4 of one color 2 of the other colors
1	7.5 x 41"	Random nylon fabric for bag
1	14"	Flat braid for draw string

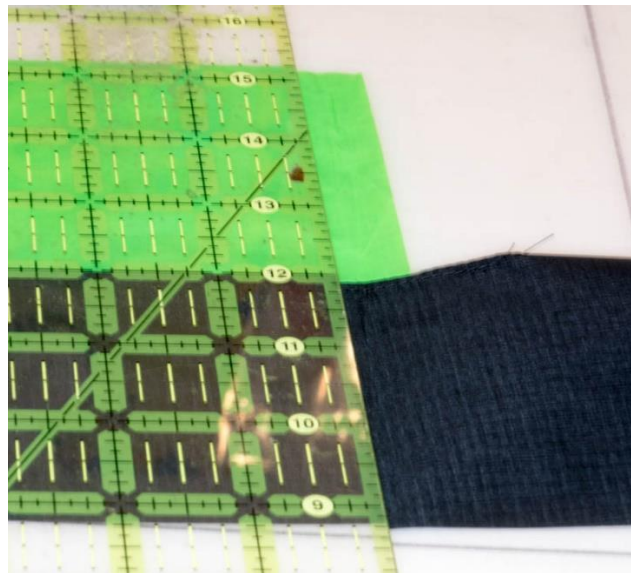
Instructions.

Note: all seam allowances on top stitched seams is  $\frac{1}{4}$ ". The edge hem is a  $\frac{1}{4}$ " double fold.

Step 1 Sew 3.25" strips together along the 54" edge. Crease open, making sure that the seam is all the way open Then top stitch. I crease the seam allowance to the dark fabric (Crease to the dark side Luke). Repeat until you have 4 two color strips.



Step 2 Measure the width of your new strips (I like to measure the width of all the strips and find an average.) Write down that measurement. After you square one end of the strip cut the strips into squares using the measurement that you forgot to write down. You should end up with at least 32 squares.



Step 3 Layout your squares and play with the pattern to determine where you want the colors. I layout both the sails so that I can keep them organized. This a good time to trim the blocks so they are closer to square, using the 6.5" quilting square. If you are unsure of how this is done please ask the instructor.



Step 4 Pair up the squares and clip the together with clips, tape or pins, whatever is your preference. I clip them together good sides together along the edge that will be my seam. I usually pair them top to bottom on each sail. Sew each square together along the clipped edge, I chain stitch all the pairs together first then open and crease them all and then top stitch all the pairs by chain stitching. Ask the instructor if you need clarification. You will end up with 16 rectangular pieces.





Step 5 Lay all you pieces out to make sure there were no brain cramps. Once you have reestablished your sail pattern. Clip the rectangles good sides together along the long side of the rectangle, align the centers and don't worry about the edges they will be straightened later. Sew them together. Then crease open and top stitch. Once again this is a good place to be efficient and chain stitch each operation. You end up with 8 wind mill blocks.



Step 6 Sewing the wind mill block into pairs. Align two blocks good faces together along the center seam and clip at the center. Stich along the clipped edge, crease open and top stitch. You will end up with 4 rectangles.



Step 7 Align two of the rectangles from the previous step good faces together along the center seam and clip at the center of the short edge and sew them together. Open and crease the seam and then top stitch. You will have a top and bottom sail.



Step 8 Find the center of the short edges of both pieces of the white fabric. Lay the front sails good side down and align the center seam with the marked center points on the white fabric. Clip the front and back together at the center on both sides. Clip the rest of those edges then sew a  $\frac{1}{4}$ " from the end of the front sail. If there is any white extending past the front sail along the sewn edge trim it even with the front sail seam allowance, then top stitch the side seams.

Step 9 Trim the top and bottom edges of each sail so that they're even with each other.

Step 10 Hem the top and bottom of each sail using a  $\frac{1}{4}$ " double fold hem. This is easier to do if your sewing machine is closer to the left edge of your table.

Step 11 Sew the 4" line to the tension reinforcements using a zigzag stitch to create at least a  $\frac{1}{2}$ " loop in the center of the long side of the triangle(see class example). This is easier to do if you use cello tape to hold the line in place for sewing. Create 8 of these.



Step 12 Sew the tension reinforcements along the sides of each sail that faces the center of the kite. There should be a reinforcement at each side seam and the center edge of the top and bottom sails.



Step 13 On the opposite edge from each tension reinforcement sew a pocket. See class example for folding method.

Sewing is done except for the bag!

Step 14 In 8 of the vinyl end caps punch a hole through the sides close to the closed end. And slide one on each end of the 36" spars. The put the remaining caps on the end of those spars.



Step 15 Insert the 36" spars into each corner of the sails top and bottom These will be threaded through the tensioning loops. The punched vinyl caps should be positioned approximately half way between the pocket and tension reinforcement.

Step 16 Install the 2 remaining 36" spars in the punched vinyl caps on the side spars. The shorter spars are too long on purpose these will need to be trimmed so when they are installed in the kite there is about 3 – 4" of bow in the long cross spar. This will help maintain sail tension, and keep the shorter spars in place longer when the winds pick up. I trim the two shorter spars to the same length to make beach assembly easier.

Step 17 Now that all of the spars are in you will tie the tensioning lines in between the top and bottom sails. Tie one end of the 24" line to the top sail using a bowline knot to the tensioning loop. The other end is threaded through the opposite loop on the bottom sail and tied with a taut-line hitch (don't fully tighten yet). Repeat at each corner. Once all the tensioning lines are on tension all four lines to put a bit of tension on the sails.

Step 18 Melt hole on either side of the front center spar at the top pocket. Repeat this on the bottom sail at the center tension reinforcement. Thread the bridle line through the front of the kite around the spar and back through the other hole and tie a bowline to secure. Repeat this with the other end of the line at the lower bridle point holes. Double up the tow point line and tie a over or figure eight knot at the open end. Use a lark's head knot to attach the loop to the bridle about 18 to 24" from the top bridle point.

Go fly a Kite!

Step 19 Make your favorite bag. I have provided some odd fabric that I use for bags and a bit of flat braid for a draw string. If you need and Idea let me know.