

1 Meter Double Parasled

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The Parasled or Storm Sled is a wonderful lifting kite. We first saw it in Denmark. They were flying in high winds as well as low winds. There were several sizes and they were all lifting huge amounts of line laundry. Some carried tails, most did not. We saw the 3-meter Parasled tied off to vehicles. A favorite size among the Germans is 1.5 meters. We like the 2-meter size. The original plan is by John Verheij, "THE DOUBLE PARASLED" Fall 1994 issue of Kite Lines. The drawing at the bottom of this page is adapted from the Kite Lines article (John Verheij and Michael Graves). It is for your reference as you lay out and sew the kite.

This class will build a 1-meter baby. But don't be fooled! It will hold up all our spiky balls or the herd of 9 elephants or the flock of ducks or our polyester satin 1, 3, and 5-meter Koi windsocks. And it hardly knows anything is on the line. It can be skitterish in higher winds and doesn't ride choppy winds as well as it's big brothers. A drogue attached with a long line will help stabilize it.

NOTES

**The shortest side of the panels is the trailing edge of the kite. This is very important to keep in mind.

**Seam allowance is 3/8 inch or 1cm.

**Start sewing at the leading edge.

**Keel points will be long at the trailing edge of the kite. This is OK.

**There is a length difference on the long sides of most panels. Watch your layout!

Notes which were not in the class packet:

These instructions were for the 1 meter parasled class. You may use them for a 1.5 or 2 meter sled as well. The seam allowances and pocket allowances are the same.

We highly recommend using the KiteLines article as another reference. Use our chart for dimensions as there are errors in the KiteLines article due to changing from metric measurements. My instructions are much more detailed.

The drawing referred to above has been moved to the last page and includes the number of panels to cut.

Included here is a diagram for the patches and webbing for the keels.

Included here is a chart for the dimensions of each panel for 1, 2, and 3 meter ParaSleds.

Prepare panels

1. (2) Panel #6, right side of fabric. Draw lines on long edges: 4.5 (1 ¾") from edges.
2. (2) Panel #4W (wide), wrong side of fabric. Draw lines on 98cm (shorter of the 2 long edges) side: 4.5 (1 ¾") from edge.
3. Hem short edges of all pieces except keels. 3/8" single fold hem. Zig zag.

3 Keels (Panel #1)

1. 4-ounce Dacron (3- 3" squares). Heat seal edges. Mark tow lines using template.
2. Position 3/8" in from edges of keel and zigzag the 2 inner sides and along diagonal. Make 2 the same and one a mirror image.
3. Fold over hems and stitch with zigzag on 2 sides.
4. Position tow point line using the pencil lines as a reference, forming the tow loop. Starting a bit in from the edge of the Dacron, backstitch with a straight stitch. Then forward zigzag to the outer edge of the Dacron, backstitch with a straight stitch. Stop with needle down and pivot fabric. Raise needle, adjust fabric to be able to lower needle into the unstitched line, and lower needle. Backstitch with a straight stitch, then zigzag to the end of the Dacron. Backstitch.

Center tube construction

1. Panels #4N (narrow), #5, #6. (ASSEMBLY A)
 - Layout:
 - ◆ Lay #6 on table, wrong side up.
 - ◆ #4N on top of #6, wrong side up. (Place on right hand side of #6)
 - ◆ #5 on top of #4N, right side up.
 - Sew along the longest side (99.7cm). Straight stitch a 3/8" or 1cm seam.
 - Fold #6 back. Position edge of seam allowance to the line on #6. Sewing within the seam allowance and close to it's edge, zigzag the seam allowance down onto #6. You will be sewing the seam to the front of the kite. This is correct. This makes the first pocket.
2. Panels #1, 3, and 5 and ASSEMBLY A.
 - Layout:
 - ◆ #3 on table (right or wrong side down, it doesn't matter)
 - ◆ #5 of ASSEMBLY A wrong side down, on #3. Make sure the trailing edges of the panels are at the same end.
 - ◆ #1 (keel), on ASSEMBLY A #5. Use one of the two keel pieces that are the same; right side up or down will vary with each student.
 - ◆ **new #5** right-side down, on #1
 - Straight stitch seam (3/8" or 1cm). Keep all 4 edges even.
 - Fold out #3. Zigzag seam allowance flat to #3.
3. Panel #4N and ASSEMBLY A.
 - Lay **new #4N** wrong side down on table, ASSEMBLY A #4N right side down on top of new #4N, ASSEMBLY A #3 on top. Straight stitch seam.
 - Fold out #4N. Zigzag seam allowance flat to #4N.
4. Panel #6 and ASSEMBLY A.

- Lay new #6 right side down on table, ASSEMBLY A second #4N (outside down) on left-hand side #6, ASSEMBLY A second #5 (right side up) on ASSEMBLY A second #4N. Straight stitch seam.
- Fold out #6. Position edge of seam allowance at the line drawn on #6, top stitch with a zigzag. This forms the second pocket. Set Assembly A aside and start with all new panels.

Left tube construction

1. Panels # 1,2,3, and 5. (ASSEMBLY B)
 - Layout:
 - ◆ Lay #2 on table, right side up
 - ◆ #1 right side down, on #2
 - ◆ #5 right side down, on top of #1
 - ◆ #3 on top of #5
 - Sew the shorter of the long sides with a straight stitch. 3/8" or 1cm seam
 - Fold #3 out. Top stitch seam allowance to #3 with a zigzag stitch.
2. Panel #4W and ASSEMBLY B.
 - Layout:
 - ◆ Lay Panel #4W wrong side down on the table.
 - ◆ Lay Panel #2 of ASSEMBLY B right side down on #4W (on the long side with line, which is the shorter of the 2 long sides). Lay Panel #3 on top of #2.
 - Straight stitch a 3/8" or 1cm seam.
 - Fold out #4W. Position the edge of seam allowance (of #2, 3, and 4W) to the line on #4W. Sewing within the seam allowance, sew the seam allowance to #4W. Zigzag. This makes the third pocket.

Joining the center tube assembly and left tube assembly

Join the left tube to the center section by joining #6 (ASSEMBLY A) to #4W and #5 (ASSEMBLY B).

- Layout:
 - ◆ Lay Panel #6 (ASSEMBLY A) right side down on table.
 - ◆ Lay Panel #4W and #5 of ASSEMBLY B on #6. #5 is on the top with the right side up.
- Straight stitch a 3/8" or 1cm seam.
- Fold out Assembly A (right side is up). Position the edge of seam allowance (of #4W, 5, and 6) to the line on #6. Sewing within the seam allowance, sew the seam allowance to #6. Zigzag. This makes the fourth pocket. Set aside.

Right tube construction

1. Remaining Panels #1,2,3, and 5. (ASSEMBLY C)
 - Layout:
 - ◆ Lay #3 on table
 - ◆ #5 wrong side down, on #3
 - ◆ #1 wrong side down, on top of #5

- ◆ #2 right side down on top of #1
 - Sew the shorter of the long sides. Straight stitch a 3/8" or 1cm seam.
 - Fold #3 out. Top stitch seam allowances to #3 with a zigzag stitch.
2. Panel #4W and ASSEMBLY C.
- Layout:
 - ◆ Lay Panel #3 and #2 of ASSEMBLY C on the table with #2 wrong-side down on top of #3.
 - ◆ Lay Panel #4W right side down on #2.
 - Straight stitch a 3/8" or 1cm seam. (The edge with the line.)
 - Turn Assembly C over. Fold out #4W. Position the edge of seam allowance (of #2, 3, and 4W) to the line on #4. Sewing within the seam allowance, sew the seam allowance to #4W. Zigzag. This makes the fifth pocket.

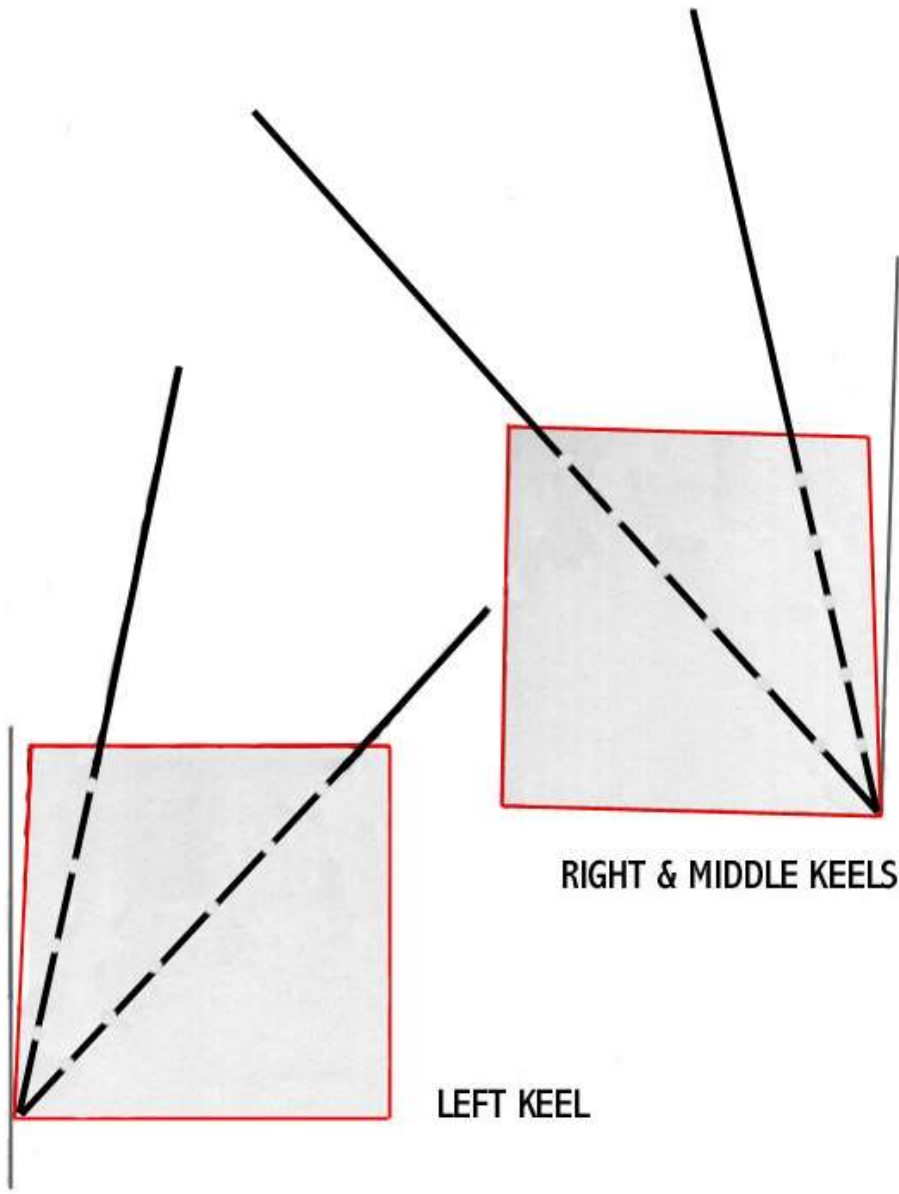
Joining the center and left tube assembly to the right tube assembly

Join the right tube to the other sections by joining #6 (ASSEMBLY A) to #4W and #5 (ASSEMBLY C).

- Layout:
 - ◆ Lay Panel #5 and #4W (ASSEMBLY C) on the table, #4W on top
 - ◆ Lay Panel #6 (ASSEMBLY A) on #4W
- Straight stitch a 3/8" or 1cm seam.
- Fold out Assembly C (right side is up). Position the edge of seam allowance (of #4W, 5, and 6) to the line on #6. Sewing within the seam allowance, sew the seam allowance to #6. Zig zag. This makes sixth and final pocket.

Finishing

1. Drogue attachment loops
 - cut 2 – 10 cm pieces of line from the un-looped end of the line in your kit.
 - sew two loops for a drogue on the outer edges of each Panel #6.
2. Securely sew all pockets closed at leading edge.
3. Rods
 - Put one end cap on each of the 6 rods.
 - Insert rods into pockets, check length, shorten as necessary. The 2 short rods go into the far left and right pockets. Put on remaining end caps.
 - With rods inside the pockets, sew the trailing edge closed. A zipper foot helps.
4. Bridle
 - Cut 3 bridle lines
 - ◆ Step A: Using the piece of line from the kit which is for the bridles, measure from the end of the loop 400cm. Mark with a permanent marker. Cut at 410cm. Put aside.
 - ◆ Step B: Make a new loop in the remaining line. Repeat Step A.
 - ◆ Step C: Make a new loop in the remaining line. Measure from the end of the loop 410cm. Mark with a permanent marker. Cut at 420cm.
 - Attach lines to tow loops on the keels with larksheads. The shorter ones are the outside bridle lines. The longer one (410cm) is for the center. Tie ends together at your mark. You are done!



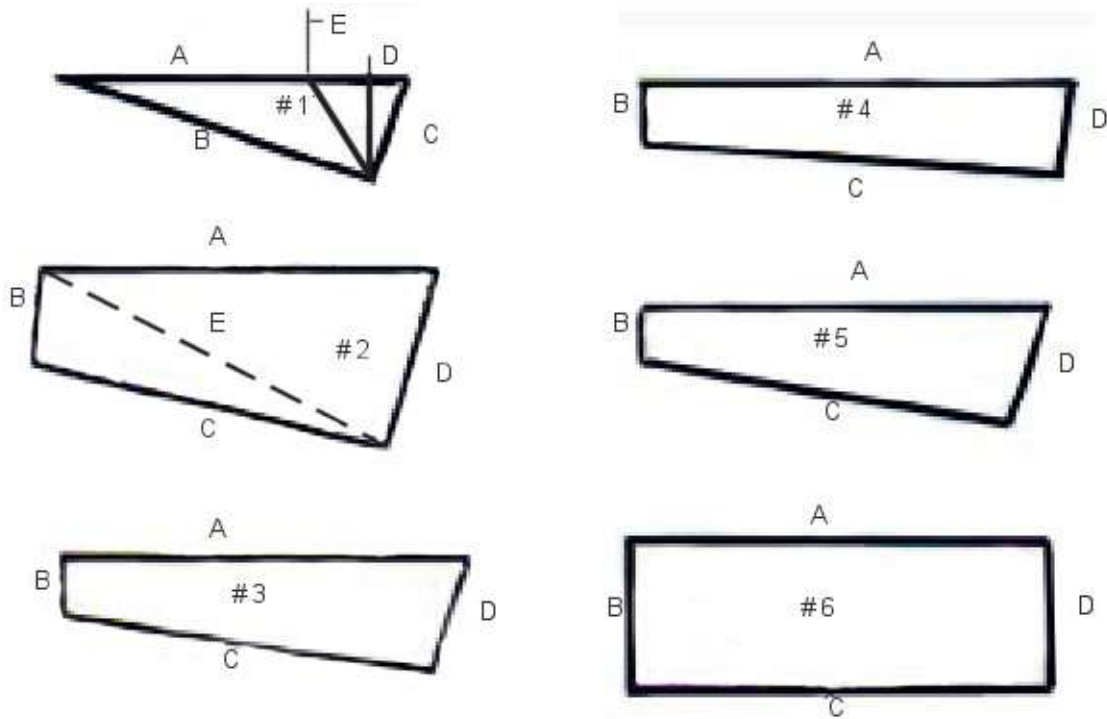
LEFT KEEL

RIGHT & MIDDLE KEELS

Panel #	Side	full size 3M	1 third 1M	2 thirds 2M	Grain line parallel to this side
1	A	2731	910	1820	
1	B	2673	891	1782	***
1	C	714	238	476	
1	D	146	49	97	
1	E	533	178	356	
2	A	2931	977	1954	
2	B	581	194	387	
2	C	2731	910	1820	***
2	D	1305	435	870	
2	E	2880	960	1920	
3	A	2931	977	1954	
3	B	419	140	279	
3	C	2731	910	1820	***
3	D	854	285	569	
4	A	2991	997	1994	***
4	B	419	140	279	
4	C	2931	977	1954	
4	D	606	202	404	
5	A	2991	997	1994	
5	B	419	140	279	
5	C	2731	910	1820	***
5	D	854	285	569	
6	A	2991	997	1994	***
6	B	1102	367	734	
6	C	2991	997	1994	***
6	D	1102	367	734	

(Flat panels)

All dimensions in millimeters



Add seam allowances to the side (A) of panel 1.

Add seam allowances to the side (A and C) of panel 2,3,4,5,6.

Add hem allowances to the (B and D) sides of panel 2,3,4,5,6, and the (B and C) sides of panel 1. OR edge bind the panels.

Add sleeve pockets of 3.5cm to side (A) on TWO of the number 4 panels, this is in addition to the seam allowance.

Add sleeve pockets of 3.5cm to side (A and C) of panel 6, this is in addition to the seam allowance.

D and E on panel 1 are for the tow point reinforcements. They go all the way from the tow point into the seam allowance. This is a very high stress point and I use webbing.

Quantity of each panels to cut :

Panel #	Qty.	
1	3	
2	2	
3	3	
4	4	(2 narrow and 2 wide)
5	4	
6	2	