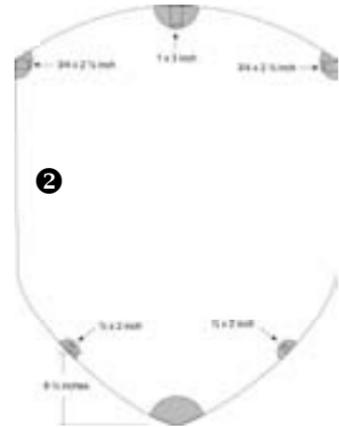


# SAM AND CARI KING'S SHIELD KITE

## REINFORCEMENTS

Using Diagram 1 as a guide, sew down the white Dacron reinforcements to their corresponding locations on the back side of the sail. Sew only the outside arc. I like a small zig-zag for this. I use either scotch or masking tape to tape the pieces in place. Remove the tape as the needle gets to that portion. When done, you should have six reinforcements sewn to the back of the kite.

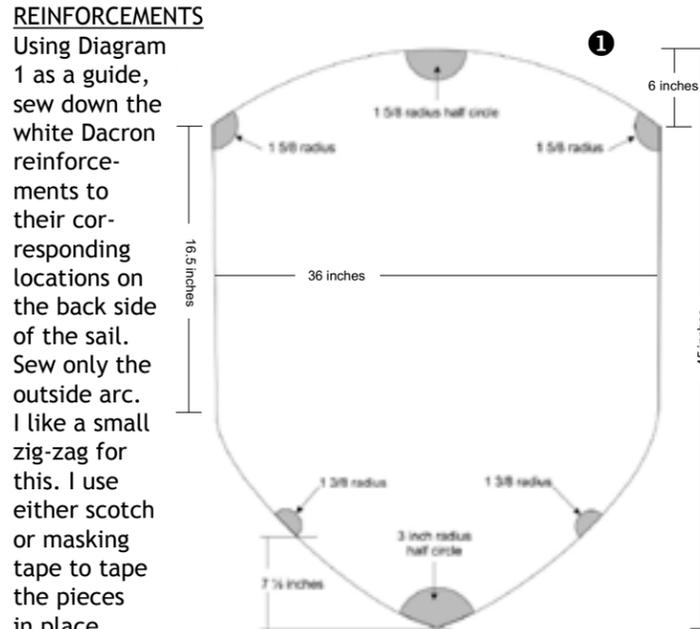
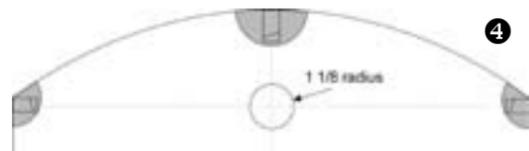


## EDGE BINDING

Use 1" 3/4 ounce nylon to edge bind your kite. Fold this in half along the length of the edge binding. Sew one long edge, then the other, then the top (zig zag). Hot cut the excess along the kite edge to seal the ends. For the curves on the bottom half of the kite, remember that a very small length of each curve is merely a straight line. Go slow, stitching down an inch or two at a time. Try to keep the sail flat on your table and allow the binding to pucker as necessary (it will flatten out as the kite is tensioned). I use a wider zig-zag for this, which helps the fabric ease a bit.

Fold the Dacron pocket pieces in half and tape in place according to Diagram 2. Sew as indicated in Diagram 3 to attach the pockets to the kite. Tack each end. I also run back and forth a couple of times at the edges of the angled bit to tack that down well.

## POCKETS



## SPAR CROSS CHANNEL

Center the 1 1/8" Dacron circle on the top corner pockets and on the pocket at the top of the kite. Sew the circle to the sail with a small zig-zag stitch. See Diagram 4. Construct the channel by centering the 7/8" x 1 1/8" Dacron rectangle on the 1" x 1" Dacron rectangle. The short ends of each face top and bottom. Sew the smaller rectangle to the larger by sewing along ONLY the top and bottom edges with a straight stitch. Sew this assembly, with the smaller rectangle facing up, in the center of the 1 1/8" Dacron circle. Sew only along the left and right edges of the larger rectangle.

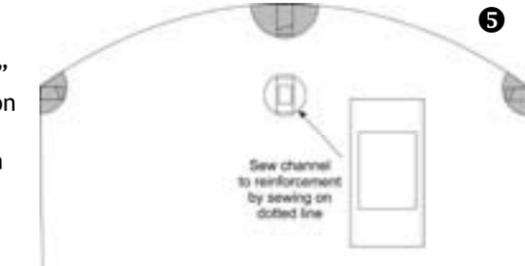
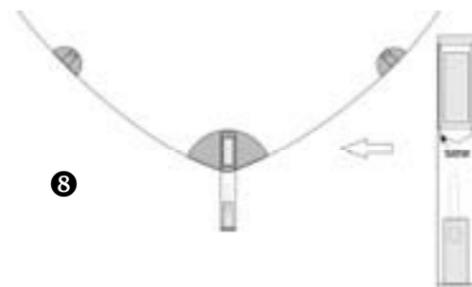
Warning: Do not sew across the smaller rectangle. See Diagram 5.

## SPINE TENSIONING POCKET

- Fold 1/4" of one end of the 1" x 6" Dacron rectangle over and sew down (creating the diagonally shaded portion). See Diagram 6.
- Sew down the loop Velcro on that end of the 1" x 6" Dacron rectangle. See Diagram 6.
- Sew the hook Velcro centered on the 1" x 2" Dacron rectangle. See Diagram 6.
- Sew the 1" x 2" Dacron rectangle (with attached hook Velcro) onto the 1" x 6" Dacron rectangle by sewing only the long sides of the rectangle to create a channel. See Diagram 7.
- If you would like a tail attachment point, sew the flat webbing with knot on the back of the 1" x 6" Dacron rectangle with the unknotted end adjacent to the hook Velcro reinforcement. See Diagram 7.

## SPINE TENSIONING POCKET ONTO SAIL

Align the completed spine tensioning pocket on the sail as indicated. The tail attachment webbing, if present, should extend off the bottom of the kite. Sew down by following the



dotted line path. The pointed end of the path should be on the bottom of the kite, approximately 1/4" from the edge of the sail (mid-way across the edge binding). See Diagram 8.

## BRIDLE ATTACHMENT REINFORCEMENT AND POINTS

The top two bridle points are centered on the top side pockets, 9 1/2" from the center of the kite. Trim the corners of the adhesive backed Dacron squares. Center one of these on each bridle point and stick to the back of the kite. Hot cut a hole at the bridle points indicated. The bottom bridle point is centered on the kite approximately 8-10" from the bottom of the kite. The exact position is not critical so adjustments can be made to fit your sail design. Hot cut two holes about 1/2" apart centered on the spine in the middle of this reinforcement.

## STICKS

The spine is .220" carbon tube. Slip a medium end cap on one end and put that end into the top pocket. Tension the kite and mark the spar at the bottom of the kite. Cut on your mark and slip on the second medium end cap. Do not put into kite yet.

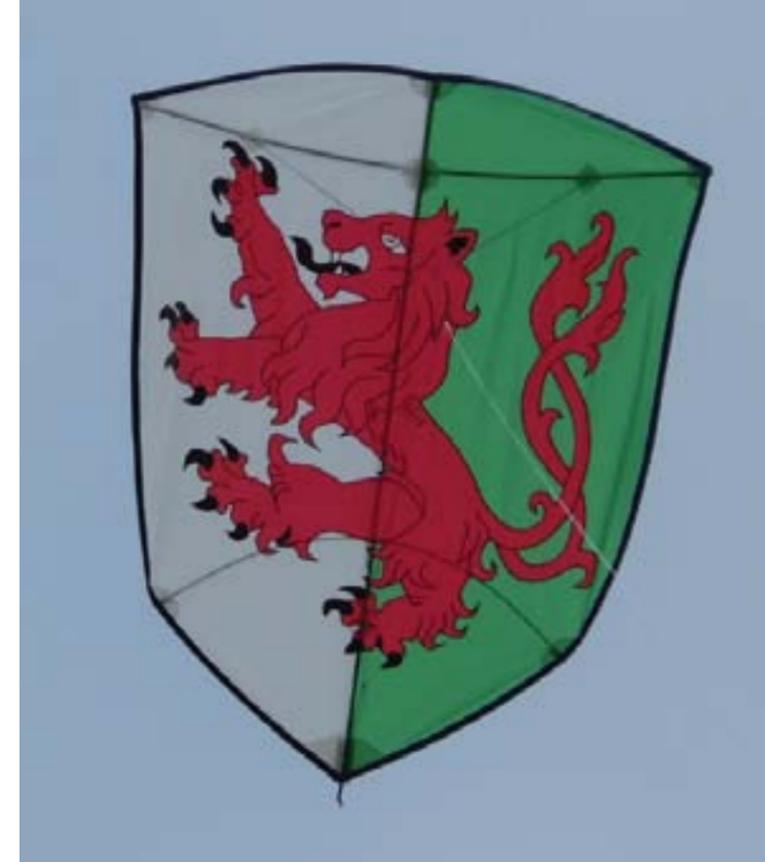


Sam King, Judy Brown, and a pointy-topped variant of the shield kite.

put into kite yet.

## STRINGS

The top bow line is 58" long. Fold 10" over at one end and tie a loop using a figure of eight knot. Repeat this process at the other end of the string. You'll end up with a 16" length in the middle with a 10" loop at each end. Using a prusik knot, attach one loop onto one end of the cross spar. Slide the cross spar through the horizontal portion of the cross spar channel and then tie the other loop onto the opposite end of the spar with a prusik knot. Now you can install the spar in the pockets. This will take some effort, but this spar does not come out of the kite, so you only have to do it once. The shortest length



of string is for the bottom tensioning spar line. Tie a small 2-3" loop in one end. Using a double larkshead knot, tie this to the bottom tensioning spar. Install the spar into the kite. Run the free end of the line through the spine tensioning channel then towards the front of the kite through a hot cut hole. Run the free end to the back of the kite through the second hot cut hole and back through the spine tensioning channel. Tie this end to the downward portion of the line using a trucker's hitch (sliding) knot. You can control the amount of tension the bottom spar exerts on the outside of the kite skin by tensioning this knot. Install the spine and tension the kite.

This kite utilizes a T-shaped bridle. Take one bridle leg and run it from the front of the kite, through the hot cut hole in the reinforcement at one of the top bridle points and tie to the cross spar using an overhand slider knot. Repeat this process to tie the other end of this line through the opposite top bridle point. In the remaining bridle line, tie a small 3-4" loop in one end. Attach this to the top bridle point using a double larkshead knot. Center this knot on the top bridle leg. Run the other end of this line towards the back of the kite through one of the holes at the bottom bridle point, around the spine,



and then back towards the front of the kite through the other hole. Tie a bowline knot, leaving a healthy loop as this will allow you a bigger loop to slip the spine through when you assemble the kite. Add a pig tail and you're ready to fly!