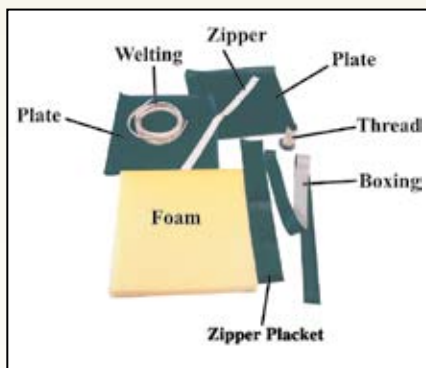


# Make your Own Cushion Covers

**Part 2: The DIY 2006-#1 issue discussed making cushion patterns and selecting and cutting foam. Here you'll learn you how to assemble and sew a small stadium cushion.**

By Jim Grant



Parts and pieces of a cushion cover.

Now that you've made your cushion pattern and cut the foam the next step is to fabricate a cover. The cover serves two functions: it is decorative but it also helps protect the foam from sunlight and abrasion that can harden or tear it.

Almost any fabric can be used for cushion covers but a synthetic fabric provides the best resistance to rot and mildew. Some synthetics offer better abrasion resistance than others. Naugahyde marine products (Naugahyde Bellingham, Naugahyde Oakwood, Naugahyde Southampton, Naugahyde Universal, NaugaLeather, NaugaSoft), outdoor acrylic furniture fabrics (Ultraleather, Ultrasuede, Sunbrella, etc.) or the Designer Phifer line of upholstery mesh are all recommended. The latter uses a vinyl-encapsulated polyester yarn in a weave that is designed to allow the free passage of moisture and air. The final selection from among all of these materials depends upon personal preference and budget. Samples are available from

Sailrite (for a small charge) to help refine your selection.

Making an 18" (45.7cm) square stadium cushion cover requires the same construction steps as a much larger, irregularly shaped cushion. You'll need enough fabric to provide for the two "plates," the top and bottom of the cushion, for the "boxing" placket that encircles the thickness of the foam and the zipper placket. You can make a paper pattern (craft paper works well) to calculate how much material you'll need. Measure the foam surfaces (top, bottom and all around the depth) and cut the paper to these measurements and lay out the pattern pieces to measure for the material needed.

Besides the fabric, you'll need a nylon or plastic zipper that is closed at both ends (not separating) and is about 8" (203mm) longer than one side of the foam. I suggest a #5 zipper for foam up to 3" (76mm) thick; a #10 for 4" (101mm) thick foam. I like a welting on all seams. Welting is cord wrapped in fabric that is sewn into a seam for a more finished look but it's not a required detail for this project. I use prefabricated welting that is available at any fabric store. Finally, select a quality polyester thread for your project since it holds up very well in a marine environment.

## Step 1 Cutting Fabric Cushion Cover Pieces

Cut the two plates for the upper and lower cushion covers exactly the same

size as the foam. If you followed our advice in the last issue you cut your foam 1/2" (12mm) larger than the desired final size all round. Cut the zipper placket as a rectangle 1.5" (38mm) wider than the depth of the foam to allow for zipper installation. It's roughly the same length as the side of the cushion plus about 6" (152mm). Finally, cut the boxing that goes round the rest of the cushion to the length of the circumference of the cushion, less the placket, with 1" (25mm) or so of extra length to allow for seaming. Boxing should be exactly the thickness of the foam. There should be no extra allowance for seaming as the seaming will reduce the size of the finished cover just enough for a snug fit. As you cut, be sure to mark the inside surface of the fabric if there is a right or wrong side for the exterior. Note that the boxing and the zipper placket may require cutting two or more pieces that will be seamed together (more about this later).

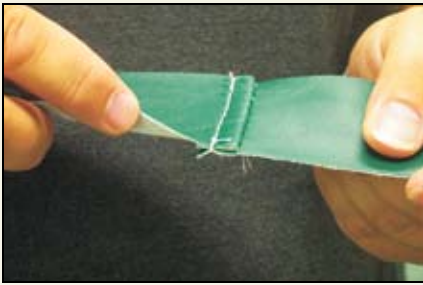
Cut all fabrics with scissors or hot blade, such as a soldering iron or gun with a narrow blade or use a specially designed tool that cuts and seals the edge at the same time, an advantage with synthetic fabrics that fray easily. This is not a serious problem with cushions where all raw fabric edges are inside the cover and any raveling goes unnoticed. With this cushion, scissors work satisfactorily. Vinyl-coated materials don't ravel at all so the hot blade offers no advantage there.

## Step 2 Preparing the Zipper Placket

Fashion the zipper placket from a strip (or strips) of fabric 1.5" (38mm) wider than the thickness of the foam. If the



**Figure 1**  
A placket end-to-end seam.



**Figure 2**  
*Topstitch on an end-to-end seam.*



**Figure 3**  
*Creasing the placket tape down its center.*

zipper edge of the foam is beveled, it's necessary to build this bevel into the placket by cutting it into three pieces: one piece the length of the beveled edge plus 1" (25mm) to allow for a seam at each end. Cut the ends of this first piece at right angles to its length. The short pieces to be sewn in place at each corner should be angled to match the bevel of the foam. To join separate pieces (with or without a bevel allowance), simply lay one on top of the other with the edges flush and put a row of straight stitches 1/2" (12mm) inside the matched edges (**Figure 1**). Then, spread the two panels to their full length and use a row of straight or zigzag stitches (**Figure 2**) to hold the seam allowance up against one or the other side (this is often called a topstitch).

The zipper placket should be roughly 6" or so longer than the corresponding cushion side. The longer the zipper placket, the easier it is to insert the foam but the placket tends to bulge so you don't want to make it any longer than necessary. While you are at it, trim the zipper with scissors to a length about 2" (50mm) longer than the placket. Fold the placket in half down



**Figure 4**  
*Sewing the placket shut with a row of straight stitches.*

its length keeping the right side of the cloth inside (**Figure 3**). I like to crease the fold over a table edge to make it more distinct. Run a row of straight stitches just 3/4" (19mm) away from the fold all along the length of the placket (**Figure 4**). Cut the placket on its fold. This results in two pieces of cloth sewn together 3/4" (19mm) from

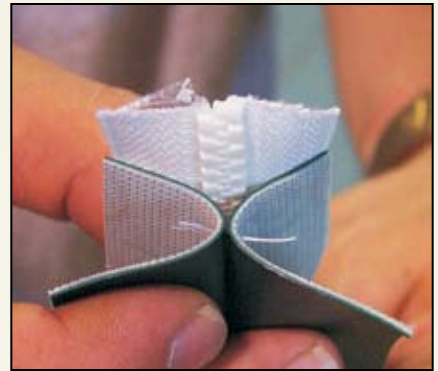


**Figure 5**  
*Cutting the placket on its centerfold.*

one edge (**Figure 5**). Splay the placket out flat with the 3/4" (19mm) side up (the right side will be down). Press the two 3/4" (19mm) edges down away from the stitching so that the parts touch only where they are sewn (**Figure**



**Figure 6**  
*Splaying the sewn placket.*



**Figure 7**  
*(top) Matching the zipper to the placket.  
(bottom) Sewing along the zipper teeth.*

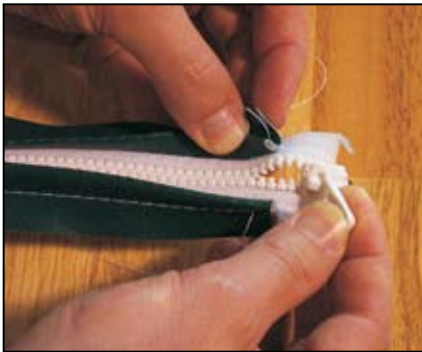
**6**). Place the closed zipper on top of the border with the teeth centered over the stitches. You can remove the zipper slider from the tape completely at this point and replace it shortly. Note that zippers have no right or wrong side. Nor is there a right or wrong direction for opening and closing the zippers (**Figure 7**).

Sew both sides of the zipper to the placket tape with a row of straight stitches. You may want to baste everything together with a stapler before you sew. Remember to remove the staples when the stitching is finished. Start sewing with about 1" (25mm) of the zipper tape extending out over the end of the placket. Note that the zipper is secured to the wrong surface (side that doesn't show on the completed piece) of the placket in Figure 7. A zipper foot helps with this task, although the stitches should be about 1/4" or so from the teeth and this normally can be accomplished without a special foot. When both sides of the zipper are secure, rip the stitch that joins the two halves of the zipper placket down its center (**Figure 8**) and pull out the broken stitch remnants.

Now, reinstall the slider on the zipper tape (assuming it was removed as



**Figure 8**  
(top) Cutting the temporary seam in the placket. (bottom) The finished zipper placket. Note that the zipper teeth are centered along the seam and covered by material.

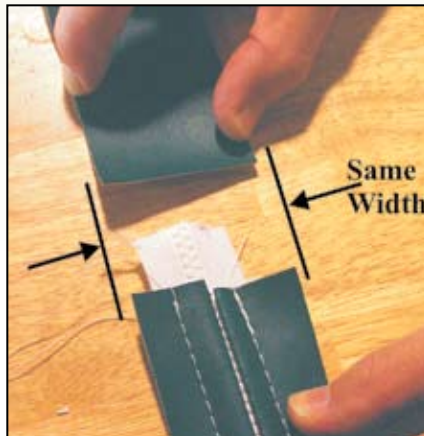


**Figure 9**  
(top) Starting the zipper slider with the pull-tab on the right side of the placket. (bottom) While feeding the slider the zipper opens up ahead of the slider.

directed above). Pull the zipper teeth apart on one end for 3" or 4" (76mm or 101mm) and push the lead end of the slider onto the separated sides at the same time so the teeth mesh together. Be sure to install the slider so the pull-tab is on the right side of the placket (**Figure 9**). Run the slider about half way into the zipper's length. As the slider runs up the tape it closes the zipper while opening it in front as it should.

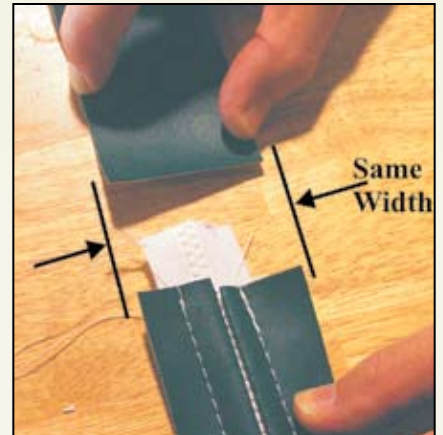
Check the width of the finished placket now. It should measure exactly the width of the cushion foam. If it's too wide, simply cut it down to size. If it's too narrow, take this into account by reducing the seam allowance when joining it to the plate and the welting (**Figure 10**).

### Step 3 Sewing Welt to the Plates



**Figure 10**  
Attaching the boxing to the placket.

The welt attaches to the plates and then the boxing to the two plate and welt assemblies. Breaking the tasks down means that there is less likelihood of error. Using a stapler or double sided basting tape to hold things in place as they are sewn makes things more manageable. I don't find this step necessary but it is, nevertheless, one more aid to use. Using a welting foot (built into Sailrite Ultrafeed sewing machines) is a big help since it allows placing the presser foot directly on top of the welt to keep everything aligned (**Figure 11**). If not available, use a zipper foot and sew



**Figure 11**  
There is a groove on the underside of the Ultrafeed presser foot so the foot can actually sit on top of the welt and thus ensure a straight stitch accurately placed along the cord. This fabric is Sunbrella and it was cut with a hot knife.

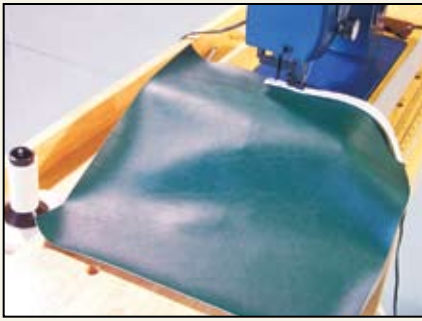


**Figure 12**  
Sewing the welt to the right side of the first plate. By sewing in a clockwise rotation keeps the bulky material to the outside.

a stitch alongside the swelling bulge in the welt.

Lay the welt flat on the right side of the first plate. Line up the "tail" of the prefabricated welt (it looks like a tadpole from the end, hence the "tail" reference) with the edge of the plate. Begin sewing the welt near the center of the side that eventually has the zipper placket (**Figure 12**). Leave about 2" (50mm) of welt unsewn at the start of your stitch. It's always a good idea to sew clockwise round a cushion. This keeps the bulk of the material outside of the machine. Everything that follows assumes this routine.

Sew to the first corner and stop with the needle down about 1/2" (12mm) short of the corner. Cut notches ("eases") into the tadpole tail of the



**Figure 13**  
Rounding the first corner.

machine manually while slowly turning the fabric. With each stitch, bury the needle and lift the presser foot of the machine to turn the work 30° or so. Once turned, drop the foot and manually produce another stitch. Stop with the needle down and continue on in this manner to complete the corner. Make 90° turns as cleanly as possible. Don't be discouraged if your turn has a small radius. As long as it's



**Figure 14**  
(top) The crossover technique to finish the welt circle. (bottom) Trimming the crossover ends.



**Figure 15**  
The plates with welting attached to the right sides.

welt if necessary so it can be bent around the corner. A prefabricated welt already has easings that may be enough to permit a smooth turn as shown in **Figure 13**. At this point, it's a good idea to operate the

machine manually while slowly turning the fabric. With each stitch, bury the needle and lift the presser foot of the machine to turn the work 30° or so. Once turned, drop the foot and manually produce another stitch. Stop with the needle down and continue on in this manner to complete the corner. Make 90° turns as cleanly as possible. Don't be discouraged if your turn has a small radius. As long as it's consistent, the finished product will look fine.

Continue all around the plate. Stop sewing 5" (127 mm) or so short of the unsewn welt at the beginning point of your work. Trim the ends of the welt so they cross over one another and overlap about 1" (25mm). The two ends should extend over the edge of the plate (**Figure 14**). Now finish sewing the welt. At the crossover point, just continue sewing right up and over the two thicknesses of welt. This crossover point continues for a 1/2" (12mm) or so. It may be necessary to hand turn the machine's balance wheel to get the needle through the bulky material. If the



**Figure 16**  
The seam that joins the boxing to the left end of the placket.

small break in the cord instead of the crossover in the welt cords. It's also possible to actually pull the prefabricated welt apart and insert one cord into a mating cover so a neat, continuous seam is produced but this requires much extra effort.

Attach a second length of welt to the other plate in exactly the same way. **Figure 15** shows the completed plates with welting installed.

## Step #4 Sewing the Boxing and Placket to the Plates

Join the boxing and the zipper placket end to end. Secure the boxing to the left end of the zipper placket. The placket has a "left" end only if it's for a beveled edge, otherwise it will be symmetrical. Be sure to close the zipper along its length except the small opening in front of the slider, which

machine absolutely refuses to do the job, hand sew the last bit. Note that some sewers prefer to simply cut the welt ends flush with each other, creating a

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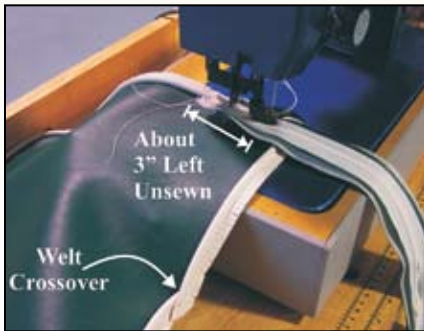
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**Figure 17**  
Lay out components in preparation to secure the placket and boxing assembly to the first seat plate.



**Figure 18**  
Mark the first corner point then each corner in succession as you sew.



**Figure 19**  
Initiating the stitch that attaches the placket and boxing to the first plate with its welt in place.

should be somewhere near the center of the placket. Place the two strips of fabric right face to right face on top of one another. Run a row of straight stitches 1/2" (12mm) inside their flush narrow edges. The zipper tape actually extends beyond the sewn edge. It's a good idea to hand turn the machine when going over the zipper teeth so the needle can be guided to relatively open places. Hitting a zipper tooth directly can easily break a needle. Reverse stitch over the zipper so there are at least two stitches holding everything together (Figure 16).

Now lay one plate flat, right side up, with the welt crossover forward. Center the zipper placket portion of the boxing assembly (right side down) over the side of the plate with the welt crossover and on the back side of the cushion so it's less visible when finished. Extend the zipper placket about 3" to 5" around the cushion corners on both ends. Be sure that the boxing and placket joint is on the left hand side where the boxing continues on with enough length to encircle the plate (Figure 17). Keeping the boxing to the left allows pushing the assembly through the machine in a clockwise circle. Just prior to the corner on the right, where the placket begins, start sewing about 3" (76mm) from the placket end. Mark the placket where it turns round the right hand corner of the plate (Figure 18) and be sure that mark lines up as you sew (Figure 19).

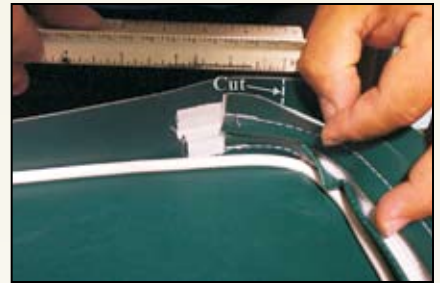
Proceed to the first corner and stop with the needle at the turning point. Clip eases into the boxing and placket strip so the plate turns and the boxing is eased around the corner (Figure 20). Again, a small radius is okay here but try to make the corner as sharp as possible. Place a mark at the next corner and continue sewing down the next side (along the length of the zipper placket), checking the mark position at intervals to make sure everything is feeding evenly top and bottom. Move on the same way to the next (third) side where the boxing/placket joint is found. When you get to the seam allowance for the boxing and placket joint, just continue sewing so the boxing and placket seam allowance is folded down against the boxing side. This makes for a very neat finish on the zipper tape.



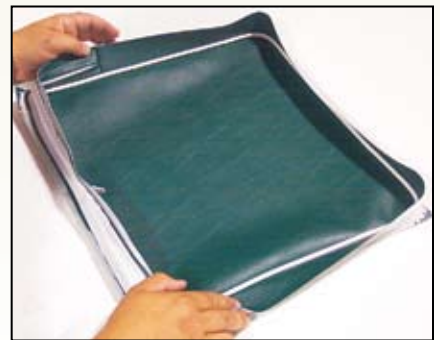
**Figure 20**  
Notches ("eases") cut into the boxing at the corners.



**Figure 21**  
The boxing and placket closure point.



**Figure 22**  
Cut the boxing to close the circle accurately.



**Figure 23**  
The completed boxing and placket and welt and plate assembly.

Continue to the next corner and the next one beyond that until you are 5" (127mm) or so from the starting point. Stop now and remove everything from the machine (Figure 21). Cut the surplus from the boxing strip so there is exactly 1" (25mm) of overlap between where the placket starts and the boxing ends. Be sure to cut squarely across the tape so there should be no angle in the cut (Figure 22). Put the boxing and the zipper placket right side to right side and sew them together with a row of straight stitches 1/2" (12mm) inside their flush edges. Once again, hand stitch over the zipper teeth where necessary and make at least two passes over the closed zipper to lock it in place. This seam allowance quite naturally lays toward the point where you

stopped sewing because the zipper is rather stiff. Let it be that way and finish the stitch all round the boxing and placket assembly and the welt/plate assembly. **Figure 23** illustrates the finished assembly.

## Step 5 Sewing the Final Plate in Place

The attachment of the second plate is perhaps the most error prone process in cushion construction. It's easy to get this plate misaligned, which results in wavy stress lines along the boxing. There are a couple simple tricks that will avoid this problem.

First place the cover assembly as it is now, inside out flat on a table. On both sides of each corner, press the boxing flat and pinch it up in a triangle with a 45° angle to the corner (this assumes a 90° corner). Hold the triangle while cutting a 1/4" (6mm) notch out of the apex. The four resulting notches mark the location for the corners of the new plate and also provide for easing around those corners at the same time (**Figure 24**).

The second trick is to staple each corner in place at these notches before sewing. Lay the assembly (plate with boxing and zipper placket attached) right side down over the right side of the unattached plate (**Figure 25**). Place staples on each side of each of the four corners of the unattached plate so those corners are centered right under the notches cut above.

Start sewing 4" or 5" (101mm or 127mm) from one corner. Starting at a corner opposite the zipper placket makes



**Figure 24**  
(top) Staplers serve to hold the boxing in place while the corner is pinched to find its center. (bottom) Cutting the corner notch.



**Figure 25**  
Matching the final plate to the boxing, placket and plate assembly. Everything is wrong side out.

it a little easier to get an accurate match up since the assembly is not so thick there. When a corner is reached, make sure that the notch is located accurately and add additional easing cuts as necessary to make a smooth turn. Check the location of the next notch. Separating the zipper makes it easier to match the placket since its bulk will be reduced. Eventually, it may be necessary to pull or push the boxing and placket assembly to ensure that the corners match the notches. This is perfectly okay so long as the corrections are limited to less than 1/4" (6mm) or so per 24" (609mm). Where the inaccuracy exceeds this, you'll need to determine what the problem is then rip out stitches and start over.



**Figure 26**  
Opening the zipper in preparation for turning the cover right side out.



**Figure 27**  
The finished cushion.

## Step 6 Foam Insertion

Pull the zipper halves apart and slide the slider down to the bottom (**Figure 26**). Now, turn the cover right side out through the zipper opening.

Fold the foam in half and insert it into the open cover. Once partly in place, flatten the foam and reach inside to tug on the far corners and the far edge to nudge the foam deeper into the cover. Be patient. It may seem that the foam just doesn't fit but, once the job is done, the cushion covering is properly filled (**Figure 27**). To facilitate insertion, use silicone spray to "lubricate" the foam or cover the foam with lightweight plastic (e.g. dry cleaner bags) and slide it in place, if necessary. Pull the plastic film out once the foam is in place. Close the zipper and admire your work!

About the author: Jim Grant founded Sailrite ([www.sailrite.com](http://www.sailrite.com)) in 1972 to supply specialty marine fabrics, component hardware and tools, sewing kits and sewing machines for boaters to build or repair canvas and sails. Headquartered in Indiana, the company has satellite stores in Fort Lauderdale, Florida and Annapolis, Maryland.

## • TIP •

### Firmer Cushions

To make the finished cushion surface smooth and firm, it's my practice to cut the foam 1/2" (12mm) larger in all directions than the intended size of the finished cushion. Fabric plates are then cut to the same size as the foam while the boxing is cut to the foam thickness. Since roughly 1/2" (12mm) is required along the edges of the plates and the boxing for seam allowance, the foam is actually stuffed by hand into the cover. — JG