Deep-pile fabrics, such as polar fleece and faux fur, present unique challenges for embroiderers. Still, there are plenty of popular items made of these materials that beg for embroidery. From jackets and vests to throws and golf-head covers, a full-service embroiderer gets many requests to embroider this fabric type. Here are several solutions for applying embroidery to materials that try to bury your stitches.

**DEBORAH JONES** has been involved in the computerized embroidery industry for the last 30 years. Recently, Jones has devoted much of her time to developing educational videos for embroiderers and writing the book, *Machine Embroidery on Difficult Materials*. Contact: djones@embroiderycoach.com.

### In Too Deep
High-pile fabrics beg for embroidery, yet can bury your stitches if you’re not careful. Here are some tips for staying on top of deep fabrics.

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### Select your topping.
The first line of defense to deal with the pile of fleece and other deep-pile fabrics is to stitch through a clear plastic water-soluble film that’s designed to be removed when the embroidery is complete. This is helpful, but this solution must be combined with other techniques when the pile is deep. I prefer to use a midweight water-soluble film when working with deep-pile fabrics. Standard lightweight water-soluble film works well on low-pile fabrics, but breaks down too quickly when penetrated by the needle on high-pile materials.

If you don’t have a midweight water-soluble stabilizer, you can fuse two layers of regular-weight water-soluble backing together. Place them between two brown paper bags and fuse them with a household iron on a low heat setting (see Figure 1).

### Select your stabilizer.
Polar fleece and similar fabrics are knit. The textbook stabilizer for knitted fabrics is a cutaway, yet you can often use a soft tearaway to stabilize fleece. Of course, the stitch count and amount of detail are important factors. A high-stitch-count design with a lot of detail may require a cutaway stabilizer, but a soft tearaway is an ideal stabilizer for most types of fleece.

Soft tearaway is more resistant to breaking down during embroidery than crisp tearaway. Crisp tearaway is made up of short fibers, and it tears like paper. Soft tearaway is made of a combination of long and short fibers. These long and short fibers cause it to be more resistant to a clean tear. Because it’s perforated by the needle, it’ll tear away cleanly around the edges of the embroidery.

To tell if a tearaway is a soft tearaway – one that will provide good support for your pile fleece fabric – do this tear test: Hold a piece of tearaway and tear it perpendicular to the edge. Inspect the torn edges. If the tearaway is a soft variety, you’ll see long fibers extending from the torn edge (see Figure 2).

The soft tearaway is hooped more easily than crisp tearaway, and it should be hooped in with pile material. You should also do a test sewout to be sure that the tearaway provides proper support for the stitch count and amount of detail in your design. I keep an old polar fleece blanket for test sewouts before I apply embroidery to the actual goods.
Program your underlay. You can control the pile by using underlay stitches that hold it down. These underlay stitches will be covered by the final layer of stitching. I recommend that you beef up the density of your underlay when embroidering satin stitches on deep-pile fabrics. You can use a tighter spacing on zigzag underlay, or use a double zigzag underlay style. If the columns are wide enough, you can also add an edge-walk underlay in addition to the zigzag. This places straight lines of running stitches along each side of the column to hold crisp edges on lettering or other column elements (see Figure 3).

Some embroiderers use well-designed underlay alone - without water-soluble topping - to hold down pile and allow their design or lettering stand out on the fleece surface. This saves money because it eliminates a somewhat costly consumable product, water-soluble topping, and the finishing time associated with removing it. The additional stitches used in the underlay are a small sacrifice in machine time for the benefit of eliminating the use of topping. This isn’t possible with all designs or all fleece, but many large shops perfect programming techniques to eliminate topping whenever possible.

Another option is applying a base of fill stitches before any satin stitch elements or fine detail. The background fill may be a geometric shape or a free-form shape, or it may follow the shape of the design or lettering that is applied to it. Start by digitizing a fill with stitch spacing of 12 points. Embroider your lettering or design on top of the light density fill and evaluate it.

Program your text properties. Fonts for use on fleece or similar pile fabrics should be bold styles without delicate details (see Figure 4). For example, avoid fonts with serifs in sizes smaller than one-half inch. Serifs are the small extensions that are found on fonts such as Times New Roman. Plain block styles such as Helvetica or Arial are more suitable. Small letter sizes may require additional stitch width. This is accomplished in most software by using the pull compensation feature.

Suitable script styles shouldn’t have small tapered ends on letters. Test styles such as brush script or athletic script styles. Be sure to use appropriate underlay as described, as well as a density of three points to three-and-a-half points for the final layer.

A NEW FABRIC FRONTIER: AUDIO TAPES

Finally there’s clothing that sounds as good as it looks. Dubbed Sonic Audio Fabric by its creator, Alyce Santoro, the fabric is made using 50% recorded audio cassette tapes and 50% polyester thread. The fabric is not only durable, but also audible – the sounds originally recorded on the tape can be “played” by rubbing a tape head on the surface. The texture of the material is a light canvas, and while Santoro has made the material into ties, hats and dresses, it’s primarily used as an artistic medium. The potential in audio fabric is finding new and possibly cost-effective materials with which to produce apparel fabric for future applications.