

Techniques for 3-D “Puff” Embroidery

By Rene Rosales

Digitizing Techniques

- Use satin (column) stitches and not fill stitches to render any section of a design or lettering that will be sewing over the foam.
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- Use a higher density than usual (in iPunch, use 0.10, in Stitch & Sew, use 1.0 to 2.0) to get good coverage over the foam and prevent it from showing through.
- Try to use foam in a color as close to the thread color as possible.
- Simplify shapes where possible, reducing sharp corners to more rounded ones, especially where satin stitches taper to a narrow “tip”.
- Overlap the ends of satin sections to prevent gaps between each section. The foam will otherwise “bulge” where any small gap might occur.
- Use edge-walk or 2-line style underlay, set at short stitch lengths (1.5 mm or less) to help cut/perforate the sides.
- “Cap” off the ends of each satin section (before sewing the satin stitch itself with short (1mm) running stitches or high-density satin stitch sewing perpendicular to the main satin stitch sewing over that given section.

Sewing Technique

- Cut a piece of foam a little larger than the design area, and secure the foam to the hat snugly with tape. It doesn't have to be a super-tight hold; the initial stitching of the design should be enough to bind the foam to the fabric or garment.
- You can stack layers of foam (bond together by spray adhesive such as 505) for a taller, more dramatic effect where desired.
- Sew with ballpoint needles, make a (slightly) larger hole than sharp tip needles, helping “cut” the foam more cleanly.
- Loosen tension slightly to allow thread more give and feed to complete each section as it covers the foam.
- For more height, try stacking 2 layers of foam together. The first few stitches will tack the foam together, or for a more secure bond, use spray adhesive like the KK100 we sell through TEXMAC Parts.