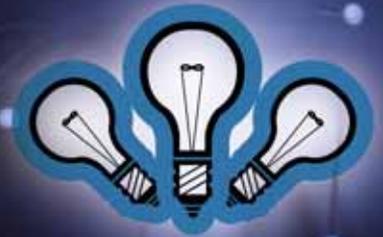


APPLICATION TIPS



How to Create a Multi-Layer Appliqué with Your Universal Laser System

Introduction

Appliqué is a technique in which one or more layers of fabric are cut and layered onto a base layer of fabric to create designs that would be too large or too expensive to produce by other methods. Appliqué has traditionally been used to decorate athletic shirts, caps and jackets with sports team mascots, numbers and letters. Today appliqué is also used to decorate casual clothing for fun and corporate attire for trade shows and special events.

Cutting appliqués with a laser is quicker and more precise than traditional knife or die cutting methods. A laser system makes it easy to cut multiple layers of material (as many as ten layers of fabric at once) and to perform intricate cuts that would be impractical to make with a knife. Cutting appliqués with a laser further ensures that each piece will be identical and allows for high quality finished work.

Appliqué typically commands higher market prices and requires shorter run times than equivalent embroidery work. And very few embroiderers offer appliqué services, making it an ideal niche service for business expansion.

Creating multi-layer appliqués on your Universal laser system is easy once you know how. In this tutorial we will take a step-by-step approach to producing appliqué. We hope you will find the process to be both rewarding and enjoyable.

Sincerely,

The Universal Laser Systems Training Staff

Creating a Multi-Layer Appliqué

Section 1: Preparing the Artwork

1.1: Import design shown in Graphic 1 into CorelDRAW.

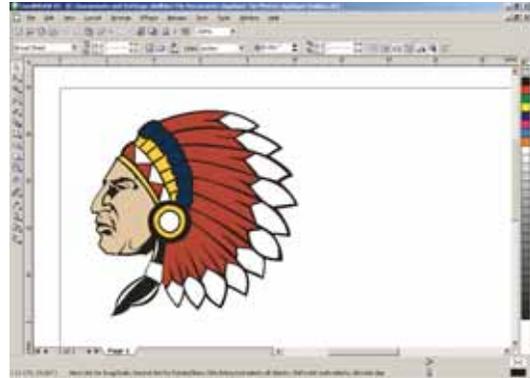
Note: The image we will be working with is a vector graphic. If you wish to create a multi-layer appliqué from a bitmap image, you must convert it to a vector graphic. You can find more information on vector graphics in the CorelDRAW user's manual.

1.2: Convert the graphic to hairline rules for vector cutting as shown in Graphic 2.

1.3: Assign a color for each layer of fabric you want to cut.

Tip: You assign any color from the ULS color palette for each fabric layer – the color does not have to match the actual fabric color you will be cutting.

Note: You can get more information about converting graphics to hairline rules for vector cutting in your Universal Laser Systems Operator's Guide.



GRAPHIC 1

Section 2: Preparing the Base Layer Fabric

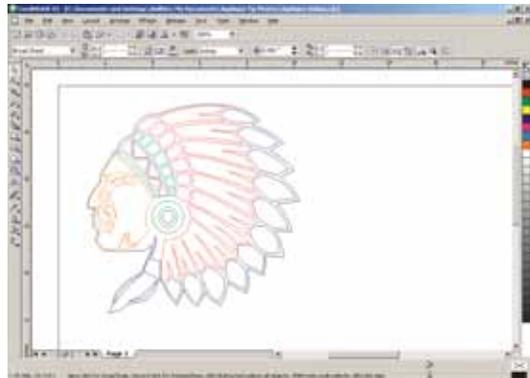
2.1: Assemble six layers of 100% poly-twill with pressure-sensitive adhesive backing to create a multi-layer appliqué.

2.2: Begin by taping a foundation piece of poly-twill securely to the cutting table so that it cannot move as shown in Graphic 3. For the Native American design we will use black fabric as the base material. Do not remove the protective backing covering the pressure-sensitive adhesive from the material.

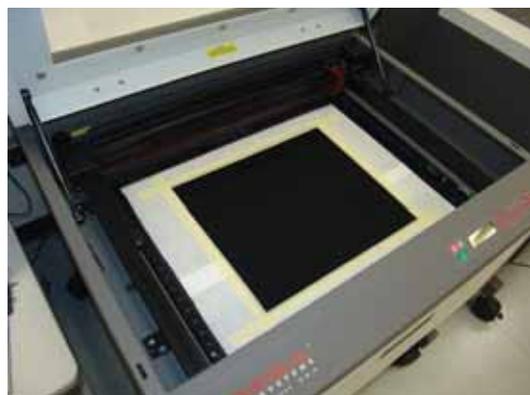
Tip: If you are using the honeycomb cutting table (recommended), apply transfer tape to the portions of the table not covered by the base fabric and also cover the upper rear exhaust vent. This will increase vacuum hold down to better hold the base fabric in place.

Note: You can purchase 100% poly-twill from Twill USA at www.twillusa.com or from Stahls at www.stahls.com.

Warning: PVC-based fabrics are dangerous! Never cut PVC or other chlorinated plastic fabric with your laser. Laser cutting PVC produces deadly chlorine gas which is corrosive and toxic.



GRAPHIC 2



GRAPHIC 3

Section 3: Making a Test Cut

3.1: Now it is time to run a test to determine power settings for cutting the fabric.

3.2: Remove the protective backing from a small scrap piece of poly-twill and position it on the base fabric as shown in Graphic 4. Be sure to position the scrap fabric well outside of the area in which you will be cutting your appliqué.

3.3: Focus the laser on the scrap and cut a 1/2 inch square with rounded corners.

3.4: Adjust the power as necessary so that you cut cleanly through the top layer of fabric without cutting or scoring the base fabric.

We were able to cut through the top layer of fabric without cutting or scoring the base fabric using the following settings with a 25-watt laser and 2.0 lens:

- Power = 16
- Speed = 6
- PPI = 500

Tip: The depth of the cut will vary slightly depending on whether you are cutting a straight or curved line, which is why we recommend you make a test cut with a shape that has both straight and curved lines.

Note: If you are using VersaLaser, you can assign the color blue to kiss die cut the first layer of fabric and the color red to kiss die cut the second layer of fabric.

Section 4: Cutting and Weeding the Appliqué

4.1: Now it is time to cut the first layer of the appliqué. We will begin with the white-colored tips of the Native American headdress.

4.2: Remove the protective backing from a piece of white fabric and position it on top of the base material as shown in Graphic 5.

4.3: Brush or roll the fabric flat to remove any air bubbles.

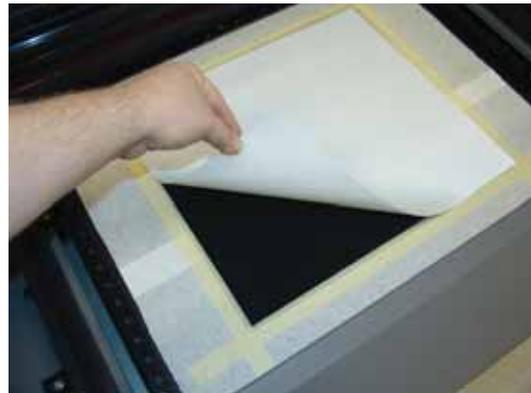
4.4: Cut the First Layer of the white fabric as shown in Graphic 6.

4.5: After the layer is cut, remove the scrap portion of fabric as shown in Graphic 7. This is called “weeding” because it is often necessary to pick away, or weed, small pieces of scrap fabric when producing intricate appliqué.

In Graphic 8 you can see the base layer of fabric and the first layer of cut fabric – the white Native American headdress feather tips.



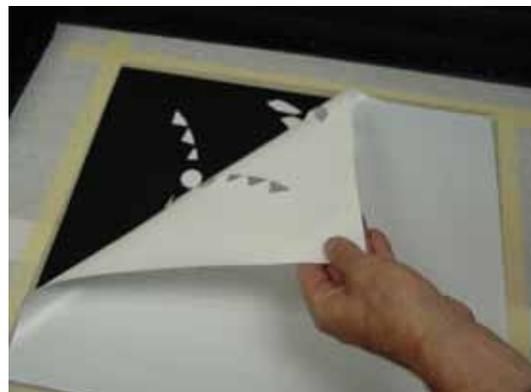
GRAPHIC 4



GRAPHIC 5



GRAPHIC 6



GRAPHIC 7

4.6: Position the second layer of fabric and cut and weed as described above in steps 4.2 through 4.5.

4.7: Repeat this process for each of the three remaining layers.

With three layers completed, the appliqué is beginning to take shape (see Graphic 9).

4.8: When all five layers have been cut, make the final cut through the black base material. The finished appliqué is shown in Graphic 10.

Note: Notice how the laser sears the edges of each layer of fabric during cutting. This prevents fraying and produces sharp, clean edges.

Tip: If you are working with fairly thick fabric, check and refocus the laser if necessary before cutting the black base fabric.

Section 5: Transfer the Appliqué to a Garment

A professional heat transfer press provides the necessary heat and pressure to permanently fuse the appliqué to almost any article of clothing.

5.1: Follow the manufacturer's directions provided with the heat transfer press. In general this means you will perform the following steps:

5.2: Preheat the press to the recommended temperature.

5.3: Remove the backing from the pressure sensitive adhesive from the appliqué and position it on the garment.

5.4: Cover with heat transfer paper.

5.5: Close the press for the recommended period of time.

Note: Most quality presses provide audible or visible indicators for warm-up and application times.

Tip: Include care instructions when delivering appliqué items to your customers.



GRAPHIC 8



GRAPHIC 9



GRAPHIC 10



GRAPHIC 11