Laser Cutting

Creating Ornaments

By Kathryn Arnold, LaserUniversity

Creating new products for the holiday season is as easy as marketing some simple ideas to your customers, using materials you may already have in your shop. The often neglected feature of laser cutting will be featured to expand the capabilities of your laser. Unique, customised ornaments are dazzling new products and are sure to create new sales opportunities during the holiday season.

Start the process by applying a little laser genius to create the simple vector art needed for cutting holiday ornaments. All graphic programs have clipart and symbols that can be easily modified to create a hanging ornament. Need more clipart for unique ideas and applications? Many laser ready clip art collections exist with graphics for dozens of themes and even corporate logos. Stars, family names, pine cones, sports and religious themes are just a few of the ideas that can be transformed into a hanging ornament.

The ornaments CD (TUS009) is available at LaserBits and features over 80 ornament shapes and ideas. I am providing you with 4 free patterns from this CD via this link: http://www.laseru.com/laseru/zz_delAug/C12L6.cdr

Creating Ornament Art

Transforming existing art into a hanging ornament utilises a few basic tools in CorelDRAW to achieve the finished product. Before we get started, let's review a few basics of preparing the art for laser cutting. The idea is to create a vector outline of a shape for cutting. The outline or vector, should have a line width of .003 inch or less to be seen as a vector or cut line by the laser engraver.

Conversely, lines or fill areas wider than .003 inch are seen by the print driver software as a raster graphic and will be engraved. The difference between a vector or a raster graphic may only be a few thousands of an inch but it is surely a case where close is not accurate enough so it is a good idea to double check the values of the graphic before sending the job to the laser for engraving.

Creating a basic ornament graphic from scratch starts by opening DRAW and a new or blank graphic page. The Character directory is a good source of basic art and they can be found by using the Ctrl + F11 command or going to Text>Insert Symbol Character. Most of the symbols available are True Type Fonts and they can be selected by clicking and dragging them on the blank page. The Insert Character Docker shows a preview of the symbols under the different fonts so it is easy to select the right graphic for the job. Some of the best fonts to use are Webdings and Wingdings.

Using text and graphics, the ornament can now be customised for the customer or specific theme to add value. Simple is usually the rule that works best when creating layouts for ornaments. A family name and year may just be enough to tastefully decorate a home for the holidays. With the graphic created and text added, the completed ornament design is now ready to print to the laser.

Creative Materials

Part of the process in creating unique products is to find the right material for cutting and engraving with the laser. Many natural materials like paper, cardboard and wood can be used to create laser cut ornaments. Coloured mat board can be engraved and cut as well and is available in a wide range of colours. Art supply or paper supply companies can be a great source of coated papers that can be used with the laser. Coloured paper products usually have a white core, which can be revealed by laser engraving. Using low power, a contrast colour can be created to highlight text and graphics in your ornament design.

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The exhaust system can cause some challenges when working with these thin, paper products due to the large volume of air that is being moved out of the laser system. Taping the paper down to the table of the laser can have a limited success ratio with some of the laser cut pieces being removed from the laser through the exhaust. Enter the MultiMat. The MultiMat (LaserBits item #XGE007) is a naturally sticky plastic material that holds thin materials flat in the laser. Press the paper or thin cardboard on to the mat and it is ready for cutting without the fear of losing the small, cut pieces until they are easily peeled off the mat after cutting. The mat is reusable for years and does not produce harmful outgas as other mats may.

Another material to consider for ornaments is a thin wood sheet. These fabricated sheets of wood have always been a popular material for creating ornaments and are available in several types. Alder, walnut and cherry are a few of the available types of wood that can create an ornament heirloom. Thickness and sizes of the thin wood sheets vary with 3/32 and 1/8 inch being the most practical for cutting with a 25 or 30 watt laser system. A wood sheet that is clear coated on both sides is ready for fabrication and will have minimal clean-up after cutting and engraving.







Acrylic materials are also natural for the laser process and work well for cutting and engraving ornaments. Available in two types, cast or extruded, you should take the time to investigate which type of acrylic will work best for your application.

Extruded acrylic is considered best for cutting and will feature smooth, glossy edges. The virtue that makes extruded acrylic cut so smoothly makes it engrave almost clear.

Cast acrylic is the second type of acrylic, which will create the frosty, white colour when laser engraved. Cast acrylic may not be your best choice for detailed cutting but can be used for simple cutting and engraving jobs with excellent results. Tuning your power and speed settings will go a long way to creating professional results when laser cutting acrylic of all types, so take your time and use common sense when evaluating the results.





Acrylic sheet comes in more colours than just clear and this may be the dazzle your ornaments need. Colour varieties for cast acrylic sheets range from mild transparent tones, to rich solid colours that are opaque.



Mirrored acrylic is also a good substrate for laser cutting and can create some unique results. The plastic reflective coating on the mirrored acrylic will be vaporised during the cutting process, so it

can be fabricated without fear of damaging costly laser optics. Mirrored acrylic is also available in many colours these days.



Finally, let's not forget our old friend's glass and crystal. Glass and crystal will enable you to have crisp engraving. It is very durable and can create a thin, lightweight ornament that will last for years. Pre-cut glass and crystal ornaments are also available from LaserBits and feature a predrilled hole for hanging. Glass and crystal ornaments are easily engraved with the laser, which produces a white engraving colour.



A relatively new procedure for glass and crystal allows us to engrave in black - creating a dark, lasting mark that will draw the eye.



Here we have used the Ferro product of Tile marking on glass - similar to the idea of CerMarking on metal. It creates a nice clear mark that stands out.

The usual caveats apply for all lasers, cutting or engraving and that is to avoid polycarbonates and PVC materials (most foams and vinyl), which can cause dangerous outgassing during the vaporisation process. With dozens of materials available for laser processing there are sure to be several materials that your customers will find favourable for a lasting family treasure.

Adding Flair to Ornament Designs

The finishing touch to a unique design will be in the special additions such as the addition of laser foil or colour fill into the engraved text. Laser foil comes in a variety of colours such as blue, red, green, gold and silver and is easily applied to the material prior to laser cutting. The laser foil has a self adhesive back and is lightly pressed onto wood or plastic.



The applied foil can be lasered using two different methods. The first method is to vector cut the foil using a very low power setting to cut just through the foil and not all the way through the base material. Vector cutting foil works great with text and other simple graphics, but will need to have the unwanted areas of the foil weeded or removed after cutting.

Adding decorative flair can be as simple as colour filling some of the text to create additional contrast. The process of colour filling can be as simple as brushing on a special colour fill agent after engraving and then wiping off the excess with a damp cloth. The thick, rich colour will flow into the engraved area of the wood or plastic. Colour fills are available in a wide range of colours including blue, red, white, gold, silver and of course black. Learning to colour fill is a technique to take time to refine the process and it will add sparkle to all your engraving projects.

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Market for Success

Most customers tell us they do not offer laser cut ornaments because no one ever walks in and asks for them. Since most customers do not know what they want, it is mandatory to market your ability to create these unique gift items. Marketing holiday ornaments would entail making samples and creating a

display where customers could see and touch the laser cut artwork. Good locations for this display would be on your sales counter, or on the door leading into your shop. Timing is also a key to holiday ornament sales and starting early in the season is best. Many customers start looking for unique gift ideas early and have their mind made, long before they actually purchase. Getting into the buying cycle is an important part of creating sales for holiday gift items.

Manufacturing with your laser is a proven profit centre and creating holiday ornaments will open new markets for corporate (yearly employee presents), as well as traditional customers looking for unique and special gift items to celebrate a special time of the year.