

Faux Glass Etching in Your Press

by Chris A. Paschke, CPF, GCF

Glass etching and engraving are not new processes. The etching of metal plates developed as an art form from the common medieval practice of creating designs on armor with acid in the early 1500s. The earliest extant inked etching with a date was executed by Urs Graf, a Swiss artist, in 1513. In metalwork and sculpture, engraving is used for surface decoration of objects in silver, gold, and glass, and has also been around for centuries.

Etching vs. Engraving

Etching is defined as a “biting” process whereby a surface is partially eaten away by a mordant. A mordant is an acid or acid bath that the glass or metal plate is emersed into to eat away at its surface to create lines, dots or areas of design that reflect the surface light differently than the remaining smooth surface.

Glass has been traditionally etched with a mordant solution of hydrofluoric acid. To create a matte frosted etch ammonium fluoride is added to the hydrofluoric acid mordant.

Engraving is a process of incising a design onto a hard surface, usually metal or stone, with a sharp tool either as ornamentation or to prepare for ink printing. So, depending upon the

desired finish and process used, glass may either be chemically etched or manually engraved.

Faux glass etching is an artificial approach to the traditional artistic process. It gives the illusion of the real thing by means of an alternative method. It is still a traditional resurfacing of the glass, but with a twist. Rather than taking the surface away, a new layer is applied. It creates the illu-



Photo 1:
The wine carafe was hand-engraved with a Sears electric engraver. The framed mirror accented with faux glass etching was created using laminates in a heat press.

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Photo 2 and detail:

The carafe is a good example of the rough textures, dot pattern and crosshatching that are prevalent in designs executed using vibrating engravers. The detail illustrates both the fine line detail and the knobby unevenness attributed to a hurried execution. Not the most time effective version of glass design.



sion of the traditional creme etching achieved by applying a perforated (pierced) matte laminating film to the glass surface, then mounting it in a heat press. This is simply a more contemporary version of a traditional decorative technique.

Traditional Acid Glass Etching

The standard contemporary method of acid etching is to use a thick acid-resist medium. The acid is applied to the glass in selective areas, often using stencils as patterns, which then eats away the smooth surface to reveal the desired pattern through resurfacing the glass. This product is available from craft and art supply stores and may be used with stencils to produce lettering, borders and show-cased images.

John Ranes, CPF, GCF, has been successfully showing and teaching this process for years in the framing industry using assorted commercial creams and Chartpak stencils. Basic steps include applying the stencil, then the cream, letting it sit, then washing it away to reveal the beautiful acid-eaten design beneath.

Glass Sandblasting

A more contemporary technique for etching and much

more commercial in format is sandblasting. This is a rather quick method of permanently etching or frosting the glass surface using a compressed air machine that blows out grit through a nozzle while another nozzle sucks it up at the same time. The pattern is masked off (as with creme etching) with a specially designed self-adhesive tape or sheet to protect the areas that are to be kept smooth and untextured. The fine abrasive powder or grit is evenly sprayed over the surface, abrading the glass and causing a retexturing which allows the design to contrast with the glossy smooth glass surface.

Sandblasted designs on glass are often found as dividers in fine restaurants and in lounges. This process is often used in large scale design jobs on a more commercial level than we might find in custom picture framing.

Manual Glass Engraving

Glass can also be engraved using manual and mechanical methods which remove and resurface smooth glass to create a matte decorative image (photos 2 and detail). In 1985, I first studied manual glass engraving using diamond tipped hand held tools (not shown in this article) and an electric engraver. At that time I was using it only in my calligraphic fine art applications such as the 1"

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high lettering on the wine carafe shown here.

Diamond tipped engraving tools require a great deal of time to achieve a completed pattern and the next best thing would be to enlist an electric version to expedite the process. Though the process is greatly speeded up with electric tools, the quality may be sacrificed by the shortened time. The carafe in the photo is a decent example of the slightly rough appearance an electric vibrating tool will produce. In the detail, notice the almost dotted pattern of the lettering. The smooth, even surface noted with creme etching and sandblasting is very difficult to achieve with a vibrating hand tool as used in this project.

The two electric "engravers" in the photo remove glass particles from the surface of the glass plate to create the design (photo 3). There are numerous electric tools available to achieve this type of engraving on surfaces by either vertical vibration or rotation of a diamond engraving tip. In the past year, R.D. Grauke, CPF, taught PPFA workshops using the same type of tool, and recommends the Dremel rotary type with a diamond tip that runs 7000 rpm.

If deciding to design with electric engraving tools there are two important things to remember: practice and patience. Practice will help you develop the truly professional level of expertise that the art of engraving requires to execute great designs. Taking adequate time and working slowly enough to fill in all of the design evenly will produce the look of a high quality, traditional acid etch.

Faux Glass Etching With Laminates

Though traditional glass etching employed an acid application method, today there are numerous variations on this theme. Laminating films may be used to create the look of glass etching without the hazards of acid cremes, the equipment of sandblasting, or the skill level and time required to master freehand or electric engraving. By applying a perforated matte finish vinyl laminate to the

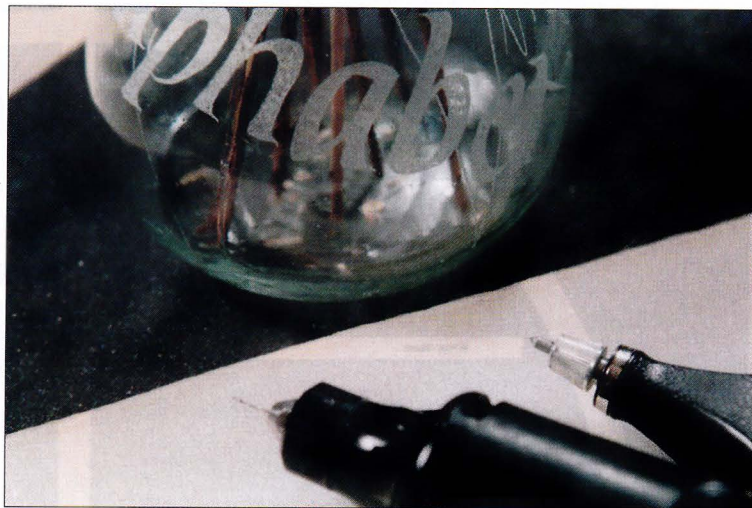


Photo 3:
Dremel rotary tool is shown on the left, a Sears vibrating engraver on the right.

surface of a piece of glass or mirror, the illusion of etching may be obtained by one run through a dry mount press. Yes, you will need a heat system to embark on faux glass etching, but if you already have one the expansion into creative laminating will only improve your press profits.

Laminate Techniques

Mitered corners, geometric overlaps (photo 4), or accent designs (flower in photo 5) are easy to apply and mount. Preheat the dry mount press to standard laminating temperatures of 185° to 225°, depending on the brand of film to be mounted and the type of press being used.

For panel designs, whether mitered or overlapping, cut strips of laminate using a professional mat cutter for the most accurate widths, remove the protective liner from the tacky laminate, and position on the glass. If a design such as the flower is desired, apply the sticky laminate directly onto the glass, cut the design, then remove the unwanted extra laminate.

When mounting in a mechanical press, the piece of glass does not require a protective board between the glass and sponge pad. Make sure press pressure is properly adjusted to accommodate the glass thickness and always design on a clean-edged piece of glass. Glass will never break as long as there are no fissures in the glass edges, no hairline crack across the face, and the pressure is 45° to the table when the project is placed inside.

In a hot vacuum press, care must be taken to protect

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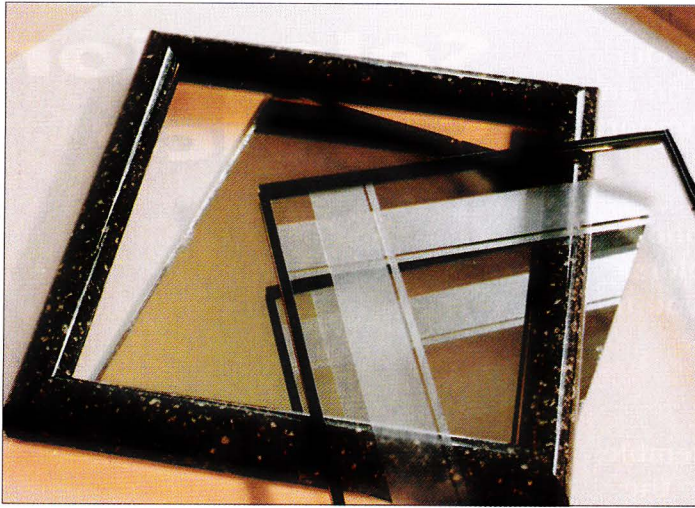


Photo 4:
The geometric strips were sized on a mat cutter, peeled, then aligned onto the clean glass for mounting. Be sure to use perforated matte vinyl laminates to allow all the air to escape when mounting.

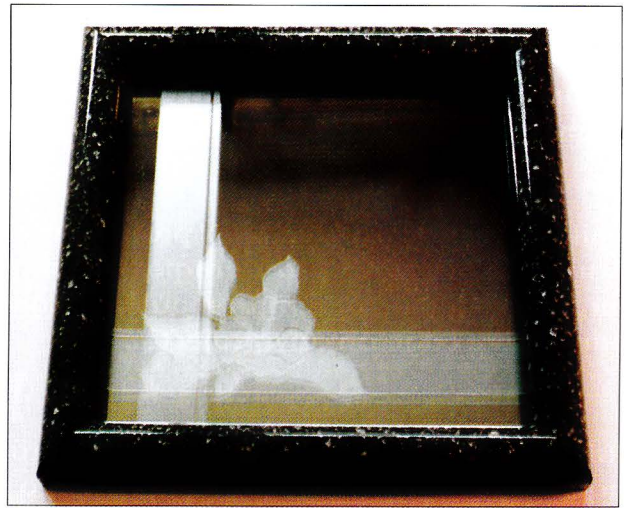


Photo 5:
If an accent design is desired, apply a piece of laminate larger than the design to be cut directly on the glass and remove the unwanted extra film prior to mounting. The two can be combined and layered over a mirror to use up scraps and create a winning profit maker.

the rubber diaphragm in the base of the press. It will automatically adjust to the appropriate pressure but cannot protect itself from puncturing the corners. A temporary substrate of scrap matboard a little larger than the project must be placed beneath the mounting package prior to mounting to protect the rubber from the corners of the glass.

Since glass is nonporous, perforated film is required to prevent trapped air in the project. Also, the completed piece of glass will be turned toward the mat. The added depth best creates the illusion of dimension most like etched glass, so all design work must be applied backwards.

Glass Designs in Framing

Glass engraving and etching definitely have found a home in the custom picture framing industry. The possibilities are endless when it comes to glazing accents and contemporary French mat imagery with glass etching. The photo samples in this article illustrate completed fine art imagery as well as profit making small mirrored designs. Accenting art with decorations on the glass is a very sensitive issue. As a framer, always keep in mind the art must remain the central visual focus. Enhance and protect, with a flair perhaps, but never overpower.

The two pieces of fine art calligraphy in the photos are

my own art, and the hand engraving using an electric vibrating point engraver is an integral part of the art itself. This would not be advised for a framer to do with a commissioned fine art original. The *Don Juan* piece is a quote from Carlos Castaneda about “your path having a heart.” The engraving (not etching) duplicates the quotation on the surface of the glass using the same lettering, created with the electric tool (photos 6a and 6b).

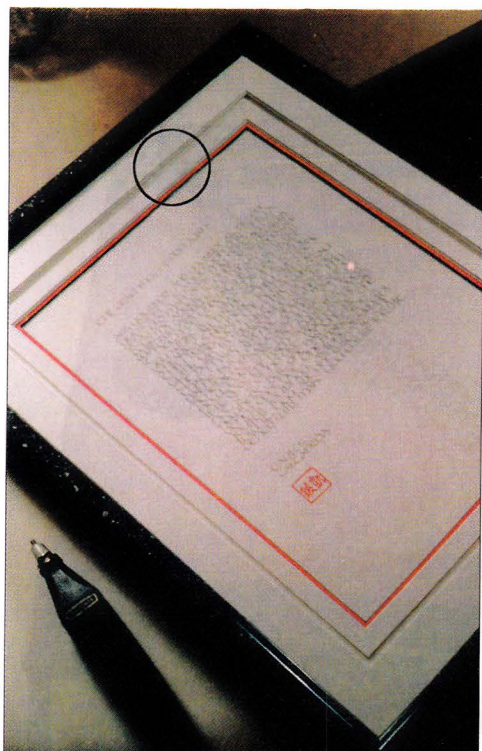
The *XYZ* piece incorporates museum board, carving, and engraving as fine art. It, too, is a soul-searching piece concerning the finding of oneself. The engraving in this case is the essence of the self being researched through lettering, carving and free-flowing forms (photos 7a, b).

In both these cases the engraving tool illustrates the potential freedom available when movement is incorporated into the form as opposed to the more easily achieved designs using stencils, cremes and laminates.

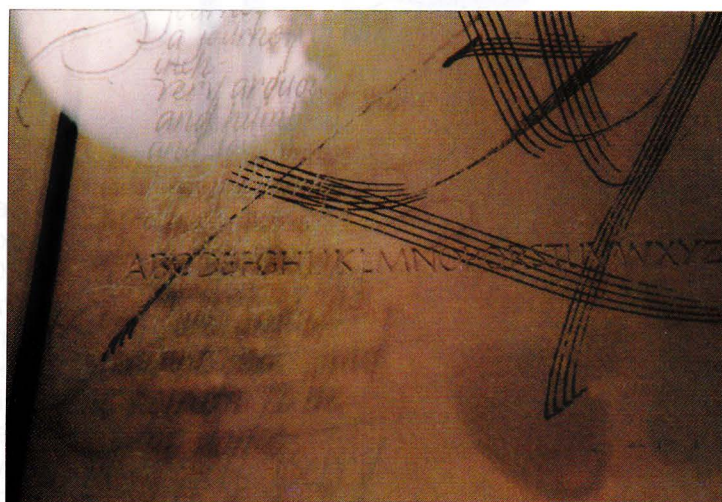
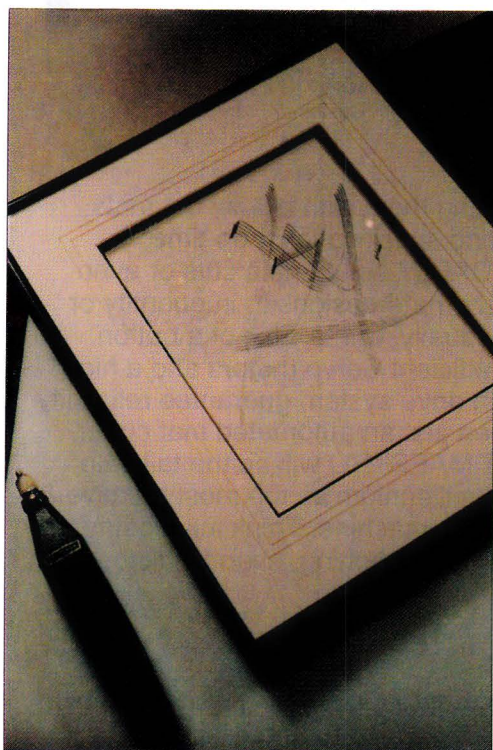
Etching, Engraving and Faux Glass Etching

It doesn't matter whether this creative element finds its way into your shop. But if it does, regardless of etching or engraving, cremes or laminates, panel designs or accents, the bottom line will raise the design potential and the profit dollars. It's yet another process that sets the frame designer apart from the production framer and

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Photos 6a and 6b
Don Juan is a calligraphic fine art piece that features glass engraving as part of the media and presentation. The piece echoes the quotation by engraving it onto the glass. (The detail portion is circled on the full shot.)



Photos 7a and 7b
XYZ is another fine art example; it features engraving rather than etching.

just reading this article has armed you with the knowledge to at least talk with your customers about all the options from the glass down to the art itself. ■

Chris A. Paschke, CPF GCF, owns Designs Ink, Oxford, Connecticut, featuring commercial and retail custom framing, product consultation, design and education. Specializing in mounting, matting and design creativity she works with numerous industry leaders including HUNT Corporation (Bienfang and Seal), Crescent Cardboard, Fletcher-Terry, Larson-Juhl, and PPFA. Her first book *The Mounting and Laminating Handbook* is already in its second printing.