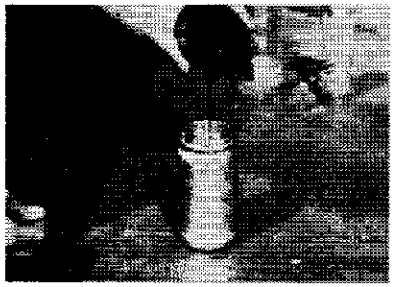
Simulating

Stained Glass

Basic ingredients

Mix glue with acrylic paint

Add aluminum and graphite



Add black acrylic paint

For a good many years, I knew that any time I was called upon to produce stained glass, I was in trouble. I was never satisfied with either the staining medium or the lead lines. A dye that would adhere to glass was not readily available. (Well, lamp dip was available, but in a limited number of colors, and it was hard to work with.)

I could find no putty that would stick to glass, so I made the lead lines with string, cord, or tape — or painted them on. All the results were very unsatisfactory.

In recent years, this dilemma has been resolved by (of all things) the hobby market. Such a popularity for simulated leaded windows has sprung up among hobby enthusiasts that hobby shops and crafts suppliers have been motivated to devise several products to meet the need. The products are inexpensive and convenient, and the results are highly presentable.

This section will take you through the steps of producing a leaded window, and propose some materials for this purpose.

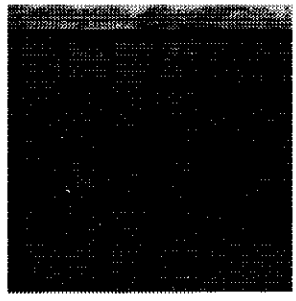
Lay out the window

First you must make a full scale drawing of your window design on paper.

The drawing must be done full-size. Butcher paper is available in large sizes and is a good choice for this drawing.

Don't be content with a beautifully rendered pencil sketch of your window; it probably won't be adequate. You can draw delicate lines with a pencil, but you may not be able to reproduce all the detail in the leading. Small grapes, facial features, or veins in leaves are easily sketched in pencil, but achieving this detail in the thicker lines of the leading is a different matter.

The leading lines must be laid out in full width so you don't fool yourself as to what can be achieved.



You will lay a sheet of "glass" over this paper plan. Because of the danger of breakage, real glass is almost never used on stage; Plexiglas or acrylic should be substituted. Thin plastic sheets are marginally cheaper than glass, anyway. The plastic sheet must be cleaned thoroughly to remove any oils, fingerprints, or anything else that might interfere with the application of dyes.

Make the leading paste

It was a red-letter day in 1978 when I discovered a "secret formula" for concocting a water-base lead-line mixture. A scenic artist from one of the Hollywood studios put this recipe together, but was

guarded with his secret. The formula is so simple that, once you know it, you wonder why you didn't think of it yourself.

These are the ingredients needed to mix your own leading paste: clear vinyl acrylic paint, white glue, metallic pigment, and powdered graphite.

Mix equal parts of white glue and clear vinyl acrylic paint. Some manufacturers call the latter vinyl glaze. It's the same stuff you apply to painted scenery to give it a gloss. The white glue can be Elmer's, Wilhold, or any polyvinyl glue.

Add aluminum powder and graphite to the glue/paint mixture until the solution becomes a thin paste. The aluminum powder should be pigment quality — such as you might mix with bronzing liquid to make aluminum paint. The graphite recommended is available in several grades for use as a lubricant in industrial machining. Actually, the graphite is an optional ingredient whose function is to make the paste a little darker.

Add black acrylic paint to taste. Without a touch of black, the leading paste will probably be too light—more like aluminum than lead. You can add a little black until you feel that the mixture has more of a leaden look.

Strain the mixture through a sheet of screen wire.

Hobby shops stock a commercially prepared product called "Window Leading." I don't know its formula, but I bet it's not far off from that outlined above.

Lead the Lines

Squirt the leading paste onto the plastic pane (laid out on top of the paper plan), following the lines of the plan.

You can do this using any plastic squirt bottle — a ketchup squeeze bottle or an empty bottle of white glue can be used. The operation is like decorating a cake with a tube full of chocolate icing.

A few years ago, the best material you could get commercially for simulating leading lines came ready to use in a squirt tube. It was an aluminum colored silicone caulking. This material is still available from hardware stores and building suppliers. Silicone caulking does adhere well to plastic panes, but . . . clean-up is next to impossible, and there is no margin for error. If you squeeze out a line too wide or too narrow, because you have moved your hand too slow or too fast, or because you're nervous or you took a step or you bumped your hand or sneezed, you can't just remove the part of the line that's wrong and then move on.

No, silicone caulking is too messy for that; the whole line must be removed — completely removed — very carefully cleaned right up to where it touches any adjacent line. And if you aren't careful when you reach the adjacent line, and you smear a little bit of *that*, you'll have to remove it, too. But why deal with this kind of frustration, when the water-base paste is so easy to mix?

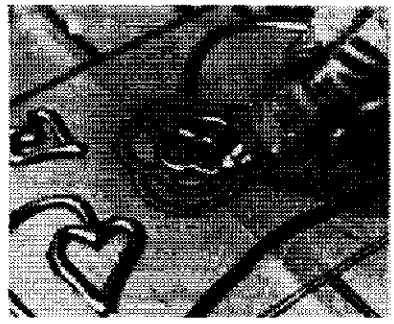
Mistakes do occur from time to time. This rose got lumpy when the artist got sloppy. It takes a lot of rags to remove a bad line. Cleanup is messy, but since the paste is water-soluble, clean-up is possible.

Duplicating and drying

We needed a pair of stained-glass windows that were to be mirror images of each other. In order to produce the reversed image, we turned the paper pattern over and retraced the design. Another window pane could then be laid over the new pattern and taped in place, and the lead lines could be applied.

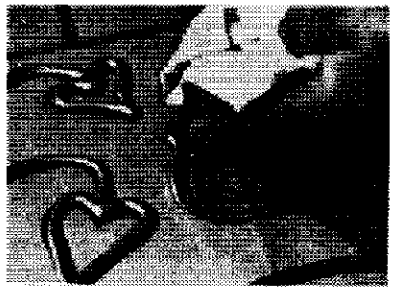
Allow 5 to 6 hours of drying time before you handle the "leaded glass," lay a straightedge over the leading, or touch the finished lines for any reason.

If your pattern contains a row



Apply mixture to plexiglas

Keep lines thin or else . . .



. . . be prepared for a mess.

The stainster, makin' copies

of small square panes, lay a straightedge directly on the dried work and use it as a guide to apply the leading perpendicular to the first set of lines. Squirt the paste alongside of the straightedge, but *not actually touching it.* Any contact of the paste with the straightedge will result in a serious flaw when the straightedge is removed.

Staining the "glass"

Clean the plastic pane again, to remove any trace of oil, before you begin to apply the dye.

There are many stains and dyes on the market that can be used to color the leaded panes. Acetate inks are available in many colors; these are water-soluble and can be applied with a paint brush or, if you prefer, with an airbrush. If you want darker or more saturated colors, use the glass lines as "levees" to contain pools of color until the ink dries.

A lacquer-base stain called "Crystal Craze" is available from hobby shops. It works best when applied with an airbrush, and it dries quickly. The name refers to its tendency to crystallize as it dries, giving texture to your pane as well as coloring it.

Another option you may wish to consider is fogging the pane with "Glass Frosting." This preparation has the effect of giving the pane a pearly translucency (and thus less transparency) which may be desirable for some applications. Spraying the frosting through a stencil gives the look of patterned milk glass. ✕✕✕