

Step-by-step: Carved urethane sign

Stained glass and gold leaf welcome this town's guests

By Joe McKernan

With every job, our first step is to determine the customer's on-site marketing needs. What is this sign about? What do they hope it will accomplish at this location? Who is the audience? What image should the sign convey to them? From how

far will it be seen and at what speed is the viewer travelling? What is the desired viewer response? We have a four-page checklist that we go through to help the customer "draw a bullseye." Our designers must then hit this target with a successful visual solution.

This time, the task was to create two double-faced signs to welcome traffic to the city of Inverell, here in New South Wales, Australia. We needed to present Inverell as a unique and high-quality tourist destination. This is an area where, in the past, some of the world's finest sapphires have been mined, a place where fossickers (gem prospectors) and jewel collectors are still among our many visitors.

We decided to do this verbally through use of "The Sapphire City" slogan, as well as visually through use of gold and a sparkling sapphire lead light pictorial (a type of stained



We laminated the panels with 3M neoprene-base contact cement, giving them a few really tight squeezes with a professionally made pinch-roller. If you don't have a good pinch-roller, stick with epoxy. It has better gap-filling properties.



After applying three coats of acrylic latex paint, the panel was masked and weeded. We usually finish first and carve through a mask.



We carve our signs the old fashioned way—by hand, with a chisel. We have five good carvers in our shop, so we can really fly when we need to.



We cut our incised letters at a 30-degree angle when they will be gilded, and at a 35-degree angle if they will be painted. The deeper cut yields more striking shadows on painted letters. Here you can see the template used for checking the angle.

glass). Instead of the typical over-used side view, we opted for a top view of a sapphire that lent itself to a more traditional lead-light design.

One thing to remember when using lead light on a sign is that the sign should be installed high enough that the viewer sees sky behind it. If it's backed up by a tree or building, it may look like a darkened church window.

Laminating the faces Because the letters were so large, the carving was a full inch deep. The total thickness of each 5-by-6-ft. sign was almost three inches. The signs were laminated using two panels of 1-inch, 18-pound Sign Foam [Sign Arts Products, 800-338-4030, www.signfoam.com] high-density urethane board over 15mm PVC. The PVC thickens the sign at a lower cost than high-density urethane board, while providing a denser material to screw hardware into. The high-density urethane board faces are easier to carve and more warp resistant than a solid piece of PVC.

To bond the sheets together, we used 3M-neoprene contact cement. We ran the panel through a pinch roller to get the pressure needed for a good bond. We've tested the adhesive for exterior use. It doesn't do as well as epoxy when fully submerged in water, but it handles normal rain and weather very well. The tight squeeze and a few coats of paint keep any significant moisture out of the lamination.

Painting, masking and carving We generally paint first, apply a mask and carve through that. We used a "primer-less" acrylic latex paint. Since high-density urethane board is waterproof, we applied only three coats without a primer. Many sign makers prefer to apply a lot of primer to get a high-gloss paint surface. Our approach is to let the gold do the shining. We used low-sheen paint in dark colors on our backgrounds for maximum con-



The large letters gobbled up 12 full books of 23k Australian gold. The gilding was done with loose gold and a gilder's tip, and then tapped gently into the size with a brush.



Our sapphire design went to a local lead-light instructor who made a prototype for testing and two finished pieces for us.



We tested several materials to protect the lead lighting, and broke at least one sample before finding the best product for the job. Here's our R&D specialist completing an impact test. The polycarbonate didn't break.



A tablespoon of silica desiccant beads was used on each side of the leaded glass. The sign is up high so the little pile of beads cannot be seen from street level.



After the desiccant was added to absorb any ambient moisture, then the unit was sealed air and water tight with silicone and then screwed shut. To date, we've had no fogging!



We assemble signs in our yard to check out the post system and take some photos. This is also a great opportunity to invite the customer over and get a testimonial and a photo that can then be used on our Web site and other advertising material. Here's the mayor of Inverell enthusiastically reviewing the new signs.

HOW IMPORTANT is a good first impression? How many lookouts and travelers pass through your town every day?

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From the initial strategic design sessions to the final artistic touches, Danthonia empowers you to step readily with a winning sign every time.

We use the sign you choose unless by the time of show we see that you prefer something else and high quality is essential. An other sign can appear that is better. We have our customers to go through and select their own signs showing about!

Jim Wright
Mayor Inverell 2004/2008

I want to thank you and your staff at Danthonia for the fabulous sign that you produced for us. It's a beautiful sign. People actually stop that car to admire the sign and take down our phone number. The goal is to attract the car coming in the street whenever the sign is coming from. Getting the best of whatever the car now that it's better to sell with the business.

Rob Anthony
Mayor of the Shire, Queensland 2002

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Here's the sales sheet we used to market entry signs to other communities. Our first mailing sold several more signs.

trast with the gold. In Australia, we get more of the sun's UV rays than many parts of the world. Gloss is the first thing to breakdown under UV light, so we "designed out" the problem by avoiding glossy paint surfaces.

When lettering will be gilded, we apply a coat of Lefranc quick size and let it dry. Then we apply a coat of Lefranc slow size to hold the gold. This gives a really nice finish.

Protecting the lead light Lead lighting is a popular, traditional Australian art form. We live in a rural country town and there are at least four lead lighters in the area.

Our customers were worried about vandalism, so we had to devise a circular PVC frame that held the breakable glass between two sheets of unbreakable 6mm polycarbonate. About ¼-inch of space was allowed between it and the glass.

Glass sandwiches like this can fog easily due to condensation. The normal solution is drilling holes and venting, but our abundant supply of Australian spiders would love to crawl in and spin webs. So we used the "total seal" approach that is used by window manufacturers. This requires a pinch or two of desiccant to absorb any ambient moisture.

Market, market, market To build awareness of what we have to offer, we always use one sign sale to bring in others. We included a picture of our local tourism manager standing by this sign on a sales sheet that we sent to the tourism directors in every community in New South Wales. A week later I got my first call—from a person who wanted five new entry signs for his town. •\$C



Joe McKernan is business manager at Danthonia Designs, in Inverell, NSW. The company is a project of the Danthonia Bruderhof (www.brudershof.com.au), a Christian intentional community. Besides

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