SMALL SIGNS; *Big Profits*

A step-by-step look at creating a small dimensional sign.

BY DAVID MCDONALD

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THERE ARE A FEW THINGS to keep in mind when it comes to small dimensional signs—not the least of which is that you should expect to charge the same amount for the labor for a small sign as you would for a much larger sign. Possibly even more.

This may not apply to small one-dimensional, one-color signs, but it's especially true for small dimensional signs that entail at least a modest amount of detail.

I have found this to be true straight across the board, but it takes doing a few to really understand the concept.

Maybe it's the loss of profits that really drives this point home. Because a sign is small the client will not always understand this very real certainty, so getting what the sign is worth can oftentimes be difficult. Most of the time we as designers and sign makers are distanced from this issue, because most customers don't want a small sign. The implication of a small sign is that "I don't need to be seen." or "My business is not that important."

But sometimes there's that situation where the client occupies an outlet where there is no choice. In these cases, we cannot sell our design and fabrication services simply based on square footage. This is because in many instances, design time and fabrication time tend to have little to do with the size of the sign.

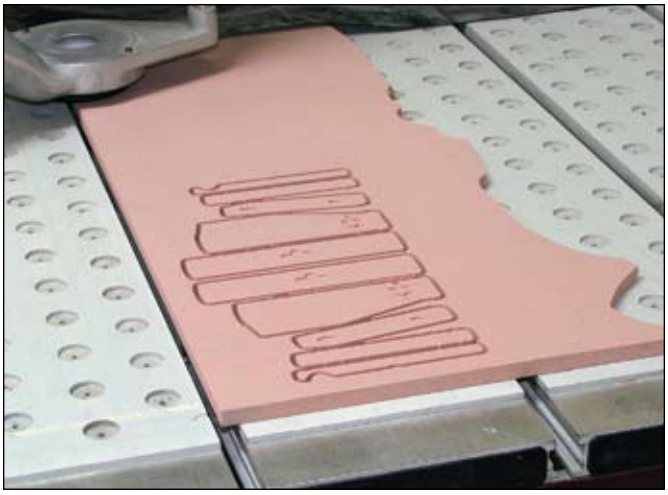
The folks at Potters Books found themselves in that situation, as there is only one place on the storefront for a sign to be hung and it is on the fascia of the building. The space available measures 12″ x 8′ and this is a retail outlet that needs to compete in a busy tourist area.

I wanted to design a sign that would

The finished sign is small but will compete for attention very well due to the strong contrast and powerful lettering.

10-lb. Signfoam 3 with a 1" thickness was cut on the Gerber router. Fitting the bits into the small areas was the most difficult part of this sign. Otherwise the design is a bunch of rectangles requiring cleaned out areas.

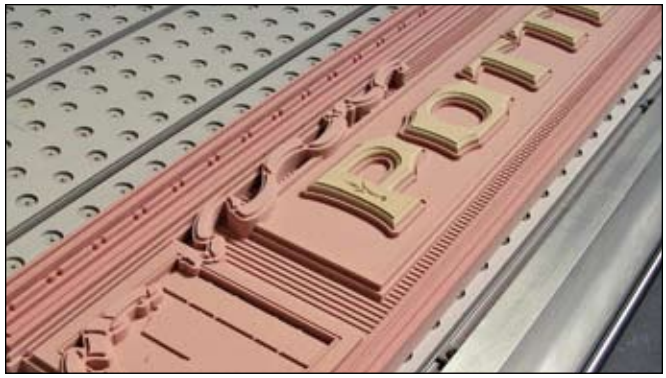
The decorative moldings at the top and bottom of the sign were cut separately and glued permanently to the sign with cyanoacrylate glue. This allowed me to manage the appearance of thickness and also made for easier tooling with the router.



The books are rectangles as well. Using 1/2" material, a male cut with a 1/8" bit was all that was required here. Later I will soften them to resemble the binding portion of a book.

The ribbons and letters are cut separately from the main sign. The ribbons will be attached to the sign before any priming takes place. As with the decorative moldings the ribbons were cut separately to allow for easier tooling with the router.

The ribbons are permanently glued to the sign using cyanoacrylate glue and an accelerator. This glue is ideal for use with high-density urethane and the immediate bond is a real time saver.



Except for the books, all of the pieces are in place and the letters are checked for fit and then removed for finishing separately from the sign. Note how the design is basically rectangles with lower lying outlines. This was a premeditated effort to allow for easy painting of this very small sign. Working in this way allowed us to paint the whole sign with a base color (in this case black) and follow up with color only on the top elements of the design leaving a very clean finished result. Any mishaps can be easily touched up with black.

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The 1/2" thick books are softened with a chisel followed by a few swipes with sandpaper. Each book is then permanently glued to the sign prior to finishing.

Strength to weight ratio is very high with cyanoacrylate so you don't need to use too much glue. The book is lightly sprayed with the accelerator and then applied to the receiving pad and becomes permanent within three seconds.

Normally we will spray the primer coat and finish coat using the HVLP spray gun but because this sign was so small we elected to brush the primer by hand to get into all of the small areas. The black finish coat (100% acrylic) was sprayed and while still wet Robin came back and worked the paint into the deep crevices.

catch the eyes of the walking public and give the client as much value as possible for their money spent. I believe I achieved this. But I will be honest in also saying that we didn't profit as well on this job as we should have, although we certainly did better than we had in the past with detailed small work such as this.

There was not a big profit here but we came out okay on this one—mainly because I calculated the difficulties with production and made every effort in the design to counter those difficulties as much as possible. Fitting the small router bits within the design was something I had to take time and get right before I proceeded and although that stage was probably the profit killer it made the rest of the production go so fast I think it was worth it!

If the sign can sell more signs, then in fact it is profitable in the long run.

Sometimes in cases like this I like to rationalize how we can simply allocate the losses to our marketing strategy. What I mean by this is that if the sign can sell more signs, then in fact it is profitable in the long run. So, to some degree as a marketing strategy, it is a good business move. (How's that for a rationalization?!)

In all seriousness we must charge accordingly with these often ignored small projects. After all, if they are designed effectively they can sell more product—as well as a bigger sign. So, the value is truly there! Follow along with the photos here to see how I made efforts to tame the unforgiving small dimensional sign and this time I did walk away with the shirt on my back.

Until next time…
Thanks for listening!

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The letters were primed and then finished with 1 Shot lettering enamel and allowed to dry. The faces were given a second coat and while still wet fine sand (like table salt) was sprinkled over the entire surface and allowed to completely dry. Once dry the loose sand was poured off and the letters were cleaned with a brush and compressed air.

I suggest sealing the sand prior to sizing for gold leaf. Frog Juice in the aerosol can is a quick way to accomplish this step.

To create plenty of open time for a "gild ready" letter, 1 Shot quick size and Lefranc 12-hour size are mixed in equal parts and applied to the entire letter. In my particular atmospheric conditions the size was ready for gold within four to five hours.

When doing a sand gild I find that you must factor and bid the work as if you are gilding twice as it will take twice the amount of gold to cover all the bumps and moguls of the sand surface. The gold leaf is laid and then pressed firmly into the sand with a foam brush.

The loose leaf is then swirled in to the remaining areas leaving a very nice matte center with a brilliant outline where there is no sand.

All color is painted with 100% acrylics. The only low lying area to paint was the blue background area. Otherwise all areas were on top. Using a red sable bound in a quill I sweep on the color keeping the brush handle at a very low angle to the surface. Working in this manner achieves a heavier film of paint on the surface and keeps run-over to a minimum.

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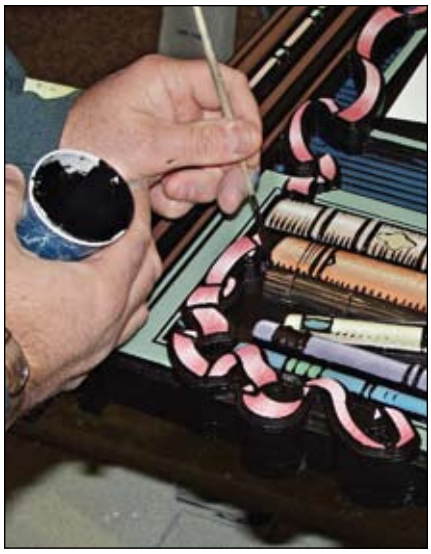
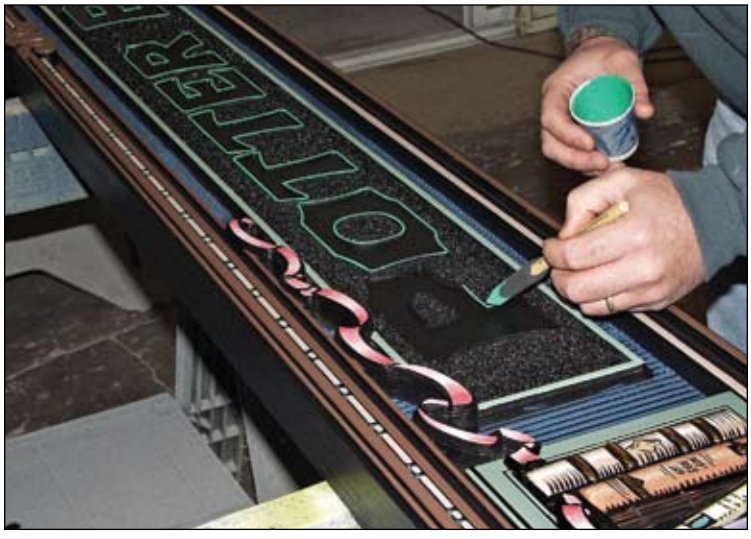
The ribbons were painted with pre-cut sponges primed with three shades of color, white, pink and red.



The books were painted with very little emphasis on shading and then flash dried with a hair drier. The woodcut type design was finished off with black creating more depth and charm. (Note my printed full color study.)

Normally I will do the osmalto (smaltz) work prior to the finish painting but in this case the area was separated and trapped quite well and I saw no need to stop my rhythm of work. A bath of tinted epoxy is brushed into the receiving area and black smaltz is poured over the still wet surface and allowed to cure before dumping off the excess. While pouring the smaltz I used a long squeegee to act as a dam to help keep it contained within the targeted area.

The gold bands on the bookbindings were sized and gilded using patent gold leaf.



After dumping the excess smaltz onto a large piece of pattern paper and returning it to the master container I was able to paint the green letter outlines.

Silicone adhesive is applied to the pre-painted backs of the gilded letters and carefully placed in position on the sign surface. A fair amount of pressure is employed to ensure a good bond between surfaces.

SEA VENTURE Re-Visited

BY DAVID MCDONALD

Re-creating an old sign with today's technology and materials.

The new sign looks like the old one—but underneath, it's a different story.

David and Robin McDonald own and operate Avila Sign & Design, a custom sign shop in Grover Beach, Calif. They may be found on the Internet at ***www.avilasign design.com.***

Over eleven years ago we created a sign package for King Ventures at Sea Venture Resort and Spas. The resort required many different types of signs from room numbers to wayfinding signs and everything in between that a resort hotel could possibly need. The free-standing dimensional monument signs at the entryways were the main focus of our labor and at that time we were very excited to design and create such a high profile sign system. In the last decade a lot has changed in the sign industry from materials as well as the technology by which we as craftsman complete a project today. The interior signs at Sea Venture are doing very well and have been assisting tourists and vacationers to enjoy their stay while visiting the Pismo Beach area.

Some of the vinyl lettering throughout the property will be redone but I am happy that most of the interior work is still in good shape. The freestanding monuments however are in need of repair and we signed on to redo them. Some materials of the monuments are holding up very well and some are not doing so well as can be expected after a decade of service. I should add that other than age there was another reason for the need to redo the monument signs—just recently the resort was in the middle of a repaint on the building's exterior when a lift truck fell on one of the two monument signs and broke it in half.

This accident prompted our services immediately. While re-creating the new

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monuments for the Sea Venture resort, I chose to fabricate the signs using different materials (some the same) and of course used the newer technology available today to get the job done.

After a decade of service the signs were showing their age. The MDF back panel had completely disintegrated and the metal hardware like the nails around the border were showing the rust.

THE GOOD, THE BAD AND THE UGLY

While inspecting the old broken sign I noticed a few things right away. We originally used 15-lb. Sign Foam high-density urethane (HDU), which was holding up very well. This included the sign faces and the HDU-skinned posts. The sign was backed with 1″ exterior medium density fiberboard (MDF) and it was completely rotten. The MDF was getting wet everyday and simply couldn't take it and had literally turned to mush. The signs have been subjected to the salt air from the ocean that is fifty yards away, the damp foggy mornings that can be common along the coast and the constant sandblast effect that the beach and ocean breeze create. Add to this the landscape sprinklers soaking the signs almost daily and after eleven plus years I am surprised the signs look as good as they do because the elements described are pretty harsh indeed.

The new sign was cut on the Gerber router, primed then finished with acrylic paint.

The copper leaf incised lettering was doing pretty well with some slight patina starting to take place in the areas where one could see that the water would sit and be last to evaporate. We redid the copper leaf about five years ago and I would be honest in saying that it was in worse shape at that point with much more patina and dark areas. When we redid the copper leaf we decided to apply more clear coats of Frog Juice, which looking back, seemed to help hold back Mother Nature a little better. Another observation I made was that all of the metal hardware used to fabricate the sign had turned to rust. This seems like a no-brainer, considering the location, but I'm talking about hardware that had been countersunk deep into the HDU and

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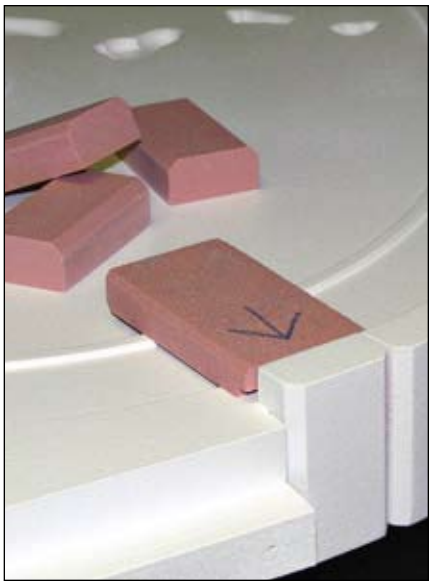

I used the router to cut the planks that surround the border of the sign. The planks were cut to length and bonded to the border with cyanoacrylate glue. For consistent placement and overhang I used the jig shown here (with arrow).

The signposts were looking really good on the old signs so I skinned the new posts in the same way as before. 3/4" Sign Foam was epoxy-glued to the posts and all edge seams were immediately set with cyanoacrylate glue. Tops were cut and shaped on the router.

Robin is bathing the sign background with tinted epoxy resin. When finished the sand smaltz is poured on immediately and left to dry overnight before pouring off the excess sand.

The sign was masked and then cut to expose the letters. Wunda size was sprayed to achieve a smooth finish.

Because copper leaf is fairly inexpensive I prefer to pile it on and then firmly press it in to the aggressive tack that the Wunda size creates. With incised letters this method works good as the leaf will usually stick to the outside edge first cracking the leaf as you press. The second layer can fill in the voids keeping the rubber glove fingers from killing the size. You must wear rubber gloves to keep your finger oils from contaminating the copper.

was then filled, primed and finish coated multiple times. Yet the rust still found its way to the surface.

SANDBLASTING TO ROUTING

Learning from my observations helped me to make better choices regarding the fabrication of the new sign. In fact, I ended up using quite a few different approaches this time around. When the signs were first created we were still sandblasting most of our dimensional signs and the Sea Venture sign was sandblasted the first time around. This time we used our Gerber CNC router to do the carving and in my opinion yielded a better looking product as I am not a big fan of the "stucco textured" look that you achieve when sandblasting HDU board.

I did however, hand carve the original incised lettering and it could be argued that the router falls short of the traditional look, especially on the inside corners while generating the geometry necessary to create an incised letter. I don't get too hung up on shortcomings of this nature because the router look is in fact perfect. What I mean by this is that the geometry is perfect and the rounded off inside corners are perfectly rounded so the eye accepts them as being accurate, albeit not idealistically correct. It becomes the look of the times based on the equipment available to a given era of craftsmen. Frankly, the router carved the lettering in about ten minutes, whereas I would have spent three

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DuPont makes a two part automotive clear coat that can be brushed quite successfully. I used this product to clear copper and gold leaf when necessary. Two parts clear to one part activator and dip into reducer as needed as it gets pretty sticky.

The finials were treated with three coats of Modern Options copper surfacing paint. While the last coat is still wet I sprayed the finials with the patina green solution to achieve a nice natural patina color.

Silicone adhesive is applied to the sign and the skirts are carefully positioned in place.

Because of budget restrictions one of the old signs was treated as a redo but it had the same rotten center core as the sign that got broken. We had to rebuild the ends to be able to have strength when secured into the dado of the posts. To fix the problem we cut Dibond and through bolted it on the ends.

quarters of a day between carving, sanding and finessing. For me, hand carving this sign would not be a profitable business decision today!

WE'RE NOT AFRAID OF THE WATER

The 1″ MDF backer on the old signs had failed terribly and it was the surrounding urethane that kept the signs from falling apart. At the time the product that we used was rated as exterior grade but nonetheless it did not pass the test. This is an extreme exposure situation and I would expect just about any material no matter how well sealed it is to fail in time, and a decade is a decent amount of time.

Fortunately today there is a product that will hold up under such tough conditions and it's called Extira. I am confident in the performance of Extira because we have done tests to confirm its ability to withstand water. To make a long story longer, we soaked a piece of Extira in a bucket of water for months only to find a slight fuzzy surface, yet very minimal, swelling and no signs of breaking down. I am confident that the 1″ Extira we used to back the sign this time will give us the longevity that is needed to support this free standing monument sign for another decade without incurring the absolute failure from the moist environment.

PAINT IS OUT, RESINS ARE IN

The Sea Venture signs have a sand smaltz background consisting of medium grit silica sand. The sand smaltz on the old sign held up pretty well in the harsh environment at the Sea Venture resort. We were using paint back then to hold the smaltz to sign backgrounds as this was the practice from the old days and was how

we were taught from the written pages of sign writing manuals. The practice was to fortify the paint with Smith's cream or the lesser known Jone's cream, which would then thicken the viscosity of the paint so that a heavy film could be laid down to hold the smaltz.

The cream paint additive would also accomplish the very important task of slowing the drying of the paint, as one would generally need time to paint out the ground on a sizeable sign. Paints have changed considerably in the last few decades and white lead is no longer used (for obvious reasons) as a main ingredient. White lead has incredible bonding strength and was a key principal in holding the smaltz to the ground. Today we are using a marine epoxy resin to hold our smaltz and the new Sea Venture signs were treated with this method. Epoxy resin is the right viscosity without adding anything and if a slow hardener is used we have plenty of time to apply it to a very large sign background. We are tinting the resin with lettering enamel to better emulate the color of the smaltz used. Tinting helps to block the ultra violet rays from prematurely breaking down the epoxy resin. I expect to see the smaltz last a lot longer on the new Sea Venture signs but only time will tell, as this must be proved.

NO MORE NAILS, GLUE IT

The salty, wet air attacked the metal hardware and rust developed on the old signs. It wasn't that bad—certainly not sticking out like a sore thumb—but wherever there was metal there was rust. I used silicone adhesive and finish nails to attach the border trim pieces that surround the border giving the appearance of a barrel or cask. Each piece was cut, placed into position and then the finish nail held it in position while the adhesive dried. The method was effective but the rust was not acceptable. I also used screws in the face of the sign to hold it in place while the adhesive set the face to the MDF—a little overkill I think, as the silicone was plenty strong enough alone to hold the sign face to the MDF backer.

Needless to say I did not use any metal on the new sign. Instead of nails I attached the border pieces with cyanoacrylate glue. The raw HDU border pieces were glued directly to the raw HDU face and Extira border. I used a gauge to help position each piece for the proper amount of overhang from the sign face. The glue is very strong when used in this fashion. The joint becomes as strong, if not stronger than the HDU itself and the assembly becomes one solid piece. Cyanoacrylate glue has changed the way we fabricate our HDU

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signs and in this case the border on the new signs is stronger and I don't have to worry about any rust developing later.

A STICKY SITUATION

Another change for the better is the way I handled the copper leaf lettering. A decade ago I used (slow) 12-hour oil size to attach the leaf and multiple coats of Frog Juice to keep the lettering shiny and protected against tarnish and patina. This method held up pretty good but the inevitable patina would slowly grow and was getting unacceptable in five to six years.

After close inspection I found that the patina was developing most prominently in the cracks of the copper. Cracks will be present when copper leafing incised lettering with 12-hour size because the size just isn't aggressive enough to hold the thick foil. You can push the leaf into the cracks of the leaf as hard as you can but in my experience the copper will not take in the cracks. We could apply the leaf when the oil size is very sticky but we must really rub (burnish) aggressively with force to remove the wrinkles and loose leaf. The drawback of doing this is that we will run the risk of busting through the overly wet size.

When leafing with the heavier foils like aluminum and copper leaf I prefer to use a different size called Wunda size. Wunda size is a water-borne product that when ready (usually within fifteen minutes) yields a very aggressive tack and is perfect for the heavier foils. Though rated as an indoor product I have found that I can get wonderful results outside unless it is getting soaked with water a lot, as the water will cause the size to re-solidify and can fail. The tack is so aggressive that you can get crack free solid coverage with the foil so that the foil seals the moisture out from reactivating the size (like putting a lid on it). If we clear coat the foil moisture is not an issue. One of the downfalls of Wunda size is that because it dries so fast it doesn't brush very well and flow out smooth.

I chose to use Wunda size and an automotive two-part clear coat on the new Sea Venture signs. I masked the sign face, cut and removed the lettering and used the

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Sea Venture Re-Visited
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airbrush to spray the Wunda size, achieving a smooth finish. I was able to apply the copper leaf by the time I cleaned up my mess and after rubbing the copper aggressively with a piece of velvet cloth achieved a beautiful gild. The automotive clear coat was applied with a brush past the outside edge of the leaf making sure to seal it well. Although the copper on the old signs was holding up fairly well I have found my new method to be superior to the old and expect to get a much longer life this time around.

FROM FAUX TO THE REAL THING

The finials on the posts were done differently as well. The first time around I copper leafed the finials and clear coated them with Frog Juice. Multiple coats of colored glaze were applied by stippling with sponges to give the appearance of old patina. I was able to achieve the look I wanted only after applying lots of coats and building to the right color. The copper leaf was frankly a bit redundant because in the end it had been almost totally covered up. The method was very time consuming and labor intensive.

The finials for the new sign were treated differently and it was much easier to achieve the natural patina finish. I used the Modern Options-Sophisticated Finishes from Triangle Coatings, a water based metal-impregnated surfacing paint that is easy to work with, dries quickly and will yield a beautiful patina every time. The copper surfacing paint was used followed by spraying with the patina green acid solution. The funny thing is 11 years ago I was trying to emulate the look of patina and now I can simply create it with the Modern Options products.

A lot has changed in the sign business in the last decade, some good changes and some not so great, but with regards to the Sea Venture signs I think it has been for the better. Change isn't always easy but when new products and techniques surface that make our day-to-day work that much easier and efficient you've got to love that!

Until next time…
Thanks for listening!