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*The Custom
Gift Annual*

Page 35

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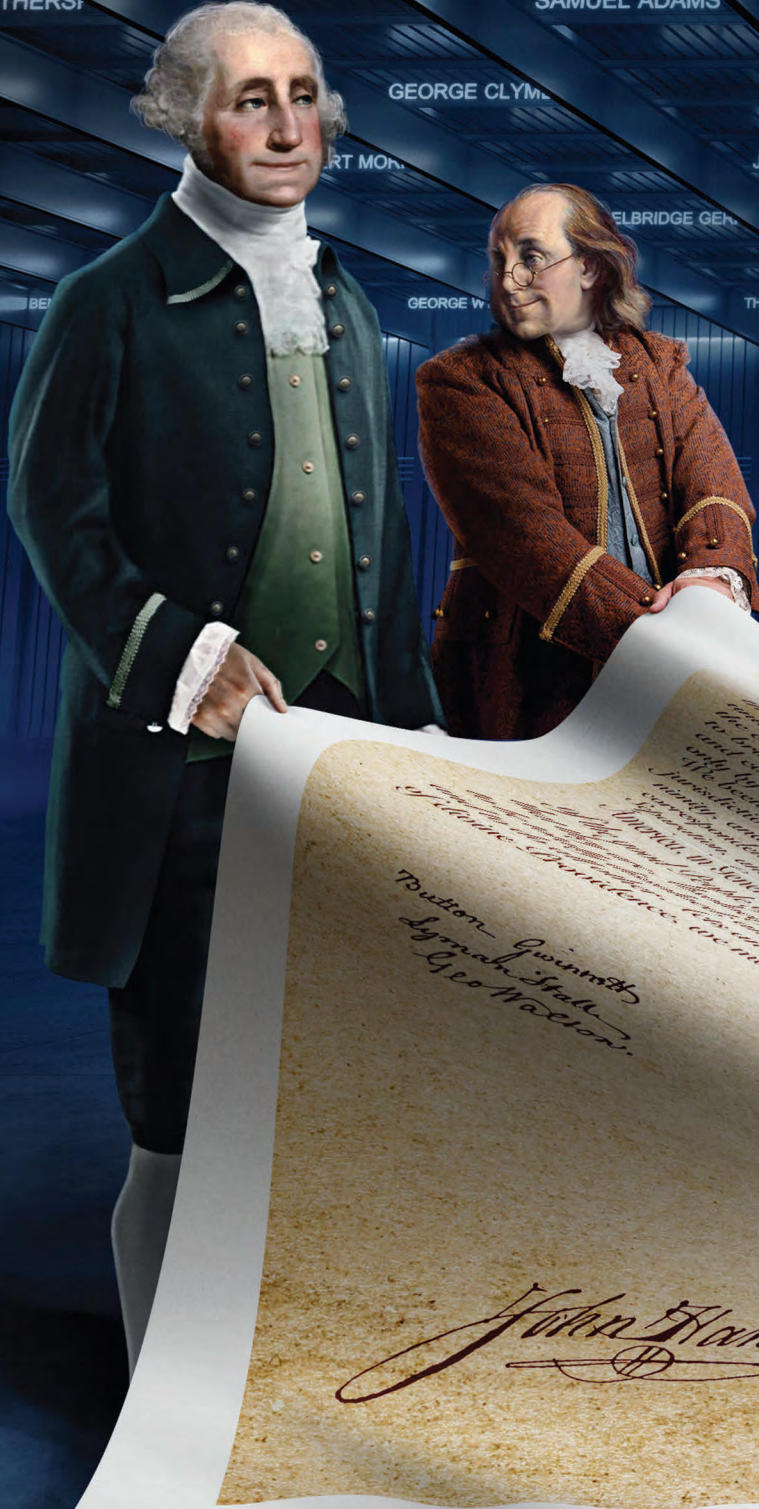
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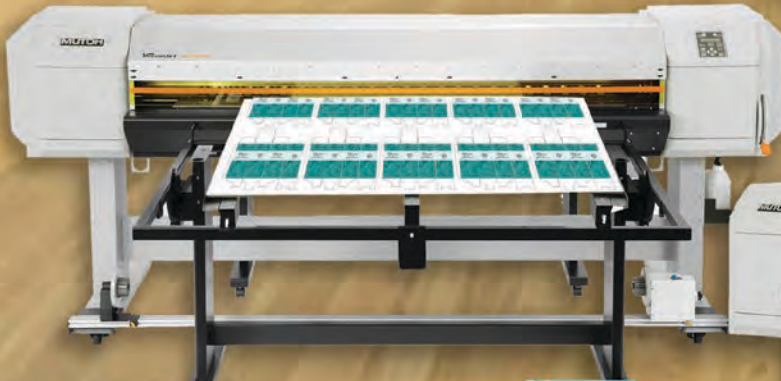
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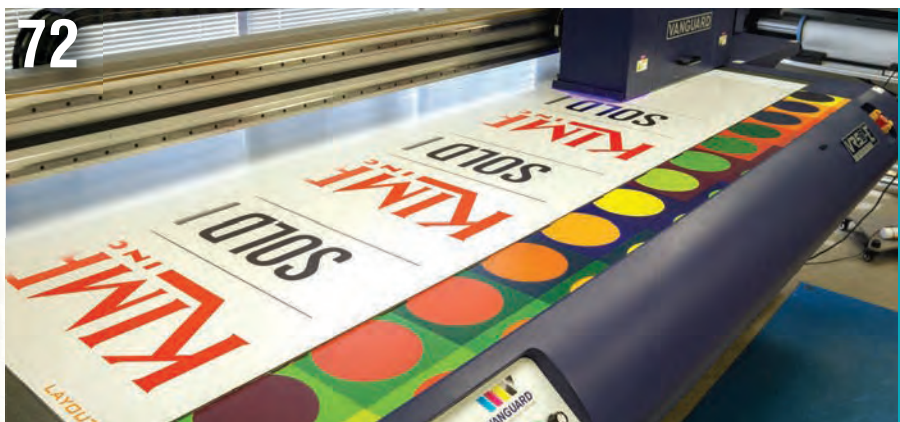
It's packed with how-to tutorials and business ideas from manufacturers to help you create the perfect personalized products for your customers.



AWARDS & CUSTOMIZATION



APPAREL DECORATING



SIGNAGE & PRINTING

"The shortage of ancillary items, like containers, generally all stem from a lack of supply and a sudden surge in demand of petrochemicals ... The reductions in production output as a result of COVID and the sudden spike in demand are a contributing factor as producers are still trying to rebalance supply."

TAYLOR LANDESMAN
LAWSON SCREEN & DIGITAL PRODUCTS

from *In the Ink Pot*, page 12

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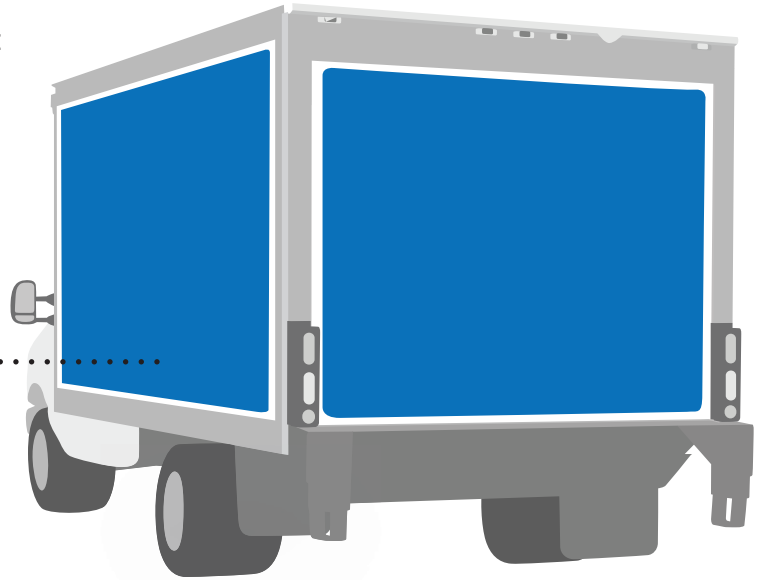


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STEP ONE *CASSIE GREEN, EXECUTIVE EDITOR*



TOUGH CONVERSATIONS

One of the hardest things about being a parent is having the “tough” conversations. You know, the ones when you have to discipline your child or break some unfortunate news to them. I hate it, and I think you’d be hard pressed to find a parent who enjoys it.

One of the hard conversations we’ve had to have in the graphics industry currently has to do with supply chain and shipping issues. I’m guessing most of you reading this have had the unfortunate experience of not being able to get something: ink, T-shirts, or perhaps even a machine itself. Throughout the world, most industries are experiencing these same problems. They’re not fun, but as difficult as it may be, we have to talk about them.

Here’s the good news: There are a lot of suppliers and manufacturers around the industry that are able to help, whether it’s finding a different hoodie to stand in for the one you were originally looking for or offering you advice on how to deal with your customer. Here are just a few quick pieces of advice:

“Make sure to plan ahead and keep ink stocked on the shelf.”
— **TAYLOR LANDESMAN, LAWSON SCREEN & DIGITAL PRODUCTS**

“The best way a graphics shop can prepare (for shortages) is with proper forecasting.”
— **DAVID LOPEZ, EPSON**

“Pricing is likely to go up on some items as well, so you can encourage customers to order early to lock in current prices.”
— **SCOTT SLETTEN, JDS INDUSTRIES**

Have the difficult conversations, but don’t give up. As things begin to pick up and even out, we know the future looks bright.

Until next time.

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(Image courtesy Kim Pyle; @roamcollective.kb)



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| SETTING NEW STANDARDS



THE LAZY WORKAHOLIC

One thing is for sure: No matter how much you study, read, or experience in life, you will never be as danged smart as you were when you were in middle school. Back then, I was an undeniable genius.

Sure was a shame that my fifth-grade teacher wasn't as gifted. Resenting the required homework, reading assignments, math problems, and all that other pure torture when there were better things to

do, I determined that if a teacher could not teach me everything that was expected of him or her in the seven-and-a-half hours a day I was in class, they should have pursued another line of work. Why should I suffer for their failure?

Continuous problems to solve, annoying deadlines to meet, sacrificing so much time to things I didn't really like doing ... what did that have to do with real life anyway? Just tell me what!

It was not that I really hated school, or even hated learning. After all, I was always an honor roll student, near the top of the class where my genius surely belonged. What I didn't like was work.

I was lazy, well at least when it came to the tedium of public school education that we were all a part of back then. Though I could and would play harder than I was ever required to work, as we all did back before computers and cell phones, my



personal work ethic for doing something I didn't enjoy was far from developed.

Thankfully, in time, that would change, and change dramatically ... maybe too dramatically. But, in the early years of my life, change was desperately needed, and a true work ethic had to emerge. It did, but not because I just miraculously matured into a hard-working and highly responsible adult. No, my work ethic was whipped into place partly because I had good examples, but mostly because I simply had no choice. There was no one who was going to do the hard work for me. Good.

As any of my regular *Trenches* readers know, the work I eventually found to do was sign work, and that unintentionally changed my life forever. After two years of college, at the age of 20, I told my future father-in-law that I intended to make a living making signs, and he said that was fine because he knew when I ran out of signs to do, I would find something else.

In reality, I've found enough sign and graphics work to do that through decades of good times and bad, our little sign shop has kept any crew I had at the time as busy as they wanted to be, and me a lot busier than that. And right now, about the time I wanted to slow down, work has been pelting me like a Panhandle hailstorm, with no end in sight.

This once lazy guy has needed all the work ethic that he could muster, as the trade I'm in is short-handed right now. But so is every trade I know of. From plumbers to mechanics to cabinet makers, all are trying to find young, talented hard workers to fill in the ranks, and all are coming up short. The business owners and managers I know, and I know more than a few, are all pulling their hair out ... if they have any hair left.

Now, my kids are all hard workers, but fully involved in other businesses, so not all young folks are slacking by any means. But it sure seems like there are plenty of good-paying skilled careers out there that can't find enough takers anymore.

Once lazy, for many years my matured attitude is one of great respect for any type of work. It is all important. A large airport cannot run without air traffic controllers or custodians. And one is no more important than the other. Not to mention concrete pourers, A/C technicians, network managers, and many more essential and valuable laborers and craftsmen.

But why should I complain about needing help, when it only takes five to 15 years to train a really skilled sign and graphics person? Oh, that's right, I'm too old for that process. But I hope the other sign makers out there who have more time, as well as all my business owner friends in other trades, can and will find their young protégés as they certainly need to do.

But I am not totally optimistic about that, as one key ingredient in this whole equation, and the one that seems to be missing, is that one little item that put my lazy rear in gear, and it is that "just have no choice because no one's going to do the hard work for me" part.

That we need back desperately. If not, it's about to get awfully lonely for all of us here *In the Trenches*, no matter what type of trenches they are.

Have a great month.

Rick

RICK WILLIAMS owns Rick's Sign Company, a commercial sign shop in Longview, Texas. He has been in the sign industry since 1973 and has been a contributing editor to *Sign Business* and *Sign & Digital Graphics* since 1986. Contact Rick via email at ricksignco@aol.com.

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Lawson Screen &
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In the Ink Pot

**HOW INK FITS IN THE GRAPHICS INDUSTRY AND
THE CURRENT CHALLENGES AFFECTING IT**

BY CASSIE GREEN



So many decorating processes in the graphics industry require ink. Screen printing, sublimation, UV-LED, direct-to-garment (DTG) ... ink plays a vital role in all of these processes. In fact, without it, you wouldn't be able to achieve an image with these decoration methods. From banner printing to T-shirts, from custom mugs to awards, there are so many items that can be embellished with colorful images created using ink.

Across the graphics industry, ink continues to be in high demand. But as the effects of the COVID-19 pandemic continue to ripple across the country, even ink has not been immune to shortages. Everything from supply chain challenges to shipping issues have had massive effects on ink supply to the graphics industry.

INK BASICS

Before we look at those issues, though, let's take a look at ink basics. Understanding how inks work, what the specifics are of each printing method, and even knowing what kinds of inks are available will help graphics shops create better prints.

Let's start with the world of textiles. Apparel and soft substrates can be embellished with a variety of techniques that utilize ink, including sublimation, DTG, and of course the traditional screen print. For each method, delivering high-quality final products is a must.

An excellent final product stems from using quality ink. "High-quality inks for screen printing are continuously tested for wash fastness and durability by the manufacturers," notes Mark Suhadolnik, GSG. "The manufacturer will also provide exact parameters for mixing, proper cure, flashing, and print application as well as proper clean up and disposal, ensuring that you can deliver a quality printed product to your customer."

"This is what your customer sees and how your final product is judged," adds Taylor Landesman, Lawson Screen &

Digital Products. If you want your customers to come back, use high-quality screen printing ink.

A similar approach is also necessary when it comes to DTG printing. "Printing on textile is not trivial," says Sharon Donovich, Kornit Digital. "There are so many parameters that need to be taken into account to get high-quality prints." She notes that means inks that provide a great look and feel; have washability and durability that match the industry standards; are safe for use on human skin; are certified to the industry standards (GOTS, CPSIA, and Eco Passport); and are compatible with digital inkjet technology.

When you use poor-quality inks on any substrate, you take major risks. "If you have low-quality inks, you risk your inks not being activated properly. This will result in poor image output,



Sublimation ink has a very specific design. If you don't use it with this process, you risk lower vibrancy and durability. (Image courtesy Sawgrass)

Screen-Printing Ink Options

Mark Suhadolnik, GSG

- 1. PLASTISOL INK:** Plastisol ink is the most widely used ink in apparel screen printing. It is made up of PVC particles suspended in a liquid plasticizer. Plastisol is durable, flexible, and easy to use in the screen-printing process.
- 2. WATER-BASED INK:** Water-based inks use water as the solvent carrier for the pigments, which lends to prints that are soft and breathable because the ink penetrates into the garment rather than sitting on top. When printing and following proper print parameters, the results are a bright print with little to no hand.
- 3. ACRYLIC INKS:** Acrylic inks or HSA (high solid acrylic) are water-based inks, but with a chemical formulation that makes the ink a higher viscosity than traditional water-based inks. They have similar characteristics of plastisol inks and print in the same manner but are completely PVC free.
- 4. SILICONE INKS:** Silicone inks are PVC free and have superior elasticity and durability when printed on demanding fabrics like performance wear. They are the go-to ink for 100% polyester garments requiring exceptional elongation; however, they do require a catalyst. They also feature low cure temperatures, which greatly reduces the chance of dye migration.

All of these inks can be used for printing on 100% cotton, 50/50, tri-blends, canvas, polyester, and polyester blends with the exception of silicone, which can only be printed on 100% polyester in most cases.



a waste of substrates, and lost time,” say Meghan Rodenhouse and Jimmy Lamb of Sawgrass. “Lower-quality inks may also require larger amounts to be used to achieve proper coverage of the surface, which results in higher printing costs.”

This isn’t just the case with apparel and textile printing. Methods like sublimation and UV-LED are often used to print on rigid or semi-rigid items. Shops shouldn’t

From signage to home decor, and everything in between, technologies such as UV-LED, sublimation, and even screen printing utilize ink to create colorful products. (Images courtesy Epson)



Left: When it comes to DTG on apparel, inks must meet high standards in order to achieve the best possible outcome. **Below:** An excellent final product stems from using quality ink no matter which printing method you use. (Images courtesy Kornit Digital)

compromise on quality when printing on items like mugs, rigid signage, and more.

“High-quality ink ensures high-quality, sellable output that customers are happy with,” says David Lopez, Epson. He notes that with certain methods, not only is it important to focus on quality, but the substrate you will work with. “Traditionally, many UV and direct-to-substrate printers require customers to select a specific ink for either rigid or semi-flexible materials.” For example, the Epson SureColor V7000 UV flatbed printer leverages a semi-flexible ink, so customers aren’t limited to one type of output.



Specialty Sublimation Ink

Meghan Rodenhouse and Jimmy Lamb, Sawgrass

Most sublimation printers are four-color units: CMYK (cyan, magenta, yellow, and black). You cannot deviate from these four base colors. However, with an eight-color unit, you have more flexibility for specialty inks. You will still have to use the standard CMYK base colors, but the four additional colors can be varied.

Sawgrass makes fluorescent pink and yellow ink for its eight-color VJ628 printer. They can be printed stand-alone or combined with the other inks in the printer to create a wide range of fluorescent-based colors. Several other specialty ink sets exist for this printer including Pro Photo, which is focused on producing enhanced skin tones, rich blacks, and smooth gradients for fine art and professional photography.



Supply chain issues and inventory shortages have led to many graphics shops not being able to order ink. Make sure you communicate with customers in an open way and try to stay stocked up when possible. (Image courtesy Sawgrass)

Custom Graphics Industry Faces Supply Chain Woes

As featured on graphics-pro.com

In this excerpt from an article featured on graphics-pro.com, Allee Bruce, Editor, *GRAPHICS PRO Daily*, spoke with several industry insiders to get the scoop on supply chain issues.

When COVID-19 first started affecting the industry, factories, manufacturers, and print service providers (PSPs) were shut down for the health and safety of their workers, plus the slowdown in business.

With shutdowns and job loss, the industry turned to online buying, much like the rest of the world's industries. The surge in online buying meant a demand for products, and as Greg Brown, Citadel Brands, a distributor of hoodies, sweats, jackets, and sportswear for AWDiS, puts it, "inventories got depleted."

"Then when the markets started to open back up, and orders started flowing again, a backlog built up quickly," Mutoh's Brian Phipps explains. "We all have become so used to getting our orders 'just in time' and that all changed for us last year during the pandemic."

For many manufacturers and suppliers, capacity couldn't keep up with demand, and shipping couldn't keep up with the number of orders requiring delivery. According to Brown, the lack of workers on vessels, crane operators at ports, and truck drivers to make deliveries is also impacting supply chains and delivery times.

... Only time will tell how much longer manufacturers, suppliers, and shops will be affected by these disruptions, but the industry experts have some predictions about capacity and demand, and some hopeful words for print and personalization business owners.

Scott Sletten, JDS Industries, says these types of issues have "a way of self-correcting over time," and he expects that'll be true in this case. Whether it takes six months or an entire year, he assures that certain products will get back into balance sooner than some others. He adds that suppliers and manufacturers will have more stock once this initial surge in demand levels out.

... "At the end of the day, it's all we can do; be as informative to your customers as possible," Todd Downing, owner of Fat Dad Custom Designs and co-founder of Our Success Group, adds. "Educate them on why something will or won't work, what the different print methods are, and the difference in material blends. A better-educated customer means less time answering questions and more time making money."

To read the entire article, visit <http://gpro.link/supplychain>.



If you want your customers to come back, using a top-quality ink in your screen prints is a must. (Image courtesy Lawson Screen & Digital Products)

Specifics are also crucial when talking sublimation ink. "The chemicals (in sublimation ink) are designed to go from a solid to a gas while skipping the liquid phase," state Rodenhouse and Lamb. "With the proper time, temperature, and pressure on a polyester surface, sublimation inks will become vibrant. If you use non-sublimation ink, the image you create will not be vibrant and will not permanently be embedded into your product."

DTG inks also have a specific technology behind them. "Digital means it uses inkjet print heads, and there are many reasons pigment water-based inks are most commonly used with DTG," says Donovich.

RIPLING EFFECTS

Businesses across the graphics industry continue to need ink for their daily projects, outputting quality prints for everything from T-shirts to drinkware. And with the COVID-19 pandemic came additional uses for these printing methods: safety signage, masks, floor graphics, and more were all created using those techniques. But the effects from COVID have obviously also had some negative repercussions. Supply chain issues are currently rippling through the world, causing problems that have even touched the world of ink.

"There is an international shortage of the major raw ingredients that make up screen-printing inks," says Landesman. "The shortage is not only limiting available supply but increasing costs, as seen in the industrial chemicals component of the U.S. Producer Price Index (PPI) ... For screen printers, this translates to increased costs in screen printing inks and a more limited selection."

Shortages are also being seen in digital inks. "We know there are manufacturers having ink supply issues," Lopez affirms. And it's not just the ink itself seeing shortages.

"At the height of the pandemic, some of the components such as ink cartridges (not the ink) were in short supply because they were manufactured in other countries and the factories were shut down," note Rodenhouse and Lamb.

"The shortage of these ancillary items, like containers, generally all stem from a lack of supply and a sudden surge in demand of petrochemicals," believes Landesman. "The reductions in production output as a result of COVID and the sudden spike in demand are a contributing factor as producers are still trying to rebalance supply."

Unfortunately, this also affects pricing.

continued on page 110



REDEFINING YOUR UNIQUE VALUE PROPOSITION

With 2021 now over halfway behind us, I hope we are all putting 2020 in the rear view mirror as far as we can. There have been many changes in our world. Some good, some bad, and some might take a while to figure out where they land. One of the big things we are experiencing is a change in what the “normal” customer might value. Where they once might have valued low cost and immediate availability, we now see more value being placed on community, story, and meaning. But why do values change, and how can you best keep up?

DEFINING VALUE

Let's start with defining value.

Value [noun] - the regard that something is held to deserve; the importance, worth, or usefulness of something. Merit, utility.

As you can see, it is not a complex idea, but it is hard to quantify in a way most of us can get our brains around. It's difficult for most to pinpoint why we value different things at different times. And that is precisely why we shy away from discussing value as opposed to price.

Not only do we all value things

differently, but the differences might be slight. One person might value the latest and greatest tech and gadgets, where someone else might value toys, trinkets, and recreation. Neither is better or worse, and from a 30,000-foot view, they might even seem the same. But at the core, they are very different values.

The other challenge faced by business owners is their ideal customer's value will change, as I mentioned in the opening paragraph. Because of the pandemic, many people value experiences differently and have come around to the idea of





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more virtual interactions. It's not that in-person stuff will go away, but we might not put as much value onto hopping on a plane to go somewhere with big crowds.

These are just slight shifts, but they make a big difference in what we are willing to pay. Value at the end of the day is what someone is willing to give or sacrifice to get the desired object. There is even negative value where someone is willing to give or sacrifice not to have to do or have a particular thing.

For me, I'm not a big car guy, so I get no satisfaction out of working on the car. I pay more than I probably need to have my oil changed and general maintenance done on my vehicle. On the flip side, I enjoy getting out and mowing my lawn and seeing the finished product as I wipe the sweat away. I don't pay for lawn service and find it hard to justify no matter how busy I get.

SEEING VALUE

Now that you understand what value is, the big question becomes, how can you make sure that you help your customers see your unique value proposition? The answer is in your marketing.

It all starts with telling a story

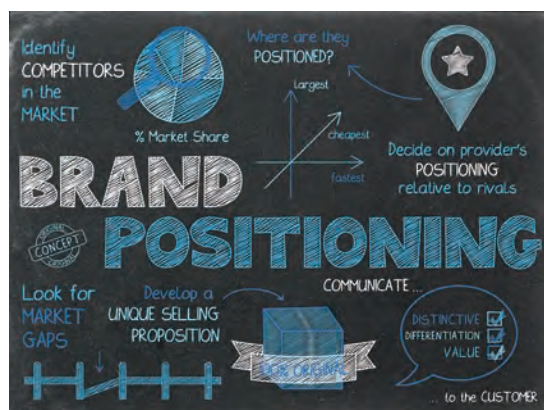
about what services you provide, and the feelings and values people get from trading their money for value. You have never gone to a movie or read a book where they just tell you the plot or read some specs. We choose books and movies that tell a story and make us feel like we are right there with the characters. I don't know anyone who picks up a user's manual of something they don't own to read at leisure.

In your marketing, stop being the user's manual, i.e., the tools used to make things, the number of colors, etc., and start telling your story as the value you bring to your customers. You create memories or connections or brand personal identities. You don't make mugs or

T-shirts or handbags. You support the national economy with made-in-the-U.S. products, or support your local community by providing jobs. Your customers will value the story that has little to do with the end product and everything to do with the journey, the people, and the community around your business.

When you tell your story in that light, it is your job to better understand your ideal customer and what they value. For decorators, you must determine why people should buy from you. It has nothing to do with the cost and everything to do with the value you bring. Is made in the U.S. important to your ideal customers? If so, how important? Are they willing to pay 40% more, or is assembled or decorated in the U.S. enough for them?

The other part of your story is the experience of working with you — the services you bring to the table, the shared interest in a niche, or your experience in that niche. One of our Mastermind Group members was part of the school system in her area for years. She understands the unique nuances that schools in her area deal with. She speaks their language, knows how to solve their





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problems, and cares about their well-being. That is value!

As you share that story that speaks to your ideal customer, you must also be communicating with them to understand when their values change. For example, in 2020, people stopped valuing the quick and easy uniform ordering and began valuing the fundraising support, signage, PPE, and masks.

We are already experiencing another shift in what people value. Masks are harder to sell, but things like rebrands, celebrations of making it through the pandemic, and getting back out to the community will be of value. Again, things like made in the USA, sustainability, community support ... those will increase the value people see in doing business with your company.

UNIQUE

VALUE

PROPOSITION

You need to redefine your unique value proposition constantly. Each day you want to take as many actions as you can to get your story out to your ideal customers and then use the results of those actions as a course correction. This post worked, so do more of that. This story felt better, so use that. This ad fell flat, so do less of that. Have conversations with customers; get involved with the local communities. Always ask, "What is new and good for you, Ms. Customer?"

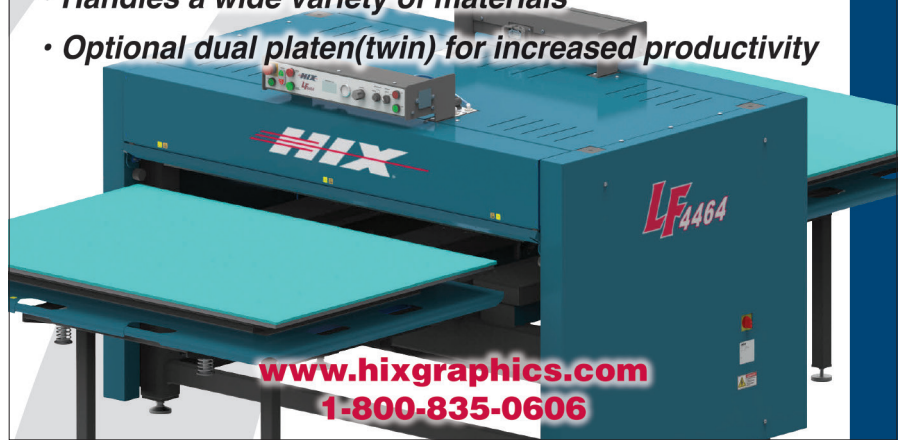
Finally, you must realize that you have a unique value proposition, whether you can pinpoint it or not. The worst thing you can do is not value what you do. If you don't value it, how will others be willing to value it? Stick to your guns on pricing, and if you are not where you want to be, then turn up the volume on your story and make sure enough people hear what is in it for them. **GP**

AARON MONTGOMERY has been certified by New York Times best-selling author Jack Canfield as a Success Principles Trainer and is the Co-Founder of OurSuccessGroup.com. Aaron has over 25 years of experience with personalized products and small business development. You can find Aaron co-hosting the decorator's industry podcast 2 Regular Guys Podcast (www.2regularguys.com). You can also check him out on his own podcast channel and weekly live videos called Small Business Saturdays (smallbusinessaturdayspodcast.com).

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One, Two, Step

ABILITIES OF THE STEP AND REPEAT TOOL



BY DOUG ZENDER

A feature that exists in CorelDRAW that can easily expedite workflow is the Step and Repeat ability. Accessed by Edit>Step and Repeat (Ctrl + Shift + D), it is a quick tool to duplicate objects when a precise distance is required. **Figure 1** shows the initial docker with its several choices. In my example, I have chosen only the

horizontal dimensions, but the vertical choices are the same.

CREATING PATTERNS

To start, I wanted to create a checkerboard pattern, so, with the Rectangle tool, while holding down my Ctrl key, I drew a 1/2-inch square and filled it with red. With it selected, in my Step and Repeat dialog, I

chose the Spacing Between Objects option and typed “.5” in the Distance field and Direction to the Right. In the Number of Copies field, I typed “8” (**Figure 2**) then clicked Apply. I had nine squares, equally spaced apart (see **Figure 3**).

At this point, I opened the Align and Distribute docker: Object>Align and Distribute (Ctrl + Shift + A). **Figure 4** shows the docker with its multiple options. Most of the Align features are easily accomplished using the C, E, T, L, B, R, and P keystrokes without the docker; however, there are other options here to specify how things are aligned.

Usually, the first choice — Align objects to: Active objects — is a good choice, but can be changed as necessary. Once this is chosen, it is active in all documents, giving a faint alignment grid related to the objects.

I selected eight of the nine squares and duplicated them, grouped them, and moved that group below and center of my original nine. This group automatically centered and aligned since I had previously chosen Align objects to: Active objects. I then

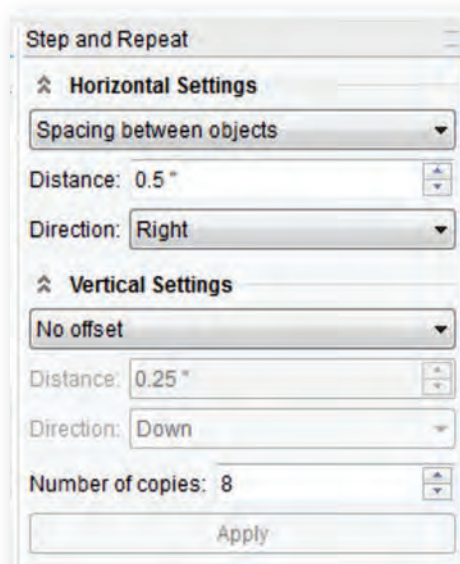


Figure 1. (All images courtesy Doug Zender)

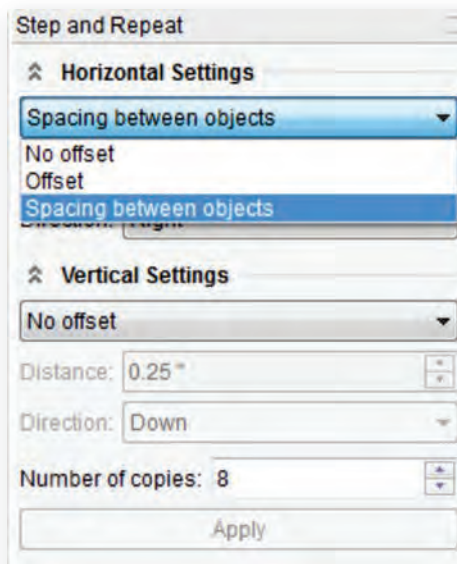


Figure 2.



Figure 3.

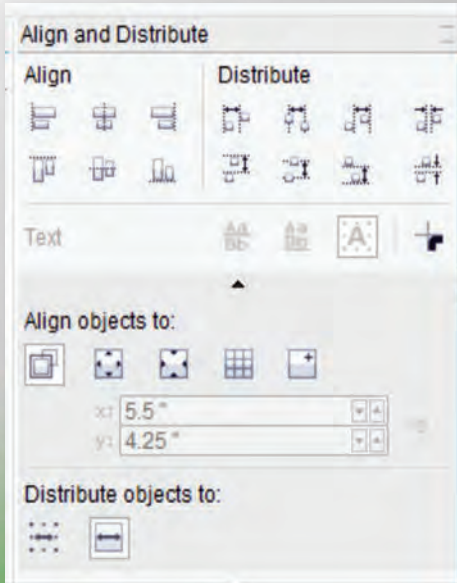


Figure 4.

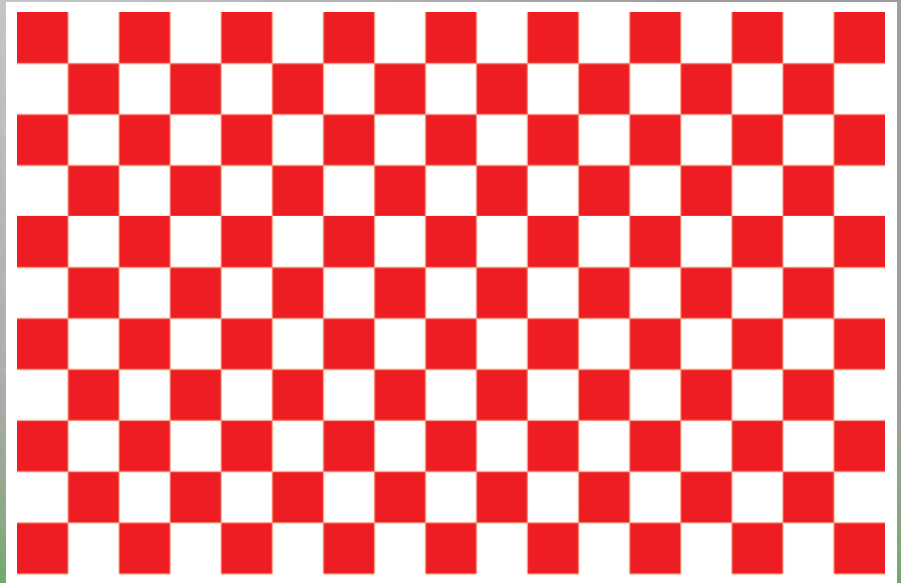


Figure 5.

duplicated my original nine objects, grouped them, and drug them below and center of the previous eight. This process was repeated several times to achieve the result depicted in Figure 5.

Returning to Figure 4, the Distribute feature offers eight options. I admit that I was a bit intimidated by them until I began to experiment with them. The top four allow horizontal distribution, the bottom four allow vertical distribution, and each choice provides a different method to arrange objects. They can all speed up workflow when it is understood how they work. I encourage one to try all of them to discover the value of each.

Next is the Text alignment — first line baseline, last line baseline, bounding box and outline — these are fairly self-explanatory. In understanding baselines, I will attempt to briefly explain how these relate to text. (A quick note: Out of curiosity, I opened my X5 version of CorelDRAW to look at the Align and Distribute functions. No docker is available, and it is limited compared to X7 and later. I highly recommend one to upgrade to a newer version if at all financially possible).

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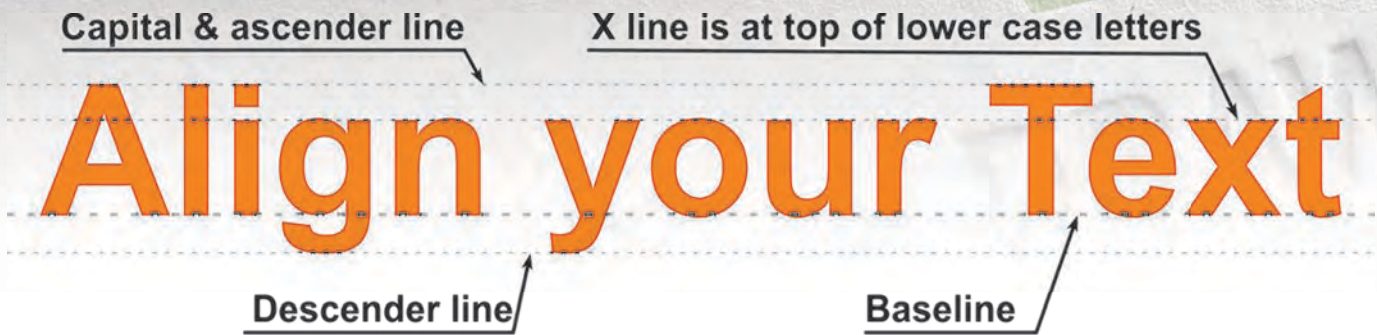


Figure 6.

Most fonts, or type styles, include both upper- and lowercase characters. The baseline is typically at the bottom edge of uppercase letters, usually determined by the capital A or R, and is at the bottom edge of lowercase letter body. Rounded letters such as O, C, U, G, J, S, U, and Q will extend slightly beyond the baseline for visual appearance.

Many lowercase letters have ascenders and descenders that also extend past the baseline. **Figure 6** should help you understand the basic principles of typography. Ascenders and descenders are the parts of a lowercase letter that either rise above the X-line or drop below the baseline. The study of typographic analysis far exceeds the space limitations of this article but is advantageous for any graphic designer.

As a sign painter and calligrapher, I have found that understanding the basics of alphabet construction has been a major help to my endeavors. Most quality fonts follow the basics of construction, but some “grunge” fonts on the internet ignore the basic principles and may include viruses. These fonts require some discretion when used.

SNAP TO

The next major alignment feature is the Snap To abilities of the program. Several options are available as shown in **Figure 7**. We’ll briefly look at each.

Pixels only relates to bitmap images and is usually ignored. Document Grid has to do with a rectangular grid displayed when enabled. Baseline Grid is related to text and is, unless needed, not enabled.

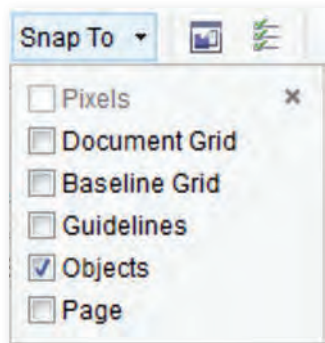


Figure 7.

Guidelines is often required when snapping objects to a guideline. Objects is, as suspected, to snap things to existing objects. Page is seldom enabled, but in rare instances may be of value.

Most often, I enable Snap to Objects and, if needed, Snap to Guidelines. These are most valuable to me.

To create a horizontal guideline, left click on the top ruler and drag down. With it selected, you can type a precise position. A vertical guideline is dragged from the left ruler in a similar fashion. Guidelines act as most other objects and can be rotated when needed by typing a value in the task bar rotation field or by second clicking to get rotation handles and rotating them as needed.

They are easily deleted when you need to remove one or all. Select the guideline and press delete. A recent perspective drawing project required one guideline at 20 degrees, another at 338 degrees, and a third at 8 degrees. Typing in a specific value in the rotation field sets the guideline to a determined angle. I was then able to add perspective following my guidelines for the needed appearance in my drawing.

Note: I have explored the Perspective abilities of the program, including one-point and two-point perspective. Anyone who has, or has not, learned the basics of Perspective in an engineering class or an art class will be particularly intrigued by the abilities of CorelDRAW in creating perspective designs. It’s a whole new realm of drawing three-dimensional images. The inclusion of the ability to add perspective and envelopes to bitmaps, beginning with the 2018 release of the program, is of great advantage to anyone who needs it.

When you right-click on either ruler, you get a small dialog to choose Grid setup, Ruler setup, or Guideline setup — each of these opens a dialog box or docker to specify preferences for each. Choose your preferences here. Go to View>Grid>Document Grid or View>Grid>Baseline Grid to enable the appropriate grid for your purposes.

Under the Ruler setup, there is a button to set a drawing scale. I have found this to



be quite convenient when pulling city sign permits as the city requires an 11" X 17" drawing of a proposed sign project with the application paperwork. As an instance, a 4' X 8' sign must be scaled to fit the required size limitations of tabloid-size paper.

There is a large quantity of common scales included in the presets and also the ability to type in a custom scale. Oftentimes, when preparing artwork for printed vinyl on a large sign, I would use a 1:4 scale in CorelDRAW, then send the .EPS or .PDF file, derived from my original .CDR file, to my printer RIP program, knowing that I had to choose 400% enlargement in the RIP when actually printed to get the actual size required for the finished product.

Many folks will never use this feature, but when needed, scaling is of immense value. Scaling may be most valuable if a file includes high-resolution bitmaps and/or transparencies, as these almost always increase the file size. At full size, they may be too large to efficiently process or to send via email, but a size reduction, using scaling, usually works with few problems.

The CorelDRAW developers have provided numerous tools for the novice, occasional, and advanced users — each new release just gets better. Our challenge is to learn all we can about the program to reach our ultimate necessity in our endeavors in a timely manner. I am fairly certain that no one will learn it all, but also believe that we all should strive to learn as much as possible to reach a reasonable level of proficiency in what we do.

Some features in the program are of little value to many users at present, but learning them can create an opportunity for the future. I often just play around and explore the program features for my own amusement.

Almost without exception, when I learn something new by experimentation, it has been utilized in a new client project. We never know in advance what a customer may want, but when they ask, "Can you do such and such," it is good to confidently reply, "Yes, I can! How many do you need?" while you present a work order for their approval and signature ... **GP**

DOUG ZENDER has used CorelDRAW extensively since version 4. His goal is to minimize the intimidation of the program and give users the sense that CorelDRAW is a friend, not an adversary. Doug began as a design artist, then moved into the sign industry in 1992 doing vinyl graphics. You can contact him at dezender1@gmail.com.

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MAKING A HOME HOBBY INTO A BUSINESS

Many readers began working with a laser or other personalization technology to make something for themselves or their home. It's fun learning to use the new machine and crafting a new item.

You may have pieced several cutouts from wood, plastic, or leather together with glue and perhaps painted some pieces. Friends saw the new item and wanted to know if you could make one for them. Or perhaps you posted a photo on Instagram and had a few followers that wanted one. Now you get enough orders that you are considering making a side or perhaps full-time business from this great new venture.

Before jumping into a larger business

commitment, spending some serious money on more equipment, or counting on your business income to pay bills, make sure you understand what this new business will require. Explore a few questions before even writing a business plan. These questions are directed toward what it will take to make a living from a business venture.

CAN YOU MAKE A LIVING FROM YOUR HOBBY?

If you have sold a few products, how much did you charge for them? If you have not sold anything yet, check out social media to see what similar items are selling for.

Take the sales price and divide it by

the estimated number of hours it took to make the product including your time to work with taking the order and perhaps shipping it. Convert this to dollars per hour. In an eight to 10 hour day, how much is the maximum you can earn if you had orders all the time? This exercise will give you some idea if making a large enough business from this hobby to pay bills is a worthwhile venture.

You will likely need to find ways to shorten your production process, perhaps by half or more. Consider four to six custom products to sell and designing them in a way that you can pre-make some of the main pieces that will not need to be customized. Production efficiency is important. Minimize gluing and painting, especially small intricate pieces.

You may need to simplify your products to earn a living. This advice may not apply to everyone; however, the method of thinking will help you create a business regardless of what it is. Design products so you can make parts in batches. Remember, smaller is not necessarily cheaper. Miniature products and parts create challenges that require a lot of additional time. You may have more discarded parts because of the difficulty of cutting them out, gluing them together, or just breakage. Consider a product size that provides an easy production process while not over-using expensive materials.

USING OFF-THE-SHELF PRODUCTS AND PARTS

Many personalization businesses sell all or mostly off-the-shelf products that are personalized with their laser, full-color system, sandcarving equipment, or other method. Building a business with off-the-shelf products from industry



A two-piece decor set. The entire product was custom cut, including the back of the sign. The small trailer required over a dozen pieces be cut and hand painted. The sign contains all cut wood pieces. Santa's hat is hand painted. This product is not a recipe for profits. (Image courtesy Kim Pyle; @roamcollective.kb)

suppliers is a doable (but not easy) approach to building a profitable business.

Building a business from products you design and produce is a much greater challenge. You will want to explore industry suppliers' products where parts can be used to help build your design or perhaps can be substituted for one or more parts that you have been producing. The big benefit of using some or all industry-supplied parts is that the cost of production when making thousands in a factory is far less than your cost of making one or a small number at a time.

THE TEST

As a hobby, you created a great-looking product that everyone loves. It takes you about four hours to produce, and 15 minutes to package for shipping. Your material cost is \$12. You would like to earn \$35 per hour to not only pay your bills, but pay for your investment in your laser and all the other supplies and equipment you need to make your product (while you are working out of your home). Based on this goal, you will have to charge \$160.75.

Can you charge this amount for your product? If not, you will need to greatly

reduce the production time and perhaps find some pre-made parts from suppliers that you can substitute for parts you make.

This exercise will help you figure out if pursuing a business venture is practical. If it is, consider beginning a business plan, however brief or thorough you can commit to. Your business plan will allow you to explore all aspects of a business whether part time or full time.

EDUCATION

You will have a lot of questions throughout this journey. There are many educational



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The sign on the left is cut from five pieces of wood including the family name (except for the other text). They are spray-painted, reducing paint time. The sign on the right is made from one less piece of wood as the tree is simply a cut out. The family name is also cut out of the wood piece. This simplification saves painting and gluing time as well as makes it easier to line up the text. (Images courtesy Kim Pyle; @roamcollective.kb)

The sign on the left uses a purchased background. The other pieces have just been cut and not painted or stained yet. The mountain and bear are three layers. The bunny is two layers.

These could be further simplified by cutting or engraving the graphic into the back piece. Engraving is the simplest solution. (Images courtesy Kim Pyle; @roamcollective.kb)

Below: The frame used for the background and the puzzle pattern was purchased. Pre-coating the wood with a matte clear coat would eliminate the need for sanding and allow for gluing on the cutout text.

The names were all laser engraved, reducing text application time. (Images courtesy Kim Pyle; @roamcollective.kb)



Above: This firefighter's mask shield cover prevents scratches when not in use. The leather is hand cut from a wood template and machine sewn. They can be produced in large batches and custom lasered. (Image courtesy Brian Pyle; station9leather.com)



resources, including this publication and its website (graphics-pro.com). Education is not only a resource, but also a continuous advantage. Many of your competitors will stop seeking out education for continuous learning once they have answers to their questions during start-up.

Become an expert with your equipment and save yourself a lot of repair costs. Become a marketing expert and control your order flow. Become a graphic artist and wow your customers by giving them the quality graphics they want. There are many areas of your business you can become an expert in. Continuous education is a continuous advantage.

INVESTMENT MINDSET

How do you look at the price you paid for your laser? Do you feel good because you got it cheaper than others? I feel a successful and profitable mindset is an investment mindset.

What is the return you expect on your investment? I don't mean to say price isn't an important factor in your buying decision. It is a factor that should be considered after you identify which features will meet your needs and how often and for how long you expect to use this piece of equipment each week.

For example, if your laser will be your primary piece of production equipment that runs every day, quality is crucial. All

machines require maintenance and repairs. Infrequent and quick repairs you can do yourself is important to on-time delivery. Not being able to produce for several days, a week, or even longer can create both customer problems and greatly reduce income.

Before you buy, understand the maintenance requirements, most frequent parts that need to be replaced, and their costs. What parts should you have on hand to reduce downtime and over-night shipping costs (and preserve your sanity)?

Equipment maintenance and repairs are often overlooked in the business-planning process. A laser tube replacement will cost you several thousands of dollars. Is the cost of maintenance and repairs part of your pricing calculation? Do you have a maintenance and repair budget and savings plan? If your pricing formula does not account for all your costs, you will be surprised one day when you add up your expenses and find the revenue does not cover these expenses or your actual earnings are not what you expected.

MARKETING

You may need to increase your order flow from a few orders each month to 10 each week to rely on the income. That order number of 10 may be what you need every day to make a full-time living. Is your present method of marketing able to give you this order flow a year from now?

Friends and family business is not likely to be continuous, although word of mouth is great marketing. Facebook Markets, Instagram, Pinterest, and the many other digital methods of marketing are key to explore today. Meeting prospective customers face-to-face can also be important. Can you hang out where potential customers are? Do you have an active chamber of commerce?

You may need to try a number of marketing methods to see what will work for you. This is where a written business plan provides you the opportunity to explore the various methods you can experiment with and helps you create a marketing

budget. Talk to other local small business owners to see what works for them. If your business will be all online, find chat rooms where you can communicate with some seasoned and successful business owners.

Some hobbies may be focused on the industry you are presently working in such as accessories for construction workers, firefighters, or law enforcement. If you plan to market to present customers or employees of the company you work for, be cautious as you may need to explore this option with your boss. If you create issues with these customers, you may be forced to go full time with your new business earlier than expected.

SHIPPING

Shipping is another overlooked subject. Today, you typically see “free” shipping included in the price of the product you order online. The shipping cost is actually included in the pricing formula, and if you buy from a large company such as Amazon who may be filling the order for someone else, their shipping costs are far lower than you will pay.

Explore not only your shipping costs, but the cost of materials and time to package your product. The materials selected and method of packing must also be secure enough to minimize breakage. Packaging products properly can be time consuming. Find simple methods and materials that are quick to work with.

I could easily dedicate a whole book to this subject. I have just touched on some of the topics that are overlooked and not thoroughly explored. My goal is to give you some thought-provoking questions to consider and encourage you to write a whole business plan. Going into your new venture with confidence will make it more fun for a longer timeframe. **GP**

BOB HAGEL recently retired after owning Eagle's Mark Awards & Signs for 18 years in Southern California. While owning the business, he offered a full line of personalized products using laser engraving, sandcarving, and full-color UV direct print on products. Today, he consults on starting and expanding personalized businesses, and on improving production efficiency and quality. He can be reached at rjhagel@verizon.net.

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/ SETTING NEW STANDARDS



MAKING MOVES WITH SUBLIMATION MIXED MEDIA

USING A LASER AND SUBLIMATION EQUIPMENT TO CREATE SOMETHING TRULY UNIQUE

Have you ever thought about how to create a mixed media design using sublimation and your laser? How would you do it? Is it easy for you or your staff to reproduce? Is it cost effective to make a healthy profit from the extra work?

When you walk around the mall and see cool customized pieces, you might wonder how it's done. Most higher-end pieces are manufactured from the start that way, so they get to work with bolts or panels of fabrics that are flat and easier to work with. In our case as decorators, we add these customizations after the fact, which we have to troubleshoot how to make work. You have to deal with what the fabric is made from, weave of the fabric, color (at times), push-pull of the material, quality of the dye, and more. It's a lot to think about!

Around 2012, our company purchased a laser that mounted to our embroidery machines as an attachment. We initially bought it to create the distress look on apparel with ripped fabric. Once I realized we could not only cut partially through, but through thicker fabrics, we started messing around more with the equipment and what it could handle.

TRYING SOMETHING NEW

After a few weeks of experimenting, we had a customer that was itching for something new for their fire department. I came up with an idea for a mixed media look that I had never seen done before, so everything was new to me; I was learning every step of the way. The customer was ok with waiting since they were the first to have this process done. At the time we were only the 26th company in the United States with this laser.

After all of the trials and errors, we figured all of our settings out — what stitch and cut depth we wanted to achieve the look we were going for. First, we took a 100% polyester shirt and cut a section of fabric out of it. We created a dye transfer and heat pressed the flames of the transfer onto the fabric.

From there we had to put our tearaway backing on our hoop in our hooping station and take the sublimated fabric facing up and tape it down to the tearaway backing in all four corners, so it wouldn't move. Then we slid the hoodie over the top of the sublimated material that was taped to the backing. When doing this process, make sure you do not shift the sublimated material at all.

Once the hoodie was positioned where we wanted it, we hooped the garment, creating a fabric sandwich that contains the hoodie on top, the sublimated fabric in the middle, and the backing at the end. Some companies use the tearaway and some don't. It depends on the look and feel you want.

From there we loaded the design into the embroidery machine and set our colors to run, and then set our laser cutting settings. Every laser is different. We wanted it to cut 95% of the way through the hoodie, so when we pulled the fabric, it frayed. Our machine, when started, sewed the outline of our design with a bean stitch, which sews all three layers together. Then the laser cut out the shapes. It was time to take our tweezers and remove the cut shapes, which exposed the polyester flames we created, making the hoodie look like it is on fire. It looks really cool, but you can see how many steps go into it.



We created a dye transfer and heat pressed the flames of the transfer onto the fabric.
(Image courtesy PJ Loomis)



We had to put our tearaway backing on our hoop in our hooping station and take the sublimated fabric facing up and tape it down to the tearaway backing in all four corners so it wouldn't move. Then we slid the hoodie over the top of the sublimated material. (Images courtesy PJ Loomis)

WORTH THE WORK

Now you have to ask yourself: Is this something you can teach your staff to do? Will it take them much longer to do than you? I taught a couple of our staff how to do it. It can take them a few tries, but I feel anyone can do it as long as they have a good teacher and are willing to learn.

When you teach your crew, do not just tell them what to do. Explain to them why they are doing it. If they do not do it the way shown, explain what can go wrong. It is important to explain everything to them to be safe and maintain the look of the design.

Is it cost effective to reproduce? Normally this would be one of the first things I talk about with any process, but since it was brand-new, and we had never done it before, I knew

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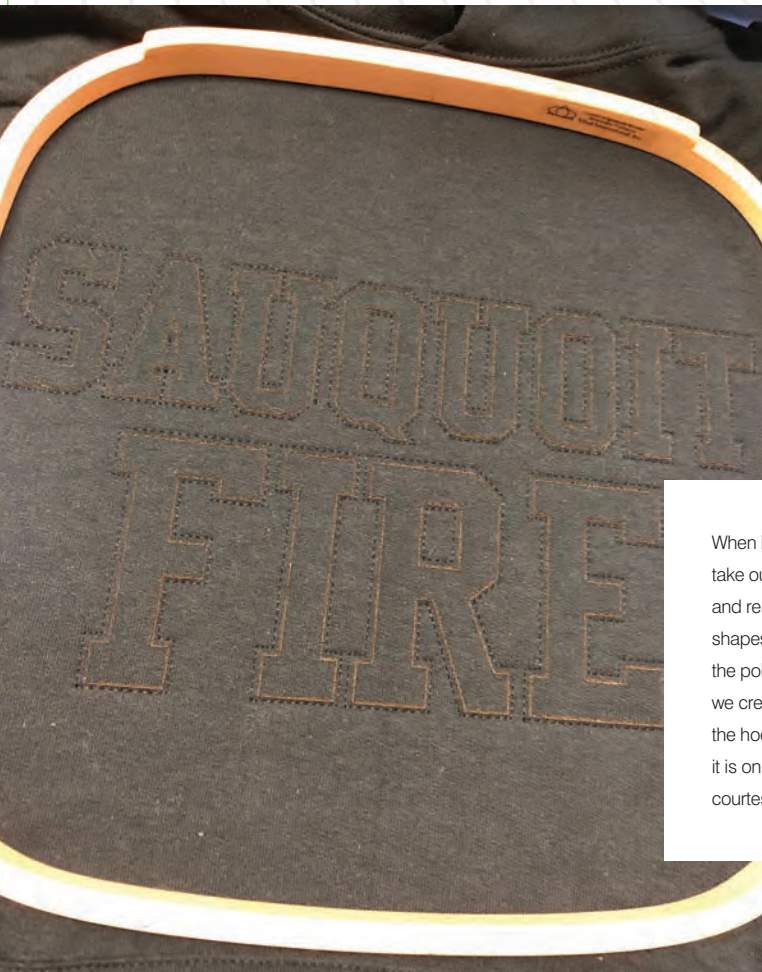
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MAKING SUBLIMATION MOVES



We loaded the design into the embroidery machine and set our colors to run, then set our laser cutting settings. (Images courtesy PJ Loomis)





When it was time to take our tweezers and remove the cut shapes, it exposed the polyester flames we created, making the hoodie look like it is on fire. (Images courtesy PJ Loomis)

the wow factor of the machine and the different process would sell naturally. I was not sure about the profit per piece at first.

We had to mess around for a few weeks to determine design time, material cost, machine payment, and labor to factor how much each piece could cost us to produce. It can be as time consuming as tackle twill, so making sure the design is simple is a must and huge help to increase your profit.

The average design did not take us longer than one hour for proofs with the customer. Most materials we used were polyester T-shirts. Average run time per piece was 10 to 15 minutes. Here's the breakdown for a 12-piece order:

- \$8.00 – hoodie
- \$1.00 – white polyester T-shirt, on



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MAKING SUBLIMATION MOVES



The final product was unique, but it required a lot of steps to create. (Image courtesy Howard Potter)

average four pieces of fabric (\$4.00 for the shirt)

\$1.50 – average designer \$18 an hour with taxes

\$3.45 – backing and thread, and sublimation transfer with employee time to make it

\$3.75 – running a single-head laser; four pieces per hour for three hours at \$15 an hour/one employee

\$1.70 – machine costs \$450 per month; we wanted to make \$20 per day for 22 days to cover costs

Total: \$19.40 cost per hoodie

Also figure in your dollar mount for profit (what do you need or want it to

be). I usually like to net at minimum \$75 to \$100 per hour per machine when possible.

MIXING IT UP

Something to think about when entering into a new process or creating multimedia pieces for clients is that very few do this, so you have to be smart about every move you make every step of the way. I do not tell you this to scare you, but to inform you. If you do everything just right, you can not only make much higher profit margins, but you create even more work for your company to grow when less people can do what you

do every day. Work to be the 1% that can do what others cannot do and your company will naturally grow by word of mouth. **GP**

HOWARD POTTER has been working in the promotional industry for 17 years, from designing to building brands and a family-owned business. He is the co-owner and CEO of A&P Master Images LLC with his wife Amanda. Their company offers graphic design, screen printing, embroidery, sublimation, vinyl graphics, and promotional items. Howard, his family, and the business reside in Utica, New York. For more information, please visit masteryourimage.com.

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All images courtesy
JDS Industries

Double Wall Insulated Drinkware in Your Mug Press

COURTESY OF JDS INDUSTRIES



From coffee mugs to water bottles, there are now several styles of double wall insulated high-endurance drinkware that can be sublimated using your mug press. Here's how it's done.

WHAT YOU'LL NEED:

- Sublimatable substrate (in this example, we use a pilsner cup)
- Sublimation transfer
- Scratch paper
- Heat tape

MUG PRESS SETTINGS:

- 380 F
- Dwell time: 1 minute to 1 minute, 15 seconds
- Pressure: light to medium

STEPS:

- 1** Cut the transfer slightly larger vertically than your substrate; position it onto the substrate.
- 2** Tape two ends of the transfer, allowing for the gap in the mug press where it will close.
- 3** Wrap a piece of scratch paper around the transfer and pilsner, taping if necessary.
- 4** Center it in the mug press and close, using the settings above.
- 5** Remove the items using heat-resistant gloves if necessary — the items will be very hot.
- 6** Remove the transfer and scratch paper.

TIPS:

- If image appears light, increase pressure or dwell time.
- If image appears blurred or the substrate yellowed or has brown spots, decrease the dwell time.
- Settings may vary slightly for your press. **CGA**





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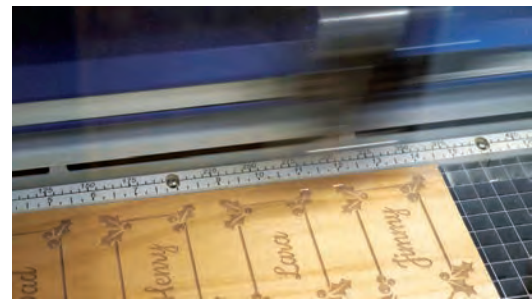
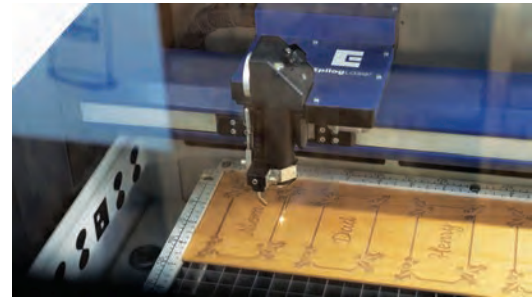
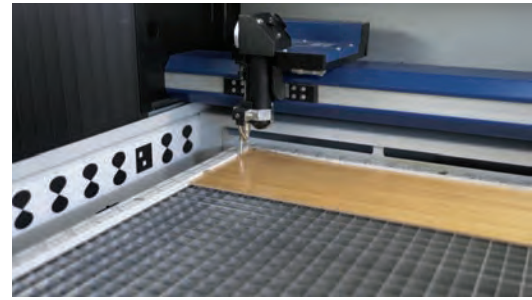
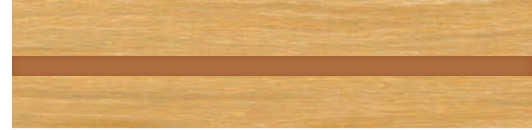
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Images courtesy Epilog Laser



Create Custom Gift Tags with Your Laser

COURTESY OF EPILOG LASER

Make gifts even more personal with these custom wooden gift tags! These festive tags are not only cute but are also quick and easy to make. And they're not just for the holiday season — change up the design or message and they can be used for birthdays, anniversaries, and many other special occasions.

MATERIALS NEEDED

- Wood blanks - ours were 1/8" thick alder, purchased from Colorado Heirloom
- Ribbon/string
- Laser system — we used a Fusion Pro 32 80 watt:
- Raster engraving – Speed: 65%;

- Power: 100%; DPI: 500;
- Dithering Pattern: Stucki;
- Bottom-up engraving
- Vector cutting - Speed: 25%; Power: 100%; Frequency: 10%

STEP 1: PREPARE THE ARTWORK

Start by customizing your artwork as necessary (you can download the artwork from Epilog's Sample Club if you wish).

STEP 2: DETERMINE YOUR PARAMETERS

Consult your owner's manual for the recommended engraving/cutting settings for your machine and wattage. Enter your settings within the dashboard and send the job to the laser.

STEP 3: PREPARE YOUR MATERIAL

Insert your wooden sheet, press Go, and let the laser go to work.

STEP 4: CLEAN UP

Once the job has completed, wipe away any residue from the tags and let the gift-giving begin! **CGA**





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How to Sublimate Pet Shirts

COURTESY OF CONDÉ SYSTEMS

Pet shirts are the perfect addition to any four-legged friend's wardrobe. With dye-sub's unlimited color and design possibilities, decorators can create a completely unique pet shirt that includes their name, photos, holiday designs, or special messages for weddings, birthdays, and more.

Using a 16" X 20" press, all but the largest two sizes can have images transferred onto the entire front and back for unique and eye-popping all-over designs. The 100% polyester slip-on shirts are available in XS (10.82" X 8.07"), S (13.4" X 9.45"), M (15.15" X 10.83"), L (16.92" X 12.2"), XL (15" X 21"), and 2XL (16" X 24").

INSTRUCTIONS:

Step 1: Download a template and use it to create artwork for these uniquely shaped items.

Step 2: Print the transfer.

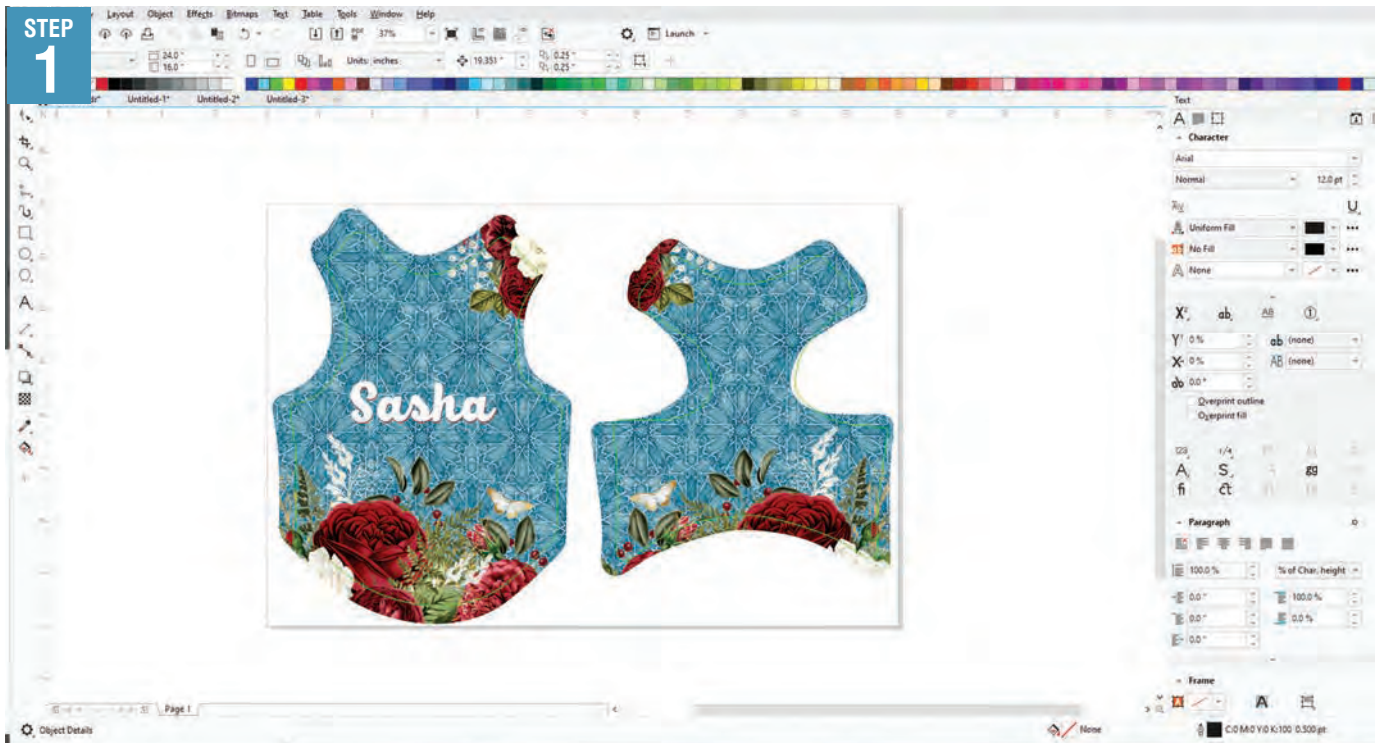
Step 3: Insert a piece of Vapor foam or Nomex inside the garment.

Step 4: Insert a sheet of protective paper between the layers of the garment to prevent ink from transferring onto the foam or Nomex.

Step 5: Lint roll and prepress garment.



Images courtesy Condé Systems





Step 6: Secure the transfer to your garment using Pro Spray II (or equivalent adhesive spray).

Step 7: Place the garment face up (transfer face down) on top of protective paper on the bottom table.

Step 8: Top with protective paper and press for 60 seconds at 400 F with light to medium pressure.

Step 9: Carefully remove the garment from the press, remove the transfer, and let the garment cool. **CGA**



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Images courtesy
Trotec Laser



Laser Cut a Plant Swing

COURTESY OF TROTEC LASER

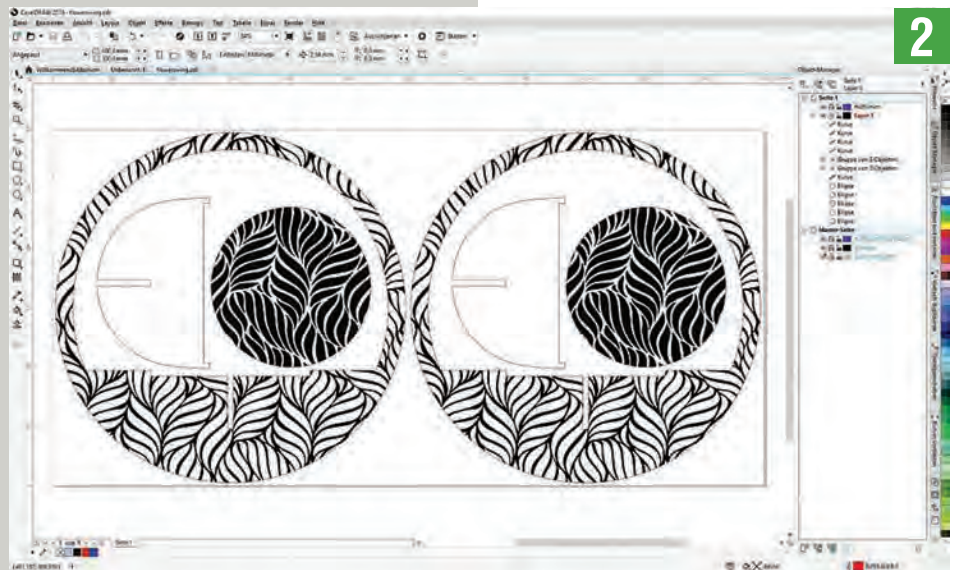
In just a few steps and using minimal material, you can make this adorable flower swing.

MATERIALS NEEDED:

- Laser machine (used here: Trotec Speedy 360 80W CO₂)
- Aluminum cutting table
- 2.0" lens
- 1 sheet solid wood 23 1/2" X 11 3/4" X 3/16"
- Additional material to cover the rest of the working area
- Plant swing files (download sample files from the Trotec website or create your own using your favorite graphics software)

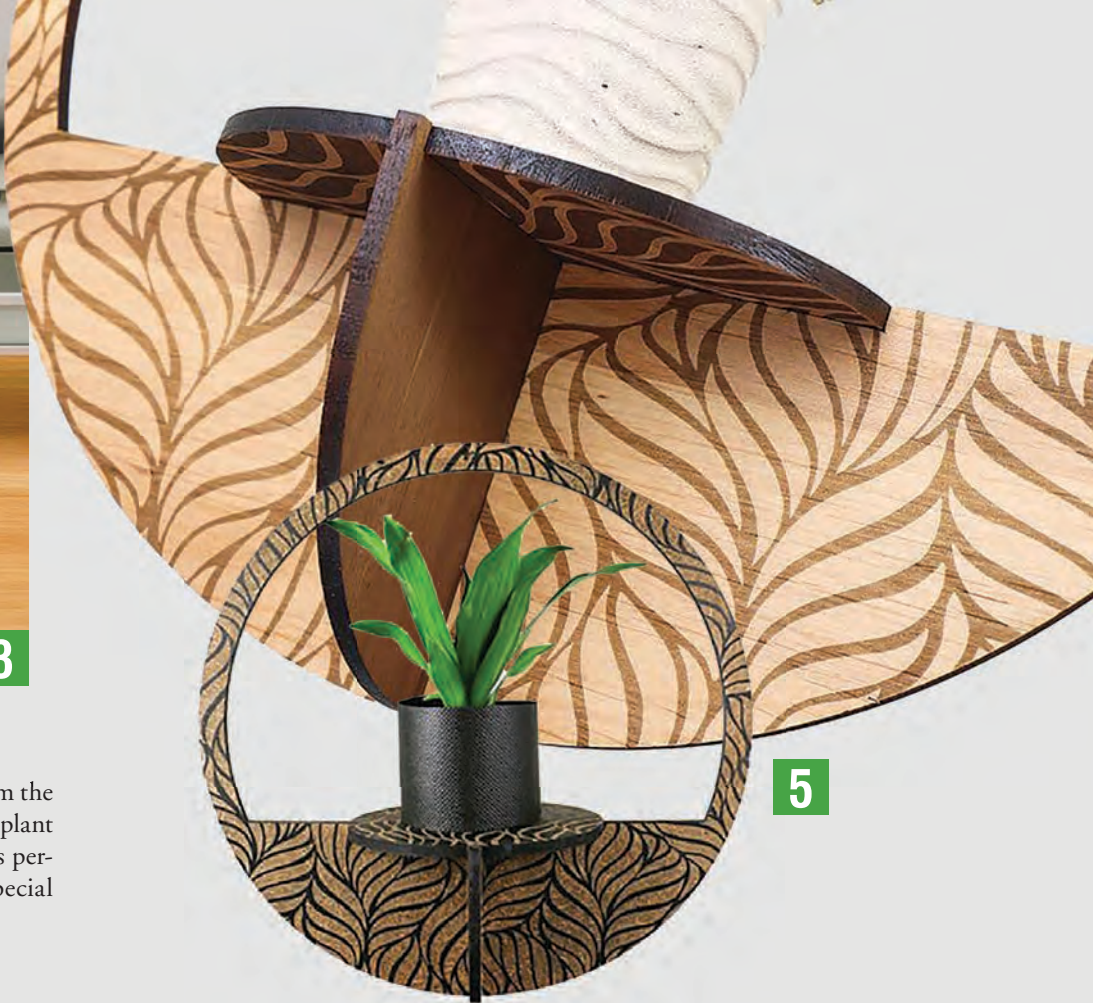
STEPS:

- 1** After placing the material in the laser machine, cover the remaining work surface with paper to ensure maximum suction.
- 2** Import the graphic files for the swing and adjust it to your laser's requirements.
- 3** Enter the appropriate parameter settings and run the file using the 2.0" lens and air assist.
- 4** Once cutting and engraving are completed, carefully remove the application from the laser. Insert the two pieces of the flower swing into one another. Place the circular support plate on top.





3



5

5 Hang the flower swing from the ceiling and decorate with a plant of your choice! This gift is perfect for birthdays and any other special occasion. **CGA**

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SETTING NEW STANDARDS





Why Bamboo Cutting Boards Make Great Gifts

COURTESY OF JDS INDUSTRIES



Bamboo cutting boards are popular right now and there are so many styles, sizes, and finishes available: paddles, animal shapes, round and rectangle, boards with butcher block inlay, and two-tone just to name a few. What makes bamboo the material of choice? Here are just a few things to consider:

- Bamboo is a highly renewable resource. More people are concerned about the environment and bamboo products are eco-friendly.
- Bamboo is durable enough to withstand typical kitchen use and when properly cared for, will last for years!
- Bamboo is beautiful. It can be lasered to a natural contrast or color filled for a bolder contrast, and it fits with any kitchen decor.
- Bamboo is economical. The price point is much lower than genuine wood boards of comparable size.
- Bamboo provides a strong, dense cutting surface that is easier on your knives!
- Bamboo is easy to clean — simply hand wash with warm water and soap.
- Bamboo cutting boards make a great personalized gift for any occasion!

These are just a few of the advantages of the many bamboo cutting boards available. Whether used as cutting boards, decor, or even signage, you can't go wrong with quality genuine bamboo. **CGA**





Popular FAQs from a Laser Facebook Group

COURTESY OF EPILOG LASER

Epilog Laser Fans (ELFs) are some of the most creative engravers around. The ELF group on Facebook has so many engraving projects and examples of the uses of Epilog machines. Here are a few of the most frequently asked questions from the ELFs, along with answers from our experts.

Q Any recommendations for hardwood engraving?

A Mask the wood. This helps reduce residue from seeping into engraved areas and makes for easy clean up. Use “bottom up” engraving. This helps prevent smoke and debris being pulled into the engraving area as the laser head moves.

Q What kind of glass should I engrave?

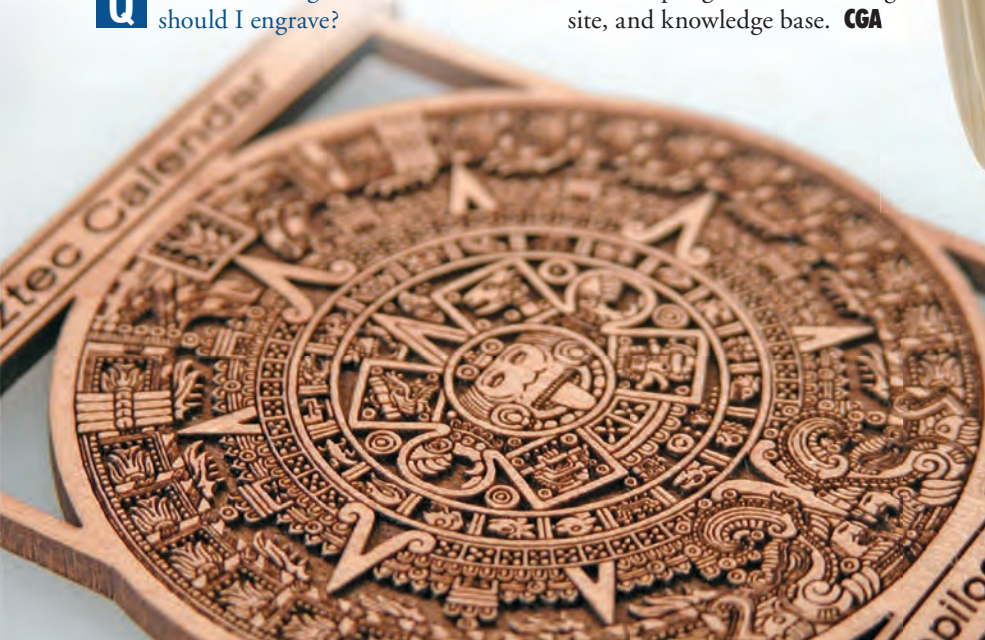
A Not all glass is created equal. While you may think you need more expensive glass to get a great result, many of our customers use inexpensive glassware from restaurant supply stores or dollar-discount chains, both of which engrave beautifully.

Q Do you have any tips for proper maintenance?

A Clean your system, especially the optics. Clean optics ensure that your laser produces the most precise engraving/cutting results. Other maintenance activities depend on your machine model and are included in your owner’s manual, in Epilog’s online training site, and knowledge base. **CGA**



Images courtesy Epilog Laser





Capitalize on Custom, One-Off Gifts

COURTESY OF
BIG SKY WOODCRAFTERS

Images courtesy Big Sky Woodcrafters

It's not uncommon to have a client require a custom item to be created and used as a personalized gift. These items are unique but can take longer to produce. Examples of these products might include:

- Baseball bats
- Military memorabilia
- Bridal bouquets
- Paintings
- Coin collections
- Gavels
- Sports memorabilia
- Jewelry
- Family heirlooms
- Antiques





Here are just a few considerations to keep in mind when creating a custom, one-off gift:

- Know what substrate you're working with. If it's client-supplied, beware that it may not be laser engravable or sublimatable, or even what the customer thinks it is. For example, they might say their Bible cover is leather, but it may not be.
- There may be additional charges to create a custom piece. These include cutting a custom shape from a material, creating artwork from scratch, or even having to order something you don't have in stock.
- Have the client sign off and approve of the proof. Make sure they understand that if there's only one item (say, if they supplied it), that you are not responsible for any approved misspellings. **CGA**



Big Sky Woodcrafters of Montana

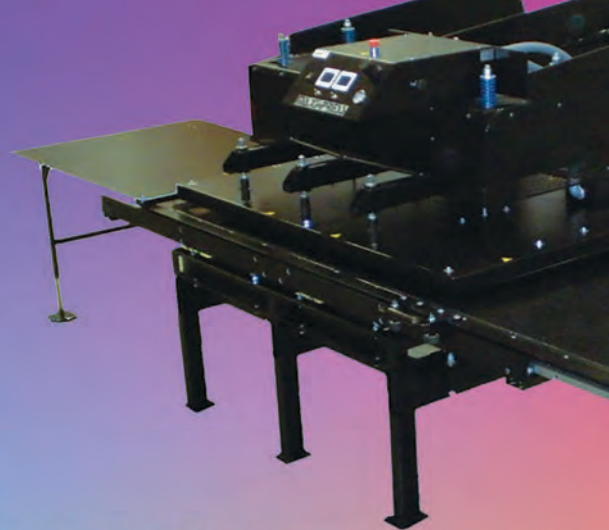
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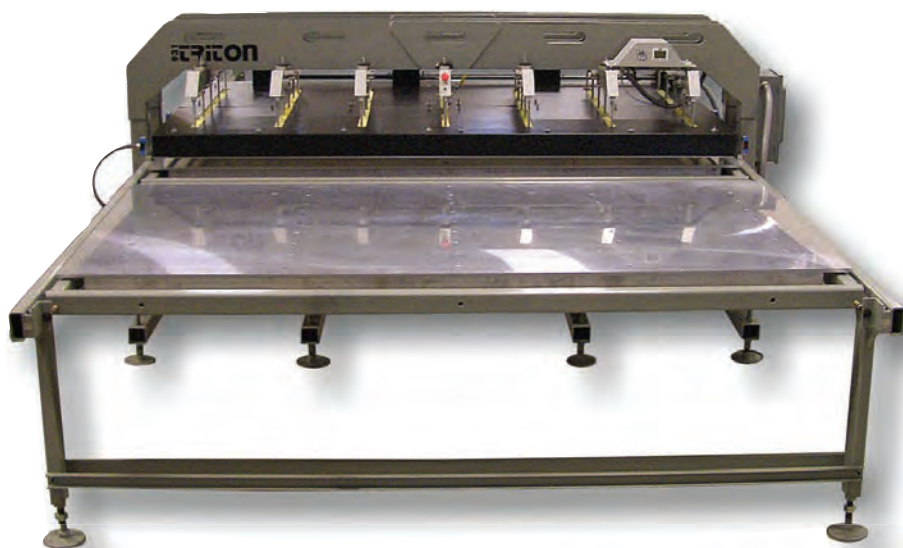
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Large-Format Sublimation Presses

COURTESY OF GEO KNIGHT & CO. INC.



There are a wide range of options for full-color printing of textiles, garments, metals, and other large-format printed substrates.

The key factor is size. How large are your metal plates or full-color fabric garments, flags, or other items going to be? That will often be the deciding factor on which choice to make in a large-format sublimation heat press.

For example, these models demonstrate the wide range of sizes available:

- The DK32AP is 26" X 32".
- The MaxiPress AIR is 32" X 42", or 44" X 64"
- The 931 Triton ranges from 54" X 72" to 54" X 103", as well as custom sizes up to 66" X 132". This provides full-color sublimation of 4' X 8' items and beyond.





Here are just a few markets to target with your large-format services:

- Events (think signage for concerts, trade shows, etc., as well as safety and directional signage)

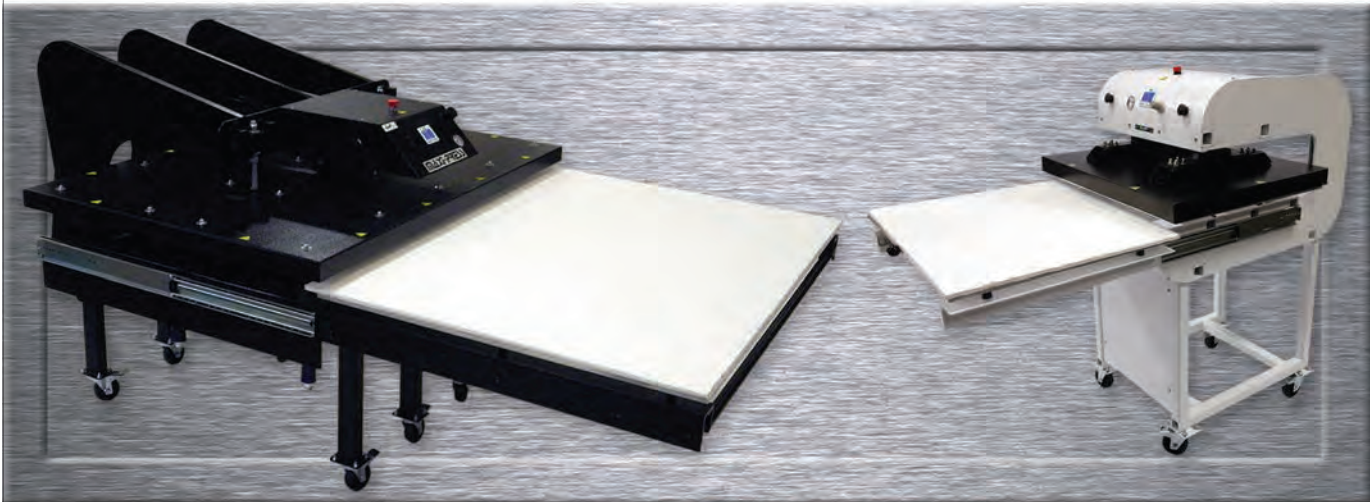
- Home decor
- Recreation signage
- Cut-and-sew operations **CGA**

Images courtesy Geo Knight & Co. Inc.

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DK32AP
26" x 32"



Big Engravings = Big Profits

COURTESY OF AP LAZER



Images courtesy AP Lazer

1



2

Personalization can increase the value of your products up to 400%. So why not go bigger? AP Lazer engraving and cutting machines are designed with large, heavy, and irregular-shaped objects in mind. From tumblers to granite monuments, an open-architecture design allows for no weight or size restrictions. Here are five objects you can engrave using these lasers:

1 Bar stools: Grab yourself a \$20 stool from the local Walmart and transform it into a unique treasure. Depending on the artwork and customization, stools like this go for \$100 and up.

2 Signage: Producing large-scale signs for local businesses can be a lucrative opportunity.

3 Wine Barrels: Large barrels are truly a unique commodity and can even be quite expensive. Because of their uniqueness, you'll be sure to make your money back after you add a custom engraving.

4 Flooring: AP Lazer's design makes it possible to remove the laser top and place it directly onto a surface such as flooring.

5 Granite Memorials: From wooden and metal caskets to granite memorials and even musical instruments, open-architecture machines can provide a truly unique life celebration through personalization. **CGA**



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Reasons to Consider Red Laserable Leatherette

COURTESY OF JDS INDUSTRIES

There's a new color in town! The beauty and durability of laserable leatherette has been available in several stunning colors for years — now you have a new option with the richness of a bold red that lasers to a black contrast. Why should you take a second look at this new color?

1 It is available in almost every style as your other favorite colors of leatherette so it gives you a new option in the items you already use.

2 You get a high-end look at a reasonable price point.

3 Black topstitching adds to the high-end look, makes the black personalization pop, and offers a higher perceived value.

4 It's so durable! Leatherette is made to last and holds up well to everyday use.

5 School colors, corporate colors, club colors ... red and black works for many.

6 There is a huge variety of products to choose from, from pen sleeves to portfolios, keychains to coasters, and so much more.

7 Perfect for promotional items, personalized gifts, employee incentives, fundraisers, or personal use.

There are as many reasons to love this new color as there are items available in it, but why not check it out and see for yourself. **CGA**



Image courtesy JDS Industries



Images courtesy
Epilog Laser



5 Cool Products to Customize with Your Rotary Attachment

COURTESY OF EPILOG LASER

The rotary attachment for your Epilog Laser system (these are also available for other brands) allows you to expand your product offerings to include all kinds of cylindrical items, like powder-coated tumblers, wine glasses, and many other promotional products. Check out these other fun projects that you can also create using your rotary attachment.



1



2

1 These wooden baseball bat mugs make a fantastic gift for coaches, players, or baseball super fans.

2 With a huge uptick in local brew pubs and taprooms, laser engraving growlers is quickly becoming a popular laser application.

3 Using Epilog's rotary attachment, you can quickly and easily produce a sleek and frosted look on all kinds of glassware, like these stemless wine glasses.

4 Customized miniature baseball bats make great gifts for youth teams, coaches, groomsmen, and more.

5 Ideal for Mother's Day, birthdays, housewarming parties, and more, these customized wooden rolling pins allow any would-be chef to produce totally unique (and delicious) culinary creations. **CGA**



3



4

Just as sublimation inkjet printing evolved in 1998, I predict direct-to-film (DTF) printing is the next emergent technology that will grow and develop rapidly over the next 10-plus years.

If you are looking to add dark color Ts and sweatshirts to your product ensemble, and you are brave enough to take the risk, you'll want to check out this new print technology. DTF is a low-volume, high-quality, full-color and simultaneous

white underlay printing system that renders heat transfers that heat press onto light and dark garments or fabrics.

For the purpose of this article, I am only writing about the desktop printer arena. This process is ideal for one-off prints, or lower volume (up to 50-plus) transfers.

What's so Cool about DTF?

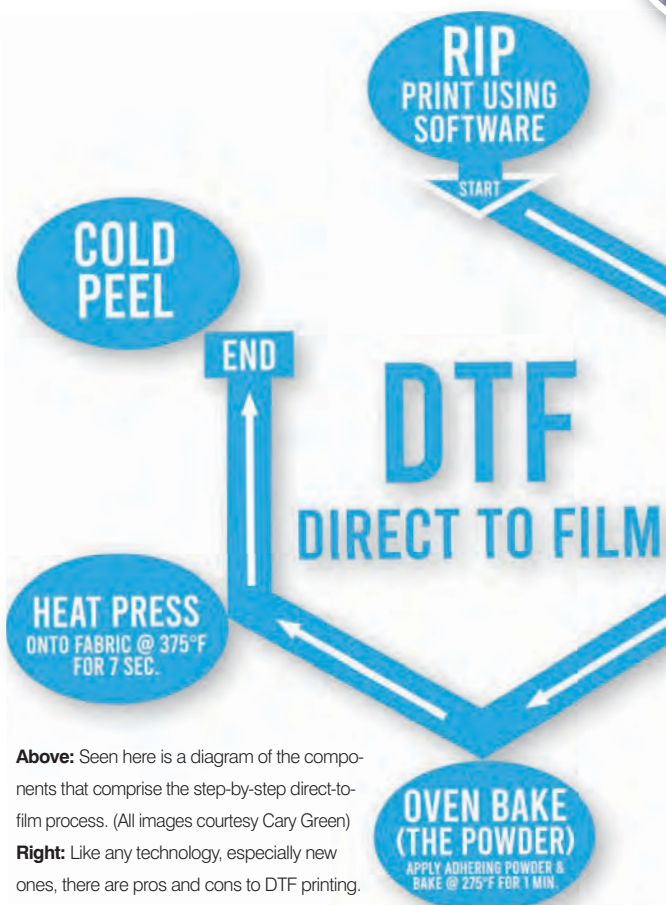
BASIC BREAKDOWN

Here is how it works. You buy a package system from a supplier that consists of a printer/software RIP, an Epson desktop printer converted for DTF printing (one of about 10 models to choose from), DTF ink, PET film transfer sheets, and adhering powder. Additional items needed include a T-shirt heat press and either an oven or hot tray. Check out the diagram of the components that comprise the step-by-step process below.

I bought a system that utilizes the Epson L-1800 model printer. Having a

DIRECT-TO-FILM PRINTING: A NEW TEXTILE TRANSFER DECORATING PROCESS JUST COMING ONTO THE MARKET

BY CARY GREEN



Above: Seen here is a diagram of the components that comprise the step-by-step direct-to-film process. (All images courtesy Cary Green)

Right: Like any technology, especially new ones, there are pros and cons to DTF printing.

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lot of experience with digital printing makes any troubleshooting much easier to resolve. That said, I am enjoying this new print application, and just mentioning my new product capability of printing on dark shirts to a few random clients has generated immediate new revenue.

PROS AND CONS

Here are some of the pros and cons you should know.

PROS

- Low initial start-up cost – A desktop printer that can print up to A+ size film (depending on the printer selection) can be purchased for less than half the price of the white toner transfer printing processes.
- Low film cost – PET films are about a third less price than other toner sheet processes, and less time and effort to complete a “ready-to-press” transfer.
- Low operating costs – Inks are sold in various bottle sizes. A liter will naturally cost much less than buying a 1/4-liter size. The ink consumption is much like any other type of ink — it goes a long way! I estimate the cost



If you are looking to add dark color Ts and sweatshirts to your product ensemble, and are brave enough to take the risk, you'll want to check out DTF print technology.

to print a full-color 75% coverage image on an A-3 film at \$1.50 - \$2 per sheet.

- Excellent registration of white – As the white prints simultaneously on top of the four-color process colors all in one pass, the registration is perfect.
- Print head quality – There has been no sign of print head failure or clogs based on my printer running at least four days a week.

- The print quality and durability are fantastic – Colors print bright and accurate. I washed and dried a black shirt for over 30 washings. The result was no appreciable color fade or loss, and the solid ink areas are just starting to crack when you stretch the ink film.

CONS

- Accessibility – At the time of this article, there are very few distributors offering a turnkey package. Most suppliers offering packages are found in China. There are also various suppliers scattered throughout other countries in Asia. It is difficult to know who the actual manufacturer is and who is a reliable reseller. You will want to find someone that is trustworthy, accessible, speaks good English, and offers quality support.
- Where to shop – Obviously, no one company produces all the components. This is where the buyer must beware. Inks and films from various suppliers will not necessarily work with other printers. I tested four different films throughout Asia, and the only film that performed flawless in my printer was the film I bought from my supplier. The different films I tried all failed in my printer for one reason or another, mostly feed failures through the printer. Another



The basic steps of DTF printing are fairly easy to learn if you already have experience with Epson desktop printers and software RIPs.

problem I experienced with different films is that the colors would not all transfer as vividly. I would not even think of switching ink sources for fear of incompatibilities.

- Warranties – I have found no warranties are offered on any part in the system at the time of writing. You may get some support discussion, but no free repair or replacement of parts whatsoever. I found one domestic supplier offers after-sale support at an additional charge.
- Slow print speeds – To get the best quality print transfer, you must select the highest print resolution, i.e., 1,440 DPI. We can print at 720 X 1,440 and still get good quality prints but any lower resolution will

invite banding to appear in the print.

- White ink fallout – Just like with DTG printers, unless you buy a high-end printer that offers recirculation of white ink, usually only available on wide-format automatic roll printer models, you will need to shake the white ink bottle for a couple minutes at the start of every print day. An occasional need to prime the damper using a syringe at the start of a new day may also be required.

WHAT THE FUTURE HOLDS

Having experience with printing on Epson desktop printers and any familiarity with software RIPs will ease the learning curve. The downside of venturing into this new print technology is there is not

a lot of information, support, or warranties that come with a purchase . . . yet. I have been researching and beta testing the DTF printing process for only five months. I found the benefits of owning a DTF system are exciting and lucrative.

As I write this, I am also aware of some American-based companies working diligently to begin to supply desktop and wide-format systems. This will be great for the obvious reasons — good communication and support. **GP**

CARY GREEN started LRI/Laser Reproductions in 1991. The company provides a full service of sublimation blanks, printing, and supplies and is based in Skokie, Illinois. You can reach him at cary@laserreproductions.com.



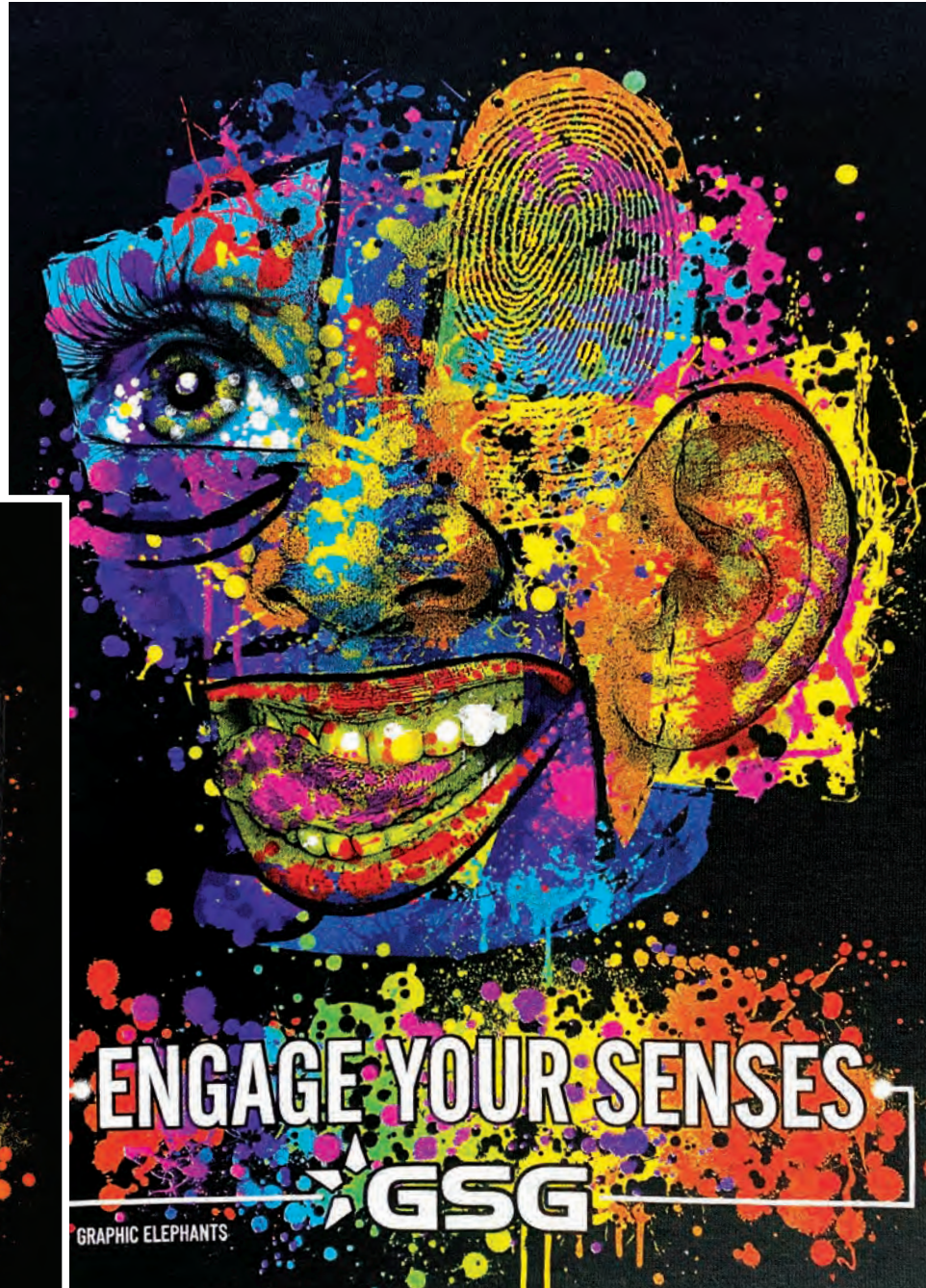


PICASSO

“ENGAGING YOUR SENSES” WITH SCREEN-PRINT DESIGN

We were challenged with developing a design around the theme “engage your senses.” Humans have five basic senses: touch, sight, hearing, smell, and taste. The sensing organs associated with each sense send information to the brain to help us understand and perceive the world around us. Without our senses, we would just be taking up space.

Each sense is as important as the others, and we rely on them. The joy of seeing a beautiful sunset, hearing a sensational piece of music, or smelling the aroma of an exquisitely cooked meal that makes our mouth water when we taste it



The campaign graphic was a loose layout of multiple ink splatters moving in all directions much like what you would expect to see in a Jackson Pollock painting.
(All images courtesy Lon Winters)

“The chief enemy of creativity is ‘good’ sense.”

PABLO PICASSO

makes a person come alive. Coming out of the pandemic, we could finally hug and shake hands to touch and feel our colleagues. But how do we represent the senses artistically speaking?

Picasso painted beautiful abstract portraits with his exaggerated proportions and two-dimensional technique. If there were a fifth Teenage Mutant Ninja Turtle, he would likely be named Picasso, don't you think? But we digress.

We were inspired to create a Picasso-esque portrait of our own and incorporate it into our client's already-existing trade

show campaign. The campaign graphic was a loose layout of multiple ink splatters moving in all directions much like what you would expect to see in a Jackson Pollock painting. It's a popular Roy G. Biv style that made for a cornucopia of color.

SENSORY DESIGN

Playing off the disproportionate style of Picasso's shapes and form, we highlighted the five receptors with a heavy black line for definition that allowed the colors to frame in the structure for the head shape. Pablo's semi-flat colorization is how

we started the concept for placement under the facial elements.

We were somewhat limited to the amount of colors based on the press we would be demoing the print on. We had eight heads to work with, but we would need to mix a couple colors to achieve the additional color theory needs.

From there, we laid in copious amounts of splatters moved around for an explosion of color. There was no shortage of stock imagery. Drizzles, spots, and drips were strategically placed. Gradients transitioned between colors, and black splatters

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The fingerprint was the least difficult because it's a series of lines, but since they would be knocked out to allow the black fabric to show through, we had to increase the weight slightly so it wouldn't fill in on press.

or knockouts helped break up some of the color and minimize the overall ink coverage for a softer hand.

We used a posterization technique to create the graphic look for each sense. First, we found photos that had good contrast balance for nice definition and turned them into greyscales. Since the splatters would be the base for the colorization, we only required the darkest values for the lines and shadows to define the shapes. We extracted all the information in the photos around the shapes and eliminated it, then ran the Posterize filter in Photoshop, which added the texture for a more illustrated look.

The fingerprint was the least difficult because it's a series of lines, but since they would be knocked out to allow the black fabric to show through, we had to increase the weight slightly so it wouldn't fill in on press. We added some bold lines around contours to some features as another way to break up the image.

Much of the color was flat and straightforward, which made it easier in the separation process as there was minimal continuous tone. Among the chosen primary and secondary colors that would be printed, we needed the addition of green and orange. We would do some old-fashioned color mixing. Blue and yellow make green, and yellow and red make orange, right? Careful consideration of percentages of each were used to mix each one. We referred to our test squares for formulas for accurate colors.

With the chaos of the splatters, we layered the elements over the color with line definition clean and enough weight for definition. We kept the grayscale of the eye without posterization. This element already had a good amount of dark contrasts with the blackness of the pupil and eyelashes. The tones around the eye had darker transitions where shadows

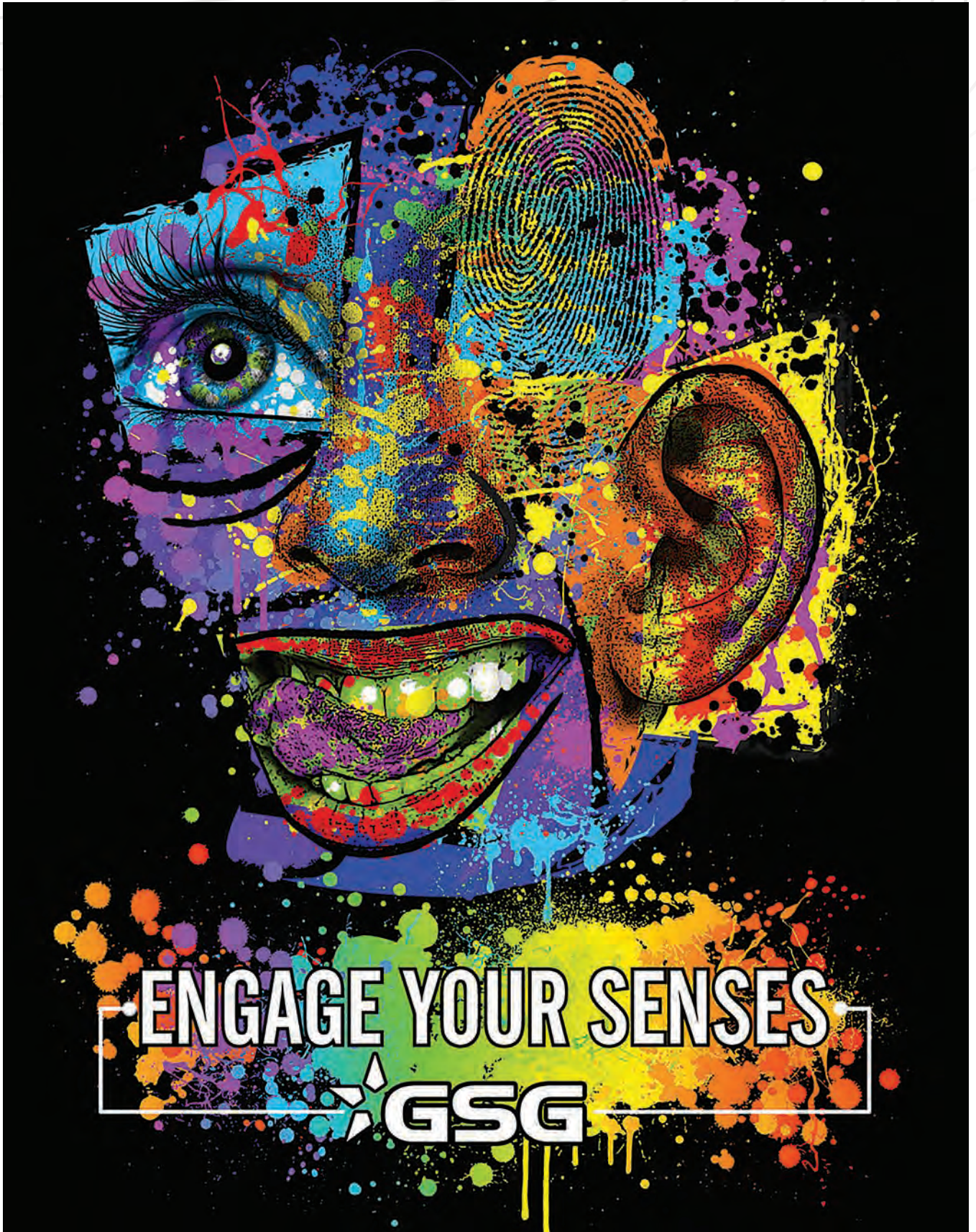


The eye already had a good amount of dark contrasts with the blackness of the pupil and eyelashes.

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The last element to be placed was the verbiage from the slogan. We added the logo along the bottom and the frame around it.

naturally occur, so we removed density on the white printer, or base-plate, so that those areas darkened with influence from the black substrate.

The last element to be placed was the verbiage from the slogan. We added the logo along the bottom and the frame around it. We didn't use much white in the image as we wanted the color to really stand out — just the type, logo, and the natural whites in the cornea and teeth.

The base was critical to keep the bright colors bold. Some portion of each color had a solid base under it to make it pop. Those solid fills were where much of the color would be its most opaque. The knocked-out elements and soft areas in the base also reduced the brightness and added secondary tones. Total removal of the base dropped off the color into shadow and dark tones. Since we essentially created a black plate as our mask to complete all of our knock-outs, this design could also print on a colored shirt using the addition of that black screen.

ON PRESS

Once seps were completed, we again outputted on CTS with a frequency of 55 LPI at a 22.5-degree angle. On a brand-new press at GPX, we ran the white on 156 TPI screen at 35 N/cm² followed by a flash and smoothing heated iron in a Teflon sling.

Next, the colored inks and the highlight white all ran wet on wet on 230's at the same tension using all 65/90/65 triple ply, dual durometer squeegees for simplicity's sake. All eight screens hit perfectly for setup demos and the job ran without issue for the whole show. No drama is a good thing. **GP**



All eight screens hit perfectly for setup demos and the job ran without issue for the whole show.

At 21 years old, **LON WINTERS** was the production manager for Ocean Pacific and started his 30+ year career reclaiming screens. He's the president and founder of Colorado-based Graphic Elephants, an international consulting firm and apparel decoration studio specializing in screen printing technical advances, plant design, layout, troubleshooting, productivity, quality analysis, and complete apparel decorating solutions. Learn more at www.graphicelephants.com.

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4 WAYS TO GROW YOUR BUSINESS

Business growth — it's what we are all supposed to strive toward as business owners. So let's talk about that. What would business growth look like for you and your business? There are many ways to measure growth: more customers, more orders, more products, more services, more equipment, more staff, more space, more hours, more, more, more ...

How much more of any of these things could you handle right now? How much more do you want? How much more do you need? Thinking that you should want or have "more" by now can be frustrating, overwhelming, and even counterproductive. On the other hand, identifying how you want to grow and then creating a plan to make that happen can be effective and satisfying. Let's dive into some of the ways that you could grow your business and see if any of them make sense for you and your business this year.

GROWTH STRATEGY 1: ADD EQUIPMENT

Adding equipment could mean adding more sewing heads, or it could mean adding another decoration method to your operation. Before you pick up the phone to call your equipment supplier, let's evaluate what you currently have in your business and how effectively it is being used.

An efficient operation uses its equipment (needles going up and down) between 50-60% of the working day. The rest of the time, the machine is not running. Hoops and frames are being loaded or unloaded, threads or bobbins are being changed, needles are being replaced, designs are being loaded, test designs are being run, or the next job is being set up.



If your operation is not yet running the equipment anywhere close to 50%, you have the opportunity to grow your business without actually investing in more equipment yet. Look at your workflow and see how you could become more efficient in handling orders so that you have the equipment running a higher percentage of every working hour.

If you have no idea of the percentage of time your equipment is running, it is time to find out! Start tracking it, even for just one week. Track how many hours you work and how many hours the

equipment is actually running orders during that week.

When you think about adding new equipment, review the existing demand for that decoration method. If you are subcontracting a consistent number of orders for sublimation or DTG, bringing that process in-house may be the next logical step. If you only send out one order a month for these processes, it may be premature to get that equipment.

Test the interest level with your customers by actively trying to get them to place orders for goods decorated with

these services. If the level of orders increases, the equipment will quickly pay for itself. If you gain no traction, there is your answer.

GROWTH STRATEGY 2: ADD HOURS

Once you know what your production percentage is, another way to grow your business is to add production hours. You can increase your production efficiency and get more stitches per hour from your equipment, you can increase your average sewing speed, you can work more hours, or you could implement a combination



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of these strategies to add more hours to your business.

Before you decide to extend your work hours, consider the impact on your personal life, family, and even health and well-being. If you are already stressed and feeling like you put in too many hours, adding more hours is not going to benefit you in the long run. Getting more efficient so that you achieve more machine running time per hour or

increasing your sewing speed on flat goods that run well can also increase your production hours without increasing the number of hours you work.

GROWTH STRATEGY 3: ADD CUSTOMERS

I have yet to meet an embroidery business owner that cannot instantly identify their favorite customers and orders. These people and jobs just stand out for

some reason. What if you could bring in two more customers and two more orders like your favorites every single month? If you are not actively asking for referrals from your existing customers, this may be easier to accomplish than you imagine.

Every time a customer gets their order, ask them if they know of anyone that might be interested in hearing from you. Hand your customers a few of



your business cards and encourage them to share them when and if the opportunity ever presents itself. Sweeten the pot by adding a 10% “twofer” coupon on the back of the card — 10% off for the new customer, and 10% off for your existing customer on their next order. Just make sure that the customer’s name is noted on the cards that you hand to them.

Look through your orders to see which were ideal for your business — they hit your profit goals and the order size was right for your equipment. Can you identify other possible customers that would have the same kinds of needs? If you have a great order for a local construction company, why not reach out to other construction companies and see if they are interested in the same products? Explore ways to replicate your best jobs by reaching out to similar businesses in your area. Show examples of the work you did for your existing customers and post photos of these orders online.

GROWTH STRATEGY 4: ADD PEOPLE

One of the best pieces of business advice I ever received was to never duplicate yourself. I cannot tell you how many times I have thought, “I wish there were two of me,” when I was trying to get an order done by a deadline, so this advice might seem counterproductive.

Here’s the secret of this advice: Figure out what you are best at in your business, and own that space. Add people to do the other jobs, not the job where you shine the brightest. If you love running the machine, hire someone to do the bookkeeping, ordering inventory, and paperwork. If you love meeting with customers, hire a machine operator to fill the orders. Even adding a part-time person, maybe a local high school or college student, to sort inventory, trim, fold, and pack orders for a few afternoons a week would give you the



help you need to get things done without losing your mind.

I hated wrangling the bookkeeping for our business. It often got away from me, and then I had to devote hours to catching up before the next quarterly filing was due. Bringing in a bookkeeper to keep things current was a game-changer. It took her only a few hours a week, and our information was always up to date after that.

As a business owner, business growth is usually our goal. Wishing for growth is not going to get results. Forming a plan

about how you want to grow and then implementing it over the coming months is the way to continue to build and grow a healthy business. Let’s get growing! **GP**

JENNIFER COX is one of the founders and serves as president of the National Network of Embroidery Professionals (NNEP), an organization that supports embroidery and apparel decoration professionals with programs and services designed to increase profitability and production. You can contact her at jennifer@nnepp.com.

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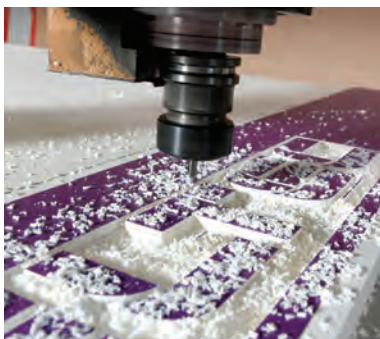
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GP

Shop Profile: Walker Companies

The More Things Change ...

BY CASSIE GREEN



When you've been in business for 70 years, just about any change that can happen, will. That said, there are some things that never change. For Kenny Walker and his team at Walker Companies, everything from construction demolition to name changes to new

technology has been weaved into their history, yet they still pride themselves on one big thing: quality.

TRANSFORMATION

Walker Stamp & Pencil Co. opened its doors in February of 1951. According to Kenny, it was just two years later that

the business experienced its first name change. "... the name was changed to Walker Stamp & Seal Co. to better reflect the products we made — rubber stamps and corporate and notary seals," he says.

Founded by Kenny's parents, Kenneth and Bobbie, the business is now dubbed Walker Companies to better reflect all



Pictured from L to R: Cathy and Kenny Walker along with daughter Natalie are all involved in the business, Walker Companies, which recently celebrated its 70th anniversary. (All images courtesy Kenny Walker)

of its capabilities. "In the mid '90s, we had branched out into so many different areas that it was difficult to market ourselves and using three to four different names (Walker Sign Co., Walker Printed Specialties, etc.) became cumbersome. So, in about 1998 we changed to Walker Companies," Kenny elaborates.

Not only has the business undergone name changes, but it's also currently in its sixth location since opening its doors. Now in downtown Oklahoma City, there

have been various reasons that the business has had to move: a fire, urban renewal, and other construction. "We moved into one of the two adjoining buildings we currently occupy in 1975 then expanded into the other in 1998," says Kenny.

More recently, the business has seen change of a different kind. "Our business has changed dramatically in recent years mainly due to technology and the equipment that technology has provided," Kenny explains. While they still

offer rubber stamps and marking devices, Walker Companies currently offers much more. "We offer rotary and laser engraved signage, and engraved and sublimated name badges and ADA signage. We have three large-format printers for banners, and rigid surface signs of all types," he says. They are also a distributor for advertising/promotional products and trade show and exhibit displays.

You might have guessed that one of the biggest changes they've experienced



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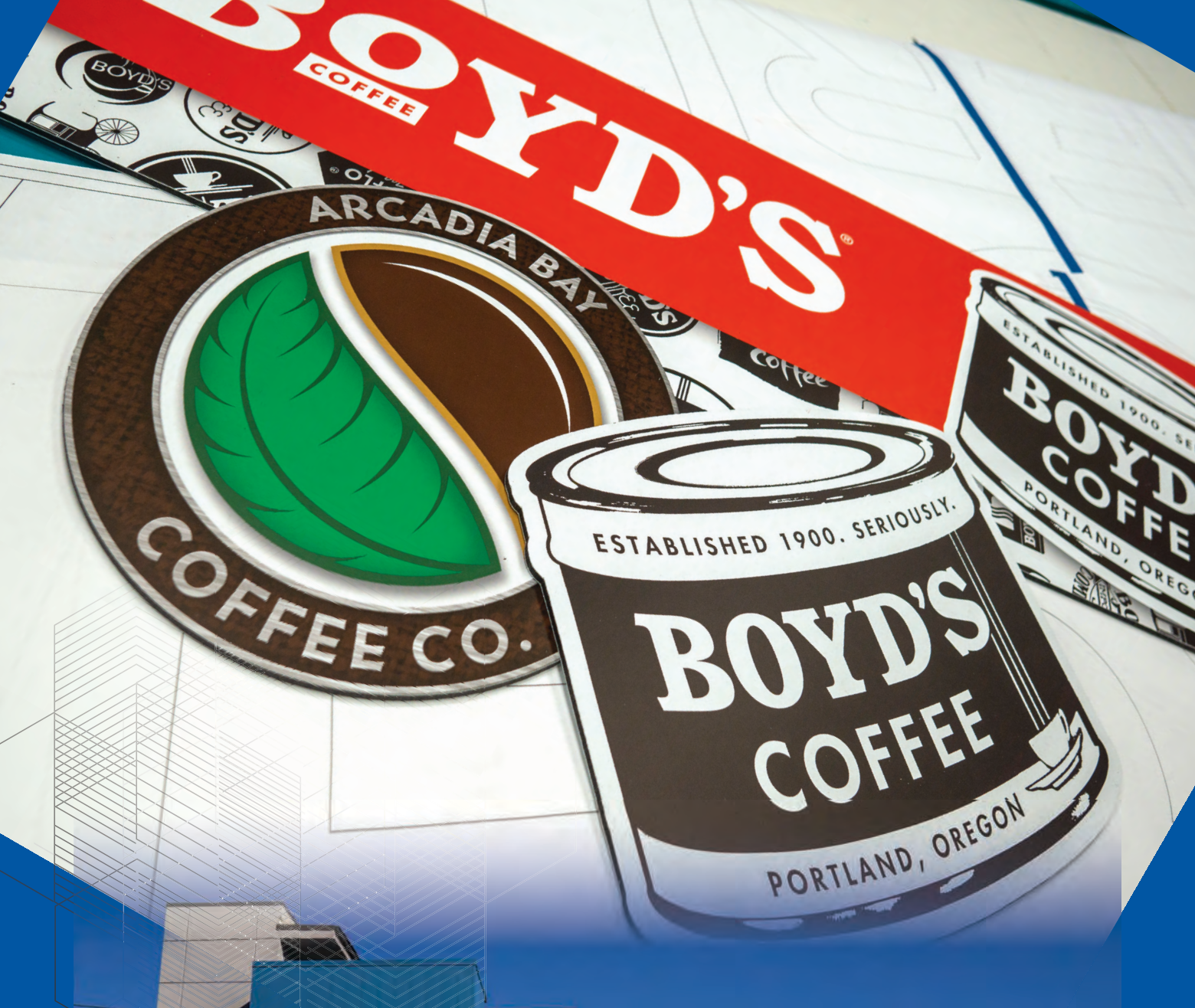
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In addition to going through a few name changes, Walker Companies is also currently in its sixth location since opening its doors — downtown Oklahoma City.

happened in 2020 with the onset of the COVID-19 pandemic. But because of creativity and quick thinking, the business has been able to survive the tough times. “Lately we have used our CNC router to make PPE equipment and products,” explains Kenny. “2020 was a tremendously trying year as most of our customers simply disappeared for a few months. Fortunately our great staff came together and came up with new and different products to help solve new and different problems for our customers.”

And even though it might seem like all is dark and dreary when it comes to

the pandemic discussion, there has been some light for many businesses, Walker Companies included. “I think by being forced to consider new products and ideas, we have grown, and our staff now knows they can think out of the box and solve new and different problems,” Kenny believes.

SMOOTH AND STEADY

But even with all the change, all the ups and downs, all the pivoting, there are a few things that Walker Companies still does the same, and that has to do with quality. “We offer quality products

(and) fast efficient service at a fair price,” Kenny states. And that quality extends far beyond just their products. “We are proud of our reputation for great customer service and standing behind our products 100%.”

One thing they also continue to do the same is to be creative. Kenny loves the fact that they continue to receive customer projects that are both fun and challenging. “We enjoy creating new products that find solutions for our customers,” he adds. “It’s always exciting to offer a one-of-a-kind product created just for them.”

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The business offers rotary and laser engraved signage, and engraved and sublimated name badges and ADA signage. It also has three large-format printers for banners, and rigid surface signs of all types.



Walker Companies is also a distributor for advertising/promotional products and trade show and exhibit displays.

HEAR KENNY TALK ABOUT THE BUSINESS'S HISTORY, WHAT'S NEW, ALL THE CHALLENGES THEY'VE FACED, AND MORE IN **THE GRAPHICS PRO FILES PODCAST**: <http://gpro.link/walkerpod>.

The key to keeping these kinds of beliefs intact, Kenny feels, is to never give up. "We have faced many challenges over 70 years including a fire, the Oklahoma City Bombing, and then COVID-19 along with dozens of smaller challenges in between," he elaborates. "There is always a solution to every problem and often that solution makes you better."

Perhaps that's why he has some interesting yet strong words of wisdom to share with other graphics professionals: "Be flexible and know that change is inevitable. It is great to have a plan, but you also

have to be ready to change or completely abandon that plan if the need arises." He adds that it's also crucial to listen to your customers and provide the best solution possible from your products and services.

All of that combined plus some good business practices are just some of the motivators that have kept Walker Companies in business for so long. And as for the future, Kenny has a few thoughts: "Our goal is to keep up with our industry's advancements and be able to provide the next generation of marking devices, signs, and promotional items needed for our customers."

"70 years is not something many companies get to celebrate. Being a small, family-owned and operated company has its challenges. We owe much of our success to our great staff ... We would like to thank all our customers for coming back again and again." **GP**

CASSIE GREEN is the executive editor of *GRAPHICS PRO* magazine, and previously served as the editor for *A&E* magazine. You can reach her at 720-566-7278 or cgreen@nbm.com.

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Creative New Capabilities

**HOW SHOPS CAN USE CNC ROUTERS
AND DIGITAL FINISHING SYSTEMS
TO GROW THEIR BUSINESS**



BY
PAULA AVEN
GLADYCH

CNC routers have been around forever, but these days sign and digital graphics shops, and even other graphics shops, are getting more creative in how they use them. From three-dimensional signage to channel letters and point-of-purchase displays, companies are finding that the number of specialty items they can create with this versatile machine is only limited by their imagination.

There has been a merging of the print service provider (PSP) and the industrial sign shop over the past few years, meaning that sign shops are now offering digital printing and digital print shops are expanding into making more three-dimensional signage. Shops need to determine what specialty items they want to produce before deciding whether they need to purchase a full-size industrial CNC router or a smaller CNC digital finishing system.

BASIC FEATURES

Both CNC routers and CNC digital finishing systems have “knife cutting capabilities and routing capabilities,” says Russell Boudria, Multicam. Shops wanting to get into this side of the business should look at the types of substrates they want to cut before making their decision.

If the shop wants to cut sheet material, and/or dense, hard, or raw materials, they will want to purchase a CNC router machine. If the bulk of the shop’s intended applications involve knife cutting materials, especially roll-to-roll, textiles, vinyl, and banner material, they should purchase a digital finishing machine, Boudria advises.

Chuck Donaldson, Antares Inc., agrees, saying that it is “the materials driving the industry more than the equipment.” Antares manufactures cutting tools that are used for engraving, sign, and mold

making on both CNC machines and engravers. The biggest difference between engraving tools and tools for a CNC is length of tool.

“CNCs have better spindles than engraving machines, a tighter hold, and they turn faster,” says Donaldson. “CNCs have become higher in precision, in speed, and volume and output than engraving machines — that is why people are spending three times more for a CNC than an engraver.”

The material on the machine dictates what tool is used to cut it or what the customer wants the end product to look like. “If a customer wants bigger products, larger format, or multiple copies ... a CNC is certainly going to make life easier,” Donaldson says.

A business must balance what it wants to use a CNC for versus the space available in their shop. Another consideration is that

Customers today expect to be able to go to one shop to get all of their graphic needs fulfilled. CNC routers and digital finishing systems help meet that demand. (Image courtesy Vision Engraving & Routing Systems)

CNCs use a higher voltage than smaller engravers or digital finishing systems.

DIGITAL FINISHING SYSTEMS VERSUS CNC ROUTERS

Digital finishing systems can produce point-of-purchase displays and outdoor signage, but there has been “tremendous growth in interior design with wallpaper, pillows, and upholstery,” says Mark Packman, also of Multicam. ADA signage, clothing, and textiles are also in huge demand, so it’s important that shops that want to get into these markets invest in the right cutting system for their product line.

“For digital finishing, styrene, foam core, thin paper products, corrugate for packaging, rubber, or foam insulation



The material on the machine dictates what tool is used to cut it. (Image courtesy Antares)



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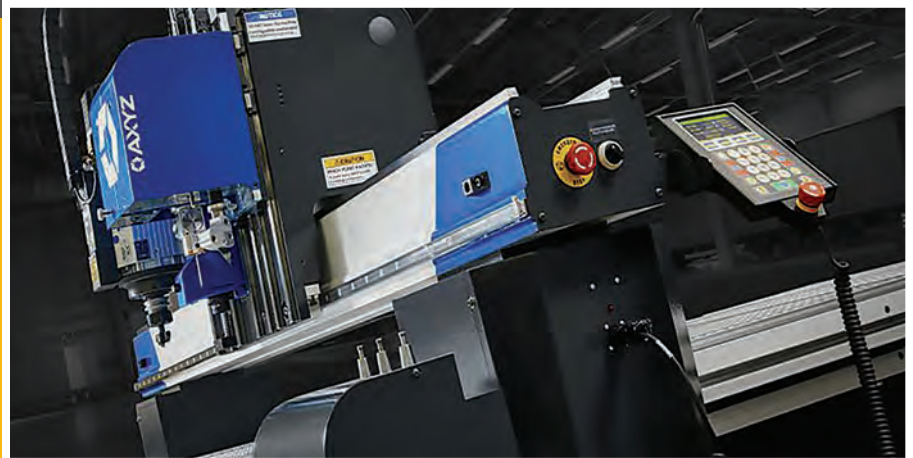
One of the most unusual items a customer made with one of CAMaster's CNC routers was a life-size chess set, which is on display in downtown Columbia, South Carolina. Each chess piece is six feet tall and two feet thick.

Shadow boxes are another unique thing, which are perfect for active-duty military or military members who are retiring but want to display their medals or branch insignia. Shops can make traditional boxes or get creative.

One of CAMaster's clients made a shadow box in the shape of the Star Wars characters Mandalorian and Grogu.

CNC routers are also in big demand in the marine and mobile fabrication industry. Car audio shops use their routers to make custom subwoofer boxes, instrument panels, and speaker boxes. Custom boat shops use their CNC to make consoles, instrument panels, and custom foam flooring for boat decks that are soft and waterproof. **GP**

CNC routers can be used to create unique products such as shadow-boxes, 3D statues, instrument panels, and more. (Image courtesy CAMaster)



Above: CNC routers have been around forever, but these days graphics shops are getting more creative in how they use them. (Image courtesy XYZ International) **Left:** Most CNC routers can cut a variety of different materials from plastics like acrylic, polypropylene, and polyethylene to materials like foam, aluminum, non-ferrous metals, wood, and composites. (Image courtesy CAMaster)



board — if you are doing all that — the majority of your business should be digital finishing,” says Packman. “The speed of knife cutting is faster on a digital finishing system.” To cut through wood, non-ferrous metals, thicker aluminum, and composite materials, shops should look at a CNC with a larger spindle on it, he adds. “The beauty of the grand format and CNC marketplace has to do with invention — daily invention of new substrates,” continues Packman. “That allows you to be much more creative with what you can manufacture. There is daily new product development for our industry. It is fantastic.”

Technological advances in the grand-format printing industry have put some pressure on shops’ ability to keep up when

it comes to cutting. Instead of the print side of the shop being the bottleneck, now it is the cutting side. That’s why Multicam believes it’s seeing more customers purchasing more than one cutting system. Many are buying CNC routers and digital finishing systems or more than one of each type of machine to keep up with the speed of the printers.

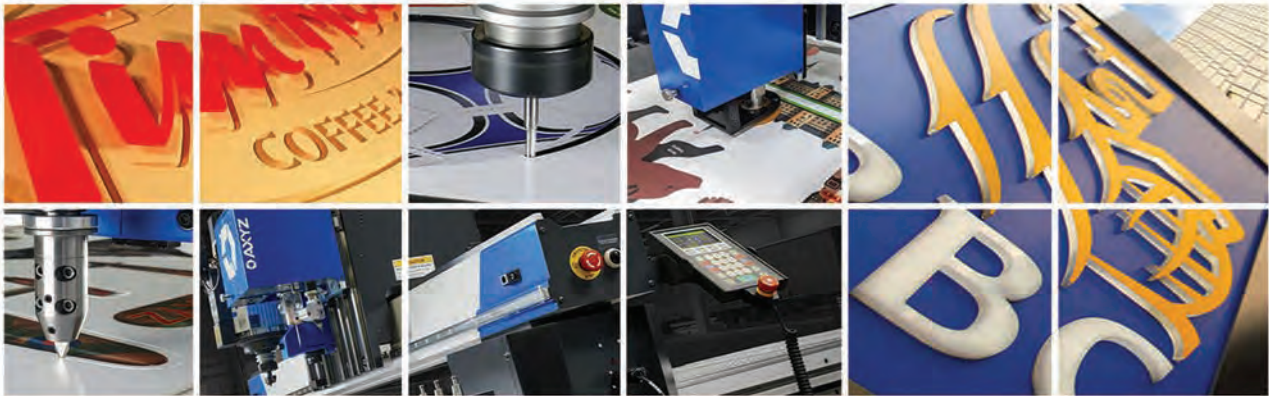
“There are so many markets out there, it is amazing to see what our customers bring to us to help them with,” says Boudria. “We’ve seen everything from making train batteries to ship building, (and) cabinet shops to channel letters. It is amazing the products we’re involved with and get to help make.”

CAMaster’s industrial CNC router can also act as a digital finisher, says Cody

Smith of CAMaster. “We provide versatility for the customer. They can do aluminum dimensional letters but then on the same machine could direct print vinyl and cut out decals with the oscillating knife.”

Cesare Magnani, Biesse, adds that most CNC routers can cut a variety of different materials from typical plastics like acrylic, polypropylene, and polyethylene to more dense materials like foam, aluminum, non-ferrous metals like bronze, wood, and composites. That means that shops can use their routers to cut out small components, machinery parts, covers or tops, and structural elements.

CNC machines have drag knives and oscillating knives as well as routing bits for carving. “We can not only work with a 3-axis machine carving vertically, but we



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have 4- and 5-axis solutions they can take to a different level of carving. They not only work vertically but inclined also. It has been a revolution. The machines today are not only more powerful but more affordable than they used to be. They have more capabilities and many different sizes,” Magnani says.

In the past, routers came with a 4' X 4' table, then 4' X 8', and then 5' X 12'. Now there are huge machines — up to 7' X 40' — depending on the application.

SPECIALTY ITEMS MADE WITH A CNC

In looking at projects that are a bit outside the box, many CNC machines can

produce specialty items. For example, Biesse's 5-axis machines can make intricate components for aerospace and automotive applications, says Magnani. Many CNC machines come with a vision system that can detect reference points on a print so it knows exactly where to cut. These systems work with just about any design software. “When we talk about quality of cut, quality of frame is important, tools are important, also the way the routing is executed is important,” he adds.

For cutting plastic materials and even wood, it is important that the bits don't get so hot that the material melts or burns. Routers can also be used to score

aluminum or plastic so that “we can bend it with precision,” Magnani says.

The 5-axis machine makes it possible to cut out something that is truly three-dimensional. People have made 3D statues using their CNC router, depending on the size. Larger statues can be carved in pieces and then assembled.

The COVID-19 pandemic opened up other possibilities for sign shops. Demand for personal protective equipment (PPE) was high in 2020 with hospitals, schools, shops, and retailers looking for ways to manufacture face shields, sneeze guards, and plastic barriers to help keep students, front line workers, and customers

Q&A WITH KRISTINA VANDERWATER, BOUNCING OFF THE WALLS

To get a picture of how some shops use their CNC machines in unique ways, we sat down with Kristina Vanderwater of Bouncing Off The Walls in Alberta, Canada.

Images courtesy Kristina Vanderwater

Q: What does your shop do/what kinds of items and markets do you serve?

A: At Bouncing Off The Walls, we create meaningful, sentimental artwork and signs for nurseries, home decor, and businesses. We also supply sign backers and unpainted lettering to others' businesses and DIY crafters.

Q: What do you use your CNC machine for?

A: We use the CNC machine to cut out all of the names and lettering for our nursery signs as well as the shapes/backers for all of my resin artwork and signs. We also use it for engraving logos and designs into plaques or signs that require detail work.

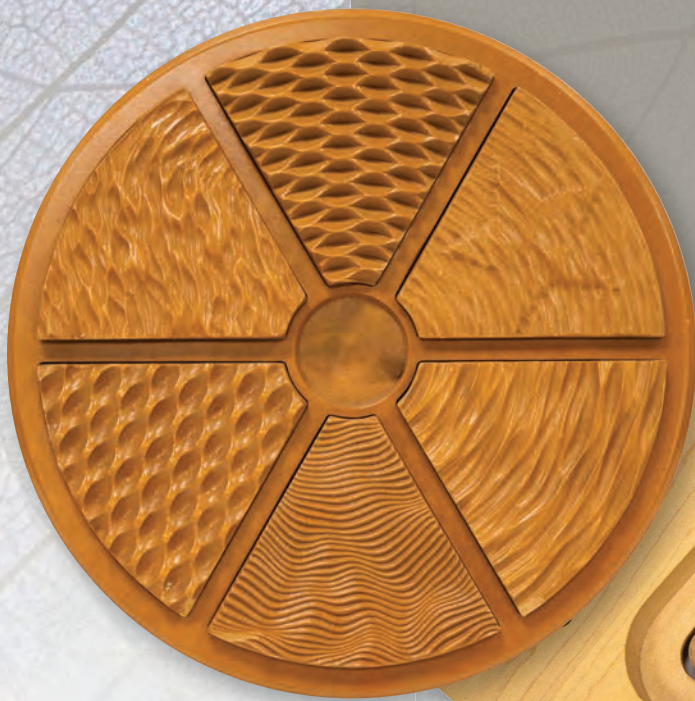


Q: How long have you been in business and how long have you owned your CNC machine?

A: We have been in business for 16 years and have owned our ShopBot CNC for 12 years.

Q: What's your favorite part about creating projects with your CNC?

A: I love the transition of taking an idea from initial concept and turning it into a piece that someone loves as well as the ability to create unique products. **GP**



From three-dimensional signage and point-of-purchase displays to custom items for the home, companies are finding that the number of specialty items they can create with a CNC machine is only limited by their imagination. (Images courtesy Multicam)

safe, says Smith. Many sign shops stepped in to fill that void, producing PPE from the substrates they had available in their inventory.

Routers also can be used to make custom wood signs, dimensional sign letters, carve HDU sign foam into the 3D marquis signs that are popular in shopping complexes, or to brand products instead of laser engraving them, Smith continues.

“Here’s the magic secret: it is all in the finishing. Most good-quality CNC routers will create a good product, high quality, and look good,” Smith says. But it is really how a shop makes the end product look good that matters. That means having great additional skills, like painting and sandcarving. “That’s what separates a good sign shop from an average sign shop. Anyone can print a decal and cut it out,” he adds.

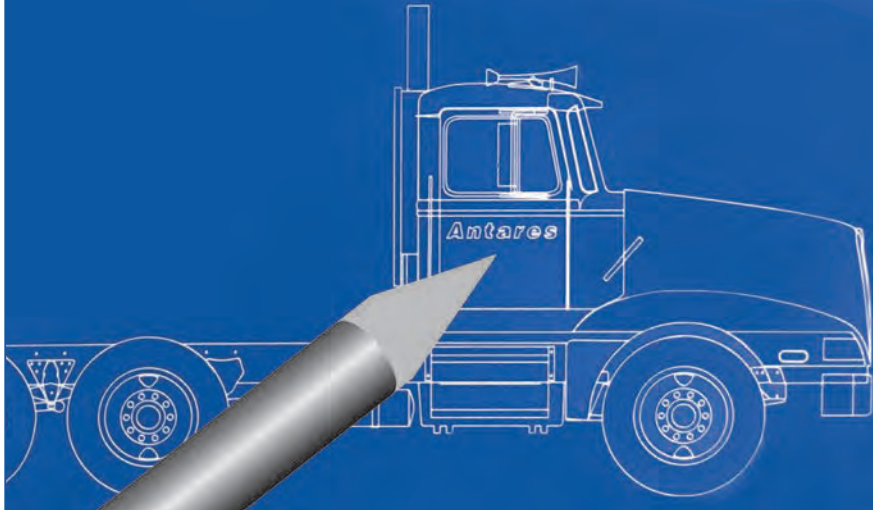
Donaldson notes that one of his company’s customers uses their CNC to cut out wooden snowboard cores. Another shop is cutting acrylic for backlit signage.

Customers today expect to be able to go to one shop to get all of their sign and digital graphics needs. Having a digital finishing system not only helps them build a revenue stream from cutting but also increases their revenue potential in the digital printing market, says Packman. **GP**



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Sign Design 101: Part 3



BY MATT
CHARBONEAU

*COMMUNICATING WITH WORDS,
CONNECTING WITH STYLE*

It's been a long week, and you're staring at the latest design request that's sitting on your desk. The client is an ATV Riders Club in town that wants a banner designed with so much extraneous information that the message will be lost in the forest of copy. This is the fourth one of these you've had to struggle with this month, and you're looking for some way to get it across to the customer that saying too much is worse than not saying enough.

We touched on this in my last article (featured in the May issue, page 54) when we discussed the billboard for the "Take dad for a Father's Day drive" message and how exploring the intangible benefits of spending time with your dad made the billboard more effective without the need to mention a product.

In this case, it's not an advertising opportunity per se, but a banner to attract new club members. They have a brick-and-mortar clubhouse and want to announce the completion of a new workshop and recreation room with WiFi, sky lights, a carpeted area with a big couch, TVs, dance floor, and a new sound system as a way to entice new members to join the club ... and did I mention they have a new five-gallon hot and cold water dispenser in the lobby too, plus they want all the contact information included somewhere on the sign. All of that on a 4' tall X 10' long banner that's installed on a fence near some bushes that only provide a three-second read from about 50 feet away.

Before we talk about layout and design, let's look at a way to compress the thoughts, ideas, and concepts into a more

concise message that will allow the sign's purpose to be fulfilled.

AN EXERCISE IN WORD COUNT

In the chart on page 85, I have created a short exercise on how to reduce word count without losing the intent of the message that needs to be conveyed. Using this discipline, you can evaluate the purpose of the sign and determine the most effective way to get the information across to the viewer in such a way that they act.

Questions to ask:

- What is the primary role or purpose of the banner? (To attract the eye of potential future club members.)
- From what distance will it be optimally viewed? (Forty feet, but it's visible from about 200 feet away as you approach.)

Find the fewest number of words you can use to announce to potential club members driving by: “Join our club because we have a new shop, dance hall, stereo, WiFi, blah, blah, blah, blah, blah.”

Using a web address on the sign allows them to list out all of the cool things they have to offer a new member ... with photos of the members, parties, rides, and all of that which cannot be conveyed effectively on a banner. That means you can design a banner that only has one purpose: to encourage the viewer to visit a website or an Instagram page. That’s the directive; the viewer must respond by visiting the website.

The expressive or intangible aspects of this banner design layout is where design skills, vision, experience, research, and good old-fashioned creativity help set the tone, mood, feeling, attitude, and style that reflects the club’s reasons for existing.

Creative design that explores the intangible provides the catwalk that allows the directive to speak to the viewer through its subliminal graphic imagery and character-focused fonts that entice the viewer to visit that website and see what the club is all about.

LOGO DESIGN FOR SCREEN VERSUS OUTDOOR VIEWING

Before I touch on this, I want to briefly review just a few points from the two previous articles. We have addressed readability, contrast, layout, spacing, font choice, and now the science of reducing word count for maximum readability, while still communicating the intended message.

Remember that this is signage — the viewer spends three seconds seeing it. Sign design is all about readability, in many ways. Always design with flow, balance, contrast, and style.

APPLYING SIGN DESIGN DISCIPLINES TO LOGO DESIGNING

Here is where I’m about to ruffle some feathers on design versus function. Some logos are dependent upon colorful graphic

<i>This is a great exercise on how to reduce word count on a banner, sign or other visual message board</i>	This is the message that the customer wants to announce	1
<i>An exercise on how to reduce word count on a banner, sign or other visual message board</i>	Lets take out some of the extra words that are basically not needed for the message	2
<i>An exercise on reducing word count on a banner, sign or visual message board</i>	As we begin to fine-tune the message, the thought becomes much clearer - more direct	3
<i>How to reduce word count on a banner, sign or message board</i>	Eliminating the word “exercise” does not affect the thought, yet it allows for a much shorter sentence	4
<i>Reduce word count on banners and signs</i>	Ultimately a thought becomes a statement that conveys the message in the fewest words so it can be rendered on a banner half the size	5

Here you see a short exercise on how to reduce word count without losing the intent of the message that needs to be conveyed. (All images courtesy Matt Charboneau)

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Left: The word "Bob's" is not the most important part of the business's name. Although Bob may be the owner, the fact that he sells "Bagels" is what must be prominent on the logo.



Above: Bob's logo as shown passes the sizing test with flying colors. It's still readable at a very small size. **Left:** Here is what the logo might look like during a squint test. Notice that the word "Bagels" is still readable.

Right: The icon for the logo works well in all sizes. The heavy font also works well at small sizes.



**HAMBLLEN
HATS**



Left: This company markets only to the electric sign industry. The name "TRIMLESS" is the most important element as "CHANNEL LETTERS" is the item of which the name tag is attached to.

imagery to paint a picture in the viewer's mind as to what the business or service offers. Those elements are what make a logo design unique, memorable, and original. This all works great for the logo design process provided the font choice, spacing, layout, and kerning are done in such a way as to promote the readability of the logo's text when viewed at any size and distance.

Also, when designing, decide on which element of the business name is the most important. Is the word "Bob's" or "Bagels" most important to the new patron looking for bagels to take to their meeting? I don't usually need to shop for a Bob, but if I did, I would scan the shopping center for a sign saying "Bob." If I was looking for bagels, well, I think you get the picture.

If a logo is designed for website use, the viewer has loads of time to look at it, study it, and comprehend it. If the viewer only has three seconds to view and comprehend the logo, is "Bagels" or "Bob's" the most critical bit of information that needs to be communicated? When driving on the highway, a typical conversation could go like A or B:

- A. "Hey, the sign back there said 'Bagels.' Let's turn here!" (Nobody cares if it's Bob's, Tom's, or Joe's bagels.)
- B. "I could only see the sign for a few seconds; it said, 'Bob's something or other.' I couldn't read the rest." ("Bob's" does not explain what he offers.)

Every logo may one day need to be used as a sign, on a sign, or as part of a sign where it's viewed from a long distance, such as sponsoring a baseball team with a banner on the outfield fence. If the logo isn't easily readable from a long distance, it loses its visual dominance and graphic impact in the sea of visual clutter that will surround it.

Logo text readability at all sizes is the hallmark of a well-planned logo design. Printing on pens and other small items is the extreme opposite of outdoor signage applications, but the same design



Left: Bold font, heavy contrast, but for this one, I designed a unique icon, which if you look closely, you will see the goose flying above the elk-style rack that makes up the chef's hat. **Right:** In this example, the established ram's head icon and CSU text were a given. Adding the text above the iconic ram's head created a bold, recognizable icon, which is what the university wanted for this mark. Kerning was a nightmare that I still am not fully happy with.



disciplines apply and have a uniquely similar correlation between channel letter fabrication and small fonts that disappear when the logo is one inch across.

For the courtesy and consideration of the designers out there who may have done their best to design a logo for someone, I simply cannot show examples of badly designed logos within this article. Nobody likes having their past mistakes brought up as a training exercise, so I am choosing to simply discuss what to do right, rather than pointing out what's been done wrong. You can see several examples of logos done correctly for outdoor use above and on page 86.

FINAL THOUGHTS

So, to wrap things up:

- Print/screen/tablet/monitor-viewed graphic design is a discipline that allows the designer to use more con-

tent, smaller text, and more detailed graphics because the viewer has time to look at all of the design.

- Designing a sign is primarily for outdoor viewing applications, other than when signs are made for communicating safety or regulatory information in close-quarter areas.
- Using the squint test to vet your designs will help you maintain the most readability for font choices.
- Knowing the audience demographics and their likes and dislikes helps with both sign design and website, brochure, and print media design.
- Fonts make the largest impact in how readable your sign design is once it's outside. Fonts can also create a mood or feeling that can help or hurt the business.
- Color, contrast, and space are the elements that help the proper fonts

be seen and read from a distance better than fonts that blend into the background.

- Kerning and font spacing, line spacing, and the proper use of descending letters (j, g, y, etc.) must be carefully planned for not only the look and layout, but the fabrication restrictions.
- Designing the sizzle to sell the steak can help you provide sign designs that go beyond the ordinary to explore the extraordinary. **GP**

MATT CHARBONEAU started his career in the sign industry in 1985 as Charboneau Signs. In 2017 he published the Pre-Sale Sign Survey Field Guide. In 2019 he started Storm Mountain Signs and the Sign Design Institute. Contact him at Matt@stormmountainsigns.com; www.stormmountainsigns.com; and 970-481-4151.

GREAT GRAPHICS

THE BASICS OF GRAPHIC FILM APPLICATIONS

BY CARLY HOLLMAN



Image is everything, which is why the graphics industry is so profitable and diverse. Whether you're looking to create foot traffic, a bold window sign, or a moving target, there's an opportunity to make an impact using graphic films.

THE BASICS

"Graphics are generally centered around the promotion of a product or idea; communication of a message, a wayfinding element, or decor," says Jay Kroll, General Formations. The biggest element is to first discover the method customers want to communicate any of those qualities because the application can vary greatly.

It also needs to be taken into consideration whether the graphic will be permanent or temporary, says Jason Harmon, FDC Films Inc.





“While most pressure-sensitive graphics consist of a film, adhesive, and liner, essentially, the intended function will dictate the level of adhesive, outside protection, and thickness of the film,” explains Jim Halloran, Lintec of America.

For example, says Kroll, interior graphics may require a thick film and a repositionable adhesive. Floor graphics need to have

a durable but removable adhesive in addition to having a protective laminate to keep the print layer looking its best and provide necessary non-slip characteristics. Vehicle wrap films are typically thinner and utilize an air-egress liner (an embossed adhesive that allows air to be

funneled through to eliminate air pockets and allows for repositioning).

That being said, according to Harmon, once applied, adhesive will wet out and form a strong bond between the film and the substrate. Removable adhesives are designed to allow for clean removal of a film



Left: Car graphics are popular due to their effectiveness. (Image courtesy FDC Graphics Film) **Top:** Bold, large, permanent images will have a learning curve, but offer strong results. (Image courtesy FDC Graphics Film) **Above:** Graphic vinyl comes in rolls that can vary in size and color, giving print service providers many options. All rolls should be stored properly, preferably on a rack, for best results. (Image courtesy Hexis)



Even the simplest graphics have importance in the market. (Image courtesy FDC Graphics Film)



The creativity of graphics and their messaging capabilities are limitless. (Image courtesy General Formulations)



Vehicle graphics that catch the eye and share the most important information tend to have the biggest impact. (Image courtesy General Formulations)



Floor graphics are often temporary but add a big punch to an event. (Image courtesy General Formulations)

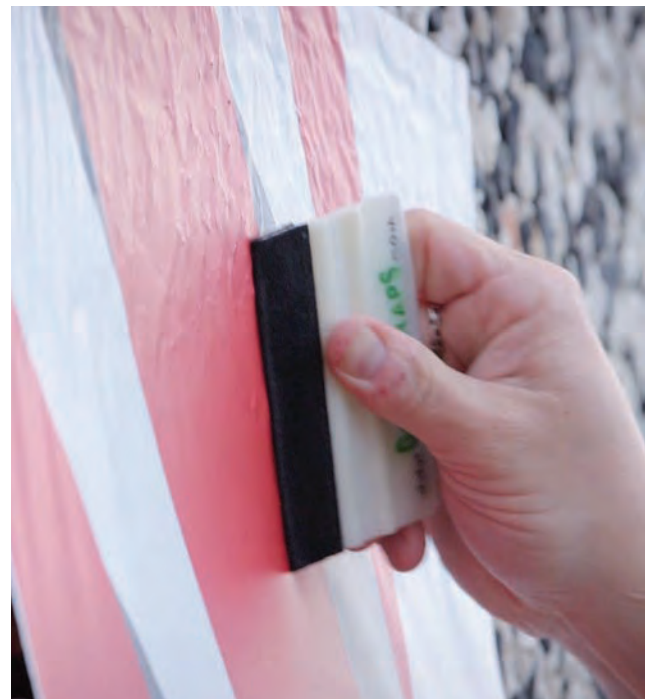


Graphic films help build a mood or idea for an event or business. (Image courtesy General Formulations)

when it is time to change the graphic, but because adhesive bonds grow stronger over time, even removable adhesives will become permanent after a certain amount of time. This is particularly important to express to customers so that their expectations are realistic.

Even with varying levels of adhesives and requirements to consider for the job, various graphics can be produced using the same or similar equipment consisting of a plotter, printer, laminator, and computer, states Harmon. And while printers are available in a variety of ink compatibilities and have different traits that may dictate what type of graphics that a graphics professional is able to make, they are largely capable of allowing for one-stop shopping.

For instance, some ink types like eco-solvent are widely available and compatible with many different types of films, explains Harmon, including latex, UV, and solvent. All it takes is ensuring the



Adhesive vinyl has come a long way over the decades and now there are very few surfaces to which you can't apply graphics. (Image courtesy Mactac)



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- Window Graphics – <http://gpro.link/windowgraphics>
- Wallcoverings – <http://gpro.link/wallcoverings>
- Vehicle Wraps – <http://gpro.link/vehicle101>



printer can accommodate different RIP software, print engines, and ink types. And with a wide-roll laminator, this furthers a shop's reach to include things like vehicle wraps, floor graphics, and other long-term applications.

OPTIONS AND DIFFICULTIES

So, why offer a variety of graphic options? Because all markets can benefit from expanding their graphic usage, says Kroll. "We've seen the creative use of every surface as a potential source for communication of a message or as a canvas for creative display," he explains.

Even more, offering various graphic options can translate to a larger stream of loyal customers. "Every additional service that a shop adds to their lineup is

one less reason that a customer would look at another option for their needs," explains Harmon. However, it's crucial to understand the unique variations and specific difficulties each type of application possesses.

These can vary from bubbles or creases to things such as UV protection quality or the lifetime of the specific adhesive. To combat these issues, always start with technical data sheets, suggests Kroll. These should have facts about installation or other challenges when approaching a project and provide some guidance on best practices. He also mentions technical tip documents that may list more in-depth information on things like recommended prep for wall graphics, compatible paints, or washing instructions for vehicle

wraps. Finally, always ask the experts by contacting the distributor or the material manufacturer as they know the materials through and through.

ART AND AUDIENCE

When it comes to creating the actual art for any graphic, always consider why the end user is reaching out for the job in the first place: They need to make a fast impression to make their business a success. To accomplish this, always consider the message. "These graphics are best when they are designed to match the brand aesthetic of the represented company, and when they are geared toward the right audience," explains Kroll.

continued on page 110

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GRAPHICS|PRO



TRANSFER TECHNIQUES

TRANSFERRING IMAGES BETWEEN MEDIA TYPES

Once upon a time when there were no computers, sign painters painted signs and billboards with pigment and brushes, most prints were made with printing presses, photographs were always printed in a darkroom, and special effects were achieved optically with giant process cameras. We've become so dependent on these little boxes it's hard to imagine what the world would be like without them.

But at one time, not too long ago, at least in my memory, the world was "EA" — entirely analog. And although some of these older technologies may appear

quaint to us today, they are the foundation of the modern digital workflow.

ARTISTS

Leave it to the fine artists to maintain an enduring relationship with the past. They continue to produce images with traditional media, like drawing, painting, and printmaking. There are many artists, however — especially those adventurous ones — who like to experiment and find that incorporating computer technology such as scanners, digital cameras, software, and printers into

their creative process extends their capabilities and endows their work with even greater possibilities.

In this *Digital Eye*, I want to examine how pictures can be transferred — processes artists use to move an image from one surface or medium to another. The transfer technique used will greatly depend on two factors: the material the source image is on and the material the destination image will be transferred to.

As you will see, transfers can be simple, employing solvents or wax, or extremely complex using special films, mediums,

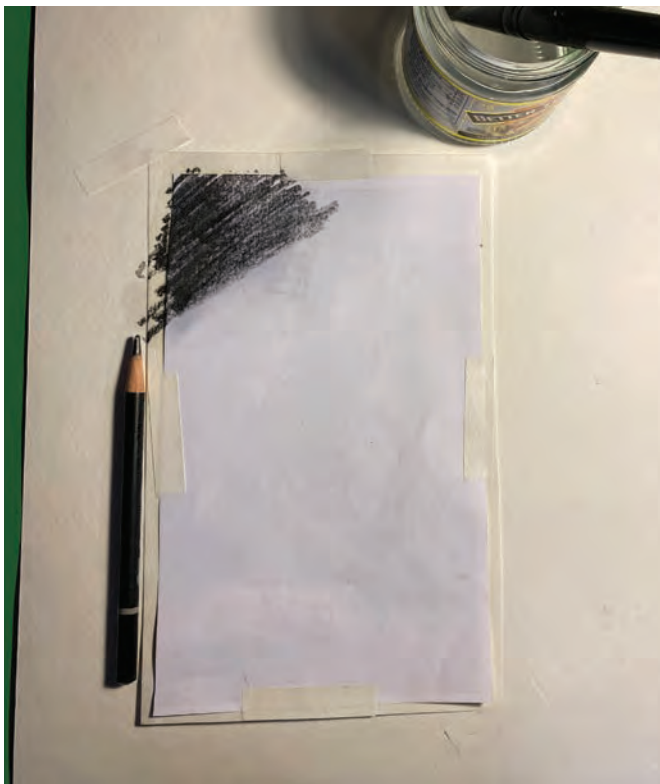


Figure 1. Brush the acetone onto a small area on the back of the print using a soft flat brush. With a soft pencil, densely scribble on the back of the print to fully cover the wet area. (All images courtesy Stephen Romaniello)

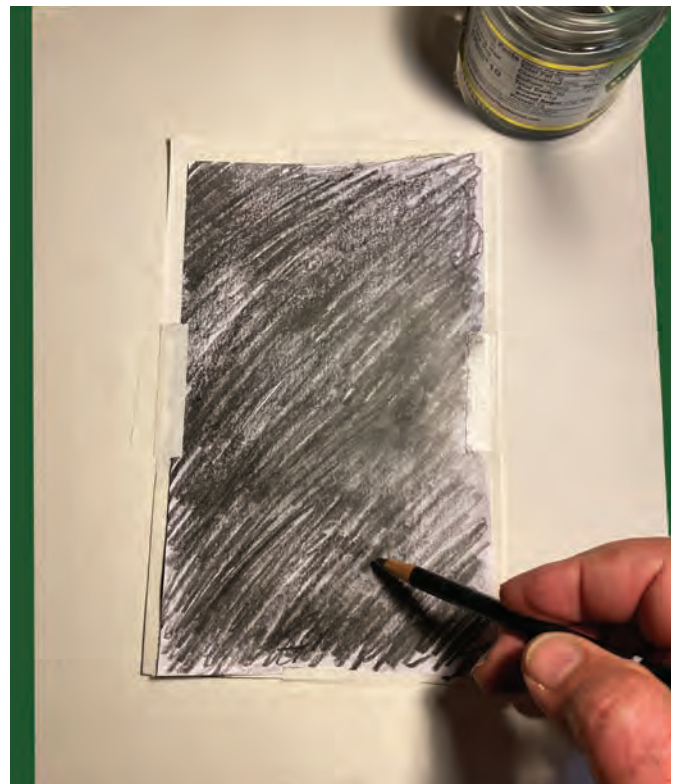


Figure 2. Repeat the process until the entire back of the image is entirely covered first with acetone and then with pencil lines, working on one small area at a time.

and surfaces. Transfers can produce deep levels of luminosity, transparency, and depth using layers that allow surfaces' textures to show through. Depending on the method, some transfers create an aged or distressed look due to the natural imperfections of the technique.

SOLVENT TRANSFERS

Most transfers start out as printed images. One of the simpler transfer methods starts with a printed picture output from a black-and-white laser printer, but it can be printed with an inkjet printer or printed on a press to a piece of newsprint. The image can be transferred to paper, wood, leather, glass, metal, or plastic. This particular technique produces a nice artsy, sketchy look.

First, tape the edges of the print to the destination media print-side down so that it won't move. I suggest that the receiver media be somewhat heavier and more rigid than ordinary 20-pound printer paper. Brush acetone onto a small area on the back of the print using a soft flat brush. Substitute nail polish remover if you don't have acetone.

With a soft pencil, densely scribble on the back of the print to fully cover the wet area (Figure 1). Use the pencil as a burnisher to produce a nice sketchy appearance. For a smoother image, use a spoon or any flat metal implement. Repeat the process until the entire back of the image is entirely covered, first with acetone and then with pencil lines, working on one small area at a time (Figure 2).

When the acetone evaporates, which happens quickly, carefully remove the print from the bottom media to reveal the transferred image (Figure 3). This technique works with both black-and-white and colored images.



Figure 3. The source image (left) transferred to a piece of card stock distressed by pencil burnishing (right).



Figure 4. If the image has text or is asymmetrical, reverse it in the software program that is generating the print.

WAX PAPER

Another simple and popular method of transferring images requires that the subject be printed on a sheet of ordinary wax paper from an inkjet printer. First, trim the wax paper to the exact size of a plain paper sheet, say letter size 8 1/2" X 11". It's important that the wax paper aligns

perfectly with the other sheets in the paper tray so that it moves through the printer effortlessly.

If the image has text or is asymmetrical, be sure to reverse it in the software program that is generating the print (Figure 4). Run the print and then let it dry for a few minutes (Figure 5).

THE DIGITAL EYE



Figure 5. Run the print and then let it dry for a few minutes.



Figure 6. The wax paper technique produces a crisp, durable graphic, even on textured surfaces.

Like the acetone technique, transferring from wax paper works on many substrates. Lay the printed image on the substrate, ink side down. Tape its edges to ensure it doesn't move. Burnish

the image with your fingers or a smooth object such as a spoon. Thoroughly burnish the entire graphic. For a final burnishing, use a credit card to smooth out any wrinkles.

The wax paper technique produces a crisp durable graphic even on textured surfaces (Figure 6). For even more durability, paint a light coat of acrylic gel medium over the surface and allow it to dry.



Figure 7. Jim Reed produces magnificent highly detailed, full-color portraits.



Figure 8. Rather than outputting the fully composited image, each layer is output separately on a six-color Epson inkjet printer.



Figure 9. After the medium dries, the Dura-Lar is carefully peeled off, leaving the ink on the canvas.

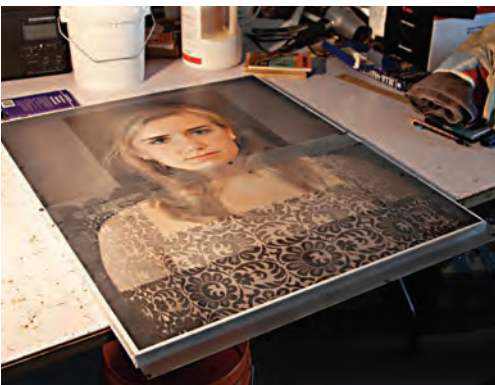
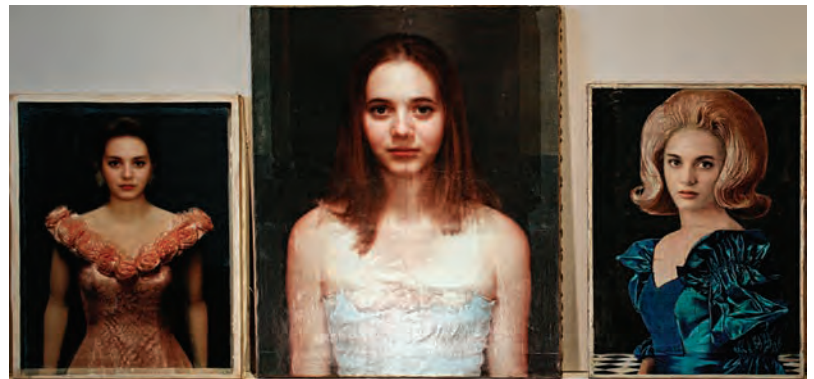


Figure 10. Additional visual elements are applied, allowing time for each layer to bake and cure.



Figure 11 (left). Freezing and cracking the finished canvas produces a distressed look as if the image was painted hundreds of years ago and has developed numerous hairline cracks. **Figure 12 (below).** Jim Reed's art is contemporary yet classical and pushes the concept of image transfer to the max.



INDUSTRIAL-STRENGTH TRANSFERS

A unique process for transferring digitally printed images was developed by artist Jim Reed, who produces magnificent highly detailed, full-color portraits (Figure 7). His process requires precision, patience, and expertise.

He starts by separately lighting and photographing the various elements of his image. His subjects may include a female model, a costume, a manikin, a background, or any other elements that his imagination invents. He composites the source images to layers and composes and transforms them by scaling, rotating, distorting, or warping to perfectly fit the components together.

PRINTING

Rather than outputting the fully composited image, each layer is output separately on a six-color Epson inkjet printer (Figure 8). The material to which he prints is a clear, lightweight polyester film

that combines the properties of both acetate and Mylar, called Dura-Lar. Prior to printing, he coats the Dura-Lar with a thin layer of a water-soluble liquid formula that the ink adheres to. The Dura-Lar acts as a plate that transfers the colored ink to the destination media. When the image is printed to the Dura-Lar, the thin coating of ink is relatively fragile. It can be easily smeared or scratched so it is sealed by spraying several light coats of clear acrylic gloss medium.

INK TRANSFER

The ink is transferred to a piece of canvas that has been coated with acrylic gloss medium. The canvas is attached to a rigid plywood board. While the medium is still wet, the film is carefully placed and registered on the board. The acrylic medium is evened out with a special squeegee. This part of the process can be tricky to remove trapped air — avoid dust to assure perfect complete adhesion. After

the medium dries, the Dura-Lar is carefully peeled off, leaving the ink on the canvas (Figure 9).

After curing and baking the first layer at a low temperature for 8 hours at 110 F, precisely registered layers of Dura-Lar with additional visual elements are printed and applied, allowing time for each layer to bake and cure (Figure 10).

Sometimes identical plates are laminated to produce rich colors and depth. During each lamination cycle, regions are modified by sanding to remove unwanted elements, and this is where a lot of the magic and creativity comes into play. Superimposed elements display a surface depth and character that can't be achieved on a single flat opaque substrate.

SILKY SMOOTH OR DISTRESSED

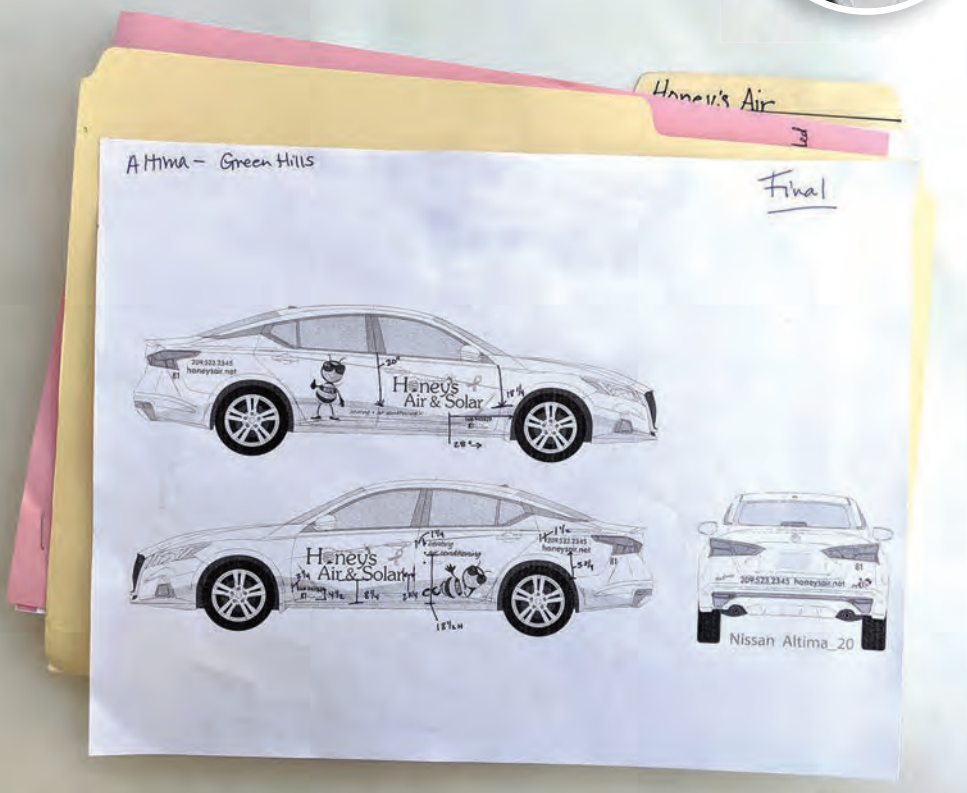
After having been laminated, cured, sanded, and finished, the resulting surface

continued on page 110

Being Accountable to Your Clients

MANAGING CUSTOMER ACCOUNTS WITH EFFICIENCY AND ACCURACY

BY CHARITY JACKSON



We keep separate folders for our repeat customers to organize their paperwork. Proofs with measurements noted are also kept on file for future reference. (All images courtesy Charity Jackson)

In a few of my recent articles, I've talked quite a bit about customer service and its importance in growing your business. How we manage the accounts of our repeat customers relies heavily on the principles of customer service, coupled with excellent organization.

When new customers come in, we work through the steps to take care of them and hopefully turn them into repeat clients. We also have our customers that come in often, whether it's a few times a year, a few times a month, or even weekly. These are the customers that keep coming back to us because we have excelled in taking care of their needs.

As these customers repeatedly come to us, we start to build an arsenal of resources specific to their accounts. By doing this, we're able to efficiently and accurately handle their projects again and again.

ORGANIZED FILES

We have a three-part invoice system that we use. The white copy goes to the customer, and the yellow copy goes to

accounting. The pink copy gets stapled to hard copies of the customer's work orders, proof layouts, wrap checklists, and other necessary paperwork.

This paperwork gets filed alphabetically in our filing cabinets and is pulled for reference when necessary. Once a customer has placed a few orders, we create a separate folder for them, keeping their paperwork together and making it easier to pull.

We gather information from the first job then add in projects or modifications over time. Think of the information you collect as a blueprint for your customer's projects, and how you build the resources will determine the quality of the finished product. I'll break down some of the paperwork we archive and why.

TEMPLATES

For our vector projects, we use FlexiSign, and within the software, there is a tool for creating your own templates that can be auto-populated with information. Look under File>Template in FlexiSign, and you will see Open Template where you can use a pre-made template in whole or part to create your own customized template. Under this same tab, you can save your custom template or apply a finished template to a project.

For more specific steps on creating a custom template, search "Template tool in FlexiSign" online. You should find helpful YouTube videos put together by SAi, the makers of FlexiSign, that walk you through the steps.

We've created a template to apply to our proofs that records project specifics, customer contact information, and space for their approval or changes. Another template we've created streamlines our output process, takes the guesswork out of job specifics, and makes it easier for the person outputting the job.

Once we get approval on a job, we apply the template to our output files

and add a printout to the rest of the paperwork. This printout goes into our folder system under Output, where the person in charge of printing/cutting jobs can reference the specifics.

This sheet includes the location of the output files, the number of signs/graphics needed, the sizes, whether it's a print or cut job, and if we're contour cutting. There are also boxes to mark for which machine we're printing on (different printers have different color output), what media type we're printing to, what substrate it's going on or if it's just graphics, as well as a note section.

It takes seconds to mark the notations on the sheet before slipping it into production with the rest of the paperwork. This information makes all the difference in outputting the jobs efficiently and accurately.

Most importantly, these filled-out templates are kept on file with the rest of the paperwork, so we have all the same specific job information already noted for future

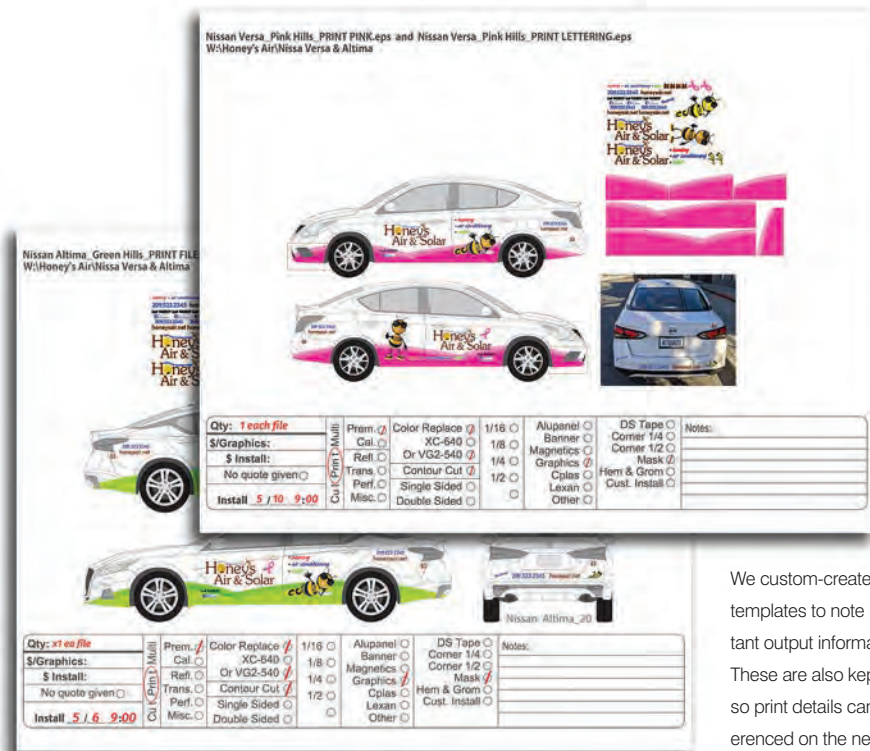
jobs. So next time the customer comes in, we already know which machine and which media we printed to in addition to other important notes to be used on the next job.

At the top of the template, the location of the job files is also noted. Over time these files are saved to our backup file system and organized in Cathy, the file cataloging program we use to find older files quickly. By having the specific file name recorded, we can narrow down our search much quicker.

COLOR TRACKING

We run two different printers. Both are Roland, and we RIP our jobs to both machines through the same VersaWorks RIP software, but because of profile discrepancies and differences in the inks used, there are noticeable differences in graphics printed on one printer versus the other.

We note the printer we output a job to on our output template, but we also note colors specifically within the paperwork.



We custom-created these templates to note important output information. These are also kept on file so print details can be referenced on the next job.

Often we'll write or print out noted colors on the job proof so it's with the layout of the sign or wrap.

We typically color match using one of two sources — a Pantone color chart or our in-house-created color charts through Roland's color system. Pantone charts are a great universal color source when matching up to colors a customer already uses.

By creating our own color charts, we can print an array of spot colors on the media types that we use. For example, we have a color chart on our premium wrap media, 3M IJ180Cv3, a color chart on 3M IJ35c intermediate vinyl, and a color chart printed on 3M IJ180mC-120 printable metallic. Not only is the customer choosing the hue they want, but they can also see exactly how it looks on the specific vinyl type.

In addition to noting the spot color, we often apply an extra decal or piece of the printed graphic to the paperwork itself for



In addition to our Pantone charts, we also have custom color charts for each of our machines and media types for accurate color selection. Clear notations of colors used are noted in the customer's paperwork.



Photos of all sides of finished vehicles and sign installs are saved in the customer's files for future reference.

future reference. If it's cut vinyl, not printed, you can also clip a part of the material and apply it to the paperwork. Be sure to note the manufacturer and color number too.

PROOFS

Often sign or vehicle projects will run through a few variations before the customer approves the design. We print out a copy of the chosen design and write FINAL on it so that it's differentiated from any other proofs still in the paperwork.

If the project is a vehicle graphic, we use this final proof during the installation for

placement reference. Include all sides that will receive graphics in the proof — don't overlook including both sides because often there are different obstacles from one side of a vehicle to the other.

During the installation of graphics, we also use this final proof to note the placement of the graphics specifically. Draw lines from a point on the vehicle to the spot on the graphic that you're measuring between.

These measurements ensure that any future installs on similar vehicles will get placed the same. Consistency is vital in managing fleet graphics; when cars are

parked together in the lot, the placement should be the same.

PHOTOS

We take finished photos of all our vehicle installs no matter how big or small the project. Keeping these on file with the rest of the customer's information is another way to maintain consistency.

It's also helpful when there are weird obstacles or tight placement of graphics that you want to replicate on another vehicle. Looking at finished photos of past work can speed the placement of graphics before installation.

We don't necessarily take pictures of every sign project, but we do photograph larger installs or unique jobs. Again, it's all about documentation for future reference.

PREFERENCES

Organization and reference information is a huge part of managing a customer's account efficiently and reliably. Couple that with excellent customer service, and your customer will come back to you time and time again.

There's one more thing to keep track of, though, and that's specific to the customer themselves: how they prefer things throughout the process. Does your customer like having artwork emailed with a follow-up phone call, or do they prefer meeting in person? Does each invoice require a purchase order for processing? Does each invoice require specific notations (work order numbers, purchaser signature, copy of a packing slip with separate billing invoice) to be paid? Has the customer set up terms, or do they want you to keep a credit card on file?

Each customer is unique in their needs, but they all benefit from the ease of working with your sign company. If you can make the process smooth and the results efficient and high quality, then you'll continue to earn their business. **GP**

CHARITY JACKSON is co-owner of Visual Horizons Custom Signs based in Modesto, California. She has been in business since 1995, and has worked in the sign industry for over 25 years. You can visit her website at www.vhsigns.com.




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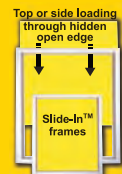
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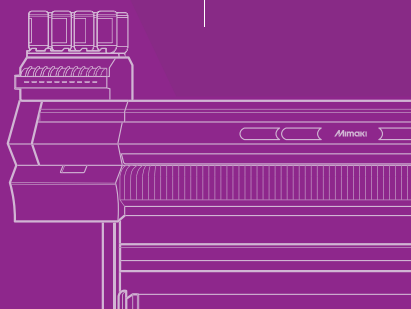
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10 a.m. – 4 p.m.

- Digital Technology Group - Print on Purpose - How to Start and Grow a Successful Print Business
- Hirsch Solutions Inc – Join the DTG Revolution!

THURSDAY, JULY 15, 2021

8-9:30 a.m.

- Epilog Laser - Get the Most from your Laser Investment: Tips & Techniques to Save Time & Increase Profits
- JDS Industries - Troubleshooting Sublimation

11 a.m. – 12:30 p.m.

- IKONICS Imaging - Profitable Sandcarving - Small Investment, Large Potential
- Transfer Express – Should you Print Licensed Logos?

1:30-3 p.m.

- Northeast States Sign Association - New Opportunities in LED Sign Retrofits
- Trotec Laser - Skills, Strategies & Laser Hacks to Help you Succeed in a Changing Business Environment

FRIDAY, JULY 16, 2021

8-9:30 a.m.

- STAHL'S' - Top Apparel Trends and How to Print Them
- Corel Trainer - CorelDRAW A to Z

9-9:45 a.m.

- Northeast States Sign Association - NSSA Panel Discussion: Planning for your Company's Future Resiliency

11 a.m. – 12:30 p.m.

- Transfer Express – Screen Print with Just a Heat Press

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IN THE INK POT

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Beyond driving up costs, this is also an issue when it comes to simply fulfilling an order. For those graphics shops that can't order ink, it can be tricky navigating their customers and getting orders out on time. "High raw material prices have started to, and will continue to, affect downstream users, like plastisol ink manufacturers and printers alike," says Landesman. "The immediate future is higher prices and maybe some constrained supply of certain items. Printers should start to expect longer lead times for screen-printing supplies."

Luckily, there are a couple things shops can do to soften the blow. "The best way a graphics shop can prepare is with proper forecasting," Lopez advises. "Watch how much ink projects consume and try to identify a pattern. Based on normal projection years, order enough ink to cover what you expect to need, and additional sets of ink for backup."

"If you are unable to obtain the ink your printer requires, don't do anything crazy out of desperation," caution Rodenhouse and Lamb of sublimation. "If you suddenly find a source for Brand Y but your printer uses Brand X, do not switch." They add that if you do switch, the two brands may not be chemically compatible, which could damage your printer. Plus, it's likely that the colors won't match. "Just be patient and stay in contact with the dealers that sell the ink that was manufactured for your printer," they advise.

Ultimately, whether you're working with screen printing, sublimation, or another digital ink, quality output is always the key to keeping customers. Despite shortages and other issues, graphics shops shouldn't compromise on using the correct ink to get the job done. **GP**

CASSIE GREEN is the executive editor of *GRAPHICS PRO* magazine, and previously served as the editor for *A&E* magazine. You can reach her at 720-566-7278 or cgreen@nbm.com.

GRAPHIC FILM APPLICATIONS

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Examples include having wayfinding signage that matches corporate colors or simple vehicle wraps that give key brand identity and only the necessary contact information. But, as Halloran stresses, start with the expectation of the end customer in mind. Understand the quality and durability expectations and work closely with vendors.

And while the equipment may be able to multitask, the materials that a shop excels in should always be the focus. "There is a learning curve that comes along with every new capability that businesses add," stresses Harmon. "Installing a car wrap is very different from installing a window film. Building the knowledge base to know the best film to use, the best techniques, and tricks of certain installs can take time to accumulate." Knowing where you shine not only helps a shop stand out in a crowded market, but ensures customers will keep coming back and spread the word of awesome graphic work. **GP**

TAKEAWAYS

- The most common graphics can be classified as permanent, temporary, or air-egress.
- Key pieces of equipment can do multiple types of graphics; most jobs typically require a plotter, printer, laminator, and computer.
- Troubleshoot using technical data sheets, technical tip documents, and the knowledge of your distributor or manufacturer.
- Always consider the use of the graphic when deciding the type of art, film, and adhesive.
- Focus on your strengths and know every style of graphic will have its learning curve.

CARLY HOLLMAN is the former editor of *Printwear* magazine with over nine years of experience covering the decorated apparel industry. She currently works as a freelance writer and artist based in Denver, Colorado. She can be reached at carly.hollman@gmail.com.

THE DIGITAL EYE

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appears silky smooth as if glazed with numerous layers of oil paint, linseed oil, and Damar varnish, a technique employed by the old masters. Freezing and cracking the finished canvas produces a distressed look as if the image was painted hundreds of years ago and has developed numerous hairline cracks (**Figure 11**).

Sometimes Reed will create multiple versions of an image, mixing components so that each image is entirely unique. The synthesis of the sublime surrealism of his photographic images and the simulated techniques of the old masters combined with the distinctive use of transfers and lamination create a compelling visual experience of color, texture, form, and content. His art is contemporary yet classical and pushes the concept of image transfer to the max (**Figure 12**).

TRANSFER

Transferring images to various substrates, as you have seen, can be extremely simple, involving a few common household materials that you probably have lying around; or exceedingly complex, involving exotic media, precision registration, and sophisticated digital and manual techniques.

No matter what method you choose to experiment with, transferring images can be a fun and creative process. The advantage is that you can apply images to almost any surface without a lot of fancy equipment. Or if you are really motivated, you can venture into the depths of the Jim Reed Dura-Lar technique. Give it a try! **GP**

STEPHEN ROMANIELLO is an artist and educator, teaching digital art at Pima Community College in Tucson, Arizona, for over 29 years. He is a certified instructor in Adobe Photoshop and the author of several books on the creative use of digital graphics software. Steve is the founder of GlobalEye Systems, a company that offers training and consulting in digital graphics software and creative imaging, and the CEO of Fireboy Productions, a publishing company.

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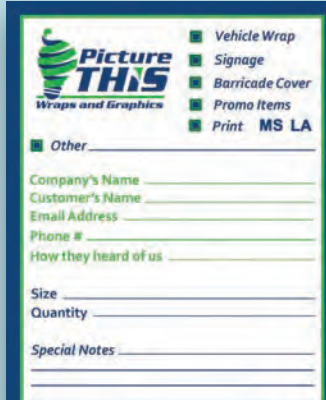


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Trey Matula, founder of Picture This Wraps and Graphics, outlines his take on SOPs.

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(Image courtesy Trey Matula)



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