

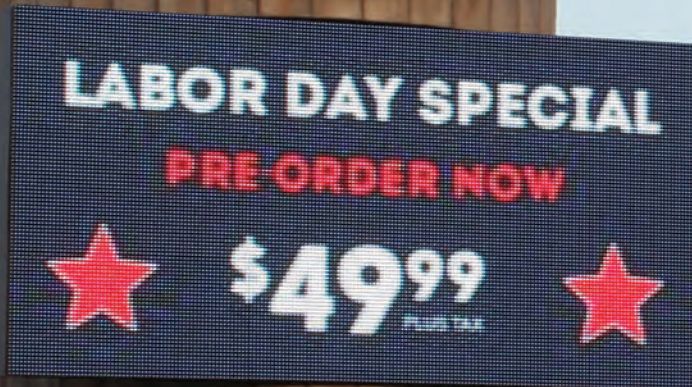
# GRAPHICS | PRO

AWARDS & ENGRAVING | PRINTWEAR | SIGN & DIGITAL GRAPHICS

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## LED DISPLAYS

- Roll-to-Roll Printing
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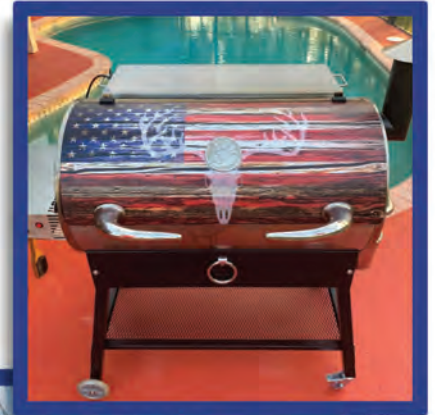
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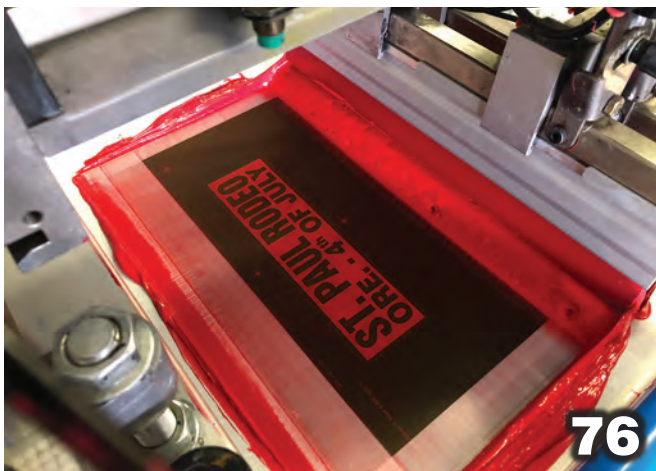
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# The Kids are Alright



Staffing is one of the biggest issues a graphics shop has to deal with. But we're not alone in that area. Finding good help is a problem across the country, so it's important to do what you can to make sure your shop is competitive with other possible career paths in the same way you need to be competitive with your products.

So, that brings us to finding those employees. Enter Gen Z.

Gen Z refers to individuals born roughly between the mid-1990s and the early 2010s. While it's important to note that individual preferences can vary within any generation, there are some common characteristics and expectations that have been observed among Gen Z regarding their ideal work environment. Here are a few key aspects:

environment. Here are a few key aspects:

**1. Technology Integration:** Gen Z grew up in a highly connected world and are generally adept at using technology. They value a work environment that leverages technology effectively, offers seamless digital experiences, and embraces innovative tools and platforms.

**2. Flexibility and Work-Life Balance:** Gen Z tends to prioritize a healthy work-life balance and values flexibility in their work arrangements. While remote work is unlikely in a graphics shop, flexible schedules, and a focus on outcomes rather than strict adherence to set office hours are still important.

**3. Collaboration and Inclusion:** Gen Z values collaboration and seeks an inclusive work environment where diverse perspectives are valued. They appreciate opportunities to work on team projects, engage in open discussions, and contribute to a positive organizational culture.

**4. Professional Development and Growth:** Continuous learning and opportunities for personal and professional growth are essential for Gen Z. They seek employers who invest in their development, offer mentorship programs, and provide clear pathways for career advancement.

**5. Socially and Environmentally Responsible Organizations:** Gen Z tends to be passionate about social and environmental issues. This means they are going to have feedback and ideas when it comes to green initiatives.

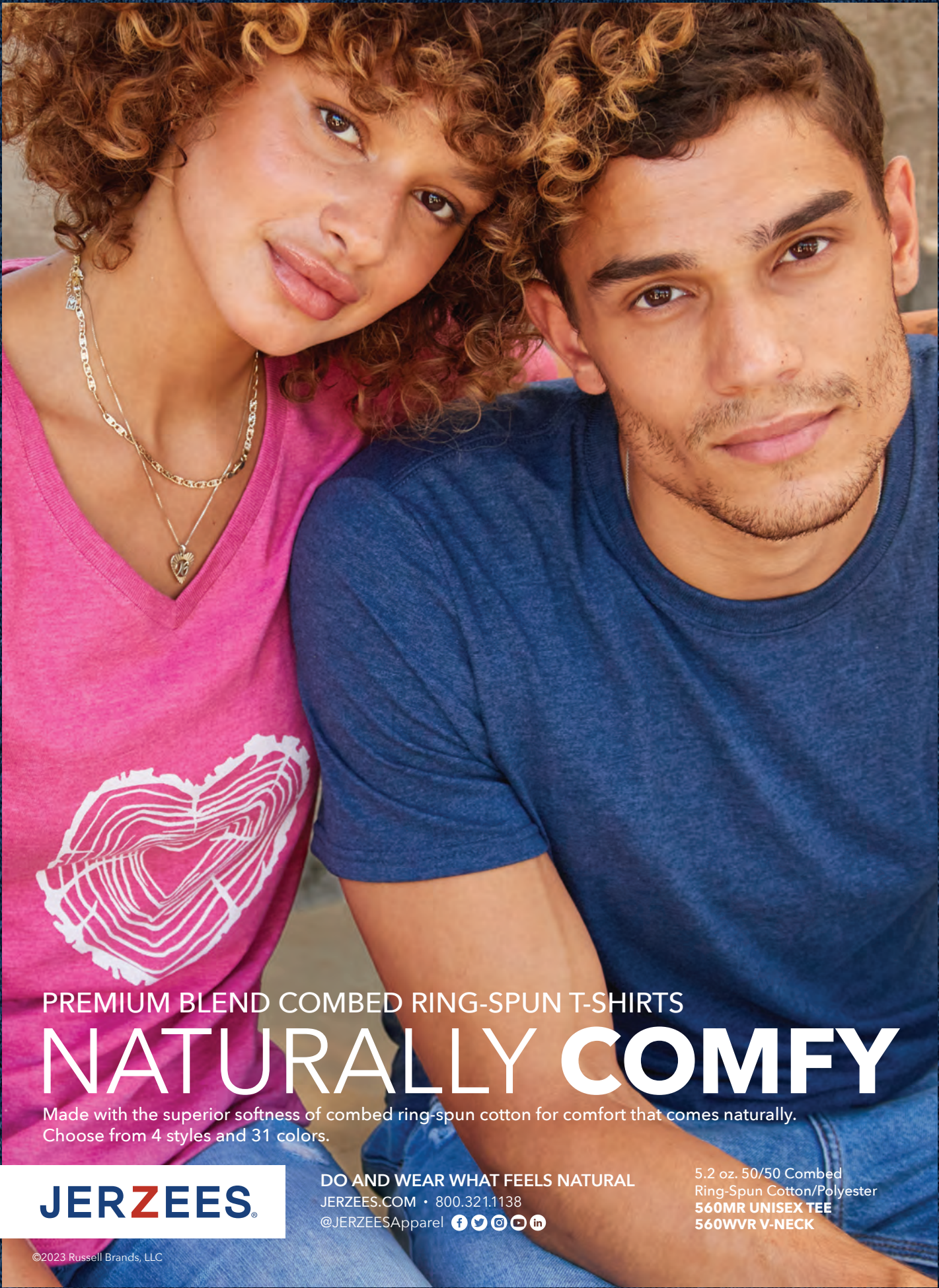
**6. Transparent and Authentic Communication:** Gen Z appreciates open and transparent communication from leadership. They value regular feedback, clear expectations, and opportunities to voice their opinions.

**7. Meaningful Work:** Gen Z tends to prioritize meaningful work that aligns with their values and allows them to make a positive impact. They often seek purpose-driven organizations and value opportunities to contribute to a greater cause.

Will adhering to these aspects eliminate turnover in your facility? Of course not. No amount of collaborative culture, environmental activism, or clear communication will keep an employee around if you offer 2% raises during 3% inflation. But it's important to understand that other shops vying for these employees will be working in this direction.


**WANT TO KNOW MORE?**

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# Waste Not, Want Not

*Tips on getting the most of your film rolls to cut down on waste and time, making each job more profitable*

BY ADAM SUMNER



Adam Sumner is the owner of Wrapix Imaging and Wrapix Academy, Burbank, California.

Flipping through page after page of a supplier's catalog can sometimes leave us with more questions than answers. What material is right for the application? What film is going to save us the most money and still deliver a quality product to our customers? What film will make this installation easier? Is that reflective really that much better for the price?



Setting up the takeup to allow for roll to roll laminating saves so much time. Pair that with setting up the panels to be the exact same size, allows us to utilize the inline slitters on our laminator cutting finishing time by 60%.



When switching materials clearly labeled rolls cuts down on time searching for the correct film to load next.

You name it, and the list goes on. I used to look at the catalogs trying to pinch every penny I could to turn the most profit on the job as possible. And years later, after walking around my production room, I realized I had been asking all the wrong questions. The answers I had gotten to those questions (the mass amount of different job-specific films I had lying around the shop) had actually cost me more and caused me to lose money, not make it.

The wide-format printing industry has so many different niche markets, from the vehicle wrap-only shops to the outdoor signage and architectural shops, and a million different combinations in between. However, no matter how large or how small the shop, we all lose money in the same place ... *waste!*

I'm not talking about the waste we should be building into the job that doesn't fill up a full sheet. I'm talking about the 8-foot leftover on a print roll or the countless partial rolls of laminate we have lying



around, the ones that cause us to cross our fingers, hoping there is enough left to finish those yard signs. That job came in at 2 p.m. Friday, and we rushed to print, then deliver at the end of the day. I'm talking about the wasted money we leave behind and one day end up throwing in the trash because we're tired of the domino effect that happens on a weekly basis.

I want to just share some tips and tricks to possibly help streamline the workflow, cut down on waste, and add profit from every possible inch of film we receive on a roll.

### Savings in pre-production

The first way I was able to find a place to save some waste on material actually started in pre-production. The way we were saving our files and how they were getting over to production was a mess, so we adopted a new system.

Yes, we have job tickets and track production, but let's face it, sometimes people have an off day and just start to print

stuff to get the job done as fast as possible and mistakes are made. So now every design or job is saved into a daily print-ready folder. That way, when production starts the day, each job that needs to print should be in that folder.

Yes, there are times a rush comes through, and it is not in there first thing in the morning, but we do our best to set the schedule up so each morning production knows exactly what files will be printed that day.

Inside that day's print folder are separate folders with what base film and what laminate will be used for any given project. We make sure to gang up all the prints for the day that will be on the same media and finished with the same laminate to cut down on the amount of times a roll change happens.

We found that every time a roll is loaded, we lose on average 8-10 inches of film on the front side and about 4-6 inches on the back side when removing the print from the machine. Yes, you can build this

into the cost of the job as we do, but by planning out our prints for the day — and not just the job and ganging as many together on a single run as possible — we cut down on the loading and unloading time and material waste.

### Matching materials

This is the number one for us since we use IJ180cv3 for a ton of customers; some love gloss, and others require a matte finish laminate. I can't even begin to tell you the amount of times we would be running the print through the laminator with our fingers crossed that the random roll of 8518 had enough to make it through to the end of the print. The number of times I got that wrong and the long nights of staying to reprint a file still drives me crazy.

The solution to this problem we found was to have matching sets. When we order a roll of print film we order a roll of laminate with it. Each one of those boxes get labeled as a set. When the print film is



Mounting tables allow for more than just transfer taping. The ability to laminate short runs or test prints for customer approval allows us to maximize every inch of laminate laying around the shop.

opened up that label goes on the inside of the core so that we know, and we do the same with the laminate. That way, each time that roll is loaded or unloaded on the printer or on the laminator, we should make sure that we never run into the problem of running short on laminate.

Now you might be asking yourself, “Well, doesn’t that mean that if you have 2 feet of material, you need to print and laminate with gloss? And then you have five jobs printing on the same film with a matte laminate. You’re going to have to unload the machine to reload on the same material but a different roll.” Yes, you are, and in my opinion you should.

At one time, we had 70+ partial rolls of laminate all with varying amount of laminate left on them. Looking at the amount of film on those rolls and wondering why we had so many lying around, I spent some time watching production and seeing where the mistakes were.

Then I found it without knowing how much was on a roll, and no one ever wanting to say, “Adam, I’m sorry we have to

reprint that driver side because the laminate ran short on the last 4 feet.” It was easier to just grab a new roll of laminate off the shelf than it was to guess and be wrong.

### Production and equipment

The one way for production to know how much film is left on the roll is to use the printer’s setting to track media length. I wish I could say we are flawless with this, but we’re not. People get in a rush and need to crank out a job and skip the step to enter the remaining material, but I’m telling you it makes a world of a difference to know that, yep, there is 34.6 feet left on this roll so let’s use this one. Oh, by the way, this roll is labeled with a pink tag. It must match up with that pink tag on the laminate. Winning.

Another way to check, just in case you forget, is just to Google “Roll Length Calculator.” Get a set of digital calipers, enter the three measurements it needs, and *boom*, you have a close estimate for how much is left on that roll. This is in no way

the best option, but it gets you close. Err on the side of caution because we have cut it a little close at times, especially on banner material.

One thing that makes this process easier is having the right equipment. I recently visited a shop to teach installation. On the tour of the place, I noticed long tables behind the laminators. When talking with the production guy, he said that even when they print wall wraps, they print one panel at a time, lay it out on the table, run it through the laminator, and then it runs out on the table.

They had been doing this for a long time but were now getting into jobs that were much larger than what they were originally used to. And none of the laminators had take-up rolls. *You need a take-up on your laminator*; it will seriously increase your production and decrease your waste.

### Mounting tables and materials

I can’t even begin to describe how valuable these machines are. I run the CWT mounting table, and I love it. We use it

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daily; it's like having another employee. If you remember back in the beginning about the 5 feet left on the roll? This is where you make sure you get all your money out of that roll.

Having the ability to laminate small sticker runs or that single graduation yard sign that came in at 2 p.m. on Friday before graduation, you're able to use that last 5 feet by table-laminating that graphic. I have no idea how we functioned without it for so long. I highly recommend this investment.

Material stocking is the big one. Limit the options and start thinking about your business like In-N-Out. Deliver a quality product, and don't make the menu too long. This is the one thing I have done, and it has saved me so much time and effort in ordering film, keeping stock up, and saying yes to that last-minute project because we have the material we need.

We have cut it down to three options



*Find your staples,  
stick to them, and  
fine-tune your  
production to cut  
down on waste and  
increase the yield  
from each roll.*

for adhesive-backed vinyl. A film for our throwaway signage (temporary signs on foam board or Coroplast and small stickers). A better calendered option for short- to mid-term flat installations interior or exterior, and then our premium film for vehicle wraps and wall murals (always checking wall graphics with an adhesion test prior to production). This has simplified our stock of print film and cut down on the amount of overlaminates we have in the shop as the first two options use the same laminate, and our premium uses its own laminate.

The wide format printing industry is evolving, and shops are now migrating from where they originally started into bigger and more profitable jobs. As things scale up, don't overcomplicate the process by adding new films. Find your staples, stick to them, and fine-tune your production to cut down on waste and increase the yield from each roll. **GP**



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# Roll-to-Roll Printer Options

BY PAULA AVEN GLADYCH

*Finding the right roll-to-roll printer for your workflow*



Paula Aven Gladych is a freelance writer based in Denver, Colorado. She can be reached at [pgladych@gmail.com](mailto:pgladych@gmail.com).

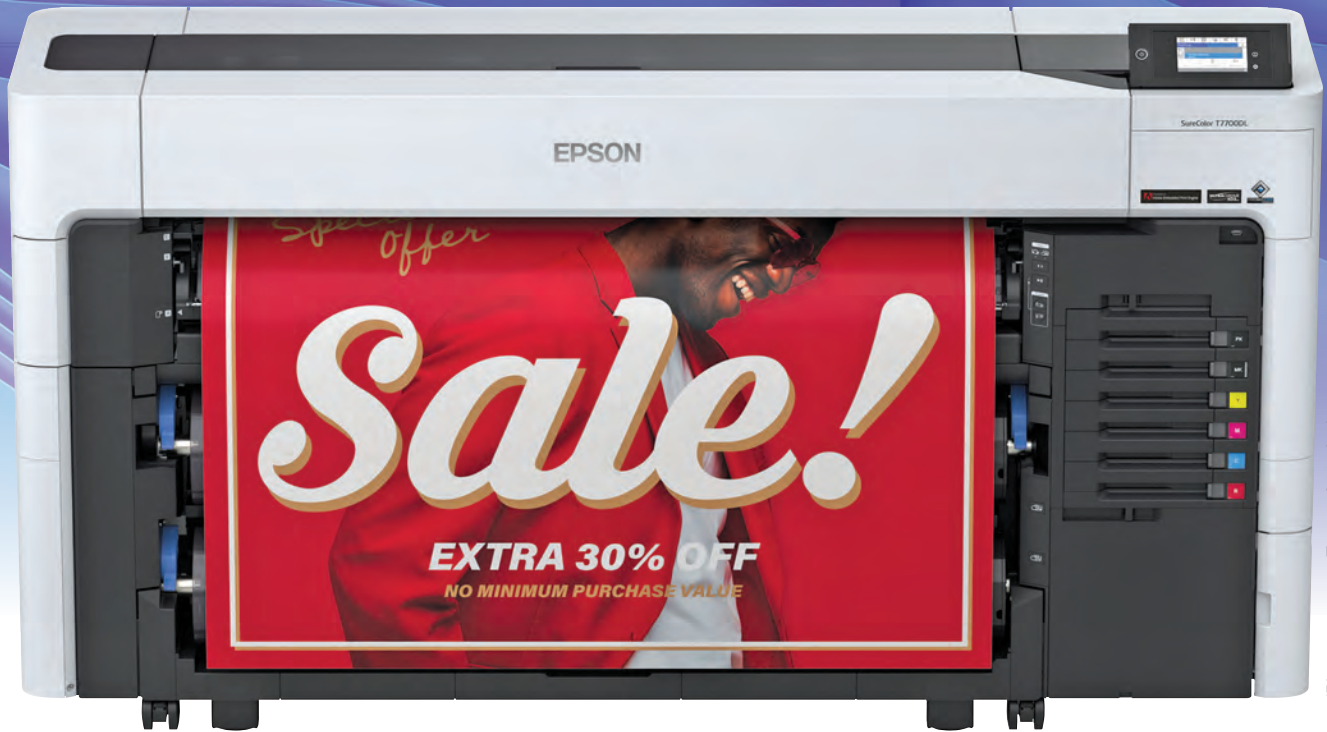
**T**oday's printing systems are durable and long-lasting, but many print shops will start looking for new equipment options after about five years of hard use, not because the machines are no longer capable of producing good products but because print technology evolves so quickly there is always something being added that can save time and space, improve performance, or open up possibilities for new product offerings.

## The next step

"These printers are purposefully designed for production and high print volume output, which makes them robust enough to last for many years in service," says Jacob Hardin, product manager, Professional Imaging, for Epson America. "While these machines are hard at work in the field, manufacturers like Epson continue to build upon previous generation technologies to improve many aspects of printing, such as speed, size of the printer, and soft capabilities such as IT, security features, and software integration."



(Photo courtesy Canon U.S.A.)



(Photo courtesy Epson America)

He added that on average, “major platform technology changes dramatically about every five years. Your machines may be producing output that still satisfies client demands as well as your needs, but around the five-year mark, it’s really a good time to start researching new platforms, features, and capabilities which have likely evolved since your last upgrade.”

Many shops begin to think about a printer upgrade when their current roll-to-roll printer starts to have problems, says Patrick Donigain, senior marketing manager for Canon U.S.A. And even though it still works, it frequently needs to be serviced because it isn’t working like it used to.

The other reason is the shop’s volume has increased.

“The machine they bought to do two or three rolls a month is not keeping up with the seven to 10 rolls they are doing now, causing overtime labor costs and additional shifts,” he says. “Work that used to be two to three hours a day is now 10 to 12 hours a day.”

Shops can choose to either upgrade an existing machine or purchase a new one based on hot new applications they want to try or customer requests for something their current machine can’t handle.

Tony Simmering, Mutoh’s product manager for eco-solvent and dye-sublimation,

says that the first thing he asks people who are looking to get into roll-to-roll printing for the first time or are already in the business is what their scope is.

“I take that answer and work off of that. If their answer is very broad, they want to be able to do everything, I ask them to take a step back and narrow the scope,” he says. The next step is looking at their current numbers and where they would like to see themselves in three to five years.

“Do they want to be adding new products or grow their existing SKUs? Really, I try to get people at least one step ahead of where they think they are now,” he says.

Hardin says that upgrades start to make sense when their current machine can’t keep up with increasing customer demands.

“Our latest roll-to-roll printers have some increased flexibility which extends beyond roll-to-roll (when needed), such as the ability to print directly to rigid posterboards, canvas, and other interesting substrates,” he says. “Adding new services supported by the latest generation technologies can help increase your flexibility and could provide an extra edge when it comes to satisfying increasing customer job demands.”

Mutoh’s Pro Series of printers come in three different levels, a 54-inch entry-level ecosolvent, a 64-inch single print head

**Many print shops will start looking for new equipment options after about five years of hard use, not because the machines are no longer capable of producing good products but because print technology evolves so quickly.**

ecosolvent, and a 64-inch two-head ecosolvent. Simmering says that if a company's entire business is stickers, decals and using heat transfers printed on a desktop printer to put designs on apparel, it might be time to invest in a 54-inch single print head entry-level machine. If a shop does fleet vehicle wraps but three years from now wants to be doing full graphic designs for luxury vehicles, paint protection film and window tinting, they should move up to a 64-inch single-head printer.

Companies need to leverage how much capital they have to put into this equipment investment vs. how many hours in the day they have to get jobs done, Simmering says. Sometimes it is easier to go one step up now for a lesser cost, but that could mean having to go through the process again in six months when

the shop's capacity becomes stretched. If shops don't upgrade enough at the beginning of their search, they may end up with many redundant printers as they grow into something bigger.

"You have to be realistic. You don't want to jump too far. We want to tell you to buy the top machine. Everyone makes out with that, but at the end of the day, you have to look at what is the right balance of capital to invest in this and the man hours you are using to produce currently," Simmering says. "You don't want to over expand or under expand."

He added that "there comes a certain point where we call it end of life. [The press] is no longer being manufactured and we've stopped making changes or add-ons at that point. That's why we say now is the time to jump into new features.

There's no way that is going to happen on the old ones."

### New models vs. older equipment

Epson's latest roll-to-roll printer models are developed based on customer and print operator feedback, "which we think are equally important," Hardin says. The company's SureColor T7770DL is a bulk ink-based roll-to-roll printer that has all-front operation, including ink and media changes. Media roll reloads now auto-load on the printer, so all an operator has to do is load the roll on a spindle, lock it in the printer, and press a button to load. No more feeding required.

"The bulk ink system can lessen time between cartridge changes and can help provide lower ink costs as well. Additionally, new IT and security features



Banner material printed on a Roland TrueVIS VG-640 printer. (Image courtesy of Roland DGA)



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(Photo courtesy HP)

help integrate these printers on existing networks.”

Many people don't realize that large-format printers have become more compact.

“Just like cell phone and computer technology, designs are becoming more compact as new generations come to market, while still maintaining very productive and powerful capabilities,” he says.

Marc Bautista, large format global product senior manager for HP, says that HP's newest roll-to-roll printer is a 126-inch-wide HP Latex 2700 that takes production efficiency to the next level, offering vivid colors at up to 958 square feet per hour via symmetrical double print heads that come equipped with automatic print head cleaning technology.

“With this new printer, users can take on high-margin jobs with 30% wider gamut at high speed, preserving media gloss and feel across a wide range of signage and décor applications — such as thin films, vinyl, and paper thanks to the lower curing temperatures,” he says.

The HP Latex 2700W printer offers “the whitest white ink in its category at speeds

of up to 581 square feet per hour, allowing Print Service Providers to produce high-margin applications on pre-colored and transparent media,” Bautista says.

All printers in the HP Latex 2700 series use HP Latex inks, which are formulated with up to 65% water. This makes Latex prints “not only odorless but also recyclable, returnable, or non-hazardous and, therefore, safe for disposal. Plus, it provides healthier print production without trading off performance,” he says.

Latex technology allows PSPs to meet more stringent health and environmental criteria, enabling them to produce work for sensitive environments, such as health care spaces, homes, or offices, he added.

#### **Efficiency, profit gains with newer tech**

Many of the advances happening in printing currently involve improvements to print head technology. Some models feature larger print heads that can increase output over previous generations while still maintaining good quality, Hardin says.

“Expanded capabilities such as being able to print on a variety of media allow

more products for customers to choose from and the potential to increase the scope of jobs that can be offered. New features that help switch and load media rolls automatically are now available which can help operators spend more time printing versus changing media. Meanwhile with all this expansion in capabilities, some of today's printers are smaller than ever, which can be a big benefit to add additional machines in your existing floorplan to increase output or even give you the ability to move machines around when needed,” Hardin says.

Print Service Providers can “enable business agility and maximize uptime and productivity thanks to software tools like HP Professional Print Service Plans or PrintOS,” Bautista says. “HP Professional Print Service Plans is a new service and printing solutions experience that helps users with every business need, offering support, print operation optimization, and actionable knowledge. Elsewhere, HP PrintOS gives remote management of the printer system, and, thanks to the Print Beat tool, users can easily identify jobs

*Many of the newer printers are designed for unattended operation. They can automatically switch out rolls and maintain the print heads without user intervention.*

and job queues of all registered printers across multiple sites in one comprehensive space and with a glance view.”

Canon’s Colorado press has the ability to spot gloss without using varnish and the company has experienced major growth in the past few months due to its white ink capabilities.

“We just launched white ink. That is notoriously a pain because of the nature of titanium dioxide particles, they like to settle,” says Donigain.

The Colorado uses UV and gel-based inks that resolve the issue of print head clogging because UV inks don’t evaporate. Gel-based inks are the consistency of hair gel, which helps suspend the particles better, he added.

The press also has an agitator in it to keep the ink fluid. The varnish option is mostly used in the business card market and in postcards. The Colorado can print

gloss and matte at the same time in a single pass.

“That is unique to us because we have this unique carriage system, a printer carriage and curing carriage,” he says. That means if the shop wants a drop of ink to hold its dome shape, the curing carriage can hit it with UV for just five seconds to cure it in that shape. If the ink is allowed to settle for five to 10 seconds and then cured, the ink will create a smooth, glassy surface.

Many of the newer printers are designed for unattended operation. They can automatically switch out rolls and maintain the print heads without user intervention, he says. The Colorado, in particular, “takes care of itself from a lot of different angles,” Donigain says, “you don’t have to babysit the machine.”

The press runs off a modular system so that a customer can purchase the

entry-level model that only has one roll, gloss only, and entry-level speeds. If their business grows, they can add a second roll into it or add the ability to print double-sided at 50% more speed. Everything is done remotely.

Mutoh’s Simmering adds that the latest printing advancements have opened up many opportunities that weren’t available in the past, including personalized shoes and apparel.

“We call it diversification at Mutoh. How to diversify your application set and what type of things can you offer in your business with your existing equipment,” he says.

A sign shop that wraps cars could offer keychains or T-shirts that match the car. This way, the shop can offer new and personalized products to new customers as well as existing clients. **GP**

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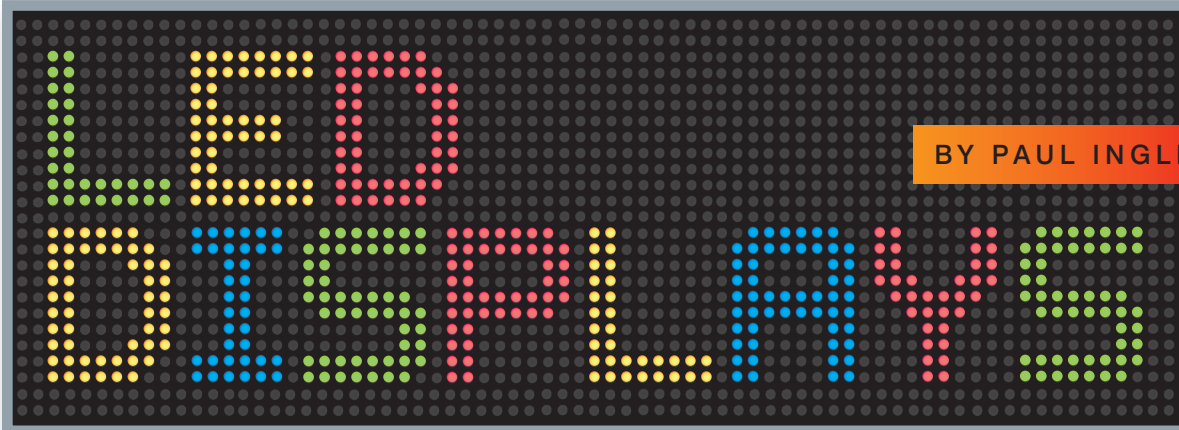


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BY PAUL INGLE



*LED displays bring dynamic value for your clients and big revenue for you*



Paul Ingle started selling signs in 1985 and has worked with regional, national, and international accounts for custom, architectural, and production manufacturing firms. He has held various positions in sales, sales

management, and marketing since 1973. From 2006 to 2017, he and his wife Nita owned Design Center Signs (a Comet Signs company) in Tyler, Texas. Comet Signs is now part of Stratus, a leading facilities and branding implementation firm. Paul is a past president of the Texas Sign Association and its regional chapter, the Greater DFW Sign Association. Contact him at [paul.ingle@cometsigns.com](mailto:paul.ingle@cometsigns.com).

**I**n a softer economy, we are all looking for ways to increase sales, expand profits, and create raving fans among our customers. Studies confirm that it costs five times more to acquire a new customer than to keep an existing one. If we only increase customer retention by just 5%, we can increase profits by 25-95%. Need another incentive? Existing clients are four times more likely to refer friends and seven times more likely to try a new offering by you!

LED displays and electronic message centers are an excellent way for you to increase your average sales dollars and add more profit to your bottom line. These systems are complex, but the display manufacturers have many tools to help you learn the product/applications, and they





provide electronic or hard copy literature to augment presentations to your clients.

### LED background

Most have demo vehicles to showcase their products via a truck or trailer, which can be displayed at your prospect's place of business. I've found that the top suppliers in the digital market are great partners during the sales process, and their expertise, input, and assistance often help close the sale.

So, what is an LED? A light-emitting diode is a small electronic semiconductor that converts electric energy into visible light. The chemical compound within an LED determines its color, brightness, and power efficiency. Unlike incandescent lamps, LEDs have no filaments that can burn out or fail. LEDs have 80-90% efficiency, which means up to 90% of their energy can be turned into light and not heat. This makes them tough and durable.

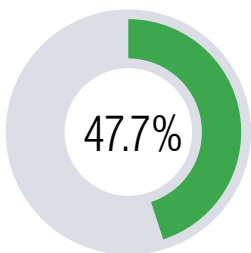
The first LED prototype was invented in 1927. Monsanto used the first commercial

*LED displays and electronic message centers are an excellent way for you to increase your average sales dollars and add more profit to your bottom line.*

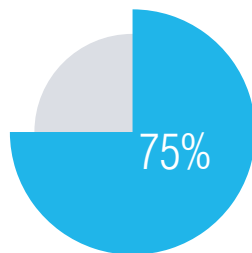




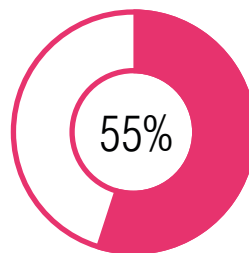
## Digital displays are proven to be effective



increased brand awareness from digital signs



of consumers recall seeing a digital sign in the last month



of people were highly engaged in the images they saw on digital signs

Source: *The Psychology of Good Signage and How to Make it Work for Your Business* Entrepreneur Middle East, June 1, 2017. Entrepreneur.com/article/295082. From InfoTrends reports and Nielsen data.

LEDs for indicators in 1968. LEDs have replaced virtually all fluorescent and incandescent lamps in our automobiles, homes, businesses, and, of course, signage. And they have almost singlehandedly eliminated the use of neon in signs due to lower costs and the low-voltage current required for power supplies versus the high-voltage transformers that powered neon.

The benefits of LED displays are many. Learning these features and benefits will help you sell them if you do not currently offer them, or increase your closing ratio if they are already a part of your product and service offering.

### Why buy an LED display?

- Perfect for indoor or outdoor use
- Low power consumption
- Low maintenance requirements
- Long life spans, even when operating 24/7
- Self-emitting light source and low carbon footprint
- More efficient than LCD and plasma displays
- Available in different shapes and sizes
- Resolution options that offer high-quality visuals
- Programmable content that can be time designated
- Operational from anywhere
- High ROI and low advertising expense compared to other media

Whether your customer is looking for a digital billboard, pylon sign addition, mobile unit, scoreboard, wall display, or interior advertising system, an LED screen has attention-grabbing capabilities. With bright, dynamic graphics, these units can improve fan experience, capture attention, and make your customer's brand stand out from the rest.

Roadside LED signs are a visual beacon for your customer and easier (plus safer) to use than changeable copy boards. They are an effective way to influence decisions by communicating products and services, hours, and a mission to people passing by.

Unlike virtually every other item in society, LED business signage is declining in cost due to rapidly evolving product



Pixels, short for picture elements, are points of light that form letters, words, graphics, dynamic animations, and video images. A pixel can be a single LED, multiple LEDs of the same color, or various LEDs of different colors. They are the smallest elements of the electronics display system that can be individually controlled and turned on or off at various brightness levels.

Most digital display systems have built-in dimmers for night use to limit distraction to drivers on the road. Many municipalities govern the dimming requirements of LED sign displays in their signage codes and ordinances.

lines, market conditions, tech, and manufacturing efficiency. LED display prices have dropped by approximately 50% in the last four to five years. That's great news for your customers looking to invest in an LED display.

These systems have consistently been proven to provide the highest marketing ROI. Since they have the lowest cost per 1,000 exposures (CPM), it is common to see an LED display average \$0.15 CPM, versus a newspaper ad that could be over \$5.00 CPM. The major domestic manufacturers of LED displays traditionally offer traffic count studies and in-depth ROI reports based on the physical address of an exterior projected location for you to cover with your prospective buyer. This alone is a great selling tool.

Due to advances in technology, LEDs have seen a marked increase in brightness through improvements in the diodes and the lenses that encapsulate and protect them. An LED lens is an optical system that changes the light field distribution as a controlled beam whether narrow, wide, or otherwise.

For LED displays in the sign industry, color shift, the viewing angle, and color blending are determined by the type of LED package. Most digital signs use red, green, or blue LEDs and louvers to deflect sunlight for higher contrast. A black matte finish reduces reflection.





Resolution is the number of pixels contained in the physical area of an electronic display. The greater the number of pixels per square foot, the higher the amount of detail portrayed in the display.

Resolution is determined by display size, pixel technology, pixel pitch, and viewing distance. Often labeled by millimeter, displays can range from 4mm to 26mm for resolution and generally, the lower the number, the higher the price. While resolution is a function of your client's budget, the LED manufacturers can assist you with calculating the ideal range based on minimum viewing distances, sign setback, what is allowed by local codes, and the size of the display.

Communication of content to the LED display is typically by modem, direct fiber, wireless ethernet, or radio. Modem use is widespread and preferred and is supported

by a cellular system that is generally serviced by a national firm like AT&T or Verizon.

Communication can be set for a certain number of years or for the life of the sign, depending on the product. Modems are ideal because they are military-encrypted, safe, and dependable. I do not know of any instance when a modem digital display from a reputable supplier has been hacked by an outside party.

Another great advantage of a modem display is that the user can program their sign from any point in the world if they have the system communications software on their device (or in the cloud) and an internet connection. Access can be password and user protected by the client for peace of mind and to allow multiple individuals to program the display as needed.

When you have narrowed down your potential proposal by a demonstration, a traffic study for CPM and ROI, and a determination of the best resolution option, another great tool is available from your supplier.

Their art department can pull images from the customer's website or the internet to create a custom movie file that shows potential animations and content on your proposed LED display rendering. You can show this to your prospect on your laptop and/or email the file for distribution to the decision makers.

This is invaluable in showcasing the attention-grabbing graphics and effects that their future display will provide prior to fabrication. It often helps you solidify the sale because it creates mental ownership by the customer through visual representation. They can see the display in action.

### **Images are the strength of pictures over words**

To complete the sales process, the national display providers can offer financing and/or third-party leasing options. Leasing is an ideal way for a client to buy an electronic message sign. It depends on the lease company, but usually a first and last payment is due at the onset after a cursory credit check and approval,





and you are paid for either 50% or the entire job upfront.

*Soft fees*, like permits, installation, primary electrical, and even maintenance can be rolled into a lease. Often, a bank will require a 20-25% downpayment if extending credit for a loan, so a lease provides a lower out-of-pocket option. Typically, a lease can be expensed on the company's financials and is not part of the balance sheet like a loan from a bank would be. Lease terms can vary, but on average, they are five years with a one-dollar buy-out at the end.

These suppliers can also offer a lot more than a display. Today's LED systems can be remotely accessed via the supplier for diagnostic and software/firmware updates. These vendors make a commitment to respond to service inquiries quickly (most use a timed-response goal system) and most calls from end-user clients can be resolved without sending out a service technician.

When you purchase a system, you gain access to a community of support. Training is available for your customers via the web to learn about content creation and sign operation. The software that drives the display system is user-friendly and contains hundreds of stills, images, animations, and holiday graphics for the user.

The vendor (or outside third parties) can provide content management services if your customer does not want to do the primary programming. Why is this an advantage to your client? These suppliers and third-party companies that specialize in content are better equipped to create engaging, well-designed, eye-catching graphics than your local car dealer, veterinary clinic, or fast-food franchise.

Third-party content allows your customer's team to do what they do best and frees them up to handle their patrons and core business. These third-party content providers have very reasonable rates for

creating standard and custom content. Consider offering one year of free content on a new eligible electronic display purchase. Customers will often renew after the first year.

Have you ever considered what it would be like to start your car and leave it running for the next five years? That's what an electronic digital display does; it works 24/7 without a day off. Most quality manufacturers have a five-year warranty on their sign systems. They continue to stock parts for sign systems up to seven or more years after the end of production of a model to ensure support is available for your customer many years after installation.

LED digital displays generate awareness within the community before services or products are needed. By providing one to your customer, you are helping them stay top-of-mind so their clients think of them first. Digital signs can amplify marketing channels, influence decisions, and enhance an image. And, unlike with social media or traditional advertising, people can't opt out or turn the channel.

### **LED signs seize 400% more glances than static signs**

A lot of innovation in technology has occurred since I first started selling programmable displays in 1985. Energy consumption and heat production have declined drastically, and resolution and graphics capabilities are exponentially greater. Maintenance and durability have increased while pricing per square foot with these collective advantages has decreased.

One thing, however, has remained constant. I have never had a customer ever utter the phrase, "I wish I had gotten a smaller electronic sign with worse resolution." Their future replacement sign will always be bigger and have better resolution. They know the display will be one of their best sales tools and will make them money. LED displays work, and they will increase your customer retention, expand your client relationships, and help your business financially in the process. **GP**



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Considered “higher learning,” these classes will take a deep dive into advanced techniques and/or the business aspect of running a graphics shop as it applies to the type of shop being run, i.e., apparel decoration, sign making or personalization product production.

Classes are offered throughout the show, in 90-minute sessions.

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Check off the classes you'd like to attend or plan to take to help you prepare!

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8-9:30 a.m.

- Epilog Laser** – From Theory to Application - a Practical Guide to Laser Engraving **START HERE**
- JDS Industries** - CorelDraw for Sublimation **START HERE**

11 a.m. — 12:30 p.m.

- Transfer Express** – Easiest Way to Print Apparel **START HERE**

1:30-3 p.m.

- Trotec Laser Inc** - How to Start and Grow a Laser Business **START HERE**

4-5:30 p.m.

- Advertising Specialty Institute, ASI** - Start Selling More to Your Customers **START HERE**
- GRAPHICS PRO** - Tips and Techniques for High-Impact, Profitable Screen Printing, *with Lon Winters*

### THURSDAY, JULY 20, 2023

8-9:30 a.m.

- Transfer Express** – Perfect Print Placement **PRO**

11 a.m. — 12:30 p.m.

- SAGE** – Adding Promo to Your Business
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# Conquer Creative Blocking

*It's time to embrace some turmoil*



Matt Charboneau started his career in the sign industry in 1985 as Charboneau Signs, later changing it to Storm Mountain Signs. In 2017, he published the Pre-Sale Sign Survey Field Guide, and he also provides sign design training at his site: Learn-SignDesign.com. Contact him at [matt@stormmountainsigns.com](mailto:matt@stormmountainsigns.com), [LearnSignDesign.com](http://LearnSignDesign.com), or 970-481-4151.

It's the night before you're supposed to have the design ready for your meeting in the morning, but for some reason, you're drawing a complete blank. Nothing seems to fit. Your ideas, although usually spot on with amazing *wow* factor, are falling flat on this project.

What do you do to get past this brick wall that's robbing your brain of its usual piss-n-vinegar creativity that you have come to rely on? (*Piss-n-vinegar; noun, an attitude and style of approaching a creative challenge with that quirky sideways method that makes clients' heads turn.*)

What have you done in the past to shake it off? Did it work like you wanted it to? If your answer is, "No, I can't seem to get over the wall," then you may find some ideas below that will help you overcome creator's block.

I would like to share with you the foolproof tools I have developed over 40 long years of struggling to stay on the cusp of providing creative solutions.

Yes, yes, yes, it's all about you right now. Finally, an educational self-help article that is focused solely on you. What *you* want, what *you* need. You are the machine that's not running as it should. Let's focus on you, and you alone... and *only* you at this moment.

## Sourdough, piglets, and turmoil

To get your head in the right place to understand what I mean, I'd like to compare this creative dilemma to another process that you can relate to. If you have any experience with how sourdough bread is made or what makes it different from regular bread, then you understand that a "starter" is used to begin the transformation of the flour, salt, and water. That is what makes all the difference.

Once mixed and left at the right temperature, it creates all sorts of turmoil within the dough as it transforms it into the wonderfulness that makes sourdough so delicious. Without the starter — and without the turmoil it creates — no magic occurs.

I'm sure you saw this analogy coming — and you

are most likely saying "NO! I don't need a starter or manager as you described it. I need ideas, direction, or a way to get back on the creative bus again."

And yes, you are right.

You don't need a starter to transform you. All you need is a little regulated turmoil to distract your brain. I have come to understand and appreciate the power of pre-planned turmoil, and it's exactly what your brain needs when it's blocked.

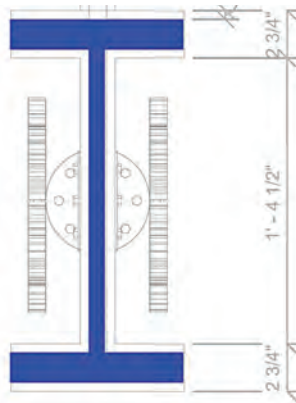
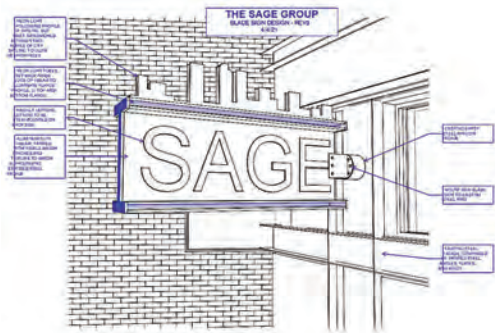
I'm talking about you taking control of your lost, wandering, zero-idea gray matter and purposely putting a specific, welcomed, high-level-mental-stress distraction into your moment, your day, and the way your brain thinks.

What might that look like? What are some of the ways to disrupt your locked-up thinking process? You may be thinking of a few of your own, but first there is something that I must go back and address from the start of this article. So, put your turmoil ideas on the back burner and pay close attention to the following information...

Remember what I started out with in this article? It's still Sunday night, and you are still stressing hard. It's not like you haven't been productive with this project — you have; it's just that this time, your brain is done, broken, worn out, and tired. It's been a long week, and not a single great idea has come to fruition, and the clock is ticking. You keep saying to yourself, "If I don't come up with a bombshell idea, I could lose my promotion and what would be..."

BAM! Your door suddenly flies open and interrupts your self-analysis of how dire your situation is. There stands your wife, soaking wet from the rain, holding onto a screeching, wet, muddy piglet.

Yep, cute as a bug's ear and obviously scared, bewildered, and cold. Your home is near the route where feedlot trailers frequently travel, and from time to time, piglets wiggle between the slats and fall out of the trailer, hitting the ground and rolling to a stop in the median. Well-meaning, big-hearted citizens will rescue the piglets so they don't



This is what the client requested. Not a problem if it were non-electrical. Obviously it's too narrow to fabricate as an electric sign. The blue "I-Beam" shape was requested as it matches some of the building's decor. Client was insistent that it remain as close to the I-beam shape as possible. Oh, that's easy... Not.

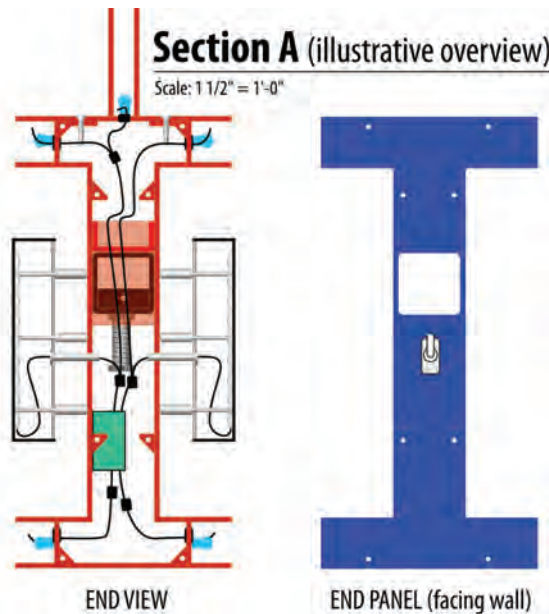
get run over, and that is exactly what your wife did tonight, and the piglet in her outstretched, wet hands was proof.

By now, the kids are up, all the lights are on, and this tiny, squealing pink squeezer has alerted the entire neighborhood to his presence in your home. So loud! I mean this little guy is a squealer to the 10th degree and the kids, of course, are insistent that *this* is the family's newest pet. Your golden lab is terrified of it and won't stop barking, and your cat is nowhere to be found (but you are sure he is now marking every spot in the house).

Then, just as your wife sets the squealer down on the hardwood floor, it poops and pees, and now you have a small lake of extremely pungent pig urine, two overly-excited kids, a dog that's hiding under the picnic table, and a cat you won't find for days.

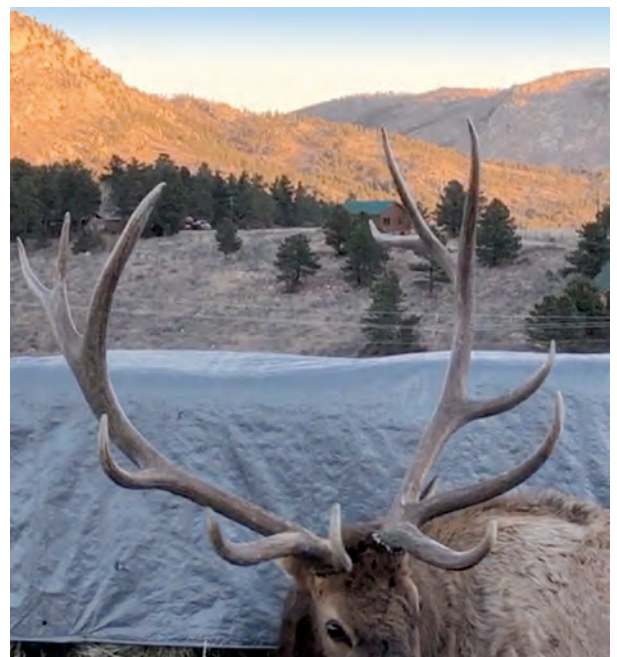
You are now in a full-blown illogical conversation about the benefits of owning a pig when just last night you had both promised each other to never bring home another orphaned animal. However, your wife is now using all of her professional training as an attorney to back you into a corner on why you won't be more reasonable about this. By now, your bride is walking around the house, holding the screaming piglet at arm's length, with little turd-lets falling to the floor, followed by your two adorable children (who now think you are totally evil).

So, as the piglet parade is heading to the spare bathroom tub to give the new family member a bath, you head to the garage to grab the mop, bucket, and floor cleaner. As you head back out the door of the garage, your head is nearly ripped off its shoulders as you strain to re-see what



It took me about a day — of complete blank stares at the screen before I decided to go outside and clear my clogged brain. I-beams... skinny body with top and bottom flanges. I was stuck... I was not able to look beyond the narrow shape. Oh sure, the final result looks so easy to have come up with. Most well-planned projects do when they meet the client's objective. I tried to explore every option to keep the shape skinny, but with no reasonable way to do it and still meet UL/NEC600. The only option was a thicker sign shape... with room to move inside of it. I considered myself lucky as the client was agreeable to the shape and design once I explained how UL and NEC600 approvals needed THAT wider shape in order to be approved, and fortunately the client agreed with it.

I needed inspiration. The logo I wanted to create would have some sort of big game rack, along with a waterfowl reference. I was stumped. How would I incorporate elk steaks with a goose graphic. I was completely stumped, and I was running out of time to spit out a winner. I decided to burn off some nervous energy by plowing some snow. That took me outside (obviously) and while firing up the equipment, my eye caught a glimpse of a herd of elk in the distance. Yes, no kidding, it would be an elk rack I used, but how do I incorporate the goose with an elk rack?





When I finished shoveling, I decided to go back inside to bury my head into some other project in an attempt to clear my head... when, suddenly, there it was, the inspiration I needed — right there on TV — in the form of a chef's hat!

was captured by the corner of your eye.

“What the heck,” you murmur to yourself. “What was that?”

You slowly and purposefully step back into the garage, and you stare in the direction of what you saw.

It's that swing set slide you haven't installed yet, from last year. But how strange is this? It's sitting on its side... yes, on its side... and you say to yourself, “Wait a minute — what the heck?”

You hastily put down the mop and bucket, and you take notice of the slide. The slide with its two rails, when on its side, looks very much like a missing puzzle piece to you. The hair goes up on the back of your neck as you realize this is the *exact* shape that you have not been able to visualize for the design project you have been struggling with.

BAM! Just like that, you are inspired, and you have an idea to expand upon. So, you finish mopping up the kitchen floor and quietly leave your family to tend to the wounds of the piglet. You sneak back to your desk and begin to expand on that shape you saw in the garage — that slide — and suddenly, that's it! You've got it. Creative solution found... Done!

But wait, you have walked past that slide in the garage a hundred times, yet it never jumped out at you as being the source of a new creative idea, so what happened this time? Why did it catch your eye like it did, this time in particular?

The reason this happened is because your brain was provided with a new,



Yes, that's it, the customer was a real, bonafide, amazing-steak-maker chef but rarely wore his hat. The hat was the ticket. It wasn't long before I realized the goose would be part of the top, and the elk rack would make up the bottom... and tada, the logo icon came together, just that quickly, once my head got cleared. Fresh air and exercise can do it for me every time.

completely unrelated bit of turmoil that wiped clean the creative blackboard of your brain. You had no choice... your wife was standing there with a very alive, squealing piglet, leaving your brain with no choice but to participate in piglet-fest and forget about your frustrating design challenge.

### The right kind of turmoil

And case in point, did your brain follow along as the story evolved about this totally unrelated event? Even my editor was probably wondering where I was going with it. Could you see the wife standing there, with a squealing, wiggling baby piglet in her outstretched hands? What was the look on her face? My lack of creative writing ability aside, were you able to visualize the kids in their pajamas? You envisioned all of that in your own mind as you read the words I placed on the page. This story, in essence, provided a great example of how easily you can distract your brain from the topic at hand — if you have the right kind of turmoil.

You may have been distracted by the words, but the “state of turmoil” most likely didn't occur. If I hired Stephen King to help me write that piglet story, perhaps a heightened sense of turmoil could be achieved. He's got the ability to write in such a way as to cause great turmoil in your imagination.

For *brain-erasing* turmoil, however, you need something real, close, and pertinent to occur. Otherwise, you simply go back

to where you left off. The live piglet is the type of “turmoil” I am talking about.

However, we can't just sit and wait for a piglet to land in our laps, so here are a few of the piglet-style tumultuous ideas that I keep on a shelf in order to clear my head. They work for me. I am not saying the things I do will work for you in the same way — not at all. What I am asking you to consider is the process of pre-planning your turmoil for situations just like this. With a list to pick from, you won't have to go to the trouble of inventing one in the moment.

This is my fun turmoil list I can refer to when I am struggling with creator's block:

- Personal fear of heights — this could involve watching videos of those insane individuals who stand on the top of antenna towers, holding on with one hand and taking selfies. Just watching a dozen or so of those videos puts me in a place of complete mental turmoil.

- Mother-in-law just called — she is in town and will be at the house in two hours. I now have two hours to make the house look Gramma-visit-clean. I really had to jump into cleaning the house on a microbial level with a tight deadline, and I worked up a sweat which provided both mental and physical turmoil for me.

- If I can clean it to showroom clean, some person in town wants to buy my Jeep for \$1,000,000 — I imagine that and make it a point to micro-clean my Jeep, which is not as easy as it sounds where I live. The point is, it's more physical activity combined with mental strategizing as I let my brain run wild as it considers all of the accessories I might get for it. I even write down the ideas as an additional way to distract myself and focus on the new turmoil.

- Volunteer at an animal shelter and contemplate adopting a new pet — but promise yourself you won't as you clean out pens and take pets for walks. This, for me, would be a mind-warp, as I fall in love with every dog I meet.

- What would your turmoil list look like?

One last point I want to make is that this only works if the turmoil is significant. If your brain even tries to think

*continued on page 92*

# GP+

## CUSTOM GIFTS

GP+ is a monthly section of GRAPHICS PRO dedicated to taking a deep dive into a specific graphics market. This month's section is all about helping shops create customized gifts and providing your clients with a wide range of choices.

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*Courtesy of Epilog*

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Adding custom gifts and personalized products to your business

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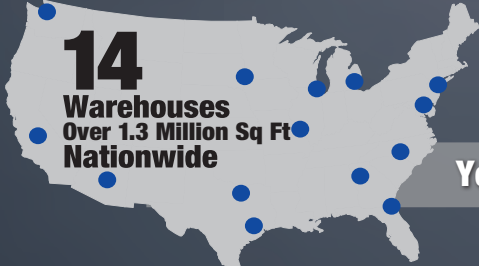
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## 5

# COMMON MISTAKES IN Laser Engraving

## AND HOW TO AVOID THEM

COURTESY OF EPILOG



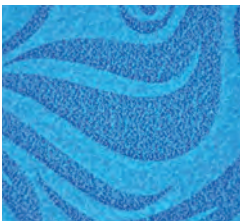
**W**hether you are an accomplished engineer or a novice maker, learning the proper uses of design equipment to avoid pitfalls and mistakes takes time and experience. Avoiding these mistakes so they don't reoccur is half the battle. Let's talk about five common mistakes when it comes to laser engraving and ways to avoid them in future projects.

### Mistake 1: Engraving Fabric but the Laser Burns through the Material

Heartier fabrics such as denim, canvas, and leather can withstand higher power settings during engraving. But when it comes to delicate fabrics, it is important to start your settings at high speed (near or at 100%) and low power (around 5% to 10%). When it comes to direct-to-garment engraving, it is helpful to lower the dots per inch (DPI) at which you engrave. The higher the DPI, the more material will be removed. Engraving at a lower DPI helps ensure the laser just slightly vaporizes the top layer and doesn't burn entirely through the fabric.

### Mistake 2: Acrylic Doesn't Produce a Frosty White Engraving

Two types of acrylics are typically used in laser engraving and both are suitable for different applications. Cast acrylic is ideal for engraving because it turns a frosty white color, making it suitable for awards and plaques. It can be cut with a laser, but it won't give projects flame-polished edges. Extruded acrylic cuts cleanly and smoothly and produces a flame-polished edge; however, it doesn't produce that frosted look, but rather a clear engraving.



### Mistake 3: Inconsistent Glass Engraving

To produce a smooth frosted finish, try incorporating one or several of the tips below:

- Use a lower resolution, about 300 DPI.
- Change the black in your graphic to 80 percent black.
- Apply a thin coat of liquid dish soap to the area you're engraving.



### Mistake 4: Wood Engraving Produces Different Results on the Same Setting

Different woods have different reactions when they are laser engraved and produce different results. Lighter woods, like cherry or maple, produce a nice contrast where the laser burns away the wood, while denser woods require more laser power to cut or engrave.



### Mistake 5: Laser Engraver Doesn't Perform as Fast Any-more

Much like other types of design equipment, a clean machine produces better results than one that is not properly maintained. If a drop in performance happens quickly, checking and cleaning the optics may be the first step in correcting the problem. **GP**



# Custom Gifts

## ON-DEMAND AND ONLINE

BY TRAVIS ROSS

*Adding custom gifts and personalized products to your business*



An order management system like Order Desk gives your clients the ability to upload custom art to each order individually.



Travis Ross is the founder of Make Your Mark Design in Broomfield, Colorado, and is the co-host of the Print On Demand (POD) Cast at [printondemandcast.com](http://printondemandcast.com).

There are many ways to sell printed products online these days. It seems every other week a new print-on-demand fulfillment company pops up with new and unique products. Add that to all the typical drop-shipped products available, and it can seem overwhelming if you're just starting to sell products online.

You may be asking questions like "What do I sell?" and "How do I stand out from the crowd?" To be honest, these are some excellent questions. And while it's easy to start a generic Shopify store and just select a fulfillment company to send your products for you, these questions remain if you plan to have any sort of success.

### What do I sell?

While I may not be able to answer that specifically for you, I can give you some concepts to consider as you move forward. For one, you need to make sure there's a market for your products and designs. Nothing is more frustrating than doing all the work required to list your products online and realizing nobody actually wants what you're selling.

Also, don't make a decision without other people's input. While we always think our ideas are the best, it's wise to ask friends and family for their opinions — you may be surprised at the feedback!

Another potentially great strategy is to combine multiple niches. I had a client that was starting their own online store and was torn between two niches: cute animal designs and motivational quotes. Both seemed promising, but she had to make a decision. She decided to combine her love for animals and inspirational messages, creating a unique line of products featuring super cute animals accompanied by uplifting quotes.

In the end, the response was great. People loved the combination of cute and motivational, and her store gained sales traction — slowly at first, but eventually it picked up some momentum. She's now using social media to find new customers that enjoy her designs.

And, of course, the last piece of advice I'd offer would be to consider the types of products that you are already selling and decide if it's something that you could produce on demand. If that's the case, it likely makes sense to start there. There's no reason to reinvent the wheel.

### How do I stand out from the crowd?

The next question you need to find an answer to is how to separate your offers from the rest of the pack. With the proliferation of on-demand decorating processes, everyone from a print shop owner to a stay-at-home mom has the ability to



Allowing customers to choose multiple fonts provides even more personalization options.

slap an "I love my poodle" design on a product and add it to their store. That said, the same on-demand capability gives us the perfect answer to our question.

Every day more and more customers are discovering the option of having their purchases personalized. It especially comes into play when thinking about buying a gift for a loved one. It makes it so much

more special to give a gift that is personalized in some way. And don't think we're just talking about adding a name to the gift — we have customers that are adding everything from family pictures to inside jokes!

For instance, our shop has the ability to produce laser-engraved tumblers. While it would be very easy to simply create some fun, generic designs like *World's Best Nurse*, we decided to take it a step beyond that and allow our customers to personalize parts of the text of the design. So, in the end, they get a beautifully engraved tumbler with a gorgeous design and their loved one's name (or nickname) as part of the design. Of course, we have a character limit to the text and occasionally need to message the customer to make sure everything is correct.

From that design, we've had people send us images and ask if we can

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Allowing customers to change a date or month gives many opportunities for sales on the same listing.



completely scrap the design on the listing and insert theirs. And while it may take a minute to format the images in a way that makes sense for laser, we end up with happy customers that are coming back to our shop because of the stellar service we provide.

### What's the order flow look like?

There are several ways you can handle the order flow for custom products, and it basically comes down to your comfort level. In our business, we try to have as many scalable systems in place as possible to allow us to not only know what each order is but also rinse and repeat on other products as we desire.

In my opinion, the most important piece of your order flows when selling online is your SKU. We like to add as much information inside the SKU as possible, including the product, the base design, color, size, and any other information we deem pertinent to that specific iteration of the product.

For instance, a basic T-shirt SKU (not customizable) would be comprised of the Design ID, the product code, the color, and the size. So, it might look like this: 1002034-TS-BLK-XL. The beauty of using the design ID is that we can add that same design to other products very easily.

For a custom product, the process is similar, but we use a different range of design IDs to let us know this product can be personalized. In our case, we use the 4 million (instead of 1 million) range of numbers. So that same black XL T-shirt SKU would start with a 4. When we see that SKU, we know the order will also contain the customer's text to change out.

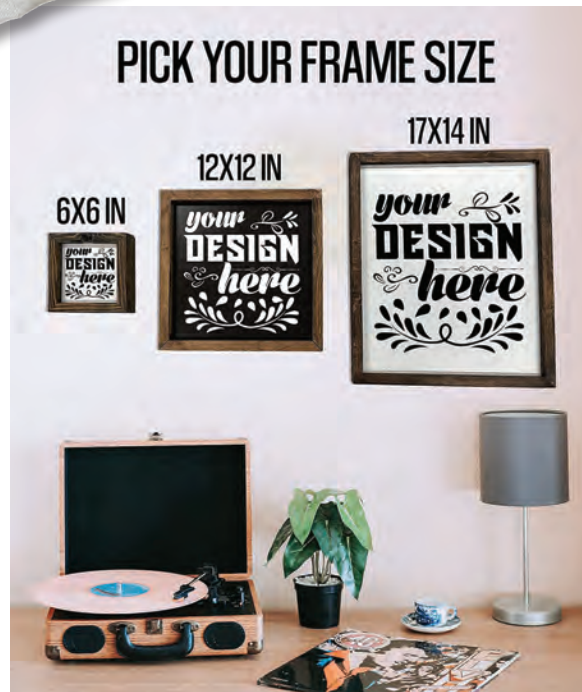
We head to the folder for that design ID and open the Photoshop or Illustrator file to edit, output it the appropriate file type, and off it goes to the specific decoration department.

### What if I want to fulfill custom products for others?

If you're like us, you're not looking to only do this for yourself and your own listings. You want to have a system that works for clients as well for an additional



A static design with a specified personalization area.



Customized listing picture example for framed UV-printed signs.

(Left) Changing the word "Mother" gives many personalized options for this framed sign.



Two-sided printing allows a static image on one side, with a personalized name on the other.

revenue stream. In this case, you'll again want to make sure your clients are using SKUs (believe it or not, some channels don't require them!) You'll also need some type of system to get the orders into your workflow each day.

With some shops that don't have many clients, you may be able to do this with ShipStation alone. You can set up integrations with Shopify, Amazon, Etsy, Walmart, etc., and import directly into the program. In this instance, you'll need a list of their SKUs and the appropriate artwork. You may even be able to give them access to a folder to upload custom art each day and name each file with the order number.

In our business, we use a web-based solution called Order Desk which then imports into ShipStation so we can ship the order after it's complete. The advantage of this system is that it has user permissions, so each of our clients has a login to their specific store.

Inside their store, they can set up integrations with all the usual selling platforms and add all of their inventory in a spreadsheet that includes the SKU, title, print method, a link to the specific art, and any other pertinent information about the product, such as size or color.

Depending on if a client is selling static (non-custom) or custom products, the orders import to Order Desk in a specific folder. For those clients selling static designs, their orders import to the Ready To Print folder with all the order specifics pulled from their inventory spreadsheet.

Each day, orders in that folder are auto-imported into ShipStation, and a spreadsheet with all order data is created in our files for our print techs based on the day. The techs create the products based on the spreadsheet and, once complete, match them with the shipping labels to be packed and sent out.

If the client is selling custom products, those orders come into the New Order folder in Order Desk, and our client manually adds the customized art link to the order and then manually moves the order to the Ready To Print folder. From there, it's the same process as above.

While this process may seem complicated, it really isn't. It also allows us to add new clients easily since each one is following the same workflow.

Regardless of how you do it, adding the ability to produce customized, on-demand products for your customers can be an additional revenue stream for your business. Consider starting with a few listings of your own to figure out the best workflow before you offer it to your customers. In the end, you'll be glad you did! **GP**



Simple static design with no personalization options can still give new design ideas.

(Inset) Providing a static image to personalize a date gives endless options.

## ADD A NEW REVENUE STREAM & INCREASE PROFITABILITY



### ADD DRINKWARE!



#### THE BENEFITS OF ADDING DRINKWARE:

**New Revenue Stream:** Expand your business by adding a new product line and quickly grow your bottom-line revenue.

**Increase Profitability:** Maintain high margins regardless of job size and see a quick equipment ROI with modest production volumes.

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# Leatherette Patches

COURTESY OF JDS INDUSTRIES

## How to heat apply leatherette patches to hats

**H**ats have been adorned with patches for probably as long as there have been hats. They're a great way to advertise your company, a specific product or event, promote your club or organization, or even your school. Now you can easily create custom patches for your customers that can be attached to hats, beanies, bags, jackets, or shirts. Precut leatherette patches are available in several shapes, sizes, and colors. Pick the patch you want to decorate, choose your design, and decorate using your laser or UV printer if you want full color. Once finished, these are the steps you'll take to attach the patch to a hat.



- 1) Position the hat on the hat heat press
- 2) Remove the backing from the patch and place it on the hat
- 3) Place a Teflon sheet over the patch
- 4) Press at 270-285 degrees for 10-15 seconds using light to medium pressure
- 5) Remove the Teflon and you're done!

Custom patches are a fun item to add to your inventory, and sheet stock is also available in several colors so you can cut your own shapes and sizes. There are so many things you can do with them, the demand for them is there and you probably already have the equipment needed to create them in your shop! **GP**

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# Top 5

## TRENDING PRODUCTS FOR SUMMER

COURTESY OF JOHNSON PLASTICS PLUS

**M**ake this summer a summer like no other by offering trending, personalization gift products! Chances are, you'll have customers asking you for personalized items for graduations, 4th of July cookouts, and fairs and festivals, family reunions, or even everyday gatherings. And when your customers come looking for those customized items, we want you to be ready with a great selection of new, trendy products.



**2. Engraving Tumbler:** The Simply Engraving Tumblers are the ideal drinkware for on-the-go use! Simply Tumblers are easy to laser engrave, UV-LED print, or vinyl application to personalize for your customers. These high-quality, double wall, vacuum-sealed tumblers keep drinks hot or cold for hours on end and fit perfectly in a standard size vehicle cup holders.

**3. Waffle Towel:** Perfect for catching some rays or for a guest bath, these waffle weave towels are fast-drying and allow you to sublimate vibrant, full-color designs to impress your customers. These towels are available in three different sizes: 16" x 24", 20" x 30" and 30" x 60".

**1. Bluetooth Tumbler:** Your customers will be the life of the party with this stainless steel tumbler with built-in Bluetooth speaker! Customize using sublimation or toner heat transfer with a brand logo or personalize with a name to create a one-of-a-kind tumbler for your customers.



**4. Travel Passport Cover:** Your customers can travel in style with this faux leather passport cover! This cover is designed to carry other travel documents in the convenient inside flap and comes with ample space to personalize both the front and back cover. Customize with engraving, UV-LED print or toner heat transfer.



**5. Garden Flag:** Add a welcoming feel to your home with a personalized garden flag. Perfect for your garden and front walkway to welcome friends or family. This flag also makes for a thoughtful housewarming or hostess gift. Personalize with sublimation or toner heat transfer.



Scan the QR code to learn more about these products!

GP

# Laser Engraved Glass Door

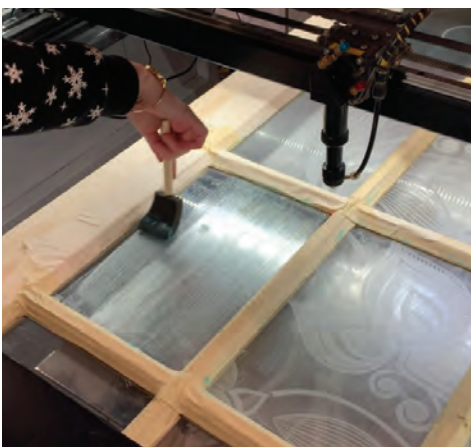
## IN 5 EASY STEPS

COURTESY OF AP LAZER

**F**inding ways to expand and diversify your laser business can be difficult, but the possibilities are endless. AP Lazer's patented open architecture systems allows for the customization of large objects such as this glass panel door — perfect for your own home improvement needs or the needs of your clients. Follow these 5 simple steps to learn how to dip into such a lucrative market!

### Needed materials:

- (1) Bottle of dish soap
- (1) Small foam brush
- (1) Roll of masking tape
- (1) Glass panel door
- (1) Laser engraving file



### Step 1: Prepare the door for engraving

Identify which side of the door you would like to engrave on.

Mask all areas around the glass panels with your masking tape to guard from debris.

Using your dish soap and foam application brush, prep each panel of glass with a thin layer of soap — this will react with the laser beam to create a crisp, clean engraving.

### Step 2: Prepare your laser file

In LightBurn (laser design software), open your design file by selecting open in the file menu.

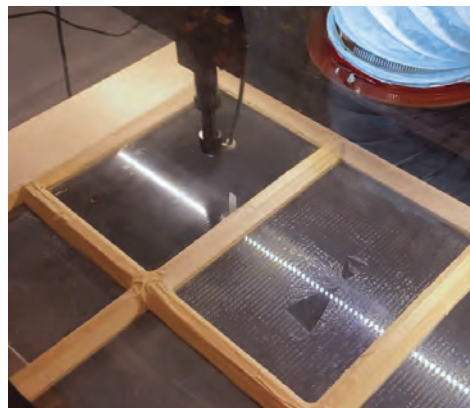
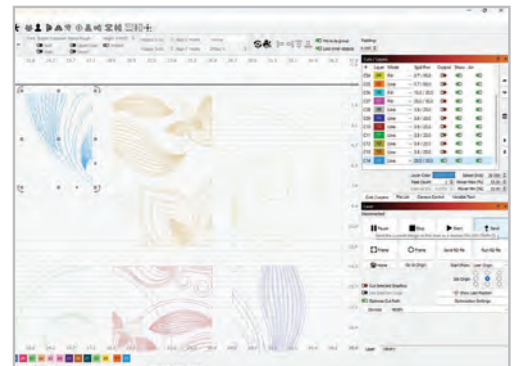
Separate your designs for each panel by color so you can run each panel separately.

\*NOTE: While you can run the entire file together, it is helpful to run each panel separately to ensure alignment of the design is correct for each glass panel.

Set your speed and power settings.

\*AP Lazer recommends a speed of 28 and a power of 33 for our 100W systems.

Send your file to the machine via USB or network connection.



### Step 3: Align your door with the machine

With the help of a friend, move your door onto a lift cart and roll it into place under the machine.

### Step 4: Begin Engraving

Focus the head of the laser on the surface of the first glass panel.

Set the origin to the top left corner of the glass and frame your project to outline the file size.

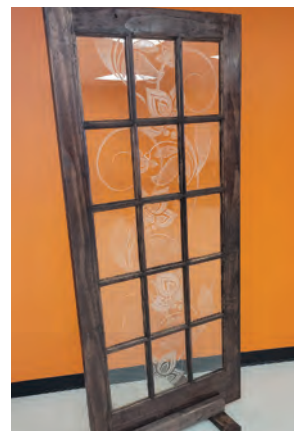
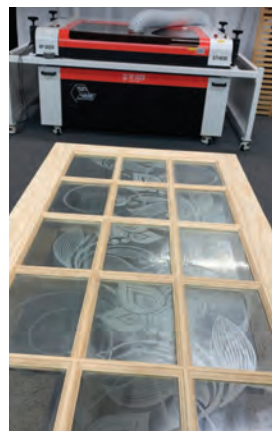
Close the lid and hit start!

### Step 5: Clean up

Wipe down each panel with your microfiber cloth and glass cleaner.

Remove all masking tape from around the glass panels.

Mask the glass panels and apply any desired finishes to the door or leave bare and enjoy the natural beauty of the wood.

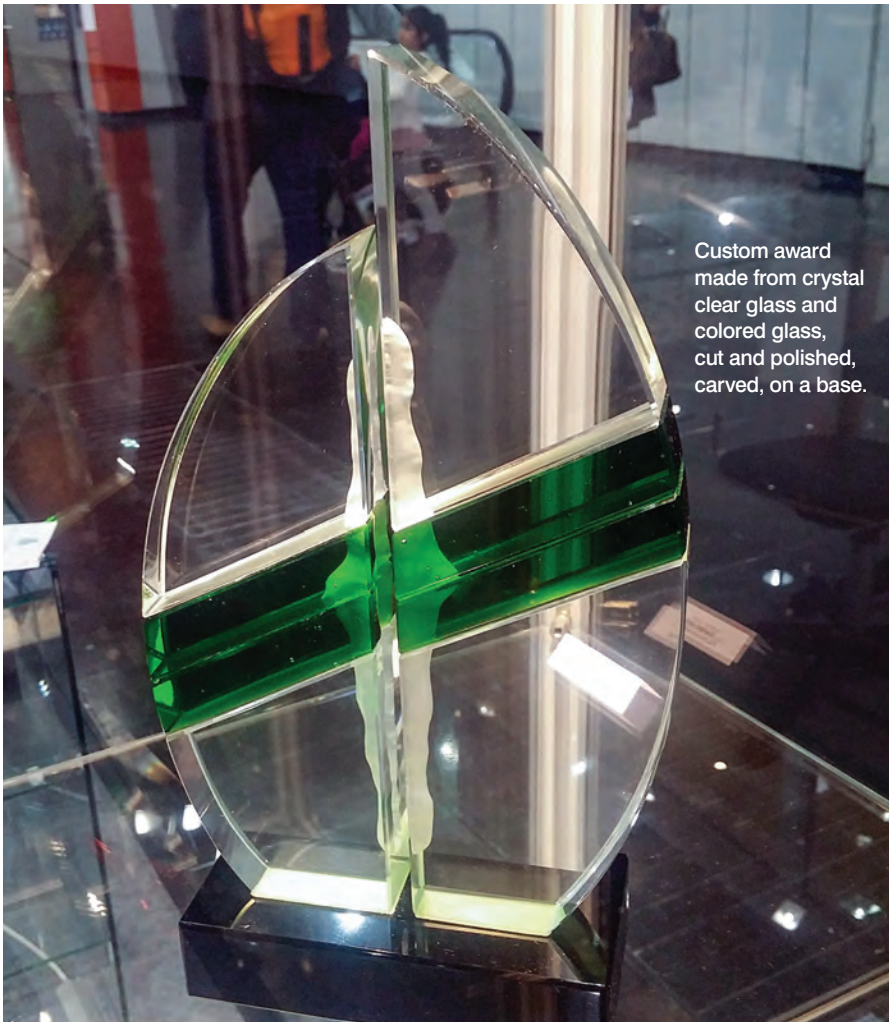




# CUSTOMIZABLE GLASS PRODUCTS

BY RUTH DOBBINS

*Get inspired by unique projects*



Custom award made from crystal clear glass and colored glass, cut and polished, carved, on a base.



With over 40 years in the glass business, Ruth Dobbins offers experience in all glass-etching techniques as well as in fused and cast glass. Ruth holds a Master's Degree in Art and has been a partner in an art glass wholesale

supply and studio company in Europe. You can reach Ruth by email at [ruth@etchmaster.com](mailto:ruth@etchmaster.com), or by phone at 505-473-9203.

Those of you who have been following my articles over the years know that every now and then I like to cover glass from a different perspective than what you maybe accustomed to. I can't ignore some things I saw at the GlassTec show in Düsseldorf, Germany. At the time of writing this article, I had just returned from the show, which took place at the end of October 2018.

GlassTec is the largest glass show in the world and happens every two years, alternating with the NGA show in the U.S. At GlassTec, attendees found nine halls full of glass-related products and machinery; each hall is equivalent to a common convention center we are familiar with in the U.S. There were 1,235 exhibitors present, and the show was attended by 43,000 visitors from 121 countries. The awards and recognition industry did not have a large presence there, even though I found a few examples. Amongst all the industrial representation, there was also a large exhibit of glass art, created by students of the technical schools for the glass industry. It was exhilarating and exhausting to see the displays. Let me show you what most impressed me.

### **Awards, Art, and Functionality**

The awards products that I was able to take pictures of were mostly custom-made from thick low-iron glass that was cut and shaped by hand. Individual pieces of glass were laminated to create the awards, and sometimes colored glass was added. The pieces are self-explanatory as are the more



"Big Ben" – laminated low-iron glass and abrasive blasting. The lower part is a display cabinet while the clock movements on all four sides are functional. Made by Anna Wolff.

usual examples of etching on glassware. The pieces with text were created with photoresist, while the more artistic pieces were either engraved or used a combination of engraving and abrasive blasting.

The more interesting pieces were of sculptural nature and created by artists. Several of these pieces employed the lamination of glass pieces with UV glue. A couple of the objects were actually combinations of sculptures and furniture, like the Big Ben. The lower part is a display cabinet, while the upper tower part includes clock movements on all four sides, therefore being functional. This piece was made by Anna Wolff.

Then there was the display cabinet (shown upper right) that featured LED lighting in the vertical columns (which were filled with crushed glass frit), and the wooden tabletop with a foosball game on top of it, both made from laminated



Artistic furniture: a display cabinet made from laminated glass. The vertical columns are filled with glass frit and illuminated with LED lights. The cabinet is capped with a wooden surface upon which a small foosball table rested, also made from laminated glass. Made by Gunnar Salchert.



A stand-alone foosball table made from laminated glass and a few metal parts.

low-iron glass. Again, UV glue was used to construct the piece. The dimensions of the table were 120 cm by 80 cm by 134 cm; it was created by Gunnar Salchert. Later, in another section of the show, I saw another foosball table (shown above), this time free-standing. This one was created by the company Intermac and was full size.



Large wine glass honoring a "Spaetlese" wine of the Schloss Vollrads vineyard.



A display of contemporary blasted glass panels. These are architectural size, but those kinds of patterns could also be created on awards and recognition pieces.



Shower enclosure by Derix Glass. It featured gold-leafed slate glass laminated to crystal clear glass with touch pad panels for animated graphics and general functions.



The see-saw made entirely from low-iron glass. It was 30 feet long and weighed in at 1.3 tons. It actually worked, and people were excited to try it out. Made by Sentry Glass Co.

Wheel engraved ornaments and glasses by students of the state technical glass school of Nordrhein Westfalen.



A few more common pieces were the blasted panels (shown upper left) on display showing off contemporary patterns, even though there is a big trend employing large-format printing directly on glass. There were several companies showing off that technology.

Another newer way of incorporating technology is the use of sensors and touch pads that can change the glass from clear one minute to an opaque or patterned glass the next. An interesting display was the shower enclosure created by Derix Glass (shown left). The shower stall had a floor and back walls consisting of slate that had been gilded with 24-carat gold and then it was laminated to clear glass. There are touch panels inside the shower that create various images in the dark triangle shape and also turn the water on and off.

### Jaw-Dropping Displays

There were the display pieces that attracted every single attendee at the show at some point in time — there were three pieces that simply made everyone's jaw drop. If you are a glass enthusiast, you can't help but get excited when viewing such constructions.

The most impressive of all the installations was a see-saw created completely from low-iron glass. The see-saw, (shown left), measured about 30 feet in length and was laminated from 11 layers of glass, pivoting on a glass rod. The weight of the whole construction was listed as 1.3 tons. The see-saw was fully functional and not many could resist the urge to hop on it and set it into motion. It was constructed by Sentry Glass from Kuraray under instruction from Sedak International and Eckersley O'Callaghan.

Most of us think that glass is a fragile material rather than being something that can carry a lot of weight. To show that glass is quite capable of supporting a lot of weight, Define Engineers bonded two glass panels, each just 2 mm thickness, to each other with DOW bonding technology. They created two panels like that and with a framework of metal bars and cables, suspended a car weighing 1.5



An upside-down car weighing 1.5 tons suspended from two panels of laminated glass no more than 4 mm thick. Who says that glass is fragile?

tons from it. The car is not touching the ground! (shown above left).

Last, but not least, to also show that glass is quite strong, there was a huge swing on display (shown above right). The structure consisted of hollow glass rods made from Schott glass, of which five rods made up a



"The Swing" — completely constructed from Schott glass rods connected with 3-D printed steel nodes. As you can see, the structure supported the weight of an adult man.

strut. Each strut was connected with steel nodes that were 3-D printed. A grown man was using the swing to demonstrate that the material supported his weight and also the motion of the swing. The object was a project of BK Bouwkundet U Delft.

As usual, after having gone through the

show, my head was spinning with all the new information and application techniques I had seen. I could not wait to get back to my studio, hoping to be able to make use of the new wave of enthusiasm for upcoming projects. **GP**

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# Laser Engraving Custom Gifts

BY JOHN MORMAN

*Material, production, and image tips for laser-engraved custom gifts*

Images courtesy of John Morman.



John Morman is the owner of Celtic Tides in Lexington, Virginia. He and his wife, Mary Jo, have been running the shop since 2005. John started laser engraving in 2003.

If there is one segment of laser engraving that must be the most exciting and potentially the most lucrative, it has to be customized gifts. Not only does it open up the entire menu of engravable products to you, it also will likely have you being asked to work on material you might never have otherwise considered. Of course, there is, equally, the potential to incur significant costs. Further, you can unleash your own imagination to design gifts or work with your customer's wishes.

## Back to basics

Okay... The basics are pretty simple. Wood, cork, leather, paper and card stock, glass, some plastics... there is a lot of material you can work with, dependent on the specifications of your machine and whatever accessories you have at your disposal.

The potential for losses arises when the customer brings in their own piece or asks if you can work with something a little more expensive, such as nice crystal instead of glass. If you can, contact your regular suppliers and see what they can provide that comes somewhat close to the material you're going to use for the final product.

It's better to practice on something that's relatively close than to destroy the customer's



piece that might not just be expensive to replace but difficult to come by. I mentioned in an earlier piece about a \$300 piece of crystal I was asked to engrave as a retirement gift for a high-ranking military officer. I couldn't afford to destroy the piece for any number of reasons. Having something to practice on would have helped my nerves a great deal!

Please don't panic but remember that lead crystal is very different from standard glass. Your settings will vary depending on your machine. I keep the power at 100%, speed somewhere around 36, and ppi around 380. Different jobs may need some subtle adjustments, which experience alone will teach you.

Most importantly, crystal doesn't handle heat as well as commercial glassware, so masking with a thoroughly soaked masking material is absolutely essential. If you're going to be working with exotic (read: expensive) woods, I would also highly recommend tape or another masking element. Keep your power down to avoid burning; you can always accentuate the piece with a second pass at lower power. (One other tip with wood — reduce the focus height by up to 1/4", at a slightly reduced power setting and run a second pass. This produces an almost 3D effect.)

Next, the judicious use of inlays can add a fantastic result. Different woods, foils, and engraver's plastic (especially those with special finishes like wood grain, marbled and metallic colors) all add to a pleasing result. Inlays can add an awful lot to a customized piece.

My advice would be to use them judiciously to highlight a gift — not so the inlay takes over the piece. An inlay will require three processes. First, of course, the inlay itself must be cut. You may want to mask the inlay to prevent smoke, chipping, or other process *side effects* from damaging the body of the inlay.

Use the standard hairline setting at the dimensions you wish to achieve. Second, you need to cut the recess for the inlay.



Copy the outline of the inlay and lay that image where you want it relative to the body of the gift. You will want to increase the outline before you cut the recess.

If you are using a very fine inlay material, I have found .75 pt thickness will work. For a thicker piece such as a second piece of wood, engraver's plastic, leather or the like, you should think in terms of perhaps 1 pt or even 1.5 pt thickness.

Third, choose an appropriate adhesive. For thinner or lighter material you can use standard double-sided adhesive tape. *Don't forget...* If you want to have the

entire inlay taped, apply the tape *before* you cut. You may choose to *spot-tape* the inlay. That is completely up to you and it can be done after cutting it. Only partially taping the inlay may not result in an ideal result.

For heavier inlays where double-sided tape doesn't provide a strong enough bond, there are any number of commercial



### Graphics editing, copyright, and pricing

What we are selling in this business really centers around the graphics and text the customer wants. This is what makes a custom gift truly unique. There is an almost limitless variety of images available, either through your own graphics software, through pay-as-you-go graphics or through open-source programs. While it's always preferable to have an image that is editable, a little practice with tracing an image results in a great result. Tweaking the various parts as you go produces a truly unique piece.

Depending on the material you are engraving, being careful with shading adds to the quality of the final image. Also, remember that if you enlarge the

adhesives that can be found at your local hardware store.

For example, I was asked by my local Police Department to use challenge coins. I used a well-known construction-grade adhesive in this case. Always secure your inlay in its recess, reinforcing it by placing a weight on top of it if necessary, and avoid using too much adhesive. Your piece can be ruined if a blob of adhesive suddenly squeezes out from under the inlay! When finishing your custom gift, just be careful to use as mild a cleanser, oil, or polish as you can to protect the inlay, the body of the piece, and the adhesive. You don't want the inlay to fall out!

Before I proceed, there are a couple of process tips I should have mentioned in an earlier piece, and I apologize for the oversight. First, engraving glass. Experiment with your settings to get the result you want. I have found the manufacturer's recommended settings tend to be too high. This results in chipping and an inconsistent finish. Adjust your power and ppi settings to get a clean result.

Protect the piece with a wet mask. I use soaked newspaper or thin packing paper, but there are masking products available from your engraving materials supplier. Using a mask protects the piece against chipping as well helping to dissipate heat.





image, or zoom in on your screen, double-check the image before you engrave to make sure outlines or other details are proportional and don't overpower the basic image.

It can be necessary to "reverse" shades in the interests of clarity. Something that is very dark may need to be drawn in a very light shade, and vice versa. It may also be necessary to ignore shading altogether to get a clear result.

Gifts for members of the Armed Forces can be a little more challenging. Standard Army, Navy, Marine Corps, Air Force, and Coast Guard logos, as well as rank badges, are available through DOD websites, and in many cases, can be downloaded in editable formats.

Specific unit logos are more challenging, though in some cases, they can also be found online. In some cases, though, you will need to have your customer supply a photograph or sample. Again, this is where developing your tracing skills will pay off. College logos, corporate logos, and the like can also be found. Law Enforcement agencies will often be only too happy to provide an image.

One word of warning... Be very careful with copyright restrictions. Intellectual property is not to be messed with. It may well be necessary to pay a licensing fee, or you might have to contact someone and ask permission to use a logo. I have purchased artwork from some institutions, I've paid royalties for using some artwork, but by simply asking permission first and explaining I'm dealing in one-offs, I have enjoyed good luck in getting permission to use logos or other privately-held designs. For more on this see Michael Stewart's article, Copyright Notice, on page 52.

How you ultimately charge for your time is completely up to you, but remember, you'll probably have a budget to work with. I have spent as much as seven days working on a design, and there is obviously no way billing for seven days' work is going to be affordable for a one-off or limited gift.

The time and material spent using inlays mustn't, or at least shouldn't, be forgotten either. You may well have to buy a piece of inlay material that is far bigger than you actually need, and the remainder of that piece really should be accounted for somewhere, if for no other reason than you may never use it again.

Customized gifts are a double-edged sword. The opportunity for good returns is there, but along with it comes the challenges associated with breakage and other losses and the proper valuation of your time. Be careful, and the rewards far outweigh the challenges, both from a satisfaction and financial standpoint. **GP**

# MORMAN

## Family rules

Love your family **SHARE**  
 Have fun *Laugh together*  
 Say please and thank you  
**Listen to each other**  
*Help each other* **Be kind**  
 Try new things **Forgive & forget**  
 Always tell the truth  
**Respect each other** *Do your best*  
 Give lots of hugs and kisses

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## LASER ENGRAVING

# Metal Flasks

COURTESY OF EPILOG

Great for groomsman gifts, college reunion keepsakes, distillery swag, and much more, these matte coated flasks engrave beautifully! Here we'll walk you through the steps of using the laser to ablate the dark coating and reveal shiny stainless steel beneath. These sleek flasks are an ideal gift for a variety of occasions and events and will make a great addition to your product line!

**Materials Needed:**

- Flasks
- Cleaning Solution
- Paper Towels

Epilog Laser System:

We used a Fusion Pro 24 80 watt

Raster engraving — Speed: 100% //

Power: 40% // DPI: 500

**Step 1: Prepare the Artwork**

Start by customizing your artwork as necessary. Because there is a slight curve to the flasks, it's best to size your artwork so that it remains in the center of the piece. This will ensure the laser doesn't go out of focus on either side when engraving.

**Step 2: Determine your Parameters**

Test different speed/power/frequency settings for your flasks. Generally, you will not need an excessive amount of power to remove the coating. We used 100% speed, 40% power, and 500 DPI on an 80-watt Fusion Pro 24.

**Step 3: Prepare your Material**

Place your flasks on the laser bed, focus the table, close the lid and run the job.

**Step 4: Clean**

After the job is done, wipe any leftover residue from the surface of the flasks using a cleaning solution, and then rinse them off with water. For this project we used Blu from Enduramark.

**Where can you sell laser engraved metal flasks?**

- Online outlets
- Distilleries
- Craft spirit stores



GP

## DECORATING APPAREL WITH

# Transparent Heat Transfer Vinyl

COURTESY OF JDS INDUSTRIES

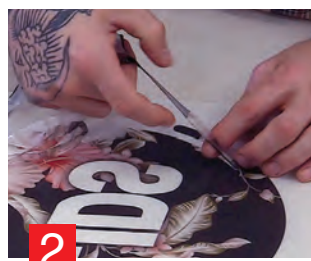
**H**eat transfer vinyl (HTV) is a great way to decorate apparel as well as rigid substrates. Between solid-color opaque films and full-color print vinyl, heat transfer offers a big advantage over dye sublimation — you can apply it to any color. In other words, you're not limited to white and other light colors. This provides more options for your customers!

However, we must admit heat transfer does have one downside when it is applied to clothing. Unlike sublimation, where the design becomes part of the garment, heat transfer involves vinyl bonding to the surface, which means you can feel the film. Depending on the thickness of the HTV and its stretchability, your customer may not like the way it feels.

Fortunately, there is a product that delivers the best of both worlds! Transparent print HTV produces vibrant colors and can deliver designs with fine details. At the same time, it offers a softer hand, delivering a feel that is similar to screen printing.

Traditionally, HTV is an opaque white film. That means it blocks out the color of the underlying fabric. Transparent HTV is the opposite. The vinyl is clear, and the underlying substrate is visible through any unprinted areas. The result is a transfer that appears to be part of the garment rather than one that is layered on top of it. Keep in mind, transparent HTV will look better on lighter colors.

Here's another big benefit of transparent heat transfer — you print directly onto the adhesive, eliminating the need for transfer tape... saving you time and money! Let's go over the steps you'll follow to apply transparent HTV.



2



3



4



5

**Step 1.** Print your design in reverse and run it through your plotter/cutter.

**Step 2.** Weed away any excess vinyl.

**Step 3.** Position the image on the substrate. It must now be right reading. Apply a piece of painter's tape to hold it in place while moving it to the heat press.

**Step 4.** Line the substrate up on the heat press, remove the tape, and press at 305 degrees for 10 seconds using medium pressure.

**Step 5.** Let it cool for a few seconds then peel away the carrier sheet.

That's it! You've created a T-shirt, jacket, or other customized product with a great look and feel. **GP**



1

# Copyright Law

## FOR TODAY'S GRAPHICS PROFESSIONAL

BY MICHAEL B. STEWART, ESQ.

*The do's and don'ts of copyrights and licensing*



Michael Stewart is a named partner of Fishman Stewart PLLC, founded in 1996. In addition to his Juris Doctorate, Michael has a master's degree in engineering and an English degree. A recognized subject matter expert in his field, Michael is a frequent speaker on intellectual property protection and enforcement. Michael can be reached at [mstewart@fishstewip.com](mailto:mstewart@fishstewip.com) or by calling him at 248-594-0633. To access white papers to help promote a better understanding of the creative process, visit [www.tackleboxinsights.com](http://www.tackleboxinsights.com). To receive a free weekly newsletter providing a pop culture view of creativity, go to [www.fishstewip.com/fish-tank](http://www.fishstewip.com/fish-tank).

**H**ave you ever seen an image or a design you wish to copy since it's perfect for a project you are working on and will make it much easier to complete in a timely and cost-effective fashion? If so, you may have wanted to copy and paste it, or even use just a portion of it.

Alternatively, have you produced a creative expression that speaks to you and others, but you are concerned that someone may rip it off. There are steps you can take to protect a creative expression using copyright law (literally the law governing the "right to copy"). In turn, if you wish to copy from someone else's creative expression, be careful, that same copyright law has some prohibitions you should know about.

### Fair use or copyright infringement?

If you are interested in copying even a portion of a creative expression of another, copying with attribution is not a loophole that avoids copyright infringement. In fact, providing attribution may complicate matters because it may be used as evidence that your copying was willful or intentional, which could subject you to higher penalties and damages in an infringement lawsuit.

However, some creative expressions that are protected by copyright and made available for public use require that you provide proper attribution. For example, Creative Commons licenses often include a condition that requires the user to give proper credit, a link to the license, and indicate if any changes were made to the original creative expression.

Also, be wary of the murky area of *fair use*. While certain copying can avoid claims of copyright infringement if they fall under the umbrella of fair use, whether or not a copying is fair use is extremely uncertain, unpredictable, and ultimately can only be determined by a federal court. That's not generally worth the risk.

Nor is there a magical percentage that can be copied that will avoid a claim of copyright infringement. A pragmatic rule of thumb is that if enough of a creative expression is copied that the owner can recognize it, then you have identified a risk.

A further myth is that one can do some limited infringing copying without concern. Even a single infringing act, such



There isn't a magical percentage that can be copied that will avoid a claim of copyright infringement.

as using a creative expression of another (like a Marvel character) on a vehicle wrap or T-shirt may be enough to trigger a response.

Significantly, a Copyright Claims Board was recently created within the Copyright Office to act as a “small claims” court that will hear infringement cases filed by copyright owners. While damages are limited to \$15,000 per infringing act or a total of \$30,000, the proceedings are extremely streamlined.

We are seeing copyright owners taking advantage of this new venue to go after copyright infringements that are relatively limited in scope since the expense of full-blown litigation is avoided.

In short, when copying from the creative expression of another, it is advisable to assume that copyright law applies — no matter the nature of the creative expression — and do not copy any of this into your own creative expression without the permission of the owner.

The reality is that permission is very often given if one goes through the proper protocols, such as approaching an individual owner directly or accessing the appropriate website links of organizations with copyright licensing protocols.

For example, if you are interested in using creative expressions owned by Disney®, a good starting point is [www.disneystudioslicensing.com](http://www.disneystudioslicensing.com). The policies & permissions for content associated with the University of Michigan, which I attended, can be found at <https://brand.umich.edu/trademarks-permissions/permissions/>.

If you provide permission to use your creative expression as an owner/licensor or you seek the right to use a creative expression of another creator as a licensee you are entering into a copyright license. A copyright license is a written agreement giving a licensee to use the creative expression of a licensor in exchange for some form of consideration such as attribution or money.

When prepared correctly, a copyright license provides a complete understanding of the relationship between the parties and the nature of the license being granted. It is important that the license be detailed and accurate so that the parties understand what their rights and obligations are to each other.

Typically, a copyright license will be limited in scope, meaning that others might also be authorized to use the creative expression at the same time. It is possible, however, to enter into an exclusive license, meaning that the licensee is the only entity with the right to use the copyrighted creative expression for the length of the copyright license.

An exclusive copyright license can be very valuable to a licensee since it restricts other ways that a licensor can permit uses of its creative expression so be careful as an owner before entering into such an agreement.

### Copyright law for the creator

In the United States, and in many other countries, copyright protection arises at the moment a creative expression is fixed in

tangible medium. This means, for example, that you have rights as soon as you draft a poem with a pen on paper, save a new logo to your computer hard drive, record a song digitally, paint on canvas, sculpt in marble, or snap a photograph on your mobile phone.

A creative expression is protected by copyright automatically: the author need not file for protection with the government to protect a creative expression.

There are some significant caveats, however, as to copyright ownership by an author. For example, an employer owns the creative expression of

an employee whose work comes into being as part of their job.

As another example, under some circumstances, an independent contractor may also not own a creative expression if it is a so-called work made for hire. Nevertheless, when working with an independent contractor it is always safer to obtain a written assignment of the copyright to the creative expression and to make sure to include language that does not permit the contractor to seek reversion of the copyright at some point in the future.

U.S. copyright law grants the owner of copyright in a creative expression the exclusive rights to reproduce and publicly distribute, and perform and display the creative expression, among other rights. All copying is covered — even downloading a copy of the creative expression of another onto your computer may constitute an unauthorized copy although it is not until one starts to publish an infringing creative expression that damages realistically start to accrue.

To obtain damages for copyright infringement, including potentially significant enhanced statutory damages and attorney fees in the case of willful infringement, it is important for an owner of a creative expression to register it with the Copyright Office of the Library of Congress.

While a registration application can be filed at any time, it is advantageous to file within 90 days of publication if you wish to go after infringers even before you register your creative expression. It might even make sense to register a copyright even before publication and in the case of some types of creative expressions (like photographs), individual protection for multiple photographs may be possible using a single registration filing. The Copyright Office does not conduct a formal examination other than to make sure that the submission meets a low threshold of originality.

Moreover, while not required, it is desirable to use the Copyright symbol ©, the year of publication, and the name of the copyright owner to avoid certain defenses to infringement such as an innocent infringer.

The bottom line is that if you are creator, copyright law can be extremely helpful to protect your creative expression and provide the opportunity to control its distribution. If you wish to use even a portion of the creative expression of another creator, be cautious, and when in doubt, seek permission. **GP**

HOW TO ELEVATE

# UV Cylindrical Drinkware

COURTESY OF INKCUPS

In a highly competitive world where numerous drinkware brands vie for the spotlight as the viral vessel of the season, you can set your brand apart by providing captivating print techniques that others struggle to replicate swiftly and effectively. Metallic vessels, like stainless steel tumblers, remain popular and serve as perfect substrates for decorating with metallic designs, typically a time-consuming and cumbersome manual process.

Similar to mirror print on glassware, where the artwork is visible from both the interior and exterior, the Lustre Effect enhances the aesthetic appeal of the vessel, creating a highly captivating product.

Harness the power of customization for drinkware and unlock greater sales potential by providing customers with an added level of pizzazz through metallic colors, graphics, and designs. Elevate your offerings with the captivating print technique known as the Lustre Effect, enabling the effortless creation of stunning metallic images on metal drinkware. Streamlining the process, this innovative solution simplifies the path to extraordinary designs, amplifying the appeal of your products.

The Helix® ONE, paired with the Lustre Effect technology software, presents numerous advantages for brand managers, product managers, advertising agencies, and other organizations seeking to stand out from competitors by incorporating distinctive metallic colors and designs into their products.

The Lustre Effect allows for a metallic appearance on aluminum, stainless steel, and other metal cylindrical vessels. It offers a range of hundreds of metallic shades for unique and eye-catching graphics. For limitless creativity, it also provides unlimited embellishment features to create gradations, dimensions, hidden and



subtle watermarks, and patterns using metallic colors. This innovative solution simplifies the entire design and print production process, benefiting both efficiency and cost-effectiveness.

Through the elimination of labor-intensive manual steps and the avoidance of trial and error, the Lustre Effect proves to be a time and resource-saving solution to achieve metallic designs. This empowers brands, regardless of their size, to focus their efforts on what truly matters — crafting exquisite works of art with meticulous precision, all in the most efficient and cost-effective manner conceivable.

By utilizing the Lustre Effect, one can effortlessly set products apart from competitors. The Helix® ONE is ideal for decorating one-off pieces, creating unique metallic drinkware that entices even the most discerning customers. **GP**



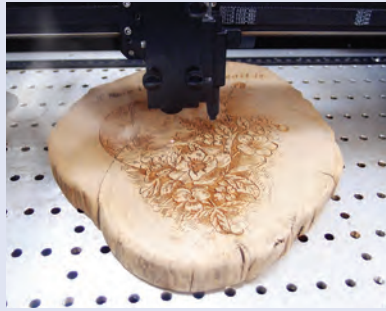
For more on the suppliers featured in this section, please see website and phone information following each product.



**COLORED ENGRAVABLE WOOD**

**Rowmark** offers its ColorShop Woods, which the company says are real wood products with colors infused into the grain. The product is laser and rotary engravable.

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**Inc.** offers the Speedy 360 and 400 laser engravers, now equipped with Trotec Vision Design & Position.

This includes a 12-megapixel camera with a live, full-color image of the working area, according to the company. The product can be used to create designs including text, logos, images, or photos.

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GP

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# Memorial Products

BY FINCH GROSS

*Using sublimation to create everlasting products*



Finch Gross started full-time at Condé Systems Inc. in 2020, where he continues to serve as a Sales & Marketing Specialist with a focus on social media content and new product development. He received his bachelor's

degree from the University of South Alabama in business administration. When he's not busy sublimating, Finch enjoys disc golf and playing music on his banjo.

**W**hile working Condé's Sublimation Kiosk at a recent trade show in Lafayette, Louisiana, I noticed one attendee having technical difficulties sending her image. When I asked to see the image, she showed me two separate photos of the same house.

At first, I must admit it surprised me. Why would she want to print out two pictures of the same house? Since I love stories, I simply had to ask why — and her story was one of remembrance. She explained that her father, who had passed away earlier this year, had taken impeccable care of the pictured house and the property that surrounded it.

I listened as she spoke highly of her father and all of the hard work he put into maintaining the house and yard. After he passed away, the house and yard went into disarray, causing her much sadness and anxiety. One of the photos was of the house and property after he passed, and the other was taken after she hired an entire crew to clean it up. I couldn't help but get emotional. I didn't know pictures of a house could mean so much!

I knew right then that I had to figure out how to get these images printed. Since it was going to take a little more time than usual to prepare the images, I asked her





Image courtesy of Sandy Livingston – Living Image Solutions

to come back by the end of the show, and I'd have her item ready.

With a little photo editing, I was able to combine the two photos into one so that I could transfer them onto a product for her. When she came back later that day, I eagerly handed her an 8" x 10" ChromaLuxe desktop photo panel with her images on it. She was blown away by the photo panel! Her reaction caused both of us to get emotional right there on the show floor!

I've heard similar stories at trade shows, and I am always amazed at how powerful sublimation imprinting can be. It can preserve cherished memories of late loved ones.

Sublimation imprinting is much more than taking a photo or graphic and putting it on a product. Sublimation imprinting is a method of preserving meaningful memories. When graphics and cherished photographs come together to form an item that brings tears to the customer's eyes, we know we're selling more than just a product.

### Indoor memorial products

Sublimation transfer offers a unique and heartfelt way to honor and remember our departed loved ones. The technology is capable of transferring full-color, photo-quality images onto hundreds and hundreds of specialty products ranging from jewelry to blankets to large photo panels.

The ability to add unlimited text and graphics assure that you'll be able to personalize the selected products in a way that faithfully pays tribute to the departed while also bringing joy and comfort to the remaining loved ones.

With so many choices, selecting a product may be the most difficult part. Puzzles, bookmarks, fridge magnets, and holiday



Image courtesy of Kevin Jackson – Glory to God Designs



Image courtesy of Jessica De Leon



Image courtesy of Mary Hodges





Image courtesy of Nancy Cranmer – Squirrel Squared



Image courtesy of Ja-Printing

ornaments may not pop into your head as memorial products at first, but they can actually be powerful and useful ways to keep images of loved ones close at hand. Here are a few of my favorite memorial products for indoor use...

**Christmas ornaments:** Christmas ornaments, imaged with a favorite photo and text, are a great option and can be displayed every year when the tree goes up. There's lots of single and double-sided shapes to select from and they come in a variety of base materials including metal, hardboard, FRP, natural wood, glass, acrylic, and more. These personalized tributes become cherished heirlooms, passed down through generations, ensuring that the memory of our loved one's lives on.

**Plaques:** Sublimated memorial plaques provide a dignified and lasting tribute. They can be created using materials like metal, acrylic, or wood, allowing for a wide range of design options. These plaques can feature a beautiful photograph of the departed, along with their name, dates, and a heartfelt quote.

**Blankets:** Transforming cherished photographs into sublimated blankets offers



Image courtesy of Mady-Jays – Jessica Simpson

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comfort and warmth during difficult times. These blankets can be adorned with full-color images, allowing for a striking and detailed representation of the departed. They serve as a loving reminder that our loved ones are always with us.

**Jewelry:** Sublimation allows for the creation of personalized memorial jewelry pieces such as pendants, charms, dog tags, and cuff bracelets. These can feature a photograph or an engraved message, enabling individuals to always keep their loved ones close to their hearts.

**Keepsake boxes:** Sublimated memorial keepsake boxes provide a special place to store treasured mementos such as letters, photographs, or small personal belongings of the departed. They can also be used to store the ashes of loved ones. These boxes can be customized with meaningful images and text, creating a personal and intimate memorial.

### Outdoor memorial products

As you know, some memorial products such as graveside decorations and memorial wall plaques are intended for outdoor use, posing a frequently asked question from those interested in sublimation transfer: “How long will a sublimated image last?”

If you’ve been in the sublimation world for very long, you know that UV light will cause a sublimated image to fade over time. Sublimated products left directly in the sun will fade faster than if they are in the shade.

This is where you need to be as transparent as possible with your clients and tell them upfront to help eliminate customer dissatisfaction via perceived false advertising. While most clients will understand, others may be overly cautious about outdoor memorial products. To reassure them, you could offer to replace the item if the image fades within a specific amount of time.

For memorial products with known intentions of being left in the sun (such as a gravesite or garden), consider offering your clients a product that has more temperance to UV light, such as ChromaLuxe Outdoor metal prints.

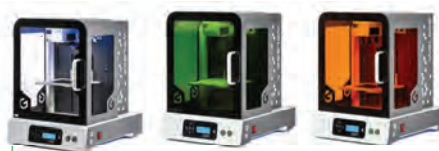
### Gantry & Galvo Lasers



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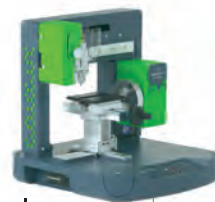


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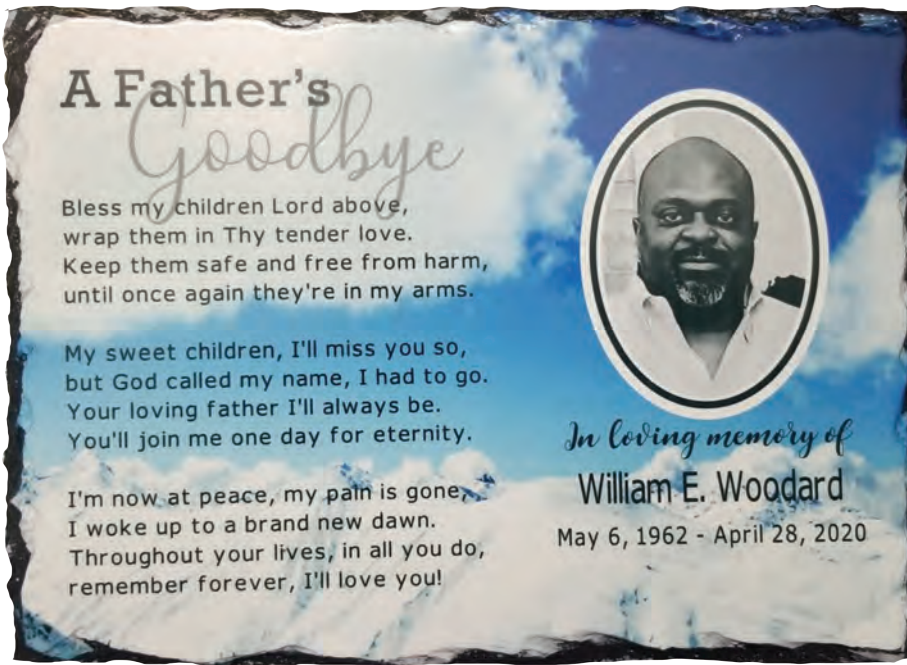


Image courtesy of Jacqueline Pitts

Without going down a complex sublimation rabbit hole, I can simply say that ChromaLuxe Outdoor now features a five-year outdoor rating when used in conjunction with Sawgrass SubliJet-UHD inks. These metal panels also deliver scratch, graffiti, and chemically resistant finishes rivaling other decorating technologies.

**Garden stakes:** One of my favorite outdoor products due to their resistance to UV light, garden stakes are a simple way to add an image and text at a graveside, in a flower arrangement, or included in a roadside memorial.

**Garden flags:** Garden flags offer a large imprint area for including a name, photograph, and/or a heartfelt message. Some are available with double-ply fabric for the option of transferring the same image to both sides or a different design on each side. Having multiple flags produced also allows the customer to rotate them based on the time of year. An attractive wrought iron garden flagpole that fits both flag sizes is sold separately.

**Slate:** Slate (or SubliSLATE), a rock-like substrate that is hand carved and then coated for sublimation transfer, is one of my all-time personal favorite substrates due to its durability, rustic look and feel, and fantastic image quality. The beauty and diversity of slate are undeniable!

Unique and impressive, slate is offered in a variety of traditional and non-traditional shapes, including tablet, half oval, oval, rectangle, left or right contour, square, round, and a rectangle with a clock mechanism.

They are also available in your choice of a matte or gloss white sublimation coating. Most sizes come with black stands for convenient desk, mantle, or tabletop display, while others are designed for hanging.

**Design**

There are four major design variables that appear on a typical memorial product:

**1. Name** — Whether the individual being remembered is a human or an animal, getting the name right is important. For humans, asking your client how exactly they would like the name



Image courtesy of Ashwood Boutique



Image courtesy of Ron Edelbrock - Benton-Trophy-and-Awards, Inc



Image courtesy of J. Brown



Image courtesy of Karla Wyss

*These personalized tributes become cherished heirlooms, passed down through generations, ensuring that the memory of our loved one's lives on.*

to be displayed is not a dumb question. Sometimes nicknames can be added in quotes.

**2. Photograph** — Getting a high-quality photo shouldn't be too difficult in this day and age. Strive to obtain the highest-quality image the person has available. Larger products may need high-resolution images to look their best.

**3. Background Image** — Having pre-made templates with graphical backgrounds will help tremendously. Try and offer only 2-3 choices for backgrounds as too many choices can make it more difficult than helpful.

**4. Text** — Whether you're helping a client make a memorial item for a Christian funeral or secular service, be ready to ask what words they would like on the memorial. Offering font choices can help as well. Ask for text that makes a defining statement, such as a poem or Bible verse.

One question we get is, "What if my client only has a printed photograph of their loved one?" In situations like this, you have some options:

1. You can scan the printed photograph and then edit in your graphics program to make it sublimation ready.

2. You can insert the printed photograph into a sublimated photo frame. This way, the printed photo can rest in the frame that's been customized with any artwork, Bible verse, or poem that they wish.

## QR codes

Another great way of preserving someone's memory is to add a QR code to a product. When scanned, it pulls up a video or image gallery of the loved one or fur baby being remembered. Some real-life examples are to take a video and create a private YouTube listing.

For an image gallery, you can take a Google image and make it a URL or use an iCloud link to share the images to the QR Code. I decided to make a memorial slate for two Golden Retrievers we lost a couple years ago and if you scan the QR code, it takes you to a video and an image gallery of some of my favorite memories with Brinkley and Sophie.

## Marketing

So, how do you get the word out that you produce memorial products? Photographing all the products you make and posting them to your Facebook and Instagram pages is a must. Also, always make sure potential clients know that you can personalize all of the products with full-color text, photos, and background patterns and that you can provide quick turnaround.

Generally, all memorial products can be divided into two categories people and animals. Knowing this, you can target your approach respectively towards one of the two or both. Some businesses that you can approach to market your products are somewhat obvious, like funeral homes and pet groomers. Some others, such as churches and military veterans' organizations, are also looking for businesses to help with memorial products. Every year for Easter and Christmas, Christians around the United States memorialize lost loved ones by offering the congregation poinsettias during Christmas and lilies during Lent.

If you're unfamiliar, you can submit the name of a lost loved one, and the church will provide the flowers and card with the

loved one's name. You could approach the florist or the church and offer them a sample garden stake with a name and Bible verse; this provides a great opportunity to add value. Once the flowers have withered, there is still a personalized item that the family can have.

## Emotional impact

Sublimated memorial products hold a profound emotional impact on those who receive them. They serve as tangible reminders of the love and memories shared with the departed, providing comfort and a sense of connection.

These personalized tributes become cherished heirlooms, passed down through generations, ensuring that the memory of our loved one's lives on. Whether it's a plaque, blanket, piece of jewelry, or a keepsake box, sublimated memorial products encapsulate cherished memories and ensure that the legacy of our loved ones endures.

Whether you've been producing memorial and/or remembrance products for years or you're just starting out, I hope this article will inspire your creativity and provide insight into the sublimation memorial products industry. **GP**



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# Memorial Magic

BY WREN H. GEORGE

*Making memorial  
pieces that shine*



In the early '80s, Wren George began etching glass using a catalog start-up kit to make unique gifts for her friends and family. Shortly after, she started WrenSong Creations in Fort Atkinson, Wisconsin, an art glass studio that

often combines multiple techniques, including surface etching, carving, stained glass and hot glass.

**C**reating memorial items can be very rewarding. There are some difficulties, though, due to the high emotions of the client and the varied options available to receive our etching. In this article I offer the maps, if you will, that I use to help navigate my way to an understanding of what best suits the client's ideas.

It starts with providing a bit of time and a willingness to just listen as they talk about the subject for the memorial piece. I have a checklist of questions to be addressed, most of which are answered organically during the conversation. Here they are, in no particular order:

1) Subject — family or friend? Human or animal? Or perhaps a tradition, era, close group disbanding?

2) Details — age, relationship, pastime, etc.

3) Budget — how much is the client comfortable spending?

4) Number of pieces required — who are they for and why?

5) Location of display — size of space, lighting, hanging or standing, etc.

6) Amount of attention desired — personal and private? Or high impact?

7) Is color or texture desirable?

8) Due date — a gathering? Holiday or anniversary?

With a small bit of encouragement the memories just flow and can give us direction.

The next navigational tool I like are photos of previous work. Presented here are examples of favorites that inspire, all inspired by clients.

1) Ornaments — beveled clear glass, optical crystal, and color backed are perfect for multiple recipients. Including a



A customer's original pet portrait drawing was used to create a stencil from 4-mil vinyl sandblast resist. As 1/8" art glass was selected, it was etched just deep enough to hold the black paint. The completed panel was then incorporated into a stained-glass panel using zinc. (Images courtesy of Wren George)



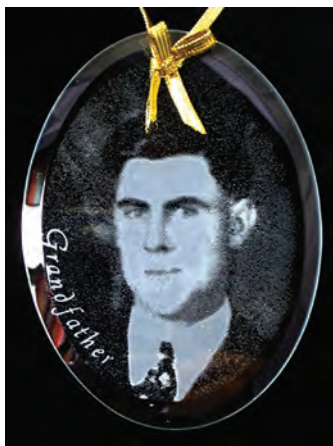
Golf-themed award blank, from Prism Products, surface etched with a photograph and text. Stencil materials used were Ikonics Imaging Rapid Mask High Detail, and 4-mil vinyl sandblast resist cut on a plotter, respectively.



Custom built wall mount of wood with LED lights installed at the top. The 1/4" plate glass has polished edges, ground notches at the top for mounting, a photograph surface etched using Rapid Mask High Detail, and text deeply etched using a 4-mil vinyl custom cut stencil.



A cast glass Pocket Stone using a casting mold and glass frit, black fine grit for the pads, and white medium grit for the main body of the piece. Approximate size of finished stone is 2" x 1-1/5". The face of this cast glass paw is etched fairly deeply using Ikonics Imaging UltraPeel photoresist film for the design, and PVC sandblast resist for the name. Black paint was added for contrast.



A beveled ornament blank, from Prism Products, was used to create this memento. The original photograph was from an old newspaper article. After a bit of work in Photoshop, a Rapid Mask High Detail stencil was used to etch in the photo, while 4-mil vinyl sandblast resist cut with a plotter for a second etching pass made the text stand out better.



Oval Pocket Stone, approximately 2" x 1-1/4", created using a casting mold with a black fine grit frit layer in the bottom, then filled with crushed scrap COE compatible glass. The design was deeply etched into the bottom using a stencil made from PVC sandblast resist.

names and/or nicknames add a personal touch.

2) Award blanks make perfect reminders of shared passions.

3) Optical crystal and crystal clear glass inserted into an LED lit base illuminates the etching to create a soothing night light.

4) Incorporating a client's original artwork into a stained glass composition never fails to delight.

5) Pocket Stones created from fused glass castings, customized to the color of the pet, a design of choice, a name, etc. These designs are often filled with paint for contrast.

6) Using the client's glass — there are times I have been requested to etch on some glass provided by the client due to sentimental reasons. I try to honor those requests, but some pieces just aren't suitable. I can often direct to a compatible piece as a complement.

Now for some production tips and tricks that I use to work as efficiently as I can... I love using photoresists, in particular Ikonics Imaging products and equipment, so some of these ideas come directly from troubleshooting conversations with them.

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Custom designed and built frame with LED lights to illuminate the 4" x 6" x 1/4" crystal clear glass. A stencil plotter cut of 4-mil sandblast resist allowed a deeper etch to capture the light for this nightlight.



A 3" glass ornament with black background color, from Prism Products, gives splendid definition to photos etchings. The Letralight unit and Rapid Mask High Detail photo resist film, both from Ikonics Imaging, were used to create the stencil. The text was added using PVC sandblast resist material, cut on a plotter, and etched in a second run through the blasting cabinet.

An 8" x 10" black mirror etched using 220 grit silicon carbide abrasive delivered at approximately 30psi from a pressurized unit in a contained cabinet. Rapid Mask High Detail from Ikonics Imaging was used to create the stencil.



Pyrex pie plate surface etched with a family heirloom recipe. Stencil was cut on a plotter using 4-mil sandblast resist. One of 14 for family Christmas gifts.

Atmosphere dryness can be alleviated in several ways.:

1) A very light mist of distilled water helps to soften the adhesive of the Rapid Mask High Detail, making positioning less problematic, and eases the pressing out of air bubbles for perfectly smooth adhesion.

2) Leaving the stencils to set for a few hours, if possible, reduces blow-off and lifting significantly. This is true of all the resists I employ, whether photoresist, vinyl or PVC.

3) A small tabletop vaporizer has been a surprisingly effective addition. I use a soft cool mist to rehydrate the stencils, particularly the UltraPeel, and keep the surrounding air soft.

4) Using a second stencil for added names/text, especially on small or rougher textures (i.e. previously etched surfaces, castings, or some art glass) allows better contrast with fewer mistakes; 4-mil vinyl or PVC stencil material is my favorite for these.

5) When adding paint leaving the stencil in place after a quick rinse and blot dry has significantly reduced cleanup time. But I do suggest removing the stencil within 24 hours. Then allow the paint to cure another day or so, depending on humidity, before final clean up. This is true of Testor model paints, and gold or silver leaf paint.

Lastly, a few words about memorializing the passing of a time or an era. Perhaps a family tradition or a reunion setting is lost. Maybe an event is no longer happening, or close knit groups are disbanding, like sports teams, military companies, scouts, musical groups, traveling friends, theater companies and so forth. I have found drinkware a successful offering to these groups.

In following any map, the destination must be kept in mind. What is the objective of a memorial item after all? For me it is to lighten a heavy heart with a bit of sparkle and the conjuring up of happy memories. While not always the most lucrative of commissions, certainly some of the most satisfying. **GP**

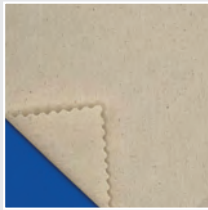
# NEW PRODUCTS

For more on the suppliers featured in this section, please see website and phone information following each product.

## PRINTABLE CANVAS

**Fisher Textiles** adds the GF 5600 Raw Canvas to its Grand Format fabric line for dye sublimation printing. It is a 100% cotton canvas with a dye sub receptive coating that the company says enables paper transfer printing. It has a natural beige finish and can be used for banners, retail displays, and home furnishing applications. It is stocked 125" wide, weighs 6.8-oz per square yard, and is 17 mil thick.

**800-554-8886 • fishertextiles.com**



## CARBON REDUCED PVC

**Brett Martin** introduces the Foamalux Light Bio, its newest sustainable semi-finished plastic sheet. It is a low carbon substrate made with 25% bio-attributed PVC derived from wood-based residue. The company says the process of creating this product reduces carbon emissions by 20%.

**brettmartin.com**



## DTF HEAT PRESS

**American DTF and Lawson Screen & Digital Products**

introduce the Turbo-Stamp, which the companies say automates the heat pressing process through rapid DTF pressing through its carousel system and automatic heat press. It is equipped with one or two pneumatic heat press modules and it allows for with its programmable heat press.

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## FLATBED LASER ENGRAVER

**Radian Laser Systems and Laser Tools and Techniques**

announce the launch of a full line of flatbed cutting and engraving systems and accessories, which the companies say will enable them to provide customers with a wider range of solutions for laser-based applications.

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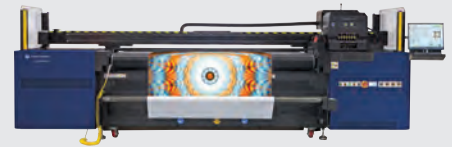
**877-597-4334 • stickersinternational.us**



## WIDE-FORMAT INKJET PRINTER

**Konica Minolta** announces the AccurioWide 250 hybrid wide-format inkjet printing system. It uses the same printhead technology and ink platform as previous AccurioWide models and features faster printing modes as well as the ability to print 4' x 8' boards in landscape orientation, according to the company.

**551-500-2659 • konicaminolta.us**



## DTF PRINTING SYSTEM

**Azonprinter** announces the launch of the Azon Primo+ Neon X, a 24" DTF printing system that uses CMYK, white, and four neon colors. The product has built-in tank agitation and recirculation systems, an automatic nozzle check-in programmable time frame, as well as bulk ink in 750 ml ink tanks. The company says it also has automatic maintenance and an LCD color touch screen.

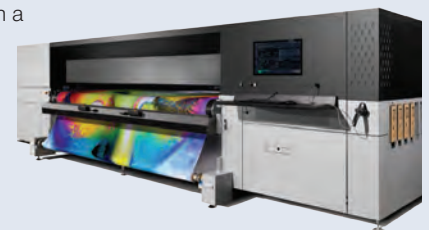
**azonprinter.com**



## HYBRID PRINTER

**Durst Group** expands its P5 portfolio with the P5 350 HS D4 hybrid printing system, whose feeder/stacker unit is formed by two Kuka robots to handle production. The robots can pick up media from different pallets with a height of up to 180 cm, feed them, and stack them again separately, according to the company.

**durst-group.com**



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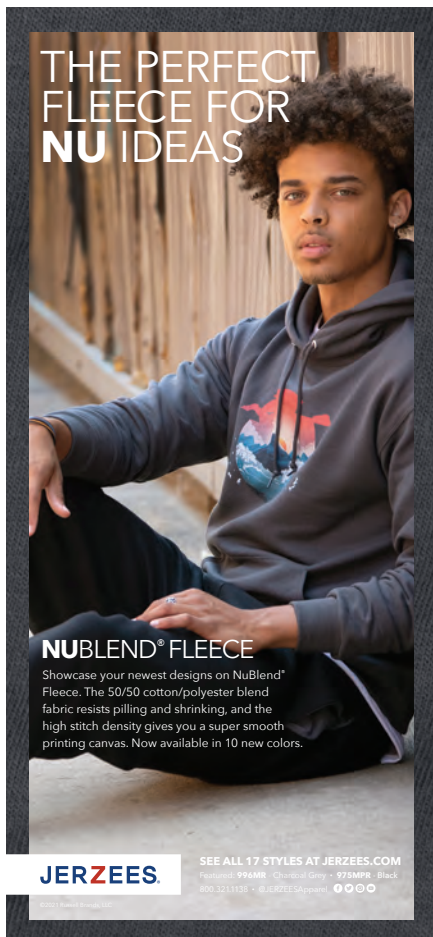
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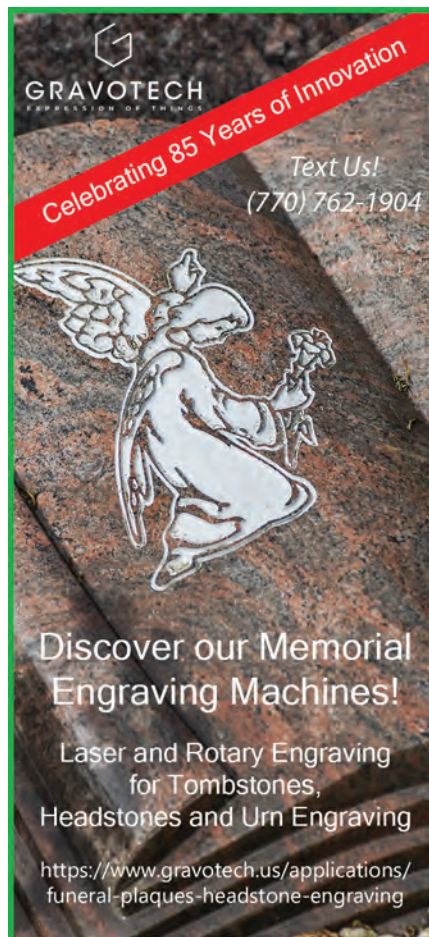
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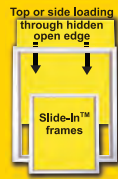
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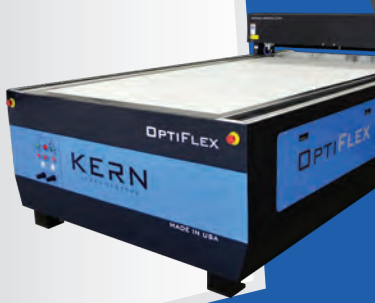
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# Digital & On-Demand Printing

*Delving into our expansion of services through the introduction of DTG and DTF digital printing technologies*

BY GEOFF SCHWEIGERT



Geoff Schweigert is the Director of Digital & Fulfillment for Tiny Fish Printing in Rochester, New York, a custom apparel decorator specializing in high-color simulated process printing for the fashion e-commerce market.

Originally planned as a staff break room, we shifted our attention during our build-out to accommodate the requirements of our newly established digital printing department.



Despite its compact size, this space is equipped with two direct-to-garment printers, two pneumatic heat presses, a pretreat machine, an infrared conveyor dryer, and packing and relabel stations, delivering an impressive level of productivity. (Images courtesy of Geoff Schweigert)

**W**hen I was approached at the start of 2022 to establish a digital printing department for our company, I eagerly embraced the opportunity. As our company grew, so did the demand for solutions that only digital printing technologies could offer.

My interest in what digital printing could offer the apparel decoration industry began when I was introduced to direct-to-garment (DTG) printing in 2012. As a designer, I was fascinated that I could print my artwork onto a shirt without worrying about hitting a minimum. As a screen printer, I was impressed by the ability to print full-color images directly onto a garment without burning a single screen. However, the capabilities of DTG printing at the time were limited, and the print quality paled in comparison to what we were able to screen print. It wasn't the time for us to invest in the technology, but I paid close attention to the advancements in DTG printing as time passed.

## Riding the digital on-demand wave

While direct-to-garment printing got better every year, so did our abilities as screen printers. New customers in our market demanded higher quality prints with more colors and finer detail; therefore, our demands from a digital printing solution also grew. It wasn't until 2020 that it seemed like DTG printing could finally meet the quality our customers expected from us with the latest offerings from leaders in the industry such as Kornit, Epson, and Brother.

In 2021, we were introduced to direct-to-film (DTF) transfers and our interest in digital printing technologies was invigorated once again. The obstacles presented by DTG printing seemed to be solved by DTF transfers, and the ability to offer both became necessary to take our business to the next level. Our customers' demand for what digital printing technologies offered grew to a point where it was a necessary addition to our operations.

At the beginning of 2022, I began researching which solution would work best for our company. After months of research comparing the solutions each company could offer within our budget, we decided that introducing the Brother



GTXpro Bulk to our shop was the most logical decision. The print quality met our customers' expectations and the savings from a bulk ink system would maintain cost-efficiency.

By August of 2022, our digital printing department was in full operation, and the demand for its services quickly

kept operations running full-time. Our introduction of digital printing solutions solved many problems our customers came to us with.

DTG printing offered the ability to print any image onto our most popular shirts with absolutely no minimum. The ability to also print DTF transfers with the

same equipment filled the gap where DTG printing didn't meet our demands.

The combination of both methods allowed us to begin offering print-on-demand solutions for our customers that have become crucial to them operating at maximum efficiency while reducing wasteful production.

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At the forefront of our digital printing department, the Brother GTXpro Bulk delivers exceptional direct-to-garment prints.



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The bulk ink system provides ink cost savings that are essential for maximizing our print pricing efficiency.



Using a clean and wide rubber print roller is an excellent method for achieving uniform pretreatment distribution before drying the shirt and has the added benefit of helping push down the shirt's fibers prior to printing.



The Brother GTXpro bulk goes beyond just direct-to-garment printing, enabling us to generate direct-to-film transfers, opening up new avenues for creativity and customization in our printing processes.

These services were a welcome addition to our fulfillment department as it reduced the amount of inventory held as our customers shifted from traditional methods to a print-on-demand method of production.

Quickly our shop realized how digital printing technologies could also improve our operations. Smaller orders that were impractical for our shop's workflow could be pushed to digital to facilitate optimal efficiency. Any order under 24 pieces would automatically switch to a digital solution. Prints with higher color counts under 100 pieces would also be considered for a switch to a digital solution.

The ability to conveniently and quickly switch from printing DTG to DTF transfers on the Brother GTXpro allows us greater flexibility on the types of garments we are able to digitally print. Switching from DTG to DTF is as easy as loading a sheet of DTF film onto the printer platen and using Brother's GLB Reversal software to send the artwork to the printer. This software reverses the white and color print order and flips the artwork.

DTF works great on synthetic materials like polyester and nylon, where DTG does not perform as well. We switched from screen printing relabels for sweatshirts to DTF transfers because of the time and resources needed to screen print these relabels.

DTF transfers also allowed us to create full-color relabels versus our traditional single-color screen-printed relabels without a giant raise in cost, an attractive upsell to our customers.

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## Opportunities and challenges

In conjunction with our fulfillment department, we've been able to launch custom stores for our customers to sell and deliver products without the worry of unprofitable print orders.

Our customers also quickly realized the value of digital printing technologies for their businesses. No minimums allowed for their creativity to flourish without the worry and burden of unsold inventory. The ability to produce DTG prints and DTF transfers allow for us to create outstanding prints on any garment our customers desire.

Our print-on-demand capabilities have created solutions for our customers looking to enter the e-commerce market at a low risk. A segment of our core customer base found value in the ability to resurrect old designs that had gone out of print through our digital solutions. Despite the limited demand, our customers can still unlock revenue opportunities that were previously missed.

Although these digital printing technologies meet our customers' needs, they do present challenges that need to be acknowledged. The main challenge when introducing DTG printing comes in the form of pretreatment of garments: the use of a digital white ink while DTG printing requires pretreatment to the garment to ensure the ink prints properly.

The difficulty with pretreating shirts is determining the amount of pretreatment to use on a garment. Not using enough pretreatment on a garment will result in a less opaque print with reduced color vibrancy. Conversely, using too much pretreatment can result in a print that does not adhere to the fabric properly and decreases the longevity and washability of a print.

Every brand and style of garment requires a unique amount of pretreatment to ensure optimal print quality. Keeping track of previous print results is crucial. This guarantees future success when working with the same garments and is helpful when creating a starting point for testing new garments.

When testing a new garment, we look



Our Vastex Lo-E Dryer cures our direct-to-garment prints without diminishing print vibrancy and maintaining a pace that matches the production speed of two printers.

at the fabric contents of the garment and compare it against the garments we've tested in the past. Once we've identified the garment most similar to the garment we're testing, we use our recorded pretreatment results to begin testing our new garment.

Our Schulze Pretreat IV is able to control the amount of pretreat solution used

by controlling the speed, pressure, and passes in which the nozzles spray solution on the garment. For our most popular garment, the Bella + Canvas 3001C, we typically set our speed at 140%, our pressure at 100% with a double pass. If the new garment I'm testing is also a 4oz. 100% ringspun cotton shirt, I begin the print test with these settings and adjust

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After pretreating shirts, a larger two-station pneumatic heat press dries the pretreated shirt and flattens the fibers of the garment to allow for an optimal print area.



Leveraging the advantages of direct-to-film transfers, we enhance the efficiency of relabeling garments, promptly affixing a full-color branded tag that adds a touch of vibrancy for our customers.



The Schulze PRETREATmaker IV allows us to pretreat shirts quickly and efficiently. Four spray nozzles ensure we pretreat only the area of the shirt we are printing with the correct amount of pretreatment solution.

Direct-to-film transfers and a small two-station pneumatic heat press power our relabeling operation for our print-on-demand department.



the pretreat settings based on the print results.

Following extensive work hours during the 2022 holiday season, we quickly recognized the necessity of expanding our operations to meet the growing demand for our digital solutions. The space allocated to our digital department in our shop was notably limited in comparison to our screen-printing operation, prompting us to explore space-saving alternatives that maintained high levels of efficiency.

We opted to restructure the department to accommodate a second printer and an energy-efficient Vastex Lo-E Infrared Conveyor Dryer.

Adding another printer to our operation enabled us to achieve higher daily production levels. Introducing a conveyor dryer into our process yielded superior print results by preventing the slight color fading that could occur during curing on the heat press. Moreover, it reduced our dependence on our heat presses, which can now be exclusively utilized for drying pretreated shirts.

While these operational additions satisfy our current demand, we are already considering avenues to further expand our operations to accommodate the anticipated growth in demand. We're currently researching emerging industrial high-speed direct-to-garment printers from manufacturers more familiar to the screen-printing industry, such as M&R, ROQ, Brown, and OvalJet. Additionally,

we are actively exploring various software solutions that can automate repetitive processes and optimize our workflow for improved efficiency.

The decision to introduce digital printing solutions to our shop proves to be a highly beneficial move. By incorporating DTG printing and DTF transfers, we expanded our service offerings and gained a competitive edge in the market.

Digital printing allows us to cater to a wider range of customer needs, including customization, shorter print runs, and intricate designs. Moreover, it provides faster turnaround times and reduced setup costs compared to traditional screen-printing methods. With the combination of digital and screen-printing capabilities, we are able to offer more versatility, increased efficiency, and, ultimately, deliver greater customer satisfaction. GP



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# Giddy Up. . .

## Making separations from photos



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 [GraphicElephants.com](http://GraphicElephants.com).

The City Park in St. Paul, Oregon, once littered with tin cans, was cleaned up in 1936 for a rodeo to be held over Independence Day. That first year, 50 cowboys came from all over the state to compete in St. Paul for a monster purse totaling \$500.

There were bareback, steer riding, and roping competitions. Hop buggy and chariot races took place as well. Trick riders and ropers provided entertainment. Carnival food, adult beverages, and game vendors facilitated good times. There was even a popular gambling tent to entertain risk-taking adults.

St. Paul was remote enough that this went unnoticed by the authorities. Rumor has it that the mayor's wife was a regular

patron. This diversity of entertainment provided just the diversion needed in a time of unknowns. In 1940, lights were added and purses were increased. Growing crowds prompted construction. In 1956, total seating reached 10,500, where it remains to this day.

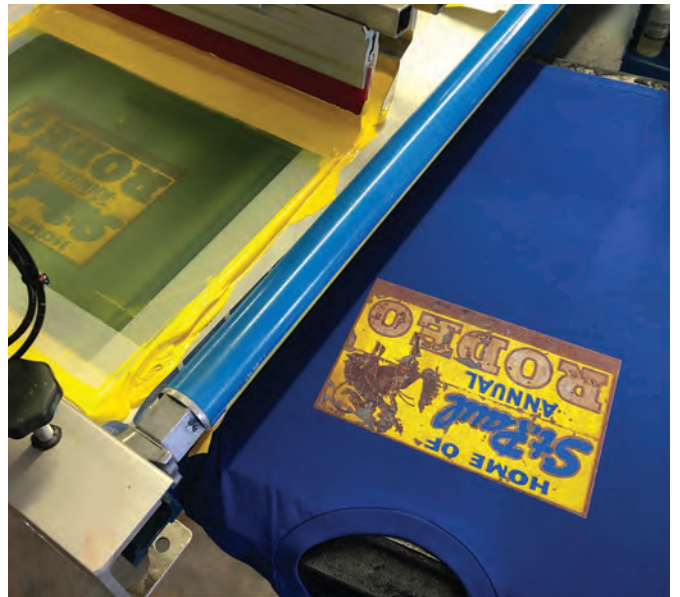
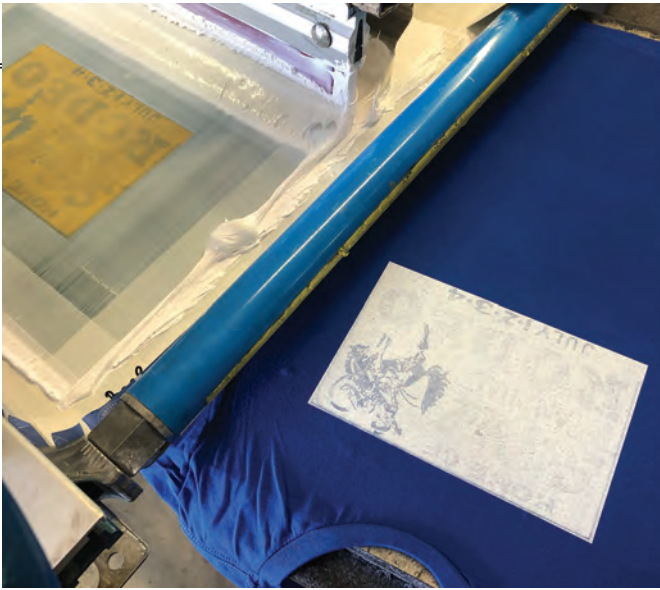
### Rodeo time

As you may or may not know, we do a ton of work in the western and country space. It's a Colorado thing. So, when the good folks from St. Paul Rodeo needed merch for this year's event, it was natural for them to reach out to us.

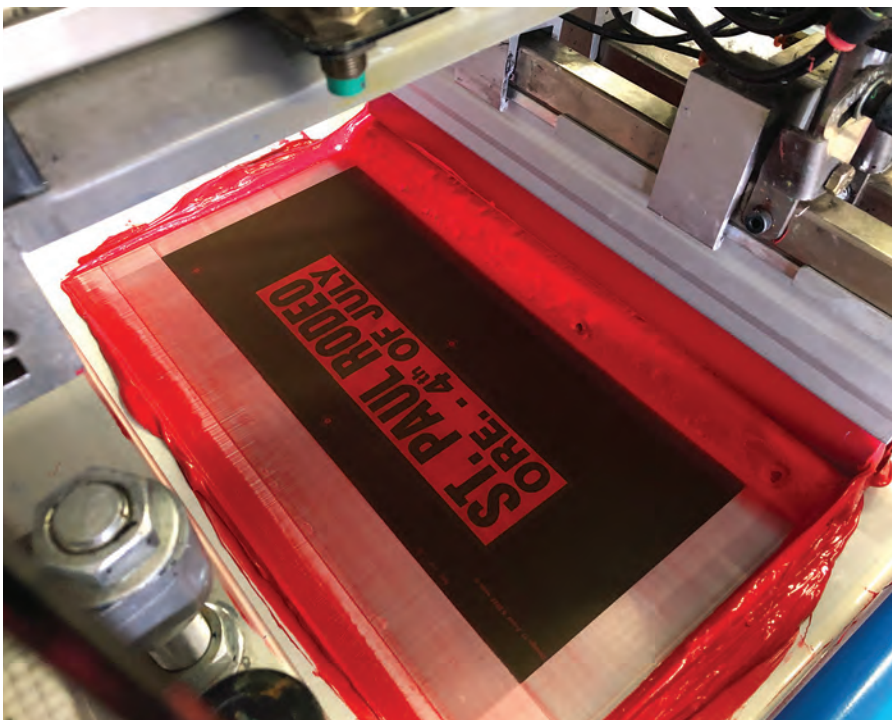
We know that market pretty well, so we were excited to get to work on some new designs for them. Oh, about that... they



In 1998, the St. Paul Rodeo Foundation was formed. Its mission was to enhance and enrich the community by supporting education, local history, and Western heritage through the annual St. Paul Rodeo. Original sign pictured above. (Images courtesy of Lon Winters)



Procession of shirts on the screens.



St. Paul Rodeo



already had their designs from years past and wanted to use them again this year. Wasn't a problem. Less fun for us, but hey, this is part of the biz too. We almost never use provided separations from other printers, though. We just do things differently than most other printers and vice versa.

As our good friend Michelle Moxley, R&D extraordinaire, says, "We (screen printers) were all raised by wolves, but we all come from different packs." Get it? We requested all the files to-size on transparent backgrounds at 300 dpi+ (dots per inch) resolution so we could move forward with our own seps. Nope! "Got photos of the art, will that work?" Well, we guessed the medium-resolution, flattened JPEGs would have to do. Ugh! Yep, our favorite.

First things first. Before we could separate anything, we needed to remove all the images from the white backgrounds and place them on transparent backgrounds (a task we all do too often). Some were easy enough to cut out, others, not so much.

For the more complex images, we used Photoshop. With one of the files open in RGB Mode, we brought up the Channels Palette and duplicated the blue channel, which became the Alpha Mask. We then applied that to the green and red channels and painted in the white elements that were missing. After selecting, we copied and pasted onto a new transparent layer as a mask and essentially cut the image off its background. Ready for separations.

Some of the designs ended up being simple with some secondary elements to fill out the compositions and minor modifications to rebuild the missing or blurry elements. We layered a texture over the top and applied airbrushing techniques. We wanted recessed textures and patterns with worn edges.

Additional designs called for a vintage style with secondary elements. Some art in this old style has an overexposed look to it as well. In Photoshop, we rebuilt our basic shapes. We then used TIFF distress patterns from our archives and positioned them over some of the images.

Much of the color was flat and straightforward, which made it easy in the separation process as there was minimal

continuous tone and/or transitional areas. With some rebuild, we layered the elements over the color with clean lines and enough weight for definition.

We kept the greyscale areas on some with a good amount of dark contrasts. We removed density on the white printers or base plates so that those areas darkened with influence from the substrates. Once colored, each layer was selected and copied to a Channel for separation purposes. Seps were fairly simple.

The most complex part of the project was the sign. By the way, the original JPEG was literally a photograph of a billboard. In the end, the final print looked exactly like that! In this image, 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 most opaque. The knocked-out elements and soft areas in the base 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 was also printed on colored shirts using the addition of that black screen.

Once all the seps were completed, we output them on CTS (Computer to Screen) with 55 lpi (lines per inch) frequency at a 22.5-degree angle and a round shape. We used high meshes at 230 tpi (threads per inch) at 30 N/cm<sup>2</sup> and 10-5% EOM (Emulsion Over Mesh) for a soft vintage hand. We used 65/90/65 for the whites and 75/90/75 on the colors, with all triple-ply, dual durometer squeegees.

We printed wet on wet wherever appropriate, only flashing after the first white down, and post-ironed with a smoothing screen to matte down the fibers. There were a few on-press issues, but for the most part, the project went without incident.

In 1998, the St. Paul Rodeo Foundation was formed. Its mission was to enhance and enrich the community by supporting education, local history, and Western heritage through the annual St. Paul Rodeo. Currently, the St. Paul Rodeo remains a



non-profit corporation with goals to produce the finest world-class rodeo in the country and one of the 20 largest in North America. Community pride produces clean, well-kept surroundings for competitors and patrons. It is highly respected in the world of rodeo and brings a slice of the old West to every 4th of July. GP



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GP0723

# The DTF takeover

*Rolling out DTF and tracking the production and revenue progress of it in our shop*



Howard Potter has worked in the promotional industry since 2003, from designing to building brands and a family-owned business. He is the co-owner and CEO of A&P Master Images

LLC, Utica, N.Y., with his wife, Amanda. Their company offers graphic design, screen printing, embroidery, sublimation, laser engraving, direct-to-film, online stores, vinyl graphics, and promotional items. For more information, visit [MasterYourImage.com](http://MasterYourImage.com).

Last year when I started researching the direct-to-film (DTF) process, I knew it would be a hit from the ease of doing artwork, printing, and production, but I have never seen a process gain traction so quickly in my 20 years of being in business.

Normally you must educate the customer, which takes a ton of time depending on the process, and then make demo pieces for people to try. This process is so good it literally sells itself.

## Launching DTF

Back in January, we got our printer and, over a two-week period, installed it and got it up and running. Then we spent time taking existing artwork we had either screen printed or purchased DTF prints

from someone else and compared them. Very quickly we learned how to adjust our artwork and the printer settings to create solid prints full of color that either matched or were better than previous files, so we made samples to show customers in our showroom.

We launched the process to our customers this past February. We started quietly by promoting it in our showroom first and selling a few orders at a time to get a handle on the process and the time needed to do each step to build a future production plan.

With a new process, you always want to ease into it to work out any kinks that may happen during the startup process. It allows you a grace period for trial and error. And, if something happens, having time to focus on how to fix it without



Angelena Potter, Sara Warner, and Cliff McBride help to heat press DTF transfers. (Images courtesy of Howard Potter)



Our screen-printing manager Cliff McBride operating our DTF printer to get ahead for the next day.

being under the gun of several deadlines.

For example, we faced an issue when we had the film too far to one side on the dryer belt (only by a quarter of an inch), and that part of the belt did not allow suction, which allowed the edge of the film to pop up and strike the head of the printer.

Luckily, we were able to get the parts we needed and were back up and running in 48 hours, so I suggest when you order your first DTF printer that you order any extra suggested parts. That way, if something happens, you will never be down for longer than one to four hours. You can pretty much do just about any of the fixes to the equipment yourself, which is another huge bonus.

### Tracking progress

In our first month of easing into the process and launching quietly, we still did around \$12,000 in production, and on the screen-printing side, we did around \$40,000, so not a bad start at all. It really allowed us to take our time and perfect the production and timing of everything and get the numbers of what we could produce per hour.

For example, we knew we would only be printing one hour every other day, so it took less than 30 minutes to cut down the transfers and put them into bins to keep them organized and free from dust.

We also learned that we could teach anyone to press these transfers within minutes, and they could average a minimum of 40 pieces per location per hour, which is not bad for a full-color design. Can some press 50-60 per hour? Yes, but not everyone will be able to handle that pace, which can create room for location errors if you go too fast.

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When you get to can koozies, tote bags, cinch bags, and other similar items, you can get as many as 100 done per hour. This process speeds up the time of teaching someone to be productive from the printing, prepping, and pressing standpoint.

As we got into the month of March, we produced \$35,000 in DTF production and \$63,000 in our screen-printing department. This is where the major shift in production started to occur, which was only one month after we launched the new process.

We knew the process would sell itself but did not think it would happen in just four to six weeks. We tripled the production from the month before, and now DTF was doing 50 percent of the sales that screen printing was doing, and production staff loved it since it was an easier and cleaner process to work with.

We did run into a production snag,

though. We only had two Air Fusion IQ heat presses by Hotronix, so we had to get two more ordered right away. We paid some overtime until our two new heat presses arrived.

By April, we let things coast to see what would happen, and our DTF numbers held and hit \$36,000 in production, and screen printing produced \$36,000 as well, so now it was 50/50.

Sometimes you are better letting off the gas pedal for a month to tweak things and see how they go before you throttle it up again, so that is what we did. By the way, our revenue totals were down because we hired new people so we slowed production down to speed up training.

By the last week of April and with everything up to speed and in order with our crew and equipment we started marketing the process fully by email to existing clients and posting all over social

media on several platforms.

At the time of writing this, we are only two-thirds into May and we have done \$41,000 in DTF production and \$31,000 in screen printing. Some might be reading this and thinking, “Wait! You’re not using the screen-printing equipment that you paid for as much,” and yes, you are correct, but that was the goal! Why?

Screen-printing supply costs have gone up almost 100 percent over the past three years, energy costs have gone up, and labor costs have gone up, especially in New York state, where we are located.

So, we reduced the use of our screen-printing equipment, which saves the life of it, lowers our power consumption by more than 50 percent since we have electric dryers that pull 60 amps each (not including four flash units at 15 amps each), and uses less supplies for stock.

And, we only use the equipment for easier one- to two-color runs, which lowers the setup time per job, makes us more productive when we operate our presses, and frees up production time for on-demand rush orders.

Instead of letting our screen printers cut hours we simply cross-trained them to operate the DTF print and heat presses. It is much easier on them and allows us to have better control of our workflow.

I am able to relay to the customer service reps which process we have more room for or which would be easier and faster to produce when rush orders come in. It takes a ton of stress off of customer service and our production team, along with allowing us to become more profitable to keep up with all of the increases.

The great thing about having 100 percent of your screen-printing equipment paid for? You can afford to run it only when you need to. I can count on one hand how many three- to five-color jobs we have screen printed this year since the DTF has been up and running.

Direct-to-film is a game changer for all-sized shops for sure, but don’t worry; screen printing will always have a place in the market. It is one of the oldest customizing options that will stand the test of time. **GP**

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# Getting That “First Date”

*How to get that first order from a new customer*



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@nnep.com](mailto:jennifer@nnep.com).

**T**he pandemic changed the very nature of business on so many levels. We changed many of the ways we do things in our everyday lives, including how we shop and how we make purchasing decisions. In this adapted environment, doing the same things we did before will not move your business forward. We need a new approach. Welcome to “Dating for Business 101.”

Getting new customers is a lot like trying to get someone to go out on a first date with you. They need to like you. They need to like the look of you. They need to feel good about dealing with you. They need to like how they feel when they are around you. They need to feel safe when doing business with you. They need to want to spend time with you. Oh my, welcome back to high school?

High school was no barrel of monkeys, let me tell you. I was not in any of the popular or cool cliques, I was more of an “I’ll stay out here on the fringe of the group,” kind of gal. I had friends in many of the prominent social circles but did my own thing for the most part. That kind of approach will not serve your business well. You need to put yourself out there, in the public eye, where you and your business can be seen.

What can you do to get the possibility of that “first date” with a new customer? In other words, how do you get that ever-so-important first order from them? There is an even more important question to ask — do you want to go on that first date with them? Here is where you ask yourself, what do you want from your customers, so that it is a great



relationship for you and your business? Trust and loyalty are on the top of the list. The ability to pay for the orders is another important quality.

Have you ever been burned in a personal relationship? Well, that can happen in business, too. The customer that tempts you with promises that the next

order will be huge, or the customer that never returns to pay for and pick up that custom order, or the customer that says they want to place their order, then shows when they need it tomorrow, and expects you to perform miracles.

It is important to evaluate a new customer to determine if they will be a good

fit for you and your business. Now is when you decide if you want a second date with them, another order. Because they are a new customer for you, this is your opportunity to train them how to be your ideal customer. If you offer a ridiculously quick turnaround on that first order, they are likely to expect that for every order. If you order them a discount because they promised a big follow up order, they will come in with that scenario on their next order potentially, true or not.

The first thing to do to attract the attention of a new customer is become an expert at expressing who you are — what you believe, and why you do what you do. Believe it or not, potential customers do not care about what you sell as their primary criteria in doing business with you. There are at least a dozen other businesses nearby that offer the exact same shirts, sweats, and jackets. In order for them to choose to do business with you, you need to get them to care about you first, and then get them to care about how your customized products make them feel. When you and your business resonates with someone, they are much more likely to become a long term customer. They feel a connection, this resonance, by getting to know you as an individual.

Think about — when someone asks you for a recommendation, a referral, how do you answer their question? Need a mechanic? Go see Mike down at Main Street Auto. Looking for a good home repair person? Call Lauren and Pat, they can do and fix anything, L&P Repairs, over in Ravenna. Your computer was hacked? Take it to George at Computer ER — he is the only one I trust with my computers! We give referrals using the person's name, their business is secondary. We know these businesses and recommend them because we know, like and trust the person we deal with at that business.

After a successful first date, that first order, your customers should be able to say to their friends, “Need some shirts with your logo? I know exactly who you need to call — [insert your name here] at [insert your business name here].”



*By making your posts and marketing materials about your customers, and not about your company, you will immediately stand out from your competitors.*

The second element of successful dating for new customers is making your outbound marketing about the kinds of customers you want to attract. Your website, social media posts, any print ads, brochures need to make it crystal clear that you are in business to serve your customers in every way possible.

Instead of putting a post on social media that you make shirts, add a post about how awesome your customer's event went with a photo of them in their new shirts. On your website, include snippets with photos whenever possible of your work "in the wild." Encourage your customers to send photos to you of their team in their new apparel. This shows potential customers the different ways your products are used, and highlights the kinds of customers with whom you work. By demonstrating how you can serve, help, or solve an issue for potential customers,

you make the message about them instead of about you.

Take a look at your current messaging — it is about you, or is it about them? By making your posts and marketing materials about your customers, and not about your company, you will immediately stand out from your competitors.

The third element to successfully attract and interact with new customers is to make it easy for them to reach you. Always include a big and obvious button or link that says call me, request a quote, see the latest catalog, email me. Use whatever language reflects you on every digital media you send out into the world. This includes your social media posts, your email signature, and every page of your website. Make sure this connection point is easy to spot and takes one only click. With your written materials, make sure that your phone, email and business address

are always easy to notice. If you do not tell them how to reach you, they cannot and will not reach you. They will scroll through to the next option, where they can connect in just one click.

It is time to take an objective look at how you present yourself and your business to the world. Would you want to go on a first date with you? Or do you sound like that awful date that drones on about their car, their job, their travel, their amazing life, and never, ever asks about you, your interests, your life. Don't be that date! Update your materials and make it about your customers, how they use your products, and how their products help them achieve their goals. You will stand head and shoulders above the competition that is a bore. You will have the opportunity to go on many more great first dates. **GP**

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# Gear Up Early for the Holiday Season

*Inventory, shipping, and marketing strategies for small garment businesses*



Aaron Montgomery is 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 and is the co-creator of the “5 Keys of Business Success.” You can also find Aaron co-hosting the decorator’s industry podcast 2 Regular Guys Podcast (2RegularGuys.com). Also, check him out on his podcast channel called Small Business Saturdays (SmallBusinessSaturdaysPodcast.com).



**H**appy Holidays! What? It’s only July. Yes, it is. And yet, I’m here to suggest that if you want to have your best 4th quarter holiday season without all the headache and heartbreak, you should start looking at your plan now.

The holiday season, with its festive cheer and potential for increased sales, is a crucial time for small businesses, especially in the garment and personalized products industry. A well-thought-out approach encompassing inventory management, customer shipping policies, and marketing can make the difference between a stressful scramble and a rewarding period of growth. Here are three specific areas to focus on before the calendar rolls to September:

## Plan your inventory early

The inventory planning process can be challenging, especially given recent supply chain issues. Preparing for the holiday season months in advance can mitigate potential problems and ensure that you have the necessary stock to meet customer demands. For sublimation, you might be importing some items from overseas, or working with distributors who are importing. Anyone bringing a container over will be looking to get those on the ocean soon. So, if you want to have new items or increase your capacity for other items, now is the time to connect with your vendors.

Start by reviewing sales data from previous years to predict your customers’ purchasing trends. Also, be aware that online eCommerce sales will continue to rise. According to Digital Commerce 360, due to the pandemic, online holiday spending in the U.S. alone was around \$201.32 billion in 2020, up 45.2% from \$138.65 billion in 2019. 2021 and 2022 showed growth as well, and no one

expects 2023 to be any different. Identify which products were holiday bestsellers and focus on stocking those items.

You can’t rely solely on historical data and overall predicted growth. You must also consider current market trends and predictions. Following fashion influencers, reading industry reports, and monitoring social media can give you insights into the upcoming popular items and colors.

You should also set appointments with your largest customers to gauge what they might expect and let them know you are interested in being prepared so you can meet and exceed those expectations. I’m sure many of them have been made aware of the supply chain issues in the past, and you should let them know you want to avoid those headaches for them by getting some forecasts.

As I mentioned, you should be working with your distributors and vendors. If the extent of the relationship you have with your key vendors is your username and password, then it is crucial to change that.

Building strong relationships with them is essential, especially in these times of supply chain disruptions. Discuss your forecasted needs and their capacity to meet them. Also, depending on your confidence level, you should have a backup plan. Find alternative suppliers in case your primary ones cannot fulfill orders due to unforeseen circumstances.

Two critical pitfalls to avoid are overstocking and understocking. Overstocking can lead to storage space issues and the risk of having to sell outdated stock at a discount. Understocking, on the other hand, can result in lost sales if popular items sell out too quickly.

# INVENTORY

## Shipping policies and deadlines

We're all used to instant gratification thanks to our friend the internet. So, when it comes to shipping, customers want their goodies and they want them yesterday. That's why getting your shipping strategy on point is super important.

Knowing when the big guys (think FedEx, UPS, USPS) have their shipping deadlines is a must. The holiday season is basically a delivery marathon for them, and you don't want your packages stuck at the back of the line. Tell your customers when the cutoff is for holiday orders. And be clear about it; no one likes a holiday surprise that comes in January. Also, understand that while it is helpful to set an early shipping cut-off time, there is still a chance that orders will not arrive on time.

All of the major carriers discontinue any shipping guarantees during the holidays. Yes, they will still charge you for overnight shipping; but if it doesn't arrive on time, they tell you they're sorry and that's it. No money back; they tried their hardest.

Different people have different needs. Offering multiple shipping options can make your customers feel like they have a choice. There is good money to be made from helping last-minute shoppers. I have seen people willing to pay three to four times the cost of the item just to get it rushed to hopefully arrive on time.

Just be careful of any guarantees you make, and make sure you are clear on the rush charges versus the upgraded shipping charges. Many customers don't understand that it might take you a few days to produce something on top of the shipping time. In many retail gift customers' minds, production and shipping times are the same thing.

Let's face it; we're all a little guilty of adding an extra item to our cart just to qualify for free shipping. There's something about the word "free" that makes us feel like we've scored a deal. And that's

exactly why offering free shipping can be a smart move for your business.

From a customer's point of view, free shipping eliminates a perceived barrier to buying. No one likes to see their total jump up at checkout because of unexpected shipping costs. By offering free shipping, you're giving customers one more reason to click that *buy now* button.

But remember, while it's a win for customers, you need to make sure it's also feasible for your business. Consider setting a minimum order value to qualify for free shipping. That way, you're encouraging customers to buy more while offsetting some of the shipping costs.

Also, don't forget about the packaging as you prepare for the holiday season. Think about using sustainable materials for your packaging, as many shoppers will be looking for that. Sustainability continues to be something more and more people are demanding with their dollars. Customers are becoming more eco-conscious and are likely to appreciate brands that share the same values. Choosing biodegradable or recyclable materials can send a strong message about your commitment to the environment.

Of course, the main job of packaging is to keep your products safe. Be sure that whatever you choose is sturdy and can protect the contents inside. Lastly, don't forget the unboxing experience. Maybe you can add a personal thank-you note or a small freebie. Or perhaps you could wrap the products in tissue paper with a branded sticker. It's these little touches that can make your customers feel special and increase the chances of them coming back for more.

By providing free shipping and crafting a memorable unboxing experience, you're not only improving your customer service but also setting your business apart from the crowd. And that can make all the difference during the competitive holiday season.

## Craft an engaging marketing plan

As you work on a killer marketing plan that'll make you shine brighter than the holiday lights, think about spicing things up a bit. What can you do differently this year that you have not tried in the past, and how can you amplify what has worked for you previously?

Creating a powerful marketing plan is not about copying what has worked for someone else. It's about understanding your ideal customers, having clarity on the brand and values that attract your ideal customers, and then marketing based on those values and ideal customers.

Since you are working on this early, you can have a plan to hit all the major shifts in the holiday season, from Black Friday to Small Business Saturday to Cyber Monday. Plus, you will be ready for those last-minute shoppers and have the perfect promotion and content to help them pull the trigger and get their gifts on time.

Due to the extra time you get from thinking ahead, you might want to consider finding some influencers to partner with. They can give your products a shout-out and help spread the word, and you will have time to iron out the win-win agreement and get products in their hands so they can create the content for their followers. Remember, the key to all of this is starting early. You want to be the early bird that gets the worm, not the one that's scrambling at the last minute.

It's time for small businesses, particularly in the garment and personalized products sector, to gear up for the holiday season. You now have some practical tips on planning inventory, crafting effective shipping policies, and developing engaging marketing strategies to lead to a successful and stress-free holiday season. **GP**



Scan here for more articles from Aaron Montgomery

# Pixels to Paths

*The skinny on integrating the two graphic image types*



Stephen Romaniello is an artist and educator who has taught computer graphics since 1990. He is Professor Emeritus and the founder of the Digital Arts program at Pima Community College in Tucson Arizona. Stephen is a certified instructor in Adobe Photoshop, Adobe Illustrator and Adobe Premier and the author of numerous books, articles and media on the creative use of graphics software. Stephen is the founder and CEO of GlobalEye systems, a company that offers training and consulting in graphics software and creative imaging.

There are two types of graphic images, each with specific characteristics and uses. The way that they behave and how they are manipulated and stored are distinctly different. *Raster* images, also called *bitmaps*, are configured by a grid of tiny colored squares called *pixels* that render variations of color and tonality. Raster images are most commonly used for photographs and digital art.

*Vector* graphics, sometimes called *objects* are composed of mathematically defined points, curves and shapes. An object can be filled with a solid color, a gradient or a pattern and stroked with a colored outline of a specific weight. Vector images are frequently used for logos, illustrations, and graphic designs.

## Resolution

A primary difference between these two types of images is the way are scaled.

When a raster image is scaled, the software adds or removes pixels that can result in a loss of quality and sharpness. Therefore,

raster images are resolution dependent, which means that the resolution is fixed when the image is created and cannot be changed without affecting its quality.

Vector images are on the other hand, resolution independent. They can be resized without loss of quality. When a vector image is resized, the software recalculates the mathematical formulas of the objects to maintain their sharpness and integrity.

## Software

Adobe Illustrator and Photoshop and CorelDRAW and PaintshopPro are the most common graphic software packages used in the industry for creating and manipulating computer-generated images. Since I'm an Adobe user I'll use Adobe software in this article to investigate the properties of these image types. Corel products, however, have similar capabilities and are used by many graphics professionals.

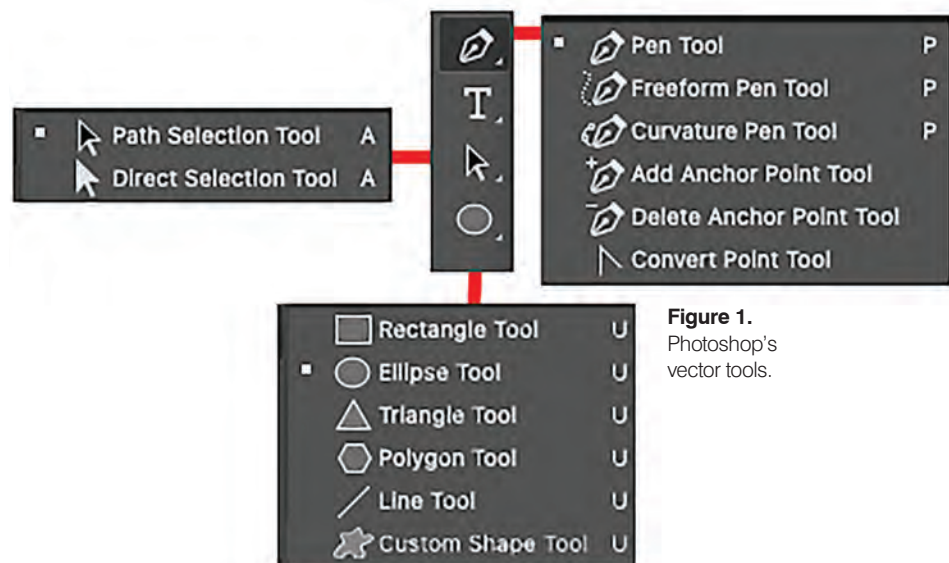
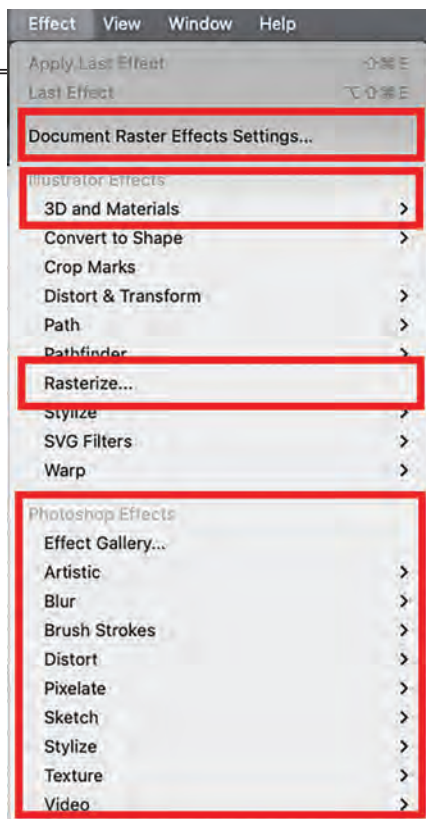


Figure 1. Photoshop's vector tools.



**Figure 2.** Illustrator has a few tools, filters and effects that modify pixels.

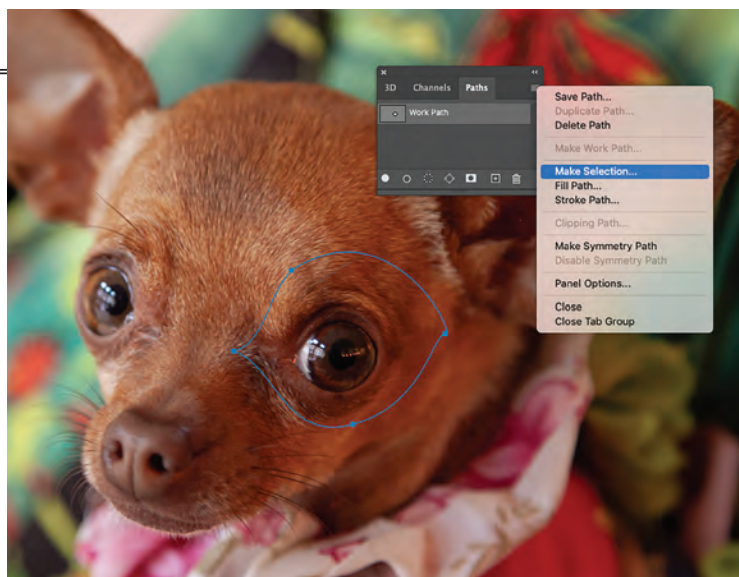
### Interchangeable

Though Photoshop is primarily used for pixel manipulation, there is one section in its Tools panel that contains vector tools (Figure 1). By the same token, most of the tools and processes in Illustrator generate and edit vector objects but there are a few tools, filters and effects that modify pixels (Figure 2).

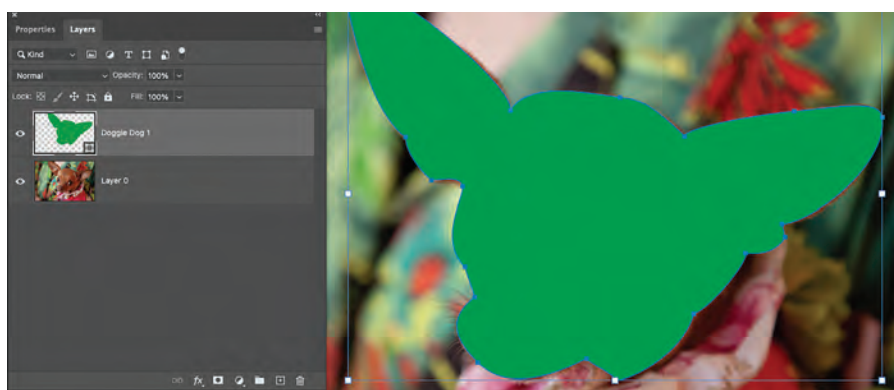
Let's look at the vector capabilities of Photoshop and Illustrator individually so you can determine which software best suits your requirements.

### Raster images in Photoshop

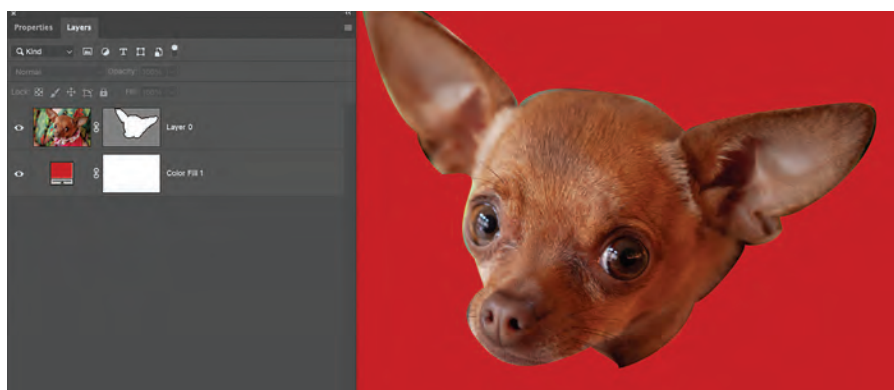
Photoshop is primarily a raster-based program, therefore most of the commands, tools and filters are designed to alter the color of *pixels*. Pixels are square areas of colored light and are the building blocks of raster images. Pixels are usually so small that when seen on a monitor, the colors blend into what appears to be a continuous-tone image. Each pixel is assigned a color based on the numerical configuration of binary information. It is the variation of colored pixels within the grid matrix of a digital image that produces variations of tone and color.



**Figure 3.** An area of a raster image can be selected by encircling it with a path.



**Figure 4.** Photoshop can generate paths and shapes in the form layers.



**Figure 5.** In Photoshop vector masks conceal areas.

### Vectors in Photoshop

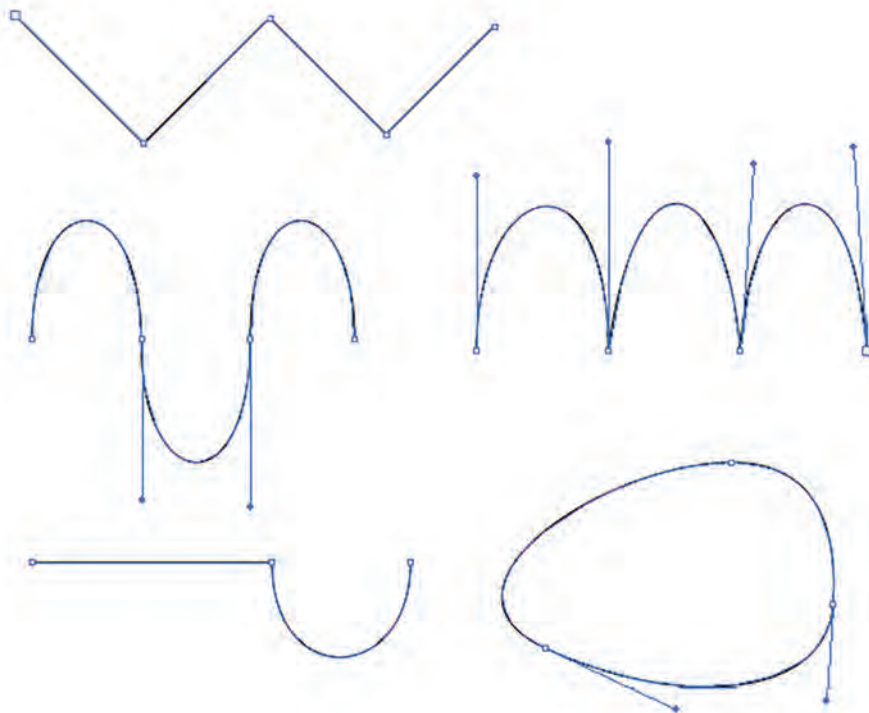
Photoshop also has vector tools. Vector objects are composed of paths and points that define their shapes. In Photoshop the vector tools can be used to:

- select an area of a raster image by encircling it with a path (Figure 3)
- generate paths and shapes in the form of layers. (Figure 4)
- conceal areas with vector masks. (Figure 5)

### Vectors in Illustrator

Illustrator is primarily a vector-based program. The path generating tools, of which there are several, are used for drawing and stacking objects that are the key components of illustrations. These basic tools are quite similar to Photoshop's vector tools however their primary purpose is to create objects by depositing or manipulating points and line segments. These paths are called *Bezier curves* (after





**Figure 6.** Bezier curves can take the form of any combination of straight, curved or scalloped paths and can be open ended or closed to form a shape.

Pierre Bezier who invented them for the European Automobile industry in the 1960s)

Bezier curves can take the form of any combination of straight, curved or scalloped paths and can be open ended or closed to form a shape (**Figure 6**) What makes them different from pixels is that they are composed of points and segments defined by mathematical formulas.

### Rasters in Illustrator

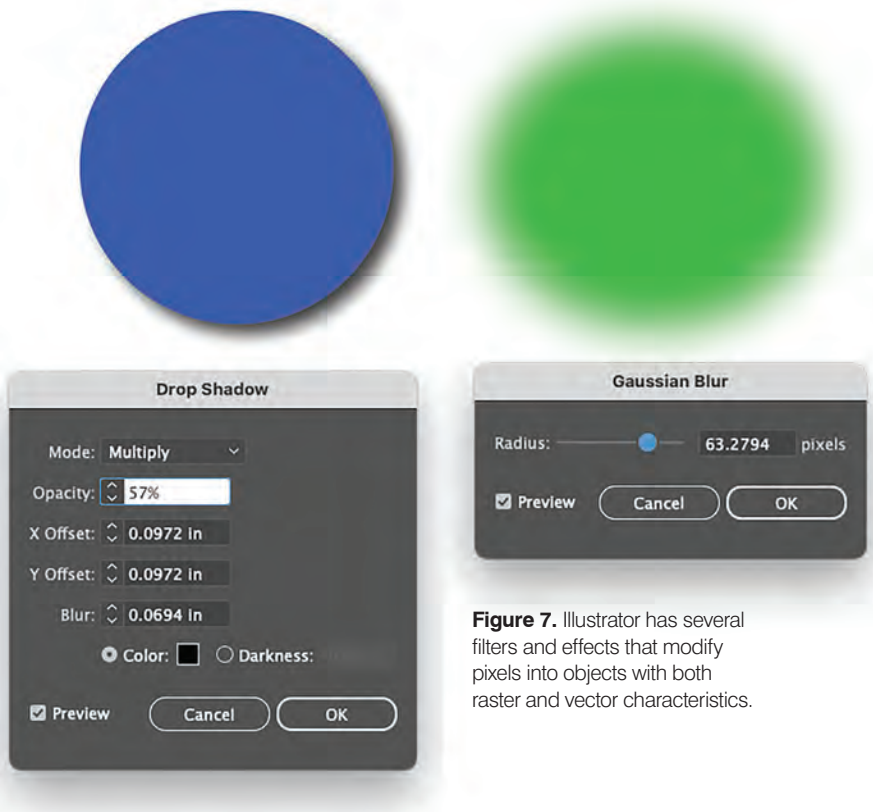
Illustrator has several filters and effects that modify pixels. Applying many of Illustrator’s special features from the Effects menu creates a hybrid object: ie an object with both raster and vector properties. A drop shadow, or a Gaussian blur for example share characteristics of both raster and vector objects as do many other features that extend Illustrators capabilities (**Figure 7**).

### Printing

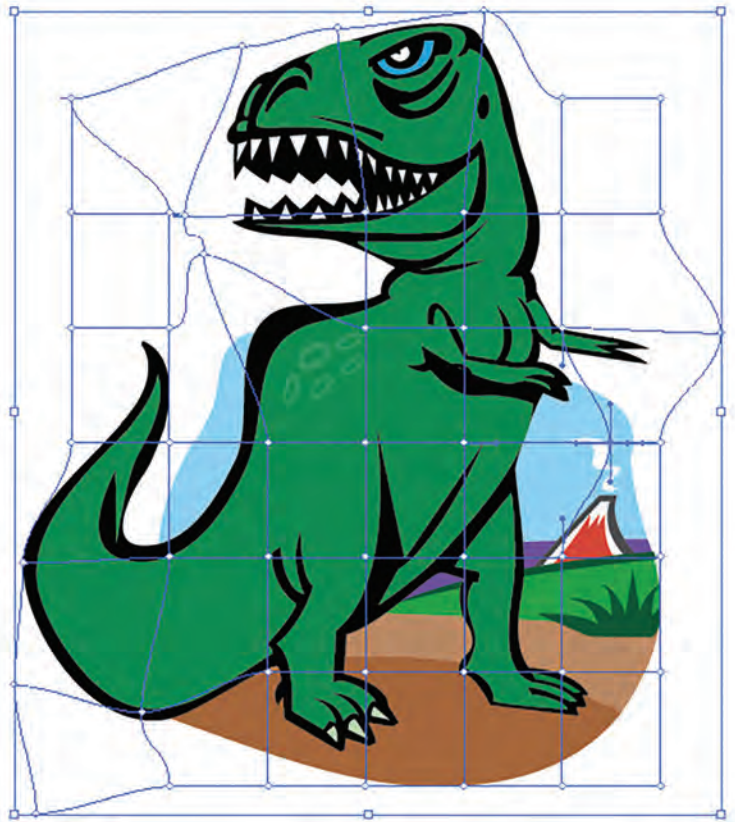
When vector objects are exported to a printer’s *RIP* (Raster Image Processor) they are automatically converted to raster data. They still produce clean, sharp lines and edges because they were resolution independent when they were created. They conform to the highest resolution of the device on which they are output, whether it’s a desktop ink-jet printer, a laser printer, large format printer or a high-resolution imagesetter, and that is one of the big advantages of creating vector graphics. The other attribute is that vectors produce crisp, well-defined artwork with intense solid colors and sumptuous gradients.

### Typography

Vector software is ideal for illustrators and graphic designers who work with type because typographical characters in both Illustrator and Photoshop are actually vector objects. When printed they produce razor-sharp edges with no “jaggies” (stair-step edges caused by a series of right angles trying to represent a curve) no matter what the resolution of the document.



**Figure 7.** Illustrator has several filters and effects that modify pixels into objects with both raster and vector characteristics.



**Figure 8.** Illustrator's Envelope Distortion feature creates a hybrid object with a distortion grid that can be altered with the Direct Selection tool.

### Raster-Vector Objects

The best way to understand how each software program manages these two types of images is to look closely at combination techniques. In Adobe Illustrator, a shape is generated with one of the Pen or Shape tools and edited with a variety of shape altering tools and commands that directly bend the Bezier curves to the will of the artist. By dragging an anchor point, a direction handle or a segment, the shape can be modified. Some of Illustrator's features, however, perform alterations that convert the shape into a temporary *unexpanded* state.

The unexpanded state is a kind of a hybrid vector-raster object. For example, Illustrator's Envelope Distortion feature (Object > Envelope Distort > Make with Mesh) creates a distortion grid that can be altered with the Direct Selection tool. (Figure 8). Dragging points or lines on the grid distort areas on the object. The paths that normally encircle the object are not visible during this process until the object is expanded (Object > Expand) when it returns to its vector status with reshaped Bezier curves.

### Vector to Raster

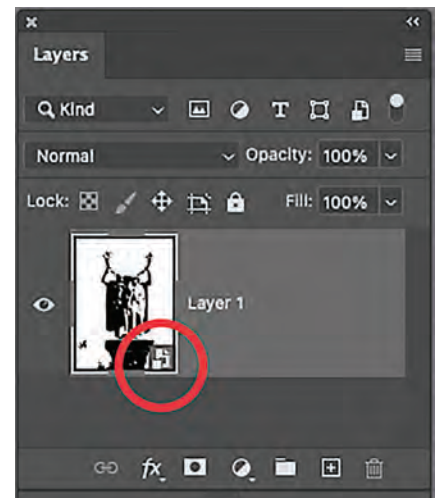
OK, so what about converting files? I hear you ask. Can raster images become

vectors and visa versa? Of course! It's easy to convert vector objects into pixels in Photoshop using the Rasterize command in the Layers menu. Vector Masks, Shape Layers, Type and Smart Objects can all be converted. Naturally this process discards all vector information so it can no longer be edited with the Path tools.

### Smart Objects

Placing, pasting or dropping an Illustrator file into Photoshop automatically rasterizes it unless it's converted to a *Smart Object*. (A prompt will ask if you want to convert the image) When the image is placed it appears as a layer with a little symbol on the lower right of the thumbnail (Figure 9). A Smart Object is hybrid image that displays a rasterized version of the image in Photoshop that is directly linked to the Illustrator file where the vector data is maintained. When the image is edited using the vector tools in Illustrator, the Photoshop image is automatically updated.

Another vector control feature in Photoshop is the *Paths to Illustrator* command that exports paths created in Photoshop directly to Illustrator. These paths, though unfilled or unstroked with color, can be altered just like any vector object directly generated in Illustrator.



**Figure 9.** When the image is placed as a Smart Object it appears as a layer with a little symbol on the lower right of the thumbnail

*Bezier curves can take the form of any combination of straight, curved or scalloped paths.*



**Figure 10:** Left : The original image. Middle: After Image Tracing. Right: After ungrouping and expanding.

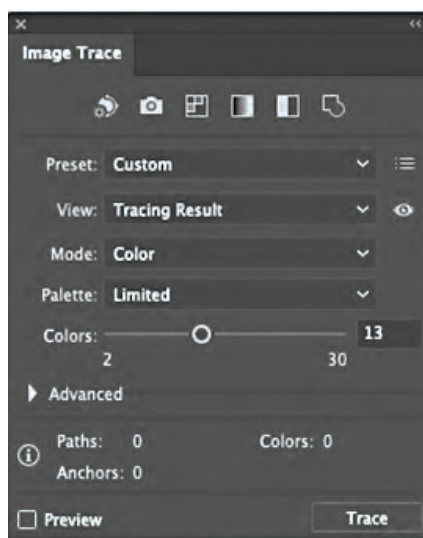
### Raster to Vector

Placing a TIFF, PSD, JPG, PNG or EPS raster image in Illustrator (File > Place) preserves its pixel information. Once placed, any of number of filters can be applied that can alter the color and apply cool artistic effects to the image that are quite similar to Photoshop’s Filter Gallery.

A powerful conversion engine however, that converts a raster image placed in Illustrator into paths that can be edited is the *Image Trace* command. Here’s how it works:

- 1) Save the Photoshop document as a TIFF.
- 2) Choose File > Place to place the TIFF in Illustrator.
- 3) Select the placed object then choose Object > Image Trace.
- 4) Set the specifications in the dialog box. Choose a mode: Black and White, Grayscale or Color and the number of grays or colors. You can play with the other settings to simplify or refine the image as you preview the results by checking the Preview box.
- 5) Click the Trace button to convert the areas of color on the raster image into vectors.

To edit the vector objects in Illustrator, ungroup the image first, select all and choose Object > Ungroup. Next choose Object > Expand. The objects are converted to paths that are filled with a color derived from the original file. The paths can be selected and edited just like any objects created in Illustrator. **(Figure 10)**



I find that this feature works better if the image is simplified by reducing the number of colors. Overly complex images are better left as rasters, but simplified images have a nice posterized look that can be modified with Illustrator’s many color application tools.

### The Switcheroo

Raster and vector objects are essentially interchangeable. It’s the old Switcheroo! Of course, they look pretty different. Rasters look like photographs and vectors, on the other hand, appear more hard-edged and graphic. The software that you choose to develop your image depends on your aesthetic sensibilities. It’s nice to know that these programs are more-or-less interchangeable and that you can choose the most compatible tools from one or both to accommodate your artistic vision. **GP**

## SIGN DESIGN

*continued from page 32*

about the project, you are not utilizing a dynamic enough kind of turmoil.

Here are a couple of things that might help:

### Mental hijacking

I place myself into a scenario that involves some crazy, deep-seated idea that is important to me in a purely selfish way. This is where I get to have fun with either a quirky idea or a concept where I know what I want to create, but I haven’t taken the time to play with the ideas yet.

I then fall back onto the skills I have come to rely upon and that I really enjoy to take my brain to a new place where those skills can shine with a topic in which I am fully confident of finding a creative solution. Even if this is just a fun exercise, the point is that if I let my brain go deep into something like this, it frees up the creative side.

**NOTE:** I choose something weird, crazy, and bizarre that is outlandishly wild to wrap my head around. Why? It’s simple. For me, I need it to be silly, crazy, and a little off-beat to draw me in. I believe that complete brain engagement is required — just like with a new piglet — and you have to keep your brain distracted long enough to actually forget about your challenge all together.

### Change of environment

I remove myself from the room or area in which I have experienced so much non-success. I feel it’s nearly impossible to change my headspace unless I physically go to a better, happier, or more visually interesting place. I work from home, so it can be a challenge sometimes. However, by doing this, I can better focus my attention on the turmoil that I have chosen from my pre-approved list.

You may stumble at first, but if you work at making turmoil something that you welcome and enjoy in a weird, brain-rocking kind of way, you will find it works incredibly well. Ideas will magically appear when you least expect them to if your brain’s blackboard is wiped clean. This has worked for me for years, and hopefully, it will work for you as well. **GP**

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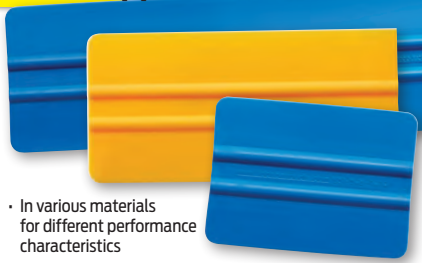
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