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BONUS COVERAGE:

The 2021 ***Sublimation Report***

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» CONTENT

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> *"Sign design is a balance between understanding how outdoor advertising works and the functions of graphic design theory."*
>
> **MATT CHARBONEAU**
> STORM MOUNTAIN SIGNS
>
> from *Sign Design 101: Part 1*, page 86

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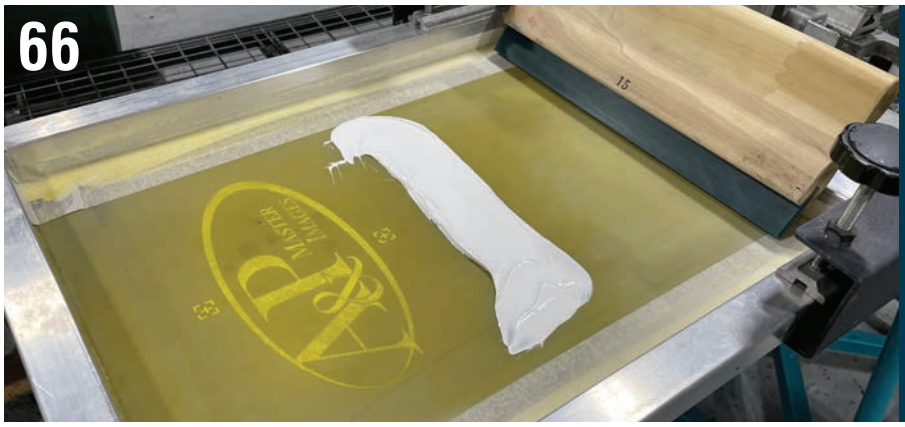
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ON OUR COVER

The April issue highlights the resiliency and ambition of the graphics industry. Celebrating flexibility and diversity of services, this month's cover art was provided courtesy of **Chase Street Accessories & Engraving**; inset image courtesy of Rick Williams, **Rick's Sign Company**.



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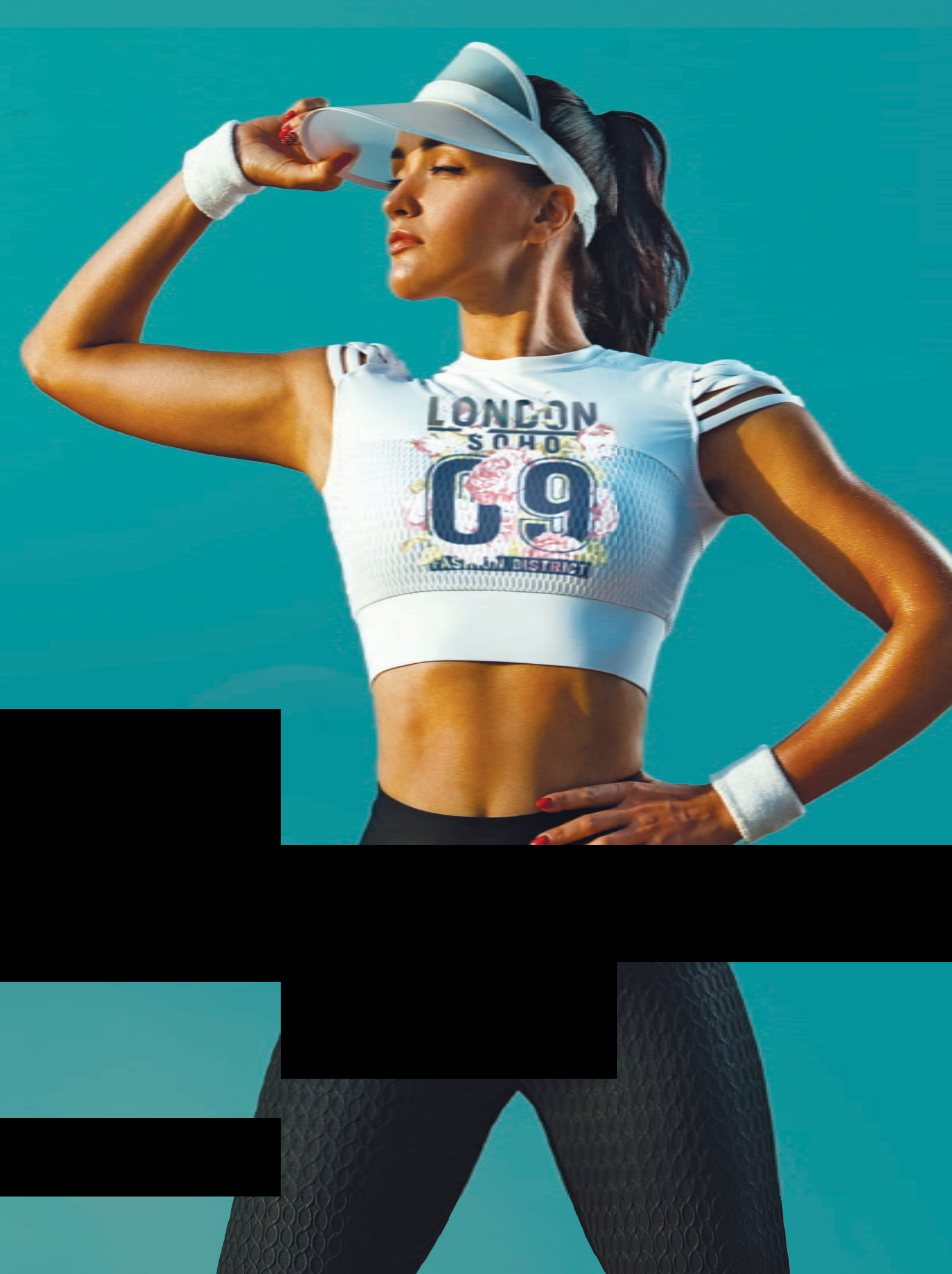
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SIMPLY SUSTAINABLE

As I sat down to write this column, I took a swig of water out of my reusable water bottle that I keep on my desk. I have three reusable ones in rotation (for washing/cleanliness), but I am never without one throughout the day. And I know there are many people reading this who are the same way.

This month's product spotlight on eco-friendly products got me pretty excited—"going green" is a cause that we take personally in our family, from buying sustainable products and recycling to implementing energy-reducing lights and using reusable shopping bags. As it turns out, there are many, many people in the graphics industry that feel the same way.

From the manufacturers and distributors creating eco-friendly products and sponsoring green initiatives to the shops implementing sustainable practices, it seems that going green is more than just a trend. People realize and value the importance of these practices, and it shows. There are a lot of reasons I'm proud to be a part of this industry, and this is just one of them.

As you read through this issue, you'll find more than eco-friendly coverage. Accurately dubbed the Active Issue, this month is full of ideas to get you and your business going. Get updates on childrenswear (always an active bunch), an introduction to roll-to-roll printing, and a slew of suggestions to energize your techniques.

And if you're curious, we cover a lot of different green initiative stories in our Daily eNewsletter. If you haven't, make sure to subscribe so you don't miss any industry happenings, like:

- 3M to Invest to Achieve Environmental Goals: http://gpro.link/3minvest
- Gildan Awarded Silver Class Distinction in The Sustainability Yearbook 2021: http://gpro.link/gildanaward
- Ricoh Collaborates with Columbia University to Reduce Emissions: http://gpro.link/ricohreduce

Until next time.



Image courtesy Vapor Apparel

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BONUS COVERAGE: THE SUBLIMATION REPORT

WANT TO KNOW MORE?

*Feel free to give me a call directly at **720-566-7278** or email me at **cgreen@nbm.com**.*

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CRAWDADS AND SUPERHEROES

It was a hot summer day in the northeast Texas oilfield town of Talco, in my dear grandmother's little side yard next to the oil top road she lived on. Today we would call that place a shack, but right then it was one of my favorite places. It was Mom's house.

That day she entertained her two little tow-headed grandsons, just barely old enough to be in school but then out for summer break, by giving us a bit of bacon tied to a string. After summer rains, large, red crawdads would build little towers of mud to keep the rain run-off from flooding their dwellings. With skill and patience, a little boy could fish them out with a bit of meat on a string, and I got mine out first.

I gently teased him toward the top of his mud house, then startled him by flipping him out into the bright sunshine. Looking at the giant on the end of the string, me, scared him plenty and he backed up under my brother with his claws high in the air.

The claws brushed the bottom edge of my kid brother's shorts, only a few inches off the ground as he squatted down facing his own crawdad hole. Reflexively, my red pincher dude clamped on to those short pants and the fireworks began!

Feeling a tug near his backside and seeing that red rascal menacingly climbing up his shorts, little brother began screaming and running at top speed in no particular direction, dangling the nightmare at his behind. I was fascinated and amused with the commotion but laughing too hard to be any help at all.



But the most amazing thing was seeing my 60-something-year-old grandmother come running like a varsity sprinter, rushing to the rescue, cutting him off at an angle. As fast as lightning, with one well-placed swat, she sent that pincher-equipped critter flying off in a red blur. What an amazing woman! Mom wasn't a normal grandmother—she was a superhero in a calico dress. She was faster than a speeding bullet, more powerful than a locomotive … well, I imagined, anyway.

Had this, and maybe a few other things not happened as they did, I would have never seen the other sides of my sweet grandmother. We were lucky to have her, blessed to get to spend time with her, and at odd and unexpected moments to see a glimpse of what was just below the surface. She would have protected us with her life, with a furry no one would have imagined, and with a grandmother's love that totally trumped everything else.

Yes, I'm sure I've shared this little story before, but it was an early insight in my life as to how easy it is to underestimate people. And I have been especially guilty of doing so through my years of being in business, regularly underestimating members of my staff without realizing it.

The sign and graphics business has been my full-time vocation for decades, and I could keep a pretty good rein on it. If something was hard, dangerous, or challenging, I usually did it myself.

But, when we started a second business, which I had no time to take full control of, I had to let others step up to the plate. The new company, WPC Services, connected to but separate from our commercial sign business, became a testing ground for what my sons could do, and what other, mostly young people could do when allowed to

take on a lot of responsibility. And then when we started a third business in a facility we bought next door, except for signing loans and thinking strategically, there was just no way to take a hands-on approach.

In both cases, each company outgrew our sign business within just a few years. Though I am involved in both businesses to some degree, each has proved that there are still unsung heroes living among us, and when they are given a lot of freedom, plenty of encouragement, and maybe a little firm ground to stand on, they can do great things, amazing things. And they can do them better with the old crawdad fisher standing on the sidelines.

Sloan, Slade, Tyston, Juan, Trey, Wes, David, Amy, and others, plus Heather and Frances at the sign shop, are being given more freedom than ever, and all have talents and abilities that need to be tested and stretched. At this point in the game, I am glad to let them do just that.

After all, now I'm the grandparent, and I've got little ones that need to know how to catch crawdads, fish, frogs, and all things natural, and that takes a bit of time. And taking me away from the shop on occasion is not a waste if we're making memories they'll remember when they're my age. I know for a fact that's a real possibility.

Anytime I get a chance to be their superhero, I intend to take it. After all, that's my best job yet! The sign work will still be there when I get back to it. Have a great month.

Rick

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





SHOP PROFILE:
Chase Street Accessories & Engraving

A Spirit of Resiliency

BY CASSIE GREEN

Talk to a lot of small businesses in the graphics industry, and you'll discover that many got their start over a casual conversation. Take Chase Street Accessories & Engraving in Baltimore, Maryland, for example, which started with a joke on New Year's Eve in 2019. That joke became a serious conversation when Shana and Chris Beach decided with their friend and neighbor Robbie Marcouillier that they could turn the old gift shop below the couple's two-unit rowhome into a trophy shop.

The previous business, originally dubbed Chase Street Accessories, underwent some changes as the small team of people collected permits, equipment, and inventory to officially re-open. "The business (we opened) was originally named 'Chase Street Accessories' because the sign had been on the building since 2004 from the store that shuttered in 2009," explains Shana. But they wanted to make their new concept more obvious, so in June of



Chase Street Engraving & Accessories, based in Baltimore, Maryland, serves a mix of B2B clients and individual customers. (All images courtesy Shana Beach)

2019, they legally changed the name to Chase Street Accessories & Engraving (Chase Street A&E for short).

A STORY OF AMBITION

But their story actually goes farther back than 2019. Shana, the majority owner of the business, was first exposed to the awards and customization world in high school, when she worked in an engraving shop. "I quickly realized that almost no one buys trophies when they're in a bad mood and loved working with all the technology and design theory involved in creating products for customers," she recalls.

She didn't go directly to the awards business after high school, however. Instead, she earned a BA in Industrial Design, an MA in Communication Studies, and an MS in Computer [illegible]. She also joined the U.S. Air Force and served overseas in support of Operation ENDURING FREEDOM and Operation INHERENT RESOLVE. But after a while, she states she felt the tug to return to creative pursuits, which eventually resulted in Chase Street A&E.

Alongside husband Chris, who is the co-owner, they run what is currently a successful business that serves a mix of B2B clients and individual customers. The shop offers just about everything. "The Chase Street A&E production team's decoration services include laser engraving, rotary engraving, heat transfer printing, full-color sublimation printing, embroidery, and more," says Shana. "The design team also provides layout, design, and artwork services upon request."

The business also prides itself on stellar customer service, a trait which Shana believes sets them apart from the competition. "We respond to all questions as quickly as possible and maintain (a less than) 24-hour response time," she says. "We help clients understand 'the art of the possible' by trying to gather what they



actually want, which is not always the same as what they request." In doing so, the team is able to achieve the best possible result, whether that's a more cost-effective option or reliable choice.

Being a woman-owned business also helps them stand out. "Chase Street A&E is currently in the process of compiling all the paperwork to apply for Women's Business Enterprise National Council (WBENC)," Shana states. "There hasn't been concrete, measurable evidence of any effects of being a woman-owned business, but it does seem like other women-owned businesses tend to be more excited about working with Chase Street A&E than similar competitor businesses." She also mentions that this opens up more doors to work with other organizations, which propels opportunities for networking and mutual support.



Chris and Shana Beach, co-owners of Chase Street Accessories & Engraving, have shown remarkable resiliency in the face of adversity.

STANDING OUT

Like most businesses, things hit an uncertain wall when the COVID-19 pandemic hit hard in 2020. Luckily for Chase Street A&E, they already had an online store in place, so when stay-at-home orders went into place, business didn't come to a screeching halt. "Thanks to Maryland's COVID-19 Layoff Aversion Fund, Chase Street A&E was able to purchase remote-work equipment and software for all its staff and to this date has not reduced hours or pay," Shana states.



Like many businesses in the graphics industry, Chase Street A&E was able to leverage its equipment to produce PPE, which helped the company survive through the COVID-19 challenges.



The business's decoration services include laser engraving, rotary engraving, heat transfer printing, full-color sublimation printing, embroidery, and more.

As the popularity of virtual events grew, so did the business Chase Street A&E got from the need to give physical gifts as a way to make these events feel more "real." The team worked with clients such as Johns Hopkins University Center for Social Concern, the Maryland State Dental Association Charitable & Educational Foundation, and Chase Brexton Health Care to directly ship tailored packages to annual event sponsors and attendees.

They were also able to adjust production to create PPE. "The team … leveraged in-house processing capabilities to support local PPE manufacturing efforts by laser-cutting fabric to mass-produce a 100% cotton mask with a filter pocket, and 3D-printing and cutting parts for acrylic face shields," says Shana.

Their hard work has not gone unnoticed. Chase Street A&E was recently nominated as a Champion of MD Manufacturing for Resiliency. "The Regional Manufacturing Institute's 2020 Champions of Maryland Manufacturing campaign tells the stories of the challenges the new reality poses to manufacturers and the successes in overcoming them," Shana explains. "For Chase Street A&E, this means recognition of the hard work and creative energy we spent in early 2020 to help us get through the year, as well as positive feedback for the community engagement we've done with other small businesses."



Majority owner Shana Beach attributes a lot of their success to exceptional customer service, something that she feels makes them stand out from the competition.

In the spirit of resiliency, Shana believes the business will not only survive, but thrive through these challenging times. "By 2027, we hope to buy or lease additional space for warehousing and processing. We find that we're quickly outgrowing our original location," she says. "By 2028, we'd like to add additional processing capabilities such as UV printing, fiber laser engraving, or a larger CO_2 laser."

From her ambition early in life and rising to the COVID-19 challenges, to the lofty future goals, Shana and her team at Chase Street A&E demonstrate success in every sense of the word, something she wants to share with other businesses. "Stay flexible and responsive," she encourages. "Most of our long-term clients have stuck with us because they originally requested something that other businesses weren't even willing to try." **GP**

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



SUSTAINABLE SIGNIFICANCE

SIMPLE AREAS WHERE YOUR BUSINESS CAN "GO GREEN"

I'm sure you have heard the term "going green." Henry David Thoreau spoke about living a green life in the 19th century. Many people believe the green movement began with Silent Spring's publication by Rachel Carson in the 1970s. Then this term took hold in 2002 when Jill Buck founded the Go Green Initiative. The deeper we get into the 21st century, the more this term is becoming not just a battle cry or a marketing ploy, but a real need for businesses to remain relevant to their future customers.

Based on the eco-friendly product section in this issue (see page 74), I thought that now would be a good time to talk about some ways we as business owners can "go green." And not just going green for the sake of marketing, but also for increased business and reduced cost, so … going green for green!

PAPER

Many companies in our industry can immediately make a significant impact by reducing their paper use. Some people argue that paper is a renewable resource, but much of the paper we use, like cheap copy paper, is not made sustainably.

Plus, we use a lot of it. If you print work orders out for every job, on top of packing slips, reports, and more, then you are probably swimming in stacks of paper. In an average office, a typical worker will use approximately 10,000 sheets per year (Source: http://bit.ly/off-paper). A small straw poll I took of some of the businesses I consult with tells me that the average print shop uses a lot more than 10,000 sheets per year. By reducing the number by half, that can save you $40 to $75 per person per year.

Fortunately today, with the number of different cloud networks and





If you print work orders out for every lob, on top of packing slips, reports, and more, then you are probably swimming in stacks of paper. (Image courtesy Aaron Montgomery)

easy-to-use order processing systems, this can be a quick fix. Stop printing out work orders and use a digital system, and you can save the money on paper, the hassle of lost work orders, and the constant shuffle of paper.

Even by using a free project management software like Asana, you can nearly instantly track all of your orders online. Using a digital system allows you to not only check the status in or out of the office, but you can also capture all the details, save pictures, and then go back and search for those details later.

Some other areas where we use paper is in the transfer process of decorating techniques like DTG, sublimation, and others. How can you better manage your resources in those areas to save money and the environment?

For example, in the wholesale DTG and sublimation work we do, we have to use parchment paper with the DTG process. We factor in about $0.10 per DTG print. But we can then use that same piece of parchment as a sublimation transfer blowout sheet. Also, beyond reusing and reducing, we then recycle all of our paper and cardboard products. Recycling helps with our solid waste costs, as our city's services have different rates for houses that recycle versus ones that do not, and we have a special trash can that gets collected to prove it.

Whomever you pay to take your garbage away, ask them about their recycling program or ways to reduce your costs just by doing a little sorting work on the front end of disposal. According to the







University of Southern Indiana, "Each ton (2,000 pounds) of recycled paper can save 17 trees, 380 gallons of oil, three cubic yards of landfill space, 4,000 kilowatts of energy, and 7,000 gallons of water. This represents a 64% energy savings, a 58% water savings, and 60 pounds less air pollution."

LIGHTS

Beyond the paper we use, there are some other ways we can go green and save some green. The next step we can take that can be implemented immediately or in phases is to look at the lights we use.

You don't realize it, but those incandescent bulbs can not only be a pain to keep changing all the time, but you might be hurting your employees' or your eyesight in the long term. By switching to LED lights, not only does this save on energy costs, but the LED lights last up to 25 times longer, so you save on replacing the bulbs even though the base cost of the bulbs is a little more expensive upfront.

Lastly, when it comes to our eyesight, the low dim lighting can cause eye strain and ultimately increase your chances of developing nearsightedness. Having a brighter, more natural color LED light will improve your workspace's look and feel, and it'll be easier to quality-check the work before it goes out the door.

WATER

Lastly, let's talk about water. There are two sides to this coin.

First and foremost, ditch the plastic bottle. The good folks at Allmade apparel have plenty of plastic bottles to keep making their shirts for decades to come. According to Earthday.org, "Humans buy about 1,000,000 plastic bottles per minute in total. Only about 23% of plastic bottles are recycled within the U.S."

We are in the decoration industry, and there's no reason you should not have your fair share of reusable drinkware. If you have employees, make sure they have a selection of reusable drinkware at work and home. It is a great way to get your brand out there, and people notice cool reusable drinkware.

Second on the waterside is the use of water in general. You can reduce the use and, therefore, the cost of water by using float boosters in your toilets, having drought-resistant grass, and monitoring and tracking your water meters.

I encourage you all to look at how you can go green. Then I encourage you to make sure to share that with your customers, potential customers, and the others in your community and circle of influence. It is not as a way to show off or brag, but a way to encourage them to do more in their lives and businesses to go green. You will start to see a domino effect, and if you are the champion of this movement in your community, it will pay dividends for you and future generations.

Feel free to tag Our Success Group on social media to share and promote the things you are doing to go green. This is a "no judgment" zone, so any changes you make to go green are all good in my book! **GP**

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



In 1992, the CrystalEdge Flame was introduced. It is one of the more difficult designs to produce, and each requires considerable hand finishing. (Image courtesy CrystalEdge)

Award Design and Product Development

GROWTH OF GLASS AND CRYSTAL AWARDS, PLUS DESIGN TIPS TO CREATE TOP-QUALITY PRODUCTS



BY BARRY SLEE

Ever wondered why glass and crystal awards have been able to grab such a major segment of the awards market? The answer is quite simple: beautiful designs that are manufactured from a heavy material that has a high perceived value.





Left: It was not until 1995 that optic crystal award products entered the market. Initially the domestically produced Schott BK7 and NBK7 optic crystal was used to fabricate a new series of three-dimensional award designs. This was soon followed by the lower cost imported K9 optic crystal, which is now widely used by the industry. (Image courtesy St. Regis Group) **Far left:** The CrystalEdge Royal Diamond is a heavy thick flat glass design. (Image courtesy CrystalEdge)

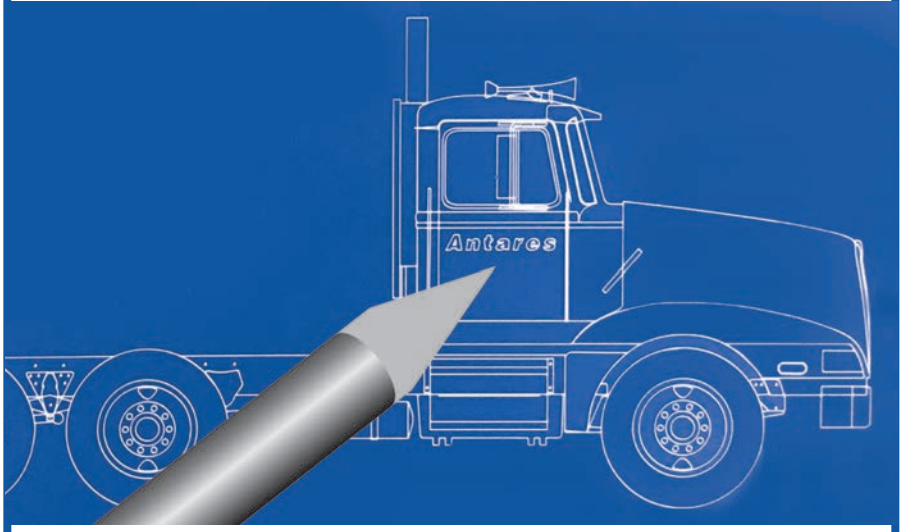
EVOLUTION OF GLASS

Prior to the mid-1980s, it was hard to find many award products that used glass. Glass plaques (mirror glass), a few lead crystal vases and bowls, plus some pressed glass products were the only choices available. In the late 1980s, that all started to change when a few domestic glass fabricators turned their sights on the design and manufacture of award products using flat glass.

Unlike metal, wood, acrylic, and many other materials favored by awards designers, glass and crystal brought a whole new set of design rules and challenges into play. The material is extremely hard, difficult to cut, not easy to machine and polish, and worst of all, it shows every little defect.

Yet with all of these constraints, the industry over the past 30 years has developed some of the most elegant and creative awards designs. During the early days, the designs were simple rectangles, squares, triangles, and a few straight-line forms. Initially the use of flat glass was more of a method to make efficient use of the offcuts and waste glass created from fabricating glass tabletops and glass shelving. Awards using glass were mostly a by-product until around 1990.

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When flat glass awards started to enter the market, they quickly gained in popularity. At first only clear float glass (known in the awards industry as jade glass) was available, but in 1990 PPG Industries (now Vitro) introduced a new low iron glass known as Starphire.

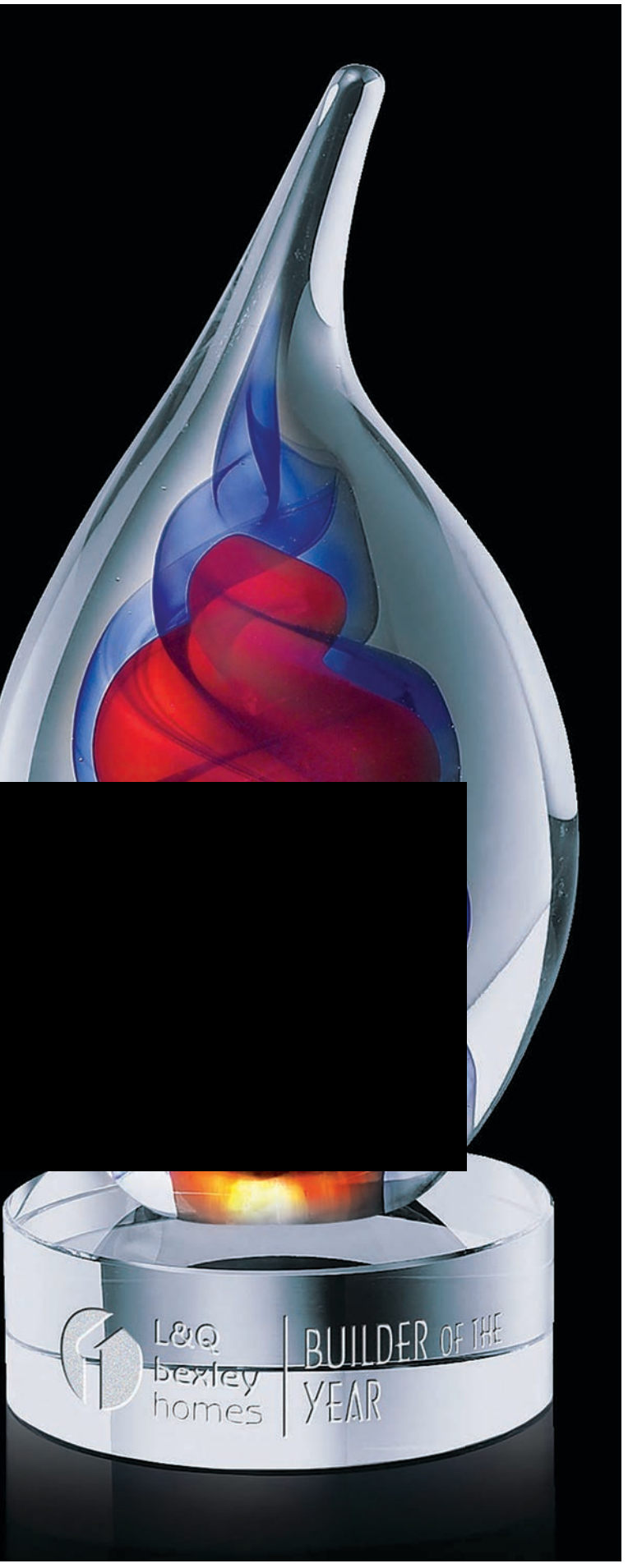
With its improved clarity and sparkle, this glass was seen as the perfect material for a new generation of awards designs. This new clearer glass quickly began to capture a larger portion of the awards market share. It also fueled the need for more innovative designs and created a need for better glass fabrication technology.

In the early 1990s, the glass fabrication technology and machinery used to produce these awards was also limited. However, in 1993 the Slee Corporation installed new glass cutting technology, and the first of five new Italian glass edging, beveling, and variable mitering machines. These huge machines were designed specifically for awards production and were purposely built to be able to produce smaller products, and to create a high-polished finish on all the edges.

This in turn opened up a whole range of opportunities for the design and development of new glass and crystal awards with ultra-high polished facets and bevels to add that sparkle that many customers desire. Many of these new designs have since become awards favorites and are instantly recognizable.

For example, one of the oldest original designs using glass that has stood the test of time is the JD Powers Award. It was introduced for the JD Powers Company by the

Above: The JD Powers award has become one of the most famous awards on the planet, and it is recognizable with its 24k gold-plated metal stand and a beveled clear glass arch. (Image courtesy Southern California Trophy Company and the JD Power Company) **Opposite:** In the early 2000s, yet another major glass product line started to gain traction. Known as art glass, and initially handmade domestically, these awards allowed for complete design freedom. (Image courtesy CrystalEdge)



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Colors and shapes are endless for art glass awards and when mounted to optic crystal bases, these awards look even more stunning. (Image courtesy CrystalEdge)





Above: In 2001, a mixed media concept using glass and a wood plaque was introduced. The CrystalEdge Cantebury Plaque features a crystal-clear glass panel positioned in front of a high-gloss piano-finished plaque board. (Image courtesy CrystalEdge) **Left and opposite page:** The Luna Crescent and the Luxor Award combine curved glass and a piano-finished wood base. This is a simple but unique design that mounts glass and wood together. (Images courtesy CrystalEdge)





Southern California Trophy Company in 1990. It has become one of the most famous awards on the planet, and it is recognizable with its 24k gold-plated metal stand and a beveled clear glass arch. This award is an example of a timeless design, and over 100,000 have been made over the past 30 years.

GREAT DESIGNS

So, what are some of the factors that contribute to a great design? There are many, but a few do stand out. The first is simplicity. If an award design is complicated, not only will it be difficult to manufacture, but it will also most likely be costly. Complexity almost always leads to more quality control issues, and often results in shipping damage because complex awards are more difficult to protect. I have seen too many awards that have arrived broken simply because they are too complex.

One of my own favorite design elements is to use clean lines, and for the award to have good symmetry. An award should always look balanced. Use a base that is correctly sized for the award. Another important rule of good award design is to limit the overall size and weight to a range that can be held with either one hand, or in the case of a JD Powers Award, easily with two hands.

CONCLUSION

Glass and crystal awards already represent a major portion of the awards market and will continue to grow as more unique designs are released. During the past year, we have seen the addition of stunning new colors of optic crystal bases, which adds a completely new set of design possibilities. With virtually every corporate logo incorporating color, the opportunities are endless and a designer's dream. **GP**

BARRY SLEE has spent almost 30 years in the award and recognition industry. As the founder of the Slee Corporation and its CrystalEdge brand, his innovative award-winning product designs have led the industry. Barry is an expert in glass and crystal design and manufacturing, and he is a regular contributor of articles and educational content to the industry.

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SETTING NEW STANDARDS





SELLING ARTISTIC AND THEMED PRODUCTS

You're excited—you have come up with a great product idea. But will others share your enthusiasm? It's time to do some research. How big is your market? How specialized is it? How do you reach those that will be enthused with your product design choices? What are people willing to pay for your product?

If your product is theme-based or based on a graphic, does the theme or graphic have wide appeal, even if it is among a group that shares the same interests? For instance, let's say you want to sell a wall hanging decor item to those that share an interest in trains. That's a specialized group of people. Does the graphic you choose have wide appeal among this group? Test out your ideas with a group of enthusiasts. Be as specific as possible in testing out ideas, graphics, fonts, and even topics.

Before you spend time working on marketing, pricing, and creating more of your business plan, find at least one group of enthusiasts to get feedback from—I even suggest more than one group. Perhaps you will find groups that represent different parts of the country, different specific interests, male and female, older and younger, etc.

Seek out local or national clubs, online and print magazines, forums, and chat groups. Find ways to reach out to the members. Perhaps offer a discount or a giveaway for those that help you by providing feedback. Be open and honest about your intent and respectful of opinions and feedback. People that share a common interest are often anxious to participate and provide feedback.

HOW CUSTOMIZED?

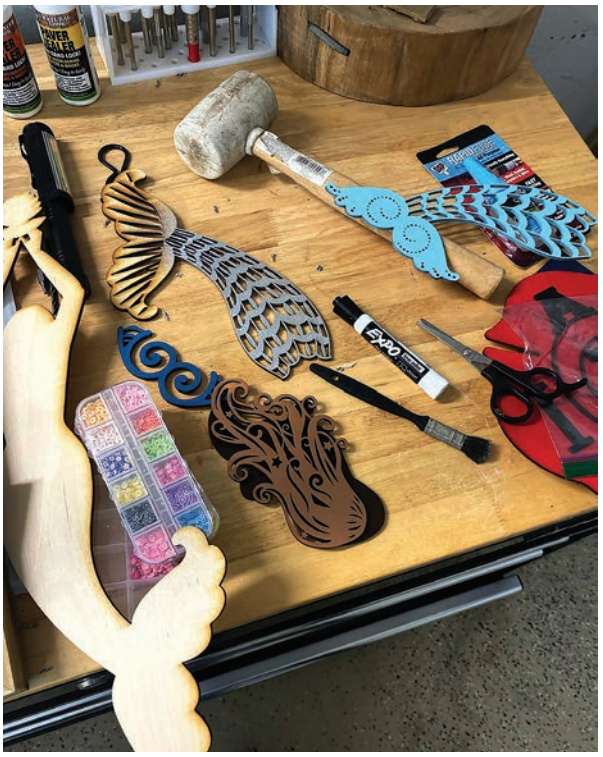
Are you offering a truly custom design or one of several designs? Truly unique designs cannot be priced ahead of time. You may offer a pricing formula, but you will need to be paid for your creative design work. If you decide to offer several pre-designed choices, you may find they each have their own price point that customers are willing to pay.

The price point may have little to do with the time involved in the design or product effort. A trendy look may demand a higher price, or a rarer design might be worth more. Feedback on pricing is just as important as on design.

Make sure the number of choices is manageable. You can add more choices as sales increase and production becomes more efficient. Too much choice can be overwhelming to many customers and end up reducing sales because people cannot make a choice. Having a selection of three to six designs is likely manageable and not too overwhelming.

HOW PRESONALIZED?

Personalization might include a name and date or even a saying or quote. But it also might include colors and font choices. Sayings, font, and color choices should be managed—a choice of five to 10 for each is usually plenty.





Left: This mermaid product is made from wood in multiple layers and is hand painted. Profitability would rely on a structured production and assembly method produced in good quantity. **Right:** The finished product serves as a nautical decorative piece that could be made in several sizes. It has a wide appeal and does not require personalization. (All images courtesy Bob Hagel)



Above: Sign shapes were researched and designed up front for this project. Personalization was offered with a few choices of fonts. These signs are attached to miniature holiday villages on each building representing a family member's interests. **Left:** A popular holiday product for newly formed families, this wood slice is easily personalized with a few font choices.

Make sure you offer a variety. This might include simple, easy-to-read fonts such as a sans serif font. Perhaps a few script fonts, maybe one that is elegant and one that is hand printed. Do you need to offer a kid's font? Contemporary, European, exotic, or island-oriented fonts can all be good choices.

Colors should be appropriate for the theme and customer base. Again, feedback from enthusiasts is important. Involving followers creates some ownership and supporters. They will be your immediate marketing force, buyers, and reviewers. If colors are a choice, will they be picked among material colors such as laserable sheet plastic? Or will you be paint-filling them? Make sure if you are paint-filling, the type of paint and color choices are easy to work with.

The size of the personalization area matters as well. How many letters and words will fit while still being readable? Are the graphic designs similar enough to take up about the same amount of space? Think through each of these choices and run through every variation by producing samples. Make sure the menu of choices is not too complex and difficult to describe. Keep it as simple as possible. Create maximum letter or word rules if necessary. You only have so much space to work with and you want the text and graphics large enough that customers will be pleased with the results.

PRICING

Pricing may consist of one price if you sell directly from your own website or storefront and other pricing based on selling from an online storefront or selling wholesale to a store or museum.

For example, volume discounts are fair and valuable to both customers and third parties such as stores. However, selling individual items or small quantities to third parties such as promotional products resellers is not worth large discounts. You still have to make the sale, perhaps provide all the design work, and produce the product. Discount for the work your third party will do for you.

Check out online storefronts such as Etsy and eBay for competitive pricing. eBay may offer more esoteric products. The fewer the competitors, the better your pricing can be. Add up your parts cost, machine time, and all of the time for assembly and shipping. If you process credit cards or use PayPal, those costs should be accounted for.

Your pricing should not only cover these costs, but a multiple of at least three or four times is needed to cover other general and unaccounted costs, and a reasonable profit. Remember, paying yourself (or others) for design or production and processing time should be considered. Profit is the dollars left after all those expenses, including your pay.

PHOTOS

People buy what they see. Fonts, designs, colors, etc., all steer choices during a sales process. Photos are critical. Poor quality photos reduce sales and look unprofessional. Invest in a good local photographer who has product photography experience.

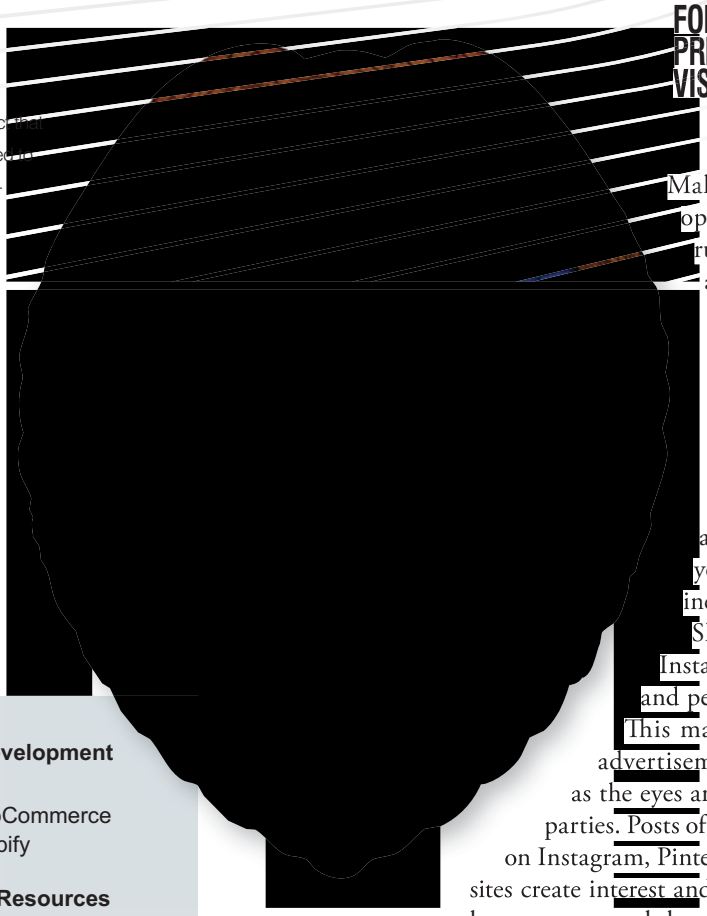
If you plan to photograph new products yourself, invest in a reasonably good camera, and even more important, a good lens. A lens in the range of 70 to 105 mm provides a good, close view of product details. Take photos from several angles, including the whole product as well as details. A product photography light tent is also a worthwhile investment. There are many in the $50 to $150 range that work well.

MARKETING AND PRODUCT PLACEMENT

If your product sales don't take place in your physical storefront, you are likely selling online (or perhaps at a farmer's market or similar place). Online sales may be at your own website storefront or hosted by one or more online shopping malls such as Amazon or Etsy. Choices increase all the time (some other popular sites are shown in the inset on page 28). Each has their own set of rules, fee structures, photo requirements, and appeal to various types of consumers.

If you participate in forums and chat rooms, do a lot of listening. Look for problems and issues needing solutions.

FOR MORE ON THE COMPLEXITIES OF PRICING CUSTOMIZED PRODUCTS, VISIT http://gpro.link/custprice.



A specialized product that can easily be adapted to the many Marine policing occupational specialties. Personalization is completed by a plate attached inside the shadowbox.

Make sure you respect all conversations and opinions, and follow and respect all the rules, especially as it relates to advertising and marketing your products. Many chatroom and forum hosts only make money from advertising and will quickly ban you if you don't follow the rules.

Most advertising at these sites is reasonable and highly effective. A large number of users of the sites have a real need and interest in products that help them solve a problem or display their pride and joy. If you have your own website, this is a great inexpensive place to advertise your site.

Shopping sites like Pinterest, Etsy, and Instagram allow users to follow their interests and people with products and similar interests. This makes your posts and advertisements more effective as the eyes are those of interested parties. Posts of good-quality photos on Instagram, Pinterest, and a few other sites create interest and followers. Your followers can spread the word for you.

Consider ways to get them involved. Contests, giveaways, honest nonpromotional surveys, online events, and many other ways to engage followers all are part of today's marketing toolkit.

Editor's Note: *To read all about creating artistic and themed products, check out Bob Hagel's column in the March 2021 issue, page 44.*

When appropriate, consider selling wholesale to storefronts or online retailers that offer specialty products to your marketplace. Have samples to show or send and be prepared to negotiate a price.

SHIPPING AND SALES TAX

It is easy to forget the costs of shipping. It can be time consuming, especially if your product is delicate and easily breakable. Consider all your shipping materials including boxing, packing, taping, and labeling. Shipping materials can also require a lot of storage space.

Shipping costs have risen over the years, more than most services. It is a major trend to offer "free" shipping. If you offer free shipping, make sure the full cost is included in your total cost of doing business. Unaccounted-for shipping can easily eliminate any profit you might have had.

continued on page 110

Ecommerce Website Development

- Squarespace
- OpenCart
- Ecwid
- Wix
- WooCommerce
- Shopify

Ecommerce Marketing Resources

- Mailchimp
- AdEspresso
- OptiMonk
- Customer.io
- SEMRush
- Google Ads
- Facebook Ads
- Drift

Left: Some primary online selling resources.
Below: A few of the key online sales platforms.

STORE / RESOURCE	FEE TYPE	PRIMARY MARKETING	OTHER
Bonanza	Monthly Fee	Google Webstore Broadcaster Affiliate Program	New Products
Amazon	Monthly Fee Selling Fee	Large Following Affiliate Program	New Products
eBay	Listing Fee Insertion Fee (added categories) Selling Fee	Large Following	Many Used Products
Handshake	Free Shopify Account Required		Wholesale
Chairish	Selling Fee		Consignment Shop Model Furniture / Decor
Etsy	Listing Fee Selling Fee Processing Fee	Popular	Niche Products / Decor Similar to Ruby Lane
Craigslist	Free	Popular	Regional / Local Many Used Products
VarageSale	Free		Regional / Local Many Used Products
Facebook Marketplace	Free	Popular	Regional / Local Many Used Products
NextDoor	Free	Neighbor Communication Platform	Regional / Local
Instagram	Free	Post High Quality Photos with Contact Info - Can Result in Calls and Sales	

THE Sublimation REPORT 2021



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TIPS, TRICKS, AND RESOURCES TO HELP TROUBLESHOOT COLOR-MATCHING CHALLENGES
This article recaps some top tips and provides a resource list for you to watch or read any time you're facing color-matching challenges.

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From printer to inks, heat presses, apparel, and more, this product section has it all.

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Elevate your offerings with sublimatable slate, plus follow along with a tutorial on how to decorate this substrate.

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Whether you want to break into a new market, expand your offerings, or piece your product lines together, cut-and-sew sublimation is a versatile process that can suit small and big facilities.

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T[redacted]IS: SUBLIMATED G[redacted]Y PUZZLES
Capitalize on the booming personalized products market with this tutorial on sublimating puzzles.

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C[redacted]FUL NUMBERS: S[redacted]MATION SURVEY FINDINGS
Get the state-of-the-industry report.



For a large chunk of people, color matching means matching a certain shade of blue (or other color) in a company logo.

COLOR Matchmaker

TIPS, TRICKS, AND RESOURCES TO HELP TROUBLESHOOT COLOR-MATCHING CHALLENGES

BY JENNIFER FOY

When I was asked to write an article on color-matching solutions, I wondered what I could possibly bring to the table that hasn't already been done or said by some great members of the sublimation industry. Now here's the thing: color matching means a few different things to different people. For most it's matching a certain shade of blue in a company logo or getting a sky to actually come out blue, or the skin tone on a person to not have a green tint to it. Sometimes, people are referring to a color looking faded as well.

There have been numerous articles released over the years, long and short, by various authors (including one by yours truly published last year), and when searching for videos online, I found a variety of resources on YouTube by sublimation industry voices such as Condé and JDS Industries. The problem is these great resources are out there and online, but they are all over the place and can be hard to find.

I thought what might be helpful for those who have missed these great resources or if you are new to sublimation (welcome to the industry!) is to recap some top tips and provide a resource list for you to watch or read at any time—whether to remind yourself or learn for the first time and grow your confidence when it comes to color in your dye-sublimation business.

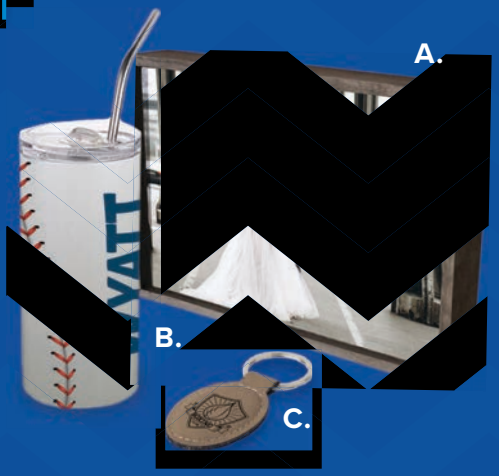
TOP TIPS

Let's start with top tips for dealing with color and your equipment. These are quick things to do, check, and keep in mind:

1. Perform a nozzle check.
   A. Keep in mind that the print head may need to be cleaned if the nozzle check pattern shows gaps. There are several ways to initiate a print head cleaning on various printers. For complete instructions on print head cleaning, see your printer manual.
2. Sublimate the nozzle check.
3. Make sure you are in RGB color mode.
4. Are you using the correct paper and the correct side of the paper?
5. Make sure you are printing with the correct color profile.
6. Use the correct driver settings: Photographic? Vivid? Fabric?
7. Make sure that the color printing is set up to include all colors, not only one.
8. Check the heat press platen temperature.

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F. SG1000 Sublimation Printer #PRNT1000N-609000
G. iColor 560 Heat Transfer Printer #ICP560W120S
H. Sublimation Paper #SUBPJP8511
I. Frosted Glass Mason Jar #XP9100F
J. Ceramic Car Coaster #CCM32
K. Faux Wood Decorative Tray #HD409W
L. MDF Dark Faux Wood Round #HD170WRD
M. 11oz Economy Mug #XP8435

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If you're encountering a color-matching problem, chances are others have as well. Tap available resources such as YouTube videos, forums, and published articles for help.

9 Check your material. If you aren't buying from a distributor but from a major retailer instead, the poly content stated is not always true. Numerous social media threads online support that theory.

10 Did you change ink brands or kinds? If so, those printer ink areas need to be flushed out very well. Distributors like BestBlanks.com offer cleaning cartridges for printers, so that may be something to look into if you've switched your printer to sublimation inks.

11 Check the ink expiration date.

A. Time slips by and suddenly you didn't realize that ink has an expiration date of yesterday. It matters. Check the dates when your package arrives and mark that date on a calendar. I suspect it's like milk or eggs when it comes to expiration dates. The ink won't suddenly spoil, but be wary once you hit or get close to that date.

BIG TIP:

Sublimate a color chart to start with on a metal print or if you are sublimating fabric, do a plain white shirt. To go one level up, sublimate a color chart and a group of small photos (that includes various people as well as color shades that show a bright white, shadows, and a solid black). Looking at skin tones, shadows, and then solid colors allow you to see all the options.

Is the solid color smooth? Does the person look a little green? Is the shadow blotchy? Review it and ask questions. Not sure you can focus and concentrate? Set a timer for yourself to look at the pressed pieces for 15 minutes. After just a few minutes, I guarantee the voice in your head will start analyzing the colors you are seeing, asking questions, and before you know it, you'll be able to see the color of the printed samples.

One last tidbit to help you organize your color chart reference: add a date to it. You will want to go back again in six to nine months and run off the same chart and photos then compare them to the older date to check your color consistency.

Don't forget: What you see on screen won't be exact to your print or the

Color matching means a few different things to different people. (All images courtesy Jennifer Foy)

pressed transfer. However, getting them close to each other is helpful. Look at the sublimated color chart and your screen at the same time, then adjust the brightness and color of your computer monitor to at least get closer to the pressed final piece. Then you can keep the differences in mind when producing on screen.

IMAGE FADING

Does the color and image look faded? Image fading (if the above checklist has been used) could be due to the incorrect pressure, time, or temperature. Double-check the recommended settings from the company where you purchased your sublimation blanks. This is another reason to purchase from a distributor—the support they offer can help save your sanity.

Coastal Business Supplies notes that "image fading is usually caused by too much time and temperature, and/or pressure. We suggest double-checking the recommended settings from the company where you purchased your sublimation blanks. Every heat press is different, which is something to bear in mind. Another suggestion is to double-check the temperature of the top platen on your press to

VIDEOS TO CHECK OUT

1. Color Problem Solutions for Dye-Sublimation Printers – Condé Systems: http://gpro.link/concolor
2. Manual Color Correction – Dye-Sublimation: http://gpro.link/mancolor
3. Testing Consistency on Your Heat Press – Unisub: http://gpro.link/unitest
4. Color Management Basics – Sawgrass Inks: http://gpro.link/sawcolor
5. Getting the Best Color with Sublimation – Johnson Plastics Plus (webinar): http://gpro.link/jppcolor

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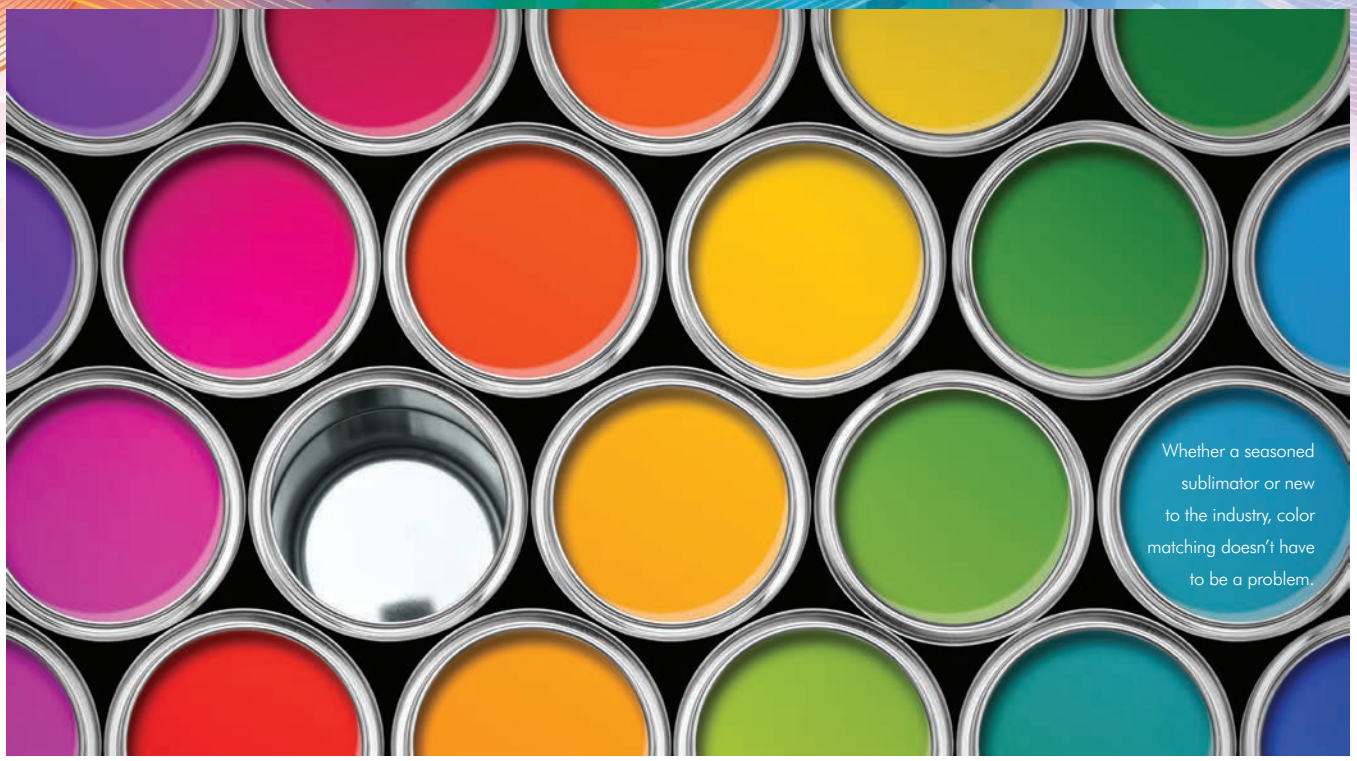
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SUBLIMATION PRESS

MUG
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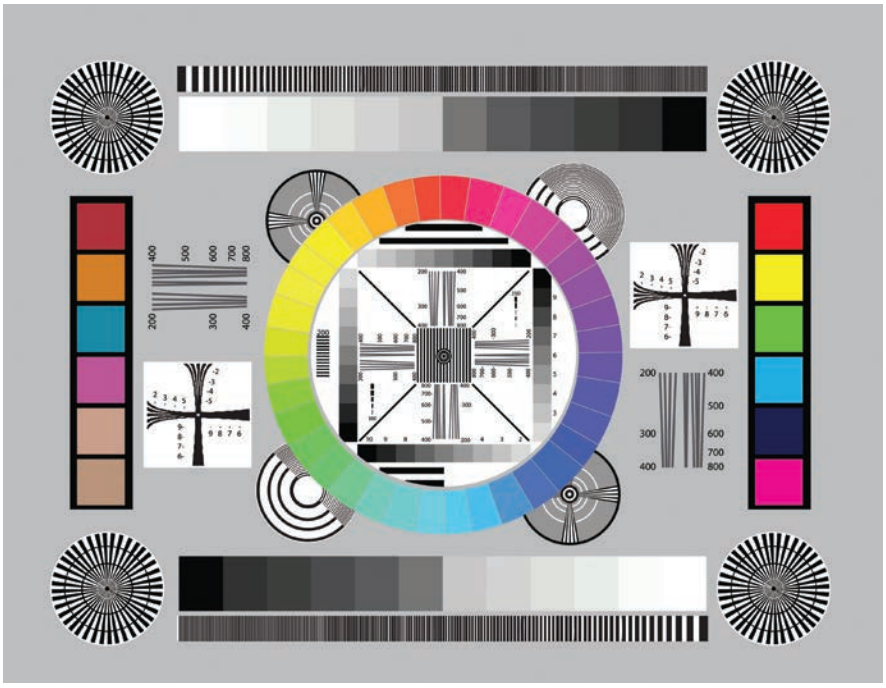
16X20
SUBLIMATION PRESS

SUBLIMATE POSSIBILITY



Whether a seasoned sublimator or new to the industry, color matching doesn't have to be a problem.

DON'T HAVE A COLOR CHART? GOOGLE IT OR LOOK IN THE FILES UNDER ONE OF THE MANY SUBLIMATION FACEBOOK GROUPS ONLINE. YOU WILL FIND MOST MEMBERS ARE NICE AND WILLING TO HELP EACH OTHER. WE'VE ALL BEEN NEW TO SOMETHING BEFORE, SO LET'S HELP EACH OTHER TO BETTER THE SUBLIMATION INDUSTRY AS A WHOLE.



One way to ensure good color is to do a color chart. Sublimate a color chart to start with on a metal print or if you are sublimating fabric, do a plain white shirt.

make sure it aligns with the stated temperature; for this, we recommend heat strips."

Using color management software is essential. Yes, there are various levels of software available. Some are free or included when you purchase a printer or a system, like CreativeStudio; others like ICC Color Profiles may be offered from your distributor at low or no cost. While color management RIP software is the cream of the crop, start with your training wheels on a smaller scale, understand your equipment, and just get started. I promise, it's easier than you think.

ADDITIONAL RESOURCES

Are you looking for some of the supplies mentioned like heat strips, cleaning





cartridges, or solutions for your printer, etc.? Many of these items are available from distributors across the country. Check their websites to see what they suggest and what they have in stock to help you on your journey to awesome sublimation color.

Remember, we are all in this together—if you are encountering a color-matching problem, most likely someone else has had the same frustration. Contact your distributor for help, join a few sublimation groups, and one last resource for you, use the search function to check the *GRAPHICS PRO* magazine website: www.graphics-pro.com. You will find all sorts of articles and tips previously shared by industry experts. Good luck and happy sublimating! **SR**

ARTICLE RESOURCES

- An oldie but a goodie previously published in *A&E* magazine (now part of *GRAPHICS PRO*): http://gpro.link/subcolor
- Ink Differently Blog from Sawgrass offers a great article on color management basics: http://gpro.link/inkdiff
- From ProWorld, The Five Most Common Sublimation Printing Problems, section four of this specifically noted about color output information: http://gpro.link/printprob

Jennifer Foy has over 20 years of experience using Adobe software and working in the advertising, marketing, and design fields. She received a Bachelor of Fine Arts in Visual Communications from the Ringling School of Art and Design in Sarasota, Florida, and a Master of Arts in Advertising from Syracuse University, Syracuse, New York. Her years of teaching experience include numerous software and design classes for colleges in Atlanta, Georgia, and Louisville, Kentucky. Jennifer is currently working as the Creative Director at Universal Woods with the Unisub and ChromaLuxe brands. Jennifer can be reached by email at jennifer.foy@unisub.com.





BY RODNEY CROES

Confused About Sublimation Papers?

TOP TIPS ON PRINTING SHIRTS WITH SUBLIMATION TRANSFERS

When you first see and hear about sublimation transfers, you may immediately think, this is the perfect solution for printing full-color logos on demand. The pros of using sublimation transfers are enormous. You can print one, individual custom image. There is no limitation on colors or artwork type. They are relatively inexpensive to print. You can do it from your desktop with the right printer, and you can print on a wide selection of items. Sounds great, right?

It's true. Sublimation transfers are a wonderful solution for all those reasons and more. However, you need to understand how they work, what they can and can't accomplish, and most importantly, how to get great print results when using sublimation transfers.

STARTING WITH THE BASICS

The root word of sublimation is sublimate, which means to change the form but not the essence. In the case of sublimation transfers, the solid dyes used to create the transfers sublimate, or change, into a gaseous state when heat is applied. Basically, the dyes used to create the design on paper will sublimate and enter the pores of the shirt, recreating the design on the shirt, which is why it's known as sublimation.



There's a sublimation transfer paper solution for every occasion. (Image courtesy Transfer Paper Experts)

PRO TIP FOR USING SPECIALTY PAPER FOR DYE-SUB PRINTING ON COTTON: PRIOR TO PRESSING THE POWDER-COATED TRANSFER ONTO A SHIRT, POSITION IT ADHESIVE SIDE UP AND ALLOW THE HEAT PLATEN TO HOVER OVER IT FOR 30 SECONDS. AFTER THAT, CAREFULLY FLIP AND PLACE THE TRANSFER POWDER SIDE DOWN ON THE GARMENT. PRESS FOR 30 SECONDS. AFTER PRESSING, WAIT 30 SECONDS BEFORE PEELING.



Dye-sub print sublimation paper can be used with dye-sublimation printers to create full-color results on light-colored polyester shirts. (Image courtesy Transfer Paper Experts)

Whether you understand the chemistry or not, one thing is clear. Sublimation can be used to print everything from garments to phone cases to mugs and more. Each one of those items must be designed to accept the sublimation inks in a gaseous state. In order for that to happen, the items must have a polyester fiber content or polymer surface or coating. Since the number of items you can sublimate is enormous, let's focus on shirts for this article.

FOUR WAYS TO SUBLIMATE

There are four main types of sublimation transfer papers you should know about.

Coated dye-sublimation paper is a coated paper made to enhance the release of the sublimation dyes onto 100% polyester material or 100% polyester-coated items. The coating on the paper is what helps transfer the dyes onto the polymer or polyester. This paper was originally produced for use on hard substrates and coated ceramic mugs or tiles or anything prepped for sublimation. But it can also be used to print 100% polyester, light-colored T-shirts or clothing items.

Can you print sublimation transfers on uncoated paper? This is a common question. If you've been around the sublimation crowd on YouTube or other social media platforms, you will find people who promote the use of uncoated, regular bond paper in a sublimation printer.

Yes, it is possible to print sublimation transfers using regular paper. However, if you choose to try this method, please know that it can be temperamental. The people promoting this method may not mention that a 50-60 lb. bond paper should be used to reduce

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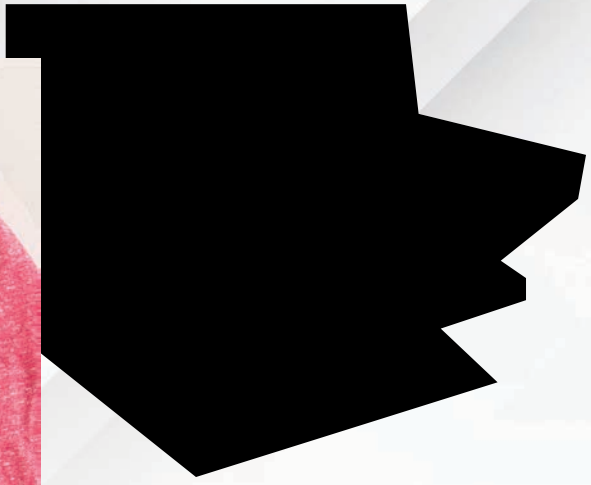


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SubliToCotton print sublimation paper can be used to create a screen print-like look on cotton fabrics. It comes with powder coating. (Image courtesy Transfer Paper Experts)



A swing-away style heat press, like the A2Z heat press from Stahls', is ideal for printing sublimation transfers. (Image courtesy Stahls')

the mottling or saturation of the sublimation inks. Also, your chances of reproducing bright, brilliant colors with this method are not high.

The porosity of the paper plays a big role. So, while it's technically possible to create sublimation transfers with regular bond paper, your results will be much better if you use a coated, made-for-sublimation paper. It's a little more expensive but definitely worth it.

Sublimation to cotton paper: If a sublimation paper says it can be used to print on cotton, it's a special paper with a specific coating. Usually, this is a two-step process. First, you run the paper through the sublimation printer. Secondly, you coat the wet ink with a powdered adhesive. The great thing about this type of sublimation paper is it allows you to print on 100% cotton shirts. The coating allows the sublimation ink to stay wet after printing, at least wet enough to receive the powder adhesive on the paper.

Here's how it works: Put the made-for-cotton sublimation paper in the sublimation printer. Remember the inks will stay wet so you have to remove each transfer immediately from the paper tray. The ink stays wet for around 5 minutes. Then place the powder on the wet ink. Some people sprinkle it, some people dip it in and shake the powder over it. You must gently tap the paper to remove excess powder. The polymer adhesive is what sticks to the cotton fabric, and the sublimation dyes penetrate the powder. The powder used for this process is clear, so you must still print on light colored shirts.

NOW THAT YOU UNDERSTAND THE IMPORTANCE OF SUBLIMATION PAPER, LEARN WHY THE QUALITY OF SUBLIMATION INK MATTERS: http://gpro.link/subink.

Cuttable sublimated flock is a cuttable, white flock material that is 100% polyester. Basically, you can transfer the sublimated image onto the flock, which is cuttable. Print out your design using dye-sub transfer paper. You print on that in right-reading format—don't mirror the image. Then transfer the design to your flock material. Wait about 15 minutes for the adhesive to settle. You can use a cutter to cut out the design. Some cutters even read crop marks. Afterward, heat press the sublimated flock onto your garment following instructions.

Sublimation paper designed for dark shirts: In order to print sublimation transfers on dark-colored shirts, you need to have an opaque layer under the inks. To do this, you need printable, cuttable vinyl made for sublimation inks. This usually comes in sheets that are designed to be run through your desktop sublimation printer. It can also be purchased by the roll.

ALWAYS REMEMBER

No matter what type of sublimation media you're using, dealing with sublimation inks means you have to keep on your toes. Sublimation inks become activated when heat is applied. The gases want to escape and are looking for the next closest polyester or polymer molecule to call home.

Here are a few sublimation heat pressing tips:

- Use a reliable, high-quality heat



Sawgrass sublimation printers can be the start of a new profit center for your business. (Image courtesy Transfer Paper Experts)



Transferring sublimation images onto a flock background allows you to print on any color shirt and gives a great textured effect. (Image courtesy Transfer Paper Experts)

press. While you can use an iron or handheld craft press to apply small sublimation prints successfully, it's practically impossible to correctly apply a full front design without a heat press made specifically for printing shirts. You will get best results when using a press that can maintain even heat over the entire platen. Any cold spots in your platen will result in uneven printing results.

- Pre-press the shirt. No matter what type of graphic you are heat printing, always pre-press your shirt for a few seconds to remove wrinkles and any moisture in the garment. This helps improve results.
- Use bond paper as a cover sheet. Some cover sheets, such as Kraft paper, contain polymers and are a magnet for sublimation dyes. Avoid using any type of cover sheet that has any type of polyester fiber or polymer in it. Silicone sheets can work, but you have to make sure they contain no polyester. Bond paper is usually a safe bet.
- Thread the shirt on the platen. Make sure you split the shirt and cover any areas you don't want to print with bond paper.
- Cover your platens. Use a Teflon platen cover on both your upper and lower platens to prevent sublimation dyes from ruining them.

INK AND PAPER COMPATIBILITY

Make sure you work with a reliable company who can help you determine compatibility between the inks, papers, and products you would like to print. This is especially important if you need to recreate specific team or corporate colorways. Look for a manufacturer and ink supplier that provides color profiles for specific papers. You may consider using less expensive ink manufacturers, but it can come back to haunt you with color profiles.

PRO TIP: SEPARATE YOUR SHIRT LAYERS. THIS IS ESPECIALLY IMPORTANT TO REMEMBER WHEN LOADING YOUR SHIRT ON THE HEAT PRESS. MAKE SURE YOU SPLIT THE SHIRT OPEN AND "DRESS" OR THREAD THE PLATEN. IF YOU DON'T DO THIS, YOU WILL FIND THE DYES MAY GO WHERE YOU DON'T WANT THEM.

HAVE FUN

It takes a bit of experimentation to become a sublimation expert but it's usually worth the trial and error involved. Remember to have fun with this creative process. Most manufacturers have a lot of how-to videos to help you figure out the best methods for your business. **SR**

Rodney Croes is the general manager at One Step Papers LLC. He has over 23 years of experience in the transfer paper industry for high-volume production and low-volume custom processes. He's an expert in manufacturing and selling screen print papers, offset papers, inkjet and laser printer papers, sublimation papers, waterslide decal papers, and the new Hybrid PET films and papers. For the past 15 years, he's also sold color laser printers, sublimation printers, and heat presses.

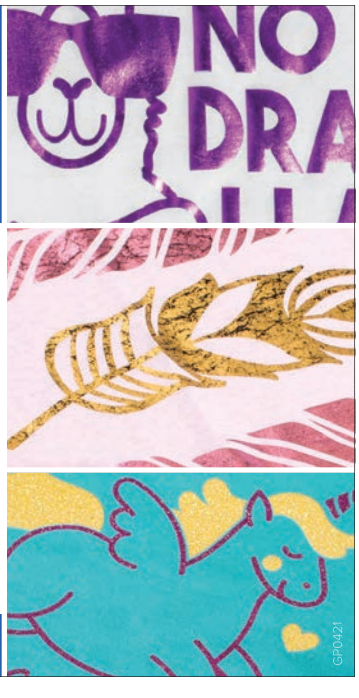
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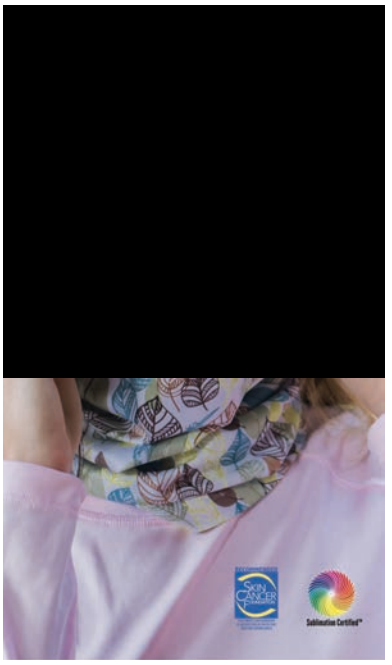
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SR



The materials needed to sublimate slate. (All images courtesy David Gross)

THE ROAD TO SUBLIMATION SUCCESS:

How to Add Rock-Solid Impact to Your Awards

A SLATE SUBLIMATION TUTORIAL



My goal has always been simple: to help you be successful at sublimation transfer by providing outstanding value and service. In my opinion, the value starts by introducing you to a variety of imprintable products that are sure to dazzle your customers and bring big profits to your decorating business. Backing up those products (and the equipment needed to produce them) with service that includes technical and educational support helps you spend less time on problems and more time helping your customers and growing your business.

In that spirit, let's talk about a product that can elevate your awards offering: slate.

WHAT IS SUBLISLATE?

Ideal for displaying cherished memories, SubliSLATE combines full-color photographs with the natural beauty and durability of rustic slate. SubliSLATE's uniform thickness and ultra-flat coated image area provide consistent photo transfers while the individually fractured edges help to blend transferred images into each piece in our experience.

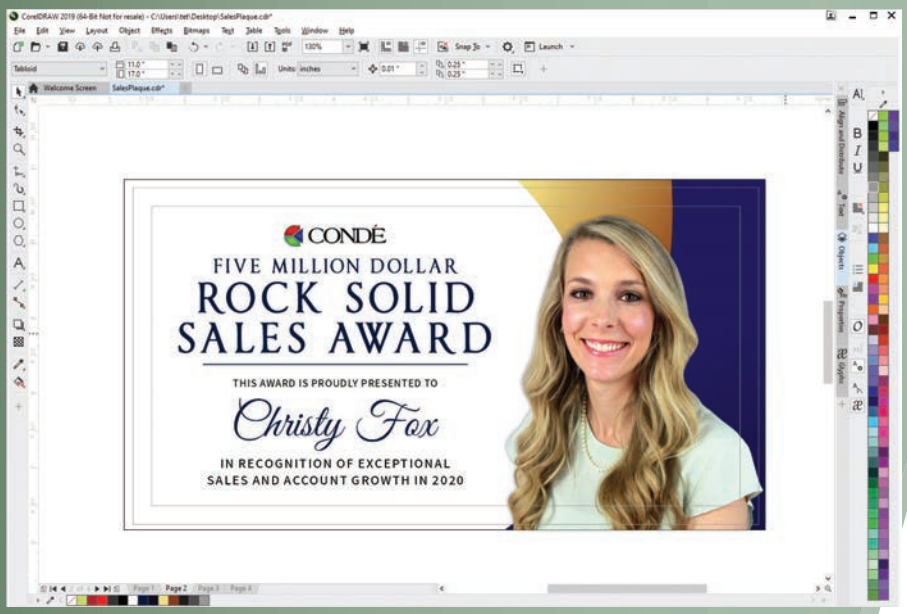
Originally, SubliSLATE was offered in a variety of traditional and non-traditional shapes and featured a matte white sublimation coating. Recently, however, new shapes, sizes, and a glossy white finish have been added. The new round, square, and square with clock mechanism come with black plastic stands for desk, mantle, or tabletop display while the picture frame with heart- or rectangle-shaped cutout come with an easel backing that is attached after imaging. Additionally, there is a narrow rectangle (portrait and landscape available) with two pre-drilled holes and jute twine for displaying finished pieces on a home or office wall.

SubliSLATE photo gifts and awards have qualities that demonstrate the value and desirability of the sublimation transfer process. I sincerely hope the following tutorial shows you how SubliSLATE can grow your awards business and wow your clients.

TUTORIAL

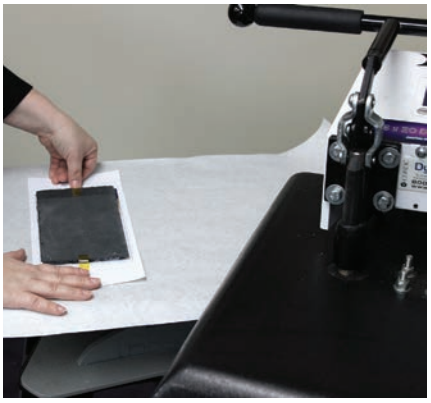
Basic materials list:

- Digital template
- Printed transfer
- Blank SubliSLATE
- Heat tape
- Protective paper
- Green pad
- Heat gloves
- Flat swing-away heat press



Step one. See text for full tutorial.


Step four.


Step five.

Instructions:

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

Step Two: Print the transfer.

Step Three: Hover the heat press platen over your printed transfer for 10 seconds to dry excess moisture.

Step Four: Cover the bottom table of the heat press with a blank sheet of protective paper.

Step Five: Secure the transfer to the




Step six.


Step seven.


Step eight.

SubliSLATE using heat tape.

Step Six: Place the SubliSLATE piece face-up (attached transfer face-down) on top of the protective paper.

Step Seven: Cover with another sheet of protective paper.

Step Eight: Cover all with a 1/8" heat-conductive green rubber pad.

Step Nine: Press for 8 minutes at 400 F with medium pressure.

Step Ten: Carefully remove the SubliSLATE from the press, remove the transfer, and let the slate cool.

Application notes

- Before pressing, remove any dust, debris, or smudges from the SubliSLATE's surface.
- If you do not use a green pad, the transfer paper may stick to the SubliSLATE and be difficult to remove.
- Too much pressure may cause the green pad to leave an unsightly texture in the SubliSLATE's coating.
- Dwell time should be increased for darker, more saturated images.
- After imaging, if you see areas of smudginess, clean the slate with denatured alcohol and a lint-free cloth.
- There will be random areas of white coating on the fractured edges that may or may not achieve sublimation; this is normal.

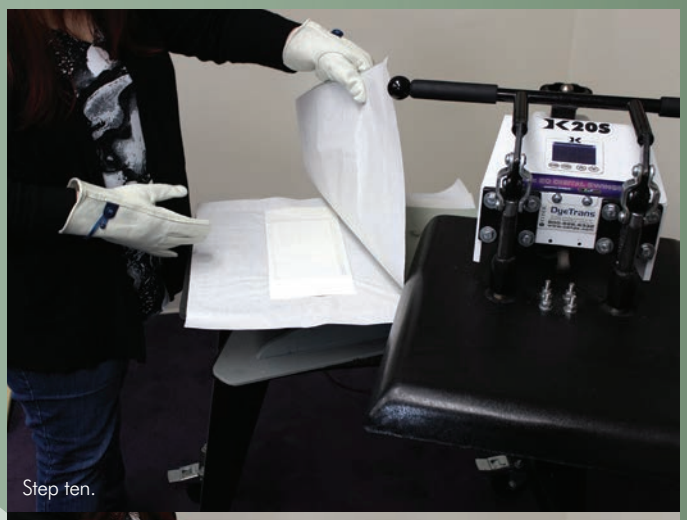
FINAL THOUGHTS

When all is said and done, a product is judged on how good the transferred image looks. The vividness of colors and accurateness of flesh tones can make or break a product's visual impact, so every effort should be taken to make sure you avoid light/faded transfers caused by not enough time, temperature, and/or pressure; or dark transfers caused by too much time, temperature, and/or pressure. It is truly frustrating to go through the entire process of making a product (especially one with a long press time) to find out in the end that the image is not adequate.

So, how can you dial in the settings on your heat press before wasting product(s)? Since achieving a deep black is probably the best way to know if you have gotten the best transfer possible, I recommend



Step nine.



Step ten.



performing a black strip test. Simply print several solid black strips and transfer them, one by one, at varying time, temperature and pressure settings to your selected product until you find the setting(s) that best achieve a deep, thorough black. **SR**

David Gross is the president of Condé Systems, Inc. For more than 25 years he has developed and built the Mobile, Alabama, based company into the premier source for printers, substrates, and consumables serving the graphic art, photography, prepress, and desktop publishing industries.



The final product.

Customizing with Cut-and-Sew Sublimation and Beyond

A LOOK AT PIECING TOGETHER THE PUZZLE FOR THIS AVENUE OF WIDE-FORMAT SUBLIMATION



BY JULIA SCHROEDER

Whether you want to break into a new market, expand your offerings, or piece your product lines together, wide-format sublimation—specifically cut-and-sew sublimation—is a versatile process that can suit small and big facilities, alike. If you're a screen printer, embroiderer, or direct-to-garment decorator, sublimation offers more customization and decoration possibilities for garments and accessories, at a lower cost.

PUZZLE PIECES

Cut-and-sew sublimation streamlines an entire end-to-end process, says Micol Gamba, EFI Reggiani. The versatility of sublimation is illustrated in sportswear, T-shirts, leggings, socks, pajamas, and more. Using a printer geared with specialized ink, you can print a transfer and fix a custom design to the substrate with applied heat.

The process can be thought of as printing and putting the pieces of a puzzle together. "It's like taking sewing pattern pieces for a garment and designing graphics for each shape, hence the puzzle pieces analogy," explains Lily Hunter, Roland DGA. For example, when constructing a sports jersey, you can design graphics for the front, back, sleeves, collar, and so on.

There are two schools of thought when it comes to the cut-and-sew process:

1. Match pre-cut pieces of fabric onto the graphics as they are fed into a calender.
2. Sublimate onto rolls of fabric to cut-and-sew later.

Hunter says that some prefer the former method to prevent excess inventory of pre-cut fabric pieces of slow-moving sizes. "If you're a screen printer, offering cut-and-sew sublimation allows you to provide custom short runs and one-offs at a lower cost," she explains. "If you are direct-to-garment printing onto cotton-based fabrics, dye-sublimation is a complementary technology for polyester fabrics."



(Image courtesy EFI Reggiani)



KEY CONSIDERATIONS OF CUT-AND-SEW

The key is polyester and poly fiber substrates. Polyester blends (preferably a minimum of 80% polyester) work best with sublimation. A higher polyester content lends to more vibrant end results. However, Hunter points out, if you want to achieve a "washed out" look, then lower polyester count is doable. The ink that "sticks" to cotton fibers eventually washes off, whereas anything that dyes the polyester fibers remains vibrant and durable.

Along with a polyester substrate, you will need the following equipment to offer this process:

- Computer with a lot of RAM and a stable internet connection
- A dye-sublimation printer



The versatility of cut-and-sew sublimation is illustrated in sportswear, T-shirts, leggings, socks, pajamas, and more. (Image courtesy EFI Reggiani)

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When it comes to carving out the ideal space for the cut-and-sew process, the space of a small garage will work initially, with the option to size up later. (Images courtesy EFI Reggiani)



- Calender – with or without a feeding table, depending on your preferred method of sublimating onto the fabric
- Fabric cutter – manual electric blades or a flatbed cutter
- Large tables for workspace, inspection stations, packing, etc.
- Sewing machine(s)
- Iron – to press finished goods for clean, professional presentation and packaging
- Workflow software – to manage the production at each stage of the process
- Large bins or trashcans – to manage the leftover scrap fabric

When it comes to carving out the ideal space for the cut-and-sew process, Gamba says you can start with the space of a small garage, with the option to size up later. Cut-and-sew is a scalable process.

Hunter adds that, ideally, you want your printer and calender to be in different rooms. The printer needs to be in a controlled environment, whereas the calender, cutter, workspace, and sewing machine can all be in a large warehouse area.

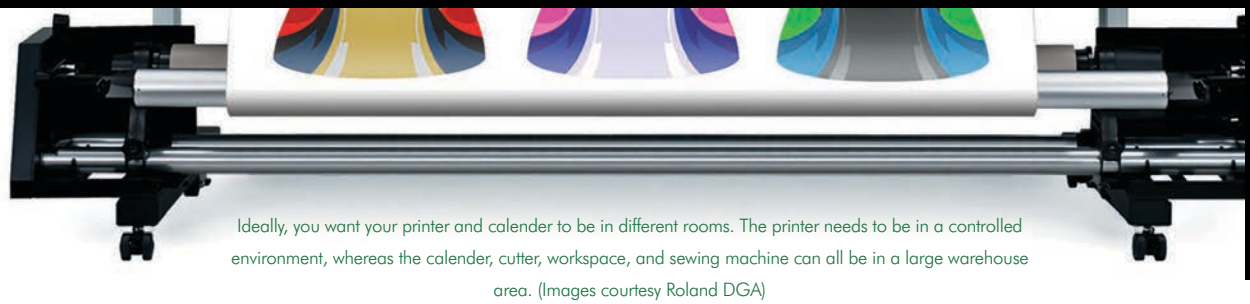
"Make sure each section is set up for a smooth flow, as the production job is fed from one station to the next," Hunter says. For example, you don't want a calender and cutting area to be too far apart with a sewing area in between them. This type of setup can interrupt the workflow and productivity. Once you have all the necessary equipment, you will need a team—specifically skilled sewing personnel—in place to help get the job done.

You may also want to start small in your offering, especially when it comes to color options. The more you offer, the more you will have to stock specific colors of thread, buttons, etc. If you offer too many color options, you'll end up with a room full of thread and accessories, and since trends change, you may be stuck with excess inventory, according to sources.

Another spot to highlight is that polyester is subject to high temperatures when sublimated. "We've explored this process a lot and one of the issues that we experienced is shrinkage," says Gamba. "Especially for cheap polyester that is not well pre-treated, it tends to shrink with high temperatures." For this reason, it's important to be aware of the polyester's

(Image courtesy EFI Reggiani)





Ideally, you want your printer and calender to be in different rooms. The printer needs to be in a controlled environment, whereas the calender, cutter, workspace, and sewing machine can all be in a large warehouse area. (Images courtesy Roland DGA)

source and run tests in order to map it out from the beginning.

DESIGNING TO CUT-AND-SEW

When you are designing a pattern, especially the parts that compose your clothes, you want to accommodate for shrinkage. Ensure that your design is larger so that even if the fabric shrinks, you are able to have clothes of the same size afterward.

Hunter suggests to always add a 1" bleed in your design, and print/sublimate all the pieces to a garment per run. For instance, don't print all the sleeves first, then all the front panels, etc. There will always be slight color shifts per run due to the environment, differences in the fabric fibers (lot-per-lot or roll-per-roll), and other factors. When you start pulling pieces from the various production runs together that feature the same color or design, there may be slight differences in color.

To ensure the color is satisfactory, set up a color profile within your software. "Since sublimation ink is designed to be fixed at high temperatures, there aren't issues with the color or color defects after the shrinkage if you already profiled the color to get the final result that you expect," Gamba adds. To support this process, it is helpful to adopt an efficient design software. Preparation of the files is also essential to optimize the use of the fabric and avoid waste.

Once you complete the design phase, the next step is to print the graphics onto transfer paper and go through the sublimation process. The final step is to sew the decorated pieces together and form a piece of clothing with clean seams and other accessories, such as buttons and zippers.

RISING TRENDS AND THE INTEGRATION OF SUBLIMATION

Wide-format sublimation is a widespread technology that continues to build on itself as more solutions and product options become available. What's on the rise more and more, according to Gamba, is an interest in natural fibers and fabrics in the textile world. In addition to growing substrate options, shops themselves are



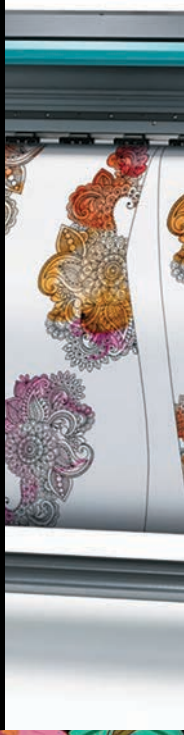
With cut-and-sew, you can create a complementary line of imprinted products like banners, uniforms, T-shirts, and more to serve a variety of markets within your community and beyond. (Images courtesy Roland DGA)

finding innovative ways to expand on this technology.

The cut-and-sew process can integrate with new business models like eCommerce or web-to-print. "Sublimation is a fast process and it's a green process," Gamba elaborates. The turnaround time ensures the possibility to take orders, personalize the printouts, cut-and-sew the sizes that you need, and deliver to your customers within a short window.

By adding sublimation to the mix of your business, you can create a complementary line of imprinted products like banners, uniforms, T-shirts, and more to serve a variety of markets within your community and beyond. **SR**





Julia Schroeder is a freelance writer based in Chicago, Illinois. Previously, she held the position of digital content editor for *A&E* magazine. She can be reached at hello@juliawritesforyou.com.



BY MICHAEL KAMINSKY

Try This:

Sublimated Glossy Puzzles



The finished puzzle.

A sublimated puzzle is a unique gift for those customers wanting to give something to their loved ones while they're apart. Make sure you have the correct materials and follow these easy steps.



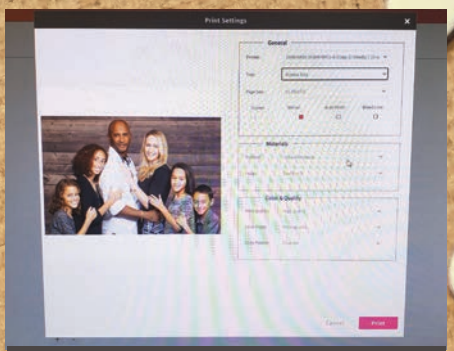
The glossy puzzle may be sublimated using any flat heat press. (All images courtesy Michael Kaminsky)

TUTORIAL

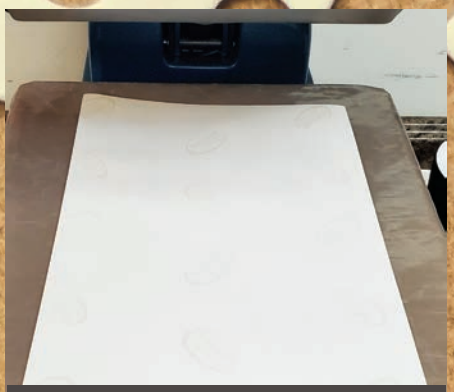
For this project, we use our puzzle that features a white, high-gloss polymer sublimation coating. They are available in 80, 120, and 200 pieces as well as a 60-piece heart shape. The glossy puzzle may be sublimated using any flat heat press.

Material List:

- Measurement to create template for puzzle
- Printed sublimation transfer
- Puzzle
- Heat tape
- Heat gloves
- Parchment paper
- Flat heat press



Step two.



Step five.

Sublimation Application:

Step One: Download a digital template of the puzzle (if none are available, measure the height and width of puzzle and add 1/4" border for bleed line).

Step Two: Print the transfer (mirror image).

Step Three: Place the protective paper on the base of your press to capture any excess ink.

Step Four: Secure the transfer to the puzzle using heat tape, about two to three small pieces (1/2").

Step Five: After the transfer is taped, flip it over so the paper is on top.

Step Six: Press at 400 F for 45 seconds with medium pressure, then open the press to let cool for about 10 seconds. Then carefilly remove the paper and you're finished. **SR**

Michael Kaminsky has been involved in the sublimation industry for over 25 years, and is a frequent instructor at conventions and contributing writer in magazines. He has watched the industry evolve before his eyes and is so excited to be part of its growth and technology with input on research, development, and so much more. He can be reached at michael@sublimation101.com.

Colorful Numbers

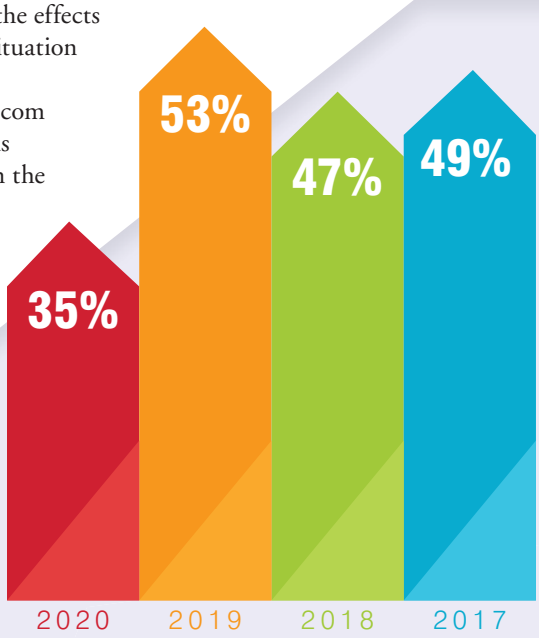
BY *GRAPHICS PRO* STAFF

SUBLIMATION SURVEY FINDINGS

Despite the continued challenges of the COVID-19 pandemic, many in the graphics industry are flourishing. Most businesses have had to adjust and learn new technology, whether it was to create PPE or meet a different need, such as customized products. Sublimation is one technology that has allowed many graphics retailers to thrive.

Following is this year's survey results from the sublimation market. You will also find some analysis from previous years. While we felt it important to acknowledge the effects of COVID-19 as well as continue to look at the numbers as the current situation evolves, we also wanted to point out the positive aspects of the market.

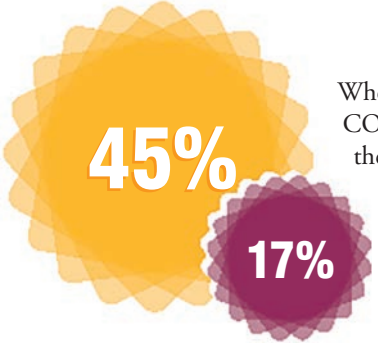
This survey was conducted through electronic mail via SurveyMonkey.com and complied with all CAN-SPAM act laws and NBM's privacy policy, as found here: nbm.com/privacy-statement. Respondents were selected from the *GRAPHICS PRO* subscriber database and all survey recipients were provided the same version of the survey, which was distributed in January of 2021. Some survey totals equal more than 100% because readers checked all the categories that apply.



REVENUES AND OUTLOOK

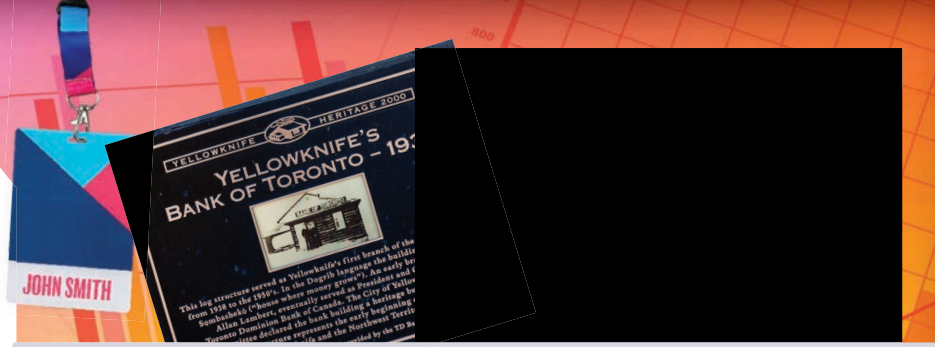
35% of respondents reported that their sublimation business *increased* in the previous 12 months (2020). That number is down from the previous years:

- 53% reported an increase in 2019.
- 47% reported an increase in 2018.
- 49% reported an increase in 2017.



When asked whether the COVID-19 pandemic affected their sublimation business, 45% responded that it has had major effects; 17% said it has not affected their sublimation business.

71% of respondents in this year's survey said that expectations for the next 12 months are favorable, a number that is slightly higher from previous years (69% in 2019, and 67% in 2018 and 2017).



PRODUCT BREAKDOWN

Top 5 Sublimated Products Sold Most

- Apparel..... 34%
- Mugs/Drinkware..... 20%
- Awards and Plaques..... 13%
- Name Badges..... 4%
- Signage (large format/textile)..... 4%



WHERE SUBLIMATED PRODUCTS ARE SOLD

- Corporations and Businesses 59%
- Athletic Associations or Clubs 48%
- Education Institutions 40%
- Retail Outlets 29%
- Government Institutions (police, fire, etc.) 27%
- Photography Market 15%



TOP 3 PRICING METHODS FOR SUBLIMATED PRODUCTS

- Multiple of Actual Cost 60%
- Perceived Value 42%
- Competitor Research 39%

EQUIPMENT AND INK

42% of shops that sublimate apparel reported their sublimatable apparel needs had *increased* in the last 12 months, which is different from years past:

- In 2019, this number was 54%
- In 2018, this number was 48%
- In 2017, this number was 49%

The survey found that 66% use only one printer for sublimation, and 22% plan to purchase one for their sublimation business in 2021.

38% of participants report having one heat press in use, and 24% plan to purchase one for their sublimation business in 2021.

The majority (55%) of respondents reported purchasing ink between 1-5 times a year.

SR



Kid's Kulture

TRENDS IN CHILDRENSWEAR

BY CARLY HOLLMAN



The main focus of childrenswear is comfort, though you will see trends inspired by adult styles. (Image courtesy Monag Apparel)

Kids taught us a lot this last year (new math, tik tok, how stressful it can be being a teacher …), but perhaps the best thing that we can all take away from their habits is dressing for comfort. Think about it: It's become the running joke of business on top and stretch (or no) pants on the bottom as many have adjusted to working from home. And no one knows the joys of being able to easily sit crisscross-applesauce on the floor, the couch, or that weird corner you've perched your computer in as children do.

COMFORT CAUSE

Childrenswear has long been the coziest of clothes. A hallmark of childrenswear is to make sure kids are comfortable, says Amit Gupta, Monag Apparel. This is seen through soft, stretchy fabrics.

"Any material that is soft, comfortable, and durable," expands Tami Miller, LAT Apparel about childrenswear. And if you're wondering what classifies as childrenswear, it could be because it encompasses such a large range.

"It can include everyone from newborns to teens," says Gupta. "Just, basically, not adults!"



However, according to Miller, the category is designed for ages 4–14 specifically. And with such a diverse group to outfit, it makes sense that trends often come from adult styles.

Gupta explains that this gives apparel companies the ability to move beyond basics and allows a large selection of styles and colors. This ranges from vintage colors to Mélange to colorblocking and contrast stitching. So, while comfort is key, it doesn't mean that it limits creativity for colorful kiddos of all ages. And like most apparel, childrenswear has further evolved in recent years to more prominently include everyone's favorite category: athlesiure.

More and more often we see "performance" features in childrenswear. Among the most desirable features for this category is SPF. "Any parent will tell you that wrangling a child to apply and reapply sunscreen while at the beach or pool is a chore," explains Allison Oliverius, Vapor Apparel. Thus, the popularity of 50+ SPF, particularly on long-sleeve tops for children both for play and everyday use, especially given the state of the world. Whether it's getting children in the yard, on walks, camping, or on the boat, all activities, Oliverius notes, contribute to an upswing in sales.

Moisture-wicking is another key for this demographic. Purely for practicality, it helps keep active and mischievous little ones dry. "Cotton shirts wet from sweat or swimming protect even



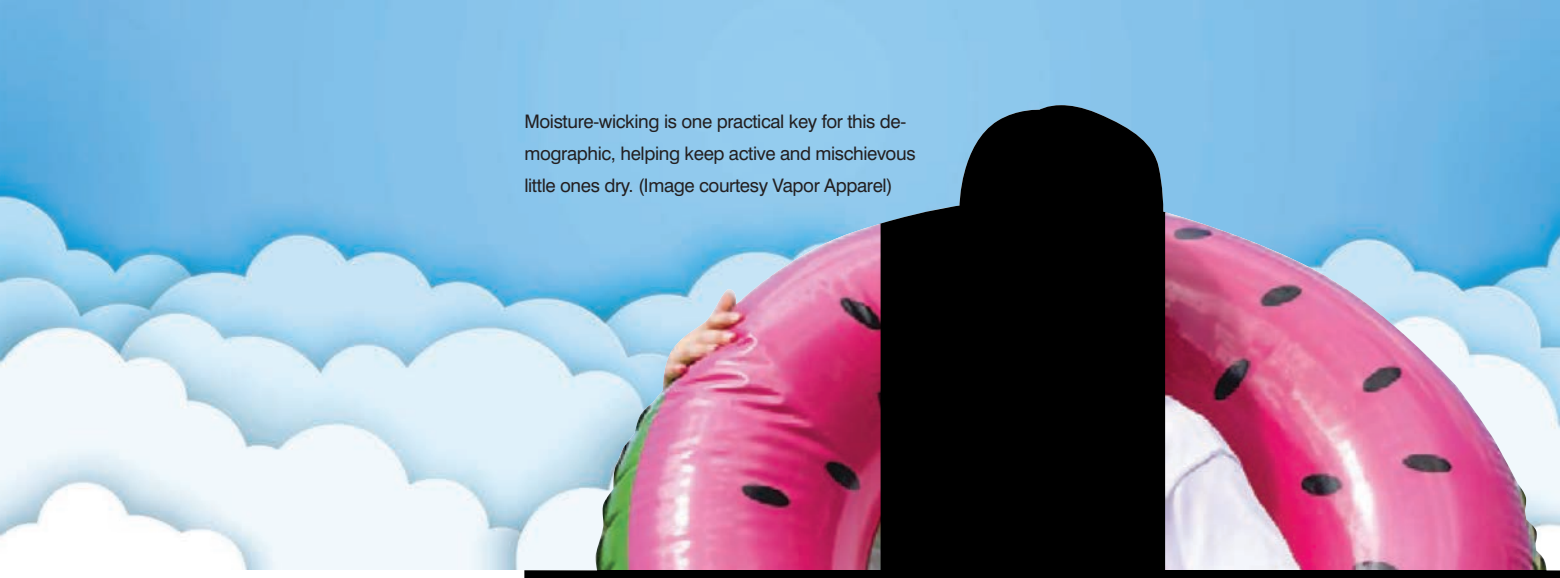
There has been a rise in popularity of 50+ SPF, particularly on long-sleeve tops for children both for play and everyday use. (Image courtesy Vapor Apparel)



Childrenswear encompasses a large range of ages and includes a variety of styles, including T-shirts and caps. (Image courtesy Cap America)

less in addition to feeling clingy and uncomfortable," says Oliverius. So, having the ability to dry quickly means a more productive day for busy parents and busy bodies.

And while most childrenswear is influenced by adult styles, another trending component for childrenswear is gender neutrality. Although this is nothing new, says Miller, she explains that unisex fitting alone has always been around, but neutrality may be more prominent through colorways in the current climate. "The color offering allows the unisex style to lean one way or another in regard to gender, but neutral colors are always a staple. I think that is why we have seen such an upswing in colors like grays and naturals



Moisture-wicking is one practical key for this demographic, helping keep active and mischievous little ones dry. (Image courtesy Vapor Apparel)

in addition to the tried-and-true neutrals like black and white," she elaborates.

For a modern take on gender neutrality, look for continually lightweight options that allow for ease of movement. However, stripes, seasonal patterns, and bright colors are always popular with childrenswear, says Oliverius.

With that said, Gupta stresses that there are more options than ever for trendy looks, and with that it is continually important to focus on comfort.



There are more options than ever for trendy looks, even for the youngest of kids, and with that it is continually important to focus on comfort. (Image courtesy Monag Apparel)

DECORATION DUDS

For decorations, the consideration toward safety (CPSIA is hugely important for childrenswear) makes direct-to-garment (DTG) one of the best options. Being water-based, this method of decoration doesn't present a problem and offers a soft hand, which makes it all the more wearable for texture-conscience kids.

These things matter to customers. Gupta extends this thought to sublimation, another soft-handed finish that complies with CPSIA and applies well to athleisure. If you are sublimating, explain how the image will never crack, fade, or peel to your customer, all ideal traits for clothes that are being put through the ringer during the day and washed constantly. He adds that embroidery is also a safe option that can offer texture in a safe way. "This, with athletic apparel, can give more choices to customers," Gupta cements.

So, while the focus on childrenswear should be on comfort, gender neutrality, versatility, and ease should be the top priorities going forward. If children are our future, we have few concerns. **GP**

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



WINTERS IS COMING (HERE!)

A PROJECT FOR A MULTITUDE OF PROMOTIONAL PURPOSES

The endless streaming of television subscriptions has allowed us to binge on our favorite shows during the pandemic. "Game of Thrones" has been king of the mountain for a while now. It was difficult not to get sucked into this medieval soap opera complete with all the deception and power grabbing, sprinkled with mythical fantasy and a wintery menace. This leads us into a piece we recently created for a multitude of promotional purposes.





DESIGN INSPIRATION

Last year, we built a design that featured a tiki character atop a surfboard ripping a curl for the "Summer of Winters" promotion with Freehand Graphics. That imagery inspired our new character. The much-anticipated tagline creating suspense for many seasons in "Game of Thrones" (GOT) is, "Winter is coming." We'll let you connect the dots. And since it's officially winter (at least, during the time of writing this), we interceded the word "here" over "coming."

White walkers are notable GOT characters due to their scored features and hauntingly gaunt faces (Summer Tiki's cooler brother, like the heat and cold miser brothers … but we digress.) Either would surely scare away evil spirits. A white walker snowboarding in the frozen homeland? Perfect!

We set the stage with snowy elements like snow-capped trees and mountain terrain. For movement, extreme perspective was used with a moonlit nighttime setting. This extreme run would not be complete without a double diamond sign.

Referencing photos of motion, snowpack, and bits of snow flying every which way helped us achieve our explosion of powder. Photos were also used for rider positions to accurately depict the crouching position.



Last year, we built a design that featured a tiki character atop a surfboard ripping a curl for the "Summer of Winters" promotion with Freehand Graphics. That imagery inspired our new character. White walkers are notable GOT characters due to their scored features and hauntingly gaunt faces—Summer Tiki's cooler brother, like the heat and cold miser brothers … (All images courtesy Lon Winters)

His attire is a combination of cargo pants and the upper armor of a white walker. The bound leather rings made for good form and interest. These creatures are made of winter, so frostbite wasn't an issue. So, the gloves came off!

We used the GOT font with a slight bevel in blue for an icy look. Icicles were a perfect element and served as a base for the type. At the client's request, we made the icicles look a little like dripping ink. We stamped "HERE" in a military lock box font.

FROM CONCEPT TO COMPLETION

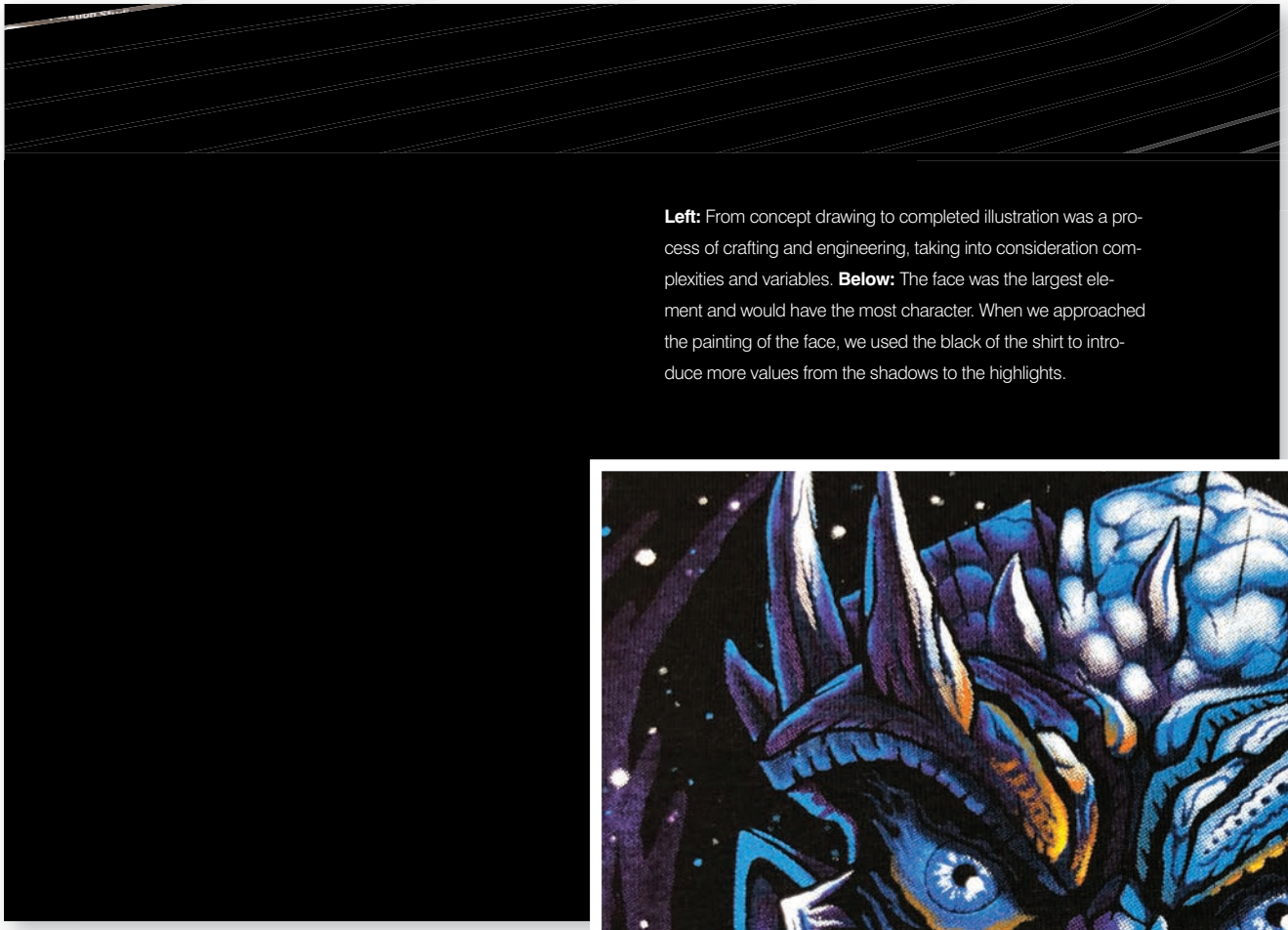
From concept drawing to completed illustration was a process of crafting and engineering, taking into consideration complexities and variables. That's not to say that we didn't make corrections along the way.

Once our pencils were complete, we moved to Adobe Illustrator to ink the image using the Pen tool and some brush effects. The painting process was manageable with layers and channels sectioned off for easy selection. We started with background elements and filled them with color to get basic theory laid out. Much of the painting was done on a tablet.

The face was the largest element and would have the most character. The tiki style would take some imagination. These unfriendly walkers are a pasty, wrinkled, and hardened species of humanoid that don't seem to smile much. Contours were grooved out in their faces and spires protruded off the top of their heads. This, and the icy long white hair made for a dramatic characterization.

When we approached the painting of the face, we used the black of the shirt to introduce more values from the shadows to the







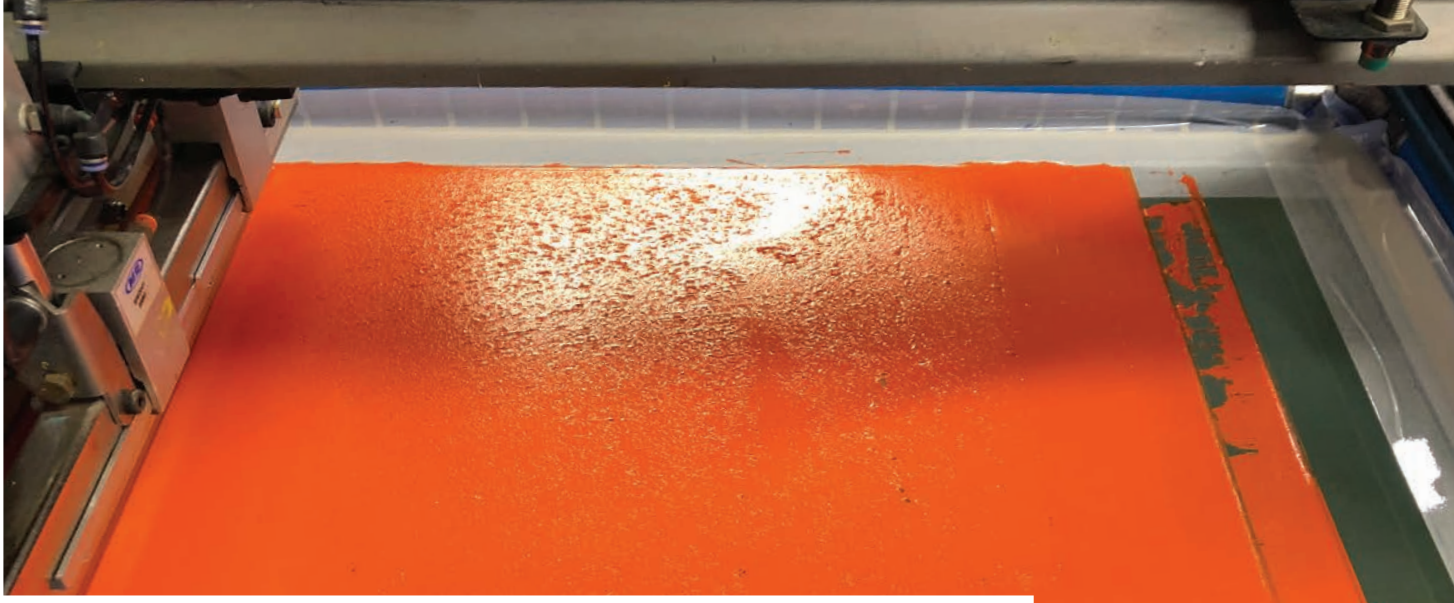
Left: From concept drawing to completed illustration was a process of crafting and engineering, taking into consideration complexities and variables. **Below:** The face was the largest element and would have the most character. When we approached the painting of the face, we used the black of the shirt to introduce more values from the shoulders to the highlights.

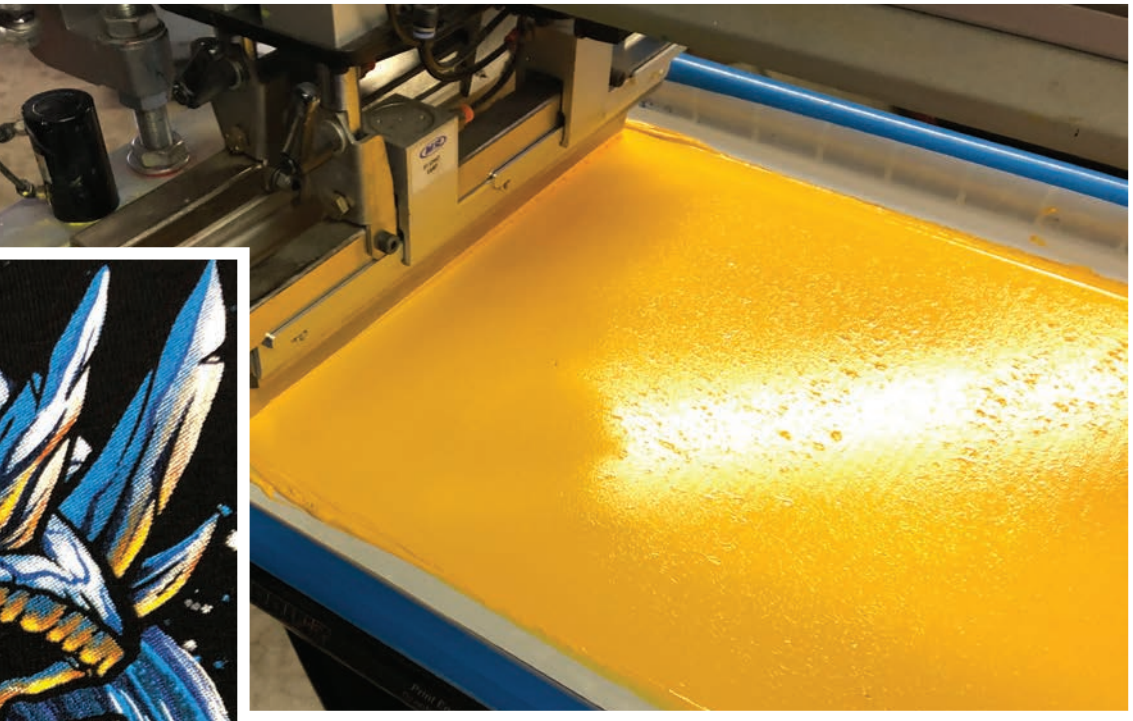


highlights. Many dark values were achieved with little or no white under. We also reduced some of the density of the inks themselves for even darker values. Varied densities on the white printer or base plate gave us even more values and tones.

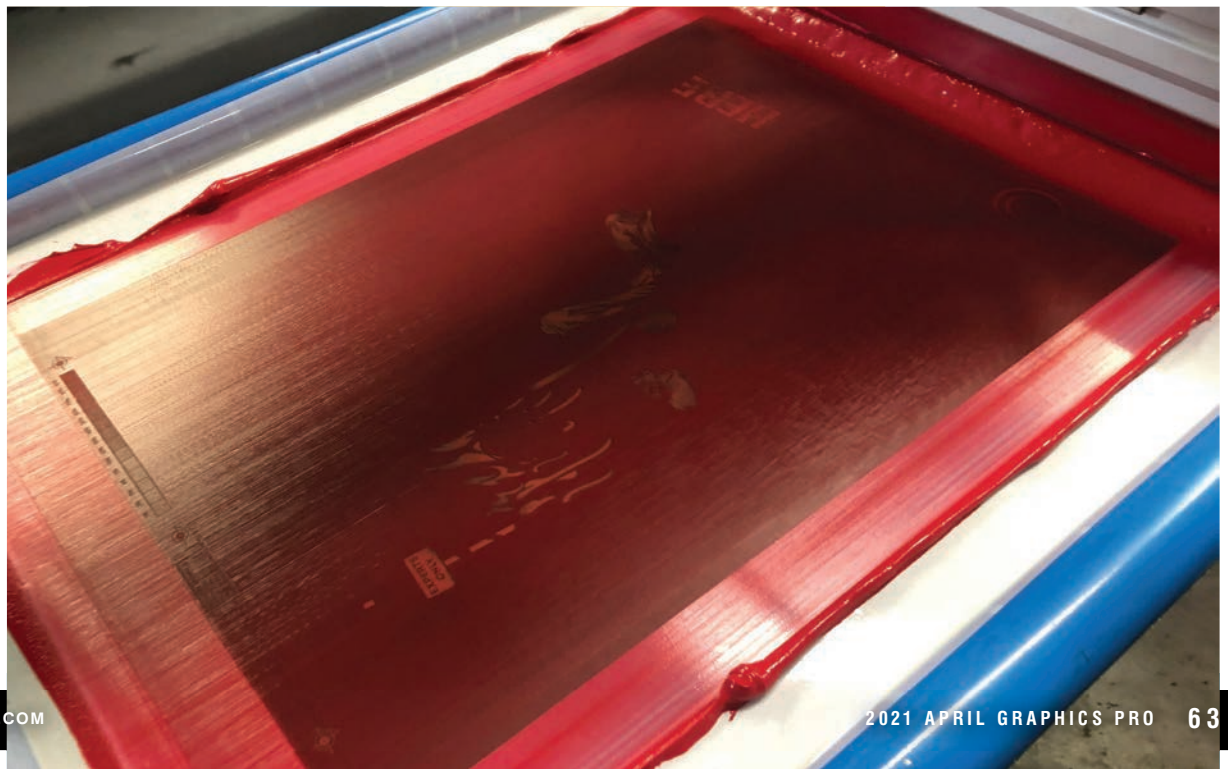
Snowboard graphics are all over the board (ha!). We chose a galaxy vignette to spread color around. The softness of the gases' densities was dramatically decreased. We had to really massage this area to get the right opacity. And for you surfers, we incorporated a little nod to Mr. Zog's board wax with the sticker.

For the trees, the on base and off base approach was used, but we added some highlight white to print on top of the purple to give us the lavender color. Most elements have a bright









We picked the brightest inks available. Primary and secondary color theory was used—you can't go wrong with vivid complementary purples, blues, red, yellow, and orange.

side and a dark side. There was a lot of white because of all the snow. To avoid too much white, we added levels and volume using our blues with removal again for some of our base to create secondary tones for dimension. The blues fell back and pushed the brightness of the white forward.

We had so many highs and lows in this design that we created two separate base plates. We call them soft and hard bases. The soft was for mid-tone and subtle areas like the space gases accenting the color. Some of these densities fell to 5-10% with just enough influence. The hard base is a severely choked version of the soft but with most opaque portions of the colors and the most vivid included. This really moved up the drama of the colorful areas and kept the shadow and mid-tone areas under control.



Once the image was completely done for black shirts, our client requested "a few purple shirts." We anticipated this and used our black channel with a few mods and removed the purple screen along with those areas on the base plates.



Since this was a promotional show type piece, we used up every head. We also repurposed the efforts to include a client who will be rolling out new LC standard colors. We picked the brightest inks available, while primary and secondary color theory would be used. Couldn't go wrong with vivid complementary purples, blues, red, yellow, and orange.

Even though we didn't think we would require a black screen, we used a black channel to select from and knock out colors for shadows. The black of the fabric reflected that channel. Of course, once the image was completely done for black



shirts, our client requested "a few purple shirts." We anticipated this and used our black channel with a few mods and removed the purple screen along with those areas on the base plates.

Once seps were completed, we outputted on CTS with frequencies 55 LPI at a 22.5-degree angle. We ran the soft white on N-272 and the hard on an N-205, both at 45 N/cm, wet on wet using 65/90/65 triple ply dual durometer squeegees followed by a flash and smoothing heated iron.

Next, the RFU colors and the highlight white all wet on wet on N-272 to N-300s all at the same tension using 75/90/75s. We added an overprint SFX Clear in subtle areas in the icicles and type for a little texture using an N-102 with a 400 micron stencil.

A substantial project with a whole lotta' work. Luckily, we have been able to use the project for the original promotion, an ink company product rollout, and this article. **GP**

A substantial project with a lot of work. Luckily, we have been able to use it for the original promotion, an ink company product rollout, and this article.

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



Take Your Design from Computer to Screen



BY HOWARD POTTER

In the following article, I explain the steps of how to take your design from the computer screen to mesh for the screen-printing process, but before we do … Who and what are you designing for? These are two important questions whenever starting any project. Knowing your client and their end goals with not only the design, but the type of screen printing they are looking for is crucial.

KNOW YOUR CLIENT

Who are they? Are they a business, not-for-profit, personal order? Knowing the client and their goal with each project allows you to not only build a relationship, but help them exceed their goals and values with each order they place.

You want to gain as much information out of the gate when writing up an order. During this time, you are not just selling an order, you are getting the information for your designer to do the best they can for your client. It also helps shorten the design time.

Usually when talking to a client, you can gauge the level of difficulty of the design just in the conversation. Write down what they are looking for and pass this information on to your designer. This helps your designer to not only know what the client is looking for, but to know roughly how long it should take them to set up a proof. Knowing all of this helps your team move smoothly and more quickly to meet order deadlines from start to finish.

What are you designing for? You are not just designing for your customer. You are designing for your production team to make their job easier and to make sure the design you are creating will translate well from the screen mesh to the fabric and surface it is being printed on.

When designing for your customer, stay on schedule. If you can keep your design times to 30 minutes to one hour on average with one proof and no more than one update to the proof, you are not just getting artwork out quickly, but helping your production team stay on schedule. I am not saying go fast to be fast, but if you can produce quality artwork in that time frame 75% of the time, that helps you gain extra time where needed on the back end for other projects or allows you to take rush orders.



Importing the logo and taking the distress pattern and overlaying it onto the logo. (All images courtesy Howard Potter)

STEP-BY-STEP

Following, I'd like to talk a customer scenario to help walk you through the process. Say your customer wants 100 black shirts, sizes small through extra-large, with their supplied vector logo on the front with a white imprint, and they want you to add something to the design to make the print a lighter handle so it's not thick.

Step One: Before you can start designing, read the customer's order and research the item you are designing for. You can go to most manufacturers' websites to not only view the products, but they usually have sizing charts. If they do not, pick up the phone and call customer service. Someone will help you get the information you need.

If you have the blank product in-house already, that is best. Read the label to know what fabric you are working with and measure the front of the shirt for the smallest and largest size shirt that will be printed. It is important to know this information. Your design not only has to look good for all size shirts that will be printed, but the shirt and imprint size also has to work for the screen printer's platen and the screen size being used for the order. Out of the gate, you need to create a checklist and make sure this happens from the start each time.

Step Two: Once you read the customer's paperwork and inspect or research the product, you can move forward to creating your proof for the customer. A lot of companies still do not create proofs. It is another important part of the process to ensure the customer is not only getting what they want, but to also keep your company's replacement errors down.

Step Three: Open a new file and import your customer's vector-based logo. Be sure to inspect their logo file and make sure no hidden layers or stray vector points are in the file. Not finding those from the start could create design headaches down the road. From there, size the logo so that it works for all size shirts on your order.

Step Four: You can go online and search vector-based patterns and import that as a second layer to sit on top of the logo. Since your shirt color is black and your imprint color is white, make the logo white on the proof of the shirt, and your second layer with your pattern will sit on the top, and you will make the pattern black. Making the pattern black allows for the shirt color to show through the design. This takes a basic white spot color logo, gives it dimension, and does not take away from the logo design, but is a quick and simple way to add to it.

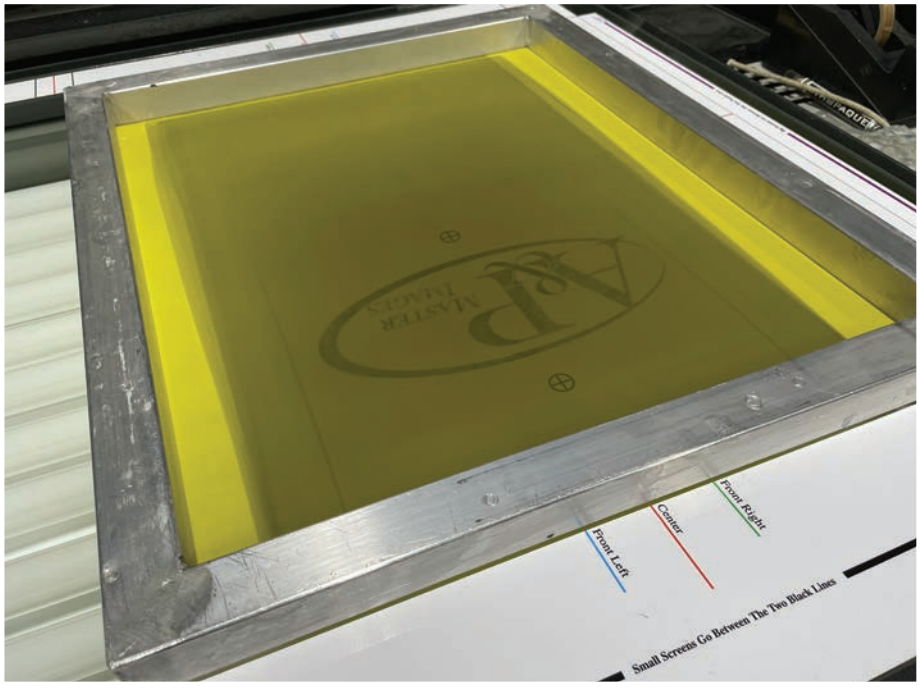
Step Five: After you send your proof to your customer and get it approved, move forward with prepping your artwork for screens to be produced. Always remember



A zoomed-in picture of what the design will look like blown up, but many of the smaller dots will fill in.







Right: Line your positive up first to tape it down to make sure it does not move. **Below:** The emulsified screen is in position to be burned. We actually created our own grid to find the center faster on the screen and positive.

PRO TIP: I always suggest a test print be done and inspected before printing the whole order. You want to make sure the right ink color is being used, print location, handle of print, and no print details are missing. Less than five minutes of double checking per order can save you thousands in replacement orders on your own dime...

what the client asked for on their order and go back and read it to be safe.

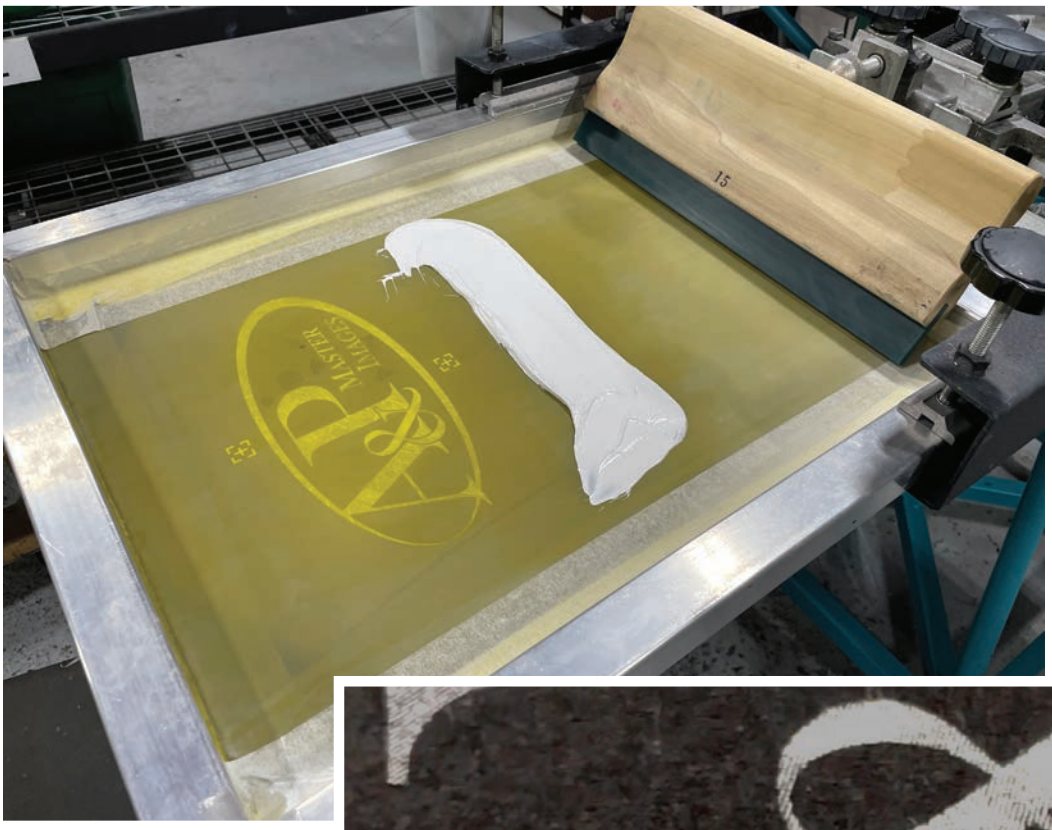
Open your design and copy and paste it in a new file. From here, make a square 1" registration mark centered above and below your design. This makes it easier for your team to register the screen to the positive on the screen printer's platen. You always want to save your proof as one file and your production files for screens as another—this makes it easier to do re-order artwork down the road or make adjustments.

Step Six: Print your positive. Take it to the exposure unit, center it on the glass, and tape the positive down to the glass. Remember at this point what the customer asked for: a light handle to the print. One way to do that is to use a higher mesh screen. The higher the mesh count, the less ink it lets pass through the mesh of the screen, creating a lighter print.

Grab your emulsify screen and place it face down centered on top of the positive. Every press is different. You will need to know what works best for your starting point to place your positive. You should, in most cases, be fine centering your screen to your positive and burning the positive about 3" to 4" down from the inside of the frame, but check with your screen printer if you do not know.

Step Seven: After your screen is burned, spray it out and let it dry in your dark room. Depending on your setup, this can take 45 minutes to an hour for most shops. Make sure your emulsion is dry before using the screen to print.

Step Eight: At this point, your screen will go to your screen printer. They will take your paperwork and proof that you created for them and read that first. That tells them why you gave them a 230-mesh screen to print with. Now they must grab the right ink. You have different screen



Left: The screen is registered to do a test print. The ink has had some reducer mixed in it to allow the ink to pass through the 230 mesh, making it easier to create a light handle to the print. **Below:** A close up from a video of the piece being printed.



print inks for different fabrics along with additives as well. In this case, your screen printer will grab their normal white ink that works for a 50/50 T-shirt blend, but they will add a little reducer into the ink to allow it to pass through the smaller holes in the mesh.

Step Nine: The printer will take your positive and tape it to the platen, centering and positioning it to where they want the print to be on each shirt. Then they will load the screen in and lower it to the positive to register the screen to the positive to ensure the screen hits the same exact spot on the platen every time.

Step Ten: After the screen is registered and the ink is in the screen, your screen printer will take a test shirt and do a test print. This is done to not only make sure the print matches the proof, but to also determine how many hits of ink are needed to make sure the design looks good printed and that the desired print handle is accomplished.

All of the tips and steps stated above are great starting points on how to take your design from computer to screen, but always work to improve each step. Each one affects the next person in your company, and the common goal for all is to keep your customer happy and returning! **GP**

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

STITCH SOLUTIONS | JENNIFER COX



GETTING FROM POINT A TO POINT B

ASKING YOURSELF THE TOUGH QUESTIONS IN ORDER TO BE SUCCESSFUL

In working with thousands of embroidery business owners over the past 25 years, one of the most common topics they want help with is how to be successful. In order to get from where you are to where you want to be, in all things, you must know two things.

First, you must know where you are right now. Second, you need to know where you want to end up. People that manage to get from Point A to Point B know where Point A and Point B are. They are able to develop a path from one to the other in the shortest amount of time, with the least expensive and fewest detours, mistakes, and side trips. They go on a straighter path than the people that have no idea of their Point A or Point B, or only a vague idea of them.

DEFINE, DESCRIBE

The very first thing to do is to define your Point A. Next, describe your ideal Point B. Very few people have thought about being successful in this way before. I can practically hear or see the lightbulb click on when they see that when they don't know where they are, and don't know where they're going, it is pretty darn sure they'll never get there. Your version of success is unique to you and your business. Everybody's destination, their version of success, is different.

Once your Point A and Point B are clearly defined, then you can decide if that benchmark of your success is the same over time, or if it needs to be tweaked. In today's pandemic world everybody keeps saying, "I wish we could go back to the way it was …" We can't. This is not the new normal—this is normal.

Every business is going through something, all the time. We are all collectively experiencing this pandemic. The impacts of it are all over the board. Some peoples' lives have changed very little. For others, their companies have closed. Some people have retooled or pivoted.

Only you can decide what your version of success is. Only you can decide what your version of normal is. Only you can decide how you want your business to evolve to get where you want to go. And until you define what that success is for you and your business, how will you know if you've achieved it?

Now is the time to get real and take a good candid look at where you and your business are at this moment. This is not meant to be a criticism or negative in any way. It is just a true assessment of your Point A, where you stand today, right at this moment.

WHERE ARE YOU RIGHT NOW?

This is your Point A. Examine/ask the following:

- Equipment – what do you own?
- Location – where is your operation located?
- Staff – you plus who else?
- Sales and Marketing – website, phone number, email, social media, groups you belong to, print ads?
- Annual sales?
- Other Assets and Metrics – digitizing, accounting, bookkeeping, legal?

This is when you review any feedback that you've gotten from your customers, your employees, or someone else that you trust that may be relevant to look at as something to factor into your Point A description.

This Point A has to be robust. It has to be a full-color picture, with warts and





STITCH SOLUTIONS





all, of your business. Once you have a candid in-depth description, understanding, and appreciation of where you are right now, evaluate your Point A. Look for gaps and pain points as well as the high notes. What are the things that you hate about where you are right now?

Evaluation for Gaps, Pain Points, Strengths

- Equipment – what do you use fully? What are you not using much? What do you wish you had more capacity with?
- Location – are you working the hours you want to? More? Less? Going insane? Bored stiff?
- Sales and Marketing – when people contact you, are they indicating that they heard about you?
- What keeps you up at night?
- What frustrates you on a daily basis?
- What gives you enjoyment on a daily basis?
- What works well, consistently?
- Where does the process get stuck, break down, or hiccup?

I'm not saying to go out and buy machines if you want to be able to produce more. I'm saying assess where you are on the baseline of what is possible. In general, if a machine is running 50% of the workday, that is efficient. If the needles are going up and down 30 minutes out of every 60, you're doing well. If you're running less efficiently than that, you've got some room there for improvement. This is the time to see it all, the good, the bad, and the ugly of your business.

YOUR IDEAL WORLD

In your "ideal world," what would your business look like? This is your new target, or Point B.

Go for it; dream the dream. What does your dream business look like? What is your definition of success, and how will you know when you have achieved it?

Some people want to have a retail storefront. Some people want to have a commercial facility. Some people want a basement full of machines. Some people want a pole building on the farm full of machines. Some people want just their single machine and all the time in the world to use it. Everybody's dream is unique. What does your perfect setup look like as far as your business? What does your success look like?

- Equipment – what would you own?
- Location – where would your operation be located?
- Staff – you plus who else would work with you?
- Sales and Marketing – what would you change about your website, phone number, email, social media, groups you belong to, print ads?
- Annual sales?
- Other Assets and Metrics – what would you do in-house? What would you outsource? What other services or products would you want to sell to your existing customers?
- What are the things that give you joy, what thrills you about your business? What gets you all in your happy space, where you do a little happy bop or you feel just like you "nailed it"?

A TO B

Even though this may feel very overwhelming, drill down and determine what you need in order to make these things and changes happen. Get it out of your head and onto the page or screen. This becomes your map. Now you can work away at it, getting one thing after another accomplished. Make it specific, make it finite, make it possible.

- If it is going to take more money, how much more?
- What can you do to bring in that money?

continued on page 110

PRODUCT SPOTLIGHT: ECO-FRIENDLY

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

APPAREL DECORATING



SCREEN-PRINTED HEAT TRANSFER

Howard Custom Transfers offers Evergreen, a screen-printed heat transfer produced using an eco-friendly water-based ink. Evergreen is free from phthalates and PVC.

866-695-8195
www.howardct.com



SUSTAINABLE CHEMICALS

Lawson Screen & Digital Products offers sustainable screen-printing methods and chemicals. Drain safe and biodegradable options include stencil removers, press washes, mesh degreasers, and ink degradients.

314-382-9300
www.golawson.com



ECO-FRIENDLY KNITS

Sportsman Cap & Bag offers three new sustainable, global recycled standard knit styles. Pure, Shore, and Rio offer versatile options containing recycled materials.

www.sportsmancaps.com



SUBLIMATABLE ECO-FRIENDLY HOODIE

Vapor Apparel offers the women's REPREVE Solar Hoodie eco-friendly apparel that provides UPF 50+ sun protection. Each hoodie is made with 100% REPREVE fabric made from recycled water bottles. It comes in four sublimation certified colors (Arctic blue, pearl gray, water blue, and white) and has thumbholes for increased sun protection. Sizes XS-2XL.

843-747-4200
www.wholesale.vaporapparel.com

APPAREL DECORATING



COTTON MESH CAP

Carolina Made offers Mega Cap's organic cotton mesh cap with frayed visor. It features 70% organic cotton washed twill/30% polyester, an unstructured, six-panel, low profile, a pre-curved distressed visor, contrast undervisor, and hook and loop closure. Available in five colors, one size.

www.carolinamade.com



WATER-BASED HEAT TRANSFER

Insta Graphic Systems offers Aquatrans, a water-based heat transfer that is PVC-free, phthalate-free, and compliant with CPSIA, Oeko-Tex 100, and international sports brand requirements. Aquatrans can be applied to many different substrates and has a low application temperature.

562-404-3000

www.instagraph.com

ECO-FRIENDLY ADHESIVES

Chromaline offers TexTac, a water-based pallet adhesive. A single application holds hundreds of garments before having to reapply. This environmentally friendly adhesive is aerosol-free and non-flammable.

800-328-4261

www.chromaline.com



MINERAL WASH SWEATPANTS

Independent Trading Co. offers mineral wash dyed men's sweatpants. Style PRM50PTMW is made of 9-oz. 80% ring-spun cotton/20% polyester blend fleece with 100% cotton 30-singles face yarn.

877-366-9911

www.independenttradingco.com

PRODUCT SPOTLIGHT: ECO-FRIENDLY

APPAREL DECORATING



TRUCKER SNAPBACK CAP

Kati Sportcap & Bag offers the Richardson trucker snapback, style #112. This 40% polyester/60% cotton cap with 100% polyester mesh back is structured, mid-profile, and has a six-panel construction.

www.katisportcap.com



COTTON-FACED HOODIE

Just Hoods by AWD offers a 100% ring-spun cotton-faced hoodie in 37 colors available in sizes S-5XL in select colors.

800-229-1240
www.citadelbrands.com



EMBROIDERY THREAD

Madeira USA offers its classic rayon embroidery thread, which the company says ensures minimal loop formation and protects moving parts such as needles and cutters from wear. A soft hand is maintained, even with high stitch-count designs, states the company.

800-225-3001
www.madeirausa.com

ORGANIC T DRESS

Royal Apparel showcases its women's viscose bamboo organic T dress. Style #73028 is made from 70% viscose bamboo/30% combed ring-spun organic cotton 4.4-oz./sq. yd. Features include a set-on rib collar, double-needle sleeve hem and bottom hem, and a satin label.

866-769-2517
www.royalapparel.net

AWARDS & CUSTOMIZATION



WOOD PRODUCTS AND SERVICES

Colorado Heirloom offers custom wood products and services such as laser engraving, direct color printing, and blind/drop ship. Made in the USA, the woods used are mainly from sustainable forests or recycled woods.

970-667-4222

www.coloradoheirloom.com



ENGRAVABLE MATERIAL

Trotec offers TroCraft Eco, an environmentally friendly, emissions-free material made from pure wood fiber. Its low weight and simple processing make it useful for interior design, model making, souvenirs, sustainable toys, and gift packaging, states the company.

844-529-0730

www.engraving-supplies.com



CUTTING BOARDS

JDS Industries offers a line of cutting boards made of composite recycled wood fiber and paper materials. The non-porous surface makes them durable and bacteria resistant for both commercial and home use.

800-843-8853

www.jdsindustries.com



SANDCARVING MACHINE

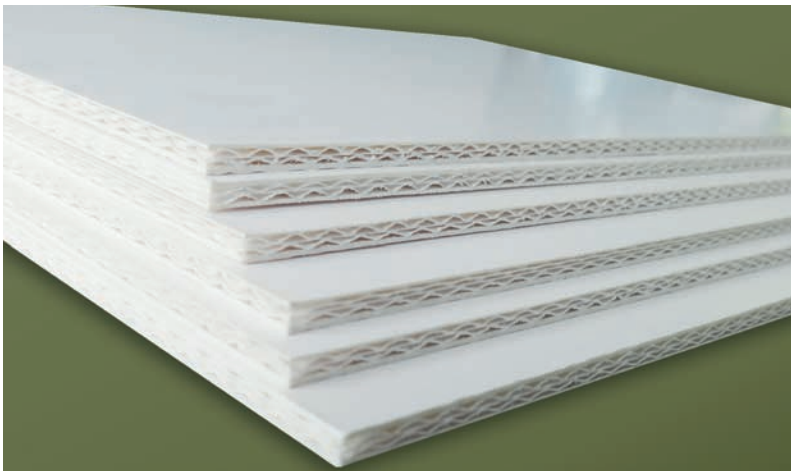
IKONICS Imaging offers CrystalBlast machines, which allow abrasive to stay contained within the sandcarving cabinet. With patented CleanFlo technology, there is no need to exhaust dust outside.

800-643-1037

www.ikonicsimaging.com

PRODUCT SPOTLIGHT: ECO-FRIENDLY

SIGNAGE & PRINTING



PAPER BOARD

3A Composites offers DISPA, a 100% paper board with flat, smooth surfaces for digital or screen printing. 3A says the structure of the core makes this paper board lightweight yet dimensionally stable and prevents 'read-through' lines.

800-626-3365

www.3acompositesusa.com

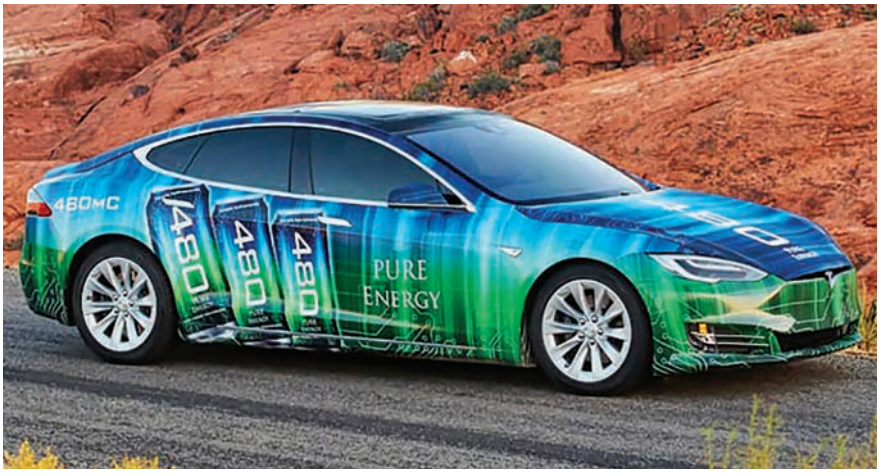
PVC RECYCLING PROGRAM

Vycom offers Celtec expanded PVC sheets, which can be reclaimed through Vycom's Recycling Take-Back Program that captures and recycles printed and unprinted PVC sheets, and scraps and drops from finishing and fabricating. The program is designed for users of PVC, acrylic, PE, and PP products to recycle used signage and scrap.

800-235-8320

www.vycomplastics.com





PRINT FILM

3M offers Envision print wrap film 480mC, a PVC- and phthalate-free product. It is slidable, conformable, and features 3M Comply adhesive with micro technology.

800-328-3908

www.3M.com

SIGNAGE & PRINTING

PRINTER/CUTTERS

Roland DGA offers the VersaUV LEC2-640 and LEC2-330 UV printer/cutters engineered for label, packaging, sign, display, and interior decor production. Roland says the 64" LEC2-640 and 30" LEC2-330 incorporate features that maximize image quality, increase print speeds, decrease ink usage, and make user operation and maintenance easier.
www.rolanddga.com





ROUGH-SURFACE FILM

Avery Dennison offers MPI 1405 Easy Apply RS, a PVC-free, eco-friendly film engineered to meet a variety of outdoor graphic applications with one solution. MPI 1405 is a digitally printable film with conformability to textured surfaces, including brick and cinder block.
800-282-8379
www.graphics.averydennison.com

GP



Getting the Ball Rolling



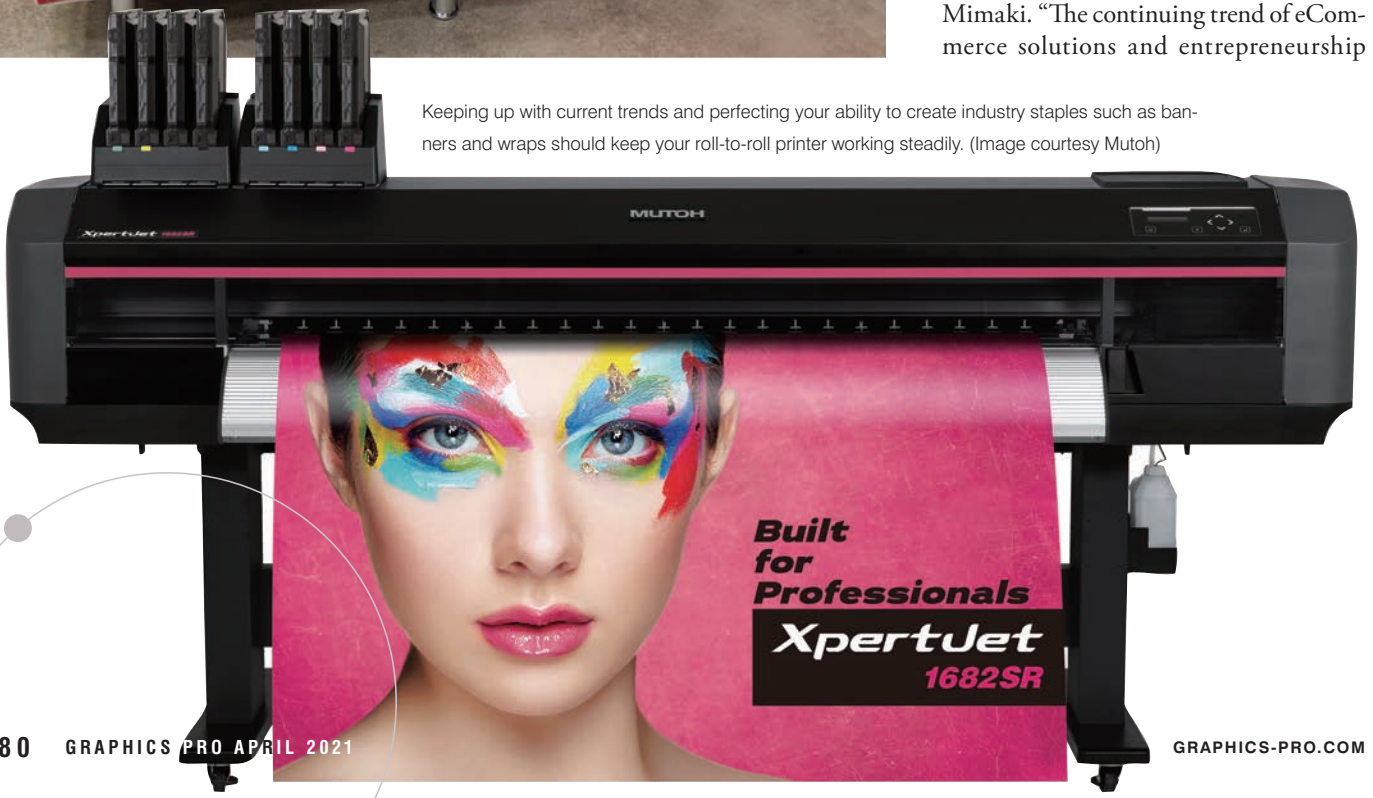
BY MATT DIXON

TAKING YOUR FIRST STEPS INTO ROLL-TO-ROLL PRINTING

The roll-to-roll printer is a gateway to offering a wide variety of graphics to your clients. Adding such a printer means your shop can engage in offering indoor and outdoor signage of all kinds—including banners, wayfinding signage, billboards, vehicle wraps, floor graphics, canvas/fine art, stickers, POP signage, backlit graphics, and more.

"As personalization demands increase and more companies move to just-in-time production, wide-format printers have become a great way to add a new revenue stream," says Michael Maxwell, Mimaki. "The continuing trend of eCommerce solutions and entrepreneurship

The roll-to-roll printer is a gateway to offering a wide variety of graphics to your clients. (Image courtesy Mimaki)



Keeping up with current trends and perfecting your ability to create industry staples such as banners and wraps should keep your roll-to-roll printer working steadily. (Image courtesy Mutoh)



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make printing an attractive addition or startup investment."

Today's roll-to-roll printers have years of proven success on the market, and they offer print shops a vast number of options.

PICKING YOUR PRINTER

To get the process started of adding a roll-to-roll printer to your shop, you must first commit to a printer. There are numerous manufacturers and distributors who will help you on your way, and the perfect place to see these printers in action is at a trade show. An interactive environment to see, touch, hear, and even smell the printer in action is worth its weight in gold. You can get your questions answered, do comparison shopping, and even build relationships that will help you long after the show is over.

With in-person trade shows just getting going again this year, some manufacturers are offering demos and small group classes to interact with their machines. And to truly maximize your investment, match up your printer's best features with the applications and end uses you plan to target most.



The Epson SureColor S40600 can produce banners at 215 ft^2 per hour. Match up your printer's best features with the applications you plan to target most. (Image courtesy Epson)

PREPPING FOR THE PRINTER

So where do you begin the process of adding one to your shop? First thing is to look at the configuration of the printer you want to purchase and make sure you have the space, power, and internet connectivity available to operate the machine.

"Make sure you have the physical space to load and operate the printer in an efficient manner," says Ken Parsley, Mutoh America. "Most shops with a roll printer will also want to have a laminator and a vinyl cutter to optimize the products they offer. "Customers need to make sure they have an adequate environment for their machine, which includes having the right power, climate control, ventilation (if needed), space, etc., specified by the manufacturer," Parsley adds.

The printer manufacturer or distributor you decide to work with will have the necessary documentation with space requirements. Most printer experts recommend getting as large a printer as you can to be able to handle the most possible applications.

Keep in mind that print width does not equal machine width. For example, when you bring a 72" printer into

Visit http://gpro.link/rolltoroll for a more in-depth look into the technical aspects of roll-to-roll printers and which features your shop truly needs.

PRINTER PRE-PURCHASE CONSIDERATIONS

1. Internet line installation
2. Computer/networking installation
3. Electrical power installation
4. Vent line installation
5. Air conditioning (if needed)
6. Lighting
7. Safety equipment
8. Layout
9. Media storage

Today's roll-to-roll printers have years of success on the market and offer print shops a vast number of options, including packaging labels. (Image courtesy of Mimaki)

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BUILT TO BUILD OPPORTUNITY.
BUILT TO LAST.

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your shop, the actual machine width will be closer to 100".

You'll also need to decide what kind of ink you want to print with. "Roll-to-roll printers support the widest range of inks," Maxwell says. "Customers can choose from eco-solvent and UV-LED options for the longest outdoor capability, or latex and sublimation for more personalized and interior applications." You ink decision will also determine factors such as your need for ventilation, curing, cartridge versus bulk, as well as OEM versus third party.



You'll need to decide what kind of ink you want to print with when selecting a roll-to-roll printer. Selections include eco-solvent, UV-LED, latex (seen here with the HP Latex 365), and sublimation. (Image courtesy HP)

Lastly, you'll want a strong computer. "Keep in mind that the better computer specifications you have, the faster the RIP can process images and start printing," says David Lopez, Epson America Inc.

Once you have your machine picked out, the process moves pretty quickly. "Typically, plan on about 10 to 14 days assuming that all the pre-installation work has been done and (is) ready to go," says Tom Wittenberg, HP.



The Mutoh RJ-900X is a printer that helps shops get their start into dye-sublimation. (Image courtesy Mutoh)

Once your hardware and material handling situation is established, then you can focus on the software. Your printing software is one of the most important pieces of the roll-to-roll equation because it will determine how efficient your workflow is. "Most of the software today that runs the printer (i.e., RIPs) are designed with ease of use and simplicity in mind. This said, you can get training on it from the software suppliers. And with a little work, one can quickly become proficient," Wittenberg says.

GETTING UP TO SPEED

Even if you have zero experience running a digital printer, most people who jump into the business are able to immediately begin creating sellable products and have been able to become proficient in a matter of weeks.

"Most printer packages allow the user to easily produce standard products right out of the box, but specialty items, items that are leading edge, may take longer to become 'proficient,'" says Randy Anderson, Mutoh America.

"The time it takes to become proficient on both the hardware and software can vary from business to business based on the amount and range of printing applications," Lopez says. "A safe range is approximately one to three months but can be accelerated by choosing a reseller that will provide training both on-site and virtual."

Shops will also want to take this time

ENTRY-LEVEL VS. ADVANCED ROLL-TO-ROLL PRINTERS

When upgrading your roll-to-roll printer, you can expect increases to most or all of these factors:

1. *Cost*
2. *Printing width*
3. *Speed*
4. *Productivity gain*
5. *Operating software*
6. *Hardware sophistication*
7. *Floor space required for end-to-end processing and the printer itself*
8. *Operator training*

to perfect their workflow and develop the best strategies for material handling and storage. While most materials can be easily stowed for use at any time, many consumables such as ink and substrates have a limited shelf life, and it's important to know use-by dates to guarantee performance and stay within manufacturer warranties.

It's also important to keep in mind the physical location of your printer and items such as your laminator or plotter so that your workflow from design to print to finish is as smooth as possible.



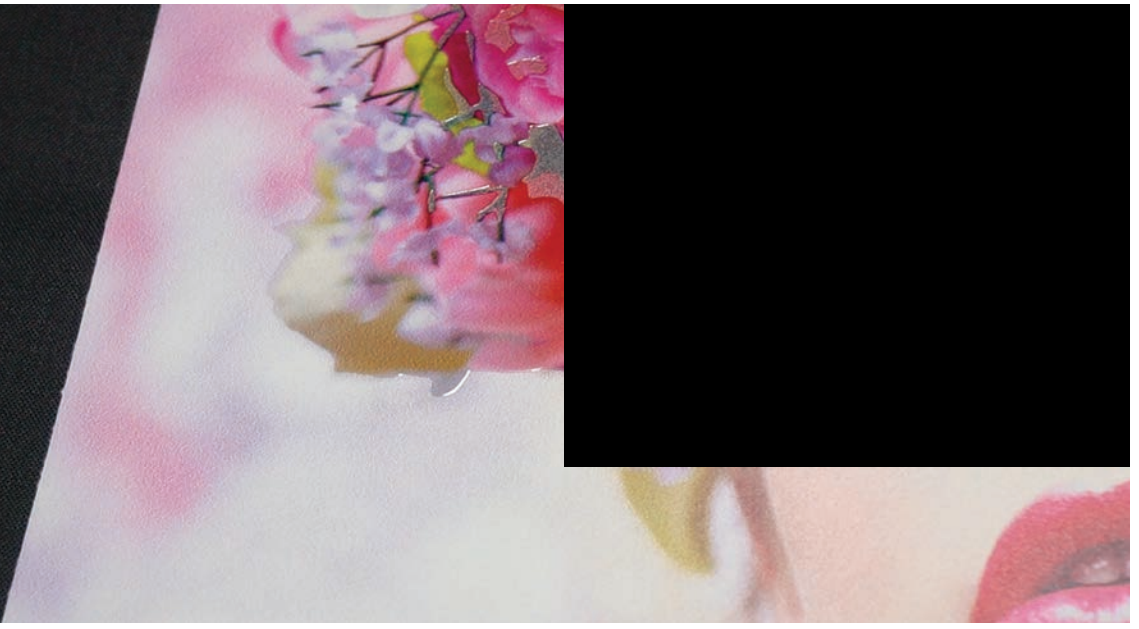
A good industry rule of thumb is that your printer should last you at least seven years before new technology and options make it less profitable to continue without a replacement or upgrade. (Image courtesy Epson)

READY TO ROLL

So, once your shop is all set up with its new printer, what can you look forward to producing right out of the gate?

"During 2020, we saw a sharp increase in retail and residential signage as society as a whole shifted the way it operated," Lopez says. "Given new state and community regulations, retail shops increased signage and displays to relay information on new business hours, take-out capabilities, and safety regulations required by the CDC. There was also a big jump in residential signage as families and neighbors practice social distancing, (and) birthdays, graduations, baby arrivals, and more were celebrated by printing and displaying custom lawn and neighborhood signs."

Keeping up with current trends and perfecting your ability to create industry staples such as banners and wraps should keep your roll-to-roll printer working steadily.



Adding a roll-to-roll printer means your shop can engage in offering graphics of all kinds. (Image courtesy Mimaki)

THE NEXT STEP

Planning for the future is always a smart idea, so what will the future of you and your roll-to-roll printer bring? First, you need to understand just how long that printer will last. With a little TLC, that can be a long time.

"Printers are designed to last for very long periods of time," says Lopez. "The key is making sure that all the recommended maintenance is done on time and consistently. Overall life expectancy will depend on how often the printer is used."

continued on page 110

Sign Design 101: Part 1



BY MATT CHARBONEAU

Let's face it: Sign design is a balance between understanding how outdoor advertising works and the functions of graphic design theory. To say, "The readability of a sign is critical to its effectiveness," is like saying, "A boat should be designed so that it floats."

What defines print/web/screen graphic design? Personal screen-viewing is the world we are now living in, and it's used by everyone, every day, and it's all created by designers who have mastered the disciplines needed to consistently create web, print, or screen content that's balanced, flows, is legible, and also carries over a mood, feeling, or emotion that matches the subject of the design piece.

The major difference between sign designers and print designers has to do with the way the final design is viewed, used, and handled. A print designer, or web or internet designer, has a fairly dependable viewing distance that their audience (the viewer) will use to look at the design 98% of the time. That provides a lot of control related to the height of the text being used to create the email, flyer, website, or even logos.

When it comes to sign design, the viewing distance is the number one and most impactful variable. Some signs are viewed at 24" away, some viewed at 24' away, and some at 240' away. That's a large variable to work within.



Why didn't your eyes go to the smaller white copy first? White is the opposite of black, so it has the highest contrast value, yet your eyes went to the yellow on black copy first. The reason this happened is not because of the size of the letters on the sign; it has more to do with the amount of space that is left around the letters and the high-contrast value between the black and yellow, which work together and make the letters legible. (All images courtesy Matt Charboneau)



Filling up every available space on the sign is actually a practical reality for a few, rare businesses. These few exceptions can be seen on signs that list the times, fees, and "where-to-board-the-boat" details for snorkeling, diving, scooter, and individual or group charter boat and bicycle rental package tours signage. I will say no more.

SIGNS ARE VIEWED FROM A DISTANCE

Sign design involves a lot of upfront understanding of the client, the sign materials, the client's customer (the one reading the sign), the read time, letter height calculations, font considerations, and arguing over how many words are actually needed to get the point across from 200' away. Not to mention, the client logos (which look great on your phone) at 200' away look more like a tangled mess of fancy-looking fonts battling it out over a game of Twister.

The differences may seem petty at first, but they are core to the disciplines that make each designer pull their hair out as they struggle to produce a design that is intrinsically foreign to their discipline.

Remember, there is another important element that print/web/screen designers get the luxury of using to their advantage, and that is the viewer's ability to stop, scroll backwards, move ahead, and review the image on the screen or page to see the details they are looking for.

Sign designers don't have that luxury. They have on average 3 to 4 seconds to get the point across. All the info needs to be conveyed and must work together to inform the viewer in just 3 precious seconds as they glance up from their phones to catch a glimpse of the billboard on the side of that bus.

BASICS OF SIGN DESIGN

First, define the *purpose of the sign*. It has a job to do. To better understand how signs differ from one type to another, you need to first categorize the sign into one of five types:

1. **Identification** (business name, building, area, section, unit, module, etc.)
2. **Informational** (rules, regulations, contact, times, length, duration, special details, etc.)
3. **Directional** (go left, right, up, down, move over, merge, form one line, two miles ahead, etc.)
4. **Safety** (warning, danger, stay out, no running, low clearance, slippery, windy, wet, etc.)
5. **Regulatory** (any sign that states a law, ordinance, regulation, or directives for which a penalty can be charged or a ticket issued to those who violate the directives)

Yes, I realize there is a large amount of crossover with sign types as sometimes an identification sign also contains some directional or regulatory information for the viewer, or a directional sign may also contain some identification details. The point is to identify and assign the type of job the sign will perform—and design it accordingly.

Second, *overcome the obstacles*. Good sign design requires an understanding of how the sign's job is affected by a variety of obstacles, restrictions, setbacks, and design conditions:

- The location of the sign—(up high, down low, behind a tree, side of a wall, across the street)
- The face size allowed—(too small for all the copy or too large for such a short message)
- The viewing distance—(the average distance that the sign will first be seen by the viewer)
- The viewing conditions—(behind a fence, always foggy, trees, people, a lot of bus traffic, etc.)
- The colors allowed—(many HOAs or Historic Districts put restrictions on colors used)
- The shape and design—(some cities control design and styling to fit a certain look or feel)
- The budget—(every obstacle usually means more cost to work around the problem)
- Function—(the sign may need to have changeable panels or tenant names)
- What's under the ground—(large signs require large footers)
- Wind load and engineering—many signs require engineering so they don't crumble



You can actually force the viewer's eyes to read a certain message on the sign first by the use of basic design and contrast techniques. In this example, the eyes naturally fall down to the lower segment of the sign to read that part first, then after reading it, it becomes clear that the first part of the sign (at the top) is critical to understanding the message—the upper part provided the why for the statement being made below.

Next, think about contrast and legibility. One of the exercises I use in teaching sign design is a little graphic example that demonstrates how an image is viewed when looked at from a distance. Where do your eyes go? What do they look at first? What are they drawn to at first glance? These are the questions that sign designers constantly ask themselves during design.

Words need the empty space around them for our eyes to quickly and easily identify them so our brains can read them. Crowding words and graphics makes things a lot harder to read even though letters may be twice the size.

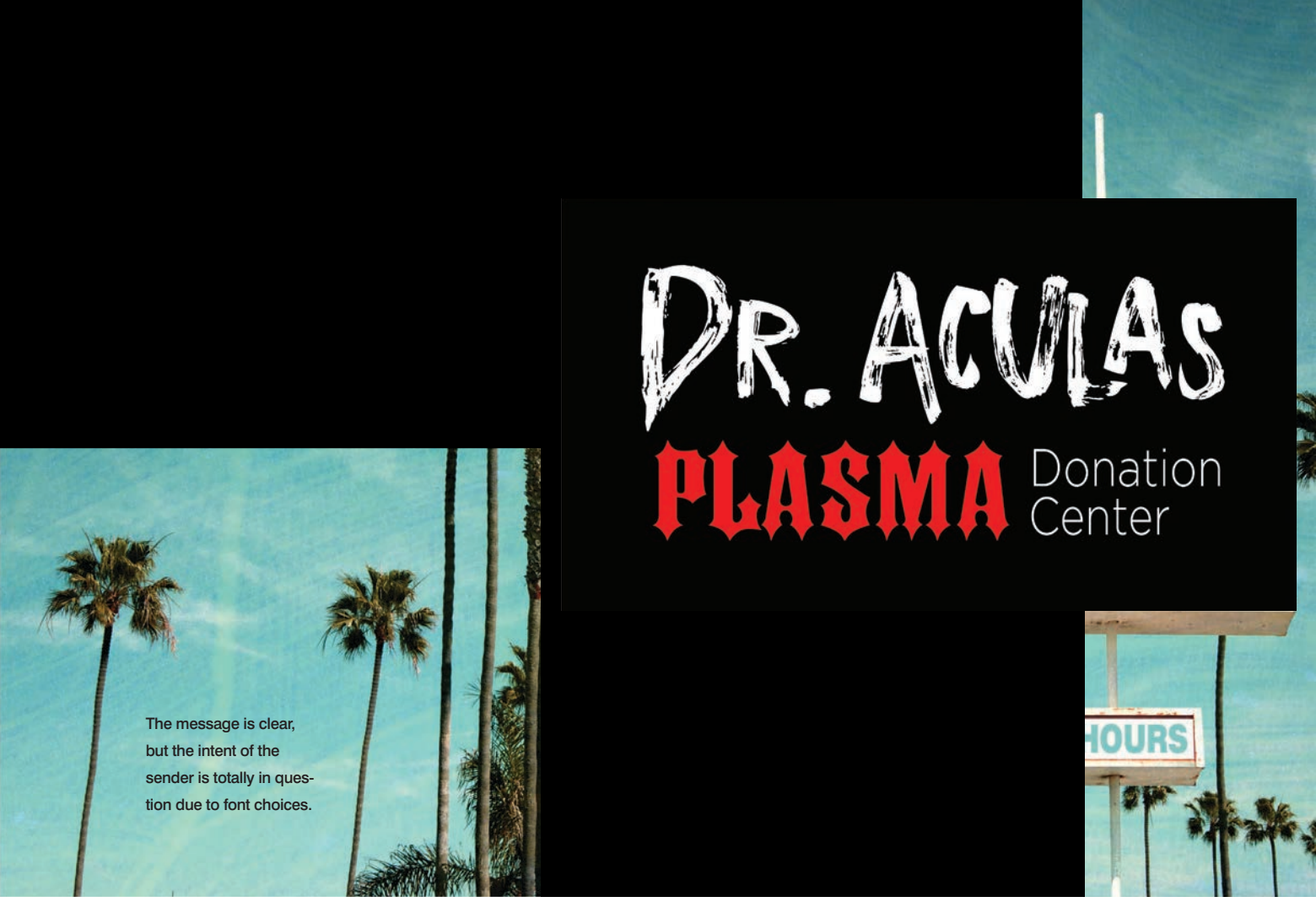
Of course, nobody would purposely design a sign like this; however, you can understand how the lack of space around words makes reading them much more difficult. In fact, has it felt slightly uncomfortable on your eyes to read that crowded sign example on page 87.

Let's next talk about legible letter styles. Fonts do tell a story, don't they! Take for example the little gem of a sign on page 89. The use of the right font, in the right way, can add mood, charm, beauty, and class to a normally boring sign design as long as legibility is maintained and the right fonts for the message are used.

THE **SQUINT TEST** FOR LOGO DESIGNING

Try using the squint test on the next logo you design—it's the perfect test tool for determining if the shape, words, layout, and the iconic elements are all playing nicely together.

Perform the squint test and ask yourself if the name of the business is the primary dominant element? If not, go back to the design program and adjust some things. It should be readable at all sizes. No excuses. How many logos out there violate this rule?



The message is clear, but the intent of the sender is totally in question due to font choices.

I have a family of type that I prefer for most of the signs I design. They are legible and offer a huge variety of subsets for various purposes. I like the Gotham typeset, as well as the Myriad Pro, and of course good old Helvetica.

TOOLS THAT SIGN DESIGNERS USE

How do you know if a sign will be readable at a distance while it's on your computer? There is a simple test you can perform (or a tool to use) and it's called the squint test. This is one of the easiest ways to determine if the sign, or design, is legible from a distance.

Step One: Place the design on your screen so that it has plenty of white space around it and step back away from the monitor, about three feet or so.

Step Two: Now carefully, while holding onto something secure and while wearing your OSHA-approved safety harness, look at the logo or design that's on the screen and squint your eyes. Squint hard enough that the image is blurry, and you only see the dominant elements of the design. These dominant elements should still be readable, like if you were taking an eye test, you should be able to read the primary text on the sign clearly and definitively without hesitation or pause.

I have had to redesign hundreds of logos just to make them readable or buildable as a sign. Consequently, those same logos also could not be reduced down in size for printing on a pen or embroidering on a shirt. Readability in logo design goes both ways by benefiting both the enlarged version and the reduction. Designing only for readability at arm's length will consistently provide designs that do not work at other sizes.

Gotham Medium
Gotham Narrow Bold
Gotham Light

Myriad Pro Condensed
Myriad Pro Condensed Bold
Myriad Pro Condensed Bold Italic

You may say boring, you may also say blocky, but you cannot argue the fact that they are readable from a distance … and legibility is what matters most in signage.

I will continue this article over future issues as we examine other factors that can affect the legibility of sign design such as the speed at which the viewer is traveling, layout, letter sizes, graphics, kerning, and a lot more on proper design strategies for creating logos that are legible at all sizes. We will also explore the science and theory behind outdoor advertising as it relates to designing displays where messages are stated clearly, to the point, and usually quite memorable. **GP**

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



RESTORATION TECHNIQUES: PART 1

METHODS FOR RESTORING ANTIQUE AND DISTRESSED PHOTOS

The digital restoration of old photographs has become popular among professional digital artists and hobbyists alike. Perhaps it's because creative individuals want to connect to the past, and what better way to travel back in time than to resurrect the glory of former days in the form of a portrait, group, interior, or landscape.

Many people have hundreds of old photos in their attics in cardboard boxes—photos of their ancestors who have long departed. These photos are important because they are a true window into the family's history and may be the only record of the lives of deceased grandparents, uncles, aunts, and cousins. Restoring their photographs brings past family members into the present.

On the professional side, historians rely on the restoration of photographs in order to collect visual information of a particular time and place, and develop a clearer idea of the social mannerisms, attire, industries, and culture of a particular era or event.

Today, we are at the zenith of the amazing technology with software that enables us to restore both static and moving images and recreate a picture of the past as it actually was.

PROBLEMS WITH OLD PHOTOGRAPHS

Time is not on our side when it comes to photographs. Many factors erode images over the years, and unless they've been preserved in a literal vacuum devoid of oxygen and light, photographic images will deteriorate in a number of ways. Here is a partial list of problems that can result from simply existing over time in a "normal environment":

- All or part of the photo is faded. Fading results from the deterioration of the emulsion on an image caused by exposure to ultraviolet light, air, or fluctuating temperatures. Frequently the photograph might be fine on one side and gradually fade on the other (**Figure 1**).
- The photo has a colorcast. A color photograph might have washed-out colors or a yellow, red, or green cast over its entire surface, usually the result of the emulsion's chemical reaction with air or the paper it was printed on.
- The image is wrinkled, torn, scratched, or covered with spots. Wrinkles and scratches are often a result of mistreatment of the photograph. Spots can develop from exposure to dust. Images stored in a damp environment can collect mold that appears as splotches on the surface.
- Part of the photograph is missing. A vital portion of the image, such as a hand or a face, might have a





Figure 1 (above). Fading results from the deterioration of the emulsion on an image caused by exposure to ultraviolet light, air, or fluctuating temperatures. (All images courtesy Stephen Romaniello) **Figure 2 (right).** A color photograph may have washed-out colors or a yellow, red, or green cast over its entire surface, usually the result of the emulsion's chemical reaction with air or the paper it was printed on. This photo also has scratches, spotting, and missing regions.



Figure 3. Is this photograph worth the effort? Critical parts of the image are missing. There is hardly any detail in the highlight areas and it is blurred, faded, stained, and covered with scratches and dust.

severe scratch or might be missing entirely. A corner might be torn, or an area of the photograph might have peeled or faded away (**Figure 2**).

- The surface is textured. Many old photographs, especially those printed in the 1960s and '70s, were printed on textured paper. The removal of this surface can present problems during the retouching process.
- Bad photography. The image may have superfluous elements such as phone lines or portions that are out of focus. The image could have been shot at the wrong moment, the composition might be unbalanced, or the image might be under- or overexposed.

Photo restoration can be extremely labor-intensive. Some images are simply beyond repair. Experience will show you which images are worth restoring and which would be a waste of time and effort (**Figure 3**).

SCANNING OLD PHOTOGRAPHS

Before scanning an old photograph, examine the image closely. Observe the darkest and lightest areas and see if there is detail that needs to be preserved. If so, adjust the contrast by using the scanner software's brightness and contrast features. Don't expect to correct the entire image. Adjust the image just enough to capture the details. You can later make more refined adjustments when you open the image into more sophisticated software.

On screen, observe the scan carefully. If you haven't captured the detail you want, rescan it at a different setting. If necessary, make multiple scans of the same photo at different settings and composite the best parts of each image into a master image. This technique, though labor intensive,





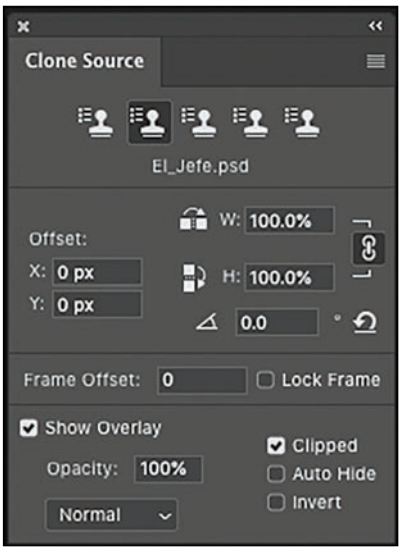


Figure 4 (above). As you paint with the Clone Stamp, the cross indicates where the content is being sampled from and the circle indicates the point where it is applied. **Figure 5 (right).** Photoshop has an extra feature called the Clone Source panel accessed from the Window menu that controls numerous characteristics of the tool including the size, angle, and offset among others.

enables you to combine the enhanced detail of the highlight, mid-tone, and shadow areas into one optimal image.

Scanning at higher resolutions helps preserve detail. Scan the image at 300 pixels per inch (PPI) or higher on a flatbed scanner. If the image is especially small, increase the scale and the resolution. Avoid exceeding the scanner's optical resolution if possible. For example, if the scanner's optical resolution is 1,200 DPI, you can scan it at 300 DPI and 400% size.

There is no advantage to scanning a black-and-white photograph in RGB mode. That will only produce an image with a larger file size. In most cases it will require desaturation to eliminate discoloration. If there are stains on the image, scanning it in RGB can exaggerate them.

For best results, scan the photo as a 16-bit grayscale to maximize the tonal range. After repairing it, convert it to an 8-bit grayscale before printing. If you later decide to add color or a sepia tint to the image, you can convert it to RGB mode and colorize it using one of the colorization features.

CLONING

Areas that are missing, scratched, spotted, or stained can be replaced with the Clone Stamp, Spot Healing brush, or the Healing brush. These tools are specifically designed to replace pixels in smaller areas.

The Clone Stamp simply copies pixels from a sampled area and paints them to a target area with a brush. It's advisable to first make a rough selection around the area to be repaired so as to avoid applying the clone to areas that need to be preserved.

In Photoshop, sample the area to be captured by pressing the Opt (Mac) or Alt (Win) key and click the mouse to store the sampled point into the tool's memory. (In Corel Photo-PAINT, right click). Choose a soft brush and paint the areas that you want to correct. As you are painting, the cross indicates where the content is being sampled and the circle indicates the area where it is applied. By default, these



Figure 6. Drag the Spot Healing brush over the area to be healed. The area is replaced by perfectly matched pixels. This image has been restored with a combination of the Clone Stamp, the Healing brush, and the Spot Healing brush.

two icons are aligned and will move as the brush is dragged (**Figure 4**).

Photoshop has an extra feature called the Clone Source panel, accessed from the Window menu that controls numerous characteristics of the tool including the size, angle, and offset among others (**Figure 5**).

HEALING

In many ways, the Healing brush performs like the Clone Stamp. The process of sampling is similar, but the application of the sampled areas to the image differs. When the sampled area is painted onto the target area, it automatically takes on the characteristics of the surrounding pixels of the target area, thereby seamlessly blending the content.

The Spot Healing brush is a variation of the Healing brush with the added feature that no sampling is required. Just choose a brush size that is a little bigger than the flawed area. Drag it over the area to be healed and voilà! The area is replaced by perfectly matched pixels (**Figure 6**).

PATCHING

The Patch tool is designed to patch a selected area. It works well on large areas in need of repair. The initial selection can be made with the Patch tool activated or any of the other selection tools. With the Patch tool selected, click and drag the selection marquee over a similar region of the image. A live preview of the content is displayed in the destination area. When the content looks right, release the mouse (**Figure 7**). Like the Healing brush and the Spot Healing brush, the Patch tool blends the new content with the surrounding pixels.

DUST AND SCRATCHES

Superfluous artifacts are unavoidable when scanning old photos. These flaws are easily removed with the Dust and Scratches (D&S) filter found in both Adobe Photoshop and Corel PHOTO-PAINT. Its Radius and Threshold sliders help define edges.

The D&S filter is a powerful tool for eliminating a good deal of the unwanted debris from an image. D&S works wonders if you're scanning a batch of old pictures from your grandmother's scrapbook, or that old team shot from your high



Figure 7. When using the Patch tool, a live preview of the content is displayed in the destination area. When the content looks right, release the mouse.

school yearbook. It can also help get rid of moiré patterns that can appear when scanning printed halftones.

When using the D&S filter, select areas of similar texture. Each area of the image might require different settings. Applying the D&S filter to the entire image all at once can result in a loss of detail. The D&S filter has two controls, Radius and Threshold. Use the minimum Radius and Threshold you need to achieve the best results. The Radius slider blurs, and the Threshold slider restores.

When you drag the Radius slider to the right, you effectively blur the areas of most contrast. Drag the Radius slider until the specks or scratch lines disappear, but do not over-blur the area. Next, drag the Threshold slider just enough to restore the surrounding texture but not enough to restore the specks (**Figure 8**). Be cautious when using the D&S filter. If you go too far with it, you could end up losing detail along with the unwanted specks.

Since the D&S filter is destructive, I recommend converting the layer to a smart object first and applying it as a smart filter to keep the editing process dynamic. Later the filter can be reapplied with a different setting if necessary, or applied to another area by editing the smart object's mask.

MISSING ELEMENTS

Often in old photographs, large areas have been mutilated beyond recognition or are missing completely. Based on the severity of the problem, you'll have to decide the best approach to restoration. In many cases, the software's tools and commands can be combined to remedy these problems, but some parts of the photograph might be too damaged to restore.

If, for example, the face of a person is missing from an image, avoid trying to paint it back in, because this will prove to be virtually impossible to accomplish with any credibility. A better approach might be to composite the face from another photograph if you have one or, if that's not possible, fill the area with neutral gray.

CONTENT AWARENESS

Speaking of adding missing elements, in Photoshop, the Content Aware Fill (CAF) command, found in the Edit menu, is a great time-saver. Corel PHOTO-PAINT has a similar feature that it released in 2020. CAF assesses the edge of a selected area and finds similar content within the same image in which to replace the selected area, thereby seamlessly blending the new content with its surroundings.

To avoid unwanted content, choose the content's location by editing the green mask with the Sampling Brush (found in the upper left of the interface) and then observe the Preview to see the result. Click OK to commit the changes (**Figure 9**).





Figure 8 (above). Drag the Threshold slider just enough to restore the surrounding texture but not enough to restore the specks.

Figure 9 (left). In the Content Aware Fill interface, choose the new content by editing the green mask with the Sampling Brush and then observe the preview to see the result.

CAF is an efficient way to retouch larger areas with a minimum effort and works particularly well on a textures such as grass, bricks, bark, concrete, etc.

BUT WAIT ... THERE'S MORE!

I've showed you a few universal techniques that are commonly used when correcting scratches, dust, and mold spots on old photos. I have to say, however, that I've barely scratched the surface (pun intended). Limited space prevents me from revealing the secrets of perfect tonal adjustments, restoring faded images, sharpening, vignetting, and colorization among other tried-and-true techniques that pop an old photo into the current day's hyper-reality.

The May Digital Eye article will address these issues, so stay tuned. In the meantime, dig up a photo from the attic and clean up the mess. You'll be surprised how easy it can be. **GP**

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

Ongoing Training



SOURCES FOR FURTHERING YOUR WRAPS EDUCATION

BY CHARITY JACKSON

It's been a few years now since I took the 3M training course and testing, and I still feel like it was one of the best decisions I've made in furthering my growth as an installer. I had plans to participate in Avery Dennison's training course last year, but unfortunately, the COVID-19 pandemic delayed that training.

That's not to say that I didn't look for other ways to learn new tricks or polish methods we're already using. It doesn't matter how long you've been in business, or if training facilities are open or not, or how much you feel like you already know—there's always something new to learn.



Trade magazines and industry websites provide tips and tricks as well as a wealth of practical information. (All images courtesy Charity Jackson)

A new tip here, a new trick there add up quickly to streamline installs and give you better results with less work. Choosing the right material for the job, having the right tool for the install, and using the proper amount of heat for the application can make a difference in how efficient and therefore profitable you are in your installs.



Online educational videos from industry experts and manufacturers are a great resource.

TRADE MAGAZINES

Before I get to some of the hands-on training and testing options out there, I wanted to look at some of the other ways to further your education. Every bit of information that you can glean and put into practice in your shop has the potential to make you money.

One of the simplest ways to learn is by picking up trade magazines and reading about new technology, new techniques, business development ideas, and ways to streamline your shop. Having this information also available online in searchable databases makes it easy to go back and look through past articles for tips and tricks.

For example, *GRAPHICS PRO* added a podcast series in 2020 to its site that offers tips, tricks, and business advice from industry veterans. They come out the second and fourth Tuesday of every month, and past podcasts are archived and available to listen to on the website under the "Education" tab.

ONLINE VIDEOS

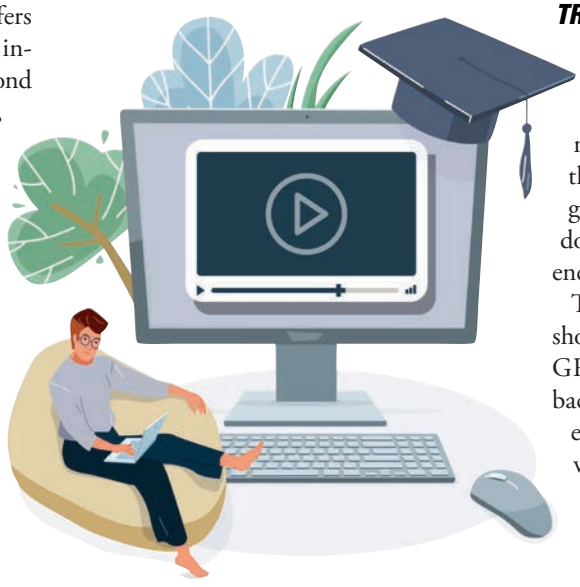
One of the first places I go to check out industry videos is The Wrap Institute. I appreciate the detailed explanations and the hands-on visual of various install methods designed to make you a better installer.

There's an annual subscription to access all of the videos and information available on the site, but if just a few of those videos speed up your installs, you'll increase your profit and more than make up for the price. You should always think of any cost you put into your education as an investment, one that will pay huge dividends over the years.

Most industry manufacturers also have training videos and resources available on their websites. On Avery Dennison's website, under "Resources and Learning," you'll find installation and how-to videos that cover a wide range of topics.

3M Commercial Solution Academy courses are free on-demand classes available online. Some topics include wrap heating techniques, working with Knifeless tape, and paint protection film techniques.

Another excellent source of online information is Roland DGA's On-Demand Webinars. These are free watch-on-demand videos that cover an extensive range of sign industry topics.



TRADE SHOWS

It's been quite a few years since I've been able to get to an industry trade show. When you run a small business, it's often challenging to get out of the daily grind and take the time to mingle with others in the industry. When we do get to the shows, we always come back energized and full of new ideas.

The pandemic put the brakes on these shows last year, but many, including the GRAPHICS PRO EXPO (GPX), are back on this year. Engaging with suppliers and educators in person and through workshops is one of the most enjoyable ways to further your education.

FOR MORE EDUCATIONAL TIPS, TRICKS, Q&A, AND VIDEOS, CHECK OUT
http://gpro.link/edu



Despite the lack of in-person training last year, there were plenty of available online resources that simulated this training. The GPX Breakaway sessions covered a wide variety of topics and allowed viewers to listen in and ask industry experts questions.

TRAINING CLASSES

I already mentioned that the in-person training class and certification class I took was one of the best decisions I made, so I wanted to explore some of the training options available. Now that many courses are opening back up, it's a perfect time to explore these sources and find the right one for you.

I remember we kicked around the idea of taking a training class for years before we finally decided to commit. So, what was the hold-up? The closest class was over five hours away (for some people, it was a flight away), which meant I would have to stay in the city for the entire five days I needed to train and test. I would also be out of our shop for those five days, not getting any work done.

We had to also consider the cost—not only did we have to pay for the training, but I also wanted to do the testing. Add in the price of the hotel, gas to drive there (or flight and car rental for some), and cost of food, and it's a hefty amount.

But we also had to commit to our business itself—to look at areas that we needed to improve in, consider ways that becoming a preferred installer would help our business grow, and accept a change in mindset. We had already been in business for over 20 years when I took the training and testing. Despite feeling like I had a lot of hands-on experience, I knew that I lacked confidence in my methods because I had never compared them to tried-and-tested techniques taught by industry experts.

Once you've committed to taking a training class and possibly testing as well, it's time to consider your class options. Since we primarily use 3M media in our shop, we knew that we wanted to take a class offered through 3M because they explore material properties in classroom education. You also get to work with different media types during the hands-on training. But note that there are plenty of other classes available.

If you want to expand your installation knowledge into areas beyond vehicles, like walls, floors, windows, or architectural finishes, then look for courses that offer training in these specific areas as well. Our shop primarily offers commercial wraps, but we provide partial color change wraps and are interested in improving our speed and quality using color change media.

A few other considerations when choosing a class include class options for beginner to advanced installers, courses that offer testing if you want to be certified, as well as courses that are available in nearby cities. The cost of the classes themselves is relatively similar, but will, of course, need to be taken into account.





Training classes provide hands-on opportunities to practice install techniques with a variety of media types.



There are a few considerations to take into account when choosing the right training class for you.

3M Since I already mentioned 3M's Installer Training programs, I'll start with a quick overview of the courses and training resources they offer. For all of these programs, you can find more in-depth information on their websites.

The Individual Installer Training programs are broken into three sections. Each one can be taken just for the training or also as preparation for the accompanying testing. All of the testing is done in a one-day test:

- 3M Graphic Films Installation Training for windows, walls, floors, and fleets (three-day training)
- 3M Films Training for Vehicle Color Change (two-day training)
- 3M Films Training for Di-NOC Architectural Finishes (two-day training)

There are also two Intro Training programs offered by 3M that are training only, no testing, and are geared toward beginners. Both classes are one-day, hands-on training courses for individual installers:

- Intro to Windows, Walls, Floors, and Fleets
- Style Your Ride – an introductory hands-on training course

3M also offers certification for your business and custom training options conducted on-site at your facility to meet the needs of group training. There is also Graphics College, which is offered at 3M's corporate headquarters in St. Paul, Minnesota.

AVERY DENNISON Industry veteran Justin Pate developed Avery Dennison's training courses, which take a hands-on approach to training. The classes focus on increasing profits and quality while streamlining workflow:

- Digital Full Print Commercial Workshop plus Color Change Intro – this is a two-day class for beginner to intermediate installers that are new to the industry or are sign guys looking to get into vehicle wraps. This course doesn't require any previous experience.
- Avery Color Change Workshop – this is also a two-day course for intermediate to advanced installers. This class focuses on color-change wraps and reviews advanced cutting and install techniques that cut install times and increase profits. Before taking the Avery Dennison Certification Exam, this course is recommended. The exam is a one-day test that combines a written exam, digital full-print vinyl, window perf vinyl, and color-change vinyl.

ARLON Arlon's Advanced Vehicle Wrap Training course is a two-day in-depth program for intermediate to advanced installers. It focuses on the commercial vehicle wrap industry. It teaches troubleshooting, panel alignment and registration, tips to avoid media distortion during installation, and how the components of wrap films affect the installation process.

Any tools and media needed for the class are provided, and as with other training programs, attendees receive a tool kit to take home. A wide variety of media types are available, so you get hands-on experience working with them.

The training course is also designed to prepare you for Arlon's Certification test, which combines six hands-on stations with a written test. This one-day test builds confidence in the installer and provides a listing in their certified applicator directory, a swag kit, and certification logos for marketing.

ORAFOL KPMF There are two education courses offered by ORAFOL that are designed to make installers proficient in applying ORAFOL and KPMF brand films. Both courses are two-day classes:

- ORAFOL/KPMF Professional Wrapping Academy – a beginner to intermediate class that covers material composition and choosing the right film, selling vehicle wraps, and hands-on experience with different types of films to build confidence. No previous experience is required for this class.
- ORAFOL/KPMF Vehicle Wrap Certification Course – an advanced class that covers more advanced application skills and business development methods in a classroom setting and through hands-on training. The course also prepares you for the Certification Hands-on Exam, which covers commercial graphics and wrap installations, solid color change wrap installations, and printed reflective graphics applications. There is an online exam after the hands-on exam.

Revisiting my earlier point, it is absolutely worth it to invest in education. Explore all of the available options for training to elevate your shop. **GP**

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



THE BIG EASY

TWO LARGE CUTOUT LOGO AND LETTER PROJECTS

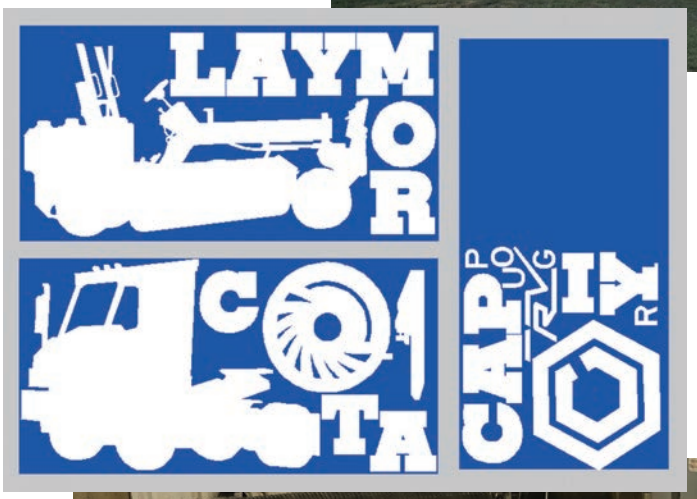
We do many different types of sign and graphics projects, from screen-printed pipeline signs and waterjet cut logos, to laser engraved tags and hazmat decals. But one of my favorite types of jobs is large cutout logos and letters for building walls, and generally the bigger the better.

On metal buildings, larger items are easier to install since they will cross multiple corrugations and require less spacers for areas that are unsupported. Some of these jobs are one color of aluminum laminate, or powder-coated aluminum sheet, which may be decorated with adhesive vinyls or digital prints. Others are done in layers of powder-coated aluminum, adding more durability to exterior colors than is possible with vinyl or prints of any kind.

This month we'll look at a couple of projects we did recently that involved that type of work. Each job was fun to do and fit our client's needs exactly.



Our client wanted a large, simple graphic to highlight their products and improve the image of an old office building, and this was what we proposed, for us a fun job to do. (All images courtesy Rick Williams)



All the elements of the job were made from white aluminum laminate sheet. Three 5' X 10' sheets were more than enough.

PROJECT NO. 1

The first one was a building front display for a large manufacturer of specialty trucks and street sweepers that is locally located. We do a lot of small decals and tags for their finished products, but on this occasion, they were trying to improve the exterior appearance of their large, old office building, highlighting the two main products they make with photographic cutouts.

The photo's images would, of course, require digital printing. And if we are being honest about it, digitally printed colors, in full sunlight, will not compete for longevity with even solid-colored vinyls, and certainly not with powder colors on aluminum. But this display would face east, not west or south (which get much more sun in our area



A waterjet can separate laminate layers, so some care was used to pre-drill pierces in tight places. But after that, the job cuts fast.



Large photo prints were made of the best digital material and printed with the best ink on a high-quality setting, but no laminate was added.



An accurate image with plenty of measurements goes to the job, along with matching vinyl dots to cover some of the screw heads.



The install was a one-man job, as all the parts were light and easy to work with.



All the screws used were stainless steel, and some were powder coated in advance.

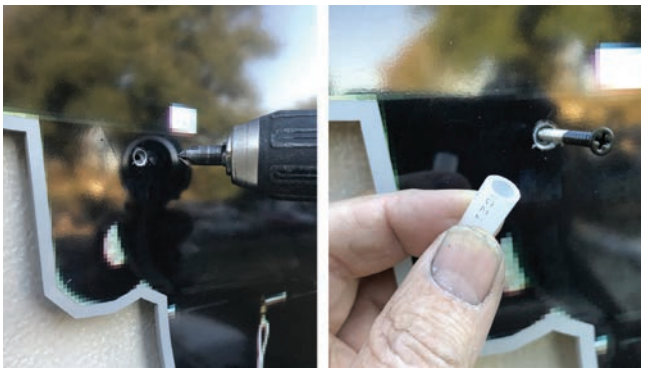
of the U.S.), so the longevity of the finished product would still be fairly good. A north-facing sign or logo will last the longest of all, of course, but east is the next best thing.

After designing the wall display, and getting the design and the cost approved, we were soon on to waterjet cutting (though the cutting could just as easily have been done with a router), then printing and applying the graphics. One thing we did not do was laminate these photo prints applied to our cutouts. Laminate coat is great for abrasion resistance, power washing, and so forth, but my experience has been that adding a laminate layer doesn't help much against UV exposure, and may at times be counterproductive.

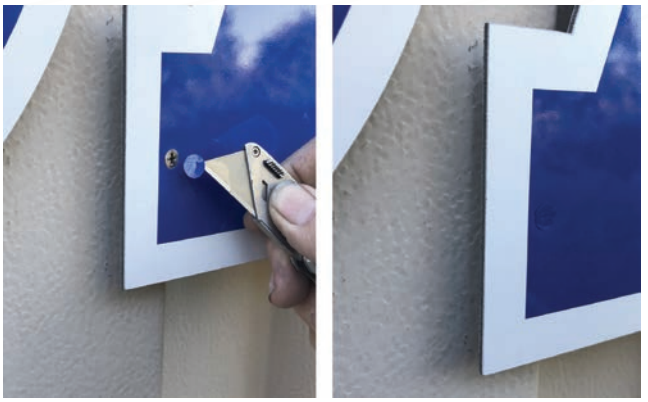
For this job, we used only white aluminum laminate sheet, with cast vinyl color applied to the letters, and high-grade digital prints applied to a pair of photographic cutouts. Everything would be installed on a metal building with an odd, wide corrugation pattern, secured with stainless steel flathead screws, offset from the wall with plastic tubing spacers. Each screw head would be countersunk and made to match the color it went into perfectly.

Stainless steel screws are worth their extra cost many times over, since there won't ever be a problem of rust stains on our client's building when the screws age and weather. On a light-colored wall, rust staining is a real issue, and even more likely when spacing things off the wall since more of the screws will be exposed to the weather and eventually rust.

As mentioned, every screw was to be



All flathead screws were countersunk to be flush with the surface and less visible. Small spacers of plastic tubing offset all components from the wall.



Here our little colored dots come in handy and work well for hiding fasteners.



Our client's old building could have used a major facelift, but this large graphic gives the viewer something interesting to look at and promotes our client's products.



We proposed this large graphic for a local school's girls softball team's new field house. The three colors involved no vinyl, paint, or prints, just layers of powder-coated aluminum for extra durability facing Texas sunsets.

countersunk flush with the surface of the items being mounted. If mounted over vinyl areas, we make small "dots" of the same vinyl, which become perfect matching covers for each screw head. I also carry a couple of parts organizers that have several colors of screws, powder coated stainless, that go with me on all jobs. These stock powder-coated screws were mostly used in the black areas of our printed cutouts.

When we are finished with a job install like this, the fasteners are nearly invisible, and will stay that way a long time. The vinyl will eventually wear out, but the stainless screws will not cause any problems even then.

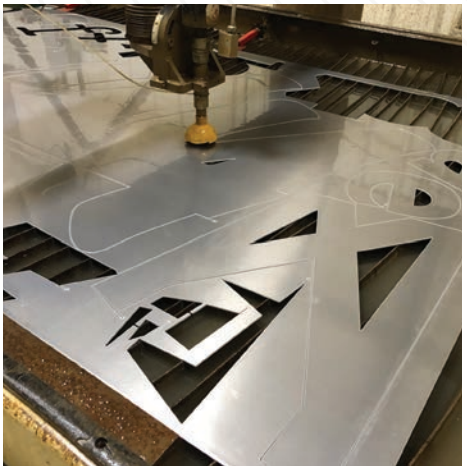
This was a "one man" installation, like many of my install jobs are. But, getting away from the shop for installations like these is a pleasant break. My old bucket truck is loaded with cordless tools, hardware of all kinds, spacer material, and so forth. Their old metal building could have used a paint job, but the new graphics did improve the look of the place, and our client was a happy camper when the job was complete.

PROJECT NO. 2

The second job was a bit different, and will have a long and useful life because every part of it was made from aluminum sheet, CNC cut and all powder coated. It involved no paint, no prints, and no vinyl. This was important and highly



Four sheets of .125 mill finish 5052 aluminum was required to supply this cut file.



Our old waterjet, located across the street from the sign shop, made short work of these large aluminum cutouts.



After prepping for powder coating with 220-grit paper or a fine fiber disk, parts are hung for powder coating.



This rack of maroon parts was joined by another of white parts, and a small number of parts coated medium gray.



Before beginning the install, all parts are spread out in handy fashion along the building's wall.

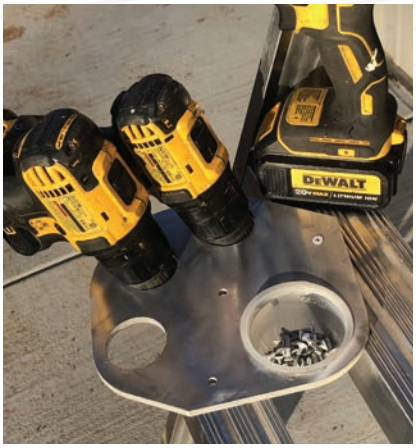
recommended to our client, since this job went on a recently completed metal building wall that faced due west and in full sun.

Any type of vinyl overlay or digital print would have a shorter life than the customer would be happy with. Fortunately, this local school system was willing to pay a bit more to have everything solid aluminum with powder-coated finishes done in three colors: white, maroon, and gray.

We own a large router, but I again used our old Omax 5' X 10' waterjet because I know how to run it better than the router. All the parts were made from mill finished 5052 aluminum, .125" thick. The front side was buffed or prepped with a fine grit fiber disk or with 220-grit sandpaper and a disc orbital sander. The small, sharp burrs left by the waterjet on the backs of the parts were sanded away as well.

The light gray metal building was a new field house for a local school's girls varsity softball team. The small city of White Oak, Texas was built originally by oilfield money and the boys' teams are named the Roughnecks. The girls are called Ladynecks. All the letters would be done with two layers of powder-coated metal, and the derrick logo required three layers of powder-coated parts.

The design was left totally up to me, and those in charge were given a selection of three design variations. Fortunately, they had the good taste to choose my favorite (doesn't always work that way). In this case, only parts of letters or logos that did not



To keep fasteners and cordless tools at easy reach, I often screw a shop-made holder to a ladder step or even a manlift bucket.



Here the white letters are added to a maroon outline. Powder-coated finishes, even facing west, will last for years.



As with the other job, all fasteners are stainless steel, and all of these are powder coated to match.



Three layers of metal provide the colors for their derrick logo.



A lot of this job was installed off a walk-board resting on two stepladders, and to level ladders like this, a simple collection of MDO scraps can provide adjustments of 1/2", 1", and 1 1/2".



The final product, showing nothing printed or vinyl, will last at least a decade or two.



They must have been happy with their new field house, and its new wall graphic, since they made sure it was included in their ribbon cutting photo.

land well on the corrugations would require spacers. No effort was made to offset the items from the wall because it might tempt kids to climb on them or pull them from the building.

This job was installed with stainless steel screws that were all powder coated when all the other parts were powder coated. A light etching in a blast cabinet was all that was needed to prep the screws for coating.

Working from an accurate scale drawing showing spacing distances vertically, horizontally, and between elements, jobs like this generally go pretty much like clockwork. Even so, we often use minimal fasteners initially, just in case any onsite changes are deemed necessary. Once everything is happily placed on the wall, and looked over closely for errors, the rest of the required screws are used and countersunk flush with each surface. When the matching screws are installed really flush, the look is clean and smooth.

This large graphic, over 20' across and 6' tall, helped make a statement on a new but very bland building. We know that our clients, the Ladyneck coaches and players, were happy with the job we did because within a week they were placing photos online of themselves having their pictures taken in front of it during their ribbon cutting. It's great to have a satisfied customer, or a whole team of them.

And, for me, that project was a fun and profitable job that will be around for a long time. **GP**

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

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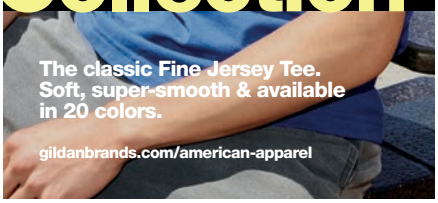
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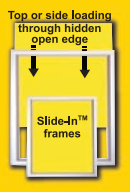
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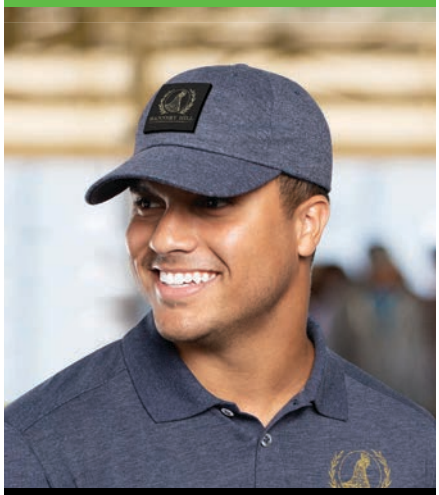
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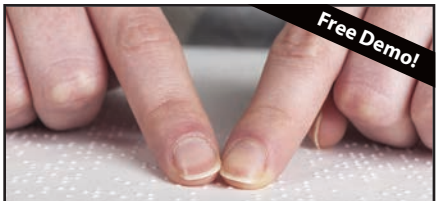
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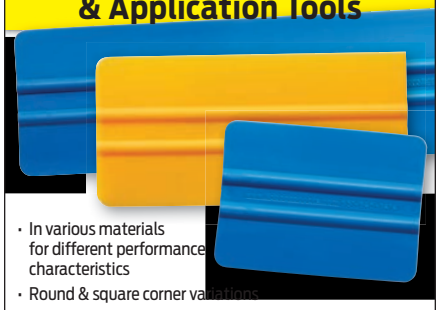
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YOUR LASER AT WORK

continued from page 28

If you will use a storefront like Etsy or Amazon, collecting sales tax might not be an issue. If you will sell on your own website, you will need to be able to calculate and pay sales tax for every state you make a sale in. Calculating the correct sales tax not only differs by state, but many counties and cities include a sales tax that must be collected in addition to the state sales tax.

Selling internationally is even more complex. If you don't collect the tax, you risk being charged for it later (and penalties) without an opportunity to collect from the customer—a very expensive mistake.

Also consider the time spent calculating or building tax tables for this effort and actually making payments. Many of you will have your accounting firm take care of this. It's not a free service, so take this cost into consideration as well.

CONCLUSION

Creating your own product can be exciting and fun. The fun wears off quickly if you are not making money or you have too many surprises. A business plan, even a brief one that includes all your costs, is critical. You may not know each and every cost. Estimate or guess, then refine the cost table as you learn the real cost or gain experience.

Start with a simple plan and allow it to grow if justified. If a product is not making money, change it or cut it from the menu. Lost leaders can be valuable, but you will only want to make that case for a very few. **GP**

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

STITCH SOLUTIONS

continued from page 73

- If you want to change location, what is that going to take?
- If you want to have more people involved, what is that going to take? Wages, government fees, benefits, liabilities, risks, rewards?
- Sales and Marketing – what would you be able to do yourself? What would you need to hire out?
- Annual sales?
- Other assets and metrics?
- What are your expectations from your business?

Only you can define what success is in your business. Unless and until you define it, how will you know when you have achieved it?

Once you have a firm and realistic understanding of where you are right now and where you want to go, then you can follow a path to get from here to there. Some of this is pretty hard, and it's hard on you because it's admitting things that you might not be comfortable admitting. Just get it out of your head and get it down on paper or on the keyboard so that you don't have to remember it all.

You can do this, even if you have to sit down a couple different times to work on it. It's not something you can just churn out. If you're able to do that, you probably haven't dug deep enough.

When you get to the things that you want and identify the gaps, the things that frustrate you, and the things that you wish were different, flesh it out and make it very specific. Then, take a deep breath and dive in to make the changes so that you are on your way to Point B. **GP**

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

ROLL-TO-ROLL PRINTING

continued from page 85

"The lifespan of a roll-to-roll machine can vary depending on the parts the manufacturer uses when building the machine," says Chris Padilla, also of Mutoh America. "Some roll-to-roll machines use parts that are only designed to last a couple years or so, and some use more industrial parts to ensure that machine is going to perform for many years to come."

A good industry rule of thumb is that your printer should last you at least seven years before new technology and options make it less profitable to continue without a replacement or upgrade. That doesn't mean your printer won't continue to be a workhorse for you long after that, it's just unlikely to be as efficient in comparison to other options on the market that your competition might possess.

Like we've seen over the last couple years, planning for the future isn't an easy thing to do. But when things go well, you'll find yourself wanting to move beyond the introductory machines and into a more advanced machine. In that case, what can you look forward to from a more advanced model of roll-to-roll printer?

"Today's product lineup usually offers similar features at every price point," Maxwell says. "The more expensive products, though, will offer faster throughput and expanded capabilities with ink."

"Typically the biggest difference between an entry level roll-to-roll machine and a high-end roll-to-roll machine would be the amount of workload it can produce in a short period of time, i.e., print speeds," Padilla says. "Entry level roll-to-roll and high-end roll-to-roll machines generally share the same capabilities as one another, but if the customer needs a machine that is capable of producing prints at a higher rate, then they are most likely going to be looking at higher end machines to accomplish this." **GP**

MATT DIXON is the managing editor of *GRAPHICS PRO* magazine. He can be reached at mdixon@nbm.com.

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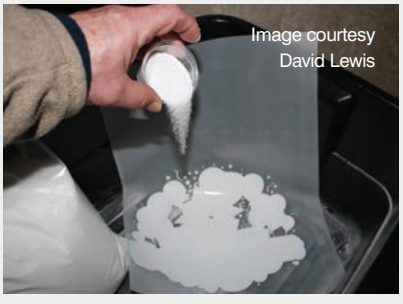


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SILVER	BLACK	LITE BLUE	ROYAL BLUE	NAVY	RED	PURPLE	LITE PURPLE	PINK	ORANGE

30 oz. Powder Coated Finish!



LG14	LG14-BK	LG14-BL	LG14-RY	LG14-NA	LG14-RD	LG14-PU	LG14-LP	LG14-PK	LG14-OR
SILVER	BLACK	LITE BLUE	ROYAL BLUE	NAVY	RED	PURPLE	LITE PURPLE	PINK	ORANGE

16 oz. Powder Coated Finish!



LG16	LG16-BK	LG16-BL	LG16-RY	LG16-NA	LG16-RD	LG16-PU	LG16-LP	LG16-PK	LG16-TL
SILVER	BLACK	LITE BLUE	ROYAL BLUE	NAVY	RED	PURPLE	LITE PURPLE	PINK	TEAL





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