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“The T-shirt market was severely impacted with closures and event cancellations due to COVID-19. However, we’ve seen increased demand each quarter and the latest trends are outpacing 2019 levels with the resurgence of events.”

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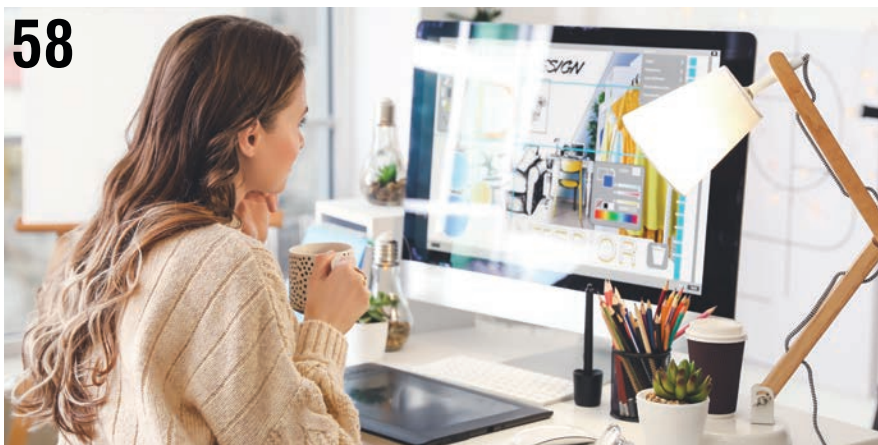
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Be on top of the game in 2022 with the latest styles and colors, *page 62*. Image courtesy **Next Level Apparel**. As more people return to the trade show floor, be sure to have the best options available to fill those aisles in exciting ways, *page 26*. Image courtesy **Orbus**.

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A GLIMPSE INTO THE FUTURE

It's the year 2022, and much like you, this morning I hopped out of my nightly stasis pod to grab some breakfast pellets before jumping into my flying car and zooming off to work at Spacely's Sprockets high up in the clouds.

At least, that's what should have happened if you asked me what this year would be like back when I was in front of a TV on Saturday morning chomping down cereal in my G.I. Joe pajamas when I was 7 years old.

I wish I had a dollar for every grand idea that I was exposed to during my Saturday morning cartoons that were eventually quashed by reality. My house? Firmly attached to the ground. My car? Not a robot. My dog? Hasn't meddled in abandoned amusement park crime schemes in years.

But what's amazing is just how futuristic things have gotten behind the scenes. That TV I watched as a kid was 3' thick. That cereal I ate was 75% sugar. And those pajamas I wore sure as heck didn't come directly off a digital printer in a matter of minutes.

I've grown up to realize that true groundbreaking change doesn't happen overnight. "Eureka!" moments need a lot of time to shake out. It's the small details and the incremental improvements that truly move the needle.

It's one of the reasons why I'm looking forward to getting out to GRAPHICS PRO EXPO shows this year. I have a feeling a lot of people are going to be pleasantly surprised this year when they go looking for new technology to help alleviate modern issues such as supply chain woes, labor shortages, and changes to consumer preferences. Bigger and faster isn't necessarily the answer to all questions anymore. Versatility, product range and ease of acquiring materials are at the forefront of shop needs.

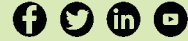
And if you go into these shows looking for these three qualities over all others, I'm pretty sure you'll find a few things that are a lot more impressive than breakfast pellets.

For a full schedule of GRAPHICS PRO EXPO shows this year, visit graphics-pro-expo.com. **GP**



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THE SPARK OF MOTIVATION

Some years ago, it was routine for me to be rushing to catch a plane to fly to Columbus, Long Beach, Orlando, or wherever the next GRAPHICS PRO EXPO (formerly THE NBM SHOW) was, and to get there prepared because I would be teaching two or three seminars on sign techniques during the show. I was, for several years, one of the sign maker “experts” on their list of speakers, though the only way I qualified as an “expert” was that I was former “spurt.”

So, several times a year I would drop everything, hustle to DFW and be crammed into the cheap seats for a ride to the next event. One time I found myself in the center seat between two good-sized fellows, which was a tight spot to be in for a three-hour ride. In fact, the guy who had the aisle seat looked like he could have been a defensive lineman for the Dallas Cowboys.

I could not get comfortable, and sure wasn't going to do any napping, so I started up a conversation with the big guy. I soon found out he was originally from Nigeria, and he'd emigrated to America about 20 years earlier. We were both on our way to Long Beach, California, which was my destination, but for him it was just a short layover on his way to Hawaii.

His wife and two kids were somewhere on the plane, and he remarked that they would be vacationing in Hawaii for the next three weeks.

“Wow,” I said, “that sounds like a whole lot of fun. I'm going to California to work at a trade show a few days, but I think I'd rather be going where you're going.”

“Well, we sure do enjoy it, and we escape some of this Texas heat,” he said. “We've been going to Hawaii three weeks each

summer for about 10 years now. My wife and kids love it there.”

I smiled and commented that he must be doing a lot of things right, and maybe I should give up the sign business and try whatever he did to make a living.

“Well, I have to admit, this country's been good to me. I came here with nothing and took a job on the night shift at a convenience store. I worked on my English by talking to the customers that came in,



and after a year or so I decided I knew enough about that store to be able to run it. My boss thought the same thing and made me the manager. For the past 10 years or so, I've been the regional manager over about 40 stores, and things have been going pretty well.”

I did not become his apprentice, of course, but it was a little bit tempting. Actually, I'm always encouraged when I hear first-hand an American success story like his, and I'm glad that stories like his are still possible.

Twenty years before, my friend from Nigeria had almost nothing, and got little or no help from anyone. But what he did have was his own natural ability, a serious

work ethic, and a whole lot of motivation. He was motivated because he knew if he was going to move up the ladder in this country it was going to be up to him.

As I see it, motivation is the “spark” in the massive internal combustion engine we call the American free enterprise system. This huge multifaceted economy, the most powerful in the world, just like an engine, relies on that essential “spark” or nothing good happens. Without the spark of individual motivation, it would cease to function ... sooner than we might think.

Diminish that spark enough, through excessive taxation and regulation, and by handing out free money and benefits to those just starting up the ladder, and a substantial number of people will just quit trying. A drop of 10% of the workforce would be enough to put the U.S. economy on life support, and the prognosis would be grim.

Maybe I am not qualified, as a mere sign maker “ex-spurt” to expand on how our whole economic system works. But then again, as a small-businessperson, and someone whose eyes are still open, oh what the heck? So, if I had a say in things, I'd not do a single thing that kills the spark of motivation, and would encourage and maintain a system that rewards hard working and motivated individuals. I say, “Good for them!” And what's good for them is good for all of us.

Rick

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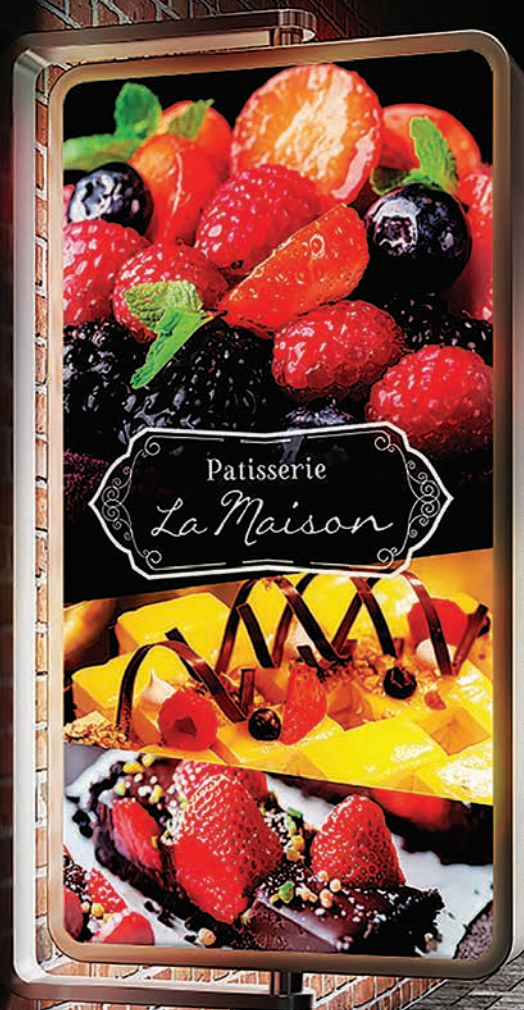
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Roll-to-roll printers provide versatility for PSPs, including applications such as backlit signage. (Image courtesy Roland DGA)



The Power of the Roll-to-Roll Printer

VERSATILITY AND RELIABILITY MAKE THIS PRINTER A GO-TO PROFIT CENTER FOR PRINT SHOPS



BY PAULA AVEN GLADYCH

Roll-to-roll printers are the workhorses of any new print shop because of their price to entry, ease of use and versatility when it comes to substrates. The types of things a shop wants to print will determine how big of a roll-to-roll printer to purchase. Most industry experts recommend going a little bigger than you expect so that you have room to grow, and the printer won't need to be replaced as quickly.

"Roll-to-roll printers are some of the

most versatile printers in today's market. Why? Because they can have a variety of ink types and can be used with the most diverse kinds of media," says Steve Gluskin, director of marketing and business development for Mutoh.

Roll-to-roll printers can be used with latex, eco-solvent, aqueous, or UV inks and they can print on vinyl, paper, canvas or textiles.

"This variety of ink and media combinations allows the user to create applications

such as vehicle wraps, T-shirts, window, wall and floor graphics, art prints and flags, and numerous other items," he says.

Entry-level units also can be smaller and more affordable yet still offer excellent print quality, says Vernon Jones, senior marketing and applications manager at Mimaki. His company introduced its 100 Series roll-to-roll printers right before the pandemic hit.

"They are still the quality of a high-end printer but at an affordable price," he says.



Sohil Singh, vice president of StratoJet, says the Middle East, Europe, and Asia are snapping up roll-to-roll printers because they want to print directly on coated fabric instead of PVC banner material.

The U.S. tends to be slower to adopt new printing technologies, says Singh, but fabric is starting to get popular since it is greener and more recyclable than vinyl banner material. Many new shops are adapting to printing on fabric directly using UV or latex inks.

Roland's TrueVIS series of inkjet printers work well for signs, banners, posters,

vehicle wraps, POP displays, decals, labels, and heat transfer apparel, says Daniel Valade, Roland DGA product manager for digital print. The company's VersaUV LEC2 series roll-to-roll printer/cutters include package prototypes and short-runs, signage, labels, and decals.

"The overall print quality, productivity, reliability and easy operation of roll-to-roll printers makes these devices very popular for print operations of all sizes," he says.

Printers with integrated print/cut allow shops to perform these tasks in "a single, uninterrupted workflow," he adds.

NECESSARY EQUIPMENT

Any new shop looking to get into roll-to-roll printing must consider the different types of finishing equipment that are necessary to do the job. Most shops buy a laminator and a finishing table so they can apply graphics to the correct medium. Plotter/cutters are necessary for shops that want to cut decals, stickers, and floor graphics.

"It depends on your business plan, the business model that you are doing, your applications to be producing, delivering to the end user or consumer," says Jones.



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Basic cutters cost about \$5,000 depending on the size and model, while laminators cost about \$7,000. All-in-one worktables, which have gained in popularity, cost between \$10,000 and \$30,000, so it depends on the available footprint in your

shop and your production level. Some printers come with a cutter, which saves floor space.

Companies that want to focus on vehicle wraps will need a printer, laminator, and plotter.

If a shop wants to focus exclusively on signage, a flatbed printer is the best option because it allows a shop to print direct to substrates, which saves time.

ROLL-TO-ROLL VS. FLATBED

There are several advantages to buying a roll-to-roll printer vs. other printers.

“First, there is the cost factor. Roll-to-roll generally is less expensive to purchase than the flatbed or hybrid printer by a factor of five to 10 times,” says Tom Wittenberg, industry relations and events for HP. “In many cases, the finishing equipment needs are not as great either.”

There also is an abundance of media to choose from for just about any market available on the roll-to-roll printers, and it is less costly to ship a roll of media



Roll-to-roll printers are the backbone of many print shops. Their versatility allows for an endless number of profitable applications. (Image courtesy Roland DGA)



(Image courtesy HP)

than to ship rigid substrates due to overall weight, he adds.

Flatbed printers are the best device for rigid media, while roll-to-roll printers can work with many different options. Just because a shop only has a roll-to-roll printer doesn't mean it can't print on rigid substrates, says Gluskin, "Roll-to-roll printers can print to adhesive-backed media that can then be mounted on many rigid materials, though this involves more labor."

He adds that flatbed printers tend to have a more limited range of inks, UV-LED being the most common which "can limit applications."

Some shops invest in more than one roll-to-roll printer so they can equip each one with a different type of ink, like eco-solvent and UV, for instance.

Another advantage of roll-to-roll inkjet printers is that they use roll media, from paper to canvas, meaning that the "print lengths are just about limitless," says Roland DGA's Valade. Large-format roll-to-roll printers also have a smaller footprint than a comparable flatbed printer, making them ideal for shops with limited space, he adds.

PANDEMIC'S IMPACT ON PRINT

"The recent pandemic has shown that demand for signage is part of what might be termed 'essential signage,'" says Mutoh's Gluskin. "Safety signs were in demand and had to be constructed quickly."

Retailers, restaurants, office buildings and other public places were clamoring for signage on doors, windows, floors and even on clear plexiglass partitions erected to protect essential front-



Entry-level units also can be smaller and more affordable yet still offer excellent print quality. (Image courtesy HP)



The Falcon series from StratoJet allows for prints up to 126" in width. (Image courtesy StratoJet)



The StratoJet Hawk 72 roll-to-roll printer allows for prints up to 64" wide and requires no outgassing after printing. (Image courtesy StratoJet)



Applications such as window graphics are easily done on today's roll-to-roll printers. (Image courtesy Roland DGA)

line workers from their customers. Gluskin says he doesn't see the demand for these types of products waning. Now, they are being made to show safety requirements or advertise products.

"For instance, they may include a QR code embedded into the design that when used with a smartphone camera can give the consumer a coupon or some other instruction more related to sales than safety," he says.

Wittenberg adds that "due to the significant impact of COVID on the commercial printing market, many commercial printers are looking to expand their focus into wide-format so as to reduce the risk and obtain higher margins than are generally available in the commercial print market."

Many smaller shops have "taken ad-

vantage of the PPP (Paycheck Protection Program) money from the government to expand their business to a certain degree. Even though there was a downturn in the general market with COVID, surprisingly, the wide-format business, for about 60-70% of the companies, has shown strength," he adds.

The decor and vehicle wrap markets have also done well during COVID.

"Decor has been strong due to the fact people have been locked down and have realized the need for upgrades in their homes, assuming they are going to be working there in the longer term. Wall-covering, drapery, upholstery, canvas, pillows, and towels have all shown strength in this sector," Wittenberg explains. For the vehicle wrap business, cars and trucks

have become the calling cards on which businesses rely to get their message out.

"The average vehicle driven 15,000 miles per year will pass in front of 9 million other vehicles, and vehicle advertising boosts name recognition 15 times greater than other advertising media. As a result, this allows the smaller business owner to compete with similar suppliers that are 10 times their size," he adds.

StratoJet's Singh says the pandemic created a new market for sign and graphics shops as many businesses were forced to close their storefronts and move their businesses online. "It is a new trend," he says. "At the same time, big shops are opening back up and a lot of people are coming back; demands for signs and banners, that also is coming back."

Overall, he says the signage industry is growing but “now the customer base is not just people coming into shops but also people going online or who are active on Facebook and Instagram and are getting sales from there as well.”

Many shops have gotten creative, allowing customers to design T-shirts or graphics on their websites before being able to place orders for their customized products online. Singh doesn't believe those extensive e-commerce businesses are going to go away anytime soon. Many customers have gotten very comfortable ordering everything from the safety of their homes. With roll-to-roll, these businesses are also able to get print orders out more quickly.

Mimaki is “busier than ever,” says Jones. Because of the pandemic, the company pivoted to more virtual events once everyone figured out how to maneuver.

Established businesses switched gears to help meet demand for pandemic-related signs and PPE. One of Mimaki's customers was printing fashion, textiles and apparel but switched gears and started making masks during the pandemic.

“Everyone got in where they fit in,” Jones says. That meant printing signs encouraging customers to stay six feet apart or wear a mask to enter a business or QR codes for restaurant menus to limit the transmission of germs among a business' clientele.

Many shops that hadn't owned a roll-to-roll printer ended up buying one during the pandemic to meet pandemic demand, Jones concludes. **GP**

PAULA AVEN GLADYCH is a freelance writer based in Denver, Colorado. She can be reached at pgladych@gmail.com.



Today's roll-to-roll printers have made huge jumps over the past decade in print quality, speed, and versatility. (Image courtesy Roland DGA)



Left: Banners, displays, and point of purchase graphics are perfect applications for a roll-to-roll printer. (Image courtesy Roland DGA)

Far left: Plotter/cutters are necessary for shops that want to cut decals and stickers. (Image courtesy Roland DGA)

Let's Talk Shop

Rising Costs, Rising Prices

EVALUATING YOUR BOTTOM LINE TO INCREASE PROFITS

BY CHARITY JACKSON



My husband and I both started in the sign industry in production, and while owning the business for 27 years means we've learned our fair share of business management, we still work within a production mindset. This means when we're busy; we hustle, we produce, we install. When we're slower, we market our outstanding estimates and prep the shop for the next wave of business.

Things like material costs, inventory, supply issues, and labor costs are issues we tackle, but honestly, we don't consider them as often as we should. We're too busy thinking about deadlines and production.

The last three years have been our busiest years ever and coupled with the difficulties in getting materials over the previous year and rising material costs, we've had to change our mindset quickly. Being busier means the jobs are coming in, but if each project is sold at a smaller profit margin and our labor costs are undercut on each install, then we're working harder – not smarter.

INVENTORY

Over the years, we've established the materials we like to use – premium wrap vinyl, calendared vinyl, printable reflective and metallic, perforated vinyl, transit vinyl, and the corresponding laminates for each one. We have rolls that we're currently printing from, and then normally, we would keep

one extra roll in stock, maybe two rolls for the premium and transit since we go through them so quickly.

With the supply issues the industry has experienced over the last year, we've had to drastically change how we stock our inventory. Early in the year, we ordered a pallet of 3M IJ180 to bring enough stock for our busy schedule. At the time, ordering one or two rolls from suppliers wasn't an option to get our hands on media, while ordering a pallet from 3M got us the stock we needed.

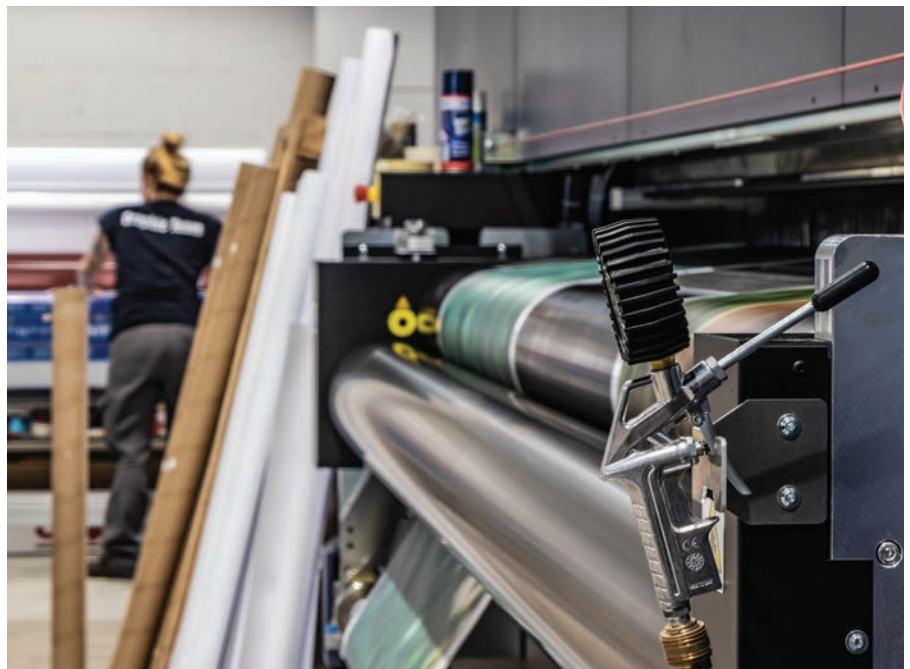
This has changed as suppliers have been able to replenish their stock a bit, but we still quickly learned to order 3-4 rolls of material for stock when our current inventory would drop to 2-3 rolls. In the past, I could order a roll and have it the next day; now, it's a toss-up as to whether suppliers will be able to meet our needs.

We've quickly learned that we must keep a closer eye on our inventory and supplier stock. For materials you know you're going to use, I would recommend ordering from a couple of suppliers, and even if it's not in stock, get it on backorder. That way, when the supplier receives the stock, you're already on the list to receive it. We've had delivery guys show up with rolls we forgot we had even ordered, but it's been an excellent way to keep the inventory stocked.

CASH FLOW

Carrying more inventory means that you're paying out on larger invoices than in the past. Before, we'd have an invoice with 1-2 rolls on it; now, we're paying double to stay on top of our needs.

As I mentioned before, our sales have been way up the last few years, so we're going through media faster, which accounts for the need to order so often. This is great for our total sales but makes it even more critical that we're on top of our profit margins.



With supply shortages, it's important to carry more inventory than you might have in the past. (Image courtesy Charity Jackson)



Why is it more important? Because the more signs and wraps we sell at higher material costs without adjusting our prices, the more work we're doing for less profit. That's not even considering the higher labor costs that have to be considered.

Make sure you're watching your accounts receivable, too. Having to pay out more upfront for materials means that you need to ensure your customers aren't taking too long to pay their invoices. Our larger, repeat clients have terms, but we require a 50% deposit, balance upon completion for most projects.

MATERIAL COSTS

The only way to know what your material costs are is to sit down and compare them. Create a spreadsheet on the computer or simply on a pad of paper. You don't have to overthink the process; you just have to do it.

Start by listing your top suppliers – those you've created a good working relationship with and who deliver often. Then add at least 2-3 other suppliers that you can get materials from.



Next, make a list of all the materials you currently like to use and want to keep in stock. We have our set material types we stock in the past, but we've had to be a bit flexible by trying out other manufacturers to fulfill an order over the last year. I'll mention more on this later but go ahead and add these materials to your list because it's essential to consider and compare all the options.

Not only will having your materials listed out help with creating a price sheet that builds in profit, but it will also make it easier for you to order. You might be surprised that a supplier you haven't been using as often can get you a product at a less expensive price. As a side note, don't be shy to ask suppliers for price matching or quantity discounts. Many manufacturers have set pricing for their products

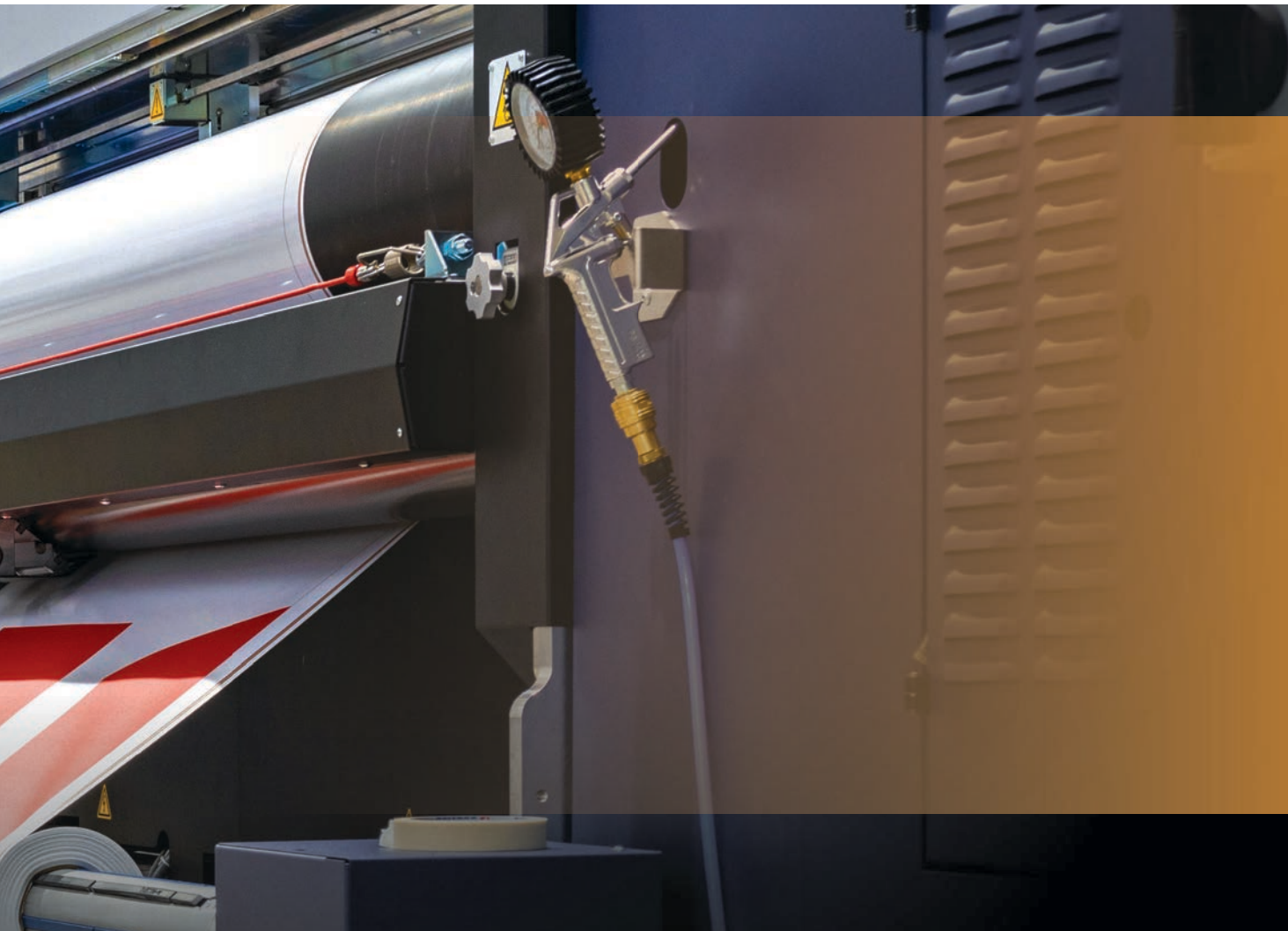
across suppliers, so you won't have wiggle room on those, but there are plenty of other products you may be able to get a better rate on, especially if you're ordering in bulk.

Once you have the manufacturer and materials filled out, go through and add the price for the material from each supplier. Be sure you're comparing the same roll widths and lengths. We usually stock 54" rolls of print media, but with how crazy the supply chain has been this last year, we also consider 48" rolls and shorter lengths when in a pinch. Add these onto your price sheet so you know what your options are at a glance. I'm primarily focusing on print media, but don't forget your substrates, frames, and consumables like masking tape, squeegees, blades, knifeless tape, and other production costs.

PRICE SHEETS

We've set up our pricing sheets based on a per square foot price broken down by material type. We also work on a sliding scale, meaning the higher the square footage, the less per square foot a customer pays. This helps cover us on the extra labor that goes into a small project vs. a larger job. Often a small job will take almost as much time setting up, working with the customer, and producing as a larger job.

When you figure out how much you pay for each supplier's roll of media, you should use the highest price to figure out your square footage pricing. This means that in our current climate, where it's harder to get media, you've considered that you might have to pay a higher price to get a roll. If you're able to get the same roll at a more competitive price, you've



made a little more profit instead of having to eat that extra cost.

Don't forget to consider any shipping costs. This may be a set price from a certain supplier, but often it's a freight charge that gets added because you need to bring in stock from another location when your local supplier would have it in stock in the past. You could plan for a \$50 per roll freight charge, for example. If you take a 48" or 54" roll of media x 50 yards and break it down to 600 sq. ft. per roll, then a \$50 freight charge is less than .09 cents per square foot. A small amount to add to your bottom line to make sure you're covered.

LABOR COSTS

We recently quoted a full wrap project for three Mercedes Sprinters. The customer had previously had a few vehicles wrapped in Texas, but these vehicles are here local. He wanted to know if we could compete with the Texas pricing,

which was significantly lower than ours – the short answer was “no, I can't touch their pricing.” After explaining this and offering a percent discount for ordering all three, we're still doing the wraps.

Even if we're both paying the same price for supplies, our labor costs are very different. Texas' basic minimum wage is \$7.25 per hour, while California's basic minimum wage is \$13 per hour. Finding employees with experience has been a significant struggle. It took us over a year to find the most recent employee we hired. We're starting out at \$16 per hour for anyone with base knowledge and quickly raising them up from there.

These labor costs must be covered somewhere, which means they need to be factored into our shop overhead and hourly labor rates. We're a small shop, so we can't get competitive rates on medical, so we try to be competitive in other areas like paid vacation, holiday pay, and sick pay. All of this has to be factored in as well.

MATERIALS

It's important to note that when trying out different media to fill orders, you must note the materials used on the customer's paperwork and keep a color sample on file. Materials will have a different white point, and the colors may appear differently. If you must repair or replace panels in the future, you should know what material you've used on the job as well.

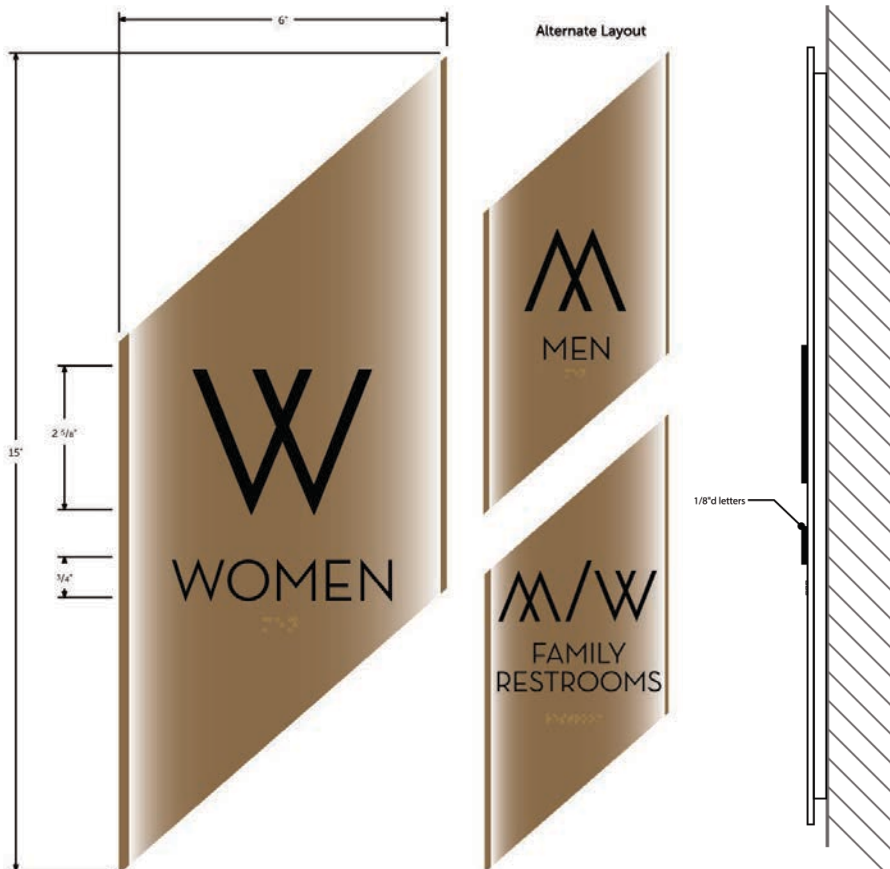
Be sure you're not compromising quality to get a job done. Check durability, product warranties, and consider ease of use, so your labor isn't affected too. **GP**

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 nearly 30 years. You can visit her website at www.vhsigns.com.

Hard Bid vs. Design/Build Sales Strategies



BY
JD HAMILTON



Examples of a “tiered” presentation of a high-end design/build program. This would be for a client that has a good budget and understands the value of creating an upscale, branded image for a property. (All images courtesy JD Hamilton)

In today’s competitive world of providing turnkey architectural signage for large projects that involve both interior and exterior signage, it can be somewhat overwhelming to keep focused and develop the different strategies needed to successfully win projects. It usually boils down to two types of selling and marketing: Hard bid quotes that are based upon project-specific drawings and specifications and the design/build strategy that provides the bidding company with some flexibility. Both have a place, and companies quoting this type of work can be profitable at both.

HARD BIDS

Hard bids have a place but are often referred to as harvesting the “low hanging fruit.” Don’t get me wrong, there are many successful companies that work this angle exclusively. It’s about pricing signage as “widgets” based on the supplied drawings and specifications provided by the architect. These projects are often from state, federal and educational markets that require very competitive pricing, so margins are usually lower. Successful companies make the lower margins profitable by increasing volume. If you are a company that



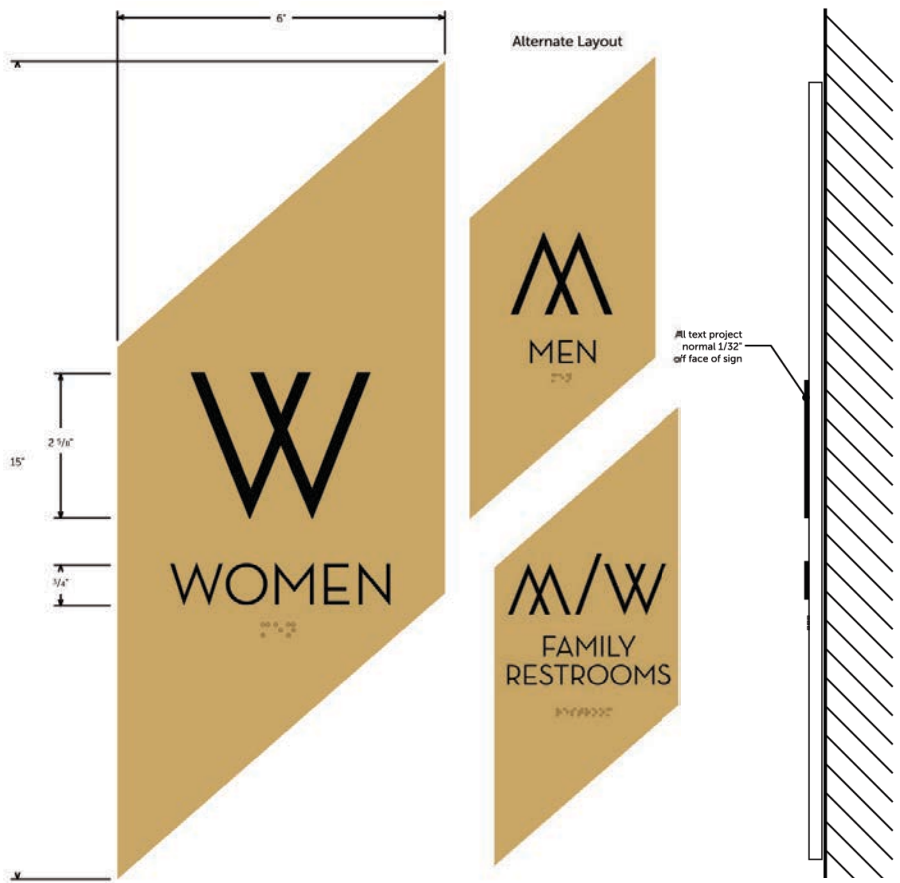
only goes after one or two of these types of projects, this market might not be for you. But if a company is set up to deliver multiple projects a year there is great opportunity.

THE TWO TYPES OF HARD BIDS

One where the owner puts out a request from quotes from multiple general contractors (GC). The other where the owner has interviewed GCs and appoints one to act as a construction manager (CM).

In the first case, multiple GCs will put out a request for bid on the signage packet for a project. It is necessary to go through all documents and create your quote. But in this scenario, you need to do your homework and find out all the bidding GCs and provide them all the same quote. Once a GC is awarded, additional follow up on the quote is necessary and the salesmanship comes into play if a reduction in margins can win the project.

CMs are a slightly different story, as the results are usually in a publicly announced bid opening for the different trade’s scopes of work. This often requires the sign company to fill out extensive pre-qualification paperwork to be accepted to bid. Sounds like a lot of work — and



Value-engineered design/build concepts. Budget here is a concern, so the manufacture of the signage is a simple two-color to hold to budget constraints. The value is in introducing unique shapes and styles for the sign types.

INTERIOR SIGNAGE

ROOM SIGNAGE TO BE REQUIRED AT ALL INTERIOR DOORS

ROOM	LOCATION	TYPE
MEN	(TOILET ROOMS)	2
WOMEN	(TOILET ROOMS)	2
JANITOR	(JANITOR CLOSETS)	3
STAIRS	(STAIR IDENTIFICATION EACH FLOOR)	2A
ELECTRICAL	(ELECTRICAL ROOMS)	3
MACHINE ROOM	(ELEVATOR MACHINE ROOMS)	3
MECHANICAL	(MECHANICAL ROOMS)	3
USE STAIRS (Accessible exit)	(AT ELEVATOR LOBBIES)	SEE A611
FLOOR (ENGRAVED)	(CALL BUTTON SIGNS AT ELEVATOR LOBBIES)	SEE A611
LUMINOUS EGRESS (ENGRAVED)	(FLOOR IDENTIFICATION SIGNS IN STAIRS)	3
ROOF (SEE A605)	(ROOF IDENTIFICATION SIGN IN STAIRS)	3
MAXIMUM OCCUPANCY LOAD	(ASSEMBLY AREAS)	5

SIGN TYPES

SIGN TYPE

SIGN TYPE 3.6" x 1.0"

DEVICE LOCATIONS

NOTE: ALL ELECTRONIC LOCKS ON EGRESS DOORS SHALL UNLOCK UPON ACTIVATION OF THE FIRE ALARM AND SPRINKLER SYSTEM.

SECTION TO 14 23 - PANEL SIGNAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Panel signs.

1.3 DEFINITIONS

A. Accessible: In accordance with the accessibility standard.

1.4 COORDINATION

A. Furnish templates for placement of sign-assembly devices embedded in permanent construction by other installers.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For panel signs.

C. Samples for Initial Selection: For each type of sign assembly, exposed component, and engraved finish.

D. Samples for Verification: For each type of sign assembly showing all components and with the required finishes, in manufacturer's standard size unless otherwise indicated and as follows:

1. Panel Signs: Full-size samples.
2. Full Applied Vinyl-Character Signs: Full-size samples of characters on glass.
3. Engraved Acrylic: Full-size samples of each signatory type.
4. Full-size Samples, if approved, will be returned to Contractor for use in Project.

E. Product Schedule: For panel signs. Use same designations indicated on Drawings or specified.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For installer and manufacturer.

B. Evaluation Reports: For post-installed anchors and power-actuated fasteners, from ICC-ES or other qualified testing agency acceptable to authorities having jurisdiction.

C. Sample Warranty: For special warranty.

Left: The common overcomplicated pages of specifications for signage from an architect. Be careful to read through these because often there are call outs for additional signs for a program that are not in the project drawings. I often find these specs good reading to fall asleep at night!

Below: This project had additional wall covering graphics on glass and dry wall. You need to be diligent in searching as this is usually under the signage scope. Besides searching for the obvious – signs, signage, and letters, you need to be aware that different architects use different terms. Look for wall coverings, graphics, and even identifying devices.

Architectural drawings showing various signage details, including wall-mounted signs, door signs, and window signs. The drawings include dimensions, material callouts, and installation details.

Typical drawings found in architectural plans where the architect has his concept of signs and the door schedule needs to be referenced for a signage take-off.

it is — but the advantage is this process “weeds out” a lot of competition. A bid opening for the signage scope usually needs at least three bidders. If they don’t get them, it goes back out to bid until they get three. Bid proposals also involve a plethora of documents that need to be signed and notarized.

These projects still involve going through and quoting all interior, exterior, permitting, submittal costs and installation and are presented in the bid documents as a “lump sum” number. You do not provide the detailed quote at this time. If awarded, the CM will conduct a scope review and this info can be shared with them at that time.

THE DEVIL IS IN THE DETAILS

Hard bidding almost always involves entering contracts. GCs and architects are notorious for putting lines in the specifications like “all code-related signage” that

might not be in any sign-type drawing, specifications, or sign schedules. Some GCs and CMs are understanding, and additional signage not quoted can still be done with a change order (CO). Keep in mind these types of projects will not allow you to bill a deposit. Instead, progress billing on an agreed schedule of values (SOV) is billed once a month on what is completed.

The bottom line is that a good, detailed estimator is needed at the front end, as well as administrative personnel familiar with filling out pre-qualification paper work plus contracts and an accounting department that understands the pay applications involved during the life of the project. Most importantly, a skilled project manager to organize and coordinate all is essential.

This is not “relationship” selling; it is all about thoroughly understanding the signage scope and being very competitive.

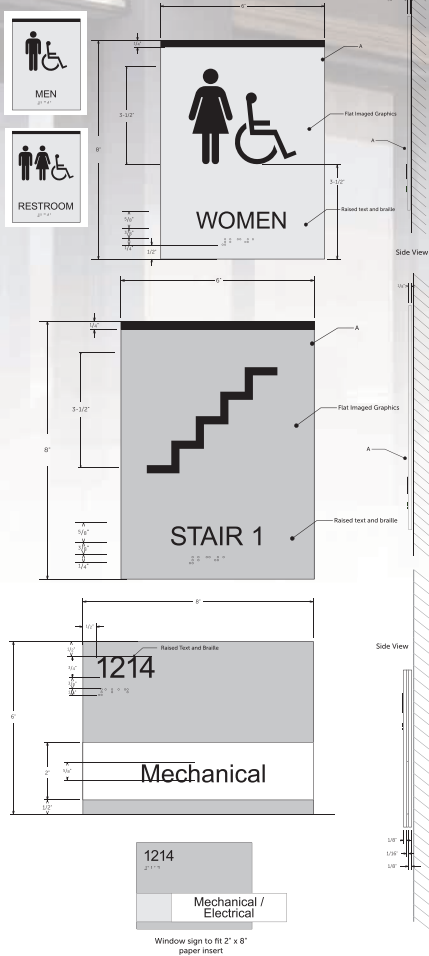
Fortunately, not all projects fall under this umbrella, but most do. Occasionally you may see that signage is owner-supplied or put in an allowance. This opens the door for a more design/build strategy.

DESIGN/BUILD

Ahhh, the design/build. It opens new opportunities, puts more control in your court and brings back more of a “relationship” sale. Although it is a small percentage of hard bids it still exists as outlined earlier. But this will be found in more private projects like multi-housing, senior living projects and rebranding of acquisitioned properties. Your company has more input in creating the interior and exterior portions of a program.

THERE IS MORE THAN JUST ONE OPTION

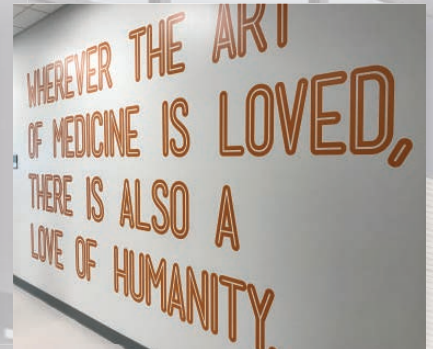
Design/build can offer the ability to offer a company’s strength in the design at



Submittal drawings of sign types based on the initial architect drawings and specifications.

the front end and material choices used in fabrications. It provides the option of doing some really creative work on one end and providing value-engineered solutions on the other. The key here is that you are providing appropriate options for the client's needs.

It all starts with pulling a budget number and expectations from your client. Perhaps the client is already over budget on other



Completion photos of the wall coverings the architect called out on the project.

parts of the project and looking for a solution to create a sign system that fits. On the other end of the spectrum, a client is willing to spend the money to create a very unique high-end themed environmental graphics program to build its branding.

This creates a tiered level of pricing. Some may call this "speculative" selling. If you have successfully pulled a budget number and have a good relationship, the stage is set to provide a fulfilling solution for a client and the only additional cost is in the design process.

If a client is teetering between bidding out or a design/build, a strong case can be brought to their attention of the time and costs involved on their part of bidding. For example, putting projects out to bid involves the client completely understanding the signage scope and providing drawings and specifications together so they can accurately assess "apples to apples" quotes. That takes a lot of resources on the part of the client and time. It is estimated that this process on averages takes eight weeks or more to send out quote requests, evaluate, and then enter into an agreement. With time being one of the most valuable resources for a client, you can let them know they can avoid all that time and cost and

work on a budget and expectations of what they are looking for and deliver solutions with only absorbing and billing the design costs up front. Shaving two months on timeframe and costs involved on the client's end is the key to the value for the client.

CHOOSE WISELY

Both strategies have a place. A good balance of both can have the advantage of filling a company's backlog to avoid the dreaded "rollercoaster" sales cycle often seen in the sign industry. Understanding the differences between the two allows a company to market and allocate sales resources appropriately. Maybe you just want to pursue the design/build projects or you want to go after volume to feed manufacturing. Regardless, learn each strategy, have the drive to go after it and the knowledge to know the difference. **GP**

JAMES DEAN HAMILTON has been writing for NBM since 1995. After a decade sabbatical from writing, he is back in the saddle. With over 30 years' experience he has a vast knowledge of everything signage, marketing, and workflow management.



Planning for Trade Shows in 2022



BY JULIA SCHROEDER

With the return of in-person trade shows, how can companies jump into the market for supplying trade show and display graphics?



Top: Choosing a display depends on a variety of factors, such as location, portability needs, design, and setup. (Image courtesy Showdown Displays) **Left:** Many suppliers have an expansive range of product and custom production capability and can accommodate most budgets and booth sizes. (Image courtesy Orbus)

The past year brought the return of in-person trade shows, and companies are getting in gear for another year of building brand connections. While the trade show market certainly took a hit in 2020, it's starting to rebound, according to Ryan McCartney, Showdown Displays.

"We're seeing that companies are spending less, therefore booth spaces are getting smaller," says McCartney. Pre-pandemic, it was common to see large booths lit up throughout the show floor with dozens of employees there to assist with questions.

The smaller booth sizes may have to do with budget cuts, along with the challenge of supply chain and staffing/hiring shortages, poses Kelly Yuen, Orbus. "Although many trade shows and events expect to carry on with in-person attendance next year, exhibitor booths may look a little different."



Above: High-quality graphics are important when showcasing a company's messaging or brand identity at trade shows. (Image courtesy Showdown Displays) **Below:** Looking ahead at upcoming trade shows in 2022, it is encouraged that companies plan and place orders well in advance to mitigate some of the current challenges with supply chain and staffing shortages. (Image courtesy Orbus)

Some companies may exhibit with a different booth size than usual, resulting in a need for new or reconfigured products to accommodate these changes. While other companies may be in a different financial position than previous years and may be looking for rental opportunities instead.

Either way, trade shows continue to evolve with the advancements in technology and growing market demand. Yuen says, "Most companies are in need of new graphics that deliver new, refreshed messages, and value propositions."

TRENDING TRADE SHOW DISPLAYS

While Silicon Edge Graphics Displays (SEG) continue to be one of the most popular looks at trade shows, an increasing number of people are utilizing portable displays due to the ease of setup and smaller budgets. Portable displays can be equally as effective, McCartney ex-



(Image courtesy Orbus)

DISPLAY GRAPHICS FOR TRADE SHOWS AND MORE

KELLY YUEN,
ORBUS

The display graphics market has endless opportunities beyond the trade show market. Displays can be seen everywhere, from grocery stores and doctor's offices to nail salons and airports, along with commercial interiors of all types. Since portable displays are designed to be fast and easy to set up, take down, store and ship, they can be utilized in various types of environments.

ADHERING TO SAFETY GUIDELINES

When planning and setting up a booth space, you'll want to consider the spacing of displays and products in the booth in order to comply with social distancing guidelines. Keep attendee traffic and flow in mind and visitors to the booth. Additional PPE products to consider having in the booth include sanitizing stations, sneeze guards, and masks.



Along with backlit signage and fabric displays, the trend of light boxes skinned with vibrant stretch fabric graphics will continue, according to Orbus' Kelly Yuen. (Image courtesy Orbus)



You'll see these at trade shows and large events for the foreseeable future, so it's a good idea to make sure they are among your product offerings. (Images courtesy Showdown Displays)

plains. Other display options include fabric backwalls, collapsible displays, fabric lightboxes, modular displays, and fully customized displays.

Fabric and Vinyl

"Seamless fabric display graphics are a unique and impactful way to show brand messaging, design, and capabilities," says Yuen. Fabric is the most popular material used in and for displays such as, collapsible displays, tube-frame displays, modular displays, hanging structures, and large-scale custom exhibits, according to Yuen. Whereas vinyl is the most popular material used for banner stands and hanging banners used outdoors.

Fabric prints are taking over, McCartney adds. "Vinyl is known to be a cost-saving option and tends to give off a cheaper look," McCartney says. "Fabric prints are a clean, high-quality print that is easy to handle."

Additionally, McCartney explains the shipping is more affordable, due to its ability to fold. Fabric displays are likely going to continue as a popular item heading into 2022.

Backlit and SEG Signage

"SEG signage continues to be the signage of choice in both retail and trade show environments due to its clean look and ability to grab people's attention," says McCartney. The ease of changing out the graphics in retail stores is ideal for messages that need to be changed often.

SEG signage provides the ability to easily update or change the graphics without needing to replace the whole display, while backlit displays provide eye-catching, illuminated attractions, says Yuen. Backlit displays deliver a big impact at trade shows and elsewhere by bringing more attention to the brand and messaging. "The possibilities with backlit and SEG signage are

plentiful as they can be found not only on the trade show floor but in retail stores, offices, airports, and commercial interiors of all types," Yuen adds.

Custom Combinations

Along with backlit signage and fabric displays, the trend of light boxes skinned with vibrant stretch fabric graphics will continue, according to Yuen. "From smaller exhibits to large in scale, the combination of frame, fabric and lighting draw attention and accelerate attention gain," Yuen says. Custom exhibits and displays can offer a unique way to showcase a brand, giving exhibitors the freedom and flexibility in the design process.

CHOOSING THE RIGHT DISPLAY

Choosing a display depends on a variety of factors, such as location, portability needs, design, and setup. The size of the booth space and budget can also dictate which



Left: Silicon Edge Graphics Displays (SEG) continue to be one of the most popular looks at trade shows. **Right:** Trade shows continue to evolve with the advancements in technology and growing market demand and companies need new graphics that deliver new, refreshed messages, and value propositions. (Images courtesy Orbus)

display/items to go with. McCartney recommends going with items that draw attention and are easy to assemble.

Many suppliers have an expansive range of product and custom production capability and can accommodate most budgets and booth sizes. When it comes time to choose a supplier, McCartney encourages choosing a partner you can trust. “Your customer has budgeted and planned their booth space for months to prepare for their trade show,” McCartney says. “Many of them may only use this format one or two times a year to promote their brand, live and in-person, so it’s essential that everything goes smoothly.”

MAKING THE MOST OF DISPLAY GRAPHICS

High-quality graphics are important when showcasing a company’s messaging or brand identity at trade shows. Trade show and display frames and graphics can be reused at multiple events, making them a reliable and economical solution. To make the most of the displays, Yuen advises the graphics be treated with care when setting up and breaking down the booth.

“It is strongly encouraged to fold the graphics and put them back in the graph-



Fabric displays are very popular because of their ability to be re-used and shipped efficiently. (Image courtesy Showdown Displays)

ics bags after each use – this will result in less headaches on your next trade show or event setup,” says Yuen. Additionally, having backup graphic options is always a good idea. “Graphics are easy and economical to replace,” Yuen elaborates. “Having several graphics to use with your display

frame system is always an option, which provides flexibility as well.”

PLANNING AHEAD

Looking ahead at upcoming trade shows in 2022, it is encouraged that companies plan and place orders well in advance to mitigate some of the current challenges with supply chain and staffing shortages. Additionally, Yuen encourages customers to:

- Follow-up with open opportunities with clients,
- be open to alternative options, and
- to place orders with complete and firm order details, final artwork, as well as the desired in-hands date and ship-to details.

Just as trade shows have provided the space for companies to grow prior to the pandemic, new shows in 2022 allow more and more opportunities to supply fresh, eye-catching displays. **GP**

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.



THE ELECTRIC SIGN CREATION PROCESS

MAPPING OUT YOUR TEAM'S RESPONSIBILITIES

If you had to write out the “electric sign process” for your shop, and you had to compress it down to a set number of “calls to action,” what would that look like and how many steps have you diagrammed and outlined so that each team member understands what their role is, and what the next step is in the process?

Have you attempted to create a flow chart that accurately describes your process and outlines the call-to-action steps, as well as the protocol to follow when something goes wrong? Running across the shop with artwork in hand while yelling out the salesperson’s name is not to be considered a proper “protocol.”

The tediously enlightening task of mapping out each team member’s role and duty within the company and within the process allows everyone to evaluate their own efficiencies, their stumbling blocks, and their passions for performing their role. Fine tuning of these processes will help to tighten up the game for a more efficient department.

As you may or may not know about my articles, I am a huge proponent of identifying the motivating passion of your team members so that you can better understand why certain tasks work well for them, and which ones do not.

This exercise will help in assigning

tasks to those who can excel at it, and not get bogged down in the complexity or monotony. The perfect example of this is myself — I truly do not like a certain part of my process, yet it’s one I must stay on top of because it’s vital to my operation ... and that is bean counting. Nope, let me design and create graphics all day because I’d much rather leave the bookkeeping to those who have a passion for counting them than beans. Yes, I can do it, but I do not do it efficiently because my heart is not in it like it is with designing.

How much smoother do projects seem to run when you have the right people,



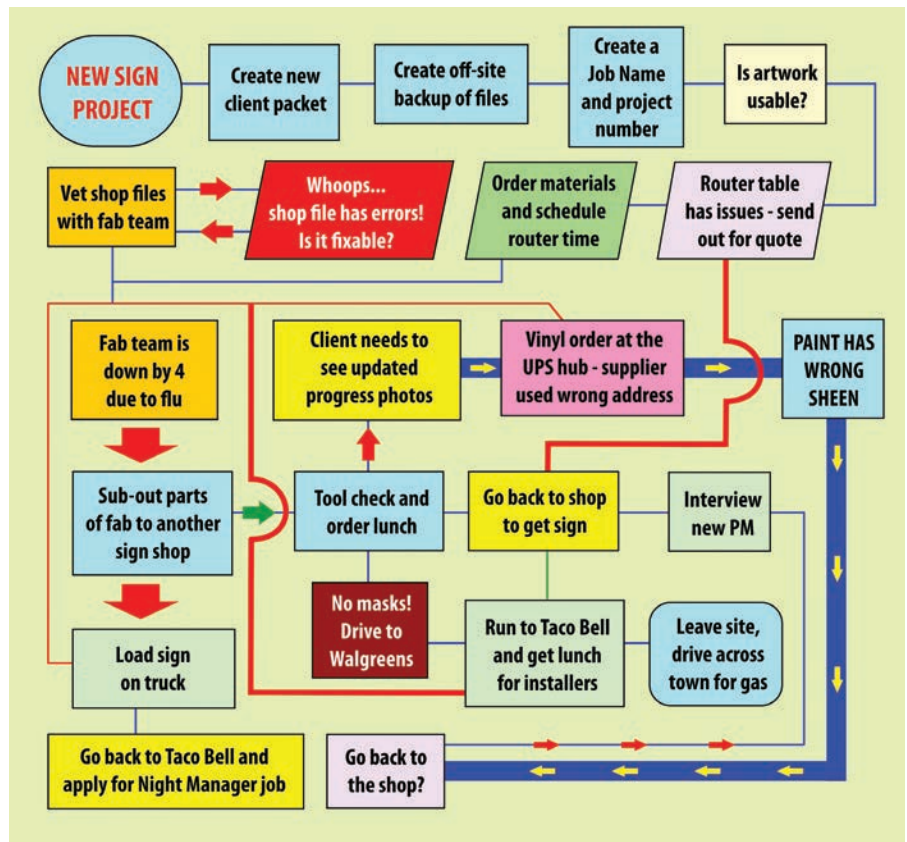
personalities, and passions in place? I know, you probably are saying, “Yeah, in your dreams, I can’t even find good team members who show up on time, let alone matching their passions to the task.”

I can clearly see and understand that dilemma, and I hope to not sound glib when I say you have the perfect opportunity to build your team the right way by changing that which you use to attract your team members ... if you attract through a higher hourly wage, then you attract those who value their personal income as their primary focus (we all do that to a certain extent). But if you use an approach where the employee’s happiness and satisfaction is a focal point, you will attract a much different candidate.

One of the keys to identifying your calls to action is the establishment of your shop’s set of in-house “unbendables.” These are the steps your team members take to ensure a preset level of product quality, efficiency, and on-time delivery. These also reflect your team’s commitment to always deliver a superior product that meets or exceeds those standards.

Unbendables: Steps or processes that your shop has established that must take place for quality, speed, and accuracy during fabrication and installation. Topics may include things like:

- Never start a project until the required permits and authorizations are IN HAND, not just on the city’s server.
- Always inform the customer up front, in writing, that production will take six weeks and therefore a check for the balance due is expected on the day of installation.
- Always speak of delivery times in terms of “it will take six weeks start-



What the process of creating an electric sign can often feel like. (Image courtesy Matt Charboneau)

ing the day after the permit is in hand.”

- Always include a verifiable element to all survey photos, such as a yardstick, or something that confirms the distance measured.
- Always ask for a design deposit up front.

What unique scenarios have occurred that have made you take notice and change the way you have handled that step of the process on subsequent, similar projects?

When a project has had some issues, have you looked beyond the process and examined the behind-the-scenes and between-the-lines mindset/perspective of

your team members? What is their take on your established electric sign process? Is it your process or the teams process that they put together? Have you asked your team what improvements they feel are needed for a smoother process? You may be shocked to find out what they think.

Please note that this is written for and directed toward the small to mid-size commercial sign shop that is just beginning to establish a process for their electrical sign projects.

For folks in the electric industry who are crew members on the big sign fab shops out there (the national and international mega sign shops that handle the big projects),

they have the luxury (in most cases) of having a team of people who make sure all the T's are crossed so projects have a better chance of running through the shop smoothly. However, for smaller shops, project management is sometimes not a title held by one team member, but rather it's a shared task by multiple people who "project manage" their roles, and the roles of the other team members as needed.

Also, keep in mind that there are so many similarities in the differences between various electric and architectural sign processes, the shops that fabricate them and the personalities running the processes. My hope is to enlighten and enhance the understanding and awareness of the speed bumps that can derail a sign project. It is not intended to create a battleground for over-focusing on details that can bog down the process. It is intended to enlighten, inform, educate and mentally prepare for the electric sign process by looking beyond what's on the screen and understanding the project from a much broader perspective.

So, I do not want to even attempt to create the end-all-be-all electric sign shop call-to-action list as every shop out there has its own unique twist on every step of the process. You cannot compare from company to company in specifics, but the end result is the same.

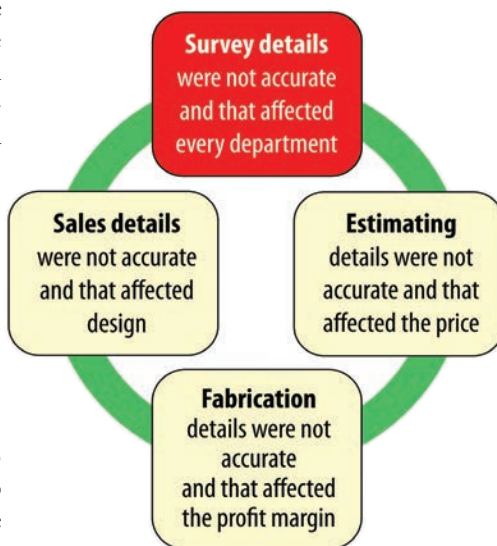
CALLS TO ACTION

Phew, now that all the disclaimers are through, let's look at this process from a perspective that you may or may not have considered in the past. These are what I call the calls to action for the electric sign process — follow these and your odds of having a smooth-running fabrication and installation process will be greatly increased.

1. Take ownership of your role in the process. Own it. Period.
2. Identify the need that this sign is fulfilling for the end user — and make sure everyone on the team un-

derstands it. It can make a huge difference in which decisions are made regarding unexpected events.

3. Identify the potential obstacles of the project up front by mapping out all the potential things that could go wrong. We always envision how right things will go, but how often do you plan out the steps to take if it's not going as planned.
4. Authorization of change orders — making sure the T's are crossed.



Setting up a standard of checks and balances can help your process run profitably without riding out the merry-go-round of inaccuracies.

(Image courtesy Matt Charboneau)

5. Materials acquisition — confirm JIT arrival dates especially during these challenging COVID times where everything is more expensive.
6. Materials shipping dates — availability and timing (that goes without saying).
7. Artwork — I can't say enough about this department. Get signatures, get authorizations, and make sure you verify artwork immediately. Waiting even a week could delay the job in ways that cannot be recouped.

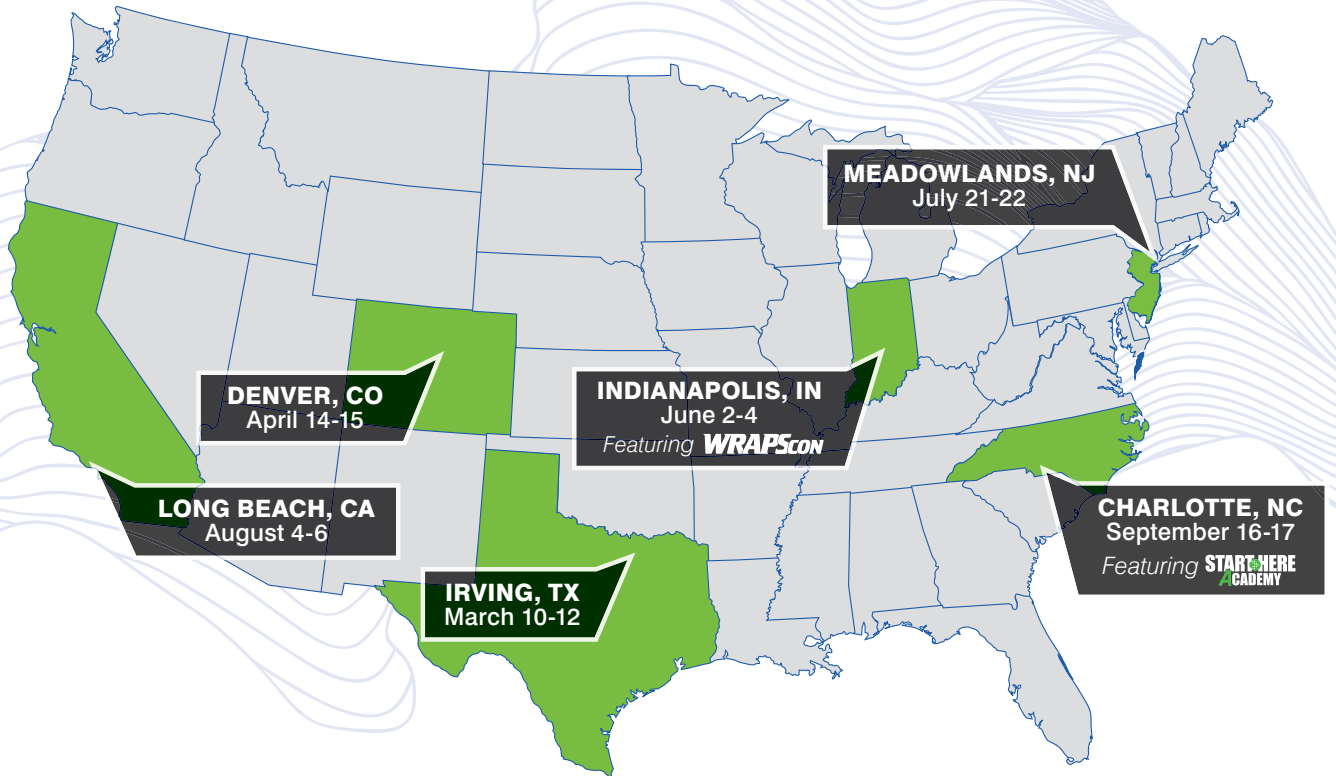
8. Labor acquisition — need a pinch hitter or not for this project?
9. Logistics of transportation of the sign to the site without damage (tie-down straps and two-by-fours) are those materials in stock and ready for use in loading a sign onto a flatbed?
10. Final payment of the project from the client. This should never be left to the "we pay out every 30 days" plan unless you have a good track record with them. Let's face it, they have had anywhere from six to eight weeks from the day the permit was approved till the day the sign is installed. That is more than 30 days, so tell your customer to cut both the deposit and the final payment check at the same time. That way, on the day of install and subsequent final inspection, the check will be in hand, ready to be picked up by the salesperson at the jobsite. (FYI: Been doing it this way for years ... not always 100%, but most of the time the client obliges because I tell them it's my policy)

In the end, you will gather up all the details, steps and parts, and write out your process. The calls to action are key to making sure you don't forget a critical step that could cost the project in lost profits. Your calls to action list may have 20 or 30 topics to consider, and there is nothing wrong with a longer list. In my humble opinion, the deeper everyone has their roots planted in what they love to do, the smoother everything will go, and the better the chances are of recognizing a comfortable profit on the job in the end. **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.

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MATCHING COLOR

DETERMINING AN EXACT COLOR MATCH IS EASIER THAN YOU THINK

THE CONCEPT. Sometimes it is necessary to perfectly match colors within the same document or between two separate documents. Matching colors is actually about “mapping” colors. Digital color is a byproduct of the ones and zeros of the binary code that computers use to perform their numerous tasks. The color that you see on your monitor color is the graphic display of the numerical values of pixels. If the color values of an area are known, then the colors in a targeted region of an image can be remapped to correspond to the source area.

BITMAP

The math behind this process is relatively simple. To understand it better, let’s start with the simplest type of document, a bitmap. Each pixel in a bitmap image has a bit depth of one bit. Bitmaps support only black or white pixels. Think of a light switch that can be switched on (white) or off (black). (Fig. 1)

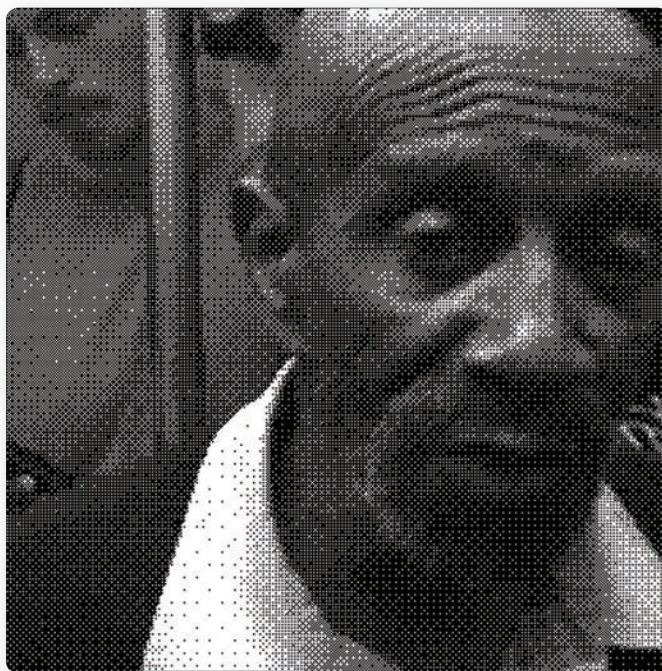


Fig. 1: A bitmap contains only black and white pixels. (All images courtesy Stephen Romaniello)

GRAYSCALE

A grayscale image has variable shades of gray ranging from black to white. (Fig. 2) Each pixel in a grayscale image contains eight bits of information (eight light switches). It can produce a potential of 256 values. ($2^8=256$). Of course, grayscale images look like black and white photographs because they lack color information such as hue and saturation.

RGB

The pixels in an eight-bit RGB image contain eight bits of information in each of three channels. Each of the 256 levels of color in a channel is a shade of the channel’s color that ranges from 0, no color or black, to 255, full color. There are three color channels for each pixel — a red, a



Fig. 2: A grayscale image has color neutral pixels that are variable shades of gray ranging from black to white.

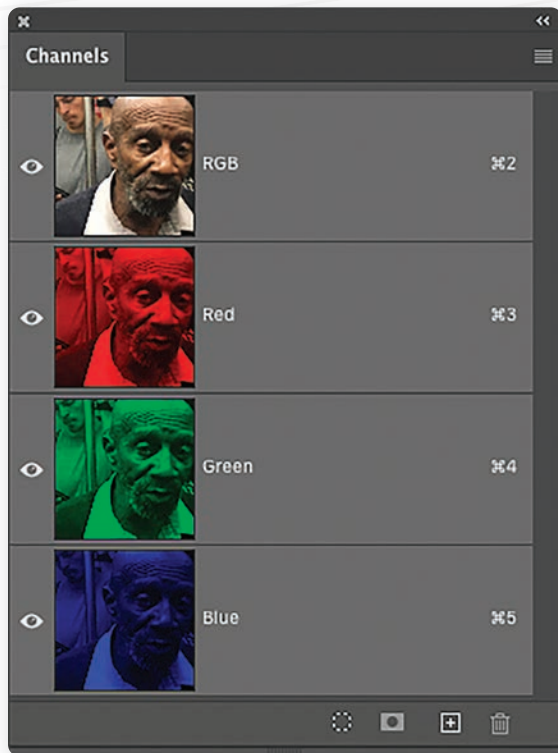


Fig. 3: An eight-bit RGB image contains pixels with eight bits of information in each of three channels (red, green, blue).

green and a blue. The color potential of an RGB image then is 256^3 or 16,777,216 possible combinations of on-off switches or red, green, blue mixtures. (Fig. 3)

HUE /SATURATION

In Photoshop, the color-mapping commands are found under the image > adjustments submenu, and there are corresponding features in the adjustments panel (Fig. 4) that produce adjustment layers. The hue/saturation panel alters RGB color characteristics but uses a specific color model to redefine the numerical values.

The hue is the numerical value of the color in degrees on a color wheel. The zero point on the default hue slider represents the values of all the colors on the image. (Fig. 5) In the hue/saturation panel, values displayed in the hue box reflect the amount of rotation from the color's original posi-

tion. Dragging the slider to the right, or a positive value, indicates a clockwise rotation of the color wheel. Dragging it to the left, to a negative value, indicates a counterclockwise rotation.

The color bars at the bottom of the panel are a graphic indicator of how the colors change as the hue slider is dragged. By default, the color bars are aligned. The top color bar represents a color wheel that has been cut at the 180-degree point. As the hue slider is moved, the top color bar remains in place and represents the entire range of colors prior to the change. The bottom color bar moves as the hue slider is dragged and realigns with the colors on the top bar to reflect the relative change of colors.

Fig. 4: Color-mapping commands are found under the image > adjustments submenu and in the adjustments panel.

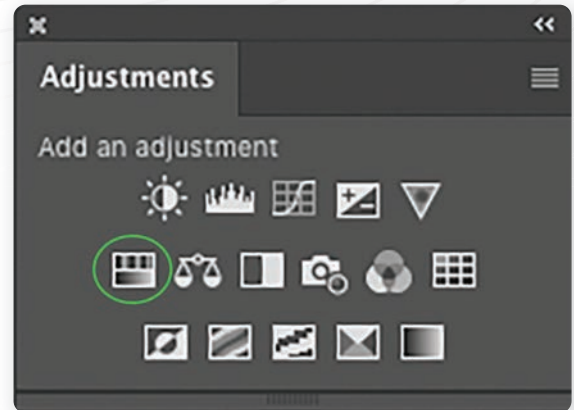
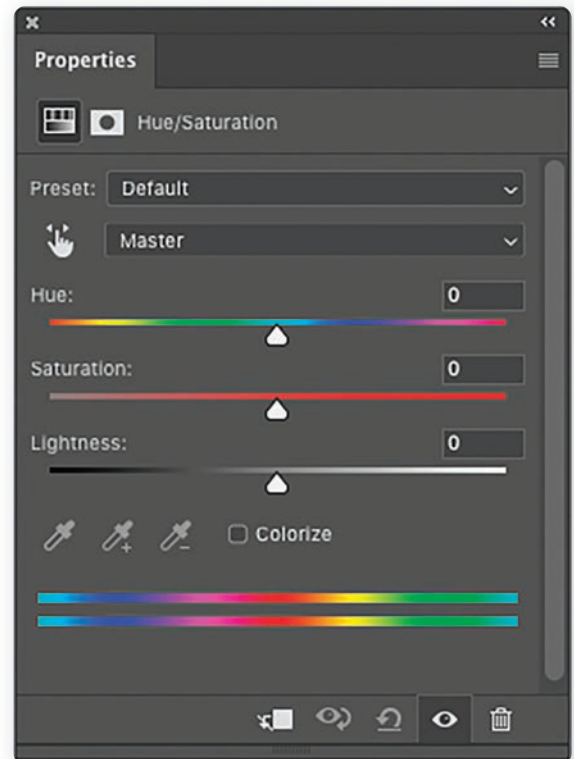


Fig. 5: The hue is the numerical value of the color in degrees on a color wheel. The zero point on the hue slider represents the value of all the colors on the image.

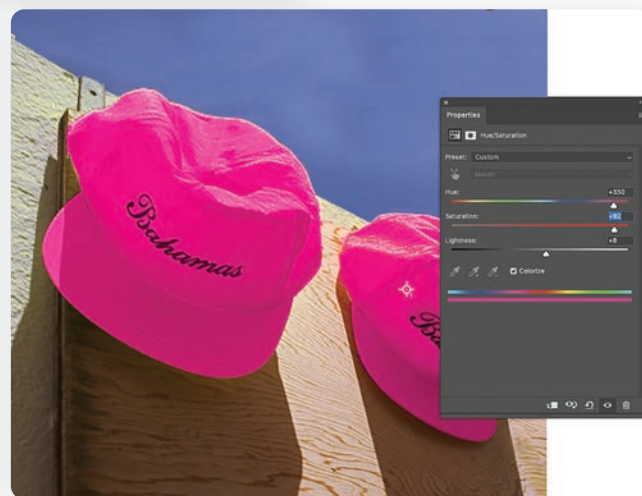


Adjusting Saturation and Lightness

The saturation specifies the intensity of colors, from zero which is neutral gray to 100%, which is full intensity. By the same token, the darkness and brightness of a color is affected by dragging the lightness slider. The 0 point marks the current lightness value of the image. Dragging the slider to the left darkens the color and to the right lightens it.



Fig. 6 (left): When the colorize box is checked, the hue and saturation sliders change to represent absolute values instead of relative ones. **Fig. 7 (below left):** Click on a midtone region of the color to be matched. The info is displayed. At the bottom of the panel, the RGB values of the sampled point are visible. **Fig. 8 (below right):** Click the icon and scroll to HSB to change the numerical readout to hue saturation and brightness.



COLORIZING

Gray pixels have RGB values that are equal. For example, the RGB values for medium gray are red = 127, green = 127, and blue = 127. When the colorize box in the hue/saturation panel is checked, the hue and saturation sliders change to represent absolute values instead of relative ones. (Fig. 6) The default hue is the current foreground color. The hue slider by default reads 0 degrees on the left and increases as the slider is dragged to 360 degrees on the right, and the current foreground color's position on the color wheel is displayed as a ramp at the bottom of the panel. To change the hue, drag the slider to the desired color or, more precisely, enter its position on the color wheel (in degrees) in the hue value field.

COLOR MATCHING

There are two distinct ways to match colors between documents or on two areas of the same document. My description of the hue/saturation command hopefully has shown how changing numbers changes colors. With this idea in mind, you can sample a color from one area and apply similar numbers to another area for a perfect match.

First, choose the color sampler tool. It's in the eyedropper fly-out in the tools panel. In the options bar, set the *Sample Size* to *3 By 3 Average* to sample a group of nine pixels.

Now, click a midtone region of the color to be matched. Immediately, the info panel is displayed. At the bottom of the panel the RGB values of the sampled area are visible. Next to the sample point list, you'll see a little eyedropper icon. Click on it and scroll

to HSB to change the numerical readout to hue saturation and brightness. (Fig. 7) The numbers change to a hue and saturation reading.

Carefully make an accurate selection of the region you want to modify with the most appropriate selection tool. Choose window > adjustments to display the adjustments panel. Click the hue saturation icon, and then check the colorize box. Drag the hue slider to the sampled hue value or type the number in the box, in this case 330 that is a pinkish magenta color.

Drag the saturation slider to the sampled percentage (92). Adjust the lightness slider by eye until you see that the tone is perfectly matched to the sampled area. Fig. 8 shows the result in colorizing a yellow hat to pink.

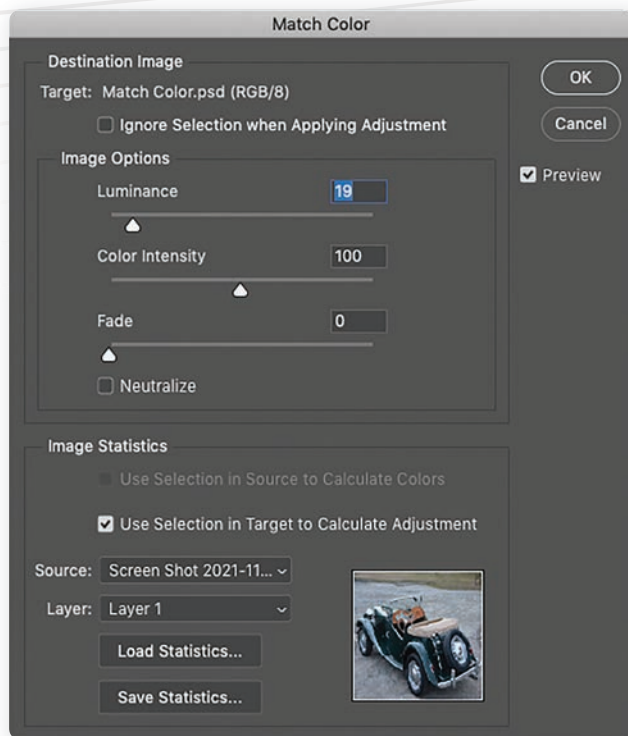


Fig. 9 (left): The result of using HSB numbers to colorize the yellow hat to pink. **Fig. 10A (below):** The target image with the selection.

THE MATCH COLOR COMMAND

Photoshop's Match Color command (Fig. 9) is convenient system especially for matching colors between documents. It's a complex dialog box but once you understand how it works it can be a great asset to your workflow.

TARGET AND SOURCE

Open two images. The current image that is active on the desktop is the target image. This image will be modified. Make an accurate selection on the target image of the area that will be modified. (Fig. 10A)

Designate the source image in the statistics field. (Fig. 10B) The source menu displays a list of all of the images that are open in Photoshop. Choose the image whose colors are to be matched. A selection on the source image limits the match to the colors within the selection and this is important if more precise control is necessary. A thumbnail of the image appears in the box to the right of the menu as in Fig. 9.

The *Use Selection from Target to Calculate Adjustment* applies color from





Fig. 10B (left): The source image with the selection. **Fig. 10C (below):** The result of the color match with a slight luminance adjustment.

a selection on target images and mixes it with the source colors. Check the *Ignore Selection on Target when Applying Adjustment* box if you want to apply the source colors to the entire image. (Really weird results!)

OPTIONS

Image Options controls the extent to which color match will be applied. The luminance slider affects the brightness of the colors while the color intensity slider affects the saturation. The strength of the color match can be controlled by dragging the fade slider. Check the *Neutralize* box to eliminate colorcasts that may result from the color match.

Fig. 10 A, B and C show the target and source images and the results of applying the Color Match feature from the dark green MG to the blue Cobra. The luminance slider has been adjusted a bit to lighten the color.

If desired, click the *Save Statistics* button and then choose a location to save them so that they can be loaded and applied to another image.

STRIKE A MATCH

Both color-matching systems ensure color accuracy when a perfect match is critical. It's always better to work with numbers whenever possible because numbers don't lie. This is especially important when working with product shots and other commercial images where color accuracy is essential. The numerical system works quite well with areas within the same document.



The Match Color command streamlines the process to some degree and is more useful for matching colors between documents. With an understanding of the core structure of digital color, a perfect match is readily attainable.

I can't stress the importance of making accurate selections on both the target and source images when using the Match Color feature. Precisely selecting what you need from the source and applying it to a specific area on the target will ensure the best results. **GP**

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



Take Control of Your Product Offerings

ANSWERING SUPPLY PROBLEMS WITH UV-LED PRINTING



BY
STEFANIE
GALEANO-
ZALUTKO

No industry – or person – is spared from the labor pains of present-day supply and demand. The entire dynamic is not only agitating inflation rates, but also escalating a serious war of words over the last pack of baby wipes in aisle three.

Finding more problems than solutions in the supply chain, some manufacturers are shifting strategies by handing the reins to their customers. In the graphics industry, for example, those businesses limited by an inability to customize products in-house are discovering new-found freedom through in-house UV-LED printing, says Jessica Hauerwas, marketing manager at LogoJET.

“Often [businesses] are dependent on

third-party providers and lose control over their own product offerings, delivery times, quality, etc. We suggest that customers take a look at their current process and how it could improve if they were in control,” she says. “Our team works with customers in developing customized cost analyses for their products. In return, they gain an understanding of what it would cost for them to bring printing in-house and analyze the opportunity for continued growth and profits for their business.”

A UV-LED printer is a wise investment at a time when businesses need creative and logistic flexibility, adds Michael Perrelli, marketing director at Innovative Digital Systems.

“Is a shipping crunch causing pint glass delays?” he asks. “Pivot to plastic versions and print them on the same rotary printer. Acrylic shortage? Switch over to complementary products like wood or aluminum sheets on the same flatbed printer.”

Veronica Storozhev, senior marketing specialist, large-format solutions at Canon agrees. She says a UV-LED printer, like Canon’s Arizona platform, adapts well to a changing product mix both for short-term gains and long-term growth.

Investing in the equipment not only gives graphic artists the proper tools to streamline and boost production with an expanded product line, but also exercise

Global UV-LED printer market projections are expected to reach \$555.5 million by the end of 2024, expanding at a CAGR of 9.2% over the forecast period 2017-2024.

(Image courtesy Canon Solutions America)



more independence. With a UV-LED printer on board, businesses can push creativity to new levels and diversify opportunities, while simultaneously cutting costs and boosting profitability.

GETTING UP TO SPEED

In UV-LED printing, a printer distributes ink onto the surface of a material, or substrate. Then, specially-designed UV lights cure and encapsulate the ink immediately. The result is an abrasion-resistant finished product that can be handled within seconds of being printed – an efficiency gain and convenient bonus compared to aqueous and solvent or eco-solvent printers.

In recent years, suppliers have made significant advancements to overcome two challenges with UV-LED printers: speed and ink adhesion.

“The speed wasn’t slow per se, but it was

hard to match that of longer runs on analog technology like pad and screen printers,” Perrelli says. “Those hindrances – if you can even call them that – are moving to the rear-view mirror. Speeds are faster than they ever have been. Ink formulations are better too, and they adhere to more products than ever before. Now, with the ease of incorporating a flame treatment unit into production, like our PYRO-TRACK system, adhesion challenges are negated.”

Perrelli says production speed is further enhanced by Innovative Digital Systems’ scan-and-print applications. Similarly referred to as “print-on-demand” or “just in time printing,” this functionality allows graphics professionals to simply scan a code to recall preset artwork.

“It’s an awesome tool that is equally viable for larger production companies and



(Image courtesy Canon Solutions America)



The SureColor V7000 4' X 8' is Epson's first UV flatbed printer designed for printing outdoor signage, promotional goods, and more. (Image courtesy Epson)

“GOING FORWARD, WE CAN EXPECT TO SEE FURTHER ADVANCES IN THE LED CURED, UV-INK FORMULATIONS THAT THESE SYSTEMS UTILIZE. THE USABLE WAVELENGTHS GENERATED BY LEDS ARE MUCH MORE LIMITED AND SO, MORE CARE IS REQUIRED IN THE SELECTION OF THE INGREDIENTS IN THE INK.”

– VERONICA STOROZHEV, CANON

smaller shops that thrive by offering customized products,” he says.

Storozhev points to the user-friendly construction of the Canon Arizona series as an additional efficiency improvement. “The LED curing systems in our printers provide the benefit of instant-on functionality, unlike traditional mercury vapor curing systems that need to warm up before printing can begin,” she explains. “LED curing is ideal in situations where

the printer might sit idle at times during the day but then be required to quickly produce a print for a waiting customer.”

For LED-based flatbed systems, there are printers that utilize UV-curable inks to produce very high-quality prints onto various rigid substrates.

LEARNING NEW TRICKS

Having the ability to print on nonconventional materials is one of UV-LED

printing’s most attractive features – and a game changer for graphic specialists, says Adam Tourville, director of sales North America at Direct Color Systems. With UV printers, ink sits on top of the substrate, rather than soaking in, opening the door for materials like Coroplast, Dibond, PVC, ABS, acrylic, Lexan, polycarbonate, polyethylene and more.

For example, Direct Color Systems’ patented products are capable of printing



Adam Tourville, Direct Color Systems, says the company's UV84-DTS UV/LED flatbed printer is the only patented ADA/Braille 4' X 8' printer on the market. (Image courtesy Direct Color Systems)

ADA/Braille and Textur3D, which build up the ink to create 3D signage.

Tourville says the company's UV84-DTS UV/LED flatbed printer is the only patented ADA/Braille 4' X 8' printer on the market. Designed for customers seeking a small footprint, the 1800S Series UV/LED flatbed printer can handle up to 12" X 24" printing with z-axis height options across models to accommodate substrates at various heights. It can print rigid substrates, ADA/Braille signage, Textur3D (dimensional signage), garments, promotional items, wood and more.

By contrast, Pirelli says the Innovative

Digital Systems PRISMA Z-max flatbed works with a variety of printable materials due to its speed and height clearance. Thanks to a 19.7" z-height clearance, the printer's 43" X 24" printable area unit allows for easy printing of large items beyond signage.

For example, coolers and cases can be emblazoned with promotional language without needing to remove lids or covers. There are also options, like the Revolution 360° T, for direct printing on cylindrical flat wall and tapered/conical objects such as water bottles, tumblers, and pint glasses.

"We have large brand-name customers that operate 10+ of these rotary units in a

single location, and then we have smaller engraving shops that have added it to their growing list of technology," Pirelli says. "Both units are easy-to-implement and make quick work of numerous items."

As technology improves, Epson focuses on the components print providers want and need, says David Lopez, product manager at Professional Imaging, Epson America Inc. From the details of usability features to the design of print head arrangements, he says every part of the printing system is well thought out to address the graphic industry's demands.

Lopez points to the SureColor V7000 UV flatbed printer, an entry-level option



The LogoJET UVx90R produces textured imprints on a variety of substrates, from dog tags, signage and golf balls to tote bags, cups, and mugs. (Image courtesy LogoJET)

“I BELIEVE THE COMPANIES THAT WERE ABLE TO DIVERSIFY AT THE BEGINNING OF THE PANDEMIC ARE BETTER SUITED TO WEATHER THE CURRENT SUPPLY CHAIN ISSUES, WHICH I HEAR ARE GOING TO LAST UNTIL LATE 2022.”

– ADAM TOURVILLE, DIRECT COLOR SYSTEMS.

that offers a 10-color ink system with eight print heads using Epson UltraChrome UV ink, including vivid red ink, gray, opaque white ink and varnish. According to Lopez, the ink works well for both rigid and flexible materials.

The SureColor V7000 4' X 8' is Epson's first UV flatbed printer designed for printing outdoor signage, promotional goods, and more. It is capable of printing on a variety of rigid substrates up to 3" thick,

and aims to deliver bright, tactile prints with low graininess and smooth gradation. The printer also includes Epson Edge Print workflow software featuring an Adobe PostScript 3 engine for layout and print management, color management and workflow integration.

Storozhev acknowledges an LED array comes at a higher price tag than a mercury vapor bulb, but says the upfront cost is easily recouped over the printer's life – es-

pecially when compared to the ongoing bulb replacement costs.

Additionally, UV lights cure any printed ink at the snap of a finger. Since dots of wet ink do not spread out, graphic artists can achieve much finer detail in their designs, as well as a longer lasting, more consistent print quality.

Over at LogoJET, Hauerwas says the UVx90R direct-to-substrate printer features industrial-strength components,



The Arizona 1300 and 2300 series also come in an 8' X 10' format, allowing continuous printing of two 4' X 8' boards. (Image courtesy Canon Solutions America)

multiple Ricoh print heads and a newly configured, customizable UV-ink configuration. It can produce full-color and textured imprints on a variety of substrates, from dog tags, signage and golf balls to tote bags, cups and mugs, allowing graphic artists to turn up the creativity.

VERSATILITY

Industry professionals agree – flatbed printing is limited only by one’s imagination. The sheer versatility in printable materials makes UV technology unrivaled by any other decoration method, Tourville says.

Certainly, the future is bright within the category. Global UV-LED printer market

projections are expected to reach \$555.5 million by the end of 2024, expanding at a CAGR of 9.2% over the forecast period 2017-2024.

Storozhev expects UV-LED printing to continue gaining ground in manufacturing, where the graphic is just one component of the manufactured item. UV-LED printers also will be increasingly more common due to recent European government initiatives aimed at eliminating mercury from products, she says.

For Perrelli, purchasing and integrating a UV-LED printer is more than just the printer itself. He says a buyer needs to look at how it fits within current production

technology and be confident in the team they are buying from in terms of knowledge and support.

“We can be their resource and the print experts that help show them the way to optimize production with whichever unit they ultimately purchase from us,” Perrelli says, and a sentiment echoed by all. **GP**

STEFANIE GALEANO-ZALUTKO is the president/CEO of Zalutko Business Services Inc., a marketing agency based in Central Florida. She can be reached at szalutko@zalutkobusiness.com.



LASERING GRAPHICS: WHAT YOU NEED TO KNOW, PART 1

Working with customers' graphics can often be a major challenge and, in some cases, the biggest hurdle to completing a project in a timely manner with good results. This two-part article series will discuss why logos and graphics can be challenging and how to work with many of these challenges.

LARGE COMPANIES UNDERSTAND BRANDING & LOGO USE

Have you ever noticed that most major corporations and non-profits have simple logos? The shapes are simple and few, and there are only two or three colors used. A few that come to mind are Nike (one shape and one color), McDonald's (two shapes and two colors), and the TV networks all have simple logos. Why is that? Their marketing departments and thus graphic artists know that logo simplicity provides quick and easy recognition. It allows a viewer to quickly know who is communicating. Most advertising is about brand recognition wanting to gain the trust of the viewer. So, companies only have a second or two to assure viewers recognize their brand.

The second thing that great graphic designers understand is that the logo or brand will need to appear in many places, on many materials with a variety of reproduction or printing

methods. Some of these methods will need to be very economical — screen printing one or two colors, for example. Some projects may be done with more sophisticated processes. So, companies produce their logos in black and white versions, grayscale versions, and perhaps several color versions. These color versions may range from a few solid colors, web-safe colors, Pantone colors for paper printing, and even versions with colors that fade.

In addition, companies will create logos that they make available in several file formats for the highest-quality reproduction with various printing methods. They may have available JPG files, either highly compressed or moderately compressed in various sizes or resolutions. They may create PNG files they use for the web and EPS files or perhaps PDF files containing vector images for the highest quality reproduction. Working with a large corporation or a smaller firm that has all these choices available is ideal for your shop.

LOCAL & REGIONAL ORGANIZATIONS

Most shops that have local and regional customers have customers that represent businesses of all sizes and marketing sophistication. In addition, you may have individual customers that create graphics they want laser engraved or reproduced with another method.

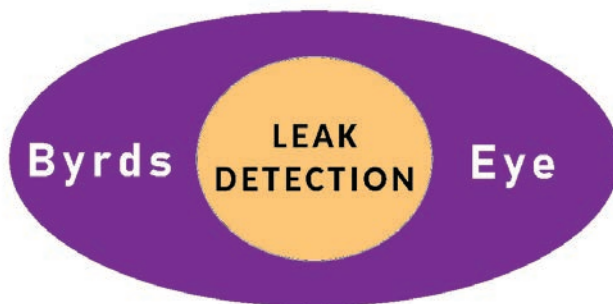
Embroidery, sandcarving, screen printing, and full-color prints on metal or wood are also common for small businesses to include in their marketing efforts. Your smaller businesses, military personnel, and individuals may only have full-color graphics or a logo in a very modest resolution JPG file. Some of these graphics will include color fades, photos, and stacked

UTILITIES



LOCATION LLP

A very simple one solid-color logo with black text. (All images courtesy Bob Hagel)



Two solid-color logos with both black and white text. It's laserable as a grayscale image and works fine with most production processes.

shapes, one on top of another. Many will be very busy, such as many military unit logos made by unit members over the years. Your challenge will be to reproduce these images with a satisfactory quality result or one that you are proud of.

THE REPRODUCTION PROCESS

Transforming a color graphic or logo into a grayscale image may not provide good lasering results. And if you need a pure solid black and white image from a color graphic, you won't get one that will work well. A true black and white image provides total contrast between those shapes that are in black from those shapes that are white. Grayscale images can provide high contrast between the original colors but often don't. When there is little contrast between shapes or letters in text, they are hard to dif-

ferentiate and read. Here's where one of your challenges may lie. If you can't differentiate shapes or letters from each other, the graphic will appear messy and perhaps unrecognizable.

The second issue you may encounter is graphic files with very low resolution. When bitmap files must be enlarged for the space they will fill, poor results are likely to be encountered. I often encounter JPG files that are created for web use, some under 100 KB in file size.

Other resolution issues may also be present in the file you have been given as well. We'll discuss these challenges in the second part of this series.

LOGO DESIGN SERVICES & ADVICE TO CUSTOMERS

Should your shop consider offering logo design services, these



30TH ANNIVERSARY

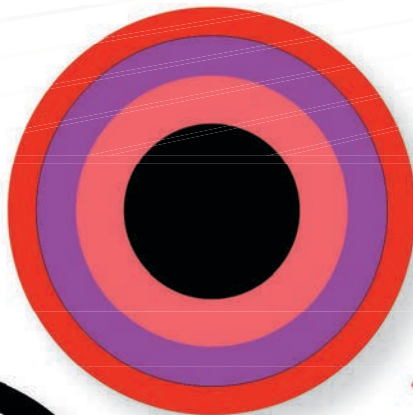
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YOUR LASER AT WORK



Bullseye

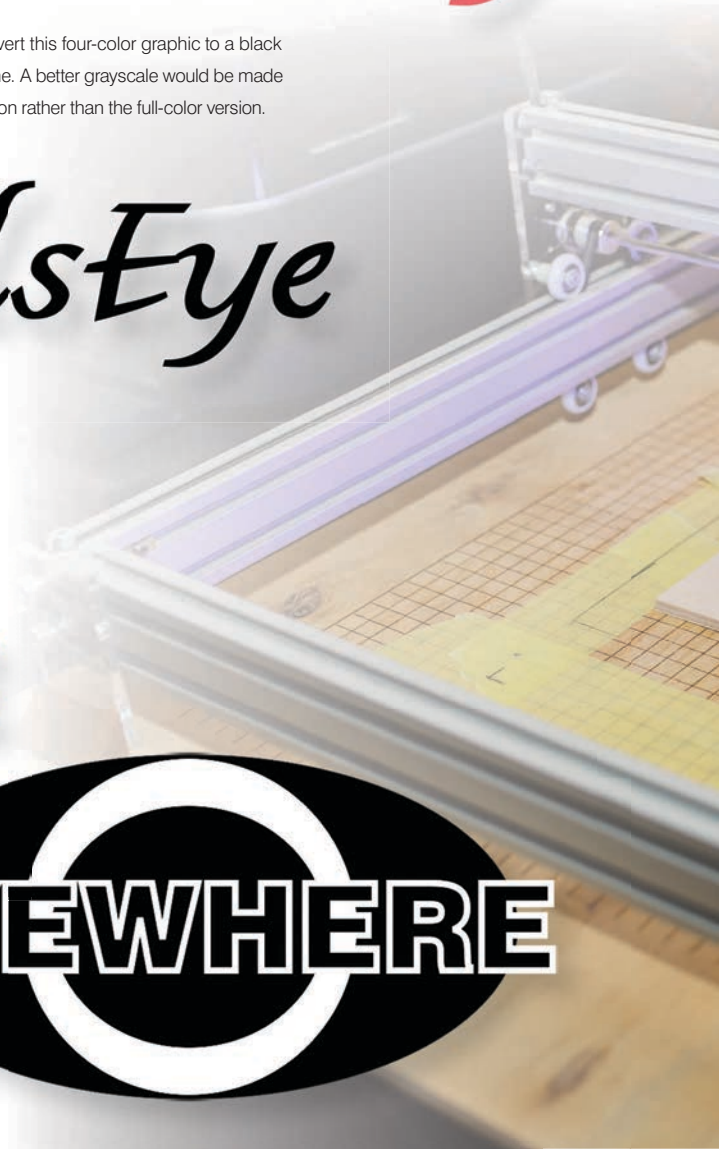
This shows how you can convert this four-color graphic to a black and white using a black outline. A better grayscale would be made from the black and white version rather than the full-color version.



Bullseye



Another black and white conversion requiring the text to be outlined white so all of it can be easily read.



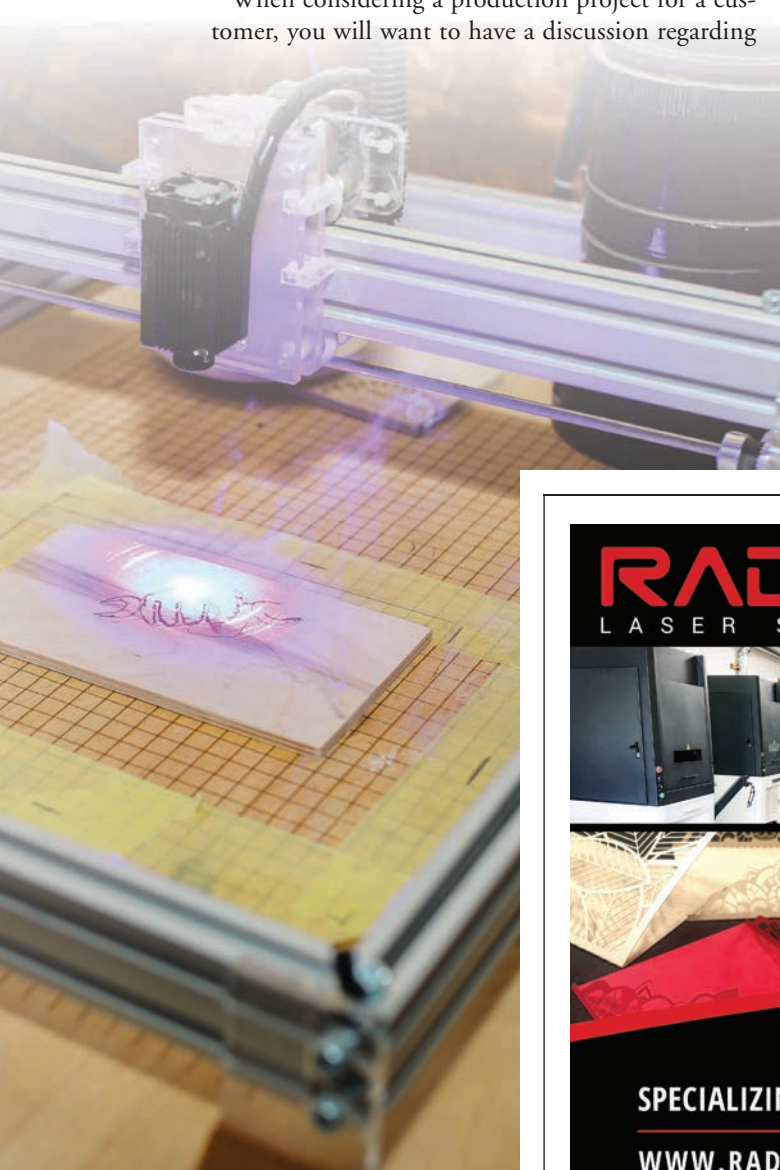
issues are something you should keep in mind and perhaps use as the centerpiece of your marketing efforts. Most local graphic artists will not have the experience to consider these issues and understand the many ways the logo or event graphic will be used and the issues that come along with it. I provided each logo design customer a series of files, including black and white, grayscale, and appropriate full-color logos in several file formats. I also included a tip sheet on when and how to use the various files.

When considering a production project for a customer, you will want to have a discussion regarding

the graphics to be reproduced and what forms they have the graphic in. If it is laser engraved, the resulting graphic will either be in black and white (the colors of the foreground and background materials) or a grayscale image. If it's for sandcarving, black and white graphics are the only reasonable images to consider with a quality result that is generally acceptable. For screen printing and embroidery, you can use solid color graphics where the colors can be separated. Vector graphics without overlapping shapes make these projects much easier with more reliable results. Even full-color printing processes will generate poor results if the file resolution is not high enough for the size it will be printed.

With clients you work with continuously, take the time to explain to them how they need to work with their logo designers. They can create brand logos and event logos in a way that produces great results without extra cost. You may even go as far as creating a graphic tip sheet to give clients to hand to their graphic artists. Even if they already have a logo in use, they are likely to make changes to the logo in the future, update it, or have other changes that would provide an opportunity to alter the logo to meet your needs better.

Organizations, especially nonprofits, create event logos at least once, and in many cases, multiple times a year. A tip sheet can be put to use sooner than you might think.



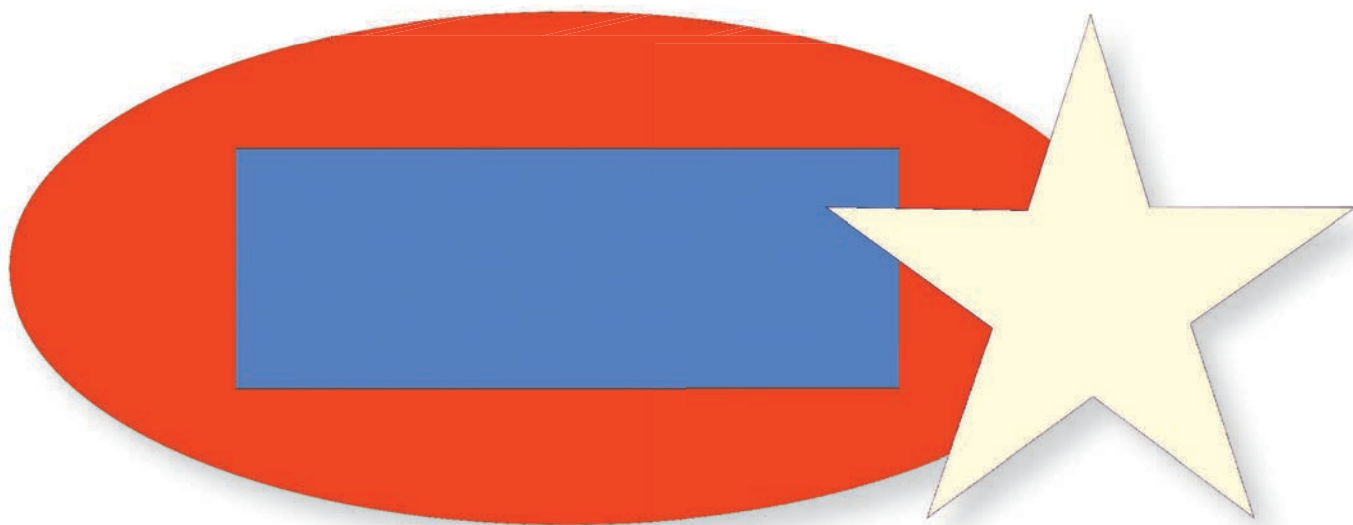
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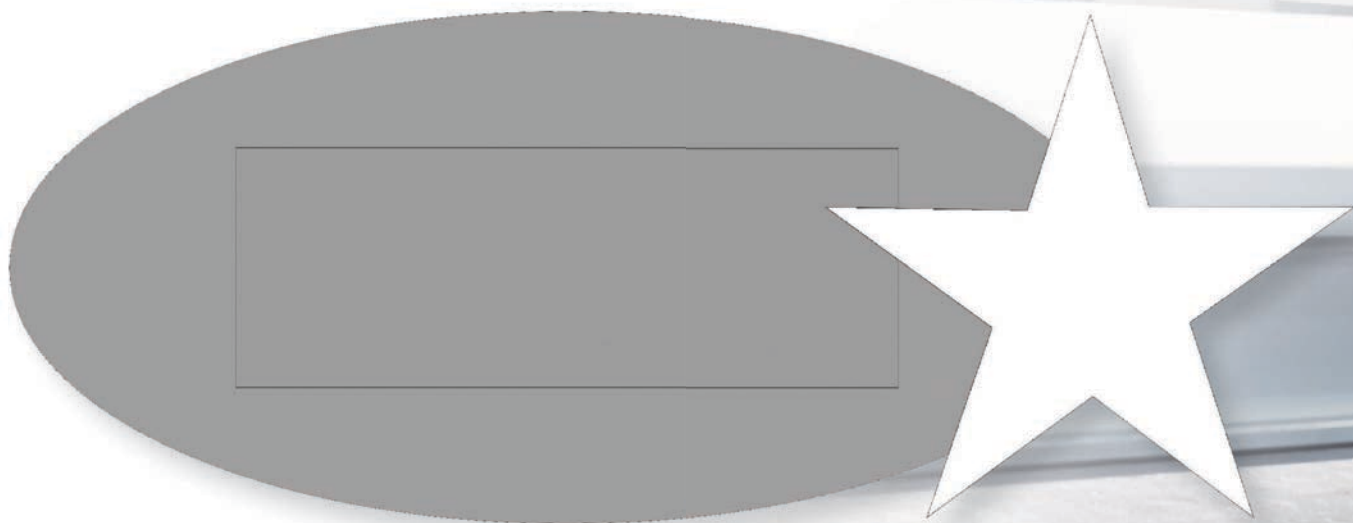
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The full-color graphic barely works with the star being so light it blends into the white background.



A grayscale version does not work at all as the red and blue are so similar in tone that they are too much alike. The beige star has no outline and completely blends into the background. An outline would make the star work.

THE LOGO TIP SHEET

You want to include these tips:

1. Always design logos with vector art. Changes can be made much quicker than bitmap design work. Vector art allows for the creation of file resolutions and sizes for every need, including a billboard.
2. Design a black and white version first. It will assure easy and quick identity and that the logo can be reproduced with the simplest reproduction process.
3. Design a grayscale version next.
4. Design a color version with solid colors only and no overlapping shapes.
5. Lastly, design the most complex version the customer may want to use. If fades and shading and overlapping shapes are desired, this version can include them with the understanding that not every reproduction process can use this logo version.

There may be other tips you want to offer; however, these are the basics that should ensure you will have what is needed without much additional work and allow you to provide results that please the customer and yourself. In Part 2 of this series, I will cover turning color graphics into grayscale images and black and white versions, how to create a vector file from a bitmap (JPG) image, the tools vector and bitmap editor software have to offer to assist with these conversions, and how your laser's print driver works with color and grayscale images. **GP**

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



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BY RUTH DOBBINS

SIGNS OF DAYS GONE BY

One of the things that keeps me interested in our work is that it is so varied. From creating a custom award to blasting headstones or lenses for an aircraft, I have seen a plethora of interesting jobs come our way. The job I will be talking about today is no different. I was contacted by a previous student who was about to retire, asking if I could take over a blasting job that was not viable for

WORKING WITH VINTAGE SIGNS



Top: The cut glass pieces with edges ground and stencils applied. (All images courtesy Ruth Dobbins)
Left: A sign in the blasting cabinet. Lighting is very important to be able to see the depth as you are creating it.

him anymore. After discussing the job, I said yes, even though it really wouldn't have mattered what the job was, I would have helped Tom no matter what. But the job was also intriguing.

The customer is an antique dealer specializing in vintage signs used in the radio studio scene of days gone by. There are plenty of collectors of such memorabilia, and the client relayed to me that the original signs often came with either missing or broken glass lenses. He had also created a replica of the housing for these signs as there seems to be more demand than actual old pieces available. So, the project was clear: produce the glass lenses to fit into the housing to complete the replica of the various signs saying such things as "On Air," "Recording," "Rehearsal," "Audition," "Applause," "Silence," and "Standby." I was a little amazed to find out the signs were not all made with the red background, which I had known, but that there were signs with a dark brown background, and that is what this customer wanted.

PREPARING THE GLASS

To make these signs would involve cutting glass pieces to the specified size of 2 7/8" X 10" X 1/4" thick. This project would use just ordinary plate glass or jade glass, as some of you may know it by. This is nothing special and can be easily ordered from any glass supplier. It is helpful for such an undertaking to know about cutting glass. Having started many years ago as a stained-glass artist, I hoped that my cutting abilities, especially of 1/4" thick glass, would be remembered by my hands doing the work. I needed to cut 72 pieces. When all the cutting was done, I had to do something about the edges of each piece. After cutting, the edges would be raw and very sharp. Not knowing who would be handling these items, I decided to play it safe and run each piece through my diamond grinder, which breaks the edge and makes it safe to handle by anyone. This, of course, increases the production time considerably, but I wanted to be on the safe side. After the grinding, which happens with a slurry of water, all the pieces were covered with dried glass dirt and had to be washed off and dried. Only then could the actual production work begin.



Above: Showing the depth around each letter. **Right:** A set of signs covered with the brown paint.

SELECTING THE STENCILS

All these signs needed to be blasted in reverse, meaning the letters of each word would stay covered while the whole background was to be blasted. Not only was the background to be blasted, but it needed to be brought to a depth of about 1/8" over the whole background. Anyone having done background blasting like that would know how difficult it is to achieve the depth smoothly, without lumps and bumps. To facilitate this type of blasting, I decided to use our pre-cut stencils made from soft vinyl that would withstand all the blasting at a higher pressure. This meant applying the stencils, removing the cover sheet, and then weeding each stencil. But since the lettering was large, the weeding was not an issue and went pretty quick. Of course, it also helps to have had years and years of experience doing the weeding, knowing what to watch for, and being able to use the X-ACTO knife accurately. To speed up the production process, it makes sense to complete all the steps at one time, so we had cut and ground all the glass at



Left: Beginning to peel off the stencil, showing that the side wall of the letter is painted. **Right:** Peeling the stencils letter by letter.

one time, applied all the stencils at one time, and did all the weeding before moving on to the blasting process.

BLASTING THE SIGNS

Working on the blasting process all at once for all the signs is really important because you have to get into the “zone” for what you are doing. It usually takes blasting a couple of pieces before you can settle into a pattern you’ll use to accomplish the desired results. I know many of you think that with a lot of experience, one should know right away how to go about blasting a project, but that is just not so. I usually have a general idea, but the real process shows up once I begin blasting and trying various things. Knowing that I had to achieve quite a bit of depth, I increased my pressure pot to about 50-60 pounds of pressure. Otherwise, the job would take forever. My blasting process: first blast in horizontal lines across the whole surface a couple of

passes, then do the same blasting vertical, up and down, before settling into a pattern of going across the whole glass surface in a circular pattern. Anytime you establish a pattern, you also have to watch that you keep about the same distance to the glass and do not change your speed. Otherwise, you will end up with variations in the glass surface and most likely with quite pronounced lumps and bumps, which will show up really well once you begin the painting process. So “steady as she goes” is the mantra here. Overall, it took 10 to 15 minutes to blast each sign, depending on how many letters the word had. All in all, it took about 18 hours to blast all the signs.

CLEANING AND PAINTING

Since all the signs needed to get painted, it was very important to really clean the surface of each sign. I blew each sign off with compressed air, but I knew that using really fine abrasive would leave a lot of dust in the pores of the roughened surface. So, after blowing them off, I also dipped them into warm water and then immediately patted them dry to avoid water spots on the blasted surface. The next step was to paint the signs. I placed about eight at a time on a Masonite board to take them outside for spray painting. Luckily, our weather is usually so good that we can do that year-round without having to get a paint booth set up with an exhaust. We had tried a couple of different brown paints and settled on the leather brown from Rust-Oleum. When spray painting,



All the stencils removed from the signs.

it is important to spray in thin layers and, most importantly, to turn the board a few times to spray from different directions so that the sidewalls of the letters would also get evenly covered. Again, it is important to spray thin layers, so the paint won't puddle at the base of a letter. Mistakes can't be corrected and will usually require a do-over, which eats away at production time and profit.

FINAL CLEAN UP

The paint needs to dry to the touch but not completely cure, since we painted across the whole sign and all the stencils still cover the letters. If you wait until the paint is cured and then try to remove the stencils, the paint will have formed a bond and will tear the paint along the stencil cut lines, leaving a serrated edge to the paint, which is not desirable at all. So, you need to wait for the dry-to-the-touch time to begin the peeling process. Each paint is different, and you need to read the instructions on the paint you are using to find out this window of time. After all stencils are peeled, we leave the sign to dry for another couple of days to fully cure the paint before packing them up for shipping. **GP**



A sign mounted in an antique frame with backlighting.

With over 40 years in the glass business, **RUTH DOBBINS** offers experience in all glass-etching techniques as well as in fused and cast glass. Ruth holds a master's degree in art and has been a partner in an art glass wholesale supply and studio company in Europe, which also placed great emphasis on a training program, before joining forces with her late husband Norm. You can reach Ruth by email at ruth@etchmaster.com or by phone at 505-473-9203.



Another sign with a different style housing.



OVERCOMING CHALLENGES AND MOVING FORWARD

Welcome to 2022. Now almost two years removed from the pandemic's start back in 2020, many of you spent the bulk of the end of 2021 dealing with challenges. The rapid change of the way things were, and the shutdown brought supply chain disruption, difficulty finding employees, and the continued divisiveness of the world. I spoke to a lot of people who were overwhelmed.

Much of our human nature is not built for us to thrive in our current modern-day times. It is made to keep us alive and conserve energy. Commiserating is a tool humans use to build community and show each other sympathy to remind us we are not alone. It is part of the amazing gifts we are given as humans, but we must change our mindset to thrive in modern times. After expressing and feeling the feeling that comes from the act of commiserating, you then need to switch to the conscious part of your brain to create solutions.

While it is natural for us to commiserate, the one-upmanship becomes a competition to see who wins the most significant challenge award. That just pushes everyone involved down deeper into a feeling of insurmountable odds. Let me give you an example from a real-life post on a Facebook group where someone shared the challenge they faced with ordering from multiple warehouses to get the garments needed to fulfill one order. The comments on that post went like this:

- I raise your challenge and share that I can't find stock and also don't have any time in my day to deal with it.
- I raise you the lack of stock, lack of time and also lack of profit because prices are going up.
- I raise you the lack of stock, lack of time, lack of profit, and the extra time it takes for shipping.
- I raise you the lack of stock, lack of time, lack of profit, extra shipping time, and extra shipping cost.
- I raise you the lack of stock, lack of time, lack of profit, extra shipping time, extra shipping cost, and the pending holiday shipping time extension.

- I raise you the lack of stock, lack of time, lack of profit, extra shipping time, extra shipping cost, pending holiday shipping time extension, and the reduced stock quality.
- I raise you the lack of stock, lack of time, lack of profit, extra shipping time, extra shipping cost, pending holiday shipping time extension, reduced quality, and getting customers to believe the issues are real.

And it goes on and on until we all just want to hide under a rock because the outlook is so grim. But is this working? Outside of the initial "at least I am not in this alone," what is the value of all of this commiserating without finding solutions. The good news is the scarcity mindset, the need to one-up each other is a programmed limiting belief from our past. What it takes to overcome challenges is a solution mindset. We must share how we have overcome the challenges and encourage people to one-up us in solutions. That mindset will bring new ideas. The reality is people are overcoming challenges daily, and while it might not be our favorite part of business ownership, it is a requirement.

HOW TO OVERCOME CHALLENGES

I want to brainstorm with you the "how." How do we overcome the challenges? And while this might not be business or decorating specific, it is our mindset that we need to look at first. We must change our thoughts, our beliefs, and our perspective. Then we can change our outcomes. When faced with a challenge, the first step is to stop and clear your mind to come up with at least three potential positive outcomes. What will facing and overcoming this challenge afford you in the future that you might not have otherwise had if the challenge did not force your hand? By doing this, you are "putting your oxygen mask on first." Meaning you are focusing on yourself first so you can show up to support those in need.

Secondly, it's time to come up with some solutions. The commiserating and responding to those challenges have pointed to the root cause. It is time to move from blaming, complaining, excuse-making,



and commiserating to finding solutions. I have five suggestions for you.

1. **Drop out of the “ain’t it awful” club:** A quote from a renowned marine artist Robert Wyland sums it up well. “There are two types of people, anchors and motors. You want to lose the anchors and get with the motors because the motors are going somewhere and having more fun. The anchors will just drag you down.” Make deliberate decisions about the group you are in, the posts you read, the people you listen to, and more. If you want a successful six to seven figure business, the crafter group showing the stolen copyright artwork and “how to’s” on the cheap are not for you. The people who like to share their problems and one-up people to prove they have it the worst are probably not for you. Be grateful for the information you did get and move on.
2. **Accountability:** When you are a business owner, it can feel like you are alone on a deserted island. It’s part of why we run to the groups to commiserate to cure that lonely feeling. But what you need is accountability. Someone to encourage you and help you make sure you work towards the solutions and do what you said you were going to do. The keyboard warriors of the internet are not going to be that for you, so you need to find a real community, mastermind groups, or an accountability partner.
3. **Refine your options/fire customers:** When you had the scarcity mindset — the feeling like the sky was falling all the time — you were taking on any job that you could, inventorying every possible item any customer could want, and chasing every person that had a dime to their name like you were a lost puppy dog. A supply shortage challenge is a perfect time to tighten up your options because many options are not available. Use this challenge as an opportunity to focus on your core customers and stop chasing the latest and greatest. When trying to source only a few options, it is much easier than thousands. When only working with your core customers, you can become the “best” in your niche because your core customers are your niche.

4. **Vendor relationships:** Most people in the “good” times only knew their vendors as a username and password. They placed orders online, and they arrived in a day or two. But those folks who have relationships with their vendors are the ones who will come out on top. Start making sure you know what person (not just a phone number) to contact, should an issue arise or if you need help in a bind. If you can’t get a rep, find another source. The stronger the relationship you can build with your vendors, the better off you will be. Those vendors can make or break you. Don’t have an adversarial relationship with them. As someone who has built customer relationships in the industry for over 21 years, I know I worked a heck of a lot harder for those customers who also valued me. Those people on the other side are humans just like you.
5. **New vendors:** These challenges we are facing are a great reminder that all things in your business should have a backup. Even if you don’t need a new vendor right now, try to carve out some time to look around, test some options and just make sure you have a Plan B. The best time to find a new vendor is when you don’t need one. The worst time is when you are desperate and end up taking whatever you can find.

I’m curious what other solutions you have implemented. What are you doing to future-proof your business and tackle new challenges head-on with confidence and positivity? I would appreciate any sharing or questions you might have about specifics in your business. You can email me at success@oursuccessgroup.com. **GP**

AARON MONTGOMERY is certified by New York Times best-selling author Jack Canfield as a Success Principles Trainer and is the co-founder of OurSuccessGroup.com. Aaron has over 25 years of experience with personalized products and small business development and is the co-creator of the “5 Keys of Business Success.” You can also find Aaron co-hosting the decorator’s industry podcast 2 Regular Guys Podcast (www.2regularguys.com). Also, check him out on his podcast channel called Small Business Saturdays (smallbusinessaturdayspodcast.com).

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Using the Symbol Manager

WORKING WITH REUSABLE SYMBOLS IN CORELDRAW



BY DOUG ZENDER

In my last article, “Duplicating an Object” on page 32 in *GRAPHICS PRO*’s January issue, I discussed some different ways to duplicate objects, including the clone feature. There is another way to include multiple instances

of an object or group of objects in a document. In this article, I want to look at the use of symbols and the Symbol Manager in CoreDRAW.

In some ways symbols are similar to clone objects, but quite different in other ways. My hope is to minimize some of the confusion that may exist in the use of symbols. The definition of symbols in the product help files is: “A reusable object or group of objects. A symbol is defined once and can be referenced many times in a drawing.”

The definition seems, to me, a bit vague. I’ll try to clarify. Nearly anything created in the program can be converted into a symbol and can be used any number of times in a document. It is a convenient way to include multiples of any object when needed. It is probably best, at this point, to look at the mechanics of the process. A lot of this info is a bit difficult to understand, so I hope to clarify as best I can. A doodler will be lost with the following details.

The first thing is to open the Symbol Manager by choosing either Object > Symbol Manager or using the shortcut keys Ctrl+F3. You should see something similar to Fig. 1, which will likely be blank as shown.

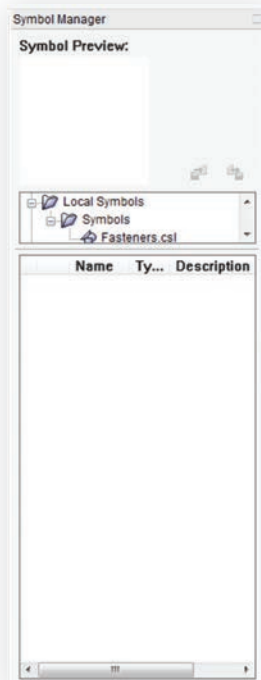
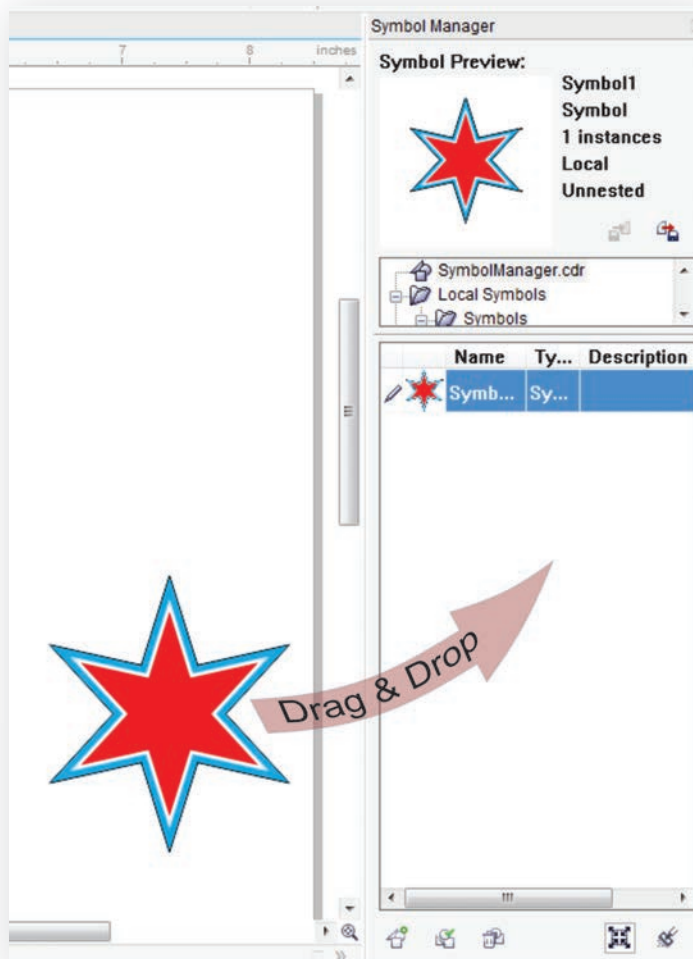


Fig. 1 (above): Open the Symbol Manager by choosing either Object > Symbol Manager or using the shortcut keys Ctrl+F3. (All images courtesy Doug Zender) **Fig. 2 (right):** There are a couple of ways to create a symbol from an object.



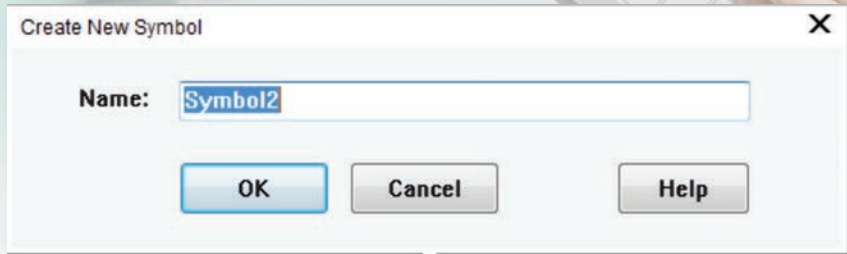


Fig. 3: This dialog box allows you to name your selection.

Let's move on to Fig. 2. There are a couple of ways to create a symbol from an object:

Option 1: With an object selected, go to Object > Symbol > New Symbol and it will appear in the docker. You will get a dialog like Fig. 3 to give a name to your selection.

Option 2: Drag the selection into the docker as shown and it becomes a new symbol.

Notice that the selection handles change to blue instead of the black handles of a regular object.

This second option does not ask for a name so you must enter it manually. Next, we'll explore the docker for details and how they function.

Returning to Fig. 2, at the top is a thumbnail of the image or Symbol Preview and to the right of it is a list of information: first the name, then the number of occurrences or instances of the image that appear in the document, then some other info. (There are also two icons — Add Library and Export Library — which we'll discuss in a future article.) Below that is a list of symbol names and their locations. Next down is a layout. From left to right: a pen or pencil icon that allows editing by double-clicking a thumbnail image of the symbol, a Name field where you can give your symbol a unique name, Type (which is usually blank), and then Description that lets you type a description if necessary. Often the description is not needed and is only a

personal preference. At the bottom of the docker are five icons. Left to right they are: Insert Symbol, which is most obvious, but dragging the symbol to the drawing page is an equal result. The next icon is Edit Symbol where one can make changes such as adding or deleting text, objects, or object info, changing color or whatever else is needed. The next icon is Delete Symbol — to be used with discretion. Next is Scale to World Units and is most valuable when scaling is involved in the document and is probably seldom used. The last icon is Purge Unused Definitions and is best described as a way to remove any symbols from a document that occur in a library but are not used in that particular document.

We will now look at how to create a Symbol Library like in Fig. 4. I first created a CorelDRAW file with five drawings of different screw heads and saved it as Fasteners.cdr. I then created a symbol of each drawing and resaved the file. Since I was doing several different documents that needed to depict the various screws, I wanted each to be available to insert as required. So, I chose Save As, and in the Save As type drop-down, I chose csl (Corel Symbol Library). By default, it will save to the same directory as the original file. Then, in the Symbol Manager, I pressed the Add Library icon and navigated to my Fasteners.csl file and added it, resulting in that file now appearing in the Symbol Manager. Notice

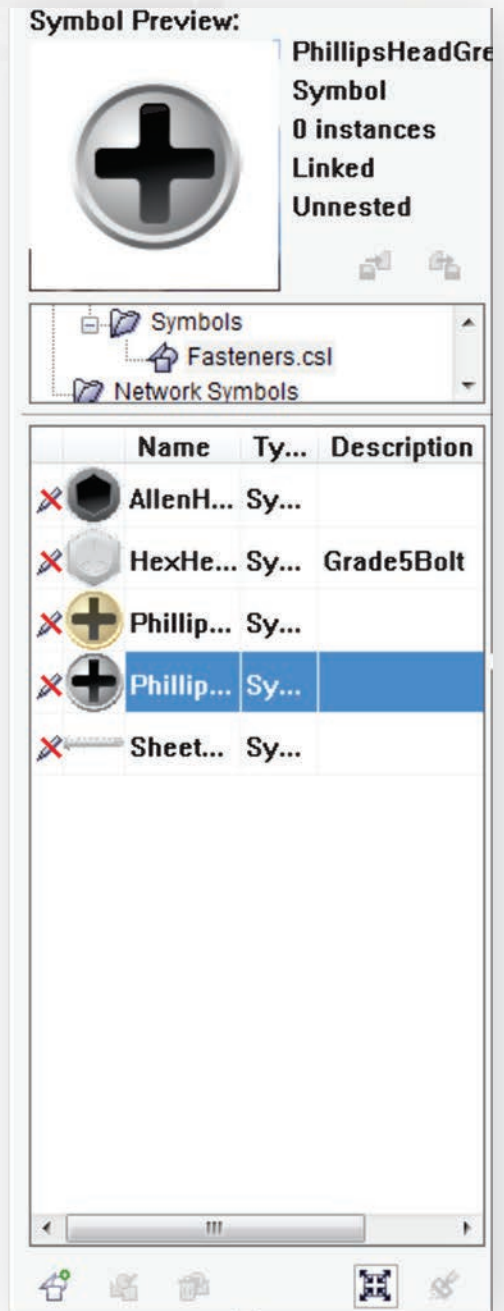


Fig. 4: How to create a Symbol Library.



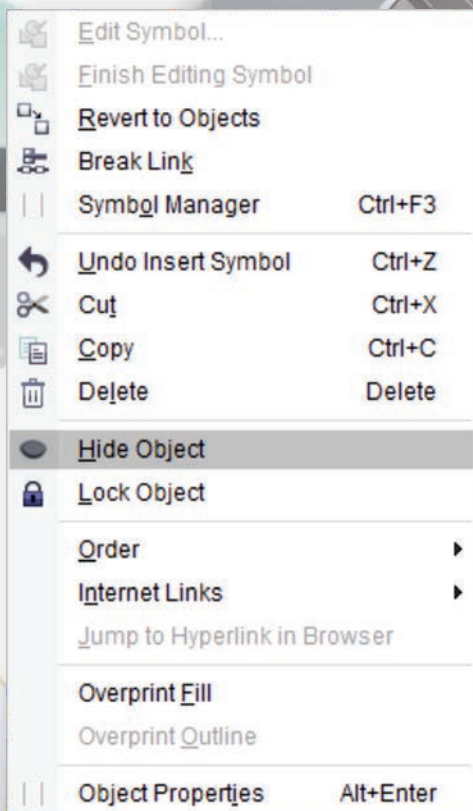


Fig. 5 (left): To edit a symbol in a library, once it is inserted into a document, right click on it and you'll see a dialog. **Fig. 6 (above):** A possible access panel that may be included in a larger industrial type drawing.

that now the pen icon on each symbol has a red slash through it, indicating that it cannot be edited. To edit a symbol in a library, once it is inserted into a document, right click on it and you'll see a dialog like Fig. 5. Go to Break Link, then right click again, and click Edit Symbol. You should now be able to make necessary changes. When finished editing, press the Finish Editing Object icon in the lower left corner of the drawing window.

Fig. 6 depicts a possible access panel that may be included in a larger industrial type drawing. The six screw heads are symbols from my library. They can all be sized, rotated, mirrored, grouped, or manipulated as with any regular object. The use of symbols is a bit complicated but has some benefits and advantages. First, there is no need to redraw an object every time it is needed in a document. Also, symbols are a great way to catalog frequently used images and are supported by most export file types such as PDF and SWF and are very much like other design programs that support symbols. Additionally, using symbols instead of regular objects, can substantially reduce the file size. If my document has 50 regular objects, each one must be retained in memory, but with symbols, only one of them is held in the memory and all others are referenced to that one.

For anyone who has not worked with symbols, I suggest you spend some time learning their value. Reading through the help files related to symbols can explain some details that are not included here.

I have given some of the basics of symbols and how to use them. Not every workflow will find them advantageous, but when needed, they are a great feature that is available in CorelDRAW.

We'll explore other features in future articles like layers, how to use contours and blends in a drawing for realistic effect, distortion tools, and some other tools and effects.

I always invite questions and/or insights. Sometimes I get questions regarding a specific topic, which help me determine what should be included in a future article. Please direct them to dezender1@gmail.com. I will answer questions as soon as possible. If you have an insight on any topic, I invite and value your input. **GP**

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



From muted to heathered, today's color stories are soft and comforting. (Image courtesy Fruit of the Loom/JERZEES/Russell)

The Tried-and-True T

TRENDS TO LOOK FOR IN 2022 *By Carly Hollman*

In the times we're currently living in, it's no wonder that we're all looking for a little bit of comfort. Hearty foods, our favorite throwback songs, that show we've seen a hundred times, and the good old classic T-shirt. And while we all have our go-to shirt from one of our favorite concerts or that shows loyalty to a local hangout, having fresh styles that still feel lived in are at the top of end-users' wish list. *GRAPHICS PRO* spoke to a few industry experts to get a better idea of what styles we can expect to see in the new year and how to make a statement for clients.

SWEET STYLES

It's no secret that fashion is cyclical. Every 10–20 years, we see familiar styles, silhouettes, and colors reemerge, albeit in fresh iterations. At this moment, the '90s are in the spotlight. From creeper



shoes to crop tops, every level of fashion seems to have a wink toward the era.

In the T-shirt category, this is particularly prevalent in the details. "From a details perspective, retro techniques that speak to brand heritage are key in a competitive retail market," says Taryn Rosen, JERZEES and Fruit of the Loom. She notes authentic details such as bound collars and ringer details, extensive topstitching, and authentic logos and branding. "We are seeing a lot of these techniques across both established and newer brands in multiple channels," she adds. In addition, Lane Seven's Toni Sciacqua says that classic heavier weight options are expected to gain popularity in the market.

Although traditional details are trending, today's popular T-shirt styles have their own spin. As far as colorways, Michael Johnson, Hanes, states that elevated earth tones are particularly popular with

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Elevated earth tones are particularly popular with younger consumers. (Image courtesy Hanes)



Although earth tones are popular, throwback shades are also trending with younger clientele. (Image courtesy BELLA+CANVAS)





Classic heavyweight styles with retro vibes are one of the most popular sales in the wholesale market. (Image courtesy Lane Seven Apparel)

younger consumers who see these natural tans, sands and very subtle greens as high-end. In addition, he says, another important color trend is what he refers to as restorative pastels. “At first glance, you may see only white, but a closer look shows a very soft application of a bright hue.”

In silhouettes, flexibility and unisex cuts are still the top trends. “Boxy Ts and matching sets have been important as people are looking for comfort and simplicity in their wardrobe, especially in today’s society with work-from-home or home-school lifestyles,” says Rosen. But when it comes to fabric composition, there are several things to consider. Johnson stresses the increasing importance of offering sustainable

fabrics. “Whether it is responsibly sourced or responsibly manufactured, sustainability is a top-tier requirement for many organizations and events,” he says. And while the makeup of fabrics may vary, according to Jason Buchanan, Next Level Apparel, cotton-rich blends are popular. Regardless, multiple sources agree that what really makes the substrate is the finish.

This can be in the form of sueded, soft ring-spun, heathered, garment-dyed, tie-dyed, pigment, and vintage washes, all of which are top sellers across the board. Overall, says Lyndsey Owsley, BELLA+CANVAS, end users are looking for soft, high-quality goods. Because not only do these finishes help to make new

continued on page 68



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SUPPLY CHAIN WOES

BY CARLY HOLLMAN


We've all felt the effects of supply chain issues as a result of COVID-19 and the massive shut-downs that are now showing up in our daily lives. At the time of this writing, while the problem is getting smoother, the ports of California are still experiencing congestion issues. As a result, the apparel industry is feeling this immensely. "The T-shirt market was severely impacted with closures and event cancellations due to COVID-19. However, we've seen increased demand each quarter and the latest trends are outpacing 2019 levels with the resurgence of events," states Kevin Reber, Fruit of the Loom and JERZEES. While this is great news, it doesn't make for smooth selling.

The uncertainty of the supply chain has caused a shift in many decorators' buying habits. Most sources report seeing larger orders than they have in recent years to hopefully ensure they have enough product on-hand to provide for their customers. Which makes for some bottlenecks along the way. Even with all the best of intentions, we've collectively learned that nothing is predictable in the midst of a global pandemic. Jason Buchanan, Next Level Apparel, offers a few tips to keep ahead of common supply issues:

- Allow for longer lead times by placing orders well in advance and keeping constant communication with suppliers
- Customers understand the challenges everyone is facing under the current supply chain trials, so be upfront and ask for first, second, and third choice color options
- Make sure you have logins to distributor websites to check inventory for those hard-to-find styles/colors. You might be surprised who might have stock on hand

The market is doing its best to keep up by changing its strategies. For example, Lyndsey Owsley, BELLA+CANVAS, says the company is doing what it can to expedite goods into its Los Angeles warehouse while also working with wholesale distributor partners to do factory direct shipments through Florida as a workaround to get goods to market faster. Companies are also innovating ways to help find products through things like updated websites and vendor locators.

Although, according to Toni Sciacqua, Lane Seven, port and supply issues are expected to continue through 2022, manufacturers are working to stay ahead and provide the latest and tried-and-true styles that end users are searching for. **GP**



Gender neutral cuts in muted tones are trending for the new year. (Image courtesy Next Level Apparel)



(Image courtesy Hanes)



(Image courtesy Next Level Apparel)

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▶ bit.ly/stahls-uc-max



Slouchier yet refined looking cuts appeal to all genders. (Image courtesy BELLA+CANVAS)



The styles of the '90s are prevalent today. (Image courtesy Fruit of the Loom/JERZEES/Russell)

continued from page 65

styles feel lived in from the first wear, but they also act as the literal canvas for the diverse decoration methods on the market today.

DECORATION STATION

With such an array of substrates to print on, decoration options are seemingly endless. Multiple sources stress the increasing use of direct-to-garment (DTG) printing. And with the trend toward heavier weight Ts, explains Sciacqua, the tighter knit of this style makes this method the perfect pairing. Similarly, Buchanan notes seeing heavier plastisol prints to match these T-shirts.

With so many different T-shirt textures trending on the market, Rosen stresses that regardless of the decoration method, the design really needs to pop off the surface. Popular design trends that help to do this are varsity graphics and fonts that have a retro, collegiate feel. There are also a lot of tweed and plaid fills, as well as brands turning to decoration that feels nostalgic and comforting from decades past, Rosen



Neutral, natural colors are seen as high end by the influencer generation. (Image courtesy Lane Seven Apparel)

adds. Owsley says graffiti, block lettering, and handwritten fonts have been making a reemergence, further solidifying the nostalgia taking place in the market.

As the world is opening back up, we're all looking for the most stylish ways to show up while maintaining the comfort we've grown accustomed to over the last two years. Luckily, T-shirts are exactly the thing that can do that for us. Whether it's a heavy-weight classic fit T or a perfectly soft, heathered graphic shirt, the most popular T-shirt styles on the market today will fit the ticket. **GP**

CARLY HOLLMAN is the former editor of *Print-wear* 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.



While the makeup of fabrics may vary, cotton-rich blends are popular. (Images courtesy Next Level Apparel)

Making Moves with Marketing

Efficient and Effective Ways to Boost Your Marketing



BY HOWARD
POTTER

Many in our line of work tend to struggle with marketing for several reasons:

- How much will it cost?
- Why do we need to do it?
- Where and why should we market the company?

These are all very valid concerns and can turn into high-risk investments if you are not careful.

WHAT TO KNOW

When business owners think of marketing, many of us tend to think we must spend a small fortune to be seen or heard by our new potential customer. Over the past 18 years of business since starting from my home, I have learned a lot about marketing and most of what I have done cost me very little to do. Most marketing firms will lead you to believe you need to spend up to 7% of your annual sales on marketing to gain more customers.

Marketing is no different than starting a business. Yes, it is scary with a lot of unknowns, but when working on marketing you must have a marketing plan. For example, who do you want for a customer? How many new customers do you want? What products do you want to sell to them? What is your target number to hit in sales for the year? Is it a new product and you just want to sell to existing customers? Once you know the answers to the basic

questions, you can start to form a marketing plan.

WHAT IS YOUR PLAN?

My business plan over the years has always been to sell more products to our existing customers. Which many, if not most shops, do not focus on enough. Why is that? Do you think it is easier to sell to a new customer or an existing one? It is not only easier to sell to an existing customer, but it is also cheaper marketing dollarwise. For example, we just bought a 3D laser this year. We purchased a few hundred dollars in blank stock to use for testing and promotion. So, when an existing customer came into our store, my wife would take their logo and run a sample on our machine using the logo right in front of them. The customers were really excited to see it in action. They got to leave with a free travel mug, too, with the sale flyers for the process. We also would take pictures and video of the machine running and post them to several social media platforms.

Now, breakdown the cost. It cost us very little to give the customer an experience they will never forget, and it cost them zero dollars. Can your radio, TV, printed ads give that experience? Half of the time, we have a shot at selling a small order or still selling to them within a month if it is a product they can use just from that one experience.





Again, you do not have to invest a fortune to market. The No. 1 thing to focus on is your customer service, turnaround time, and quality of what you offer. That alone will give you priceless word of mouth marketing, which you can never put a price tag on. When your customer comes to pick up their order, put a sale flyer in with the invoice to promote the next product you think they might want or need. This promotes top-of-mind awareness. Another thing we do is keep company swag on hand to give to customers year-round, so they get to leave with a reminder of us. It can be something as simple as a pen, but we also give out apparel, travel mugs, and much more.

Make sure you have a functional website, and that you are set up on as many social media platforms as possible. It can take you fewer than 10 minutes a day to post something to your social media pages on average. Take advantage of that. We are big on posting our work and flyers to educate customers on what we offer. Marketing is non-stop education for your customers.

Why do you need to market? Some do and some do not. Some companies find such a niche market to sell to and they may be one of the handful of companies that can offer a certain product or service, so not much marketing is needed, but they still must do a great job to keep the customer.

KEEP YOUR GOALS IN MIND

Most companies need to market to gain new customers or to get existing customers to come back. Knowing if one or the other or both is your goal is very important. In our case as a company, we are now cutting out radio and TV marketing from our budget. Why? First, we had to ask ourselves if we wanted new customers. If so, who and how do we get them? Yes, we wanted new customers and more work from existing ones. We know we can market directly through email, in store gifts, sale flyers, and mailing samples of our work directly to the customers that we want. When marketing on radio, TV, and printed ads, you never know who or how

many are going to call, email, or stop in, which we have learned can be a backend high-risk cost when marketing.

What does that mean? If we have a massive increase of calls, emails, and people who stop in, we cannot keep up with them and our customer service is viewed as bad by a new customer. Whereas an old customer would be more understanding. So, now you have to look at hiring more customer service members to keep up, which is an added expense. So, the way I think is, do we want 1,000 new customers next year or 50 new ones that will spend as much as 1,000 smaller customers?

In our case, with the number of services and products we can do that. So, now I can redirect my marketing to market to 200 places in hopes that we land 50 of them within the first quarter of this year. Twenty percent return landing new customers is a very high number, but very obtainable and much more effective than advertising to just anyone and not knowing if the new customer is going to be a pain or just not pay their bills either. If you control your marketing, you can control your growth and your customer base.

Many companies tend to waste time focusing on their competition's marketing and what they are always doing. I am not saying to not be aware, but don't let your marketing be dictated by what they are doing, or you get sucked in like many do trying to keep up, which can be a huge waste of time and resources. Spend more time focusing your marketing on your goals and your customers. That is how you will achieve a lifetime of success! **GP**

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



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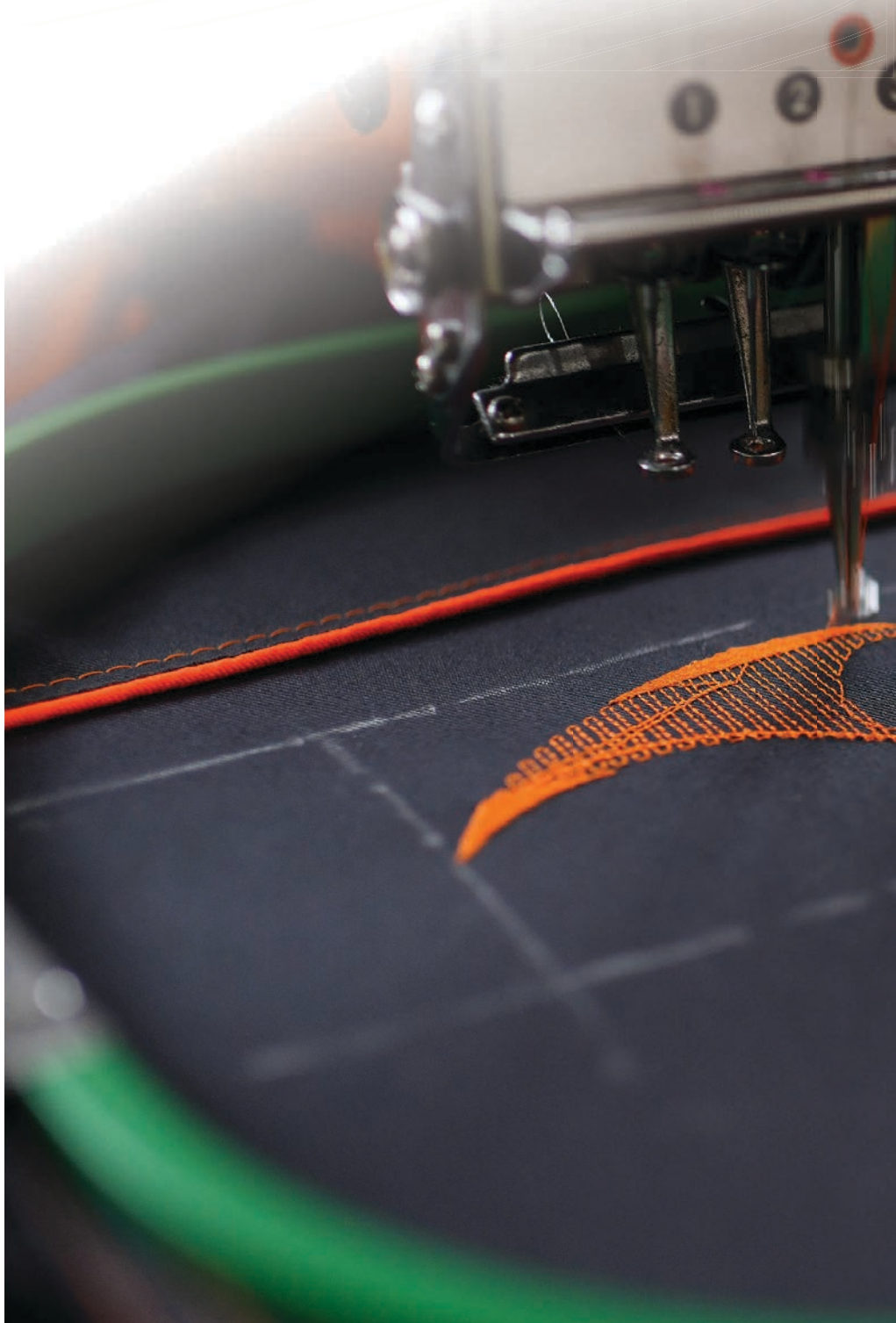
WHY IS THAT?

TAKE A LOOK AT ESTABLISHED POLICIES AND RE-EVALUATE

So many things in life are just the way they are. They have always been “that way,” and they will always be “that way.” Yet there are many things that raise the question, “Why is that?” I find myself asking this question quite often as an independent business owner. In my more than 25 years of working with thousands of embroidery and apparel decoration business owners, I discovered that they are also asking this question, frequently.

WHY IS THAT NO. 1: WHY DO OUR CUSTOMERS THINK BRINGING IN THEIR OWN PRODUCTS IS THEIR BEST OPTION?

I think our industry is at least partially responsible for this situation. After all, we say that we “do embroidery.” How would a customer know that also means that we can and will provide the product to which the embroidery is applied? To combat this perception, we can shift the language we use to describe ourselves, our businesses, and the services we provide. Instead of saying you have an embroidery business, you say that you sell branded and logoed apparel and products. Where you used to say, “I am an embroiderer,” now say, “I sell custom-branded and logoed apparel and products.” By shifting the focus from the service, you provide (embroidery) to selling the products you provide (apparel and products), it helps your potential customers understand that you can do much more than add a design to the stuff they bring to you.





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WHY IS THAT NO. 2: WHY DO OUR CUSTOMERS THINK WHAT WE DO IS EASY?

I chalk this one up to human nature. Do I think what a lawyer does is easy? Not particularly. I also know that they went to extra schooling for it and had to pass a difficult test. Do I think being a cashier at a store is easy? Certainly, it is easier than being a lawyer, and I am aware that no certifications are needed prior to taking on this job. People have no idea what is involved in the process of creating a custom design and applying that design to a product. They assume that the machine does all the work, and that all we have to do is push the button to make the machine go. If you have a website, add an article or an FAQ page about the steps that go into creating a custom order. Describe your workload in terms of your production schedule. Use language that equates what you do to work — because *it is* work, your work!

WHY IS THAT NO. 3: WHY DO OUR CUSTOMERS THINK WE CAN HAVE THEIR ORDER READY BY TOMORROW?

Thanks to the Amazon-driven world we now live in, people are accustomed to having things in just a few days, and even by tomorrow. Because our customers do not understand all that is involved in creating custom embroidered goods, they have no guidelines for how long it will take to create their order. There is no need to break it down for them, step by step. Do let them know that their order is scheduled for production within the next week, 10 days, fill in your timeframe. This language helps your customer relate their order to work, and they are less likely to visualize you “whipping this up for them after dinner,” if you will.





**NEED GUIDANCE ON PRICING
YOUR EMBROIDERY? CHECK OUT
7 QUESTIONS YOU NEED TO ASK
BEFORE QUOTING A PRICE AT
<http://gpro.link/quotes>**



WHY IS THAT NO. 4: WHY DO CUSTOMERS FEEL LIKE THEY CAN HAGGLE OVER OUR PRICES?

Everything we do is custom. Having one price for a golf shirt with a logo on it is a challenge, as the cost of the shirt can vary widely and the cost of the decoration can vary widely, based on stitch count and the number of hoopings involved. The customer gets the impression that the price is made up, since there is not a pre-set price on a sticker on the item, like in a traditional cash-and-carry retail store environment. Somehow, we are fostering this impression, and I am not sure how, or how to change it. If I go into a custom bakery and ask for a quote for a fancy cake for an event, I do not haggle with them. I either order the cake, or I leave. When you take a car in to get a repair done, they give you the price and you either leave the car, or you go to another repair shop.

WHY IS THAT NO. 5: WHY ARE WE PAYING OURSELVES SO LITTLE?

Are you taking an actual paycheck from your business? If so, good for you! It is time for a raise, as I suspect that you have not had one in a while. If you are not taking a paycheck, why on earth not? If you say because the business cannot afford it, then you have bigger issues, as you do not have a viable business yet. Time to raise your prices. When you are not paying yourself, you are losing out in more than one way. You are not contributing to your future in the form of Social Security. You are not able to fund any sort of retirement. Why are you working this hard for nothing? It just does not make sense. Nearly every industry, every market, every product is going up in price. Your prices should keep pace and increase a bit as well.

January is the start of a new year, a clean slate. Who knows what 2022 will bring? I invite you to ask the question, “Why is that?” any time you run up against something that is limiting you or holding you back in your business. If and when you find yourself asking “Why is that?” I would love to know what you are questioning. Email me at jennifer@nnep.com, subject line: Why Is That. If enough of us make even a small change in the same direction, we can influence how our customers, friends and family perceive us and our industry, and maybe even influence changes on a grander scale. Widespread incremental changes can add up to massive shifts in the way things are in the future. **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.



IT'S WHAT'S FOR DINNER



What's for dinner? "Leftovers!" The anticipation of something delicious from the kitchen fizzles right there. Dinner is great but loses something in the second or third go-around. We have all seen cookbooks and recipes to whip up delicious leftovers nearly as good as the original.

Can designs have leftovers? Can we make something old, new again? The answer is yes. In our fast-paced world, time is money and if we have a design that worked well the first time for a customer,

Left: Our equipment manufacturer wanted a fun beach design to run on a machine in Orlando. (All images courtesy Lon Winters)

why not repurpose it and achieve the same goal? We have done a multitude of designs for demos and promotions for the trade. We have amassed quite a library of royalty free art. There is no shame





Above and left: The different tones of shadow in the flamingo's recessed areas like the neck and the feathers were developed in the base.

in repurposing designs for further use in another application. We don't mean just using the same design over again but using elements that made up a particular design. Repurposing a palm tree from one design for use in another design. It saves us time.

Earlier this year, our equipment manufacturer wanted a fun beach design to run on a machine at a trade show in Orlando. We had done several of this type of image over the years. We dipped into our resource library of previous art and reimagined the "leftovers" for a new flavor. This was helpful as they needed the art in minimal colors and quickly for test printing.

The original art was complicated and ran on an 18 color with several flashes with multiple special effects. We wrote about it in a S+S a couple years ago. We chose to use some of the same elements in our simpler version. We would use a flamingo since it was being printed in Florida. It was hard to go wrong with a surf theme for a beach design. Instead of 12 colors, we had just five screens to work with.

SOFTWARE TO SUBSTRATE

Going on a black substrate allowed us to stretch out some of the colors to form secondary tones by reducing or eliminating the white printer or base plate in areas. Some effects on the original rendering had to be recalculated with fewer colors. The strength of the design held together even with that reduction. A strong, central figure with many elements of the frame that didn't change.

Primary colors with a bit of a spin were the safe choice with reduced screens. Flamingo? Gotta be pink, right? Water should be blue. Sunsets have plenty of yellow. That was the formula to keep the style of the original with solid, bold colors. The flamingo occupied the space differently than the tiki. We fit him in the frame and adjusted accordingly. The left wing nearly covered the sky, but the sun still peeked out. Pink replaced red but still mixed nicely with the yellow. We didn't change much of the values in the separation, just the color of the ink.

We gave up some of the rich coloring in the water with less colors. What was bright blue is now 100% of the single blue's opacity and the areas where the royal blue once lived became a secondary tone of the single blue with not only the base removed but a decrease of its opacity as well. Effectively creating three tones. The black substrate substitutes the shadowy recesses of the darker water in the wave. Even though the flamingo wasn't as colorful as the tiki, we didn't lose any of the details. All values were accounted for and still guaranteed a satisfactory outcome for the printed result.



Though the white printer or base plate wasn't technically a color, really more of a support system, it had a very necessary role and the biggest part to play.

We recolored the wooden planks because mostly darker colors were used in the rendering. It was meant to fall back, but we only had bright inks to work with. We removed the base entirely under the pink to darken it up and added some blue and yellow to complete the wood.

The leaves probably took on the biggest transformation since we didn't have a bright green to work with. We know that blue and yellow make green so no problem, right? Well, mostly, depending on the value of blue and yellow needed to make an



acceptable green. Luckily, we had two bright colors to work with. With portions denser than others, we retained the values of the green tones from highlight to shadow. In the yellow, the darker spots dominate the blue because it was a third the opacity. In other areas, they are just about equal, or the blue takes over.

The pink flamingo highlights this style on black. The different

tones of shadow in the flamingo's recessed areas like the neck and the feathers were developed in the base. We kept the opaqueness very bright and decreased others where we wanted a fall back of the opacity. To create the softest shadows, we decreased the base 80% leaving us 20%. When the pink printed there was a noticeable change. The darker shadows had complete removal

of the base and a reduction in opacity of the pink to 70%. The removal of the 30 % gave us a substantial shadow right where we needed it. Again attaining at least three separate values.

Though the white printer or base plate wasn't technically a color, really more of a support system, it had a very necessary role and the biggest part to play. We reduced the amount of base where it counted and kept it solid where we wanted opacity and vibrancy.

Once seps were completed, they were outputted on CTS with a frequency of 55 LPI. The white printer was on a 156 TPI screen at 35 N/cm² using 65/90/65 a triple-ply, dual-durrometer squeegee. It was flashed



Above and left: There is no shame in repurposing designs for further use in another application.

and smoothed. Next, the blue, pink, yellow and the highlight white ran on 230s at the same tension using the same squeegees wet on wet.

The customer was satisfied, but ... the show was cancelled in Orlando. Stupid COVID! Ahh, but all is not lost. We are now repurposing these leftovers. Gonna change the type from Florida to California, where this will now be printed in January. At least it is another beach community. However, other than at zoos, flamingos are not indigenous to California. Oh well, it'll give us something to talk about. **GP**



The customer was satisfied, but the Orlando event was canceled. We are now repurposing these leftovers. Gonna change the type from Florida to California.

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.

PRODUCTREVIEW

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



SPIRAL TIE-DYE T

Royal Apparel offers its Organic Cotton Spiral Tie-Dye T-shirt, which features a crew neckline, set on rib collar, double-needle sleeve and bottom hem, side seams, and a tear-away label.

866-769-2517

royalapparel.net



MID-SIZE LASER

Rayjet Laser, a division of **Trotec Laser**, introduces the R400 laser cutting and engraving machine to its R Series product line. It has a 40.5" X 24.8" bed size and features up to 100 watts of DC power. Users can cut and engrave plastics, paper, textiles, acrylics, wood, and more. It also includes the Rayjet Manager workflow software.

866-226-8505

rayjetlaser.com

MEN'S HOODED SHIRT

Independent Trading Co. offers the SS150JZ full-zip hooded shirt made of 4.5-oz 60/40 cotton/polyester lightweight jersey, with the exception of the gunmetal heather. It has a No. 5 kissing zipper, sewn eyelets, flat drawcord, unlined hood, and 1X1 ribbing at the cuffs and waistband. Sizes range from XS-3X, and colors include black, charcoal heather, classic navy heather, gunmetal heather, and olive.

949-366-9911

independenttradingco.com



PVC FILMS

Drytac announces the global availability of its Polar Premium Clear permanent polymeric PVC inkjet media and Weathershield polymeric PVC overlaminating film. Polar Premium Clear is a 3.2 mil phthalate-free printable polymeric solvent self-adhesive PVC film that the company says can perform well on various substrates. Weathershield UV overlaminates are 3.2 mil clear polymeric gloss or matte PVC laminating films that can be used for general signage, window graphics, and more. The product has a seven-year durability.

800-280-6013

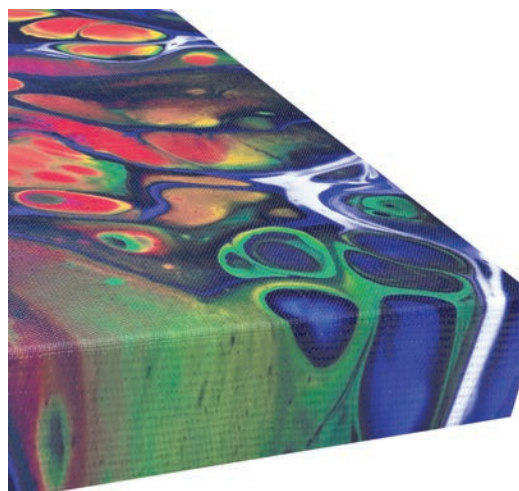
drytac.com

PHOTO CANVAS

LexJet, a division of **S-One Holdings Corporation**, debuts three new canvas collections in its Elements Portfolio. The new additions are the gemstone, quarry, and boundless collections. The products can be used for photographers, high-volume reproductions, and canvas made from recycled water bottles, according to the company.

800-453-9538

lexjet.com





UV-LED FLATBED

RICOH announces its RICOH Pro TF6251 UV-LED flatbed printer, which can produce on substrates up to 4.3" thick. It can also print on odd-size and pre-cut materials. The product has two ink configurations and two ink sets to choose from and has the addition of a roll option attachment.

800-637-4264
ricoh-usa.com



NO POWDER DIRECT-TO-FILM PRINTER

The Mosaica Group offers Cobra Flex direct-to-film printers, which feature multiple Epson i3200 print heads with CMYK plus white and a proprietary printable adhesive. It is available in two widths, 24" and 50" and can print up to 255 square feet per hour.

800-658-9022
printmosaica.com

CUT-FILE SOFTWARE

Zünd releases PreCut Center software, a workflow for generating cut files for unprinted materials. The company says its product can prepare fully nested cut files in a few steps, reduce workload in file preparation, generate optimal material yield, and eliminate error potential. It is available in two versions, basic and pro.

414-433-0700
zund.com



BALLPOINT PENS

Fastpens offers the Sparta ballpoint pen, which the company says will not clog or dry up and can write in any direction. It is made of plastic and features a white barrel and clip with a twist top. A section under the barrel is offered in six trim colors including black, blue, light blue, red, orange, and green. The ink color is black.

888-574-1233
fastpens.com

ORANGE INK

MUTOH America introduces MS41 orange ink, a new addition to its line of eco-solvent inks. It is available for MUTOH's XpertJet 1682SR printer. The product comes in 300ml bags and is GREENGUARD Gold Certified.

800-996-8864
mutoh.com



PRODUCTREVIEW

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



SIGNAGE AND BANNERS

InkSoft announces the addition of more signage and banners to its platform. The company says users can now offer more than a thousand products including signs, banners, stickers, decals, and more.

800-410-3048

inksoft.com



READY-TO-PRINT SHIRT

RTP Apparel releases a new DTG ready-to-print shirt, the 1700 LongSleeve crew neck. It is a 100% combed ring-spun cotton, 30-singles, long sleeve pretreated shirt. It is currently available only in black.

877-299-2914

rtpapparel.com

DIRECT-TO-FILM TRANSFER PRINTER

ColDesi Inc., announces the addition of its new flagship direct-to-film transfer printer, the DTF-24H2, to its DigitalHeat FX line. It uses PET transfer film for users to see the design underneath the film when they heat press it onto the garment. The company says the product produces full-color digital transfer sheets.

877-793-3278

coldesi.com



DESKTOP PRINTER/CUTTER

Roland DGA announces the launch of its new VersaSTUDIO BN-20A desktop

printer/cutter. It removes the BN-20's recirculating specialty color channel for white and metallic inks. It can be used for signs, posters, decals, labels, customized apparel, and more. The product also uses Roland DG's GREENGUARD Gold certified Eco-Sol MAX 2 inks.

800-542-2307

rolanddga.com

FLATBED PRINTERS

SwissQprint introduces a line of flatbed printers that have a maximum resolution of 1,350 DPI and ultra-high-precision droplet placement according to the company. The table can be divided into up to 256 segments, and the product adds the company's Tip Switch vacuum.

224-802-2770

swissqprint.com





SWING-AWAY HEAT PRESS

Insta Graphic Systems offers its Insta 256 manual heat press, which has a cast-in tubular heating element to heat the upper platen from within. The 16" X 20" swing-away machine swings almost a full 180 degrees to the right.

562-404-3000
instagraph.com



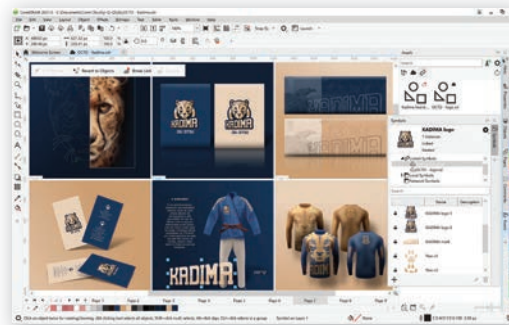
DTG CONVEYOR DRYER

Lawson Screen & Digital Products Inc. offers its Kick-Start direct-to-garment conveyor dryer, which is an alternative to curing and drying DTG prints without a heat press. It can also dry pre-treated shirts prior to printing.

314-382-9300
golawson.com

GRAPHICS SOFTWARE UPDATES

Corel announces subscriber-exclusive updates for CorelDRAW Graphics Suite and reveals CorelDRAW Technical Suite, which is the newest edition of its software collection for technical design and documentation. The company says subscribers can expect asset management, enhancements to collaboration workflows and new typography tools.



877-582-6735
corel.com



LASERABLE WALLETS

JDS Industries introduces bi-fold and wrist strap wallets to its Laserable Leatherette line. The bi-fold wallet is available in seven colors and features a flip-up ID holder, two large pockets for bills, and slots for four cards. The wrist strap wallet is available in eight colors and features a detachable wrist

strap, room for 12 cards and an ID, a zippered compartment for change, a large compartment for bills, and two smaller pockets for other items. Both offer RFID protection.

800-843-8853
jdsindustries.com



UV-LED INK

EFI ProGraphics offers a new UV-LED display graphics inkjet ink, called XA high-adhesion ink. The ink is available for EFI's wide-format flatbed and hybrid printers. The company says the ink can give greater adhesion and durability on rigid substrate prints.

650-357-3500
efi.com

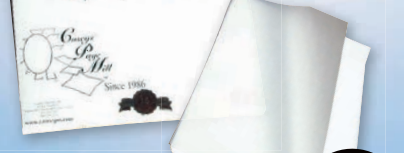
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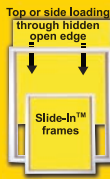



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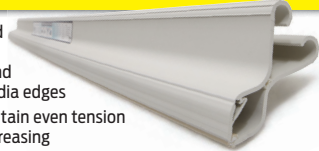


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Graphic Elephants, Episode 14

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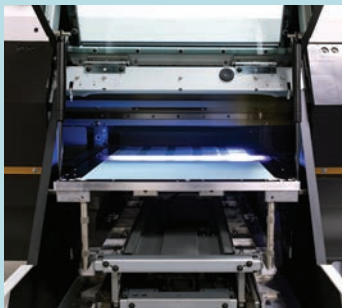
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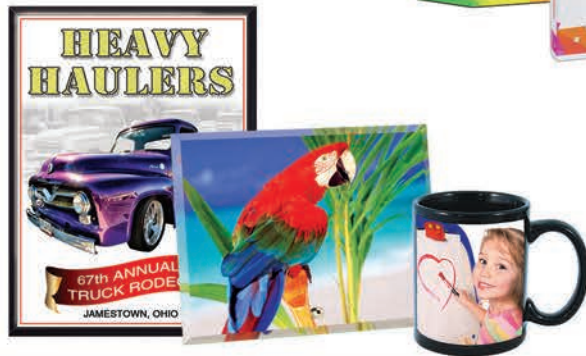
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