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## The Race Is On To Indy!

*The Screen Graphics Show '97*



## PAUL & SCOTT SADDLER ... MAKE OBSTACLES INTO OPPORTUNITIES

BY MIKE MUSSELMAN



**TO DECORATION ... AND BEYOND!** "Screen printers" Scott Saddler (seated) and older brother Paul soon found that label limiting, as plastics-industry clients drove their business outside the scope of screen or pad-transfer work. Today, they're "decorative and functional applications specialists." And tomorrow ...?



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If you take the tour at Screen Tech Designs' production facility, you're probably in the plastics industry. You're adding your name to a guest list that has included the likes of Thomson Consumer Electronics and Motorola, as well as Metro Plastics Technologies Inc., Kimball International and other custom injection-molding companies who service electronics giants such as RCA.

You'll be escorted around by the company founders, brothers W. Paul and Scott A. Saddler, who, if they have their way, will convince you that you've come to the right place. With justifiable pride, they'll point out, in turn, state-of-the-art features of their facility's design. As Paul Saddler opens the door into his production area, you won't immediately see the Titan 50,000 CFM, 5 million BTU Positive Flow Air Makeup Unit, but you'll feel the rush of air from its positive air-flow and particle/contaminant-filtration systems. You'll also note the feel of the air itself, the temperature and humidity of which, Scott will point out, is precisely controlled by the two seven-and-a-half-ton Trane HVAC systems humming away just outside the walls. Other amenities? How about 75HP Kaeser Complete Screw Compressor System provides contaminant-free compressed air? You'll soon note, as well, that, though you've come looking for a "screen printer," that's a woefully inadequate description of what goes on *inside* Screen Tech's four walls.

Sure, there's a collection of screen presses. If you're up on press technology, you'll recognize a half dozen semi- and three-quarter autos and a five-color UV carousel and a couple of large manual flatbeds.

But as the tour continues, you find that a goodly number of the Saddlers' 50-odd employees handle a surprising varieties of *other* manufacturing chores. The four pad-transfer presses aren't unheard of. After all, it's printing. And there's diecutting. But what about the four painting booths, and the automated spray-painting production line? And are those people over there assembling computer disk drives?

Along the way Paul or Scott will point out the fact that their company's phenomenal 1,056 percent growth rate ranks them 241st on *Inc.* magazine's "Top 500" list of fastest-growing privately held companies — alongside list alums the likes of Timberland, The Boston Beer Company (brewers of the "Samuel Adams" brand), Intuit and Microsoft. And by the time they usher you into their tastefully furnished conference room, you'll have had a glimpse of why that is so, but still be wondering: If you, in the figurative sense, scratch a Saddler, what would you find under the surface? Mechanical engineers, maybe? Chemists? Paint formulators? It may come as a surprise that the correct answer is *none of the above*.

PHOTOGRAPHY BY TIM OSTRANDER



**NOT FLAT? NO PROBLEM:** Pad-transfer equipment extends the Saddlers' printing capability to keypad buttons and other irregular or hard-to-reach plastic surfaces on their client's injection-molded parts.

#### SEPARATE DESTINIES

The Saddlers soon split T-shirt and plastic operations. The former was housed in 1,000 sq. ft. of rental space, but the latter, significantly, soon occupied every inch of a 4,500 sq. ft. facility purchased in 1991. By 1992, the contrast sharpened, as garment and plastics operations reacted to radically divergent business climates.

By '93, the plastics side had more than doubled, and had itself been split between the 4,500 sq. ft. shop and a third 10,000 sq. ft. facility. "There wasn't really anyone else in the Midwest who was doing it at the level we were, or the way we were, at that time," Paul explains.

OEM product designers had thrown fabricators a curve as well, abruptly abandoning the smooth-shiny surface, fresh from the mold, for a subdued matte or textured finish on a part, which required painting.

Screen Tech's clients experienced difficulty juggling paint and print portions of the manufacturing process, so the Saddlers inaugurated in-house painting to save their customers the trouble of sourcing vendors, and to save themselves from a troublesome variable. "Somebody has painted the part with God-only-knows what, and now we've got to figure out how to print it," Saddler says. "What happens if there is a problem with the paint? Do we go back to the painter? The molder? So we said, *Well, the easiest thing to do was to paint the thing ... and make another nickel.*"

#### PUSHING THE ENVELOPE

That pattern has continued to drive the Saddlers outside the "core competencies" comfort zone. Case in point? Digital Ocean approaches the Saddlers with its Wireless LAN (Local Area Network), specifically for use with the Apple Newton MP100. Designed to be an integral part of an existing message pad, Digital Ocean's LAN housing must match, in color and texture, the green suede finish on the OEM component. Problem: the paint, applied in Japan, contains isocyanates, a carcinogenic component which would require a U.S. manufacturer to implement robotics and other cost-prohibitive safeguards.

While that's a turn-down job in most screen-printing quarters, it represents the type of rapid-prototyping opportunity that Screen Tech Designs now seeks out. On the strength of the relationships Paul has established with his paint suppliers, he was able to formulate a non-hazardous, water-borne paint, which duplicates the texture, color, and durability of the OEM finish at half the cost, and then apply the replica paint on his own fully automated paint line.

Their willingness to stretch themselves, technically, has kept the Saddlers in the vanguard of an increasingly sophisticated industrial screen-printing market, and allowed them to stay a step or two ahead of a small but growing group of plastics-printing competitors.

They moved into pad printing to extend their printing reach to keypad buttons and other non-flat or recessed plastic surfaces. They also offer economical multi-color screen printing of overlays and the clear plastic "lenses" that enclose LCD digital dis-



**UNSEEN EYES AND HANDS:** The Saddler's credit others, both in-house and out, for much of their firm's skyrocketing growth. Before parts can be printed on this semi-automated press, a small army of "silent partners" — fixturing subcontractors, ink and paint vendors, machine manufacturers — has contributed tools, techniques and technical talents toward customer satisfaction.

1,000 samples of a new plastic part destined for use by RCA? (The regular printer, it seems, couldn't meet a deadline.)

Saddler took the job, but found the going difficult on the smooth injection-molded surface. Many parts later, he perfected his technique, but only after reformulating the ink that was then considered the electronics industry standard.

He got the contract, and with it, a mini-business boom that required Screen Tech to run two shifts. The downside? Paul — and now his wife — worked both. "We'd shut everything down at 5:00 o'clock on T-shirts, grab a bite to eat and start working on the plastic parts," says Paul. Printing the evening's quota of 250 took several additional hours. "How many times have you heard people say, *Being self-employed is great, you can work half-days?* They didn't tell me that meant 12 hours," quips Paul.

When Metro upped their standing per diem to 1,800 parts, Paul balanced the prospects of a long string of all-nighters against the promise of additional income, and sprung for semi-automated equipment. And in 1988, they were introduced to UV ink technology.

#### SILENT "PARTNERS"

When Scott returned from his year-and-a-half away ("After all the *hard* stuff was done," Paul notes.), he enrolled at Miami of Ohio to finish his schooling. "He couldn't find a job he liked, so he came to help me out for what was supposed to be a few months," Paul recalls.

In fact, Scott worked without pay for several weeks, but soon found ways to bring his continuing education in business law and accounting to bear on a growing tangle of bookkeeping, inventory management and billing challenges as Screen Tech's production rose to 15,000 pieces per day.

"I was particularly horrible at the day-to-day finances," Paul admits. "I'm really the tech guy." So, from that point forward, the brothers assumed complementary roles, and Paul, company spokesman and production head, credits his quieter brother with much of what is so right about the business side of the business.

Paul is also quick to pass out kudos on the technical end to a select group of competent technical reps from their key suppliers. In particular, he singles out his earliest vendor/mentor, Roland Hobart, now with Dynamesh, but then an outside salesperson for now defunct Advance Process Supply. "He helped me out from the time I got started," Paul says. "And he still comes in and helps us out." Hobart not only sold them their first "store bought" presses and drying racks, but acted in an advisory capacity as the Saddlers built their first clean-room, and tackled the then brave new world of UV printing.

The Saddlers make no bones about being vendor-dependent. "We are just applicators," Paul explains. "We don't pretend to know how everything works." The Saddlers work with several local companies on fixturing challenges, and frequently send a troublesome job out to press or ink manufacturer and say, "You guys figure out how to print this, and then come teach us how you did it."

If a prospecting vendor calls, offering to send them a "new, improved" product, Paul has a standard reply: "Don't send it. Have your salesmen bring it by." No salesman in the area? No sale.

"I don't care how great it is, or how cheap it is," Paul insists. "when I have a problem with it, I want someone to come in and help me, and they won't be able to do that."



**SEEING THINGS IN A DIFFERENT LIGHT:** Paul Saddler (rear) counts on technical support specialist Wes Crouch and an expanding group of in-house technicians, as Screen Tech's client services expand farther from the company's core print/paint competencies into rapid prototyping, EMI shielding, solvent welding and product assembly.



**INLINE AUTOMATION:** Screen Tech's Hercules 5-color, carousel UV screen printer is the centerpiece of the Saddler's screen-printing department, the most efficient tool in a process-quality arsenal that includes an additional half-dozen semi- and three-quarter-automated presses.

## A BRIEF HISTORY

Not so long ago, and only a few mile away, the Saddlers began screen printing in the basement of their parents' home. Things like OEM prototyping, automated printing and painting — even plastics — aren't in the plan. If this sounds familiar, then so should the rest. It's 1982, and the plan at Red Baron T-Shirts is ... T-shirts. Paul and Scott, then 18 and 16 years of age, respectively, began printing them for their high-school chums, with a \$40 screen printing kit Paul picked up at the local "art & crafts" outlet.

"The guy there assured me that printing on T-shirts with four, five or six colors was a snap," says Paul. "As it turns out, it wasn't. But we stuck with it."

Soon, the boys picked up orders for events and promotions around town, prompting a move from the basement to an abandoned barracks at a nearby deactivated military installation. Though larger, it had no heat. But it had water for developing and cleaning screens. "It didn't have hot water," says Paul. "But it did have water."

If (which was often) they didn't have what they needed (or more likely, couldn't afford it), they made it. They laid down multi-color work on a home-built, one-color plywood press by fashioning cardboard jigs. "We'd pull a shirt over the jig, pin it, and then we'd use three-point registration." Screens were burned on a homemade exposure unit. (Don't by the way, mistake homemade for crude. According to Paul, this same light table did active service until just prior to the present facility's recent grand opening.)

While business didn't exactly boom, there were boomlets. "We ended up getting a couple of what were — back then and for us — substantial orders," Paul recalls, adding dryly. "A company would come in and order 300 shirts every couple of months or so."

Which, in turn, called for a more sophisticated, multi-color press. "We built it from 2x4s and plywood," says Paul. And the rotary mechanism? "A bar stool," says Scott. "We used the swivel on the stool as the basis for the rotary carriage."

In 1984, Red Baron incorporated, a move which changed its name to D.S.E. Inc, d/b/a Screen Tech Designs, but did little to improve its financial prospects. What it did signal was the Saddlers' recognition that their future might lie outside the scope of their original tradename.

"We were still doing the T-shirt thing," says Paul. "But during that time, we'd take on the occasional odd job — 200 plastic license-plate holders, sheet vinyl. Anything people brought in, we'd try to print."



**ENGINEERING IT IN:** Screen Tech's quality auditor Sharon Robertson views a graphic design element on the optical comparator, one of a number of QC tools available to her in the company's Quality Assurance Department. Job one? Maintain Screen Tech's ISO 9000-level quality process.

## WINDS OF CHANGE

In 1986, Paul moved Screen Tech operations from the barracks to a 300 sq. ft. commercial sublet. (Primary attraction? An office.) He made his first press purchase — a used Hopkins four-color rotary, from a fellow printer in Bloomington — and eked out a living while commuting, sometimes twice a day, between his Columbus shop location and nearby Bloomington, where he attended college classes.

And Scott? "He escaped," Paul quips. "Scott left to attend college overseas."

If not for a serendipitous visit from a local plastics fabricator, Screen Tech may have remained a T-shirt shop and the Saddler's story might have been, well ... shorter. But in 1987, a representative from Metro Plastics Technologies, an injection molder from Noblesville, Ind., stopped by with an intriguing proposition. Could he print approximately



**RAPID-RESPONSE TEAM:** Paul (left) and Scott meet with operations manager Shana Schreiner in the company's show-worthy conference room. Schreiner oversees Screen Tech's Project Development and Prototype Department, seeking speedier turnaround of client prototypes.

plays, on in-line screen-printing equipment, featuring five print heads, each followed by a UV-curing station (see photo, p. 28). All with an eye to offering more, better, faster, cheaper.

And T-shirt operations? While plastics clients were raising their quality consciousness, T-shirt buyers had become acutely price conscious. The Saddlers saw the time was ripe to quietly retire from the garment game. "The T-shirt market was only going to decrease. It was either going to be taken up by the thousands of mom-and-pop shops that popped up right then, or it was going to be absorbed by very large T-shirt printers which, as it turns out, is where most of it has gone."

#### A BETTER FIRST IMPRESSION

With their garment division's demise, the Saddlers turned their attention to their plastics customers, whose quality focus had expanded from product to process. The new watchwords were *production efficiency* and *waste reduction*.

"Early on, as long as the customers got the end products they desired, they didn't care how it was made," says Paul. "Then people began to look at not only *what* you could do, but *how* you did it, and the *tools* you used to do it."

They were also interested in the *where*. Prospective clients began requesting facility tours, for a first-hand look at the process. "We were hesitant to bring anybody in," Paul admits, but adds that reluctance rose not from technical self-doubt, but doubts instead about their environment. The larger of their two sites was a former machine shop, and despite the brothers' efforts to efface that history, it made a poor technical showcase. "It was dark. It was dirty," says Paul. "We took prospective clients to our 4,000 sq. ft. building first. It had nice offices and our five-color press was there. Then we'd take them over to the

*dungeon* where we were actually *doing* everything. So we tried to make a good first impression, because the *second* one was going to be *lousy*."

Plans were immediately drawn for new digs where both function and form would contribute to sales.

In November of 1995, Screen Tech occupied its present four-worthy facility, consolidating offices, design and production plant in 18,000 sq. ft. at 2651 Cessna Drive in Columbus, Ind. The consolidation yielded immediate benefits in reduced overhead expenditures, and it improved scheduling and increased overall efficiency, simply by making Screen Tech's various design and production departments more accessible to one another.

In addition to the previously mentioned HVAC and air-filtration equipment, the facility lighting, a major concern in the former facilities, is state-of-the-art. Uniformly lit to 75 lumens, the new fixtures are now a key feature of both functional and "show" aspects, generating twice the brightness of the old. So bright, in fact, that Paul recalls, "The electrician questioned us repeatedly about it, before we finally drove it home that that's the way we wanted it."

But the facility's greatest benefit is *potential*. Current operations and parking area occupy just two of the site's five available acres. Expandable on two sides to a total of 100,000 sq. ft., the building itself presents few impediments to foreseeable growth.

And if the Saddlers' have their way, that growth will come. "We want to become a 'one-stop shopping center' for plastic decoration," says Paul, but adds that Screen Tech will not hesitate to venture beyond the bounds of the purely decorative, as well. "We're heading into EMI shielding, which is a specifically *functional* rather than a decorative process," he says. "And we've already gone so far as to apply pressure-sensitive adhesives, die-cut and assemble components, solvent-weld jewels into plastic casings to accommodate light-piping, and add the rubber feet, too," says Paul. "So when the customer gets the product housing back, it's essentially *done*."

In addition, the Saddlers have launched several sidelines, including a marketing/promotional program designed around the company's lexan-coated mouse pad which, unlike conventional cloth surfaces, resists finger printing and discoloration from skin oils and dirt.

#### THE MORE THINGS CHANGE ....

At tour's end, it's tempting to ask if, despite their successes, this still-young company's thirtysomething founders have any second thoughts. "As the saying goes, *When you're on your deathbed, you won't be wishing you'd worked more*," says Paul. "So if I had anything to do over, I'd work less. But aside from that, we've been blessed."

"We've built an 'Inc. 500' company. We work with a great bunch of people. I even get to wear jeans, if I want. So I can't complain a whole bunch," Paul sums up. "I *do*, but I shouldn't. So I wouldn't change anything."

Those who take future tours should find that, in the midst of rapid industry change, Screen Tech's business plan remains essentially unchanged: to go wherever its clients drive it, never forgetting to say, *we can do that*. And why not? When you're ranked 241st on the "Inc. 500" list, there's still 240 to go. ■