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Owners build on 30-year legacy at Legend Custom Woodworking

IWF 2014: Post-show report

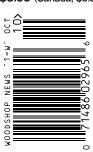
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- lower power consumption 100-150 watt per hour, no heating dimensional coating of profiles.
- perfect for veneering surfaces
- edge banding
- gluing of surfaces and edges
- for more information view www.barth-maschinenbau.de



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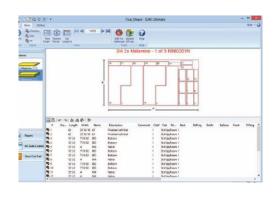
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- Designed for ease of use







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Over the Workbench Talkin' shop with former editor A.J. Hamler



This Business about Woodworking Share an opinion with David DeCristoforo but don't expect to be right

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TAKING STOCK

with TOD RIGGIO

IWF gave a sneak peek of big things to come

he final day of the International Woodworking Fair falls on a Saturday and it can be a long day for exhibitors. The big crowds have come and gone and thoughts of finally getting home have crept in. They're exhausted, waiting for the signal to start packing up, while wearing their emotions on their sleeve. As a paid observer, this is where you learn the truth. Thumbs-up or thumbs-down on the show? You're not fooling anyone.

I talked to one downtrodden person who perked up when discussing an abundance of leads. There was more of everything — exhibitors, attendees, machinery and exhibit space — than at recent shows, making it clear that the industry is in a growth mode.

There was plenty of product innovation, enough to fill the next several issues of Woodshop News, for shops that can finally loosen the purse strings. I noticed shops sending teams of employees to scout new machinery and processes, exhibitors celebrating the day's sales results and high spirits in the aftershow hours. Stuff I haven't seen since, oh, before the Great Recession.

IWF management couldn't be more pleased, as you'll learn in our show roundup on Page 10.

From my perspective, a number of products stood out. I remain intrigued by Cabinotch, a company that supplies face-framed cabinet boxes ready for assembly. Combine the service with KCD's Touch tablet software and you can design a cabinet job, order the boxes and get your shop working on the rest of the project before leaving the customer's home.

It's an interesting business model.

Thermwood's Cut Ready (August 2014 issue, Page 16) gets my nod as the show stopper.

SawStop appears to have hit a home run with its sliding crosscut table saw attachment (Page 20). For a company that never wanted to make tables saws and is now the No. 1 seller, the competition must be wary. We heard about one company that's got a table saw safety device to rival SawStop, but no official announcement was made at IWF.

Steel City Tool Works caught me off guard with its restructuring plans (Page 28). There were a couple of times when I thought the company had gone out of business. But it's had a steady presence at the trade shows and management seemed really excited about the

The Challenger's Awards always leave me a bit confused. They practically stop the show for an awards ceremony, then the presenters drive away in golf carts, leaving onlookers confused as to what the winning entries actually are. We've done our best to explain on

If you're a student, enter the Design Emphasis student woodworking competition in 2016. The IWF does a really nice job of promoting and providing a proper gallery setting for some impressive work. I can't imagine a better audience for aspiring furniture designers. Check out our coverage on Page 16.

Finally, I want to offer my sincere appreciation to our fan club, the readers who stopped by the Woodshop News' booth and offered their praise. It means a lot to the entire team.

Working with tools and wood is inherently dangerous. We try to give our readers tips that will enhance their understanding of woodworking. But our best advice is to make safety your first priority. Always read your owner's manuals, work with properly maintained equipment and use safety devices such as blade guards, push sticks and eye protection. Don't do things you're not sure you can do safely, including the techniques described in this publication or in others. Seek proper training if you have questions about woodworking techniques or the functions of power machinery.



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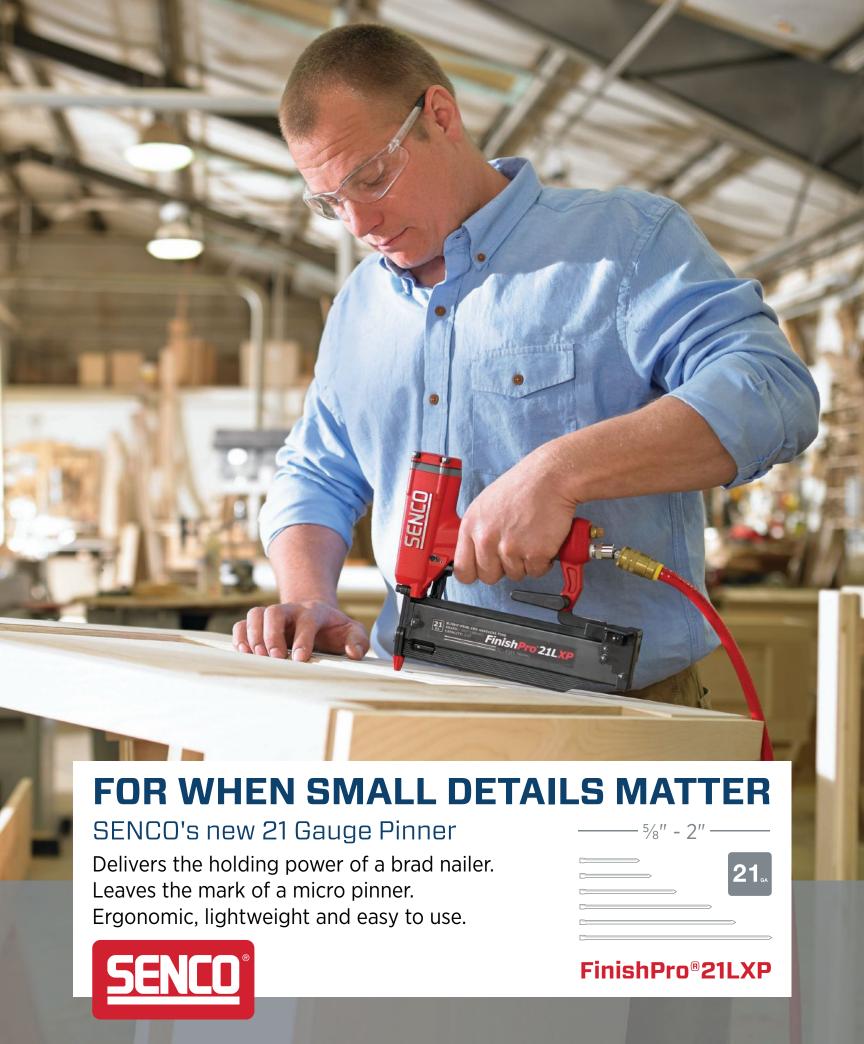
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NEWS DESK

IWF 2014 buoyed by continued growth

By Jennifer Hicks

WF 2014, held Aug. 20-23 at the Georgia World Congress Center in Atlanta, earned high marks from attendees, exhibitors and the show's management, based on post-show interviews conducted by Woodshop News.

Show chairman Rick Hannigan says IWF drew 920 exhibitors, offered more than 448,000 sq. ft. of exhibit space and featured approximately 200 new exhibitors. There were 212 international exhibitors representing 32 countries. Registration was up 10 percent over the last show in 2012.



Steel City made news at IWF. See page 28 for details.

"We really fully expect to have continued growth for the next four years at the show and the woodworking industry as a whole," Hannigan says.

Activity on the show floor was energetic, positive and vibrant. Attendees were eager to see new technology, connect with vendors, become educated on new trends and openly discuss needs to expand their businesses through efficiency and productivity.

"The overall attitude of the attendees is much more vibrant and much more positive as opposed to two years ago. Attendees are now committed to investing so they are actively looking for information for the product they want. At the last couple of shows they were hesitant and weren't really sure if they wanted to invest," Hannigan adds.

Exhibitors said attendees were engaged and very interested in new products. More than 108,000 leads were collected by the show's electronic lead retrieval system. About 50 percent of the audience stated they expected to make significant purchases in the next six to 12 months, according to the IWF.

"The exhibitors saw a big difference with attendees on the show floor this year. They're positive about the future of their companies. There's still a little bit of hesitation there, but it also helps them to talk to each other and we encourage attendees to talk to each other," Hannigan says.

"There's a lot of movement toward automation and material handling. Good, highly trained, motivated employees are hard to find, so more and more people are using automation to replace the employees that aren't available."

Lewis Reed, an exhibitor from Somerset Wood Products in Somerset, Ky., says the show has become a real benefit for his company's networking efforts, including making contacts outside the U.S.

"The show was really good for us this year we received several leads and have already been in contact with some of these companies only a few days after the show. Our company has been an exhibitor sense 2008 but we also bring several of our employees to visit the show and see what's on the market for new machinery and services for the future. We will be back to the show as it has been a real help in difficult years," Reed says.

Cabinet Makers Association executive director Dave Grulke says the organization had a tremendous presence with its educational session offerings. The CMA conducted 15 sessions that drew nearly 1,000 attendees.

"We offered widespread coverage of business management and technical topics geared towards small- and mid-sized shop management. There's always a lot of interest in our lean manufacturing and pricing sessions, and our new session on tips and tricks for CNC where we discussed advanced techniques and how to present things was pretty popular,"



The TigerStop booth drew big crowds throughout the show.

Grulke says.

Paul Losavio, a representative with software exhibitor Cabinet Vision, said it was an exceptional show.

"Based on software sales and leads generated, we haven't had those kind of results since 2007-2008. In addition to that, there was an overall positivity about the industry as a whole that we felt from our machinery and industry partners, as well as from our customers. Most of our customers seemed to be very busy with work and many of those were looking to hire more people and invest in capital equipment and software. All good signs for the industry," Losavio says.

Robert Sullivan, a woodworker and owner of Creekwood Resort in Sautee, Ga. was an attendee at the show. He says that he was impressed with the way CNC machinery systems have become simpler with faster software and more durable. He also liked looking at the 3-D printers.

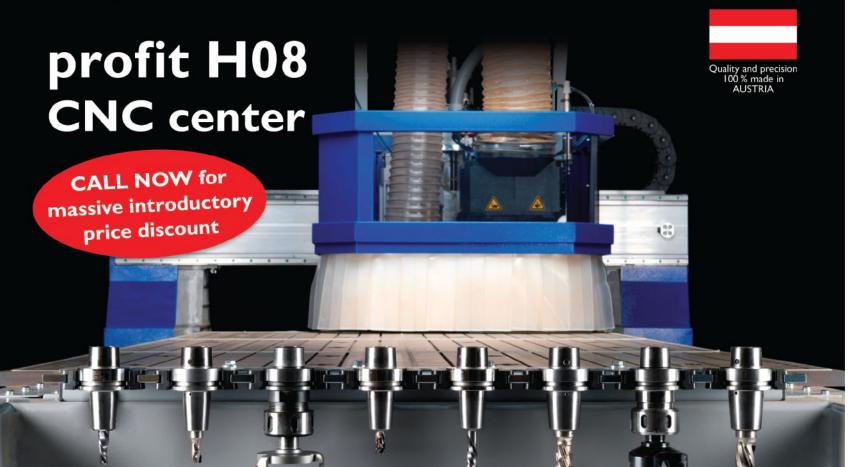
"Working the IWF for two days, I am always amazed on the booth setups, size and uniqueness," Sullivan says. "My past life was in the boating industry and I've attended many of the larger boat shows in the U.S. and England. The difference here is that you are seeing equipment that is being used to build the products."

"I have been exhibiting at IWF since 1990," adds Terry D. Gross, owner of Brown Wood Inc. in Lincolnwood, Ill. "My colleagues and I met after the show and decided that IWF is a necessity for our business. Since we serve such a wide variety of woodworkers and industrial manufacturers, IWF is a unique opportunity for us to see our customers, meet new prospects and, as important to us, see our vendors and shake hands with our competitors," says Gross.

"This year we were pleased with the results. While we would have liked to have seen more visitors, those that we did have an opportunity to speak with were engaged and optimistic. We are looking forward to 2016."

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Six honored at IWF with Challengers Awards

ix exhibitors captured the seven Challengers Distinguished Achievement Awards at IWF 2014, which recognize innovative and new technology in the wood product industry.

Sixty-one products from 45 companies competed in the 2014 competition. The seven winners were selected from 20 finalists. The winners are:



Castle gets nod for speed, ease of integration.

Castle Inc. won for its pocket cutter/screw insert machine, model CSI-1.5.

The machine saves time, reduces waste and eliminates non-value-added labor and screwhandling motion trauma for high-production cabinet joinery, according to the company.

"By using our patented Screw-in-Pocket (SIP) technology CSI-1.5 cuts Castle's distinctive screw pocket, drills a low angle pilot hole and inserts a screw below flush in 1.5 seconds," the company said in a statement.

"The screw placement allows for material stacking without marring adjacent material during transfer. The fit of the screw in the pocket assures it will stay put during transportation. CSI-1.5 seamlessly integrates into operations utilizing One-Piece Flow manufacturing practices. CSI-1.5 provides faster machining and faster production time by eliminating screw handling at assembly."

For information, visit www.castleusa.com or call 800-282-8338.

AikenControls, a division of Aiken Development, won for its nDepth 3-D Sensor.

The sensor provides advanced 3-D color and depth measurement for industrial applications in a single low-cost package, according to the company.

"The sensor combines both color and depth imaging with advanced processing to offer a powerful and practical solution for common automation tasks," the company said in a statement. "By scanning for 3-D shape and depth, the sensor can detect missing parts, holes, wane, and other types of detects in material, regardless of color, to improve inspection and cutting processes. NDepth technology is simple to configure and easily connects to most existing systems and programmable logic controllers."

For information, call 828-572-4040 or visit www.aikencontrols.com.

Graco was honored for the ProMix PD2K.

"The ProMix PD2K mixes the material close to the gun so the flush zone is significantly smaller," according to the company's website. "This allows customers to use less paint, spend less on disposal costs and allows for faster color changes. And because there is limited mixed material in the system, the ProMix PD2K is ideal for short pot life materials. It is also compatible with acid-based materials."

For information, call 844-241-9497 or visit www.graco.com.



The Evolution is a revolution for its four-sided machining capability.

Weing/Holz-Her U.S. won two Challengers Awards for the Evolution vertical machining center and GluJet.

The Evolution offers true four-sided machining with a patented work holding system and short machining cycle times, according to the company. It features a compact footprint, taking up just 54 sq. ft. of floor space, yet ac-

cepts workpieces up to a height of slightly more than 36" (920 mm) and unlimited length.

The GluJet is a "melt-on-demand" adhesive application system for edgebanders, producing waterproof, invisible joints with thin film technology.

For information, visit www.holzher.com or call 704-587-3400.

Timesavers won for the Yieldsaver-24, an automatic, opposed, self-centering knife planer.

The rough lumber planer features a compact design and the capability to automatically center each board as it is being processed.

"The opposed cutter heads, self-centering infeed shoes, and self-centering infeed drive rolls individually center each and every board," the company said in a statement. "This ability eliminates fixed cuts from thin boards and roller splits of material. The Yieldsaver-24 ultimately produces the highest yields, best grades, and a high quality finish, while minimizing knife marks and snipe."

For information, call 800-537-3611 or visit www.timesaversinc.com.



The controls of Timsavers' Yieldsaver-24, a rough lumber planer.



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- Blade size: 1311/2" long
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14" ANNIVERSARY BANDSAW

- Motor: 1 HP. 110V/220V. single-phase, TEFC
- Precision-ground cast iron table size: 14" sq.
- Table tilt: 45° R, 10° L
- Cutting capacity/throat: 131/21 Max. cutting height: 6"
- Blade size: 921/2"-931/2" L (1/8"-3/4" W)
- Blade speeds: 1800 & 3100 FPM MADE IN TAIWAN
- Approx. shipping weight: 247 lbs.



\$54500 SALE



17" HEAVY-DUTY BANDSAW

- Motor: 2 HP, 110V/220V, prewired to 220V, single-phase, TEFC
- Precision-ground cast iron table size: 17" sq.
- Table tilt: 45° R, 10° L
- Cutting capacity/throat: 16¹/₄"
- Max. cutting height: 121/8"
- Blade size: 1311/2" L (1/8"-1" W)
- Blade speeds: 1700 & 3500 FPM
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- Suction capacity: 1025 CFM @ 2.6" SP
- Max. static pressure (inches of water): 10.3"
- Filter: 0.2-2 micron
- Collection drum: Steel, 35 gallons
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- Approx. shipping weight: 312 lbs. Shown with optional stand

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- Max. cutting height: 6"
- Blade size: 921/2"-931/2" L (1/8"-3/4" W)
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- Approx. shipping weight: 196 lbs.



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- RPM: 1725
- Precision-ground cast iron table size: 235/8" x 171/4" x 11/2" thick
- Table tilt: 5° left, 45° right
- Cutting capacity/throat: 161/4" left
- Maximum cutting height: 12"
- Blade size: 1311/2" long
- Approx. shipping weight: 418 lbs.



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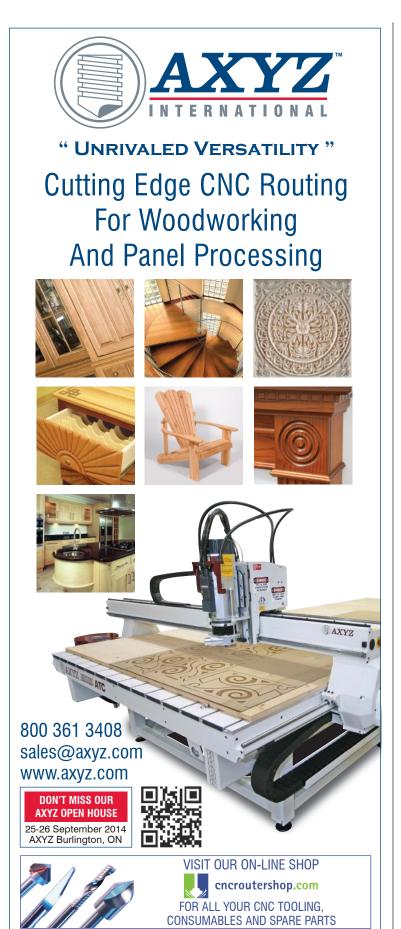














Thermwood's CutReady was a show-stopper at IWF.

Thermwood Corp. was honored for the Cut Ready

The Cut Ready is preprogrammed to cut cabinets, drawers, doors, moldings and more. The operator simply selects a design and the measurements on kiosk-type touch screen and the machine gets to work.

"For nested-based manufacturing, you usually have to create a CNC program to cut the parts. But the Cut Ready works differently," product manager Jason Susnjara says. "There is no CNC programing needed ever. The machine knows how to make face-frame, frame-less or any other type of cabinet. You just select the design you want, adjust the size and make it. There is no software or programming involved."

The machine is preloaded with more than 10,000 cabinet and closet designs, for example. After the dimensions are added and the stock is positioned on the table, the operator presses the start button or can use a remote control. The screen provides information on the job's progress and time remaining.

Thermwood plans to add more design options in the coming years, which will be available as free updates to customers.

For information, call 800-533-6901 or visit www.cutready.com.

THE RUNNERS-UP

Colonial Saw - Lamello Tenso self-clamping glue aid

Earth Anatomy - Thin Stone Veneer

Friulmac Inc. - Randomax end matcher

Leitz Tooling Systems LP – Leitz DFC dust extraction hoods

Martin Woodworking Machines Corp. - Hebrock Airtronic

Next Wave Automation - Ready2Rout

SD Machinery - MagPi

Stiles Machinery - Kentwood random scraping machine

Stiles Machinery - Homag Group PowerTouch Control

Stiles Machinery - Holzma dustEX

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High quality cited in **Design Emphasis winners**

By Jennifer Hicks

n a sea of exhibitors at IWF 2014, gallery space was reserved for the next generation of furniture designers competing in the Design Emphasis student competition. A panel of eight judges selected winners in five categories, which proved to be a challenge based on the high quality of work submitted.

"The design and craft of this year's Design Emphasis finalists made judging the pieces a challenging activity as we had to inspect every element to determine the winners," judge Alan Harp says. "I was especially impressed with the number of students who submitted chairs and other seating pieces as this is one of the hardest pieces of furniture to do correctly.

"The students never fail to impress with their pieces in the Design Emphasis competition. The quality of the designs and craft continues to improve year after year, making it more challenging as a judge to choose the winning pieces. This year was no different in that the judges had some spirited discussion trying to finalize our votes on the top pieces."



Benjamin Rosenberg won two awards, including the case goods category for this desk.

One of the winners, Valerie Berlage, representing Haywood Community College in Clyde, N.C., says the contest represents an important steppingstone.

"This contest has meant the opportunity to garner some national, even international exposure. As an emerging artist, one of the most difficult battles I am facing is getting my name



out there, and making my reputation. I made the decision not to seek outside employment after completing the program at Haywood, but to focus all my energy and creativity on making art. So, at this early point in my career, I really cannot afford to buy the kind of publicity that the contest receives.

"Through association with Design Emphasis, it is my hope that people and galleries that I might have never been able to find or reach, will see my work and want it," says Berlage.

THE WINNERS WERE:

Best of Show

Benjamin Rosenberg, Haywood Community College

Accent Furniture/Tables

- Winner: Mark Manczyk, University of Kentucky
- Merit: Luis Peraza, Columbus College of Art and Design
- Honorable Mention: John Barry, Southside Virginia Community College

Case Goods

- Winner: Benjamin Rosenberg, Haywood Community College
- Merit: Ian Anderson, Brigham Young University
- Honorable Mention: Adam Eaton, University of Kentucky

Commercial/Office/Hospitality

- Winner: You Min Kim, Art Center College of Design
- Merit: Richard Thompson, Kansas State University
- Honorable Mention: Kenton Beard, Southern Virginia Higher Education Center

Design Creativity

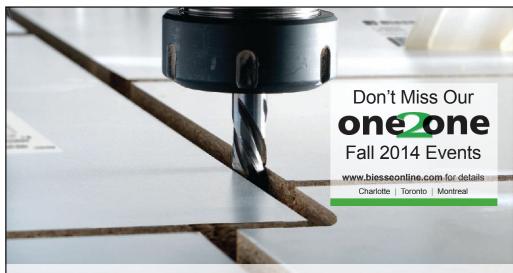
- Winner: Valerie Berlage, Haywood Community College
- Merit: Brennan Gasser, Minneapolis College of Art and Design
- Honorable Mention: Adriana McNinch, Purdue University

Seating

- Winner: Sarah Mohr, the University of Kentucky
- Merit: Patrick White, Appalachian Center for Craft
- Honorable Mention: Nicholas Wolfatthe, University of Idaho W



Best in Show: Rosenberg's "Wave Credenza."



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WCA continues credentialing program at IWF

By Jennifer Hicks

he Woodwork Career Alliance of North America continued its mission to establish an industry-recognized credentialing program at IWF 2014 in Atlanta.

The group conducted evaluator training for its Skills Standards initiative, which provides students with the necessary skills for a job in the woodworking industry.

"Two years after the dissolution of Woodlinks USA, the WCA has become the go-to source for relevant educational materials and information. Since 2013, over 80 schools have joined to take advantage of membership benefits and networking," says Patrick Molzahn, a member of the WCA board of directors and cabinetmaking and millwork program director at Madison Area Technical College in Madison, Wis. "Students are now completing high school and post-secondary programs with an industry-recognized credential which outlines a viable career path

and training sequence.

"As a whole, the WCA is helping our industry take a giant leap forward when it comes to rebuilding our workforce."

Meanwhile, WCA president Scott Nelson has been putting the full-court press on state education officials, promoting the Skill Standards and the employment opportunities that exist in the woodworking industry.

"If we get in touch with the proper people at the state level, this program will help them justify expenditures on their budgets for trade programs," Nelson says.

For information, visit www. woodworkcareer.org.



Scott Nelson, president of Woodwork Career Alliance.





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TOOLS VIECHNIQUES



SawStop crosscut accessory hits the market

By Jennifer Hicks

he SawStop booth always draws a big crowd at IWF, with attendees waiting for the next demonstration of the company's blade-stopping safety device. But this year there was a new sliding crosscut table attachment to check out.

The accessory comes with pre-drilled mounting holes to fit all existing SawsStop

saws. It was scheduled to be available for purchase in mid-September, according to the company.

"A number of our customers asked us to make a crosscut slider with SawStop quality and practical engineering, so we did," Saw-Stop vice president of marketing Matt Howard says. "And we're proud of the result: A beautifully-finished table that is easy to use and delivers repeatable, dependable results."

The slider can rip or crosscut material up to 48" deep and features a 43"-wide fence that extends past 58" for material support.

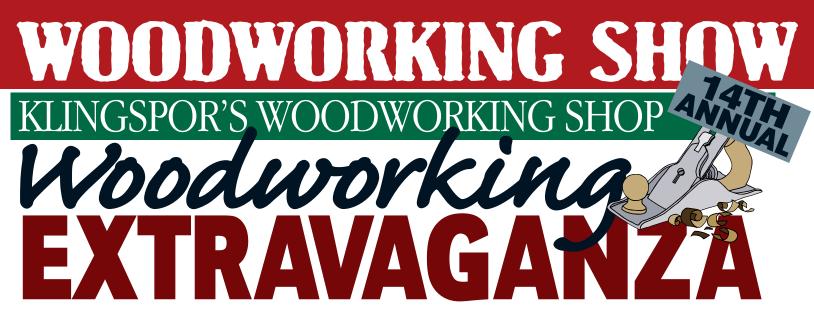
The table and fence are constructed from T-6 aircraft-grade extruded aluminum and finished in matte black to match SawStop saws.

An oversized miter gauge measures to 60 degrees, while other features include large flip stops with scales and a magnified lens.

The accessory sells for \$999 in the U.S. W

Contact: SawStop LLC. Tel: 503-570-3200. www.sawstop.com.





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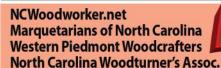
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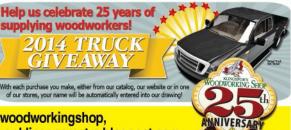


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Freud rolls out new saw blades at IWF

By Jennifer Hicks

reud America introduced two redesigned general-purpose saw blades at IWF 2014, the 10" Premier Fusion Blades featuring the company's Fusion Trio tooth design.

The blades are offered in two models: the standard kerf P410 and thin kerf P410T. Each features what Freud refers to as a special grind for the top, sides, and face of each tooth.

"Professional and enthusiast woodworkers can now enjoy even better performance

from our next generation Premier Fusion general purpose blades," Freud president and CEO Russell Kohl says. "With the new Fusion Trio tooth grind, this blade will effortlessly glide through material and provide flawless rip cuts and cross cuts."

The company says the blades have a 30-degree, high





alternate top bevel, meaning that the teeth alternate between a right- and left-hand bevel, to produce a flawless finish on the top and bottom of all materials, including plywood and melamine. A double-sided grind produces polished cuts, while the newly added axial shear face grind with a block tooth design improves feed rate and reduces amp draw on the saw's motor.

"Through the combination of these radical new grinds, the next-generation Premier Fusion blade delivers the controlled, flawless crosscuts and ripping in laminates, melamine, veneered plywood, hardwoods, softwoods and thick stock lumber. It is ideal for use in sliding miter saws, table saws and radial arm saws," Kohl adds.

The blades are made from titanium and cobalt high-density carbide and also feature Freud's Perma-Shield non-stick coating.

The standard kerf sells for about \$136. The think kerf costs about \$110. W

Contact: Freud Tools. Tel: 800-334-4107. www.freudtools.com

KBIS reports sold-out exhibitor space

The Kitchen and Bath Industry Show recently announced more than 500 exhibitors have committed to space for 2015, representing a 25 percent increase from the previous show.

The sold-out event is scheduled for Jan. 20-22, 2015 at the Las Vegas Convention Center and will run concurrently with the National Association of Home Builders' show.

Attendee registration opened on Sept. 2. For information, visit www.kbis.com.

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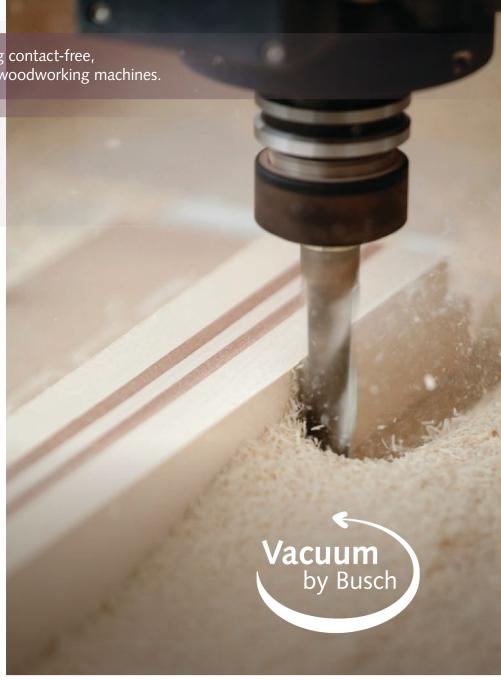
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* Actual savings depends on a number of factors and will vary.



Next Wave Automation debuts lift accessory for router table

By Jennifer Hicks

ext Wave Automation debuted Ready2Lift at IWF 2014, a computer-controlled router table accessory to set the bit height with extreme accuracy. It compliments the company's Ready2Route electronic fence.

"This product allows woodworkers to adjust their bit height to 0.001 of an inch, which is its

biggest feature. It enhances the Ready2Rout fence in that they can work independently or with each other," product manager Ron Shapland says.

"The Ready2Lift assists when doing work such as a ramp-style cut, like a biscuit joint that starts out at one height and goes through the entire distance of a biscuit like an arch,



which you can't do manually. You'd have to have someone handling the router and raising it while someone is moving the wood."

Used together, both products can produce box and dovetails joints, for example, by pressing a few buttons on the controller. The software can store up to 12 commonly used settings.

"The device can also do precise indexing, drilling holes at specified distances apart, like an upside down drill press. Something that would ordinarily require a jig system," Shapland says.

The Ready2Lift is available with two plate options to fit most commercially available router tables. It sells for \$399. The controller is an additional \$229, though it's included with the purchase of a Ready2Route for \$599.

Contact: Next Wave Automation. Tel: 419-318-4822. www.nextwaveautomation.com.

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CMA names Wood Diamond award winners at IWF

The Cabinet Makers Association concluded its fourth annual Wood Diamond award winners at IWF 2014 in Atlanta, recognizing excellence in woodworking and cabinetry.

"Our members never cease to amaze me," award program chairwoman Tracy Yarborough said in a statement. "As you look over the projects that were submitted you can see the craftsmanship our members have and use to create beautiful, functional, wooden items of cabinetry and furniture.

"This program has proven to be of great value to those that participate. Each entry is available for viewing online which gives our members a place to showcase their work and offer clients a gallery of pictures to look at their previous projects."

To see the winning projects, visit www.cabinetmakers.org.

Chemcraft

A Great Finish is Only the Beginning







DeWalt expands its storage solution lineup

By Jennifer Hicks

eWalt recently introduced a new rolling workshop along with several storage solutions to its existing lineup of related products to help woodworkers and other tradespeople stay organized while on or away from the job.

One product, the new Multi-Level Workshop, is a four-level mobile workstation ideal for transporting and storing large tools, as well as organizing hand tools, accessories, and other jobsite necessities.

"This workshop allows contractors to roll over rough job-site terrain right up to their work area. In one seamless movement, users can open and extend the workshop for visible access to four levels of storage," product manager Naama Eylon says.

The workshop offers 90 lbs. of load capacity and 22.5 gallons of storage space. It sells for about \$90.

Also part of the new lineup is the Tough Chest mobile storage unit with steel top rails for top loading. Toolboxes, saw horses and other items can be secured to the top of the Tough Chest with bungee cords. It features 8" rubber wheels for maneuverability over the rough job-site terrain and includes a water seal and durable, corrosion-resistant metal latches. The storage unit has a load capacity of 110 lbs. and sells for about \$90.

DeWalt is also offering the new Pro Organizer, a toolbox featuring several organizers and see-through lids. It sells for \$15.

Contact: DeWalt, Tel: 800-433-9258. www. dewalt.com.





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Steel City Tool Works trims product line

By Jennifer Hicks

eaders from Steel City Tool Works made several announcements about the machinery manufacturer's new direction at IWF 2014 in Atlanta, starting with the addition of Todd Damon, co-owner of Wood Werks Supply in Columbus, Ohio, as a managing partner.

Steel City also formed a partnership with Axiom Precision, a CNC router supplier, to create the Axiom Tool Group, which will focus on product innovation.

Steel City presented a pared-down offering of its conventional woodworking machinery at IWF.

"We've trimmed our line from over 45 different products down to 21. There were too many options making it confusing for our distributers to sell our products," says David Campagna, also a managing partner.

For example, Steel City had table saws with different motor configurations, table options and fence lengths, requiring distributors to carry eight models.

"It was a nightmare," Campagna says. "We've pared that down to three table saws with different fence lengths available. Now, every one of our 21 products is class-leading with the best quality-to-value ratio in the industry."

Steel City will continue to promote granite as its preferred tabletop material. "Being the first that came out with that type of top five years ago, it's been a tremendous success and we want to press forward with that material because we believe it's better and more stable than cast iron," Campagna says.

Ultimately, the company's goal is to keep ahead of the competition by launching new products.

"In the future we are going to be adding a lot more technology to our tools as well. We really just kind of want to revitalize an industry where the machines have existed since the post-war era. They haven't really had any



Steel City showed several compressors at IWF.

changes to them mechanically inside. So we're looking forward at developing new products in the future and we have a lot on the drawing board," Campagna says. W

Contact: Steel City Tool Works. Tel: 630-812-1647. www.steelcitytool-works.com.



Cabinet Vision displays new 3-D software

By Jennifer Hicks

abinet Vision introduced the Vortek Experience at IWF 2014, a software program that allows kitchen and bath manufacturers to display their

products in an immersive 3-D visualization platform.

The program creates a virtual showroom, allowing customers to create a kitchen design, for example, with hand gestures similar to those used with a Wii game console. A drop-down menu

lets the customers choose various textures and finishes for walls, floors, countertops and more.

"The software comes with a few pre-installed designs, but a customer can import 3-D

files of a certain type into Vortek," marketing manager Paul Losavio says. "With Cabinet Vision Version 9, they will be able to export a job from Cabinet Vision and import it into

Vortek for display, along with the ability to use Vortek to change the finishes, colors and textures. But they can also use other 3-D modeling software, like Trimble SketchUp (formerly Google SketchUp), for instance."

While the presen-

tation can be done on one monitor, the company recommends a three-monitor set up or a 3-D projector as the purpose of the software is to mimic real life scale and experience as closely as possible.



In addition to the Vortek Experience, Cabinet Vision also introduced Vortek Web and Vortek Mobile.

Vortek Web is a viewer embedded on a company's website. Designs can be uploaded to the viewer and linked to a client. The viewer also allows for changes by the client and sharing on social media. Vortek Mobile runs on an iPad, using the tablet's camera to help visualize a design.

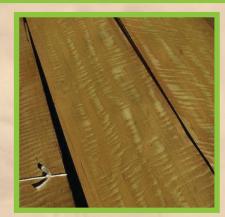
Contact: Cabinet Vision. Tel: 800-280-6932. www.cabinetvision.com.

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Bigger, better batteries are key to our future

By John English

s you read this, there are thousands of guys in North Dakota living in "man camps" that are eerily reminiscent of the 1930s. Back in 2000, Williston and Watford City were remote little hamlets on the windswept prairie, far removed from mainstream America. The biggest news in town was a stray steer on the highway or the librarian's new haircut. Now, thanks to something called fracking, these have become everything one imagines about boomtowns. They are at the center of the Bakken oilfield.

So what on Earth does that have to do with cordless drills in a woodshop?

One key to the answer can be found in a report by The New York Times 18 months ago that said "the United States will overtake Saudi Arabia as the world's leading oil producer by about 2017 and will become a net oil exporter by 2030."

Frackin' in the Bakken has a lot to do with that. America is harvesting more fossil fuel, while other countries pursue alternatives. Germany, for example, already derives more than 6,500 MW from active solar. In fact, Germany's capacity for generating photovoltaic solar power is now about six times that of the U.S, and growing. Spain and Japan are significantly ahead of us in photovoltaic solar power, too, and even Italy (with just 1/5 of our population) is barking at our heels. And here's a surprise: China produces more than twice the clean hydro-generated power of the U.S. We don't even lead the field in biogas — both Germany and Britain are ahead of us there.

All of these shifts in global resource management are circling the biggest problem facing the planet: how to more efficiently store electrical energy. Generating power from non-fossil sources is challenging, but eminently possible, as lots of other countries are demonstrating. Delivering it to end users is not so simple.

We need better batteries.

DRIVING FORCES

The most visible evidence of the need for better storage is the automobile industry. Everyone knows that the electric car is the vehicle of the future (fuel cells could play a role, too). The goal is twofold: to create a new generation of highly efficient batteries and then charge them with clean power rather than plugging into coal-burning power plants. But, right now, the range of vehicles (how far they can go) restricts them to city commuting. A few hybrids that carry both a gasoline engine and an electric motor can actually make it to the next town in a Western state, but pure electric cars (no gas) generally have a disappointing range. Ford's new Focus Electric dribbles to a stop after about 76 miles without recharging and Chevy's all-electric 2015 Spark is listed at just 82 miles. The one bright spot is California's Tesla Motors, which is producing all-electrics with ranges roughly equivalent to smaller gas-fueled cars. Their Model S with an 85 kWh battery kit can go up to 265 miles in ideal conditions, but the price tag is sobering (\$70,000 to \$80,000).

So carmakers are driving battery research and there's a pot of gold waiting. Globally, the lithium-ion battery market "earned revenues of \$17.58 billion in 2013 and estimates this to more than quadruple by 2020," according to recent study by Frost & Sullivan, a technology consulting firm.





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TOOLS & TECHNIQUES

During the next decade, batteries for cordless tools are expected to get smaller, lighter, stronger, longer-lasting and cheaper. Lithium-ion, rather than any other battery format, is seen as the way forward because it can store large amounts of energy and still remain relatively lightweight. Lithium can store about twice the energy of nickel-metal-hydride and about six times the energy of a lead-acid battery. It also holds a charge four times better than nickel-metal-hydride, trickling away just 5 percent or so a month.

Unlike other batteries, lithium-ion packs don't have to be completely discharged to take a full charge (called the memory effect). And they can handle a lot more recharges than traditional storage devices.

MANUFACTURING TO DOUBLE

On Sept. 3, Reuters reported that the state of Nevada would shortly announce that it won a bid for Tesla Motors' new \$5 billion battery plant that will design, develop and manufacture lithium-ion batteries. The Reno plant's goal is to build cheaper and more efficient battery packs for the company's future electric car models. Estimates are the production of 500,000 vehicles annually by 2020, with a range of 200 miles and a price tag that's half the current one on a Tesla (dropping to about \$35,000). This will be the world's largest such plant and predictions are that it alone will double the world's manufacturing capacity.

With the auto industry taking the lead in research, it's not beyond reasonable conjecture to assume that the power tool industry is going to follow in its wake and deliver some serious innovation during the next decade.

Look for battery packs that can run all day long under the most intense usage. Tools that are currently at or beyond the edge of rechargeable battery technology, such as table saws and jointers, will probably be brought into the fold. There is talk of portable power packs that will replace gas-powered generators on new construction or remote installations. And a whole new generation of microcomputers is being built into battery packs to better manage power/discharge.

While tool manufacturers don't have the kind of research dollars available to the automotive industry, they certainly have engineers who can take advantage of major advances paid for by the big boys.

AAW reaches out to the next generation

The American Association of Woodturners is offering free memberships to students and educator benefits.

"Now, for the first time, AAW is offering a new membership level geared toward students," program director Linda Ferber said in a statement.

Instructors teaching woodturning to students aged 10 to 25 can receive a promotional code that provides students with a free AAW online membership.

Additionally, shop teachers at accredited secondary and postsecondary schools will receive complimentary registration for the AAW International Symposium.

"Exposure to turning today is likely to be through family or from attending a special event such as a regional or national symposium or a smaller event hosted by a craft organization, store, youth program, or local chapter. Without that exposure, they just don't know about turning," Ferber said. "Identifying ways that the AAW can help our members and teachers be comfortable reaching out to youth is crucial. Providing solid resources on how to teach, what to teach, and how to be safe can make all the difference."

For details or to obtain a promotional code for qualified student memberships, visit *tiny.cc/AAWYouth*.

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10" CONTRACTOR-STYLE TABLE SAW with Riving Knife

- Motor: 11/2 HP, 110V/220V, single-phase, prewired to 110V
- Precision-ground cast iron table with wings
- Table size: 251/4" x 40" Arbor: 5/8"
- Arbor speed: 4000 RPM FREE 10"

Approx. shipping weight: 208 lbs.

Capacity: 31/4" @ 90° 21/4" @ 45°

Rip capacity:

30" R. 12" L

CARBIDE-TIPPED BLADE







G0732 \$79500 SALE \$65000

10" HYBRID TABLE SAW with Riving Knife

- Motor: 2 HP, 110V/220V, single-phase, prewired to 220V
- Precision-ground cast iron table with wings measures: 27" x 40"
- Arbor: 5/8"
- Arbor speed: 3850 RPM
- Capacity: 31/8" @ 90°, 23/16" @ 45°
- Rip capacity: 30" R, 12" L
- Quick-change riving knife
- Cast iron trunnions
- Approx. shipping weight: 404 lbs.

BEAUTIFUL WHITE COLOR!

G0715P ONLY \$79500



10" LEFT-TILTING TABLE SAWS with Riving Knife & Cast Iron Router Table

- Motor: 3 HP or 5 HP, 240V, single-phase
- Precision-ground cast iron table size with wings: 27" x 48"
- Arbor: 5/8
- Cutting capacity: 25%" R, 8" L
- Max. depth of cut: 3" @ 90°, 21/8" @ 45°
- Approx. shipping weight: 550 lbs.

G1023RLW 3 HP ONLY \$136000 G1023RLWX 5 HP ONLY \$139500





10" CARBIDE-TIPPED BLADE

MADE IN TAIWAN

10" CABINET TABLE SAW

with Riving Knife & Extension Rails

- Motor: 3 HP, 220V, single-phase
- Precision-ground cast iron table
- Table size with extension: 27" x 743/4"
- Arbor: 5/8" Arbor speed: 4300 RPM Capacity:
- 31/8" @ 90°, 23/16" @ 45°
- Rip capacity: 50" R. 12" L
- Max. dado width: 13/16"
- Approx. shipping weight: 557 lbs.



FREE 10"

CARBIDE-TIPPED BLADE

G0691 ONLY \$159500

10" HEAVY-DUTY CABINET TABLE SAW with Riving Knife

- Motor: 5 HP, 220V/440V*, 12A/6A, 3-phase
- Precision-ground cast iron table with extension measures: 27" x 753/4" • Table height: 341/8"
- Arbor: 5/8" Arbor speed: 4000 RPM
- Max. dado width: 3/4"
- Capacity @ 90°: 33/16", @ 45°: 23/16"
- Max. rip capacity: 52" R, 18" L
- Approx. shipping weight: 716 lbs.

EXTREME

MADE IN TAIWAN



CAST IRON

G0652 ONLY \$215000

12" EXTREME TABLE SAW

- Motor: 5 HP, 220V, single-phase
- Precision-ground cast iron table size with extention: 691/2" x 783/4"
- Arbor: 1" Arbor speed: 3600 RPM
- Max. dado width: 3/4"
- Max. rip capacity: 52"
- Max. depth of cut: 4" @ 90°, 23/4" @ 45°
- Approx. shipping weight: 854 lbs.



MADE IN TAIWAN

G0605X1 ONLY \$249500 = \$1791



12" LEFT-TILTING TABLE SAW with Riving Knife

- Motor: 5 HP, 220V, single-phase
- Precision-ground cast iron table size with wings: 303/4" x 481/4"
- Arbor: 1" Arbor speed: 3600 RPM
- Max. dado width: 3/4"
- Max. rip capacity: 36'
- Max. depth of cut: 4" @ 90°, 2¾" @ 45°
- Approx. shipping weight: 756 lbs.

MADE IN TAIWAN



G0696X ONLY \$219500 = \$1791

10" SLIDING TABLE SAW with Riving Knife

- Motor: 5 HP, 230V, single-phase
- Main table size: 143/8" x 27"
- Sliding table size: 121/4" x 63"
- Main blade arbor: 5/8"
- Main blade arbor speed: 4000 RPM
- Scoring blade size: 31/8"
- Scoring blade arbor: 22mm
- Depth of cut: 3½ @ 90°, 2½ @ 45°
- Max. rip capacity: 33"
- · Approx. shipping weight: 688 lbs.



G0623X ONLY \$299500 = \$150



*To maintain machine warranty, 440V operation requires additional conversion time and a \$250 fee. Please contact technical service for complete information before ordering.



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15" PLANERS with Spiral Cutterhead

and Built-in Mobile Base

Motor: 3 HP, 240V, single-phase

Cutterhead speed: 4800 RPM

Max. cutting depth: 1/8"

Feed rate: 16 & 30 FPM

· Approx. shipping

weight: 672 lbs.

POLAR BEAR SERIES WHITE

GRIZZLY GREEN & TAN

15" x 20"

Precision-ground cast iron table size:

G0453Z ONLY \$185000

Motor: 5 HP, 220V, single-phase

Cutterhead speed: 5000 RPM

Cutterhead diameter: 31/4"

G0453PX ONLY \$175000

20" PLANER with Spiral Cutterhead

Max. cutting width: 20" • Min. stock length: 7"
 Max. cutting depth: ½" • Feed rate: 16 FPM & 20 FPM

Table size: 25³/₄" x 20" (56" x 20" with extensions)

Overall dimensions: 56" L x 39" W x 41" H

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12" JOINTER/PLANER COMBINATION MACHINE

- Motor: 5 HP, 220V, single-phase
- Jointer table size: 14" x 591/2"
- Cutterhead dia.: 31/8"
- Cutterhead speed: 5034 RPM
- Max. jointer depth of cut: 1/8"
- Max. width of cut: 12"
- Planer feed rate: 22 FPM END-MOUNTED **FENCE**
- Max. planer depth of cut: 1/8"
- Max. planer cutting height: 8"
- Planer table size: 121/4" x 231/8"
- Approx. shipping weight: 704 lbs.



20" PLANER with Spiral Cutterhead

- Max. cutting width: 20" Min. stock length: 8"
- Max. cutting depth: 1/8" Feed rate: 16 FPM & 20 FPM
- Cutterhead diameter: 31/8"

- Approx. shipping weight: 932 lbs.



PRECISION-GROUND **CAST IRON BED & INFEED**







G1033X ONLY \$299500

COMBINATION SANDER 6" x 48" Belt, 9" Disc

- Motor: 3/4 HP, 110V/220V, single-phase, 3450 RPM, 12A/6A
- · Cast iron table, disc, and body
- · Quick belt release mechanism
- Dual voltage motor prewired for 110V
- Dust ports 2" for belt, 21/2" for disc
- 2300 SFPM belt speed
- Belt driven
- Approximate shipping weight: 122 lbs.

G1014Z ONLY \$39800

3 HP DUST COLLECTOR

- Motor: 3 HP, 240V, single-phase, 3450 RPM,12A
- Air suction capacity: 2300 CFM
- Static pressure: 16.7"
- 7" inlet has removable "Y" fitting with three 4" openings
- Impeller: 123/4" cast aluminum
- Bag capacity: 11.4 cubic feet
- Standard bag filtration: 2.5 micron
- Portable base size: 211/2" x 491/2"
- Height with bags inflated: 78"
- Approximate shipping weight: 170 lbs.

MADE IN AN ISO 9001 FACTORY!







- Motor: 5 HP, 240V, single-phase

11/2 HP SHAPER

Spindle travel: 3"

Spindle speeds:

7000 & 10,000 RPM

Max. cutter dia.: 5"

Approx. shipping

weight: 246 lbs.

- Cutterhead speed: 4800 RPM
- Table size: 20" x 253/4" (20" x 551/2" with extension)
- Overall dimensions: 555/8" L x 39" W x 457/8" H

Motor: 11/2 HP, 120V/240V, single-phase

2 interchangeable spindles: 1/2" & 3/4"

Precision-ground cast iron table size: 201/4" x 18"













G1035P ONLY \$59500

18" OPEN END DRUM SANDER

- Motor: 11/2 HP, 110V, single-phase, 15A
- Drum surface speed: 4000 FPM
- Conveyor feed rate: Variable, 2-12 FPM
- Max. stock dimensions: 36" W x 41/2" H
- Min. board length: 6"
- Min. board thickness: 1/8"
- Sanding drum size: 4"
- 2½" dust collection port
- Overall size: 35" W x 50" H x 24" D
- Approx. shipping weight: 328 lbs.

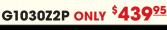
















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EXCLUSIVE QUICK RELEAS

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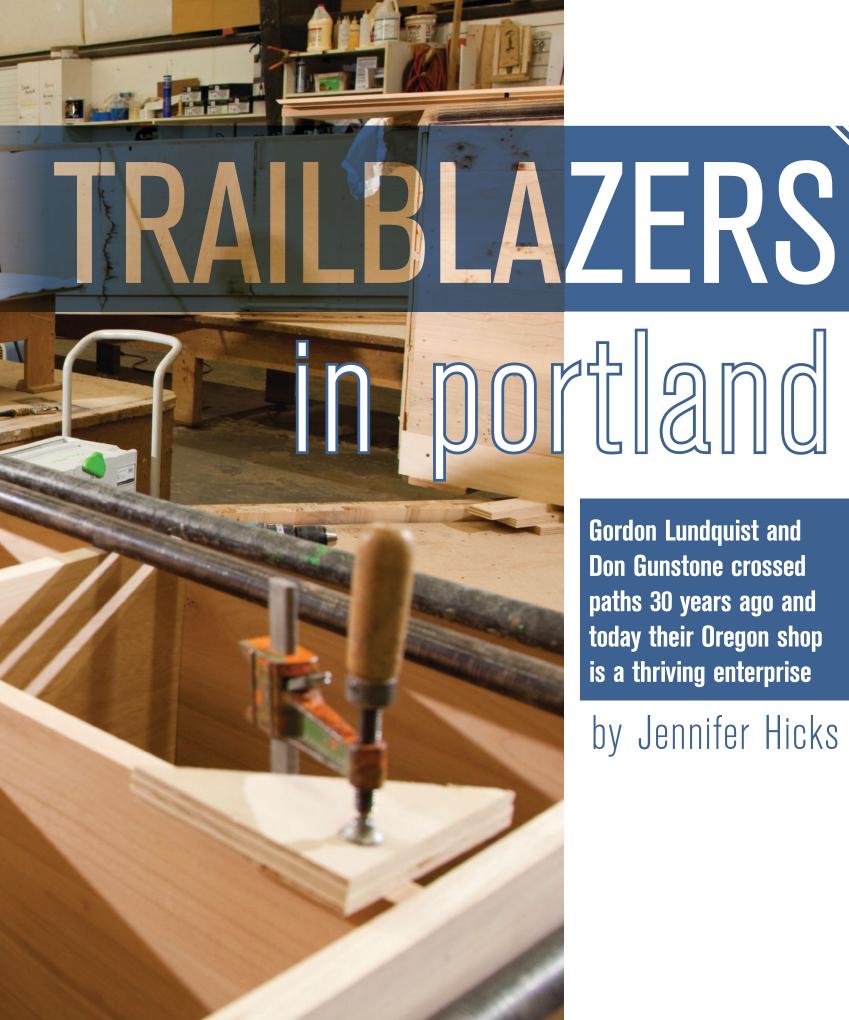
SERIES ...



MADE IN TAIWAN

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Gordon Lundquist and Don Gunstone crossed paths 30 years ago and today their Oregon shop is a thriving enterprise

by Jennifer Hicks



o two guys start a woodworking business out of a garage and, 30 years later, they've got a 26,000-sq.-ft. shop and 40 employees.

That's the short story behind Legend Custom Woodworking in Portland, Ore., which does most of its work for medical facilities, commercial food services, restaurants, offices, schools and high-rise condos.

The two guys are Gordon Lundquist and Don Gunstone, who founded the company in 1984 and, to this day, take turns managing the business. Through thick and thin, they've subscribed to the basic tenants of providing exceptional service with dependability and it's gotten them pretty far.

EMPLOYEES TO EMPLOYERS

Originally from Seattle, Gunstone says he developed a strong appreciation for woodworking in school, but had a love for the trade as a child when he built model airplanes and birdhouses. He started out as a carpenter, before convincing a cabinetmaker to hire him. It was a good move because he enjoyed the work more, but no so good because the shop soon went out of business.

Gunstone started building decks and anything else to make ends meet when he crossed paths with Lundquist, who was doing the same thing. They teamed up and became partners.

"At first we worked out of Gordon's garage at his house, but there was too much noise, too many smells and the neighbors were very unhappy," Gunstone says. "We went to my garage at my house for a while after that. But there was not enough room there, so we rented a small property for a while right outside of Portland, then went



From left, project manager Larry Lotter meets with co-owners Gordon Lundquist and Don Gunstone.

into a larger commercial building nearby. In April 1993 we had the opportunity to purchase the building we're in now.

"We never had a business plan. The only plan we ever had was to service our customers. Our core values are what we are about and we want to make sure our customers get a quality product."

PORTLAND AND BEYOND

The company today specializes in commercial work, supplying casework, millwork, windows, doors and staircases. It works closely with architects and builders

With 30 to 40 jobs in the pipeline at any given time, the shop's finishing room is always busy.





and has extensive experience incorporating stone, solid-surface, metal and glass components into its projects.

"When we say we do commercial woodworking, that's very broad," says Gunstone. "We do a lot of cafeteria and food service outlets, we do one-off pieces

such as tables and prep stations for restaurants and much more.

"We are probably the second- or thirdlargest shop in the area depending on the economy. Last year we were second."

Portland is the primary market, but San Francisco and Seattle are also in play.

Legend promotes the use of FSC-certified building materials and helps clients achieve LEED certification. "We've done quite a bit with reclaimed fir from demolition jobs. That's been really hot in this area the past few years in this area," Gunstone says.

For the most part, Gunstone says Portland has a small-town feel where everyone knows everyone. "I would say that, generally speaking, it's pretty comfortable doing business in Portland. I'd say that the area is pro-business.

"A good portion of people that live in the area are very interested in fishing, hiking, camping, mountain-climbing and skiing. A lot of my employees have come here from California to be near the mountains and the ocean. The coldest it ever gets here is maybe 20 degrees. You can golf or go bicycling in January. You can't do that [comfortably] in Detroit."

A MODERN SHOP

When about 75 percent of your work is supplied by referrals and repeat customers,



Lundquist breaks out the plans for an improtu design meeting around an unfinished reception desk.







A sampling of the shop's commercial work.

advertising isn't a major concern. And there's no grand plan for future growth, according to Gunstone.

The company has annual revenue of \$5 million to \$7 million and has invested heavily in top-quality industrial machinery.

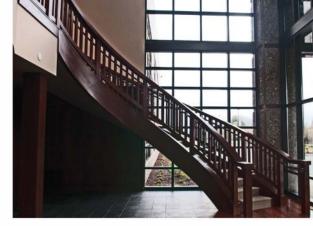
"Our goal for the last couple of years has been to keep on top of new machinery to stay on the cutting edge," Gunstone says. "We have a lot of modern German and Italian machines, like edgebanders, saws and CNCs. Most of them come from Stiles. These machines are very innovative and very necessary for our production schedule.

"The recent recession didn't hurt us that much. I can honestly say that we did OK; we didn't have a lot of layoffs. Things did get much more competitive, though. Everybody seemed to have dropped their price. We never dropped our price during the recession."

Gunstone can still appreciate the early years when there were no employees. But the shop has a low turnover rate, so the partners must be doing something right.

"Things can get difficult with so many people on staff. A shop of around 10 would probably be easier. We run 30 to 40 jobs at any given time," Gunstone says.

"But we have a saying around here: 'We don't get paid until we nail something to the wall.' Until the customer pays, we don't



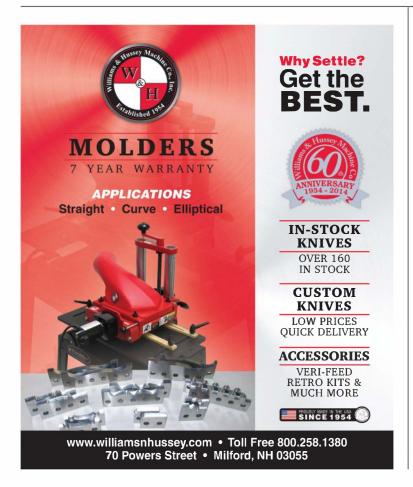
get a check. We have to get out there and complete it."

Needless to say, the partners are sticklers for meeting deadlines.

"We believe our success comes from keeping our core values, which reflect being loyal to clients, keeping up on industry changes such as in technology and keeping your quality at a very high level.

"I've really tried all my life to not have a shoulda, woulda or coulda attitude. I've taken those words out of my vocabulary. You just do the best you can with each day you have," Gunstone says. W

Contact: Legend Custom Woodworking, 17415 S.E. Kendall Ct., Portland, OR 97216. Tel: 503-669-1000. www. legendcustomwoodworking.com





IN THE

Finding a solid CNC system involves envisioning what you want your shop to be in the future **By John English**

isit with woodshop owners or go to online forums on the subject of choosing a CNC setup and a couple of concerns will jump out right away. Most of the conversation won't be about the actual machines. Even if the chat begins that way, it will eventually turn to software.

New users are overwhelmingly nervous about learning it and are especially concerned about the time commitment it requires to do

so. They are all used to buying software programs from large companies such as Apple or Adobe and finding out how difficult it is to talk to a live person for support. Here's some good news: almost every cabinet program on the market has decent — if not downright outstanding - support. There are phone numbers and websites provided by the software companies and huge user forums for every aspect of CNC operations from programming to machine repairs. Plus, many of the program designers and engineers actually own and/or run these relatively small companies, so there is still a somewhat personal atmosphere in this market.

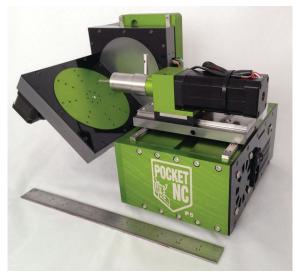
Once they're up and running, new users also worry about the amount of time it will take to draw a cabinet or part or even make a simple adjustment like A five-axis CNC milling machine from Pocket NC.

adding a hinge hole. It's hard to get your head around spending more time drawing and less time milling. And for a while, it will probably take a bit longer to get jobs out the door. But not for very

At the top of the learning curve, when the CNC operation is up and running smoothly, the quality of the job soars and the number of man-hours declines. Plus, there's another benefit that

> is especially valued by older woodworkers: sitting at a computer and telling a machine what to do is a lot less physically demanding than endlessly clamping on straightedges and milling dadoes with a portable router or moving a jig to plow cavities for 35mm hinges.

Tech talk seems to be a big concern, too. Words and phrases such as DXF batch imports, nesting, tool paths, screen-to-machine, tool changer and so on are apparently intimidating to guys who have been building casework the old-fashioned way for 20 or 30 years and just want to upgrade. They don't want to learn a new language. Younger shop owners don't seem to have the same fears: perhaps coming of age in a digital world has made them more comfortable. Yes, there is a new vocabulary to learn, but it really isn't terribly complex.



Pricing, while certainly an issue, doesn't seem to be at the top of most shop manager's worry lists. They understand that this is serous technology and they are generally prepared for the sticker shock. Folks who have actually made the jump mention that the actual machine isn't always the biggest expense. Tooling and training can add significantly to the cost of the machine/software package.

The following quote from a forum on Woodweb (woodweb.com) sums up the situation:

"I think you have to include the software in the price while shopping for a machine. The software is just as important as the machine and can add \$10,000 to \$20,000 to the cost. You probably need to look first at what you want the machine to do for you and look to the future. I would think a tool changer is a must have. An inexpensive machine that won't do everything you want it to do is no bargain. The same goes for your software."

One training cost often overlooked is the fact that a shop needs to get more than one employee up to speed on the software as well as the hardware. Without a backup person, production stops if an operator calls in sick, goes on vacation or finds a new job.

COST ESTIMATES

Figuring out the return on investment (ROI) is tricky too, especially when accountants get involved and start talking about depreciation. There's really no way to accurately gauge cost savings until several jobs have been run through the new setup. It's important to keep a log of the way the shop runs now and the way it runs after the new machine is in place. What you're looking for is how much work passes through (usually measured in terms of its dollar value/gross receipts), and how many man-hours were spent getting that done.

Up front, when estimating whether or not a CNC is a good investment for a small shop, the spreadsheet needs to include more than direct costs and savings. Add in any ancillary costs such as estimated changes in the electric bill, insurance, dust collection, loan interest, heating/cooling and rent, if you're going to need more floor space. Deduct cost savings such as payroll (including workers' comp, unemployment insurance, employer contributions etc.). It's a good idea to hand it all to a bean counter and let him or her analyze the numbers. They can then tell you whether it's best to buy or lease the machine, or perhaps rent the software, and they

might be able to weigh in on another critical decision — how much machine do you need? That boils down to what you want to be able to make now, but also where you see the shop going in the future. A small shop that's building kitchens has a different agenda than one making something like gunstocks, canoe paddles or one-off furniture.

SMALL CNC OPTIONS

If the shop is only making a few small parts, a desktop CNC might be all that's needed. They cost about the price of a decent table saw and are ideal for shallow relief carving or lettering (signage) jobs. The software is often included, but it might only work on Windows computers, so ask up front if you're running a Mac.

One very familiar name in this field is ShopBot. Its version of the desktop CNC comes in a couple of different base platforms, either with a 2-1/4-hp Porter-Cable router or else with a 1-hp industrial spindle. It will work on projects up to 18" x 24" x 5-1/2" tall, so it's ideal for engraving door panels.

These machines are also quite affordable. For example, ShopBot's model 10199 is listed at \$4,995 (Sept. 2014), and that includes VCarve Pro and PartWorks3D software for designing, plus ShopBot's own control software. Those packages require a PC that is running Windows XP/Vista/7/8.

If design software seems intimidating, there's good news here: these programs actually simulate the cutting of parts, so you can verify that they will be created just as you intend. That is, you can actually see what you're getting, so it's quite intuitive. Another huge advantage to owning a ShopBot is that the company provides free telephone technical support seven days a week from its headquarters in Durham, N.C.



Engineered for flexibility, durability and affordability, the Flexa 27 & 37 Series Edgebander offers unique features, typically found on more expensive machines. Standard with an industrial feed track, PLC controller, two motor end trim, top and bottom trim, scraping and buffing, and optional pre-milling and corner rounding the Flexa 27 & 37 Series can efficiently process tape, PVC, laminate, and wood strips for the small to medium shop.



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Options in the desktop CNC market include the Piranha from Next Wave Automation.

Shops that make short runs of complex parts (perhaps a few cabinet pulls at a time, single prototypes or maybe unique pieces of sculpture) might want to look at a five-axis CNC milling machine. A small startup company in Montana called Pocket NC (pocketnc. com) is working on a model that they will release next year in the \$3,500 range. Both the spindle (which is equipped with 1/8" end

mills) and the table can move, which opens up a lot of design possibilities for products such as finials and other trim details.

When a manufacturer says its CNC operates in three axes, it means the cutter moves left-right, back-forth and up-down. The Pocket NC cutter (which is held in an industrial-grade, highly accurate spindle) only moves left-right and back-forth. But the table that the part is attached to also moves and it travels up-down, swivels on a vertical axis and rotates on a horizontal axis. That means it can work on five faces of a cube without having to shut down and reposition.

"Because this machine can be used by so many industries in so many different ways," says engineer Michelle Hertel of Pocket NC, "we're not bundling it with one specific software package. A great option for woodshops is Autodesk Fusion 360." That's a cloud-based CAD/CAM design package that starts at \$25 a month. Cloud-based simply means that your work is backed up on a mainframe computer off site, so if you have a computer problem at the shop, you don't lose any of your designs. CAD is computer-aided design (it draws the part), and CAM is computer-aided manufacturing (it tells the machine to make the part you drew).

The smallest and least expensive option for a shop looking at desktop CNC is to actually build a machine and a company called My D-I-Y CNC (mydiycnc.com) can help make that happen. Their supply plans and parts in kit form. Complete kits/turnkey systems run from \$625 to \$1,045 and, to be frank, it looks like a whole lot of fun. However, this is an option for a one or two-man shop with some time on their hands.





THE CUTTING EDGE

with R.W. LEE

Linear guide rail system: weighing pros and cons

y previous two articles covered the two major sub-assemblies of a CNC machine: stepper and servo motors, and linear drive systems. Our tour is almost complete with a description of the linear constraint systems. This term is used to describe the structure or frame of the machine and the linear guide system, which is attached to the frame and allows movement of the machine's axes.

We probably all have a trusted woodworking bench. If it's like mine, it has a thick, heavy top and stout legs and cross-bracing to support the weight and to deal with the static and dynamic forces generated from sawing, planing and pounding. It's built for a purpose and serves its purpose quite well.

Commercially built CNC machines that cut wood, foam, plastics and aluminum stock have framing elements of steel, aluminum or both. And, like all things in life, there are positives and negatives to both relative to the intended use. Generally, the larger the machine is and the faster the axes move, the heavier and more substantial the machine's framing will have to be. A CNC machine that has a cutting area of 10' x 5' with two 25-hp variable-frequency-drive spindles and an automatic tool changer used in a high-speed production environment is going to have and need more mass than one with a 4' x 4' cutting area and single 3-hp router.

STEEL OR ALUMINUM

The steel base frames and the X- and Y-axes of the larger production-oriented machines tend to be made of welded steel. Relative to the final costs of these types of machine, the steel stock and the bending and welding of it makes for rapid and efficient production of

Ligna will feature new Wood Industry Summit

Ligna, a trade fair for the forestry and wood industries in Hanover, Germany, is adding a Wood Industry Summit exhibition area for its May 11-15 show in 2015.

Organized by Deutsche Messe in partnership with the German Forestry Council, the summit will include an exhibition area, a matchmaking platform and a forum, making it a powerful hub for international lead generation and dialogue. It will be staged on about 2,000 sq. ft. of display area in Hall 13.

In the exhibition area, companies and institutions from the forestry technology, saw-mill technology, wood panel products and veneer production, wood energy, solid wood working and pulp and paper industries will showcase their latest technology offerings in the immediate vicinity of international group pavilions run by key players from carefully selected timber-rich target market regions, such as Russia, China and North and South America.

The matchmaking platform will feature institutions and delegations of high-ranking government and business representatives from Russia, China and North and South America, who will outline market access opportunities and regional wood-industry projects in their countries. The platform is also an opportunity for companies from European countries, such as Finland, Sweden, Germany, Austria and Switzerland, to present their technologies to the participating wood-industry representatives and purchasing delegations from their international target markets.

The third component of the Wood Industry Summit is a special forum for key international representatives of industry, science and government. The aim of the forum is to present new solutions and the current state of the art in various technology areas, particularly harvesting technology, and to discuss current industry trends and issues. The forum is also an opportunity to share detailed information on how to initiate business in key target markets and to find the best technology fit for specific countries.

the frame and axes. Steel is easy to finish by sand-blasting and then spray-painting and is easy to machine, specifically to flatten areas for the mounting of linear guide systems for the moving axes and to then drill and tap holes to bolt the fixed portion of the linear guide systems to the steel framing.

For a smaller, low-speed production machine, the base frame and the X- and Y-axes are generally made with extruded aluminum. T-slotted profiles are bolted together using gussets, T-nuts and bolts. Relative to the final cost of such a machine, this is also a rapid and efficient production method. Aluminum T-slot profiles are the more common material used in many of the fences on stationary woodworking power tools, such as table saws, band saws and router tables. Post-production machining prior to mounting the fixed portion of the linear guide systems is generally not required because the surface of the extruded aluminum is flat and true.

The choice of which material to use in the construction of the machine base and the moving axes, and how to join them, is ultimately based on the intended use of the machine rather than any attempt to distinguish one as being better than the other. What is best depends on the production uses of the CNC machine, which can vary from a high-

speed production environment producing cabinets to a small one-man shop producing custom furniture.

TRACKS, RAILS AND TRUCKS

The linear guide systems are the interface between the base frame of the CNC machine and the mounting point of the axes and their drive systems. The idea of a linear guide system is what a woodworker sees in the miter slot on a table saw's top that constrains a miter gauge's movement.

The linear guide system come in an astonishingly wide variety of forms, though they are primarily comprised of two parts. The first is a rail, either flat or round, and the second is a truck that rides on or within the rail, depending on the type of rail. To the truck is attached the moving axes of the CNC machine. The trucks are quite complex and use a wide variety of methods and materials to help this load-bearing device slide easily on or within the guide rail.

Some systems use a rail that looks like T-track and the truck has ball-bearing mounted rollers that ride within the T-track-like rail. Others are just the opposite, having the rollers or linear ball-bearing units ride on the outside of the rail. Another option is extruded aluminum T-slotted profiles with integrated steel

guide rails for the trucks to ride on.

Again, there's not an ultimate linear guide rail system. You want the best system to handle the demands of the particular CNC machine. A heavier system, with automatic lubrication and self-cleaning features, would be needed for a large production machine, while lighter rail and truck system is often the choice for a CNC machine used to make one-off pieces of furniture.

Connecticut Saw & Tool completes acquisition

Connecticut Saw & Tool of Stratford, Conn., says it finalized the acquisition of Third Avenue Grinding Shop in Brooklyn, N.Y.

"The purchase of Third Avenue Grinding Shop allows us to more efficiently manage our newly combined customer base by adding experienced local personnel in the New York City Metropolitan area," company vice president Dan Povinelli said in a statement. "We look forward to continuing to serve this area with the high quality customer focus both companies are known for."

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again Alan Noel's busy

restoration business in the Atlanta suburbs thrives on juggling several jobs at once

By Jennifer Hicks



ased in the Atlanta suburbs, Alan Noel completes intricate restoration work on fine furniture as the owner of two businesses, A. Ross Noel and Associates and Noel's Woodworks, which employs four independent contractors in a co-op setting.

Noel has been restoring furniture for more than 30 years, yet he prefers the title restoration specialist.

"As far as my profession goes, when you walk into an antique store or someone's home and you see furniture that has definitely been refinished, in my opinion, whoever did the work did a poor job because you can tell it's been done," Noel says.

"We do restoration; not refinishing of fine antiques and fine furniture. We're restorers. And what that means is that we try to make things look as if they've been very well taken care of and keep the original character and patina and all that to mimic natural aging."

He believes that the most important skill necessary for success in this line of work is to consistently offer a good product, one that reflects not only his own skills and expertise, but also respects prior work.

"You never know what's going to come through the door and what skill set you have to have to take care of that particular project. That's the most interesting part of the business."

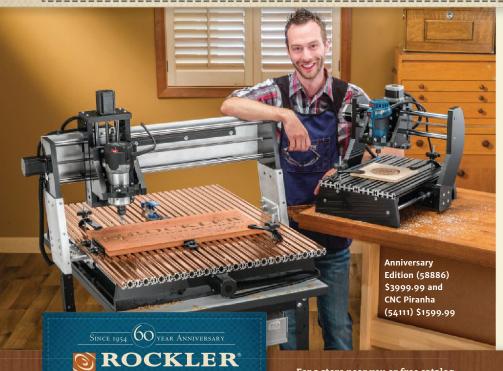
FROM MUSIC TO ANTIQUES

Originally from Hopewell, Va., Noel attended Atlantic Christian College in Wilson, N.C., in the early 1970s. He majored in musical studies, since he could play guitar, and was unsure of his career path. Then he got a job at Williams Antiques, a dealer that offered restoration services, where he learned traditional finishing techniques.

But music remained his main ambition. He toured with various bands until he was 32, when he decided to settle in Atlanta



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and got a job repairing medical equipment at Children's Heathcare of Atlanta.

"I liked the work and thought it was interesting, but because I had a lot of free time on my hands I started refinishing furniture for my first apartment," Noel says. That led to more refinishing work from the hospital's staff and Noel had a full-time business going by 1983.

IN THE LUXURY MARKET

Restoration customers can generally afford the work, according to Noel.

"Most of my clients definitely have money. And when you grow up in an environment like that you tend to have an appreciation for the

finer things in life. So when your dining room table gets screwed up, you've got to have it fixed and you have the means to do it. It's not about money to them; it's about the presentation of their belongings.

"When I first went into business, Atlanta was fabulous. There are so many people here and it was a very wealthy city. There were young people buying furniture and having grandma's furniture restored. In 2009, that market collapsed and many restorations shops went out of business. But, since we're in the luxury market, our business picked up and now we're just slammed."

Noel is a people person who really cares about his clients, which is great for business. For example, he'll often fix additional



items at no charge and has been known to gift a rocking chair to an expectant mom.

"I give away a lot of things, but it has paid off in spades," says Noel. "I know how to run a business, that's for sure, and how to keep clients coming through the door."

BUSY SHOP

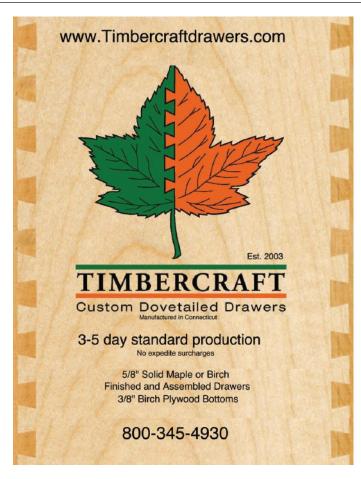
Noel's shop usually has about 25 projects in progress, ranging from simple repairs to a complete restoration. He's an expert finisher, well-versed in gold leafing, water gilding and color matching, as well as production and architectural finishing. He does cane and rush seating, flat reed seats, wicker

furniture, floor repair, veneer repair and even offers services to cut glass and mirrors.

He can also rely on the talents of his four associates: Scott King, Michael Layton, Michael Livingston and Brian Webster.

"We work as a team and they all have their strong areas of what they're good at and that's how I disperse the work out to whichever craftsman I believe is best suited for the job," Noel says.

What's his biggest challenge? The weather. He says no matter the season, dealing with the different temperatures and levels of humidity is always a struggle. The shop can get very hot in the summer, but any type of cooling system would interfere with his finishing.





FUTURE PLANS

Noel teaches at the Highland Woodworking School and has written for several publications, including Woodshop News. Retirement isn't far off, but Noel can't imagine ever really getting out of the business. He enjoys being part of the local business community and bartering with other merchants that he's known for years. He also gets a kick out of meeting new clients, who are often the children of previous customers.

"I'm 63 now, so within another year I'm going to start handing over the operations to an associate and eventually will phase myself out of the business in the future. But in the immediate future I will still continue to teach as much as I can and write as much as I can.

"When you run a business in the arts — and I consider this the arts — you never retire because you're going to be interested in it for the rest of your life. I'll never stop going to junk stores or estate sales. Whenever there's junk to be seen, I'm looking. It's just in my blood. This business is really something you have to have a passion for."

Outside of the shop, Noel and his wife purchase and rent real estate, a lucrative sideline that he wishes he started a long time ago.

"In my opinion, real estate is a great way to create wealth. In my own business, I owned my building and had income coming in from that shop on my building, so basically I had an income-producing, free shop with no utilities for a good 15 years. Every penny that I made was clear profit and that really created a lot of wealth for me because I spend that on real estate. \square

Contact: A. Ross Noel and Associates, 5105E Peachtree Industrial Blvd., Chamblee, GA. Tel: 770-936-0667. Website: www.a-rossnoel.com.





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PRO SHOP

with DAVID GETTS

Cash in on pivotal turning points in your career

ears ago, while working on a multiphase project, I developed a good relationship with the owners, a well-established, self-employed, professional couple in their early 70s. Because I was around so often, we all agreed it only made sense to adopt them as surrogate parents. One day, while the woman was watching me work, she pulled me aside and told me, "David, life is a marathon, not a sprint. You must learn to pace yourself." Although I knew exactly what she was saying (doing two days worth of work in one), it wasn't until many years later (after having

more real-life experiences) that I came to understand what she was saying. These simple words spoken were a turning point for me because they changed the way I approached my work.

Turning points are like destinations on a map; as you journey along the path of life, certain events happen that have a profound effect on you — and not always how you would expect. According to Aristotle, when telling a story, these "changes of fortune" (turning points) should be an event that occurs contrary to the audience's expectations. This event is known as peripeteia, which

could simply be defined as "a reversal of circumstances" (in reference to literature).

There are countless ways that directional change or turning points can occur. And the common characteristic among them all is that they are unique to the individual. What causes change in one person might not even be on the radar for another. The key is taking advantage of when they occur because if we don't, it could be a lost opportunity that never finds its way back. So how do we recognize and take advantage of these turning points? It begins with awareness.

THE SUBTLE NUDGE

I would venture a guess that most turning-point experiences start with the subtle nudge. We all want to have a trumpet announce the coming of change, but it rarely happens. Getting the most out of life is primarily centered on being aware of your surroundings so that you can recognize when opportunity is in front of you. When my "surrogate mother" told me to pace myself, she didn't beat me over the head and tell me what I had to do, she simply used a metaphor to describe her observations. That's why it took me many years to really understand what it was she was saying. Because I had not yet learned the value of being aware of how I approached my work





(I was only thinking in terms of going fast to finish the race), I was blinded to the fact that this was only one of many hundreds of races of which I would partake in my career. Although her subtle nudge did not bring about instant change to my life, the kind words spoken simmered like a pot of stew in my psyche, slowly bringing out the flavors of change.

THE RED FLAG

There is a reason red is used for stoplights; it's an aggressive color that demands attention. There are two ways of looking at a redflag turning point. One is like the stoplight. Danger or caution is sensed and you bring all forward motion to a halt until you figure out what caused the spike of change. The second is one that accentuates the hostility of the red color. This would be like a bull charging at a matador's taunting cape. Just as arguments, coins and magnets have two sides to them, the red flag will either cause you to stop or charge. The common thread is the color red. In other words, some turning points come at you like a speeding bullet. These instances are abrupt, obvious and demand immediate attention. Unlike the subtle nudge, you are positive that change is on the horizon and that a turning point is imminent.

How you respond (stopping or charging) is dependent on a multitude of factors such as personality and circumstance. Therefore, it's important to prepare yourself beforehand by recognizing what the red flag symbolizes, so that you can take the appropriate action when it is raised. A great example of the red flag was when the U.S. economy went into a deep recession a few years ago. If you didn't recognize how obvious it was (fewer customers, higher prices, closing businesses, etc.), then you were not in the race. For those that were, turning-point survival meant either stopping to evaluate, charging like a bull at new opportunity or a combination of both.

NUMBERS DON'T LIE

One of the greatest things about math is that numbers do not lie. Now you can manipulate numbers to skew the facts, but through careful analysis, mathematics always brings you back to ground zero. Math is logical and factual-based. There is really no room for emotion. The nudge and the flag appear as an individually interpreted point on the path, which means you can choose to make them a turning point or not. Numbers (or logic), on the other hand, provide you with facts that force a turning point against your choosing. Hence, the importance of a good accounting system.

Premier EuroCase secures North American distributors

Premier EuroCase announced an agreement with Hardwoods Specialty Products/Frank Paxton Lumber Co. for exclusive distribution of its panel products throughout North America.

Premier is a producer of surfacing solutions, specializing in laminated panels. Hardwoods/Paxton is a supplier of hardwood lumber, plywood, and specialty wood products since 1926.

"The partnership between Premier and Hardwoods/Paxton is a perfect match," Premier EuroCase president and CEO Andy Wilzoch said in a statement. "Both companies believe in providing solid customer service while offering unique products and the highest quality solutions."

Hardwoods/Paxton will primarily focus on distributing Premier's two latest product lines: Reflekt high gloss acrylic and Roücke HD textured melamine.

For information, visit www.premiereurocase.com.





To remain sustainable in business, you must know what the health of your company is at any given time. And the best way to do this is by keeping track of everything that has a number: materials, money and time. Monitoring these numbers on a regular basis will give you a good sense of direction and upcoming change. Now, with all that being said, how you interpret and direct the logical turning point that the numbers reveal is still subjective. After all, you do have a choice how to respond. The only thing that is certain is the turning-point marker itself. Which direction you choose to go is entirely up to you.

A turning point in life probably comes more frequently through subjective circumstances such as the subtle nudge or red flag. This is primarily because these emotional or spiritual encounters come in endless forms on multiple fronts daily. The key to understanding and taking advantage of turning points lies in the preparation. When telling a story as Aristotle suggests, the peripeteia (surprise outcome) of a turning point is desirable to keep an audience engaged. However, in business, peripeteia can be a killer. Although you can never predict the outcome of a turning point, you must do your best to prepare for it.

Much like building a set of kitchen cabinets requires careful planning around what type of appliances are being used, having a successful turning point starts with being able to recognize how upcoming change will affect the health of your business. If you do not learn to read the signs of change, you'll miss the opportunities they bring. You must know your business like you know your friends.

In addition, a very important ingredient in the recipe of change is understanding yourself. As mentioned before, one man's opportunity is another man's misfortune. Understanding what makes you tick is the only way you'll be able to take advantage of the turning points that appear along the journey.

AWFS adds student woodturning competition for 2015 fair

The 2015 AWFS fair will feature a new juried student woodturning competition called "Turning to the Future" and created through a partnership of the Association of Woodworking & Furnishings Suppliers and American Association of Woodturners.

The competition is open to high school and post-secondary students in art, design or trade programs. The finalist pieces will be on display July 22-25, 2015, at the AWFS fair in Las Vegas, adjacent to the Fresh Wood student woodworking competition.

The competition is open to all forms of turning, with the exception of furniture making. Projects must be at least partially made with a lathe and should be 20" or

less in diameter.

All winners will receive an AAW symposium scholarship and have their work featured in the American Woodturner journal. There is no entry fee.

"AWFS is excited for this partnership with AAW and the exposure of student woodturners to the industry", AWFS executive director Angelo Gangone said in a statement. "We look forward to their participation in the AWFS fair and hope this leads to more opportunity for the students and woodturning programs."

The entry deadline is May 1, 2015.

For entry instructions, visit www.awfs-fair.org.







FINISHING

with GREG WILLIAMS

Cooking up an 'omelet' test for finishing techniques

How you go about hiring an employee in this area can determine whether you find a keeper or not

s an exercise, I asked a group of finishers and shop owners: "What test would you give a prospective employee for a lead finishing position?"

There was reference made to a restaurant test, where a new cook is asked to make an omelet. The task requires learned techniques that will quickly inform you if someone has experience in the kitchen.

Could there be omelet test for a finisher?

DEVISING A TEST

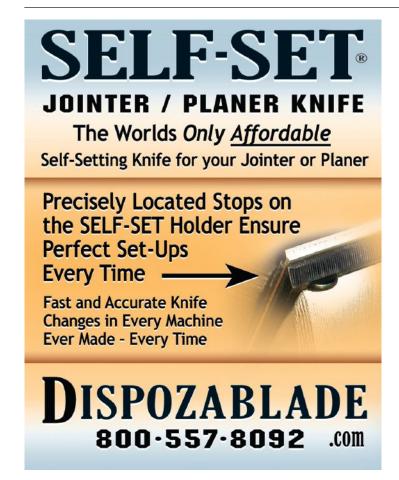
Since there are no broadly accepted standards for finishing work, you would have to create a shop standard for at least a representative finish schedule or two as an expectation of competence. I would create a detailed written schedule, leaving out the specific details, to produce a step panel. I would also create at least two bracketing standards, showing the extremes acceptable in terms of overall color. For example, one would be as dark as allowed, the other as light as allowed, and acceptable would be somewhere in between. Another axis could be too red and too green.

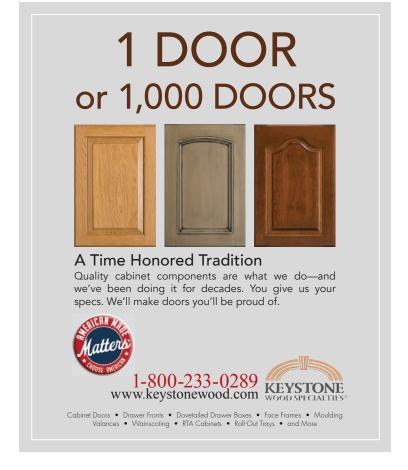
A good test panel might be a raised panel door with enough profile to take advantage of proper glazing. Another probative exercise might be a complex chair with a lot of variation in shape.

I suspect that the grading of the test might be difficult. If the prospect showed a good understanding of most of the process, but had difficulty with gun shading with a dye, I might give a pass depending on the person's attitude and general competence. On the other hand, if the prospect showed little flexibility in deviating from what he had previously learned, this would represent a red flag.

For years I've heard complaints about the struggle to find employees who are a good fit with the company and the job and the difficulty of changing long-established habits. I've seen great success stories, some including the prized employee who has not only hidden skills, but the ability to learn and adapt quickly.

I'm not confident that we can come up with





one universal test to determine who will be a good employee. As employers, we can use a number of ways to inform ourselves about the prospect and we can decide what our needs are, selecting employees on the basis of whether they are likely, in our opinion, to become what we need. So the process starts by deciding if your shop is willing and able to accept an employee who is eager to learn and improve or an experienced finisher who can take over immediately, but might be set in their ways.

NECESSARY SKILLS

Perhaps the most important traits of a new hire are a great work ethic, intelligence, problem-solving skills, the ability to communicate effectively, honesty and respect. Your list might be different from mine. But when it comes to technique, here are some skills or abilities I would screen for:

 The ability to read and understand product data sheets, product labels, material safety data sheets and other written material concerning the products and processes used. I would highlight certain important information on a MSDS and have the prospect explain what it means. I would also ask the prospect to highlight information on a product data sheet and tell me why it's important and interpret a product label.

- An understanding of the processes of finishing and some knowledge of the different types and manufacturers of finishing materials. I would have the prospect go through the materials in the shop and share knowledge of product uses, things to look out for and overall familiarity with application processes.
- The physical ability, including sight, hearing, strength and coordination, to safely perform finishing tasks.

I would administer one of the several color acuity tests that are available free online. However, these tests should be used with caution. In my experience, unless the prospect scores very poorly, the results are not always reliable.

You can search for an online color acuity test or find one at *www.filmsourcing.com*. While we can all agreed that a finisher should be able to see color well, many have been able to adapt to any deficiencies with training.

There are several online color tests that require the participant to arrange colored squares in a sequence from one standard to another in a natural progression. Be aware that differences in ambient light, monitor and computer settings, and even the background against which the test is viewed affect the ability to make subtle distinctions.

The online tests should not be used to replace an exam by an optometrist, but can alert you to possible problems. Also note that scores can be improved through practice.

The organizational ability to retrieve the materials necessary to create the step panel, following the supplied finishing schedule and the knowledge and technique to do so

I would have the prospect select the required materials, tools and equipment, prepare a step panel and closely observe work habits. This test might need to take place over multiple days.

I would also have the prospect seal and topcoat kitchen cabinets or a dining chair, giving me the chance to observe organizational skills, preparing the wood for finish, setting up spray equipment, adapting to environmental conditions and applying finish.

A TEST OF PATIENCE

Each shop manager will have his own priorities and each prospect will bring certain skills and knowledge to the table. There is hardly ever a perfect candidate. Expectations and needs will differ for the small refinishing shop and the kitchen cabinet manufacturer and unfortunately the vast majority of finishing tech-



nicians are largely self-taught or informally taught on the job. It will take some investment of time and energy on the part of both the employer and employee to make it work.

Do you have an omelet test? Please share any experience about hiring a lead finisher, either from an employer or candidate's perspective, in an email to <code>gregalwil@yahoo.com</code>. W

Greg Williams, formerly senior touchup and finishing instructor for Mohawk Finishing Products, is now a freelance instructor and consultant.

Registration opens for International Builders Show

The National Association of Home Builders opened online registration for the 2015 International Builders Show, scheduled for Jan. 20-22 in Las Vegas.

The show will run concurrently with the Kitchen and Bath Industry Show, International Window Coverings Expo, International Surface Event and Las Vegas Market.

The IBS will feature more than 1,000 exhibitors and 100 educational sessions.

For information, visit www.builderss-how.com.

Universal Stair Parts has new owner

L.J. Smith Stair Systems acquired Universal Stair Parts, a company specializing in custom manufacturing and distribution of stair parts.

"The joining of forces will give us a strong manufacturing and distribution foothold in the Southeast and therefore bring added capabilities which will further strengthen our commitment to serve our customers," L.J. Smith president Craig Kurtz said in a statement.

Founded in 1885, L.J. Smith Stair Systems is a manufacturer of stair parts based in Bowerston, Ohio. It serves all 50 states from nine distribution branches and four manufacturing centers across the U.S.

Products will continue to be sold under the Universal Stair Parts brand.

Smithsonian honors Silas Kopf

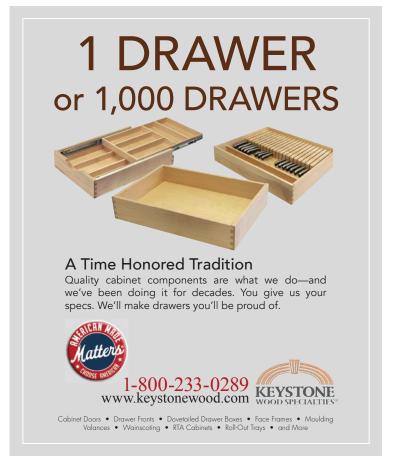
Silas Kopf, a studio furniture maker in Northampton, Mass., won a 2015 Master of Medium award in the wood category from the Smithsonian Institution's James Renwick Alliance.

Kopf, known for his inventive and witty inlayed furniture, has been making studio furniture since 1973. His piece, "Bad Hare Day," was purchased for the Renwick's collection by the James Renwick Alliance in 2008.

His work can also be found in the Museum of Fine Arts in Boston, the Brooklyn Museum of Art, and the Milwaukee Art Museum, as well as numerous private collections.

Past honorees in the wood category include Sam Maloof, Wendell Castle, and Judy McKie.





WOODMARKETS

Cherry sales steady as housing improves slowly

By Jennifer Hicks

ales of cherry are steady for the most part these days, according to lumber dealers interviewed by Woodshop News who also say supplies are increasing because of improvements in the U.S. housing market.

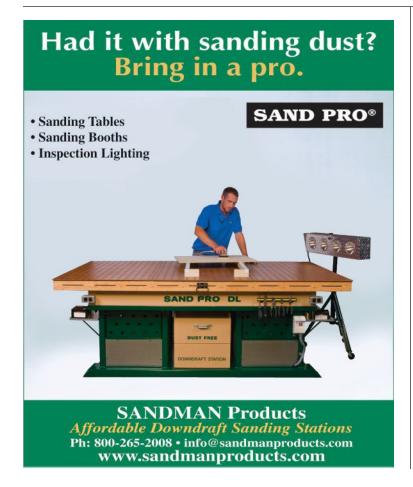
Greg Engle of Certainly Wood, a veneer supplier in East Aurora, N.Y., notes that quartersawn and highly-figured cherry are moving extremely well.

"It's all designer-driven," he says. "All of our cherry inventory is put into special projects for designers looking for something that has a wow factor or something that's extremely uniform close-grained like the quarters that we're selling. Color-wise, the primary focus for what we're getting asked for are the light pink tones of Eastern cherry as opposed to the Midwest cherry that seems to be a little bit darker in color.

"Of course, pitch-free is always the key to the success of selling any cherry, it seems. Pitch is the name for the black dark pockets that show up in cherry. They are common, but considered defects by certain buyers."

Lee Stitzinger, of BWP Hardwoods in Brookville, Pa., says cherry sales are OK, but not as strong as in the past. He says the current demand stems from a change in taste for the pinkish color of the wood.









"Cherry has always been a minor species and it's always been held as a prestigious species because it is a minor species. It's only 2 percent of the hardwoods used and people feel proud to have cherry. But some of that went by the wayside where many individuals of today's generation are not looking at it that way now. They're not looking at heirlooms; they're looking at what they can afford now and what looks good.

"But I do think cherry will always be a sought-out species because of its properties.

I think cherry will trend back. I don't think it will be as strong as it was in the past, but it will come back," Stitzinger says.

"Sales are better and we are seeing a lot of the cherry we sell go towards cabinetry and millwork projects," adds Paul Dow of Yoder Lumber Co. in Millersburg. Ohio. "Everyone's a little bit busier now so everything's picked up.

"Cherry's got wonderful properties. It machines very well, finishes very well. It's a very good wood. The problem is that the brown

woods were more popular than the redwoods for a while. Walnut was very, very strong for a long time and cherry is getting better than it has been."

For hardwood information, visit the U.S. Forest Service, Forest Products Laboratory's Center for Wood Anatomy Research website at www.fpl.fs.fed.us.

Grants provided to boost manufacturing's appeal to students

CNC Software, developers of Mastercam CAD/CAM software, is one of the two initial underwriters of Purdue University's MSTEM3 Grant Initiative, aimed at changing youngsters' perception of manufacturing through EduFactor, Edge Factor's highimpact multimedia resource.

CNC Software has underwritten \$50,000 to help increase the number of schools that can take advantage of the grant. The Gene Haas Foundation has contributed \$250,000.

Because of the grant, upper elementary

and high schools can qualify for EduFactor's suite of products for as little as \$99 per year.

"We have been a supporter and believer in Edge Factor's productions since they started making exciting films featuring compelling, true stories about manufacturing four years ago," CNC Software operations manager Meghan West said in a statement. "It's with great pleasure that we back this grant to help broaden the reach of Edu-Factor's well-executed resources to relay the engaging reality of today's manufacturing environments and skill requirements to students, teachers, and parents.

"Industry needs to continually attract people to manufacturing's interesting and well-paid careers to sustain this vital economic sector. Unfortunately, manufacturing is misperceived by many in America. Just watching one Edge Factor presentation can begin to really change that."

The grant is available on a first-come, first-served basis to schools that apply at www.mstem3.org and qualify.





Fall means it's time for Fine Furnishings Shows

By Jennifer Hicks

Fine Furnishings Shows with dates in Milwaukee, Wis. (Oct. 3-5) and Pawtucket, R.I. (Nov. 7-9). These annual shows present makers of custom furniture, home décor and accessories with a wide variety of designs, materials and price points.



Work at Fine Furnishings Shows includes this bench by Cole & Sons in Russiaville, Ind. ...

"These shows provide a venue where artisans have the opportunity to meet with designers, decorators, members of the media, collectors, and the general public to make direct sales, initiate commissions, and generate publicity for their work," show director Karla Little says.

The Milwaukee show will be held The Garage at the Harley-Davidson Museum, while Pawtucket Armory Arts Center hosts the Rhode Island show.

Both venues feature an awards program, honoring the best in show, students' work and marketing excellence, sponsored by Rockler Woodworking and Hardware.

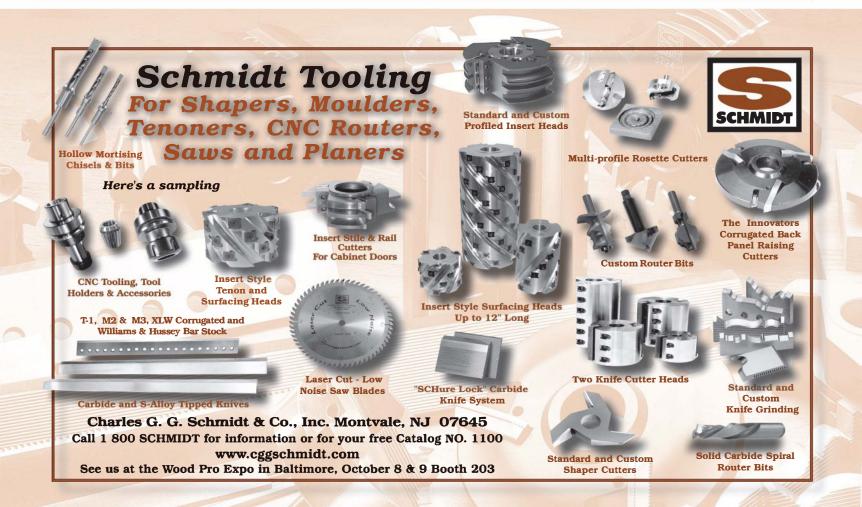
"The craft of woodworking takes many forms, and the Fine Furnishings Show is a tremendous showcase of the beautiful pieces woodworkers create for all of us to enjoy. We are proud to help support this wonderful event," Rockler vice president of marketing Scott Ekman said in a statement.



Chair by Dave Masury of Kittery Point, Maine ...

AT THE MESSLER GALLERY

A juried exhibition of work by Center for Furniture Craftsmanship alumni and studio fellows opened Sept. 26 at the Messler Gallery in Rockport, Maine. It will run through Jan. 7, 2015.





And desk by Kauffman Fine Furniture in Noblesville, Ind.

The work on display is primarily furniture, from elegant, comfortable chairs to sculptural tables and clocks. Center director Peter Korn says that he is gratified to see the school's graduates exploring a variety of aesthetic terrains.

"This is just what we hope to impart; beyond a commitment to superb craftsmanship, there is the courage to develop one's own creative voice," Korn says.

Jurors for the exhibition were Betty Scarpino, editor of American Woodturner magazine; Meg White, director of Boston's Gallery NAGA, and Andrew Zoellner, assistant editor of American Craft magazine.

The exhibitors are graduates of the school's nine-month comprehensive program, 12-week intensive furniture and turning programs, summer workshops and studio fellowship program.

They include Nick Barboza of Bangor, Maine; John Beaver of Pacific Palisades, Calif.; Jonathan Brower of Pascoag, R.I.; Mark Buley of Frederic, Wis.; Nicholas Doremus of Jacobstown, N.J.; Reuben Foat of San Diego; Melanie Hamilton of St. John's, N.L.; Owain Harris of Deerfield, N.H.;

Patrick Kana of Rochester, N.Y.; Clark Kellogg of Houston, Texas; Ian Kirk of Bar Harbor, Maine; Mike Korsak of Pittsburgh, Pa.; Chris North of Owls Head, Maine; Mark Palmquist of Frederick, Md.; John A. Pennisi, Jr. of Syracuse, N.Y.; Andrew Pitts of Heathsville, Va.; Monica Raymond of Burlington, Vt.; Michael Scarborough of Sunnyside Gardens, N.Y.; Matt Shewchuk of Melville, N.Y.; Michaela Stone of Rockport, Maine, and Dennis Turney of New York.

After the opening, the exhibition can be viewed online at www.woodschool.org. w

Contacts:

Fine Furnishings Shows, Tel: 401-816-0963. www.finefurnishingsshows.com

Messler Gallery, 25 Mill St., Rockport, ME 04856. Tel: 207-594-5611.



"In Time," by Mike Korsak, will be on display at the Messler Gallery's Alumni and Fellows Exhibition.





CALENDAR

Organizations sponsoring meetings, classes or shows of interest to professional or hobbyist woodworkers are invited to submit items to: Calendar, Woodshop News, 10 Bokum Road, Essex, CT 06426; editorial@woodshopnews.com.

Include name, dates, location, description of event and a contact address or telephone number. Calendar items, which should be typed or printed clearly, must be received a minimum of 60 days before the event.

Please note that fees, as listed, might not include materials or shop fees. Check with a specific class for further details.

The complete national calendar of events is continuously updated at www.woodshopnews.com.

— Compiled by Jennifer Hicks

CALIFORNIA

Monthly — San Fernando Valley Woodworkers meetings are held on the third Thursday of each month at 7 p.m. at the Balboa Park Sports Complex, Gym Building, at 17015 Burbank Boulevard in Encino. www.sfvw.org

Nov. 7-9 — The Northern California Woodworking Show, featuring new products and

instructional seminars, will be held at the Cal Expo in Sacramento. www.thewoodworking-shows.com

COLORADO

Nov. 21-23 — The Denver Woodworking Show, featuring new products and instructional seminars, will be held at the Denver Merchandise Mart in Denver. www.thewoodworkingshows.com

FLORIDA

Ongoing — The Dunedin Fine Art Center is offering six-week woodturning classes at its Cottage Campus taught by AAW professional member Tony Marsh for beginners and intermediate-level participants. Full day classes are held on Thursdays. Call 727-298-3322 or e-mail education@dfac.org for information.

Monthly — Woodcrafters Club of Tampa meets every third Thursday evening at 3809 W. Broad St. in Tampa. For information, visit www.tampawoodcrafters.org.

ILLINOIS

Feb. 6-8, 2015 — The St. Louis Woodworking Show, featuring new products and instructional seminars, will be held at the Gateway Center's Center Hall in Collinsville. *www.thewoodworkingshows.com*

INDIANA

Jan 16-18, 2014 — The Indianapolis Woodworking Show, featuring new products and instructional seminars, will be held at the Indiana State Fairgrounds in Indianapolis. www. thewoodworkingshows.com

MAINE

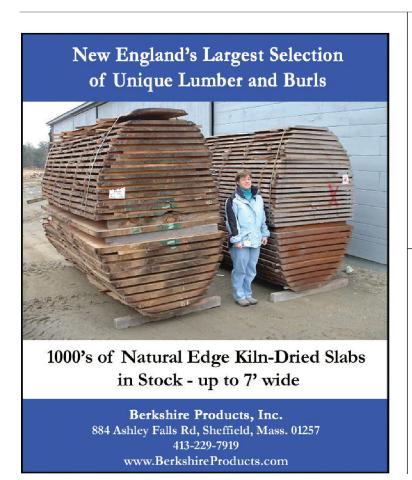
Oct. 27-Jan. 23 — Twelve-week Furniture Making Intensives. Designed to meet the needs of aspiring professional furniture makers, curriculum focuses on design, lumber selection, joinery, traditional hand skills, machine techniques, surface preparation and finishing, shop maintenance, advanced techniques and professional practices. Tuition: \$7,230. Location: Center for Furniture Craftsmanship, Rockport. www.woodschool.org

Oct. 6-17 — Furniture Making Workshops with Peter Korn and Clark Kellogg. Tutition: \$1,310. Location: Center for Furniture Craftsmanship, Rockport. www.woodschool.org

MARYLAND

Jan. 2-4, 2015 — The Baltimore Woodworking Show, featuring new products and instructional seminars, will be held at the Maryland State Fairgrounds Cow Palace in Timonium. www.thewoodworkingshows.com

Feb. 20-22, 2015 — American Craft Council





List your Events in our Calendar

Woodshop News welcomes event notices. Entries must be received by the15th of the month, three months prior to the event.

> Mail to: Calendar, Woodshop News, 10 Bokum Road, Essex, CT 06426 Fax to: Calendar, 860-767-0642 E-mail: j.hicks@woodshopnews.com Subject: Calendar Item

The events are also listed at no charge on the Internet: www.woodshopnews.com

Be sure to include: event name, date, location, sponsor, contact name and telephone number, and Web site URL if applicable.

Baltimore Show at the Baltimore Convention Center, featuring original work by more than 650 of the top contemporary furniture, home décor, jewelry and other craft artists from across the country. www.craftcouncil.org

MASSACHUSETTS

Oct. 11-13 — Paradise City Arts Festival 20th annual fair will be held at the 3 County Fairgrounds in Northampton during Columbus Day weekend. It will feature a showcase of handmade craft items including furniture, blown glass, jewelry, paintings and more.

Nov. 21-23 — Paradise City Arts Festival will be held at the Royal Plaza Trade Center in Marlborough. It will feature a showcase of handmade craft items including furniture, blown glass, jewelry, paintings and more.

MISSOURI

Jan. 30-Feb. 1, 2015 — The Kansas City Woodworking Show, featuring new products and instructional seminars, will be held at Kemper Arena Grounds in Kansas City. www. thewoodworkingshows.com

NEVADA

Jan. 20-22 — KBIS/IBS 2015. The Kitchen & Bath Industry Show (KBIS) will be held in conjunction with the International Builder's Show

(IBS) at the Las Vegas Convention Center in Las Vegas. KBIS, sponsored by the National Kitchen & Bath Association, will a showcase of the latest industry products and be attended by over 125,000 residential design professionals. IBS, sponsored by the National Association of Home Builders, will feature more than 1,000 manufacturers and suppliers showcasing the latest and most innovative products. For information, visit www.kbis.com or www.buildersshow.com.

NEW YORK

Monthly — Sawdust and Woodchips Woodworking Association meetings are held on the first Thursday of each month at 6:30 p.m. at the Canton Woods Center in Baldwinsville. www.sawdustwoodchips.org

Monthly — Northeast Woodworkers Association meetings held on second Thursday of the month at various locations in Albany area. www.woodworker.org

NORTH CAROLINA

Nov. 9-11 — STAFDA (Specialty Tools & Fasteners Distributors Assoc.) will hold its 38th annual convention and trade show at the Charlotte Convention Center in Charlotte. There will be more than 570 booths with products serving the light construction/industrial mar-

ket. Keynote speaker will be Joe Gibbs, former Washington Redskins football coach and now NASCAR team owner. www.stafda.org

OREGON

Nov. 14-16 — The Portland Woodworking Show, featuring new products and instructional seminars, will be held at the Portland Expo Center in Portland. www.thewoodworkingshows.com

RHODE ISLAND

Nov. 7-9 — New England Fine Furnishings Show. Annual show offering handcrafted furniture and accessories. Location: Pawtucket Armory Arts Center. *www.finefurnishingsshows.com*

SOUTH DAKOTA

Monthly — The South Dakota Woodworkers Guild meets the last Thursday of every month (except August) at various members' shops. The club has hand tool and woodturning groups. www.sdwoodworker.org.

WISCONSIN

Oct. 3-5 — Milwaukee Fine Furnishings Show. Annual show offering handcrafted furniture and accessories. Location: Harley-Davidson Museum. www.finefurnishingsshows.com

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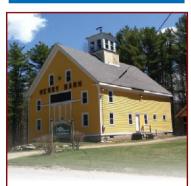
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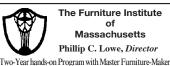
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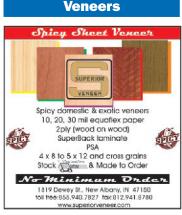
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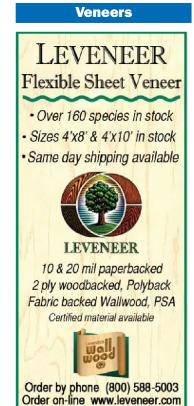
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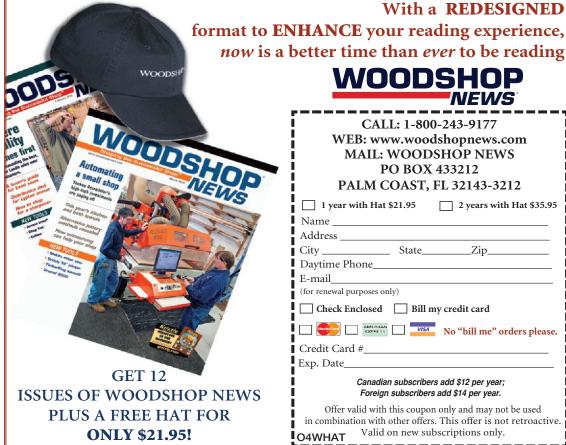
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Craftsmen respond to challenge

eneer Technologies, a veneer supplier, announced the results of its 10th annual Craftsman's Challenge competition at IWF 2014. Keith Morgan and Aaron Nash of Bespoke Minneapolis, a custom shop in Larchwood, Iowa, won the grand prize from the transitional cabinet category.

"When I look at this entry, I'm envious of the level of design and even more of the quality of execution that went into this work," Alfred Sharpe said in his judging comments.

"The main goal of this project was to create a platform that could showcase our strengths in both our detail and marquetry/veneer work in a more contemporary format," the shop's entry description said. "The cabinets offer many unique details that demonstrate this, from the micro-reeded details, the up-lighting of each deck, the herringbone parquetry work on the lower deck and ceiling, the curved interior corners, the perpendicular veneer door edges flanked by the walnut piping, the automotive finish on the drawer box sides interrupted by the teak micro-reeding to the both vertical and horizontal matching of all of the ziricote exteriors and Burmese teak interiors. A lot of details in an understated package."

The grand prize consists of a \$3,000 cash award. Certainly Wood, the project's veneer supplier, received \$2,000 and sales representative Greg Engle won \$1,000.



The grand-prize winner in the 2014 Craftsman's Challenge, produced by Bespoke Minneapolis in Larchwood, Iowa.

Bespoke also won the cabinetry category for a residential kitchen in the Royal Crescent, the former retreat of Queen Mary in Bath, England.

The competition drew more than 100 entries.

"This year's competition was filled with high-quality entrants," Sharpe said. "We had some very difficult decisions to make in many categories, and we created an ad hoc category, 'Wearable Veneers,' to recognize three veneer eyeglass frame designs."

Category winners also included:

Architectural Woodworking: Kirk Coryn of

Kirk's Kreations in Sapulpa, Okla.

Furniture: Richard Hubbs of Richard Hubbs Furniture and Design in Ferdinand, Ind.

Special Items: Spider Johnson and Lora Hunt of Mason, Texas

Student Design: Olof Jondelius from the University of Washington in Seattle

Wearable Veneer: Arc-Iris of Pocatello, Idaho Additional photos of the winning entries can be viewed at *www.veneertech.com*, which also has details about the 2015 Craftsman's Challenge.

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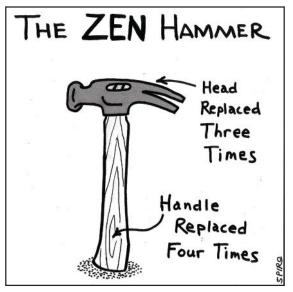




From left, "Jewelry Armoire," winner of the furniture category, made by Richard Hubbs Furniture and Design in Ferdinand, Ind., and "Frank", a chair selected as the winner of student design category, by Olof Jondelius from the University of Washington in Seattle.

60 Grit

Rough humor by Steve Spiro





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