



# North Texas Woodworkers Association

See us at: [www.ntwa.org](http://www.ntwa.org)

Volume 25, Number 8

Newsletter

August 2016

## Welcome

**President John Loftis** welcomed everyone to the August meeting of the North Texas Woodworkers Association.

## Guests

*David Reason* of Richardson found NTWA with a Google search.

*Gary Badger* is retired and getting back into woodworking. He also did a Google search to find NTWA.

*Greg Colombo* is from Plano and has been a carpenter doing trim and router work. Wants to expand his skills.

*Austin Crew* just moved to Plano from New York and was introduced to NTWA by club member Jim Polanco.

## Announcements

Steve Yauch said he received a request looking for someone to build a display tree. Anyone interested should contact Steve.

John Loftis presented two estate sales. Information for the first was emailed earlier in the week and is in Dallas. It is mostly mechanics hand tools rather than woodworking tools. A link to pictures was included in the email and John has a handout. The full lot can be bought for \$1800.

The second is in Murphy, TX with an out building full of serious woodworking tools including a 5HP

Clearview dust collector that is new and still in the box. If you are interested, please call Pat at 972-442-5830 for directions.

## Shop Questions

Dale Smith is looking for a "bull-nose" sander. He's tried several home-made versions that he's not happy with. Several members referred him to Klingspor.

Joe Polich let the club know that Dewalt sells planer knives for the DW735 13" planer in a package of two sets. You can find them online from a number of sources for \$80 compared to \$57-80 for a single set.

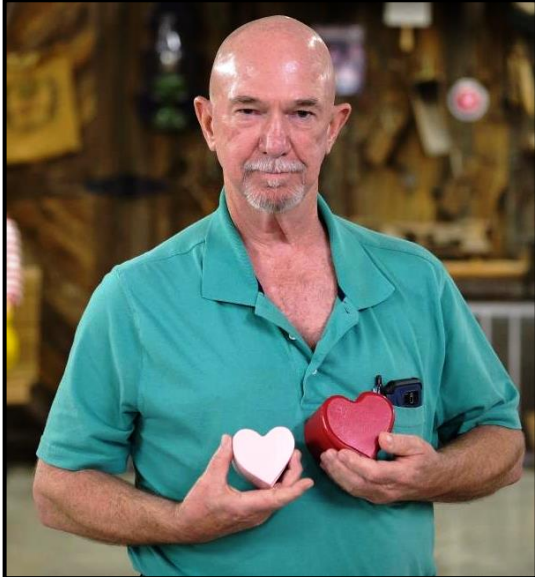
## Show & Tell

OOPS from July



This is Dale Smith, not Fred Sawtelle!

And this is Fred, not Dale!



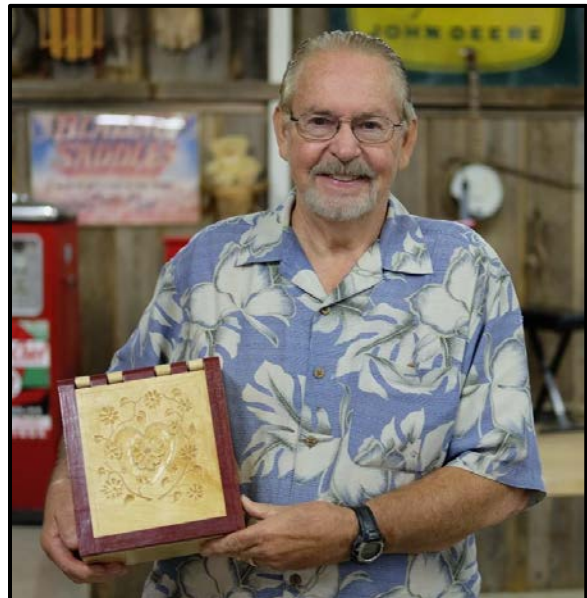
Now for August:



Bill Jacobs made this box out of maple and walnut then finished it with shellac.



Joe Polich turned pens and letter openers for gifts. He made the box for the pen and letter opener from mahogany using 5mm barrel hinges.



Dale Smith – yes the real Dale Smith – made another dog ash box out of sycamore and purple heart. He hand-carved the lid and used a wood pin hinge.



Mike Blazier made this hall coat rack and mirror out of alder.



Michael Minarzick shows off the cushions for his Morris chairs. Michael presented the build at the May club meeting.



Sunny Sunder made this king bed with walnut and maple.

### **Raffle**

Chris Edwards: Grip 3 piece 8" caliper and divider set.

Dave Cassman: Sorby sash mortise chisel.

John Loftis: GRR-Riper Advance 3D pushblock.

Bill Jacobs: Woodpecker 24" straight edge.

## Program



The August program presented by club member Joe Polich was about dust collection in the home shop. Joe walked everyone through the various stages he went through by trial and error hoping to save some members some of the grief he went through.

Like most members, Joe started out in a small basement shop that created dust issues with the wife. His first effort was with a ceiling-hung dust filter that helped, but didn't solve the problem. He then added a Jet DC-1100 that was a big improvement.

This system was modified numerous times over the years and especially after he moved to Texas and built a 900 square foot shop. With lots of modifications he now has his dust collection piped overhead with drops to each machine utilizing blast gates to control the air flow.



A handout from Joe's presentation giving a number of resources he used to design and install his system follows this newsletter.

If you are interested in Joe's presentation, please contact him at [joep3931@verizon.net](mailto:joep3931@verizon.net) to request a copy.

**Next club meeting:**  
**Sept. 20th, 2016**  
**7:00 p.m.**  
**The Party Barn**

**Cabin Build**  
**Bob Wheat**

*Newsletter edited by: Joe Polich  
 Pictures by: Sidnev Futrell*

# Dust Collection for The Home Workshop

North Texas Woodworker's Association

August, 2016 Program Resources

Joe Polich



## **WoodMagazine.com: To avoid common duct-design flaws:**

<http://www.woodmagazine.com/woodworking-tips/techniques/dust-collection/avoid-common-duct-design-flaws>

DO use the largest ductwork that fits your collector. Just because a tool comes with a 4" dust port doesn't mean you should use 4" main ducts or drops. Instead, look at the intake port sizes for the collectors you're considering. Most cyclones have intake ports of 6" to 8", and some two-bag collectors have 5"- or 6"-diameter intakes, so consider at least a 5" main duct. Tapered reducers, like the one below, change duct diameters with minimal static-pressure loss.

DO smooth out sharp curves. Think of air molecules as fast-moving cars on a freeway. Both change direction faster on a sweeping curve than a 90° turn. The PVC tee shown at near right adds more airflow resistance than the metal dust-collection pipe's gradual bend.

DON'T overuse flex hose. Corrugated tubing creates three times more static-pressure resistance than the same length of smooth pipe. Use just enough to link a tool to its drop pipe.

DO eliminate bottlenecks near the collector. (See "Give dust a straight shot to the collector" below.) Instead of two 90° bends, use two 45° bends. Better still, raise the collector until the main duct leads straight into the inlet.

DON'T create long duct runs. A single duct of 30' or more that wraps around more than two walls of a shop reduces air velocity and increases the risk of dust buildup. Instead, hang one shorter main duct, with diagonal branches leading to the tool drops.

## **Woodworkers Journal eZine 2004: PVC vs Metal & Grounding**

<http://www.woodworkersjournal.com/using-metal-pvc-pipes-dust-collection/>

<http://www.woodworkersjournal.com/grounding-pvc/>

A. Michael Dresdner: "This issue is one of the most hotly debated on Internet message boards. The best information from the most reliable sources I have seen is that, in most cases, you are perfectly safe running plastic pipe. Admittedly, if you can afford it, metal pipe is better. Plastic pipe may give you a shock, just like a shag rug paired with a wooly sweater, but it is not likely to generate a spark capable of starting an explosion."

A. Rob Johnstone: "Let me start out by saying that, in over 25 years of woodworking, I have never heard of an actual explosion or fire resulting from the 'static electricity on the plastic dust collection tubes' danger. Tons of ink (both real and virtual) have been spilled discussing and debating this 'issue.' With that said, if you are concerned about it ... ground the tubes with a wire running through the system. You'll feel better, the electrical supply company will thank you, and you can then be considered an expert during the next online 'discussion.' Did I mention that I have never heard of a problem with static electricity exploding dust in a plastic tubed system?"

**Personal Experience:** Ground PVC if you have electronics hooked up to the machine! PVC produces more static electricity than metal ducts.

**Posted by Rockler May 19, 2006:** If you want a little more in-depth look into the subject of dust collection, PVC and static electricity, read Rod Cole's thorough and well researched article, "Grounding PVC and Other Dust Collection Myths." The article, which you'll find posted on a number of websites including Rod's **Woodworking Page**, goes just about as deep as most of us would ever want to go into the physical and electrical properties at play in explosions and fires caused by electrical field discharge. In the end, Rod agrees that the risk of explosion or fire involved in using PVC tubing for dust collection in a home shop is very low, and concludes that "the primary issue is to protect yourself from a shock."

Should you ground your dust collection system? Whatever the risks of explosion or fire, taking a "better safe than sorry" attitude and equipping your PVC ductwork with a grounding system will at least prevent you from suffering a nasty zap when you brush up against a dust collection port. Rod Cole offers a few directives for grounding a system toward the end of his article, and to make the project easier, Rockler offers a **Dust Grounding Kit** made for the purpose. Between the two, you'll rest a little easier and you'll be likely to spare yourself a few unpleasant surprises from your dust collector's ductwork.

[http://www.woodcentral.com/articles/shop/articles\\_221.shtml](http://www.woodcentral.com/articles/shop/articles_221.shtml)

Note: this is a very technical document, but if you read carefully and ignore the hyper-tech stuff, does have some good information you can use – Joe P.

Rob Cole

No documented fires in PVC dust collection systems in any fire registry database used by fire inspectors. Bigger problem is static electricity shocks. Grounding solves it. If you use PVC the primary issue is to protect yourself from a shock. For this I recommend either a bare grounded wire in the duct, or grounded screws through the pipe spaced every 4 inches. This will reduce the maximum charge build-up by allowing more discharges at lower energies. In a four-inch duct, the maximum discharge distance to the bare wire is 4 inches, and the maximum discharge distance to the ground screw is 4.5 inches, so both give approximately equal protection. Because both the wire and screw point have very small radii, they will cause discharges at a much lower charge density than you need for a similar discharge to your finger. The advantage of the screws is that they will not hang up shavings like the wire can. If you are not concerned about receiving shocks, you need not ground the PVC ducts. It is likely that the external ground wire, bare or insulated, or grounded foil wrap is safe in the home shop, but this is problematic if you can generate very large amounts of fine dust.

**DANGER: CURVES AHEAD**

**POOR**



This PVC tee's sharp bend raises static-pressure loss by slowing airflow.

**BETTER**



A more gentle arc creates less resistance, but you can do better.

**BEST**



A shallow bend reduces static pressure resistance and improves airflow.

## **Canister Filter**

Wynn Environmental Sales Inc.

211 Camars Drive

Warwick, PA 18974

Phone 215-442-9443

[www.WynnEnv.com](http://www.WynnEnv.com)

99.999% efficient @ 0.5 Microns

Nanofiber material

Open 1 end w/gasket; closed other end

18.75" OD; 14" ID; 25" length

C1425C Cartridge Filter        168.00

FREIGHT                                23.99

## **Oneida SuperDust Deputy**

<http://www.oneida-air.com>

Sales & Technical Support

Phone (Toll-Free): 1-800-732-4065

Email: [info@oneida-air.com](mailto:info@oneida-air.com)

Customer Service

Phone (Toll-Free): 1-866-387-8822

Email: [customerservice@oneida-air.com](mailto:customerservice@oneida-air.com)

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