



February 2019 Edition

(Newsletter Editor: Ros Barnes, [rbbnz@msn.com](mailto:rbbnz@msn.com) or 505-864-8857)  
<http://www.abqawa.org>

### **IMPORTANT ANNOUNCEMENT!!**

**AWA will again be meeting in Class Room #4 at North Domingo Baca Multigenerational Center, beginning at 9:30 AM, concluding around 12:30 PM, on the **third** (3rd) Saturday of each month. Doors open at 9:00 AM.**

**This does not mean AWA is ending its relationship with Woodworkers Supply. We have spoken to Woodworkers Supply who has been a very generous sponsor of AWA for many years and will continue its support moving forward.**

### **Preview of the February 16, 2019 AWA Workshop starting at 9:30 AM**

For February, we have:  
**“Antique Tools for Woodworking”**  
**Presented by Rock Mountain Tool Club**

The Rocky Mountain Tool Collectors is a regional club incorporated in Colorado as a non-profit, in 1975. The purpose is to promote the collection, restoration, study, and understanding of the tools of early trades and crafts and to share this understanding with interested people and institutions.

Members' interests cover all areas and trades, from carpenter & cooper to wainwright & wheelwright. Some members specialize in collecting tools of one trade, or even one brand of tool, while some have collections that are more general in nature. But having a collection is not a requirement for membership; all you need is an interest in old tools.

Today's AWA presentation is intended to discuss 'User' vs 'Collector' tools, the dangers of an emphasis of 'value' while overlooking the condition of tools and promoting membership in the RMTC as a source for affordable tools, parts and and knowledge about the field.

Presenters:

**Ken Burris** is a former Sheet-Metal worker, and retired from a position as Project Superintendent for a DOE production facility. He first joined the club in 1989. He has a small garage shop that can accomplish most any woodworking as well as many metal working tasks.

**Dave Fessler**, retired Cabinet Maker with a long history in Albuquerque, currently collects Surveying tools but can be counted on knowledge of tools in almost every field. He is an early member of the club, beginning in 1980. His well appointed cabinet-makers woodshop is still active and alive with projects despite his retired status

**Jason Fink** is a retired Cartographer and Programmer whose tool use in the field was limited to sitting in front of a computer for far too many years. A member of the RMTC since 1996, he focuses on collecting Stanley tools manufactured between 1910 and 1918. However, he loves all tools, modern and vintage, power and hand.

### February's Woodworker's Supply Specials

Come to the meeting and check out the Specials there.

**NOTE:** Since our meetings have moved to a new location, away from WWS, they have agreed to hold over their specials through the following Monday so that we may have a better opportunity to take advantage of those specials.

On the day of each monthly AWA meeting, in addition to the day's specials chosen to sync with the workshop topic, each of our members will be allowed to pick any one safety-related item, and buy it with the same discount terms, "our usual price, less 10%, unless it goes under WWS's cost". This would include feather boards, push sticks, hearing protection, eye protection, breathing protection, and other safety items from the big catalog. As an example, a member could buy a feather board OR a push stick OR any one of several other safety items at the same special discount. This "safety special" will be an ongoing offer from WWS to our members, every month on the day of the meeting.

### Upcoming Workshops

**03/16/19**

**"How to Build a Wooden Kayak"**

**Presented by Lauren Pacho and Reid Schaeffer**

**04/20/19**

**TBD**

**05/18/19**

**"Integrating Design and Execution  
for High-End WW"**

**Presented by Michael Mocho**

### January's Workshop Statistics

Attendance: 56 members & 4 guests.

\$10.00 Cash: John Paul Hendrickson

\$10.00 Cash: Monique Tillier

\$25 TJ Hardware Gift Certificate: Ron Bathje

\$50 Woodworkers Supply Gift Certificate: Kerry Neef

## February 16, 2019 SILENT AUCTION

**(A note from Les:)** *If you have an item you want to donate to the AWA because 1) you no longer need to it, 2) you no longer want it, 3) you forgot (or never knew) how to use it, consider donating it to the AWA and we'll offer it in the silent auction during the meeting. If you have decided you have something like that and are going to bring it to the meeting for the auction, please let me know ahead of time so we can be prepared for it. Just send me an email at [secretary@abqawa.org](mailto:secretary@abqawa.org) and we'll have it all set up. Thank...Les*

### New Feature Joins Raffles at Monthly Meetings

A Silent Auction of woodworking items donated by members will be conducted during the meeting to offer items of greater value than those typically offered for the raffle.

Here's what to expect. If a member wants to donate an item he or she feels is of greater value than is typically raffled, that item can be entered in the monthly silent auction. The item is brought to the meeting, and the member contacts the "auctioneer" who will provide a form asking for a short description, an approximate value, and a designation of where the funds are to be used if other than the general budget. The auctioneer will put a minimum bid on the form and announce the item is open for bid at the beginning of the meeting. Bids will be accepted until the presentation is concluded at which time the auctioneer will announce the highest bidder. It is expected that a winning bidder pay for and take the item they won immediately.

Les Bruce ([secretary@abqawa.org](mailto:secretary@abqawa.org)) will be the auctioneer at the Saturday meeting. If you plan to bring an item for silent auction it would be helpful to let him know ahead of time so we can have things prepared.

Items for the raffle and the silent auction are donations but if members wish to sell woodworking items rather than donate them, those items or description can be brought to the meeting and we'll post them on a "For Sale" board for members to see. There is a classified ads area on the new website (<http://www.abqawa.org/dir/forums/forum/classified-ads/>) where you can post items for sale to the membership. We will post items listed in the classified ads on the "For Sale" board at the meeting.

If you have any questions, send an email to Les.

## January, 2019 Presentation

For January, we had:  
**"Manufacturing Using CAD and CAM"**  
by **Daniel Tillier**  
[www.tillierdesigns.com](http://www.tillierdesigns.com)  
(written by Robert Ewing)

Daniel Tillier discussed his methods of using CNC and 3D printing to make objects in his Rapid Prototyping and Manufacturing business. The parts he makes vary from laser engraving on flat surfaces to the fabrication of accurate 3D models of missiles and other items.



There were several technologies discussed in the presentation. For those not familiar with the terminology used in the presentation, the following definitions are provided.

**CNC Milling – subtractive** machining - material is cut away to make the part

A **CNC machine** is a computer-controlled machine that can cut, bend or shape material in the manufacturing process. The term “**CNC**” is an abbreviation for Computer Numeric Control. Computer Numerical Control operates tools along a tool path to produce a three-dimensional part.

**3D Printing – additive** machining – material is added to make the part

3D printing is any of various processes in which material is joined or solidified under computer control to create a three-dimensional object, with material being added layer by layer in the vertical direction. An inkjet printer squirts ink onto paper to create a two-dimensional pattern (letters, pictures, etc.). 3D printing adds the third (vertical) dimension using materials that solidify instead of ink.

**SLA (a method of 3D printing)**

**Stereo Lithography Apparatus (SLA)** is an additive manufacturing process and an example of a 3D printing method. This technology uses an ultraviolet (UV) laser to turn light-sensitive resin (a liquid material that becomes hard when ultraviolet light is shined on it) into solid 3D objects, layer by layer.

**FDM (Fused Deposition Modeling - a method of 3D printing)**

**FDM** is an additive filament-based technology where a temperature-controlled head extrudes a thermoplastic material layer by layer onto a build platform in the horizontal plane. The platform is moved in the vertical direction as the 3D part is made.



**Laser Engraving** – Laser heating is used to remove a small amount of material (such as burning letters into a wooden piece)

**CAD** is computer-aided design, often used for architectural and industrial design. An example of **CAD** is the computer program used to create blueprints for a house or design a piece of furniture. CAD can be two-dimensional (house plans) or three-dimensional (furniture design). Many AWA members use Sketchup for their 3D design. Sketchup licensing is available through AWA at a discount. Fusion 360 (by Autodesk) is the 3D software used by the presenter Daniel Tillier. AutoCad, Tinkercad, Inkscape, X-Carve/ Easel, OpenOfficeDaw and SolidWorks are other examples of CAD software.

**CAM** is computer aided manufacturing – The software that plans (automates) the path the cutting tool will follow to remove material in CNC machining. Fusion 360, FreeMill, Easel and Verctric VCarve Pro are examples of CAM software. The CAM instructions are converted to G-code which controls the CNC machine. Universal G-code sender is an example.

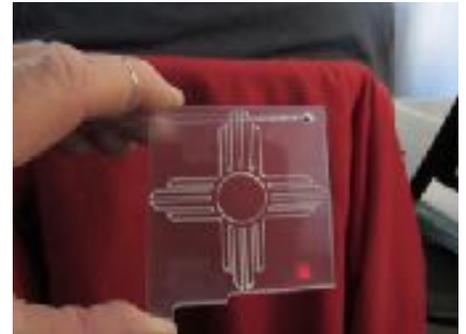
**CNC machines** vary from desktop (home use) to very large industrial machines. Home use machines are generally limited to working with wood, acrylic and soft metals such as aluminum, brass and copper. Home use machines are limited in the size of parts that can be made particularly in the vertical dimension (around 2 inches). Router bits or endmill bits can be used. The bit type must be matched to the operation and material. A limitation of the CNC machine is that you can only work on one surface at a time. If machining is required on multiple surfaces, the part must be



repositioned and the machine must be recalibrated. Designs can be imported by scanning the shape of the object to start the design.

Home use CNC machines do not require specialized training and there are many online aids for learning. The accuracy may be as good as 0.005 inches provided the machine is placed on a sturdy platform to minimize vibration and there is very little electrical noise and the setup is done very carefully. Material type, bit quality and material removal rate also affect the accuracy. Dust collection capability and hearing protection is also recommended. Because the communication method between the computer and the CNC machine uses interrupts, Windows is the most common operating system.

Daniel makes some of his CNC items from **cast** acrylic. Extruded acrylic does not machine well and will form a ball of waste. Cast Acrylic is available from Port Plastics in Albuquerque. Acrylic from home centers is extruded and not suitable for CNC work.



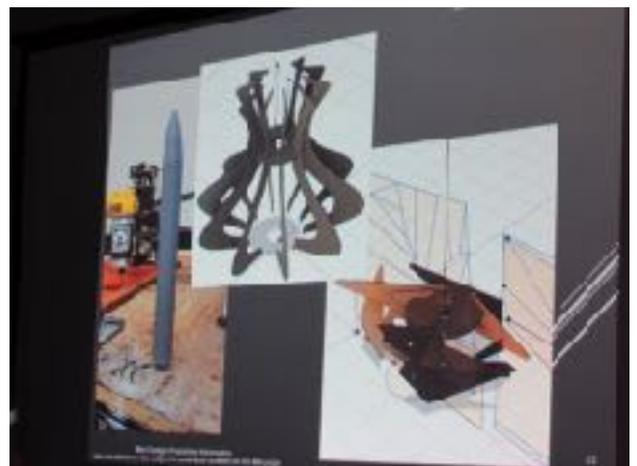
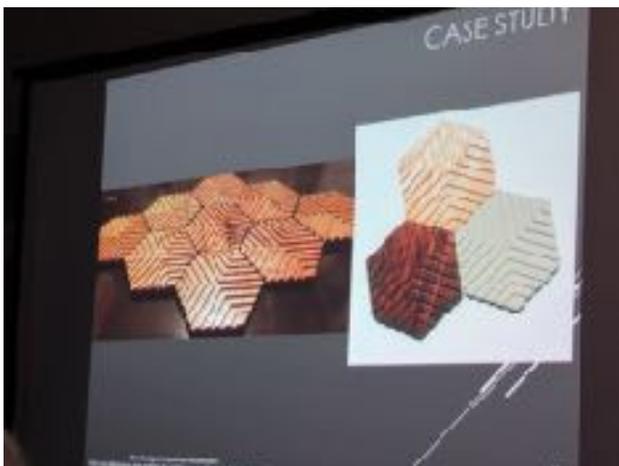
X-Carve is one brand of home use CNC machines. Easel is a web-based free software platform that allows you to design and make items from a single, simple program with the X-Carve machines. <https://www.inventables.com/technologies/easel> gives examples. Google “this old house cnc video” for more examples of CNC projects. CNC kits for home use are priced in the \$1300 to \$2000 range.

**3D printing** machines also vary from desktop to large industrial machines. The process of making a part is time consuming (may be several hours) because the material is added in very small increments. One advantage is that very complex three-dimensional parts can be made that would be difficult or impossible to make with common milling machines. Very detailed objects are easily made with features as small as 0.01 inches or smaller. Since accuracy and repeatability are good, many parts that are essentially the same can be made.

### Summary:

The choice to use automation (CNC and/or 3D printing) depends on the complexity, accuracy and quantity of items to be made. Doing the design with CAD takes time but also provides efficiency if many parts are to be made. Repeatability and accuracy are major advantages of automation. Automation also allows for multitasking in a production environment.

Daniel will make parts for your project if you can provide the basic design.



## Special Announcements

### Woodworking (and woodturning) camp help needed!

(from Hy Tran 2019 NMWT President)

Due to popular demand, NMWT (New Mexico Woodturners) will be teaching the woodworking camp at Explora again in Summer 2019! The camp dates are Mon-Fri, July 29-August 2, 2019, from 9:00am-12:00pm.

In this camp, teen-aged students (middle school and high school) will be exposed to woodworking. In the first two days of the camp, we explore carving with a knife, grain direction, and hand tools such as planes, chisels, and gouges. The second day, the students make a spoon. In days three to five, the students are introduced to the lathe, and by the last day, they make objects such as honey dippers and finger tops. (And yes, they use a skew, and quite well too!)

You need not be an expert woodworker (or woodturner) to coach—you only need to be enthusiastic about wood! If you want to help, but are unable (or unwilling) to coach, we can use your help with materials preparation and with lending us tools—carving knives, pocket knives, drawknives, planes, spokeshaves, spindle roughing gouges, spindle gouges, parting tools, and skews. We will gladly sharpen your hand tools and return them to you sharp. If you would like to coach, we will be doing “coach-the-coach” training sessions. We’ve already scheduled sessions at Explora for May 23 and May 25, but we can be flexible with scheduling.

Please contact Hy Tran ([hy.d.tran@gmail.com](mailto:hy.d.tran@gmail.com)) if you want to help.

Thank you!

**Bernell Rice** needs someone to stain and seal two freestanding bedroom cabinets. The cabinets will be available about mid-March and he will transport them to the person to do the finish work. If you are interested, contact Bernell at 816-260-8604 or [brice@realtytrustgrp.com](mailto:brice@realtytrustgrp.com)

**Jo Lynne Fenger** contacted AWA about having an interested member build some artist's stands and bases for her. Her contact information is [jolynne555@gmail.com](mailto:jolynne555@gmail.com) or 505-933-5404.

**Frank Warren's** woodshop is up and running 7 days a week from 9-4pm for working on toys. Anyone who wishes to participate and have time during these days and hours, call Frank at 962-9212. His address is 4972 Turquoise Dr. in Rio Rancho. Thanks.

From **Derek Roff** regarding the last meeting of the Woodworking Design Special Interest Group – January 2019:

Our first meeting at Cherry Hills Library went well. The room is large and pretty comfortable. We were glad to find that the temperature was comfortable. There is a good projection screen at the front, and we set our projector on a table at the front. Once we got the computer setup and talking to the projector, we got a good image that was easy to see.

Ivan talked about a project that he made for a class at the Santa Fe Community College, which featured a floating top, supported on two transverse stretchers. The intent was to use mortise and tenon joinery. However, the basic layout meant that there would be no long-grain to long-grain connection between a normal tenon on the stretchers and the aprons. To solve this problem, Ivan changed the normal tenon into triple small tenons,

with the long-grain of the long dimension of these small tenons running parallel to the grain in the aprons. This gave the proper long-grain to long-grain orientation for a good glue joint between the mortise and tenon.

Ivan also showed an interesting technique of duplicating some of the functionality and visual convenience that we used to have with three-view drawings. After he has finished creating the entire 3-D model in SketchUp, he moves to the front view, duplicates the model, offsets it vertically, and rotates it 90 degrees to give a top view of the model, aligned above the original front view of the model. This gives him two views visible at the same time. He then repeats the process, to produce another copy of the model, rotated and offset to the right, to give the side view. In this way, when he chooses to view the model in a front view, he can also see the top view and side view simultaneously. This can be very useful for visualizing everything at once, as in a three-view drawing.

Sid showed photos of two small tables having a design that he wants to make, and he asked for discussion on how he might do some of the joinery. The photos gave no details, so he has to figure everything out. He got a lot of varied advice, probably more than he was looking for. The group has wide experience and offered many alternatives.

Rex showed some photos of a woodworking bench that he is making, along with a SketchUp drawing of it. He is making the workbench out of ash. To get the width and/or thickness needed for some pieces, he glued up two pieces of thick stock to make even thicker stock. An advantage of this approach was that he could cut a dado in each of the pieces, and then glue them together to produce a mortise with rectangular corners.

Ben showed photos and his SketchUp drawing of his miter saw/chopsaw work station, which he has shown at previous meetings, as the work was in progress. The project is now complete, and it looks great. One of Ben's innovations is a dust collection box at the back of his work station. Dust is pulled through two holes in the dust box, below which two tubes lead to a wye, and then to the dust collection duct. The floor of the dust collection box is below the cutting surface, so that dust will tend to collect in the box, even if it doesn't all get pulled into the ducts.

Gerry showed the SketchUp drawings for his dust collection system, which he is assembling from parts made by different manufacturers. He chose the Super Dust Deputy cyclone separator from Oneida, because it has 6" ports for both input and output. He used a Grizzly 2HP blower unit, and 0.5 micron cartridge filter. Gerry says that the filter gives a much higher air flow rate than the bag that came with the blower.

We had good attendance, especially for a January meeting at a new location. Nine members attended: Ivan, Tracy, Rex, Ben, Derek, Les, Bill Cotton, Bill Krausmann, Gerry, and Sid.

Our meetings are on the fourth Tuesday of each month at the Cherry Hills Public Library. We could welcome more members to join us for the next meeting. If you are interested woodworking design issues and decisions, please join us. Contact Ben Blackwell <[bblackwell13@comcast.net](mailto:bblackwell13@comcast.net)> to get on our email list.

***World of Wood is back!***

World of Wood is back up and running on the wholesale side of business.  
(See their ad at the end of this NL for their e-mail. No phone number available at this time)

## Safety Tips, Woodworking Tips, Experiences

(If you have a tip that you would like to share, send it to the editor, Ros Barnes, [RNBBNZ@MSN.COM](mailto:RNBBNZ@MSN.COM))

From **Jo Kobler**: Here's an interesting and somewhat un-scientific test of several glues/adhesives. Might be of interest.

<http://www.landrcing.com/forum/index.php?PHPSESSID=13838899373f1d50b17bda45d0bfa239&topic=17546.0>

From **Ros Barnes**: If you use a plunge router (like my Milwaukee), be aware that some models do NOT have a built-in stop to prevent inadvertent contact of the router bit collect with the guide bushing. If that does happen, sparks will fly! Ask me how I know.

## AWA "Mentor List"

(from Ros Barnes, newsletter editor, [RNBBNZ@MSN.COM](mailto:RNBBNZ@MSN.COM))

AWA is still looking for any members who are interested in being a Mentor for others in our organization. If you are at all interested, please e-mail me. You do not need any formal training to be a Mentor - just the desire to share your woodworking knowledge with others.

NAME	DISCIPLINE	CONTACT INFO
Ros Barnes	Cabinet (casework) design and construction, toy design and construction, equipment adjustment and tuneup, jigs.	505-864-8857 <a href="mailto:RNBBNZ@MSN.COM">RNBBNZ@MSN.COM</a>
Bill Cotton	CNC, 3D printing, laser engraving and joinery questions.	phone 505.306.6819 <a href="mailto:wyzarddoc@yahoo.com">wyzarddoc@yahoo.com</a>
Gale Greenwood	Cabinet making, case goods (eg: chest of drawers).	505-256-1379
John Gonser	Toy design and maker (Note: John [an AWA LIFE Member] lives in Grand Rapids, Michigan, but is willing to mentor anyone via email, telephone, or other means, and he has some original designs he is willing to share.)	616-949-0061 <a href="mailto:john.gonser@sbcglobal.net">mailto:john.gonser@sbcglobal.net</a>
Alan Voda		Alan: 268-7096 or <a href="mailto:amv6775@gmail.com">amv6775@gmail.com</a>
Steve Wagner	Plastic casts and molds	Steve: <a href="mailto:bigjawbone@mac.com">mailto:bigjawbone@mac.com</a>
Frank Warren	Toy design and building, and scroll saw and scroll saw projects	505-962-9212 <a href="mailto:AB5WJ@cableone.net">mailto:AB5WJ@cableone.net</a>
Bill Zerby	Tool Sharpening	505-263-6632 <a href="mailto:william.zerby@gmail.com">mailto:william.zerby@gmail.com</a>

## New Members

**Tom Dhanens, Will Krausman, and Kerry Neef** all of Rio Rancho joined AWA in January.

***WELCOME!***

## AWA Name Badges



**Steve Schroeder** is the volunteer who makes badges for those members that need them. You can contact him at [stefano.abq@gmail.com](mailto:stefano.abq@gmail.com).

## AWA Shirts, Smocks, & Hats

Ivan A. Blomgren is taking orders for club caps, shirts, etc. Due to the lack of volume and associated shipping costs our embroidery shop experiences on small orders, it has been decided we need to switch to placing orders on a quarterly basis in hopes of boosting the volume for each order so the per item shipping costs can come down.

The way this procedure will work is that members can place orders with Ivan up until the **third meeting** of each quarter. The collected orders will then be submitted to the embroidery shop and should then be available for distribution at the first meeting of the **following** quarter. **Full payment for an order will need to be submitted with each order form before it can be processed!** Order placement cut off dates for each quarter will be as follows:



1st Qtr:	Jan - Mar <b>meeting</b>	Order cutoff: <b>March</b>
2nd Qtr:	Apr - Jun <b>June meeting</b>	Order cutoff:
3rd Qtr:	Jul - Sep <b>meeting</b>	Order cutoff: <b>September</b>
4th Qtr:	Oct - Dec <b>meeting</b>	Order cutoff: <b>December</b>

Order forms can be downloaded and filled out from our web site as well as from Ivan at our meetings.

## AWA Classifieds

From **Neil Davie** (Phone or Text: 505-250-4873): “Woodworkers never downsize, we just upgrade.”



1. Delta 36-220, 10” compound miter saw, \$75,
  2. GE magnetic motor starter, up to 2 HP single phase or 3 HP 3 phase, \$15,
  3. 14” abrasive cutoff wheels, 5 ea., NEW, \$10 for all.
- I will consider lower offers.

From **Jerry Wall** ([2yardbirds@comcast.net](mailto:2yardbirds@comcast.net) or 505-898-8254):



RYOBI BT3100-1: 10 inch table saw with a sliding miter table on the left side of the blade and router table on the right. Comes with a thin combo blade and manual. Asking price: \$ 250.00 I can deliver locally. This saw was only used a couple of times to build a flower box and a kids sand box.

## AWA website

Now that the AWA is settled comfortably into its new meeting place, the association also has a new home online.

The club's new website ( <http://www.abqawa.org/dir/> ) features a members-only area with access to workshop videos, the newsletter archive, the AWA library, and discussion forums. The club's webmaster (Steve Scott) invites you to visit, have a look around, and share your thoughts and questions.

## Workshop CDs and DVDs

The AWA Library is currently unavailable as we move the collection to a new home, but we hope to make materials available for checkout again soon. If you haven't used the library before, we encourage you to take advantage of this resource. A list of books is currently posted on the AWA website.

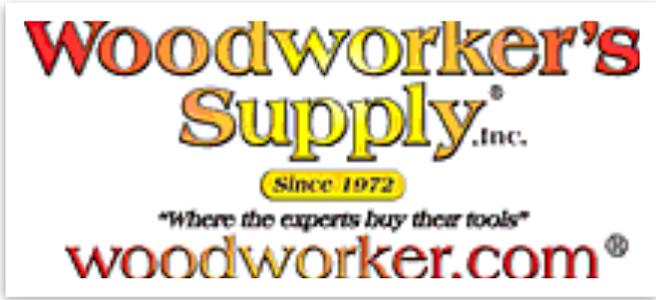
We also hope to launch a new online system soon that will make it very easy to find and check out books, and we hope to make it easy for members to pick up and return books when they check them out.

## Sawdust On The Brain (humor via Ros Barnes)

**“Job openings coming soon.”**



AWA SPONSORS



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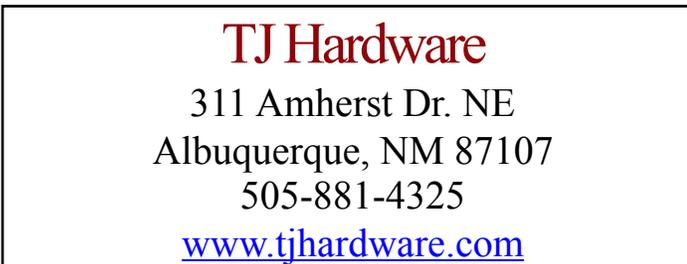
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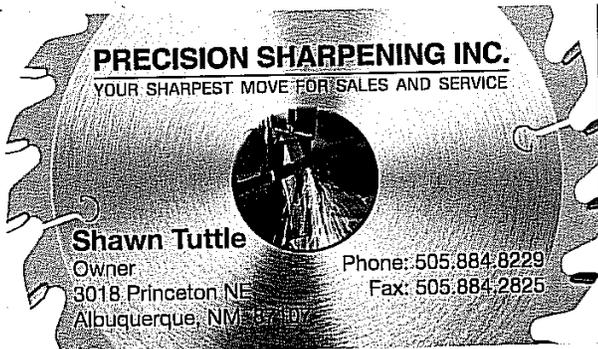
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## Membership Application

Mail to: P. O. Box 36133 Albuquerque, NM 87176-6133

### DUES:

**Dues are assessed on a calendar year basis.** Please pay a pro-rated amount of **\$3** per month to the end of the current year plus additional years to extend your membership. Please check appropriate boxes.

- One Year - **\$36**     Two Years - **\$68** (a 5% discount)     Three Years - **\$97** (a 10% discount).
- Lifetime Membership - **\$360** (10 times annual dues).
- Full-time students (under 22) in an accredited educational program receive a **50%** discount.

**Amount Paid:** \$ \_\_\_\_\_ (Prorated current year + additional years)

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Spouse: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Telephone: Home: \_\_\_\_\_ Work: \_\_\_\_\_ Cell: \_\_\_\_\_

E-mail (please use all capital letters): \_\_\_\_\_

**I agree that Albuquerque Woodworkers Association, including the officers, will not be liable for any injuries or bodily harm resulting from the operation and activities of the association.**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Print Name: \_\_\_\_\_

Please sign, date, and send this form (with payment by check) to the above address or bring payment (check or cash) to the next AWA Meeting/Workshop. The membership application is fillable on your computer so download, complete, and print.

\* We would appreciate your answering a few questions so we can make your membership in Albuquerque Woodworkers Association as satisfying as possible:

- Are you willing to volunteer a few hours to help with various Association activities?  Yes     No
- What special skills do you have that might be useful to AWA?:

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• Are you retired or semi-retired?  Yes     No    Comments: \_\_\_\_\_

(Revised 11/6/2018)