



NEW

Meeting Info:

Meeting location:

Woodcraft of
Chattanooga

5824 Brainerd Rd.

Chattanooga, TN

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Nov.

Demonstrator

Unfortunately our Demonstrator for the November meeting had to cancel. Doug is working tirelessly to locate a replacement and is certain that we will have one for our meeting this Saturday.

Please remember, our December meeting will be our annual Christmas Party. As in the past, it will be held at the Privateer Yacht Club, 4713 Privateer Rd., Hixson, TN. On December 14th at 6:00 p.m.

This is a pot luck dinner. The Club will provide the meats and we ask that the members bring salad, sides, desserts and beverages. A form will be passed around at the November meeting where you may sign-up for what you will bring (it is not mandatory).

Additionally, a silent auction will be held. This is single largest fund raiser for the Club, and has offered an exciting mix of items for auction. They have included logs for turning, wooden blanks, finished "wood art" pieces, food and confections, hand-made craft pieces, tools etc. We rely on the members to not only provide the items for auction but also to participate in the auction.



Tri-State Woodturners
An official AAW chapter





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Most above officers are official

Tri-state Woodturner Mentors



Don't forget the opportunity to give to others by turning one of the donation projects; Beads of Courage Box, Pens for the Troops or Ornaments.



NEW MEMBER MENTOR: Are you new to wood turning or at least have an interest in it? TSW provides an opportunity for you to learn from other turners who are willing to give you personal instruction and guidance. There is no fee for this instruction for TSW members. Contact one of the listed officers who will guide you to select a helpful mentor for you.

The following sponsors give generously to Tri-State Woodturners and we want to encourage members to support them generously



5824 Brainerd Rd., Chatt. TN 373411 + (423) 710-8001

Ask about their discounts for AAW club members



Treasurer's Report



The Web

Beginning Balance August	2,378.74
Income	35.00
Raffle	35.00
Expenses	322.00
Rent	72.00
Demonstrator	250.00
Ending Balance August	2,091.74
AV special contribution fund	300.00

2024 TSW Club Challenges

Each member that brings a "Challenge Piece" and signs it in at the meeting, for the month of the challenge, is entered into a drawing for a gift certificate. You may do what was demonstrated the previous month as well. Doing the challenges provides you with experience in trying something new and will give others ideas of what they can make. If you previously made the challenge, try making another one with some kind of improvement.

Month	Item
January	Something from scrap wood—8
February	Heart— 5
March	Mug—5
April	Kaleidoscope—6
May	Tippe Top—5
June	Useful homemade Jig—4
July	Wig/Hat Stand—4
August	Flashlight—2
September	Natural edge Goblet -
October	Ghost -
November	Ice Pick -



Christmas Party

Friday—December 14 6:00 p.m.

Privateer Yacht Club

4713 Privateer Rd., Hixson, TN

(Come at 5 if you can help set up)

Pot luck dinner (club provides meat)

**Bring your spouse and food you signed up for
(otherwise bring salad, veggie or beverage)**

Bring something for the Silent Auction

**Plan on an enjoyable evening together,
Great food and time to buy interesting things
at the Silent Auction**

Silent Auction

You may bring anything that may sell for the silent auction. It could be something you made or an item a woodturner would use. Items also may include anything someone would purchase. Since this is a Christmas event things that could be used as Christmas gifts would be very appropriate. Remember this also includes spouses so items they might be interested in would be very appropriate. The purpose of the silent auction is to raise funds for the club. This has been one of the best fund raisers for the club in past years. Your donations will be greatly appreciated plus all the things you purchase.

Show and Tell



Jerry Schnelzer

Jerry Reed



Show and Tell



These 3 items
by Eric Schaffer



Kenny Schaffer



Jerry Bowman



Show and Tell



Gary Farlow



Tim Mehling



Beverly
deYampert

Show and Tell



Geoff Brookman



Suzanne
Ruckman

Show and Tell

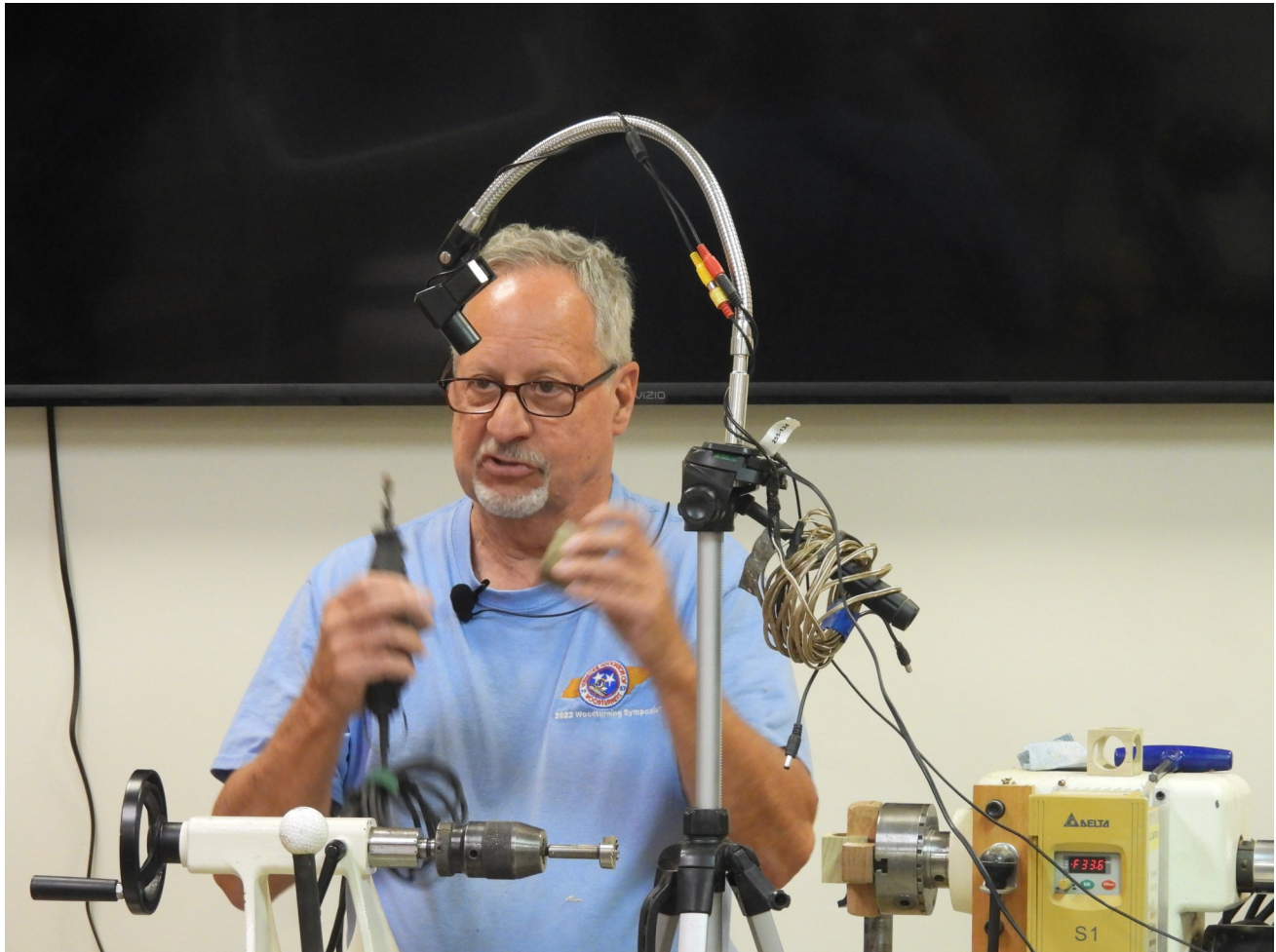


Michael
Anderson

Seth Eichenberger



Show and Tell



John Lucas



TURN A SQUARE Ornament

John Lucas



I do a lot of demos for my local club, so I am challenged to come up with new topics that they haven't seen before. For a change of pace, I devised a project that was simple and required a minimal set of tools (*Photo 1*). Since our

club turns Christmas ornaments to raise money for a local charity, I decided to try something new—a square ornament.

Prep the blank and the chuck

I started with a 1¾" (4cm-) square block, or cube. I've cut these on the bandsaw but prefer the table saw because the final project requires less sanding.

Holding the first test piece in my four-jaw chuck worked great, but the grip of the eight corners of the jaws left dents on all the wood faces. Texturing the outside of the ornament can disguise the dents, but I decided instead to eliminate the problem entirely by making a wooden chuck that anyone can build with minimal tools. To build the chuck, start with a scrap of wood about 5"

(13cm) square and 1½" (38mm) thick. This will be the base of your chuck. You can either screw it to a faceplate, or drill a 2" (5cm) hole about ¼" (6mm) deep in the back with a Forstner bit and hold the wood with expanding chuck jaws. Turn it round and true up the face. Next cut four small boards from ¾"- (19mm-) thick 1½"-wide stock. Two of these pieces should be 5" long, and two should be just a hair less than 1¾" long.

Mark the center on one face of your square ornament blank. Pin this center with the point in your live center, and bring the tailstock up to push the block against the faceplate, centering it (*Photo 2*). Now put some cyanoacrylate (CA) glue on one of the 5"-long pieces and glue it so it touches the ornament block.

First thoughts



1 A surprisingly small set of tools and materials is needed to make these delightful ornaments.

Be careful not to get glue squeeze-out on the ornament block. Next glue the other 5" piece to the opposite side of the block, sandwiching the ornament between the two. Then glue the 1¾" pieces in between the 5" pieces, thereby encasing the ornament. If the short pieces don't fit between the long ones, shorten them as needed on the bandsaw or disk sander (Photo 3). After the glue is dry, remove the ornament block and then turn the outside of the four-block assembly round. Cut a groove to recess a hose clamp about ⅛" (3mm) from the outer edge. Cut it just a little deeper than the thickness of the band in the hose clamp (Photo 4).

Now you need to cut slots in the face so the hose clamp can squeeze the wood. Don't be tempted to cut these slots at the bandsaw, as the round workpiece would not be stable enough on the bandsaw table; an accident could result. I use a backsaw, but any handheld saw should work. Cut four slots at approximately 45

degrees so there will be eight grooves. Cut them as deep as you can without impinging on the screws in your faceplate, or the mortise for your chuck jaws (Photo 5).

Install the hose clamp so the loose end will point away from you and tend to lay flat when spinning toward you (Photo 6). I found this to be pretty safe because I turn at high speed on a project this size. However, to be really safe, I made a protective cover by cutting a bicycle tube, folding it over, cutting a slot through it, and securing it with a hook-and-loop strap. I just wrap this around the hose clamp for protection (Photo 7). *Safety Note: A metal protrusion at speed needs to be given due care, whether covered with padding or not. Corners of chucks, live edges, even too sharp an edge on a bowl can injure you if you come into contact with them. Things can turn invisible at speed. Don't discount this fact, protect yourself, and always be mindful.*

Now just put the ornament block into the shopmade clamp. Tighten the



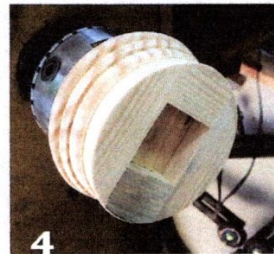
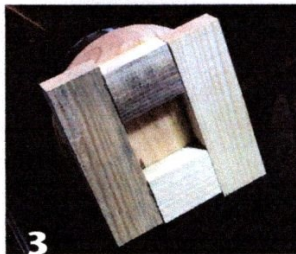
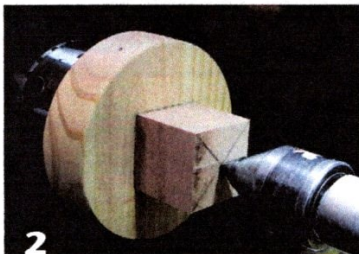
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hose clamp and pull fairly hard on the ornament block to test the grip. If it doesn't slip out, put the rubber protective collar over the hose clamp and you're ready to turn.

Turn identical, intersecting bowls

The square ornament is formed by turning identical miniature bowls in all ►

Build a shopmade chuck

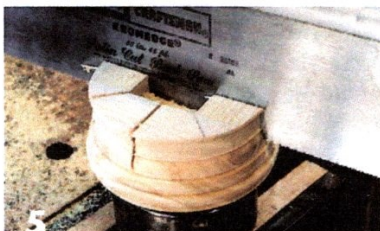


(2) Center the blank in preparation for building the wooden chuck jaws around it.

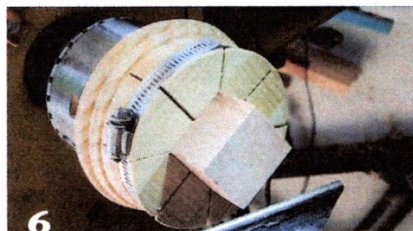
(3) Glue up the four pieces to form a close-fitting frame around the centered blank.

(4) Turn the frame round, and include a groove in it ⅛" from the end and deep enough to recess the hose clamp.

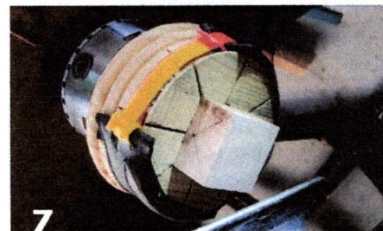
Prepare the clamp



Hand cut the slots that will create the functioning chuck, but don't cut deep enough to hit the faceplate screws or chuck jaws that are holding the base.



The wooden chuck with the hose clamp in place. Note that the clamp is oriented with the free end pointing away from you and trailing as the wood rotates.



For an added layer of safety, wrap the hose clamp with a section of bicycle tube, secured with a section of hook-and-loop strap. Be careful!



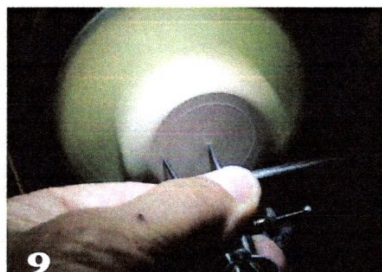
Plan the bowls



Figure 1 Use graph paper to plan the size of the bowls, and the corresponding holes between them. The area of overlap determines the size of the holes between the various faces.



8 A template made of cardboard functions as a depth gauge as well as a shaping guide.



9 Dividers set to match the template scribe the bowl's outer edge.

six sides. The bowls go just deep enough to intersect one another, producing the interior holes. I used $1\frac{1}{2}$ " as my bowl size. To determine the right size bowl, I made a full-sized drawing of the block. Then I took my compass and drew centered bowls in two sides, with the point of the compass on the outside of the block. If the lines didn't intersect, I made the circle slightly larger. When I got the circles to overlap just a little, that is the dimension I used (*Figure 1*). This approach works, regardless of the actual size of the ornament.

To turn all the bowls the same, make a template using the compass still set at your chosen bowl dimension. On moderately thick cardboard, draw a circle with the compass. Draw a line through the center, and then two lines parallel

to each other that just touch the outside of the circle and are perpendicular to the bisecting line. Cut this out along the outer lines and then along the half circle. You'll end up with something that looks like a tongue depressor. The line straight across at the center functions as a depth gauge, while the profile serves to gauge the shape (*Photo 8*).

When you turn the bowls, the block may or may not be running true, or it might have excessive saw marks, so the first thing I do is true up the face. This cleans up any problems and reduces the amount of sanding needed. Once I have it faced off, I sand up to 400-grit abrasive. Next I set my pointed dividers to $\frac{3}{4}$ " to make a circle $1\frac{1}{2}$ " in diameter (the size of my bowl). Put one leg of the divider in the center and scribe a

circle with the other leg (*Photo 9*). This will be the outside of your bowl.

Drill a $\frac{3}{8}$ "- (16mm-) deep, centered hole in the blank with a $\frac{3}{8}$ " (10mm) drill bit. I use a bit of masking tape as a depth stop (*Photo 10*). To hollow the bowl, I use a $\frac{3}{4}$ " round-nose scraper that I've ground to a negative rake (*Photo 11*). The negative rake makes it much less grabby. Since you're turning such a small bowl, a thick scraper would tend to hit the bottom of the bowl. My scraper is ground 40° on both the top and bottom, giving me an included bevel angle of 80° . It's important to have the included angle less than 90° or it won't raise a good burr when you grind it (*Photo 12*).

This is a good project for understanding how grain direction affects turning bowls. You are essentially turning two endgrain bowls and four sidegrain bowls. Following the basic principle that wood fibers should be cut from short to long, to maintain support and avoid cutting "uphill," the endgrain bowls should be turned from the center out to get clean cuts with the least amount of tearout. The sidegrain bowls should be turned from the outside to the middle for the cleanest cuts.

Final steps

Now it's just a matter of turning a little, then putting the template in and seeing where you need to turn more. The depth and shape are critical if you want your intersecting holes on the inside to be identical and symmetrical. When I get close, I often mark where I need to remove wood with pencil lines. It's pretty easy to gauge when you need to go deeper, but harder to remember exactly where the shape is off on the sides (*Photo 13*). When you get the bowl almost perfect, put a fresh burr on your scraper and make a final light pass or two to fine-tune the shape and clean it up.

When one bowl is completed, remove the block from the chuck and remount it to form a bowl in another surface. Do this until you have turned

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six identical bowls, one in each surface of the cube.

As you near the final cuts in each bowl, make very light passes because the wood will cut quickly where the holes intersect (*Photo 14*). You can't really sand the inside because when the bowls start to intersect, the holes in the side will grab the sandpaper. If necessary, a small flap-wheel sander works pretty well to clean up the edges of the bowl.

You may need to sneak up on the bowl size to get all the holes identical. The holes may be partly filled with wood or have jagged edges. When you finish all the bowls, remove the wood and use a small sanding drum to clean up and refine all the holes (*Photo 15*). If the small drum is too large to get into the holes, enlarge them with an abrasive cutter like one used to sharpen chainsaws. Once you have all the holes cleaned up, you can sand the outside and then add paint or texture to really make your ornament stand out. Finally, install a small eye screw in one of the corners so you can hang your ornament with pride.

Alternative chuck

One challenge with this project is that it requires you to make a square block to start with. You may find, as I did when cutting the blanks on the bandsaw, it can be very difficult to get perfectly clean, square cuts. Cleaning up the faces too much at the lathe can make the block too small for the shopmade chuck, so I made custom wooden jaws for my chuck (*Photo 16*). This allowed me to make ornaments of different sizes, or to get a good grip on a block that was gradually getting smaller as I faced it off. If you have the skill to build these, they can be an even better option. ■

John Lucas, a retired photographer, has been working in wood for more than 35 years and also dabbles in metalworking. He enjoys modifying machines, making tools, and sharing his knowledge through written articles and videos. He has taught classes at John C. Campbell Folk School, Arrowmont, and The Appalachian Center for Crafts.

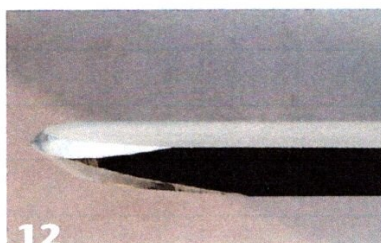
Turn the bowls



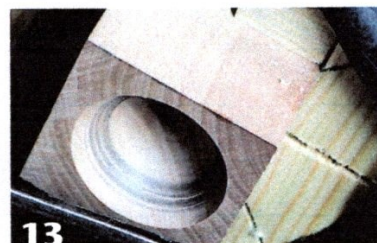
10 Easily establish the depth with a marked drill bit.



11 Hollowing proceeds quickly and cleanly with a negative-rake scraper.

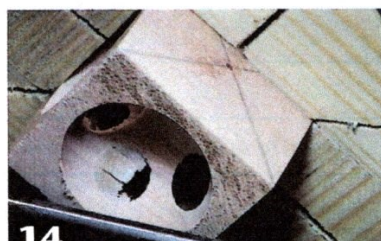


12 You can grind your own negative rake on a standard scraper. A 40° bevel on each surface works well.

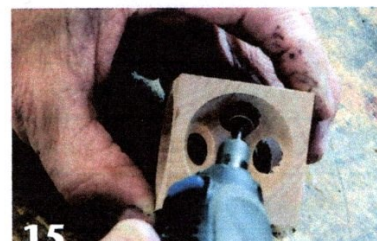


13 Using your template as a guide, mark areas that need to be cut with a pencil. Keep shaving them away as you sneak up on the proper profile.

Refinements

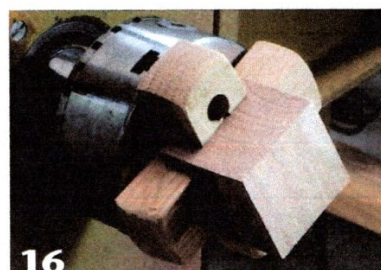


14 As the holes meet, the scraper will want to cut fast and deep. Very light cuts are critical here, and rather than trying to complete the holes with the scraper, hand-work with a flap-wheel sander provides a safer alternative.



15 Clean up the edges of the holes with a miniature drum sander.

An alternative chuck



16

For greater versatility, a complete set of custom wooden jaws allows you to work with any size blank, and adjust to minor variations in size as you complete a given project.