

ECHOES FROM THE "BAT" CAVE

BALTIMORE AREA TURNERS

Turning a Piston Box - Tod Raines

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The June meeting was a remote demonstration by Tod Raines on turning a piston box. Tod's inspiration for this project was an article by Walt Wager in the June 2015 American Woodturner magazine, "Turn a Purse Box".

Tod likes this project because it provides an opportunity to try different embellishments and variations of themes. Some examples of his work are below.

Project Variations:



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Piston Box (continued)

Layout:

Todd starts with a dried blank 1 3/4 inches square by 8 inches long. For this demo he is using a piece of pine.

He holds the blank in a chuck to allow for drilling from the tailstock. The project is worked starting at the tailstock end and working left towards the headstock. The blank will remain in the chuck for the entire project.



The layout of the box in the blank is shown on the left. The body of the box is on the left half of the picture, with its open end facing the tailstock. The piston insert is on the right half of the picture, with its lid on the left and bottom closest to the tailstock on the right.

In the completed box, the piston is flipped 180 degrees and inserted into the body. There is no chance for grain matching between the piston lid and the body. It's often a good idea to color or embellish the lid. The piston or just the lid can also be made from a contrasting wood.

With the tailstock supporting the blank, use a roughing gouge to turn it round. You can determine the size of box the blank will yield by subtracting one inch from the roughed out length, and dividing this by two. The one inch is to allow for the piston lid and end, material lost in parting, and jam chucking for the box body.

Piston:

Cleanup and square off the end of the blank with a skew. Using the larger of the Forstner bits held in the tailstock with a Jacobs chuck, bring it up just enough to scribe a line in the end of the blank. This defines the outer diameter of the piston.



Now switch to the smaller Jacobs chuck and hollow the piston to the desired depth (2 1/4 inches). Cleanup the inside of the piston by lightly sanding with a dowel wrapped with sandpaper.



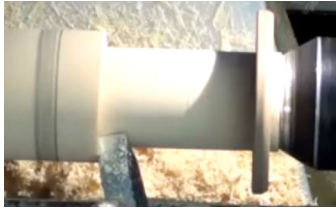
Layout the depth of the piston and the desired thickness of the lid. The shaded area is where the piston will be parted from the blank. With a cone center lightly supporting the blank. It's now time to turn the piston to its final 1 1/4 inch dimension. Remember that the final wall thickness of the piston will be 1/16 of an inch, so take care not to apply too much pressure from the tailstock.



To simplify the process, Todd uses a gauge, made of 1/4 inch thick cherry. He drilled a 1 1/4 inch hole in the center with a Forstner bit. Then he lightly sanded the hole so the template fit loosely around the bit. This will make for a slightly oversized piston that can be fine tuned to fit the body. Round over the outside edges of the gauge to soften the sharp edges.

Piston Box (continued)

Start working at the very end of the piston. Using a 3/8 inch beading and parting tool, carefully reduce the diameter towards the scribe mark. Stop and check frequently and continue until the gauge will just fit over the end of the piston.



With the gauge left on the piston, bring the tailstock up to gently support the piece and continue to work toward the piston lid. Use the gauge to continually check until you can reach the lid with the gauge. Undercut the inside of the lid slightly to ensure a good fit to the body of the box.

Very lightly sand the tube of the piston. Part it off from blank and set it aside.

Body:

Cleanup the end of the blank that will now be the body of the box with a skew. You want to slightly undercut the end to allow a good fit with the underside of the piston lid. Make a registration mark to help center the drill bit. Use the piston to layout the depth to hollow on the body. Add about 1/8 inch to the depth.



Hollow the body of the box using the 1 1/4 inch Forstner bit. To ensure the bit runs true, Todd advanced the bit towards the blank until it just made contact. He waits until he the bit starts to pickup the cut and make regular contact before continuing to advance. He worked slowly, removing the bit frequently to clear shavings. If the bit squeals, you can apply carnauba or beeswax to the bit to help lubricate it.

Lightly sand the inside of the body and continually test fit the piston. You want a snug fit for the piston. The piston will be jam chucked into the body to finish the top of the piston lid and the overall profile of the box.

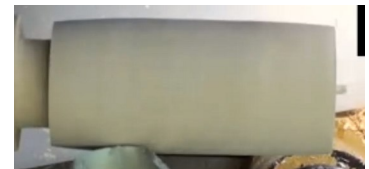


Box Profile:



With the piston jam fit into the body, the next steps are to finish the top of the piston lid and turn to outer profile of the box. For Todd's demonstration, he turned the box into the shape of a barrel and added burn lines for the bands and staves.

The steps that follow here are the same, regardless of the variation of piston box you are making. When design changes are completed, part the box body from the blank.

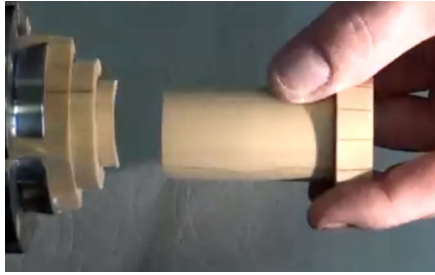


Final Steps:

Clean up the blank still held in the chuck and prepare it to jam chuck the box body in order to finish the outer end of the body. Jam chuck the body and use blue painters tape to prevent it from being pulled off.

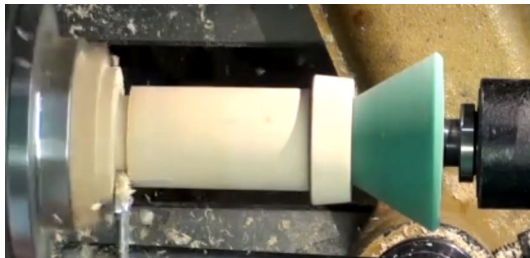
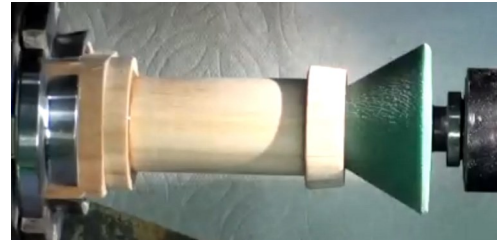


Piston Box (continued)



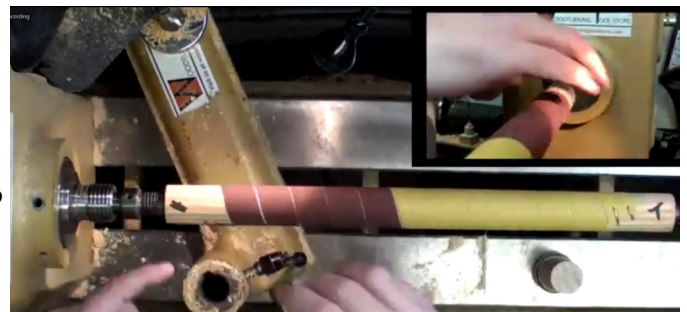
Now clean up the end of the blank once again and create a short tenon to fit into the open end of the piston tube. Leave enough room for glue between the joint. Sand the end of the tenon as this will be the inside bottom of the piston.

Using medium CA glue applied to the tenon, and accelerator sprayed on the inside of the piston end, glue the piston to the tenon. Use gentle pressure from the tailstock to hold the piston in place.



Now part off the piston, parting through the very edge of the piston and the glue line. Once the piston has been parted off, clean up the bottom by sanding.

Gluing the bottom into the piston has created a sealed tube. A hole must be opened in the side of the piston in order to allow access to the interior of the box. Todd uses a sanding stick made from an 1 1/4 inch closet rod. He holds the rod between a safety cup center and the tailstock center. Using the safety center allows the rod to be easily positioned to ensure it runs true each time. He used 150 grit paper to wrap the sanding stick.



Use the sanding stick to sand open an access hole in the side of the piston. Clean up the hole with hand sanding. Hand sand the piston to get the desired fit of the piston into the body.

As a final step, make a small mark in the outer edge of the piston lid to indicate where the opening is. This allows the user to orient the box so it can be opened without spilling the contents.

Many thanks to Todd for this informative demonstration!

Todd mentioned the article by Walt Wager as his inspiration for his purse box project. Walt's article can be found in the June 2015 edition of the American Woodturner.

If you are a member of the American Association of Woodturners (AAW), this article can be found either through accessing the June 2015 issue, or by searching in the Explore Article Search.

If you are not an AAW member, you can access all this and much more for 3 full months for FREE. There is no obligation to join and no complicated process to decline membership if you choose to do so.



Joanne Sauvageau

The August meeting was a joint meeting with BAT and the Mid Maryland Woodturners Club (MMWTC). The demonstrator was Joanne Sauvageau, from Alberta Canada.

Joanne shared her techniques of using stamps and alcohol inks.

Seal the wood:



She uses white paper birch for most of her pieces. After turning and sanding, she wants the piece to be non-porous before applying inks. She applies Modge-Podge, wipe on poly, or Liquitex flexible modeling paste. The Liquitex paste is her favorite. She sands to 400 grit and sprays on a coat of lacquer over the sealed wood.

Stamps and Inks:

Joanne uses rubber stamps and ink pads to create the underlying details of her design. She likes the stamps available at stampscapes.com. She starts all her designs on paper first.



She has a variety of inks she uses in a variety of colors. StazOn, Hero Arts “Hero Hues”, and Ranger Ink’s Archival Ink to name a few. She sometimes uses acrylic paint to charge the stamps. She stores her ink pads upside-down to help prevent them from drying out.



Stamping Technique:

It’s important to keep your stamps clean. She uses baby wipes with added alcohol to clean her rubber stamps and avoids allowing the ink to dry on the stamps as much as possible.

When stamping a piece she uses a bean bag or pillow to hold the piece and allow her to use both hands on the stamp.

To ink a stamp, she places the stamp face up on her desk and daubs the inkpad on the stamp. This allows her to see the pad is fully covered.

When transferring the stamp to the piece, often there will be an area where the transfer may not have been complete. Do not try and re-stamp, you can use a mini sharpie to touch up these areas,

Once the stamping is done, spray on a lite coat of lacquer or spray polyurethane over the inked surface. You may do this as you complete a section, or repeatedly as you continue to work in a section, to protect what has been completed as you continue. Do not use a wiping or brushing product as it will remove the ink. You can use Grumbacher workable fixative or even hair spray.



Joanne Sauvageau (continued)

Airbrushing:



Joanne uses a Copic airbrush system. The airbrush transfers alcohol based ink from a marker placed into the airbrush. The markers come in a variety of colors, are refillable, and replacement nibs are also available.

She has refilled markers with Chestnut Stains or any other alcohol based stain.



Joanne uses the Copic airbrush to apply layers of color over the stencils. The bowl shown on the left was then misted with alcohol to create the rain drop effect.

At any time, she may work back and forth between stamping and airbrushing. The layering gives depth to the piece.

Other Techniques:



Joanne also uses Encostic Wax and Embossing Powder in her layering. Seth Apter (sethapter.com) makes several products she uses. The Vintage Beeswax embossing powder gives an orange peel / patina finish, as shown to the left. The embossing powders add sparkle or metallic finishes (right), depending on the product.

To use the Encostic Wax and Embossing Powder. First use an embossing ink pad to prepare the piece. Then sprinkle the wax or powder over the area. Be sure to have a clean piece of paper to catch the product that does not stick to the piece, it can be returned to the container and re-used.

Use an embossing gun (or heatgun set very low) to melt the wax or powder to the piece. If using a heat gun, be very careful not to overheat the work.

Another technique is to use Nuvo Gilding Flakes. These are applied to the piece using an adhesive size, similar to applying metal leaf.



Thanks to Joanne for adding some interesting techniques to try in our struggle with “brown and round”!

The President's Turn



Hello Everyone – I hope you are all doing well despite the obvious limitations on our mobility, and the oppressive heat we have been experiencing. Not a great summer, by any means.

BAT continues to offer a quality program, albeit almost entirely vis Zoom. We realize that this is far from an optimal situation, and we are all eager to be able to start in person meetings at Boumi soon. Sad to say, that appears to be a distant dream at this point. In the meantime, we are doing all we can to supplement monthly meetings with other content we can share vis email.

We have several quality programs coming up as you will see in Ed Cohen's "What's On Tap" column elsewhere in this newsletter.

Please remember that we will hold elections for the 2021 – 2022 BAT Board in November. Any and all positions are open for candidates, and we hope you will consider running for a Board position. The club needs a few people interested in seeing the club succeed, and you may well have the skills it takes to push us ahead. Please give it some thought and let me know if you are interested. We have had several of you step up and are grateful, but the election is open to all. You can respond to me at rford2002@comcast.net.

Thanks everyone. Please stay well, and turn safely.

Ron Ford
BAT President

What's on Tap?

Jim Echter will be our September demonstrator and will be speaking from his home in the Finger Lakes Region of Upstate New York.

Jim is the Founding President of the Finger Lakes Woodturning Association. He will show us how to master the skew, a skill that eludes most of us but perhaps not so after his demo. Jim has 35 years of turning experience which will become evident when you watch him turn and hear him speak.

I watched his recent skew demonstration for the Mid Maryland Woodturners club and found him an excellent teacher – he is very enthusiastic and quite engaging. I feel certain that after his demonstration you will no longer "fear the skew".

Ed Cohen, Program Director

polodoc@erols.com

Interested in sharing a tool, technique or project with the club? Demonstrate your project-in-progress at an upcoming BAT meeting. Contact program director Ed Cohen for details.

BAT Mentoring



Please know that free mentoring is available to all paid members. This is a great opportunity to get some one on one expert advice on any questions, problems or other issues you may have in relation to your turnings. So if you're frustrated, unhappy or just not completely satisfied with your turnings this your chance to get help. Our experienced mentors can help you with all aspects of wood turning. Whether it's basic bowl turning, hollow forms, spindle work, sharpening, sanding, embellishments, etc.

No question or problem is too small. In just one free, 3-4 hour session you could take your work to an entirely new level. The sessions are also relatively anonymous. Only I, the mentor and you will know. So please at the next meeting take this wonderful opportunity to fill out a mentoring request form.

This your chance to possibly bring something to the next show and tell in May or an upcoming meeting. We are truly looking forward to some different members to show their work. This is not a competition or a judging. We welcome every one of our members to bring something. No matter what.

Thank you,

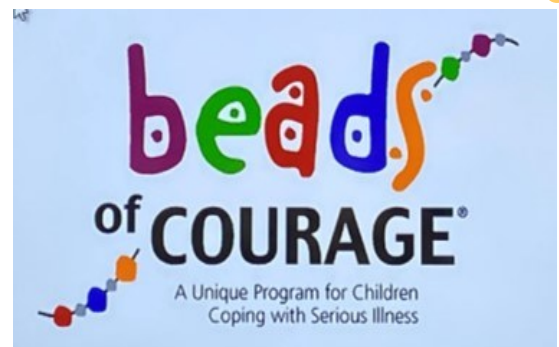
Chuck Cohen

Mentoring

Beads of Courage

BAT's 2020 service project is for the club to contribute to the Bead's of Courage program.

Beads of Courage (BOC) is an arts-in-medicine program that partners with national and international hospitals. The BOC program supports and strengthens children and teens coping with serious illness their families. For more information on BOC, please visit <https://www.beadsofcourage.org/the-beads-of-courage-program/>.



Through Ron Ford, we have a local connection to the program at John's Hopkins and Dr. Kenneth Cooke. Dr. Cooke is the Director of Pediatric Blood and Marrow Transplantation Program at the Johns Hopkins Kimmel Cancer Center and the Bloomberg Children's Center.

We hope everyone can contribute to this project by making one or more BOC bowls. The bowls are used to hold beads, which are given to the children as a visual history of their treatment and celebration of their courage.

Beads of Courage Bowl Guidelines:

- Minimum 5" tall (can be taller)
- Minimum 6" wide (can be wider)
- Wide base to prevent tipping
- Easy to grasp lidded knob that a small child can grip
- No paint
- Suggested finishes are stain, hard wax, and/or varnish
- If you choose to embed a BOC bead, they measure 13/16" in diameter. (See Ron Ford for a kit that includes a bead and small card so the recipient knows who made their bowl.)

2020 President's Challenge

First Challenge: for 2020 is to turn a Beads of Courage bowl. (See BOC Guidelines in the newsletter.)

Second Challenge: Turn a plate or a platter.

Third Challenge: Turn a gavel or a carvers mallet.

Fourth Challenge: Create a piece that incorporates wood and one other material (fabric, leather, metal, resin, etc.) as an integrated component.

2020 President's Challenge Results

Name	BOC Bowl	Plate/Platter	Gavel/Mallet	Multi-Material	TBD	TBD
Andrew Arconti	X					
Clark Bixler	X	X	X			
Chuck Cohen	X					
Ed Cohen	X		X	X		
James Crane	X	X				
Jim Fisher	X	X	X	X		
Ron Ford	X	X	X	X		
Joe Harber	X					
Louis Harris	X	X	X	X		
Don Keefer	X					
Steve Kelban	X	X	X	X		
Wayne Kuhn	X					
Alan MacAnespie			X			
Dave Maidt	X	X	X	X		
Jim Oliver	X	X	X	X		
Bob Sobczak	X	X	X	X		
Tom Szarek	X					
Jon Withrow		X				

Baltimore Area Turners Meetings

Sept - Jim Echter - Don't fear the skew!

Oct - TBD

Nov - TBD

BAT Club Discounts

Mark Supik & Company - \$20 discount on instructional classes for members of BAT
(www.marksupikco.com/workshops) 410-732-8414 mark@marksupikco.com

Hartville Tools - 15% discount for club members plus free shipping. (www.hartvilletool.com) 800-345-2396

Penn State Industries - 10% discount for club members. (www.pennstateind.com)

Klingspor Woodworking Shop – 10% discount on all non-powered merchandise in catalog

Exotic Lumber (Annapolis and Frederick) – 10% discount

Freestate Lumber (Timonium) – 10% discount

Lyle Jamieson Woodturning - 10% discount due to club demo (lylejamieson.com)

New BAT Website

Our Webmaster, Dave Maidt, has been working hard on a brand new BAT website, and it is up and running! New look and feel, and incorporates many new features we will be able to take advantage of now and in the future. The website address remains the same at <https://baltimoreareaturners.org>

One area that needs your attention is the Gallery. Dave has created a wonderful space for everyone to share their work. Please send pictures to bat@diadav.com and they will be posted.

Thanks again to Dave for this terrific upgrade!!

- BAT Board

New BAT Facebook

BAT has a new Facebook page. Close to 30 members have joined, but only a small handful are contributing content or posting information. This is a great way to stay in touch during these unusual times, and everyone is encouraged to take advantage of it.

Please remember that this is a private page available to BAT members only, and that you must have a current Facebook account to join.

To join, click on the following link and click on "**Accept**" at the top of the page:

<https://www.facebook.com/groups/355364505441249/?ref=share>

Please log on today and start sharing pictures, projects, etc.

- BAT Board

Want to build your woodturning skills?

The American Association of Woodturners (AAW) strives to deliver the publications and services that our members need to grow, connect, explore, and thrive in the areas of woodturning that are important to them. With nearly 16,000+ members and 360+ chapters internationally, AAW's many resources, including our award-winning *American Woodturner* journal, help our members to learn, create, and connect.



By signing up for a complimentary Guest membership, you can have limited access to a sampling of AAW resources for a full **60 days**. You'll be able to explore what the AAW has to offer, kick our tires, and hopefully decide to become a full-fledged, paid AAW member to benefit from everything the AAW has to offer.

Visit us at woodturner.org

BAT is a local chapter of the American Association of Woodturners (AAW) which serves the Baltimore metropolitan area. A wide range of skills and interests are represented by our members. Work ranges from small utilitarian project to galley art and includes pen making, bowls and platters, hollow forms, small projects, furniture spindles and architectural work. We are fortunate to include professional turners and published authors among our members. Membership is open to anyone with an interest in woodturning, and guests are always welcome.