Baseball Bat Pencil

An article by:
Bob Altig

A.K.A “bobaltig”

Baseball Bat Pencil

by Bob Altig

Introduction

Two of my passions are woodturning and baseball. Fortunately my wife also loves baseball and tolerates woodturning. We love going to professional baseball games. Unfortunately, tickets, parking and food concessions have become so expensive that we only get to go to the ballpark three or four times a year. My love for baseball started when the Brooklyn Dodgers played at Ebbetts Field, the New York Giants played at the Polo Grounds, and the :Philadelphia Athletics played at Connie Mack Stadium. How's that for dating myself?

My wife and I like to attend Oakland Athletics games at the Oakland Coliseum and often go with friends, Glen and Merry, who also love baseball. Merry, always keeps score at the games, probably a carry over from the days when Glen coached several championship Little League teams. One day as we were walking to our seats, I spotted a ballpoint pen in the shape of a baseball bat with the Oakland A's logo burned into the barrel of the bat at a concession stand. I went back to the stand while everyone stayed in their seats watching the A's lose (what else is new) with the idea of getting one of those pens for Merry as a present. Was I ever amazed when I found out this piece of ash wood with a non-replaceable ink cartridge cost over $35. Of course I shouldn't have been shocked because at the Coliseum a hot dog costs $6.

I decided I would try to make one and if it turned out okay, I might make some and sell them. Then I thought a pencil rather than a pen would be more useful. A pencil could have replaceable lead, and an eraser. Copying the Oakland A's logo would be a trademark infringement so that was out, but something representing the Oakland A's would be nice. The easiest legal way to do this would be to put colored rings in the wood representing the team colors.

Choosing materials

Once I got into the design and turning process, I was surprised how simply these could be made. I was later surprised how popular they are with baseball fans. Every game Merry still gets hers out of her purse and keeps score with it.

Considerations:

Lightweight
Length
Good balance
Comfortable fit in hand
Something unique to a particular team

Materials List	***Approx. Cost***
1. Ash pencil blank	*$ .80*
¾" square by 4 ½"	
2. Father Sing pencil kit	*$ .6.50*
3. Colored plastic inserts	*$ .04*
Cut from 3'x4' sheets at Tap Plastics	
Total	*$ 7.34*

I chose the Father Sing pencil kit because I had some on hand. It has a replaceable eraser, and the lead can be replaced. It is also the right length to fit in the average sized ladies purse or a man's shirt pocket. There are many woods that could be used – ash, maple or oak. I chose ash based of cost and availability. The colored ring inserts were made from 1/16th inch thick sheets of

colored acrylic from Tap Plastics that were 4”x6” and cost $1.00 each. I didn’t include the bushings in the materials list because most everyone has them already. We will not be turning to a bushing size anyway. Using slimline bushings for spacers makes things a lot easier on easily frustrated over the hill woodturners like me.

It pays to shop around for your supplies too. I bought the ash blanks in packs of 10 for $7.90 or $.79 each. The green and yellow plastic was purchased in 4” x 6” sheets, 1/16th “ thick and I cut the sheets into 3/4 “ squares with a regular pair of scissors yielding 30 plastic inserts. At Tap Plastics, you can also look in their cut off bin and if you find the colors you want, it’s about half price.

Preparing the blank

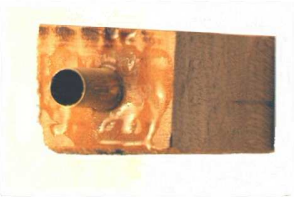
Use standard sized ¾” square blanks. Cut them to 4 ½” long. Next make a cut 1 ¾” from the end of the blank I aligned both parts of the blank and put a mark across the cut on one side with a felt tip pen so they could be aligned on the lathe for turning. Drill both blanks all the way though with a 7mm drill bit.

After roughing up the tubes with sandpaper to remove the coating and any oils, we are ready to glue in the tubes. Now we are going to depart from the norm. I’m going to glue the longer tube into the shorter blank and the shorter tube into the longer blank. It will become clear in a few minutes why we are doing this.

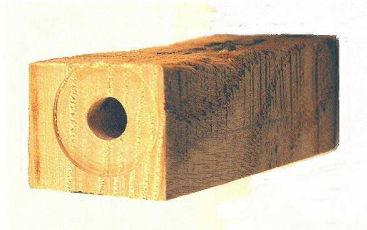
Glue the tubes

You can use the glue of your choice. I prefer five minute epoxy glue, but that’s just a personal choice. I like it because it is stronger than other glues, doesn’t take long to dry, and dries clear. Mix some epoxy and hardener and apply to one end only of the longer tube.

Insert the glued end of the longer into the hole drilled in the shorter blank until the tube is flush with the shallowest part of the opposite end hole. By shallowest part we refer to the fact few blanks are perfectly, I mean perfectly, square and exactly perpendicular to the hole we drill. That is always our goal, but we seldom achieve perfection. Set this short blank and exposed tube aside to cure.

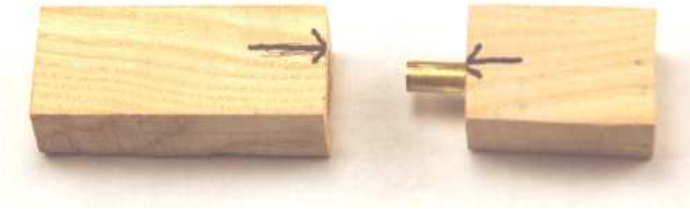


You can see in the picture above that I have not squared the blank on the end that has the tube protruding. This is on purpose. And I’m not concerned about the dried epoxy which will be turned off later.



Apply the remaining epoxy glue to the shorter tube and insert this tube into the longer blank from the bottom (unmarked) end of the of the blank until it is also flush with the shallowest portion of the drilled hole and set aside to cure. As you can see, I have squared the ends of this blank using a standard pen mill. I need this end squared so that is will accept the colored plastic segments we will install. Once I have turned the blank down to a smaller diameter than the ring left by the pen mill, the end should be perpendicular to the axis of the tube.

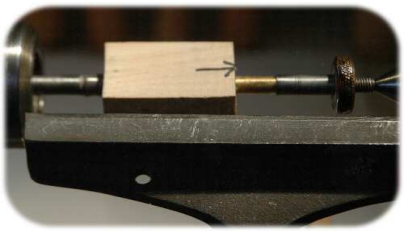
Now we have two blanks. One short blank with a tube glued into it and a rather lengthy unglued portion of tube protruding from the end that will become the center of the pencil. We will also have a longer blank with a tube glued into it that is flush with the bottom of the blank and a section of 7mm hole that has no tube in it on the other end.



Squaring the remaining blank end…

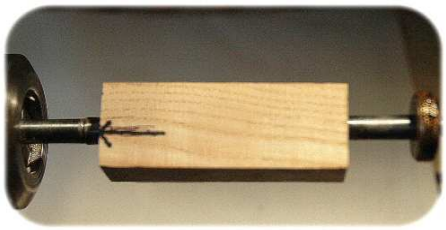
Whenever doing segmentation of any kind, we always want to avoid gaps between the two materials being segmented. The surfaces to be joined together must mate up perfectly to avoid gaps. In this project we will be joining ash wood and acrylic plastic material. The acrylic will be somewhat pliable, but the wood won't. So we want to be sure the wood surface at the point of segmentation is absolutely as flat as we can get it and let the acrylic form to the wood surface.

Mount the shorter blank with the longer tube on the turning mandrel by itself using slimline bushings as spacers. Using an adjustable mandrel with a collet chuck, makes this easy to do.



Set your lathe to high turning RPM and use a spindle gouge and turn this blank to round – not the final shape, but just to round. Using a parting tool, remove a small amount of wood on the end with the tube protruding to make the blank square with the axis of the tube. Remove the blank from the lathe and check it for flatness and perpendicularity to the axis of the protruding tube. If all went well, it should now look like the blank in this picture.

Mount the longer blank on the mandrel and turn this blank to round. I want to remove all wood on the end surface that wasn't removed by the pen mill so that there is no ridge and the end is flat. This surface should be prepared now to join up with the plastic colored inserts.

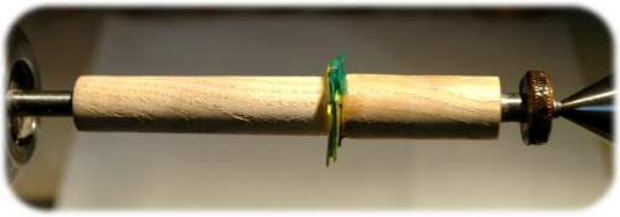


This larger blank should now look the one in the picture to the left. It's rounded but only so that there are no ridges on the ends. It is not turned to shape. That's coming up.

We'll do some more turning pretty soon now.

Now I've got two blanks and the ends of these blanks will be as perpendicular to the tube as we can get them and they are ready for insertion of the colored plastic and the final glue up. Doing the actual segmentation is probably the easiest part of the entire project, so let's get to it.

Here's the completed blank all set for final turning with the colored inserts segmented to the wood. It's really simple to put all this together. Here's how to get it done.



Cut the segmentation pieces to size. In this case we are using green and yellow acrylic sheets – 1/16th inch thick. I've cut two green and two yellow pieces with an ordinary pair of paper scissors. I cut them to ¾" square and drilled a 7mm hole in each piece.

Mix five minute epoxy glue on a 3"x5" index card using an old ice cream stick to do the mixing. Apply a coat of the epoxy to one plastic piece and slide the piece over the brass tube. I keep doing this with each piece until all four pieces are on the tube. Obviously you can use any color or material that works for you. Please note the plastic pieces are not aligned with each other. Assembling in this manner tends to make a stronger bond when glued. Once all four pieces are on the tube, apply the remaining epoxy to the rest of the exposed brass tube and insert the tube in the tubeless end of the larger blank. Clamp the entire blank lengthwise and let it cure. A wood workers vise works well for the clamping operation. Let the "5 minute epoxy" cure for a minimum of two hours before proceeding with turning the bat pencil.

Mount the blank on the mandrel with only two bushings, one on each end and adjust the mandrel to length. Now have fun making this blank look like a miniature baseball bat with some metal things sticking out the ends. Be creative and use your imagination. All that's left to do is a little sanding, apply a finish, and do the assembly.

Holy Scorekeeper, Batman!

This blank is sanded to shape and ready to have the finish applied. My personal preference is to leave it on the lathe to apply finish and sand between coats.

All done. This should make any Oakland A's fan happy and it's a lot of fun to make too.

Safety:

1. Always wear good dust protection when sanding. A wet bandana over your nose and mouth only helps in cowboy movies. Get a good dust mask or a respirator before you need to drag an oxygen bottle along behind you. Dust in your lungs isn't a good thing.
2. Wear a good spray paint mask when applying the finish and do any application in a well ventilated area. Paint or finishing products in your lungs aren't a good thing.
3. Should you accidentally spray something you didn't want to – like your hand, your Rolex wristwatch, or your new Lamborghini Diablo – clean up is easily done with the solvent listed on the label followed by soap and water (no soap and water on the Rolex please).
4. And, of course, always wear safety glasses in the shop. Glossy eyes may be romantic, but acrylic finish on your eyeball can ruin your whole day.
5. Protect your skin, lungs and eyes. You only get one set of each in this life so make them last.

Bob

Altig Custom Pens
http://www.altig.net