

Berea Hardwoods Co., Inc.  
Kit Instructions

## **Nevus Pen Berea #1305**



Needed: Mandrel-A  
Bushings-Possibly 9A and 15A  
Drills-#11, #29, Letter O and Letter S

### **PLEASE READ THIS FIRST!!**

This pen is a quite sophisticated kit. It relies on the expertise of the maker and his or her abilities and experience gained from previous pen kit builds. It has the potential to be a really beautiful and unique design, but it is not intended for the beginning pen maker.

There are many measurements that must be taken and adhered to in order to make a beautiful and functional pen. It is designed to give you the freedom to do all sorts of free form designs.

The method described here is not the only method of making this pen. You may see a better or easier way to make the pen. If so, then proceed and if you can let us know about your new finds.

With all that said, let's get to it!

## Material Preparation and Pen Construction



1. Cut your material the length of “tube 1” + “tube 2” + “the nib adaptor” + **about 1/4”** to allow for the finial round over or other decoration you desire. **DO NOT** include the “tube 1 threaded bushing” as it will press inside tube 2.
2. Make a straight mark the length of your blank.
3. Now, measure the length of Tube 2 + the nib adaptor. Mark this from one end of your blank and cut it on the mark. Lay the short piece, which will become the finial, aside for now.
4. Align the mark you made in step 2 with a reference mark made on your drilling vise.
5. Using an Letter S bit, drill a hole lengthwise through the blank to a depth of 93mm to 94 mm.
6. Remove the blank and mark the length of tube 2 from the end that is drilled.
7. Cut the blank at this point.
8. Return the short piece to the vise, with the hole up. Line up the mark on the blank with the reference mark on the vise.
9. Using an #29 bit drill a hole completely through the short piece.
10. With the piece still in the vise drill a #11 hole about 21 mm from the top of the blank. Remove the blank and try the nib adaptor in the blank. It should seat flush with the top with no brass protruding from the small hole. If the brass sticks out the small hole you can epoxy glue the adaptor in flush with the bottom and then, after the glue has set, remove a small amount of brass from the top of the adaptor with a sharp file.
11. Next, glue tube 2 into the long blank using epoxy glue and glue in the nib adaptor if you have not already done so. Lay these aside to set firmly.
12. Face both ends lightly. Just enough to clean them up. Clean the inside of the tube thoroughly.
13. Press the tube 2 threaded busing into the end of the long tube that will mate with the nib of the pen.
14. Screw the tube 2 assembly into the nib assembly tightly. If the fit is not flush then unscrew it and dress the pieces until they mate nicely.

## Turning

1. With these 2 assemblies threaded together tightly slide a 9A bushing into the open end. Slide all of this onto an A mandrel until it stops.
2. If you have an adjustable mandrel then slide it back until the 9A bushing is touching the chuck. Remove the blanks and slide it a little further back, maybe 1/8”, and tighten the mandrel.
3. If you do not have an adjustable mandrel then make up the open distance with spacers, again leaving a little bit of room so the mandrel does not touch the threaded bushing on the inside.
4. Now move the tailstock up to the little brass piece sticking out the end.
5. Tighten the tailstock, **BUT** not too tight. You don’t want to deform the brass piece.
6. **USE VERY SHARP TOOLS AND TAKE LIGHT CUTS.** Shape and finish as desired.

## Turning and Assembling the Finial



1. Measure and cut the finial blank about  $\frac{1}{4}$ " longer than Tube 1. The tube is generous in length so feel free to shorten it if you want a shorter finial, but don't cut it shorter than the transmission stub.
2. Drill a letter "O" hole in the blank only the length of your tube. You want to leave enough to round over the end.
3. Glue the tube into the blank.
4. There are several ways to turn the finial. I used a "Pin Chuck" that I made. If you don't have one, Google it. You may want to try it. You can also do it similar to the way you turned the main barrel. That is, using a bushing, try a 15A, and use a block and your center on the other end.
5. Whatever method you use, turn the finial to the desired contour and finish as you desire.

### Assembly

1. Unscrew the nib from the barrel.
2. Place the barrel over a push block to keep from damaging the threads.
3. Now unscrew the transmission from its holder. Place the clip over the brass part of the transmission holder and press the transmission and clip into place.
4. Replace the nib and insert the refill. Screw in the transmission.
5. Push the finial into place and check the proper operation of the pen.

Here's how mine turned out. The finial is using the full length tube.



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