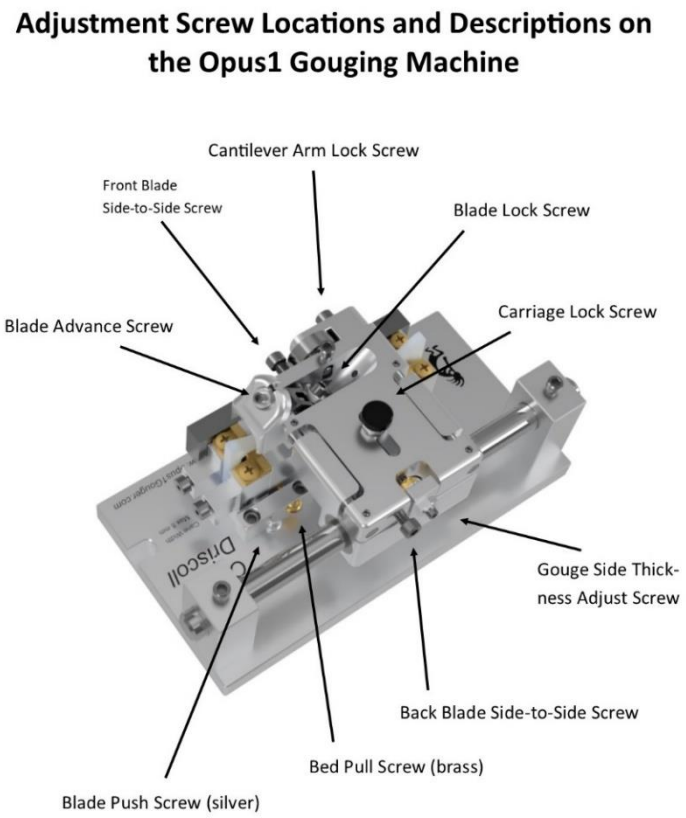
Quick Start Guide to Using The Opus1 Gouger

Tools Needed to Gouge Cane

- ✓ Radius Gauge that reads 10.5mm diameter. It is best to use a gauge that is made from a circular segment. There are tools with a V-slot or point contacts but these do not show the curvature of the cane. These tools are made for metal rods that are perfectly round. Cane is not perfectly round. The Circular Segment style gauge will not only give you the diameter but also show the quality of the curve of the cane.
- ✓ Bowl of "Soup Warm" water that is deep enough to submerge the cane completely. I generally soak my cane for about 15 minutes.
- ✓ A Single-Edged Razor Blade or an Arrow Splitter to split the cane.
- ✓ A Guillotine or Fillotine to chop the cane to a specific length to fit in the bed of the gouger.
- ✓ A Planing Board, Fillotine or similar tool to plane the surface of the cane. It should measure 8mm across the flat surface.
- ✓ Micrometer to measure the results of your gouging.
- ✓ 3-in-1 or WD-40 to lubricate the main rod and apply oil to a cotton ball to protect the blade from rusting when not in use.

Knowing the Parts of the Opus1 Gouge

With your gouger in front of you, you can use the diagram above to locate and learn the names of the various adjustment screws on your machine. Even though the gouger looks a bit complicated with all its components, it is actually very simple in its design. Each screw



handles a specific adjustment to manipulate the measurements of the gouge curve. There is only one screw used to make any specific measurement change. This allows you to UNDO a specific adjustment that you might make and not find to your satisfaction. On other designs, you will need to move multiple screws to make a single adjustment, which becomes impossible to undo unless you are skilled at adjusting gougers. You are now free to experiment with your setup without the fear of getting in over you head and having to send you machine off to have it re-adjusted by an expert.

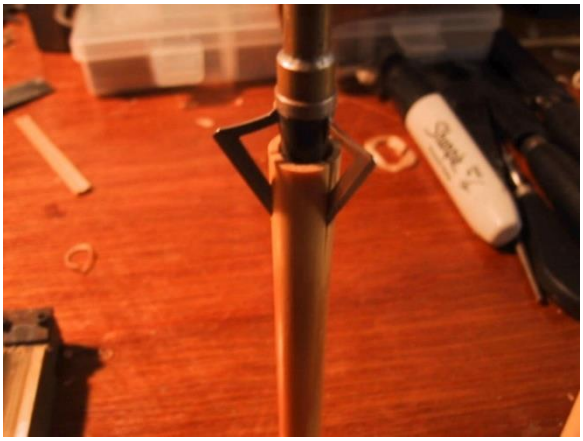
Prepare your cane to be gouged

Chose a straight piece of cane to be split from the tube that is between 10.25mm and 10.5mm in diameter.

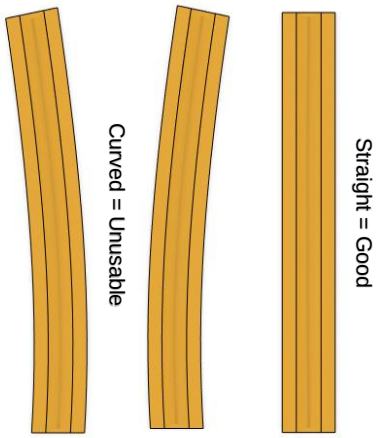
I have a radius gauge that is mounted onto the face of a desk lamp. As you can see, I am viewing the cane with the gauge on

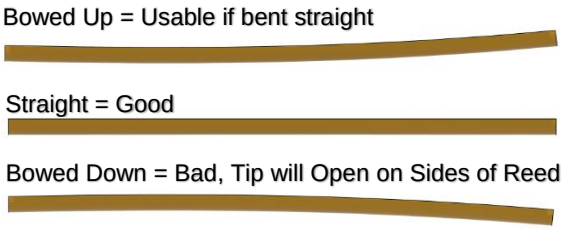
the top surface of the cane. This way I can use the light to illuminate the cane so that inspection of the diameter is easier. Measure down the whole length of the tube to make sure the diameter is consistent.

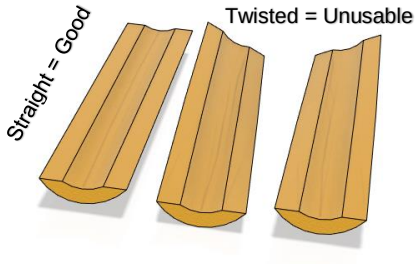
Using a razor or an arrow, cut the section you would like out of the tube.



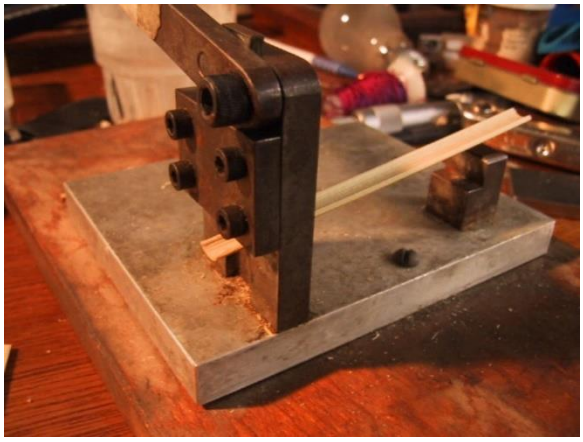
Inspect the split piece to confirm that it is straight.

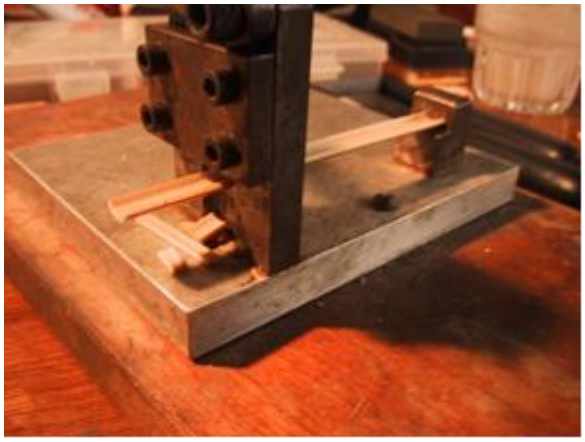






Chop one end of the cane with a guillotine to establish the start of the chosen section of the cane as in the left picture below. Then reverse the cane to cut it to the desired length as in the right picture below. Chopping twice gives you a clean edge on both ends of the piece of cane.

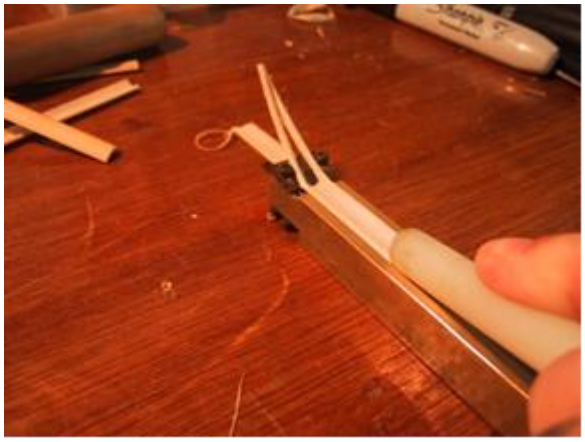




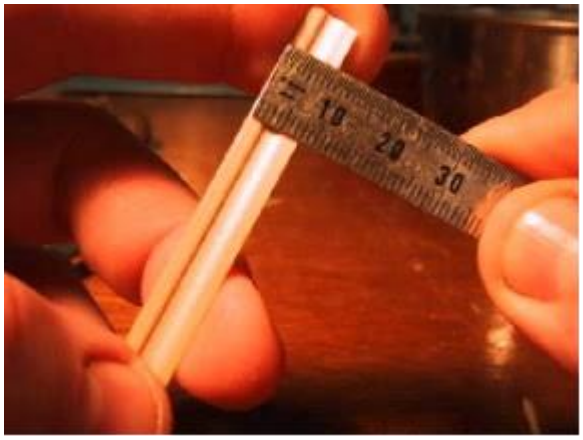
Another reason for chopping the cane at both ends is the section of the cane that you want to use may be located somewhere in the middle of the piece of cane that you cut from the tube. The cane is generally cut in the cane fields near the knots on the stalk. Since the grain is merging into the knots, the cane will sometimes have a curve in it near these locations.

Once the cane is cut to length, it is planed either with a Planing Board, a Filliere as seen below, or a Fillotine as seen on my website.

See video in Fillotine Section, to see the Best Practices in its use.



The piece of cane should be 8.0mm across the flat surface. This is VERY IMPORTANT. If the cane is too wide, the machine will not gouge in an optimal fashion. See PLANING YOUR CANE in the Gouger University's Freshman Class #1 for more information on this.



Once you cane is planed to the appropriate width, you should narrow the ends of the cane before gouging. The intent is to allow the blade edge to FEED into the side part of the gouge curve. I cut off the outer third on each side starting about one-half inch from the end.

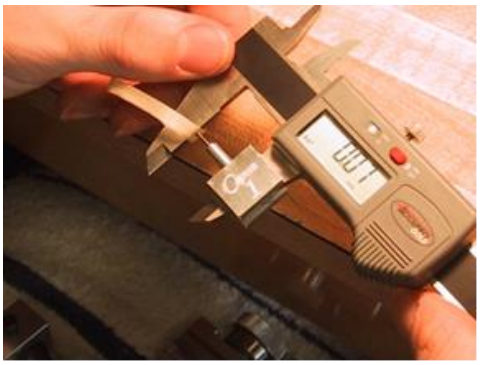
At this point, soak the cane in a bowl of "Soup Hot" water for 15- 30 minutes. The cane should be as wet as it will be while playing it as a reed. It will gouge too thin if the cane is swollen due to over-soaking.

I prefer to gouge on my lap using a towel that is about 4 feet long and draped over and under my legs to form table, if you will. Some people prefer to gouge on a table surface. Go to GOUGER UNIVERSITY's Freshman Class #4 for more information on this topic.

The Opus1 Gouger is a DOUBLE RADIUS gouger. It is designed to have the cane flipped every 5 or so passes of the carriage. This is done to help insure symmetry in the gouge. Both walls of the cane's finished gouge curve are cut with the same half of the blade curve.

A SINGLE RADIUS gouger uses a symmetrical blade and the cane is, ideally, not flipped. As the blade dulls or the alignment of the curve is not exact, the gouge curve will lose symmetry. This was the reason for the development of the DOUBLE RADIUS setup.

Measure the thickness of the chip that comes out of the machine. It should not read thicker than 0.70mm. It is optimal around 0.05-0.06mm. This measurement should vary little from side to side.



The gouging machine will have finished its work when there is no cane being cut in BOTH DIRECTIONS. At this point, inspect the thickness in the CENTER with a micrometer. The gouge CENTER THICKNESS should be 0.60mm. This can vary slightly to taste. I also check this side thickness of the cane after shaping it. This measurements should be around 0.50mm.