Piercing for Mere Mortals

Tools, Techniques, and Tips to get started with piercing.

Handout

Primary Audience: New to piercing.
Time: 1.5 to 2 hours.
Prerequisites: Interest in piercing.

Objective.

The objective of this demo is to help you get started with piercing. It includes techniques that begin on the lathe to create an appropriate canvas for your aesthetic expression and continues to address suggestions for how to proceed (and how not to).

Preparation.

For a closed form I begin with a form that's finished on the outside and ready final hollowing.

Introduction.

As with many thing, learning to pierce your turnings is a journey that begins with small, simple steps. My process for piercing generally involves relatively small forms with a wall thickness of no more than 1/8 inch. Three questions will guide what I offer you in this demo:

- What would I want to know if I were considering piercing?
- What tools do I need to get started?
- How do I use them.

To these I will add a fourth.

- What lessons did I learn (am I still learning) along the way?

Let's get started!

Tools.

- **Carvers**. There are many rotary carvers to choose from. I have several, and not all are good choices for piercing.
    - Drill, (1500 rpm).
    - Flex shaft (Master Carver, 30,000 rpm / 1/4" and 1/8" bits).
    - Rotozip tool.
    - Motor in hand piece (Dremel) 30,000 rpm / 1/8" and 3/32" bits).
    - Micromotor (Master Carver Micro Pro, Marathon, 35,000+ rpm / 1/8" and 3/32" bits).
    - Pneumatic (NSK Presto 350,000+ rpm / 1/16" bits)
    - The micromotor is my "go to" carver for the kind of piercing I do.
- **Bits**. There are lots of bits, but most are not useful for piercing, and I typically use only a few.

- **Materials**.
  - Carbon Steel (avoid).
  - High Speed Steel (ok).
  - Carbide in various alloy choices (recommended).
- **Styles**.
  - Single cut (more aggressive)
  - Double cut (less aggressive)
  - Diamond - very fine (for "sanding")
- **Shapes for starting and enlarging holes**.
  - Drill bits.
  - Tapered.
  - Dentist „starter" bits.
  - Cylinder.
- **Deburring and sanding**.
  - Bristle disks.
  - Diamond bits.
  - Sanding mandrels.
  - Flap wheels.
  - Non woven abrasives (like Scotch Brite).

- **Miscellaneous**.
  - ***Dust mask / dust collection.
  - ***Safety glasses.
  - Something to cradle the work.
  - Fan.
  - Deburring and sanding.

Process.

- Start with a good form. <u>No amount of carving or piercing will make up for bad form</u>!

- Piercing begins on the lathe.
- Wall thickness needs to be no more than 1/8" for micromotor piercing. (Note: This assumes there will be no relief carving.)
- Start with a relatively small, open form to make it easier to produce a evenly thin wall.

Tip: Determine where piercing will be and drill a hole to easily gage wall thickness. A crochet hook (purchased or home made from a paper clip) works well.

- **Draw the major design**.
  - Freehand, Stencils, Indexing, Duplicate shapes.
  - Decide spacing, size, and general shape.
  - Draw the whole pattern with a pencil to insure general uniformity of size, shape, and spacing.
  - Consider precision required for what you have in mind.
  - Any deviation from perfect is easy to spot.
  - Consider the appropriate randomness.

PLAN AHEad

- **Make the first plunge cuts**.

- **Enlarge the holes gradually**.

  - The carver is a "router."
  - Work against the direction of rotation.
  - Avoid touching the bit in two places at once. One side pushes the bit one way while the other pushes in the opposite direction. The result is loss of control.
  - Multiple light, controlled passes are better than one big uncontrolled pass.

- **Patterns**.

  - Many are similar to texture patterns achieved with carvers or burners.
  - Most patterns look better if made random which has to be learned.
  - We tend to line things up, and when we don't do it perfectly it shows.
  - If you want to do a pattern like bricks and mortar you must be very precise. Irregularities will stand out!
  - We also tend, without references, to get bigger and bigger or smaller and smaller.

PLAN AHEad

Suggestions.

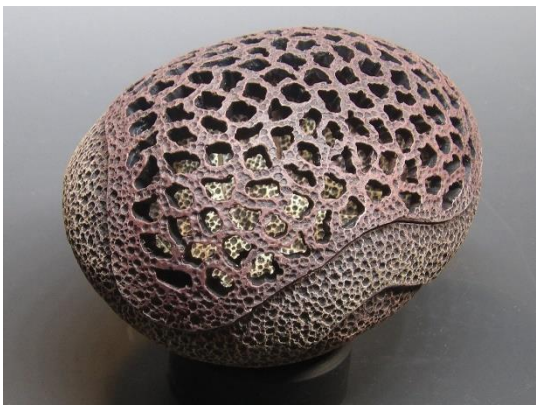
- **Things not to try** (at first).

  - Small.
  - Pointy.
  - Perfectly aligned.
  - Complex.

- **Some things are important**.

  - Consistency
  - Size.
  - Shape.
  - *Membrane* thickness.

- **Wall thickness**.
    - Even.
    - < 1/8“ for microcarvers (35k rpm).
    - < ¼“ for drills, cable carvers.
    - 1/16“ for pneumatic high speed (300k rpm) carvers.



For more information visit my website

http://RickUrbanWoodturner.com/
or email me
RickUrbanWoodturner@gmail.com