

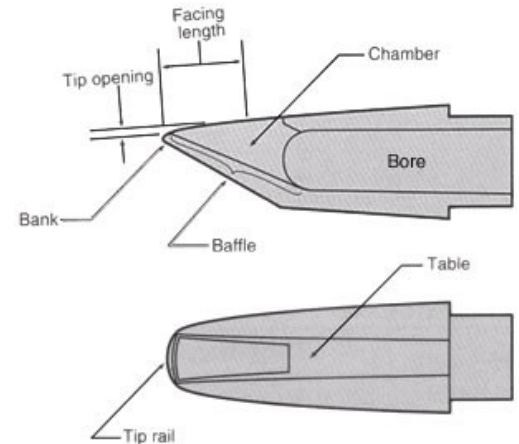
# What makes different mouthpieces different?

## Single Reed Mouthpieces

Together with the reed and ligature, a clarinet mouthpiece is the creator of tones.

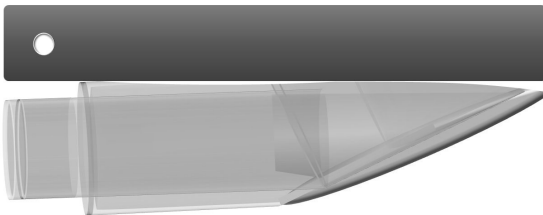
Things that affect the tone include:

- Diameter of the bore
- Length of the lay or facing
- Steepness of the lay or tip opening
- Form and degree of the change between the lay and the bore



The **diameter of the bore** is defined by the instrument, because the mouthpiece must have the same bore as the rest of the instrument.

The **lay** is the cut-off surface onto which the reed is fixed. The window and tip opening are part of the lay which, on first glance, appears to be flat. In fact, it is not; the surface at which the reed is held with the ligature is slightly concave and the tip opening is convex. The length of the lay from the window to the tip determines the resistance a player will feel when playing. A shorter lay will cause the reed to play stiffer, while longer lays will cause the same reed to be more flexible.



The **Tip opening** of a mouthpiece can range from open to closed and has a great deal to do with the tone produced.

A more open tip will require a softer reed and be easier to blow – this type of mouthpiece is good for beginners and jazz musicians. Open tip mouthpieces produce a brighter tone and can perhaps be played a bit louder, but with a sacrifice of articulation delicacy and control.

A closed tip will use a harder reed, be a little harder to blow and will produce a darker tone and provide the player with more control – especially in the upper register.

For example:

Tip: open	Tip: close
Lay: short	Lay: long
Reed Requirement: soft	Reed Requirement: hard
Tone: Brighter	Tone: Darker

## Brass Mouthpieces

Brass mouthpiece numbers can be confusing to understand. This article is based on the Bach numbering system, which is the standard system in the United States.

The number on a Bach mouthpiece stands for the cup diameter. The larger the number, the smaller the cup diameter. For example, a 12 is smaller than a 5 with a 1 being the largest available. The letter represents the cup depth with "A" being the deepest and "F" being the shallowest. The letters and numbers are available in a wide variety of combinations. The following characteristics generally produce the following effects:

### Rim Attributes

Wide: Increased endurance

Narrow: Improved flexibility and range

Round: Improved comfort

Sharp: Increased brilliance and precision of attack

### Cup Attributes

Large diameter: Increased volume and control

Small diameter: Relieves fatigue

Deep Cup: Darker tone (especially in the low register)

Shallow Cup: Brighter tone (especially in the high register)

### Throat Attributes

Large: Easier to blow, louder volume, sharpens high register

Small: Harder to blow, more brilliant tone, flattens high register

