



## *958 silver vs 925 silver and why TJ flutes have decided to use 958 silver on their new 'Voce' headjoint PV/CV/VV and alto flute models*

As many of us will know, flute headjoints made from different materials can significantly impact the instrument's tonal and resonance characteristics. Moving from 925 silver to 958 silver as standard for our silver lip and silver head TJ 'Voce' headjoints has meant understanding the differences involving both the material properties and their practical effects on sound production and playing experience. For your information, we compare here 958 silver (known as Britannia silver) to 925 silver (known as sterling silver).

### **(1) Material Properties**

#### **958 Silver**

- Composition: 95.8% silver, 4.2% other metals (often copper)
- Density: Slightly higher than 925 silver due to higher silver content
- Hardness: Marginally softer than 925 silver due to higher silver content, affecting how it interacts with vibrations

#### **925 Silver**

- Composition: 92.5% silver, 7.5% other metals (usually copper)
- Density: Slightly lower than 958 silver
- Hardness: Slightly harder due to higher content of alloying metals, affecting durability and vibration characteristics

### **(2) Tonal Characteristics when used on TJ flutes**

#### **Tonal Warmth and Brightness**

- **958 Silver:** Typically produces a warmer and richer tone. The higher silver content allows for more complex overtones and a greater depth in sound. Flute players often describe the tone as being more mellow and rounded.
- **925 Silver:** Often results in a brighter and more focused sound. The increased hardness from the additional alloying metals contributes to a crisper and more penetrating tone.

### **(3) Resonance and Projection**

- **958 Silver:** Offers better resonance due to the higher silver content, which efficiently transmits vibrations. This material allows for a more responsive headjoint, capable of producing a wide dynamic range with ease. The notes may feel more fluid and connected.
- **925 Silver:** Provides good resonance but with slightly less responsiveness compared to 958 silver. The harder material can result in a slightly more resistant feel, which might require more effort from the player to achieve the same dynamic range and smoothness in legato passages.

#### **(4) Performance Characteristics**

##### **Playability and Response**

- **958 Silver:** The softer and more resonant nature of the material often makes the headjoint more responsive to subtle changes in embouchure and air pressure. Players may find it easier to produce a variety of tone colours and dynamic contrasts.
- **925 Silver:** While still highly responsive, the harder material can make the headjoint slightly less sensitive to very fine adjustments in playing technique. This might require players to work a bit harder to achieve the same level of expressiveness and dynamic variation.

#### **(5) Resonance Frequencies and Harmonics**

- **958 Silver:** Due to its higher purity, 958 silver has a slightly higher density, affecting the speed at which sound waves travel through the material. This can result in a richer harmonic spectrum and a more pronounced resonance in the lower frequencies. The complex overtones contribute to a fuller and more enveloping sound.
- **925 Silver:** The presence of more alloying metals in 925 silver affects the propagation of sound waves, often resulting in a slightly higher resonance frequency and a brighter harmonic spectrum. This material can emphasize higher overtones, contributing to the perceived brightness and clarity.

#### **(6) Subjective Perception**

##### **What flute players might feel and hear!**

- **958 Silver:** Players might notice a more luxurious and rich sound, with an ease of response and a capacity for greater dynamic range. The headjoint might feel more responsive to embouchure adjustments, allowing for a more nuanced and expressive performance.
- **925 Silver:** Players may perceive a brighter and more direct sound, with excellent clarity and projection. The headjoint might feel slightly more resistant, requiring more precise control to achieve the same level of expressiveness. The articulation could feel crisp and defined.

#### **Conclusion**

Our choice at TJ flutes between using 958 silver and 925 silver on our 'Voce' headjoints involves a small trade-off between warmth and richness (958 silver) versus brightness and clarity (925 silver). The higher silver content in 958 silver generally enhances resonance and tonal complexity, offering a more responsive playing experience, while 925 silver provides a bright, focused sound with clear articulation. Ultimately, and it's important to point out here that there is no right or wrong with the choice of using either 925 or 958 silver content on our TJ flute 'Voce' flute headjoints. It's only what the player feels which is most important which is why we are now using 958 silver.