Flute makers often discuss the proper ways to fit a flute headjoint to a flute barrel; some opinions are factual and well-thought-out while others are shaky. The headjoint tubing should fit easily into the body tubing.

Most of the time after the taper has been drawn into the headjoint tubing, it fits into the barrel, but not the smooth, gliding fit that flutists expect. Toolmakers and engineers call this an interference fit, one with tolerances of about 1/4 the thickness of this page. If the headjoint is just slightly too large, it will not slide into the body. If it is slightly too small, the headjoint will be loose.

The general agreement is that when the diameter of a headjoint tenon is too large the outside diameter of the tenon should be reduced by sanding, filing, spinning, turning, or honing. If a headjoint is too small, there are three generally accepted ways to correct the fit. The choice depends upon how large an adjustment is needed. This is where confusion arises.

For a slightly small headjoint burnishing is best. Some flutists believe that burnishing is dangerous and can ruin a headjoint, but burnishing can correct such defects such as dips and out-of-round spots that other methods cannot. In skilled hands burnishing is an incredibly precise way to change the size or shape of the headjoint tenon. Most flute makers will burnish headjoints at no cost.

The classic way to burnish is with a polished tool that resembles a dull knife, called a burnisher. With a slightly smaller steel rod inserted in the headjoint tenon, flute makers observe the fine scratches on the tenon. The technician applies the burnisher to places that do not make contact with the barrel and squeezes the headjoint between the burnisher and the steel rod.

This squeezing makes the tubing wall slightly thinner and the overall diameter of the headjoint slightly larger. Burnishing a tenon may entail increasing its diameter by .004", which is roughly twice the thickness of a human hair. In doing so the wall thickness will decrease by only .00007", or about 1/30 the thickness of this page.

Every flutist who shops for headjoints should know the difference between burnishing and stretching. Imagine working with pizza dough instead of metal. As a rolling pin thins the dough, the pie grows larger which is much the effect of burnishing. Spinning the dough overhead makes the dough larger and it is more similar to stretching.

A headjoint can be stretched with a tool that looks like a table-mounted, hand-cranked can opener. The tenon is placed over a fixed roller, and a second roller is tightened down against the metal of the tenon and rotated. As the headjoint turns and the tenon metal is made thinner, the diameter of the tenon increases. This method is not...

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as selective as burnishing and could result in a disastrous over-expansion.

Another tool is essentially an expanding mandrel over which the headjoint tenon is placed. As the tool expands, so does the tenon. This is the preferable way because it is difficult to over-expand the tenon, but the process is not as selective as burnishing.

For larger adjustments, plating is an ideal solution. The electro-plating process deposits an uneven layer of metal on the headjoint tenon. Typically too much plating is added to allow for machining down to fit. That unevenness is then corrected by buffing. Plating costs about $100, but it is the best solution.

For large differences between the sizes of headjoint and bodies, as when an .016" is to be used with an .018" barrel, a sleeve added to the tenon is the best method. This thin cylinder of silver is machined either by drawing or turning, and soldered onto the tenon. The cost of adding a sleeve begins at about $100.

The headjoint fitting controversy will probably continue long into the future, but flutists who understand the various repair methods will certainly make better choices when a problem arises.

Review

The revolutionary effect Ludwig van Beethoven had on Romantic composers was absolutely astonishing. Even though he suffered from many illnesses, the worst being an increasing loss of hearing that ended in complete deafness. This deafness robbed him of the pleasure of hearing his music. In the *Heiligenstadt Testament* he expressed hope that someday someone would discover the cause of his deafness. Although he had considered suicide, Beethoven remained determined to compose all that he could. He wrote to a life-long friend, Franz Gerhard Wegeler, that he would “take fate by the throat,” which he did by composing much of his most interesting and innovative music in complete deafness.

In the decades before photography, it was customary to cut a lock of hair in remembrance of a loved one, a practice that included great and famous figures. At the time of Beethoven’s funeral, it appeared that many adoring fans had assaulted his head with scissors by the look of the snipped-off hair. Fifteen-year-old Ferdinand Hiller, who had visited Beethoven with his teacher, Johann Hummel, several times in the final days of the composer’s life, was one of the fans who cut a lock of hair from the dead composer’s head. The fascinating and intriguing story of how this lock of hair passed through Hiller’s family for more than a half a century is related in Russell Martin’s book *Beethoven’s Hair*. Over 120 years after Beethoven’s death, it mysteriously appeared in Gilleleje, Denmark during the Nazi occupation of World War II. One night the lock of hair was given to Kay Fremming, a local physician, apparently in gratitude for helping several Jews who were hidden in his home minutes before they were captured by the Nazis.

Fremming’s adopted daughter eventually sold the lock in 1994 to two American Beethoven enthusiasts, who put it through D.N.A. testing to determine the cause of Beethoven’s poor health, deafness, and death. This book takes readers on an historical treasure hunt for the truth in this incredible story. (Broadway Books, 276 pages, $24.95) —Walden Hughes

Honors and Appointments

The Eastman School of Music announced that William Dobbins returned to the jazz faculty. He has been in charge of the department of jazz and popular music at the Cologne Musical Academy in Cologne, Germany and will return to Eastman as professor of jazz studies and contemporary media.

The New England Conservatory appointed Jeanne Baxtresser to the flute faculty for the fall semester. She has held principal positions with three major orchestras, including 15 years as principal flutist of the New York Philharmonic. Dante Anzolini is the new director of the orchestral program and is on the faculty at M.I.T.

*Ten of a Kind* by David Rakowski was named as one of two finalists for the 86th annual Pulitzer Prize in music. The work was commissioned and premiered by the United States Marine Band. Rakowski teaches composition and theory at Brandeis University in Massachusetts.