

The Beaudin flute—a modern traverso

By Jean-François Beaudin with Richard Sommer

This new flute of mine is a successful adaptation of the modern Boehm inside bore to the one-keyed traverso flute's characteristics. My goal has been to create a one-keyed flute producing the greatest amplitude possible, and I have managed to increase it by about a quarter. I was also very surprised to be able to keep the same tuning and fingerings as the Baroque traverso, even with these and other improvements and modifications. Experimentation to reach the best tuning possible has occupied much of the last ten years of my research into the creation of a new flute (see below).

I chose a large bore diameter, thick wooden body, and large finger holes (about 9mm). The bore structural shape is basically a cylindrical foot and long centre joint, with a conical headjoint, narrower at the embouchure end. I have developed a special embouchure hole with large undercut, which has contributed significantly to the new flute's impressive tone and fast response. Its playable range is two and a half octaves, from D to A, the same as the traditional traverso.

For years, I have been driven to experiment by my frustration with the very limited volume of the Baroque traverso. After much research on the Quantz flute, the most powerful such flute of the eighteenth century, despair of a solution prompted me to look elsewhere. During a period of time spent in south India (1988–1989) to explore the world of modal music, I discovered the great bamboo flutes played in Carnatic music, which later became a source of inspiration to me for the development of a modern traverso. And I was surprised to note that these bamboo flutes, which play very loudly, are made with the same type of bore as the Boehm flute. As with much current art production, my innovation has consisted of an East-West blend, joining the best qualities of the baroque flute with those of the Carnatic bamboo flute. The seventeenth-century Ganassi recorder also has some similarity with my new flute, and some influence in its concept. From that idea, my flute can be seen as 'the missing link' for the traverso player who can now play the Italian virtuoso sixteenth-century repertoire.

With respect to the physical structure of my flute, from the beginning I adopted the long centre joint of the eighteenth century makers, Hotteterre and Rippert, a tradition that Boehm himself followed. My flute is divided into three main pieces: headjoint, long body with the six fingerholes, and footjoint. The headjoint's upper end is capped with a separate piece. On the lower end of the headjoint I have used a tenon instead of a socket, as with both ends of the body joint. This is done in order to adapt several headjoints to a single socket. To join

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them I have followed the flute makers mentioned above in adding a short connecting piece with a socket in each end.

This connecting piece, the headjoint cap and the foot are offered to my customers in three styles of moulding: a form called 'Beaudin Personnel', a contemporary style in which smooth curves replace moulding; an early French baroque style; and a style more like early seventeenth century Italian. Currently in development is a style involving silver rings. Three pitch-versions of my flute, proportionally similar, are available as well: A=440, A=415, and A=392 Hz.

On the foot, a key covers the E \flat hole and, if desired, a D \sharp key, in accord with Quantz's idea, can be added, making possible a clear distinction between a higher E \flat (+10 cents) and a lower D \sharp (-12 cents), a feature much appreciated for baroque repertoire. A G \sharp key, useful to those who play Celtic music, is also available. Basically, however, the one-key version of my traverso plays with no loss of musical values. Since the notes made by forked, or cross, fingerings are perfectly in tune and much more sonorous than those of traditional baroque flutes, my traverso allows for a much broader palette of expression and colour, along with a gain in volume.

The footjoint attracts attention by its thickness and size. These features give more general strength, and they amplify the less audible lower notes. As with the Quantz flutes, this heavier footjoint centres the flute's balance-point well over the right thumb, and thus avoids the fingers' involvement in supporting the instrument

Some details about tuning. Comparison of the Quantz flute with the common baroque flute could make an article by itself. Trying to keep the latter's essential characteristics, Quantz nevertheless made some choices to improve his flute's ability to stay in tune in keys with more than three sharps or flats. I have tried to apply his best ideas to my own instrument. One might assume that the second key for D \sharp should be the first feature chosen. If so, all my new traversos would come with these two keys on the foot, but I offer this only as an option, because the effect of the two keys is to force the second B \flat (fingering: 12-4567) to sound too high. This is why Quantz proposed the fingering (1-3) as a first choice. This imposes a more difficult technique on the player and is not accessible to all amateurs.

A more significant detail concerns the F \sharp (1234-6) and F \sharp (1234-7) in addition to the special F \sharp (123-567). With the common baroque flute, usually we find a good F \sharp at -12 cents, with a too high but normal F \sharp at +15cents that needs to be lowered with the embouchure to +7 cents, and with a higher special F \sharp ideally tuned to zero. Quantz, whom I have followed in this, decided to lower both F \sharp and F \sharp by 8 cents to have a perfect F \sharp at +7 cents without embouchure adjustment, and to sacrifice the F \sharp at -20 cents, to be raised to -12 cents without too much effort. According to this choice, the special F \sharp fingering became essential for obtaining a good fifth with B. All this allows the flautist to play the E \flat major and E major scales without embouchure tuning corrections. Also, on my flute I have been able to achieve a perfect F \sharp at +7 cents without sacrificing the F \sharp which can stay at -12 cents.

The future. To perform nineteenth and twentieth century repertoires, the Boehm flute is unsurpassed. Yet, in search of authenticity, some flautists have turned from it to play the music written before its invention. I agree with this sensitivity and

aesthetic choice. The one-keyed flute has the advantage of a harmonious fingering pattern with a logic that accords well with our reflexes based on the principle of one hole, one finger, plus a series of cross-fingerings giving different tonal colours.

As described, my traverso is closer to the baroque than to the modern, having only one key and with the same fingerings and tuning, but because of the modern bore applied, the sound is as much of our time as of the baroque. Thus anyone who likes its tone can use it for any music that fits its range limits. This new traverso can therefore take its place in our contemporary musical life. Because of its improved amplitude, tuning, and simple fingering system, it may be regarded as the modern alternative to the Boehm flute. In future, the Boehm instrument and the Beaudin flute could together cover the entire repertoire from mediaeval to contemporary music, with the division of function falling at around 1800.

Currently, my flute is used mostly for Baroque and Celtic music. It works well, too, with Renaissance music, and I personally enjoy using it for Debussy and Fauré songs with piano accompaniment, playing either the 440 Hz or the 392 Hz models. My favourite pitch is the lowest, at A 392 Hz. For my own personal instrument, I have two footjoints, the main one with one key and a second with two, especially to play the J.S. Bach flute sonatas. And I am on the lookout for new music composers who would be interested in writing pieces for this flute. Many premieres, I hope, are yet to come.



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