

## A guide to graduate, professional and vintage Piccolos (Sept 2019)

A wooden body and a wooden head-joint are normally standard on graduate and professional instruments (although some manufacturers do also make precious metal head-joints and bodies as alternatives) and the more expensive instruments are completely hand-made. The main areas of variation between instruments are: the embouchure surface (where the player rests their lip); the embouchure chimney design (the cut of the embouchure hole); the bore design (of both body and head-joint together); the wood used; and the key-work fitted.

### Embouchure Surface design

There are two basic designs of embouchure surface – the traditional (where the embouchure hole is cut straight into the head-joint) and the reform (where the side of the embouchure hole furthest away from the players lip is shaped like a wave); both these designs are available with or without a lip-plate.

- The **traditional embouchure** (or standard embouchure) is cut straight into the head-joint with no lip-plate or shaping of the head-joint - this can be found on standard thick walled wooden head-joints.



- The traditional embouchure with a lip-plate is called a **flute style lip-plate (embouchure)** – on metal head-joints this looks the same as a Flute lip-plate but proportionately smaller – on wooden head-joints the wall of the head-joint is thinned except around the embouchure hole so the head-joint effectively has a flute style lip-plate. The lip-plate helps the player locate their lip and is sometimes favored by players who need to swap between Flute and Piccolo.



- The reform embouchure is carved so that the side of the embouchure hole that is furthest away from the players mouth is raised and shaped like a wave and for this reason is often referred to as a **wave cut embouchure** this can be found on standard thick walled head-joints. (Note some retailers misleading use the term 'wave cut embouchure' to describe the reform embouchure with a lip-plate – see below).



- The reform embouchure with a lip-plate is called a **reform lip-plate (embouchure)** - the wall of the head-joint is thinned except around the embouchure hole and the head-joint is carved so that the side of the embouchure hole that is furthest away from the players mouth is raised and wave shaped. The lip-plate helps the player locate their lip and is sometimes favored by players who need to swap between Flute and Piccolo.



Within these four designs there is plenty of room for variation. No one design is superior to another, the player must choose which they prefer.

Note that the terms 'reform embouchure', 'high wave embouchure', 'winged embouchure', and 'profiled embouchure', are sometimes used by retailers to describe **both** types of reform embouchure so these terms are ambiguous. Hammig use the terms 'standard' and 'reform' in conjunction with 'thin-walled' or 'thick-walled' to describe the four designs (note Hammig also use the term 'redel' embouchure to describe a fifth type of embouchure – but this is really just an unusual variation of the wave cut embouchure).

## **Embouchure hole design**

The design (or 'cut') of the embouchure hole (also known as the chimney) is another area of variation between manufacturers and models. The shape of the opening of the hole can range from a small round-like shape to a larger rounded rectangular shape and all shapes in between; also the angle of the sides of the hole can vary. Some manufacturers offer models with identical embouchure surface but different designs (cuts) of embouchure hole. Hammig offer 6 different designs of embouchure hole as well as the four varieties embouchure surface! Again no one design is superior to another; the player must choose which they prefer.

## **Bore design**

The design of the whole bore (body and head-joint together) can vary slightly from manufacturer to manufacturer but the manufacturer will keep the same design for all its models. The design of the bore determines the intonation of the instrument and there is no perfect design - each manufacturer will settle on what they think is the best compromise across the compass of the instrument. By slightly scaling down the bore design the manufacturer can offer models with a slightly higher pitch centre (typically A442 and A444).

## **Wood varieties**

Most Piccolos are made of Grenadilla, but some manufacturers offer the head-joint or the entire instrument in other woods, these woods can give a different tone to the instrument (for more information about woods used in Woodwind manufacture please refer to my article: Info – the Recorder 4c – The Woods used in Recorder making). Some manufacturers will also make head-joints or the entire instrument in a precious metal (usually Silver).

## **Key-work options**

Besides the use of precious metals, manufacturers may produce models with alternate key arrangements or extra keys. Variation in keys can include:

- Split E – for Piccolos with a standard closed G# this enables a truer sounding top E (although it does compromise the 3<sup>rd</sup> register G/A trill)
- G/A trill – for Piccolos fitted with a split E this enables a secure G/A trill
- C# trill – this has several functions: it enables easier B/C# and C/C# and high F#/G# trills; and it offers alternate high G/Ab, G/A, and Ab/Bb trills
- High G# (facilitator)- this mechanism half closes the thumb key when playing third register G# fingering, this helps to sound the note more easily (this mechanism must be kept in correct adjustment or it can affect the top C)
- Brossa F# - this is an alternate touch-piece just above the D key used to play F# (and better vents the note compared to the standard fingering)
- B key on right – in England the conventional arrangement has the Thumb B touch-piece on the left (higher up the instrument than the Thumb Bb touch-piece) although in other countries the arrangement of the Thumb touch-pieces is sometimes reversed (with the Thumb B touch-piece on the right)
- Open G# - Boehm's original design of the flute (and by implication the Piccolo) originally

had an open G# which ensured adequate venting for all notes (without the necessity of additional key-work such as the split E); this design proved unpopular so later models had a closed G# but the acoustic argument for an open G# is still relevant so some manufacturers produce open G# Piccolos.

## Graduate instruments

These instruments are for students at music College, professional teachers, and the serious amateur; currently the choice of instrument is limited. At the lower end of the price range is the Trevor James '6TPRSSK Recital' (which has a wave cut embouchure) this model is available in two versions – with silver plated keys on the advanced student instrument and with solid silver keys on the graduate version; both versions of this model have been discontinued but are still available in the shops. In the middle of the price range are 3 models from Yamaha – the YPC81 with a traditional embouchure; the YPC81R with a wave cut embouchure; and the YPC82 with a solid silver head-joint (and flute style lip-plate). At the top end of the graduate price range are the Burkhardt & Phelan 'Resona' (which has the options of a traditional or wave cut embouchure) and the P Hammig 650 series of Piccolos available with a range of options.

## Professional instruments

Some manufacturers make only one professional model with a limited variety of options; some make a range of professional models with a great variety of options but overall there is far more variety of options on professional models than graduate models. The manufacturers of professional Piccolos that are currently distributing to UK retailers include: Bulgheroni, Burkhardt, Hammig, Keefe, Powell, and Yamaha.

## Vintage instruments

Vintage Boehm Piccolos tend not to be good investment – the parts of the mechanism are very small compared to other woodwind instruments and once there is excessive wear on the mechanism, short of making new parts, it is near impossible to remove - (unlike on a vintage Saxophone where there are many methods available to the repairer to remove excessive mechanical wear). Vintage simple system Piccolos (although not used by orchestral players except perhaps in period instrument performances) are a different case – there is little mechanism to speak of and so these instrument can be valuable (provided the wood is in good condition).

## Play-testing a Piccolo before purchase

Whatever the ability of the player the most important thing is to warm the instrument up correctly before play-testing it - **do not blow into the instrument** – this will immediately create condensation in the instrument and distort the tuning - instead hold the instrument in your hand for a five minutes to warm it up. When you are comparing instruments make sure you re-warm each one each time before you play it and, when you put the instrument down to try another, make sure it is **resting with its keys uppermost**.

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