

The Bassoon – a beginner’s guide to student instruments

Although Bassoons are classed as woodwind instruments, some student instruments are made of plastic. There are only two commonly played members of the Bassoon family – the Bassoon and the Contra Bassoon (which is twice as large and plays an octave lower). There are two different key systems for the Bassoon: the German (or Heckel) system and the French (or Buffet) system. British players use the German system.

People who start playing the Bassoon have usually made significant progress on some other instrument first. The Bassoon is played with a double reed (whereas the Clarinet and Saxophone are played with a single reed) and it is difficult to play in tune, so it is best that the player has already developed their “musical ear” to some extent. Tuition for children is not usually available until secondary school – this is not just because of the size of the instrument (although Howarth have started selling small Bassoons – see below) and the difficulty in playing it but because even poor quality student instruments are expensive.

The parts of a Bassoon

The different parts of a Bassoon are referred to by various names:

- Firstly there is the **wing-joint** also known as the **short-joint** or **tenor-joint** it has a narrow metal **socket** at the top end (into which the **bocal** fits) and a corked **tenon** at the other end.
- Secondly there is the **bottom-joint** also called the **boot-joint** or **butt-joint**, which has two sockets next to each other.
- Thirdly there is the **long-joint** also called the **bass-joint** with a cork tenon at each end.
- Lastly there is the **bell** which has only one **key** on it.
- In addition to this there is the short metal pipe called a **bocal** or **crook** that fits into the wing-joint, onto this metal pipe the reed is fitted.

The metal keys on the Bassoon make up the mechanism of the instrument. The keys are supported between metal pillars on screws, rods, or pins. Most keys have a wire spring that keeps the key held open or held shut and a key cup in which there is glued a pad to cover the tone-hole. Each key also usually has cork or felt glued on to function as a stop so that the key opens the correct amount.

The pads, corks, and felts on the instrument (and also the adhesives which keep these items in place) deteriorate over time. On older or poorer quality instruments the mechanism itself starts to wear and the keys can become loose or jammed. Bassoons need to be regularly serviced to remain in good playing order – if you are considering buying a second-hand instrument then get it checked over before purchase to make sure it is in reasonable condition.

Although not a part of the instrument, there is one other vital accessory – the case. A case that holds the bassoon snugly protects the instrument during transport (a poor fitting case will damage the instrument).

The bocal: apart from the reed, the bocal (or **crook**) is the part of the instrument that has most influence on the tuning of an instrument; to some extent it also influences the tone and response of the instrument (particularly of the upper register). Bocals are usually made of nickel silver and are un-plated, nickel-plated, or silver-plated. Bocals are available in 4 sizes in order of increasing length (and thus flatness): 0,1,2,3. Size 2 is usually correct pitch. Manufacturers use other codes to indicate bore or thickness of tube, which is to the player’s own taste. A good bocal presents the least resistance possible and produces a well-focused and bright sound. The reed fits onto the end of the bocal.

Standard and short reach key-work

Student bassoons are often available with standard key-work or short-reach key-work. The Bassoon is the same size in either case but instruments with short-reach key-work have some of the duplicate keys omitted and some other key modified to make it easier for children (or adults with smaller hands) to reach them (see below). Short-reach key work is not just for students but can be found on graduate and professional instruments.

Special beginner Bassoons for small children

Recently Howarth has started selling two types of small Bassoon specifically for primary school children; they are called the mini-Bassoon which plays in G a fifth higher than the standard instrument, and the Tenoroon which plays in F a fourth higher than the standard instrument. Small Bassoons have been used for teaching purposes since the 17th century but this practice is uncommon today; usually children journey from Recorder, via Clarinet or Flute, to Bassoon, but these new smaller Bassoons are intended to be the step after the Recorder.

If a musically gifted child was very interested in playing Bassoon and was too small to play a normal size Bassoon and also had a teacher willing to teach on a smaller instrument, then these instruments might be of interest; however, generally I think it would be better for a child to progress on an easier wind instrument, or on piano/keyboards, to develop their sense of pitch in preparation for learning the standard size Bassoon. These small Bassoons are more expensive than budget Bassoons and most teachers and schools will not be familiar with them.

Categories of student instruments

Student Bassoons can be divided into four categories.

Old student instruments: these are models that have not been manufactured for many years but are still knocking about, often found in schools. They are usually fitted with the minimum standard key-work (see below). They are low quality instruments often with a poor tone and some tuning irregularities that the player has to work around. These instruments are still in use because new instruments are so expensive. It is important to have instruments of this type assessed before you buy one (second-hand) because they are often in poor condition and require extensive repair work to be put into a reasonable condition. Examples of old student instruments include: Artia, Boosey and Hawkes, Bundy, Corton, Lafleur, Lewington, Lignatone, Linton, Louis, and Rudall Carte.

New Budget student instruments: usually it is best to rule out budget woodwind instruments altogether because they are always of inferior quality and they often require regular tweaking and repairs, so much so that it usually works out more economical to buy a better instrument in the first place, however, with regard to Bassoons, the price difference between a budget instrument and a premium student instrument is so great that it is worth considering starting on a budget instrument (as long as it is actually working when you buy it). Recently Jonathon Myall music and John Packer music have been selling the **JP191 MkII short reach Bassoon** at about £1250 which is around £2000 cheaper than the cheapest premium student instrument. Another relatively cheap instrument is the **Amati 3 series short reach Bassoon** at about £2000 from Windblowers – in price and quality this is somewhere between a budget and premium student instrument. I do not recommend either of these Bassoons in terms of their quality as instruments but even with the anticipated running repair costs they could work out significantly cheaper as a starter instrument than a premium student instrument.

Premium student instruments: these are instruments that have been manufactured in the last twenty years. They are considerably better made than the older student instruments or new budget instruments and have design features which, although they may not immediately be appreciated by the player, nevertheless make the instruments much better. Premium student instruments usually have a significantly better tone and also have better tuning than older student instruments. I particularly recommend the makes (brands) **Adler, Fox/Renard, Howarth, Monnig, and Schreiber.**

Vintage instruments: in the case of other woodwind instruments vintage instruments are usually only of interest to advanced players looking for a particular sound but for Bassoon players there are some vintage instruments that would be of interest to a beginner as long as they were in good condition. The particular makes to look for are **Huller, Kohlert, and Monnig.**

Variations in design

Modern student instruments are usually available with standard or short-reach key-work. Not all manufacturers use the same criteria for counting the separate keys on an instrument but generally the following is true.

Standard key-work: has a minimum of 23 touch-pieces – that is 23 parts of the mechanism that can be depressed by the fingers to operate a key directly or indirectly (including the crook key lever).

These keys are located as follows progressing from Bell to crook

1. Back of Bass (Long) Joint – thumb keys - bottom register Bb, B, C, D.
2. Front of Bass joint - finger keys - bottom register D#, C#.
3. Back of Boot joint – thumb keys – 2nd register Bb, bottom register E, F#, (Alternative) G#.
4. Front of Boot joint – finger keys bottom register G#, F, (Alternative F#), G, (Alternative) 2nd register Bb, 2nd finger ring key (sometimes called automatic G key because it tunes 3rd register G), 2nd register C# trill.
5. Back of wing (tenor) joint – Thumb keys – Crook lever (Octave key), 2nd register C# (also sounds 2nd register Eb when fingering D), 2nd register A (also used as octave key for 2nd register Bb and 3rd register A & Bb) 3rd register C (also used as octave key for 3rd register B and some 4th register notes).
6. Front of wing joint – 3rd finger ring (corresponds with Thumb C# to sound 2nd register Eb when fingering D), 2nd finger F# trill (2nd register E to F#).

Short-reach key-work: can have as little as 19 touch-pieces. The touch-pieces for the right hand are located closer together so that smaller hands can reach them more easily (in order to do this manufacturers omit the alternative Bb touch-piece) and some touch-pieces are also lengthened. Usually the left hand 3rd finger key is fitted with a plate (instead of a ring) to cover the tone-hole, and sometimes the 2nd finger key is also fitted with a plate - this reduces the stretching required by the left hand. Often the alternative G# key is also omitted to make the common 21 keyed instrument. Sometimes the wing joint 2nd finger F# trill and the boot joint 2nd register C# trill are omitted too.

Additional key-work: is sometimes fitted; the most common additional keys on a student instrument are a crook lock (usually for the left thumb on the back of the wing joint) and a high D key (also for the left thumb on the back of the wing joint) creating the common 25 keyed Bassoon. Some short-reach instruments also have a high D key and a crook lock creating a 23 or 24 keyed short-reach Bassoon (depending on whether only the alternative Bb is missing or if the alternative Bb *and* the alternative G# are missing). Another common additional touch-piece is a plate extension to the Low C touch-piece (for the Thumb on the long joint) – with the extension plate the key is sometimes referred to as a double C key although it is not usually counted as an extra key. A minimum of 5 rollers (for long joint C# and D# and boot joint finger F, F# and G#) is now considered standard on a Bassoon but other keys may also have rollers fitted to ease the movement from one touch-piece to an adjacent touch-piece.

Other design features (listed below) may be found on premium student instruments; these features reduce problems with the mechanism and body of the instrument.

Locked pillars: the pillars that hold the keys often twist (because the springs are highly tensioned and the Maple wood that the Bassoons are made of is relatively soft). Some instruments have the pillars “locked” in position by pins or screws to reduce this problem.

Tenon rings: because Maple wood is relatively soft the tenons at the ends of the joints tend to distort over time. Metal tenon rings help to reduce this problem.

Metal-lined boot-joint socket: again, because Maple wood is soft, the two sockets at the top of the boot-joint can distort. If the sockets are lined with metal this can reduce the problem.

Plastic-lined bore: Maple is vulnerable to rotting caused by water condensating out of the player's breath. To prevent water attacking the bore it is essential that the bore of the wing-joint and also the narrow bore of the boot-joint are plastic-lined because this is where the water initially condensates. It is also desirable that the wide bore of the boot-joint is also plastic-lined because the water that condensates onto the bore runs down the bore and collects at the very bottom of the instrument and it can find its way up into the wide bore of the boot joint.

Lined tone-holes: Compared to other woods used in the manufacture of woodwind instruments Maple is a fairly porous. The (metal) lined tone-holes reduce leakage of air through the wood itself and also protect the wood from water penetration.

Play-testing a Bassoon before purchase

For a complete beginner this is impossible because the player won't be able to produce a sound. If the player has already made progress on an old student instrument and can produce a reliable sound then it is worth getting the player to try the instrument before purchasing because the player might prefer the tone of one instrument over another, and also the player might find the key-work easier to reach on one instrument compared to another.

It is important that the instrument is tested with a suitable bocal. A new instrument ought to be supplied with an adequate bocal (although this can sometimes be improved upon). Second-hand instruments may well have an unsuitable bocal.

A bocal should meet at least two basic requirements:

- Firstly when the bocal is inserted into the top of the short-joint then the octave hole (near the cork on the bocal) should lie underneath the octave pad (this sticks out from the top of the short-joint) so that when the crook key is operated the octave pad seals the octave hole on the crook.
- Secondly the bocal should be the right length to bring the instrument into tune (generally a size two is best).

If the bocal supplied with the instrument doesn't meet these requirements this prevents the player being able to test the instrument effectively from the point of view of tone, tuning and response, although the player will be able to test whether the instrument does actually play all of its notes.

When testing the instrument the player should test the whole compass of the instrument but focus on the middle range of the instrument from Low G through middle G to high G. The player should also use a fingering chart to test alternate fingerings because a particular fingering for a particular note may work well on one Bassoon but not on another.

The player should test the instrument with their own selection of reeds they have built up whilst learning to play. If the player is having difficulty with a particular instrument they are trying, even when it is matched with a suitable bocal, it could be down to how well the instrument is working (bear in mind that even brand new instruments might not be working well).