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A beginner's guide to student Bassoons (Nov 2024)

Although Bassoons are classed as woodwind instruments, some 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; less common are small Bassoons for children (see below). 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 (but see below) – this is not just because of the size of the instrument and the difficulty in playing it, but because even lower quality student instruments are expensive.

There are several designs of Bassoon aimed at children but these will be examined after first looking at the standard Bassoon.

The parts of a Standard 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 '**boca**l' or '**crook**' 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**' (not fitted to shortened Bassoons) 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 (key-work) 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 allow the instrument to become damaged).

The bocal: apart from the reed, the bocal (or crook) is the part of the instrument that has the 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 can be 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 usually matches most instruments. Manufacturers use other codes to indicate variations in bore design or thickness of the 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.

Variations in key-work (on standard Bassoon)

Modern student instruments are usually available with a range of key-work configurations – '**standard**', '**reduced**', '**short-reach**', or a combination of short-reach and reduced (note the term 'reduced key-work' is rarely used by retailers).

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

The most common practice is to count the keys as follows progressing from Bell to crook

1. Back of Bass (Long) Joint – thumb keys - bottom register Bb, B, C (single or double touch-piece), D. (total 4)
2. Front of Bass joint - finger keys - bottom register D#, C#. (Total 2)
3. Back of Boot joint – thumb keys – 2nd register Bb, bottom register E, F#, (Alternative) G#. (Total 4)
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. (Total 7)
5. Back of Wing (Tenor) joint – Thumb keys – Crook key (Octave key), 2nd register C# (also sounds 2nd register Eb when fingering D if linking mechanism is present), 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). (Total 4)
6. Front of wing joint – 3rd finger ring or plate (a ring always links with Thumb C# to sound 2nd register Eb when fingering D – so sometimes this is called the Eb vent key; a plate might not have this link if the instrument has reduced or short-reach key-work), 2nd finger F# trill (2nd register E to F#). (Total 2)

Unfortunately different manufacturers use different criteria for counting the separate keys on an instrument - most, but not all, ***do*** count the crook key as a separate key; and most, but not all, do ***not*** count the Low C key fitted with an additional touch-piece (the double C key or alternate C key) as a separate key – this gives rise to confusion when comparing instruments. The 'vented Eb' or Eb vent key (where the Thumb C# key can also function as an Eb key) requires a linkage between the Thumb C# key on the wing joint and the ring or plate for Left-hand finger III – this is not usually counted as a key because the two points of contact for the player - the left thumb C# key and the left finger III ring (or plate) have already been counted.

When comparing instruments with reduced key-work or short-reach key-work (see below) there is a further complication: commonly a plate is fitted for left hand finger III – this is counted as an extra key because it is replacing the standard ring key; but conversely plates can also be fitted for left-hand finger II and Right-hand finger I – and these are not usually counted because they are not adding any extra notes to the instrument (but some manufacturers do count them).

Reduced key-work: standard Bassoons are commonly manufactured with 18 to 21 touch-pieces. The keys that are not used by novice players are omitted and this reduces the cost of the instrument (and makes it more reliable) but the remaining keys are of standard design and in their standard locations. The keys that are most commonly omitted are the alternate Bb and/or the alternate G# key on the Boot joint giving rise to the common '**21 keyed**' Bassoon. The boot F# trill, and/or the boot C# trill, and/or the wing F# trill, can also be omitted reducing the Bassoon to a 20, 19, or 18 keyed instrument (note: if the standard link to the thumb C# key to enable the player to play 'vented Eb' is omitted then there is no necessity for a ring key for left-hand finger III, but sometimes a plate will be fitted to enable the hole to be more easily covered) There is no standard order to which keys are omitted so the number of keys is not an indicator of which keys are omitted (e.g. two 19 keyed Bassoons might have different keys omitted) - to make matters more complicated the manufacturer, whilst omitting some keys might actually add one or two other keys (a crook lock and/or a high d) so it is possible to have a 23 keyed Bassoon which at first glance appears to have standard key work but actually has reduced key-work (usually the boot Bb and G# have been omitted) but with additional keys (usually a crook lock and a high d key have been added).

Short-reach key-work: can have 21 touch-pieces but usually has fewer than 21. Short-reach key-work describes a Bassoon where the design and location of some of the touch-pieces have been modified for smaller hands: the touch-pieces for the right hand are located closer and some touch-pieces are lengthened; the left hand finger III key is usually fitted with a plate (instead of a ring) to cover the tone-hole (the link to Thumb C# to create the vented Eb may be omitted); sometimes the left hand finger II tone-hole is also fitted with a plate key to make it easier to cover; and sometimes the right hand finger I tone-hole is also fitted with a plate key to make it easier to cover. Often the manufacturer omits the alternative Bb and G# keys on the boot joint so in fact most short-reach bassoons also have reduced key-work; unfortunately manufacturers do not always make it clear whether short-reach, reduced, or short-reach and reduced key-work has been fitted to a particular model of Bassoon; again additional keys (the crook lock and high d) might be fitted so a 21 keyed short-reach bassoon might in fact be a short-reach bassoon with reduced key-work and additional keys! Note that the plates for left-hand finger II and right-hand finger I are not usually included in the count of keys (but some manufacturers do include them) but the plate for left hand finger III is included (regardless if it has the link for vented Eb or not).

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. 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 little 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.

When comparing the key-work on different Bassoons the only truly reliable way is to handle the Bassoon and count the keys (or possibly to ask the retailer to take photos of the front and back of the actual (assembled) instrument they have in stock and send them to you). Do not rely on retailers' descriptions – these are very often incorrect, and do not rely on website photos – they rarely show the front and back of the instrument and they are frequently photos of the wrong model (even manufacturers' own websites can be incorrect).

Special beginner Bassoons for children

'Mini-Bassoons' and 'Tenoroons'

In recent years there has been a resurgence in the use of small Bassoons specifically for primary school children. As well as being smaller, these instruments also have reduced key-work – the bell Bb and B keys are omitted (as these small Bassoons are transposing instruments the name of the keys are the same as on the standard size Bassoon even though they do not produce the same notes) and so are other alternate keys and trill keys. This reduces the weight of the instrument and makes it less prone to damage (which is an important consideration for young children). Because these instruments are pitched higher than the standard Bassoon, they require sheet music that is transposed to the correct key and so this has to be taken into account when incorporating the instrument into ensembles. The 'mini' Bassoon plays in 'G' - a fifth higher than the standard instrument, and the Tenoroon plays in 'F' - a fourth higher than the standard instrument.

The small Bassoons currently available from retailers in the UK are the **Bassetto** 'Faggottino' B95 (in G) Mini-Bassoon, **Elkhart** Mini-Bassoon (in F) the **Howarth** 'Mini–Bassoon plus' (in G), the **Howarth** 'Tenoroon' (in F), and the '**Ludlow**' Mini-Bassoon (in G). The **Wolf** Fg5 'Quint Mini-Bassoon' (in G) and Fg4 'Quart Mini-Bassoon' (in F) are currently only available by import.

Small Bassoons have been used for teaching purposes since the 17th century but this practice is uncommon today; usually children journey from Recorder, sometimes 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 is very interested in playing Bassoon, but is too small to play a standard size Bassoon (and there is also a teacher willing to teach on a small instrument) then

these instruments might be of interest; however, generally it is better for a child to make 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 still expensive due to the low numbers of instruments in production, and most teachers and schools will not be familiar with them.

Shortened Bassoons

Three manufacturers (**Adler, Amati** and **Heyday's**) produce 'shortened' bassoons – the Heyday's instruments are aimed at primary school children and the Adler and Amati instruments are aimed at secondary school children (but would be suitable for an adult beginner). These instruments are actually standard size bassoons, and are thus at the standard pitch (C), but they are not fitted with a Bell and have no keys for (the infrequently used) Low B and Bb – thus the length of the bore is shorter (the Lowest note is C) but the rest of the instrument is standard size. These 'shortened' Bassoons also have reduced key-work (some alternate keys and trill keys are omitted) which further reduces the weight of the instrument and makes it less prone to damage. These 'shortened' Bassoons are suitable up to and including grade 3.

Heyday's produces two models (both currently available only by import) – the Fagonello 'Basic' Bassoon, and the Fagonello 'Chromatic' Bassoon. The Basic model has very reduced key-work (only 10 Keys) - as well as having no Low B and Bb it has: no wing f# trill, (no LH3 link to C#), no crook key, either no high A (or perhaps C?); no alternative boot Bb, G#, F# and c# trill; no boot ring key; and no Bass Eb and C#. Without these last two keys the instrument cannot sound all the notes in the chromatic scale but these notes are not required for absolute beginners. In contrast the Fagonello 'Chromatic' Bassoon does have the Bass Eb and C# keys, making it a 12 key Bassoon, and so it is fully chromatic (which some teachers may prefer).

Because of the innovative one-piece design of the Heyday's instruments they are significantly lighter than other 'shortened' Bassoons – this makes it much easier for young children to carry and support whilst playing and will remove the possibility of damage during assembly (the prime cause of repairs), however I have not examined one of these instruments on the work bench so I cannot vouch for their build quality.

Adler also produces two models of 'shortened' Bassoon. The Adler C 1350 'mini' Bassoon has 15 keys, as well as having no Low B and Bb it has: no alternative boot Bb, no alternative boot G#, no boot c# trill, no alternate boot F#, no wing f# trill, and (unusually) no crook key. The Adler C 1350P (plus Crook Key) has 16 keys – it has the same specification as the C 1350 but with the additional of the crook key (which some teachers may prefer because although its function is irrelevant for the beginner, its absence can lead to bad habits developing in the positioning of the player's left hand). Confusingly Adler call both these models 'mini' Bassoons – however they are not – they are shortened Bassoons. Only the 1350P model is currently available in the UK

Amati produce the 'Vantage' model (which is possibly a renaming of the previous '32C' model) which has the same keywork as the Adler C 1350P, and is of a similar quality

The Adler and Amati instruments are lighter and more portable than a 'full size' Bassoon, cost less to maintain, and are of good quality and will take players up to and including grade 3. They would be a good instrument for secondary school stock but they are not small or light enough for primary school children; the useful lifetime of the instrument before the player needs to upgrade may not justify the price of the instrument for an individual.

Note that all these beginner Bassoons are not 'full compass' instruments – that is they cannot sound the lowest and highest notes that a standard size Bassoon can (from Low Bb, two octaves and a second below middle C, - to high E, a tenth above middle C). The lowest note on a Mini-Bassoon is G (an octave and a fourth below middle C); the lowest note on a Tenoroon is F (an octave and a fifth below middle C); and the lowest note on a shortened Bassoon is C (two Octaves below middle C).

Variations in design

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 condensing 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 condenses. It is also desirable that the wide bore of the boot-joint is also plastic-lined because the water that condenses 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.

Categories of student (full compass) instruments

Student Bassoons, regardless of key-work, can be divided into five 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 standard 21 keys as described earlier. 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 standard quality student instrument is great enough that it is worth considering starting on a budget instrument (as long as it is actually working when you buy it) and then having the instrument tweaked and repaired on a relatively frequent basis (although little can be done to improve the tone or tuning of the instrument). Several shops have started selling budget Bassoons - these instruments are usually from China and are often stamped with a suitably attractive name (Maestro, Tuyama Etude, etc) or sometimes stamped with the shop's own name (or initials); the most well-known examples of this last practice are the budget priced **JP191** and **JP291** student Bassoons from John Packer which are each over £1000 cheaper than the cheapest standard quality student instrument.

Standard student instruments: the only manufacturer making Bassoons of 'standard' quality is Amati; the old Amati 3 series are short-reach bassoons with reduced key-work; and the old Amati 4 series are not short-reach. In conjunction with Howarth Amati have produced new additions to both series – the ABN33 HL and ABN41iii HL ('Vantage'), both of these have new bore designs which are said to improve intonation, tone, and projection.

Premium student instruments: these are better made than standard 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 or current standard student instruments. Premium student instruments are currently available from **Adler**, **Fox/Renard**, **Howarth**, **Moosman**, **Schreiber**, and **Wolf**.

Vintage instruments: in regards to 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**.

Renting an instrument

Renting a Bassoon can be a good option for a beginner; this is partly because Bassoons are expensive instruments and partly because a player who progresses on the instrument is likely to have to upgrade at least once, if not twice, as they improve. I advise that you rent a new instrument (some shops rent out second hand instruments but these can be in poor condition) and avoid renting budget instruments (they quickly deteriorate but beginner players think it is their own playing rather than the instrument that is at fault).

Renting is a particularly good option for the smaller child – consider either the shortened Bassoons (the Alder 1350P or Amati 'Vantage') or one of the Mini-Bassoons (the Bassetto 'Faggottino' B95 Mini-Bassoon, Elkhart Mini-Bassoon, Howarth 'Mini–Bassoon plus', Howarth 'Tenoroon', or the 'Ludlow' Mini-Bassoon) but **only** if the Bassoon teacher is set up to teach on such instruments).

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 (crook). 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 2 is best).

If the bocal supplied with the instrument doesn't meet these requirements this will prevent 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 as well as they ought to be).

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