

LESSON 4

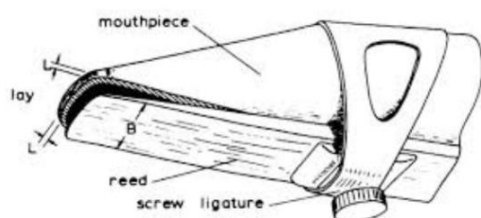
WOODWIND INSTRUMENTS

The woodwind family descended from various ancient instruments made of wood, bamboo, bone, or metal. There are two main types of woodwind instruments: flutes and reed instruments. What differentiates these instruments from other wind instruments is the way in which they produce their sound.

Reed Instruments

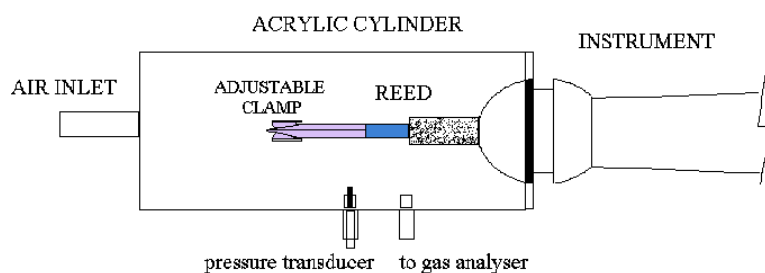
Reed instruments produce sound by focusing air into a mouthpiece which then causes a reed, or reeds, to vibrate. Similar to flutes, Reed pipes are also further divided into two types: single reed and double reed.

Single Reed Wood Winds



Single-reed woodwinds produce sound by placing a reed onto the opening of a mouthpiece (using a ligature). When air is forced between the reed and the mouthpiece, the reed causes the air column in the instrument to vibrate and produce its unique sound.

Double Reed Wood Winds



Double-reed instruments use two precisely cut, small pieces of cane bound together at the base. The finished, bound reed is inserted into the instrument and vibrates as air is forced between the two pieces (again, causing the air within the instrument to vibrate as well).

1. The woodwind family descended from

various ancient instruments made of

_____, _____, _____, or _____.

2. There are two main types of woodwind instruments: _____.

3. What differentiates these instruments from other wind instruments is the way in which they

_____.

4. Like flutes, Reed pipes are also further divided into two types:

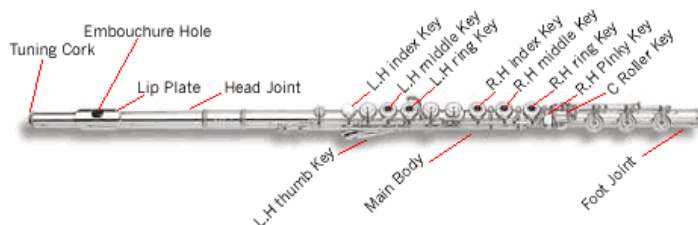
_____, _____.

5. Single-reed woodwinds produce sound by placing a _____ onto the opening of a mouthpiece (using a ligature).

6. Double-reed instruments use two precisely cut, small pieces of _____ bound together at the base.

FLUTES

Flute



The flute and the piccolo are the only woodwind instruments without a reed. The Performer blowing across a hole in the side instead of into the end of the tube. As in all other woodwind instruments differences in pitch are obtained by opening and closing the finger holes and keys. The flute is usually made out of wood. Though metal flutes provided with various and elaborate key systems are by no means uncommon. The

most perfect modern type is known as the Boehm Flute named after Theobald Boehm, who in 1832, modified and greatly improved its construction. Boehm flutes are made of wood or of silver either solid or plated.

Playing Range:



Piccolo

The first Octave is weak and of little effect, its tones being better replaced by the second octave of the flute. The second octave of the piccolo is useful for imparting brilliancy in fortissimo passages or it may be used for extending the upward range of the woodwind, either forte or piano by continuing a passage when it passes above the compass of the flute. The highest notes are shrill and piercing. The use of the piccolo in the orchestra is incidental rather than normal. When three flutes are employed, the third, or the second and third players take the piccolo part or parts where indicated in the score. Parts for the piccolo are written an octave below their actual sound in order to avoid the constant use of ledger lines above the staff. It is therefore a "Transposing Instrument"

Playing Range:



Reed Instruments

The Clarinet



The clarinet is of cylindrical bore and is played with a mouthpiece to which is bound a single flat reed of cane. The clarinet comprises four registers, which can be blended without perceptible break by the skillful performer.

The first or lowest is dark and ominous. The second consists of four or five dull weak notes of inferior quality.

The third or medium register is of singular beauty, combining nobility, tenderness and that limpid quality for which the clarinet is distinguished.

The highest register is brilliant, but difficult to subdue, hence useful mainly in forte passages.

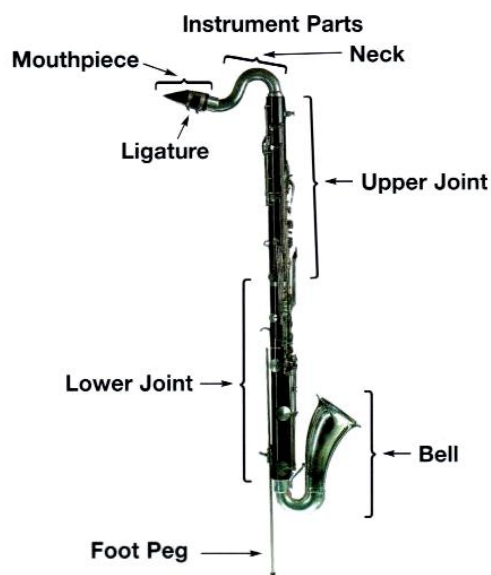
Clarinets are made in five or six different keys. All except the clarinet in C are "Transposing Instruments". In the modern Symphony Orchestra, the two (or three) clarinets are pitched in A or in Bb. The latter sounds

one tone lower than written; the former in A sounds a tone and a half lower than written. Compositions in sharp keys are usually scored for the A clarinet, in flat keys for Bb instruments.

Playing Range:



The Bass Clarinet



This instrument is pitched an octave lower, than the ordinary clarinet. Its peculiar form as been adopted for convenience in playing and has no influence on its tonal quality, which (as in the case of the English Horn when compared with the oboe) is similar to, though not identical with that of the regular clarinet. It has neither the liquid quality in the medium, nor the menacing quality in the low register that distinguish the ordinary clarinet but its full rich organ like tones form excellent basses for the woodwind section, especially in sustained legato passages. In the execution of rapid staccato notes, it cannot compete with the bassoon. It is one of the most eloquent of solo voices, standing pre-eminent in the rendition of motives expressive of dignity and nobility. Although the bass clarinet is made in A as well as in Bb, it has been found that, owing to its slowness of speech no passages are likely to be written which require execution too rapid for convenient performance on the Bb instrument. One Bb bass clarinet is therefore all that is required in the Symphony Orchestra. It is usually provided with a low Eb

key. This gives the instrument the same downward range as the bass clarinet in A.

Playing Range:



The Basset Horn



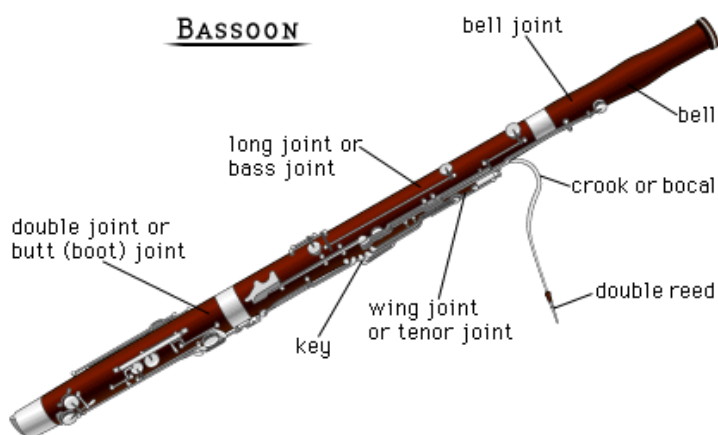
The basset horn was invented in the year 1770 by German Clarinet maker by the name Horn. He called his invention "basset horn" which means little bass (clarinet made by Horn). The Italians and French unaware of this circumstance translated the name "Horn" literally, hence the designation "Corno di Bassetto" and "Cor de Basset" both of which are misnomers.

The basset horn is a tenor clarinet in F provided with additional keys which extend its downward range to C instead of E as in ordinary clarinets. The bell joint is made of metal and is more flaring than that of other clarinets owing to the wide bore of the instrument. It is written in the treble clef as a "Transposing Instrument in F". Its tones sounding a fifth lower than its notation.

Playing Range:**The Oboe**

The oboe is a double reed musical instrument of the woodwind family. The oboe is pitched in concert C and has a soprano range. Two and often three oboes are employed in symphony orchestras. The third performer being also provided with an English Horn to be used when required by the score. A musician who plays the

oboe is called an oboist.

Playing Range:**The Bassoon**

The bassoon is the natural bass of the oboe family. It is a double reed instrument of the conical bore with a tube about nine feet long. Doubled upon itself for convenience of handling it has an extreme compass of three and a half octaves of which however the four or five highest notes are seldom used.

The tones of the lowest octave are full and rich and of ample power to form a foundation for the entire woodwind section.

The medium register is not especially resonant but is characterized by an agreeable dryness which is absolutely unique possessing neither the incisive bite of the oboe nor the liquid beauty of the clarinet. And with limited capability for swelling and diminishing the tone, the bassoon rivals the flute itself in the rendition of staccato passages. The high notes from Eb up to Bb are of singularly appealing beauty and have been called "Vox Humana Tone" (human voice tones). The Bassoon is a "Non-Transposing Instrument". The bass, tenor and treble clefs are used in its notation. Symphony Orchestras usually require three players the third of whom is also provided with a contra bassoon to be used when required by the score.

Playing Range:

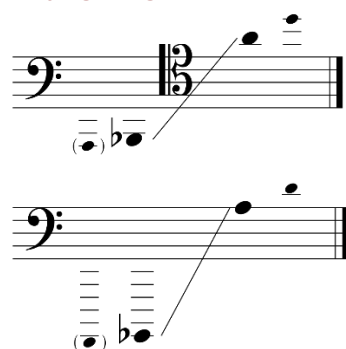
The Double Bassoon



This ponderous instrument, also called contra bassoon is pitched an octave below the bassoon to which it bears the same relation as does the double bass to the cello. It is usually about sixteen feet long, but is doubled on itself four times to make it less unwieldy. Although it has a possible range of three and a half octaves its principal use is to extend the downward range

of the bassoon thus supplying a solid deep pitched foundation for the woodwind section. The tones comprising the two lowest octaves are the most valuable. The tonal quality differs little from that of the ordinary bassoon. Although it is not a modern instrument, its use was long restricted, owing to imperfections in intonation. Recent improvements have made its use more general and the third bassoonist of Symphony and Grand Opera Orchestras is always provided with a double bassoon to be used when required by the score.

Playing Range:



The English Horn/Cor Anglais



The name of this instrument is misleading, as it is neither English nor a horn but simply a double-reed woodwind instrument similar to an oboe.

It has the same range, but is pitched a fifth lower. The two or three highest notes are seldom used, as they are difficult of production and of inferior quality to notes of the same pitch taken on the oboe. It blends admirably with all the other instruments of the woodwind group, even its lowest tones being available in soft combinations without fear of cutting through the tonal mass. The English Horn in reality is a "Transposing Instrument in F" though not so designated in the score. It sounds a fifth lower than its notation, The English horn part is usually played by the third oboist.

Playing Range:



The Saxophone

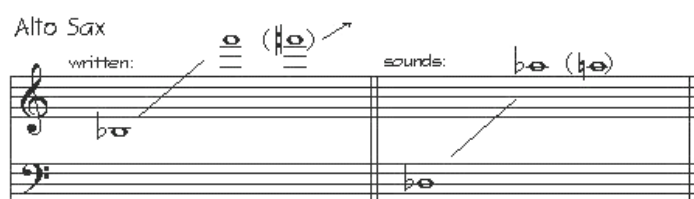
The saxophone is a family of woodwind musical instruments. It was invented by the Belgian instrument maker Adolphe Sax in 1840. Each type of saxophone has a different size, pitch and key. There are four main types of saxophone commonly used, although more do exist. Saxophone players are called saxophonists.

Alto Saxophone:



The alto saxophone is smaller than the tenor saxophone but larger than the soprano. The range of the alto saxophone is from concert $D\flat_3$ to concert $A\flat_5$ (or A_5 on altos with a high $F\sharp$ key). As with most types of saxophones, the standard written range is $B\flat_3$ to F_6 (or $F\sharp_6$). Above that, the altissimo register begins at $F\sharp$ and extends upwards. The saxophone's altissimo register is more difficult to control than that of other woodwinds and is usually only expected from advanced players.

Playing Range:

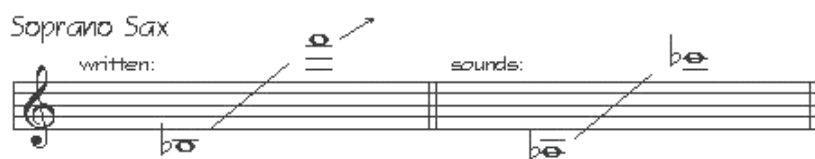


Soprano Saxophone:



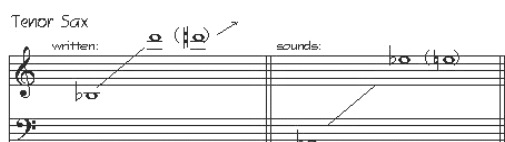
The soprano is the third smallest member of the saxophone family, which consists (from smallest to largest) of the soprallo, sopranino, soprano, alto, tenor, baritone, bass, contrabass, and tubax. It is in the $B\flat$ key.

Playing Range:

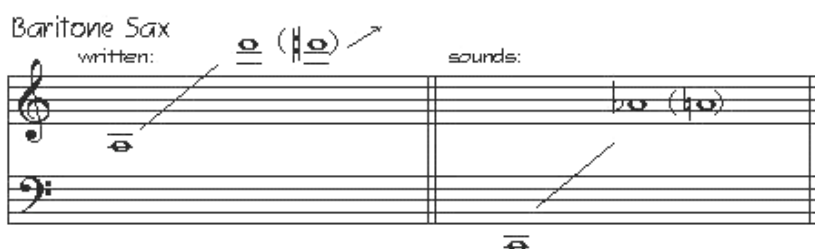


Tenor Saxophone:

The tenor saxophone is a medium-sized member of the saxophone family. The tenor is pitched in the key of B $\flat$, and written as a transposing instrument in the treble clef, sounding a major ninth lower than the written pitch. Modern tenor saxophones which have a high F# key have a range from B $\flat$ 2 to E5 and are therefore pitched one octave below the soprano saxophone. The tenor, with the alto, are the two most common types of saxophones.

Playing Range:**Baritone Saxophone:**

The baritone saxophone is one of the larger and lower pitched members of the saxophone family. The baritone is distinguished from smaller sizes of saxophone by the extra loop near its mouthpiece; this helps to keep the instrument at a practical height. It is the lowest pitched saxophone in common use.

Playing Range:

WOODWIND INSTRUMENT TEST

1. There are two main types of woodwind instruments: _____ , _____ .
 2. The _____ and the _____ are the only woodwind instruments without a reed.
 3. Parts for the piccolo are written an octave below their actual sound in order to avoid the constant use of ledger lines above the staff. It is therefore a “_____ Instrument”.
 4. The clarinet is played with a _____ to which is bound a single flat reed of cane.
 5. Clarinets are made in five or six different keys. In the modern Symphony Orchestra, the two (or three) clarinets are pitched in _____ in _____ or in _____.
 6. The _____ is pitched an octave lower, than the ordinary clarinet.
 7. The bass clarinet is made in _____ as well as in _____.
 8. One _____ bass clarinet is therefore all that is required in the Symphony Orchestra.
 9. The basset horn was invented by German Clarinet maker by the name Horn. He called his invention “basset horn” which means _____ (clarinet made by Horn).
 10. The Italians and French unaware of this circumstance translated the name “Horn” literally, hence the designation “_____” and “Cor de Basset”.
 11. The oboe is a _____ reed musical instrument of the woodwind family.
 12. A musician who plays the oboe is called an _____.
 13. The bassoon is the natural _____ of the oboe family.
 14. The double bassoon, also called _____ is pitched an octave below the bassoon to which it bears the same relation as does the double bass to the cello.
 15. The name of the _____ is misleading, as it is neither English nor a horn but simply a double-reed woodwind instrument similar to an oboe.
 16. The English Horn in reality is a “Transposing Instrument in _____”.
- The saxophone is a family of _____ musical instruments.
- Saxophone players are called _____.