Teacher's Guide

Bassoon

Selmer®

by Homer Pence

Teacher's Guide to the Bassoon

Almost every book or article written about instrumental study gives emphasis to developing good habits from the outset. Who would disagree that care taken, in the first lessons, to establish correct hand position, good embouchure, etc., is crucially important for the student's future development? Yet the beginning bassoonist is often neglected during his first crucial weeks - is often handed a bassoon, a spurious fingering chart, an un-tested reed, and told to go to work.

Why this neglect of an instrument which can add so much to an ensemble, yet often is left to detract instead?

1 - Few music teachers had an opportunity in college to learn more than the most general facts about the bassoon.

2 - Ignorance makes the teacher afraid to coach the student. Convinced the first lessons are crucial, he presumably expects to do more harm than good.

3 - With twenty clarinets, but only one bassoon, the teacher finds it easy to justify his neglect on utilitarian principles.

4 - There is no local source of reliable information about the bassoon.

Assuming that some or all of the above apply in a given situation, is there a solution that is practical and at the same time musically sound?

A Basis for Teaching

Self-education plays a large part in any learning process. Formal instruction provides the foundation for sounder and more efficient self-education. (To attempt "learning through doing" without this foundation would be wasteful if not futile in most cases.) Thus, the doctor keeps abreast of the latest medical advances and the plumber is able to install the newest type of equipment. Neither man has returned to school but has simply built on his previous knowledge.

It is possible for the teacher to learn and teach the rudiments of the bassoon in this same way. Most school music teachers have had some formal woodwind instruction in order to qualify for a license. This will serve as a beginning.

At this point the natural reaction is puzzlement. How may this be accomplished with no previous experience on the bassoon? Many regard *il fagotto* as a freak, with nothing in common with other instruments except its reed. It is not really so different from other woodwinds. Start with the points of similarity. The *differences* will then begin to take care of themselves. Basic hand position, embouchure, and tone production techniques are reasonably similar to those used on saxophone, clarinet, and oboe. Relax your embouchure and give it a try!

It is doubtful that anyone will become thoroughly acquainted with the bassoon through this procedure. However, the common sense, experience, and maturity of the music teacher will enable him to learn enough in this way to guide the student effectively. Most often the student selected to learn the bassoon is outstanding in ability and deserves this extra time and effort on the teacher's part.

All bassoons, even the finest, are "individuals" and it will profit the teacher to ascertain, *before* he or his student starts, which registers are "stuffy," which notes seem out of tune or tonally imbalanced, and which parts of the instrument need mechanical repair.

In the first lesson these points deserve special emphasis:

Holding the bassoon

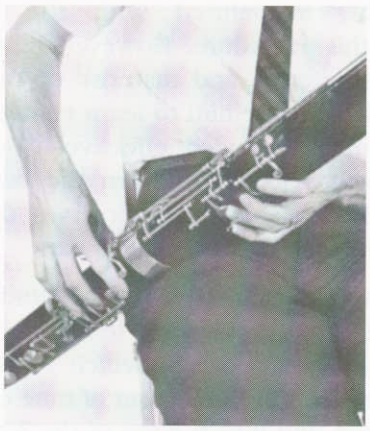
It is important to establish at the beginning a comfortable, natural posture. The choice between neck-strap or seat-strap will determine this posture to a great extent. I am a firm believer in the virtues of the seat-strap: it allows a relaxed position because it takes the weight of the instrument off the student's neck; it anchors the bassoon at the bottom, rather than the center, and so prevents it from swinging back and forth from a center pivot point; it usually prevents the student from leaning or slumping toward the instrument.

Hand Position

The fingers of the left hand should be slightly arched. The fourth finger may tend to flatten out because of the long reach between D and C holes. If so, a plate-key will help this fourth finger. The left index finger must support some of the bassoon's weight. Experiment with the

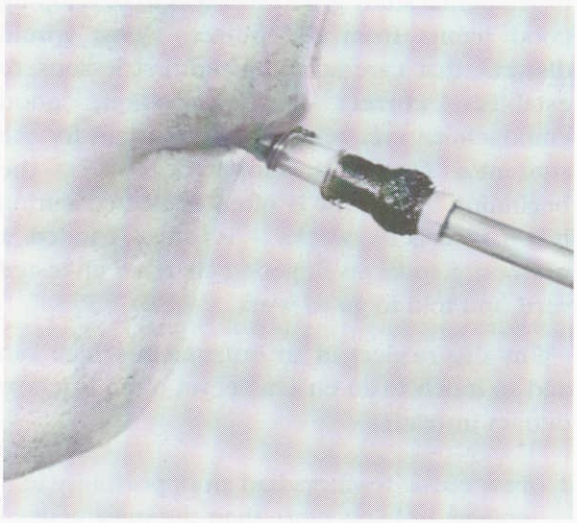
angle of the instrument to minimize the weight at this point. The thumb can be lined up with the high A key. This will allow it to pivot down to the whisper-key or up to the high C key.

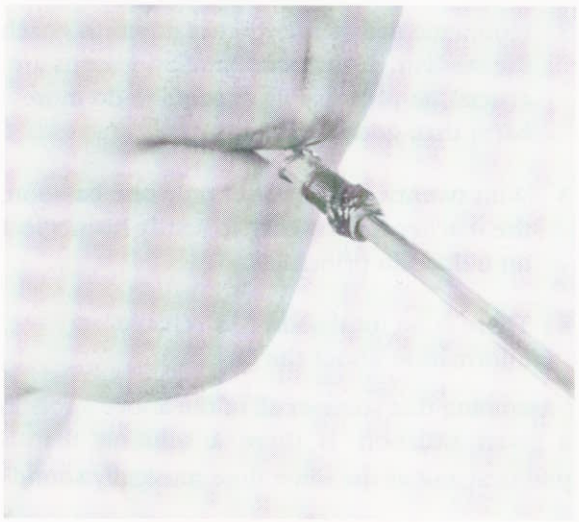
For players whose fingers are sufficiently long, a hand rest on the boot joint will be invaluable in helping to maintain the correct position of the right hand. The fingers of this hand also should be slightly arched. The main pitfall to beware of in the right hand is placing the thumb too high on the joint to support the instrument. The thumb should be lined up with the low E key. This will make it easy to reach the F# and B♭ keys. As with any woodwind instrument the fingers should move only slightly in changing from note to note.



Embouchure

Keep the corners of the mouth in. The lower lip should be slightly in back of the upper one. The upper lip may be drawn fairly firmly against the teeth, but the lower one should be more relaxed, even turned out slightly. Turning the lower lip too far over the lower teeth, a common error with beginning bassoonists, tends to dampen the vibrations of the reed and consequently the tone will not be as full as possible. The chin should be dropped back slightly, producing a slight overbite, and should be as free as possible from wrinkles. The best start towards a good bassoon embouchure is to relax consciously as you play.





Tonguing

This phase of technique should produce relatively few problems on the bassoon. The reed is small in comparison with the reed and mouthpiece combination of the single-reed instruments, and usually does not interfere with the natural action of the tongue. Touch the reed with a point on the tongue just behind its tip and slightly on top. The proper tongue action will result when the tongue touches the lower blade of the reed and the student feels the reed's tip-opening slightly. The best placement of the tongue on the reed will vary somewhat with the length of the player's tongue. The tongue must be placed so as to remain relaxed and unhindered in its movement. Needless to say, there should be minimum outward movement

of the lip or jaw, as this will hinder the tongue's freedom of motion.

Producing the first tones

Second space C in the bass clef is a good starting tone. Take a full deep breath before each note. Be sure oral cavity and throat stay open and relaxed. Play *forte*. Gradually extend the range up and down, using C as a center point. Try taking several notes in one breath, making sure the tone stays full and relaxed. Don't worry if the pitch is a little flat at first. As the student gets used to the reed and instrument, this will correct itself. Again, *relax*. As the student progresses to notes farther away from the second space C, he may find that his inner mouth shape alters slightly. This shape normally varies between an "AH" shape as he goes lower on the instrument and an "EE" shape as he begins to reach the higher register. The embouchure should reveal only a slight change, if any at all. Do not be misled by this into thinking that it does not change: the change is slight but can usually be felt, if not seen, in the center of each lip, especially the lower.

Tone quality

Four factors enter into the production of a good bassoon tone: (a) properly adjusted instrument and reed (b) correct breath control and support (c) a relaxed, well-placed embouchure (d) a good mental conception of what a bassoon should sound like. This last is of great importance but is probably the factor most often overlooked. Students should be encouraged to listen to the performance of other bassoonists, recorded or live, whenever possible. While no two performances will have the same quality of tone, the student will soon arrive at some conception of good tone. This mental idea of sound then produced subtle adjustments of air column, embouchure, and reed evaluation as the student gradually builds his own tone quality.

As you see, these basic techniques of bassoon playing are similar to the ones used for all woodwind instruments. This brings us back to my initial premise — the importance of a good foundation in fundamentals. Once these are established and become an integral part of the student's playing, he will be able to make good progress in more advanced work. Whether an advanced technique is thought of in terms of facile fingers or a beautiful tone, it must be grounded solidly on these basic concepts. Time, patience, and hard work will take care of the rest.

The Instrument

Among the major problems of teaching a double reed instrument is the instrument itself. This seems especially true of the bassoon. I have examined dozens of school-owned bassoons and found many of them unsatisfactory! Some were in poor mechanical condition, while others were faulty in their basic construction. The criteria used to judge these instruments may be listed as follows:

1- A scale sufficiently even so that the player may play in tune with the minimum favoring (even the finest bassoons have some intonation problems).

2- Ease and evenness of response. Stuffy registers are common to many inferior bassoons and sometimes certain tones seem to leap out with a quality totally different from those adjacent to them.

3- An acceptable tone quality, full, resonant, and characteristic of the bassoon.

4- Good workmanship in the boring and drilling of the wood and key mechanisms that function properly.

These are standards which anyone would accept as being reasonable. They may be found in several makes of bassoons now available. However, the general lack of knowledge about the bassoon has permitted many students and music directors to buy unacceptable instruments.

The teacher of music is able to purchase a good clarinet, trumpet, or trombone with minimum effort and maximum confidence in their manufacturers. Unfortunately, this is far less true of the bassoon. However, the additional time spent on a careful selection will reward the teacher with good results from his students and the satisfaction that a wise purchase always brings.

In choosing a bassoon, there are several factors to consider in addition to playing qualities. First, the key system used: there are two main types in use today, the French or Conservatory System, and the German or Heckel system.* French

*(*The term Heckel system is often confused with the Heckel-Biebrich bassoon. Johann Heckel and Karl Almenraeder designed and built the first German system instrument in 1831. Since that time all instruments using this system are referred to as Heckel system instruments. However, only those instruments made at the Heckel Instrumentenfabrik at Biebrich are Heckel-Biebrich bassoons.)*

system bassoons are smaller in bore than their German counterparts and, consequently, have a thinner quality. In this country the German system is used almost exclusively, and there are few teachers here who even know the French system. Therefore, it is advisable to be sure you are getting a German system bassoon.

Secondly, the number of keys needed for satisfactory performance: the standard bassoon has twenty-two keys including the whisper key. This, which opens and closes the vent on the bocal, is very important to facilitate playing in the low register. Beware of the bassoons which do not have whisper keys; they are probably very old or were not designed for use in this country. Of these twenty-two keys, there should be a minimum of four roller-keys. These should be placed between the F and A♭ keys on the boot joint, (little finger, right hand) and D♭ and E♭ keys on the bass joint, (little finger, left hand). The following additional keys and "extras" are helpful, but not strictly necessary for a student instrument.

1-High D vent speaker-key on the tenor joint.

2-A♭-B♭ trill key on the boot joint.

3-Additional roller keys.

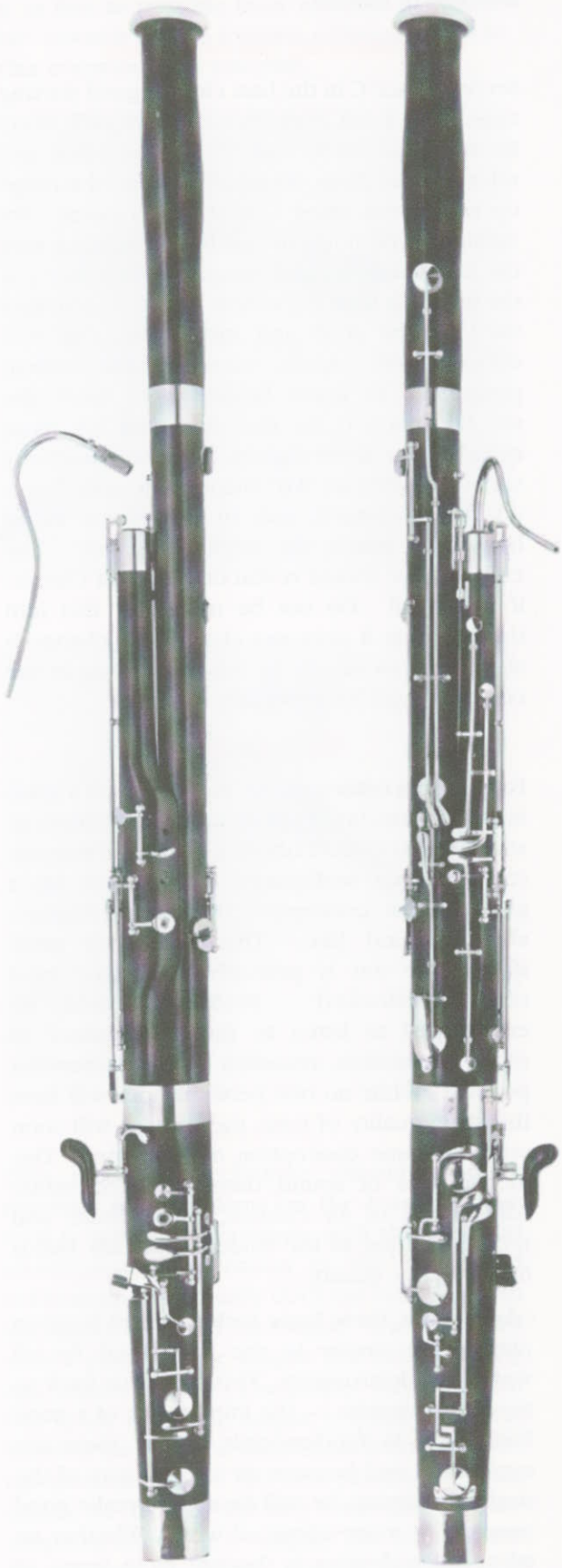
4-Covered C hole (4th finger, left hand).

5-Whisper-key locking mechanism

Two other helpful additions to the bassoon, whether for student or professional use, are the hand rest to support the right hand, and the joint lock., this latter device connects and helps to stabilize the tenor and bass joints.

Generally two bocals are standard equipment. These come in graduated lengths from #00 to #4. The higher the number, the longer the bocal. Numbers 1 and 2 are most often used, as these tune around A-440. While it may not be possible for a school to own a Heckel-Biebrich bassoon (in fact, it would probably not be the best instrument for a school with a limited budget) a Heckel bocal can, if matched properly to the instrument, improve the tone, response, and intonation of even the worst bassoons. The cost of a fine bocal is nominal in light of what it can do to improve the instrument.

A sturdy case, strap and swabs, complete the equipment. Wool swabs with wooden handles are generally not best for bassoons. They tend to leave lint, get dirty easily, and seldom will they fit through the narrow upper portion of the tenor joint. A long triangular cloth tied to an aluminum



rod (similar to the flute swab) is the most practical. This can be pulled through the tenor joint, using the rod as a weight, and then wrapped around the rod to clean the two sides of the boot joint.

Materials used in bassoon construction

Many manufacturers are experimenting with, or already have in production, bassoons made from plastic or other synthetic materials. As with other instruments, the plastics are usually used in lower priced models, sometimes with practical success and sometimes with utter failure. As with other facts of construction, the care and experience of the maker are of prime importance. It is completely irrelevant that an instrument can be suspended in a tank of water and still play. What is important is that the instrument, regardless of the materials used, meet the standards mentioned above.

Wood instruments continue to be made of hard maple or, occasionally, other similar woods. This is finished with red or mahogany stain, and recently black has also become popular. The color of an instrument has no direct bearing on its playing qualities. The pads used on bassoons are usually either the "brownskin" type or white kid. Most professionals and repair men believe the white kid pad is superior in seating qualities and for retaining softness, but the skin in tan pads is more air-tight. Bassoon keys are normally of cast-plated variety, rather than forged. Nickel and silver plating are commonly used and the choice between them is a matter of personal preference. I prefer the feel of silver-plated keys, and many repairmen think that silver, due to its malleability, takes and holds adjustment better than nickel-plate.

Care and maintenance of the bassoon

I mentioned earlier that many school instruments which do not work properly are suffering from bad mechanical condition. Much of this could be avoided by proper care. The following suggestions will help to keep your instrument in top condition and avoid unnecessary repair bills.

1-After each playing session the instrument should be swabbed out, the keys and body wiped, and water blotted from the pads and finger holes with cigarette paper. These are probably the most important steps in keeping the bassoon in good condition. Water left in the bore can do untold damage to the wood of an instrument, not to mention that it is unsanitary. Finger smudges left on the keys will shorten the life of almost any plating job. The bell and the bass joint need not be swabbed after each playing, as no water reaches these parts. However, it is wise to dust them occasionally.

2-Every four to six weeks the key bearings at the posts and springs should be oiled with a light key oil. The amount of oil which will accumulate on the point of a large sewing needle is usually sufficient. This lubrication will keep the key mechanisms silent and smooth, an important factor in good technique. Also, well-oiled pivot screws and rods will not rust and corrode, an important deterrent to costly repair bills.

3-About every six months the bore should be oiled with a small amount of purified linseed oil or one of the several bore oils on the market. This will replace the oil extracted from the wood by repeated swabbings. This job is best done with a long swab treated lightly with the oil. The parts which are rubber-lined (the tenor joint and the small side of the boot) must not be oiled. For instruments which have no water-tube linings in the finger holes, it is a good idea to put a drop of pure olive oil in these holes when you oil the bore.

4-Wash out the bocal with warm, soapy water about once a week, and brush dust and lint from around keys, as needed. An inexpensive, small paintbrush is ideal for this job. A word of caution about cleaning the bocal may be advisable here. Never use a needle or pin to open the hole of the nib. Should it become clogged, clean it with a broomstraw or toothpick. This will prevent enlargement of this very critical opening.

5-Care should be exercised in the assembly of the bassoon. Holding the boot joint in the right hand, turn and push the tenor joint into the smallest of the two holes on the boot. Be careful that the bridge mechanism coupling these parts is in place so that the whisper key may be operated from the low E key. Still holding the boot and tenor joints in the right hand, carefully twist and push the bass joint in the larger hole. If the instrument has a joint-lock, be sure not to force the rod in place. If there is no lock, turn the bass joint counter-clockwise until all thumb keys on this joint and the tenor joint are within easy reach of the

left thumb. Next put the bell on top of the bass joint, again taking care that the connection is in line. When inserting the bocal, never hold it at the end on which the reed is placed. Always grasp it at the top of the curve and insert it with a turning and pushing motion. Be careful that the nib on the bocal does not catch and tear the whisper-key pad.

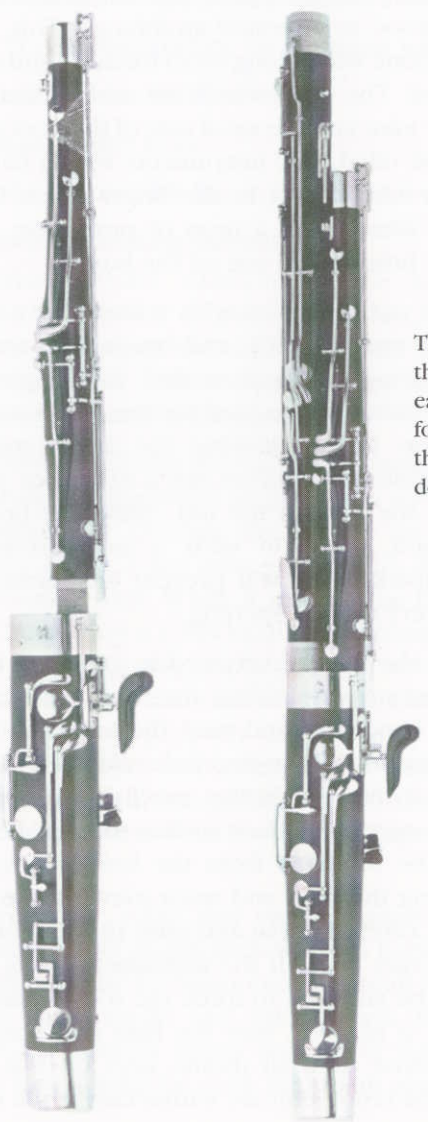
6-While the bassoon is not as susceptible to cracking as the oboe or clarinet, it would be risky to expose it to extended periods of heat and cold. The instrument should be played at room temperature and, of course, should not be taken out in the rain, freezing temperatures, or direct sunlight.

If these steps are followed faithfully, repair bills will be kept at a minimum, in addition to the obvious benefit of having an instrument which functions properly.

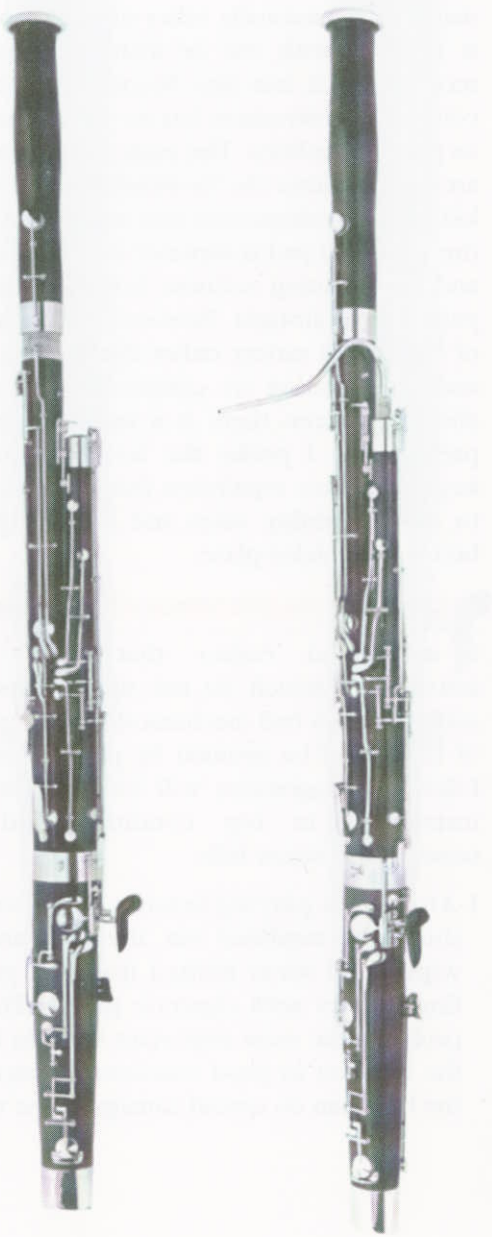
A few final points about picking out a bassoon may help you make a wise purchase.

Don't be fooled into believing that all bassoons of a given make are of equal quality. The difficulties of boring, drilling, and key-mounting cause inconsistencies even in the finest makes. Don't let price be your sole guide. Look for the most instrument for the money, but remember that there is a minimum price consistent with good quality.

Don't overlook the possibility of a good instrument. With care in its selection you may save several hundred dollars. *Never* buy a bassoon sight unseen. Always insist on a trial period to test it in your band or orchestra. Finally, if at all possible, have the instrument examined and tested by a professional. He will know what to look for and can be a real help in the selection of a satisfactory bassoon.



The illustrations show the bassoon following each of the following four steps in assembling the instrument, as described in 5.



The progress of a young bassoon student is often hindered by an inferior reed. Professional bassoonists or advanced students of the instrument avoid the problem, at least partially, by making their own reeds. However, this is not a practical solution for most school music directors or their relatively inexperienced students. In this writer's opinion, the best answer for them is to purchase semi-finished reeds and to learn to make good reeds by doing the final trimming. I want to describe a good reed before explaining how to trim one.

Characteristics of a good reed

1. A reed which has been properly trimmed will respond easily in all registers with both *staccato* and *legato* articulations.

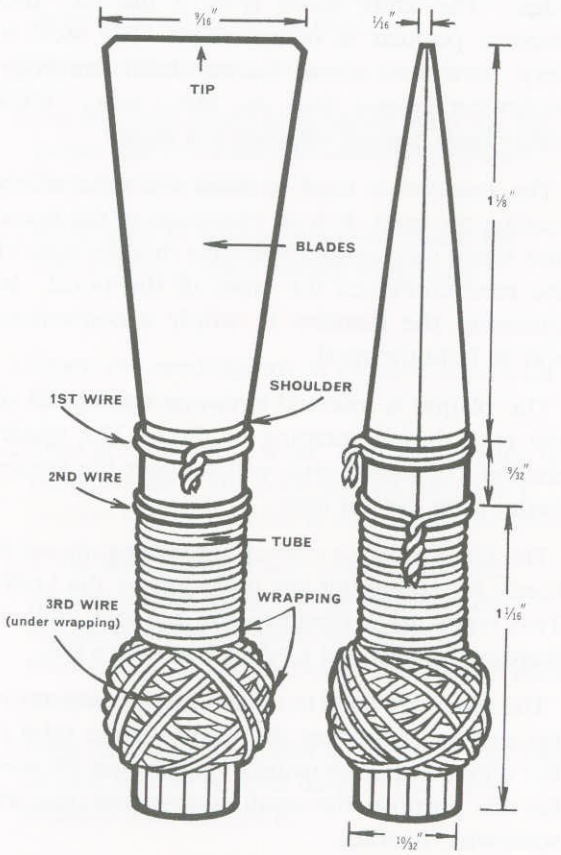
2. The intonation will be good but this will be somewhat dependent on the player and the instrument. However, the pitch stability should be very good. If certain notes go sharp or flat quite noticeably then the reed probably needs further adjustment. Often, good response and good intonation go hand in hand.

3. The tone quality which the reed produces should be to the player's liking. This is largely a matter of the concept of a good tone. The reed has less to do with the tone quality than many people like to think. To prove this, give several different players the same reed on the same instrument and there will be as many different tone qualities as there are players. It is true that some reeds tend to "brightness," i.e. excessive vibration, and others to the opposite "darkness." However, the player and the instrument have the greatest influence in this area. It is quite possible to construct a reed with the emphasis on tone quality, but in so doing the result is often poor response and intonation.

4. A good reed should allow the performer to play with proper dynamic variation. It is not unusual to find a reed which will work well at the *forte* end of the dynamic scale but will not permit *pianissimo* attacks.

5. Finally, good reeds, almost invariably, are neatly made. While the appearance of a reed may seem unimportant, it is an indication of the reed maker's care in all facets of construction.

Proper dimensions of the reed and the names of its various parts may be seen in the following illustration.

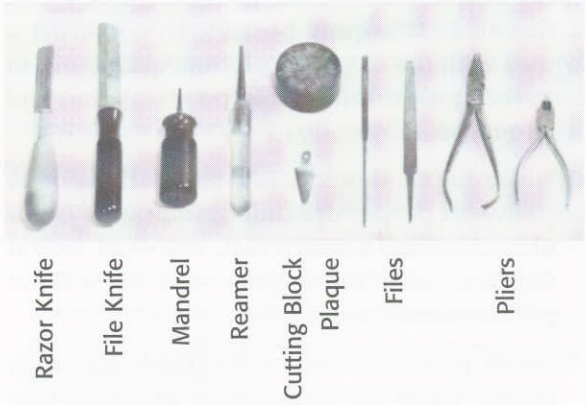


There are, of course, variations in these measurements, but they may be accepted as generally standard.

Reed Tools

To adjust a bassoon reed you will need a few basic tools. These should include a knife, mandrel, plaque, snub-nosed pliers, and small

file. A reamer to enlarge the tube of the reed, a cutting block, and some wet-or-dry sandpaper will also be helpful.



The knife is the most important single tool used and it should be selected with care. There are two main types available and both are quite satisfactory. The razor type is a hollow-ground knife and usually has a slightly curved cutting edge. The knife made from a file has also become popular in recent years. File steel is very hard and these knives hold an edge somewhat longer than the razor type. With either knife, a good oil-stone is a must.*

The mandrel is used to form the tube when making the reed. It is an extension of the bocal and, when used properly, insures that the tube of the reed continues the taper of the bocal. In trimming, the mandrel is simply a convenient way to hold the reed.

The plaque is inserted between the blades of the reed during scraping or filing. The spade-shaped, contoured type will support the blades better than the flat type.

The file is used for over-all smoothing-up and is handy for taking out any nicks left by the knife. Two types are recommended, a 4-inch mill or warding bastard and a #2 or 3 jeweler's file.

The pliers are used to adjust the opening at the tip and for regulating the shape of the tube at the wires. Although ordinary pliers may be used for this purpose, the small, snub-nosed type are somewhat handier.

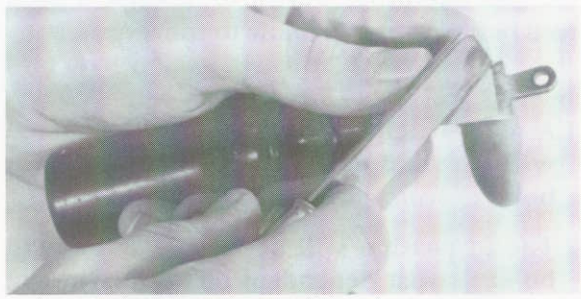
The cutting block, or billet, is used to support the reed for filing or cutting the tip back. it should be about 1½ inch in diameter and rounded across the end. Grenadilla wood makes an excellent material for the block.

Although ordinary wet-or-dry sandpaper is acceptable for smoothing the reed, the silicon type is ideal. Whatever the abrasive material, be sure that it will not rub off on the reed when wet.

Another helpful tool is the reamer. This is used to enlarge the tube of the reed for a better fit on the bocal. Reaming should always be done when the reed is dry, as a wet tube will prevent the cane from coming off cleanly. Reamers are available with several flutes or with a single cutting edge. Either type is satisfactory.

Trimming the reed

Several basic problems and their usual solutions are described below. Because the reed is made from a natural material** it will never respond exactly the same way twice. Therefore, it is wise to test the reed often as it is being adjusted. Keep in mind that the bassoon reed is constructed on two main planes: a gradual slope from the back to the front and from the center to the sides. The thinnest part of the reed should be the corner of the tip and the thickest part the center of the back. Any radical alteration of this basic design will have an adverse effect on the reed's playing qualities. Remember that both blades should be as nearly alike as possible. This often means trimming both sides when an adjustment is made.



Proper method of holding knife and reed when scraping.

Proper method of holding reed when cutting back tip.

**Literature is available from the Behr-Manning Corp. on the proper stone and method of sharpening for different types of knives.*

***Arundo donax. It is grown in several areas of the world, but the area around the French Riviera grows the best cane for reeds.*

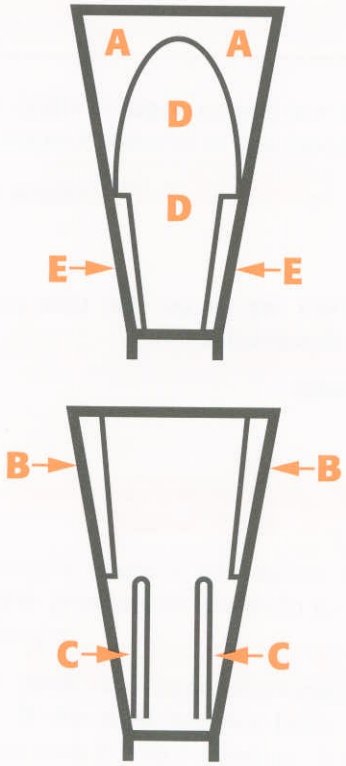
ADJUSTMENT	TIP	TONE	PITCH
Squeeze 1st wire from sides	more open	"darker"	raised
Squeeze 1st wire from top to bottom	less open	"brighter"	lowered
Squeeze 2nd wire from sides	less open	"darker"	raised
Squeeze 2nd wire from top to bottom	more open	"brighter"	lowered

Adjusting the wires

Several important adjustments may be made with the wires. This means of altering the reed has the advantage of not being irrevocable. If a mistake is made in scraping the blades the cane cannot be replaced: if adjusting the wires fails to achieve the desired result, it is a simple matter to return the wire to its original position. The chart at the top of this page illustrates some of the more common adjustments at the wires*

Adjustments on both wires might also be advisable in certain situations. Changes in response will vary with the amount of adjustment made at each wire.

The following illustrations will show the various areas referred to in the instructions on trimming.



A more extensive chart will be found in Spencer's The Art of Bassoon Playing, *Summy-Birchard Co., Evanston, 1958.*

Reed too stiff

1. Check the tip opening. If this is too large, close the reed with pliers at the first wire.
2. If the reed remains stiff, trim lightly with the knife in area A. (Remember to test the reed after each step.)
3. If more trimming seems necessary, trim next in area B.
4. Trim next in area C. Always try to follow the general contour of the reed.
5. Use the file next to thin out area D.
6. Go over the entire reed lightly with the file, being sure to retain the same proportions from back to front.
7. If the reed is still too resistant repeat the whole series, again testing frequently.

Reed too soft

1. Open the reed slightly at the first wire with the pliers.
2. Trim areas B and E a bit. This will change the proportions of the reed so that the center section will be heavier in relation to the sides.
3. If the reed remains soft, cut the tip back slightly (about 1/32"). This step may be repeated, although there is a limit to shortening the blades before the over-all pitch level is affected.
4. Soak the reed orally and let it dry in the case. Repeat this for several days. If the reed remains soft, discard it.

Reed too "bright"

(excessively vibrant, nasal, or "buzzy")

1. Adjust wires as indicated on chart.
2. Trim the sides of the reed in area E.
3. Cut back the tip slightly.
4. Trim back of reed (areas E, C, and back portion of D). If the "crow" is too high in pitch, only

the front portion may be vibrating, thereby causing a thin sound.*

Reed too "dark"
(lack of vibration, thick, or "tubby")

1. Adjust wires as shown on chart.
2. Trim carefully in area D. Test and re-trim as necessary. Work out towards the tip. Stay away from the back center of D as much as possible.
3. With the knife, trim area C.
4. File or sand lightly over the entire reed.

Reed too flat in pitch

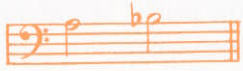
1. Adjust wires, as shown on chart. Squeezing both wires 1 and 2 from the sides may also help.
2. Cut the tip back. This may require further scraping over the entire reed for balancing.
3. Ream the tube of the reed so it will go on the bocal farther.
4. Narrow the "vee" of the reed by working the sides of the reed lightly with sandpaper. Exercise great care in this step as it is easy to damage the tip.

Reed too sharp in pitch

1. Adjust wires as indicated on chart.
2. Check the reed for the amount of cane over all and trim accordingly. A thick reed will often result in sharpness.
3. Scrape reed in area D.
4. In trimming the reed, work for a lower-pitched "crow".

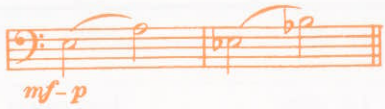
In addition to the above general trimming procedures, there are certain other, more specific steps which affect particular notes of registers. For the following problems, trim where indicated in the illustrations.

1.

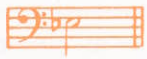


If these notes break or go to the lower octave, trim the blades here.

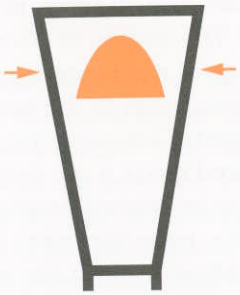
Test for results:



2.



If this note is sharp or unstable, trim the blade here.



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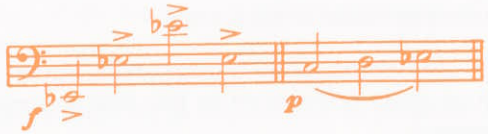

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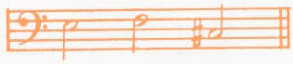
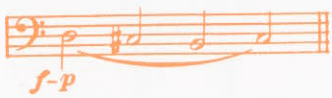


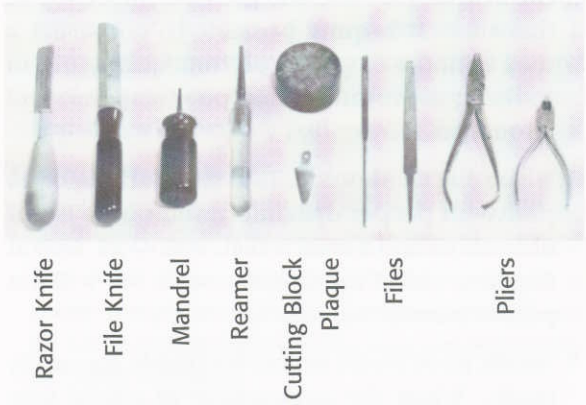
If these notes sag or go flat, trim to correct flatness as described above.

Test for results:



**"Crowing" the reed refers to blowing it off the instrument. This should be done with a loose embouchure to allow the reed to vibrate as much as possible.*

file. A reamer to enlarge the tube of the reed, a cutting block, and some wet-or-dry sandpaper will also be helpful.



The knife is the most important single tool used and it should be selected with care. There are two main types available and both are quite satisfactory. The razor type is a hollow-ground knife and usually has a slightly curved cutting edge. The knife made from a file has also become popular in recent years. File steel is very hard and these knives hold an edge somewhat longer than the razor type. With either knife, a good oil-stone is a must.*

The mandrel is used to form the tube when making the reed. It is an extension of the bocal and, when used properly, insures that the tube of the reed continues the taper of the bocal. In trimming, the mandrel is simply a convenient way to hold the reed.

The plaque is inserted between the blades of the reed during scraping or filing. The spade-shaped, contoured type will support the blades better than the flat type.

The file is used for over-all smoothing-up and is handy for taking out any nicks left by the knife. Two types are recommended, a 4-inch mill or warding bastard and a #2 or 3 jeweler's file.

The pliers are used to adjust the opening at the tip and for regulating the shape of the tube at the wires. Although ordinary pliers may be used for this purpose, the small, snub-nosed type are somewhat handier.

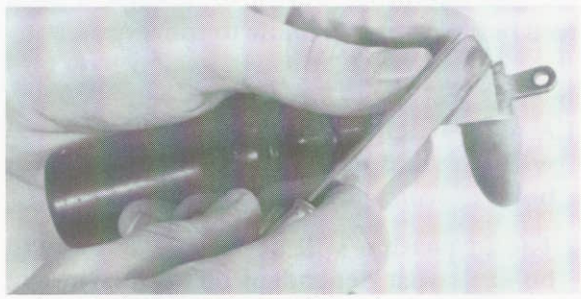
The cutting block, or billet, is used to support the reed for filing or cutting the tip back. it should be about 1½ inch in diameter and rounded across the end. Grenadilla wood makes an excellent material for the block.

Although ordinary wet-or-dry sandpaper is acceptable for smoothing the reed, the silicon type is ideal. Whatever the abrasive material, be sure that it will not rub off on the reed when wet.

Another helpful tool is the reamer. This is used to enlarge the tube of the reed for a better fit on the bocal. Reaming should always be done when the reed is dry, as a wet tube will prevent the cane from coming off cleanly. Reamers are available with several flutes or with a single cutting edge. Either type is satisfactory.

Trimming the reed

Several basic problems and their usual solutions are described below. Because the reed is made from a natural material** it will never respond exactly the same way twice. Therefore, it is wise to test the reed often as it is being adjusted. Keep in mind that the bassoon reed is constructed on two main planes: a gradual slope from the back to the front and from the center to the sides. The thinnest part of the reed should be the corner of the tip and the thickest part the center of the back. Any radical alteration of this basic design will have an adverse effect on the reed's playing qualities. Remember that both blades should be as nearly alike as possible. This often means trimming both sides when an adjustment is made.



Proper method of holding knife and reed when scraping.

Proper method of holding reed when cutting back tip.

**Literature is available from the Behr-Manning Corp. on the proper stone and method of sharpening for different types of knives.*

***Arundo donax. It is grown in several areas of the world, but the area around the French Riviera grows the best cane for reeds.*

The young bassoon student should spend the first few weeks developing an acceptable tone and learning fingerings from the low B-flat to the high G.

This covers the range of most high school compositions. As soon as these early foundations are established, he must begin to develop a disciplined technique.*

At this point, many school music directors have misgivings about continuing to teach the student. But while a professional bassoon teacher would be desirable, any director can still be of real help to his students at this more advanced stage-especially on the problems dealt with below.

Tone:

There is such a diversity of ideas on tone quality that it would probably be impossible to define a good tone in terms that would please all bassoonists. I mentioned earlier that a clear mental conception of tone was highly desirable. Assuming this, the student should try to work toward this sound on every note.

Beyond quality of sound the young bassoonist must work for quantity of tone. This is especially frustrating to a beginner because the bassoon is not capable of the volume of a trombone or French horn. The bassoon in high school literature is often doubled with these instruments, so that the student begins to feel that he is seldom heard. While the bassoon can never compete with the brasses for volume of sound, it is capable of a good volume when played properly. Important factors to check are the reed for vibrancy, the instrument for good pad coverage, and the player for relaxation and proper breath support.

In checking the reed, note carefully the areas toward the back and back-center. These are especially important for a full sound. It may be necessary to trim the reed here to insure free vibration. However, the player remains the most important factor. The teacher should be sure that the student is keeping the throat and mouth cavities open, that he is breathing fully and freely, and that the air column has a fair amount of intensity as it enters the instrument. Just as the instrument resonates the sound after it emerges from the reed, the player can resonate the sound, via his mouth and throat openings, as it enters the reed.

A third factor in producing a good bassoon tone is vibrato. Methods for teaching vibrato range from a casual suggestion that the student try to get a "warm" sound, to elaborate exercises with a metronome. In learning vibrato the mechanical approach is probably better for most students; at least it emphasizes the importance of controlling the pulsations. In its application, however, vibrato should never sound contrived. It does, and should, vary somewhat depending on the style of music being performed. Vibrato on the bassoon should be of the diaphragm or diaphragm-throat type as lip or jaw controlled vibrato usually seems offensive.

Students may begin vibrato by practicing a very slow, drone-like pulsation, controlled from the abdominal muscles. This has also been described as a slow, rolling laugh. Be sure that the pitch fluctuation is not "jagged" but is smooth and rounded. As the student increases the speed of the pulsations, he may find that control is moving up toward the throat. This is all right, but be sure that the throat does not constrict. The use of vibrato, to any degree, should be avoided until a good straight tone is achieved.

A good practice routine is important to establish and maintain fine tone.

**The word technique is used in the broader sense to include not just fast fingering but tone quality, phrasing, etc., over which the student must gain control.*

A good procedure would be to spend ten or fifteen minutes per day on long tones in different registers and at varying dynamic levels. This will allow the student to listen to his own sound carefully and will also develop lip muscles and breath control. Tone practice should come at the beginning of each practice session.

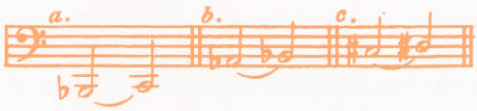
Fingering:

Every bassoonist must work constantly for precision and smoothness in fingering. The often complex fingerings, even in common note sequences, may cause "blips" unless the bassoonist is very careful. This is especially true in slurred passages. To develop coordination of his fingers the student should work slowly with half and whole steps, advancing gradually to the larger intervals. Two further points may be helpful: (1) for slurred passages which have difficult intervals, practice detached at first, then legato; (2) practice fingering the instrument without blowing, listening to the key click until only one, precise, sound is heard.

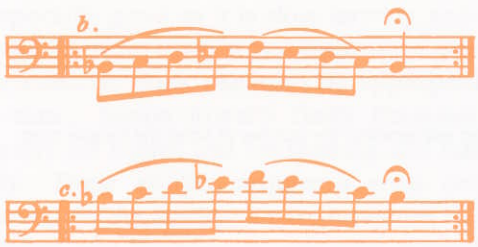
When the student is ready for rapid fingering, a metronome is indispensable. This should be moved up in speed only as the student plays each preceding speed with smoothness. Hand position becomes increasingly important at this more advanced level.

The importance of key adjustment on the bassoon can't be overestimated. Have a competent repairman check the instrument regularly for pad heights, depth of key stroke, and seating pads. Don't overlook the necessity of periodic lubrication for smoothness of key action.

It is important to develop a good practice routine for fingering problems. Each day select several difficult intervals and work on these slowly and carefully, e.g.:



The importance of scales and scale fragments cannot be over-emphasized in the development of a good technique. The following scale exercises, which may be used in any key, are examples of the type of study which can aid the student's facility.



Suggested speeds are 56; 72; 88; 100. Do each group over and over. Other practice routines may be worked out to meet the needs of the individual student. Try to organize each practice session for maximum efficiency.

Tonguing and Articulation

Staccato tonguing presents many problems to the young bassoonist, the most common of which is the inability to play a truly short note. The student should be reminded that the only way to get a short staccato is to stop the tone with the tongue, not the breath. As this may cause a thin, "pecky" sort of sound the student should also be reminded that good breath support is especially important in staccato.

In fast staccato the ending of one tone is also the beginning of the next (insofar as tongue action is concerned). Obviously, then, no definite stop with the tongue is used. There are also types of staccato in which an abrupt release is not appropriate, but this is less common than the short staccato I have described. After the student begins to have success with staccato tonguing on one pitch, he should begin coordinating tongue with fingers.

Both single and double tongue may be used on the bassoon. It is doubtful that a school music director would have a student so advanced as to be ready for double tongue. However, should that situation arise it is suggested that the student work for a soft-tongued sound, -duh-guh for example-rather than the more common tu-ku alternation. This will place the tongue more forward in the mouth and will usually work better on the bassoon.

In training the tongue for a fast staccato a good practice routine is again essential. For example, a scale passage might be worked out as follows:

Original Passage

Step 1:

This step will establish the number of times the tongue must articulate.

Step 2:

This step will begin finger coordination with the tongue.

Step 3:

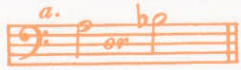
Further coordination until orginal is mastered.

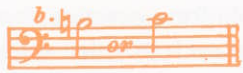
Legato playing also presents certain problems to the young bassoonist. Because of the bassoon's size and also its vagaries in bore, reed-bocal relationships, etc., a seemingly simple slur may be difficult to play smoothly. Notice that the fingering pattern in this example is somewhat related to the register "break" on the clarinet.

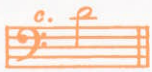
The sudden change in bore length calls not only for smooth fingering but also an embouchure adjustment. Changing from "tu" on the F to "ah" on the G will help the notes to speak smoothly and clearly.

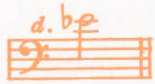
Another sort of legato problem occurs when slurring to certain notes near the top of the bass staff.

Here the upper note often wants to drop to the lower octave or, worse, produce an in-between sound that is neither octave. The solution lies in the use of speaker keys, or "snip" keys as they are sometimes called. In the first example the correct speaker key is the high A key, (No. 3 on the fingering chart). A light flicking of this key with the thumb, causing it to barely open, will help the A to speak clearly. A list of other speaker key uses follows:

To slur to:  "snip" high A key, no. 3

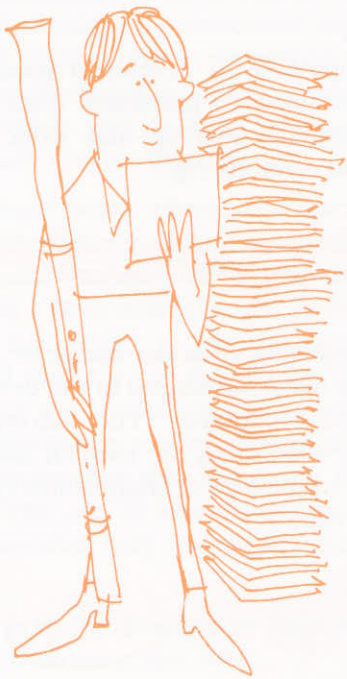
To slur to:  "snip" high C key, no. 2

To slur to:  "snip" high D key, no. 1

To slur to:  "snip" high C key, no. 4

It is in slurring on the bassoon that the sensitiveness of the embouchure is most important., The student must be encouraged to "memorize" an embouchure setting for a particular note. This means that when he slurs, for example to top-line A, he knows in advance the amount of resistance he will encounter and what amount of lip pressure is necessary to play the note in tune. This knowledge of specific notes will improve the student's accuracy and smoothness of style immeasurably.

The remaining elements of technique, especially phrasing and musicianship, should not be overlooked at this stage in the student's development. However, these are better left to the individual teacher.



The literature for the bassoon has always been limited in quantity and much of this limited in quality. Consequently, young bassoonists are often saddled with poor solos, inadequate method books, and meaningless etudes. This section of the *Teachers Guide* is a guide to the best study materials, designed to help relieve this basic problem and also to suggest some useful supplementary exercises.

The range may then be extended down to the low F. When the student can play the notes between low F and the thumb F (diatonically) he is ready for a beginning method book.

The book chosen will of course depend on the student's musical skill. The Weissenborn, *Method for Bassoon, Vol. 1* is the traditional beginning book. However, before starting this particular method the student must have acquired the following musical skills:

1-A good rhythmic sense and the ability to understand rhythmic patterns which include 8th and 16th notes and dotted note patterns.

2-The ability to read and sing rhythmic patterns such as triplets and various compound times such as 6/8, 9/8, 12/8.

3-The ability to read bass clef.

4-A moderately good pitch sense, especially for the common intervals.

If the student dos not have these abilities, or if he is unusually young, the *Belwin Bassoon Method, Vol. 1* by Gekeler and Hovey is recommended. After completing the first volume the student is usually ready for the Weissenborn Method. The Gekeler-Hovey method contains two more volumes, however, and these may be used if desired. When the student has completed the Weissenborn Method or its equivalent he should have also learned the twelve major scales in a two-octave range. Finger coordination exercises, such as those shown in the preceeding section, would also be appropriate at this time.

When the student has a reasonable mastery of fingering patterns and tone production from low B-flat to high G, he is ready for an easy solo. I recommend the *Three Pieces for Bassoon and Piano* by Bakalenikoff. The first of these pieces is especially good, as it is slow moving and very helpful for tone control and intonation study. A daily exercise book may also be appropriate at this time. Simon Kovar's *Daily Exercises* are effective for legato and for slurring and interval study. These studies require a great deal of patience on the student's part, however, and are probably best assigned to one who is relatively mature.

When the student has started the second volume of the Weissenborn *Method*, he is ready for another solo and further scale study. An excellent solo at this time would be the *Sonata in F Minor for Bassoon and Piano* by G.P. Telemann. A slow movement from one of the many Vivaldi concerti might also be appropriate. A must for technique development at this stage is the *Enseignment Complet du Bassoon, Vol. 1* by Fernand Oubradous.

All of the studies listed above are planned to do a specific job—to improve facility, range, musicianship or some other definite phase of playing. The specific works mentioned above are not so important in themselves. What is important is selecting the method or solo with a definite purpose in mind for each student.

The following chart lists the above compositions plus some others, in the order recommended.

Method Book	Technique Exercises	Solo
Belwin Method Vols. I, II, III	Slow long tones	
Weissenborn Method Vol. I	Simple finger coordination Scales to two octaves	
	Kovar, **24 Daily Exercises**	**Three Pieces,** Bakalenikoff
Weissenborn Method Vol. II	Scales over entire range Oubradous, **Enseigment** Vol I	**Sonata in F minor,** Teleman
	Kovar, (cont.)	Slow Movt. from **Concerto No. 7 in A minor,** Vivadli
Concert Studies, Vol. I, L. Milde	Oubradous, **Enseignment** Vol. II	Slow Movt. from **Concerto in F major,** von Weber
		Concertpiece, Pierne
		Concerto in B-flat Major, Mozart


Left Fingers
Left Thumb
15
16
17
1
2
3
4
5
6
7
8
9
Left
Right
18
19
20
21
22
23
10
11
12
13
14
Left
Right
Right Fingers
Right Thumb

Bassoon Fingering Chart

The fingerings shown on the following chart are those most often used on the bassoon. I have made no attempt to show all possible fingerings; such an effort would only lead to confusion. In those cases where more than one fingering is shown, the first is the most common.

Only a few trill fingerings have been shown, but these are the ones with which most students become confused. Several trills on the bassoon are well nigh impossible, at least with any dexterity, among them low B-flat to low C or low E to low F sharp. In these cases it is best to leave the note un-ornamented.

In the realm of alternate or "fake" fingerings, there are so many possible that no one chart could encompass all of them. The ones shown will cover most situations.

For the sake of clarity the keys have been numbered in this chart. However, most bassoonists refer to the keys by name and these are given below for those who may be interested.

Tenor Joint: Nos.

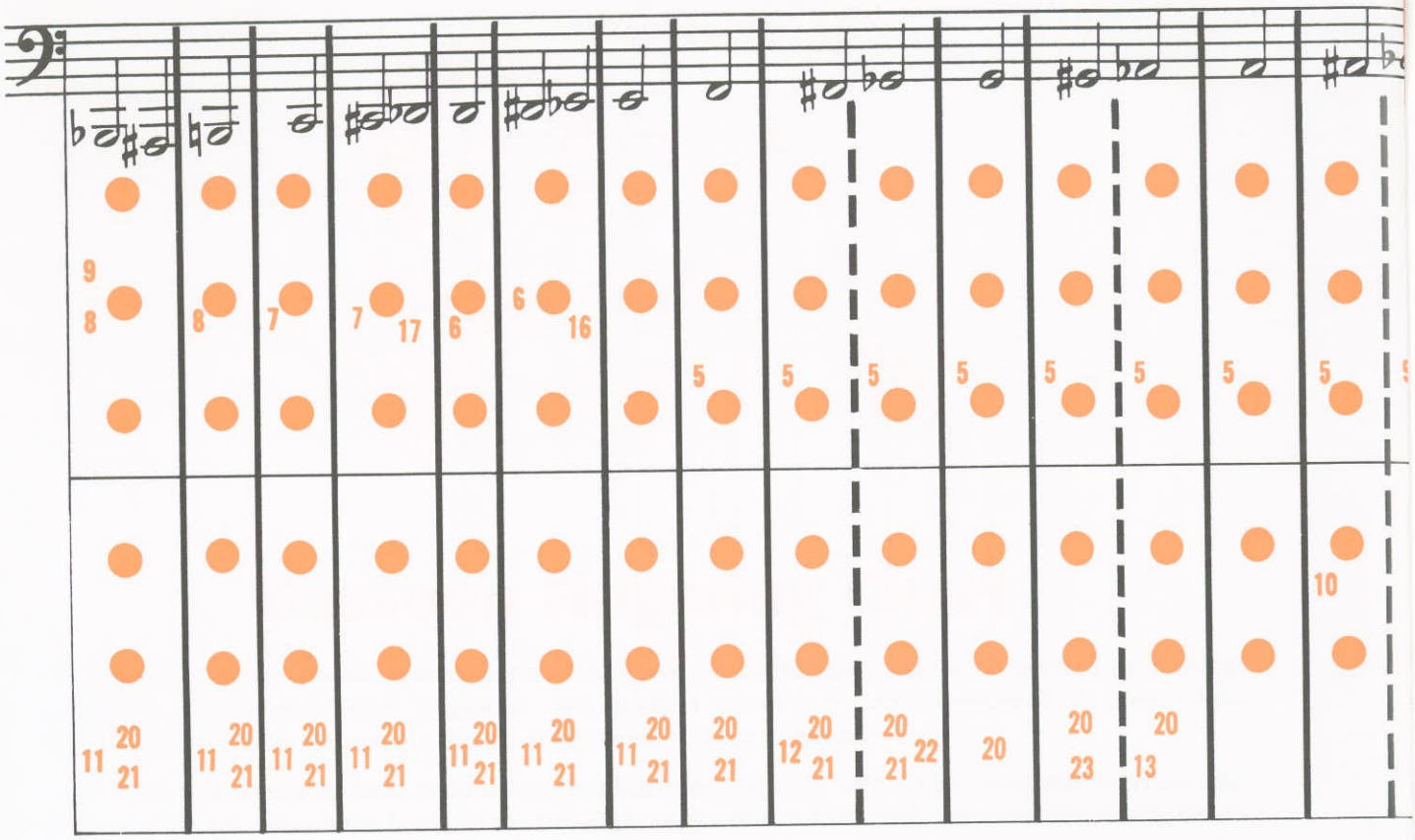
1. High D key
2. High C key
3. High A key
4. C sharp key
5. Whisper key
15. F sharp triller or High E-flat key

Boot Joint: Nos.

10. B-flat key
11. Low E key
12. F sharp key
13. Back A-flat key
14. A-flat-B-flat triller
18. C sharp triller
19. Top B-flat key
20. G key
21. Low F key
22. Top F sharp
23. A-flat key

Bass Joint: Nos.

6. Low D key
7. Low C key
8. Low B key
9. Low B-flat key
16. Low E-flat key
17. Low C sharp key



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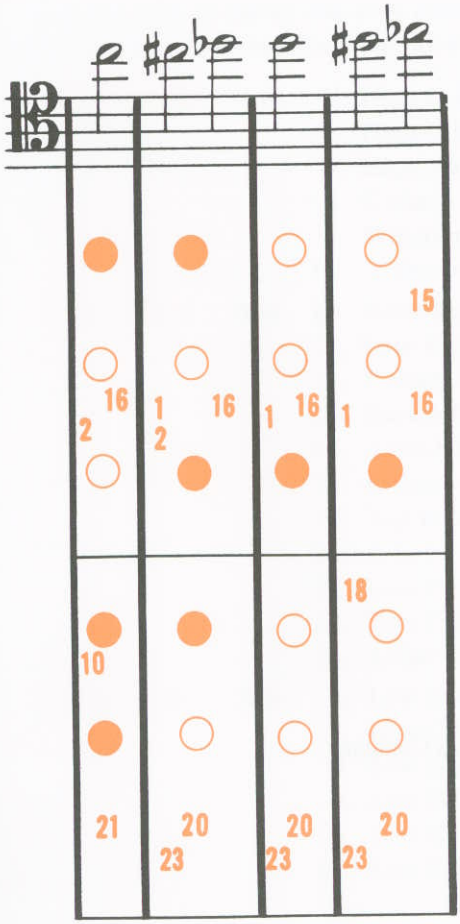
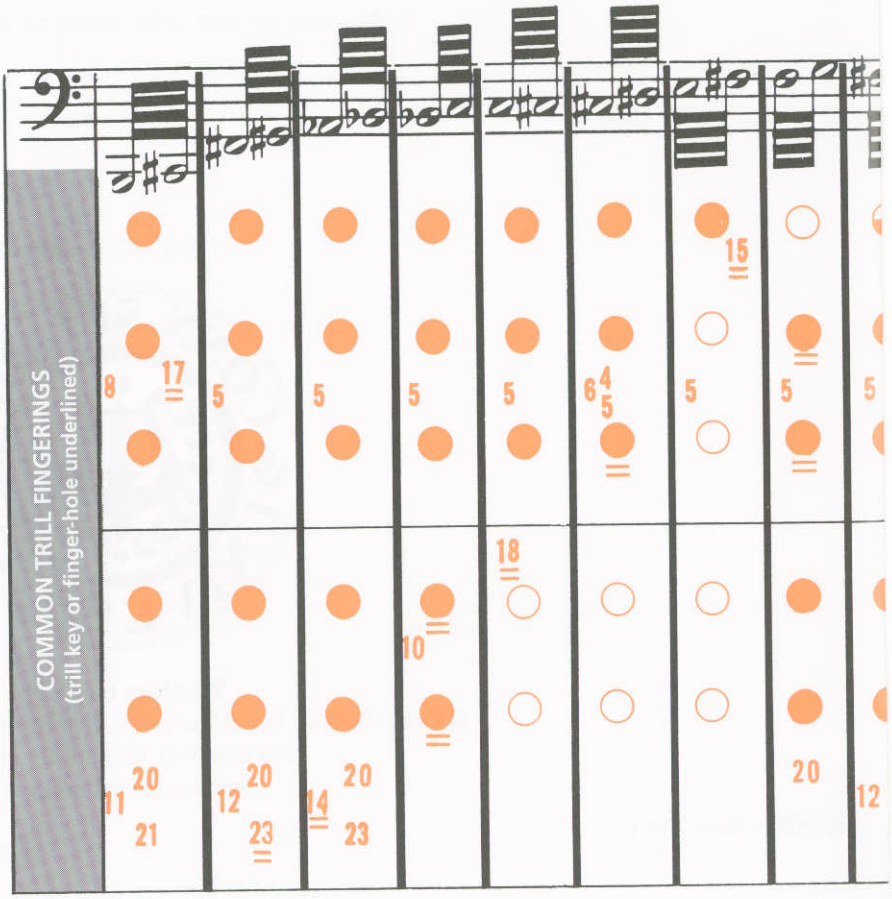
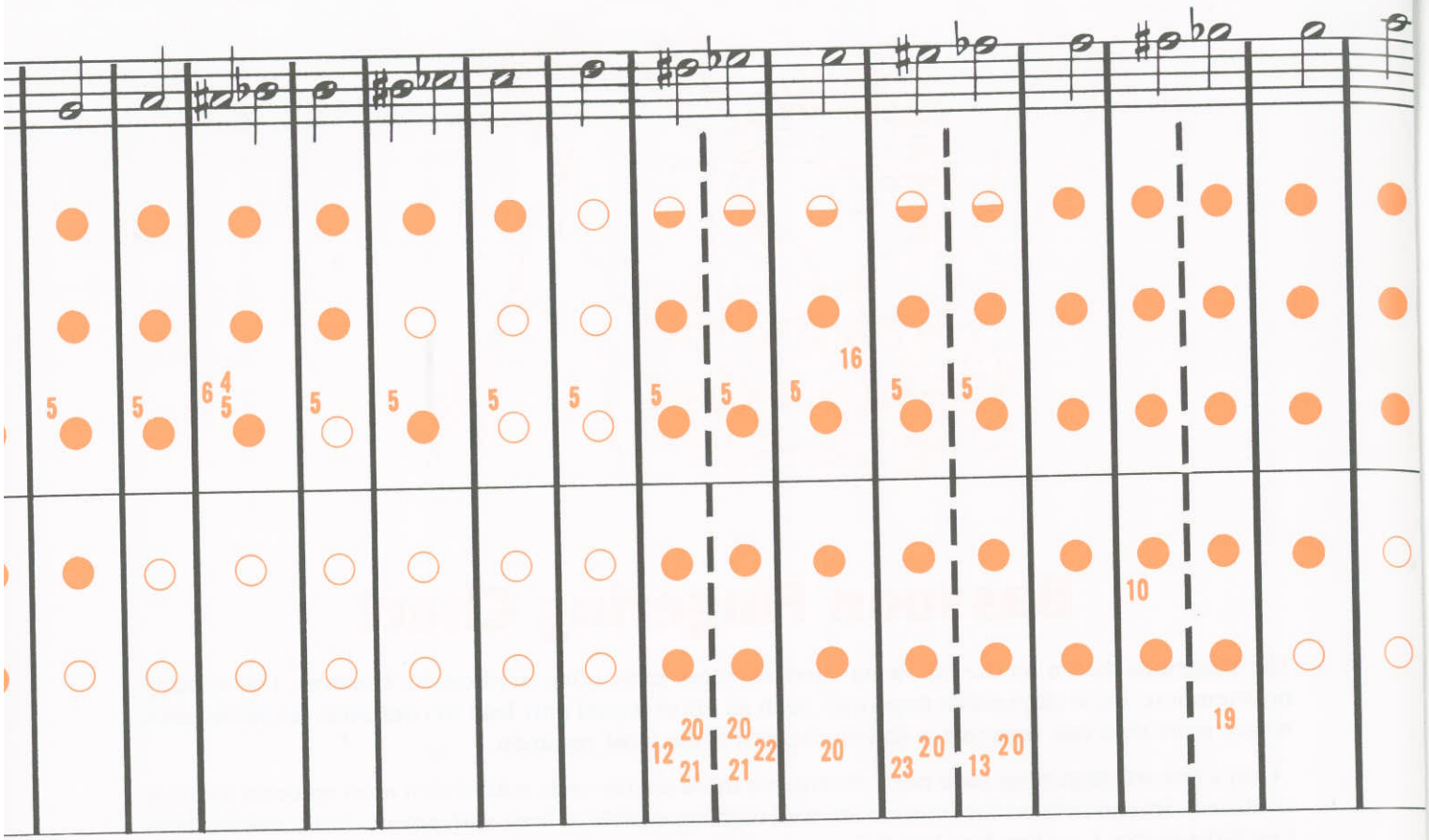
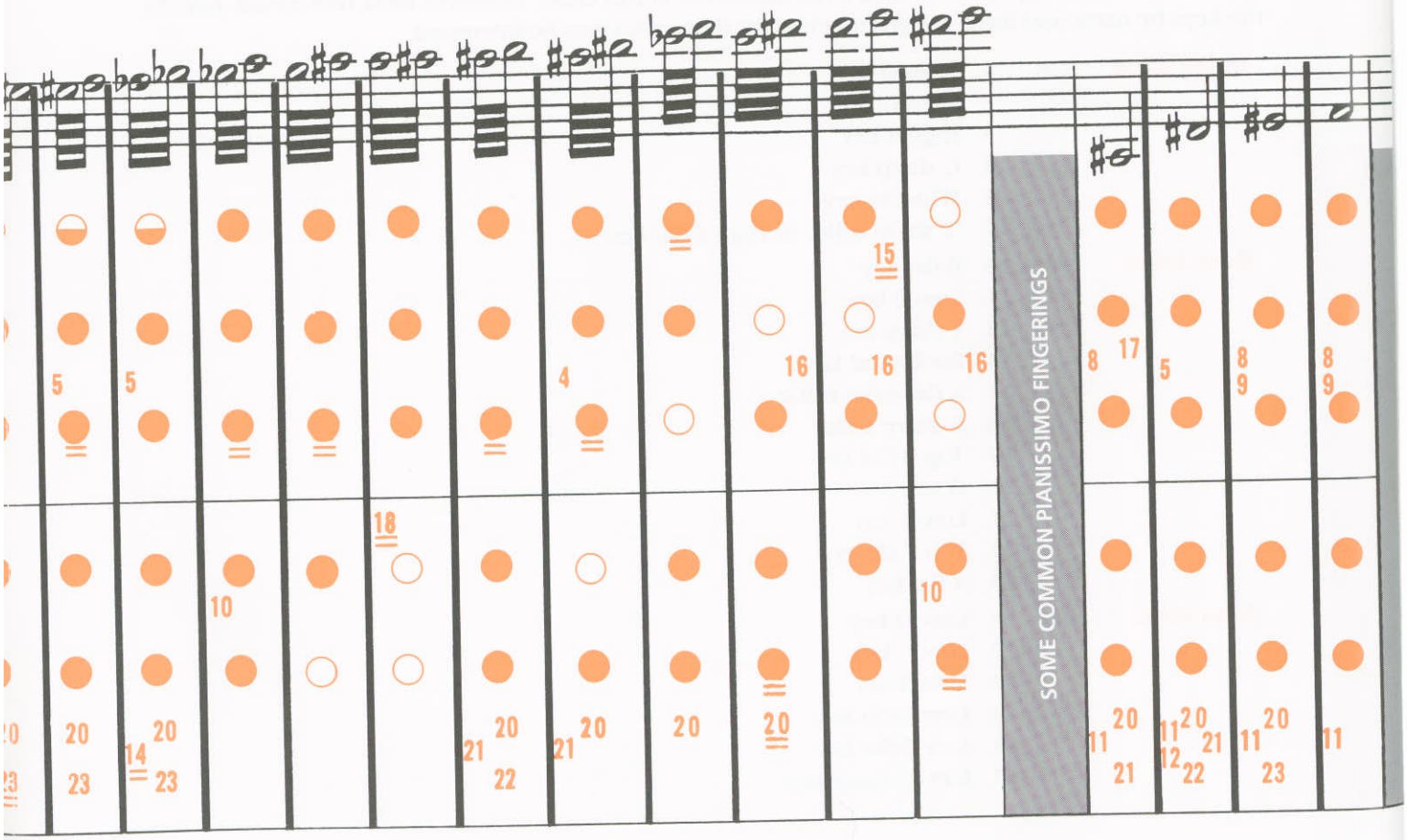
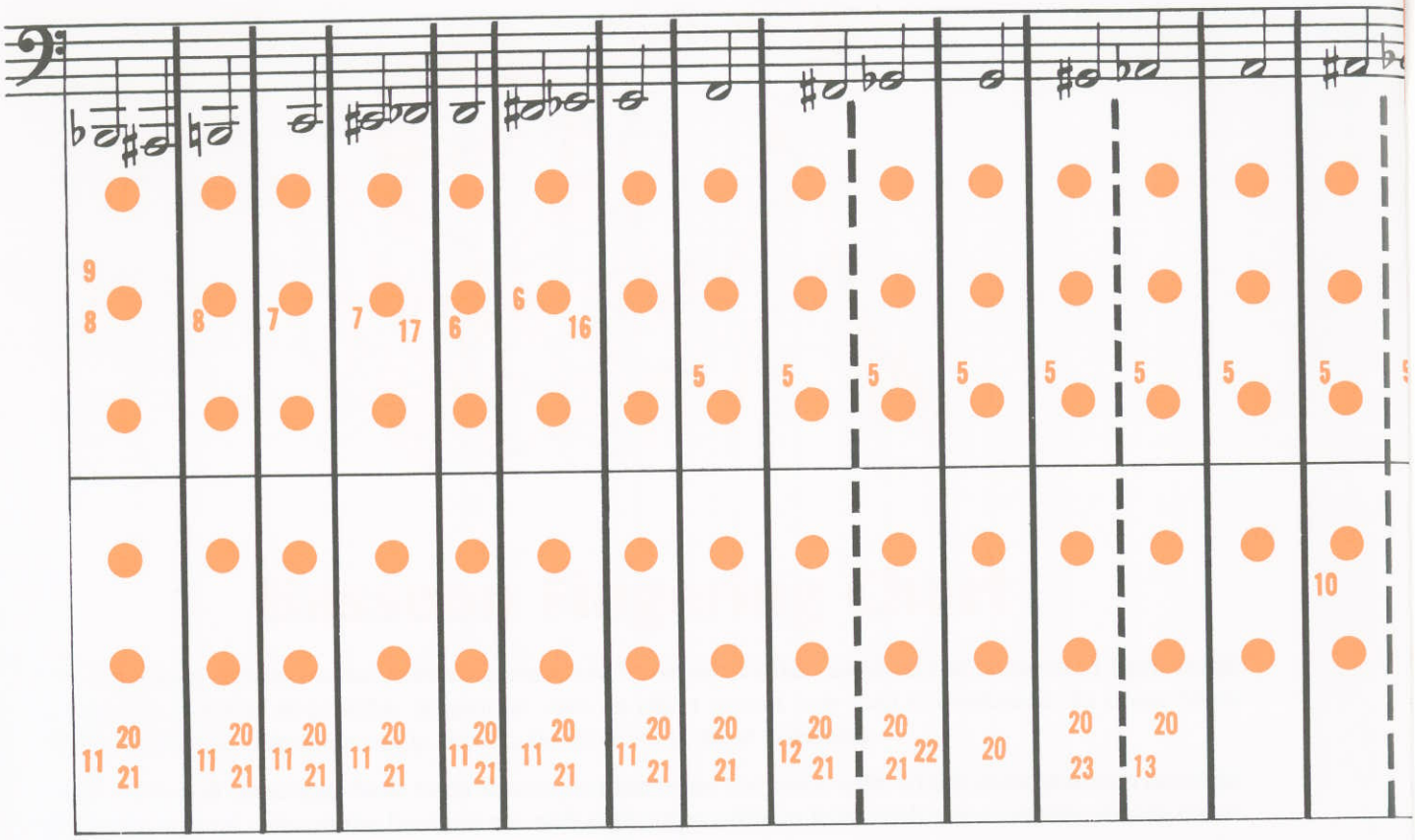



COMMON TRILL FINGERINGS
(trill key or finger-hole underlined)



R BASSOON FINGERING





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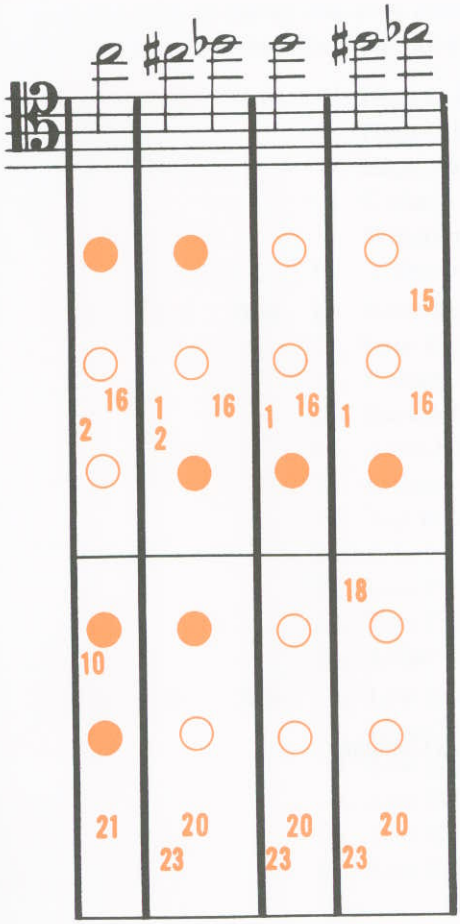

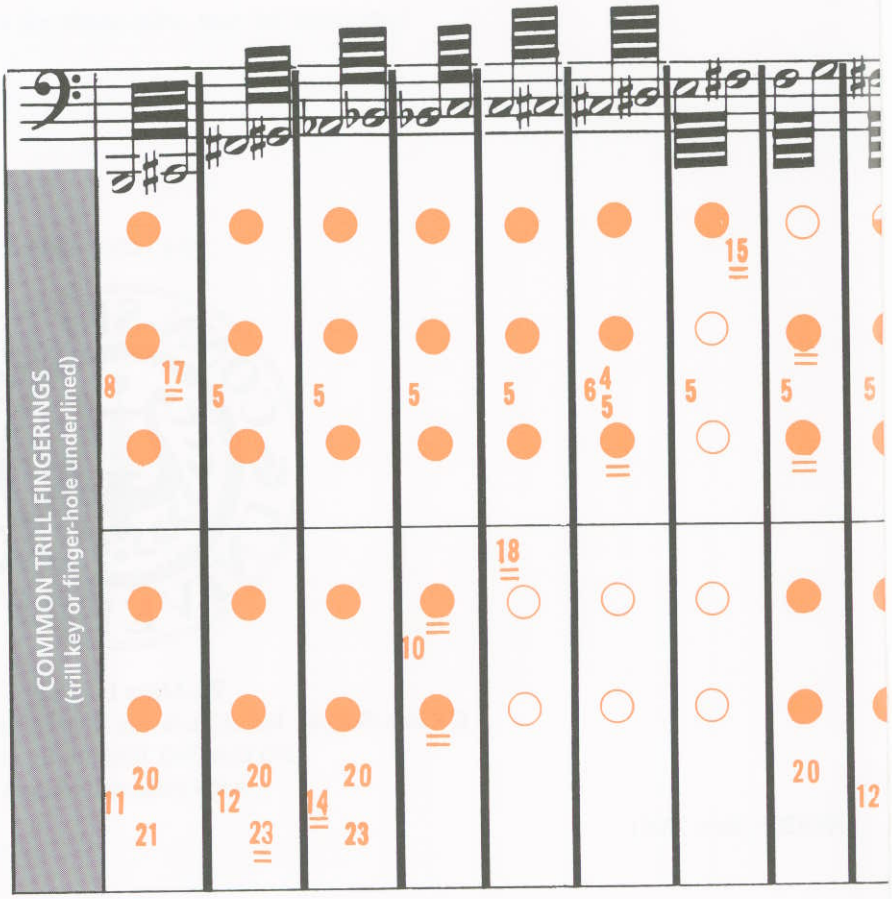
COMMON TRILL FINGERINGS
(trill key or finger-hole underlined)