

IV. Outline of Topics

A. The Warm-Up

Students will be expected to begin each day with a bassoon warm-up of approximately 30-60 minutes. During this time, students will play long tones, scales, arpeggios, articulation exercises, and interval exercises, as assigned by the instructor.

Here is an example of a typical warm-up routine for a first-year student in their first semester of study (see descriptions of exercises in the sections below):

1. Long Tones (10 minutes)

- “Undulating Fog Horn” on C4, F3, and A4.
- “Focus on the Breath” on D4, G3, and B4.
- “Return Trip” starting on D3 and moving upwards by whole step to a final starting pitch of D4.

2. Vibrato Exercises (5 minutes)

- “Ho, Ho, Ho, Ho!” on notes of C major scale.

3. Scales and Arpeggios: Tonic F (15 minutes)

- Two-octave major, harmonic minor, and melodic minor scales in quarters and eighths at quarter note=72. All slurred and all tongued.
- Two-octave scales in dotted eighth-sixteenth and sixteenth-dotted eighth rhythm
- Two-octave arpeggios in half notes and quarter notes at quarter note=72.

B. Long Tones

Long tones provide an excellent means of locking into the details of sound production. Since the finger work is inherently simple, the player can devote more attention to important, but often neglected, aspects of bassoon playing, such as breathing, preparing the embouchure, the shape of the oral cavity, quality of the attack, resonance, overtones, dynamic control, intonation, intonation in conjunction with dynamic variation, vibrato, and controlling the release of a note.

1. Exercises to be Played with a Metronome and Tuner

i. Undulating Fog Horn

In this exercise, the student plays a sustained pitch while paying close attention to dynamics and consistency of pitch. Students should execute the dynamic changes as exactly as possible with their placement beneath the measure. The purpose of this exercise is to help students discover the changes necessary to maintain consistent intonation on a given note through a range of dynamics. The first sustained note is at a healthy *mezzoforte* and is meant to serve as a benchmark of resonance. Though the dynamic level is ever-changing, students should try to maintain the natural richness of overtones of the initial sustained pitch. Students should aim for smooth and attentive attacks and releases, with no change in pitch as each note is released. Students should repeat this exercise on several different notes in different registers.

$\text{♩} = 60$

mf (sustain dynamic →) mf < ff > mf mf > p < mf

mf > p p (sustain dynamic →) p > pp p < mf > p

ii. Focus on the Breath

This exercise shifts the student's attention to breath control and the speed of air intake. The student alternates between sustained notes and notated measures of rest. The length of the measure of rest decreases by one beat each time, until no rest is allotted to the breath. Initially, the player can take slow, meditative breaths. As the length of the measure of rest is reduced, the student's breath must become faster and more energized in order to maintain the same level of air intake. Though slow breaths are a great way of setting up a note, they are not always possible in the context of a piece of music. This exercise helps the student compare the quality and ease of sustaining after slow breaths to that achieved following quicker breaths. The student must strive to match the quality and ease of sustain, no matter how much time is allotted to the breath. Students should play this exercise on a variety of notes in different registers.

$\text{♩} = 60$

iii. Confidence Tones

The purpose of this exercise is to help students build confidence in articulating a given note in tune at a variety of dynamics. Students begin by playing a single sustained note with two abrupt shifts in dynamic. Student should strive to maintain consistency of tone and intonation across each shift. Throughout the exercise, sustained pitches are alternated with articulated, repeated ones. Students should strive to match the sense of air flow of the repeated articulated pitches with that of the sustained pitches. Students should play this exercise on a variety of notes in different registers.

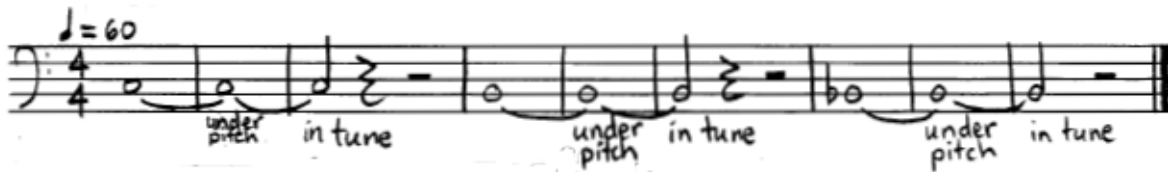
$\text{♩} = 50$

p mf p p mf p p ff p p ff p p mf p mf p

p ff p ff p

iv. Swoop Tones

This exercise provides the student with the opportunity to explore the range of pitch possible on a given note. The students begin by initiating C3 where they think it will sit in tune. The student proceeds to relax the embouchure and oral cavity as much as possible, causing the note to drop in pitch, ideally at least 20 cents below the tuner's indication of "in tune." The student then gradually brings the pitch back in tune and sustains the note at this pitch level. Students should descend chromatically down to the lowest note on the instrument. Since bassoonists are often sharp in the low register, and other wind instruments (e.g. flute, oboe) are flat in the low register, this exercise helps the student prepare for the physical adaptations and flexibility required to play in tune in an ensemble.

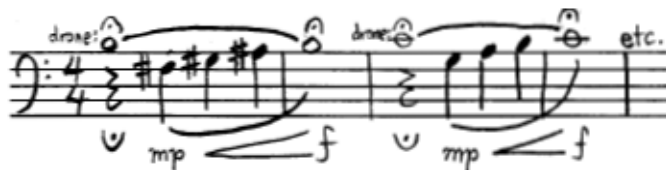


2. Exercises to be Played against a Drone

In order to fully benefit from these exercises, students should play them against a drone. A drone could be produced by a tuner, Dr. Beat, computer, a piano with the sustain pedal held down, electric keyboard, or another live musician.

i. Rising to the Occasion

This exercise focuses on attaining a rich sound quality in the tenor register. Though one of the sweetest registers of the bassoon, the tenor register is also the most inclined to sound weak and unsupported. This exercise helps students bridge this difference in core resonance by having the student begin at the top of the middle range of the instrument, just below the transition into the tenor range. Students must strive to match the resonance of the previous note with each ascent that they make, while increasing the flow of air. Since the pitch in the tenor register often sits too low, the use of a drone allows the student to immediately assess whether or not they have reached the top of each gesture in tune and sharpens their ears for making quick changes when playing with other musicians. In order to determine how a reliable means of achieving good intonation in this register, students are encouraged to experiment with shifting to a higher-placed vowel shape as they ascend into the tenor register. More advanced students might want to use this exercise to practice achieving "instant-on" vibrato on the uppermost note of each gesture. Students should continue to shift the drone up a semitone, until they reach the top of their range.



ii. Return Trip

As in the previous exercise, the purpose is to aid in developing a richer tenor register through step-wise motion and comparison with preceding pitches. In this exercise, the most important connection is between the fourth and fifth notes, since the fifth note is the upper limit as the student gradually shifts upwards through the range of the bassoon. In order to maintain a common tone between the 5th note of one gesture and the 4th note of the next, students should increase the drone by a whole step after each statement.



iii. Leaping Giants

The purpose of this exercise is to practice maintaining good tone and pitch across registral leaps. Students should consider vowel placement within the oral cavity, air speed, and engagement of the abdominal muscles. After each gesture, students should shift the drone up a whole step until the top note of the student's range has been reached. Students should alternate between beginning this exercise on B-flat and A.



C. Scales and Arpeggios

Students will be required to practice scales and arpeggios as part of their warm-up routine. Through varying many different parameters over the course of a student's study, it is my hope that the study of scales and arpeggios will remain fresh, exciting, and engaging for the student. Variable parameters include range, articulation, speed, rhythm, dynamic, and the pattern itself. In general, less experienced first-year students will begin by playing scales in a two-octave range. They will be encouraged to shift towards practicing scales across the full range of the instrument as soon as possible, even if the tempo needs to be slow. It is important that they integrate the extreme registers of the instrument into their basic technique as soon as possible, since a lack of fluency in these registers can limit the repertoire available for study.

Variations in articulation will include: all slurred, all tongued *legato*, all tongued *staccato*, two slurred/two tongued, two tongued/two slurred, three slurred/one tongued, one tongued/three slurred, slurring in groups of two, slurring in groups of two offset from the pulse, and many more. Some possible variations in rhythm are shown in the example below.

1. Variations in Rhythm for Use in Scale and Arpeggio Routines

a. Duple-Based Subdivision of the Beat



Three staves of musical notation in bass clef, 4/4 time signature. The first staff contains exercises a, b, and c. Exercise a is a quarter-note scale. Exercise b is a quarter-note scale with a triplet of eighth notes. Exercise c is a quarter-note scale with a triplet of eighth notes. The second staff contains exercises d, e, and f. Exercise d is a quarter-note scale with a triplet of eighth notes. Exercise e is a quarter-note scale with a triplet of eighth notes. Exercise f is a quarter-note scale with a triplet of eighth notes. The third staff contains exercises g and h. Exercise g is a quarter-note scale with a triplet of eighth notes. Exercise h is a quarter-note scale with a triplet of eighth notes, with a 6/8 time signature change indicated by a double bar line.

b. Triplet-Based Subdivision of the Beat



Two staves of musical notation in bass clef. The first staff is in 6/8 time signature and contains exercises a, b, c, and d. Exercise a is a quarter-note scale. Exercise b is a quarter-note scale. Exercise c is a quarter-note scale. Exercise d is a quarter-note scale. The second staff is in 4/4 time signature and contains exercises e, f, g, and h. Exercise e is a quarter-note scale. Exercise f is a quarter-note scale. Exercise g is a quarter-note scale. Exercise h is a quarter-note scale. The word "Pulsate" is written below the second staff.

2. Scale and Arpeggio Patterns

Though only the two-octave and full-range scales will be heard in juries, students will be assigned various scale and arpeggio patterns to incorporate into their daily warm-up. The purpose of these patterns is to further improve agility and finger technique on the instrument, offset any imbalances in technique based on register, and improve the student's ability to play basic scales.

i. Broken Record High Register

The purpose of this exercise is to promote technical fluidity in the high register. The fingerings in the high register of the bassoon are generally considered to be more difficult than in the lower register, due to seemingly illogical combinations of keys and few obvious relationships from one note to the next. Additionally, bassoonists tend to spend less time playing in this register, making the appearance of these notes in ensemble repertoire and more advanced solo repertoire seem daunting. This exercise aims to create confidence and fluidity in this register by having the student cycle through the top four notes of the scale several times in rhythms with decreasing durations. In the presentation below, one can see that approximately half of the student's playing time is spent in the high register. The rhythms begin slowly and comfortably so that the student can relax and allow the fingers to feel each transition and get to know each interval from a physical standpoint. As the

rhythmic values quicken, students should strive to maintain a similar relaxed state and physical awareness in the hands



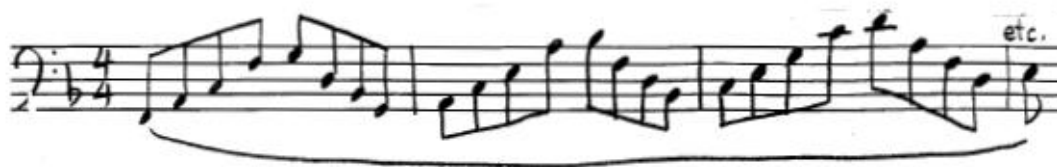
ii. “Modal” Scales and Arpeggios

This exercise is called “modal” because it cycles through octave spans beginning on every scale degree within a key, resulting in a statement of each of the church modes. Pick any major or minor key. Play one octave ascending of either the scale or arpeggio, rise by one step within the key, and play one octave descending, adhering to the accidentals of the chosen key. Students should continue moving upwards until they reach the upper limit of their range, then descend to the lower limit of their range, and conclude by looping back up to the starting tonic. The examples below show the beginning of this exercise in the key of F major. When playing in minor keys, the harmonic version is recommended in order to avoid confusion about when to raise and lower notes across the continual alternations between ascending and descending scales. Students are encouraged to vary the pattern by alternating between scalar and arpeggiated movement within each measure, selecting different articulations and rhythms, and creating measure-long or larger-scale dynamic plans.

a. “Modal” Scale Pattern in F major



b. “Modal” Arpeggio Pattern in F major



iii. “Modal” Scales and Arpeggios with Lower Neighbour Tones

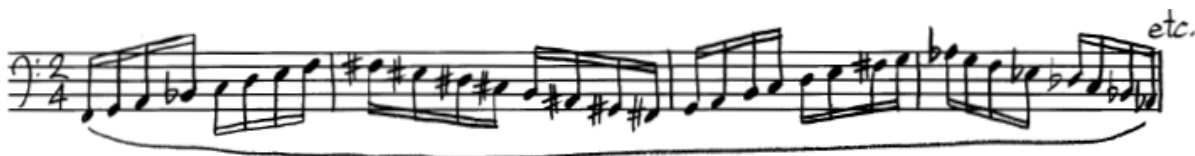
This exercise takes the model of the modal scales and arpeggios, and inserts a lower neighbor below every note of the scale. A fluid and fast performance of this exercise requires advanced technique and is reserved for older students. The scalar version in F major is shown below.



iv. Chromatic Modulating Scales and Arpeggios

Pick any note as a starting pitch. Play one octave ascending of either the scale or arpeggio, rise by one semitone, and treat this note as a new tonic for an octave descent. Rise by one semitone after each octave statement of the scale or arpeggio. When the upper limit of the range is reached, descend by a semitone after each octave statement of the scale or arpeggio. Since all twelve major or minor keys will be covered, the starting pitch is of little importance. If a student has a “favourite” starting point, they may want to occasionally start a semitone away from this note in order to swap the ascending and descending motion associated with each key.

a. Chromatic Modulating Scales Beginning on F, Major Scale Version



b. Chromatic Modulating Arpeggios Beginning on F, Major Arpeggio Version



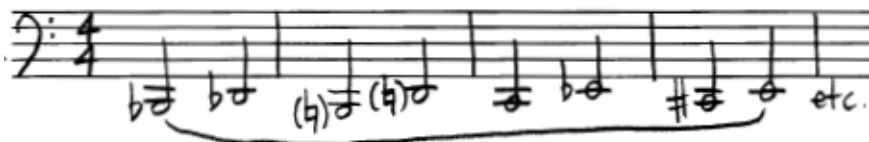
D. Interval Exercises

The next set of exercises focuses on creating smooth intervals without working within the context of a key. The lack of tonal grounding means that these interval patterns are often awkward in a way that scales and arpeggios are not, but fragments of these interval patterns are sure to appear in solo and ensemble repertoire in some capacity. Mastery of these patterns will result in technique that can easily adapt to unusual arrangements of notes. These exercises should be played all slurred so that exactness of finger work is necessary for the interval to sound completely smooth. In general, these exercises should be played without vibrato.

1. Chromatic Thirds

Beginning from low B-flat, ascend a minor or major third. Slur down to B-natural, and ascend another third. Continue cycling upwards until the upper limit of your range, and then cycle back down to low B-flat, playing descending thirds rather than ascending thirds. Students could play with a metronome if they wish, but the most important thing is that they focus on the point of connection between each pair of notes, regardless of the tempo. For this reason, a slow tempo is recommended, perhaps quarter note=60.

i. Chromatic Minor Thirds Beginning on Low B-Flat



ii. Chromatic Major Thirds Beginning on Low B-Flat



2. Chromatic Fourths

Beginning from low B-flat, ascend a perfect fourth. Slur down to B-natural, and ascend another perfect fourth. Continue cycling upwards until the upper limit of the range, and then cycle back down to low B-flat, playing descending fourths rather than ascending fourths. Students could play with a metronome if they wish, but the most important thing is that they on the point of connection between each pair of notes, regardless of the tempo. For this reason, a slow tempo is recommended, perhaps quarter note=60. Once this is fluid, move on to fifths, sixths, sevenths, and octaves.



3. Ever-Expanding Universe

This exercise is based on Simon Kovar’s Exercise #3: “Legato, Intonation, and Facility.” Students begin on F3, the exact mid-point between low B-flat and high C, the boundaries of most bassoonists’ “comfortable” range. The exercise begins with minor seconds above and below F3, and the interval is gradually expanded one semitone at a time until the student reaches a perfect 12th above and below F3, also known as high C and low B-flat! Once the intervals are fairly comfortable, advanced students might want to experiment with adding vibrato and trying to maintain a consistent quality of vibrato from one note to the next. Recommended tempo for this exercise is approximately quarter note=80.



4. Exercises from Kovar

Simon Kovar’s etude book, *Twenty-Four Daily Exercises for Bassoon*, contains a wealth of exercises based exclusively on intervals and technical patterns. A required book for students in my studio from the second year of study onwards, specific exercises will be assigned on a student-by-student basis.

E. Tenor Clef

Some bassoon students enter undergraduate studies with little or no experience reading in tenor clef. These are typically students who have little experience playing in an orchestra or studying advanced bassoon repertoire. It is important that such students develop fluency in reading tenor clef as soon as possible, and they only particularly reliable means of achieving this is through practice. The tenor clef reading exercises in the first volume one of Weissenborn’s *Bassoon Studies*, Op. 8, will serve as a starting point for these students.

F. Vibrato

Some students will begin undergraduate studies with little or no experience with vibrato on bassoon. For these students, the two exercises below will serve as the primary training ground for developing a controlled and usable vibrato. These exercises begin by producing slow pulsations using the abdominal muscles. As the speed of the vibrato quickens, the source of the vibrato will gradually move upwards out of necessity. Throughout this process, the student will be encouraged to keep the throat open and the embouchure engaged. Though some bassoonists produce embouchure using the throat or even the lips, this tends to produce unnecessary tension and vibrato that is too fast for the low range of the bassoon. This type of vibrato is often modeled after techniques used on upper

woodwind instruments. As the student becomes more comfortable with the physicality of producing vibrato, they will be encouraged to apply it to longer notes in their solo repertoire. The goal is that vibrato will eventually become a natural component of the student's playing.

1. Ho, Ho, Ho, Ho!

In this exercise, the student alternates between producing a deep spoken "Ho," and producing slow pulsations on the bassoon. The idea is that the student will copy the deep abdominal motion that naturally occurs with each "Ho." When the student shifts to playing the bassoon, they should feel the abdominal muscles contracting with every pulse and resist the temptation to involve the tongue wherever they see notated accents. As the alternations progress, the student should move through the notes of a one-octave C major scale. Students should play with a tuner so that they can keep an eye on the pitch. The pitch should not be altered by each pulsation. Quarter note=60 would be a good starting tempo.

2. The Terraced Vibrato Crescendo

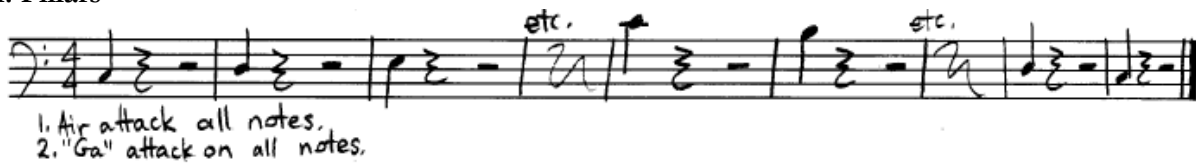
In this exercise, students practice gradually increasing the speed of the pulsations in a very controlled way. The student begins with pulsations on every quarter note, and increases the rate of pulsation at every bar line. Initially, it might be difficult to control the pulsations beyond sixteenth notes, but with time, the student will develop the muscle control to shift the abdominal movement upwards and to reduce the amount of movement. After completing the exercise one pitch, move up a step and repeat the process. Students should play with a tuner so that they can keep an eye on the pitch. As in the previous exercise, the pitch should not be altered by each pulsation. Quarter note=50 would be a good starting tempo.

G. Double Tonguing

Double tonguing on the bassoon requires an alternation between a front-placed syllable, such as “ta” or “da,” and a back-placed syllable, such as “ka” or “ga.” My preference is to alternate between the syllables “da” and “ga,” since these syllables tend to produce lighter articulation. However, many bassoonists have had success with using the syllables “ta-ka,” or even “ticket,” to develop a clear and usable double tongue.

The progressive exercises below are based on the syllables “da-ga,” but they are easily adaptable to other syllables. Back-placed syllables are more difficult to clearly articulated with a reed in the mouth. The exercises begin with air attacks, with the purpose of encouraging the student to explore the note initiation process without the aid of the tongue. This type of initiation is difficult to control, but the extra attention to abdominal and air support will serve as a model for producing notes using a back-placed syllable. As the student becomes increasingly comfortable with producing isolated back-placed tongued notes, the exercises become increasingly demanding. When the student reaches a point where their double-tonguing speed approaches their single-tonguing speed, they should begin incorporating double tonguing into orchestral excerpts and solo repertoire anywhere where this type of tonguing would ultimately be preferred. This process can take many months, possibly several years. Some good orchestral excerpts for the application of double tonguing include the fourth movement of Beethoven’s *Symphony No. 4*, the fourth movement of Mozart’s *Haffner Symphony*, and the fifth movement of Berlioz’s *Symphonie Fantastique*.

i. Pillars



1. Air attack all notes.
2. "Ga" attack on all notes.

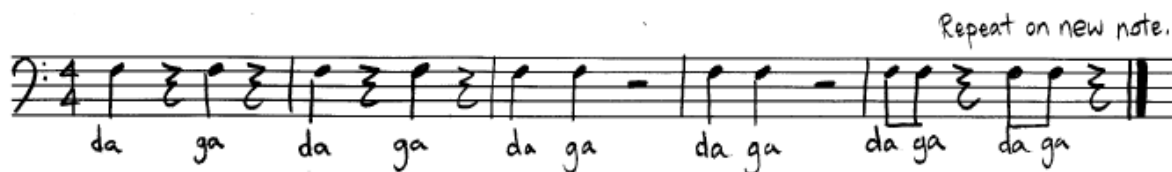
ii. Hopskotch



1. Air attack all notes.
2. "Ga" attack all notes.

iii. Copy Cat

Copy the articulation quality of the front-placed syllable (“da”) when playing the back-placed syllable (“ga”).



Repeat on new note.

iv. Rest Stops

Handwritten musical notation in 4/4 time. The tempo is marked as quarter note = 60. The melody consists of eighth notes with rests. The lyrics are "da ga da da" followed by "da ga da da" and "etc.".

v. Broken Record Copy Cat

Copy the articulation and air flow quality of the front-placed syllable ("da") version when playing the back-placed syllable ("ga") version.

Handwritten musical notation in 4/4 time. The exercise is divided into two parts. The first part features a sequence of notes with lyrics: "da da da da da da da da da ga da ga da ga da ga da". The second part features notes with lyrics: "da da da da da da da da da ga da ga da ga da ga da ga da ga da ga da".

vi. No Chromatic Note Left Behind

Handwritten musical notation in 3/4 time. The exercise involves chromatic patterns. The first staff includes lyrics: "da da da", "ga ga ga", "da ga da ga", "da ga da ga da ga da ga", "da da da", "ga ga ga", "da ga da ga", "da ga da ga da ga da ga". A note is circled with the instruction "Repeat up a semitone." The second staff includes lyrics: "da da da", "ga ga ga", "da" with an arrow pointing to the right.

Variations for opening measure (and mm. 3 and 5):

Handwritten musical notation in 3/4 time showing four variations (a, b, c, d) for the opening measure. The lyrics for each variation are: "da ga da ga da ga", "da ga da da ga da da ga da", "da ga da ga da ga", and "da ga da ga da ga".