

The Clarinetist's Octatonic Workbook

Matthew Weger

Introduction

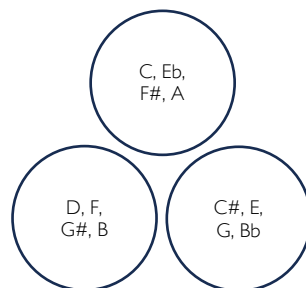
Throughout my studies as a clarinetist and music theorist, I have often found myself trying to adapt new (to me) theory concepts into my practice. While the octatonic collection or scale is certainly not new, it has recently piqued my interest especially since it is a hallmark of many twentieth-century works, to which the clarinet is no stranger.

The purpose of this workbook is to provide fellow clarinetists with exercises and studies based solely on octatonic collections, helping to familiarize themselves with the unique tonal and sonic properties of these collections. The workbook is divided into several sections: scales, thirds, triads, fourths, tritones, mixed chords, dexterity passages, miscellaneous patterns, and études. For the studies no articulation has been provided—please use any you desire. To that end, this workbook is designed for any clarinet and includes Low C bass clarinet studies.

I hope to make this project expandable, so when you find errors (as I am sure there are many), or have suggestions, please do not hesitate to contact me so version 2 can be even better!

The Octatonic Collection

Octatonic collections/scales are groups of eight notes that are arranged by alternating whole and half steps. They are also referred to as diminished scales since they are based on fully diminished seventh chords.



Using the above image, by selecting two adjacent diminished chord “pools” an octatonic collection is formed. When reordered, scales may be formed: C, Db, Eb, E, F#, G#, A, Bb, C, etc. It is important to note there are only 3 distinct octatonic collections (0,1); (0,2); (2,3) in pitch class notation, any others are rotations or transpositions of them. Respellings occur as needed.

A unique property of the octatonic collection is symmetry. There are two fully diminished seventh chords separated by a whole or half step. There are two 4-note segments of minor scales [C, D, Eb, F | F#, G#, A B] which are transposed by a tritone. In a smaller division, this can also be thought of as four 3-note segments of minor scales (do, re, me) [C, D Eb | Eb, F, Gb | F#, G# A | A, B, C] that when looking at the roots of these segments outline a diminished chord, with the complement containing the same. Many chords can be extracted a few abnormal ones which are explored in the latter half of the studies (even between what would appear as “primary” chords [split major/minor chords]).

There is a great deal of literature that explains much more about the octatonic collection in depth—but that is beyond this project as this is a workbook, not a textbook.

TLDR: very cool theory things, but it's really about the studies anyway, it just sounds spooky.

About the Études

I have composed four small études solely from octatonic collections—a fun challenge as a novice composer. Composing has always been intimidating to me for several years, and this project has finally allowed me to overcome this fear.

The first, marked *Allegro*, is a duality between major and minor. A small interlude and “mock cadenza” create a B section before re quoting A material.

The second, *Semplice*, is a dance—rather mocking in nature. Disjunct leaps should be well defined—especially dissonances.

The third, *orbital*, explores “centricity” around F-sharp, hence orbital. The dynamics should reflect the non-linear (orbital) path when approaching F-sharp. Unlike the small forms demonstrated in the first two études, *orbital* was composed using serialized rhythmic patterns (over two beats), but in no way is related to pitch or dynamics.

The last, *groove*, is another dance. Provided in two versions, 4a is written for a Low C bass clarinet, and 4b written a tritone above, for soprano clarinets (but also bass clarinets too—for a real challenge). This étude is a study in register leaps; a grooving bassline, and a disjunct upper melody, pointillistic and angular.

Last Remarks

Whether you use this workbook as an amateur, student, teacher, or professional clarinetist, I hope it offers enjoyable challenges, inspiration, and the curiosity to identify the use of the octatonic collections elsewhere. Happy practicing!

-Matthew Weger

Bowling Green, Ohio
October 2023

Scales (3 Octaves) Cont.

F-sharp - HW

5.

Musical notation for scale 5, F-sharp - HW. The scale is written in treble clef with a key signature of one sharp (F#). It consists of two staves. The first staff shows the ascending scale: F#4, G4, A4, B4, C5, D5, E5, F#5. The second staff shows the descending scale: F#5, E5, D5, C5, B4, A4, G4, F#4. The piece concludes with a double bar line and a final chord consisting of F#4 and C5.

F-sharp - WH

6.

Musical notation for scale 6, F-sharp - WH. The scale is written in treble clef with a key signature of one sharp (F#). It consists of two staves. The first staff shows the ascending scale: F#4, G4, A4, B4, C5, D5, E5, F#5. The second staff shows the descending scale: F#5, E5, D5, C5, B4, A4, G4, F#4. The piece concludes with a double bar line and a final chord consisting of F#4 and C5.

G - HW

7.

Musical notation for scale 7, G - HW. The scale is written in treble clef with a key signature of no sharps or flats. It consists of two staves. The first staff shows the ascending scale: G4, A4, B4, C5, D5, E5, F#5, G5. The second staff shows the descending scale: G5, F#5, E5, D5, C5, B4, A4, G4. The piece concludes with a double bar line and a final chord consisting of G4 and C5.

G - WH

8.

Musical notation for scale 8, G - WH. The scale is written in treble clef with a key signature of no sharps or flats. It consists of two staves. The first staff shows the ascending scale: G4, A4, B4, C5, D5, E5, F#5, G5. The second staff shows the descending scale: G5, F#5, E5, D5, C5, B4, A4, G4. The piece concludes with a double bar line and a final chord consisting of G4 and C5.

Scales (2 Octave)

9. D - HW

10. D - WH


11. D# - HW

12. E-flat - WH

Extended Range

1a. 


1b. 

2a. 

2b. 

3a. 

3b. 

4a. 

4b. 

Low C - Extended Range

1a. C - HW

3 2 R L L R 2 3

1b. C - WH

3 R L L R 3

2a. C-sharp - HW

2 2

2b. C-sharp - WH

2 R L L R 2

3a. D - HW

R L L R

3b. D - WH

for the first phrase, for the second phrase

4a. D# - HW

R L R L R

4b. E-flat - WH

R L R L R

5.

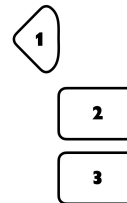
6.

7.

8.

9.

Note The numbers refer to the following right hand thumb notes on the bass clarinet:



4.

Musical score for exercise 4, consisting of three staves of music. The first staff contains four measures of music. The second staff contains four measures of music. The third staff contains four measures of music, ending with a double bar line.

5.

Musical score for exercise 5, consisting of three staves of music. The first staff contains four measures of music. The second staff contains four measures of music. The third staff contains four measures of music, ending with a double bar line.

6.

Musical score for exercise 6, consisting of three staves of music. The first staff contains four measures of music. The second staff contains four measures of music. The third staff contains four measures of music, ending with a double bar line.

Fully Diminished 7th chords

1.  

2.  

3.  

The image displays three exercises, each consisting of two staves of musical notation. Exercise 1 is in C minor, exercise 2 is in D minor, and exercise 3 is in E minor. Each exercise features a sequence of fully diminished 7th chords, with the notes of each chord clearly marked with accidentals (sharps, flats, and naturals).

Major Triads Related by Tritones

1.

2.

3.

4.

5.

6.

Chalumeau

7.

8.

9.

10.

Altissimo

11.

12.

13.

Minor Chords

1.



Musical notation for exercise 1, first staff. It begins with a treble clef and a key signature of one flat (B-flat). The melody consists of eighth and sixteenth notes, starting on G4 and moving through various intervals, including a tritone (F4-Bb4).



Musical notation for exercise 1, second staff. It continues the melody from the first staff, ending with a double bar line and a final chord consisting of G4, Bb4, and D5.

2.




Musical notation for exercise 2, first staff. It begins with a treble clef and a key signature of one flat (B-flat). The melody consists of eighth and sixteenth notes, starting on G4 and moving through various intervals, including a tritone (F4-Bb4).




Musical notation for exercise 2, second staff. It continues the melody from the first staff, ending with a double bar line and a final chord consisting of G4, Bb4, and D5.

3.



Musical notation for exercise 3, first staff. It begins with a treble clef and a key signature of one flat (B-flat). The melody consists of eighth and sixteenth notes, starting on G4 and moving through various intervals, including a tritone (F4-Bb4).



Musical notation for exercise 3, second staff. It continues the melody from the first staff, ending with a double bar line and a final chord consisting of G4, Bb4, and D5.

Major Chords

1.



Musical notation for exercise 1, first staff. It begins with a treble clef and a key signature of one sharp (F#). The melody consists of eighth and quarter notes, with a final quarter note on G4. The staff ends with a double bar line.



Musical notation for exercise 1, second staff. It begins with a treble clef and a key signature of one flat (Bb). The melody consists of eighth and quarter notes, with a final quarter note on G4. The staff ends with a double bar line and a common time signature.

2.




Musical notation for exercise 2, first staff. It begins with a treble clef and a key signature of one sharp (F#). The melody consists of eighth and quarter notes, with a final quarter note on G4. The staff ends with a double bar line.




Musical notation for exercise 2, second staff. It begins with a treble clef and a key signature of one flat (Bb). The melody consists of eighth and quarter notes, with a final quarter note on G4. The staff ends with a double bar line and a common time signature.

3.



Musical notation for exercise 3, first staff. It begins with a treble clef and a key signature of two sharps (F# and C#). The melody consists of eighth and quarter notes, with a final quarter note on G4. The staff ends with a double bar line.



Musical notation for exercise 3, second staff. It begins with a treble clef and a key signature of two flats (Bb and Eb). The melody consists of eighth and quarter notes, with a final quarter note on G4. The staff ends with a double bar line and a common time signature.

4.

Exercise 4 consists of three staves of music. The first staff begins with a treble clef and a key signature of one sharp (F#). The melody is written in eighth notes, starting on G4 and moving through various intervals, including a tritone (Bb4) and a diminished interval (Ab4). The second staff continues the melody, featuring a chromatic descent from G5 to F4. The third staff concludes the exercise with a final cadence on G4.

5.

Exercise 5 consists of three staves of music. The first staff begins with a treble clef and a key signature of one sharp (F#). The melody is written in eighth notes, starting on G4 and moving through various intervals, including a tritone (Bb4) and a diminished interval (Ab4). The second staff continues the melody, featuring a chromatic descent from G5 to F4. The third staff concludes the exercise with a final cadence on G4.

6.

Exercise 6 consists of three staves of music. The first staff begins with a treble clef and a key signature of one sharp (F#). The melody is written in eighth notes, starting on G4 and moving through various intervals, including a tritone (Bb4) and a diminished interval (Ab4). The second staff continues the melody, featuring a chromatic descent from G5 to F4. The third staff concludes the exercise with a final cadence on G4.

Misc. Chords (Major-Flat 5)

1.

Exercise 1 consists of four staves of music. The first staff begins with a treble clef and a key signature of one flat (B-flat). The melody is composed of eighth and quarter notes, with various accidentals (sharps, flats, naturals) indicating the specific notes. The second staff continues the melody with similar rhythmic patterns. The third staff shows a more complex melodic line with many accidentals. The fourth staff concludes the exercise with a final note and a double bar line.

2.

Exercise 2 consists of four staves of music. The first staff begins with a treble clef and a key signature of one flat (B-flat). The melody is composed of eighth and quarter notes, with various accidentals. The second staff continues the melody with similar rhythmic patterns. The third staff shows a more complex melodic line with many accidentals. The fourth staff concludes the exercise with a final note and a double bar line.

3.






4.





Dexterity Passages


$\text{♩} = 80+$

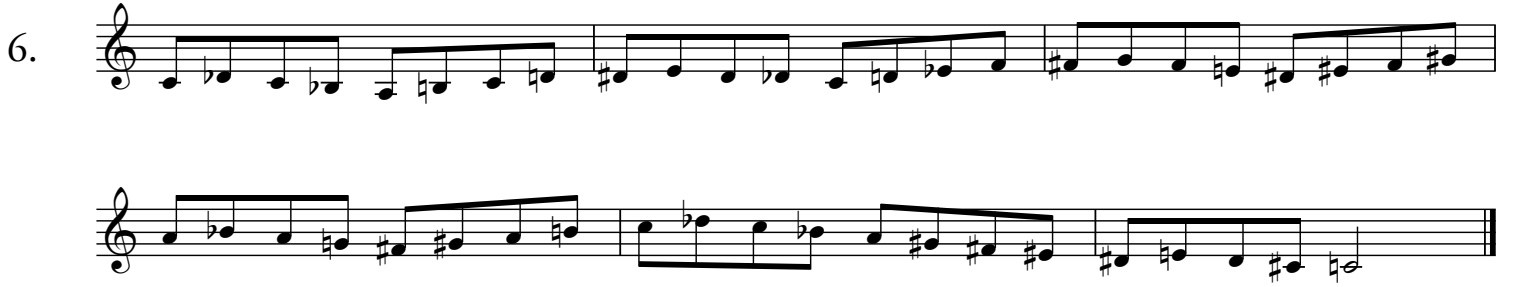
1. 



2. 


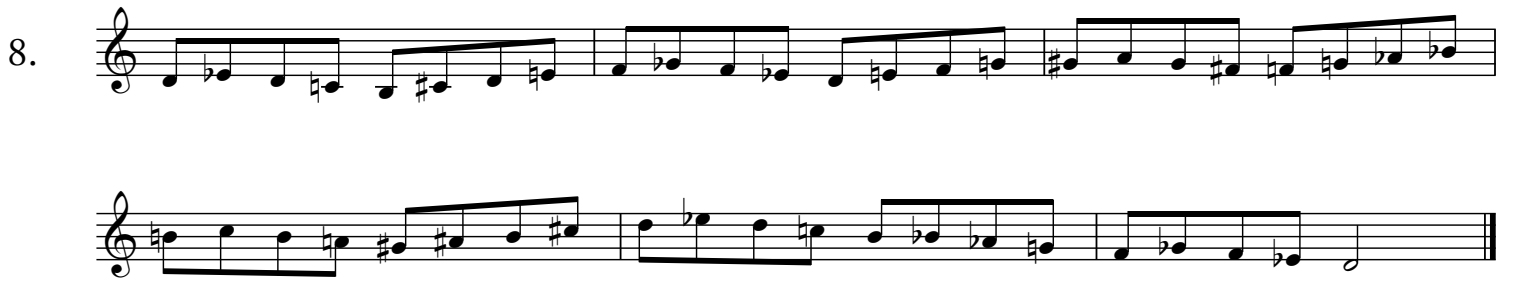
3. 


4. 


5. 


6.  Exercise 6 consists of two staves of music. The first staff begins with a treble clef and a key signature of one flat (B-flat). The melody starts on G4 and moves through a series of eighth and quarter notes, including chromatic descents and ascents. The second staff continues the melody, ending with a double bar line. The key signature changes to two flats (B-flat and E-flat) in the second staff.

7.  Exercise 7 consists of two staves of music. The first staff begins with a treble clef and a key signature of one sharp (F-sharp). The melody starts on A4 and moves through a series of eighth and quarter notes. The second staff continues the melody, ending with a double bar line. The key signature changes to two sharps (F-sharp and C-sharp) in the second staff.

8.  Exercise 8 consists of two staves of music. The first staff begins with a treble clef and a key signature of one flat (B-flat). The melody starts on G4 and moves through a series of eighth and quarter notes. The second staff continues the melody, ending with a double bar line. The key signature changes to two flats (B-flat and E-flat) in the second staff.

Misc. Patterns

1.

Exercise 1 consists of three staves of music in 4/4 time. The first staff contains four measures of eighth-note patterns with various accidentals. The second staff continues with eighth-note patterns, including a measure with a flat. The third staff concludes with eighth-note patterns and ends with a double bar line and a common time signature.

2.

Exercise 2 consists of three staves of music in 4/4 time. The first staff contains four measures of eighth-note patterns with various accidentals. The second staff continues with eighth-note patterns, including a measure with a flat. The third staff concludes with eighth-note patterns and ends with a double bar line and a common time signature.

3.

Exercise 3 consists of three staves of music in 4/4 time. The first staff contains four measures of eighth-note patterns with various accidentals. The second staff continues with eighth-note patterns, including a measure with a flat. The third staff concludes with eighth-note patterns and ends with a double bar line and a common time signature.

4.

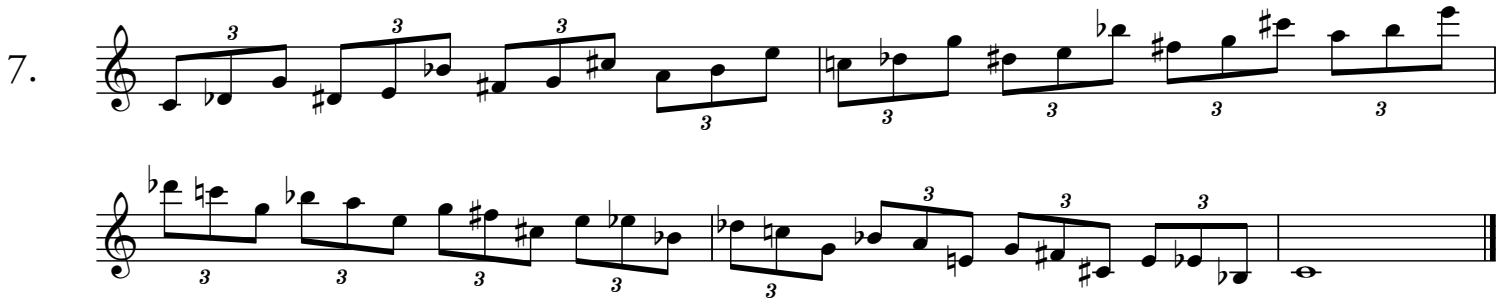
Exercise 4 consists of three staves of music. The first staff begins with a treble clef and a key signature of one flat (B-flat). The melody is composed of eighth and quarter notes. The second staff continues the melody, featuring a measure with a circled 'b' above a note. The third staff concludes the exercise with a double bar line and a final chord.

5.

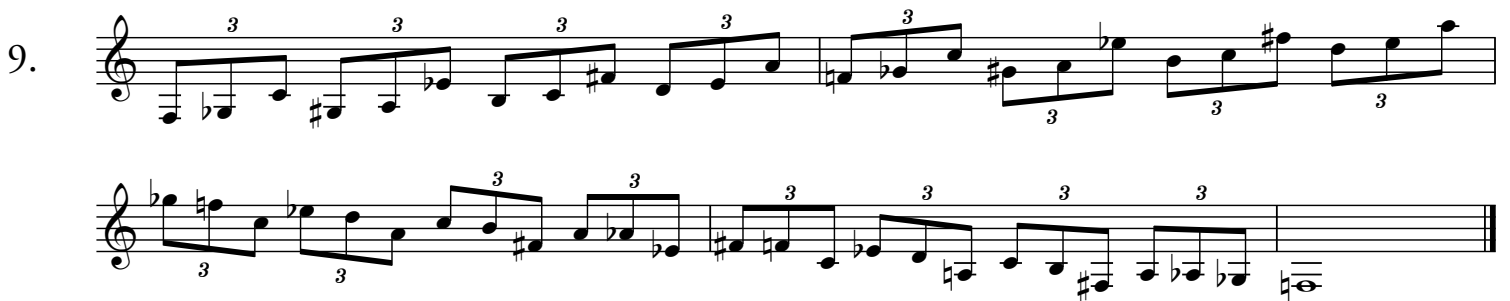
Exercise 5 consists of three staves of music. The first staff begins with a treble clef and a key signature of one flat (B-flat). The melody is composed of eighth and quarter notes. The second staff continues the melody. The third staff concludes the exercise with a double bar line and a final chord.

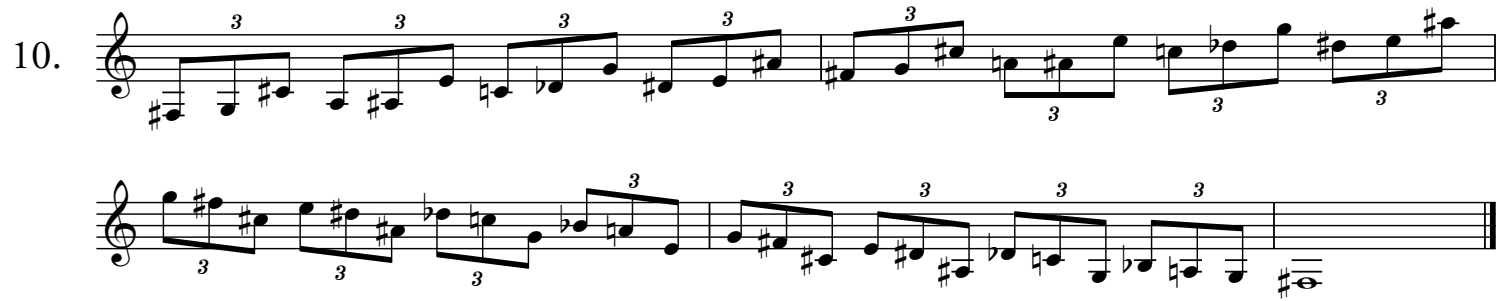
6.

Exercise 6 consists of three staves of music. The first staff begins with a treble clef and a key signature of one sharp (F-sharp). The melody is composed of eighth and quarter notes. The second staff continues the melody. The third staff concludes the exercise with a double bar line and a final chord.

7. 

8. 

9. 

10. 

11. 

12. 

13. 

Étude 1

Matthew Weger

1 **Allegro** (♩=72+)

6 *p* *mf* *f* *p*

12 *mf* *mf* *rall.*

17 **a tempo**

21 *f*

Étude 2

1 **Semplice** (♩=55)

7 *p* *mf*

12 *f*

18 *mf* *sub. p* *poco rall.* . . . *pp*

Étude 4a

Matthew Weger

1 groove (♩=120)

The musical score for Étude 4a consists of two staves. The upper staff is the piano accompaniment, and the lower staff is the melody. The piece is in 3/4 time with a tempo of 120 beats per minute. The key signature has one sharp (F#). The score is divided into measures, with measure numbers 1, 5, 10, 14, 19, and 23 indicated at the start of their respective lines. The piano part features a steady eighth-note accompaniment with various chordal textures. The melody is primarily eighth-note based, with some sixteenth-note runs and rests. Dynamics include *mf* (mezzo-forte) at the beginning and *f* (forte) in measure 10. A *mf* dynamic is also present in measure 23. The piece concludes with a double bar line in measure 24.

Étude 4b

Matthew Weger

1 groove (♩=120)

The musical score for Étude 4b consists of six staves of music, each with a treble clef and a key signature of one flat (B-flat major or D minor). The tempo is marked as 'groove' with a quarter note equal to 120 beats per minute. The score begins with a dynamic marking of *mf* at measure 1. The first staff (measures 1-5) features a rhythmic pattern of eighth notes and quarter notes. The second staff (measures 6-10) continues this pattern with some triplet-like groupings. The third staff (measures 11-15) introduces a dynamic marking of *f* and includes some sixteenth-note runs. The fourth staff (measures 16-20) continues the melodic and rhythmic development. The fifth staff (measures 21-23) features a dynamic marking of *>mf* and includes some rests. The sixth staff (measures 24-28) concludes the piece with a final cadence.