

## Overtone Exercises for Flute

Marc Adler

Play these exercises slowly in the manner of long tone exercises. Transpose and play both ascending and descending as well.

1st Partial: Primary Fundamental Pitches -. These pitches will be used to produce the 2nd and 3rd partials. Ratio of cycles: 1:1. Low B, C and Db will be used for partials 4 and 5 introduced later.

Flute

1:1

8

2:1 - octave

2nd Partial: Using only the lips [do not change fingerings] make the "jet stream" of air leaving the lips smaller and the next partial in the overtone series will sound an octave higher. Partials are often spoken of in terms of number of cycles per second and their relationship to the fundamental. The relationship between the first and second partial is 2:1 with the second partial an octave higher than the first and with double the number of cycles per second.

15

2:1 - octave

20

25

3rd Partial: Similar to the manner in which you achieved the second partial make the air stream leaving the lips more focused and concentrated to produce the third partial - which will sound a perfect fifth above the second partial and a 12th above the fundamental. Ratio to fundamental is 3:1.

32

3:1 "5th"    1    2    3    2    1

35

38

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2

Musical score for the fourth overtone exercise. The score consists of two staves of music. The first staff starts at measure 41 in common time (indicated by '4'). The second staff begins at measure 44 in common time (indicated by '4'). Both staves feature a treble clef and five-line staff lines. The music consists of a series of notes connected by horizontal lines, with vertical stems extending either upwards or downwards from each note. Small circles with stems are placed above or below the stems of the notes. Measure 41 contains notes 1 through 4. Measure 44 contains notes 1 through 4. Measures 45 and 46 show a continuation of the pattern.

Fourth Partial: Sounding two octaves above the fundamental. Ratio to fundamental is 4:1

Continuation of the fourth overtone exercise. The score continues from measure 44. The first staff ends at measure 44 and the second staff begins at measure 45. The key signature changes to one flat (B-flat) at measure 45. The music consists of a series of notes connected by horizontal lines, with vertical stems extending either upwards or downwards from each note. Small circles with stems are placed above or below the stems of the notes. Measure 45 contains notes 1 through 4. Measure 46 contains notes 1 through 4. Measures 47 and 48 show a continuation of the pattern.

4:1 "octave"

Continuation of the fourth overtone exercise. The score continues from measure 46. The first staff ends at measure 46 and the second staff begins at measure 47. The key signature changes to one flat (B-flat) at measure 47. The music consists of a series of notes connected by horizontal lines, with vertical stems extending either upwards or downwards from each note. Small circles with stems are placed above or below the stems of the notes. Measure 47 contains notes 1 through 4. Measure 48 contains notes 1 through 4. Measures 49 and 50 show a continuation of the pattern.

Continuation of the fourth overtone exercise. The score continues from measure 48. The first staff ends at measure 48 and the second staff begins at measure 49. The key signature changes to one flat (B-flat) at measure 49. The music consists of a series of notes connected by horizontal lines, with vertical stems extending either upwards or downwards from each note. Small circles with stems are placed above or below the stems of the notes. Measure 49 contains notes 1 through 4. Measure 50 contains notes 1 through 4. Measures 51 and 52 show a continuation of the pattern.

Continuation of the fourth overtone exercise. The score continues from measure 50. The first staff ends at measure 50 and the second staff begins at measure 51. The key signature changes to one flat (B-flat) at measure 51. The music consists of a series of notes connected by horizontal lines, with vertical stems extending either upwards or downwards from each note. Small circles with stems are placed above or below the stems of the notes. Measure 51 contains notes 1 through 4. Measure 52 contains notes 1 through 4. Measures 53 and 54 show a continuation of the pattern.

Fifth Partial: Sounding two octaves and a major third above the fundamental. Ratio to fundamental is 5:1.

Musical score for the fifth overtone exercise. The score consists of two staves of music. The first staff starts at measure 57 in common time (indicated by '4'). The second staff begins at measure 58 in common time (indicated by '4'). Both staves feature a treble clef and five-line staff lines. The music consists of a series of notes connected by horizontal lines, with vertical stems extending either upwards or downwards from each note. Small circles with stems are placed above or below the stems of the notes. Measure 57 contains notes 1 through 5. Measure 58 contains notes 1 through 5. Measures 59 and 60 show a continuation of the pattern.

Continuation of the fifth overtone exercise. The score continues from measure 58. The first staff ends at measure 58 and the second staff begins at measure 59. The key signature changes to one flat (B-flat) at measure 59. The music consists of a series of notes connected by horizontal lines, with vertical stems extending either upwards or downwards from each note. Small circles with stems are placed above or below the stems of the notes. Measure 59 contains notes 1 through 5. Measure 60 contains notes 1 through 5. Measures 61 and 62 show a continuation of the pattern.

Continuation of the fifth overtone exercise. The score continues from measure 60. The first staff ends at measure 60 and the second staff begins at measure 61. The key signature changes to one flat (B-flat) at measure 61. The music consists of a series of notes connected by horizontal lines, with vertical stems extending either upwards or downwards from each note. Small circles with stems are placed above or below the stems of the notes. Measure 61 contains notes 1 through 5. Measure 62 contains notes 1 through 5. Measures 63 and 64 show a continuation of the pattern.

Musical staff 60: Treble clef, key signature of C major (no sharps or flats). The staff shows a sequence of notes with open circles above them, indicating specific overtones to play.

Musical staff 61: Treble clef, key signature of C major (no sharps or flats). The staff shows a sequence of notes with open circles above them, including some flats, indicating specific overtones to play.

Pitch Matching using the 3rd partial

Exercises

Musical staff 65: Treble clef, key signature of C major (no sharps or flats). The staff shows a sequence of notes with open circles above them, including some sharps, indicating specific overtones to play.

Musical staff 72: Treble clef, key signature of C major (no sharps or flats). The staff shows a sequence of notes with open circles above them, including some flats, indicating specific overtones to play.

Musical staff 80: Treble clef, key signature of C major (no sharps or flats). The staff shows a sequence of notes with open circles above them, including some flats, indicating specific overtones to play.

Musical staff 88: Treble clef, key signature of C major (no sharps or flats). The staff shows a sequence of notes with open circles above them, including some flats, indicating specific overtones to play.

Musical staff 96: Treble clef, key signature of C major (no sharps or flats). The staff shows a sequence of notes with open circles above them, including some sharps, indicating specific overtones to play.

Musical staff 104: Treble clef, key signature of C major (no sharps or flats). The staff shows a sequence of notes with open circles above them, including some flats, indicating specific overtones to play.

Triads. Transpose to other keys.

Musical staff 112: Treble clef, key signature of G major (one sharp). The staff shows a sequence of notes with open circles above them, divided into four measures labeled G: I, IV, I, and F: I. Measure 1 starts with a sharp sign above the staff.

Overtone Exercises for Flute

4

Chromatic Major Thirds. 2nd and 3rd partials used.

119

Etc.

Perfect Fifths. 2nd and 3rd partials used.

124

Etc.

c

Simple Melody. 2nd and 3rd partials used. Transpose.

129

Bb: V I V I V I

135

V I

Repeating Root. 2nd and 3rd Partial used. Transpose to other keys.

142

Major 7th and Tritone. 2nd & 3rd partials used. Transpose.

Chromatic Exercise. 3rd partial only used. Continue pattern.

149

Bugle Call. 3rd, 4th & 5th partials used. Transpose to C, Db, D and Eb.

155

C7 C7

Jazz Applications

161

D<sup>b</sup>7 D<sup>b</sup>7 C7 C7

166

D<sup>b</sup>7 D<sup>b</sup>7 C7 C7

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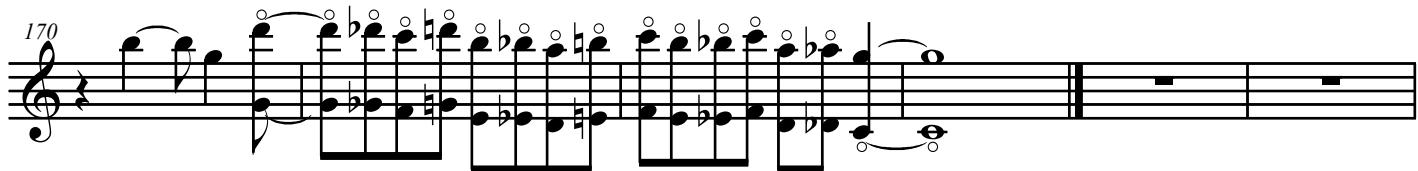
D $\flat$ 7

D $\flat$ 7

C7

C7

5



Additional Sources:

1. Wye, Trevor. *Practice Book for the Flute; Book 4: Intonation & Vibrato*. London: Novello & Company. 1983.
2. *supra: Book I Tone*.
3. Dick, Robert. *Tone Development Through Extended Techniques*. New York: Multiple Breath Music Company. 1986.