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ABC's
of the
Overtone Series

Overtone Series

THE SEVEN SERIES

Overtone Series



C Series (open)

A musical score for a grand staff (treble and bass clefs) showing the overtone series for an open C string. The bass clef has a single note on the open string (C2). The treble clef has a key signature of one flat (Bb) and a series of notes: C3 (open string), C4 (middle C), E4, G4, Bb4, C5, E5, G5, Bb5, C6. A green arrow points to the C3 note on the treble staff.

OPEN

Overtone Series



B Series (2nd Valve)

Musical notation showing the overtone series for the B series (2nd Valve). The notation is written on a grand staff (treble and bass clefs). The notes are: B₂ (bass clef, 2nd line), B₃ (treble clef, 2nd space), D₄ (treble clef, 1st space), E₄ (treble clef, 1st line), F₄ (treble clef, 1st space), G₄ (treble clef, 2nd line), A₄ (treble clef, 2nd space), B₄ (treble clef, 3rd space), C₅ (treble clef, 4th space), D₅ (treble clef, 4th line), E₅ (treble clef, 5th line), F₅ (treble clef, 5th space), G₅ (treble clef, 5th space), A₅ (treble clef, 5th space), B₅ (treble clef, 5th space). The notes are grouped into two measures. The first measure contains the notes B₂, B₃, D₄, E₄, F₄, G₄, A₄, and B₄. The second measure contains the notes B₄, C₅, D₅, E₅, F₅, G₅, A₅, and B₅. A green arrow points from the B₄ note in the first measure to the B₄ note in the second measure. Below the notation, the words "OPEN" and "2" are written.

OPEN 2

Overtone Series



Bb Series (1st valve)

Musical notation for the Bb overtone series. The notation is written on a grand staff (treble and bass clefs). The notes are: Bb (2nd line), Bb (3rd space), Bb (4th space), Bb (5th space), Bb (6th space), Bb (7th space), Bb (8th space), Bb (9th space), Bb (10th space), Bb (11th space), Bb (12th space). The notes are grouped into three sets of three, with the first set labeled 'OPEN', the second '2', and the third '1'. A green arrow points to the first note of the third set, Bb (11th space).

OPEN 2 1

Overtone Series



A Series (12 or 3)

OPEN 2 1 12
or 3

Overtone Series



Ab Series (23)

OPEN 2 1 12 23
or 3

Overtone Series



G Series (13)

OPEN 2 1 12 23 13

or 3

Overtone Series



F# Series (123)

Musical notation for the F# overtone series on a piano. The notation is written on a grand staff (treble and bass clefs). The notes are: OPEN (bass clef), 2 (treble clef), 1 (bass clef), 12 (treble clef), 23 (treble clef), 13 (bass clef), and 123 (treble clef). A green arrow points to the 123 note. The notes are arranged in a sequence that shows the overtone series for F#.

OPEN 2 1 12 23 13 123

or 3

Overtone Series

Pitch Tendencies (valves)

The diagram illustrates the overtone series for a trumpet, showing the pitch tendencies for each valve combination. The series is presented in a table format with valve indicators, photographs of the valves, and musical notation.

Valve Indicator	Valve Photograph	Musical Notation
ok		OPEN
ok		2
ok		1
s#		12
*sb		23
m#		13
v#		#123

The musical notation shows the overtone series for each valve combination, with the fundamental pitch indicated by a note on the bass staff. The notes are arranged in a treble clef staff, showing the harmonic structure of the series.

or 3

* Can vary depending on the manufacturer.