

# Trombone Harmonic Series

The fundamental pitch of the trombone is determined by the length of the tube. Its characteristic tone quality is determined not only by the size of the opening in the tube, but also the amount of conical tubing or flare.

Regardless of the length of tubing, a natural overtone series is produced when the air inside the tube is activated through the vibration of the lips. By changing the tension of the lips and air speed, the performer can move higher and lower within the harmonic series, without changing the slide positions.

Although the harmonic series is (in theory) endless, the chart below begins with the fundamental and continues through the 12th partial.

The 7th and 11th harmonic (partial) is so flat that it is unusable in the series (note the triangular shape of the note head). However, different brands of instruments and mouthpieces may produce varying results.

**Partials:**      1            2            3            4            5            6            7            8            9            10          11          12

**WARNING!** It is **illegal** to photocopy or reproduce the Trombone Harmonic Series and Position Chart. Individual Trombone Position Charts are available for purchase from your favorite music dealer for use with your students. Please refer to the back cover of this manual for further information.  
 Individual Trombone Position Charts: Kjos Edition Number - W33TB

# Trombone Position Chart

Notes on gray background are pedal tones.

F	F# Gb	G	G# Ab	A	A# Bb
6 or T 1	5	4	3	2	1

B	C	C# Db	D	D# Eb	E	F
Tb7 (lip down)	T 7	T 6	Tb4	Tb3	7 or T 2	6 or T 1

F# Gb	G	G# Ab	A	A# Bb	B	C
5	4 or Tb7	3 or Tb6	2 or Tb4	1 or Tb3	7 or Tb2	6 or T 1

C# Db	D	D# Eb	E	F	F# Gb	G
5	4	3	2 or 7	1 or 6	5	4

G# Ab	A	A# Bb	B	C	C# Db
3 or 7	2 or 6	1 or #5	4 or b7	3 or b6	2 or b5

D	D# Eb	E	F	F# Gb	G
1 or b4	3 or #6	2 or #5	1 or #4 or 6	#3 or 5 or 7	#2 or 4 or 6

G# Ab	A	A# Bb	B	C	C#	D
3 or 5 or 7	2 or 4 or 6	1 or 3 or 5	2 or 4	3 or b1 or 6	2 or 5	1 or b4

(When more than one position is shown, the first is the most common.)

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