

INTERVALS

An *interval* is the distance in pitch between two notes. When the two notes are played in succession they form a 'melodic interval'; when they are played simultaneously they form a 'harmonic interval'.



Intervals are named by *size* and *quality*. The size is labelled as a number and is determined by how many letters in the musical alphabet it spans. The first note is counted as one, therefore C to D is a second; C to E is a third; C to F is a third; and so on.

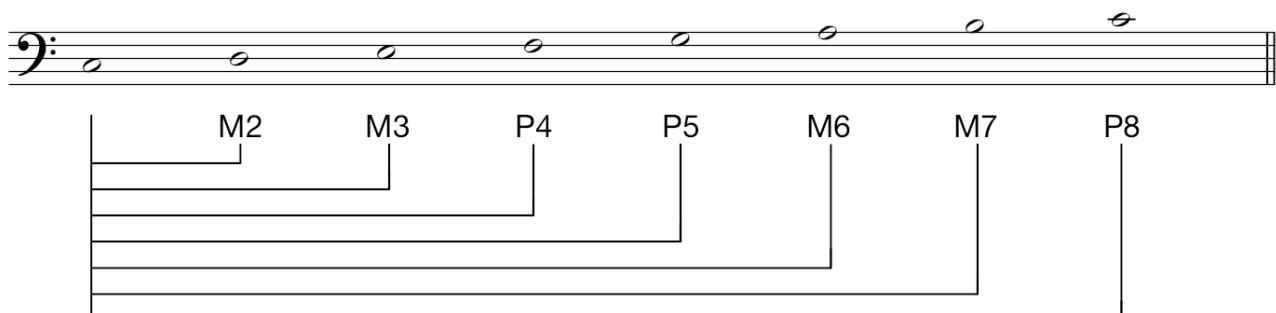
C	D	E	F	G	A	B	C
1	2	3	4	5	6	7	8
<i>unison</i>				<i>octave</i>			

Accidentals do not affect the numerical value, A to E \flat for example would still be a fifth.

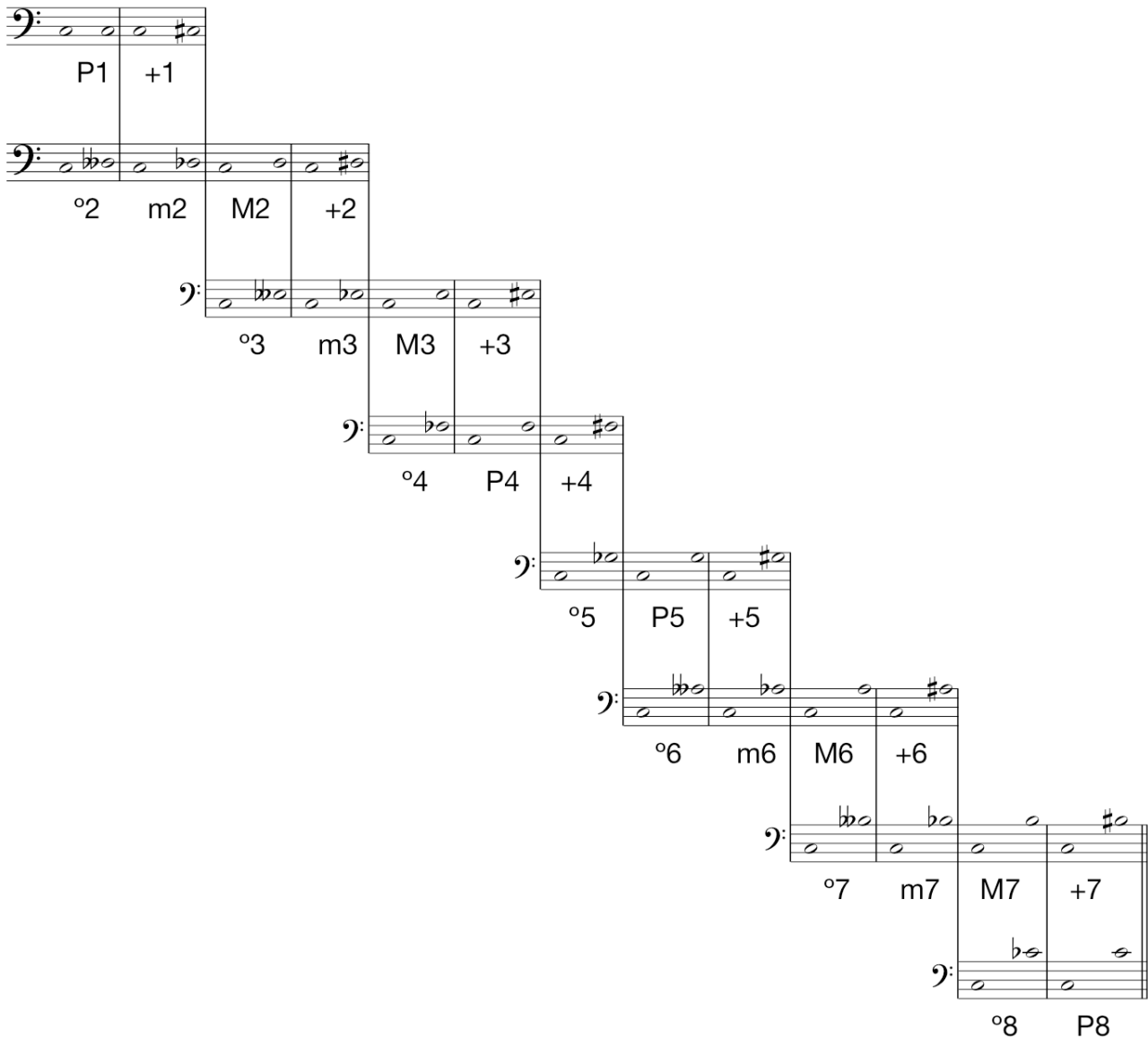
A	B \flat	C	D \flat	E \flat	F	G	A
1	2	3	4	5	6	7	8
<i>unison</i>				<i>octave</i>			

The quality of the interval is determined by the number of semitones between the notes. Unisons can be perfect (P), augmented (+) or diminished ($^{\circ}$), as can fourths, fifths and octaves; seconds, thirds, sixths and sevenths can all be major (M), minor (m), augmented or diminished.

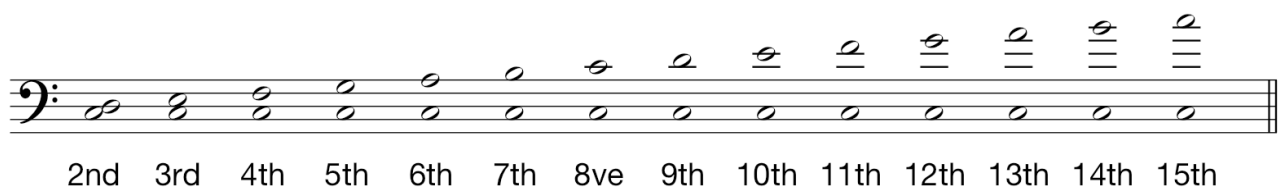
A major scale, for example, consists of the following intervals:






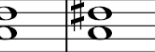
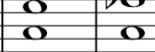
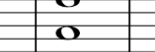
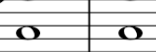
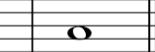

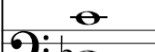
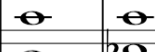
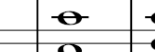
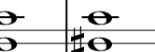
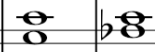
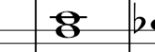
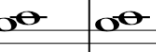


Just as C# is the *enharmonic equivalent* of D \flat , so is the interval of an augmented unison and a minor second. The following diagram shows all possible intervals, and their enharmonic equivalents, occurring within an octave:



Intervals of an octave or less are called *simple intervals*, intervals greater than an octave are called *compound intervals*. For any interval whose number is larger than 8, subtract 7 from the number to arrive at its simple equivalent.



When one of the notes of an interval is raised or lowered by an octave, so that the top note becomes the bottom or vice versa, it is said to be *inverted*.

											
m2	M2	m3	M3	P4	+4	P5	m6	M6	m7	M7	P8
											
M7	m7	M6	m6	P5	°5	P4	M3	m3	M2	m2	P1

As can be seen above, the size of the original interval and its inversion always add up to nine:

$$2 + 7 = 9$$

$$3 + 6 = 9$$

$$4 + 5 = 9$$

$$6 + 3 = 9$$

$$7 + 2 = 9$$

$$8 + 1 = 9$$

Except for perfect, which remains the same, the quality of the interval also inverts:

minor becomes major
 major becomes minor
 augmented becomes diminished
 diminished becomes augmented