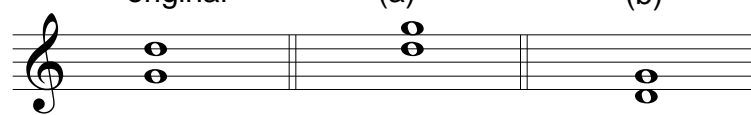


Inversion of Intervals

All intervals may be inverted by flipping the interval upside down. This is done (Ex. 1) by either taking the lower note and writing it above the upper note (1a), or by taking the upper note and writing it below the lower note (1b).

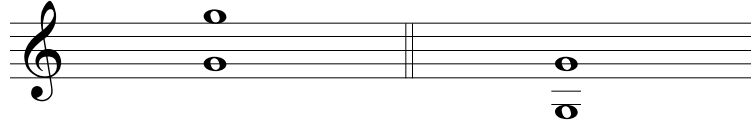
Ex. 1

original (a) (b)



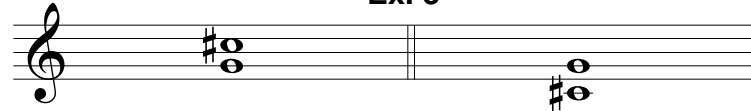
In doing so, you may have noticed that the interval has changed. This will always be the case, except when you invert octaves (Ex. 2).

Ex. 2



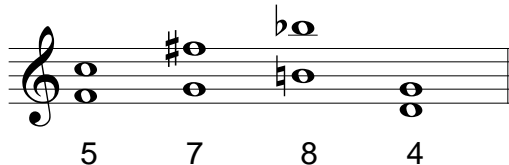
Another interesting aspect of interval inversion takes place when you invert a tritone (A4/d5). In this case, a tritone always inverts to a tritone. Where the number of half steps between the notes changed under inversion in Ex. 1, when inverting tritones, the number of half steps stays the same.

Ex. 3



Intervals consists of two aspects: The general interval, and the specific interval. The general interval is in the form of a number and represents the distance in letter names from one note to another. The general interval for the pitches in Ex. 4 are given below the score. Remember to always count the starting note as 1 when determining the general interval. In determining the general interval, accidentals are inconsequential.

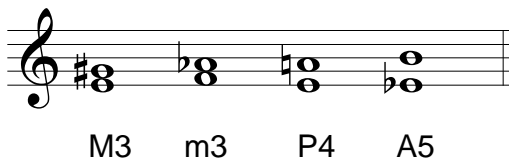
Ex. 4



5 7 8 4

The specific interval is the quality of the interval. the specific interval may be perfect, major, minor, augmented, diminished, doubly augmented, doubly diminished, etc. (Ex.5). The specific interval may be determined by counting the half steps between the two notes, by relating the two notes back to a major or, perhaps, minor scale, or simply by memorization.

Ex. 5



M3 m3 P4 A5

In determining the inversion of an interval you must invert both the general and specific aspects of the interval. All the possibilities within an octave are included in the following two charts (Ex. 6a and 6b). Ex. 6a lists all the possible inversions of the general interval. Ex. 6b lists all the possible inversions of the specific interval.

Ex. 6a

1 ----- 1		5 ----- 4
2 ----- 7	and therefore	6 ----- 3
3 ----- 6		7 ----- 2
4 ----- 5		8 ----- 8

Ex. 6b

P ----- P		P ----- P
M ----- m	and therefore	m ----- M
d ----- A		A ----- d

*Notice that in each inversion, the numbers add up to 9 (with the exception of the unison and the octave).
For example 2 inverts to 7. 2+7=9.

Let's put the charts to work!

Question: Invert a M3.

Process: Invert the general interval first. According to Ex. 6a, a 3rd inverts to a 6th. Now, invert the specific interval. According to Ex. 6b, a major interval inverts to a minor.

Answer: m6

Illustrate your answer:

Try these (answers are at the bottom):

- (1) M6 inverts to _____
- (2) P4 inverts to _____
- (3) M2 inverts to _____
- (4) d5 inverts to _____
- (5) m6 inverts to _____
- (6) A6 inverts to _____
- (7) P8 inverts to _____
- (8) m2 inverts to _____
- (9) M7 inverts to _____
- (10) A3 inverts to _____

Answers: (1) m3 (2) P5 (3) m7 (4) A4 (5) M3 (6) d3 (7) P8 (8) M7 (9) m2 (10) d6