

# MUSIC THEORY.aargh©

## The Year of the Interval: Unisons, Octaves and Inversion (Session 15)

By Dr. Ona Pinsonneault

Answers to February questions about fourths and fifths: Eb up to Bb is a Perfect Fifth, Ab up to Db is a Perfect Fourth, F up to Bb is a Perfect Fourth, C# up to G# is a Perfect Fifth, F# up to B is a Perfect Fourth, and D up to A is a Perfect Fifth. *Amazing (Grace)* begins with a Perfect Fourth, *Twinkle, Twinkle (Little Star)* begins with a Perfect Fifth, and *I've Been (Working on the Railroad)* begins with a Perfect Fourth.

In the fourth measure below there is a Perfect unison and a Perfect Octave. In a **Perfect Unison** two voices are on the same pitch (one note) and they are zero half steps apart. In a **Perfect Octave** the notes in the interval are 8 letters apart (C, D, E, F, G, A, B, C) and 12 half steps apart. In measure 8 below C up to C# is one half step, the letters are the same, the interval is called an **Augmented unison**. The second interval C# up to C is 11 half steps, the letters are the same, the interval is called a **Diminished octave**.

Interval Inversion

Major 2   minor 7   Major 3   minor 6   Perfect 4   Perfect 5   Perfect unison  
Perfect octave

minor 2   Major 7   minor 3   Major 6   Augmented 4   diminished 5   Augmented unison  
diminished octave

Last session we looked a little bit into *inversion*. “If the fourth is turned upside down a fifth results.” **Inversion** results when one of the notes of the interval moves up or down an octave so that it crosses the pitch level of the other note in the interval. **Interval Inversion occurs when the lower note becomes the upper note, or vice versa.**

Notice that the sum of each pair of intervals is 9. Notice that if a **Major** interval is inverted it becomes **minor**, that **Perfect** remains **Perfect**, and that **Augmented** becomes **diminished**, and vice versa on all.

	↔		↔		
Major	↔	Minor	Second ↔ Seventh = 9 (2 + 7)		
Perfect	↔	Perfect	Third ↔ Sixth = 9 (3 + 6)		
Augmented	↔	diminished	Fourth ↔ Fifth = 9 (4 + 5)		
			Unison ↔ Octave = 9 (1 + 8)		

Each of these pairs of intervals has it’s own inherent quality and use, but the interval inversion of each pair is used in a similar way. Each pair of intervals is very different in quality and use from the other pairs of intervals.

If you have questions about intervals please send them along. In the meantime, it’s going to be a great Festival Conference in La Crosse; I hope to see you there!

Until next time,

Dr. P

[Ona.pinsonneault@normandale.edu](mailto:Ona.pinsonneault@normandale.edu)

April, 2014