

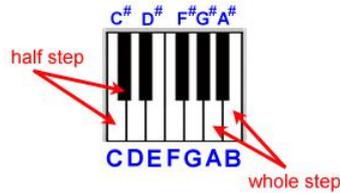
## Music Theory

### Intervals

An interval is the distance between two notes. Intervals are always counted from the lower note to the higher one, with the lower note being counted as one. Intervals come in different qualities and size. If the notes are sounded successively, it is a melodic interval. If sounded simultaneously, then it is a harmonic interval.

The smallest interval used in Western music is the half step. A visual representation of a half step would be the distance between a consecutive white and black note on the piano. There are two exceptions to this rule, as two natural half steps occur between the notes E and F, and B and C.

A whole step is the distance between two consecutive white or black keys. It is made up of two half steps.



### Qualities and Size

Intervals can be described as Major (M), Minor (m), Perfect (P), Augmented (A), and Diminished (d).

Intervals come in various sizes: Unisons, Seconds, Thirds, Fourths, Fifths, Sixths, and Sevenths.

2nds, 3rds, 6ths, and 7ths can be found as Major and Minor.

Unisons, 4ths, 5ths, and Octaves are Perfect. [Listen](#)



When a major interval is raised by a half step, it becomes augmented.  
 When a major interval is lowered by a half step, it becomes minor.  
 When a major interval is lowered by two half steps, it becomes diminished.

When a minor interval is raised by a half step, it becomes major.  
 When a minor interval is raised by two half steps, it becomes augmented.  
 When a minor interval is lowered by a half step, it becomes diminished.

When a perfect interval is raised by a half step, it becomes augmented.  
 When a perfect interval is lowered by a half step, it becomes diminished.

### INVERSIONS OF INTERVALS

Intervals can be inverted, which basically means you turn them upside down. The lower note is raised up an octave so that the top note/bottom note relationship is reversed. The chart below shows the inversions of intervals.

#### Qualities

- Major becomes Minor
- Minor becomes Major
- Perfect remains Perfect
- Augmented becomes Diminished
- Diminished becomes Augmented

#### Size

- 2 becomes 7
- 3 becomes 6
- 4 becomes 5
- 5 becomes 4
- 6 becomes 3
- 7 becomes 2

### Interval Identification

It is important to be able to hear and identify intervals. This is a very important thing for musicians to do. Here is a list of familiar songs that will help you to identify the intervals.

m2- Stormy Weather	<a href="#">m2</a>
M2- Happy Birthday	<a href="#">M2</a>
m3- The Impossible Dream	<a href="#">m3</a>
So Long, Farewell from The Sound of Music	
M3- Halls of Montezuma	<a href="#">M3</a>
P4- Here comes the bride	<a href="#">P4</a>
A4- Maria from West Side Story	<a href="#">A4</a>
P5- Star Wars	<a href="#">P5</a>
Twinkle, Twinkle, Little Star	
M6- NBC theme music	<a href="#">M6</a>
m7- Somewhere from West Side Story	<a href="#">m7</a>
M7- Bali Hai from South Pacific	<a href="#">M7</a>
Octave- Over the rainbow	<a href="#">Oct.</a>

## Scales

There are many different types of scales. They are the backbone of music.

A major scale is a series of 8 consecutive notes that use the following pattern of half and whole steps: [Listen](#)

W W  $\frac{1}{2}$  W W W  $\frac{1}{2}$

Minor Scales come in three forms: Natural, Melodic, and Harmonic.

Natural Minor scales use the following pattern of half and whole steps: [Listen](#)

W  $\frac{1}{2}$  W W  $\frac{1}{2}$  W W

Melodic Minor scales ascend and use the following pattern of half and whole steps. When descending, they do so in the natural minor form. [Listen](#)

W  $\frac{1}{2}$  W W W W  $\frac{1}{2}$

W W  $\frac{1}{2}$  W W  $\frac{1}{2}$  W

Harmonic Minor scales use the following pattern of half and whole steps: [Listen](#)

W  $\frac{1}{2}$  W W  $\frac{1}{2}$  W+ $\frac{1}{2}$   $\frac{1}{2}$

Chromatic Scales are made up entirely of half steps. When ascending, the scale uses sharps, when descending it uses flats. [Listen](#)

Whole Tone Scales differ from the other scales because it only has 6 tones. It uses the following pattern: [Listen](#)

W W W W W

A pentatonic Scale is a five-tone scale, which has its beginning in antiquity. There are traces of this scale in Oriental and American Indian music. This scale does not have a leading tone, which gives the scale its unique sound. The scale has two forms. The first one uses the group of two black keys followed by three black keys. The pattern is as follows: [Listen](#)

W W+ $\frac{1}{2}$  W W

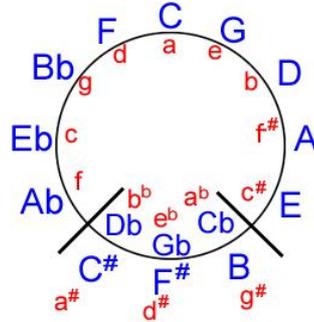
The second one used the group of three black keys followed by two black keys. The pattern is as follows: [Listen](#)

∨ ∨ ∨ ∨  
 W W W+½ W

Key Signatures

There are 15 major and 15 minor key signatures. The sharps or flats at the beginning of the staff indicate the main tone (diatonic) to which other tones are related.

**Circle of 5<sup>ths</sup>**



Db-C#, Gb-F#, Cb-B, are enharmonic keys, meaning that they are written differently, but sound the same.

There are 15 major and 15 minor key signatures. The sharps or flats at the beginning of the staff indicate the main tone (diatonic) to which other tones are related.

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