Intervals 101 (In Less Than 15 Minutes)

Interval Basics

First let's lay out three basic points regarding intervals:

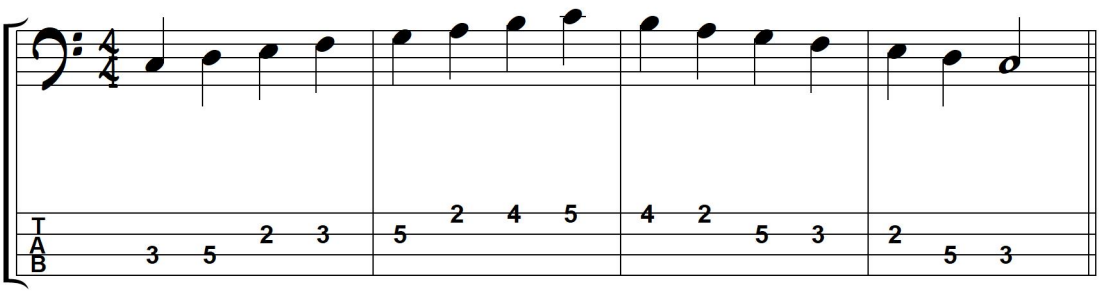
1. Intervals are **measurements of musical distance** like tones and semitones (whole steps and half steps). Intervals are simply a little more descriptive.

2. Interval names are **unrelated to scales**. The basic set of intervals are roughly named according to the **major scale** but, beyond that, ignore any relationship to scales.

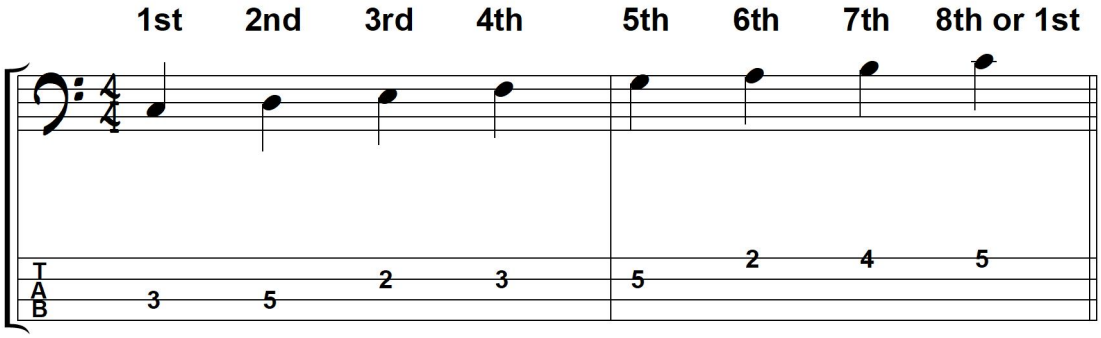
3. Intervals are basically the **alphabet of music**. They are the letters of the language. Musical **phrases**, **scales**, **chords**, **arpeggios** and everything else can be described and built from intervals.

Intervals Of The Major Scale

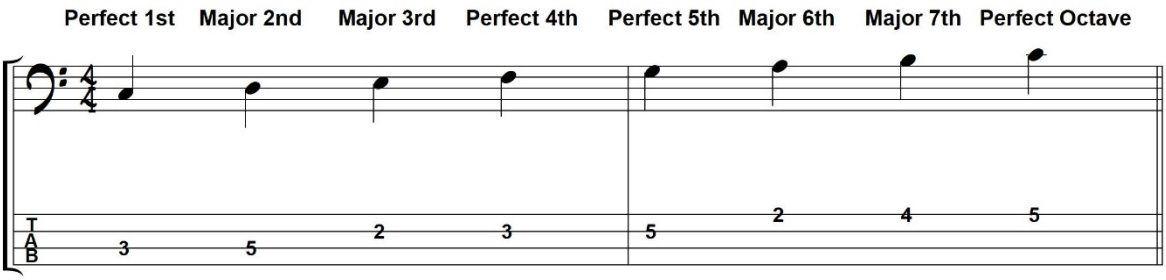
The most common set of intervals are based on a **major scale**. Below we see a simple **C Major Scale**:



We can then **number** the notes of the scale:



Intervals also contain a **quality**. The intervals of the major scale contain the following qualities:



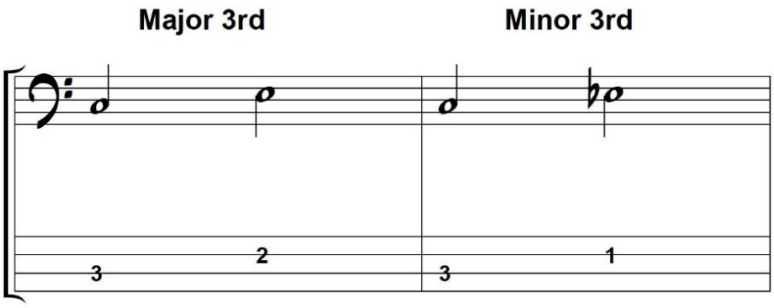
Simply follow the principles:

- **1st, 4th** and **5th** are all **Perfect** Intervals
- All the rest are **Major**

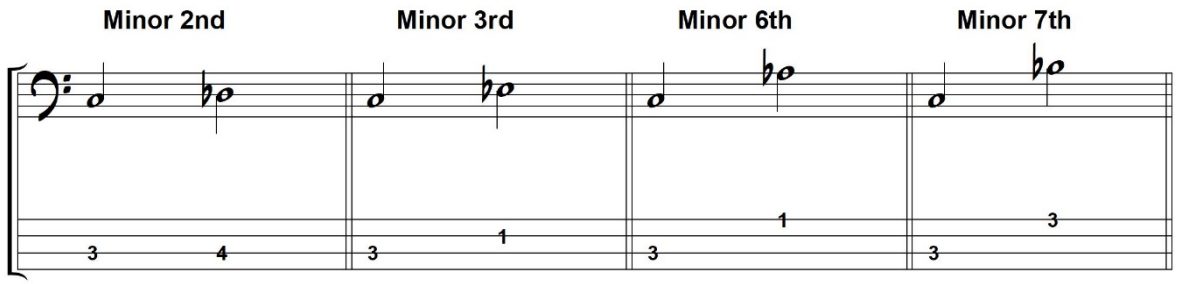
Minor Intervals

To create a **Minor Interval** we simply take a **Major Interval** and drop the top note by a half step.

Here we see that from a root note of C, a **Major 3rd** is E and a **Minor 3rd** is Eb:



We can apply this principle to every Major interval and create Minor 2nd, Minor 3rd, Minor 6th and Minor 7th intervals:



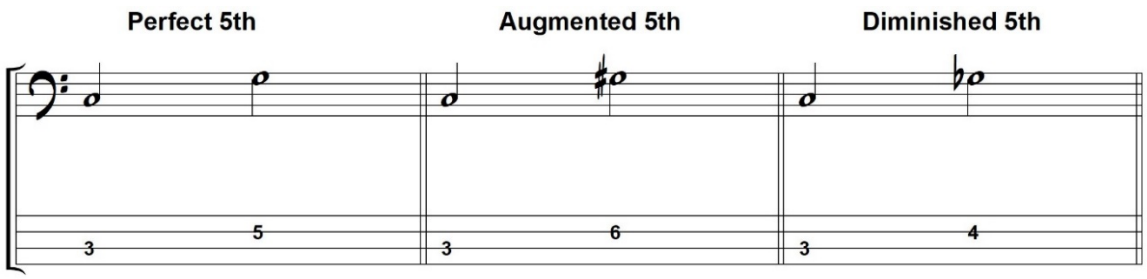
Minor Intervals tend to sound darker or 'sadder'. By listening out for the **Emotive Quality** of each interval we can develop our musicianship, ear and musical vocabulary.

Augmented & Diminished Intervals

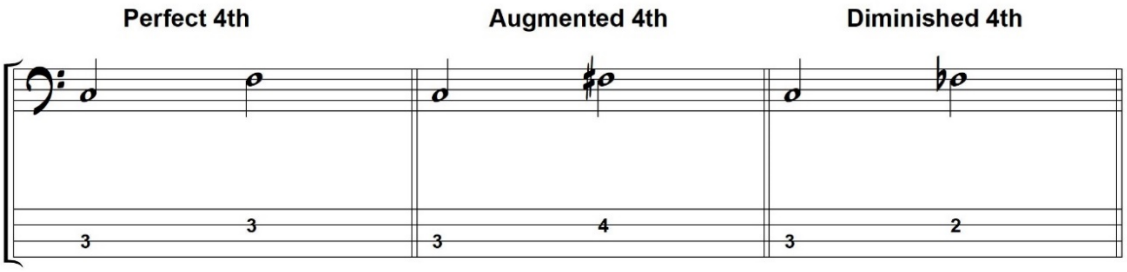
We generally create **Augmented** and **Diminished** intervals by raising or lowering the **Perfect Intervals** by a half step.

- An **Augmented Interval** is created by raising the top note of a **Perfect interval** by a half step
- A **Diminished Interval** is created by lowering the top note of a **Perfect interval** by a half step

Here we can see these intervals applied to the 5th:



Here we can see these intervals applied to the 4th:



Enharmonic Equivalency

With a lot of augmented and diminished intervals we can find ourselves using the same pitch but with a different note name.

For example, the **Diminished 4th** from **C is Fb**. This could also be written as **C to E**. However, if we look at the notes **alphabetically**:

- D is the **2nd** note from C
- E is the **3rd** note from C
- F is the **4th** note from C etc.

Therefore, C to E is always a 3rd of some kind. C to F is always a 4th of some kind, regardless of the sharps or flats involved.

For this reason, **C to Fb is a Diminished 4th** and **C to E is a Major 3rd**. They are the same pitch and fret on the bass but the interval name is different because of their alphabetic placement.

This principle of 'same pitch – different note name' is called **Enharmonic Equivalency**.

More Augmented/Diminished Intervals!

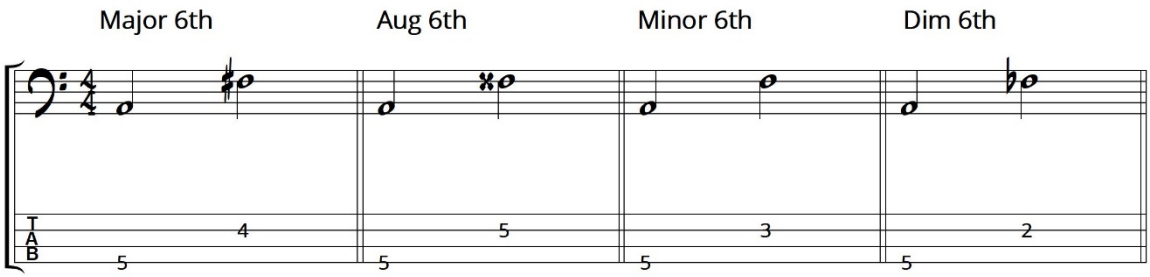
As well as **augmented** and **diminished** intervals on the **1st, 4th and 5th** we can also have **augmented** and **diminished 2nd, 3rd, 6th and 7th** intervals! These are much less common but still an important part of music theory.

The augmented and diminished intervals lie above the major and below the minor:

- An **Augmented Interval** is created by raising the top note of a **Major interval** by a half step
- A **Diminished Interval** is created by lowering the top note of a **Minor interval** by a half step

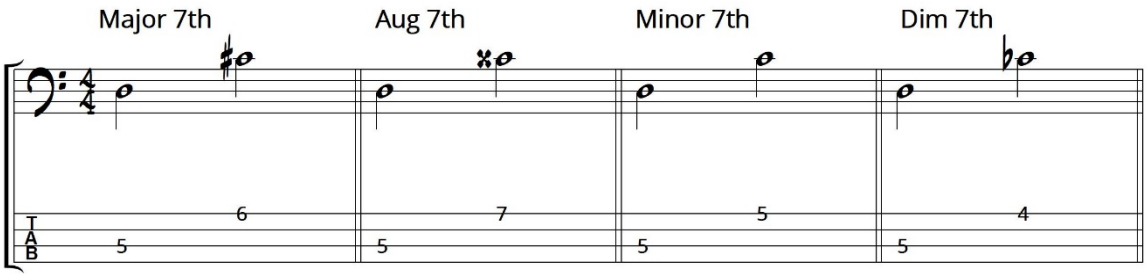
So as some examples, on a root note of A we could have the following 6th intervals:

- A to F#: Major 6th
- A to F##: Augmented 6th
- A to F: Minor 6th
- A to Fb: Diminished 6th



On a root note of D we could have the following 7th intervals:

- D to C#: Major 7th
- D to C##: Augmented 7th
- D to C: Minor 7th
- D to Cb: Diminished 7th



Beyond The Octave: Compound Intervals

So far, we've only looked at intervals within an octave. But we can also move to infinity and beyond by looking at **Compound Intervals**.

These are intervals beyond the octave and are easy to understand because they're exactly the same as the intervals we've already covered but they just have a higher number.

The **Octave** is an interval in its own right: the **perfect 8th**. Hence the name OCTave.

Beyond the 8th we can continue our set of intervals as the **9th, 10th, 11th, 12th, 13th, 14th** and the **15th** as the second octave.

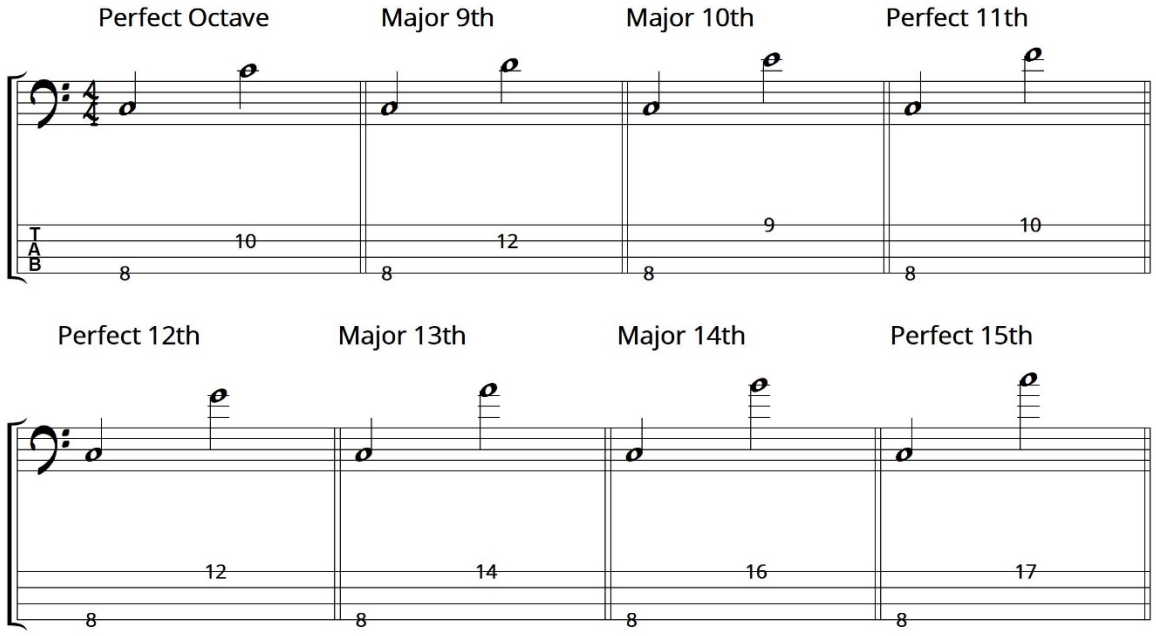
These intervals correspond to the intervals in our first octave:

- **9th = 2nd**
- **10th = 3rd**
- **11th = 4th**
- **12 = 5th**
- **13th = 6th**
- **14th = 7th**
- **15th = 8th (octave)**

By applying the **interval quality**, we can see the set of intervals within the **major scale** as:

- **Perfect 8th (Octave)**
- **Major 9th**
- **Major 10th**
- **Perfect 11th**
- **Perfect 12th**
- **Major 13th**
- **Major 14th**
- **Perfect 15th**

The **compound intervals** in the second octave can be seen below from a **C note**. Remember, there are many different fingerings for any one interval. These are just an example:

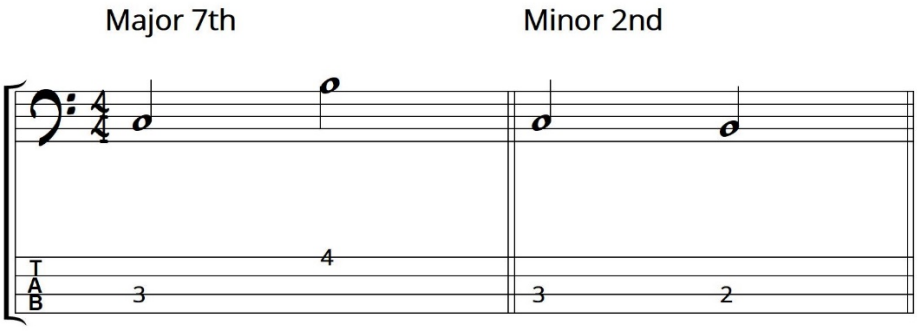


These intervals can also be labelled by simply inserting the prefix '**compound**'. For example, the **Major 9th** may be written as **Compound Major 2nd** or the **Perfect 11th** would be the **Compound Perfect 4th**.

Interval Inversion

Lastly, we need to look at interval inversion. When we invert intervals we are basically measuring them in a **downward direction**. As an example:

- C **up** to B is a **Major 7th**
- C **down** to B is a **Major 2nd**



This is **interval inversion**. We measure the same two notes but in the **opposite direction**.

The rules for interval inversion are as follows:.

- **2nd becomes 7th**
- **3rd becomes 6thj**
- **4th becomes 5th**

And vice versa:

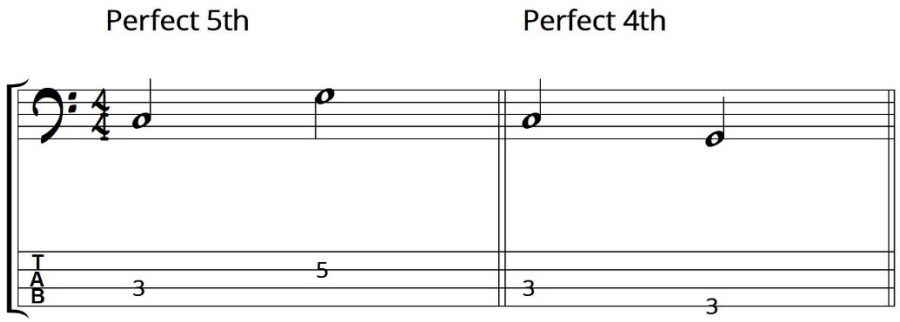
- **7th becomes 2nd.**
- **6th becomes 3rd**
- **5th becomes 4th.**

For the qualities:

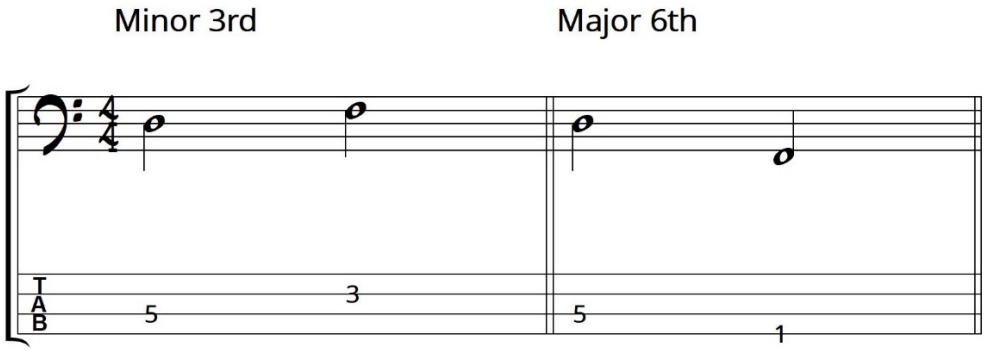
- **Perfect Intervals stay the same**
- **Major Intervals become Minor** (and vice versa)
- **Augmented Intervals become Diminished** (and vice versa)

Here are some examples:

- C to G **ascending** is a **Perfect 5th**.
- C to G **descending** is a **Perfect 4th**



- D to F **ascending** is a **Minor 3rd**
- D to F **descending** is a **Major 6th**



- A to D# **ascending** is an **Augmented 4th**
- A to D# **descending** is a **Diminished 5th**