

Lecture #8 – Music Fundamentals – Part IV

I. Introduction

In this lesson we will look further into chords and keys.

II. Keys

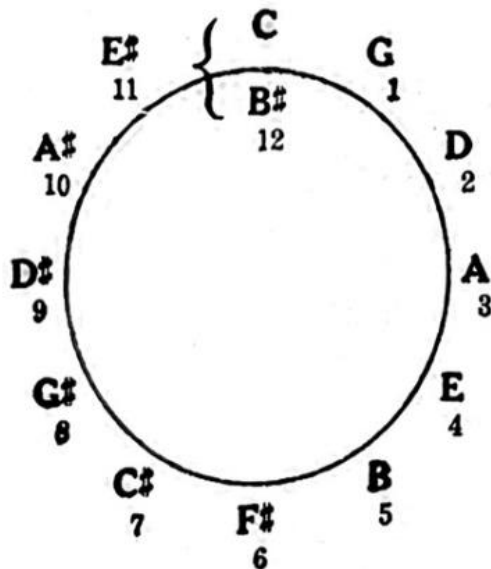
Keys are diatonic scales built on different starting notes and receive their name from that starting tone.

Circle of Scales, or Keys

86. We have learned that by using the fifth degree of one scale as the first of the next, each successive scale has one sharp more than the one before it. This succession continues until B# is reached; as this note corresponds to C-natural, the circle of sharps may be considered complete. We have learned that the sharped note is always the seventh of the new scale. We have also learned that by using the fourth degree of any scale as the first of the next. Another circle is formed by flattening the fourth of each successive scale. This succession continues until Dbb is reached; as this note corresponds to C-natural, the circle of flats may be considered complete.

Illustration 44

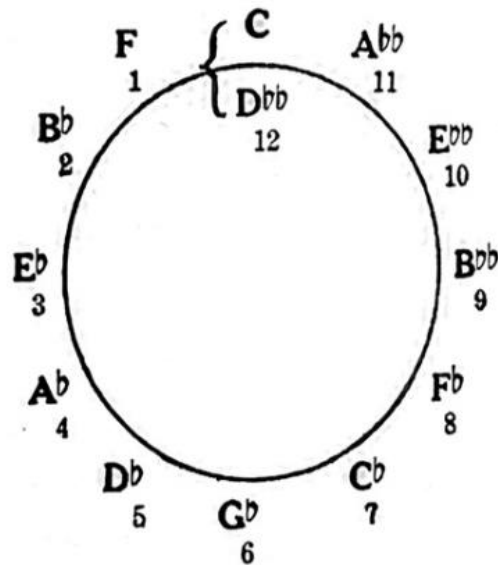
Read to right



The figure represents the number of sharps.

Illustration 45

Read to left



The figure represents the number of flats.

87. Only twelve major scales are commonly employed: C Major (no #s or bs), G Major (1 #), D Major (2 #s), A Major (3 #s), E (4 #s), B (5 #s), F# Major (6 #s), F Major (1 b), Bb Major (2 bs), Eb Major (3 bs), Db Major (4 bs), Gb Major (5 bs). Every major scale has its relative minor, making twenty-four major and minor scales which are commonly employed.

88. By comparing the scales of F# and Gb, it will be found that they have the same pitch but are differently represented. Such scales, keys, or changes are called *enharmonic*. All further transpositions of the scale would likewise be enharmonic; therefore they are omitted here as they are not of practical importance for this work.

107. Enharmonic change of key is a change of representation without a change of pitch or syllable.

Illustration 47

Enharmonic Change of Key.

1 2 3 4 5 6 7 8. 1 2 3 4 5 6 7 8.
Do Re Mi Fa Sol La Ti Do. Do Re Mi Fa Sol La Ti Do.

Quickly Identifying Keys

All keys are named for their foundational tone, which is not obviously indicated by the key signature. There are a couple of tricks to quickly identifying a major key based on the key signature:

- No #s or bs = Key of C
- For #s, look at the rightmost # in the signature. The key name is the tone that is a half-step above this sharp.
- For bs, look at the b that is second from right. The key name is that tone.
 - Note – just remember that one b is the key of F. The rule above applies technically but it is complicated as to why.

Transposition

67. The process of changing the scale to the various keys is called *transposition*.

Modulation

115. Modulation is passing from one key into another without changing the signature. Modulations are usually made to near-related keys.

There are various types of modulations, but one of the most common is **pivot chord modulation**.

In the study of harmony we find that modulations are made to the dominant of the old key, which is 5 or *sol*. This is called modulating to the dominant or modulating by sharps. The 5 of the old key becomes 1 of the new key. When modulations are made to the subdominant or 4 of the old key, it is called modulating to the sub-dominant or modulating by flats. The 4 of the old key becomes 1 of the new key.

116. The nearest related key to the key of C by sharps is the key of G.

117. The nearest related key to the key of C by flats is the key of F.

118. In modulating from one key to another, the same syllables are used as though the key had not been changed. The tones which effect the modulation, or lead to the new key, are treated as though they were chromatic tones as far as the syllables are concerned, but they are in reality diatonic tones. Even though the syllable names are not changed in modulation, the ear readily detects the change of key relationship.

Other types of modulations include:

- **Direct modulation**, which changes directly into the new key.
- **Common tone modulation**, which repeats common tones as it shifts to a new key.

V. Practical Music Lessons – Minor Keys

Relative Major and Minor Keys

120. So far, we have dealt only with the major diatonic and the chromatic scales. We now come to a consideration of the minor scale and minor key.

The word “major” when applied to music means greater or larger. “Minor” when applied to music means lesser or smaller.

121. Each major key has its relative minor. This relationship lies in the fact that these keys have many notes in common and that the same signature stands for the two keys.

122. The keynote of the relative minor is always found three degrees below or six degrees above the keynote of the relative major.

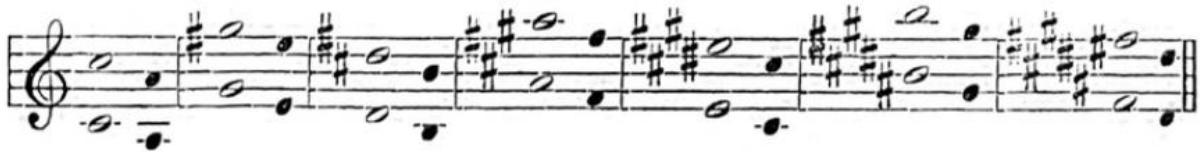
123. The keynote of the major is *do*; the keynote of the minor is *la*.

124. The following illustration shows the key signature with the keynote of all keys commonly employed. The major is shown with an open face note; the minor with a closed face note.

Illustration 50

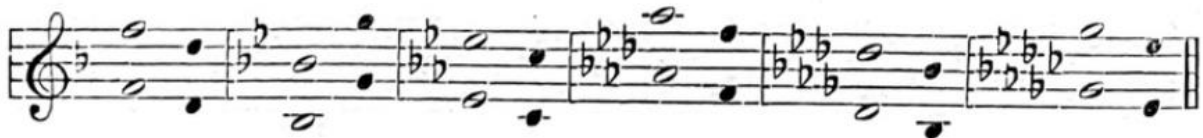
Keys in Sharps.

C Major G Major D Major A Major E Major B Major F# Major
A Minor E Minor B Minor F# Minor C# Minor G# Minor D# Minor



Keys in Flats

F Major Bb Major Eb Major Ab Major Db Major Gb Major
D Minor G Minor C Minor F Minor Bb Minor Eb Minor



125. As already stated the signature of the major and its relative minor is the same.

Harmonic Minor Scale

126. There are three kinds of minor scales: *natural minor scale*, *harmonic minor scale*, and *melodic minor scale*. The one we are to consider for this work, however, is the **harmonic minor**, which is the most practical of all minor scales.

127. The tone of the major scale that is not used in the harmonic minor is 5 or *sol*, and the tone that is used in its place in the harmonic minor scale is sharp 5 or *si*.

128. For example, in the relative minor of the key of C Major, which is A Minor, G is not used but G# is used instead, and it is 7 of the key.

129. A peculiarity of the minor key is that 7 is not represented in the signature place, but is indicated by an accidental in the measure.

130. If we take the tones of the minor key in their regular order we have the minor scale.

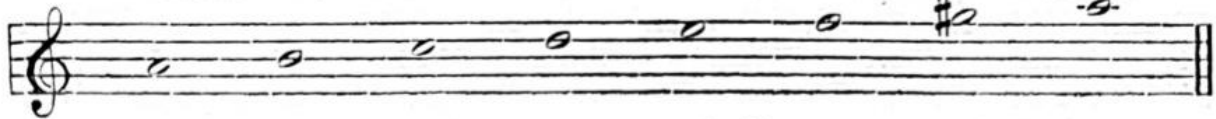
131. When we analyze the harmonic minor scale we find that it is composed of three *major seconds*, three *minor seconds*, and one *augmented second*. The major seconds occur between 1 and 2, 3 and 4, 4 and 5; the minor seconds occur between 2 and 3, 5 and 6, 7 and 8; and the augmented second occurs between 6 and 7 as illustrated.

The Harmonic Minor Scale. Key of A Minor

Illustration 51

The Harmonic Minor Scale.

Major Second Minor Second Major Second Major Second Minor Second Augmented Second Minor Second.



1 step 2 half 3 step 4 step 5 half 6 step-half 7 half 8.
 La, Ti, Do, Re, Mi, Fa, Si, La.

132. The major scale is known by its major third and sixth, and the minor scale is known by its minor third and sixth. The third and sixth are the distinguishing intervals.

Illustration 52

SCALE OF A MINOR Ascending and descending. La is on A, Si is on G#.

Two staves of music. The top staff is in treble clef and the bottom staff is in bass clef. Both show the A minor scale ascending and then descending. The notes are: A, B, C, D, E, F, G#, A, G#, F, E, D, C, B, A. The notes are written as quarter notes with stems. The descending part includes a natural sign on the G note.

1 2 3 4 5 6 7 8. 8 7 6 5 4 3 2 1.
 A B C D E F G# A. A G# F E D C B A.
 La Ti Do Re Mi Fa Si La. La Si Fa Mi Re Do Ti La.

V. Practical Music Lessons – Chords

Chords of the Major and Minor Scales

149. In the study of harmony we find that we have chord names of the scale which are better known as harmonic names of the scale.

151. A chord is a combination of tones which blend harmoniously when sounded together.

152. A chord with three tones including the fundamental, third, and fifth is called a *triad*.

Illustration 69

Harmonic Names of the Major Scale. Harmonic Names of the Minor Scale.

C Major A Minor

Tonic Super-Tonic Mediant Sub-Dominant Dominant Sub-Mediant Sub-Tonic Tonic

Tonic Super-Tonic Mediant Sub-Dominant Dominant Sub-Mediant Sub-Tonic Tonic

Illustration 70

Triads of the Major Scale

Triads of the Minor Scale

I II III IV V VI VII VIII

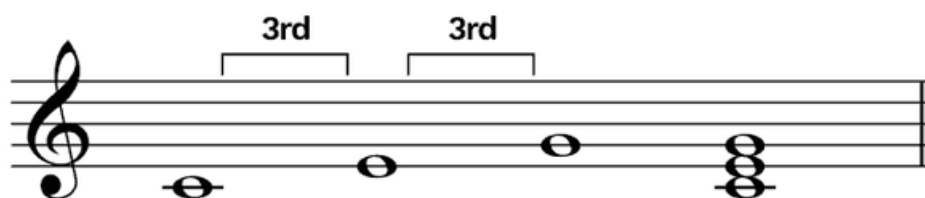
i ii III iv V vi VII viii

The primary chords in any key are the I (Tonic), IV (Subdominant), and V (Dominant).

Common Types of Chords

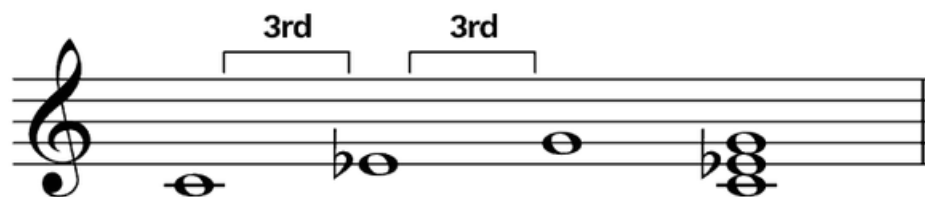
Chord names are based on their root note (C, Bb, F#, etc.) or the scale interval (I, V, vi, etc.)¹

A **major triad chord** is comprised of the root note, a major third (two steps), and a perfect fifth (three steps and one half step). The example below is a C major chord, often written as just C.² It can also be written as Cmaj, CM, CMA, or CΔ.



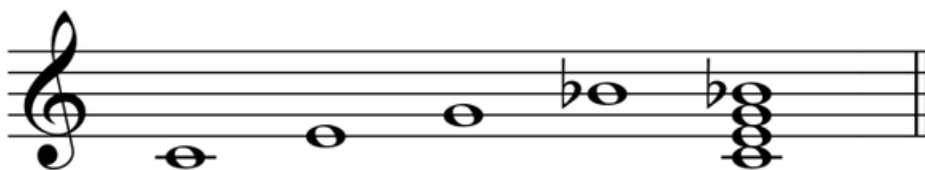
C major triad

A **minor triad chord** is comprised of the root note, a minor third (one step and one half step), and a perfect fifth (three steps and one half step). The example below is a C minor chord, often written as Cmin, Cm,



C minor triad

A **seventh chord** adds a fourth note to the triad based on the seventh interval. The C major seventh chord (Cmaj7) is comprised of C-E-G-B. The most common type of seventh chord is the **dominant seventh**, which adds the minor seventh (four steps and two half steps). The C7 chord is C-E-G-Bb.



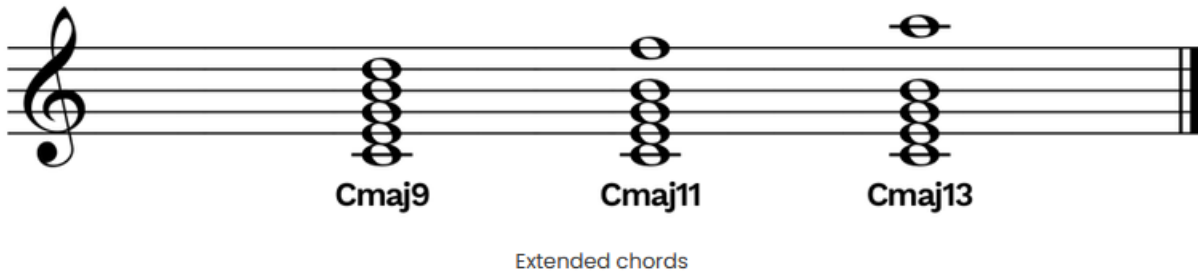
C Dominant 7 chord

¹ When using Roman numerals like this, capital letters are for major chords and lower case letters for minor chords.

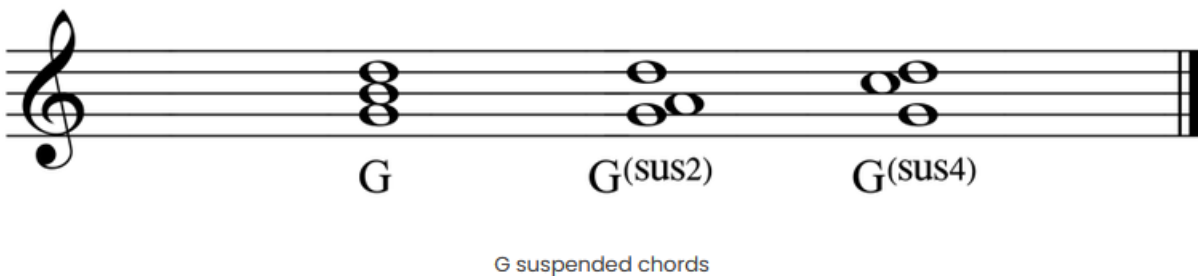
² The major is often implied but is commonly written out for more complex chords.

Advanced Types of Chords³

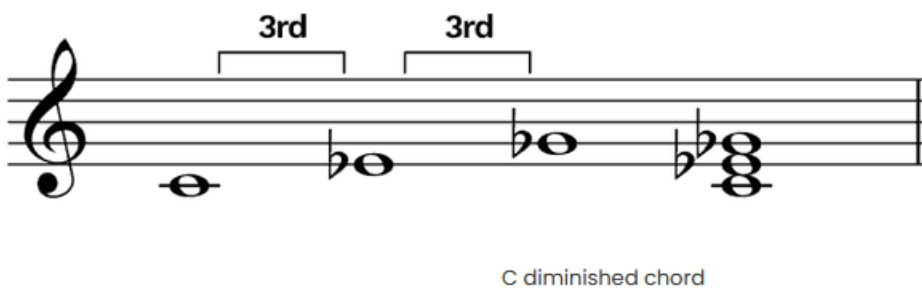
Extended chords add additional notes to a seventh chord and are indicated by the interval number added to the chord name.



Suspended chords are not built on thirds like major and minor chords. These keep the root and fifth of the base chord but shift the middle note. The change is indicated in the chord name by giving the number of the interval.

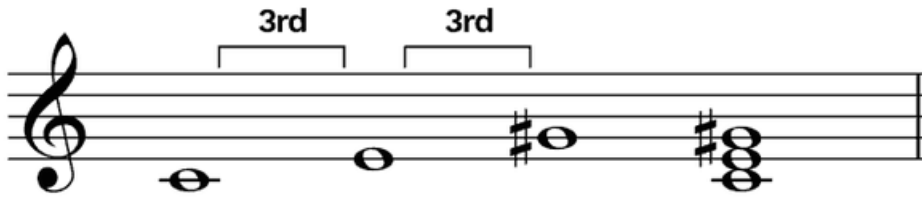


Diminished chords are triad chords that use minor thirds instead of major thirds. If a major seventh is added, it is a fully diminished chord. If a minor seventh is added, it is a half-diminished chord.



³ If you see a lot of these, the music may be too advanced for congregational usage. Plus, your pianist may kill you for making them play them.

Augmented chords take the major chord and raise the fifth note one half-step. These can be noted by adding a + or aug to the chord name.



C augmented chord

Chords Progressions

Songs are built around patterns of chord changes. For instance, Pachelbel's Canon is built on a recurring progression of I-V-IV-iii.