

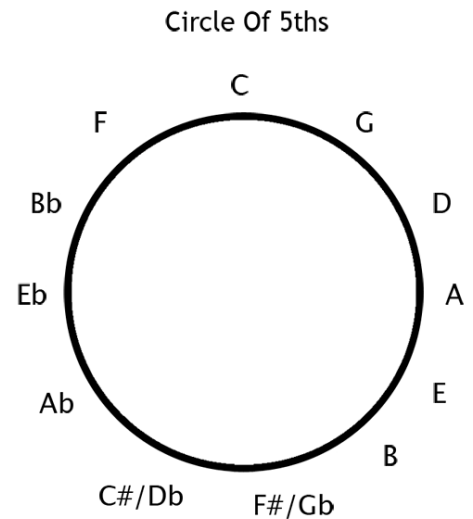
## The Circle of 5ths and Chord Progressions

In 1679, the Russian composer Nikolai Diletskii gave the musical world a great gift. In a treatise on composition Diletskii included a circle diagram showing the relationships between musical keys and the interval of a 5th. Over the intervening centuries, Diletskii's simple diagram has become a fundamental tool for understanding music.

The diagram shows relationships among chords, shows key signatures and relative minor chords.

The basic diagram is a clock-face with the key of "C" at noon. Moving clockwise each successive entry is the musical interval of a 5<sup>th</sup>. Start with "C" and move up a 5<sup>th</sup> clockwise to "G", another 5<sup>th</sup> to "D" and so forth, clockwise, around the circle. Moving counter-clockwise the intervals are a 4<sup>th</sup>.

Start with "C", move counter-clockwise by a 4<sup>th</sup> and reach "F". Another 4<sup>th</sup> counter-clockwise to Bb and so forth, counter-clockwise around the circle.



### Circle of 5ths as Guide to Musical Keys

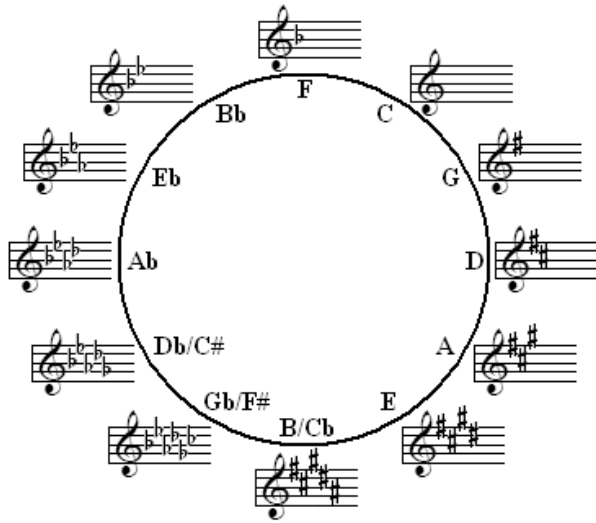
The scale of C major is C – D – E – F – G – A – B – C.

Remember the pattern of whole and half steps in a diatonic scale ( *do re me fa so la ti do* ) is always Whole – Whole – half - Whole – Whole – Whole – half. In the key of "C" it is not necessary to make any of the tones a half step higher or lower to fit the pattern of whole and half steps. No sharps or flats are required.

However, the key of G major is a different story. The diatonic scale in the key of "G" is G – A – B – C – D – E – F – G. But this fails to fit the pattern of Whole – Whole – half - Whole – Whole – Whole – half. The final step in the scale as written is a whole step, not a half step. That forces us to raise the F by a half tone to F#. The scale becomes: is G – A – B – C – D – E – F# - G

Herein lies the power of this diagram. It's not simple a circle showing a succession of 5<sup>th</sup> intervals. Each step around the circle in a clockwise direction adds one sharp to the key signature. If you can remember the image of the Circle of 5ths you will always know the key signature. The pattern is:

Key	Number of Sharps
C	0
G	#
D	##
A	###
E	####
B	#####
F#	#####



The table could, and perhaps should go completely around the circle. At the key of F# or C# it becomes easier to use flats instead of sharps. The keys of Gb and F# are called “enharmonic”. The pitch is the same. Only the nomenclature is different. Db and C# are enharmonic. So are B and Cb.

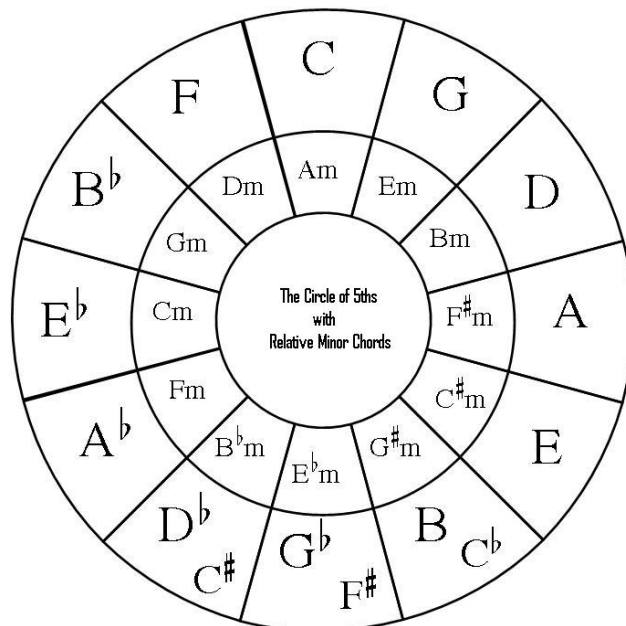
The order of keys on the Circle of 5ths reveals an interesting fact about the voices of musical instruments. Most traditional instruments and most string instruments are at home in “sharp” keys. Guitarists, mandolin players, banjo players like the keys of C, G, D, A and E best. A great amount of traditional music is in performed in these keys or some smaller subset of these keys. Wind

instruments like clarinets and saxophones tend to like the flat keys. Saxophones are classified as the Eb alto sax or the Bb tenor sax. The most common clarinet is a Bb instrument. But they come in other keys too. Most often Eb and sometimes even A. Trumpets are mostly in Bb or C.

### Circle of 5ths as Guide to Chord Selection

The human mind is hardwired to listen for specific relationships among tones. The fundamental and intervals of the 5<sup>th</sup> and 4<sup>th</sup> provide the grounding for all harmonic relationships. The Circle of 5ths very conveniently makes a graphic representation of those relationships. Moving clockwise around the circle the interval is the 5<sup>th</sup>. Moving counter-clockwise the interval is a 4<sup>th</sup>. So, each position on the Circle of 5ths shows the I – IV – V chords. Selected “G” as the key. Then the “G” chord is the tonic, move counter-clockwise to the “C” chord to find the IV. Move clockwise to the “D” chord to find the V. This relationship is true at every position around the Circle of 5ths.

Now add an inner circle to the diagram. The members of this inner circle are the relative minor, or 6<sup>th</sup> interval from the original tones of the outer ring of the Circle of 5ths. So, the inner circle position from “C” is “a”. The inner circle position from “D” is “b”. Lower case letters signify the minor relationship. This added, inner circle of relative minors gives the circle its great power. This new, more complete, version of the Circle of 5ths shows the inter-relationships of the chords within any given key.



Look at the shaded region of the Circle of 5ths. This region is the key of "D". The outer circle shows the I – IV – V chords. Or, D – G and A. The inner circle shows the relative minor chords of these major chords. This is iv – ii – iii. Note that the lower case indicates these are minor chords. By name these chords are Bm – Em – F#m.

In this form, the Circle of 5ths yields almost everything you know to know to select chords in a given key.

Any order of chords within this chord box is allowed. Start with the chord that names the key, in this

example that's "D". Any of the six chords in the shaded "chord box" can be used within the key. This chord box identifies the six chords of the key of "D" that are most frequently used in traditional music: D – Em – F#m – G – A – Bm.

Which chord is best at what point in a melody is the focus of the topic of arranging.

