

# CIRCLE OF FIFTHS WORKSHOP

A useful concept for when you want to jam with other instruments or write a song!

The Circle of Fifths shows the relationships among the twelve tones of the Chromatic Scale, their corresponding key signatures and the associated Major and Minor keys. The word "chromatic" comes from the Greek word *chroma* meaning "color." The chromatic scale consists of 12 notes each a half step or "semi-tone" apart. It is from the chromatic scale that every other scale or chord in most Western music is derived. Here's the C chromatic scale going up as an example: C C# D D# E F F# G G# A A# B C

In everyday terms: The Circle of Fifths is useful if you're playing in an open jam with other instruments, e.g., guitars or fiddles around a campfire, or when you're trying to figure out the chords of a song from scratch, or write your own song.

The Circle of Fifths is a music theory picture. Each "segment" on the circle represents a note, a chord, and a key.

Why is it called the Circle of Fifths? When going clockwise, each key is a fifth above the last. When going counter-clockwise, each key is a fourth above the last, so you may also hear it called the "circle of fourths". The perfect fifth interval is said to be *consonant*, meaning it is a typical "pleasant sound" and sounds stable within music (the groundwork for this concept was set by Pythagoras and based on the sound frequency ratios). You'll hear the bass playing the root (I) and fifth (V) notes as a stable support for the rest of the musicians, and adjacent open strings on the bass are typically a perfect fourth apart. Other cultures have based their music system on different intervals that are "pleasing" to them. The other "perfect" intervals are a perfect fourth and an octave. These perfect intervals apply to both major and minor scales and chords. A "fifth" is a distance of seven semitones, and is always the 5<sup>th</sup> note in a major or minor scale. A "fourth" is a distance of 5 semitones, and is always the 4<sup>th</sup> note of a major or minor scale. I've provided more information on tones and semitones near the end of this info sheet, if you're interested.

Look at the wheel I've provided you. On the outer circle of the wheel are major chords; on the inner circle are minor chords. The relative minor of a key has the same key signature, and therefore all the same notes, as the major. You'll notice that the relative minors going clockwise around the circle are also a fifth apart. Our Circle of Fifths shows us the relationships between these chords. The closer they are in the circle, the more closely they are related. The Circle of Fifths helps determine what we'll call chord families.

## CHORD FAMILY

Look at the C chord at the top. The most closely related key to C Major, for example, is A minor (called the relative minor), because it has the same key signature (no sharps and no flats). The next most closely related major keys to C Major would be G Major (or E minor), with one sharp, and F Major (or D minor), with only one flat. The keys that are most distant from C Major, with six sharps or six flats, are on the opposite side of the circle.

Many songs we play use what we refer to as the one (I), four (IV), and five (V) major chords, and a minor sixth (vi) chord. Often you'll see roman numerals used to represent these chords.

So it's easy to find out chords IV and V of any key: just pick any letter around the circle and treat that as I chord (otherwise known as the tonic or root). The letter to the left is IV, and the letter to the right is V. So chord IV of C is F, and chord V is G.

Another important chord is vi. The reason for this is because I, IV, V and vi are used in a lot of four-chord progressions.

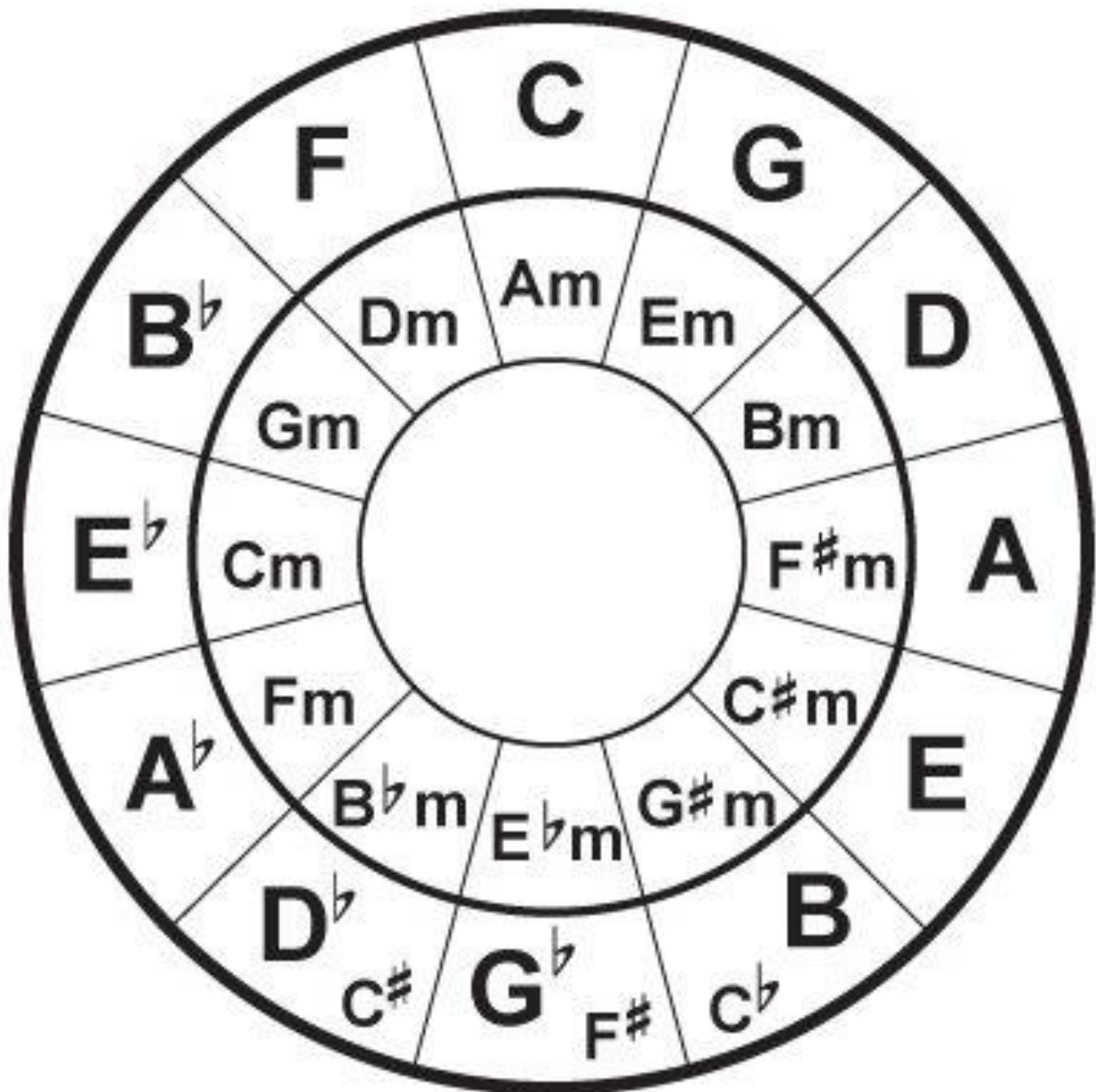
## SO YOU'VE ARRIVED AT A MULTI-INSTRUMENT JAM! Now what?!

If you're playing with others, first ask the song leader what key they are playing the song in.

**Example 1:** if they say "C", then you look at the C "spoke" on the wheel, and at the 2 spokes on either side of the C – the F spoke and the G spoke. If there are only major chords in the song, likely they will be using C, F, and G or G7. If you can hear minor chords in the song, then you can try Am first, and if that doesn't sound right try Dm or Em.

**Example 2:** if they say "D", then you look at the D "spoke" on the wheel, and at the 2 spokes on either side of the D – the G spoke and the A spoke. If there are only major chords in the song, likely they will be using D, G, and A or A7. If you can hear minor chords in the song, then you can try Bm first, and if that doesn't sound right try Em or F#m.

### CIRCLE OF FIFTHS



**Another way to figure out a chord family, if you don't have the chart above with you, is to count on your fingers.** The only problem with this method is that you have to know which sharp and flat chords are in whatever key you're playing in. The wheel helps you to figure that out, but if you're using the finger method, you have to know.

In the sample chart below, the capitalized roman numerals stand for major chords, the small roman numerals stand for minor chords. Typically, easy songs use the I, IV, and V major chords, and if you hear a sad sounding chord, it will often be the minor vi chord. The pattern of chords for any major key is major, minor, minor, major, major, minor, minor/diminished).

The major, minor, and diminished chords in each major key:

<b>Chord Key</b>	<b>I</b>	<b>ii</b>	<b>iii</b>	<b>IV</b>	<b>V</b>	<b>vi</b>	<b>vii (dim)</b>
<b>C major</b>	C	Dm	Em	F	G	Am	Bm
<b>G major</b>	G	Am	Bm	C	D	Em	F#
<b>D major</b>	D	Em	F#m	G	A	Bm	C#
<b>A major</b>	A	Bm	C#m	D	E	F#m	G#
<b>E major</b>	E	F#m	G#m	A	B	C#m	D#
<b>B major</b>	B	C#m	D#m	E	F#	G#m	A#
<b>F# major</b>	F#	G#m	A#m	B	C#	D#m	F
<b>Gb major</b>	Gb	Abm	Bbm	Cb	Db	Ebm	F
<b>Db major</b>	Db	Ebm	Fm	Gb	Ab	Bbm	C
<b>Ab major</b>	Ab	Bbm	Cm	Db	Eb	Fm	G
<b>Eb major</b>	Eb	Fm	Gm	Ab	Bb	Cm	D
<b>Bb major</b>	Bb	Cm	Dm	Eb	F	Gm	A
<b>F major</b>	F	Gm	Am	Bb	C	Dm	E

## EXTRA INFO:

### How about minor keys?

The pattern of chords for any minor key is minor, diminished/minor, major, minor, minor, major, major. Using the key of A minor as an example, whose notes are A B C D E F G, the chords in the key of A minor in order are A minor, B diminished/minor, C major, D minor, E minor, F major and G major. Remember, every chord makes use of notes that are part of the scale.

Chord Key	i	ii(dim)	III	iv	v	VI	VII
<b>C minor</b>	Cm	Ddim	Eb	Fm	Gm	Ab	Bb
<b>C# minor</b>	C#m	D#dim	E	F#m	G#m	A	B
<b>D minor</b>	Dm	Edim	F	Gm	Am	Bb	C
<b>D# minor</b>	D#m	E#dim	F#	G#m	A#m	B	C#
<b>Eb minor</b>	Ebm	Fdim	Gb	Abm	Bbm	Cb	Db
<b>E minor</b>	Em	F#dim	G	Am	Bm	C	D
<b>F minor</b>	Fm	Gdim	Ab	Bbm	Cm	Db	Eb
<b>F# minor</b>	F#m	G#dim	A	Bm	C#m	D	E
<b>G minor</b>	Gm	Adim	Bb	Cm	Dm	Eb	F
<b>G# minor</b>	G#m	A#dim	B	C#m	D#m	E	F#
<b>Ab minor</b>	Abm	Bbdim	Cb	Dbm	Ebm	Fb	Gb
<b>A minor</b>	Am	Bdim	C	Dm	Em	F	G
<b>A# minor</b>	A#m	B#dim	C#	D#m	E#m	F#	G#
<b>Bb minor</b>	Bbm	Cdim	Db	Ebm	Fm	Gb	Ab
<b>B minor</b>	Bm	C#dim	D	Em	F#m	G	A

### FIGURING OUT KEY SIGNATURES USING THE CIRCLE OF FIFTHS:

In music, we define a **key** as the “tonal center” of a piece of music. The melody and harmony will revolve around this tonal center, which is simply a single note. This single note is also given the name of the **tonic** or **root**, and is given the designation “**I**”. It is on this tonic that we build the *scale* or the eight-note sequence that is used to compose melodies and harmonies in the key of the tonic.

On the Circle of Fifths, the number of steps you take around the circle tells you how many accidentals (i.e., sharps or flats) the key will have. Head clockwise around the circle starting at C major. G major has one sharp (F#), D major has two (F#, C#) and so on. New sharps are added in the order **F-C-G-D-A-E-B** (**F**ather **C**hristmas **G**ives **D**ad **A**n **E**lectric **B**lanket). You can come up with your own mnemonic for remembering this order OR you can look at the Circle of Fifths.

Head counterclockwise around the circle starting at C major, and flats are added in the reverse order to sharps: **B-E-A-D-G-C-F**.

So, for example, try to figure out the number of sharps B major has.

Starting at C, count the number of steps until you reach the B. You'll see that it will be five. Therefore, using the order of sharps, you'll know that the sharps in B Major are **F#, C#, G#, D#, and A#**.

The most commonly-encountered types of scales in Western music are called "major" and "minor". Major scales sound joyful, bright, and upbeat. Minor keys sound sad, melancholy, and tear at your heartstrings. To retain the characteristic major or minor sound, scales in most keys require *accidentals* – sharps and flats that will give the scale the desired sound.

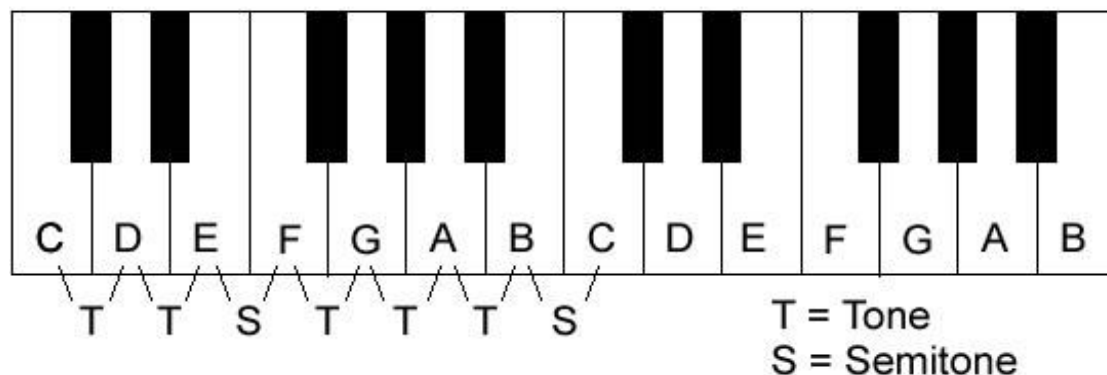
Each key will have its unique pattern of sharps and flats. However, if you examine the distances (known as "intervals") between the notes of, for example, every major scale, and compare them, you will see that **the interval pattern is exactly the same in all major scales** (this holds true for minor scales as well, though they will have a different pattern from major).

The major scale pattern is:

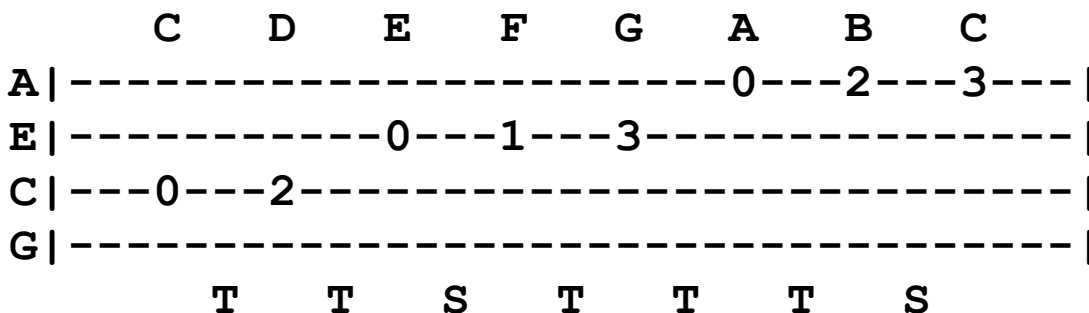
**Tone; tone; semi-tone; tone; tone; tone; semi-tone**

Here is the C major scale on a keyboard:

### Major Scale Intervals - Tones & Semitones



Here is the C major scale on a ukulele:



Here is the natural minor scale pattern:

**Tone – Semitone – Tone – Tone – Semitone – Tone – Tone**

# SONGS TO DEMONSTRATE CIRCLE OF FIFTHS

## Hound Dog

INTRO: / 1 2 3 4 / [I] / [I]↓

### CHORUS:

You ain't nothin' but a [I] hound dog, cryin' all the time  
[I] You ain't nothin' but a [IV] hound dog, cryin' all the [I] time  
[I] Well you ain't [V] never caught a rabbit  
And you [IV] ain't no friend of [I] mine [I]↓

Well they said you was [I] high-classed, well that was just a lie  
[I] Yeah they said you was [IV] high-classed, well that was just a [I] lie  
[I] Well you ain't [V] never caught a rabbit  
And you [IV] ain't no friend of [I] mine [I]↓

## Dirty Old Town

INTRO: / 1 2 3 4 / [I] / [I]

I met my [I] love, by the gas works wall  
Dreamed a [IV] dream, by the old ca-[I]nal [I]  
I kissed my [I] girl, by the factory [I] wall  
Dirty old [V] town, dirty old [vi] town [vi]

Clouds are [I] drifting across the moon  
Cats are [IV] prowling on their [I] beat [I]  
Springs a [I] girl, from the streets at night  
Dirty old [V] town, dirty old [vi] town [vi] ↓

## You Are My Sunshine

INTRO: / 1 2 / 1 2 / [I] / [I]

The other [I] night, dear, as I lay sleeping  
[I7] I dreamed I [IV] held you in my [I] arms  
[I7] But when I [IV] woke, dear, I was mis-[I]taken  
[vi] And I [I] hung my [V7] head and [I] cried

### CHORUS:

[V7] You are my [I] sunshine, my only sunshine  
[I7] You make me [IV] happy, when skies are [I] grey  
[I7] You'll never [IV] know, dear, how much I [I] love you  
[vi] Please don't [I] take, my [V7] sunshine a-[I]way [I] ↓

## We'll Rant And We'll Roar

We'll [I] rant and we'll [vi] roar, like [ii] true Newfound-[V]landers  
We'll [V] rant and we'll roar, on [V7] deck and be-[I]low [I]  
Un-[I]til we strike [vi] bottom, in-[ii]side the two [V] sunkers  
[V] ↓ When... [I] straight through the [ii] channel to [V] Toslow we'll [I] go [I]

## Hielan' Laddie

INTRO: / 1 2 3 4 / [i] / [i]

[i] Was you ever in Quebec?  
[iv] Bonnie laddie [v] hielan' laddie  
[i] Stowing timber on the deck  
My [iv] bonnie [v] hielan' [i] laddie

### CHORUS:

[VI] Hey [III] ho, a-[VII7]way we [III] go  
[iv] Bonnie laddie [v] hielan' laddie  
[VI] Hey [III] ho, and a-[VII7]way we [III] go  
My [iv] bonnie [v] hielan' [i] laddie [i]

INTRO: / 1 2 3 4 / [Am] / [Am]

[Am] Was you ever in Quebec?  
[Dm] Bonnie laddie [Em] hielan' laddie  
[Am] Stowing timber on the deck  
My [Dm] bonnie [Em] hielan' [Am] laddie

### CHORUS:

[F] Hey [C] ho, a-[G7]way we [C] go  
[Dm] Bonnie laddie [Em] hielan' laddie  
[F] Hey [C] ho, and a-[G7]way we [C] go  
My [Dm] bonnie [Em] hielan' [Am] laddie [Am]

## Someday Soon

INTRO: / 1 2 3 4 /

[F] There's a young man [Dm] that I know  
[Bb] Just turned twenty-[F]one  
[Am] Comes from down in southern Color-[Bb]a-[C]do  
[F] Just out of the [Dm] service  
And [Bb] lookin' for his [F] fun  
Someday [Gm] soon, goin' [C] with him, someday [F] soon [F]

My [F] parents cannot [Dm] stand him  
'Cause he [Bb] works the rode-[F]o  
They [Am] say "he's not your kind, he'll leave you [Bb] cry-[C]in' "  
But [F] if he asks I'll [Dm] follow him  
Down the [Bb] toughest row to [F] hoe  
Someday [Gm] soon, goin' [C] with him, someday [F] soon [F]