

# How to Use the Circle of Fifths in Music

Written by Jane South

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An important part of music theory to grasp an understanding and knowledge of is the different "keys" that form the basis of musical harmony.

In total there are 12 keys based on the 12 different pitches of an octave, and the best way to learn them is using a clever diagram called the circle of fifths. Dating from the 1600s, this system is still used to easily find and remember keys and their corresponding sharps or flats.

## Playing in different keys

A **key** is a set of notes used in a piece of music. Here we are talking specifically about most Western classical, jazz, art, and pop music.

It is the foundation of available pitches from which a musical composition can be written and the basis for how the melody and harmony in a piece of music sound.

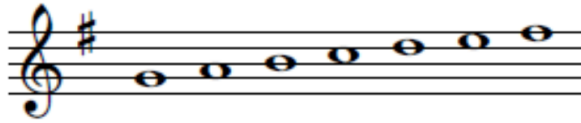
Each key is named after its root note (tonic) which identifies its sound.

The notes of a key can be found by stepping up a **major scale** of notes from its root note. Here are two examples:

1. If **C** is the root note, then the music is in the **key of C** and the notes that can be used from any octaves are these:



2. If **G** is our root note the music is in the **key of G**, and the set of notes from any octave to be used is this:



**G A B C D E F#**

You will notice that the key of G has an F sharp. Every key has its own unique set of sharps or flats to match the sound of its major scale. They are present for each key exactly as they are for major scales.

As you learn more repertoire you will discover pieces written in different keys. You will even find pieces of music that shift to different keys as they go along. Therefore, knowing which sharps or flats are needed for each key is a really important aspect of music theory to learn in order to be able to play all the music that you wish to!

## The major keys

As well as the different keys for each of our notes, there are two main types of keys: **major** and **minor**.

The major or minor type of key dictates a large part of the mood and character of the music, alongside other aspects such as rhythm, instrumentation, or speed.

Just like a major scale does, the notes of a major key naturally have a positive and happy sound. Think of the cheerful song “Happy Birthday”. This is in a major key, and therefore its melody has an uplifting sound, no matter which major key you play in.

Most music that is written in a major key sounds happy and harmonically easier to listen to.

## The minor keys

The minor type of key is often thought of as more melancholic and sad - the opposite of major in sound and character.

Think of the mournful-sounding first movement of Beethoven’s “Moonlight Sonata” which is written in a minor key. It will retain a sadder character in a minor key than if it was in a major key, no matter which minor key you play it in.

The minor key is made of specific intervals taken from its natural minor scale and requires the corresponding sharps or flats to create that sound.

Each minor key also shares the same sharp, flat, or natural notes as a closely-related “relative” major scale that sits 3 semitones higher. This is a great way of remembering minor keys!

## Key signatures

The set of sharps or flats for the key of a piece of music is shown on the score by a **key signature**.

This consists of the sharp or flat symbols for that key written in the staff positions that correspond with their notes. It appears at the start of a piece of music on all staves and on every line as a reminder of which notes need to be sharp or flat.

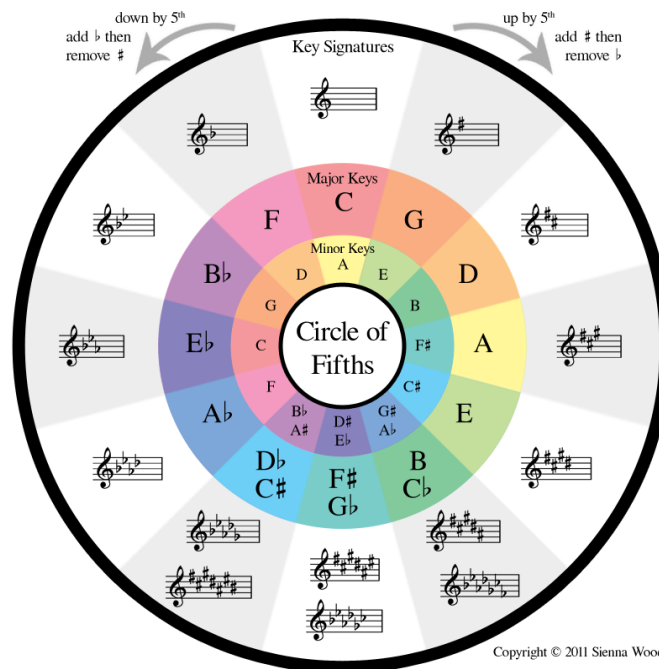


## Learning the key signatures

Learning all the key signatures means you can easily play in any key knowing which sharps or flats to use.

The 12 keys have up to six sharps or flats. Therefore, it is very useful to have an easy guide to learning all the keys and key signatures.

The circle of fifths is an easy-to-follow diagram that helps us to find and memorize them quickly. Based on simple math, its uses are far-reaching, and it provides a surprising amount of musical theory information.



## How to use it

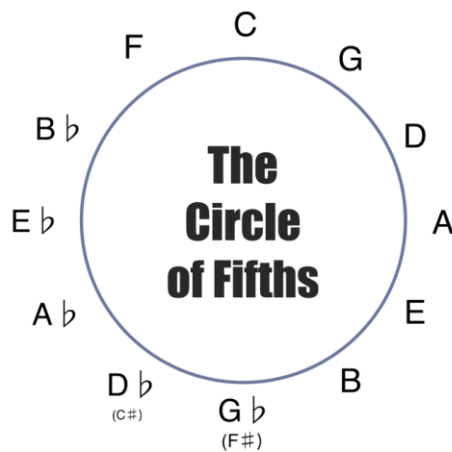
The circle of fifths can be used to help you to do the following:

1. Recognize and remember keys
2. Learn minor keys and see how keys are related
3. Learn scales progressively
4. Learn arpeggios and chords
5. Identify common chord progressions

To create the circle of fifths, the keys are arranged so that there is an interval of a fifth between each pair of notes. This is why it is called the circle of **fifths**.

C is in the middle, keys to the right of C going clockwise go **up** in fifths, and keys to the left of C going anticlockwise go **down** in fifths.

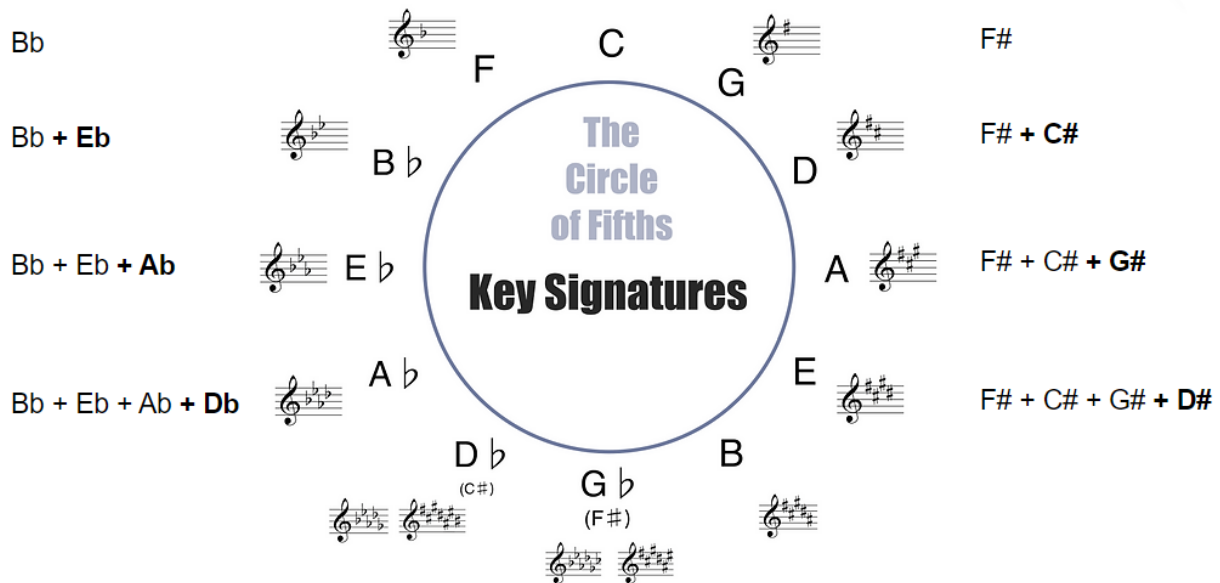
This basic outline of the circle of fifths now represents all of our 12 major keys.



Let's see how to use it.

### 1. Recognize and remember keys

Here the sharps and flats for all the keys are added:



With all the keys arranged in this order, you can see the key signatures in progressive order of increasing numbers of sharps or flats as you go down the circle from top to bottom, which makes it easier to understand and learn them.

From our starting point of C, the keys with increasing numbers of sharps go clockwise, and keys with increasing numbers of flats go anticlockwise.

Conveniently, the keys with flats step **down** in fifths (remember, a flat lowers a note a semitone down). The keys with sharps step **up** in fifths (a sharp raises a note a semitone up).

It is also clear that each new key shares the sharps or flats from the previous key and builds on it with one more. E.g.:

The key of G with 1 sharp has F#.

The key of D with 2 sharps keeps F# and **adds C#**.

The key of A with 3 sharps keeps F# and C# and **adds G#**.

And so it goes on. The same pattern applies to the flats going the other way around the circle.

And of course, the order of the sharps and flats for each key themselves also follows the circle of fifths pattern!

The sharps go up in fifths: **F#, C#, G#, D#**, etc.

The flats go down in fifths: **Bb, Eb, Ab, Db**, etc.

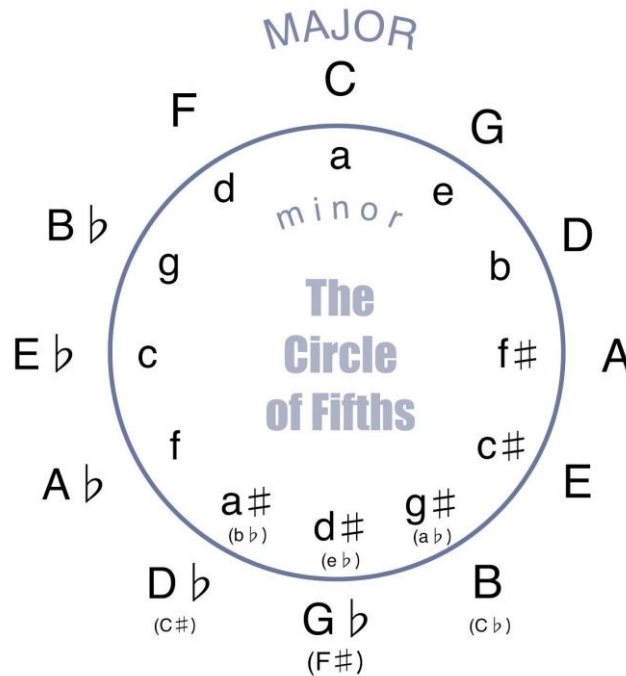
Bear in mind that the fifth between each pair of keys is a "perfect" fifth each time, which is made of 7 semitones. Therefore, a perfect fifth higher than B is F# (not F natural).

## 2. Learn minor keys and see how keys are related

Now you can see easily how keys and scales have similar sharps and flats, which helps you to group them in your practice.

Let's take this further and add in our **relative minor** keys on the inside of the circle. As you learned earlier, these take their key signatures from their relative major keys 3 semitones higher.

As with the major keys on the outside, they are arranged in fifths with increasing numbers of sharps or flats.



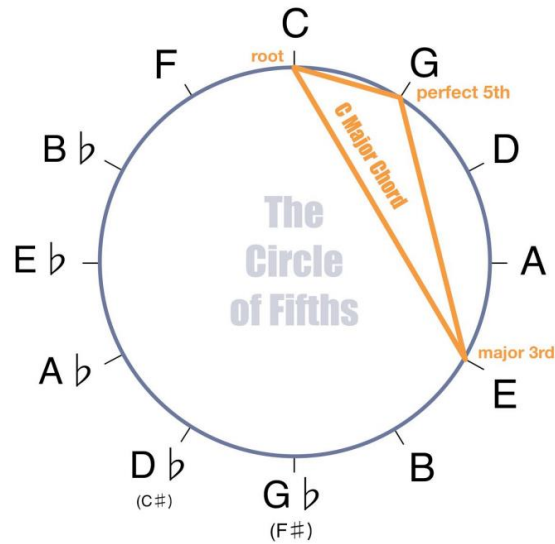
### 3. Learn scales progressively

This circle of fifths instantly provides us with the perfect order in which to learn scales and keys.

Starting with the easiest keys with the fewest sharps or flats, progressively going around the circle to keys with increasing numbers of sharps or flats is the most effective way. You only need to add one more sharp or flat for each subsequent key as you build on your knowledge of the previous key. This also accompanies tutor book methods that progress through increasingly more complicated keys.

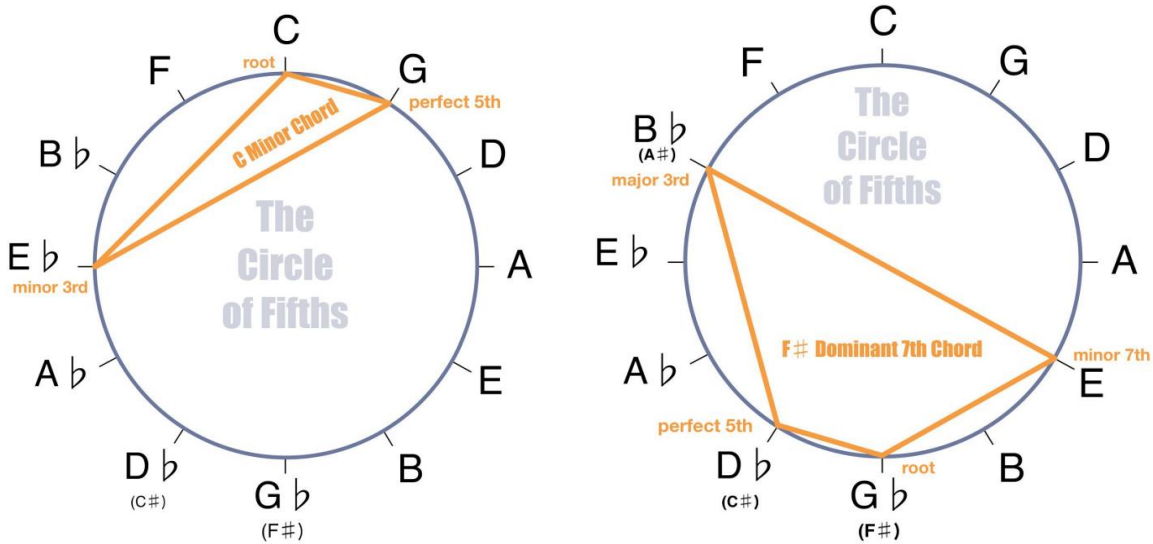
### 4. Learn arpeggios and chords

You can use the circle of fifths to find and remember the notes for major and minor arpeggios and chords. By connecting the notes of the C major **arpeggio or chord** (CEG) across the circle it makes a triangle shape as shown here in orange.



You can then transfer this same triangle shape to any other position in the circle giving you the notes for the major arpeggio or chord for that key.

This can also be applied to other types of arpeggios and chords:



## 5. Identify common chord progressions

Many classical and popular pieces use harmonic progressions based on the circle of fifths. It creates a sense of predictability with the feeling that the music moves in circles always returning to its root chord. This can be very pleasing to listen to and is helpful to look out for when learning a piece as it can simplify learning harmony.

Jazz standard pieces often use the circle of fifths for chord progressions, as shown here in the jazz song “Autumn Leaves” in the key of A minor (the chord names are written above the notes):

## Autumn Leaves

The image shows a musical score for 'Autumn Leaves' in 3/4 time. It consists of three staves of music. The first staff has chords Dm7, G7, CM7, and FM7. The second staff has chords Bm7 b5, E7, Am7, E7, and Am. The third staff has chords Bm7 b5, E7(b9), Am, Dm7, G7, and CM7. The music is written in a treble clef with a key signature of one sharp (F#).

Many baroque and classical pieces use the circle of fifths as a basis for harmony. One famous example of this is Pachelbel's "Canon in D major", with the harmony written here as chord names above the notes of the melody:

- Fifth -                      - Fifth -                      - Fifth -

D      A                      Bm      F#m                      G      D                      G      A

The image shows a single staff of music in a treble clef with a key signature of two sharps (D major). The notes are D, A, Bm, F#m, G, D, G, A. Above the notes are the chord names: D, A, Bm, F#m, G, D, G, A. The intervals between the notes are labeled as '- Fifth -'.

Knowing your circle of fifths will help you learn and understand the harmony of such pieces more easily and be satisfying to listen out for as well.

### **In conclusion**

There are myriad ways that the circle of fifths can support learning music theory, scales, arpeggios, harmony, and more. Why not print it out and keep it somewhere you will see it often? In time you will be able to visualize all 12 keys and get to know them very well.