

MUSIC THEORY

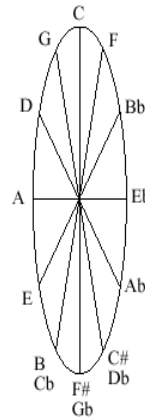
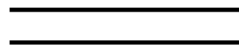
UNIT 3: Circle of 4ths

Basic Terminology:

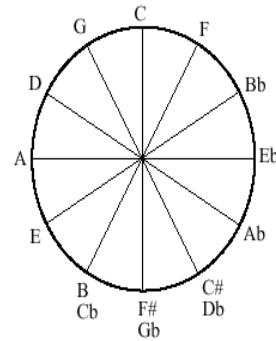
- **Key:** A default set of pitches.
- **Key Signature:** a way of displaying a key in music.
- **Mode:** an order of pitches using a key/key signature, often presented as a scale or following certain melodic tendencies around a particular TONAL CENTER.
- **Scale:** an order of pitches in either ascending or descending pattern.

Key of "C" = no sharps or flats

	#	b
1	G	F
2	D	Bb
3	A	Eb
4	E	Ab
5	B	Db
6	F#	Gb
7	C#	Cb



Circle of 4ths



Order of Accidentals

b's = B E A D G C F

#'s = F C G D A E B

CIRCLE of Fourths or Circle of Fifths

The Circle of 4ths/5ths is an organizational tool to help us categorize keys and scales. It also appears (or at least portions of it) in countless other situations in musical study and performance. It is an invaluable tool to learn. Memorize both the "circle" and the "order of accidentals".

At the top of the circle is the Key of "C". The Key of "C" has no sharps or flats. As one progresses around the circle, the keys are arranged by the number of accidentals in the key. The closest keys, clockwise and counter clockwise, to "C" have one accidental. The next closest have 2 accidentals and so on, until you reach the final keys with 7 accidentals.

- It is considered the "CIRCLE of 4^{ths}", if when you progress clockwise from "C" you are going to keys with flats. Each note is the interval of a Perfect 4th when you count up (ex. C going up to F ... C,D,E,F)
- It is considered the "CIRCLE of 5^{ths}", if when you progress clockwise from "C" you are going to keys with sharps. Each note is the interval of a Perfect 5th when you count up (ex. C going up to G ... C,D,E,F,G)

How to use the Circle to figure out EVERY Major key or scale

1. Determine the number of accidentals needed for a key by its position in the circle (ex. *Ab-* is the 4th key around the circle on the side with flat accidentals, therefore *Ab* major has 4 flats)
2. Determine which notes receive the accidentals by taking the number of accidentals from the “Order of Accidentals” list in order. (ex. *Ab* has 4 flats. The first four flats in the Order of Accidentals in the “flats” row are: *B, E, A, D*)
3. You now have all the information necessary to correctly write in music notation or by letter name EVERY major scale.

Minor Scales

Parallel Minor Keys- modes/keys that are related by letter name (ex. F major and f minor)

Relative Minor Keys- modes/keys that are related by the same key signature (ex G major and e minor)

If given Major and you need to find a relative minor: (pick a method)

1. “6th Note” method:
 - a. To determine the relative minor key from a major key, simply start on the 6th note of the given major scale. This gives you the starting pitch. Use the same key signature for the minor scale as for the major.
 - b. This is the same as going down a half step and then a whole step (changing letter names on both notes as you count).
2. “Circle of 4ths” method
 - a. Take the given Major Key and move COUNTER-CLOCKWISE 3 positions. This gives you the name of the starting minor key pitch.
 - b. Use the same key signature as major.
 - c. Remember there are a few keys which use/require enharmonic equivalents. (ex. C# Major will move to Bb and will need to change Bb to A# minor to keep the accidentals the same)

IF given a MINOR key and you need to find the relative MAJOR: (pick a method)

1. “Step and a Half” method:
 - a. Count up a whole step and then a half step from the given minor key note (make certain to change note letter names as you count both steps)
 - b. This gives you the name of the MAJOR key (relative) that shares the same key signature as the minor key in question.
2. “Circle of 4ths method”
 - a. Take the given minor key and move CLOCKWISE 3 positions.
 - i. Remember that there are a few keys which require enharmonic equivalents

FORMS OF MINOR

There are 3 main types of minor scales that we will study, they are:

natural minor- (Aeolian mode) this form of minor is the easiest, there are no note modifications. From the 6th scale degree of the major scale, start and apply the key signature to the new scale. (ex. G major = e minor; notes are: e,f#,g,a,b,c,d,e)

harmonic minor- this form of minor changes one note from the natural minor scale.

The 7th note in the minor scale is raised a half step

(ex. G maj = e min; notes are e,f#,g,a,b,c,D#,e)

melodic minor- this form of minor raises the 6th and 7th notes from the natural minor scale when the scale ascends. When the scale descends the notes return to their original position in the key.

(ex. G maj = e min; notes are e,f#,g,a,b,C#,D#,e-ascending e,d,c,b,a,g,f#,e-descending)

Writing Key Signatures



Flat key signatures follow the “order of accidentals” for flats.

Symbols always stay attached to the staff and do not use ledger lines.

Flat key signatures begin with Bb. The next flat (Eb) is added a 4th higher. The next flat (Ab) is added a 5th lower. The pattern continues- up a 4th, Down a fifth.



Sharp Key Signatures follow the “order of accidentals” for sharps. Symbols stay attached to the staff and do not use ledger lines.

Sharp key signatures begin with F#. The next sharp (C#) is down a 4th. The next sharp (G#) is drawn up a 5th. This pattern continues until the 5th sharp (A#). This sharp is drawn down a 5th to keep the remaining sharps on the staff. Other than this the pattern remains the same.

TRANSPOSING

If given a melody pattern or a series of pitches, the notes could be converted into any Major or Minor key so long as you can identify the scale degrees of the notes in your given key.

I. So, if the following notes were given in the key of **C major** are:

C	F	E	D	G	A	G	B	C
1	4	3	2	5	6	5	7	8(1)

That SAME pattern of notes could be changed to a new Key, such as **G major** (1 sharp, F#):

G	C	B	A	D	E	D	F#	G
1	4	3	2	5	6	5	7	8(1)

This simply replaces the scale degree for each note in the original with the scale degree of the note in the new key.

If the same melody or pitch pattern needed to be converted into MINOR, you would simply find the key signature of the requested MINOR key and apply any changes to the key based on which Form of Minor is requested (natural, harmonic, melodic).

SO, if the original melody was to be converted into **G MINOR in harmonic form** (2 flats, Bb and Eb):

First, figure out the key signature and the SCALE for the needed MINOR key form:

1, 2, 3, 4, 5, 6, 7, 8

G A Bb C D Eb F# G

(F# is the result of raising scale degree 7 a half step)

Then apply the original melody or melodic pattern by scale degree to get the correct answer:

G	C	Bb	A	D	Eb	D	F#	G
1	4	3	2	5	6	5	7	8(1)