Musician's Compass

by Brett Thompson

The Musician's Compass can be used to easily discover the notes in any major or minor key. The colours represent the steps of the key starting at the black arrow, just set the key to the desired position and follow the colours.

The numbers around the centre denote the natural minor scale.

For minor keys start at the Aeolian position.

For major keys start at the Ionian position.

Outer Blue ring - the Major keys

Inner Grey ring - the Minor keys

Middle White ring - 3 of these notes don't have a major or minor key B♯, E♯, F♭ but are part of other keys, 3 have a major key C♭, G♭, D♭ and 3 have a minor key G♯, A♯, D♯ use these notes when necessary to ensure each step of the key has a different letter name.

Example 1: Select A major and follow the colours A B C♯ D E F♯ G♯ A

Simultaneously view its relative minor key in the grey ring F♯ G♯ A B C♯ D E F♯

Example 2: Select D♭ major and follow the colours D♭ E♭ F G♭ A♭ B♭ C D♭

Simultaneously view its relative minor key in the grey ring B♭ C D♭ E♭ F G♭ A♭ B♭

Note that keys with enharmonic equivalents C♯/D♭ - F♯/G♭ - B/C♭ are reflected by their relative minor keys A♯/B♭ - D♯/E♭ - G♯/A♭ respectively.

SHARPS OR FLATS:

There is 1 natural key, 7 sharp keys and 7 flat keys 3 of which have enharmonic equivalents such as B and C flat. This leaves us with 12 major keys. The chart below shows each key, its relative minor and how many sharps or flats it has.

C/Am - no sharps or flats

G / Em	1♯	F / Dm	1♭
D / Bm	2♯	B♭ / Gm	2♭
A / F♯m	3♯	E♭ / Cm	3♭
E / C♯m	4♯	A♭ / Fm	4♭
B / G♯m	5♯	D♭ / B♭m	5♭
F♯ / D♯m	6♯	G♭ / E♭m	6♭
C♯ / A♯m	7♯	C♭ / A♭m	7♭

enharmonic keys

MODES:

It can be helpful at times if you view modes with respect to their relative major key. There are 3 major modes - Ionian, Lydian and Mixolydian and 4 minor modes - Dorian, Phrygian, Aeolian and Locrian.

Example 3: A Dorian A B C D E F♯ G A is the second mode of G major.

Example 4: C Mixolydian C D E F G A B♭ C is the fifth mode of F major.

CHORD STRUCTURE:

Use the intervals on the disc to find the notes in chords. Some common chord types include:

Major - 1st 3rd 5th

Minor - 1st ♭3rd 5th

Minor 7th - 1st ♭3rd 5th ♭7th

Diminished - 1st ♭3rd ♭5th ♭♭7th

Half diminished (m7-5) - 1st ♭3rd ♭5th ♭7th

Augmented - 1st 3rd ♯5th

add9 - 1st 3rd 5th 9th

Major 7th - 1st 3rd 5th 7th

Dominant 7th - 1st 3rd 5th ♭7th

sus4 - 1st 4th 5th

7 sus4 - 1st 4th 5th ♭7th

9th - 1st 3rd 5th ♭7th 9th

11th - 1st 3rd 5th ♭7th 9th 11th

13th - 1st 3rd 5th ♭7th 9th 11th 13th

Example 5: You can view the notes in an Am7 chord by setting A to the black arrow and following the chord formulae for minor 7th as above -

1st	♭3rd	5th	♭7th
A	C	E	G

SCALES:

As well as the 7 modes including the major scale [Ionian mode] and the natural minor scale [Aeolian mode] other important scales include:

5 note scales

Pentatonic major - 1st 2nd 3rd 5th 6th 1st

Pentatonic minor - 1st ♭3rd 4th 5th ♭7th 1st

Dorian pentatonic - 1st ♭3rd 4th 5th 6th 1st

Mixolydian pentatonic – 1st 2nd 3rd 5th ♭7th 1st

6 note scales

Blues scale - 1st ♭3rd 4th ♭5th 5th ♭7th 1st

Whole tone scale - 1st 2nd 3rd ♯4th ♯5th ♯6th 1st

7 note scales

Harmonic minor - 1st 2nd ♭3rd 4th 5th ♭6th 7th 1st

Melodic minor - 1st 2nd ♭3rd 4th 5th 6th 7th 1st

Phrygian dom - 1st ♭2nd 3rd 4th 5th ♭6th ♭7th 1st

8 note scales

Diminished - 1st 2nd ♭3rd 4th ♭5th ♯5th 6th 7th 1st

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