

Keys Versus Modes

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1 Overview

Many guitar players, particularly jazz players, emphasize playing in “modes”. This document demonstrates that **playing any standard mode from any root/tonic note is really just modulation to another key**. Hence, being able to play fluidly in any key encompasses all modes.

2 Introduction: What is a “Mode”?

Unfortunately, in formal music theory the word “mode” has several meanings. This document is about “standard” modes, that is, patterns of intervals starting from a given root or tonic note.

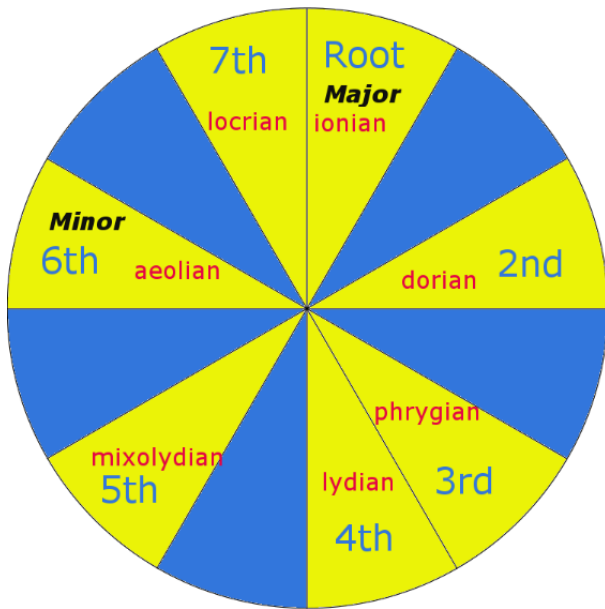
The standard major (or diatonic) scale has the following interval pattern in half-steps: **2,2,1,2,2,2,1**. There are seven intervals between any tonic note and its next octave, for a total of eight notes.

In the key of **C**, these notes would be **C, D, E, F, G, A, B, C**, where the single half-step intervals are between **E-F** and **B-C**. The other intervals are whole steps.

3 All the Modes

If we treat the major scale pattern as a circle, **every starting point in the pattern is a mode**, each of which has a traditional Greek name. Since we are always playing the same pattern of intervals, **each mode must be a diatonic (major) key (or a relative minor key)**.

Here is a diagram of the mode patterns as a cycle. The yellow wedges are valid diatonic scale patterns; the blue wedges are chromatics that are not in the scale. Note that the major scale is the same as the **Ionian** mode and the minor scale is the same as the **Aeolian** mode.



The following table shows all the modes in the key of C.

Mode	Roman	Rotated Pattern	Scale Starting From Note C	Resulting Key Signature	Relative Key Signature
Ionian	I	2-2-1-2-2-2-1	C, D, E, F, G, A, B, C	C	I
Dorian	II	2-1-2-2-2-1-2	C, D, Eb, F, G, A, Bb, C	Bb	bVII
Phrygian	III	1-2-2-2-1-2-2	C, Db, Eb, F, G, Ab, Bb, C	Ab	#V
Lydian	IV	2-2-2-1-2-2-1	C, D, E, F#, G, A, B, C	G	V
Mixolydian	V	2-2-1-2-2-1-2	C, D, E, F, G, A, Bb, C	F	IV
Aeolian	VI	2-1-2-2-1-2-2	C, D, Eb, F, G, Ab, Bb, C	Eb	bIII
Locrian	VII	1-2-2-1-2-2-2	C, Db, Eb, F, Gb, Ab, Bb, C	Db	bII

The first column gives the Greek name of the mode. The **Ionian** mode is the standard major scale. The second column (“Roman”) gives the roman numeral of the scale position from which the mode starts. The third column shows the interval pattern for the mode; each row simply starts the pattern at the next interval.

The fourth column gives the pattern of notes that arises by playing the modal interval pattern starting from C.

The fifth column indicates the actual key that is produced by playing that mode starting from the note **C**. **This column is really the whole point of this document.**

The final column gives the Roman numeral of the key signature relative to the scale position in C.

This table shows every key that contains the note **C**. **The keys that do not contain C are not modes of C.** For example, the keys D, A, E and B are missing, since none of them contains a **C** natural.

4 All the Modes and Their Keys

The table below shows the keys that result from playing a given mode from a given root/tonic note.

Mode	Roman Key Signature	All Tonic/Root Notes											
		C	C#/Db	D	Eb	E	F	F#/Gb	G	Ab	A	Bb	B
Ionian	I	C	Db	D	Eb	E	F	F#/Gb	G	Ab	A	Bb	B
Dorian	bVII	Bb	B/Cb	C	C#/Db	D	Eb	E	F	F#/Gb	G	Ab	A
Phrygian	#V	Ab	A	Bb	B	C	C#/Db	D	Eb	E	F	F#/Gb	G
Lydian	V	G	Ab	A	Bb	B	C	C#	D	Eb	E	F	F#/Gb
Mixolydian	IV	F	Gb	G	Ab	A	Bb	B	C	C#/Db	D	Eb	E
Aeolian	bIII	Eb	E	F	F#/Gb	G	Ab	A	Bb	B	C	C#/Db	D
Locrian	bII	Db	D	Eb	E	F	F#/Gb	G	Ab	A	Bb	B	C

For example, if you start with **F** and play the **Phrygian** mode, the resulting key is **Db**.

5 Using Modes

The primary reason for using modes is to add variety to improvisation. Jazz and blues players like to add notes like the **bVII (b7th)** and **bIII (b3rd)** while improvising, since they give a “moody” or melancholic atmosphere to the improvisational line.

There is a more-or-less standard ordering for the modes that increases the “jazzy” or “bluesy” quality as you advance from one mode to another.

Let’s use the key of C and look at the impact of different modes.

- Starting in **C Ionian**, only the standard “white key” notes are available, since this is just the key of C major.
- Moving to “**C Mixolydian**”, we’re now playing in the key of F. This adds the **bVII (b7)** node, **Bb**, which gives a bit more “bluesy” feel.
- Moving to “**C Dorian**”, we now add the **bIII (b3rd)** note, **Eb**. This gives the scale a more minor key feel, since **Eb** is the **bIII** of the key of C.
- Moving then to “**C Aeolian**”, we are now fully minor, since it’s the key of **Eb** or **Cm**. It also has the note **Ab**, which is the **#5** of C.

- Moving from there to “**C Phrygian**”, we are playing in the key of **Ab**, and it adds the node **Db**, which is the **bII** or **bIX (b9)** of C.
- Finally, we arrive at “**C Locrian**”, which is the key of **Db**. This gives the player **bII/bIX, bIII, bV, #V** and **bVII**.

Each of these progressive mode changes makes the improvisation jazzier. The order to remember the modes is (with examples from C):

- **I (C, Ionian)**
- **IV (F, Mixolydian)**
- **bVII (Bb, Dorian)**
- **bIII, (Eb, Aeolian)**
- **#V, (Ab, Phrygian)**
- **bII/bIX (Db, Locrian)**

If you know the circle of fifths, it’s easy to remember these because it’s the order of the keys in the circle of **fourths** (i.e. backwards from the tonic note in the circle of fifths). (See the section on mnemonics later in this document).

Each step in this progression makes an improvisation sound jazzier/bluesier.

6 Why Keys are Better Than Modes

The real problem is that “mode” players almost always start a mode from its tonic. To continue the example of using the **Phrygian** mode in the key of **F**, players are often forced to start an improvisation with the note **F**, the tonic, since they don’t know how to “break into” the **Phrygian** mode for that root note from any scale position.

If, however, the player knows that F Phrygian is exactly the same as the key of Db, the player can just start playing in Db anywhere in its scale in any octave.

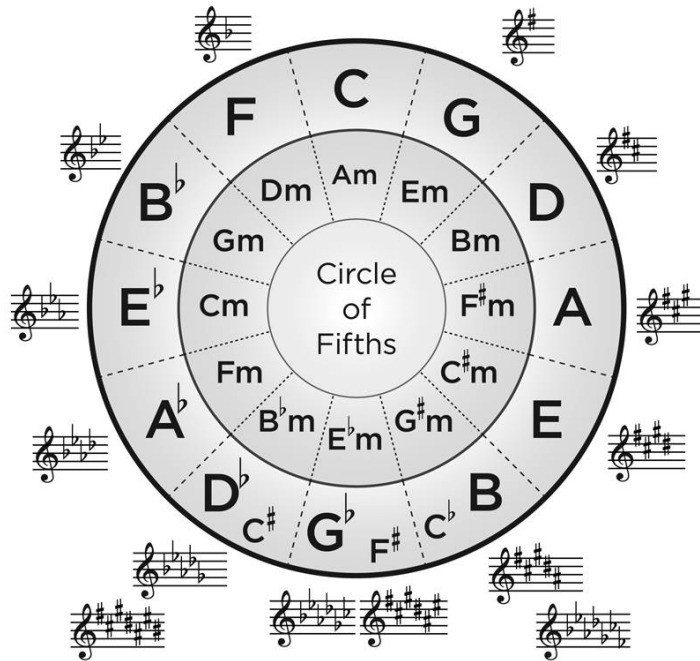
In other words, the ability to play fluidly in any key lets an improviser easily use modes. The further along the mode progression above (*Ionian, Mixolydian, Dorian, Aeolian, Phrygian, Locrian*) the “jazzier” the improvisation will sound.

7 Mental Mnemonics

There are two ways to remember the ordering of modes explained above.

7.1 Method 1: Remember the Circle of Fourths

Here is a diagram of the circle of fifths. Note that moving **backwards** gives a circle of **fourths**.



Starting from the current key you're playing in, move backwards on the circle. The farther you go, the jazzier your scale will sound.

7.2 Method 2: Remember the Roman Intervals

Here is the list from earlier showing the modes in their proper order.

- **I (C, Ionian)**
- **IV (F, Mixolydian)**
- **bVII (Bb, Dorian)**
- **bIII, (Eb, Aeolian)**
- **#V, (Ab, Phrygian)**
- **bII/bIX (Db, Locrian)**

The Roman numeral gives you the scale position whose note is the key you should play in to be in that mode. For example, if you're playing in F:

- The **I (tonic)** in F is **F: Ionian**.
- The **IV (4th)** in F is **Bb: Mixolydian**.
- The **bVII (b7th)** in F is **Eb: Dorian**.
- The **bIII (b3rd)** in F is **Ab: Aeolian**.
- The **#V (sharp 5th)** in F is **Db: Phrygian**.
- The **bII/bIX (b2nd or b9th)** in F is **Db: Locrian**.

Each successive mode brings a jazzier feel to the improvisation. The player, of course, must remember to emphasize the tones in the mode that are actually in the original key or melody.