



DIATONIC MODES

CONCEPTS

by Vitali Tkachenka



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ABOUT THE AUTHOR:

Vitali T – guitar player & composer from Belarus/USA: solo artist [Vitali T Project](#) and guitar faculty member at the [Atlanta Institute of Music](#) (USA).

The brightest in the rock fusion world move the music forward with an awareness of what came before them. That is certainly true of Vitali Tkachenka. A native of Belarus, Vitali began his formal music training under the guidance of widely respected Yuri Dzmitriev of the [Ethno-Trio Troitsa](#), and “National Artist of Belarus” – Vladimir Tkachenko, a widely admired Belarusian guitarist who is known particularly for his two-hand tapping technique. Due to his exposure to the two-hand tapping technique, Vitali began to incorporate it into his own style of playing. Following his experience Vitali went on to study guitar and music on a University level at the [Institute of Modern Knowledge](#). Instead of starting his career as a full-time professional musician, as many before him have done,

Vitali moved out of his hometown to learn more about the study of music and guitar. In 2006, Vitali transitioned out of Belarus and into the United States in order to study guitar at the [Atlanta Institute of Music](#) (AIM). At AIM, Vitali’s focus and diligent study ethics led to his graduation as an honor student. Vitali assembles diverse elements in a way that feels natural. He pays homage to his musical roots while pushing beyond those sometimes limited boundaries, taking us on a delightful musical journey. His approach to rock fusion music is invigorating. He gives equal attention to playing, composing, and writing, choosing songs that embrace both traditional and modern sounds. In 2009, Vitali released a single “Fly Away”, and in July 2011 Vitali released his debut solo record “Sides”. Also in 2011 as author Vitali released book “Modern Scales Concepts” (Atlanta Institute of Music & VTP Publishing). Vitali continues as a guitar program faculty member at [Atlanta Institute of Music](#).



Information about Vitali T, music, videos, lessons and more you can find at www.vitalitproject.com

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DIATONIC SCALES CONCEPTS by Vitali Tkachenka

Major Modes:

The IONIAN, LYDIAN and MIXOLYDIAN modes would be considered the Major modes because all of them contain a Major Third (M.3) interval and are based on a major triad even though they each have a unique harmonic quality. The IONIAN mode is simply the major scale, therefore I'll refer to it as a "Natural Major" scale (though there are many other views on modal theory, for example George Russell's "Lydian Chromatic Concept of Tonal Organization" and others). The LYDIAN and MIXOLYDIAN modes can be

considered derivatives of the IONIAN (Natural Major). I want to emphasize, that I do not think about the LYDIAN and MIXOLYDIAN modes as secondary modes, in my opinion, they are completely independent, equally stable and fully functional modes as IONIAN. The comparison of the modes in relation to the IONIAN, simplifies understanding of the structure and harmonic function of the LYDIAN and MIXOLYDIAN modes. The choice of mode will be based on the type of tonic/root chord itself (chord built from first degree of the mode) as considered within the surrounding harmony.

The main types of tonic/root chord in modes of the Major group are: - **Maj6** (*Ionian*); - **Maj7** (*Lydian*); - **Dominant 7** (*Mixolydian*)

To see and hear the full representation of the modes, it is necessary to not only know the tonic chord but also to understand the harmonization of the mode (that is a structure of chords (triads or 7th chords) built from each scale degree). This gives an understanding of the scale in terms of the chords it produces, and reinforces the concept that a mode is not merely a scale used only for melodies but represents the unique relations between specific scales and the specific chords they produce/harmonize.

LYDIAN	1	2	3	#4	5	6	7
	Maj7	7	M7	M7(b5)	Maj7/Maj7	M7	M7
# ↑							
IONIAN (Natural Major)	1	2	3	4	5	6	7
	Maj7/Maj7	M7	M7	Maj7	7	M7	M7(b5)
b ↓							
MIXOLYDIAN	1	2	3	4	5	6	b7
	7	M7	M7(b5)	Maj7/Maj7	M7	M7	Maj7



The **IONIAN** mode, in my explanation of modal theory, is the basic mode in the group of Major modes and consequently called the “**Natural Major**”. The formula of the IONIAN mode will consist of the following intervals: Major Second, Major Third, perfect Fourth, perfect Fifth, Major Sixth and Major Seventh (1 2 3 4 5 6 7).

The main type of tonic chord in the IONIAN mode is “**Maj6**” chord. At times we can consider the “**Maj7**” chord as the main tonic chord of the IONIAN mode, but in that case 7th degree of this chord with 4th degree of the IONIAN mode will form a dissonant “Tritone” interval (augmented 4th or diminished 5th). For this reason, the 4th degree of the IONIAN mode is considered an “avoid note”. The 6th degree of the IONIAN mode does not harmonically clash with the 4th degree, and using the “**Maj6**” chord as the primary chord for the IONIAN mode avoids the inherent dissonance (Tritone interval) between 4th and 7th degrees. Also the half-step distance (Minor Second interval) between the 3rd and the 4th degrees of the IONIAN mode will still not let us to use 4th degree as completely stable scale note. When using a “**Maj7**” chord with the IONIAN mode it’s important to recognize and potentially avoid the 4th scale degree (from the perspective of having a fully functional diatonic (7-note) scale over the “**Maj7**” chord, it will be more suitable to use the LYDIAN mode, which is described in the following chapter of this book).

The various types of tonic chords in the IONIAN mode are (instead “X” can be the root of any key or the name of any note):

X, **X^{SUS2}**, **X^{SUS4}**, **X^{ADD2}**, **X^{ADD4}**, **X⁶**, **X⁶⁽⁹⁾**, **X⁶⁽¹¹⁾**, **X^{MAJ7}**, **X^{MAJ9}**, **X^{MAJ7(11)}**, **X^{MAJ7(13)}**

The choice of the IONIAN mode as the primarily scale used over “**Maj6**” or “**Maj7**” chords more precisely can be based on the surrounding harmony (by the type and order of the chords in the harmony/composition).

Harmonization of the IONIAN mode:

1	2	3	4	5	6	7
Maj ⁶ / _{Maj⁷}	M ⁷	M ⁷	Maj ⁷	7	M ⁷	M ⁷ (b5)

The characteristic features of the IONIAN mode which differentiate it from the other modes of the Major modes group will be the chords constructed from its following degrees:

4th – Maj7

5th – Dominant 7

7th – m7(b5)

Here are some examples of the tonic “Maj6” or “Maj7” chords combinations with the chords that will distinctively and uniquely represent the IONIAN mode (in actual harmonic progressions, the following chords might be combined together, and/or combined with other chords from the IONIAN mode):

Three musical staves illustrating harmonic progressions in the IONIAN mode. Each staff begins with the tonic chord, I Maj⁶ (Maj⁷). The first staff progresses to IV Maj⁷. The second staff progresses to V 7. The third staff progresses to vii m7(b5).

Examples of songs written in the IONIAN mode:

“*I Got Rhythm*” (G. Gershwin), “*Take the A Train*” (B. Strayhorn), “*St. Thomas*” (S. Rollins), “*The Girl from Ipanema*” (A. C. Jobim).

* Because all these examples are jazz compositions, their full harmonies are not staying just in the one key/mode and modulate to another keys/modes, but the main parts of these compositions are based on the harmonization of the IONIAN mode.

For a more complete understanding of the structure, quality and function of the IONIAN mode, it's a good idea to see the scale as its evolution from the simple tonic Major Triad to the entire IONIAN mode:

- *Major Triad* (as the main/tonic triad in the IONIAN mode, which sets the mode's quality/type) ----- 1 3 5
- *Arpeggio of the Major Triad* (as the notes of the Major triad in order) ----- 1 3 5
- *Major 6th Chord* (as the next step in the development of the Major triad by adding the 6th degree) ----- 1 3 5 6
- *Arpeggio of the Major 6th Chord* (as the notes of the Major 6th chord in order) ----- 1 3 5 6
- *Major Pentatonic Scale* (as the arpeggio of the Major 6th chord with an added 2nd degree) ----- 1 2 3 5 6
- *Ionian Scale* (as the Major Pentatonic scale with added 4th and 7th degrees) ----- 1 2 3 4 5 6 7

Major Triad

Major Arpeggio

Major6 Chord

Major6 Arpeggio

Major Pentatonic

Ionian Scale

C

form

A

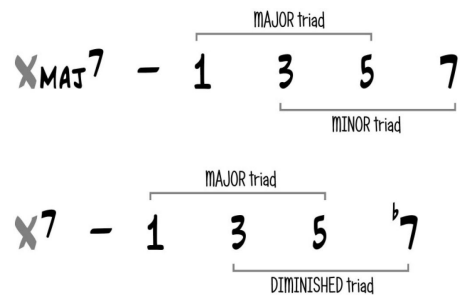
form

SEQUENCES IN TRIADS

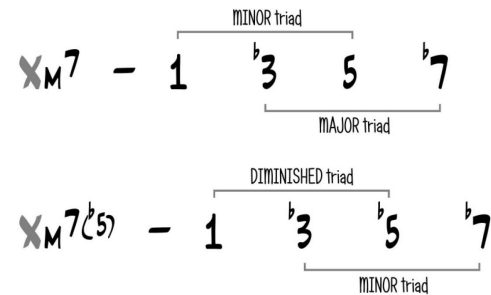
The triads, in my opinion, are one of the most powerful tools of musical scale usage, as triads contain an inherently strong melodic function (because triads will consist of consonant intervals - *Thirds*). As the triads, even in a melodic placement (when notes are arpeggiated) carry strongly pronounced melodic function. In fact, triads are the simplest kind of chord. The triads in the various modes are possible to use in many ways:

- It is possible to consider the *tonic and the other 7th chords in the mode as a connection of two triads* (from the 1st and 3rd degrees of the 7th chord);
- It is also possible to consider any *diatonic mode as three major and/or three minor triads* which, depending on the interval structure of the mode, will be at its three various degrees. To be able to apply triads effectively the knowledge and understanding of an interval structure and harmonization of the mode is necessary);
- It is possible to consider the entire *mode as the seven triads constructed from each degree of the mode* (diatonic harmonization).

MAJOR family of 7th chords as two triads:

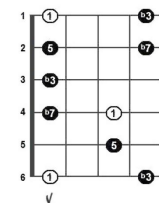


MINOR family of 7th chords as two triads:



Sequence in Two Triads (7th Arpeggio)

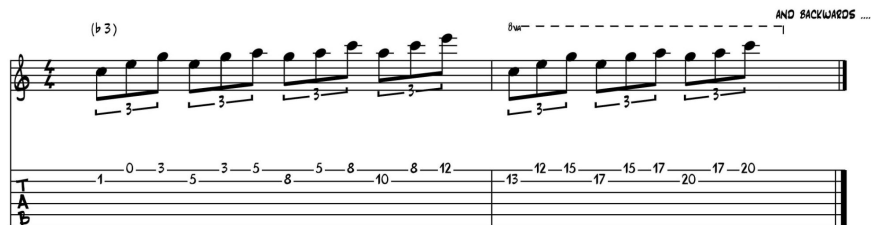
For demonstration of a sequence as an example was used
E-form of A MINOR 7th Arpeggio in 5th position



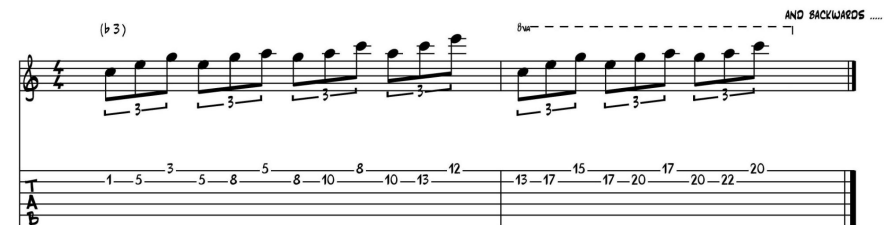
HORIZONTAL SEQUENCES

Most guitar players tend to think vertically when learning and using scales and arpeggios. This keeps the pattern of the scale or arpeggio around the chord shape (in position); this is why vertical usage of scales and arpeggios is applied much more often, than diagonal and horizontal. It's also a great idea to think horizontally with these scales and arpeggios. This allows you to see the intervals and structure of the scale or arpeggio as well as connecting ideas for more common vertical patterns.

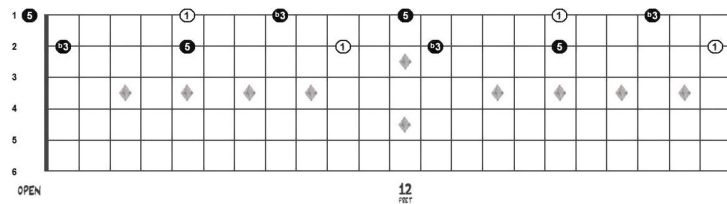
2-string Horizontal Sequence (Triad Arpeggio)



alternative fingering



For demonstration of a sequence as an example were used "CAGED" forms of **A MINOR TRIAD arpeggio** on high E & B strings



When you look at Triad Arpeggios on two strings, it's easy to visualize the Major/Minor Third intervals as the main building blocks of the Diatonic Triads. The example of a sequence is given on the 1st and 2nd strings, but for a full representation of the horizontal connections between triad inversions on two strings, it is necessary to play this sequence on other strings combinations as well.

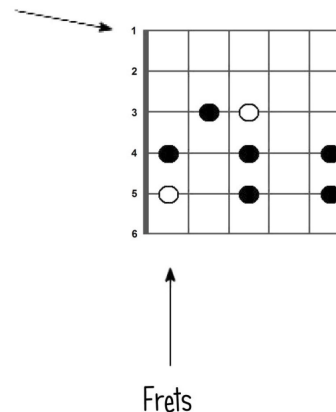
SPECIAL SIGN GLOSSARY:

Scale/Mode Degrees (Intervals):

- | | |
|---|--|
| 1 - Root (Unison) | |
| $\flat 2$ - minor Second | 2 - Major Second |
| $\flat 3$ - minor Third | 3 - Major Third |
| 4 - perfect Fourth | |
| $\sharp 4$ - augmented Fourth (Tritone) | $\flat 5$ - diminished Fifth (Tritone) |
| 5 - perfect Fifth | |
| $\flat 6$ - minor Sixth | 6 - Major Sixth |
| $\flat 7$ - minor Seventh | 7 - Major Seventh |

Fretboard Diagram:

Strings
1 - high E
2 - B
3 - G
4 - D
5 - A
6 - low E



Other scale/mode degree



Root of the scale/mode

All the chord types and choices over the scales/modes are given as an: Root note (X) instead "X" can be the root of any key or the name of any note + type of the chord (7, maj7, m7, etc)

All the scale/mode, arpeggio and chord forms in this book are given in the **CAGED System** (the 5 forms scale system on the basis of five forms of major chords in an open position - C, A, G, E, and D forms/chords) and in the **Three-Note Per String Concept** (or the "7 Forms System" when the scale patterns start from each degree of the scale on the 6th string, and every scale form contains three notes per-string).