

The Universal Encyclopedia of Scales

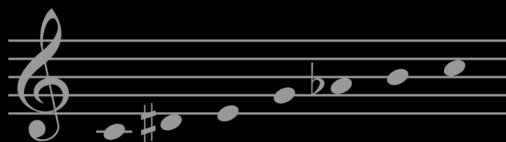
An in-depth account of all 2048 Scales in Music

Symmetrical Augmented

HexaTonic III^m:bVI • Messiaen Inv. III Truncated • Augmented

Messiaen V

6 Notes • 2 Modes • 4 Transpositions



m3 H m3 H m3 H

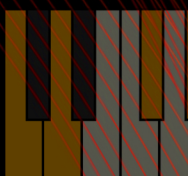
1 #2 3 5 b6 7

Bi-Triadic Hexatonic

√+: III+ III: Im bVI: IIIm I: bVIm



W M3 W M
1 2 b5 b6



2600 pages showing every scale over the circle of fifths, notated in twelve keys with piano keyboard & guitar fretboard. It includes intervallic formulas, symmetry, source scale and related modes

The Universal Encyclopedia of Scales

An in-depth account of all 2048 Scales in Music

mDecks Music

Table of Contents

Preface

What is a Scale?

Equivalence of scales

Scale Representation

Transpositions

Modes

Source Scales & Related Modes

Summary of Circle of Fifths Transformations

Scales of Limited Transpositions (Symmetry)

Bi-triadic Hexatonic Scales

Cataloguing & Naming Scales

How scales are presented in this encyclopedia

How to use the indexes and search for scales

Search & Find Tips

Finding All Scales In Music

Master Index

More Books & Apps by mDecks Music

Preface

“There are 2048 scales in music, no more, no less. 12 of them are intervals (scales with only two notes), and 344 of the other 2036 scales are source scales”

A complete encyclopedia of scales has always been on every musician's wish-list. There are many reasons why having a collection containing all scales in music fascinates us, but the most attractive one is that it is *universal*.

We all know that our twelve tone system (with only twelve different pitch-classes) must produce an exact amount of scales. A list with all possible scales in music must then be universal and unchanging. In fact, if well-organized, this list should offer much more than just a simple description of each scale. This list could show relationships between scales while cataloguing them based on different properties (symmetry, amount of notes and/or modes, source scales vs. modes of source scales, intervallic formulas, etc.)

With a complete encyclopedia of scales we can finally have the answers to many questions, such as:

How many scales are there in music and what are they?

Which scales are the source scales and what are their related modes? (What are the related modes of any scale?)

Which scales are symmetric?

How many scales are there with only one (or two, three, etc) mode(s), and which ones are they?

Which scales are pentatonic or bi-triadic hexatonic or truncated, etc.?

What is the scale represented by a specific intervallic formula?

What is the interval content of any scale? How dissonant or consonant a scale is?

How many modes does any one scale produce?

The creation of this universal encyclopedia of scales was made possible by using the concepts developed for the app [Tessitura Pro by mDecks Music](#).

Tessitura Pro represents scales by graphing them over the circle of fifths. This graphing technique creates very distinct polygons. *Moving forward, we will refer to these polygons as **graphs**.* This technique allowed us to find all possible scales in music, studied their properties and classified scales using different criteria.

Master Index of Scales

Select one of the options below

Index of Source Scales by Mode Count

Index of All Scales by Mode Count

Index of Source Scales by Note Count

Index of All Scales by Note Count

Index of Symmetrical Source Scales

Index of Bi-Triadic Hexatonic Source Scales

Index of Source Scales by Mode Count

Select one of the options below

[Click here to go back to the Master Index](#)

Source Scales with 1 Mode

Source Scales with 2 Modes

Source Scales with 3 Modes

Source Scales with 4 Modes

Source Scales with 5 Modes

Source Scales with 6 Modes

Source Scales with 7 Modes

Source Scales with 8 Modes

Source Scales with 9 Modes

Source Scales with 10 Modes

Source Scales with 11 Modes

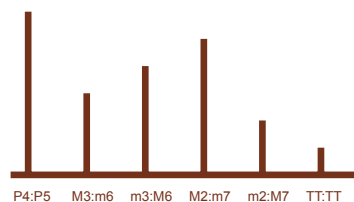
Modes of 1111116

7 Notes • 7 Modes • 12 Transpositions

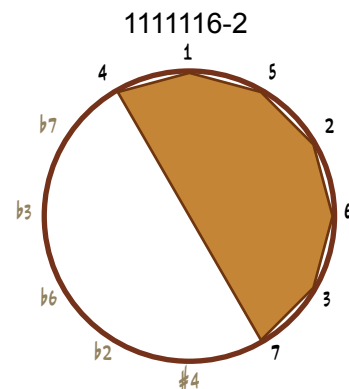
Source Scale: Ionian

Symmetrical: NO

Bi-Triadic Hexatonic: NO

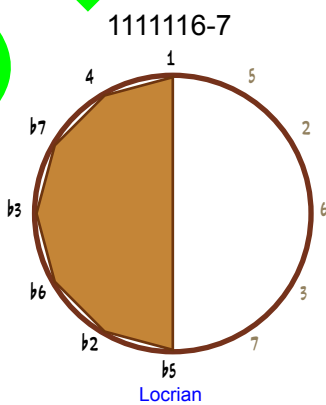
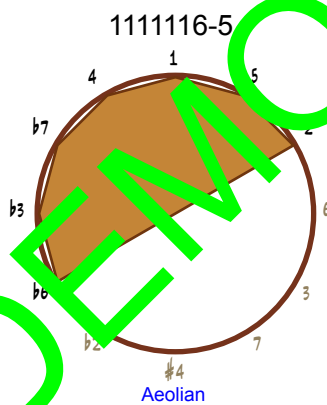
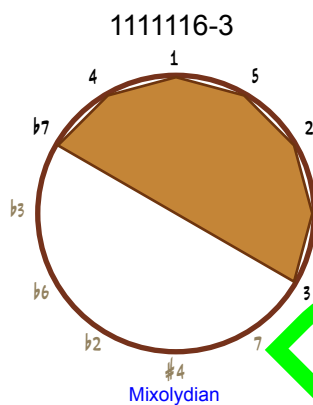
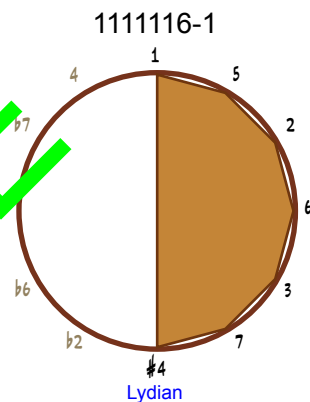
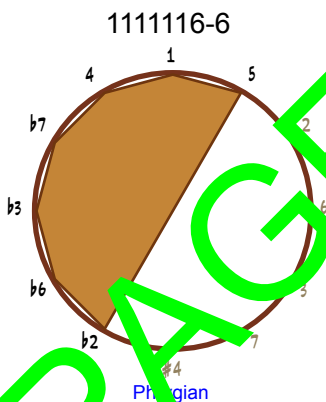
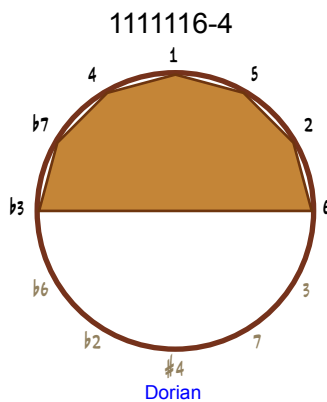
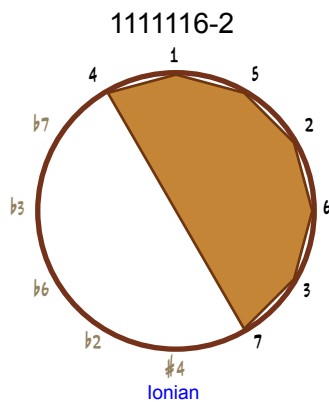


Aggregated Dissonance(0 to 10): 3.4



[Click here to go back to Main Index](#)

Click on any scale name (mode) to view it



Ionian

• Ionian • Major • Mixolydian n7 • Lydian n4 •

[View related modes](#)

7 Notes • 7 Modes • 12 Transpositions

Intervallic Formula: W W H W W W H

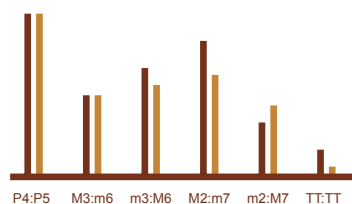
Degrees Formula: 1 2 3 4 5 6 7

Source Scale: Self

Not a Symmetrical Scale

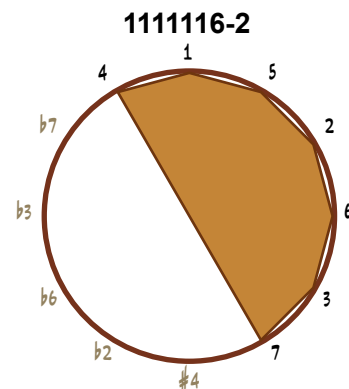
Not a Bi-Triadic Hexatonic

[Click here to go back to Main Index](#)



Scale Dissonance(0 to 10): 2.4

Aggregated Dissonance(0 to 10): 3.4



DEMO PAGE

Dorian

• Dorian • Mixolydian b3 • Aeolian n13 • Melodic Minor b7 •

[View related modes](#)

7 Notes • 7 Modes • 12 Transpositions

Intervallic Formula: W H W W W H W

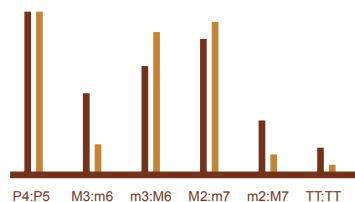
Degrees Formula: 1 2 b3 4 5 6 b7

Source Scale: Ionian [2]

Not a Symmetrical Scale

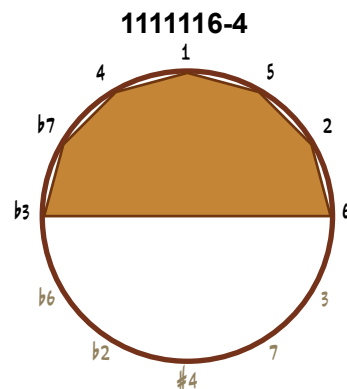
Not a Bi-Triadic Hexatonic

[Click here to go back to Main Index](#)



Scale Dissonance(0 to 10): 2.1

Aggregated Dissonance(0 to 10): 3.4



DEMO PAGE

The image displays 12 rows of musical notation and keyboard diagrams for the Dorian mode. Each row consists of a musical staff with a treble clef, a keyboard diagram showing the notes of the scale, and a grid of dots representing the notes of the scale. The notes of the Dorian mode are D, E, F, G, A, B, C. The rows show the mode in various transpositions, with the first row being the Dorian mode in D (D, E, F, G, A, B, C) and the last row being the Dorian mode in C (C, D, E, F, G, A, B).

Phrygian

• Phrygian • Aeolian b9 • Locrian n5 •

[View related modes](#)

7 Notes • 7 Modes • 12 Transpositions

Intervallic Formula: H W W W H W W

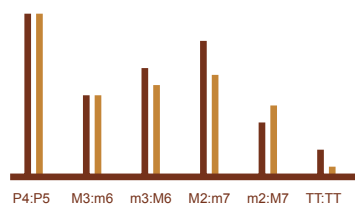
Degrees Formula: 1 b2 b3 4 5 b6 b7

Source Scale: Ionian [3]

Not a Symmetrical Scale

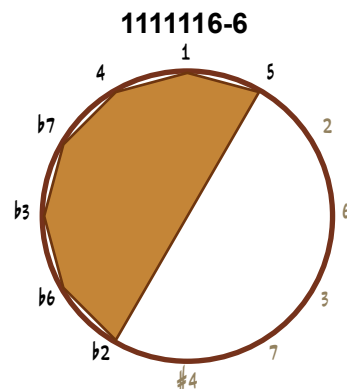
Not a Bi-Triadic Hexatonic

[Click here to go back to Main Index](#)



Scale Dissonance(0 to 10): 2.4

Aggregated Dissonance(0 to 10): 3.4



DEMO PAGE

12 transpositions of the Phrygian mode, each shown with musical notation, a keyboard diagram, and a fretboard diagram.

Lydian

• Lydian • Ionian #4 • Lydian Diminished n3 • Pelog n13 •

[View related modes](#)

7 Notes • 7 Modes • 12 Transpositions

Intervallic Formula: W W W H W W H

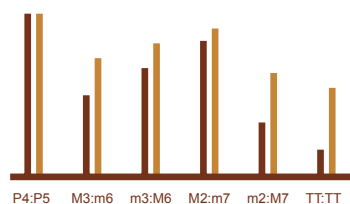
Degrees Formula: 1 2 3 #4 5 6 7

Source Scale: Ionian [4]

Not a Symmetrical Scale

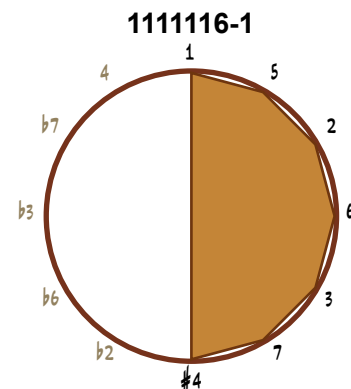
Not a Bi-Triadic Hexatonic

[Click here to go back to Main Index](#)



Scale Dissonance(0 to 10): 3.9

Aggregated Dissonance(0 to 10): 3.4



DEMO PAGE

Mixolydian

• Mixolydian • Adonai malakh • Ionian b7 • Dorian n3 •

[View related modes](#)

7 Notes • 7 Modes • 12 Transpositions

Intervallic Formula: W W H W W H W

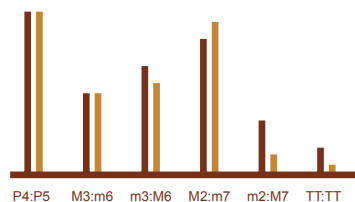
Degrees Formula: 1 2 3 4 5 6 b7

Source Scale: Ionian [5]

Not a Symmetrical Scale

Not a Bi-Triadic Hexatonic

[Click here to go back to Main Index](#)



Scale Dissonance(0 to 10): 2.1

Aggregated Dissonance(0 to 10): 3.4



DEMO PAGE

12 transpositions of the Mixolydian scale, each shown with musical notation, a keyboard diagram, and a fretboard diagram.

Aeolian

• Aeolian • Natural minor • Dorian b13 • Phrygian n2 •

[View related modes](#)

7 Notes • 7 Modes • 12 Transpositions

Intervallic Formula: W H W W H W W

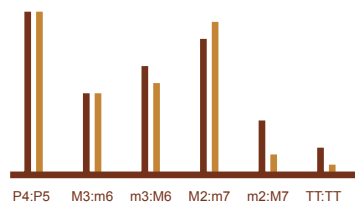
Degrees Formula: 1 2 b3 4 5 b6 b7

Source Scale: Ionian [6]

Not a Symmetrical Scale

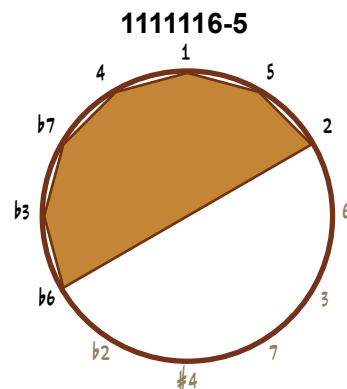
Not a Bi-Triadic Hexatonic

[Click here to go back to Main Index](#)



Scale Dissonance(0 to 10): 2.1

Aggregated Dissonance(0 to 10): 3.4



DEMO PAGE

Musical notation and keyboard diagrams for the Aeolian mode. The notation shows the scale in treble clef with a key signature of one flat (Bb). The keyboard diagrams show the scale on a piano keyboard, with the notes C, D, Eb, F, G, Ab, and Bb highlighted in yellow.

[View related modes](#)

Intervallic Formula: H W W H W W W

Source Scale: Ionian [7]

Not a Bi-Triadic Hexatonic

Figure 1 displays two charts illustrating the dissonance of the 1111116-7 scale.

The left chart shows the Scale Dissonance (0 to 10) for various intervals. The intervals are P4:P5, M3:m6, m3:M6, M2:m7, m2:M7, and TT:TT. The dissonance values are approximately: P4:P5 (3.9), M3:m6 (3.4), m3:M6 (3.4), M2:m7 (3.4), m2:M7 (3.4), and TT:TT (3.4).

The right chart shows the Aggregated Dissonance (0 to 10) for the same intervals. The intervals are labeled 1 through 7. The aggregated dissonance values are approximately: 1 (3.9), 2 (3.4), 3 (3.4), 4 (3.4), 5 (3.4), 6 (3.4), and 7 (3.4).

[illegible]