

Chord Scale Theory

By Ed Saindon

We will address the many options of chord scales used in improvisation along with the criteria for choosing a specific scale over a chord. In this article, we'll look at more conventional chord scale options listed according to chord types. A future issue will address more advanced scale options such as cross-referenced scales, use of parent scales, and synthetic scales along with various application techniques. The concept of chord scales is an important topic since many improvisational techniques such as the use of Upper Structure Triads, Four-Note Groupings, Intervallic Playing, and Pentatonics are chord-scale based.

CHORD SCALE CHART

The following chart contains the various chord scales that are available based upon specific chord type.

Major 7

Ionian: 1 2 3 4 5 6 7

Ionian (#2): 1 #2 3 4 5 6 7

Lydian: 1 2 3 #4 5 6 7

Lydian (#2): 1 #2 3 #4 5 6 7

Major 7#5

Lydian Augmented: 1 2 3 #4 #5 6 7

Lydian Augmented (#2): 1 #2 3 #4 #5 6 7

Symmetrical Augmented: 1 #2 3 5 #5 7

Symmetrical Augmented (#4): 1 #2 3 #4 5 #5 7

Bebop: 1 2 3 4 5 #5 6 7

Ionian (#2) Bebop: 1 #2 3 4 5 #5 6 7

Minor 6

Melodic Minor: 1 2 b3 4 5 6 7

Minor 7

Dorian: 1 2 b3 4 5 6 b7

Aeolian: 1 2 b3 4 5 b6 b7

Phrygian: 1 b2 b3 4 5 b6 b7

Minor Major 7

Melodic Minor: 1 2 b3 4 5 6 7

Harmonic Minor: 1 2 b3 4 5 b6 7

Minor 7b5

Locrian: 1 b2 b3 4 b5 b6 b7

Locrian (Natural 2): 1 2 b3 4 b5 b6 b7

Locrian (Natural 2 and 6): 1 2 b3 4 b5 6 b7 1

Dominant 7

Mixolydian: 1 2 3 4 5 6 b7

Mixolydian (b2, #2): 1 b2 #2 3 4 5 6 b7

Mixolydian (b6): 1 2 3 4 5 b6 b7

Lydian b7: 1 2 3 #4 5 6 b7

Altered (with natural 4 and 5): 1 b2 #2 3 4 5 b6 b7

Altered (Diminished Whole Tone): 1 b2 #2 3 #4 (b5) b6 b7

Symmetrical Diminished (H/W): 1 b2 #2 3 #4 5 6 b7

Whole Tone 1 2 3 #4 (b5) #5 (b6) b7

Dominant 7 sus 4

Mixolydian: 1 2 3 4 5 6 b7

Mixolydian (b2, #2): 1 b2 #2 3 4 5 6 b7

Mixolydian (b6): 1 2 3 4 5 b6 b7

Altered (with natural 4 and 5): 1 b2 #2 3 4 5 b6 b7

Diminished 7

Symmetrical Diminished (W/H): 1 2 b3 4 b5 b6 6 7

The scales listed above are some of the many options that can be used for improvisation. The improviser should have a solid grasp of these scales in all keys. In addition, the improviser should also know which tensions are associated with each given chord scale. For example, a Lydian b7 scale on a Dom 7 will include tensions 9, #11, and 13.

BEBOP SCALES

The improviser can also add a chromatic approach note to many of the above scales, thereby creating an eight-note scale. The theory behind the added chromatic note is that it allows one to sound chord tones on the downbeats and passing notes on the upbeat while playing eighth-note based lines. Here are the options for adding the chromatic note:

For Maj 7 chords, add #5 (line will outline a Maj 6)

For Min 6 chords, add #5

For Dom 7/Dom 7 sus chords, add natural 7

For Min 7/Min 7 b5 chords, add natural 7

For example, C Lydian Bebop would be: 1 2 3 #4 5 #5 6 7

C Mixolydian Bebop would be: 1 2 3 4 5 6 b7 7

CHOOSING CHORD SCALES

In choosing a specific chord scale for a type of chord, it helps to narrow down the important differences between each scale in the specific chord category. For example, with a Major 7 chord, the difference between Ionian and Lydian is a natural 4 versus a #4. With that in mind, here is a chart that takes into account those scale differences in each chord-type category.

Major 7

4 or #4? 2 or #2?

Minor 7

6 or b6? If b6, 2 or b2?

Dominant 7

2 or b2, #2? 4 or #4? 6 or b6?

Minor 7b5

2 or b2? 6 or b6?

Choosing chord scales can be very subjective, and most often it is up to the improviser in terms of what colors one wishes to sound when improvising. For example, on a Minor 7, a Dorian scale will be brighter than a Phrygian scale. Many times, there is not a right or wrong choice. Also, the improviser might choose different scale options for certain chords on each successive chorus. Even further, the improviser might use several scale options for the same chord duration.

However, there are several factors and specific criteria to address when choosing chord scales. One method is choosing chord scales according to chord function. This method works well for compositions with more conventional harmony such as standards from the Great American Songbook, Jobim's Brazilian compositions, pop tunes, etc. In general, for compositions with conventional harmony, the general intent is to keep the chord scales diatonic to the overall tonality of the composition. Here are some examples in a major key tonality.

Diatonic Chord Function

I Major 7 Ionian

II Minor 7 Dorian

III Minor 7 Phrygian

IV Major 7 Lydian

V7 Mixolydian

VI Minor 7 Aeolian

VII -7b5 Locrian

Non-Diatonic Chord Function

V7 of V7 Lydian b7

Substitute Dominant 7 Lydian b7

bII Major 7, bIII Major 7, bVI Major 7, bVII

Major 7 Lydian

bVI7, bVII 7 Lydian b7

IV - 6 Melodic Minor

#IV -7b5 Locrian

NON-CONVENTIONAL HARMONY

For contemporary compositions that feature more non-conventional harmony, the follow-

ing information will be helpful in determining chord scales.

Basically, when we are choosing chord scales, we already know most of the notes in the scale. Since we know the scale will contain 1, 3, 5, and 7 of the chord, we need to determine which additional notes would be good choices for passing notes. When choosing the chord scale for each given chord, there are basically three things to look at:

1. **The Melody:** For example, if the melody included a #4 on a Major 7, the scale would be a Lydian. If the melody included a b6 and a natural 2 on a Minor 7, the best choice would be an Aeolian scale. Please note: if a note in the melody is a chromatic approach to a chord tone and is not held for very long, that note should not be used as criteria in choosing the chord scale. Many times, the melody may not give any clues in determining the best chord scale choice.

2. **The Previous Chord Scale:** This is the most important factor in choosing the best chord scale. In essence, we are trying to retain any notes from one chord scale to the next successive chord scale. For example, if we are going from a C-7 with an Aeolian scale to an Ab7 chord, the most likely choice would be an Ab Lydian b7 scale. The reasoning would be as follows: the C Aeolian scale contains a Bb, D, and F, which are respectively the notes 2, #4 and 6 in the Ab Lydian b7 chord scale.

3. **The Following Chord:** This is especially important in choosing scales for a Dom 7 chord. A dominant chord generally sets up the sound of the next chord. For this reason, we look at the following chord in the case of a V7 cadence. For example, a Dom 7 resolving to a Minor 7 generally takes some type of an altered scale. The corresponding altered tensions, b9, #9, and b13, set up the minor sound of the following Minor 6/Minor 7 chord.

This discussion on choosing chord scales is only a general guideline. As mentioned, there can be many effective choices in the selection of chords scales for a given chord. For example on a Maj 7 chord, a Lydian #2 scale would be a good choice if you wanted to sound an unconventional tension in the line such as the #9. Similarly, a Locrian Natural 2 and 6 scale would be a good choice if you wanted to sound the Natural 13 on a Minor 7 b5 chord. You are encouraged to try out all of the many scale options and experiment with how they sound on a given chord in the context of a progression or composition.

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