

Symmetric Scales

When a mode of given scale produces the same type of scale as the original, the scale is said to be symmetric. Several of the important scales used by jazz musicians are symmetric. For instance, the chromatic scale is symmetric, in that every single mode of it is another chromatic scale. In this case, there is really only one unique chromatic scale; all others are just modes of it. In general, if N modes of a given scale produce the same type of scale (including the first mode, the original scale itself), then there are only $12/N$ different scales of that type.

One thing to watch out for in the scales discussed in this section is that they seem to lend themselves to playing patterns, and sometimes it is difficult to avoid sounding clichéd when using these scales. When you have several measures of a given chord, a common technique is to play a short figure in the associated scale and repeat it transposed to several different positions. For instance, a possible pattern in C major would be "C, D, E, G". This pattern could be repeated several times starting at different positions, perhaps as "D, E, F, A" or "E, F, G, B". For some reason, many of the scales listed below invite this type of approach, and it is easy to end up with a few clichés you use every time you are confronted with these scales. Always be conscious of this. You should not feel that a scale is dictating to you what you can or should play.

Whole Tone Scale

A particularly easy scale is the whole tone scale, so called because all the steps in the scale are whole steps. A C whole tone scale consists of "C, D, E, F#, G#, Bb". It has only six notes, and all six of its modes (including itself) form whole tone scales. There are thus only $12/6$ or 2 different whole tone scales. The other one is "Db, Eb, F, G, A, B".

Since the first, third, and fifth degrees of this scale form an augmented triad, this scale can be played over augmented chords. This scale also contains the note that would be the seventh in a dominant chord (that is, Bb in a C7). The chord implied by this scale is written either as C7aug, Caug, C7+, C+, or C7#5.

The Diminished Scales

Another symmetric scale is the diminished scale. This scale is also called the whole step half step scale, or the half step whole step scale, because it is constructed from alternating half and whole steps. A whole step half step (abbreviated WH) scale on C consists of "C, D, D#, F, F#, G#, A, B"; a half step whole step (abbreviated HW) scale consists of "C, Db, Eb, E, F#, G, A, Bb". These scales each contain eight notes. Note that, in addition to the original scale, the third, fifth, and seventh modes of either a WH or HW scale (in addition to the first mode) form another WH or HW scale, so there are only 12/4 or 3 different diminished scales of each type. Also, note that the WH diminished scale is just the second mode of the HW diminished scale, so that in fact, there are only three distinct diminished scales in all. The WH and HW versions of this scale are used in different situations, however. The HW diminished scale outlines a dominant seventh chord with a lowered ninth and fifth. For example, C7b9b5 is "C E Gb Bb Db" and these notes, as well as the sixth, the natural fifth and the raised ninth, are all present in the C HW diminished scale. The HW scale is thus a good choice to use over dominant seventh b9b5 chords. John Coltrane used this sound a lot. This scale is very similar to the [altered scale](#), which you may recall is also called the diminished whole tone scale. The C altered scale contains the first five notes of the C HW diminished scale and the last four (overlapping the E and F#) of the C whole tone scale. Since both scales contain lowered fifths and lowered and raised ninths, they are sometimes used interchangeably over dominant seventh chords. Try going to a piano and practicing both scales in your right hand over the root, third, and seventh in your left. They sound very similar. Many fakebooks are inconsistent in using the symbols alt, #9, b9, b5, #9#5, and b9b5. The lesson here is, you will have to depend on your ears and common sense to guide you in the use of these two scales. The WH diminished scale outlines a fully diminished seventh chord and is thus used over diminished chords. For instance, the C WH diminished scale "C, D, D#, F, F#, G#, A, B" can be played over Cdim or Cdim7. The classical symbol for diminished, a small circle, is sometimes used as well. Note that this scale is the same as the D#, F#, and A WH diminished scales, and in fact Cdim7, D#dim7, F#dim7, and Adim7 are all inversions of the same chord. They may be used interchangeably.

More importantly, this scale is also the same as the D, F, G#, and B HW diminished scales. These scales are associated with their respective b9b5 dominant chords. The C, Eb, F#, and A diminished chords are thus often used as chord substitutions for the associated dominant chords, and vice versa. In most places where you see a diminished chord, you can substitute one of the related dominant chords. One particularly common chord progression is | Cmaj7 | C#dim | Dm7 |. The C#dim chord here implies the C# WH diminished scale, which is the same as the C, Eb, F#, and A HW diminished scale. In this case, the A7b9b5 chord can be substituted for the C#dim chord. Not only do A7b9b5 and C#dim share the same scale, but the A dominant chord also resolves well to the D minor chord. Any of the scales associated with A dominant chords, such as A mixolydian, A lydian dominant, A altered, or A blues, can thus be played over the C#dim chord in this context.