

Scales & Modes

Modes came before Scales. The Greeks experimented with and defined the ancient modes from the tetra-chords (4 notes) that were standard for the 4-string Lyre. When they combined these, the results were 8-note patterns of pitches (with the top and bottom pitch being doubled) that they named modes.



These pitches were defined by the intervals between the notes. These intervals were either larger (what are now 2 half-steps) or smaller (what is now considered 1 half-step).

The Greeks defined 7 classical modes and ascribed to them different qualities, and related them to their world-view. For example, certain modes were connected with the different Greek gods and the planets that are associated with them and were given different place names from their locations (e.g. Ionian, Dorian, Aeolian. We'll explore these modes more fully in a later lesson.)

These 7-note patterns are familiar to us as Diatonic scales. For example, the do-re-mi-fa-sol-la-ti-do pattern that most singers know from choir experience (if not from the *Sound of Music* song), is the same as the Ionian Mode AND the same as the Major Scale. These seven note patterns are like playing only the white keys on a piano. (e.g. C D E F G A B C)

The Chromatic scales developed when 5 more notes were added to the 7 to result in 12 tone scales (each whole step was divided into 2 half steps). This is like the black keys that are added to the piano. (I told you we'd get to these later!) A chromatic scale, then, is one in which every step of the scale is played, resulting in 13 notes (if you

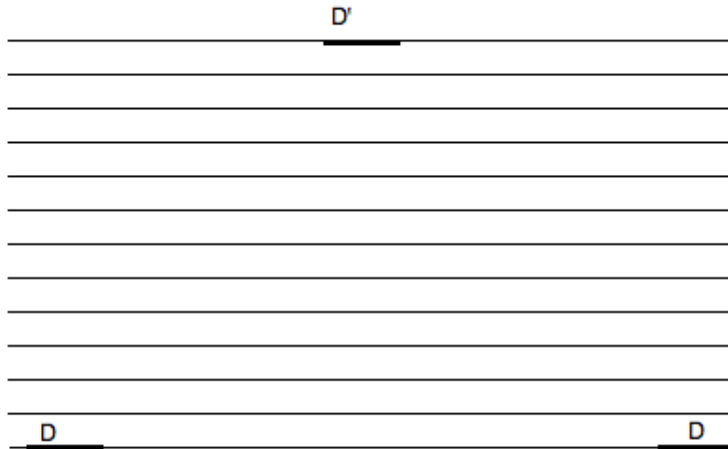
double the first and the last note) e.g. C C# D D# E F F# G G# A
A# B C

Of course, a guitar fretboard is like having all the piano keys all the time and one can play a chromatic scale by starting at 0 on any string and playing every fret up the fretboard until reaching the 12th fret.

Mountain and hammered dulcimers, however, are laid out in the 7-note diatonic pattern that skips the extra notes. Some mountain dulcimers have extra frets (+ or ½ frets, discussed in a later lesson) to play certain of the chromatic notes. Hammered dulcimers have the chromatic notes, but the player has to search for them in order to play them.

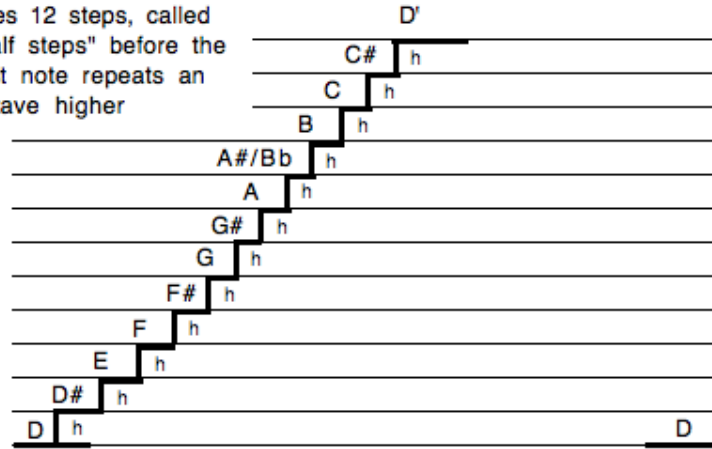
The relationship of Diatonic Modes and Chromatic scales can be illustrated by comparing them to how one uses stair steps as seen in these diagrams:

Question: How do we get from D to D'?
(D'= one octave higher than D)

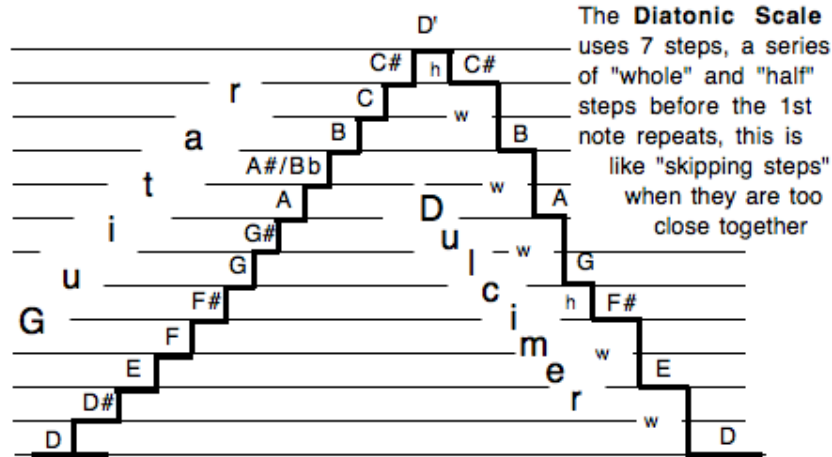


The Chromatic Scale

uses 12 steps, called "half steps" before the first note repeats an octave higher



Chromatic & Diatonic Scales



The **Diatonic Scale** uses 7 steps, a series of "whole" and "half" steps before the 1st note repeats, this is like "skipping steps" when they are too close together

Thus, there are 2 different ways or systems of describing the scale tones from the first note "D" to its octave, or when it repeats.

The hammered dulcimer has the modes laid out either in the box or in a straight line.

For a more illustrative discussion of these concepts, check out the **Map of the Mountain Dulcimer** and **Hammered Dulcimer** and the **Modes** lessons on this site.