

THE SCALE: A SOUND LADDER

Do you know how many different scales there are? I was amazed to find so many when I began my study of scales. Let's start with the definition and go from there,

Webster defines scale as "a means of ascent; a series of steps, a ladder; a system or grouping or classifying in a series of steps or degrees . . . In music, a series of tones arranged in a sequence of rising or falling pitches in accordance with any of various systems of intervals ; especially, all of such a series contained in one octave.

Groves dictionary describes it this way... Scale)Latin and Italian scale -, ladder; Fr. Gamme; Ger. Tonleiter - Sound ladder). A theoretical statement of the notes employed by convention in music. Scale is in itself an intimate fusion of melody and harmony.

A Scale is a stepwise arrangement of all the main notes in a particular passage of music or in a musical system of a people. The number of scales in use throughout the world is incalculable.

There are scales of the East and West. Pentatonic scales; church modes; diatonic scales, chromatic scales, diminished scales, major and harmonic minor scales, melodic minor scales, blues scales; and synthetic scales by the hundreds.

The man credited with inventing scales was the famous Greek mathematical genius, Pythagoras. In 550 B.C. he introduced the octave adding the eighth string to the lyre. The octave is about the only common denominator to all scales. Pythagoras showed how to split the octave into two distinct tetrachords (four ascending notes whole, whole, half steps) He discovered the numerical relationship of notes by means of the number of vibrations needed to produce different sounds. Pythagoras invented an instrument called the monochord which consisted of one string which was divided into sections showing how different notes could be formed. When the string was divided exactly in the center, a note sounded an octave higher. By dividing the string two-thirds would make a note a fifth higher, and all the notes had precise mathematical proportions. This study of harmonics can be illustrated on your piano. Try this experiment: Depress the note G below middle C on the piano carefully so that no sound is heard, hold it down while you strike the low C loud and then lift the C and you will hear the G sound all by itself. You may repeat this a whole octave higher and still have this happen. Try it on A below middle C depressing the note and then play the low I) and hear the same perfect fifth. When Pythagoras discovered that the division of the string at the half raised the pitch an octave he regarded the octave as the most important relationship in music. The division at two-thirds of the string creating a perfect fifth, he regarded. as the second most important relationship in music. The division of the string at three-fourths raised the pitch by a perfect fourth which was another important relationship.

The PENTATONIC SCALE has just five notes scattered between the octave. It is represented by the five black keys on the piano. Many tunes around the world are based on this scale including Scottish tunes, Chinese, Japanese and the well known American favorite, "Amazing Grace". The African tune, "Nobody Knows the Trouble I've Seen" is based on the pentatonic scale as well as the children's song, "Jesus Loves Me".

The WHOLE TONE SCALE has six tones starting on either C or D flat. There are no semitones to define position in the scale which creates a certain vagueness. A beautiful impressionistic sound can be achieved by holding down the damper pedal of the piano and playing the six tones (middle C, D, E, F#, G#, A#) and continue up the keyboard. There are 720 different ways to play six tones. The composer Debussy used this scale in his compositions.

The CHROMATIC SCALE consisted of twelve semitones. This scale consisting of half steps is also called the Dodecuple Scale. It means an octave divided into twelve parts.

Throughout the ages composers have expressed themselves using a diversity of scales. Minor scales and modes may enable the composer to express feelings that other scales may not. Scales are like colors to a painter. Each color has so many possibilities and shades.

The DIMINISHED SCALE has a unique series of sound steps. This page is from the book, "The Complete Book of Improvisation, Chord Progressions & Fills, Practice this scale and try playing chords underneath it.

Now practice all your major and minor scales All twenty-four scales should be played

four octaves, hands together in less than five minutes time. Scales are very important. All music is derived from scales. It is definitely worth your time to practice scales.