

eVirtuoso-Online Lessons

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Scales Lesson 1

Introduction to Scales

A **Scale** is a specific set of notes played one at a time built from whole step and half step intervals (if intervals have not been committed to memory, revisit and review the interval's chapter). Scales are found everywhere in music, in vocal melodies, orchestration scores, and all of those unforgettable solos and riffs. Scales are used to add melodic and harmonic interest. This section will demonstrate how to build and use several of the most common scales and modes, followed by an extensive list showing a large selection of scale types to explore and apply to daily practice and song writing. After mastering this chapter on scales, songs will be heard with a new and creative perspective!

Scale Construction

There are many types of scales and the most common scales will be taught. Each scale type will have its own unique quality, which will allow a greater versatility of scale usage in songs and solos. The most common and widely used scale types will be shown with many examples demonstrating how these various scale types are constructed.

Scales can be constructed using several different methods. One method is to use the universal **Major** scale (Do, Re, Mi, Fa, So, La, Ti) to build any other scale. With this method, the seven notes in the major scale are listed as scale steps or degrees (1, 2, 3, 4, 5, 6, 7). These scale steps can be sharped or flatted to reflect the note changes from the major scale to the scale being built. Musicians use step numbers as a placeholder to refer to a position in a scale without having to specify any notes. For example, the 3rd step would refer to the 3rd note in that scale, and a b3rd step would refer to the 3rd note in the scale flatted a half step. Also, these step numbers are sometimes written using roman numerals (I, II, III, IV, V, VI, VII). Another method is to build a scale by modifying a familiar or nearby scale because both scales will share many common notes. This method is much faster than building the scale from scratch. The last approach is to use whole (W) and half step (H) intervals starting from the scale's **Root** note to construct a scale. The root (tonic) note is the first step in a scale.

The first scale to construct is the **Chromatic** scale. This scale is made up of all half step intervals; therefore, the chromatic scale is made up of all 12 notes in music (A, A#/Bb, B, C, C#/Db, D, D#/Eb, E, F, F#/Gb, G, G#/Ab). Remember, from B to C and E to F there are no sharps or flats in between them. Because the chromatic scale uses all 12 notes in music (western music), any scale can be constructed using the chromatic

scale's notes.

The next two scale types will use 7 notes per scale. The first 7 note scale is the **Major** scale. The scale steps (degrees) of a major scale would simply be 1, 2, 3, 4, 5, 6, 7. This scale formula will be used to create many other scale types in this section, and also help construct chords in the chord's lessons. By comparing the notes in C major (C, D, E, F, G, A, B) with the step numbers (1, 2, 3, 4, 5, 6, 7), notice that each note is associated with a scale step (1C, 2D, 3E, 4F, 5G, 6A, 7B). If a G major is constructed, the step number and notes would be 1G, 2A, 3B, 4C, 5D, 6E, and 7F#. So, a different major scale is associated with a new set of notes with each step number. To build a major scale using whole steps and half steps, the combination would be W-W-H-W-W-W-H. If a scale uses W+H or H+W, this indicates a minor third interval because a whole step and half step are combined. This scale is the most important scale and should be practiced until fully memorized. Figure 1 below shows a C major scale.

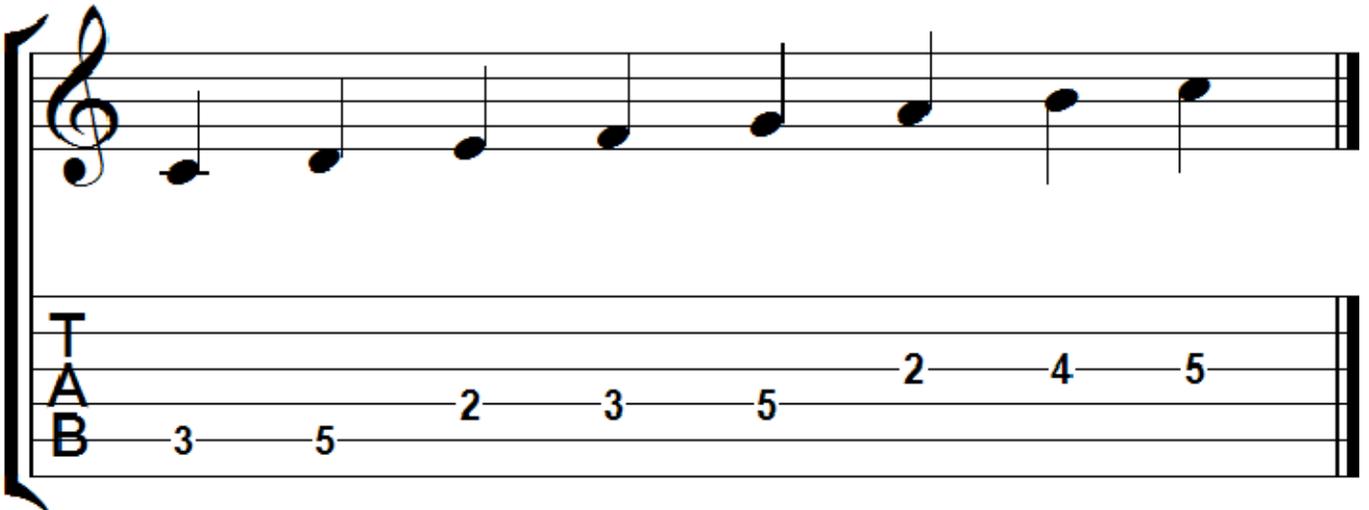


Figure 1 - C Major Scale

The second scale is the **Minor** scale. This scale can be built from the major scale or from the ground up using whole steps and half steps. When using the major scale formula (1, 2, 3, 4, 5, 6, 7), flat the third step, sixth step, and seventh step to construct the minor scale (1, 2, b3, 4, 5, b6, b7). For example, the C minor scale has the notes C, D, Eb, F, G, Ab, and Bb. An alternative to using the major scale, a minor scale can be constructed using whole step and half step intervals. The combination is W-H-W-W-H-W-W. This minor scale should be practiced until fully memorized in every key signature because it will also be used to help build several other scales. Figure 2 below shows the C minor scale.

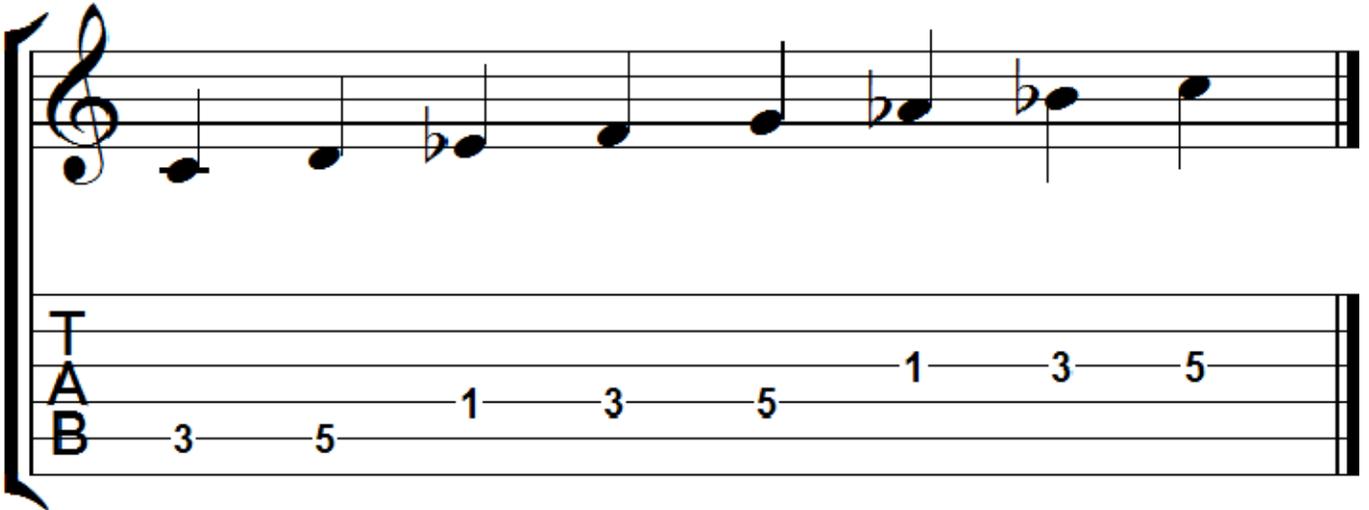


Figure 2 - C Minor Scale

The next two scales will be 5 note **Pentatonic** scales. Pentatonic scales are some of the most popular scales and are used in a wide variety of music genres. The focus will be on two types of pentatonic scales, the major and minor. The **Major Pentatonic** scale can be constructed easily with the major scale by simply removing the fourth and seventh step notes. The formula for the major pentatonic scale is 1, 2, 3, 5, 6. The whole step and half step combination is W-W-H+W-W-W+H. Figure 3 is a C major pentatonic scale.

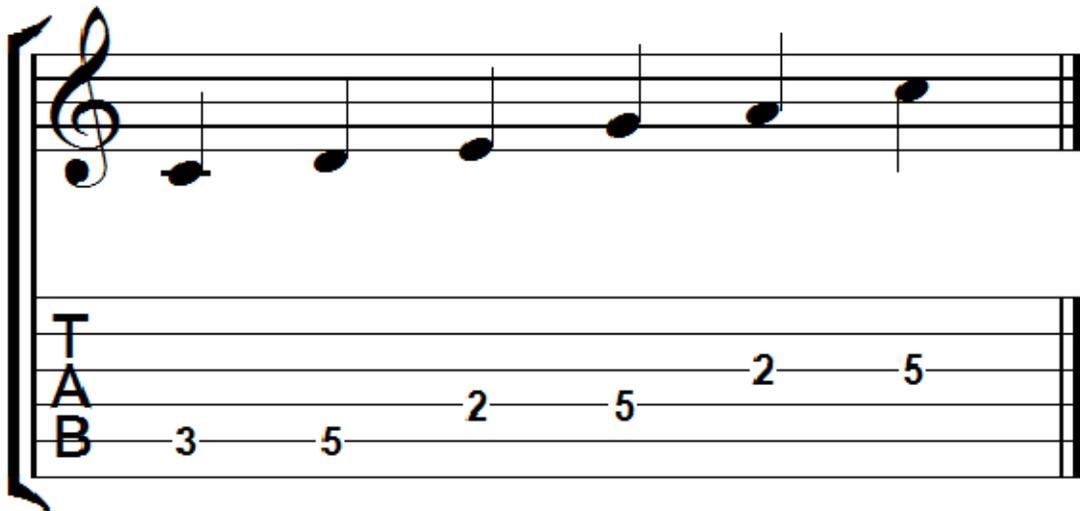


Figure 3 - C Major Pentatonic Scale

The **Minor Pentatonic** scale is constructed from a minor scale without the second and sixth steps. The minor pentatonic scale formula is 1, b3, 4, 5, b7. The whole step and

half step combination is W+H-W-W-H+W-W. Figure 4 below is a C minor pentatonic scale.

The image shows the C minor pentatonic scale in two parts. The top part is a musical staff with a treble clef, showing the notes C4, Bb4, A4, G4, F4, and E4. The bottom part is a guitar TAB staff with the following fret numbers: 3, 6, 3, 5, 3, 5.

Figure 4 - C Minor Pentatonic Scale

The **Dorian** scale is the next scale to learn how to build. This scale has two alterations from the major scale. The third step and the seventh step are both flatted. Therefore, the formula is 1, 2, b3, 4, 5, 6, b7. Another method of creating a dorian scale is by altering the minor scale. Remember, the minor scale's formula is 1, 2, b3, 4, 5, b6, b7. The only difference between the dorian scale and the minor scale is the sixth step note. Simply raise that minor scale's sixth degree note a half step up to get a dorian scale. To construct a dorian scale with whole steps and half steps, use the combination W-H-W-W-W-H-W. The next page is a C dorian scale in Figure 5.

The image shows the C Dorian scale in two parts. The top part is a musical staff with a treble clef, showing the notes C4, D4, Eb4, E4, F4, G4, Ab4, and A4. The bottom part is a guitar TAB staff with the following fret numbers: 3, 5, 1, 3, 5, 2, 3, 5.

Figure 5 - C Dorian Scale

The next scale is the **Phrygian** scale and its formula is 1, b2, b3, 4, 5, b6, b7. This scale can be created from a minor scale by taking the minor scale (1, 2, b3, 4, 5, b6, b7) and then flattening the second step. To build the phrygian scale with whole steps and half steps, the combination is H-W-W-W-H-W-W. Figure 6 is a C phrygian scale example.

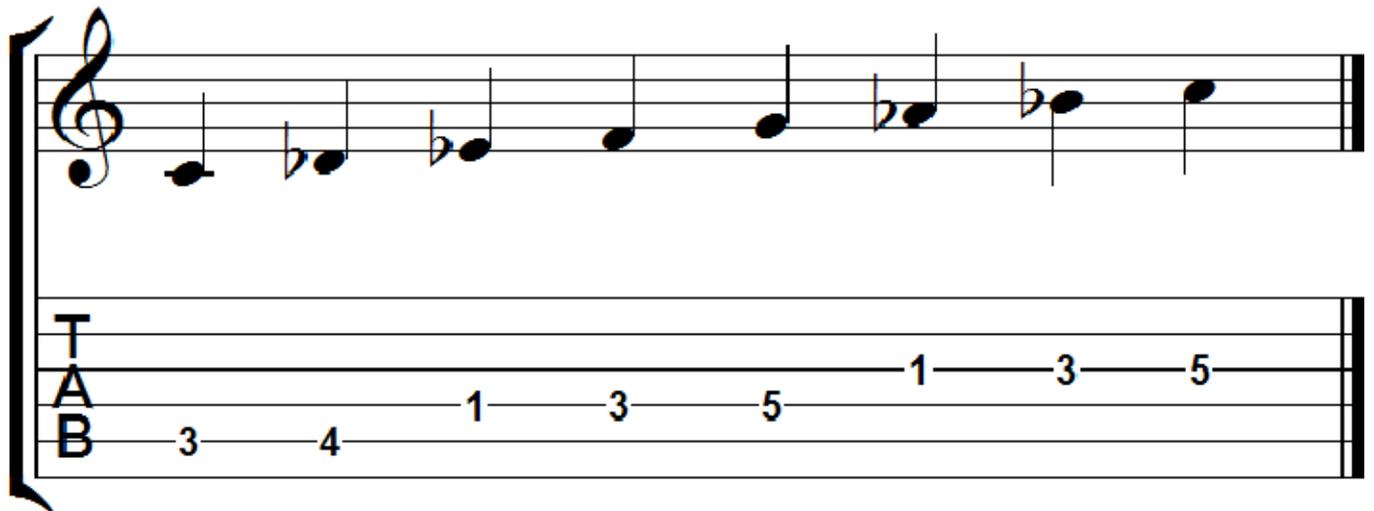


Figure 6 - C Phrygian Scale

The next scale is the **Lydian** scale. This scale is very similar to the major scale. The only difference is the fourth step note must be sharpened (1, 2, 3, #4, 5, 6, 7). For example, to build a C lydian scale, use the notes from the C major scale (C, D, E, F, G, A, B) and raise the fourth step note (C, D, E, F#, G, A, B). So, the difference is between the C major and C lydian scales is the F and F#. To build this scale using whole and half step intervals, use the combination W-W-W-H-W-W-H. Figure 7 below shows a C lydian scale.

The image shows the C Lydian scale on a guitar. The top staff is a treble clef with notes C (open), D (open), E (open), F# (2nd fret), G (open), A (open), and B (open). The bottom staff shows the fretboard with fingerings: T (open), A (open), B (open), 3 (3rd fret), 5 (5th fret), 2 (2nd fret), 4 (4th fret), 5 (5th fret), 2 (2nd fret), 4 (4th fret), and 5 (5th fret).

Figure 7 - C Lydian Scale

Another similar scale to the major scale is the **Mixolydian** scale. With the mixolydian scale, simply flat the seventh step note from the major scale. This will produce the formula 1, 2, 3, 4, 5, 6, b7. So, a C mixolydian scale will have the notes C, D, E, F, G, A, Bb. The whole and half step interval combination is W-W-H-W-W-H-W. Figure 8 demonstrates a C mixolydian scale.

The image shows the C Mixolydian scale on a guitar. The top staff is a treble clef with notes C (open), D (open), E (open), F (open), G (open), A (open), and Bb (flat, 1st fret). The bottom staff shows the fretboard with fingerings: T (open), A (open), B (open), 3 (3rd fret), 5 (5th fret), 2 (2nd fret), 3 (3rd fret), 5 (5th fret), 2 (2nd fret), 3 (3rd fret), and 5 (5th fret).

Figure 8 - C Mixolydian Scale

The last scale is the **Locrian** scale. The locrian scale flats all steps except the first and fourth. So, the formula is 1, b2, b3, 4, b5, b6, b7. Constructing the locrian scale from

the phrygian scale (1, b2, b3, 4, 5, b6, b7), simply add a flat fifth step. The whole step half step combination is H-W-W-H-W-W-W. Figure 9 below shows a C locrian scale.

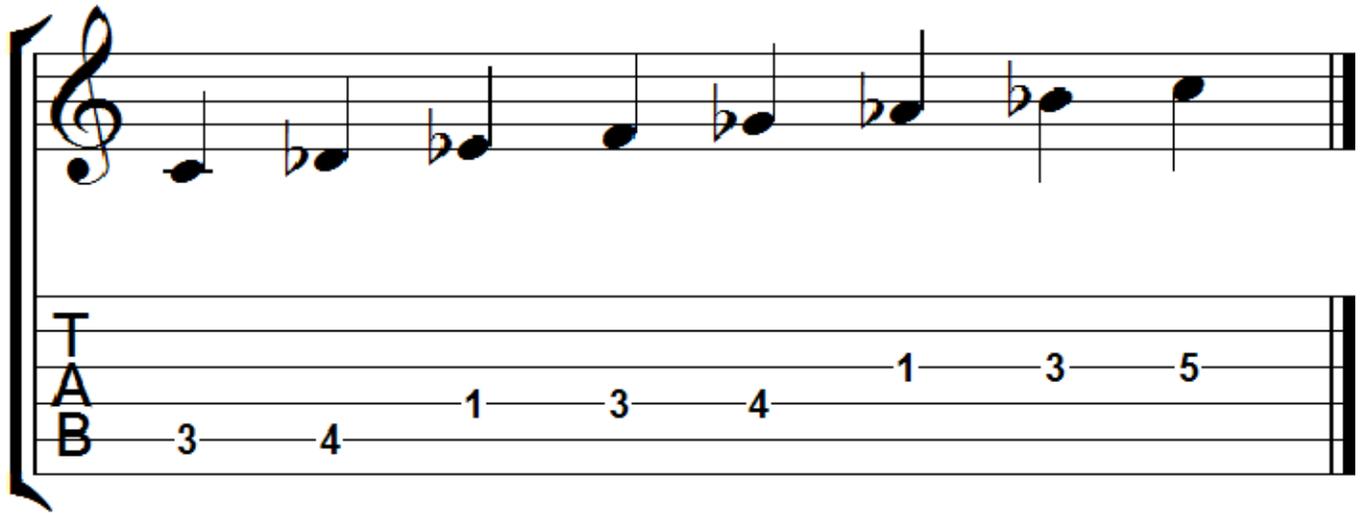


Figure 9 - C Locrian Scale

The following [PDF link, 55 Scale Types](#), shows a long list of many common and exotic scale names, their formula, and notes in the Key of C. This table is a great reference while studying and practicing all these scales. It will take some time before all these scales become memorized. Remember to use similar scales to help remember the more difficult scales by identifying the small differences between the similar scales.

[55 Scale Types](#)