Chapter 1

Guitar Theory in a Nutshell

In This Chapter

- Understanding why guitar theory is important
- Getting to know the fretboard with the help of guitar tabs and neck diagrams
- Surveying the different scales guitarists need to know
- Building chords and chord progressions

So you want to find out more about guitar theory? Well, you've come to the right place. This chapter gives you a quick overview of guitar theory and explains why this information is so useful for guitar players to know. It also introduces you to some of the elements you'll encounter throughout this book, like guitar tabs, neck diagrams, scales, and chords. Be sure to take the quiz at the end of this chapter to see what you already know about guitar theory. Then dive in to the rest of the book to find out what you don't know.

To hear an audio example that explains why guitar theory is so important and demonstrates the sound of some of the material presented throughout this book, listen to Audio Track 1.

Why Learn Guitar Theory?

Music theory is the study of music — how it's written, notated, discussed, thought of, and played. As you may have already guessed, *guitar theory* is the study of how music theory specifically applies to the guitar fretboard. It usually focuses on how the different components of songs, such as scales, chords, and progressions, fit together to create something great. Guitar theory is a topic best suited for players at the intermediate level and above who already know the basics of playing chords and who want to take their knowledge to the next level and learn to navigate the fretboard like the pros.

You can study music from many different angles. For instance, you can study notation, technique, rhythms, scales, chord construction . . . the list goes on and on. While all musical topics have their benefits, scales, chords, and progressions top the list of must-knows for guitarists. After all, every guitarist, beginner to advanced, strums chords, follows progressions, and plays melodies, riffs, solos, and bass lines with scales.

But what's the point of learning all this theory stuff? Can't you just randomly plunk away on your guitar and progress to guitar-hero status with enough practice? Well, I suppose that if you're blessed with enough raw talent, you can probably go pretty far without learning much about music. As for the rest of us, though, we need to put some thought and effort into learning about guitar theory to get what we want out of playing.

If you've ever heard a player who seems to know what's coming next the first time through a song, you've seen what understanding a little theory can do. Knowing how music is composed before you start learning a new song can help you pick up on that song a whole lot quicker. And if you want to improvise, compose, or just understand the music you play better, you need to know the theory behind it. Plus, learning about music can be as enjoyable as playing it.

Navigating the Fretboard

Guitar players navigate the fretboard in a few ways. First, they know the location of some key notes. For example, they often know the notes along the 6th and 5th strings well and use them to track chord shapes and scale patterns. Second, they identify notes on other strings by tracing them to the 6th and 5th strings with simple octave shapes. I cover these notes and octave shapes in detail in Chapter 2; here, I introduce you to the fretboard with neck diagrams and guitar tabs.

Seeing the fretboard as a grid

Remember when you had to match shapes in kindergarten? Now you can put that skill to good use. With the way that guitar strings and frets run perpendicular to each other and the way that they're all numbered, the fretboard is like a grid. Instead of concentrating on the pitches and note names of the scales and chords you play, focus on how they fit into the grid.

Everything you play on your guitar makes a shape or pattern. You get to know important relationships in music by arranging and connecting these shapes and patterns. This grid-like arrangement is what separates the guitar from other instruments such as the piano and is why you don't need to know how to read standard musical notation to develop a good working knowledge of guitar theory. Instead, you focus on the fretboard by using guitar tablature and neck diagrams.

Viewing neck diagrams

Neck diagrams are a great way to map out chord shapes and scale patterns. They allow you to see a bird's-eye view of the guitar neck. Figure 1-1 shows three vertical neck diagram examples. For each diagram, you're looking at the face of the fretboard straight up and down. Here's what you see in each diagram:

- The first diagram shows a sample G major scale pattern with the letters representing the notes.
- The second diagram shows a G major barre chord shape with the numbers representing fingerings.
- The third diagram shows a combination of both, with all the circles representing the scale pattern and the black dots specifically outlining the barre chord. Also, in this example the numbers represent neither notes nor fingerings but rather intervals (which you get to know in Chapter 2).

The numbers to the left of each diagram indicate fret numbers: 3fr. is short for 3rd fret, 5fr. is short for 5th fret, and 7fr. is short for 7th fret.

Figure 1-2 shows the same examples as Figure 1-1 but this time in a horizontal neck diagram format. Here, you're looking at the face of the fretboard longways and upside down. The top line represents the 1st string, and the bottom line represents the 6th string. This is how you see the guitar neck when you hold a guitar to play it and lean over to view the fretboard in your hands. Notice that the fret numbers appear below the horizontal diagrams.

As you see, a lot of information can be displayed in fretboard diagrams from scales to chords, notes to intervals, fingerings to shapes. Diagrams can be displayed vertically or horizontally. You see diagrams used in all these ways throughout the book.

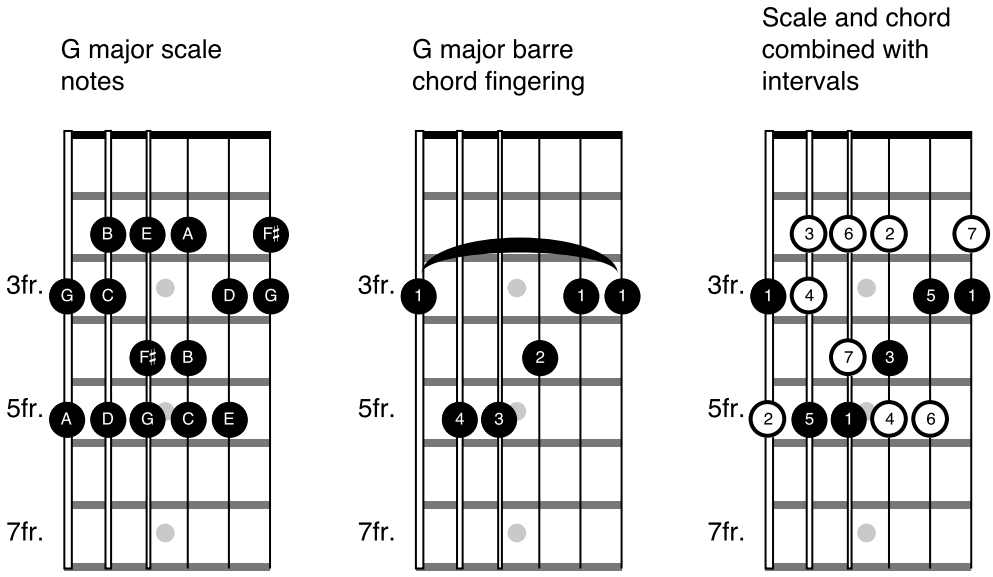
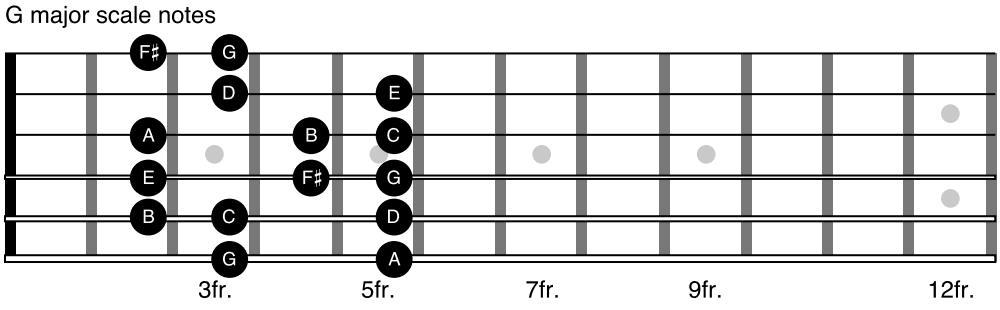
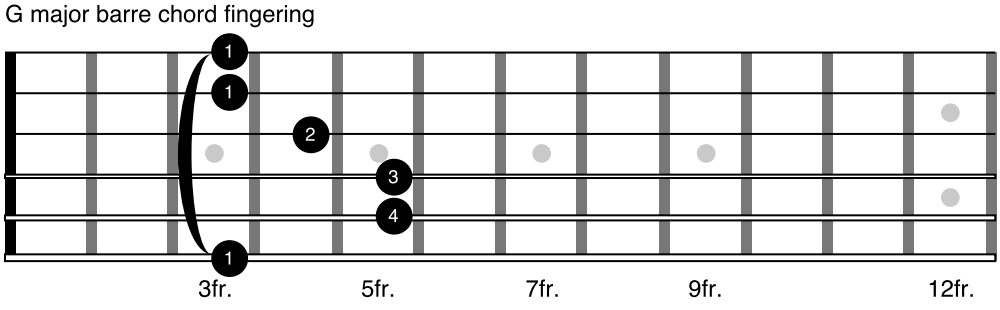


Figure 1-1: Vertical neck diagram examples.

Illustration courtesy of Desi Serna





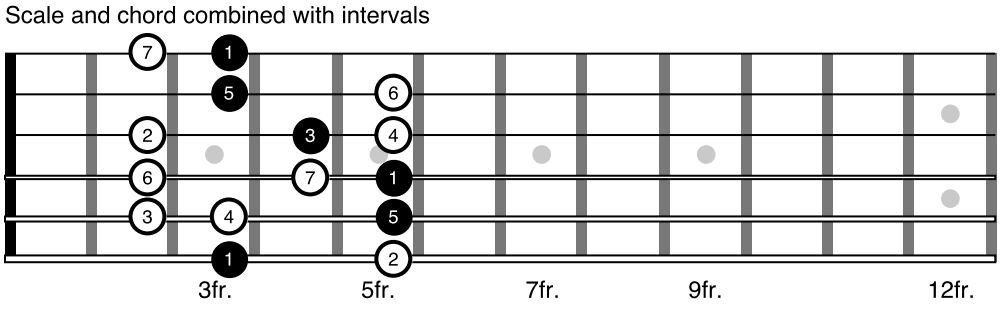


Figure 1-2: Horizontal neck diagram examples.

Illustration courtesy of Desi Serna

Reading guitar tablature

Reading music is a skill that requires a lot of study and practice; not to mention, standard music notation only indicates pitches. Because you can play most pitches in several different positions on the neck, and because many of the presentations in this book focus on specific positions, shapes, and patterns, you want to know exactly where to place your fingers for certain pitches. That's where guitar tabs come in handy. Guitar *tablature,* or *tab* for short, is a number system that indicates exactly where to place your fingers on the fretboard. If you can count the strings and frets on your guitar, then you can instantly read tab. Tab is especially handy for writing out examples that you want to play in series, like a scale pattern or a set of chord changes. I use a neck diagram to illustrate what a scale looks like as a pattern and tab to show you how to ascend and descend through the notes of the scale in the proper order.

In Figure 1-3, you see three chords written in standard musical notation. If you know how to read music, then you can easily find these pitches in the first position on the guitar.

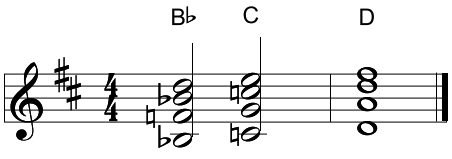


Figure 1-3: Three notes in standard musical notation.

Illustration courtesy of Desi Serna

In Figure 1-4, you see the same three chords in tab. Notice that you can now see two important things that you couldn't see in standard notation:

- These chords aren't all played in the 1st position.
- These chords are all based on the very same shape moved up two frets at a time.

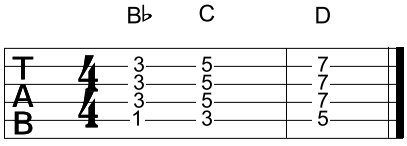


Figure 1-4: Three notes in guitar tab.

Illustration courtesy of Desi Serna

In Figure 1-5, you see the same chords again but this time with a more complex rhythm. In this case, it's useful to have both forms of notation. Most guitar players look at the tab to finger and fret the notes and look at the music to count the rhythms.

Reading notation and counting rhythms are beyond the scope of this book. But in case you already know how to read music a bit, throughout the book, I occasionally combine the two when I think doing so is helpful. If I don't include music and rhythms, though, it means that they're unimportant and you should just focus on the tab.

Figure 1-6, shows an example of *slash notation,* which I use when you need to play chord changes in time but not in any specific position or voicing. Usually slash notation includes only very basic rhythm marks, allowing you to fill the bar any way you see fit (called *comping*). With this type of notation, chord symbols appear above the staff. Some forms of slash notation don't include note stems like you see in my example, only slashes, hence the name.

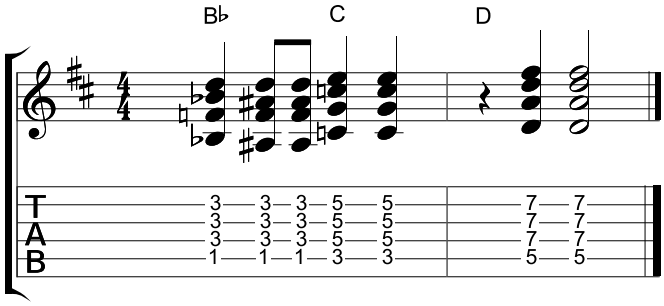


Figure 1-5: A combination of standard musical notation and guitar tab.

Illustration courtesy of Desi Serna

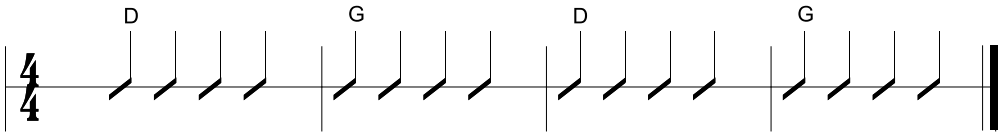


Figure 1-6: Slash notation.

Illustration courtesy of Desi Serna

In Figure 1-7, you see an example of *rhythmic notation,* a method that specifies an exact rhythm in which to play or comp the indicated chords. You don't need to be able to read standard musical notation or rhythmic notations in this book, but I occasionally include them anyway in case you find them helpful.

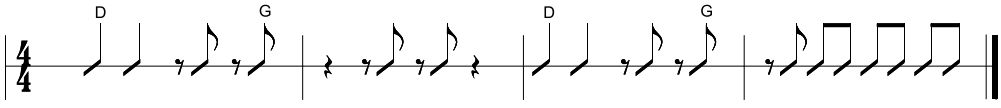


Figure 1-7: Rhythmic notation.

Illustration courtesy of Desi Serna

Playing Scales

A *scale* is a series of notes played one at a time in an ascending or descending fashion. Guitarists use scales to play melodies, riffs, lead guitar solos, and bass lines. Different types of scales make different patterns on the fretboard that you have to learn and practice. In popular music, the two most commonly used types of scales are the pentatonic scale and the major scale. From the major scale come modes. The harmonic minor is one more type of scale that's useful for guitar players to know.

Pentatonic scale

Pentatonic scales are derived from major scales. As the name implies, the *pentatonic* is a five-tone scale. Because the pentatonic has fewer tones than do major scales (which have seven), its patterns are easier to finger and play on the fretboard. The simple box-shape patterns that the pentatonic scale makes on the fretboard are ideal for getting started with riffing and jamming. Plus, many of the most recognizable guitar riffs of all time are based in pentatonic patterns. Popular pentatonic songs include "My Girl" by The Temptations and "Purple Haze" by Jimi Hendrix. For these reasons, guitar players often learn pentatonic scale patterns first. You get started with this scale in Chapter 11.

Major scale

Guitarists use major scales to riff and jam, too. The more melodic a line is, the more likely it is to use a seven-tone *major scale.* Think "Joy to the World," which is simply a descending major scale. You hear something similar in the opening to "Friend of the Devil" by Grateful Dead and the chorus to "Wild World" by Cat Stevens.

In addition to using the major scale to play melody, guitarists use it to measure intervals, build triads and chords, add chord tones and extensions, chart chord progressions, and determine keys. You could say that everything is drawn from the major scale or relates to it in some way. For this reason, I introduce basic major scale patterns as early as Chapter 2 and use them to help explain fretboard navigation, chords, progressions, and keys throughout Parts I, II and III. You work on covering the whole fretboard with major scales for playing riffs and solos in Chapter 12. Major scale patterns also make minor scales and all the modes.

Modes

Perhaps no other musical topic generates more intrigue and confusion than modes. But the concept is so simple that most musicians miss it. Modes are all the different types of scales that the major scale makes when you change the starting point and pitch center in the scale. This includes the minor scale and also all the modal scales that have Greek names such as Dorian, Phrygian, Lydian, and so on. Far from being an advanced or exotic concept, most music is in some type of mode, and properly identifying a song's mode is critical to understanding its composition and construction. You don't learn new scale patterns to play modes. The modal concept is all based on key centers and how major scale patterns are applied. You get to know both aspects of modes in Chapters 7 and 13.

Harmonic minor scale

The *harmonic minor scale* is an altered minor scale that plays a very important role in music. Its primary purpose is to create a dominant 7th chord that pulls to a minor tonic, a very strong harmonic resolution. If you're not sure what I'm talking about, don't worry! I tell you all about dominant function in Chapter 9 and the harmonic minor scale in Chapter 14. In the meantime, listen to "Smooth" by Santana to get in on the action.

Working with Chords

Chords are built from groups of three notes called *triads*. Understanding how to use the major scale to build triads and recognizing the resultant sequence of major and minor chords are two extremely important aspects to music. You work with triads by stacking the major scale in 3rds in Chapter 3. The information in Chapter 3 then becomes the basis for the remaining chapters on chords and progressions.

CAGED chord system

You can play literally thousands of different chord shapes on the fretboard, but most of them can be traced back to just five common open forms. These forms are C, A, G, E, and D. Together they make up what's called the guitar *CAGED chord system,* which includes arpeggio patterns, chord inversions, and various chord voicings. In Chapter 4, you move up basic open position chords and convert them into barre chord shapes. You then break these barre chords into a variety of other forms that are common in popular music.

Adding chord tones and extensions

In addition to using plain major and minor chords, guitarists add other scale tones to triads to create chords like Cmaj7, Dm7, Gsus4, and Fadd9. See Chapter 5 for more details.

Passing chords

Other types of chords, called *passing chords,* don't stem from the major scale at all. They sound very unusual on their own but create nice voice leading when placed in between the right chord changes. You get to know these types of chords in Chapter 10.

Charting chord progressions

You've probably heard musicians calling out numbers on the bandstand, right? "One . . . four . . . five . . . " — well, get ready to find out what those numbers mean. The numbers refer to the scale degrees and chords that the music cycles through. Recognizing chord movement and playing by numbers can help you chart and remember songs better, which, in turn, enables you to apply scales properly, play by ear, and compose your own music.

Musicians often refer to a chord progression by the way it moves numerically through a scale or pattern rather than by its actual pitches. Fortunately, playing chord progressions and playing by numbers go hand in hand, and the whole concept is easier on the guitar than most other instruments. In Chapters 3 and 6, you use major scales to build chords and map out numbered patterns on the neck. These chord patterns are the basis for most chord progressions used in popular music.

Testing Your Guitar Theory Knowledge

Are you ready to get started? Here's a short quiz to help put your musical gears into motion. If you don't know the answers now, don't worry; you will after you work through this book.

1. What's the difference between a major 3rd and a minor 3rd?
2. What do a root, a 3rd, and a 5th make?
3. Which two chord shapes does Rolling Stones guitarist Keith Richards favor?
4. In chords like Gmaj7, Asus4, and Dadd9, what do the numbers mean?
5. If you had to play chords I, IV, and V in the key of G, what chords would you play?
6. In which mode is "Oye Como Va" by Santana?
7. What does it mean to "borrow" a chord?
8. Fill in the blank: V7 leads to _____.
9. I'm thinking of a type of chord that sounds unusable on its own but perfect in between the right chord changes. What is it?
10. What are the two primary types of scale patterns used in popular music?
11. True or False: Modes are scales with their own unique patterns.
12. What do you call a natural minor scale with a raised 7th?
13. In what way do blues players break the rules of traditional harmony?
14. How do you play licks and phrases and develop your own style?

Answers:

1. One fret (Chapter 2) 2. Major triad/chord (Chapter 3) 3. A form and C form (Chapter 4) 4. They're added scale degrees/intervals. (Chapter 5) 5. G, C, and D (Chapter 6) 6. Dorian mode (Chapter 7) 7. To combine chords from two different scales that both center on the same tonic pitch (Chapter 8) 8. I (Chapter 9) 9. Passing, diminished, or augmented chord (Chapter 10) 10. Pentatonic and major (Chapters 11 and 12) 11. False: Modes are based on major scale patterns. (Chapter 13) 12. Harmonic minor scale (Chapter 14) 13. They use minor pentatonic scales over major chords. (Chapter 15) 14. Learn songs! (Chapters 16 and 17)