

## Vertical Harmony Concepts

The purpose of this book is to familiarize the bassist with chord structures and to enhance his ability to solo intelligently and effectively. While many of these concepts can be applied to bass lines and fills, these exercises will focus more on soloing.

The words "horn-like" are often used to describe solos that are fluid and graceful. To achieve this type of description, one needs to listen to, practice, transcribe and ultimately understand what a soloist is playing.

The first step to understanding is knowing chord structures. As bassists, we typically aren't called upon to play chords. So why even know them? That is the question I get from many of my beginning students. Or, "just tell me the root, I'll figure it out from there" which usually means "I'll plod along on the root." We bassists are not only responsible for holding things together rhythmically; we are also the keepers of the harmony. If you don't understand how chords are constructed, how are you going to hold things together? Let alone solo? Playing root notes will only get you so far. Fortunately, knowing what it takes to construct a chord is easy, and by knowing the construction (quality), you should never play a "wrong" note.

Intervals are what make up any type of musical structure. Everything you play will involve intervals. An understanding of intervals is essential for understanding music. An interval is the distance between two notes. In Western music there are twelve intervals. Each interval has a numerical identity. A chromatic scale is constructed of all twelve intervals played consecutively in half-steps. From the root they are:

***1 half step = minor 2nd (  $\flat 2$  )***

***2 half steps = major 2nd (2)***

***3 half steps = minor 3rd (  $\flat 3$  ) or augmented 2nd (#2)***

***4 half steps = major 3rd (3) or diminished 4th (  $\flat 4$  )***

***5 half steps = perfect 4th (4)***

***6 half steps = augmented 4th (#4) or diminished 5th (  $\flat 5$  )***

***7 half steps = perfect 5th (5)***

***8 half steps = minor 6th (  $\flat 6$  ) or augmented 5th (#5)***

***9 half steps = major 6th (6) or diminished 7th (  $\flat\flat 7$  )***

***10 half steps = minor 7th (  $\flat 7$  )***

***11 half steps = major 7th (7)***

***12 half steps = octave or perfect unison***

If you purchased my 1st book, the above information is a review. If you haven't purchased my 1st book, you will be hopelessly lost in bass purgatory and be forced to listen to a beginning guitarist play the blues scale over every known song in existence. Ok, seriously, my 1st book will really help you get your intervals together in a diatonic fashion and it makes a good companion to this one. And since this isn't a scale book, how else are you going to learn how to play the blues scale so you can be just as annoying as the aforementioned guitarist? I stated that this isn't a scale book, so now it is time to look at:

# The Major Scale!

(But I thought he said it wasn't a scale book?)

And it isn't. Our focus will be on chords, but, the major scale is going to be used as a reference for constructing chords and as a visual guide for intervals. For those of you who already know this information, consider it a refresher course.

Most tunes are based out of the major scale, so in order to build chords; we will start at the source.

C Major Scale  
ex.1

1 2 3 4 5 6 7 1(8)

BT 4 2-3 5 2-4-5  
RA 4 3-5  
GB 4 3-5

1 2 3 4 5 6 7 1(8)

The numbers under the notes represent the interval number. Notice that there are no accidentals. That is due to the intervals all being major intervals, hence, the MAJOR scale. If you take every other note (1-3-5-7) and stack them on top of each other you have just made a chord.

ex.2

1 3 5 7 =  $\begin{matrix} 7 \\ 5 \\ 3 \\ 1 \end{matrix}$

The interval numbers mean: 1= root note, 3=major 3rd, 5=perfect 5th, 7=major 7th. By knowing the intervals and their number you can easily construct chords. The same thing can be done with the other numbers, 2-4-6-8, 3-5-7, etc...however, that is looking at the intervals in relation to the key or their TONALITY.

This book will focus on MODALITY or how a chords intervals relate to its own root. Since we are looking at the modality of each chord, each root number will be a 1. Using the scale (ex.1) example, a chord starting on the 2 note (D), would be numerically spelled like this:

***1- $\flat$ 3-5- $\flat$ 7 instead of 2-4-6-8***

By thinking of the numbers, you will know that it is a minor type chord, and if you follow this book in order, hopefully you will be able to HEAR the difference of chord qualities by the end of the next section. This isn't a magic "perfect pitch" lesson, but, if you practice things in order, your relative pitch should improve dramatically.

If you are unfamiliar with this terminology, I suggest that you get together with a good instructor and go through this together. It is very important to understand the number system. Your understanding of the rest of this book will depend on it. While things will start out on a "basic" level, future sections will be very advanced. I recommend that you don't skip over the fundamentals and head straight to the advanced section.

## Chords

At their most basic, chords are a set of notes stacked in 3rds and played simultaneously. Usually a chordal instrument like guitar or piano is responsible for playing chords. As a rule, bassists do not play stacked (block) chords. But then again, neither does a horn player, but I guarantee that the horn player knows what the chords are in a song. Bass players should be no different. Since we are not playing block chords, then how do we outline the harmony? The answer is simple. We play the chord one note at a time. This is called an arpeggio. Arpeggios will be the foundation for every exercise in this book. This first exercise section will feature triads. Triads are basic, 3-note chords. There are 4 different types or qualities of triads. They are:

ex.3 1. Major triad      2. Minor triad      3. Diminished triad      4. Augmented triad

By interval number they are:

**Major triad 1-3-5 or a major 3rd and a minor 3rd**

**Minor triad 1- $\flat$ 3-5 or a minor 3rd and a major 3rd**

**Diminished triad 1- $\flat$ 3- $\flat$ 5 or a minor 3rd and a minor 3rd**

**Augmented triad 1-3 $\sharp$ 5 or a major 3rd and a major 3rd**

All triads contain a root, some type of 3rd, and some type of 5th. The root tells us the letter name of the chord. The 3rd tells us what the quality is (major or minor), and since the major and minor triads both contain a perfect 5th, the only time a 5th is used to describe a triad is if it is diminished (lowered) or augmented (raised). Now pick up your bass and play them.

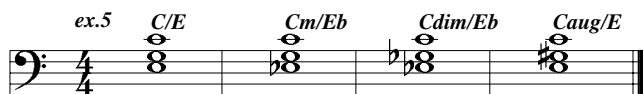
ex.4 1. C major triad      2. C minor triad      3. C diminished triad      4. C augmented triad

Listen carefully to how each triad sounds. Hear the difference? If not, play them again and again until you can really HEAR the difference. It wouldn't be a bad idea to play them on a keyboard as arpeggios and as block chords as well. If you don't have a piano or keyboard or even a guitar, find someone that does and have them play them for you. The root notes from here on out will all be the same, a C. The reason for that is: one, we are studying modality, two, it will let you compare and contrast the different qualities from the same root note. Very good for ear training. Now go back and play example 4 several more times and really concentrate on the quality of each triad. Practice each one several times before moving onto the next one. Once you feel that you have them under your fingers and in your ear it is time to move onto:

## Inversions

A triad that has a chord tone other than the root on the bottom or lowest note is an inversion. An inversion contains all of the same notes of the triad, just in a different order. There are 2 inversions of a triad. The first one ironically, is called first inversion and it looks like this:

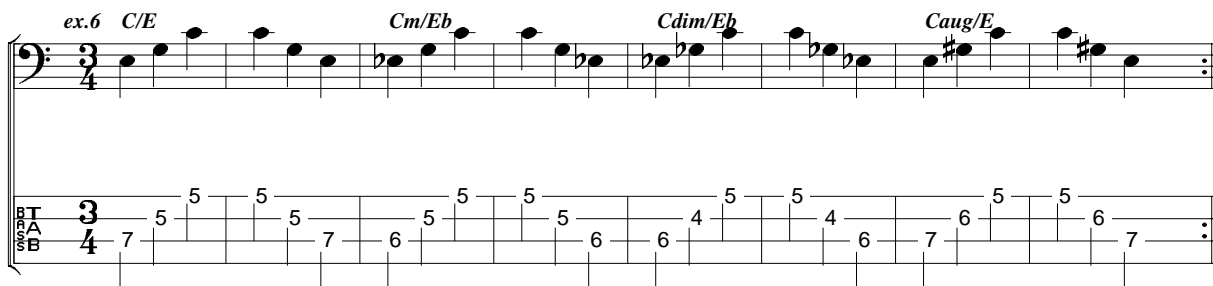
ex.5



*C/E*      *Cm/Eb*      *Cdim/Eb*      *Caug/E*

The funny little symbols above the notes are chord symbols. A slash (/) is used to indicate an inversion. Do not confuse it with a straight line (--) as that is used to indicate a poly-chord, something that will not be discussed here in detail. Play the inversions (ex.5) on the piano to get them in your head. Then play the arpeggios on your bass.

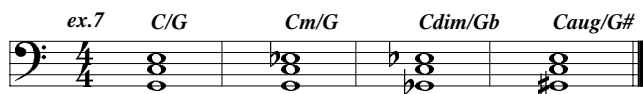
ex.6



*C/E*      *Cm/Eb*      *Cdim/Eb*      *Caug/E*

When the 5th is the lowest note, it is in 2nd inversion. Bassists are expected to play the bottom or bass note of the inversion while playing bass lines. When soloing, any of the chord tones may be played. Of course a bass line can be played using all of the chord tones as well, but usually the composer has a specific reason for the inversion and that particular note being in the bass. Here is what 2nd inversion looks like:

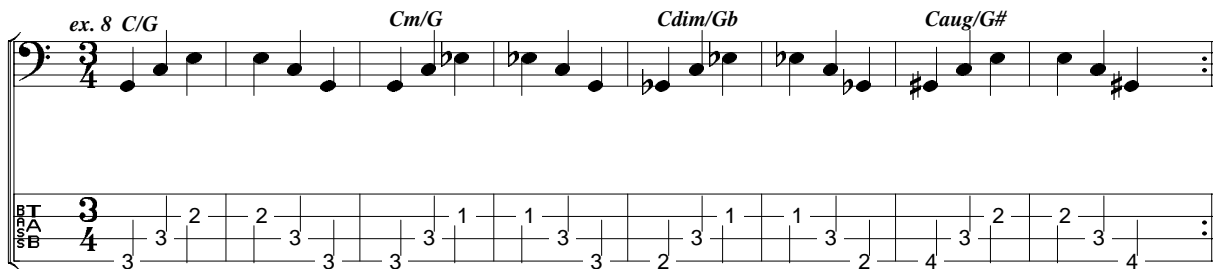
ex.7



*C/G*      *Cm/G*      *Cdim/Gb*      *Caug/G#*

Notice that the chord symbol has changed to represent the inversion. Once again play the inversions (ex. 7) on the piano. If you are having troubles hearing the difference of this inversion, move it up an octave and see if that helps. When you are done at the piano it is time to play the arpeggios on your bass.

ex. 8



*C/G*      *Cm/G*      *Cdim/Gb*      *Caug/G#*

When you feel comfortable playing and hearing the inversions, move on to the next section.

## Triad Exercises approach notes

This next section is intended to get your ears and hands warmed up. You will be utilizing all that you have learned previously as well as some new concepts. Triads are used in all types of soloing situations, and even though they are a basic structure, they can be used in highly advanced playing. In order to keep triads from sounding stale and over used, previous generations of improvising masters came up with a way to "dress" up the triads and other chords while playing melodies and soloing. The most common of these methods is using approach notes. Approach notes approach the chord tone in a variety of ways. The exercises will focus on what I consider the main (but not only) way to approach chords.

The 1st one is by approaching each chord tone from a half step below. These notes can be chromatic or diatonic (belonging to the key). It could be a passing tone or in some instances, like 7th chords (more on them later), a chord tone. A normal person's ear will subconsciously hear the resolution of approach notes, so even the chromatic ones will sound perfectly fine. The other nice thing about approach notes for bassist is that it makes playing arpeggios easier. Due to the physical nature of the bass, and its tuning, arpeggios are not the easiest thing to play. Approach notes help to make the angular nature of arpeggios more linear, thus easier to play. For the examples below I will only use the major triad, but, the concept can be applied to the other type of chords as well. For illustrations sake, there will be no time signature. The eighth note (s) is the approach note, and the half note is a chord tone.

ex. 9 C 1 3 5

BT  
RT  
A  
S  
B

Play this several time through and pluck/pick each note as well as play them legato. For those that don't know, playing legato means using hammer ons and pull-offs. Playing legato makes a line smoother and is part of blowing that "horn-like" solo.

The second type of approach is diatonically from above. This usually is a whole step. Chromatics from above are not very common, unless they are also diatonic. Since we are looking at the modality of each chord, I'll let you figure out the key or scale. Bet you wish you had my other book now don't you?

ex. 10 C 1 3 5

BT  
RT  
A  
S  
B

The third type of approach is a half step from below and diatonic from above, or vice versa. I will show both in the examples below, but in the exercises only the half step from below and diatonic from above will be noted. Be sure to practice both ways. Write the diatonic from above and half step below out if need be. This type of active participation will help you retain more and help with your musical development.

ex. 11 C 1 3 5

BT  
RA  
SA  
SB

7 10 8 5

ex. 12 C 1 3 5

BT  
RA  
SA  
SB

10 7 8 5

Approach number four involves two notes from above the chord tone. One of them will be chromatic. This type of approach works best when the original diatonic approach is a whole step. The major and augmented triads require a different treatment on the 3rd chord tone. If you go clear back to the major scale (ex. 1), you will see that there is a half step between the 3rd and 4th interval. In order for there to be a chromatic approach, the 4th has to be raised. In some situations, the raised 4th is actually the diatonic note, in other situations it is a chromatic note. Both situations work fine for this application.

ex. 13 C 1 3 5

BT  
RA  
SA  
SB

10 9 8 5

The final approach method is a 3 note approach or double chromatic combined approach. The approaches will be from a half step below and the double chromatic from the last example. They may also be reversed and be double chromatic from above and a half step from below. The same rule applies to the triads with a major 3rd as it did in the double chromatic approach.

ex. 14 C 1 3 5

BT  
TAB  
G A B

ex. 15 C 1 3 5

BT  
TAB  
G A B

The following exercises will cover all triad types and all approach note methods. They are meant to be played over and over. While I'll admit that they are not very exciting, it is crucial that they be followed in order. Play them slow and focus on the chord tones. I can't stress enough the importance of being able to hear the chord tones.

The tab is only a guide, there is no special way to finger the examples, but do try to play them in an efficient manner. Also note that for the most part all of the exercises ascend. This is where your active participation comes in...play them descending as well. Write them out if need be. Even though the tab is for 4-string, the exercises are for any number of strings.