CHORD CONSTRUCTION

While the theory here begins from the beginning, there are many insights which may be useful to even fairly advanced players. Subsequent theory lessons will build upon the theoretical material so even those impatient to learn about complicated chords or reharmonization are advised to not skip this material.

The only prerequisite is that you know the names of the notes on your instrument, i.e., you should be able to find a C, C# (Db), D,

The keyboard is the easiest instrument to visualize harmony and other music theory on. I recommend that even guitar players get a basic keyboard to help in understanding theory (nowadays you can buy simple ones for next to nothing). It's very rare for a jazz musician, even a drummer, to not have some very basic keyboard skills.

The most important first step is to understand major scales. These are the ones we learn to sing as children: Do Re Mi Fa So La Ti Do. These form the basis of western music.

C major is the easiest scale to learn since the names of its notes are just letters in the alphabet and there are no sharps or flats. On the keyboard these are just the white notes.

C major scale is: C D E F G A B C

It is frequently convenient to talk about the notes in a major scale by number. Thus in a C major scale: 1=C, 2=D, 3=E, 4=F, 5=G, 6=A, 7=B. In some instances, which we shall not go into just yet, we can keep counting, even though the notes start to repeat themselves and say 8=C, 9=D, 10=E,11= F, 12=G, 13=A.
There is no need to ever count beyond 13.

All notes can have several names. For example, C# and Db are the same physical notes. Our choice of which one to use is based on the context. Some more tricky examples are that B and Cb are the same note. Even trickier examples are ones like, G and F## (Fx) are same, as are F and Gbb. While this may seem to be overly complicating things, we shall see later that it actually makes things easier.

I'm assuming that the basic sound of a major scale is already in your ears. Make sure you can sing a major scale up and down. You can practice playing a major scale on your instrument and then listen to it and sing it back.

With this small amount of information, we'll learn how to construct even the most complicated chords. By knowing our major scales, we can construct all these chords. We explain what notes make up the chord and how the chord is usually named in a sheet of music. If you can be at a keyboard, it's a good idea to play these chords and listen to them so you can begin to get the sounds clearly in your ear.

When we name chords, we always begin with the root. Thus the root of a C chord is C. The root of a Db7 chord is Db. The root of an Eb7(#11) chord is Eb. We shall see that if we know the major scale beginning on the root of a chord, that we can construct even the most complex chords fairly easily.

Three note chords (triads)

The **major** chord is formed from the 1, 3, 5 notes of a major scale. C major chord has notes C, E, and G and is written as C.

A **minor** chord is just a major chord with a b3, so its notes are 1, b3 and 5. C minor has notes C, Eb, and G and is written as Cmi, or Cm, or sometimes C- .

A **diminished** chord is just a major chord with b3 and b5, so its notes are 1, b3, b5. C diminished has notes Eb and Gb and is written as C dim or C^{o}.

An **augmented** chord is just a major chord with a #5, so its notes are 1, 3, and #5. C augmented has notes C, E, and G# and is written as C aug or C+.

A **suspended** (sus) chord is a major chord with the 3 replaced with the 4^{th} note of the major scale, so its notes are 1, 4, and 5. C sus has notes C, F, and G and is written C sus.

Four note chords

A **major sixth** chord is just a major chord with the 6^{th} note of the major scale added to it, so its notes are 1, 3, 5, and 6. C major 6 has notes C, E, G & A and is written C6.

A **major seventh** chord is just a major chord with the 7th note of the major scale added to it, so its notes are 1, 3, 5, and 7. C major 7 has notes C, E, G, and B and is written Cmaj7 or Cma7 or CM7 or CΔ7.

A (dominant) **seventh** chord is just a major chord with the b7 note of a major scale added to it, so its notes are 1, 3, 5, and b7. C seventh chord has notes C, E, G, and Bb and is written C7.

A **minor sixth** chord is just a minor chord with the 6th note of the major scale added to it, so it's notes are 1, b3, 5 and 6. C minor sixth has notes C, Eb, G and A and is written Cmi6 or Cm6 or sometimes C-6.

A **minor major seventh** chord is just a minor chord with the 7th note of the major scale added to it, so it's notes are 1, b3, 5 and 7. C minor major seventh has notes C, Eb, G and B and is spelled Cmi(maj7) or Cm(ma7) or CmM7 or sometimes C-(natural)7.

A **minor seventh** chord is just a minor chord with the b7th note of the major scale added to it, so its notes are 1, b3, 5, and b7. C minor seventh has notes C, Eb, G, and Bb and is spelled Cmi7 or Cm7 or sometimes C-7.

A **minor seventh flat 5** chord is a minor seventh chord with a b5, so it's notes are 1, b3, b5, and b7. C minor seventh flat five has notes C, Eb, Gb, and Bb and is spelled Cmi7b5 or Cm7b5.

A **diminished seventh** chord is a little tricky. It is a diminished chord with a bb7 so its notes are 1, b3, b5 and bb7. A bb7 is the same as 6 of the major scale so I prefer to think of it as 1, b3, b5 and 6. C diminished seventh chord has notes C, Eb, Gb, Bbb (A) and is spelled C dim7 or C^{o}7.

There are several further variations on the dominant seventh chord; these are the seventh sus4, seventh flat 5 and augmented (seventh #5).

A **seventh sus 4** chord is a seventh chord with a 4 instead of a 3, so its notes are 1, 4, 5, b7.

A **seventh flat 5** chord is just a seventh chord with a b5, so its notes are 1 ,3, b5, and b7. A C seventh flat five chord has notes C, E, Gb, Bb and is spelled C7b5.

An **augmented seventh chord** is a seventh chord with a #5, so its notes are 1,3,#5, and b7. A C augmented seventh chord has notes C, E, G# and Bb and is spelled C aug 7 or C+7.

Tensions

It is possible to add additional notes to these chords. These notes are named as if they are in the octave above the first seven notes of the major scale. These additional notes are 9, 11, and 13 as well as the modifications of these numbers, as b9, #9, #11 and b13.
For a chord with root, C, b9=Db, 9=D, #9=D#, 11=F, #11=F#, b13=Ab and 13=A.
So a C7b9#1113 chord has a C7 (C, E, G, Bb) plus Db, F# and A.

Learning this material

The first thing to do is to learn the notes in all of the major scales.

C major - C D E F G A B C
G major - G A B C D E F# G
D major - D E F# G A B C# D
A major - A B C# D E F# G# A
E major - E F# G# A B C# D# E
B major - B C# D# E F# G# A# B
F# major - F# G# A# B C# D# E# F#
C# major - C# D# E# F# G# A# B# C#
F major - F G A Bb C D E F
Bb major - Bb C D Eb F G A Bb
Eb major - Eb F G Ab Bb C D Eb
Ab major - Ab Bb C Db Eb F G Ab
Db major - Db Eb F Gb Ab Bb C Db
Gb major - Gb Ab Bb Cb Db Eb F Gb
Cb major - Cb Db Eb Fb Gb Ab Bb Cb

Write them all out on paper from memory and say them in your head until you know them pretty well. Practice knowing the notes of each scale by number. For example, in the above order, what is the 2nd note of each scale? The 3rd Note? … the 7th note? 9th note? 11th note? 13th note?

As you learn each major scale, practice figuring out all the chords with root that note, i.e. when you learn the D major scale, spell D , Dmin, Ddim, D aug, Dsus, Dma7, D7, Dmi(maj7), Dmi7, Dim7 b5, D7b5, D7#5, D7sus4.