

Music Theory 101

We've all been there. It fills us with fear and stops us in our tracks. It makes us wonder why we ever got into this job in the first place. It is a question that we dread hearing. "How do you play a Cdim7?"

Music theory seems to be one area that many musicians are not comfortable with. Especially for volunteers, it can be a daunting subject. Without having any formal musical training except for a few guitar or piano lessons, many worship leaders and musicians are at a loss when faced with questions of how to play certain chords, what key the music is in and how fast a song is supposed to go.

Why bother?

You know how to play the basic chords in every key and pretty much understand what those fractions at the beginning of a line of music mean, so why should you make an effort to learn and understand music theory?

To help your volunteers. Many volunteer musicians don't have any formal musical training. They need help knowing that 6/8 is different than 3/4. They need help knowing how to play Asus or G5. They need to be comfortable admitting that they don't know these things and also need to be able to be confident in asking someone who does.

To help chart music. While it's true that you might not be making your own arrangements of songs every week (or every month for that matter), you will be faced with charting music eventually. If you belong to a church that uses hymns in worship you will quickly realize that hymns straight out of the hymnal do not include the guitar chords. They also are built on chords that shift on every beat which make them hard for inexperienced guitar players to play right out of the gate. It's your job to be able to pick out and label the chords in the hymn and determine which ones are the most important to keep in the hymn's structure and which ones can be left out for simplification. By understanding music theory, you will know that just because there's an F# in the bass doesn't mean the chord is an F# chord. It could be a D chord with an F# on the bottom.

To become more confident at leading. With a great grasp of music theory your ear will start to develop a sense of when certain chords should be played at certain times. You will know how to transpose a song quickly if you're leading in a small group and you realize the music is too high or too low. You will know how to create chord progressions on the fly that you can use as a music bed under a prayer time or an encouragement to the congregation. You will know how to extend the end of a song without using predictable repetition.

There are many other advantages to understanding music theory.

Notes: 8 note scale, major and minor

A major scale will have eight notes, in the key of C they are:

C major:

C	D	E	F	G	A	B	C
I	II	III	IV	V	VI	VII	VIII

And a minor scale will have eight notes, although the 3rd and sixth are flattened to make it minor. Again, in C:

C Minor

C	D	E ^b	F	G	A ^b	B	C
I	II	III	IV	V	VI	VII	VIII

I have numbered the notes with Roman Numerals to make the next section (chords) less confusing. Just as there are 8 notes in a scale, in each key there will be the related chords as well. The first note/chord is known as the Root, as this should generally where you will always come back to in a song. Every chord has a harmonic name, we won't look at all of them now apart from chord IV and V, which are known as the sub-dominant and dominant.

Why is this important? Well, it's the structure of most songs that we know and use. The *12 bar blues* is based on these chords (I, I, IV, I, V, IV, I), they just work very well together. Look at some of our songs, and work out the chord structure. You will see that most of them follow this simple structure with some embellishment...and if writers try to use something different, it often just feels unsettling. "*Over All the Earth*": I, V, IV, V; "*Beautiful One*": IV, V, IV, V, IV, V, I; etc!

Chords: Triads, major, minor, 7ths, sus, 6, 2, 5

So we know that there are 8 notes in major and minor scales. These 8 notes now have relevance to how chords are constructed. If we take the simplest sort of chord, a major triad, it has three notes (hence "triad!!"). In the key of C, we have the 1st, 3rd and 5th notes of the scale. The **root** note is in **bold**:

C Major

C	E	G
1	3	5

For a minor chord, we have the same three notes, 1st, 3rd and 5th, but the 3rd is flattened (to make it minor, the "sad" chord):

C Minor (Cm)

C	E ^b	G
1	3	5

So far, so simple?! Now that we understand a basic chord, we can move onto the next shape, the 7th. The seventh chord is created by taking your triad, and adding...the seventh note of the scale!!! Now there are actually 3 main sorts of 7th chord. In our charts, when we write a seventh chord we mean that the seventh is actually a flattened seventh (this comes from jazz and popular music), so a C7 would be played with these notes:

C 7th (C7)

C	E	G	B \flat
1	3	5	7

Then, we have our Minor 7th chord. In classical music, a minor seventh would be as our previous chord (the seventh chord with a flattened 7th). But, for all we do (and again the “Jazz” standard), a minor seventh chord is a minor triad with a flattened 7th, again, in C:

C Minor 7 (Cm7)

C	E \flat	G	B \flat
1	3	5	7

And then the final seventh that we will look at, the major seventh. This is the pretty chord, summery and cheerful. A major chord with a major 7th note on the top. In C:

C Major 7 (Cmaj7)

C	E	G	B
1	3	5	7

So now that we have a basic understanding of chord structure, it should then start to make sense with some of the additional chords that we may encounter on our charts. So a sus4 chord will include the 4th note of the scale, the 6th the 6th and so on. Some examples below (all still in C)

<u>C suspended (Csus4)</u>	<u>C6</u>	<u>C2</u>	<u>C5</u>								
C	F	G	C	E	G	A	C	D	G	C	G
1	4	5	1	3	5	6	1	2	5	1	5

You may also hear about “Inversions”, this is when chords are arranged in a different order (same notes!). So a regular C chord would have C in the bass, the Root note. But it could also have an E or a G in the bass, as these are elements of the chord. So these are known as inversions, we get Root, 1st Inversion and 2nd Inversion. For our charts, most commonly we will write an “over” chord, so C over E, or C/E.

Transposition.

So if we know that our chords are numbered 1 – 8, we can easily use this to transpose to other keys....especially useful for guitarists and capos. You need to know the key and root note.

Original Key of F:

F	G	A	Bb	C	D	E	F
I	II	III	IV	V	VI	VII	VIII

If we move the Capo to fret 1 (up one semitone), still key of F (you can line up the chords on the top row)

E	F#	G#	A	B	C#	D#	E
I	II	III	IV	V	VI	VII	VIII

So when we play an **E chord on our guitar (our new Root)**, we will hear an F. So far, so good. But then if we want to play a G, we'll have to fret an extremely uncomfortable F# chord (not nice for guitarists). So let's try a different position.

Capo to fret 3 (up three semitones), key of D

D	E	F	G	A	B	C	D
I	II	III	IV	V	VI	VII	VIII

We are now taking **the chord of D as our new Root**, with the capo on the third fret. We can straight away see that there are some easier chords here (no sharps!!!), and if we look at our common chords (I, IV, V) they are guitar friendly D, G and A. But we can take this further:

Capo to fret 5 (up five semitones), key of C

C	D	E	F	G	A	B	C
I	II	III	IV	V	VI	VII	VIII

So the capo is on the 5th fret now, and we are taking **C as our Root**. Again, this is going to be simpler than playing in F without a Capo.

One of the reasons we distinguish the chords as Roman Numerals is to separate them from the chords outlined above...avoiding confusion. But in addition, once we are comfortable identifying our chords as numbers, it makes it even easier to transpose. Indeed, there is a whole chart system called the Nashville Number System that only uses these numbers, the idea being that as long as you've been given the Root key, you can then follow the chart in any key. So, for example, "*Over all the Earth*", key of C:

C G F G C
Over all the earth, You reign on high,

Would become this in the Nashville Number System:

I V IV V I
Over all the earth, You reign on high,

Once you start to get a grasp of chord movement like this, it becomes easier to transpose and follow a song, as they will commonly follow similar patterns.