

# Basic Chord Theory and the Nashville Numbering System

In this lesson you will get an understanding of basic chord theory, the Nashville Numbering system and practical applications for using the system to enable you to expand your ability to play songs in any key. Let's get started.

## Part I- Intervals

What is an interval- An interval is the amount of space between any two given notes. We will be dealing mostly with half steps and whole steps. Look at the chart below

C C# D D# E F F# G G# A A# B C

That is what is called a chromatic scale. A chromatic scale is what you get when you play every white and black note on a piano in sequence. You play a chromatic scale on guitar by playing every fret on a given string up the neck.

### Half Steps and Whole Steps

A half step is the interval between one given note and the note immediately next to it. A whole step is the interval you get when you skip one note in between. We use an (H) to denote Half step and a (W) to denote whole step

Ex. 1. Write whether each interval is a whole step (W) or half step (H)

1. C-C#   (H)
2. D-E
3. A-A#
4. F-G
5. E-F

Ex. 2. I'll give you the first note and the interval. You fill in the correct second note.

1. C (H)   C#
2. D (W)
3. C# (H)
4. A (W)
5. E (W)

## Part II - Scales

A scale is made up of a combination of intervals sequentially ascending or descending. For our purpose we will be looking at Major scales. Each scale will include one of every letter (A-G) of the musical alphabet.

Major Scales- Major scales pattern of steps is W W H W W W H

To figure out the scale start on any given note. Lets take C for an example. Then just move up the required step to get the next note. Then proceed from there till the end.

**C** (W) **D** (W) **E** (H) **F** (W) **G** (W) **A** (W) **B** (H) **C**

Ex. 3. Try creating a scale in the following Keys. The first letter and some of the others have been filled in to help you.

D (W) \_\_\_\_\_ (W) \_\_\_\_\_ (H) \_\_\_\_\_ (W) \_\_\_\_\_ (W) \_\_\_\_\_ (W) \_\_\_\_\_ (H) \_\_\_\_\_

G (W) \_\_\_\_\_ (W) \_\_\_\_\_ (H) \_\_\_\_\_ (W) \_\_\_\_\_ (W) \_\_\_\_\_ (W) \_\_\_\_\_ (H) \_\_\_\_\_

A (W) \_\_\_\_\_ (W) \_\_\_\_\_ (H) \_\_\_\_\_ (W) \_\_\_\_\_ (W) \_\_\_\_\_ (W) \_\_\_\_\_ (H) \_\_\_\_\_

E (W) \_\_\_\_\_ (W) \_\_\_\_\_ (H) \_\_\_\_\_ (W) \_\_\_\_\_ (W) \_\_\_\_\_ (W) \_\_\_\_\_ (H) \_\_\_\_\_

## Part III- Chords

A chord is two or more tones played simultaneously. For the purposes of this lesson we will be dealing with major, minor and diminished triads. Tri meaning three and tones meaning tones or notes. So a triad would be three notes played at the same time.

Remember about whole steps and half steps? Well chords use that same concept as intervals. After chords are just combinations of intervals. A major chord consists of two intervals. The first interval is two whole steps, the second is a whole step and a half step. So to make a C Major chord you start with the root note. (The root note or tonic is the note the chord starts on) and count up from there. Here is an example

Starting note is **C** two whole steps takes you to **E** and a half step and whole step take you to **G**

Note: Two whole steps are called a Major 3rd, A whole step and half step are called a Minor 3rd

Simplified it looks like this; **C** (W)(W) **E** (H)(W) **G** or **C** (major third) **E** (minor third) **G**

You can also find it by writing out the scale you are using and choose every other note:

**C** **D** **E** **F** **G** **A** **B** **C**

Ex 3. Try writing out the following major chords in the key of G (Hint use the G scale above)

G major = G B D

C major = C \_\_\_\_\_

D major = D \_\_\_\_\_

A minor chord consists of the opposite intervals. The first interval is a half step and whole step, the second interval is two whole steps, or a Minor third and then a Major third.

Use the same C scale but start a chord on D

**D** (H)(W) **F** (W)(W) **A**

Ex 4. Try writing out the following minor chords in the key of G (Hint use the G scale above)

A minor = A C E

B minor = B \_\_\_\_\_

E minor = B \_\_\_\_\_

### Scale Tones and Numbers

Now that we have a basic understanding of basic chord theory lets introduce the numbers. Giving numbers to chords was created so that music could be analyzed and played in any key, not just the original one. The first numbers used were the roman numerals. These are used mostly in classical music and music theory classes.

I ii iii IV V vi vii

More recently the Nashville Numbering System uses arabic numerals to denote chords.

1 2 3 4 5 6 7

Each number notes a specific chord in the key. For instance if you are in the key of G then it looks like this:

Letters:	G	A	B	C	D	E	F#
Nashville:	1	2	3	4	5	6	7
Roman:	I	ii	iii	IV	V	vi	vii

Ex 5. Fill in the chart for the key of D

Letters:	D	_____	_____	_____	_____	_____	_____
Nashville:	1	2	3	4	5	6	7
Roman:	I	ii	iii	IV	V	vi	vii

### Major and Minor Chords-

Take a look at the roman numerals. Notice how some of them like I and V are upper case and ii and vi are lower case? The upper case denote Major chords in a key, and lower case denote minor chords. The great thing is that they never change. Look at Example 3 and 4 from above. You already used the key of G and found all the major and minor chords. When writing out chords using letters you can use just the letter for Major chords and a "m" after the letter to denote minor chords. So in the key of G the chords are:

G Am Bm C D Em F#dim G

\*wait.. what is F#dim? A diminished chord is made up of two minor third intervals. the vii or 7 chord is always diminished.

Your major chords are 1, 4 and 5. Minor chords are 2,3 and 6. 7 is diminished.

### Using Nashville Numbering to Transpose

Using the Nashville Numbering system makes it easy to play any song in any key. It works simply using the following steps.

1. Write down the tones (letters or chords) in the original key.
2. Assign the corresponding numbers
3. Write down the tones in the second key
4. Find and replace

Lets say you want to transpose the chord chart for the chorus of "Hey I Love Jesus" to the key of C.

G C D C    G C D C  
Hey    I love Jesus  
G C D C    Em    D  
He    loves me

1. Write down the tones. Since it is in the key of G we would write down:

Letters:    G    A    B    C    D    E    F#

2. Write down the numbers

Letters:    G    A    B    C    D    E    F#  
Numbers :    1    2    3    4    5    6    7

3. Add the second key:

Letters:    G    A    B    C    D    E    F#  
Numbers :    1    2    3    4    5    6    7  
New Key:    C    D    E    F    G    A    B

4. Find and replace

C F G F    C F G F  
Hey    I love Jesus  
C F G F    Am    G  
He    loves me

You are replacing the 7 letters (A-G) only. Any notations like minor (m) or (7) remain to the next key. So notice that on the word "Me" Em becomes Am.

Ex. 6.

Transpose the following chord progressions using the Nashville Numbering system from the original key of G to the key given in the example.

<b>Original</b>	<b>Numbers</b>	<b>New Key</b>
1. G   C   D   C	1    ___   ___   ___	A   ___   ___   ___

2. G Em D C 1 \_\_\_ \_\_\_ \_\_\_ D \_\_\_ \_\_\_ \_\_\_

3. G Am C Em 1 \_\_\_ \_\_\_ \_\_\_ C \_\_\_ \_\_\_ \_\_\_

Using the Nashville Numbers to transpose is very helpful in some situations. For example, if you are playing guitar and need to use a capo to move a song to a more playable key. It is also helpful for quick transpositions if you have music in one key, but it is uncomfortable for a singer, you can quickly move the song to a more acceptable range.

### Starting off using the system-

So if you can use the Nashville Numbering system to transpose one key to another, why not just start off notating your music with the system. Look again at "Hey I Love Jesus" in the last section. Instead of writing out the original chords, you could just start off with the numbers. It would look something like this

1 4 5 4 1 4 5 4  
Hey I love Jesus  
1 4 5 4 2m 1  
He loves me

Written like this you could now play this in any key that you were comfortable with.

Ex. 7. Transpose the song to the following keys:

#### Key of C

Hey I love Jesus  
He loves me

#### Key of D

Hey I love Jesus  
He loves me

#### Key of E

Hey I love Jesus  
He loves me

I hope this has been helpful to you. I could go into much more depth about the system but just wanted to give you a basic understanding of how this works. It should be noted too that there is not a "standard" for the Nashville Numbering notations and there are some variations. The key is to find what works for you, and your group and stick to it.