

0. Music Theory? No Thanks!

Tune your box to GDG or GDGB, go to [cbgitty](#) and buy one of these books with scale and chord charts, \$22.99 each:

3-String Cigar Box Guitar "The Ultimate Collection" How-to-Play Book for GDG tuning
[3-String Cigar Box Guitar How-to-Play Book for GDG tuning](#)

4-String Cigar Box Guitar "The Ultimate Collection" How-to-Play Book for GDGB tuning
[4-String Cigar Box Guitar How-to-Play Book for GDGB tuning](#)

Otherwise the following informations will help you to get started with elementary music theory:

1. You you have a chord sheet of a song but you don't know how to play it: getting the chords for a simple folk song: a practical exercise
2. Musical notation, accidentals and keys
3. Scales: intervals, relationship between major and minor scales, major and relative minor scales, minor and relative major scales

This tutorial is still work in progress: corrections and suggestions are welcome...

By the way: to play a song in any key it would be best to have two or three boxes, tuned GDG and DAD or GDG, CGC and EBE, to stay for any key below the 18th fret.

1. You you have a chord sheet of a song but you don't know how to play it...

Let's start: our tuning is GDG, and the chord sheet of this simple folk song looks as follows:

A: / G G / D⁷ D⁷ / D⁷ D⁷ / G G / G G / C C / D⁷ D⁷ / G G /
B: / D D / A⁷ A⁷ / A⁷ A⁷ / D D⁷ /
A: / G G / D⁷ D⁷ / D⁷ D⁷ / G G ...

Definition: 'diatonic chord' denotes a chord which is built up exclusively from the notes which are part of the scale of some key: F#AC is a diatonic chord of the E minor scale E - F# - G - A - B - C - D - E, GBD# is not.

Depending of the context, G, C, D, A may mark the notes of a scale or a chord with this note as root.

G, C, D in the chord sheet above denote diatonic triads, chords built up from root, flat or sharp 3rd (3 or 4 semitones), and diminished or perfect 5th (6 or mostly 7 semitones).

D⁷, A⁷ denote diatonic 7th chords, built up from diatonic triads, with a flat or sharp 7th (10 or 11 semitones) added.

As we will learn, we yet know even more about these chords: G, C, D are triads with root, sharp 3rd and perfect 5th, D⁷, A⁷ are 7th chords with root, sharp 3rd, perfect 5th, and flat 7th: these are major chords. Minor chords with a flat 3rd would be denoted with Gm, Cm, Dm, Dm⁷, Am⁷.

Let's start with a neck diagram drawn on a strip of paper where you mark the semitones for each string of your our: for GDG tuning:

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

G#, A#, C#, D#, F# are read Gis, Aïs, Cis, Dis, Fis.

An example: a perfect 5th is seven semitones above the root: F# or Gb is the perfect 5th to the root B.

By the way: if you have a chord sheet for key of E, but your box is tuned to GDG, you can just draw a neck diagram as if the box would be tuned to EBE: above the 15th fret most boxes sound rather tiny, and so you can get an idea of how the song sounds.

Song Structure, Chord Progression

Part A starts and ends with a major G chord: we assume the key is G major with the scale G-A-B-C-D-E-F#-G until this assumption is proved to be wrong.

Not sure about the key of a song? Play the song replacing the chords with power chords without 3rds which denote them major or minor: you will hear intuitively which note is the base of the scale.

To get an idea about the chord progression, the structure of the song, we number the notes of the G major scale with Roman numerals to denote the degree of the chord progression regardless of the key.

Further, we mark, whether the relative chords are major or minor, whether the 3rds of each note of the scale are three or four semitones off the root, flat or sharp: 3rd GB is sharp, ..., 3rd F#A is flat:

G	A	B	C	D	E	F#
major	minor	minor	major	major	minor	minor
I	IIIm	IIIIm	IV	V	VIIm	VIIIm
tonic	supertonic	mediant	subdominant	dominant	submediant	leading tone

Important for us are the major chords on degree I, IV, and V: I is called tonic, IV subdominant, V dominant: variations of I - V - I and I - IV - V - I are the most common chord progressions used in folk songs, country music and blues.

As we now see, A⁷ in part B, a major chord, cannot be a diatonic chord of the G major scale: G major has Am⁷ with ACEG, but D major with scale D-E-F#-G-A B-C#-D has A⁷ with AC#EG. Here the key must have changed for part B to D major, the key of the dominant of G major scale:

D	E	F#	G	A	B	C#
major	minor	minor	major	major	minor	minor
I	IIIm	IIIIm	IV	V	VIIm	VIIIm
tonic	supertonic	mediant	subdominant	dominant	submediant	leading tone

Summary of our analysis of the chord progressions used in this song:

Part A: G major						Part B: D major				Part A	
I	V ⁷	I	IV	V ⁷	I	I	V ⁷	I	I ⁷ / V ⁷	I	...
G	D ⁷	G	C	D ⁷	G	D	A ⁷	D	D ⁷	G	...

In part B the final dominant 7th chord D⁷ is ambiguous: tonic (I) in the context of part B, but dominant (V⁷) returning to part A, kind of a hinge between parts B and A.

A dominant 7th chord is built up from root, sharp third, perfect fifth, and flat 7th, the chord of the dominant or fifth degree of a major scale. For blues, these chords are used on any degree of the chord progression, as is for this eight bar blues:

I	IV	I	V	I	IV	I - V	i - V
G ⁷ G ⁷	C ⁷ C ⁷	G ⁷ G ⁷	D ⁷ D ⁷	G ⁷ G ⁷	C ⁷ C ⁷	G ⁷ D ⁷	G ⁷ D ⁷

Chords of Part A

G Chord

G chord: 3rd is A# or B, 5th is D: A# is not part of the scale, so the triad with root G is GBD, with the inversions BDG and DGB: swapping the notes of top and bottom string you get variants which are not proper triads:

	GBD	DGB	BDG	GDB	DGB	BGD
	root position	swapped	1st inversion	swapped	2nd inversion	swapped
G	7	12	0	4	4	7
D	9	9	0	0	5	5
G	0	7	4	0	7	4

Why all these variants sound different? Let's have a look at their internal intervals: try them out all three proper dyads of the triad:

root position	G	sharp 3rd		B	flat 3rd		D								
	G	perfect 5th					D								
1st inversion					B	flat 3rd		D	4th			G			
					B	flat 6th						G			
2nd inversion								D	4th			G	sharp 3rd		B
								D	sharp 6th						B

Which variant sounds best? Which one sounds best with the following D⁷ chord? Let's vote for the variant where the root of the chord equals the root of the scale and 3rd and 5th are in their natural order: GBD, especially for the first chord which anchors the song to key G major.

D⁷ Chord

D⁷ chord: 3rd is F or F#, 5th is A, 7th is C or C#; F and C# are not part of the scale, so the full 7th chord is DF#AC. With three strings only, inevitably we have three options to choose: to omit the root, to omit the 5th, or to omit the 3rd:

Omitting the root:

	F#AC	CAF#	ACF#	F#CA	CF#A	AF#C
	1st inversion	swapped	2nd inversion	swapped	3rd inversion	swapped
G	5	11	11	14	2	5
D	7	7	10	10	4	4
G	11	5	14	11	5	2

Omitting the 5th:

	DF#C	CF#D	F#CD	DCF#	CDF#	F#DC
	root position	swapped	1st inversion	swapped	3rd inversion	swapped
G	5	7	7	11	11	5
D	4	4	10	10	0	0
G	7	5	11	7	5	11

Omitting the 3rd:

	DAC	CAD	ACD	DCA	CDA	ADC
	root position	swapped	2nd inversion	swapped	3rd inversion	swapped
G	5	7	7	14	2	2
D	7	7	10	10	0	0
G	7	5	14	7	5	5

Let's vote here for the variant omitting the 5th, where the root is first and 3rd and 7th are in their natural order: DF#C, retaining the flavor of major of the chord.

C Chord

Now the C chord: 3rd is D# or E, 5th F# or G: D# is not part of the scale, and G is the perfect 5th so the C chord is CEG:

	CEG	GEC	EGC	CGE	GCE	ECG
	root position	swapped	1st inversion	swapped	2nd inversion	swapped
G	0	5	5	9	9	12
D	2	2	5	5	10	10
G	5	0	9	5	12	9

As with the G chord, let's vote here for the variant where the root of the chord equals the root of the scale and 3rd and 5th are in their natural order: CEG.

Tablature for the Chords of Part A

	G	G	D ⁷	D ⁷	D ⁷	D ⁷	G	G	G	G	C	C	D ⁷	D ⁷	G	G
	I	I	V ⁷	V ⁷	V ⁷	V ⁷	I	I	I	I	IV	IV	V ⁷	V ⁷	I	I
G	7	7	5	5	5	5	7	7	7	7	0	0	5	5	7	7
D	9	9	4	4	4	4	9	9	9	9	2	2	4	4	9	9
G	0	0	7	7	7	7	0	0	0	0	5	5	7	7	0	0

Chords of Part B

As we saw above, with part B the key schanges from G to D, with the scale D-E-F#-G-A B-C#-D.

D Chord

The D chord: as for the G chord in part A let's vote for the variant omitting the 5th, where the root is first and 3rd and 7th are in their natural order: 3rd is F or F#, 5th is G# or A: F is not part of the scale, and A is the perfect 5th so the D chord is DF#A:

	DF#A		F#AD		ADF#	
	root position	swapped	1st inversion	swapped	2nd inversion	swapped
G	2	7	7	11	11	14
D	4	4	7	7	12	12
G	7	2	11	7	14	11

A⁷ chord, with 5th omitted

As for the D⁷ chord in part A we will concentrate on the variants with the 5th omitted: 3rd is C or C#, 5th is E, 7th is G or G#: C and G# are not part of the scale, so the full 7th chord is AC#EG, with the 5th omitted AC#G:

	AC#G	GC#A	C#GA	AGC#	GAC#	C#AG
	root position	swapped	1st inversion	swapped	3rd inversion	swapped
G	12	14	2	6	5	12
D	11	11	5	5	7	7
G	14	12	6	2	0	5

As with the D⁷ chord in part A let's vote for the variant where the root is first and 3rd and 7th are in their natural order: AC#G.

Tablature for the Chords of Part B

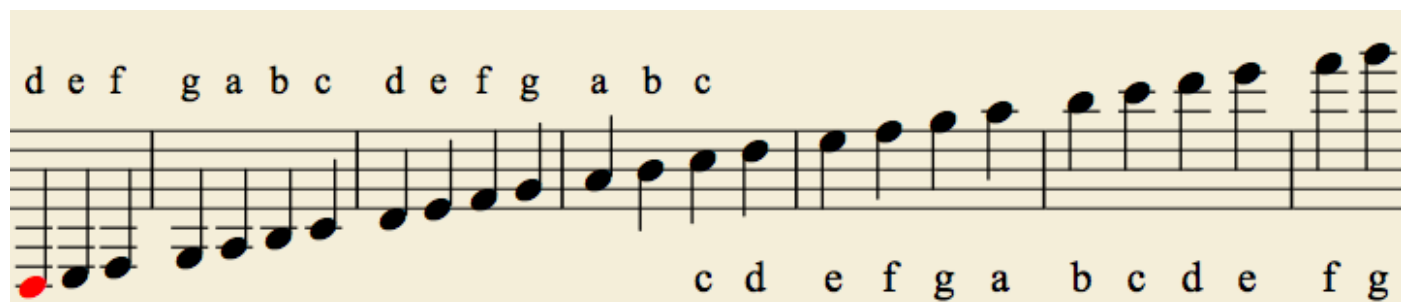
	D	D	A ⁷	A ⁷	A ⁷	A ⁷	D	D ⁷								
	I	I	V7	V7	V7	V7	I	I/V ⁷								
G	11	11	12	12	12	12	11	5								
D	7	7	11	11	11	11	7	4								
G	7	7	14	14	14	14	7	7								

And keep moving with part A:

	G	G	D ⁷	D ⁷	D ⁷	D ⁷	G	G	G	G	C	C	D ⁷	D ⁷	G	G
	I	I	V ⁷	V ⁷	V ⁷	V ⁷	I	I	I	I	IV	IV	V ⁷	V ⁷	I	I
G	7	7	5	5	5	5	7	7	7	7	0	0	5	5	7	7
D	9	9	4	4	4	4	9	9	9	9	2	2	4	4	9	9
G	0	0	7	7	7	7	0	0	0	0	5	5	7	7	0	0

2. Musical Notation

Note Values



Accidentals and Relative Keys

-	#	##	###	####	#####	#####
C major	G major	D major	A major	E major	B major	F# major
A minor	E minor	B minor	F# minor	C# minor	G# minor	D# minor

-	b	bb	bbb	bbbb	bbbbb	bbbbbb
C major	F major	Bb major	Eb major	Ab major	Db major	Gb major
A minor	D minor	G minor	C minor	F minor	Bb minor	Es minor

Reminder: G#, A#, C#, D#, F# are read Gis, Aïs, Cis, Dis, Fis: Ab, Bb, Db, Eb, Gb are read As, Bes, Des, Es, Ges. C# means a semitone above C, Cb a semitone below C.

3. Scales

Intervals

semitones	interval	semitones	interval
1	minor second	7	fifth, perfect fifth
2	major second	8	minor sixth
3	minor third	9	major sixth
4	major third	10	minor seventh
5	fourth, perfect fourth	11	major seventh
6	diminished fifth	12	octave

Relationship between Major and Minor Scales

G major scale	G	A	B	C	D	E	F#	G							
E minor scale						E	F#	G	A	B	C	D	E		
G major scale								G	A	B	C	D	E	F#	G

Major and Relative Minor Scales

		root	2nd		3rd		4th	5th		6th		7th		8th
C major	A minor	C		D		E	F		G		A		B	C
G major	E minor	G		A		B	C		D		E		F#	G
D major	B minor	D		E		F#	G		A		B		C#	D
A major	F# minor	A		B		C#	D		E		F#		G#	A
E major	C# minor	E		F#		G#	A		B		C#		D#	E
B major	G# minor	B		C#		D#	E		F#		G#		A#	B
F# major	D minor#	F#		G#		A#	B		C#		D#		E#	F#
F major	D minor	F		G		A	bB		C		D		E	F
Bb major	G minor	Bb		C		D	Eb		F		G		A	Bb
Eb major	C minor	Eb		F		G	Ab		Bb		C		D	Eb
Ab major	F minor	Ab		Bb		C	Db		Eb		F		G	Ab
Db major	Bb minor	Db		Eb		F	Gb		Ab		Bb		C	Db
Gb major	Es minor	Gb		Ab		Bb	Cb		Db		Eb		F	Gb

Minor and Relative Major Scales

		root	2nd		3rd		4th	5th		6th		7th		8th
A minor	C major	A		B	C		D		E	F		G		A
E minor	G major	E		F#	G		A		B	C		D		E
B minor	D major	B		C#	D		E		F#	G		A		B
F# minor	A major	F#		G#	A		B		C#	D		E		F#
C# minor	E major	C#		D#	E		F#		G#	A		B		C#
G# minor	B major	G#		A#	B		C#		D#	E		F#		G#
D minor	F major	D		E	F		G		A	bB		C		D
G minor	Bb major	G		A	Bb		C		D	Eb		F		G
C minor	Eb major	C		D	Eb		F		G	Ab		Bb		C
F minor	Ab major	F		G	Ab		Bb		C	Db		Eb		F
Bb minor	Db major	Bb		C	Db		Eb		F	Gb		Ab		Bb