

COMPLETE MANDOLIN INTERACTIVE E-BOOK

FRETBOARD TOOLBOX

COMPLETE MANDOLIN E-BOOK

A Quick-Reference Guide to the
Music Theory that Matters Most.

*For Rock, Folk,
Bluegrass, Country,
Pop, Reggae, R&B,
Blues, and more!*

**Free
Preview
Pages!**

by Scott Sharp

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Capo Corner~ Use this tool to figure out what key a guitarist is playing in when they use a capo between the 1st and 7th frets. For example, a guitarist can play a song in the key of G Major by putting a capo on fret #3 and playing chord shapes from the key of E Major (shown in this column as E3). They can also play in G Major by putting a capo on fret #5 and playing chord shapes from the key of D Major (D5). This column shows capo positions up to the 7th fret, but the pattern continues. The keys of F[#] / G^b Major and C[#] / D^b Major have dotted lines between them because both keys use the same chord positions.

See capos discussed in more detail on the Fretboard Toolbox YouTube channel at www.youtube.com/fretboardtoolbox.

Click on any page number, at the bottom of pp. 2-38, to return to this page.

Standard Chord Jigs Explained

(Chord Jig shown is from the "Keys of G Major and E minor" page)

What are Fretboard Toolbox "Standard Pages"? Popularly played music can be crudely divided into three main key "families": Major, relative minor, and Blues keys. One great trait of music is that each Major key has a relative minor key that uses essentially the same chords and notes for scales! The main difference is which note is treated as the "root" note. A "G" note is the root note in the key of G Major, as shown below, and an "E" note is the root note of G Major's relative minor key (E minor). Notice how the Major and relative minor roots each have their own special border in this book. **It's also important to know that songs in Major keys tend to have "happier" sounds, while songs in relative minor keys tend to have "sadder" sounds!** Each of the 14 Major and relative minor keys are combined into "Standard Pages" (the odd numbered pages 9-35), and they're used to play in many kinds of non-bluesy styles, including rock, folk, bluegrass, country, pop, and more. See pp. 5-7 to learn how blues keys relate to Major and minor keys.

To see the ideas in this book explained in a lot more detail, check out the free videos at www.youtube.com/fretboardtoolbox.

Five Ideas Worth Learning In Every Key (using the "Keys of G Major & E minor" Chord Jig as an example):

- 1 Which chords sound good together in each key, and what are the Roman numerals of each chord in each key? All of the chords in this column sound good when played together, and can be mixed and matched to play countless songs. Each chord is given its own Roman numeral, **bold** for the Major key and plain text (not bold) for the relative minor key. *The F Major chord is italicized here because it is not really in the key of G Major- it just sounds good in this key!* Learn which chords are commonly played together in each key, and the Roman numerals for each chord, and you can figure out an incredible number of songs by ear! See page 3 to learn how to use the Chord Progressions boxes to discover common ways these chords can be arranged- in any key!
- 2 Which notes are most important to know in each Major key? The notes in columns 1, 2, 3, 4, 5, 6, and 7 are the notes that make up the key of G Major and are shown in **white boxes**. The flat-3 "b3" and flat-7 "b7" notes are shown, in part, because they're needed to make common chords like I7 (G7) and IV7 (C7). These two notes are also critical for blues music- turn to p. 5 to see why.
- 3 Which notes make up the Major and relative minor *pentatonic* scales? The underlined notes G, A, B, D, and E make up the G Major pentatonic scale (using notes from the 1, 2, 3, 5, and 6 columns). The E minor pentatonic scale uses these notes as well, just rearranged! These 5-note scales are played a lot because the notes sound great for solos in both keys- see p. 4 to learn more.
- 4 Which notes outside of the Major and relative minor scales are commonly used? Common notes and chords from outside these keys are shown in *italics* throughout this book, and are shown because they can add some cool "flavor" to songs! Common examples include playing the ii, iii, and/or vi chords as Major chords, playing the IV chord as a minor (iv) chord, and/or replacing the "real" vii chord (m7b5) in each Major key with a *bVII (flat-VII)* chord. I know a musician who calls these "money chords". ☺
- 5 Which notes are needed to make each chord type? The chords with bold outlines in the 1, b3, 3, and 5 boxes are the triads (3-note chords) that make up each Major and relative minor key's **most common chords**. Major triads are made of notes from the 1, 3, and 5 columns. Minor triads are made of notes in the 1, b3, and 5 columns. Dominant 7 chords just add the note from the b7 column to the Major triad and minor 7 chords just add the note from the b7 column to the minor triad. See pp. 37-38 to learn a lot more about building just about any chord you'd like. **Regardless of the instrument, each chord type always uses the same notes!**

Chord Names and Roman Numerals: Major / relative minor	Use notes from these columns to build any chords I-bVII from the key of G Major, and any chords i-VII from the key of E minor.										
	1	2	b3	3	4	5	6	b7	7		
G MAJOR (G) I / III	G	A	Bb	B	C	D	E	F	F#		
A minor (Am) ii / iv	A		C	C#		E		G			
B minor (Bm) iii / v	B		D	D#		F#		A			
C MAJOR (C) IV / VI	C		Eb	E		G		Bb			
D MAJOR (D) V / VII	D			F#		A		C			
E minor (Em) vi / i	E		G	G#		B		D			
F MAJOR (F) bVII / bII	F			A		C		Eb			

Chord Jig

Chord Type: 5 Use notes in columns:

Major-----1, 3, 5
e.g. G Major-----G, B, D
e.g. E Major-----E, G#, B

7, dom7-----1, 3, 5, b7
e.g. D7-----D, F#, A, C
e.g. B7-----B, D#, F#, A

minor-----1, b3, 5
e.g. Bm-----B, D, F#
e.g. Cm-----C, Eb, G

min7, m7-----1, b3, 5, b7
e.g. Am7-----A, C, E, G
e.g. Em7-----E, G, B, D

Chord Progressions & Fretboard Layout

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Chord Progressions Boxes~ See pp. 9-35 (odd pages) for these same chord progressions in each Major & relative minor key.

1 To play the first chord progression in this box, a I-V-I progression, play a **G (G Major)** chord, followed by a **D** chord, and then return to a **G** chord. Capitalized Roman numerals represent Major chords and lower case Roman numerals represent minor chords. All Roman numerals and chords played with songs in Major keys are shown in bold font ("Chord Progressions" boxes 1 and 2 below). All Roman numerals and chords played in minor keys ("Chord Progressions" box 3) are shown in plain (non-bold) font.

2 This box has some progressions that use chords from outside of each "song's" key. These "rule-breaking" chords, which are *italicized* throughout this book, often add some great flavor to songs, and can do a lot to enrich your playing! If you know the Roman numerals for a chord progression in one key, then you can flip to any other key in this Toolbox and play the chords with the same Roman numerals to get a similar sound in that key. This is called "transcribing" songs, and it's really easy with a Fretboard Toolbox!

3 The box on the right shows some common minor chord progressions. Play these and you'll notice that songs in minor keys have "sadder" sounds than songs in Major keys. In minor keys, the "v" chord (minor) can also be played as a "V" chord (Major).

1 Some G Major Chord Progressions

I-V-I-----G-D-G
I-IV-V-----G-C-D
I-V-IV-----G-D-C
I-vi-IV-V-----G-Em-C-D
I-vi-ii-V-----G-Em-Am-D
I-ii-IV-V-----G-Am-C-D
V-IV-I-----D-C-G

2 More G Major Chord Progressions

I-iii-ii-V-----G-Bm-Am-D
ii-V-I-----Am-D-G
I-bVII-IV-V-----G-F-C-D
I-II-IV-V-----G-A-C-D
I-III-IV-iv-----G-B-C-Cm
I-III7-VI7-II7-V7-----G-B7-E7-A7-D7

3 Some E minor Chord Progressions

i-v-i-----Em-Bm-Em
i-VII-v-----Em-D-Bm
i-VII-i-----Em-D-Em
i-V-i-----Em-B-Em
i-iv-V-----Em-Am-B
i-VII-VI-V-----Em-D-C-B
i-iv-VI-V-----Em-Am-C-B

Fretboard Layout~ When you want to build chords and solos all over your fretboard, you may find it really helpful to know the notes all up and down the neck. The problem is that there's a whole bunch of notes, found several times each, all over the fretboard. Also, lots of single locations on a fret can have two, or even more, different note names. (Read more about this idea on page 37). The good news is that you can make memorizing the whole fretboard much easier by learning the locations of just the C, D, E, G, and A notes (the C Major & A minor pentatonic notes), which are shown below in bold font in light-colored boxes. Once you know these five notes all over, then every other note you could play is just one fret to the left or right of a note you already know! The thick, striped line labeled "Nut" is what your strings rest on. Notes to the left of the nut are the notes played "open" (without frets).

Fret #:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	E F#	F# Gb	G	G# Ab	A	A# Bb	B Cb	C	C# Db	D	D# Eb	E	F F#	F# Gb	G	G# Ab	A
2	A	A# Bb	B	C B#	C# Db	D	D# Eb	E	F F#	F# Gb	G	G# Ab	A	A# Bb	B	C B#	C# Db
3	D	D# Eb	E	F F#	F# Gb	G	G# Ab	A	A# Bb	B Cb	C	C# Db	D	D# Eb	E	F F#	F# Gb
4	G	G# Ab	A	A# Bb	B Cb	C	C# Db	D	D# Eb	E	F F#	F# Gb	G	G# Ab	A	A# Bb	B Cb

Fret Markers are dots shown on frets 3, 5, 7, 10, 12, and 15.

Standard Fretboard Jigs Explained

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Scale Builder- The Fretboard Jigs in this edition highlight the Major and natural minor scales in white boxes, for fun, easy soloing.

-**Complete Major scale-** notes are in **white boxes** on each key's Fretboard Jig. This scale is the backbone of Western music.

-**Major pentatonic scale-** notes are underlined on each key's Fretboard Jig. This is a great "go-to" scale for songs in Major keys!

-**natural minor scale-** notes are in **white boxes** on each key's Fretboard Jig. This is a great "go-to" scale for songs in minor keys!

-**minor pentatonic scale-** notes are in underlined on each key's Fretboard Jig. This is a great "go-to" scale for songs in minor keys!

-**harmonic minor scale-** use notes in white boxes on each key's Fretboard Jig, but replace the b7 (x'ed out below) with the 7 note, found in the empty gray box to the left of minor root. This scale sounds cool in minor key songs where the minor key v chord is played as a Major (V) chord. In the key of E minor try hitting the D# note during a V chord (B Major = B, D#, F#) to see how this scale works.

The shading and fonts below mirror the Fretboard Jigs (odd-numbered pp. 9-35). Note the special borders around the Major (G) & minor (E) key root notes. Major key solos often return to the Major root notes. Minor key solos often return to minor root notes.

Scales for songs in G Major (use notes from columns below)	1	2	b3	3	4	b5	5	b6	6	b7	7	8(I)
Complete G Major scale- 1, 2, 3, 4, 5, 6, 7 notes	<u>G</u>	<u>A</u>		<u>B</u>	<u>C</u>		<u>D</u>		<u>E</u>		<u>F#</u>	<u>G</u>
G Major pentatonic scale- 1, 2, 3, 5, 6 notes	<u>G</u>	<u>A</u>		<u>B</u>			<u>D</u>		<u>E</u>			<u>G</u>

Scales for songs in E minor (use notes from columns below)	1	2	b3	3	4	b5	5	b6	6	b7	7	8(I)
E natural minor scale- 1, 2, b3, 4, 5, b6, b7 notes	<u>E</u>	<u>F#</u>	<u>G</u>		<u>A</u>		<u>B</u>	<u>C</u>		<u>D</u>		<u>E</u>
E minor pentatonic scale- 1, b3, 4, 5, b7 notes	<u>E</u>		<u>G</u>		<u>A</u>		<u>B</u>			<u>D</u>		<u>E</u>
E harmonic minor scale- 1, 2, b3, 4, 5, b6, 7 notes	<u>E</u>	<u>F#</u>	<u>G</u>		<u>A</u>		<u>B</u>	<u>C</u>		<u>X</u> (D#)		<u>E</u>

Building chords with a Fretboard Jig- A chord is simply a group of notes played at the same time. Using the G Major Chord Jig from page 9, you'll see that G Major chords are played using combinations of the notes G, B, and D. If you look at any chord charts that show different ways to play G Major chords, then you can use the use the Fretboard Layout below to see *how* all the different G chords simply show different ways to play only G, B, and D notes. Remember, the flat-3 (b3) and flat-7 (b7) notes from each Major key are *italicized* on each Fretboard Jig. These notes are shown on the Fretboard Layouts because they are needed to make *I7*, *IV7*, and *bVII* chords (G7, C7, and F Major chords in the key of G Major), and because they're needed for playing minor pentatonic and blues scales. If the Fretboard Jig of the key you're playing in doesn't show a note you need, see what the note is on the Fretboard Layout on page 3.

Learn more about soloing scales and chord-building at: www.youtube.com/fretboardtoolbox.

Standard Fretboard Jig - (see page 3 to find any notes not shown below)

Fret #:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	<u>E</u>	F	<u>F#</u>	<u>G</u>	<u>A</u>	Bb	<u>B</u>	C		<u>D</u>		<u>E</u>	F	<u>F#</u>	<u>G</u>		<u>A</u>
2	<u>A</u>	Bb	<u>B</u>	<u>C</u>		<u>D</u>		<u>E</u>	F	<u>F#</u>	<u>G</u>		<u>A</u>	Bb	<u>B</u>	<u>C</u>	<u>D</u>
3	<u>D</u>		<u>E</u>	F	<u>F#</u>	<u>G</u>		<u>A</u>	Bb	<u>B</u>	C		<u>D</u>		<u>E</u>	F	<u>F#</u>
4	<u>G</u>		<u>A</u>	Bb	<u>B</u>	C		<u>D</u>		<u>E</u>	F	<u>F#</u>	<u>G</u>		<u>A</u>	Bb	<u>B</u>

G Major & E natural minor scales: White boxes
G Major & E minor pentatonic scales: Underlined
b3(Bb) and b7(F) notes from G Major: *Italicized*

Major Roots: For songs in G Major

Minor Roots: For songs in E minor



Blues Chord Jigs Explained

(Chord Jig shown is from the "G Blues" page)



What are Fretboard Toolbox Blues Pages? On page 2, I mentioned the (controversial?) idea of three "key families" - Major, relative minor, and Blues keys. Bluesy music is often based on Major key chord progressions, *played alongside minor key soloing scales!* For example, if a bluesy song is in the key of G Major, then you'll often use G Major chord progressions combined with *G minor soloing scales!* What makes it even more interesting is that you can combine scales like the G Major pentatonic with the G minor pentatonic for even more flavorful sounds. With this Fretboard Toolbox "Complete Edition", you can see the "Standard" and "Blues" versions of all 14 Major & Blues keys side-by-side, so you can see exactly which soloing scales and chords give songs their unique sounds! Note that the "Standard Pages" are the odd-numbered pages 9-35, while the "Blues Pages" are the even-numbered pages 10-36.

Five "Bluesy" Ideas Worth Learning In Every Key (using the "G Blues" key Chord Jig as an example):

1 Which chords sound "bluesy" together in each key, and what are the Roman numerals of each chord in each key? Bluesy chord progressions typically focus on the I, IV, and V chords- (G Major, C Major, and D Major chords in the key of G Major). Lots of "bluesy-rock" songs often add *bIII* "flat-three" chords (a Bb Major chord in the key of G Major) and/or *bVII* "flat-seven" chords (an F Major chord in the key of G Major) to the I, IV, and V chords. Notice these 5 chords are simply the minor pentatonic notes played as Major chords! See page 6 to learn how the Chord Progressions Boxes reveal common ways to combine these chords in any key!

2 Which scales are commonly used in bluesy music? The first row of Blues pages' Chord Jigs shows the Major scale of the I (Root) chord in bold font. The Major scale is built from the notes in the 1, 2, 3, 4, 5, 6, and 7 columns (G, A, B, C, D, E, and F# in G Major). Major pentatonic scale notes are underlined (G, A, B, D, and E). The minor pentatonic notes from the key are shown in white boxes (G, Bb, C, D, and F). These are the notes that will easily give you really cool, bluesy sounding solos! Blues music also often adds the "flat-five" note (shown in the "b5" column with an asterisk (*)) to the minor pentatonic scale to get even more bluesy sounds.

3 Which notes from the Major scale are used/changed to make bluesy scales? Some of the heart and soul of bluesy music comes by changing (flattening) the notes from the Major scale's 3 and 7 columns into b3 and b7 notes. To hear this in G Major, first play the G Major pentatonic scale (see notes above). Now try the G Blues Scale (notes above) & memorize the unique sounds of each!

4 How are 7 chords used in blues? Bluesy music uses TONS of "dominant 7" (dom7) chords, made by adding the b7 (read "flat-7") note to the 1, 3, and 5 columns. So, to play a "G7" chord, you'd add one or more "F" notes to the notes G, B, and D. Try playing the "Simple 12 Bar Blues" progression from box 1 on page 6 using all 7 chords (G7, C7, and D7) to see one way these 7 chords work.

5 How are blues chords and scales built? This box shows the columns & notes from the Chord Jig used to make basic chords in each key. It also shows the columns & notes from the Chord Jig used to make the various types of scales in each key. Bluesy music often centers on the minor pentatonic & Blues scales, but also often mixes in notes from the Major & Major pentatonic scales too! When you learn a new blues lick, take the time to figure out which scale(s) it's using, and then you can get that sound in any key!

Chord Names and Roman Numerals for the key of G Major		Use notes from these columns to build any chords I-b VII in the key of G Major.									
		1	2	b3	3	4	b5	5	6	b7	7
G MAJOR (G)	I	G	A	Bb	B	C	Db*	D	E	F	F#
A minor (Am)	ii	A		C				E		G	
Bb MAJOR (Bb)	bIII	Bb			D			F		Ab	
B minor (Bm)	iii	B		D				F#		A	
C MAJOR (C)	IV	C			E			G		Bb	
D MAJOR (D)	V	D			F#			A		C	
E minor (Em)	vi	E		G				B		D	
F MAJOR (F)	bVII	F			A			C		Eb	

Chord Jig

Chord Type 5 Use notes from columns

Major-----1,3,5
e.g. G Major-----G,B,D
e.g. Bb Major-----Bb,D,F

7, dom7-----1,3,5,b7
e.g. C7-----C,E,G,Bb
e.g. D7-----D,F#,A,C

Scale Type Use notes from columns

Major-----1,2,3,4,5,6,7

Major pent.-----1,2,3,5,6

minor pent.-----1,b3,4,5,b7

Blues-----1,b3,4,b5,5,b7

Bluesy Progressions & Fretboard Layout

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Chord Progressions Boxes- To see these same chord progressions in each of the 14 Major keys, see even-numbered pages 10-36.

1 Play the chord changes from this box to train your ear to recognize the classic 12 bar blues chord progression. Chords, I, IV, and V, can be played as simple Major chords (G, C, and D), dominant 7 chords (G7, C7, and D7), or combinations of both. Each time the chord is written is considered one bar, so there are four bars of the "I" or "I7" (G Major or G7 chords) in the first row. Each bar has four beats (one and two and three and four and...). See this explained further at www.youtube.com/fretboardtoolbox.

2 The middle box is just like the box on the left, but the second bar replaces the I (or I7) chord with a IV (or IV7) chord, which is called a "quick-change". Using the chord changes from the left & middle boxes, **you can play an amazing number of blues songs!**

3 The cool sounds of these bluesy-rock progressions comes from the fact that they **take notes from the bluesy sounding minor pentatonic scale, and turn each of those notes into Major chords**. The G minor pentatonic scale is the notes G, Bb, C, D, and F. The G, C, and D notes are shared with the G Major scale, but the flat-3 (Bb) and the flat-7 (F) notes from the G minor pentatonic scale can both be turned into Major chords. Notice how all of the rock progressions below are made of **only those five chords**.

Simple 12 Bar Blues in G

I(7)-----I(7)-----I(7)-----I(7)
IV(7)-----IV(7)-----I(7)-----I(7)
V(7)-----IV(7)-----I(7)-----V(7)

G(7)-----G(7)-----G(7)-----G(7)
C(7)-----C(7)-----G(7)-----G(7)
D(7)-----C(7)-----G(7)-----D(7)

Quick-change 12 Bar Blues in G

I(7)-----IV(7)-----I(7)-----I(7)
IV(7)-----IV(7)-----I(7)-----I(7)
V(7)-----IV(7)-----I(7)-----V(7)

G(7)-----C(7)-----G(7)-----G(7)
C(7)-----C(7)-----G(7)-----G(7)
D(7)-----C(7)-----G(7)-----D(7)

Some G Major Rock Progressions

V-IV-I-----D-C-G
I-bIII-I-----G-Bb-G
I-bIII-IV-----G-Bb-C
I-bVII-I-----G-F-G
I-bVII-IV-----G-F-C
I-bIII-bVII-IV-----G-Bb-F-C
I-V-IV-bIII-----G-D-C-Bb

Fretboard Layout- When you want to build chords and solos all over your fretboard, you may find it really helpful to know the notes all up and down the neck. The problem is that there's a whole bunch of notes, found several times each, all over the fretboard. Also, lots of single locations on a fret can have two, or even more, different note names. (Read more about this idea on page 37). The good news is that you can make memorizing the whole fretboard much easier by learning the locations of just the A, C, D, E, and G notes (the A minor pentatonic notes from the "A Blues" page), **which are shown below in bold font in light-colored boxes**. Once you know these five notes all over, then every other note you'd need is just one fret to the left or right of a note you already know! The thick, striped line labeled "Nut" is what your strings rest on. Notes to the left of the nut are the notes played "open" (without frets).

Fret #:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	E Fb	F E#	F# Gb	G Ab	A	A# Bb	B Cb	C B#	C# Db	D	D# Eb	E Eb	F E#	F# Gb	G	G# Ab	A
2	A Bb	A# B	B Cb	C B#	D	D# Eb	E Eb	F E#	F# Gb	G	G# Ab	A	A# B	B Cb	C B#	C# Db	D
3	D Eb	D# Eb	E Fb	F E#	G	G# Ab	A	A# Bb	B Cb	C B#	D	D# Eb	E Fb	F E#	F# Gb	G	G# Ab
4	G Ab	G# Ab	A	A# Bb	B Cb	C B#	D	D# Eb	E Fb	F E#	F# Gb	G	G# Ab	A	A# Bb	B Cb	C B#

Fret Markers are dots shown on frets 3, 5, 7, 10, 12, and 15.

Blues Fretboard Jigs Explained

Complete Mandolin E-Book

Scale Builder~ This Blues Edition's Fretboard Jig shows you the complete Major scale, the Major pentatonic scale, the minor pentatonic scale, and the blues scale for each Major key~ **all at once!** These scales can be played individually, or mixed together for great solos!

-**Complete Major scale**~ uses seven notes: 1, 2, 3, 4, 5, 6, and 7. Each Major key's notes are in **bold font** on that key's Fretboard Jig.

-**Major pentatonic scale**~ uses five notes: 1, 2, 3, 5 and 6. These notes are underlined on each key's Fretboard Jig.

-**minor pentatonic scale**~ uses five notes 1, *b3*, 4, 5, and *b7*. The minor pentatonic scale uses the 1, 4, and 5 notes from the Major scale, along with the "*b3*" (flat-3) and "*b7*" (flat-7) notes, which are both *italicized* on each key's page. *The secret to bluesy music is that songs in Major keys can sound really cool when solos use the minor pentatonic scale of the Major key!* These notes are in **white boxes** on each key's Fretboard Jig. This is a great "go-to" scale for blues songs, especially when you add "*b5*" notes to turn this scale into a Blues scale.

-**Blues scale**~ just add the "*b5*" (flat-5) note, shown with an **asterisk (*)** on each key's Fretboard Jig, to the minor pentatonic scale. You can see the name of the *b5* note for each Major key in the "Blues note" box, located below each Blues key's Fretboard Jig.

All shading and fonts below match those on the G Blues Fretboard Jig (p. 10).

Scales for Songs in G Major	1	2	<i>b3</i>	3	4	<i>b5</i>	5	<i>b6</i>	6	<i>b7</i>	7	8 (1)
Complete G Major scale ~ 1, 2, 3, 4, 5, 6, 7 notes	G	A		B	C		D		E		F#	G
G Major pentatonic scale ~ 1, 2, 3, 5, 6 notes	<u>G</u>	<u>A</u>		<u>B</u>			<u>D</u>		<u>E</u>			<u>G</u>
G minor pentatonic scale ~ 1, <i>b3</i> , 4, 5, <i>b7</i> notes	<u>G</u>		<i>Bb</i>		C		<u>D</u>			<i>F</i>		<u>G</u>
G Blues scale ~ 1, <i>b3</i> , 4, <i>b5</i> , 5, <i>b7</i> notes	<u>G</u>		<i>Bb</i>		C	<i>(Db)</i>	<u>D</u>			<i>F</i>		<u>G</u>

Building chords with a Fretboard Jig~ On the Blues Page Fretboard Layouts, some of the notes you need for playing the chords you want will be in white boxes and some will be in gray boxes. This is because the Blues pages show the notes from each Major key's minor pentatonic scale in white boxes. If you have trouble seeing how to build chords with the Blues Chord Jigs, then build the chords on the opposite (Standard) page. **The real beauty of the Blues Fretboard Jigs is in being able to visualize the four scales above, all at the same time.** Remember, the flat-3 (*b3*) and flat-7 (*b7*) notes from each Major key are *italicized* on each Fretboard Jig, and are included because they are needed to make bluesy *I7*, *bIII*, *IV7*, and *bVII* chords (*G7*, *Bb Major*, *C7*, and *F Major* chords in the key of G Major), and since they're needed to play the minor pentatonic and blues scales. **See page 6 for any notes missing from the Fretboard Layouts.**

Learn more about soloing scales and chord-building at: www.youtube.com/fretboardtoolbox.

Blues Fretboard Jig ~ (see page 6 to find any notes not shown below)

Fret #:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
1	E	<i>F</i>	F#	G	<i>A</i>	<i>Bb</i>	B	C	*	D		E	<i>F</i>	F#	G		<i>A</i>	
2	A	<i>Bb</i>	B	C	*	D		E	<i>F</i>	F#	G		A	<i>Bb</i>	B	C	*	D
3	D		E	<i>F</i>	F#	G		A	<i>Bb</i>	B	C	*	D		E	<i>F</i>	F#	G
4	G		A	<i>Bb</i>	B	C	*	D		E	<i>F</i>	F#	G		A	<i>Bb</i>	B	C

Complete G Major scale: **Notes in bold font**

G Major pentatonic scale: Underlined notes

G minor pentatonic scale: Notes in white boxes

Major Roots: For songs in G Major	G
Blues note: add to minor pentatonic (<i>Db</i>)	*

Standard Notation Jig

Complete Mandolin E-Book

This tool shows several cool ideas you might find useful:

1. The 4 strings are tuned to G3 on the piano. The 3 strings are tuned to D4 (a whole step above piano's "middle-C"), the 2 strings to A4 and the 1 strings to E5. Notice how the colors of the Treble Clef notes, the Piano Layout, and the Fretboard Layout all match, and all represent the notes that are in the same octave.
2. The range of the mandolin from the "open" 4 strings to the 17th fret of the 1 strings (which is the most frets that could fit on here), is from the piano's G3 note to A6. For comparison, the same span on a guitar is E2 on the open 6 string to A5 on the 17th fret of the 1 string.

3. The big difference between stringed instruments and the piano is that on stringed instruments, notes are repeated all over the fretboard. All repeated notes (notes in the same octave) have the same color.
4. The last thing you'll need to know is which notes are sharp (#) or flat (b) in each key, which you can visualize easily, along with lots more, on this [Fretboard Toolbox Complete Mandolin Edition](#).

To see this explained in more detail, check out the Fretboard Toolbox YouTube Channel at www.youtube.com/fretboardtoolbox!

The diagram illustrates the relationship between musical notation, piano layout, and the 'Middle-C' note (C4). It is divided into three main sections:

- Treble Clef:** Shows a treble clef on a five-line staff. The notes C, D, E, F, G, A, and B are shown on the lines and spaces. The note C is labeled 'Middle-C' and is shown on the first line. The notes D, E, F, G, A, and B are shown on the second, third, fourth, fifth, and first lines of the staff, respectively. The notes C, D, E, F, G, A, and B are also shown on the ledger lines above the staff, labeled 'Ledger Lines'.
- Piano Layout:** Shows a piano keyboard with the notes C, D, E, F, G, A, and B labeled on the keys. The note C is labeled 'Middle-C' and is shown on the first line of the staff. The notes D, E, F, G, A, and B are shown on the second, third, fourth, fifth, and first lines of the staff, respectively. The notes C, D, E, F, G, A, and B are also shown on the ledger lines above the staff, labeled 'Ledger Lines'.
- Piano's 'Middle-C' Note (C4):** A label pointing to the C4 key on the piano keyboard.

The diagram also includes a list of notes and their corresponding piano keys:

Note	Piano Key
C	1
D	2
E	3
F	4
G	5
A	6
B	7

Color-Coded Fretboard Layout

Fret #:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
1	E F#	F# Gb	G	G# Ab	A	A# Bb	B	C	C# Db	D	D# Eb	E	F	F# Gb	G	G# Ab	A	
2	A	A# Bb	B	C	C# Db	D	D# Eb	E	F	F# Gb	G	G# Ab	A	A# Bb	B	C	C# Db	D
3	D	D# Eb	E	F	F# Gb	G	G# Ab	A	A# Bb	B	C	C# Db	D	D# Eb	E	F	F# Gb	G
4	G	G# Ab	A	A# Bb	B	C	C# Db	D	D# Eb	E	F	F# Gb	G	G# Ab	A	A# Bb	B	C

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*Print another copy of this for free at the “Free Extras” link at **www.fretboard-toolbox.com!***



Middle C on a Piano

Keys of G Major and E minor (1 sharp)

Complete Mandolin E-Book

Chord Names and Roman Numerals: Major / relative minor	Use notes from these columns to build any chords I- <i>bVII</i> from the key of G Major, and any chords i-VII from the key of E minor.											
	1		2	<i>b3</i>	3	4		5		6	<i>b7</i>	7
G MAJOR (G) I / III	<u>G</u>		<u>A</u>	<i>Bb</i>	<u>B</u>	C		<u>D</u>		<u>E</u>	<i>F</i>	F#
A minor (Am) ii / iv	A			C	<i>C#</i>			E			G	
B minor (Bm) iii / v	B			D	<i>D#</i>			F#			A	
C MAJOR (C) IV / VI	C			<i>Eb</i>	E			G			<i>Bb</i>	
D MAJOR (D) V / VII	D				F#			A			C	
E minor (Em) vi / i	<u>E</u>			G	<i>G#</i>			B			D	
F MAJOR (F) <i>bVII</i> / <i>bII</i>	<i>F</i>				A			C			<i>Eb</i>	

Chord Jig

Chord Type: Use notes in columns:

Major-----1, 3, 5
e.g. G Major-----G, B, D
e.g. E Major-----E, G#, B

7, dom7-----1, 3, 5, *b7*
e.g. D7-----D, F#, A, C
e.g. B7-----B, D#, F#, A

minor-----1, *b3*, 5
e.g. Bm-----B, D, F#
e.g. Cm-----C, *Eb*, G

min7, m7-----1, *b3*, 5, *b7*
e.g. Am7-----A, C, E, G
e.g. Em7-----E, G, B, D

Some G Major Chord Progressions

I-V-I-----G-D-G
I-IV-V-----G-C-D
I-V-IV-----G-D-C
I-vi-IV-V-----G-Em-C-D
I-vi-ii-V-----G-Em-Am-D
I-ii-IV-V-----G-Am-C-D
V-IV-I-----D-C-G

More G Major Chord Progressions

I-iii-ii-V-----G-Bm-Am-D
ii-V-I-----Am-D-G
I-*bVII*-IV-V-----G-F-C-D
I-II-IV-V-----G-A-C-D
I-III-IV-iv-----G-B-C-Cm
I-III7-VI7-II7-V7-----G-B7-E7-A7-D7

Some E minor Chord Progressions

i-v-i-----Em-Bm-Em
i-VII-v-----Em-D-Bm
i-VII-i-----Em-D-Em
i-V-i-----Em-B-Em
i-iv-V-----Em-Am-B
i-VII-VI-V-----Em-D-C-B
i-iv-VI-V-----Em-Am-C-B

Standard Fretboard Jig - (see page 3 to find any notes not shown below)

Fret #:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	<u>E</u>	<i>F</i>	F#	<u>G</u>		<u>A</u>	<i>Bb</i>	<u>B</u>	C		<u>D</u>		<u>E</u>	<i>F</i>	F#	<u>G</u>	<u>A</u>
2	<u>A</u>	<i>Bb</i>	<u>B</u>	C		<u>D</u>		<u>E</u>	<i>F</i>	F#	<u>G</u>		<u>A</u>	<i>Bb</i>	<u>B</u>	C	<u>D</u>
3	<u>D</u>		<u>E</u>	<i>F</i>	F#	<u>G</u>		<u>A</u>	<i>Bb</i>	<u>B</u>	C		<u>D</u>		<u>E</u>	<i>F</i>	F#
4	<u>G</u>		<u>A</u>	<i>Bb</i>	<u>B</u>	C		<u>D</u>		<u>E</u>	<i>F</i>	F#	<u>G</u>		<u>A</u>	<i>Bb</i>	<u>B</u>

G Major & E natural minor scales: White boxes
G Major & E minor pentatonic scales: Underlined
b3 (Bb) and b7 (F) notes from G Major: Italicized

Major Roots: For songs in G Major

G

Minor Roots: For songs in E minor

E

G Blues (1 sharp)

Complete Mandolin E-Book

Chord Names and Roman Numerals for the key of G Major	Use notes from these columns to build any chords I-b VII in the key of G Major.											
	1	2	b3	3	4	b5	5	6	b7	7		
G MAJOR (G) I	<u>G</u>	A	Bb	<u>B</u>	C	Db *	<u>D</u>	E	F	F#		
A minor (Am) ii	A		C				E		G			
Bb MAJOR (Bb) bIII	Bb			D			F		Ab			
B minor (Bm) iii	B		D				F#		A			
C MAJOR (C) IV	C			E			G		Bb			
D MAJOR (D) V	D			F#			A		C			
E minor (Em) vi	E		G				B		D			
F MAJOR (F) bVII	F			A			C		Eb			

Chord Jig

Chord Type Use notes from columns

Major-----1,3,5
e.g. G Major-----G,B,D
e.g. Bb Major-----Bb,D,F

7, dom7-----1,3,5,b7
e.g. C7-----C,E,G,Bb
e.g. D7-----D,F#,A,C

Scale Type Use notes from columns

Major-----1,2,3,4,5,6,7
Major pent.-----1,2,3,5,6
minor pent.-----1,b3,4,5,b7
Blues-----1,b3,4,b5,5,b7

Simple 12 Bar Blues in G

I(7)-----I(7)-----I(7)-----I(7)
IV(7)-----IV(7)-----I(7)-----I(7)
V(7)-----IV(7)-----I(7)-----V(7)

G(7)-----G(7)-----G(7)-----G(7)
C(7)-----C(7)-----G(7)-----G(7)
D(7)-----C(7)-----G(7)-----D(7)

Quick-change 12 Bar Blues in G

I(7)-----IV(7)-----I(7)-----I(7)
IV(7)-----IV(7)-----I(7)-----I(7)
V(7)-----IV(7)-----I(7)-----V(7)

G(7)-----C(7)-----G(7)-----G(7)
C(7)-----C(7)-----G(7)-----G(7)
D(7)-----C(7)-----G(7)-----D(7)

Some G Major Rock Progressions

V-IV-I-----D-C-G
I-bIII-I-----G-Bb-G
I-bIII-IV-----G-Bb-C
I-bVII-I-----G-F-G
I-bVII-IV-----G-F-C
I-bIII-bVII-IV-----G-Bb-F-C
I-V-IV-bIII-----G-D-C-Bb

Blues Fretboard Jig ~ (see page 6 to find any notes not shown below)

Fret #:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	<u>E</u>	F	F#	<u>G</u>	A	Bb	<u>B</u>	C	*	<u>D</u>	E	F	F#	<u>G</u>	A		
2	A	Bb	<u>B</u>	C	*	<u>D</u>	E	F	F#	<u>G</u>	A	Bb	<u>B</u>	C	*	<u>D</u>	
3	D	E	F	F#	<u>G</u>	A	Bb	<u>B</u>	C	*	<u>D</u>	E	F	F#	<u>G</u>	A	
4	<u>G</u>	A	Bb	<u>B</u>	C	*	<u>D</u>	E	F	F#	<u>G</u>	A	Bb	<u>B</u>	C		

Complete G Major scale: Notes in bold font
G Major pentatonic scale: Underlined notes
G minor pentatonic scale: Notes in white boxes

Major Roots: For songs in G Major

Blues note: add to minor pentatonic (Db)

G

*

Chord Toolbox Explained

Complete Mandolin E-Book

Building Major Scales- *These ideas take time to learn, but they are essential to a meaningful working knowledge of music!*

Knowing how to build Major scales is essential because all chords and all other soloing scales are built by manipulating Major scales. **All Major scales are built using the following formula: whole-step, whole-step, half-step, whole-step, whole-step, whole-step, and then a half-step back to the same note you started on, just an "octave" above.** A "whole-step" means you have to skip one fret in between the two notes, while a "half-step" means to play the note right next to the fret you're on. You can see how a G Major scale is built the "G" string by looking at the graphic below. All of the notes from the key of G Major are shown in white boxes in the "Notes" row. (The notes G, A, B, C, D, E, and F# make up the G Major scale).

Fret #	0	1	2	3	4	5	6	7	8	9	10	11	12
Major Scale	1		2		3	4		5		6		7	8(1)
Notes	G	<i>G#</i> <i>Ab</i>	A	<i>A#</i> <i>Bb</i>	B	C	<i>C#</i> <i>Db</i>	D	<i>D#</i> <i>Eb</i>	E	<i>E#</i> <i>F</i>	F#	G
		Whole-step	Whole-step	Half-step	Whole-step	Whole-step	Whole-step	Whole-step	Whole-step	Half-step			

The "Fret#" row above represents all of the possible frets from the "open" G note ("open" means played without any fret), all the way up to the next G note on the 12th fret. The numbers 1-7 in the "Major Scale" row above represent the seven notes that make up a Major scale. Notice that the notes in the "1" and the "8(1)" columns are the same note, it's just that the G note in the "8(1)" column is higher-pitched (an "octave" above the G note in the "1" column). On this page, all of the notes from the Major key are written in **bold** letters inside white boxes. You can see the Major scale for every key on the "Major Scale Jig" on the next page.

Chord Building- Chords are just groups of notes played at the same time, so it's important to know which notes you need to build any chords you want to play. Several of these "Chord Formulas" are shown below, with lots more shown on the following page. Chords can be made entirely of notes found within the Major scale of the chord (Major scale notes are in **bold**), but you often have to make one or more notes "flat" (b) or "sharp" (#). Any notes outside the key of G Major are *italicized* below. Any note with a "b" (flat) in the chord formula is played one fret lower-pitched (a half-step lower). Notes with a "#" (sharp) in the chord formula are played one fret higher-pitched (a half-step higher). **Whether you flatten or sharpen a note, the letter of the note always stays the same!** As shown below, since the "3" note in the G Major scale is a B note, the "b3" note needed for a G minor chord (chord formula-1, b3, 5) is a Bb note. (A# notes are on the same frets as Bb notes, but the "3" note in the key of G Major has to include the letter "B", as in "B" or "Bb". The "7" note in G Major is an F# note, so the "b7" note needed for a chord like G7 (1, 3, 5, b7) is an F note. For a G augmented chord (1, 3, #5), since G Major's "5" note is a D, you'd just change any D note to a D# (*not "Eb"*).

Major Scale		1	b2	2 (9)	b3	3	4 (11)	b5	5	#5	6 (13) bb7	b7	7	
Chord Type	Chord Formula	G	<i>G#</i> <i>Ab</i>	A	<i>A#</i> <i>Bb</i>	B	C	<i>C#</i> <i>Db</i>	D	<i>D#</i> <i>Eb</i>	E	<i>F</i> <i>E#</i>	F#	Use Notes:
G Major	1,3,5	G				B			D					G,B,D
GMaj7 (GM7)	1,3,5,7	G				B			D				F#	G,B,D,F#
G7 (Gdom7)	1,3,5,b7	G				B			D			<i>F</i>		G,B,D,F
Gadd9	1,9,3,5	G		A		B			D					G,A,B,D
Gsus4	1,4,5	G					C		D					G,C,D
G5	1,5	G							D					G,D
G6	1,3,5,6	G				B			D		E			G,B,D,E
Gaug (G+)	1,3,#5	G				B				<i>D#</i>				G,B,D#
G minor	1,b3,5	G			<i>Bb</i>				D					G,Bb,D
Gm7	1,b3,5,b7	G			<i>Bb</i>				D			<i>F</i>		G,Bb,D,F
Gm7b5	1,b3,b5,b7	G			<i>Bb</i>			<i>Db</i>				<i>F</i>		G,Bb,Db,F
Gm7#5	1,b3,#5,b7	G			<i>Bb</i>				<i>D#</i>			<i>F</i>		G,Bb,D#,F
Gdim7	1,b3,b5,bb7	G			<i>Bb</i>			<i>Db</i>			<i>Fb</i>			G,Bb,Db,Fb

Chord Toolbox

Complete Mandolin E-Book

Major Scale Jig~ This shows how to build each of the Major scales. The Chord Builder boxes at the bottom show the various notes you'd need to use and/or modify from this Major Scale Jig to make just about any chord you want.

1	2	3	4	5	6	7
	9		11		13	
A	B	C#	D	E	F#	G#
A#	B#	C##	D#	E#	F##	G##
Bb	C	D	Eb	F	G	A
B	C#	D#	E	F#	G#	A#
Cb	Db	Eb	Fb	Gb	Ab	Bb
B#	C##	D##	E#	F##	G##	A##
C	D	E	F	G	A	B

1	2	3	4	5	6	7
	9		11		13	
C#	D#	E#	F#	G#	A#	B#
Db	Eb	F	Gb	Ab	Bb	C
D	E	F#	G	A	B	C#
D#	E#	F##	G#	A#	B#	C##
Eb	F	G	Ab	Bb	C	D
E	F#	G#	A	B	C#	D#
Fb	Gb	Ab	Bbb	Cb	Db	Eb

1	2	3	4	5	6	7
	9		11		13	
E#	F##	G##	A#	B#	C##	D##
F	G	A	Bb	C	D	E
F#	G#	A#	B	C#	D#	E#
Gb	Ab	Bb	Cb	Db	Eb	F
G	A	B	C	D	E	F#
G#	A#	B#	C#	D#	E#	F##
Ab	Bb	C	Db	Eb	F	G

Chord Builder~ All chords are built by using and/or modifying notes from the Major scale of the desired chord. The three boxes below give the "chord formulas" for lots of different Major, minor, and diminished chords. All notes taken directly from the Major scale of the chord are shown in **bold**. Any notes that must be modified from the Major scale (note that have to be flattened or sharpened) are *italicized*. All the different ways to play each chord exist because they're just different ways to place your fingers so only the notes needed for the chord are being played.

Lots of Major Chords

Notes:	1	2	3	4	5	6	7
		9		11		13	
Maj:	1		3		5		
Dom7:	1		3		5		b7
Maj7:	1		3		5		7
add2(9):	1	2	3		5		
sus2:	1	2			5		
7sus2:	1	2			5		b7
add4(11):	1		3	4	5		
sus4:	1			4	5		
7sus4:	1			4	5		b7
sus2sus4:	1	2		4	5		
7b5 (7-5):	1		3		b5		b7
5:	1				5		
aug (+):	1		3		#5		
7#5 (7+5):	1		3		#5		b7

Even more Major Chords

Notes:	1	2	3	4	5	6	7
		9		11		13	
6:	1		3		5	6	
6add9:	1	9	3		5	6	
9:	1	9	3		5		b7
Maj9:	1	9	3		5		7
7b9:	1	b9	3		5		b7
7#9:	1	#9	3		5		b7
9b5:	1	9	3		b5		b7
11:	1	9	3	11	5		b7
Maj11:	1	9	3	11	5		7
13:	1	9	3		5	13	b7
Maj13:	1	9	3		5	13	7
Slash Chords: e.g. G/B- play "G" chord and add a "B" note as the bass (lowest) tone.							

minor/diminished chords

Notes:	1	2	3	4	5	6	7
		9		11		13	
min:	1		b3		5		
min7:	1		b3		5		b7
min/Maj7:	1		b3		5		7
m7b5:	1		b3		b5		b7
m7#5:	1		b3		#5		b7
min6:	1		b3		5	6	
min6add9:	1	9	b3		5	6	
min9:	1	9	b3		5		b7
min/Maj9:	1	9	b3		5		7
min11:	1	9	b3	11	5		b7
min13:	1	9	b3	11	5	13	b7
dim:	1		b3		b5		
1/2dim:	1		b3		b5		b7
dim7:	1		b3		b5		bb7

Fretboard Toolboxes are Periodic Tables of the Musical Elements!

Learn to read this book and you'll understand these critical ideas like a pro...

- ✓ The chords that make up songs in all the Major, minor, & Blues keys.
- ✓ The Roman numerals for each chord, in each key, for easy transposing.
- ✓ The notes that make up virtually any chords you want to play.
- ✓ Complete Major, minor, pentatonic, and blues scales in every key.
- ✓ How to visualize all of this anywhere on the fretboard!

For the first time, you can now see the chords and scales for each Major/relative minor AND corresponding Blues key side-by-side!

- Use this book's Chord Jigs to see how chords are built, and how they go together to make songs in just about any music style that you like to play!
- Use the Fretboard Layout to find any note, on any string, anywhere on the fretboard, in an instant~ learn your fretboard like the back of your hand.
- Use the Fretboard Jig to find chord patterns all over your fretboard and use it to learn how to make great Major, minor, & pentatonic solos in any key.
- Use the Chord Toolbox to see how any chord is built, from simple "G Major" and "E minor" chords, to chords as complex as "F#m7b5" and "Ebsus4".
- Fretboard Toolbox Print Editions are printed to last on heavy cardstock, and are spiral-bound so they stay open, unlike way too many other music books.
- Fretboard Toolboxes are available in an ever-growing library of print and E-Book editions for guitar, mandolin, ukuleles, 5-string banjo, C-G-D-A instruments (mandola, tenor banjo, tenor guitar, etc.), piano, and more!

To learn more about Fretboard Toolboxes, go to www.fretboard-toolbox.com.

Be sure to check out tons of Toolbox explanations on YouTube:
www.youtube.com/fretboardtoolbox.