

FRETBOARD TOOLBOX 

# THEORY BY HAND

See how to build:

-Major & minor scales

-Major & minor  
pentatonic scales

-Blues scales

-Notes that make up  
common chords

-Chords that make up  
Major and minor keys

\*all on one hand!

Free  
Preview  
Pages!

by Scott Sharp



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Theory by Hand ~ Fretboard Toolbox



Click any page below learn more about each of the 8 Big Ideas. Take it one idea at a time, focusing on the Major key ideas before you try the blues or minor keys.

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# Big Ideas Overview

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Eight Big Ideas in Music - see p. 28 for ways to practice these ideas!

-B1 (Big Idea #1) Building Major Scales-

~Major Scales are THE building blocks of Western Music. They make up the melodies of countless songs, and the notes sound wonderful together to people all over the world. Learning Major scales is the first step towards seeing *the music theory that matters most!*

-B2 (Big Idea #2) Building Major Pentatonic Scales-

~Major pentatonic scales use only 5 of the 7 notes from each Major scale, but they are 5 notes that happen to sound **outstanding** together. Pentatonic scales are a great place to start soloing, because you can make some amazing solos *using only those notes!*

-B3 (Big Idea #3) Building Common Chords-

~When instructors teach you chords, they most often show you where to put your fingers, but they omit *why your fingers go there!* When you can see the notes that make up chords, and where they're found on a fretboard, you can **play chords on just about anything!**

-B4 (Big Idea #4) Chords That Make Up Major Keys-

~Each key is made of 6 main chords (diatonic chords). Knowing those chords in common keys lets me frequently figure out songs "on the fly", a big goal since I first started playing. Plus, when songs have "weird" chords outside of a given key, *I know new rules to break!*

-B5 (Big Idea #5) Building the Blues Scales-

~I play lots of bluegrass, country, and folk music, so learning the blues scales has taught me the "blues notes" in every key, which lets me add "bluesy" flavors any time I want.

-B6 (Big Idea #6) Finding the Most Popular Songs-

~In an analysis of over 30 million songs on Spotify, only about 1/3 were in minor keys\*, so focus on learning common Major key chords & scales first. However, minor key songs have a **special, darker sound**, and you must know minor scales to solo with them!

\*<https://insights.spotify.com/us/2015/05/06/most-popular-keys-on-spotify/>

-B7 (Big Idea #7) Building Minor Pentatonic Scales-

~Minor pentatonic scales are doubly useful because you can use them to solo over songs in minor *OR MAJOR* keys. Minor pentatonic scales are the foundation of blues scales!

-B8 (Big Idea #8) Chords That Make Up Minor Keys-

~Just like with Major keys, learning the chords that make up minor keys allows you to predict chords that will be played in minor key songs, which helps you figure out songs "on the fly". Playing songs in minor keys gives you a whole new dimension to your playing!

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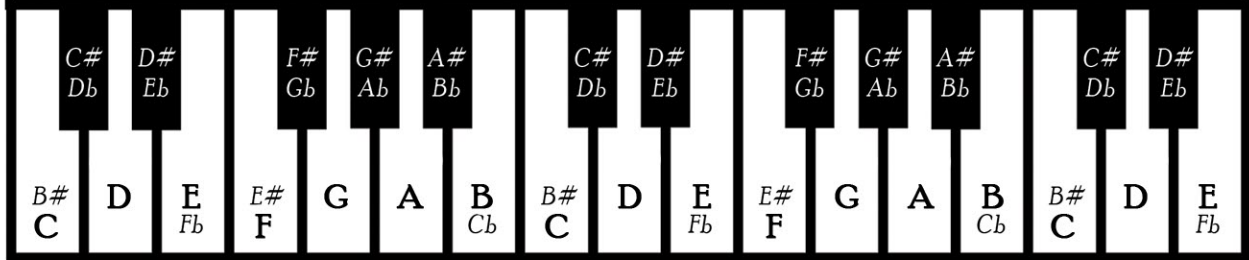


# (B1) Building Major Scales

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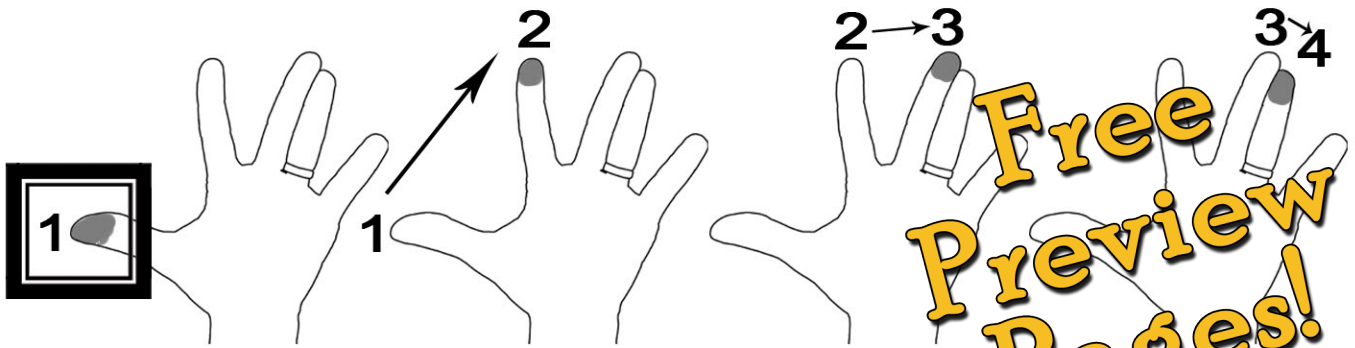
## Chromatic Keyboard Layout - (multiple names for each piano key)



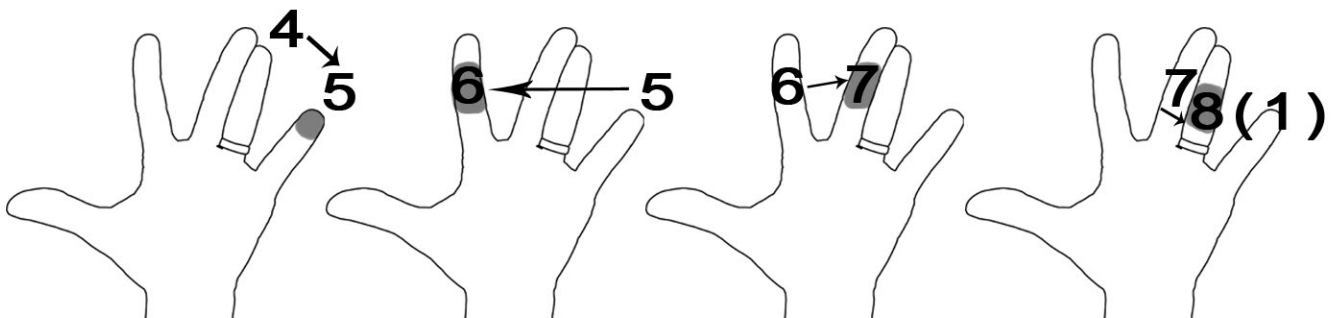
### IMPORTANT POINTS:

1. One big reason Major scale notes matter is because they make up the melodies of countless songs!
2. Each note letter can only be used once per Major Scale: e.g. C Major = C, D, E, F, G, A, B.
3. Intervals: Whole-Steps skip a piano key or fret, and Half-Steps use the next door piano key or fret.
4. Memorize Major Scale Intervals: Whole - Whole - Half - Whole - Whole - Whole - Half
5. Major scale notes are the notes in white boxes on all Fretboard Toolbox Complete Editions.

1 Major Root/Key   1-2 Whole-Step   2-3 Whole-Step   3-4 Half-Step



4-5 Whole-Step   5-6 Whole-Step   6-7 Whole-Step   7-8(1) Half-Step



Major key root note boxes as shown in Fretboard Toolboxes

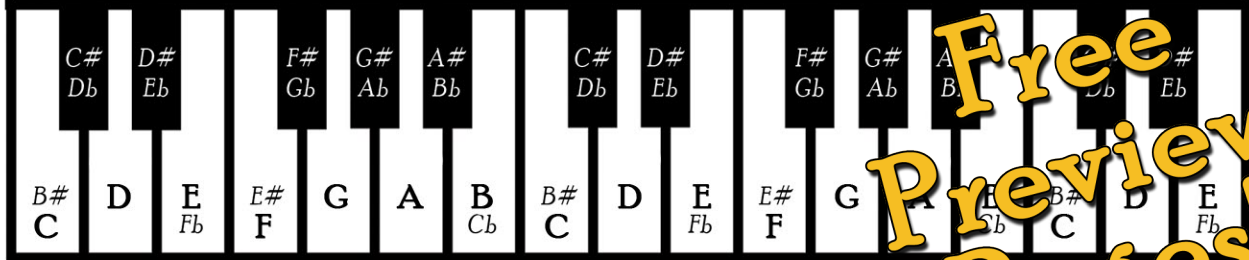


# (B1) All 14 Major Key Scales

Theory by Hand - Fretboard Toolbox



## Chromatic Keyboard Layout - (multiple names for each piano key)



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Important Points: (Once you're ready, quiz yourself on page 20)

1. Start by memorizing the notes of some of the most common Major scales first. (Shown with "→").
2. The 1 note is the root note or key of a song, and the 8 note is an "octave" above the 1 note.
3. After the 7 note, Major scales go back to the 8 note, which is the same as the 1 note, an octave up.
4. Throughout this book, the column "pg #" tells you which Fretboard Toolbox Complete Edition page you'd use to see these ideas- there's editions for guitar, mandolin, banjo, ukuleles, bass, & more!

(Root/Key)	Whole	Whole	Half	Whole	Whole	Whole	Whole	Half	pg #
→ <b>G</b>	A	B	C	D	E	F#		9	
→ <b>Ab</b>	Bb	C	Db	Eb	F	G		11	
→ <b>A</b>	B	C#	D	E	F#	G#		13	
<b>Bb</b>	C	D	Eb	F	G	A		15	
<b>B</b>	C#	D#	E	F#	G#	A#		17	
→ <b>C</b>	D	E	F	G	A	B		19	
<b>C#</b>	D#	E#	F#	G#	A#	B#		21	
<b>Db</b>	Eb	F	Gb	Ab	Bb	C		23	
→ <b>D</b>	E	F#	G	A	B	C#		25	
<b>Eb</b>	F	G	Ab	Bb	C	D		27	
→ <b>E</b>	F#	G#	A	B	C#	D#		29	
→ <b>F</b>	G	A	Bb	C	D	E		31	
<b>F#</b>	G#	A#	B	C#	D#	E#		33	
<b>Gb</b>	Ab	Bb	Cb	Db	Eb	F		35	



Major key root note boxes as shown in Fretboard Toolboxes

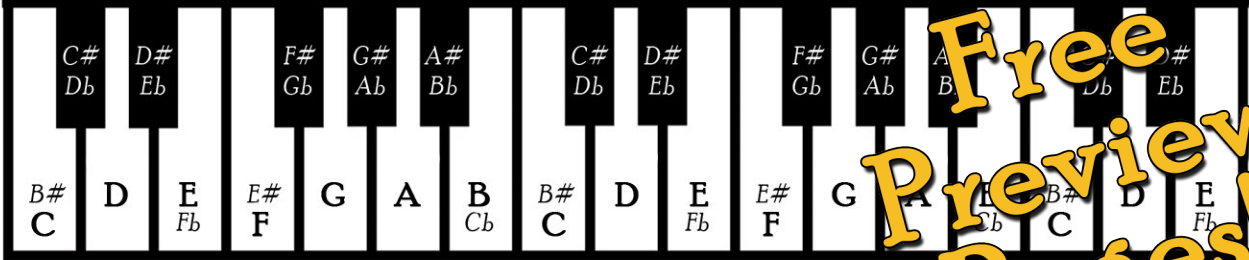


# (B1) Building Major Scales Worksheet

Theory by Hand - Fretboard Toolbox



## Chromatic Keyboard Layout - (multiple names for each piano key)



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Quiz Yourself: (Use page 5 to check your answers)

1. Major scales are made of the following notes: 1, 2, 3, 4, 5, 6, and 7.
2. In Solfège, this is Do (1), Re (2), Mi (3), Fa (4), Sol (5), La (6), and Ti (7).
3. Start with memorizing the most common Major scales first - the ones shown with this symbol "→".
4. Pay close attention to the the intervals between the notes (Whole-Steps or Half-Steps).
5. Memorizing common scales will pay off immensely for figuring out solos and melodies!

(Root/Key)	Whole	Whole	Half	Whole	Whole	Whole	Whole	Half	pg #
→ G									9
Ab									11
→ A									13
Bb									15
B									17
→ C									19
C#									21
Db									23
→ D									25
Eb									27
→ E									29
→ F									31
F#									33
Gb									35



Major key root note boxes as shown in Fretboard Toolboxes



# Practicing the Big Ideas

Theory by Hand ~ Fretboard Toolbox



## -B1 (Big Idea #1) Building Major Scales-

~Fretboard Toolbox Complete Editions show Major scale notes of all keys in white boxes, and where they're found all over the fretboard. To download over 1/4 of a Fretboard Toolbox for free, go to the Fretboard Toolbox website <https://www.fretboard-toolbox.com> > **Pick Your Instrument**. Scroll down to the Complete Editions, and then click "Look Inside!"

~Once you can play some common Major scales, like G, A, C, D, E, or F Major, go to **Tracks & Tab > 200 Free Jam Tracks** on the website to practice soloing with free jam tracks.

~To see how these notes make common melodies, try the **Picking Melodies E-Book**.

## -B2 (Big Idea #2) Building Major Pentatonic Scales-

~After you can play some common Major pentatonic scales, try improvising with them using the same **free jam tracks** listed above. There are well over 200 free tracks there!

## -B3 (Big Idea #3) Building Common Chords-

~Once you understand a bit about how chords are built, head over to the Fretboard Toolbox YouTube Channel (<https://www.youtube.com/fretboardtoolbox>) and find the playlist with your instrument (guitar, mandolin, 5-string banjo, soprano, concert, tenor ukulele, baritone ukulele, bass, tenor guitar/banjo, or piano) to see how Toolboxes help you better understand chords.

## -B4 (Big Idea #4) Chords That Make Up Major Keys-

~When you start seeing the chords that make up the most common Major keys, try playing along with them using my free jam tracks. Pay close attention to the Roman numerals of each chord, and learn to think of songs in terms of numbers like I-IV-V.

## -B5 (Big Idea #5) Building Blues Scales-

~Once you see how blues scales are made, try soloing with the blues **free jam tracks**. If you're not sure where the notes are found, try a Fretboard Toolbox Complete Edition!

## -B6 (Big Idea #6) Building Natural Minor Scales-

~The **free jam tracks** also have lots of minor scale chord progressions, played with the guitar, in six of the most common minor keys. This makes a great improvising laboratory!

## -B7 (Big Idea #7) Building Minor Pentatonic Scales-

~Try improvising over the **free minor key jam tracks** using minor pentatonic scales (underlined notes in Fretboard Toolboxes), and note how nice these scales are for soloing.

## -B8 (Big Idea #8) Chords That Make Up Minor Keys-

~When you start seeing the chords that make up minor keys, try playing along with minor key chord progressions found on the **free jam tracks** page.

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