

Chords and Voicings Made Simple

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I. Intervals

An **interval** is the space between two notes.

- intervals of a 2nd, 3rd, 6th, and 7th can be diminished, minor, major, or augmented
- intervals of a unison, 4th, 5th, and octave can be diminished, perfect, or augmented

melodic interval = two notes heard separately one after another (e.g. up or down a minor 3rd)

harmonic interval = two notes heard together (e.g. an interval of a major 6th)

simple intervals = smaller than an octave

compound intervals = larger than an octave

- compound intervals can be thought of as the corresponding simple interval plus an octave
- e.g. major 9th = major 2nd + octave
- e.g. minor 13th = min 6th + octave

	Interval		# of Frets*
diminished 2nd	unison		0
	minor 2nd	augmented unison	1
diminished 3rd	major 2nd		2
	minor 3rd	augmented 2nd	3
diminished 4th	major 3rd		4
	perfect 4th	augmented 3rd	5
diminished fifth	tritone	augmented fourth	6
diminished 6th	perfect 5th		7
	minor 6th	augmented 5th	8
diminished 7th	major 6th		9
	minor 7th	augmented 6th	10
diminished octave	major 7th		11
	octave	augmented 7th	12

*these are the number of frets up and down a single string

unison dim 2nd

A musical staff in treble clef with a key signature of one flat. The first measure contains two whole notes on the same pitch (E4), labeled 'unison'. The second measure contains a whole note on E4 and a whole note on D4 (one semitone below), labeled 'dim 2nd'.

min 2nd aug unison

A musical staff in treble clef with a key signature of one flat. The first measure contains a whole note on E4 and a whole note on F4 (one semitone above), labeled 'min 2nd'. The second measure contains a whole note on E4 and a whole note on E#4 (one semitone above), labeled 'aug unison'.

maj 2nd dim 3rd

A musical staff in treble clef with a key signature of one flat. The first measure contains a whole note on E4 and a whole note on F#4 (two semitones above), labeled 'maj 2nd'. The second measure contains a whole note on E4 and a whole note on C4 (three semitones below), labeled 'dim 3rd'.

min 3rd aug 2nd

A musical staff in treble clef with a key signature of one flat. The first measure contains a whole note on E4 and a whole note on G4 (two semitones above), labeled 'min 3rd'. The second measure contains a whole note on E4 and a whole note on F#4 (two semitones above), labeled 'aug 2nd'.

maj 3rd dim 4th

A musical staff in treble clef with a key signature of one flat. The first measure contains a whole note on E4 and a whole note on G#4 (three semitones above), labeled 'maj 3rd'. The second measure contains a whole note on E4 and a whole note on B4 (four semitones above), labeled 'dim 4th'.

per 4th aug 3rd

A musical staff in treble clef with a key signature of one flat. The first measure contains a whole note on E4 and a whole note on A4 (four semitones above), labeled 'per 4th'. The second measure contains a whole note on E4 and a whole note on B#4 (five semitones above), labeled 'aug 3rd'.

aug 4th dim 5th

A musical staff in treble clef with a key signature of one flat. The first measure contains a whole note on E4 and a whole note on C#5 (six semitones above), labeled 'aug 4th'. The second measure contains a whole note on E4 and a whole note on B4 (four semitones above), labeled 'dim 5th'.



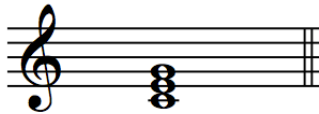
II. Chord Basics

Triads

Augmented = Root - maj 3rd - aug 5th



Major = Root - maj 3rd - per 5th



Minor = Root - min 3rd - per 5th

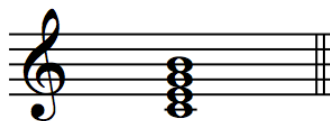


Diminished = Root - min 3rd - dim 5th



Seventh Chords

Major 7 = Root - maj 3rd - per 5th - maj 7th



Dominant 7 = Root - maj 3rd - per 5th - min 7th



Minor 7 = Root - min 3rd - per 5th - min 7th



Half-diminished 7 (minor 7b5) = Root - min 3rd - dim 5th - min 7th



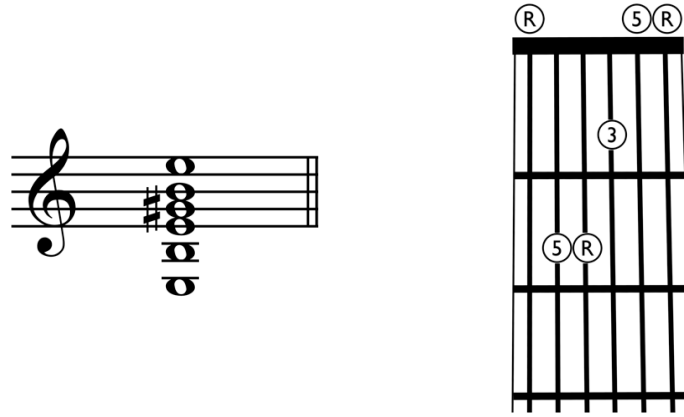
Fully-diminished 7 = Root - min 3rd - dim 5th - dim 7th



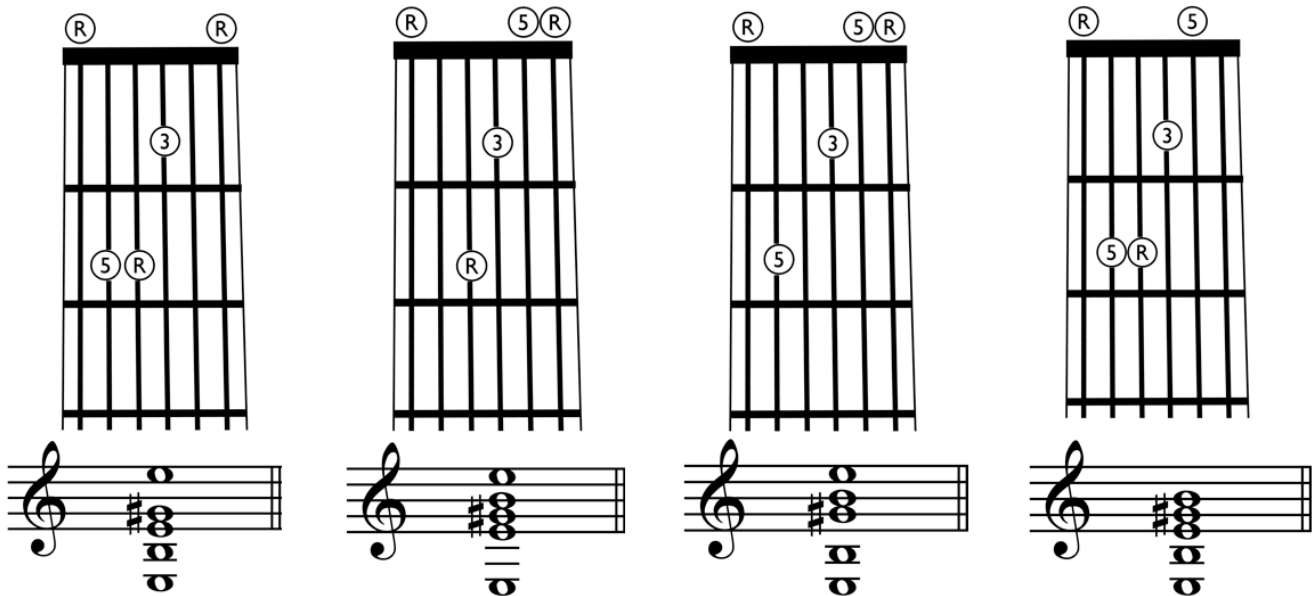
- Extended chords beyond the 7th (9th, 11th, and 13th) are voiced with the core root, 3rd, 5th, and 7th below the extended note
- The 5th is commonly omitted in all types of chords, but most commonly in the extended chords

III. Voicings

First Position E Major Chord Shape



Possible 5 Note Voicings



Possible 4 Note Voicings

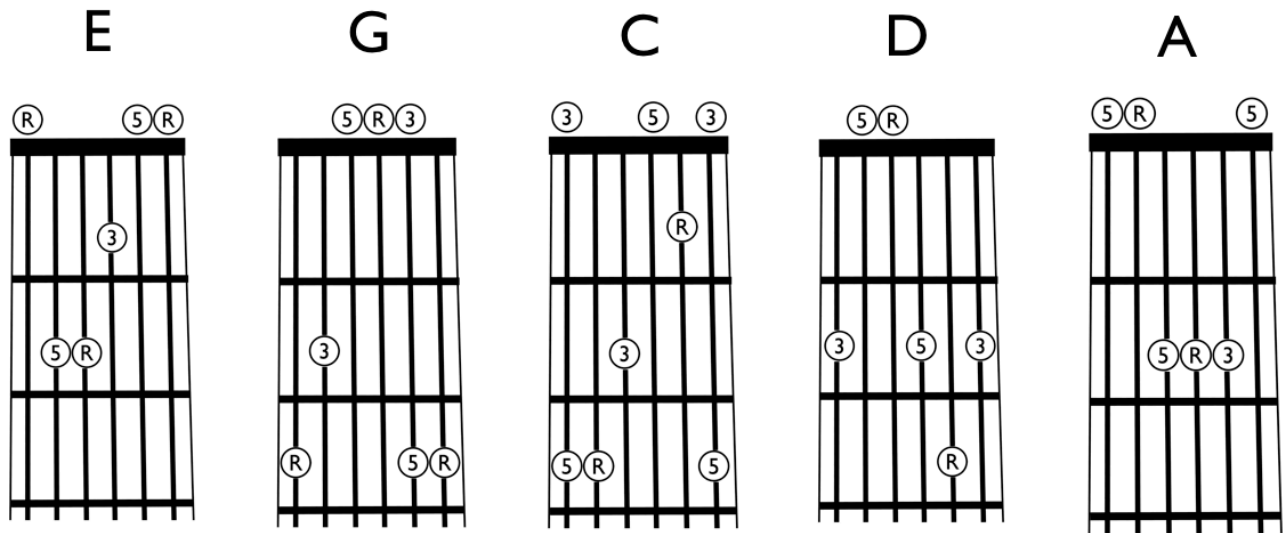
Four guitar fretboard diagrams are shown, each with a corresponding musical notation below it. The diagrams illustrate different 4-note voicings on the fretboard:

- Diagram 1:** Fret 5, strings 1, 2, 3, 4. Fingerings: 5 (string 1), R (string 2), 3 (string 3), R (string 4). Musical notation shows notes G4, A4, B4, C5.
- Diagram 2:** Fret 5, strings 2, 3, 4, 5. Fingerings: R (string 2), 5 (string 3), R (string 4), 3 (string 5). Musical notation shows notes A4, B4, C5, D5.
- Diagram 3:** Fret 5, strings 3, 4, 5, 6. Fingerings: R (string 3), R (string 4), 3 (string 5), R (string 6). Musical notation shows notes B4, C5, D5, E5.
- Diagram 4:** Fret 5, strings 4, 5, 6, 7. Fingerings: R (string 4), 5 (string 5), 3 (string 6), R (string 7). Musical notation shows notes C5, D5, E5, F5.

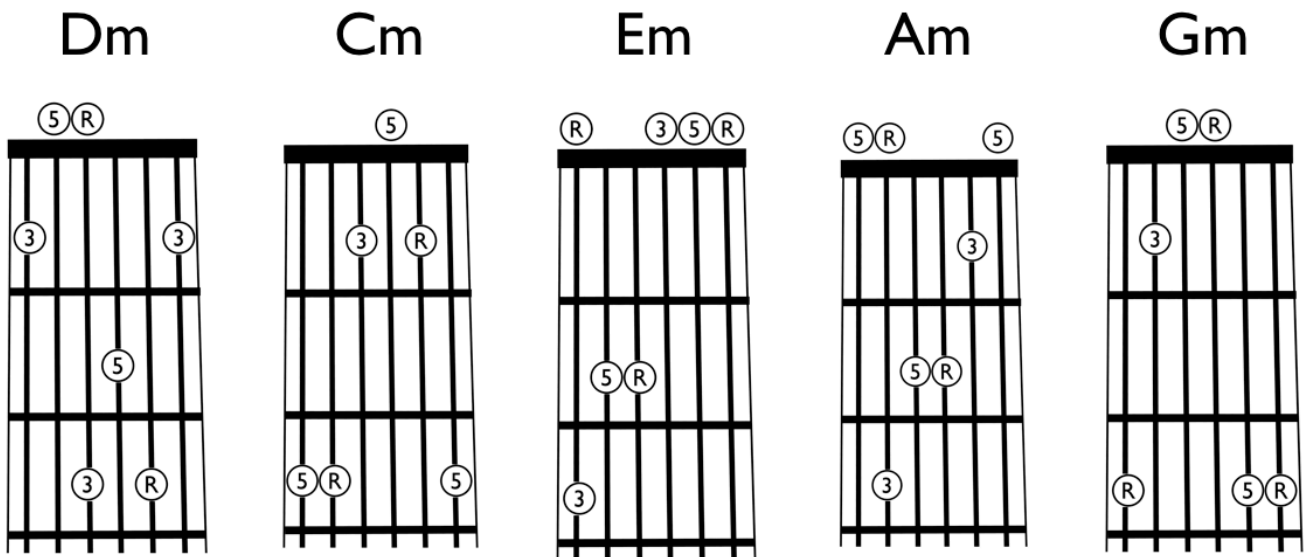
Three guitar fretboard diagrams are shown, each with a corresponding musical notation below it. The diagrams illustrate different 4-note voicings on the fretboard:

- Diagram 5:** Fret 5, strings 1, 2, 4, 5. Fingerings: R (string 1), R (string 2), 3 (string 4), 5 (string 5). Musical notation shows notes G4, A4, C5, D5.
- Diagram 6:** Fret 5, strings 2, 3, 4, 5. Fingerings: R (string 2), 5 (string 3), 3 (string 4), 5 (string 5). Musical notation shows notes A4, B4, C5, D5.
- Diagram 7:** Fret 5, strings 3, 4, 5, 6. Fingerings: R (string 3), 3 (string 4), 5 (string 5), R (string 6). Musical notation shows notes B4, C5, D5, E5.

Major Chord Shapes

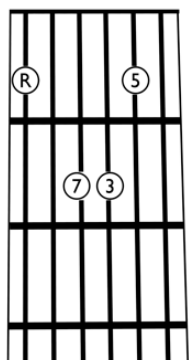


Minor Chord Shapes

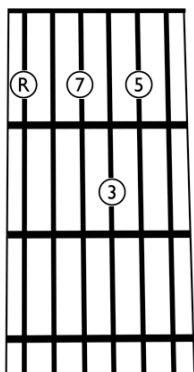


7th Chord Shapes - Root on the 6th String

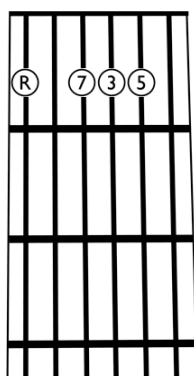
maj 7



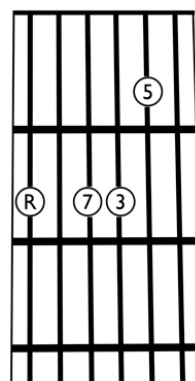
dom 7



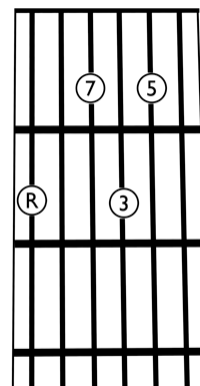
min 7



min 7b5

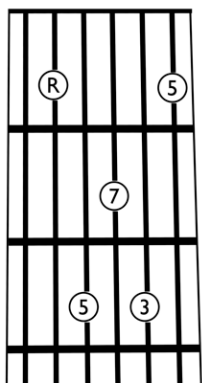


dim 7

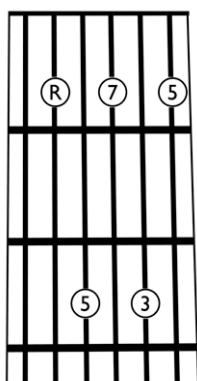


7th Chord Shapes - Root on the 5th String

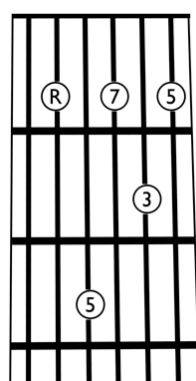
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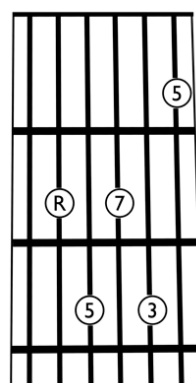
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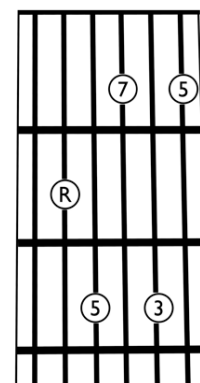
min 7



min 7b5

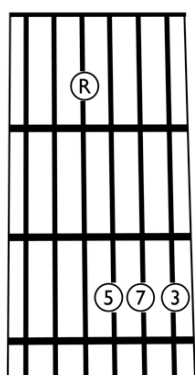


dim 7

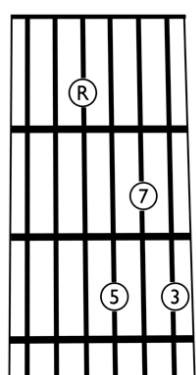


7th Chord Shapes - Root on the 4th String

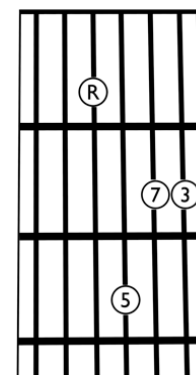
maj 7



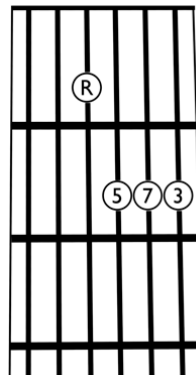
dom 7



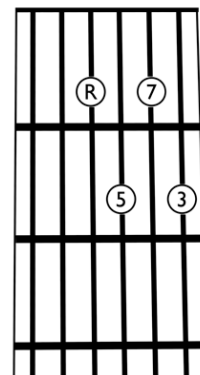
min 7



min 7b5

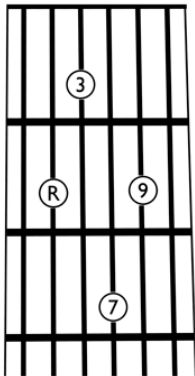


dim 7

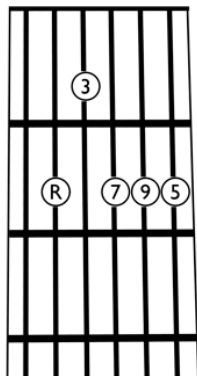


Common Extended 7th Chords Shapes

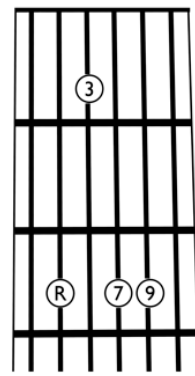
maj 9



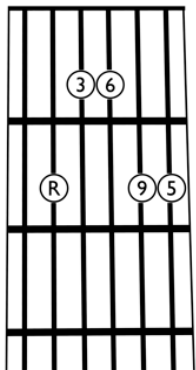
dom 9



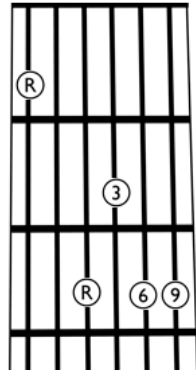
min 9



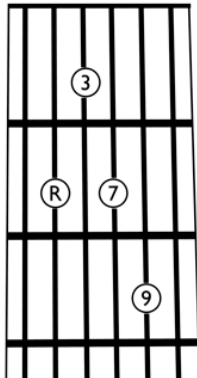
maj 6/9



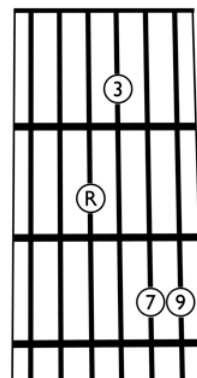
maj 6/9



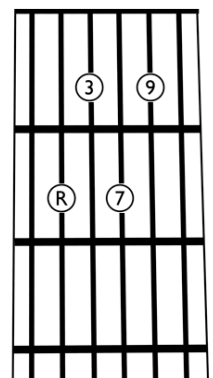
dom 7#9



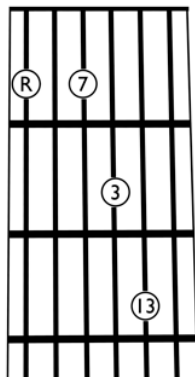
dom 7#9



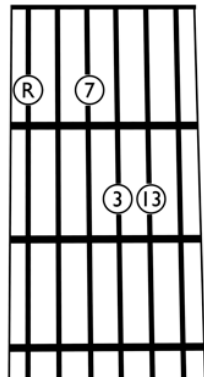
dom 7b9



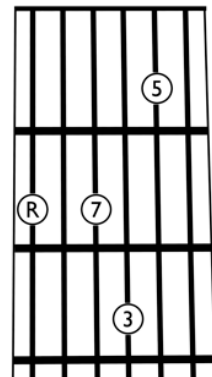
dom 13



dom b13



dom 7b5



IV. Keys

Order of Sharps - F# - C# - G# - D# - A# - E# - B#



Order of Flats - Bb - Eb - Ab - Db - Gb - Cb - Fb



- C major/A minor - no sharps or flats!
- G major/E minor - 1 sharp (F#)
- F major/D minor - 1 flat (Bb)
- D major/B minor - 2 sharps (F# - C#)
- Bb major/G minor - 2 flats (Bb - Eb)
- A major/F# minor - 3 sharps (F# - C# - G#)
- Eb major/C minor - 3 flats (Bb - Eb - Ab)
- E major/C# minor - 4 sharps (F# - C# - G# - D#)
- Ab major/F minor - 4 flats (Bb - Eb - Ab - Db)
- B major/G# minor - 5 sharps (F# - C# - G# - D# - A#)
- Db major/Bb minor - 5 flats (Bb - Eb - Ab - Db - Gb)
- F# major/D# minor - 6 sharps (F# - C# - G# - D# - A# - E#)
- Gb major/Eb minor - 6 flats (Bb - Eb - Ab - Db - Gb - Cb)
- C# major/A# minor - 7 sharps (F# - C# - G# - D# - A# - E# - B#)
- Cb major/Ab minor - 7 flats (Bb - Eb - Ab - Db - Gb - Cb - Fb)

- These have been arranged in the order of increasing number of accidentals (sharps and flats)
- Notice that three pairs overlap (B/Cb, Db/C#, and F#/Gb)

V. Diatonic Chords

Chords in a major key = I - ii - iii - IV - V - vi - vii^o

Chords in a minor key = i - ii^o - IV - iv - V - VII - VII^o

C major = C - Dm - Em - F - G - Am - B^o

A minor = Am - B^o - C - Dm - Em - F - G

G major = G - Am - Bm - C - D - Em - F#^o

E minor = Em - F#^o - G - Am - B - C - D

D major = D - Em - F#m - G - A - Bm - C#^o

B minor = Bm - C#^o - D - Em - F# - G - A

A major = A - Bm - C#m - D - E - F#m - G#^o

F# minor = F#m - G#^o - A - Bm - C# - D - E

E major = E - F#m - G#m - A - B - C#m - D#^o

C# minor = C#m - D#^o - E - F#m - G# - A - B

B major = B - C#m - D#m - E - F# - G#m - A#^o

G# minor = G#m - A#^o - B - C#m - D# - E - F#

F# major = F# - G#m - A#m - B - C# - D#m - E#^o

D# minor = D#m - E#^o - F# - G#m - A# - B - C#

C# major = C# - D#m - E#m - F# - G# - A#m - B#^o

A# minor = A#m - B#^o - C# - D#m - E# - F# - G#

Cb major = Cb - Dbm - Ebm - Fb - Gb - Abm - Bb^o

Ab minor = Abm - Bb^o - Cb - Dbm - Eb - Fb - Gb

Gb major = Gb - Abm - Bbm - Cb - Db - Ebm - F^o

Eb minor = Ebm - F^o - Gb - Abm - Bb - Cb - Db

Db major = Db - Ebm - Fm - Gb - Ab - Bbm - C^o

Bb minor = Bbm - C^o - Db - Ebm - F - Gb - Ab

Ab major = Ab - Bbm - Cm - Db - Eb - Fm - G^o

F minor = Fm - G^o - Ab - Bbm - C - Db - Eb

Eb major = Eb - Fm - Gm - Ab - Bb - Cm - D^o

C minor = Cm - D^o - Eb - Fm - G - Ab - Bb

Bb major = Bb - Cm - Dm - Eb - F - Gm - A^o

G minor = Gm - A^o - Bb - Cm - D - Eb - F

F major = F - Gm - Am - Bb - C - Dm - E^o

D minor = Dm - E^o - F - Gm - A - Bb - C

VI. Cycle of 4th/5ths

Key	I	IV	vii ^o	iii	vi	ii	V	I
C major	C	F	B ^o	Em	Am	Dm	G	C
C#/Db major	C#	F#	B# ^o	E#m	A#m	D#m	G#	C#
D major	D	G	C# ^o	F#m	Bm	Em	A	D
Eb major	Eb	Ab	D ^o	Gm	Cm	Fm	Bb	Eb
E major	E	A	D# ^o	G#m	C#m	F#m	B	E
F major	F	Bb	E ^o	Am	Dm	Gm	C	F
F#/Gb major	F#	B	E# ^o	A#m	D#m	G#m	C#	F#
G major	G	C	F# ^o	Bm	Em	Am	D	G
Ab major	Ab	Db	G ^o	Cm	Fm	Bbm	Eb	Ab
A major	A	D	G# ^o	C#m	F#m	Bm	E	A
Bb major	Bb	Eb	A ^o	Dm	Gm	Cm	F	Bb
B/Cb major	B	E	A# ^o	D#m	G#m	C#m	F#	B

- A progression can be formed from the sequence of chords and will sound good as long as the chords come in order (e.g. I - IV - vi - V)
- Two of the most common progressions in tonal music can be found embedded into the sequence (ii - V - I and I - vi - ii - V)
- There are many progression in tonal music that stem from, but are not limited to, this sequence
- All of these chords (except for the IV chord) can be turned into secondary dominants by altering a chord to a dominant chord
- The minor chords can be altered to a major one to serve the same function