

Guitar Theory Cheat Sheet

Chords — intervals, chord formulas, spellings in every key, chords in a key

INTERVALS 1 half step = 1 fret. Count up from the root. Shaded = the notes chords are built from.

Frets	0	1	2	3	4	5	6	7	8	9	10	11	12
Degree	1	♭2	2	♭3	3	4	♭5	5	♭6	6	♭7	7	8
Interval	Root	m2	M2	m3	M3	P4	TT	P5	m6	M6	m7	M7	Oct

CHORD FORMULAS The 3rd decides major vs. minor. A plain “7” means ♭7; “maj7” means the natural 7.

Chord	Written (in C)	Formula	Half steps	Notes in C	Where it lives in a key
Major	C	1 3 5	4 + 3	C E G	I · IV · V of a major key
Minor	Cm	1 ♭3 5	3 + 4	C E♭ G	ii · iii · vi of a major key
Diminished	C° or Cdim	1 ♭3 ♭5	3 + 3	C E♭ G♭	vii° (major key) · ii° (minor key)
Dominant 7	C7	1 3 5 ^{♭7}	4 + 3 + 3	C E G [♭]	V7 — wants to resolve to I
Major 7	Cmaj7 or CΔ7	1 3 5 ⁷	4 + 3 + 4	C E G ^B	Imaj7 · IVmaj7 — smooth, jazzy
Minor 7	Cm7	1 ♭3 5 ⁷	3 + 4 + 3	C E♭ G ^B	ii7 · iii7 · vi7
Half-diminished	Cm7♭5 or Cø7	1 ♭3 ♭5 ⁷	3 + 3 + 4	C E♭ G ^B ♭	viiø7 (major key) · iiø7 (minor key)

CHORD SPELLINGS — ALL 12 ROOTS Rust = the 7th added on top of the triad.

Root	Major · C	Minor · Cm	7 · C7	maj7 · Cmaj7	m7 · Cm7	m7♭5 · Cø7
C	C E G	C E♭ G	C E G ^B	C E G ^B	C E♭ G ^B	C E♭ G ^B ♭
D♭ / C♯	D♭ F A♭	C♯ E G♯	D♭ F A♭ ^C	D♭ F A♭ ^C	C♯ E G♯ ^B	C♯ E G ^B
D	D F♯ A	D F A	D F♯ A ^C	D F♯ A ^C ♯	D F A ^C	D F A♭ ^C
E♭ / D♯	E♭ G B♭	E♭ G♭ B♭	E♭ G B♭ ^D	E♭ G B♭ ^D	E♭ G♭ B♭ ^D	D♯ F♯ A ^C ♯
E	E G♯ B	E G B	E G♯ B ^D	E G♯ B ^D ♯	E G B ^D	E G B♭ ^D
F	F A C	F A♭ C	F A C ^E ♭	F A C ^E	F A♭ C ^E ♭	F A♭ C♭ ^E ♭
F♯	F♯ A♯ C♯	F♯ A C♯	F♯ A♯ C♯ ^E	F♯ A♯ C♯ ^E ♯	F♯ A C♯ ^E	F♯ A C ^E
G	G B D	G B♭ D	G B D ^F	G B D ^F ♯	G B♭ D ^F	G B♭ D♭ ^F
A♭ / G♯	A♭ C E♭	G♯ B D♯	A♭ C E♭ ^G	A♭ C E♭ ^G	G♯ B D♯ ^F ♯	G♯ B D ^F ♯
A	A C♯ E	A C E	A C♯ E ^G	A C♯ E ^G ♯	A C E ^G	A C E♭ ^G
B♭ / A♯	B♭ D F	B♭ D♭ F	B♭ D F ^A ♭	B♭ D F ^A	B♭ D♭ F ^A ♭	A♯ C♯ E ^G ♯
B	B D♯ F♯	B D F♯	B D♯ F♯ ^A	B D♯ F♯ ^A ♯	B D F♯ ^A	B D F ^A

Diminished triad (°) = the first three notes of the m7♭5 column. Odd-looking names are the correct spelling of familiar frets: C♭ = B, E♯ = F. A sharp and its flat twin (C♯ = D♭) are the same fret — the first note in each cell is the root you're spelling.

CHORDS IN A KEY Upper case = major · lower case = minor · ° = diminished · ø = half-diminished (m7♭5)

Major key								Minor key							
pattern M m m M M m d · example C								pattern m d M m m M M · example Am							
No.	I	ii	iii	IV	V	vi	vii°	No.	i	ii°	III	iv	v	VI	VII
Triad	M	m	m	M	M	m	d	Triad	m	d	M	m	m	M	M
In C	C	Dm	Em	F	G	Am	B°	In Am	Am	B°	C	Dm	Em	F	G
7th	maj7	m7	m7	maj7	7	m7	m7♭5	7th	m7	m7♭5	maj7	m7	m7	maj7	7
In C	Cmaj7	Dm7	Em7	Fmaj7	G7	Am7	Bm7♭5	In Am	Am7	Bm7♭5	Cmaj7	Dm7	Em7	Fmaj7	G7

Guitar Theory Cheat Sheet

Keys & scales — key signatures, scale patterns, progressions, rhythm

2 / 2 · Keys, scales & rhythm

KEY SIGNATURES Each step along the order of 5ths adds one sharp; along the order of 4ths adds one flat.

Order of 5ths	C 0	G 1 $\sharp$	D 2 $\sharp$	A 3 $\sharp$	E 4 $\sharp$	B 5 $\sharp$	F $\sharp$ 6 $\sharp$	C $\sharp$ 7 $\sharp$
Rel. minor	Am	Em	Bm	F $\sharp$ m	C $\sharp$ m	G $\sharp$ m	D $\sharp$ m	A $\sharp$ m
Adds sharp	—	F $\sharp$	C $\sharp$	G $\sharp$	D $\sharp$	A $\sharp$	E $\sharp$	B $\sharp$
Order of 4ths	C 0	F 1 $\flat$	B $\flat$ 2 $\flat$	E $\flat$ 3 $\flat$	A $\flat$ 4 $\flat$	D $\flat$ 5 $\flat$	G $\flat$ 6 $\flat$	C $\flat$ 7 $\flat$
Rel. minor	Am	Dm	Gm	Cm	Fm	B $\flat$ m	E $\flat$ m	A $\flat$ m
Adds flat	—	B $\flat$	E $\flat$	A $\flat$	D $\flat$	G $\flat$	C $\flat$	F $\flat$

- Read the “adds” rows left to right: sharps go **F C G D A E B**, flats go **B E A D G C F** (same, backwards).
- Sharp keys: the last sharp is a half step below the key (C $\sharp$ → D). Flat keys: the next-to-last flat is the key (B $\flat$ E $\flat$ A $\flat$ → E $\flat$).
- Relative minor = 3 frets below the major root (or its 6th note). Same notes, same key signature.
- Same sound, two names: F $\sharp$ = G $\flat$, C $\sharp$ = D $\flat$, B = C $\flat$.

SCALE PATTERNS W = 2 frets · H = 1 fret

Major W W H W W W H								
1	2	3	4	5	6	7	8	
C	W	D	W	E	H	F	W	G
	W	A	W	B	H	C		

Natural minor W H W W H W W								
1	2	$\flat$ 3	4	5	$\flat$ 6	$\flat$ 7	8	
A	W	B	H	C	W	D	W	E
	H	F	W	G	W	A		

The same step pattern works from any root. A minor is C major's notes started on the 6th — its relative minor. Scale degrees are the Nashville numbers; the $\flat$ 3, $\flat$ 6 and $\flat$ 7 are why minor-key chords differ.

COMMON PROGRESSIONS Major examples in G, minor in Am

Numbers	Example	Sound
I – IV – V7	G – C – D7	Rock, country, folk
I – V – vi – IV	G – D – Em – C	Pop
I – vi – IV – V	G – Em – C – D	'50s ballad
ii7 – V7 – Imaj7	Am7 – D7 – Gmaj7	Jazz turnaround
i – iv – V7	Am – Dm – E7	Minor, strong pull home
i – VI – III – VII	Am – F – C – G	Minor rock / pop

12-BAR BLUES IN A Every chord is a dominant 7 · last bar turns around

A7	I7	A7	I7	A7	I7	A7	I7
D7	IV7	D7	IV7	A7	I7	A7	I7
E7	V7	D7	IV7	A7	I7	E7	V7

NOTE & REST VALUES Beats in 4/4 time

	Whole	Half	Quarter	Eighth	Sixteenth
Beats	4	2	1	$\frac{1}{2}$	$\frac{1}{4}$
Note					
Rest					
Per bar	1	2	4	8	16
Count	1 2 3 4	1 2 3 4	1 2 3 4	1 & 2 &	1 e & a

RHYTHM EXTRAS

- Dotted note** = the note plus half its value. Dotted half = 3 beats · dotted quarter = $1\frac{1}{2}$ · dotted eighth = $\frac{3}{4}$.
- Tie** = a curve joining two notes of the same pitch: play once, hold for both (quarter tied to quarter = 2 beats). Over different pitches it's a slur (hammer-on / pull-off).
- Time signature**: top = beats per bar, bottom = the note that gets one beat (4 = quarter, 8 = eighth).

4 Common time (C)

4 Count 1 2 3 4

3 Waltz

4 Count 1 2 3

6 Six eighths

8 Felt as 2 beats: 1 2 3
4 5 6

2 Cut time (¢)

2 2 half-note beats