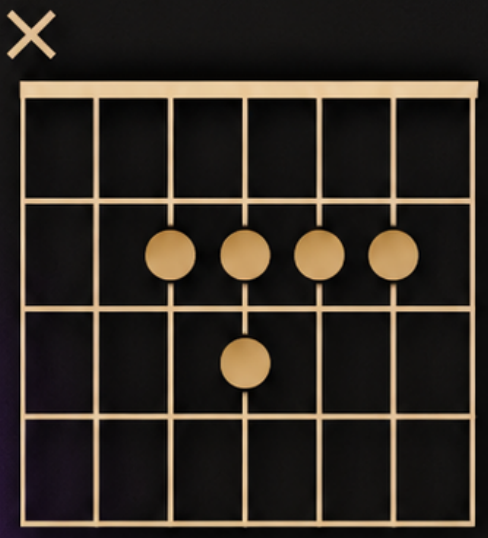
Fretboard Maps



PREMIUM PDF RESOURCE

TABLE OF CONTENTS

THE COMPREHENSIVE STRUCTURAL BLUEPRINT

⚡ HOW TO NAVIGATE THIS VISUAL BLUEPRINT

Every diagram in this reference guide utilizes standardized interval color coding: **Root (1)**, **3rd**, **5th**, **7th**, and **Color / Blue Note**. Connect shapes by referencing anchor root nodes across adjacent regions rather than memorizing isolated fret numbers.

MODULE 1: FOUNDATIONS & THE FRETBOARD LANDSCAPE

Standard Tuning Mechanics & The B-String Shift

Standard guitar tuning (**E2 - A2 - D3 - G3 - B3 - E4**) is tuned primarily in Perfect Fourths (5 semitones), with one critical acoustic asymmetry between the G and B strings.

TUNING INTERVALS (STRING PAIRS)

- **6th (Low E) → 5th (A):** P4 (5 frets / 5 semitones)
- **5th (A) → 4th (D):** P4 (5 frets / 5 semitones)
- **4th (D) → 3rd (G):** P4 (5 frets / 5 semitones)
- **3rd (G) → 2nd (B):** **Major 3rd (4 frets / 4 semitones)**
- **2nd (B) → 1st (High E):** P4 (5 frets / 5 semitones)

THE B-STRING GEOMETRIC SHIFT

Because the interval between G and B is 1 semitone narrower, **any geometric scale, chord, or arpeggio shape crossing onto the B and High E strings must be shifted UP by exactly 1 fret** towards the guitar bridge.

The 12-Tone Chromatic Matrix

Every fret is a half-step. Natural notes occur sequentially with natural half-steps existing exclusively between **B–C** and **E–F**.

String	Open	Fret 1	Fret 2	Fret 3	Fret 5	Fret 7	Fret 8	Fret 10	Fret 12
1 (High E)	E	F	F# / Gb	G	A	B	C	D	E
2 (B)	B	C	C# / Db	D	E	F# / Gb	G	A	B
3 (G)	G	G# / Ab	A	A# / Bb	C	D	D# / Eb	F	G
4 (D)	D	D# / Eb	E	F	G	A	A# / Bb	C	D
5 (A)	A	A# / Bb	B	C	D	E	F	G	A
6 (Low E)	E	F	F# / Gb	G	A	B	C	D	E

The 4 Universal Octave Jump Geometries

OCTAVE GEOMETRICAL FORMULAS

- **Vector 1 (Strings 6 → 4):** Down 2 strings, right 2 frets. *(e.g., Low E fret 3 [G] → D string fret 5 [G])*
- **Vector 2 (Strings 5 → 3):** Down 2 strings, right 2 frets. *(e.g., A string fret 5 [D] → G string fret 7 [D])*
- **Vector 3 (Strings 4 → 2):** Down 2 strings, right 3 frets *(Compensates for the B-string shift)*.
- **Vector 4 (Strings 3 → 1):** Down 2 strings, right 3 frets *(Compensates for the B-string shift)*.
- **Unison String 6 & 1:** Strings 6 and 1 share identical note names on the exact same fret.

MODULE 2: THE CAGED BLUEPRINT & CHORD ARCHITECTURE

The 5 Core CAGED Geometries

The CAGED system connects five fundamental open chord grips (**C - A - G - E - D**) across the neck in an endless cycle. Each shape anchors directly to specific root-string pairs.

Shape	Root Strings	Fret Span	Structural Character	Primary Use Case
C Shape	Strings 5 & 2	3 Frets	Diagonal grip with root on 5th string ring finger	Sweet acoustic voicings & arpeggio sweeps
A Shape	Strings 5 & 3	2 Frets	Compact flat barre across D-G-B strings	Punchy rock rhythm and double-stops
G Shape	Strings 6, 3 & 1	4 Frets	Wide stretch spanning roots on strings 6, 3, and 1	Arpeggio runs and partial triadic fills
E Shape	Strings 6, 4 & 1	3 Frets	Standard 6-string full barre chord anchor	Foundational rhythm & minor pentatonic Box 1
D Shape	Strings 4 & 2	3 Frets	Upper-register triangle grip; root on 4th string	High-register melodic fills & triad comping

Triad Inversions (Closed Voicings)

Triads (Root, 3rd, 5th) form the harmonic backbone of all rhythm and solo arrangements. Mastering them across 3-string groups provides crystal-clear articulation in any mix.

TOP STRING SET (STRINGS 1, 2, 3 - E, B, G) — MAJOR & MINOR TRIAD MAPS (KEY OF G)

Voicing State	Formula	G Major Grip (Frets G-B-E)	G Minor Grip (Frets G-B-E)
Root Position	R - 3 - 5	G (12) - B (12) - D (10)	G (12) - Bb (11) - D (10)
1st Inversion	3 - 5 - R	B (4) - D (3) - G (3)	Bb (3) - D (3) - G (3)
2nd Inversion	5 - R - 3	D (7) - G (8) - B (7)	D (7) - G (8) - Bb (6)

MIDDLE STRING SET (STRINGS 2, 3, 4 - B, G, D) — MAJOR TRIADS (KEY OF C)

Voicing State	Formula	C Major Grip (Frets D-G-B)	Bass Motion Role
Root Position	R - 3 - 5	C (10) - E (9) - G (8)	Direct root grounding
1st Inversion	3 - 5 - R	E (2) - G (0) - C (1)	Smooth stepwise bass leading (e.g., C/E → F)
2nd Inversion	5 - R - 3	G (5) - C (5) - E (5)	Stable pedal-point rhythmic punch

MODULE 2: CHORD ARCHITECTURE (CONTINUED)

Essential 7th Chords: Drop-2 & Drop-3 Voicings

Drop-2 and Drop-3 voicings are the industry standard for jazz, R&B, funk, and neo-soul guitar. They drop the second or third highest voice down an octave, creating balanced, open chord grips.

THE 4 FOUNDATIONAL 7TH CHORD TYPES & FORMULAS

- **Major 7th (Maj7):** `1 - 3 - 5 - 7` • Warm, lush, cinematic resolution.
- **Dominant 7th (7):** `1 - 3 - 5 - b7` • Bluesy, driving, unstable harmonic tension.
- **Minor 7th (m7):** `1 - b3 - 5 - b7` • Smooth, mellow, sophisticated melancholy.
- **Minor 7b5 (Half-Dim):** `1 - b3 - b5 - b7` • Dark, tense ii-chord in minor key progressions.

Chord Quality	Drop-2 on Top Strings (D-G-B-E) [Root C]	Drop-3 on Low Strings (E-D-G-B) [Root C]
`CMaj7`	`Frets: D:10, G:12, B:12, E:12` `R-5-7-3`	`Frets: E:8, (A:x), D:9, G:9, B:8` `R-7-3-5`
`C7 (Dominant)`	`Frets: D:10, G:12, B:11, E:12` `R-5-b7-3`	`Frets: E:8, (A:x), D:8, G:9, B:8` `R-b7-3-5`
`Cm7 (Minor)`	`Frets: D:10, G:12, B:11, E:11` `R-5-b7-b3`	`Frets: E:8, (A:x), D:8, G:8, B:8` `R-b7-b3-5`
`Cm7b5 (Half-Dim)`	`Frets: D:10, G:11, B:11, E:11` `R-b5-b7-b3`	`Frets: E:8, (A:x), D:8, G:8, B:7` `R-b7-b3-b5`

Voice Leading Connectors & 1-Fret Transitions

Voice leading ensures the smoothest possible transition between chord changes by moving voices by the smallest step (1 or 2 frets) rather than jumping large distances across the fretboard.

CLASSIC II - V - I VOICE LEADING IN C MAJOR (DM7 → G7 → CMAJ7)

Observe how the Guide Tones (3rds and 7ths) resolve effortlessly by a single half-step:

- **Step 1 (Dm7):** Play Dm7 Drop-2 [D:12, G:14, B:13, E:13] • **7th is C**, 3rd is F.
- **Step 2 (G7):** The 7th of Dm7 (C) resolves down 1 fret to the 3rd of G7 (B) • Grip: [D:12, G:12, B:12, E:13].
- **Step 3 (CMaj7):** The 7th of G7 (F) resolves down 1 fret to the 3rd of CMaj7 (E) • Grip: [D:10, G:12, B:12, E:12].

MODULE 3: PENTATONIC & BLUES NAVIGATION

The 5 Minor Pentatonic Interlocking Box Positions

The 5 Pentatonic boxes tile across the neck like interlocking puzzle pieces. In the key of **A Minor** (A-C-D-E-G), every position shares its boundary frets with the adjacent box.

Box	CAGED Match	A Minor Fret Span	String 6 Notes	String 1 Notes	Root Locations
Box 1	E-Shape	Frets 5 – 8	**A (5)** - C (8)	**A (5)** - C (8)	Strings 6, 4, 1
Box 2	D-Shape	Frets 8 – 10	C (8) - D (10)	C (8) - D (10)	Strings 4, 2
Box 3	C-Shape	Frets 10 – 13	D (10) - E (12)	D (10) - E (12)	Strings 5, 2
Box 4	A-Shape	Frets 12 – 15	E (12) - G (15)	E (12) - G (15)	Strings 5, 3
Box 5	G-Shape	Frets 15 – 17 / (0 – 3)	G (15) - **A (17)**	G (15) - **A (17)**	Strings 6, 3, 1

Major Pentatonic: The Relative 3-Fret Shift Rule

MAJOR VS. MINOR PENTATONIC FORMULAS

Minor Pentatonic: `1 - b3 - 4 - 5 - b7` • Aggressive, blues/rock grit.

Major Pentatonic: `1 - 2 - 3 - 5 - 6` • Sweet, country, southern rock & soul.

The 3-Fret Shift: To play in *A Major Pentatonic*, shift the Box 1 pattern down 3 frets to start on **Fret 2 (F#)** while targeting the A root on fret 5 of String 6.

The "Blue Note" Injections & Diagonal Sliding Runs

INJECTING THE BLUE NOTE (FLAT 5TH / B5)

In A Minor, the blue note is **Eb / D#**. It adds chromatic grit when approached from the 4th (D) or 5th (E):

- **String 5:** Fret 6 (Between D on fret 5 and E on fret 7)
- **String 3:** Fret 8 (Between D on fret 7 and E on fret 9)

🧙 DIAGONAL HIGHWAY RUN (A MINOR 3-OCTAVE SLIDE)

Escape rigid vertical boxes by sliding horizontally across string pairs:
String 6: 5-8 → **String 5:** 5-7 (Slide 7→10) → **String 4:** 7-10 → **String 3:** 7-9 (Slide 9→12) → **String 2:** 10-13 → **String 1:** 10-12 (Slide 12→15-17 **A**).

MODULE 4: THE 7 MODES OF THE MAJOR SCALE

The 7 Diatonic Modes & The Brightness Spectrum

Modes are emotional color filters generated by starting on different degrees of the parent Major scale. Modes range from the brightest (most sharps) to the darkest (most flats).

THE MASTER BRIGHTNESS HIERARCHY

Lydian (+1#) → Ionian (Natural) → Mixolydian (1b) → Dorian (2b) → Aeolian (3b) → Phrygian (4b) → Locrian (5b)

Mode	Parent Degree	Tonal Type	Formula	Signature Note	Mood / Character
Lydian	IV	Major	1 - 2 - 3 - **#4** - 5 - 6 - 7	**Sharp 4th (#4)**	Mystical, Dreamy, Sci-Fi, Floating
Ionian	I	Major	1 - 2 - 3 - 4 - 5 - 6 - 7	**Natural 4th (4)**	Triumphant, Pure, Resolved, Bright
Mixolydian	V	Major	1 - 2 - 3 - 4 - 5 - 6 - **b7**	**Flat 7th (b7)**	Bluesy, Southern Rock, Classic Rock
Dorian	ii	Minor	1 - 2 - **b3** - 4 - 5 - **6** - b7	**Major 6th (6)**	Sophisticated, Jazzy, Santana, Mellow
Aeolian	vi	Minor	1 - 2 - **b3** - 4 - 5 - **b6** - b7	**Flat 6th (b6)**	Sad, Melodic, Heavy Metal, Tragic
Phrygian	iii	Minor	1 - **b2** - b3 - 4 - 5 - b6 - b7	**Flat 2nd (b2)**	Exotic, Spanish Flamenco, Dark Metal
Locrian	vii°	Diminished	1 - b2 - b3 - 4 - **b5** - b6 - b7	**Flat 5th (b5)**	Dissonant, Highly Unstable, Tense

Parent Scale vs. Parallel Modal Thinking

1. DERIVATIVE / PARENT APPROACH

Relates the mode back to its parent key. For example, *D Dorian* contains the exact same notes as *C Major* (C-D-E-F-G-A-B), but centers on D as the home tonic.

2. PARALLEL APPROACH (RECOMMENDED)

Compares the mode directly to parallel Major or Minor. For example, *A Dorian* is just *A Minor* with a raised **Major 6th (F#)**. This guarantees targeted melodic phrasing.

MODULE 4: 3NPS SYSTEM & MODAL VAMPS

3-Notes-Per-String (3NPS) System

The 3NPS framework structures every major scale mode into seven symmetrical 3-note patterns across every string. This ensures uniform picking mechanics (Down-Up-Down / Up-Down-Up) and optimal economy sweeps.

THE 3 SYMMETRICAL FINGER ARCHETYPES

- **Spread 1 (Whole - Whole):** 2 frets + 2 frets • *Fingers: 1 - 2 - 4* (Wide stretch)
- **Spread 2 (Half - Whole):** 1 fret + 2 frets • *Fingers: 1 - 2 - 4* (Compact bottom)
- **Spread 3 (Whole - Half):** 2 frets + 1 fret • *Fingers: 1 - 3 - 4* (Compact top)

Pattern #	Starting Mode (Key of G)	6th String Starting Note	Fingering Spreads Across Strings
Pattern 1	G Ionian	Fret 3 (G)	3-5-7 (E, A strings) • 4-5-7 (D, G) • 5-7-8 (B, E)
Pattern 2	A Dorian	Fret 5 (A)	5-7-8 (E, A strings) • 5-7-9 (D, G) • 7-8-10 (B, E)
Pattern 3	B Phrygian	Fret 7 (B)	7-8-10 (E, A strings) • 7-9-10 (D, G) • 8-10-12 (B, E)
Pattern 4	C Lydian	Fret 8 (C)	8-10-12 (E, A strings) • 9-10-12 (D, G) • 10-12-13 (B, E)
Pattern 5	D Mixolydian	Fret 10 (D)	10-12-14 (E, A strings) • 10-12-14 (D, G) • 12-13-15 (B, E)
Pattern 6	E Aeolian	Fret 12 (E)	12-14-15 (E, A strings) • 12-14-16 (D, G) • 13-15-17 (B, E)
Pattern 7	F# Locrian	Fret 14 / Fret 2 (F#)	14-15-17 (E, A strings) • 14-16-17 (D, G) • 15-17-19 (B, E)

Modal Backing Track Progression Vamps

Modes require characteristic harmonic vamps to establish their unique sonic context. Solo over these chord pairs to instantly unlock authentic modal flavor.

THE ESSENTIAL MODAL CHORD PAIR ROADMAPS

- **Dorian Vamp:** `i - IV` → **Am7 to D7** (Emphasize the **F# (Maj 6th)** on downbeats over D7).
- **Mixolydian Vamp:** `I - bVII` → **A to G/A** (Emphasize the **G natural (b7)** over the A bass).
- **Lydian Vamp:** `I - II` → **C to D/C** (Emphasize the **F# (#4)** over the C bass).
- **Phrygian Vamp:** `i - bII` → **Em to F** (Emphasize the **F natural (b2)** resolution into E).

MODULE 5: ADVANCED HARMONIC LANDSCAPES

Harmonic Minor & The Phrygian Dominant Sound

Harmonic Minor Formula: `1 - 2 - b3 - 4 - 5 - b6 - 7` • Characterized by the dramatic augmented second gap between the $ lat 6$ and natural 7.

PHRYGIAN DOMINANT (5TH MODE OF HARMONIC MINOR)

Formula: `1 - b2 - 3 - 4 - 5 - b6 - b7` • *Example: E Phrygian Dominant over an E7(b9) resolving to Am.*

Features an exotic Major 3rd ($G\sharp$) coupled with a Spanish flat 2nd ($F atural$), making it the ultimate tension generator over dominant V7 chords.

Melodic Minor & Its Essential Soloing Modes

Jazz Melodic Minor (Ascending): `1 - 2 - b3 - 4 - 5 - 6 - 7` • A minor triad topped with a bright major upper structure.

Mode	Formula	Key Characteristic	Application
Lydian Dominant (4th Mode)	1 - 2 - 3 - **#4** - 5 - 6 - **b7**	Combines Lydian #4 with Mixolydian b7	Non-resolving dominant 7th chords (e.g., C7#11)
Altered Scale (7th Mode)	1 - **b2 - #2 - 3 - b5 - #5 - b7**	Contains every altered tension (b9, #9, b5, #5)	Altered V7alt chords resolving to minor tonic

Symmetric Scales & 4-Note Arpeggio Overlays

WHOLE-TONE SCALE (SYMMETRIC)

Formula: 6 notes spaced entirely by whole-steps (2 frets).
`1 - 2 - 3 - #4 - #5 - b7`
Creates floating, impressionistic tension over augmented 7th chords ($7\sharp 5$).

DIMINISHED SCALE (HALF-WHOLE)

Formula: 8 notes alternating half-step and whole-step.
`1 - b2 - #2 - 3 - #4 - 5 - 6 - b7`
Essential for soloing over dominant 7th flat-9 ($7 lat 9$) chords.

⚡ ARPEGGIO SUBSTITUTION CHEAT CODE

To create sophisticated jazz/fusion colors over an **Am7** chord, play a **CMaj7 arpeggio (C-E-G-B)** from the 3rd to outline the `b3 - 5 - b7 - 9` extensions effortlessly!

MODULE 6: DAILY WORKOUT & MASTER REFERENCE

The 10-Minute Daily Fretboard Routine

Discipline and consistency forge true fretboard freedom. Follow this timed metronome-driven regimen daily to eliminate hesitation across all 12 keys.

STRUCTURED 10-MINUTE DAILY WORKOUT BREAKDOWN

Segment	Duration	Focus Area	Execution Instructions
Part 1	3 Minutes	Cycle of 4ths Root Hunt	Locate roots in sequence: **C - F - Bb - Eb - Ab - Db - Gb - B - E - A - D - G** across all 6 strings at 60 BPM.
Part 2	4 Minutes	Triad Climbing	Ascend and descend the diatonic triads of C Major on Strings 1-2-3 (Root pos → 1st inv → 2nd inv).
Part 3	3 Minutes	Single-String Soloing	Improvise over a backing track using exclusively String 2 (B string) or String 3 (G string) to force horizontal visualization.

Universal Key Transposition Matrix

Quickly calculate relative minors, dominant 5ths, and subdominant 4ths across the Circle of Fifths.

Key (I Major)	Relative Minor (vi)	Subdominant (IV)	Dominant (V)	Key Signature
C Major	A minor	F Major	G Major	Natural (0 sharps / 0 flats)
G Major	E minor	C Major	D Major	1 Sharp (F#)
D Major	B minor	G Major	A Major	2 Sharps (F#, C#)
A Major	F# minor	D Major	E Major	3 Sharps (F#, C#, G#)
E Major	C# minor	A Major	B Major	4 Sharps (F#, C#, G#, D#)
F Major	D minor	Bb Major	C Major	1 Flat (Bb)
Bb Major	G minor	Eb Major	F Major	2 Flats (Bb, Eb)

APPENDIX: MASTER FRETBOARD REFERENCE MAP

Complete 24-Fret 6-String Note Matrix

Every note in standard tuning from open strings through fret 24. Fret 12 mirrors open strings, and fret 24 mirrors fret 12.

String	0 (Open)	Fret 1	Fret 3	Fret 5	Fret 7	Fret 8	Fret 10	Fret 12	Fret 15	Fret 17	Fret 19	Fret 22	Fret 24
1 (E)	E	F	G	A	B	C	D	**E**	G	A	B	D	**E**
2 (B)	B	C	D	E	F#	G	A	**B**	D	E	F#	A	**B**
3 (G)	G	G#	A#	C	D	D#	F	**G**	A#	C	D	F	**G**
4 (D)	D	D#	F	G	A	A#	C	**D**	F	G	A	C	**D**
5 (A)	A	A#	C	D	E	F	G	**A**	C	D	E	G	**A**
6 (E)	E	F	G	A	B	C	D	**E**	G	A	B	D	**E**

CONGRATULATIONS ON MASTERING FRETBOARD MAPS!

You possess the complete structural geometric blueprint of the guitar neck. Use these maps as your eternal compass for improvisation, song writing, and technical mastery.