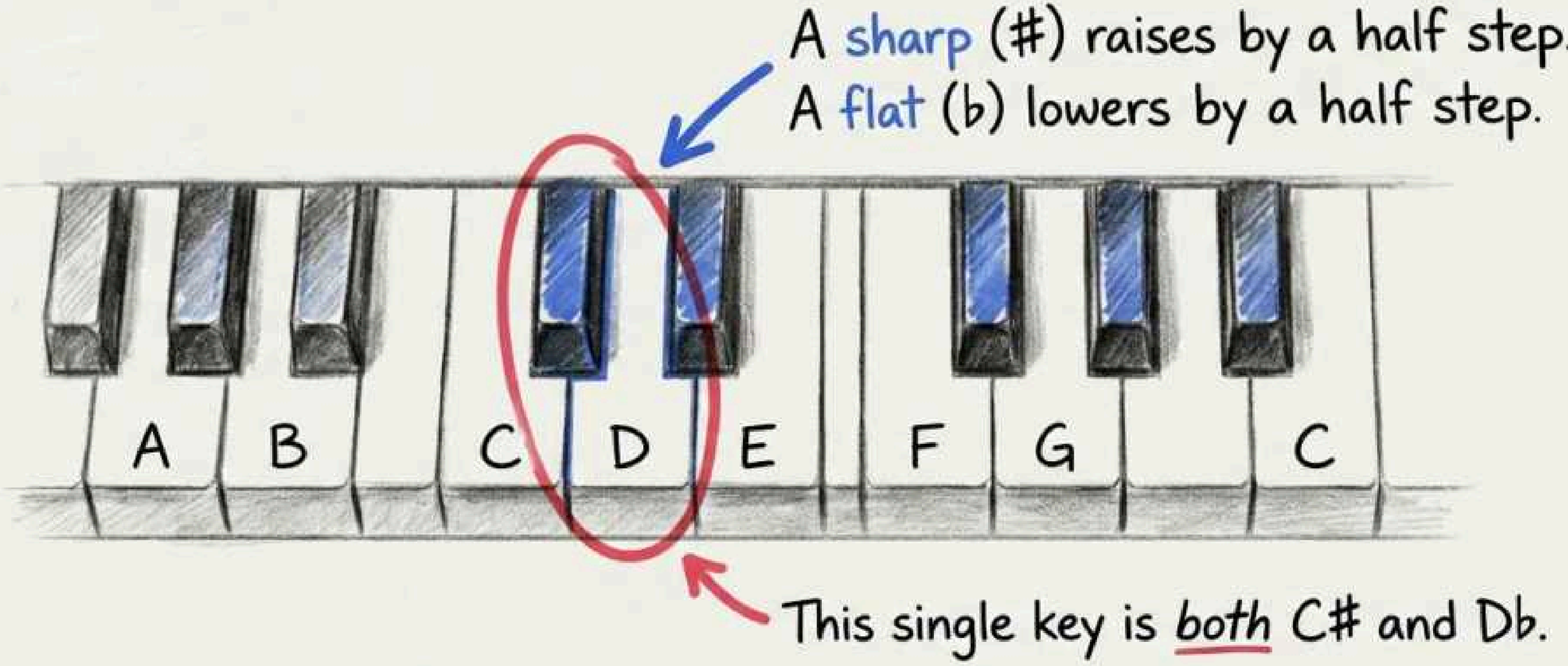
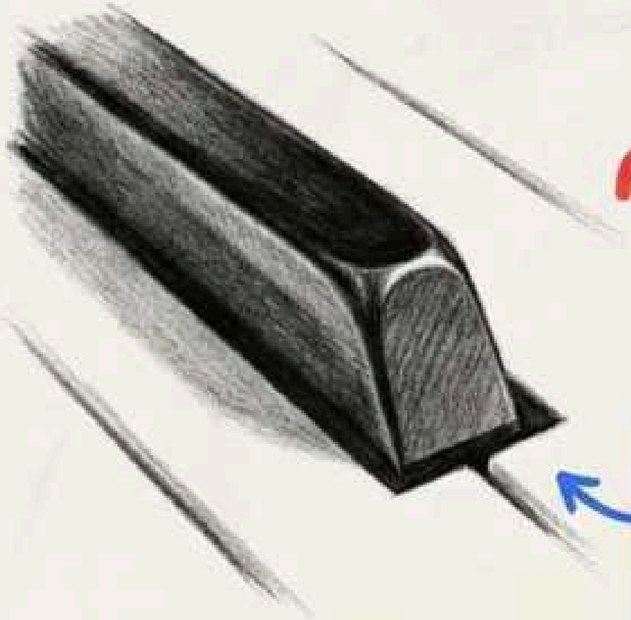
The 12 Notes of Western Music



Western music uses a repeating cycle of twelve notes: seven primary letter names (white keys) and five intermediate notes (black keys).

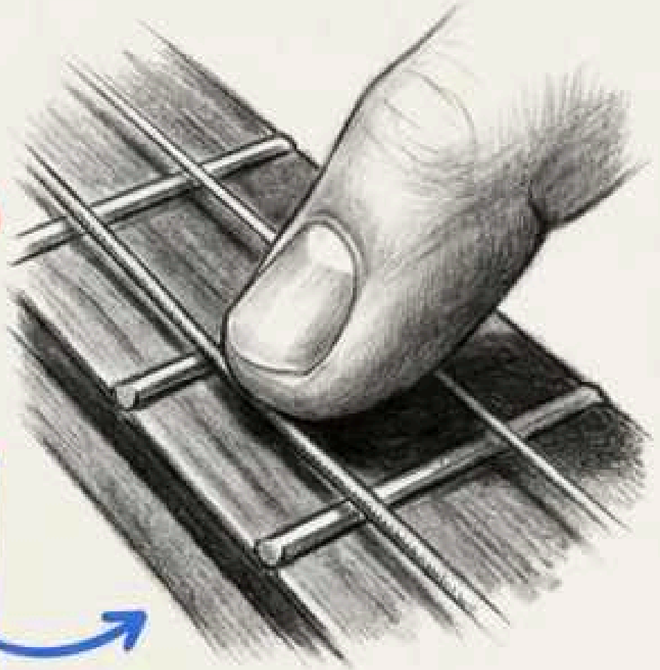
Enharmonic Equivalents Depend on Context

¶ 2.2



Two names, one pitch = Enharmonic Equivalents.

Context matters:
Sharp keys use sharp names (e.g., A♯).
Flat keys use flat names (e.g., B♭).



Notes like C♯ and D♭ sound identical and are played in the exact same place on the ukulele.

The name used simply depends on the musical key being played.

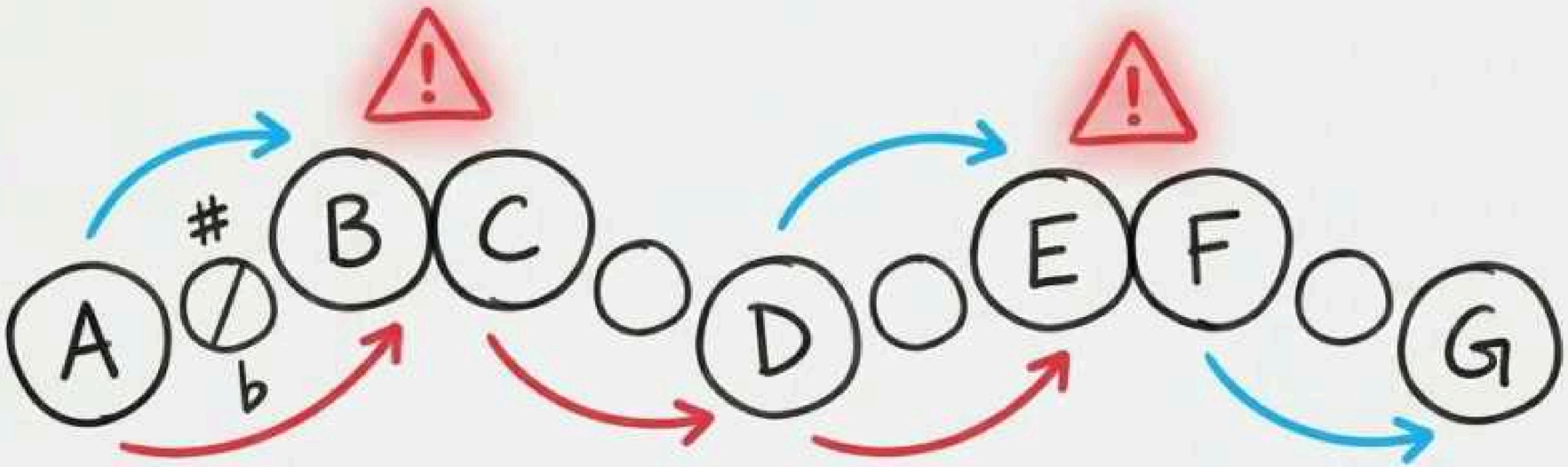
A chord chart may call the exact same chord A♯ or B♭.

The Distance Between Notes

¶ 2.3

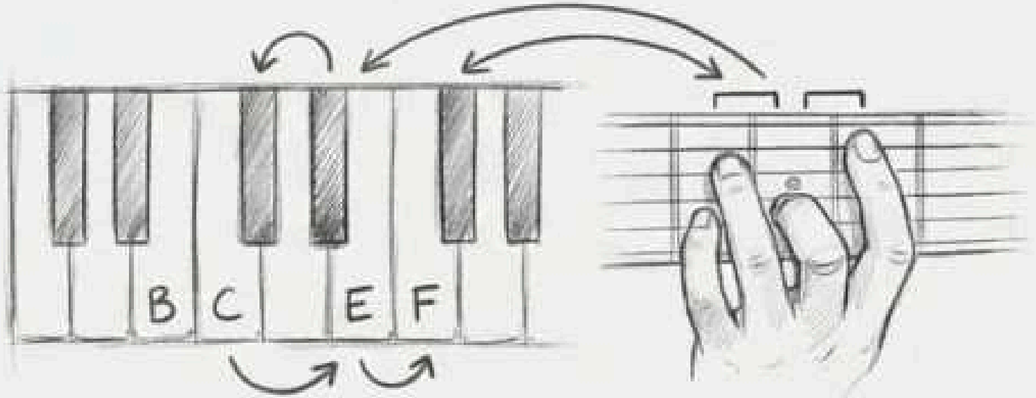
Half Step (Semitone): The smallest distance (one piano key to the very next).

Whole Step (Tone): Two half steps.



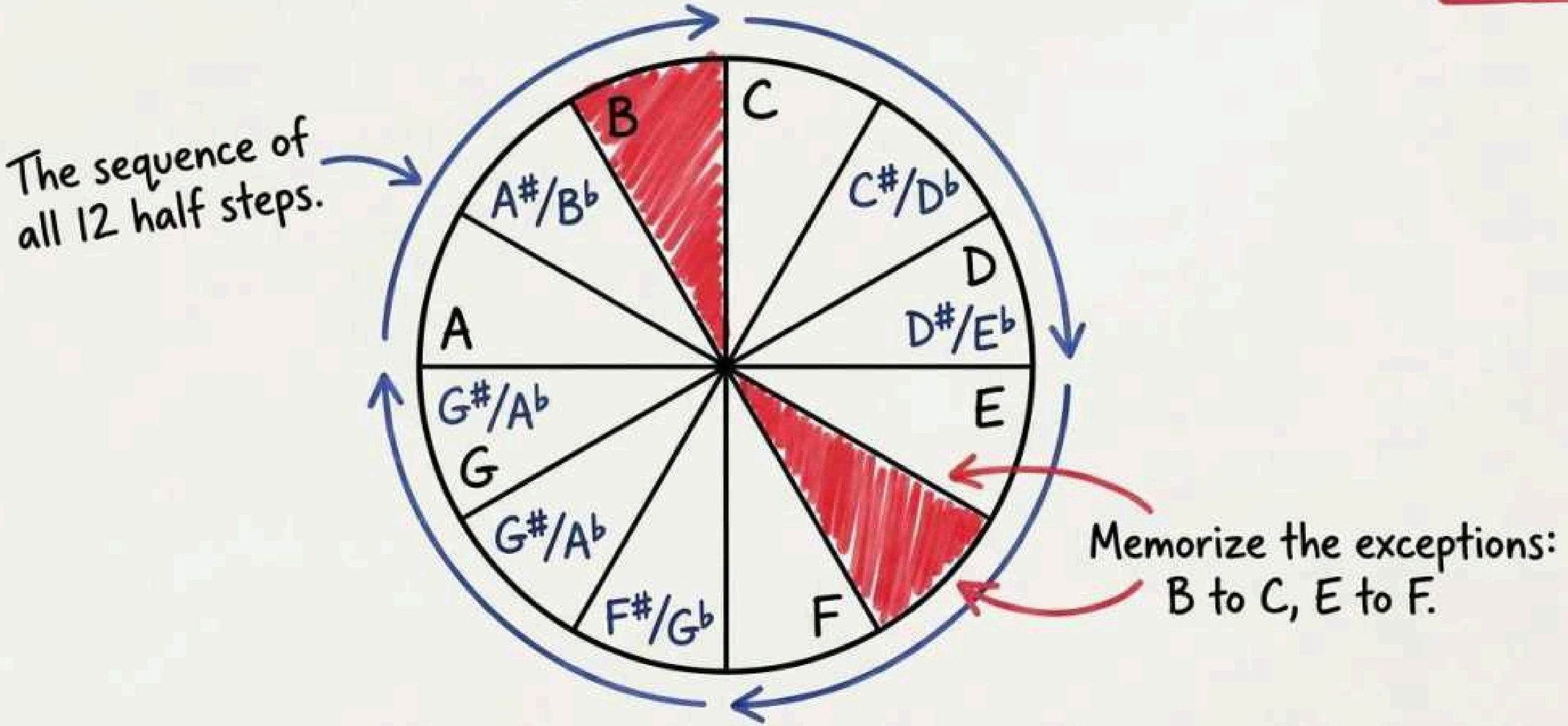
Most neighboring letter notes are a whole step apart, with a sharp/flat in the middle.

Crucial Exceptions: There is only a half step between B & C and E & F (no note in between).



The Chromatic Scale Cycle

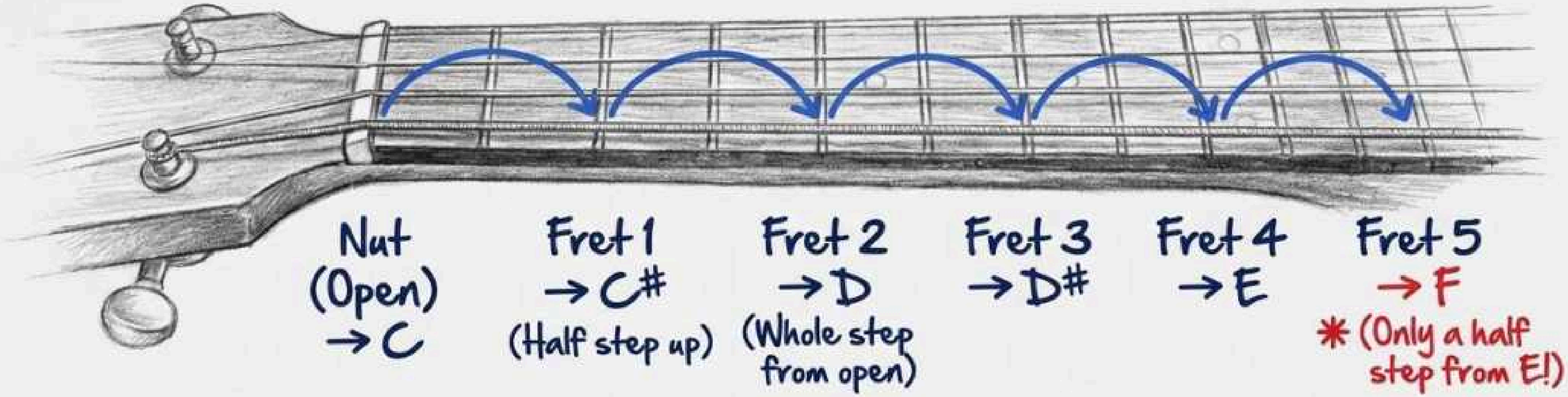
¶ 2.4



The chromatic scale cycles through every note before returning to the start an octave higher. Committing the B-C and E-F half-steps to memory is the most vital piece of fretboard knowledge.

Frets Act as Half Steps

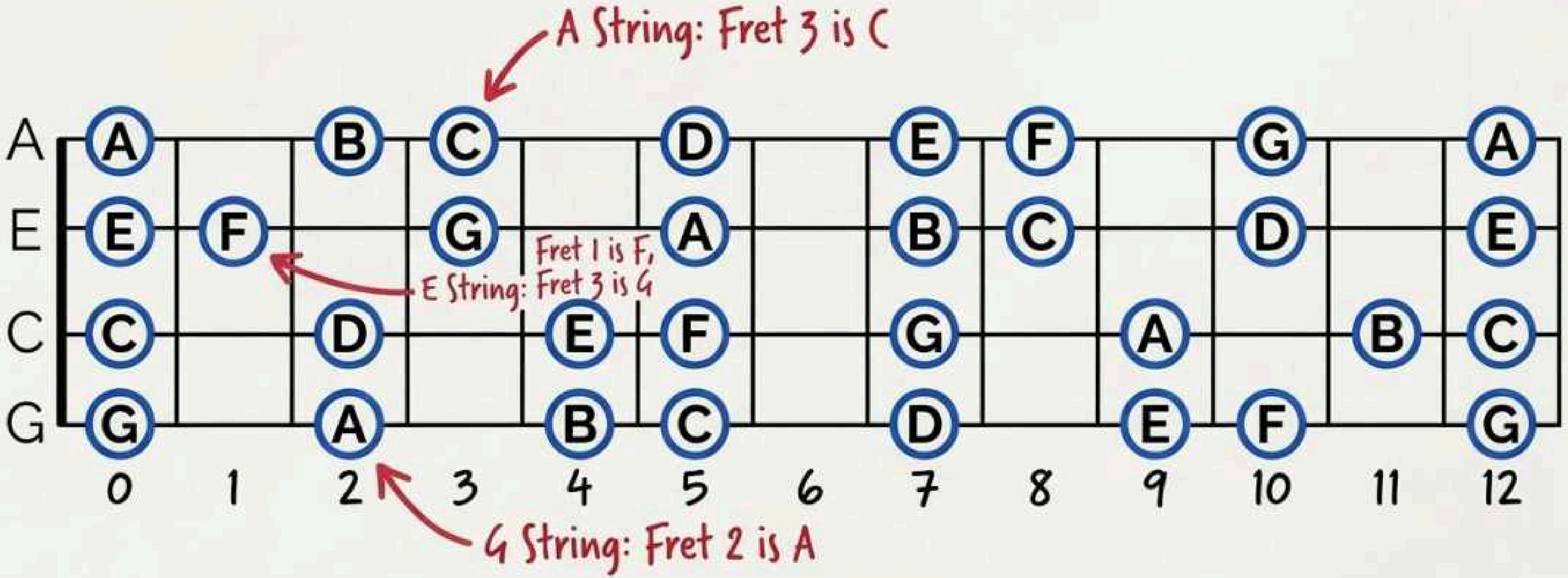
92.5



On a ukulele, moving up one fret equals moving up one half step. To find any note, start at the open string and count up the chromatic scale.

Mapping the Complete Fretboard

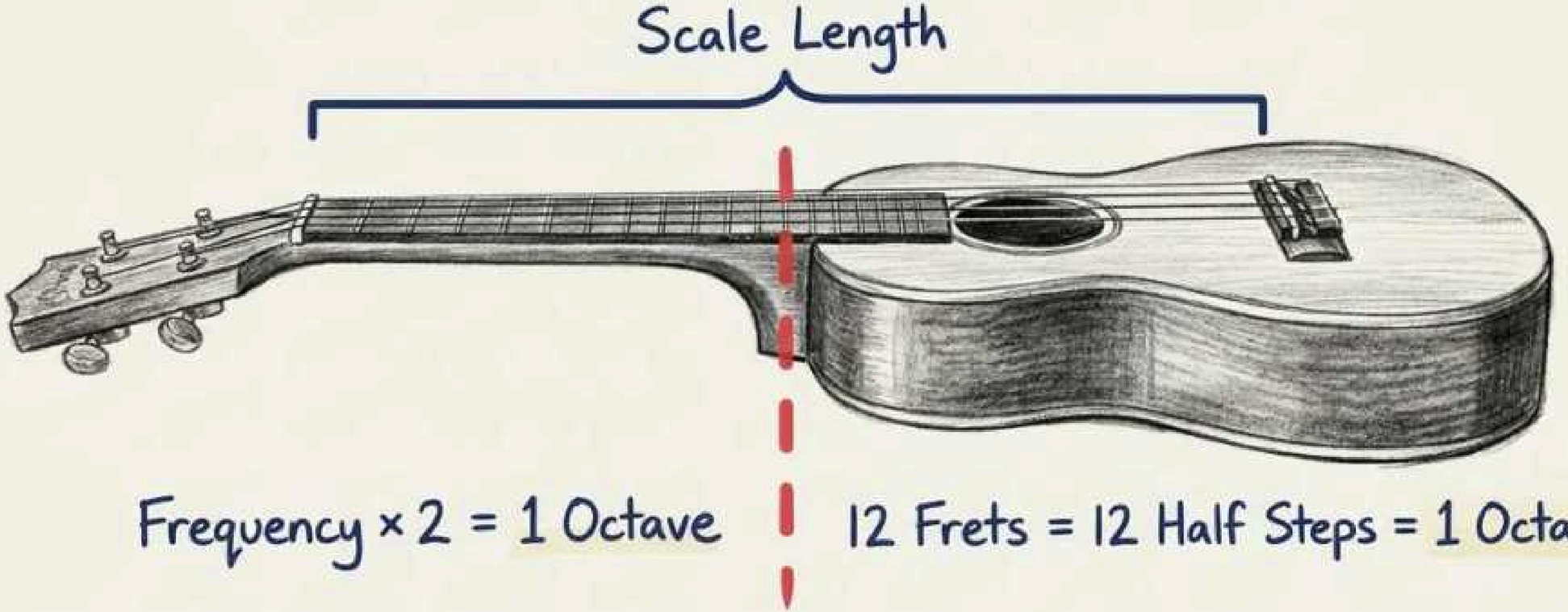
¶ 2.6



Applying the chromatic scale to all four strings creates a complete map of the fretboard. Best practice: learn one string at a time, starting with the natural notes (the ones without sharps or flats).

The Octave at the 12th Fret

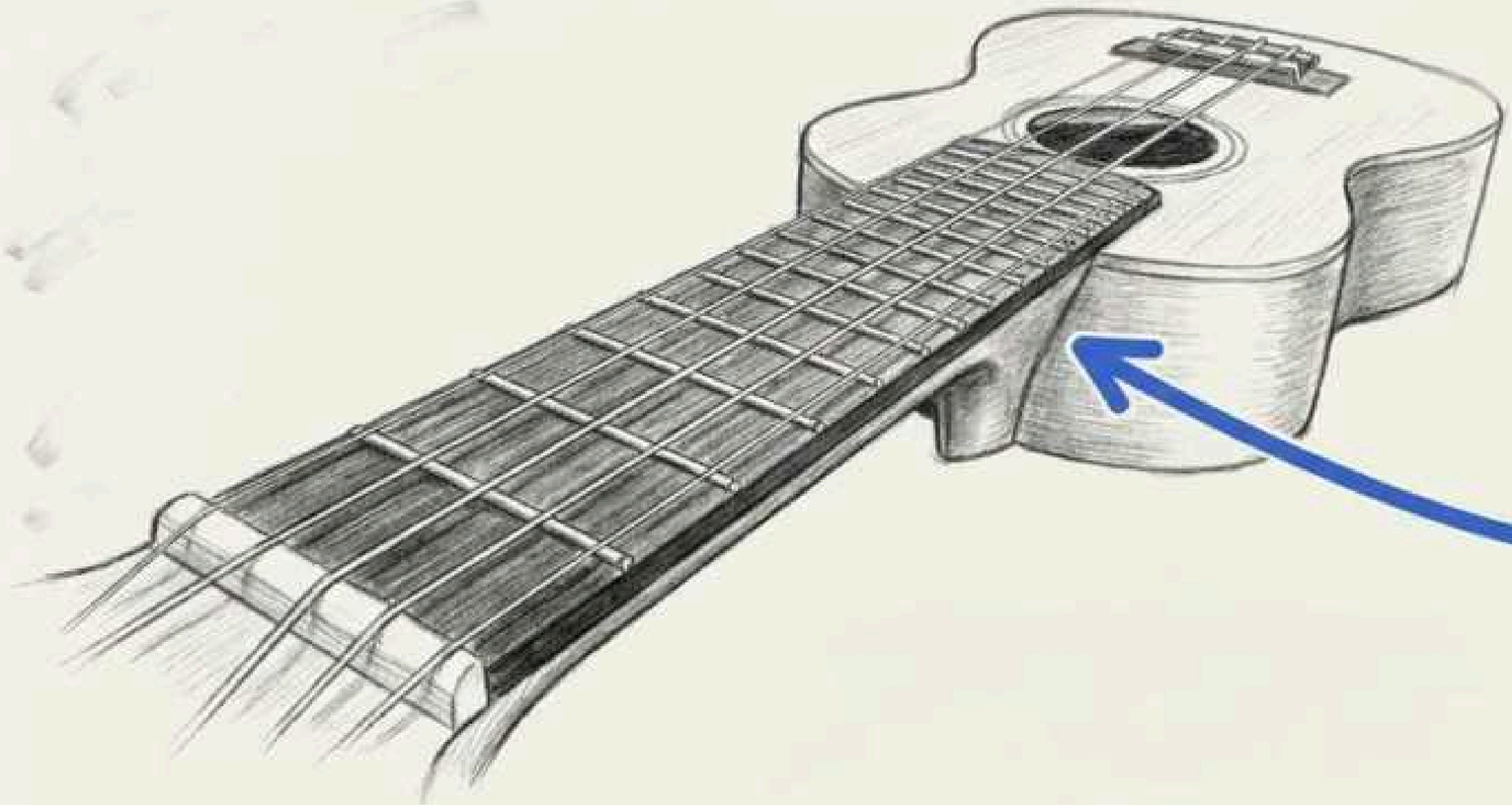
¶ 2.7



The 12th fret sits at exactly half the scale length. Playing it doubles the frequency, producing the same letter note as the open string, one octave higher. The note pattern above the 12th fret perfectly repeats the pattern from the nut.

The Math of Fret Spacing

¶ 2.8



$$f_n = f_0 \times \left(\sqrt[12]{2}\right)^n$$

$$\sqrt[12]{2} \approx 1.0595$$

Distance is proportional, not absolute.

To raise the pitch by equal half steps, each fret must shorten the string by the same proportion. On a standard 13-inch soprano ukulele, the 1st fret is about 0.73″ from the nut, while the 12th fret is at 6.5″.

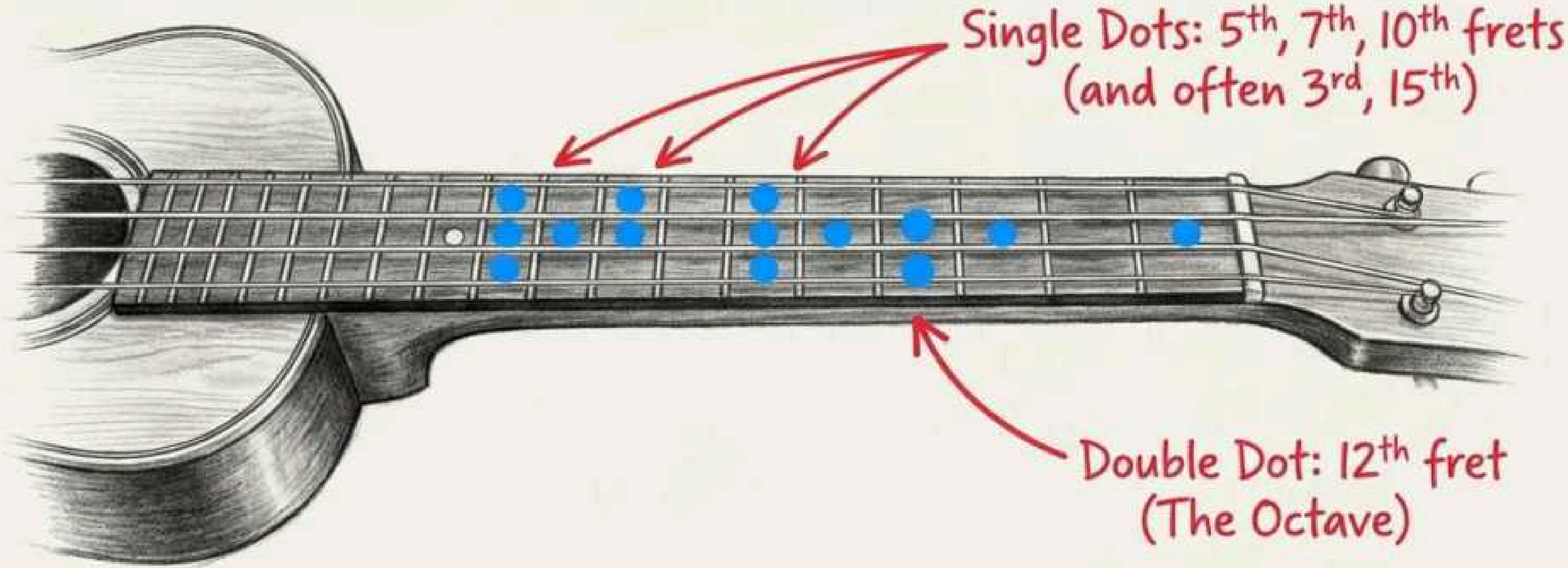
The Equal Temperament Compromise

¶ 2.9



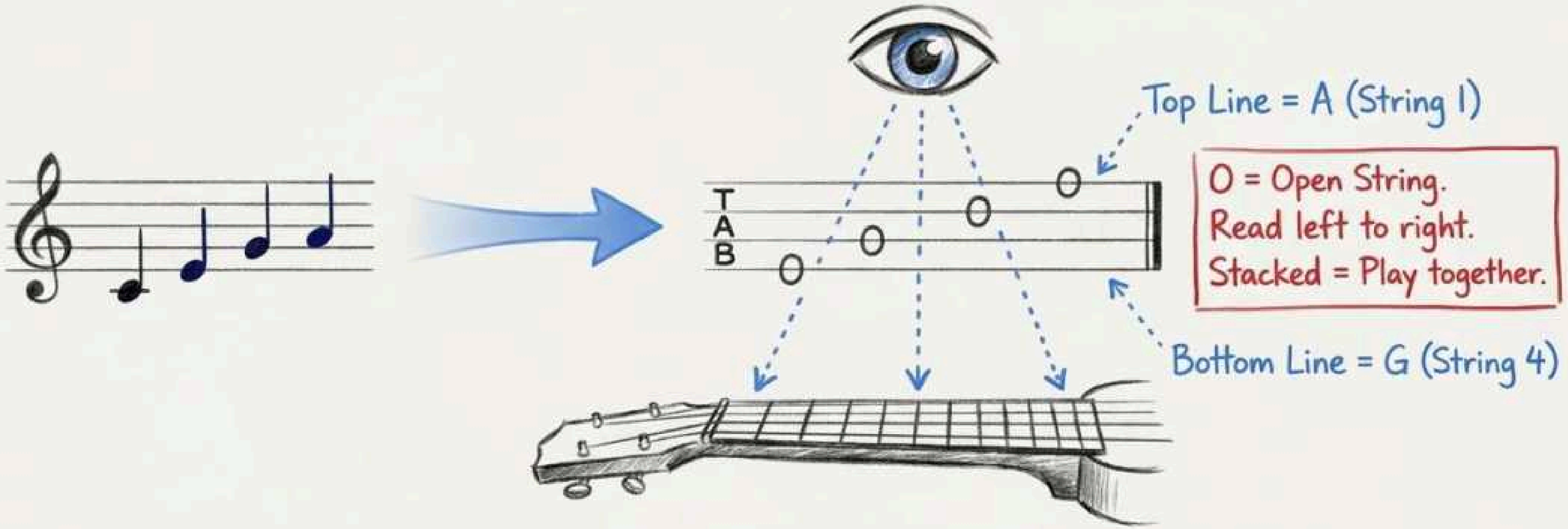
Modern fretted instruments and tuners divide the octave into 12 exactly equal steps. This is a compromise: it allows you to play in any key and move chord shapes freely across the neck, even though intervals are very slightly out of tune with pure physics.

Using Position Markers for Navigation



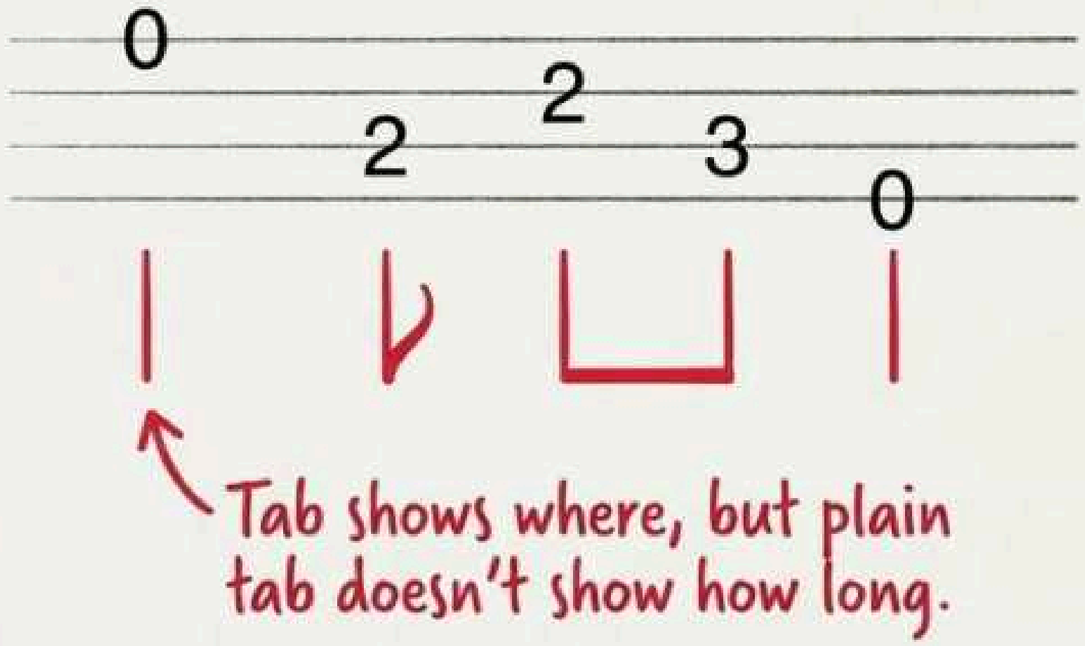
Position markers on the fretboard and neck act as quick visual reference points. Memorizing key marker notes (e.g., the 5th fret of the C string is F; the 7th fret is G) accelerates finding your place further up the neck.

Translating the Fretboard into Tablature



Tablature represents the strings as if looking down at the instrument in your lap. Numbers indicate which fret to press, offering a direct physical map for your fingers rather than abstract pitch notation.

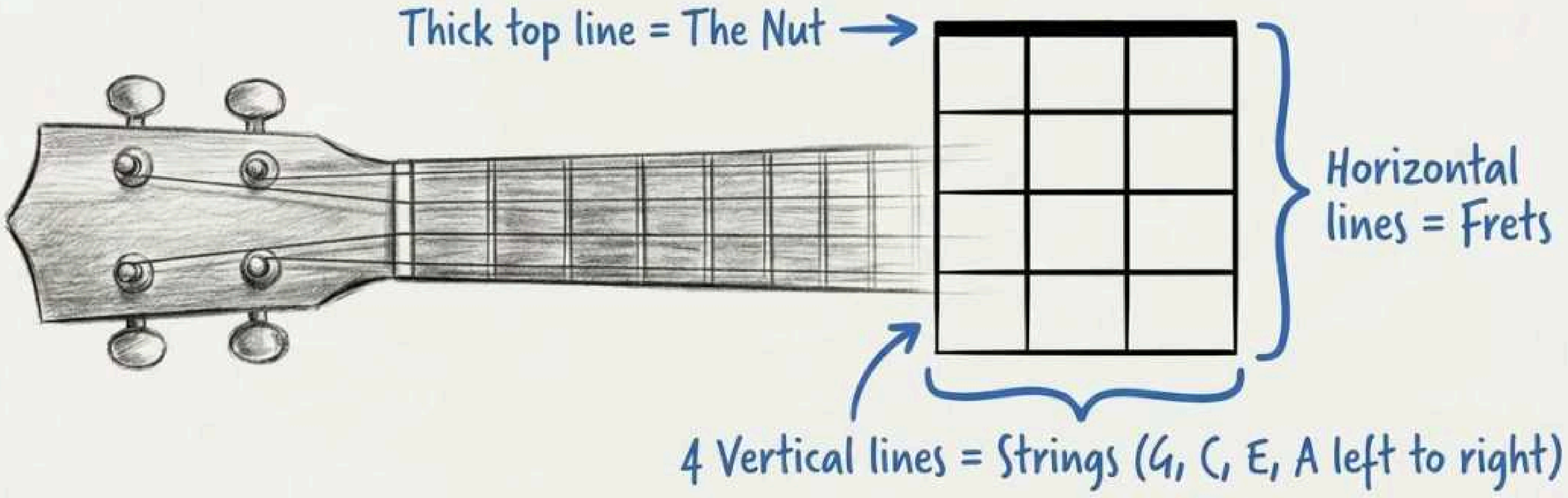
The Limits of Plain Tablature





Good tab includes standard rhythmic stems beneath the numbers or is paired with standard notation above it. Additionally, tab assumes a specific tuning; playing baritone or Low-G tab on a standard ukulele will yield entirely different pitches.

Reading Chord Diagrams
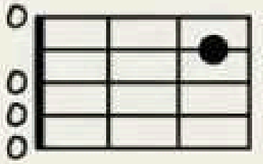


Chord diagrams (or chord boxes) represent the ukulele standing upright, facing you. They provide a direct, visual map of exactly where to place your fingers to build a specific harmony.

Numeric Chord Shorthand

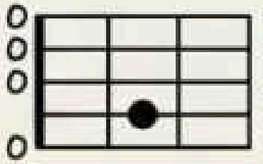
Order is always G-C-E-A.

0 = Open string

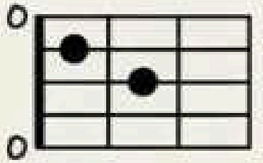
C = 0003 →



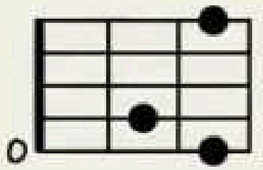
Am = 2000 →



F = 2010 →



G = 0232 →

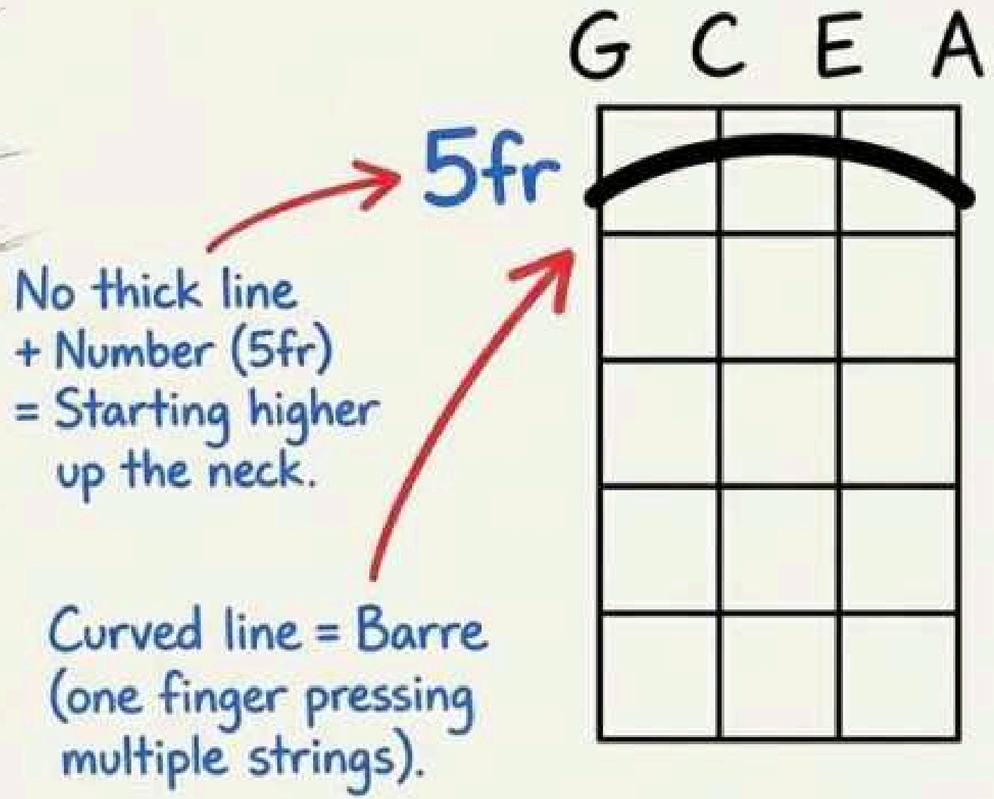


Chords are often written as a compact string of four digits, representing the frets played from the G string to the A string. This shorthand is completely unambiguous once you commit the string order to memory.

Playing Higher Up and Barre Chords

¶ 2.15





Barre chords allow you to press multiple strings at once, usually with the index finger. **Because they do not** rely on open strings, these shapes are **entirely "movable"** and **can be slid anywhere on the neck.**

Synthesis: Mastering the Fretboard

¶ 2.16

[The Chromatic Scale]
+ [1 Fret = 1 Half Step]
+ [4 Open String Notes]
= [Name Any Note]



Scale = A pattern of steps

Chord = Notes a fixed distance (half steps) apart

By combining the chromatic scale rules with the open string tunings and the one-fret-per-step rule, you now possess the formula to name every single note, build any scale, and construct any chord across the entire instrument.