= Major thirds tuning =

Among alternative tunings for guitar , a major @-@ thirds tuning is a regular tuning in which each interval between successive open strings is a major third (" M3 " in musical abbreviation) . Other names for major @-@ thirds tuning include major @-@ third tuning , M3 tuning , all @-@ thirds tuning , and augmented tuning . By definition , a major @-@ third interval separates two notes that differ by exactly four semitones (one @-@ third of the twelve @-@ note octave) .

The Spanish guitar 's tuning mixes four perfect fourths (five semitones) and one major @-@ third , the latter occurring between the G and B strings :

E @-@ A @-@ D @-@ G @-@ B @-@ E.

This tuning , which is used for acoustic and electric guitars , is called " standard " in English , a convention that is followed in this article . While standard tuning is irregular , mixing four fourths and one major third , M3 tunings are regular : Only major @-@ third intervals occur between the successive strings of the M3 tunings , for example , the open augmented C tuning

G ? -C @-@ E @-@ G ? -C @-@ E.

For each M3 tuning , the open strings form an augmented triad in two octaves .

For guitars with six strings , every major @-@ third tuning repeats its three open @-@ notes in two octaves , so providing many options for fingering chords . By repeating open @-@ string notes and by having uniform intervals between strings , major @-@ thirds tuning simplifies learning by beginners . These features also facilitate advanced guitarists ' improvisation , precisely the aim of jazz guitarist Ralph Patt when he began popularizing major @-@ thirds tuning between 1963 and 1964 .

= = Avoiding standard tuning 's irregular intervals = =

In standard tuning , the successive open @-@ strings mix two types of intervals , four perfect @-@ fourths and the major third between the G and B strings :

E @-@ A @-@ D @-@ G @-@ B @-@ E.

Only major thirds occur as open @-@ string intervals for major @-@ thirds tuning , which is also called " major @-@ third tuning " , " all @-@ thirds tuning " , and " M3 tuning " . A popular M3 tuning has the open strings

G ? -C @-@ E @-@ G ? -C @-@ E ,

in which the low G ? is a major third above the low E of standard tuning . Consequently , a seventh string for the low E is often added to restore the standard E @-@ E range . While M3 tuning can use standard sets of guitar strings , specialized string gauges have been recommended . Besides this M3 tuning , which has the open notes { G ? , C , E } , there are exactly three other M3 tunings , which have distinct sets of open @-@ note pitch classes . The other major @-@ thirds tunings respectively have the open notes { A , C ? , F } , { A ? , D , F ? } , and { B , D ? , G } . For six @-@ string guitars , the M3 tuning

F ? -A ? -D @-@ F ? -A ? -D

loses the two lowest semitones on the low @-@ E string and the two highest semitones from the high @-@ E string in standard tuning ; it can use string sets for standard tuning .

= = Properties = =

Major @-@ thirds tunings require less hand @-@ stretching than other tunings , because each M3 tuning packs the octave 's twelve notes into four consecutive frets . The major @-@ third intervals allow major chords and minor chords to be played with two ? three consecutive fingers on two consecutive frets . Every major @-@ thirds tuning is regular and repetitive , two properties that facilitate learning by beginners and improvisation by advanced guitarists .

= = = Four frets for the four fingers = = =

In major @-@ thirds tuning , the chromatic scale is arranged on three consecutive strings in four consecutive frets . This four @-@ fret arrangement facilitates the left @-@ hand technique for classical (Spanish) guitar : For each hand position of four frets , the hand is stationary and the fingers move , each finger being responsible for one fret . Consequently , three hand @-@ positions (covering frets 1 ? 4 , 5 ? 8 , and 9 ? 12) partition the fingerboard of classical guitar , which has exactly 12 frets .

Only two or three frets are needed for the guitar chords ? major , minor , and dominant sevenths ? which are emphasized in introductions to guitar @-@ playing and to the fundamentals of music . Each major and minor chord can be played on two successive frets on three successive strings , and therefore each needs only two fingers . Other chords ? seconds , fourths , sevenths , and ninths ? are played on only three successive frets . For fundamental @-@ chord fingerings , major @-@ thirds tuning 's simplicity and consistency are not shared by standard tuning , whose seventh @-@ chord fingering is discussed at the end of this section .

= = = Repetition = = =

Each major @-@ thirds tuning repeats its open @-@ notes after every two strings , which results in two copies of the three open @-@ strings ' notes , each in a different octave . This repetition again simplifies the learning of chords and improvisation . This advantage is not shared by two popular regular @-@ tunings , all @-@ fourths and all @-@ fifths tuning .

Chord inversion is especially simple in major @-@ thirds tuning . Chords are inverted simply by raising one or two notes three strings . The raised notes are played with the same finger as the original notes . Thus , major and minor chords are played on two frets in M3 tuning even when they are inverted . In contrast , inversions of chords in standard tuning require three fingers on a span of four frets , in standard tuning , the shape of inversions depends on the involvement of the irregular major @-@ third .

= = = Regular musical @-@ intervals = = =

In each regular tuning , the musical intervals are the same for each pair of consecutive strings . Other regular tunings include all @-@ fourths , augmented @-@ fourths , and all @-@ fifths tunings . For each regular tuning , chord patterns may be moved around the fretboard , a property that simplifies beginners ' learning of chords and advanced players ' improvisation .

In contrast , chords cannot be shifted around the fretboard in standard tuning , which requires four chord @-@ shapes for the major chords : There are separate fingerings for chords having root notes on one of the four strings three ? six .

= = = = Shifting chords : Vertical and diagonal = = = =

The repetition of the major @-@ thirds tuning enables notes and chords to be raised one octave by being vertically shifted by three strings . Notes and chords may be shifted diagonally in major @-@ thirds tuning , by combining a vertical shift of one string with a horizontal shift of four frets : " Like all regular tunings , chords in the major third tuning can be moved across the fretboard (ascending or descending a major third for each string) .... "

In standard tuning , playing scales of one octave requires three patterns , which depend on the string of the root note . Chords cannot be shifted diagonally without changing finger @-@ patterns . Standard tuning has four finger @-@ patterns for musical intervals , four forms for basic major @-@ chords , and three forms for the inversion of the basic major @-@ chords .

= = = Open chords and beginning players = = =

Major @-@ thirds tunings are unconventional open tunings , in which the open strings form an augmented triad . In M3 tunings , the augmented fifth replaces the perfect fifth of the major triad ,

which is used in conventional open @-@ tunings . For example , the C @-@ augmented triad (C , E , G ?) has a G ? in place of the C @-@ major triad 's G. (The note G ? is enharmonically equivalent to A ? , as noted above .) Consequently , M3 tunings are also called (open) augmented @-@ fifth tunings (in French " La guitare # 5 , majeure quinte augmentée ") .

Instructional literature uses standard tuning . Traditionally a course begins with the hand in first position , that is , with the left @-@ hand covering frets 1 ? 4 . Beginning players first learn open chords belonging to the major keys C , G , and D. Guitarists who play mainly open chords in these three major @-@ keys and their relative minor @-@ keys (Am , Em , Bm) may prefer standard tuning over an M3 tuning . In particular , hobbyists playing folk music around a campfire are well served by standard tuning . Such hobbyists may also play major @-@ thirds tuning , which also has many open chords with notes on five or six strings ; chords with five @-@ six strings have greater volume than chords with three @-@ four strings and so are useful for acoustic guitars (for example , acoustic @-@ electric guitars without amplification) .

Intermediate guitarists do not limit themselves to one hand @-@ position , and consequently open chords are only part of their chordal repertoire . In contemporary music , master guitarists " think diagonally and move up and down the strings " ; fluency on the entire fretboard is needed particularly by guitarists playing jazz . According to its inventor , Ralph Patt , major @-@ thirds tuning

" makes the hard things easy and the easy things hard . [...] This is never going to take the place of folk guitar , and it 's not meant to . For difficult music , and for where we are going in free jazz and even the old be @-@ bop jazz , this is a much easier way to play . "

= = = Left @-@ handed chords = = =

Major @-@ thirds tuning is closely related to minor @-@ sixths tuning , which is the regular tuning that is based on the minor sixth , the interval of eight semitones . Either ascending by a major third or by descending by a minor sixth , one arrives at the same pitch class , the same note representing pitches in different octaves . Intervals paired like the pair of major @-@ third and minor @-@ sixth intervals are termed " inverse intervals " in the theory of music . Consequently , chord charts for minor @-@ sixths tunings may be used for left @-@ handed major @-@ thirds tunings ; conversely , chord charts for major @-@ thirds tunings may be used for left @-@ handed minor @-@ sixths tunings .

= = = Fingering of seventh chords = = =

Major @-@ thirds tuning facilitates playing chords with closed voicings . In contrast , standard tuning would require more hand @-@ stretching to play closed @-@ voice seventh chords , and so standard tuning uses open voicings for many four @-@ note chords , for example of dominant seventh chords . By definition , a dominant seventh is a four @-@ note chord combining a major chord and a minor seventh . For example , the C7 seventh chord combines the C @-@ major chord { C , E , G } with B ? . In standard tuning , extending the root @-@ bass C @-@ major chord (C , E , G) to a C7 chord (C , E , G , B ?) would span six frets (3 ? 8) ; such seventh chords " contain some pretty serious stretches in the left hand " . An illustration shows this C7 voicing (C , E , G , B ?) , which would be extremely difficult to play in standard tuning , besides the openly voiced C7 @-@ chord that is conventional in standard tuning : This open @-@ position C7 chord is termed a second @-@ inversion C7 drop 2 chord (C , G , B ? , E) , because the second @-@ highest note (C) in the second @-@ inversion C7 chord (G , B ? , C , E) is lowered by an octave .

= = History = =

Major @-@ thirds tuning was introduced in 1964 by jazz @-@ guitarist Ralph Patt . He was studying with Gunther Schuller , whose twelve @-@ tone technique was invented for atonal composition by his teacher , Arnold Schoenberg . Patt was also inspired by the free jazz of Ornette

Coleman and John Coltrane . Seeking a guitar @-@ tuning that would facilitate improvisation using twelve @-@ tones , he introduced major @-@ thirds tuning by 1964 , perhaps in 1963 . To achieve the E @-@ E open @-@ string range of standard (Spanish) tuning , Patt started using seven @-@ string guitars in 1963 , before settling on eight @-@ string guitars with high G ? (equivalently A ?) as their highest open @-@ notes . Patt used major @-@ thirds tuning during all of his work as a session musician after 1965 in New York . Patt developed a webpage with extensive information about major @-@ thirds tuning .