

Pitch Equivalent Guitar Fingerings of the E Minor Closed Triads

© Philip Pennance Version: May 2025.

Remarks

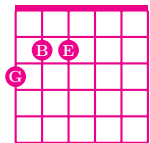
The following is a 6×4 table of some commonly used voicings of the E minor closed triads¹ on a 21 fret guitar. Let $X(i, j)$ be the chord in row i and column j , so that, for example, the top left and bottom right chords of the table will be denoted $X(1, 1)$ and $X(6, 4)$ respectively. Notice that:

1. Chords on a given row fall in roughly the same range of frets.
2. Each row contains a root, first inversion and second inversion triad of the closed E minor. The fourth chord is an upward pitch translation by one octave of the first chord. Thus, for example, $X(3, 4)$ is one octave higher than $X(3, 1)$ and of the same inversion/permutation.
3. [Chord Pitch](#) is constant on fingerings of the same color (located on the diagonals). Since there are eight colors in the table, there are exactly eight distinct E minor chord pitches. It is natural to refer to fingerings of the same color as being *pitch equivalent* or belonging to the same *pitch class*. Clearly all fingerings in a given pitch class will be of the same inversion.
4. In a given row, each chord follows from the preceding by raising the base note by one octave.
5. Since there are only three even permutations of three notes, the chords in row $i + 3$ will be an octave higher than in row i and of the same inversion.
6. The fingerings of minor chords in other keys can now be obtained by a pitch translation of the entire table.

¹Please refer to the article [Guitar Chord Sequences Totally Ordered by Pitch](#) for terminology.

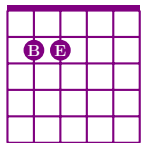
$$M_3 \oplus P_4 = M_6$$

×××



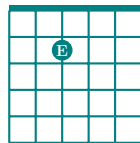
$$P_4 \oplus m_3 = m_6$$

× ⊙ × ×



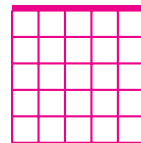
$$m_3 \oplus M_3 = P_5$$

× × ⊙ ⊙ ×



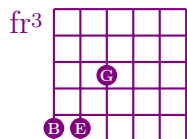
$$M_3 \oplus P_4 = M_6$$

× × × ⊙ ⊙ ⊙



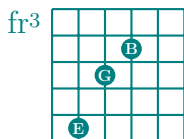
$$P_4 \oplus m_3 = m_6$$

× × ×



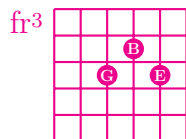
$$m_3 \oplus M_3 = P_5$$

× × ×



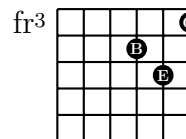
$$M_3 \oplus P_4 = M_6$$

× × ×



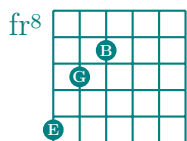
$$P_4 \oplus m_3 = m_6$$

× × ×



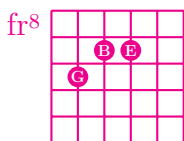
$$m_3 \oplus M_3 = P_5$$

× × ×



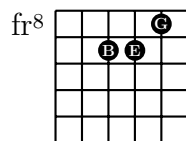
$$M_3 \oplus P_4 = M_6$$

× × ×



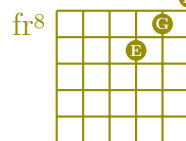
$$P_4 \oplus m_3 = m_6$$

× × ×



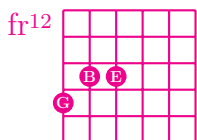
$$m_3 \oplus M_3 = P_5$$

× × ×



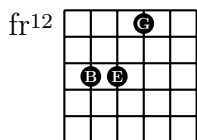
$$M_3 \oplus P_4 = M_6$$

× × ×



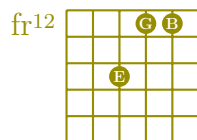
$$P_4 \oplus m_3 = m_6$$

× × ×



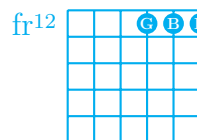
$$m_3 \oplus M_3 = P_5$$

× × ×



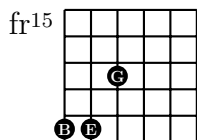
$$M_3 \oplus P_4 = M_6$$

× × ×



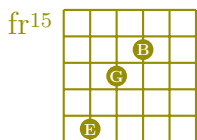
$$P_4 \oplus m_3 = m_6$$

× × ×



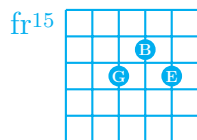
$$m_3 \oplus M_3 = P_5$$

× × ×



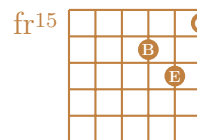
$$M_3 \oplus P_4 = M_6$$

× × ×



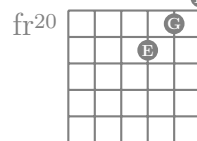
$$P_4 \oplus m_3 = m_6$$

× × ×



$$m_3 \oplus M_3 = P_5$$

× × ×



Some Suggestions for Practice

The chords can be practised

1. One row at a time (so as to remain within a given fret range). Before and after each row, the closed chord determined by the highest notes of the three open chords can also be played.
2. One column at a time.
3. All chords of a given color.
4. In order of pitch increasing and pitch decreasing. This can be done by playing along all paths of length 9 connecting $X(6, 4)$ to $X(1, 1)$. Such paths contain every color exactly once.
5. Interleaved with musically related chords..