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Composing with Alternative Acoustic Guitar Techniques

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COMPOSING WITH ALTERNATIVE ACOUSTIC GUITAR TECHNIQUES

By
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"Composing with Alternative Acoustic Guitar Techniques"

The acoustic guitar is an immensely versatile instrument that offers numerous tonal and rhythmic possibilities for composers and guitarists alike. As an unaccompanied instrument, the acoustic guitar is capable of performing complex harmonies and expressive melodies with ease. Unaccompanied guitar works that refrain from incorporating techniques such as alternate tunings and percussive practices significantly miss the full potential of the acoustic guitar. Due to its construction and layout, the acoustic guitar allows composers to experiment and enhance their scores with alternative techniques, including alternate tunings, harmonics, capos, right hand note tapping, and percussive treatment. These practices will collectively be referred to as alternative techniques. Alternative techniques greatly expand both the tonal and rhythmic potential of the guitar and allow composers to enhance and more fully express their unique creative voice.

This thesis will discuss alternative techniques as they are used in contemporary unaccompanied six-string acoustic guitar works. Through the examination of alternative techniques' origins, recent developments, and contemporary applications, one will more fully understand the extent to which they expand a score's harmonic and rhythmic characteristics. Further, this thesis will address alternative techniques as they appear in works by notable composers, including in-depth examinations of works by guitarists and composers such as Phil Keaggy, Tommy Emmanuel, Andy McKee, and the author.

The Development of the Acoustic Guitar

Much is unknown in regard to the origination and early development of the acoustic guitar. Discrepancies in both function (whether a plectrum is used and specific hand positioning) and construction (number of strings, neck length, curved back, and tuning mechanisms) lead scholars to differ in their classification and lineage of the early guitar. For example, similarities exist between the "guitar" and "kithara" from Ancient Greece. However, these similarities are more etymological rather than functional (Heck et al. 2001). Others believe that the guitar developed from the oriental lute or citole–or Middle Ages lute–due to its construction and lengthened neck. In his book *The Early Guitar: A History and Handbook*, James Tyler argues that while scholars unanimously agree that the guitar originated on the Iberian Peninsula, historians cannot trace the modern guitar earlier than the sixteenth century. He condones linking today's guitars to those portrayed in artwork throughout antiquity, specifically paintings from Italy and Egypt commonly found in literature. He argues, "this kind of uncritical and hasty guesswork, this labeling of a wide variety of available pictures with the name 'guitar', does nothing more than render the word meaningless" (Tyler 1980, 15).

However, most scholars believe that the four-course guitar first appeared near the beginning of the fifteenth century, followed by the five-course guitar in the late-fifteenth century (Heck et al. 2001). As it relates to the discussion of alternative techniques, as well as in order to narrow overall scope, this study begins with the earliest "guitars" as

defined by James Taylor–rejecting association with the lute or citole. The task of analyzing various tunings and alternative techniques of "guitar-like" instruments prior to the fifteenth century is far beyond the purpose of this thesis. To begin, a brief history of the guitar's development is discussed to better understand the actions of composers, guitarists, and guitar-makers (luthiers) that ultimately shaped the acoustic guitar and alternative techniques commonly known today.

In the 1600s, the tuning relationship–intervals–between the guitar's strings had yet to be standardized as many composers altered their tuning depending on venue, genre, and ensemble participation. It was during this time, however, that the tuning intervals used began to reflect those of the modern six-string guitar–perfect fourth, perfect fourth, major third, perfect fourth. Composers created a variety of tunings following these set intervals beginning on notes such as F, G, and C. Similarly, as this was a transitional period for guitar tuning and technique; it was also a developmental time for the appearance and construction of the guitar (Heck et al. 2001).

"The transition from the Baroque five-course guitar to a recognizably modern instrument with six single strings took place gradually during the second half of the eighteenth century and the first decades of the nineteenth century in Spain, France and Italy" (Heck et al. 2001). There remains much speculation and debate among scholars regarding the exact date and individuals responsible for the transition to the six-string guitar known today–and standard tuning. In his book *A Concise History of the Classic Guitar,* Graham Wade wrote, "the progressions by which the guitar became settled in six single strings are too convoluted to chart with certainty" (Wade 2001a, 65). Additionally, it was during this developing time that composers arrived at and solidified what is

commonly known as "standard tuning" for the guitar–[E^2, A^2, D^3, G^3, B^3, E^4] (Heck et al. 2001). The six strings of the modern guitar are numbered one through six, with one being the highest pitched string and six being the lowest. When defining various tunings, the lowest pitched string (sixth) is listed first, followed by the remaining five strings. In summary, a standard tuned guitar is numbered and pitched according to figure 1. It is important to state that the guitar is notated one octave higher than it sounds.

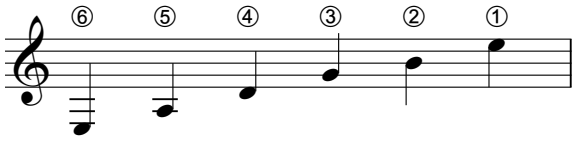


Figure 1. Standard Tuning.

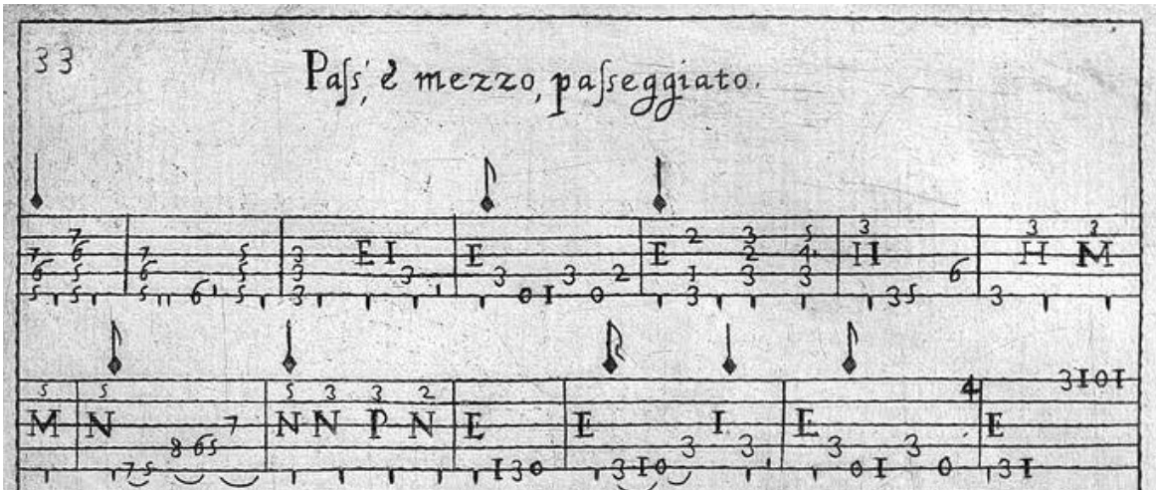
Further study may be performed to more fully understand alternate tunings or "scordatura" of the early guitar–specifically the four-course and five-course guitar. The remainder of this discussion focuses on tunings and techniques that have been used on the six-string guitar, which as mentioned, solidified during the late eighteenth and early-nineteenth centuries alongside standard tuning (Heck et al. 2001).

Standard tuning was primarily used during the Classical Period by influential guitarists and composers such as Fernando Sor (1778-1839), Dionysio Aguado (1784-1849), and Mauro Giuliani (1781-1829). These composers, along with Matteo Carcassi (1792-1853) and Ferdinando Carulli (1770-1841), contributed immensely in both repertoire and technique of the early six-string guitar–one that greater resembled today's acoustic guitar. Their works further elevated the guitar in popularity. As the guitar gained exposure and acceptance, it began to be regularly performed and featured in large-scale works in concert and recital halls. Fernando Sor showcased the six-string guitar and its variety of textures and techniques in *Variations on a Theme of Mozart Op. 9*–which has become the most frequently performed guitar work from this time period (Heck et al.

2001). Even though these composers contributed heavily to the guitar's repertoire and societal popularity, a brief overview of each composer's catalog of works will reveal a scarcity–alternate tunings. The frequent use of scordatura–or alternate tuning–of previous centuries had come to an abrupt end.

A connection can be made between the decline in alternate tuning repertoire and the discontinued use of tablature–"musical notation using letters, numeral, or diagrams to specify pitch" (Randel 2003, 864). Previously, guitar composers utilized tablature in their works such as in Giovanni Paolo Foscarini's *I quattro libri della chitarra spagnola*–see example 1.

Example 1. Giovanni Foscarini, *I quattro libri della chitarra spagnola*. mm. 1-14.



A significant benefit of tablature is that the performer is not required to be aware of the pitches they are playing, as they would if reading traditional staff notation. The guitarist must simply position their fingers over the correct strings and frets to produce the correct pitch. For guitarists that frequently utilize non-standard tuning, tablature is a highly beneficial notation device. To describe the decrease in both tablature and non-standard tunings, David Boyden suggested, "With the emergence of the new [six-string] guitar, tablature was abandoned in favour of staff notation, which made reading and

playing scordaturas difficult, and might explain the subsequent decline of unusual tunings for the instrument" (Boyden et al. 2001).

Interest in the acoustic guitar declined during the nineteenth century. Many serious musicians that first learned the guitar transitioned to other higher esteemed instruments such as the piano, cello, and violin. Music for the guitar was thought of as limited in sophistication, and therefore regarded as amateur (Wade 2001a). Additionally, the guitar was significantly limited in regard to volume. Because of its early design, the guitar was unable to project as effectively as the piano and violin in large venues. Júlio Ribeiro Alves wrote, "the instrument could not be well listened [to] by large audiences in the concert halls" (Alves 2015,100). These factors resulted in the gradual decline of the acoustic guitar.

One of the most influential guitarists of this time was Andrés Segovia (1893-1987). A Spanish guitarist and composer, Segovia made it his mission to elevate the guitar's status on the international stage. Graham Wade summarized Segovia's contribution to the guitar's development as, "immeasurable. He revitalized traditional playing techniques and expanded the repertory by editing many transcriptions and by his massive work in inspiring composers to write new music for the instrument" (Wade 2001b). Wade further wrote, "[Segovia's] charisma and his teaching encouraged new generations of players to strive to fulfil [sic] their musical ambitions within the context of the guitar" (Wade 2001b).

Andrés Segovia challenged society's views and increased both the reputation and sophistication of guitar repertoire. Graham Wade wrote, "The process of elevating the guitar to its present respected stature in the world of music was not without anguish and

set-backs, despite the immense success Segovia's art ultimately achieved" (Wade 1980, 149). As demand increased, the guitar continued to develop in both practice and construction. Guitar makers throughout Europe such as Antonio de Torres Jurado, Hermann Hauser, David Rubio and Paul Fischer further re-designed the guitar–internal bracing, sound hole placement–to meet the growing demands of guitarists in the early twentieth century (Heck et al. 2001).

Throughout the twentieth century, the acoustic guitar was used in a wide variety of works and genres. Composers diverse in style such as Roberto Gerhard (1896-1970), Benjamin Britten (1913-1976), and Arnold Schoenberg (1874-1951) wrote concert pieces that featured the acoustic guitar. For example, Schoenberg's *Serenade op.24* features two guitarists primarily performing contrasting, monophonic lines. The guitar was used to accompany opera as well as to add color to large-scale symphonic works (Heck et al. 2001). Composers continued to enhance their works for the guitar and further experimented with style and performance practice, a characteristic that bridges history with the current discussion of alternative techniques.

A fact yet to be mentioned is that the six-string guitar discussed above does not yet fully reflect the popular contemporary guitars known today. As a result of the increased popularity and growing repertoire of the early twentieth century, guitarists needed a louder, more versatile instrument. In an article on *Grove Music Online*, Tony Bacon wrote:

> In the twentieth century, many changes were made to the basic design of the classical guitar, mostly for the purpose of producing greater volume and penetration. These changes resulted in several distinct types of guitar; each originally designed to meet the specific musical requirements of guitarists playing in popular music forms, principally folk, jazz, blues, dance music and rock and roll. (Heck et al. 2001)

Guitars began to be produced by manufacturers such as Martin, Larson Brother, and Gibson; each product tailored to the evolving and diverse needs of the guitar community.

A prominent similarity exists among individuals and events discussed: experimentation. Composers experimented with various ways to notate their guitar works. Guitarists experimented with diverse tunings until arriving at what is known as standard tuning. Luthiers experimented with bracing, string material, and sound projection to produce an instrument that allowed alternative techniques–especially percussive practices–to be performed and sound pleasant. As a still developing instrument, the acoustic guitar afforded significant experimentation. This experimental mentality remains to this day and has resulted in the ongoing development of contemporary alternative techniques for the unaccompanied acoustic guitar such as alternate tunings, capos, looping, and percussive practices.

Alternate Tuning

Tuning the guitar to pitches other than standard [E^2, A^2, D^3, G^3, B^3, E^4]–or any of its identical interval profiles such as [E-flat^2, A-flat^2, D-flat^3, G-flat^3, B-flat^3, E-flat^4]–opens up a seemingly endless amount of possibilities for guitarists and composers to explore. Even slight alterations such as lowering the sixth string one whole-step–known as "Drop-D"–enable the performer to form new chord shapes, and make notes previously inaccessible feasible–see figure 2. Using alternate tunings, the composer has access to chord voicings, melodic patterns, and harmonic textures that are impractical or impossible in standard tuning. For the guitarist, alternate tunings de-familiarize the fretboard at first, and create an immense opportunity for creativity and expression.

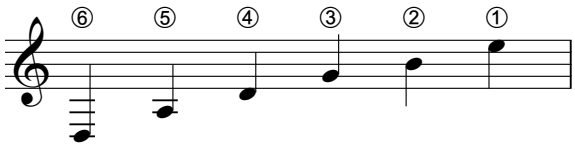


Figure 2. Drop-D Tuning.

Guitarists and composers refer to non-standard tunings in several ways. Terms such as altered, alternate, alternative, and open are all used to define and refer to various tunings. In this study, any instance in which the guitar's tuning does not reflect the intervals of standard tuning–perfect fourth, perfect fourth, perfect fourth, major third, perfect fourth–will be referred to solely as "alternate tuning." A subset of alternate tuning, "open tuning" is defined as a tuning that produces a major or minor chord without fretting. An example of open tuning is "Open-G" [D^2, G^2, D^3, G^3, B^3, D^4], which forms a

G major chord in second inversion–see figure 3. In this tuning, the guitarist may place their finger across all strings (barre) at any fret to produce additional major chords–such as forming the IV chord on the fifth fret and the V chord on the seventh fret. If one remains in the key of G major, they must learn a new collection of chord shapes in order to perform common chords. Figure 4 presents several common chords in the key of G major and how they are positioned on the fretboard in Open-G tuning. Guitarists Peter Frampton (*Penny for Your Thoughts*), John Renbourn (*The English Dance*), and James Taylor (*Love Has Brought Me Around*) have used Open-G tuning in their guitar works. An analysis of Peter Frampton's *Penny for Your Thoughts* is conducted in the following pages.

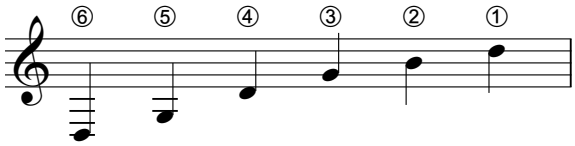


Figure 3. Open-G Tuning.

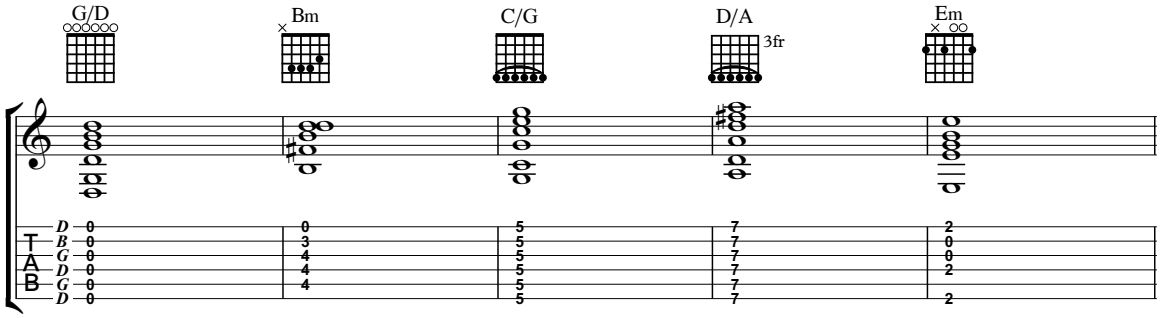


Figure 4. Common Chords in Open-G Tuning.

Author Mark Hanson compiled an excellent resource for guitarists interested in studying and performing alternate tunings. His book *The Complete Book of Alternate Tunings* introduces over twenty alternate tunings and contains useful chord charts and scale exercises in each tuning. Another book on alternate tunings, *How to Write Songs in Altered Guitar Tunings* by Rikky Rooksby, includes numerous examples, diagrams, and

guitarists' quotes on the subject. In addition to personal experience, web searches, and guitarist interviews, these two books have been extremely helpful resources in finding relevant information and examples on the topic of alternate tunings.

Forthcoming musical examples have been transcribed using Sibelius 7.5 to create a consistent format. Scores are included as they appear in the composer's original work with minimal alteration. In several instances, it was beneficial to separate voices in order to better isolate a melody or technique. Additionally, performance notes–such as percussion instructions and legends–have been unaltered and remain in the composer's original verbiage.

Drop-D

Drop-D [D^2, A^2, D^3, G^3, B^3, E^4] provides an excellent introduction to the study of alternate tunings. As expected, many songs utilizing Drop-D are either in the key of D major or its relative minor. However, closely related keys such as G and A major also offer favorable chord positions and voicings to be experimented with, as they share some of the same chords.

Figure 5 depicts several common chords in the key of D major and how they are shaped in Drop-D tuning. Notes that sound on the five highest-pitched strings–unaltered–are positioned on the same frets as if the guitar is in standard tuning. With the sixth string (E^2) lowered one whole step, several common chords–such as the E minor and G major in figure 5–must be positioned differently than in standard tuning. The simple act of altering a single string allows the guitarist to access and re-shape chords for greater mobility and harmonic depth such as moveable triads and dense chord voicings.

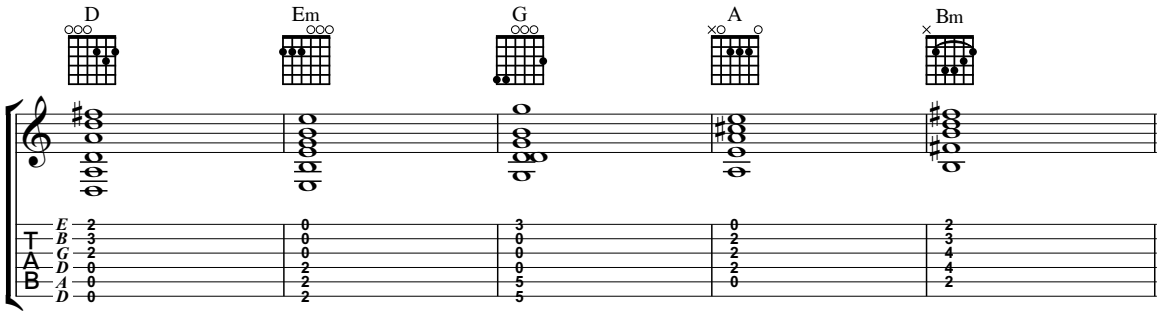


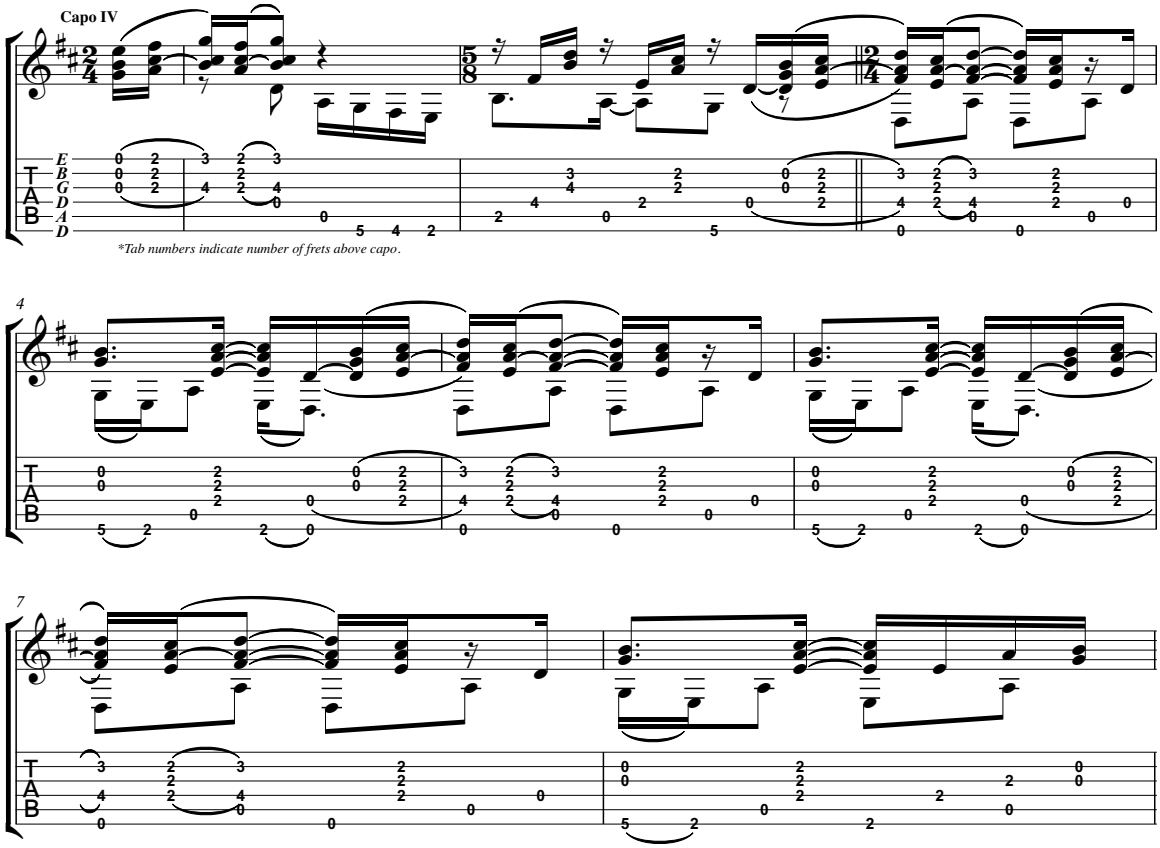
Figure 5. Common Chords in Drop-D Tuning.

Songs that feature Drop-D tuning are *All Thumbs* (Chet Atkins), *Country Road* (James Taylor), and *Mona Ray* (Leo Kottke). Example 2 presents the opening measures of *Mona Ray*. Leo Kottke (b. 1945) was a highly respected guitarist and was known for composing in unique alternate tunings. His 1974 release *Dreams and All That Stuff* included *Mona Ray*, written in Drop-D tuning. The lowered sixth string (D^2) adds warmth and contrast to the melody and its accompanying harmonies. Measure 3 is repeated five times in this piece's introduction. In that measure, the guitarist alternates between the F-sharp^3/D^4 and E^3/C-sharp^4 in the higher strings while the lowered sixth string (D^2) grounds the phrase with its tonic pitch–D.

Note Kottke's instruction to place a capo on the fourth fret–capo usage will be discussed at length in a following chapter. Even though a capo is placed on the guitar's fourth fret, raising the pitch of all strings a major third; the song is notated as if there is no capo. When a full capo is used, it is common for composers to notate their works as a transposed score. It is much easier for guitarists to read and perform sheet music that is written using common left hand shapes and patterns than to transpose the score from one key to another as they are playing. To inform the guitarist of this notation characteristic, a performance note at the beginning of the score states that the numbers written in the tablature indicate the number of frets above capo, rather than actual fret of the guitar.

Notating a complex guitar piece in an alternate tuning presents many challenges, many of which can be remedied with adequate instruction from the composer. Challenges in notation will be encountered as alternate tunings are further discussed.

Example 2. Leo Kottke, *Mona Ray.* mm. 1-8.

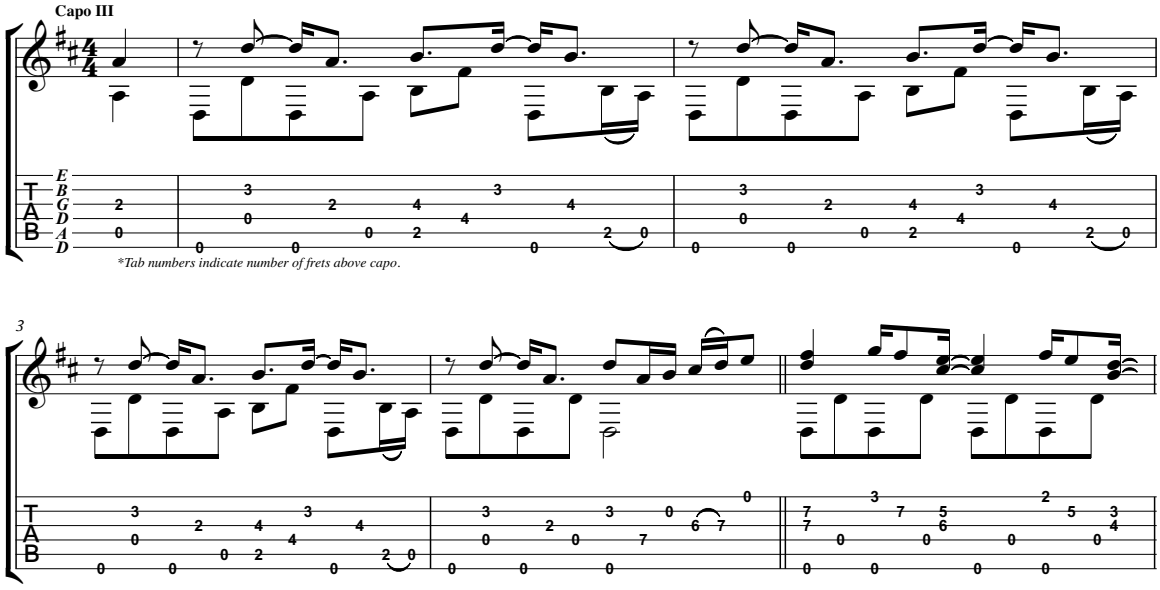


Tommy Emmanuel's *Half Way Home* provides an excellent example of the many accompanimental possibilities available in Drop-D tuning. In much of the introduction and following passages, the right hand thumb alternates between the sixth string (D^2) and fourth string (D^3) at an eighth note pulse–see example 3. As both strings provide the bass accompaniment, the guitarist frets higher-pitched strings to articulate the melody. Observing the tablature, note that the guitarist is frequently instructed to play B^3 on the fourth fret of the third string, rather than on the open B string. As a result, the fretted B^3 sustains while additional notes–D^4 in mm. 1-4–are added in the upper strings. Performing

in this manner will result in a more consistent, layered sound, as opposed to a disconnected, monophonic melody if performed on a single string.

Altering the sixth string in *Half Way Home*, Emmanuel made accessible the higher registers of the guitar. In m. 5, Emmanuel instructed the guitarist to fret D^4 and F-sharp^4 on the third and second strings, respectively. This effect creates a layered sound with the addition of the G^4 and following F-sharp^4 (second string) on beat two. The F-sharp^4 (second string) and G^4 (first string) create a temporary dissonance that resolves to a simultaneous C-sharp^4 and E^4. However, with the addition of the pedal tone D^2, a new dissonance is created between the pitches C-sharp^4 (third string) and octave D's (sixth and fourth strings). Beat four uses a rhythmically identical descending motif–16^{th}/quarter/16^{th}–to resolve the remaining dissonance to a vi chord in first inversion–full triad achieved with F-sharp^4 sustained from beat four.

Example 3. Tommy Emmanuel, *Half Way Home*. mm. 1-5.



Regarding notation and performance, it is common practice for guitarists to sustain notes for the duration of a measure even though their rhythms are notated at

shorter values. For example, the D^3 in m. 1 will likely be sustained until the F-sharp^3 in the second half of the measure–F-sharp^3 is performed on the D string. Similarly, the B^2 in m. 3 will likely sustain until it is performed again in beat four. The guitarist is expected–unless otherwise instructed–to perform works like this with expression and musicality, rather than exactly as notated. In this regard, the guitarist is generally allowed a great degree of freedom when performing a composer's guitar works.

The picking pattern in *Half Way Home* is similar to that made popular by Chet Atkins (1924-2001). Atkins was a world-renowned guitarist, producer, and recipient of the Grammy Lifetime Achievement Award (1993). He was also inducted to the Country Music Hall of Fame in 1973 and Rock and Roll Hall of Fame in 2002 (Malone and Mazor 2015). He is well known in the guitar community for his unique fingerpicking pattern, which uses the right hand thumb to strike the guitar's bass notes while remaining fingers perform melodic elements on higher strings. Tommy Emmanuel credited Atkins for much of his inspiration and influence saying, "Mark [friend of Emmanuel] and I both learned so much from Chet-he was a hero and a mentor to each of us, and we've tried to bring his spirit forward into the future in our own playing" (Emmanuel 2019).

G6

Chet Atkins utilized many alternate tunings throughout his many years as a composer and guitarist, including G6 tuning. G6 tuning–also referred to as Drop-G–involves lowering the fifth and sixth strings one whole-step–see figure 6. It creates a fretboard that favors the key of G major while leaving the fourth through first strings unaltered. Chet Atkins composed *Yellow Bird*–from his 1970 release "This is Chet Atkins"–using G6 tuning–see example 4.

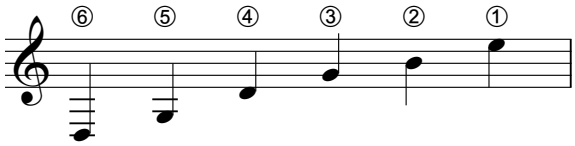
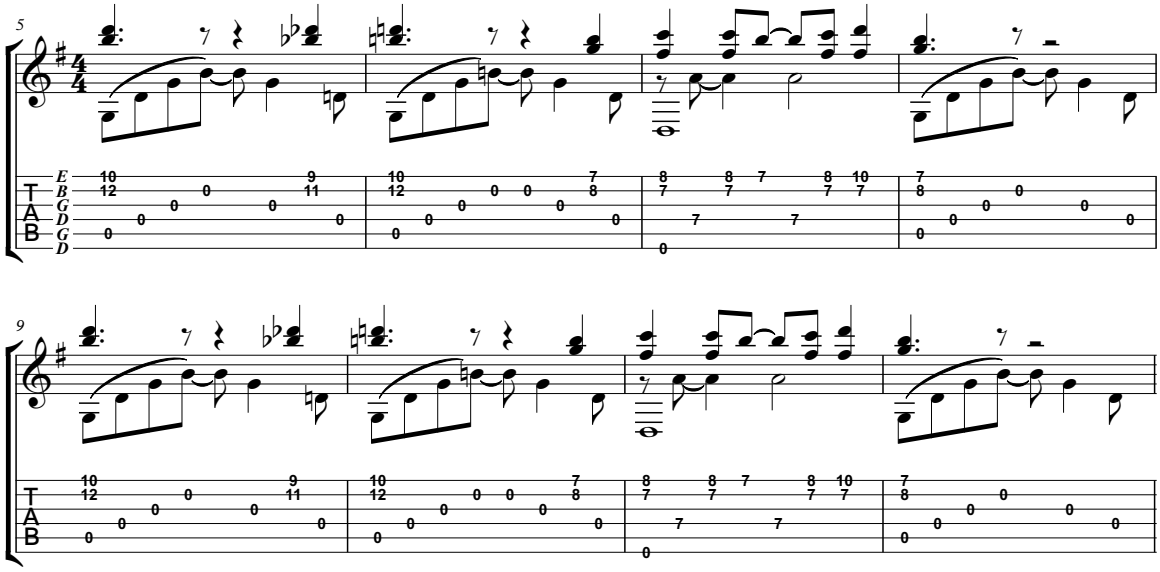


Figure 6. G6 Tuning.

Example 4. Chet Atkins, *Yellow Bird. mm. 5-12.*

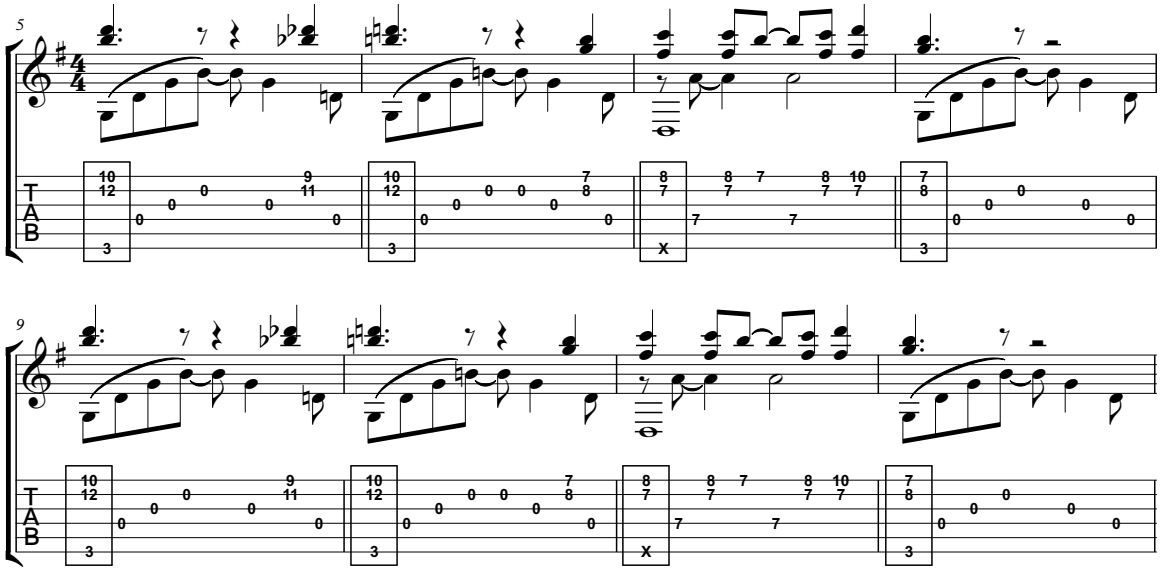


An ascending G major arpeggio in mm. 5-6–repeated in mm. 8-10–provides the harmonic foundation for the upper voices. The guitarist must place their fingers on frets 12 (second string) and 10 (first string) to achieve the pitches B^4 and D^5, respectively. These two notes progress in parallel, chromatic thirds before separating at m. 7. In m. 8, they return to their original interval of a third. This pattern is repeated in mm. 9-12. These textures and chord voicings would be unattainable in standard tuning. The ability to arpeggiate a major–or minor–chord without fretting a single note liberates the left hand to perform a great amount of new textures and voicings.

To better understand the versatility that G6 tuning–and other alternate tunings–offers, example 5 provides an alternative–and impossible–transcription of *Yellow Bird*. The staff notation is identical to example 4, however the tablature has been altered to

reflect a guitar in standard tuning. From the onset, it is physically impossible to press the third fret (sixth string), 12th fret (second string), and 10th fret (first string) simultaneously. Further, in sections that are physically possible to perform–such as beats two through four of m. 5 and m. 6–there can be no sustaining bass tone, as possible in G6 tuning. The D^2 in m. 7 is also inaccessible because the lowest string is be tuned to E^2 in standard tuning. For notational clarity, an "x" has been substituted in the tablature for the inaccessible D^2. In following chapters–and guitar notation in general–an "x" represents a percussive hit rather than an inaccessible note. When using an alternate tuning, the guitarist is afforded a diverse range of tonal and harmonic possibilities. Previous examples cover scenarios in which one or two strings are altered. The following scores provide examples of even greater altered tunings, beginning with Open-G.

Example 5. Chet Atkins, *Yellow Bird.* mm. 5-12 (Standard Tuning in Tablature).



Open-G

Open-G tuning [D^2, G^2, D^3, G^3, B^3, D^4] creates a G major harmony in second inversion. To achieve this tuning, the guitarist must lower the sixth, fifth, and first strings one whole-step. Open-G tuning was common among blues players in the early 1900s as

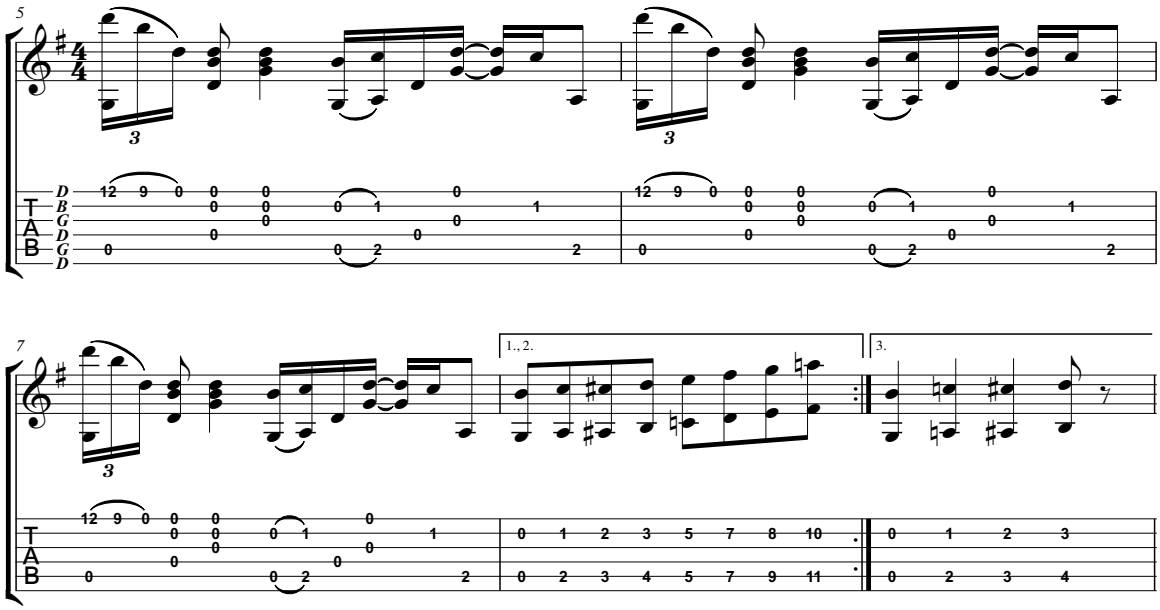
well as guitarists such as Eric Clapton, James Taylor, and Peter Frampton (Hanson 1995, 44). Peter Frampton (b. 1950) is a highly successful singer-songwriter, guitarist, studio musician, and composer. He was named *Billboard* Magazine's Artist of the Year in 1976 (Donald 1990, 83). He has written extensively for the guitar, in various alternate tunings, including Open-G.

Peter Frampton's *Penny For Your Thoughts* was released in 1976 and included on Frampton's *Frampton Comes Alive!* album. This unaccompanied instrumental acoustic guitar piece was written in the key of G major and maintains Open-G tuning throughout. Example 6 provides five measures that are repeated several times throughout the piece. As with any observation of a musical score written in an alternative tuning, it is helpful to examine both the staff and the tablature to look for patterns or open notes. Much of m. 5 is performed using open strings–sounding a G major chord in root position. As observed in *Yellow Bird*, there is a considerably large range–two octaves and a perfect fifth–between the lowest note (G^2) and the highest note (D^5). Additionally, this–and many–alternate tuning provides an excellent opportunity for hammer-ons and pull-offs. On beat three of m. 5, the guitarist is instructed to strike the second and fifth strings simultaneously with the right hand and then hammer-on notes on the first and second frets, respectively. The sounding pitches A^2 and C^4 will sustain until they are struck again in beat four. These hammer-ons are attacked and sustained while the guitarist plays an arpeggio pattern on the open fourth, third and first strings.

When composing with alternate tunings, the availability of open strings is an incredible asset for the composer to incorporate hammer-ons and pull-offs, especially when utilizing these techniques on multiple strings at once as observed in *Penny for Your*

Thoughts. The manner in which a composer writes using hammer-ons and pull-offs–if executed properly–has the potential to add not only harmonic value to a work, but rhythmic–further discussed in chapter four.

Example 6. Peter Frampton, *Penny For Your Thoughts*. mm. 5-9.



In m. 8, Frampton composed a transitional passage consisting of ascending thirds. Harmonically, this section progresses diatonically–with the exception of the A-sharp^{2} and C-sharp^{4}–from the tonic pitch (G^{2}) to the leading tone (F-sharp^{3}). Observing the tablature, note that this entire measure is to be performed on the same two strings, gradually moving further up the guitar's neck. Alternatively, Frampton could have composed this ascent by placing the lower note of each third one octave higher, and therefore shifting the fret numbers from the fifth string (G^{2}) to the third string (G^{3}) to reduce the distance between notes. However, this alteration would have resulted in a much weaker transition that lacked the warmth and depth that a lowered fifth string can provide. Frampton's intentional use of pitch, octave, and string clearly reflect his abilities as a composer and careful attention to musical detail.

DADGAD

An alternate tuning yet to be discussed–and possibly the most common behind Drop-D–is DADGAD [D^2, A^2, D^3, G^3, A^3, D^4]. Casually referred to and pronounced by guitarists as "Dad Gad," this alternate tuning creates a D suspended fourth harmony when openly played–see figure 7. English guitarist Davey Graham (1940-2008) is credited with having popularized DADGAD tuning after reportedly discovering it in Morocco during the 1960s (Hanson 1995, 25). Many guitarists later embraced DADGAD because of its unique intervallic structure–perfect fifth, perfect fourth, perfect fourth, major second, perfect fourth. As a result of the major second interval between the second and third strings, the guitarist has the ability to perform consecutive notes with greater ease–as opposed to a standard-tuned guitar's interval of a major third. The guitarist may also find that it is easier to create dissonant harmonies by exploiting the altered layout of the fretboard. This unique characteristic differentiates DADGAD from previously discussed alternate tunings.

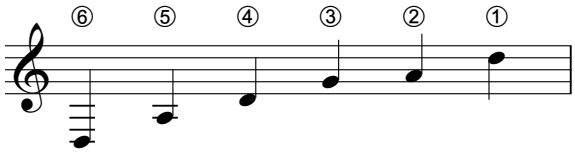


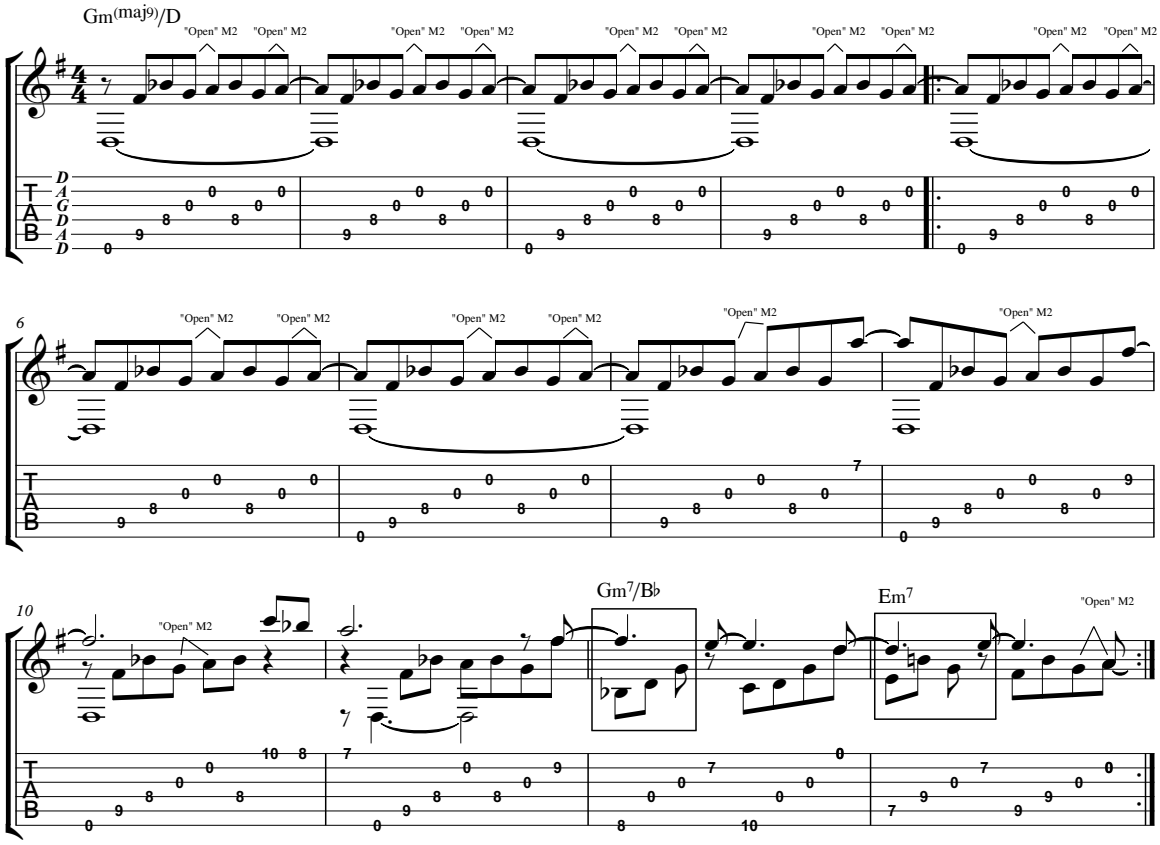
Figure 7. DADGAD Tuning.

Alex de Grassi (b. 1952) is an American finger-style guitarist and Grammy nominated composer. He grew up learning folk, jazz, blues, and classical guitar before developing his own unique compositional voice. De Grassi's style reflects a diverse range of techniques, including extensive use of alternate tunings such as DADGAD.

Alex de Grassi's work, *Mirage,* exploits many of the opportunities available to the composer in DADGAD tuning. With a key signature of one sharp, although not in G

major or E minor, mm. 1-13 present the “Introduction” (mm. 1-4) and “A Section” (mm. 5-13). As mentioned, DADGAD is a unique tuning in that it creates a major second interval between the second and third strings–an interval used heavily in de Grassi’s composition. Each open string occurrence of the major second interval has been labeled in example 7 to reflect how heavily this feature was used.

Example 7. Alex de Grassi, *Mirage*. mm. 1-13.



If one were to analyze or perform this section relying solely on the staff, they would likely consider the repeated upper line–F-sharp^3, B-flat^3, G^3, A^3, B-flat^3, G^3, A^3–as a highly active melody, as opposed to an arpeggio. However, examining the tablature and the phrase’s vertical–ascending consecutively from the sixth string to the second string–construction, one will conclude that all pitches provide a harmonic accompaniment rather than a definite melody. Each note is intended to sustain as long as possible, resulting in

the following cluster of pitches sounding simultaneously at beat three of each measure–see figure 8.

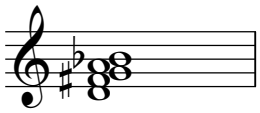


Figure 8. Alex de Grassi, *Mirage*. Harmonic Cluster.

There are multiple ways to analyze the harmony occurring in m. 1 of example 7–also repeated until m. 12. One analysis may label the chord as a D augmented chord. In order to arrive at this definition, the pitches G and A natural must be considered non-harmonic tones–successive passing tones from F-sharp^3 to B-flat^3–and the B-flat must be analyzed enharmonically as A-sharp. Another possibility–and more likely given its sustained, vertical structure–is to label the chord as a G minor chord in second inversion. This analysis considers the F-sharp^3 and A^3 as non-harmonic tones. *Mirage's* first harmonic shift occurs at m. 12 in which the pedal tone (D^2) is interrupted by a B-flat^2 on the sixth string. This harmony, however, should not be analyzed as a new chord, as it is simply an inversion of the initial chord and should be labeled as a G minor seventh in first inversion. An E minor seventh chord in m. 13 provides a brief escape from the recurring G minor harmony until the guitarist is instructed to return to m. 5 (G minor in second inversion) at the repeat.

The dissonance–created by the F-sharp^3 and A^3–and timbral depth of the G minor harmony throughout example 7 provides a unique and stable accompaniment for the melody. Figure 9 depicts the entire melody introduced in the "A Section"–isolated from the accompaniment. Though not complex or especially active, this phrase uses conservative melodic and rhythmic repetition as it descends one octave–A^4 to A^3. Additionally, observe de Grassi's careful selection of which string to place certain notes,

especially utilizing the open first string (D^4) in m. 12. In order for a guitarist to fret many of these pitches while performing the accompanying material, de Grassi needed to place this melody on the higher frets of the guitar–even though they are also located lower on the guitar's fretboard. This single section exhibits both de Grassi's skill as a composer and versatility as a guitarist.

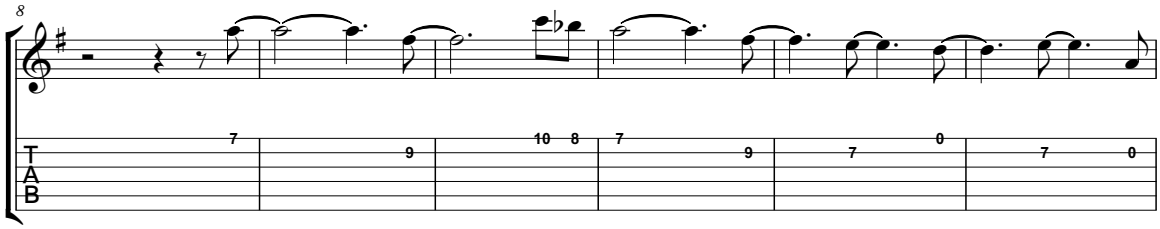


Figure 9. Alex de Grassi, *Mirage*. Melody.

Alternate tuning provides a wealth of opportunity, creativity, and expression for both composers and guitarists. By rearranging the pitches and intervallic structure of the guitar's fretboard, alternate tuning affords new and complex voicings that are unattainable in standard tuning. Additionally, certain alternate tunings liberate the left hand and allow the guitarist to perform intricate melodies further up the guitar's neck or to engage in percussive practices.

Percussive Performance

Similar to the development of alternate tunings, there is neither a single individual that invented or event that initiated the percussive techniques and performance practices that are commonly known and used today. The development of these techniques is ambiguous as there are minimal historical references to their occurrences. Scholars agree that, aside from Flamenco music, the guitar was not frequently performed in a percussive manner–striking components other than the strings–prior to the twentieth century. However, as a naturally percussive instrument, it is likely that guitarists and composers were well aware of the practices and sounds possible with percussive playing. In a 1976 article discussing percussive practices of the acoustic guitar, scholar Carmen Marina bluntly concluded, "the lack of interest in this dimension [percussive practices] can only mean that the musicians of that time were not attracted to it" (Marina 1976, 36). She further stated at the time of her writing that percussive practices of the acoustic guitar needed to be explored at greater depth and described research on the matter as "uncharted territory" (Marina 1976, 37).

The acoustic guitar boasts numerous timbral possibilities concerning percussive hits. A guitarist may strike any location of the guitar–including the top, sides, and fretboard–to produce favorable effects that emulate a kick drum, snare, or tom. Further, tonal properties change depending on which part of the hand or which fingers a guitarist uses to produce each hit. Many composers that incorporate percussive practices in their

guitar works are guitarist themselves, and therefore know exactly how to produce their intended percussive practices in performance. In order for guitarists to accurately replicate these practices, composers must carefully describe each attack or desired effect in their scores, as seen in forthcoming examples.

Carmen Marina's article was published the same year that Windham Hill Records was founded by guitarist William Ackerman. Windham Hill Records would later sign two incredibly influential guitarists–with respect to percussive guitar–to its roster, Alex de Grassi and Michael Hedges. Michael Hedges' (1953-1997) compositions feature a variety of lesser-used–at the time–techniques such as slap harmonics (striking the string(s) with the right hand at a specific location to produce a harmonic), melodic/rhythmic hammer-ons and pull-offs, and percussive slapping (striking the body of the guitar at various locations with either hand to create a rhythmic pulse). Many modern-day guitarists that utilize percussive practices credit Michael Hedges for his influence on the subject. As a result of his creative contributions, alternative techniques such as percussive practices were embraced and featured in future guitarists' repertoire.

One individual that credits Michael Hedges–along with other notable guitarists such as Don Ross, Pierre Bensusan, and Leo Kottke–is French-Canadian finger-style guitarist and composer Antoine Dufour (b. 1979). Dufour incorporates numerous unusual alternate tunings, two-hand note tapping, and percussive practices in his works to create unique and complex arrangements. He likens his approach of writing for the acoustic guitar to writing for a full band (Young 2011, 16). Dufour fuses complex rhythmic patterns and rich harmonies–often requiring unusual alternate tunings–in his solo guitar repertoire, as if a percussionist, bassist, and guitarist were performing together.

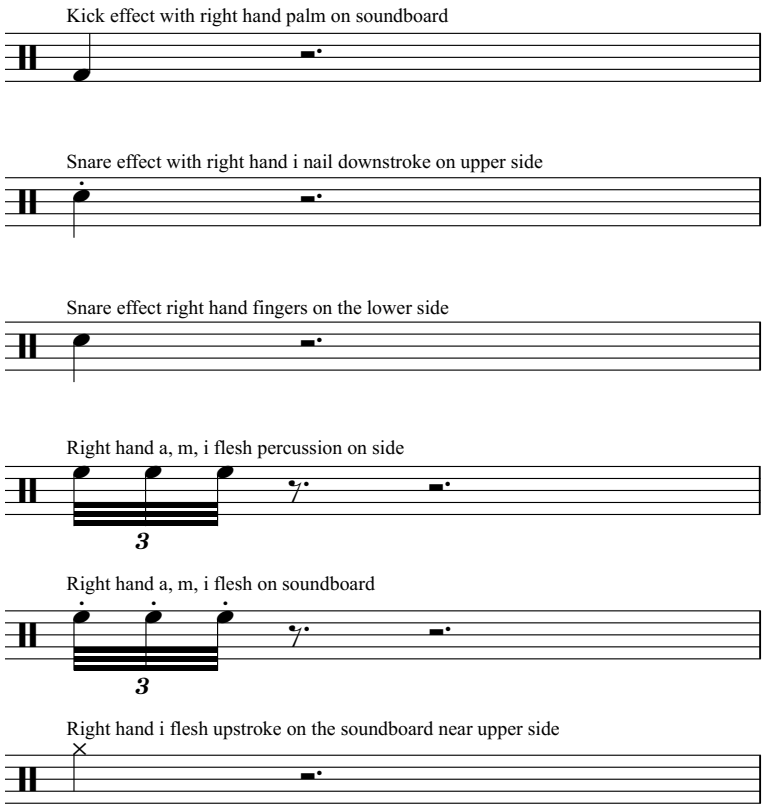
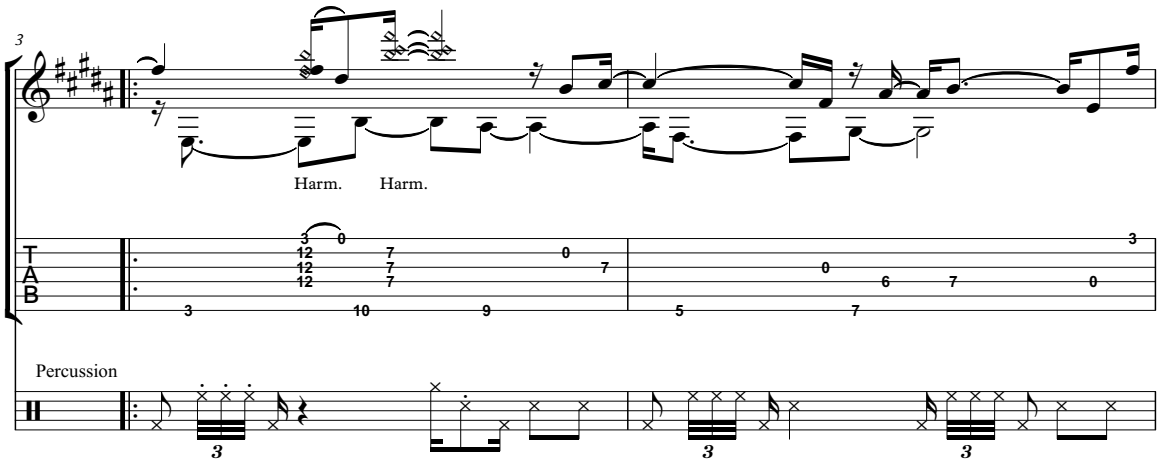


Figure 10. Antoine Dufour, *These Moments*. Percussion Legend.

These Moments showcases Dufour's versatile composition skills and is an excellent example of the percussive practices possible for the guitar. When transcribing his work, Dufour chose to separate the guitar staff and tablature from the percussion staff, likely in order to more clearly communicate his intentions. As mentioned, many discrepancies exist for notating percussive practices of the guitar. The composer, ultimately, is responsible for communicating their intentions clearly and in a well-organized manner. Figure 10 displays Dufour's legend in which he describes his intended execution of each notation symbol. However, ambiguity still exists in regard to the precise location that the guitarist is to strike the guitar–some composers have gone so far as to include diagrams or exact measurements. In *These Moments*, Dufour communicated the intended effect of each hit such as "snare effect" or "kick effect." Overall, this legend

provides sufficient information for a guitarist to proceed with an appropriate degree of both instruction and freedom.

Example 8. Antoine Dufour, *These Moments*. mm. 3-4.

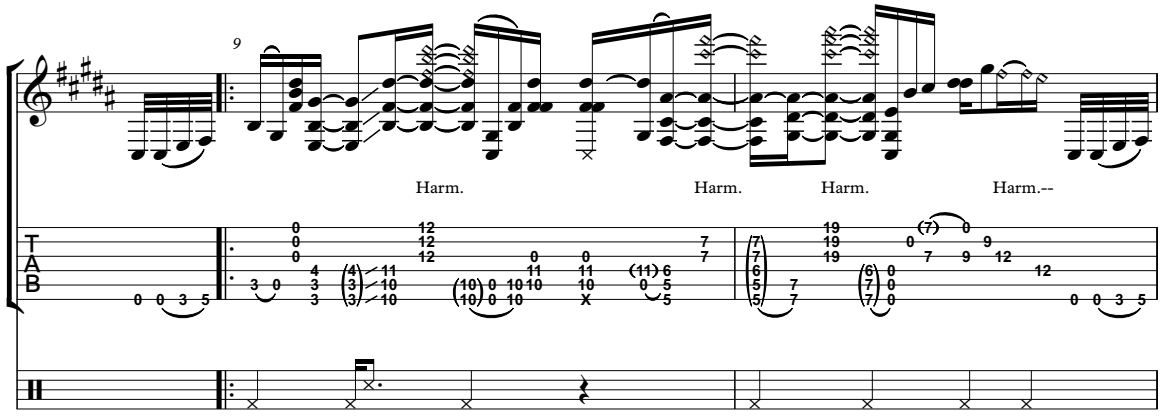


These Moments begins with two measures of harmonic picking–mostly on the seventh and 12th frets–before introducing an "A Section"–see example 8. These two measures may be divided in three parts reflecting the core instruments in a band: rhythm (drums), low accompaniment (bass), and high accompaniment (guitar). The alternate tuned guitar [C-sharp^2, G-sharp^2, E^3, F-sharp^3, B^3, D-sharp^4] provides a rich palate of harmonic colors, including a lowered sixth string sounding a minor third below the sixth string of a standard tuned guitar. An unusual tuning such as [C-sharp^2, G-sharp^2, E^3, F-sharp^3, B^3, D-sharp^4] provides unique possibilities regarding harmonics–considered a percussive technique if tapped on the fretboard by the right hand or consecutively strummed in an aggressive manner–see Andy McKee's *Rylynn*. Measure 3 contains two prominent sets of harmonics: E^4/F-sharp^4/B^4 and B^4/C-sharp^5/F-sharp^5. Dufour balanced these two harmonic occurrences with hammer-ons and pull-offs performed using the outer strings–sixth, fifth, and first. Note that there are two instances in m. 4 that the guitarist is instructed to pull-off to an open string. All of these features–alternate tuning,

harmonics, hammer-ons/pull-off–liberate the right hand from producing every pitch, and enable the guitarist to engage in percussive practices. In mm. 3-4, both parts–notes and percussion–are strategically interwoven to create the perception that two (or more) individuals are performing simultaneously.

Dufour continued to interlace percussion, bass, melody, and harmonics in the chorus of *These Moments*–see example 9. Following a 32nd note hammer-on on the sixth string, m. 9 presents a complex–and technically difficult–arrangement that features hammer-ons, pull-offs, slides, strums, harmonics, and percussion. Rhythmically, every 16th note contains either a pitch–produced by either a slide, hammer-on, or pull-off–or percussive hit. The guitarist is actively engaged throughout this entire measure and must constantly switch hand positions in order to produce the demanded effects. The downbeat of m. 9 presents both a pitch–left hand hammer-on on third fret–and a percussive attack–kick drum effect with right hand. Executed effectively, this melodic and rhythmic motif creates a powerful, assertive introduction to the chorus.

Example 9. Antoine Dufour, *These Moments*. mm. 9-10.



Hammer-ons and pull-offs may be classified as both melodic and rhythmic techniques. As mentioned, the guitarist is generally instructed to strike a string with their pick hand and then fret a note either higher or lower in pitch–on the same string–with

their fret hand. There are times, however, that the guitarist must hammer-on a note that has not yet been struck by the pick hand. In m. 9, the guitarist must perform a percussive hit with their right hand while simultaneously executing a hammer-on on the fifth string (B^2). The guitarist must then pull-off to the G-sharp^2 one 16th note later. Later in beat one, the guitarist must hammer-on pitches E^2, B^2, and G-sharp^3 prior to audibly sliding up to notes B^2, F-sharp^3, and D-sharp^4. Implemented in this manner, hammer-ons and pull-off enable the left and right hands to operate with great independence. As a result, the left hand does not require the right hand to produce notes to execute a hammer-on or pull-off, allowing the composer to write with considerable flexibility.

To expand this technique, composers will often layer hammer-ons and pull-offs by notating two or more strings to be struck and then fretted. In m. 9 of example 9, Dufour instructed the guitarist to pull-off notes B^2/F-sharp^3 to the open fifth and sixth strings. One 16th note later, the guitarist must perform a stacked hammer-on on the same two strings to re-produce pitches B^2 and F-sharp^3. As a result of the pull-offs and following hammer-ons, the guitarist's right hand is not involved, enabling it to perform additional material such as percussive practices.

Compared to example 8, the percussive progression in mm 9-10 of example 9 is significantly less complex. The guitarist is instructed to perform a constant quarter note pulse–with the exception of m. 9 beat four–by striking the soundboard with the right hand's palm. In *These Moments*, when Dufour's harmonic and melodic material was less complex, the percussive parts were enhanced. Conversely, when Dufour's harmonic and melodic material was more complex, the percussive parts were reduced. As a guitarist and composer, Dufour understood both the possibilities and limitations of incorporating

percussive techniques in his works. In many of Dufour's works, he experimented with various techniques–especially percussive–and created compositions that greatly exploited both the rhythmic and harmonic characteristics of the solo acoustic guitar.

The Capo

A third alternative technique available for guitarists and composers to enhance their repertoire is the use of a capo. A capo is a mechanism that frets one or more strings automatically. It is attached to a guitar's neck using either a strap or spring and only affects strings at the fret it is place over. The most commonly used capos are designed to cover all six strings–full capo–and are manufactured by companies such as Shubb, Kyser, and D'addario.

Guitarists frequently use the full capo to conveniently transpose a song when performing with a band or while accompanying a vocalist. The full capo can be used to easily raise–or lower if the capo is already in use–the overall pitch of the guitar in half-step increments. For example, if a guitarist is accompanying a vocalist singing in the key of G major and the piece needs to be performed in the key A-flat major, the guitarist would simply place a full capo on the first fret–one half step above the open fretboard–and perform as if the capo was the "zero" fret. Another reason for using the full capo is to make certain chords easier to play–as the distance between frets decreases further up the neck. A third reason to use a capo is simply for its preferred tone. If a guitarist desires to perform a piece in a higher register for aesthetic purposes, the capo is an effective tool to achieve preferred results.

As with previous techniques, composers and guitarists have experimented with and expanded their utilization of the capo. As a result, manufacturers have created partial

capos that alter several of the guitar's strings while leaving others unaffected. An example of a partial capo is the Drop-D or Short-Cut capo–both manufactured by Kyser. The Drop-D capo is designed to fret the highest five strings of the guitar, leaving the sixth string unaltered–see Figure 11. When placed on the second fret, the guitarist may fret a D major chord shape–sounding as E major because of the capo on the second fret–and strum all six strings to sound a rich, full chord. However, this capo is not a true substitute for Drop-D tuning, as it does not alter the intervals between strings above the capo-ed fret. Above the capo, the guitarist must continue to shape chords as they would in standard tuning.

Figure 11. Drop-D Capo.

A significantly more versatile capo is the Kyser Short-Cut capo. The Short-Cut capo is designed to fret three adjacent strings and can either be placed above the guitar's neck (fretting the fifth, fourth and third strings) or below the guitar's neck (fretting the fourth, third, and second strings)–see figure 12. When positioned above the guitar neck, the Short-Cut capo may be positioned at the second fret to sound an E suspended chord–as in figure 12. Other favorable locations in this position include the fifth, seventh, and ninth frets. When placed below the guitar neck, a major triad is formed and is therefore beneficial when a piece features a recurring chord such as A major. To obtain a fixed

harmony, the guitarist must place the capo on a fret such as the second (A major), fourth (B major), or fifth (C major) fret. As a result of its versatility, the Short-Cut capo offers composers and guitarists unique possibilities to expand a piece's sonic characteristics.

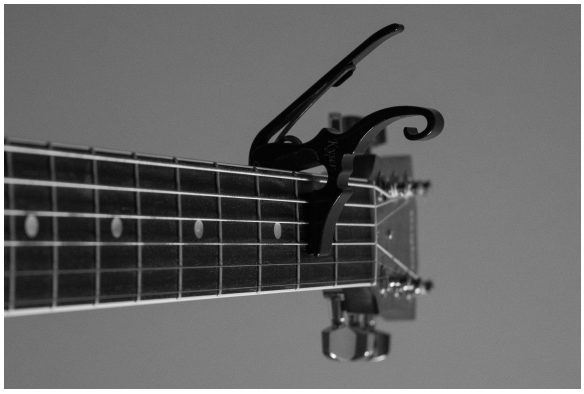


Figure 12. Short-Cut Capo.

Many similarities exist between the use of a partial capo–such as the Drop-D and Short-Cut–and alternate tunings. Both techniques alter the openly strummed guitar and allow the composer to utilize chord shapes and arpeggio patterns unattainable in standard tuning. Both techniques also have the potential to create rich, resonant, and unique chord voicings and melodic patterns. A significant distinction, however, is that when using one or more capos, the fretboard's interval structure remains unchanged. Contrary to alternate tunings, the use of a partial capo does not alter the overall shape of chords fretted or the interval between strings above the capo.

Similar to alternate tunings, certain keys are favored in each positioning–or placement–of the capo. If the Short-Cut capo is positioned to form an E suspended chord–second fret–when openly strummed, the guitarist is likely to perform in the keys of E major or C-sharp minor. Figure 13 presents several common chords and their respective shapes when the Short-Cut capo is positioned in this manner. Since each chord in Figure 13 is formed by fretting two or fewer notes on the fretboard, the guitarist may use their

remaining fingers to perform additional musical material. Additionally, the prevalence of open strings in Figure 13 drastically enhances the guitar's resonances, a significant benefit of performing with a partial capo or alternate tuning.

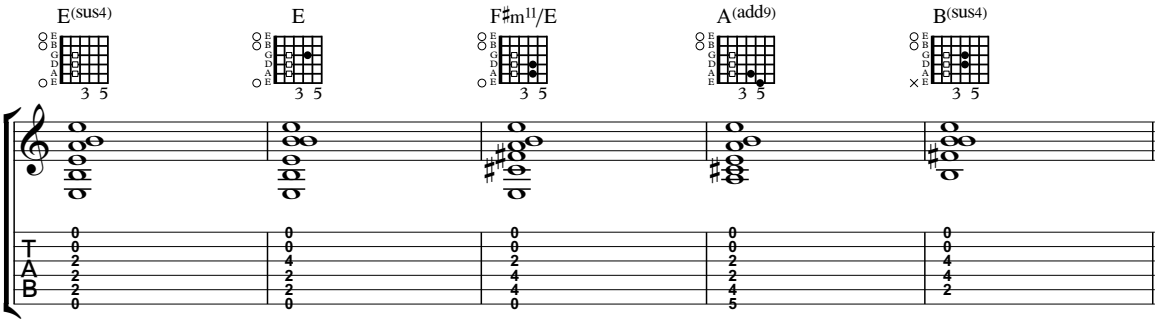


Figure 13. Common Chords Using a Short-Cut Capo.

Performing with a Short-Cut capo, a guitarist may easily explore the upper frets of the guitar's neck as well as experiment with moveable chord shapes over the entire fretboard–see Figure 14. Shapes such as these exist in standard tuning–with no capo–but are more difficult to accompany as the remaining strings' pitches create unfavorable dissonances. With a Short-Cut capo, however, shapes in Figure 14 interact favorably with the remaining open and fretted strings–fifth, fourth, second, and first. These shapes may be used as part of an arpeggio or performed as a piece's melody. They are versatile chords that, when combined with a partial capo, enhance a piece's tonal possibilities.

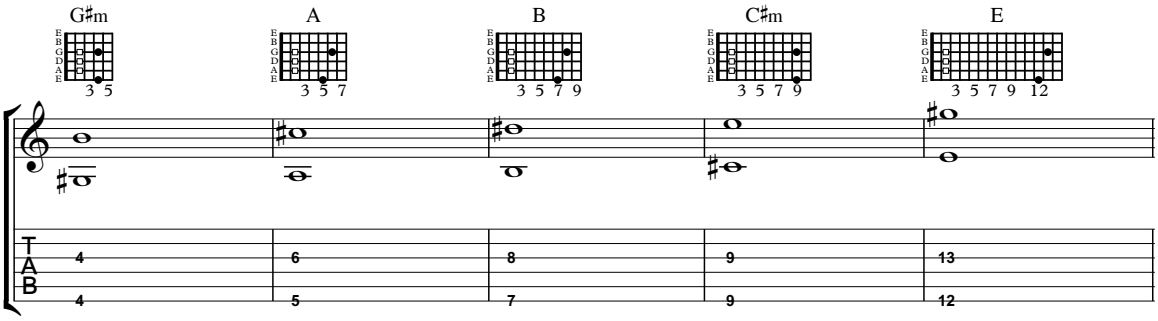


Figure 14. Moveable Chords Using a Short-Cut Capo.

If one desires to use a Short-Cut capo in another key, such as F major, they would simply place a full capo on the first fret and the Short-Cut capo on the third fret. Similarly, to perform in the key of G major, a full capo should be placed on the third fret and the Short-Cut placed on the fifth fret – as in figure 15. Combining the short-cut capo and a full capo greatly expands the amount of keys available to be performed in. Additionally, techniques previously discussed such as hammer-ons and pull-offs are equally useful as they further exploit the open strings created by the multiple capos.

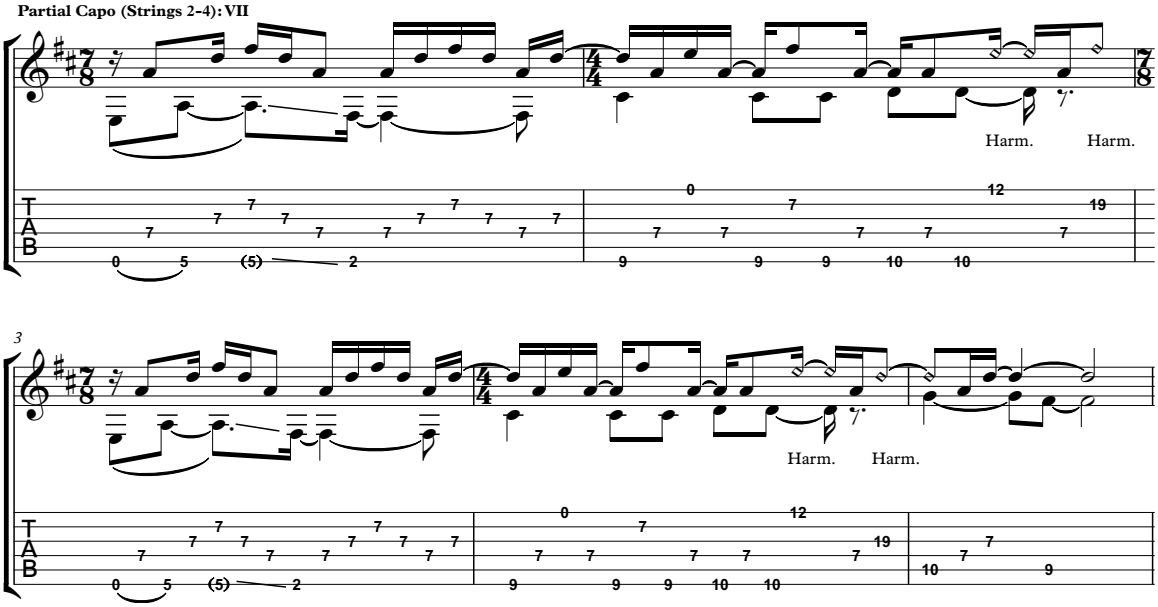
Figure 15. Full Capo and Short-Cut Capo.

A composer that utilizes a partial capo is not limited to pitches above the capo. A guitarist might think that because there is a capo in place that they must keep their left hand above the capo-ed fret. However, the practice of fretting a note–either a bass or treble note, as three of the inner strings will always be fretted by the Short-Cut partial capo–below the capo creates the potential for unique dissonances and extended harmonies.

Example 10 depicts the first five measures of my composition *So Far*. This piece is written in standard tuning. To perform *So Far*, the guitarist is instructed to place a partial–Short-Cut–capo in the "A Position" on the seventh fret. When strummed openly, the guitar will sound [E^2, A^2, A^3, D^4, F-sharp^4, E^4]. The partial capo–placed on the

second, third, and fourth strings at the seventh fret–creates a D major triad that may be combined with the open fifth string–A^2–to produce a D major chord in second inversion. With the exception of the harmonics on the end of mm. 2 and 4, the left hand performs solely on the sixth string. The guitarist alters the bass notes of the introduction by using a combination of hammer-ons and pull-offs–many of which are located below the capo. In executing this pattern, the guitarist's left hand is continually moving from one side of the capo to the other.

Example 10. Matthew Elenbaas, *So Far*, mm 1-5.



This alternative technique–using a partial capo–allows the performer to access a greater amount of notes than when using a full capo. The use of one or more capos is a valuable tool for guitarists and composers alike, as capos further expand the technical, harmonic, and sonic possibilities of the guitar.

Composer Study: Andy McKee

Alternate tunings, percussive practices, and capos are invaluable techniques and–when used effectively–greatly enhance a composer's guitar repertoire. These techniques have been discussed individually to this point. However, many guitarists employ multiple–or all–techniques simultaneously in their works. In exploiting each technique's unique advantages, such as using both an alternate tuning and a capo to combine new chord shapes (alternate tuning) with greater fretboard access (capo), one has the opportunity to showcase a diverse range of compositional abilities. Three guitar composers will be discussed in regard to how they fuse alternative techniques to create unique, expressive works for the acoustic guitar: Andy McKee, Phil Keaggy, and myself.

Guitarist Andy McKee (b. 1979) is among the most well known contemporary guitar composers that use alternative techniques. His complex rhythms and expressive melodies have earned him a massive following in the instrumental guitar community. Influenced by Michael Hedges and Don Ross, McKee incorporates alternative techniques in a majority of the songs he composes.

McKee is well known for his creative use of both rhythmic and harmonic motifs. He described his approach to composition in a 2009 interview for *Guitar Player*. The interviewer asked McKee how he keeps both parts–rhythmic and harmonic–progressing in his solo works. He responded by saying, "I generally start a song with the full rhythmic pattern, and then I simplify it in order to play the melody. I will sneak in percussive hits

with either hand once the melody is rolling. Keeping the groove and the melody together is the greatest challenge to playing in a style like mine" (McKee 52).

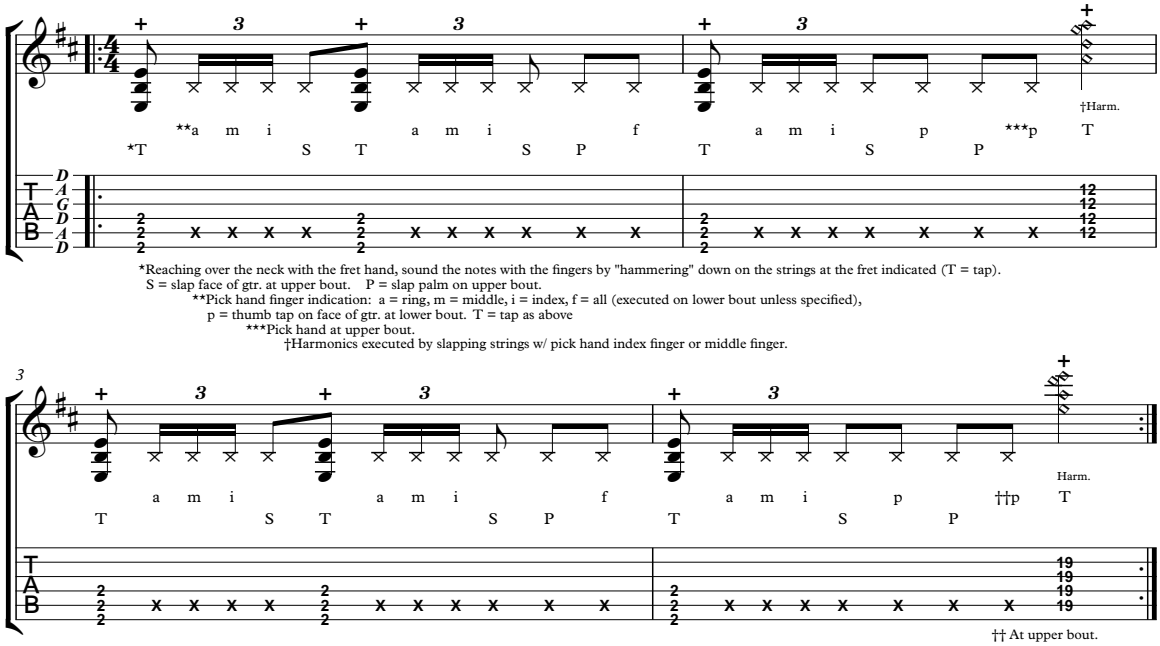
Balance is extremely important when it comes to incorporating percussive techniques in a score. In both the studio and on stage, McKee has demonstrated his ability to create memorable, expressive melodies while maintaining intricate percussive patterns. In 2005, McKee released his third album *Art of Motion*, which included songs such as *Rylynn, For My Father,* and *Drifting*. *Drifting* provides an excellent example of McKee's remarkable compositional skills and incorporation of alternative techniques.

Drifting explores the harmonic and rhythmic possibilities that exist in DADGAD tuning. The piece begins with the left hand tapping the lowest three strings at the second fret, sounding an E5 chord. This harmony is easily attainable because of the altered strings–otherwise sounding an F-sharp^2, B^2, and E^3 in standard tuning. Immediately following, the right and left hand begin a percussive pattern, striking the guitar at both the face and sides of the upper bout–see example 11.

To properly perform a score with this level of difficulty, as with any challenging piece, the guitarist must have adequate instruction from the composer in regard to notation. To notate the left and right hand percussive parts, McKee placed two lyric lines between the staff and tablature. The upper lyric line corresponds to the right (pick) hand while the lower lyric line reflects the left (fret) hand. McKee placed a legend describing–in great detail–each notation at the beginning of his score. For the most part, McKee followed traditional finger labels such as using an *a* for the ring finger, *m* for the middle finger, and *i* for the index finger. In the left hand, an *S* indicates when the guitarist must "slap face of guitar at lower bout" (McKee 2007, 1). Additional instructions include

tapping the lower bout with the thumb, slapping the palm on the upper bout, and executing harmonics with the pick hand. McKee's thorough approach to notation significantly reduces confusion in rehearsal and performance. This score exemplifies how a composer can organize their complex intentions with clarity.

Example 11. Andy McKee, *Drifting*. mm 1-4.

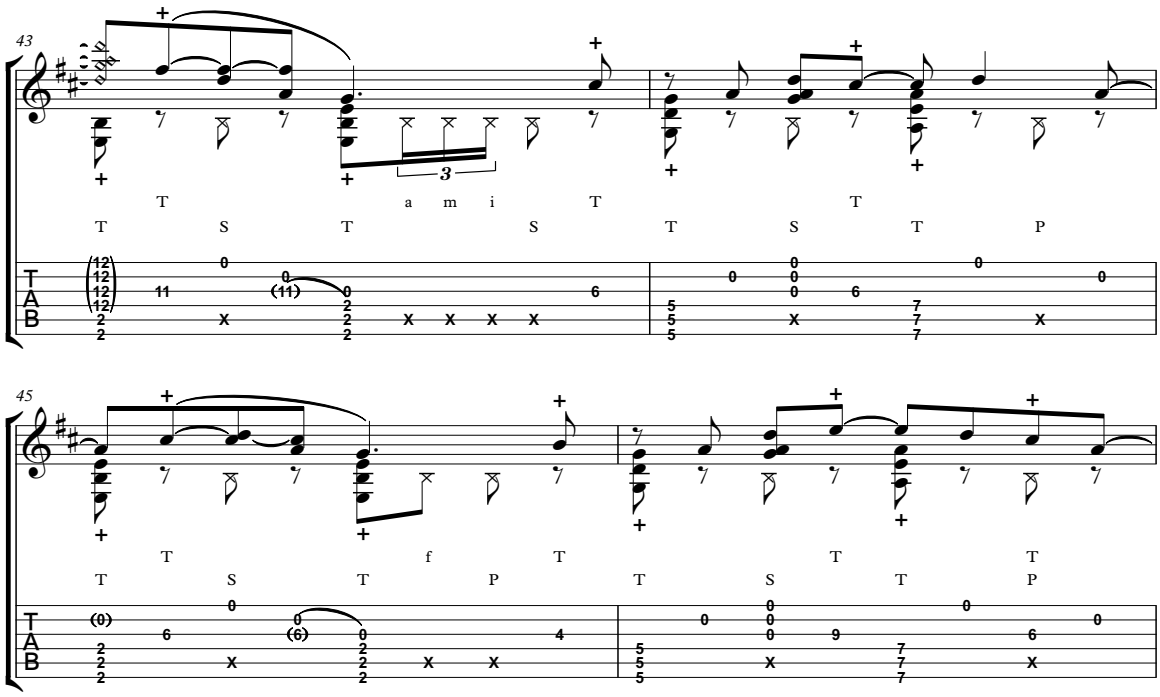


The motif introduced in mm. 1-4 is repeated frequently throughout *Drifting*. Initially, it fails to firmly establish a tonal center. The E5 chords–tapped with the left hand above the guitar neck–suggest either a major or minor triad and is followed by a D suspended fourth harmony in second inversion at the conclusion of m. 2. It isn't until the final beat of m. 4 that the key of D major can be assumed–at the entrance of the A suspended fourth harmony in second inversion. Further, observing the key signature of two sharps, an analysis of this passage will yield a ii-$I^{6/4}$-ii-$V^{6/4}$ progression in the key of D major.

Each fretted pitch in this introduction–E5 harmony–is followed by a group of triplet percussive hits, executed using the right hand's ring, middle, and index fingers.

Throughout the first four measures, the guitarist's right hand moves quickly and repeatedly from the neck–to fret a note–to the body of the guitar–to hit. In m. 1, the left hand must "slap face of gtr. at upper bout" and then hammer-on by "reaching over the neck" in the span of one beat–at 125 beats per minute (McKee 2007, 1). This combination of advanced harmonic and rhythmic movements is a significant characteristic of *Drifting*. McKee carefully fused both harmonic and rhythmic elements to compose a unique, expressive work.

Example 12. Andy McKee. *Drifting*. mm. 43-46.



Example 12 depicts four measures that occur near the end of *Drifting*. Harmonically, a repeated ii-IV-V progression is performed over two measures and features several extended harmonies such as an E minor ninth and a G major with an added second. According to McKee's legend–and traditional guitar notation–the "+" symbol instructs the guitarist to tap the note, rather than fret the note with the left hand and pluck with the right. In m. 43, the left hand must tap the two lowest strings

simultaneously–with the hand above the fretboard–before the right hand taps an F-sharp^4 on the 11th fret of the third string. As evident with the tied F-sharp^4, the guitarist must leave their right hand finger on the note while plucking the first string (D^4) with their second or third finger. The finger must further remain on the fret while the left hand slaps the side of the guitar at beat two. This practice creates an unusual–and at times, awkward–position in which the hands operate while crossed. In beat three, the right hand pulls off the F-sharp^4 to the open string (G^3) and immediately performs triplet percussive hits with the ring, middle, and index fingers on the lower bout of the guitar.

In contrast to example 11, mm. 43-46 contain a consistent quarter note pulse. Each quarter beat contains some type of percussive hit, either as a notated hit "x" or tap "+." When one taps–with either hand–a note, the string abruptly slams against the metal fret, creating an audible attack. The attack is not typically present when a guitarist simply frets a note and plucks it with the right hand. Several factors contribute to how audible an attack can be including which string is tapped and at which fret. The greater the distance between the string and metal–also known as *action*–the louder the hit. Also, a thicker–usually lower in pitch–string will produce a more audible attack. In m. 43, the guitarist is instructed to tap the two lowest strings. In the following measure, the left hand must tap the lowest three strings at the fifth and seventh frets. The effect that is created when tapping these strings is simultaneously harmonic and percussive. When used as it appears in mm. 43-46, tapping is a versatile compositional technique that can be considered both rhythmic and melodic.

Released in 2005, *Rylynn* is arguably McKee's most well known work. Benefitting from the exposure of a viral video performance in 2006, McKee gained a

massive following in the acoustic guitar community for his compositional ability and expertise. *Rylynn* is likely to be mentioned in any discussion of alternative techniques among contemporary guitarists. The piece requires the guitar to be tuned to an alternate tuning [E^2, C^3, D^3, G^3, A^3, D^4]–see Figure 16. This tuning is unique in that it raises the fifth string A^2 a full three half steps to C^3. In addition, a partial capo is to be placed on the fifth fret, impacting the lowest four strings–sixth through third strings. This combination of alternate tuning [E^2, C^3, D^3, G^3, A^3, D^4] and partial capo placement results in an interrupted ascent when strummed openly from the lowest (sixth) string–also known as re-entrant tuning. The partial capo frets a C^4 on the third string while the second string produces an A^3–a minor third below. If one were to individually pluck–or strum–from the sixth string to the first, the following pitches would sound, in order: [A^2, F^3, G^3, C^4, A^3, D^4]. Listed chromatically from low to high, regardless of string order, the following pitches are present: [A^2, F^3, G^3, A^3, C^4, D^4]. McKee exploited the groups of closely related notes–F^3/G^3/A^3 and C^4/D^4–both consecutively (melodic) and concurrently (harmonic) throughout *Rylynn* to add dissonance and repetition.

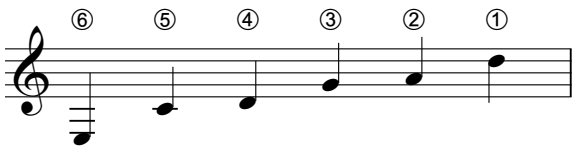
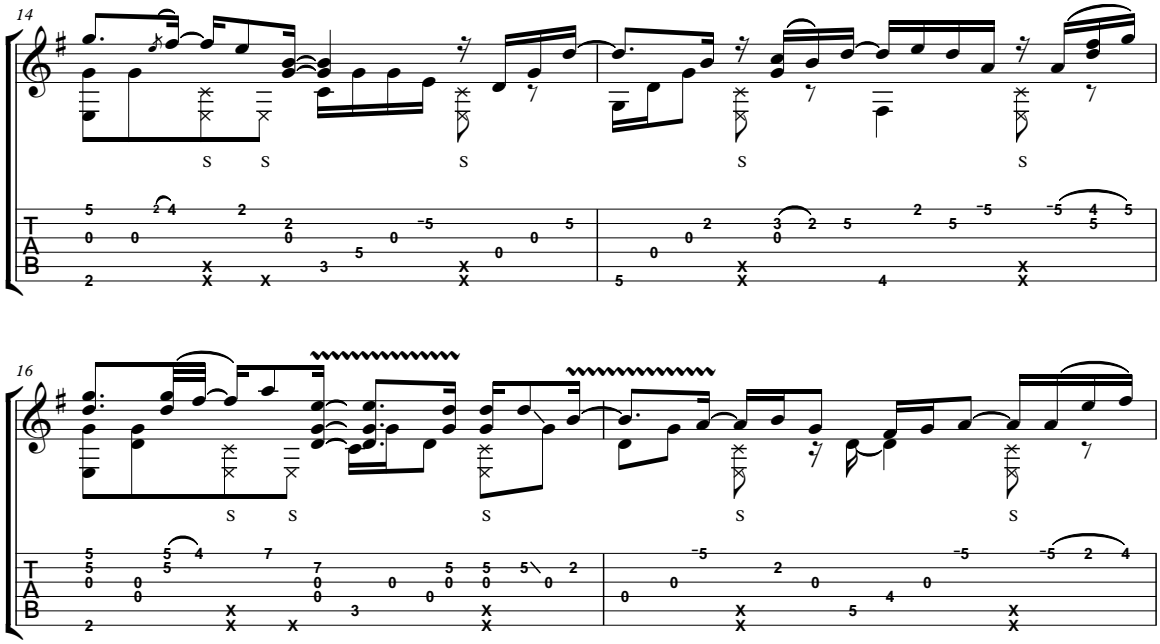


Figure 16. Andy McKee, *Rylynn*. Tuning.

The official transcription of *Rylynn*–published by Razor & Tie Music Publishing–presents several notational challenges for the guitarist. The staff is written as a transposed score, reflecting pitches that would be produced if a capo were not being used. In the tablature, the capo acts as the "0" fret. Any notes that are to be fretted below the capo are notated with a negative sign–such as "-5" or "-2." The downbeat of m. 14 in example 13

shows an E^2, G^3, and G^4 in the staff. To achieve these pitches, the guitarist must strike the open sixth and third strings (E^2 and G^3) while fretting the first string at the 10^{th} fret (G^4)–fifth fret above capo. This placement is contrary to the traditional location of the G^4 on the third fret in standard tuning. McKee changed the tablature of the highest two strings by lowering both pitches one whole step–to align with the alternate tuning [E^2, C^3, D^3, G^3, A^3, D^4]. To rehearse this piece, it is highly beneficial for the guitarist to consult both the staff and tablature notation, as confusion may arise when considering both an alternate tuning and partial capo. The following description will refer to notes and chords using their transposed labels, rather than their actual sounding pitches.

Example 13. Andy McKee, *Rylynn*. mm. 14-17.



Example 13 is performed in *Rylynn* three times and will be analyzed as a chorus. A brief overview will yield concepts previously discussed such as percussive hits, hammer-ons, and pull-offs. McKee used a combination of these techniques to enhance and accompany the melody. Written as a two-measure phrase, the melody begins on G^4

and then descends diatonically to B^3 before ascending back to G^4–focusing on pitches G^4, F-sharp^4, D^4, B^3. Many open-string pitches that are produced naturally by the alternate tuning and partial capo such as C^3, D^3, and G^3 accompany the melody. The availability of these pitches liberates the left hand from having to constantly fret a chord, further enabling the guitarist to focus on expressing the melody or performing percussively.

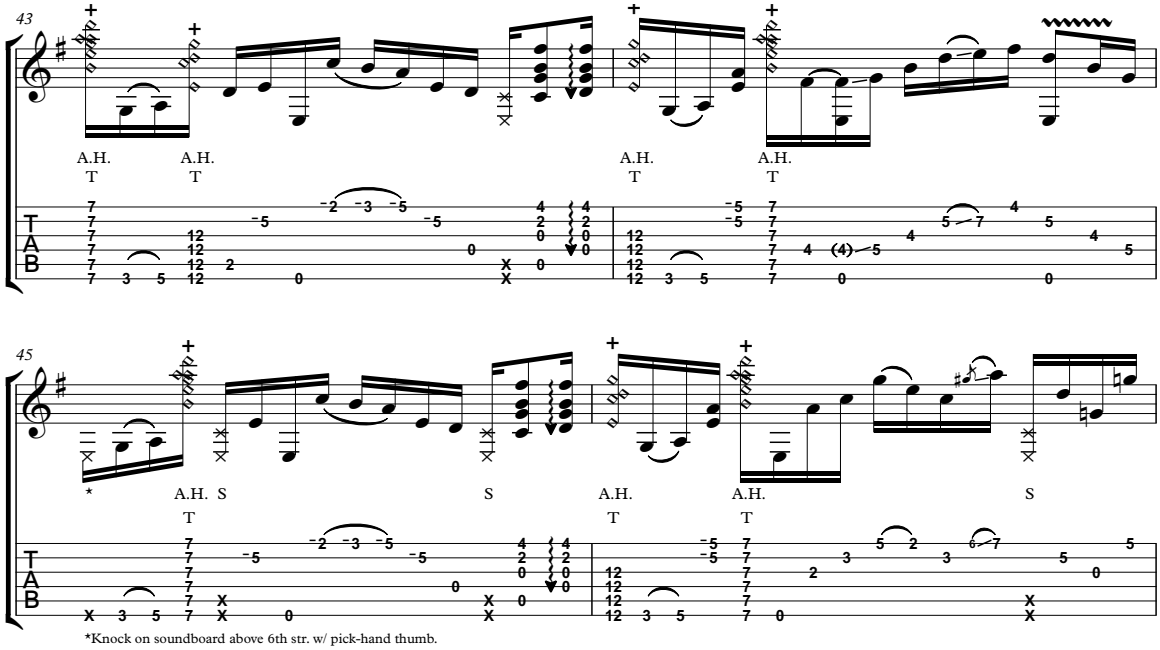
In contrast to his work *Drifting*, McKee incorporated a simplified percussive rhythm throughout the chorus of *Rylynn*. A percussion legend located early in the score states that the "S"–written below notated hits–instructs the guitarist to slap the fifth and sixth strings with the pick-hand thumb. McKee used this effect to emulate a snare attack, emphasizing beats two and four, primarily. The snare effect creates a solid, definitive beat, even though no percussive hits occur on the downbeat. Even with the benefit of an alternate tuning and partial capo, it would be difficult to compose a more complex percussive pattern, as each 16th note already contains either a note, chord, or hit. As seen in prior examples, when a passage contains a complex percussive part, the melodic and harmonic aspects are simplified. Conversely, as seen in example 13, the percussive practices are limited when a composer features a complex melody or harmony. A final example from *Rylynn* validates this conclusion.

The "bridge" of *Rylynn* features artificial harmonics, percussive hits, slides, hammer-ons, and pull-offs. Example 14 depicts four measures of this climactic passage. The downbeat of m. 43 presents a harmony consisting of tapped–using the right hand index or middle finger–artificial harmonics at the seventh fret above the partial capo. However, the guitarist is actually tapping on the guitar's 12th fret, as the seventh fret above the capo-ed fifth fret is the 12th fret. The pitches produced are B, E, G, A (x2), and

D. Since the guitar's highest two strings (A^3 and D^4) are unaffected by the capo, their harmonics result in the strings being divided in two equal parts, whereas the lower four strings–with a partial capo on the fifth fret–are divided in three equal parts at the guitar's 12^{th} fret, as if one were to produce a harmonic on the seventh fret without a capo. This harmonic cluster is followed by two hammer-ons and an additional tapped harmonic. This time, however, the guitarist is instructed to tap the harmonics on the 12^{th} fret above the capo–guitar's 19^{th} fret–on the sixth, fifth, fourth, and third strings, essentially dividing those strings in two equal parts. The guitar's highest two strings are not tapped in this cluster. This motivic pattern–harmonic - hammer-on - hammer-on - harmonic–occupies only the first beat, requiring extensive skill and preparation from the guitarist.

McKee also composed a series of harmonic attacks in example 14, such as at the

Example 14. Andy McKee, *Rylynn*. mm. 43-46.



conclusion of m. 43. A plucked chord and subsequent up-strum contribute both harmonic and rhythmic characteristics to the phrase. The plucked chord and up-strum are preceded by a percussive hit–right hand thumb striking the sixth and fifth strings at beat four–and

followed by a tapped harmonic–m. 44 beat one. These elements together, when performed effectively, establish a strong rhythmic pulse consisting of both downbeats and off beats. The increase in percussive complexity in this passage does not, however, diminish its harmonic and melodic traits. Beats two through four of mm. 43-46 contain significant melodic material that is introduced, reintroduced, and developed. The melody's primary pitches–G, F-sharp, and B–are voiced throughout example 14. McKee creatively integrated a melody in both chords and natural harmonics, as if multiple instruments were performing together. The result is a passage that is appropriately balanced in regard to melody, harmony, and rhythm. As a composer, McKee exhibited his immense knowledge of the guitar's possibilities and characteristics, while acknowledging and enhancing a work's musicality and expression.

Composer Study: Phil Keaggy

Few guitarists have achieved the level of artistry, success, and impact of Phil Keaggy (b. 1951). Regarded in multiple genres–both sacred and secular–as one of the most influential guitarists of recent time, Keaggy has pioneered a career consisting of both musical technicality and a spiritual message. He began playing guitar at the age of 10 and joined his first band, the Keytones, at the age of 13 (Keaggy 2019). Keaggy later embarked on his solo career and released his first instrumental album *What a Day* in 1973. His popularity increased in both the acoustic guitar community as well as in the CCM–Christian Contemporary Music–community. His instrumental albums *The Wind and the Wheat*, *Beyond Nature*, *Invention*, *Acoustic Sketches*, *Majesty and Wonder*, and *Lights of Madrid* were all recipients of Dove Awards. Above all, in a "lyric-less" genre such as instrumental guitar music, Keaggy found a way to communicate his message. His website biography summarizes, "[Keaggy] is aware that God gave him a calling to deliver the Gospel through his music, and for over forty years, Phil Keaggy has been grateful to do just that" (Keaggy 2019).

It is impossible to assign or label Keaggy's compositional style to a single genre or a sole characteristic. As a composer possessing over forty years of experience across multiple genres including rock, singer-songwriter, and instrumental guitar, Keaggy fused techniques and styles from numerous influences in his massive repertoire. In his instrumental guitar works, many similarities exist between Keaggy's performance

practices and previously discussed alternative techniques. While the existence of alternative techniques is similar to guitarists such as Chet Atkins (alternate tunings), Michael Hedges, and Andy McKee (percussion), the extent to which Keaggy approaches and incorporates alternative techniques in his works is unique. Keaggy's music is particularly melodic, accompanied by a vast array of harmonies and rhythmic motifs. In much of his instrumental guitar works, Keaggy masterfully introduces and develops emotive melodic elements to shape a piece's overall structure.

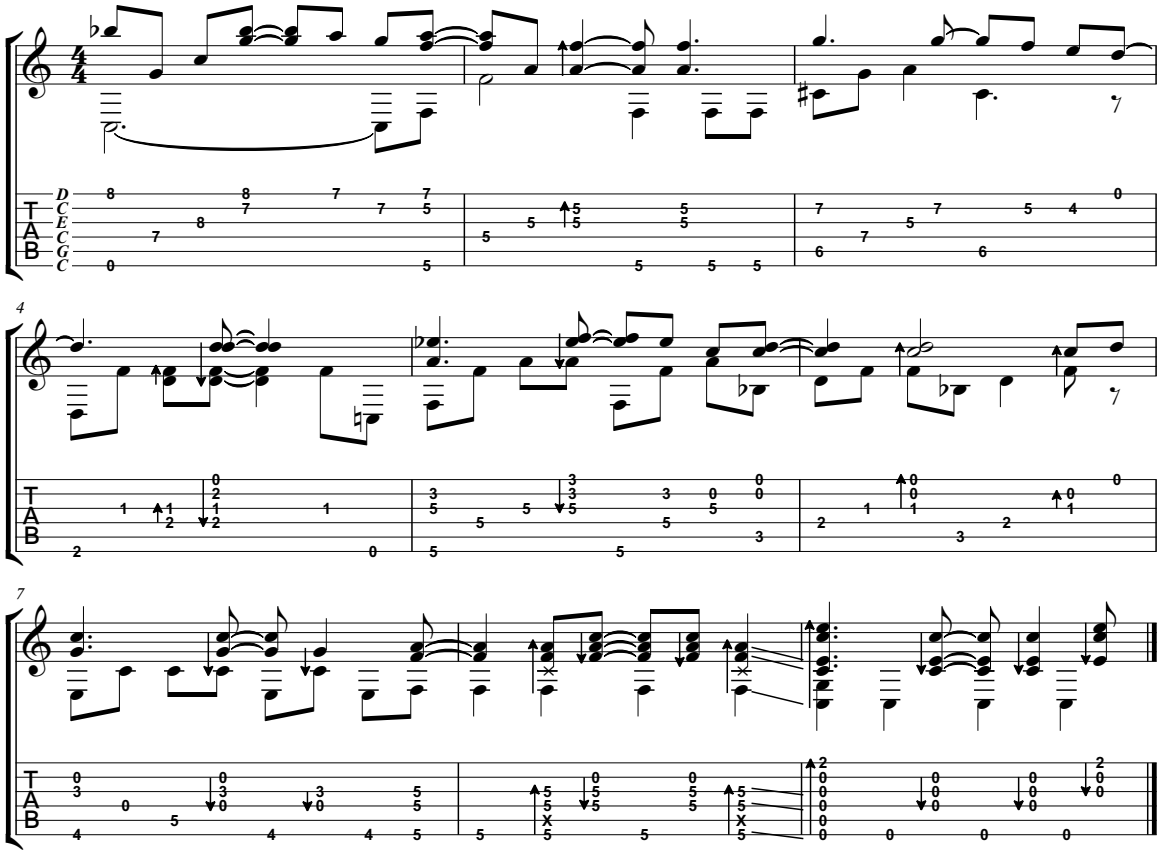
Keaggy composed *The Song Within* using a variation of Open-C tuning [C^2, G^2, C^3, E^3, C^4, D^4]. As mentioned, a significant benefit of alternate tunings is the availability of pitches on each of the open strings. The ease of which to perform open-string pitches allow the guitarist to venture further up the neck while fretting fewer notes. Although this setup is extremely helpful, it can also be somewhat limiting, harmonically. The composer–or guitarist–may feel that they must remain in the tuning's favored key, and use only diatonic harmonies. However, numerous chromatic possibilities exist in alternate tunings that allow the guitarist to expand the overall harmonic character of their works. *The Song Within* provides an excellent example in which Keaggy employed non-diatonic harmonies by utilizing secondary dominants in an alternate tuning. The piece's introduction–see example 15–contains a series of V-I or V-i harmonic movements that, when analyzed in the key of C major, form the following progression:

$$V^7/IV - IV - V^7/ii - ii - V^7/\text{flat-VII} - \text{flat-VII} - I - IV - I.$$

Example 15 can be divided into two-measure phrases, each consisting of a V-I or V-i progression. The opening chord (C7) is achieved by striking the open sixth string (C^2) and the fretted first string (B-flat^4) simultaneously. As an arpeggio continues, the guitarist

resolves the C7 chord (V^7/IV) to an F major chord (IV) one eighth note before m. 2. In order to perform the F major, the guitarist must form a barre across the fifth fret with their left hand. The tablature in example 15 reflects the barre in m. 2 as each pitch is notated at the fifth fret. No additional fingers or frets are required to perform this measure.

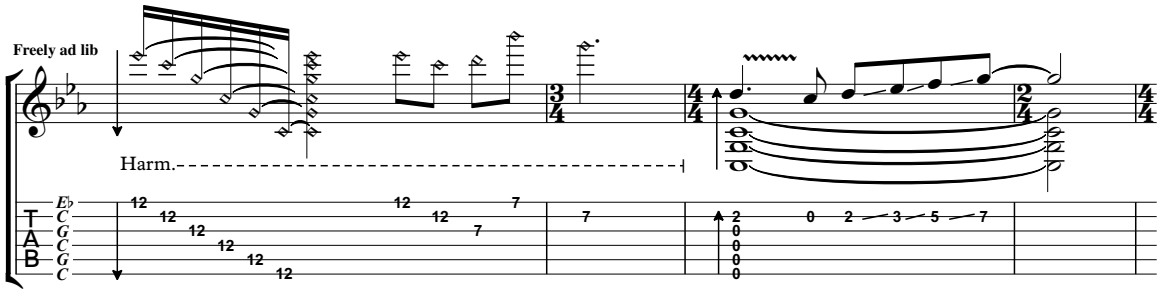
Example 15. Phil Keaggy, *The Song Within*. mm. 1-9.



The following measures present unique fingerings for the guitarist as a result of the alternate tuning–depicted in the tablature. Measures 3 and 4 contain an A7 (V^7/ii) resolving to a D minor (ii) harmony. The following two measures contain an F7 (V^7/flat-VII) resolving to a B-flat major (flat-VII). Even though non-diatonic harmonies are composed in this passage, Keaggy made frequent use of the open strings, especially on

the D minor and B-flat major harmonies. Measures 7-9 are used to establish a clear tonal center for the piece as they contain a C-F-C progression (I-IV-I). This introduction occurs one additional time in the piece at m. 43, at which point it functions as a transition between sections. Harmonic exploration in this passage offers an appealing and effective departure from–and return to–C major, especially in an alternate tuning that highly favors harmonies in the key of C major.

Example 16. Phil Keaggy, *Legacy*. mm. 1-4.



Originally released on Phil Keaggy's 1996 album *Acoustic Sketches*, *Legacy* incorporates numerous alternative techniques including alternate tunings, harmonics, and most notably, the practice of string slapping. The song begins with the guitar tuned to an Open-C Minor tuning [C^2, G^2, C^3, G^3, C^4, E-flat^4]. Keaggy exploited the open string harmonics available in this tuning throughout the 11-measure introduction. Example 16 presents four measures that are to be performed "freely ad lib." As demonstrated when Keaggy recorded this piece, each phrase is to be expressively performed, letting each pitch sustain as notated in m. 1. In this opening passage, the guitarist explores harmonics on both the seventh and 12th fret. In m. 3, the guitarist performs a series of pitches ascending to G^4 by sliding on the second string from the second fret up to the seventh fret while the lower four strings sustain a C5 chord–C^2, G^2, C^3, G^3. Keaggy's use of various meters–4/4, 3/4, and 2/4–suggest a rhythmically detached introduction that prepares the

listener for forthcoming material. This compositional practice results in a strong entrance of the "A Section" at m. 12, in which the rhythm is stabilized at 4/4.

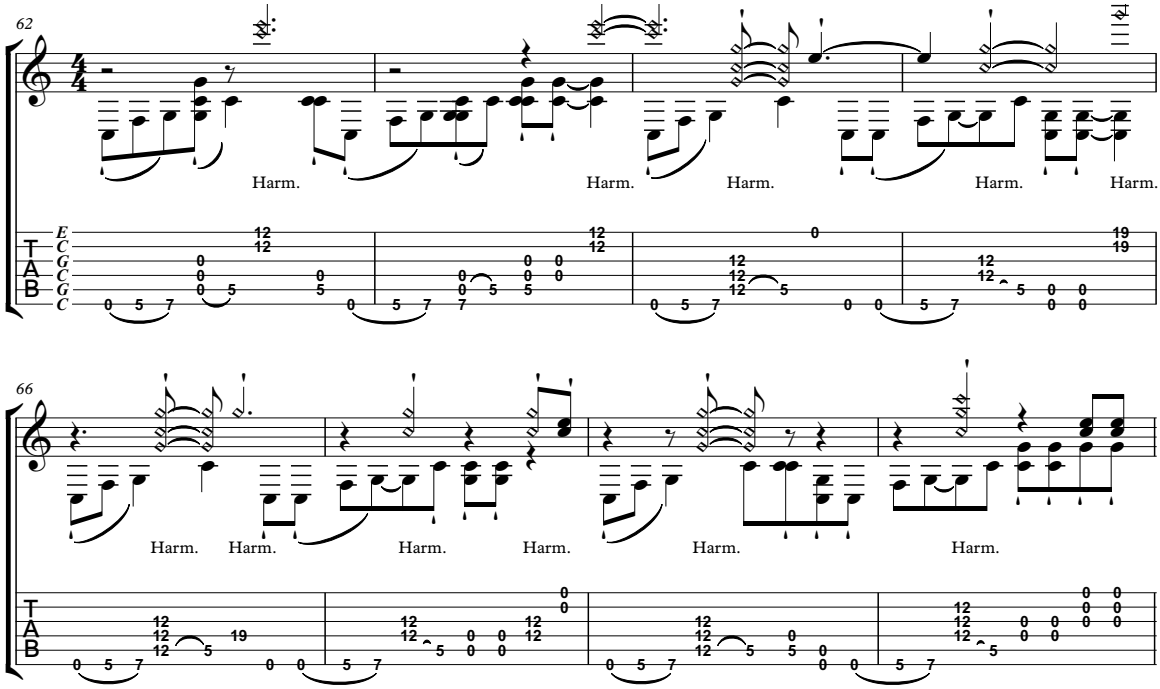
One of Phil Keaggy's most signature sounds occurs in mm. 62-81 of *Legacy*. To prepare for this passage, the guitarist is instructed to tune the guitar's first string up one half step to E^4. Two measures of time are allotted for the guitarist to make this audible tuning adjustment. The half step alteration transforms the guitar's tuning from Open-C Minor [C^2, G^2, C^3, G^3, C^4, E-flat^4] to Open-C Major [C^2, G^2, C^3, G^3, C^4, E^4]. A shift in both key–from C minor to C major–and character occur at the downbeat of m. 62–see example 17. At this point, the guitarist begins to slap the strings at various locations in order to produce either a prepared–by the left hand–pitch or natural harmonic. Transcribed by Adam Cord, *Sketchbook* is a resource that includes 15 scores of Keaggy's works. Cord described Keaggy's unique techniques featured in *Legacy* at the introduction of *Sketchbook* as follows:

> Whole sections of "Legacy" are built around [percussive slapping]. For isolated slaps, Phil strikes the strings over the frets with the pad of his first finger, literally bouncing it off the fingerboard like a rubber ball. The location of the slap is often directly over a specific fret, thus producing a harmonic… The fingers of his right hand bounce in a back-and-forth motion with the first finger slapping on the downbeat and his third and fourth fingers coming back with a combined slap of their own on the upbeat. (Keaggy 2012, 4)

For notation clarity, pitches–fretted, open, or harmonic–in example 17 that the guitarist must slap with their right hand are marked with a wedge either above or below the note head. This wedge gives a clear indication of the increased activity of the right hand over the fretboard. Note the increased frequency of hammer-ons immediately following an initial slapped attack, most notably the C^2-F^2-G^2 progression that occurs once per measure in example 17. Rhythmically, the slap and subsequent dual hammer-

ons occur at alternating beats. It first appears at the downbeat of m. 62 and then one eighth note beat before m. 63. Again, the pattern occurs at the downbeat of m. 64 and similarly one eighth note beat before m. 65. The single act of shifting a slapped attack one eighth note ahead creates rhythmic variation that enhances the piece's flow and movement. Further, this recurring slapped bass line provides a favorable contrast to the various harmonic motives performed by the right hand.

Example 17. Phil Keaggy, *Legacy*. mm. 62-69.



Keaggy composed this passage–example 17–using harmonics primarily on the 12th fret, sounding natural harmonics from the open strings. He varied his use of certain strings as some measures include harmonics performed on the upper strings (mm. 62-63), while some are performed on the middle strings (m. 64). A brief sounding of harmonics on the nineteenth fret occurs at m. 65, but is quickly cancelled by a pair of 12th fret harmonics on beat two of m. 66. As one of Keaggy's signature sounds, this passage

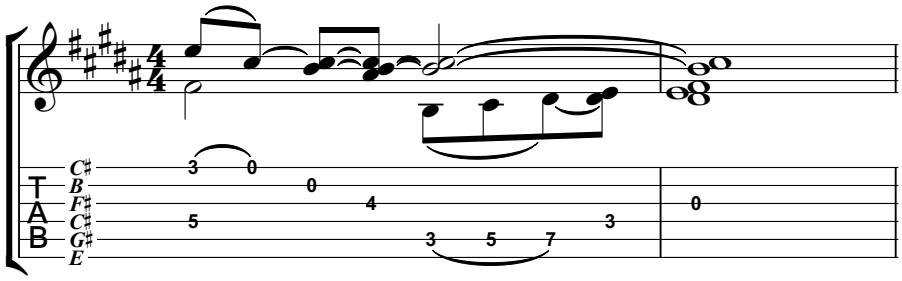
demonstrates a highly skillful combination of alternative percussive, melodic, and harmonic techniques.

In August 2019, I was given the opportunity to meet Phil Keaggy at his personal studio to discuss guitar composition and alternative techniques. The two-hour discussion covered topics such as alternate tunings, capos, looping, and song development. Throughout our conversation, Keaggy picked up his Olson guitar and performed material from his compositions as it related to our discussion. Pieces Keaggy performed were *Shades of Green*, *Village Bells*, *The Apprentice*, *Metamorphis*, and others. In addition to performing previously composed material, Keaggy masterfully exhibited his improvisational skills as he composed "on the spot" while explaining his songwriting process. When asked how he approaches development in his compositions and live performances, Keaggy replied, "It comes natural. Some things, especially if you get into looping, can get repetitive. But I do like to go to surprising places in terms of sections of songs to bring back that initial section so that it is familiar and yet longed for–like a composition, [it has a] verse/chorus/bridge/verse/chorus/bridge. Sometimes, I've written songs within songs" (Keaggy 2019).

Phil Keaggy is well known for his frequent and experimental use of alternate tunings. In Keaggy's words, "It is wonderful to discover [the] places you can go with alternate tunings" (Keaggy 2019). While performing passages of *As It Is In Heaven*, written using an alternate tuning [E^2, G-sharp^2, C-sharp^3, F-sharp^3, B^3, C-sharp^4], I asked Keaggy about his process for composing a melody in a piece. He replied, "The melodies will be suggested because of the emotion of the chord. Sometimes it just happens so easily, it is a natural flow" (Keaggy 2019). He went on to perform a series of chords, each

with an implied melodic note accompanied by intricate harmonies and arpeggios. To support melodic motifs, Keaggy favors sustained pitches and continuing lines. Example 18 depicts an example in which Keaggy used a combination of open and fretted pitches to form a dense harmonic cluster in *As It Is In Heaven*. Each pitch is gradually introduced and sustained until five unique pitches – D-sharp^{3}, E^{3}, F-sharp^{3}, B^{3}, C-sharp^{4} –sound simultaneously in m. 2. This compositional technique–layering sustained harmonic clusters–is possible because of the alternate tuning [E^{2}, G-sharp^{2}, C-sharp^{3}, F-sharp^{3}, B^{3}, C-sharp^{4}].

Example 18. Phil Keaggy, *As It Is In Heaven*. mm. 1-2.



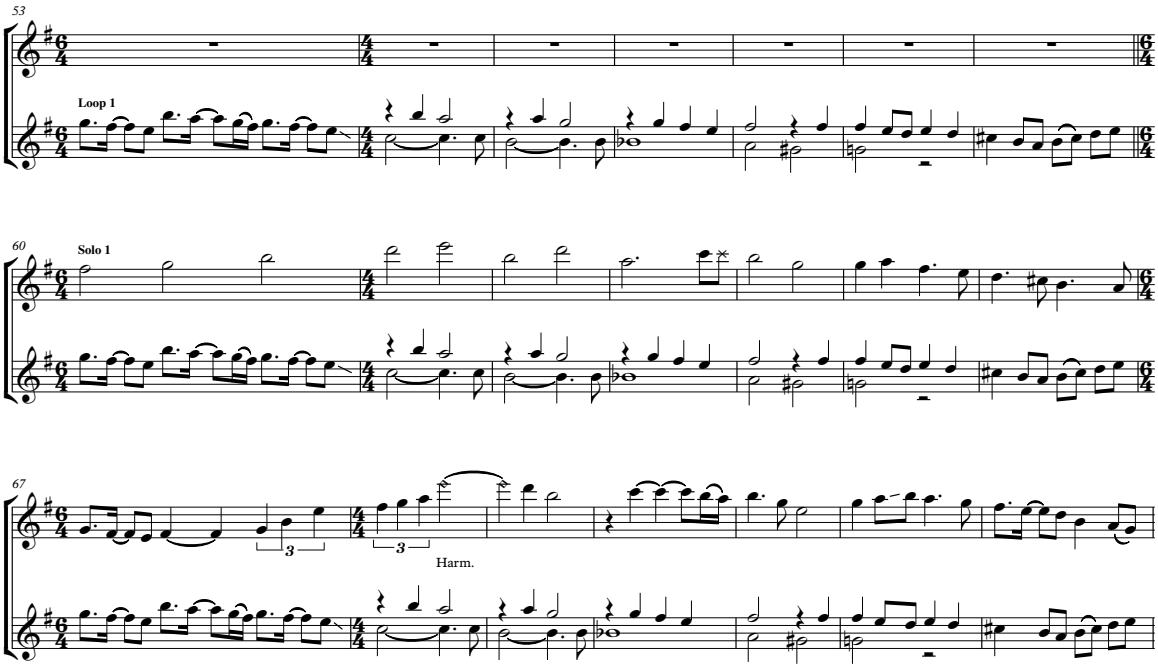
A technique that I had not encountered prior to meeting Phil Keaggy involves the guitarist placing a thin piece of laminate between the strings near the bridge. In order to secure the laminate in place, it must be strung below and above alternating strings–i.e. above sixth string then below fifth. The resulting sound possesses a tin like timbre with a slight percussive attack. This technique is similar to that of prepared piano in which a piece of paper is placed over some or all of the piano's strings. Keaggy demonstrated this technique and explained how he used it on his piece *Legacy,* as well as his band Glass Harp's 2004 release *Ball Bearing Rain*. I asked Keaggy how he first discovered this unique technique. He explained that he had experimented with various items before

discovering that laminate remained in place, “I was sticking picks in here and they would always fly out” (Keaggy 2019).

Delving further into Keaggy’s compositional process, we discussed his approach to writing *Metamorphosis*, a piece from his 1996 album *Acoustic Sketches*. Similar to his projects *Zion* and *On the Fly*, *Acoustic Sketches* featured song performed primarily on the solo acoustic guitar. Referring to the recording process of *Metamorphosis*, Keaggy explained, “This was just me siting right here [in front of his mixing console] playing directly into a JamMan to reel-to-reel tape” (Keaggy 2019). The JamMan is a product manufactured by Lexicon that allowed a performer to create sound clips as long as thirty-two seconds to be continuously repeated–known as a looper. This device allowed guitarists–or any performer–to stack musical motifs, harmonies, and percussive patterns in both recording and live settings. Keaggy was introduced to the JamMan by guitarist Chet Atkins and has used the device regularly throughout his career.

When asked about his approach to composing with a looper, Keaggy answered, “I loop because I grew up to be a player in a band. I miss drums; I miss bass, and the interaction. When [I have] to do solo stuff, I will create rhythm and grooves, bass bits, and progressions that I can play leads over. It keeps it interesting for me. I have done it long enough [that] I seem quite comfortable with it” (Keaggy 2019). Keaggy further discussed his views on incorporating alternative techniques such as looping and percussion in a solo work. “My favorite guitar players do not plug in anything [loopers]. Those are the guitar players I admire the most. I have a good excuse, [I am] missing a finger… [Their music] is great to watch, but to listen to it on a recording, to me, it is more natural to play one instrument, not two at the same time” (Keaggy 2019).

Example 19. Phil Keaggy, *Metamorphosis*. mm. 53-73.



In our time together, Keaggy performed passages of *Metamorphosis*; describing each spot that he would begin a new loop or section. A transcription of this work can be found in Phil Keaggy's *Sketchbook*. Example 19 displays an instance in which Keaggy used a repeated–looped–seven-measure motif to establish a foundation for additional material. For clarity, tablature notation has been omitted from example 19 in order to emphasize melodic and rhythmic interactions, rather than note placement on the guitar's fretboard. The motif begins in m. 53 with a monophonic melody divided in three parts, each with a similar rhythmic pattern. A second voice is introduced in m. 54, beginning a polyphonic five measure phrase in which the lower voice descends–diatonically and chromatically–to the tonic pitch (G). A brief monophonic run in m. 59 transitions to the repeat. Material in mm. 53-59 is repeated in both mm. 60-66 and mm. 67-73 using the JamMan looper.

The first seven-measure solo begins in m. 60 and includes a half note ascent to E^5 in m. 61. Pitches in the solo staff create both dissonance and consonance throughout the phrase. For example, the downbeat of m. 60 contains a minor second interval–dissonant–between the G^4 (loop) and F-sharp^4 (solo). On beat three of m. 60, a major third interval–consonant–sounds between the B^4 (loop) and G^4 (solo). Each instance of dissonance in mm. 60-66 concludes with a consonant interval. The common musical characteristic of tension and release–dissonance and consonance–is prevalent throughout example 19 as various voices interact with each other.

As the second solo phrase–mm. 67-73–increases in activity, two new effects are introduced: triplets and a harmonic. At m. 67, which is the most rhythmically active measure of example 19, the solo part performs one octave below the looped part. Beginning in beat five of m. 67, the solo part includes two sets of quarter note triplets. The loop continues to sound quarter and eighth note rhythms, thus creating a hemiola–"the use of three notes of equal value in the time normally occupied by two notes of equal value" (Randel 2003, 389)–effect between both parts. Keaggy concluded the hemiola with a natural harmonic on beat 3 of m. 68. The remainder of the phrase–through m. 73–contains further creative interaction between both the solo and looped parts. In this passage, Keaggy artfully demonstrated his skills at variation, counterpoint, and alternative techniques.

The final technique that was discussed during my conversation with Phil Keaggy was the use of multiple capos. In addition to his arsenal of full and partial capos from multiple manufacturers, Keaggy owns several discontinued Kyser K-Lever capos. These capos operate similarly to full and partial capos currently on the market, but have one

major distinction. Partial capos cover portions of the fret and make it difficult for the guitarist to access blocked frets–such as the sixth string in figure 11. K-Lever capos, however, possess a spring-loaded lever that allows the guitarist to manually fret the blocked sixth string–or first string if reversed. As a result of its ease, the guitarist may effortlessly fret the previously inaccessible fret during a performance. A composition that Keaggy employed multiple Kyser K-Lever capos is *Village Bell*, in which partial capos are placed on the fifth and seventh frets. Keaggy utilized multiple capos–full, partial, K-Lever–in many of his compositions including *Shades of Green*, *The 50th*, *Fare Thee Well*, *The Apprentice*, and *Musings*.

As Keaggy and I were discussing various alternate tunings, he pulled out two sheets of paper that contained descriptions of his tunings on certain songs–see figure 17. The left column lists works that were composed using standard tuning. The right column contains pieces written using either alternate tunings or capos. The single page in figure 17–a small fraction of Keaggy's acoustic repertoire–lists 15 unique alternate tunings. Keaggy's creativity and experimentation in alternate tunings is reflected in tunings such as [F^2, A^2, D^3, A^3, C^4, E^4] (*The Road Ahead*), [E^2, G-sharp^2, D^3, F-sharp^3, B^3, E^4] (*Brother Jack*), and [D^2, A^2, B^2, F-sharp^3, B^3, E^4] (*Paradise Dream*). Figure 17 is an invaluable resource for a guitarist wishing to perform a Keaggy piece or experiment with unique alternate tunings.

As our interview concluded, Keaggy performed one final piece, *Paka*. The song was written as a tribute to his father and recorded as both an instrumental version and vocal piece. *Paka* features an alternating bass similar in style to that of Chet Atkins.

Keaggy mentioned that while he is a fan of Atkin's music, he did not become a "Chet-like player" (Keaggy 2019)–referring to Atkin's signature picking patterns.

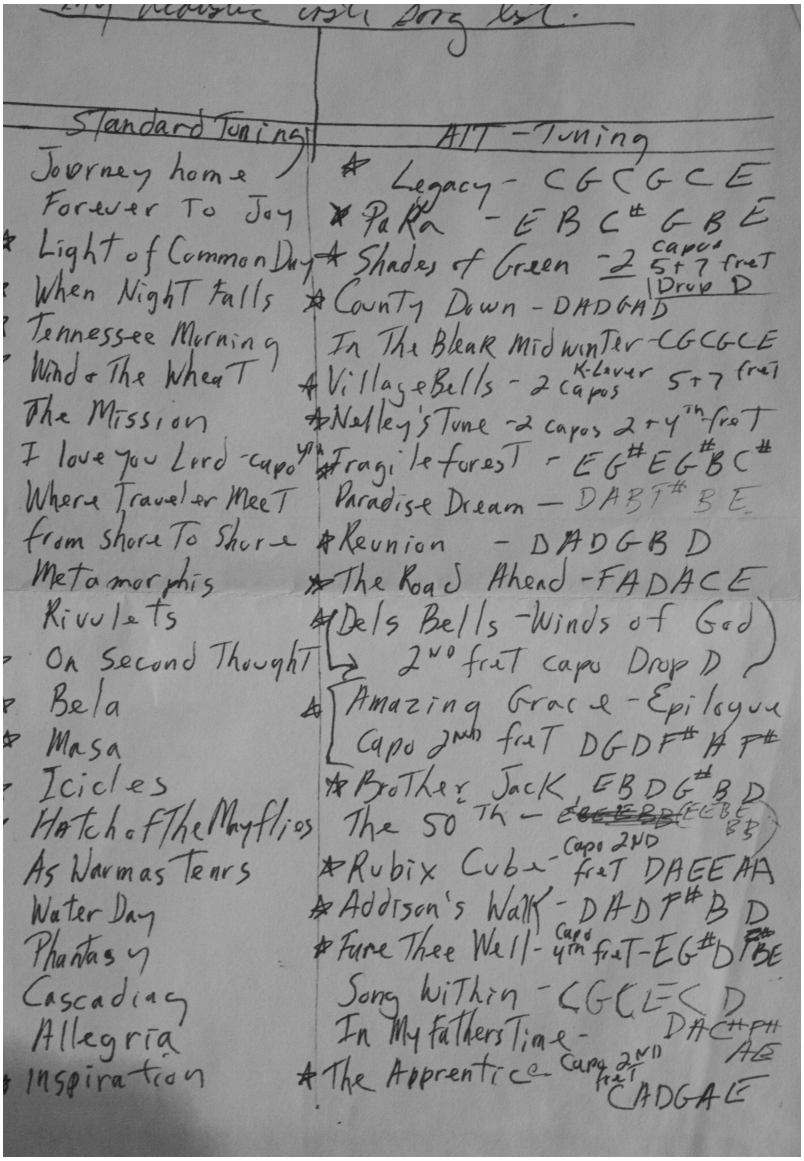


Figure 17. Phil Keaggy Tunings.

As a guitarist, I was astounded at the depth of experience, expertise, and humility that Keaggy conveyed throughout our discussion. A guitarist that is capable of performing an immense array of techniques and styles, Keaggy offered one final piece of advice when incorporating alternative techniques in one's works. When introducing an alternative technique, Keaggy said, "it feels like [the song should be] begging for that

moment. It happens spontaneously. There is no set rule for how [alternative techniques] should happen" (Keaggy 2019). Keaggy further discussed his early musical experiences, family, and faith, of which he does not separate from his music. He explained, "My instrumental music is an extension of the person I am inside and the freedom I have to create with it, to try to accentuate the beauty of music, not the angst and anger" (Keaggy 2019).

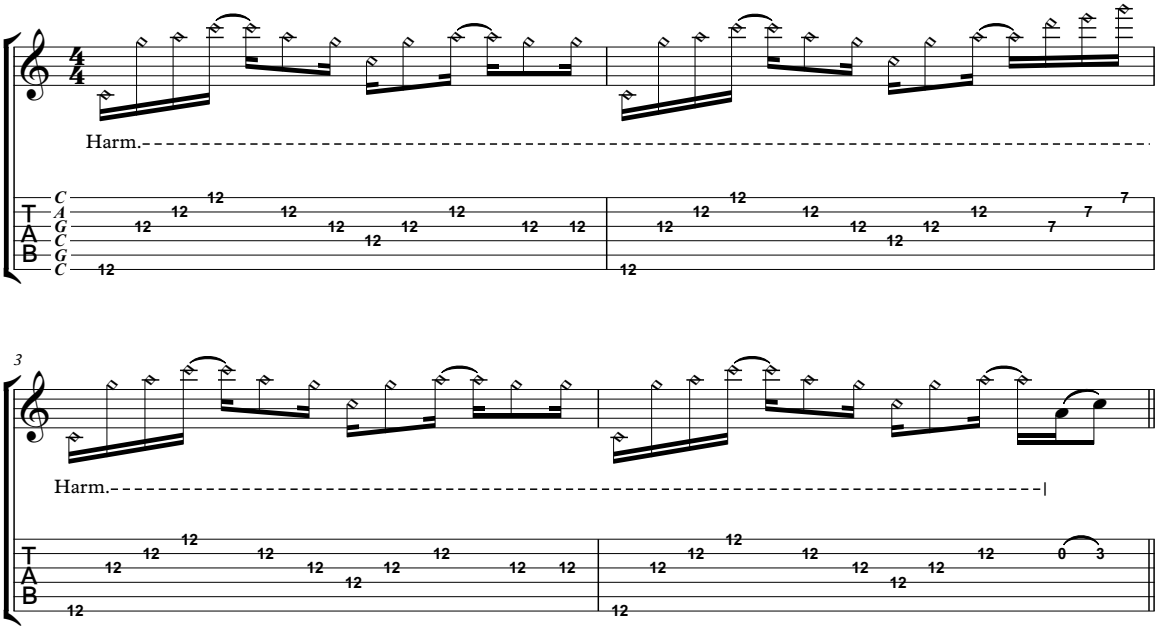
Composer Study: Matthew Elenbaas

I began to incorporate alternative techniques in my original compositions in 2014. I encountered alternative techniques such as alternate tunings, tapping, and percussive practices many years prior as a result of my guitar studies. However, I first began to fully incorporate alternative techniques in my repertoire in 2014. I realized that tuning the guitar to an alternate tuning sparked a level of creativity that did not exist in standard tuning. Rearranging the intervallic structure of the guitar neck forced me to re-learn how to form basic harmonies. Further, as a result of experimenting with alternate tunings, I discovered new voicings, melodies, and musical ideas that were later developed into complete songs. Influenced by guitarists such as Andy McKee, Antoine Dufour, and Phil Keaggy, I gradually implemented percussive practices in my original compositions. As I further experimented with alternative techniques, as well as complex harmonics, hammer-ons/pull-offs, and right hand tapping, my repertoire grew exponentially in both quantity and virtuosity.

A common critique of guitarists–and songs–that use alternative techniques is that they implement alternative techniques solely to "show off their virtuosity" rather than to enhance the music. Critics commonly state that a melody or emotion is lost when one utilizes an alternative technique–especially percussive practices. In validation of the critic, many beginner guitarists that experiment with alternative techniques have a tendency to over-perform in order to draw attention to the technique–or guitarist–rather

than the music. During a guitarist's development, however, he or she will likely discover an appropriate use and implementation of alternative techniques; incorporation that fully supports and enhances a song's message, rather than detract from it. It has always been my goal to incorporate alternative techniques that improve a piece's overall character. I dislike adding a technique or function simply to include it–it must serve a purpose.

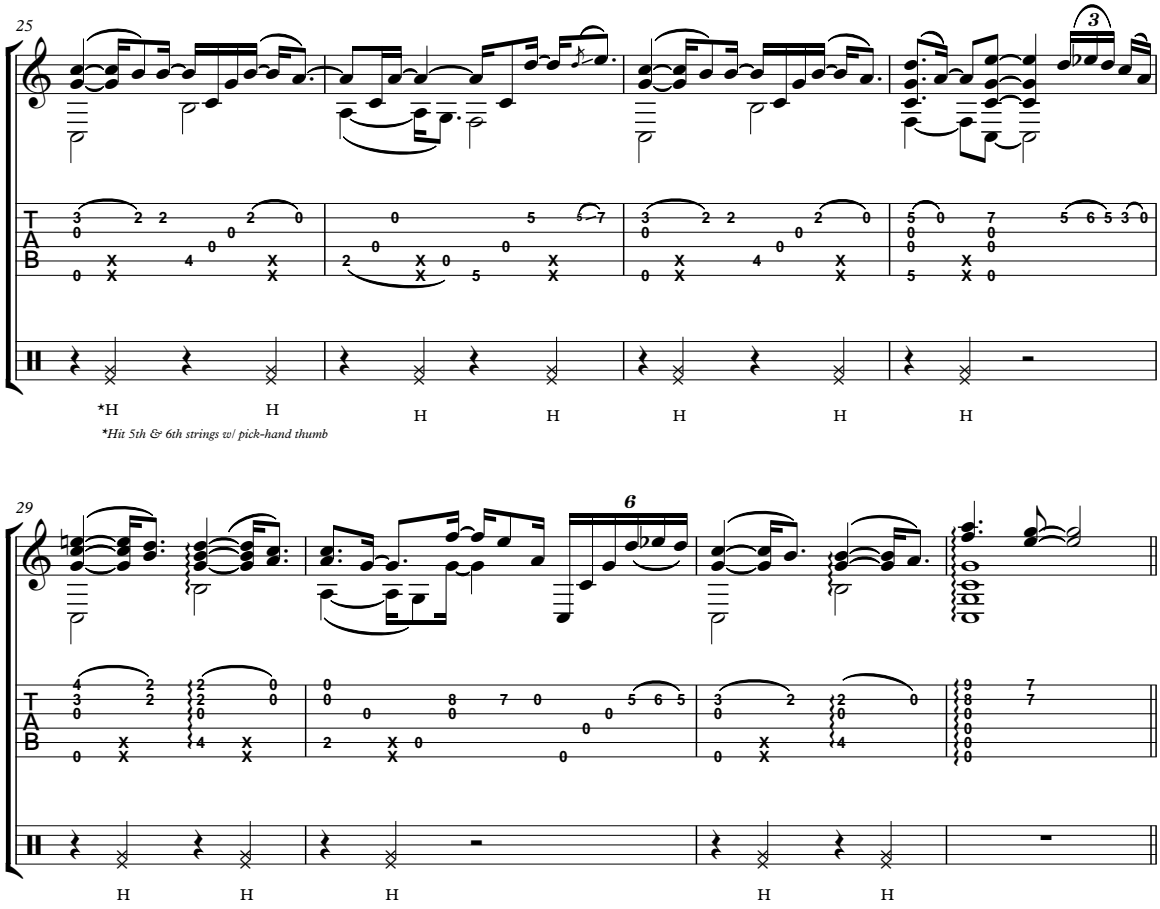
Example 20. Matthew Elenbaas, *Someday Soon*. mm. 1-4.



My composition *Someday Soon* was written and published in 2016. I composed this piece after experimenting with an alternate tuning [C^2, G^2, C^3, G^3, A^3, C^4]. I discovered that this tuning provides immense opportunities to feature harmonics–at the fifth, seventh, and 12th fret–in both the melody and accompaniment. Example 20 depicts four measures that serve as the piece's introduction. Note that the guitarist's left hand maintains its position for a majority of the introduction, only moving to the seventh fret in the final beats of m. 2. Although not rhythmically complex, this combination of harmonics and a syncopated pulse creates a unique introduction for forthcoming material. *Someday Soon's* sixty-nine measures contain a variety of motivic passages–verse, chorus,

bridge–that feature a combination of alternative techniques. For example, the verse consists of a melody with a minimal percussive pattern while the second half of the chorus features recurring harmonic strums accompanied by a complex percussive pattern. As a result, the work possesses an ebb and flow of various techniques, timbres, and musical ideas.

Example 21. Matthew Elenbaas, *Someday Soon*. mm. 25-32.



Example 21 contains eight measures that are considered and analyzed as a verse. The melody is constructed in two-measure phrases and primarily emphasizes pitches C^4, B^3, A^3. Referencing the tablature, one will see that the entire melody is performed on the second string–tuned to A^3. In m. 26, the pitches D^4 and subsequent E^4 are performed on the second string to allow the guitarist to fret the bass note F^2 on the sixth string–tuned to

C^2. Although the guitarist is capable of performing both pitches–D^4 and E^4–on the first string, it would be significantly more difficult because of its increased spacing, as well as hinder the execution of the slide. Further, with the melody remaining on a single string, a harmony may be easily added–as seen in mm. 29-30.

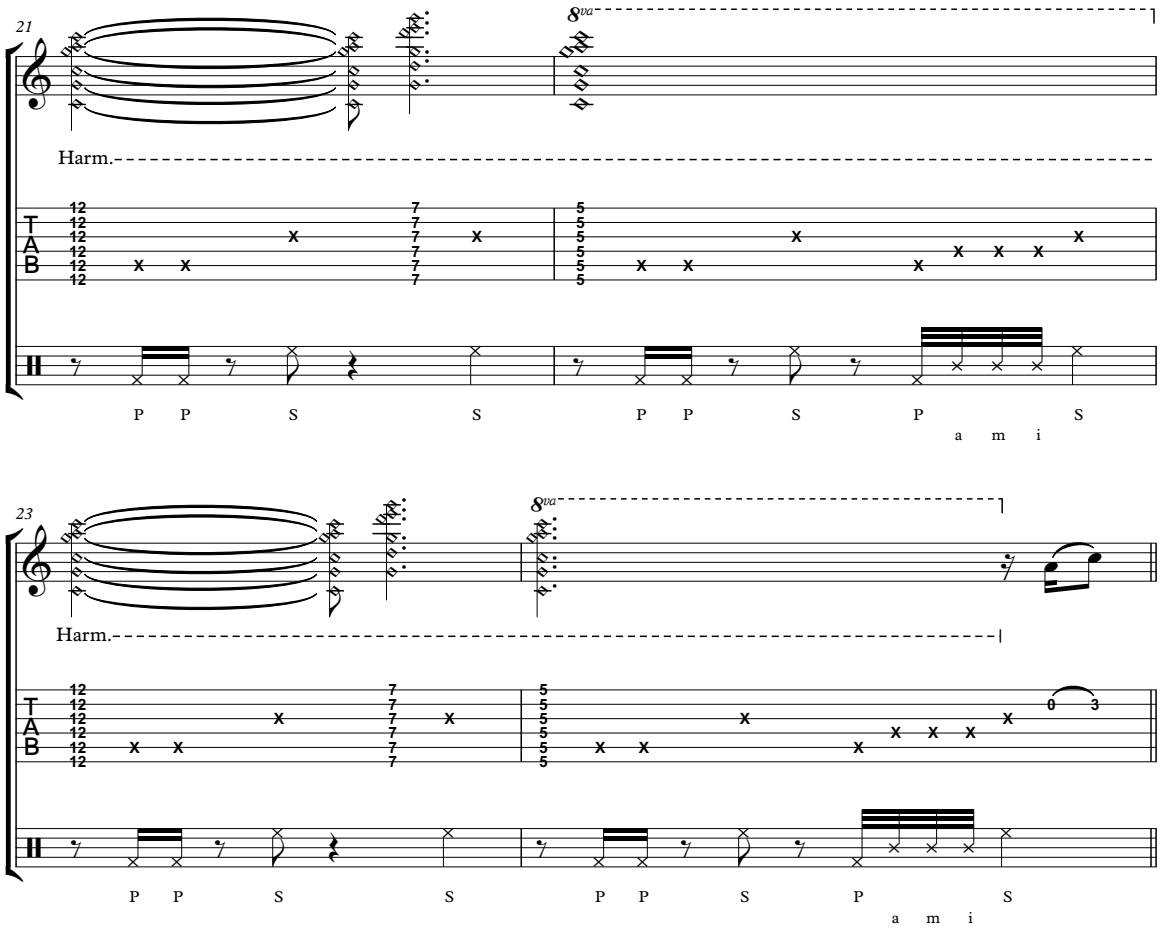
Percussively, this passage features a single snare attack on each second and fourth beat–with the exception of mm. 28, 30, and 31. A performance note instructs the guitarist to hit the fifth and sixth strings simultaneously with their pick-hand thumb, emulating a snare effect. As a verse, I felt that a minimal percussive pattern was appropriate in order to provide movement while not detracting from the melody.

The most percussively active passage in *Someday Soon* is the second half of the chorus–see example 22. Over each two-measure phrase, the guitarist is instructed to strum three clusters of harmonic pitches at the 12^{th}, seventh, and fifth frets. Due to the nature of harmonics, when the 12^{th} fret harmonics are produced, the pitches of the open strings sound–CGCGAC–as the guitarist divides the string in two equal parts. The next cluster of harmonics is produced by placing a finger across all six strings on the seventh fret–dividing the string in three equal parts. The resulting pitches sound a major fifth above the open string–GDGDEG. The final harmonic cluster is performed by placing a finger across all six strings on the fifth fret–dividing the string in four equal parts. At the fifth fret, the original open pitches are produced two octaves higher. As written, the harmonic clusters sound in an ascending order, although the guitarist is moving their left hand down the fretboard–to the left.

As the harmonic clusters of example 22 sustain, the guitarist is instructed to use their right and left hand to produce a series of percussive hits. A legend located at the

conclusion of the score details how each attack should be produced. To perform a kick drum effect, notated as an "x" on the F^3 space, the guitarist's right hand palm should strike the guitar's top below the bridge. To produce a snare effect, notated as an "x" on the high E^4 space, the guitarist's right hand fingers should slap the side of the guitar on the lower bout. Lastly, to perform a tom effect, notated as an "x" on the A^3 space, the guitarist's left hand fingers should strike the guitar's top above the fretboard.

Example 22. Matthew Elenbaas, *Someday Soon*. mm 21-24.



These three effects are utilized in example 22 to create movement and rhythmic contrast from previous sections. In m. 21, the guitarist's left hand remains near the fretboard, as the composed percussive effects are produced solely by the right hand.

However, in m. 22, the left hand, after sounding the initial harmonic cluster, must move towards the guitar's body–above the fretboard–in order to strike the guitar's top on beat three.

In m. 22, three consecutive left hand attacks lead to, and anticipate, the right hand's snare attack at beat four. Following, the guitarist has one beat–at eighty beats per minute–to move the left hand back into position in order to produce the harmonic cluster at m. 23. One measure later, the same percussive pattern is repeated, requiring the left hand to transition again to the top of the guitar–above the fretboard. This time, however, the guitarist's hand must return to its standard position in the time of three 16^{th} notes–to hammer-on the C^4 in beat four. As both a composer and guitarist, I understood that this transition is possible–but difficult–at the score's recommended tempo. It would not be possible, however, to compose the same percussive attacks in beat three–mm. 22 and 24–on beat four while expecting the guitarist to effectively produce the following harmonic clusters. If one intended to compose a more active fourth beat, the right hand would need to be utilized rather than the left. One option would be that the right hand's fingers produce the 16^{th} note hits in the same location above the fretboard, leaving the left hand free to prepare for forthcoming material. Considerable care must be taken during composition as to how a guitarist is expected to perform certain techniques, especially those that require the shifting of either hand's location. The composer must adequately understand the intricacies and nuances of the guitar before incorporating alternative techniques in their works. In summary, a great number of rhythmic possibilities exist, allowing the knowledgeable composer to express and develop his or her intentions.

In late 2015, I composed *November*. In this work, I utilized three Kyser capos–full, Drop-D, and partial. In standard tuning, I placed the full capo on the 2nd fret, the Drop-D capo covering the fifth through first strings on the fourth fret, and a partial capo covering the fourth through second strings on the sixth fret–see figure 18. Openly strummed, the six strings sound the following pitches [G-flat^{2}, D-flat^{3}, A-flat^{3}, D-flat^{4}, F^{4}, A-flat^{4}]–see figure 19.

Figure 18. Matthew Elenbaas, *November*. Capo Setup.

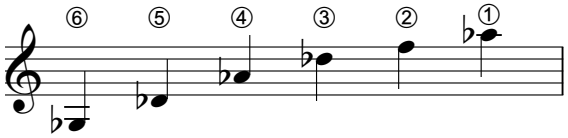
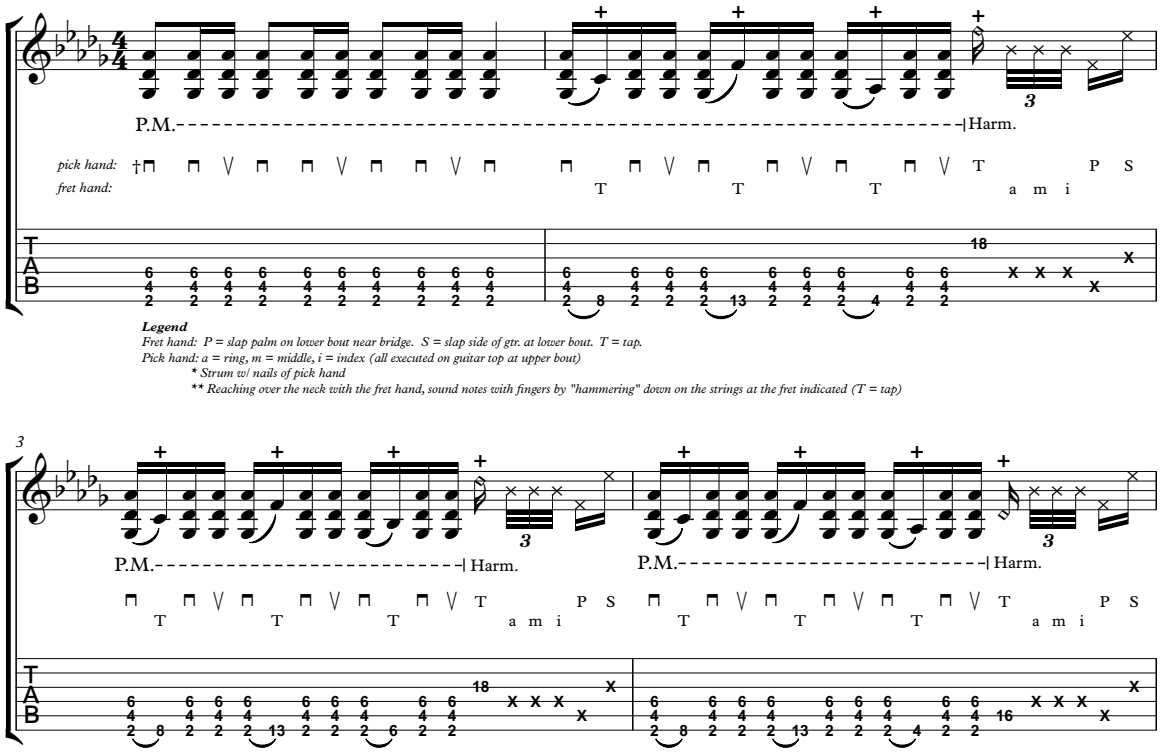


Figure 19. Matthew Elenbaas, *November*. Tuning.

November incorporates alternative techniques such as tapping (both hands), hammer-ons, pull-offs, harmonics, and percussion–see example 23. The piece begins with a palm muted strumming pattern on the open sixth, fifth, and fourth strings. A benefit of the numerous capos is that the guitarist is not required to fret any notes with their left hand until the tapped [C^{3}] in m. 2. To produce this pitch, the guitarist is instructed to reach over the neck with the fret hand and sound the pitches with the fingers by hammering down. This unusual positioning of the left hand is recommended in order to better reach the sixth string–especially at the fourth fret which is already being

obstructed by a partial capo. Depending on the design of the capo, it may be extremely difficult to tap a string on a fret in which a capo is already placed, even if the tapped string is not being fretted by the capo. This is an instance in which the Kyser K-lever capo–discussed in chapter four–would be beneficial.

Example 23. Matthew Elenbaas, *November*. mm. 1-4.



In m. 2, the guitarist is expected to tap three pitches with the left hand–C^3, F^3, and A-flat^2 –by reaching over the neck as the right hand continues a notated strumming pattern. In the fourth beat of m. 2, the right hand must move over the fretboard to produce a harmonic on the 18th fret of the second string. Immediately following, the left hand must move near the instrument's body to slap the guitar's face using the ring, middle, and index fingers–executing a triplet percussive pattern. The guitarist's right hand must then return to its original position to strike the lower bout near the bridge before striking the side of the guitar to produce a snare effect. The rhythmic and harmonic pattern of m. 2

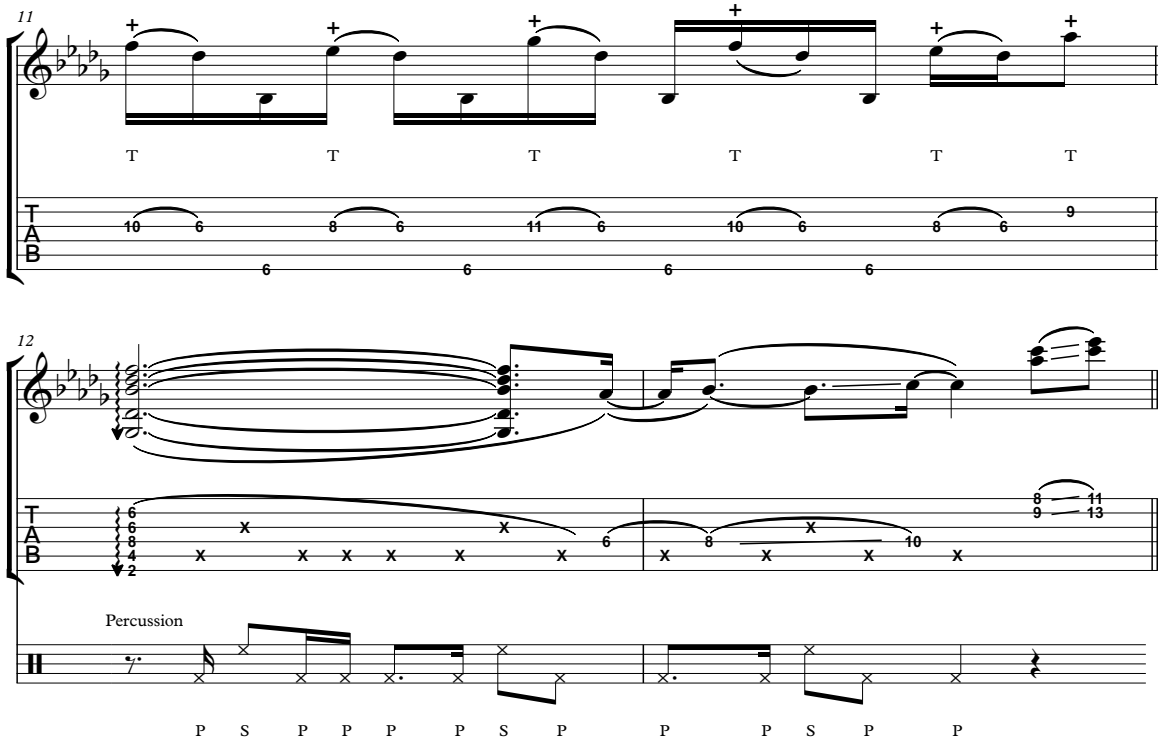
repeats in mm. 3-4 with slight melodic changes in the notes tapped with the left hand and harmonics produced by the right hand. This combination of chords, notes, and percussion are prominent features that give *November's* introduction its unique character and sound. Technically, the interaction between the left and right hand–each hand constantly alternating between percussive attacks, harmonics, or tapped pitches–demands skill and extensive preparation from the guitarist.

Three measures in *November* exemplify the combination of alternative techniques discussed. As a transition from a chorus to a verse, mm. 11-13–see example 24–exploit tapping, hammer-ons, pull-offs, and percussion. Additionally, the open tuning created by multiple capos–[G-flat^{2}, D-flat^{3}, A-flat^{3}, D-flat^{4}, F^{4}, A-flat^{4}]–is utilized both melodically and harmonically. In m. 11, the first three pitches form a complete B-flat minor chord–relative minor to D-flat major. Although m. 11 is composed in 4/4 time, the notated pitches are grouped in threes–(F^{4}-D-flat^{4}-B-flat^{2})(E-flat^{4}-D-flat^{4}-B-flat^{2})(G-flat^{4}-D-flat^{4}-B-flat^{2}). The guitarist performs a series of tapped notes followed by a pull-off to an open string. Each tap and subsequent pull-off is executed on the third string (open D-flat^{4}) and followed by a bass note attack (B-flat^{2}) on the sixth string. The guitarist must fret the sixth string at the sixth fret to produce the bass note. The open string (D-flat^{3}) and bass note (B-flat^{2}) are repeated in this pattern until the final beat, in which the right hand must tap the second string at the ninth fret to sound an A-flat^{4}.

The following two measures–mm. 12-13–feature a series of percussive hits, hammer-ons, and pull-offs. Measure 12 begins with a single up-strum sounding a G-flat major seventh harmony. As a result of the multiple capos, the guitarist may easily form this chord by fretting a single note–B-flat^{3} on the fourth string. Immediately after

strumming, the guitarist's right hand begins a percussive pattern. To execute the first hit, notated as "x" on the F^3 line, the guitarist must slap their palm on the guitar's lower bout near the bridge, resulting in a kick effect–as detailed in the score's instructions and legend. To produce the second hit, notated as "x" on the E^4 line, the guitarist must slap the side of the guitar at its lower bout, resulting in a snare effect. The guitarist's right hand must remain in this position and continue to execute percussive hits until the final beat of m. 13. Meanwhile, the left hand performs three pitches utilizing a hammer-on, pull-off, and slide. The guitarist begins by executing a pull-off from the previously

Example 24. Matthew Elenbaas, *November*. mm. 11-13.

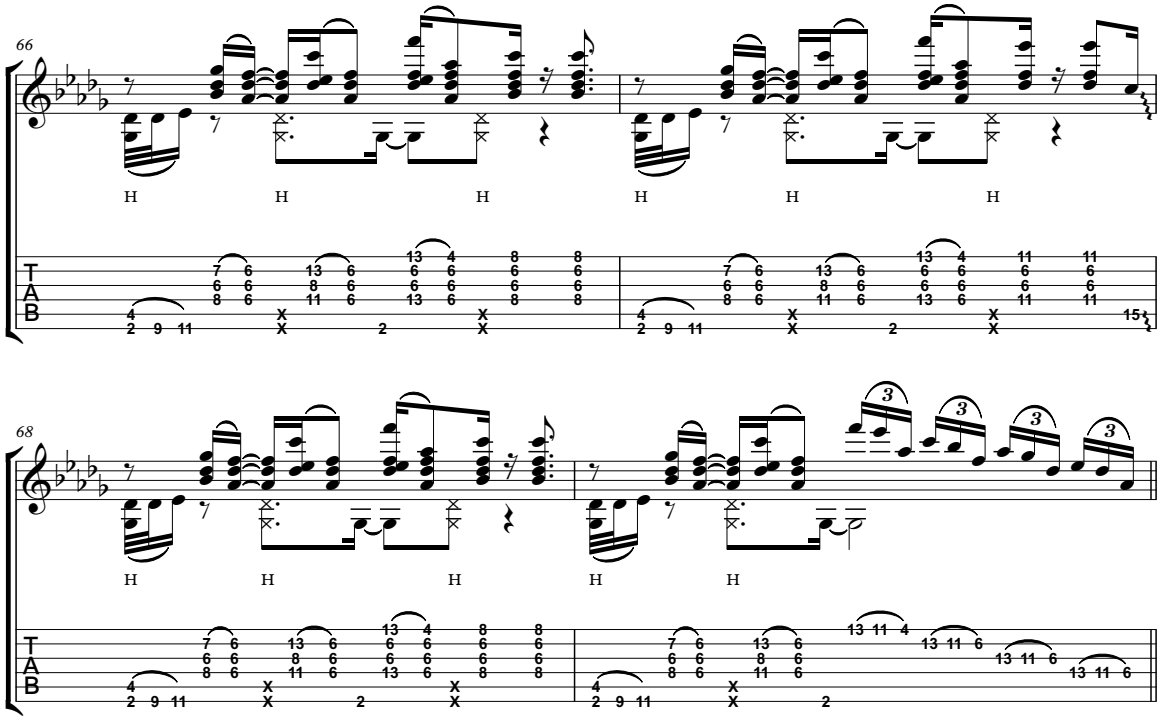


formed G-flat major seventh harmony in m. 12. Next, the guitarist must re-fret the B-flat^3 using a hammer-on and then slide up to the 10^{th} fret–sounding a C^4.

To effectively perform this passage, the guitarist's right and left hand must operate independently. Contrary to previous examples, especially *Drifting,* in which both

hands work together to sound both melody and percussion, this section is composed–and notated–with each hand assigned a unique task, either melodic or rhythmic. As a result, the unique combination of both pitch and percussion featured in mm. 11-13 creates the

Example 25. Matthew Elenbaas, *November*. mm 66-69.



impression that two or more individuals are playing simultaneously. This is an effective compositional tool when one desires to create the effect of multiple performers.

The climactic moment of *November* occurs at the bridge, in which both hands are actively engaged in multiple techniques simultaneously. The bridge is divided into two mostly identical parts: mm. 62-65 and mm. 66-69. Example 25 depicts the second half of the bridge before a return to the chorus. At first glance, one will note the large amount of stacked harmonies, a sharp contrast from previous examples. Instead of a monophonic melody accompanied by an arpeggio or alternating bass line, this section features harmonic clusters ascending and descending the fretboard. After an initial bass hit–performed by slapping the fifth and sixth strings with the thumb–and to subsequent

hammer-ons, the guitarist must pluck the fourth, third, and second strings while fretting two notes (B-flat^{3} and G-flat^{4}) on the fourth and second strings. An immediate pull-off will result in the sounding of pitches A-flat^{3}, D-flat^{4}, and F^{4}–all open strings. This pattern of plucking a cluster of notes and then pulling-off to the open strings continues in an ascending manner two more times in m. 66, at one point utilizing the highest four strings of the guitar. This repetition of pull-offs is a distinctive characteristic of *November's* bridge and continues until beat three of m. 69. At this point, the guitarist is instructed to perform four triplet pull-offs in a rapid manner. The guitarist begins by sounding the first string at the 13th fret prior to pulling-off to the 11th fret. The guitarist then sounds the open string by utilizing a pull-off from the 11th fret. This pattern continues on the second, third, and fourth strings, respectively.

Percussively, the right hand must hit the fifth and sixth strings on beat two as well as halfway through beat three of each measure to emulate a snare effect. Compared to example 12 (*Drifting* mm. 43-46) and example 22 (*Someday Soon* mm. 21-24), this passage's percussive pattern is significantly reduced. This reduction is in order for the guitarist to be capable of performing the complex harmonic techniques required in the score–32nd note hammer-ons, stacked pull-offs, and slides. As previously concluded, when one feature gains complexity, the other generally must be reduced. As the composer, I decided to focus this passage on harmonic movement and expression, rather than rhythmic complexity. I chose to include a minimal percussive pattern to establish a solid beat, rather than add unnecessary virtuosity.

In its entirety, *November* includes alternative techniques such as multiple capos, tapping, harmonics, percussion, slides, hammer-ons, pull-offs, and palm muting. With the

great number of alternative techniques involved, I was extremely careful to not overuse or over-complicate certain techniques. If I were to compose a section featuring each of these techniques simultaneously, it would be pointlessly busy, and likely impossible for the guitarist. Rather, I chose to implement certain alternative techniques in several sections, while refraining from including them in others. The consistent introduction and exit of an alternative technique–such as percussion–creates ebb and flow and maintains a listener's interest. Certain passages contain primarily harmonic movement, while others possess a simple melody accompanied by a minimal percussive pattern. In all, alternative techniques are utilized and exploited to enhance *November's* overall flow and expression. For further study, the score of *November* is provided in its entirety on pages 77.

Conclusion

The common saying, "just because you can, does not mean you should" applies to many things, including music composition. A composer that writes for the acoustic guitar is continually faced with the decision of whether or not to include certain alternative techniques in their works. An alternative technique–such as percussion or tapping–needs to serve a purpose other than to solely highlight the guitarist's skill. A percussive pattern should add movement or establish a beat. A tapped note should be used to complement the melody or harmony, as well as to allow notes to be performed when one cannot reach certain areas of the fretboard. A capo should be used to allow greater freedom and access to the fretboard for more expressive melodies and more intricate arpeggios. Lastly, slides, hammer-ons, and pull-offs, should add character and expression in ways that simply plucking a note cannot.

A prevailing theme throughout the development of the acoustic guitar and its unaccompanied repertoire is experimentation. Experimentation has led to numerous advancements in both guitar construction and virtuosity, and has resulted in the creation and continuous development of alternative techniques. Composers that wrote for the acoustic guitar were afforded a number of new tools–alternative techniques–to incorporate in their works as well as a great degree of freedom and creativity in which to express their own musical ideas. A vast array of percussive, harmonic, and melodic

techniques allowed for composers to discover and express their unique compositional voice.

Due to the increasing popularity of virtuosic works that incorporate various alternative techniques, composed by influential guitarists such as Phil Keaggy and Andy McKee, today's guitarists are highly likely to encounter these practices early in their artistic development. Repertoire in the genre–unaccompanied acoustic guitar–is greatly expanding in both quantity and complexity as new composers are exposed to, embrace, and experiment with alternative techniques. No different than in the early days of the guitar, today's composers are experimenting with innovative techniques and further contributing to the ongoing development of the guitar and its repertoire.

As a composer, I discover a great degree of creativity when experimenting with alternative techniques. I have realized that one of the most effective ways to compose new material is to experiment with an alternate tuning. By exploring the fretboard of a guitar tuned to an alternate tuning, I discover new harmonic voicings and melodic patterns that are either unfavorable or unattainable in standard tuning. This re-learning of the fretboard leads to a renewed perspective of the composition process, as if learning how to play the guitar again. Overall, experimenting with an alternate tuning frequently results in a fresh collection of melodies, voicings, and musical ideas from which to form entire compositions.

In my compositional process, I typically begin with a melody in mind and then use various alternative techniques such as tapping, hammer-ons, and pull-offs to execute each phrase. I then experiment with the various harmonic possibilities that are accessible using that specific alternate tuning or capo setup. Many of my unaccompanied works

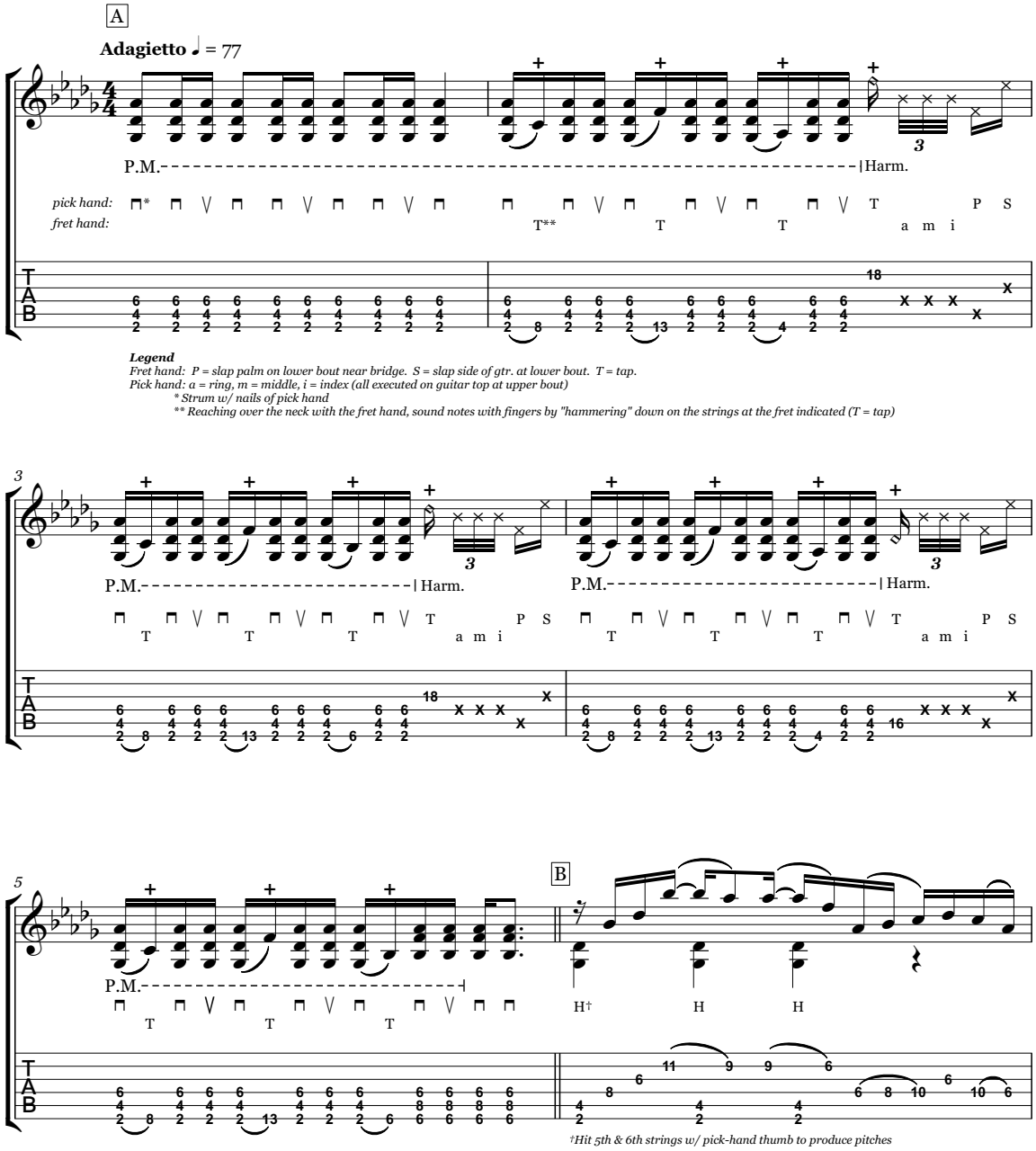
feature harmonies formed using a combination of notes located on the upper fretboard and open strings. This combination frequently results in dense and dissonant harmonies – as seen in example 25. Once the melodic and harmonic progression is complete, I begin to add percussive hits to create a rhythmic progression. This process involves much experimentation in order to find the appropriate degree to which each technique is used. By incorporating various alternative techniques, I am able to transform and embellish a simple melody into an expressive passage that reflects my unique compositional voice.

Alternative techniques are incredible tools for today's composer that writes for the unaccompanied acoustic guitar. Alternative techniques are invaluable in that they promote and allow experimentation and exploration of the guitar and its immense sonic properties. When adequately understood and effectively implemented, alternative techniques provide a wealth of possibilities for even the most advanced composer.

November

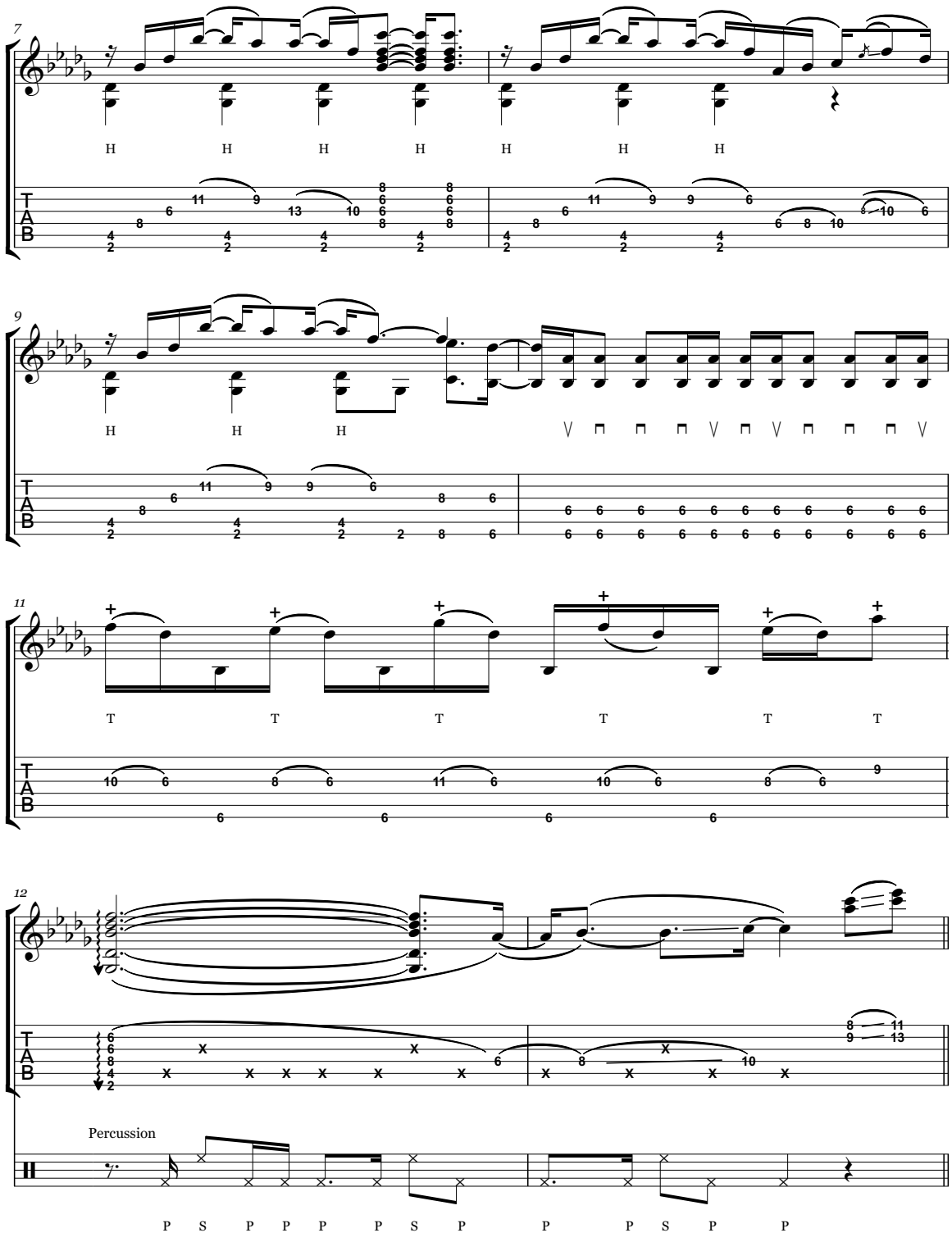
Full Capo II
Partial Capo (Strings 5-1) IV
Partial Capo (String 4-2) VI

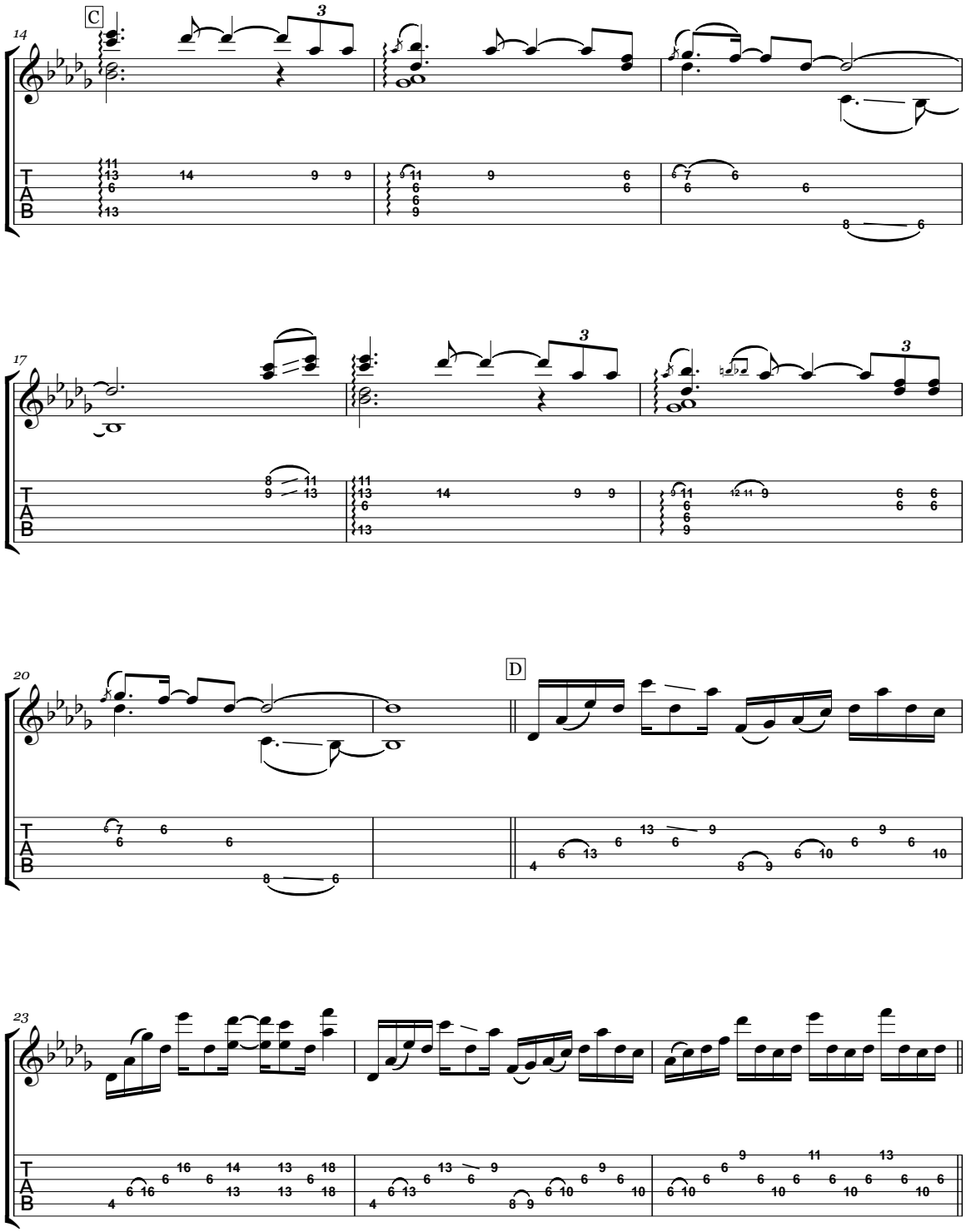
Matthew Elenbaas

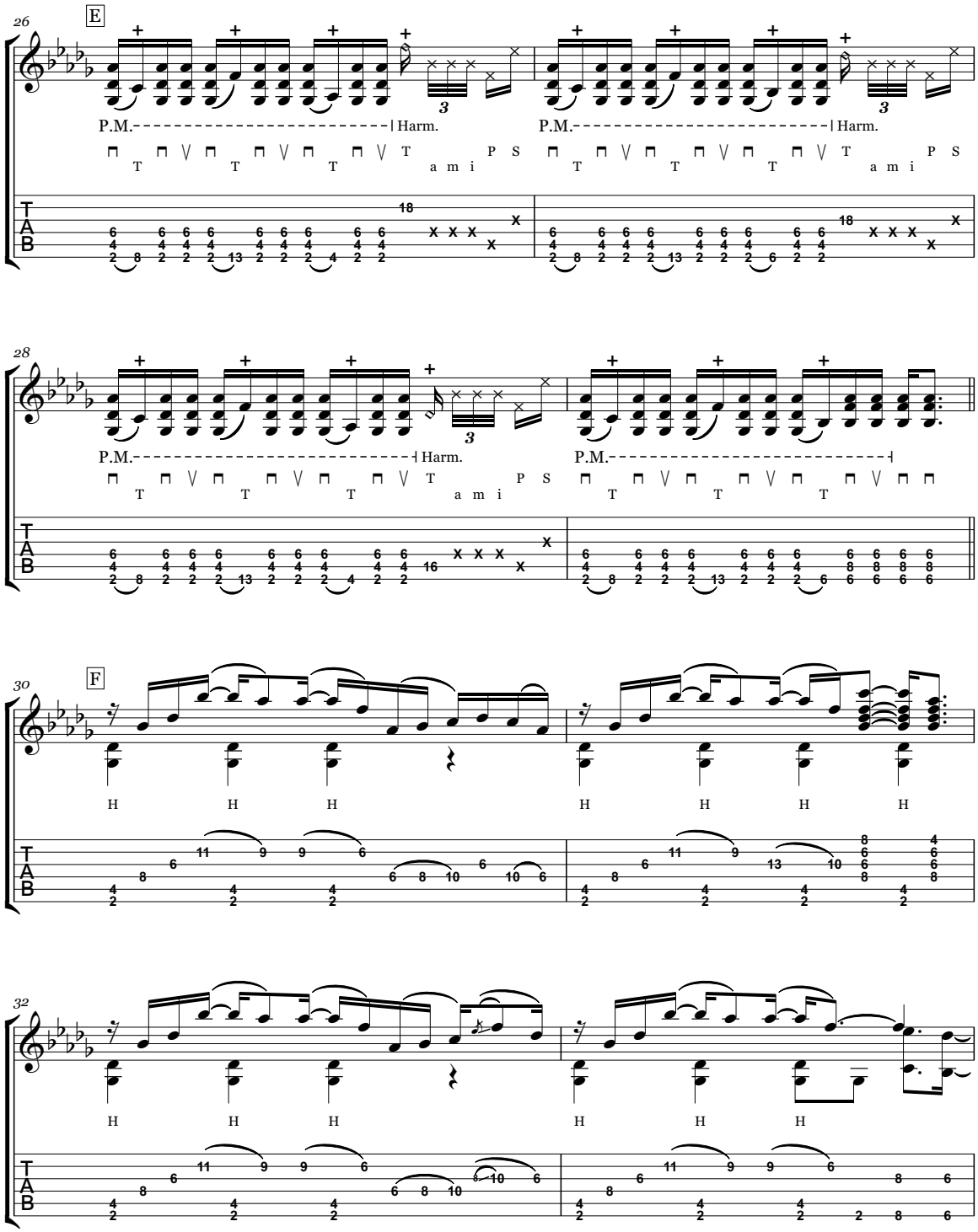


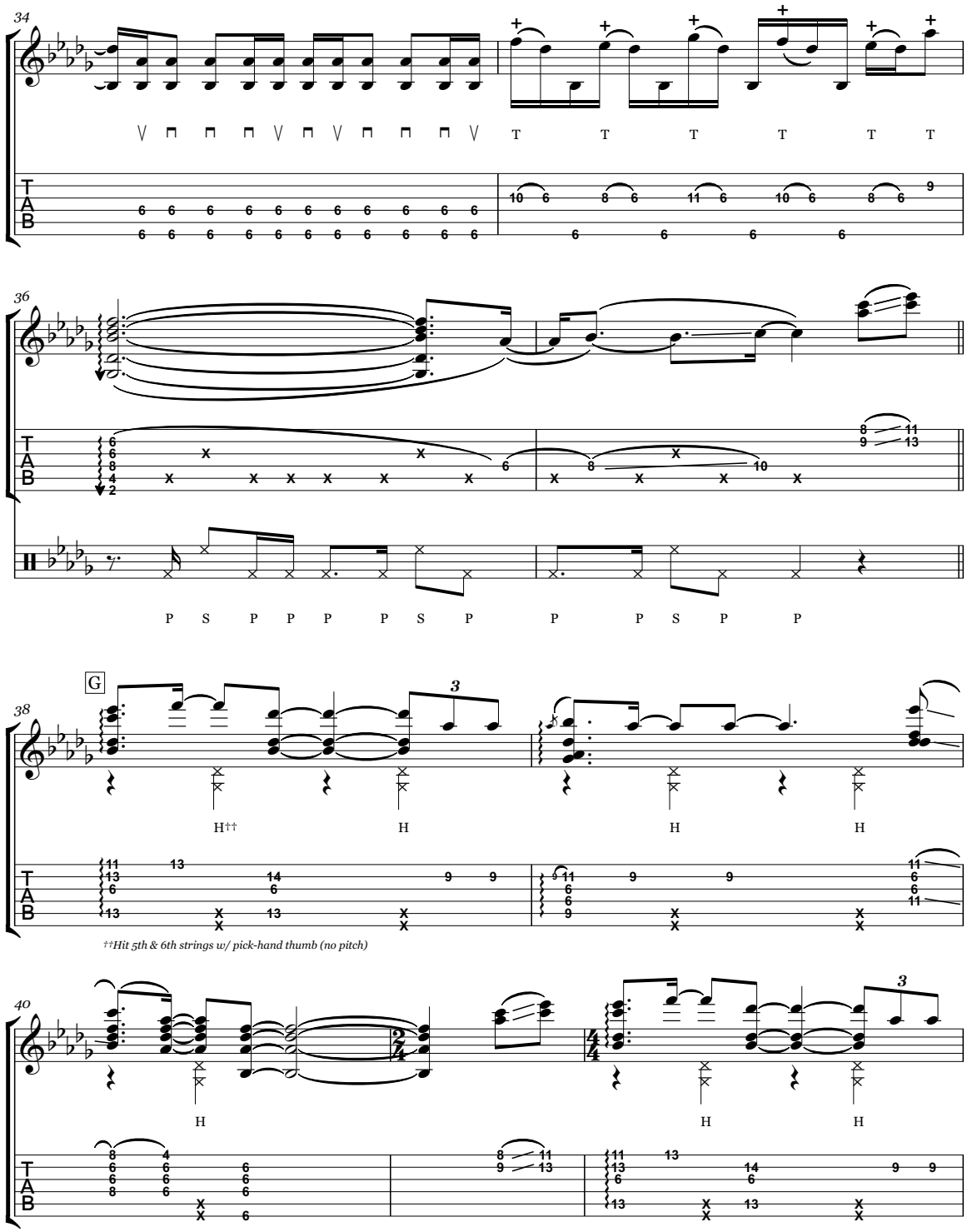
Legend
Fret hand: P = slap palm on lower bout near bridge. S = slap side of gtr. at lower bout. T = tap.
Pick hand: a = ring, m = middle, i = index (all executed on guitar top at upper bout)
** Strum w/ nails of pick hand*
*** Reaching over the neck with the fret hand, sound notes with fingers by "hammering" down on the strings at the fret indicated (T = tap)*

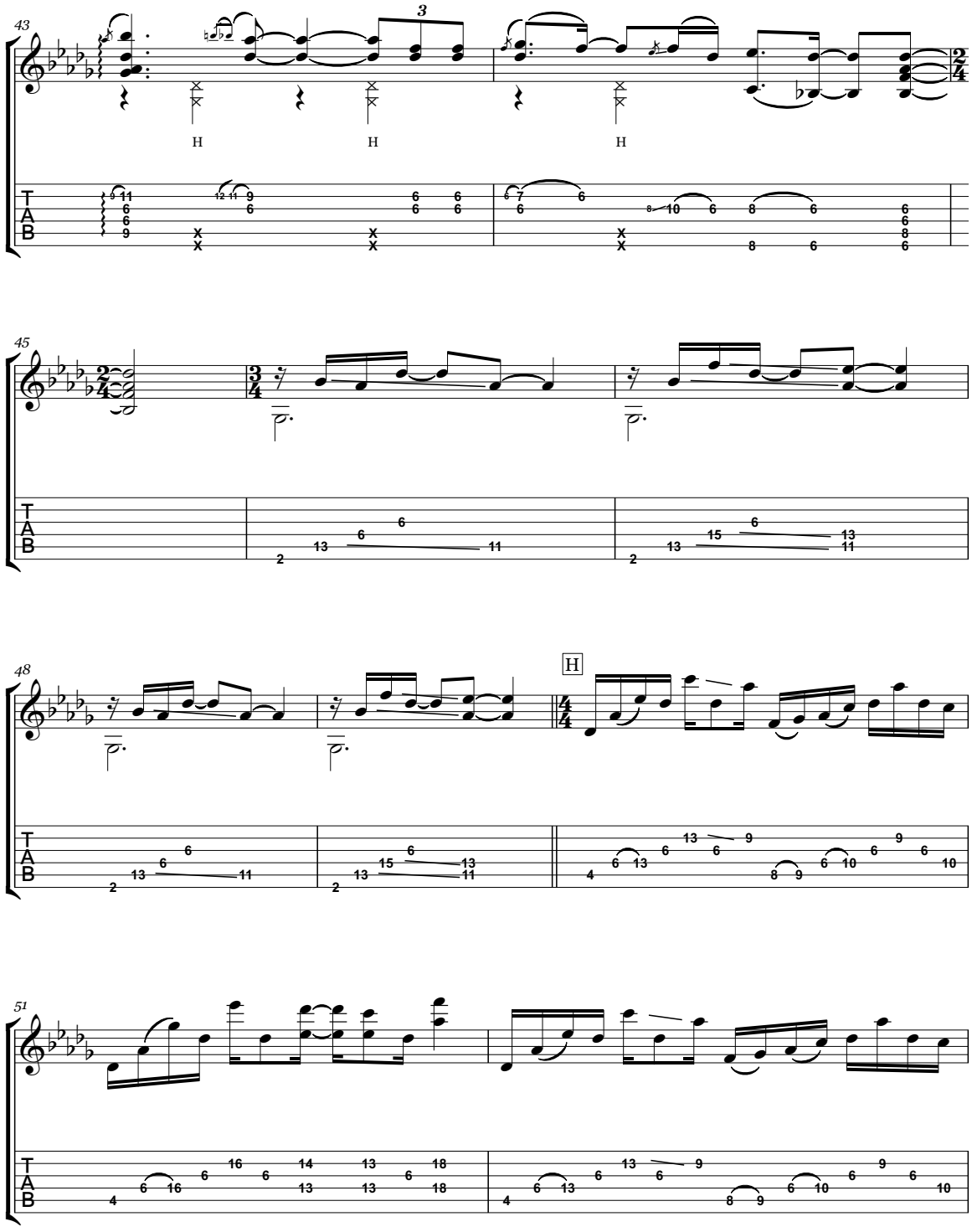
†Hit 5th & 6th strings w/ pick-hand thumb to produce pitches


7
H H H H H H H
T A B
9
H H H
T A B
11
T T T T T T
T A B
12
T A B
Percussion
P S P P P P S P P P S P P


14
C
17
20
D
23
T
A
B


26
E
P.M.
Harm.
P.M.
Harm.
28
P.M.
Harm.
P.M.
30
F
32


34
T T T T T T
36
P S P P P P S P P P S P P
G
38
3
H†† H H H
†† Hit 5th & 6th strings w/ pick-hand thumb (no pitch)
40
3
H H H


43
3
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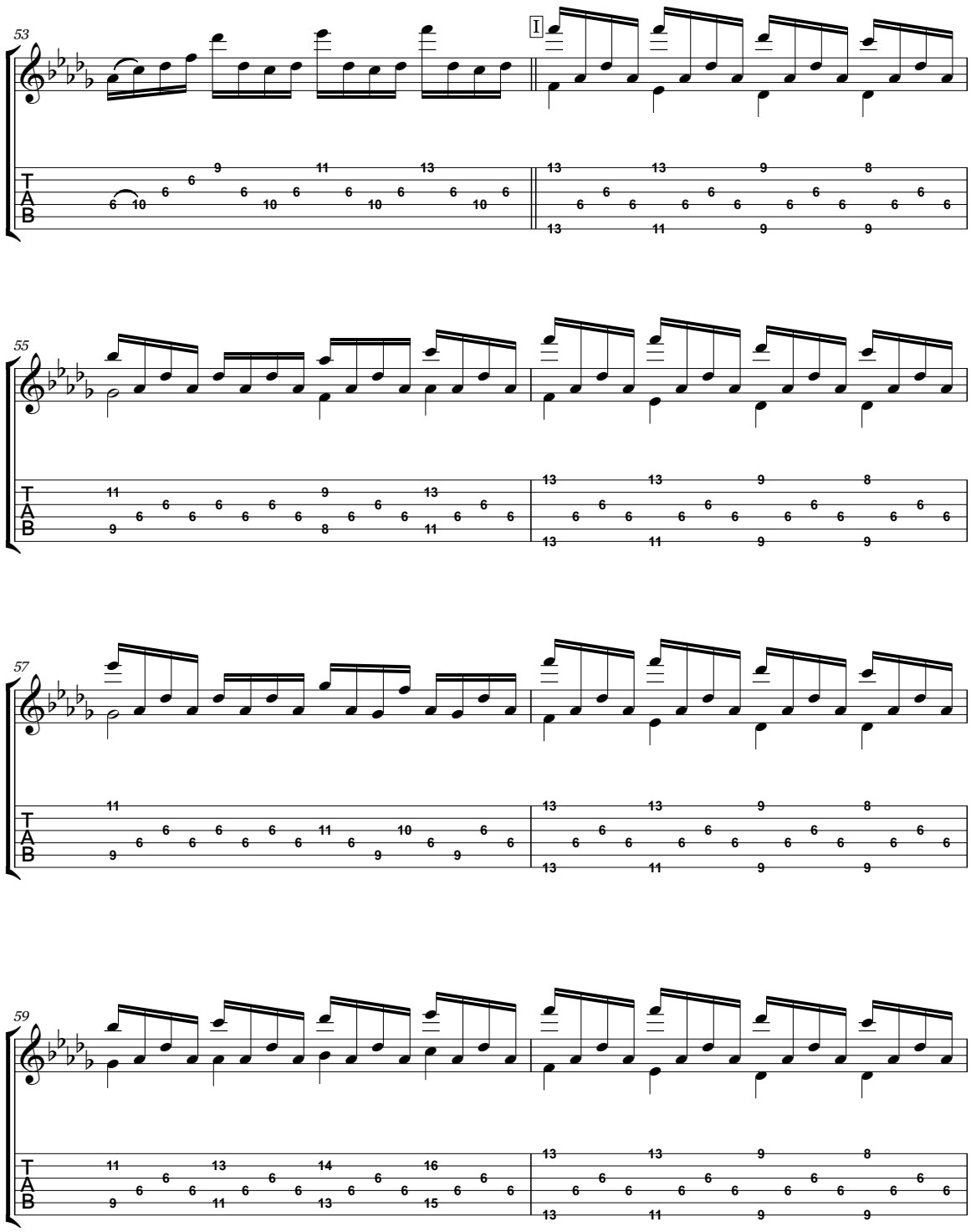
H
45
48
H
51


53
I
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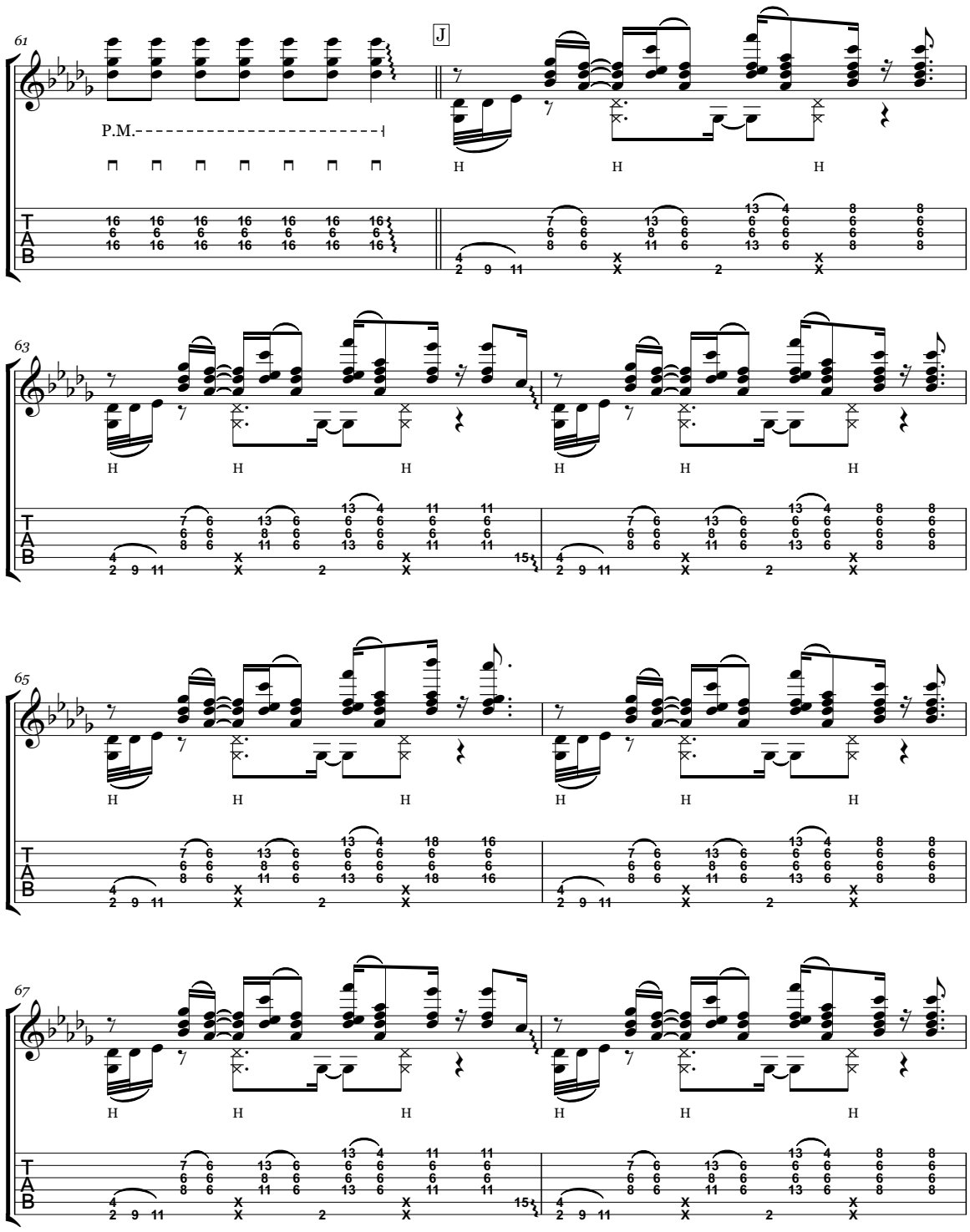
57
59
T
A
B


61
J
P.M.
H
63
65
67
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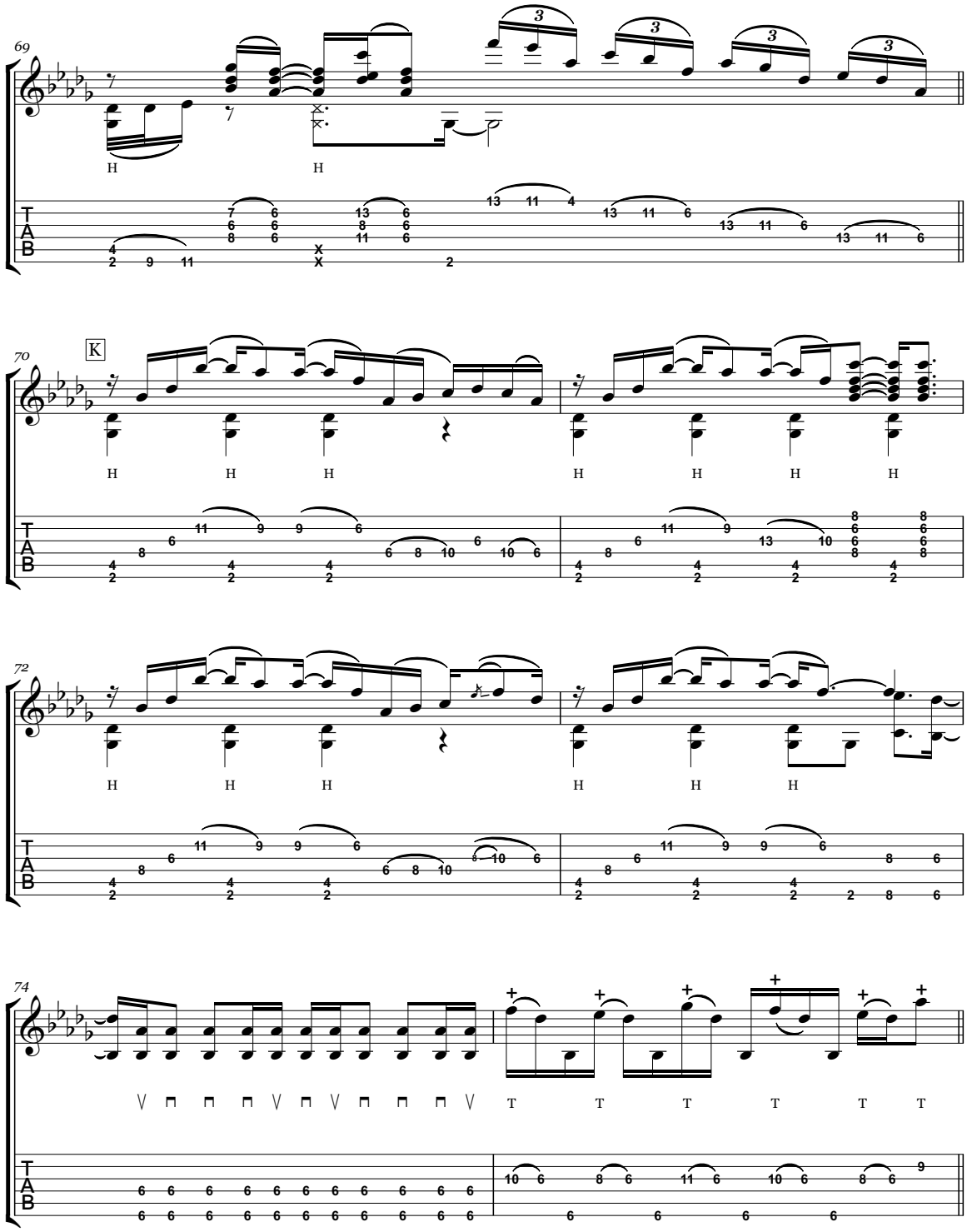
A
B


69
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70
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74
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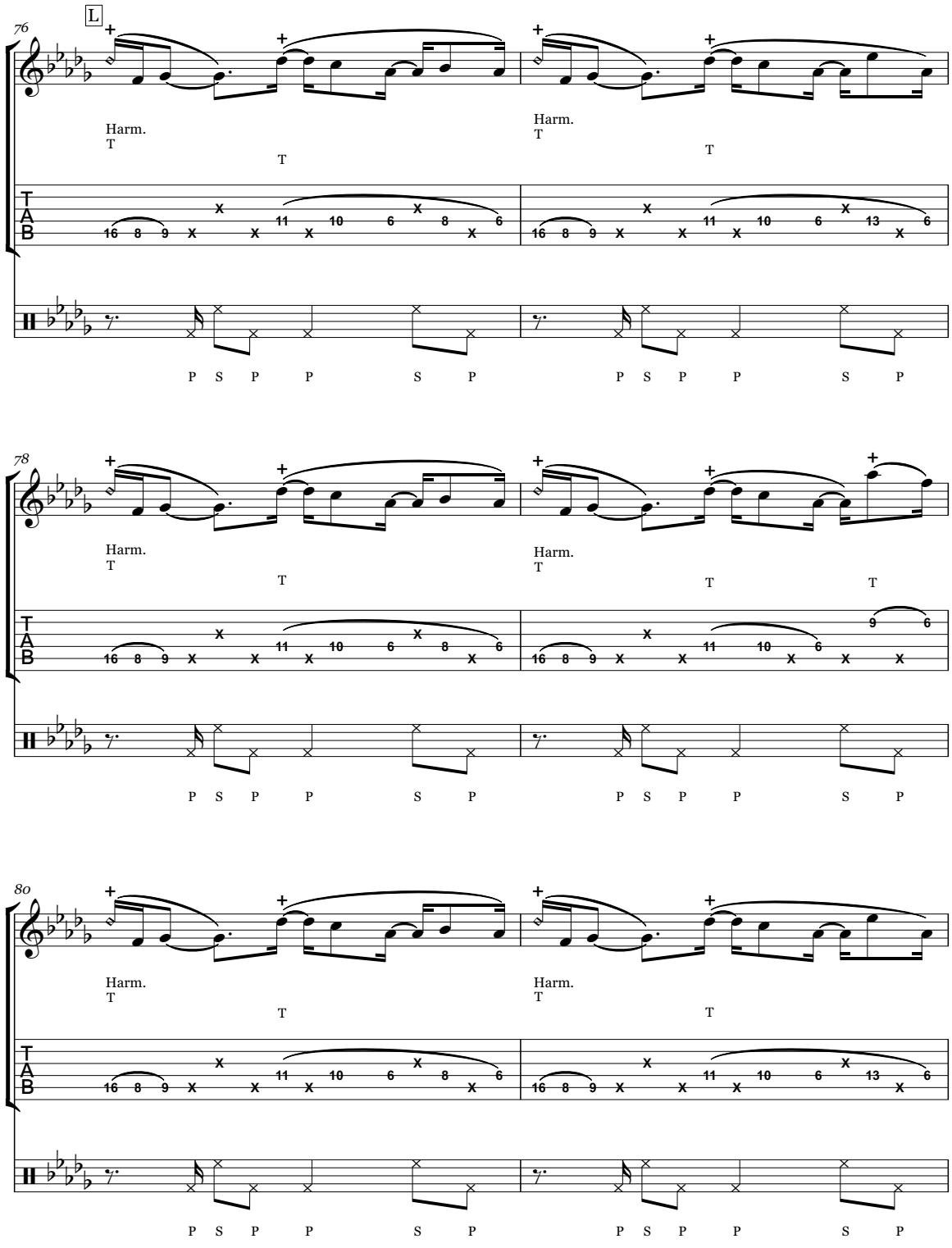
76
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Harm.
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Harm.
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TAB
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16 8 9 X X 11 X 10 6 13 X 6
P S P P S P
P S P P S P
78
Harm.
T
T
Harm.
T
T
T
TAB
16 8 9 X X 11 X 10 6 8 X 6
16 8 9 X X 11 X 10 6 X X 9 6
P S P P S P
P S P P S P
80
Harm.
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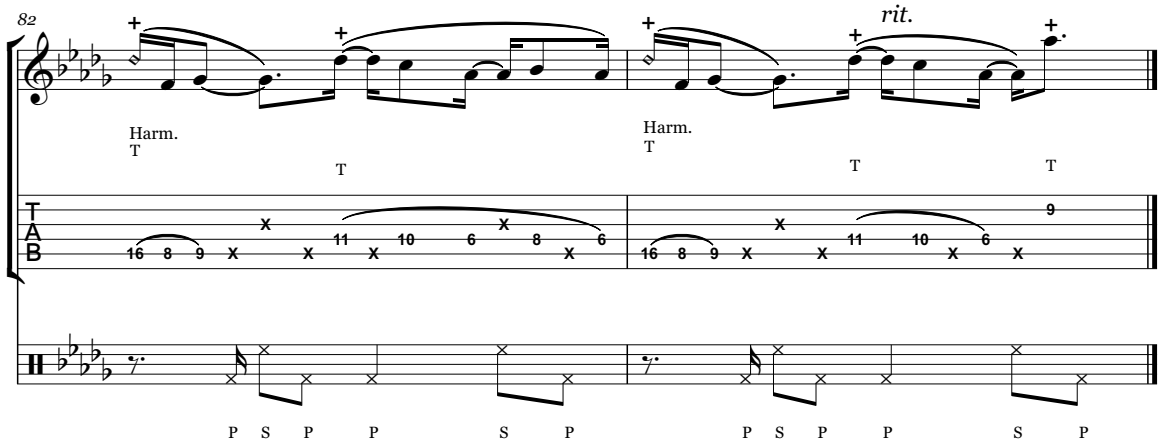
TAB
16 8 9 X X 11 X 10 6 8 X 6
16 8 9 X X 11 X 10 6 13 X 6
P S P P S P
P S P P S P


82
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T
T
Harm.
T
T
T
T A B
16 8 9 11 10 6 8 6
16 8 9 11 10 6 9
P S P P S P
P S P P S P

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