



Timmy Barnett

ODE TO CREATIVE COMMONS
A PROTECTOR OF FREE INFORMATION


for 7-string Kite guitar
8'

Tucson, Arizona

EDITION ZALZAL

series editor — Robert Lopez-Hanshaw

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Ode to Creative Commons

Timmy Barnett

PREFACE

The composer was inspired by exploring chord possibilities on the Kite guitar. Open strings are used extensively. This piece uses major, minor, augmented, and diminished triads, major and minor 7 and 9 chords, dominant 7, 9, $b9$, $7\sharp 11$, and $9\sharp 11$ chords, and fully diminished 7 chords. These chords are tuned with 7-limit Just Intonation ratios. The ratios for these chords are as simple as possible. The major triad is 4:5:6, the minor triad is 10:12:15, and the dominant 7 is 4:5:6:7. The more complex Pythagorean 3rds and 6ths are avoided. There are a few sections of natural harmonics. Square waves are approximated by plucking in the middle of the string where the octave harmonic lies.

This piece has been scored for 6-, 7- and 8-string Kite guitar. It has been notated in both up/down and pure HEJI. These alternate scores can be found at https://timmybarnett.com/Ode_to_Creative_Commons. Adaptations are encouraged. The composer has performed this piece many times with differences from this score. The performer should feel free to make adaptations for their instrument and to simplify or expand parts for their own playing style. Though metronome markings are provided, these are only suggestions. The piece may be transposed. Distortion may also be used at any point. The performer is free to publish alternate versions of this piece under CC-BY-SA.

The composer believes musicians, artists, and researchers should have more control over the content they create. But they are too often forced to give away their rights to their works. In extreme cases such as John Fogerty's self-plagiarism suit, a composer may not even feel free to continue composing. If given a choice, not all content creators would agree that their works should be as restricted as the publishing and recording industries desire in order to maximize profits. Much of the composer's knowledge of the world comes from countless hours spent on Wikipedia. Creative Commons licenses such as CC-BY-SA allow sites like Wikipedia to exist. This starkly contrasts with JSTOR, a database that can't be freely shared with others. Creative Commons puts freedom in the hands of the composer, performer, and audience, and seeks to restrict only restrictions themselves.

This piece is dedicated to Aaron Swartz, and his dream of Open Access.

—T. B.

“Information is power. But like all power, there are those who want to keep it for themselves. The world's entire scientific and cultural heritage, published over centuries in books and journals, is increasingly being digitized and locked up by a handful of private corporations.”

— Aaron Swartz, *Guerrilla Open Access Manifesto (2008)*

BIOGRAPHY

Timmy Barnett is a musician, teacher, and FLO (Free/Libre/Open) software/hardware developer. He studied violin with Anna Vayman at Ball State University, where he received his BM and MM. He has played violin and viola for many orchestras including the Danville Symphony Orchestra, Muncie Symphony Orchestra, Kokomo Symphony Orchestra, and has served as concertmaster for the Hendricks Symphony Orchestra and Fishers Chamber Orchestra. He performs on many instruments and in many genres. He teaches and performs on string instruments bowed and plucked, fretted and unfretted, as well as piano and organ. His fascination with composition and improvisation has led him to baroque figured bass realization, jazz, Irish (Indianapolis Ceili Band), and rock (!mindparade).

Timmy has always been curious about non-Western tunings. Stephen Weigel introduced him to microtonality while they were both students at Ball State University. Soon after moving to Portland, OR, he met Kite Giedraitis who introduced him to the Kite guitar. He has been playing Kite guitar and helping promote it since late 2019. This instrument has lead him to play 41-edo and 19-limit Just Intonation on violin.

Timmy's projects can be found on his website <https://timmybarnett.com>.

THE KITE GUITAR

The Kite guitar, named for its inventor Kite Giedraitis (<https://tallkite.com>), is a new solution to a problem that musicians and instrument builders have grappled with for centuries: How do you balance accurate tuning, ergonomic playing, and the ability to modulate between keys?

If all harmonic intervals are tuned to pure Just Intonation, the instrument must favor a single key (or only a few), or else the number of pitches rapidly proliferates. If there is a large number of pitches, physical navigation of the instrument becomes more difficult. And if absolute freedom of modulation is desired, an equal division of the octave (edo) must be used—yet the most accurate edos are quite large, with many pitches, and the smaller and more ergonomic edos are much less accurate.

The Kite guitar solves this conundrum by using 41-edo, a large and accurate edo, combined with the idea of “skip-fretting” as developed by Matthew Autry. In this scheme, only every *other* fret is used, so adjacent frets are *two* steps of 41-edo apart. This makes the fretboard much more playable than a full 41-edo board, because the fret spacing is not as narrow. Only half of the intervals of 41-edo are available on a single string; however, the strings are tuned an odd number of edo-steps apart, and thus all pitches are available on each *pair* of strings. In addition, because the strings are all tuned the same interval apart, interval shapes and chord shapes are consistent everywhere on the fingerboard: the system is “isomorphic,” unlike a standard guitar.

The following diagram graphically demonstrates the utility of the Kite system. In this diagram, the strings are tuned 13 steps of 41-edo (13\41) apart, representing a “downmajor” third in Kite parlance, very close to the Just Intonation ratio 5/4 (386c). This is the most common tuning for Kite guitar, though others are possible. With this tuning, 25 different intervals, all commonly of interest to microtonal musicians, are available across 4 strings and a compass of 8 frets, equivalent to roughly 4-5 frets on a standard guitar. Thus, they all lie easily under the hand without shifting position.

← towards the nut				towards the bridge →				
vm7 966¢ 7/4	^m7 1024¢ 9/5	vM7 1083¢ 15/8	^M7 1141¢ 27/14	P8 1200¢ 2/1				
d5 585¢ 7/5	~5 644¢ 16/11	P5 702¢ 3/2	vm6 761¢ 14/9	^m6 820¢ 8/5	vM6 878¢ 5/3	^M6 937¢ 12/7	m7 995¢ 16/9	
M2 205¢ 9/8	vm3 263¢ 7/6	^m3 322¢ 6/5	vM3 380¢ 5/4	^M3 439¢ 9/7	P4 498¢ 4/3	~4 556¢ 11/8	A4 615¢ 10/7	
				P1 0¢ 1/1	vm2 59¢ 28/27	^m2 117¢ 16/15	vM2 176¢ 10/9	^M2 234¢ 8/7
-3	-2	-1	0	1	2	3	4	

Further resources are available at <https://kiteguitar.com>.

—R. L. H.

Notation

41-EDO ACCIDENTALS

The diagram illustrates 41-edo accidentals on a two-staff system. The top staff shows pitches and equivalent spellings in a whole step, with fret numbers 0c, 29c, 59c, 88c, 117c, 146c, 176c, and 205c. The bottom staff shows pitches and equivalent spellings in a half step, with fret numbers 410c, 439c, 468c, and 498c. An ellipsis (...) indicates the continuation of the sequence between the two groups of notes.

Note that all pitch information necessary for performance is contained in the tablature—the staff notation is primarily for understanding what sounds to expect.

This piece is in 41-edo. In this edo, the perfect 5th is close to harmonically pure, only very slightly sharp. Translated into notation, this means that all *standard* accidentals represent pitches derived from a spiral of these near-pure 5ths. Pitches in the direction of rising 5ths (C-G-D-A-E...) become increasingly sharper than their 12-edo equivalents, while pitches in the descending direction (C-F-B \flat -E \flat ...) become increasingly flatter. As shown in the diagram above, the result is that flats are lower in pitch than their usual enharmonic sharps.

An alteration by one step of 41-edo (half of the interval between adjacent frets) is typically notated by an arrow attached to a standard accidental. Two steps (a full fret) are typically notated by a quarter-tone accidental, as shown.

KEY SIGNATURES

Because this piece is very diatonic, key signatures are used. This gives the visual impression of consonance, more so than a proliferation of accidentals would.

Key signatures reflect a Just Intonation approach. In this piece, in major keys, the 3rd, 6th, and 7th are lowered by a single step of 41-edo ($1\backslash 41$). In minor keys, the 3rd, 6th, and 7th are *raised* by $1\backslash 41$. These alterations are shown in the key signatures.

In addition, sometimes this raised minor 7th interval is lowered by $2\backslash 41$ to approximate a natural 7th harmonic, and occasionally other overtly microtonal intervals appear; but these are always alterations, never a part of the key signature.

NONSTANDARD CONVENTIONS

Because open strings are used frequently, the open strings will often have up stems, as Bach would write for pieces such as the Prelude from the E major *Violin Partita*. The exceptions are longer passages that do not use open strings, as well as measures 118-172. In those cases, stem direction follows modern convention.

Because of the complexity and unfamiliarity of interpreting microtonal key signatures, the names of key signatures are also written in text form each time they appear.

TABLATURE

The tablature uses the fret numbers of the Kite system. String bending is shown on the tablature staff (measures 91-92). For ease of reading the numbers, all rhythmic, articulation and expressive information is shown on the standard notation staff.

HARMONIC NOTATION

Natural harmonics are shown in staff notation by an open diamond notehead representing the location on the string that is touched. When this touch point differs from the sounding pitch, the sounding pitch is included above it as a parenthesized, stemless notehead.

Natural harmonics are shown in tablature by a diamond surrounding the fret number. Because several natural harmonics fall directly in between the frets, arrows are added to clarify the necessary position. An up-arrow denotes moving closer to the bridge.

Artificial harmonics are notated with a standard notehead at the *fretted* pitch, and a diamond notehead at the *touched* point.

For a comprehensive discussion of Edition Zalzal's approach to notation, please see <https://untwelve.org/zalzal/> **notation**.

—R. L. H.

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♩ = c. 104

Tempo are freely flexible

Musical notation for the first system, measures 1-3. The piece is in F# minor (three sharps: F#, C#, G#) and 3/4 time. The first measure is marked *mf*. The guitar part uses fret numbers 0, 12, 15, and 14. The bass part uses fret numbers 0, 14, 13, 15, and 12.

Musical notation for the second system, measures 4-6. Measure 4 contains a triplet of eighth notes. Measure 5 features a diamond-shaped fretboard diagram for a barre at the 12th fret. The guitar part uses fret numbers 0, 12, 15, 13, 11, 12, 13, and 14. The bass part uses fret numbers 0, 12, 13, 15, 12, (12), (12), and 0.

Musical notation for the third system, measures 7-9. The guitar part uses fret numbers (0), 13, 15, 12, 0, (0), 14, 13, 15, 12, 15, 15, and 14. The bass part uses fret numbers (0), 12, 15, 12, 15, 12, 15, 13, and 14.

17 ♩ = 112

(A major)

Treble clef: 17: G4, A4, B4, C5, B4, A4, G4. 18: G4, A4, B4, C5, B4, A4, G4. 19: G4, A4, B4, C5, B4, A4, G4. 20: G4, A4, B4, C5, B4, A4, G4. 21: G4, A4, B4, C5, B4, A4, G4.

Bass clef: 17: 12-11, 12-11, 9-8, 0-(0), 0-(0). 18: 12-13, 13-12, 12-13, 13-12, 0-0. 19: 12-13, 13-12, 12-13, 13-12, 0-0. 20: 12-13, 13-12, 12-13, 13-12, 0-0. 21: 12-13, 13-12, 12-13, 13-12, 0-0.

22

Treble clef: 22: G4, A4, B4, C5, B4, A4, G4. 23: G4, A4, B4, C5, B4, A4, G4. 24: G4, A4, B4, C5, B4, A4, G4.

Bass clef: 22: 12-13, 10-13, 12-10, 0-10, 0-11, 12-10, 9-10. 23: 12-13, 10-13, 12-10, 0-10, 0-11, 12-10, 9-10. 24: 12-13, 10-13, 12-10, 0-10, 0-11, 12-10, 8-10.

25

Treble clef: 25: G4, A4, B4, C5, B4, A4, G4. 26: G4, A4, B4, C5, B4, A4, G4. 27: G4, A4, B4, C5, B4, A4, G4. 28: G4, A4, B4, C5, B4, A4, G4.

Bass clef: 25: 11-10, 11-8, 11-10, 11-8, 11-10, 11-8, 11-10. 26: 11-10, 11-8, 11-10, 11-8, 11-10, 11-8, 11-10. 27: 11-10, 11-8, 11-10, 11-8, 11-10, 11-8, 11-10. 28: 11-10, 11-8, 11-10, 11-8, 11-10, 11-8, 11-10.

29

Treble clef: 29: G4, A4, B4, C5, B4, A4, G4. 30: G4, A4, B4, C5, B4, A4, G4. 31: G4, A4, B4, C5, B4, A4, G4.

Bass clef: 29: 14-11, 14-11, 14-11, 14-11, 14-11, 14-11, 14-11. 30: 14-11, 14-11, 14-11, 14-11, 14-11, 14-11, 14-11. 31: 14-11, 14-11, 14-11, 14-11, 14-11, 14-11, 14-11.

32

0 0 0 0 0 0 0 0 0 0 0 0

14 14 14 11 11 10 11 10 11

0 14 14 0 12 11 12 11

35 rit.....a tempo

0 0 0 0 0 0 0 0 0 0 0 0

14 14 14 14 14 13 13 13 13 12 10 13 10

0 12 12 13 13 12 10 13 10

39

0 12 0 9 12 9 12 8 8 10 8 10 8

11 10 11 10 11 10 11 10 11 10 11 11 11

42

10 0 10 0 0 0 0 0 0 0 0 0

11 11 11 14 11 9 8 9 11 12 12 14 11 14 11

46

Musical notation for measures 46-48. Treble clef, key signature of two sharps (F# and C#). The guitar part features fret numbers 10, 11, 12, and 14 on the lower strings.

49

Musical notation for measures 49-51. Treble clef, key signature of two sharps. The guitar part includes fret numbers 11, 12, 10, and 20 (diamonds).

52

rit.....

$\text{♩} = \text{c. } 64$

(F# minor)

Musical notation for measures 52-54. Treble clef, key signature of two sharps. Includes a "rit." marking and a tempo marking of approximately 64 bpm. The guitar part features fret numbers 20, 8, and 12, with a diamond symbol at measure 52.

55

Musical notation for measures 55-57. Treble clef, key signature of two sharps. The guitar part features fret numbers 8, 12, and 20, with diamond symbols.

58

61

64

67

♩ = c. 108

Freely, as rubato or straight as desired

69

(F# major)

73

(F# minor)

77

(F# major)

81

85

(F# minor)

14 13 14 15 13 14 13 15 13 12 11 12 11 15 12 11 12 11

89

(E♭ major)

11 11 11 10 11 11 11 10 3 3 3 2 3 3 3 2 3 0

93

(F# minor)

1 1 1 0 1 2 1 1 1 0 1 0 2 1 1 1 0 1 0

97

1 0 1 2 1 0 0 1 12 11 12 9 11 8 12 11 12 9 11 0

(bend fret 5 sharper by half of a fret, or about 29c, to achieve correct intonation)

♩ = 112

More straight time

101

101 102 103 104

105

105 106 107 108

109

109 110 111 112

113

113 114 115 116

molto rit. a tempo

[*]

117

(B \flat minor) *f* *mf* H

121

125

129

(B \flat major)

* Stem direction follows standard conventions until measure 172.

133

Musical notation for measures 133-136. The top staff is a treble clef with a key signature of one sharp (F#) and a 2/4 time signature. The melody consists of eighth notes. The bottom staff is a guitar TAB for a tenor guitar (T) and bass guitar (B). The fret numbers are: 2-1-2-3-1-1, 2-1-2-3-1-0, 2-1-2-3-1-1, 2-1-2-3-1-0.

137

Musical notation for measures 137-140. The top staff is a treble clef with a key signature of one sharp (F#) and a 2/4 time signature. The melody consists of eighth notes. The bottom staff is a guitar TAB for a tenor guitar (T) and bass guitar (B). The fret numbers are: 2-1-2-3-1-1, 2-1-2-3-1-0, 2-1-2-3-1-1, 2-1-2-3-1-0.

141

Musical notation for measures 141-144. The top staff is a treble clef with a key signature of one sharp (F#) and a 2/4 time signature. The melody consists of eighth notes. The bottom staff is a guitar TAB for a tenor guitar (T) and bass guitar (B). The fret numbers are: 2-1-2-3-1-0, 1-0-0-2, 2/4 1-0-0-2, 3/4 0-0-0-2, 2/4 1-1-1-0. A key signature change to (B♭ major) is indicated in the second measure.

145

Musical notation for measures 145-148. The top staff is a treble clef with a key signature of one sharp (F#) and a 2/4 time signature. The melody consists of eighth notes. The bottom staff is a guitar TAB for a tenor guitar (T) and bass guitar (B). The fret numbers are: 2/4 1-0-0-2, 3/4 0-0-0-2, 2/4 1-0-0-2, 3/4 0-0-0-2, 2/4 1-1-1-0. Time signature changes are indicated above the staff.

149

(B \flat minor)

153

(B \flat minor)

157

(B \flat major)

161

165

Treble clef, key signature of two sharps (F# and C#). The melody consists of eighth notes. The bass line includes fret numbers: 2-1-2-3-1-1, 2-1-2-3-1-0, 2-1-2-3-1-1.

168

Broad
♩ = 92 **accel.**

Treble clef, key signature of two sharps. Measure 168 has a tempo marking "Broad" and "♩ = 92 accel.". Measure 169 has a key signature change to B \flat major. The melody includes a half note and a quarter note. The bass line includes fret numbers: 1-3-1-0, 2-1-2-3-1-0, 3-3-2-0-1-1.

172

[*]

Treble clef, key signature of two sharps. Measure 172 has a key signature change to E \flat major. Measure 173 has a key signature change to E major. The melody includes eighth notes and a quarter note. The bass line includes fret numbers: 16-16-15-0-14, 17-0-0, 11-11-10-0-9, 12-0-10-0.

176

rit......

Treble clef, key signature of two sharps. Measure 176 has a key signature change to F \flat major. The melody includes eighth notes. The bass line includes fret numbers: 13-13-12-0-11, 13-13-12-0-11, 13-13-12-0-14. The piece ends with a 3/4 time signature.

* Stem direction reflects open strings versus fretted strings through end of piece.

Fast

♩ = 152

179

(D major)

f

183

mf

187

191

195

(C# major) *p*

This system contains measures 195 through 198. The music is in C# major and piano (*p*). The melody consists of eighth-note patterns with accents. The bass line features fret numbers: 12-11-13-13, 11-13-11, 12-11-11, and 11-11-11.

199

(F# minor)

This system contains measures 199 through 202. The music is in F# minor. The melody continues with eighth-note patterns and accents. The bass line features fret numbers: 14-13-13-12-13, 14-13-13, 0-15-13, and 0-14.

203

(E♭ major) *f* (D major)

This system contains measures 203 through 206. It starts in E♭ major with a forte (*f*) dynamic and changes to D major in measure 205. The melody features eighth-note patterns with accents. The bass line features fret numbers: 16-15-17-14-17, 15-17, 14-13-15-12-15, and 13-15-14.

207

(C# major) *mf*

This system contains measures 207 through 210. The music is in C# major and mezzo-forte (*mf*). The melody consists of eighth-note patterns with accents. The bass line features fret numbers: 12-11-13-13, 12-13-11, 12-11-11, and 12-11-11.

211

(G minor) (F# minor)

214

(C# major) rit.....

218

Slower
♩ = 96

(Eb major) (F# minor) *mp*

222

(C# major) rit.

226 (gradual slowing)

p

0 9 10 0 9 10 0 9 10 0 9 10

12 12 11 12 12 11 12 12 11 12 12 11

230

12 12 5 12 12

12 8 20 20

232 $\text{♩} = 50$

(A major) *mp*

0 0 0 0 0 0 0 0 0 0 0 0

28 27 28 25 26 25 25 27 28 28 28 27

235 rit. accel.

0 25 26 25 16 15 13 10 11 10 11 12 11 11 14 11 14 12

239 **rit.** **accel.** **rit.**

mf

$\text{♩} = 84$
molto sul tasto; pluck notes at 1/2 of vibrating length

242

(E \flat major) *mp*

$\text{♩} = 70$ **rit.**
bass notes and harmonics senza sul tasto; fretted notes molto sul tasto

245

(A major) *f*

$\text{♩} = 40$

248

(F \sharp major) *mf* *p*

EDITION ZALZAL is named in honor of the medieval oud player Mansur Zalzal. His talents were legendary, and his contribution extends to music theory: The interval with a size between that of a minor and major third—an interval which we now consider “microtonal”—has long been known as the “third of Zalzal.”

This series aims to make microtonal guitar music available to the general public in clear, readable, and beautiful editions. We strive to bring to light important unpublished works of the past, as well as the vibrant and vital music of today. We celebrate the radical diversity and creativity of microtonal music. And—for maximum clarity—we use a single standard notation, adapted to the many idiosyncratic tuning systems in our catalogue.