Study

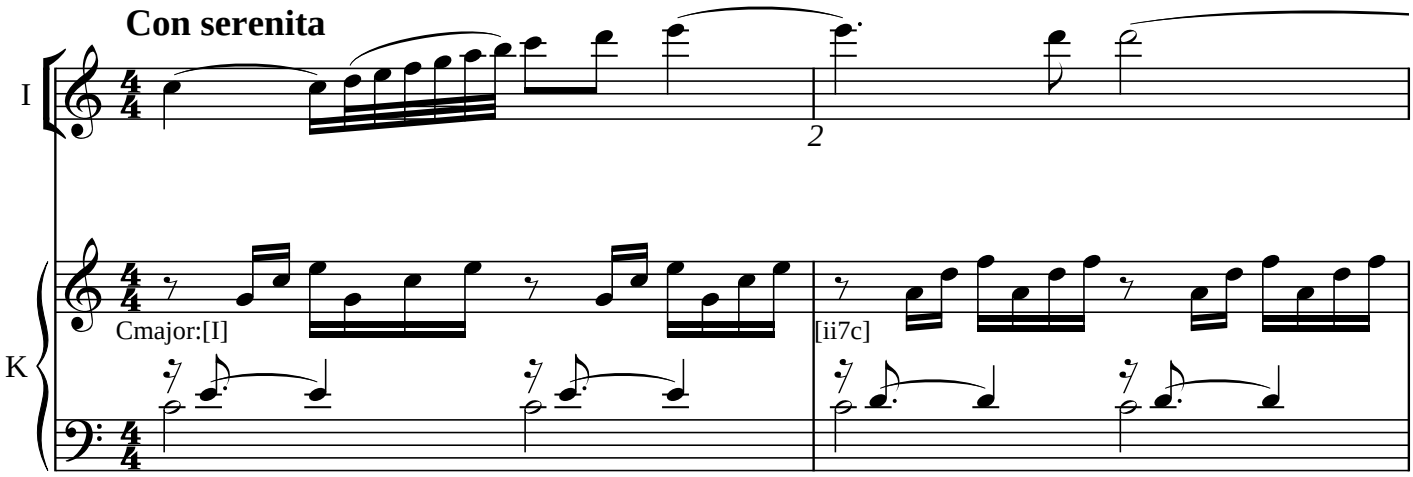
for Treble Recorder or Flute with keyboard accompaniment
based on Prelude No.1 from the Forty-eight Preludes and Fugues (1722)

Arr. Philip Perry
www.pjperry.freeuk.com/

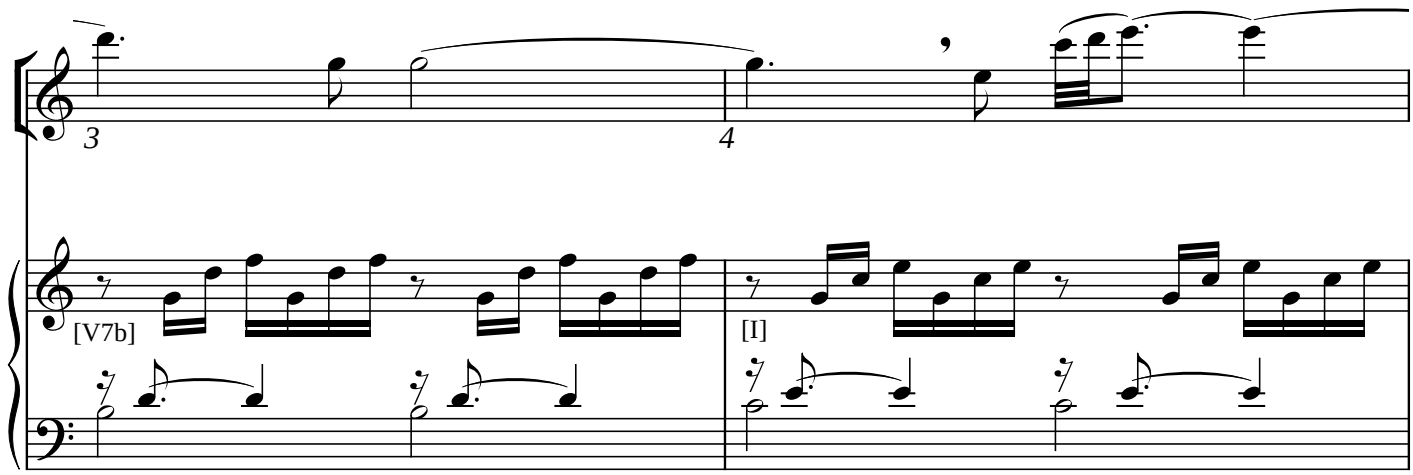
(♩=61.318...! see Note 3)

J.S.Bach (1685-1750)

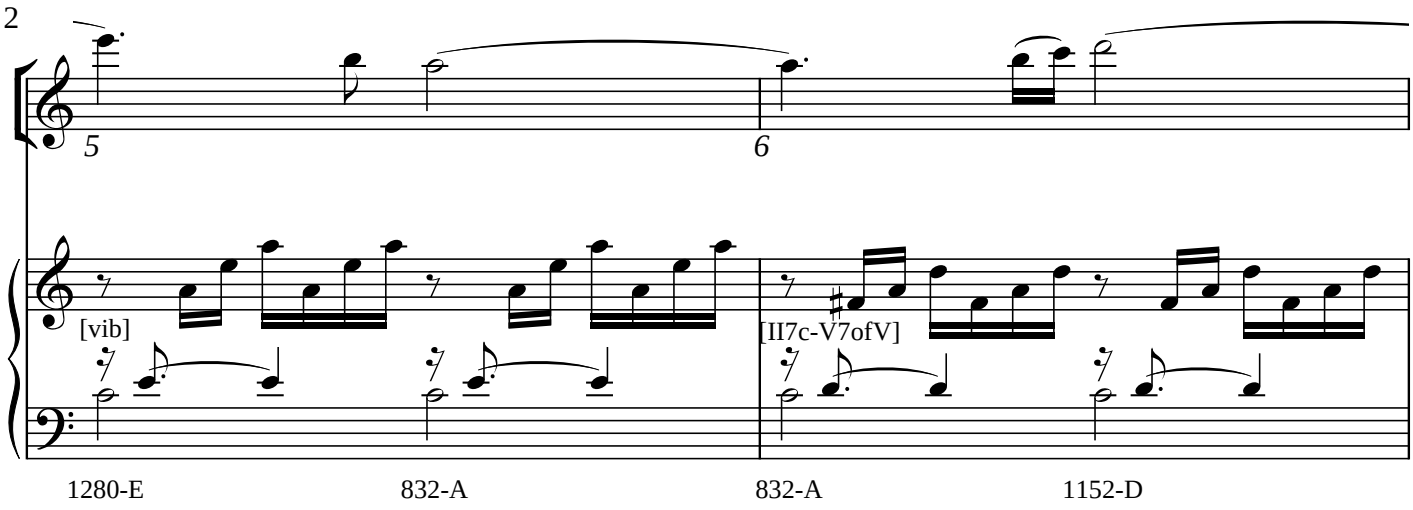
Con serenita

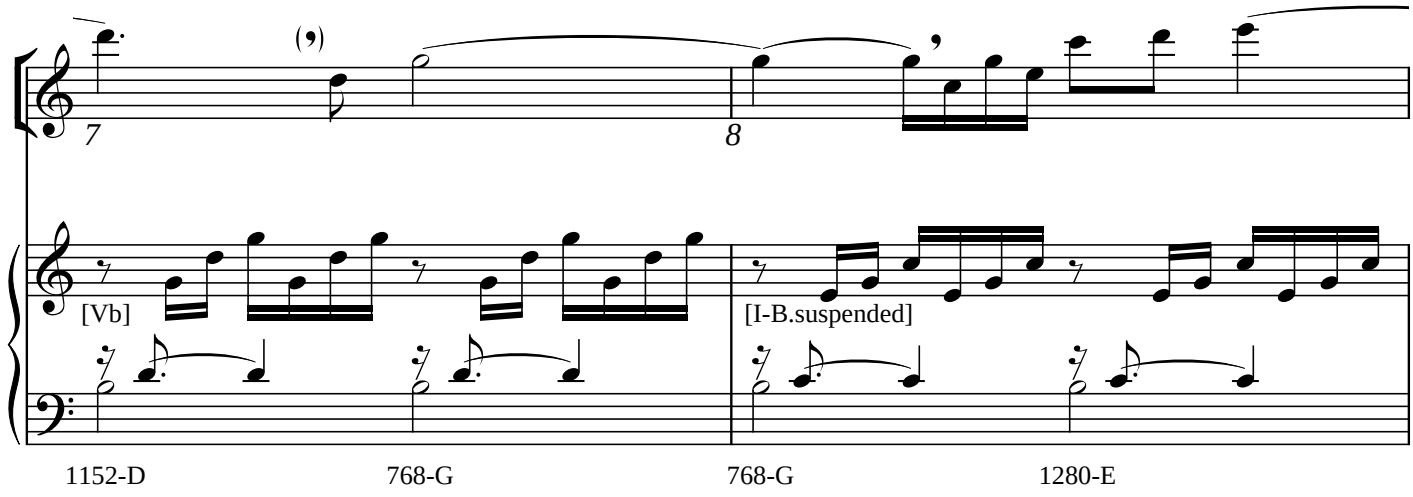


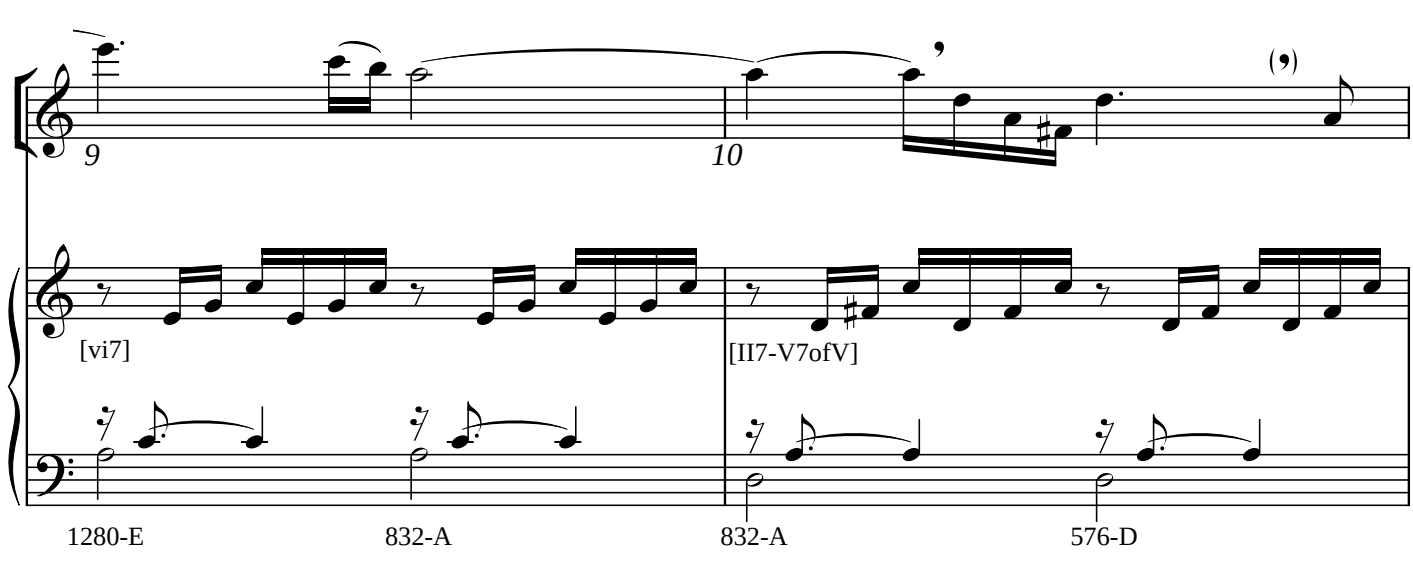
Mutable Base Numbers:		1280-E	1280-E	1152-D	
		---	---	---	
	Mutable	10	9	8	
	Digit	4	5	5	etc...
Pitch: middle C = 256 Hz		32	28	28	
C-h1 = 1hertz	Sequences:	1	1.016	1.029	

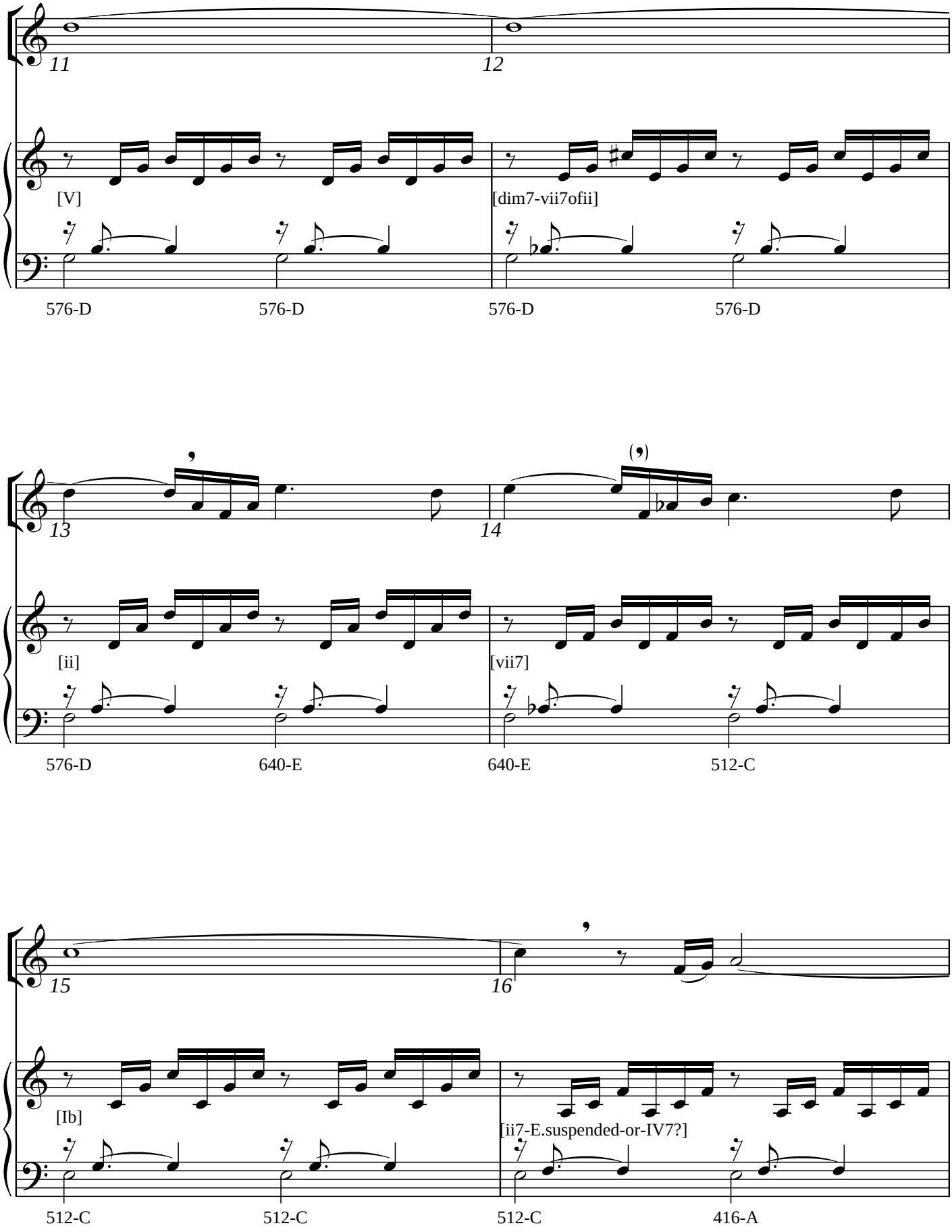


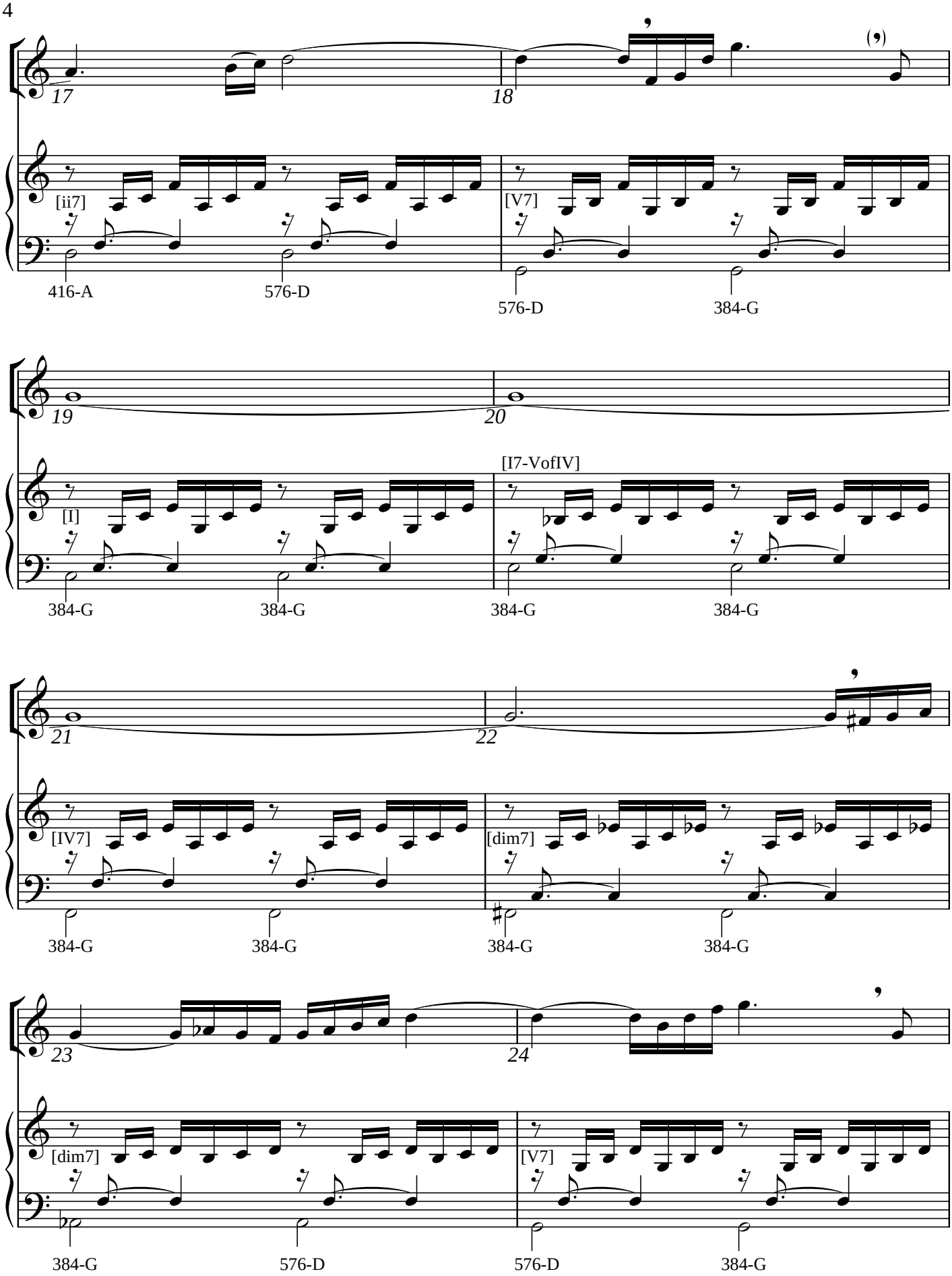
1152-D 768-G 768-G 1280-E

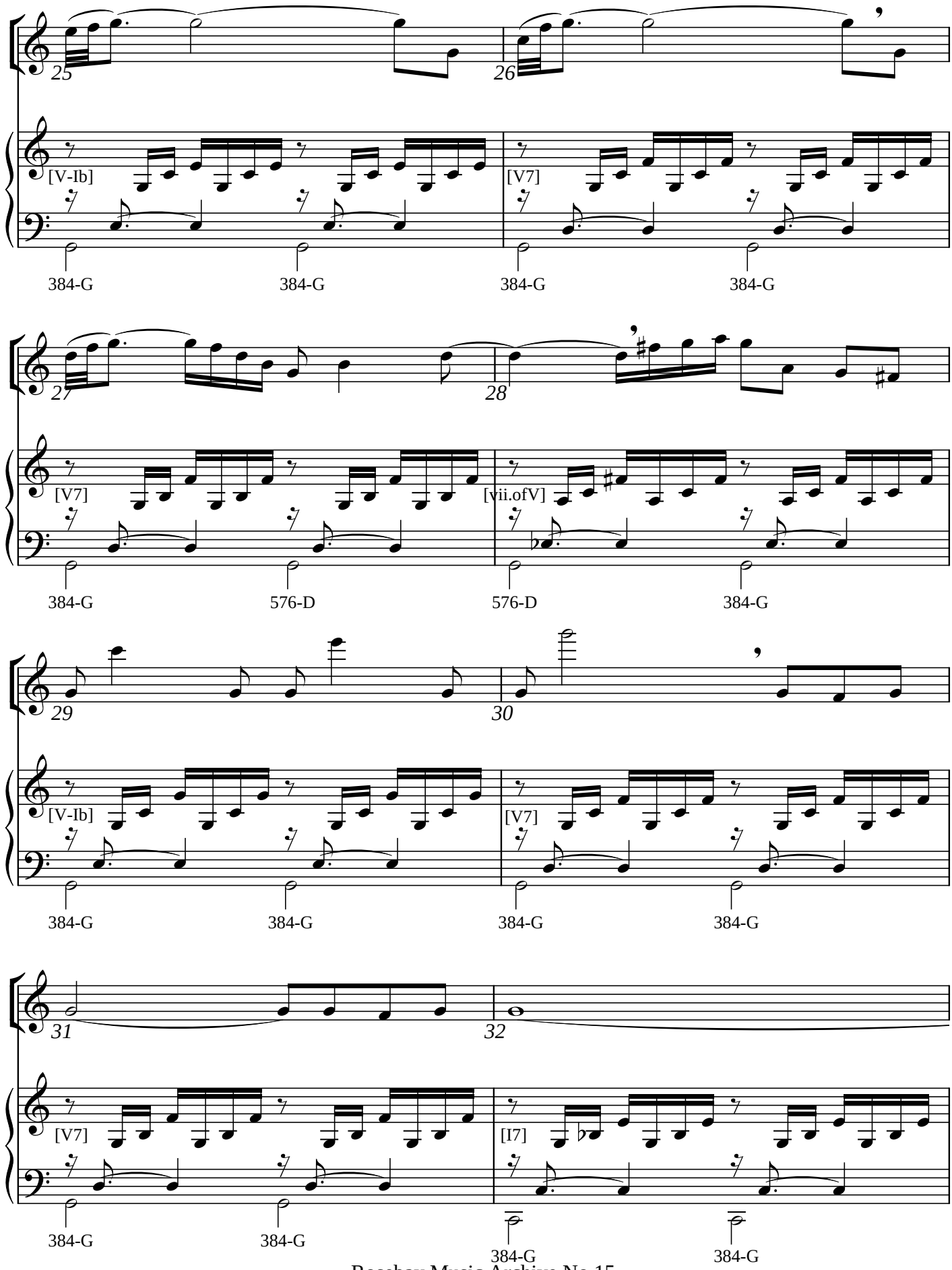

5
6
[vib]
[II7c-V7ofV]
1280-E
832-A
832-A
1152-D

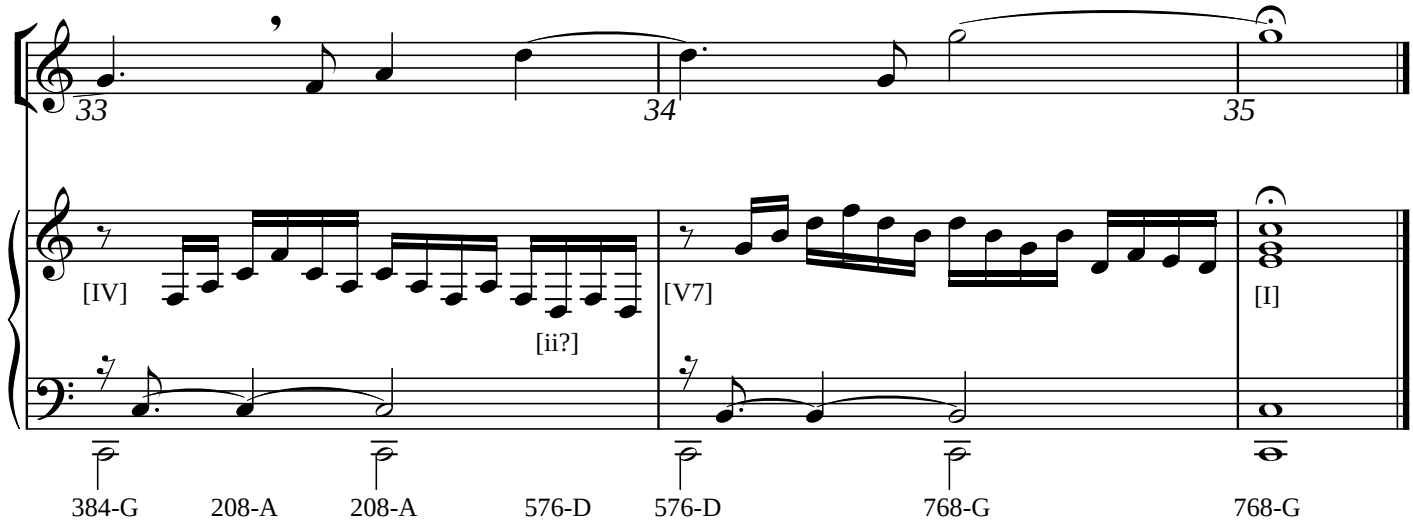

7
8
[Vb]
[I-B.suspended]
1152-D
768-G
768-G
1280-E


9
10
[vi7]
[II7-V7ofV]
1280-E
832-A
832-A
576-D


11
12
[V]
[dim7-vii7ofii]
576-D
576-D
576-D
576-D
13
14
[ii]
[vii7]
576-D
640-E
640-E
512-C
15
16
[Ib]
[ii7-E.suspended-or-IV7?]
512-C
512-C
512-C
416-A


17
18
[ii7]
[V7]
416-A
576-D
576-D
384-G
19
20
[I]
[I7-VofIV]
384-G
384-G
384-G
384-G
21
22
[IV7]
[dim7]
384-G
384-G
384-G
384-G
23
24
[dim7]
[V7]
384-G
576-D
576-D
384-G


25
26
[V-Ib]
[V7]
384-G
384-G
384-G
384-G
27
28
[V7]
[vii.ofV]
384-G
576-D
576-D
384-G
29
30
[V-Ib]
[V7]
384-G
384-G
384-G
384-G
31
32
[V7]
[I7]
384-G
384-G
384-G
384-G



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Note 1. This study is intended as an example of how the modulation algorithm might be applied to the field of harmonic analysis. The first four bars essentially illustrate the process; where ’bridges’ or conjunctions between harmonic series encapsulating each succeeding chord, allow the whole number exchanges of the modulation algorithm to be computed, and the relationships made intelligible. Though the music is written and played as chords of limited numbers of notes, the overall effects of the combination tones made within our ears and the harmonics of timbre, produce near or complete harmonic series. Out of this raw material -- mutable number digit sequences -- a thread of simple whole number computations emerge, linking groups of chords into larger coherent units (e.g. bars 1-4). The computations may either increase or decrese the level of complexity, however, the typical pattern is one of a marked increase in energy and complexity early in a phrase, followed by a gentle relaxation of stress as the systems works its way to a less extended harmonic series based on a higher fundamental frequency. However, there are no hard and fast rules: aural undertanding is complex, fexible and addaptive - though ultimately built upon a simple logic. A much fuller explanation of the mechanism of modulating oscillatory systems can be found in the articles and essays ‘Journey to the Heart of Music’; and this piece as a worked example -- chapter ten. (www.pjperry.freeuk.com/index.thm)

Note 2. The ties across barlines should be played with a metrical accent amounting to something less than completely detached tonguing.

Note 3. If played at concert pitch and MM 61.318... the basic pulse will be equal to the absolute fundamental period (C-h1) of the nested harmonic series which describe the harmony, though not essential, this tempo provides a link between the metrical and harmonic aspects of the composition.