

Maximilian Marcoll

# Canone Monodico a 2

Canone mensurale su un tema di Igor Stravinsky

for digitally controlled sawtooth wave generator, two performers

(Interlock 3)



**For Timm Roller & Thilo Ruck**

**Duration: 6'30"**

## Introduction

*Interlock 3* has been written for two performers controlling a single sawtooth wave generator. The two performers simultaneously control the frequency of the same monophonic sound throughout the entire piece.

Both performers play on a fixed range of two octaves. Their impact on the sound, however, is different: While the two octaves of the first performer change the resulting frequency in a range of slightly more than one octave, the second performer controls a range of approximately five octaves, resulting in rather odd scales.

The diminution and augmentation of the range played on by the performers corresponds to the organisation of the musical text that is being performed:

*Interlock 3* is a proportional canon. While the first performer plays the text twice, the second performer plays it only once, in half speed.

The text itself is composed of nothing else but augmentations and diminutions (in both time and pitch) along with their inversions and retrogrades, all derived from the opening theme of Stravinsky's "Le sacre du printemps".

The overall organisation of those variations is laid out in the form of one long downwards glissando, which corresponds to the waveform used to play the piece, the sawtooth wave.

*Interlock 3* is also a "table canon". Just like the sawtooth waveform, (comprised of all harmonics with their relative amplitudes being their respective inverted [sic!] index), the entire piece is symmetrical: it is its own inverted retrograde.

## Notation

This score comes with three differently notated versions of the same piece. The first, written in tenor (and soprano) clef, is the original version in which the organisation of the piece becomes most evident.

The second version is written in treble clef utilising a friendlier handling of accidentals. This version is most likely to be used for performances. Both versions are identical in respect to the result, however.

The third version is a notation of the actually sounding result of this piece. It is not intended for use in performance.

## Performance Instructions

Starting simultaneously, player one will play the text twice at the tempo indicated in the score, while player two, performing the same text in half the speed, will play the score only once.

Since deviations in volume are not subject to the composition, no dynamic indications are given in the score. The general dynamic level should stay the same throughout the piece, although a slight crescendo from approximately the middle till the end might be advisable.

All in all, the piece should be performed at very high levels.

The first note automatically triggers a quick glissando up to the highest pitch. Immediately after the end of the score, the wave generator is to be switched off.

## Technical Information

This piece is written for two performers controlling a single sawtooth wave generator. Any two digital controllers capable of transmitting 25 separate pitches each, e.g. two midi keyboards with 25 keys, can be used.

The two performers will both control the same single monophonic sound throughout the entire piece.

Should you decide to perform this piece using a digital wave generator on a computer, a Csound-Patch is already available online at [www.marcoll.de](http://www.marcoll.de), ready to use.

There are of course other possibilities (for example midi to cv conversion and analogue oscillator) and I want to encourage anyone interested to implement their own solution.

This is what you will need to know:

The default frequency, which is played when both controllers send their highest control signal (e.g. c''' on a c'-c''' midi controller), is 2093 Hz, which corresponds to c'''@440Hz.

The two controllers use different ranges:

Controller 1 uses a mapping of 1.2 octaves on 24 steps (highest pitch = no deviation, hence 24, not 25), corresponding to a single step size of 60 cents. Controller 2 uses a mapping of 5.05 octaves on 24 steps, resulting in a single step size of 252.5 cents.

If you are using midi controllers with a range from c' to c''' (midi notes 60-84), the factors to deviate from the default frequency are derived from the following simple equations:

Controller 1:  $a = (2^{1.2/24})^{<midinote> - 84}$       Controller 2:  $b = (2^{5.05/24})^{<midinote> - 84}$

The resulting frequency will then be  $f = 2093 * a * b$  [Hz]

A transition ramp of approximately 10 ms in duration is recommended for each pitch change.

The piece should begin with a 300 ms exponential glissando from 1 Hz to the default pitch of 2093 Hz. Before the first note is triggered by the performers, there should be silence.

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Maximilian Marcoll, 2018

♩ = 100-110 The scope of natural signs is limited to one single note only.

Player 2: half tempo

3

5

8

11

14

17

20

24

28

32

36

2

41

47

52

56

60

64

68

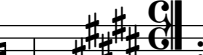
71

74

77

79

Transp. in Ab



Player 1: 2x  
Player 2: 1x

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♩ = 100–110

Player 2: half tempo

The musical score consists of 36 measures, organized into systems of five staves each. The notation is complex, featuring numerous triplets and quintuplets. The key signature is one flat (B-flat), and the time signature is 4/4. The tempo is marked as 100-110 bpm. The score is for two players, with the second player playing at half tempo. The notation includes various accidentals (sharps, flats, naturals) and articulation marks (accents, slurs).



2

41

46

50

54

58

62

66

69

72

75

77

79

Player 1: 2x

Player 2: 1x

# Canone Monodico a 2

## Result Notation

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The image displays the result notation for the piece 'Canone Monodico a 2' by Maximilian Marcoll, 2018. The notation is presented in a series of systems, each corresponding to a measure of music. Each system consists of two staves (treble and bass clef) with notes and rests. Above the notes, numerical values in cents (e.g., +12c, -8c, -18c) are provided, indicating the pitch adjustment for each note. Some of these values are underlined. The notation is dense and complex, reflecting the intricate nature of the piece. The systems are numbered 1 through 14, with the first system starting at measure 1 and the last system ending at measure 14. The notation includes various musical symbols such as notes, rests, and accidentals, and is presented in a clear, legible format.

16

8va

18

8va

20

8va

22

8va

24

8va

26

8va

28

8va

30

8va

32 <sup>-20c</sup> 8va <sup>+10c</sup> <sup>-18c -10c</sup> <sup>-5c</sup> <sup>-15c</sup> <sup>-23c</sup> <sup>-13c</sup> <sup>-23c</sup> <sup>-15c</sup> <sup>+2c</sup> <sup>-18c</sup> <sup>+2c</sup> <sup>-10c</sup> <sup>-8c</sup> <sup>+22c</sup> <sup>+15c</sup> <sup>+10c</sup> <sup>+20c</sup> <sup>+10c</sup>

34 <sup>+15c</sup> <sup>-15c</sup> <sup>+20c</sup> <sup>-20c</sup> <sup>-10c</sup> <sup>-10c</sup> <sup>+10c</sup> <sup>+25c</sup> <sup>-15c</sup> <sup>+20c</sup> <sup>-10c</sup> <sup>-20c</sup> <sup>-8c</sup>

36 <sup>+10c</sup> <sup>-20c</sup> <sup>-10c</sup> <sup>-20c</sup> <sup>+15c</sup> <sup>-5c</sup> <sup>-13c</sup> <sup>-23c</sup> <sup>+22c</sup> <sup>-18c</sup> <sup>+2c</sup> <sup>+17c</sup> <sup>+7c</sup> <sup>-13c</sup> <sup>-23c</sup> <sup>-10c</sup> <sup>+20c</sup>

38 <sup>+7c</sup> <sup>-23c</sup> <sup>+12c</sup> <sup>+7c</sup> <sup>+17c</sup> <sup>-23c</sup> <sup>+22c</sup> <sup>-18c</sup> <sup>-3c</sup> <sup>-13c</sup> <sup>+10c</sup> <sup>-3c</sup> <sup>+7c</sup> <sup>+20c</sup>

40 <sup>-20c</sup> <sup>+17c</sup> <sup>-13c</sup> <sup>+22c</sup> <sup>-18c</sup> <sup>-13c</sup> <sup>-20c</sup> <sup>-8c</sup> <sup>+7c</sup> <sup>+12c</sup> <sup>-23c</sup>

42 <sup>+22c</sup> <sup>+15c</sup> <sup>+10c</sup> <sup>+20c</sup> <sup>-20c</sup> <sup>+12c</sup> <sup>+22c</sup> <sup>-13c</sup> <sup>-3c</sup> <sup>+20c</sup> <sup>+20c</sup>

44 <sup>+5c</sup> <sup>+25c</sup> <sup>-10c</sup> <sup>+25c</sup> <sup>-5c</sup> <sup>+10c</sup> <sup>-8c</sup> <sup>-18c</sup> <sup>-20c</sup> <sup>+17c</sup> <sup>+7c</sup>

46 <sup>+10c</sup> <sup>-15c</sup> <sup>+10c</sup> <sup>+10c</sup> <sup>-8c</sup> <sup>+25c</sup> <sup>+20c</sup>

4

48

Musical notation for measures 48-49. Treble clef: -20c, +10c, -13c, +17c, -13c, +17c, -23c, -13c, -23c. Bass clef: +22c, -18c, -5c, +25c, +2c, -18c, +20c, +10c.

50

Musical notation for measures 50-51. Treble clef: -3c, +17c, -15c, -5c, -15c, +15c, +25c, -15c, -15c, -3c, +17c, -23c, -23c, +12c, -8c. Bass clef: +2c, +22c, -18c, +22c, +17c, -23c, -23c, +10c, +10c, +20c, -20c, -10c, -15c.

52

Musical notation for measures 52-53. Treble clef: -10c, +10c, -5c, +5c, -5c, +7c, +7c, -23c, -10c, -10c, +20c, -20c, +10c, +7c, +10c. Bass clef: -3c, -13c, +22c, -18c, +22c, +2c.

54

Musical notation for measures 54-55. Treble clef: -5c, +5c, -5c, +22c, -15c, +5c, -23c, -15c, -13c, -3c, -3c, -13c, -23c. Bass clef: +25c, -15c, -15c, -8c.

56

Musical notation for measures 56-57. Treble clef: +12c, +2c, -8c, -8c, +12c, -8c, +10c, +17c, -3c, +7c, +7c, +17c, +20c, -10c, -20c, -18c, +2c, +2c, -3c, -13c, +15c, -5c, -5c, -13c, -23c, -3c. Bass clef: -20c, -3c.

58

Musical notation for measures 58-59. Treble clef: -13c, +5c, +10c, +5c, +5c, -10c, +7c, +17c, +7c, -5c, +5c, -5c, +20c, +25c, -5c, -5c. Bass clef: -13c, -15c, -20c, -20c, -10c, -20c, -10c, +20c, -20c, -10c, -20c, -10c, +10c.

60

Musical notation for measures 60-61. Treble clef: -23c, -3c, +2c, +22c, -5c, +25c, +17c, -3c, -13c, +25c, +5c, -15c, -13c, -23c, +10c. Bass clef: -8c, +2c, -8c, -5c, +15c, +15c, -23c, -23c.

62

Musical notation for measures 62-63. The system consists of a grand staff with a treble clef on the upper staff and a bass clef on the lower staff. Measure 62 contains notes with accidentals and fingerings: -3c, -3c, -3c, #10c, +7c, +20c, -10c, +12c, +2c, -8c. Measure 63 contains notes with accidentals and fingerings: -13c, +12c, #22c, +12c, -8c, -15c, +5c, -5c, -15c. The bass staff for measure 62 has notes with accidentals and fingerings: -15c, -15c. The bass staff for measure 63 has notes with accidentals and fingerings: -13c, -3c.

64

Musical notation for measures 64-65. The system consists of a grand staff with a treble clef on the upper staff and a bass clef on the lower staff. Measure 64 contains notes with accidentals and fingerings: -3c, +17c, -23c, +7c, +5c, -15c, -13c, -23c, -15c. Measure 65 contains notes with accidentals and fingerings: -8c, +22c, +2c, +22c, +22c, -20c, -20c, -20c, +5c, -15c, +5c. The bass staff for measure 64 has notes with accidentals and fingerings: -13c, +25c, -15c, +25c, -15c, +25c.

66

Musical notation for measures 66-67. The system consists of a grand staff with a treble clef on the upper staff and a bass clef on the lower staff. Measure 66 contains notes with accidentals and fingerings: +25c, +25c, +17c, -5c, -5c, -5c. Measure 67 contains notes with accidentals and fingerings: +20c, -20c, +20c, -20c, -20c, +22c, +12c, -18c, -20c, -20c, +10c, -8c, +22c. The bass staff for measure 66 has notes with accidentals and fingerings: -13c, +17c, -13c, +5c, +5c, -15c, -10c, -20c. The bass staff for measure 67 has notes with accidentals and fingerings: +2c, -8c, -5c, +5c, -5c, +5c, +25c, +5c, -5c, +5c, -5c, +15c, +17c, -13c.

68

Musical notation for measures 68-69. The system consists of a grand staff with a treble clef on the upper staff and a bass clef on the lower staff. Measure 68 contains notes with accidentals and fingerings: -23c, -3c, -8c, -8c, +22c, +12c, +22c, +12c, +25c. Measure 69 contains notes with accidentals and fingerings: +2c, -8c, -5c, +5c, -5c, +5c, +25c, +5c, -5c, +5c, -5c, +15c, +17c, -13c. The bass staff for measure 68 has notes with accidentals and fingerings: -18c, -8c, -18c, -13c, -3c, -3c, +17c, +2c, +22c, -8c. The bass staff for measure 69 has notes with accidentals and fingerings: +2c, -8c, -5c, +5c, -5c, +5c, +25c, +5c, -5c, +5c, -5c, +15c, +17c, -13c.

70

Musical notation for measures 70-71. The system consists of a grand staff with a treble clef on the upper staff and a bass clef on the lower staff. Measure 70 contains notes with accidentals and fingerings: +25c, -5c, +22c, +2c, -18c, +12c, +22c, -23c, -3c, +17c, +7c, +17c, +7c, -3c, -10c, -20c, +20c, +10c. Measure 71 contains notes with accidentals and fingerings: -13c, +17c, -15c, +25c, +5c, -5c, -3c, +7c, -3c, +17c. The bass staff for measure 70 has notes with accidentals and fingerings: -13c, +17c, -15c, +25c, +5c, -5c, -3c, +7c, -3c, +17c.

72

Musical notation for measures 72-73. The system consists of a grand staff with a treble clef on the upper staff and a bass clef on the lower staff. Measure 72 contains notes with accidentals and fingerings: +10c, +20c, -5c, -15c, +25c, +15c, -15c, +5c, -5c, +5c, -5c, -8c, -18c, +12c, +12c, -8c, +12c, +2c, +12c, +7c, -13c, +7c. Measure 73 contains notes with accidentals and fingerings: -13c, -3c, +17c, +15c, -15c, +5c, +25c, -15c. The bass staff for measure 72 has notes with accidentals and fingerings: -13c, +17c, -15c, +25c, +5c, -5c, -3c, +7c, -3c, +17c.

74

Musical notation for measures 74-75. The system consists of a grand staff with a treble clef on the upper staff and a bass clef on the lower staff. Measure 74 contains notes with accidentals and fingerings: +10c, -10c, +20c, -20c, +10c, -10c, -10c, -23c, -3c, +17c, +7c, -23c, +17c, +15c, -5c, +15c, +25c, +15c, +5c, -5c, +20c, -10c, -10c. Measure 75 contains notes with accidentals and fingerings: +25c, +5c, -3c, +7c, -3c, +7c. The bass staff for measure 74 has notes with accidentals and fingerings: +25c, +5c, -3c, +7c, -3c, +7c.

6  
76

-10c -10c +20c  
+22c -8c +2c -18c -8c +12c +22c +12c +22c -20c -10c -20c -10c +10c +20c -10c +10c -10c -18c -8c -18c +12c +2c +12c +2c -8c -18c +2c -8c -5c -15c -5c +5c +15c +5c

78

-13c +7c +7c +17c +7c +17c -13c -23c -23c -20c +10c +10c -10c -10c +20c  
-5c -15c -5c +5c +15c +5c -5c -15c -5c -3c -13c -3c -13c -3c +7c +17c +7c +5c -5c -15c -5c +5c +15c +25c -15c -13c +17c

80

+2c +22c -8c +2c -8c +2c -8c +22c  
+15c -3c -13c -3c -13c

82

+2c +12c +2c +12c -18c +2c -15c  
+12c +2c +12c -18c +2c -23c +7c -3c +7c -3c +7c -23c -3c

84

+15c +25c -15c -5c +5c +15c +5c +2c -8c -18c -8c +2c +12c +2c +12c +2c +5c +15c +5c -5c -15c -5c +5c +15c +5c  
-20c +10c +10c -10c +22c +22c +12c -18c -18c -8c -18c -8c -18c +12c -8c

86

+7c -3c +17c +7c -3c -13c -3c -13c +17c +7c +17c +10c -10c +10c -20c -10c +10c +20c +20c -23c -13c -23c -13c +7c +17c -3c +7c -23c  
-15c -5c -15c -5c +5c +15c +5c -20c +10c +10c

88

+10c +10c -20c +5c -5c -15c +25c -15c +5c -5c -18c +22c -8c -18c  
+2c +22c -8c +2c -8c +2c +10c +10c +20c -20c +10c -10c -5c +25c

90

Musical notation for measure 90, featuring a grand staff with treble and bass clefs. The bass line contains various notes with accidentals and fingerings, including +15c, +25c, -5c, +15c, -15c, -8c, +12c, -18c, -8c, +12c, -8c, +2c, -3c, -13c, +7c, -13c, -13c, +17c, +7c, +5c, -5c, +5c, -5c, +15c, -15c, +25c, +15c, +5c, and -20c.

92

Musical notation for measure 92, featuring a grand staff with treble and bass clefs. The bass line contains various notes with accidentals and fingerings, including -10c, -10c, -20c, +20c, +10c, -8c, -18c, -8c, -18c, +2c, +7c, -23c, -13c, +17c, -3c, -23c, -18c, +2c, -8c, +2c, -5c, +5c, +25c, +25c, +15c, -18c, and +12c.

94

Musical notation for measure 94, featuring a grand staff with treble and bass clefs. The bass line contains various notes with accidentals and fingerings, including +22c, +12c, -18c, +5c, -5c, +5c, -5c, +25c, -5c, +25c, +5c, -5c, -3c, +7c, -3c, +7c, -23c, +7c, +17c, -3c, -23c, -13c, -23c, +7c, +7c, -18c, +2c, +2c, +22c, +2c, +12c, and +2c.

96

Musical notation for measure 96, featuring a grand staff with treble and bass clefs. The bass line contains various notes with accidentals and fingerings, including -10c, +20c, +20c, +17c, -20c, +20c, -20c, +20c, -23c, +7c, -13c, -23c, +20c, +20c, +10c, +5c, +5c, +15c, +5c, -5c, -5c, +12c, -18c, +12c, -18c, +25c, +25c, and +25c.

98

Musical notation for measure 98, featuring a grand staff with treble and bass clefs. The bass line contains various notes with accidentals and fingerings, including -5c, +15c, -5c, +20c, +20c, +20c, -23c, -23c, -3c, -23c, +7c, +15c, +25c, +15c, +25c, +15c, +25c, +12c, +22c, +12c, +15c, -5c, +22c, -18c, and +2c.

100

Musical notation for measure 100, featuring a grand staff with treble and bass clefs. The bass line contains various notes with accidentals and fingerings, including +15c, +5c, -5c, -13c, +7c, -13c, -23c, -13c, +2c, +12c, +12c, +7c, -3c, -13c, +10c, -20c, -8c, -10c, +2c, +2c, +2c, +15c, and +15c.

102

Musical notation for measure 102, featuring a grand staff with treble and bass clefs. The bass line contains various notes with accidentals and fingerings, including +22c, +22c, +7c, +7c, -10c, +22c, +12c, +15c, -15c, -15c, +5c, -3c, -5c, +25c, +12c, +2c, -18c, +25c, +5c, -23c, -3c, +2c, and +22c.



8

104

10c +20c +10c -20c +10c +20c +20c +20c

+5c +5c +25c -10c +10c +5c -5c

+5c -5c -18c -8c +10c +10c +15c -5c -8c -5c -8c +12c +12c

8vb

Detailed description: This system contains measures 104 and 105. Measure 104 has a treble clef staff with notes and accidentals, and a bass clef staff with notes and accidentals. Measure 105 continues the bass clef staff. Fingerings are indicated by numbers 1-5. An 8vb (octave below) marking is present under the bass clef staff in measure 105.

106

+2c +22c +12c +5c +5c -15c +2c +12c +2c -3c -3c +17c

+10c -20c -18c -8c -8c +2c -18c -10c +20c +7c -13c +7c +7c -3c -13c

Detailed description: This system contains measures 106 and 107. Measure 106 has a treble clef staff and a bass clef staff. Measure 107 continues the bass clef staff. Fingerings are indicated by numbers 1-5.

108

+22c +22c +2c +22c +2c +12c +15c +22c -5c +15c +25c +7c -23c +5c -5c +5c

-5c -5c +15c +25c

Detailed description: This system contains measures 108 and 109. Measure 108 has a treble clef staff and a bass clef staff. Measure 109 continues the bass clef staff. Fingerings are indicated by numbers 1-5.

110

+8c -3c -13c +17c -23c -13c -10c +20c -20c +10c +20c +20c +22c -8c -8c +5c -5c +5c +15c +5c -10c +10c

+5c

Detailed description: This system contains measures 110 and 111. Measure 110 has a treble clef staff and a bass clef staff. Measure 111 continues the bass clef staff. Fingerings are indicated by numbers 1-5.

112

+7c -13c +22c -18c +2c +15c +15c +10c +20c +15c +25c -20c -10c -10c +22c +22c -18c -23c +17c -23c

+3c -15c +15c +5c +15c -18c +2c

Detailed description: This system contains measures 112 and 113. Measure 112 has a treble clef staff and a bass clef staff. Measure 113 continues the bass clef staff. Fingerings are indicated by numbers 1-5.

114

-10c -20c +25c +5c +17c -23c

+22c +12c +22c +17c -3c -18c +12c +2c -18c +2c +12c -10c +20c -20c

8vb

Detailed description: This system contains measures 114 and 115. Measure 114 has a treble clef staff and a bass clef staff. Measure 115 continues the bass clef staff. Fingerings are indicated by numbers 1-5. An 8vb (octave below) marking is present under the bass clef staff in measure 115.

116

+12c +22c -18c -13c +7c -23c +17c -3c

-20c +25c -5c +7c -10c -10c +15c

8vb 8vb

Detailed description: This system contains measures 116 and 117. Measure 116 has a treble clef staff and a bass clef staff. Measure 117 continues the bass clef staff. Fingerings are indicated by numbers 1-5. Two 8vb (octave below) markings are present under the bass clef staff in measures 116 and 117.

118

Musical notation for measures 118-119. The system consists of a grand staff with a treble clef on the upper staff and a bass clef on the lower staff. Measure 118 contains notes with accidentals and fingerings: -13c, +7c, -8c, -18c +20c, -3c, -23c, +17c, +7c -10c, +5c, +25c +10c, +25c, -8c, -18c, -3c, -23c. Measure 119 contains notes with accidentals and fingerings: -5c, +7c, -13c. There are two instances of '8vb-' with a dashed line indicating an octave drop in the bass staff.

120

Musical notation for measures 120-121. The system consists of a grand staff with a treble clef on the upper staff and a bass clef on the lower staff. Measure 120 contains notes with accidentals and fingerings: +12c, -23c, -13c, +2c, -20c, -20c, +20c -15c, +20c, -10c, -15c, -5c. Measure 121 contains notes with accidentals and fingerings: +20c, -20c, -23c. There is one instance of '8vb-' with a dashed line indicating an octave drop in the bass staff.

122

Musical notation for measures 122-123. The system consists of a grand staff with a treble clef on the upper staff and a bass clef on the lower staff. Measure 122 contains notes with accidentals and fingerings: -13c, -18c, +22c, -13c, -8c, +7c, +20c, +12c. Measure 123 contains notes with accidentals and fingerings: +17c, -23c, +12c, -18c, +20c. There is one instance of '8vb-' with a dashed line indicating an octave drop in the bass staff.

124

Musical notation for measures 124-125. The system consists of a grand staff with a treble clef on the upper staff and a bass clef on the lower staff. Measure 124 contains notes with accidentals and fingerings: -20c, -8c, +2c, -10c, +12c, +2c, +17c, -23c. Measure 125 contains notes with accidentals and fingerings: -8c, +12c, +2c, +22c, -18c, -8c, -13c, +22c, -8c. There are two instances of '8vb-' with a dashed line indicating an octave drop in the bass staff.

126

Musical notation for measures 126-127. The system consists of a grand staff with a treble clef on the upper staff and a bass clef on the lower staff. Measure 126 contains notes with accidentals and fingerings: -20c, +10c, +22c, +12c, -8c, -18c, -3c, +17c, -23c, +22c, +12c, +5c, -15c, +20c, +10c, +20c, -10c. Measure 127 contains notes with accidentals and fingerings: +10c, +10c, +20c, +10c, +20c, -20c, +15c, -15c. There are three instances of '8vb-' with a dashed line indicating an octave drop in the bass staff.

128

Musical notation for measures 128-129. The system consists of a grand staff with a treble clef on the upper staff and a bass clef on the lower staff. Measure 128 contains notes with accidentals and fingerings: +12c, -18c, +7c, +20c, +10c, -20c, +15c, +25c, +10c, -10c. Measure 129 contains notes with accidentals and fingerings: +10c, +10c, +20c, +10c, +20c, -20c, +15c, -15c. There is one instance of '8vb-' with a dashed line indicating an octave drop in the bass staff.

130

Musical notation for measures 130-131. The system consists of a grand staff with a treble clef on the upper staff and a bass clef on the lower staff. Measure 130 contains notes with accidentals and fingerings: -3c, +7c, -10c, -20c, -10c, -15c, -23c, +7c, -18c, +10c, -3c, +17c. Measure 131 contains notes with accidentals and fingerings: +10c, +17c, -3c, -10c, +20c, +15c, +22c, +12c, +22c, +15c, +5c. There is one instance of '8vb-' with a dashed line indicating an octave drop in the bass staff.

132

Musical notation for measures 132-133. The system consists of a grand staff with a treble clef on the upper staff and a bass clef on the lower staff. Measure 132 contains notes with accidentals and fingerings: -8c, -20c, -13c, -20c, -10c, -3c, +20c, -10c, -10c. Measure 133 contains notes with accidentals and fingerings: -15c, -15c, -3c, +7c, +17c, -23c, +12c, +22c, -23c, -3c, -3c, +20c. There are two instances of '8vb-' with a dashed line indicating an octave drop in the bass staff.

10  
134

+17c  
+20c -20c +20c +10c +20c -20c +20c -15c -15c -3c +10c +10c +20c +10c +20c -10c -18c +2c -10c +20c -3c +7c -3c -23c -15c -15c -8c  
8vb

136

+2c +10c +2c +12c +20c +25c +5c -8c +12c +17c +2c +22c +10c -20c -13c -3c +7c +10c +20c +17c +10c +10c -8c -18c  
8vb

138

+22c +12c +2c +5c +5c +2c +22c +2c +5c +25c -5c +25c -18c -18c +15c +25c -20c +7c -23c +25c +25c -23c +17c +15c +25c +17c -3c -10c -10c -10c -10c -10c +10c  
8vb

140

+7c -23c -18c -18c -20c +10c +22c -18c +25c +15c +25c +5c +2c +12c +2c +5c +5c +2c +12c +22c +2c +12c +2c +12c +17c -13c -3c +5c +25c +20c +20c  
8vb

142

-15c +5c +20c -20c -8c +2c -5c +25c +5c +2c +5c -5c -8c +22c +20c +20c +22c +12c +20c -10c -10c -5c +15c -3c -23c -13c -23c +17c +15c +15c  
8vb

144

-20c +17c +17c +7c +10c +20c -23c +7c -3c +7c -13c -20c +20c +12c +2c +2c +12c +10c +20c +20c +10c +20c +20c +5c +17c +7c  
8vb

146

+22c +15c -15c -18c -8c -5c +25c +5c -10c -10c +2c -8c +2c -8c -3c +7c +12c -8c -15c +15c -13c -13c -13c -13c -20c +5c +20c +2c +22c  
8vb

148

-10c -10c -10c +10c +5c -15c +5c +7c -23c -23c +17c +25c +15c +25c +20c +20c +10c +5c -5c +5c -10c -8c +2c +2c -10c -20c -18c +2c +5c +5c +2c -15c -10c +20c +25c +5c  
8vb

150

+7c +17c +7c +5c +15c +20c +17c -13c +5c +5c -20c +20c -20c +20c +25c -5c -3c +17c +15c +25c +15c +25c +12c -8c -18c +2c -23c +17c -23c +22c +12c -18c -20c +2c -8c

8vb

152

-20c +2c -8c -8c +12c +17c -23c +17c +20c +22c -20c +12c +15c -15c -20c +10c -10c +22c -18c -13c +7c -23c -20c -23c +17c -23c -20c +20c +10c +10c -10c -8c -10c +10c +12c +17c -13c -23c -20c +25c +15c

8vb

154

+15c +25c -15c +5c +2c -8c -3c -13c -15c +25c -5c -8c +12c +10c +12c +2c -3c +25c -23c +5c +25c +15c +12c +22c +2c +5c +15c +12c -18c +2c +22c -20c -18c -15c +5c +25c -23c +25c -5c -3c +7c

8vb

156

-8c -10c +20c +22c +2c +5c -15c -13c +17c -3c -5c -8c +22c +20c +10c +12c +10c +12c +12c +10c +20c -10c -8c +12c -15c +25c -23c -3c -5c -15c +25c +5c +2c +20c -20c +20c +22c +12c +15c +5c +7c -13c +17c +20c +10c +12c +12c

8vb

158

+17c -23c +17c +10c -20c -13c -3c +17c -23c -13c -10c -13c -10c +20c +17c -13c -3c -13c -3c +2c +20c +10c +10c -10c +2c +12c -8c -13c -23c -3c -13c +25c +15c +5c +5c +2c -18c -20c +22c -18c +20c +10c +20c +10c +17c +7c +17c -23c -13c -23c -13c

8vb

160

+12c +2c +12c +22c -18c -10c -20c +20c -20c +22c +12c +22c +12c +12c +22c +22c -18c -20c +20c +22c +20c +10c +10c +17c -23c -13c -3c +7c -23c +7c -13c -23c -13c -23c -13c -13c +7c -3c -3c -23c -23c +17c +7c +17c +7c -13c

8vb

162

+12c -18c +20c -20c +22c +12c +22c +12c +2c -18c -20c -18c -20c +10c -20c +10c +10c

8vb







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