

Music for Marimba & Computer

for 5-octave marimba

by Cort Lippe

2004

Written for Pedro Carneiro

**Commissioned by the 2004 Sonorities Festival of Contemporary Music and
supported by the National Lottery through the Arts Council of Northern Ireland.**

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Performance Notes for *Music for Marimba and Computer*

A 5-octave marimba is need to perform this piece.

Introduction

The first beat should be played as simultaneous 4-note chords. The tremolo between left and right hands should start where indicated. The angled beaming of the first beat indicates a *ritardando* within a single beat. (See also measure **1** of movement 1 for further use of angled beaming.)

Accents

All accented notes should be played with great force in comparison with neighboring notes.

Accents Grace Notes

All accented grace notes should be played with great force in comparison with the notes they grace. (For example, see the passage between measures **24** and **30** in movement 2 starting in the middle of page 5.)

Nota Bene #1 (page 7, measures 61-64)

The left hand part can be played an octave higher to facilitate reach. Octave transposition is suggested in similar passages throughout the piece if needed. (If the player physically cannot make the reach.)

Mallets

A set of four mallets should be chosen which are relatively soft yarn wrapped around a hard center. The indications for mallets suggest whether the hard mallet center should be emphasized or whether the softer yarn should be emphasized.

hard “touch” 

soft “touch” 

Electronics

While the piece is in 3 movements, there are two electronic “sections”. Electronic events are indicated with a number inside a polygonal shape;



Page turns

There is ample time for page turns. Page turns should be done in the following 4 places:

1) between pages **3** and **4**

(the last system of page **3** can be copied and taped to the top of page **4**)

2) between pages **7** and **8**

3) between pages **12** and **13**

(the last system of page **12** can be copied and taped to the top of page **13**)

4) between pages **15** and **16**

(the last system of page **15** can be copied and taped to the top of page **16**)

Cort Lippe

Program Notes

“Music for Marimba and Computer” (2004) was commissioned by the 2004 Sonorities Festival of Contemporary Music and supported by the National Lottery through the Arts Council of Northern Ireland for the opening of the Sonic Arts Research Center of Belfast, and written for the percussionist Pedro Carneiro. The electronic part was created at the Hiller Computer Music Studios of the University at Buffalo, New York, using Max/Msp, which was originally developed by Miller Puckette and whose dedication to computer music made this piece possible. Technically the computer tracks parameters of the marimba, such as pitch, amplitude, spectrum, density, rests, articulation, tempi, etc., using this information to trigger specific electronic events and continuously control all the computer sound output by directly controlling digital synthesis and compositional algorithms in real-time. (Thus, the performer is offered the possibility to “interact” with the computer, not simply triggering, but also continuously shaping all of the computer output.) Some of the sounds in the electronic part come directly from the composed marimba part, so that certain aspects of the musical and sound material for the instrumental and electronic parts are one and the same. Stored sound material, other than the marimba, is also manipulated via a variety of sampling techniques. The digital synthesis algorithms focus on frequency domain processing, including interpolation of spectral snapshots, cross-synthesis, noise reduction/enhancement, re-ordering of spectral components, and various non-standard spectral techniques. (Thanks to Erik Oña and Henrik Frisk for sharing my obsession with the spectral domain.) Standard time-based signal processing such as harmonizing, delay, frequency shifting, phasing, reverberation, spatialization, etc., are also employed. The instrument/machine relationship moves constantly on a continuum between the poles of an “extended” solo and a duo. Musically, the computer part is, at times, not separate from the marimba part, but serves rather to “amplify” the marimba in many “dimensions” and directions; while at the other extreme of the continuum, the computer part has its own independent “voice”.

Duration: 14 minutes.

(INTRODUCTION)

as fast as possible → rall. poco a poco to tremolo →

SECTION I

1

1

$\approx 10''$

$\approx 10''$

$\approx 10''$

(2 hands)

(make change seem poco a poco)

(rall. tremolo poco a poco)

① $\text{♩} = 120$
(MOVEMENT 1)

A musical score for piano. The top staff is treble clef, 6/8 time, with a fermata over the first measure. The bottom staff is bass clef, 9/8 time. The key signature changes from C major (no sharps or flats) to G major (#) at the end of the first section. The melody consists of eighth-note pairs with grace notes. Dynamic markings include **p**, **pp**, **(ff)**, **(pp-p)**, and **(f)**.

③ (accented notes should be $ff-f$)
while unaccented are $pp-p$

6

Musical score for the right hand, page 10, measures 11-12. The score consists of two staves. The top staff uses a treble clef and the bottom staff uses a bass clef. The key signature is A major (no sharps or flats). Measure 11 starts with a grace note followed by a sixteenth-note pattern. Measure 12 begins with a sixteenth note, followed by a grace note, then a sixteenth-note pattern. The score includes dynamic markings: $(pp-p)$, > , 5 , 6 , $>$, 6 , 5 , and $> >$.

9

(pp-p) (ff-f) simile →

12

3

15

5

18

21

3

24

3

(27)

(p-mp)

(30)

(33)

(36)

(39)

(42)

(mp-mf)

(45)

(mp-mf) cres. poco a poco ...

(48)

sempre cres. poco a poco ...

poco accel. → (50) più mosso

ff

rall. poco a poco ...

(52)

decreas. poco a poco ...

semper rall. poco a poco ...

(55)

mp semper decreas. poco a poco ... pp [page turn]

(MOVEMENT 2)

1 a tempo

pp (start playing when electronics have faded considerably) p

8

4

14

19

5 6 (simile mallets ...)

23

7 8 (sempre grace notes)

26

28

(30)  *mf* (repeat chords) *mp* 3 (play e^b and e^h) ↓

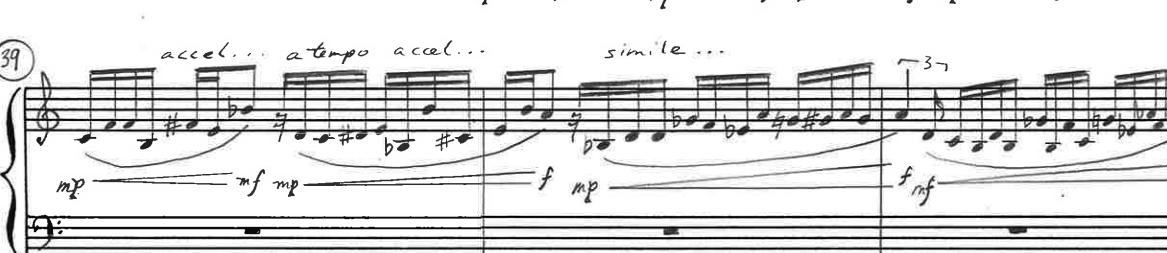


(33) *mp* 3 *mf* 3 3 *f*

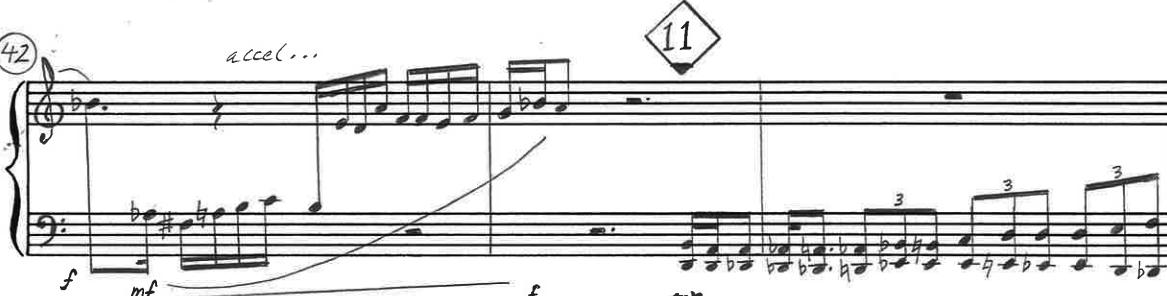
(36)  *mp* *mf* *mp* *mf* *mp* *mf* *mp* *mf*



(39) *accel...* *a tempo* *accel...* *simile...* *3*
mp *mf* *mp* *f* *mp* *f* *mf*



(42) *accel...*  *f* *mf* *f* *mp* 3 3 3



(45) *3* *accel. poco a poco...* *3* *3* *3* *cres. poco a poco...* *mf*



48

sempre accel. poco a poco...

mf ————— f

12 a tempo

p

51

p ————— mp ————— p ————— mf ————— mp ————— f ————— mf

54

(stop trem.) 8va ---

mf ————— f p ————— mp p —————

13

57 8va ---

mf mp cres. poco a poco... 5 5

60 8va ---

sempr. cres... 5 f NB1

accel. poco a poco...

14

mf cres. poco a poco... f

63 sempre accel...

3 3 3 3

15 (poco)

[page turn]

f decres. poco a poco... mp

poco più lento, poco ad lib.

(65) 8va ---

pp

(70) 8va --- rall. poco... 16 a tempo accel. poco a poco...

pp

mf cres. poco a poco...

sempre accel. 5 sempre cres... ff f

(76)

f

(79) 18 accel. poco a poco... 19 a tempo

mf cres. poco a poco...

f mp

accel. poco a poco... a tempo rall. poco a poco... 20 subito a tempo accel. poco...

f mf p f 3 3 3

poco accel... poco rit... accel. poco a poco ...

(86)

f

sempre accel... (21) a tempo

(89) (21) a tempo

f *mf*

3 5 5

(22) 8va - - -

(91)

mp

3 3 3 3 3

deces. poco a poco ...

8va - - -

(94) poco rall. molto rall...

sempr decres... *pp*

(96) 8va - - -

(23) a tempo

pp

f

rall. poco a poco ... (100) (24) a tempo accel. poco a poco ... 6

f

mf

cres. poco a poco ...

103 *sempre accel.*
 25 *a tempo marcato*
 103 *ff*
sempre cres.

26 *accel. poco a poco* 105
mf *cres. poco a poco...*
 27 *a tempo*

107 *rall. poco*
 28 *a tempo, accel. poco a poco...*
 29 *a tempo*

110 *rall. poco*
 30 *pp*
 31 *più lento - rall. poco...*
 32 *8va --- a tempo*

113 *8va ---*
f
 33 *mf* *5* *f* *5* *mf*

116 *mf* *f* *mf* *f* *f* *mf*
 34 *marcato* *8va ---*
ff

This image shows a handwritten musical score for piano, consisting of six staves of music. The score includes various dynamics such as ff, f, mf, pp, and 8va. It features performance instructions like 'sempre accel.', 'a tempo marcato', 'accel. poco a poco', 'rall. poco', 'più lento - rall. poco...', and 'sempre cres.'. Measure numbers 103, 25, 26, 27, 107, 28, 29, 110, 30, 31, 32, 113, 33, 116, and 34 are marked throughout the score. The music is written in common time with various key signatures.

8va ---

(120)

ff

3 3 3

8va ---

(123) tall. poco a poco ...

(35) a tempo

mf

ff

3 3 3

8va ---

(126)

mf

3 3 3

(128) 8va ---

mf

mp

8va ---

(131)

p

3

8va ---

(134)

p

136 8va — sempre rall. poco a poco...

140 37 rall. un poco a tempo rall. poco a tempo

143 38 rall. poco più lento rall. poco a tempo - rall. poco più lento

146 a tempo rall. più lento rall. 39 a tempo - rall. più lento

150 più lento a tempo simile... simile...

154

[page turn]

(159)

p — *mp* — *p*

(164)

p — *mp* — *p*

p < *mp* > *p*

(MOVEMENT 3)

1

$\text{♩} \approx 132$

p

7

40

mp

12

ff *p*

ff

16

41/0 COMPUTER SECTION 2

ff

pp

ff

p

(21) 1

p
ff p (ff) simile ...
3

(24)

p
ff simile ...
3

(27) 2

p ff simile ...
3

(30)

mp
ff mp simile ...
3

(33) 3

mp ff mp simile ...
3

(36) 4

mp
ff simile ...
3

39

5

mp

(ff) *mf simile...*

(ff)

42

6

mf

(ff) *poco a poco cresc...*

(ff) *sempre cresc...*

45

7

8

f

(ff)

(ff)

(ff)

48

f

cres. poco a poco...

sempre cres...

(fff)

51

9

10

≈ 108

ff

(fff)

(fff) ff

fff

[page turn]

54

≈ 108

rit. poco

≈ 132

mf

57  ≈ 132
mp *accel. poco...*
 12  ≈ 108 (*simile mallet...*)
mf →

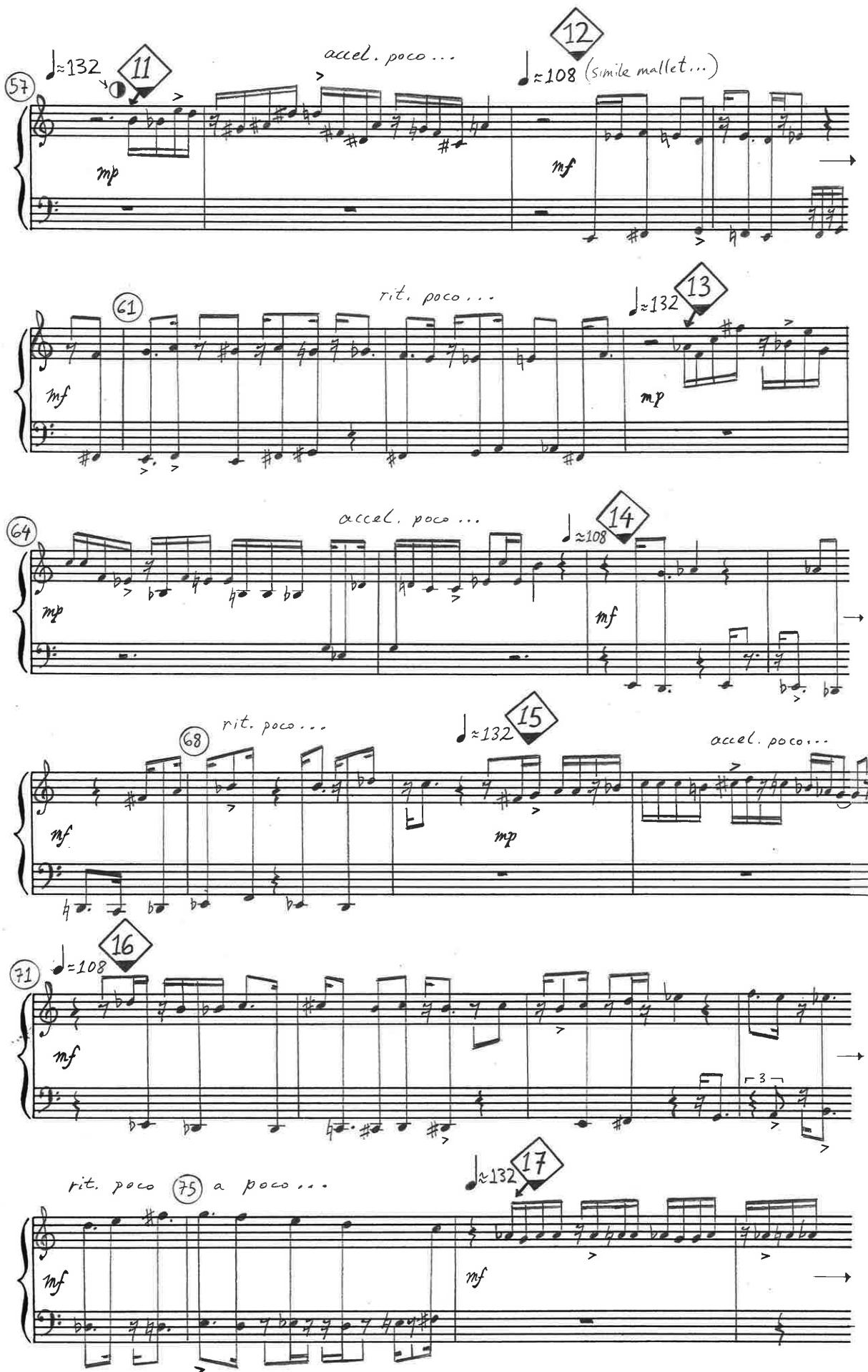
61  ≈ 132
mf *rit. poco...*
mp

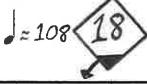
64  ≈ 108
mp *accel. poco...*
mf →

68  ≈ 132
nf *rit. poco...*
mp *accel. poco...*

71  ≈ 108
mf
mf →

rit. poco  ≈ 132 a poco...
mf →



accel. poco... (78) 
mf (mf)

rit. poco... (81)  accel. poco... (85) 

mf

rit. poco... (85)  accel. poco... (90) 

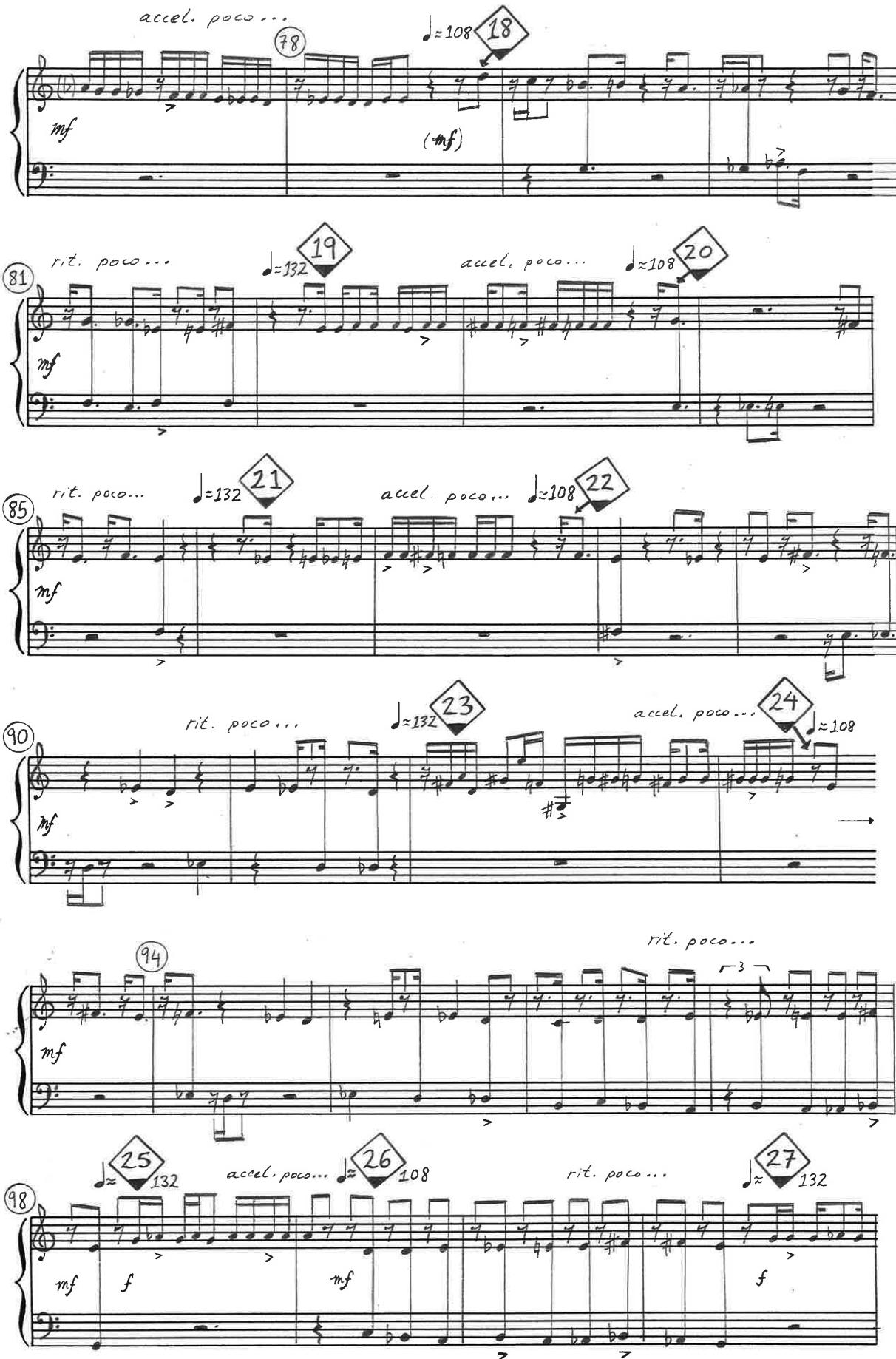
mf

rit. poco... (90)  accel. poco... (94) 

mf

rit. poco... (94)  accel. poco... (98)  rit. poco... (98) 

mf f mf f



102 accel. poco ...  
f *mf*
 rit. poco ... 
f →

108
 accel. poco ... 
f *mf*
 rit. poco ... 
f

111 accel. 
f *mf*
 rit. poco ...

116 
mf
f
 108 
mf

rit. poco ... 
f 

121
mf
 rit. poco ...

127 
mf

135 rit. poco...

37 ≈ 132

38 ≈ 108

140

mf

145

mf

150 rit. poco a poco...

senza decrescendo!

39

Buffalo
2004
(for Phoebe)

(fade electronics after ≈ 40 seconds)