

Eetu Lehtonen

Wormhole

*for recorders, viola da gamba,
harpsichord, tape & live electronics*

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2017

Written for the *Ugly Pug* trio

Live electronics:

Single channel with effects in the following order:

-two parallel pitch shifters:

1st: one octave up

2nd: approx. 40 cents down, lower in volume

-reverb: quite bright, hall-like, approx. 6s decay

-granulator: grain time approx. 40 ms, moderate pitch and grain time modulation

Vocoder with the ability to switch carrier and modulator inputs.

Feel free to experiment to get a pleasing result.

Live electronic effects send levels are expressed in numbers 0-4.

Tape samples:

Tape samples are to be played at the times specified in the score.

The samples are provided by the composer upon request.

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All effects sends off at first

♩=60 *molto accel.* → ♩=140 ♩=100

Paetzold
Subgreatbass
Recorder

Bass Viol

Harpsichord

3 *tongue pizz.* *sung note* 2 (moderate effects send)

Ptzld.

B. Viol

7

a low multi-
phonic ad lib.

key click

○ (effects send off)

click keys in the same
dynamic as the notes
are played

Ptzld.

f

mp

3

5

B. Viol

pizz.

mp

2 (moderate effects send)

Hpsd.

mf

release
arpeggiando

*

10

constantly evolving overtones by
moving hand over the labium ad lib.

Ptzld.

f *mp*

no deliberate
key clicks

2 (moderate
effects send)

arco
sul pont.

Make a single back-and-forth-motion
along the strings with the bow to
produce various harmonics

○ (effects send off)

B. Viol

pp *f*

with fingernails on the
strings on the other side
of the bridge

Hpsd.

mf l.v. as long as possible

5

mf

gliss.

13

Ptzld. *mf*

B. Viol *mf* *p* *fp*

Hpsd. *mp*

ord. - breathy tone - ord. → flatt. >

high-pitched squeak using the labium

15 (flatt.) ♩=130

Ptzld.

B. Viol *fp*

Hpsd.

18 $\text{♩} = 95$ sung notes

Ptzld. mf fff

B. Viol. ord. mf fff scratching tone

Hpsd. l.v.

21 $\text{♩} = 100$

Ptzld. ord.

B. Viol. ord.

Hpsd. f

Turn on vocoding:
-harpichord as carrier
-recorder as modulator

24 increase effects send (0 ————— 2)

Hpsd.

whistling accent
with the labium momentary dips
in pitch

25

Ptzld.

B. Viol

Hpsd.

fp

sul pont.

ord.

s.p.

26

Ptzld.

B. Viol

Hpsd.

sung note

momentarily rising pitch

ord.

5

left-hand pizz.

(arco)

○ (effects send off)

28

Ptzld.

B. Viol

click keys on accents

mf

f

pp

overblown
whistling sound

(click keys
on accents)

30

Ptzld.

Hpsd.

Musical score for measures 30-31. The Ptzld. part (bass clef) features a melodic line with accents and a whistling sound effect. The Hpsd. part (grand staff) provides harmonic support with chords and moving lines. The key signature has two sharps (F# and C#).

31

Ptzld.

B. Viol

Hpsd.

Musical score for measures 31-32. The Ptzld. part continues the melodic line. The B. Viol. part (bass clef) enters with a triplet and a forte (*f*) dynamic. The Hpsd. part (grand staff) continues the harmonic accompaniment.

32

Ptzld.

B. Viol

Hpsd.

Musical score for measures 32-33. The Ptzld. part continues with a melodic line. The B. Viol. part (bass clef) features a triplet and a whistling sound effect, with a note marked 'increase effects send'. The Hpsd. part (grand staff) continues the harmonic accompaniment. The piece concludes with a double bar line.

34

increase effects send 7

(O ————— 2)

Ptzld.

B. Viol

Hpsd.

mf *f*

O (effects send off)

37

pronounce pitchlessly in rhythm:
/takatukutakatukutaka/

Ptzld.

B. Viol

Hpsd.

Tape

2 (moderate effects send)

pizz.

mp

2 (moderate effects send)

p

play sample #1

tape at approx. 0:14

40

with the labium

Ptzld.

B. Viol

mf *mp* *mf*

sung note

arco

arco

arco

pizz.

mp

gliss.

$\text{♩} = 120$
click keys excessively

44

loud overblown whistle

mf *f* keys normally

ord. *gliss.*

arco *f* 3

Hpsd. *f*

loud key clicks again

46

flatt. /khi/ /khi/ /tu/

left hand pizz.

Hpsd.

48 $\bullet = 105$

Ptzld. sung note 3 (quite heavy effects send) loudening key clicks

p ∇ *ff*

B. Viol. arco left hand pizz. 5 l.h.pizz. 7 arco l.h.pizz. 5

f slam the body of the instrument arco slam again slam slam

Hpsd. 3 (quite heavy effects send)

51

Ptzld. loud key click and overblown whistle

3 (quite heavy effects send)


B. Viol. arco *f* 3 3

Hpsd. strummed slam on the strings with fingernails *fff* gliss. on the strings, approximate range *fff* *fff*


Tape play tape sample #2

rit.

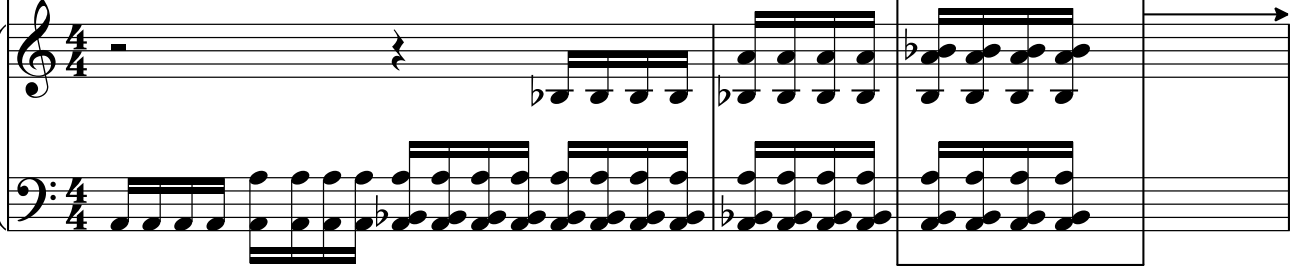
repeat until the tape has progressed to approx. 0:13

Ptzld. 

(3 ————— 4)
increase effects send to a high level

B. Viol 

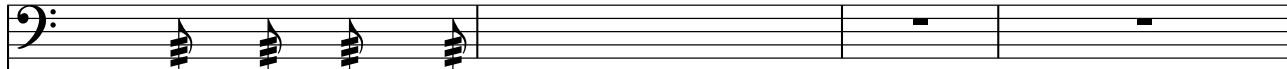
(3 ————— 4)
increase effects send to a high level

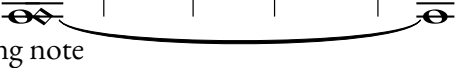
Hpsd. 

(3 ————— 4)
increase effects send to a high level

Change vocoder settings to:
-harpichord as carrier
-viol as modulator

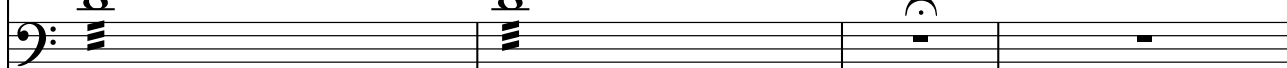
Wait for the tape to progress to approx. 0:54

55 sporadic flatt. → breathy tone 

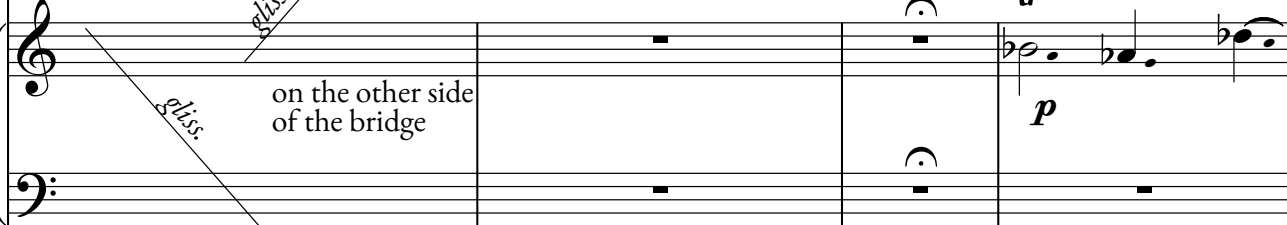
sung note 

3 (quite heavy effects send)

move left hand up and down the strings to produce various harmonics ad lib.

B. Viol 

2 (moderate effects send)

Hpsd. 

gliss. on the other side of the bridge

tr *p*

on the whole range of the strings with fingernails

3 (quite heavy effects send)

59

B. Viol

Hpsd.

(tr)

mp

62

Ptzld.

B. Viol

Hpsd.

key click approx. pitch

f /tuketuku.../ /takataka.../

pizz.

mp

63

Ptzld.

B. Viol

Hpsd.

p 5 mf

7

(2 4)

increase effects send to a high level

66 $\circ \rightarrow$ ord.

Ptzld.

B. Viol

Hpsd.

arco $>$ sul pont.

$< f$ p f

70 multi-
phonic \rightarrow ord. multi-
phonic \rightarrow ord.

Ptzld.

f f pp

73

Ptzld.

B. Viol

Hpsd.

Tape

p 3 mf 3 p 3

melodramatic with plenty of vibrato

Play sample #3

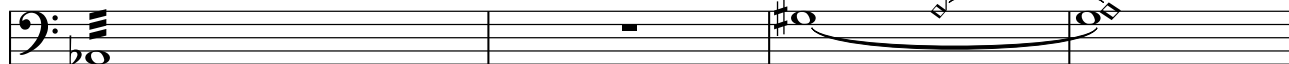
4 (high level effects send)

sung note

76

Turn off vocoding

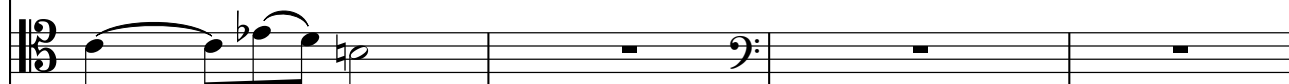
Ptzld.



Staff for Ptzld. (Pizzicato) in bass clef. It contains a long note with a slur and a diamond-shaped articulation mark.

mp

B. Viol

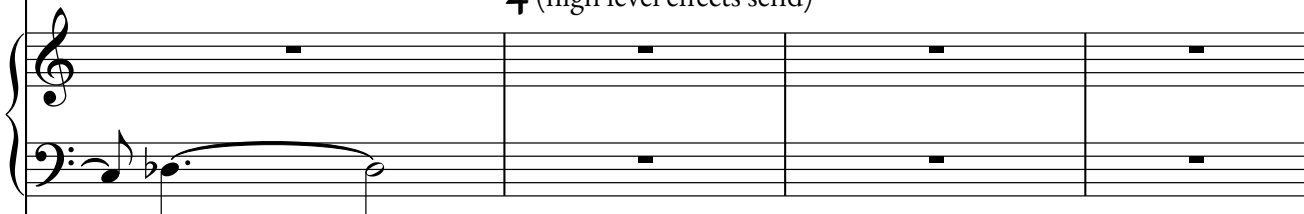


Staff for B. Viol (Bass Violin) in bass clef. It features a triplet of eighth notes followed by a slur.

3

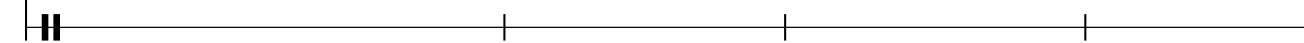
4 (high level effects send)

Hpsd.



Staff for Hpsd. (Harp) in grand staff. It contains a long note with a slur.

Tape



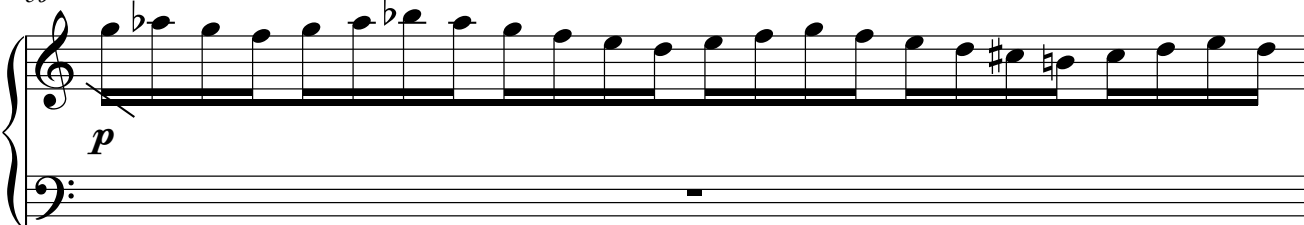
Staff for Tape, showing a double bar line.

rubato

mute the strings

80

Hpsd.



Staff for Hpsd. (Harp) in grand staff. It features a melodic line with a slur and a dynamic marking of *p*.

p

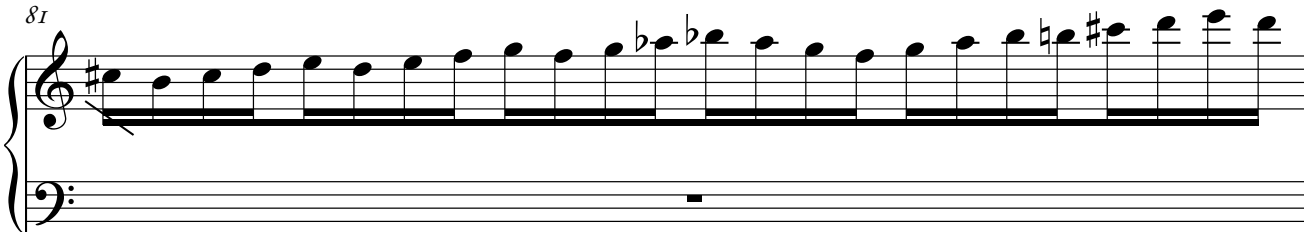
Tape



Staff for Tape, showing a double bar line.

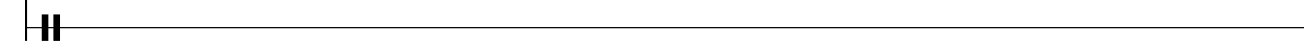
81

Hpsd.



Staff for Hpsd. (Harp) in grand staff. It features a melodic line with a slur.

Tape



Staff for Tape, showing a double bar line.

a tempo

14

82

a wide and full
multiphonic ad lib.

Ptzld.

B. Viol

Hpsd.

Tape

approx. 0:28

86

B. Viol

Tape

93

Ptzld.

B. Viol

Hpsd.

Tape

approx. 1:03

Musical score for measures 82-85. The score includes parts for Ptzld., B. Viol, and Hpsd. The Ptzld. part has a fermata over the first measure and a note in the second measure. The B. Viol part has a fermata over the first measure and notes in the second and third measures. The Hpsd. part has a complex rhythmic pattern in the first measure and a fermata over the second measure. The Tape part has a fermata over the first measure and a note in the second measure. Dynamics include *f*, *mp*, and *mf*. Performance instructions include *poco rubato*.

Musical score for measures 86-89. The B. Viol part has a complex rhythmic pattern. The Tape part has a fermata over the first measure and a note in the second measure.

Musical score for measures 93-96. The Ptzld., B. Viol, and Hpsd. parts have fermatas over the first measure. The Tape part has a long, curved line with three dots, indicating a sustained sound.

poco rit.

94

Hpsd.

Tape

95

Ptzld.

Tape

sung note

mf

101

Ptzld.

B. Viol

mf

3

Improvise using the given scale.
 Use rapidly undulating stepwise
 motion somewhat in the range
 indicated by the arrows.

Hpsd.

Tape

Mute the strings constantly

Make gestures similar to the graph with the labium

105

Ptzld.

B. Viol

Hpsd.

Tape

mp Barely pressing the string, move up and down on the high D string somewhat following the graph

mp sul pont. *gliss.*

Same kind of undulating but overall rising motion, now on the strings on the other side of the bridge

109

Ptzld.

B. Viol

Hpsd.

Tape

Wait for the tape to finish

air hiss

change to tenor recorder

mp play into the harpsichord

gliss.

on the highest point on the fingerboard

slide beyond the fingerboard towards the bridge

2 (moderate effects send)

$\text{♩} = 80$

○ (effects send off)

○ (effects send off)

T. Rec. ¹¹³

T. Rec. ¹¹⁷

B. Viol.

sempre molto flautando

pp

T. Rec. ¹²¹

B. Viol.

Hpsd.

Tape

rall.

p

pp

p

Wait for the tape to finish

Play sample #4