

stars from the earth
stars from the stars

for amplified flute, clarinet, violin, cello,
and percussion with electronics

Julio Zúñiga (2019)

In the fall of 2016, several U.S. diplomats working for the American embassy in Havana fell victim to what was initially described as a sonic weapon supposedly devised by the Cuban government. In part due to lack of evidence and the seemingly complete absence of communication between U.S. and Cuban scientists investigating the case, the explanation that circulated in the news media for several months was that cicadas on the island were so loud that they made the U.S. officials ill.

In 1978, Mercedes Sosa recorded María Elena Walsh's song "Como la cigarra," which became a popular protest song against the Latin American authoritarian regimes of the second half of the 20th century. "Singing to the sun like the cicada /after a year underground, / like a survivor / returning from war," goes the chorus. In fact, most periodic cicadas spend 17 years underground as nymphs before emerging to reproduce and die.

At the beginning of the 20th century, Jakob von Uexküll discovered that a tick completely deprived of nourishment could survive in an inert state for as long as 18 years.

After that time, when provided blood, the animal awoke to feed and died.

INSTRUMENTATION AND SETUP

piccolo, bass flute

1x MIDI cue pedal

violin

1x metal+rubber mute

cello

1x metal+rubber mute

E♭ clarinet, contrabass cl.

1x MIDI cue pedal

EXH Bass Micro Synthesizer

EXH Canyon – Delay and Looper

percussion

2x snare drums

1x 29" timp

1x computer, phone, or any device with an 1/8" headphone jack

2x vibration speakers (1st perf.: Dayton Audio DAEX25 Exciters)

7x condenser mics (1st perf. list below; use similar mics subsequently)

5x Neumann KM185: 1x on picc/bfl, 1x on vn, 1x on E♭ cl, 2x on perc

1x AKG414 on vc

1x DPA 4088 on cbcl

1x small mixer

1x reamper

1x DI box

5.1 speaker arrangement (1x sub, 1x center speaker, quad system)

GENERAL INDICATIONS AND PEDALS

This is a **transposing** score. In addition to the customary transposition applied to the contrabass clarinet, the Bass Micro Synth, when on, will transpose the resulting pitch yet one more octave down.

Small arrows on accidentals indicate subdivisions smaller than a quarter tone.

Spatialization for each instrument at any given moment is indicated using these symbols: 

This has been automated in Max MSP and is activated by MIDI pedal cues. It appears in the score mostly for reference.

Dynamics are to be interpreted very literally throughout. *cresc.* and *decresc.* should not be applied to note onsets and offsets, respectively. Rather, the impression of crude sonic blocks is desired. (Think of **NOTE ON**, **NOTE OFF**.)

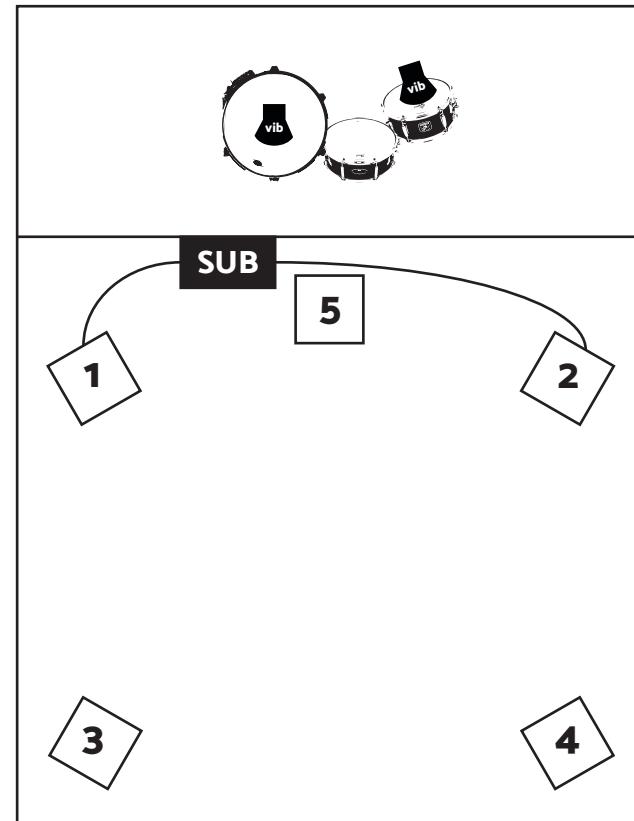
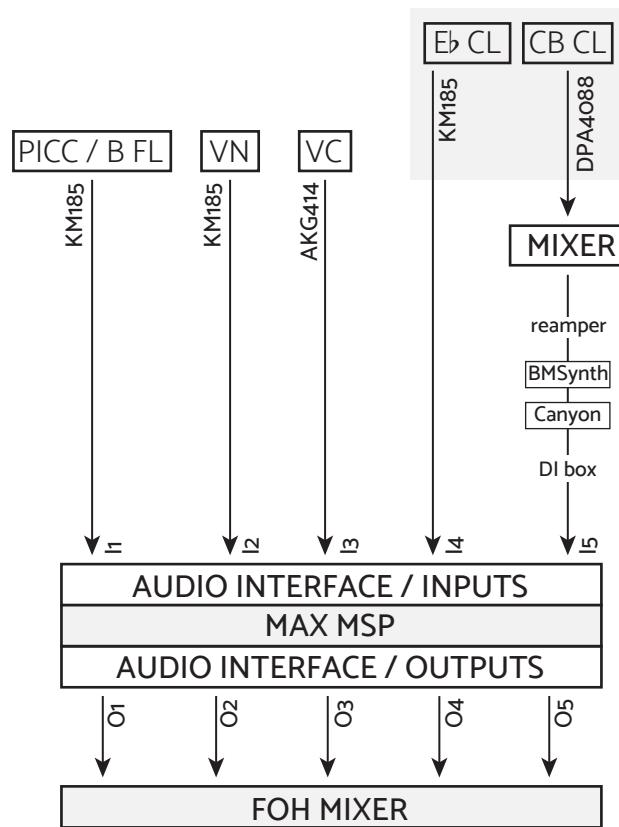
FLUTE

MIDI pedal cues are indicated with large, boxed numbers. When these appear right below the flute staff—as opposed to the clarinet staff—the flutist is asked to activate the corresponding electronic cue.

The bottom hole of the piccolo must be prepared using very finely sliced aluminum foil prior to the performance. The flutist is asked to remove this preparation and in m. 33 and to put it back on during the 6-min. section in m. 92.

ROUTING DIAGRAM

Flutes, violin, cello, and clarinets must not be on stage but in a separate room, invisible to the audience. Their live signals are fed into the hall using the routing scheme below. When possible, the clarinetist should sit a little farther away from the other three performers to keep its signal very clean; it is important, however, that there is visual contact between the four performers throughout.



the five outputs from FOH are sent to their corresponding speaker numbers; sub receives channels 1 and 2 as buses

stars from the earth

stars from the stars

for Madison Greenstone and
the [Switch~ Ensemble]

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1 2
3 4

♩ = 44

prepared

Picc

3/4

mp

1

22

B FL 33"

VN

VC

CB CL

decresc. to niente over 33"

p

3

OCTAVE PEDAL **ON**
(setting 1)

32

(C, V, F)

10"

fl: → remove picc preparation

OCTAVE PEDAL **OFF**

CB CL

4

SNES

5

20"

1 2 +SUB

62Hz

+64Hz

CBCL (Clarinet) score with three staves:

- Staff 1 (Measures 34-35):** Key signature of $\text{F}^{\#}$, 4/4 time. Dynamics: mp , p , mp . Performance instructions: embouchure gliss., measured vib. Articulations: [a] → [i], Vooooo (full tone), ooooooo. Measure 35 ends with a fermata.
- Staff 2 (Measures 40-41):** Key signature of $\text{F}^{\#}$, 3/4 time. Dynamics: mp , p , mp . Performance instruction: (everything simile). Articulations: 3.1, 4.8, 3.1, 4.8.
- Staff 3 (Measures 46-47):** Key signature of $\text{F}^{\#}$, 4/4 time. Dynamics: mp , p , mp . Articulations: 3.1, 4.8, 3.1, 4.8.

52

CB CL

mp

p



58

CB CL

mp

p

x4



86

CB CL

(no pitch! but retain exact same gesture)

mp

p

7

1 2
3 4

pre-recorded Eb cl

sounding

TAPE

mf

8"

57"

PICC

91

pp

8

VC

pp

cl: → 8th pedal ON (setting 2)

TAPE

mids

PICC: Measures 8-9. Dynamics: *pp*. Measure 9: Bass flute and prepare picc again.

VC: Measure 9: Dynamics: *pp*.

cl: → 8th pedal ON (setting 2)

TAPE: Mids.

92



recording of sunrise, 4:30-6 AM on Sunday, August 4, 2019, 9°10'03.0"N 83°43'19.8"W

BFL

VN

VC

CBCL

93

1 = 88

bridge

fingerboard

bridge

fingerboard

CANYON SHIMMER **ON**

slowly bring FX LVL up by about 20%

10

98

B FL

VN

VC

CB CL

f *mp* *p* *>pp* *p* *ppp* *ppp*

mp *p* *pp* *ppp* *ppp sempre*

mf *p* *ppp* *almost imperceptible*

f

11

... always as close to l.h. as possible

vn

103

no cresc.

8va

5

5

5

5

5

5

5

2

$\text{♩} = 74$

108

prepared PICC

VC

TAPE

8

12

2

4

“ ... cantando al sol... ”

==

113

prepared PICC

VC

TAPE

8

13

mp

14

mf

remove picc preparation

prepare 2nd string

119

PICC 8va

VN "pp" always

15

VN 15ma

pp constantly adjust to match picc's dyn. level

TAPE grains

(sempre 8va) ...

(sempre 15ma) ...

5

127

PICC

VN

ppp almost imperceptible

5

TAPE

135

PICC

VN

TAPE

16

Musical score for PICC and VN at measure 151. The PICC part consists of two staves of sixteenth-note patterns with grace notes. The VN part consists of two staves of eighth-note patterns with grace notes. The score is in common time, with a key signature of one sharp. Measure 151 starts with a dynamic of $\frac{8}{8}$.

Musical score for PICC and VLN. The PICC part (top) starts with a sixteenth-note pattern (A, B, C, D) followed by a rest, then continues with a sixteenth-note pattern (E, F, G, A) and a sixteenth-note pattern (B, C, D, E). The VLN part (bottom) starts with a sixteenth-note pattern (A, B, C, D) followed by a sixteenth-note pattern (E, F, G, A) and a sixteenth-note pattern (B, C, D, E). Measure numbers 3, 5, and 3 are indicated above the PICC staff.

17

TAPE

Musical score for PICC and VN parts, measures 167-170. The PICC part (top) starts with a eighth-note pair, followed by a sixteenth-note pair, a eighth-note, a sixteenth-note, and a eighth-note. The VN part (bottom) starts with a eighth-note pair, followed by a sixteenth-note pair, a eighth-note, a sixteenth-note, and a eighth-note. Measure 167 ends with a fermata over the eighth-note. Measure 168 begins with a sixteenth-note pair, followed by a eighth-note, a sixteenth-note, and a eighth-note. Measure 169 begins with a sixteenth-note pair, followed by a eighth-note, a sixteenth-note, and a eighth-note. Measure 170 begins with a sixteenth-note pair, followed by a eighth-note, a sixteenth-note, and a eighth-note. Measure 170 ends with a fermata over the eighth-note.

TAPE

$\text{♩} = 88$

182

PICC 4 (8) . . .

VN 4 \sharp . . .

VC 4 (II (rattling on prepared 2nd string)) 4 (w/o losing fundamental)

EbCL 4 (both pedals **OFF**) 18 (mf)

SINES 1 2 +SUB 41.2Hz **19** (90" machine)

digital reverb on picc and vn + vol level suddenly comes down 9-12dB (triggered by cl) → reverb wet signal increases while dry signal decreases to nothing over the next 18 seconds

no rattling: cover 2nd string if necessary

gradually emphasize upper pitch only

187 (8) . . .

PICC

p poss.

hold pitch for 11"

VN

p poss.

hold pitch for 11"

rearticulate but do not overemphasize

rearticulate but do not overemphasize

levels for picc and vn go down significantly but not completely here; audio file triggered by cl cuts them off definitively at m. 190

bass fl

VC

15^{ma}

pp

approach mic as much as possible

21

contra 8^{ve} pedal (setting 2)

30"

TAPE

machine

20

sweep

SINES

43.8Hz

191 (♩ = 88)

B FL

22

VN

metal+rubber mute on

fp

metal+rubber mute on

VC

ff

prepare 2nd string

move slightly away from microphone

23

TAPE

highs

OCTAVE PEDAL ON

9"

poco a poco decrescendo

B FL

arco ord. 8va

p

pp

PPP

stop bow on string

VN

mp +

delicately add bow

stop bow on string

w/mute

V/C

arco ord.

(l.v.)

mp +

press for C4 softly w/l.h. then delicately add bow

CB CL

ppp

24

25

1'

VN

$\text{♩} = 74$

196 8va very slow bow very close to l.h. gradually detach bow from 1st string and remain only on 2nd

[rearticulate every 8 beats]

VC

$\text{♩} = 74$ very slow bow very close to l.h. gradually detach bow from 2nd string and remain only on 3rd

[rearticulate every 8 beats]

TAPE

1 2 +SUB
sol: 24.5Hz

(25)

PERC

r.h.: chain
l.h.: brush on snare 1
vib. speaker on snare 2 . . .

mayo - octubre de 2019
San José, C.R. - Cambridge, MA