
ball peen hammer

for flute and computer

James Paul Sain

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performance notes

Flute Soloist – perform the work as noted with given timed silences. As the computer part is different each time there is no preconceived synchronicity between the flute part and computer part.

Computer Performer – The given notations in the computer part are merely one example of what might happen during this work. The soloist should feel free to improvise utilizing the Max/MSP interface and game controllers.

Software – contact the composer for the most recent version of the patcher and abstractions required to perform this composition.

Hardware – in addition to a computer running Max/MSP, to perform this work the following items are required: 4-channel audio interface, flute microphone and cabling, midi interface, USB hub (4 port), Logitech Dual Action USB game controller, Logitech Attack 3 USB joystick controller, ART X-11 foot pedal, and quadraphonic playback system with summed mono monitor for flute soloist. See diagram on inside back cover.

program notes

ball peen hammer - a tool meant to coax raw metal into desired shapes approximating a musical instrument. The musical instrument then can be used to beat the hapless listener into musical submission by its metallurgical induced force. The flute, often thought as a gentile and civilized instrument of historic reason, is utilized in this work as a sonic weapon. Bleeding may be a result...or perhaps liberation. Be very cautious – listen with due care (and do not operate heavy machinery while under the influence).

Thanks to Ron Parks for his spectral accumulation and evaporation algorithm!

composer

James Paul Sain (b. 1959) is Professor of Music at the University of Florida where he teaches electroacoustic and acoustic music composition, theory, and technology. He founded and directed the internationally acclaimed Florida Electroacoustic Music Festival for 17 years. His compositional oeuvre spans all major acoustic ensembles, instrumental and vocal soloists, and embraces electroacoustic music. His works have been featured at major national and international societal events. He has presented his music in concert and given lectures in Asia, Europe, South America and North America. Dr. Sain is currently SCI Executive Committee chair and an American Composers Alliance board member. His music is available in print from Brazinmusikanta and American Composers Editions and on CD on the Capstone, Electronic Music Foundation, Innova, University of Lanús, Mark Masters, Albany and NACUSA labels.

*Most current and machine-readable forms of the above prose can be found at – <http://jamespaulsain.com/> or via email – jsain@ufl.edu
To obtain the needed Max/MSP patchers and abstractions to perform this composition contact the composer at the above email address
To obtain Max/MSP contact cycling74.com and Junxion at www.steim.org
duration: 7'57"*

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AGGRESSIVE (♩ = c. 60)

Flute

Computer

Flute

Comp

0:04

0:08

0:13

0:17

0:20

0:25

0:29

0:31

0:35

GRAN ON
Flute D Flutter 1

GRAN ON
Hammer 2

GRAN ON
Manufacture 3

ALL GRAN OFF

LIVE SAMPLE 1

PLAYBACK
Live Sample 1

SPEC FILT ON

GRAN ON
Flute D Flutter
TRANPOSE 1

...like a hammer hitting cold steel

8va

8va

8va

8va

8va

4"

3"

4"

3

smooth

5:4

mp

mf

n

p

fff

f

ffff

sfz

sub. ffff

wandering

5:4

7:4

6

f

fff

5"

mp

mf

f

fff

fl.

5:4

5"

harsh **moving forward**

Flute (Fl) staff: "AH" *mp* → *f* *mf* *f* *fp* → *ff* *gr^b* *gr* *gr^b*

Compressor (Comp) timeline: 0:41, 0:49, 0:52, 0:55, 0:58

Control boxes: SPEC EVAP ON, LIVE SAMPLE 2

AGGRESSIVE **rebounding**

Flute (Fl) staff: *sub.p* *3"* *flt.* *sfz* *mp* *p* *pp* *f* *ff* *fff* *gr^{va}*

Compressor (Comp) timeline: 1:01, 1:04, 1:07, 1:09, 1:12, 1:15

Control boxes: GRAN ON Manufacture TRANSPOSE 3, PLAYBACK Live Sample 1, GRAN OFF Flute D Flutter TRANSPOSE OFF 1, PLAYBACK Live Sample 2, GRAN ON Opening 4

singing **lazily**

Flute (Fl) staff: *4"* *3* *flt.* *mp* "AH" *p* *ord. 3* *cresc.* *3* *3*

Compressor (Comp) timeline: 1:19, 1:23, 1:27, 1:32, 1:37

Control boxes: GRAN ON Hammer 2, LIVE SAMPLE 3

(hammer on steel)

dr *slow* *fast* spit tongue

f *mf* *fff*

finger slide

1:40 1:43 1:51 1:54 1:57 2:01

Comp

SPEC FILT ON

LIVE SAMPLE 1

rebounding

6 7:4

sub.ppp *fff* *mf* *p*

2:03 2:07 2:10 2:15

Comp

GRAN OFF Manufacture 3

GRAN OFF Opening 4

5" spit tongue 6"

pp *rmfz* *n* *f*

2:19 2:23 2:29 2:33 2:36

Comp

GRAN OFF Hammer 2

PLAYBACK Live Sample 3

LIVE SAMPLE 4

IMPROV Live Sample 4

Flute (Fl) staff: spit tongue, *f*, *mp*, *f*, *rfz*, *f*, forward

Compressor (Comp) staff: 2:42, 2:45, 2:49, 2:54

GRAN OFF
Flute D Flutter 1

Flute (Fl) staff: *ff*, growl, *ffff*, *p*, *mf*, *f*, bouncing metallic object

Compressor (Comp) staff: 2:59, 3:03, 3:07, 3:10, 3:13, 3:17

GRAN ON
Manufature 3

GRAN ON
Hammer 2

Flute (Fl) staff: lip bend ± 1/2 step at end, breathing, *mf*, *p*

Compressor (Comp) staff: 3:21, 3:25, 3:29, 2:33, 3:37, 3:43

LIVE SAMPLE 4

IMPROV
Live Samples 1 2 3 4

Flute (Fl) staff: **singing** (3:47-3:53), **lazily** (3:56-3:59). Dynamics: *mp*, *mf*, *mp*, *mf*, *p*, *mf*. Includes triplet and sextuplet markings.

Comping (Comp) staff: Time markers 3:47, 3:50, 3:53, 3:56, 3:59. Includes **LIVE SAMPLE 2**.

Flute (Fl) staff: **rubato** (4:03-4:06), **singing** (4:16-4:20). Dynamics: *f*, *mp*. Includes *tr^b* and *fit.* markings.

Comping (Comp) staff: Time markers 4:03, 4:06, 4:10, 4:14, 4:16, 4:20. Includes **GRAN ON Flute D Flutter 1** and **PLAYBACK Live Sample 3**. Note: "sing glissando shape (up then down)" with a 2" duration.

Flute (Fl) staff: **lazily** (4:25-4:32), **cresc.** (4:34-4:37), **f** (4:39). Dynamics: *mf*, *p*, *mf*, *cresc.*, *f*. Includes "AH" marking and triplet markings.

Comping (Comp) staff: Time markers 4:25, 4:28, 4:32, 4:34, 4:37, 4:39. Includes **SAMPLES TO SPEC FILT** and **LIVE SAMPLE 3**.

sain • ball peen hammer

Fl

spit tongue ord. spit tongue ord. fast slow spit tongue ord.

sub. *ff* *mp* sub. *ff* *mp* *ff*

4:43 4:47 4:50 4:54 4:58 5:01

Comp

GRAN ON Opening 4 ALL TRANSPOSE ON

Fl

cresc. *fff* *f* *mf* *f* 5:4

5:06 5:10 5:15 5:19 5:22

Comp

SPEC FILT ON

Fl

fl. 5" wandering (as if ... accel.)

5:25 5:30 5:33 5:38

Comp

IMPROV Live Samples ALL GRAN OFF

Detailed description of the musical score: The score is divided into three systems. The first system (4:43-5:01) features a Flute line with 'spit tongue' and 'ord.' markings, and a Compressor line with dynamic markings *sub. ff*, *mp*, and *ff*. A 'GRAN ON Opening 4' box is positioned between the systems. The second system (5:06-5:22) continues the Flute line with 'cresc.', 'fl.', and '5:4' markings, and the Compressor line with *fff*, *f*, *mf*, and *f*. A 'SPEC FILT ON' box is located between the systems. The third system (5:25-5:38) shows the Flute line with 'fl.', '5"', 'wandering', and '(as if ... accel.)' markings, and the Compressor line with *ff*, *mf*, and '5:4', '6', '7' markings. A box for 'IMPROV Live Samples' and 'ALL GRAN OFF' is at the bottom.

Fl

f *ff* *fff* *mf*

5:41 5:45 5:49 5:53 5:57 6:01

Comp

hard strikes rebounding

Fl

ff *mf* *ff*

6:03 6:07 6:11 6:15 6:18 6:22

Comp

metal bending pounding

finger slide

PLAYBACK 1
Live Sample

Fl

sub. p *mf* *sub. p* *mf*

6:24 6:28 6:32 6:36 6:39

Comp

bouncing

Flute (Fl) score with dynamic markings and performance instructions:

- 6:43** *f* spit tongue
- 6:47** *ff*
- 6:51** *fff* *8va* 3"
- 6:56** *fff* *8va* 4"
- 6:58** *fff* 5:4
- 7:01** finger slide
- 7:03** *sub.ppp* 6
- 7:08** *sfz* 3"
- 7:11** *mf* 4"
- 7:16** *f* *ff*
- 7:20** *ff*
- 7:24** *fff* *8va*
- 7:29** *fffz* *8va*
- 7:33** *mf* *f* *mf* *fff* *8va*
- 7:39** *mp* *n* 8"
- 7:43** *mp* *n*
- 7:48** *n*
- 7:50** *n* SPEC EVAP ON
- 7:58** IMPROV Live Samples

Comped (Comp) events:

- 6:43** GRAN ON Flute D Flutter TRANSPOSE 1
- 6:51** GRAN ON Manufacture 3
- 6:56** GRAN ON Manufacture 3
- 6:58** TRANSPOSE Manufacture 3
- 7:03** GRAN ON Hammer 2
- 7:08** PLAYBACK Live Sample 4
- 7:11** PLAYBACK Live Sample 2
- 7:16** TRANSPOSE Hammer 2
- 7:33** GRAN ON Opening 4
- 7:43** TRANSPOSE Opening 4
- 7:50** IMPROV Live Samples
- 7:58** BEGIN TO TURN OFF ALL GRAN

set-up diagram for "ball peen hammer"

