

Imprints

*for snare drum
and computer*

(2008)

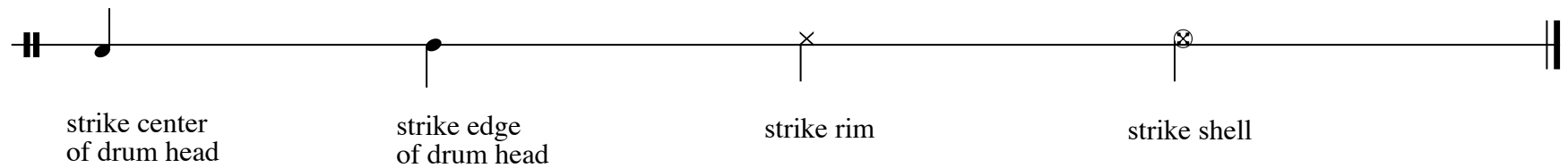
Program Note

Imprints for snare drum and computer explores the snare drum's diverse sounds by shifting between contrasting playing techniques and a variety of attack placements. The computer emphasizes these shifting timbres by accentuating and mutating the tonal characteristics of the drum by feeding the snare drum's sound into a bank of dynamic bandpass filters, whose outputs are then fed into a bank of delays. The filters and delays are controlled algorithmically; driven by pseudo-random number generators along with parameters mapped to the snare drum's amplitude. The computer part also includes real-time granular synthesis of source samples of the snare drum. *Imprints* is dedicated to percussionist Julie Licata.

Instrument Note

Imprints must be performed on a snare drum that has a metal shell and a bright, "ping-y" sound. The piece features playing on the rim and the shell of the drum and these effects are able to acoustically project more clearly with a metal shell. I have used two different types of snare drums that are both preferable for the piece. My favorite choice is the Brazilian caixa drum, used traditionally for samba, with a recommended diameter of 12" and a depth of 15-19 cm. Another model of snare drum that was used effectively was a small diameter, shallow, metal snare drum with tambourine metal jingles attached along its rim.

Percussion Map



Symbols:

The following symbols describe the manner of playing on the snare drum:

- denotes a sustained scrape w/ brush

rim shots denoted with "R.S."

= scrape

= dead stroke

Beaters:

The following beaters are required for performance:

Brushes
Multi-mallets
Wooden drum sticks

Technical Note

Imprints software has been tested on a Ubuntu 7.04 operating system with the Pure Data-extended version (0.39.3) of Miller Puckette's Pure Data compiled by Hans Christoph Steiner. *Imprints* has also been tested and performed on an Apple OS 10.4.11 system running Pd-extended (0.39.3). X11 must be installed on the Mac OS along with Pd-extended for the program to function correctly. A computer with at least 1200 MHz processor speed and 512 MB of RAM is required.

Imprints software exists in the folder called "Imprints_2008_01_17.3." The file that runs the piece is called "Imprints_Driver." All of the included Pure Data (.pd) files must remain in the folder with one another for the software to run correctly.

Imprints uses a mono input signal to the computer and has a stereo output to the sound system. The microphone's signal is routed to the first input of the computer's sound card. The program's audio output is sent to the first two outputs of the computer's audio card.

The microphone should be pointed towards the head of the drum, slightly off-axis, and spaced about 3-4 feet of distance away from the drum. This provides a light sense of ambience and is also a practical consideration because the percussionist will be striking various parts of the drum including the rim and the shell with drum beaters. At too close a distance, he or she might accidentally strike the microphone.

The audio system's input and output levels are viewable as VU meters in the top level patcher, "Imprints_Driver." Input level can be double-checked visually by viewing the VU meters before starting the piece. Audio will not be output until the first cue is initiated. A test audio pulse patcher is also provided called "pd pulse" that can be turned on to test the computer's output without the need of a microphone input. The shifting parameters of the filters, delays, and sample granulation are also displayed visually on the top level, parent patch.

The first cue should be triggered when the percussionist begins playing. Clicking on the space bar triggers each of the cues sequentially. Each cue number should be triggered at its correlating number box as shown in the score. The technical assistant can also switch between cues in a nonlinear manner for rehearsal purposes or in case there is an accidental trigger of the wrong cue number. This is accomplished by setting the cue number in the number box running into the set \$1 message located above the patcher "pd section_controls" and followed by a space bar to trigger the set cue. The final cue, cue 23, gradually fades out the microphone's signal and the computer's output signal.

Imprints

for snare drum
and computer

for Julie Licata

1
Calm
w/ brushes
ad lib. 13"
pp

2
Brooding
♩ = 60
p

Snare Drum
snare on

3
mp
cresc. poco a poco

4
♩ = 110
f

5
mf

6
R.S.
f

Playful
w/ multi mallets
mf
cresc.

7

3

9

13

Imprints

8

19

f

9

24

10

29

fingernail scratch

w/ fingertips

closed slap

mp *f* *pp* *f*

11

35

closed slap

w/ fingertips

LFO off

mf *f* *mf* *mp*

12

40

15" (Electronics Interlude)

13

w/ multi mallets

mf

Mechanical

43

decresc. poco a poco

w/ fingertips

49

p *decresc. poco a poco* *pp*

Freely

14 w/ wooden drumsticks

54 *pp* *mf* *sfz* *p* *ff*

56 *mp* *f* *pp*

57 *p* *f* *sfz* *mp* *ff*

5" 7" 11" 6" 5" 8"

4
15
4" $\text{♩} = 90$ Imprints

60
mp R.S. R.S. *f*

63
8" 6"

mp *mf* *mp*

65
4" 7"

f *mf* *p* *ff*

16 $\text{♩} = 90$ 17

67 6 3 3 *mf* *p* *mf* R.S. *f*

20"

18 *w/ one stick ad lib.* 5"

71 *f* *fp*

w/ one stick *accel.*

Imprints

73 $\text{♩} = 60$
dead stroke
f
w/ one stick
mp
gradually depress center of the drum head in and out w/ elbow

78

86 $\text{♩} = 70$
19 Mechanical
w/ both sticks
p *mf* *cresc. poco a poco*

92 20
f

97
R.S. *cresc. poco a poco*

21

102

Musical notation for exercise 21, starting at measure 102. The notation consists of a series of eighth-note patterns with accents (>) and four-measure slurs (4) over groups of notes.

22

107

Musical notation for exercise 22, starting at measure 107. The notation consists of eighth-note patterns with accents (>) and four-measure slurs (4) over groups of notes.

23

112

Musical notation for exercise 23, starting at measure 112. The notation consists of eighth-note patterns with accents (>) and 'R.S.' markings. The exercise concludes with a final measure marked with a forte dynamic (*fff*).