Full Circle

for Trombone and Interactive Electronics

Keith A. Hamel

written for Jeremy Berkman and Benny Sluchin

Duration: 14 minutes.
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Technical Requirements

2 - Macintosh laptop computers (1 for audio processing running NoteAbilityPro and MaxMSPJitter [version 6.0 or higher] and 1 running NoteAbilityPro for score display for the performer.

2 - large screen displays (1 for each laptop)

1 - audio interface – with at least 1 mic input and 4 or 8 output channels

1 - Webcam (Logitech C900) with spigot for connecting to microphone stand

1 - tall microphone boom (capable of being 4 meters above the stage floor)

1 - long USB cable (with internal booster)

1 - microphone (DPA d:vote 400T) for the trombone

1 - mixer (with at least 8 input channels and 8 discrete output channels)

8 channel audio system (with speakers positioned around the hall). Optionally, 4 speakers may be used with speakers placed in the corners of the hall.

1 - plunger mute (other mutes can also be used in section IV of the composition)

Technical Notes and Setup

A camera (Logitech C900 or comparable webcam) is mounted on a boom microphone stand and placed above the performer so that the performer and connected by a USB cable to the main computer. A microphone (DPA d:vote 400T or comparable mic) is attached to the bell of the trombone and positioned so that it is still possible to use a plunger mute during the performance. The microphone is connected to the input of an audio interface. The audio interface is connected to Mac laptop Computer 1 via firewire or thunderbolt. Computer 1 is running NoteAbilityPro and MaxMSP. All MaxMSP controls are embedded in NoteAbilityPro score which is running during the performance. Computer 2 is connected to Computer 1 through a closed wireless network and the performer’s score is displayed in NoteAbilityPro on Computer 2. One of the large screen displays is placed in front of the performer and the performer reads the score from this screen. The pages on the performer’s score are automatically turned by network messages sent from Computer 1.
Score Notes

The second staff in the score represents rotations of the trombone slide from the center positions (M) to the right (clockwise) and to the Left (counterclockwise.) Rotations to the right and left trigger electroacoustic events.

Symbols denoting audible exhale and inhale - the duration of the breath is determined by the length of the line - no specific pitch is required.

Produce an audible hissing sound and change the position of the plunger mute at the same time. The sound should be constantly modulating.

Produce a glissando by altering lip pressure.

Move the slide silently without blowing into the trombone - slide motions will be tracked and produce electroacoustic events.

Move the slide as if you are playing the approximate pitches indicated in the rhythm indicated. Electroacoustic sounds will be generated when the slide is moving.
with plunger

\[ \text{breath (exhale) (one long breath)} \]

\[ \text{breath (inhale) (almost a gasp)} \]

\[ \text{rotate trombone} \]

\[ \text{R} \]

\[ \text{L} \]

hissing

\[ \text{with plunger mute} \]

\[ \text{plunger: closed} \rightarrow \text{open} \]

\[ \text{pp} \]

\[ \text{p} \]

\[ \text{pp} \]

\[ \text{mf} \]

\[ \text{pp} \]

\[ \text{pp} \]

\[ \text{L} \]

lip gliss…..

\[ \text{R} \]

move slide silently
move slide silently

breath [exhale]

slowly close and open plunger mute...

[breathy tone] [quasi gliss]

move slide silently

lightly

22

27

27

22

27

27

22

27
lip glissade

[smooth transition to and from flutter]
[move slide silently…]

(smooth transition to and from flutter)
(move slide silently)

pick up plunger

plunger mute closed

gradually open and close plunger mute

hissing

(with plunger mute)

put down plunger
quasi gliss...

gradually close and open.....

open. . . . . closed

gradually open and close plunger mute....

closed . . . . open

breath [exhale] [one long breath]

ggradually open and close plunger mute....

plunger closed . . . . . . . . . . . . . . open

[ plunger mute down ]
IV  \( \odot = 90 \) (omax)

with a steady pulse

\[
\begin{align*}
\text{IV} & \quad \odot = 90 \\
\text{with a steady pulse} & \quad (omax)
\end{align*}
\]