IDOLUM

for flute, violin, and two guitar machines

Taylor Brook

2015

About *Idolum*

Idolum was written for the TAK ensemble and is scored to violin, flute, and two performers playing guitar-machines, which are arduino-based instruments that plays guitars with motors via distance sensors. *Idolum* is approximately 10 minutes in duration.

Idolum refers to something akin to a spirit: a non-corporeal entity. This titles refers to both the nature of music in general as well as the means of playing the distance-sensors that drive the guitar machines in performance. Another reading of the title points towards non-poetic aspects of music — *Idolum* aspires to be pure music, exploring the intruments, their sounds, and how these sounds may evolve and interact over time to create indescribable impressions on the mind. In this way, music is like a spell or hypnotism, pulling thought and emotions this way and that way to those who are willing.

For more information please visit: www.taylorbrookmusic.com

Violin Techniques

bow placement indications:

ord. - ordinario - (use an ordinary bow position.)
s.t. - sul tasto - (Bow close to the end of the fingerboard.)
a.s.t. - alto sul tasto - (Bow over the fingerboard.)
p.s.t. - poco sul tasto - (Bow slightly towards the fingerboard from ordinario position.)
s.p. - sul ponticello - (Bow close to the bridge.)
m.s.p. - molto sul ponticello - (Bow very close to the bridge, thereby producing a harsh sound. This technique will often silence or obscure the fundamental pitch of the string.)
e.m.s.p. - extreme molto sul ponticello - (Bow as close to the bridge as possible by placing a left hand finger on the bridge to stop the bow from jumping over the bridge to the other side.)
p.s.p. - poco sul ponticello - (Bow slightly closer to the bridge than ordinario position.)

bowing technique indications:

norm. - normale - (Use a normal bow technique.)
flautando - Fast, low pressure bowing in a alto sul tasto position to obtain a flute-like tone.
scr. - scratch - (Use overpressure to produce a scratch tone that obliterates the pitch)
p.scr. - poco sctratch (Use overpressure to produce a scratch tone while retaining some of ordinary pitch)
1/2 c.l.t - half col legno tratto - (Rotate the bow so that it rubs the string with both the wood and hair.)

Scratch indications may also be given with a visual prompt showing the intensity and shape of the scratch tone:

scr.

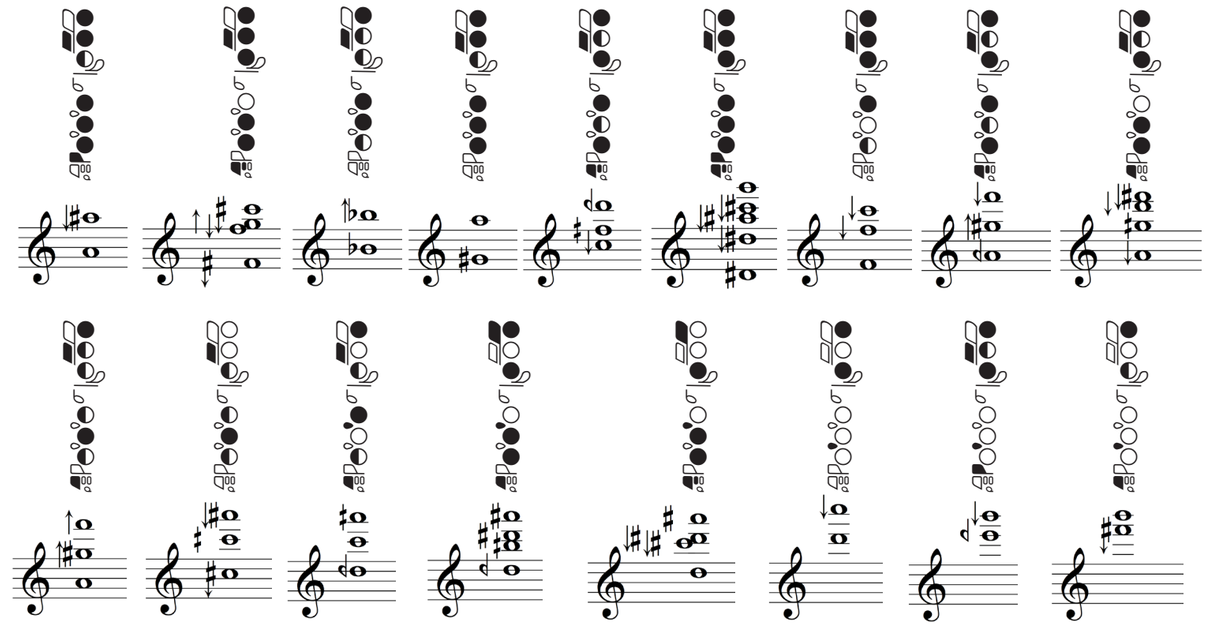
vibrato indications:

vib. - with vibrato
s. vib. - with no vibrato
m.vib. - with a lot of vibrato

Vibration indications may also be given with a visual prompt showing the general intensity and shap of the vibrato gesture: vib.

Flute Techniques

multiphonics:



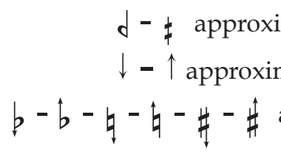
These multiphonics may only work at certain dynamic levels, and the dynamic in the score is an essential part of the role of multiphonics in the texture of the music. If any multiphonic employed does not work, it may be replaced with an alternate multiphonic that produces the indicated dynamics and a similar pitch profile.

other indications:

diamond-shaped noteheads — aeolian tone (air only)
half-aeolian — breathy tone
fry — Produce a vocal fry that resonates through the instrument.
D-D# — Trill D and D# trill keys energetically to produce randomized notes.

Microtonal Notation

The following acccidental nomenclature is used:



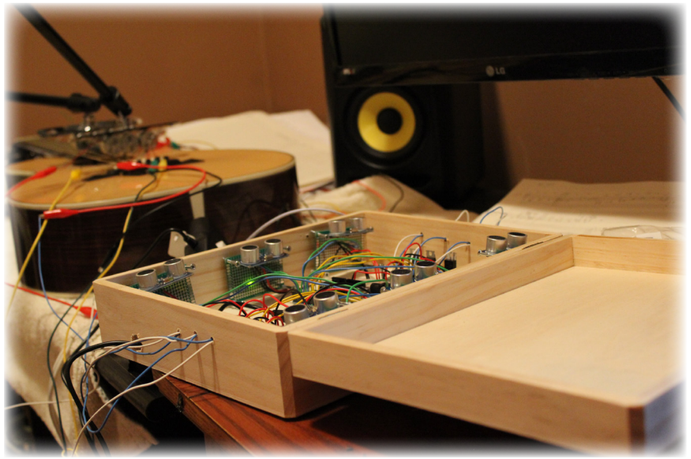
approximately 1/4 tone flat or sharp (50 cents)

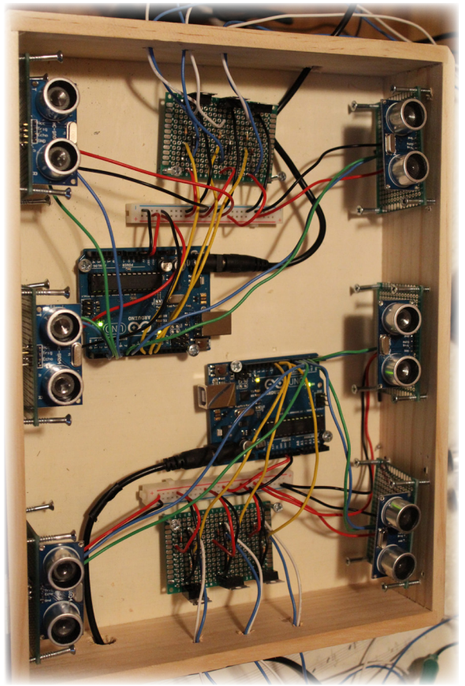
approximately 1/6 tone flat or sharp (33 cents)

approximately 1/12 tone flat or sharp (17 cents)

The microtones may be understood within a system of just intonation. A precise tuning of the guitars will greatly help the accuracy of the violin and flute.

Guitar-Machines





× - ⊗ - ○

general muting (full mute, half muted, and no mute) - These indications are given above notes on the staff to stop the strings from ringing by muting it with a finger. The muting finger should be pressed on the string between the nut and the first fret.

■ ⁄ □

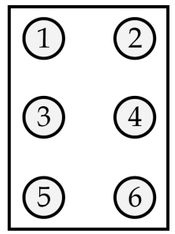
mute individual string - These noteheads (quarter and half) indicate that the performers should stop the string from ringing by muting it with a finger. The muting finger should be pressed on the string between the nut and the first fret.

gliss harmonics - run a lightly pressed finger up the string to make a sweep of the partials in the string. Fret indactions that signify where the sweep should end and begin on the string are sometimes used.

strum with finger - strum the strings of the guitar direcly with your finger rather than using the motors of the guitar machine.

On learning to play the Guitar-Machine

The performer endeavoring to play one of the guitar-machine parts will need to get some hands-on time with the device before the rehearsal process with the other musicians begins. A physical understanding of how the sensors react to the hands can be developed quite quickly, and is key developing technique and sensitivity on one's own, even before learning the notation. Once an understanding of the physicality of the contraption is complete, the notation will be much easier to understand.



The guitar machines consist of 6 distance sensors, each connected to a motor that excites a guitar string. The tabulature shown to the left is used throughout that score to indicate the placement of the hands. Each encircled number represents one of the sensors in the box. The numbers also correspond to the strings of the guitar: sensor 1 is connected to the first string (high E), the second sensor to the second string, and so on.

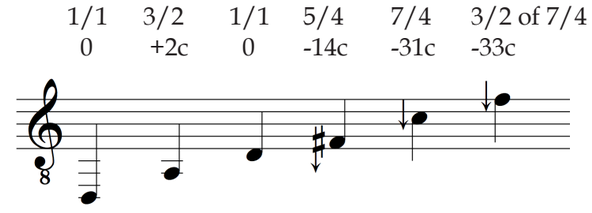
The sensors are programmed to read a distances between 5 and 30 cm. At 5cm the motors will spin at their max speed, and towards 30 cm they will slow down, stopping entirely at any measurement beyond 30 cm. Motor speed corresponds with dynamics in the score, which are notated in a traditional manner. In summary, encircled numbers show x-axis placement of the hands and dynamics show y-axis position of the hands (distance from the sensors).

Preparations

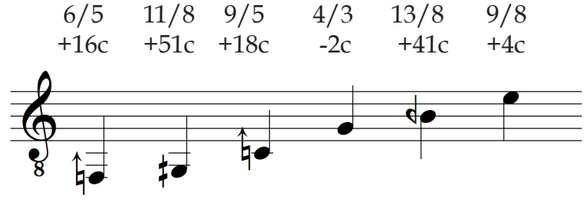
When called for in the score, the guitar strings must be prepared by weaving metal paper clips into the guitar strings. The result will be an inharmonic, noisy timbre. It is imperative that the fundamental note of the string be completely indiscernible. The metal paper clips should be placed in such a way that the timber is not only noisy, but also a beautiful, bell-like, and rich sound — the performer should experiment with this to find an arrangement they find interesting.

Tuning

guitar 1:



guitar 2:



IDOLUM

for TAK

Taylor Brook

Calmly ♩ = 66

♩ = 72 (slightly faster) *rit.* → (♩ = 42) ♩ = 66

Flute

full and resonant

energetic

D-D#

calm

a.f. 1 2 1 2

Violin

IV = F# -14c

energetic

flautando (light, fast bow, sul tasto)

p.s.p.

s.t.

flautando

Fl.

aggressive

calm

Vln.

norm.

m.s.p.

repeat as fast as possible

a.s.t.

flautando

poco poco

Fl.

aggressive

1/2 aeolian → air → norm. → air → 1/2 aeolian

a.s.t.

repeat as fast as possible

Vln.

light bow

a.s.t.

repeat as fast as possible

norm.

s.t.

a.s.t.

rit. (♩ = 42) a tempo ♩ = 66

Fl.

Vln.

Gtr. 1

Gtr. 2

a.f.

full and resonant

melodic, quasi parlando

p.s.p. → ord.

s.p. → ord.

gliss harmonics

poco rit. a tempo

bisb.

flz.

(gliss harmonics, moving to the open string on the downbeat)

ord.

s.p. → s.t.

p.s.p. → s.t.

vib. → s.vib.

rit. → accel. → a tempo

(order of notes may be varied)

repeat as fast as possible

→ air → norm.

Fl.

Vln.

p.s.t.

vib.

Gtr. 1

strum with flech of finger

Gtr. 2

strum with flech of finger

s.t.

ord.

→ aggressive

rit. ♩. = 36 (♪ = 108) poco rit. (♩. = 32) accel. ♩. = 56

Fl.

Vln.

Gtr. 1

Gtr. 2

cantabile

(♩=♩) ♩ = 84

flz.

bisb.

air

D-D#

"ff" (as loud as possible)

flautando s.t.

ord.

norm. ord.

a.s.t., noisy

scratch m.s.p.

s.p.

prepare guitar with metal paper clips

♩ = 96

Fl.

Vln.

Gtr. 1

Gtr. 2

72

bisb

growl through flute
cover embechure

ingressive vocal fry

bisb

ingressive vocal fry

growl

norm.
frantic and intense

cover embechure
(voiceless alveolar fricatives)

scratch
on winding

sub tone

on string

on winding

(scratch)
IV

1/2 scratch → scratch

on winding

(scratch)
IV

machine-like
scratch

string

string
winding

winding

80

whistle tones ad lib

ingressive fry

jet whistle

growl

sub tone

(sub tone)

f.mute (no pitch)

scratch

1/2 scratch

ord.
norm.
II

poco rit. ♩ = 88

Fl.

Vln.

Gtr. 1

Gtr. 2

dolce

tongue ram

scr.

parlando

flz.

pp – mp

bisb.

accel. poco a poco ♩ = 132

1/2 scratch

gliss harmonic trill note as before

(gliss harmonic trills as before)

norm.

rit. ♩ = 84

rit. ♩ = 52

Fl.

Vln.

Gtr. 1

Gtr. 2

103

fff fff fff

vocalizing throught the instrument

growl

f ppp

spacy and distant

slow wide vib.

pp

slow wide vib.

(bending down quarter-tone)

repeat as fast as possible

p mf ppp

s.p.

ffp fff

spacy and distant

s.t.

mp (balance with flute)

mf p mf mp pp

m.vib.

s.vib.

IV

p

REMOVE PREPARATIONS

mf p mf p mp pp

REMOVE PREPARATIONS

ff ff f f mf mf mp mp mp

accel. ♩ = 66

♩ = 80

113

cantabile

mp mf mp pp mp p mp p ppp

n mf pp

ppp

flautando

a.s.t.

norm.

p.s.t.

n mf pp

sweep harmonics

I XVII I

mp f p f mp f

mp

f

poco accel. ♩ = 76

Fl.

Vln.

Gtr. 1

Gtr. 2

128

mp

MULTI

IV
III

rit. ♩ = 56 accel. ♩ = 66

140

sweep harmonics

XVII

I

II
III
IV

(○)

154

Fl.

Vln.

Gtr. 1

Gtr. 2

mf

f

170

ord.

(gliss on IV)

ff

pp

Fl.

Vln.

Gtr. 1

Gtr. 2

182

ff mf ff mf ff mf ff mf

f pp f pp f pp f pp f pp f pp

f pp f pp f pp f pp f pp f pp

191

fff

ord.

s.p.

ff mp ff ff mf ff

pp–p pp–p

f pp–p f pp–p

Fl.

Vln.

Gtr. 1

Gtr. 2

201

sempre ff

flautando (light, fast bow, sul tasto)

half aeolian

norm.

1/2 c.l.t.

flautando

s.t.

(vary the dynamic by slowly and calmly moving hands)

poco rit.

a tempo

213

sempre pp – mp

Fl.

Vln.

Gtr. 1

Gtr. 2

225

cantabile

half aeolian

walk over to the guitar machine calmly

rit.

♩ = 112

1/2 c.l.t.

close the lid of the sensor box

237

Unplug guitar machine on downbeat

unmute at the exact moment the power is cut