

Heuchera micrantha seedpods

Machines
for
Listening

Dan Trueman

Machines for Listening

for bitKlavier and active listener

Machine Listening is an important and complex field, focusing on teaching machines (or having them learn) to listen and parse sound. But what about machines *for* listening, things that invite *us* to listen, teach *us* to listen?

These nine sketches are intended as active listening guides for bitKlavier, a kind of digital musical machine configured in specific ways to process the operator's input and generate sound. Each "listening machine" has specific settings and interconnections that yield sometimes unexpected rhythms and textures, but are in fact completely deterministic — anything that seems like randomness is a product of the specific interactions between operator and machine.

These are "open form" sketches, providing seeds, specific materials, and intentions for the operator to work with, strictly or loosely. They can be open ended, used at home as listening meditations, or can be the starting points for collaborations with other listeners and instrumentalists, perhaps through collaborative recording, or even live performance. The "operator" may also choose to integrate other instruments or machines into the process, occasionally feeding the listening machines and then reaching out with these others to contribute and listen more deeply.

Machines for Listening were sketched during June of 2020, with the world in imperfect lockdown and raging against centuries of racial injustice: silence is not an option, but listening is required. I'm indebted of course to the legacy of Pauline Oliveros, whom I had the pleasure of playing with many times years ago, and whose "machines for listening" are monumental. The cover is from a piece by my mother, Judy Trueman, that she used for her holiday card in the year 2000, a month after my daughter was born in Kingston NJ; in it she wrote "Happy Holidays to you two, the Princess of Kingston, the World, and the Universe." We are in this together, after all.

Dan Trueman
June, 2020

Required:

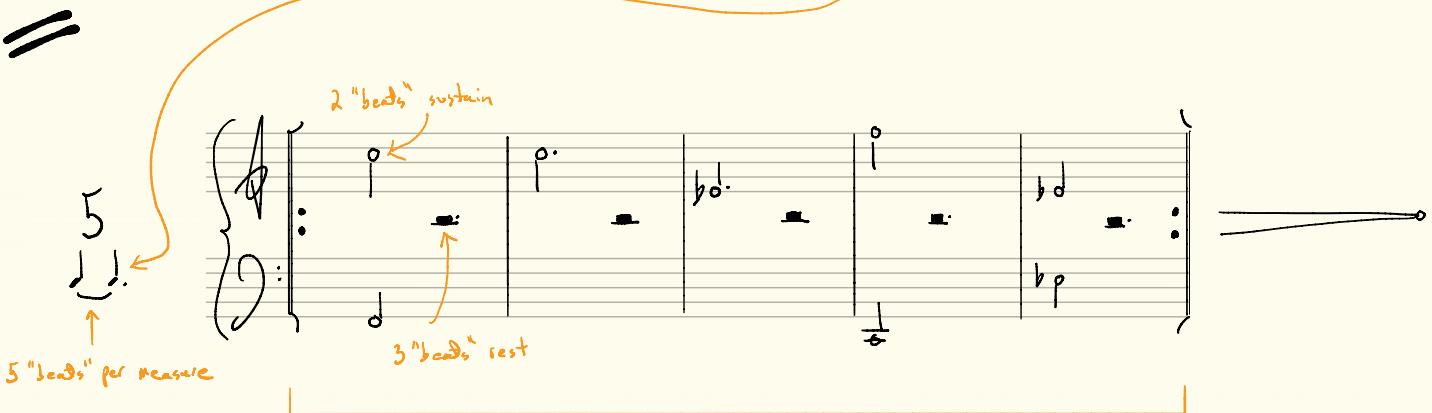
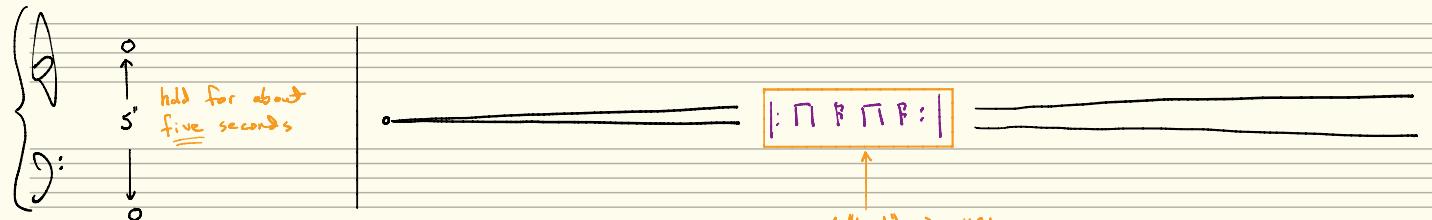
bitKlavier (bitKlavier.com) and an 49-key (or more) MIDI keyboard.

Each "machine" has a single Piano in the Gallery; just select the appropriate Piano and interpret the sketch. The numbers correspond to the primary settings for the Blendrónico preparation, the heart of the machine for all of these.

Machine for listening #1

3.2

Truman



repeat, many times, listen, add other notes as you like

Machine for Listening #2

4.3.2.3

Tuerney

repeat many times, listen, vary, omit, embellish as you like

repeat many times, listen, vary, omit, embellish as you like

Machine for listening #3

5.3.2.3

True man

3 + 3 + 2 + 3 + 2
16

as many times as you like

Nx

2x

3x

first time only

solo, sync

two measure duration

one measure duration

ba ba ba ba ba

ba ba ba ba ba

2x

2x

ba ba ba ba ba

ba ba ba ba ba

2x

Silences

repeat, vary, omit, embellish, listen

Machine for listening #4

6.5

Truman

5+6
16

5x 6x (4) 3x

A

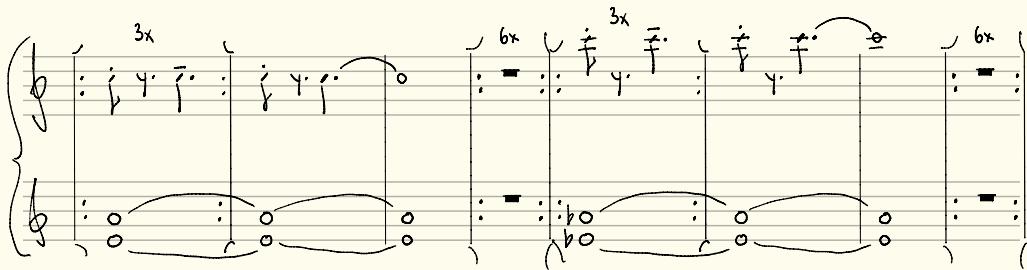
B

silence, first time only

sustain through the repeat; no attack

A **B**

continue



repeat ↗ onix embellish... listen

sounding 8^{vb}

Back to A

Handwritten musical notation on four-line staves. The first staff starts with a forte dynamic (f). The second staff begins with a 3x pattern of eighth-note pairs. The third staff begins with a 6x pattern of eighth-note pairs. The fourth staff begins with a 3x pattern of eighth-note pairs. The fifth staff begins with a 6x pattern of eighth-note pairs. An orange arrow points to the text "sounding 8^{vb}". A curved orange arrow points from the end of this section back to a box labeled "A".

Machine for listening #S

7.5, 4, 3, 4, 5

1	2	3	4	5	6	7
4 +	4 +	4 +	4 +	4 +	4 +	4 + 4

→ even 7

Truman

$\text{J} = 90$

7 beats

first time only (silent)

sounding

evened pulse

1	2	3	4	5	6	7
4 +	5 +	4 +	3 +	4 +	5 +	3 +

→ or, lopsided 7 (you choose)

ton

kick

free

← repeat, omit, extend, change register... listen ← to beginning

A handwritten musical score for a single melodic line. The score consists of eight measures. Measure 1: A dynamic instruction 'P' above a staff, followed by a measure repeat sign, a bass clef, and a common time signature. Measure 2: An eighth note with a 'G' above it, followed by a measure repeat sign, a bass clef, and a common time signature. Measure 3: An eighth note with a 'G' above it, followed by a measure repeat sign, a bass clef, and a common time signature. Measure 4: An eighth note with a 'G' above it, followed by a measure repeat sign, a bass clef, and a common time signature. Measure 5: An eighth note with a 'G' above it, followed by a measure repeat sign, a bass clef, and a common time signature. Measure 6: An eighth note with a 'G' above it, followed by a measure repeat sign, a bass clef, and a common time signature. Measure 7: An eighth note with a 'G' above it, followed by a measure repeat sign, a bass clef, and a common time signature. Measure 8: An eighth note with a 'G' above it, followed by a measure repeat sign, a bass clef, and a common time signature. The score uses vertical brace groups and horizontal bar lines to delineate measures. Orange arrows point from the end of each measure to the start of the next, except for the final measure which ends with a double bar line.

Machine for listening #6

8.3

Turner

1. ~ 8x 8x 8x 8x 2x 1x 5x 6x

3+3+3+2
16

D. P. P. P.

first time only (silent)

Sustain, no re-attack through 8x

D/E sustained throughout, except one time through => omit

repeat, wait, listen

Machine for Listening #7

9.5.4.5

Trueman

Freely, Slowly

sustain notes through arrows

4+5+4+5+5

16

1 2 3 4 5

5 "beats"

pulse emerges, but don't sync with it.

3

3

3

3

1 2 3 4 5

with pulse

omit sometimes

(repeat)

of "beats" to sustain each chord

1 5 5 2 3 4 6

5 5 2 3 5

freely...

solo

or

repeat, extend, omit, explore, listen

Machine for listening #8

10.7

Truman

Hand-drawn musical score for 'Machine for listening #8' by Truman. The score includes a tempo marking of $\text{♩} = 60$, a key signature of F# , and a time signature of 16 . The score consists of two staves. The first staff features a bass clef, a common time signature, and a 16th-note pattern. The second staff features a treble clef, a common time signature, and a 16th-note pattern. A large bracket groups the first four measures of each staff. Orange annotations include a bracket labeled 'Ped' under the bass staff, another labeled 'Ped' under the treble staff, and a bracket labeled 'release pedal on the beat'. An orange arrow points from the bass staff to the treble staff. A box highlights a specific measure in the treble staff. The score concludes with a colon and a vertical bar line.

continue same rhythm & pedaling
with these chords:

Hand-drawn musical score showing a continuation of chords. It includes a bass clef, a common time signature, and a 16th-note pattern. The score consists of two staves. The first staff shows a bass line with notes like F# , A# , C# , and E# . The second staff shows a treble line with notes like A# , C# , E# , and G# . A bracket groups the first four measures of each staff. An orange arrow points from the bass staff to the treble staff.

(highest key will silence)

repeat, add, subtract, listen

6.16.20

Machine for listening #9

11.7.5.3.2.3.5.7

Truman

C4 & C5 cause this
(5) w/ silence

one "beat"

sustain to end of pattern (one "bar")

This pattern emerges...
listen for this!

clears & sets "phase" of pattern

one "bar"

The "beat" and the "pattern" have the same 16th-note subdivision, but will have changeable relationships, creating different series of pulse. The upper B in the "beat" will sometimes feel on the 2nd 16th, but not always!

listen, explore, change focus...

6 "beats"

restarts

use to clear & re-sync.
others are possible!

Unlike the others, this one consists of various elements that can be combined, varied, or ignored.
as usual, repeat, subtract, elaborate... listen

Syntax patterns

Handwritten musical notation for Exercise 1, Part 1. The notation consists of ten measures on five-line staffs. Measure 1 starts with a bass clef, followed by a common time signature. Measures 1 through 9 each begin with a vertical stroke and a downward diagonal stroke, indicating a specific dynamic or performance technique. Measure 10 begins with a vertical stroke and a downward diagonal stroke, followed by a vertical stroke and a horizontal bar line, indicating a repeat or continuation.

played in sync with the "bar" pattern
different registers, inversions, notes, etc.. possible!

Diamond Patterns

for example...

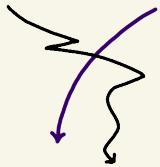
etc... in sync with "beat"

Charles

A handwritten musical staff consisting of five horizontal lines. The first line contains a circled Roman numeral 'I' with a brace underneath, followed by a note with a vertical stem and a circled '2'. The second line contains a note with a vertical stem and a circled '0'. The third line contains a note with a vertical stem and a circled '0'. The fourth line contains a note with a vertical stem and a circled '0'. The fifth line contains a note with a vertical stem and a circled '0'. There are also several rests represented by vertical stems without circles.

Handwritten musical notation for Exercise 2. The notation is on a staff with five horizontal lines. It consists of a series of notes and rests. An orange bracket labeled "repeat" covers the first two measures: a sharp sign over an open circle, followed by a dash over an open circle. This pattern repeats throughout the staff. A circled number "2" is on the far left. An orange bracket at the bottom labeled "repeat" covers the last two measures: a sharp sign over an open circle, followed by a dash over an open circle.

Variable durations, registers, voicings, subsets



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