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 sometime 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
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**Required:**

bitKlavier (bitKlavier.com) and an 88-key MIDI keyboard (smaller keyboards are also possible, with some adjusting).

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 Blendoric preparation, the heart of the machine for all of these.
Machine for Listening #1

3.2

5 beats per measure

2 "beats" sustain

3 "beats" rest

1 "beat" ≈ 48 bpm

Hold for about five seconds

Repeat, many times, listen and add other notes as you like
Machine for Listening #2

4.3.2.3

repeat many times, listen, vary, omit, embellish as you like
Machine for Listening #4

Trueman

5x 6x 3x 6x 3x

5+6

16

(silence)

Sustain through the repeats; no attack

A B A B
Machine for listening #5

\[ 7.5.4.5.4.5 \]

Event: Truenan

Beats: 7

First time only (silent)

Prime pulse

\[ 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \]

\[ 1 + 4 + 4 + 4 + 4 + 4 + 4 \]

\[ 4 + 5 + 4 + 3 + 4 + 5 + 3 \]

\[ \text{even 7} \]

\[ \text{or, lopsided 7 (you done)} \]
repeat, omit, extend, change register... listen ← to beginning ←

\[ N_x \]

then

\[ \text{free} \]
Machine for Listening #6

8.3

Trueman

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

Freely, Slowly

sustain notes through arrows

$4 + 5 + 4 + 5 + 5$

$\text{16}$

$\begin{array}{cc}
\text{1} & \text{1} \\
\text{1} & \text{1} \\
\text{1} & \text{1} \\
\text{1} & \text{1} \\
\text{1} & \text{1} \\
\end{array}$

grobe emerges, but don't bump with it.

5 "beds"

(repeat)

1 2 3 4 5

with gobe

omit sometimes
# of "beats" to sustain each chord

\[
\begin{array}{cccccc}
\text{r} & \text{g} & : & : & : & :\\
\text{f} & \text{i} & \text{v} & \text{b} & 8 & 8\text{b}\\
\end{array}
\]

\[\text{repeat,.entryd, omit, explore, listen} \]

\[5 \ 5 \ 2 \ 3 \ 4 \ 6 \ 5 \ 5 \ 2 \ 3 \ 5 \]

\[\text{ET ii. iii. vi} : t. li \#iiiiii::.:t.:.:r:t \]

\[\text{freely} - - -.
\]

\[\text{f} \ 8 \text{v} \# \text{f} \]

\[\text{p} \ 1 \ 4 \ 14.20 \text{g} \]

\[6.14.20\]
Machine for Listening #8

10.7

\[ \frac{1}{16} \quad \frac{1}{8} \quad \frac{1}{4} \quad \frac{1}{2} \]

\[ \frac{1}{16} + \frac{1}{8} + \frac{1}{4} \]

\( \text{release pedal on the beat} \)

16vb

Ped

16vb

Ped

\( \text{bass line only} \)

Repeat, add, subtract, listen

(highest key will silence)

Continue same rhythm & pedaling with these chords:

6.16.20
Machine for listening #9

11.7.5.3.2.3.5.7

Trueman

C4 & C5 cause this
(highest C will silence)

~111 bpm

After end of pattern (one "bar")

This pattern emerges...

Listen for this!

C4 & sets "phase" of pattern

one "bar"

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

Listen, explore, change tempo...

6 "beats"

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.
Sync patterns

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

Drum Patterns

for example...

etc... in sync with "beat"

Chordes

Variable durations, registers, voicings, subsets