Drum Machine

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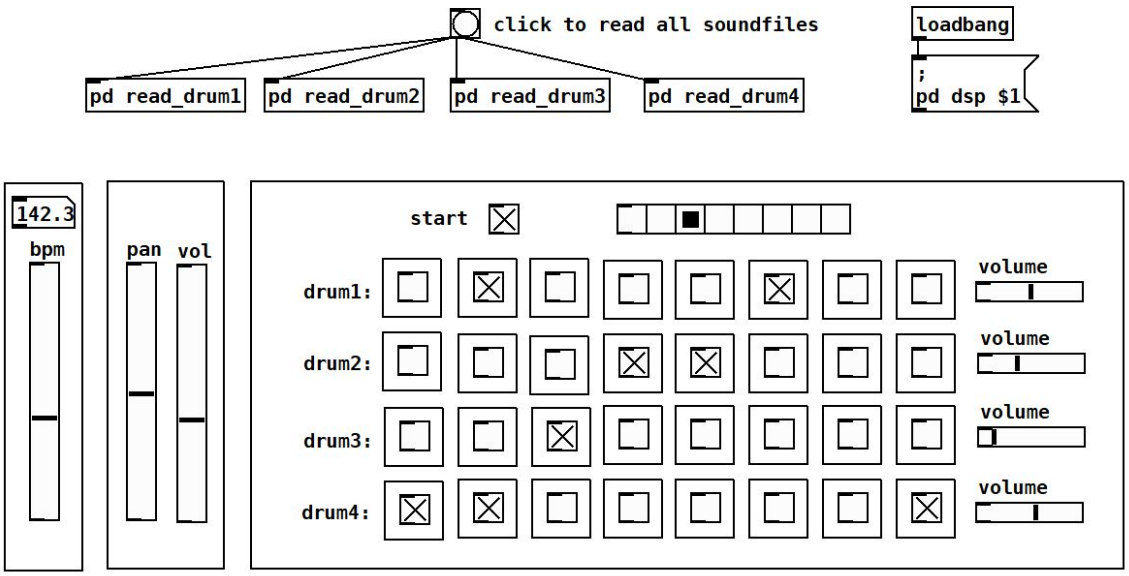

In order to use the drum machine, you need to first click bang to load all sound files, then click the toggle next to “start”.

I created four pd patch [readdrum_n] for loading drum samples with [soundfiler].
When open the [readdrum] patch, you will find waveforms of each sample. All samples are from Roland TR-909 drum machine. Four loaded samples are well-experimented to make sure their drum type differs but their combination sounds harmonious.

There are four volume control for four samples individually, and one for the entire drum machine. There’s also a pan control for panning the left and right channel, I used [sqrt] for two channels, so it sounds more balanced.

I decided to have 8 beats per measure in my drum machine, since it is a common choice for making electronic music. I put a 8-step sequencer to realise this idea on pure data. I used Vradio and [select] to build sequencer, in the subpatch [drums].

The BPM can be adjusted in a range from 40 to 300 beats per minute. It is connected to a [metro] of the 8-step sequencer. For each time slot, you can play 0~4 drums together.

I created pd patches [button] to make abstraction of buttons. The [button] wirelessly receives input from the 8-step sequencer. While the sequencer is counting to the 2nd step, then four [button] corresponding to the 2nd step receives “1”. While a toggle of certain drum on a certain time slot gets selected, it will trigger the [change] of this [button] to send out a signal received by [play_drum]. [play_drum] subpatches are designed to play loaded samples with [tabplay].

I have initialized parameters for pan control, all volume controls and BPM, so it’s easier to use. In order to make UI cleaner, I used [canvas] to show only elements for user control.