

# **MUS 6: Electronic Music**

Section Lecture 4

*Wednesday, October 28, 2020*

# Lecture Outline

1. Announcements
2. Homework 2 (*Part 1: Audio Filters and Automation*)

# Announcements

- Homework Assignment #2 is DUE by Friday, [Nov 6](#) at 11:59 pm

# **Homework 2**

***(Part 1: Audio Filters and Automation)***

# Homework 2: Lecture schedule

- **Today:**

- Audio filter automation
- Dry/wet and device on/off automation

- **Next week:**

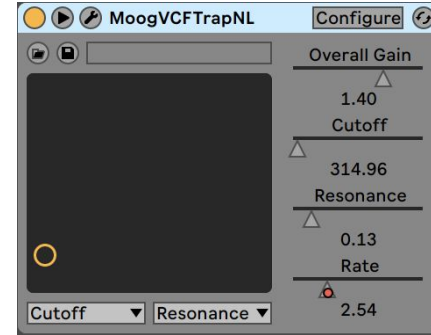
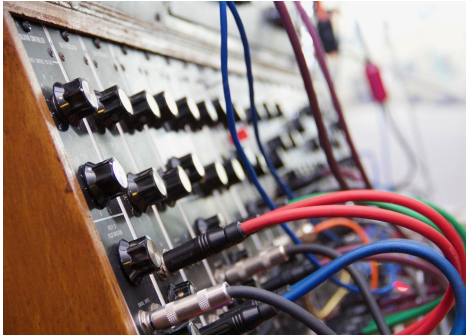
- Sampled audio
- Reverb
- Delay
- Musical scales
- Return tracks

# Homework 2: Listening examples

- We'll now listen to a couple examples of time-varying audio filters found in popular music. We can implement time-varying audio filters using automation. (Note: these examples are described in more detail on the class OneNote page).
  - [The Chemical Brothers - Playground for A Wedgeless Firm](#)
  - [Daft Punk - Musique](#)
- Both examples use audio filters. In particular, the Chemical Brothers song seems to use an audio filter similar to the Moog Voltage-Controlled Filter (VCF). The Moog VCF is also often referred to as the Moog ladder filter because its circuit architecture includes a ladder of low-pass filters. This ladder of low-pass filters gives the filter its resonant quality.

# Homework 2: Moog VCF

- The Moog VCF is a resonant low-pass filter commonly used in electronic music.
- For those who are interested, you can follow [this link](#) to some simulation code I wrote that emulates the Moog VCF. You can compile the code to get a VST plugin that you can use in Ableton.
- To read more about the emulation, go [here](#) (see top of page).



# Homework 2: Class demonstrations

- Some of you may already be familiar with audio filters and automation. If you are and have composed music using these techniques, would you like to take a couple minutes to share your work with the class?



# Homework 2: Ableton Live implementation

- We'll now open up Ableton Live and review how to program audio filters and automation. We'll use basic music theory to write a composition.
- For more information about these homework topics, go to the following pages on the class OneNote:
  - **Audio Filters**: Ableton -> Audio Effects
  - **Automation**: Ableton -> Recording and Editing -> Automation

# Questions