

# 21M.380 · MUSIC AND TECHNOLOGY

## RECORDING TECHNIQUES & AUDIO PRODUCTION

### SOUND EDITING EXERCISE 1 (ED1)

#### DRUM LOOP

DUE: MONDAY, OCTOBER 3, 2016, 9:30AM  
SUBMIT TO: MIT LEARNING MODULES ▶ ASSIGNMENTS  
5% OF TOTAL GRADE

## 1 Instructions

Using *Reaper* – or whichever other digital audio workstation (DAW) package you might have agreed on with the instructor – create a loop from the percussion sounds in the sound file provided with this assignment<sup>1</sup> (or any subset thereof), plus a single short sound that you have recorded yourself.

## 2 Guidelines

- Only basic editing operations are allowed, such as cutting, splicing, (cross)fading, panning, and adjusting the level balance. Refrain from using EQs, compressors, reverb, or any other plugins!
- ‘Loop’ means that your submission should be usable as a loop, *not* that it should itself be repetitive! Your loop may repeat itself only if each repetition introduces some element of variation.
- Your final loop should play smoothly when actually looped, i.e., the file duration should correspond to the loop’s inherent tempo.<sup>2</sup>
- Use your DAW to record the extra sound to be used for this assignment. To achieve a better sound quality than you can get from your laptop’s or smartphone’s internal microphone, you are expected to borrow one of the Zoom H4n handheld recorders from the Lewis Music Library’s front desk for this task.
- If you are unfamiliar with the elements of a drumkit and their respective sonic possibilities, get a tour of the drumkit in a video by Vic Firth (2016).

<sup>1</sup> All sounds © by Freesound user TicTacShutUp, published as sample pack *Studio Drums 1* at <http://www.freesound.org/people/TicTacShutUp/packs/17/> under a *Creative Commons Attribution* license (<https://creativecommons.org/licenses/by/3.0/>).

<sup>2</sup> For example, if the loop happens to 8 bars long, with 4 beats per bar, and in a tempo of 120 beats per minute, your final sound file should be  $\frac{8 \cdot 4 \cdot 60}{120} = 16$  seconds long.

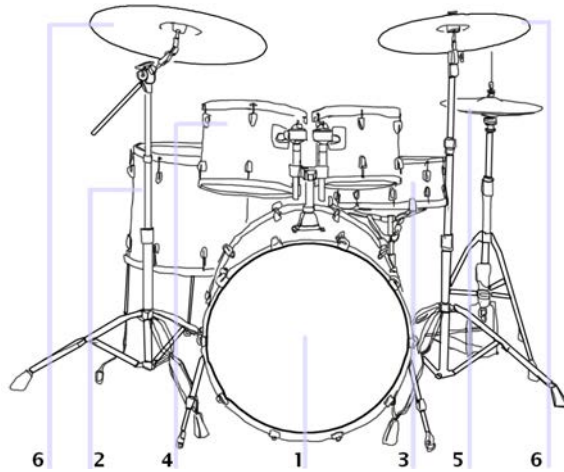


FIGURE 1. A typical drum kit. 1: bass (or kick) drum; 2: floor tom; 3: snare drum; 4: tom-toms; 5: hi-hat; 6: crash cymbal (right) and ride cymbal (left) (© Public domain image)

### 3 Assessment criteria

The finished loop should demonstrate your ability to handle the following tasks by means of a digital audio workstation (DAW).

- Importing an existing sound file into a DAW session
- Cutting/splicing audio into individual elements and rearranging them on the timeline
- Applying fades and crossfades where appropriate to avoid clicks
- Adjusting the level balance between the different drums in an aesthetically pleasing fashion
- Creating a well-balanced stereo image by panning individual elements along the left-right axis
- Normalizing the loop to a specific and appropriate output level (not too soft, but also not clipping)
- Rendering the final DAW session to an audio file in a specified file format and with a correctly chosen rendering region

Your work will be assessed exclusively by the rendered result, not by your DAW session, so be explicit about your demonstration of the above techniques! Your loop will also be judged in terms of its liveliness and the overall musical creativity that it demonstrates.

## 4 Submission format

Submit your assignment as a single archive `submission.zip`, which should be structured as follows:<sup>3</sup>

```

submission.zip
├── loop.wav (stereo, 44.1 kHz, 24 bit, 7–20 seconds)
└── writeup.pdf (1 page max.)

```

<sup>3</sup> Please make sure you stick closely to the requested submission format. Detailed guidelines can be found in the syllabus.

- `loop.wav` should contain your final drum loop as a single stereo `.wav` file. Do not submit sound files in any other format than the one specified above. Also, do *not* submit any DAW session files (which do not contain actual audio), such as files in Reaper's native `.rpp` format.
- `writeup.pdf` should include a description of the toolchain and editing process and a meaningful screenshot of your final DAW session. It should also explain the nature and source of the additional sound you have used, and your motivation for choosing it. Keep this document concise and informative; do not make it too verbose. This is really an editing, not a writing assignment.

## References & useful resources

Firth, Vic (2016). *Beginner Drumset Lessons: Intro #1 - A Tour of the Kit*.  
 URL: <https://youtu.be/9Mb-NQ2koWA> (visited on 02/23/2016).

MIT OpenCourseWare  
<https://ocw.mit.edu/>

21M.380 Music and Technology: Recording Techniques and Audio Production  
Fall 2016

For information about citing these materials or our Terms of Use, visit: <https://ocw.mit.edu/terms>.