

Max/MSP exercises 4a

Ex. 1

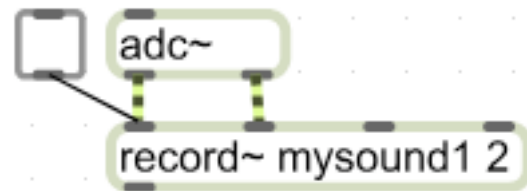
The last set of exercises explored the [sfplay~] object. This reads sound directly from the hard drive, which is useful for many purposes. But sounds can also be played back from RAM (Random Access Memory). The advantage with this is that access to the data is considerably quicker.

To load data into RAM, we use the [buffer~] object.

1. Copy this object. Lock the patch and double-click on it: `buffer~ mysound1 2000 2`

The window that pops up represents the available space in memory (2000ms in 2 channels) that [buffer~] has set aside in memory. We have given this space a name: 'mysound1'. This is important! Other objects will refer to this [buffer~] by this name in order to write to it, or to access its contents.

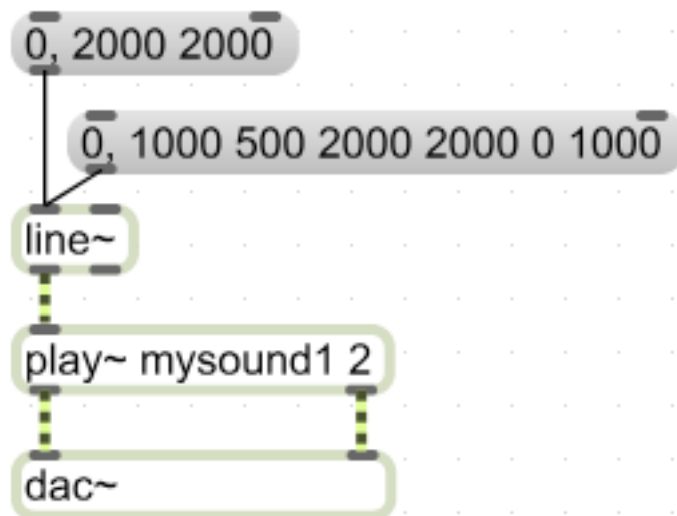
2. Copy the routine on the right. Lock the patch and double-click the [adc~] object to access the DSP window. Choose your computer's local driver (CoreAudio Built-In on the Mac) as we need access to the microphone. Press the [toggle] and make noises into the mic. You should see [buffer~]'s window update...



Ex.2

So you can write material into a [buffer~]. You can also read from it. There are a variety of objects that will enable you to do this. We will cover two of them.

1. Copy this routine:



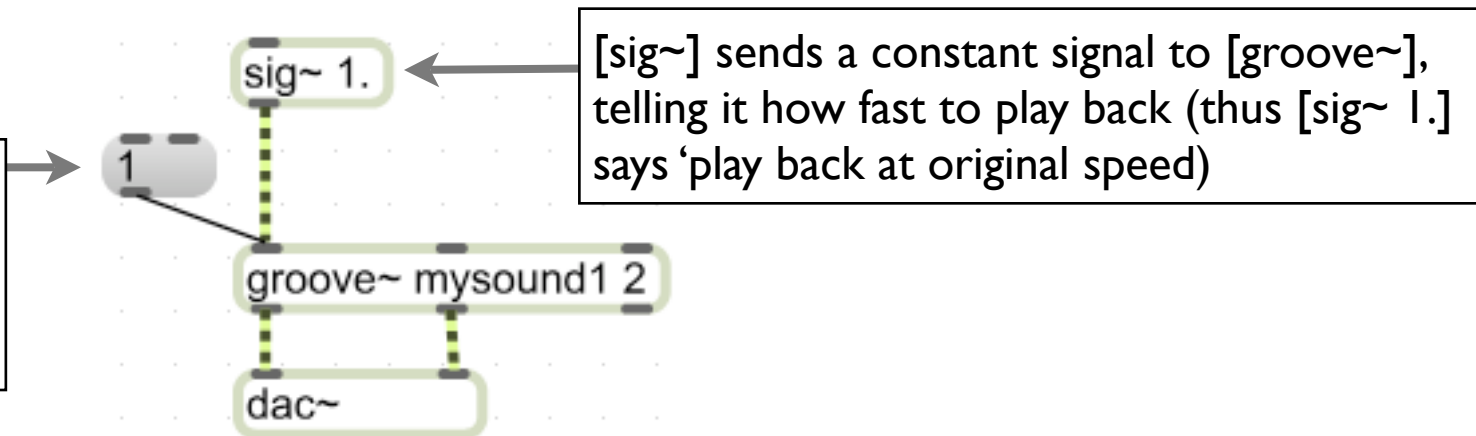
2. Lock the patch and hit the two message boxes. You will notice that in this patch, [line~] is being used to read through the contents of the [buffer~] via the [play~] object. Depending on the values given (i.e. where it is reading to and how long it is given to get there), the sound will play back at different rates and can play backwards.

Ex.3

A little more versatile is the [groove~] object.

1. Copy this routine:

a message tells [groove~] where to start from. This says to start reading at 1ms.



2. Lock the patch and click the '1' [message box]. [groove~] will play back the sound from 1ms to the end of the file at 1 x speed.

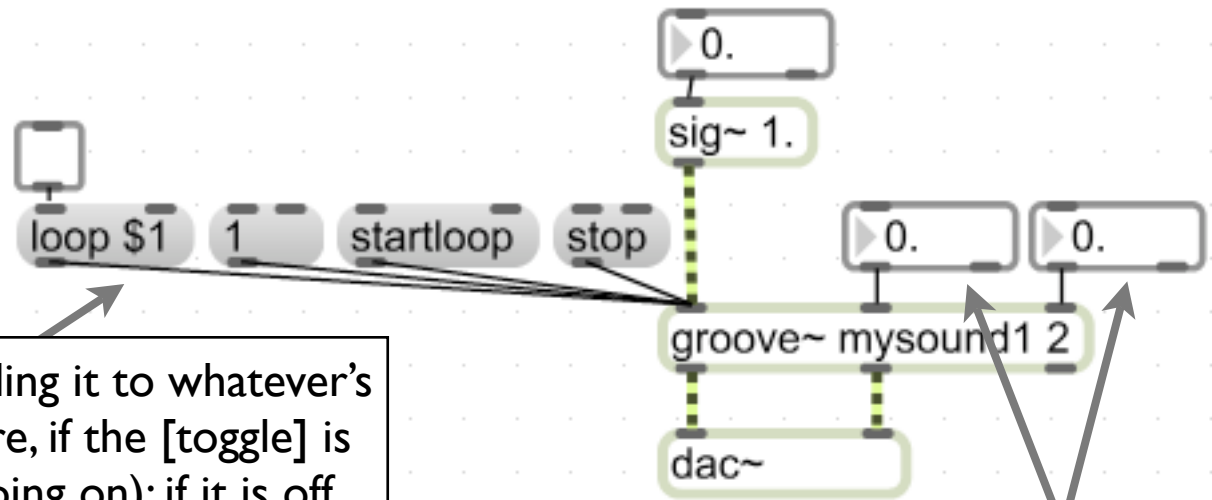
3. Change the value in the [message box] to '1000' and hit it.

4. Connect a [float] box to the inlet of [sig~], then lock the patch and change its value. You'll hear that the transposition behaves in the same way as it did with [sfplay~].



Ex.3 (cont)

5. Modify the patch as follows:



\$1 throughputs whatever it receives, adding it to whatever's already stored in the [message box]. Here, if the [toggle] is on, we will get 'loop 1' (thus turning looping on); if it is off, we will get 'loop 0' (thus turning looping off).

loop start and end boxes. The left box (start) should be a smaller value than the right (end).

6. Turn looping on by clicking the [toggle] above the 'loop \$1' [message box]. Then, set the values in the [float] boxes attached to [groove~] to '500' (left) and 1500 (right). Now hit first the '1' message box (wait to see what happens), then 'stop', then 'startloop'. You should notice that 'startloop' only plays the loop.