**Introducing sfrecord~**

**Electronic Music II**

**Spring 2013**

1. sfrecord~ is an object used to record audio files to the hard disk.
   1. Create a blank object and type sfrecord~. This will create the object, with the default single channel (mono recording).
   2. To create a stereo sfrecord~, set the number of channels (2) in the object:

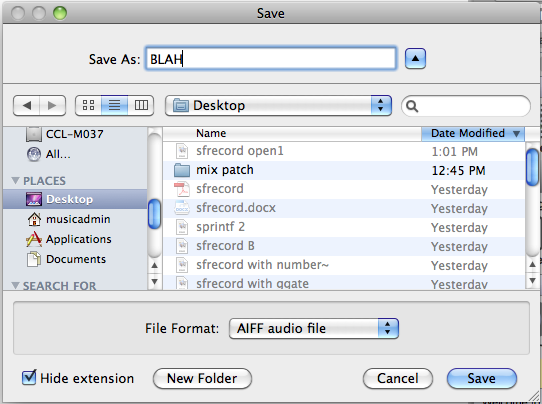
sfrecord 2ch.png

* 1. To use sfrecord~, we must send it the following, in order:
     1. An open message, with the filename to be created
     2. A message “samptype int24”, to set the output to 24 bits
     3. A trigger to record. This will be a message containing just the number 1.

1. For demonstration, we will be using a special feature of sfrecord~’s open messages.
   1. Create a message box containing only the word “open”. Connect the outlet to *sfrecord~*’s left inlet.

sfrecord open1.png

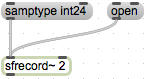
* 1. Clicking this message will open a file dialog, where we can choose a location and file name for *sfrecord~*’s output.



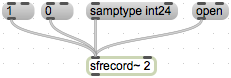
1. The message setting sfrecord~’s bit depth will be sent to sfrecord~ following the open message.
   1. Create a message box containing the following: **samptype int24**. Shown below:

samptype.png

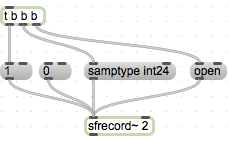
* 1. Connect the outlet of the message to the left inlet of sfrecord~.



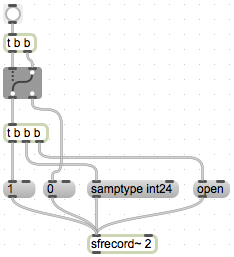
1. The final piece of information sfrecord~ needs is a 1 to begin recording, or a 0 to stop recording.
   1. Create two message boxes, one containing the number 1 and the other the number 0. Attach their outlets to sfrecord~’s left inlet:



* 1. This is a functional basic setup.
  2. One of the first improvements we can make is to ensure that we send information in the correct order. This is accomplished by using a trigger object:

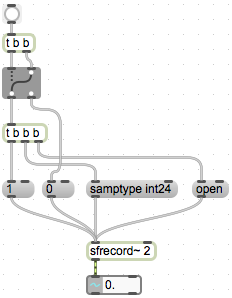


* 1. Now, every time we click the bang button at the top left, an open message will be sent, followed by our bit depth setting, followed by the trigger to start recording.
  2. This setup still requires us to manually stop recording by clicking the 0 message. We can include this function in our trigger setup with a ggate:



* 1. Now, each time we click the bang button, we will either initiate the sequence of events to start a new recording, or stop the current recording. We cannot send a start trigger without first stopping the recording.

1. Closing remarks
   1. One convenient troubleshooting object for sfrecord~ is number~. This serves as a timer, giving us a readout of how many milliseconds sfrecord~ has been recording. Attach the outlet of sfrecord~ to its left inlet.



* 1. Another convenient reminder-object is an integer box. Attach the outlets of our 1 and 0 message boxes to its inlet. This will reflect the current state of the switch.

