

•SPEED CONTROL•
 This sub-patch controls the speed of the clip being read from the selected folder by changing the value of the qmetro object. qmetro is measured in milliseconds, therefore a smaller number will make for a faster cycling through the frames. Taking input from a MIDI controller knob, I've reversed the input using the "scale" object so that turning the knob to the right makes the clip go faster.

•PLAYBACK TYPE•
 This sub-patch cycles through the type of playback when the button is pushed. 0 plays the loop from beginning to end (forwards), 1 plays the loop from end to beginning (backwards), and 2 plays the loop on a pendulum. This one tends to be the most useful because it's seamless.

•MAIN CONTROLS•
 This sub-patch controls the reading and writing of clips. First, a folder is selected, then a clip is written to this folder, then that clip is read from the folder in a continuous, controllable loop.

•DURATION COUNTER•
 This sub-patch counts the number of frames written to disk for each loop. When the "write to disk" toggle is turned on, this sub-patch starts counting. When the "write to disk" toggle is turned off, it stops counting and sends the number in the "bucket" to the outlet "clipDuration". This number is then used to scale the "rslider" input values from the midi controller, allowing you to control the clip with the full range of the sliders every time.

•CONVERT VIDEO TO .JFX FRAMES•
 This sub-patch takes video input from the grabWebcam patcher and converts it to single .jfx frames. This allows the video to be controlled fluidly without overtaxing the computer's resources. When the "write to disk" toggle is on, the video input from the grabWebcam patcher is output to individual frames in the selected folder. The way the patcher is set up, video is simultaneously written AND read- this makes for a seamless loop-station effect, which is important for this project.

•TRIMMER•
 This sub-patch adjusts the beginning and ending points of the clip being read. The "rslider" is a good direct controller for this, and mapping it to the sliders on the midi controller are crucial. Because the "rslider" has to have a set range of values, I've sent the clip duration to the maximum value on each of the scale objects. That way, a slider value from 0 to 127 can be mapped from zero to 500, or 629, or whatever the duration of the captured clip happens to be. This allows you to control the loop points quickly and seamlessly.

•CLIP READER•
 This sub-patch plays back the frames that were just captured from the WRITE sub-patch. It's controlled by the TRIMMER and SPEED CONTROL sub-patches. Clicking the "0" message by the "RESTART CLIP" note will set the current frame to 0, effectively restarting the clip. This is helpful in getting the timing of the clips synced to the music.

This sub-patch also sends the clip being read for mixing via the "s clip1" message.

