Forest SuperCollider Usage Guide

Set-up (Part 1) [only needs to be done once]:
1. Download Supercollider
2. Open SuperCollider
3. Click "File -> Open User Support directory"
4. Drag the folder within this folder titled "sc3-plugins" into the "Extensions" folder of the User Support Directory that you opened in the previous step.
5. Close SuperCollider
6. Download "Korg Kontrol Editor" if you don't already have it.

Set-up (Part 2):
1. Plug Korg nanoKONTROL2 and Korg nanoKONTROL2 into your computer.
2. Open the "korgPresets" folder within this folder.
3. For each of the files in this folder, do the following:
    1. Open the file with the "Korg Kontrol Editor" application.
    2. Click "Communication -> Write Scene Data -> Ok"

Global Software Usage [Preset Manager]:
1. Open the "0_main.scd" file (located in the main project directory).
2. Click "Language -> Evaluate File"
3. In the "PresetManger" window, click the "INIT RUN" button. This button must be pressed for the software to run. If this button is pressed at any time, the entire patch will return to its initial state.
4. **Stop:** stops all audio functionality.
5. **Reset:** resets the audio functionality to the last state the patch was in. **Except:** This button also sets the software to any new values entered in the "Global Output Routing" and "Input" modules of this software.
6. The fader on the right of the "PresetManger" window sets the **main volume** for all of the audio coming out of the patch. Like a **master fader.**

Global Output Routing [Preset Manager]:
1. The number boxes labelled "Forest Number of Channels" and "Spatial Number of Channels" determine the number of output channels these multi-channel samplers will utilize. Enter the desired number of channels and **press enter.** If you don't press enter, the software won't register the change. *You also need to click "reset" for these changes to be registered.*
2. The **"Forest Output Start"** and **"Spatial Output Start"** number boxes set which output channel the sequence of multi-channel outputs will start with. *You also need to click "reset" for these changes to be registered.*
3. **"Live Output"** sets which channel the stereo live processing effects will begin on. *You need to click "reset" for this changes to be registered.*

Preset Management [Preset Manager]:
1. **Save a preset:** enter a preset name into the text box above the yellow "save" button -> Press enter once you have typed the name -> Click the yellow "save" button
2. **Load a preset:** Click the drop down menu above the "INIT RUN" button and select the preset you want to recall -> Click the green "Load" button.
3. **Delete and Overwrite a preset:** Delete or overwrite whichever preset is selected in the drop down menu.
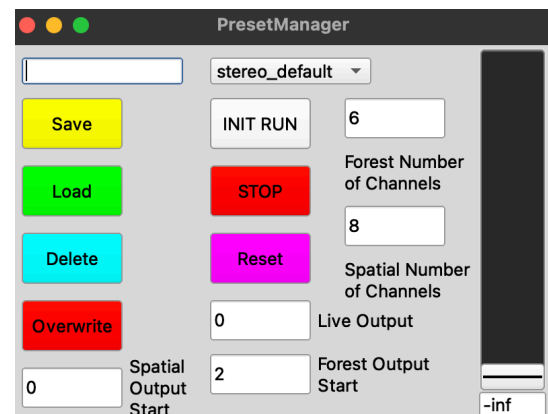
Audio Inputs [Inputs]:
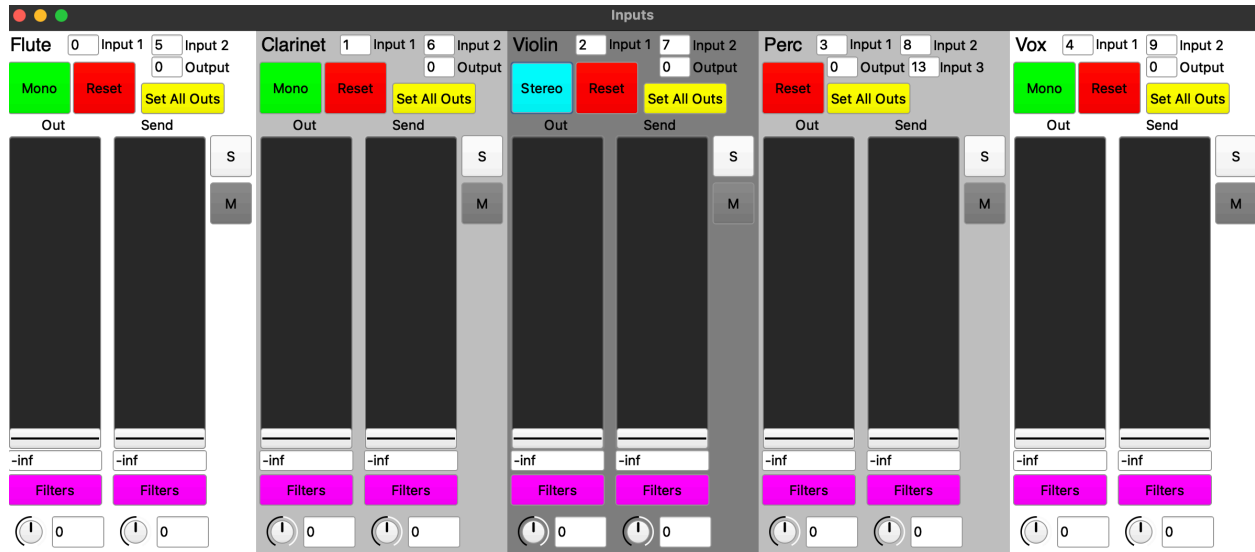
1. **Input 1, 2 and 3:** These number boxes allow you set which hardware input on your interface you want to use for each of the above channel strips. The **"perc" channel strip** is hard-coded to take three inputs, which are all summed to mono before passing though the channel strip. **The other channel strips** can use 1 or 2 inputs, depending on the state of the green "Mono" button. **Mono** means only the 1st input will pass through the channel strip. **Stereo** (like the violin channel in the above screen shot) indicates that "Input 1" and "Input 2" are both active and summed to mono before passing though the channel strip. **When changing the inputs, be sure to hit enter and the "Reset" button after inputting a value.**
2. **Output:** Sets which output channel each channel strips' dry signal will be routed to.
3. **Set all outputs:** Sets all of the channel strips' **outputs** to the same channel as the current channel strip.
4. **Reset:** Resets the channel strip to update to the new **input** and **output** values that have been entered.
5. **Out** fader**:** Sets the output volume of the dry signal being routed to a given channel's **output.**
6. **Send** fader: Sets the volume of an FX send being routed to the FX processing.
7. **Filters:** Click this button to access a LPF and HPF that can be applied to the dry output or FX send signal. Click the corresponding filter button to turn the filter on or off. The faders set the cutoff frequency.
8. **Pan:** The knobs below the magenta "filter" buttons pan the given signal.
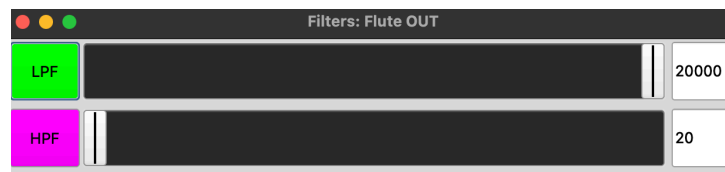
Sample Playback [Vox Samples, Perc Samples, and Sines]:

1. **Play** and **Loop:** Trigger a sample's playback or toggle its loop or hold functionality.
2. **Out** fader: Set the volume of a given sound.
3. **Filters:** Same as [Inputs]. See previous page.
4. **Routing:** The numbered buttons below the "Filters" button allow you to route a given sound to any speaker. The buttons highlighted in red indicate the speakers the sample will play through when triggered.

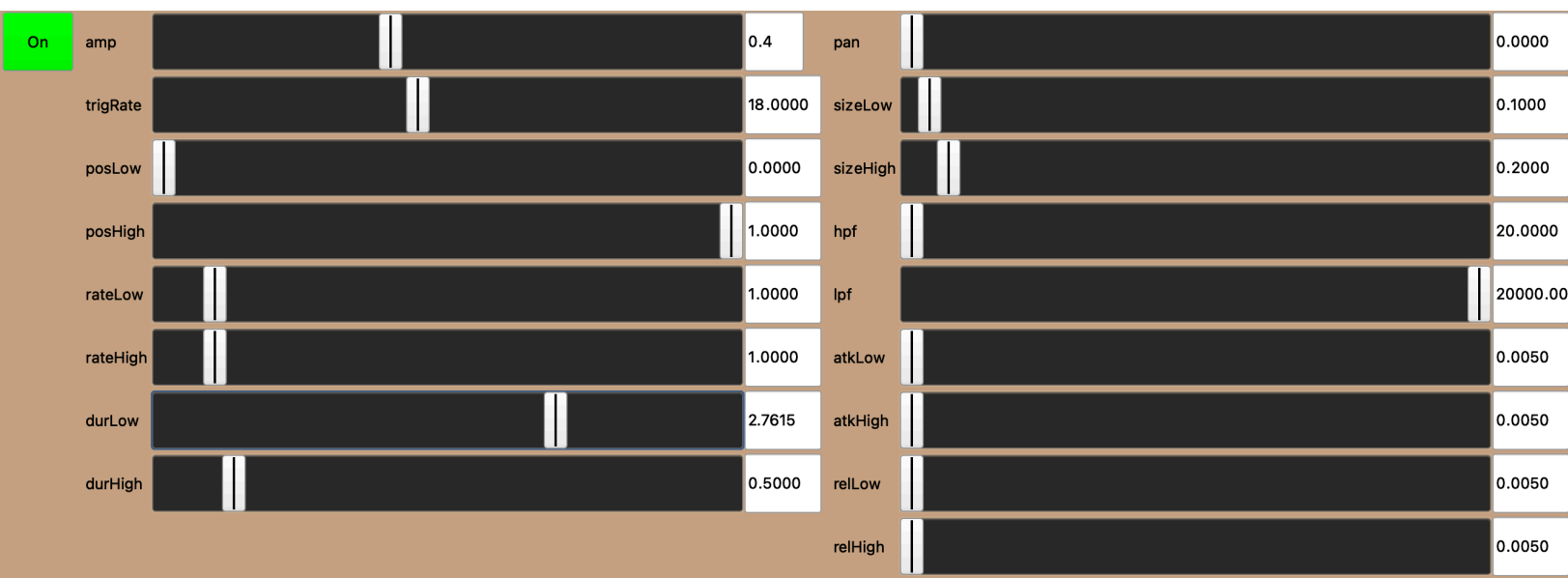Spatial Samples [Spatial Samples]:
1. **Loop:** Toggle a loop on or off.
2. **Out** fader: Set the volume of a given loop.
3. **Filters:** Same as [Inputs]. See page 2.
4. **Drop down menu:** When clicked, you are able to choose which spatialization algorithm will be applied to each loop.
    I. Random: Uniform distribution
    II. Random Walk (Brownian motion): like Max/MSP's "Drunk", with a deviation of 20%
    III. Same as above: deviation of 40%
    IV. Same as above: deviation of 60%
    V. Same as above: deviation of 80%
    VI. Same as above: deviation of 100%
    VII. Random Walk triggered by an onset detector that is listening for onsets within each sample. Various deviations…
    VIII. Etc etc etc
5. **Pan Freq:** Set the frequency (panning speed) of your chosen spatialization algorithm.
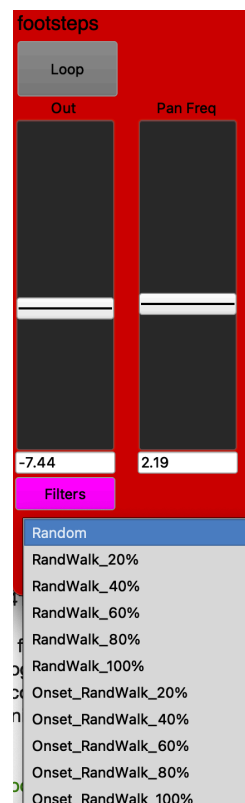
Forest Generator [forest0 (start of piece), forest1 (piece end)]:

Generates chopped up/looped samples from a bank of audio.

1. **On/Off:** Turn sample generation on or off.
2. **Amp:** Amplitude each generated sample.
3. **trigRate:** How fast are samples being generated (density).
4. **posLow/posHigh:** How much of each sample files the forest audio banks are being accessed by the generator. *You shouldn't have to manipulate this parameter.*
5. **rateLow/rateHigh:** A random range that determines the playback rate of a generated sample when triggered.
6. **durLow/durHigh:** A random range that determines the overall duration of each sample.
7. **Pan:** Sets the probability that a sample will be panned to a random static location (0) or will be panned across a random horizontal vector (1) for the chose random duration.
8. **sizeLow/sizeHigh:** A random range that determines the loop duration for each generated sample. If the value generated for this value is greater than the value generated for the sample's overall duration (via **durLow/durHigh**), the sample will not be looped.
9. **HPF/LPF:** High-pass and low-pass filter.
10. **atkLow/atkHigh:** A random range that determines the attack portion of an ASR envelope applied to each generated sample.
11. **relLow/relHigh:** A random range that determines the release portion of an ASR envelope applied to each generated sample.

On				
amp	0.4	pan	0.0000
trigRate	18.0000	sizeLow	0.1000
posLow	0.0000	sizeHigh	0.2000
posHigh	1.0000	hpf	20.0000
rateLow	1.0000	lpf	20000.00
rateHigh	1.0000	atkLow	0.0050
durLow	2.7615	atkHigh	0.0050
durHigh	0.5000	relLow	0.0050
		relHigh	0.0050

Live Processing Effects [Ensemble FXs]:

Bit Crusher	Harmonizer	Reverb	Octaver	Convolution
Params / Off	Params / Off	Params / Off	Params / Off	Params / Off
Receives	Receives	Receives	Receives	
-inf	-inf	-inf	-inf	-inf

1. **On/Off:** Turn FX on or off.
2. **Faders:** Output volume of each FX.
3. **Params:** This button opens a sub menu that allows you to set the individual parameters of each FX device.
    a. NOTE: The convolution FX only takes input from the vox input. This FX device bit crushes the incoming signal before sending it though a convolution reverb. This bitcrushing is mapped to the amplitude of the input signal. The "bitDepthLow" fader sets the amount of bitcrushing that is applied when the vocalist is at max volume, the "bitDepthHigh" fader determines what amount of bit crushing is applied during silence.
4. **Receives**: Opens a sub menu that allows you to set the receive volume of each input channel strip.
    a. NOTE: By default all receives are set to unity aside from the vox input which is set to -inf. (As indicated in the score)