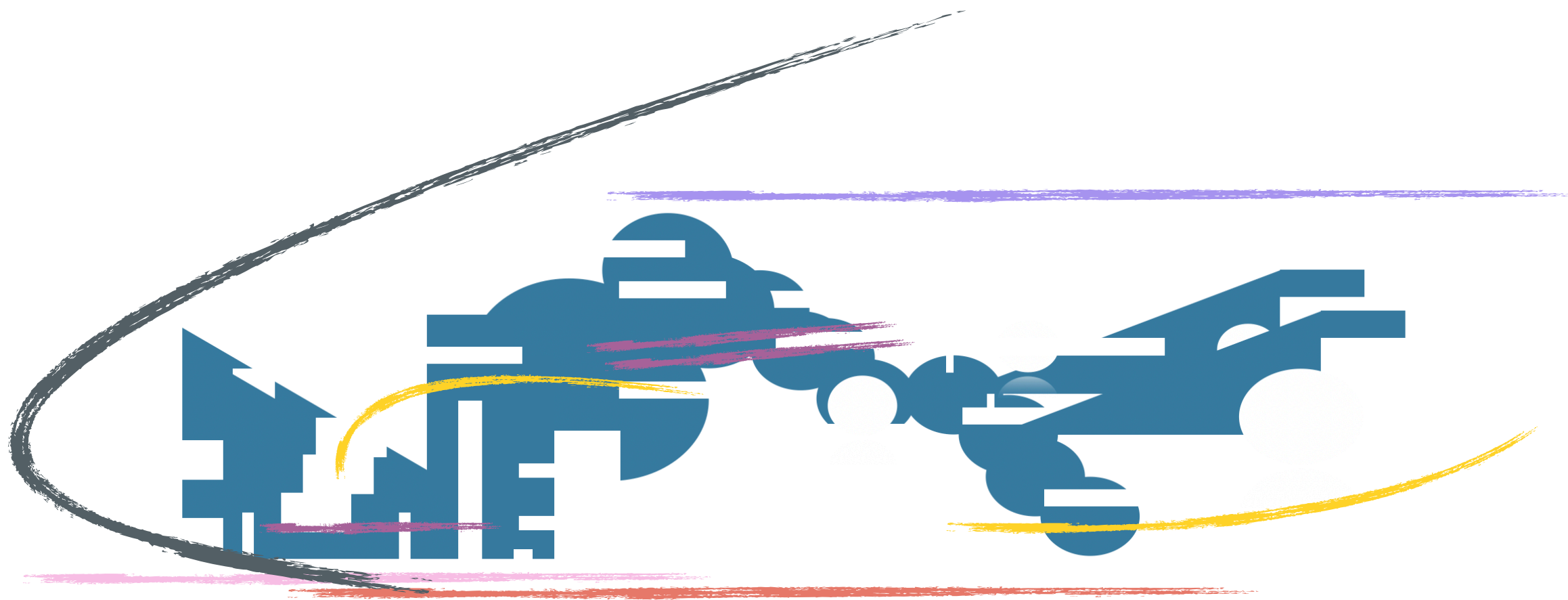


Reactionaries

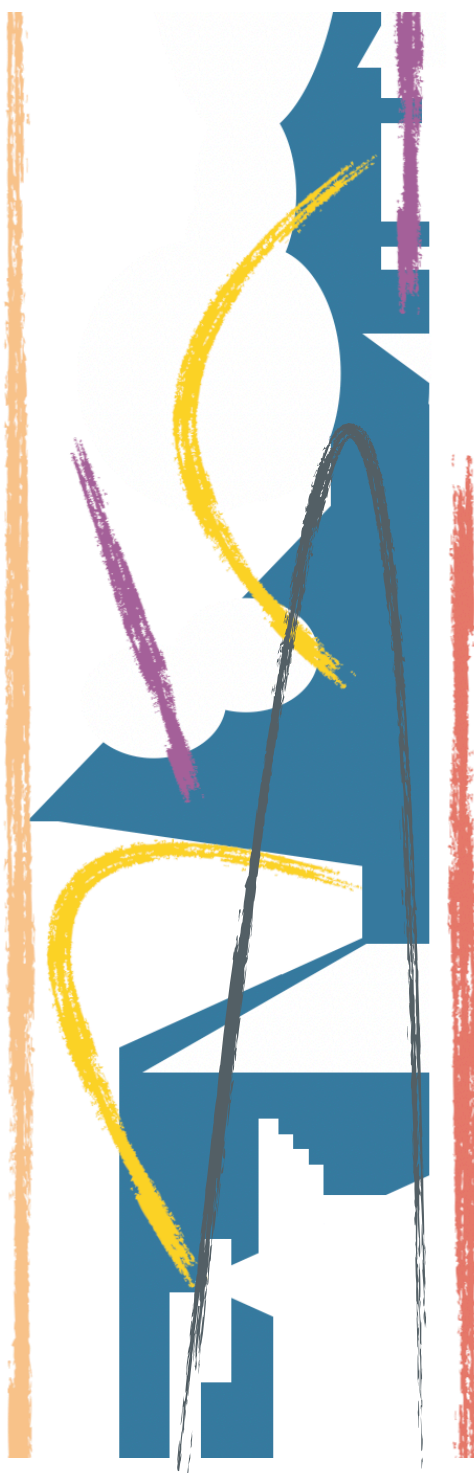
STEVEN LEWIS



Reactionaries

STEVEN LEWIS

1. Synopsis
2. Source Material
3. Notation
4. Electronics Notation
5. Electronics System
6. Instrumental Score with Parameters
7. Electronics Score with Parameters
8. Instrumental Score Template
9. Electronic Score Template
10. Graphic Score (no words)



Reactionaries is a piece for piano, bass, vibraphone, and electronics that experiments with using graphic score notation and interpretive, reactive improvisation as techniques in studio composition.

This performance will last approximately five minutes and require four performers. The order of “reacting” (meaning the order of recording) will be as follows:

- 1) Vibraphone Player
- 2) Piano Player
- 3) Upright Bass Player
- 4) Electronics System (Audio-Visualizer built in Max/Msp~/Jitter)

The vibraphone performer reacts to the source sound (provided by the electronics operator), the piano performer reacts to the first performer's response to the sound file, and so forth. Four parameters can be altered- timbre, note density, dynamics, and pitch trajectory. The notation section below delves into detail regarding the definitions and interpretations of these parameters.

As opposed to simultaneous group improvisation acting as the input into the software, what will take place is a chain of recordings where each performers' improvisation is not based on the output of an entire group recording, but solely on the instructions provided in the score, relative to the last performers' interpretation. Thus, the composition as a whole will not be heard until after all of the parts are played separately, processed, then subsequently mixed and visualized within the electronics component.

There are two scores: one for the three instrumentalists and one for the electronics operator.

There are two separate copies of each of the scores below: one with the time increments relevant to this particular piece, and another, more utilitarian, symbolic score for further attempts.

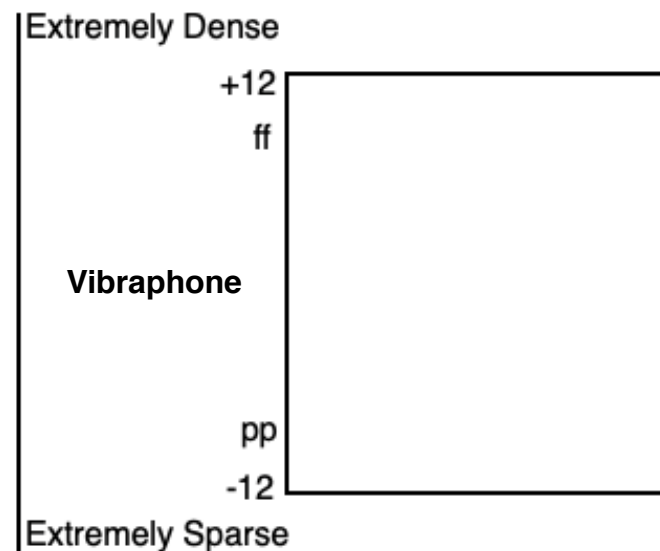
Tone Row:

Piano

Double Bass

Graphic Staff Key:

Timbre Indications



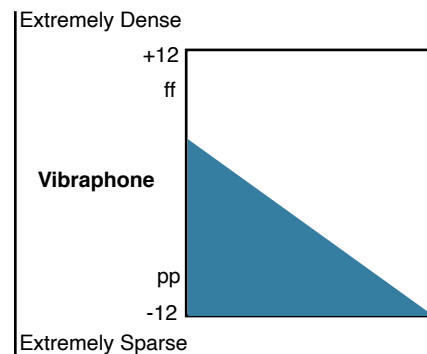
Phrase Leading Indications

The following notation can be interpreted by referencing this page. All information for the successful performance of this piece is written in or around the white box. Each white box represents a time increment, which is usually kept at a uniform duration for each box so as to keep the performance as simple as possible. In this case, the contents of each white box represent 30 seconds in duration.

Lines describing their respective parameters will stay only within their corresponding boundaries on the timeline/graph. Meaning, the performer can expect lines that depict pitch information to exceed the length of the lines describing dynamics, as dynamic markings are written "inside" the pitch lines. Lines indicating a change in timbre are indicated by lines marked outside of the box, moving horizontally left-to-right.

Shapes:


Indicate the amount of choice the improviser has with respect to note density over time. The entire white box below represents 30 seconds of time (00:30). The performer can improvise within a specific range of note density wherein the shape fills in varying amounts of white space. For example, the triangle below represents 30 seconds of time where the player has the choice to play anywhere from "medium" to extremely sparse density. Since the shapes represent a range of density choices, the performer could have alternatively played with extremely sparse note density throughout the entirety of the 30 second increment.

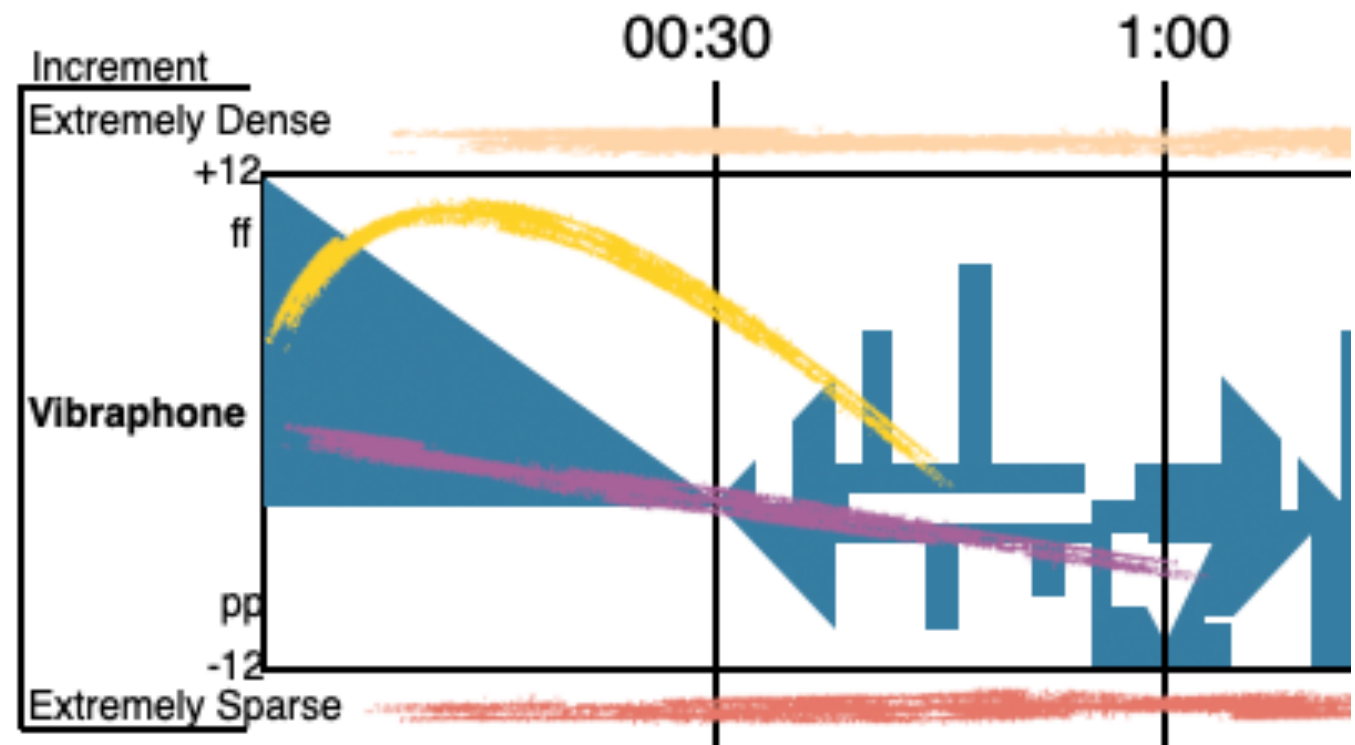


Lines:

Indicate a specific gesture/motion in the music. Where there is space between successive lines of the same color, it is expected that the performer make their own decisions as to how to arrive at the next specific instruction. It could be a gradual or sudden transition to the next instruction. The key to each line is given on the left side of each graph (y-axis).

Pitch Trajectory 

Dynamic Contour 



Putting it all together: Over the first 30 seconds, the vibraphone is leading the first phrase (indicated by the red line), bowing (peach line), has the option to play from extreme to average note density (blue triangle shape) executes a swell in dynamics from mf-ff-mf, and plays a phrase having a gradual downward pitch trajectory.

Timbre Changes:

Use of Bowing 

Percussive 

Plucking 

Lines = Panning Gestures

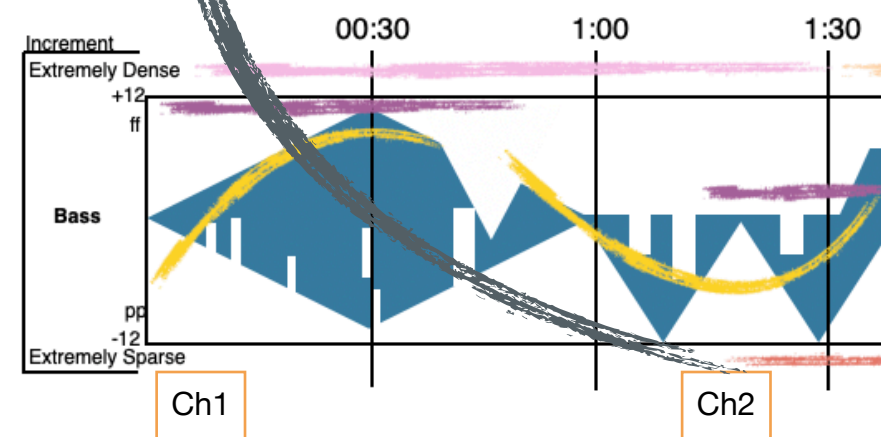
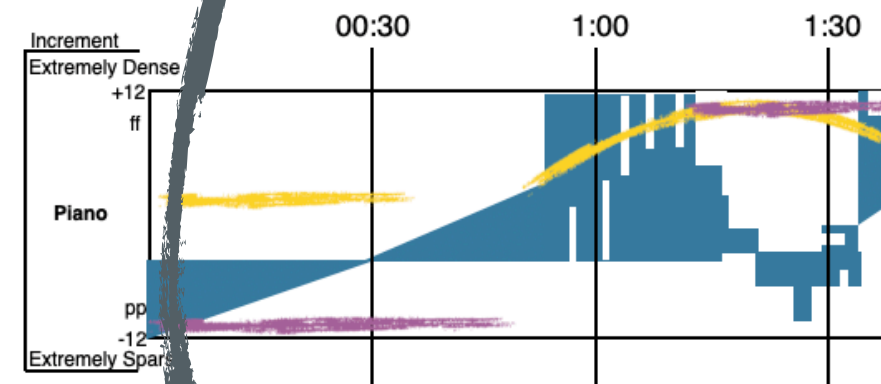
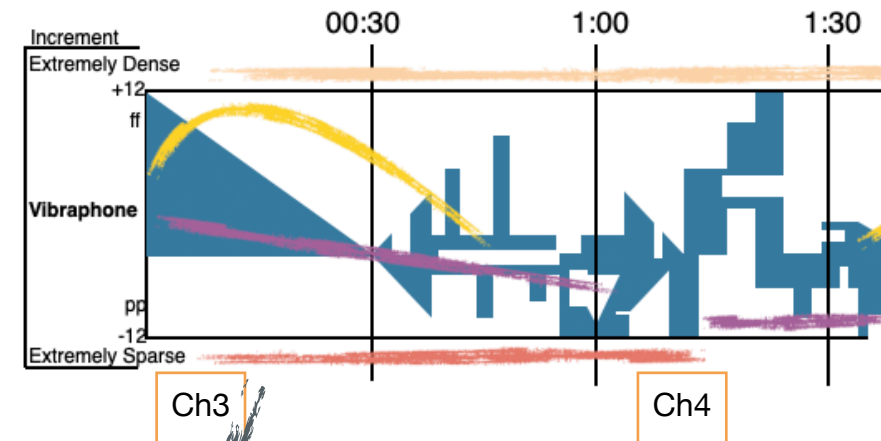
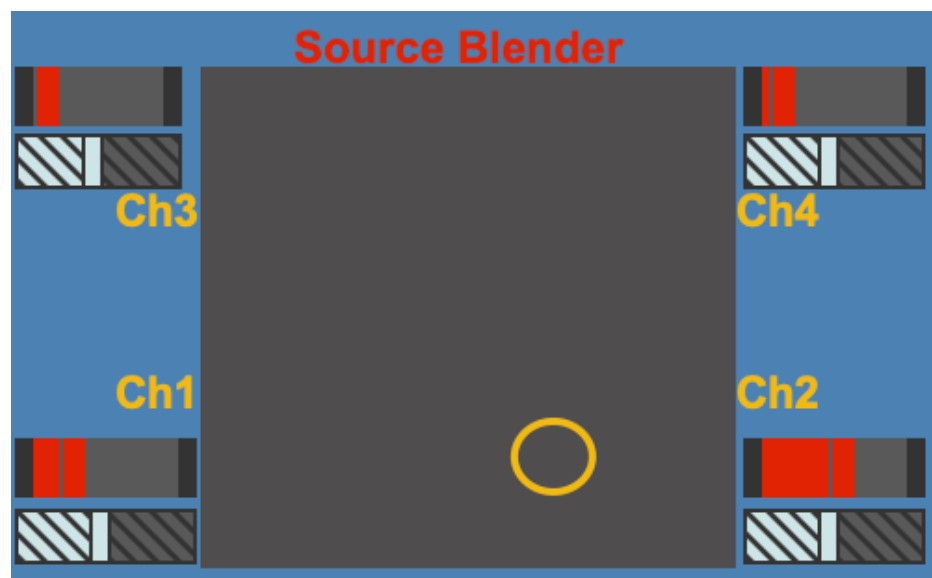
The gray lines represent which gestures the electronic operator uses while mixing the four sound sources together. These “painted” gestures are based on the motion they mirror when interacting with the Max UI. These gestures occur over the specified time increments of the boxes and coincide the beginning and end of phrases (red lines).

Similarly to the the yellow pitch trajectory markings, gaps in grey lines indicate that choice has been given to the performer as to how to arrive at the next provided gestural instruction, within the correct time increment.

Example to the Right: In the opening phrase - occurring over the first 1 minute and 20 seconds -the electronics operator has to smoothly “bend” the gesture from Ch3 to Ch2. The next phrase at 1:20 initiates a successive gesture as well.

The channel boxes are not included in the actual score. The idea must be internalized and subjectively interpreted by the electronics operator.

It may seem odd to include a fourth channel when there are only three instrumentalists, but this precludes the possibility of the electronics mixing their own sonic output as a fourth voice in the ensemble. The fourth channel serves this purpose (a photo of the algorithmically driven audio [bpatcher] below).



Gestural decisions ultimately decide the real-time cross-fading of visual effects as well.

This is responsible for individually processing all three instrumentalists and mixing them with the system's independently generative output.

The screenshot displays a sophisticated digital audio workstation (DAW) interface, likely a custom-built software environment. The interface is divided into several functional panels:

- Audio File Playback:** Features a piano roll, a waveform display, and controls for playback rate (3.51), repeat last sample, and zero-crossing synth. It includes a 'Drag and Drop Indv Sample' and 'Sample Folder' area.
- Comb Filtered Audio:** Shows a piano roll and waveform, with parameters for Pitch (13), Fund. Freq. (17.323914), Input Gain (0.186), FF Amp (0.043), and FB Amp (0.611).
- AlgoDelay:** A delay processing module with a threshold of 0.14, a delay time of 1555, and an FB Amount of 0.777. It also includes an LPF (Low Pass Filter) set to 1555.
- Generative Synth Params:** Contains two synth modules: 'Big Ben Bell' and 'Bassline'. The 'Big Ben Bell' module has parameters for polyphony (10), harmonic (1-5), stereo, attack, and decay. The 'Bassline' module has parameters for waveform (voices, glide, sub osc, modwave, wave), filter (type, cut, res, key, modfilt, env), vibrato mod (speed), and amplitude envelope (attack, decay, sustain, release). Text annotations explain the use of 'Borax' for finding delta times and controlling parameters.
- AutoDrone:** A visualization of drone patterns with four lanes (1-4) showing note sequences.
- Source Blender:** A routing module with four channels (Ch1-Ch4) and a central mixer knob.
- MC Source Blender:** A module for mixing multiple sources.
- Narration Buffer:** A module for audio narration with playback rate (1.03), stop/start, and loop controls.
- MultiSpeed Sampler:** A sampler with playback rate (1.03), stop/start, and loop controls. It includes a 'Pitch Shifter' with 'p LFOs' and three spread modes: 'Spread harmonically' (0.255 to 1.040), 'Spread deviantly' (0.176 to 0.053), and 'Spread exponentially' (-1 to 0.219).
- MC Delay:** A delay module with a threshold of 0.02, a delay time of 1962, and an FB Amount of 0.981. It includes an LPF set to 1962.

At the bottom left, there are labels for 'p gigaVerb' and 'p DACS'. The interface is highly detailed with various knobs, sliders, buttons, and waveform displays, indicating a complex and flexible audio processing environment.

INSTRUMENTAL SCORE - WITH PARAMETERS

REACTIONARIES

