JUDITH SHATIN

Amplified Zipper Quartet
& Interactive Electronics

PROGRAM NOTE

Zipper Music is part of my *Quotidian Series,* inspired by the rich sonic tapestry of our daily world. The series features digital music as well as electroacoustic pieces that are performable by those without traditional music training. The goal of the series is twofold: to create music from sounds that we encounter in our daily lives but often ignore and to offer music performance opportunities to all.

The idea for this piece came to me suddenly when I was fiddling with the zipper on a vest and started noticing the variety of sounds and rhythms as I pulled the zipper in different patterns as well as pulling the material away from and closer to my body. I became fascinated and decided to create *Zipper Music* for amplified zipper players and interactive electronics. Composer/technologist/performer Max Tfirn created the Max patch in consultation with me, a process with a great deal of delightful experimentation. My initial foray was a version for zipper player duet, with very specific instructions for both the timing of the zipper players' parts and the MIDI controllists' changes. That version is still available. However, I also wanted to add a more collaborative element to the zipper player parts as well as making it performable by groups ranging from duet to quartet. The glyphs I created for the zipper pulls are the same in both, as are the processing effects. The electronics have also been created with flexibility in mind: they can be controlled with 1 MIDI controller, or with 1 MIDI controller per zipper player. These everyday objects offer a rich musical source, further expanded by the magic of electronic processing. For more information, visit www.judithshatin.com. –JS

Zipper Music Quartet: Setup & Instructions
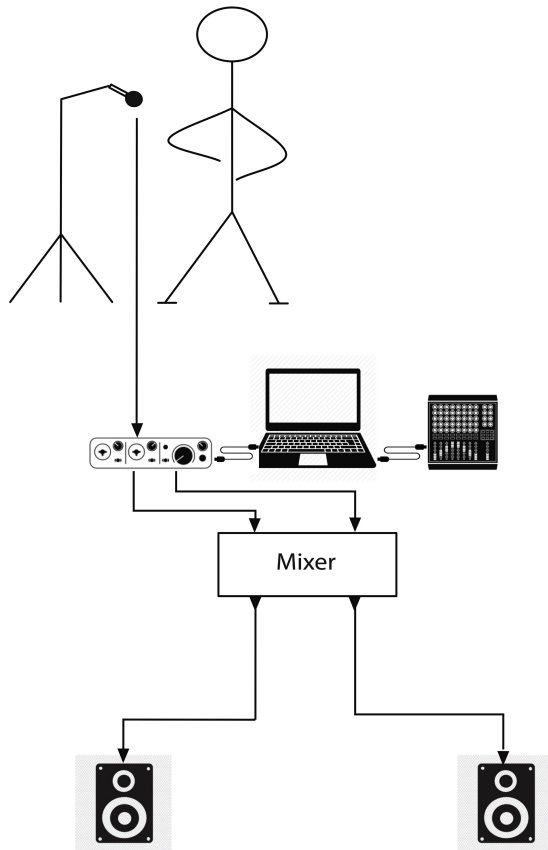
Mixer

The diagram to the left shows the setup for each zipper player. Each plays into a mic which is routed through an audio interface to the computer, where the sound is manipulated with a Max patch and then sent to the mixer. The resultant sound ideally is broacast from individual speakers, though stereo of the mix is also acceptable. If possible, separate the players by a foot or so.

There are multiple options for the interactive electronics. These range from 1 MIDI controller per zipper player, to 1 for the entire group. Each involves an audio interface connected to a laptop running the Max patch. While the original was created using an AKAI MidiMix, you can set up a variety of controllers to work with the Max patch. Your controller(s) should have 8 sliders and 2-3 knobs per slider. If you have 1 MIDI controller setup per zipper player, you can decide which parameters you each control, or each use the full panoply.

The duration is flexible, with a minimum of 8:00 and a maximum set by the performers either prior to or during the course of the performance. There are small boxes, just below the section names on the score, with only the first filled in at 0:00. Performers should feel free to use these if they determine a fixed duration for each section. However, they may also choose a freer approach. Performers should designate a section cue giver.

Zipper Player Equipment

Players need a lightweight jacket, windbreaker or vest with a zipper front whose material has some give to it so you can easily pull the material away from your body. Make sure you like the sound of the zipper, and that you have about 6-8" of zipper length to use, without going all the way down or up to the top. If you go too near either end, the zipper may get stuck.

Use one hand to control the zipper, and the other to pull the material tight at the bottom. You can change the timbre of the zipper depending on how close you hold the material to your body and how tautly you hold it. Experiment! This is something you can change over the course of the piece, depending on the resonance you want. Make sure you are close enough to the mic and that it is at an angle that amplifies the zipper well.

Performance Instructions: Zippers and MIDI Controllers

Before going to the zipper score proper, practice the different types of pulls in the glossary. The zipper players choose whether to start by pulling the zipper in the same direction or not and then just go in the direction necessitated by the previous gesture as the gestures are direction neutral. However, relative heights of individual icons correspond to the size of the pull. Slanting icons show relative duration of the gesture. If you have a slow zipper pull, move the material away from your body a bit more, still holding it taut, creating a slightly larger resonant area. Icons specifying between 1 and 4 pulls are shown, sometimes showing approximately where on the zipper to perform them (Low, Medium, High). When there are repeated pulls, notated in boxes, use a fast tempo. Boxed icons do not specify a specific number or duration of individual pulls, but rather specify a fast tempo and the extent of the action. The score shows the types of icons/gestures to use in boxes to the left of each section. In some sections these are specifically notated, with relative pull heights indicated. In others, players are directed to draw from all of the options listed as they wish.

Max Patch

The MAX patch contains 7 parameter modules that can be operated a MIDI controller. The controller score shows the degree and rate of parameter changes over time, with the specifics determined by the controllist. One member of the zipper player ensemble should cue the controllers at the start of each section, and at the end of the piece. There are a number of options regarding the number of MIDI controllers. These range from 1 for the entire ensemble, to 1 for each Zipper player. In the latter case, the controllists may want to divvy up the modules either per section or for the duration of the piece. Or, each can use the full panoply.

Composer/technologist Maxwell Tfirn created the Max Patch for the *Zipper Music* series in consultation with me. After connecting the controller, when you first open the patch, go to MIDI Matrix Setup bar. When you open the MIDI Matrix, you will see the controller you are using in the drop-down menu. If you are using controller other than the AKAI, you will have to set it to control the parameters specified in the modules. There are instructions on the MIDI Matrix Setup screen. Next, save the settings. Each time you open the Max patch you will need to retrigger your controller presets. Then close that window.

To test the patch, or to experiment with the various effects, put the patch in Playback mode (red box near the upper left corner), and make sure the modules are turned on (box to the right of the Off/Mic/Playback). Next,

find the Record On/Off Sound Check lable. Click open the right to the File Playback and hit 'open' to load a soundfile. Tap play on and loop on. You can now test the effects of each module on the sound. Several zipper sound files are provided for testing. When you are done testing and ready to rehearse with the zipper player(s), change from Playback to Mic.

MIDI CONTROLLER PARAMETERS
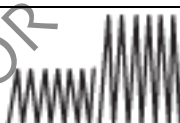
There are 6 controller parameters + a mic input slider.   If your controller has a master gain in addition, that can be set as well. Since the sonic transformations depend on the timbre of the particular zippers as well as the controller you are using, controllists should adjust the settings as needed for their devices. You can set the amplitude range of the sliders within the patch. There is also an input filter so that you can control any issues such as unwanted feedback.

The controller score indicates amount of processing, rather than specifying exact combinations. The ensemble should experiment with these. Note that the Glitch Parameter must be turned on to use
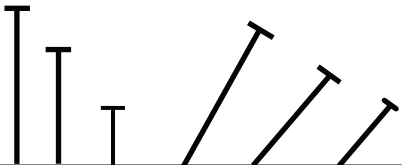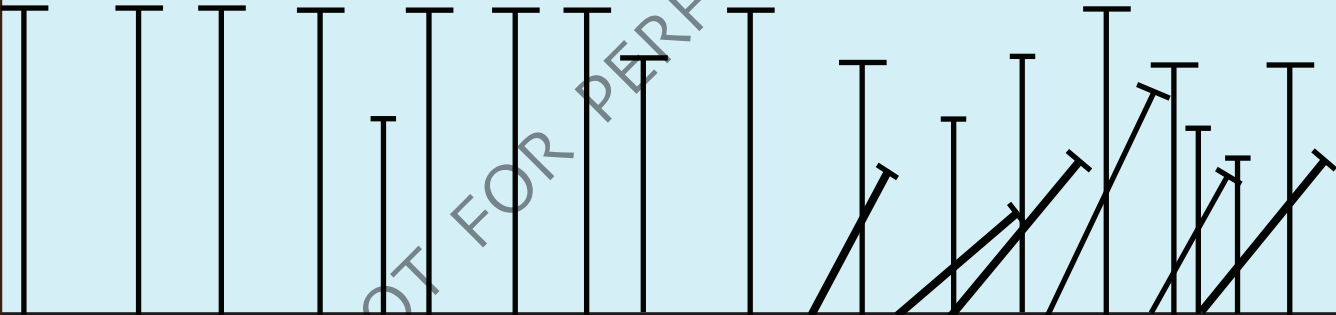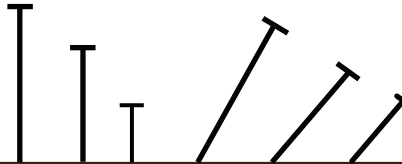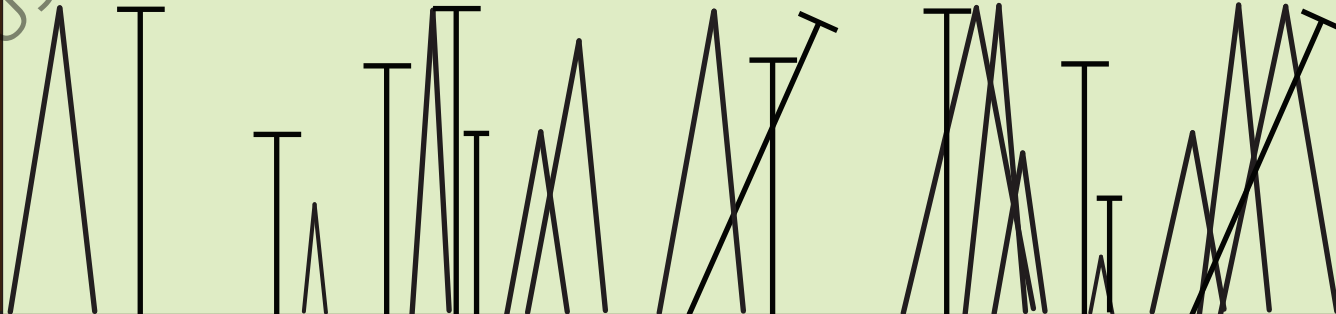
S1 Allpass   S5 Heterodyne
S2 Bandpass   S6 Band Generator
S3 Reverb   S7 Glitch
S4 Feedback   S8 Master Gain
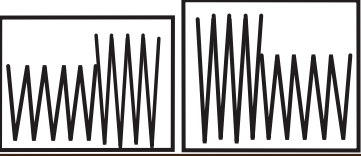
Zipper Pull Icons
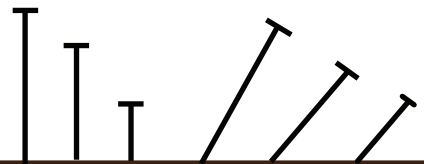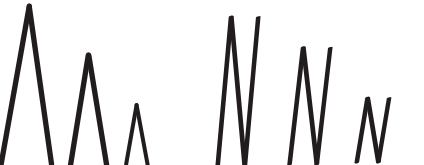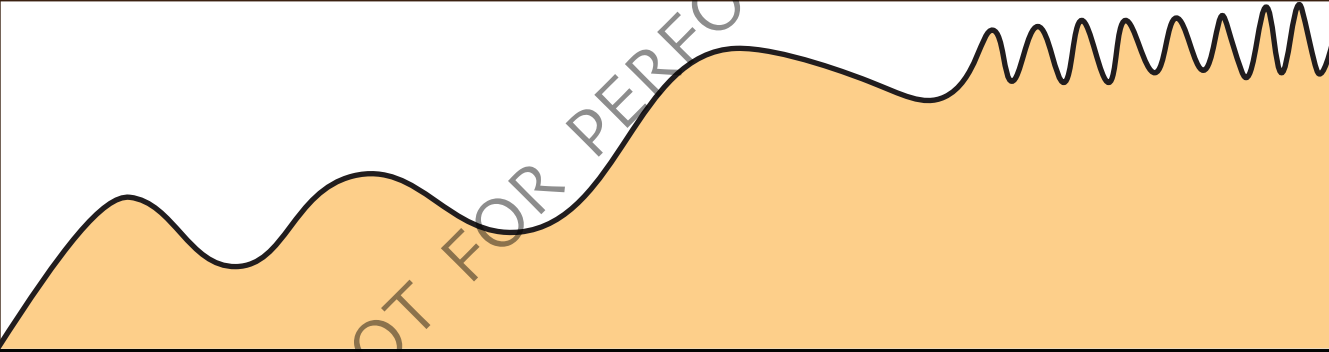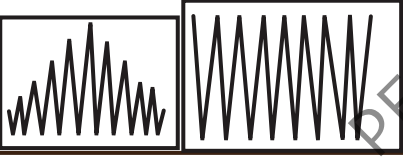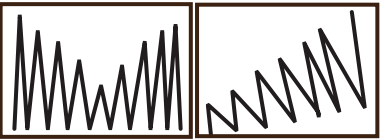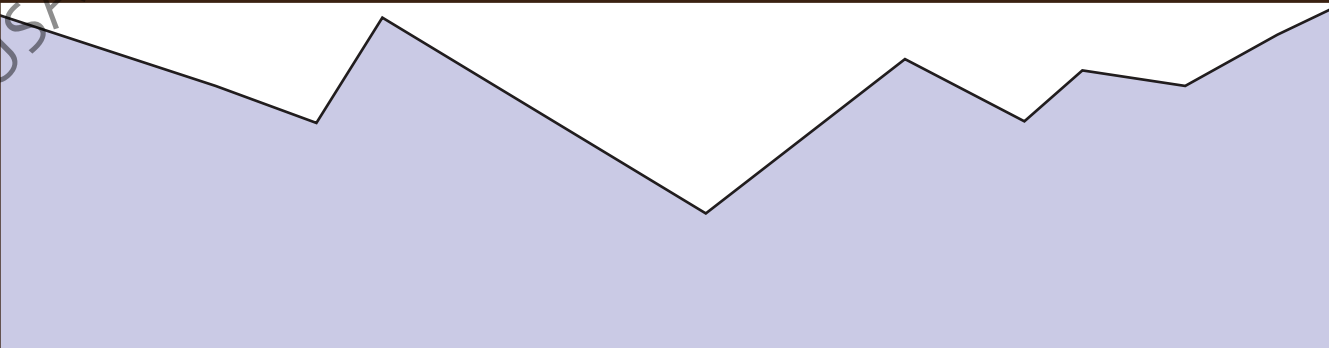
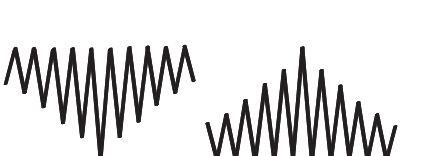|			
	Single, quick pull		Multi-pull, expand and contract pull size.
	Single pull over specified duration		Multi-pull for specified duration
	Dual pull		Multi-pull, different length blocks
	Triplet pull		Multi-pull, multiple level plateaus
	4-pull group		Multi-pull, change height and return to previous

Zipper Music Quartet
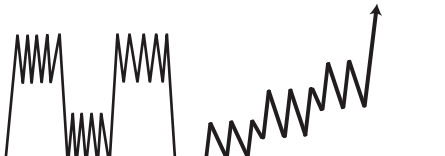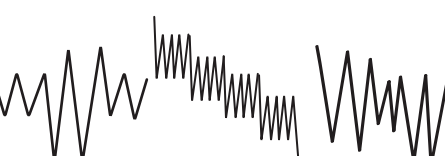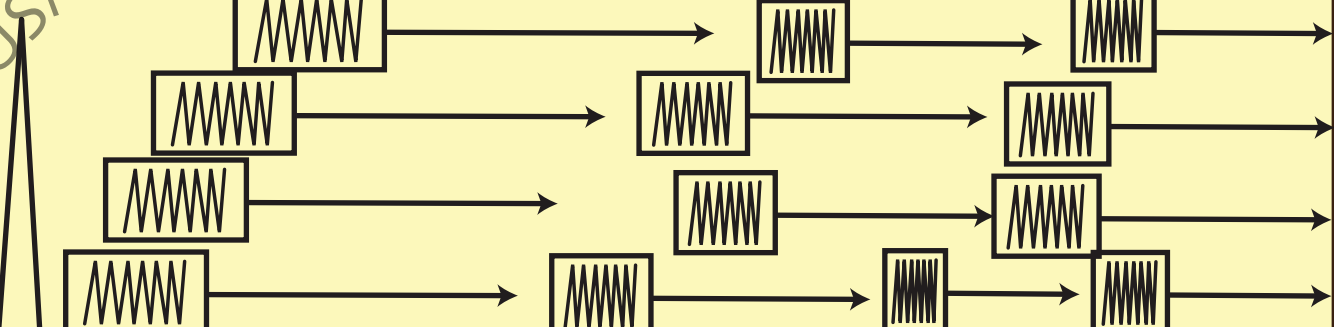
Icons

Cue 1   Section 1

| 0:00 |

Start with quick unison long pull. Next, players take turns, random spacing between. Gradually increase density, intersperse shorter and/or slower pulls, go from no to increasing overlap.

U   I

Cue 2   Section 2

Unison duple start, then single pulls intermixed with duple. Change lengths and density as shown below. Again include silence, interrupting increasingly intense actions.
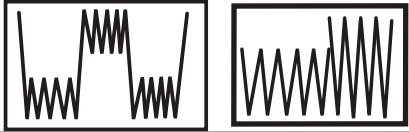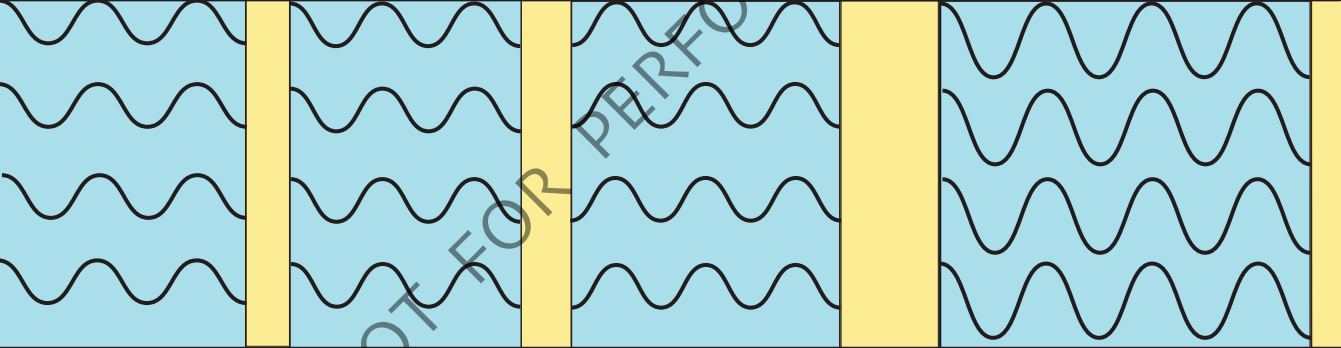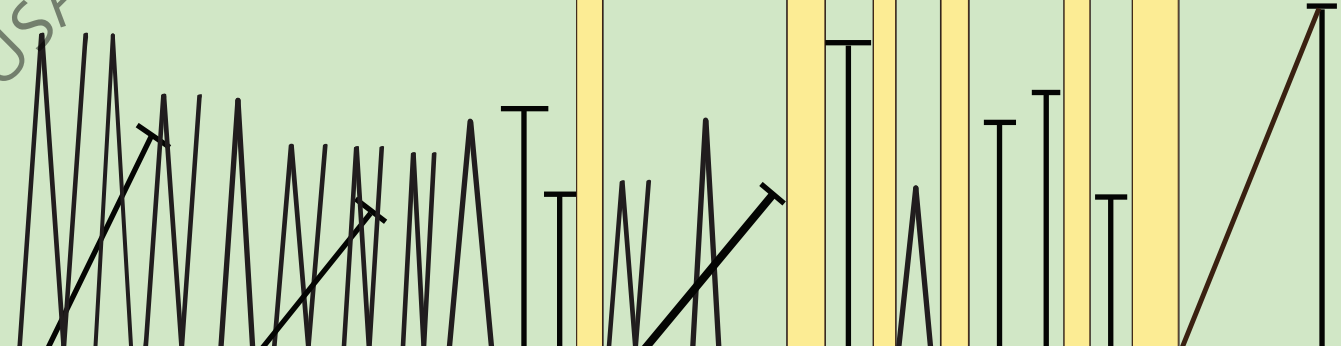
U I

Zipper Music Quartet

Icons

Cue 3 — Section 3

Continue single, duple and triple pulls, build rhythms and increase layering. Change lenghth and duration of pulls; build intensity and move towards rhythmic synchrony following shape below.

Cue 4 — Section 4

Extend and trade continuous gestures, changing size and shape of pulls according to icon list. Layer gestures. Start together, imitate one another, follow density shape below.

Zipper Music Quartet

Icons	Cue 5	Section 5

Start together before moving independently. Continue from previous section, now with swirls of continuous gestures, based on icon list and size of swirls below. Take occasional individual breaks.

U I

	Cue 6	Section 6

Start with unison duple pull,]move to continuous gestures, changing size and shape of pulls based on listed icons. Imitate each other in pattern type and length. Trade inspired by diagram.

U I

Zipper Music Quartet

Icons	Cue 7	Section 7

Continue extended gestures in dense waves with multiple sudden unison breaks as suggested below, increase duration of breaks as you move through the section, then end with a brief silence.

Cue 8	Section 8

Start with dense duple & triple pulls. Gradually become sparser, with single pulls becoming more prominent. Gradually add more silences. End with unison silence, then a slow pull to a fast one.

Zipper Music Controller Score

Judith Shatin