

Four Lines

David Rosenboom
(2001)

String Quartet Version

Performance Notes

The score is to be played in loose synchrony with a stereo, digitally synthesized, audio track containing electronic sounds. Listen for meaningful coincidences and overlapping resonances. Try to stay in sync as closely as possible, though perfection is not the object. For reference, the notes that are contained in the score also initiated the synthesis of corresponding electronic sounds, though their dynamic evolution may make this more or less easy to follow at times. Optionally, and by prior agreement, each player may depart from the score at a prearranged point to improvise a solo, while the other players continue playing the score. The soloist should rejoin the score at another prearranged point.

For synchronization with the digital audio track, use a tempo close to MM=100. Accidentals apply only to the notes they precede.

Each player, in a manner suiting their instrument and their interpretation of the music, may freely determine articulations. Dynamics provide general guidelines only, and it is intended that articulations, dynamics, timbre, bowing effects, and tone quality transitions be shaped through improvisation in response to and in interaction with the electronic lines. These interpretations may be extreme.

The sounds of each stringed instrument in the quartet may also be expanded through use of electronic signal processing. One example using pitch shifters controlled by envelope followers is shown in the score. Players may choose other options, including pedals they can operate themselves. In the example shown, players control the processing by means of their performed dynamics. Whatever method is used, it is the quartet players who should be influencing the signal processing applied to their instruments.

Four Lines is an extension of ideas contained in my earlier composition *Two Lines* (1989). It is about exploring the meaning of stability and instability in strict and open forms. As in *Two Lines*, hearing unpredictable and fascinating musical details emerge from superimposing multiple interpretations of common musical materials is part of the intent. In this case, the composition of two sets of superimposed lines—string quartet and electronics—was inspired by the juxtaposition of continuity and extremes in sounds associated with mappings of electrical, event-related potentials (ERPs) recorded from the brains of two performers participating in my self-organizing chamber opera *On Being Invisible II (Hypatia Speaks to Jefferson in a Dream)* (1994-1995). The wonder of appreciating imperfections in something produced through the application of great discipline and effort is part of the joy.

Four Lines was originally conceived for two or four instruments or multiples of these groups. Five versions have been arranged: 1) for two high-range and two low-range instruments or multiples of these pairs, 2) for two high-range instruments or multiples of two, 3) for two pianos or other keyboards or multiples of two, 4) for four Bb trumpets/piccolo trumpets or multiples of four, and 5) for string quartet.

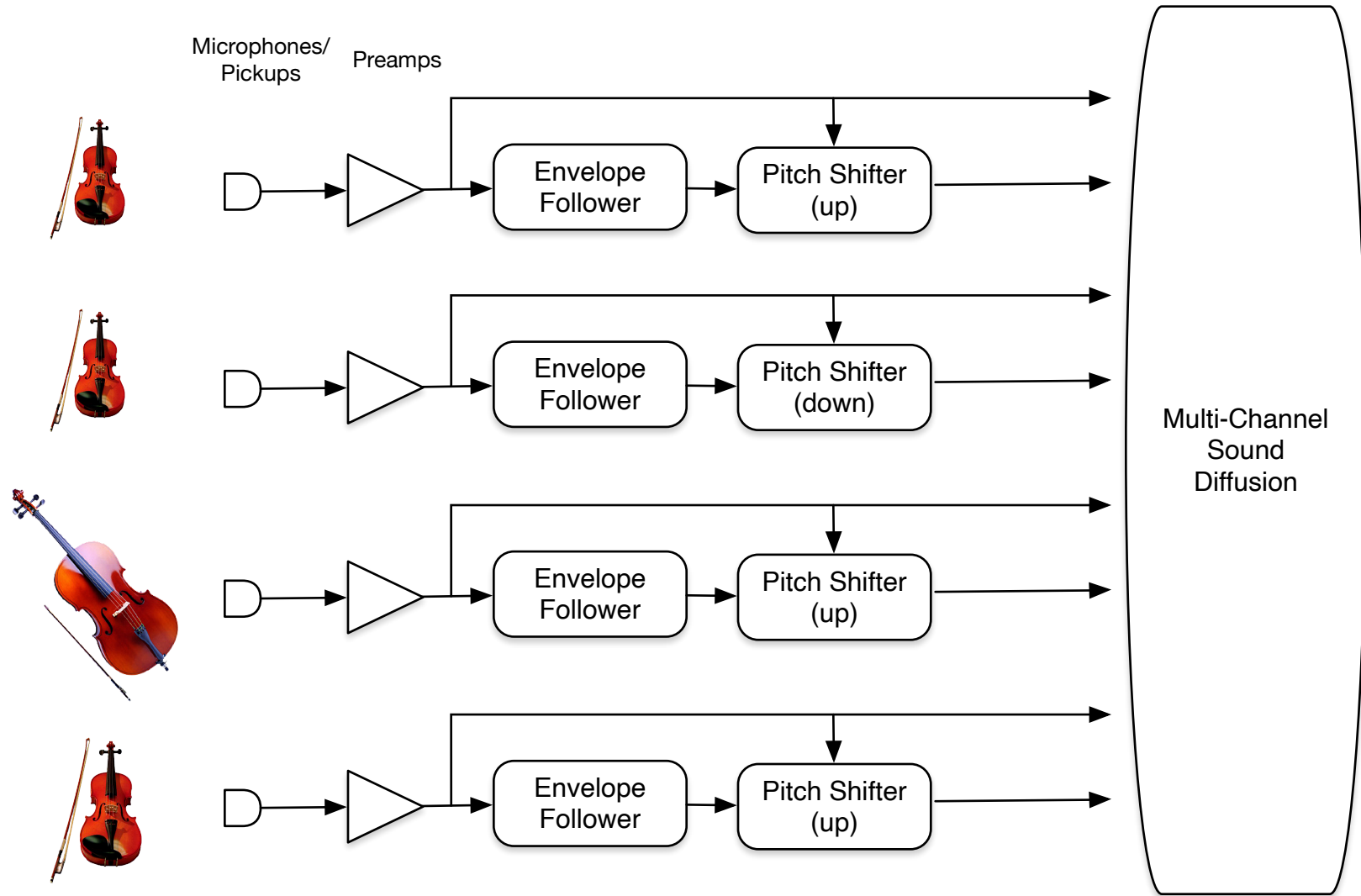
Sound Files

Three digital sound files are available from the composer: 1) the electronic sound track to play with (Four Lines Elec Perf.aif), 2) a metronome click track at 100 bpm that may be used in performance to stay in close synchronization with the electronic track (Four Lines Click.aif), and 3) a voice track that gives starting cues for a two-bar lead-in and announces bar numbers at every tenth bar. If these files are used together, their starting points must be precisely aligned. Note that the first electronic sound synchronizes with the first note in the Violin 1 part, which does not occur on the downbeat of Bar 1. Playback of files 2) and 3) may be routed to earphones (single sided) worn by the performers, if desired, but should not be heard by the audience.

DR 2022

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String Quartet
Processing Option Example



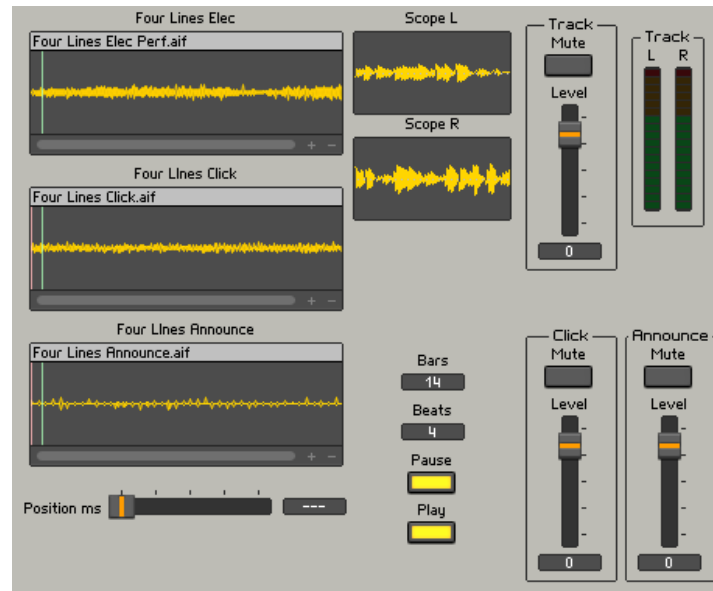
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String Quartet

Examples of Instruments Programmed in Reaktor Software



Control panel for an instrument implementing two stereo pitch shifters controlled by envelope followers. Two such instruments could be used to process the four instruments in a string quartet independently. Players may develop other methods.



An instrument used to play the electronic track, metronome click track, and starting cues and bar number announcements track out of independent audio channels to aid in synchronization. Performers may devise other methods.

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Play with a sense of constant forward motion and intense concentration, while being subtle, energetic, contrasting, unpredictable and surprising.

Align first note with first electronic sound.

Dynamics provide general guidelines only, and it is intended that articulations, dynamics, timbre, and tone quality transitions be shaped through improvisation in response to and in interaction with the electronic lines. These interpretations may be extreme. Open improvisations may be inserted according to agreements. Very short notes may be played pizzicato ad libitum. To synchronize precisely with the electronic tracks, a tempo of quarter note = 99.96 BPM is required. A 100 BPM approximation is usually acceptable.

Fast/Very Fast

The score is divided into two systems. The first system includes Violin 1, Violin 2, Viola, and Violincello. The second system includes Violin 1, Violin 2, Viola, and Violoncello. Each part contains complex rhythmic patterns with various dynamics and articulations. Fingerings and slurs are indicated throughout. The first system starts with a tempo marking of 'Fast/Very Fast' and a performance instruction to align the first note with the first electronic sound. The second system includes a circled number '10' at the beginning of each staff, likely indicating a measure number or a specific performance instruction.

59 60 8^{va} ff mp pp mf p ff mf

Vln 1

Vln 2 ff mp f mf f mp ff mp p mf f 5 ff f pp

Vla 59 60 5 p mp p mf pp

Vcl 59 60

68 70 8^{va} 15^{ma} f mf p pp

Vln 1

Vln 2 68 70 f mf sf mp f ff p ff mp

Vla 68 70 p mf mp mf mp pp p pp

Vcl 68 70 mp

78 **80**

Vln 1 *mp* *pp* *p* *pp* *mp* *mf*

Vln 2 *f* *mf* *ff* *mp* *pp* *p* *pp* *mf* *pp* *p* *pp* *mp*

Vla *mp* *p* *mp* *pp* *mf* *pp* *mf* *pp* *mf* *pp* *pp* *mf*

Vcl *ff* *p*

88 **90**

Vln 1 *mp* *f* *pp*

Vln 2 *pp* *p* *pp* *p* *pp* *mf* *pp* *p* *mf* *p* *mp*

Vla *mf* *p* *pp* *mf* *pp* *mf* *p* *mf* *mp* *pp* *p* *pp* *mp* *pp* *p* *pp*

Vcl

98

Vln 1

Vln 2

Vla

Vcl

100

100

100

100

f *mf* *f* *mp*

p *mf* *mp pp* *f* *mp* *p* *mp* *pp* *p* *pp*

mf *pp* *p* *pp* *mp* *f*

pp *f* *p*

8^{va}

15^{ma}

108

Vln 1

Vln 2

Vla

Vcl

110

110

110

110

9

9

9

9

f *mf* *f*

mp

mp *f*

pp *mf* *p* *mf* *p* *f* *pp* *mp* *ff* *mf* *pp* *mf* *pp*

Open Improvisation (vigorous & contrasting) (electronic tracks continue)

Open Improvisation (vigorous & contrasting) (electronic tracks continue)

Open Improvisation (vigorous & contrasting) (electronic tracks continue)

Open Improvisation (vigorous & contrasting) (electronic tracks continue)

15^{ma}

145 *15^{ma}* *f* *p* *f* *mf* *ff* *150* *f* *mf* *mf*

Vln 1

145 *mp* *mf* *mf* *pp* *mp* *pp* *6* *mp* *pp* *5* *pp* *5* *6* *7* *mp* *p* *mpf* *mp*

Vln 2

145 *mp* *pp* *mf* *pp* *mf* *pp* *p* *pp* *3* *5* *3* *5* *3* *5* *3* *mf* *pp*

Vla

145 *mp* *pp* *mf* *pp* *mf* *pp* *p* *pp* *mf* *pp*

Vcl

145 *p* *f* *mf* *150* *ff*

153 *8^{va}* *pp* *f* *mf* *f* *pp* *mf* *ff* *mf* *15^{ma}* *mf* *pp* *ff* *p* *pp* *ff* *p* *15^{ma}* *ff* *pp* *160* *mf* *pp* *mf* *pp* *mf*

Vln 1

153 *f* *mf* *pp* *mf* *pp* *ff* *mf* *pp* *ff* *p* *pp* *ff* *p* *15^{ma}* *ff* *pp* *160* *mf* *pp* *mf* *pp* *mf*

Vln 2

153 *f* *mf* *pp* *mf* *pp* *ff* *mf* *pp* *ff* *p* *pp* *ff* *p* *15^{ma}* *ff* *pp* *160* *mf* *pp* *mf* *pp* *mf*

Vla

153 *160*

Vcl

153 *mf* *ff* *mf* *mp* *ff* *mp* *f* *160* *p* *f*

162

Vln 1

Vln 2

Vla

Vcl

170

Vln 1

Vln 2

Vla

Vcl

178 180

Vln 1

Vln 2

Vla

Vcl

mf pp

pp mf pp

pp mp f mp mf p mp f mf f p mf p

188 190

Vln 1

Vln 2

Vla

Vcl

mp pp

mp p pp p mf pp

mf p pp mf pp ff mf f mf ff

mf pp mf pp mf p mf p f p pp mf mp ff mp mf p mf mp

195

Vln 1

Vln 2

Vla

Vcl

pp *mp* *p* *mf* *p* *mp*

p *mf* *p* *mp* *pp*

pp *p* *mp* *f* *mp* *p* *mf* *p* *mp* *p* *mf* *p* *pp* *p* *mp* *p* *pp* *mf* *pp* *mp* *mf* *p*

mp

200

Vln 1

Vln 2

Vla

Vcl

f *mp* *p* *mf* *p*

f *mp* *p* *mf* *pp* *mp* *f* *mf* *ff* *mf* *pp* *mp* *f* *mp* *mf*

mp *f* *p* *mf* *mp* *p* *mf* *f* *ff*

208 210 210 210 210

Vln 1

Vln 2

Vla

Vcl

ff *mf* *mp* *pp* *mf* *ff* *mf* *p* *pp* *mf*

pp *mf* *pp* *mp* *pp*

p *mf* *p* *mf* *p* *mf* *p*

216 220 220 220

Vln 1

Vln 2

Vla

Vcl

mp *p* *mf* *ff* *f* *p* *mf* *pp* *p* *pp* *mp*

p *pp*

f *mp* *pp*

226

Vln 1

Vln 2

Vla

Vcl

230

230

230

230

15^{ma}

8^{va}

p *mf* *pp* *mp* *p* *mf* *p* *mp* *f* *mp*

f *mp* *f* *p* *pp* *mf* *pp*

p

p *f* *ff* *p* *mf* *p* *f* *p*

236

Vln 1

Vln 2

Vla

Vcl

240

240

240

240

f *mp* *mf* *mp* *pp* *mf* *pp* *mp* *pp* *mf* *pp*

ff *mp* *f* *ff* *f* *ff* *mf* *ff* *f* *mf* *f* *p* *f* *mp* *p*

ff *mp* *mf* *pp* *f* *mf* *pp* *f* *pp* *f* *pp* *mf*

247

Vln 1

Vln 2

Vla

Vcl

250

250

250

250

mf *ff*

p *mf* *p* *mp* *p* *mf* *p*

mf *p*

pp *p* *pp* *mf* *mp* *p* *mf*

8^{va}

258

Vln 1

Vln 2

Vla

Vcl

260

260

260

260

f

mf *pp* *mf* *p* *mf* *p* *f* *ff*

f *ff*

p *f* *p* *mf* *p* *pp*

8^{va}

305

Vln 1

Vln 2

Vla

Vcl

f *mf* *f* *ff* *mf* *f* *mf* *p* *mf* *p* *5* *pp* *mf* *pp* *ff* *mf* *ff*

p *mp* *p* *ff* *mf* *ff* *mp*

ff *mf* *ff* *mf* *ff* *mf* *ff* *f* *mf* *ff*

mp *f* *mp* *pp* *mp* *f*

15^{ma} 6 3 7 15^{ma} 5 310 8^{va} 3 310 310 310

315

Vln 1

Vln 2

Vla

Vcl

f *p* *mp*

p *pp* *p* *mf* *p* *pp*

mp *ff* *mp* *pp* *mf* *pp* *f* *mf* *f* *pp* *mp*

pp *p* *mf* *p* *f* *p* *pp* *p*

320 320 320 320

326

Vln 1

Vln 2

Vla

Vcl

330

330

330

330

15^{ma}

f *mp* *f* *mf* *f* *p* *mf* *mp* *f* *mf* *f* *mf* *p*

p *pp* *mp* *f* *pp* *p* *mf* *p*

ff *mf* *ff* *mp* *5* *5* *7* *3* *6* *7* *f* *mp*

mf *p* *pp* *mf* *pp* *p* *mf* *p* *pp* *p*

337

Vln 1

Vln 2

Vla

Vcl

340

340

340

340

mf *p* *pp* *mf* *pp* *mf* *pp* *mf* *pp*

pp *mp*

f *p* *f* *mp* *p* *mp* *p* *mf* *p* *pp* *mf*

mf *pp* *mp*

348 350

Vln 1 *f* *mp* *pp* *mf* *p* *mf* *pp* *mp* *pp*

Vln 2

Vla *pp*

Vcl *pp* *mp* *pp* *mf*

357 360

Vln 1 *mf* *pp* *mp*

Vln 2 *pp* *p* *mp* *pp* *mp* *p* *mp*

Vla *p* *pp* *mp* *pp* *mp* *pp* *mf* *pp*

Vcl *pp* *mf* *pp* *mp* *pp* *mf* *pp* *mp*

366 370

Vln 1 *f* *mf* *f* *pp* *mf* *pp*

Vln 2 *mf* *p* *mf*

Vla *mf* *pp* *p* *mf* *p* *pp*

Vcl *mf* *mp* *mf* *f* *p*

377 380

Vln 1 *mf* *pp* *mp* *pp* *mf* *pp* *mp*

Vln 2 *mp* *ff* *p* *f* *p* *mf* *ff* *mf*

Vla *p* *mf* *p* *mf* *p* *mf* *p*

Vcl *ff* *mp* *ff* *pp* *ff* *mp* *ff* *p* *mf* *ff* *pp* *mf* *pp* *ff*

408 *8^{va}* *15^{ma}* 410

Vln 1

Vln 2

Vla

Vcl

f *mp* *f* *mf* *ff* *mf* *ff* *mf* *ff* *p* *mf* *p* *f* *mf* *f* *mf*

mf *p* *mf* *p* *mf* *p* *mf* *p* *mf* *p* *mf* *p*

ff

418 420

Vln 1

Vln 2

Vla

Vcl

ff *mf* *f* *mp* *mf* *mp* *f* *ff* *mf* *ff* *f* *ff* *f*

mf *p* *mf* *ff* *mf* *ff* *mf* *ff* *f*

mf *ff* *mp* *f* *mf* *f* *mp* *f*