

Solitaire

for microtonal sampler keyboard and soundfile
(or microtonal keyboards, fretless bass, and flute/oboe)

by
Kyle Gann
2009

Solitaire (2009)

Solitaire uses a just-intonation scale of 29 pitches; about 38 pitches are implied, but some of these are so close that substitutes are used instead. The piece is in E-flat, although no tonic chord ever appears. Harmonies are arranged around nine chords. Four of these are conventional IV, V, vi, and ii in E-flat major. Another is a major 7th on flat III. Three chords are built on the 7th, 11th, and 13th harmonics respectively, and a final one on the 7th subharmonic, 8/7. I made a chart of all possible chord successions and characterized them as "piquant," "subtle," "eerie," "weak," "intense," and so on, following these moods as the progression seemed to require. The private game alluded to in the title was to meander among these nine chords (and eight rhythmic patterns) moving as little as possible in register; to find as much variety as possible within extreme limitations, going deeper into the existing framework rather than outward from it.

The piece is notated in Ben Johnston's microtonal notation. FAC, CEG, and GBD are pure 4:5:6 triads. Flats lower a pitch by 24/25, sharps raise it by 25/24; + multiplies by 81/80, - by 80/81, 7 by 35/36, L by 36/35, ^ by 33/32, and 13 by 65/64.

The piece is gratefully dedicated to Robert Ashley, and inspired by his comment:

"Eventfulness is really boring."

Solitaire scale (pitches with asterisks are replaced by the closest substitute):

Pitch	Ratio to 1/1	Cents from 1/1
E♭	1/1	0
E13♭	65/64	26.8
E♭^	33/32	53.3
E♭L	15/14	119.4
F7+	35/32	155.1
F	10/9	182.4
F+	9/8	203.9
F-L	8/7	231.2
F^	55/48	235.7*
G♭	6/5	315.6
G♭7^	77/64	320.1*
G13♭	39/32	342.5
G	5/4	386.3
GL	9/7	435
G^	165/128	439.6*
A♭7+	21/16	470.8
A♭	4/3	498
A♭^	11/8	551.3
B13♭7♭	91/64	609.4*
AL	10/7	617.5
B♭7	35/24	653.2
B♭	3/2	702
B♭^	99/64	755.2
C13♭	13/8	840.5
C7+	105/64	857.1*
C	5/3	884.4
C+	27/16	905.9
CL	12/7	933.1
C^	55/32	937.6*
D♭7	7/4	968.8
D♭	9/5	1017.6
D♭13	117/64	1044.4
D	15/8	1088.3
DL-	40/21	1115.5
D^	495/256	1141.5*
E♭7+	63/32	1172.7

*to Robert Ashley:
"Eventfulness is really boring"*

Solitaire

Still
 $\text{♩} = 100$

Kyle Gann
2009

Oboe $\begin{array}{c} \text{♩} \\ \text{♩} \end{array}$ $\begin{array}{c} \text{♩} \\ \text{♩} \end{array}$ $\begin{array}{c} \text{♩} \\ \text{♩} \end{array}$

Piano $\begin{array}{c} \text{♩} \\ \text{♩} \end{array}$ $\begin{array}{c} \text{♩} \\ \text{♩} \end{array}$ $\begin{array}{c} \text{♩} \\ \text{♩} \end{array}$

Synthesizer $\begin{array}{c} \text{♩} \\ \text{♩} \end{array}$ $\begin{array}{c} \text{♩} \\ \text{♩} \end{array}$ $\begin{array}{c} \text{♩} \\ \text{♩} \end{array}$

Contrabass $\begin{array}{c} \text{♩} \\ \text{♩} \end{array}$ $\begin{array}{c} \text{♩} \\ \text{♩} \end{array}$ $\begin{array}{c} \text{♩} \\ \text{♩} \end{array}$

≡

Ob. $\begin{array}{c} \text{♩} \\ \text{♩} \end{math}$ $\begin{array}{c} \text{♩} \\ \text{♩} \end{math}$ $\begin{array}{c} \text{♩} \\ \text{♩} \end{math}$

Pno. $\begin{array}{c} \text{♩} \\ \text{♩} \end{math}$ $\begin{array}{c} \text{♩} \\ \text{♩} \end{math}$ $\begin{array}{c} \text{♩} \\ \text{♩} \end{math}$

Synth. $\begin{array}{c} \text{♩} \\ \text{♩} \end{math}$ $\begin{array}{c} \text{♩} \\ \text{♩} \end{math}$ $\begin{array}{c} \text{♩} \\ \text{♩} \end{math}$

Bass $\begin{array}{c} \text{♩} \\ \text{♩} \end{math}$ $\begin{array}{c} \text{♩} \\ \text{♩} \end{math}$ $\begin{array}{c} \text{♩} \\ \text{♩} \end{math}$

5

Ob.

Pno.

Synth.

Bass

The score consists of four staves. The Oboe (Ob.) starts with a grace note and a sustained note. The Piano (Pno.) has a sustained note followed by eighth-note pairs. The Synthesizer (Synth.) has sustained notes with grace notes above them. The Bass has eighth-note pairs. Measure 5 ends with a common time signature. Measure 6 begins with a 11/4 time signature, followed by a 10/4 time signature. Measures 7-8 begin with a 7/4 time signature, followed by a 11/4 time signature. Measures 9-10 begin with a 11/4 time signature, followed by a 10/4 time signature. Measures 11-12 begin with a 11/4 time signature, followed by a 10/4 time signature.



7

Ob.

Pno.

Synth.

Bass

The score continues from the previous section. The Oboe (Ob.) has a grace note and a sustained note. The Piano (Pno.) has eighth-note pairs. The Synthesizer (Synth.) has sustained notes with grace notes above them. The Bass has eighth-note pairs. Measure 7 ends with a 10/4 time signature. Measure 8 begins with an 8/4 time signature, followed by a 10/4 time signature. Measures 9-10 begin with a 10/4 time signature, followed by a 10/4 time signature. Measures 11-12 begin with a 10/4 time signature, followed by a 10/4 time signature.

Solitaire

9

Ob.

Pno.

Synth.

Bass



11

Ob.

Pno.

Synth.

Bass

Solitaire

13

Ob.

Pno.

Synth.

Bass



15

Ob.

Pno.

Synth.

Bass

Solitaire

17

Ob.

Pno.

Synth.

Bass

The musical score consists of four staves. The Oboe (Ob.) starts with a measure in 8/4 time, then changes to 4/4. The Piano (Pno.) has a measure in 8/4 followed by one in 4/4. The Synthesizer (Synth.) has a measure in 8/4 followed by one in 4/4. The Bass has two measures in 8/4 time.



19

Ob.

Pno.

Synth.

Bass

The musical score consists of four staves. The Oboe (Ob.) starts with a measure in 10/4 time, then changes to 8/4. The Piano (Pno.) has a measure in 10/4 followed by one in 8/4. The Synthesizer (Synth.) has a measure in 10/4 followed by one in 8/4. The Bass has two measures in 10/4 time.

Solitaire

21

Ob.

Pno.

Synth.

Bass

The score consists of four staves. The Oboe staff starts with a sixteenth-note pattern, followed by a fermata over a eighth-note. The Piano staff has a sustained eighth-note followed by a sixteenth-note pattern. The Synthesizer staff has a sustained eighth-note followed by a sixteenth-note pattern. The Bass staff has a sustained eighth-note followed by a sixteenth-note pattern. Measure 22 begins with a sixteenth-note pattern for the Oboe, followed by a fermata over a eighth-note. The Piano staff has a sustained eighth-note followed by a sixteenth-note pattern. The Synthesizer staff has a sustained eighth-note followed by a sixteenth-note pattern. The Bass staff has a sustained eighth-note followed by a sixteenth-note pattern. Measure 23 begins with a sixteenth-note pattern for the Oboe, followed by a fermata over a eighth-note. The Piano staff has a sustained eighth-note followed by a sixteenth-note pattern. The Synthesizer staff has a sustained eighth-note followed by a sixteenth-note pattern. The Bass staff has a sustained eighth-note followed by a sixteenth-note pattern. Measure 24 begins with a sixteenth-note pattern for the Oboe, followed by a fermata over a eighth-note. The Piano staff has a sustained eighth-note followed by a sixteenth-note pattern. The Synthesizer staff has a sustained eighth-note followed by a sixteenth-note pattern. The Bass staff has a sustained eighth-note followed by a sixteenth-note pattern.



24

Ob.

Pno.

Synth.

Bass

The score consists of four staves. The Oboe staff starts with a sixteenth-note pattern, followed by a fermata over a eighth-note. The Piano staff has a sustained eighth-note followed by a sixteenth-note pattern. The Synthesizer staff has a sustained eighth-note followed by a sixteenth-note pattern. The Bass staff has a sustained eighth-note followed by a sixteenth-note pattern. Measure 25 begins with a sixteenth-note pattern for the Oboe, followed by a fermata over a eighth-note. The Piano staff has a sustained eighth-note followed by a sixteenth-note pattern. The Synthesizer staff has a sustained eighth-note followed by a sixteenth-note pattern. The Bass staff has a sustained eighth-note followed by a sixteenth-note pattern. Measure 26 begins with a sixteenth-note pattern for the Oboe, followed by a fermata over a eighth-note. The Piano staff has a sustained eighth-note followed by a sixteenth-note pattern. The Synthesizer staff has a sustained eighth-note followed by a sixteenth-note pattern. The Bass staff has a sustained eighth-note followed by a sixteenth-note pattern. Measure 27 begins with a sixteenth-note pattern for the Oboe, followed by a fermata over a eighth-note. The Piano staff has a sustained eighth-note followed by a sixteenth-note pattern. The Synthesizer staff has a sustained eighth-note followed by a sixteenth-note pattern. The Bass staff has a sustained eighth-note followed by a sixteenth-note pattern.

Solitaire

27

Ob.

Pno.

Synth.

Bass



29

Ob.

Pno.

Synth.

Bass

Solitaire

31

Ob.

Pno.

Synth.

Bass



34

Ob.

Pno.

Synth.

Bass

Solitaire

37

Ob.

Pno.

Synth.

Bass



40

Ob.

Pno.

Synth.

Bass

Solitaire

43

Ob.

Pno.

Synth.

Bass



45

Ob.

Pno.

Synth.

Bass

Solitaire

46

Ob.

Pno.

Synth.

Bass

≡

48

Ob.

Pno.

Synth.

Bass

Solitaire

50

Ob.

Pno.

Synth.

Bass



52

Ob.

Pno.

Synth.

Bass

Solitaire

55

Ob.

Pno.

Synth.

Bass

This section contains four staves. The Oboe (Ob.) has a sustained note with a fermata. The Piano (Pno.) has eighth-note patterns. The Synthesizer (Synth.) has sustained notes with grace notes. The Bass has eighth-note patterns. Measure numbers 13 and 14 are indicated above the staves.



59

Ob.

Pno.

Synth.

Bass

This section contains four staves. The Oboe (Ob.) has sustained notes. The Piano (Pno.) has eighth-note patterns. The Synthesizer (Synth.) has sustained notes with grace notes. The Bass has eighth-note patterns. Measure numbers 7+ through 10 are indicated above the staves.

Solitaire

63

Ob.

Solitaire

69

Ob.

Pno.

Synth.

Bass

This section contains four staves of musical notation. The first staff (Ob.) has a treble clef and shows sustained notes with slurs. The second staff (Pno.) has a treble clef and includes a bass staff below it, both featuring eighth-note patterns. The third staff (Synth.) has a treble clef and includes a bass staff below it, showing sustained notes with slurs. The fourth staff (Bass) has a bass clef and shows eighth-note patterns. Measure 69 ends with a repeat sign and two endings. Ending 1 continues with measure 70, which is identical to ending 2.



73

Ob.

Pno.

Synth.

Bass

This section contains four staves of musical notation. The first staff (Ob.) starts in 4/4, changes to 5/4, then 4/4, and finally 3/4. The second staff (Pno.) starts in 4/4, changes to 5/4, then 4/4, and finally 3/4. The third staff (Synth.) starts in 4/4, changes to 5/4, then 4/4, and finally 3/4. The fourth staff (Bass) starts in 4/4, changes to 5/4, then 4/4, and finally 3/4. Measures 73-76 feature complex rhythmic patterns and changing time signatures.

Solitaire

77

Ob.

Pno.

Synth.

Bass



79

Ob.

Pno.

Synth.

Bass

Solitaire

82

Ob. $\frac{10}{4}$

Pno. $\left\{ \begin{array}{l} \text{Pno.} \\ \text{Bass} \end{array} \right.$ $\frac{10}{4}$

Synth. $\left\{ \begin{array}{l} \text{Synth.} \\ \text{Bass} \end{array} \right.$ $\frac{10}{4}$

Bass $\frac{10}{4}$



84

Ob. $\frac{5}{4}$

Pno. $\left\{ \begin{array}{l} \text{Pno.} \\ \text{Bass} \end{array} \right.$ $\frac{5}{4}$

Synth. $\left\{ \begin{array}{l} \text{Synth.} \\ \text{Bass} \end{array} \right.$ $\frac{5}{4}$

Bass $\frac{5}{4}$

Solitaire

87

Ob. $\begin{array}{c} \text{G clef} \\ \text{10} \\ \text{4} \end{array}$

Pno. $\begin{array}{c} \text{G clef} \\ \text{10} \\ \text{4} \end{array}$

Synth. $\begin{array}{c} \text{G clef} \\ \text{10} \\ \text{4} \end{array}$

Bass $\begin{array}{c} \text{Bass clef} \\ \text{10} \\ \text{4} \end{array}$



89

Ob. $\begin{array}{c} \text{G clef} \\ \text{5} \\ \text{4} \end{array}$

Pno. $\begin{array}{c} \text{G clef} \\ \text{5} \\ \text{4} \end{array}$

Synth. $\begin{array}{c} \text{G clef} \\ \text{5} \\ \text{4} \end{array}$

Bass $\begin{array}{c} \text{Bass clef} \\ \text{5} \\ \text{4} \end{array}$

Solitaire

92

Ob. $\text{G} \frac{10}{4}$

Pno. $\left\{ \begin{matrix} \text{G} \frac{10}{4} \\ \text{Bass} \frac{10}{4} \end{matrix} \right.$

Synth. $\left\{ \begin{matrix} \text{G} \frac{10}{4} \\ \text{Bass} \frac{10}{4} \end{matrix} \right.$

Bass $\frac{10}{4}$

=

94

Ob. $\text{G} \frac{5}{4}$

Pno. $\left\{ \begin{matrix} \text{G} \frac{5}{4} \\ \text{Bass} \frac{5}{4} \end{matrix} \right.$

Synth. $\left\{ \begin{matrix} \text{G} \frac{5}{4} \\ \text{Bass} \frac{5}{4} \end{matrix} \right.$

Bass $\frac{5}{4}$

Solitaire

97

Ob.

Pno.

Synth.

Bass

10 8
4 8
4 8
4 8
4 8



99

Ob.

Pno.

Synth.

Bass

5 7 6
4 7 6
5 7 6
4 7 6

Solitaire

102

Ob. $\frac{10}{4}$

Pno. $\left\{ \begin{matrix} \frac{10}{4} \\ \frac{8}{4} \end{matrix} \right.$

Synth. $\left\{ \begin{matrix} \frac{10}{4} : 8 \\ \frac{8}{4} \end{matrix} \right.$

Bass $\frac{10}{4}$



104

Ob. $\frac{5}{4}$

Pno. $\left\{ \begin{matrix} \frac{5}{4} \\ \frac{7}{4} \end{matrix} \right.$

Synth. $\left\{ \begin{matrix} \frac{5}{4} : 8 \\ \frac{7}{4} \end{matrix} \right.$

Bass $\frac{5}{4}$

Solitaire

107

Ob. $\frac{10}{4}$

Pno. $\left\{ \begin{array}{l} \frac{10}{4} \\ \frac{3}{4} \end{array} \right.$

Synth. $\left\{ \begin{array}{l} \frac{10}{4} \\ \frac{3}{4} \end{array} \right.$

Bass $\frac{10}{4} \quad \frac{3}{4}$



109

Ob. $\frac{13}{4}$

Pno. $\left\{ \begin{array}{l} \frac{13}{4} \\ \frac{3}{4} \end{array} \right.$

Synth. $\left\{ \begin{array}{l} \frac{13}{4} \\ \frac{3}{4} \end{array} \right.$

Bass $\frac{13}{4} \quad \frac{3}{4}$

Solitaire

III

Ob.

Pno.

Synth.

Bass



114

Ob.

Pno.

Synth.

Bass

Solitaire

118

Ob.

Pno.

Synth.

Bass



121

Ob.

Pno.

Synth.

Bass

Solitaire

124

Ob.

Pno.

Synth.

Bass



127

Ob.

Pno.

Synth.

Bass

Solitaire

129

Ob. 

Bass

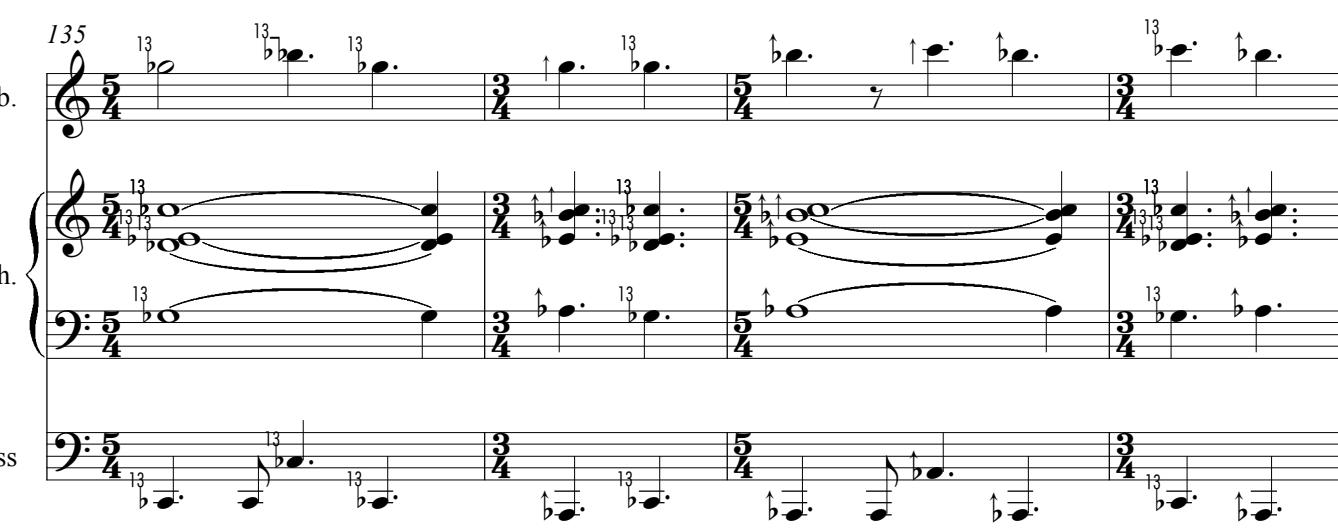
132

Ob. 

Synth.

Bass

135

Ob. 

Synth.

Bass

Solitaire

139

Ob. $\begin{array}{c} \text{5} \\ \text{4} \end{array}$ $\begin{array}{c} \text{3} \\ \text{4} \end{math>$ $\begin{array}{c} \text{13} \\ \text{4} \end{array}$

Synth. $\begin{array}{c} \text{5} \\ \text{4} \end{array}$ $\begin{array}{c} \text{3} \\ \text{4} \end{math>$ $\begin{array}{c} \text{13} \\ \text{4} \end{array}$

Bass $\begin{array}{c} \text{5} \\ \text{4} \end{array}$ $\begin{array}{c} \text{3} \\ \text{4} \end{math>$ $\begin{array}{c} \text{13} \\ \text{4} \end{array}$



142

Ob. $\begin{array}{c} \text{11} \\ \text{4} \end{array}$ $\begin{array}{c} \text{8} \\ \text{4} \end{array}$

Pno. $\begin{array}{c} \text{11} \\ \text{4} \end{array}$ $\begin{array}{c} \text{8} \\ \text{4} \end{array}$

Synth. $\begin{array}{c} \text{11} \\ \text{4} \end{array}$ $\begin{array}{c} \text{8} \\ \text{4} \end{array}$

Bass $\begin{array}{c} \text{11} \\ \text{4} \end{array}$ $\begin{array}{c} \text{8} \\ \text{4} \end{array}$

Solitaire

144

Ob.

Pno.

Synth.

Bass

≡

146

Ob.

Pno.

Synth.

Bass

Solitaire

148

Ob.

Pno.

Synth.

Bass



151

Ob.

Pno.

Synth.

Bass

Solitaire

154

Ob.

Pno.

Synth.

Bass



156

Ob.

Pno.

Synth.

Bass

Solitaire

158

Ob.

Pno.

Synth.

Bass



160

Ob.

Pno.

Synth.

Bass

Solitaire

163

Ob.

Pno.

Synth.

Bass



166

Ob.

Pno.

Synth.

Bass

Solitaire

168

Ob.

Pno.

Synth.

Bass

The musical score consists of four staves. The Oboe (Ob.) has a single melodic line. The Piano (Pno.) and Synthesizer (Synth.) are grouped together, each with two staves: treble and bass. The Bass staff is separate. Measure 168 starts with a 7/4 time signature, followed by a 4/4 bar, and then a 5/4 bar. Measure 169 begins with a 4/4 bar, followed by a 5/4 bar. Measure 170 begins with a 5/4 bar. Measures 168-170 feature various dynamics like *l*, *o..*, *b*, and *↑*, and articulations like dots and dashes.



171

Ob.

Pno.

Synth.

Bass

The musical score consists of four staves. The Oboe (Ob.) has a single melodic line. The Piano (Pno.) and Synthesizer (Synth.) are grouped together, each with two staves: treble and bass. The Bass staff is separate. Measure 171 starts with an 8/4 time signature, followed by a 7/4 bar, and then a 4/4 bar. Measure 172 begins with a 7/4 bar, followed by a 4/4 bar. Measure 173 begins with a 4/4 bar. Measures 171-173 feature various dynamics like *+b*, *o..*, *b+*, and *↑+o..*, and articulations like dots and dashes.

Solitaire

174

Ob.

Pno.

Synth.

Bass

=

176

Ob.

Pno.

Synth.

Bass

Solitaire

179

Ob.

Pno.

Synth.

Bass



181

Ob.

Pno.

Synth.

Bass

Solitaire

184

Ob.

Pno.

Synth.

Bass



186

Ob.

Pno.

Synth.

Bass

Solitaire

188

Ob.

Pno.

Synth.

Bass



191

Ob.

Pno.

Synth.

Bass

Solitaire

194

Ob.

Pno.

Synth.

Bass

≡

197

Ob.

Pno.

Synth.

Bass

Solitaire

199

Ob.

Pno.

Synth.

Bass



201

Ob.

Pno.

Synth.

Bass

July 6-24, 2009
Germantown, NY

Solitaire