

# NIL

for guitar and interactive music system



photo by Raquel Fernandes

by V.J. Manzo

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[vjmanzo.com/cv](http://vjmanzo.com/cv)

## Performance Note

nil is a composition for solo classical guitar and interactive music system. In this piece, the opening notes of the guitar performance are sampled by the computer and placed into a small buffer. From within the buffer, the audio sample is trimmed to remove any silence around the file. The audio sample is then manipulated to generate all of the computer sounds in the piece.

As the performer continues to perform from a notated score, the computer begins manipulating qualities of the audio sample according to a score that it follows. The computer also processes the live input of the performer in a number of ways. All of the computer processing and sound generation for nil occurs in real-time and is driven by the performance of the guitarist.

V.J. Manzo  
10-01-10

Duration: 5' 50"

## About the Composer

V.J. Manzo is a composer and guitarist with research interests in theory and composition, artificial intelligence, interactive music systems, and music learning. He is Director of Music Technology at Montclair State University (2007) where he teaches courses in traditional and electronic music and composition.

His interactive music systems and other software systems/algorithms are freely available for download from his website [www.vjmanzo.com/cv](http://www.vjmanzo.com/cv).

**nil**  
for guitar & interactive computer

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**Space Bar Control Modes**

- space bar begins piece and recording into buffer when pressed
- space bar begins piece and enables sound-activated hands-free recording
- space bar begins piece with pre-loaded buffer sample (default\_sample.aif)

**input source**  
audio file  play guitar demo

**count in**  
measure: 125 beat: 1

**input level**  
position the microphone so that the opening three notes cause the meter's lights to reach the height of the arrow when played at the appropriate dynamic level.

**computer audio**  
arm recording  record

**main instrument processed**  
arm recording  record

**main instrument dry**  
Note: this output is at 0 by default. Increase if necessary to reach the balanced achieved in the "demo" performance.  
arm recording  record

**Instructions:**  
to begin, press the space bar  
upon pressing the space bar, the counter will display numbers increasing from 1 - 4 at 100 bpm (quarter notes). You may then follow the measure and beat numbers displayed below to stay in sync with the written score.

To hear a demonstration of the interaction between the guitar and the real-time computer processing using a synthesized rendering of the guitar part, check the box "play guitar demo".

You may choose from one of the three "space bar control modes" at the left. The first two modes record a sample of the guitar using a microphone. This sample is then cropped by the software to remove any silence at its beginning or end. The timbre of each computer parts is created using this sample.

If desired, a prerecorded sample may be used in place of real-time sampling. Effects used on the main instrument and the computer processing of the timbre will still occur in real-time.

To replace the default sample, play the piece in one of the first two modes, and, at the end of the piece, click here: **overwrite default sample**

Note: you should ensure that the sample you record produces computer timbres that you like before overwriting the default sample. Alternatively, you may locate the file "default\_sample.aif" in the program folder and overwrite the file manually.

A backup of the default sample is included as "default\_sample\_backup.aif". To load this sample, simply rename it to "default\_sample.aif" or drag the file onto the rectangle below marked "drop sample here".

**output controls**  
arm & record all   
stop recording   
audio properties

drop sample here  load default sample

0.00 250.00

screenshot of nil software

# nil

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$\text{♩} = 100$  (2)

*mf*  $\text{---}$  *ff* *p*  $\text{---}$  *f* *mf*

*slight accel. through triplet*

9 VI 3 1 4 VII 3 1 4 3 3

*pizzicato* *soltasto*

15 4 VI 4 III

22 VII 3 1 0 V VII 3 1 0 V II 4 0 0 0

*let notes ring out* *p* *pp* *p*

27 VI 2 0 0 X 2 0 III VI 1 0 3 II VI X VII

32 IV 2 3 1 III VII V 4 3 1 III II IV 4 1 4 0 1 4

38 VIII 3 4 3 2 VIII X VIII

*ff* *pizzicato* *soltasto*

43 XI XV X XV IX VIII VI

*ponticello*

47 I (4) I

*relax tempo let notes ring out*

*f* *mf*

artificial harmonic  
w/ r.h. at XV

54 accel.

*mf*

61 a tempo rit. III 4 3

*f* *subito p* *pp*

68 a tempo VIII VI

*ff* *soltasto* *ponticello* *soltasto*

73 III VII IX

*ff* *fff*

77 V VIII II III V (1) (2) (3)

*ffff* *p*

artificial harmonic  
w/ r.h.

*strum all strings between 5 and 2*

84

*pp*

92

*relax tempo*

♩ = 40      ♩ = 50

*p*

97

*mf*

102

*f*

107

*pp*

111

*pp*

116

*ppp*