

Intrusions

Intrusions is an exploration of an application Messiah's modes of limited transposition. This series of scales have only 2-3 transpositions possible for each scale before returning the same note series. In this piece one mode is used for each hand in the piano, and additional mode is mapped on to a spectral filter allowing the performer to 'intrude' upon the piano part with a different mode by filtering the live performance as well as capturing and editing the piano sound in real time.

The filtering mechanism for the second player was built in the Max/MSP programming environment and functions by allowing several modes of operation. (Figure 1.)

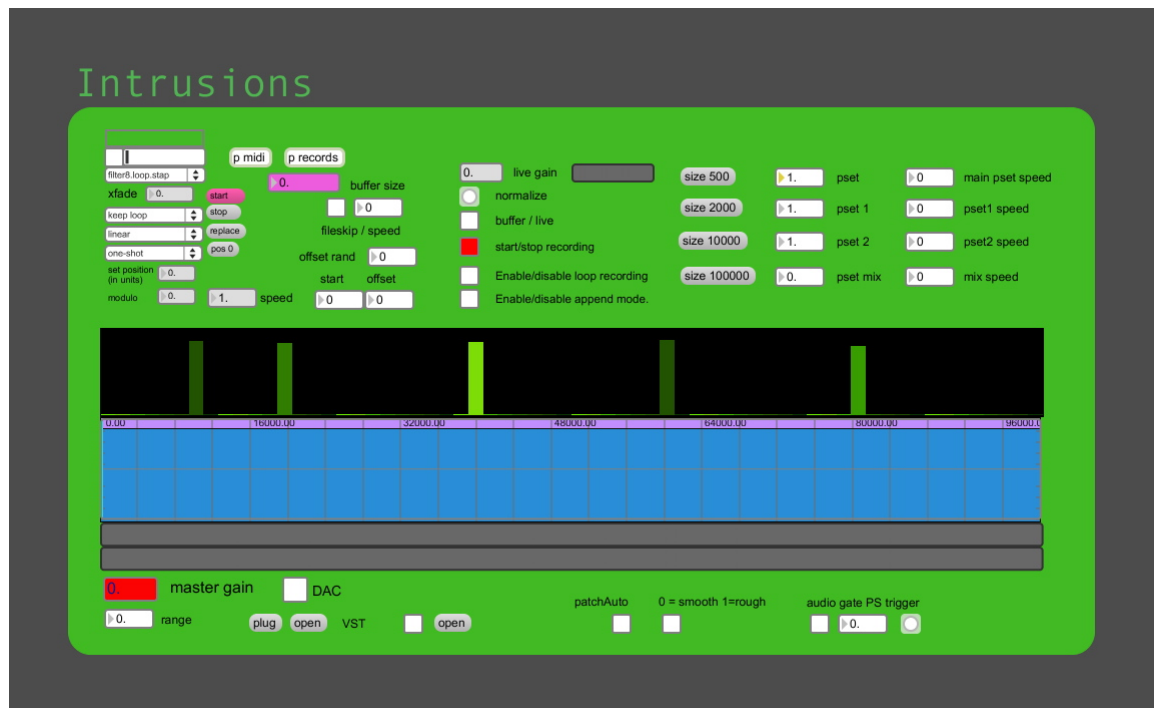


Figure 1.

The first is the realtime application and interpolation of 20 preset filters in any possible combination to live audio. Each of these filters is preset to spell out a single pitch class or combination of notes in Messian's 2nd mode of limited transposition (Figure 2.)



Figure 2.

The application also affords the performer the ability to capture and loop the live audio and effect being input to the application. This looping feature can played alone or mixed in and effected with the live audio signal.

The third major function of the application is automated interpolation between presets based on volume levels of the live audio input.

The recording included is a realization of the piano score with computer accompaniment.

A complete score of the piece is also included.

Intrusions

Joe Cantrell

4/4

Computer

Capture & Loop
Filter 1-4

Piano

10

Capture & Loop
Filter 5-6

Capture & Loop
Filter 7-9

p

p

mp

3

18

Filter 7

Capture & Loop
Filter 7 & 12

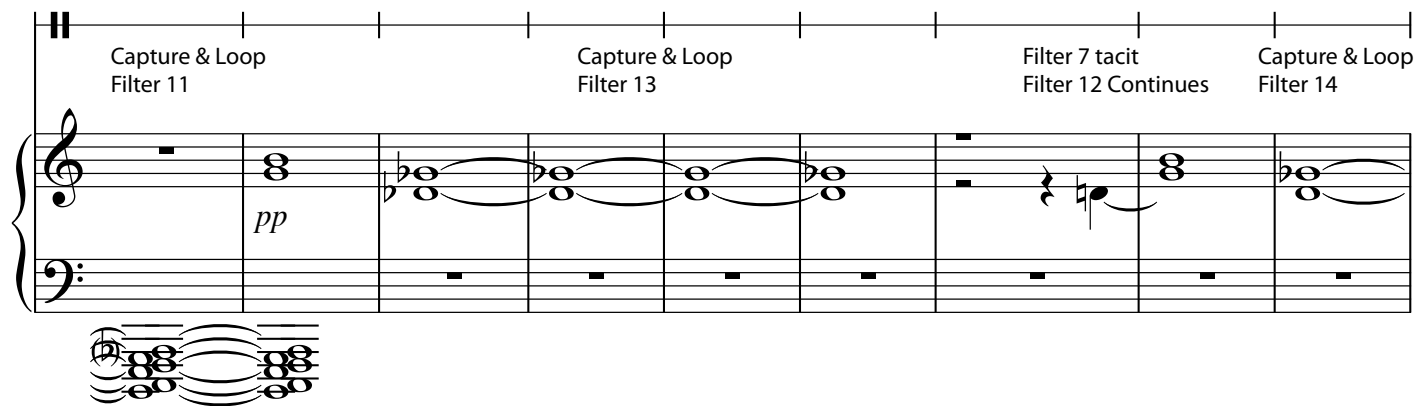
Capture & Loop
Filter 10

p

Ped.

pp

28



Measure 28: Capture & Loop Filter 11. Treble clef has a whole rest, bass clef has a whole rest. Dynamics: *pp*.

Measures 29-32: Capture & Loop Filter 13. Treble clef has a whole note chord (F4, A4, C5) tied across measures. Bass clef has a whole rest.

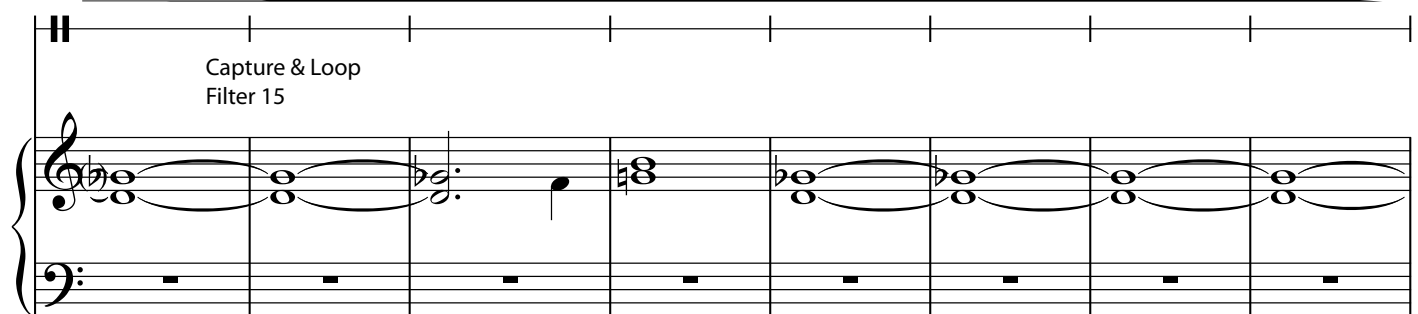
Measure 33: Filter 7 tacit. Treble clef has a whole rest, bass clef has a whole rest.

Measure 34: Filter 12 Continues. Treble clef has a whole note chord (F4, A4, C5) tied across measures. Bass clef has a whole rest.

Measure 35: Capture & Loop Filter 14. Treble clef has a whole note chord (F4, A4, C5) tied across measures. Bass clef has a whole rest.

Measure 36: Capture & Loop Filter 14. Treble clef has a whole note chord (F4, A4, C5) tied across measures. Bass clef has a whole rest.

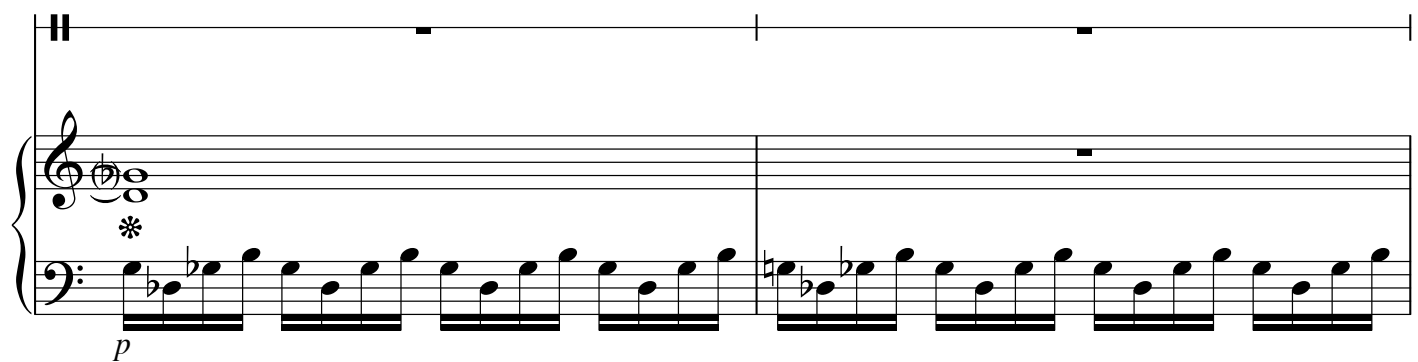
37



Measure 37: Capture & Loop Filter 15. Treble clef has a whole note chord (F4, A4, C5) tied across measures. Bass clef has a whole rest.

Measures 38-44: Capture & Loop Filter 15. Treble clef has a whole note chord (F4, A4, C5) tied across measures. Bass clef has a whole rest.

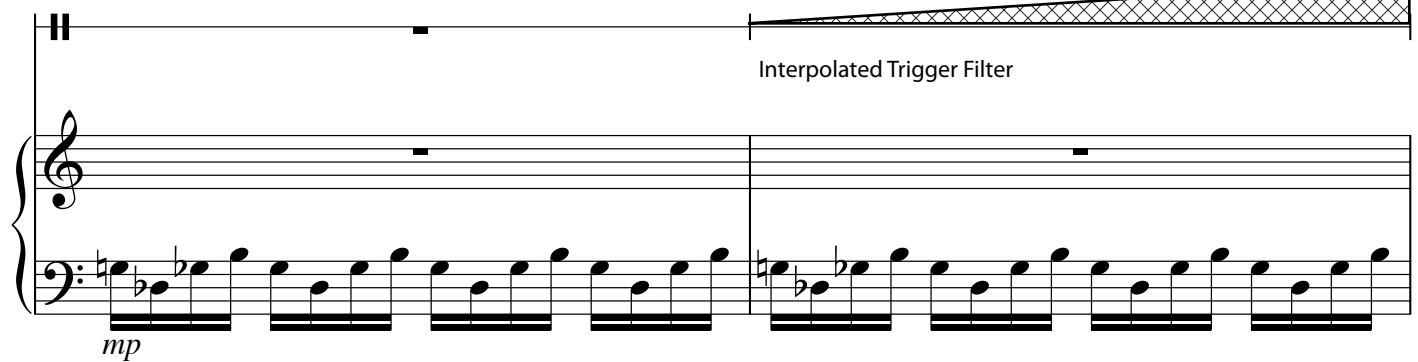
45



Measure 45: Treble clef has a whole rest, bass clef has a whole rest. Dynamics: *p*.

Measure 46: Treble clef has a whole rest, bass clef has a whole rest.

47



Measure 47: Treble clef has a whole rest, bass clef has a whole rest. Dynamics: *mp*.

Measure 48: Interpolated Trigger Filter. Treble clef has a whole rest, bass clef has a whole rest.

49

Measures 49 and 50 of a musical score. The system begins with a double bar line and a repeat sign. Above the staff is a rectangular area with a cross-hatch pattern. The music is written for piano in a key with two flats (B-flat and E-flat). The right hand (treble clef) plays a continuous eighth-note pattern, while the left hand (bass clef) plays a slower eighth-note pattern. The dynamic marking *mp* is present at the start of measure 49.

51

Measures 51 and 52 of a musical score. The system begins with a double bar line and a repeat sign. Above the staff is a rectangular area with a cross-hatch pattern. The music continues with the same piano texture as the previous system, featuring eighth-note patterns in both hands. The key signature remains two flats.

53

Measures 53 and 54 of a musical score. The system begins with a double bar line and a repeat sign. Above the staff is a rectangular area with a cross-hatch pattern. The piano texture continues, with the right hand playing eighth notes and the left hand playing a slower eighth-note pattern. The dynamic marking *mp* is present at the start of measure 53.

55

Measures 55 and 56 of a musical score. The system begins with a double bar line and a repeat sign. Above the staff is a rectangular area with a cross-hatch pattern. The piano texture continues, with the right hand playing eighth notes and the left hand playing a slower eighth-note pattern. The key signature remains two flats.

57

Measures 57 and 58 of a musical score. The system includes a percussion staff with a cross-hatched pattern, a treble clef staff with whole rests, and a bass clef staff with a continuous eighth-note accompaniment. The bass line starts with a piano (*p*) dynamic. The key signature has one flat (B-flat).

59

Measures 59 and 60 of a musical score. The system includes a percussion staff with a cross-hatched pattern, a treble clef staff with eighth-note patterns, and a bass clef staff with eighth-note accompaniment. The key signature has one flat (B-flat).

61

Measures 61 and 62 of a musical score. The system includes a percussion staff with a cross-hatched pattern, a treble clef staff with whole rests, and a bass clef staff with eighth-note accompaniment. The key signature has one flat (B-flat).

63

Measures 63, 64, and 65 of a musical score. The system includes a percussion staff with a cross-hatched pattern in measure 63 and whole rests in measures 64 and 65. The treble clef staff has chords in measures 63 and 64, and a triplet of eighth notes in measure 65. The bass clef staff has eighth-note accompaniment throughout. The key signature has one flat (B-flat).

66

Capture & Loop Filter 7 Capture & Loop Filter 17

70

accel. Loop single note & grad. increase speed - Filter 12

Live Filter 5 Live Filter 10

pp *mp*

76

Live Filter 18

p

82

Capture & Loop
Filter 7

p

Change start position
Filter 7

Increase speed
Filter 7

pp *mp* *mf* *mp*

Decrease speed
Filter 7

p *p*

Filter 20

pp *Ped.* *