



Pulses

open score for chamber ensemble

Dedicated to Andrew Reed Miller

Jordan Nobles



Pulses

by Jordan Nobles

Information on the Piece

ABOUT THE PIECE

Pulses was written in March of 1999 for the **Motion** ensemble of Fredericton, New Brunswick, and has since been performed by them, **Next New Music**, **Ensemble Symposium** and other groups.

The technique of 'metric modulation' is applied to a series of thirteen systems. Each system has its own key, character, and tempo. The players move through the open score independently, making decisions on the spot about which cells to play, when and in what octave, creating a different version of the piece with each performance. The piece is always recognizable even though no two performances sound exactly alike.

INSTRUMENTATION

Pulses can be performed by any 5 or more 'melodic' instruments. That is, instruments capable of chromatic melody (as opposed to drums or modal harps). Mixed ensembles are best but convincing performances can be made by groups with similar instrumentation.

DURATION

Although the recorded version of the piece (by **Ensemble Symposium**) is 16 minutes the duration of the piece can be adjusted to anywhere from **8-25 minutes** long by adjusting, not the tempo, but how many cells the performers play in each system. (see performance notes) In the recorded version, each performer is playing 4-5 cells before moving on to the next system but they could play all of the cells or only one of them (per system) without changing the character of the piece. Playing all seven of the cells in each system is not recommended in mixed ensembles however, as some cells may prove to be awkward for some instruments and they should be able to skip them. It should be agreed upon ahead of time how many cells are to be played and each player should stick with this decision.

PROGRAM NOTES

In *Pulses*, the technique of 'metric modulation'; moving to a different pulse related to the current one, is applied to a series of thirteen sections, each in a different character and key. The players move through the open score independently, making decisions on the spot about which cells to play, when and in what octave, creating a different version of the piece with each performance.

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Performance Instructions

- ◆ *Pulses* can be performed by any melodic instruments.
- ◆ Players enter one at a time in any order starting with the first cell.
- ◆ Cells should be played in any order, each one repeated for approx. 10 seconds
- ◆ The repetitions should fade in and out over the 10 seconds
- ◆ N = niente (as quiet as possible)

For example, cell #1 should sound like this...

Approximately 10 Seconds



niente *mf* niente

- ◆ Cells can be played in any octave as long as the dynamics can be maintained
- ◆ Players should change octaves frequently
- ◆ Some cells contain diads (such as #13). Single line instruments such as woodwinds playing these cells can choose to play either note during each repetition. Polyphonic instruments are encouraged to play both notes.
- ◆ Players move through the piece independently but no player should be too far ahead.
- ◆ Each system is a different pulses rate. Related to the one before it and the one after it but not necessarily to any other systems. So all performers **SHOULD BE ON THE SAME SYSTEM** before anyone moves on to the next.
- ◆ When switching from one system (pulse) to the next, all players should agree on where that pulse is and synchronise with each other. Basically whomever moves first onto the new system establishes the beat.
- ◆ Performers need not play all the cells. they should play between 1 to 6 from each system but they should still proceed in order if at all possible. Performers should agree on how many cells to play in each performance and play the same amount as each other to ensure that they more easily stay together throughout the piece. The duration of the piece can be modified in this way. If an ensemble is playing 5-6 cells per system the piece could last up to 25 minutes but if they only play 1-2 cells per system then the piece would be considerably shorter, about 8 minutes.
- ◆ When the final cell (#78) has been reached, the players should repeat it (fading in and out in different octaves) until everyone has arrived on it, then each player fades out at their discretion.

Pulses

(C Score)

Jordan Nobles

Legato

$\text{♩} = 240$ repeat each cell for about 10 seconds

Musical notation for measures 1 through 6. Each measure is a separate cell, indicated by a double bar line and repeat dots. Measure 1: quarter note G4, quarter note A4. Measure 2: quarter note B4, quarter note C5. Measure 3: quarter note D5, quarter note E5. Measure 4: quarter note F5, quarter note G5. Measure 5: quarter note A5, quarter note B5. Measure 6: quarter note C6, quarter note D6. A dynamic marking *mf* is placed below measures 1 and 2, with a hairpin shape extending to measure 6. The text "etc..." is written below measure 4. A fermata is placed over measure 6.

$\text{♩} = 80$

$\text{♩} = \text{♩} (= 80)$

Musical notation for measures 7 through 12. Measure 7: quarter note G4, quarter note A4. Measure 8: quarter note B4, quarter note C5. Measure 9: quarter note D5, quarter note E5. Measure 10: quarter note F5, quarter note G5. Measure 11: quarter note A5, quarter note B5. Measure 12: quarter note C6, quarter note D6. A fermata is placed over measure 12.

$\text{♩} = 160$

Musical notation for measures 13 through 18. Measure 13: quarter note G4, quarter note A4. Measure 14: quarter note B4, quarter note C5. Measure 15: quarter note D5, quarter note E5. Measure 16: quarter note F5, quarter note G5. Measure 17: quarter note A5, quarter note B5. Measure 18: quarter note C6, quarter note D6. A fermata is placed over measure 18.

$\text{♩} = 320$

Musical notation for measures 19 through 24. Measure 19: quarter note G4, quarter note A4. Measure 20: quarter note B4, quarter note C5. Measure 21: quarter note D5, quarter note E5. Measure 22: quarter note F5, quarter note G5. Measure 23: quarter note A5, quarter note B5. Measure 24: quarter note C6, quarter note D6. A fermata is placed over measure 24.

$\text{♩} = 64$

$\text{♩} = \text{♩} (= 64)$

Musical notation for measures 25 through 30. Measure 25: quarter note G4, quarter note A4. Measure 26: quarter note B4, quarter note C5. Measure 27: quarter note D5, quarter note E5. Measure 28: quarter note F5, quarter note G5. Measure 29: quarter note A5, quarter note B5. Measure 30: quarter note C6, quarter note D6. A fermata is placed over measure 30.

$\text{♩} = 192$

$\text{♩} = \text{♩} (= 192)$

Staccato

Musical notation for measures 31 through 36. Measure 31: quarter note G4, quarter note A4. Measure 32: quarter note B4, quarter note C5. Measure 33: quarter note D5, quarter note E5. Measure 34: quarter note F5, quarter note G5. Measure 35: quarter note A5, quarter note B5. Measure 36: quarter note C6, quarter note D6. A fermata is placed over measure 36.

Pulses (page 2) C score

$\text{♩} = 96$
Legato
37 38 39 40 41 42
etc...

Staccato $\text{♩} = 288$ $\text{♩} = 288$
43 44 45 46 47 48

$\text{♩} = 72$
Legato
49 50 51 52 53 54
etc...

$\text{♩} = 216$ $\text{♩} = 216$
55 56 57 58 59 60

$\text{♩} = 108$
61 62 63 64 65 66

$\text{♩} = 324$ $\text{♩} = 324$
67 68 69 70 71 72

$\text{♩} = 81$
73 74 75 76 77 78

Pulses

(C Score - Bass Clef)

Jordan Nobles

Legato ♩ = 240 repeat each cell for about 10 seconds

Musical notation for measures 1 through 6. The notation is in bass clef and includes dynamic markings *N* and *mf*. Measure 1 is marked with a '1' and a fermata. Measure 2 is marked with a '2'. Measure 3 is marked with a '3'. Measure 4 is marked with 'etc...' and a '4'. Measure 5 is marked with a '5'. Measure 6 is marked with a '6'. The notes are: 1. G2, A2; 2. G#2, A2; 3. G#2, A2; 4. G#2, A2; 5. G#2, A2; 6. G#2, A2.

Musical notation for measures 7 through 12. The tempo is marked as ♩ = 80. Measure 7 is marked with a '7'. Measure 8 is marked with an '8'. Measure 9 is marked with a '9'. Measure 10 is marked with a '10'. Measure 11 is marked with a '11'. Measure 12 is marked with a '12'. The notes are: 7. G#2, A2; 8. G#2, A2; 9. G#2, A2; 10. G#2, A2; 11. G#2, A2; 12. G#2, A2.

Musical notation for measures 13 through 18. The tempo is marked as ♩ = 160. Measure 13 is marked with a '13'. Measure 14 is marked with a '14'. Measure 15 is marked with a '15'. Measure 16 is marked with a '16'. Measure 17 is marked with a '17'. Measure 18 is marked with a '18'. The notes are: 13. G#2, A2; 14. G#2, A2; 15. G#2, A2; 16. G#2, A2; 17. G#2, A2; 18. G#2, A2.

Musical notation for measures 19 through 24. The tempo is marked as ♩ = 320. Measure 19 is marked with a '19'. Measure 20 is marked with a '20'. Measure 21 is marked with a '21'. Measure 22 is marked with a '22'. Measure 23 is marked with a '23'. Measure 24 is marked with a '24'. The notes are: 19. G#2, A2; 20. G#2, A2; 21. G#2, A2; 22. G#2, A2; 23. G#2, A2; 24. G#2, A2.

Musical notation for measures 25 through 30. The tempo is marked as ♩ = 64. Measure 25 is marked with a '25'. Measure 26 is marked with a '26'. Measure 27 is marked with a '27'. Measure 28 is marked with a '28'. Measure 29 is marked with a '29'. Measure 30 is marked with a '30'. The notes are: 25. G#2, A2; 26. G#2, A2; 27. G#2, A2; 28. G#2, A2; 29. G#2, A2; 30. G#2, A2.

Musical notation for measures 31 through 36. The tempo is marked as ♩ = 192. The word **Staccato** is written above the staff. Measure 31 is marked with a '31'. Measure 32 is marked with a '32'. Measure 33 is marked with a '33'. Measure 34 is marked with a '34'. Measure 35 is marked with a '35'. Measure 36 is marked with a '36'. The notes are: 31. G#2, A2; 32. G#2, A2; 33. G#2, A2; 34. G#2, A2; 35. G#2, A2; 36. G#2, A2.

Pulses (page 2) C score - Bass Clef

$\text{♩} = 96$
Legato
37 38 39 40 41 42
etc...

$\text{♩} = 288$
Staccato
43 44 45 46 47 48
3 3 3 3

$\text{♩} = 72$
Legato
49 50 51 52 53 54
etc...

$\text{♩} = 216$
 $\text{♩} = \text{♪} (= 216)$
55 56 57 58 59 60
3 3 3 3

$\text{♩} = 108$
61 62 63 64 65 66

$\text{♩} = 324$
 $\text{♩} = \text{♪} (= 324)$
67 68 69 70 71 72
3 3

$\text{♩} = 81$
73 74 75 76 77 78

Pulses

(Bb Score)

Jordan Nobles

Legato

$\text{♩} = 240$ repeat each cell for about 10 seconds

Musical notation for measures 1 through 6. Each measure contains a single note with a repeat sign. The notes are: 1. Bb, 2. B, 3. B, 4. B, 5. B, 6. B. A dynamic marking of *mf* is placed below measures 1 and 2. The text "etc..." is written below measure 4. The notes are connected by a slur.

Musical notation for measures 7 through 12. Measures 7-8 are marked with $\text{♩} = 80$. Measures 9-12 are marked with $\text{♩} = \text{♩} (= 80)$. The notes are: 7. Bb, 8. Bb, 9. Bb, 10. Bb, 11. Bb, 12. Bb. The notes are connected by a slur.

Musical notation for measures 13 through 18. The tempo is marked as $\text{♩} = 160$. The notes are: 13. Bb, 14. Bb, 15. Bb, 16. Bb, 17. Bb, 18. Bb. The notes are connected by a slur.

Musical notation for measures 19 through 24. The tempo is marked as $\text{♩} = 320$. The notes are: 19. Bb, 20. Bb, 21. Bb, 22. Bb, 23. Bb, 24. Bb. The notes are connected by a slur.

Musical notation for measures 25 through 30. Measures 25-26 are marked with $\text{♩} = 64$. Measures 27-30 are marked with $\text{♩} = \text{♩} (= 64)$. The notes are: 25. Bb, 26. Bb, 27. Bb, 28. Bb, 29. Bb, 30. Bb. The notes are connected by a slur.

Staccato

Musical notation for measures 31 through 36. Measures 31-32 are marked with $\text{♩} = 192$. Measures 33-36 are marked with $\text{♩} = \text{♩} (= 192)$. The notes are: 31. Bb, 32. Bb, 33. Bb, 34. Bb, 35. Bb, 36. Bb. The notes are connected by a slur.

Pulses (page 2) Bb score

$\text{♩} = 96$
Legato

Musical notation for measures 37-42. The notation is in treble clef with a key signature of two flats. It consists of six measures, each containing a dotted quarter note followed by an eighth note. The notes are: 37 (Bb), 38 (Bb), 39 (Bb), 40 (Bb), 41 (Bb), 42 (Bb). The text "etc..." is written below measure 39.

Staccato $\text{♩} = 288$ $\text{♩} = \text{♩} = 288$

Musical notation for measures 43-48. The notation is in treble clef with a key signature of two flats. It consists of six measures of staccato eighth notes. Measures 43, 44, 45, and 46 each contain a triplet of eighth notes. Measures 47 and 48 contain eighth notes. The notes are: 43 (Bb), 44 (Bb), 45 (Bb), 46 (Bb), 47 (Bb), 48 (Bb).

$\text{♩} = 72$
Legato

Musical notation for measures 49-54. The notation is in treble clef with a key signature of two flats. It consists of six measures of half notes. The notes are: 49 (Bb), 50 (Bb), 51 (Bb), 52 (Bb), 53 (Bb), 54 (Bb). The text "etc..." is written below measure 52.

$\text{♩} = 216$ $\text{♩} = \text{♩} (= 216)$

Musical notation for measures 55-60. The notation is in treble clef with a key signature of two flats. It consists of six measures of eighth notes. Measures 55, 56, and 57 each contain a triplet of eighth notes. Measures 58, 59, and 60 contain eighth notes. The notes are: 55 (Bb), 56 (Bb), 57 (Bb), 58 (Bb), 59 (Bb), 60 (Bb).

$\text{♩} = 108$

Musical notation for measures 61-66. The notation is in treble clef with a key signature of two flats. It consists of six measures of eighth notes. The notes are: 61 (Bb), 62 (Bb), 63 (Bb), 64 (Bb), 65 (Bb), 66 (Bb).

$\text{♩} = 324$ $\text{♩} = \text{♩} (= 324)$

Musical notation for measures 67-72. The notation is in treble clef with a key signature of two flats. It consists of six measures of eighth notes. Measures 67, 68, and 69 each contain a triplet of eighth notes. Measures 70, 71, and 72 contain eighth notes. The notes are: 67 (Bb), 68 (Bb), 69 (Bb), 70 (Bb), 71 (Bb), 72 (Bb).

$\text{♩} = 81$

Musical notation for measures 73-78. The notation is in treble clef with a key signature of two flats. It consists of six measures of quarter notes. The notes are: 73 (Bb), 74 (Bb), 75 (Bb), 76 (Bb), 77 (Bb), 78 (Bb).

Pulses

(Eb Score)

Jordan Nobles

Legato

$\text{♩} = 240$ repeat each cell for about 10 seconds

Musical notation for measures 1 through 6. Each measure is a single eighth note with a repeat sign. The notes are: 1. Bb, 2. Bb, 3. Bb, 4. Bb, 5. Bb, 6. Bb. A dynamic marking *mf* is placed below measures 1 and 2, with 'N' above them. The text 'etc...' is written below measure 4.

$\text{♩} = 80$

$\text{♩} = \text{♩} (= 80)$

Musical notation for measures 7 through 12. Measures 7-9 are eighth notes with repeat signs: 7. Bb, 8. Bb, 9. Bb. Measures 10-12 are eighth notes: 10. Bb, 11. Bb, 12. Bb.

$\text{♩} = 160$

Musical notation for measures 13 through 18. Measures 13-18 are eighth notes with repeat signs: 13. Bb, 14. Bb, 15. Bb, 16. Bb, 17. Bb, 18. Bb.

$\text{♩} = 320$

Musical notation for measures 19 through 24. Measures 19-24 are eighth notes with repeat signs: 19. Bb, 20. Bb, 21. Bb, 22. Bb, 23. Bb, 24. Bb.

$\text{♩} = 64$

$\text{♩} = \text{♩} (= 64)$

Musical notation for measures 25 through 30. Measures 25-30 are eighth notes with repeat signs: 25. Bb, 26. Bb, 27. Bb, 28. Bb, 29. Bb, 30. Bb.

$\text{♩} = 192$

$\text{♩} = \text{♩} (= 192)$

Staccato

Musical notation for measures 31 through 36. Measures 31-36 are eighth notes with repeat signs and triplets. Measures 31-33 are eighth notes with repeat signs and triplets: 31. Bb, 32. Bb, 33. Bb. Measures 34-36 are eighth notes with repeat signs: 34. Bb, 35. Bb, 36. Bb.

Pulses (page 2) Eb score

$\text{♩} = 96$
Legato
37 38 39 40 41 42
etc...

Staccato $\text{♩} = 288$ $\text{♩} = 288$
43 44 45 46 47 48
3 3 3 3

$\text{♩} = 72$
Legato
49 50 51 52 53 54
etc...

$\text{♩} = 216$ $\text{♩} = 216$
55 56 57 58 59 60
3 3 3 3

$\text{♩} = 108$
61 62 63 64 65 66

$\text{♩} = 324$ $\text{♩} = 324$
67 68 69 70 71 72
3 3

$\text{♩} = 81$
73 74 75 76 77 78

Pulses

(F Score)

sounds a fifth lower or a fourth higher

Jordan Nobles

Legato

$\text{♩} = 240$ repeat each cell for about 10 seconds

Musical notation for measures 1 through 6. Each measure contains a pair of notes with a bar line between them. Measure 1: N (natural) and N (natural) with mf dynamic. Measure 2: \sharp (sharp) and \sharp (sharp). Measure 3: \sharp (sharp) and \sharp (sharp). Measure 4: \sharp (sharp) and \sharp (sharp). Measure 5: \sharp (sharp) and \sharp (sharp). Measure 6: \sharp (sharp) and \sharp (sharp). The text "etc..." is written below the staff.

$\text{♩} = 80$

$\text{♩} = \text{♩} (= 80)$

Musical notation for measures 7 through 12. Measure 7: \sharp (sharp) and \sharp (sharp). Measure 8: \sharp (sharp) and \sharp (sharp). Measure 9: \sharp (sharp) and \sharp (sharp). Measure 10: \sharp (sharp) and \sharp (sharp). Measure 11: \sharp (sharp) and \sharp (sharp). Measure 12: \sharp (sharp) and \sharp (sharp).

$\text{♩} = 160$

Musical notation for measures 13 through 18. Measure 13: \flat (flat) and \flat (flat). Measure 14: \flat (flat) and \flat (flat). Measure 15: \flat (flat) and \flat (flat). Measure 16: \flat (flat) and \flat (flat). Measure 17: \flat (flat) and \flat (flat). Measure 18: \flat (flat) and \flat (flat).

$\text{♩} = 320$

Musical notation for measures 19 through 24. Measure 19: \flat (flat) and \flat (flat). Measure 20: \flat (flat) and \flat (flat). Measure 21: \flat (flat) and \flat (flat). Measure 22: \flat (flat) and \flat (flat). Measure 23: \flat (flat) and \flat (flat). Measure 24: \flat (flat) and \flat (flat).

$\text{♩} = 64$

$\text{♩} = \text{♩} (= 64)$

Musical notation for measures 25 through 30. Measure 25: \flat (flat) and \flat (flat). Measure 26: \flat (flat) and \flat (flat). Measure 27: \flat (flat) and \flat (flat). Measure 28: \flat (flat) and \flat (flat). Measure 29: \flat (flat) and \flat (flat). Measure 30: \flat (flat) and \flat (flat).

$\text{♩} = 192$

$\text{♩} = \text{♩} (= 192)$

Staccato

Musical notation for measures 31 through 36. Measure 31: \flat (flat) and \flat (flat). Measure 32: \flat (flat) and \flat (flat). Measure 33: \flat (flat) and \flat (flat). Measure 34: \flat (flat) and \flat (flat). Measure 35: \flat (flat) and \flat (flat). Measure 36: \flat (flat) and \flat (flat). Triplet markings (3) are present above and below the notes in measures 31, 32, 33, 34, 35, and 36.

Pulses (page 2) F score

$\text{♩} = 96$
Legato
37 38 39 40 41 42
etc...

Staccato $\text{♩} = 288$ $\text{♩} = \text{♩} = 288$
43 44 45 46 47 48

$\text{♩} = 72$
Legato
49 50 51 52 53 54
etc...

$\text{♩} = 216$ $\text{♩} = \text{♩} (= 216)$
55 56 57 58 59 60

$\text{♩} = 108$
61 62 63 64 65 66

$\text{♩} = 324$ $\text{♩} = \text{♩} (= 324)$
67 68 69 70 71 72

$\text{♩} = 81$
73 74 75 76 77 78