

canal(s)

for Unheard-of//Ensemble

John Eagle  
August 2019

**Setup:** Clarinet, Violin, and Cello are equipped with individual speakers which can be programmed to play each specified tone during the correct time window. The speaker can be turned on/off by the player. Sometimes two separate tones must be available. The speakers provided by the composer are activated by proximity. When placed on the floor near the foot of the player, the performer may place a foot in front of the sensor to activate the tone. When multiple tones are available, the foot may be moved closer/farther away to access the second tone. A stereo tape track plays throughout, starting at 0:00 and lasts for 15 minutes. These means that performers should start stop watches with the beginning of the track. The piece ends with 30 seconds of tape. The tape part should be dynamically equal to the instruments or even louder. The instruments should be heard, but not in the foreground.

**Piano:** The majority of the piano's notes are harmonics achieved by lightly pressing on the correct node as indicated by the boxed number above the notes on the bottom staff (the sounding pitch is indicated on the middle staff). Normally played notes are on the top staff. The player may prepare the strings in advance by placing "sticky tacky" on the correct nodes, though a few notes toward the end will require the sticky tack to be moved mid-performance. These notes are marked with an asterisk. However, with enough time to rehearse the performer may be able to find most, if not all, notes within the allotted time for each cell during performance without preparing the strings in advance. Notes in each cell may be played in any order and may be repeated, so long as each note is played at least once. Repeating a key attack while searching for the correct node is welcome.

**Notation:** Each cell is one 30 second section, marked with a normal barline. Some of these are divided into sub-cells of 15 seconds with a dashed barline. Most cells have one note. This note may be played *at any time* during the given timings and need not start right away. It need not last the entire cell either (more on proportions below). When multiple notes are given, they may be played in any order or together as a chord (piano may choose any combination of given notes). Cells without a note are rests.

Clarinet, violin, and cello each have a "Speaker" staff with the pitches that are available from their speakers. Cent deviations and the pitch ratio relationships are specified for every pair. The cello's first cell has two pitches available and one pitch in the speaker. The ratio of the two cello pitches are specified above and the speaker pitch is connected to the relevant cello pitch with a dashed curve. A staff with cues provides notes present in other instruments that may be helpful tuning references.

**Performance:** The piece is a process of tuning. It is expected that players will be searching for their notes. There are many pitch relationships that are a few cents off of the printed ratio. This is a result of approximating harmonies found in the tape part. This should create some pitch movement. A player may have multiple pitch references that might require raising or lowering their note to achieve the specified ratio. The speaker should be used explicitly as a tuning reference. One should try and "check in" at least once a cell, but might use it more or less depending on the difficulty of the tuning demands.

Generally, players should be listening intensely, looking for multiple tuning references whenever possible and trying to adjust accordingly (even, *especially*, when deviations are present). Given this demand, a pure steady tone should be used throughout (no vibrato). Dynamics should be pretty consistent (within a small range) and the ensemble should be equally balanced. Duration is dependant on listening and the physicality of the performance, but notes should be generally long.

In section A: players should strive to play as much of the time as possible, leaving only brief gaps when necessary.  
In section B: players should play about 66% of the time (so in a 30 second cell, playing about 20 seconds of the time).  
In section C: players should play about 33% of the time (about 10 seconds of a 30 second cell).

Piano might take exception some of the time as number of pitches available might require more/less playing. Piano notes should be allowed to ring out with their natural decay time.

# canal(s)

John Eagle

## A

	00:00	1 196.37 00:30 +3	2 239.7 01:00 +49	3 194.3 01:30 -15	4 442.5 02:00 +10	5 334.93 02:30 +28
Clarinet in B $\flat$						
Speaker		147.27 +5	319.67 +47	145.73 -13	353.9 +23	133.97 +41
Violin		270.03 -45	358.63 +46	259.07 -17	353.9 +23	364.53 -26
Speaker		154.33 -14	179.67 +49	145.73 -13	196.63 +6	130.27 -7
Cello		154.33 -14	120.0 -49	149.5 +31	221.2 +9	156.23 +7
Speaker		115.67 -13	179.67 +49	277.63 +3	196.63 +6	138.83 +3

## A

	00:00	00:30	01:00	01:30	02:00	02:30
(Ord.)						
Piano (Sounding)		(# $\circ$ ) (b $\circ$ )	(b $\circ$ ) ( $\circ$ )	( $\circ$ ) (b $\circ$ )	( $\circ$ ) ( $\circ$ )	( $\circ$ ) ( $\circ$ )
(Key/Node)	8	5 3	11 11	5 3	3 3	5 3

	03:00	03:30	04:00	04:30	04:45	05:00
<b>6</b> 276.07 -7	<b>7</b> 317.97 +38	<b>8</b> 187.47 +23	<b>9</b> 300.27 +39	<b>10</b> 196.9 -8	<b>11</b> 332.97 +17	
<b>B<math>\flat</math> Cl.</b>	$\sharp\text{e}$ $\boxed{9/8}$ 245.37 -11	$\text{b}\text{e}$ $\boxed{15/13}$ 275.5 -11	$\text{b}\text{e}$ $\boxed{7/6}$ 160.8 -43	$\text{e}$ $\boxed{4/3}$ 225.4 +42	$\text{e}$ $\boxed{8/5}$ 123.13 -5	$\text{e}$ $\boxed{8/5}$ 208.2 +5
<b>Spkr.</b>	$\text{e}$	$\sharp\text{e}$	$\text{e}$	$\text{e}$	$\text{e}$	$\sharp\text{e}$
<b>Vln.</b>	337.4 +40	250.43 +24	200.63 +40	354.03 +24    337.6 +41	218.87 +9	249.97 +21
<b>Spkr.</b>	$\text{e}$ $\boxed{2/1}$ 168.57 +39	$\text{e}$ $\boxed{16/11}$ 172.2 -24	$\text{e}$ $\boxed{2/1}$ 100.47 +43	$\text{e}$ $\boxed{16/7}$ $\boxed{2/1}$ 154.97 -7    169.03 +43	$\text{e}$ $\boxed{4/3}$ 164.3 -5	$\text{e}$ $\boxed{6/5}$ 208.2 +5
<b>Vc.</b>	187.47 +23	241.1 +24	133.93 +40	157.8 +25	146.0 -10	104.2 +6
<b>Spkr.</b>	$\sharp\text{e}$ $\boxed{9/4}$ 421.77 +27	$\text{e}$ $\boxed{16/11}$ 350.6 +7	$\text{e}$ $\boxed{3/2}$ 200.63 +40	$\text{b}\text{e}$ $\boxed{5/3}$ 262.97 +9	$\text{e}$ $\boxed{9/8}$ 164.3 -5	$\text{b}\text{e}$ $\boxed{2/1}$ 208.2 +5
<b>(Ord.)</b>	03:00	03:30	04:00	04:30	04:45	05:00
<b>Pno. (Snd.)</b>	$\sharp\text{e}$	$\sharp\text{e}$	$\text{e}$	$\text{b}\text{e}$ $\text{e}$	$\text{e}$	$\sharp\text{e}$ $\text{b}\text{e}$
<b>(K/N)</b>	$\text{e}$ $\boxed{11}$	$\text{e}$ $\boxed{5}$	$\text{e}$ $\boxed{3}$	$\text{e}$ $\boxed{5}$ $\text{e}$ $\boxed{3}$	$\text{e}$ $\boxed{3}$	$\text{e}$ $\boxed{3}$ $\text{e}$ $\boxed{3}$

	05:15	05:30	05:45	06:00	06:15	06:30	07:00
<b>B<math>\flat</math> Cl.</b>	12 250.47 +25	13 205.57 -17	14 198.57 +23	15 202.47 -44	16 274.5 -17	17 267.57 +39	18 228.7 -33
<b>Spkr.</b>	214.6 -43 ( $\circ$ )	128.5 -31 ( $\circ$ )	158.87 +36 ( $\flat$ $\circ$ )	303.9 -41 ( $\flat$ $\circ$ )	190.07 +47 ( $\sharp$ $\circ$ )	170.27 -44 ( $\circ$ )	127.07 -50 ( $\circ$ )
<b>Vln.</b>	313.33 +12		238.17 +37	303.9 -41	412.07 -14	280.97 +23	272.43 -30
<b>Spkr.</b>	125.17 +24 ( $\circ$ )		173.23 -14 ( $\circ$ )	216.93 -24 ( $\circ$ )	274.5 -17 ( $\sharp$ $\circ$ )	140.37 +22 ( $\sharp$ $\circ$ )	190.63 -48 ( $\circ$ )
<b>Vc.</b>	167.13 +24 ( $\circ$ )	119.9 +49 ( $\flat$ $\circ$ )	151.63 -44 ( $\flat$ $\circ$ )	151.77 -43 ( $\flat$ $\circ$ )	176.53 +19 ( $\circ$ )	100.43 +42 ( $\circ$ )	218.63 -11 ( $\circ$ )
<b>Spkr.</b>	100.33 +40 ( $\circ$ )	102.83 -17 ( $\flat$ $\circ$ )	108.33 -26 ( $\circ$ )	202.47 -44 ( $\flat$ $\circ$ )	274.5 -17 ( $\flat$ $\circ$ )	267.57 +39 ( $\circ$ )	280.97 +23 ( $\sharp$ $\circ$ )
	5/3	7/6	7/5	4/3	14/9	8/3 9/7	3/2

	05:15	05:30	05:45	06:00	06:15	06:30	07:00
<b>(Ord.)</b>						( $\flat$ $\circ$ )	( $\circ$ )
<b>Pno. (Snd.)</b>		( $\sharp$ $\circ$ ) ( $\sharp$ $\circ$ )	( $\circ$ )		( $\sharp$ $\circ$ ) ( $\sharp$ $\circ$ )	( $\flat$ $\circ$ ) ( $\circ$ )	( $\sharp$ $\circ$ )
<b>(K/N)</b>	8	5 5	5		5 5	3 3	5

	07:30 <sup>19</sup>	08:00 <sup>20</sup>	08:30 <sup>21</sup>	08:45 <sup>22</sup>	09:00 <sup>23</sup>	09:15 <sup>24</sup>	09:30 <sup>25</sup>	09:45 <sup>26</sup>
B $\flat$ Cl.	252.2 +36	230.3 -21	200.73 +41	199.43 +30	184.27 -7	188.47 +32		202.3 -45
Spkr.	16/15 236.47 +25	9/8 204.67 -25	2/1 100.17 +38	3/2 133.0 +29	6/5 153.6 -22	9/8 167.47 +28		13/9 140.07 +18
Vln.	270.23 -44	263.13 +10	300.57 +40	266.07 +29	211.1 +29	251.3 +30	331.13 +8	303.47 -43
Spkr.	4/3 202.8 -41	8/7 230.3 -21	2/1 150.47 +42	2/1 133.0 +29	11/8 153.6 -22	2/1 125.53 +29	2/1 165.53 +8	5/4 252.87 +41
Vc.	5/4 145.53 -15	11/8 167.53 +28	4/3 150.47 +42	7/6 171.0 -36	3/2 127.93 -39	4/3 167.47 +28	6/5 150.53 +43	16/13 217.87 -17
Spkr.	181.87 -30	230.3 -21	200.73 +41	199.43 +30	191.93 -36	125.53 +29	180.53 -42	177.03 +24

	07:30	08:00	08:30	08:45	09:00	09:15	09:30	09:45
(Ord.)								
Pno. (Snd.)								
(K/N)	8	3	3 3		7 5		3	

C

canal(s)

	10:00	27 197.4 +12	28 269.3 10:15 -50	29 271.4 10:30 -36	30 253.37 11:00 +44	31 281.67 11:30 +28	32 267.77 12:00 +40	33 266.33 12:30 +31
B $\flat$ Cl.		4/3	16/9	6/5	3/2	2/1	2/1	13/11
Spkr.		262.97 +9	151.47 -46	226.2 +48	168.93 +43	140.87 +28	133.8 +39	225.43 +42
Vln.		225.5 +43	303.17 -45	226.2 +48	253.37 +44	257.8 -26	501.97 +28	488.37 -19
Spkr.		8/7	8/7	2/1	3/2	15/13	7/2	5/2
Vc.		112.6 +40	151.47 -46	161.63 -34	126.7 +45	193.6 -21	251.5 +31	187.8 +26
Spkr.		9/8	14/11	5/4	4/3	4/3	2/1	6/5
		197.4 +12	265.17 +23	113.03 +47	168.93 +43	223.43 +27	143.5 -40	195.3 -6
		100.13 +37	118.97 +36	129.3 -20	168.93 +43	145.1 -21	501.97 +28	225.43 +42

	10:00	10:15	10:30	11:00	11:30	12:00	12:30
(Ord.)							
Pno. (Snd.)		* *					
(K/N)	3	5 7 7	7 7	7 7	7 7	5	

8

canal(s)

	13:00	13:30	14:00	14:30
B $\flat$ Cl.	34 337.2 +39	35 300.73 +41	36 345.2 -20	37 14:30
Spkr.	126.53 +42	100.0 +35	313.93 +16	
Vln.	241.03 -42	375.17 +24	221.93 +15	14:30
Spkr.	144.67 -26	214.4 -44	197.43 +13	
Vc.	144.67 -26	175.13 +5	107.83 -34	14:30
Spkr.	126.53 +42	100.0 +35	258.67 -20	

	13:00	13:30	14:00	14:30
(Ord.)				
Pno. (Snd.)			*	*
(K/N)	8	3 13 5 5	5	