Straight Line Through A Landscape

by Joe Bates

Performance Notes

Instrumentation

Flute, doubling alto flute

Clarinet, doubling bass clarinet

Cello

Percussion: four demijohns, two tenor drums (medium, low). Medium and soft sticks, ball bearings.

Duration – c. 17'

Accidentals

Quartertones and conventional accidentals are used to indicate a 24-tone equal temperament. Microtonal accidentals should deviate from standard tuning by 50 cents

These are combined with arrows, which indicate smaller, less precise deviations. These are to be tuned from the demijohns.

The Demijohns

Sourcing the equipment

This piece uses four glass demijohns: one of c.23 litres, two of c.11 litres (labelled A and B), and one of c.4.5 litres. It also uses three ½" diameter vinyl tubes, each 2m long. All this equipment can be sourced from home-brewing stockists. The percussionist will also need ball bearings. These must be food safe; decanter cleaning balls are recommended.

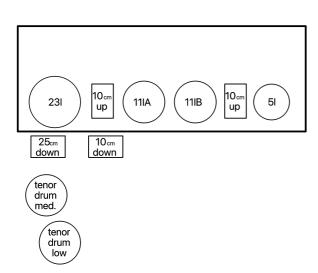
Arranging the vessels

These should be filled with 25 litres of water, approximately evenly divided across the four vessels. This is best measured with digital scales. Once filled, the 23l vessel should be raised onto a robust table. A tube should be inserted into the vessel. It should be siphoned, by sucking, into the lowest pitched of the two 11l vessels, which should then be raised to table level. This process should be repeated with the remaining two vessels, using the remaining tubing, until all four vessels are on the table, connected by three siphon tubes.

Setting up the stations

The result is that when a vessel is raised or lowered, water will flow between the vessels to maintain an even level, changing their pitch.

Four different stations will be required for the vessels, on top of and beside the table. Areas raised by 10cm should sit on the table beside the 5l and 11l A vessels. Areas lowered by 10cm and 25cm should sit in front of the 23l and 11lA vessels, respectively. You can see this setup in



the diagram to the left.

Marking the vessels and setting the station height

This setup is designed to elicit specific pitches, which are shown below. These pitches should be checked with a spectrogram, as the vessels are likely to have two prominent pitches. First, check the tuning of the initial setup, marked as 1. on the figure below. If the notes are not correct, you can raise the pitch of each vessel by raising it using sheets of paper or lower it by raising every other vessel with paper. (If multiple vessels are out of tune, start by fixing the lowest out-of-tune vessel first to minimise moves.)

To set the height of the raised stations, you will need a timer, a spectrogram, and a permanent marker. Move the vessels as indicated by the arrows in the figure below – for example, move the 5l demijohn up 10cm to start section 2. Time these movements from the moment that the vessel is picked up. After the allotted time, place a mark on the vessel whose final pitch is circled, numbering them sequentially as indicated. There will be a total of five marks. Check the pitch of the vessel at this mark using the spectrogram. If it is not near the suggested pitch, raise or lower the station accordingly.



The final movement does not need a mark drawn, as there will be no further moves, or adjustments to the height of the stations, as they have been established by the earlier moves.

When this is complete, use a ruler and masking tape to continue the marked line around the complete circumference of the vessel. Number each mark. This allows all players to see when the water level is approaching the mark.

Playing the demijohns

The vessels can be struck either on their side or on the curved top part. They should mostly be struck on the side, as this yields a more resonant sound. Triangle noteheads indicate that they should be struck on the top.

In the last movement, ball bearings are poured into the empty 5l demijohn through a funnel. This is then shaken rhythmically while the top is covered with the percussionist's hand. The rhythm is indicated through slash noteheads.

Movement endings

The movements of the piece are determined by the demijohns. Except for the prelude and final movement, each ends with a demijohn being moved, which acts as a cue for the ensemble. These moves occur when the water level in one of the demijohns hits a marked line, except for in the first movement, where it happens in the final bar of the movement. At the end of movement 4, this move is executed by the cellist.

The movements and their approximate timings are:

<u>#</u>	<u>Timing</u>	Ending move	Ending mark
Prelude	1'	N/A	N/A
1.	1'30"	Raise 51	N/A
2.	1'30"	Raise 111 A	Mark 1 (51)
3.	1'30"	Lower 51 & 111 A	Mark 2 (111 A)
4.	2'00"	Lower 231	Mark 3 (111 B)
5.	2'30"	Lower 111 A	Mark 4 (231)
6.	2'00"	Raise 51	Mark 5 (111 A)
7.	4'00"	N/A	N/A

The score and parts show the theoretical moment where the demijohn should be moved, marked in minutes and seconds. Due to natural variations of tempo, however, it is expected that the demijohns may need to be moved earlier or later. As such, flexibility is built into the ends of movements.

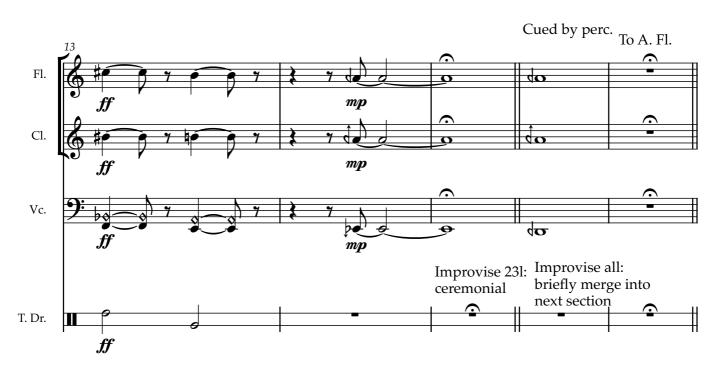
If the demijohns are moved early, players may stop at the nearest double bar line and move on to the next movement. If the demijohns are moved late, they may either repeat a given section until the demijohn is ready (movements 2 and 6) or leave a general pause at the end of movement (movements 3, 4, and 5).

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6 Prelude





















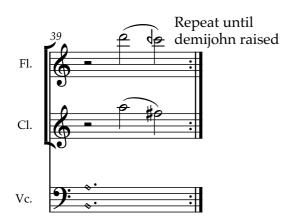


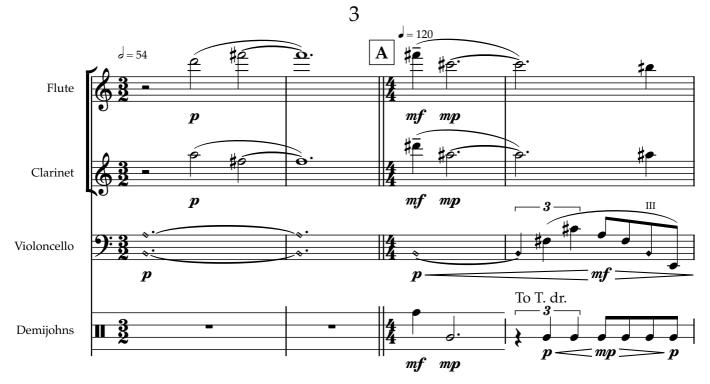


1'30"

When demijohn is raised, stop on next double bar line.







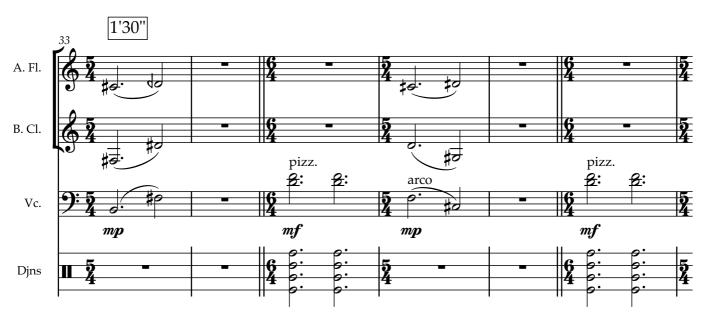


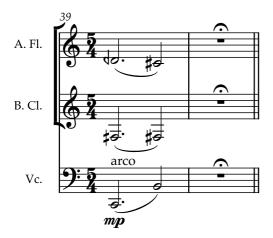




When demijohns are lowered, stop on next double bar line.















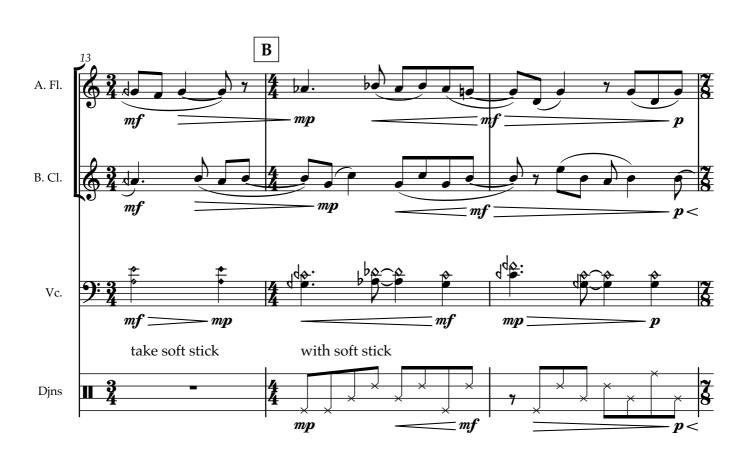












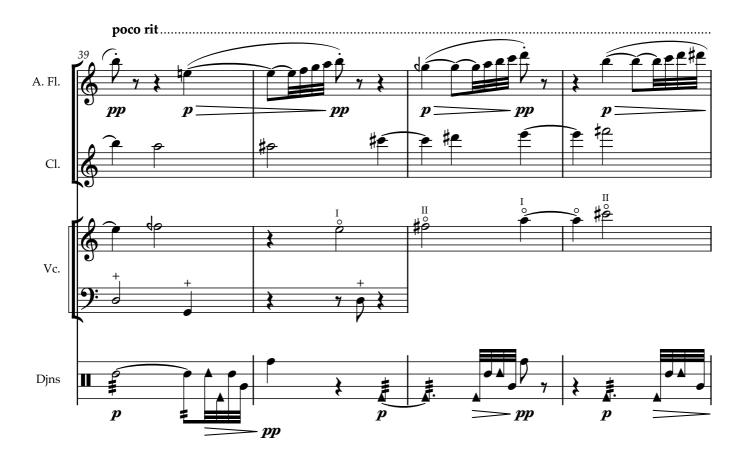


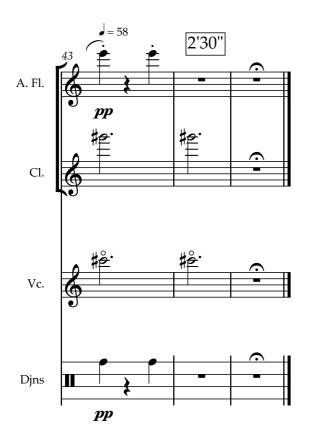


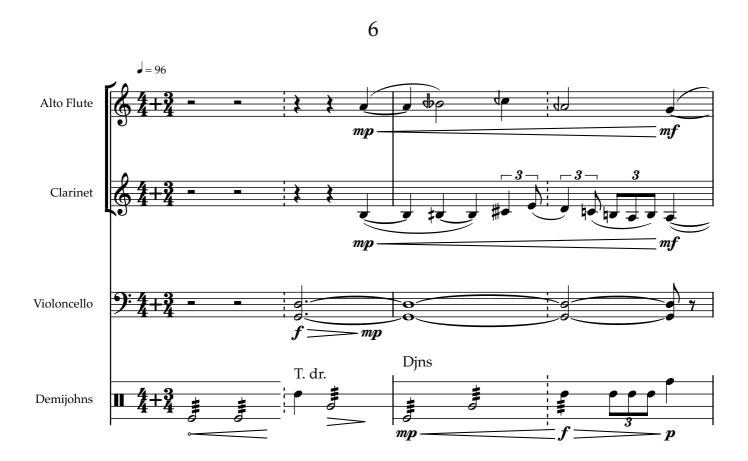












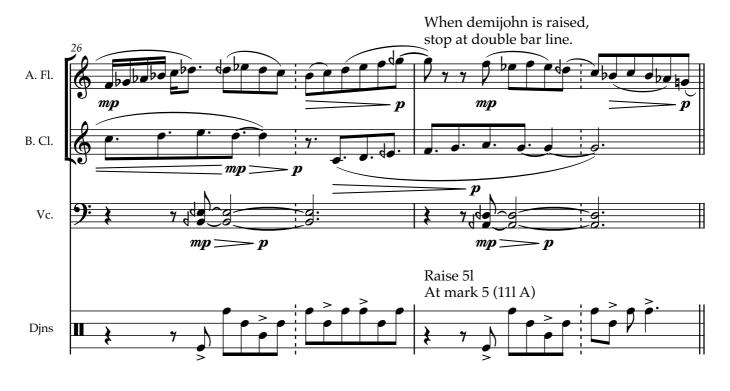


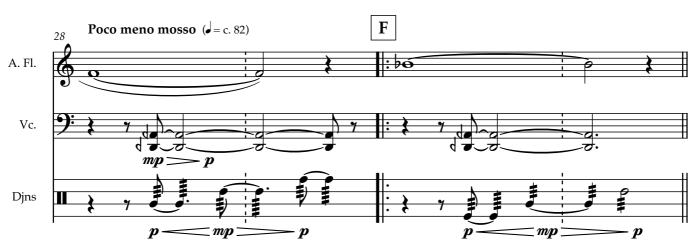




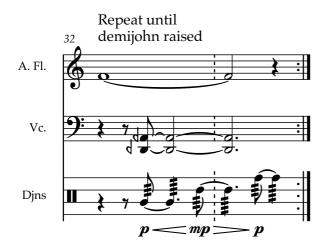


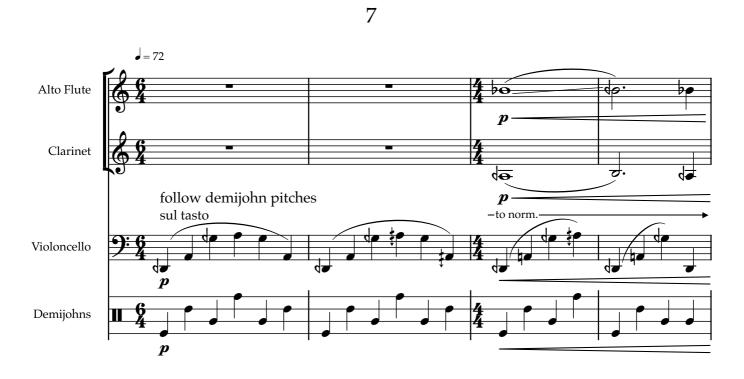
















Djns

mp -



mp -









