

# On the Wind-Battered Staircase

for

**Tuba-Euphonium Ensemble and Live Electronics**

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# Performance Notes

## Instrumentation

*On the Wind-Battered Staircase* is a piece for four euphonium parts, two tuba parts, and a single performer to control the electronics via MIDI controller. However, euphonium IV can be performed by tubas for a three euphonium, three tuba configuration. It is preferred to have 2-3 performers on each tuba/euphonium part.

## Electronics

### Equipment

The equipment required for *Staircase* are a quadrophonic (or stereo) speaker setup, a computer, and a midi controller (preferably a keyboard or a Korg nanoPAD2) capable of being connected to the computer. Optionally, microphones may also be used to feed the ensemble playing through to the speakers in order to allow for a better blend between the ensemble and the electronics.

### Software

The electronics can be found in the accompanying Max patch, all digital sounds will be controlled from there.

**Using the Max Patch** After opening the program, to start the audio click on the box marked *Audio On/Off*. An X will appear in the box if the audio is on.

In order to configure the inputs and outputs of the program, double click on the box labeled *dac~ 1 2 3 4* and click on the *I/O Mappings* button. The opened window allows you to map the internal channels to external channels. In order to downmix the output to stereo, set output channels 3 and 4 to the same outputs as 1 and 2, respectively.

To select the MIDI input device you will be using, double click on the box labeled *notein*.

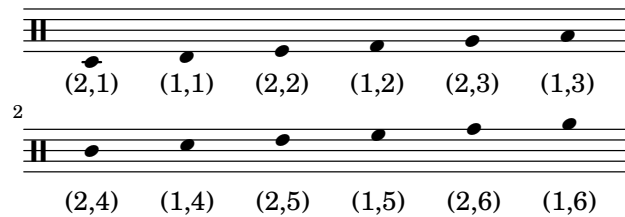
*p quad\_calibration* is a tool that allows you to check and adjust the levels of your speakers, double click on the box to open it. Here, each individual channel's levels can be tested.

When opening the program, the patch is configured to start at the beginning. However, the electronics can be moved to any rehearsal mark using the drop down menu labeled as such.

**Reading the Score** Controlling the electronics is configured two ways: for a keyboard style controller and for the Korg nanoPAD2. To select a configuration, use the *Control Selection* drop-down menu.

**Keyboard** To read the keyboard bindings, simply read the notes on the electronics part as if they were in treble clef.

**Korg nanoPAD2** The bindings for the nanoPAD2 are shown below, where the coordinates are the button's distance from the top, left corner. For example, (1,2) would be the second button from the left in the top row.



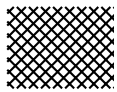
The large zigzag indicates the presence of the collection of swooping frozen mix samples.



The arrow indicates the direction of the pitch-shift used on the mixed sample.

## Graphic Notation

The graphic notation present in the electronic part is a visual descriptor of what is occurring in the electronics at that point in the score.



The crosshatching pattern indicates the presence of the noise soundscape - a collection of sounds that randomly glissando between pitches in the set used in the piece, with the range of pitches available changing throughout the piece. The height of the pattern indicates the range of pitches currently being used, and the vertical positioning of the pattern indicates the register of the pitches.



The zigzags indicate the presence of a "frozen" fragment of audio at that point in time. The lower note is a tuba sample and the upper note is a mix of a euphoium and a dulcimer.









Faster

27 **C** **D**

E.I.

E.II

E.III

E.IV

T.I

T.II

Elec.

The musical score is written for a piece titled "Faster". It is in 3/2 time and consists of 10 measures. The score is divided into several parts: E.I, E.II, E.III, E.IV, T.I, T.II, and Elec. The key signature has one flat (B-flat). The score includes various musical notations such as notes, rests, dynamics (mf), and articulation marks. A large shaded area is present at the bottom of the page.



37

E

E.I

E.II

E.III

E.IV

T.I

T.II

Elec.

The musical score consists of five systems of staves. The first system (measures 1-4) includes staves E.I, E.II, E.III, and E.IV. E.I and E.III have a whole rest in measure 1. E.II and E.IV have a half note in measure 1. In measure 2, E.II and E.IV have a half note, while E.I and E.III have a whole rest. In measure 3, E.II and E.IV have a half note, while E.I and E.III have a whole rest. In measure 4, E.II and E.IV have a half note, while E.I and E.III have a whole rest. The second system (measures 5-8) includes staves T.I and T.II. T.I has a whole note in measure 5, a half note in measure 6, and a whole note in measure 7. T.II has a half note in measure 5, a half note in measure 6, and a whole note in measure 7. The third system (measures 9-10) includes the Elec. staff, which has a whole note in measure 9 and a whole note in measure 10. A shaded rectangular area is located below the Elec. staff.

47

E.I

E.II

E.III

E.IV

T.I

T.II

Elec.

**F**

The musical score consists of five systems of staves. The first four systems are for electric instruments (E.I, E.II, E.III, E.IV) and the fifth is for two tenors (T.I, T.II). The electric instruments play a complex, syncopated melody with many accidentals and dynamic markings. The tenors play a simpler, more rhythmic melody. The electric section is marked with a '47' and a 'F' (forte) dynamic. The tenor section is marked with a 'T.I' and a 'T.II' dynamic. The electric section is marked with a '47' and a 'F' (forte) dynamic. The tenor section is marked with a 'T.I' and a 'T.II' dynamic. The electric section is marked with a '47' and a 'F' (forte) dynamic. The tenor section is marked with a 'T.I' and a 'T.II' dynamic.





67

E.I

E.II

E.III

E.IV

T.I

T.II

Elec.

**H**

**f**

The musical score consists of seven staves. Staves E.I, E.II, E.III, and E.IV are grouped together. Staves T.I and T.II are grouped together. The Elec. staff is at the bottom. Measure 67 is marked with a '67' and a brace. E.I has a box 'H' above measure 70. T.I and T.II have a forte 'f' dynamic marking in measure 70. The Elec. staff has a tremolo pattern from measure 67 to 76, with a single note in measure 70.



77

E.I

E.II

E.III

E.IV

T.I

T.II

Elec.

The musical score is arranged in a system with seven staves. The first four staves are for electric guitar parts (E.I, E.II, E.III, E.IV), the next two for trumpet parts (T.I, T.II), and the bottom staff is for an electric guitar section (Elec.).

**Measures 77-86:**

- E.I:** Starts with a half note G2, followed by a half note F#2. Measure 78 has a half note G2. Measure 79 has a half note G2. Measure 80 has a half note G2. Measure 81 has a half note G2. Measure 82 has a half note G2. Measure 83 has a half note G2. Measure 84 has a half note G2. Measure 85 has a half note G2. Measure 86 has a half note G2.
- E.II:** Starts with a half note G2, followed by a half note F#2. Measure 78 has a half note G2. Measure 79 has a half note G2. Measure 80 has a half note G2. Measure 81 has a half note G2. Measure 82 has a half note G2. Measure 83 has a half note G2. Measure 84 has a half note G2. Measure 85 has a half note G2. Measure 86 has a half note G2.
- E.III:** Starts with a half note G2, followed by a half note F#2. Measure 78 has a half note G2. Measure 79 has a half note G2. Measure 80 has a half note G2. Measure 81 has a half note G2. Measure 82 has a half note G2. Measure 83 has a half note G2. Measure 84 has a half note G2. Measure 85 has a half note G2. Measure 86 has a half note G2.
- E.IV:** Starts with a half note G2, followed by a half note F#2. Measure 78 has a half note G2. Measure 79 has a half note G2. Measure 80 has a half note G2. Measure 81 has a half note G2. Measure 82 has a half note G2. Measure 83 has a half note G2. Measure 84 has a half note G2. Measure 85 has a half note G2. Measure 86 has a half note G2.
- T.I:** Starts with a half note G2, followed by a half note F#2. Measure 78 has a half note G2. Measure 79 has a half note G2. Measure 80 has a half note G2. Measure 81 has a half note G2. Measure 82 has a half note G2. Measure 83 has a half note G2. Measure 84 has a half note G2. Measure 85 has a half note G2. Measure 86 has a half note G2.
- T.II:** Starts with a half note G2, followed by a half note F#2. Measure 78 has a half note G2. Measure 79 has a half note G2. Measure 80 has a half note G2. Measure 81 has a half note G2. Measure 82 has a half note G2. Measure 83 has a half note G2. Measure 84 has a half note G2. Measure 85 has a half note G2. Measure 86 has a half note G2.
- Elec.:** Starts with a half note G2, followed by a half note F#2. Measure 78 has a half note G2. Measure 79 has a half note G2. Measure 80 has a half note G2. Measure 81 has a half note G2. Measure 82 has a half note G2. Measure 83 has a half note G2. Measure 84 has a half note G2. Measure 85 has a half note G2. Measure 86 has a half note G2.

**Dynamics and Articulation:**

- E.I:** *ff* (measures 77-78), *p* (measures 79-86).
- E.II:** *ff* (measures 77-78), *p* (measures 79-86).
- E.III:** *ff* (measures 77-78), *p* (measures 79-86).
- E.IV:** *ff* (measures 77-78), *p* (measures 79-86).
- T.I:** *ff* (measures 77-78), *p* (measures 79-86).
- T.II:** *ff* (measures 77-78), *p* (measures 79-86).
- Elec.:** *ff* (measures 77-78), *p* (measures 79-86).

**Articulation:**

- E.I:** *mp* (measures 83-84), *p* (measures 85-86).
- E.II:** *mp* (measures 83-84), *p* (measures 85-86).
- E.III:** *mp* (measures 83-84), *p* (measures 85-86).
- E.IV:** *mp* (measures 83-84), *p* (measures 85-86).
- T.I:** *mp* (measures 83-84), *p* (measures 85-86).
- T.II:** *mp* (measures 83-84), *p* (measures 85-86).
- Elec.:** *mp* (measures 83-84), *p* (measures 85-86).

10

90

E.I

E.II

E.III

E.IV

T.I

T.II

Elec.

The musical score is written for ten instruments, grouped into three systems. The first system includes E.I, E.II, E.III, and E.IV. The second system includes T.I and T.II. The third system is for the Elec. (Electric) instrument. The score is in 3/2 time, indicated by the time signature at the beginning of the E.I part. The key signature has one flat (B-flat). The E.I part begins with a rehearsal mark 'J' and a measure rest. The E.II part has a measure rest in the first measure. The E.III part has a measure rest in the first measure. The E.IV part has a measure rest in the first measure. The T.I part has a measure rest in the first measure. The T.II part has a measure rest in the first measure. The Elec. part has a measure rest in the first measure. The score includes various musical notations such as notes, rests, dynamics (mp, p), and articulation marks. A rehearsal mark 'J' is present at the beginning of the E.I part. The Elec. part is represented by a wavy line with a few notes.

100

E.I

E.II

E.III

E.IV

T.I

T.II

Elec.

100

101

102

103

104

105

106

107

108

109

110

mp

mp

mp

mp

mp

p