

**Brian Riordan**

# **Laniakea**

**2015**

for pipa, horn in f, double bass, piano, and laptop

## Performance Notes:

The tempo of the entire piece is somewhat flexible. All tempo markings are suggestive. It is preferred that a conductor is not used for the performance.

It is important that the entire ensemble reads from the score.



This symbol is placed above the staff of the instrumentalist that is to make a gestural cue to the rest of the ensemble. Dotted lines are provided through all staves as a warning to the rest of the ensemble that a cue is being made.

In addition to the cues marked in the score, it is encouraged that the performers cue each other throughout the piece. At times, adjustments must be made to either catch up or fall back to stay with the rest of the ensemble.

For graphic notations indicated by zig zag lines, “X’s” or “O’s” on one lined staves, follow the text instructions provided at the time of the graphic notation. Follow the duration as well, but the placement of the graphics are to be loosely interpreted by the performer.

The pipa is tuned, from lowest to highest strings sounding A2, D3, E3, A3. The pipa is notated an octave higher than it sounds. Tablature is provided in some sections when fingering is difficult.

## Piano Preparation Notes:

All notes from F3 to E5 are to be prepared by placing a piece of Blue-Tac on a node, located at the octave, completely covering both strings.

## Additional Equipment required:

The horn player needs a thin metal sheet, preferably aluminum, that is wide enough to cover the bell of the horn for pages 13 and 14.

The piano player needs a plastic case used for clarinet reeds for pages 6 and 7.

A shoe polish brush or a piece of tape to mute the top octave of the strings on pages 13 and 14.

Hard marimba or vibraphone mallets are needed for page 17.

**Notes for the electronics:**

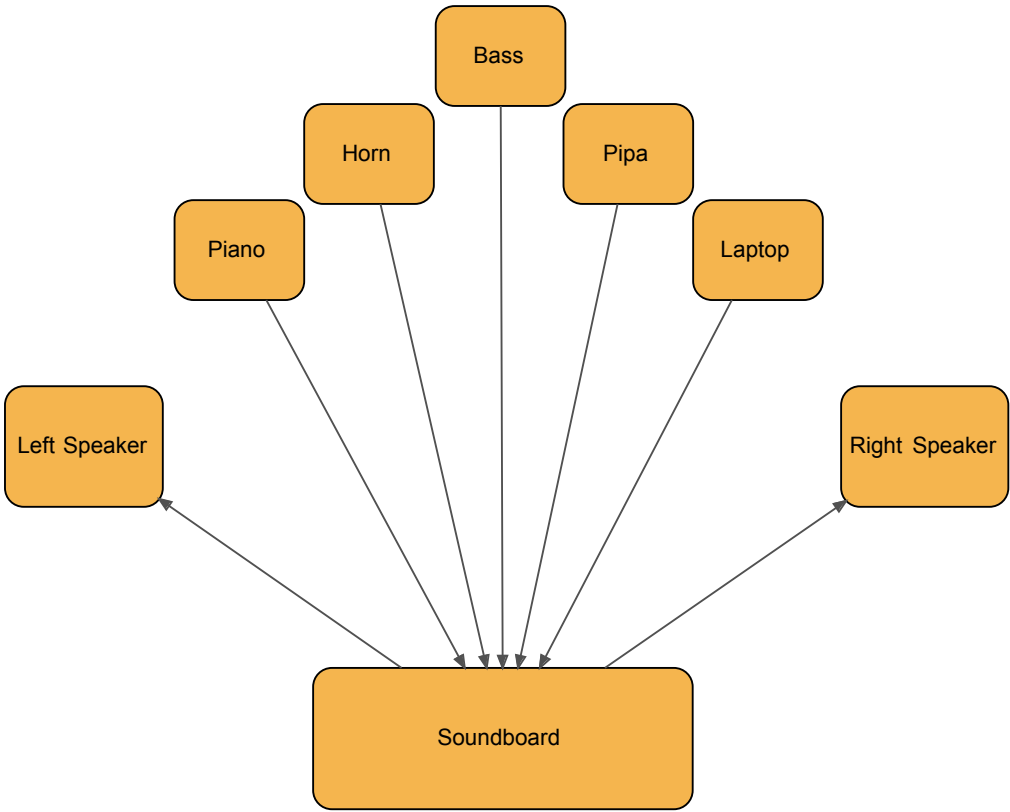
In contrast to earlier electro acoustic music, there are no pre-recorded sounds. There is no tape used in the performance. This brings back the usual flexibility of tempo that is a hallmark of live performance. All electronic sounds are generated in real time by the laptop performer.

An assistant who knows the proper balance between the instruments and sounds produced by the laptop should sit at a mixer in a good listening position in the hall and adjust the volume as necessary throughout the performance. A rehearsed soundcheck should take place without the presence of the audience so the assistant could become familiar with all sounds and balances of the piece.

The ideal sound for optional amplification of instruments is a clear and rich “close” sound. The microphone should be quite near the instrument. The amount of amplification naturally depends on the concert venue, but the amplified sound should be equal to the sounds generated from the Laptop. The general level could be set rather loud, but not painfully so.

Two house speakers should be placed in front of the performers to prevent potential feedback. They should be placed on either side of the performers to project a proper stereo mix to the audience. Generally a monitor speaker should be placed on the floor close to the performers so that they can hear all electronic sounds and optional amplified effects. The soundboard setup should be in front of the speakers located anywhere along the center of the venue so the assistant can mix proper audio levels throughout the performance.

All musicians must sit in a position where eye contact can be made with each member of the ensemble. A performance diagram follows:



## Laptop Setup

Equipment needed:

Macintosh laptop (Macbook) containing at least 2 USB ports and 1 Firewire port (with OS 10.6 or higher)

Novation Launchpad connected via USB

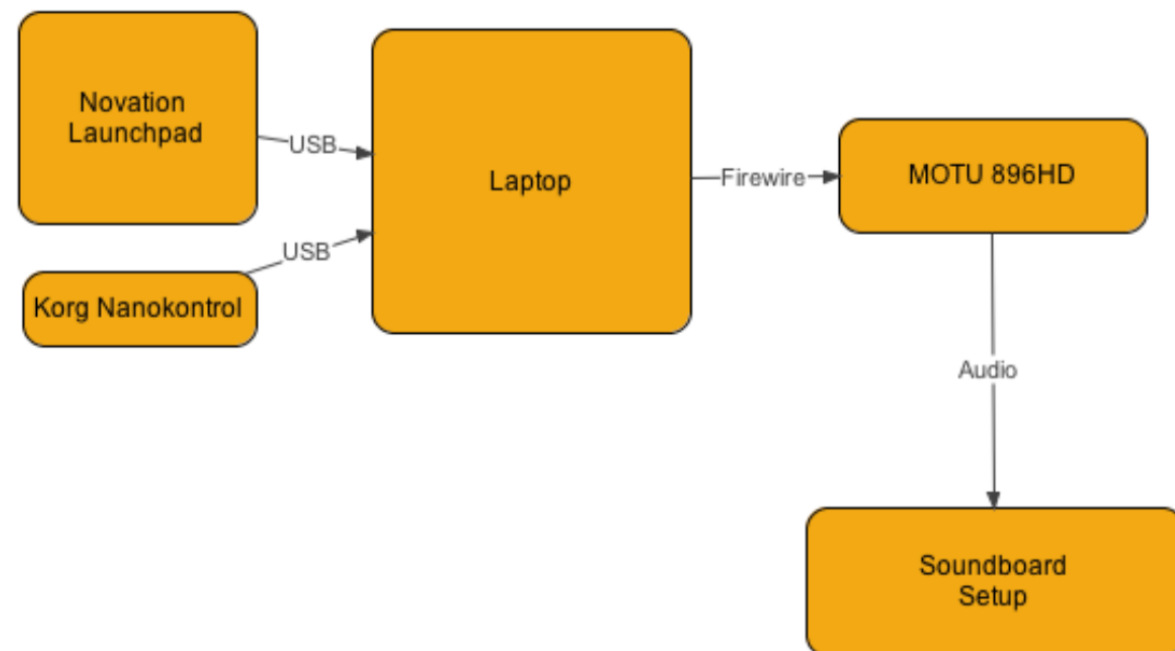
Korg Nanokontrol connected via USB

Audio Interface (such as a MOTU 896HD via firewire) with 2 audio cables sending out Left and Right audio mix to Soundboard

Some software (Max/MSP) is available from the composer.

Additional software (Ableton Live) must be provided by the performer. A template, or set, will be provided by the composer.

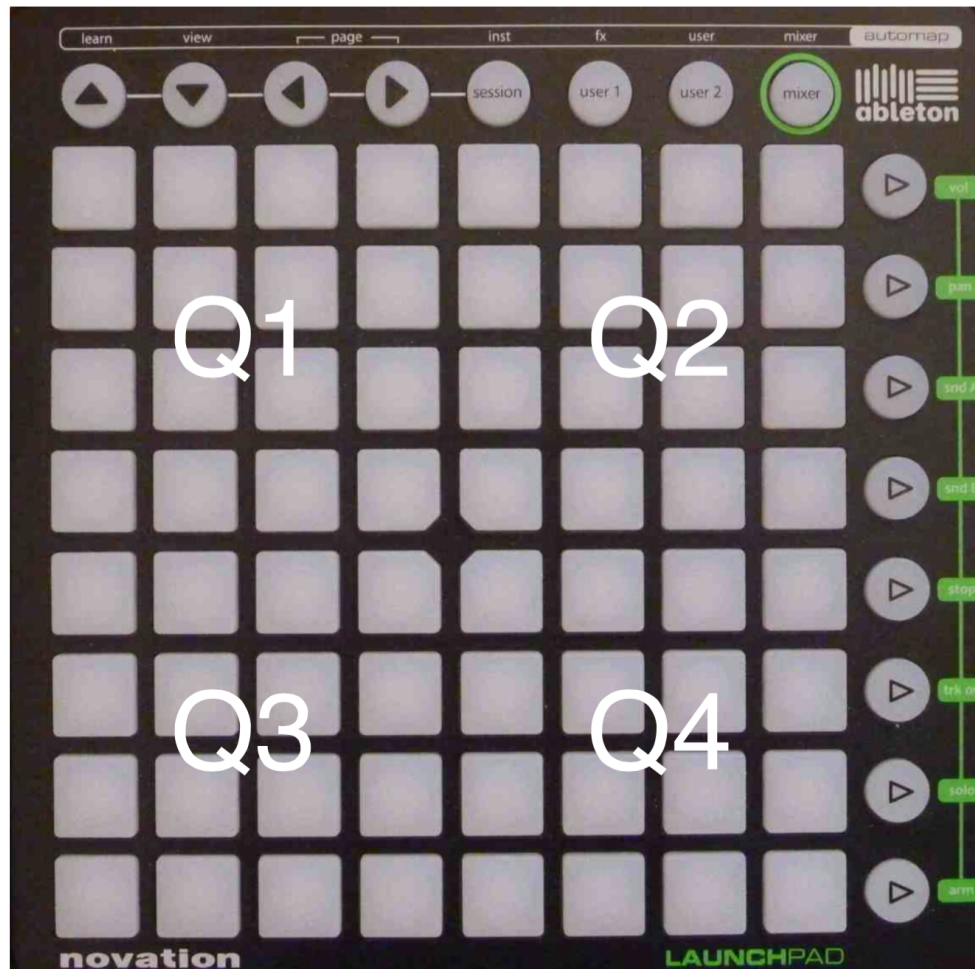
A performance diagram for the Laptop Setup follows:



### Novation Launchpad:

This device contains a grid of 64 buttons arranged 8 x 8. This piece requires that the grid be divided up into 4 individual “quadrants” of 16 buttons each arranged 4 x 4. Each quadrant is noted 1 through 4 as Q1, Q2, Q3, and Q4 arranged from left to right on the top, and left to right on the bottom.

An image presenting each individual quadrant follows:



Each Quadrant on the Novation Launchpad is divided into 16 buttons arranged 4 x 4 with the letters A, B, C, and D representing the rows, and the numbers 1, 2 ,3 and 4 representing the columns.

An image representing the arrangement of buttons within each quadrant follows:



## List of Novation Launchpad sounds:

When a button is lit up, that means the corresponding sound is currently sounding. Most sounds turn off when you touch the button a second time.

Q1: A1: Randomized glitch sounds

Q1: A2: Clicking sounds

Q1: A3: Bass Crunch

Q1: A4: Noise Swirl

Q2: A1 and B1: Pipa drones (EP)

Q2: A2, B2, C2: Horn drones (EH)

Q2: A3, and B3: Bass drones (EB)

Q2: A4 and B4: Piano drones (EPf)

Q3: A1, A2, A3, A4, B1, B2, B3, B4: Horn Solo Drones

Important note: unlike other buttons on the launchpad, the buttons in this quadrants do not turn off when you touch the button a second time.

Q3: A3: Horn Drone Off

## Korg Nanokontrol:

This device contains many buttons, knobs, and faders. Not all of them will be used for this piece. Located on the left side of the device are several rectangular buttons. They are not notated in the piece itself, but their function is important for the overall usage of the Laptop setup.

The buttons to be used are as follows:



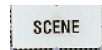
Press this button to turn all sound “On.” Please press this button prior to performance.



Press this button to “Mute” all sound. Press this button if desired while performance is not taking place to make sure that no accidental sound is produced.



This button should only be used in the unlikely event where accidental latency occurs between pressing buttons and sound occurring. This will reset some of the audio settings to get rid of any unwanted latency. This is only to be used in an emergency.



This button is located right next to 4 separate LEDs. Make sure LED “1” is lit up during performance. If not, press this button until LED “1” is lit. The Korg Nanokontrol will not work properly if any of the other 3 LEDs are lit up.

The volume for various parts of the electronic sounds produced by the Laptop are controlled by various knobs and faders located on the Korg Nanokontrol. Follow crescendos and decrescendos within the score that are listed **below** the staff to control fader positions. A fader pulled all the way down is mute (marked as a “0”), pulled all the way up is full volume (Marked as a “10”).

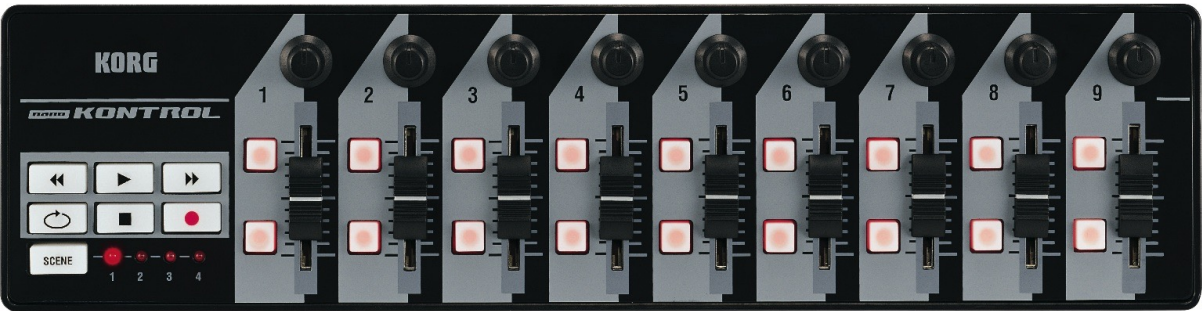
Notation for knobs are listed **above** the staff. A knob all the way to the left is “0” and all way to the right is a “10”.

All fader and knob positions are relative based on balance of ensemble in realtime. Make adjustments during performance If a sound seems too loud, too quiet, or too active.



**Korg Nanokontrol Sounds:**

Observe the channels of the 9 channels on the image below:



Each channel is assigned to a different sound. The faders alter the volume while the knobs alter the sound with an effect. Each channel is linked with a button or a set of buttons of the Novation Launchpad.

Channel 1: Algorithmic cloud  
knob: density and frequency of algorithm

Channel 1: Pipa drone sounds (linked with Q2: A1 and B1)

Channel 2: Horn drone sounds (linked with Q2: A2, B2, and C2)

Channel 3: Bass drone sounds (linked with Q2: A3 and B3)

Channel 4: Piano drone sounds (linked with Q2: A4 and B4)

Channel 5: Solo electric horn (linked with Q3: A1, A2, A3, A4, B1, B2, B3, B4, C1)

Channel 6: Clicking Sounds (linked with Q1: A2)  
Dial: filter sweep

Channel 7: Bass crunch (linked with Q1:A3)

Channel 8: Noise swirl (linked with Q1:A4)  
knob: Intensity

Laniakea  
for pipa, horn in f, double bass, piano and laptop

I

at least c. 120 sec.

c. 20 sec

A1

set dial between 4 and 5

Improvise with dial between 0 and 6, some silence may occur in playback

0

10

5

Q1

(channel 1)

10

II

c. 20 sec

c. 10 sec

12

7

5

13

12

12

13

Pipa

Sparse Random Natural Harmonics

ppp

mp

mf

Keep dial in vicinity of 4, increase and decrease to interact with pipa

Q1

A1 (off)

3/4

(♩ = c 60)

Solo, flexible tempo

7

12

1

Pipa

mute strings

ff

p

mf

p

f

p

A1 (on)

0

1

6

5

Q1

3/4

4/4

3/4

c. 10 sec

a tempo

Pipa

L.V.

Slow String Scrape, drag fingers against frets

*mp*

*mf*

3:2

Keep dial in vicinity of 4, increase and decrease to interact with pipa

Q1

Pipa

Random non pitched muted sounds. Begin sparse, increase frequency

*p* *f* *mf* *mp*

Q1



0 0 0 0 0 0

7 7 8 9 8 9

8 8 9 10 9 10

0 0 0 0 0 0

Pipa

sul pont.

*mp*

Q1

4/4

accel.



Pipa

Hn.

D.B.

Pno.

Inside the Piano

Scrape clarinet reed plastic case away from dampers  
Over duration of rhythm, slowly change angle of case  
from straight up and down to pointing away from you.

The musical score is arranged in four staves. The top staff is for the Pipa, which has a treble clef and a key signature of one sharp (F#). The second staff is for the Horn (Hn.), with a bass clef and a key signature of one flat (Bb). The third staff is for the Double Bass (D.B.), also with a bass clef and a key signature of one flat (Bb). The bottom staff is for the Piano (Pno.), with a grand staff (treble and bass clefs) and a key signature of one sharp (F#). The piano part begins with a dynamic marking of *mp* (mezzo-piano) and includes a section marked "Inside the Piano \*". The score is divided into five measures by vertical bar lines.

- \* Scrape corner of the clarinet reed plastic case on piano strings between felt and tuning pegs from left to right (sub ponticello)



Pipa

Hn.

D.B.

loco

Pno.

*f*

Sul E

This musical score page features four staves. The top staff is for the Pipa, marked with a treble clef. The second staff is for the Horn (Hn.), marked with a bass clef. The third staff is for the Double Bass (D.B.), also marked with a bass clef. The bottom staff is for the Piano (Pno.), marked with a grand staff (treble and bass clefs). The piano part begins with a forte (*f*) dynamic and includes a 'loco' marking. The double bass part includes a 'Sul E' marking. The piano part contains several triplet markings (indicated by a '3' over the notes) and a wavy line indicating a tremolo or rapid oscillation. The music is written in a key with two flats (B-flat and E-flat) and a common time signature.

Pipa

Hn.

D.B.

Pno.

*f*

*f*

*ff*

Mute with finger  
2 inches from dampers

IV (♩ = 4-5 sec.)

Pipa

Horn in F

Double Bass

Piano

E. Pipa (channel 1)

E. Horn (channel 2)

Q2

E. Bass (channel 3)

E. Piano (channel 4)

Vib. P.S.P. S.P. M.S.P. S.P. P.S.P. S.P.

*mp* *ppp* *ppp* *f* *ppp* *ppp* *f* *ppp*

(Continue pedale sempre until "drastic cutoff" on page 12)

A1 0 10

The musical score is for 'The Piano' by Philip Glass, featuring a variety of instruments and a complex, layered texture. The score is divided into several systems, each with a different instrument or group of instruments.

- Pipa:** The top instrument, playing a melodic line with a key signature of one sharp (F#) and a time signature of 4/4. The tempo is marked 'Andante'.
- Hn. (Horn):** Playing a melodic line with a key signature of one sharp (F#) and a time signature of 4/4. The tempo is marked 'Andante'.
- D.B. (Double Bass):** Playing a melodic line with a key signature of one sharp (F#) and a time signature of 4/4. The tempo is marked 'Andante'.
- Pno. (Piano):** Playing a melodic line with a key signature of one sharp (F#) and a time signature of 4/4. The tempo is marked 'Andante'.
- EP (Electric Piano):** Playing a melodic line with a key signature of one sharp (F#) and a time signature of 4/4. The tempo is marked 'Andante'.
- EH (Electric Harp):** Playing a melodic line with a key signature of one sharp (F#) and a time signature of 4/4. The tempo is marked 'Andante'.
- Q2 (Quadrant 2):** Playing a melodic line with a key signature of one sharp (F#) and a time signature of 4/4. The tempo is marked 'Andante'.
- EB (Electric Bass):** Playing a melodic line with a key signature of one sharp (F#) and a time signature of 4/4. The tempo is marked 'Andante'.
- EPf (Electric Piano Forte):** Playing a melodic line with a key signature of one sharp (F#) and a time signature of 4/4. The tempo is marked 'Andante'.

The score includes various musical notations, including notes, rests, and dynamic markings. The dynamics range from *ppp* (pianissimo) to *f* (forte). The tempo is marked 'Andante'.

Pipa

Hn.

D.B.

Pno.

EP

EH

Q2

EB

EPf

Drastic cutoff

Inarticulate/irregular Random finger trills quasi half valve/half stop (emulate rhythm of E. piano sound)

Vib. P.S.P. S.P. M.S.P. S.P. M.S.P.

ppp f ff

ppp f ppp ff

pp mf ff

ppp f ppp ff

A2 (off)

B3 (off)

D2 (off)

0 10 0

0 10 0 10 0

10 0 C2 10 0

0 10 0

**Pipa**

**Horn in F**

**Double Bass**

**Piano**

**Q1: Glitch (channel 6)**

**Q2: E Bass (Channel 3)**

**Q3: E Horn (Channel 5)**

**Annotations:**

- mp** (mezzo-piano)
- mf** (mezzo-forte)
- p** (piano)
- full stop with metal sheet**
- sparse clicking sounds (mute strings close to sound board)**
- sparse clicking sound (mute strings, highest octave)**
- progressively more frequent clicking sounds**

P

frantic clicking sounds

*f* *ff* *pp*

Hn.

sing top note (fluctuate vowels)

wave metal sheet around

*ff* *mf* *ff* *pp*

D.B.

gradually increase pressure — overpressure

*ppp* *mp* *ppp* *mf* *ppp* *mf* *ppp* *f* *ppp* *ff*

frantic clicking sounds

*f* *ff* *pp*

Q1: G

A2

0 10

Q2: EB

10

C2 (off)

0

Q3: EH

(♩ = c. 90) Solo, flexible tempo

VI

Bass

IV

III

IV

III

IV

III

*f*

*ff*

*f*

3

DB

O.P.

Ord

*p*

*f*

Wild glissando

*ff*

DB

*mp*

*f*

*p*

*f*

*mp*

*mf*

Mute strings at the octave.  
Crunch with bow

DB

*mp*

*ff*

*p*

*f*

I

IV

III

Mute strings at the octave.  
Crunch with bow



DB

*p* *mf*

DB

*p*

DB

*mp* *ff*

accel. pizz. arco 3 Behind Bridge

DB

increase pressure O.P. *fff* *f* *ppp*

flip bass around

aggressively crunch bow against back of bass

DB

Q1

C1

Channel 7: 10

VII

(♩ = c. 60)

Hn.

DB

Pno.

Roll string with hard mallets inside piano

8vb

Q1

D1

0

10

0

10

0

C1 (off)

Channel 8: 0

**VIII** (♩ = c. 60)

**Pipa**

rolling

**Piano**

loco irregular repeated rolling

**Pedale sempre**

**Pipa**

**Pno.**

The musical score is for a piece titled "VIII" with a tempo of approximately 60 beats per minute (♩ = c. 60). It features two main parts: Pipa and Piano. The Pipa part is written in 4/4 time and includes a TAB system with fret numbers (9, 8, 10) and a "rolling" articulation. The Piano part is written in 4/4 time and includes a "loco" and "irregular repeated rolling" articulation. The score is divided into two systems, each with two measures. The first system includes dynamic markings of *ppp*, *mp*, and *ppp* for the Pipa, and *ppp*, *mf*, and *ppp* for the Piano. The second system includes dynamic markings of *ppp*, *mf*, and *ppp* for the Pipa, and *mf* and *ppp* for the Piano. The score also includes a "Pedale sempre" instruction for the Piano part.

Pipa

Pno.

Channel 1: 0

Q1

Channel 1: 0

Musical score for "The Wind" by Gustav Mahler, featuring Pipa, Piano, and Q1. The score is in 4/4 time and consists of five measures.

**Pipa:** The part begins with a rest in the first measure. In the second measure, it plays a half note G4, a half note F#4, and a half note E4. In the third measure, it plays a half note G4, a half note F#4, and a half note E4. In the fourth measure, it plays a half note G4, a half note F#4, and a half note E4. In the fifth measure, it plays a half note G4, a half note F#4, and a half note E4.

**Pno.:** The part begins with a half note G4, a half note F#4, and a half note E4. In the second measure, it plays a half note G4, a half note F#4, and a half note E4. In the third measure, it plays a half note G4, a half note F#4, and a half note E4. In the fourth measure, it plays a half note G4, a half note F#4, and a half note E4. In the fifth measure, it plays a half note G4, a half note F#4, and a half note E4.

**Q1:** The part begins with a half note G4, a half note F#4, and a half note E4. In the second measure, it plays a half note G4, a half note F#4, and a half note E4. In the third measure, it plays a half note G4, a half note F#4, and a half note E4. In the fourth measure, it plays a half note G4, a half note F#4, and a half note E4. In the fifth measure, it plays a half note G4, a half note F#4, and a half note E4.

The score includes dynamic markings (mp, ppp, mf) and articulation marks (accents, slurs).

The musical score is arranged in three systems. The first system features a Pipa part on a single staff and a Piano (Pno.) part on two staves. The second system continues the Piano part. The third system features a Q1 part on a single staff. The score is written in 4/4 time and includes dynamic markings such as *mp*, *fp*, and *ppp*. The key signature is one flat (B-flat).

[illegible]