

Garden of Tones

set of three gender barung,
two sets of arbitrarily tuned suling,
and gong ageng

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Instrumentation

Garden of Tones is scored for a set of three *gendèr barung* (keyed metallophones), two sets of arbitrarily tuned *suling* (bamboo flutes), and *gong ageng* (large gong).

Each *gendèr* is in a different scale: *slendro* (Slendro – S), *pelog nem* (Pelog 1 – P1), and *pelog barang* (Pelog 2 – P2).

The piece uses two sets of *suling*, one *slendro* and one *pelog* *suling* per set.

Garden of Tones uses a number-based notation where numbers correspond to pitches (scale degrees).

The range of each *gendèr* from low to high in number-based notation:

Slendro: 6̣ 1̣ 2̣ 3̣ 5̣ 6 1 2 3 5 6 1̣ 2̣ 3̣

Pelog nem: 6̣ 1̣ 2̣ 3̣ 5̣ 6 1 2 3 5 6 1̣ 2̣ 3̣

Pelog barang: 6̣ 7̣ 2̣ 3̣ 5̣ 6 7 2 3 5 6 7̣ 2̣ 3̣

The piece uses four musicians that each play two instruments, sometimes both at once.

The following instrumentation is suggested for each player:

Player 1: Pelog 1, pelog *suling* set 1, one soft mallet, two hard mallets

Player 2: Slendro, slendro *suling* set 1, one soft mallet, two hard mallets

Player 3: Pelog 2, pelog *suling* set 2, one soft mallet, two hard mallets

Player 4: Gong, slendro *suling* set 2, large soft gong mallet

Players should sit in a close configuration where they can see each other for the purpose of cueing. To accommodate the *suling* pairings and ease of cueing, it is suggested that player 1 and player 2 sit facing each other, and player 3 and player 4 sit facing each other.

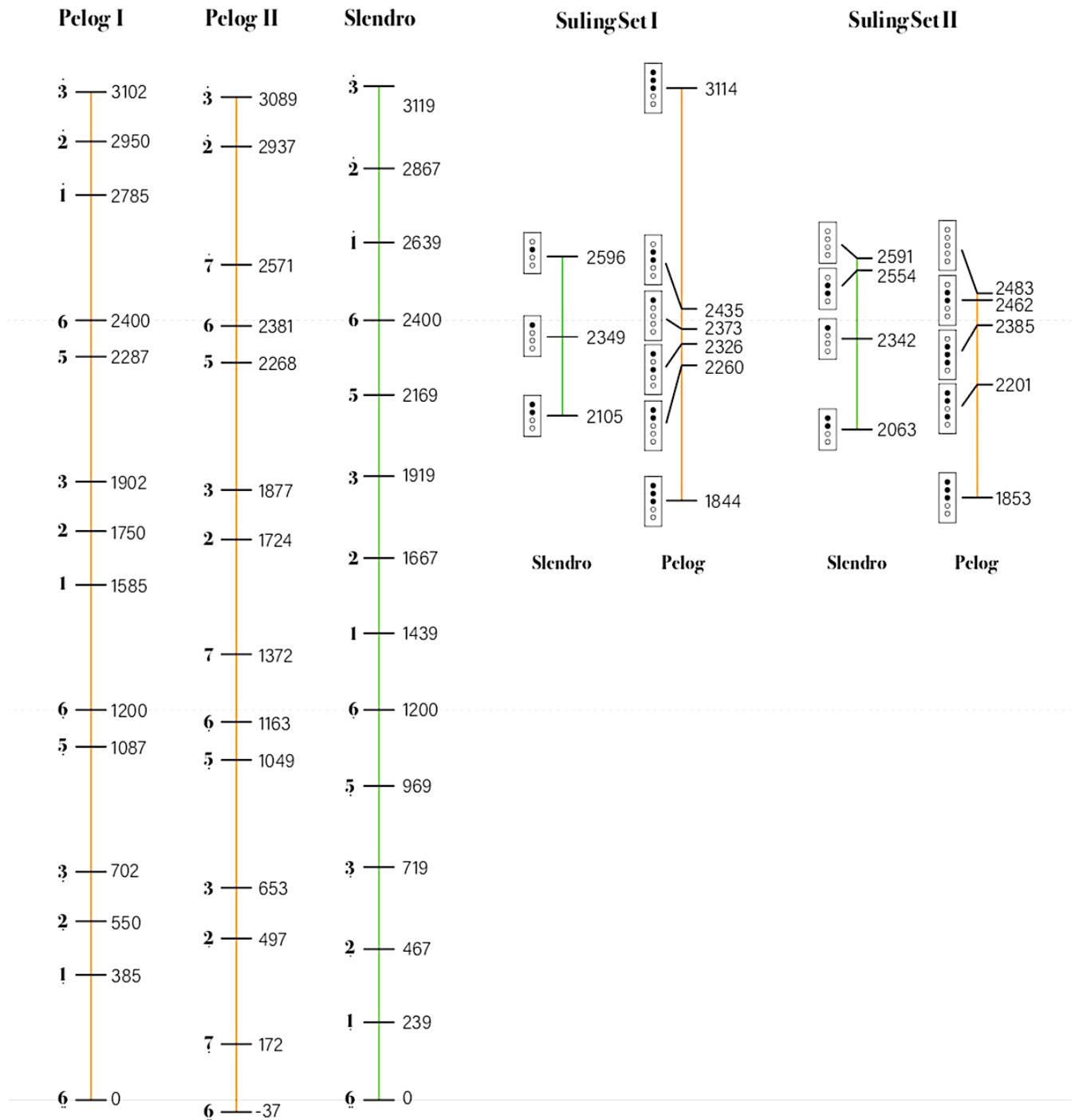
Tuning

Garden of Tones may use any set of three *gendèr barung* as long as there is one *slendro*, one *pelog nem*, and one *pelog barang* that are tuned in relation to themselves. This results in a nuance of temperament which is individual to any given set of instruments.

The two sets of *suling* are tuned arbitrarily in relation to each other and the *gendèr* (i.e. pitches not necessarily coordinated with the *gendèr* or the other *suling*). *Suling* diagrams denote which holes of the flute to cover and/or leave open. The resultant pitches may vary dramatically depending on which instruments are chosen.

The score could be realized by any instruments of the same type and range, but the sonic result would be different. In other words, Garden of Tones is an expression of individual instrumentation, and therefore, nuance of temperament.

The following chart details the tuning used (in cent values) for a 2018 recording of the piece.



* tuning chart digitized by Matthew Mitchell

Performance Notes

Dynamics are left up to the performers but should all be about the same level.

In pages 1–2 each system represents a flexible, indefinite time bracket – systems are realized spatially, with each system executed over the course of one full breath long tone from the suling players. These durations should be comfortable and not strained. A slight pause (breath) is taken at the end of each system.

Gendèr pitches in pages 1–2 are played L.V. (allowed to sustain; no muting).

Pages 1–2 begin in strict homophony and gradually move toward inexact, non-synchronous playing over the course of each page.

In pages 3–4 the number of dead stroke gongs corresponds to the number of chords to be played. For the first time through this section, one of the gendèr players cues each chord within each system by way of a head nod or other cue agreed upon by the performers. Chords are played in strict homophony and no chord may be allowed to fully decay before the next chord is struck.

After the first time through pages 3–4, the gong player cues which system is played within the repeat by striking the number of dead stroke gongs that correspond with the desired system. The gong player should also use their fingers to communicate the number to ensure ensemble accuracy. If the gong player's hand is facing forward, chords are played from page 3. If their hand is facing backwards, chords are played from page 4. Similar to the first 2 pages, chords should move from strict homophony gradually to non-synchronicity.

After completing this process the desired number of times, the gong player cues when the final chord is struck by playing a single dead stroke gong with no accompanying hand signal. The ensemble plays their final chord in rhythmic unison with a regular stroke gong.

Symbols

Regular stroke gong:



Dead stroke gong: The player holds their mallet in place on the boss of the gong once struck, creating a “dead” tone that lacks sustain



Filled in circles on suling diagrams represent which holes to cover.

Ex) The top hole is covered while the bottom four remain open



Each suling pitch is played in the lowest possible octave except in page 1 system 2 which requires the performer to use the next highest octave (notated with an up arrow)



Suling Set 1

Full breath, long tone



*All gender use soft mallet

Pelag 1
Pelag 2
Slendro

1	2	5	6	1̇	5	3̇
7̇	2̇	6	5	3	2	5
6	5	3	1	6	2	6

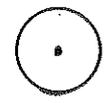


↑

sim. →

P1
P2
SL

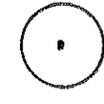
1̇	5	2	3	1	3̇
7̇	2̇	6	5	3	2
6	3	1	6	3̇	6



○ ○

P1
P2
SL

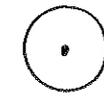
5	6	3	1	3̇
7̇	5	2	3̇	6
6	3	5	6	1̇



○ ○

P1
P2
SL

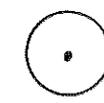
1̇	2̇	3	5
2	5	7̇	6
3	6	5	2



○ ○

P1
P2
SL

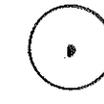
1̇	5	3
5	7̇	6
3	2	5



○ ○

P1
P2
SL

5	6
3	7̇
6	5



Suling Set 2

★ P1 and SL use one soft and one hard mallet. P2 use one soft mallet.

★ When only one Pitch is played P1 and SL use Soft mallet.

P1 { 1/5, 1/2 }
P2 { 3, 5 }
SL { 2, 6 } ○

P1 { 5, 3, 1 }
P2 { 7, 5, 6 }
SL { 6/3, 3/2, 3/6 } ○

P1 { 2/5, 5/1, 2/3, 3/1 }
P2 { 6, 5, 7, 5 }
SL { 3, 6, 6, 6 } ○

P1 { 5/2, 3/1, 1/5, 3/2, 3/6 }
P2 { 3, 6, 7, 5, 3 }
SL { 5, 6, 3, 6, 2 } ○

P1 { 6/5, 5/3, 3/6, 6/3, 5/3, 3/6 }
P2 { 3, 7, 5, 3, 7, 6 }
SL { 1/5, 2/6, 6/2, 2/1, 6/5, 3/2 } ○

P1 { 6/3, 1/5, 2/6, 1/6, 3/1, 5/1, 1/6 }
P2 { 7, 6, 3, 7, 5, 2, 6 }
SL { 2/6, 3/2, 6/5, 5/3, 6/2, 3/6, 6/3 } ○

To hard mallets

$\odot \odot \odot \odot \odot$

P1	$\frac{1}{3}$	5	$\frac{3}{6}$	6	$\frac{3}{6}$
P2	$\frac{5}{7}$	$\frac{2}{5}$	$\frac{7}{3}$	$\frac{2}{5}$	$\frac{3}{6}$
SL	$\frac{6}{2}$	$\frac{3}{6}$	$\frac{5}{1}$	$\frac{3}{6}$	$\frac{3}{6}$

$\odot \odot \odot \odot$

P1	$\frac{5}{2}$	$\frac{3}{1}$	$\frac{1}{5}$	$\frac{3}{1}$
P2	$\frac{7}{5}$	$\frac{5}{2}$	$\frac{6}{3}$	$\frac{3}{7}$
SL	$\frac{6}{3}$	$\frac{3}{1}$	$\frac{2}{6}$	$\frac{5}{2}$

$\odot \odot \odot$

P1	$\frac{1}{6}$	$\frac{5}{3}$	$\frac{2}{1}$
P2	$\frac{7}{6}$	$\frac{6}{5}$	$\frac{3}{2}$
SL	$\frac{6}{5}$	$\frac{3}{2}$	$\frac{5}{3}$

$\odot \odot$

P1	$\frac{6}{1}$	$\frac{5}{6}$
P2	$\frac{6}{7}$	$\frac{3}{5}$
SL	$\frac{5}{6}$	$\frac{6}{1}$

(X) (X)

$\left. \begin{array}{l} P1 \\ P2 \\ SL \end{array} \right\}$	$\begin{array}{cc} \overset{\cdot}{6} & \overset{\cdot}{5} \\ \hline \overset{\cdot}{6} & \overset{\cdot}{1} \end{array}$
	$\begin{array}{cc} \overset{\cdot}{3} & \overset{\cdot}{6} \\ \hline \overset{\cdot}{5} & \overset{\cdot}{7} \end{array}$
	$\begin{array}{cc} \overset{\cdot}{6} & \overset{\cdot}{5} \\ \hline \overset{\cdot}{1} & \overset{\cdot}{6} \end{array}$

(X) (X) (X)

$\left. \begin{array}{l} P1 \\ P2 \\ SL \end{array} \right\}$	$\begin{array}{ccc} \overset{\cdot}{2} & \overset{\cdot}{5} & \overset{\cdot}{1} \\ \hline \overset{\cdot}{1} & \overset{\cdot}{3} & \overset{\cdot}{6} \end{array}$
	$\begin{array}{ccc} \overset{\cdot}{3} & \overset{\cdot}{6} & \overset{\cdot}{7} \\ \hline \overset{\cdot}{2} & \overset{\cdot}{5} & \overset{\cdot}{6} \end{array}$
	$\begin{array}{ccc} \overset{\cdot}{5} & \overset{\cdot}{3} & \overset{\cdot}{6} \\ \hline \overset{\cdot}{3} & \overset{\cdot}{2} & \overset{\cdot}{5} \end{array}$

(X) (X) (X) (X)

$\left. \begin{array}{l} P1 \\ P2 \\ SL \end{array} \right\}$	$\begin{array}{cccc} \overset{\cdot}{3} & \overset{\cdot}{1} & \overset{\cdot}{3} & \overset{\cdot}{5} \\ \hline \overset{\cdot}{1} & \overset{\cdot}{5} & \overset{\cdot}{1} & \overset{\cdot}{2} \end{array}$
	$\begin{array}{cccc} \overset{\cdot}{3} & \overset{\cdot}{6} & \overset{\cdot}{5} & \overset{\cdot}{7} \\ \hline \overset{\cdot}{7} & \overset{\cdot}{3} & \overset{\cdot}{2} & \overset{\cdot}{5} \end{array}$
	$\begin{array}{cccc} \overset{\cdot}{5} & \overset{\cdot}{2} & \overset{\cdot}{3} & \overset{\cdot}{6} \\ \hline \overset{\cdot}{2} & \overset{\cdot}{6} & \overset{\cdot}{1} & \overset{\cdot}{3} \end{array}$

(X) (X) (X) (X) (X)

$\left. \begin{array}{l} P1 \\ P2 \\ SL \end{array} \right\}$	$\begin{array}{ccccc} \overset{\cdot}{3} & \overset{\cdot}{6} & \overset{\cdot}{3} & \overset{\cdot}{5} & \overset{\cdot}{1} \\ \hline \overset{\cdot}{6} & \overset{\cdot}{2} & \overset{\cdot}{6} & \overset{\cdot}{1} & \overset{\cdot}{3} \end{array}$
	$\begin{array}{ccccc} \overset{\cdot}{3} & \overset{\cdot}{2} & \overset{\cdot}{7} & \overset{\cdot}{2} & \overset{\cdot}{5} \\ \hline \overset{\cdot}{6} & \overset{\cdot}{5} & \overset{\cdot}{3} & \overset{\cdot}{5} & \overset{\cdot}{7} \end{array}$
	$\begin{array}{ccccc} \overset{\cdot}{3} & \overset{\cdot}{3} & \overset{\cdot}{5} & \overset{\cdot}{3} & \overset{\cdot}{6} \\ \hline \overset{\cdot}{6} & \overset{\cdot}{6} & \overset{\cdot}{1} & \overset{\cdot}{6} & \overset{\cdot}{2} \end{array}$

$\left. \begin{array}{l} P1 \\ P2 \\ SL \end{array} \right\}$	$\begin{array}{c} \overset{\cdot}{3} \\ \hline \overset{\cdot}{3} \end{array}$
	$\begin{array}{c} \overset{\cdot}{3} \\ \hline \overset{\cdot}{3} \end{array}$
	$\begin{array}{c} \overset{\cdot}{3} \\ \hline \overset{\cdot}{3} \end{array}$