

## SCORE

# Mostly Slendro Passacaglia

by Barbara Benary

### Contributors and Editors

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### Online

Recording of *Mostly Slendro Passacaglia*  
[www.gamelan.org/balungan](http://www.gamelan.org/balungan)  
All six volumes of Benary's scores for gamelan:  
[www.gamelan.org/composers/benary](http://www.gamelan.org/composers/benary)



Barbara Benary, circa 1979. Photo: *Gamelan in the New World*, Folkways Records LP-31313.

### Notes

*Mostly Slendro Passacaglia* is a composition for gamelan instruments in slendro and pelog with clarinet and suling. It was composed by Barbara Benary in 1993 as part of her wayang kulit theater piece *Karna: A Shadow Puppet Opera*. This piece combines slendro and pelog to create a composite scale and unusual harmonic framework. It takes the form of a *passacaglia*, an eighteenth-century musical form characterized by a repeating ground-bass ostinato in triple meter. The original score and notes, included here, is from *Gamelan Works Volume 4: Seven Pieces in Mixed Tuning: Slendro and Pelog* (Benary 1994: 5–9).

### Structure of the Composition

*Mostly Slendro Passacaglia* has three formal sections, marked A, B, and C. Sections A and B alternate, each played twice (i.e. AABB). Section C is a coda, played at the end of the piece.

Benary employs a structural process involving what she describes as a cycle of fifths, in this case what the Javanese call *kempyung*, harmonic intervals made of two tones in slendro that are two scale degrees apart. In the progression from one *kempyung* to the next, shown in Figure 1, each pair of notes contains a tone from the previous pair. The progression is cyclical and occurs twice in Section A. Section B starts with the same pair, but moves through the sequence backwards, in retrograde order.

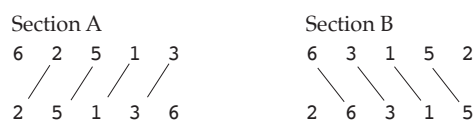


Figure 1. Progression of *kempyung* in the two sections of *Mostly Slendro Passacaglia*

Benary frequently uses this kind of process-based structure in other pieces, such as *Macramé* (1976), *Hells Bells* (1979), and *Hot Rolled Steel* (1986), in which the process is the focal point of the composition. In *Mostly Slendro Passacaglia*, however, the process of “*kempyung* modulation,” as Benary calls it, serves as a foundation for additional harmonic and melodic elaboration, taking the role of the ground-bass characteristic of the eighteenth-century *passacaglia* from which the piece takes its name.

### Instrumentation and Notation

*Mostly Slendro Passacaglia* is scored for a minimum of six gamelan instruments: peking, saron, two demung, slenthem, and pitched gongs, plus two instruments that play melodic obbligati; other instruments may be added or substituted. Benary suggests possibly replacing the demung parts with gender, or adding more balungan instruments to the Demung I part. The two obbligati parts are for suling and “slendro clarinet.” The latter is a custom-made instrument, tuned to Gamelan Son of Lion’s slendro scale, with a body of PVC pipe with the addition of a standard clarinet bell and mouthpiece; it was originally commissioned by Daniel Goode and built by Steven Silverstein.

The gamelan score is in Kapatihan cipher notation. The notation puts the strong beat the beginning of each measure. This is sometimes referred to as “front-weighting,” in contrast to the convention in gamelan notation of “end-weighting,” or placing the strong beat at the end. Benary shows the slendro and pelog pitches together on a single line; pelog notes are identified with “p” above the cipher, while all other notes are slendro. The obbligati parts use staff notation. Benary includes a scale that corresponds to the gamelan pitches to assist the performers of the obbligati parts.

Most players will need both a slendro and pelog instrument, so some of the instruments can be set up with the slendro instrument in front of the player and the pelog instrument behind it, sometimes raised up, like on two pieces of wood.

### Order of Entry and Performance Practice

The piece begins with entrances staggered in the following order:

- A Demung II and Slenthem
- A' Demung I<sup>1</sup>
- B Saron, doubling Demung I
- B' Saron (playing its own part), Peking

Gongs, other gamelan instruments, and clarinet enter at A on the second cycle of the AABB form. The suling enters near the end of the clarinet melody, overlapping slightly.

The slenthem has two notated variations, and the player may freely switch between them. Once the obbligato instruments are playing, the gamelan should provide a constant texture with no dynamic or tempo variations. After repeating the AABB form as many times as desired, Section C is played directly after B', with a slight ritard near the end, and a pause before the final gong.

### *Mostly Slendro Passacaglia* on Other Gamelan

*Mostly Slendro Passacaglia* was composed specifically for Gamelan Son of Lion, based on the tuning and physical characteristics of those instruments. To play this piece on another gamelan, it is important to understand Gamelan Son of Lion’s tuning and instruments when configuring the

parts for a gamelan that is likely to be tuned differently.

### Tuning

As the title of the piece implies, *Mostly Slendro Passacaglia* uses all five slendro tones, plus two from pelog (3 and 7). In sequence from low to high, the composite scale for *Mostly Slendro Passacaglia* must be: S1, S2, P3, S3, P4/S5, 6, and P7. While the overall arrangement of scale tones is more important than their absolute pitch, Benary composed these melodies with Gamelan Son of Lion’s interval sizes in mind, some of which are harmonically meaningful in the context of this piece. The interval between pelog 7 and slendro 1, for example, is about 55 cents on Gamelan Son of Lion and serves as a kind of “leading tone,” whereas if this interval is wider on another gamelan it will not serve that same function.

In Gamelan Son of Lion’s tuning 6 is the same in slendro and pelog (*tumbuk*), and slendro 5 is the same as pelog 4. Without this configuration, it may not be possible to play this piece since that difference may affect the composite scale prescribed above. A gamelan with *tumbuk* 2 would need to adjust the parts to always play slendro 6 and not use it interchangeably with pelog 6. A gamelan with *tumbuk* 3, however, would not be able to play this composition at all, because the composed melodies depend on slendro 3 sounding higher than pelog 3 (about 40 cents).

The notation also assumes that pelog 4 and slendro 5 are the same pitch, using each in different parts of the piece for ease of playing. If this equivalence is not present, it is possible to use slendro 5 exclusively and adapt the notation accordingly. These common tones are also important to the performance of this piece as they facilitate changing from one scale to the other.

If a gamelan does not have a tuning similar to Son of Lion’s, it may still be possible to create a suitable scale from available tones. Benary’s composite scale is loosely similar to a D-flat major scale with variously sized intervals (not equal tempered). There may be a way to create a similar scalar hierarchy with tones from another gamelan. Experimentation is encouraged!

### Instrumentation

For the pitched gong part, Gamelan Son of Lion uses a set of instruments called “key gongs,” based on a design by composer and instrument builder Daniel Schmidt.<sup>2</sup> These instruments are large aluminum slabs suspended over long resonators and serve the same function as gong or kempul. *Mostly Slendro Passacaglia* requires the full range of slendro pitches in the lower register, from low 2 to high 1 (2356̇1̇). A Javanese gamelan can use kempul and gong suwukan or gong ageng for this part. For the obbligato instruments, Benary suggests that string instruments, such as rebab, erhu, or violin could be used instead of the wind instruments notated in the score, as long as they can play in tune with the gamelan.

### Arranging the Saron Part

The balungan instruments of Gamelan Son of Lion have small keys and a short sustain. These characteristics allowed Benary to write the saron part for one player to perform with two mallets without damping. This playing technique could be problematic for more resonant instruments. One possible solution is to play the saron part on a different instrument, such as a bonang panerus (with pots arranged to include the pelog pitches), gambang, or a celempung with minor tuning adjustments.

For this *Balungan* edition of *Mostly Slendro Passacaglia*, I have created an arrangement of the saron part in which the notated part is divided between two players in imbal-like fashion. In order to replicate Benary's saron part, the two parts could not be evenly divided rhythmically. This part assumes the same tumbuk and low-to-high pitch organization as in Gamelan Son of Lion. The Saron I player will use only the slendro saron, while the musician playing Saron II will need to use both slendro and pelog instruments. ♪

### Endnotes

1. In the recording of this piece, the Demung I played a sparser version of the written part in A', adding the rest of the notated part later in the B section. See, *Gamelan Son of Lion*, New Gamelan/New York (GSOL Records, GSOL CD-1, 1995).

2. These instruments serve the same function as gong and kempul for many other American-made gamelan ensembles, such as the Berkeley Gamelan, Gamelan Pacifica, Gamelan Son of Lion, and the Diamond Bridge.

Notation Key: approximation of Son of Lion tuning

Slendro

6 1 2 3 5 6 i

Pelog

1 2 3 4 5 6 7

Composite Slendro/Pelog

1 1 2 2 3 3 4 5 5 6 6 7

Scale for *Mostly Slendro Passacaglia*

1 2 3 3 4 5 6 7





# Mostly Slendro Passacaglia

Barbara Benary  
Finale notation: Jim Dalton

Hi F - overblow 6  
Hi G $\flat$  - overblow 3  
L = leg note

(clarinet solo)

A1 5 A2 5 B1 5 B2 3 (cue)

suling solo

L A2

B1

B2 L

A1 Duet

A2

B1

B2

A1 3 3

Clarinet in Slendro +

# Mostly Slendro Passacaglia

Barbara Benary  
Finale notation: Jim Dalton

A1

A2

B1 \*

B2

A1 \*\* A2 5 B1 5 B2 5

A1

A2

B1 B2

A1

\*note: if is impossible, substitute \*\*or try

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### About the Tunings and Notation

This set of seven pieces was written between 1980 and 1994. Their common denominator is that they each require the simultaneous use of slendro and pelog tunings.

Generally each player plays a pair of instruments arranged as a double keyboard, although for a few pieces the tunings are kept apart and played by different persons.

In those pieces where process is the primary focus, the pitch relationships of the two tunings is less relevant. However a few of the pieces are pitch-specific, and meant to be played on a set of instruments whose tunings approximate those of Gamelan Son of Lion, for whom they were written. *Woodstock*, for example, is the piece which is most pitch-specific and represents one end of the spectrum. *Yudishthira's Quartet*, on the other end of the spectrum, is based on randomness and any pitches at all will do.

For all other pieces the primary necessity is that the general relationships of the two scales resemble that of the chart below. In sequence from lowest to highest the pitches should be: slendro 1, pelog 1, slendro 2, pelog 2, pelog 3, then slendro 3. Tumbuk 6 (common tone on both scales) is desirable, and in some pieces a second "tumbuk": slendro 5 = pelog 4. Diatonic approximations are given for Gamelan Son of Lion's tunings in the charts below, but the intervallic relationships of the slendro and pelog are more important than the range relationship to the diatonic models.

If the available gamelan set has pitch relationships other than these, consult the introduction to each individual piece to determine if it will work.

The following notations are in number (cipher) form. As they are not Indonesian pieces, the convention of end-beat stress is not used. Unless otherwise indicated, assume downbeats, as in western music. Standard staff notation is also included for obligato instruments.

The diagram illustrates the relationship between Slendro and Pelog scales. At the top, two musical staves are shown. The left staff is labeled 'SLENDRO' and contains notes with a key signature of one flat (B-flat). Below it is the cipher notation: 6 1 2 3 5 6 i. The right staff is labeled 'pelog' and contains notes with a key signature of one sharp (F-sharp). Below it is the cipher notation: 1 2 3 4 5 6 7. Below these are three horizontal lines representing diatonic approximations. The first line is labeled 'PELOG' and has notes numbered 1 through 7. The second line is labeled 'PIANO' and shows the diatonic scale from C to C-sharp. The third line is labeled 'SLENDRO' and has notes numbered 1 through i.

## MOSTLY SLENDRO PASSACAGLIA

### Orchestration and Notation:

For a minimum of 6 players: key-gongs (gong & kempul), slentem, two demung, one saron, one peking. Additions and substitutions: gender and/or gender panerus can substitute for the two demung players, or supplement them. An additional pair of saron may double the demung 1 line. Two obbligato parts are a desirable addition, but optional.

Each player uses a pair of like instruments in slendro and pelog. Since the piece is mostly slendro, it is suggested that the slendro keyboard be placed closest to the player and the pelog positioned behind it (rather like the black keys on a conventional keyboard). Saron 1 (solo player) will need two mallets.

Slendro and pelog parts are notated in a single line. Notes with a "p" above them are on the pelog keyboard; all others are slendro.

### Obbligato parts:

Two melodic, non-keyboard instruments are required, preferably of different timbre and range. Gamelan Son of Lion used a suling and a custom-made slendro clarinet. A bowed string instrument could substitute (rebab or erh-hu for example).

A composed notation is provided for the obbligato lines. These are in western staff notation, following the pitch approximation chart in the introduction to this volume. Using these composed lines the piece has a finite length of four repeats (2A + 2B) plus coda. Gamelan moves to the coda (C) when the obbligato instruments are holding their final note.

If indeterminate length is desired, the obbligato players may instead improvise their lines, taking turns according to a pre-arranged sequence.

### Length and sequence of sections:

The general formula for the piece is 2x (A) and 2x (B), and this sequence is repeated a pre-arranged number of times - four if the composed obbligatos are used. The coda (C) is played only once.

### Order of initial entry:

Staggered entrances throughout the first two (A) & (B) sections. First (A): slentem and demung 2. Second (A) add demung 1. First (B) add saron 1 doubling demung 1 line. Second (B) saron 1 moves to its solo line and peking enters.

On the repeat of the piece add keygongs and any other doubling instruments. Slentem may use its variation line ad lib. The clarinet obbligato enters at this point.

Gamelan provides a constant texture with no dynamic or tempo variations from here until the coda, where there is a moderate slowdown to the final gong.

MOSTLY SLENDRO PASSACAGLIA

(A)

<u>peking:</u>	6 2 3 5 6 3	5 $\dot{1}$ $\overset{p}{7}$ 6 5 3
<u>saron 1:</u>	6235 6235 6236	$\overset{p}{4}$ 176 $\overset{p}{4}$ 176 $\overset{p}{4}$ 176
<u>demung 1:</u>	6 $\overline{.6}$ 6 6 6 $\dot{1}$	5 $\overline{.5}$ 5 5 5 3
<u>demung 2:</u>	2 . 2 . 2 .	2 . 2 . 2 .
<u>slentem:</u>	2 . . . 6 .	5 . . . $\overset{p}{7}$ .
<u>slentem variation:</u>	2 . . . 2 6	5 . . 5 . $\overset{p}{7}$
<u>keygongs:</u>	$\textcircled{2}$ 6	5

<u>peking:</u>	5 1 2 3 5 6	3 $\dot{1}$ 6 5 3 2	3 5 6 $\overset{p}{6}$ 3 5
<u>saron 1:</u>	5123 5123 5125	3 $\dot{1}$ 65 3 $\dot{1}$ 65 3 $\dot{1}$ 65	3633 $\overset{p}{6}$ 633 $\overset{p}{6}$ 633
<u>demung 1:</u>	5 $\overline{.5}$ 5 5 5 6	3 $\overline{.3}$ 3 3 3 2	3 . 5 p3 . . $\overline{35}$
<u>demung 2:</u>	1 . 1 . 1 .	1 . 1 . 1 .	6 . 6 . 6 .
<u>slentem:</u>	$\dot{1}$ . 1 . 5 .	3 . . . 5 .	6 . 6 . . .
<u>sl. var.:</u>	$\dot{1}$ . 1 . . 5	3 . . 2 3 5	6 . 6 . . .
<u>keygongs:</u>	1	3	6

(B)

<u>peking</u>	2 6 3 $\overset{p}{3}$ 2 6	6 $\overset{p}{3}$ 3 6 3 5	3 $\dot{1}$ 6 5 3 $\dot{1}$
<u>saron 1:</u>	$\overset{p}{2}$ 633 $\overset{p}{2}$ 633 $\overset{p}{2}$ 633	$\overset{p}{6}$ 336 $\overset{p}{6}$ 336 $\overset{p}{6}$ 335	3 $\dot{1}$ 65 3 $\dot{1}$ 65 356 $\dot{1}$
<u>demung 1:</u>	6 $\overline{.6}$ 6 6 6 $\overline{35}$	6 $\overline{.6}$ 6 $\dot{1}$ 7 6	1 $\overline{.1}$ 1 5 6 $\dot{1}$
<u>demung 2:</u>	2 . 2 . 2 .	$\overset{p}{3}$ . $\overset{p}{3}$ . $\overset{p}{3}$ .	3 . 3 . 3 .
<u>slentem</u>	2 . . . 2 .	6 . 6 . 5 .	3 . . . 3 .
<u>sl.var.</u>	2 . . . 2 .	6 . 6 . . 5	3 . . . $\overset{p}{3}$ 2
<u>keygongs</u>	$\textcircled{2}$ 6	6	3

Mixed Tuning 6

		to (B)	to (A) or (C)
<u>peking</u>	1 $\dot{1}$ 3 5 3 $\dot{1}$	2 $\dot{1}$ $\overset{p}{7}$ 5 3 $\overset{p}{3}$	2 $\dot{1}$ $\overset{p}{7}$ 5 3 5
<u>saron 1:</u>	1135 $\overset{p}{3}$ 135 $\overset{p}{3}$ 135	$\overset{p}{2}$ 175 $\overset{p}{2}$ 175 $\overset{p}{3}$ 323	$\overset{p}{2}$ 175 $\overset{p}{2}$ 175 $\overset{p}{2}$ 335
<u>demung 1:</u>	7 5 $\dot{1}$ . . $\dot{1}$	$\overset{p}{7}$ 2 $\overset{p}{7}$ . . $\overline{65}$	$\overset{p}{7}$ 2 $\overset{p}{7}$ . . $\overline{65}$
<u>demung 2:</u>	5 . 5 . 5 .	5 . 5 . 5 .	5 . 5 . 5 .
<u>slentem</u>	1 . $\dot{1}$ . 6 .	5 . . . 3 $\overset{p}{3}$	5 . . . 3 $\overset{p}{3}$
<u>sl. var.</u>	1 . $\dot{1}$ . . 6	5 . 2 5 3 $\overset{p}{3}$	5 . 2 5 3 $\overset{p}{3}$
<u>keygongs</u>	1	5	

(C)

<u>peking:</u>	6 2 3 5 6 3	5 $\dot{1}$ $\overset{p}{7}$ 6 5 3	5 1 2 3 5 6
<u>saron 1:</u>	6235 6235 6236	$\overset{p}{4}$ 176 $\overset{p}{4}$ 176 $\overset{p}{4}$ 176	5123 5123 5125
<u>demung 1:</u>	6 $\overline{.6}$ 6 6 6 $\dot{1}$	5 $\overline{.5}$ 5 5 5 3	5 $\overline{.5}$ 5 5 5 6
<u>demung 2:</u>	2 . 2 . 2 .	2 . 2 . 2 .	1 . 1 . 1 .
<u>slentem:</u>	2 . . . 6 .	5 . . . $\dot{7}$ .	$\dot{1}$ . 1 . . 5
<u>keygongs:</u>	② G	5	$\dot{1}$

			(all tremolo)
<u>peking:</u>	3 $\dot{1}$ 6 5 3 2	3 5 6 $\overset{p}{6}$ 3 $\overset{p}{3}$	. . 2 . . .
<u>saron 1:</u>	3165 3165 3165	$\overset{p}{3}$ 633 $\overset{p}{6}$ 633 $\overset{p}{6}$ 6335	. . 6 . . .
<u>demung 1:</u>	3 $\overline{.3}$ 3 3 3 2	3 5 $\overset{p}{3}$ . 3 5	. . 6 . . .
<u>demung 2:</u>	1 . 1 . 1 .	$\overset{p}{6}$ . $\overset{p}{6}$ . $\overset{p}{6}$ .	. . 2 . . .
<u>slentem:</u>	3 . . . 5 .	$\overset{p}{6}$ . $\overset{p}{6}$ . . .	. . 2 . . .
<u>keygongs:</u>	3	6	② G

ritard -----

Mixed Tuning 7

Mostly Slendro Passacaglia — slendro suling

H: F = overblow 6  
 H: G<sup>b</sup> = overblow 3  
 L = leg note

clarinet solo

Handwritten musical notation for the clarinet solo, showing a sequence of notes with fingerings 5, 5, 5, and 3, and dynamic markings A<sub>1</sub>, A<sub>2</sub>, B<sub>1</sub>, and B<sub>2</sub>.

Handwritten musical notation for the suling solo, starting with a (cresc.) marking and an A<sub>1</sub> dynamic marking.

Handwritten musical notation for the suling solo, featuring a leg note (L) marking.

Handwritten musical notation for the suling solo, featuring an A<sub>2</sub> dynamic marking.

Handwritten musical notation for the suling solo, featuring a B<sub>1</sub> dynamic marking.

Handwritten musical notation for the suling solo, featuring a B<sub>2</sub> dynamic marking.

Handwritten musical notation for the suling solo, featuring a leg note (L) marking.

Handwritten musical notation for the suling solo, featuring an A<sub>1</sub> DUET marking.

Handwritten musical notation for the suling solo, featuring a B<sub>2</sub> dynamic marking.

Handwritten musical notation for the suling solo, featuring a B<sub>1</sub> dynamic marking.

Handwritten musical notation for the suling solo, featuring a B<sub>2</sub> dynamic marking.

Handwritten musical notation for the suling solo, featuring a B<sub>2</sub> dynamic marking.



Handwritten musical notation for the suling solo, featuring a B<sub>2</sub> dynamic marking.

Handwritten musical notation for the suling solo, featuring an A<sub>1</sub> dynamic marking and a 3-measure rest.

Mostly Slendro Passacaglia — clarinet in slendro+

Handwritten musical score for clarinet in slendro+. The score is written on ten staves. The first staff begins with a treble clef, a key signature of two sharps (F# and C#), and a 3/2 time signature. The music consists of various melodic lines and rhythmic patterns. Key features include:
 

- Staff 1: Melodic line starting with a whole rest, followed by eighth and sixteenth notes. Labeled A<sup>1</sup>.
- Staff 2: Continuation of the melodic line. Labeled A<sup>2</sup>.
- Staff 3: Melodic line with a double bar line and a star symbol (\*). Labeled B<sup>1</sup>.
- Staff 4: Melodic line with a double bar line and a star symbol (\*). Labeled B<sup>2</sup>.
- Staff 5: Melodic line with a double bar line and two star symbols (\*\*). Labeled A<sup>1</sup>.
- Staff 6: Bass line with five-finger patterns (5) and double bar lines. Labeled A<sup>2</sup>, B<sup>1</sup>, and B<sup>2</sup>.
- Staff 7: Melodic line with a double bar line and a star symbol (\*). Labeled A<sup>1</sup>.
- Staff 8: Melodic line with a double bar line and a star symbol (\*). Labeled A<sup>2</sup>.
- Staff 9: Melodic line with a double bar line and a star symbol (\*). Labeled B<sup>1</sup>.
- Staff 10: Melodic line with a double bar line and a star symbol (\*). Labeled B<sup>2</sup>.

\* note: if  is impossible, substitute  \*\* or try 