# PANABUKA

(music for an imaginary dance drama)

2022

for panflute and darbuka

JAMES WOOD

Commande du Hameau Fleuri

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Panabuka was written for Matthijs Koene (panflute) and Rafaël Simon (darbuka) for the "Concerts du Hameau Fleuri", Pays d'Auge, Normandie. It was premiered by them on 21 January 2023 at the Hameau Fleuri concerts, Normandie, France.

I am grateful to Matthijs Koene for his detailed advice on writing for the panflute, and to Omar Kattan, Simon Tressin and Limbs for their equally detailed video-tutorials on traditional Turkish darbuka technique.

Duration: 7:30 approx.

## Formal design

The overall form of *Panabuka* is loosely modelled on the ancient Indian drama of Gāndharva, where the individual scenes or acts of the drama are framed by *dhruvas*. The *dhruvas* were incidental songs introducing or commenting on the story in a manner somewhat akin to the choruses in ancient Greek drama, thus offering a brief respite from the intensity of the action. In *Panabuka* there are just two scenes which feature an intricate and increasingly elaborate rhythmic interplay between the two instrumental characters; these are framed by three *dhruvas*: *praveśa* (entrance), *āksepa* (diversion) and *prasananda* (calming), all of which are primarily melodic in character.

The rhythmic structure of *Panabuka* is based on three tālas from the catalogue of 120 *deśī tālas* compiled by the thirteenth-century Indian music theorist Śārngadeva. Indeed, as can be seen in the diagram below, almost every aspect of the work's form, both macro and micro, is derived in some way from these three tālas. The tālas used are *jayaśrī*, *dvandva* and *simhavikrīdita*, all three of which use a total of three different types of anga (rhythmic units)—*laghu* (1), *guru* (2) and *pluta* (3)—which in turn spawn three distinct characters of rhythmic structure (A, B and C respectively). Each of these characters is associated with a distinct tempo, instrumental leader and rhythmic style. The tāla cycles then determine

	TĀLAS			TRANSCRIPTION	
jayaśrī	21212	2 anga-types, 5 angas (= 8 kalās)	46*	2.1.2.1.2	
dvandva	2122211	3 anga-types, 7 angas (= 11 kalās)	110*	1.1.2.2.2.1.3	
simhavikrīdita	212212222	3 anga-types, 11 angas (= 24 kalās)	1.3.2.3.3.2.1.2.3.1.3		
	ANGAS	* number in Śarngadeva's list of <i>deśī i</i>	ālas		
	<i>laghu</i> (= 1 kalā)				
	<b>\$</b> guru (= 2 kalās)				
	$\hat{\mathbf{S}}$ pluta (= 3 kalās)				

both the overall layout of *dhruvas* and scenes and the sequence of rhythmic characters within the two scenes, as well as forming the basis of the rhythms themselves.

In the scenes, the type of rhythmic interplay between the two instrumentalists is characterised first and foremost by the use of either monorhythmic (solo and accompaniment) or polyrhythmic structures. Both of these make use of 'composite rhythms' (a combination two rhythmic strands based on different base units: duplet, triplet or quintuplet), and the polyrhythmic structures make use of 'crossed canons' (where each rhythmic strand is 'canoned' in opposite directions between the two players).

					S					2										
	Dhruva			]	First scene	2			Dhruva	Second scene										
				jayaśrī		$\rightarrow$	<		P 1 1 1	<i>simhavikrīdita</i> (retrograde) —										
		S	I	٢	I	S	(5	I		ŝ	2	I	S	ŝ	ŝ	2	ŝ	I		
	praveśa	B1	A1	B2	A2	B3	C1	A3	āksepa	C2	B4	A4	B5	C3	C4	B6	C5	A5	Prasananda	
leader	Pf.	Pf.	Db.	Pf.	Db.	Pf.	Db.	PfDb.	Pf.	Db.	Pf.	PfDb.	Pf.	Db.	Db.	Pf.	Db.	D-P-D-P-D	Pf.	
style	melodic	rhythmic	rhythmic	rhythmic	rhythmic	rhythmic	rhythmic	rhythmic	melodic	rhythmic	rhythmic	rhythmic	rhythmic	rhythmic	rhythmic	rhythmic	rhythmic	rhythmic	melodic	
rhythm type		mono-	mono-	mono-	mono-	mono-	poly-	mono-		poly-	poly-	mono-	poly-	poly-	poly-	poly-	poly-	mono-		
comp. rhythm unit ratio	3:2	3:2	3:2	3:2	3:2	5:3	3:2	3:2	3:2	3:2	3:2	3:2	3:2	3:2	5:3	3:2	5:3	5:3	3:2	
tempo	66	72	108	72	108	72	80	108	66	66	72	108	72	72	66–69	72	66–69	110	66	

#### *jayaśrī* (inversion)

### **Modal structure**

The melodic and harmonic structure of *Panabuka* is based on a 13-note mode with a period of 45 quarter-tones. Just four different versions of the mode are used: transpositions 13 and 22 of the straight mode, and transpositions 1 and 11 of the inverted mode. The table below shows the four modes with the quarter-tone step number, adjacent interval and the number of the pipe on which each note is played. The intervallic sequence of the straight mode is: 1 - 2 - 8 - 1 - 7 - 3 - 1 - 1 - 4 - 2 - 7 - 2 - 6.

	lower 13-note register											8 <sup>va</sup> 49	51	57	58	60	68	69	76	79	80	81	۲ 85			
Mode 0	1 step: inter	4 val: 2	6	12	13	15	23 8 1	24 1 7	31	34 3 <b>4</b>	35 1 • 1	36	40 1 <b>b</b> - 2	42 ⊈ <b>4</b> 7		2	6	l : ‡●:	2 • • •	8 <b>þ.</b> - 1		/ <b>h_</b> <sup>3</sup>	3 ₫			4 4
(str. 13)	pipe:	<b>₽</b> 2	<b>b</b> • 3	<b>5</b>	5	6	8	8	10	11	12	12	13	13	16 8 <sup>va</sup>	16	18	18	19	21	21	23	24	24	25	26
	step: 0	4	6 7	13	15	21	22	24	32	33 de 7	40 b- 3	43 • 1	44 •• 1	45 d 4	49	51 2 7	58 2	60 6	66 1	67 2	69 de 8	77 ‡• 1	78 • <u>•</u> 7			
Mode 1 (str. 22)	6 4•	-  -	<b>&gt;</b> •	•	<b>•</b>	<b>d e i</b>	<b>₽</b>	<b>4-</b>	10	11	13	14	14	14	16	<b>∢</b> ● 16	18	19	20	21	21	24	24	26	-	
	pipe: 1 step: 0	2 6	3 8	5 15	17	21	22	23	26	33	34	42	44	45 6	8 <sup>va</sup> 51	53	60 2	62 4	66	67 1	68 3	71 7	78	79 م-		
Mode 2 (inv. 1)	interval: 6	2	7	2	4	1	1 4•	3	7	<b>de</b> <sup>1</sup>	4• 8	<b>4</b>	þ <u>e</u> 1		′ <b>√</b> ●	<b>!•</b>	þe	40	4-	‡ <b>•</b>	Þ. <b>e</b> .				•	-
(	pipe: 1	3	3	5	6	7	7	8	9	11	11	13	14	. 14	16 8 <sup>va</sup>	17	19	19 	20	21	21	22	24	24	 81	
Mode 3	step: inter	7 val: 2	9 1	10 6	16 2	18 7	25 2	27	31	32 1	33 • 3	36 • 7	43 ≰ <b>●</b> 1	<b>6 4 4 4 6 4 4 4 4 4 4 4 4 4 4</b>	2		6	2	03 7 ‡•	2 4	4 <u>+</u>	↓ <u>−</u> 1	≠ <u></u> 1			
(inv. 11)	pipe:	3	4	<b>₽</b> 4	6	6	9	9	10	10	11	12	14	14	16	17	17	19	20	21	22	23	24	24	25	

## **NOTES FOR PERFORMANCE**

#### General

#### Amplification

It is recommended to amplify both instruments slightly in performance.

#### **Rhythmic structure and performance**

In *Panabuka* the main, structural rhythms are notated in normal-sized notes, and the ornamentation (or *Gati*, to use the Indian terminlogy) is notated in small notes. Sometimes these are notated precisely, and sometimes as grace-notes. The general tendency should be to perform the Gati a little lighter than the main rhythms.

In the darbuka part, however, the intensity of the Gati will depend more on the given 'fingering' - in the case of hand-to-hand (eg. R-L-R-L-R) Gati (see Ex. 1), this implies a greater intensity, whilst with triplets where one hand uses split-hand technique (Ex. 2) and longer Gati with split-hand ornaments in both hands (Ex. 3), this implies a lighter touch. [R.H. strokes are indicated by black noteheads, and L.H. strokes by white diamond noteheads].

In the panflute part, Gati should normally be played lighter, especially in the case of t-k-t-k articulations.



## Panflute

*Panabuka* is written for a panflute in C, with a range of three and a half octaves from c' to g''''



three-quarter-tone flat), although often a quarter-sharp sign is used instead of a

threequarter flat in order to show the melodic contour more clearly.

#### **Quarter-tone notation Miscellaneous** breath sound (with perceptible pitch) $\mathbf{g}^{\prime\prime}$ open g" quarter-tone flat finger vibrato (max. quarter-tone) g" semitone-flat gliss diatonic glissando from G to F pipe (grace-note tongued, main note not tongued) threequarter-tone flat (f " quarter-tone sharp) g″ gliss ° diatonic glissando from A to F pipes Harmonic (first grace-note tongued, others not tongued) always third partial (twelfth above fundamental) upward glissando (pitch-bend)on A-pipe Articulation starting from A threequarter flat, ending on open A downward glissando (pitch-bend) on D pipe *not* tongued when no articulation mark starting open, ending semitone flat always tongued Tuning All deviations from the diatonic tuning of the panflute are achieved by tilting the instrument slightly away from the player, resulting in a flattening of the pitch. slaptongue For this reason, almost all the accidentals are shown as flat signs (quarter- semi-,



articulate using t - k - t - k

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## Darbuka

Panabuka is written for a modern darbuka (22cm with aluminium shell)—played in the traditional way on the lap and under the left arm—and a dahola (bass darbuka: 26-29cm\*), mounted on the player's right, in such a way that it can resonate well, and so that the head can easily be played by the player's right hand with minimal movement from its normal position.

### **Basic sounds (darbuka)**

	D (DUM) - centre, always RH deep resonant sound
×	S (Sac) - centre, always RH deep dry sound
•	ta (RH rim), ka (LH rim) bright sound
-	TEK (RH extreme rim), TEK (LH extreme rim) very bright sound
+ ) + ) * *	POP - place RH (little finger side) on centre, perpendicular to head, and then play TEK with LH (almost simultaneously) very strong POP sound
°	harmonic TEK played by LH whilst placing third finger of RH just off centre very bright and pure sound
	fast tremolo (both hands) starting with RH, starting with LH
•	fast tremolo with flat of fingernail of third finger (RH) (side-to-side rubbing motion) extreme edge, edge, between edge and centre, centre

\* Regarding the size of the dahola - it would be optimal if the fundamental (DUM) of the dahola sound about a major or minor third below that of the darbuka.

## **Ornamentation (gati)**

Panabuka makes use of Turkish split-hand technique, notated as in the following examples:



LH rotates and alternates between 2 and 4 (or 3+4) this alternation can be swapped, starting with 4



then LH rotating/alternating 2 4 (or 3+4)

RAK - grace-notes played by LH, 2-3-4 'ripple' (also sometimes 4-3-2 in R.H.)

light, resonant ka (ta) played by 3<sup>rd</sup> finger of LH (RH)

