

Tondo

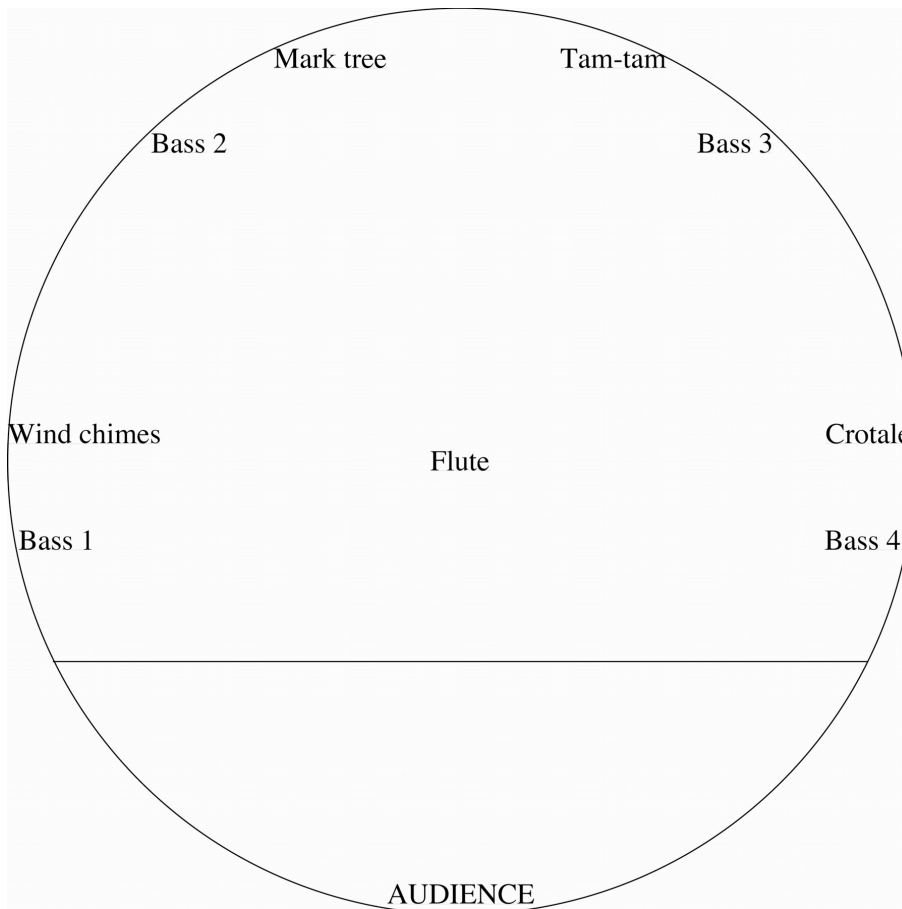


for alto flute and four double basses

Bill Alves

A tondo is a painting in a circular frame. This form was popular in Renaissance Italy, where artists such as Raphael used them to circumscribe elaborate geometrical plans that outlined the structures of many of their paintings. During this period, many artists and architects, like their Classical Greek models, believed that a harmonious artistic structure could be found in the beauty of mathematical relationships.

Tondo is scored for alto flute and four double basses. In addition, each of the bassists plays a percussion instrument: player 1 wind chimes, player 2 a mark tree, player 3 a tam-tam, and player 4 a crotale tuned to G. The setup of the stage should resemble the following:



The flute player may play standing in the position shown (the middle), or, if the player has memorized the part, it may be theatrically effective for her to walk slowly around the stage, visiting each of the four bassists in turn (from stage right to stage left) by the time that they play their percussion instruments, tracing, as it were, the internal geometry of the tondo.

Tondo has no meter, but the bassists time their playing, including dynamics, to clock timings indicated in the score. I suggest that they use stopwatches that they start together. While the flute part also has timings and note durations indicated, these are offered as general guidelines for what should be a free rhythm. However, it is expected that the flute part coincide with the strokes of the percussion instruments at the places shown. If the flute player gets to one of these points early, the part is written so that the last note may be held or repeated. In addition, the flute's last note (and bass four's last note) should end when the crotale is struck for the third time, though not abruptly.

Open strings on basses one and three are retuned as shown below. Their parts are notated in scordatura. Basses two and four are tuned normally (with beatless fourths), but are required to have a low-C extension.

Basses 1 and 3

<u>String</u>	<u>Frequency</u>	<u>Pitch relative to ET*</u>	<u>Tuning relationship</u>
E string	42.8 hz	E +65 cents	4/3 below A string
A string	57.0 hz	A +63 cents	7/4 above basses 2&4 C string
D string	67.2 hz	D -153 cents	4/3 below G string
G string	89.6 hz	G -155 cents	11/4 above basses 2&4 C string

Basses 2 and 4 (with C extension)

<u>String</u>	<u>Frequency</u>	<u>Pitch relative to ET*</u>	<u>Tuning relationship</u>
C string	32.6 hz	C -6 cents	3/1 below G string
A string	55.0 hz	A +0 cents	normal tuning
D string	73.3 hz	D -2 cents	4/3 above A string
G string	97.8 hz	G -4 cents	4/3 above D string

*ET = equal temperament, A 440

The flute player plays in tune with the drone pitches held by the basses. This means that the player must adjust pitches through alternate fingerings and changes in embouchure. In the flute part, some alternate accidentals are used to indicate more precisely the pitch of the notes. These are as follows:

♯[↑] somewhat sharp of a semitone sharp (~ 133 cents)

♯[↓] somewhat flat of a semitone sharp (~ 67 cents)

♯ somewhat sharp (~ 50 cents)

↑ somewhat sharp (~ 33 cents)

↓ somewhat flat (~ 33 cents)

♭[↓] quartertone flat (~ 50 cents)

♭[↑] somewhat sharp of a semitone flat (~ 67 cents)

♭[↓] somewhat flat of a semitone flat (~ 133 cents)

Suggested fingering charts and other hints can be found in the following sources:

John Fonville. "Microtonal Fingerings for Flute: A Comprehensive List." *Pitch 1/4* (1990), 37-51.

Andrew Bolotowsky. "Microtonal Flute Fingerings: An Overview." *Pitch 1/4* (1990), 36.

Carin Levine and Christina Mitropoulos-Bott. *The Techniques of Flute Playing*. Kassel, Germany: Baerenreiter, 2002.

Carin Levine and Christina Mitropoulos-Bott. *The Techniques of Flute Playing II: Piccolo, Alto and Bass Flute*. Kassel, Germany: Baerenreiter, 2004.

Robert Dick. *Tone Development Through Extended Techniques*. Multiple Breath Music Co

Robert Dick. *The Other Flute: A Performance Manual of Contemporary Techniques*. London: Oxford University Press, 1975.

However, fingerings may need to be adjusted through experimentation for different players and makes of flutes.

Tondo

Alto Flute in G

Bill Alves

1:30 1:45

ppp *mf*

2:05 2:25

pp *p* *mp*

2:45 Wind chimes 3:00

ppp *f*

3:20 3:35 3:50

mf *p* *f* *p*

4:20

mf *p*

4:35 Mark tree 4:55 5:15

ppp

5:30 5:50

p

6:15

f

6:35

mf

Tondo

Alto Flute

7:10 *f*

7:35 8:00

8:30 *p mp mf*

8:45 9:00 *f*

9:10 Tam-tam *ff fff ff f*

10:10 *mf*

10:45 *mp p*

11:20 11:50 *pp*

12:15 12:40 *ppp* Crotale

Tondo

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Double basses
(2 and 4 in scordatura)

0:10 Sul A 2:20 Sul D 2:45 Wind chimes 3:15 Sul G 4:15 Sul D

Bass 1: *pp* (0:10-2:20), Sul G (0:10-1:50), Sul D (1:50-2:45)

Bass 2: *pp* (0:10-0:55), *p* (3:10-3:40), *pp* (3:10-3:40), *mp* (3:40-4:05), *p* (4:05-4:15)

Bass 3: Sul A (0:40-1:20), *pp* (1:20-2:00), Sul E (3:55-4:15), 3:35

Bass 4: Sul G (1:06-2:45), Sul D (2:45-3:55), Sul A (3:55-4:15)

pp

3 4:35 (Sul A) 5:35 Sul A 6:35 Sul D 7:35 Sul G (7th harmonic) 8:35 Sul D 8:45 Sul G 8:55 Sul G 9:10 10:10 Sul A 11:30 12:50

Mark tree 5:15 Sul A 7:15 Sul A 8:15 Sul C 9:50 Sul D 10:50 Sul G 12:10

4:55 Sul A 5:55 Sul A 6:55 Sul D 7:55 Sul D Tam-tam 9:35 Sul A 11:00 11:50

6:15 Sul G 12:30 G Crotale

p < *mf* < *f* < *ff* > *mp* > *p* > *ppp*

mp < *mf* < *f* < *ff* > *mp* > *pp* < *mp* > *ppp*

mf > *p* < *f* > *p* *f* *pp* < *mp* > *ppp*

mp < *mf* > *p* *ff* < *p* < *mp* > *ppp*