Marc Sabat

John Jenkins

PLAINSOUND MUSIC EDITION

to Wolfgang von Schweinitz
with greatest appreciation and friendship

GENERAL NOTES

The musical material has been taken from Johann Sebastian Bach's Ricercar a 6 in Musikalisches Opfer, BWV 1079 (1747), mm. 29-103 (all but the exposition). Bach's original pitches and durations remain unaltered, but their vertical relations have been disturbed by presenting the individual notes largely in sequential (rather than simultaneous) order. The resulting melodic material retraces Bach's harmonic and motivic constructions as a kind of projection into two dimensions. This melody (contained in its entirety in the keyboard part) undergoes a second projection back into the non-keyboard instrumental parts. The string trio version is an adaptation of the original version (2001) for keyboard and six instruments.

John Jenkins (1592-1678) was an English composer who wrote primarily instrumental consort music, often originally intended for home performances by amateur musicians. Unlike many other composers, who were in the employ of royal courts and/or the Church, Jenkins spent much of his life working privately for various families in remote country houses of eastern England. He is also known as the inventor of the "lyra consort", an exotic mixed ensemble consisting of violin, lyra viol, bass viol, theorbo, and harpsichord.

The melody is to be expressively phrased, with an abundance of local detail. The general sensibility is ornate and Baroque, with great attention to the collectively created phrases. Vibrato should be used very sparingly. Tones connected by dotted slurs to be played as a single connected gesture.

› (just before a note) indicates beginning of a new phrase; (after a note) indicates end of a phrase.

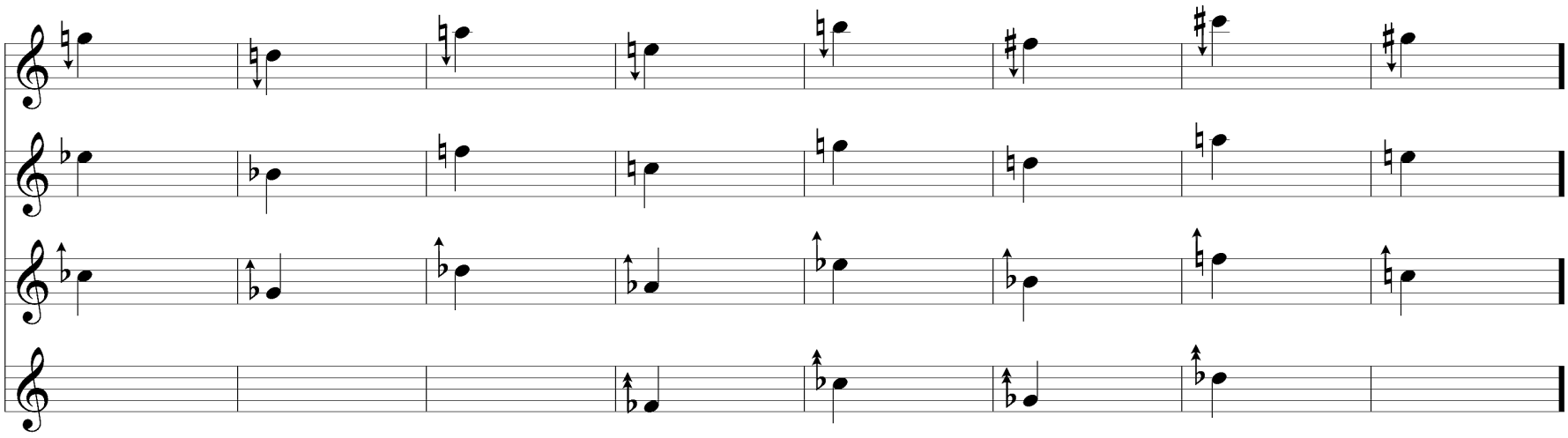
The keyboard tuning is described in detail in the following pages. It is assumed that the six non-keyboard parts are played by any appropriately-registered instruments of flexible tuning capable of matching the harpsichord's intonation.

John Jenkins was written at the request of Jennifer Waring (for Continuum, Toronto) and Daniel Matej (for Musica Aeterna, performing at the 2000 Bratislava Evenings of New Music). It was commissioned with the assistance of the Canada Council for the Arts.

NOTES ABOUT THE TUNING

The harpsichord part is written for a two-manual French instrument, with two 8′ stops and one 4′ stop. The pitches required in the music are distributed among the three sets of strings as indicated in the Keyboard Tuning Layout. Cents deviations are noted above the various tones, assuming A as the reference pitch. The system employed was originally proposed by Hermann von Helmholtz in his book "On the Sensations of Tone as a Physiological Basis for the Theory of Music" (1862), based on his studies of traditional Arabic and Persian tuning. It is essentially a very subtle temperament which closely approximates 5-limit Just Intonation.

The score is written using The Extended Helmholtz-Ellis JI Pitch Notation, developed in collaboration with Wolfgang von Schweinitz. It is assumed that the traditionally-notated pitches are ordered as a series of pure fifths (tuned in a frequency ratio of 2:3), extending indefinitely in each direction. Enharmonic tones (i.e. G-flat and F-sharp) differ in pitch by a Pythagorean Comma (approximately 23.46 cents). The Pythagorean major thirds produced in this series differ from pure major thirds (tuned in a frequency ratio of 4:5) by an interval known as the Syntonic Comma (80:81 or approximately 21.51 cents), which is notated by an arrow attached to the flat, natural, or sharp signs. Thus, the pitch classes of 5-limit Just Intonation used in this piece can be represented in a 2-dimensional array as follows:



At the end of the second staff, the next tone produced in the series of fifths would be a B-natural. Helmholtz noted that this tone is very close to the C-flat raised by a Syntonic Comma which begins the third staff (the two pitches differ by a Schisma of approximately 1.95 cents). He proposed narrowing the tuning of each fifth by 1/8 of this interval (approximately .2442 cents), in order to produce, with a single continuous series of slightly tempered fifths, all of the pitch classes used in 5-limit Just Intonation.

To realize the notated pitches accurately by ear, several possibilities must be considered. Ideally, this can be accomplished in rehearsal by matching the harpsichord tones which double the instrument pitches.

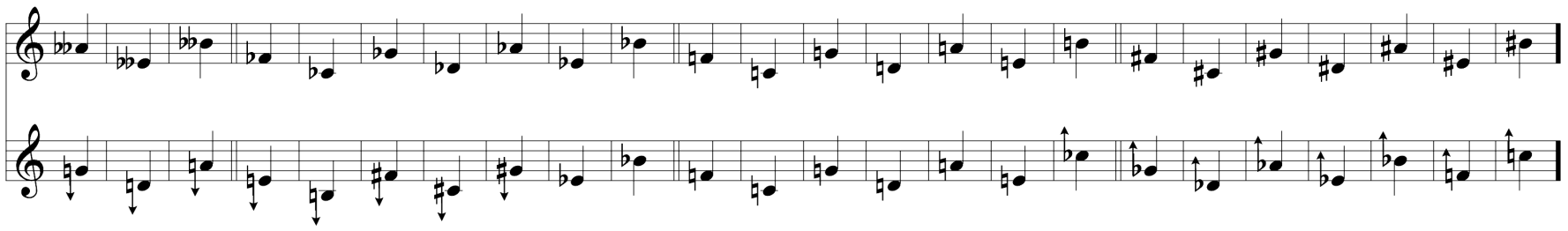
In the music there are many pure thirds, sixths, fourths, and fifths, all of which can be tuned by ear. However, in various chords (primarily dominant seventh and diminished seventh) there will also be dissonant thirds, which can be distinguished by familiarity with the notation. In general, a third or sixth will sound pure if only one of the two notes has an appropriately directed additional arrow attached to its natural, flat or sharp sign. The pure major third and major sixth are one arrow narrower, and the pure minor third and minor sixth are one arrow wider.

In the dominant seventh chord in 5-limit tuning, the pure major triad is tuned first. To find the seventh, tune two successive perfect fourths up from the root. This will produce a narrow Pythagorean minor third between the upper two notes of the chord. This interval is smaller than the pure minor third, and is notated without additional arrows.

In the diminished seventh chord in 5-limit tuning, the root of the dominant seventh chord is dropped. This results in a diminished triad consisting of one pure minor third and one Pythagorean minor third. The tritone produced between the outer tones should sound relatively smooth. To produce the diminished seventh, a pure minor third is tuned above the top note of the diminished triad. This will result in a dissonant dimished seventh interval between the outer notes of the chord, approximately a quarter-tone larger than the pure major sixth.

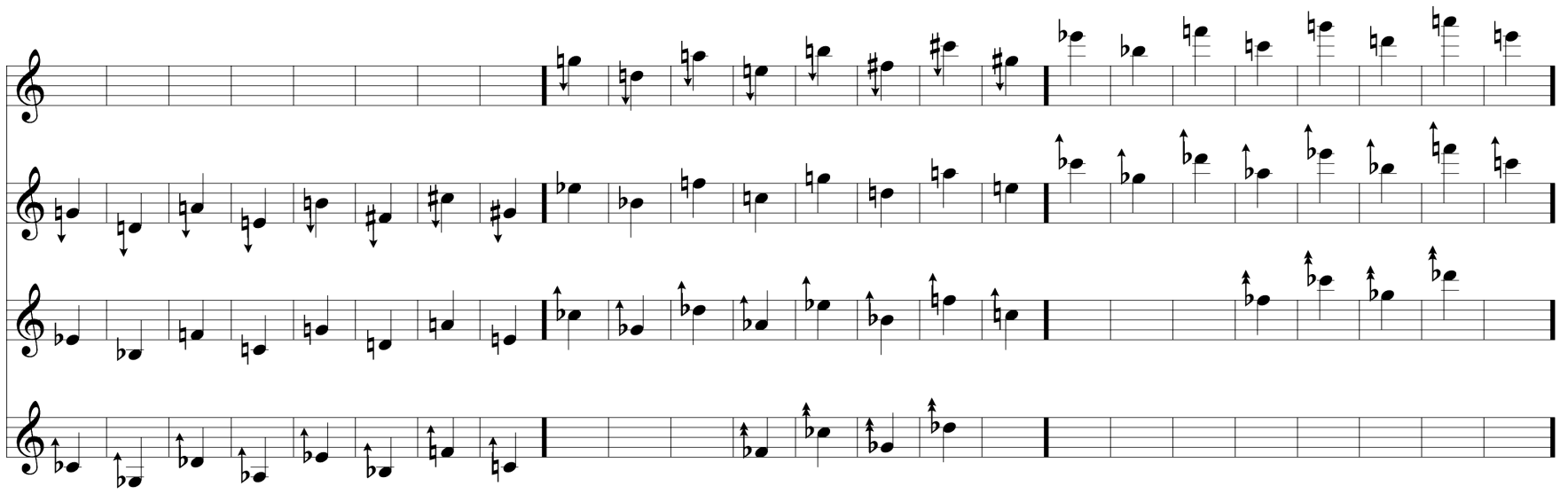
In individual preparation, the first aim should be to produce the tones of the series of pure fifths in relation to a fixed A, and to learn the techniques required to play the tones accurately. The ear must be trained to distinguish the Pythagorean Comma between enharmonic tones, which is approximately 24 cents or about one eighth-tone. With the assistance of an electronic tuning device, it is possible to measure the deviation in cents of each successive fifth from Equal

Temperament. The pure fifths are approximately 2 cents larger than the tempered fifths, so if A registers as 0, then E will be (+2), B (+4), F# (+6), etc. and D will be (-2), G (-4), C (-6), etc. In this manner it is possible to realize the following series of tones:



The upper line has tones spelled exactly as they occur in the series of fifths. The bottom line respells the notes using the arrow notation, as they occur in the music. In the Helmholtz Temperament used for the keyboard in this piece, the variation of almost 2 cents between alternately spelled tones is divided across eight slightly tempered fifths. For practical purposes, the tones are identical.

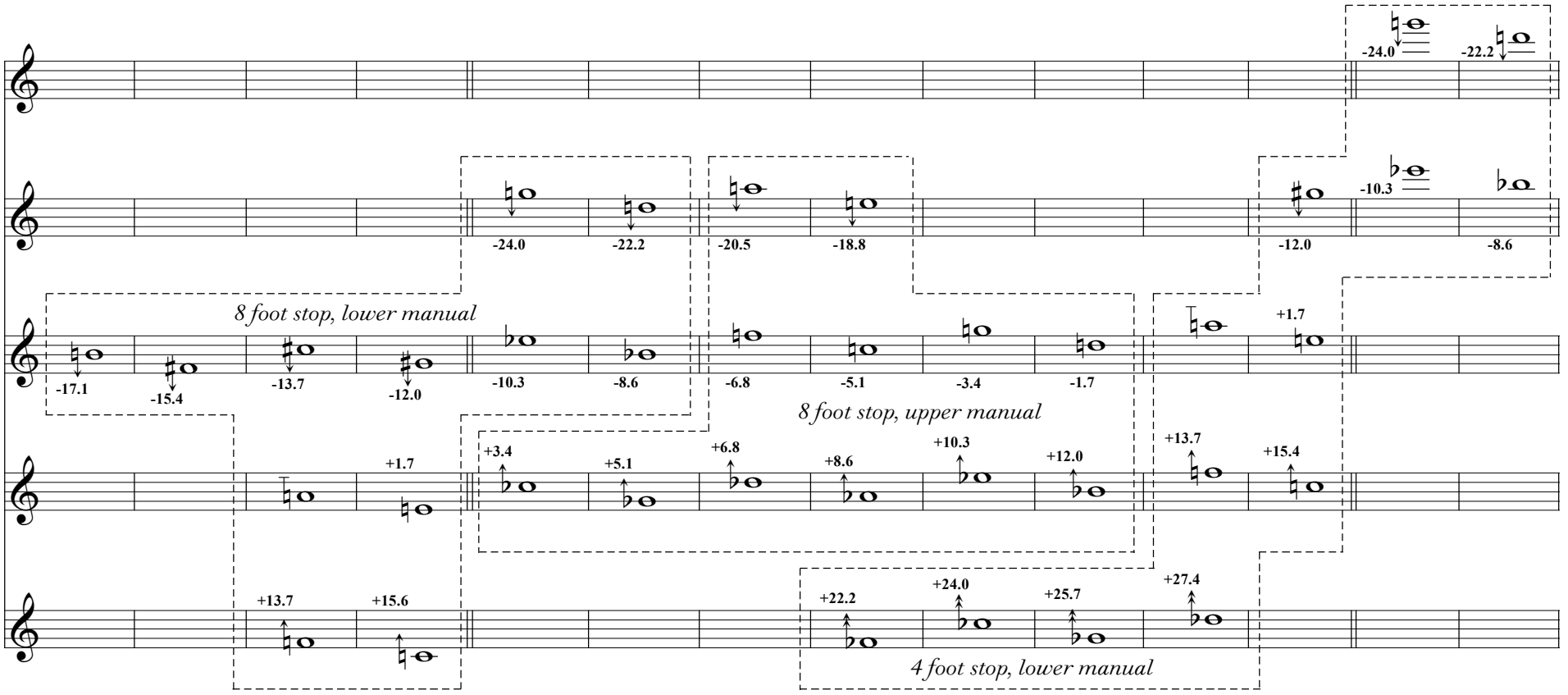
The arrow notation and respelling of tones can be more practically tested, realized, and learned with the following layout of the tones used in the piece. Once again, left to right is the series of perfect fifths, but in addition, the vertical relations indicate pure major thirds, which can readily tuned by ear. This also clarifies the logic of the respelled tones, allowing major thirds always to keep their familiar pitch-class spellings. The intervals and tunings apply in all registers.



Each instrument can develop its own reference points to verify the accuracy of the tuning by ear. For example, a string instrument would have open strings tuned to C G D A E, and can tune other tones in the horizontal direction using perfect fifths, fourths, and octaves. Tones in the vertical direction can be tuned by using perfect major thirds. The B-flat raised by one arrow is a pure major third below the open D string, and the F-sharp lowered by one arrow is a pure major third above the open D-string. The B-flat with no arrow can be tuned by proceeding by fifths and fourths from the open G string (G C F Bb). The Syntonic comma can readily be tested between the E-natural (open E string) and the E lowered by an arrow (pure third above the open C string).

KEYBOARD TUNING LAYOUT

deviations of the Helmholtz Temperament indicated in Cents (in relation to Equal Tempered Semitones)



HARPSICHORD

John Jenkins

Marc Sabat
2001

harpsichord

hpschd

1.

31

U

L

hpschd

U

L

37

U

L

hpschd

U

L

42

A

U

L

hpschd

U

L

4' stop

4' stop

49

U

L

hpschd

U

L

8' stop

8' stop

55

U

L

hpschd

U

L

60

U

L

hpschd

U

L

66

AA

U

L

hpschd

U

L

71

U

L

hpschd

U

L

76

U

L

hpschd

U

L

82

U

L

hpschd

U

L

87

U
L
hpschd
U
L

B

92

U
L
hpschd
U
L

97

U
L
hpschd
U
L

102

U
L
hpschd
U
L

106

U
L
hpschd
U
L

4' stop

4' stop

110

U

L

hpschd

U

L

114

C

U

L

hpschd

U

L

8' stop

8' stop

118

U

L

hpschd

U

L

121

U

L

hpschd

U

L

124

U

L

hpschd

U

L

127

D

U

L

hpschd

U

L

131

U

L

hpschd

U

L

4' stop

4' stop

134

U

L

hpschd

U

L

137

U

L

hpschd

U

L

141

U

L

hpschd

U

L

144

U

L

hpschd

U

L

147

U

L

hpschd

U

L

151

U

L

hpschd

U

L

155

U

L

hpschd

U

L

E

8' stop

8' stop

159

U

L

hpschd

U

L

163

U
L
hpschd
U
L

168

U
L
hpschd
U
L

173

U
L
hpschd
U
L

177

U
L
hpschd
U
L

181

U
L
hpschd
U
L

186

U

L

hpschd

U

L

F

191

U

4' stop

L

hpschd

U

4' stop

L

196

U

L

hpschd

U

L

201

U

L

hpschd

U

L

G

206

U

8' stop

L

hpschd

U

8' stop

L

211

U

L

hpschd

U

L

214

U

L

hpschd

U

L

217

U

L

hpschd

U

L

220

U

L

hpschd

U

L

223

U

L

hpschd

U

L

227

U
L
hpschd
U
L

231

H

U
L
hpschd
U
L

236

U
L
hpschd
U
L

240

U
L
hpschd
U
L

244

U
L
hpschd
U
L

249

I

U

L

hpschd

U

L

254

U

L

hpschd

U

L

259

U

L

hpschd

U

L

265

U

L

hpschd

U

L

271

U

L

hpschd

U

L