

Johan Svensson

# marionette

for string instrument,  
electro-mechanical devices  
and lights

2018

*commissioned by and dedicated to  
Karin Hellqvist*

*with support from Helge Ax:son Johnsons stiftelse*

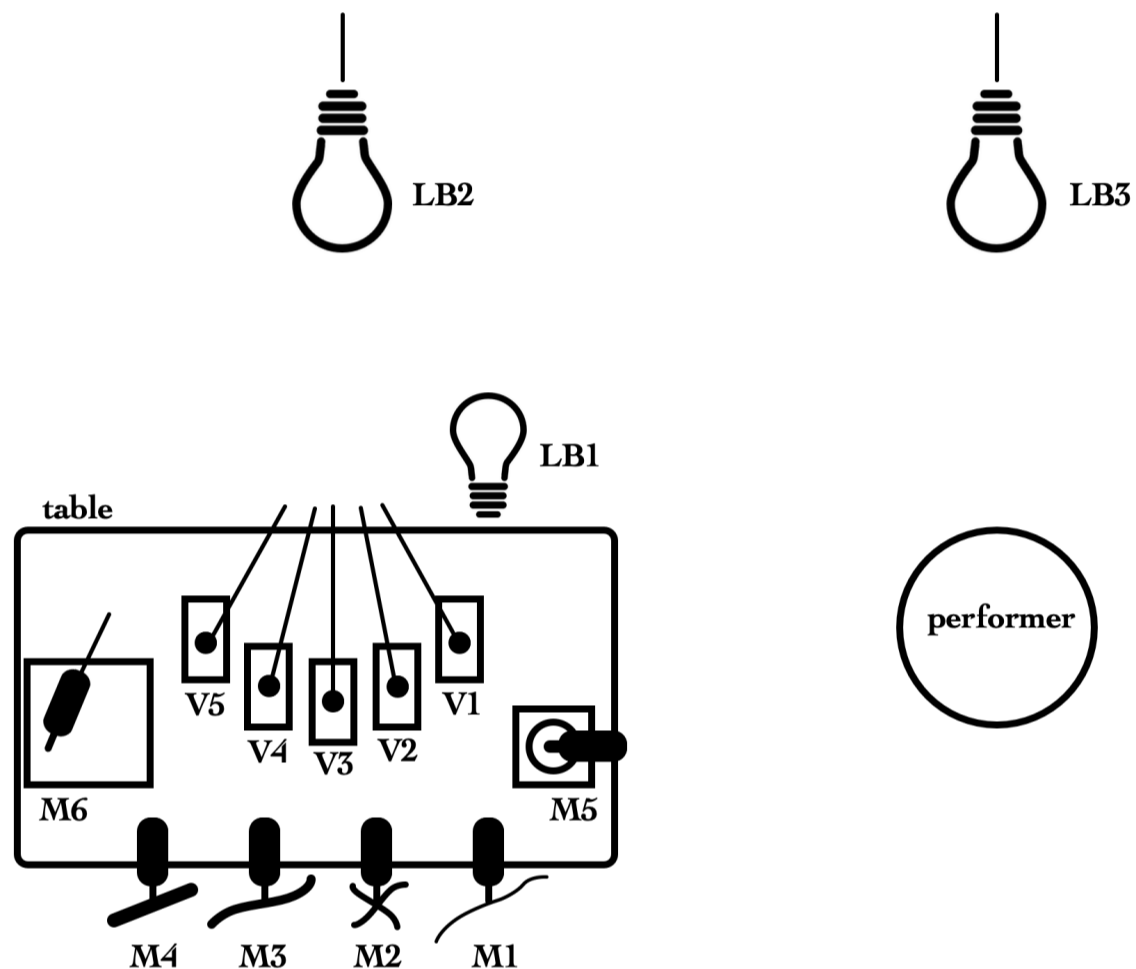
*år: 1530*

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## ABOUT

*marionette* is a kind of duo where the string instrument player (most suitable for violin, viola or cello) is one part and an electro-mechanical / light structure (built from motors, vibrators, LEDs, light bulbs and relays) the other. As if connected with invisible strings, a human-machine relationship is created where movements and actions are reproduced in the medium of the other part.

## STAGING



### DC motors

M1: thin wire attached  
M2: thin rubber band attached  
M3: thick rubber band attached  
M4: plastic piece attached  
M5: wheel with sandpaper attached - produces friction against sandpaper surface  
M6: hanging motor spinning on a wooden surface.

M1-4 produce different propeller sounds

### vibrators

V1: on glass surface  
V2: on stone surface  
V3: on metal surface  
V4: on plastic surface  
V5: on wooden surface

### light bulbs

LB1: on/behind table  
LB2: hanging above table  
LB3: hanging above performer

**!!! instrument and all devices should be amplified !!!**

\* all devices and lights can be provided by the composer

## GENERAL INSTRUCTIONS

The electro-mechanical/light construction is controlled by a computer through an Arduino and the string instrument player is performing with a click track.

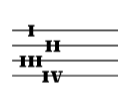
All four strings should be slightly dampened with yarn. The goal is to reduce the sustain while changing the attack sound and the pitch as little as possible.

Page turning can only be done where specified (if not using a tablet and turning with a pedal), and only with the hand being in a lowered position (mostly with the right hand).

All dynamic signs should be read as *action dynamics*, where the sign indicates the energy that should be put into the action while the sounding result probably is much softer.

The different playing techniques in general have their own note heads and they are clarified at their first appearance (reminders occur at some points).

## PLAYING TECHNIQUES AND SPECIFICATIONS

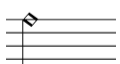


All string instrument action is notated on a 4-line staff where each line represents one string. The actions should be performed on the notated string (or on other specified places on the instrument).

Bow and pizzicato actions should be performed on open strings if nothing else is written. Tapping should be performed on the notated string: sounding pitch is free of choice.



Right arm up / left arm down. Arm up means it should be in a "ready to play" position. Arm down means it should be hanging down loosely by the side of the body. Transitions between up and down should always be done swiftly.



The harmonic sound should always have the following sounding result:  
Violin: 3rd partial. Viola: artificial harmonic.  
Cello: 9th partial or artificial harmonic: the same choice each time.



The rest of the signs are explained as they appear.

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marionette

Johan Svensson

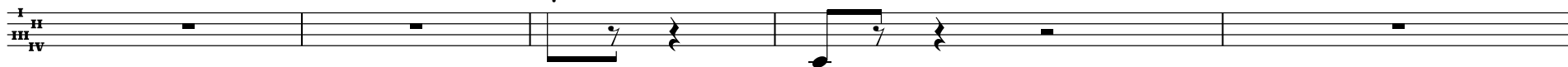
PART 1

♩ = 85

**2**  
**4**

↑ (right arm up)

**4** (bow on instrument body:  
**4** lower waist)



before starting the piece:  
right arm down

*f* sempre

6



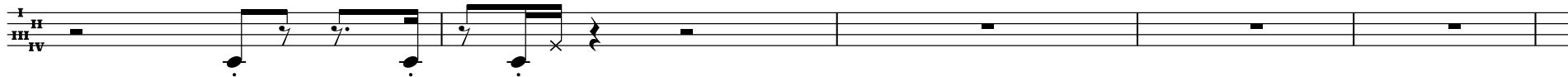
11

(IV)  
(legno battuto)

**2**  
**4**

**3**  
**8**

**4**  
**4**



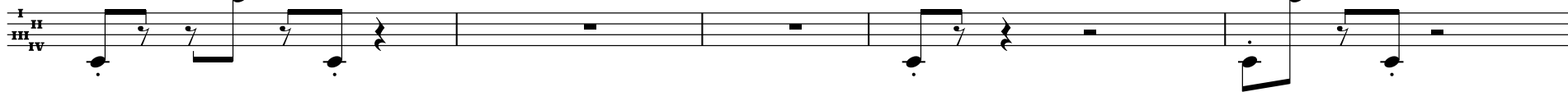
16 **4**  
**4**

(bow on instrument body:  
upper waist)

**3**  
**4**

**3**  
**8**

**4**  
**4**

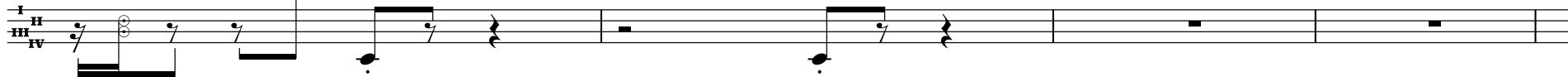


21 (II, III)  
(crini battuto)

**2**  
**4**

**3**  
**8**

**4**  
**4**

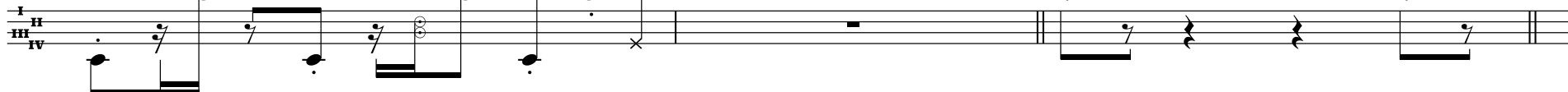


25 **4**  
**4**

(right arm down)

(up)

**4**  
**4**



PART 2

(♩ = 85)

(tap with index finger)

28  $\frac{4}{4}$  (hit fingerboard with thumb) (IV)  $\frac{3}{4}$   $\frac{4}{4}$

*f* sempre

32  $\frac{4}{4}$   $\frac{3}{4}$   $\frac{4}{4}$

36  $\frac{4}{4}$   $\frac{3}{4}$   $\frac{4}{4}$  (I)  $\frac{2}{4}$   $\frac{3}{4}$

40  $\frac{3}{4}$   $\frac{2}{4}$   $\frac{4}{4}$   $\frac{2}{4}$

44  $\frac{3}{4}$   $\frac{4}{4}$   $\frac{4}{4}$   $\frac{4}{4}$

48  $\frac{4}{4}$   $\frac{2}{4}$   $\frac{4}{4}$   $\frac{2}{4}$   $\frac{4}{4}$   $\frac{2}{4}$

52  $\frac{2}{4}$   $\frac{3}{4}$   $\frac{2}{4}$   $\frac{4}{4}$   $\frac{2}{4}$

♩ = 60  
(right arm down)  
TURN PAGE

PART 3

(♩ = 60)

56  $\frac{2}{4}$   $\frac{4}{4}$   $mp$   $f$

60 damp strings with left hand  $\frac{2}{4}$   $\frac{3}{4}$  (hit strings with bow, keep bow on strings)  $\frac{4}{4}$  (quickly release bow from strings)  $f$   $mp$

64  $f$  damp strings with left hand (not damped) 0 3 1 0 3 1 0 3 1 0

68 (crini battuto) (two bounces)  $\frac{3}{4}$   $\frac{3}{8}$   $\frac{2}{4}$   $\frac{4}{4}$  harmonic  $f$   $p$  sounding pitch:  $8^{va}$

73  $\frac{4}{4}$   $f$  3 3 4 3 sim.  $\frac{3}{4}$

76 (several bounces)  $\frac{4}{4}$   $mp$   $f$  0 1 0 3 0

80 1 0  $\frac{3}{4}$   $\frac{2}{4}$   $\frac{3}{4}$   $\frac{2}{4}$  1 0 3 1 0

85  $\frac{2}{4}$   $\frac{3}{4}$   $\frac{4}{4}$   $\frac{3}{4}$   $mp$   $p$   $f$



PART 4

(hit strings with left hand)

♩ = 80

89  $\frac{3}{4}$  4 3 0 1 0 1 3 2 0 1 4 2 0 1  $\frac{4}{4}$   $8^{va}$  4 3 0 1 4 3 2 0 1  
*ff* *p* *ff*

93 0 3 2 1 4 3 2 0 1 0 2 0 1 1 0 1 0  $\frac{2}{4}$   $8^{va}$   $\frac{4}{4}$   $8^{va}$   
*p* *ff* *p*

97 4 2 0 1 4 3 2 0 1 4 3 0 0 3 1 0 0 *sim.* 4 2  $\frac{3}{4}$  3 1 0 4 2 0 0  $\frac{2}{4}$   
*ff* *sim.*

100  $\frac{2}{4}$  *sim.*  $\frac{4}{4}$   $8^{va}$   $\frac{3}{4}$  4 3 1 0 4 3 2 1 0 *sim.*  $\frac{2}{4}$   $8^{va}$   
*p* *ff* *p*

104  $\frac{2}{4}$  *sim.*  $\frac{6}{4}$   $8^{va}$   $\frac{2}{4}$  4 3 2 1 0  $\frac{4}{4}$   $8^{va}$   $\frac{4}{4}$   
*ff* *p* *ff* *p* *ff* *p* *ff*

109  $\frac{4}{4}$  ↓ TURN PAGE  $\frac{2}{4}$

PART 5

♩ = 60

110

**2**  
**4**

**3** (left hand pizz. and  
**4** legno battuto)

**4**  
**4**

(hit strings with left hand)

**3**  
**4**

Musical notation for measures 110-113. Measure 110 starts with a 2/4 time signature, followed by a 3/4 time signature for measures 111-112, and a 4/4 time signature for measure 113. The notation includes a double bar line, an upward-pointing arrow above measure 110, and a dynamic marking of *mf* sempre below measure 111. A bracketed triplet of eighth notes is shown in measure 113. The staff is marked with I, II, III, and IV at the beginning.

114

**3**  
**4**

**4**  
**4**

**2**  
**4**

**4**  
**4**

**3**  
**4**

Musical notation for measures 114-117. Measure 114 is 3/4, 115 is 4/4, 116 is 2/4, 117 is 4/4. The notation includes two bracketed triplets of eighth notes in measure 116. The staff is marked with I, II, III, and IV at the beginning.

118

legno

**3**  
**4**

**4**  
**4**

**2**  
**4**

**3**  
**8**

**4**  
**4**

Musical notation for measures 118-122. Measure 118 is 3/4, 119 is 4/4, 120 is 2/4, 121 is 3/8, 122 is 4/4. A horizontal line labeled "legno" spans from measure 118 to 122. The notation includes a bracketed triplet of eighth notes in measure 121. The staff is marked with I, II, III, and IV at the beginning.

123

**4**  
**4**

**3**  
**4**

**2**  
**4**

Musical notation for measures 123-125. Measure 123 is 4/4, 124 is 3/4, 125 is 2/4. The notation includes a series of eighth notes with 'x' marks above them, indicating string hits. The staff is marked with I, II, III, and IV at the beginning.

126

**2**  
**4**

**4**  
**4**

**3**  
**4**

**4**  
**4**

Musical notation for measures 126-128. Measure 126 is 2/4, 127 is 4/4, 128 is 3/4. The notation includes a series of eighth notes with 'x' marks above them. The staff is marked with I, II, III, and IV at the beginning.

129

legno

**4**  
**4**

**3**  
**4**

**4**  
**4**

Musical notation for measures 129-131. Measure 129 is 4/4, 130 is 3/4, 131 is 4/4. A horizontal line labeled "legno" spans from measure 129 to 131. The notation includes a series of eighth notes with 'x' marks above them. The staff is marked with I, II, III, and IV at the beginning.

132

**3**  
**4**

**4**  
**4**

Musical notation for measures 132-134. Measure 132 is 3/4, 133 is 4/4, 134 is 4/4. The notation includes a series of eighth notes with 'x' marks above them. The staff is marked with I, II, III, and IV at the beginning.

135 (tap string and make a gliss. upwards) *legno*

138

141

144

147

150

153 *click track off* stand as still as possible **TURN PAGE** 35" **6**

INTERMEZZO 1

(♩ = 60)

154

**6**  
**8**

click track on

(left arm up)

Musical notation for measures 154-158. The staff shows a sequence of eighth notes with various articulations. Above the staff, there are dynamic markings: an upward arrow at measure 154, a downward arrow at measure 155, an upward arrow at measure 156, and downward arrows at measures 157 and 158. A bracket spans measures 156 and 157. A double bar line is at the end of measure 158.

159

**3**  
**8**

**6**  
**8**

**4**  
**4**

Musical notation for measures 159-164. The staff shows eighth notes with articulations. Above the staff, there are dynamic markings: a downward arrow at measure 159, an upward arrow at measure 160, a downward arrow at measure 161, an upward arrow at measure 162, and a downward arrow at measure 164. A bracket spans measures 162 and 163. A double bar line is at the end of measure 164.

165

Musical notation for measures 165-168. The staff shows eighth notes with articulations. Above the staff, there are dynamic markings: an upward arrow at measure 165, a downward arrow at measure 166, an upward arrow at measure 167, and a downward arrow at measure 168. A bracket spans measures 166 and 167. A double bar line is at the end of measure 168.

166

**6**  
**16**

**4**  
**4**

(right and left arm up)

**2**  
**4**

**4**  
**8**

Musical notation for measures 166-171. The staff shows eighth notes with articulations. Above the staff, there are dynamic markings: an upward arrow at measure 166, a downward arrow at measure 167, a downward arrow at measure 168, and an upward arrow at measure 171. A bracket spans measures 167 and 168. A double bar line is at the end of measure 171.

PART 6

171

**4**  
**8**

♩ = 120

(left hand pizz.)

*f* sempre

Musical notation for measures 171-174. The staff shows eighth notes with articulations. Above the staff, there are dynamic markings: an upward arrow at measure 171, a downward arrow at measure 172, a downward arrow at measure 173, and an upward arrow at measure 174. A double bar line is at the end of measure 174.

175

**3**  
**8**

**4**  
**8**

Musical notation for measures 175-179. The staff shows eighth notes with articulations. Above the staff, there are dynamic markings: a downward arrow at measure 175, a downward arrow at measure 176, and an upward arrow at measure 179. A bracket with the number '3' spans measures 175 and 176. A double bar line is at the end of measure 179.

180

**6**  
**8**

**4**  
**8**

Musical notation for measures 180-184. The staff shows eighth notes with articulations. Above the staff, there are dynamic markings: a downward arrow at measure 180, a downward arrow at measure 181, and a downward arrow at measure 184. A double bar line is at the end of measure 184.

184 **3** **4**

189 **4** (crini) **6** **3** **6**

193 **6** **4** **5** **3** **2**

198 **2** **3** **4** **5** **4** **5**

203 **5** **2** **3** **2**

208 **2** **3**

213 **4** **5**

218 **5** **4** **5** **4**

TURN PAGE

INTERMEZZO 2

223 ♩ = 60

5/4 4/4 9/8 3/4 2/4 5/4

228

4 3 2 1 0

5/4 2/4 3/4 sim. 8va 4/4

*f* *f* *p*

233

3/4 6/16 9/16 3/8 (fast arpeggio) 4/4

*f* *pp*

238

4/4 4/8

*f* *pp* *f* *pp*

243

*mf* *f* *pp* *mf* *f* *pp*

248

4/4 4/4 TURN PAGE 4/4

*mf*

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PART 7

♩ = 60

251  $\frac{4}{4}$   $\begin{matrix} 4 & 3 \\ 0 & 1 \end{matrix}$   $\begin{matrix} \lceil 3 \rceil \\ \lceil 3 \rceil \\ \lceil 3 \rceil \\ \lceil 3 \rceil \end{matrix}$  *sim.*  
*ff* sempre  
(left hand pizz. and  
legno battuto)

255  $\begin{matrix} \lceil 3 \rceil \\ \lceil 3 \rceil \\ \lceil 3 \rceil \end{matrix}$   $\frac{2}{4}$   $\frac{4}{4}$  (vertical bowing)

259  $\frac{3}{4}$   $\begin{matrix} \lceil 3 \rceil \\ \lceil 3 \rceil \\ \lceil 3 \rceil \\ \lceil 3 \rceil \end{matrix}$   $\frac{4}{4}$

263  $\frac{4}{4}$   $\begin{matrix} \lceil 3 \rceil \\ \lceil 3 \rceil \\ \lceil 3 \rceil \\ \lceil 3 \rceil \end{matrix}$   $\frac{2}{4}$

267  $\frac{2}{4}$   $\frac{4}{4}$  2 (sempre simile)  $\begin{matrix} \lceil 3 \rceil \\ \lceil 3 \rceil \end{matrix}$

271  $\begin{matrix} \lceil 3 \rceil \\ \lceil 3 \rceil \\ \lceil 3 \rceil \\ \lceil 3 \rceil \end{matrix}$   $\frac{3}{4}$

274  $\frac{3}{4}$   $\begin{matrix} \lceil 3 \rceil \\ \lceil 3 \rceil \end{matrix}$   $\frac{4}{4}$   $\frac{2}{4}$



279

283

INTERMEZZO 3

285 (♩ = 60)

stand as still as possible when not playing  
(fast flicker in the three light bulbs)

289

minor 2nd interval, overpressure (light flicker in the three light bulbs)

*fff*

292

minor 2nd interval, overpressure (fast flicker in the three light bulbs)

*fff*

295

minor 2nd interval, overpressure (fast flicker in the three light bulbs)

*fff* sim.

298

minor 2nd interval, overpressure (fast flicker in the three light bulbs)

*fff* 30"

302

click track on