

J Trombone .

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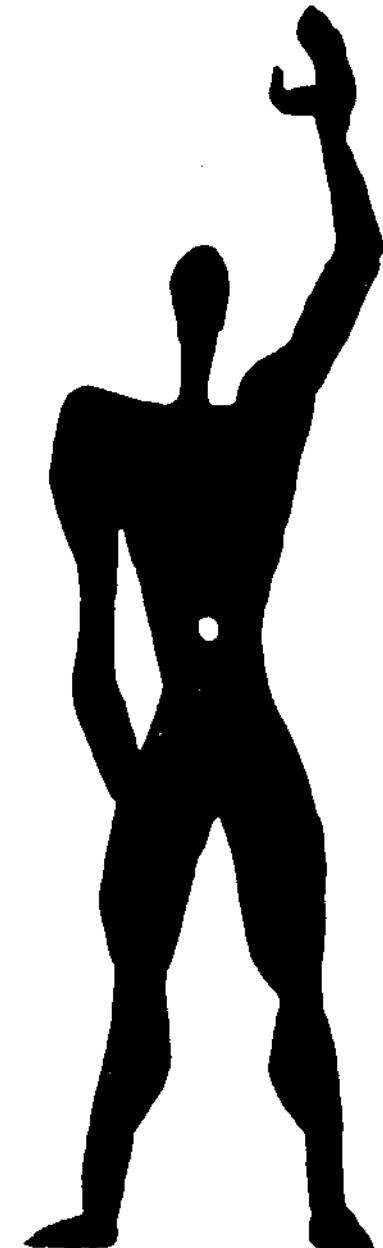
MODULOR

Ian Willcock

Preview File Only

DURATION - 12 MINUTES

For Trombone and Piano with Live Electronics



An implacable mathematics and physics reign over the forms presented to the eye... Their agreement, their repetition, their interdependence, and the spirit of unity or of family which binds them together to form an architectural expression, is a phenomenon which is as supple, subtle, exact and implacable as that of acoustics. (Le Corbusier quoted in Le Corbusier - Architecture and Form by Peter Blake, Penguin Books 1963)

The figure on the title page is taken from Le Corbusier: Oeuvre complète edited by W. Boesiger.

Modulator was written for John Kenny and Markus Stange and was first performed by them, with sound projection by John Whiting on 23rd January 1993.

| Duration | | —Attack Densities— | | |
|----------|------|--------------------|---------|---------|
| Centre | Band | Centre | Minimum | Maximum |
| 686.6000 | 0 | 0.0015 | 0.0008 | 0.0021 |
| 424.3421 | 1 | 0.0024 | 0.0013 | 0.0034 |
| 262.2579 | 2 | 0.0038 | 0.0021 | 0.0055 |
| 162.0843 | 3 | 0.0062 | 0.0034 | 0.0089 |
| 100.1736 | 4 | 0.0100 | 0.0055 | 0.0144 |
| 61.9107 | 5 | 0.0162 | 0.0089 | 0.0234 |
| 38.2629 | 6 | 0.0261 | 0.0144 | 0.0378 |
| 23.6478 | 7 | 0.0423 | 0.0234 | 0.0612 |
| 14.6151 | 8 | 0.0684 | 0.0378 | 0.0990 |
| 9.0326 | 9 | 0.1107 | 0.0612 | 0.1602 |
| 5.5825 | 10 | 0.1791 | 0.0990 | 0.2592 |
| 3.4502 | 11 | 0.2898 | 0.1602 | 0.4195 |
| 2.1323 | 12 | 0.4690 | 0.2592 | 0.6787 |
| 1.3178 | 13 | 0.7588 | 0.4195 | 1.0982 |
| 0.8145 | 14 | 1.2278 | 0.6787 | 1.7769 |
| 0.5034 | 15 | 1.9866 | 1.0982 | 2.8750 |
| 0.3111 | 16 | 3.2144 | 1.7769 | 4.6519 |
| 0.1923 | 17 | 5.2010 | 2.8750 | 7.5269 |
| 0.1188 | 18 | 8.4154 | 4.6519 | 12.1789 |

Notation

The score is notated at concert pitch.

Accidentals: ♯ ♪ ♯ ♭ ♭

 - Indicates a continuous glissando, the slide commencing at the beginning of the first note and ending at the start of the second. Unless indicated, there is no separate articulate articulation of the second note, i.e. if it is a grace note it only shows the pitch reached at the end of the slide.

Grace notes should be played so that the associated main note is precisely in time i.e. before the beat. Arpeggiated chords should be started as notated, and played as fast as possible. Their conclusions need not correspond with the notated duration of the first note.

Trombone Part

-  - Flutter tongue.
-  - Rapid single tonging *only* - i.e. there should be no 'sounding' of the note at all.
-  - Sharp out breath (unpitched).
-  - Sharp in breath (unpitched).

The mute required is a Harmon type with the tube pushed in. Instructions for stopping and unstopping are:

-  - open.
-  - stopped (hand covering cup but still allowing air to flow through instrument).

Piano Part

-  - A rapid reiteration of the note.
-  - The indicated pitches are played so as to raise the dampers without striking the strings.

Electronics

The combined directions for the ring-modulation effects are given below the piano part, they indicate which of the instruments (or both) is to be modulated and the gain to be applied the modulated signal. 0 indicates a zero level and 100 represents a gain sufficient that the dynamic of the modulated signal will equal that of the natural instrumental sounds as they appear in the performance acoustic (i.e. if the untreated sounds are

amplified, this should be taken into account when setting the gain of the treated signal). The actual perceived dynamic will depend on the combination of gain and source signal level. It is vital that for a setting of 100, the ring-modulated signal tracks precisely and equally the dynamic level of the original source signal.

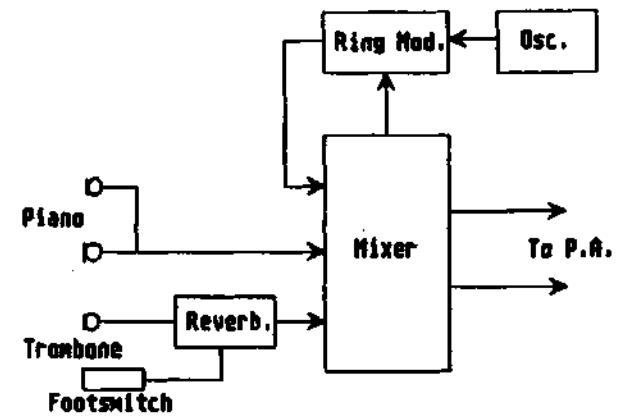
Performance

The live electronic effects should be connected according to the diagram below. At least two microphones should be used for the piano.

The amplification must be capable of achieving an equal balance between the ring-modulated signal and the 'natural' instrumental sounds at all dynamics (see above). The overall dynamic should be as loud as possible.

The trombone player controls the digital reverberation using a foot switch. The filtration applied to the reverberation-feed (or feedback) should be adjusted to give a similar relationship between pitch and decay-time as that obtaining on the piano. It is important that the reverberation used generates no perceptible re-iteration of the input signal, i.e. an echo-type device is not appropriate.

The ring-modulation may be controlled either by a sound-projectionist, if available, or by the performers via foot pedals. Both instruments are modulated by a single sine-wave with a constant frequency of 293.66 Hz - the D immediately above middle C. It is imperative that for each performance the modulation oscillator is precisely tuned to this note on the particular piano being used.



TROMBONE

Pppp SEMPRE (BUT NO MUTE!) SEE NOTE #1

COLDLY, OBSESSIVE AND CONTROLLED

Pppp SEMPRE (UNA COSA)

A musical score page featuring two staves. The top staff is for Trombone, showing a continuous eighth-note pattern. The bottom staff is for Piano, also showing a continuous eighth-note pattern. Measure numbers 5, 6, 7, and 8 are indicated above the staves. The piano part includes several bass notes. A large blue watermark reading "Preview File Only" is diagonally across the page.

A musical score page featuring two staves. The top staff is for the Trombone, and the bottom staff is for the Piano. Measure 3 starts with a eighth-note rest followed by eighth-note pairs. Measures 4-6 show eighth-note pairs with grace notes. Measures 7-8 show eighth-note pairs with grace notes. Measures 9-10 show eighth-note pairs with grace notes. Measures 11-12 show eighth-note pairs with grace notes. Measures 13-14 show eighth-note pairs with grace notes. Measure 15 shows eighth-note pairs with grace notes. Measure 16 shows eighth-note pairs with grace notes. Measure 17 shows eighth-note pairs with grace notes. Measure 18 shows eighth-note pairs with grace notes. Measure 19 shows eighth-note pairs with grace notes. Measure 20 shows eighth-note pairs with grace notes. Measure 21 shows eighth-note pairs with grace notes. Measure 22 shows eighth-note pairs with grace notes. Measure 23 shows eighth-note pairs with grace notes. Measure 24 shows eighth-note pairs with grace notes. Measure 25 shows eighth-note pairs with grace notes. Measure 26 shows eighth-note pairs with grace notes. Measure 27 shows eighth-note pairs with grace notes. Measure 28 shows eighth-note pairs with grace notes. Measure 29 shows eighth-note pairs with grace notes. Measure 30 shows eighth-note pairs with grace notes. Measure 31 shows eighth-note pairs with grace notes. Measure 32 shows eighth-note pairs with grace notes. Measure 33 shows eighth-note pairs with grace notes. Measure 34 shows eighth-note pairs with grace notes. Measure 35 shows eighth-note pairs with grace notes. Measure 36 shows eighth-note pairs with grace notes. Measure 37 shows eighth-note pairs with grace notes. Measure 38 shows eighth-note pairs with grace notes.

* THE TONGUE SHOULD CLEARLY ARTICULATE THE NOTATED PATTERNS
BUT WITHOUT BREAKING THE SOUND (IP ENTIRELY)

Pd

RING MOD. BOTH

1

10

O_(subITO)

2

TROMBONE

PIANO

TROMBONE

PIANO

TROMBONE

PIANO

TROMBONE

CLIPPED, UNCONNECTED

JUB. Pd.

PIANO

f SUSTO

TROMBONE

DRY, BROOKING

P CRESC. (Poco)

PIANO

BROKEN

TROMBONE

HEAVY, COARSE

P SUBITO

PIANO

CONTROLLED

NOT FLUTTERTONGUE - SEE PERF. NOTES

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* WITHIN THE NOTATED PITCH-BEND CHANGE HARMONICS RAPIDLY AND RANDOMLY WHILE SIMULTANEOUSLY MAINTAIN THE SINE WAVE IN AN HARDIC AND HARMONIC/TARIE MANNER.

4

TROMBONE: 3 8 3 5 5 3 5 5 3 Distracted

Piano: mp fpp psub. Heavy Controlled

TROMBONE: 3 8 3 5 5 3 5 5 3 Controlled

Piano: fpp cresc. fpp

TROMBONE: 3 8 3 5 5 3 (Distracted) 5 (Controlled)

Piano: pp sub. sempre (HEAVY) 5 (Controlled)

TROMBONE: 3 8 3 5 5 3 5 5 3 (Distracted) 5 (Controlled)

Piano: f subito (HEAVY) 5 8

TROMBONE: 5 (Controlled) 3 5 5 3 4 5 (Controlled), stabbing 3 8 3 5 5 3 SEE NOTE - PAGE 3

Piano: ff sub. cresc. 5 8

TROMBONE: 5 (Controlled) 3 5 5 3 4 5 (Controlled), stabbing 3 8 3 5 5 3 HEAVY 5 8

Piano: ff sub. cresc. 5 8

TROMBONE: 5 (Controlled) 3 5 5 3 4 5 (Controlled), stabbing 3 8 3 5 5 3 HEAVY 5 8

Piano: ff sub. cresc. 5 8

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6

TROMBONE

(P)

SEMPRE

FURIOUS, OBSESSIVE AND UNCOMPROMISING

PIANO

(P)

SEMPRE

HAMMERED, DRY

TROMBONE

FURIOUS...

BROKEN...

FURIOUS...

BROKEN...

PIANO

HAMMERED...

FURIOUS...

HAMMERED...

TROMBONE

FURIOUS...

BROKEN...

FURIOUS...

HAMMERED...

PIANO

FURIOUS...

HAMMERED...

FURIOUS...

HAMMERED...

TROMBONE

FURIOUS...

BROKEN...

FURIOUS...

HAMMERED...

PIANO

FURIOUS...

HAMMERED...

FURIOUS...

HAMMERED...

TROMBONE

PIANO

TROMBONE

PIANO

TROMBONE

PIANO

TROMBONE

PIANO

5 BROKEN... 5 FURIOUS... 5 BROKEN... 3 5 5 HAMMERED... 5 FURIOUS... 5 BROKEN... 5 7

FURIOUS... 3 5 5 HAMMERED... 5 FURIOUS... 5 BROKEN... 5 FURIOUS... 5 BROKEN... 5 FURIOUS...

FURIOUS... 5 BROKEN... 5 16 5 5 HAMMERED... 5 FURIOUS... 5 BROKEN... 5 FURIOUS...

FURIOUS... 3 5 5 HAMMERED... 5 FURIOUS... 3 5 5 HAMMERED... 5 FURIOUS...

BROKEN... 8 5 5 FURIOUS... 3 5 5 HAMMERED... 5 FURIOUS... 5 BROKEN... 5 FURIOUS...

BR. BROKEN... 8 5 5 HAMMERED... 5 FURIOUS... 3 5 5 HAMMERED... 5 FURIOUS...

3 5 6 5 HAMMERED... 5 5 5 FURIOUS... 5 3 5 5 HAMMERED... 5

34 3 5 5 HAMMERED... 5 5 5 FURIOUS... 5 3 5 5 HAMMERED... 5

10

5
3

5
3

30

JKOMBook

PIANO

TROMBONE

Piano

TRIMBLE

Pan10

8

600P

[R.M.-TROMBONE: 25]

3

(mp)

88

1

1

A musical score for piano, featuring two staves. The top staff shows a treble clef, a key signature of one sharp, and a common time signature. It contains measures 1 through 3, with measure 3 ending on a double bar line. Measure 1 consists of eighth-note chords. Measure 2 starts with a forte dynamic (f) and includes a grace note. Measure 3 begins with a dynamic of *mp*. The bottom staff shows a bass clef, a key signature of one sharp, and a common time signature. It continues from measure 3, starting with a dynamic of *f*, followed by measures 4 and 5. Measure 4 ends with a repeat sign and a dynamic of *f*. Measure 5 ends with a dynamic of *p*.

R.M. - TROMBONE: 50

R.M. - TROMBONE: F

(四)

1

1

R.M.-TROMBONE: 10

SLOWER ♩=69

IN THE FOLLOWING PASSAGE, EACH BAR IS AN EIGHT BEAT BAR (THE INDICATED BAR EXCEPT WHERE A CHANGE IS INDICATED).

11

TROMBONE

PIANO

(P)

TROMBONE

PIANO

TROMBONE

(P)

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PIANO

(P)

SHARP

RNG MODULATION: TROMBONE - 0

12

PLAY CLOSE TO THE MICROPHONE SO THAT NOISES OF BREATH ETC. BECOME SLIGHTLY OVER-EMPHASISED WITHOUT NEEDING TO BE PLAYED LOUDLY.

GT LEGATO!

12

PLAY CLOSE TO THE MICROPHONE SO THAT NUANCES OF BREATH ETC. BECOME SLIGHTLY OVER-EMPHASISED WITHOUT NEEDING TO BE PLAYED LOUDLY.

TROMBONE

4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64 68 72 76 80 84 88 92 96 100 104 108 112 116 120 124 128 132 136 140 144 148 152 156 160 164 168 172 176 180 184 188 192 196 200 204 208 212 216 220 224 228 232 236 240 244 248 252 256 260 264 268 272 276 280 284 288 292 296 300 304 308 312 316 320 324 328 332 336 340 344 348 352 356 360 364 368 372 376 380 384 388 392 396 398 399 400

R.H.

Piano

L.H.

FLEETING, ALWAYS DISTURBINGLY SHORT. [DO NOT DAMP STRINGS]

NOT LEGATO!

SEMPRE

SILEN

M SEMPRE

A musical score page featuring two staves. The top staff shows a treble clef, a key signature of one sharp, and a common time signature. The bottom staff shows a bass clef, a key signature of one sharp, and a common time signature. Measure 5 starts with a forte dynamic (mp) followed by a eighth note. Measure 6 begins with a eighth note, followed by a eighth note, and a eighth note. The page is marked with a large blue watermark reading "Preview File Only".

TOMISAKI

21

513

58

5 18

Rimbaud

mf p sf p - sf = p

145 146 147 148

Premiere File Only

A piano score page showing two staves. The top staff is for the piano (Rimbaud) and the bottom staff is for the piano (Piano). The page is numbered 5 at the top left and 18 at the top right. Measure numbers 145, 146, 147, and 148 are indicated above the staves. Various dynamics like *mf*, *p*, *sf*, and *mp* are marked. Measure 145 has a tempo of 5. Measures 146-148 have a tempo of 3.

5 88

Rimbaud

p mp p (p) sf p mp sf p sf mp

149 150 151 152

Premiere File Only

A piano score page showing two staves. The top staff is for the piano (Rimbaud) and the bottom staff is for the piano (Piano). The page is numbered 5 at the top left and 88 at the top right. Measure numbers 149, 150, 151, and 152 are indicated above the staves. Various dynamics like *p*, *mp*, *sf*, and *mp* are marked. Measure 149 has a tempo of 5. Measures 150-152 have a tempo of 3.

14

FASTER ♩ = 112

TROMBONE

MP DIM, MOLTO POCO A POCO - SEE NOTE *

PIANO

D SEMPRE MECHANICAL, DRY

MP DIM, MOLTO POCO A POCO - SEE NOTE *

R. MOD. TROMBONE - 100

(Pd)

TROMBONE

(Pd) (DIM) → PP

PIANO

TROMBONE

* AS IT FADES, THE PATTERN SHOULD BECOME GRADUALLY SUBMERGED WITHIN THE R.H. MATERIAL

SLOWER ♩ = 69

15

~~Mf~~ (SEE NOTE-BAR 137) S.

FLEETING, ALWAYS SHORT

SULLEN

R. MOD : TROMBONE - 0

A musical score page featuring two staves of handwritten musical notation. The notation uses vertical stems with horizontal dashes to represent pitch and duration. The page is rotated diagonally, with a large blue watermark reading "Preview File Only" running diagonally across it.

303

MP SF

P (mf) MP P

305

Musical score for Trombone and Piano, page 16, measures 5-8. The score includes two staves: Trombone (top) and Piano (bottom). Measure 5 starts with a dynamic **p**. Measure 6 begins with a dynamic **p**, followed by a melodic line with grace notes and dynamics **mp**, **p mp**, and **p**. Measure 7 starts with a dynamic **p**, followed by a melodic line with grace notes and dynamics **p**, **p**, and **p**. Measure 8 starts with a dynamic **p**, followed by a melodic line with grace notes and dynamics **p**, **p**, and **p**. The piano part features sustained chords throughout the measures.

FASTER ♩ = 104

SENZA SORDO SUBITO!

17

TROMBONE

ff (HARMONIC GLISS.)

II

3

ppp

p

jmp

p

5

16

DRY

3

185

5

PIANO

RING MODULATION - TROMBONE: 100

III

3

p

cresc.

R. MOD. PIANO: 0

III

3

5

III

mf

p

mp

jaws

TROMBONE

p

d

cresc.

3

5

3

5

3

5

3

5

3

5

3

5

3

5

PIANO

p

d

cresc.

3

5

3

5

3

5

3

5

3

5

3

5

3

5

3

5

CORNETT

(p)

d

cresc.

3

5

3

5

3

5

3

5

3

5

PIANO

5

16

7

16

7

16

7

16

7

16

7

16

7

16

7

16

7

16

7

16

18

18 5

TROMBONE

PIANO

TROMBONE

PIANO

TROMBONE

PIANO

Preview File Only

TROMBONE (Pd) (f)

PIANO f

TROMBONE (Pd) I II III $\frac{1}{2}$ IV $\frac{1}{2}$ V VI

PIANO 201 201 201 201 201 201

TROMBONE (Pd) I II III $\frac{1}{2}$ IV $\frac{1}{2}$ V VI

PIANO 210 211 211 211 211 211

TROMBONE (Pd) I II III $\frac{1}{2}$ IV $\frac{1}{2}$ V VI

PIANO 212 213 213 214 214 214

TROMBONE (Pd) RINK NO. PIANO 100 215 216 217 218 219 220

PIANO 215 216 217 218 219 220

Preview File Only

TROMBONE

PIANO

R. MOD.: BOTH 0

SLOW VALVE TRILL Trummm Trummm

sfp — mp (sm.) **sfp — mf (sm.)** **sfp — f (sm.)**

CHECK POCO A POCO

FASTER ♩ = 88 **FASTER** ♩ = 104

SWAP SEMIAC **p** **p** **swb.** **p** **swb.** **swb.** **swb.** **swb.** **swb.** **swb.** **(SWAP HANDS)** **j.SWRE**

RING MOD.: BOTH → 0

Piano

Preview File Only

22

TROMBONE

PIANO

TROMBONE

PIANO

TROMBONE

PIANO

TROMBONE

PIANO

5 ANGULAR, ABRUPT

(R) 5

5 SF 5 SF 5 SF

5

(T) 242 310 243 244 245

3 8

fp 5

5 3 5 3

3 8

3

P 5

ff P 3

5 Tr

246 247 248 249 250

SF SILENT

SF

SLOWE $\text{♩} = 88$

CRES. POCO A POCO

SM.

164

(P) CRES. POCO A POCO

RING MOD: BOTH

100

PREVIEW File Only

FASTER ♩ = 120

SLOWER ♩ = 104

23

TROMBONE

(A) MP CRESC POCO A POCO

PIANO

f mf cresc (poco)

253

259

260

261

262

263

3

TROMBONE

(B) SUBDUED, DISTANT

254

PIANO SEMPRE

RING MOD. BOTH

DISJOINTED

3

PIANO

262 UP SEMPRE

263

MUFFLED

264

5

265

HSB

266

3

TROMBONE

DECREASING

5

3

3

PIANO

267 5

268

MP

5

3

3

269

PIANO SEMPRE

3

100

RING MOD: BOTH

3

PD

24

FASTER ♩ = 120

TROMBONE

PIANO

(P)

TROMBONE

(P)

PIANO

TROMBONE

(P)

PIANO

(P)

RING NO.: BOTH

26

26

TROMBONE

PIANO

TROMBONE

PIANO

STRUGGLING, PATHETIC

RELENTLESS

RING MOD: BOTH 100 SUBITO

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