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Dances of the Moon

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Robert Wieck

Dances of the Moon

for three-hole pipe bagpipes
shawm tambourine and
hurdy-gurdy

Dances of the Moon

I	*allegro, minim = 80*	*three-hole pipes, hurdy-gurdy*
II	*lento, crotchet = 52*	*bagpipes, hurdy-gurdy*
III	*allegro, crotchet = 160*	*shawm, hurdy-gurdy*
IV	*tempo libre, lento*	*tambourine, hurdy-gurdy*
V	*allegro, crotchet = 144*	*bagpipes, hurdy-gurdy*

Notes

Dance I:

Two pipes are required, one modified with tape to provide a b-flat drone, the other having a natural scale of d-flat. The hurdy-gurdy must be fully chromatic; the drones are off.

Dance II:

The bagpipes should have a natural scale of d-major, drone on.

Hurdy-gurdy drones on, trompette tuned to d.

Pitches for the drones are indicated on the bass staves; the trompette rhythm is also indicated on this stave.

Dance III:

The shawm should likewise have a natural scale of d. Trompette remains on d; the retuning of the other drone is an integral part of the piece, occupying the final extended bar of the previous dance.

Dance IV:

In the Tempo Libre sections estimate durations and speeds from the notation.

Hurdy-gurdy should tune one course of chanterelles down a minor third;the score therefore gives only the upper note of a melody in parallel thirds.Tune the trompette to e,other drones as indicated.

Except where indicated,the wheel should be jerked rather than turned continuously to produce a staccato effect.

Dance V:

Hurdy-gurdy retune chanterelles to unison,trompette remains on e,one other drone as indicated.

I

Allegro, ♩=80

Three-hole Pipes

Hurdy Gurdy

drones off

4

7

10

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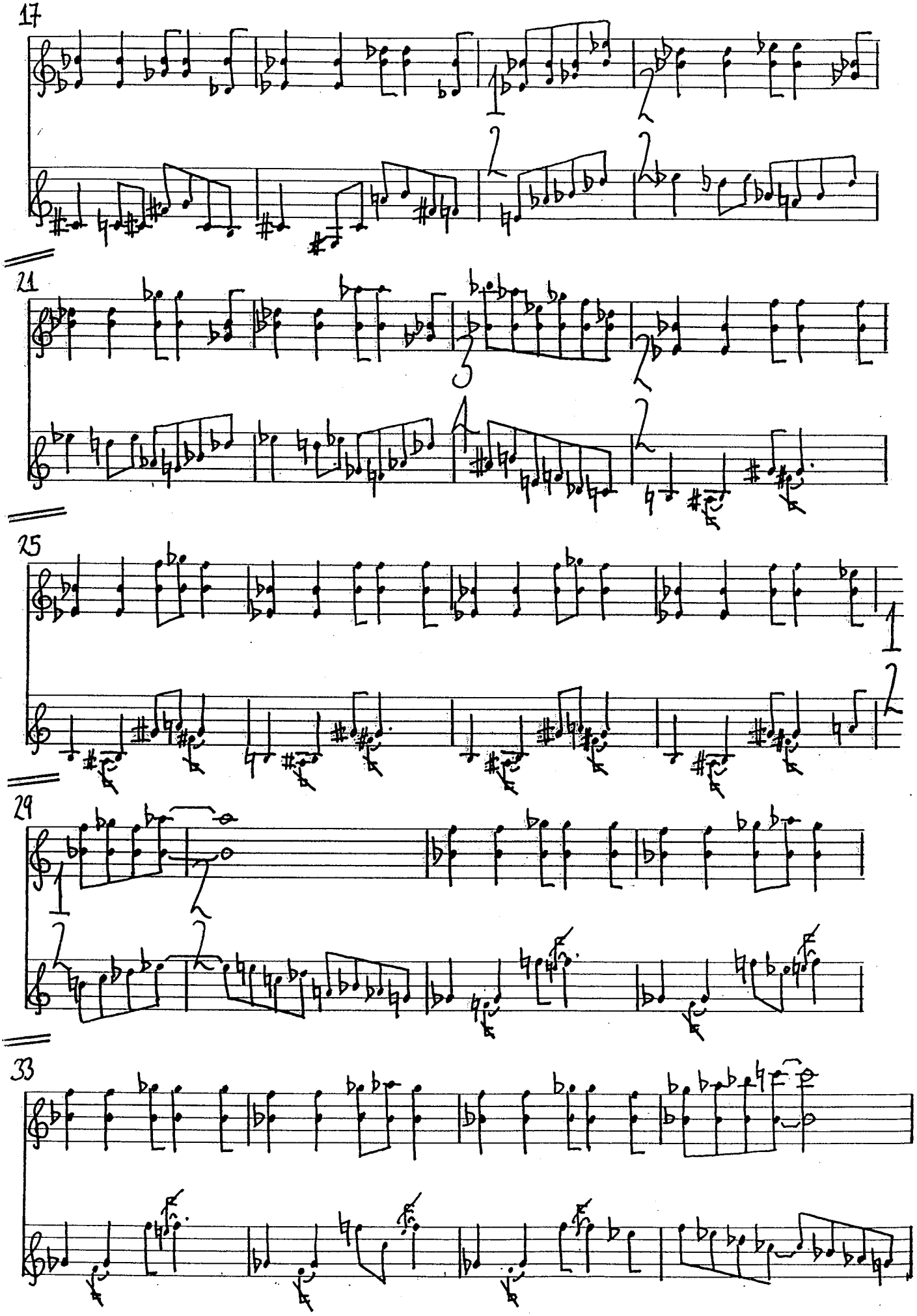
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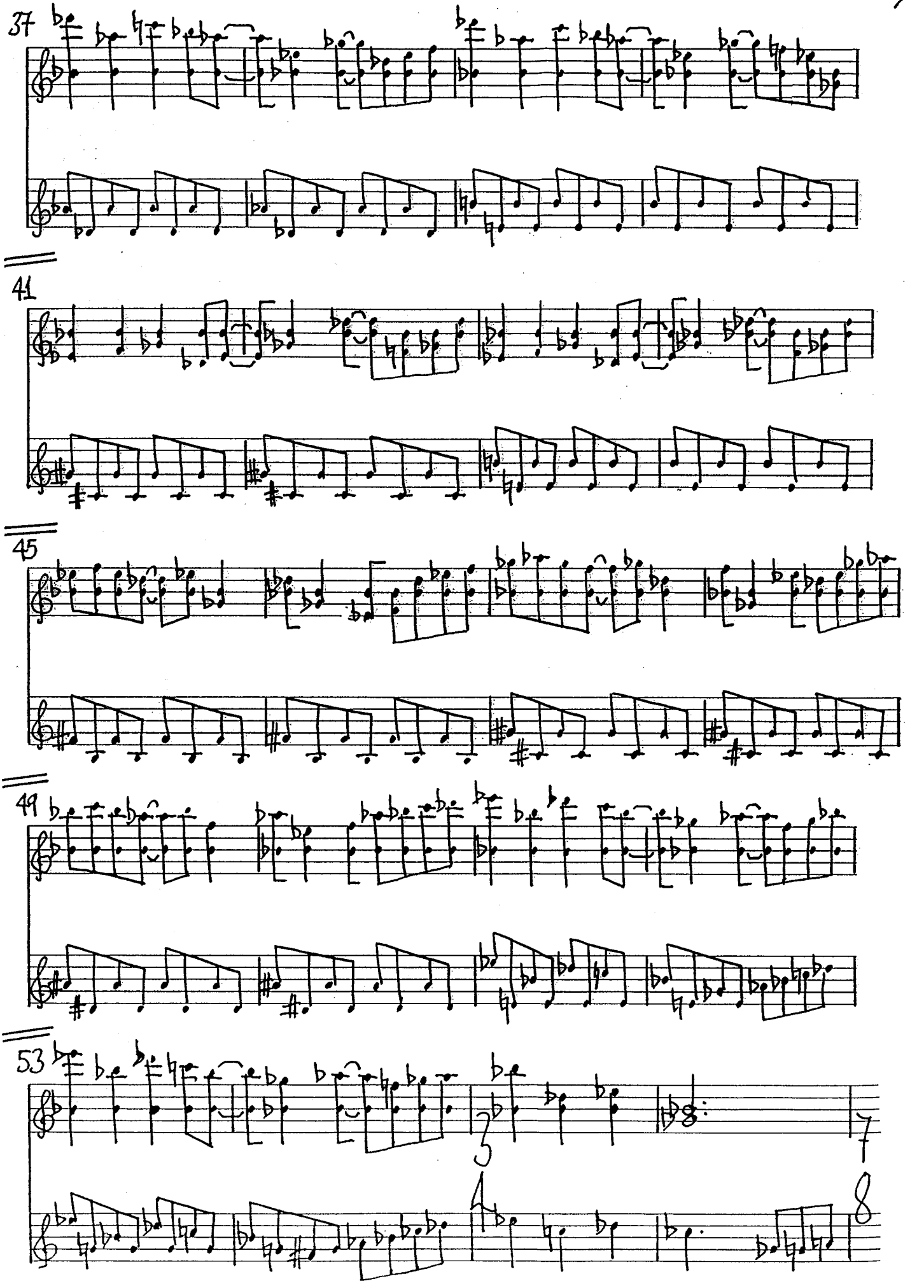
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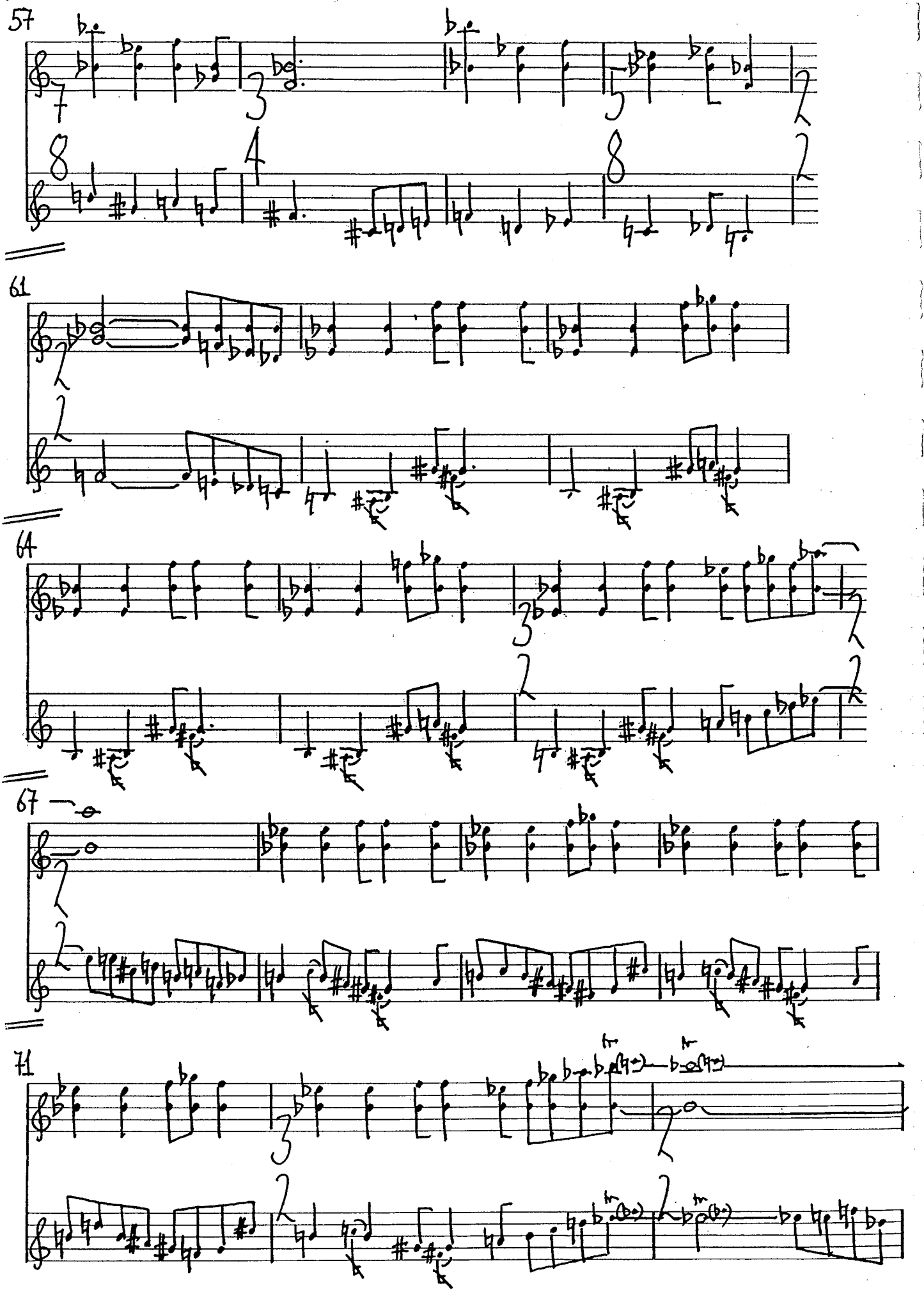
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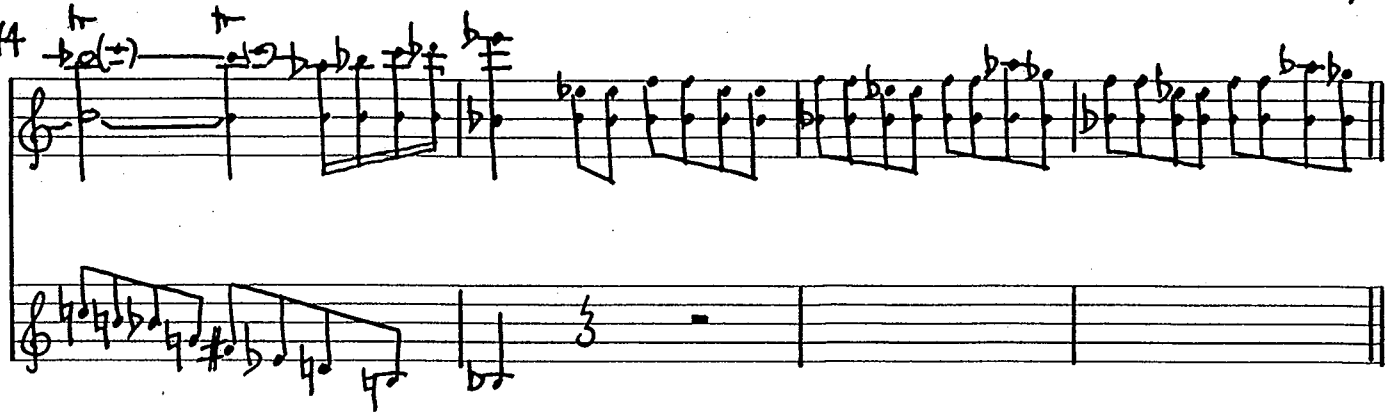

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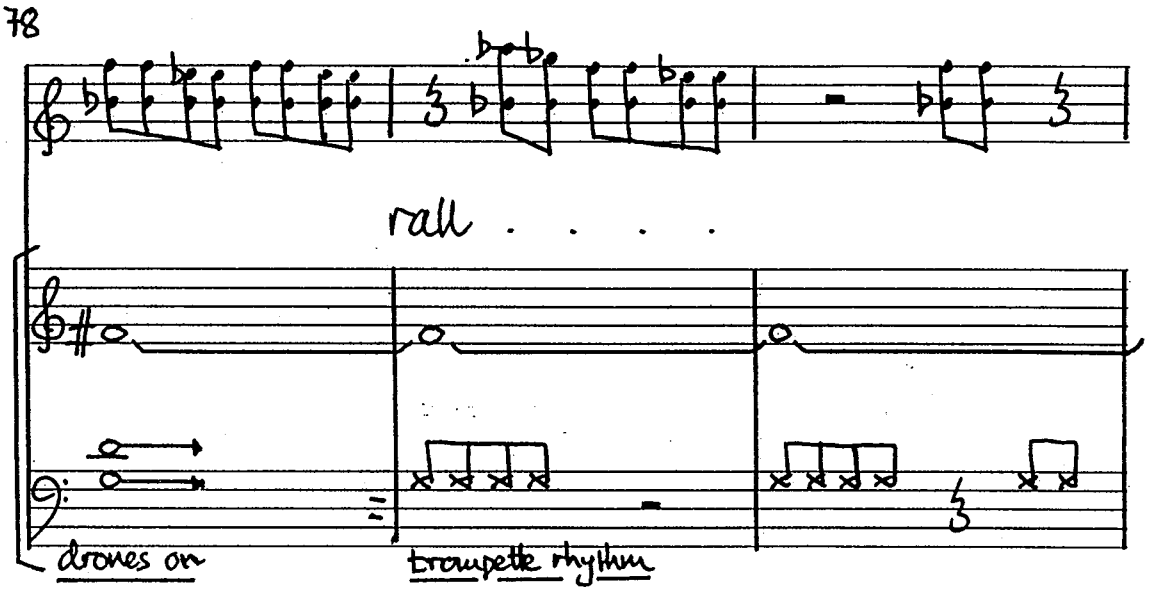

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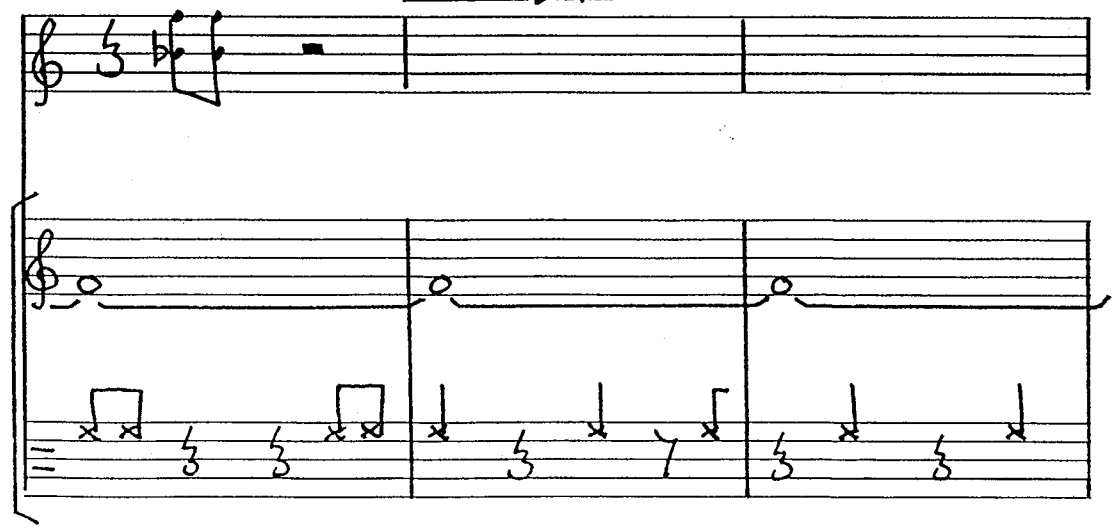

Lento, ♩=52

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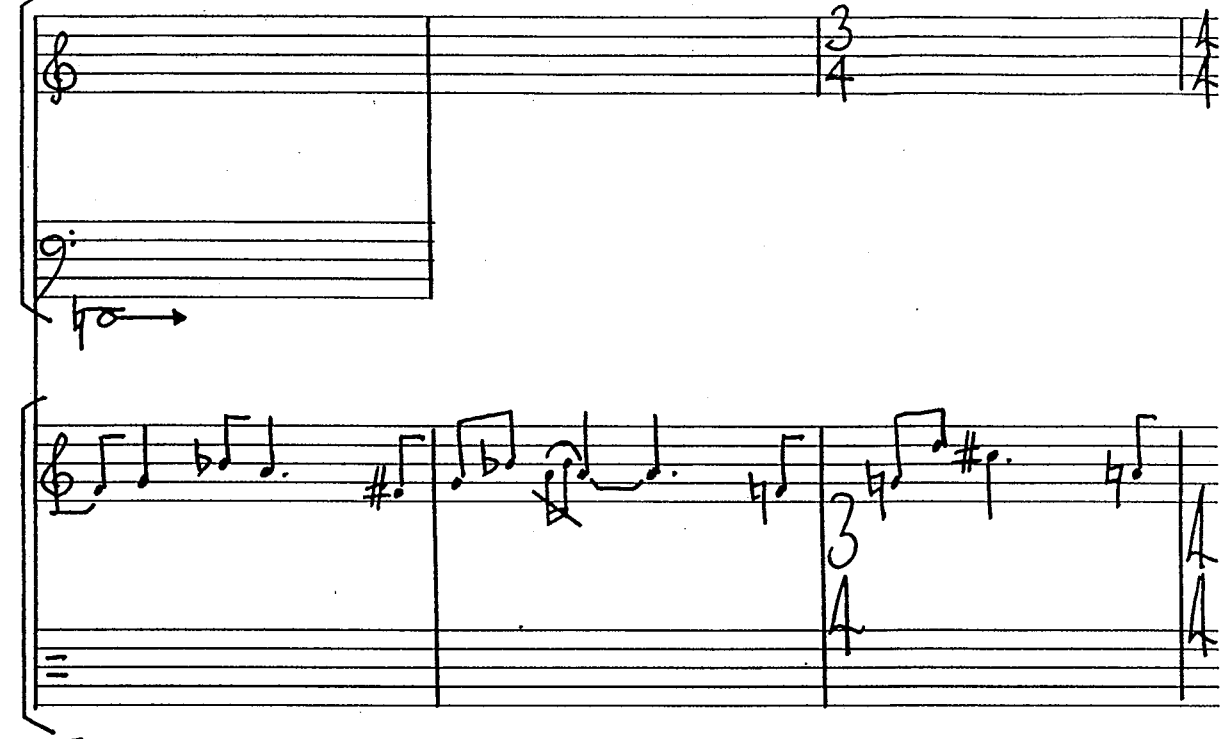

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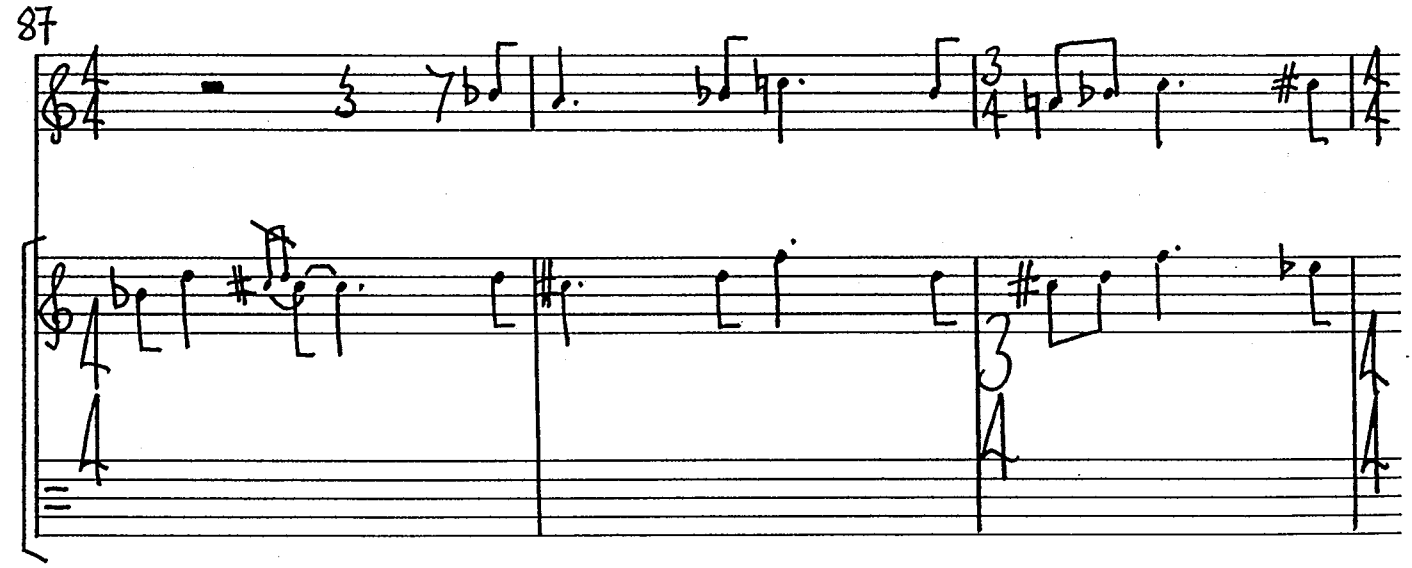

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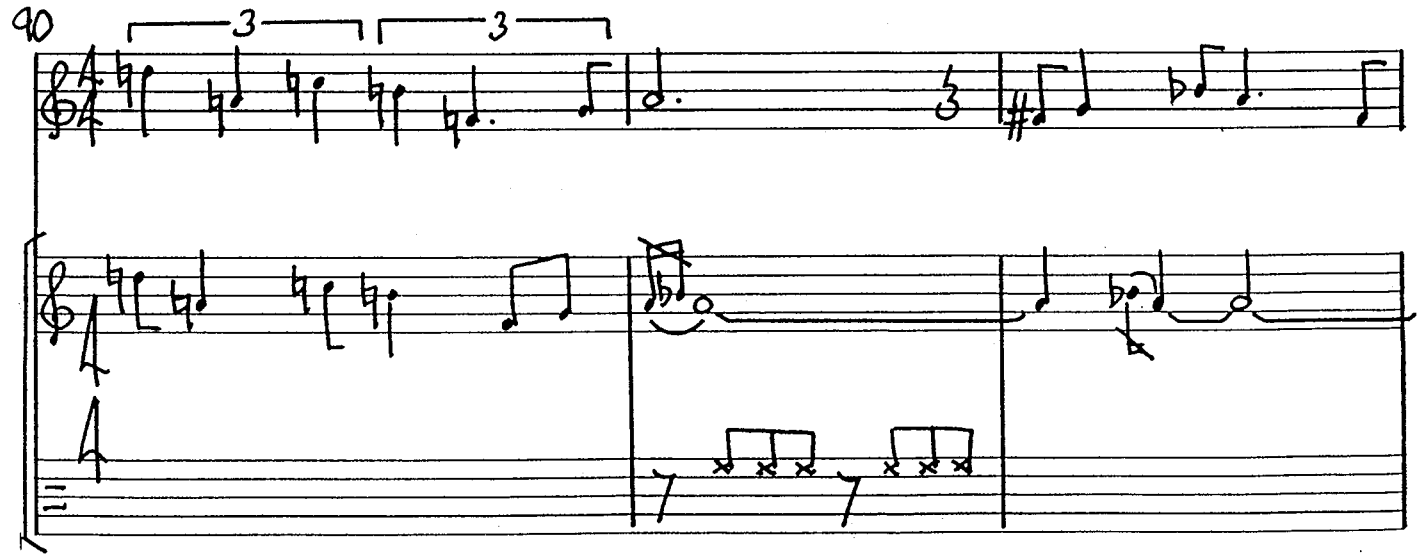

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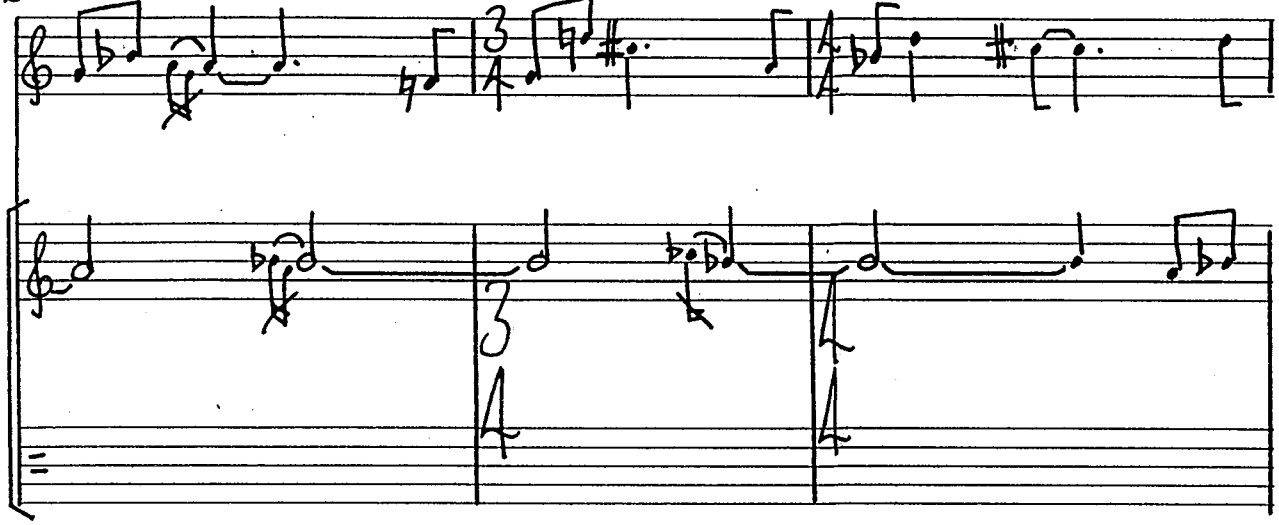

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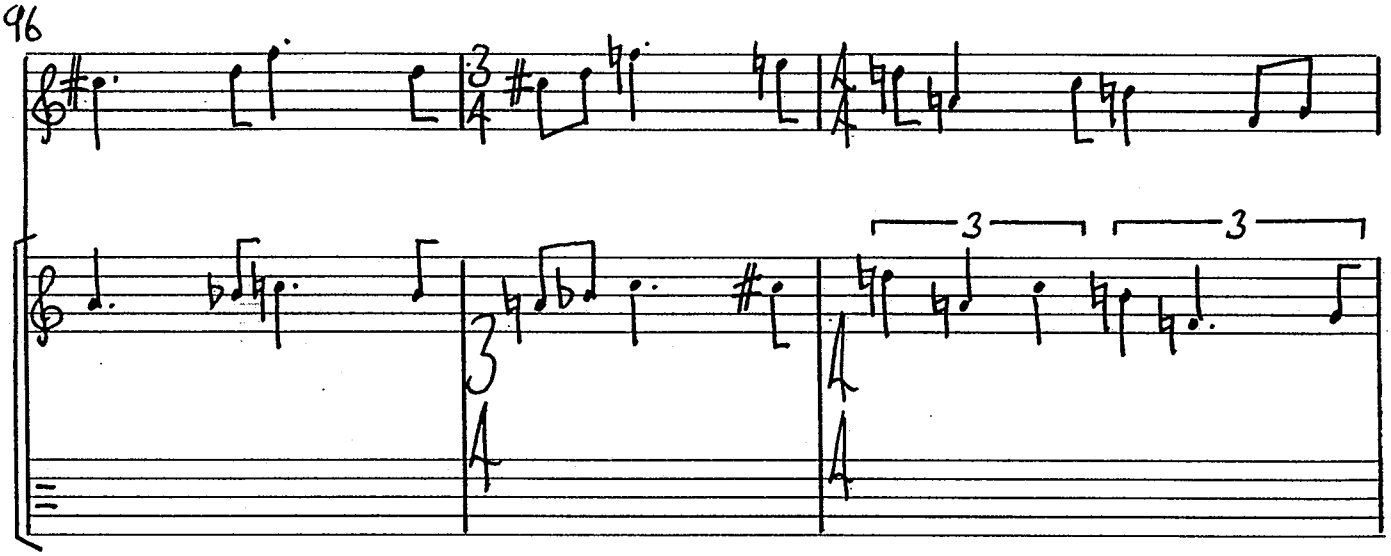

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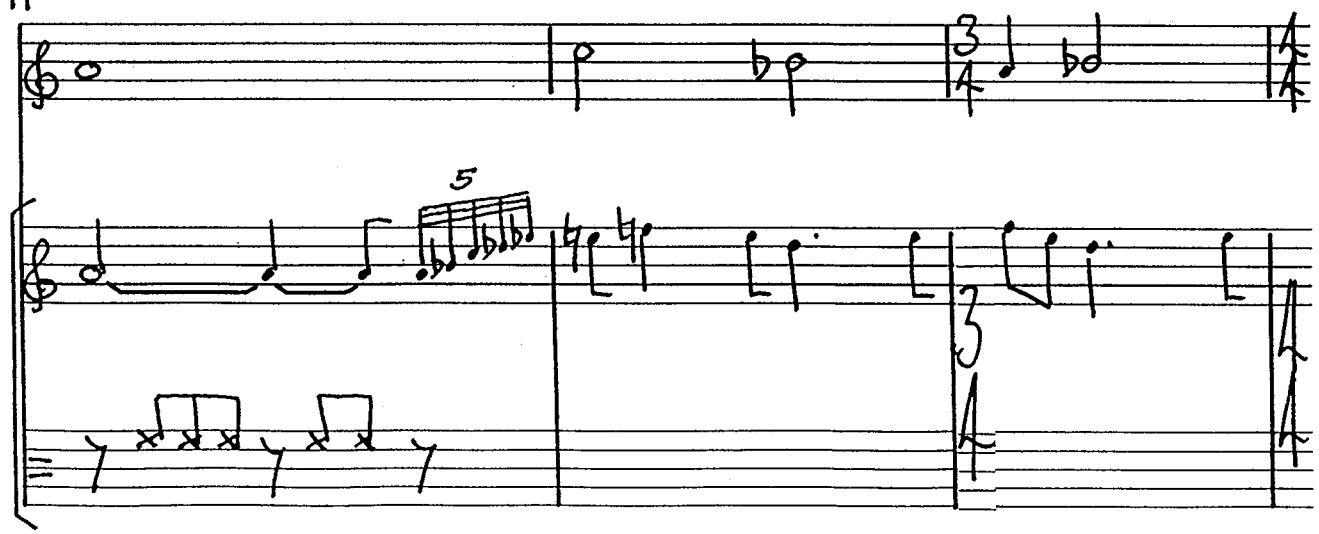

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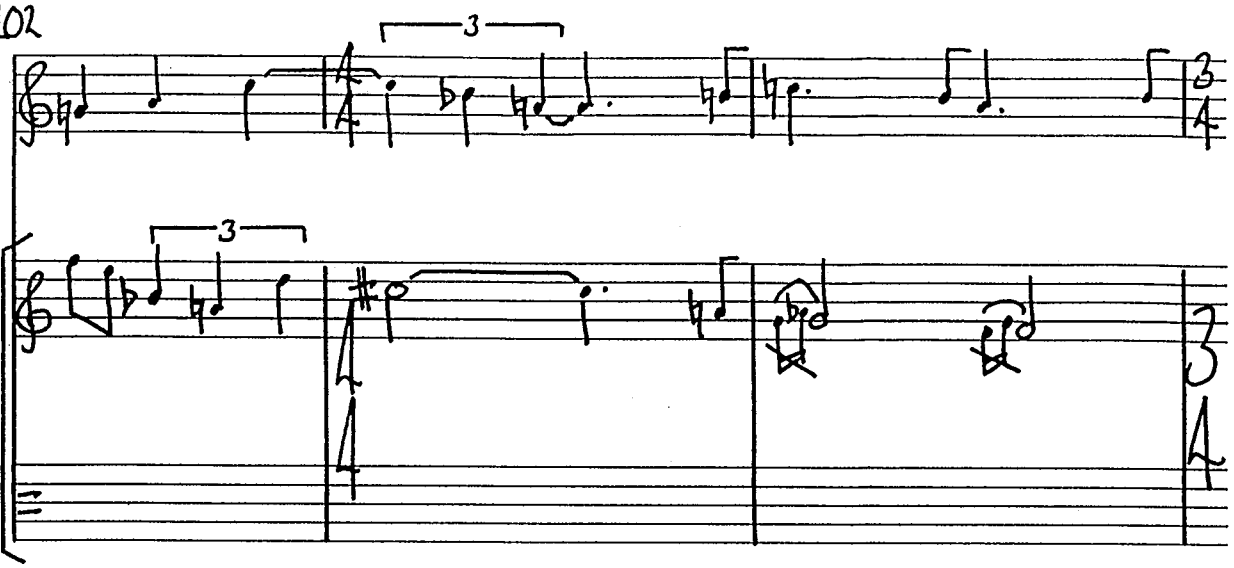

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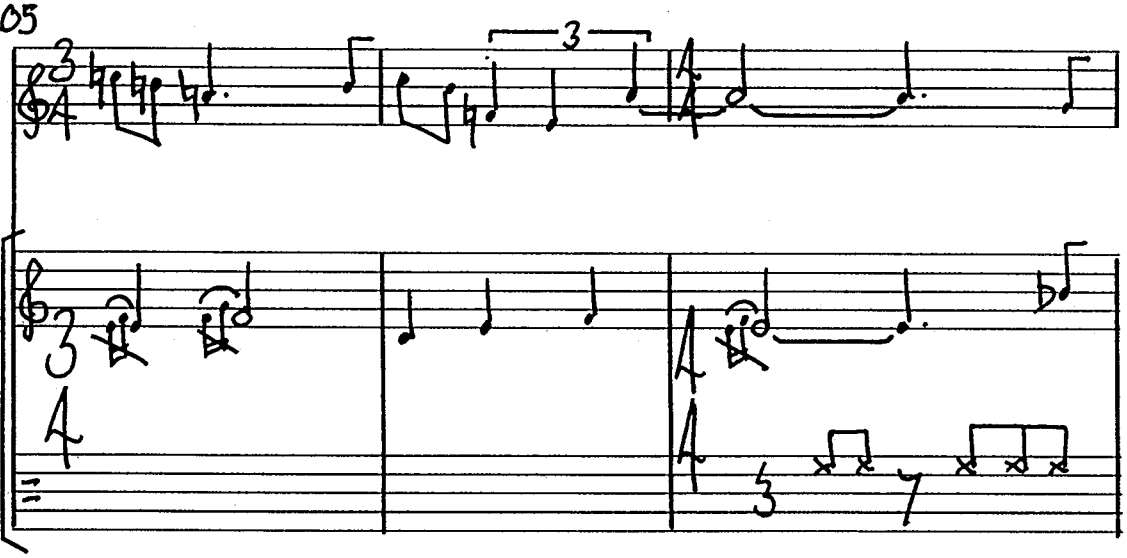

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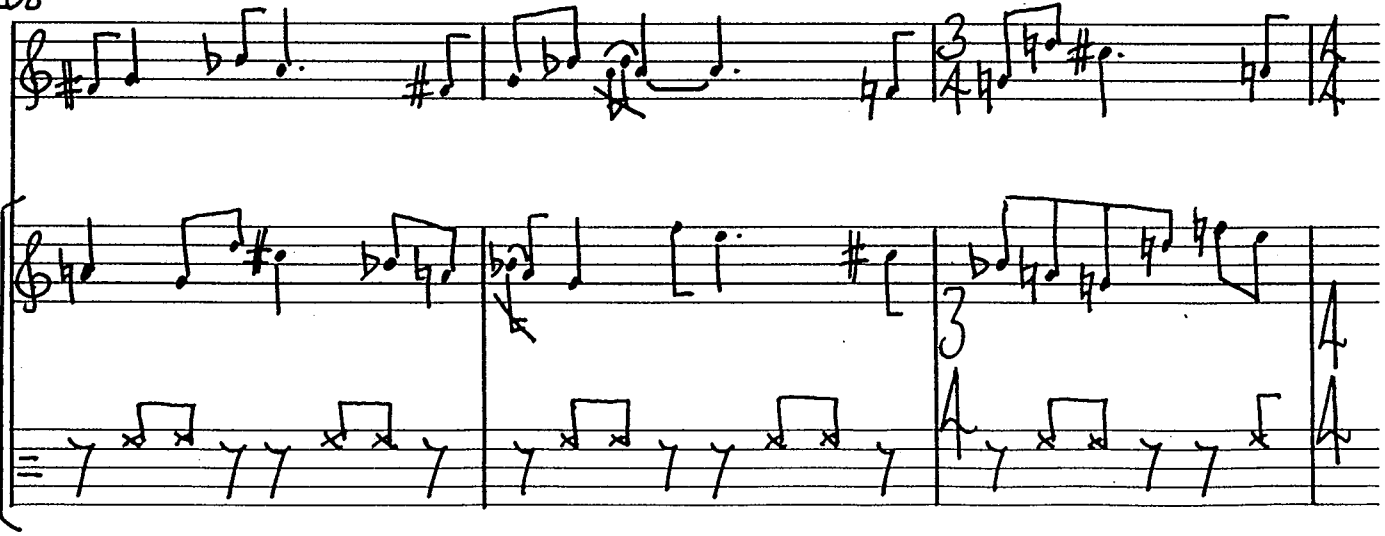

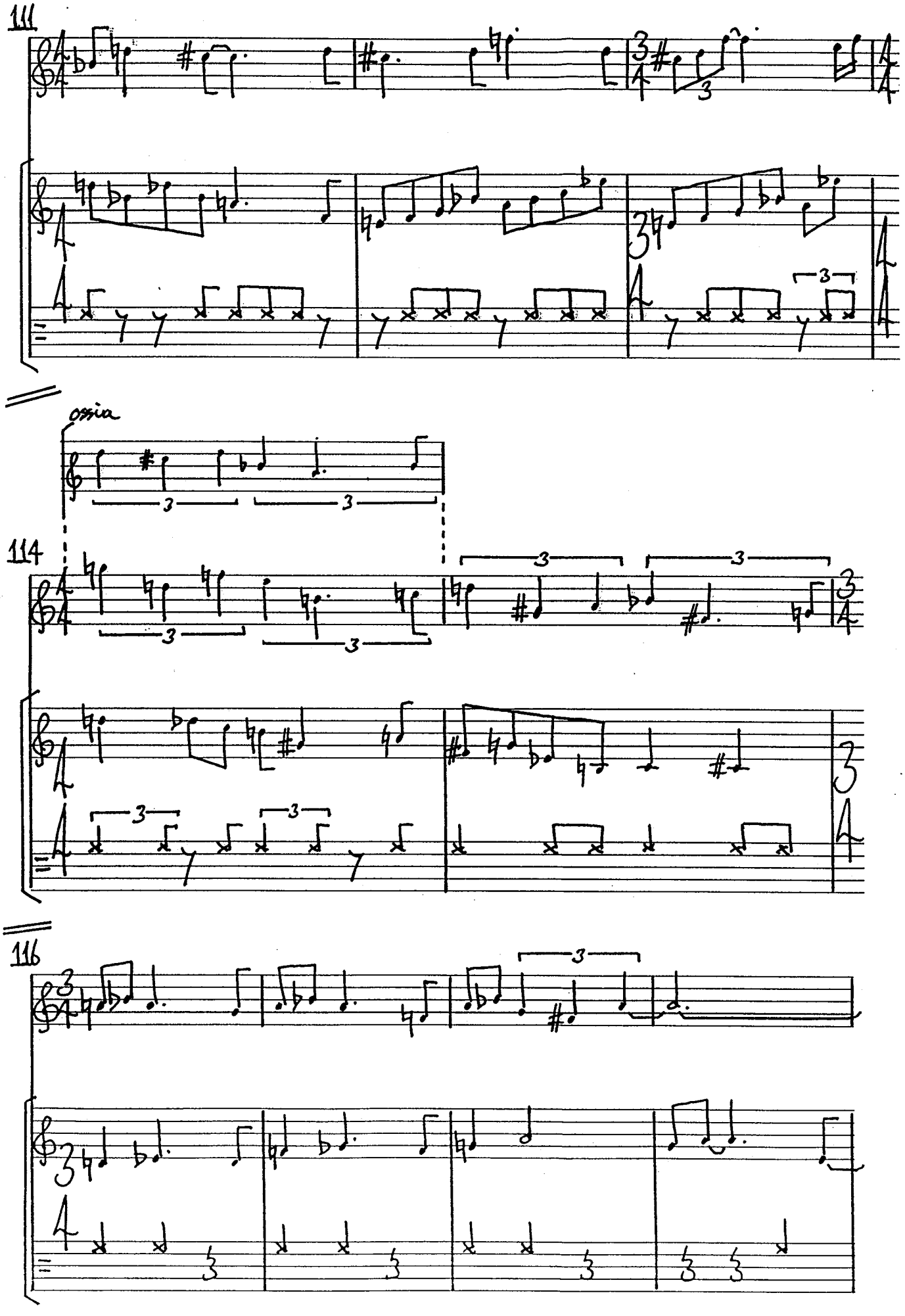
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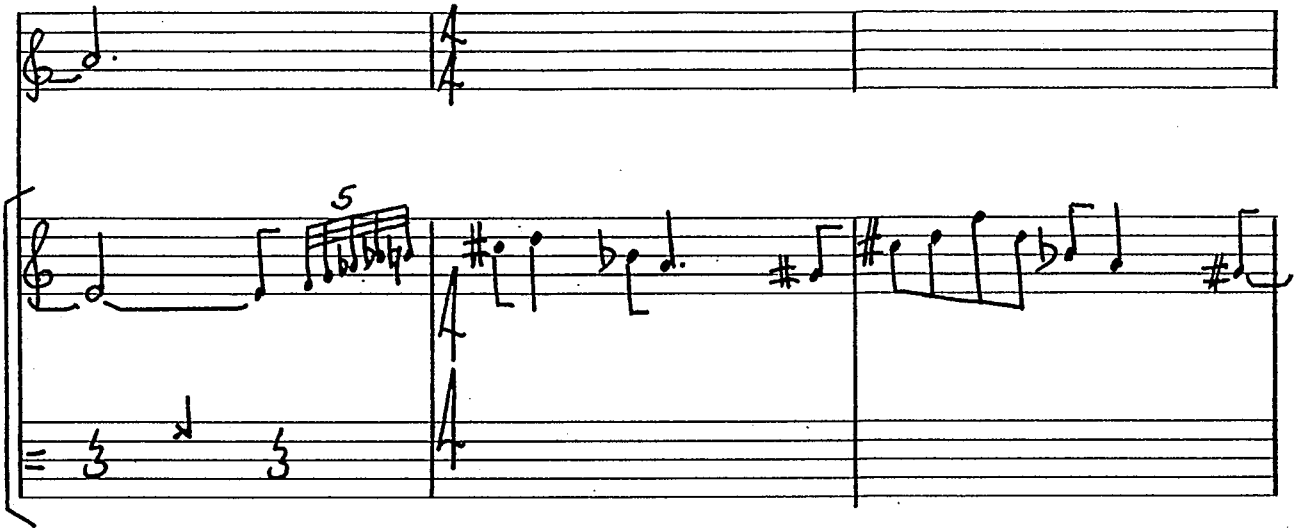

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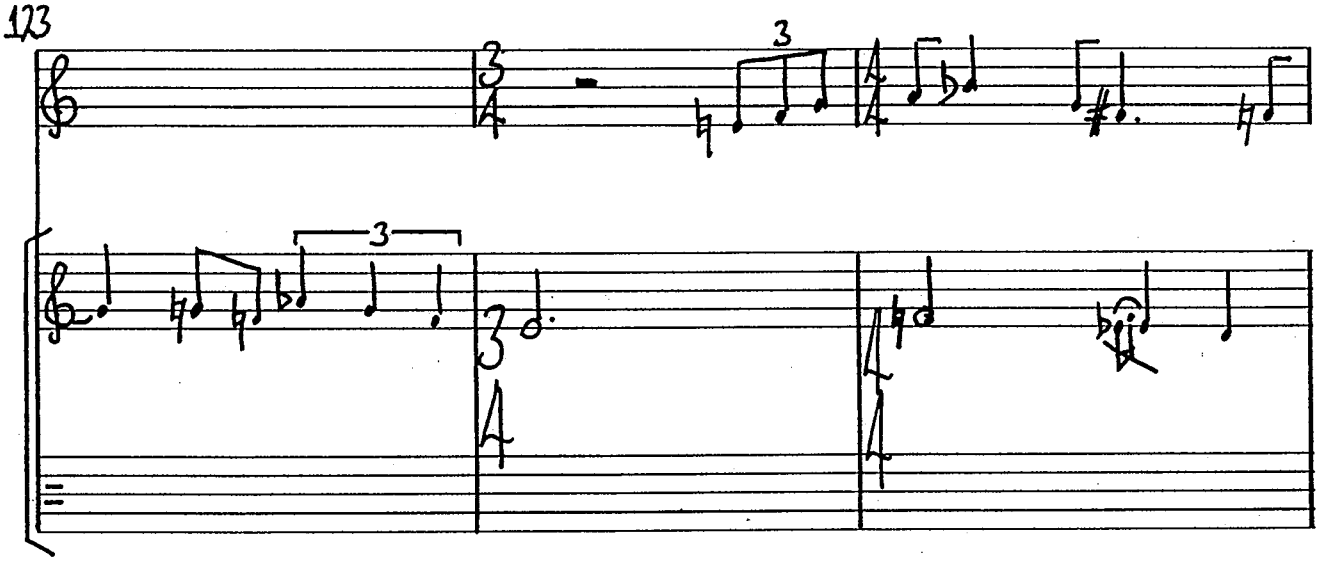

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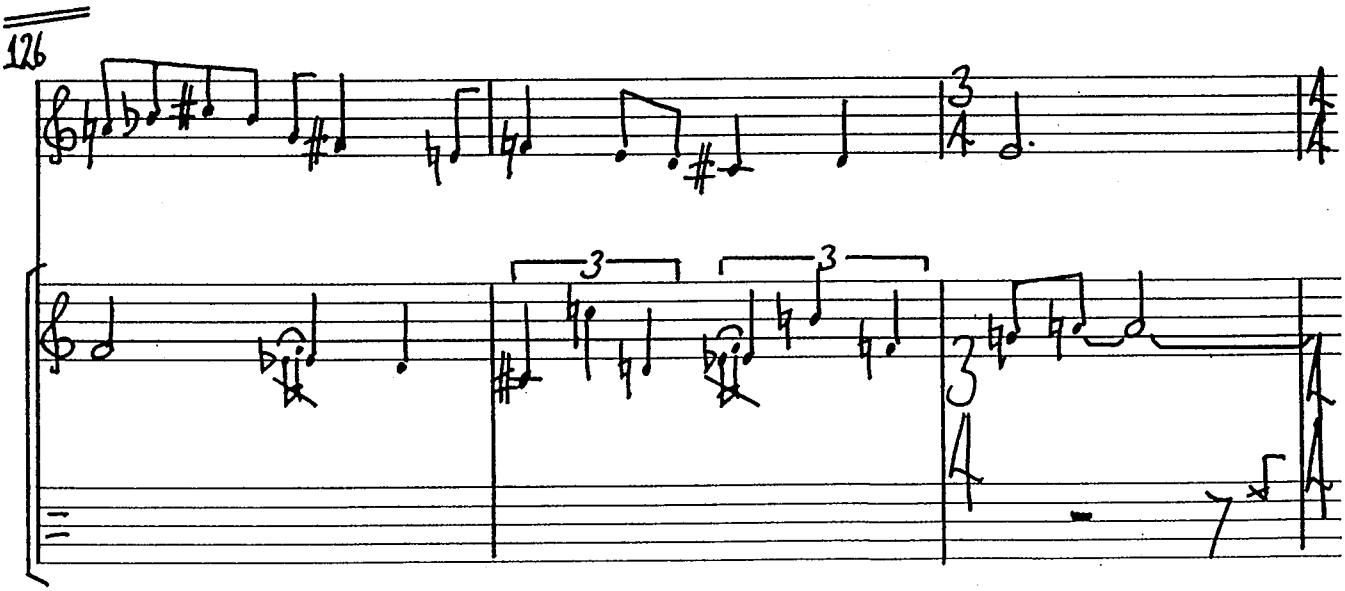

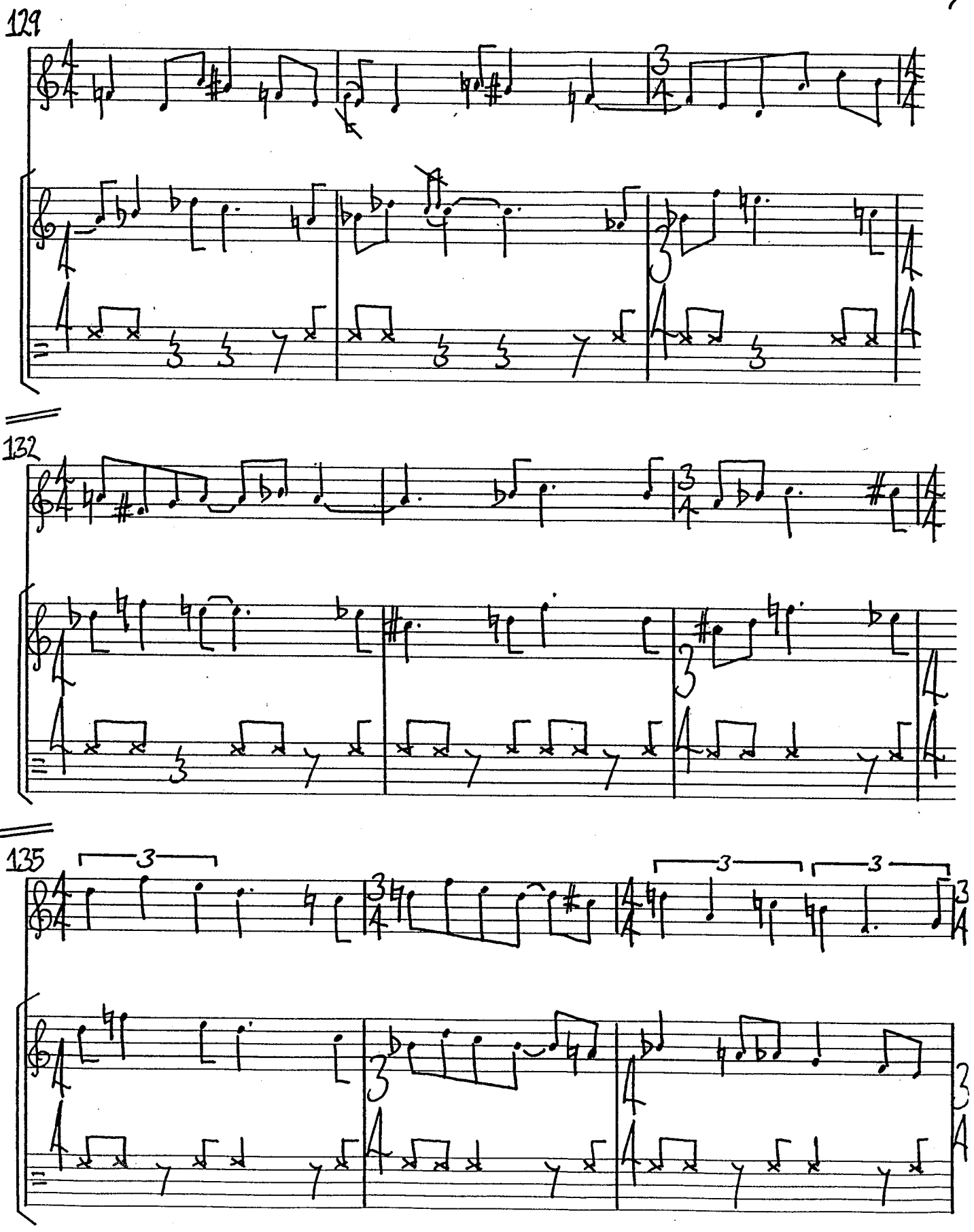
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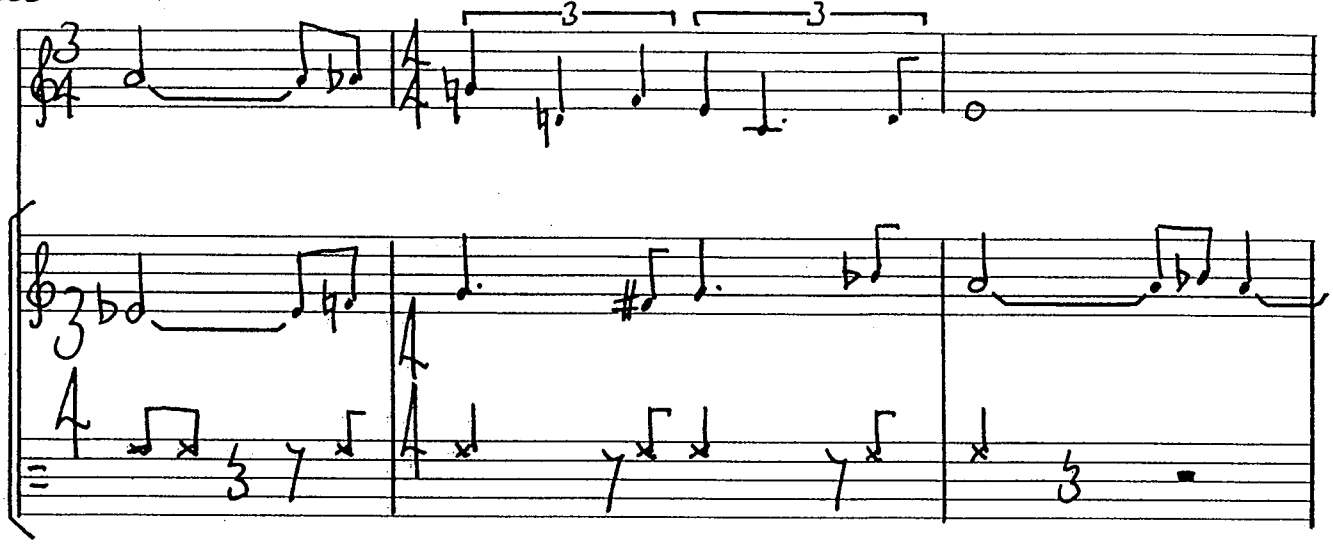

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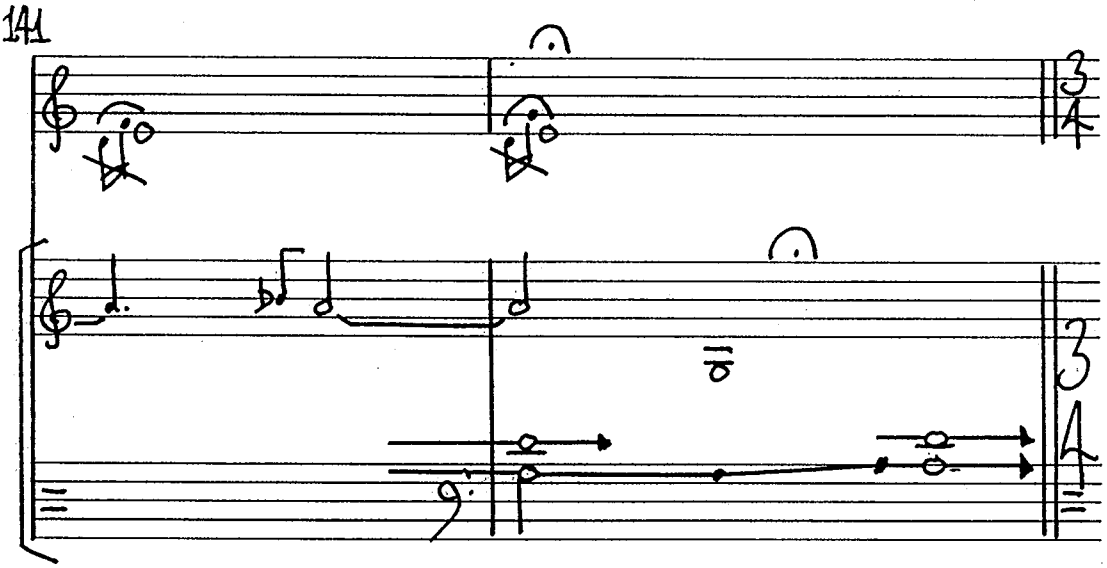

III

Allegro agitato, ♩ = 180

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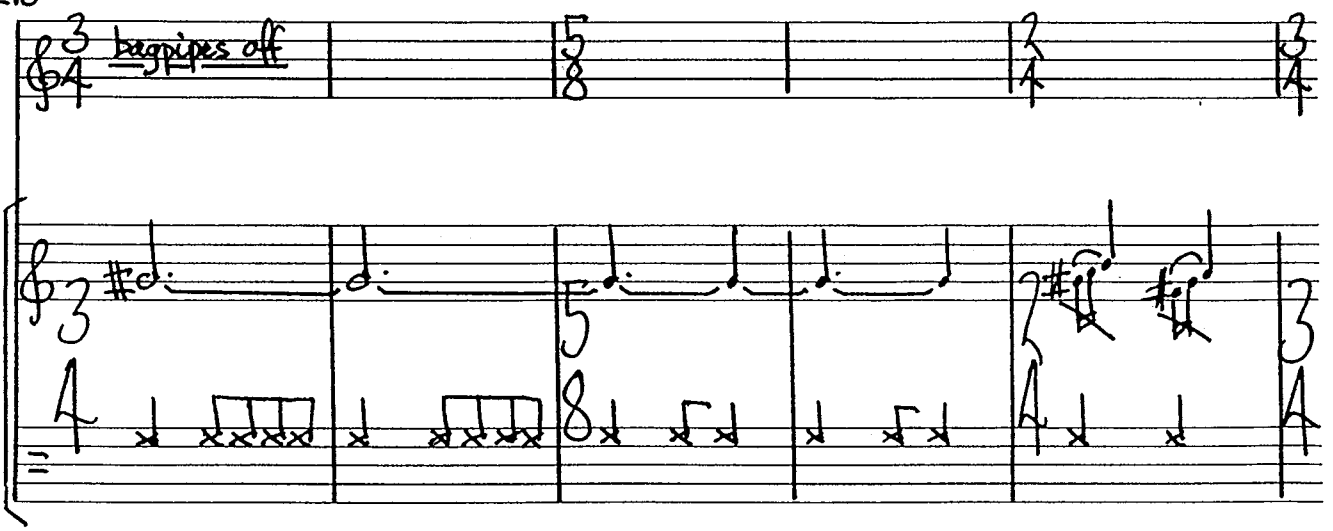

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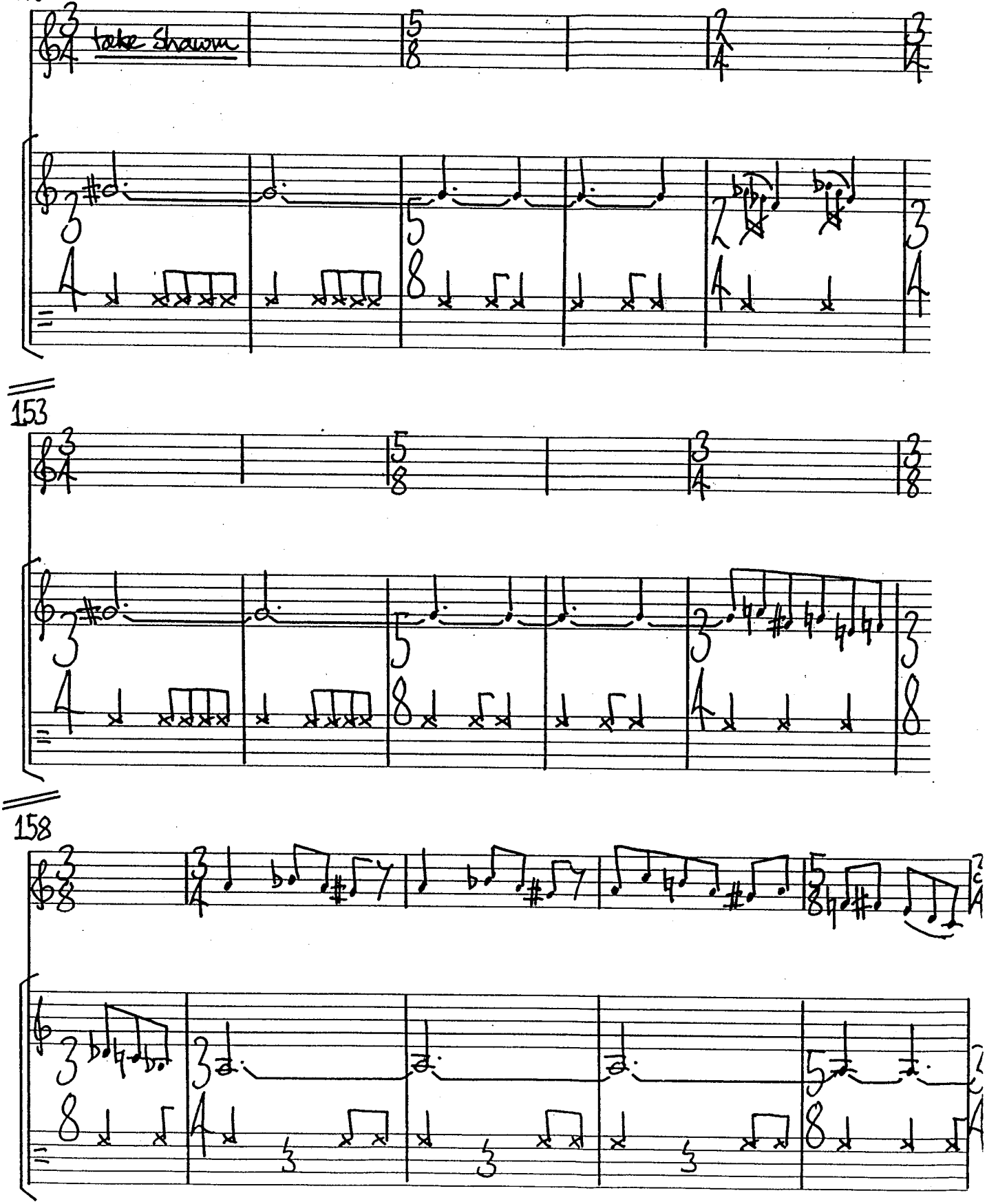

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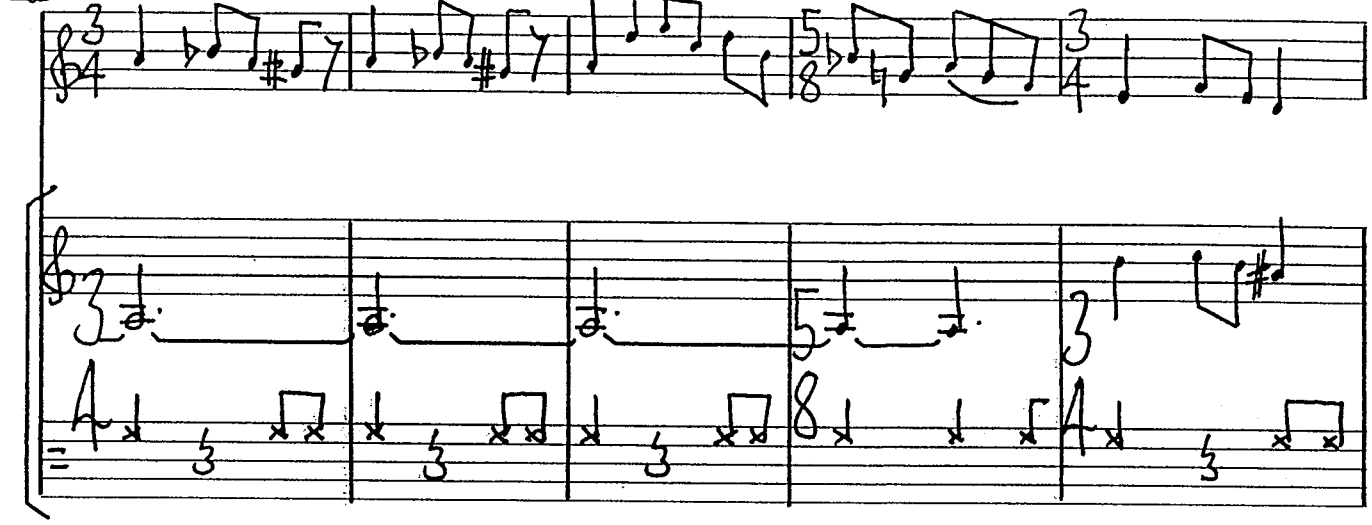

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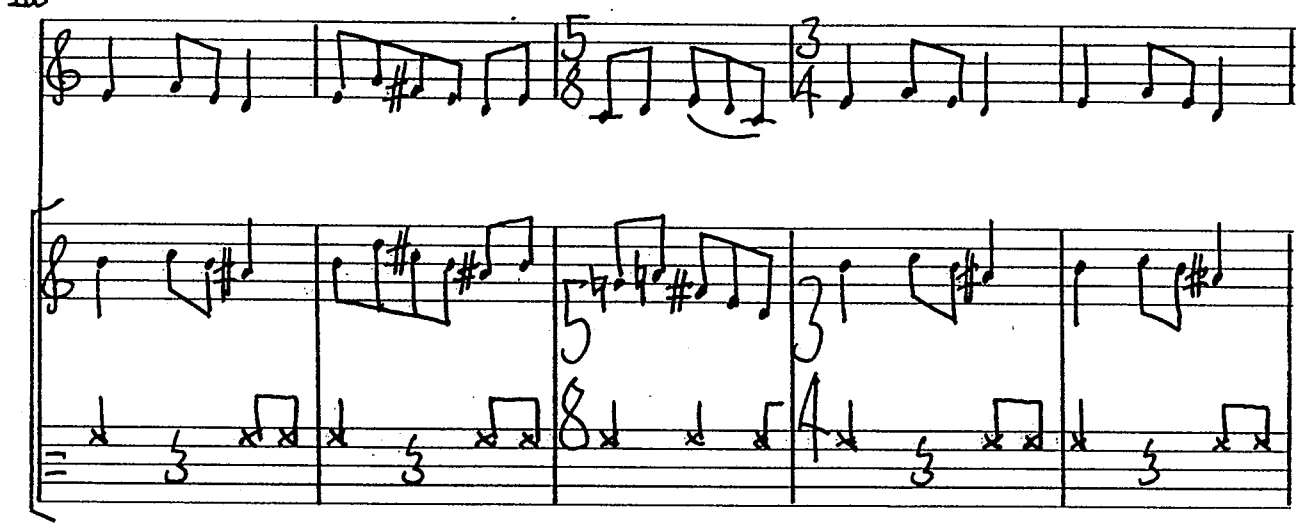

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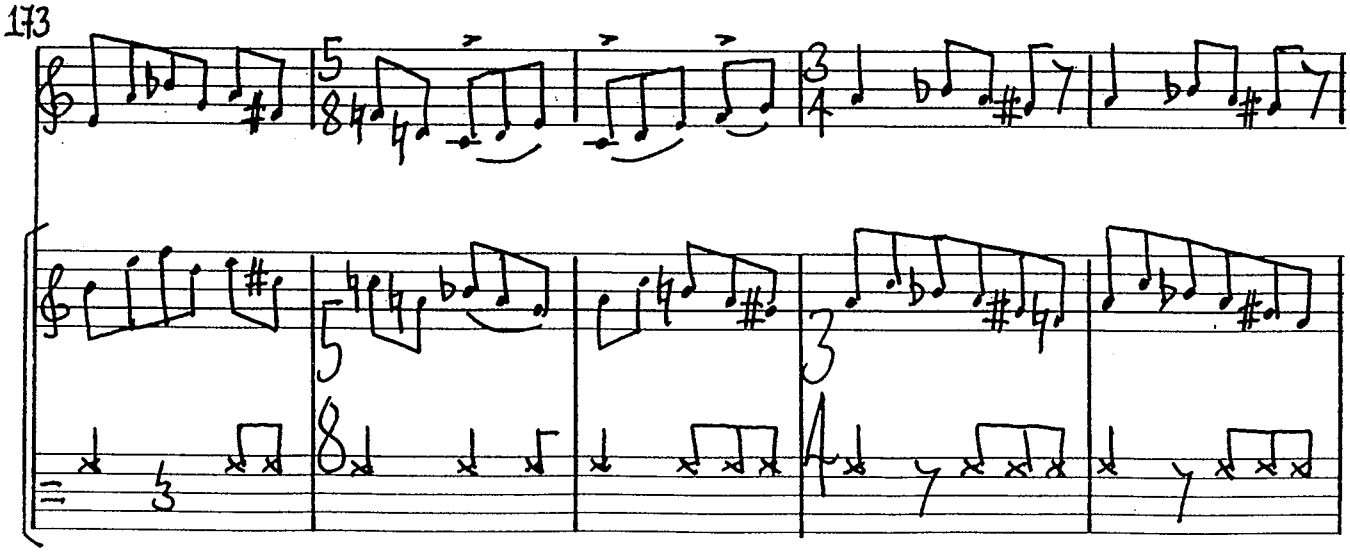

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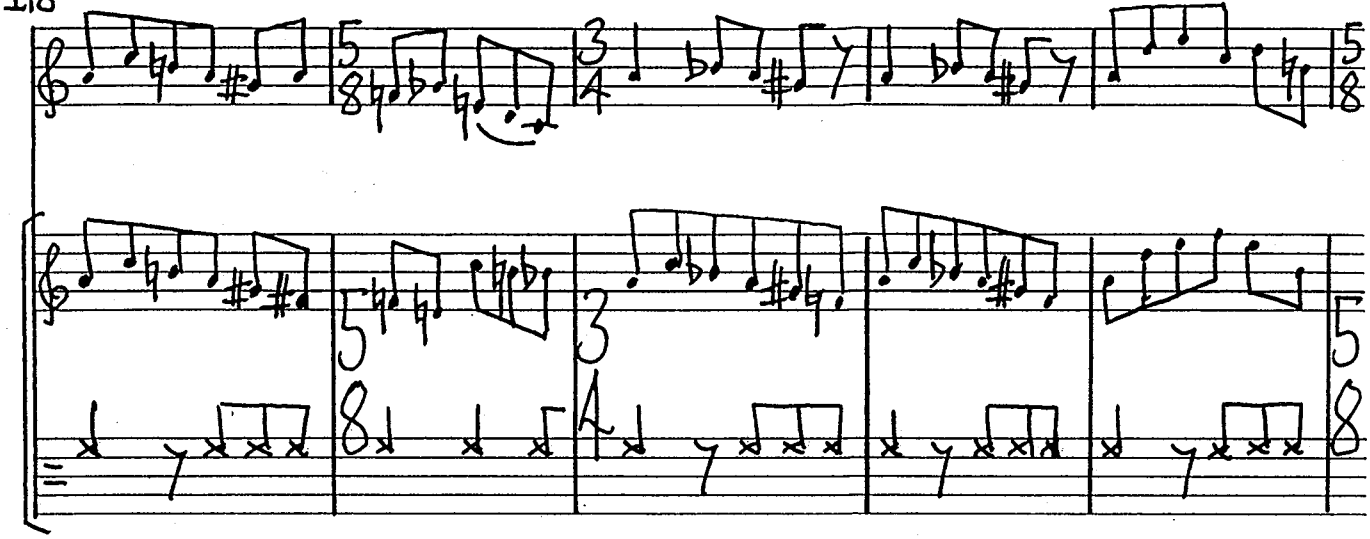

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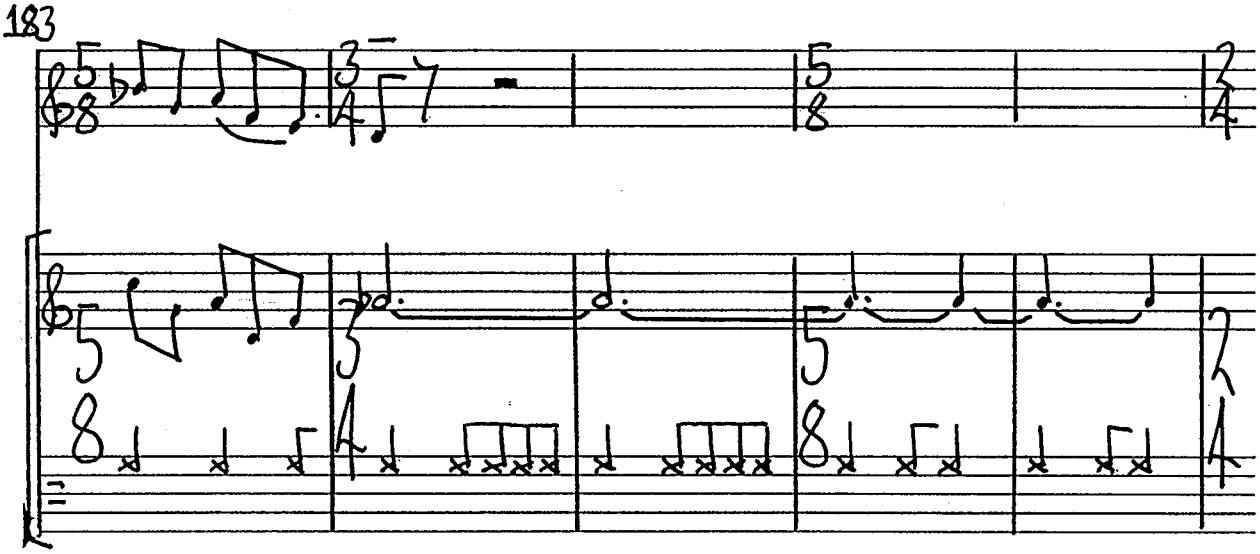

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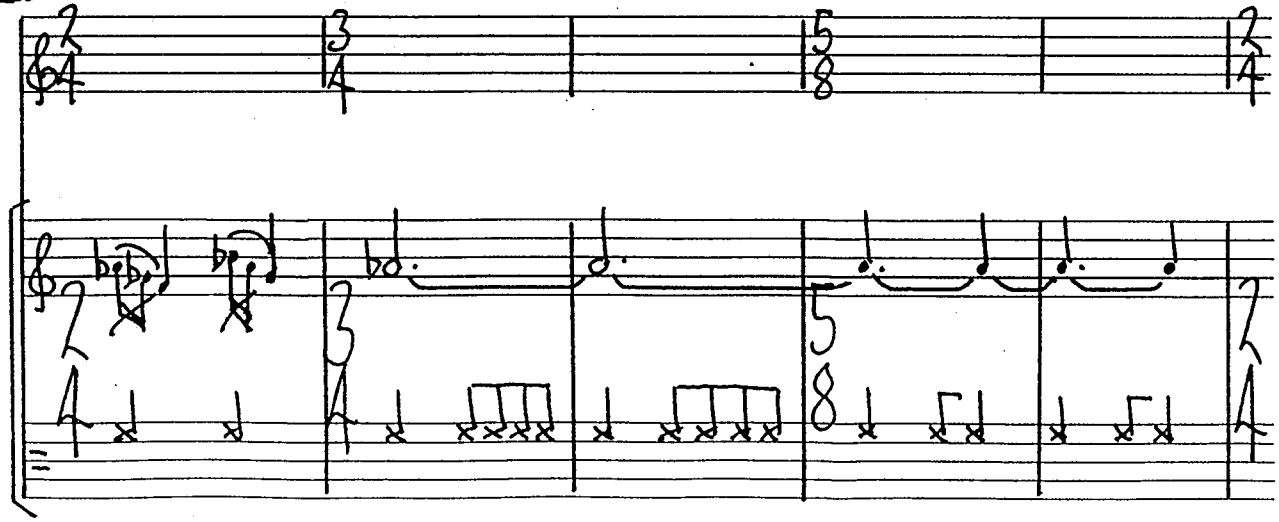

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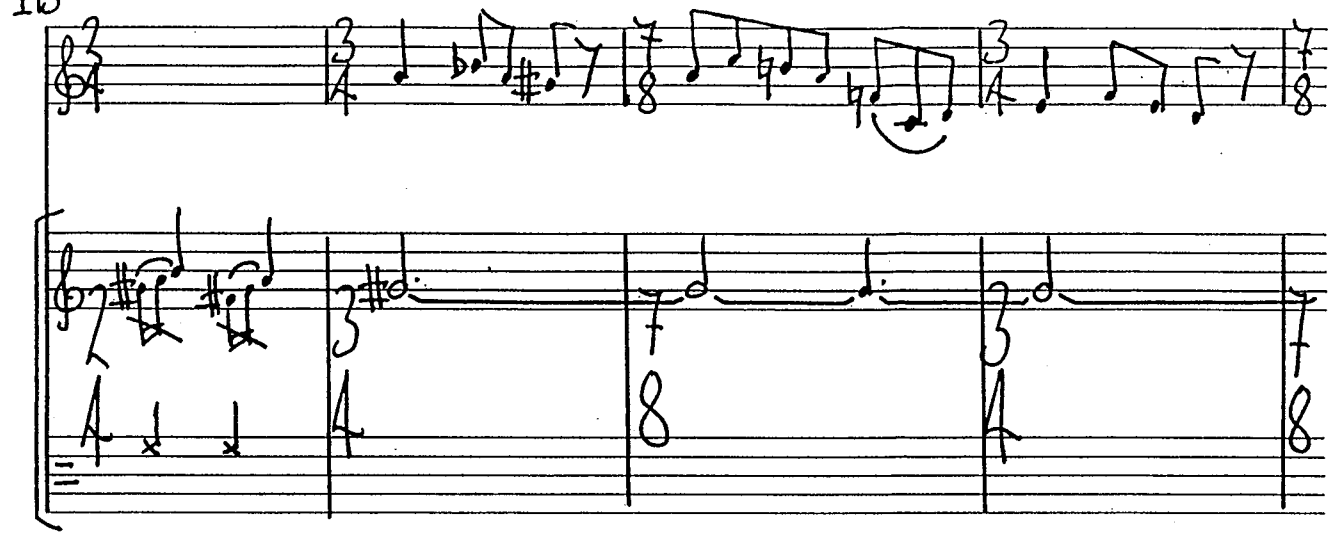

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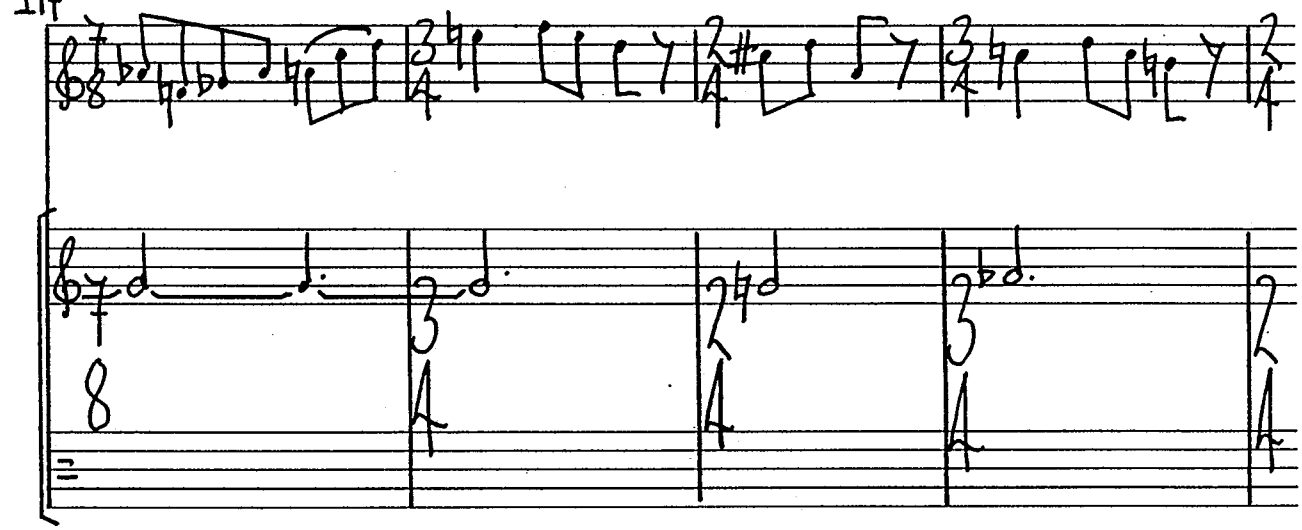

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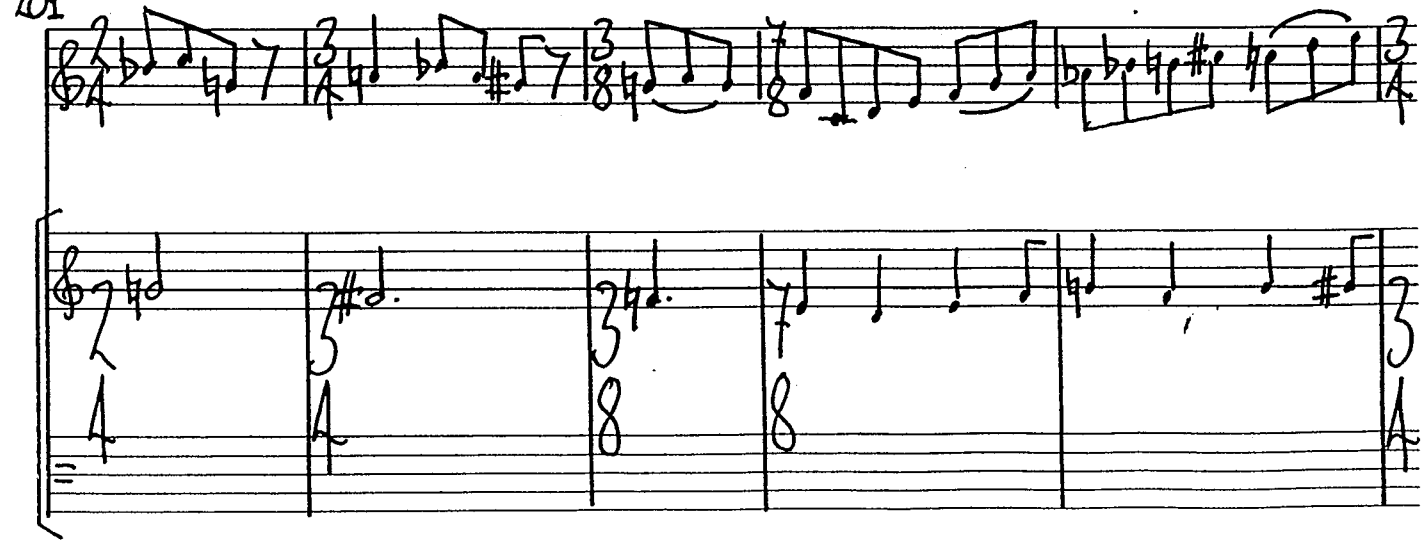

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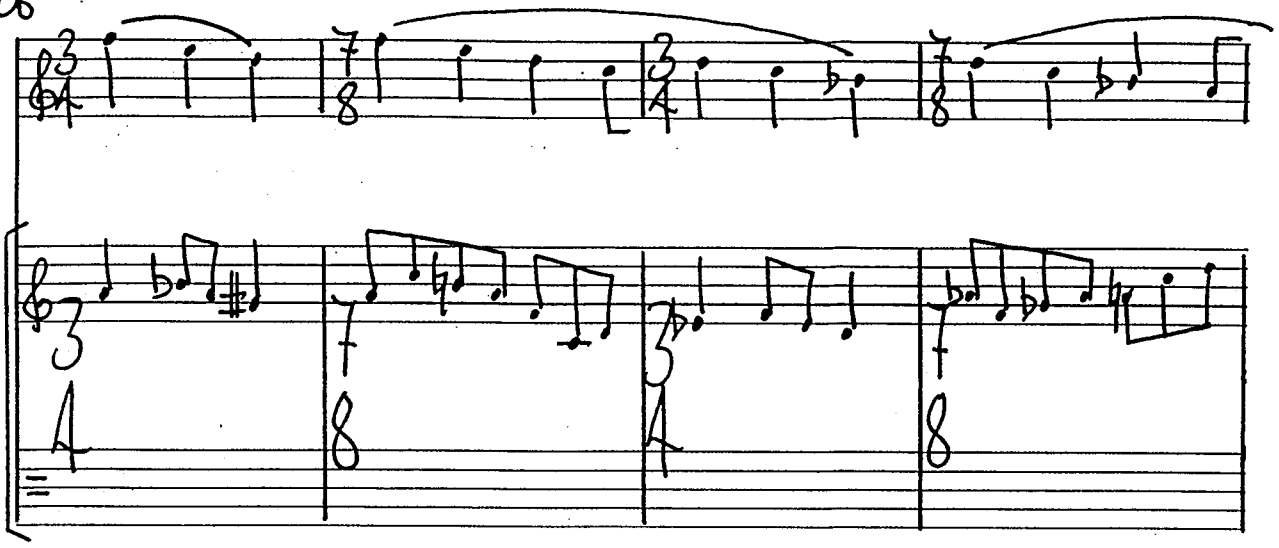

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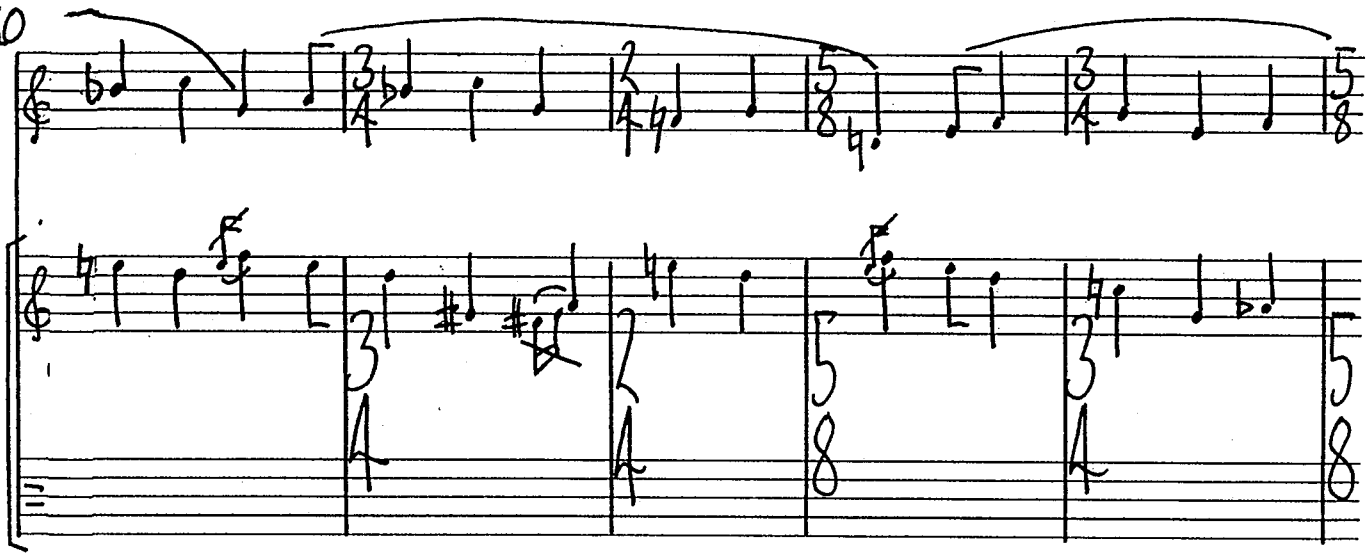

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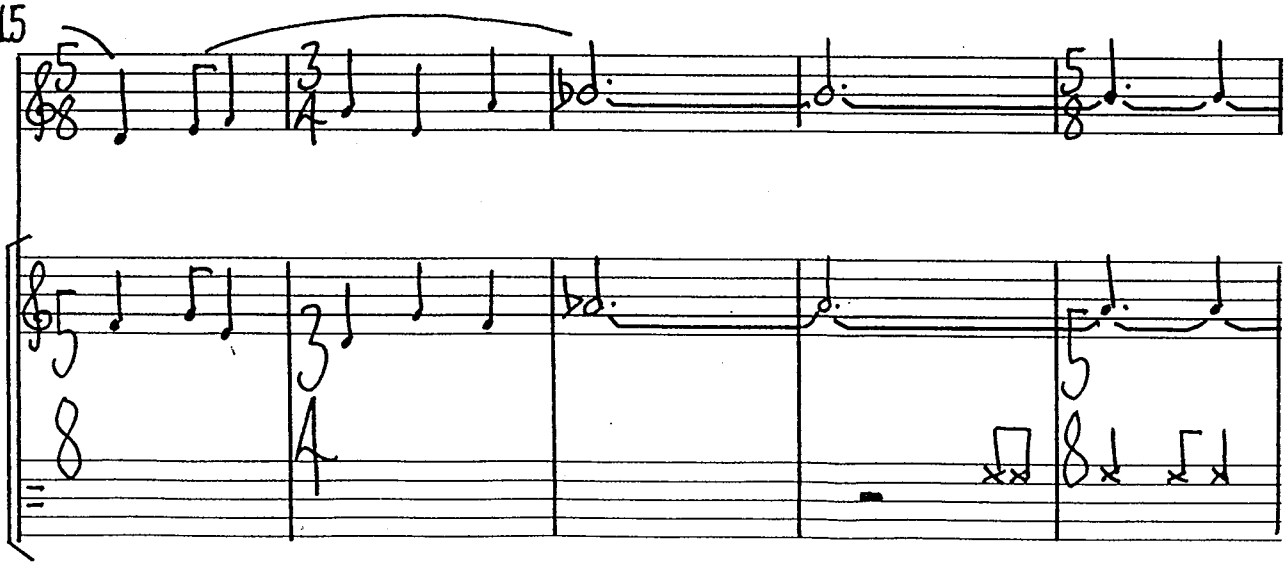

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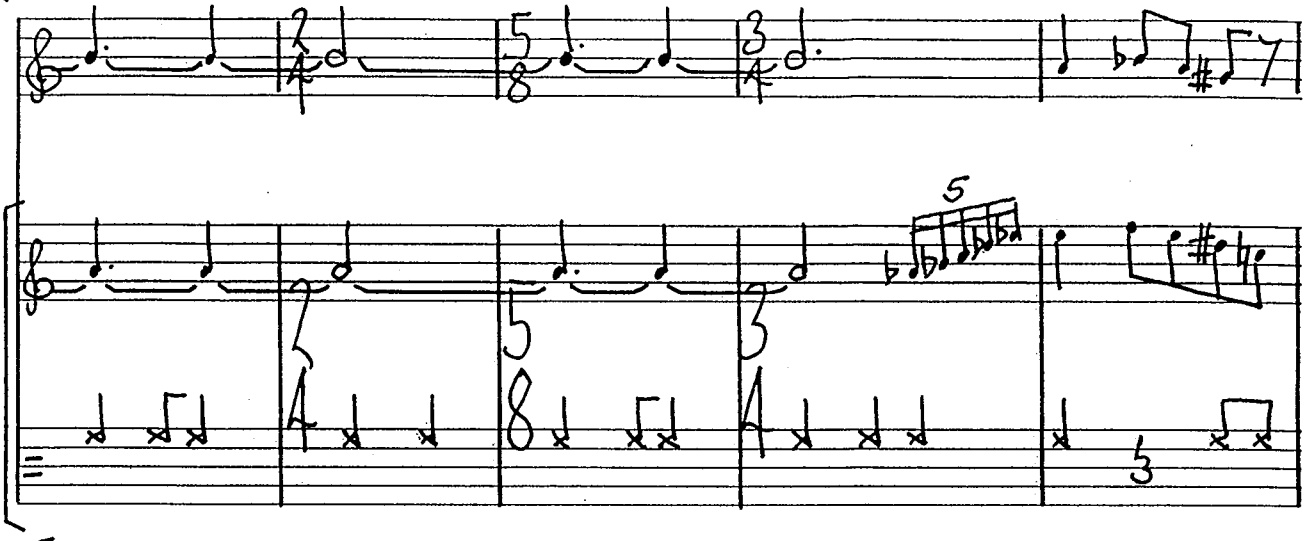

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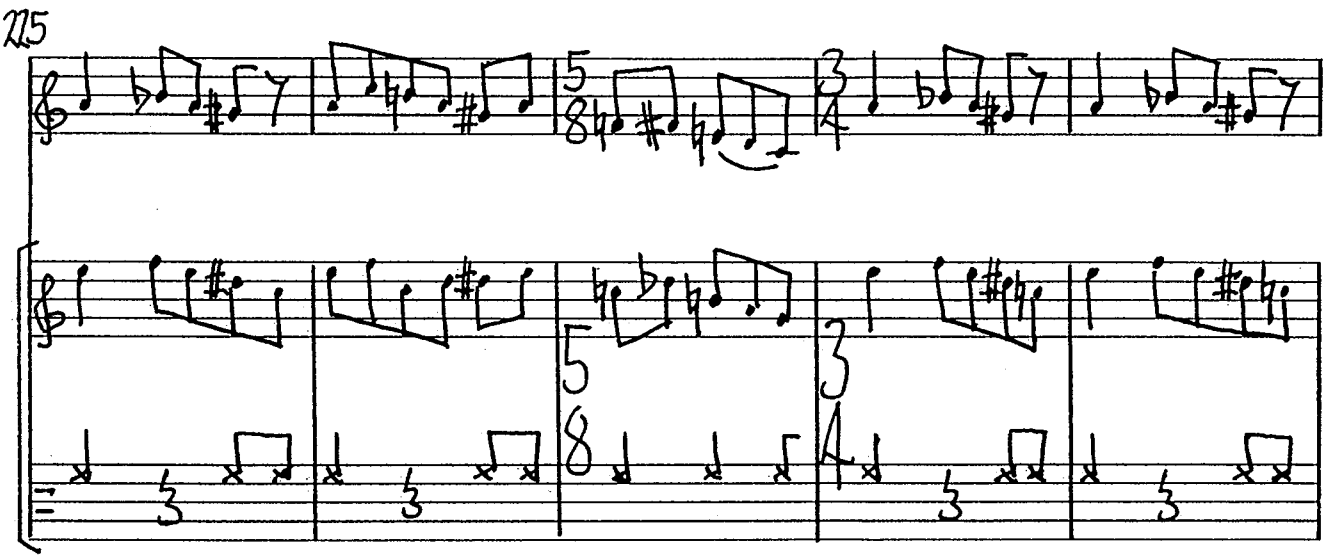

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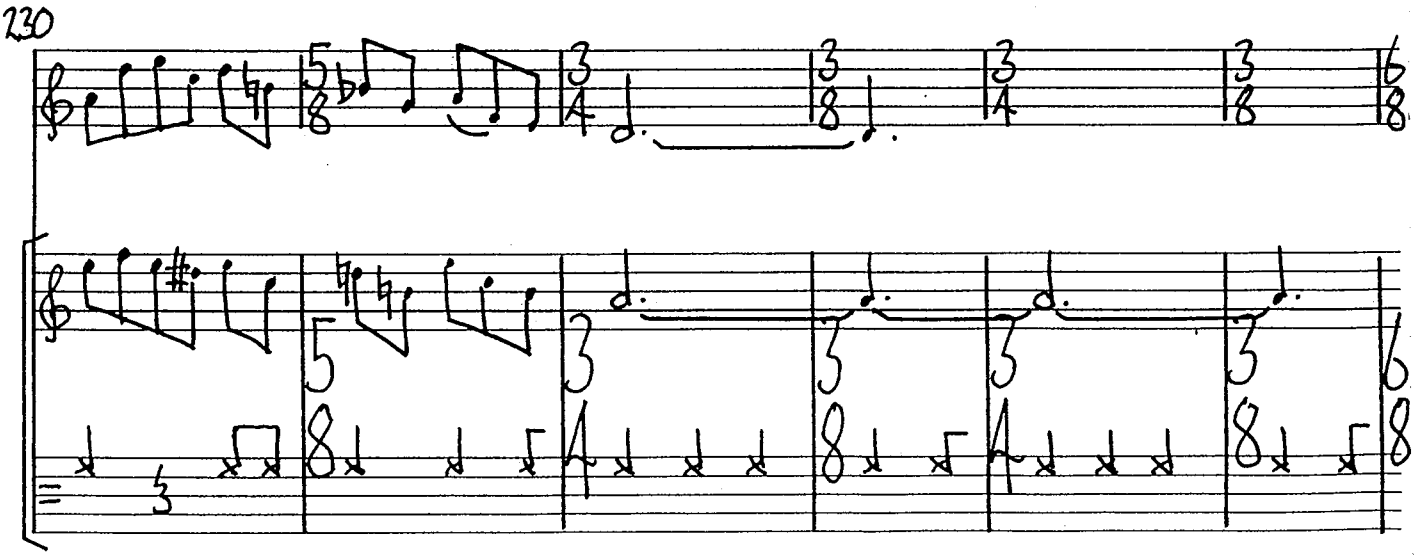

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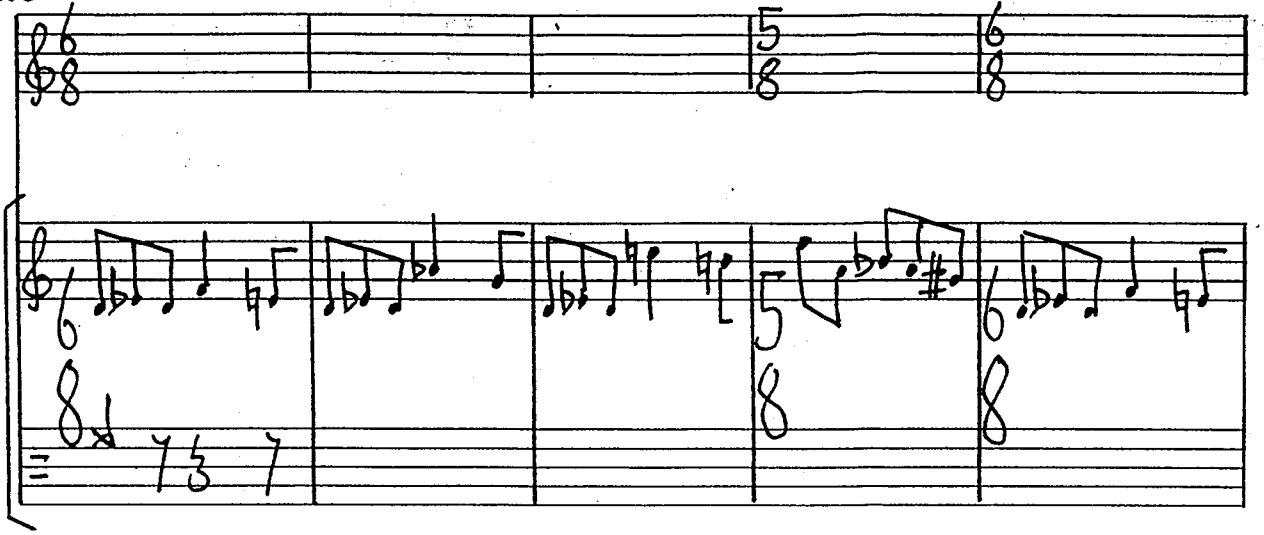

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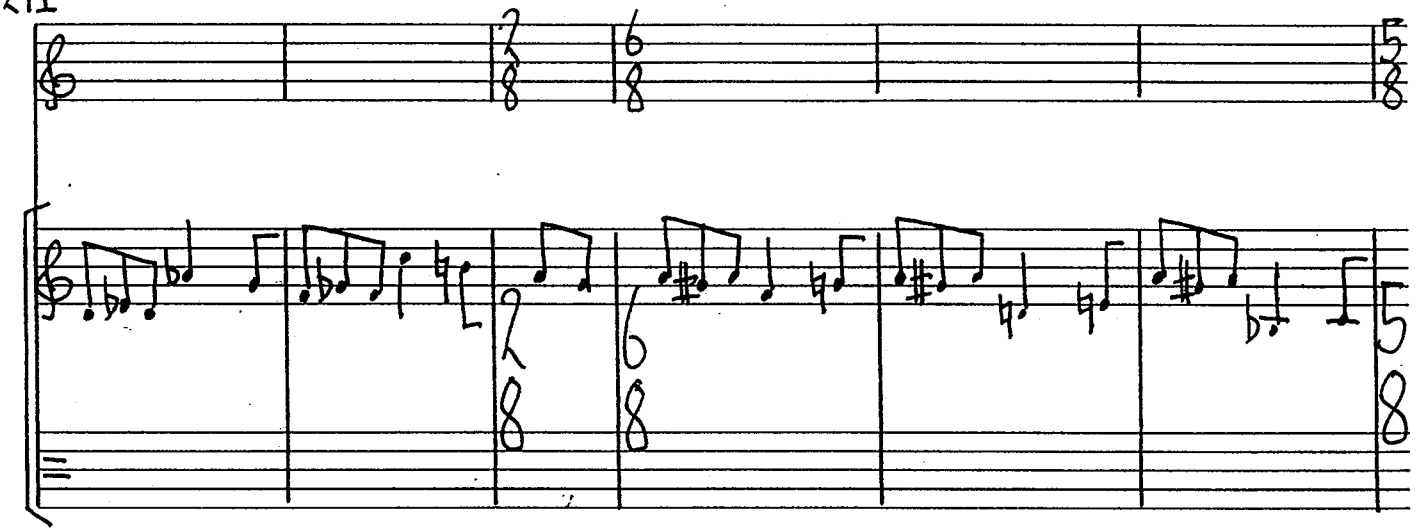

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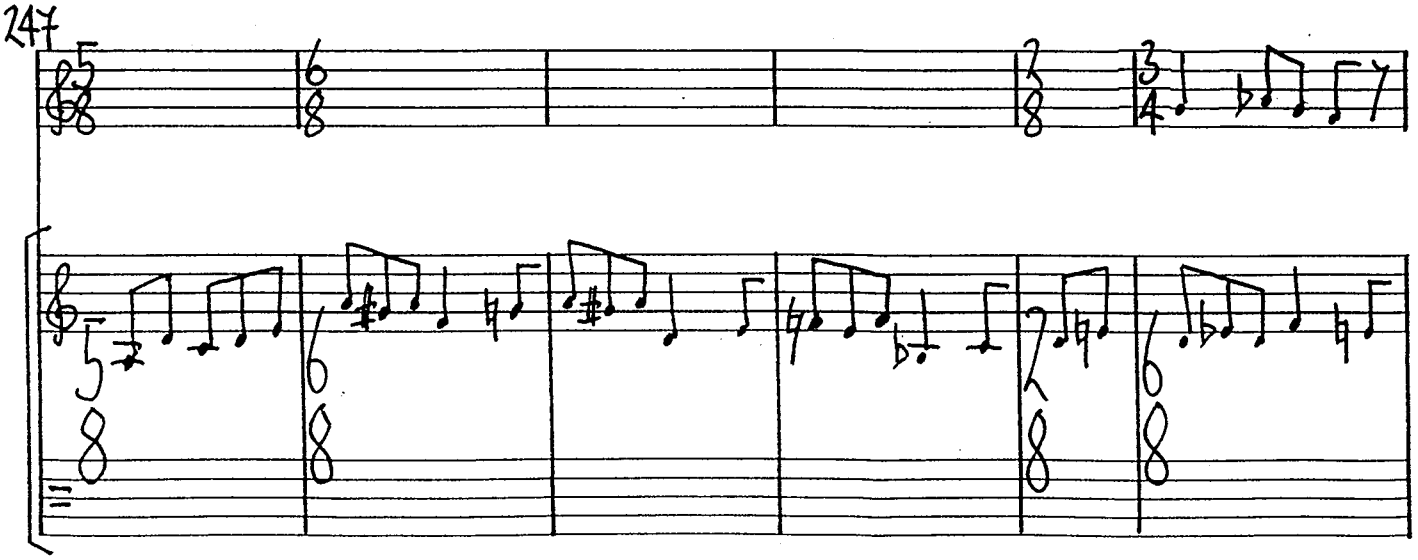

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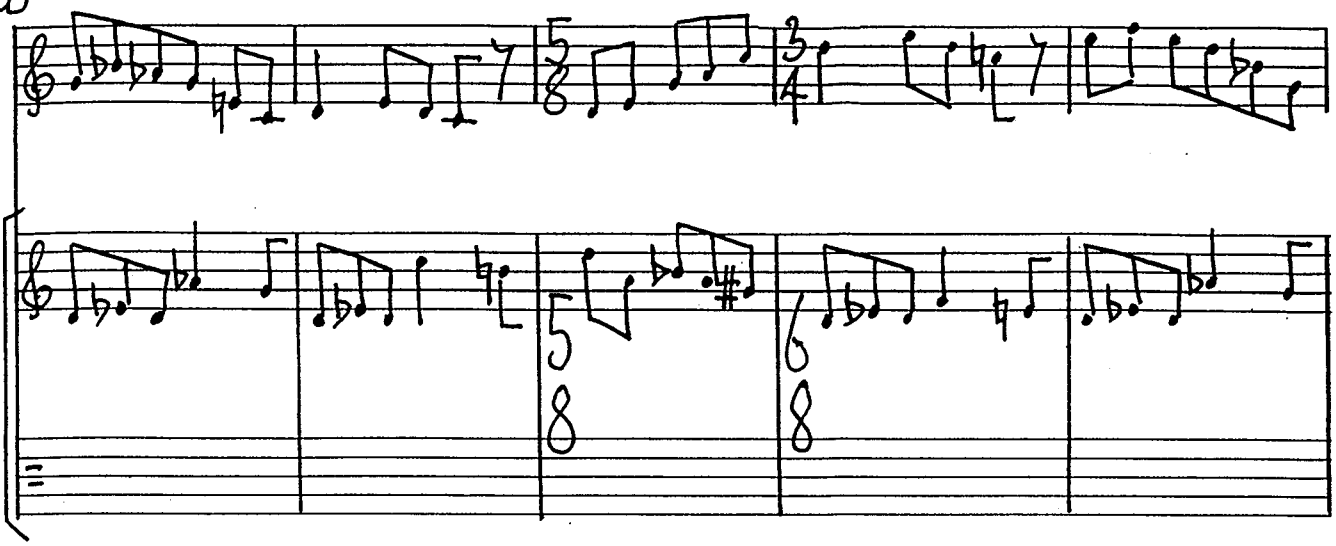

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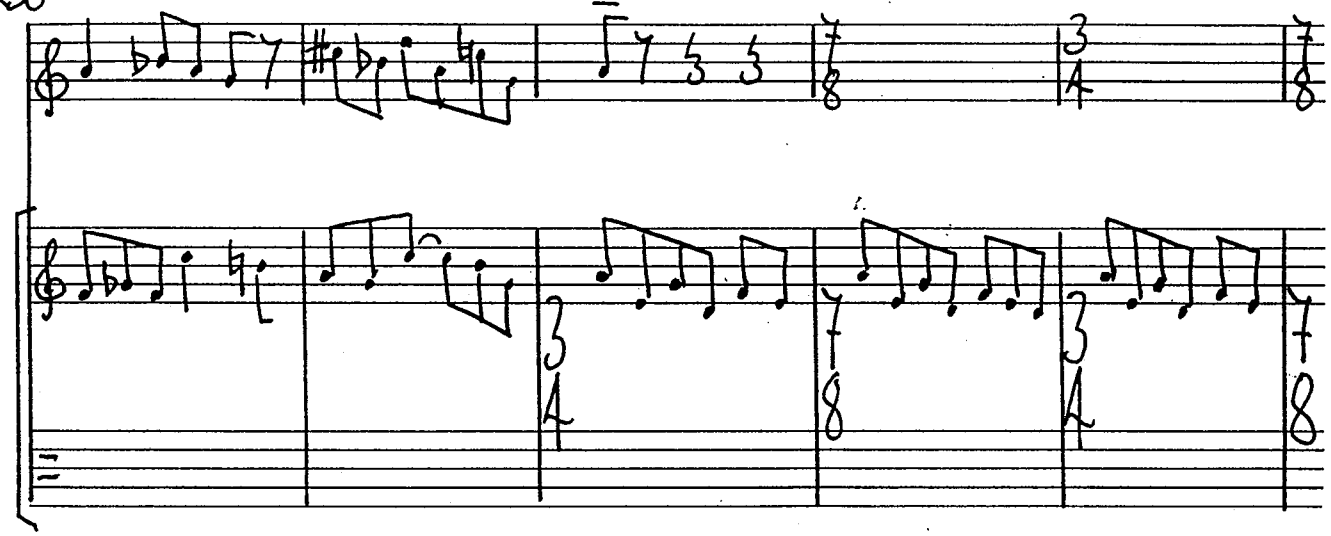

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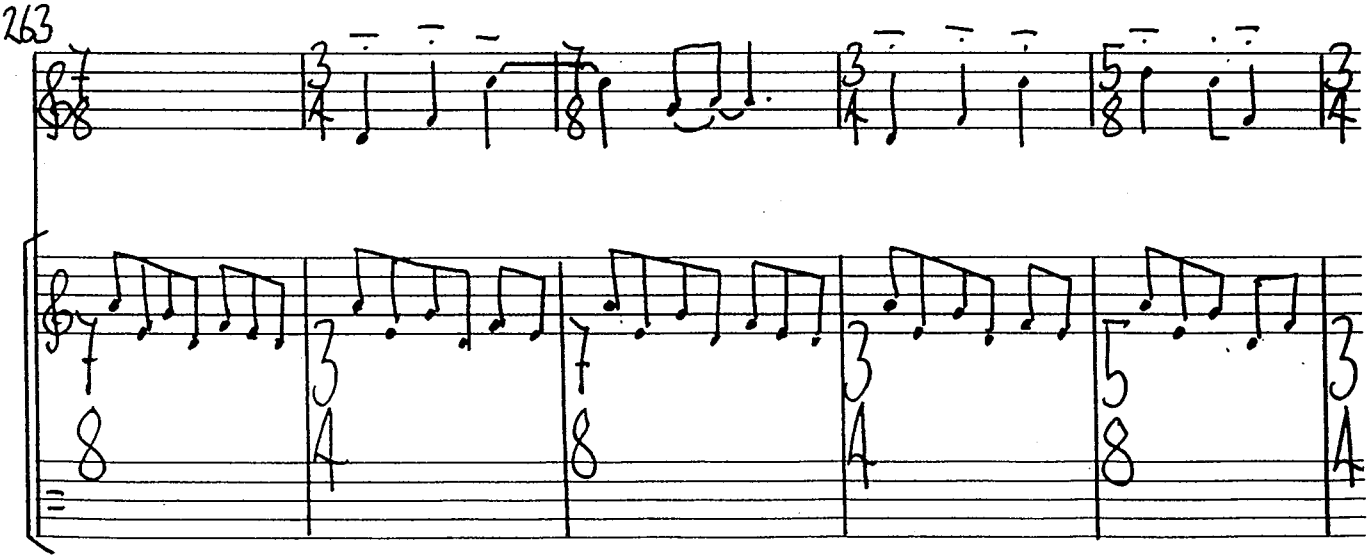

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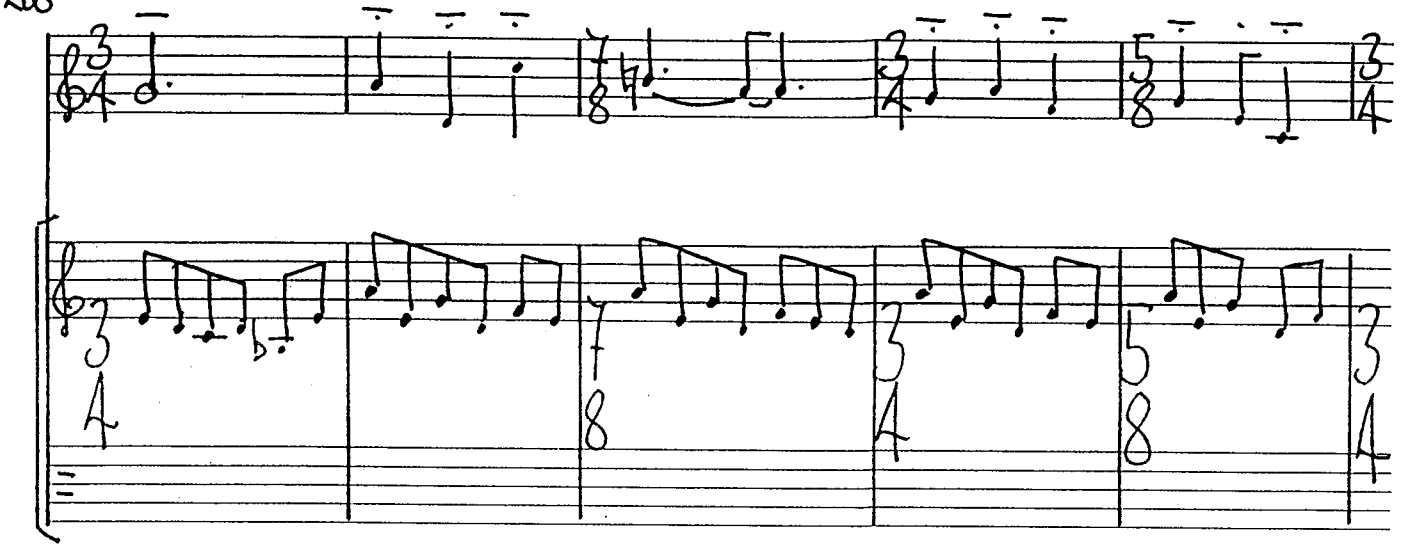

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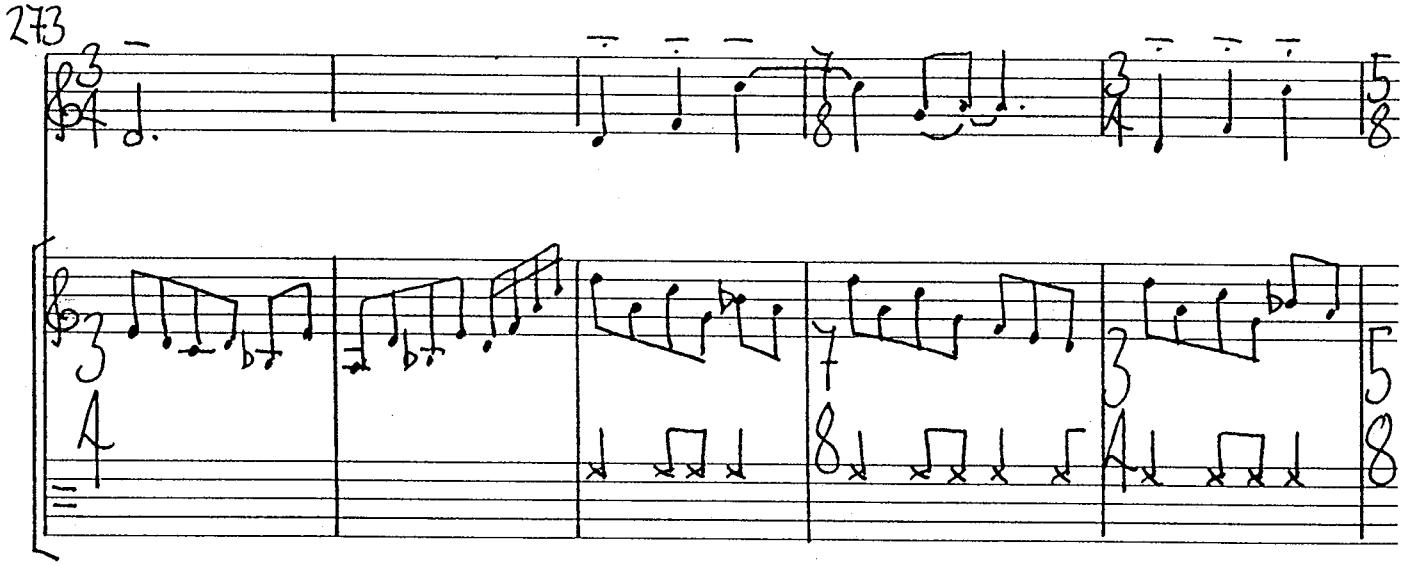

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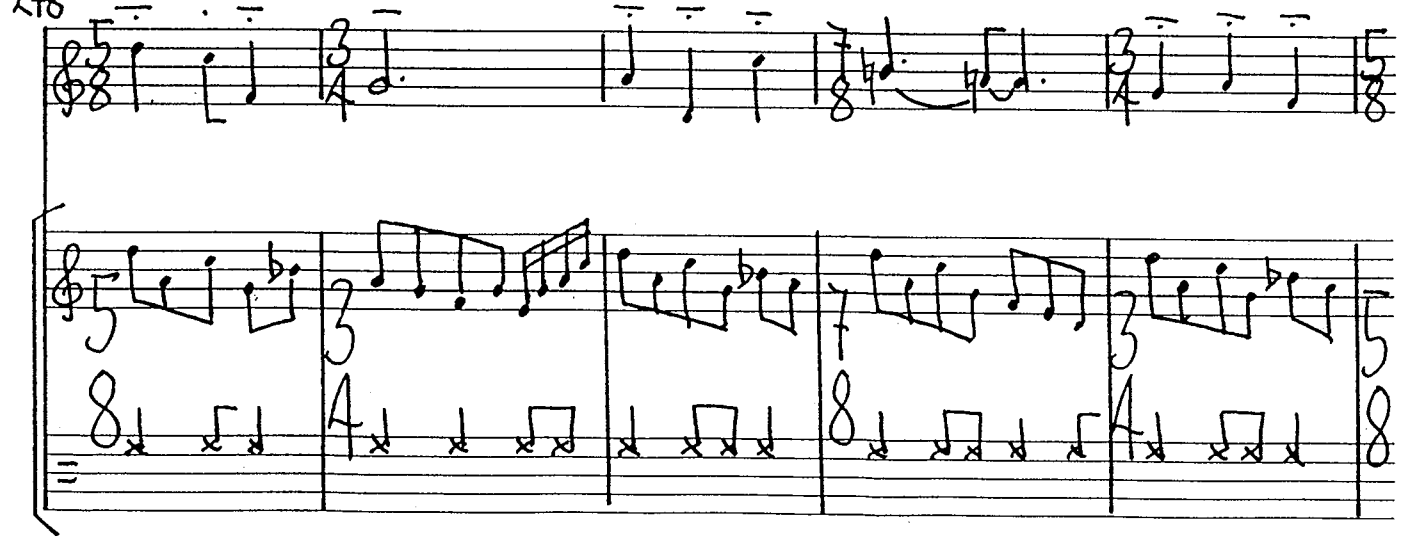

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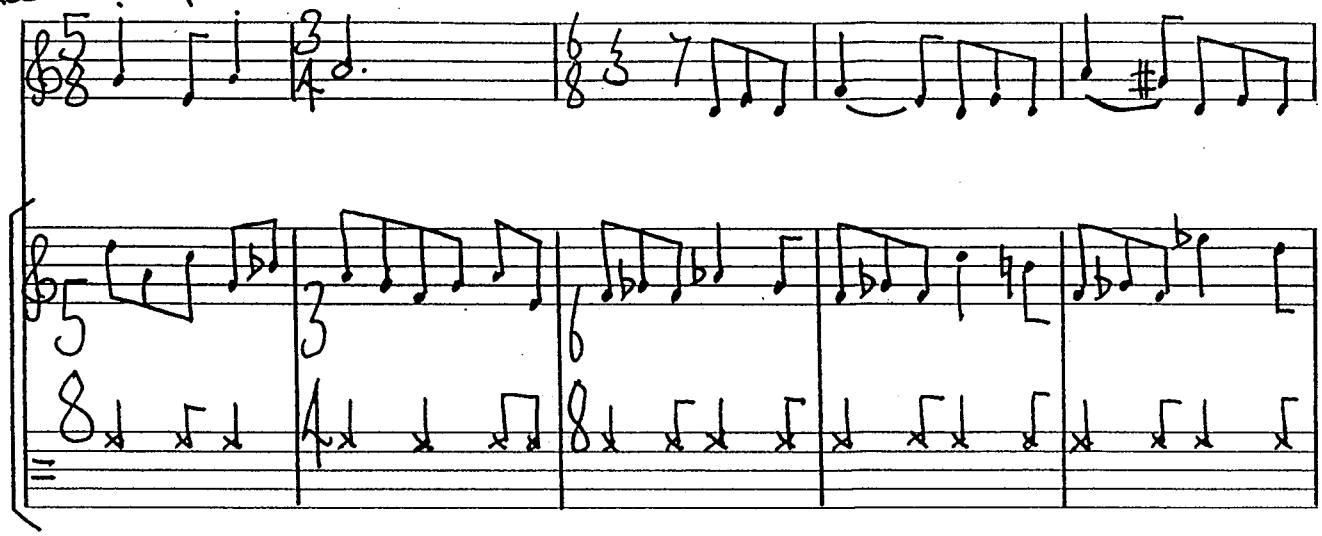

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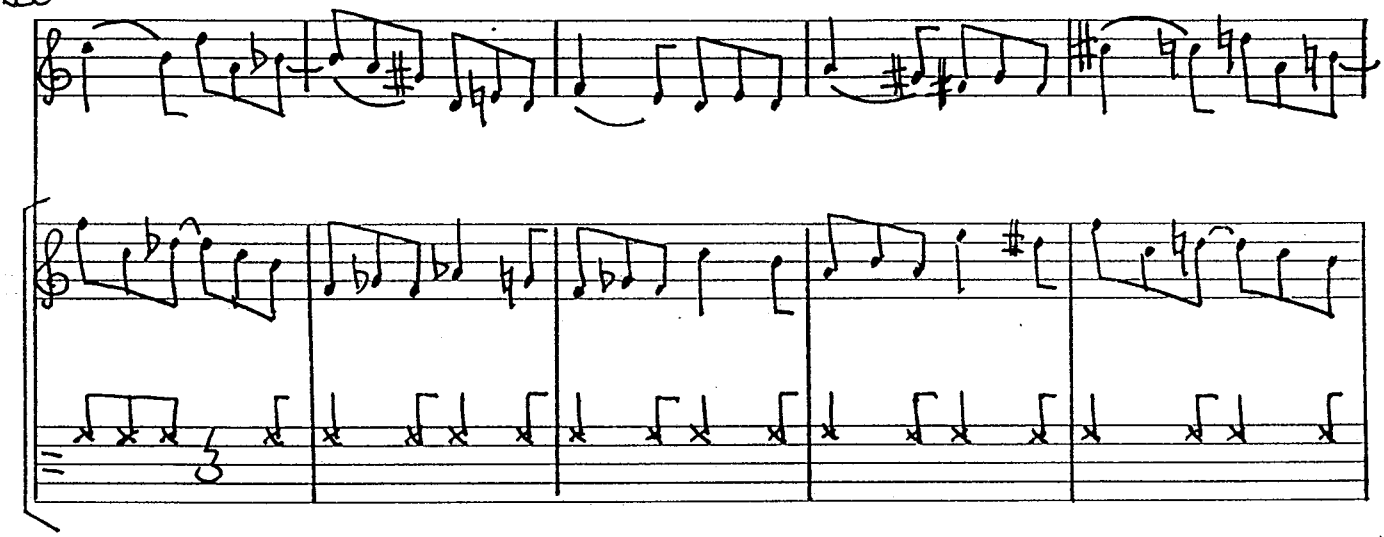

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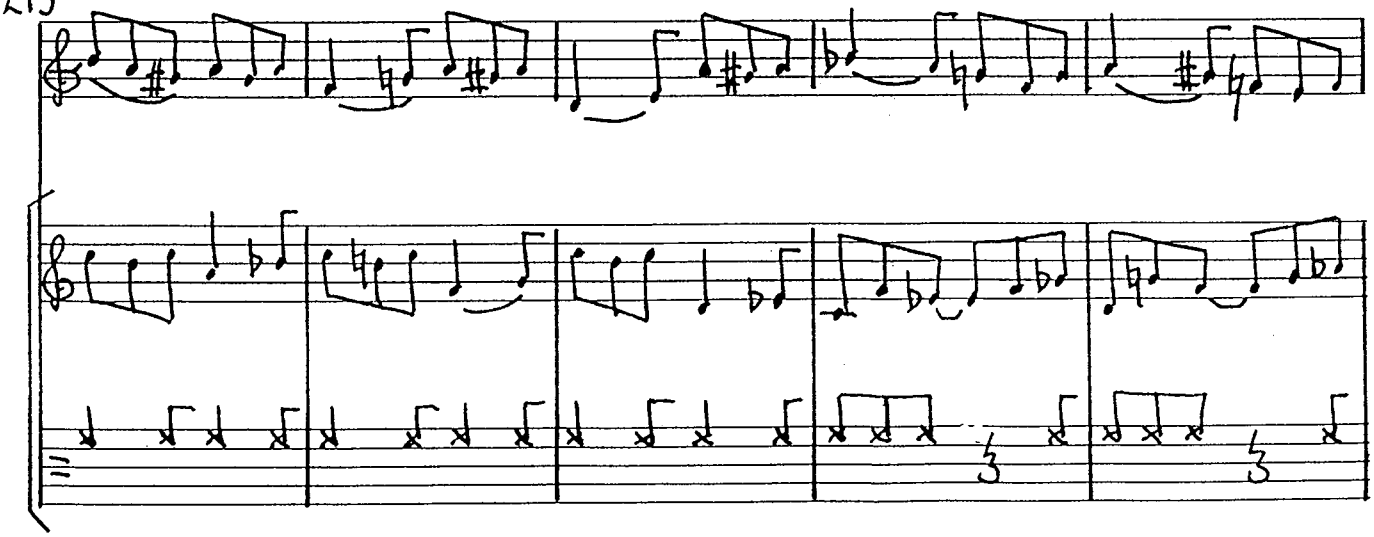

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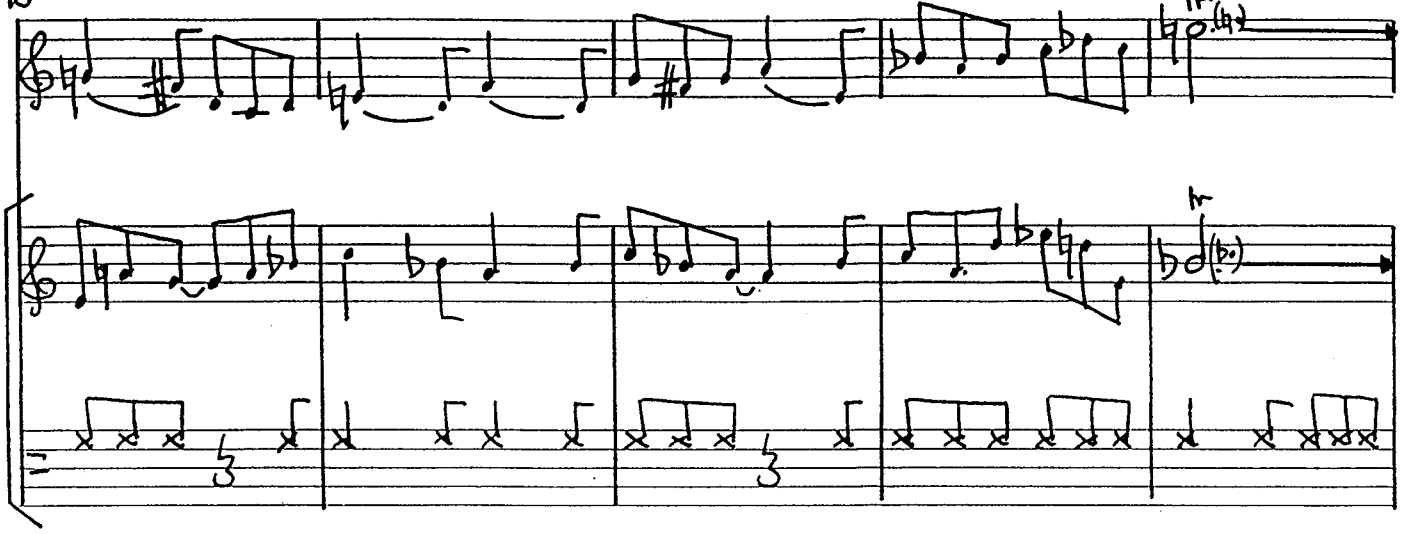

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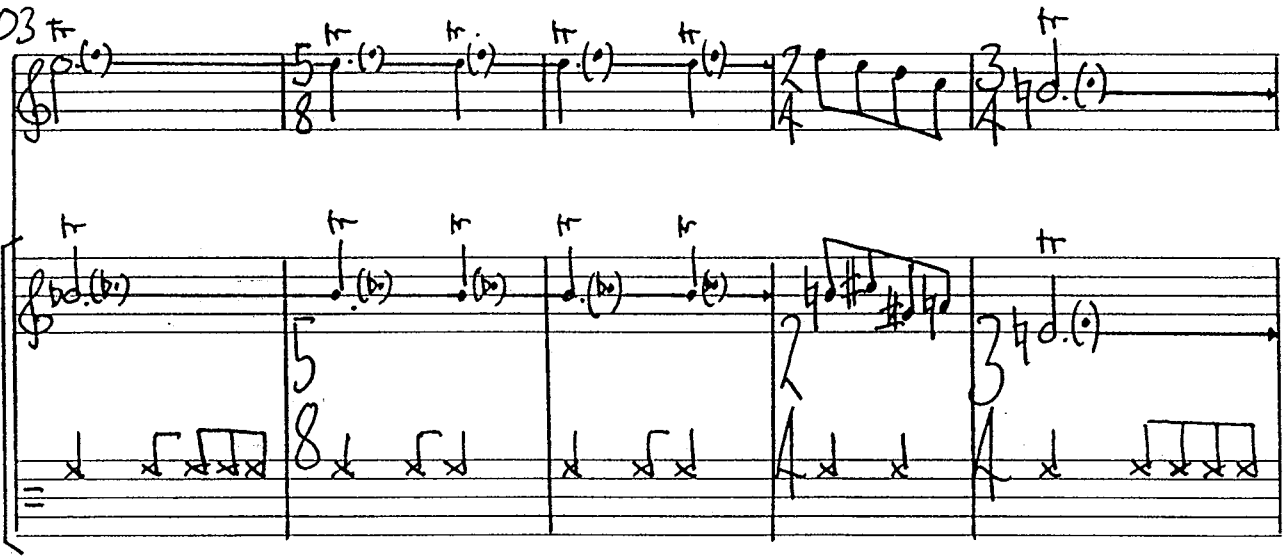

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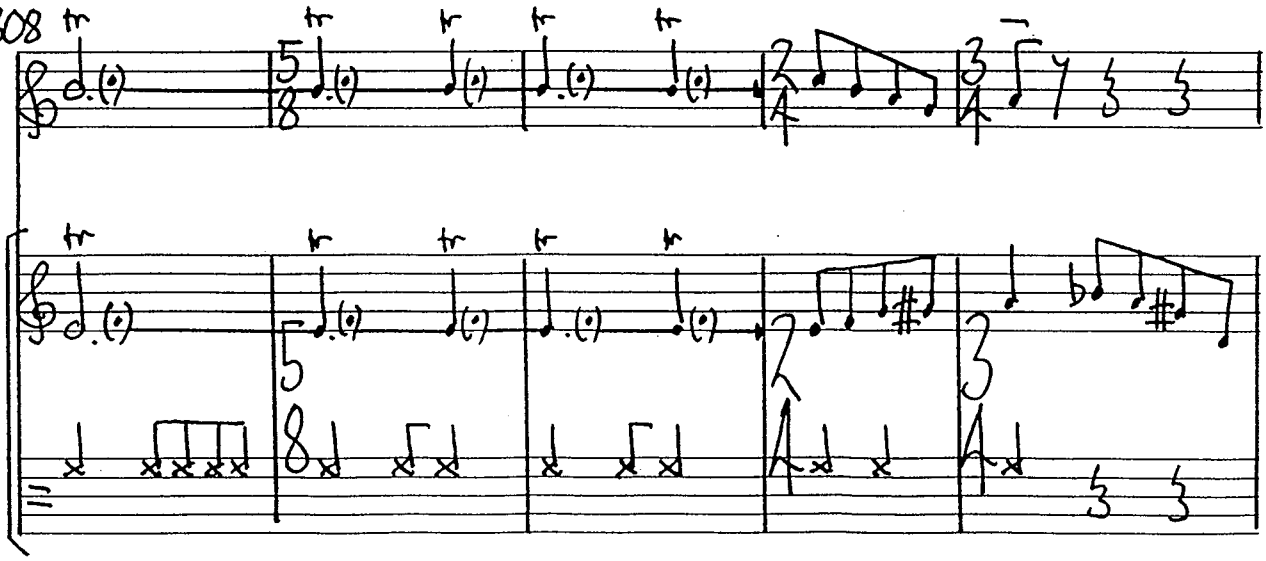

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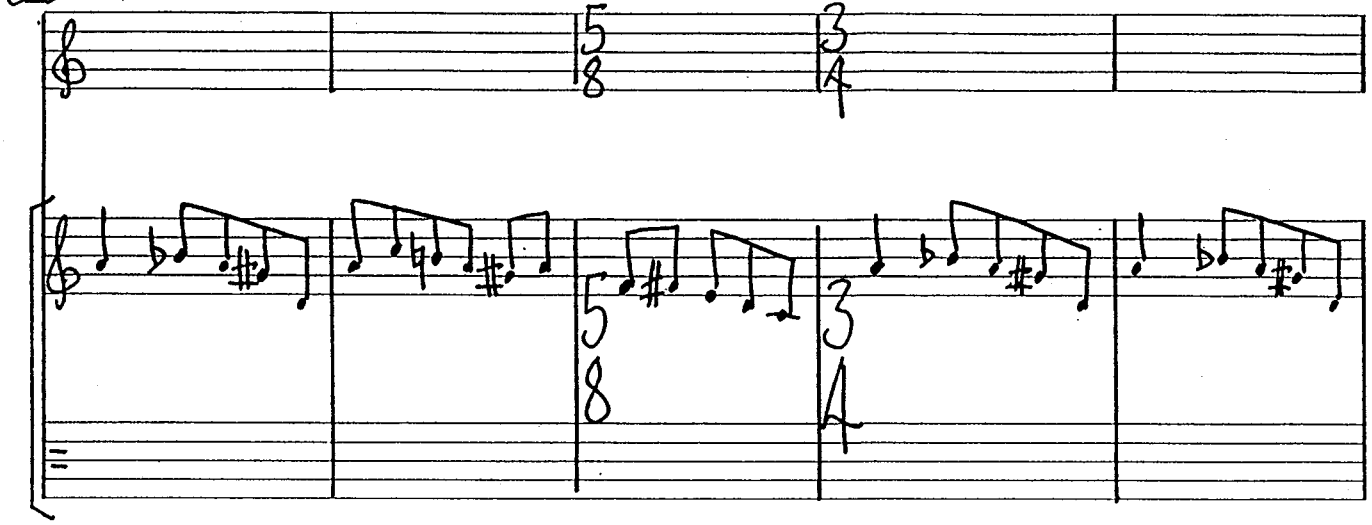

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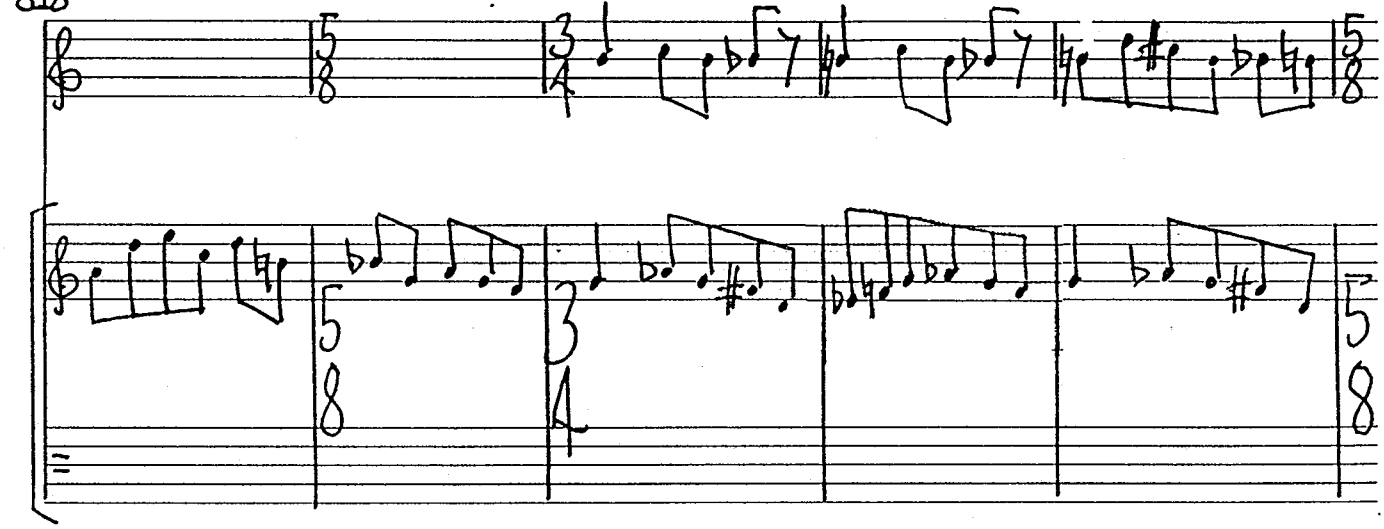

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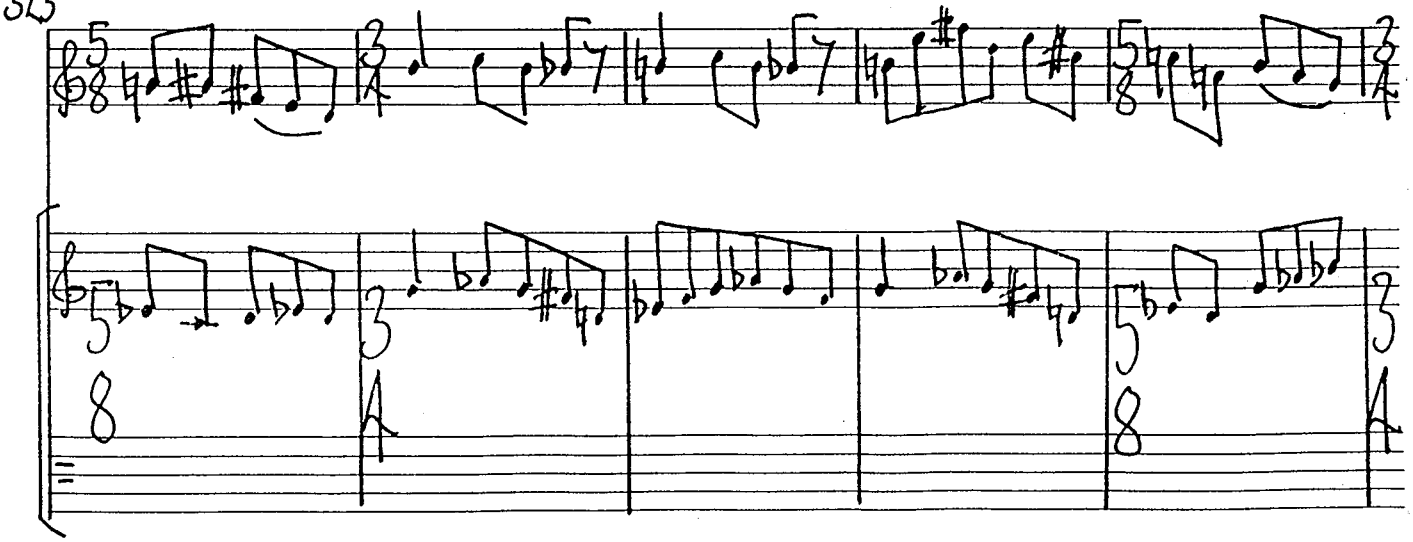

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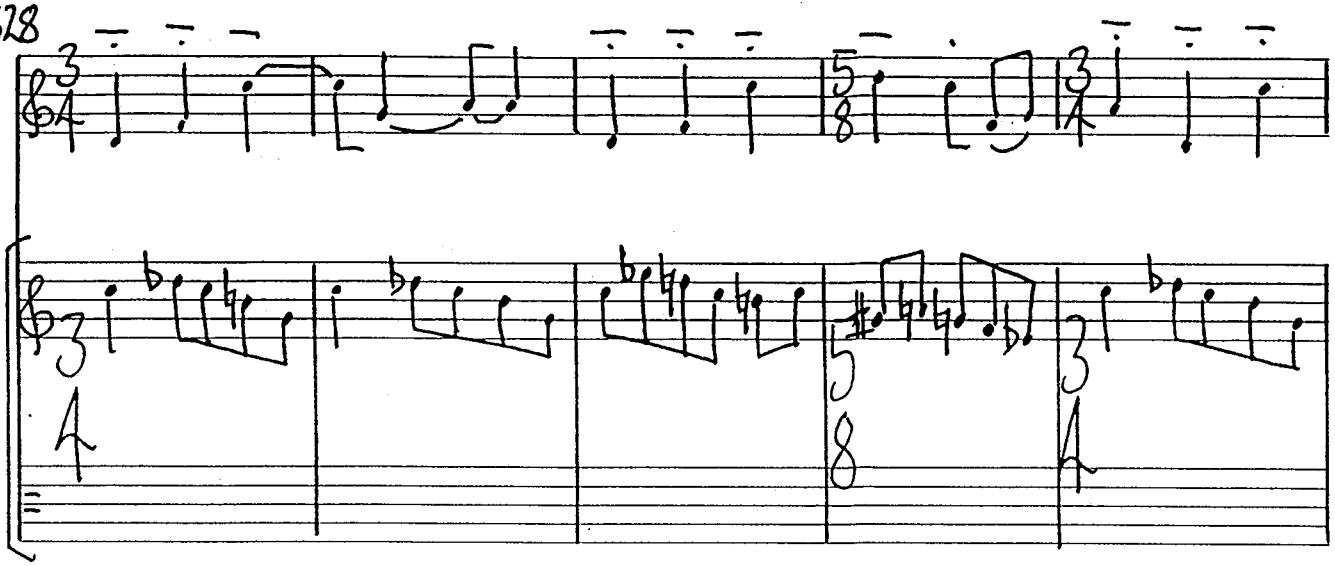

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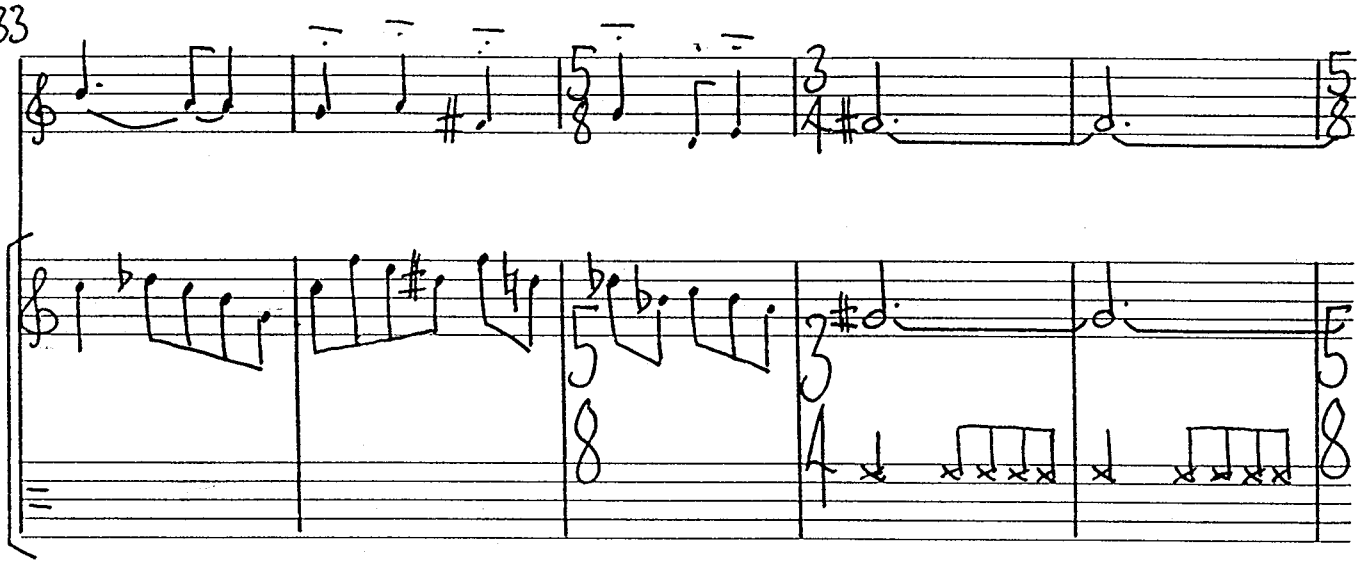

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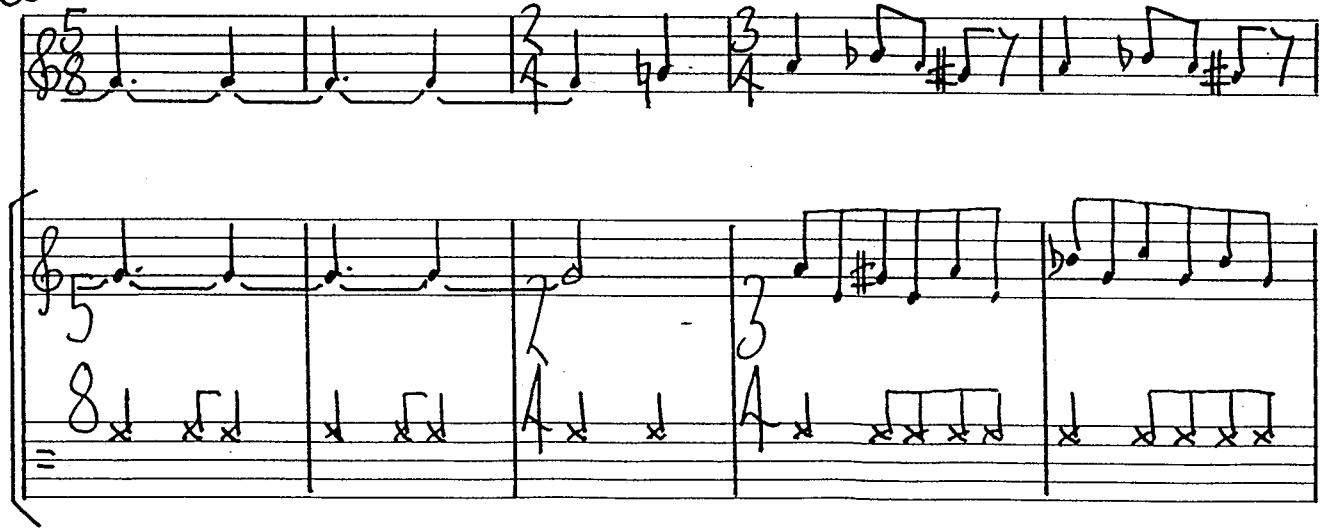

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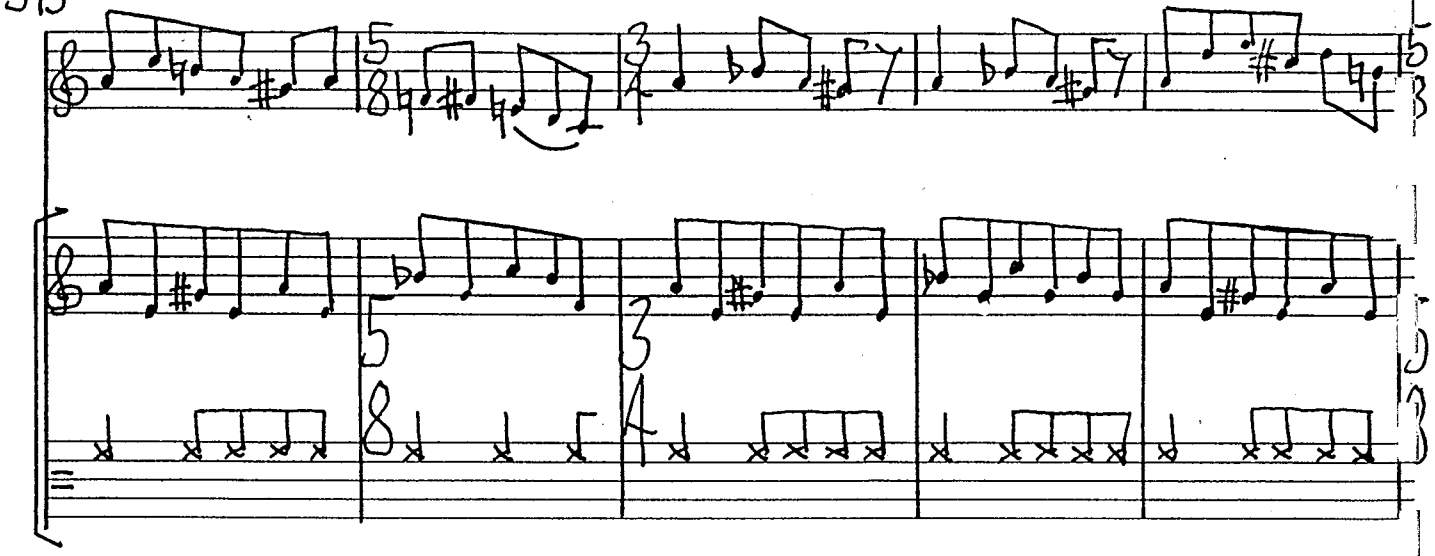

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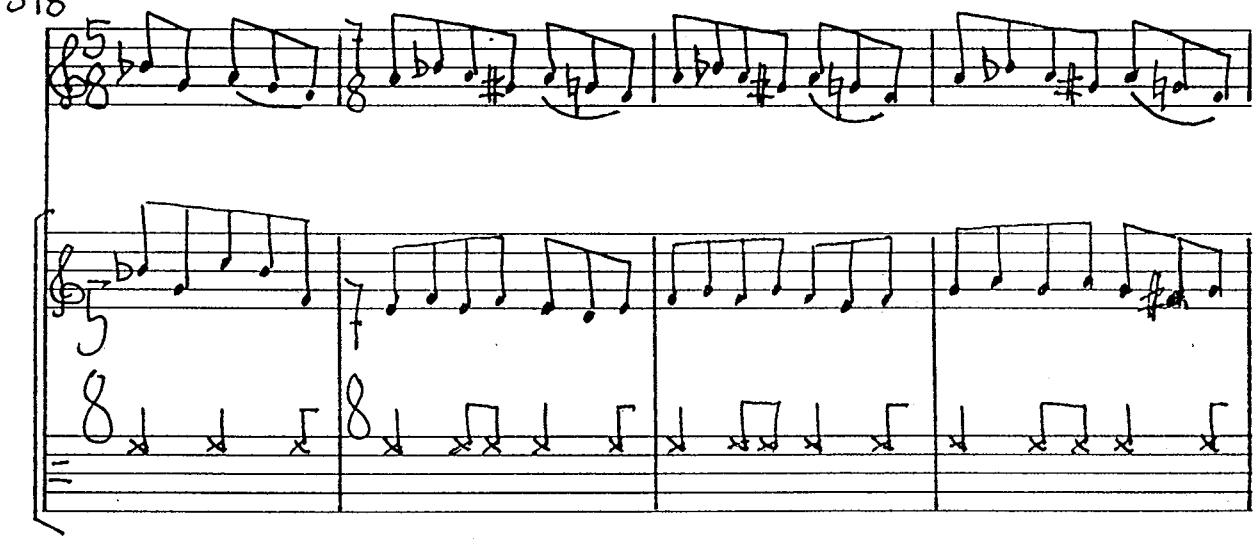

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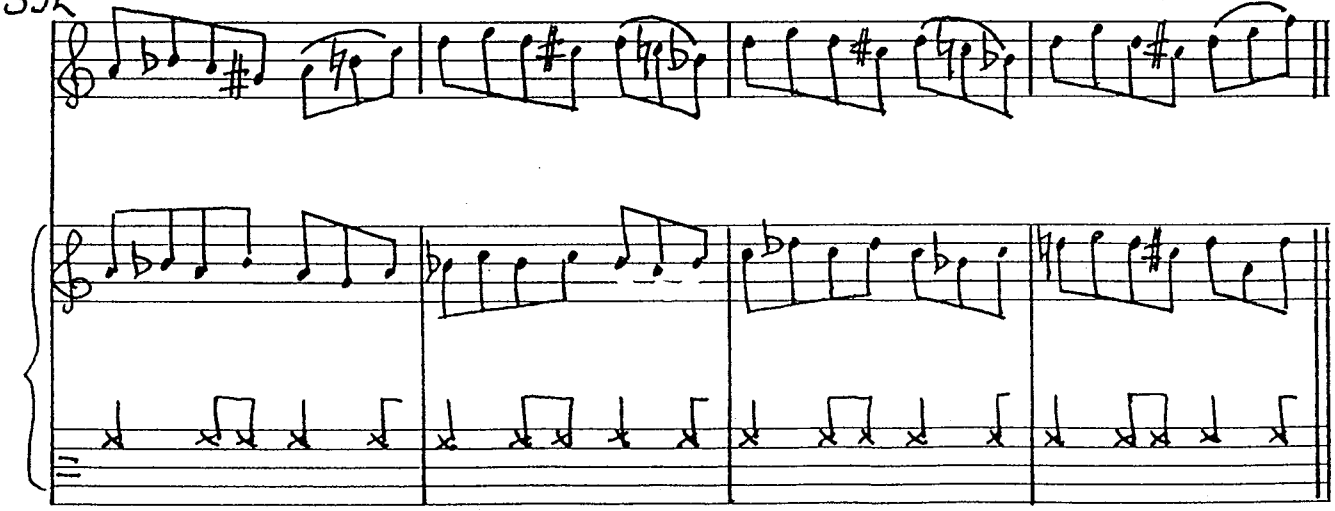


IV

Tempo libre (♩=c.180)

356

Take Tambourine

357

Tempo giusto, ♩=180

ff

dim. e rall.

Time 1 course
down a minor 3rd

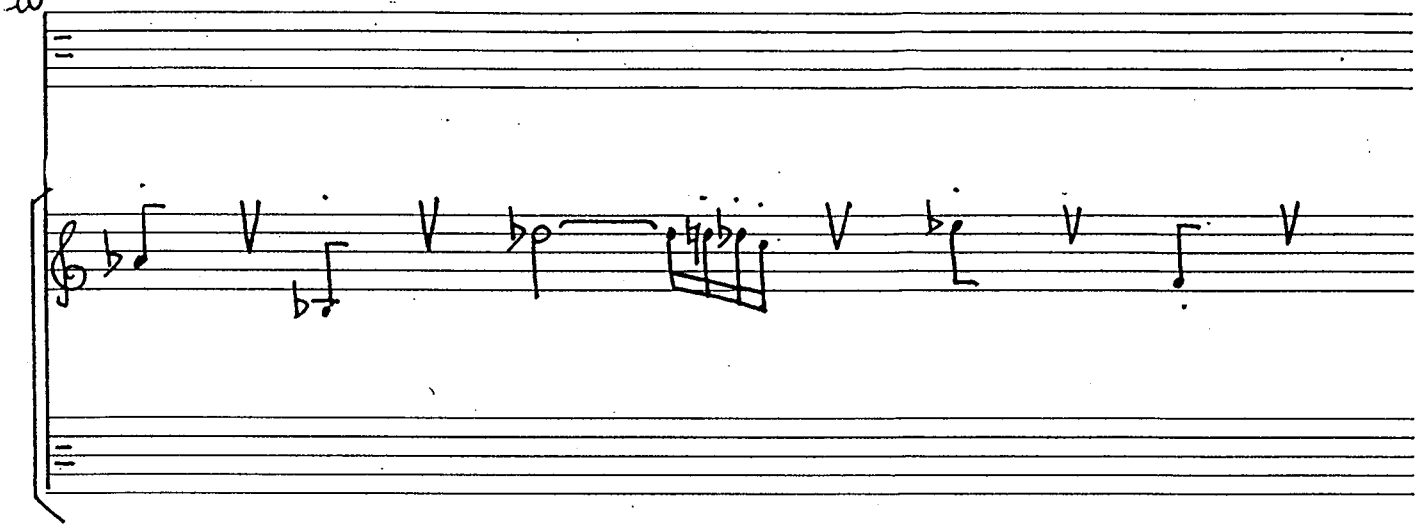
Trompette to
Drones G and A

362

p

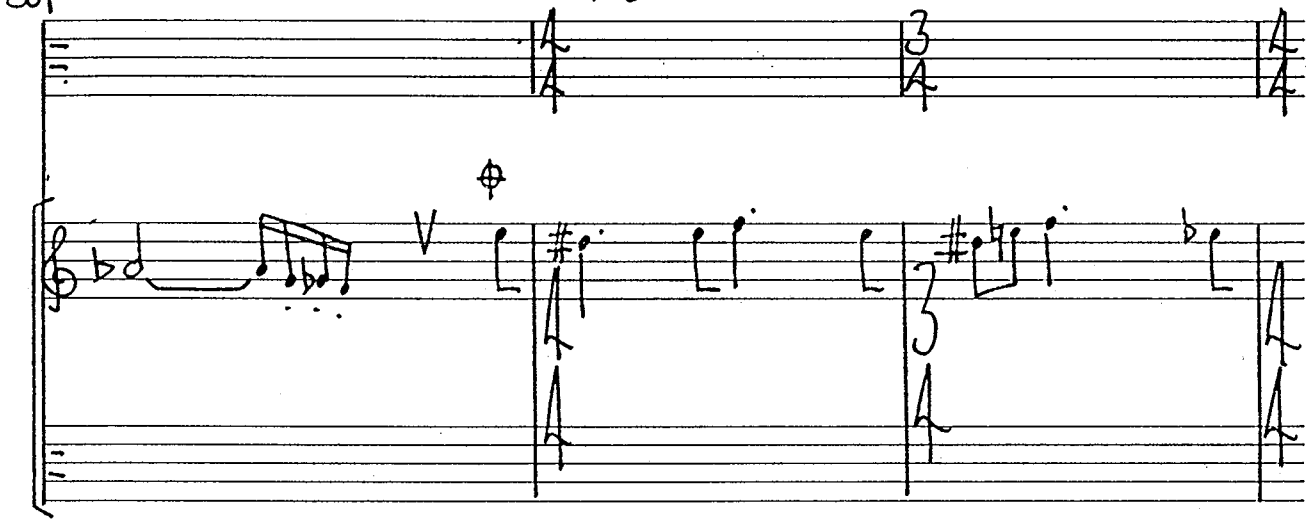
Tempo libre (♩=60)

366



367

Temp gilush, ♩=60



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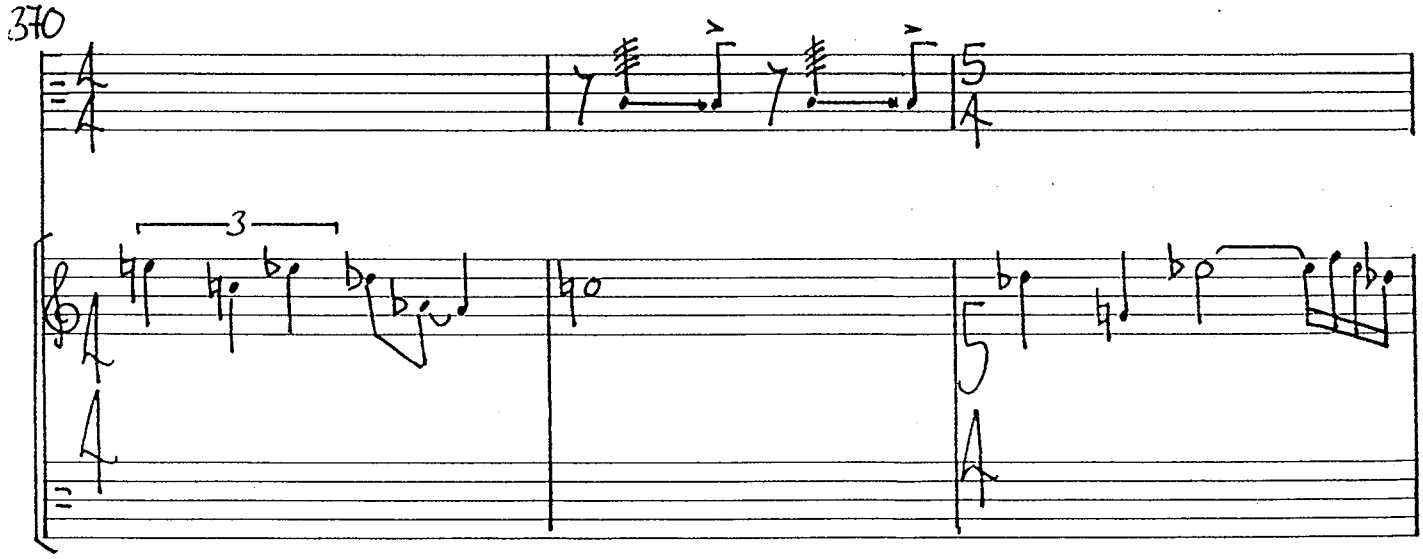

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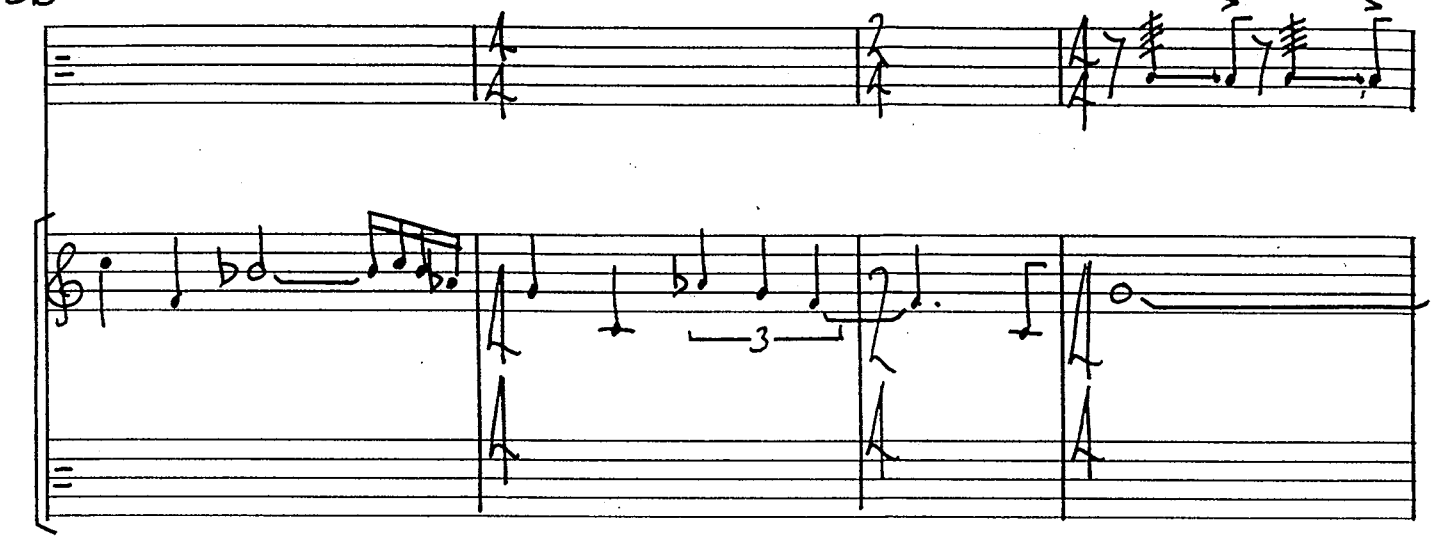

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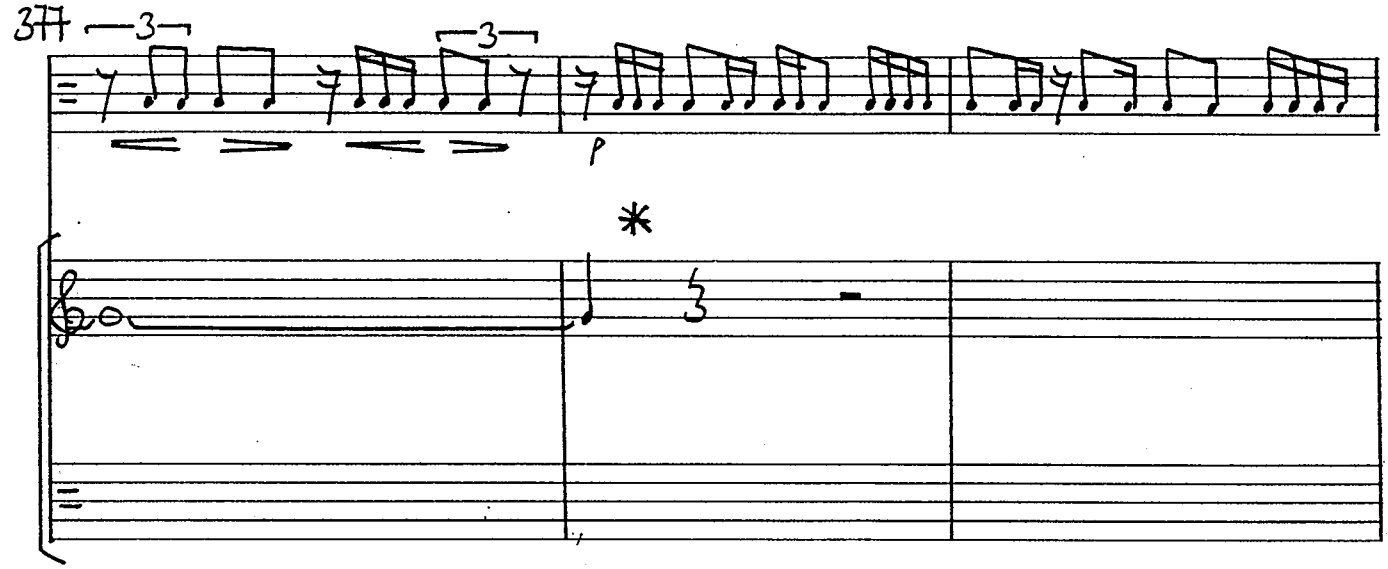

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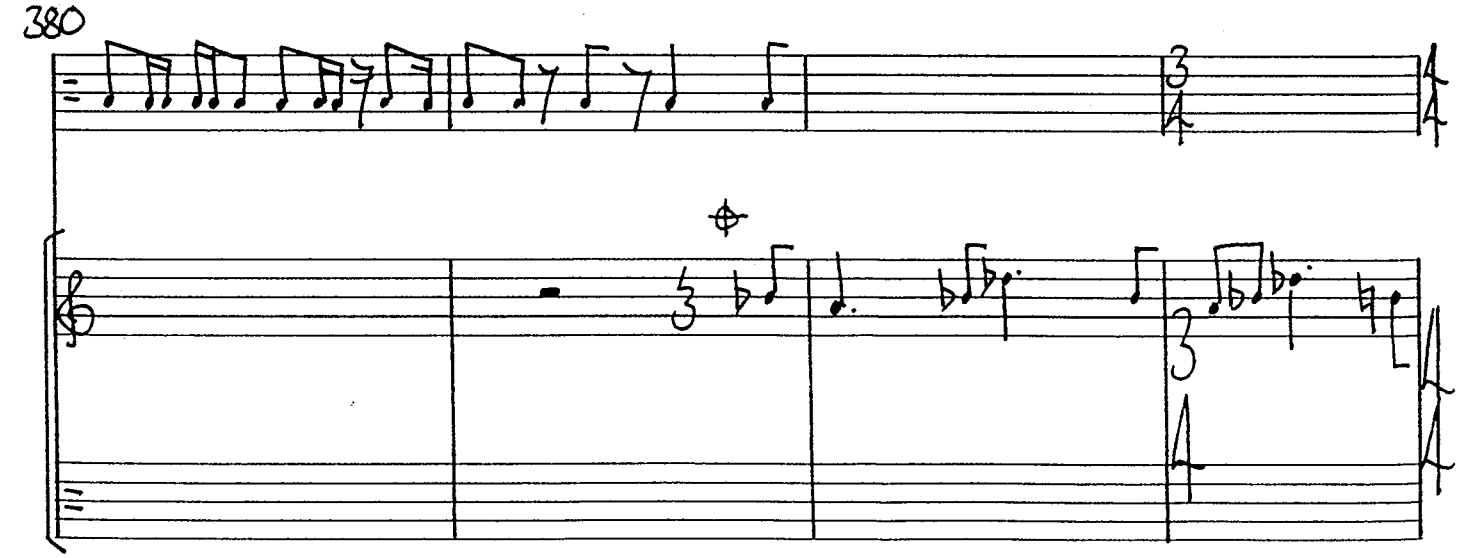

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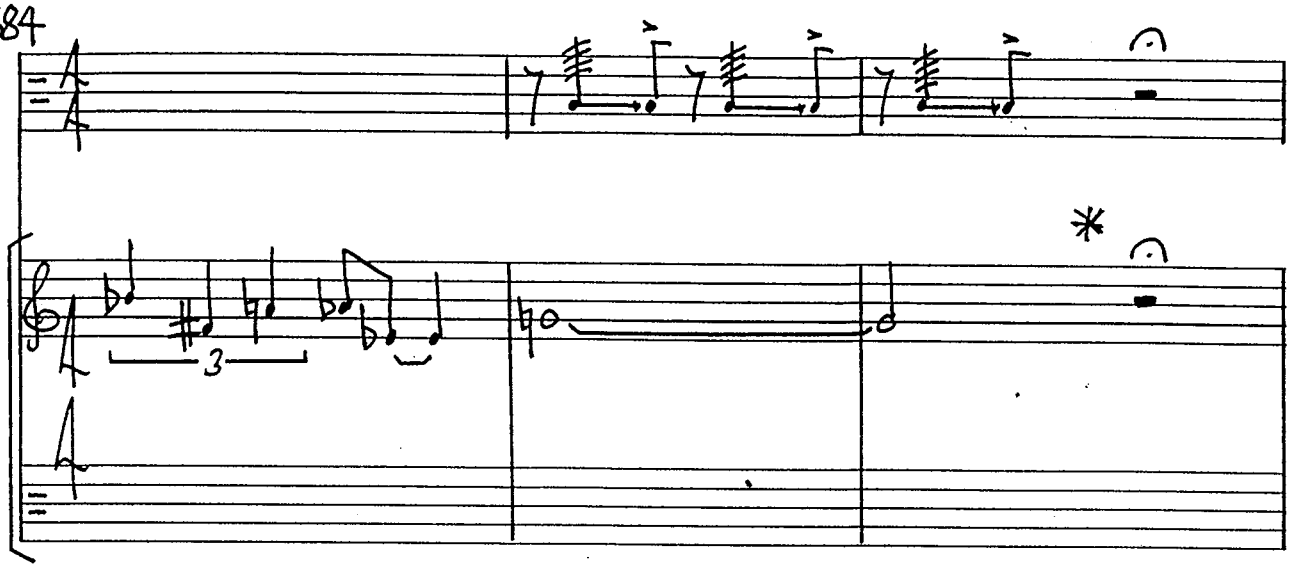
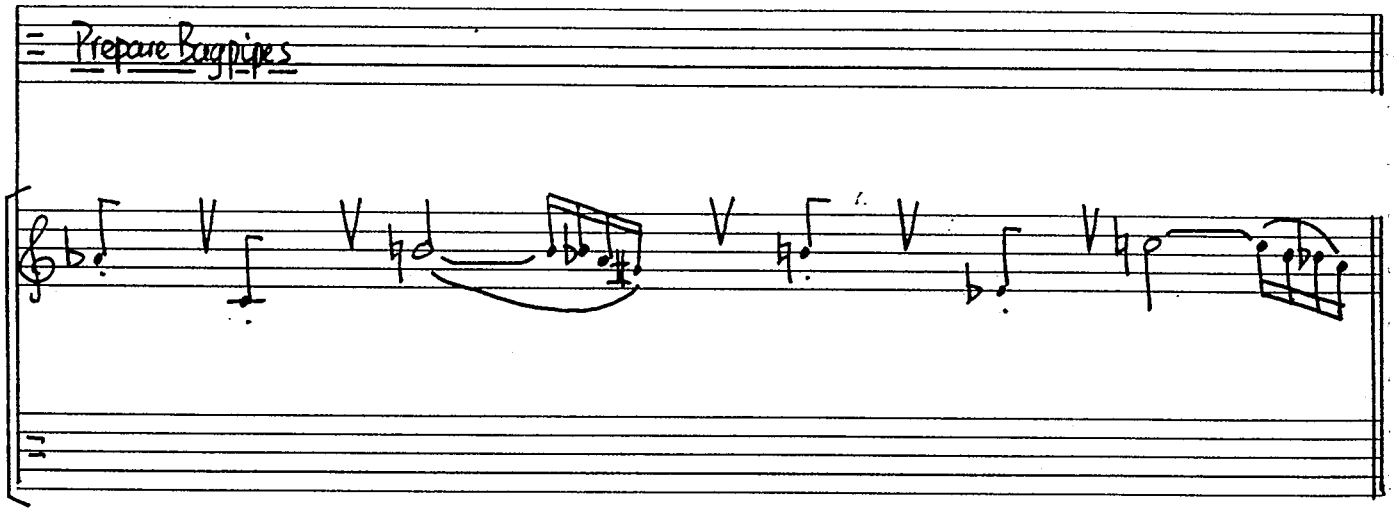
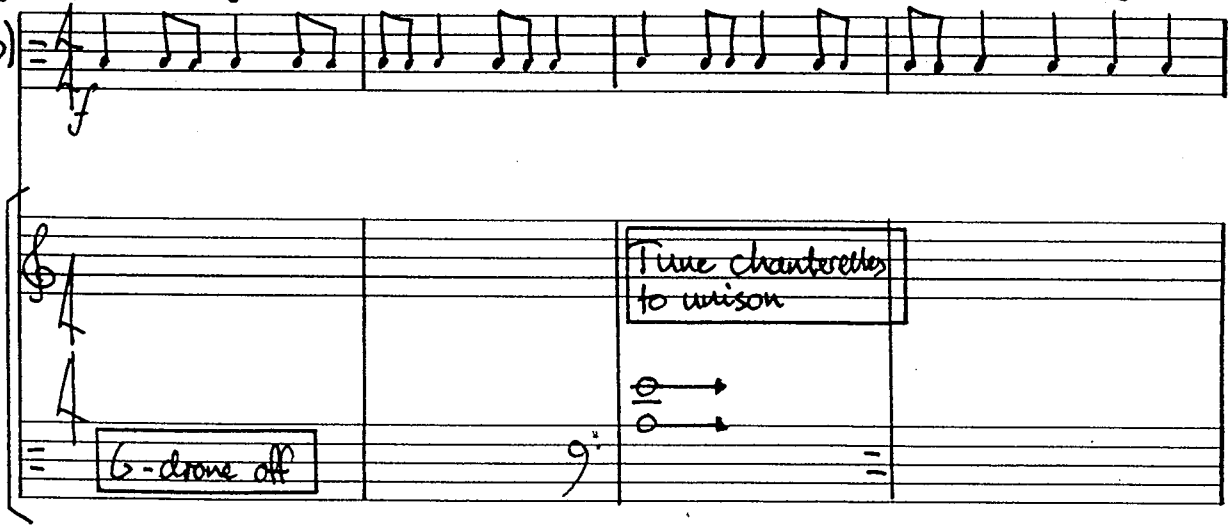


387 Tempo libre, ♩=60



V

388 Tempo giusto, allegro, ♩=144



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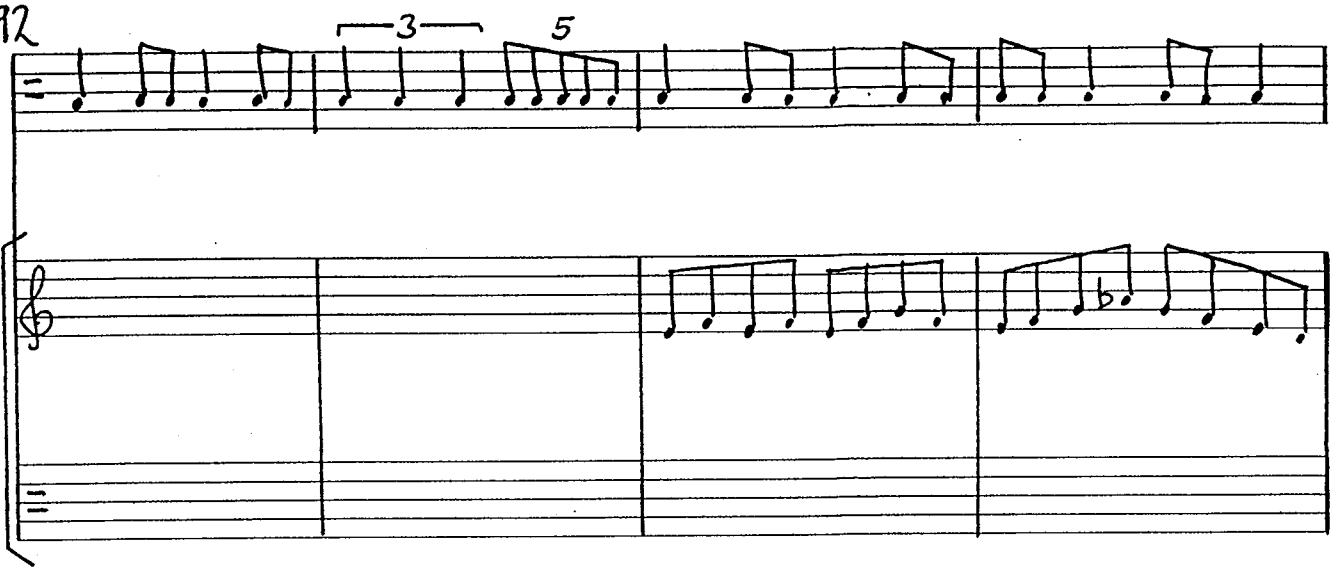

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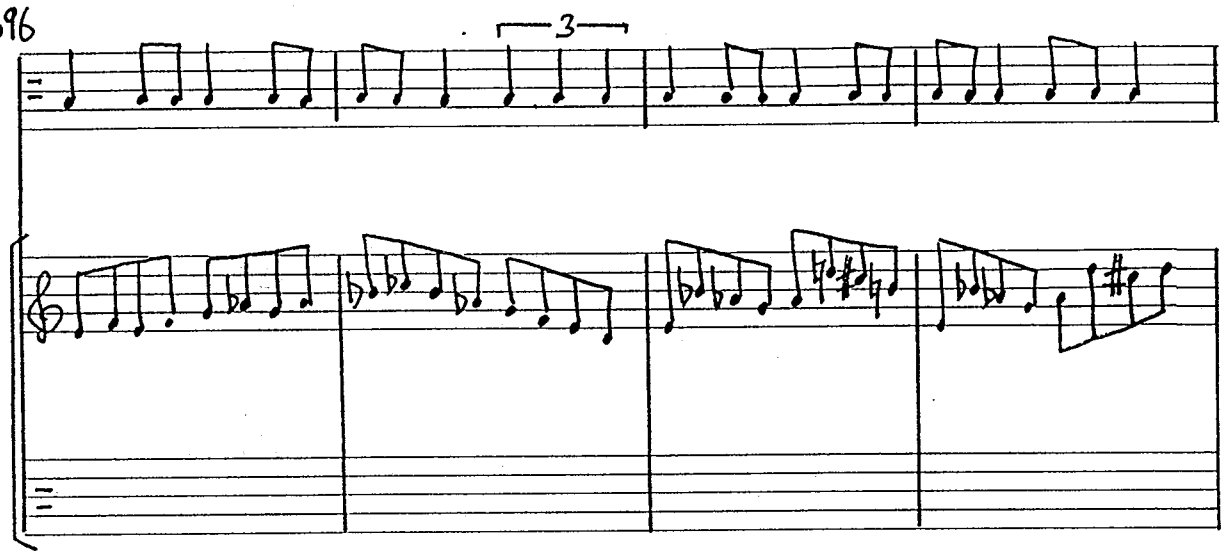

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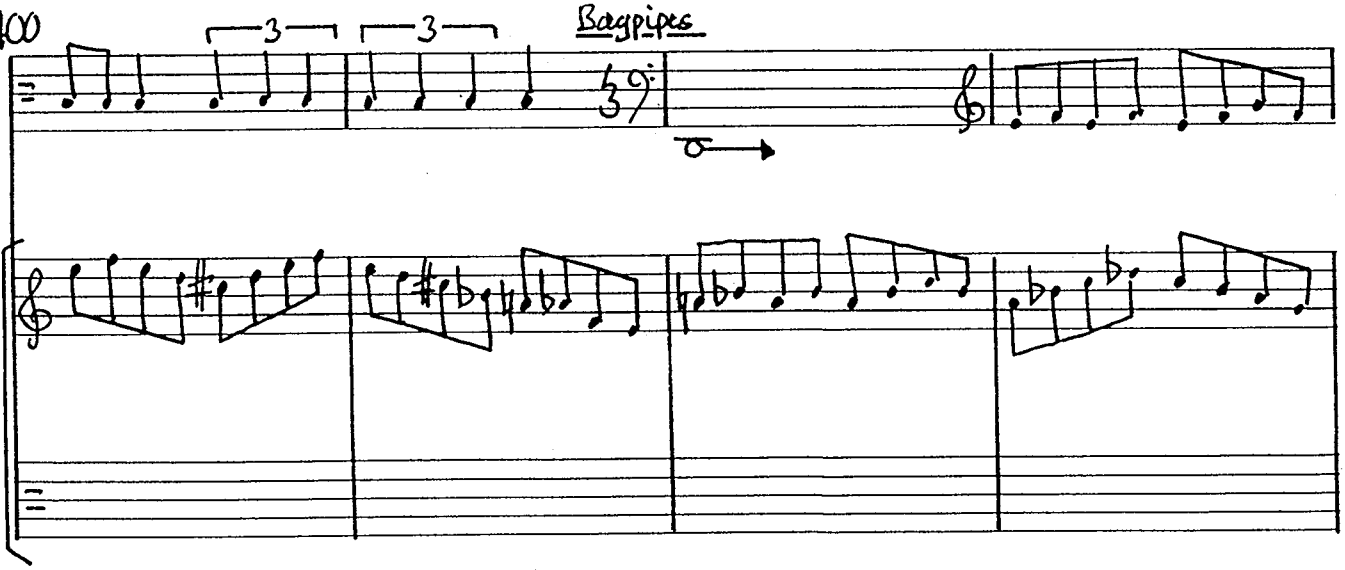

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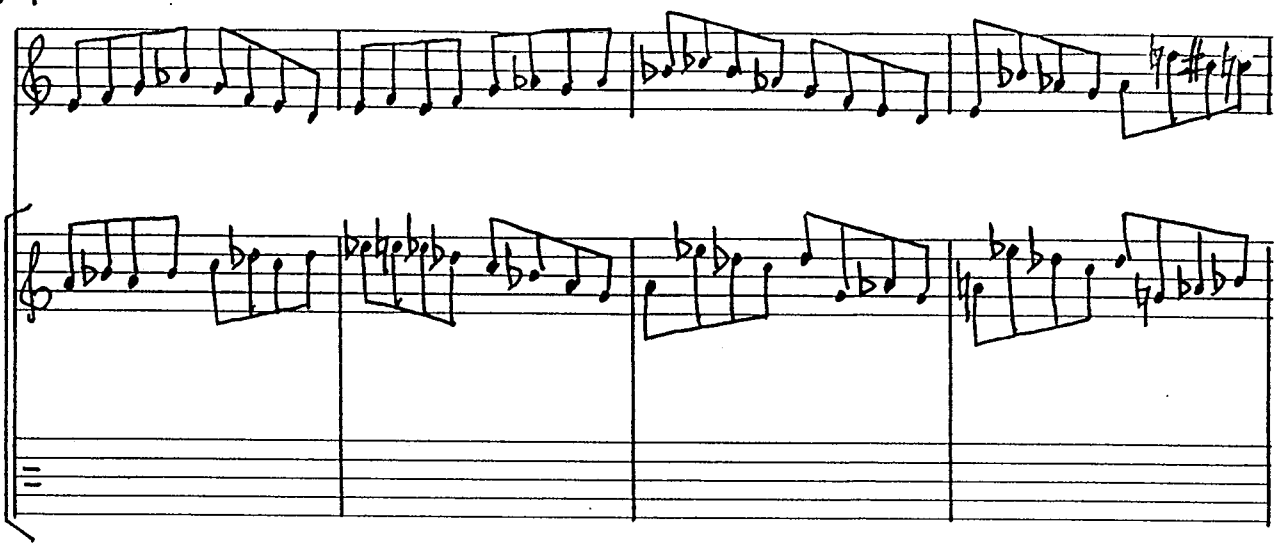

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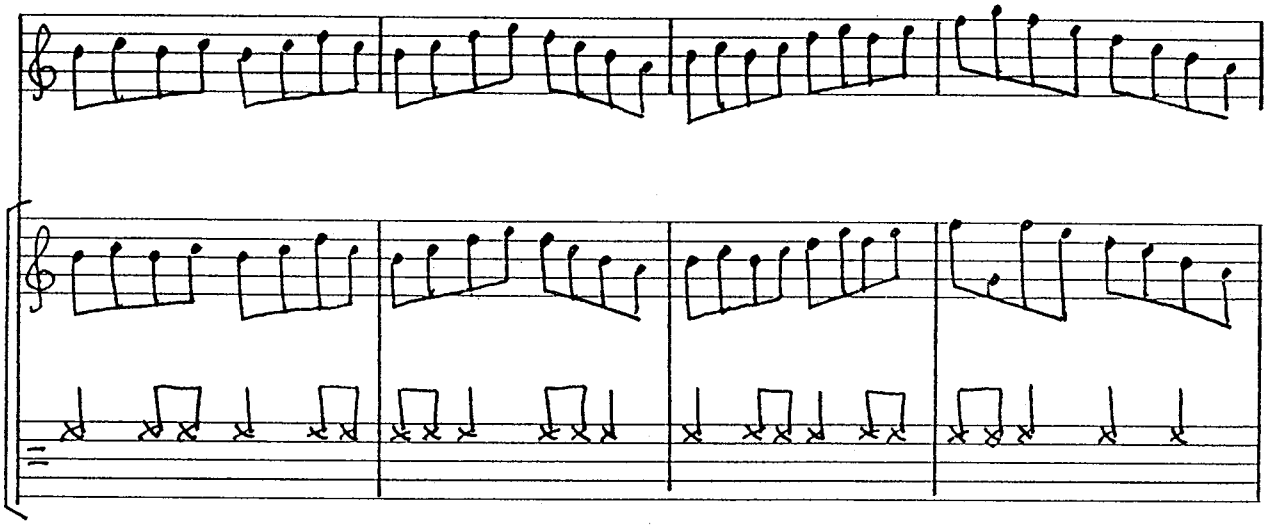

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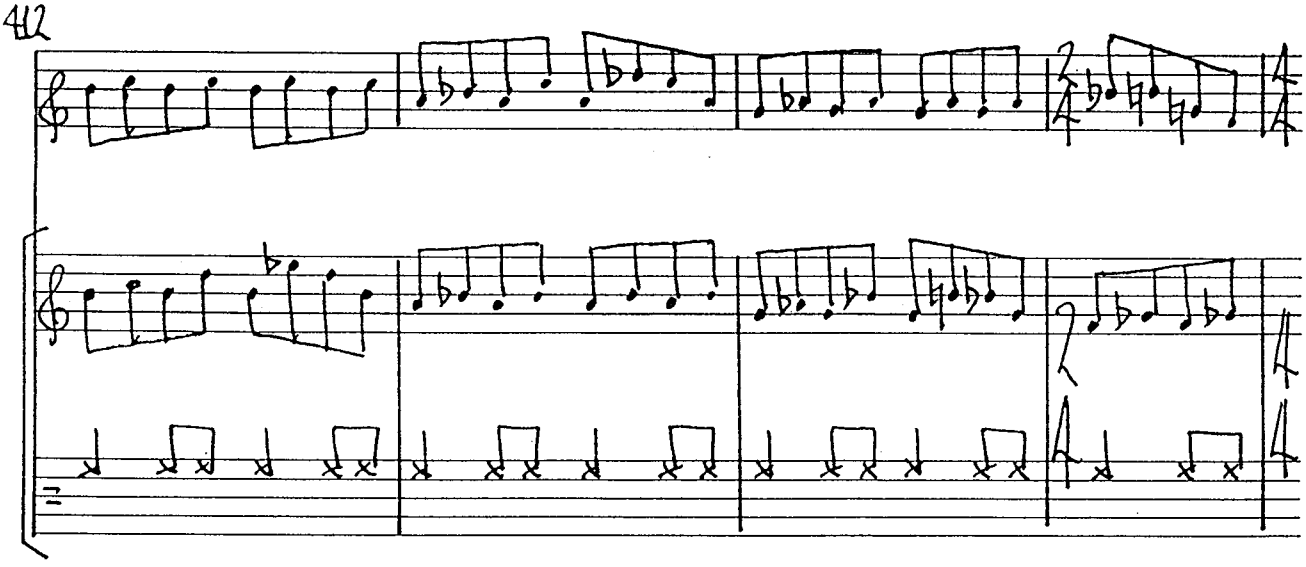

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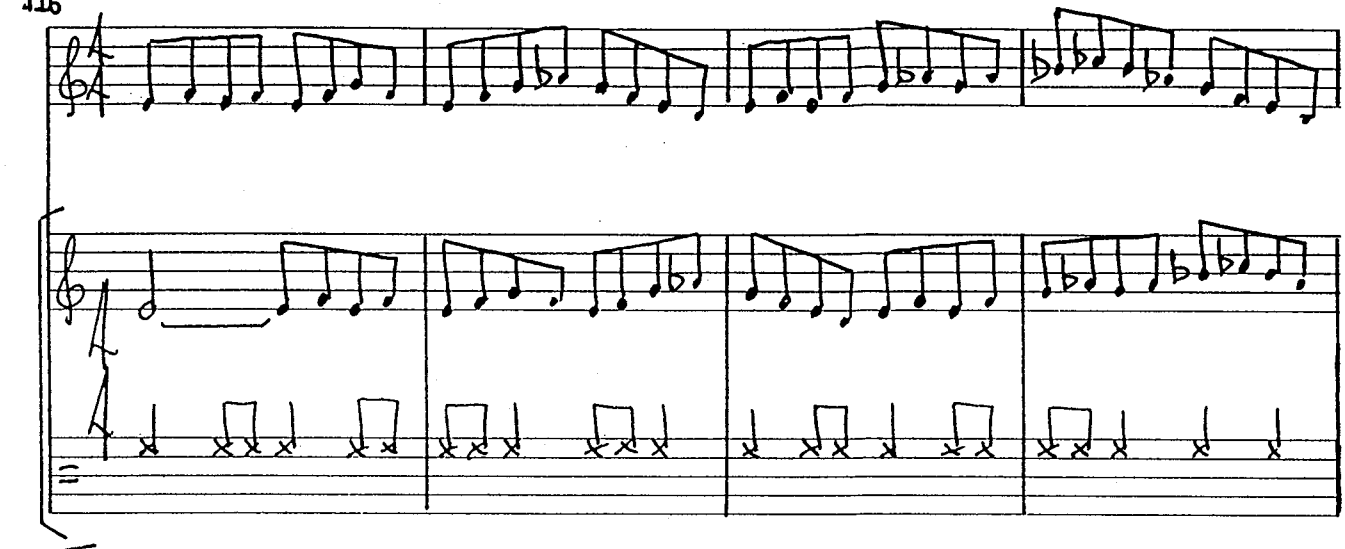

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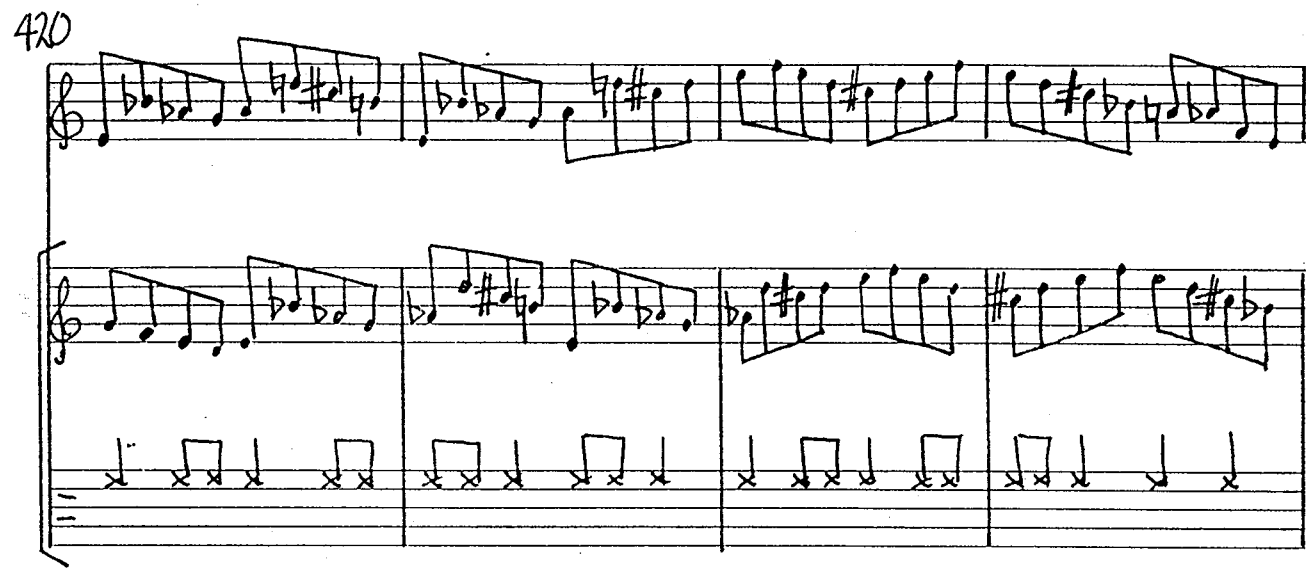

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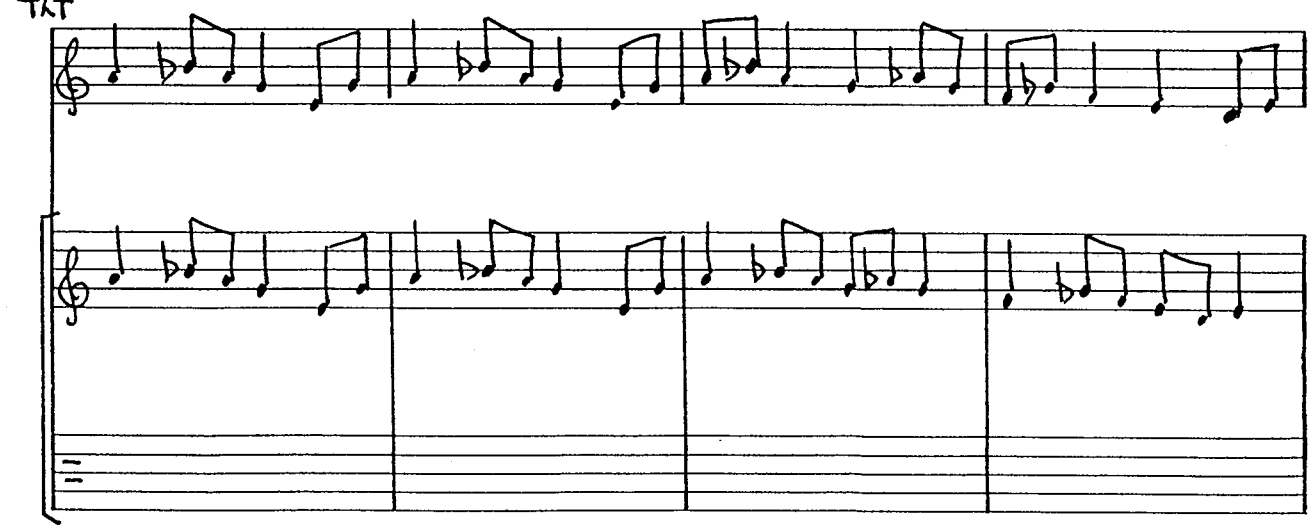

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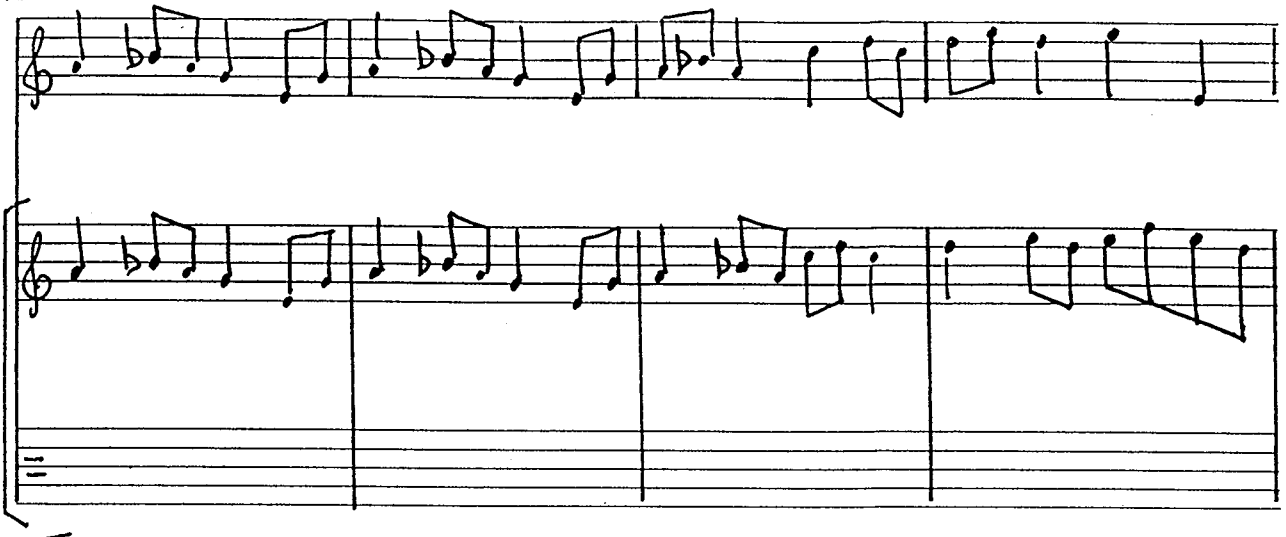

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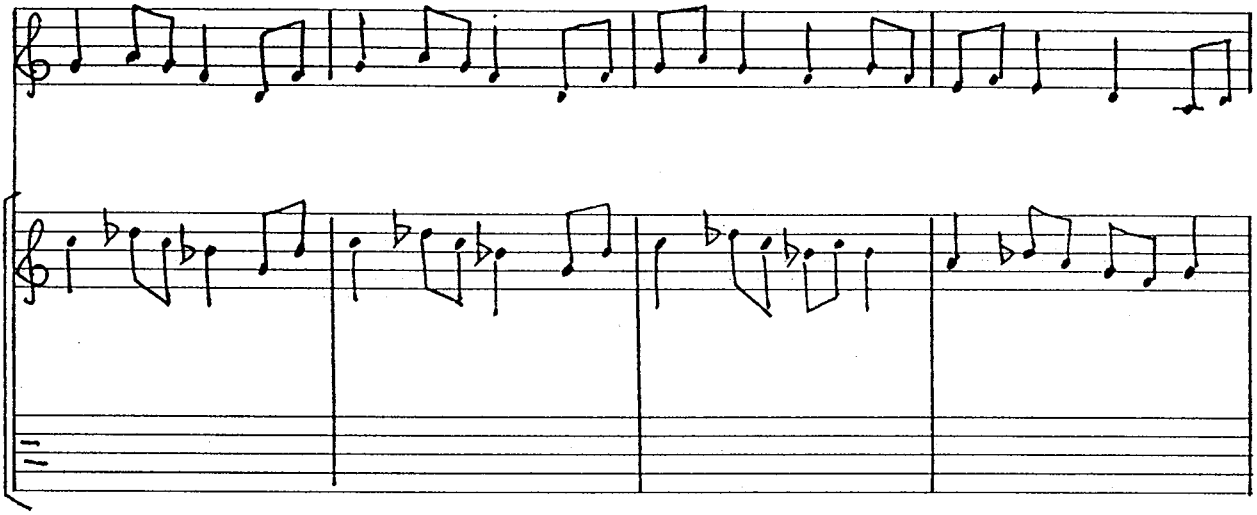

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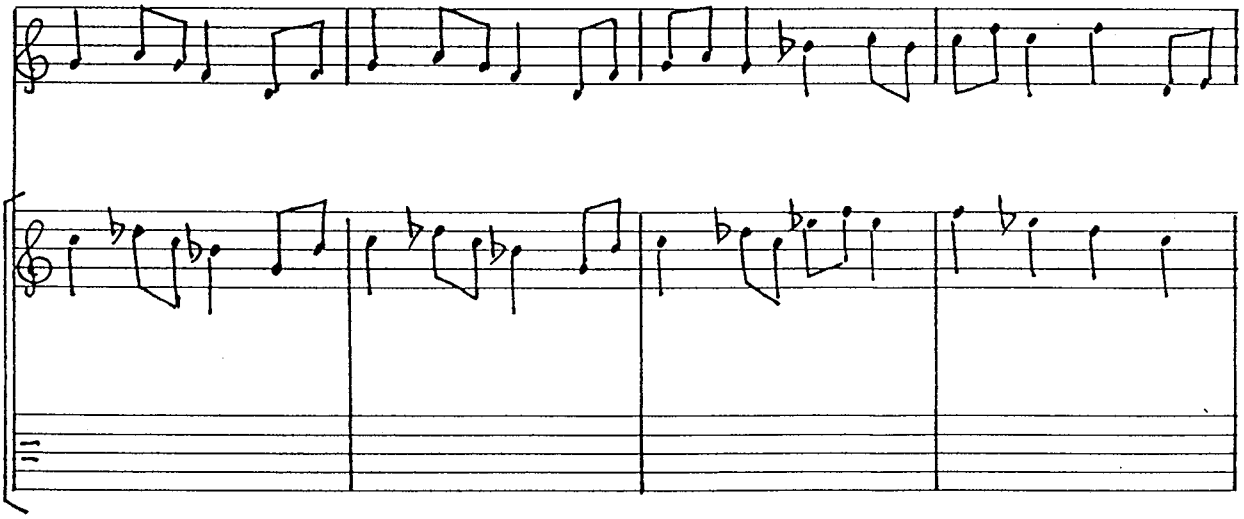

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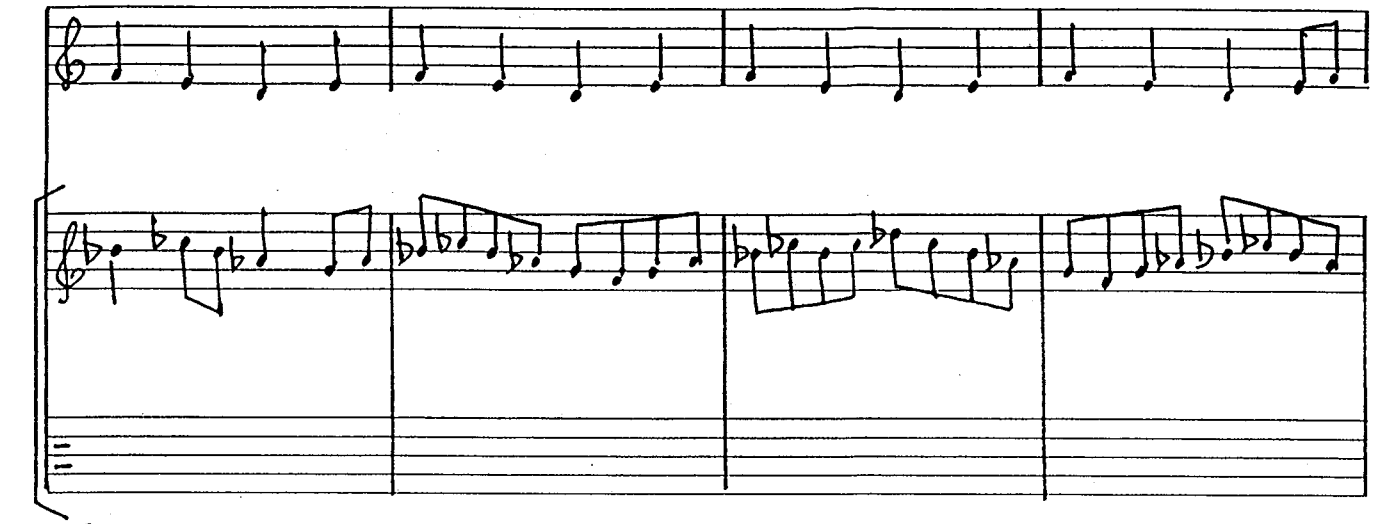

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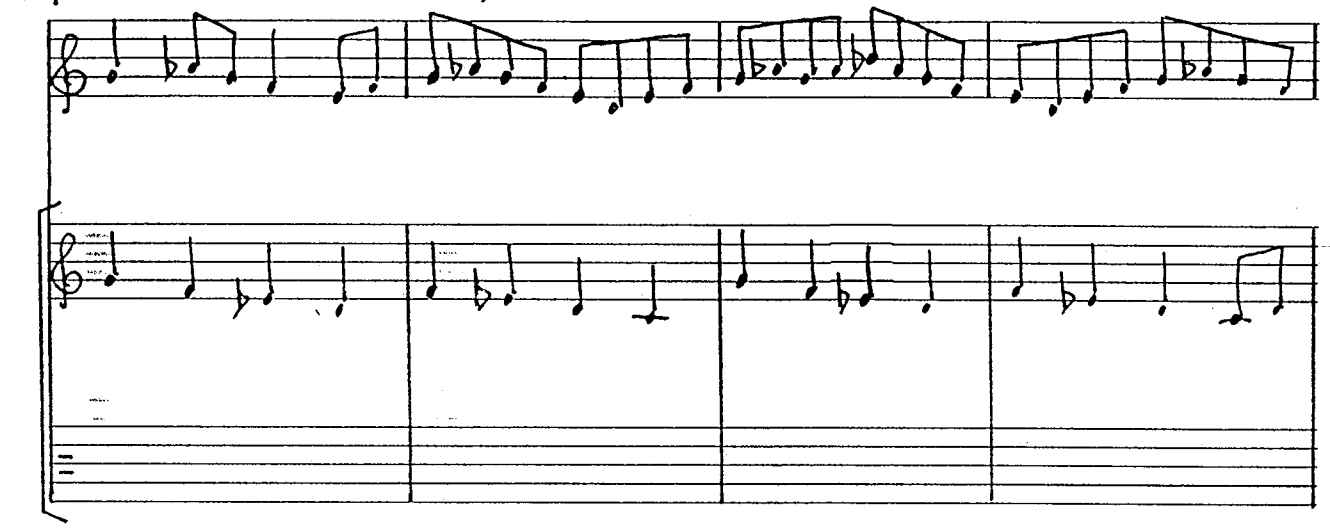

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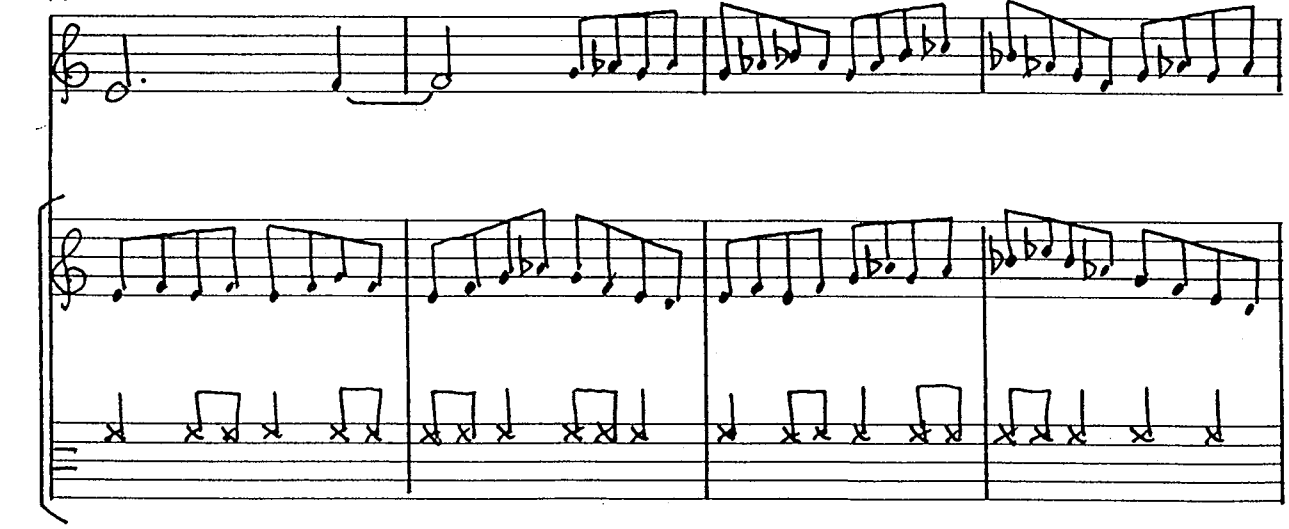

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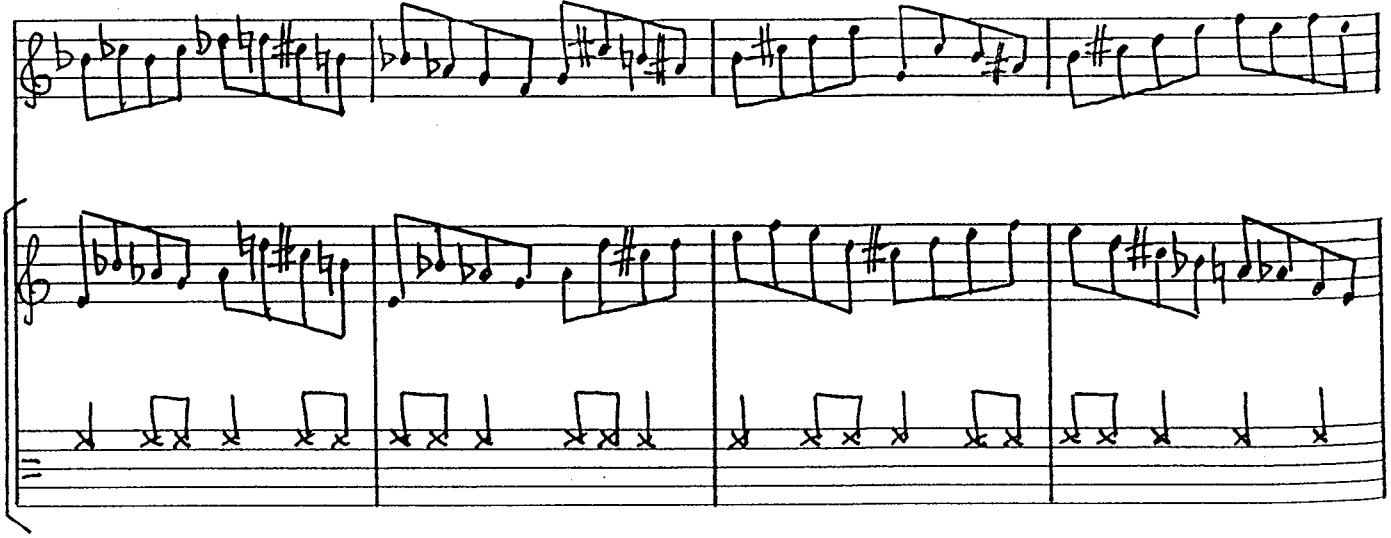

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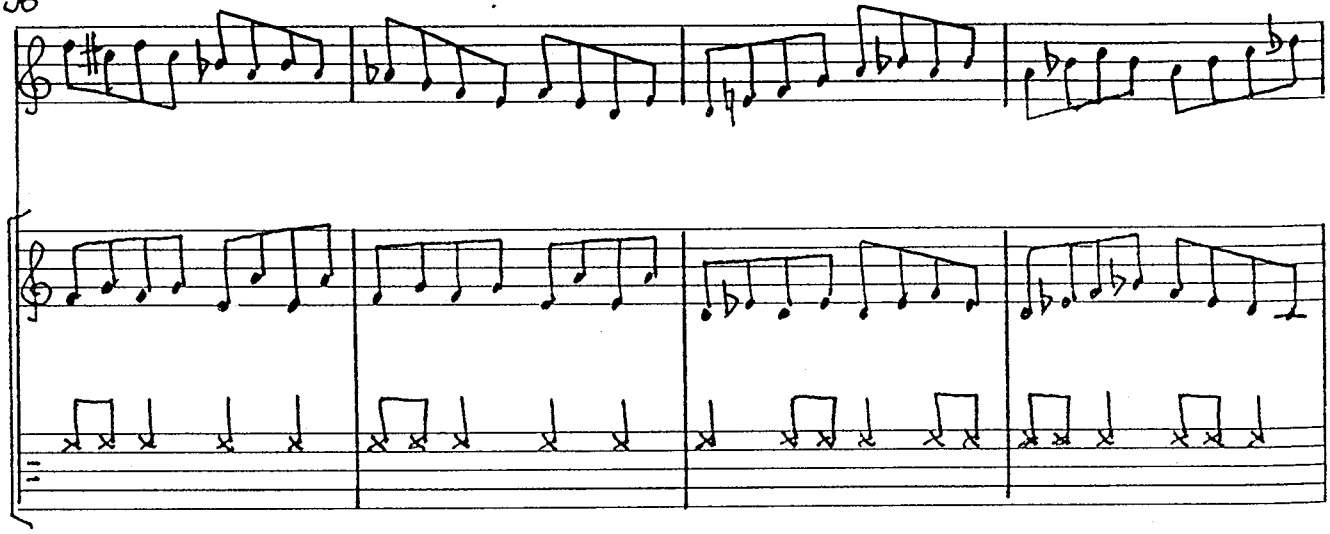

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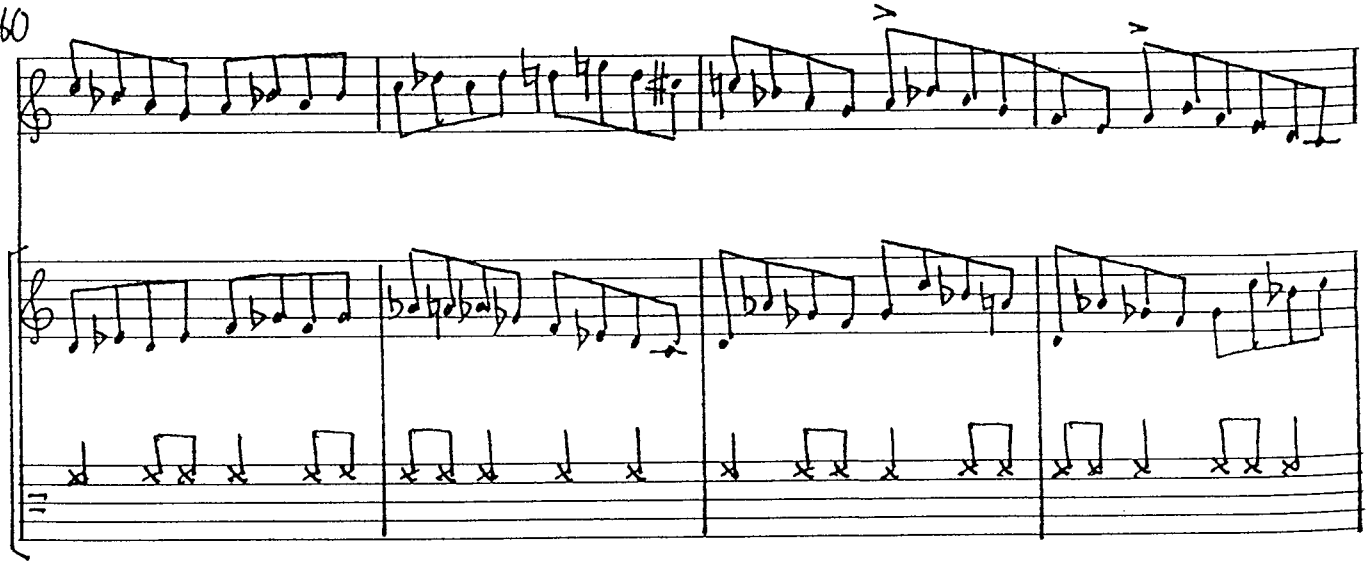

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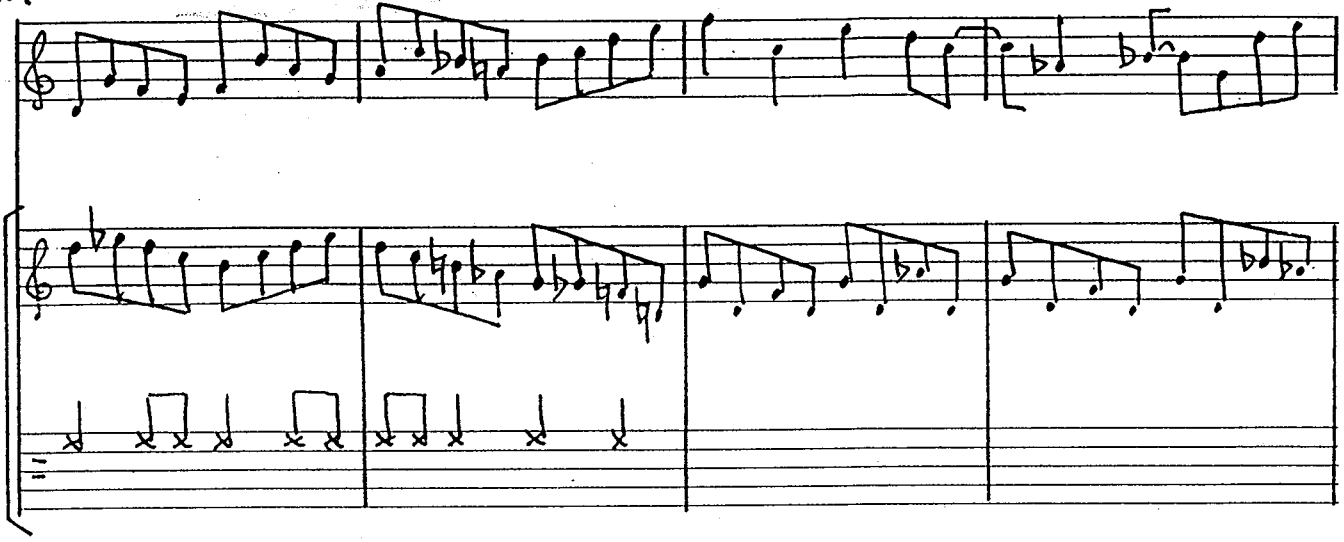

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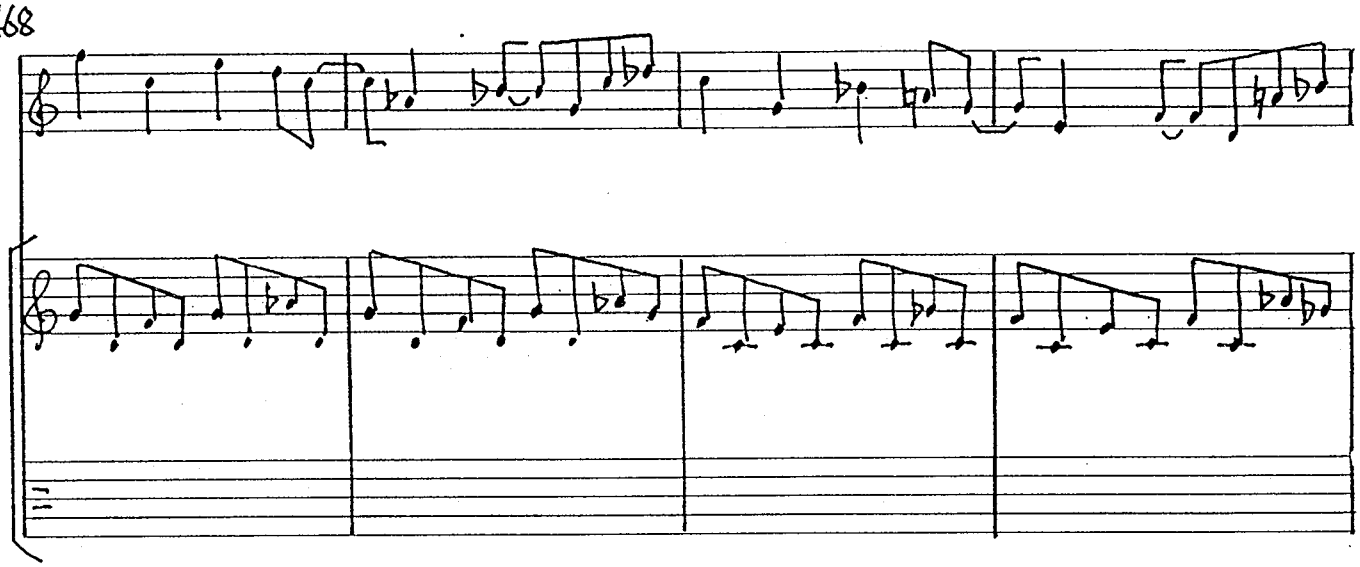

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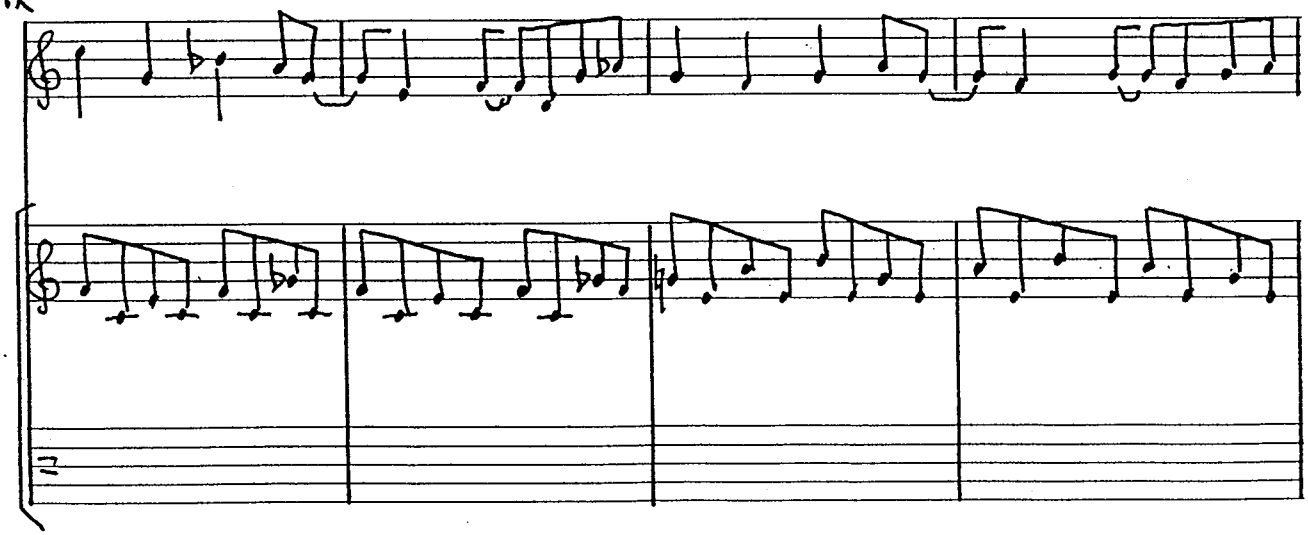

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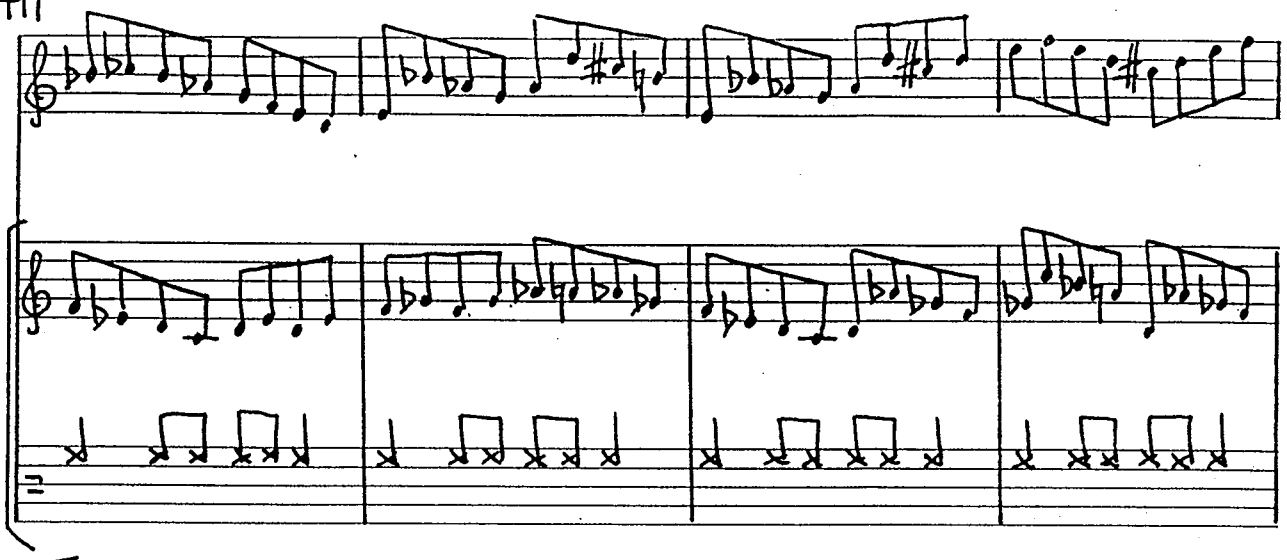

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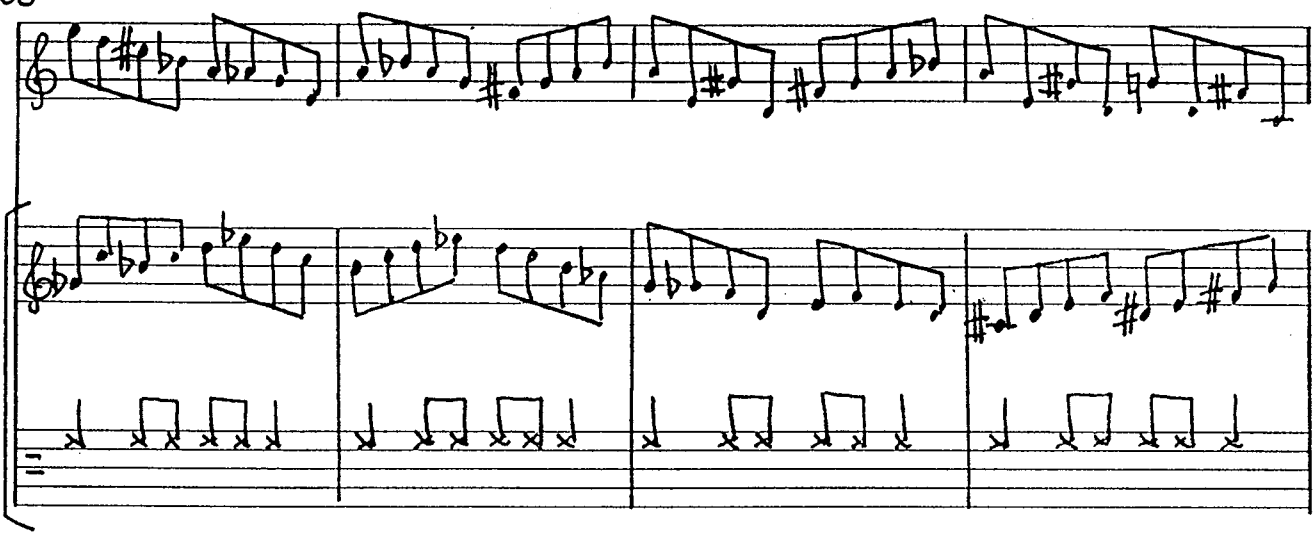

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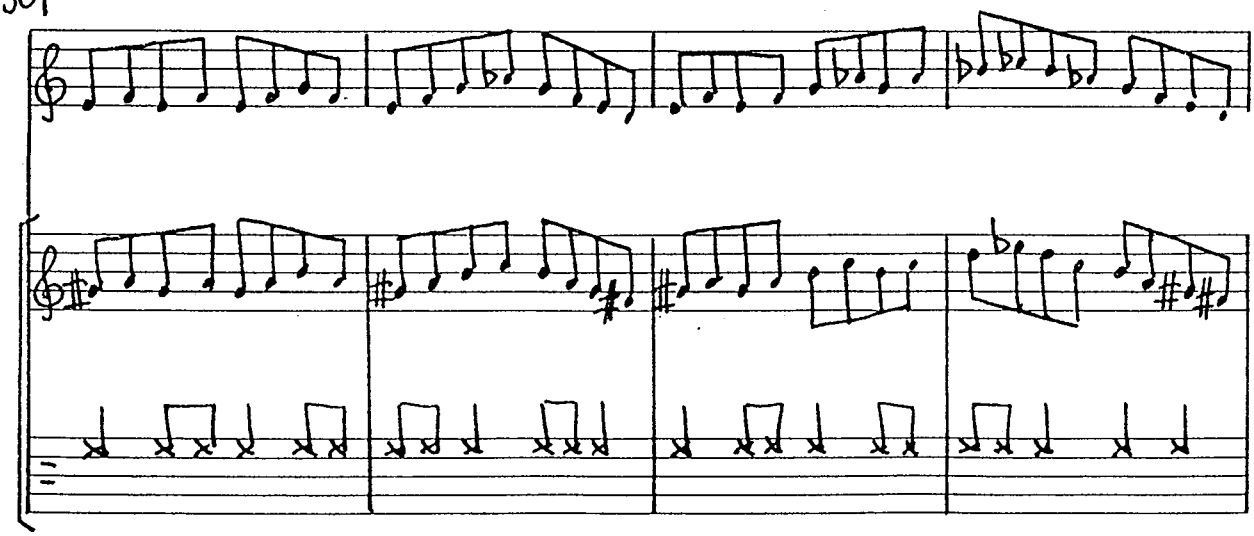

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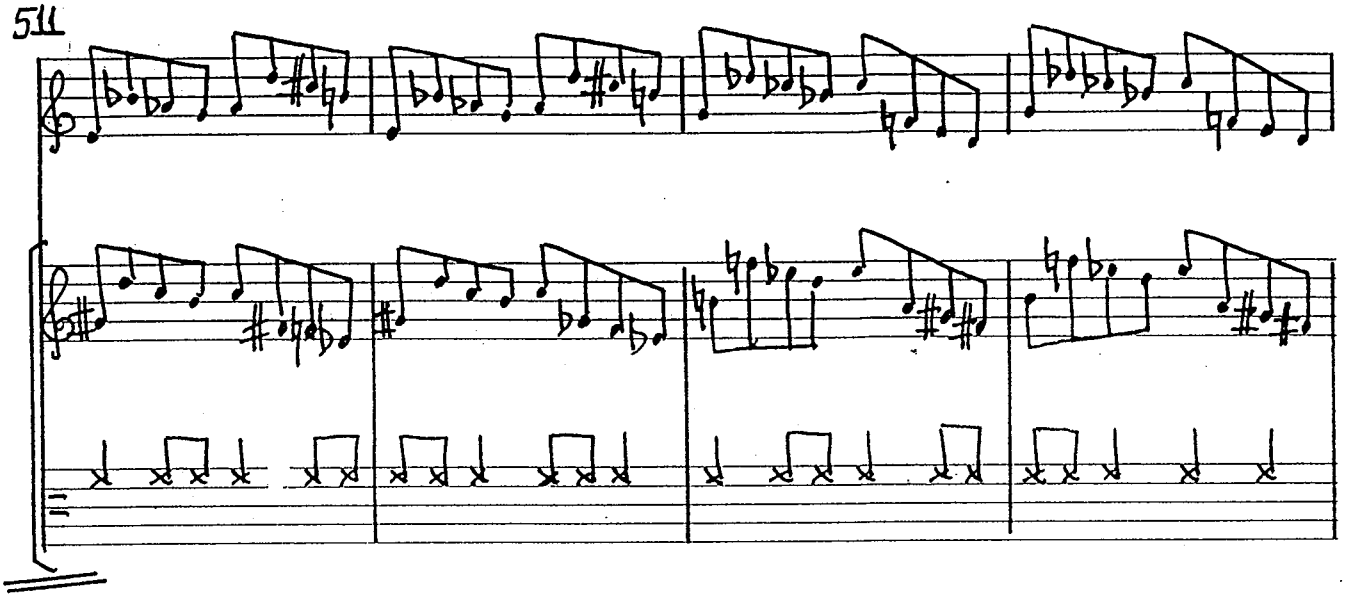

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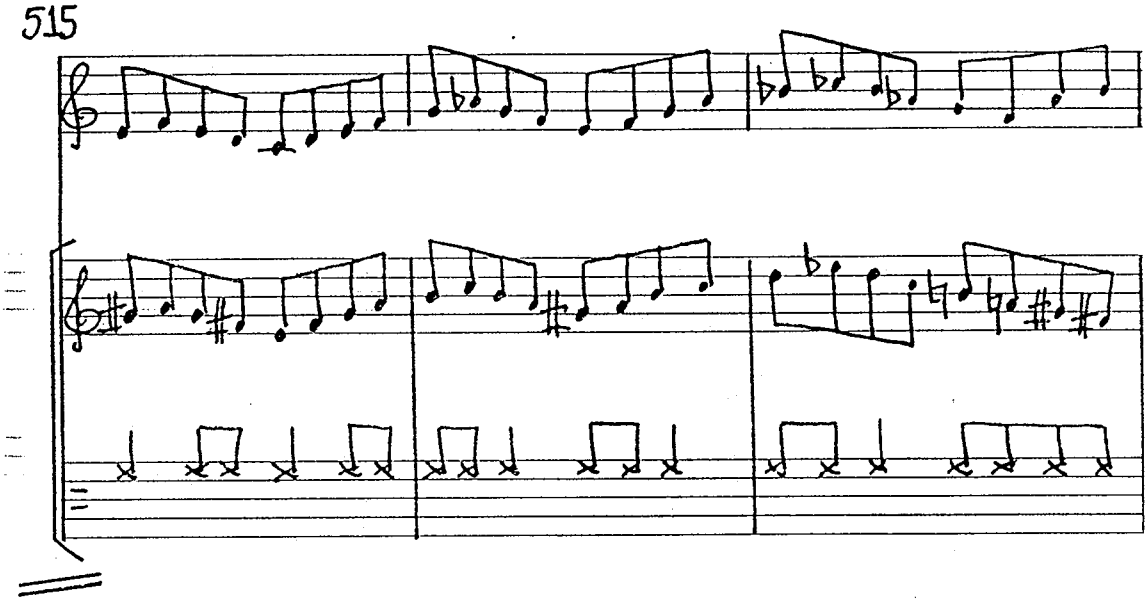

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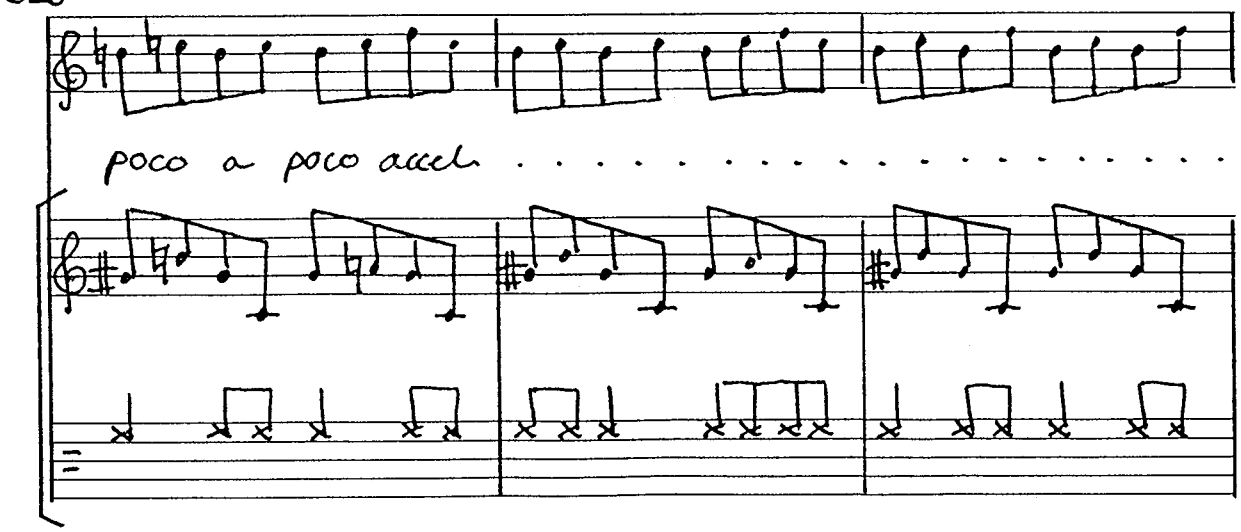

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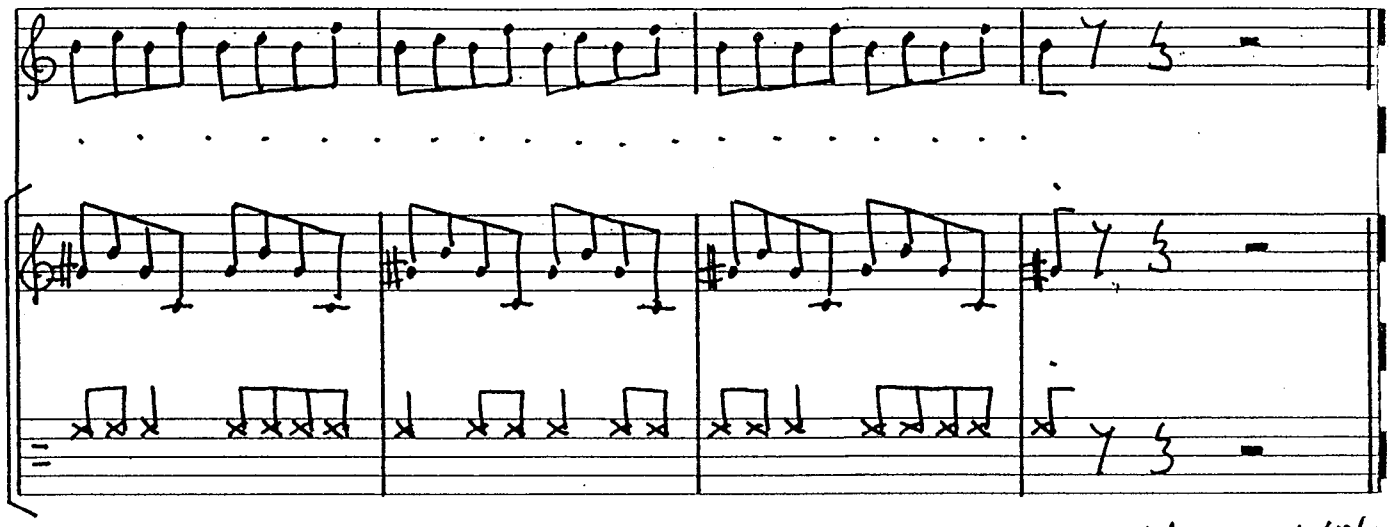
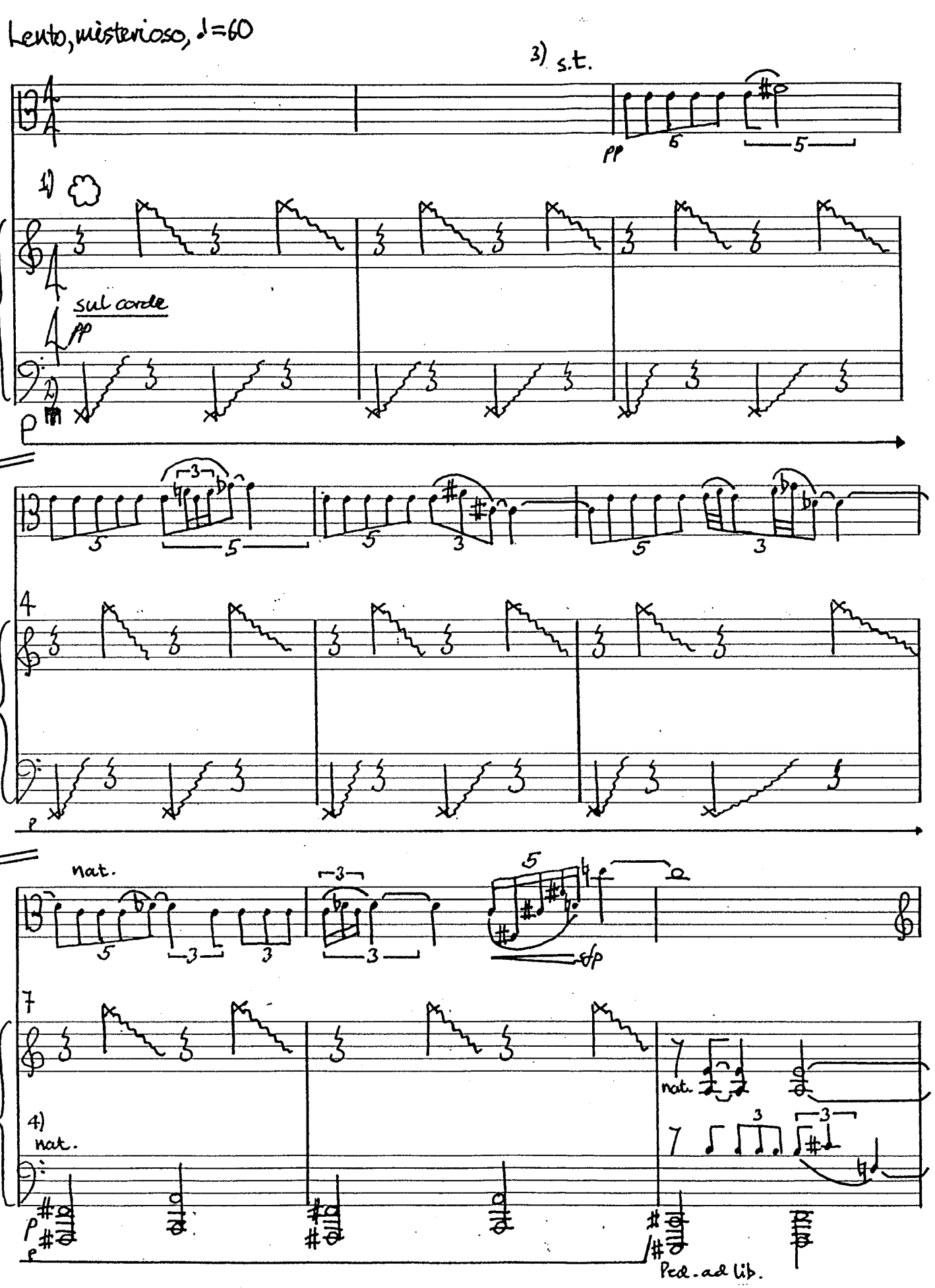


10/12/95
4/9/96

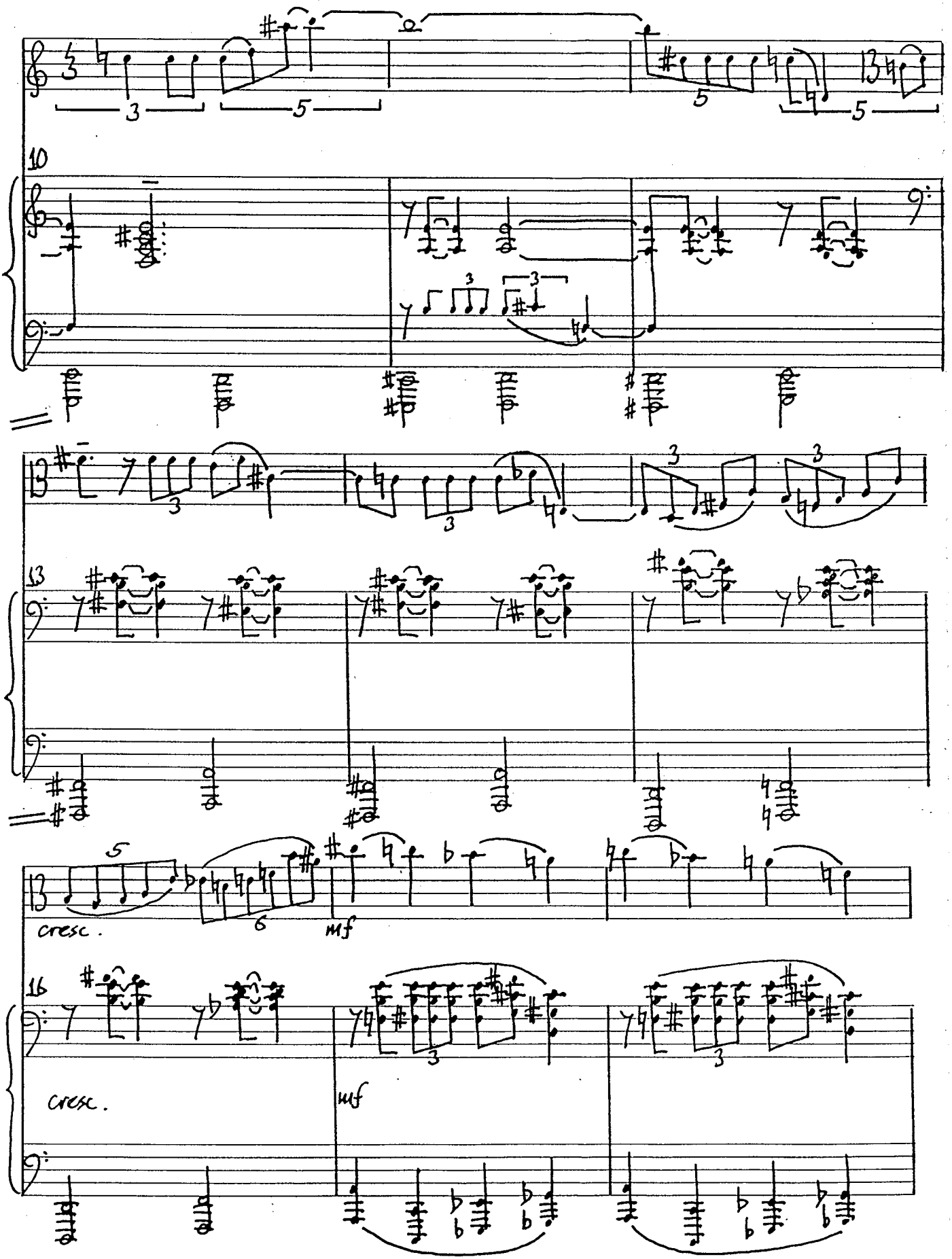
Robert Wieck

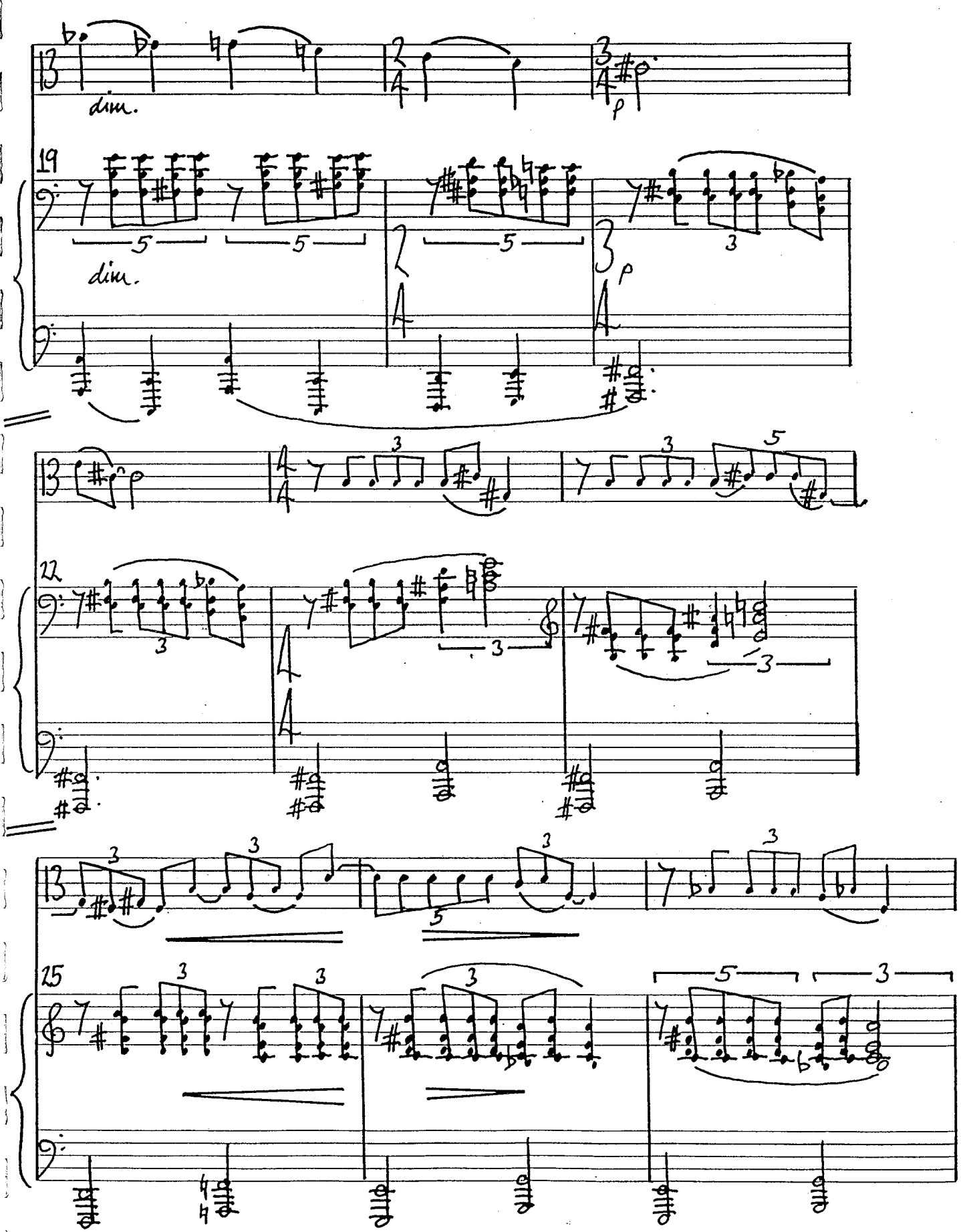
The Ladder Reaches to the Moon

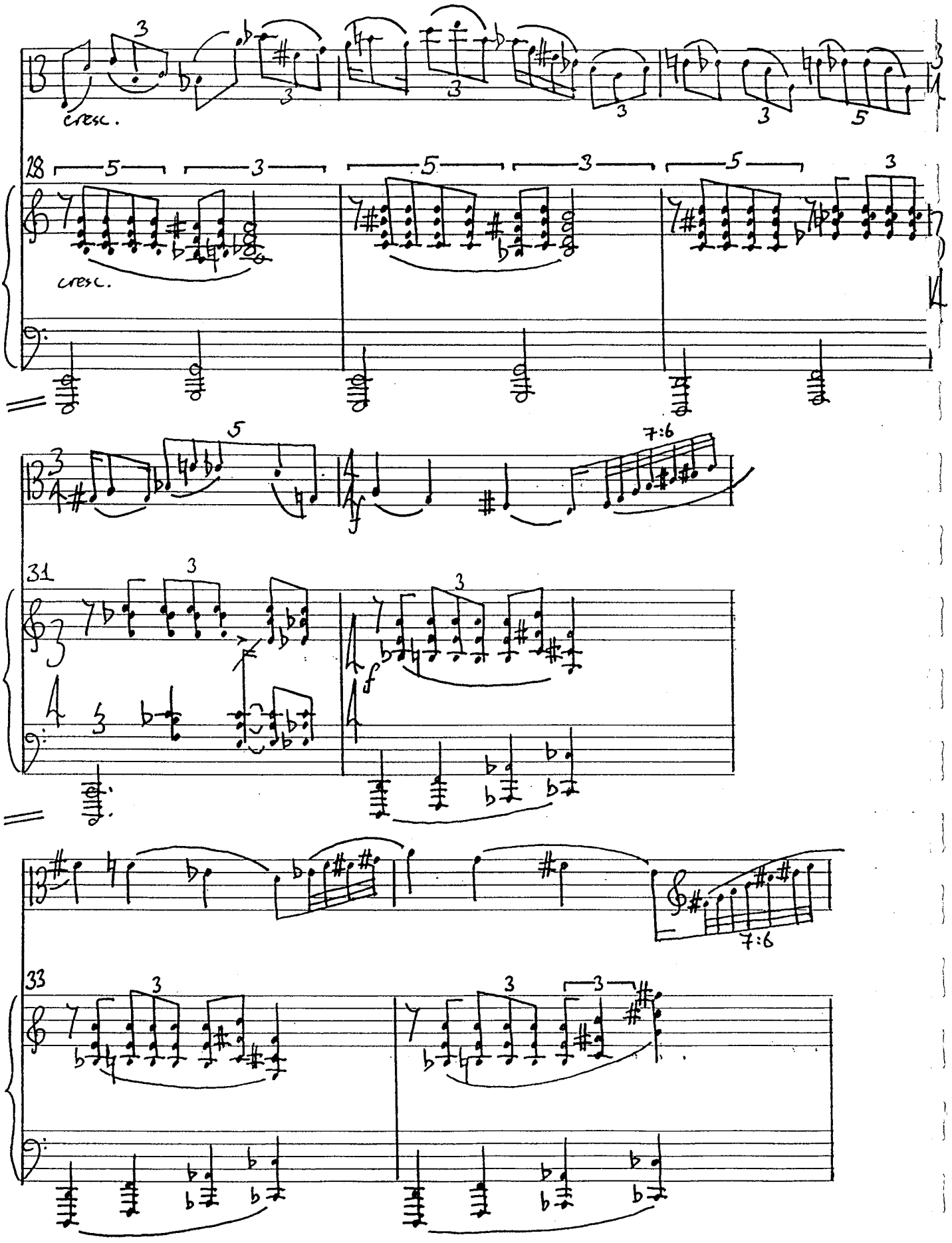
viola and piano

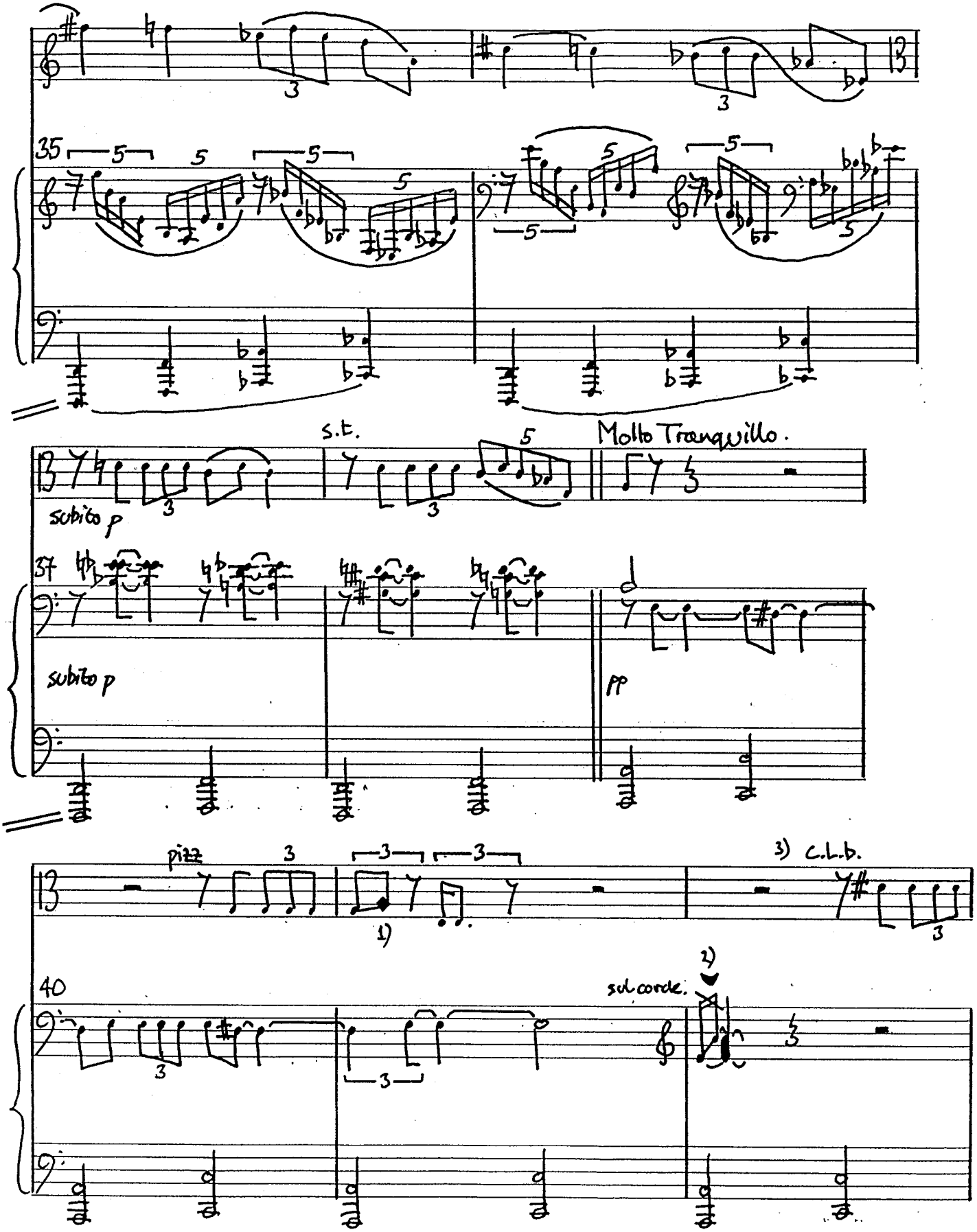


1) glissando across strings with soft cloth
2) glissando across strings with brush
3) sul tasto
4) play on keys in the normal manner.


10
13
cresc.
mf
16
cresc.
mf


dim.
p
19
dim.
p
22
25

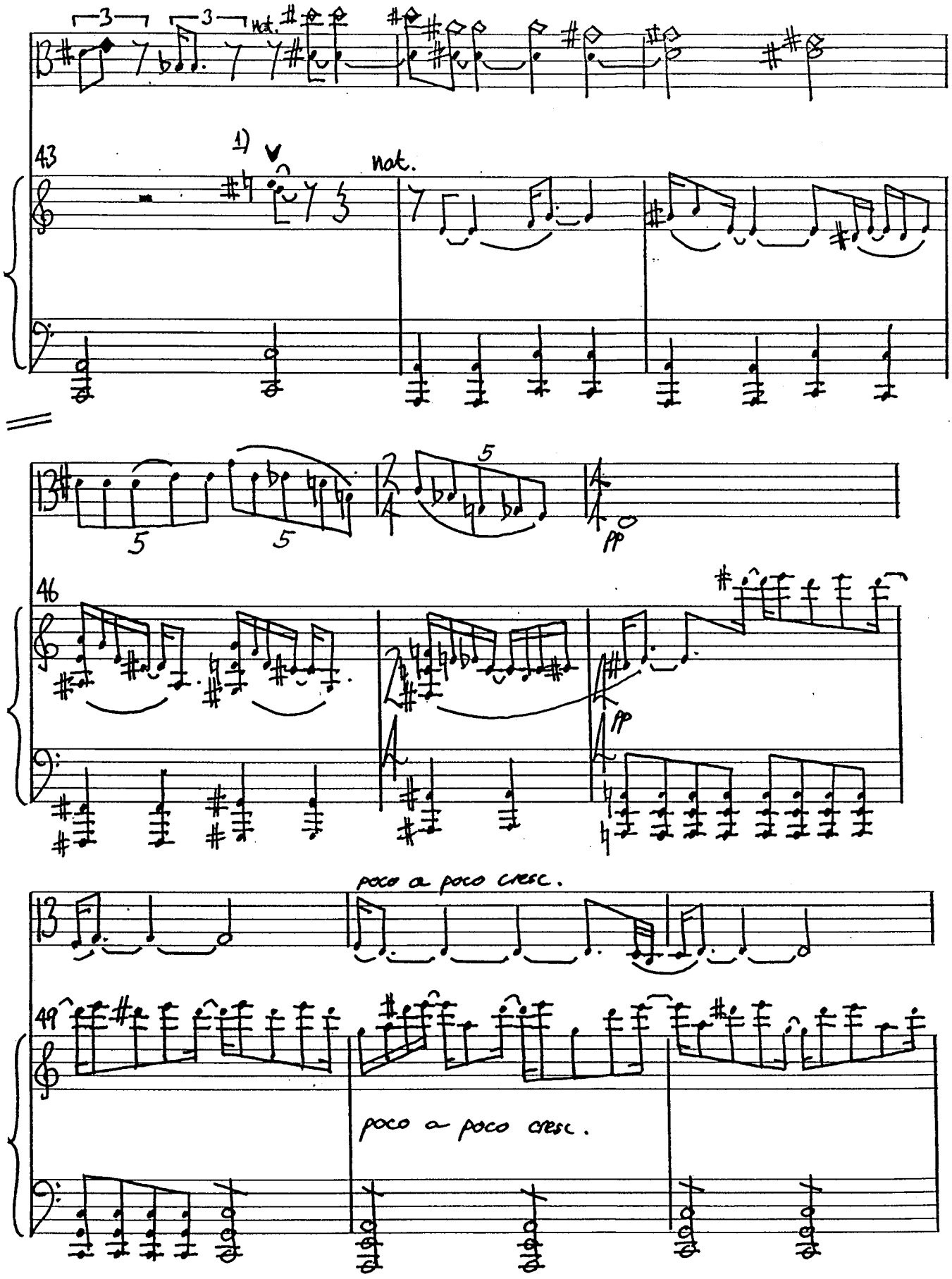

cresc.
28
cresc.
31
f
7:6
33



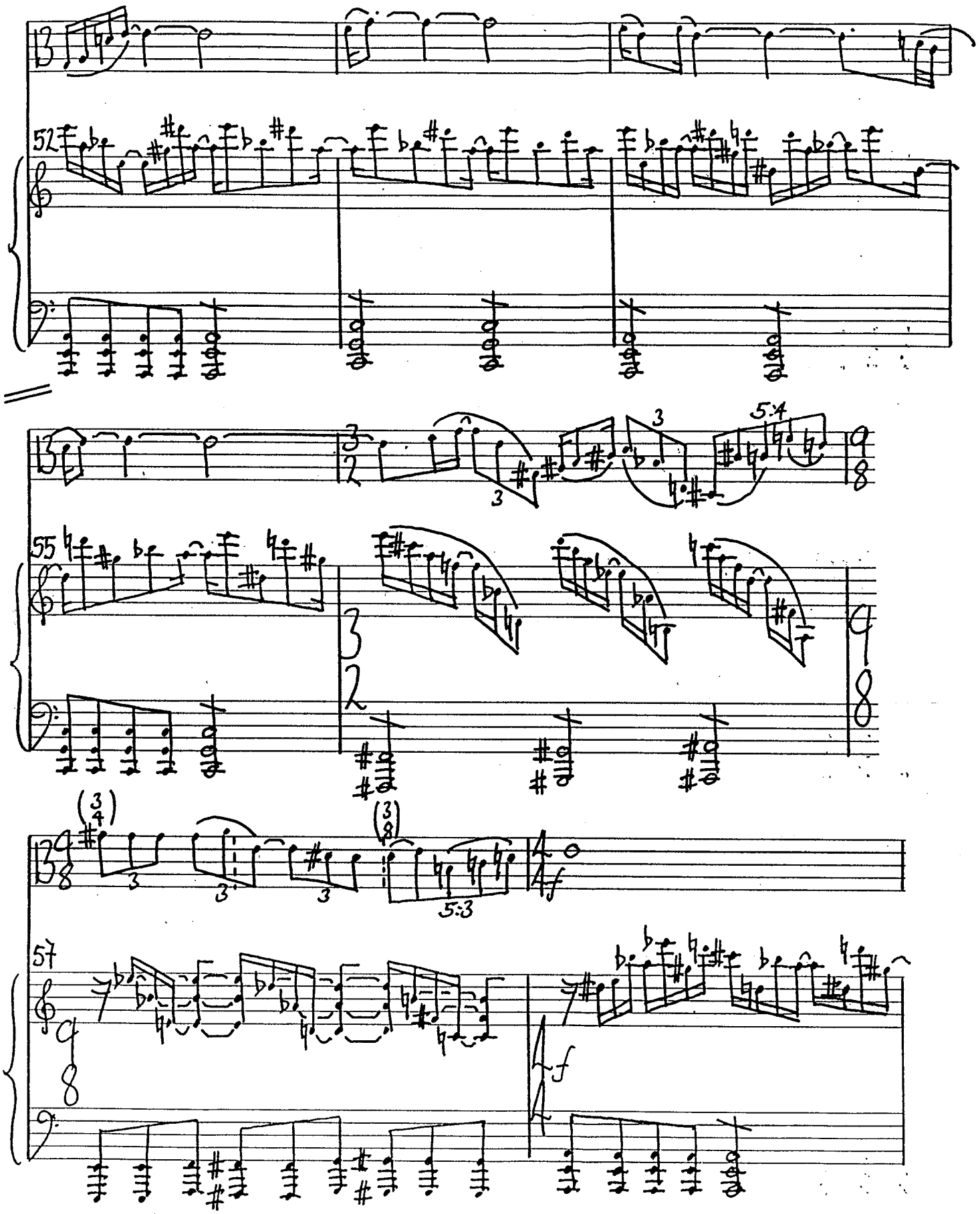
1) glissando to note but do not articulate

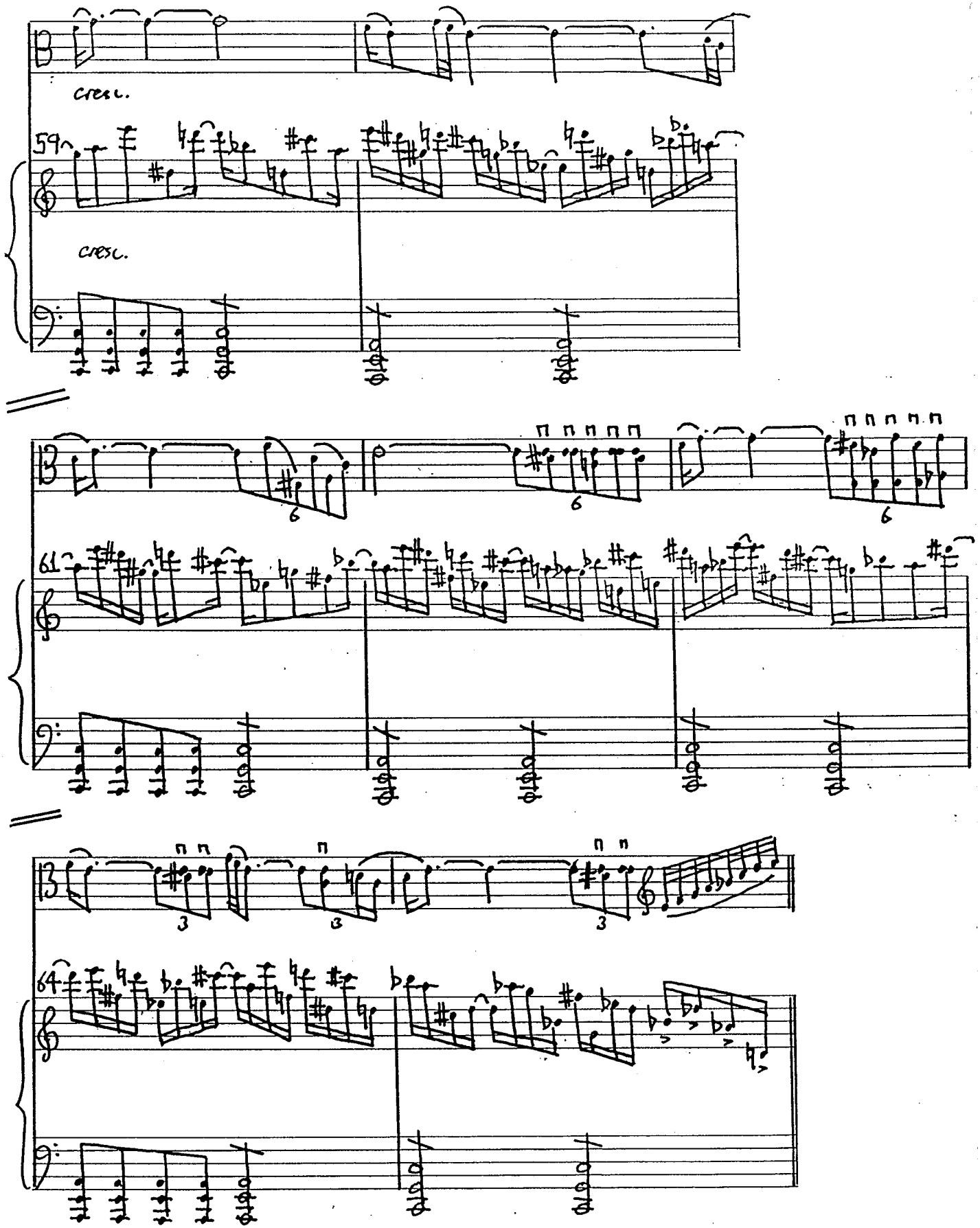
2) glissando with fingernail across strings

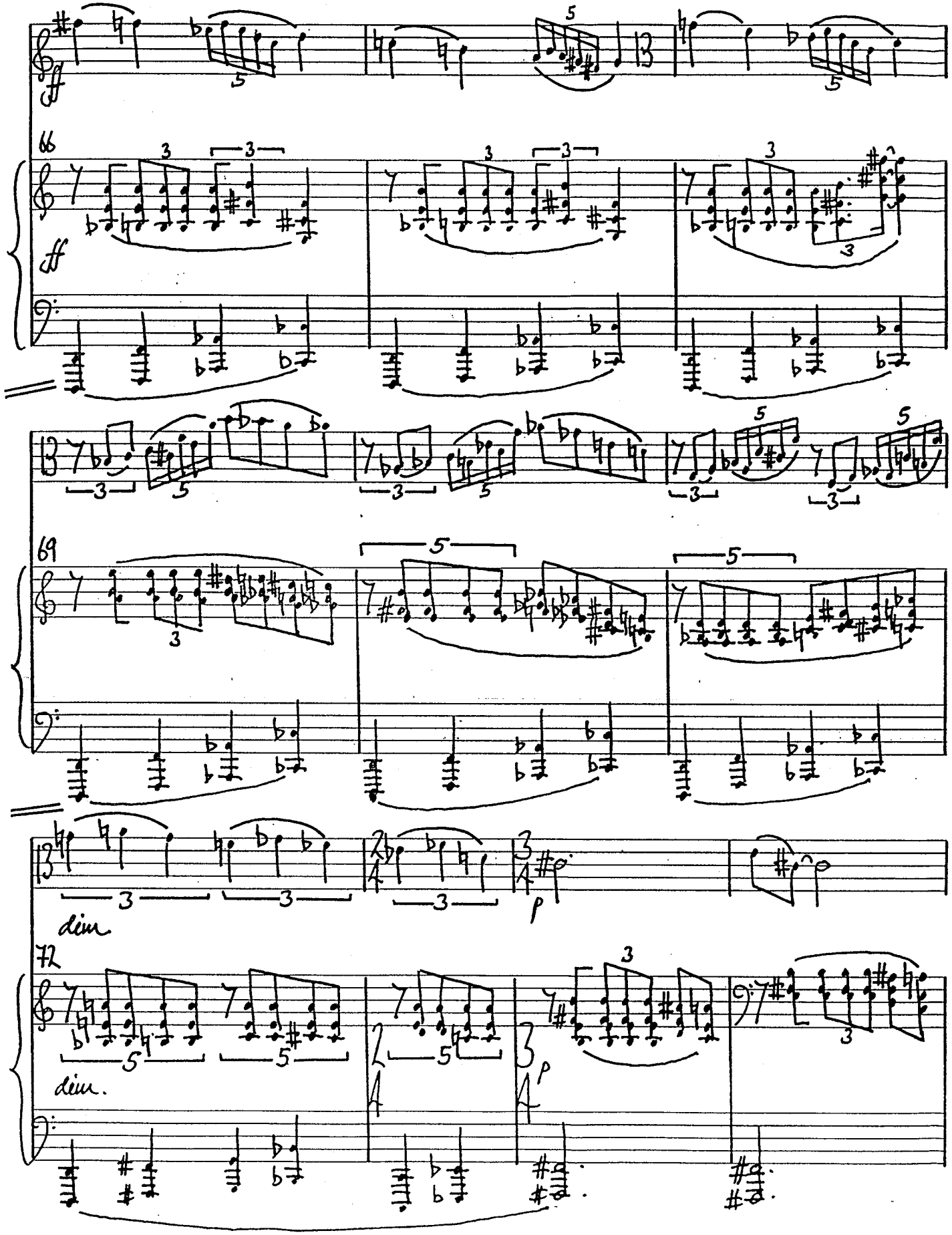
3) col legno battuto

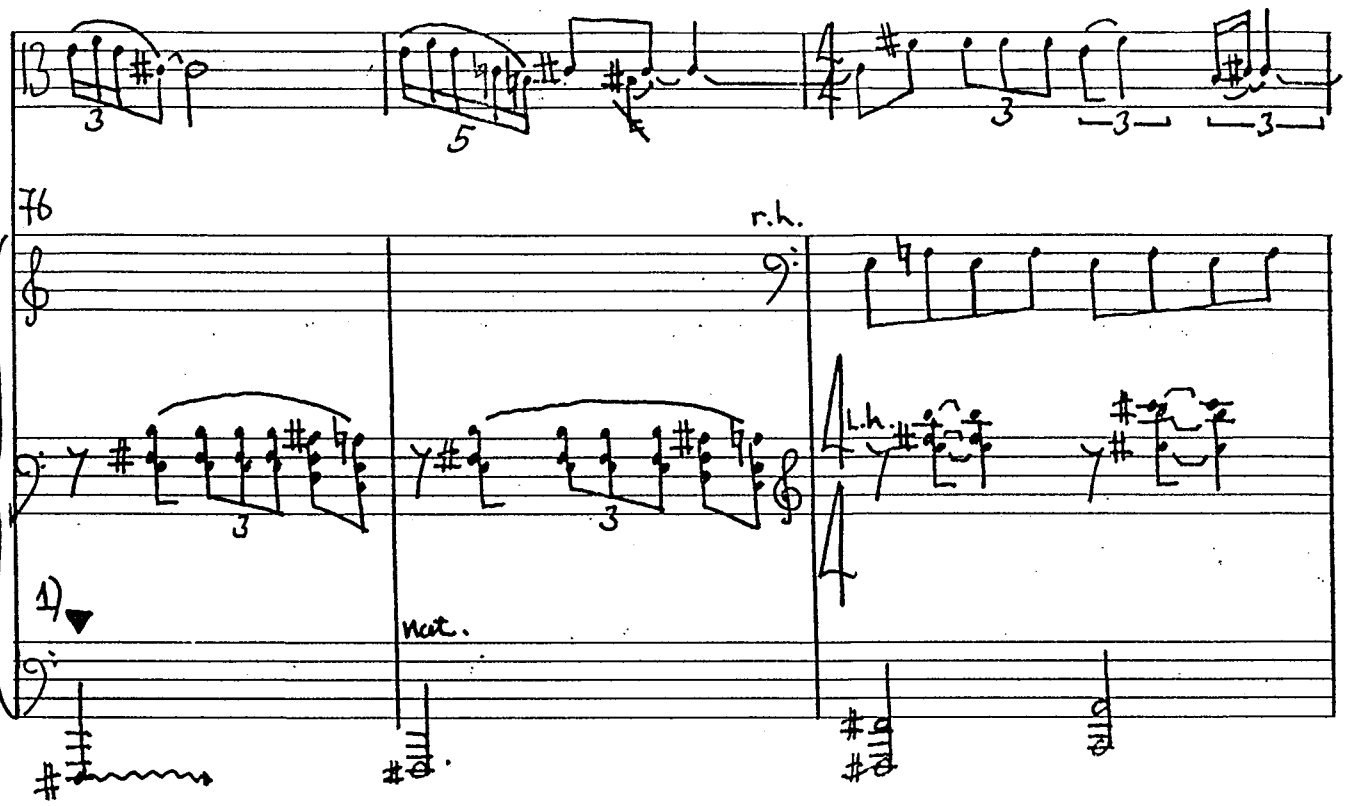


1) pluck strings with fingernails.

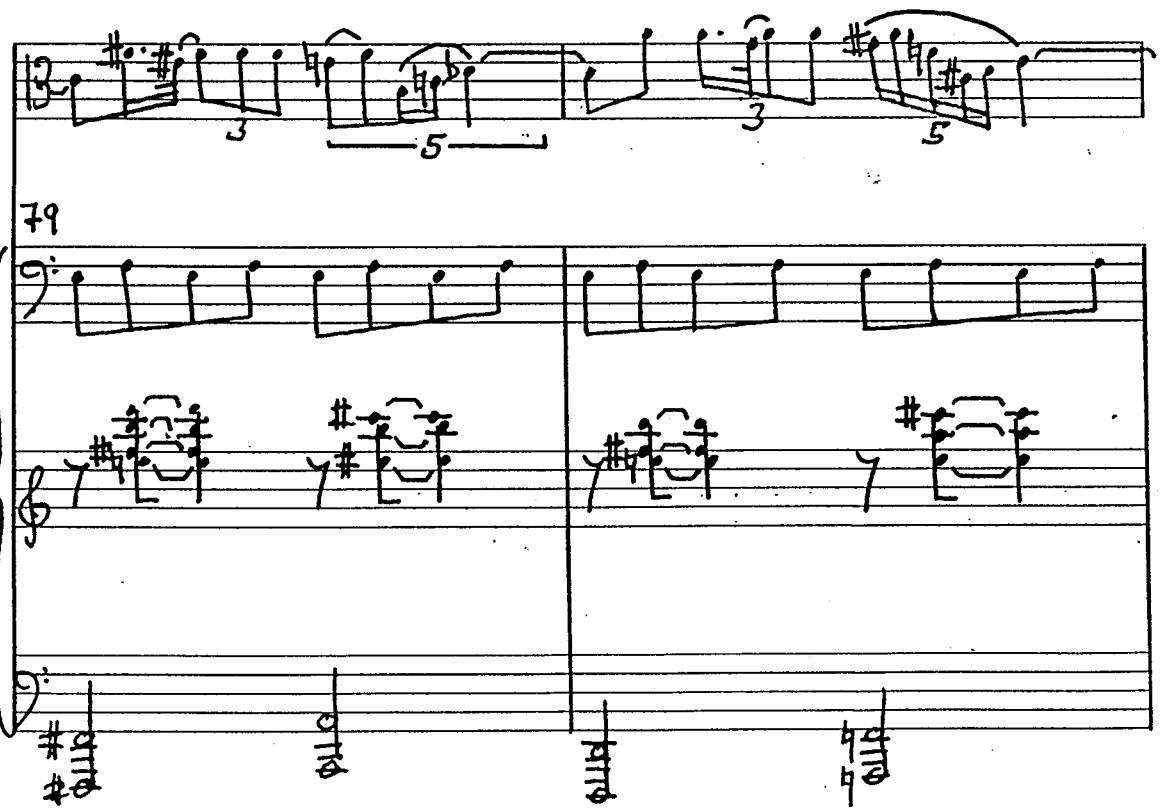

52
55
57
f

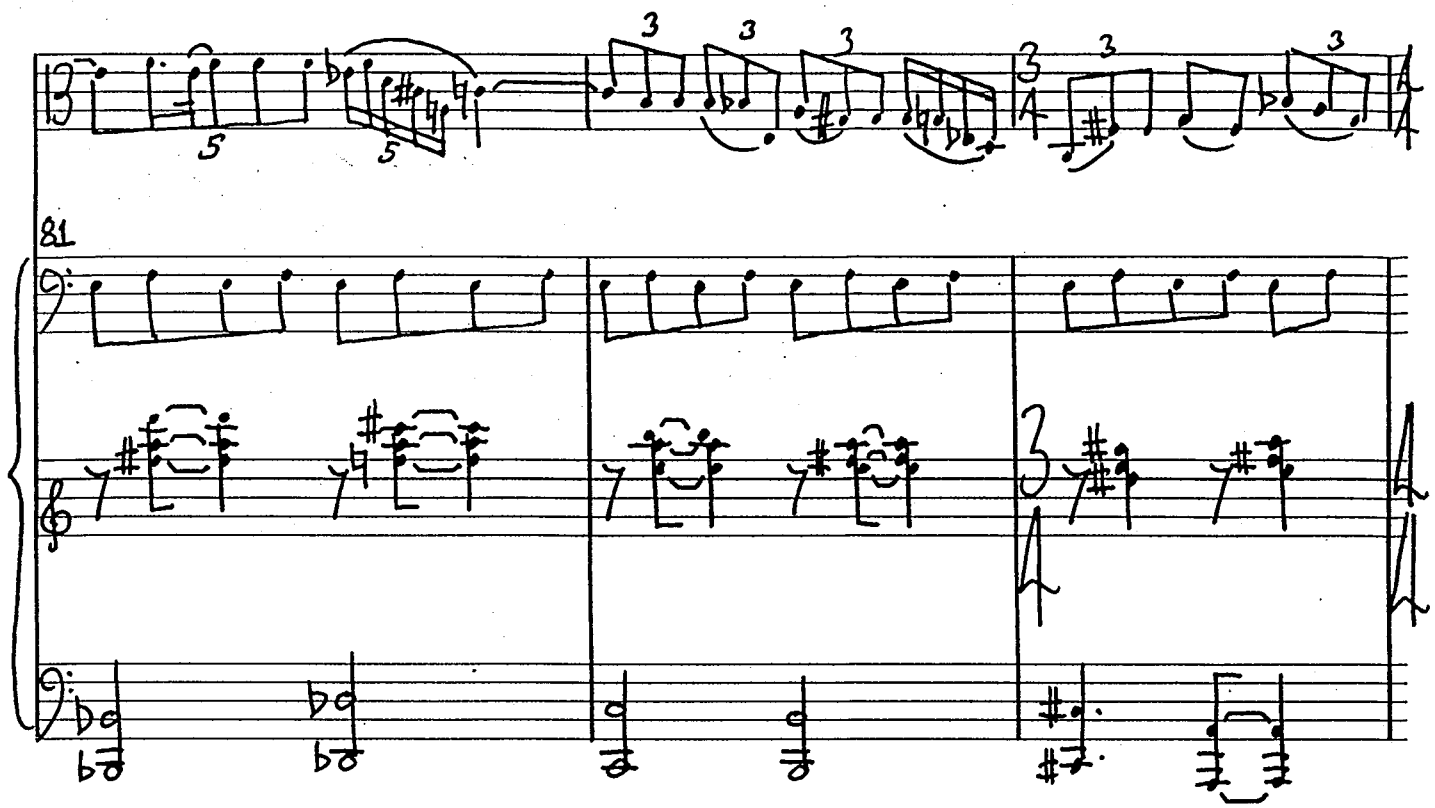

cresc.
59
cresc.
61
64

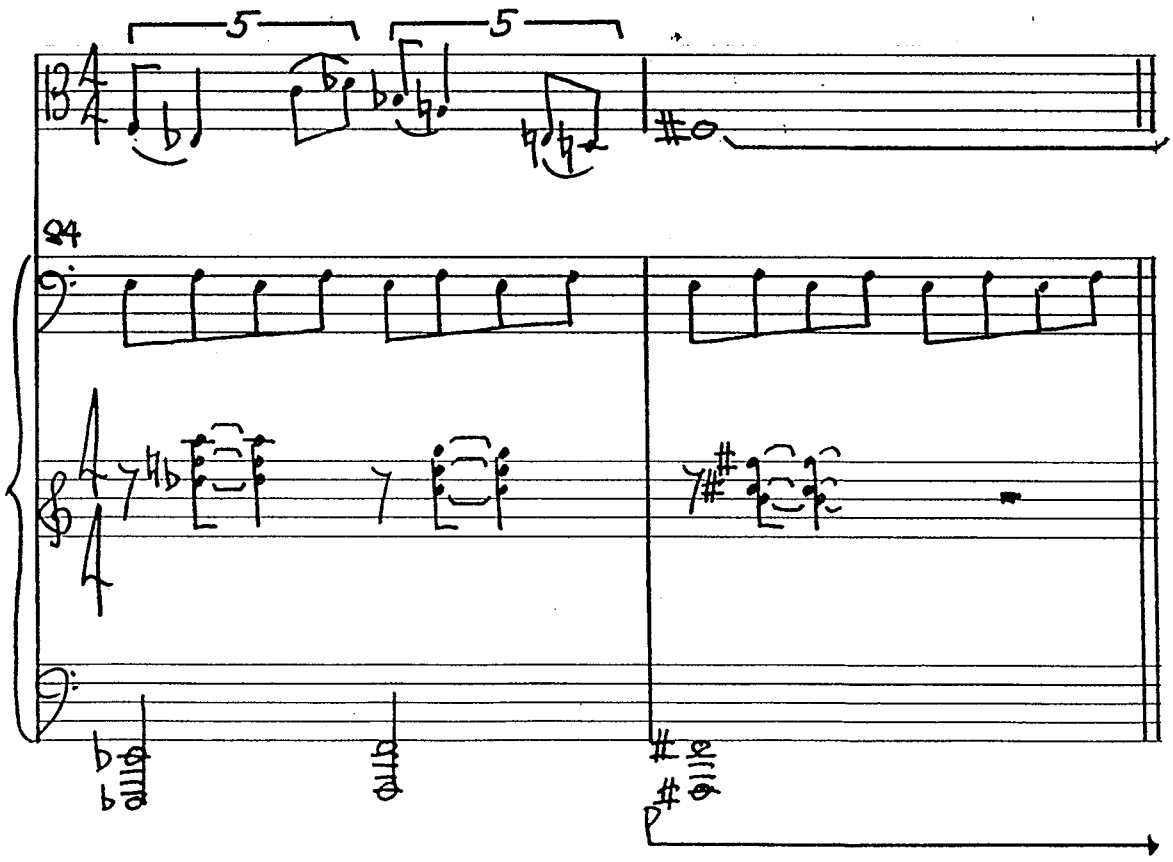

66
69
72
dim
dim.
p
p



1) scrape rapidly along strings with plectrum.



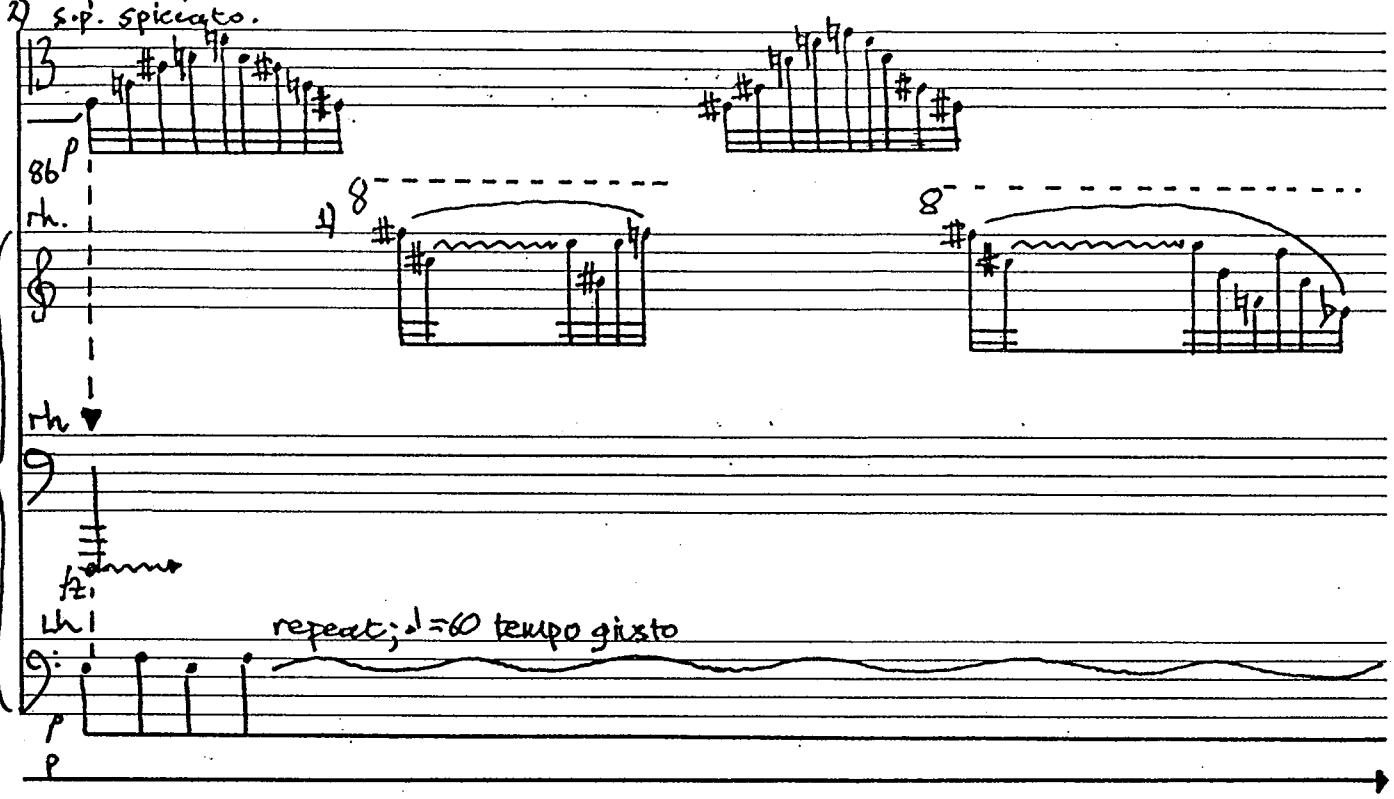

81


84

12

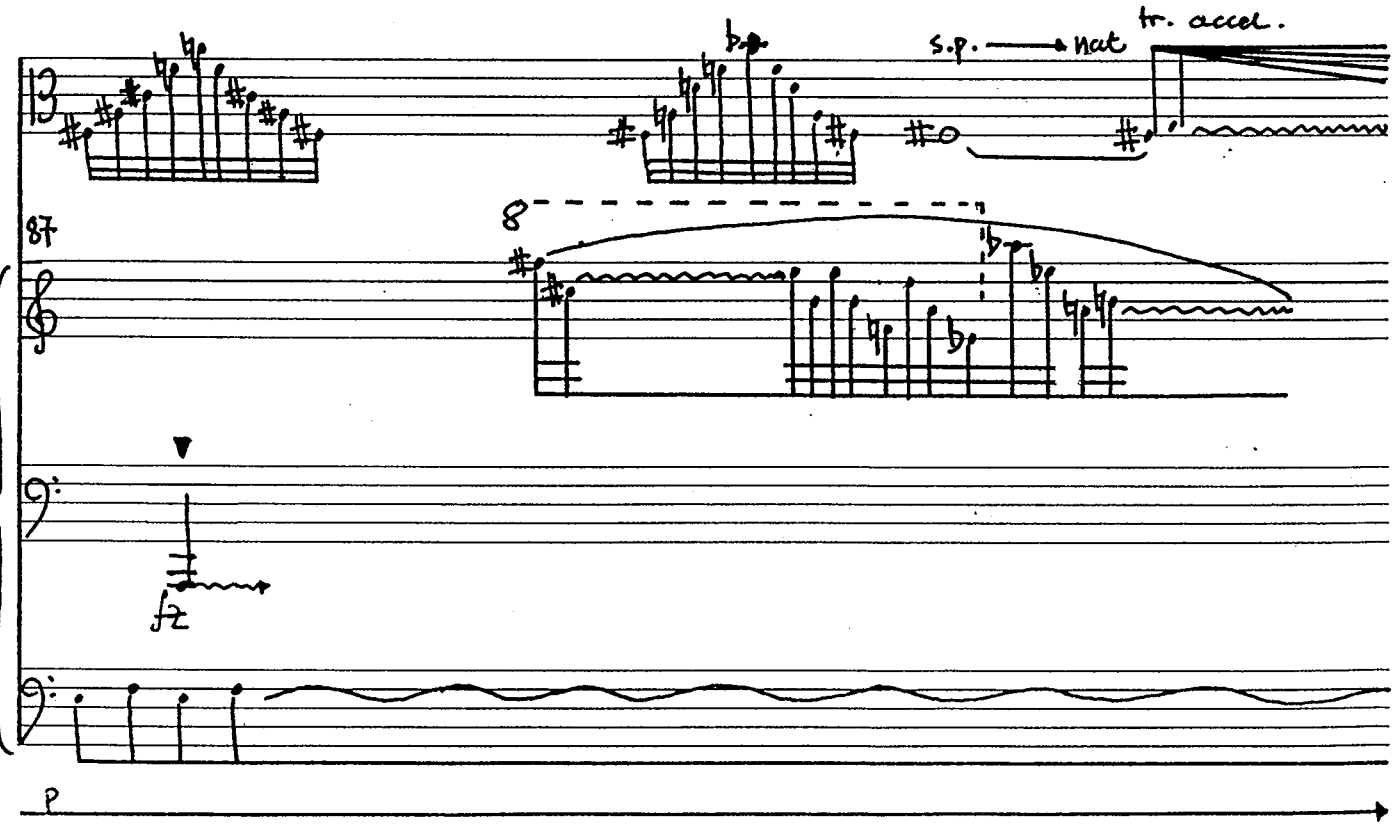
Tempo libre, lento.

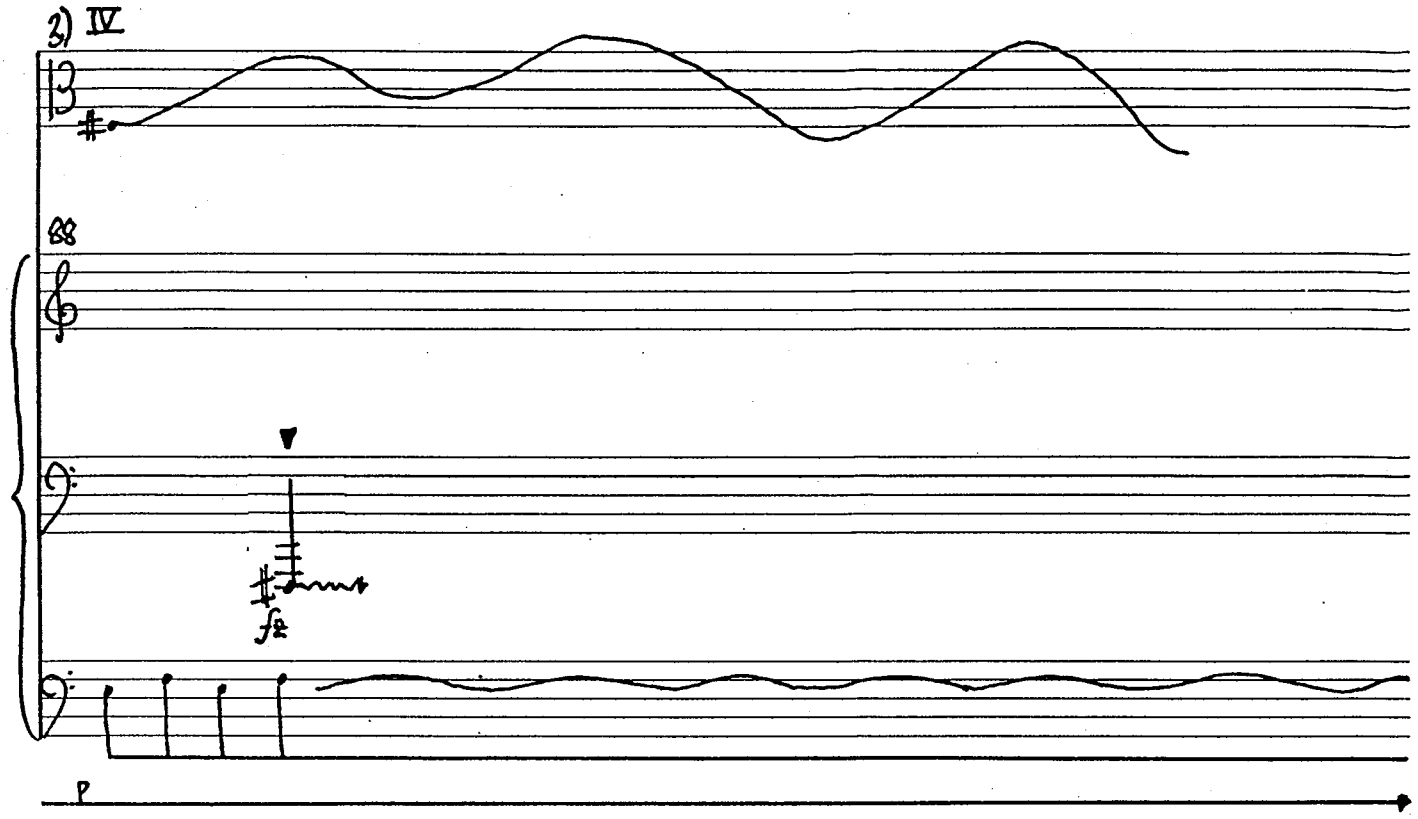
2) s.p. spiccato.



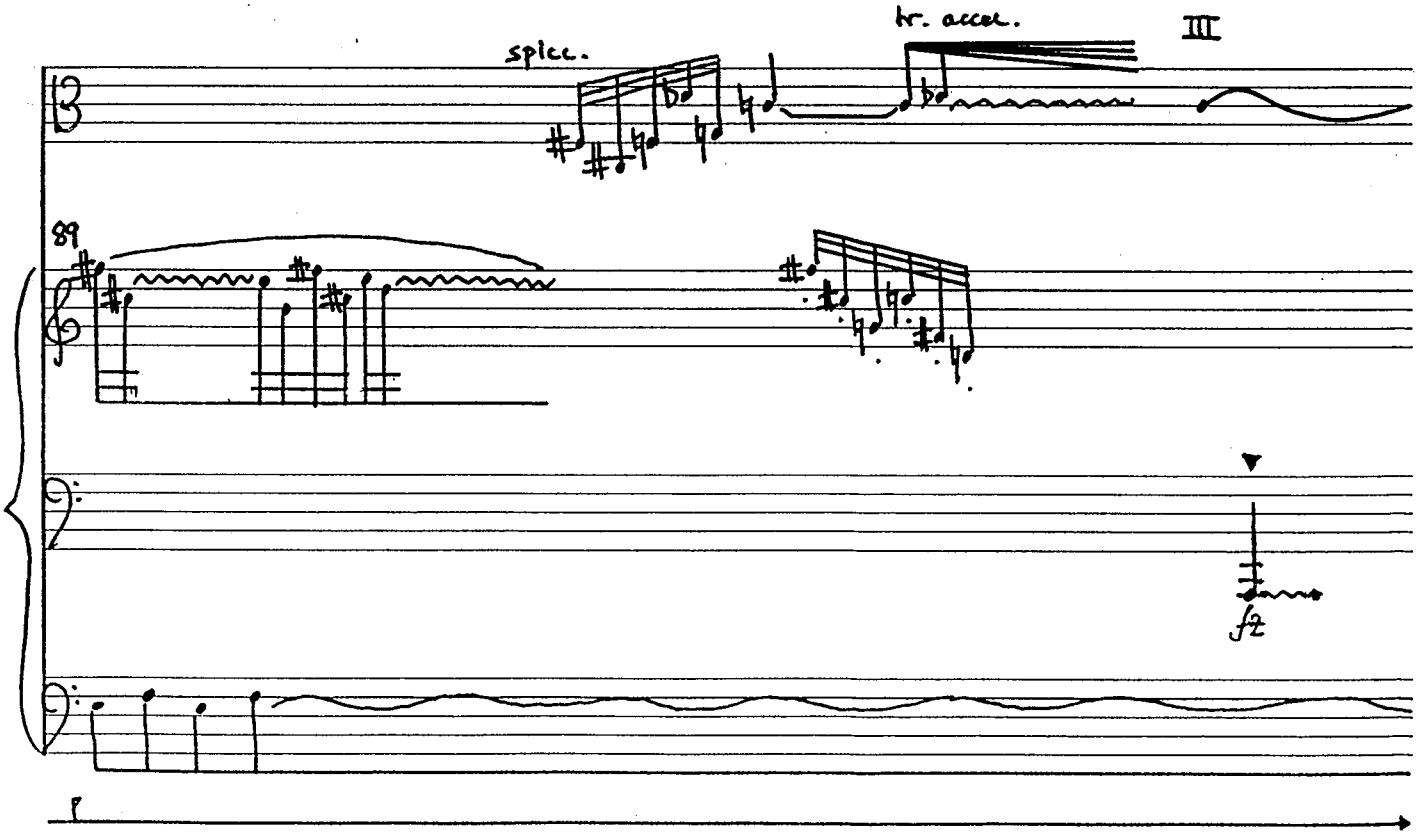
1) tremolando notes grouped; fast tempo, Judge duration by length of line.

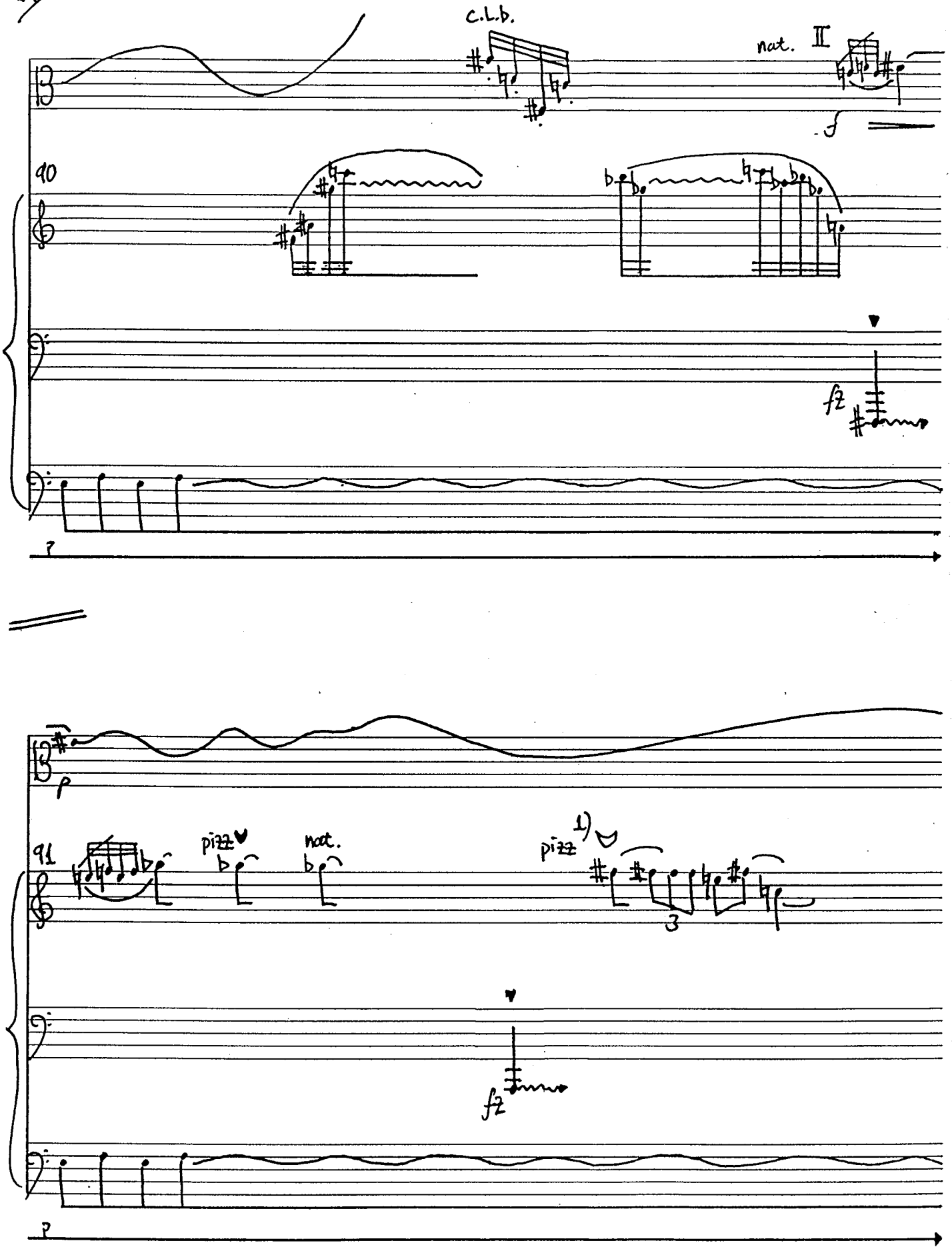
2) sul ponticello



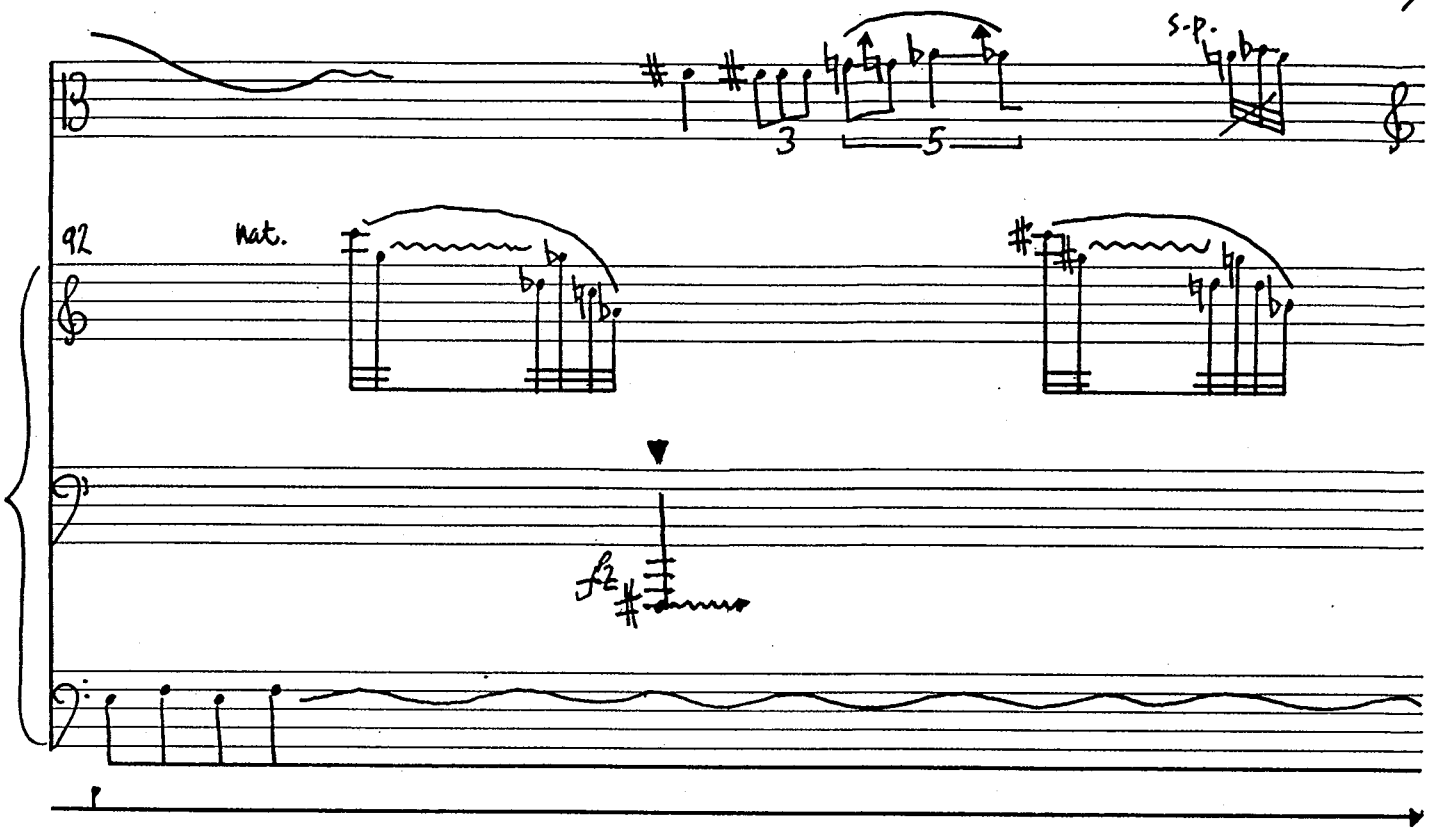


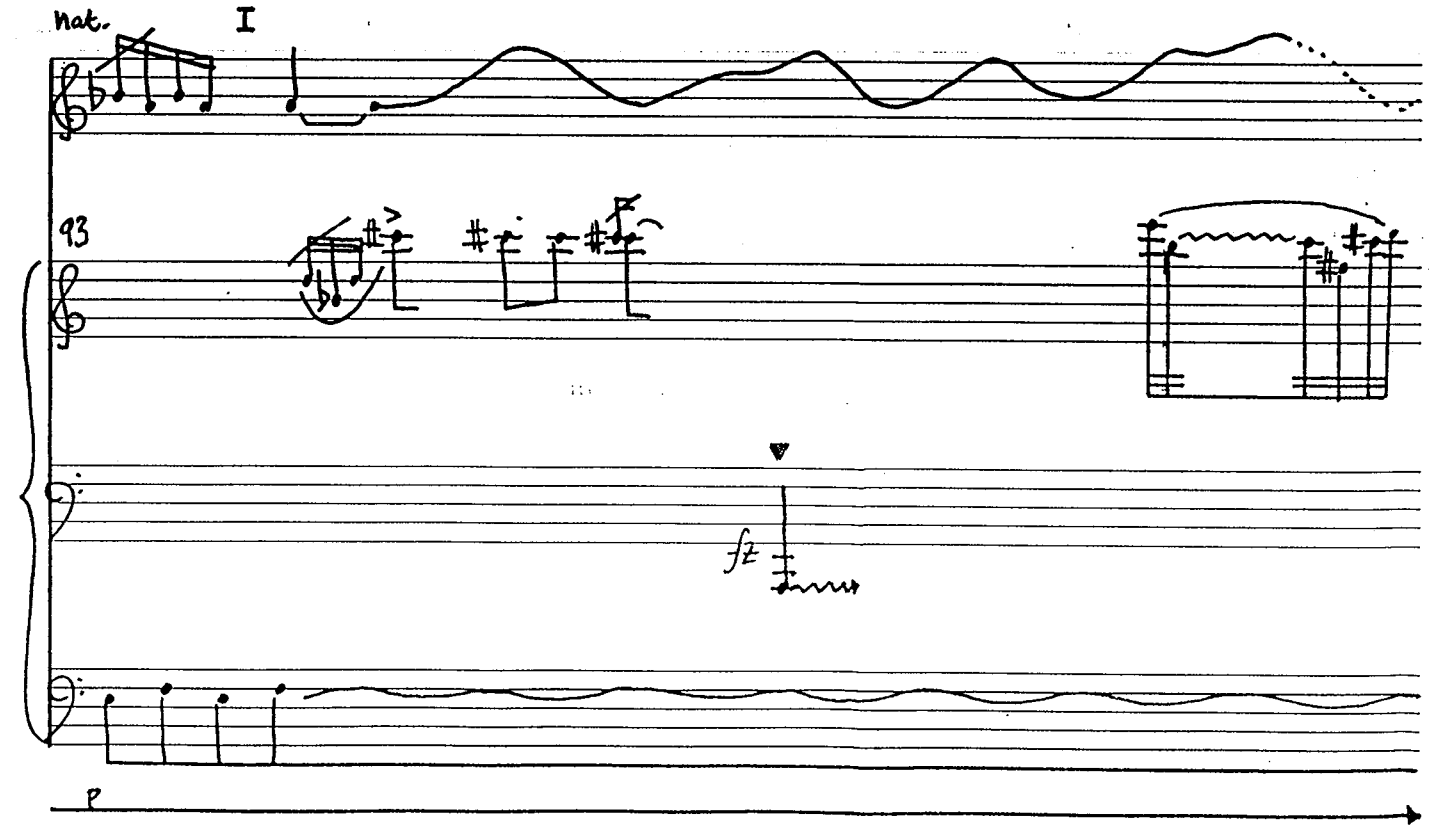
2) glissando smoothly on string indicated, following contour of the line.

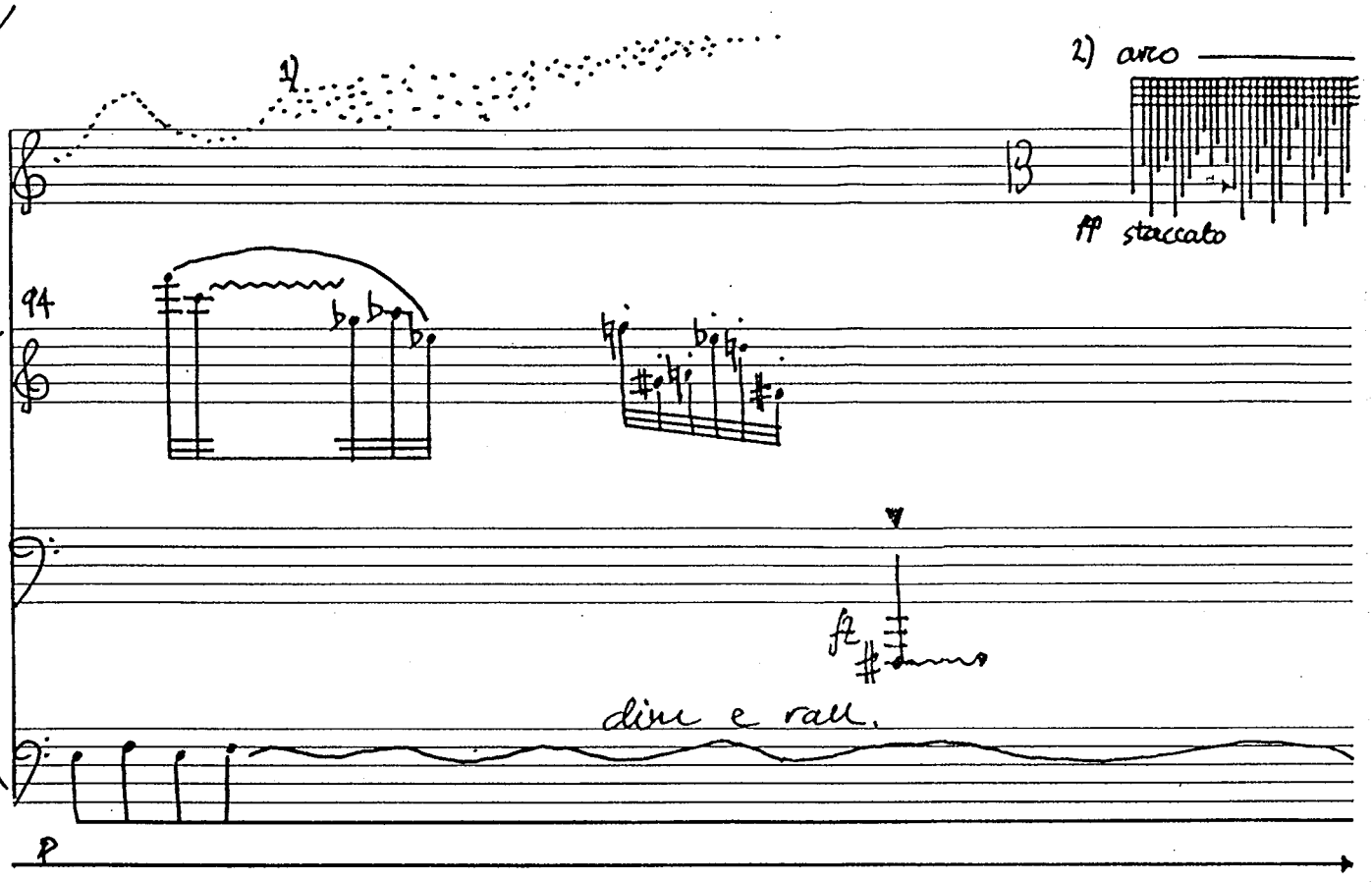




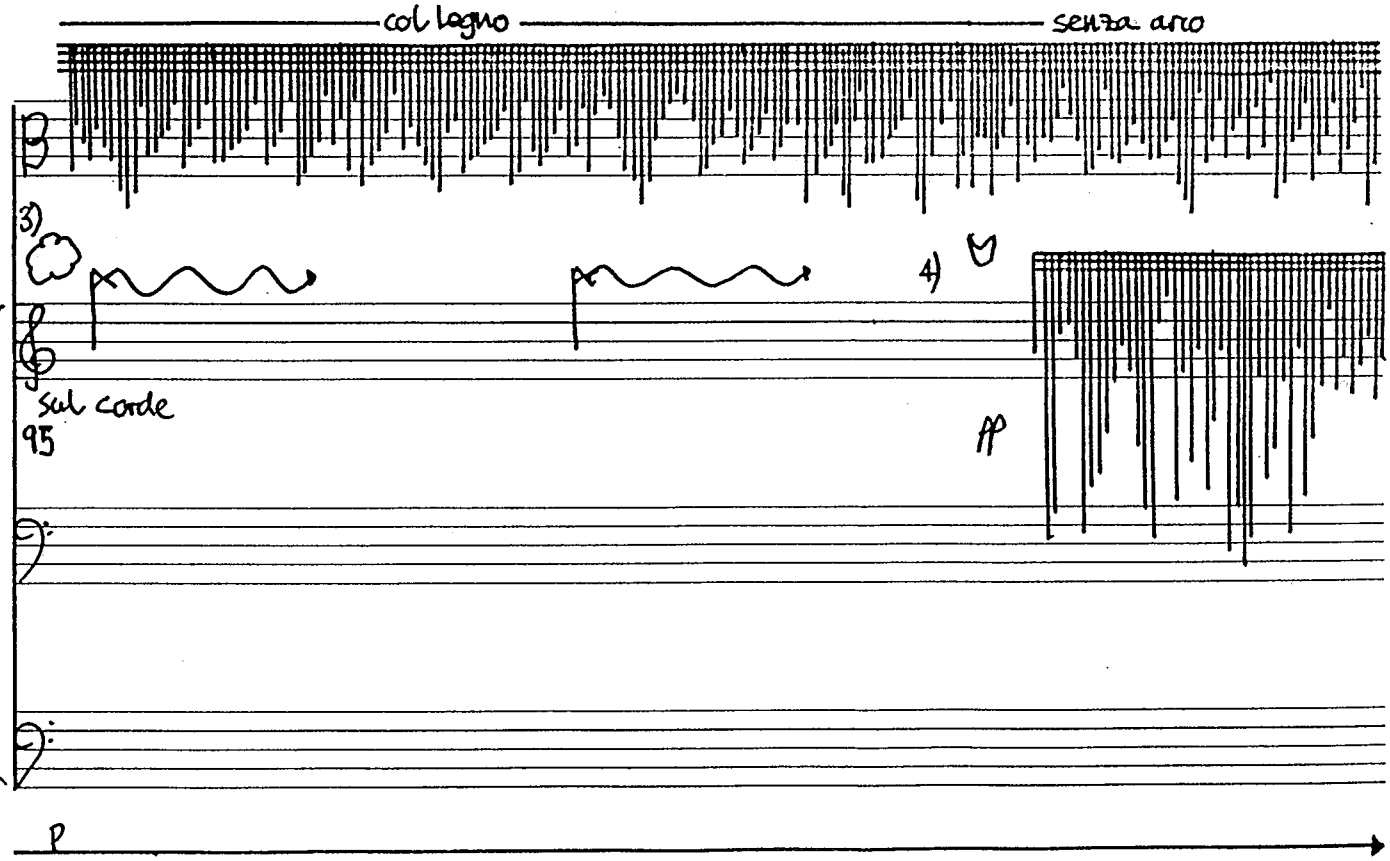
1) pluck strings with fingertips


S-P.
3
5
92
nat.
fz
p

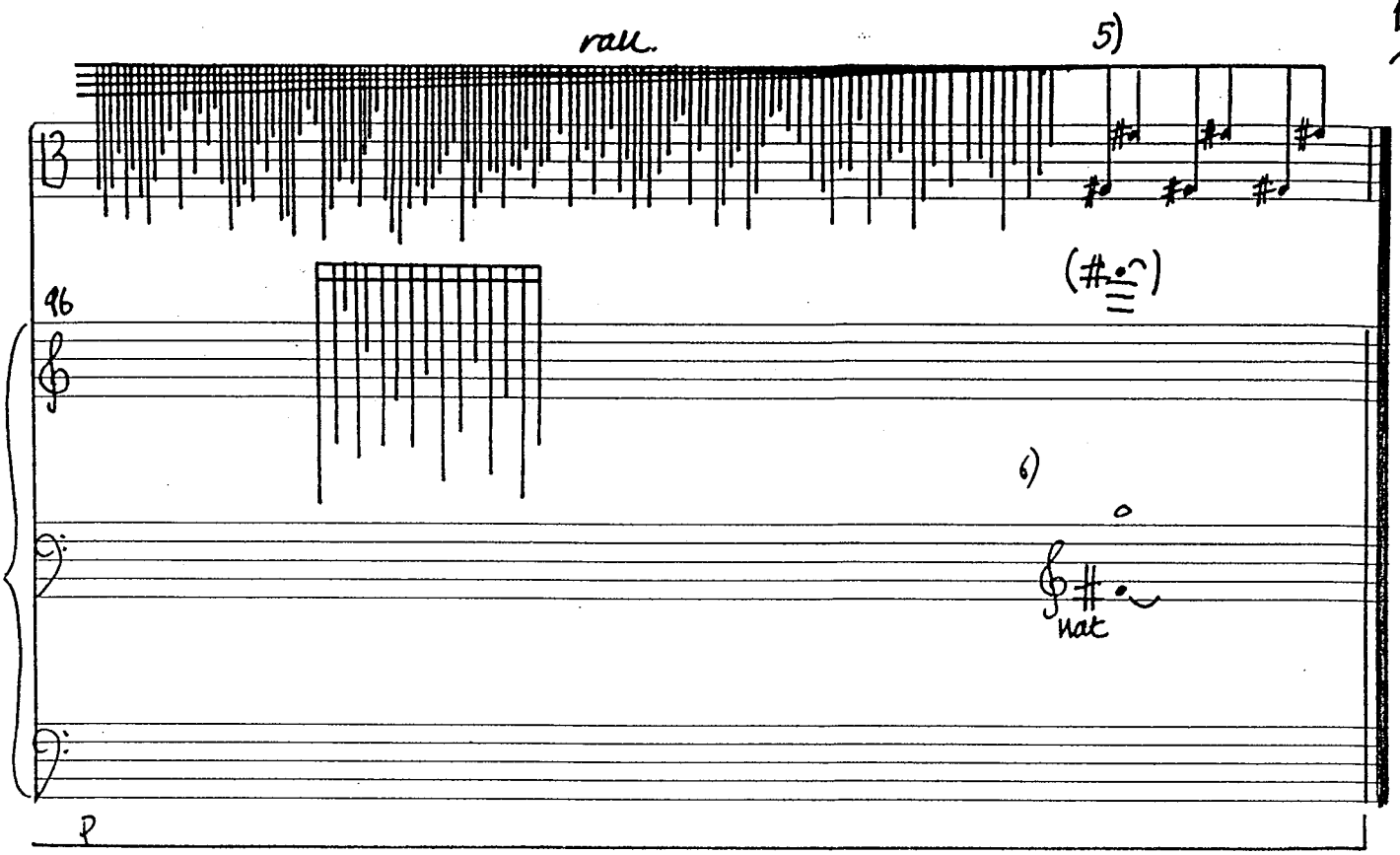

nat.
I
93
fz
p



1) rapid random staccato notes.
2) "fingercadenza"; very light bow pressure, forceful lefthand fingering; rapid random pitches



3) brush strings gently with soft cloth.
4) rapid drumming on strings using fingertips



5) finger actual pitches
6) harmonic; play note normally stopping string to produce the harmonic indicated.

29/7/96

Robert Wieck

Dawdon Beach

For Orchestra

Robert Wieck

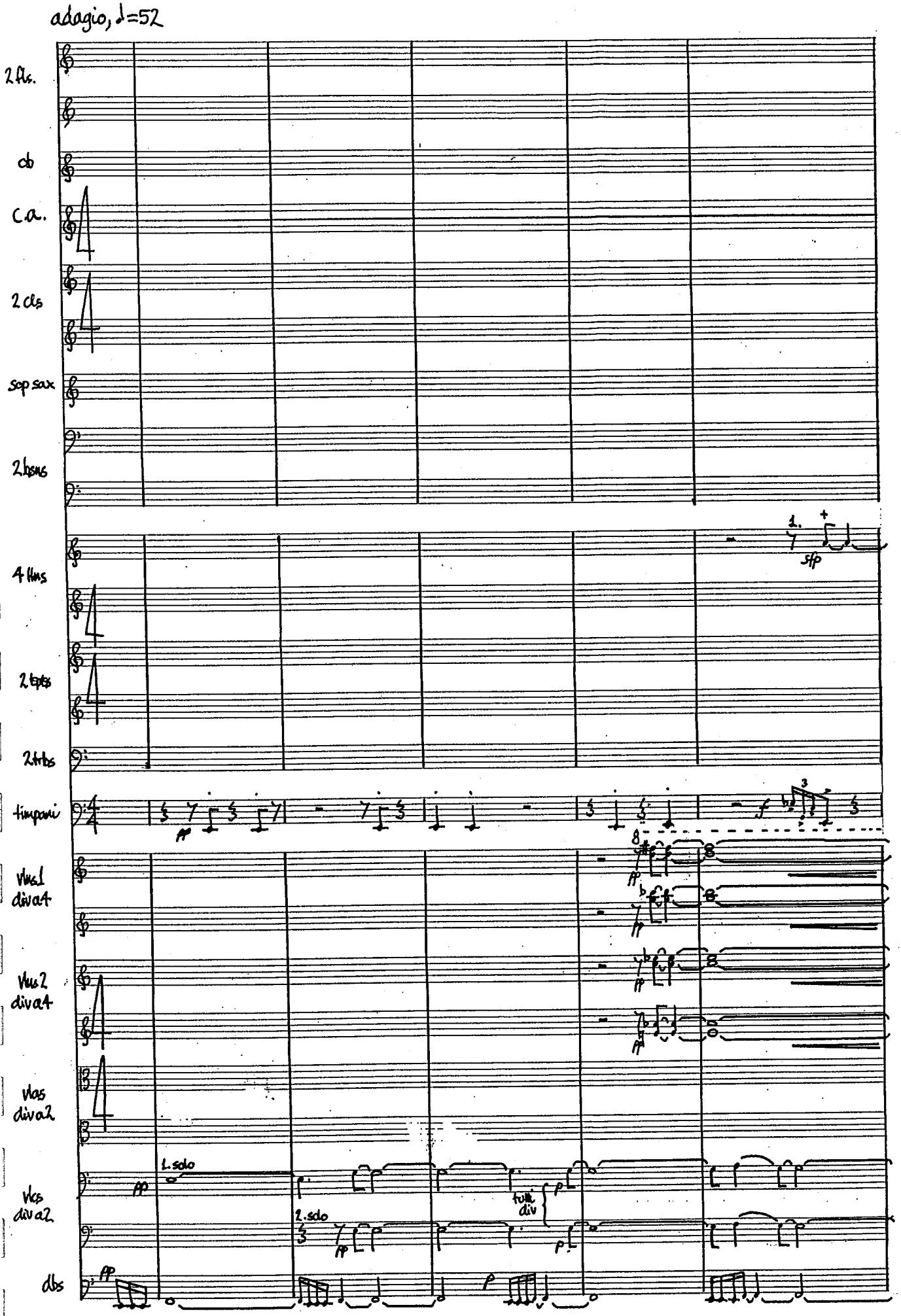
Dawdon Beach

For Orchestra

DAWDON BEACH

for Orchestra

2 flutes
2 oboes, 2nd doubling cor anglais
2 clarinets
soprano saxophone
2 bassoons
4 horns
2 trumpets
2 trombones
4 percussionists:
    4 woodblocks
    2 bongos
    2 congas
    4 tomtoms
    side drum
timpani
strings



adagio, ♩=52

2 fls.

ob

c.a.

2 cls

sop sax

2 bsns

4 hns

2 tpts

2 trbs

timpani

vlns 1 div a4

vlns 2 div a4

vlas div a2

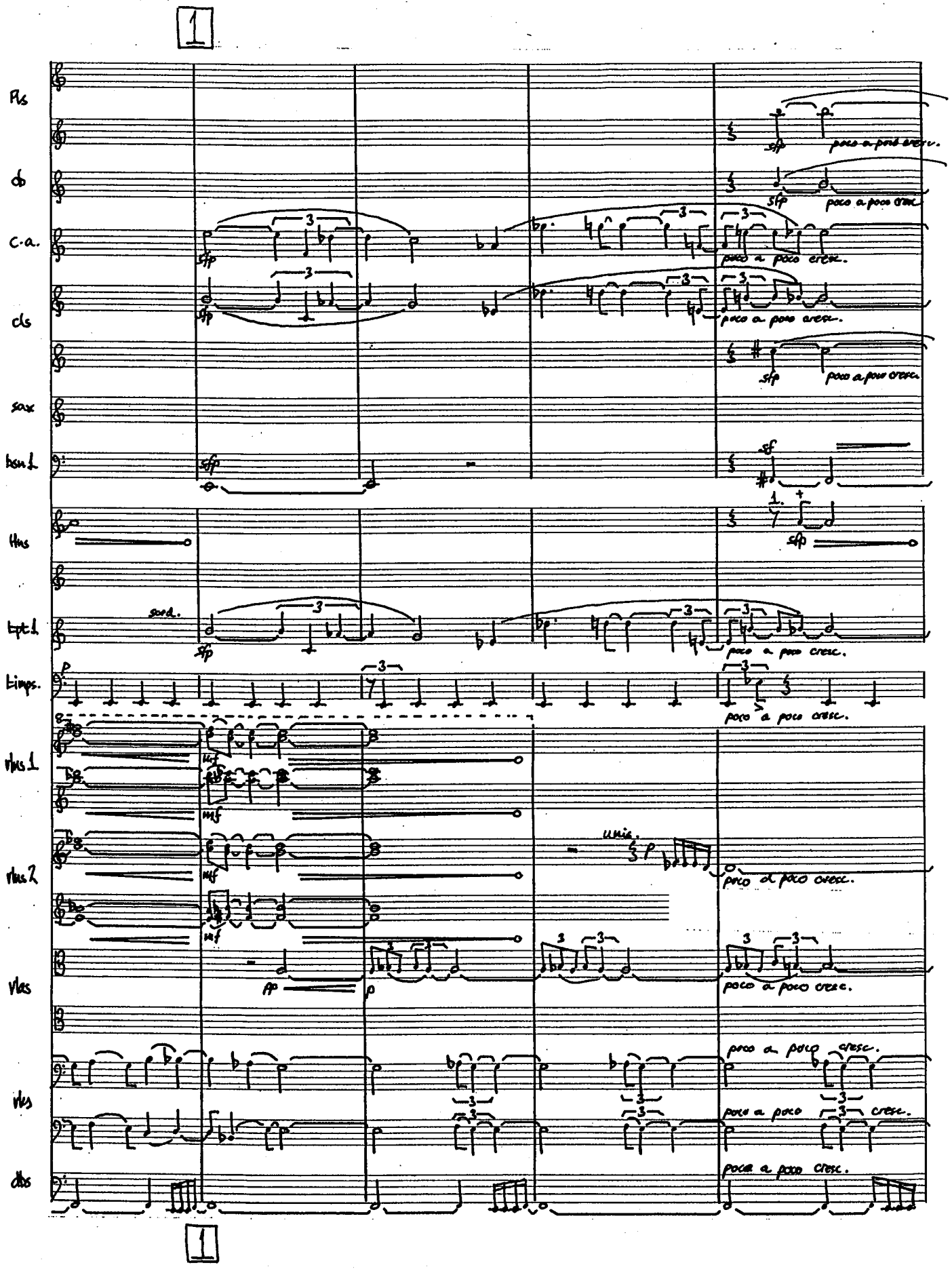
vcs div a2

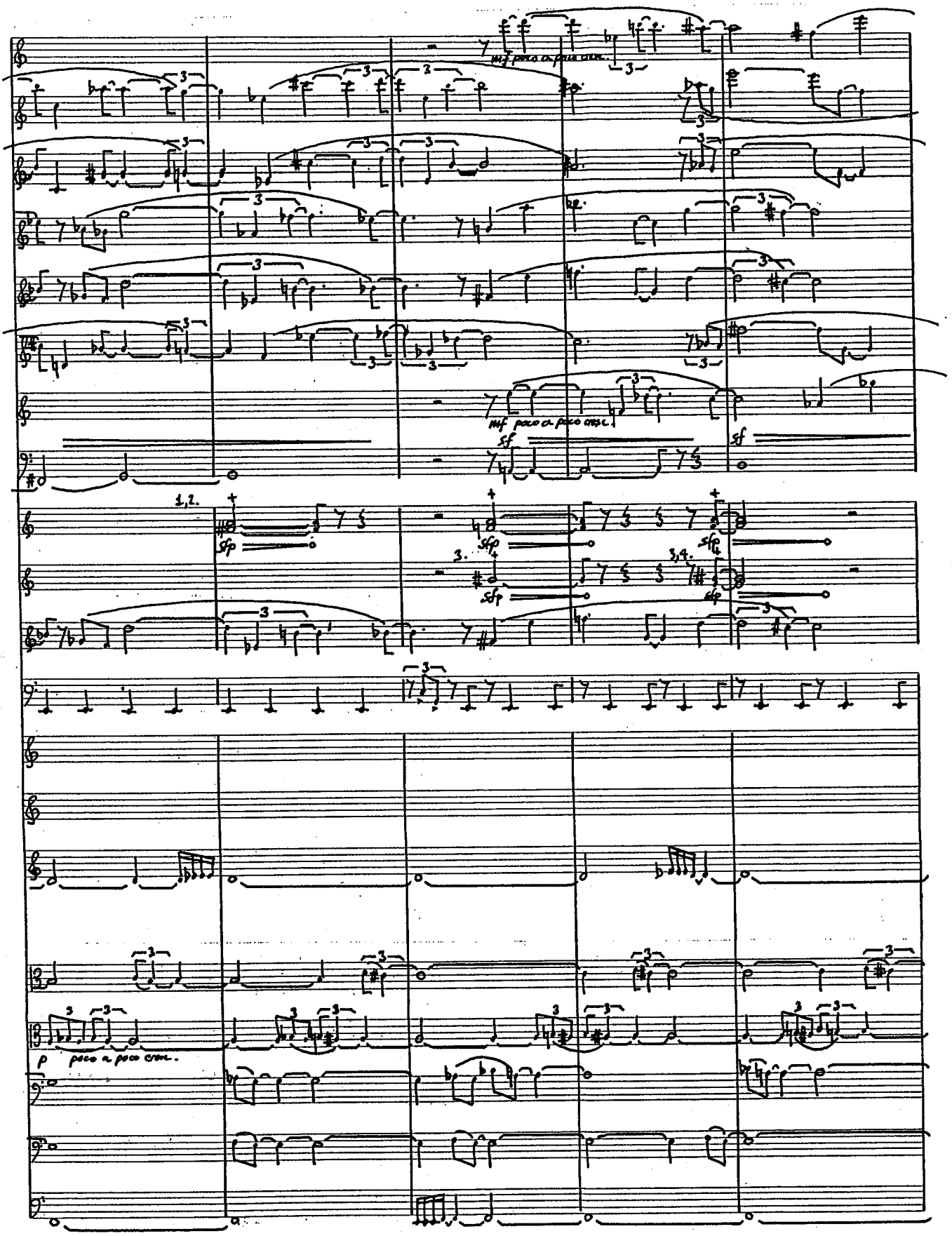
dbs

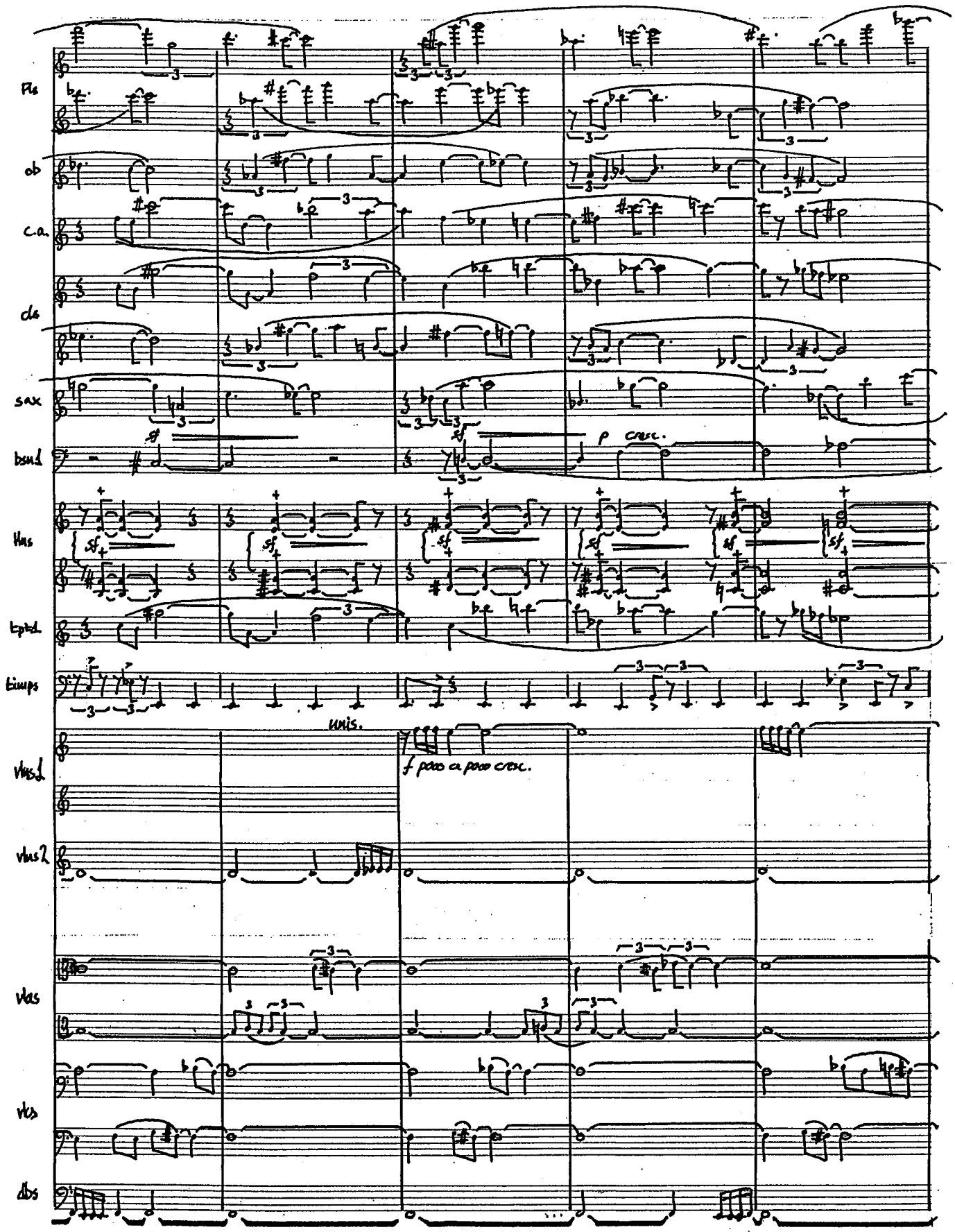
1. solo

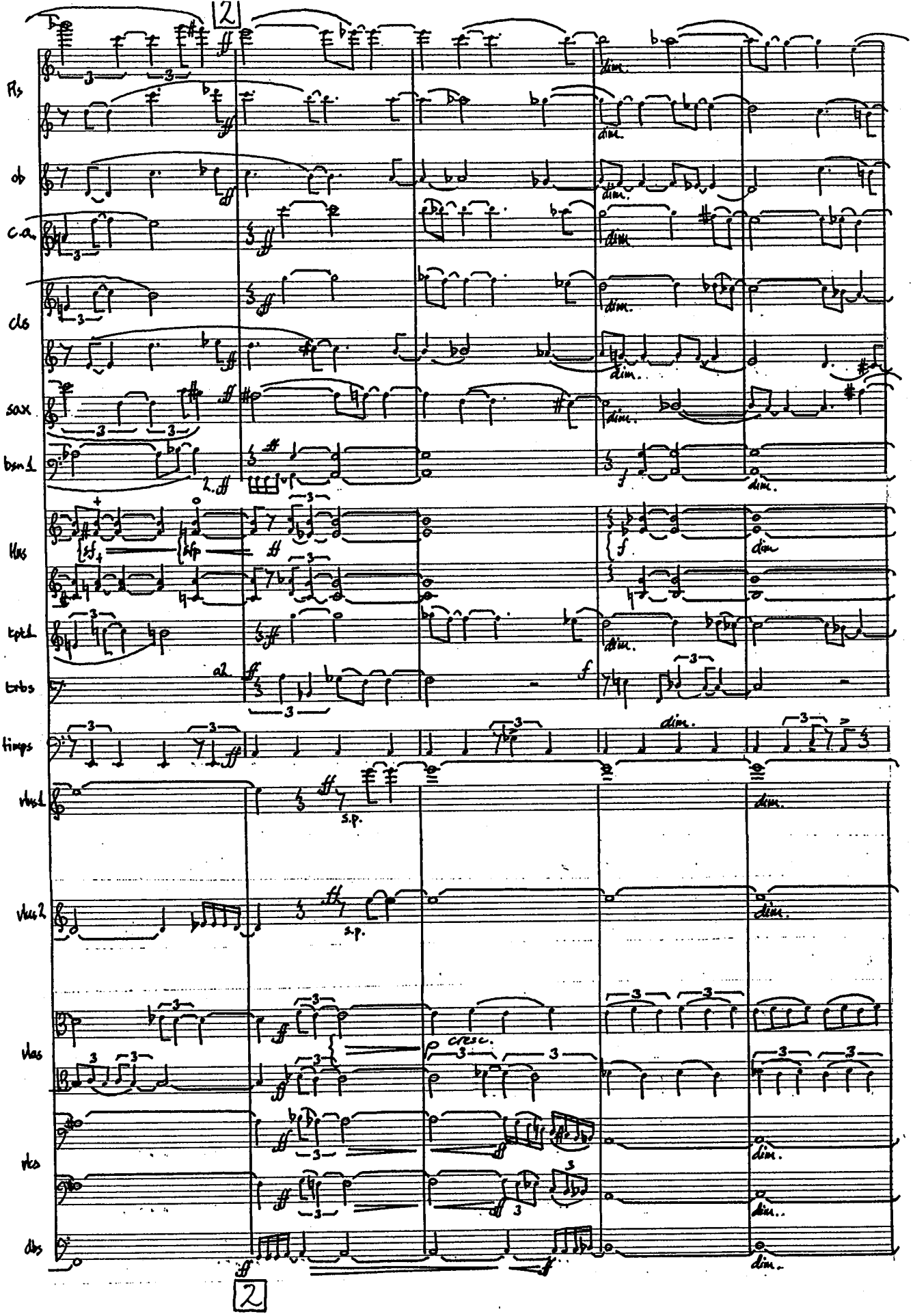
2. solo

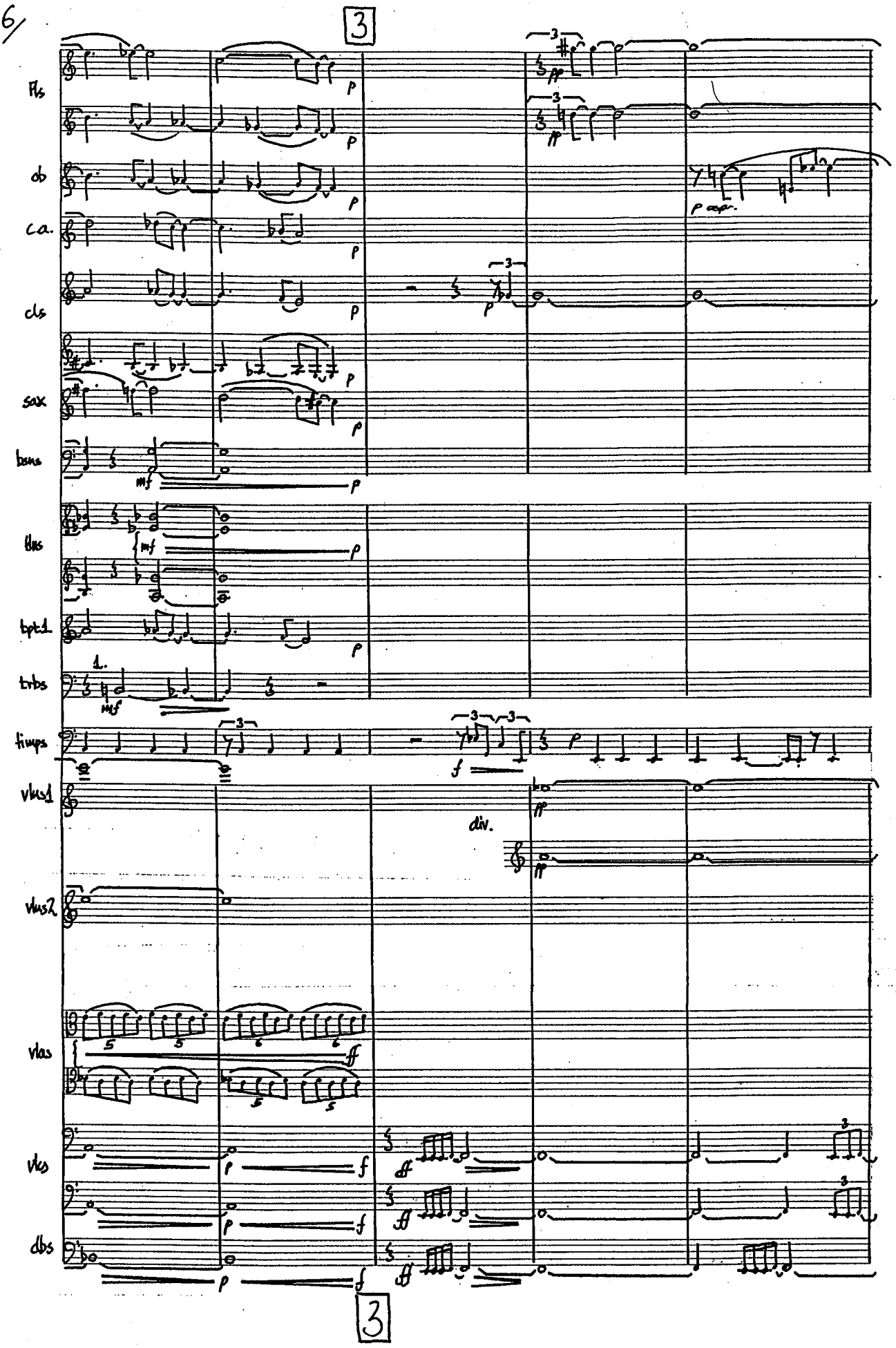
tutti div

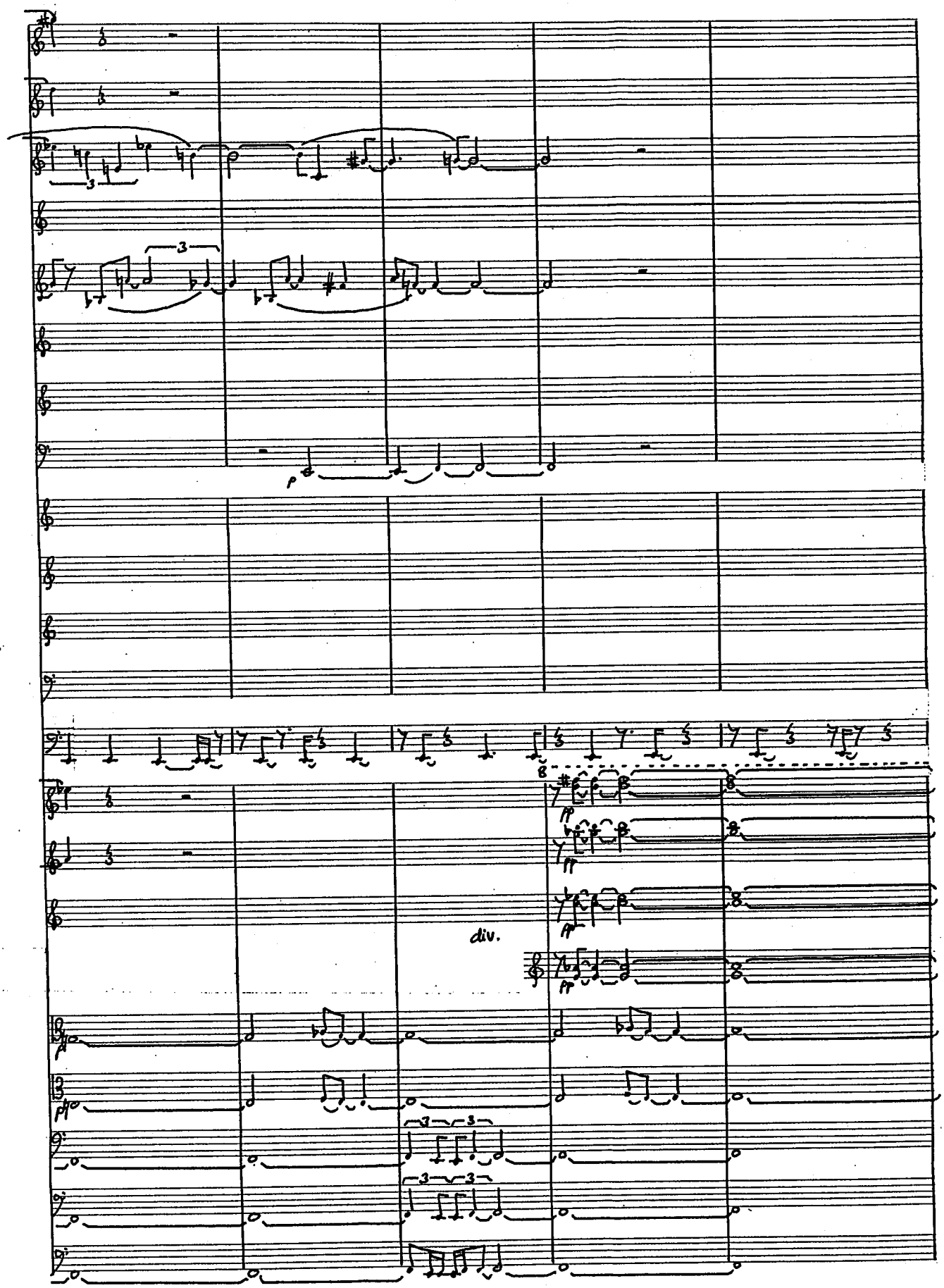

1
Fls
ob
c.a.
cls
sax
bsn 1
Hns
tpt 1
timps.
vlns 1
vlns 2
vlas
vlcs
dbs
sfp
poco a poco cresc.
sf
sord.
unis.
mf
pp
p
1


mf poco a poco cresc.
mf poco a poco cresc.
sf
sf
1,2.
sfp
3.
sfp
3,4.
sfp
sfp
p poco a poco cresc.

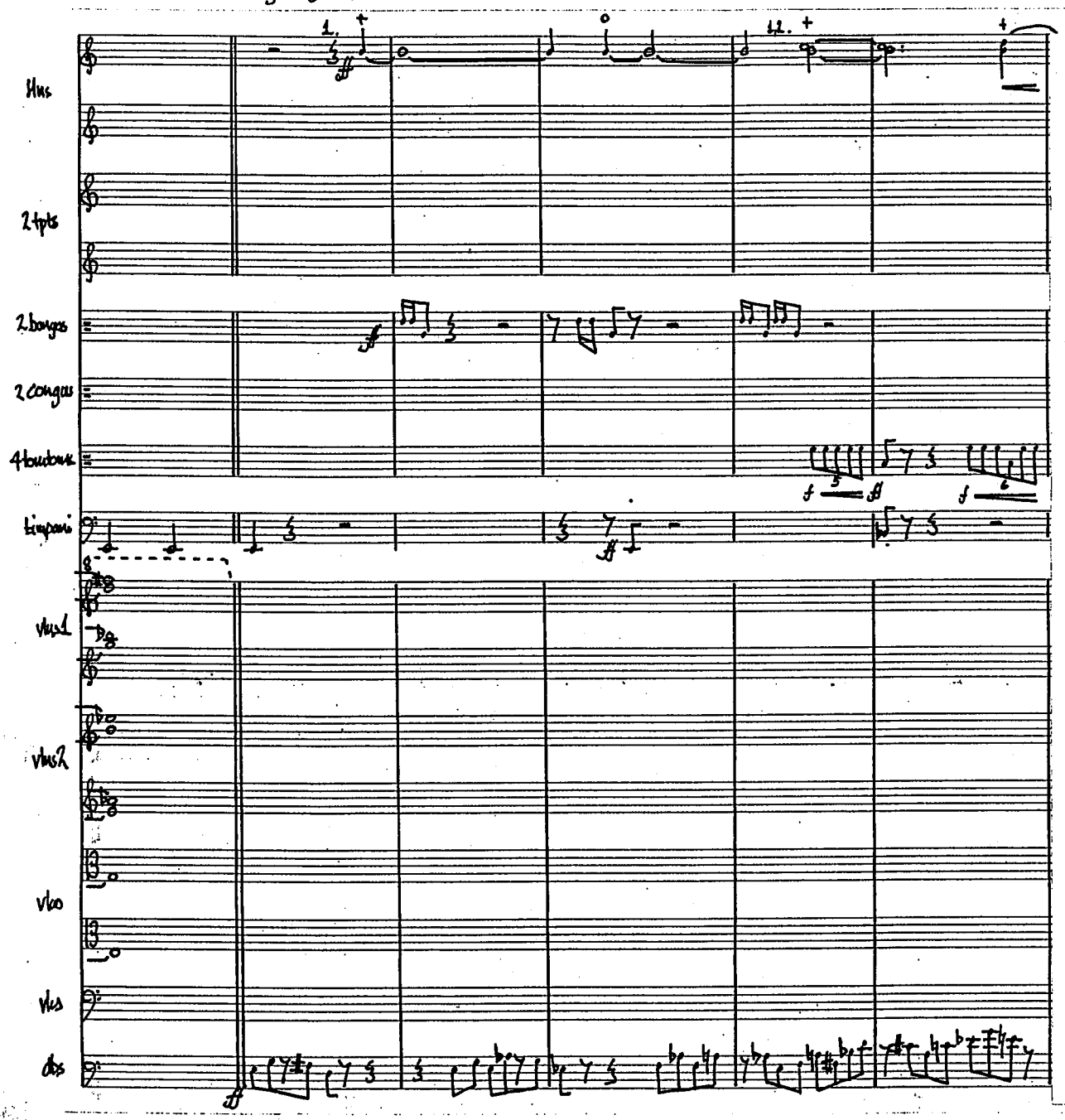

Fls
ob
c.a.
cls
sax
bsn1
p cresc.
Hns
tpt1
timps
unis.
f poco a poco cresc.
vlns1
vlns2
vlas
vlcs
dbs

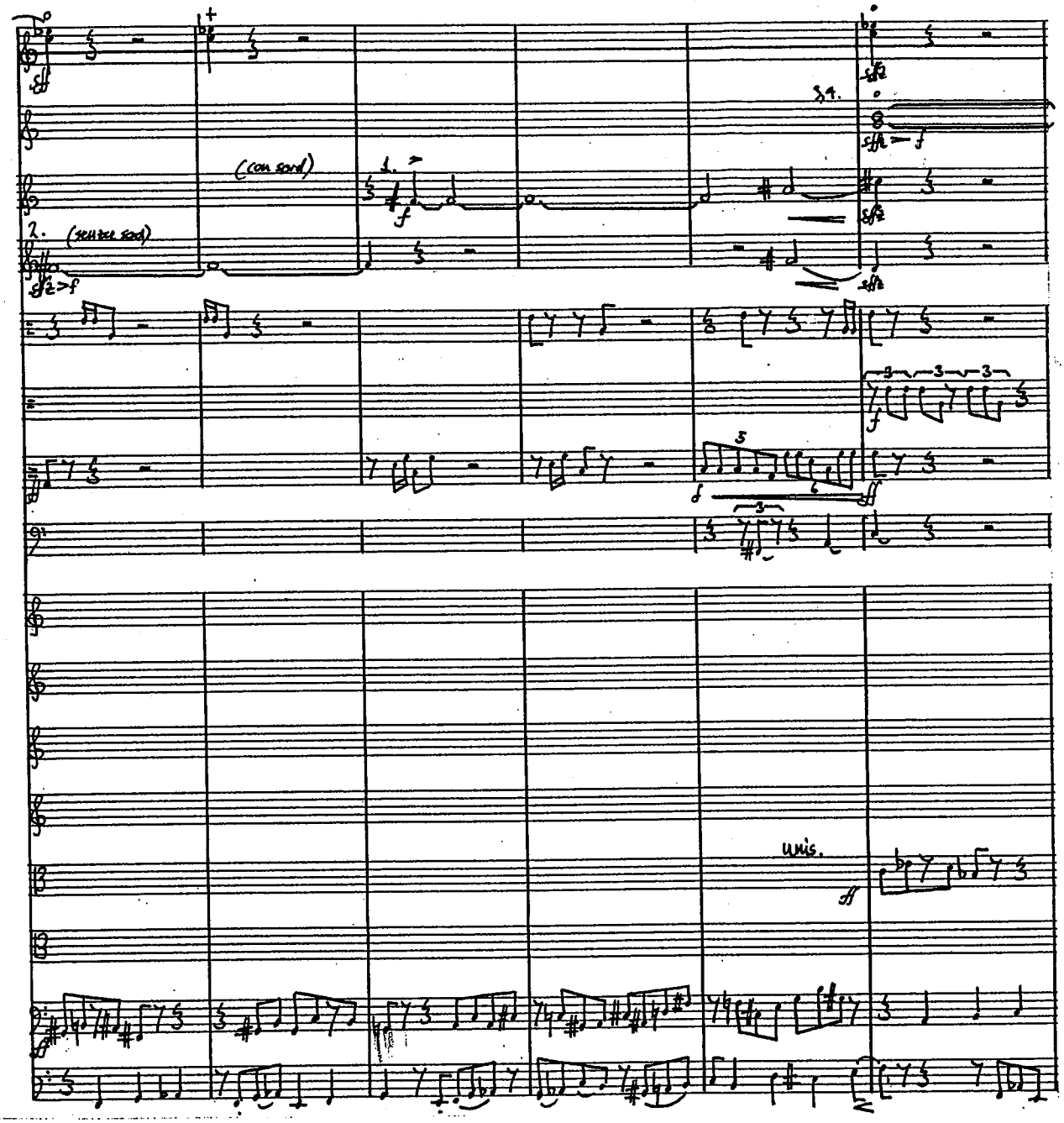

2
fl
ob
c.a.
cls
sax
bsn 1
hns
tpt 1
trbs
timps
vln 1
vln 2
vlas
vcs
dbs
s.p.
cresc.
dim.
2


3
Fls
ob
ca.
cls
sax
bsns
thns
bpt1
trbs
timps
vlns1
vlns2
vlas
vlcs
dbs
div.
3

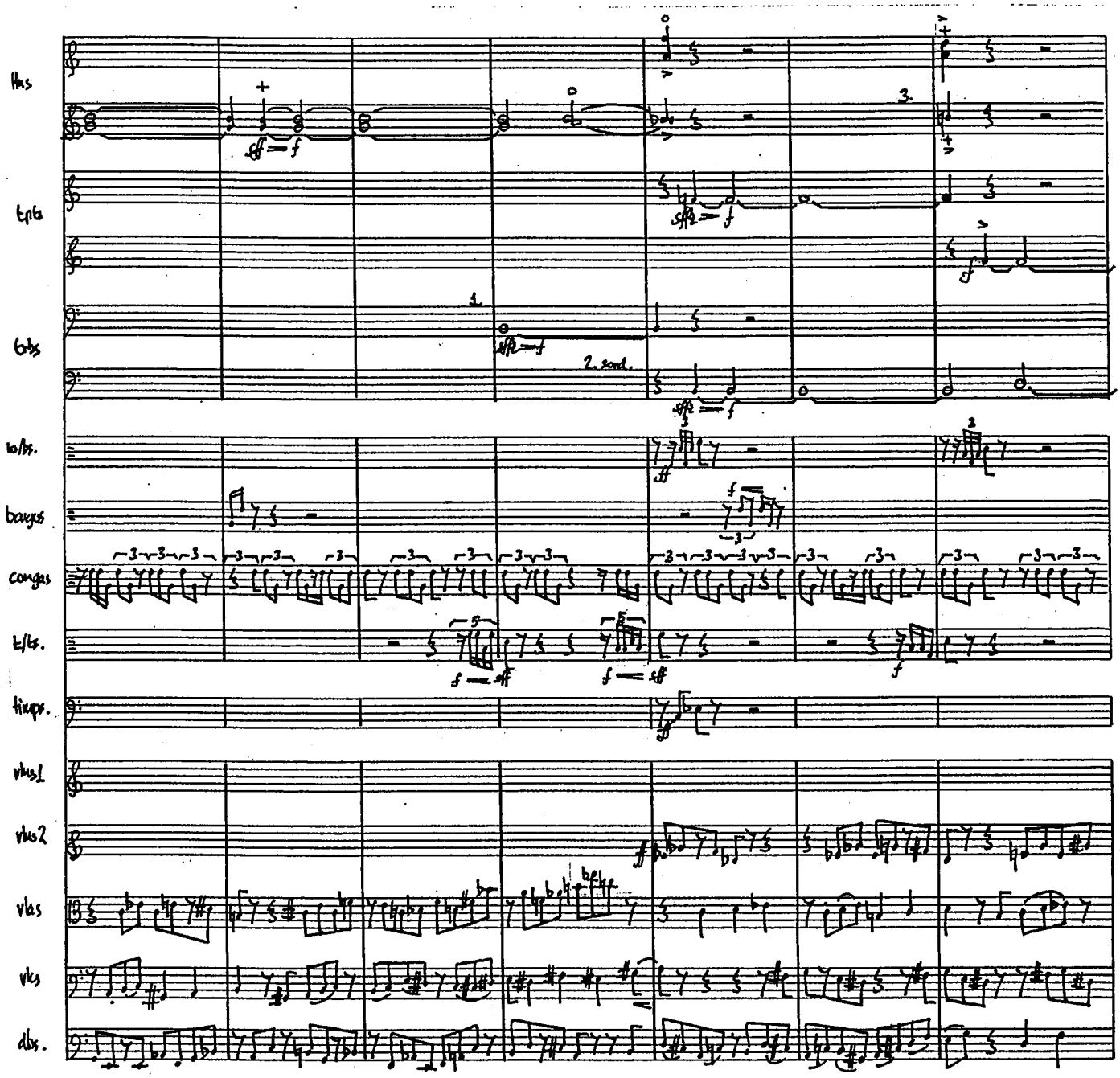

p
8
pp
pp
pp
pp
div.

Allegro Agitato, ♩=132

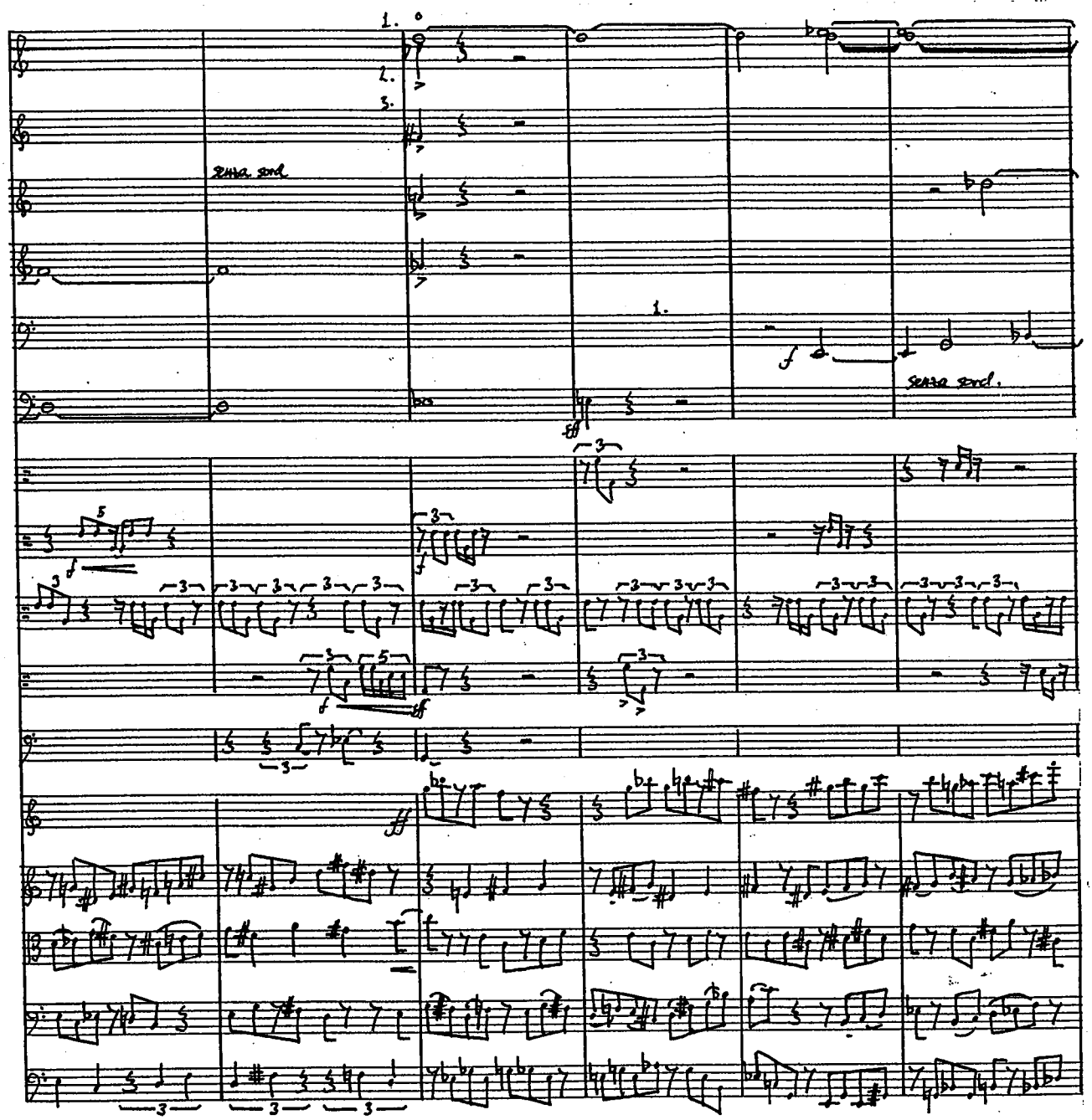


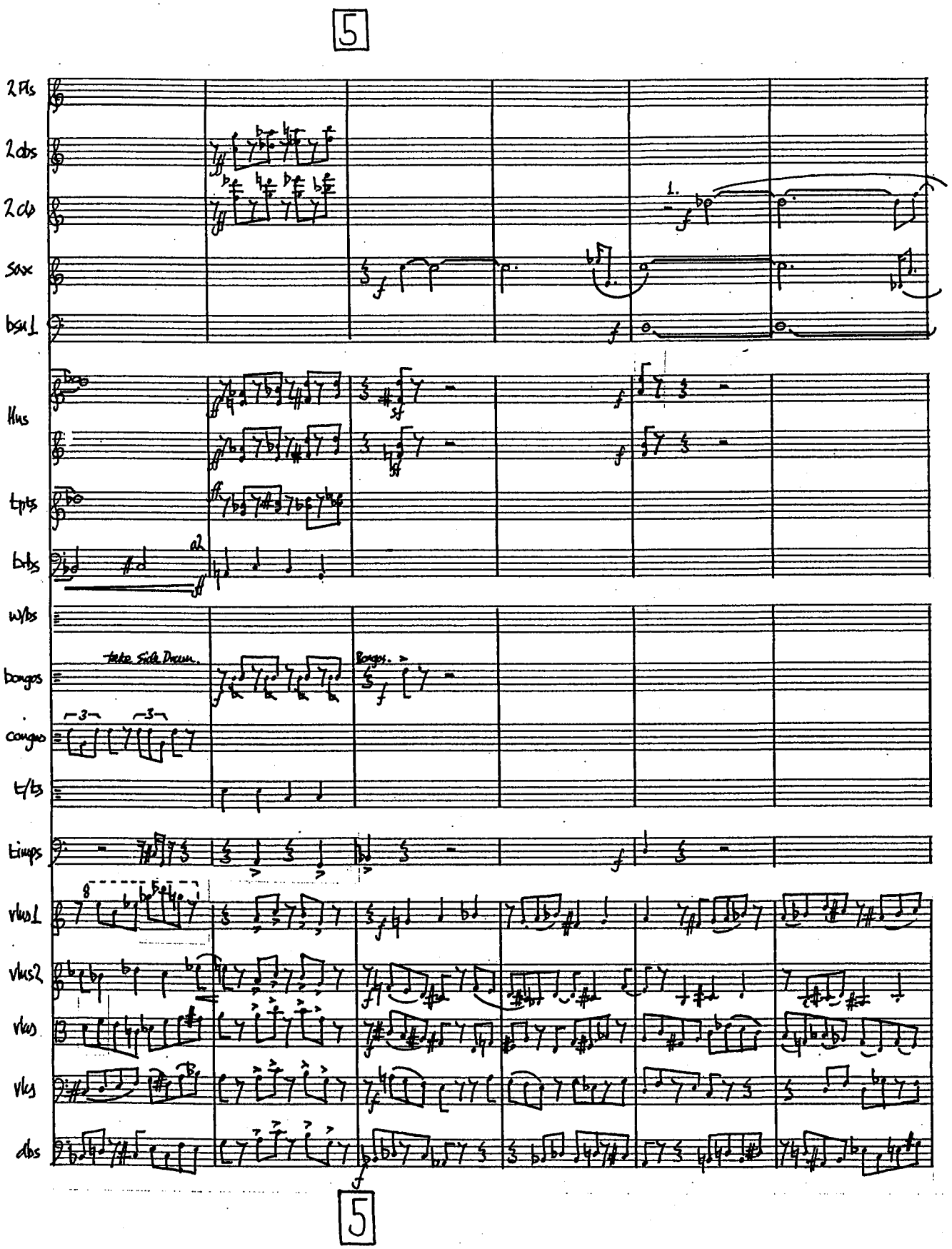

(con sord)
1.
2. (senza sord)
3.4.
unis.

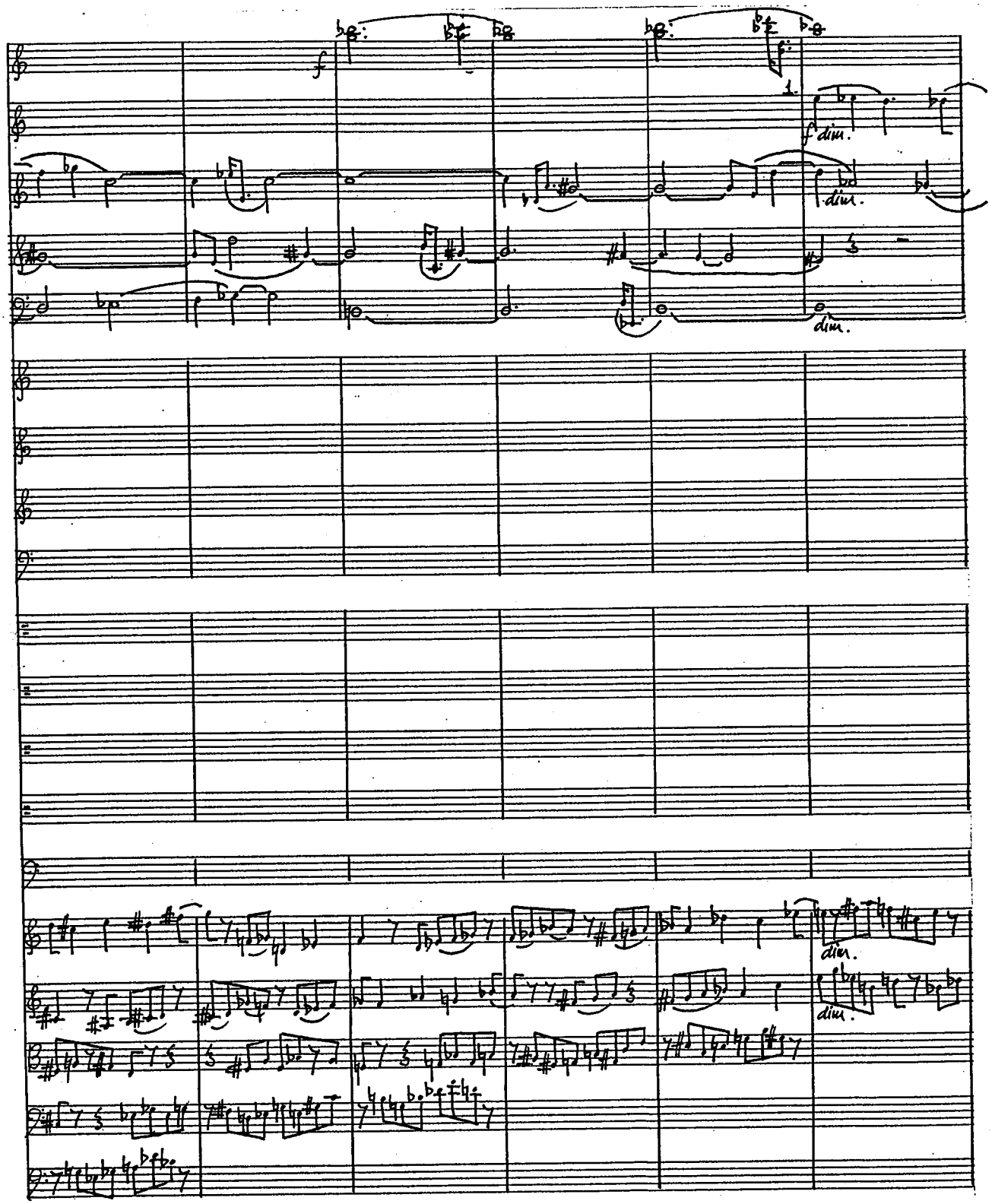
4


Hns
tpts
trbs
1.
2. sord.
3.
w/bs.
bargos
congas
t/ts.
timps.
vlns1
vlns2
vlas
vlcs
dbs.

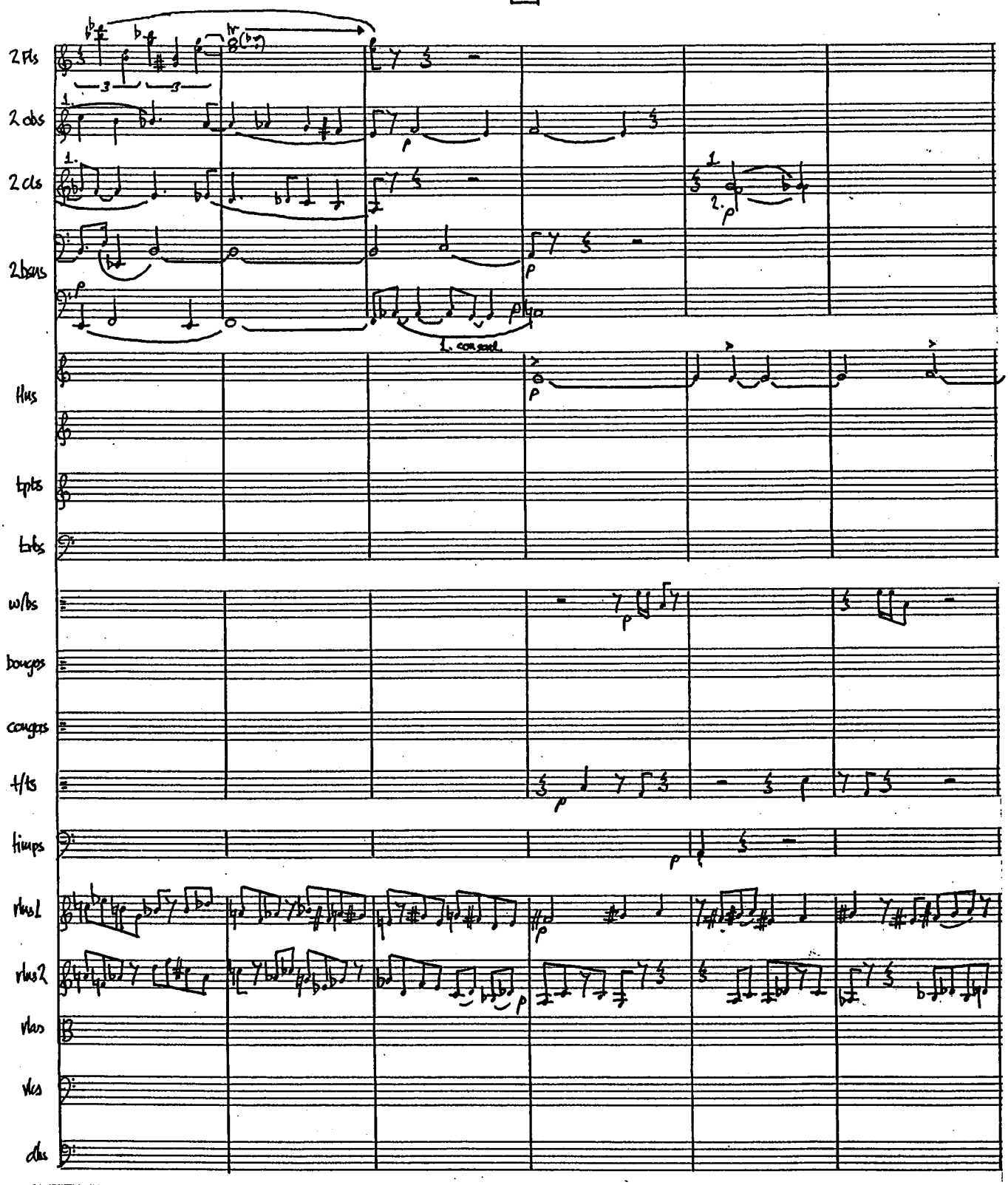
4


senza sord.
senza sord.

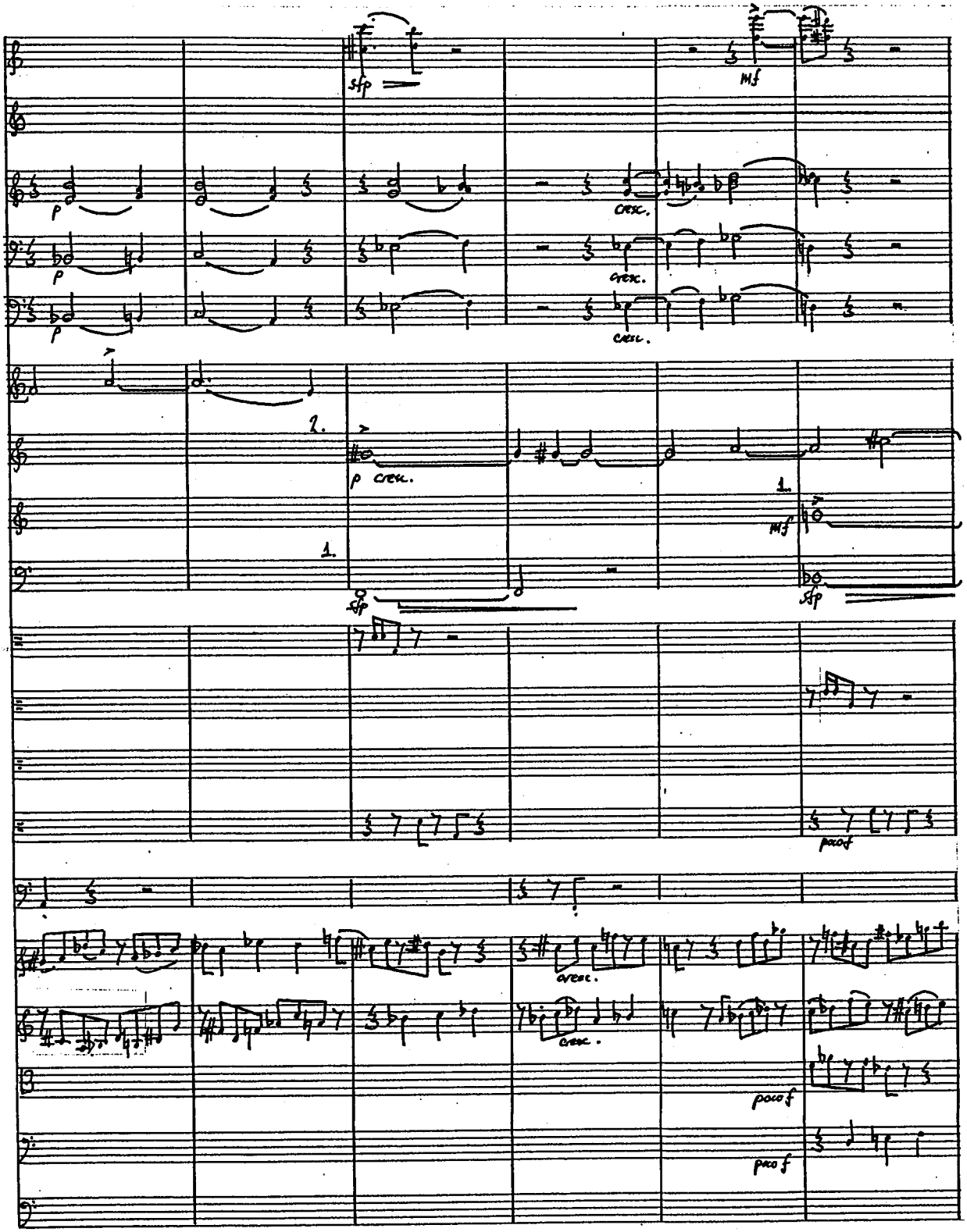

5
2 Fls
2 obs
2 Cls
Sax
bsn 1
Hns
tpts
btbs
w/bs
bongos
congas
t/bs
timps
vlns 1
vlns 2
vlas
vlcs
dbs
take Side Drum.
Bongos.
a2
1.
5

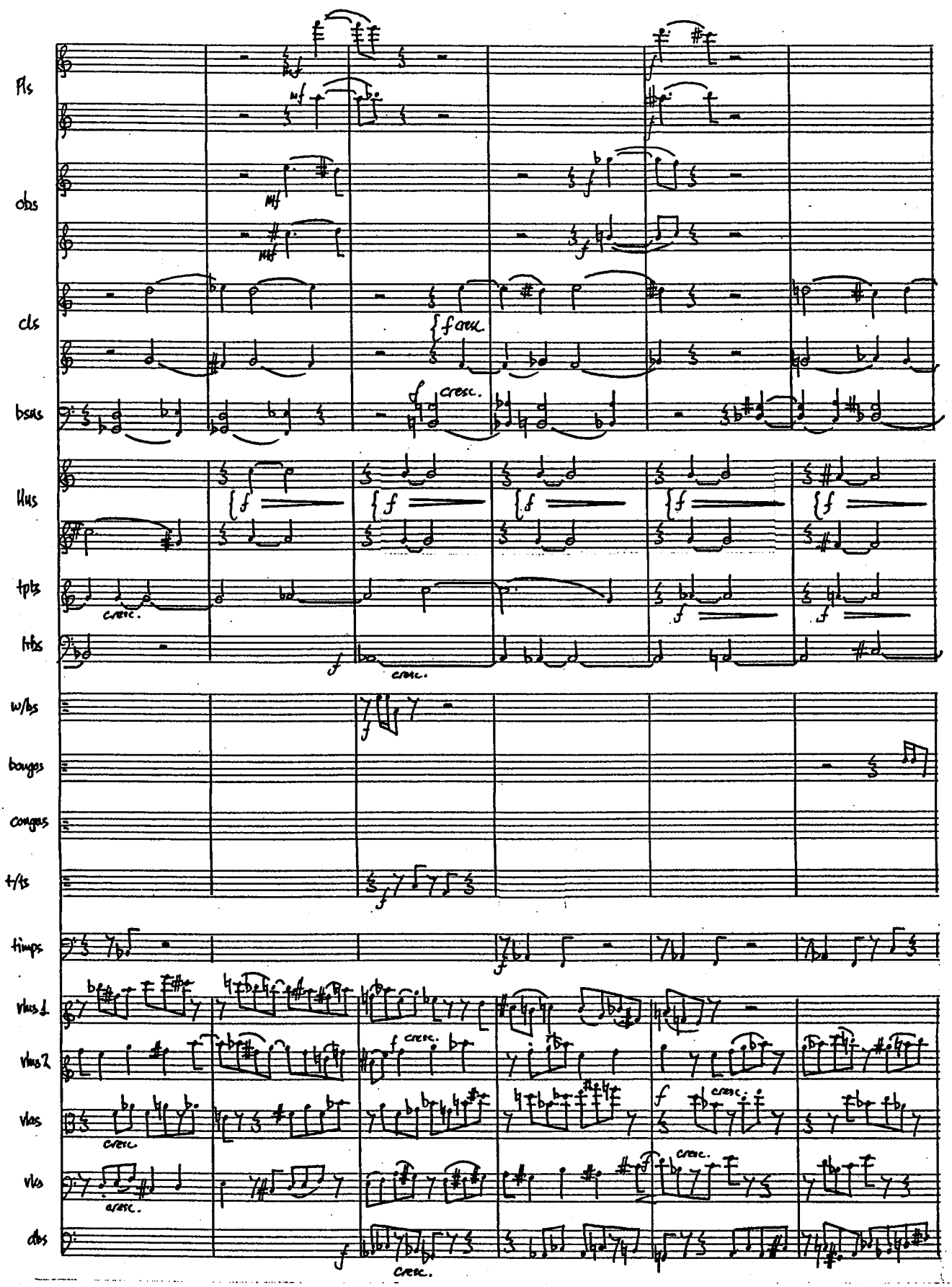

f
1.
f dim.
dim.
dim.
dim.
dim.

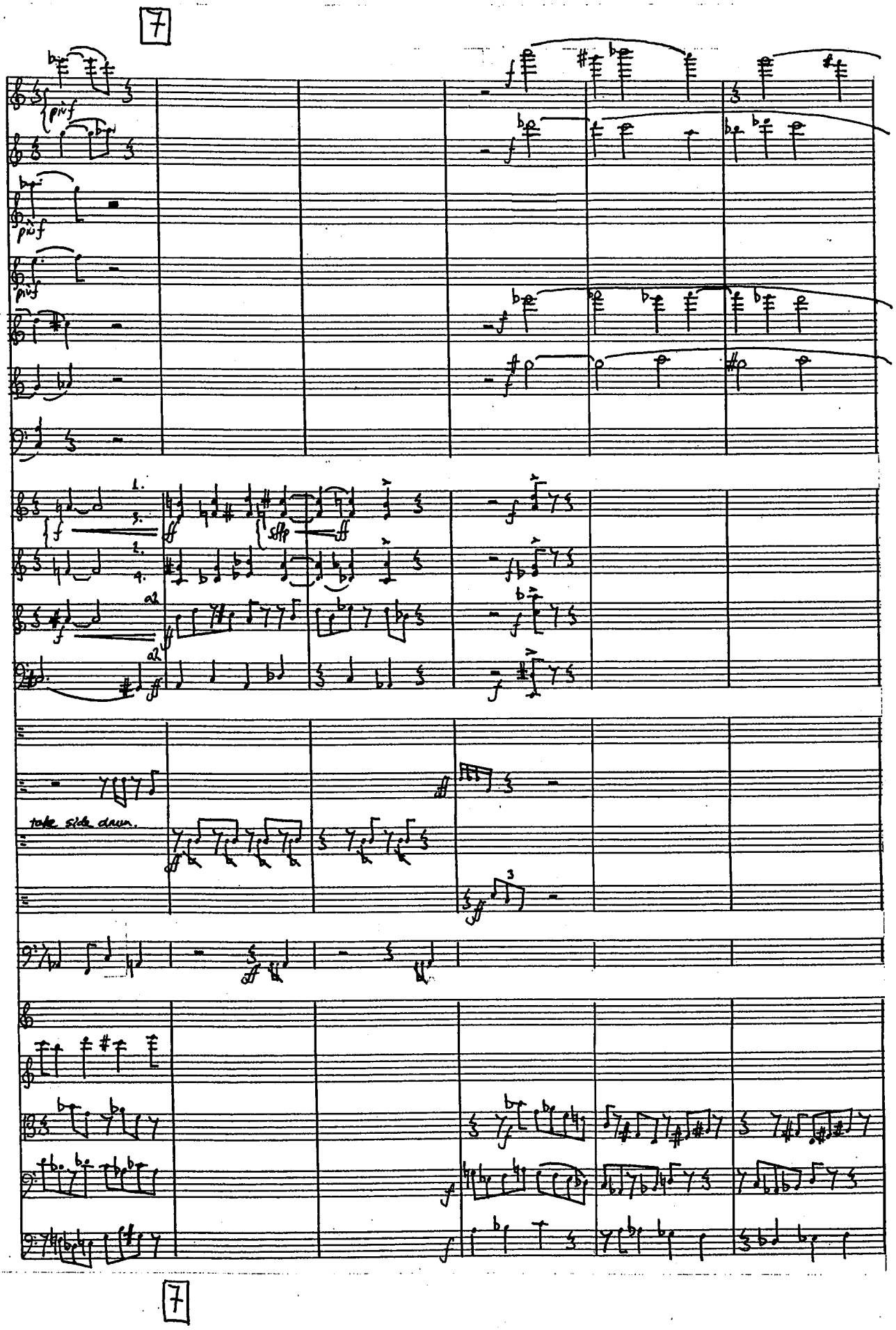
6

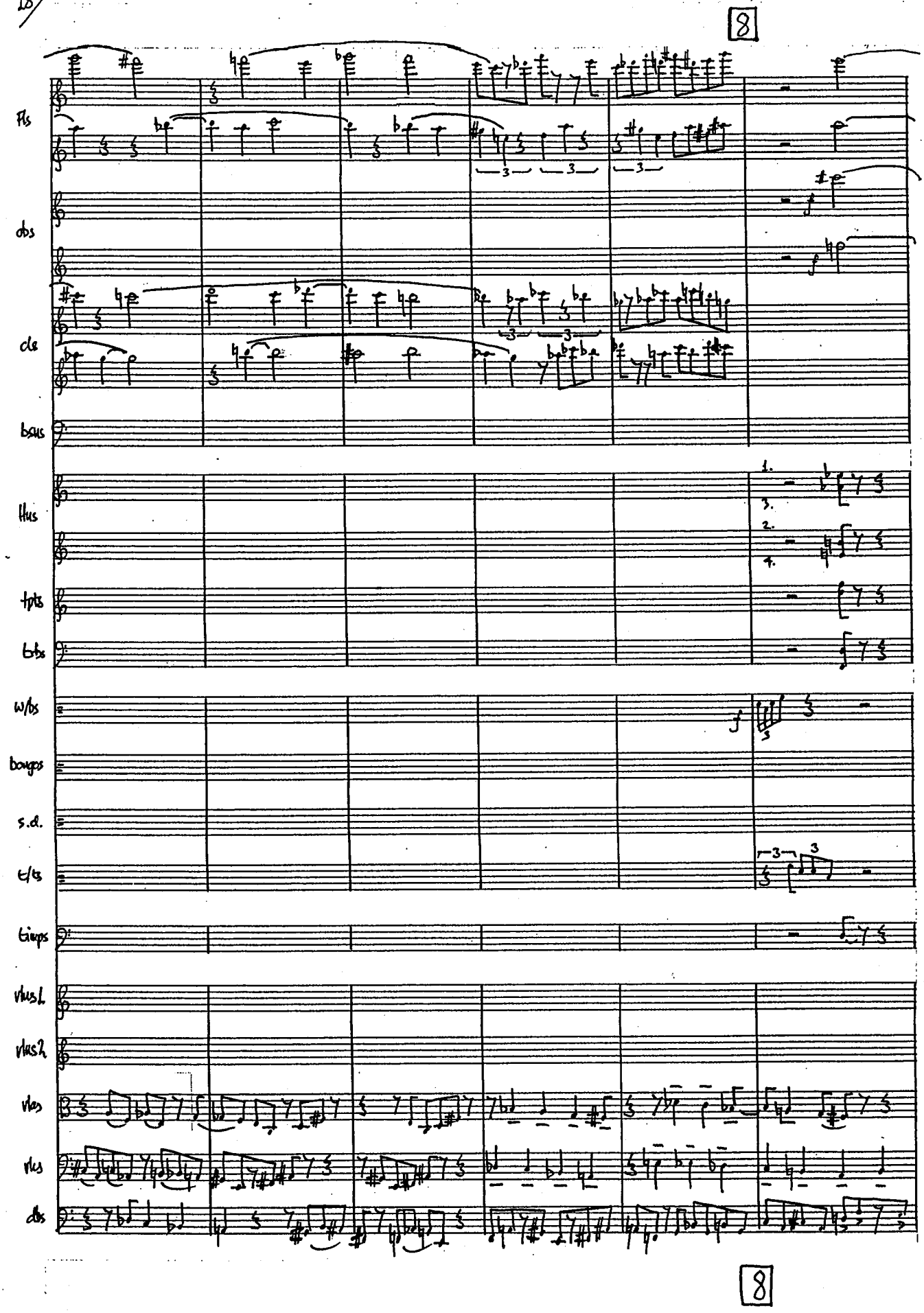

2 Fls
2 obs
2 cls
2 bsns
1. con sord.
Hns
tpts
trbs
w/bs
bonges
congas
t/ts
timps
rlns1
rlns2
vlns
vlcs
dbs

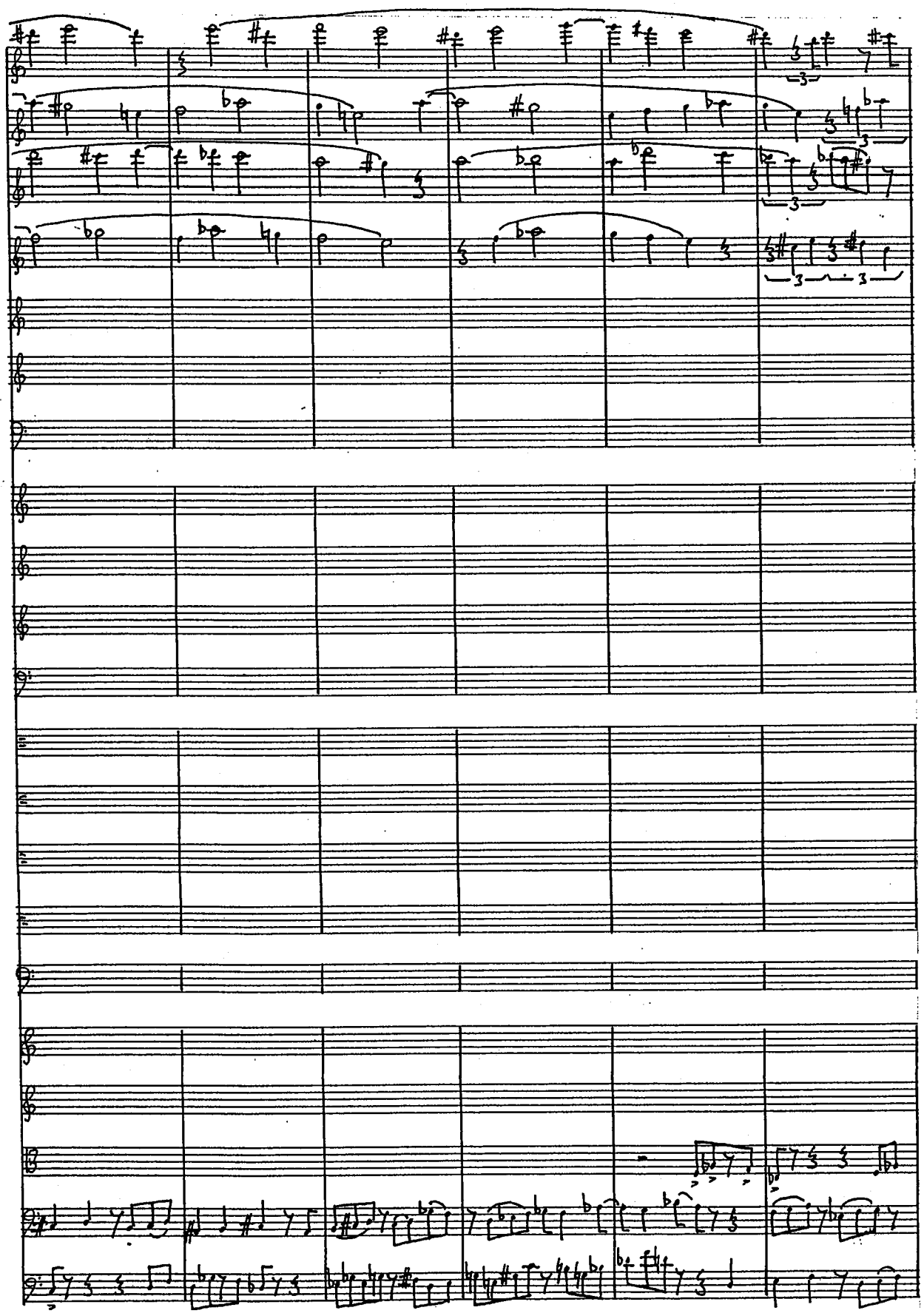
6

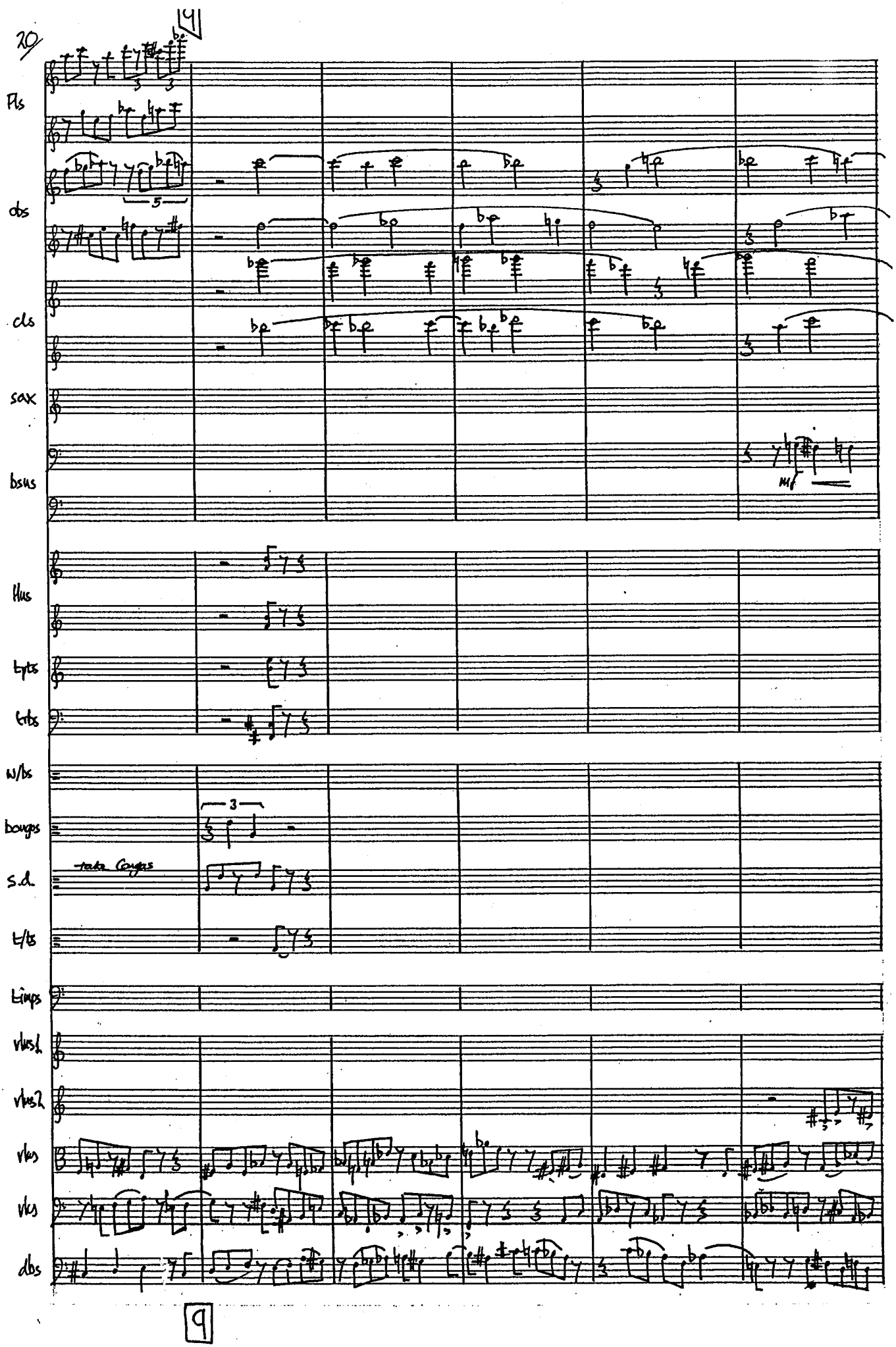

sfp
mf
p
cresc.
1.
p cresc.
mf
sfp
poco f

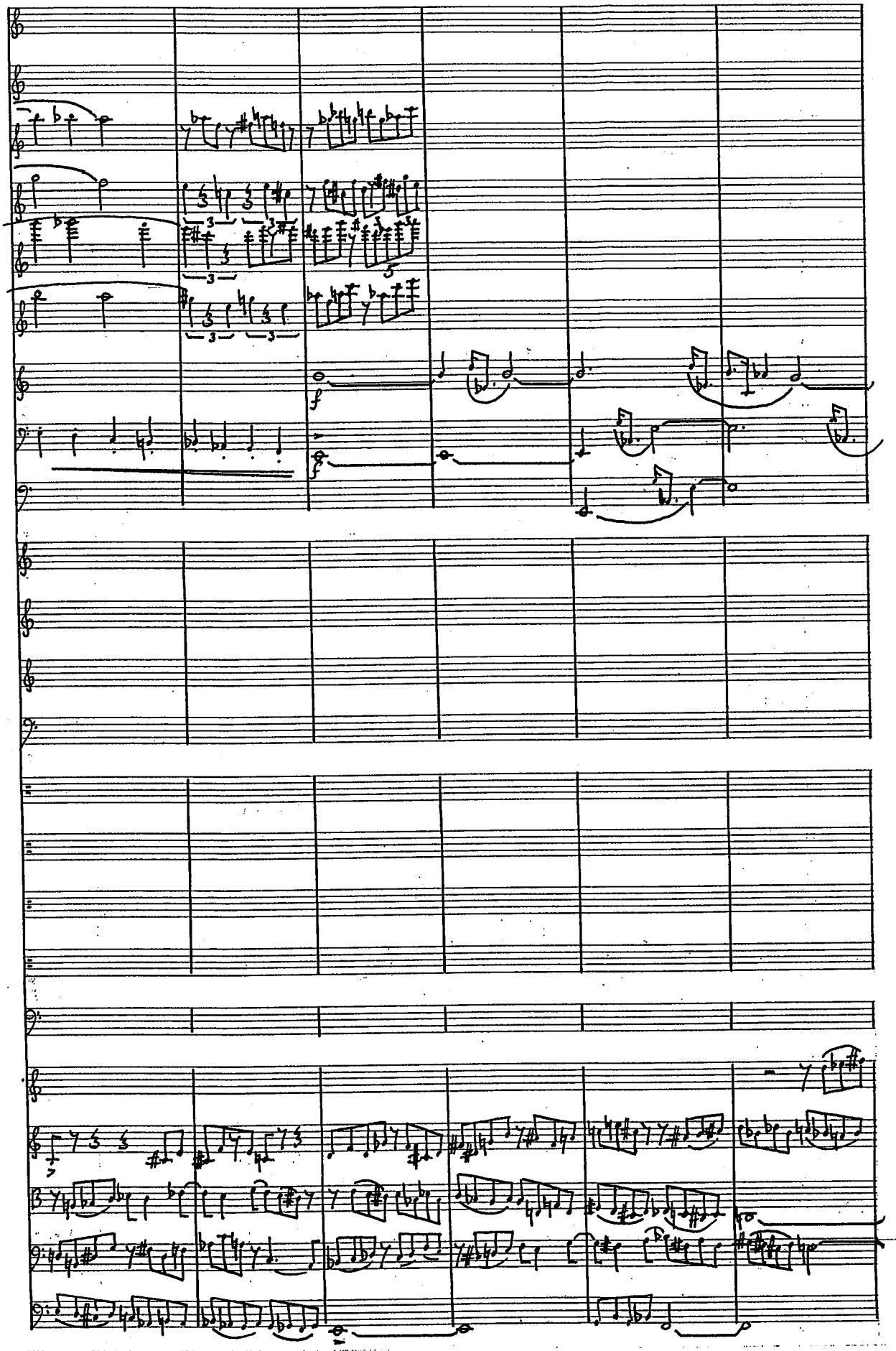

Fls
obs
cls
bsns
Hns
tpts
trbs
w/bs
bongos
congas
t/ts
timps
Vns 1.
Vns 2.
Vas
Vcs
cbs
cresc.


7
1.
2.
a2
sfp
take sticks down.
7

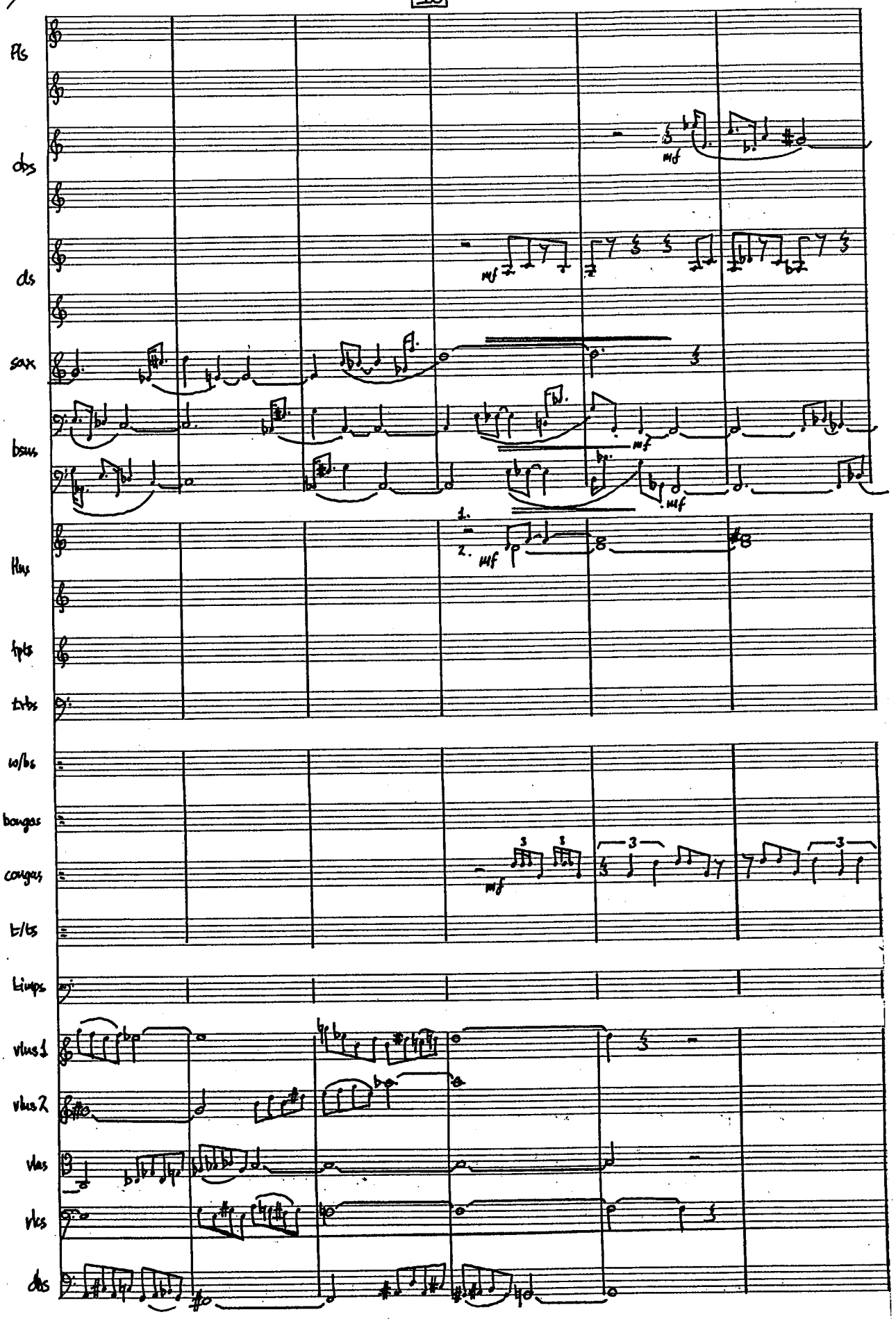

8
fls
obs
cls
bsns
hns
1.
3.
2.
4.
tpts
bbs
w/bs
bongos
s.d.
t/t
timps
vlns1
vlns2
vlas
vlcs
dbs
8

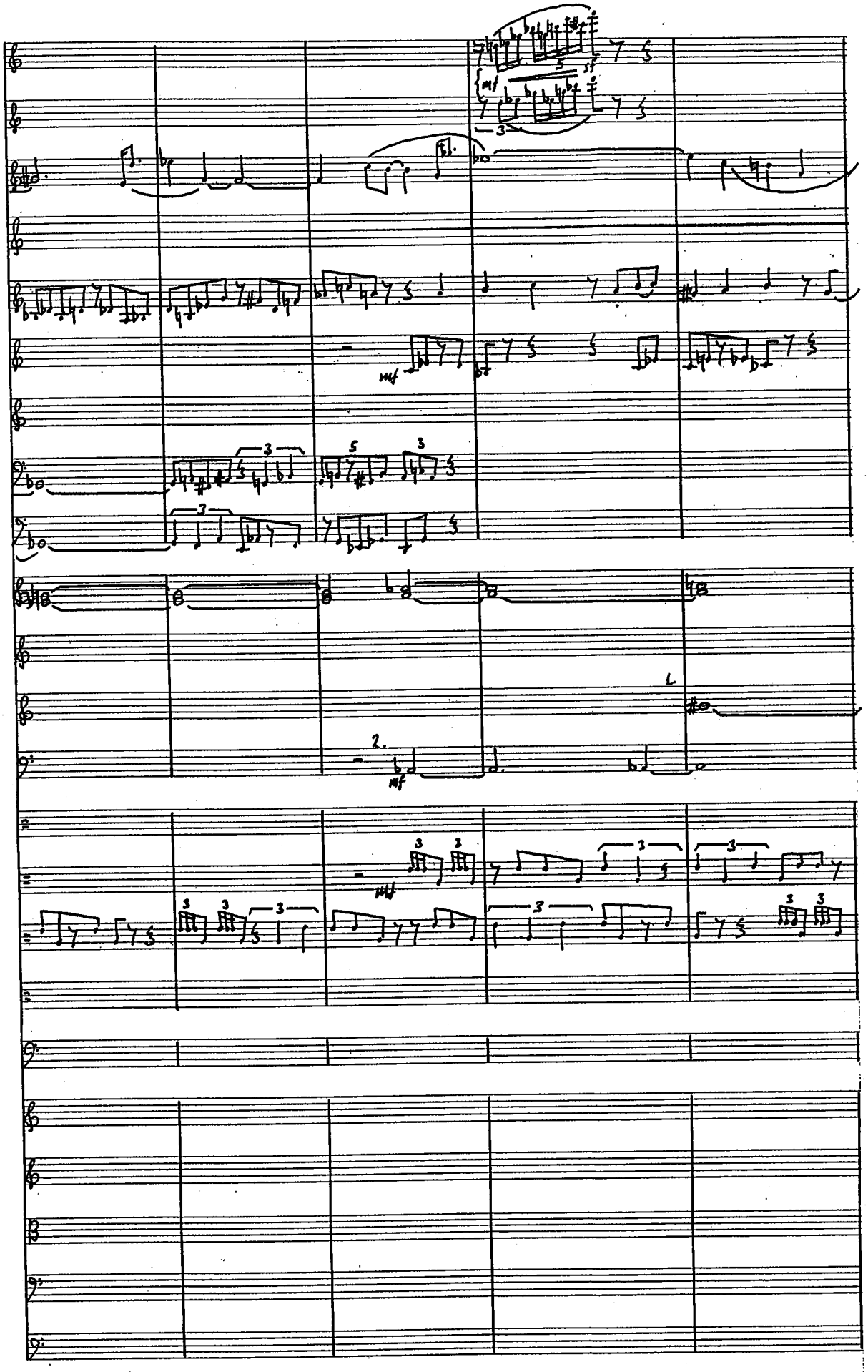


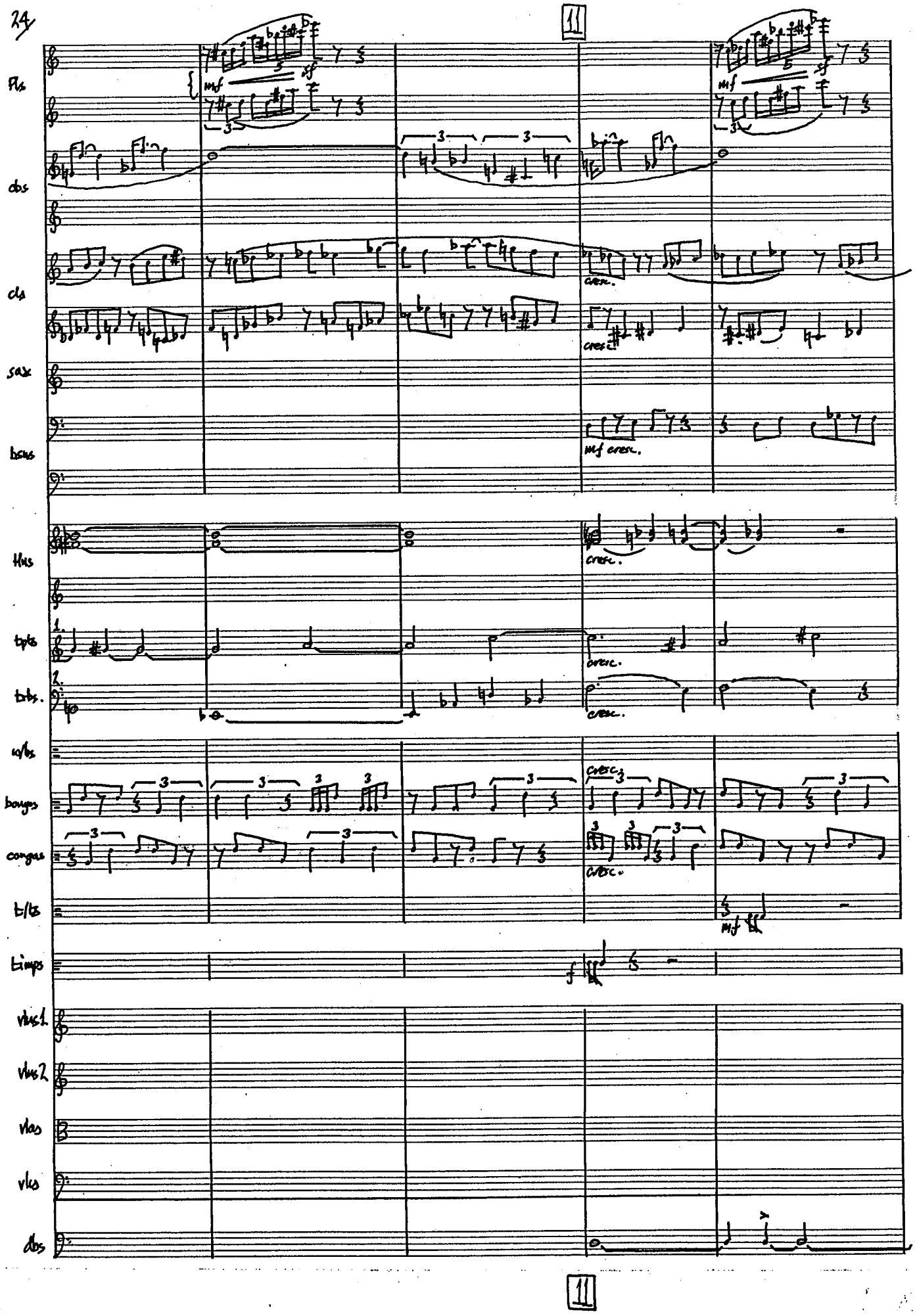

Fls
obs
cls
sax
bsns
Hns
tpts
trbs
w/bs
bongos
take Congas
s.d.
t/tr
timps
vlns1
vlns2
vlas
vcs
dbs
mf

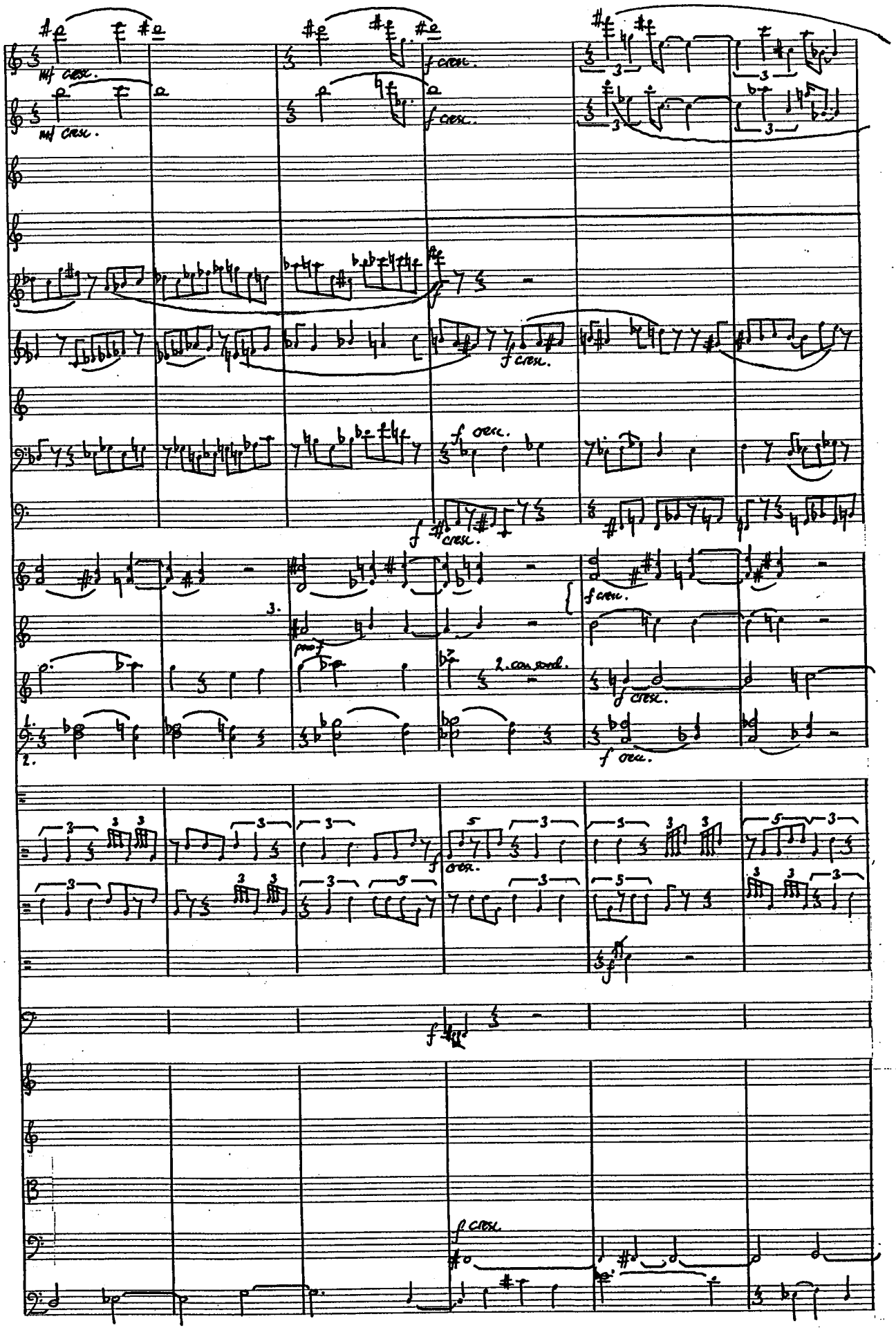


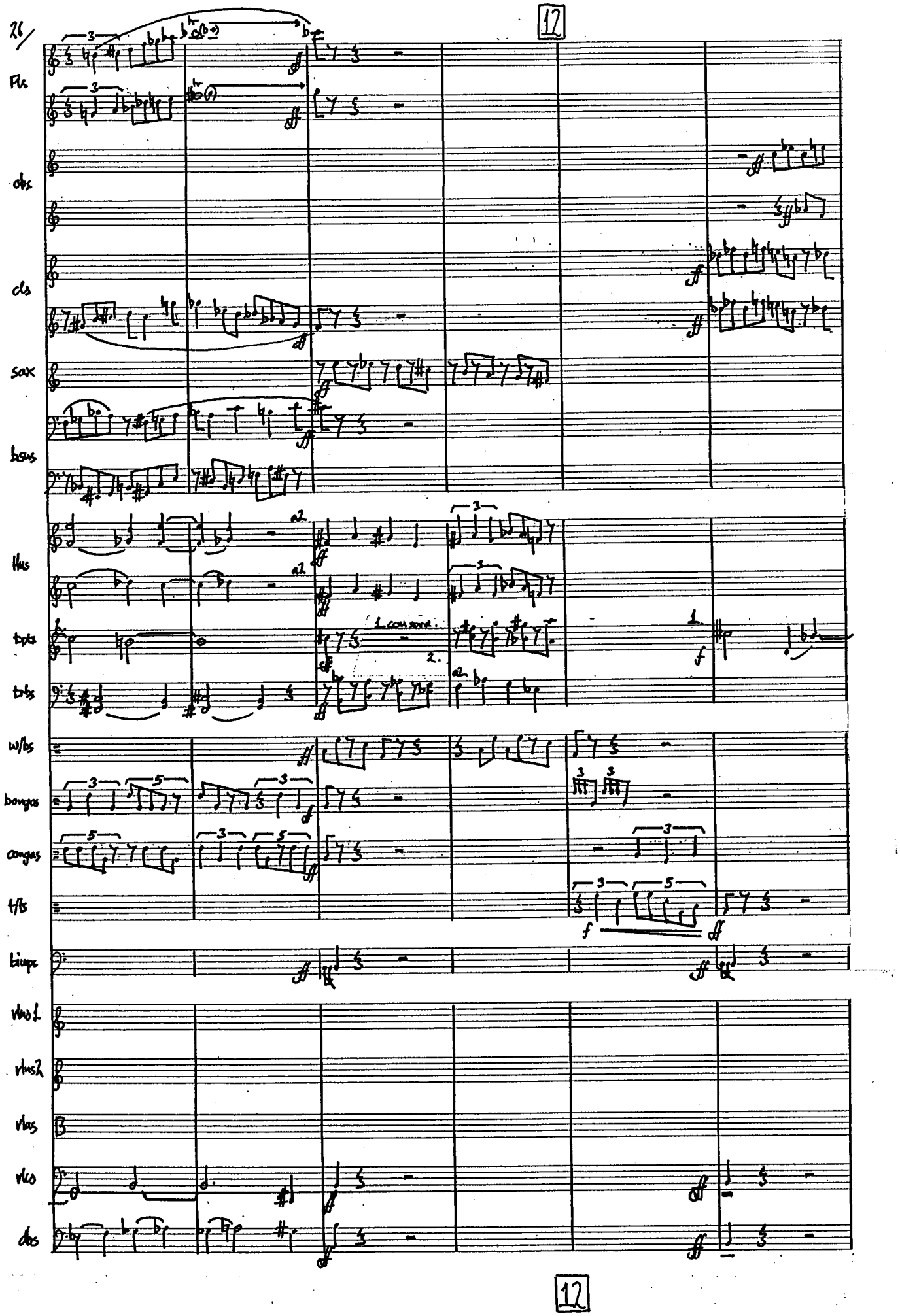
10


Pfs
cbs
cls
sax
bsns
Hns
tpts
trbs
w/bs
bongos
congas
t/ts
timps
vlns1
vlns2
vlas
vcs
dbs
mf
1.
2.


mf
sf
mf
mf
2.
mf
L


11
Fls
mf
sf
obs
cls
cresc.
sax
mf cresc.
bsns
hns
tpts
1.
2.
tbns.
u/bs
bongos
congas
t/bs
mf
timps
vlns1
vlns2
vlas
vlcs
dbs
11


mf cresc.
mf cresc.
f cresc.
f cresc.
f cresc.
f cresc.
f cresc.
f cresc.
mf
2. con sord.
f cresc.
f cresc.
f cresc.
f cresc.
f cresc.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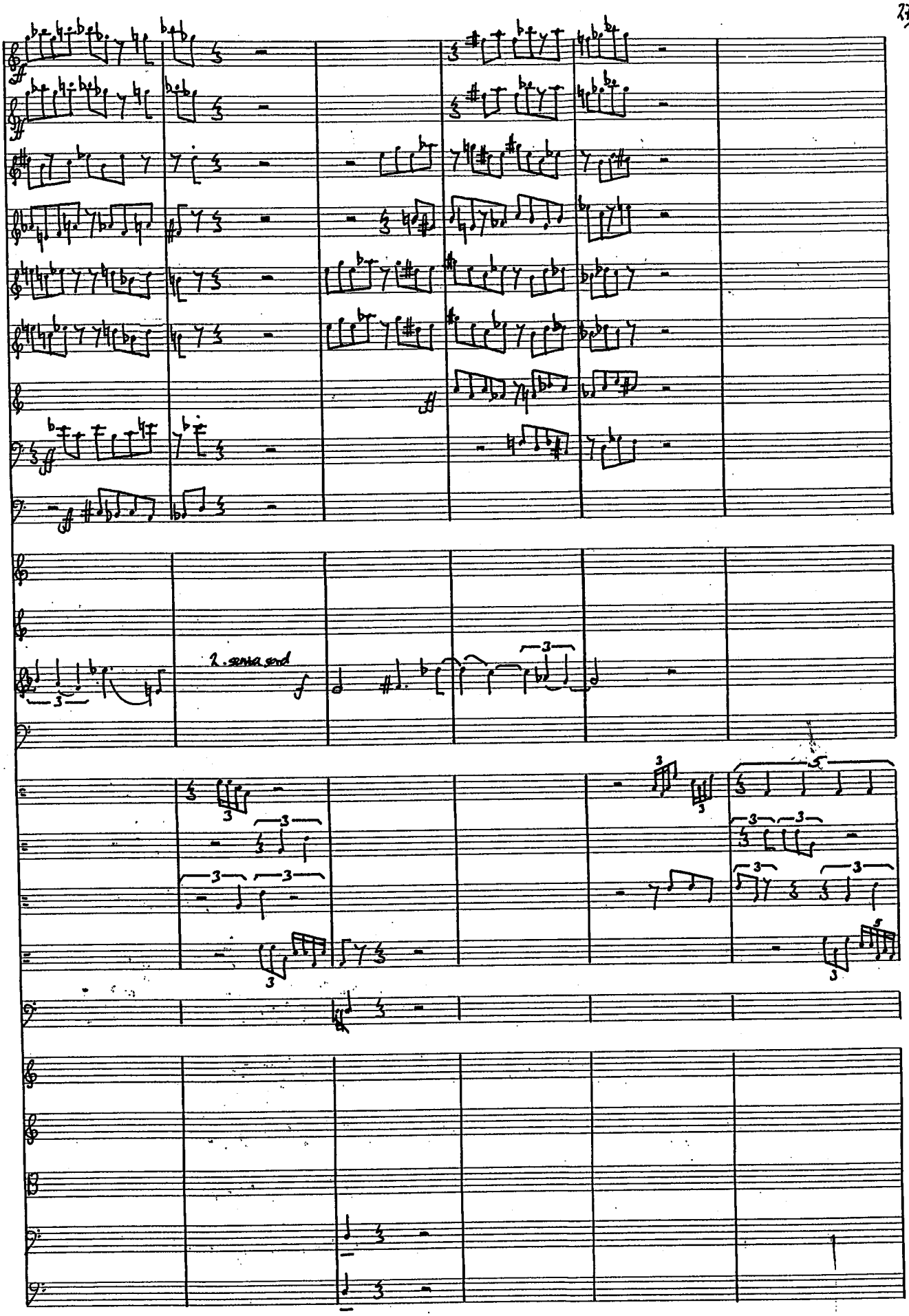
2. senza sord

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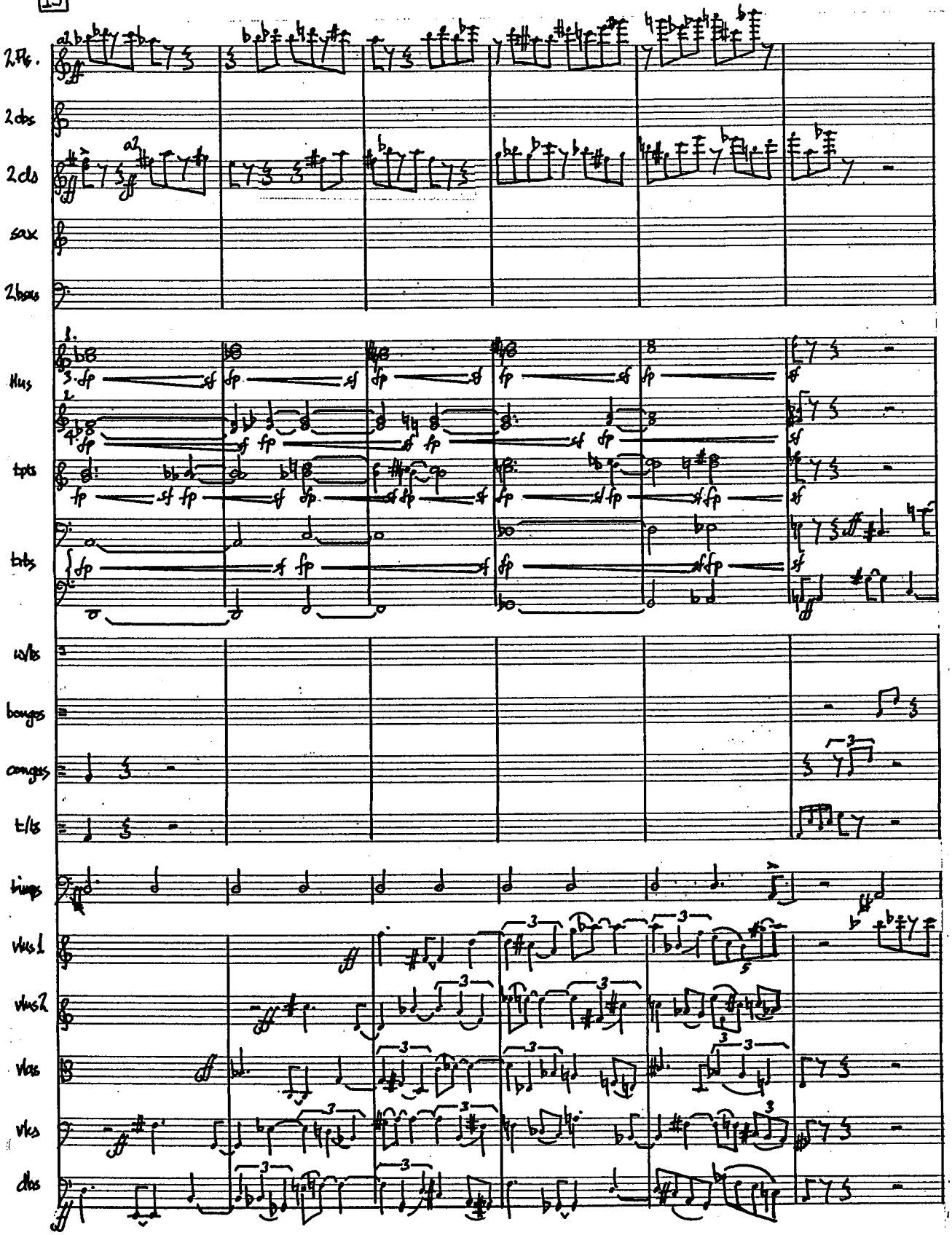

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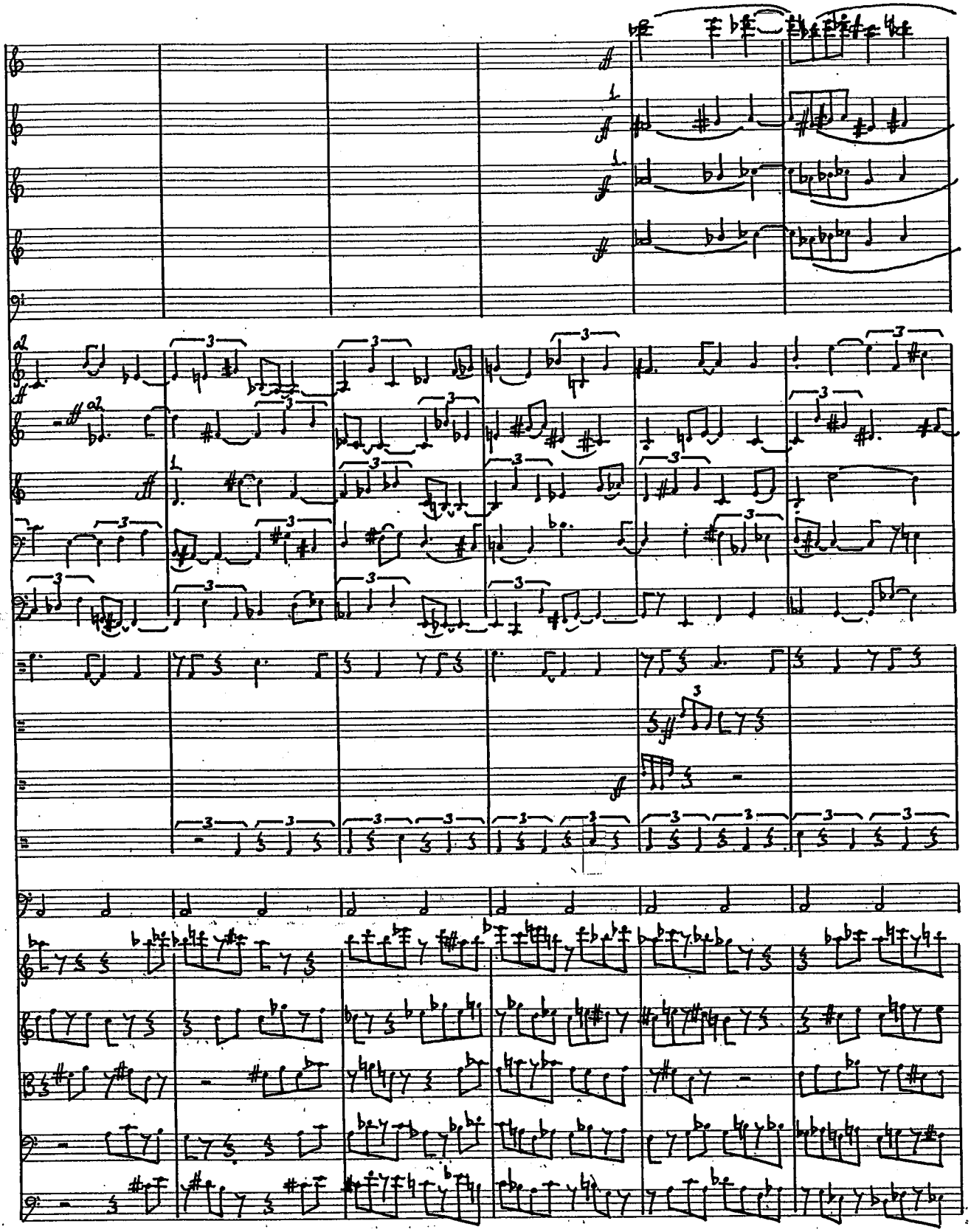

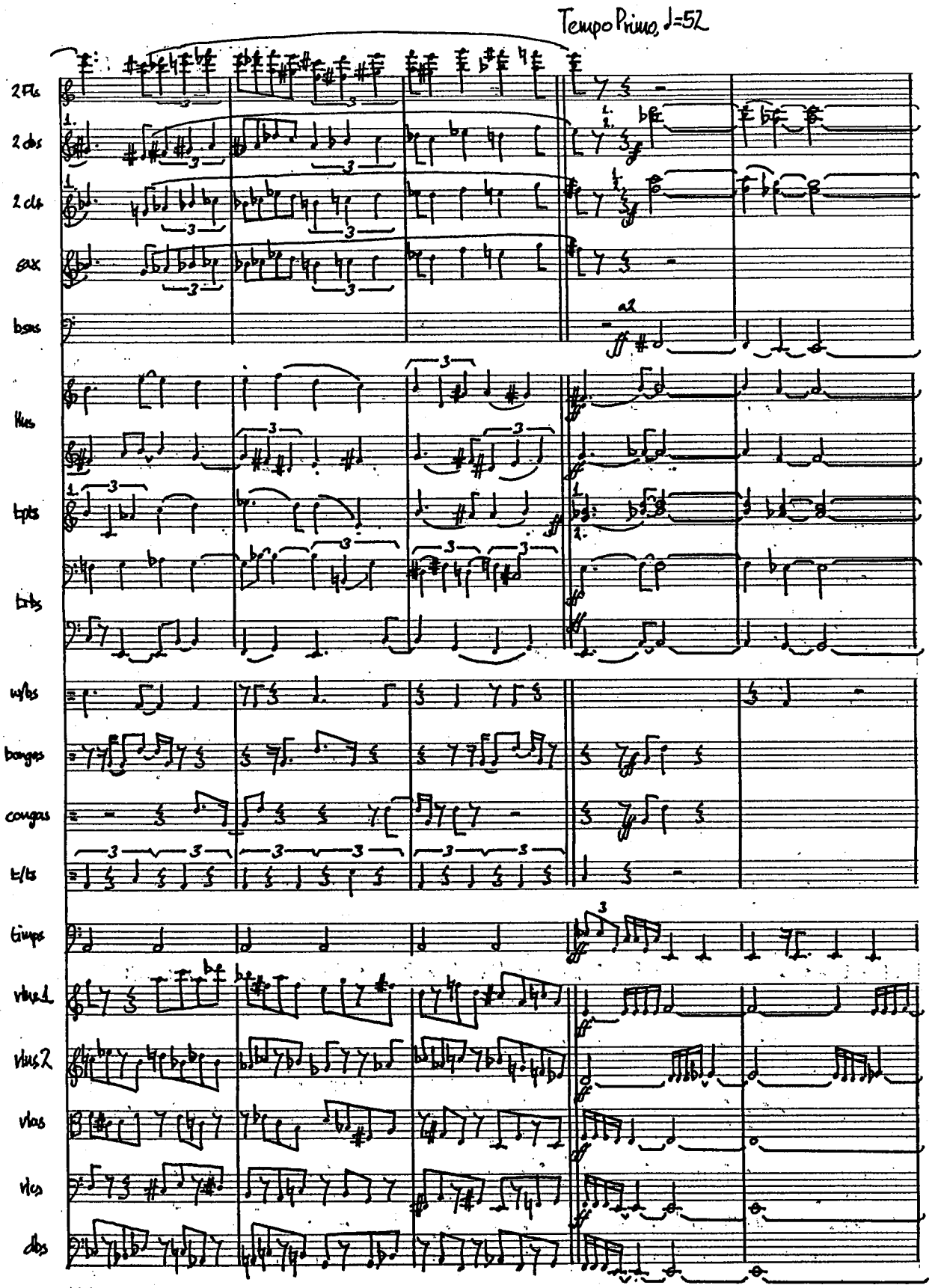
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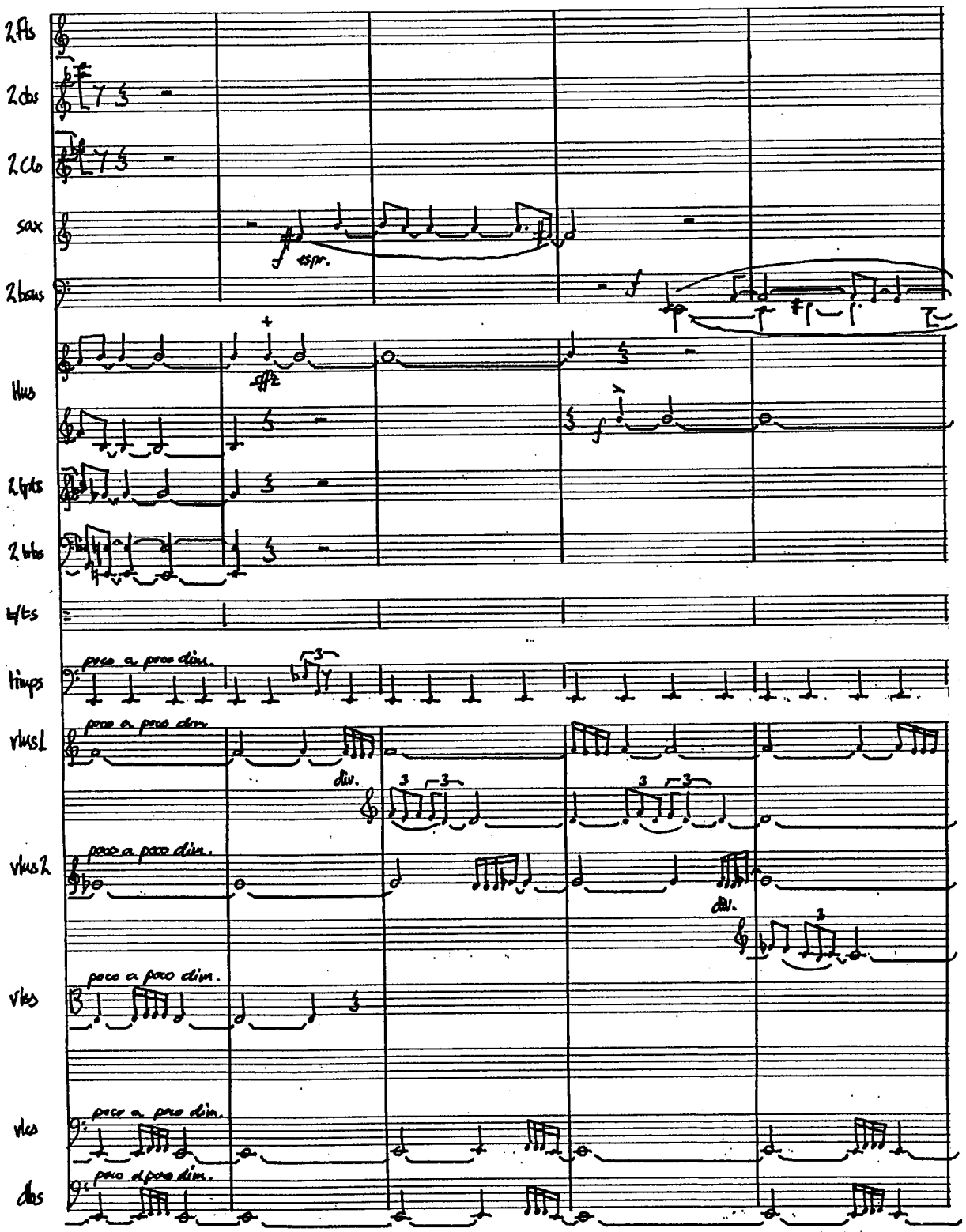
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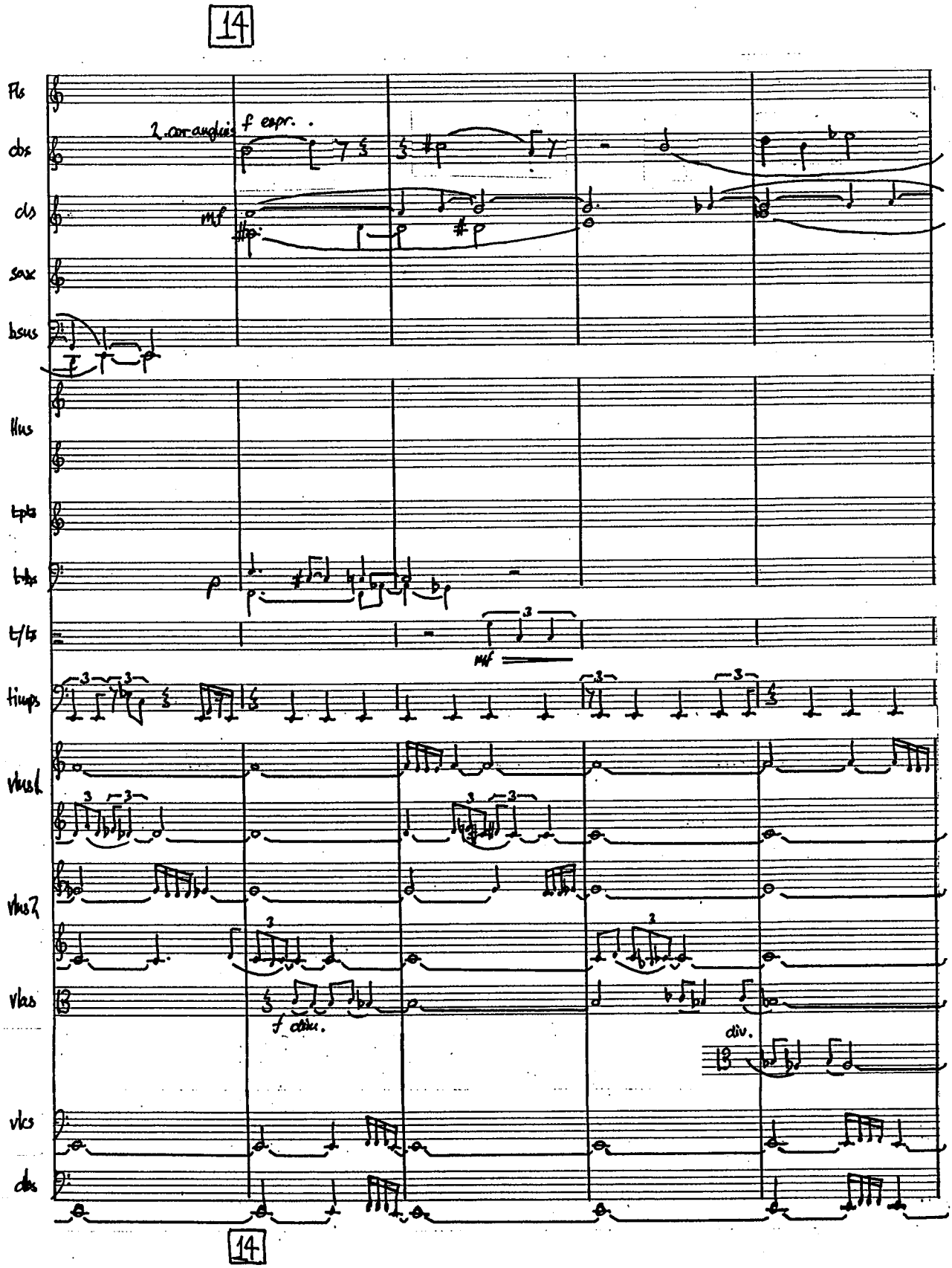
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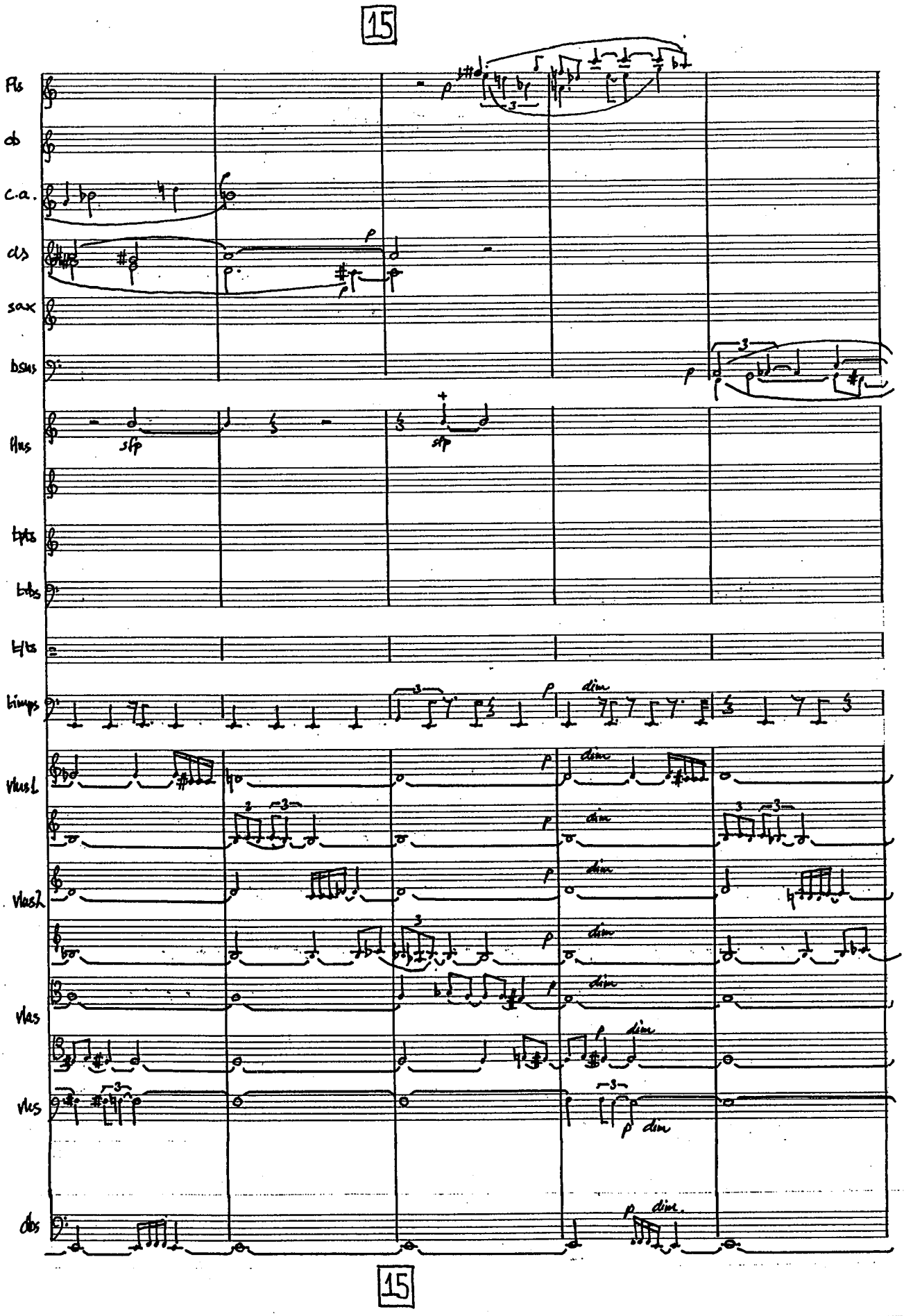
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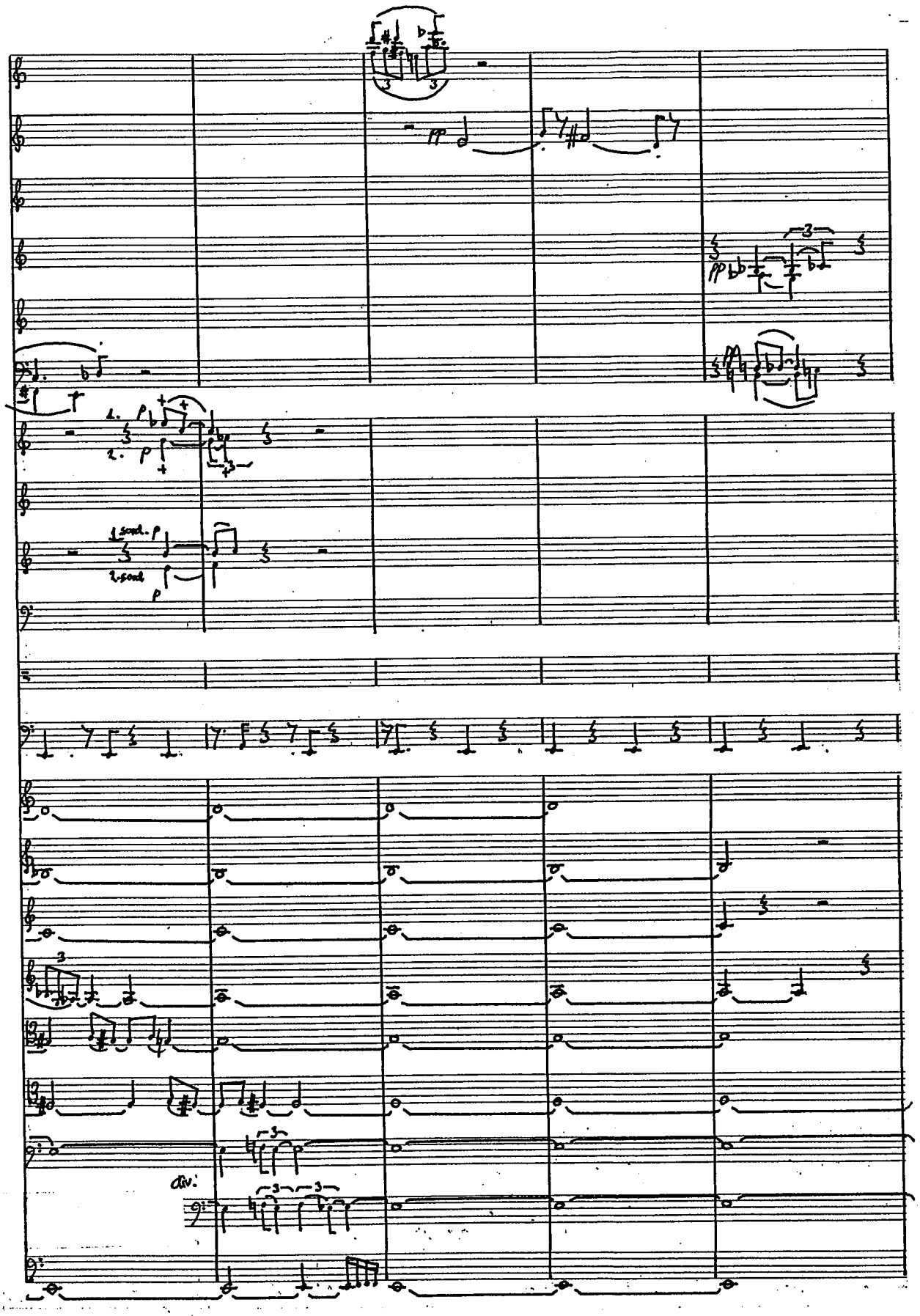
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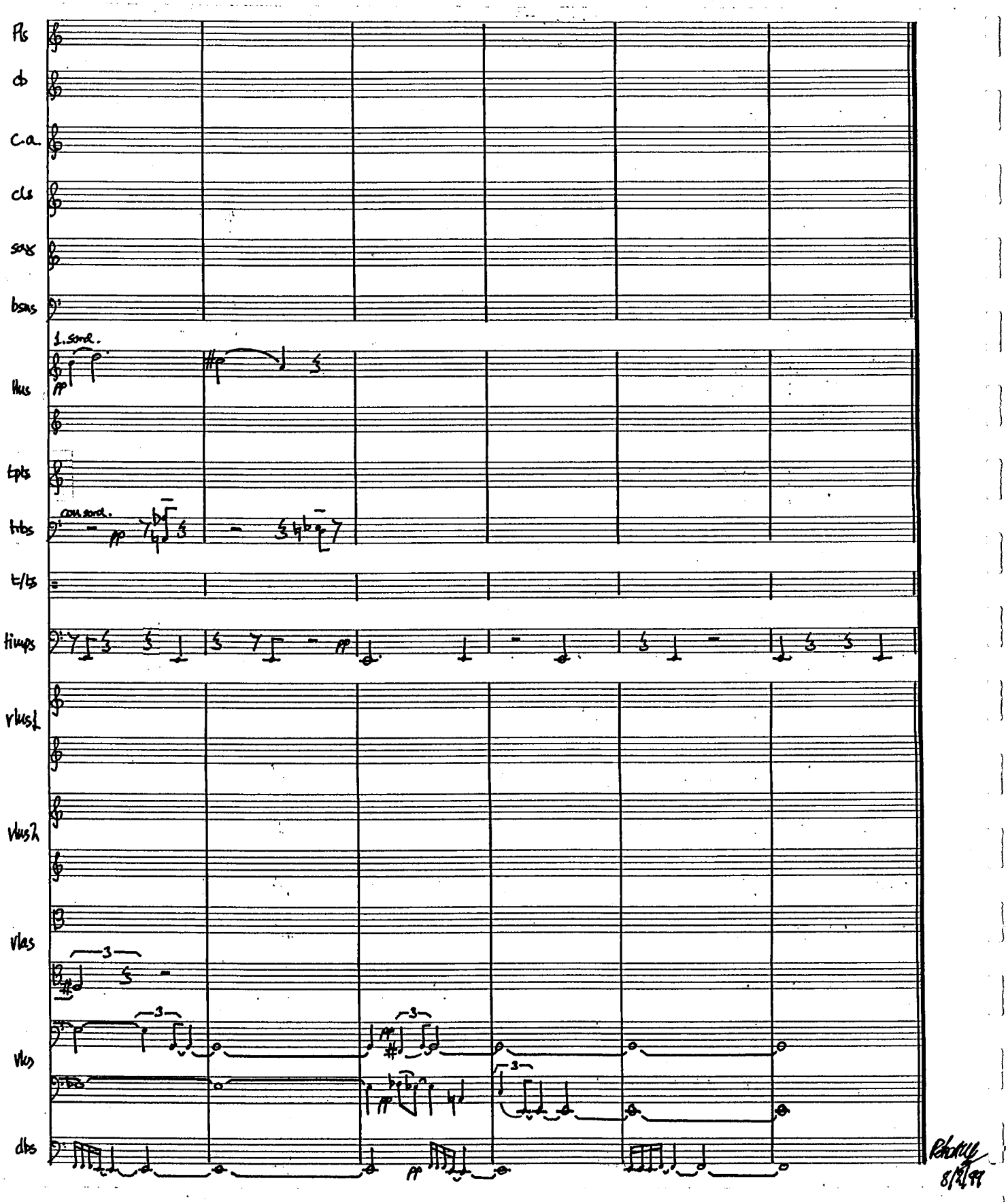
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Dawdon Beach

commentary

"Dawdon Beach" is a tone-poem for orchestra, comprising double woodwind plus saxophone, four horns, two each of trumpets and trombones, five percussion players including timpani, and strings.

The piece was inspired initially by the film "Get Carter" (MGM 1971, Mike Hodges), and in particular the closing scenes (the chase along the beach and subsequent fight beneath the aerial flight (system for disposal of coal-waste at sea), the disposal of the body in a waste hopper, and Carter's death at the hands of a remote marksman, all this set against the background of the black Durham beaches and sluggish waste-laden sea). Further inspiration was drawn from the industrial decline since the 60s of the North-east, the unemployment and deprivation resulting from pit closures, and the pollution of the beaches around the coastal collieries.

The piece is not a narrative composition, rather it is a reflection and commentary upon life and environment in the East Durham Coalfield. The basic musical materials used to achieve this end are extremes of register and dense sustained chords, corresponding to isolation, the slow-moving grinding harmonies conveying a sense of oppression and brooding atmosphere, and repetitive motoric rhythms which have an industrial and mechanical quality. I have sought to convey a sense of unease and dislocation by the introduction of irregularities into the basic rhythmic flow, and the overlaying of rhythmic units of differing lengths.

The harmonic content of the piece is derived from thirds and sevenths in a manner characteristic of other compositions in my repertory - cf Eluxée. The melodic writing likewise uses thirds, minor seconds and sevenths. However in the contrapuntal layers of the piece, linear considerations are all-important, the individual lines not fitting into any overriding harmonic scheme, other than large-scale tonal polarities. The resulting tension between vertical and horizontal elements, and between contrapuntal and stable harmonic layers adds further to the dislocation and uneasy character of the music.

The piece is continuous, divided into three sections. Two slower outer sections enclose the faster central section, creating the form ABA'. The tempo of the outer sections is crotchet=52, that of the central section crotchet=132, a little over double time.

Section A evokes the mood of desolation, brooding and oppressive. The E tonality, coloured by f at the bottom of the texture, is established at the outset, together with the characteristic anacrusic rhythm. The timpani, in even crotchets with occasional deviations, suggestive of defunct machinery, beat out a basic pulse, which is contradicted by the irregular flow of the

superimposed canons in the wind. The string chord at bar 4 (see Example 1, chord (x)) sets out in vertical form a reservoir of pitches and intervals that have large-scale significance, the initial melody (a) being derived from this. The melody is presented in three-part canon at rising stepwise intervals: Example 2 shows how this is disposed. The minor third steps at the top are to avoid repetition of pitch-classes.

The slow-moving string harmony evolves independently of the wind canons; however they both reach a peak at figure 2, where the tonality shifts to A. This is achieved melodically by the movement of the double-basses, and prefigured by the initial melodic entry at figure 1. The basses subsequently move up to b-flat, providing the same harmonic colouring as at the outset. After this climax there is a return to E and now a simpler texture allows attention to focus on individual lines, the melodic material deriving from (a). The section closes as the rhythm slows with chord (x), neatly bringing the music full circle.

Section B is initially a fugue, and fugal writing is consistent throughout much of the section, though other material subsequently assumes greater importance. Individual fugal entries are derived from (x), and the tonalities of each exposition rise in successive fourths, a natural outcome of the E→A movement of the first section. Example 3 shows the fugal entries.

The surface of the music is much more active, with the rapid quaver movement in the strings and the pattering percussion. A furious energy is built up by the successive accretion of contrapuntal layers. The industrial aspect of the piece is much more in evidence here in the driving flow of the counterpoint, but the sense of unease is still present, due to the irregularly spaced fugal entries; only in the first and last expositions are all the entries equally spaced at five bars distance, while in the others the entries are more compressed. The interruptions that occur at one bar before figure 5, at figure 7 and at two bars before figure 12 break up the onward rush and also serve to present the fugue subject partially in augmentation.

Initially the fugue is accompanied by long sustained notes in the brass, highlighting the slower harmonic pace beneath the surface. At figure 5 this function is turned over to the woodwind, using melodic material derived from (a) while the fugal texture thins. At figure 6 two new ideas appear, a rocking figure in the woodwind (b) and a long-note melody in the brass (c). As the texture thickens the harmonic and rhythmic tension is increased to reach a climax at the interruption. A new texture develops in which the registral spacing widens using low strings and high woodwinds, the latter playing

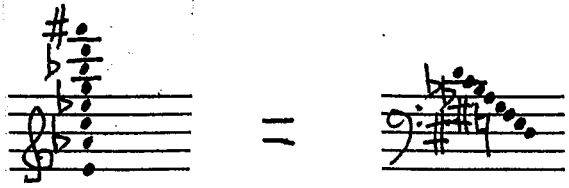
material derived from (b). At this point the fugue begins to become less important in the musical argument as attention is focused elsewhere.

The final fugal exposition at figure 10 is in the woodwind, the strings having momentarily dropped out. Material (a), (b) and (c) are all present and also percussion rhythms similar to those seen at the beginning of the fugue. After this exposition the texture becomes more block-like, and the fugue disappears, though its material is still present. At figure 12 there are two two-and-a-half bar passages using subject material in canon, the starting pitches being derived from (a). This is followed by a five-bar passage where the strings play (a) in canon, using pitches derived from (x), while sustained block chords reappear. There is then a ten-bar passage, an extended variant of the above, where (a) in inversion appears in the brass. The fugue material dissolves in diminishing counterpoint in the strings, gradually reduced to its four initial notes, while the countersubject appears in parallel augmented triads in the woodwind. The return of the even timpani pulse prepares the ground for the final section.

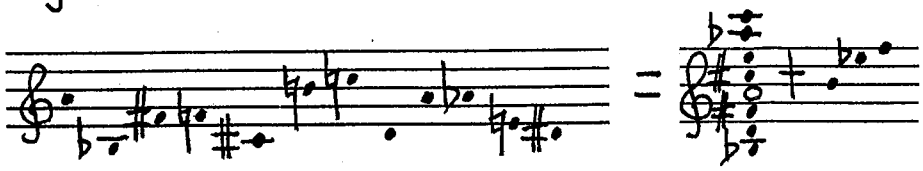
The sense of desolation returns after the climax as the long diminuendo runs its course. The melodic interest is in the cor anglais, supported by the clarinets in a restatement of the fugue subject in new rhythmic values. The dying sounds of industry in the brass and low woodwind is set against the sounds of nature in the flutes, using material derived from (a) but in a very twisted fashion; an image of pollution and degradation. The dense string harmonies here sink, reversing the trend of the opening section, coming to rest on chord (x), here disposed in seconds, before dissolving, leaving only the opening note cluster of e and g coloured by a low f. Thus the piece comes full circle.

Example 1

String Chord at b.4 "(X)" String chord at end

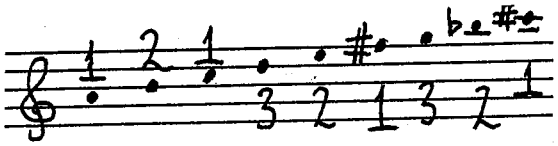


Melody "(a)"



Example 2

Disposition of canonic entries of (a)

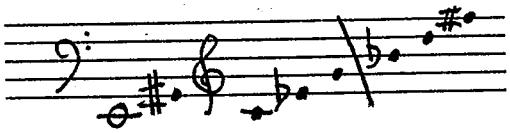


the numbers indicate the individual concurr voices in the three-part canon

Example 3

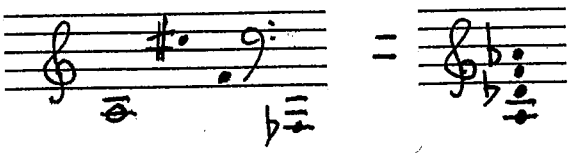
Disposition of fugal entries.

first exposition, page 3 bar 2



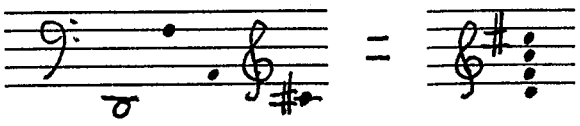
chord (x) complete

second exposition, figure 6



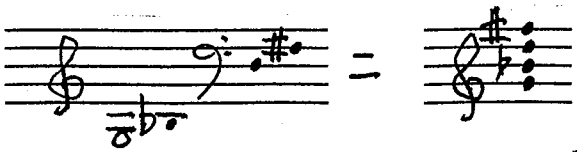
bottom half of chord

third exposition, figure 8



top half of chord

fourth exposition, figure 10



top half of chord.

Eluxeé

Commentary

The piece falls broadly into three sections,distinguished by timbre, texture,tempo and metre.Each of the three sections is further broken into shorter units.The overall layout is as follows:

SECTION 1	Tempo crotchet=60
0'00" to 4'17''	free metre
	muted solo trumpet projecting a line against static background drones and harmonies
SECTION 2	Tempo crotchet=90
4'17'' to 8'29''	metre 6/4 or 3/2
	four-part contrapuntal writing on tape,with occasional interjections from soloist
SECTION 3	Tempo crotchet=120
8'29'' to end	metre 8/4 in the main
	open trumpet projecting a line initially solo, later in counterpoint with taped trumpet and bass

Section 1 breaks down into three subsections,broadly defined by timbre changes,though the voice-leading graph and formal design indicate a slight difference.Thus the first subsection consists of the wezee-muted trumpet material,plus the first phrase of the cup-mute material,culminating in the first climax at 1'44''.The second subsection consists of the remainder of the cup-mute material,and the third subsection consists of all the straight-mute material, culminating in the second climax at 4'17''.

In Section 2 the musical argument is carried entirely by the tape, and the section breaks down into four subsections as follows:the first subsection consists of fanfare-like material for the taped trumpets,entering one by one in different rhythmic units,building to a climax at 5'43.5''.The second subsection is a short passage for the soloist using similar material.The third subsection is introduced by the fanfare chords at 6'17'',and consists of a long contrapuntal development for four taped trumpets in different tempi.This too builds to a climax just before 7'45'',at which point the fourth subsection begins,the soloist playing fanfare material and more melodic gestures.

Section 3 is divided into three sections,marked off by the three refrains which are in progressively higher keys (D,F-sharp,B-flat).

Subsection 1 is for the soloist accompanied only by taped percussion and background textures,with the occasional interjection from taped trumpets.Subsection 2 introduces a walking bass and a taped trumpet that duets with the soloist,and subsection three is a climactic coda concluding the piece in a stable B-flat major.

There are two sets of voiceleading graphs;first a "middleground" graph (pages i to ix) ,and a "background" graph (pages x to xii). These attempt to show the harmonic trends lying behind the melodic and contrapuntal writing of the piece.Because the piece is mainly conceived in a linear,horizontal fashion,the vertical combinations that result from the conflict of lines often bear little resemblance to the underlying harmonic motion,and the graphs are intended to bring this out.In many cases linear motion has been reduced to chords or scalic motion,and from this the harmonic independence of the contrapuntal parts can be clearly seen.

Middleground Graph,page i;Background Graph page x

The initial whole-tone B-flat sonority is enriched by the addition of the D-flat,giving a characteristic major-minor feel.The E-flat in the bass appears at 0'44'',the result of the tritonal formations tracing out the semitonal set F-E-E-flat, and a whole-tone sonority is established,again coloured by chromatic notes,most importantly B-flat and C.This results in a definite E-flat major formation at 1'23'',and all the linear motion leads neatly to the climax.

The C in the bass arises through a tritonal motion related to that at 0'40'',and then moves melodically to F for the next solo entry.The prevailing tonality is a stable chromatically enriched F minor.At 2'48'' a process of expansion begins as the lines pull apart,the bass dropping to D and the solo rising to F at 3'10'',followed by a climactic descent to E-flat. At 3'23'' the bass drops further to D-flat,and the harmony becomes more dissonant,using rich third-based formations. The solo line traces an arpeggio prolonging its initial E-flat, before ascending to the high B-flat,connecting with the B-flat of the opening,while the bass climbs stepwise;I have linked this back to the bass C at 1'51'' (indicated by the double arrows in the background graph).Thus there is an overall

linear motion in the bass towards A,while the solo drops a semitone,and a stable A major is established at 4'17''.

Middleground Graph,pages ii to iv;Background Graph page x

The passage between 4'17'' and 4'57'' is in all parts a prolongation of the A,now in the form of a stack of minor thirds. The main musical argument is carried by the upper two parts,which having climbed up to B then descend stepwise. The harmonies are more complex after 4'57''.Now that all four trumpets are in and moving,there is a wider variety of chord structures.The top two parts continue the minor-third pattern,though in different tonal regions,E and D,and now using a wider range of melodic gestures,while the lower parts form a composite of F major and B-flat minor around a central A.The bass tends downwards to D,and after 5'25'' all the upper parts rise,mainly by stepwise motion,until they are sharply cut off just before 5'45''.

At this point the tonality shifts to F,though the solo provides a strong A,traced out in minor thirds as at the beginning of this section.Coming up to 6'17'' the bass and trumpets converge on an A/B-flat sonority.The F-sharp at the top of the third chord (at 6'27'') is the outcome of the chromatically rising solo line,and links into the ensuing counterpoint.

Middleground Graph,pages iv to vi;Background Graph page xi

This third subsection is by far the most complex passage in the entire piece,and its harmonic instability is clear from the profusion of shapes evident in the middleground graph. The interaction of the first two parts to enter results in a rising scale from the initial F-sharp up to E-flat,the D being provided by the initial note of the third trumpet.From this point on (6'57'') the complexity becomes most apparent as each part follows its own independent trajectory.

The topmost part moves through a stack of thirds up to A, then hovers around D/B-flat,stabilising briefly at 7'17'', before settling on C and again rising in thirds to B-flat. The second part traces out F then E-flat formations,the B-natural at 7'13'' leading to the B-flat in the following bar, where there is a brief moment of stability before continuing through minor-third and whole-tone patterns to A.

The third part uses A-flat formations,first in major thirds then minor thirds,arriving on D at 7'31'',then rising hesitantly to A-flat.
The fourth part has rising third formations beginning on B, reaching B-flat before dropping to D-flat,stabilising briefly at 7'17''.A triadic rise leads to A-flat and then a scalic ascent to G. The bass meanwhile traces out a series of pedalpoints which only occasionally coincide with the upper parts;this is most striking at 7'17'' where the bass reaches E-flat,while three of the upper parts stabilise on congruent pitches.
At 7'45'' the solo re-enters,initialy in the same manner as before,but here the tonality is G-flat.Again minor-third formations are the prevailing harmonic feature until 8'09'', after which the tape falls chromatically while the solo rises in whole-tone fashion.After the bass has arrived on C the solo drops out and again the trumpets rise,concluding on an A-major seventh chord,in preparation for the new section.

Middleground Graph page vi;Background Graph page xi

The refrains can be regarded as prolongations of a single tonality,expressed in the graph as a stack of thirds around the main note.The first refrain is in D;each successive refrain is a major third higher.Each refrain is played by the tape only.
The solo material begins at 9'13'',and lies in an E-flat region, the line tracing out a minor-third formation on B-flat,while the accompaniment,consisting of long drones and sporadic chords,rises in minor thirds from E-flat.
After 9'37'' both parts arrive on A;the bar-and-a-half interruption adds a B-flat,and these two notes are the main notes for the solo's next foray.This consists of a melodic sequence first on A then on B-flat,arriving on F and descending in a series of overlapping fifths to C-sharp.
The solo continues with rising third formations on C-sharp then F,before returning to C-sharp and a chromatic rise to the final A-flat.
The subsequent tape interruption consolidates A-flat,and the new solo entry,although initially in E,settles into G-sharp before rising to F-sharp;meanwhile the tape drops stepwise to D-sharp.The F-sharp gives way to A,and the tonality hovers between A and F-sharp,finally coming out in favour of F-sharp.The second refrain consolidates the new key.

Middleground Graph pages vii to ix;Background Graph page xii

Here the bass enters,now playing a real part in the development of the music.Leading from F-sharp,the bass makes its way to A by interlocking thirds and minor seconds;the accompanying chords shift slowly,linked by common notes.

At the solo entry at 12'05'' the A gives way to D,achieved just before 12'25''.At this point a second trumpet part, recorded on the tape,takes over,tracing out a line in which fifths and minor thirds are prominent.After two bars the solo re-enters,the two parts diverging as the solo climbs through thirds to F while the second trumpet falls to D;finally they coincide on E at 12'49''.The two parts continue their independent trajectories,sharing similar material,but arriving on D-sharp in conjunction with the bass E-flat four bars later.

Now the melodic line is shared between the two trumpets as it winds its way to F-sharp via a series of sequences;the bass after recapitulating material from the beginning of this section moves by sequence to F-sharp.

The new key is achieved at 13'21'',and the melodic material, initially carried by the soloist,is derived from that presented at 9'13''.F-sharp is briefly countered by E where the second trumpet enters,but is quickly restored as the two lines move first in canon,then in tandem and finally in canon.The bass settles briefly on D-flat,then all parts rise steadily until the tonality of B-flat is attained for the final refrain.

This last refrain is more densely scored than the others, adding a bass and an inner descant.

The coda is a further consolidation of B-flat major,the trumpet parts emphasising F while the bass descends to E-flat,rising through thirds to the final cadence,a third-based chord on G-flat then one on B-flat.

The Tape Part

Since the piece is built around the solo trumpet,open and muted but otherwise timbrally unmodified,the sounds used in the tape part are chosen to blend or complement.

Most of the material used in assembling the tape is the sound of the trumpet, untreated though often using different mutes.French Horn sounds are also used,as well as a range of percussive noises extracted from various metallic objects.There is also a small amount of electronic sound.

The tools used where SoundTools,Performer v5.01,Csound,and the EMU EiiiSX sampler.The only treatments employed were artificial reverberation and a chorus,used to thicken the sampled instruments.

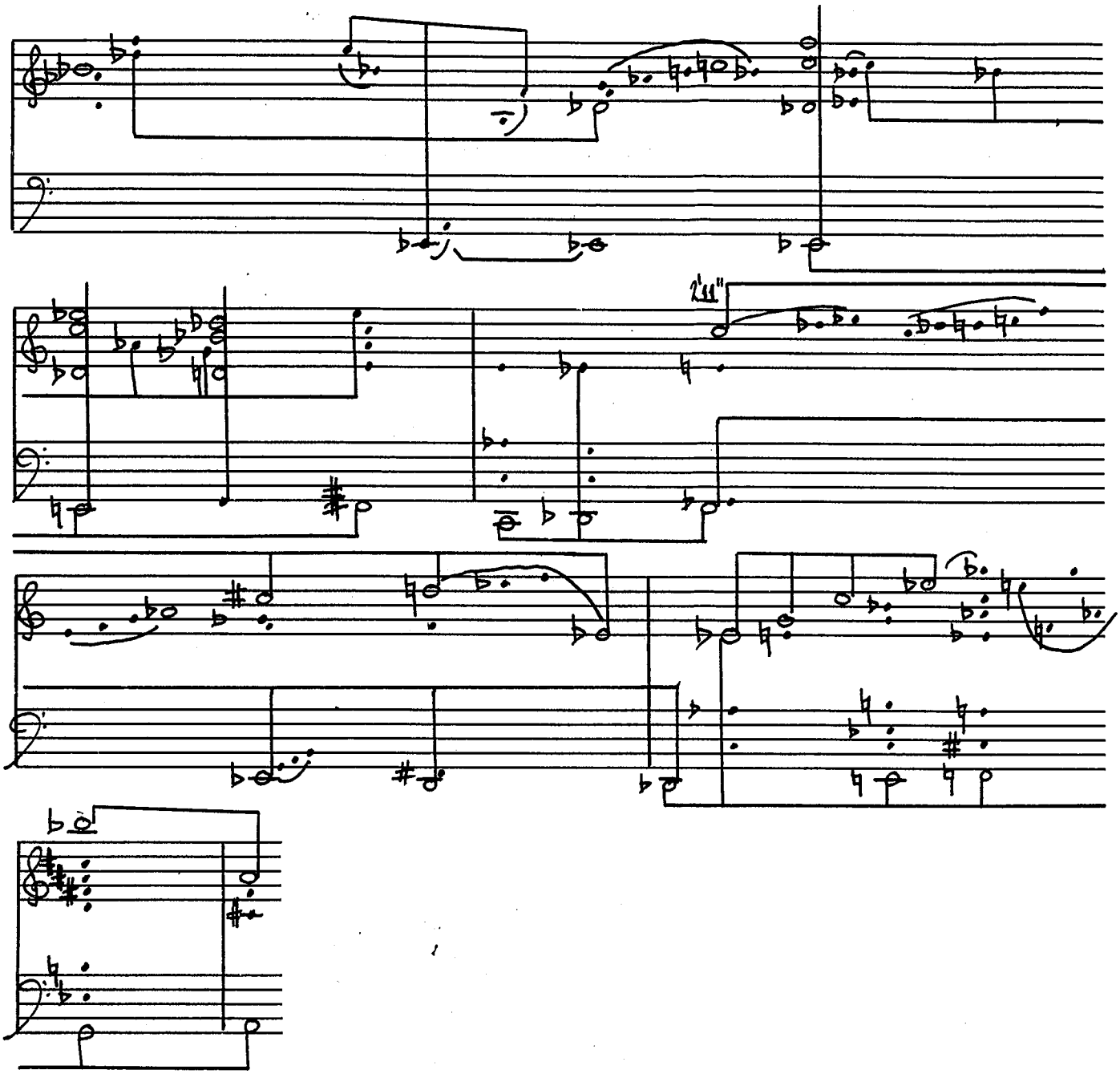
The horn and trumpet samples consisted of single notes,looped to provide long sustained tones,and the characteristic three-note figure,with its final note extended.In the case of the trumpet, several different versions were recorded using different mutes.

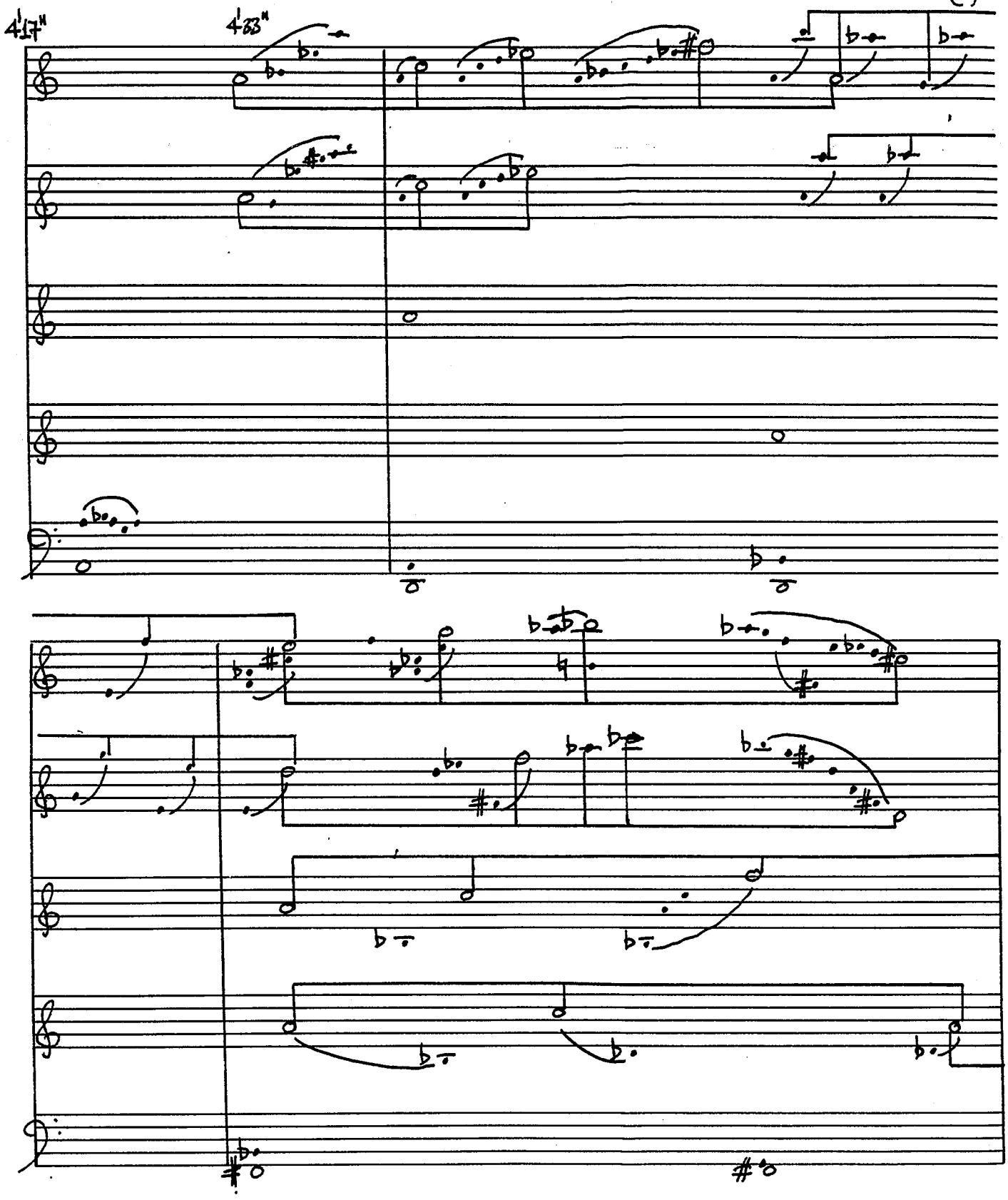
The electronic sounds,created using Csound,are all instrumental in character.They fall into two types,'functional',created using additive synthesis,where they are used to punctuate the musical argument,and 'textural',created using frequency modulation.

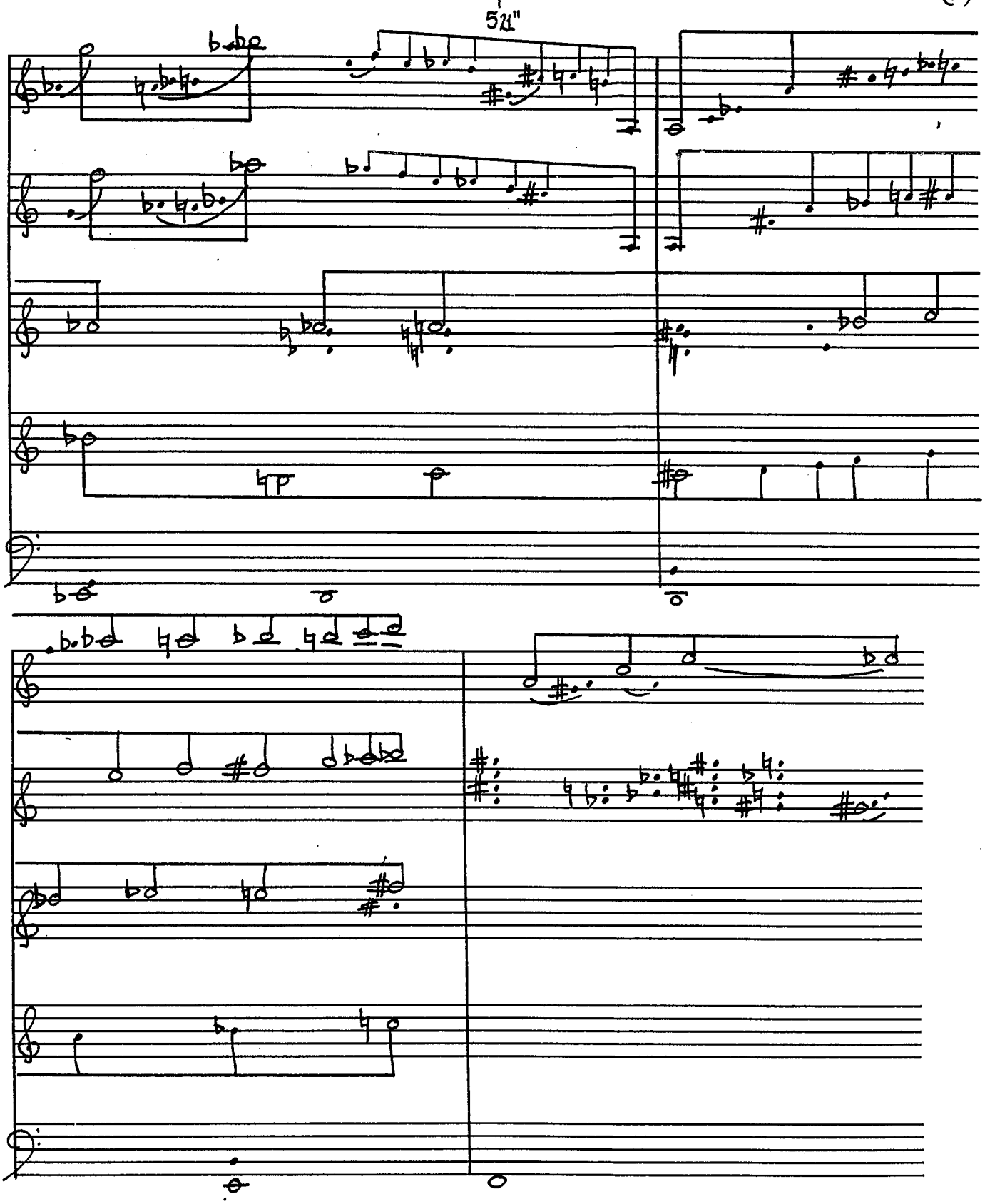
Sounds of the first category are used in the first section of the piece,as scales or arpeggio figures.Likewise the climactic chords at the beginning of the second section are in this category.Sounds in the second category are used,in the third section to provide the long drones in the background.

The central section using four contrapuntal parts was prerecorded, each part using a different mute and placed on a different channel to give the illusion of four different trumpets,one in each corner of the performance space.Likewise the refrains in the final section and the second trumpet line used from 12'25''.

MIDDLEGROUND GRAPH




4'17"
4'33"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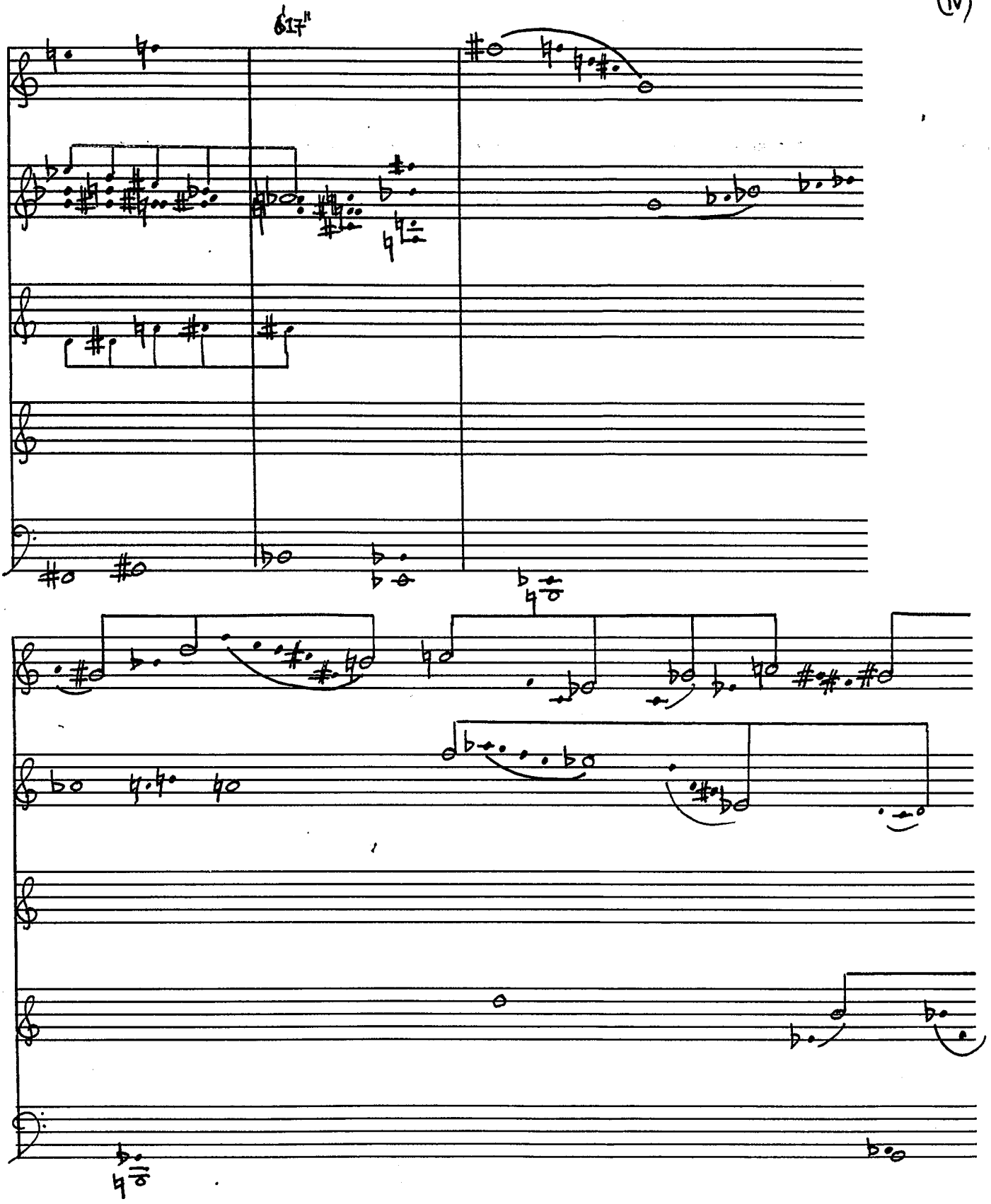
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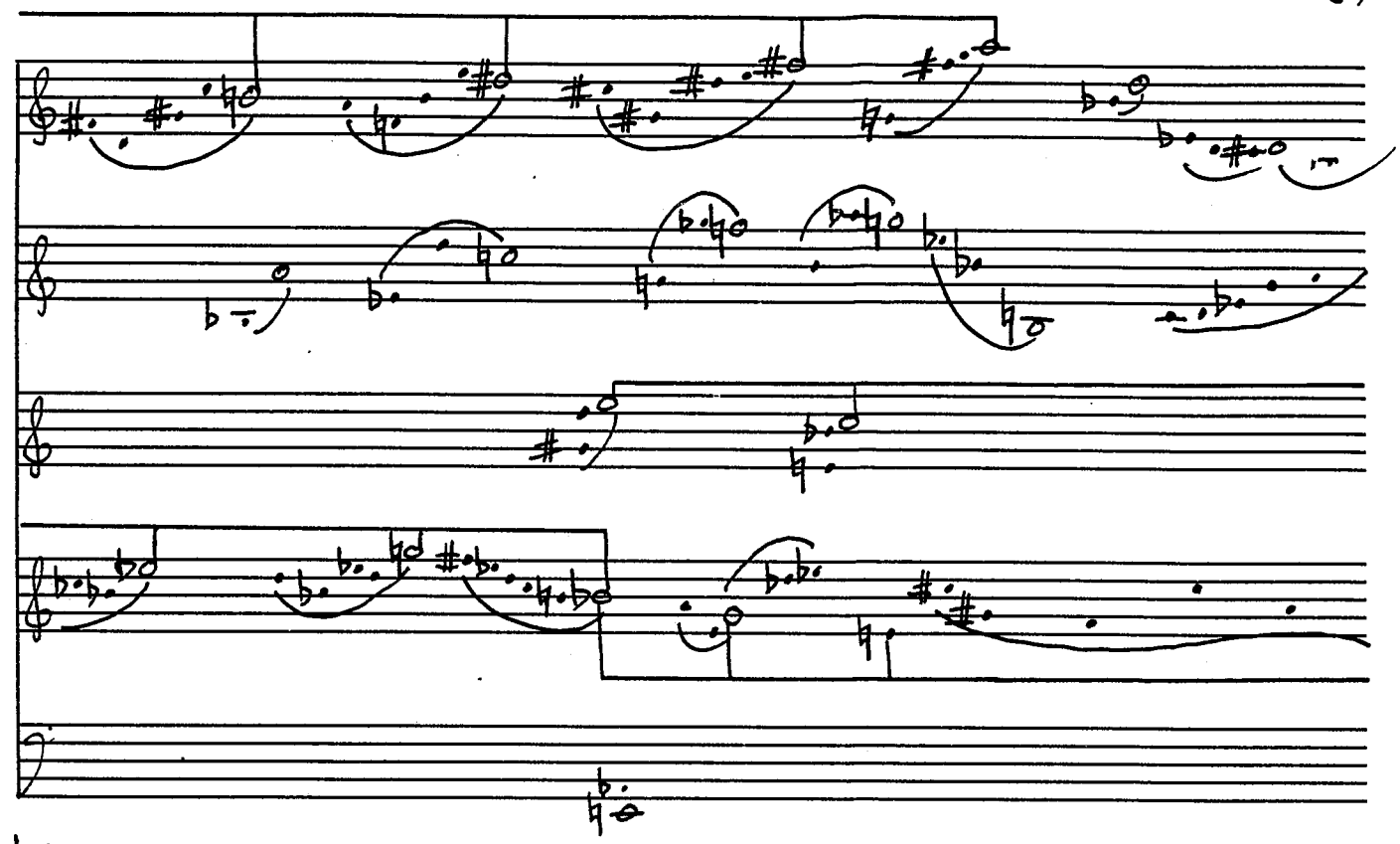

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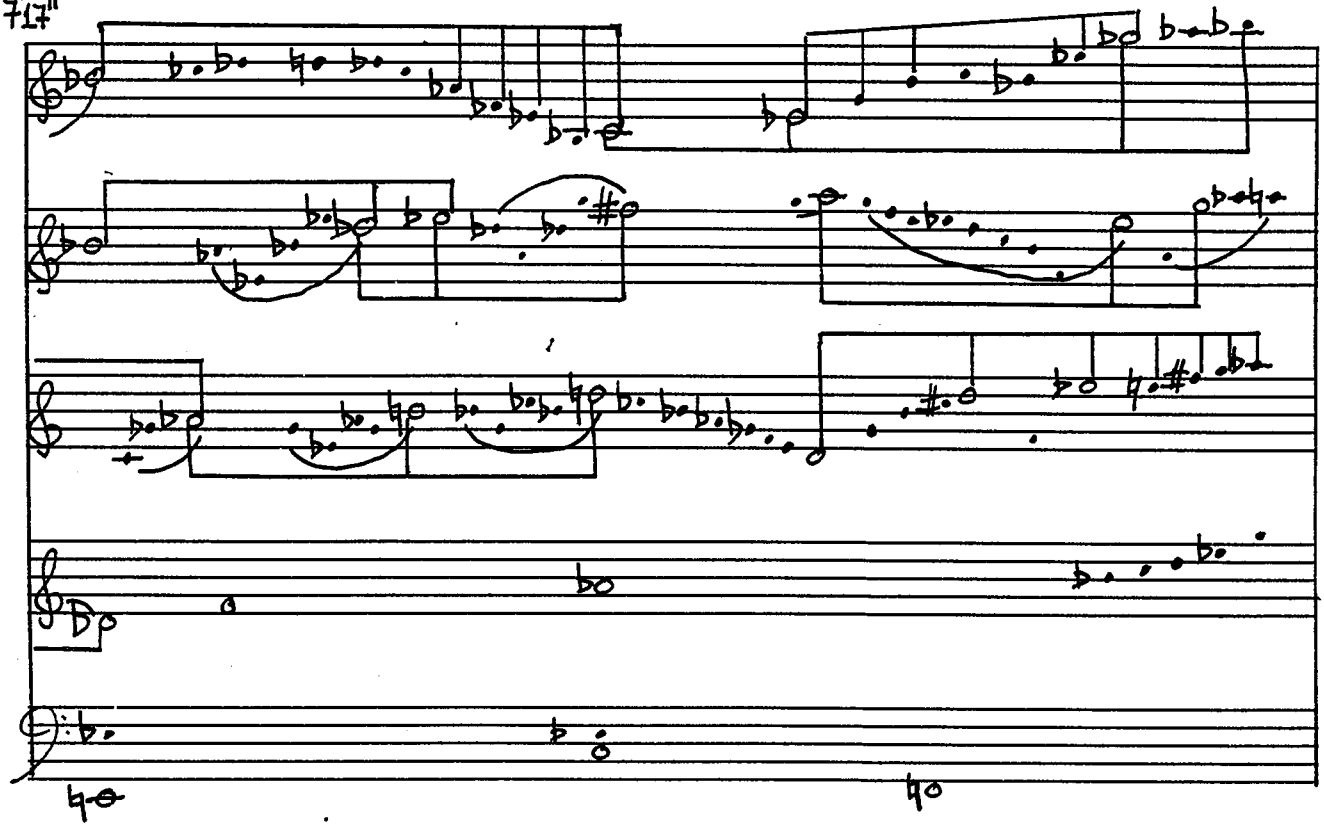

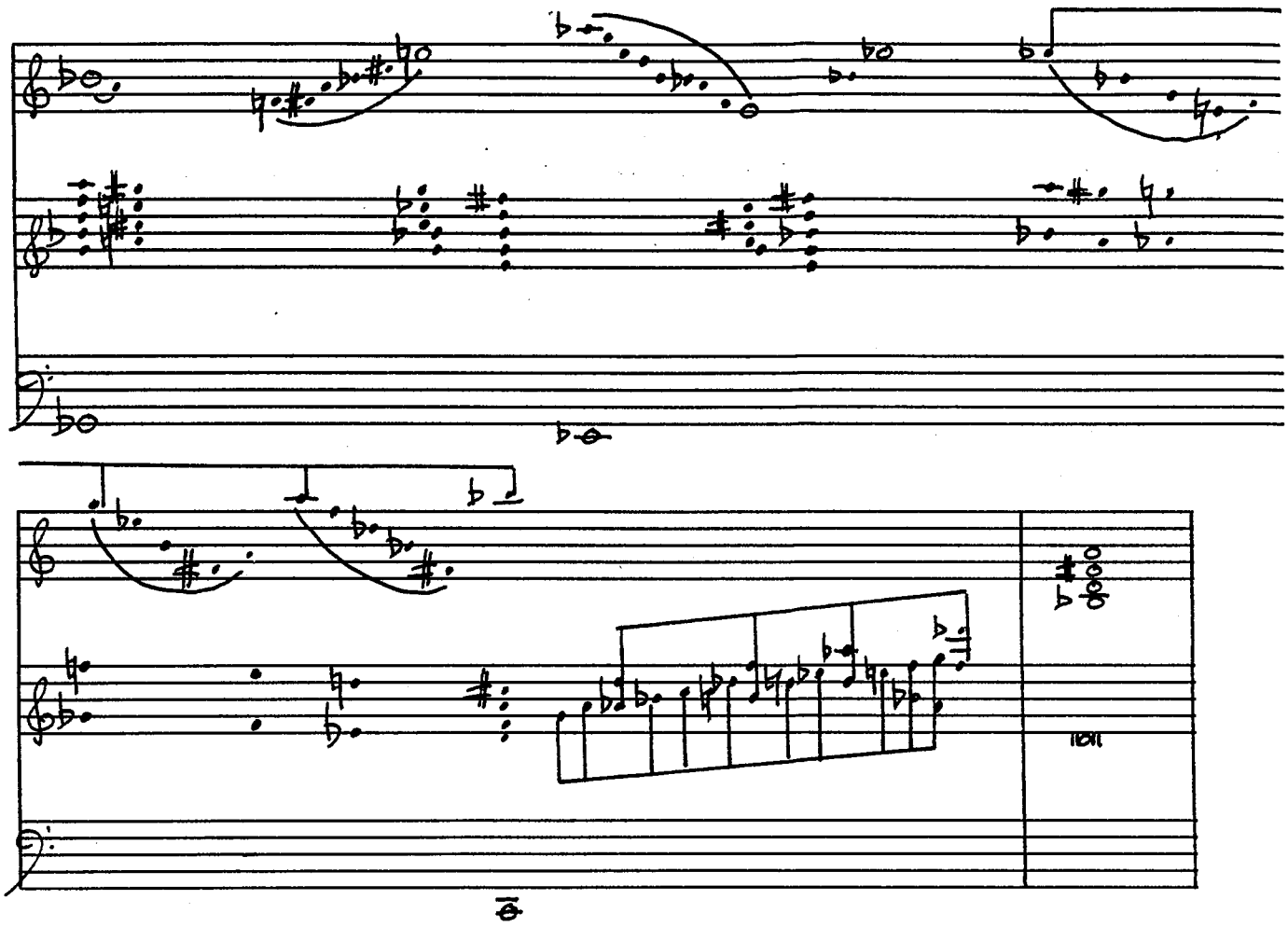

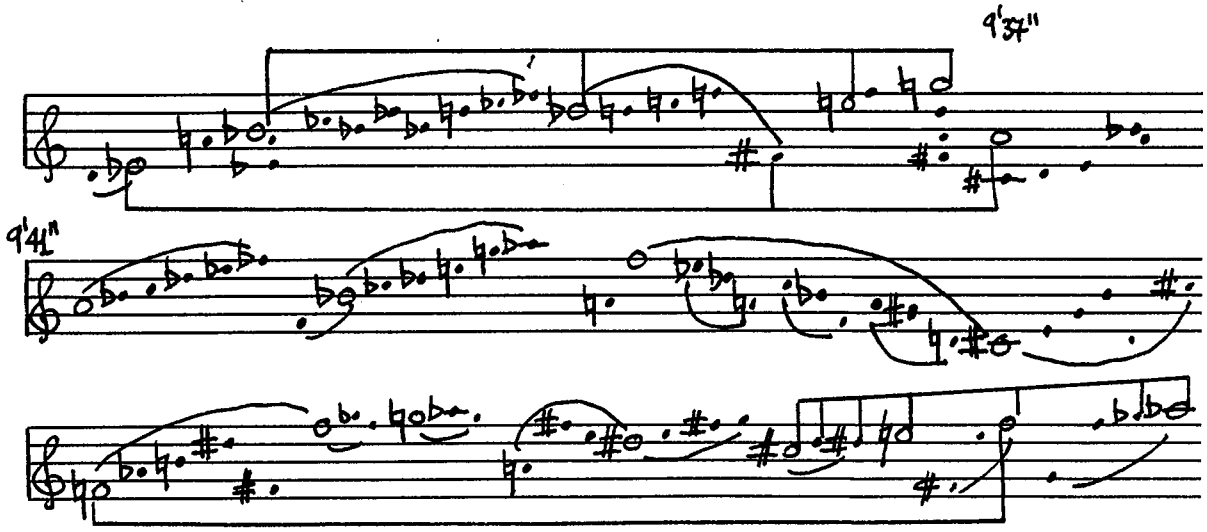
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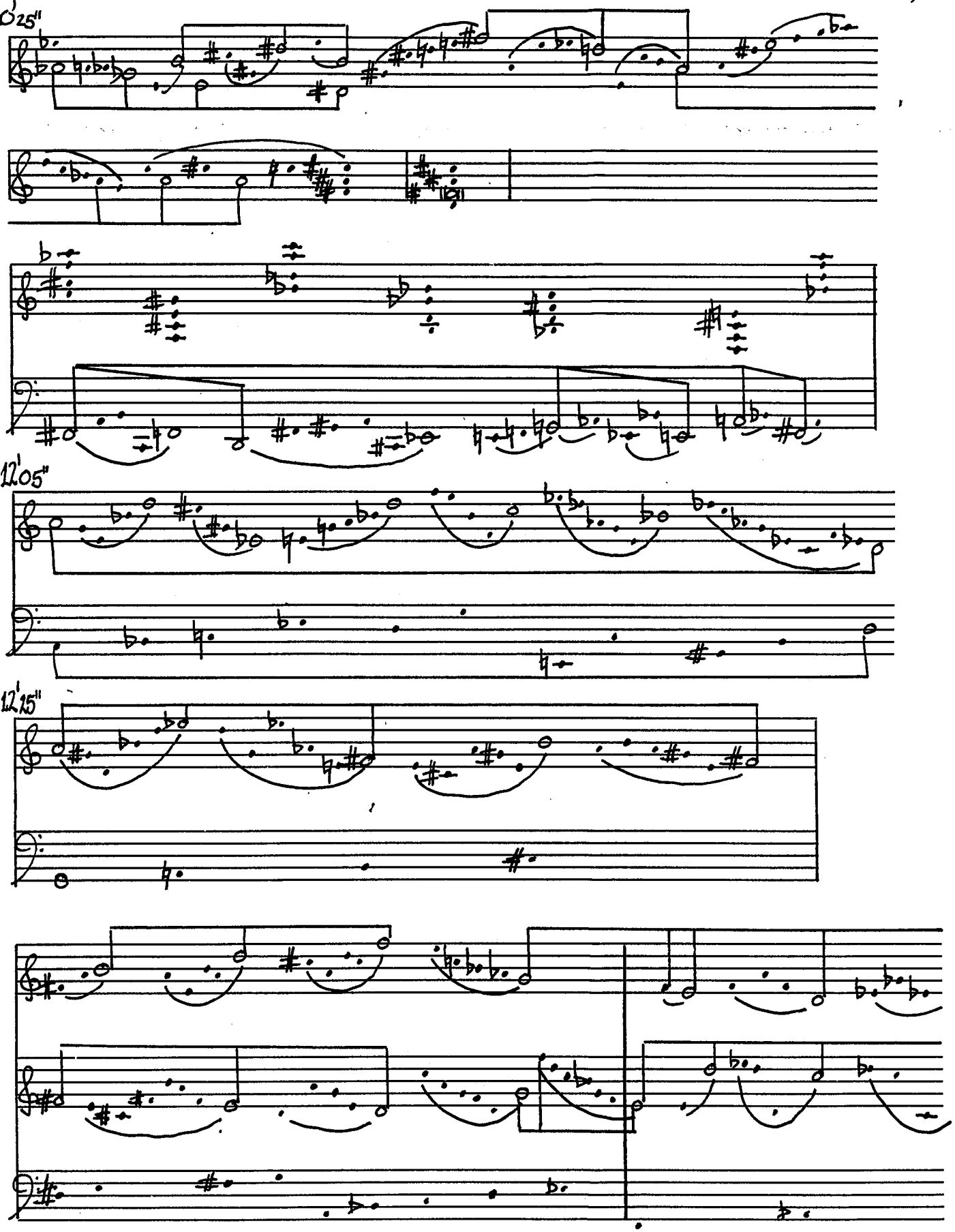

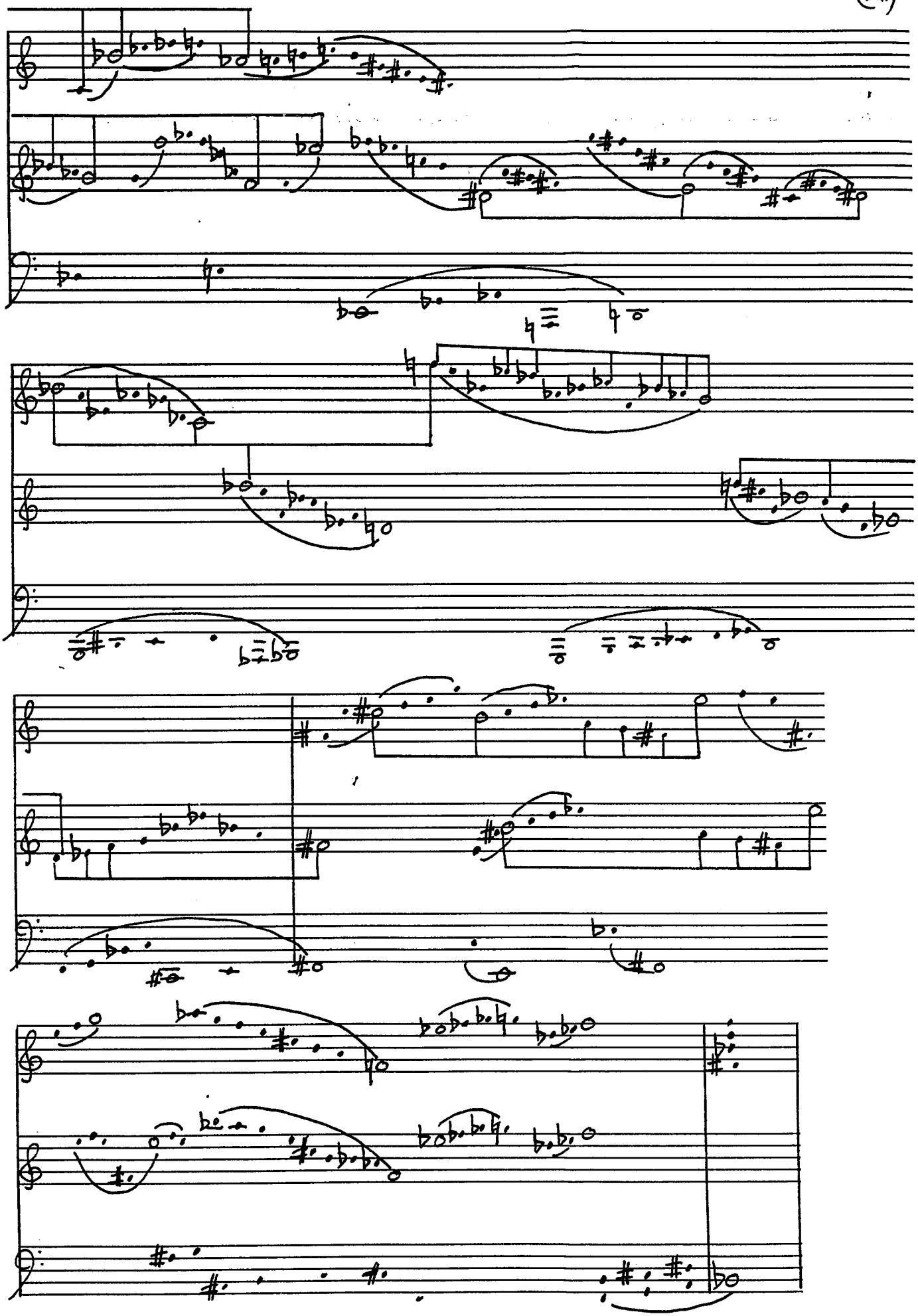

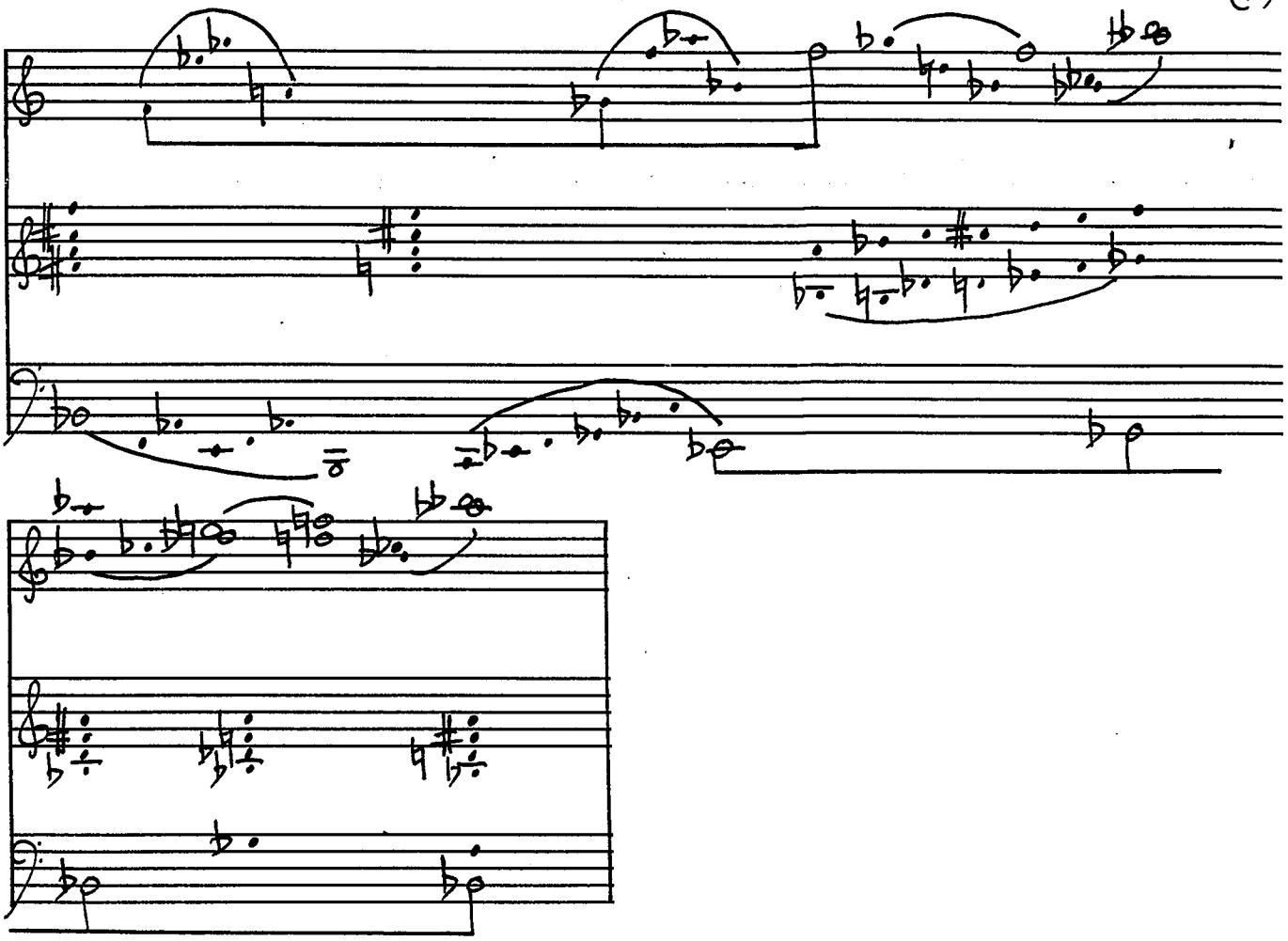

BACKGROUND GRAPH

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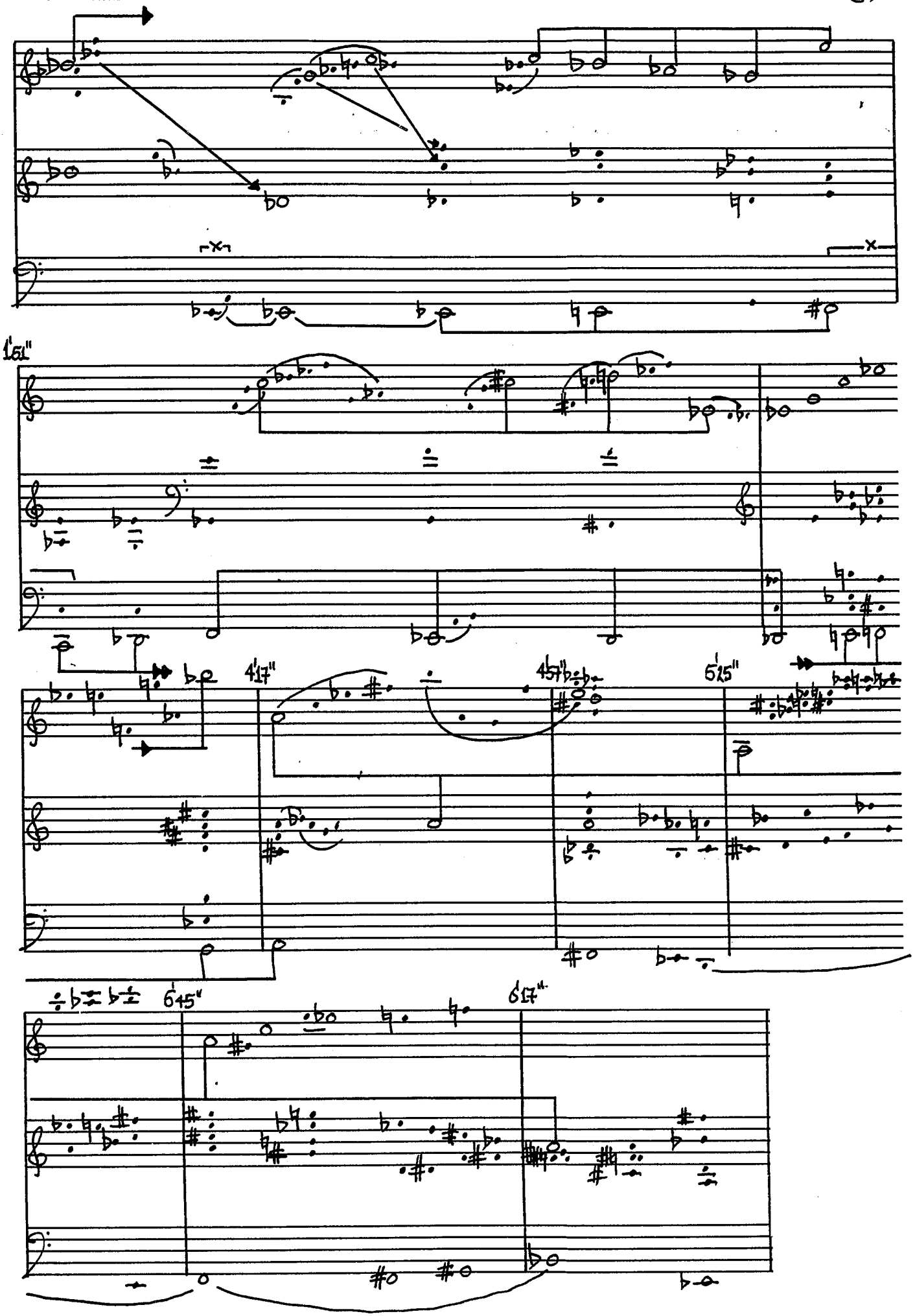

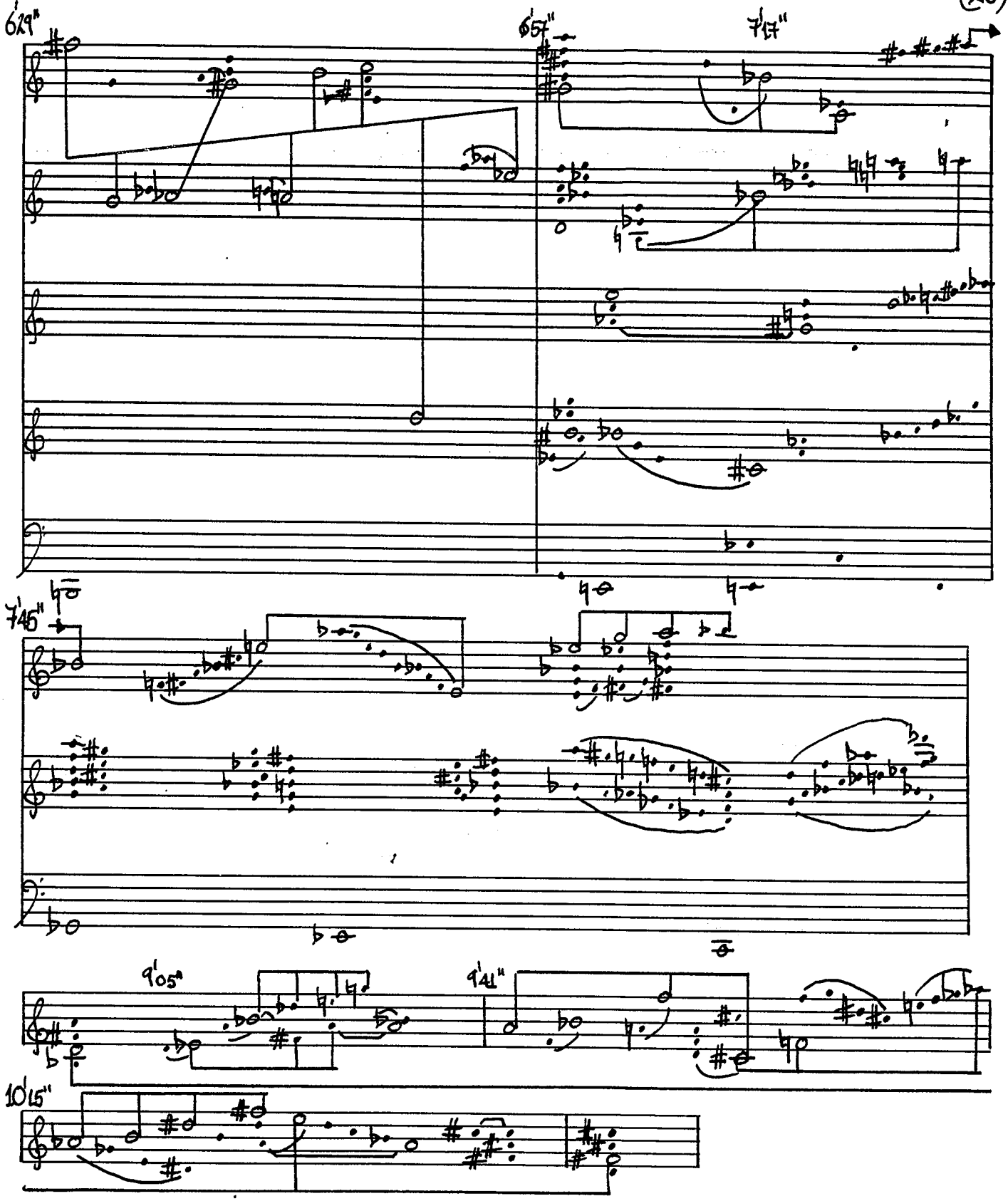
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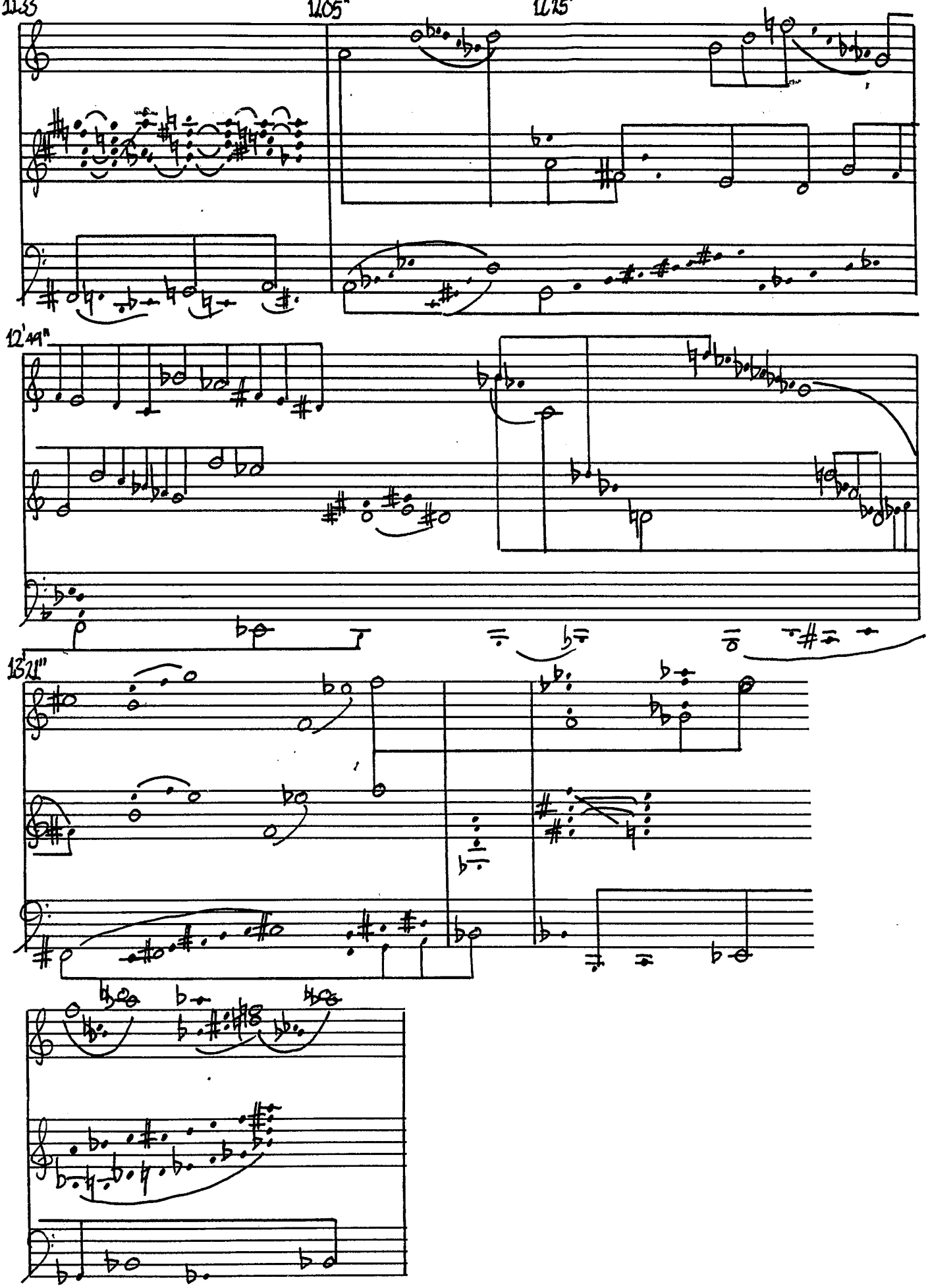


Dances of the Moon

Commentary

"Dances of the Moon" is a duet scored for a small selection of medieval instruments:hurdygurdy,english great pipes (referred to here as bagpipes),shawm,three-hole pipes and tambourine. The three-hole pipes used are a pair of pipes bound together and played simultaneously,one playing a melody,the other providing a drone. The work consists of five movements,played without a break. The hurdygurdy is used throughout the piece;the other player switches between the various wind instruments required and also plays the tambourine.
The scoring and tempo of each movement is as follows:

I	Three-hole pipes	Allegro,minim=80
II	Bagpipes	Lento,crotchet=52
III	Shawm	Allegro,crotchet=180
IV	Shawm,Tambourine	Tempo libre,crotchet=60
V	Bagpipes	Allegro,crotchet=144

All the instruments with the exception of the shawm are capable of playing drones,and with the exception of the hurdy-gurdy in the first movement this characteristic is exploited.
The range of drones available is limited,as is the compass of each instrument;furthermore only the hurdygurdy is fully chromatic.
The three-hole pipes have a single drone,B-flat,and a natural scale of D-flat major,with no chromatic notes.
The bagpipes have a natural scale of D major,with a few additional notes;the drones available are D and E.
The shawm likewise has a natural scale of D with additional notes.
The hurdygurdy is more flexible in its choice of drones,having three strings available for this purpose.One of these is fixed, tuned to A,the second can be tuned within the range G to B.The third is the trompette,tuned in the range D to E;this string is also used to provide the characteristic rhythmic buzz.

The formal and tonal structures used are relatively simple,given the intention of writing a piece in a contemporary idiom that is also appropriate for the instrumentation.To this end all the movements use repetitive forms of a rondo type,and techniques such as canon,heterophony and organum are employed.

Dance 1

This dance is constructed along ternary lines,consisting of a simple motif and a string of variants,followed by contrasting material,and finally a return of the initial motif and another variant, as laid out below:

Section 1	Motif A	bb 1-5
	bridge	b 6
	Motif A	bb 7-12
	Variant 1(A^1)	bb 13-15
	Variant 2(A^2)	bb 16-19
	Variant 3(A^3)	bb 20-23
	Motif A	bb 24-29
	bridge	b 30
	Motif A	bb 31-36
Section 2	Motif B	bb 37-40
	Motif C	bb 41-44
	Motif D	bb 45-50
	Motif B	bb 51-54
	Motif E	bb 55-61
Section 3	Motif A	bb 62-66
	Bridge	b 67
	Variant 4(A^4)	bb 68-72
	Coda	bb 73-75
	Link	bb 75-77

Graph 1 is a voice-leading graph for this dance,highlighting the formal structure shown above.It can be clearly seen that the three-hole pipe is limited in its range of keys to E-flat,D-flat and F,while the hurdy-gurdy,here used without drones,is more flexible,and this allows for bitonality and tonal ambiguity.

Motif A initially appears on three-hole pipe alone,in the key of E-flat,the hurdygurdy entering in bar 6 with the bridge figure,a simple third-based pattern.At the repeat of A the pipes are still in E-flat,but the emphasis of b-natural in the hurdygurdy puts the tonality in doubt.A^1 continues with the same ambiguity,the hurdygurdy playing now a smoother melodic line;this is characteristic of all the variants of A.

A^2 is more clearly bitonal,the pipes remaining in E-flat while the hurdygurdy inhabits C-sharp.Only in A^3 do the tonalities coincide for the first time with both instruments in E-flat.
A returns in its basic form at bar 24,and after the bridge transposed up a fifth (bar 31);the b/E-flat ambiguity becoming f-sharp/B-flat
In section 2 the hurdygurdy is accompanying,all the thematic interest being in the pipes,until the repeat of motif B at bar 51.
Tonal ambiguity is further exploited in this section,as the D-flat tonality of motif B is disturbed by the presence initially of the b-flat drone,then at bar 39 by the minor-third shift in the hurdygurdy.It is these shifting ambiguities that provide tonal movement in this section,as the same shift occurs in the next four bars,underpinning motif C,in E-flat.The pipes remain in E-flat for the remainder of the section,and the drive towards the return is provided by the hurdygurdy moving up from B through C-sharp and D-sharp to E at bar 51.
This is the repeat of motif B,now in E-flat,and the hurdygurdy figuration is altered so that the melody is played on both instruments in unison.The E-flat of the melody is however underpinned with an e-natural,shifting up to g-natural two bars later,reflecting the structure of its previous appearance.
The motif labelled E above functions as a codetta to this middle section and also as a link into the return.It consists of three limbs,based on the same phrase but with extensions and new harmony in the successive limbs.The absence of the continuous quaver movement that was a major feature of the central section,together with the jerky irregular rhythms serves to halt the momentum in preparation for the restatement of motif A,in the same form as its first tutti statement at bar 7.Variant A^4 at bar 68 shifts the register up an octave and reintroduces the more melodic hurdygurdy line characteristic of the other variants.The dance is rounded off with a long trill and a flourish in contrary motion,and a rocking figure in the pipes to link into the second dance.

Dance 2

This dance is in rondo-form,with internal repeats to allow the instruments to swap parts.The hurdygurdy has its drones tuned to g and d,the latter being the trompette string;the trompette rhythm being written on an extra stave.The bagpipes are also

used here,the drone tuned to d,thus the background tonality is that of G in a 6-4 position.The structure of the dance is as follows;

Section 1	Link from previous dance	bb 78-83
	Main theme A	bb 84-91
	Repeat A^1 ,parts reversed	bb 92-99
Section 2	Episode B	bb 100-103
	Repeat B^1 ,parts reversed	bb 104-107
Section 3	Repeat A^2 ,elaborated	bb 108-120
Section 4	Episode C	bb 121-124
	Repeat C^1 ,parts reversed	bb 125-128
Section 5	Repeat A^3 ,elaborated	bb 129-142

Graph 2 shows the voice-leading for this dance.
The G tonality is established by the hurdygurdy drones,with the addition of the sharp seventh,at the outset,while the rocking figure in the pipes continues,interlocked with the trompette rhythm,*rallentando.*
At the establishment of the new tempo the bagpipes enter,providing the low d drone.The hurdygurdy has the initial statement of the main theme A, its overall shape outlining D,and joined in the second half (bar 87) by the bagpipes,initially in thirds then in unison heterophony at bar 90.For the repeat A^1 the roles are reversed,only minor changes occurring due to the unavailability of e-flat on the bagpipes.
For section 2,the first statement of B is again on the hurdy-gurdy,the bagpipes merely accompanying.The foreground tonality shifts here from the initial D to A,at which point the material is restated,the roles reversed,and the ending modified to retain the A tonality.
Section 3 is the restatement of the main theme,A^2 ,with the bagpipes continuing to lead,accompanied by a more elaborate hurdygurdy line.This complicates the tonal structure as the D of the bagpipes overlays A in the hurdygurdy.The ending is also modified,the heterophony of a A^1 being here replaced by an internal repeat of the material,beginning a fourth higher on g,

accompanied by a descending D scale.There follows four bars of codetta as the two parts converge on a.
For the first statement of episode C,the bagpipes again drop out,leaving the material stated by the hurdygurdy unadorned. As with the previous episode this material tends towards A. For the repeat (C^1) the bagpipes re-enter carrying the tune,now transposed so that F-sharp would appear to be the destination; however the ending is altered so that again the tonality is A.
The final statement of the main theme,A^3 is a further elaboration and extension,thereby achieving a sense of climax. Once again the hurdygurdy leads;at first this is transposed repeat of A^2 with role reversal.At bar 133 the similarity ends,with a return to the parallel writing of A^1 ,and a two-bar insert to heighten the sense of climax.The heterophony is again absent,in its place a repetition of the descending phrase,first from d then from g,the rising hurdygurdy line concluding the movement in A.

Dance 3

This dance too is based on rondo form,the structure being as follows:

Section 1	Motif A:rhythmic material on trompette	bb 143-158
	Motif B:main theme,solo on shawm	bb 159-166
	Variant B^1 :in fifths,fourth lower	bb 167-175
	Variant B^2 :in unison,at pitch	bb 176-184
	Motif A	bb 184-193
Section 2	Motif C:long melody on shawm accompanied in long notes on hurdygurdy	bb 194-205
	Variant C^1 :parts reversed,but more melodic shawm	bb 206-218
Section 3	Variant A^1	bb 219-223
	Variant B^3 :in fifths,at pitch	bb 224-232
	Variant A^2	bb 232-235

Section 4	Motif D:long melody for hurdygurdy	bb 236-243
	Variant D^1 :melody in inversion	bb 244-251
	Variant D^2 :Motif D plus Motif C in shawm	bb 252-260
	Motif E:melody in shawm with accompanying figuration	bb 261-274
	Variant E^1 :same but new accompanying figure	bb 275-284
	Variant D^3 :motif D in canon at 3rd	bb 285-302
Section 5	Motif A	bb 302-311
	Motif B	bb 312-319
	Variant B^4 :in heterophony	bb 320-327
	Variant B^5 :combination of motifs B and E	bb 328-336
	Motif A	bb 336-340
	Motif B	bb 341-348
	Coda	bb 349-355

At the end of the previous dance the hurdygurdy tunes the g-drone up to a;with the trompette remaining on d the background tonality is that of D,but coloured by the insistent g-sharp apparent at the opening.In this dance the tonality is very stable,this D being largely unchallenged;conversely, the rhythmic profile is the most irregular. Motif A is always purely rhythmic,appearing in a number of guises,longer or shorter and sometimes with different harmonic colouration.It is used to frame the main theme at each occurence,separating it from the intervening episodes.The rhythmic instability of this pattern informs much of the rest of the dance.
The first appearance of Motif B,the main theme of the rondo structure,is on shawm,still emphasising the g-sharp.It is immediately repeated,the hurdygurdy joining in,running in parallel fifths insofar as this is practicable.There is then a third appearance,in unison at the original pitch,which confirms the tonality as D.The section closes with a repeat of motif A.

Section 2 is the first episode,simple in structure consisting of two repetitions of new material derived from motif B,and continuing the rhythmic instability.
Section 3,the first return is a simple structure,motif B in fifths being framed by A and a short simplified variant,whose greater rhythmic regularity is a feature of the ensuing episode.
Section 4,the second episode,is a more complex structure,consisting of the interspersing or overlapping of several different motifs.The first of these is a long 6/8 melody in the hurdygurdy,more rhythmically stable than hitherto(motif D).The internal repeat is an inversion of this.This is succeeded by a third repeat,now used as an accompaniment to motif C from section 2,altered to suit the new metre.
There is then an abrupt change as a new accompanying figure is played on the hurdygurdy,supporting a melody in longer notes in the shawm(motif E);this is immediately repeated with a slightly varied accompaniment,before switching abruptly back to motif D,now on both instruments in canon at the minor third.
This leads into the second return,heralded by motif A
The reappearance of motif B is marked by a decrease in tension, the result of timbral uniformity(the shawm is temporarily absent) and the absence of the trompette.The tension begins to rebuild with the entry of the shawm for the repetition of motif B, in thirds heterophonically,followed by the overlaying of motifs E and B.After a final appearance of motif A,reintroducing the trompette,and a final reiteration of motif B the dance is dispatched with a brief *accelerando* coda.

Dance 4

This elliptical little piece exploits the hurdygurdy's ability to tune the chanterelles to different notes,resulting in instant organum.Other than its spiky opening gesture,which serves to structure the piece,it uses no new material,instead recycling motifs from the two previous dances.
The opening serves as the ending to the previous dance, dissipating the energy in a pair of harsh stabs and a restricted flourish.The gesture is repeated after a pause,by the hurdy-gurdy only,and after another pause motif A from the previous dance is played on the tambourine,at the initial speed though *rallentando* and *diminuendo*.During this time the hurdygurdy detunes one course of the chanterelles down a minor third,tunes

the trompette up to e and adds the third drone,g.This opening section is concluded by two further repetitions of the stabbed figure.
Then follows a more sober passage recapitulating the main theme of the second dance,establishing an A-minor tonality.The stabbed figure,now in a lyrical guise follows,also cadencing in A, allowing space for the tambourine to reenter,again using motif A,notated here to suggest a different tempo and metre.When this too peters out the hurdygurdy again recapitulates the theme from the second movement,still retaining the A-minor tonality,and after a few desultory twitches from the tambourine the piece is concluded by two spasms reiterating the stabbed gesture.

Dance 5

The final dance is again in rondo form,but here the emphasis is on canon,the main rondo theme appearing in a number of different canonic forms,as laid out below:

Section 1	Introduction	bb 388-393
	Motif A:rondo theme in solo	bb 394-401
	Canon A^1 :at fourth,one bar distant	bb 402-407
	Motif A:in unison	bb 408-411
	bridge	bb 412-415
	Canon A^2 :in unison,half bar distant	bb 416-423
Section 2	Motif B	bb 424-431
	Variant B^1 :organum at fourth	bb 432-439
	bridge	bb 440-447
Section 3	Canon A^3 :at minor third,one-and-a-half bars distant	bb 448-455
	bridge	bb 456-457
	Canon A^4 :at fifth,one bar distant	bb 458-465
Section 4	Motif C	bb 466-469
	Motif C:repeat fourth lower	bb 470-473
	bridge	bb 474-479
	Variant C^1 :with interpolations	bb 480-488

	bridge	bb 489-495
Section 5	Canon A^5 :at major second,one-and-a-half bars distant	bb 496-505
	bridge	bb 505-506
	Motif A:in parallel major thirds	bb 507-514
	coda	bb 515-524

The dance opens with tambourine only,playing the rhythm that underpins the main rondo theme:meanwhile the hurdygurdy player must switch off the g-drone,entering in bar 390,and retune the chanterelles to unison.

The rondo theme,Motif A,appears in bar 394 on hurdygurdy only,a moto perpetuo motif of running quavers.The bagpipes enter at bar 401 where the first canon begins,initially the d-drone,the melody coming in the next bar.This establishes the background tonality of D,against which the canons at various intervals suggest alternative keys,in this case A. The canon is foreshortened,partly due to the limits of the instruments,and this allows the theme to be played in unison,suggesting the key of B.This too is cut short as a bridge pattern emerges,a sequence derived from the foregoing material.

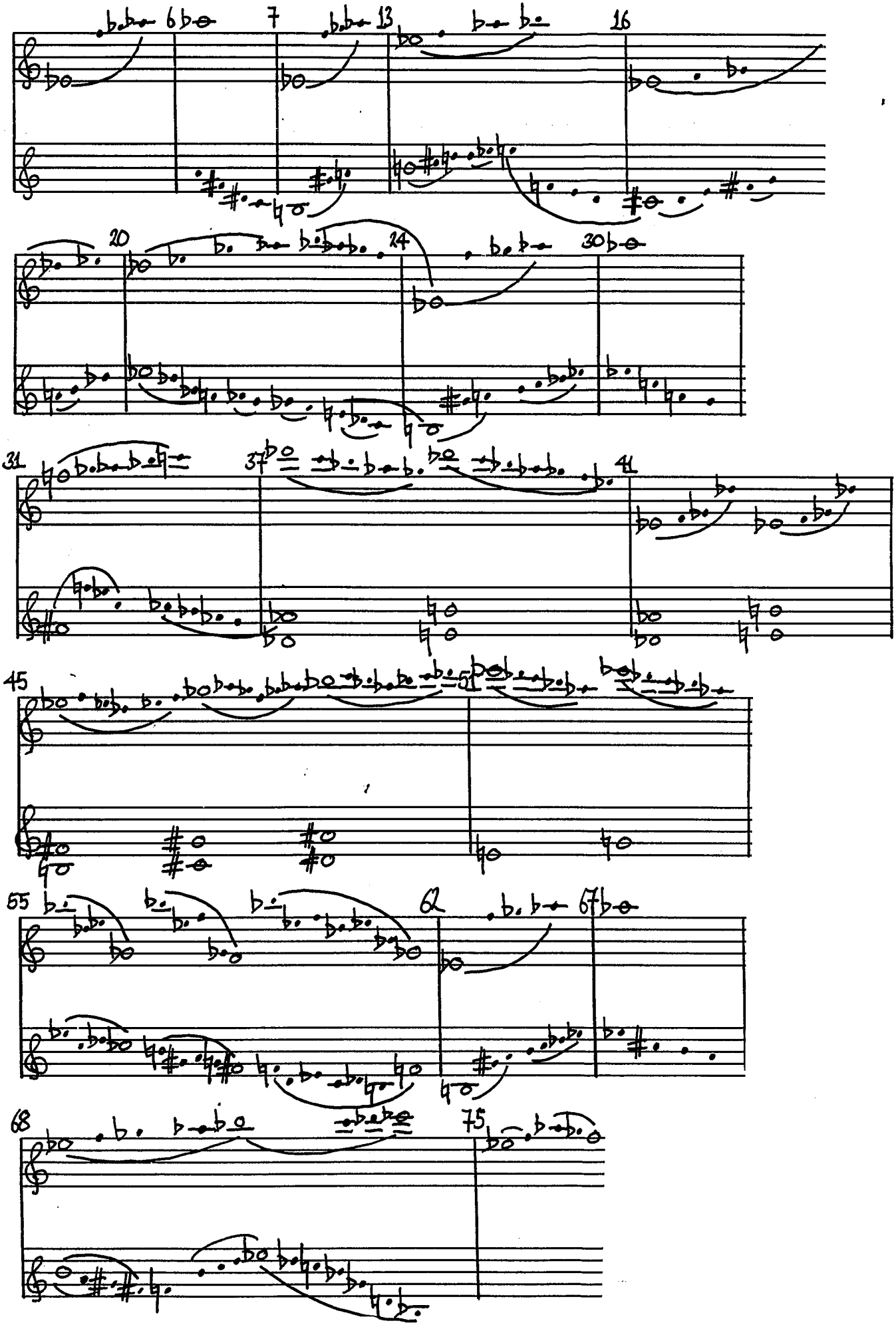
This brings the tonality back to that of the initial presentation of the theme,E,and a new canon ensues.This is allowed to run its course,leading naturally into Section 2,the first episode.

Here the continuous quaver motion is dropped in favour of a dactylic rhythm.The new material is initially presented in unison,in A;the immediate repeat is in parallel fouths,the occasaional use of the diminished fourth clouding the tonality. The bridge is derived from this and the moto perpetuo,leading the tonality back to E.

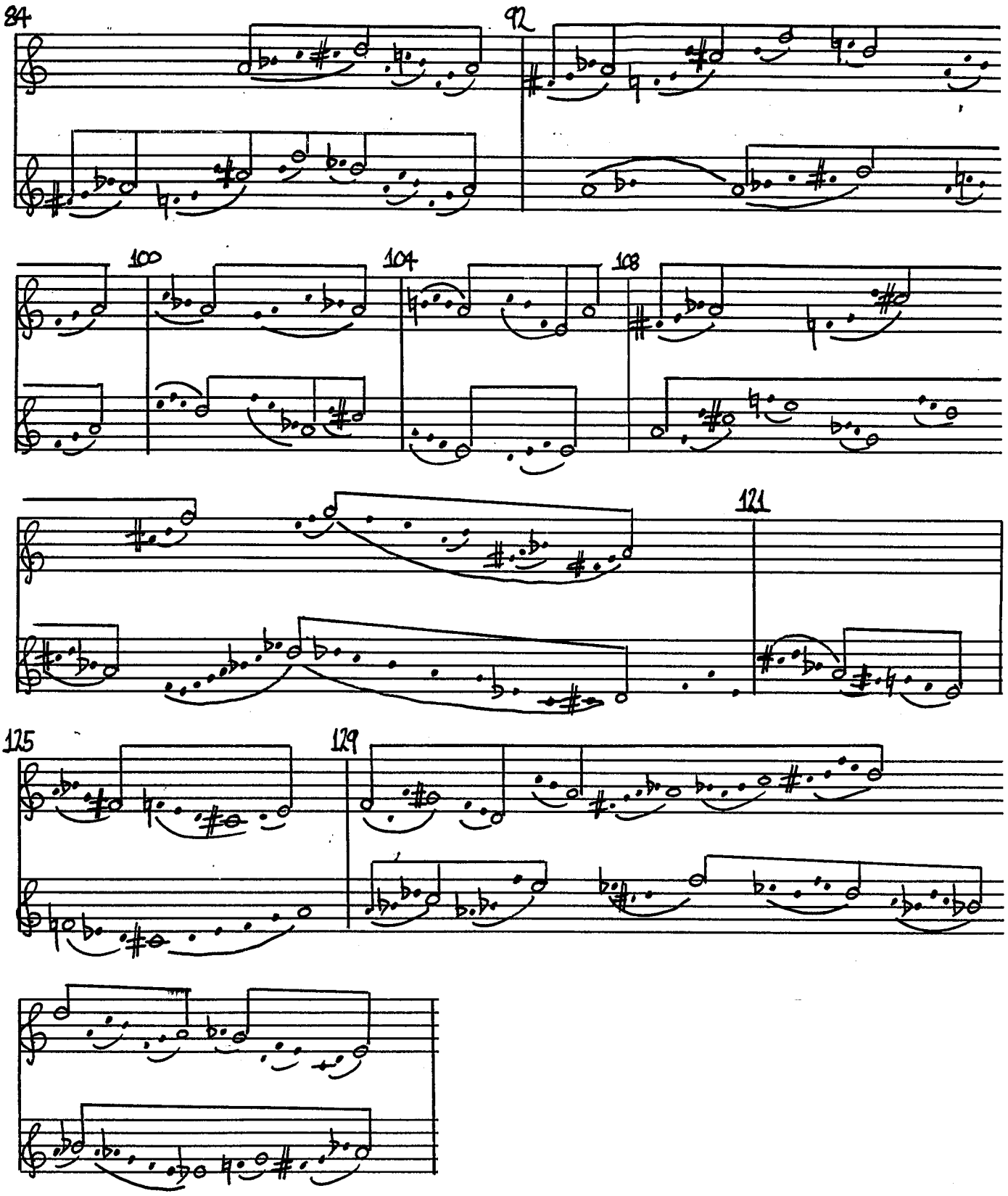
Section 3,the first return,opens with another canon,which is allowed to run its course;two bars of bridge lead on to a fourth canon,in which the bagpipes deviate after four bars,though still retaining the moto perpetuo figuration.This leads without a pause into Section 4,the second episode. The bagpipes here recapitulate Motif B from the first dance(here labelled C),over a slightly more involved hurdygurdy figure. There is an immediate repeat a fourth lower,before a bridge appears,a sequence using the same rhythmic pattern,pulling the

tonality up to E.At bar 480 Motif C reappears,but now the hurdygurdy is using material derived from Motif A,which is further developed in interpolations between statements of motif C.This evolves into a new sequence that prepares the ground for the final return.
Section 5 begins at bar 496 with the bagpipe entry with motif A, in the fifth canon of the piece.After this has completed its course a short bridge leads ito the final statement of motif A,in parallel major thirds.An internal repeat at bar 513 prevents this statement from running its full course,instead concluding with a short sequence before the final *accelerando* coda,retaining the D/E tonal ambiguity,but forcing resolution by dint of repetition.

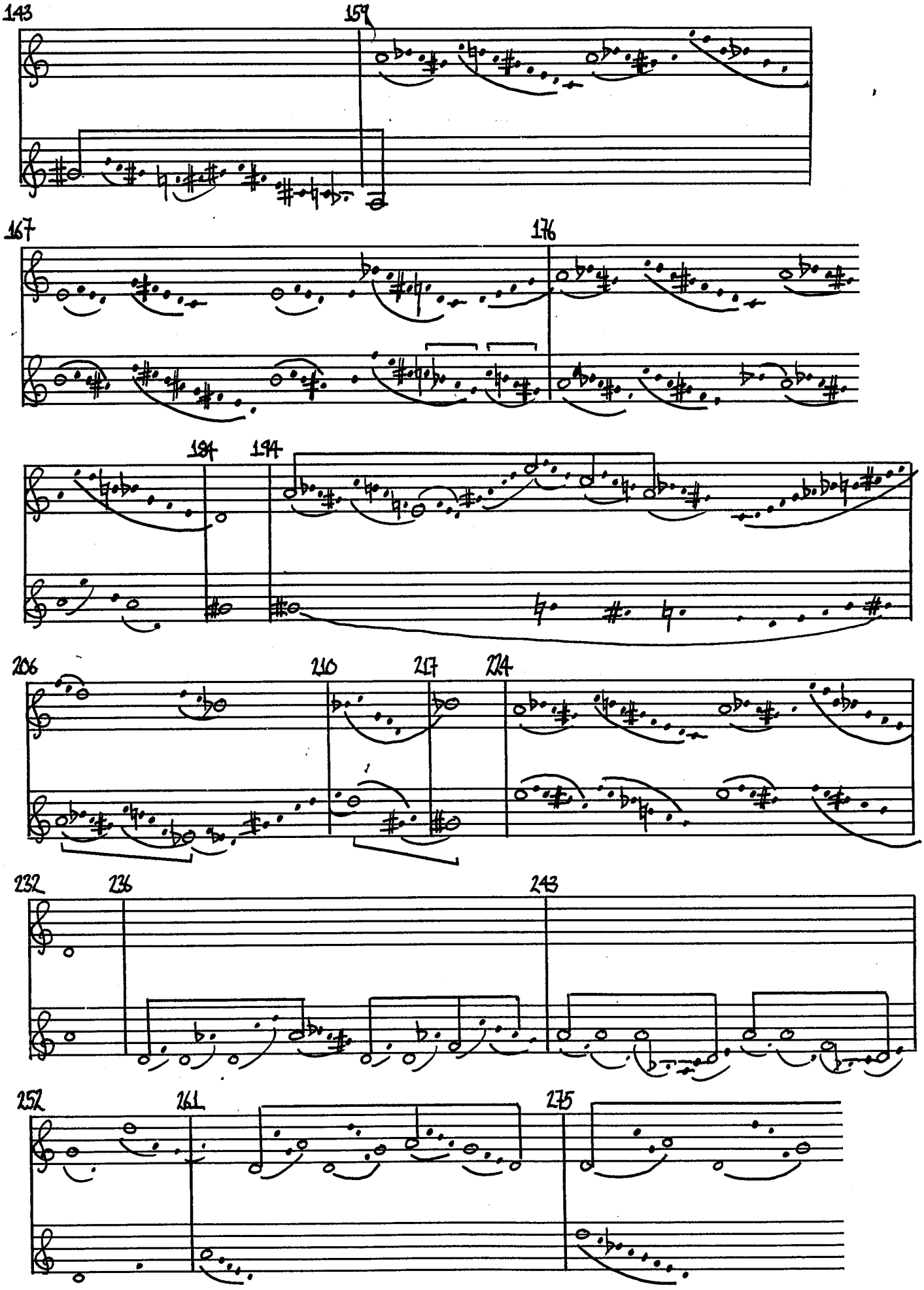
GRAPH 1



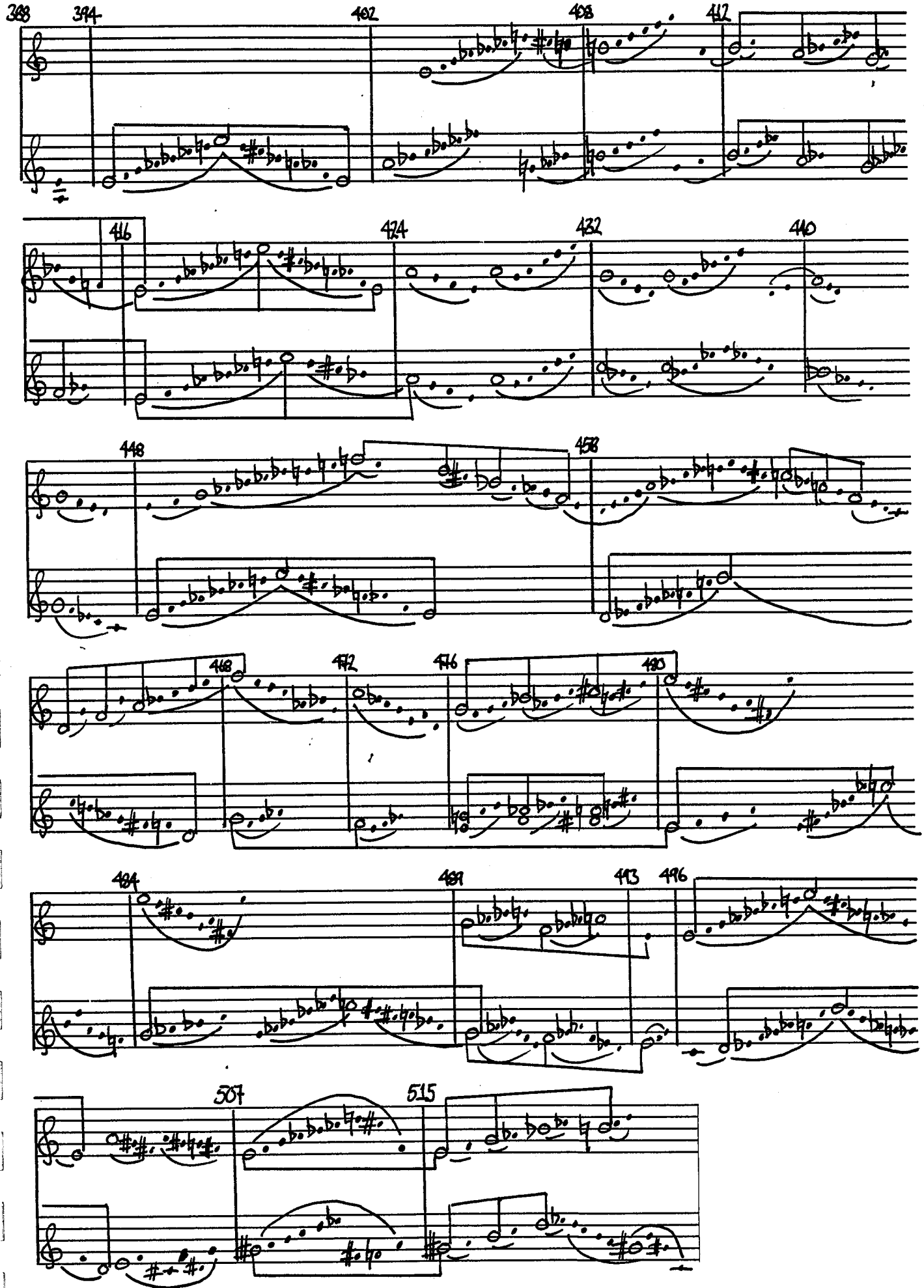
GRAPH 2



GRAPH 3



Danse V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The Ladder Reaches to the Moon

Commentary

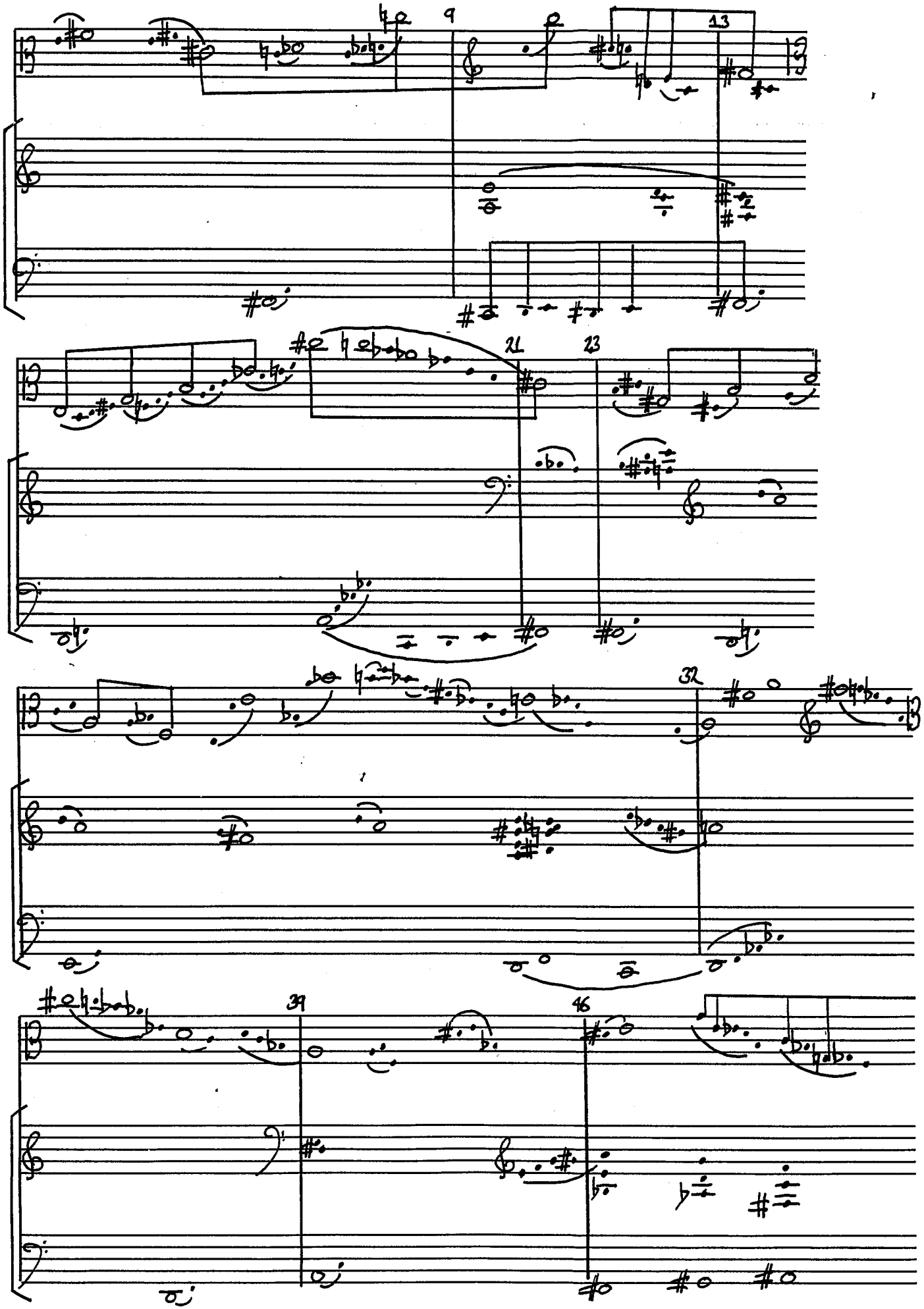
"The Ladder Reaches to the Moon" is scored for viola and piano.
It calls for various special methods of playing,especially in the case of the piano,such as the use of brushes and cloths to scrape the strings,and also the plucking of the strings.
The piece is constructed as a ternary form,framed by an introduction and extended coda,and is concerned with continual thematic variation,elaboration and decoration.The tonal and harmonic movement is regulated by third-based relationships.
The imagery of the title is reflected in the movement from normal playing in the bulk of the piece to the more unusual techniques employed in the "moon-music" of the coda.

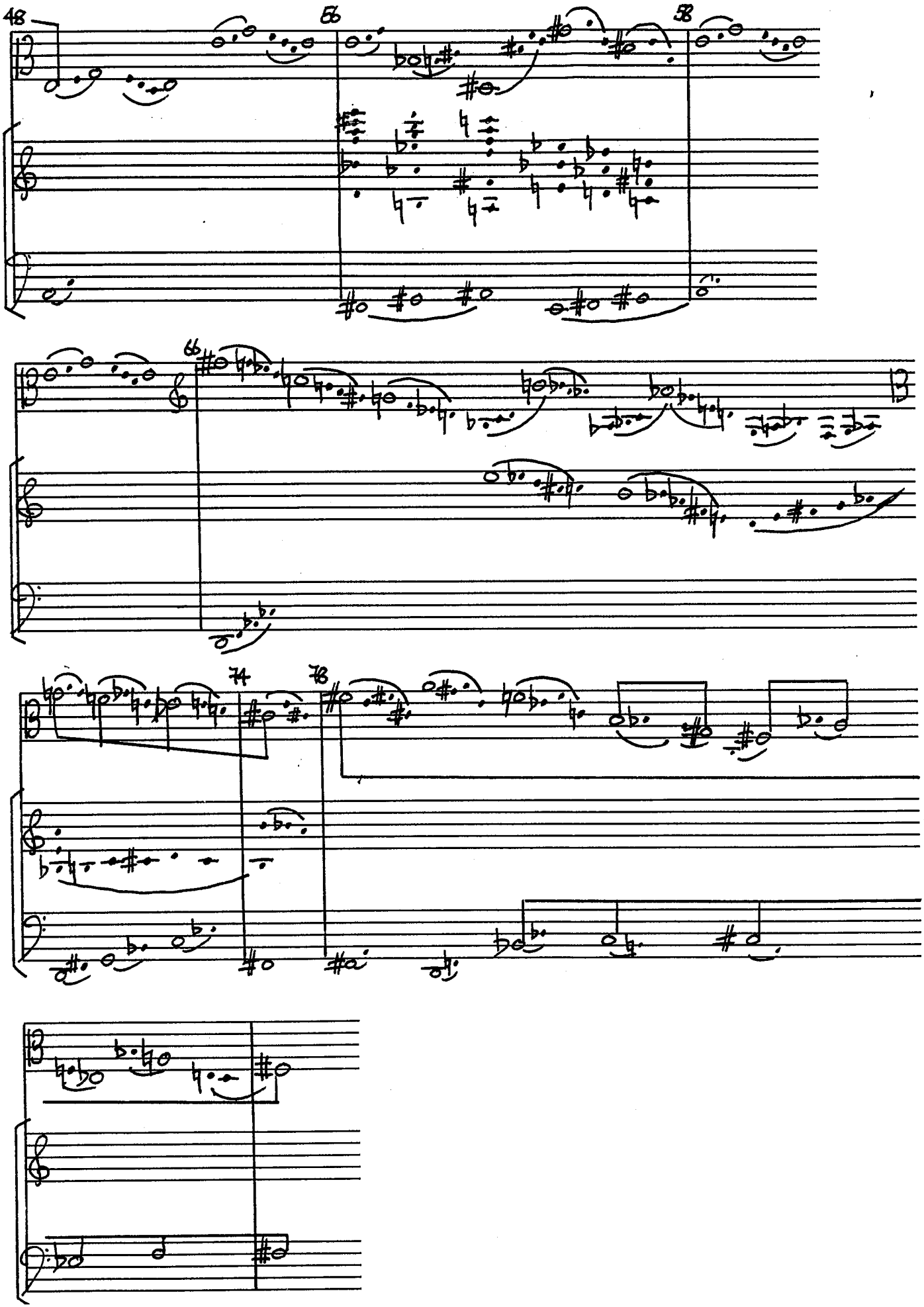
Cloth and brush are employed at the outset,where a texture is created by regular glissandi across the strings.It is against this backcloth that the viola hesitantly propounds a simple motif, with certain elaborations,that is to be the mainspring of the entire piece(motif A)
This motif first appears in its pure form at bar 5,and the tonality of F-sharp minor is delicately hinted at,becoming more certain with the rocking f-sharp/a figure in the piano's left hand, played in the normal manner.This rocking figure is an important component in the harmonic makeup of the piece.
The texture becomes more elaborate in bar 9 where normal playing is taken up in the piano's right hand,and the graph shows how all parts converge in F-sharp.
The next six bars consist of the presentation of an extended melody built out of a sequence of cells derived from the opening. A characteristic rhythm is used to articulate the theme,freely varied.Third-based patterns are much in evidence in shaping the harmonic and tonal flow,pulling the tonality round to A at bar 17.The motif A appears in the piano in parallel chords, accompanying a downward chromatic line in the viola(motif B). Through bars 19 and 20 there is a reconvergance into F sharp, and a new piano figure emerges having a stabilising effect.
Bars 23 to 38 are essentially a rerun of this material,but considerably varied and extended.The piano plays a greater role in the development,providing denser,more elaborate harmonies. The first major climax is reached at bar 32,where the tonality settles on D:this corresponds to the arrival on A at bar 17. However this passage is terminated abruptly at bar 37 with a sudden decrease in dynamic and activity,in preparation for the mysterious hushed new section.

The *molto tranquillo* is contrasted mainly in terms of its tonal stability and rhythmic regularity.The melodic material is derived from motif A and the rocking minor third patterns hitherto seen only in the bass. The A tonality is established at the outset and is entirely unchallenged throughout this section.Bars 39 to 47 are transitional in nature as the new rhythmic profile is gradually achieved and the melodic material formed.By bar 48 these are established,the main focus being the pulsing quavers in the left hand and the sustained line in the viola,this shadowing the rocking minor thirds of the bass with simple ornamentations. The piano's right hand meanwhile pursues a course of its own,a repetitive pattern of gradually incrementing complexity.Bars 56 and 57,reminiscent of bars 46 and 47,provide a brief respite,after which the previous material returns with greater intensity,its sheer insistent quality grinding inexorably towards the main climax of the piece.

This comes at bar 66,with a return of motif B,with elaborations and extensions,converging as at its first appearance on F-sharp at bar 74. Bars 74 to 77 correspond to bars 21 and 22,likewise bars 78 to 83 correspond to bars 12 to 16,an extended and here ornamented treatment of motif A.Bars 84 and 85 are cadential,converging on F-sharp,and the long coda follows.

The coda is concerned with the gradual dissolution of all that has gone before,a kaleidoscope of melodic and harmonic forms, glissandi and strange noises.Some structural sense is retained, articulated by the four long swooping glissandi on the viola.As the coda progresses the sound-world gradually disintegrates,the gestures becoming more fragmentary.The last glissando breaks up into a rapid series of points,after which the piece concludes with a long,slowly dissolving cluster of noise as the bow is replaced with *col legno battuto* and finally dispensed with altogether,the music of another cold dead world.


9
13
21
23
32
39
46


48
56
58
66
74
78

setup for live electronics

The trumpet is provided with a pair of microphones thereby producing a stereo signal.The signal is sent to the mixing desk, and at the discretion of the engineer is relayed through the loudspeakers.

Two delay units are required,of the SPX90 variety or equivalent,and they should be programmed to provide stereo delays as given:

SPX1 left	250 ms
SPX1 right	500 ms
SPX2 left	750 ms
SPX2 right	1 sec

The internal feedback in the delay units should be of the order of 30%.

The left signal from the trumpet is sent to SPX1 while the right signal is sent to SPX2.The delays are not constantly in use;the engineer must manipulate the faders so that only the last two or three notes of the trumpet sound are "caught" to be fed through the delays,effectively scattering the trumpet sound around the hall.These moments are indicated in the score;the points at which they occur are also listed below:

at c.1'43"
at c.3'22"
at c.3'35"
at c.3'39"
at c.3'47"
at c.3'53"
at c.4'09"
at c.6'00"
at c.8'18"

These timings are rough indications;the solo part should be followed to ensure that the delays occur at the correct times.

The amount of material that is sent to the delays is indicated by a box around the relevant notes.

Both the live signal and the treated signal should also be sent to a reverb unit,with approximately 6" decay time.The signal is then sent to the speakers at a level sufficient to add a bloom to the sound while not overpowering the live instrument.In the final section of the piece(beginning at 8'29")the reverb signal should be sent to the front speakers only;thus the live instrument will not be confused with the trumpet part on the tape.

interpretation

The soloist requires four different mutes:

(1) wezee
(2) straight
(3) cup
(4) wa-wa

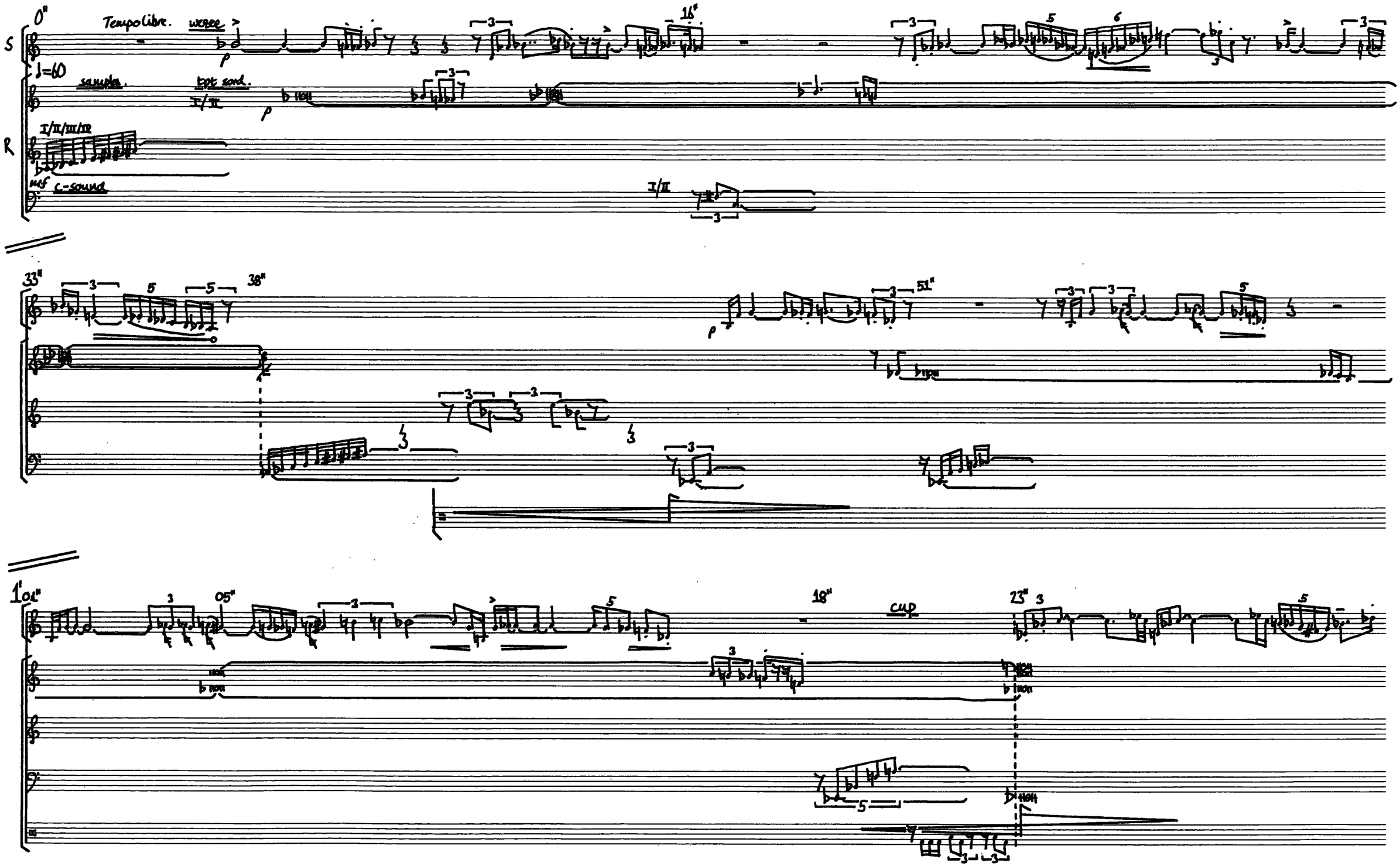
The first three of these are only used in the first section of the piece.There are several changes of mute called for,so the mutes should be placed on a convenient table.The wa-wa is only used in the second(6/4)section,and it may be played entirely with the stem in with no variation in timbre,or timbre may be varied ad lib;the final allegro is played open throughout.

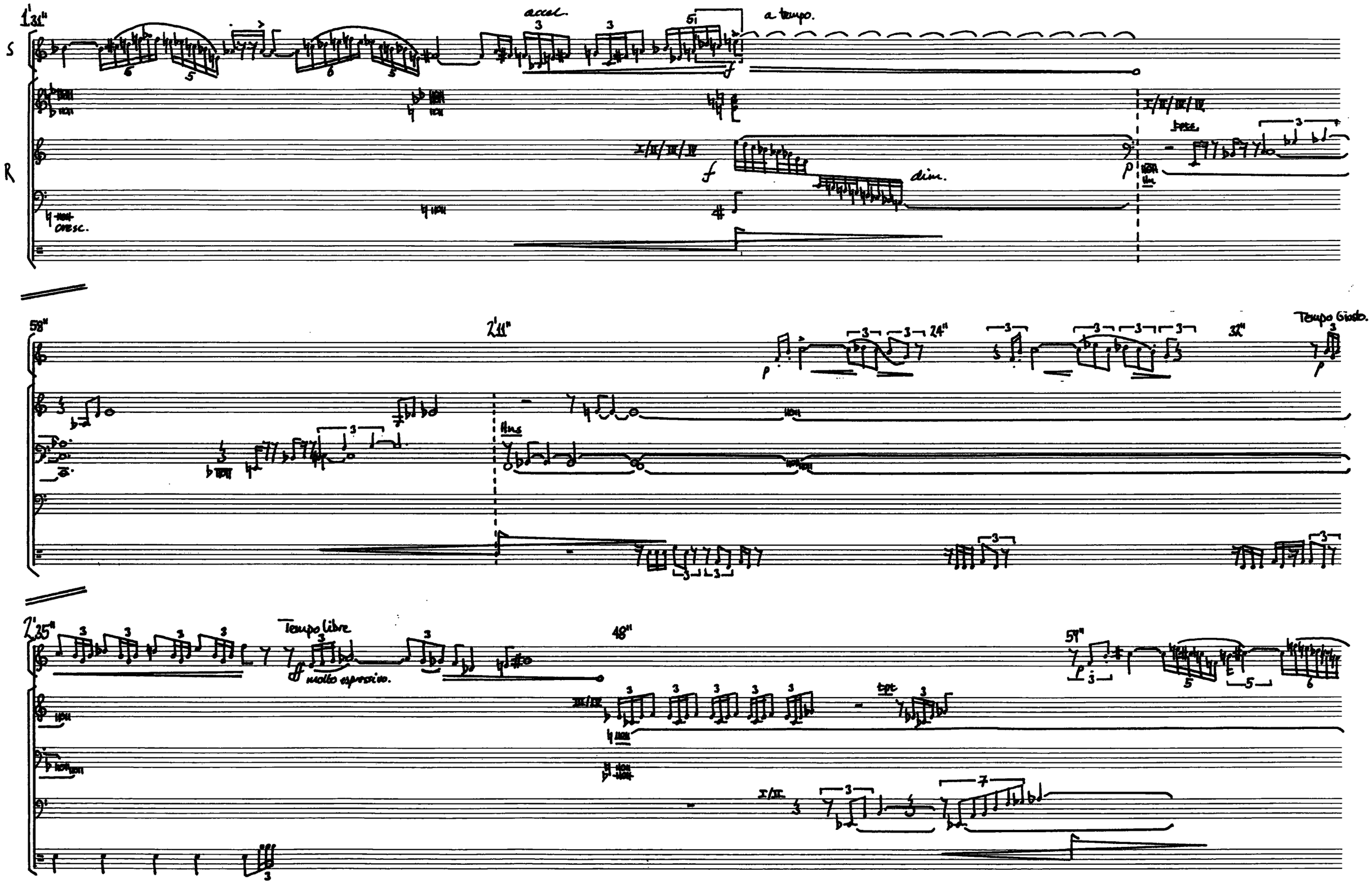
In the first part of the piece,the solo part is written *senza misura* and is therefore not to be played in strict time except for two instances;(i)at c.2'34" for the six crotchets following, and(ii)from c4'09"until the end of the section.The tape part contains rhythmic and melodic cues,around which the soloist must fit the part.

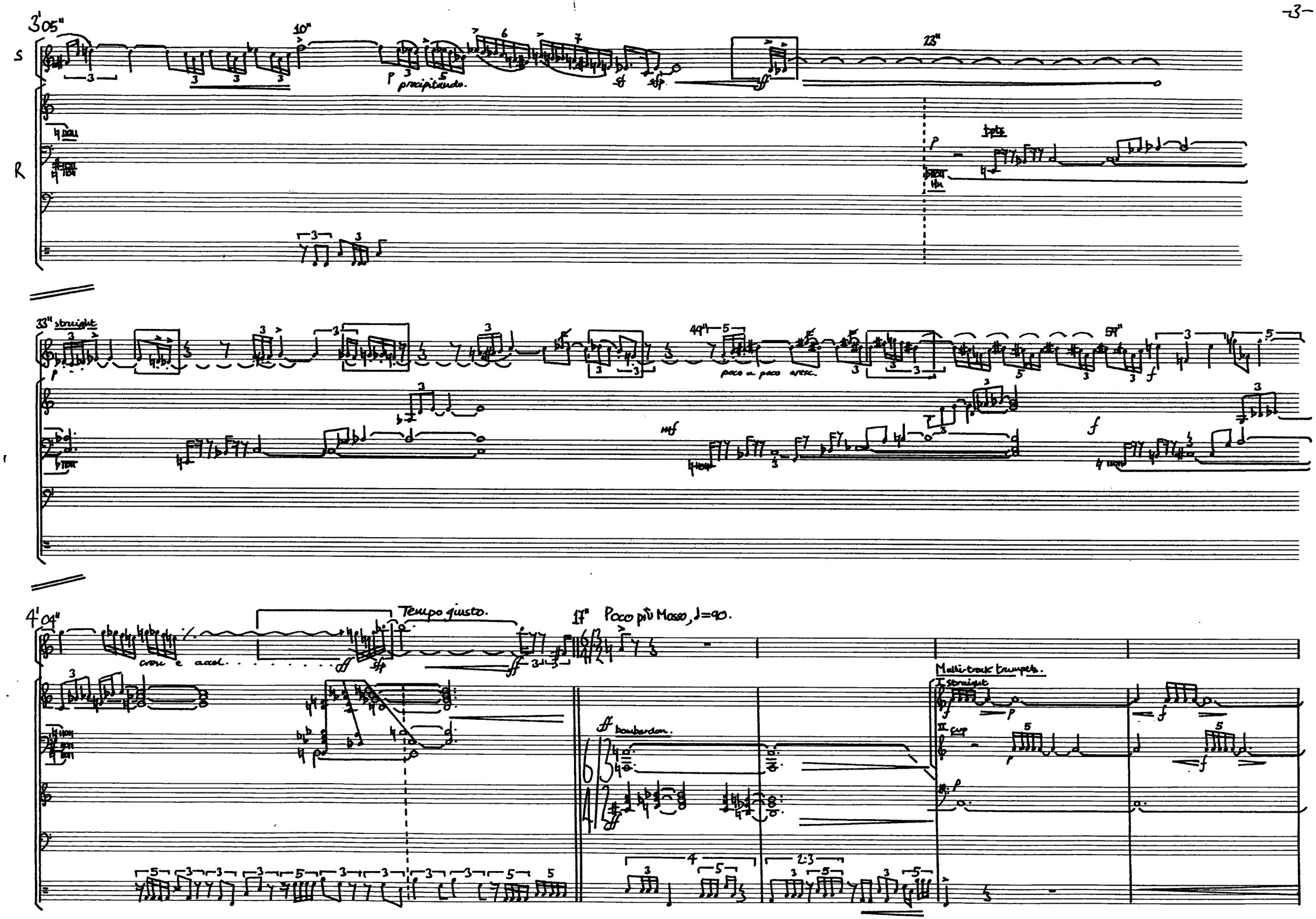
The remainder of the piece is written in strict measured time and therefore the part should be played as accurately as possible.

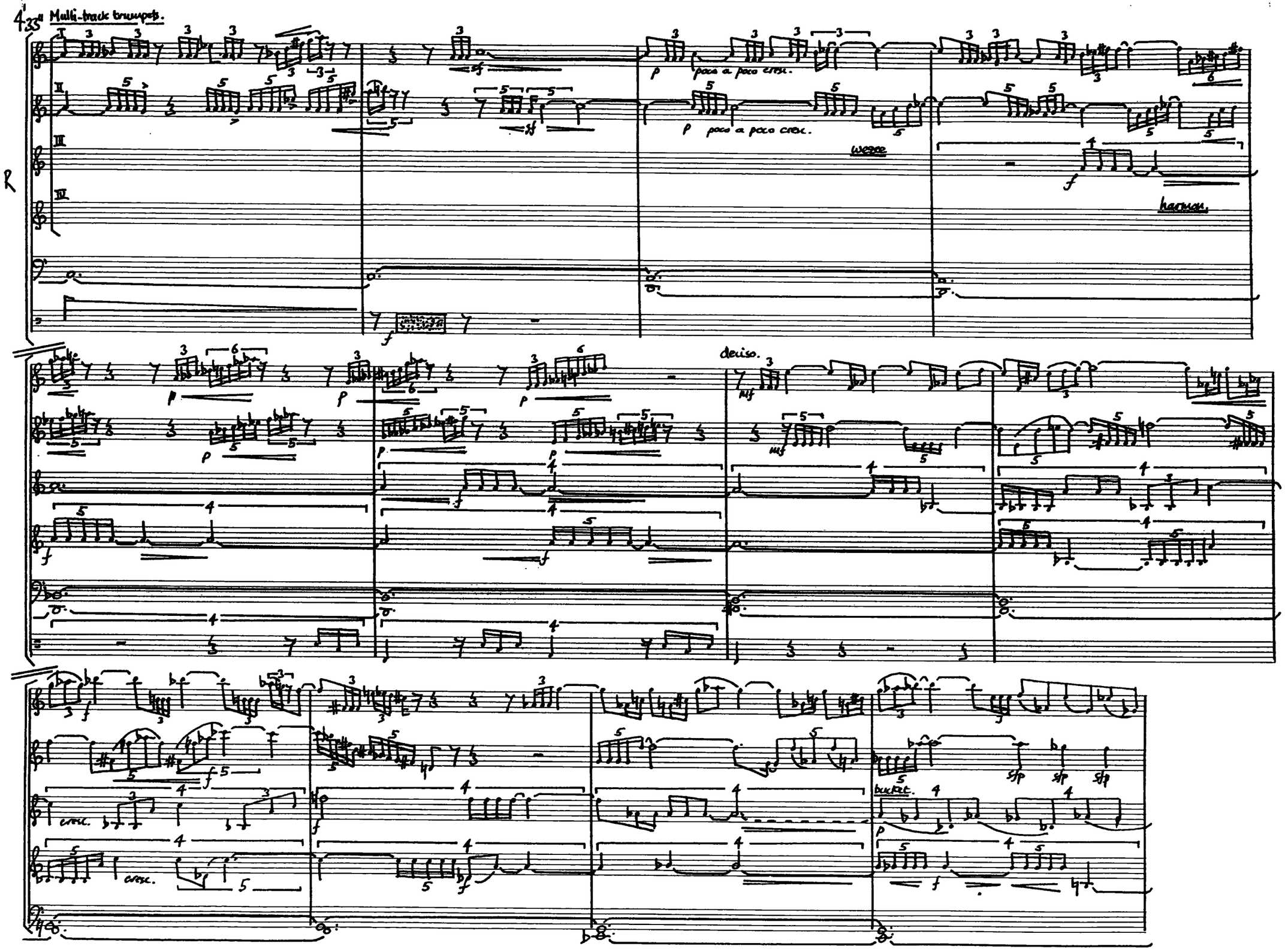
acknowledgement

Thanks to Mark Latham for provision of trumpet samples and for playing the material in the multitracked sections. Realised in the Music Studios at Durham University, November 1994 to January 1995.


0"
Tempo libre.
wezee
S
♩=60
samples.
tpt sord.
I/II
R
I/II/III/IV
mf
c-sound
I/II
16"
33"
38"
51"
1'01"
05"
18"
cup
23"


1'31"
S
R
accel.
a tempo.
dim.
cresc.
58"
2'11"
24"
32"
Tempo Giusto.
2'35"
Tempo libre
molto espressivo.
48"
59"


3'05"
10"
23"
S
R
precipitando.
33" straight
49"
59"
poco a poco cresc.
4'04"
Tempo giusto.
17" Poco più Mosso, ♩=90.
cresc e accel.
bombardon.
Multi-track trumpets.
I straight
II cup


4'33" Multi-track trumpets.
R
poco a poco cresc.
poco a poco cresc.
wegge
harmon.
deciso.
cresc.
cresc.
bucket.

5'11"

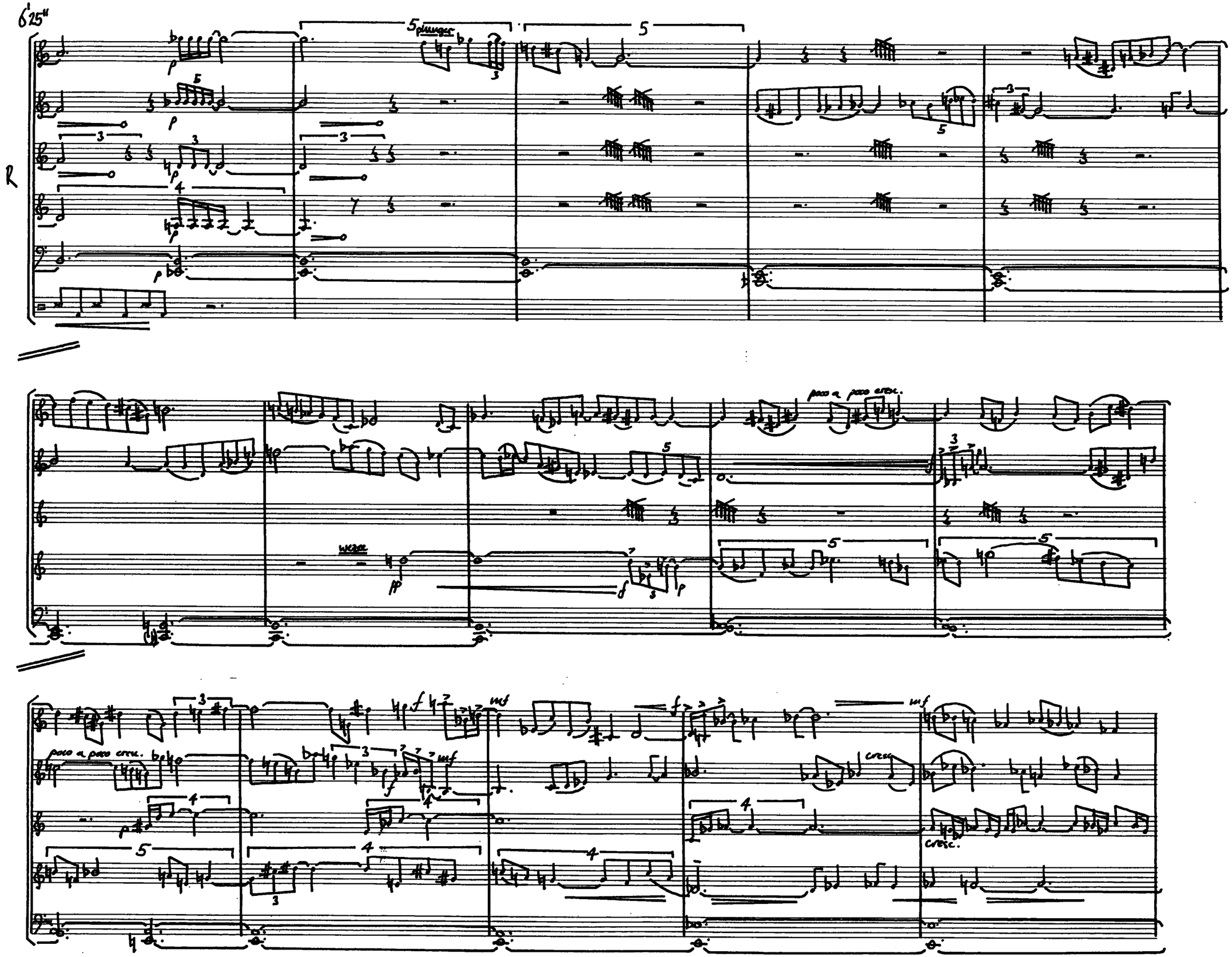
R

S

wave

cresc.

5'53"
S
R
cresc.
copper straight.


6'25"
R
5 plunger
poco a poco cresc.
poco a poco cresc.
cresc.
cresc.

7'25"

copper straight.

R

S

straight.

wetter

harmon

R

8'01"

S

R

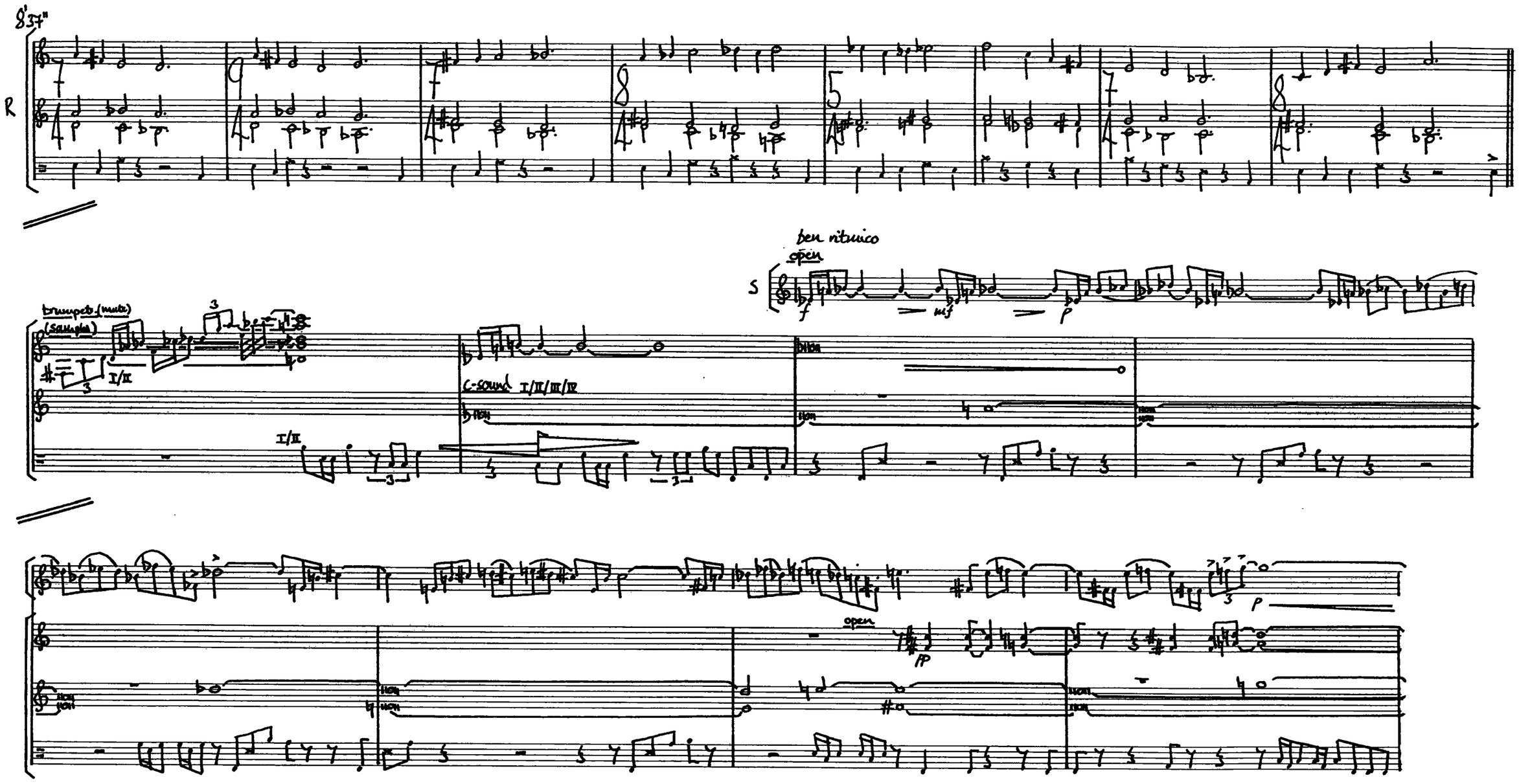
f poco a poco cresc.

Allegro, ♩ = 110

open I/II

open I

II


8'37"
R
ben ritmico
open
S
f
mf
p
trumpets (mute)
(samples)
I/II
C-sound I/II/III/IV
I/II
open
pp
p

9'37"
S
R
mute
mf
f
p
open
3

10'25"

S

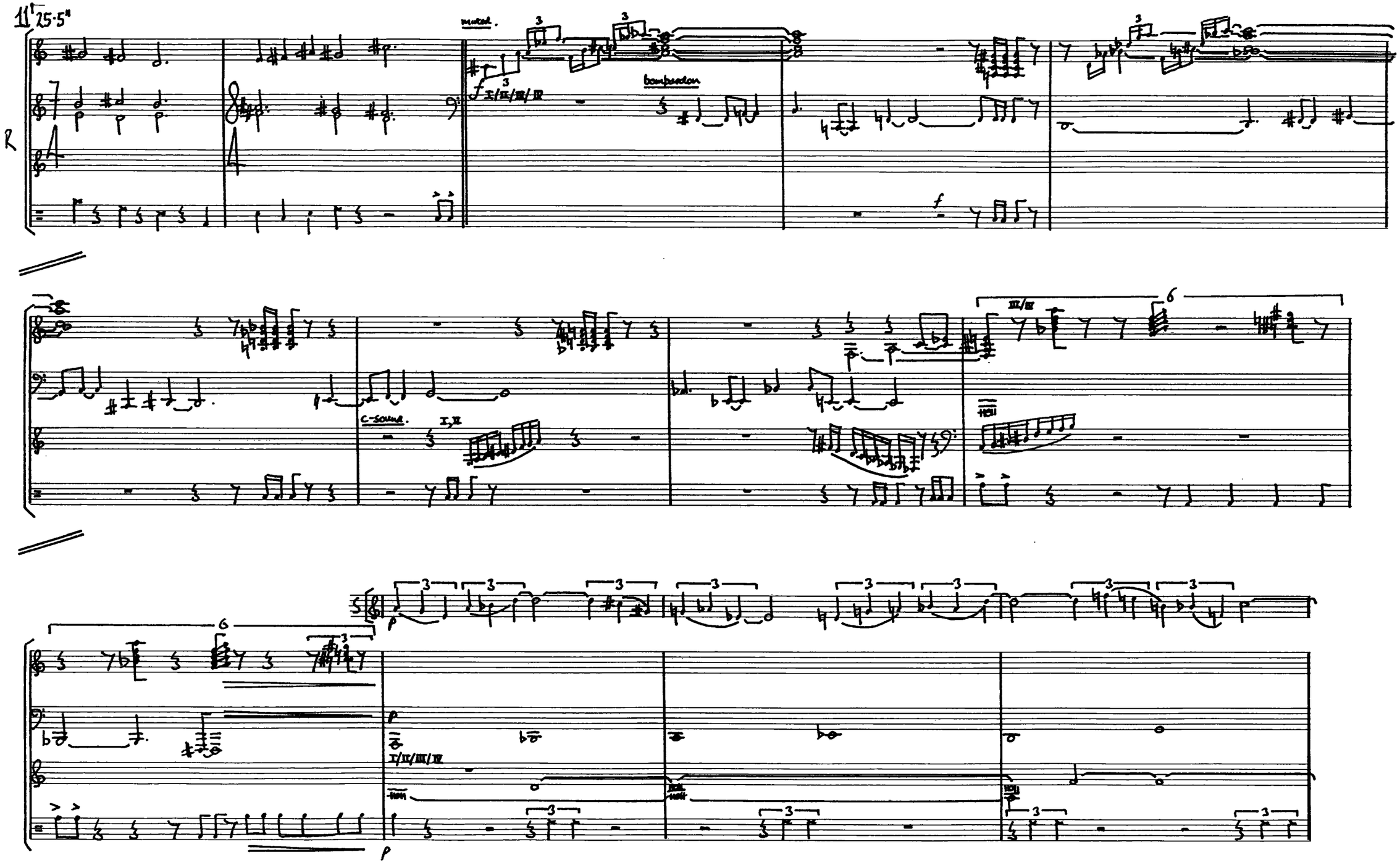
R

muta

croc.

open

multitrack


11'25·5"
R
muted.
bombardon
c-sound.
I/II/III/IV
III/IV
I,II

12'17"

S

R

Mußbruch (III/IV)

cresc.

cresc.

f

mf

poco f

f

II/I

IV/III

bass trumpet

open

cresc.

mf

(sempre)

R

15 OS"

-15-

13'57"

R

S

R

sampler 3 mute

bombardon

14'53"

28/4/94 - 27/5/95