NOTE TO USERS

This reproduction is the best copy available.

UMI®

UNIVERSITY OF CINCINNATI

September 22 1978

I hereby recommend that the thesis prepared under my supervision by Sylvia Pengilly

entitled The Pi Man

be accepted as fulfilling this part of the requirements for the degree of Doctor of Musical Arts

Approved by:

Paul M. Palombo

[illegible]

[illegible]

Form 66-6—Grad. School

A dissertation submitted to the
Graduate School of the College-Conservatory of Music,
University of Cincinnati, in partial fulfillment
of the requirements for the degree of
Doctor of Musical Arts

by

Sylvia Pengilly

September, 1978

UMI Number: DP16799

INFORMATION TO USERS

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleed-through, substandard margins, and improper alignment can adversely affect reproduction.
In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

UMI®

UMI Microform DP16799
Copyright 2009 by ProQuest LLC
All rights reserved. This microform edition is protected against unauthorized copying under Title 17, United States Code.

ProQuest LLC
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106-1346

NOTES ON PERFORMANCE

1. General

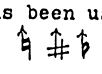
Although internal sections of this piece may bear individual titles it is intended to be performed without interruption.

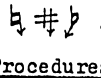
2. Instrumental

a) Notation

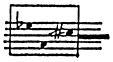
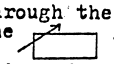
Duration is indicated in terms of minutes and seconds on a line above each system. A heavy, unbroken line following a note head indicates the duration for which that note should be held. Heavy lines in an upward or downward direction indicate a glissando over the time span indicated. The time line should not be regarded as inviolable but rather as an indication of the approximate time needed for an idea to unfold. The only section in which durations must be strictly observed is where instruments must coordinate with the quadrophonic tape (Weep for Infinity) and for this reason an attempt has been made to represent graphically the tape sounds in this section. Sections which use a meter signature should be performed in the usual manner.

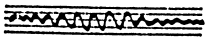
Where quarter-tone inflections are required the following table of accidentals has been used:


- sharpen a quarter-tone


- flatten a quarter-tone

Other Notational Procedures

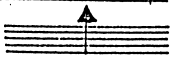

- play notes within frame, in any order, for the duration of the heavy line following the frame. Use articulation and dynamics indicated. A diagonal arrow through the top left corner of the frame  indicates notes should be played as fast as possible.


- increase, then decrease pitch fluctuation (vibrato). Where no vibrato is required the words non vib. appear.

- gradual accelerando

- gradual decelerando

- random harmonics (strings)


- highest possible note

Other symbols are given individual explanations in the score.

b) Rehearsal Numbers

In order to facilitate rehearsal key points have been designated as reference points. In unmetered sections these points are indicated in terms of minutes and seconds, e.g. 5'34" enclosed by a square. In metered sections they are indicated by letters e.g. B These reference points are also indicated on the parts.

c) Breathing (Woodwinds and Brass)

During long, sustained passages the two players of a particular instrument should stagger breathing. If only one instrument is indicated the player should snatch breaths, whenever needed, as unobtrusively as possible.

3. Tape

The audio technician should have a full score. In addition to activating the tape deck at the appropriate point he should also be ready, at the end of tape sections, to cue players who are to play in the following section (see specific directions in the score). During the Weep for Infinity section

he must also record portions of the performance. Specifically where and how to do this is indicated in the score and a detailed sheet of instructions is included with the instrumental parts.

4. Laser

This system of producing Lissajous patterns was developed by Drs. Lee Cross and Richard W. Peterson of the Physics Department of Western Illinois University. A small mirror is fastened to each of two small speakers connected to a stereo amplifier. Two audio signals are then fed into the amplifier. The laser beam first hits the mirror on the right speaker, bounces off it onto the mirror on the left speaker, and then is projected onto a screen. The Lissajous patterns thus produced may be varied by changing the ratio between the two input frequencies. For performance purposes these frequencies have been pre-recorded on electronic tape and the output from the tape deck is fed into the amplifier, thus driving the speakers. As very little amplitude is needed in this procedure the output from the small speakers is practically inaudible. The laser operator should be stationed at optimum distance from the stage to provide patterns of the desired size. To activate the system he should turn on the laser and the tape deck at the beginning of each section so indicated and turn the laser off at the end of each such section. The tape deck should be held in "Pause" mode between sections as this makes for smoother starting of the tape at the beginning of the following section. White leader is spliced between the four laser sections and should be used as a visual cue to set the tape deck in "Pause" mode.

THE PI MAN

INSTRUMENTATION

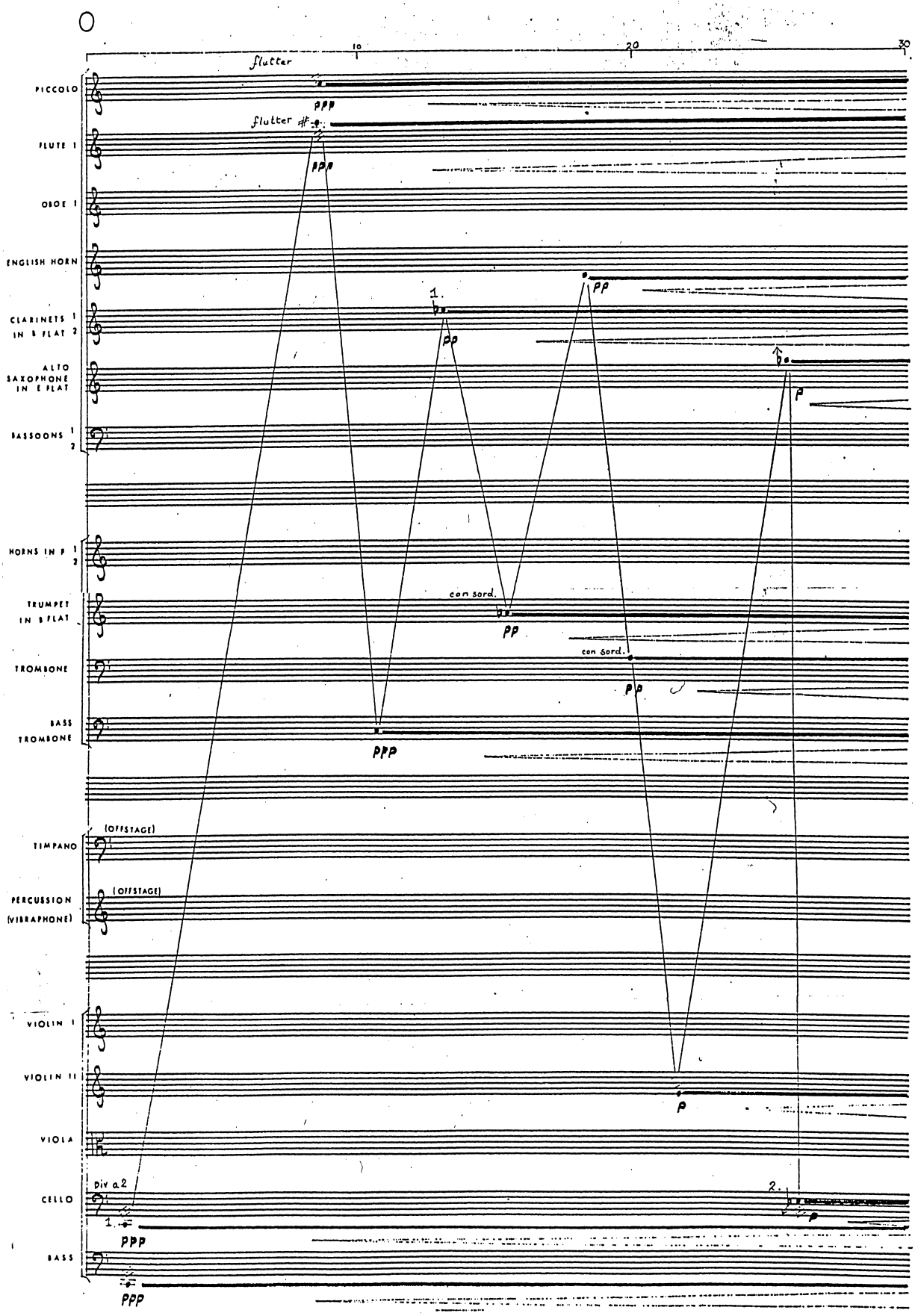
Dancers (onstage)	1 Man 1 Woman
Soloists (onstage)	* 1 Percussion (preferably male) + 1 Violin (preferably female) 1 Viola 1 Cello
Orchestra (in pit)	2 Flutes (second doubling Piccolo) 2 Oboes (second doubling English Horn) 2 Clarinets in B flat 1 Alto Saxophone in E flat 2 Bassoons 2 Horns in F 1 Trumpet in B flat 1 Tenor Trombone 1 Bass Trombone * 1 Timpano (large) plus inverted cymbal (large) * 1 Percussion (Vibraphone) Strings (Bass should have C extension) Quadrophonic Tape Laser , driven by a second tape deck (stereo)

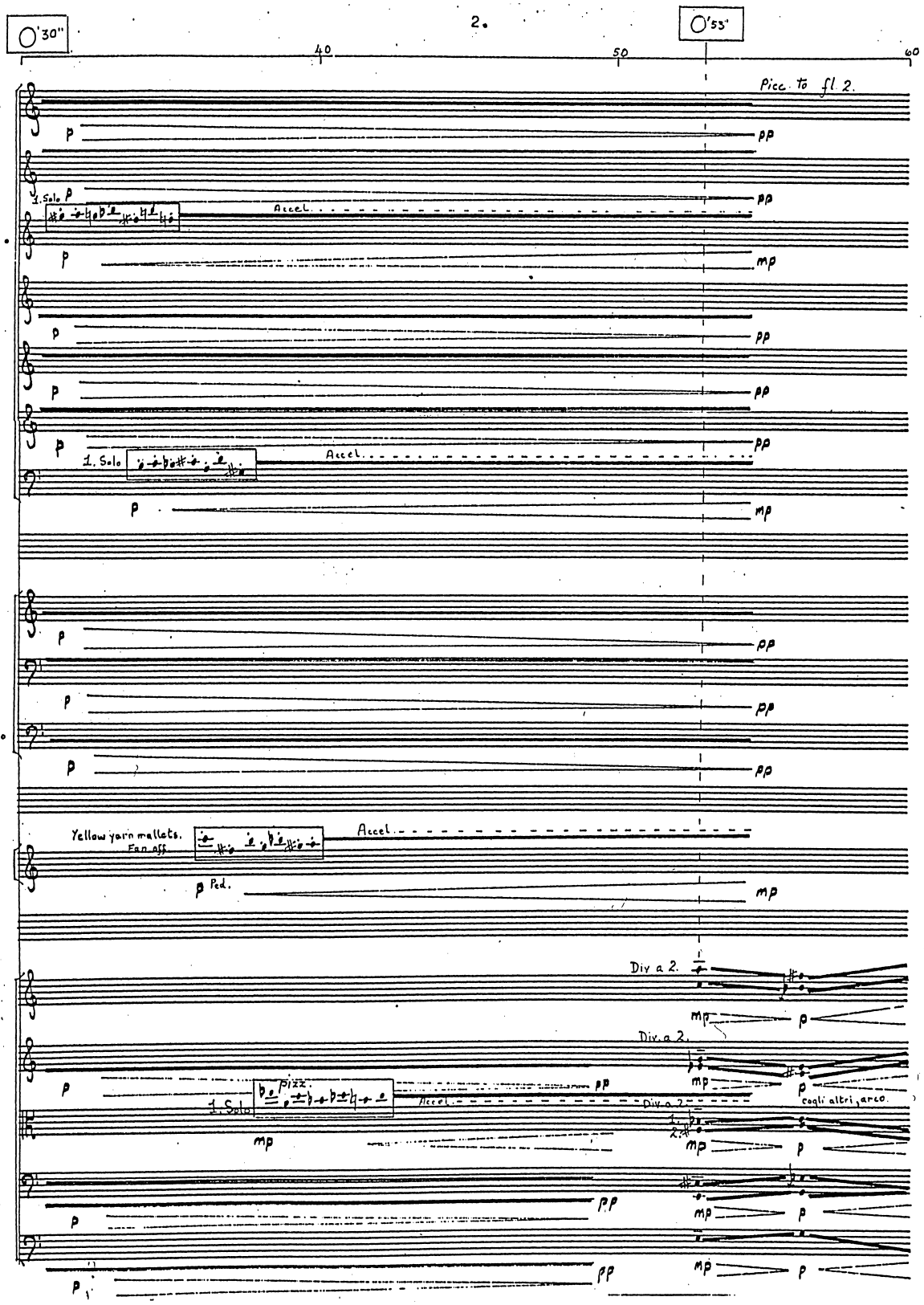
* The Percussion soloist should also cover the Percussion requirements, including Timpano, for the pit orchestra. His equipment should be in the wings of the stage when functioning as part of the orchestra, onstage when functioning as a soloist.

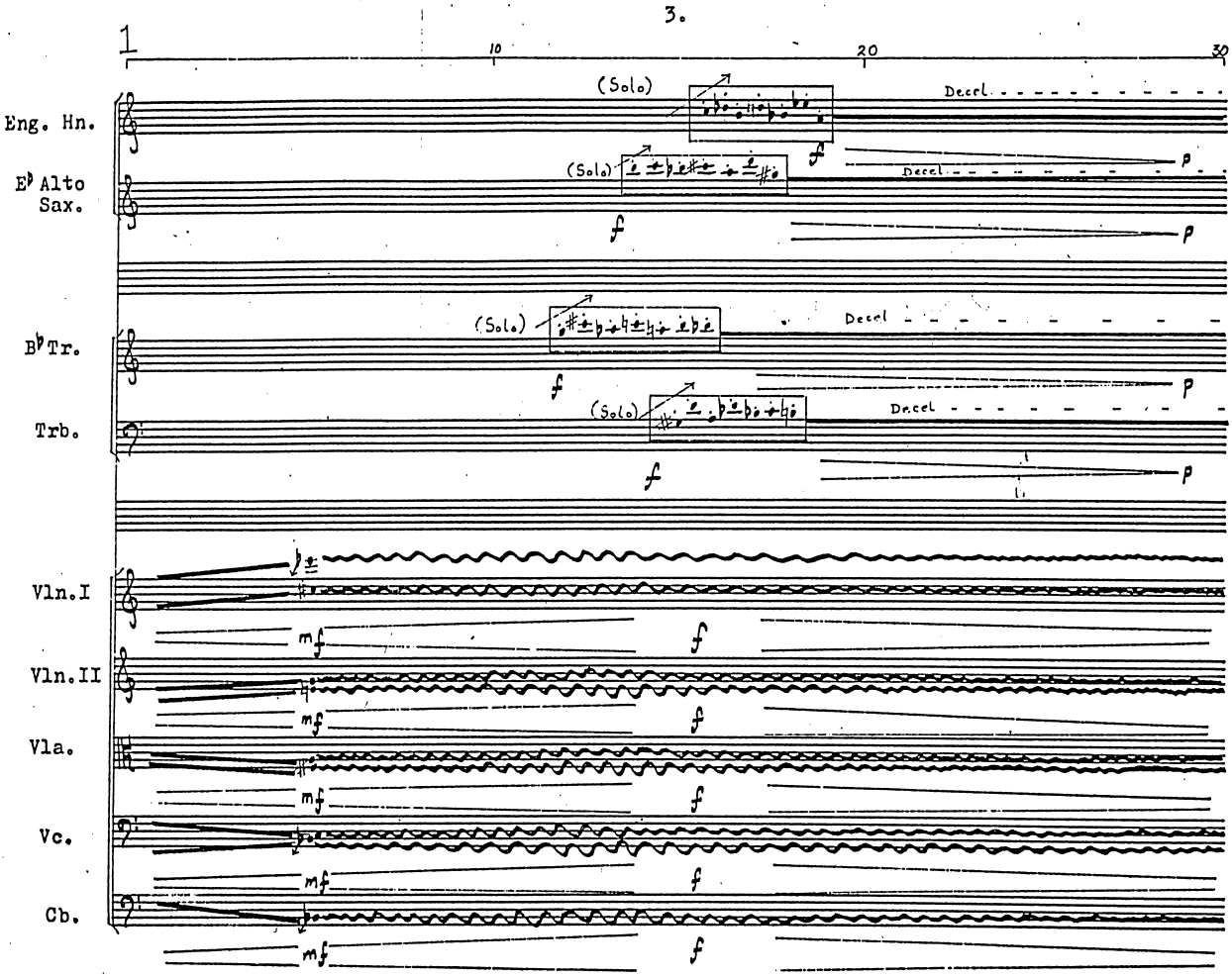
+ In addition to her own instrument the Violin soloist should also provide a cheap instrument, tuned scordatura, to hand to the male dancer (see p.36).

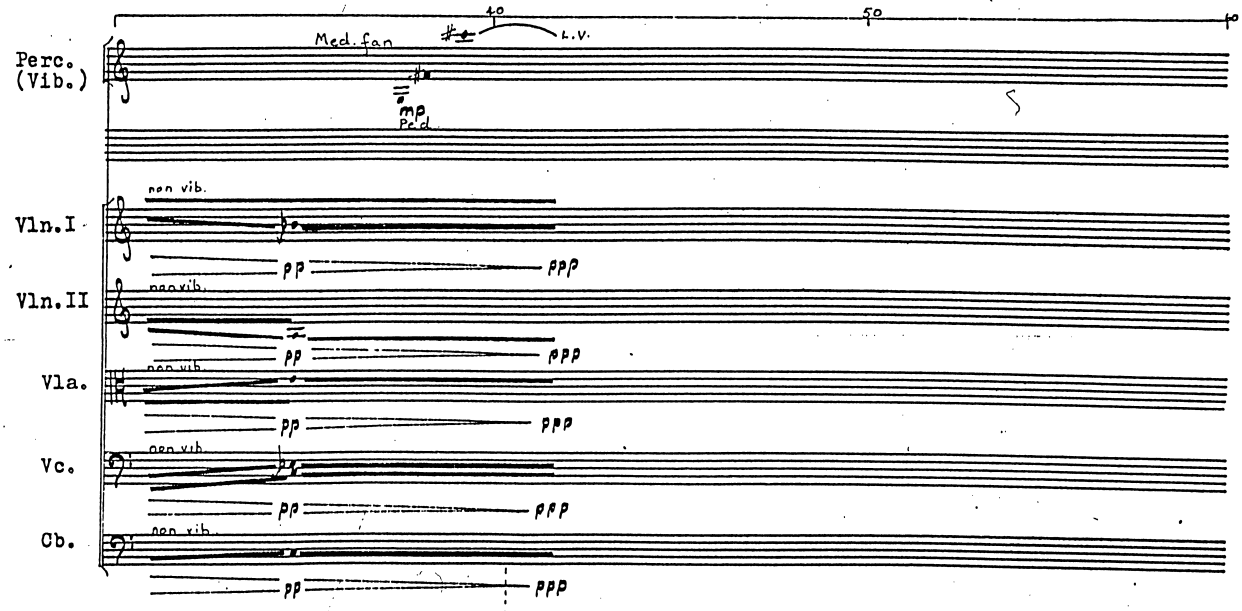
THE PI MAN

SYLVIA PENGILLY



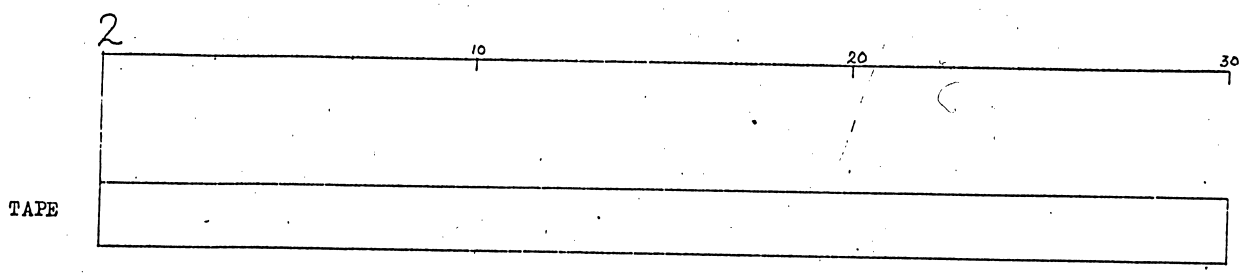

0'30"
40
50
0'55"
60
Picc. to fl 2.
Picc.
Fl.1.
Ob.1.
Eng.Hn.
B♭ Cl.1.
E♭ Alto Sax.
Bsn.1.
B♭ Tr.
Trb.
B. Trb.
Perc. (Vib.)
Vln.I
Vln.II
Vla.
Vc.
Cb.
1. Solo
Accel.
Yellow yarn mallets. Fan off
Ped.
Div a 2.
Pizz.
coqli altri, arco.

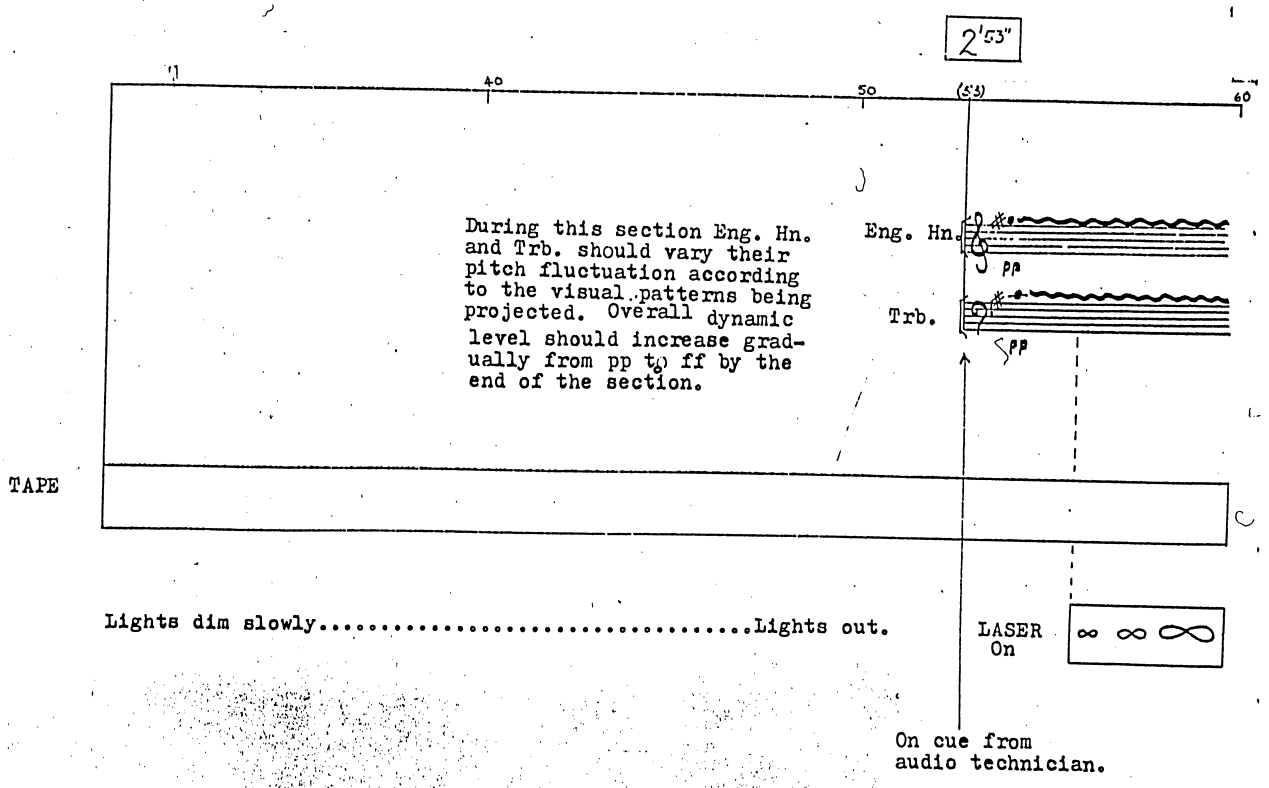


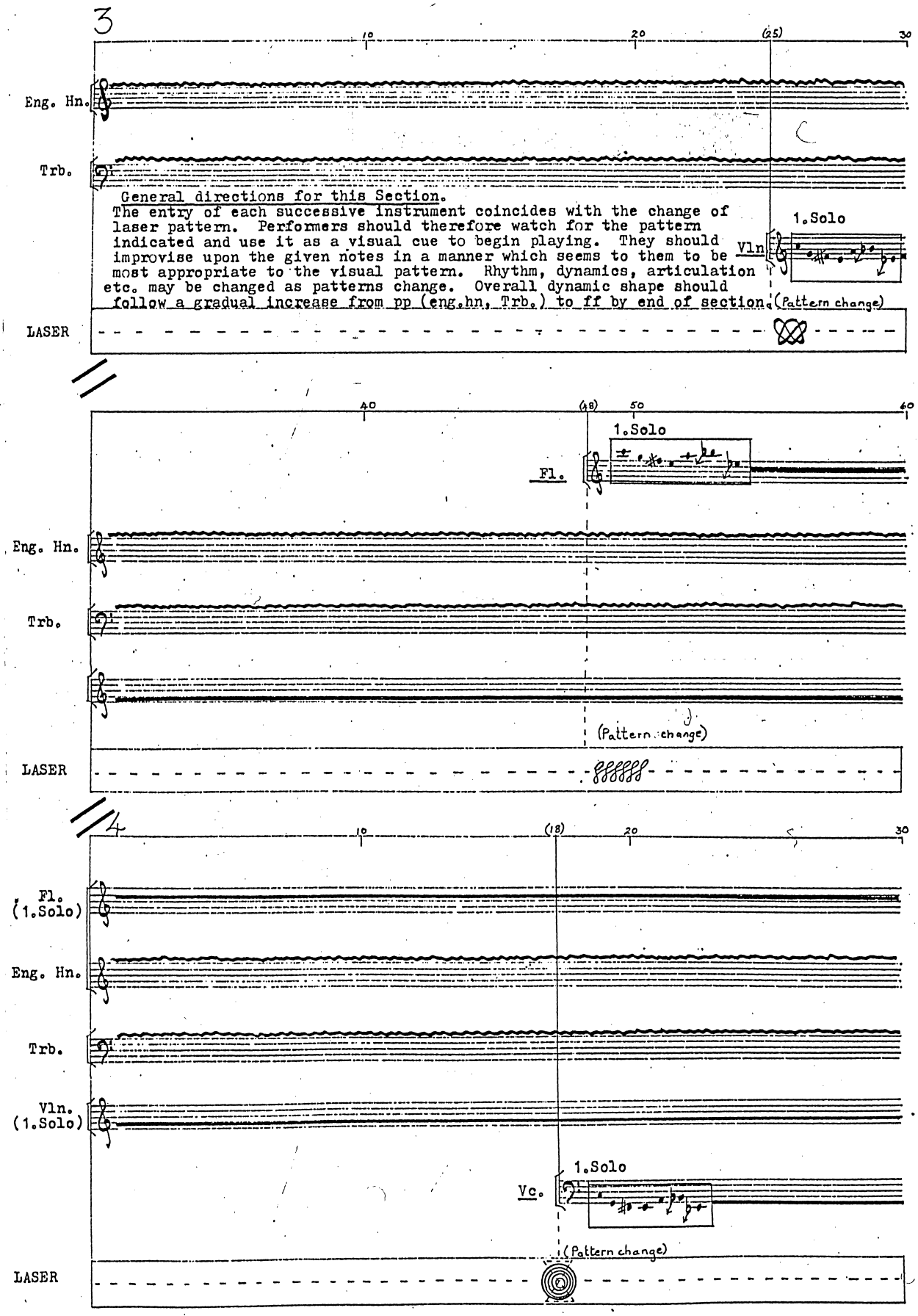


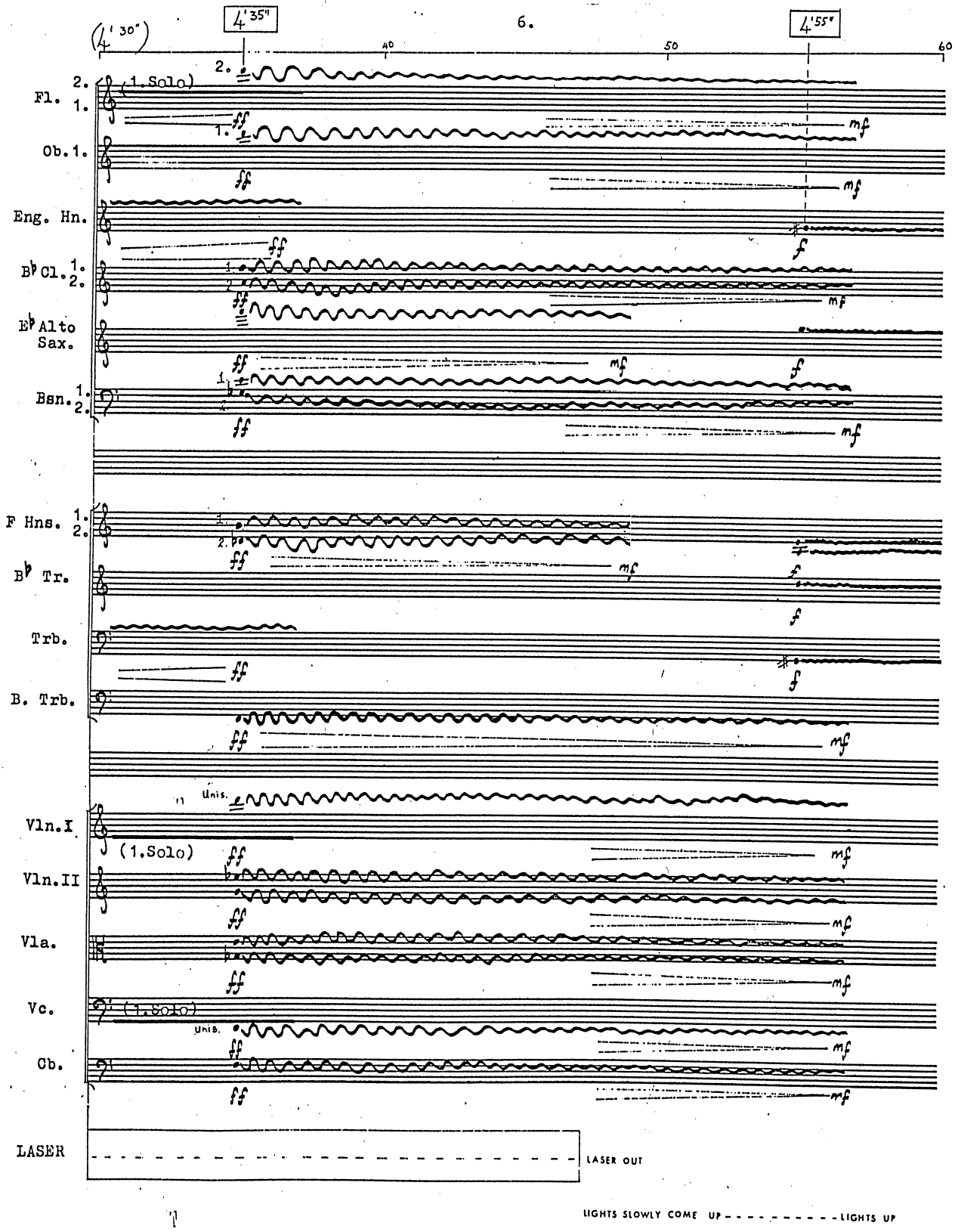
TAPE ON

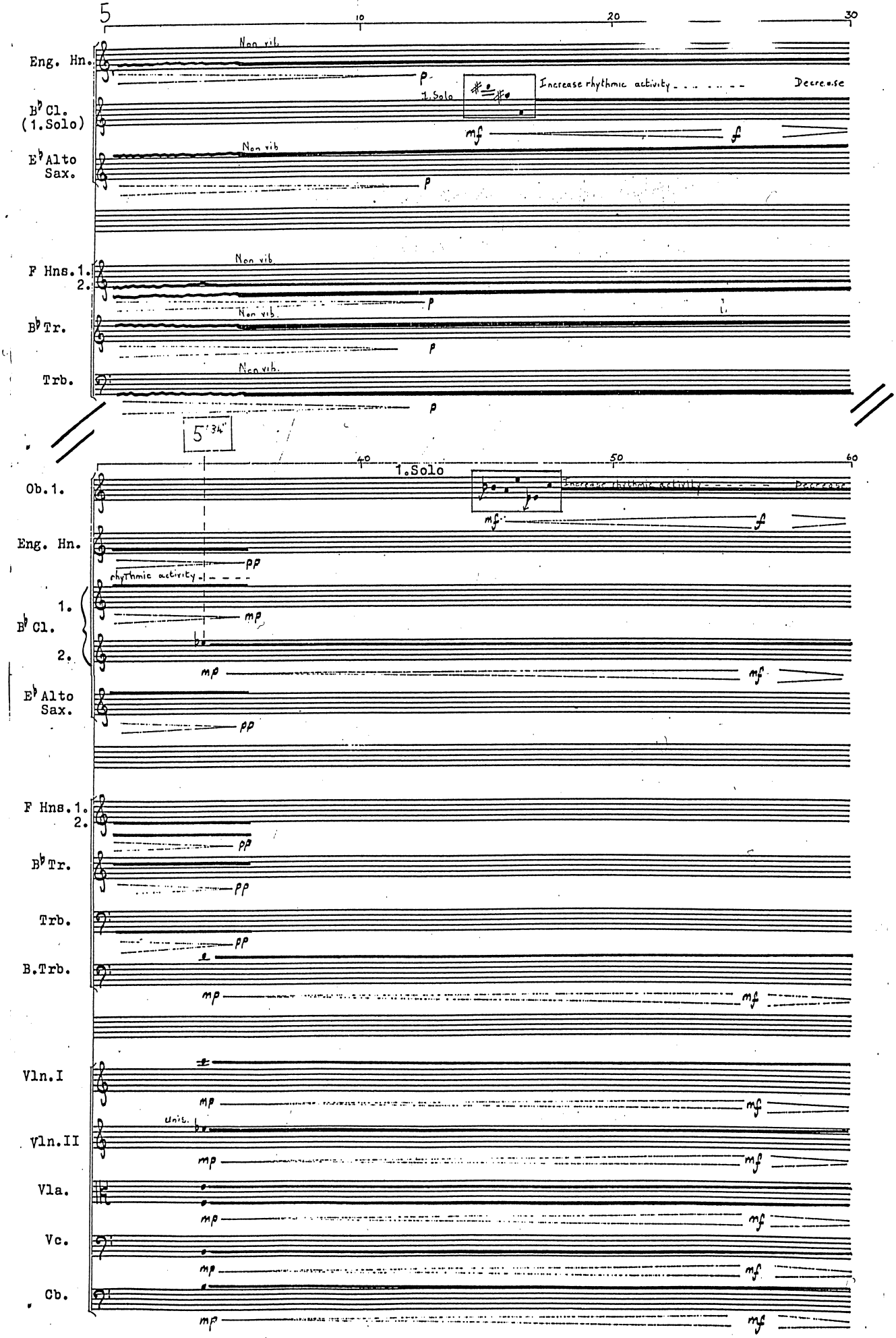
Audio technician should time this section with a stopwatch in order to cue Eng. Hn. and Trb. on next page.

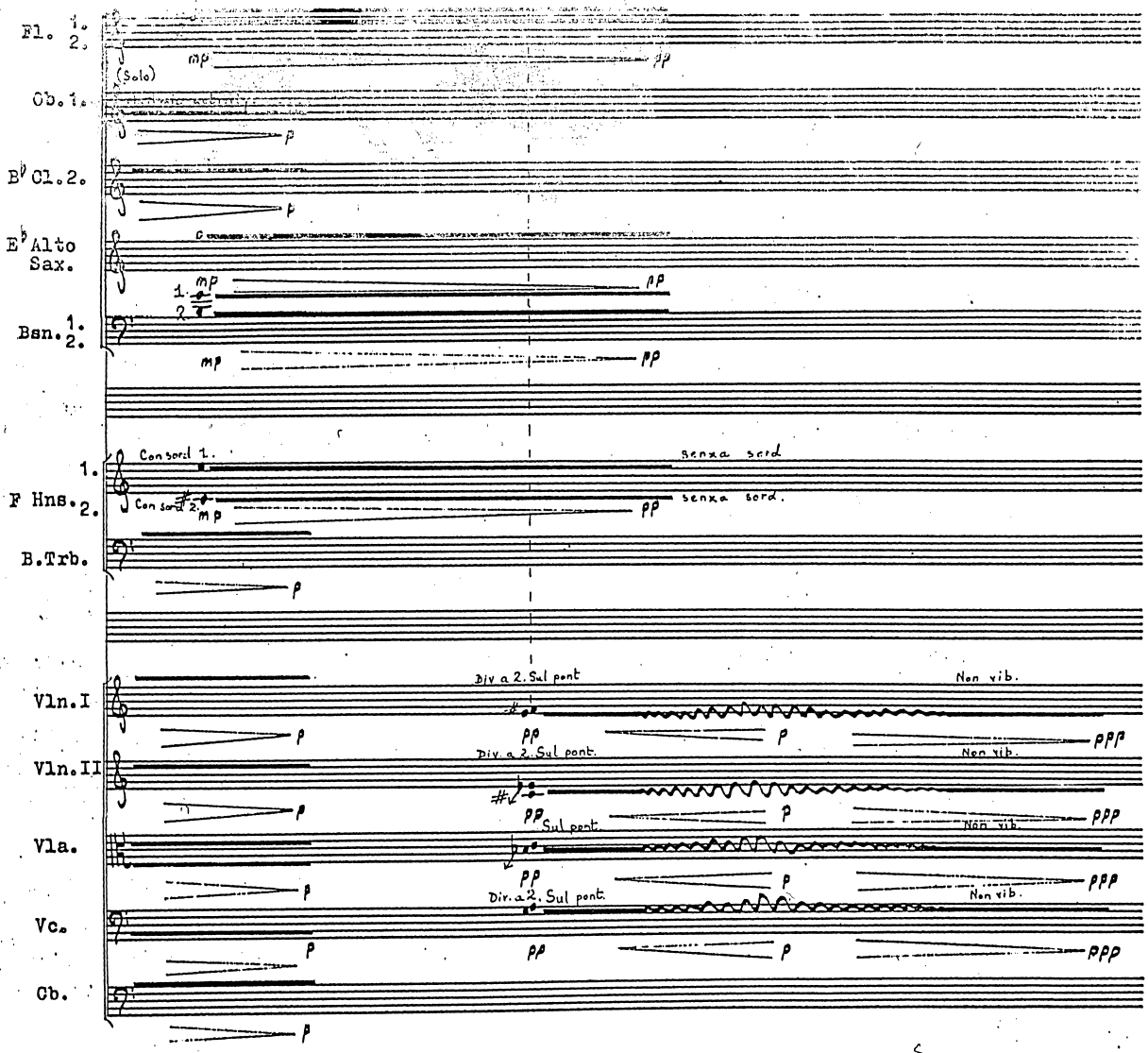

2
10
20
30
TAPE


2'53"
40
50
(5'3)
60
During this section Eng. Hn. and Trb. should vary their pitch fluctuation according to the visual patterns being projected. Overall dynamic level should increase gradually from pp to ff by the end of the section.
Eng. Hn.
pp
Trb.
pp
TAPE
Lights dim slowly.....Lights out.
LASER On
On cue from audio technician.


3
10
20
(25)
30
Eng. Hn.
Trb.
General directions for this Section.
The entry of each successive instrument coincides with the change of laser pattern. Performers should therefore watch for the pattern indicated and use it as a visual cue to begin playing. They should improvise upon the given notes in a manner which seems to them to be most appropriate to the visual pattern. Rhythm, dynamics, articulation etc. may be changed as patterns change. Overall dynamic shape should follow a gradual increase from pp (eng.hn, Trb.) to ff by end of section.
1.Solo
Vln
(Pattern change)
LASER
40
(48)
50
60
1.Solo
Fl.
Eng. Hn.
Trb.
(Pattern change)
LASER
4
10
(18)
20
30
Fl.
(1.Solo)
Eng. Hn.
Trb.
Vln.
(1.Solo)
1.Solo
Vc.
(Pattern change)
LASER


(4'30")
4'35"
4'55"
40
50
60
Fl.
(1.Solo)
Ob.1.
Eng. Hn.
B♭ Cl.
E♭ Alto Sax.
Bsn.
F Hns.
B♭ Tr.
Trb.
B. Trb.
Unis.
Vln.I
(1.Solo)
Vln.II
Vla.
Vc.
(1.Solo)
Unis.
Cb.
LASER
LASER OUT
LIGHTS SLOWLY COME UP
LIGHTS UP

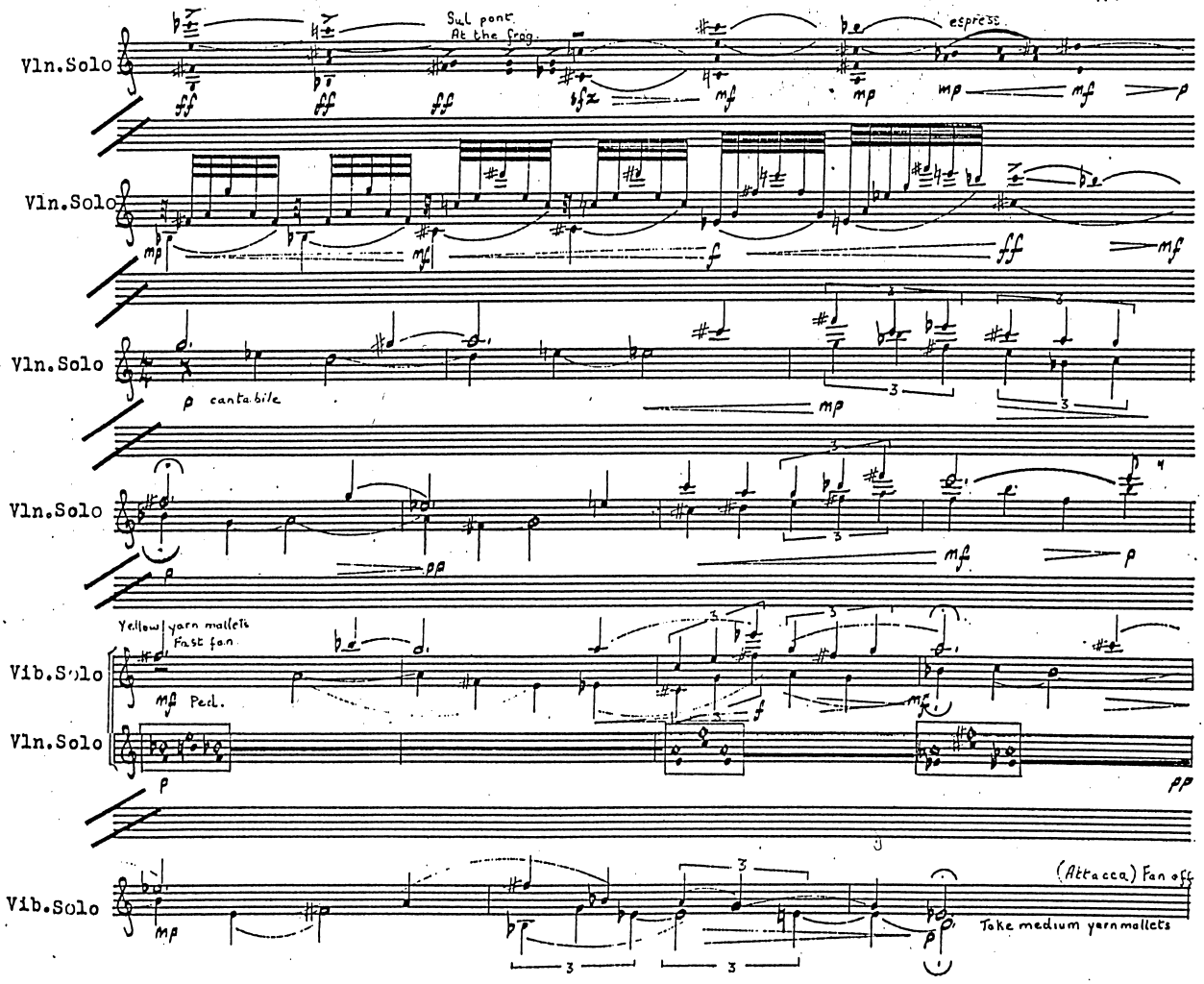

5
10
20
30
Eng. Hn.
Non vib.
p
1. Solo
Increase rhythmic activity
Decrease
B♭ Cl.
(1. Solo)
mf
f
E♭ Alto Sax.
Non vib.
p
F Hns. 1.
2.
Non vib.
p
B♭ Tr.
Non vib.
p
Trb.
Non vib.
p
5'34"
40
50
60
1. Solo
Ob. 1.
Increase rhythmic activity
Decrease
mf
f
Eng. Hn.
pp
rhythmic activity
B♭ Cl.
1.
2.
mp
mf
E♭ Alto Sax.
pp
F Hns. 1.
2.
pp
B♭ Tr.
pp
Trb.
pp
B. Trb.
mp
mf
Vln. I
mp
mf
Vln. II
unis.
mp
mf
Vla.
mp
mf
Vc.
mp
mf
Cb.
mp
mf


Fl. 1. 2.
(Solo)
mp
pp
Ob. 1.
p
B♭ Cl. 2.
p
E♭ Alto Sax.
1. mp
2.
pp
Bsn. 1. 2.
mp
pp
Con sord 1.
senza sord
1.
F Hns. 2.
Con sord 2.
mp
pp
senza sord.
B.Trb.
p
Vln. I
Div a 2. Sul pont
Non vib.
p
pp
p
ppp
Vln. II
Div. a 2. Sul pont.
Non vib.
p
pp
p
ppp
Vla.
Sul pont.
Non vib.
p
pp
p
ppp
Vc.
Div. a 2. Sul pont.
Non vib.
p
pp
p
ppp
Cb.
p

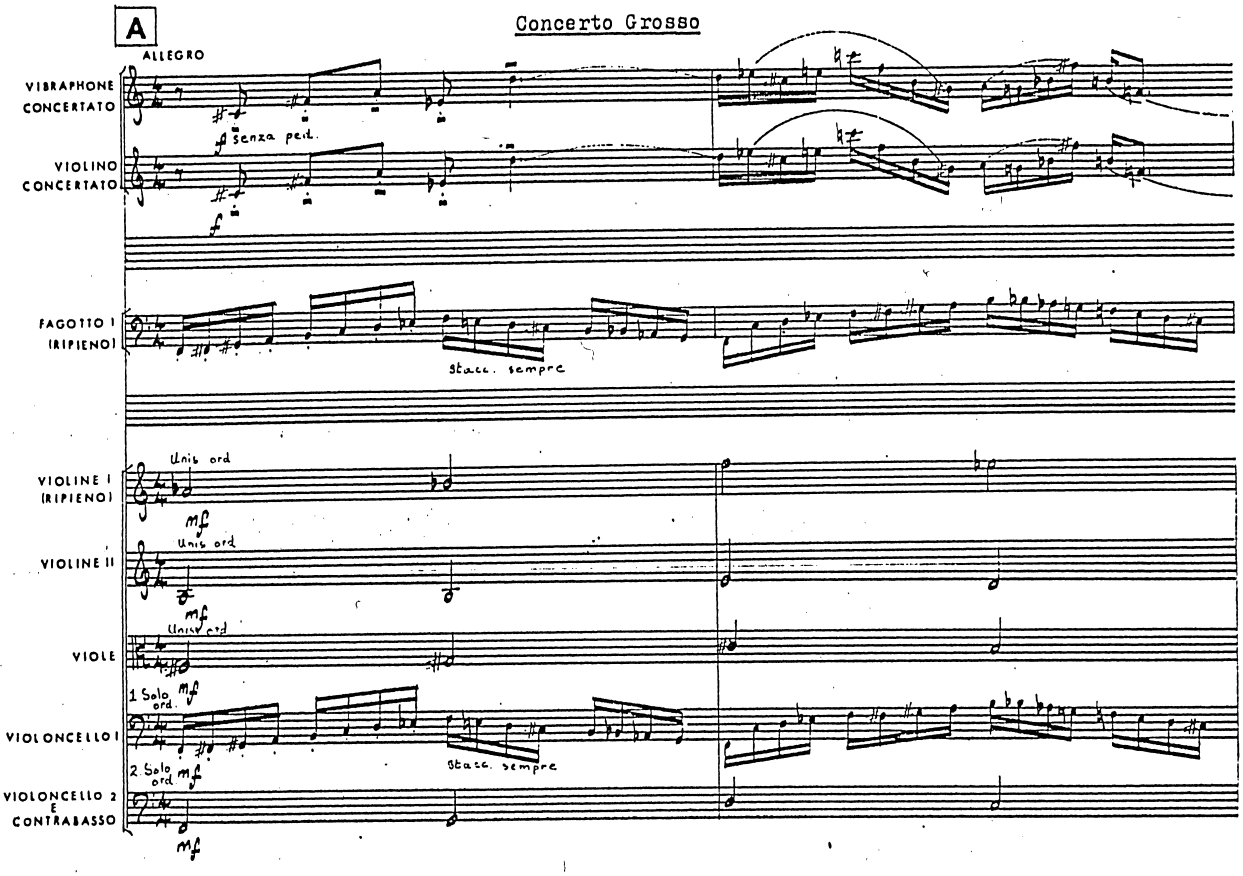
Enter Solists, onstage.

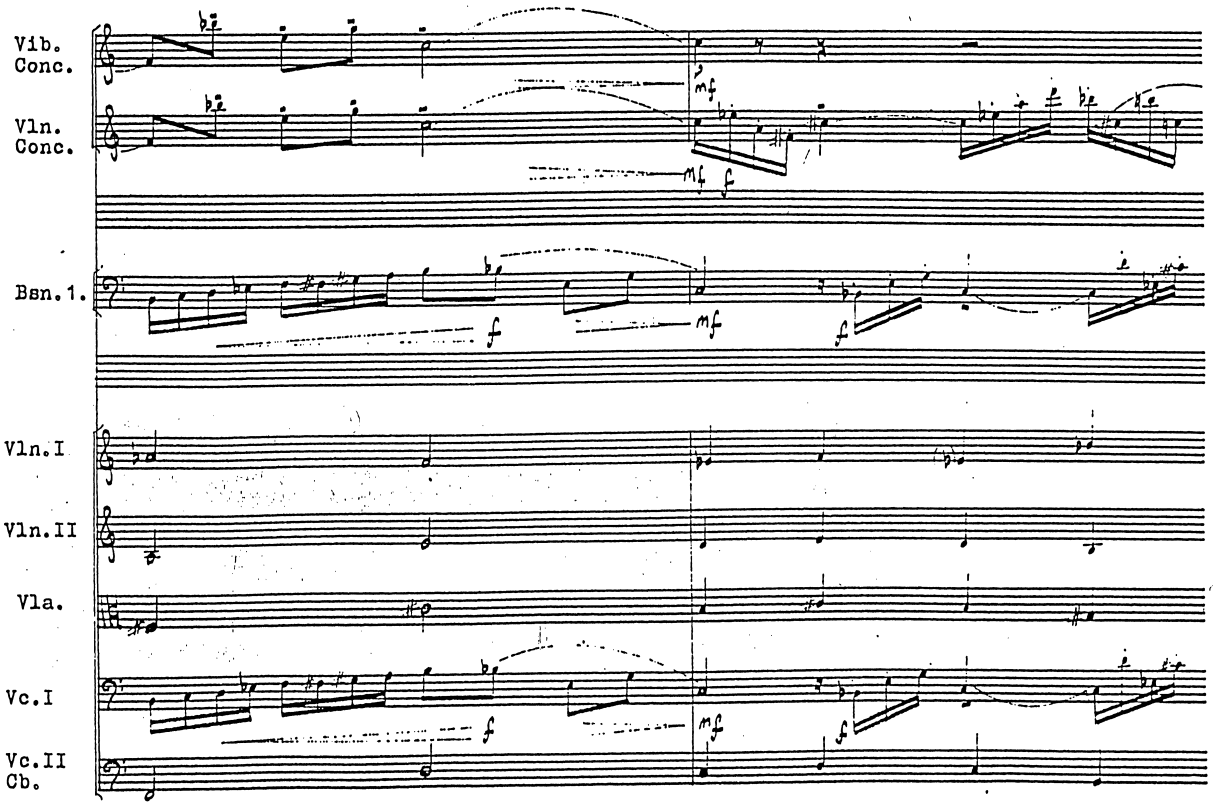
Solo Violin enters stage R., solo Vibraphone enters stage L.

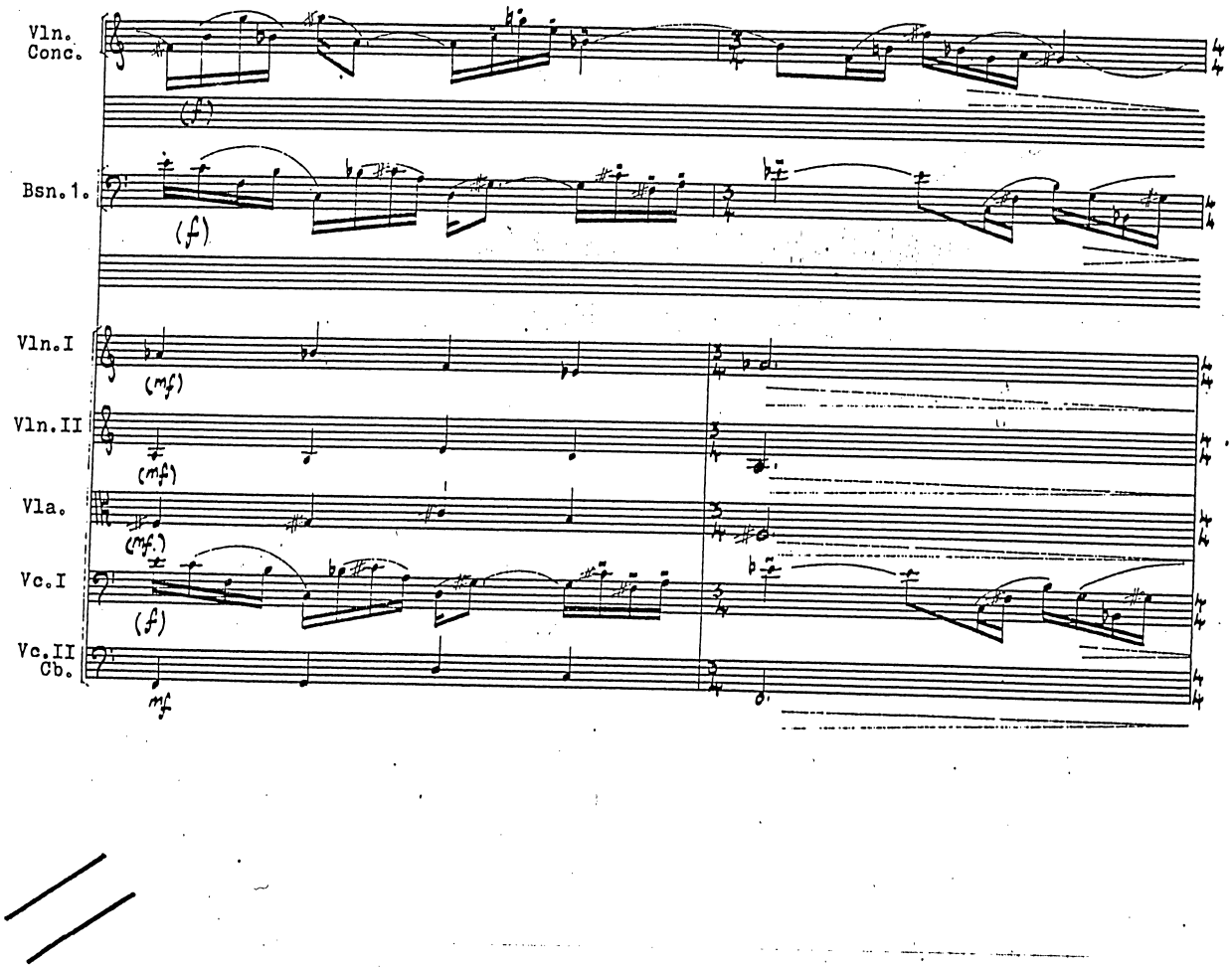
Intense, flamboyant. With rhythmic freedom, approx. 25 sec. each system until metered section.

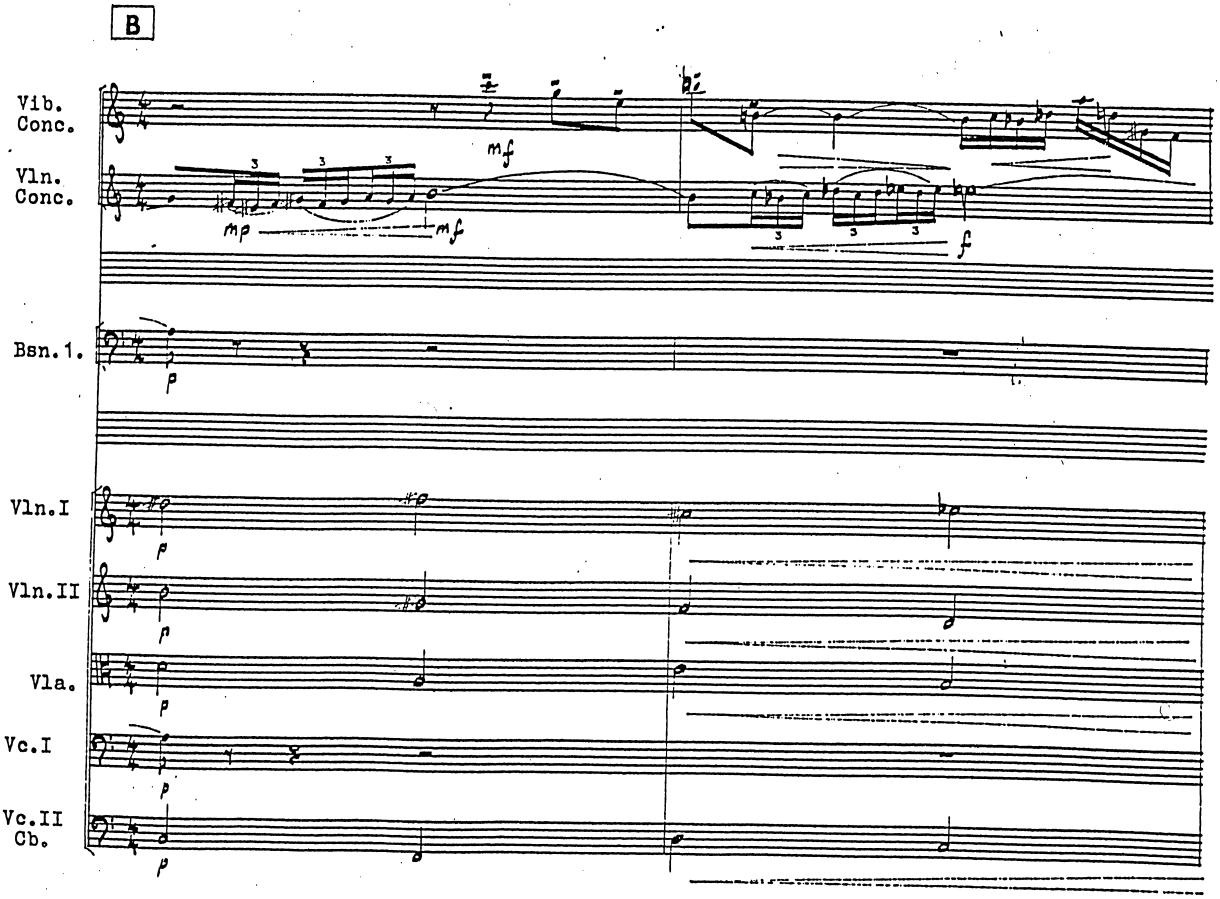


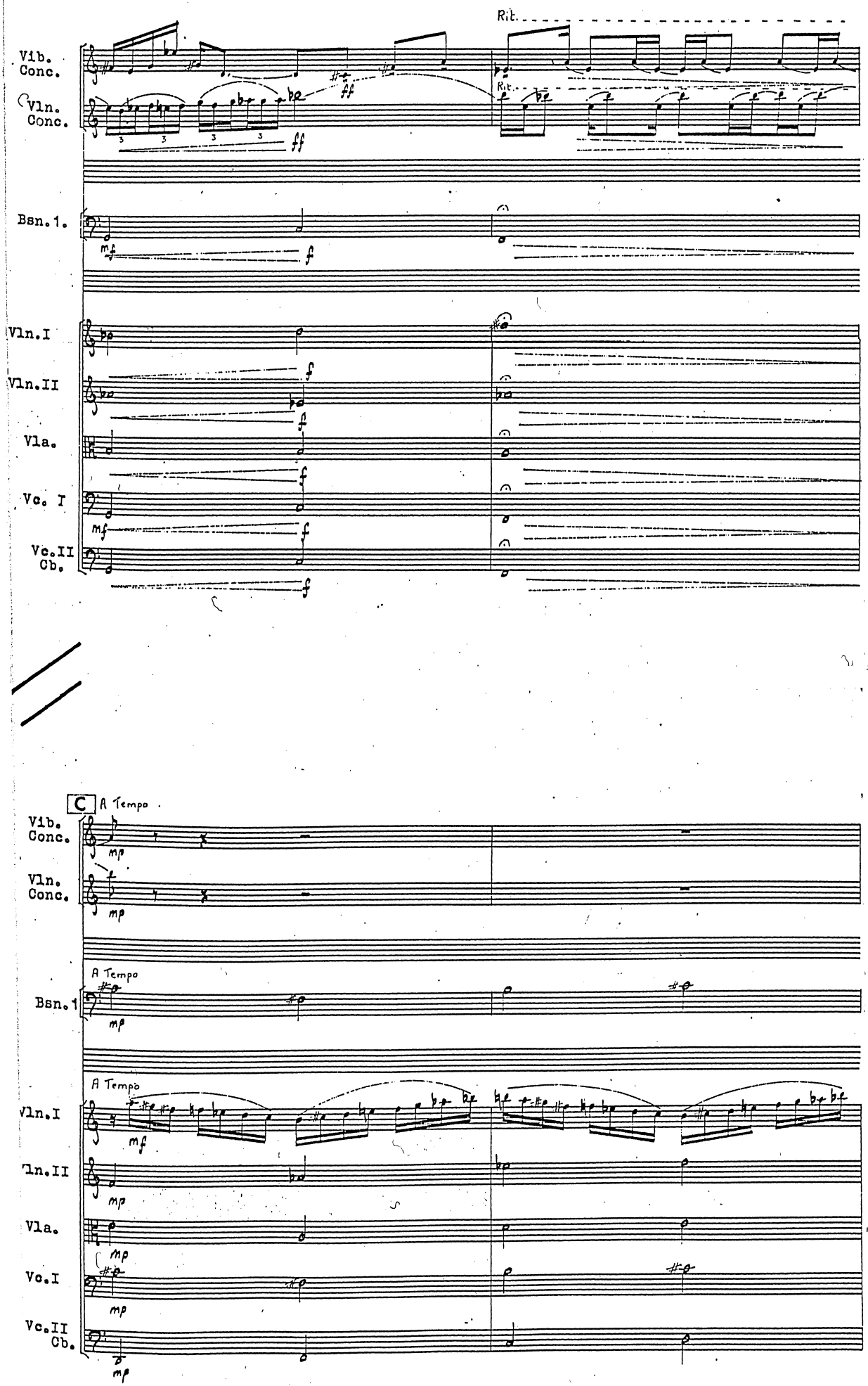
Concerto Grosso

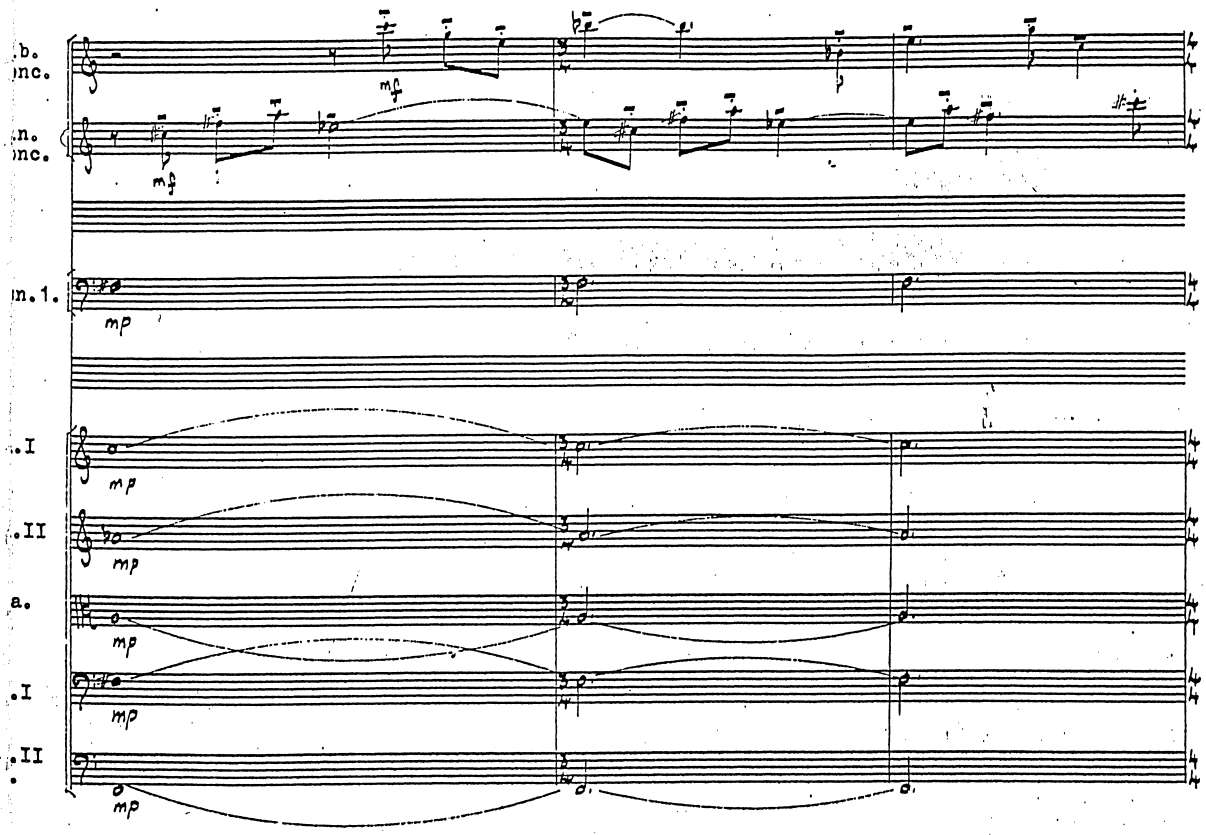


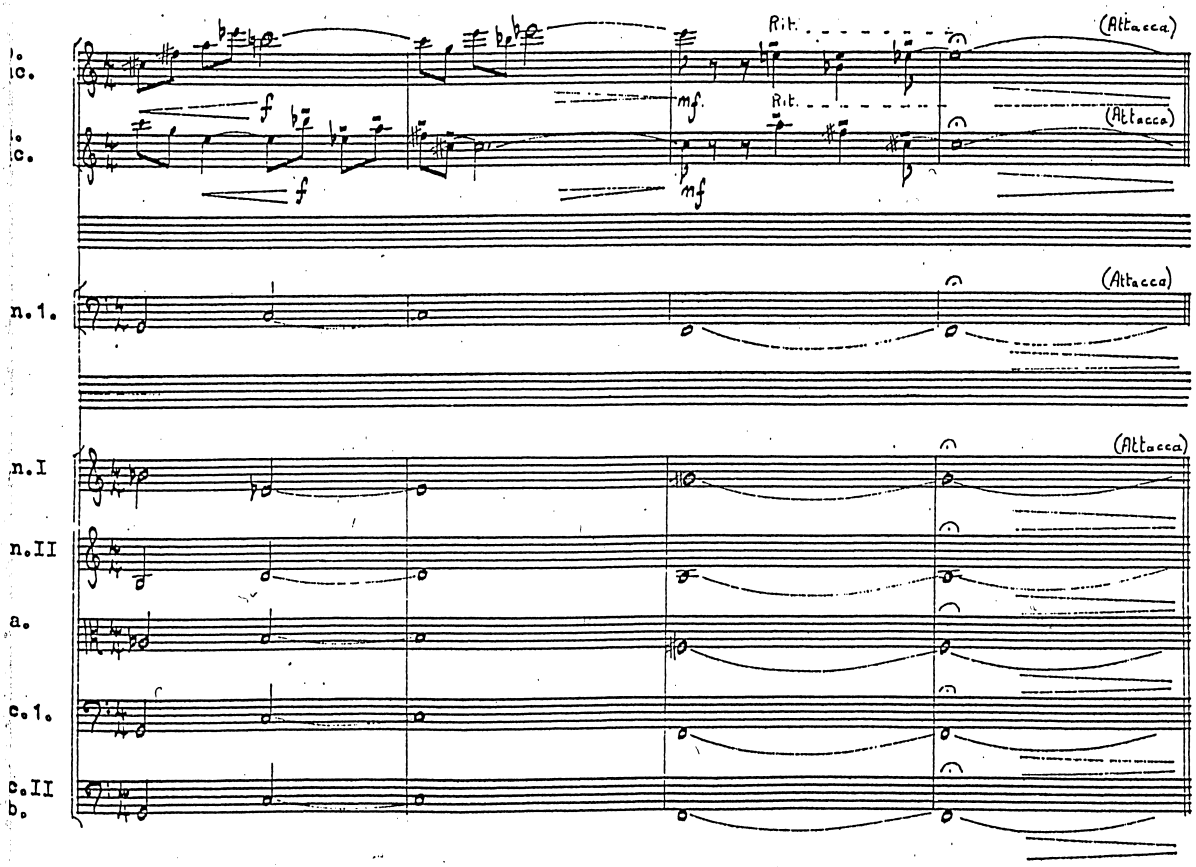



Vln.
Conc.
(f)
Bsn.1.
(f)
Vln.I
(mf)
Vln.II
(mf)
Vla.
(mf.)
Vc.I
(f)
Vc.II
Cb.
mf


B
Vib.
Conc.
Vln.
Conc.
mf
mp
mf
f
Bsn.1.
p
Vln.I
p
Vln.II
p
Vla.
p
Vc.I
p
Vc.II
Cb.
p


Rit.
Vib.
Conc.
Vln.
Conc.
Bsn.1.
Vln.I
Vln.II
Vla.
Vc. I
Vc.II
Cb.
C
A Tempo
A Tempo
A Tempo


mf
mf
mp
mp
mp
mp
mp
mp


f
f
mf
mf
Rit.
Rit.
(Attacca)
(Attacca)
(Attacca)
(Attacca)

II.

D

Adagio

Take yellow yarn mallets
Slow fan.

Vib. Conc.
Vln. Conc.
Bsn. 1.
Vln. I
Vln. II
Vla.
Vc. I
Vc. II Cb.

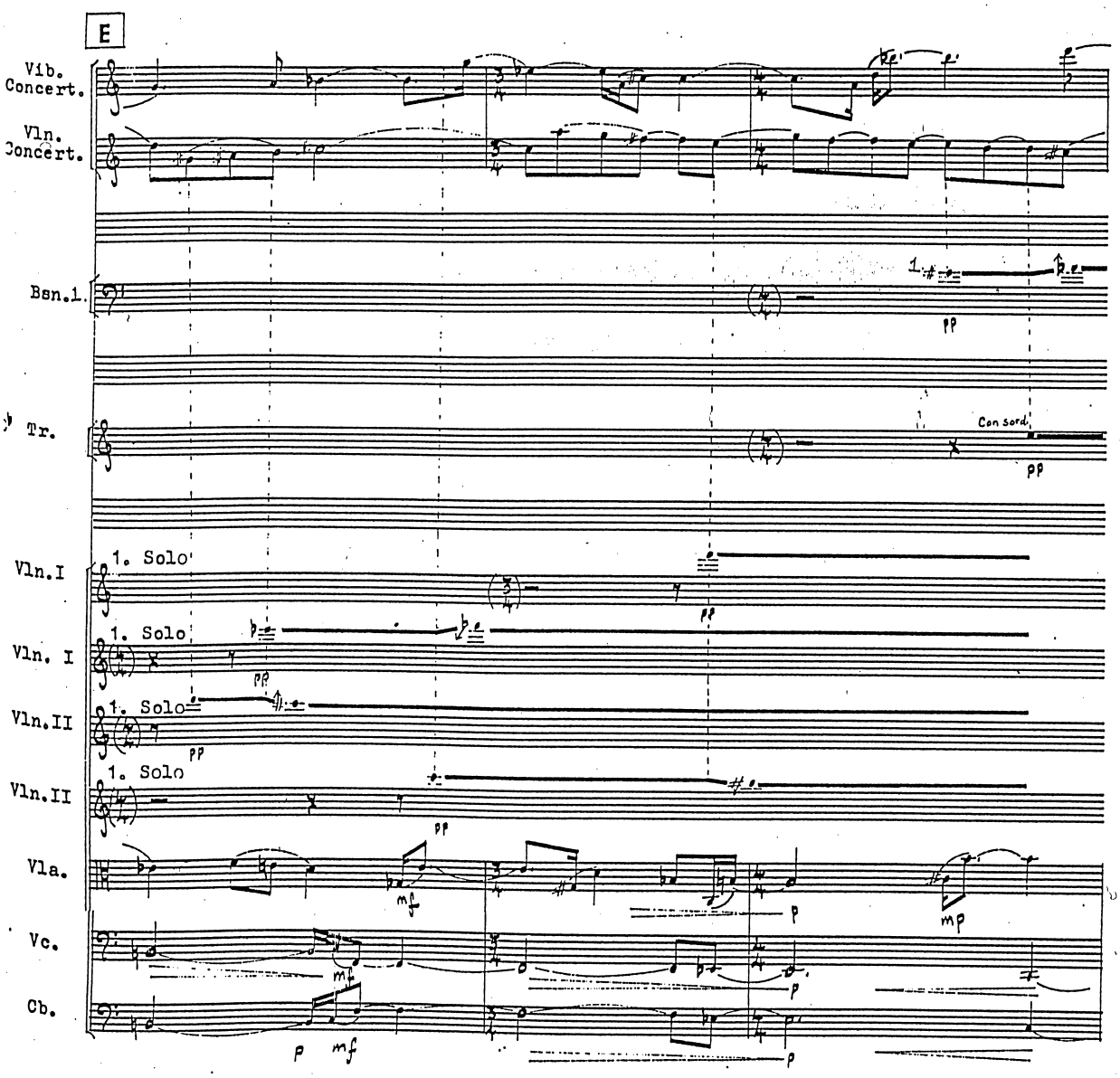
pp
espress.
mf Ped
mp

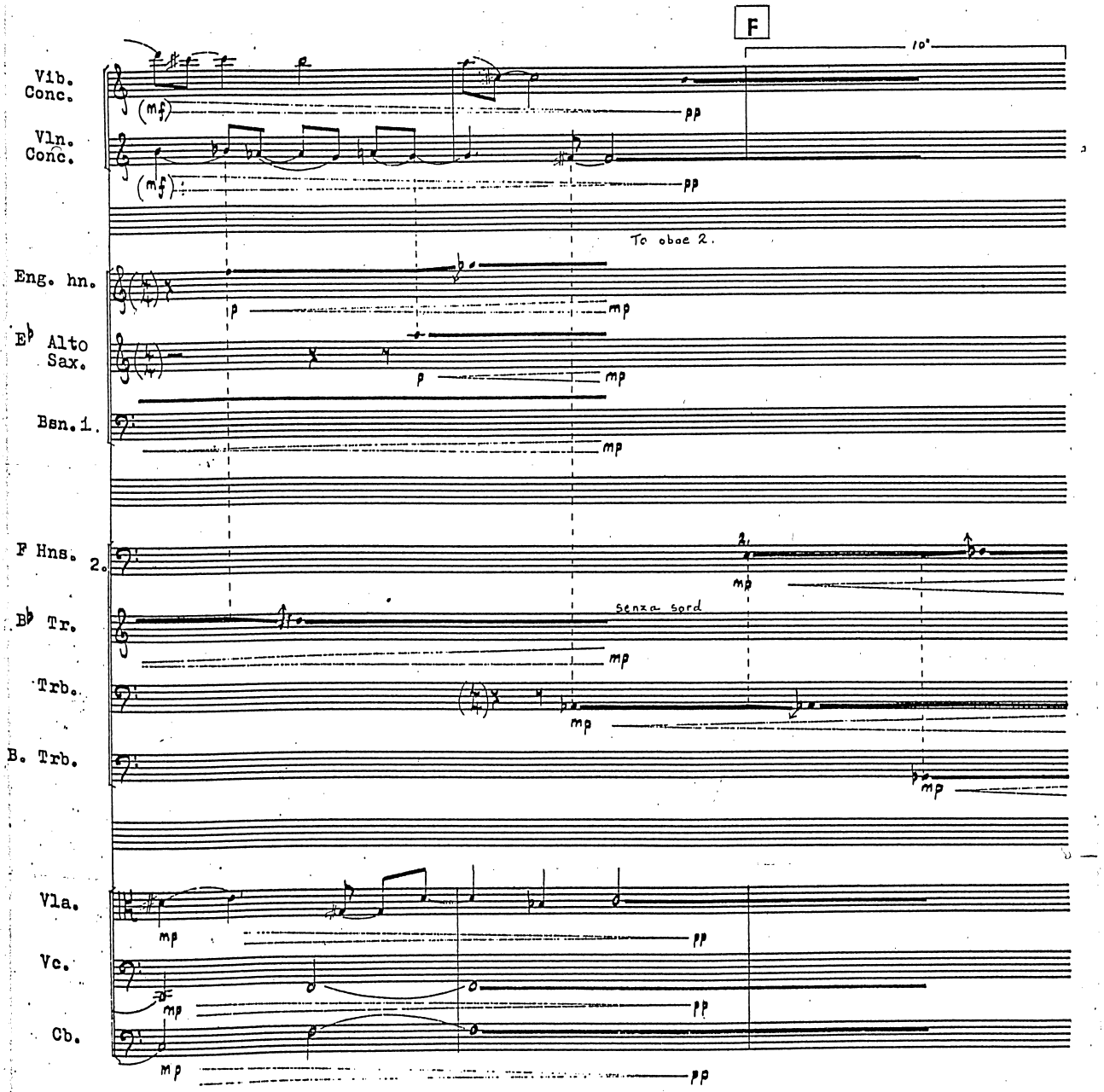
Vib. Conc.
Vln. Conc.
Vla.
Vc. Cb.

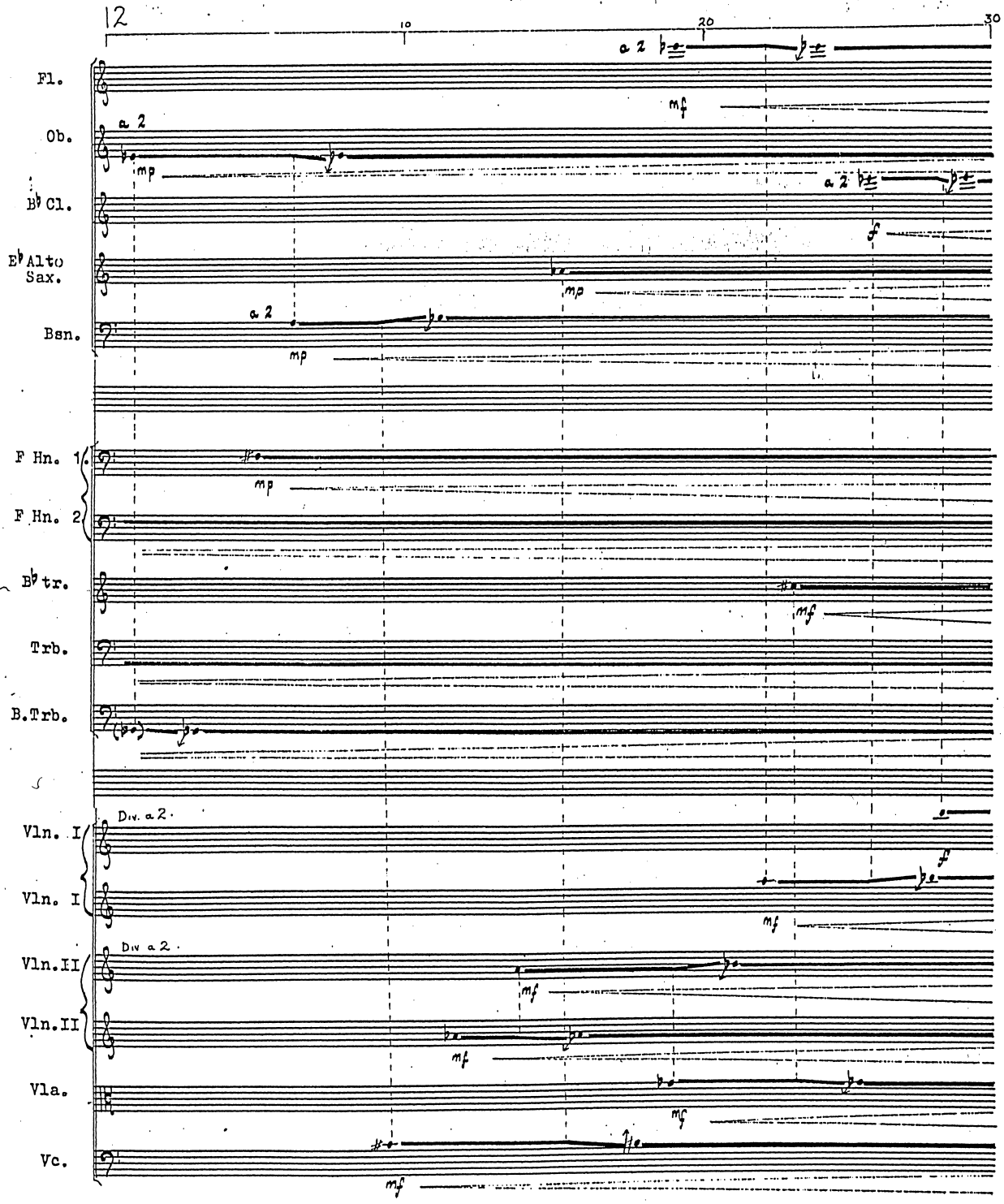
f
mp
mf

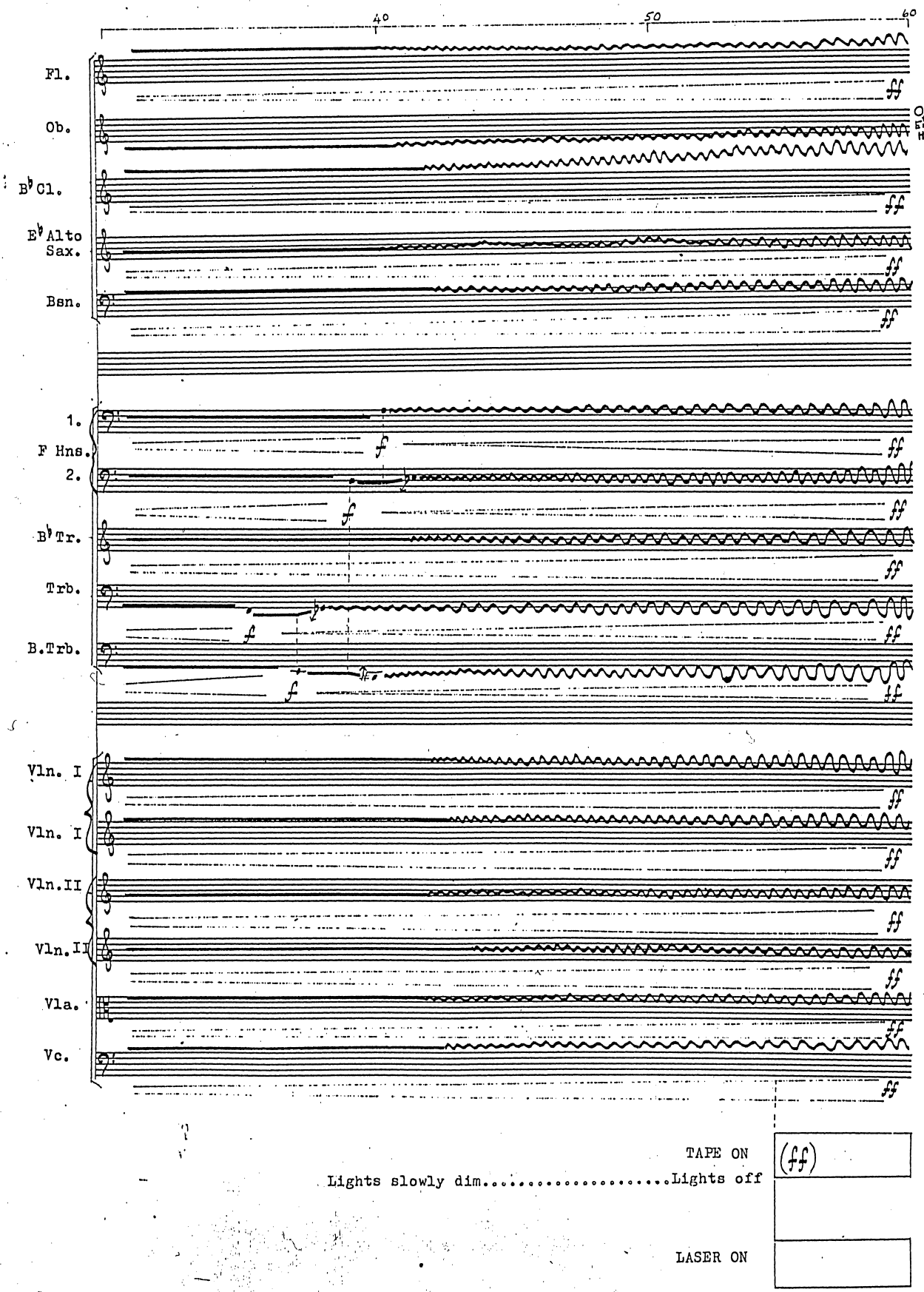
Vib. Conc.
Vln. Conc.
Vla.
Vc. Cb.

p


E
Vib. Concert.
Vln. Concert.
Bsn.1.
Tr.
Con sord.
Vln.I
1. Solo
Vln. I
1. Solo
Vln.II
1. Solo
Vln.II
1. Solo
Vla.
Vc.
Cb.
pp
mf
p
mp


F
10"
Vib. Conc.
Vln. Conc.
(mf)
pp
To oboe 2.
Eng. hn.
p
mp
E♭ Alto Sax.
Bsn. 1.
F Hns. 2.
2.
B♭ Tr.
senza sord
Trb.
B. Trb.
Vla.
Vc.
Cb.


12
10
20
30
Fl.
Ob.
B♭ Cl.
E♭ Alto Sax.
Bsn.
F Hn. 1
F Hn. 2
B♭ tr.
Trb.
B.Trb.
Vln. I
Vln. I
Vln. II
Vln. II
Vla.
Vc.
a 2
Div. a 2.
mp
mf
f


40
50
60
Fl.
Ob.
Ob 2 Vs Eng. Hn.
B♭ Cl.
E♭ Alto Sax.
Bsn.
1.
F Hns.
2.
B♭ Tr.
Trb.
B.Trb.
Vln. I
Vln. I
Vln.II
Vln.II
Vla.
Vc.
ff
f
TAPE ON
(ff)
Lights slowly dim.....Lights off
LASER ON

LASER BALLET No. 1

13

10 20 30

During this section, under cover of darkness, the stage should be set, as unobtrusively as possible, for the Violin, Viola, and Cello soloists who are to play in the next section (Weep for Infinity). As soon as the stage is set the soloists should enter as quietly as possible and be ready to play as soon as the lights come up. All personnel should attempt not to get in the way of the laser beam.

TAPE

LASER

40 50 60

TAPE

LASER

14

10 20 30

TAPE

LASER

40 50 60

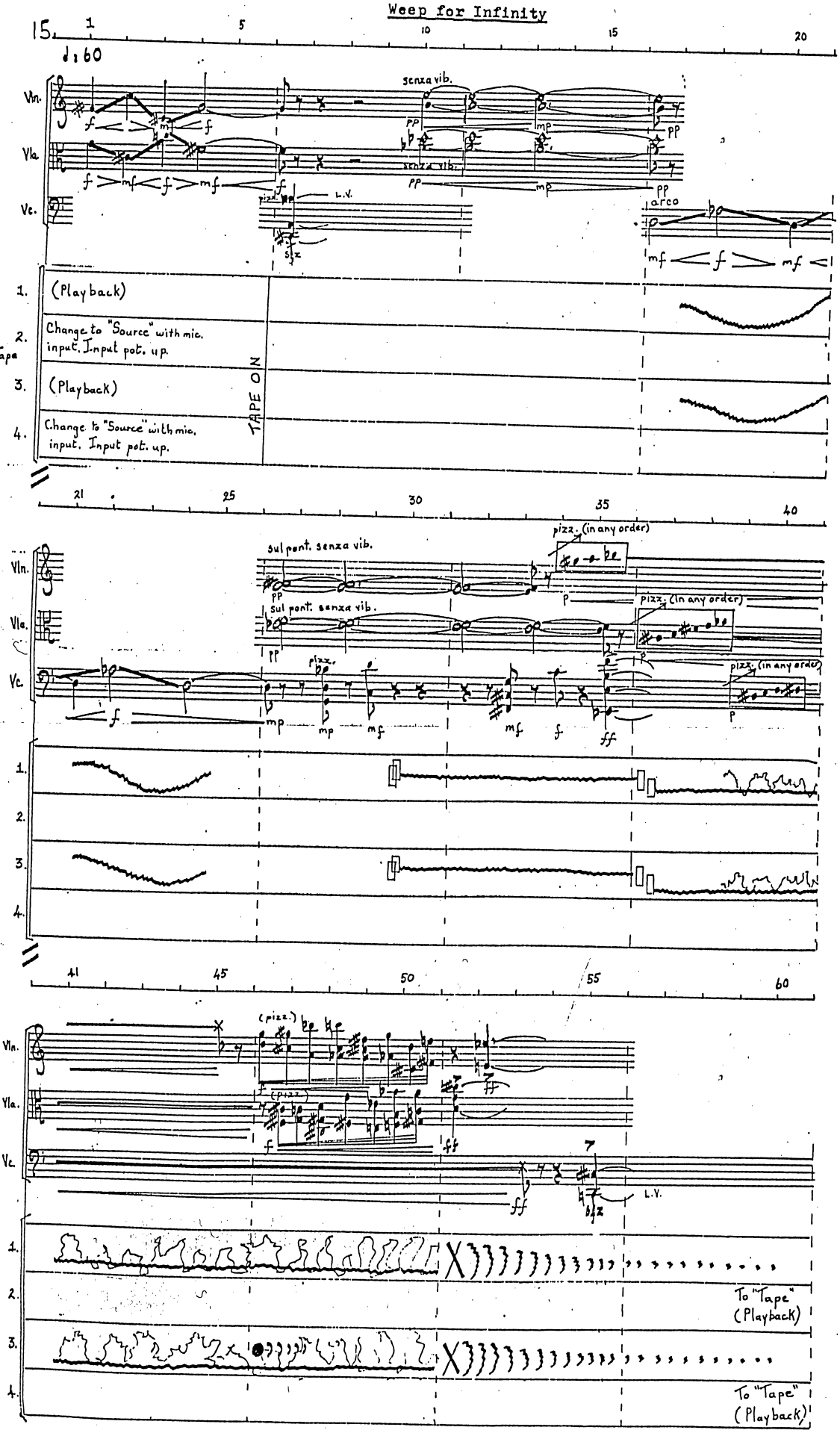
TAPE

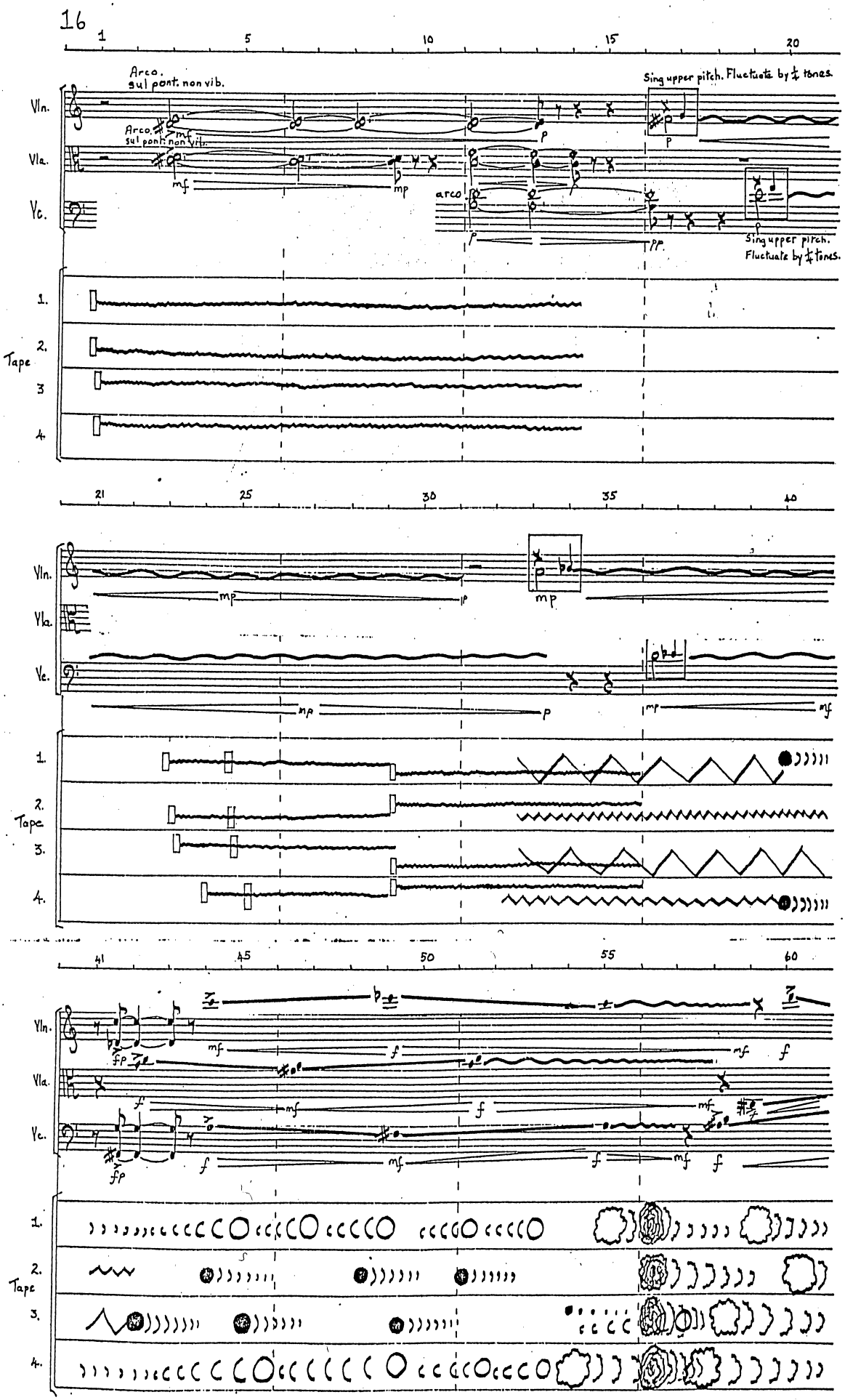
Tape on PAUSE (white leader)

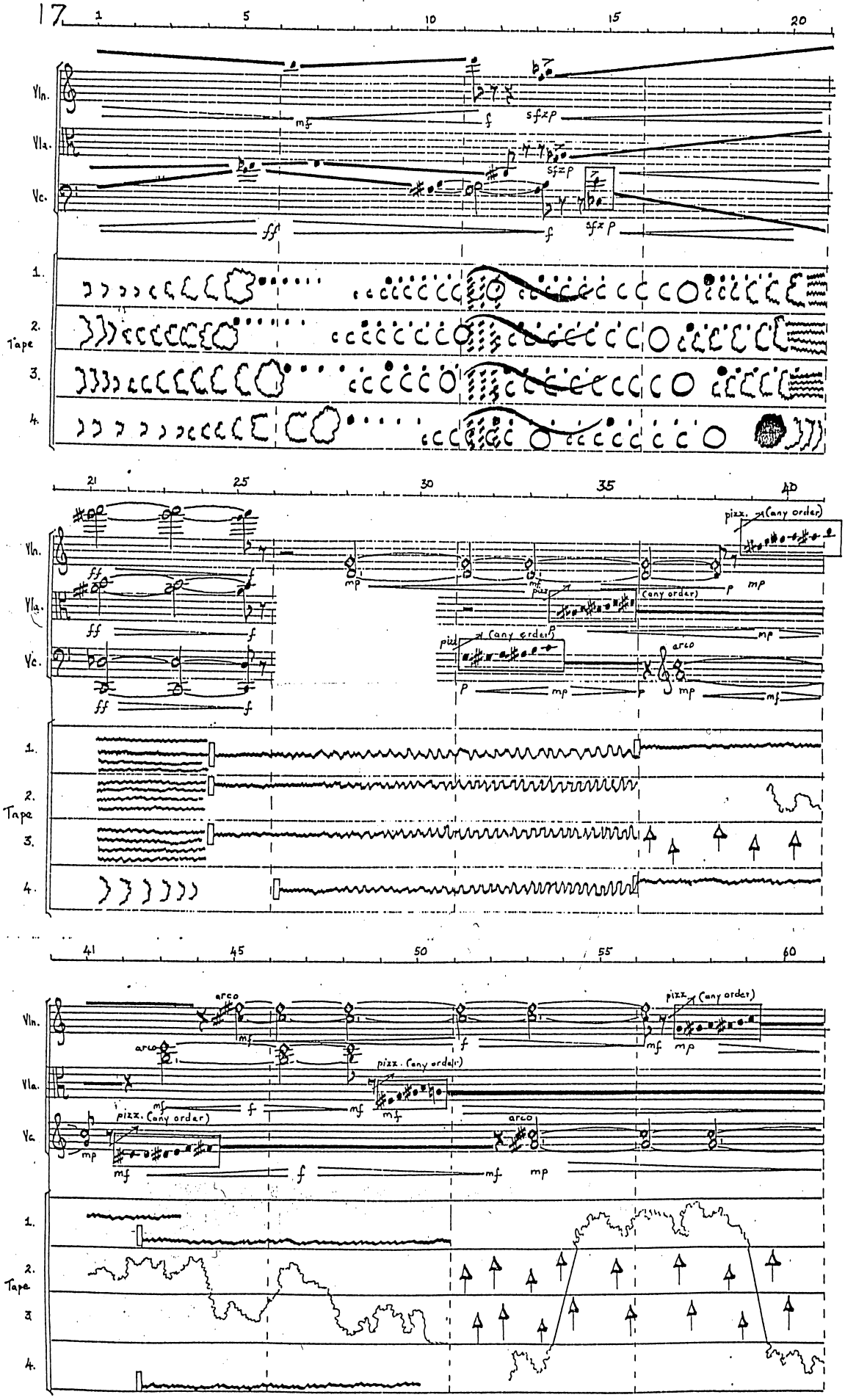
5 seconds of silence as lights come up for next section.

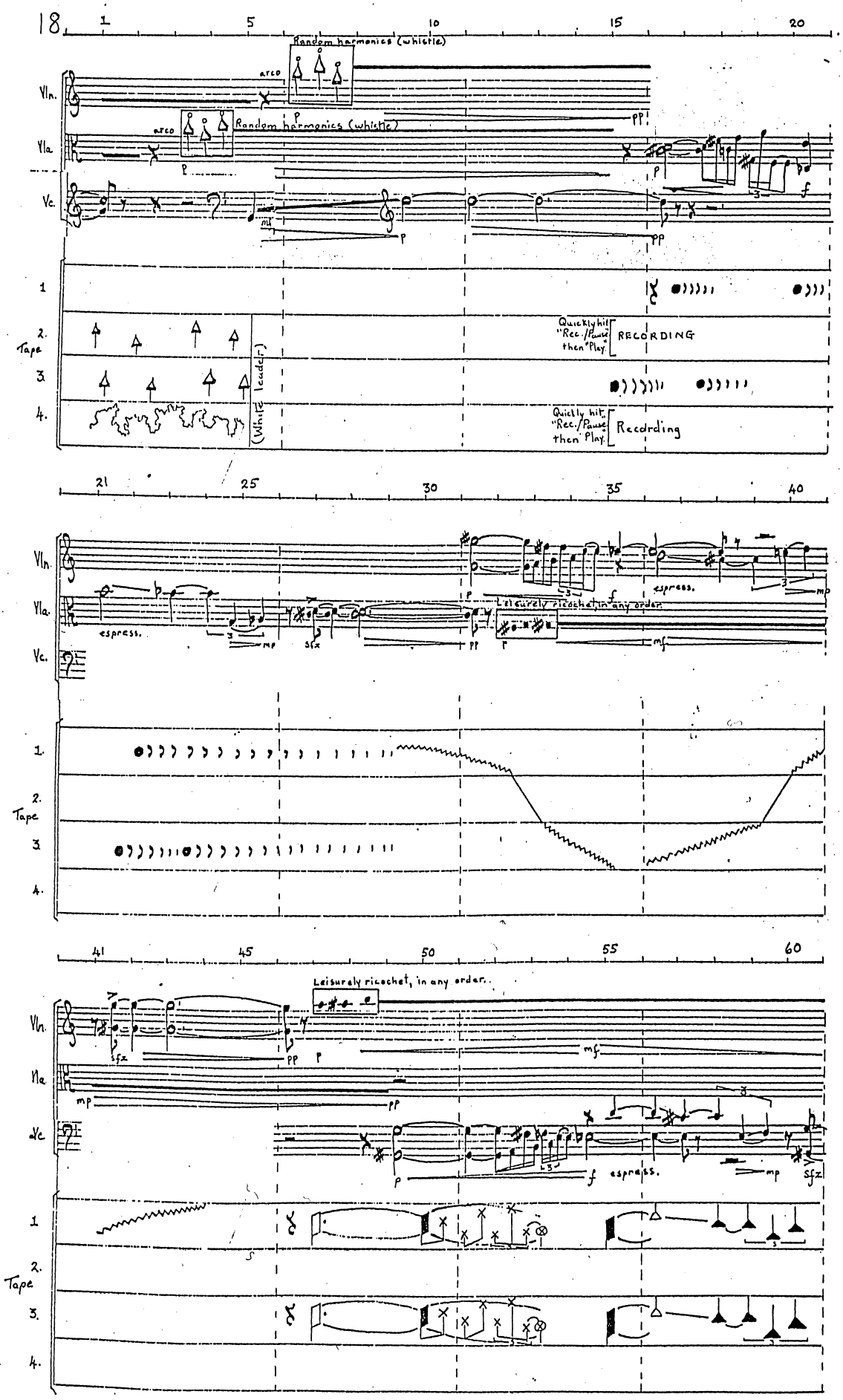
LASER

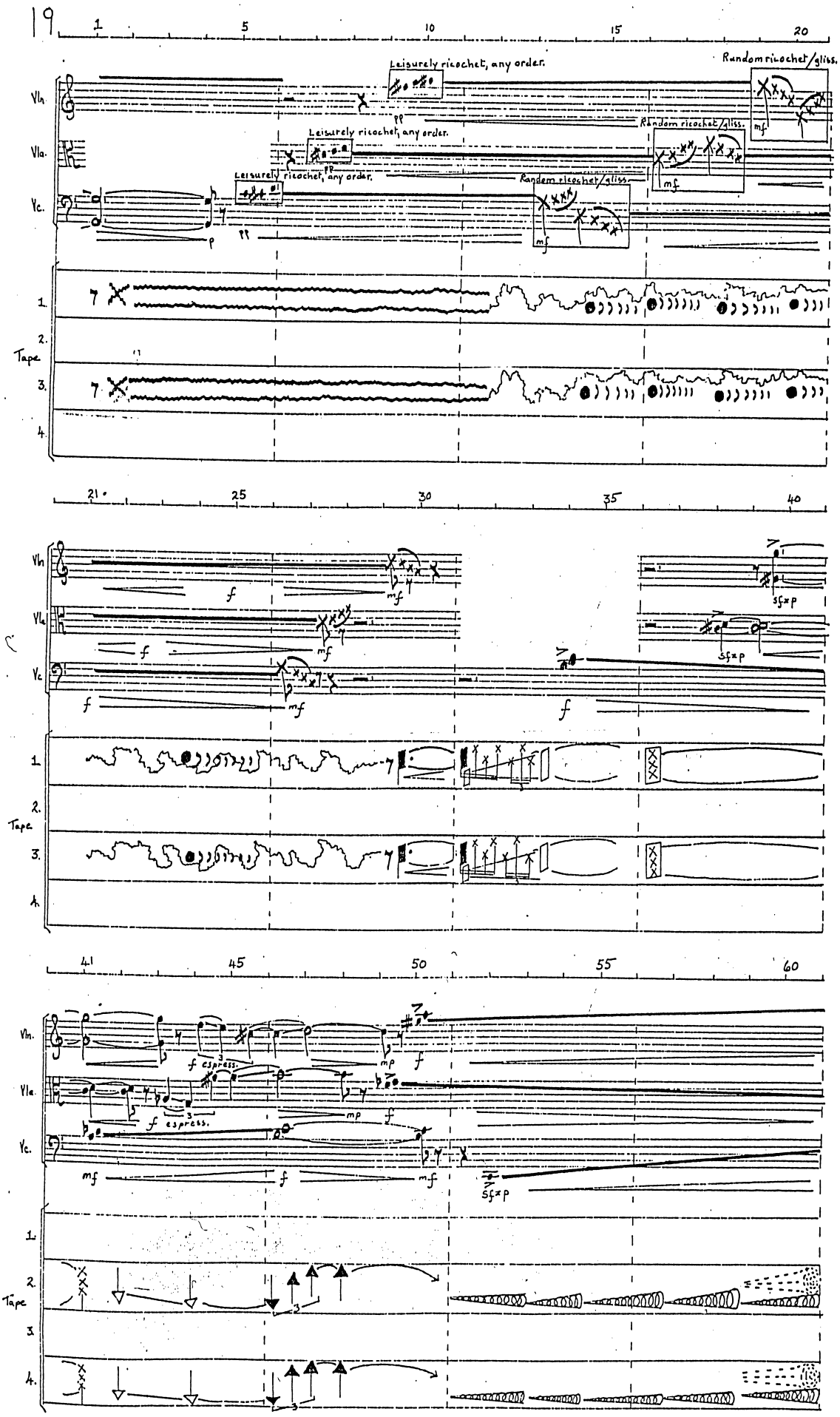
Weep for Infinity

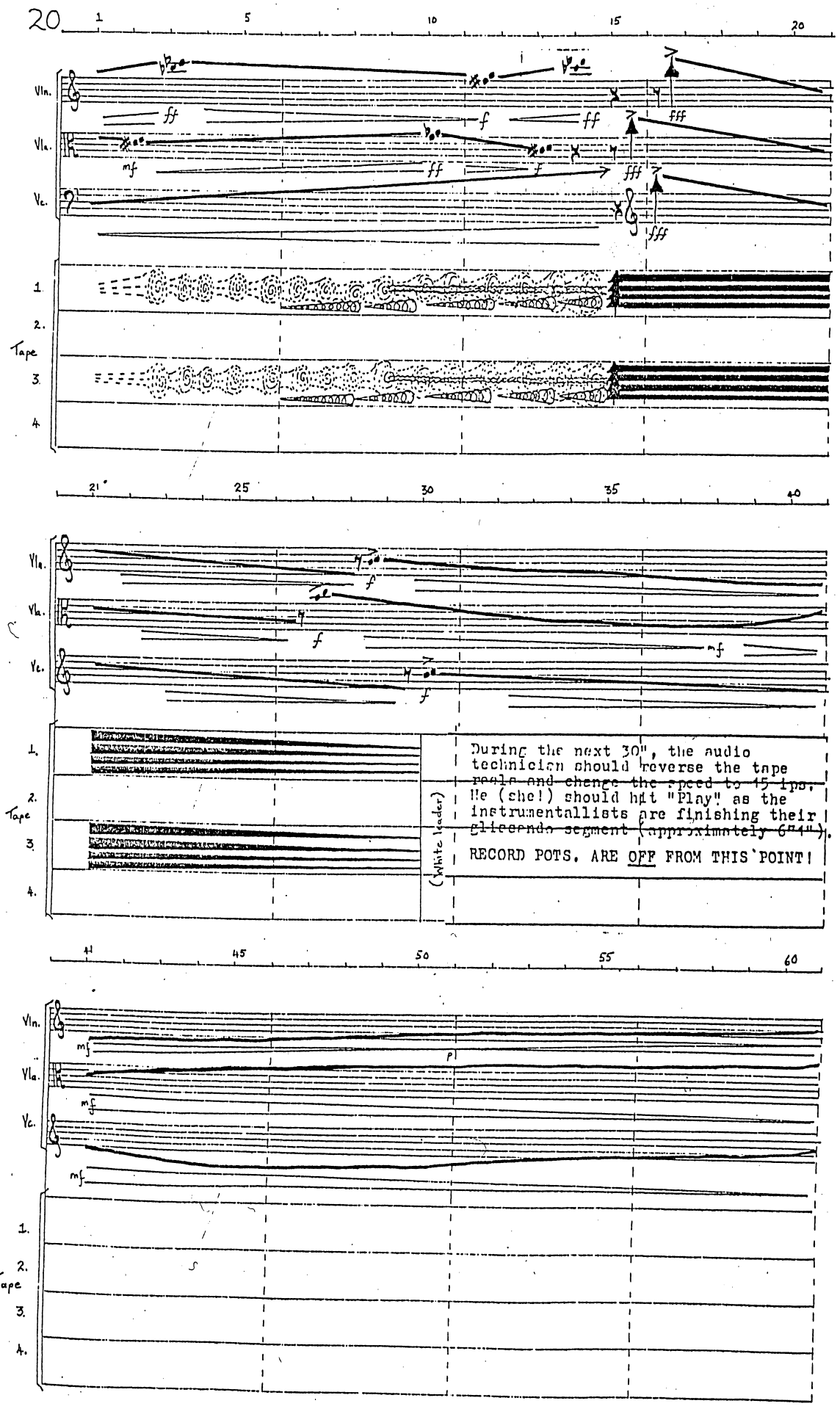



16
1
5
10
15
20
Arco.
sul pont. non vib.
Sing upper pitch. Fluctuate by ± tones.
Vln.
Vla.
Vc.
Arco.
sul pont. non vib.
arco
Sing upper pitch.
Fluctuate by ± tones.
Tape
1.
2.
3
4.
21
25
30
35
40
Vln.
Vla.
Vc.
Tape
1.
2.
3.
4.
41
45
50
55
60
Vln.
Vla.
Vc.
Tape
1.
2.
3.
4.


17
1
5
10
15
20
Vln.
Vla.
Vc.
mf
f
sfzp
sfzp
sfzp
fff
f
1.
2.
Tape
3.
4.
21
25
30
35
40
pizz. (any order)
ff
f
mp
mf
p
arco
41
45
50
55
60
arco
pizz. (any order)

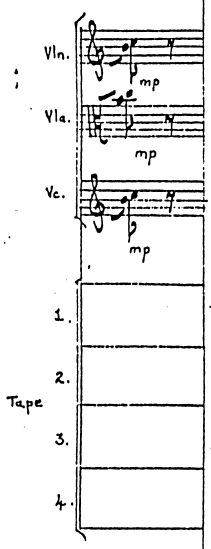

18
Random harmonics (whistle)
arco
Vln.
Vla.
Vc.
Random harmonics (whistle)
Tape
(White leader)
Quickly hit "Rec./Pause" then "Play"
RECORDING
Quickly hit "Rec./Pause" then "Play"
Recording
espress.
Leisurely ricochet, in any order.
Leisurely ricochet, in any order.
espress.


19
Leisurely ricochet, any order.
Random ricochet/gliss.
Vln.
Vla.
Vc.
Tape
f espress.
sf≠p


20
1
5
10
15
20
Vln.
Vla.
Vc.
ff
f
fff
mf
1.
2.
Tape
3.
4
21
25
30
35
40
During the next 30", the audio technician should reverse the tape reels and change the speed to 15 ips. He (she!) should hit "Play" as the instrumentallists are finishing their glissendo segment (approximately 6"-4").
(White leader)
RECORD POTS. ARE OFF FROM THIS POINT!
41
45
50
55
60
p

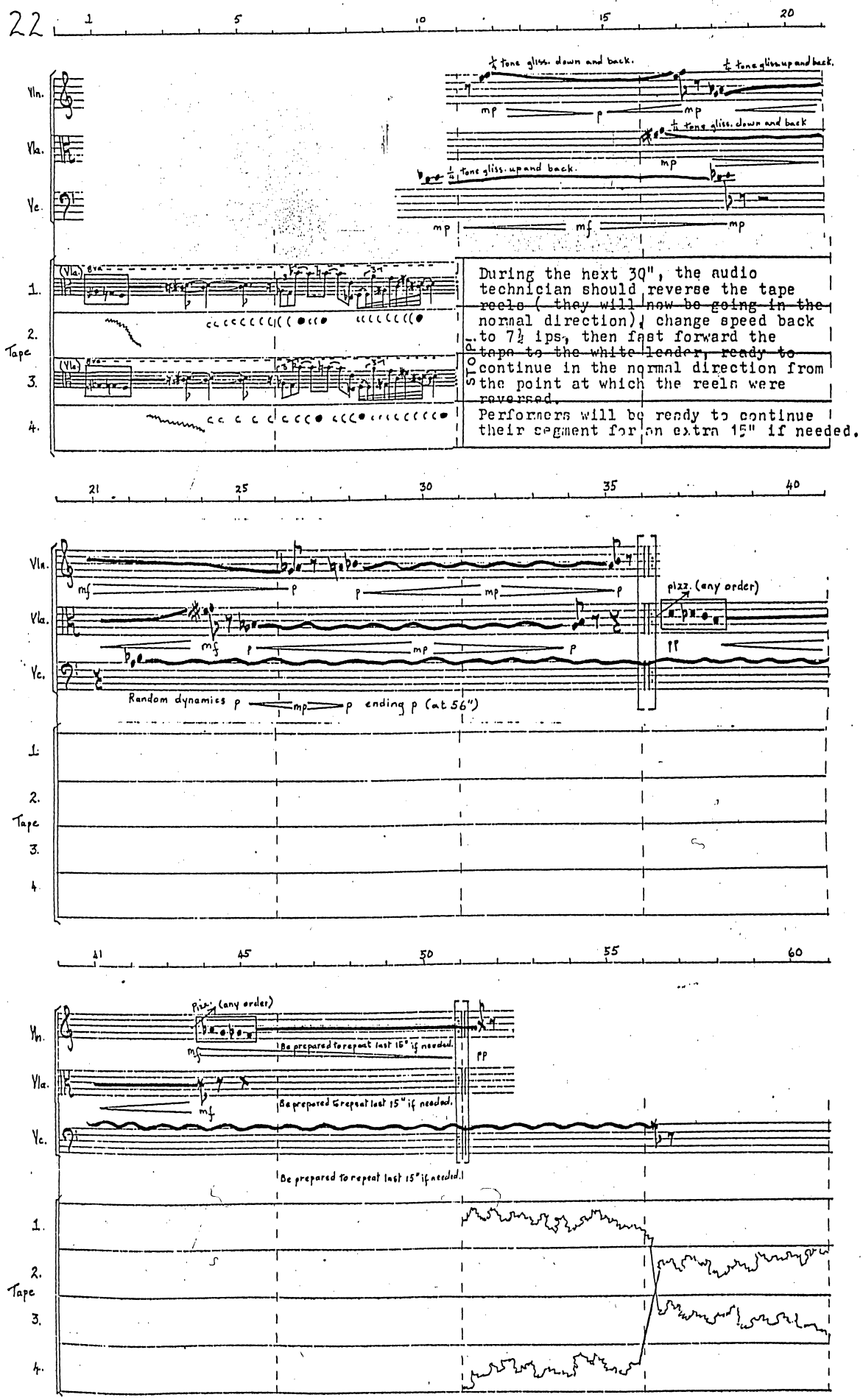
60"

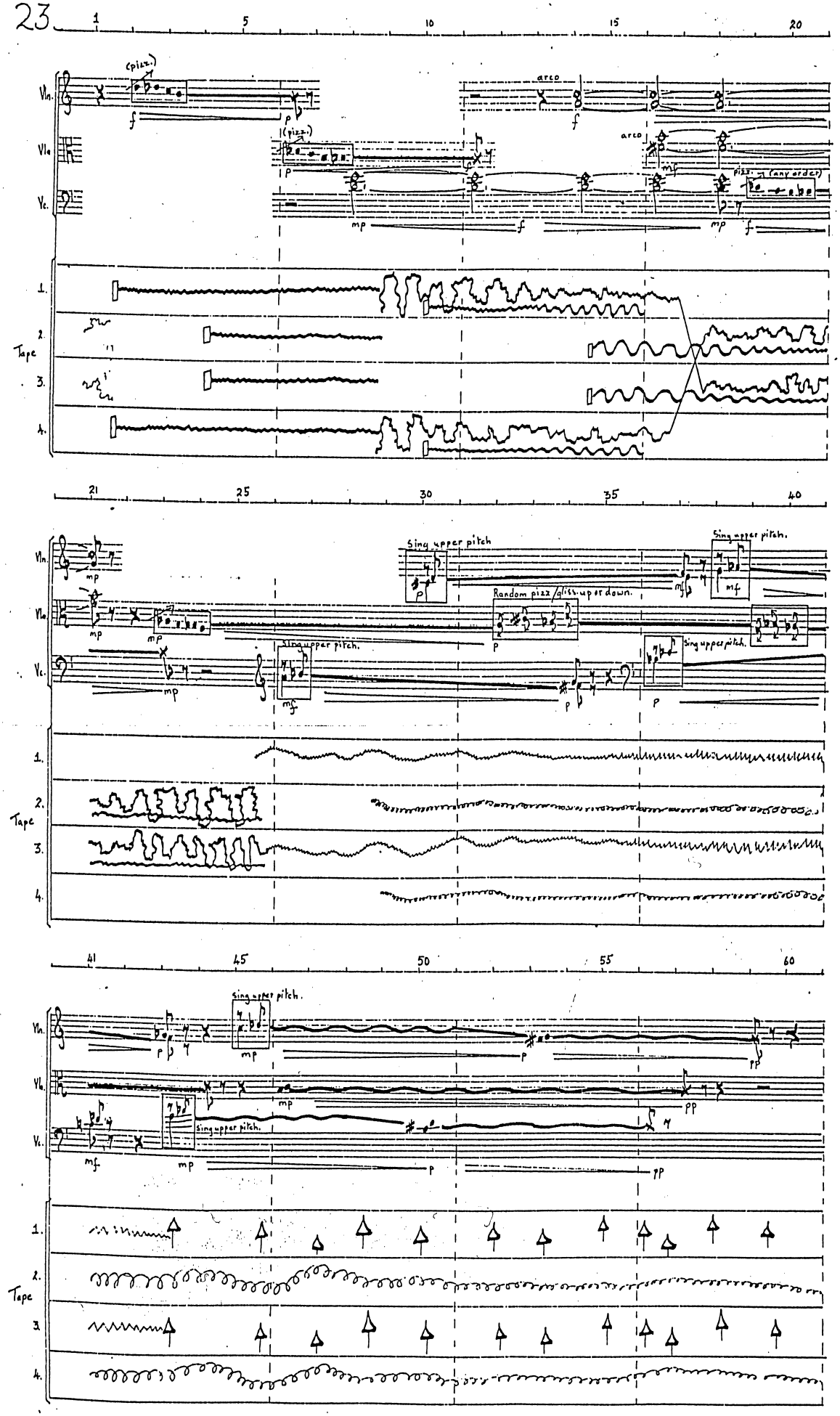
21

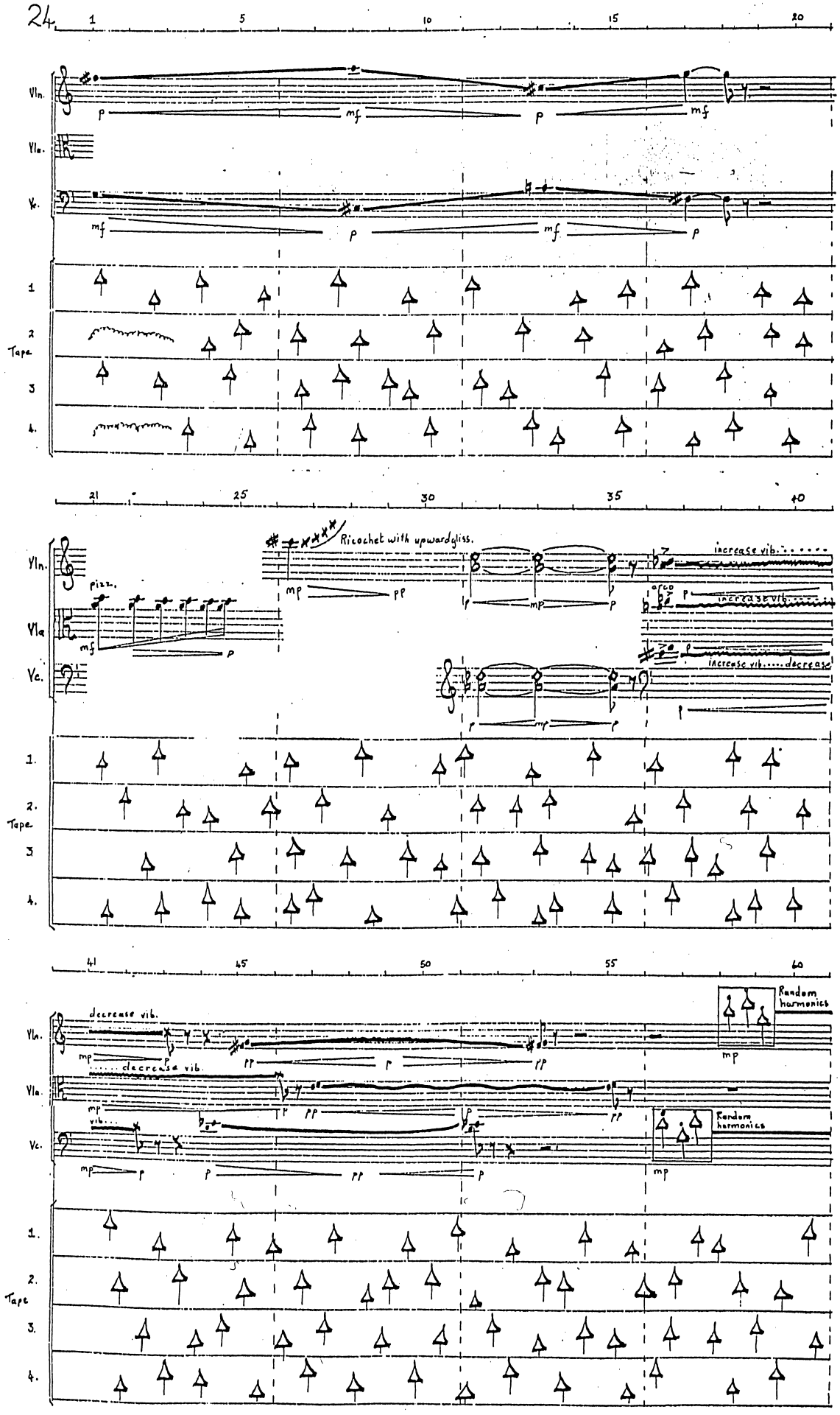


For the next 70 seconds the tape presents a retrograde version of the fugue section (from 16'16"), at 15 ips. Instruments are tacet during this section. The final 10" of the tape tracks are indicated on the following page as a cue for the instrumentalists.

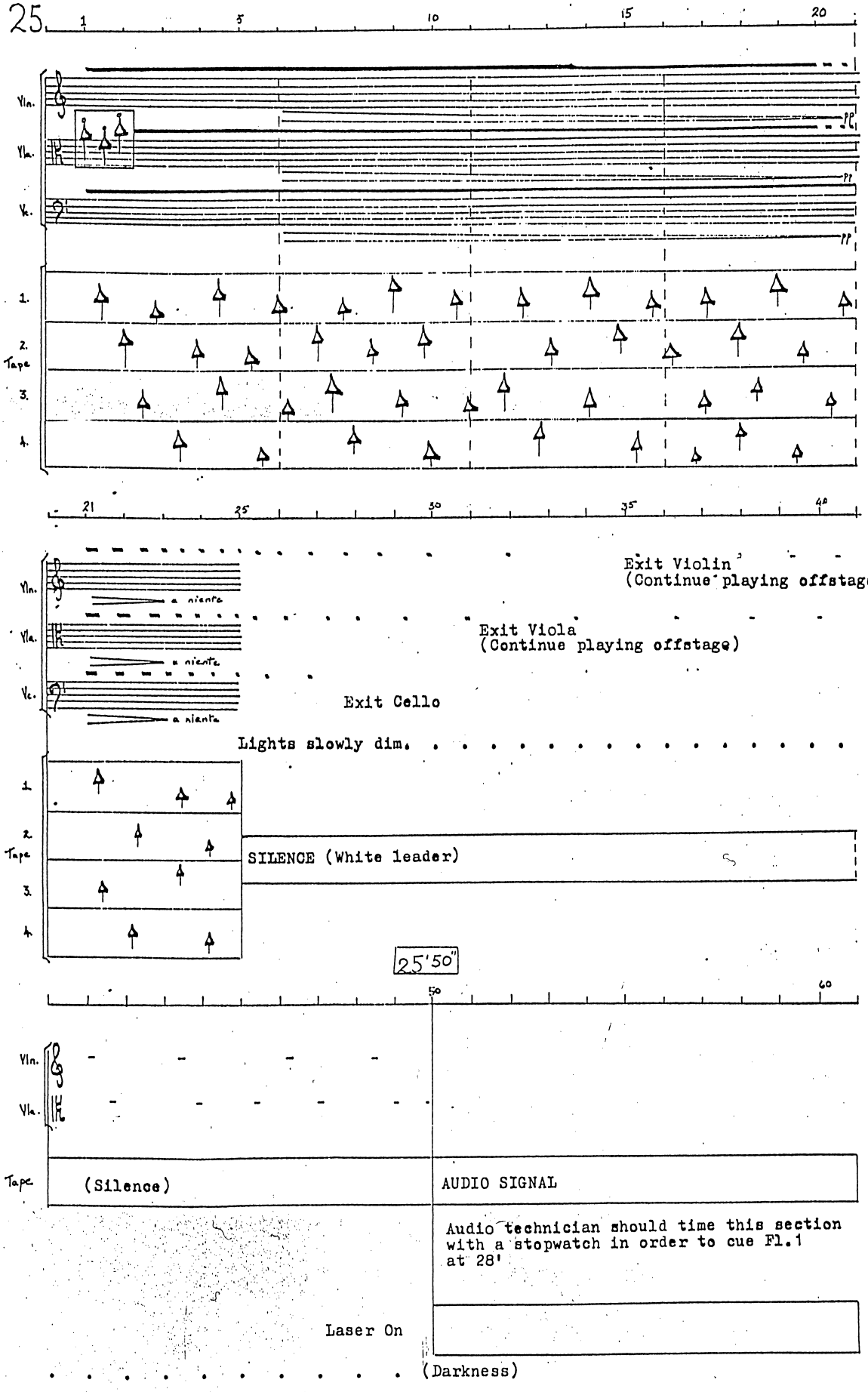
60"


22
1
5
10
15
20
Vln.
Vla.
Vc.
¼ tone gliss. down and back.
¼ tone gliss up and back.
mp
p
mf
1.
2.
Tape
3.
4.
(Vla)
8va
During the next 30", the audio technician should reverse the tape reels (they will now be going in the normal direction), change speed back to 7½ ips, then fast forward the tape to the white leader, ready to continue in the normal direction from the point at which the reels were reversed.
Performers will be ready to continue their segment for an extra 15" if needed.
21
25
30
35
40
pizz. (any order)
Random dynamics p mp p ending p (at 56")
41
45
50
55
60
Be prepared to repeat last 15" if needed.
ff

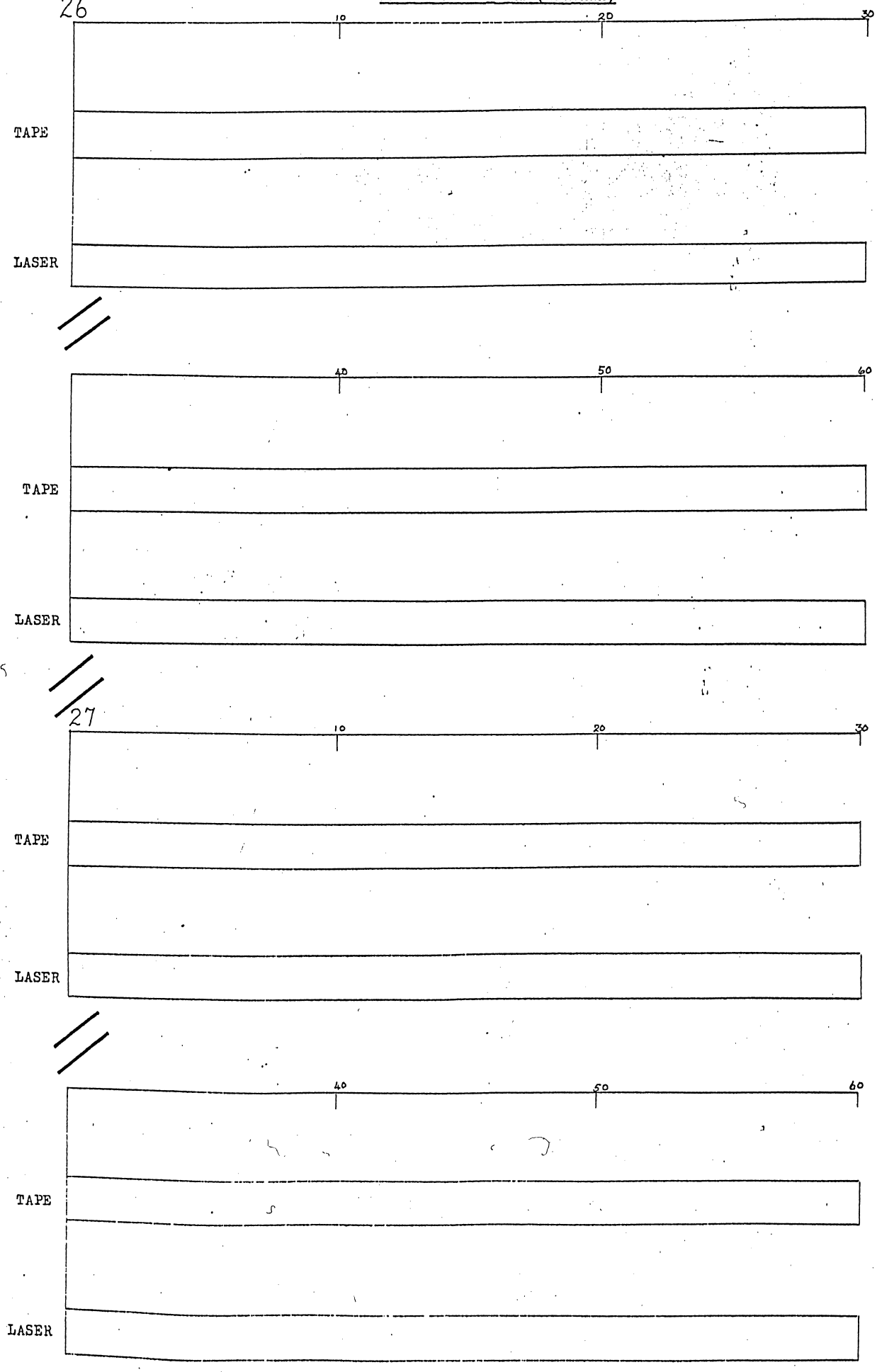

23
1
5
10
15
20
Vln.
Vla.
Vc.
(pizz.)
arco
pizz. in (any order)
Tape
1.
2.
3.
4.
21
25
30
35
40
Sing upper pitch.
Random pizz./gliss. up or down.
41
45
50
55
60

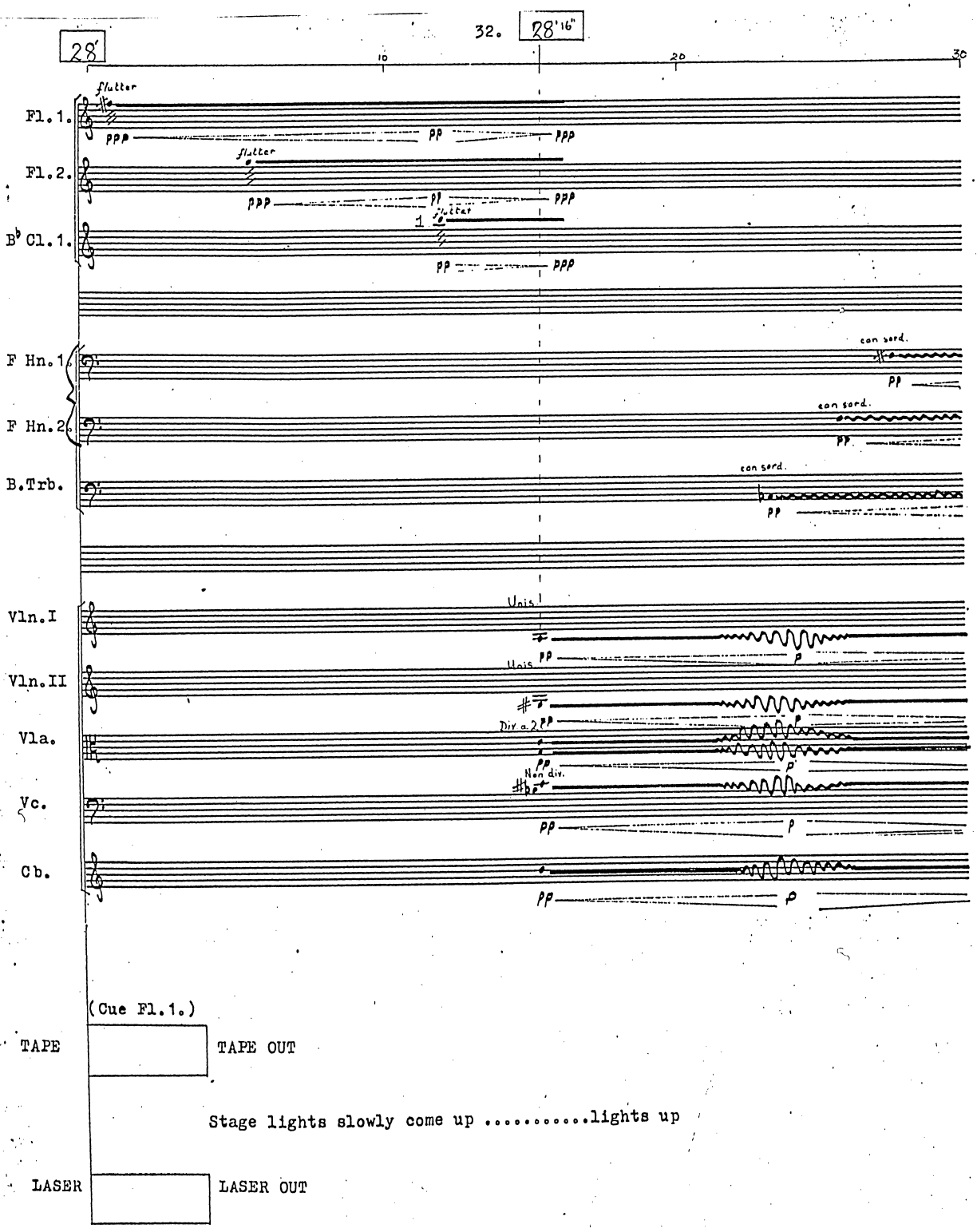

24
1
5
10
15
20
Vln.
Vla.
Vc.
mf
p
1
2
Tape
3
4.
21
25
30
35
40
pizz.
Ricochet with upward gliss.
mp
pp
increase vib.
arco
increase vib.....decrease
41
45
50
55
60
decrease vib.
Random harmonics
mp
pp

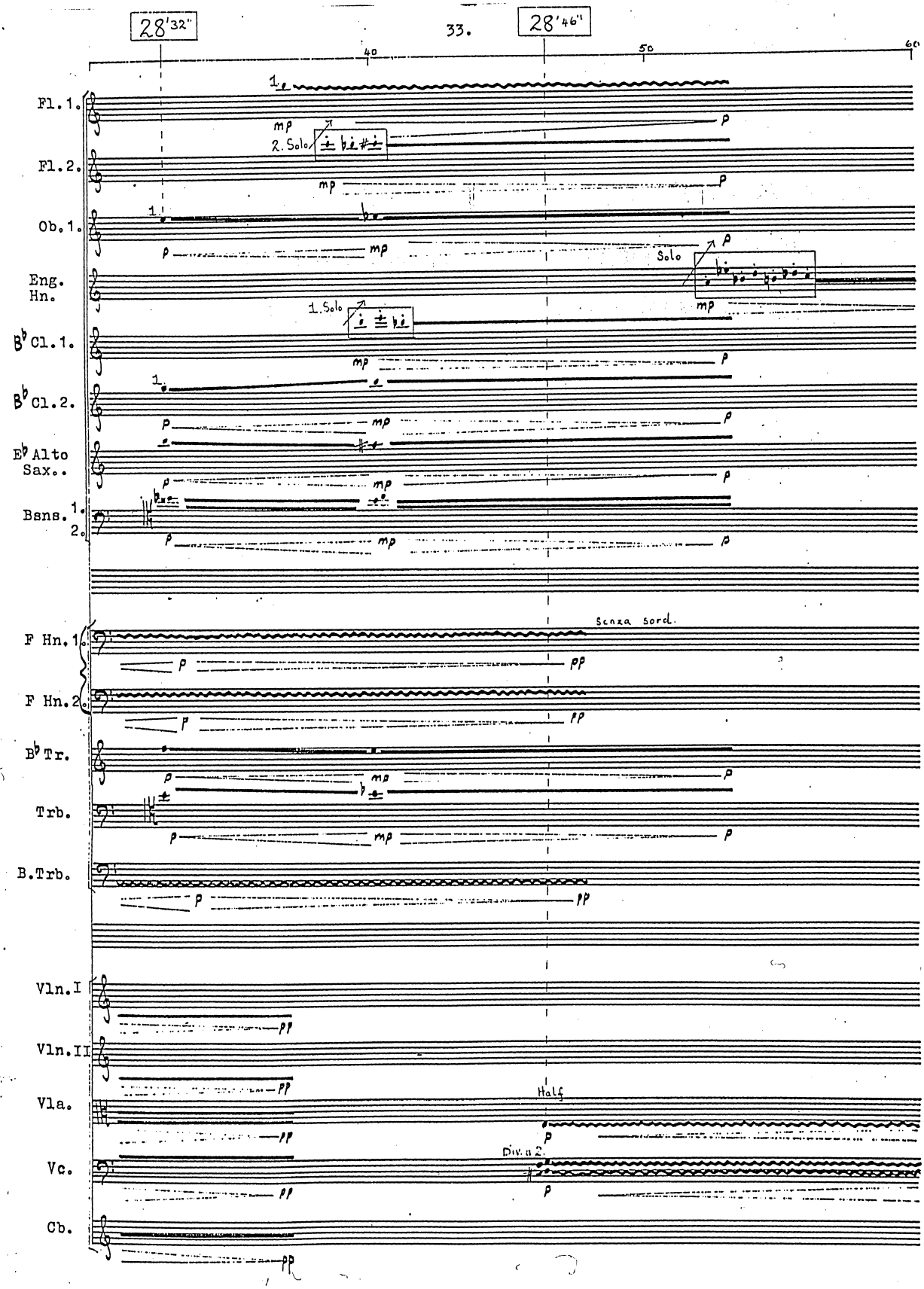
25

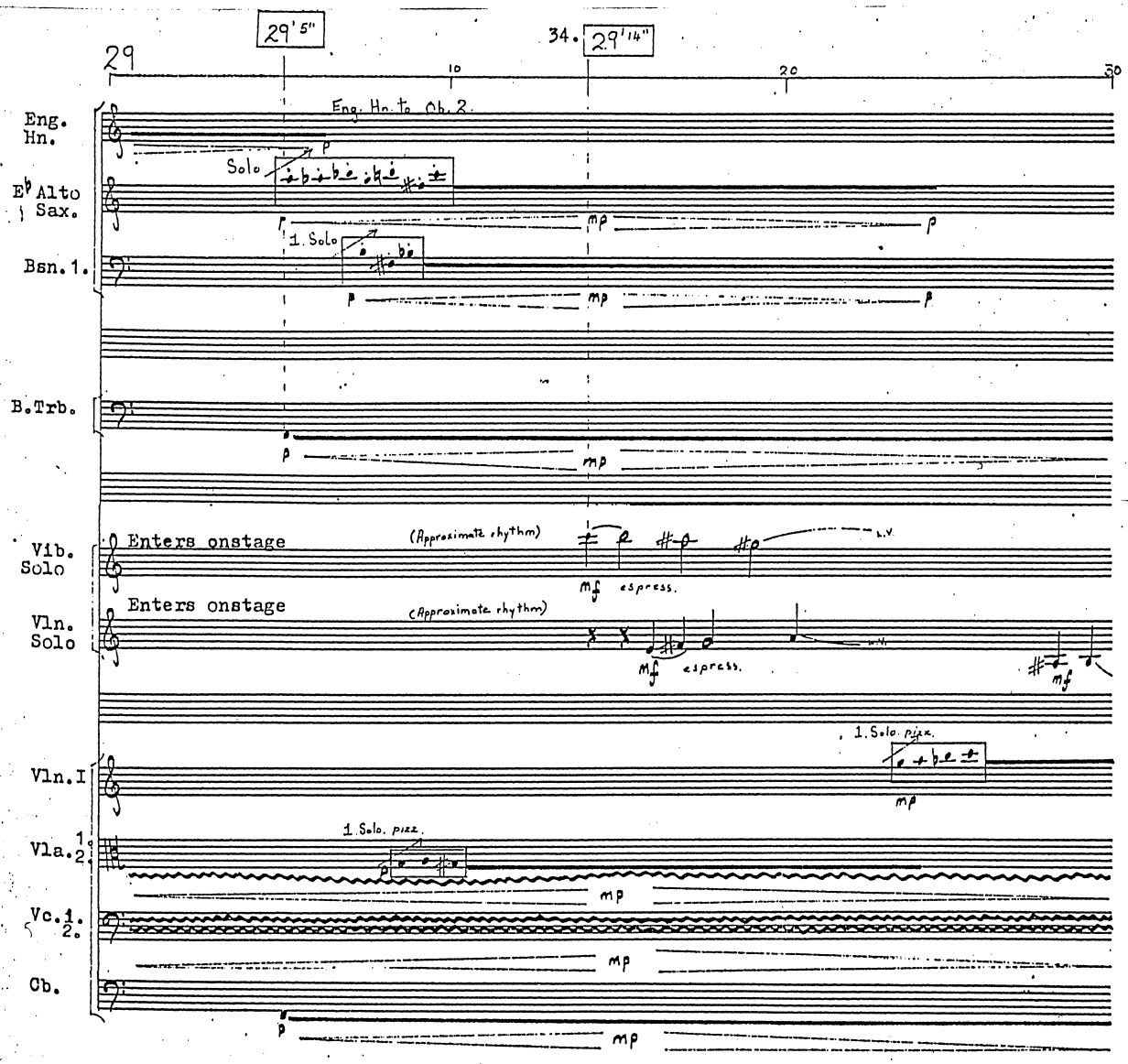

1
5
10
15
20
Vln.
Vla.
Vc.
pp
p
1.
2.
Tape
3.
4.
21
25
30
35
40
a niente
Exit Violin
(Continue playing offstage)
Exit Viola
(Continue playing offstage)
Exit Cello
Lights slowly dim.
SILENCE (White leader)
25'50"
50
60
(Silence)
AUDIO SIGNAL
Audio technician should time this section with a stopwatch in order to cue Fl.1 at 28'
Laser On
(Darkness)

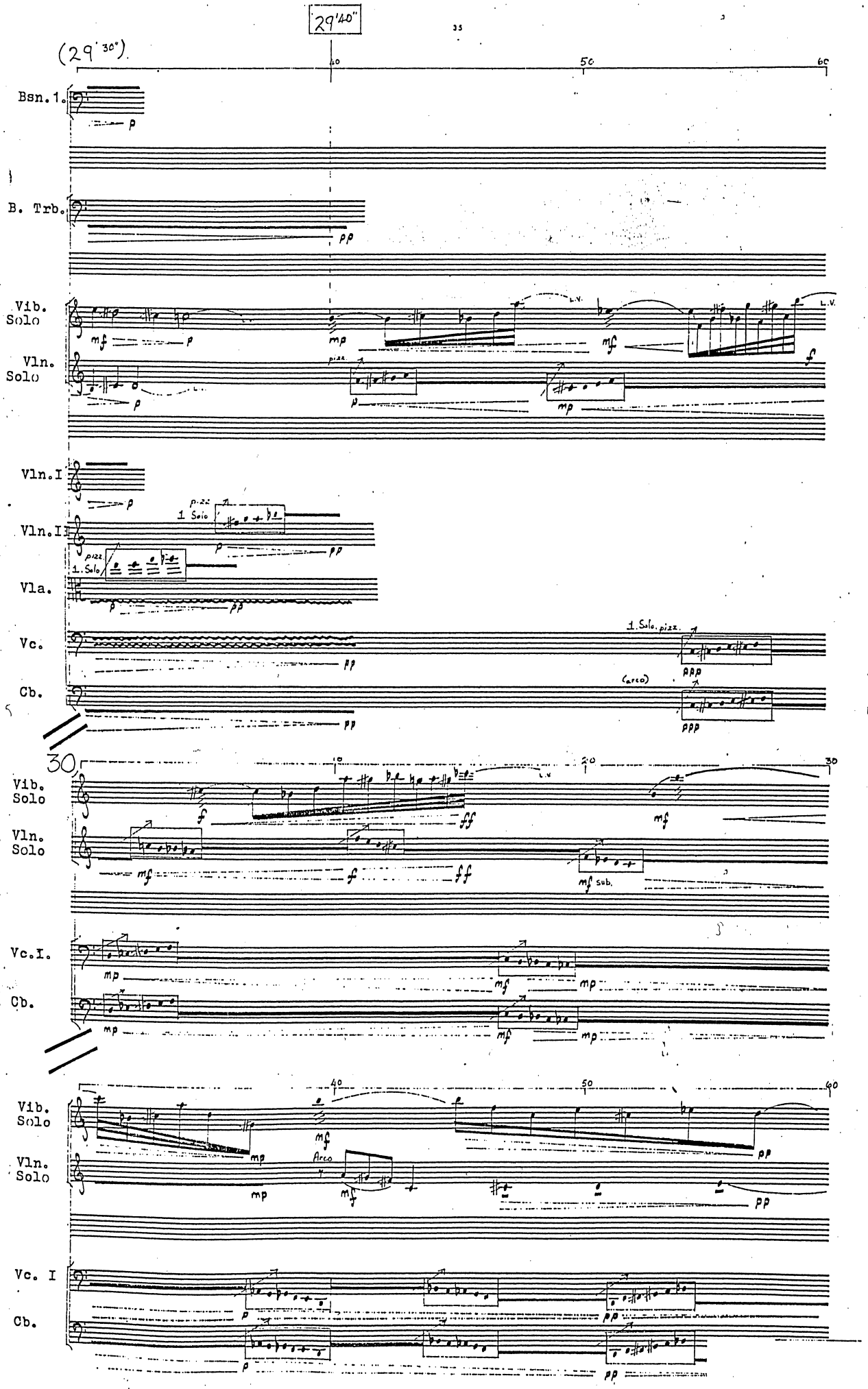
LASER BALLET No.2 (NIRVANA)




28'
28'16"
10
20
30
Fl.1.
Fl.2.
B♭ Cl.1.
F Hn.1
F Hn.2
B.Trb.
Vln.I
Vln.II
Vla.
Vc.
Cb.
flutter
ppp
pp
con sord.
Unis.
Div a 2
Non div.
(Cue Fl.1.)
TAPE
TAPE OUT
Stage lights slowly come up .....lights up
LASER
LASER OUT


28'32"
28'46"
40
50
60
Fl.1.
Fl.2.
Ob.1.
Eng. Hn.
B♭ Cl.1.
B♭ Cl.2.
E♭ Alto Sax..
Bsns. 1.
2.
F Hn.1.
F Hn.2.
B♭ Tr.
Trb.
B.Trb.
Vln.I
Vln.II
Vla.
Vc.
Cb.
2. Solo
1. Solo
Solo
Senza sord.
Half
Div. a 2


29
29'5"
34.
29'14"
10
20
30
Eng. Hn.
Eng. Hn. to Ob. 2.
Solo
E♭ Alto Sax.
1. Solo
Bsn. 1.
B.Trb.
Vib. Solo
Enters onstage
(Approximate rhythm)
l.v.
mf espress.
Vln. Solo
Enters onstage
(Approximate rhythm)
l.v.
mf espress.
mf
1. Solo. pizz.
Vln. I
mp
1. Solo. pizz.
Vla. 1 2
mp
Vc. 1 2
mp
Cb.
mp


29'40"
(29'30")
40
50
60
Bsn. 1.
B. Trb.
Vib. Solo
Vln. Solo
L.V.
Vln. I
Vln. II
1. Solo
pizz.
Vla.
Vc.
Cb.
1. Solo. pizz.
(arco)
30
10
20
30
Vc. I.
Vc. I
mf sub.
Arco

51"

31

Female dancer goes to vib., takes mallets.
She plays random pitches in approximate range indicated.

Violin soloist unobtrusively changes her violin for another, tuned scordatura:-

Hands it to male dancer.

Vib. Solo

Vln. Solo

Fl.1. 1. Solo

Vc.

Cb.

Vib.Solo (Dancer)

Take cluster mallets

32

Random clusters

(High black notes)

Watch conductor, follow his beat.

(Low white notes)

32'30"

"Gavotte"

Vib.Solo (Dancer)

Vln.Solo (Dancer)

(Original soloists dance)

Fl.

1. Solo.

Fl.2 to picc.

Vln.I

Vln.II

Vla.

Vc.

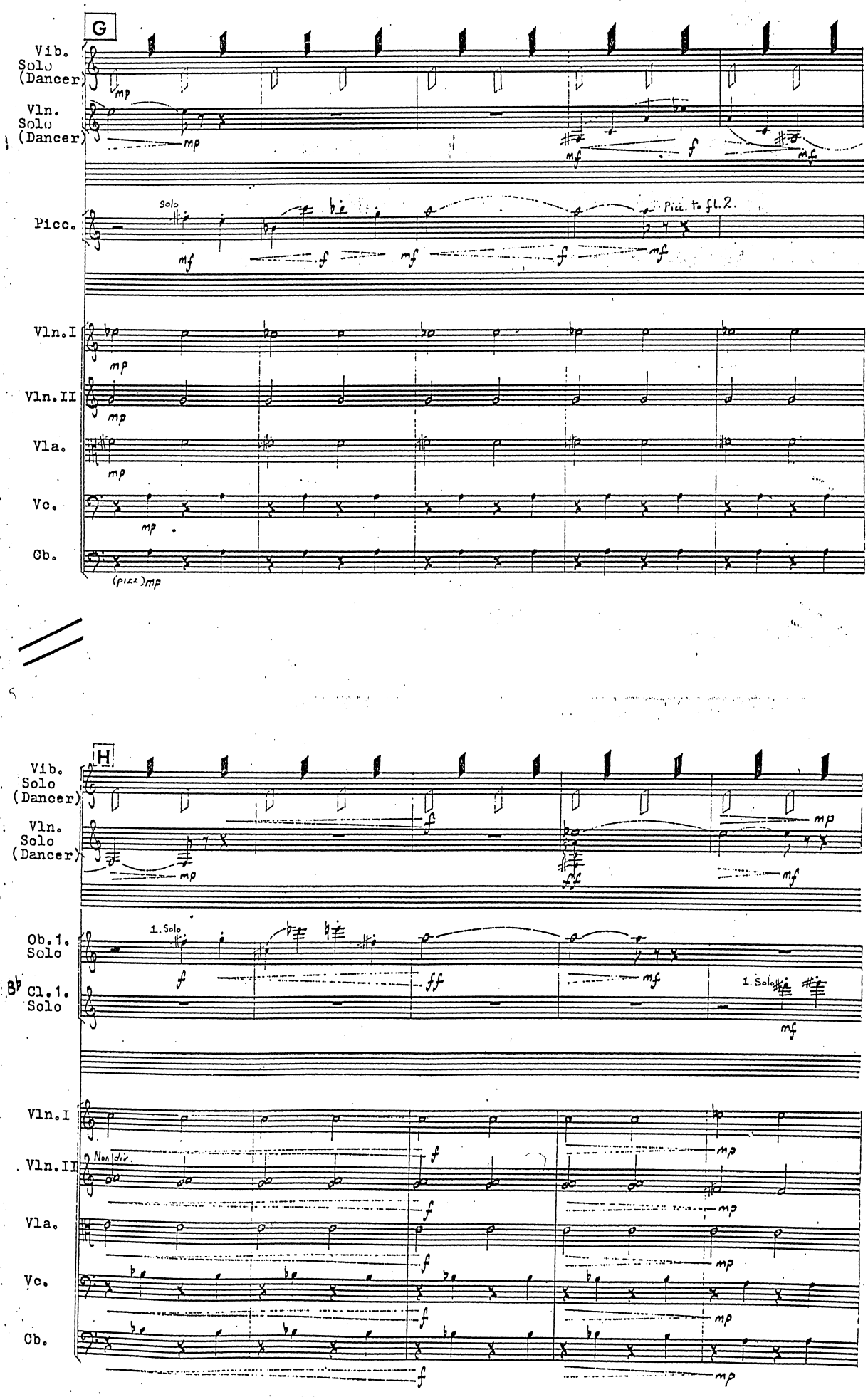
Cb.

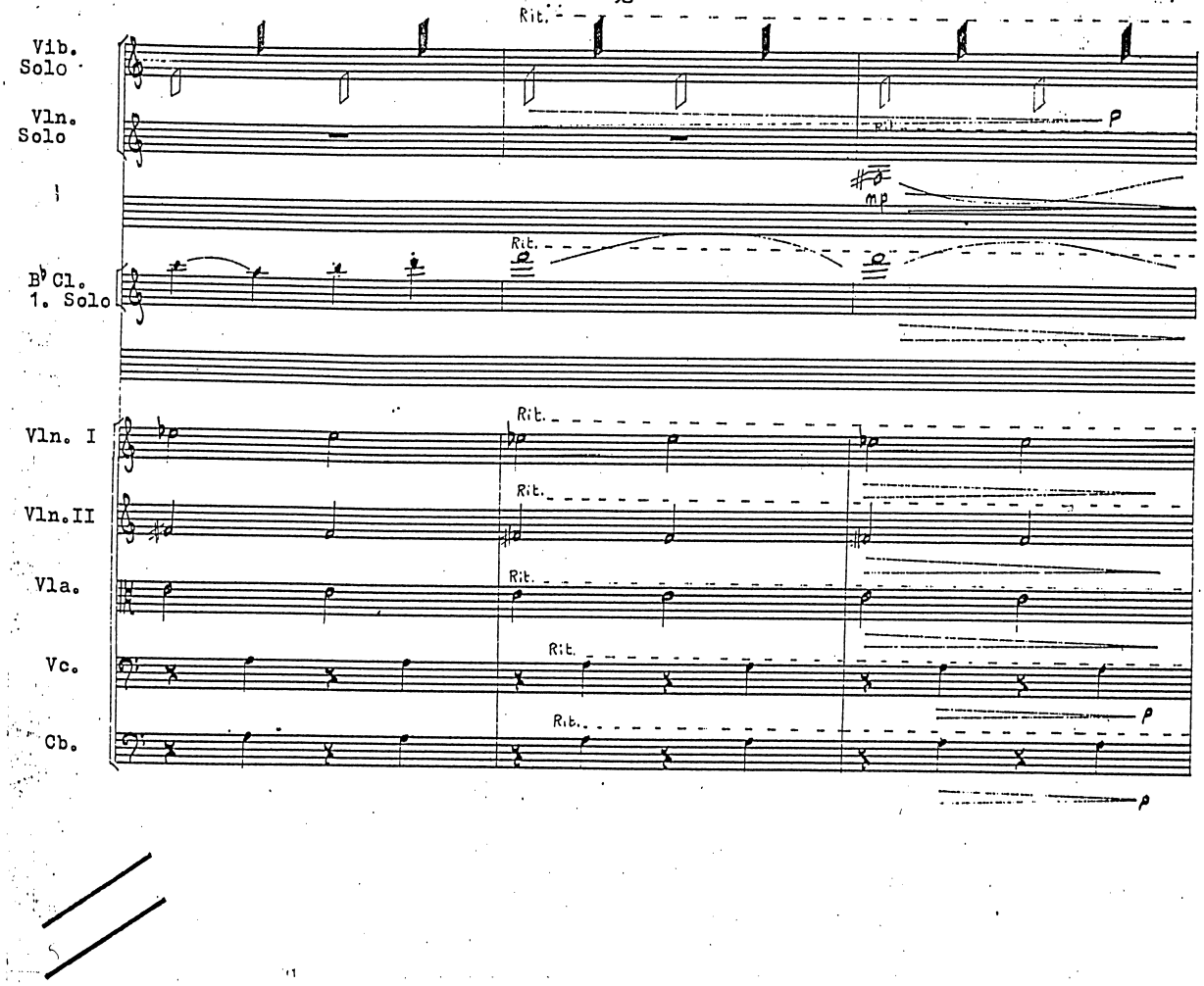
Arco

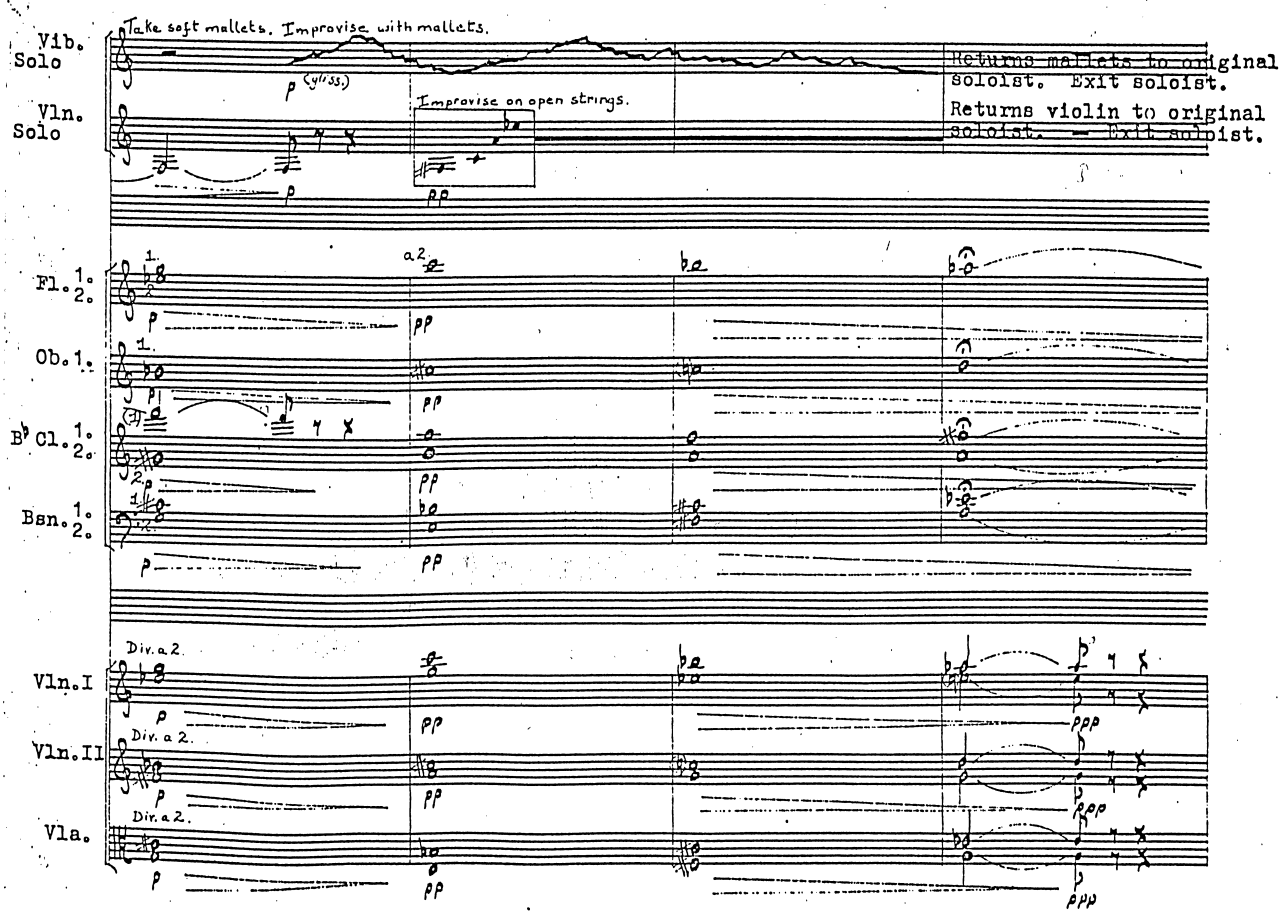
Tutti. Arco.

Vc. Arco

Cb. pizz.

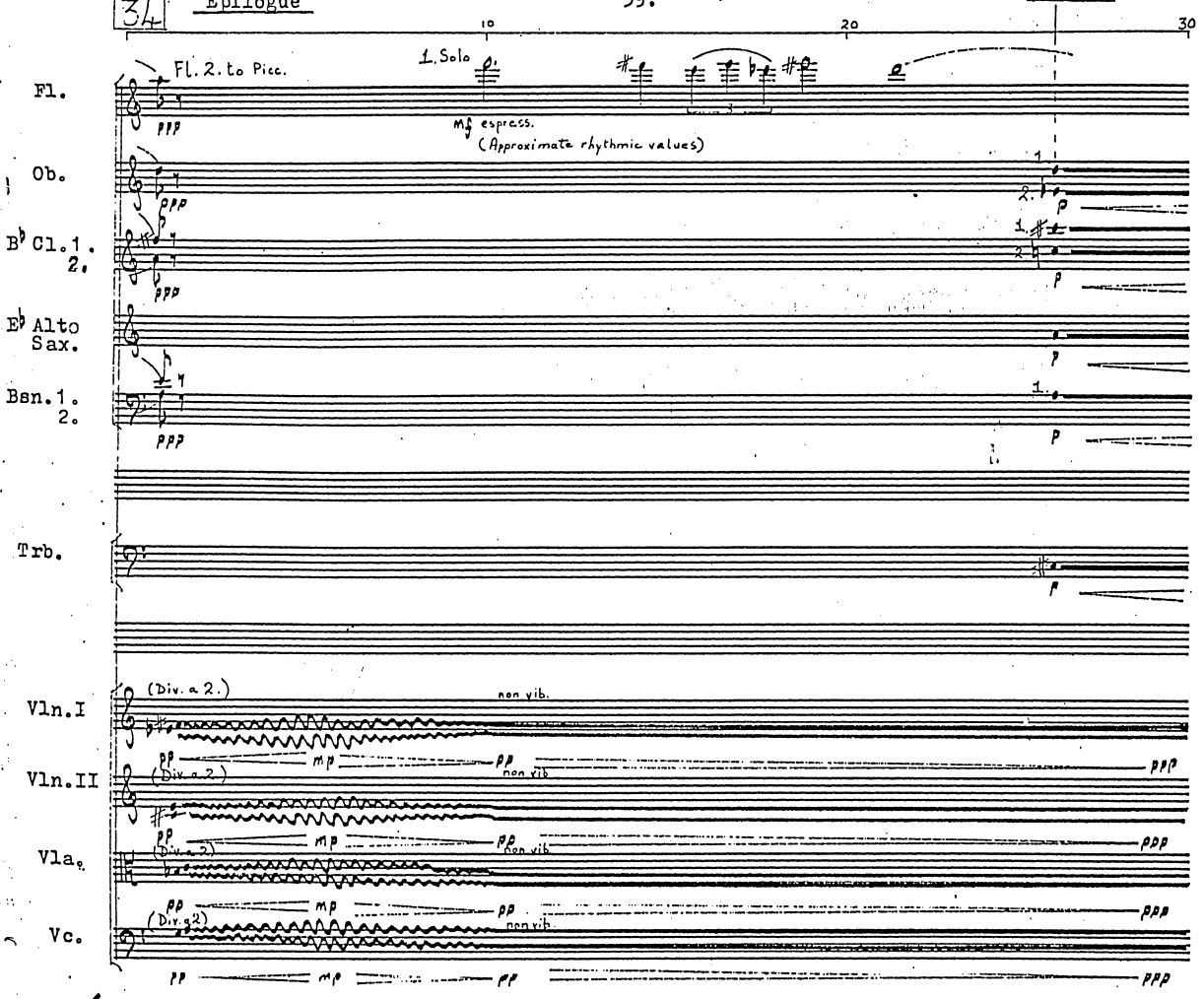

G
Vib.
Solo
(Dancer)
Vln.
Solo
(Dancer)
Picc.
Solo
Picc. to fl. 2.
Vln.I
Vln.II
Vla.
Vc.
Cb.
(pizz.)
H
Ob.1.
Solo
1. Solo
B♭ Cl.1.
Solo
Non div.


Rit.
Vib. Solo
Vln. Solo
mp
B♭ Cl. 1. Solo
Vln. I
Vln. II
Vla.
Vc.
Cb.
p

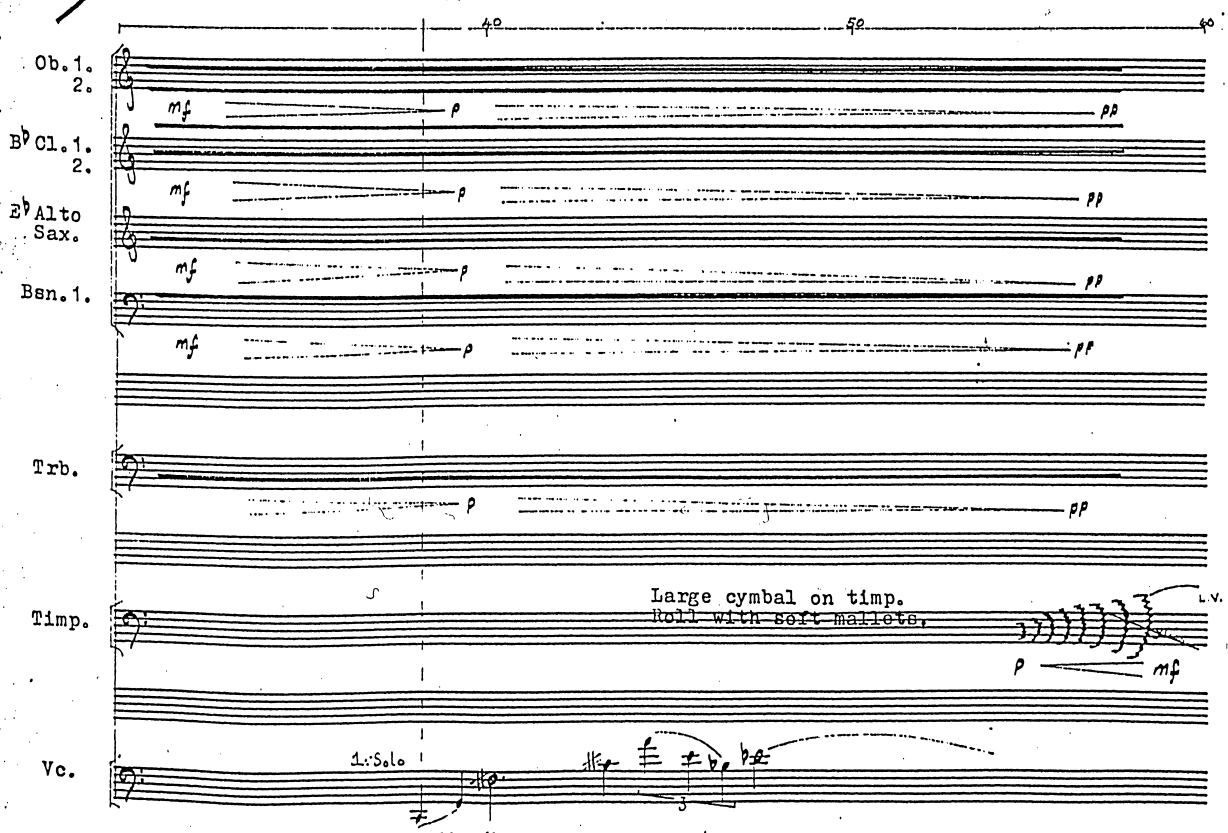

Take soft mallets. Improvise with mallets.
Vib. Solo
p (gliss.)
Improvise on open strings.
pp
Returns mallets to original soloist. Exit soloist.
Vln. Solo
Returns violin to original soloist. — Exit soloist.
Fl. 1. 2.
a2
Ob. 1.
B♭ Cl. 1. 2.
Bsn. 1. 2.
Div. a 2.
Vln. I
Vln. II
Vla.
ppp

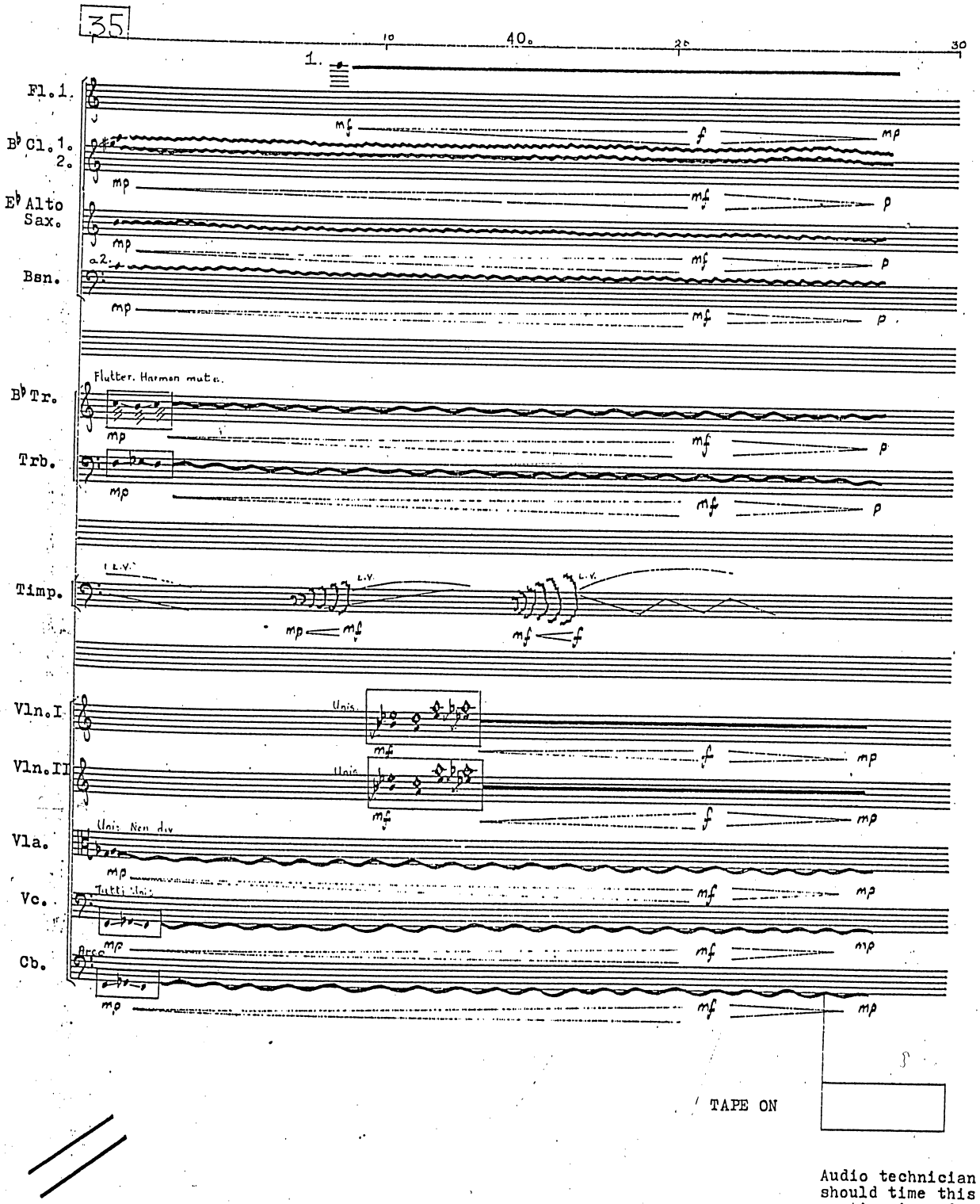
31 Epilogue

34'26"

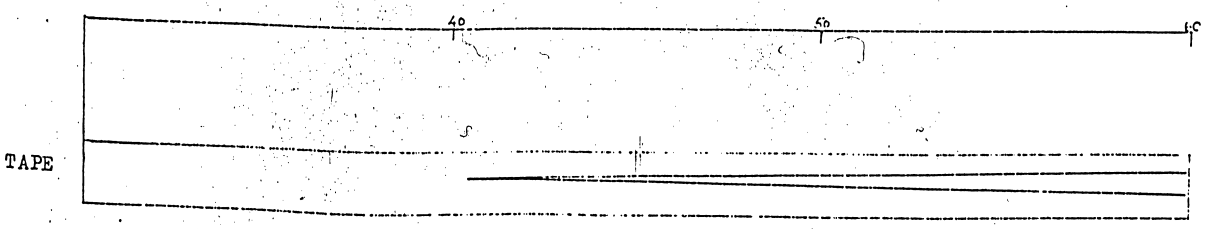


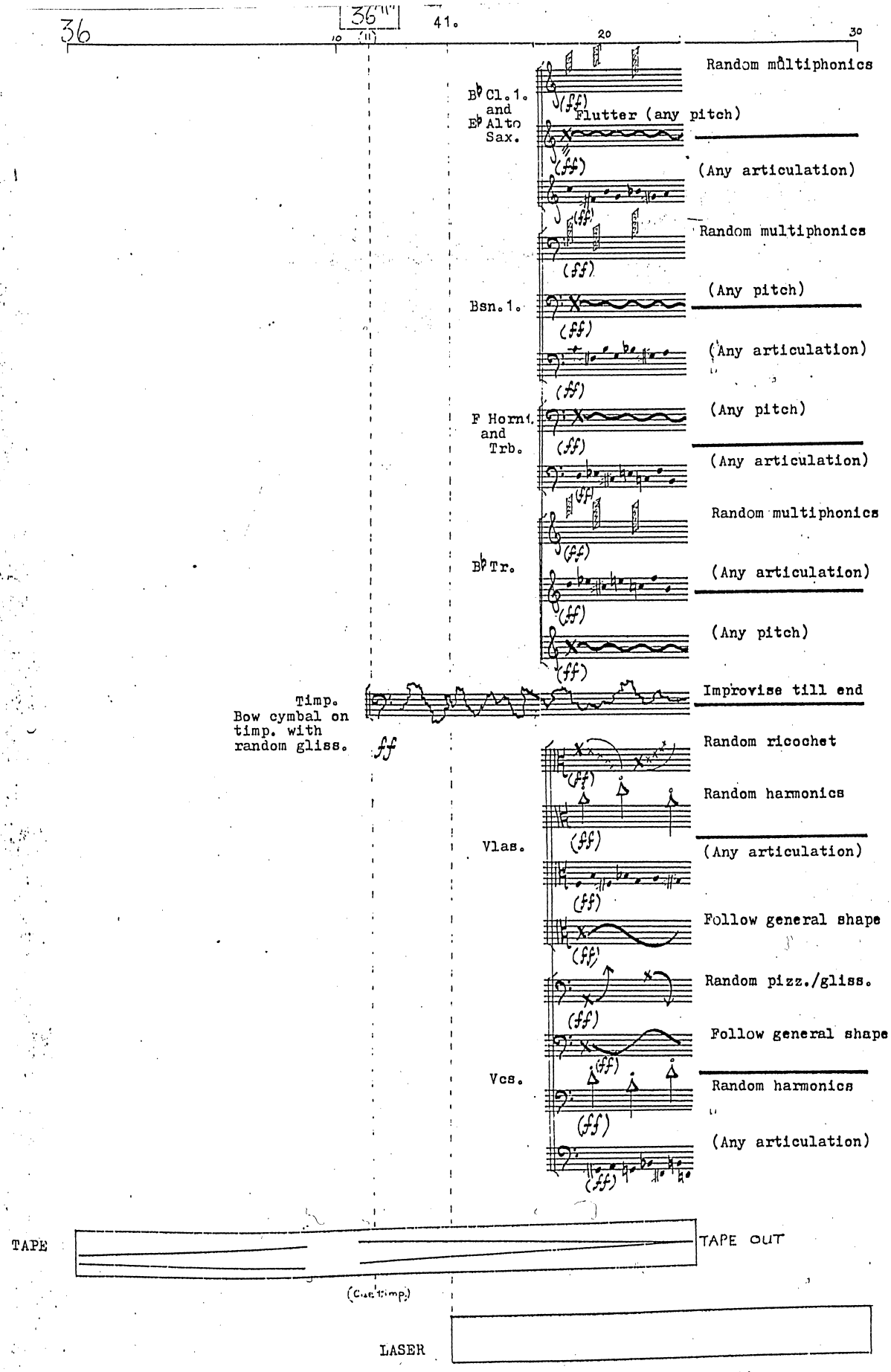
34'38"





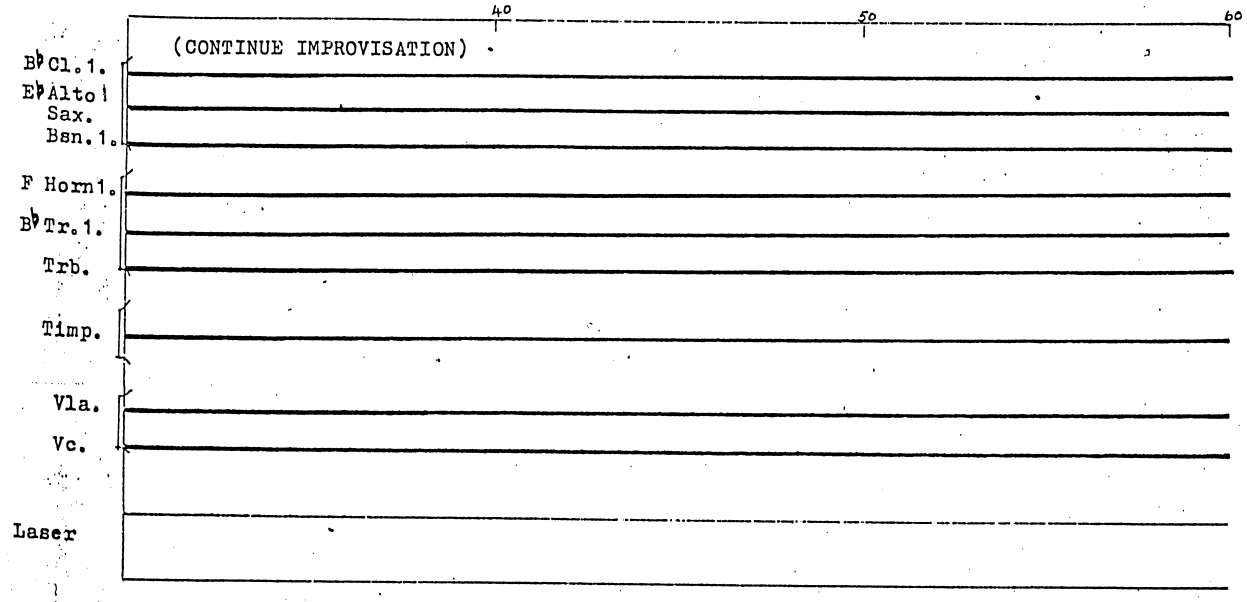
Audio technician should time this section in order to cue timp. at 36'11" on next page.

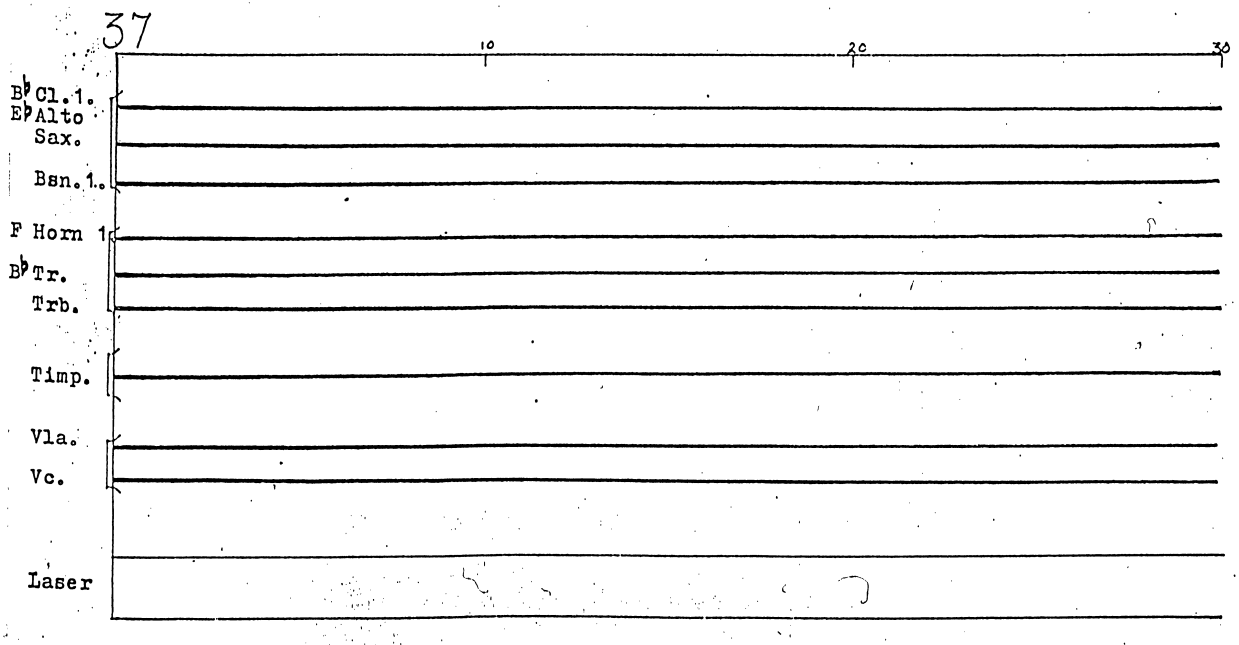




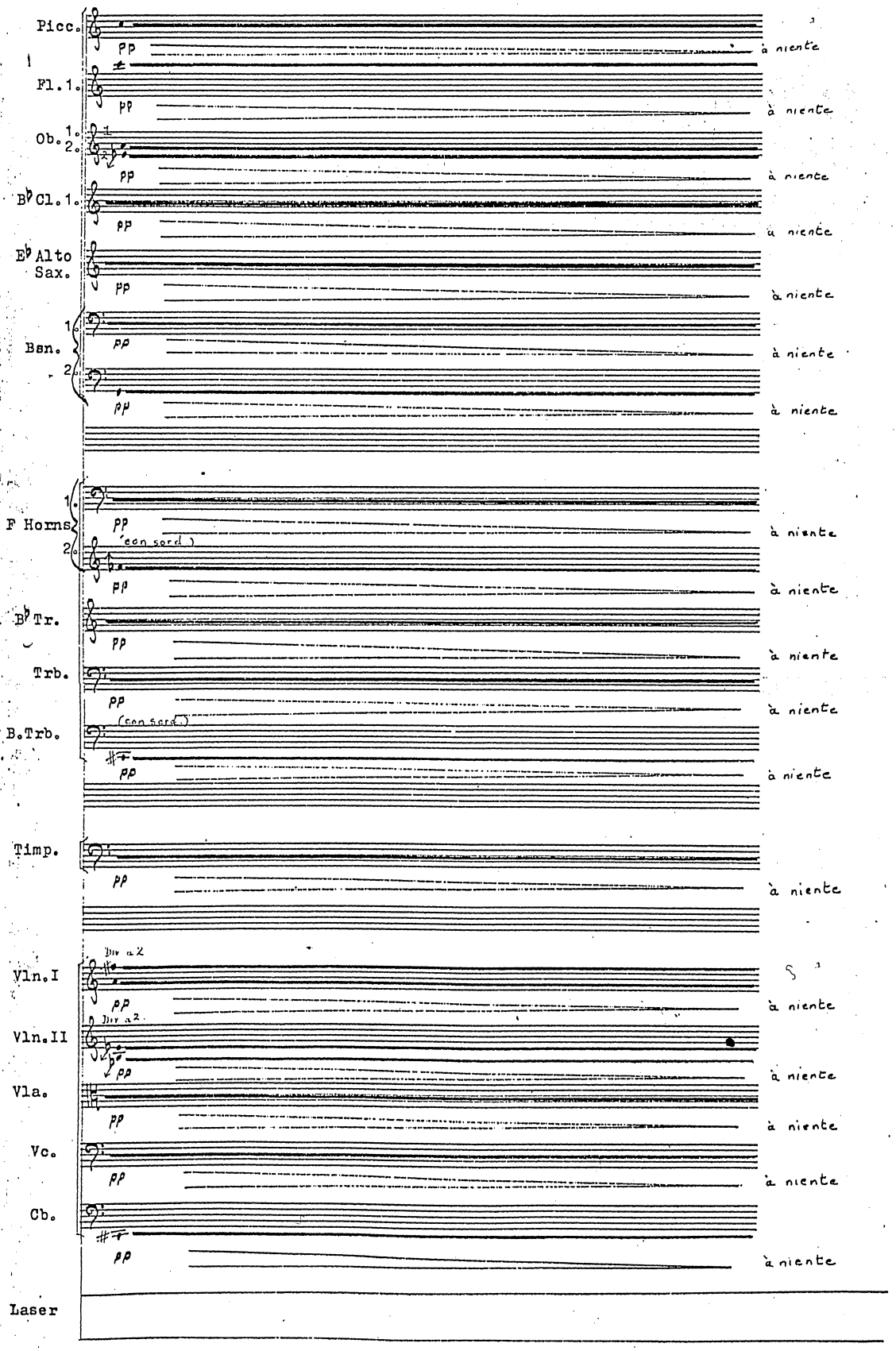
General Directions for this Section

Performers should choose whichever of their segments seems to them to be most appropriate to the visual pattern being projected. Overall dynamic shape should begin fortissimo with a gradual diminuendo to ppp (a niente) by the end of the piece.


40
50
60
(CONTINUE IMPROVISATION)
B♭Cl.1.
E♭Alto Sax.
Bsn.1.
F Horn1.
B♭Tr.1.
Trb.
Timp.
Vla.
Vc.
Laser


37
10
20
30
B♭Cl.1.
E♭Alto Sax.
Bsn.1.
F Horn 1
B♭Tr.
Trb.
Timp.
Vla.
Vc.
Laser

40 50 60


Picc.
Fl.1.
Ob. 1. 2.
B♭Cl.1.
E♭Alto Sax.
Bsn. 1. 2.
F Horns 1. 2.
(con sord.)
B♭Tr.
Trb.
(con sord.)
B.Trb.
Timp.
Vln.I
Div a 2
Vln.II
Div a 2
Vla.
Vc.
Cb.
Laser
pp
à niente