RPM

For Large Ensemble and Solo Turntablist

Nicole Lizée

Faculty of Music, McGill University, Montreal

November, 2000

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Master of Music in composition.

Abstract

The focal point of the work is the turntable and DJ (or Disk Jockey; one who controls the turntables). This concept not only manifests itself through the utilization of actual turntables, but also much of the acoustic material performed by the ensemble consists of "metaphoric turntables". These are contrasting layers of sound superposed over one another that are played by small groups of specific instruments within the larger ensemble. These instrumental groups simulate the sonorities generated through turntable manipulation such as warping, oscillations, crossfading, transforming, and numerous scratching techniques. The DJ (sometimes referred to as a turntablist) employs many techniques, articulations, and effects that are notated and explained in the accompanying analysis.

L'oeuvre est entièrement inspirée par le concept de la table tournante (platine de lecture). Non seulement *RPM* pévoit l'utilisation de platines réelles contrôlées par un "platineur" (ou DJ en anglais), mais une bonne part du matériel de la composition est constituée de ce que j'ai appelé des "tables tournantes métaphoriques". Il s'agit de petits groupes instrumentaux à l'intérieur du grand ensemble agissant comme autant de strates musicales autonomes et pouvant de plus se juxtaposer. Ces groupes instrumentaux ("tables tournantes métaphoriques") imitent en quelque sorte plusieurs sonorités typiques de la manipulation des tables tournantes telles le "warping", les oscillations de hauteur et de vitesse, le "crossfading", le "transforming" ainsi que plusieurs formes de "scratching". Deux platines de lecture et un pupitre de mixage sont utilisées par le platineur mettant à contribution les différentes techniques, moyens d'articulation et effets typiques de cette forme d'art. L'analyse qui suit présentera ces différentes techniques ainsi que leurs implications dans la composition de l'oeuvre.

Acknowledgements

I would like to thank Denys Bouliane, my thesis advisor, for all of his time, energy, and motivation in the preparation of the thesis.

Table of Contents

Introduction

RPM is permeated by the concept of the turntable. This idea is evident not only because the work includes actual turntables in the instrumentation, but also because the acoustic ensemble emulates and mimics the turntables. There is a turntable metaphor consistently referred to throughout the work as certain instruments and instrumental groups simulate the sonorities that are generated through turntable manipulation. Among these sonorities are warping, crossfading, transforming, record juggling, and numerous scratching techniques—techniques that are typical of turntable manipulation by a DJ. The piece could be regarded as having an organic element; the work grows and develops from this initial concept and all ensuing material can be traced back to it.

The preexistent, recorded excerpts (extracted from an LP) directly influence the work's formal structure, pitch content, rhythmic flux, tempi, meter changes and instrumental registers. There are instances in the piece where the conductor is almost "conducted" by the recorded excerpt—the record dictates the flow and direction of the work. It is at these points that the term "manipulation" becomes most significant: the record can manipulate the acoustic ensemble (on behalf of the conductor) in the same way that a conductor can manipulate the turntables (on behalf of the DJ), treating them as instruments. In these instances the tempo, pitch, or any other pre-established element of the recorded excerpt must be manipulated effectively by the DJ to meet the demands of the conductor and ensemble. This method of interactive manipulation is of great importance and appears frequently

throughout the work. This analytical discussion of *RPM* examines in depth all these facets that had a tremendous impact on the creation of the work.

Chapter 1: The Objectives and Concepts in the Composition of *RPM* and the Sources of Preexistent Material Included in the Work

My objective behind the work was to fuse together two apparently separate genres and introduce a plausible new sound source into an otherwise traditional ensemble. In order to properly represent and showcase this new member of the ensemble, I was conscious of two particular facets that would have to be acknowledged: the influence of the preexistent music on the musical syntax of the work, and the new sonorities and technical practices. The preexistent samples used in *RPM* originate from a variety of sources; most excerpts are very short fragments extracted from an LP. These fragments integrate into the piece using two approaches. In the first case, they merge into the existing material performed by the acoustic ensemble. In the second case, the material of the ensemble builds around the recorded samples.

It is not the first time that fragments of preexistent, recorded material have been integrated into a piece consisting of otherwise conventional instrumentation. American composer John Zorn devoted a period of his compositional career—primarily the mid-to-late 1980's—to this way of writing. Zorn's method is essentially the fusion of a variety of excerpts from a multitude of sources; he does not distinguish between "high art" and "low art". His material contains several

short fragments from works that already exist; these may be sampled or newly composed to simulate or replicate a specific genre. While there is a great deal of emphasis on the musical material itself (in the judicious selection of fragments), it is the way these fragments are assembled that is most important. The organization of the fragments creates the composition. By using this fragmented or block form, Zorn liberates the structure of the work, giving the impression that it is seamless. Since each block is out of context with no apparent connection to what precedes or follows it, the form is left open; although, overall, a connection is made when the fragments begin to link in one's perception. The sense of form is left to the listeners' own interpretation taking into account their knowledge of pop culture, world music, and concert music, and their ability to discern the numerous genres presented to them.

In *RPM* my intention was to impose a definite framework within which the smaller sections would occur in conjunction with the preexistent, recorded excerpts. It is this aspect of the concept behind the work that reflects Zorn's compositional approach. The organization of the many diverse fragments—either those already in existence or those simulated—creates the composition. The excerpts or fragments partition the work into sections and subsections. The listener automatically associates a particular section of the work with a certain excerpt and therefore isolates it as a separate entity, spontaneously creating a division. A technique that permeates Zorn's compositional process also presents itself here: each block is out of context with no clear link to the material that precedes or follows it. The form begins to take shape as the fragments generate a "micro-form"

according to the excerpts' content or character. Although the same could be said for works that do not contain preexistent or sampled material, the effect is not quite as strong. Preexistent and pre-recorded excerpts generate a different type of listening: the ear naturally gravitates toward this sound source. The listener may either recognize the sampled material as such or may simply recognize its specific instrumental colour. In *RPM* my objective was to direct attention to the preexistent material through the constant manipulation of the recorded excerpts using a series of turntable techniques.

The majority of the preexistent, recorded excerpts are from a specific musical era. Most of the quotations come from 1960's musicals and what is now regarded as "lounge music". My intention was to incorporate and manipulate a genre of music that is not usually associated with contemporary turntablism and scratching techniques. DJs prefer to use records made specifically for turntable manipulation. In a club setting ideal results are achieved with records containing simple rhythms and sound effects. Many DJs also use quotations from familiar "Top 40" dance music from the 1980s as well as excerpts from jazz and concert music recordings. These are the music genres that a listener generally associates with a DJ performance. In *RPM*, not only did I want to introduce a new and unexpected sound source or "instrument" into a traditional ensemble, but I also wanted to extend this element of unfamiliarity and surprise to include the recorded samples manipulated by the DJ.

The following chart illustrates each prerecorded excerpt found in *RPM*; each entry includes the duration of the fragment and a brief description of the material. The excerpts are listed in the order that they appear in the work.

[Fig. 1]

Material	Measures In Score	Duration	Description
1. *The Sound of Music Soundtrack: "Morning Hymn"*	Mm.113-159	Complete excerpt	Sacred hymn; female voices—a cappella
2. *George Winston: "Refection"*	Mm.164-182	45"(approx.)	Solo piano—thin texture
3. *Perry Como: "Catch a Falling Star"*	Mm.191-215	2"	Bass ostinato with faint percussion
4. *Perry Como: "Don't Let the Stars Get in Your Eyes"*	Mm.228-252	3"	Brass section accompaniment
5. *Perry Como: "Papa Loves Mambo"*	Mm.238-252	2"	Solo trumpet in high register
6. *The Sandpipers: "Inchworm"*	Mm.292-307	1"	Vocal fragment
7. *The Sound of Music Soundtrack: "I Have Confidence"*	Mm.314-324	1"-4"	Solo vocal fragment
8. DJ album of samples featuring distorted effects appropriate for scratching	Mm.328-344	N/A	Distorted sonorities

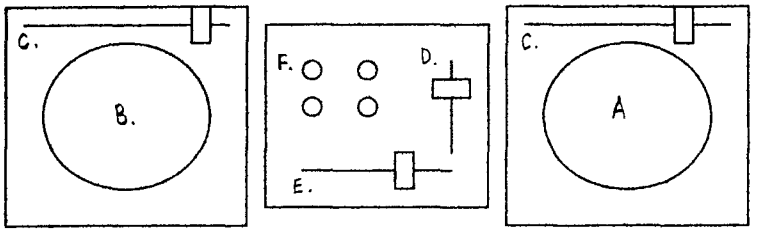
Chapter 2: The Turntable System, Techniques and Notation

In *RPM* the physical turntables are set up in the same fashion employed by most professional DJs. This system consists of two direct-drive turntables and one mixer situated between the two turntables. In this work the turntable on the right hand

side is designated as turntable 1 and the one to the left is turntable 2. The mixer includes a number of features that are mandatory in modern turntablism. A crossfader is located near the bottom of the mixer; its appearance is similar to a mixer's volume control but moves left to right. The crossfader alternates the sound between the two turntables: if the crossfader's slider is to the right the sonorities from turntable 1 are heard. As the slider moves to the left the sound quickly fades out from turntable 1 and fades in to turntable 2. If only one turntable is in use, the crossfader cuts the sound from that turntable off and on; it works similar to a volume control except that the switching between off and on is quicker using the crossfader. The mixer contains several other basic function controls including an equalizer, treble and bass regulators, as well as balance levels.

A device that is found on the turntable is the pitch control located at the very top of the apparatus. This feature transposes the pitch of the recorded excerpt up or down by semitone steps. The cumulative pitch span of this control is usually a major sixth from the very left to the very right. Figure 2 illustrates the turntable setup of *RPM.*

[Fig. 2]



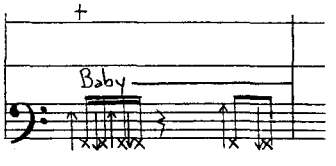
A. Turntable 1
B. Turntable 2
C. Pitch control
D. Volume control
E. Crossfader
F. Miscellaneous controls

Contemporary turntablists have produced and formulated a number of techniques and procedures that have evolved into an established practice now recognized as a distinct art form. These techniques are idiomatic to what is now regarded as a musical instrument in its own respect. DJs are expected to have an extensive repertoire of skills to exploit. Some of these are standard and others are considered "expert" practices, reserved for definite moments in the display. The most elemental and essential tool of turntablism is scratching. This sonority is produced when the record moves back and forth against the stylus of a record player. By altering the speed, rhythm, pattern, and combinations of scratches, a large number of varying techniques are possible. The following is a description of the turntable techniques in *RPM* and their notation. Terms that were established (and are recognized by) the vast majority of contemporary turntablists identify these techniques. These terms originate from the early 1980s when DJ techniques became widespread. [1]

Description of Turntable Techniques with Illustrated Examples

Baby—this is the most basic scratch technique. The record is pushed forward then immediately pulled backward to produce two short scratches.

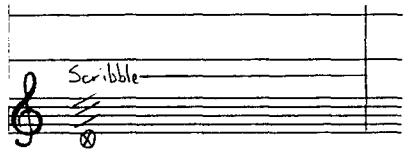
[Fig. 3] **M. 173**



[1] Vode, Zorlon. "The Evolution of a Disk Jockey in the Hip-Hop Culture", 1998

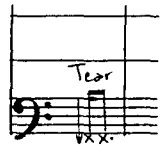
Scribble—with a tense forearm muscle, the fingers are pressed on the surface of the record so that the record moves back and forth very quickly creating a tremolando scratching sonority.

[Fig. 4] **M. 178**



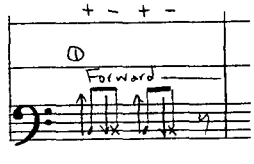
Tear—the record is pushed forward to produce one scratch and then pulled twice backward; the second of these scratches is louder and slower to lengthen the scratch.

[Fig. 5] **M. 197**



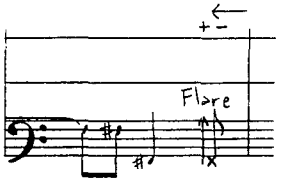
Forward—the excerpt is started and then suddenly cut off by using the crossfader as the record is pulled back to the starting point of the excerpt.

[Fig. 6] **M. 207**



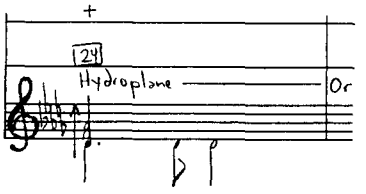
Flare—a forward scratch is cut off abruptly using the crossfader and the record is pulled back.

[Fig. 7] **M. 194**



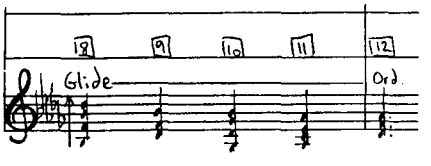
Hydroplane—the fingers are rubbed along the surface of the record against the record rotation to produce a warped vibrating sound.

[Fig. 8] **M. 146**



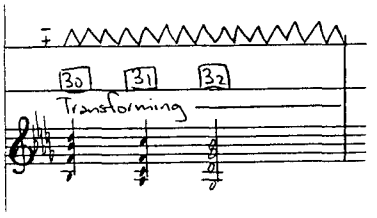
Glide—the fingers are rubbed quickly back and forth along the edge of the record to create a fast and wide vibrato.

[Fig. 9] **M. 131**



Transforming—using one turntable (with no sound on the second turntable), the crossfader is opened and closed (sound on to sound off) quickly while playing an excerpt to produce a "stuttering" effect.

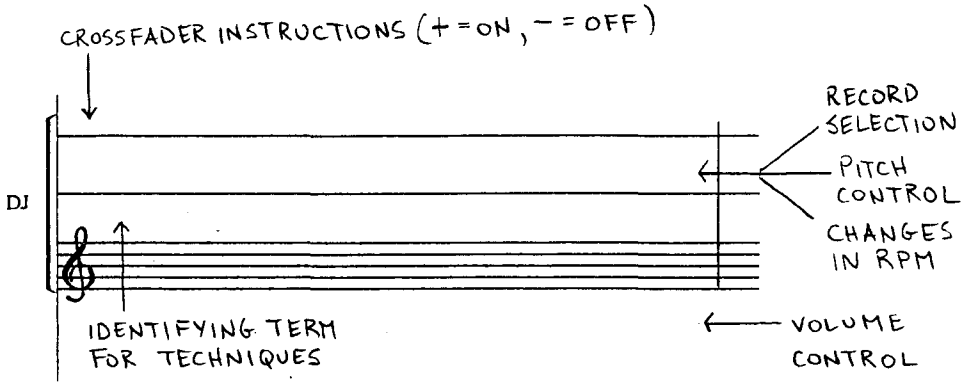
[Fig. 10] **M. 150**



A staff designed specifically for this work displays all of the articulations and instructions for the DJ. The top line contains the crossfader indications. In instances where the DJ uses only one turntable (with no sound on the other), "+" calls for the crossfader to be open (sound is on) and "-" calls for the crossfader to be closed (sound is off). When the DJ employs both turntables, the top line of the staff displays the number of the turntable (either 1 or 2) to indicate which excerpt should be heard. The second line specifies three details: the name of the recorded excerpt being used, the alterations in pitch using the pitch control function, and the changes in r.p.m. (revolutions per minute) from 33 1/3 to 45. The bottom of the staff includes the volume control indications. This volume is independent of the predetermined volume or dynamics of the recorded excerpt and the DJ controls it

entirely. This line also contains the identifying term for each technique to facilitate and clarify their notation. The traditional staff displays the rhythmic notation and—when necessary—a transcription of the recorded excerpt.

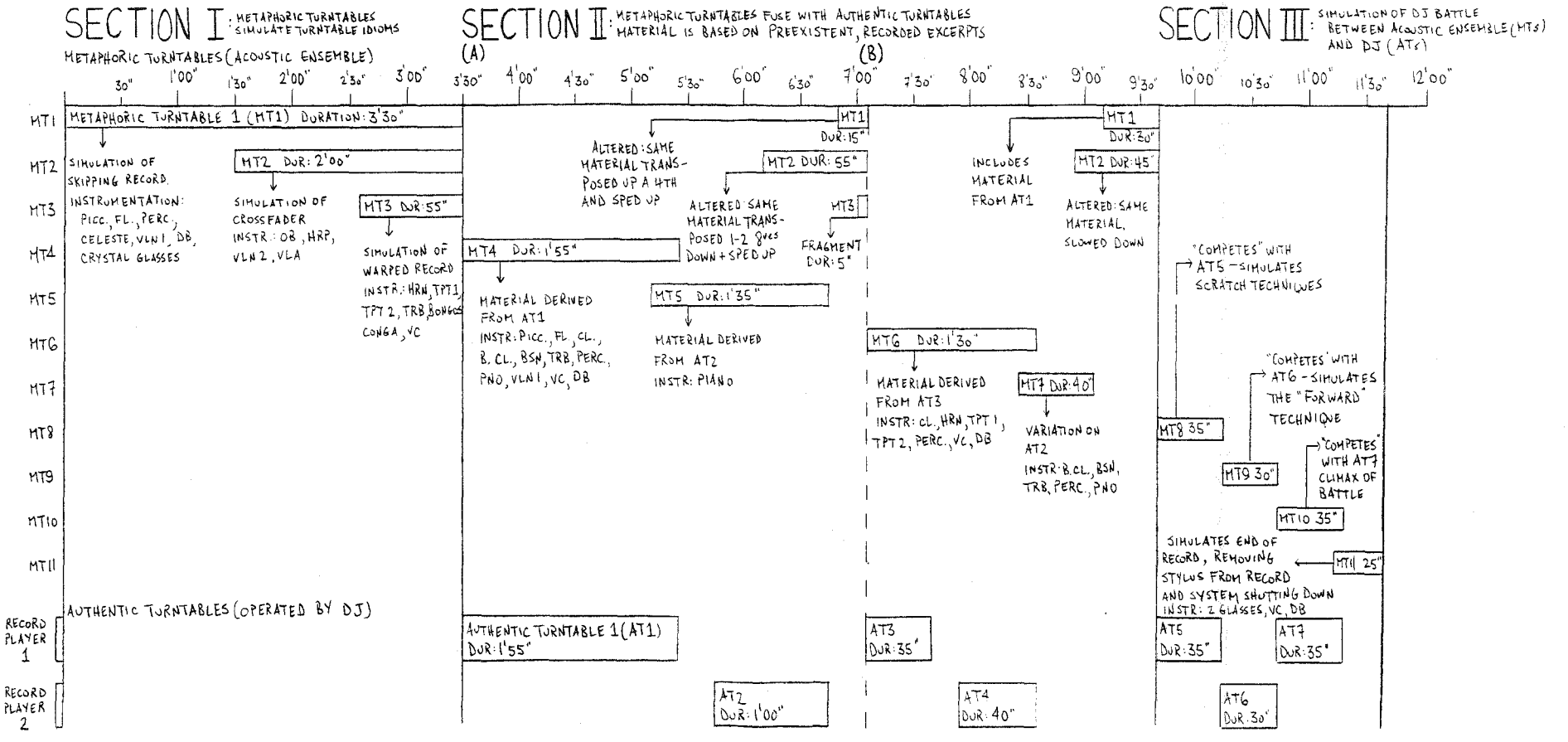
[Fig. 11]



Illustrative Outline of Formal Structure of *RPM*

The following page features a concise chart of the formal layout of the work [Fig. 12]. Please refer to this outline for the remainder of the analysis.

Fig. 12


SECTION I: METAPHORIC TURNTABLES SIMULATE TURNTABLE IDIOMS
METAPHORIC TURNTABLES (ACOUSTIC ENSEMBLE)
SECTION II: METAPHORIC TURNTABLES FUSE WITH AUTHENTIC TURNTABLES MATERIAL IS BASED ON PREEXISTENT, RECORDED EXCERPTS
(A)
(B)
SECTION III: SIMULATION OF DJ BATTLE BETWEEN ACOUSTIC ENSEMBLE (MTs) AND DJ (ATs)
30" 1'00" 1'30" 2'00" 2'30" 3'00" 3'30" 4'00" 4'30" 5'00" 5'30" 6'00" 6'30" 7'00" 7'30" 8'00" 8'30" 9'00" 9'30" 10'00" 10'30" 11'00" 11'30" 12'00"
MT1
MT2
MT3
MT4
MT5
MT6
MT7
MT8
MT9
MT10
MT11
METAPHORIC TURNTABLE 1 (MT1) DURATION: 3'30"
SIMULATION OF SKIPPING RECORD. INSTRUMENTATION: PICC., FL., PERC., CELESTE, VLN 1, DB, CRYSTAL GLASSES
MT2 DUR: 2'00"
SIMULATION OF CROSSFADER INSTR: OB, HRP, VLN 2, VLA
MT3 DUR: 55"
SIMULATION OF WARPED RECORD INSTR: HRN, TPT 1, TPT 2, TRB, BONGOS, CONGA, VC
MT1 DUR: 15"
ALTERED: SAME MATERIAL TRANSPOSED UP A 4TH AND SPED UP
MT2 DUR: 55"
ALTERED: SAME MATERIAL TRANSPOSED 1-2 8VES DOWN + SPED UP
MT3 FRAGMENT DUR: 5"
MT4 DUR: 1'55"
MATERIAL DERIVED FROM AT1 INSTR: PICC., FL, CL., B. CL., BSN, TRB, PERC., PNO, VLN 1, VC, DB
MT5 DUR: 1'35"
MATERIAL DERIVED FROM AT2 INSTR: PIANO
MT1 DUR: 30"
INCLUDES MATERIAL FROM AT1
MT2 DUR: 45"
ALTERED: SAME MATERIAL, SLOWED DOWN
MT6 DUR: 1'30"
MATERIAL DERIVED FROM AT3 INSTR: CL., HRN, TPT 1, TPT 2, PERC., VC, DB
MT7 DUR: 40"
VARIATION ON AT2 INSTR: B. CL., BSN, TRB, PERC., PNO
"COMPETES" WITH AT5 — SIMULATES SCRATCH TECHNIQUES
"COMPETES" WITH AT6 - SIMULATES THE "FORWARD" TECHNIQUE
"COMPETES" WITH AT7 CLIMAX OF BATTLE
MT8 35"
MT9 30"
MT10 35"
MT11 25"
SIMULATES END OF RECORD, REMOVING STYLUS FROM RECORD AND SYSTEM SHUTTING DOWN INSTR: 2 GLASSES, VC, DB
AUTHENTIC TURNTABLES (OPERATED BY DJ)
RECORD PLAYER 1
RECORD PLAYER 2
AUTHENTIC TURNTABLE 1 (AT1) DUR: 1'55"
AT2 DUR: 1'00"
AT3 DUR: 35"
AT4 DUR: 40"
AT5 DUR: 35"
AT6 DUR: 30"
AT7 DUR: 35"

Chapter 3: The Influence of Preexistent Material and Turntable Manipulation on the Formal Structure of *RPM*

The work comprises three large formal sections that contain several subsections designated as "turntables". These "turntables" are essentially contrasting layers of material performed by the acoustic ensemble. I refer to these streams of material as "metaphoric turntables" (abbreviated as MT) since they emulate the articulations and techniques of the "authentic turntables" (abbreviated as AT) operated by the DJ. Each of these metaphoric turntables has distinguishing features that sets it apart from the other and makes it readily identifiable. As the piece progresses, the metaphoric turntables eventually begin to merge with the authentic turntables causing the streams of material to intermingle and generate larger assimilated layers of sound that are referred to as "combined turntables".

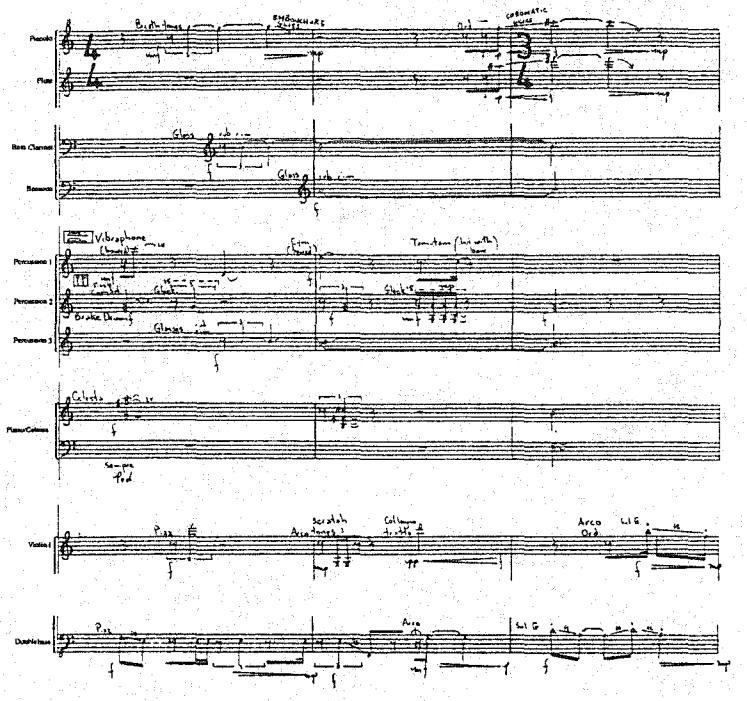
RPM contains eighteen turntables in total, including both the metaphoric and authentic kind. Several of the turntables, particularly those of the metaphoric variety, return throughout the work in slightly modified versions. Section I consists exclusively of metaphoric turntables. Section II merges the metaphoric and authentic turntables. Section III emulates a "DJ Battle", which is a term for an actual competition where two DJs showcase their talents in a duel-like fashion as they alternate back and forth to display their techniques, gradually increasing the degree of difficulty. In this work the competition takes place between the acoustic ensemble and the DJ.

Although Section I does not involve authentic turntables, this portion of the work focuses on the turntable metaphor. Each of the three metaphoric turntables included in this section simulates a particular turntable idiom. The exclusion of authentic turntables at the start of the work is partly for dramatic purposes. Since the most prominent feature of the work and ensemble are the turntables and the DJ, the listener anticipates their entrance and expects them to be heard much sooner than they are. This is the case for the first 3'30" of the piece; the audience hears an acoustic portrayal of turntable techniques while they observe and anticipate the silent authentic turntable equipment. A number of components help define and distinguish the metaphoric turntables in the piece. Each one includes a particular group of instruments that represent the specific turntable or stream. The particular instrumental groups were selected according to what would most effectively simulate the featured turntable technique. Alterations in tempo and meter also assist in the process of differentiating the metaphoric turntables. Although the conductor beats a fixed tempo, the piece is written in such a way so that several changes in meter and tempi can be perceived simultaneously.

The first metaphoric turntable (MT1) mimics a skipping record. The first six measures of the piece present the entire material for this stream. All ensuing measures contain abbreviated variants of the initial six to suggest a stylus constantly skipping at different locations in the excerpt. In order to facilitate this turntable phenomenon, the contents of the first six measures had to be composed in a particular manner. Thus, each measure includes prominent and diverse articulations that emphasize each beat and allow for omitting material at any point

within the excerpt. MT1 includes a small group of five instruments and percussion: piccolo flute, flute, celeste, violin 1, double bass, vibraphone, two cymbals, brake drum, glockenspiel, and two crystal glasses.

[Fig. 13] **Mm. 1-3**

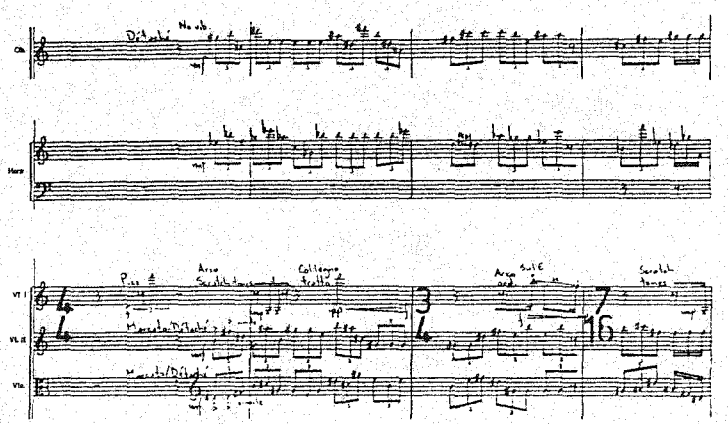


Each measure begins with an emphasized downbeat and follows with more intricate and varied articulations for each instrument. The texture is thin to allow the meticulous articulations to be discerned and to accommodate the two succeeding metaphoric turntables. The celeste, sizzle cymbal, and brake drum stress the first beat of each measure; these instruments provide a convincing emphasis of the beat while simultaneously instilling a sonorous, delicate quality. The celeste leaps through several regions of the keyboard to suggest movement as though the excerpt would continue. The violin plays pointillistic, percussive articulations similar to

those of the percussion. While the double bass also reflects this approach to some extent, its primary function is to provide a foundation using several ostinato-like figures akin to those of a jazz bass part. The part features several varying special effects to ensure that the material will be easily recognizable thereby creating the impression of a skipping record. The crystal glasses provide a sustained sonority as a contrast in the excerpt.

Metaphoric turntable number two (MT2), beginning in measure 46 and concluding in m. 112, simulates the crossfader function on a mixer as it turns the sound from one turntable on and off. MT2 is superposed over MT1 and is treated as an independent entity from the first metaphoric turntable. The implied meter of MT2 within the frame of MT1 is a triple meter (6/8, 9/8, etc.) where ♩ = ♩.. Although MT1 and MT2 are written with a common notated meter, the actual perceived meters of both streams are independent. Like many contemporary compositions, the bar line serves only as a means of synchronization. The instrumental combination of this stream includes four instruments: oboe, harp, violin II and viola.

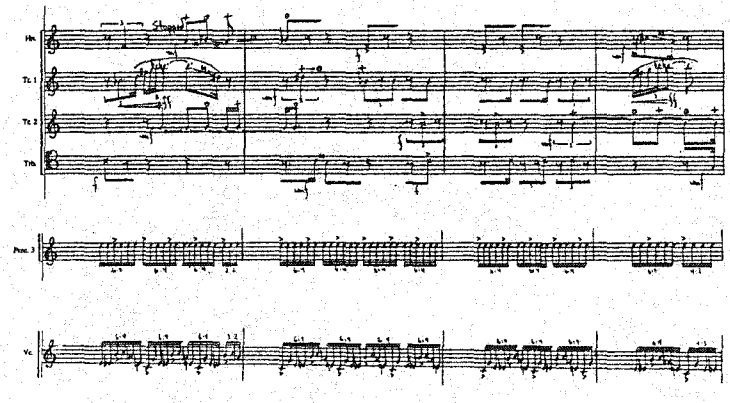
[Fig. 14] Mm. 46-49



MT2 contains a fluid linear passage that emphasizes smooth phrasing and generates a greater sense of momentum. These qualities enable a better simulation of the sudden switching on and off of sound. The content of this metaphoric turntable bears some resemblance to that of the first in that it also consists of a short excerpt or loop used for the entire duration of the stream. This allows the irregular interruptions to be more easily perceived.

The third metaphoric turntable, starting at m. 84 and ending at m. 112, mimics a warped record on a turntable. This technique is suggested by incorporating ritardandos and accelerandos in combination with descents and ascents in pitch that coincide with changes in tempo. The instrumentation for MT3 is horn, two trumpets, trombone, cello, bongos, and conga.

[Fig. 15] **Mm. 85-88**



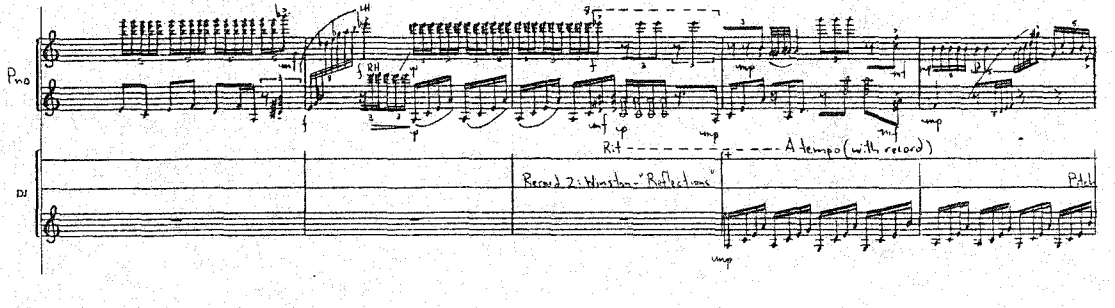
MT3 presents material that is somewhat more raucous in nature than the preceding streams. Equally important is the pace at which it moves. Accenting every fourth sixteenth note suggests a faster virtual tempo. Like MT2, this stream of material is superposed over the other two and is perceived as metrically independent although it fits within the written barring of the first turntable. MT3 has a more agitated nature and draws the attention of the listener, particularly toward the end of the section. The speeding up and slowing down of a continuous flow of music over a period of 55" generates a warping sensation. During these fluctuations in tempi, the pitch either rises or falls in conjunction with the changes in tempi. The material of MT3 gradually gains importance, eventually becoming the culmination point for the section.

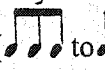
While Section I focuses on simulated turntable techniques performed by the acoustic ensemble, Section II presents the authentic turntables for the first time. After anticipating this sound source for the first three-and–a–half minutes of the work, the listener finally hears the turntables operated by the DJ in combination with the acoustic ensemble. Metaphoric turntable no. 4 (MT4) and authentic turntable no. 1 (AT1) make up the combined stream of material that begins Section II in m. 113. In this section the metaphoric turntables no longer exist solely to emulate turntable techniques; they develop into autonomous streams of independent material. It is the coalescence of the two varieties of turntables that now characterizes the texture of this work. At this juncture, the preexistent material serves as the foundation for all ensuing material. In other words, the material of AT1 provides the material for MT4. The preexistent source that the DJ uses in AT1

is the "Morning Hymn" from *The Sound of Music*. This hymn includes forty individual a cappella chords that integrate into the material of MT4 and become altered. In this portion of *RPM* the excerpt has a strong impact on the pitch structure of the acoustic material. Equally important is the issue of synchronization between the DJ and the conductor. Both of these subjects will be discussed at length in chapters 4 and 6 of this analysis.

The next metaphoric/authentic turntable combination uses one instrument in each respective turntable source. AT2 consists of a piano excerpt that serves as the basis for the material in MT5 (scored for solo acoustic piano). These integrated turntables are superposed over MT4/AT1 and they gradually manifest themselves beginning with the acoustic piano (MT5) in m. 149 as the combined stream of MT4/AT1 fades out. In m. 149, MT5 makes slight references to the forthcoming AT2; these references become increasingly evident as AT2 approaches until the two finally merge in m. 164, creating a layer of tangled pianos.

[Fig. 16] Mm. 161-165

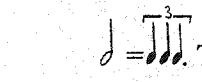


As this stream evolves, a metaphoric turntable first heard in Section I—MT2—makes a new entrance at m. 168 in an altered version. In this instance, the material of MT2 is essentially the same with some exceptions in register, instrumentation, and tempo. While the pitch-class content remains the same, the notes are transposed either one or two octaves down (depending on the instrument). The bass clarinet replaces the oboe, a member of the original MT2, to better accommodate the lower pitch. The tempo varies in the second version of MT2 as the triplet doubles to a sextuplet: ( to ). The two other metaphoric turntables first heard in Section I—MT1 and MT3—also make abbreviated appearances in a modified form to conclude the first part of Section II. The material of MT1 transposes up a fourth and speeds up to suggest the acceleration of the turntable first heard at normal speed in Section I. This mimics a shift from 33 1/3 r.p.m. to 45 r.p.m. This subsection of the work, starting at m. 168 and concluding at m. 191, functions as a concise recapitulation of Section I. (See mm. 168-191 in the score.)

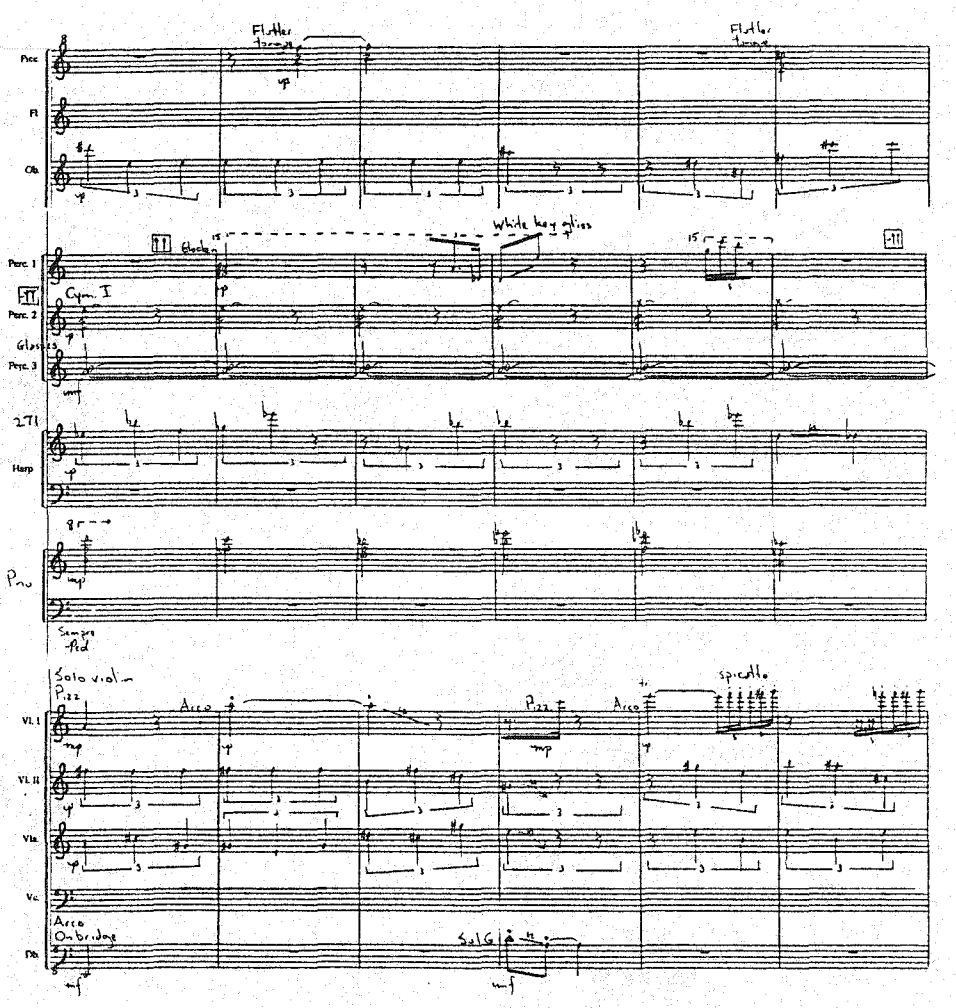
The second part of Section II is somewhat separated from that of the first. This division is based entirely on the change of preexistent material that in turn presents both a new tempo (from  =60 to  =120) and a new musical character. This part begins with a combined turntable grouping including metaphoric turntable no.6 and authentic turntables 3 and 4. The authentic turntables in this instance employ two records each and the DJ switches between them at the mid-point of MT6. Once again, the instrumental group contributes to the definition of the musical stream. MT6 includes an instrumental group that relates to the instrumentation of AT3 and AT4. This group consists of piccolo flute, flute, clarinet, bass clarinet, bassoon,

trombone, percussion, piano, violin I, cello, and double bass. (See mm. 191-251 in the score.)

Beginning in m. 242, a contrasting metaphoric turntable emerges over the MT6/AT3/AT4 combination. This stream of material, referred to as MT7, is considerably more restrained in character than that of the preceding layer. Due to the lower-pitched sonorities and the slower pace, the presence of MT7 barely registers while heard in conjunction with MT6/AT3/AT4. MT7 finally surfaces when the preceding turntable combination comes to a halt in m. 253. (See mm. 242-253.) This metaphoric turntable includes a group of six instruments (bass clarinet, bassoon, trombone, piano, timpani, and tam-tam) and exploits their extreme low registers. The material for MT7 comes from AT2: an excerpt of the left-hand accompaniment from George Winston's *Reflection* (initially heard as AT2), is transposed down and slowed down considerably to suggest a static warping of the record.

From m. 253 until the conclusion of Section II, metaphoric turntables exist exclusively and the section ends with concise recapitulations and allusions to earlier material. Another version of MT2 combines with MT7 at the beginning of m. 261. This variant contains the original instrumentation and pitches heard in the first section yet includes longer note values to slow down the written tempo, as  . The section concludes with a varied restatement of MT1—only its original articulations remain. Each measure begins with a stressed downbeat and follows with more delicate, restrained articulations supplied by several interlaced instruments.

[Fig. 17] Mm. 271-276



Although the rhythms and articulations allude to MT1, the actual pitch content makes no references to that particular metaphoric turntable, but rather pertains to AT1. The chords from the preexistent source of the "Morning Hymn" from the soundtrack to *The Sound of Music* are the primary pitch source for this version of MT1. These variations of MT1 and MT2—played at a tentative, tranquil pace—

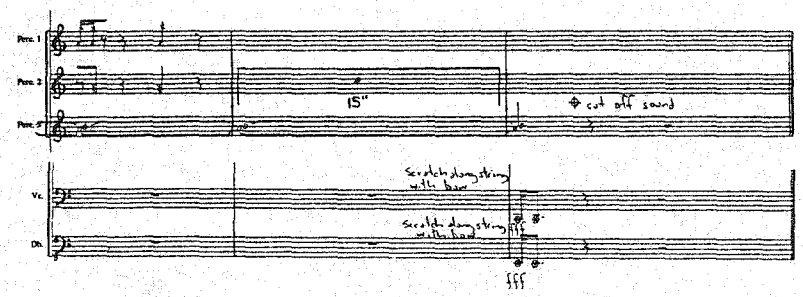
conclude Section II in m. 286 and prepare for the tumultuousness of the forthcoming third section.

Section III, beginning in m. 288, simulates a "DJ Battle". This event can be described as a duel or a bout, where professional DJs display their skill and talent through a series of short demonstrations presenting their most advanced techniques. The two DJs exchange routines, each increasing in difficulty, until a clear winner is chosen, usually designated by both judicial evaluation and audience response. In *RPM* the contestants are the entire acoustic ensemble and the DJ. The metaphoric battle is an exchange of varying material between the ensemble and the DJ that becomes increasingly more agitated as the "duel" progresses. The section concludes at the apex of the duel as the two participants play simultaneously at their loudest dynamic, each fighting to oust one another and be designated as champion.

In the formal outline of the work illustrated on p. 16, the battling acoustic ensemble comprises three metaphoric turntables—MT8, MT9, and MT10—with their individual streams of music. This suggests the switching of records and routines, which are common occurrences in a real DJ Battle. The DJ also employs three different recorded excerpts (authentic turntables) in his demonstrations that compete with the metaphoric turntables performed by the acoustic ensemble. The acoustic ensemble and DJ go on competing as they alternate demonstrations until the final bout in m. 340 where they play simultaneously at their loudest dynamic level. This concludes the battle in a state of turmoil as it is unclear who is the winner. The work ends with MT11 that consists of two crystal glasses to suggest

the noise of the tone arm of a rotating turntable as the LP reaches the end. This effect continues for several measures until the final measure where the cello and double bass perform a scratchy effect to simulate a stylus being noisily removed from the record surface and the turntable system being shut down.

[Fig. 18] Mm. 346-348



Chapter 4: The Musical Syntax of *RPM*

(A) Autonomous

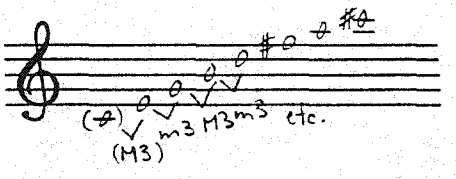
(B) The Influence of Preexistent Material on the Musical Properties

The material for each metaphoric turntable in *RPM* comes from a different source: it is either independent, or extracted from preexistent sound sources. The micro components of each metaphoric turntable, most notably the pitch content, are salient elements helping in the discerning of musical streams. Section I includes those metaphoric turntables whose inherent musical features are independent of the preexistent sources yet play a very important role in the construction of each unique musical stream.

MT1, in the first section, comprises different complementary elements. It contains an emphasized downbeat in each measure followed by more intricately articulated gestures. This stream incorporates two separate, yet related, pitch structures. Due to the agitated character of the metaphoric turntable (attributable in part to the choice of instrumentation), a pitch structure made up of intervals of thirds serves to diminish the agitated quality to some extent. One grouping forms those sonorities heard on the downbeat of the measure primarily in the celeste and, on one occasion, in the two flutes.

[Fig. 19]

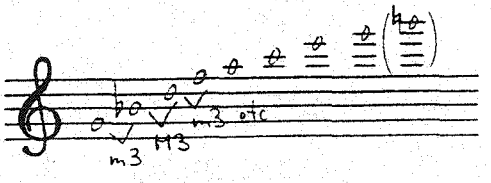
GROUP A



The grouping consists of stacked thirds alternating major and minor with E as the starting pitch. In only one instance toward the end of the excerpt is C included as a contrasting pitch. The remainder of the measure following the downbeat employs the second grouping. Although it is structured identically as the first grouping, it starts on a different pitch to produce a parallel, yet varied, sonority.

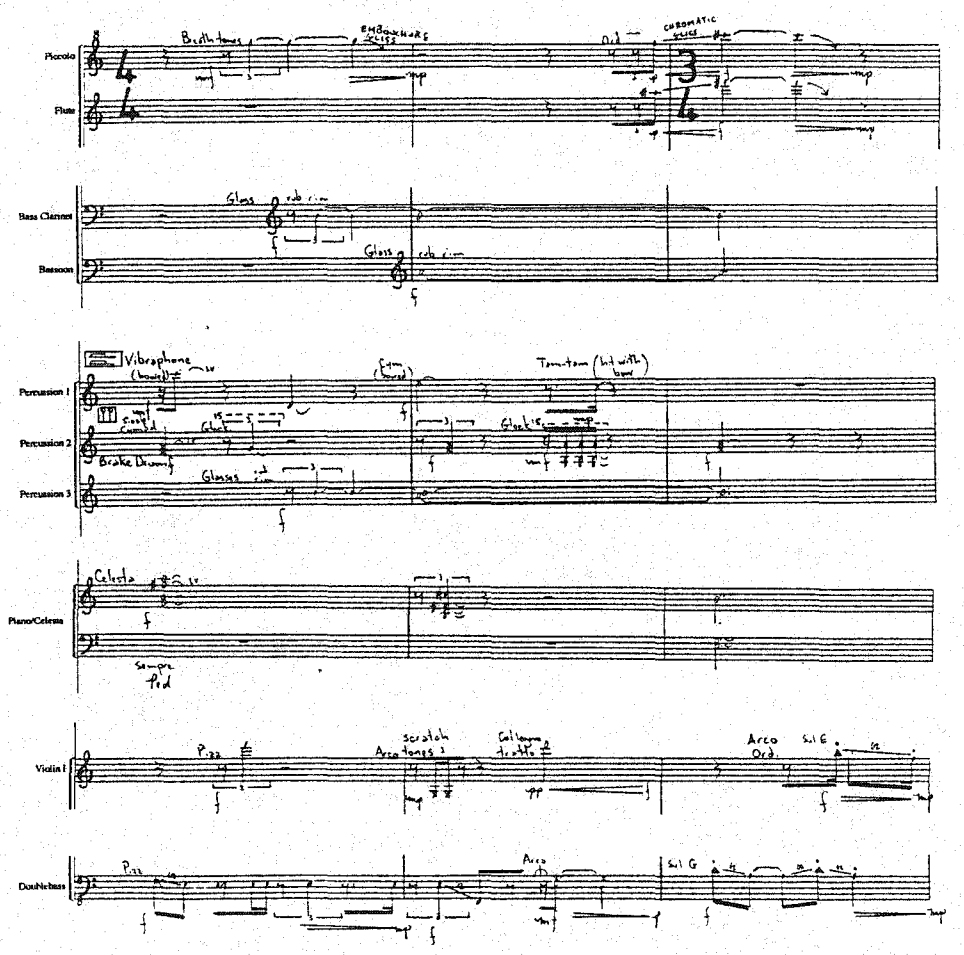
[Fig. 20]

GROUP B

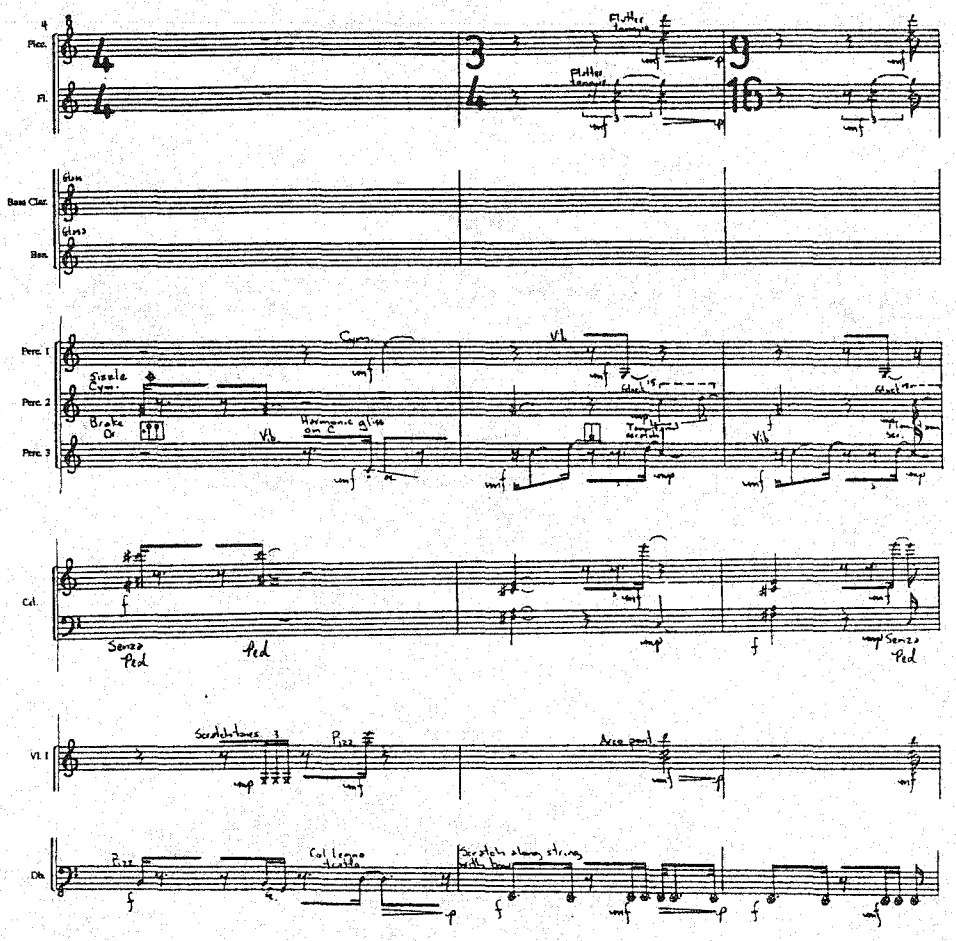


The thirds are stacked identically to those in group A and the grouping includes the supplemental pitch B as a contrasting feature. This pitch provides a connection to the first group, as it is a common pitch to both. E not only functions as the starting pitch for the initial structure, but also serves as the focal pitch around which MT1 forms. This is particularly evident in the vibraphone and double bass parts in mm. 7 and 8 where E appears to be the destination point.

[Fig. 21] Mm. 1-3



[Fig. 21] cont. Mm. 4-6

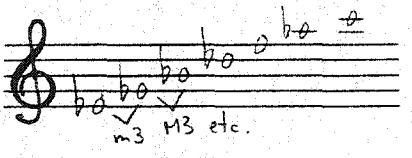


As mentioned in an earlier part of the analysis, MT2 mimics the crossfader function located on the mixer. The concise, flowing loop of material used for this stream helps to achieve the effect of flashing a crossfader on and off. As the material becomes increasingly recognizable, the discontinuous splinters of sound become more perceivable. Each of the four instruments used in MT2—oboe, harp, violin II, and viola—play brief loops of homophonic material simultaneously and

repeatedly until the conclusion of Section I. The pitches that form the loops relate to the pitch structures of the material in MT1. The pitches are once again ordered in stacked thirds but in this instance they do not strictly adhere to this formation, as the pitches are arranged in an arbitrary order unlike MT1, which always stresses the structuring of thirds. The starting pitches of the two groups in MT2 begin a semitone lower than the starting pitches of the groups in MT1. With these pitch formations it is possible for the listener to discern the two metaphoric turntables while still maintaining an association due to the similar structuring of pitches.

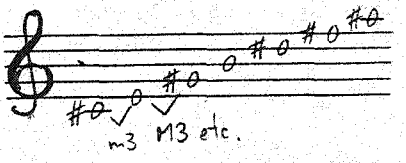
[Fig. 22]

GROUP C: Harp



[Fig. 23]

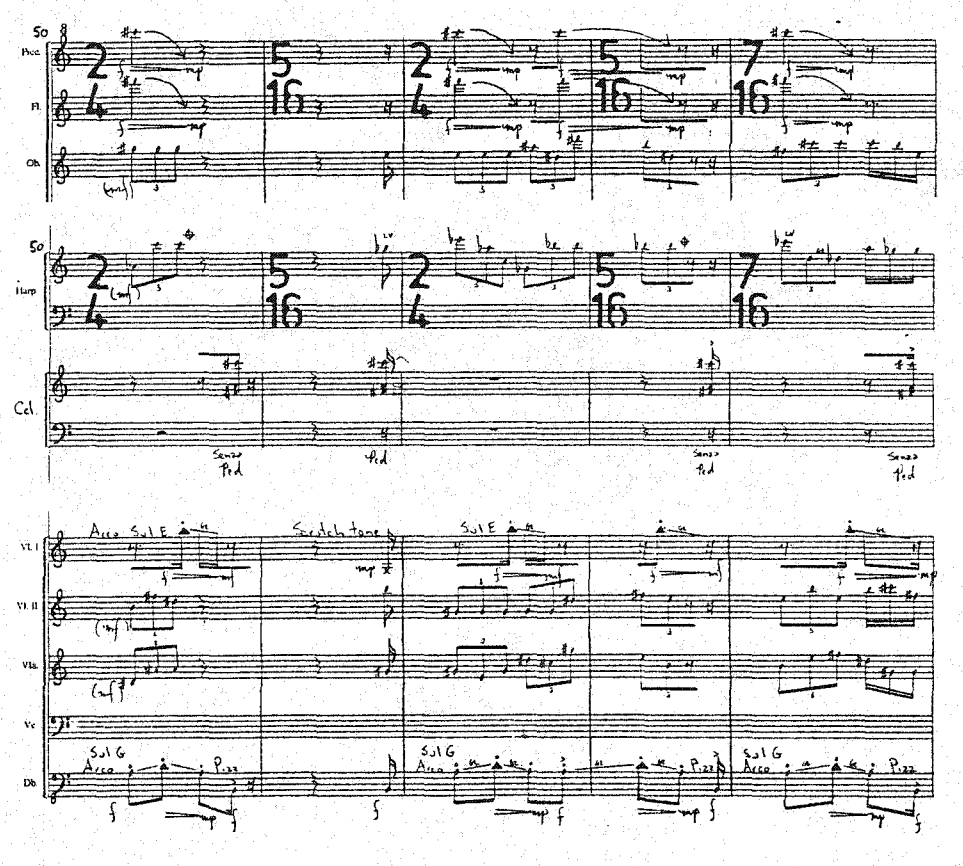
GROUP D: Oboe, Violin, Viola



The means by which these loops are rhythmically organized also promotes the effect of autonomous layers. As described earlier, the last two metaphoric turntables of Section I exist within the metric frame of MT1, yet these ensuing turntables function as independent entities within MT1's foundations. MT2 is a

fluid episode in triple meter ($\text{♩} = \text{♩.}$) where some metric divisions correspond with those of MT1 and others remain autonomous.

[Fig. 24] **Mm. 50-54**

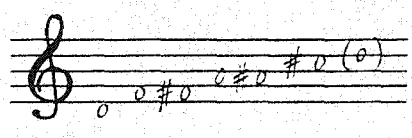


The articulations in MT2 provide a sense of autonomy from MT1. While MT1 contains a series of attacks followed by several fluctuations of dynamics, accents, and articulations, MT2 maintains a constant character. It is one that is assertive enough to solidify its presence—particularly through the use of marcato in the strings—yet is indicative of gesture, phrasing and momentum. The only change in dynamics occurs toward the end of the first section where three metaphoric turntables sound spontaneously.

MT3 is the first metaphoric turntable thus far to use differing pitch combinations. It includes four separate groupings: one each for horn, trumpets 1 and 2 (same grouping), trombone, and cello. The formations bear some resemblance to the previous structures due to the inclusion of thirds, yet they are less perceptible because of the emphasis on minor seconds. In MT3 it is no longer thirds that are the primary focus but rather seconds. The four groups contained in MT3 are as follows:

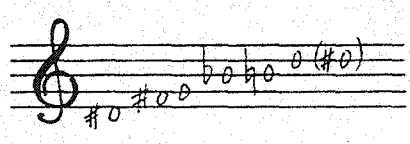
[Fig. 25]

GROUP 1: Horn



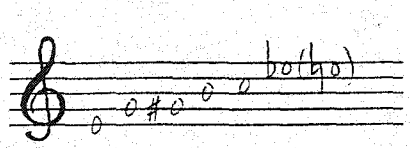
[Fig. 26]

GROUP 2: Trumpets 1+2



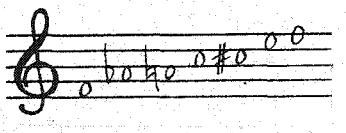
[Fig. 27]

GROUP 3: Trombone



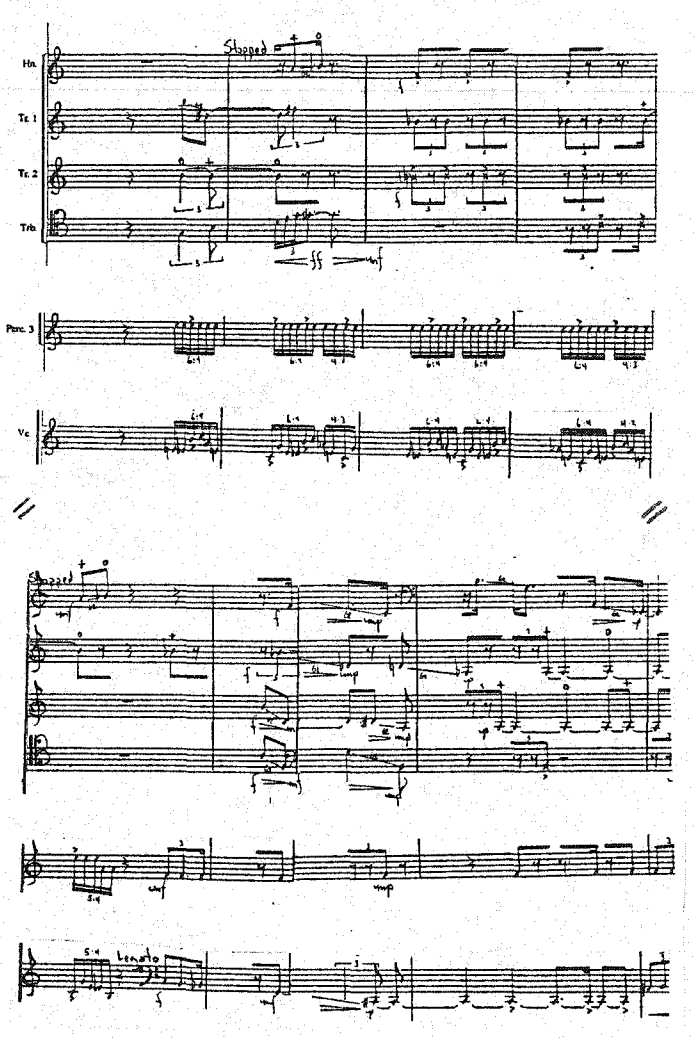
[Fig. 28]

GROUP 4: Cello



The musical character is the most significant component of this metaphoric turntable. The rhythmic qualities and agitated articulations essentially form the core of the stream. The bongos and cello play sextuplets to provide the foundation in conjunction with the percussive attributes of the brass that serve almost as an embellishment to the cello's incessant loop. This loop supplies a constant repetition of raucous material as ornamentation to the focal point of the stream—the bongo's rhythm. In addition, the high register and quick tempo of the cello part prepares for the imminent slowing down, which is an essential element of the simulation of the warped turntable technique. These episodes of warping occur three times in MT3 where the rhythmical values of this stream increase in length while simultaneously descending greatly in pitch.

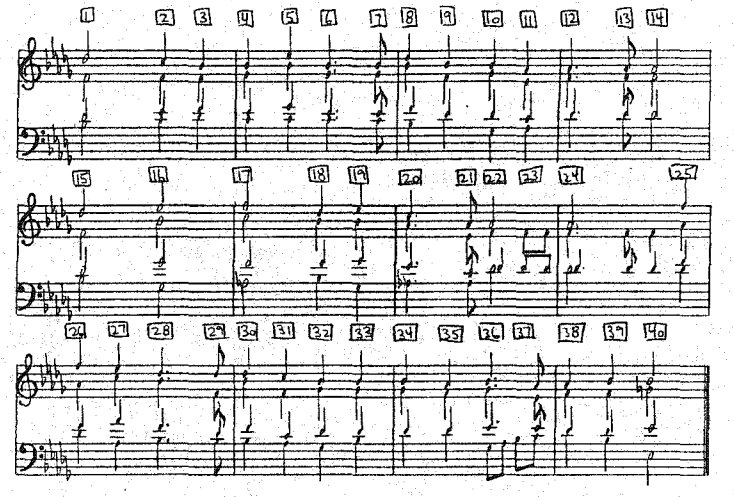
[Fig. 29] Mm. 89-92



The selections of preexistent sources begin to have a notable impact on almost all of the material starting with the introduction of MT4 in Section II (m. 113). The basis of the material for this stream is AT1 played by the DJ who manipulates the "Morning Hymn" from *The Sound of Music* soundtrack. The hymn contains forty individual chords that are heard in succession in the recording. In *RPM* the DJ manipulates them so that they correspond with the ensemble writing. The following

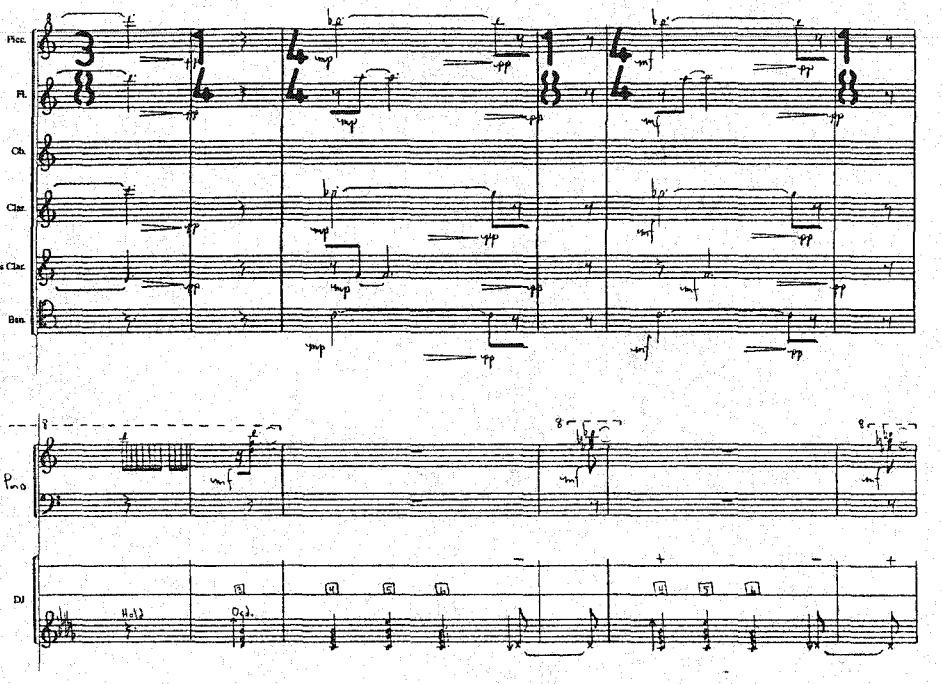
is a transcription of the hymn that specifies the chord changes as they appear in *RPM.*

[Fig. 30]



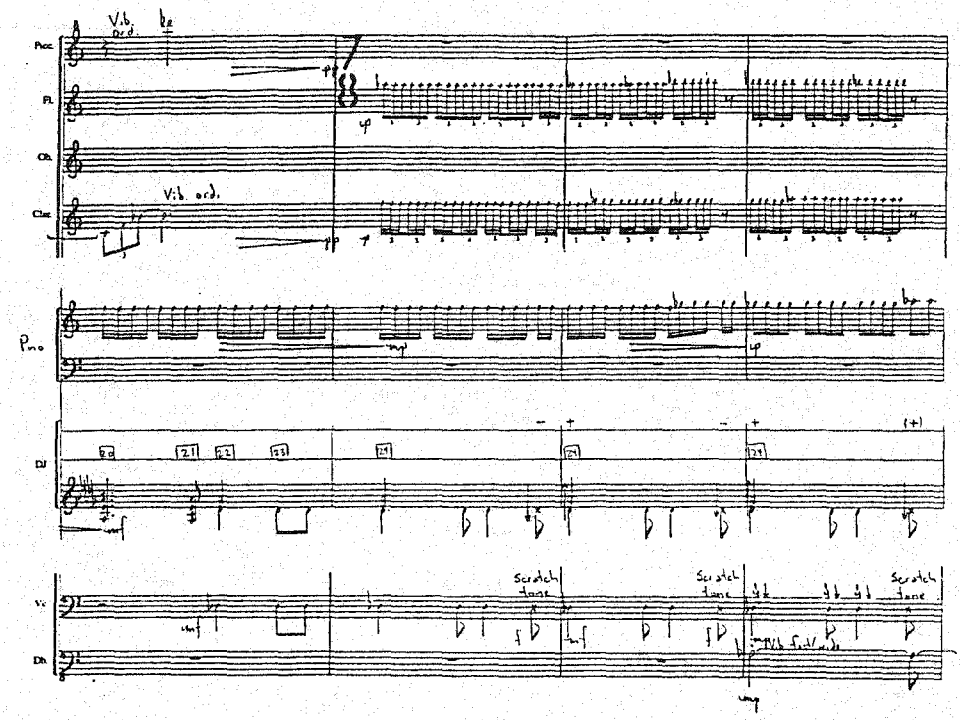
The pitch structure of MT4 demonstrates the impact of the preexistent excerpt since all of the chords and other tonal formations originate from the excerpt. These derivations are, for the most part, indirect. The sonorities played by the ensemble may imply the particular chord in its original form as it is heard in the recording, but one or two pitches differ slightly to create a new, yet associated soundscape. While this concept permeates MT4, one instance where it is particularly effective is the beginning of m. 120 in the piano part. The recorded excerpt plays a Bb minor chord in first inversion and the piano plays a derivation of the same chord in the same inversion one 16th beat later, except that the D and B are natural. In the following measures, the recording plays a half-diminished chord beginning on C and the ensemble alters this sonority by changing the Eb from the original hymn to an F and replacing the Gb with an A.

[Fig. 31] Mm. 119-124



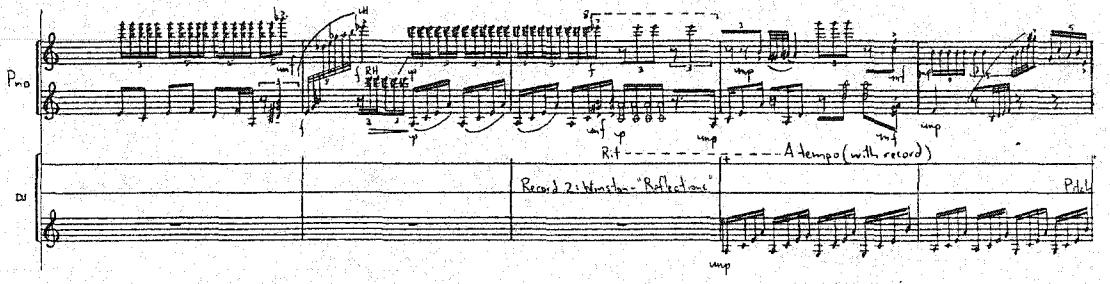
This procedure preserves the fundamentals of the chords so that they coalesce with the sampled material and they do not seem to be completely disassociated; yet the slight alterations present a new sound spectrum. Mm. 142-147 illustrate another means of composing around the recorded hymn. M. 142 begins with a Db major chord in the flute, clarinet, piano, and cello parts, then a transition gradually begins as the acoustic instruments slowly deviate from the initial chord while the recording maintains it. The listeners can detect a change slowly taking place while the focal material stays the same.

[Fig. 32] Mm. 141-144



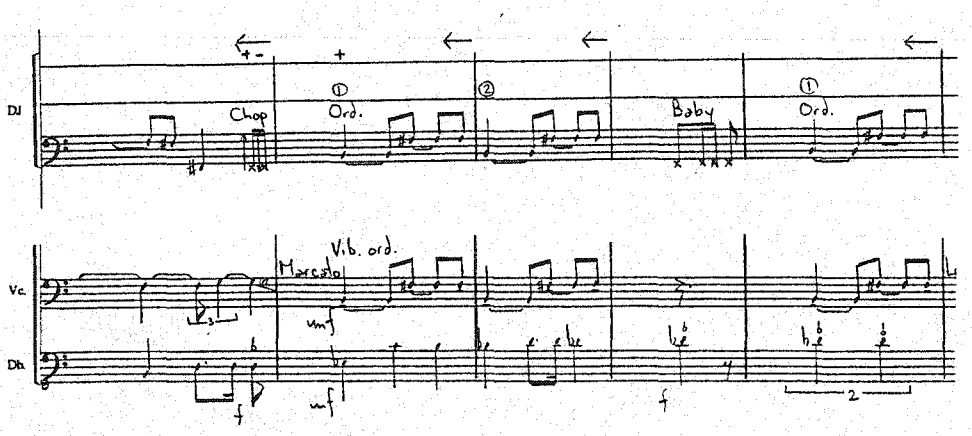
AT2 incorporates George Winston's "Reflection" and this excerpt is the basis for the material in MT5. The metaphoric stream precedes the actual recorded version and there are several allusions made to it by the acoustic piano before the recorded excerpt begins. The preexistent sample is harmonically quite simple and thin-textured, which is ideal for merging with the acoustic piano. This facilitates the process of synchronizing both the metaphoric and authentic turntables and having both parts discernible while maintaining an adequate blend.

[Fig. 33] Mm. 161-165



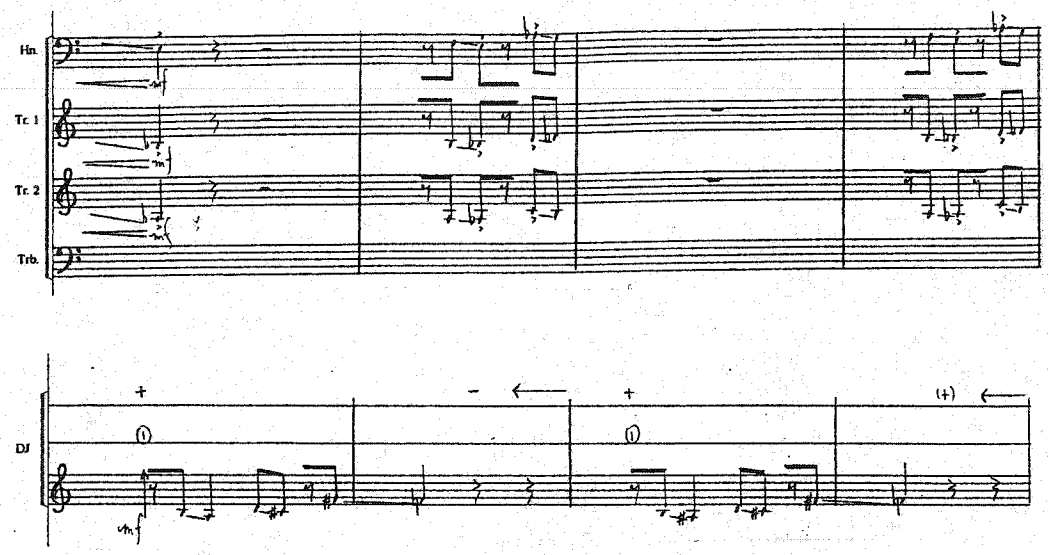
M. 191 is the start of the second part of Section II due to the change of preexistent, recorded selections and simultaneous transformation of acoustic material. In m. 191 MT6 sounds in combination with AT3 and AT4. The preexistent sources used in AT3/AT4 are fragments extracted from three selections by Perry Como: "Catch a Falling Star", "Don't Let the Stars Get in Your Eyes", and "Papa Loves Mambo". The premise for AT3 and AT4 is a prominent turntable effect referred to as record juggling. This procedure employs two records simultaneously and therefore requires a great deal of adeptness with the crossfader control on the mixer. In AT3 the DJ manipulates two identical records—one on each turntable—and alternates between them. By juggling two records of the same material, the DJ generates a loop and can then modify it in a variety of ways to create unequal and altered measures, and then combine them with various scratching effects. The acoustic ensemble intermingles with the recorded samples to function as an embellishment or an accompaniment to suit the character of the excerpt. At precise moments, specific instruments in MT6—most notably the cello—imitate the recorded fragments.

[Fig. 34] Mm. 199-203



AT4, beginning in m. 228, also exploits the record juggling technique, but in this instance the DJ manipulates two different samples. This effect differs from the previous one due to the contrasting qualities of the two fragments. Their tempos are not synchronized; the excerpt starts simply at the cue of the conductor. This is an issue that will be investigated further in chapter 6. One notable feature of MT6—whose material has its origins in AT4—is the imitation of the recorded fragments by the acoustic ensemble. This segment of the work uses a similar approach to the one used in MT4. Certain pitches taken from the recorded excerpt differ slightly to simulate the excerpt while generating new pitch constellations and harmonic fields. In addition, rhythms from the recorded samples appear in the acoustic simulations.

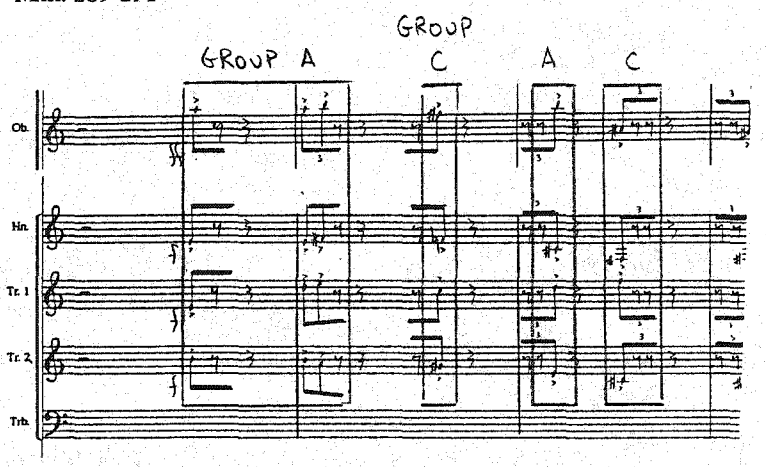
[Fig. 35] Mm. 228-231



As discussed earlier, Section III consists of a simulated "DJ Battle" where the contestants are the entire acoustic ensemble and the DJ. The three metaphoric turntables in the battle (MT8, MT9, MT10) suggest this idea of a competition in addition to simulating specific aspects of the authentic turntables used in the contest. A great deal of the material used in MT8—which initiates the battle in m. 288—mimics scratching techniques. These will be discussed in the following section of the analysis. The pitch structure for MT8 refers to the pitch groupings that form the first two metaphoric turntables in Section I (refer to pages 29-32 of this analysis). The material in Section III alternates between these four groups of pitch structures. Employing these groups again in this concluding section provides some reference to the initial metaphoric turntables of Section I and binds the work to some degree. To view this reiteration of the grouping, the brass section in conjunction with the oboe can be examined from m. 289 to m. 293. In this excerpt,

pitches derived from Group A (that constructs MT1), and Group C (that constructs MT2) alternate. The groupings are outlined in the following excerpt.

[Fig. 36] Mm. 289-291

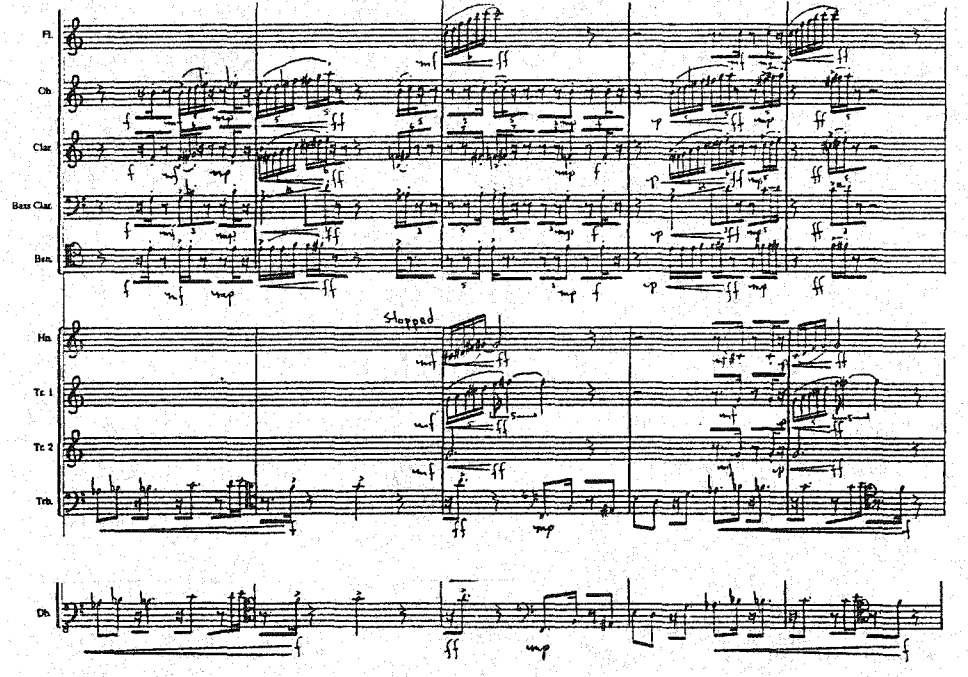


AT5, which corresponds with MT8, includes a very short fragment that sounds during MT8's display and becomes integrated into it. The DJ manipulates this same fragment during his demonstration using scratching techniques, while the instrumental ensemble is silent with the exception of the glockenspiel and trombone that embellish the DJ's display and provide a pitch foundation. (See mm. 292-306 in the score).

The second "round" of the competition occurs from mm. 308-325 where both the metaphoric and authentic turntables are different. While the authentic turntables—or records—are literally changed, the music of the acoustic ensemble also changes to suggest a switching of records. In MT9 the acoustic ensemble emulates the material from AT6. Using a concise vocal fragment from *The Sound of Music*, AT6 exploits a common turntable technique known as the "forward" wherein the DJ begins an excerpt and then suddenly cuts it off while pulling the record back to begin the excerpt again. While pulling the record back to the

beginning of the excerpt, the DJ closes the crossfader so as not to play the scratch-type sonority. MT9 emulates this forward technique produced by the DJ. This is the reason for its staggered nature, its repetitiveness and its ascending sonorities that seem to better mimic the "forward" technique. The material in the trombone and bass parts serves as a virtual running bass or accompaniment to the focal material.

[Fig. 37] Mm. 309-313



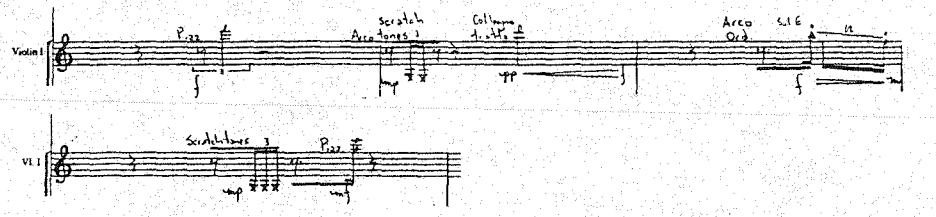
The final part of the simulated battle beginning in m. 325 and concluding in m. 343 forms the tenth metaphoric turntable that rivals AT7. This presents the apex of the battle where the DJ demonstrates numerous scratching techniques using a specific DJ record intended for such procedures. The acoustic ensemble emulates the sonorities by playing raucous, agitated articulations at its loudest dynamic level. The exchanges between the two contestants occur at rather quick intervals until m.

340 where they sound simultaneously to conclude the battle. This chaotic climax keeps the listener unsure as to who is the actual winner. (See mm. 325-343 in the score).

Chapter 5: The Transposition of Turntable Manipulation into the Instrumental Writing

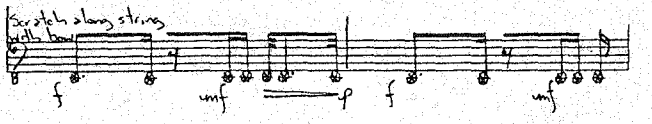
While the emulation of authentic turntable techniques by the acoustic ensemble exists on a macro level—to the extent that it dictates the formal structure of the work—it also exists on a micro level. This chapter of the analysis deals with the inherent features of the individual instruments from the acoustic ensemble that mimic features of turntable manipulation at a more local level. Most of the simulated effects in *RPM* are scratching techniques; therefore, many percussive, scratchy-type sonorities are heard at specific moments throughout the work. This concept becomes evident immediately in Section I where the acoustic ensemble simulates turntable idioms on a macro level without the presence of authentic turntables. Within this larger-scoped occurrence, individual instruments perform numerous percussive effects to mimic the scratching sonorities. The violin and double bass play these throughout MT1. The violin performs scratch tones in mm. 2 and 4 of the first six measures that form the material for all of MT1. Therefore this effect appears throughout MT1.

[Fig. 38] Mm. 1-4



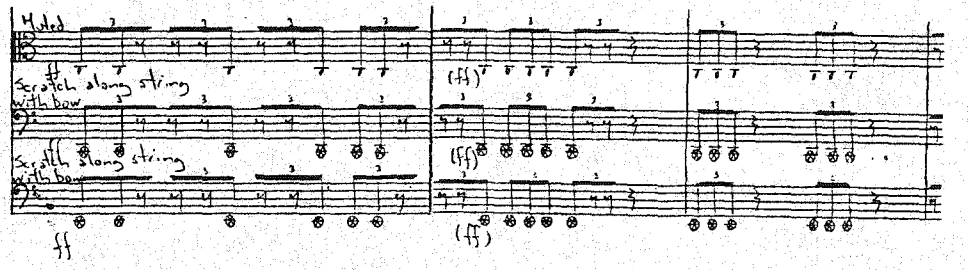
The double bass plays an articulation that is a particular expression of the scratchy sonority on turntables. In mm. 5-6 the bass player rubs the bow with force longitudinally along the E string.

[Fig. 39] Mm. 5-6



This procedure foreshadows Section III where the viola, cello, and double bass utilize this technique throughout.

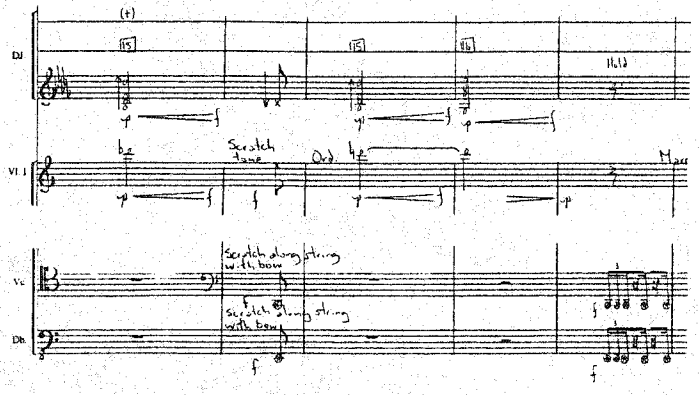
[Fig. 40] Mm. 228-290



Additional turntable simulations of this nature occur at the start of Section II where metaphoric and authentic turntables begin to intermingle. In m. 135 the acoustic ensemble interrupts the flow of the authentic turntable with very short, uneven measures of scratchy, percussive material. M. 136 serves as an interruption of the "Morning Hymn" (the manipulated sample in this section), in that the first

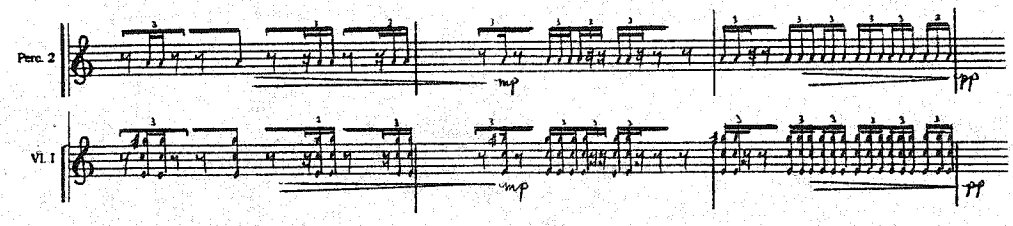
violin, cello, and double bass play scratchy sonorities in combination with those scratches performed by the DJ.

[Fig. 41] Mm. 135-139



In mm. 140-143 the violin plays marcato triple stops in conjunction with the cabasa. This combination produces a predominantly raspy sonority through which an actual pitch remains perceivable.

[Fig. 42] Mm. 141-143



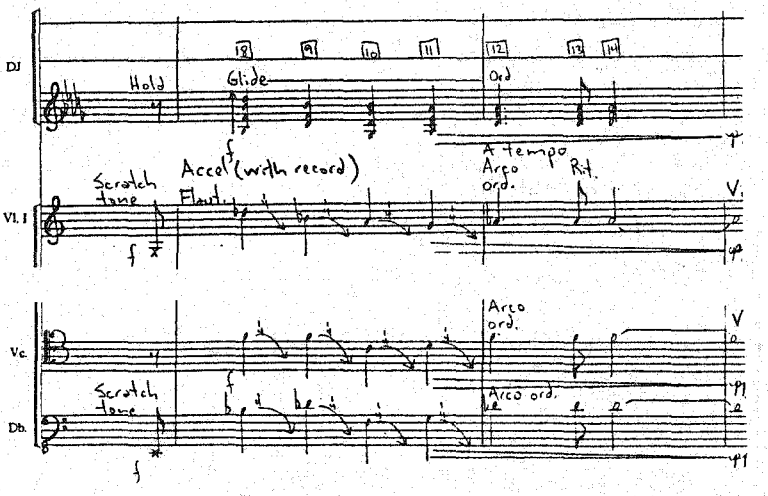
Chapter 6: The Issue of Synchronization in the Fusion of Preexistent Recorded Material and the Acoustic Ensemble. Who's Conducting Whom?

The integration of preexistent, recorded excerpts and acoustic instruments raises the question of tempo and synchronization between the two protagonists. Due to

the inclusion of the recorded excerpts, one could assume that the ensemble would be conducted and performed around the sampled material, which could be regarded as the authority in matters of tempo. The ensemble has one virtual conductor (the pre-recorded material) and one authentic conductor. In *RPM* the reverse is also true. The preexistent, recorded samples do not exist independently; the DJ controls them via turntables and, consequently, the turntables are regarded as an instrument in their own respect. Both situations occur throughout the work. In one instance, the sampled excerpts played by the DJ dictate the pace to be followed by the conductor. In another instance, the DJ must revert to the turntable manipulations to keep in sync with the conductor. It is precisely the varied use of these two approaches that is most interesting.

When the authentic turntables are presented for the first time in Section II, the pre-recorded material immediately dictates the tempo. The metronome marking shifts from ♩=84 to ♩=60, which is the tempo of the pre-recorded selection used in this part of the work—the "Morning Hymn" from *The Sound of Music*. The conductor must keep the ensemble in sync with the record, and therefore follows the slight inflections and tempo alterations present in the recording. In order to enable the conductor to do so, the score includes notated versions of the sampled excerpts.

[Fig. 43] Mm. 130-132

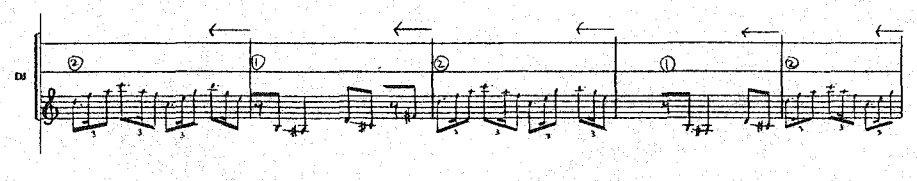


While this alleged manipulation of the conductor and ensemble by the recorded selection occurs, the conductor asserts some control over the DJ and the recording. Although the recording designates the tempo when the material plays in conjunction with the acoustic ensemble, it is the conductor who specifies when and for how long the recorded excerpt plays. The DJ starts and stops the recording to comply with the instrumental writing, although the conductor usually maintains the tempo at approximately ♩=60 (the tempo of the "Morning Hymn"). In turn, whenever the record resumes playing, the conductor follows it once again.

There is one particularly notable part of the work that demonstrates the conductor exerting almost complete control over the ensemble and DJ. In m. 228 of Section II, the DJ juggles two records using two different recorded fragments. Both are samples taken from the Perry Como catalogue but from two different selections. The most prominent varying element between the two fragments is tempo. The first sampled recording, "Don't Let the Stars Get in Your Eyes" (whose tempo is ♩=126),

provides the overall pace for this portion of the work. Following the establishment of this tempo, the conductor stringently maintains it even though the second fragment—which enters at m. 238—proceeds at a faster speed and introduces a new character.

[Fig. 44] Mm. 238-242



In this instance of juggling two different records, it is important for the DJ to follow the conductor closely with little regard to the preexistent tempi from the recorded samples. The DJ alternates the records only when indicated by the conductor, and will not switch to the second excerpt in accordance with its inherent beat or tempo. These examples illustrate how the conductor and the DJ share the responsibility of designating the tempo, and shows how their interaction generates variations in the pace, meter, and rhythm.

Conclusion

My intention behind *RPM* was to construct an entire work around one precise concept and exploit it in every plausible facet of the composition. To a large extent, I conceived the work as an "organic" entity; one that grows and develops from one seed or specific source that, in this instance, is the turntable. From an intrinsic

perspective it could appear that the fusion of two diverse art forms is what constitutes the work. While this coalescence for me was of primary importance, it was the diversified renderings of the turntable concept that stimulated me the most compositionally—not only in its authentic form but also in its metaphoric transliterations.

In addition to enabling me to generate new sonorities and soundscapes, this procedure of both recontextualization and simulation has led me to revisit varying aspects of formal structure and general musical syntax. My objective was not only to exploit the turntable in its most idiomatic form in a context where it could be perceived as an instrument in its own right, but more so to consider it the foundation of the material for the entire acoustic ensemble. I wanted to propose a feud between the two sound sources (DJ and ensemble) while simultaneously suggesting a collaboration or form of synergy between them.

This composition also presented the task of notating the new techniques and procedures performed by the DJ. A task that, to my knowledge, had not been attempted prior to this work. This led me to devise a concise method to be quickly and easily comprehended and interpreted by both the DJ and the conductor. This required transcriptions of the recorded fragments, varying from simple contour indications up to a full pitch and rhythm transcription.

Upon the completion of this work, I realize that my research and experimentation will lead me to new, extensive amalgamations of sound sources. There remains an extensive realm of possible turntable techniques and unlimited combinations to be explored. In addition, new procedures are constantly being

created and refined. When these possibilities intertwine with the broad-scale possibilities of a large acoustic ensemble, the options are endless. Following the completion of this project, I look forward to continuing my research into the turntable technique and its integration with acoustic instruments. It could be stimulating to experiment with varying instrumental groups in combination with two turntables or perhaps numerous turntables operated by several DJs. The technical combinations remain numerous, as do the future aesthetical implications.

Bibliography

Potter, Russell A. *Spectacular Vernaculars: Hip-Hop and the Politics of Postmodernism.* Albany: State University of New York Press, c1995

Strickland, Edward. *American Composers: Dialogues on Contemporary Music.* Bloomington: Indiana University Press, 1991

Zorn, John. "Zorn on Zorn". *Downbeat.* March 1992

Website Articles:

McLeod, Kewbrew. "A History of Turntablism", 1999. www.scratchdj.com

Jee, Bevan. "Scratch Tutorial", 1998. www.turntablism.com

Vode, Zorlon. "The Evolution of a Disk Jockey in the Hip-Hop Culture", 1998 www.turntablism.com

Recordings

Como, Perry. "Don't Let the Stars Get in Your Eyes". (Slim Willet, composer), 1952

Como, Perry. "Catch A Falling Star". (Lee J. Pockniss and Paul Vance, composers), 1954

Sandpipers, The. "Inchworm". Toronto: Quality Records, Ltd.

Sound of Music, The. Soundtrack recording. "Morning Hymn". (Rodgers and

Hammerstein, composers). New York: RCA Records, 1965

Sound of Music, The. Soundtrack recording. "I Have Confidence". (Rodgers and Hammerstein, composers). New York: RCA Records, 1965

Winston, George. *Winter Into Spring.* "Reflection". Stanford, California: Windham Hill Records, 1982

Selected Readings

Jencks, Charles. *The Post-Modern Reader.* London: Academy Edition; New York: St. Martin's Press, 1992

Nattiez, Jean Jacques. *Music and Discourse: Toward a Semiology of Music.* Princeton, New Jersey: Princeton University Press, 1990

Windsor, W. Luke. "Autonomy, Mimeses and Mechanical Reproduction in Contemporary Music". *Contemporary Music Review.* 1996, Volume 15, part 1, pp. 139-150

RPM

For Large Ensemble and Solo Turntablist

Nicole Lizée

Instrumentation

2 Turntables (1 DJ)

Piccolo flute
Flute
Oboe
Clarinet in Bb
Bass clarinet (plays one crystal glass from mm. 1-82)
Bassoon (plays one crystal glass from mm. 1-82)

French horn
2 Trumpets in C
Trombone

3 Percussion: (each player has the following instrumental set-up):

1. Vibraphone
   Glockenspiel
   3 Cymbals
   --1 small cym.
   --1 med. cym.
   --1 ride cym.
   Tam-tam
   Bass drum
   Sandpaper blocks
   7 Crotales
   Musical saw
   3 Tom-toms
   --1 high
   --1 med.
   --1 floor tom-tom
   Snare drum
   1 Timpani (30")
   Flexatone

2. Glockenspiel
   Brake drum
   Tam-tam
   Snare drum
   3 Cymbals
   --1 small cym.
   --1 med. cym.
   --1 sizzle cym.
   Cabasa
   Hi-hat

3. 4 Crystal glasses
   Vibraphone
   Xylophone
   2 Bongos
   Conga
   Snare drum
   Tam-tam
   Ride cym.

Harp
Piano/Celesta

2 Violins
Viola
Cello
Double Bass

The score is notated at concert pitch with all instruments sounding as written with the following exceptions: the piccolo flute sounds one octave higher than written, the celesta sounds one octave higher, the glockenspiel sounds two octaves higher, the crotales sound two octaves higher, and the double bass sounds one octave lower.

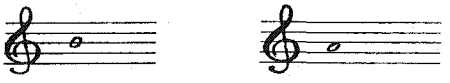
Duration: ca. 12 minutes

Performance Notes

Woodwinds

Chromatic gliss.—fingered glissando as continuous as possible (sliding between pitches).
Embouchure gliss.—gradually turn embouchure away to achieve a descending glissando of approx. one whole tone in length.
 —flutter tongue
When glissandi are notated in the oboe, bass clarinet, and bassoon parts, it is intended for the pitches to dip down slightly between a 1/4 tone and a semitone. See mm. 244-265.
Shake—extreme vibrato is achieved through a combination of lip vibrato and the actual shaking of the instrument. is used to indicate this articulation.

Bass clarinet and bassoon play one glass each from mm. 1-82. This is achieved by wetting the fingers with water and rubbing firmly along the edge of a crystal glass while holding the base. The pitches used are:



Brass

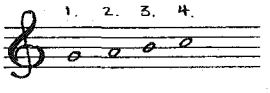
 —accented percussive sound; the attack is of more importance than the precision of pitch.
The trombone employs a straight mute covered in aluminum foil from mm. 113-156.
A tenor or baritone saxophone mouthpiece is attached to the trombone from mm. 243-265.

Harp

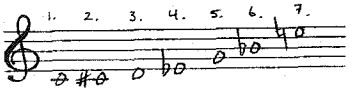
 —dampen strings
—pluck string normally and glissando quickly down a single string using a rod or metal beater.

Percussion

Percussion 3 employs four crystal glasses throughout the work. Two glasses are used in mm. 1-82 and mm. 342-348. All four glasses are used in mm. 283-286. The glasses should be firmly taped to a small table. The pitches for each glass are as follows:



Percussion 1 uses seven crotales from mm. 123-153. The required pitches are as follows:



Piano/Celesta

—vigorously rub the lowest wound strings inside the piano, preferably with waxed paper. See m. 135.

Strings

—bow near bridge to achieve metallic tone.

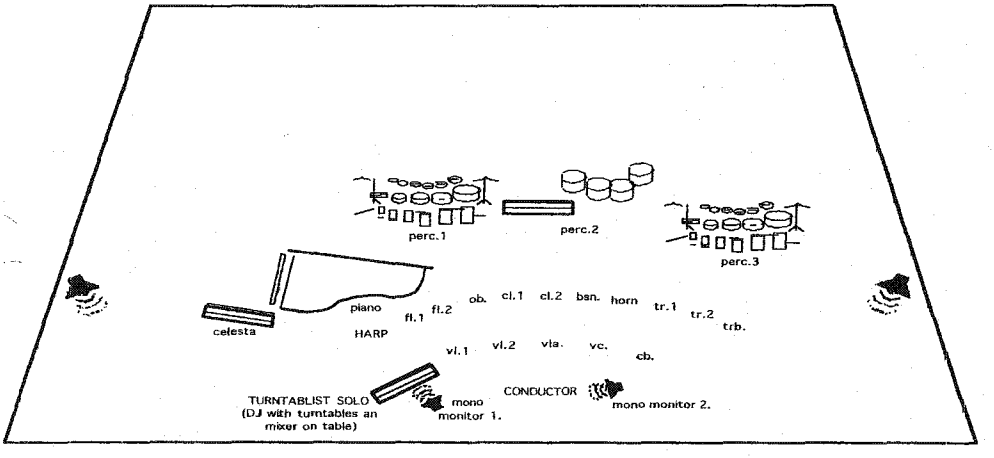
—play highest possible note.

—scratch bow hair firmly longitudinally along specified string for raspy sound.

Col legno tratto—bow using half hair, half wood

Vib. fast/wide—touch the fingerboard lightly as though playing a harmonic and rub along the string approximately the length of an inch. The fundamental pitch will break into higher partials.

Seating Arrangement



Lizée / RPM

Note: stereo SOUND SYSTEM required
stereo output from the DJ table on stage TO>> main stereo speakers and 2 mono stage monitors

Performance Notes for Turntables

Record 1 refers to the turntable to the DJ's right; record two to his/her left.
The record selection is indicted on the second line in the DJ's part.
The crossfader is notated on the top line: +=crossfader is open (sound is on)
-=crossfader is closed (sound is off)
Pitch control is notated on the second line, as are changes in rpm (33 1/3 or 45).
"Morning Hymn"—mm. 113-159: 40 individual chords are numbered in their order of appearance and indicated over the second line.
Volume control is notated at the bottom of the staff. This volume is independent of the excerpt's dynamics and is controlled entirely by the DJ.
↑ —record moves clockwise
↓ —record moves counterclockwise
← —move record back to the beginning of specified excerpt/sample.
Ord.—cancels out any previous instruction or articulation.
Hold—hold record which is cued to the next sample.
Accel.—push record manually to keep in sync with the conductor's tempo.
∓^^^^^^^^—crossfader is quickly flashed on and off.
Record juggling occurs in mm. 191-215 and again in mm. 228-253.

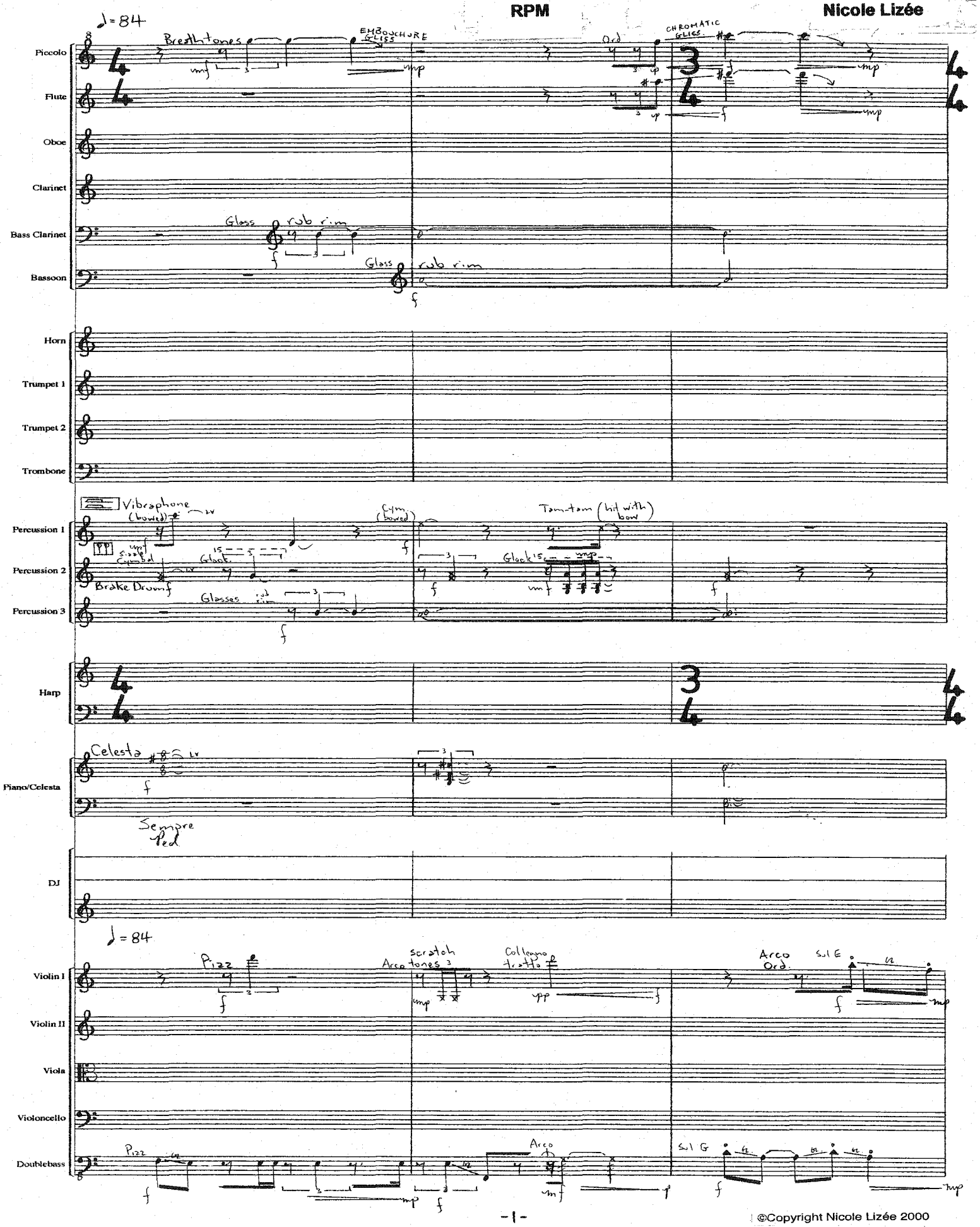
Turntable Techniques and Articulations

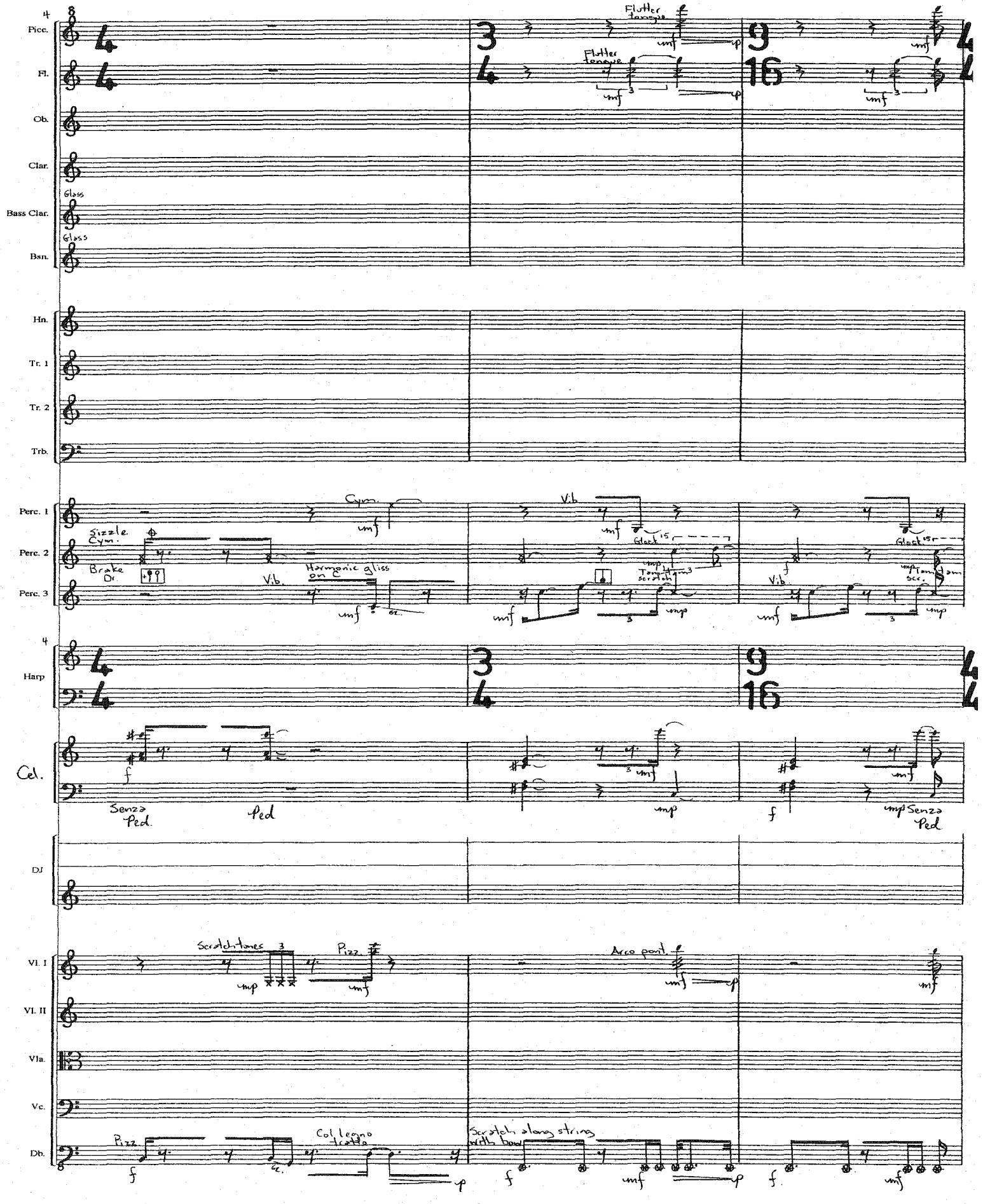
Hydroplane—rub the fingers along the surface of the record against the record rotation to produce a warped vibrating sound. See m. 125.
Glide—rub fingers quickly back and forth along the edge of the record to create a fast/wide vibrato. See m. 118.
Transforming—open and close the crossfader quickly while playing an excerpt to produce a stuttering quality. See m. 150.
Scribble—press fingers on surface of record and tense forearm muscle so that the record moves very quickly back and forth creating a tremolando scratching sonority. See m. 158.
Tear—push record forward to produce one scratch and then pull twice backward; the second of these scratches is louder and slower, lengthening the scratch. See. m. 197.
Baby—two short scratches are produced; one forward and one backward. See m. 171.
Forward—start the excerpt, then suddenly cut off sound pull the record back. See. m. 172.
Flare—scratch forward and then cut off sound abruptly while pulling the record back. See m. 194.

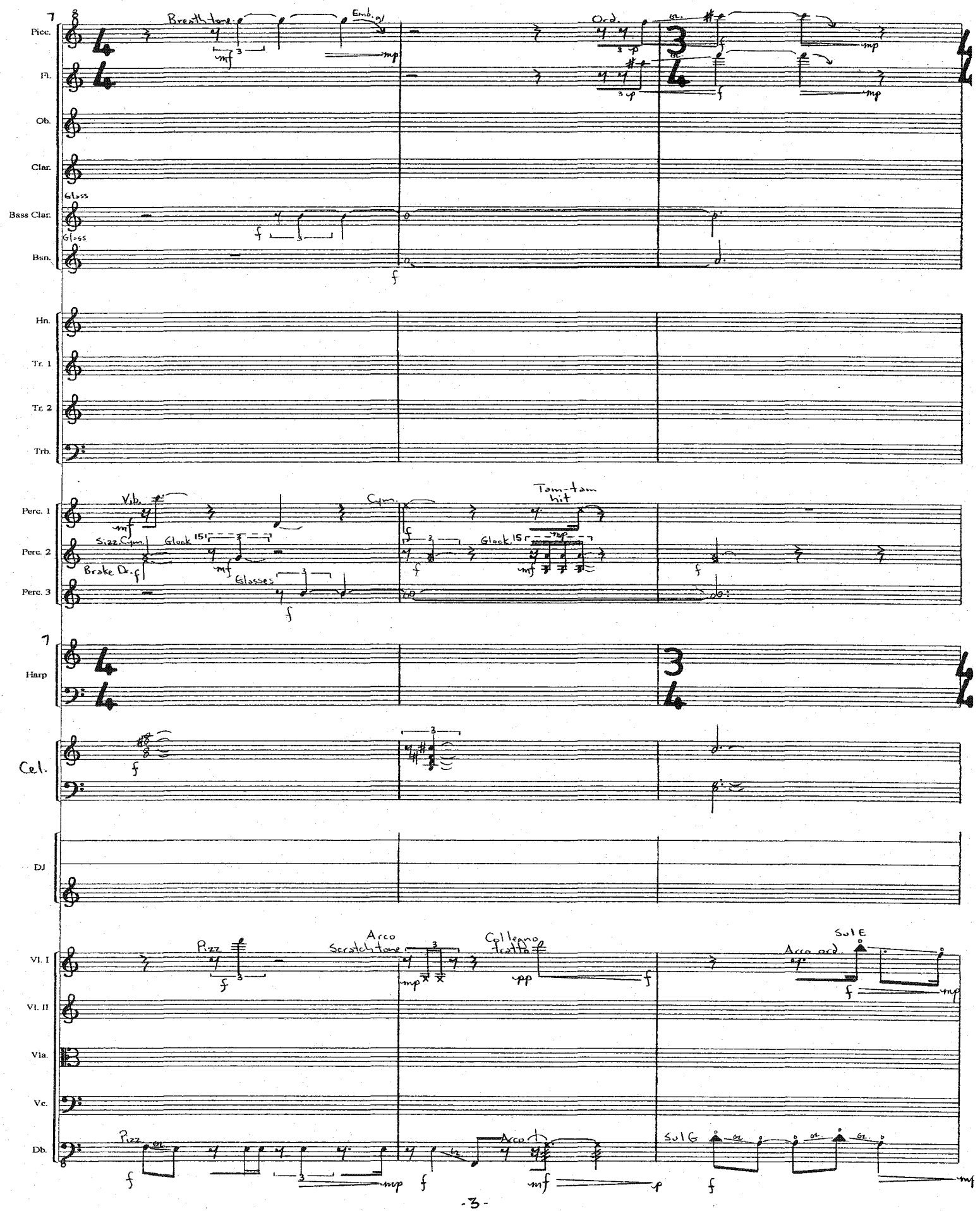
List of Pre-recorded Excerpts: Required Selections and Cues

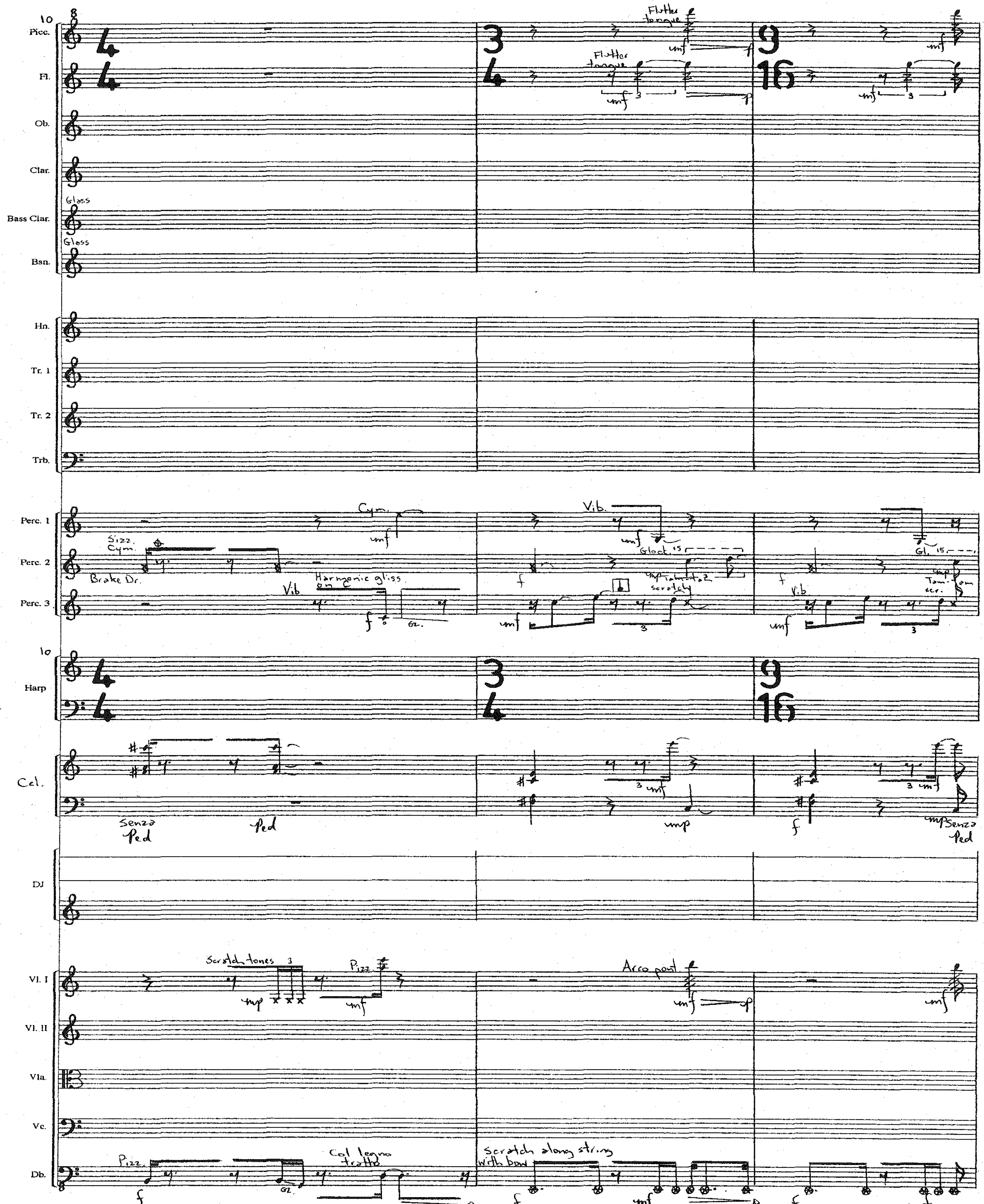
1. *The Sound of Music* Soundtrack: Side 1, track 3--"Morning Hymn". Duration: 1'03" (complete hymn excluding "Alleluia"). Mm. 113-160.
2. George Winston--*Winter Into Spring*: Side 1, track 4-"Reflection". Mm. 164-183.
3. Perry Como--"Catch A Falling Star". Fragment beginning at 0:07. Two records of the same sample are required for this excerpt. Mm. 191-215.

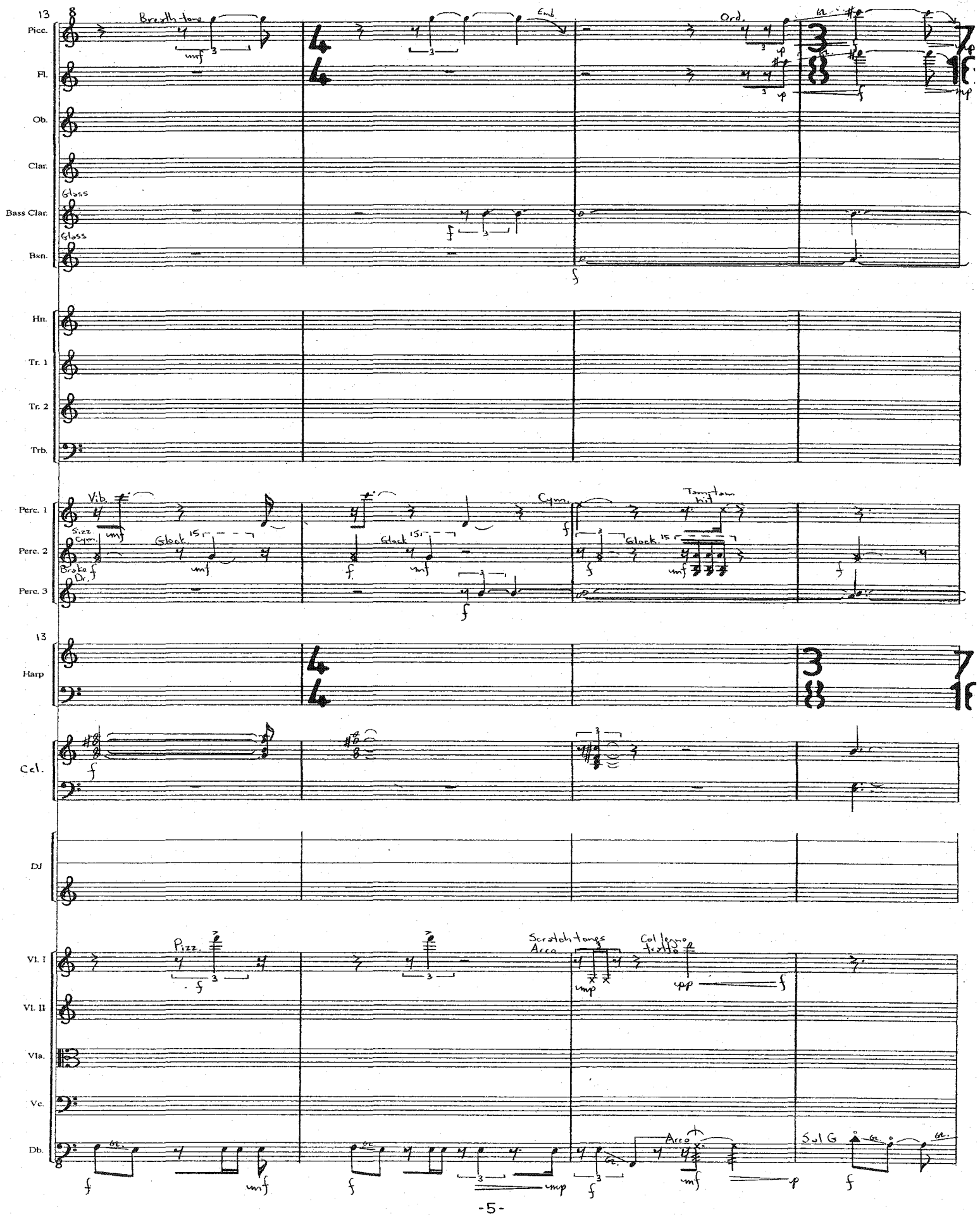
4. Perry Como--"Don't Let the Stars Get in Your Eyes". Fragment beginning at 0:16. Mm. 191-215
5. Perry Como--"Papa Loves Mambo". Fragment beginning at 0:00. Mm. 228-253.
6. The Sandpipers--"Inchworm". Fragment beginning at 0:03. Mm. 228-307.
7. *The Sound of Music* Soundtrack: Side 1, track 5--"I Have Confidence". Fragment beginning at 0:45. Mm. 313-324.
8. Mm. 328-345 requires a record which is suitable for loud, distinct scratching effects.

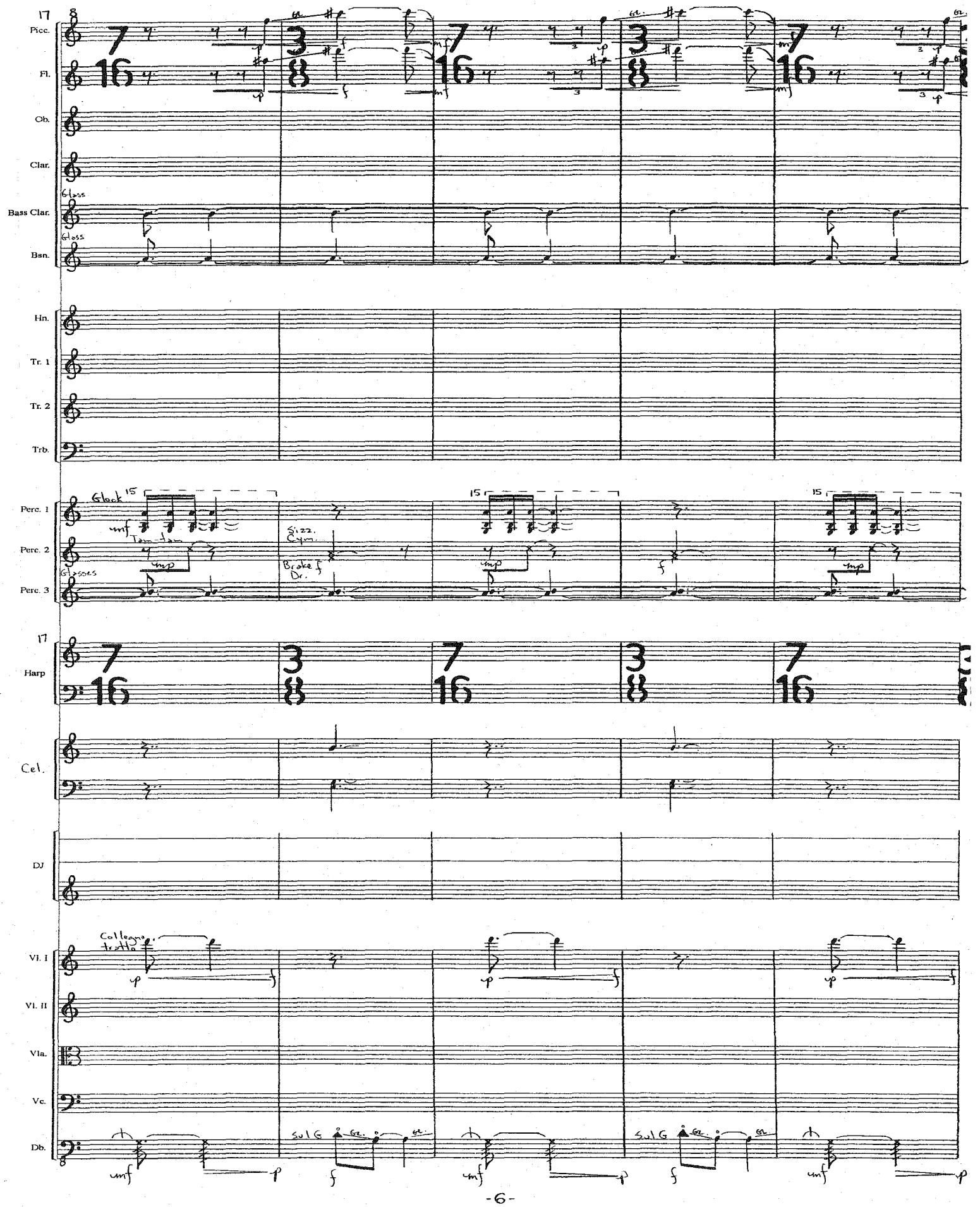


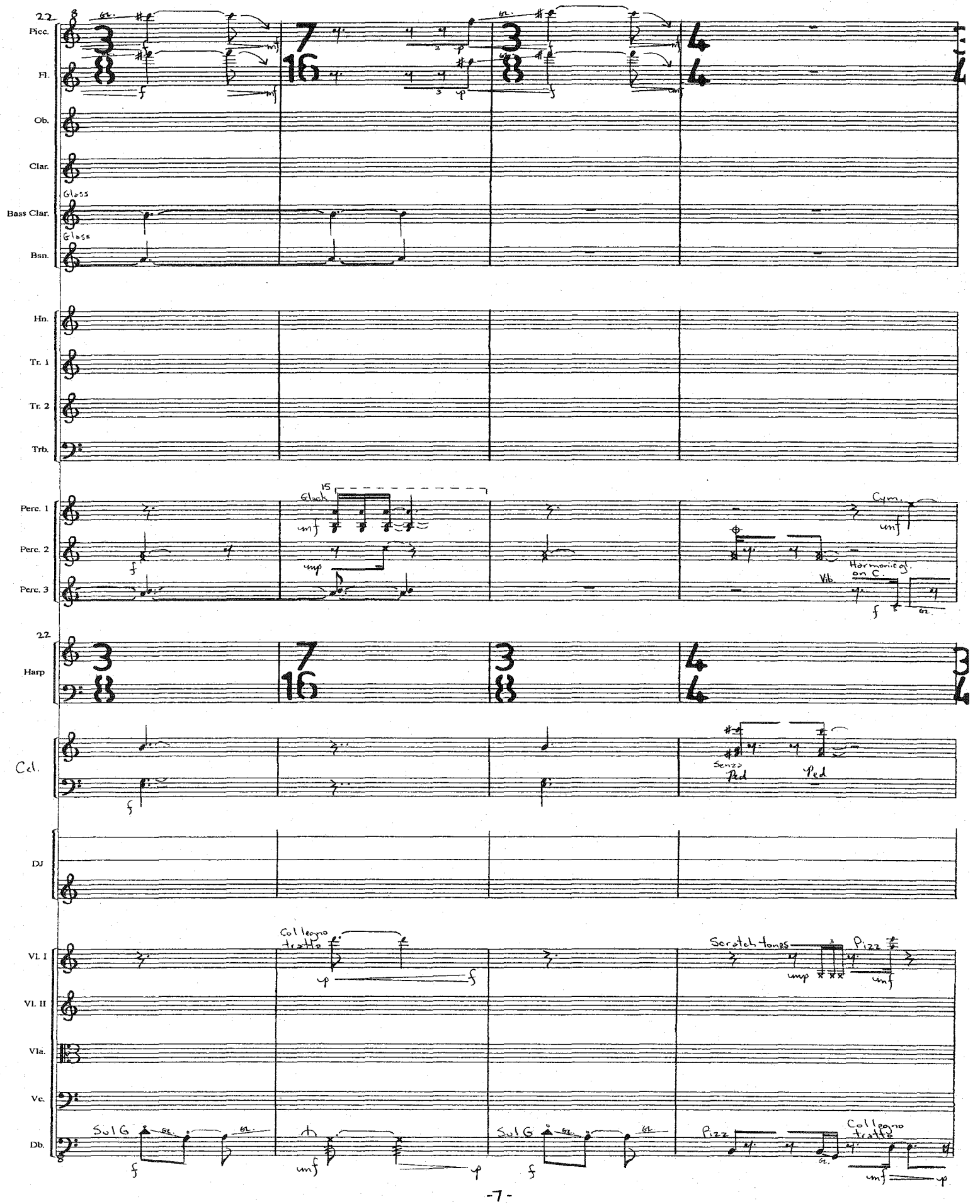

Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Harp
Cel.
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Flutter tongue
Gliss
Sizzle Cym.
Brake Dr
Cym.
Vib.
Harmonic gliss on
Senza Ped.
Ped
Scratch tones
Pizz.
Arco part.
Col legno tratto
Scratch along string with bow

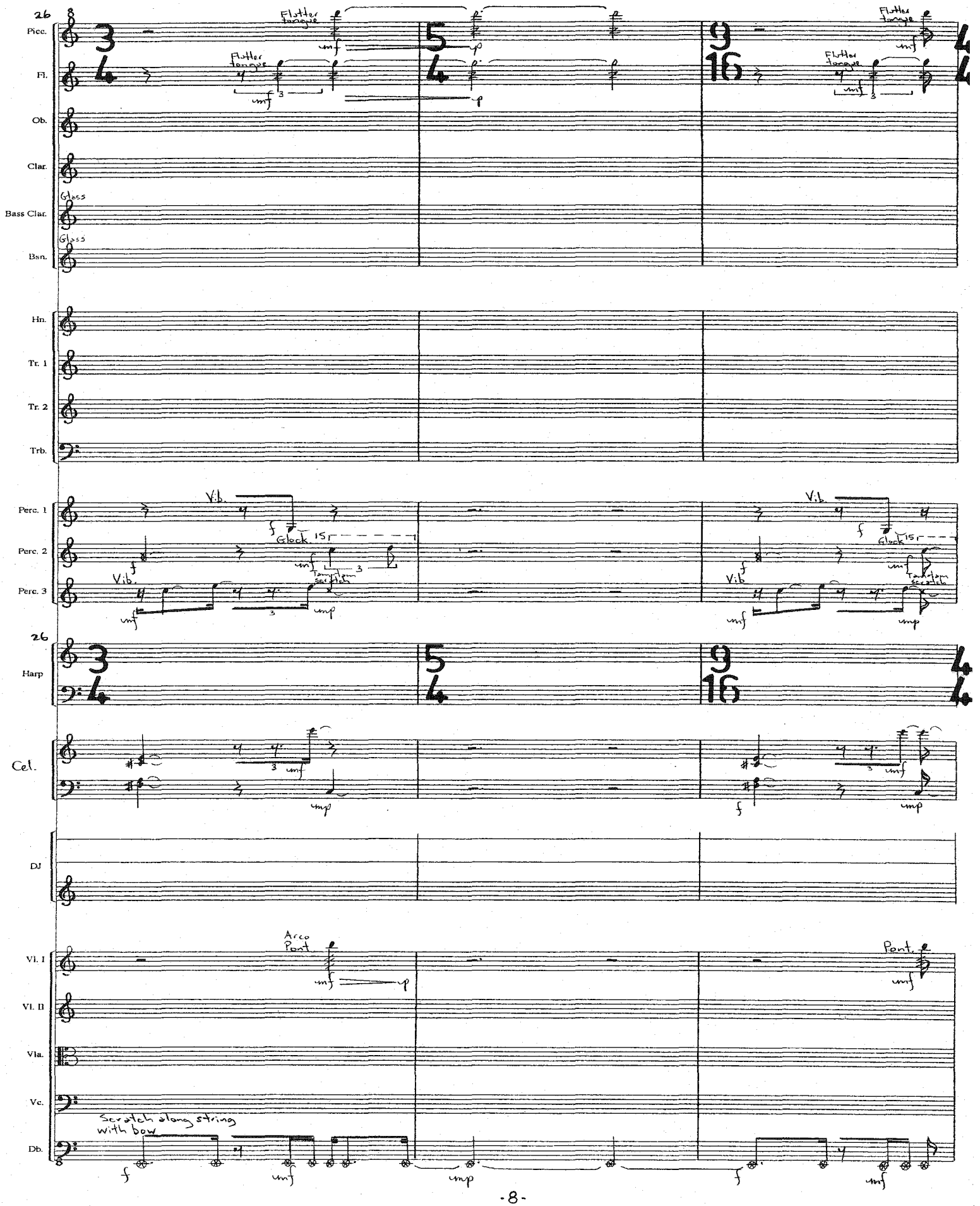

Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Harp
Cel.
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Breath tone
Emb. al
Ord.
Gloss
Vib.
Cym.
Tam-tam hit
Sizz Cym.
Glock.
Broke Dr.
Glasses
Pizz.
Arco
Scratch tone
Col legno tratto
Arco ord.
Sul E
Sul G

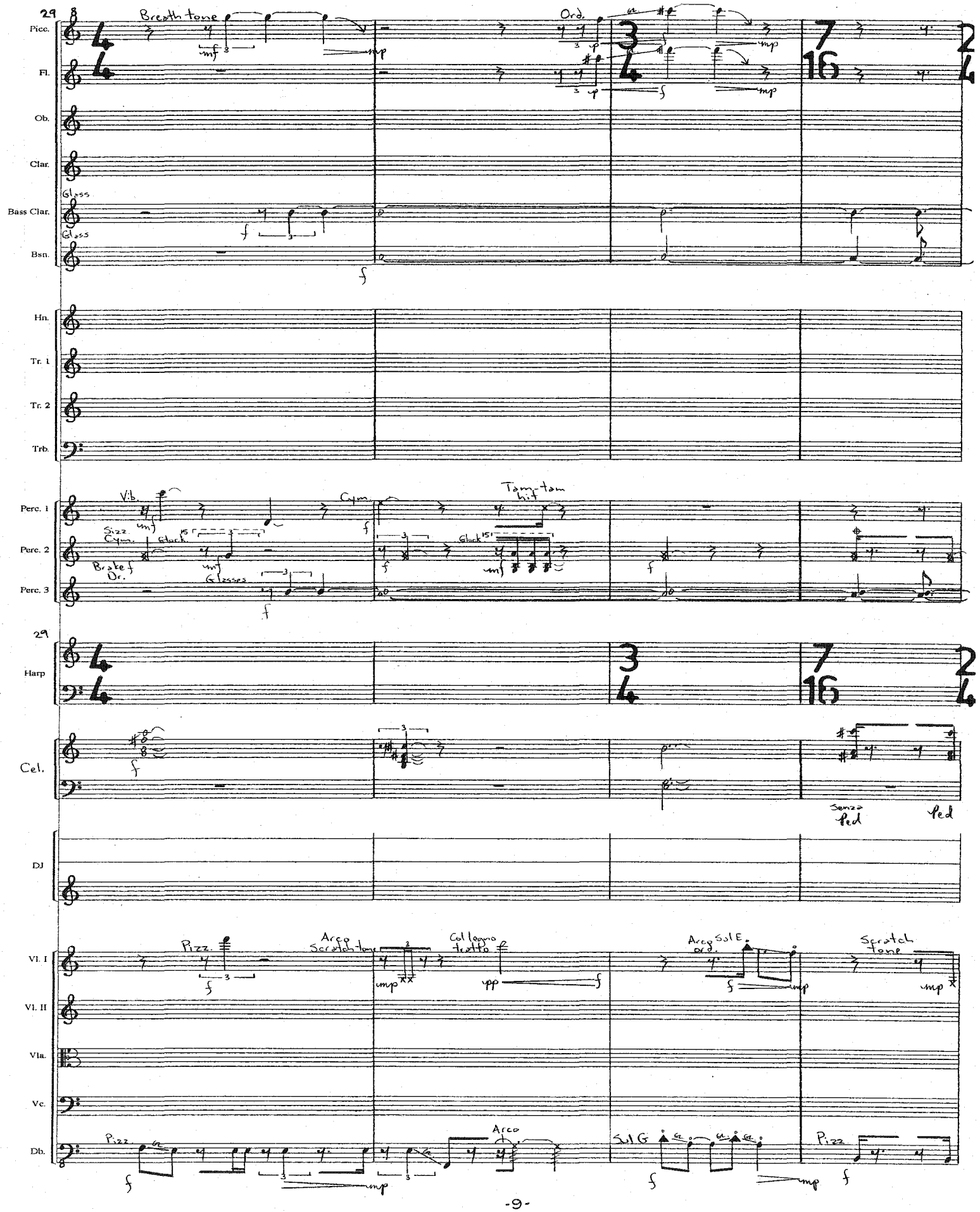

10
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Harp
Cel.
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Flutter tongue
Glass
Cym.
Vib.
Sizz. Cym.
Brake Dr.
Glock.
Gl.
Harmonic gliss on C
Vib
Senza Ped
Ped
Scratch tones
Pizz.
Arco pont.
Col legno tratto
Scratch along string with bow

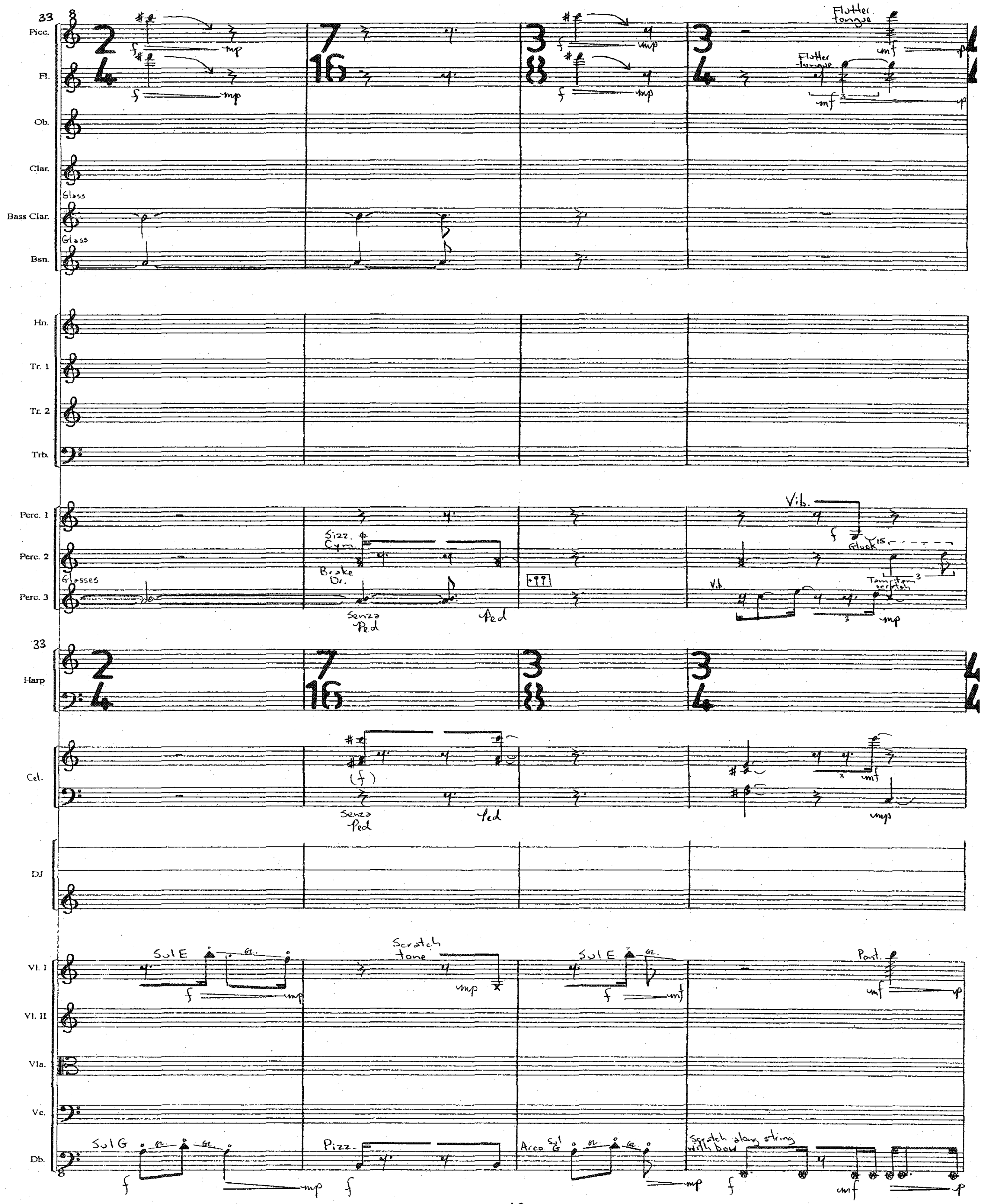

13
Picc.
Breath tone
unf
Emb.
Ord.
Fl.
Ob.
Clar.
Bass Clar.
Gloss
Bsn.
Gloss
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Vib.
Perc. 2
Sizz Cym.
Brake Dr.
Glock
Cym.
Tamtam hit
Perc. 3
13
Harp
Cel.
DJ
Vl. I
Pizz.
Scratch tongue
Arco
Col legno tratto
Vl. II
Vla.
Vc.
Db.
Arco
Sul G

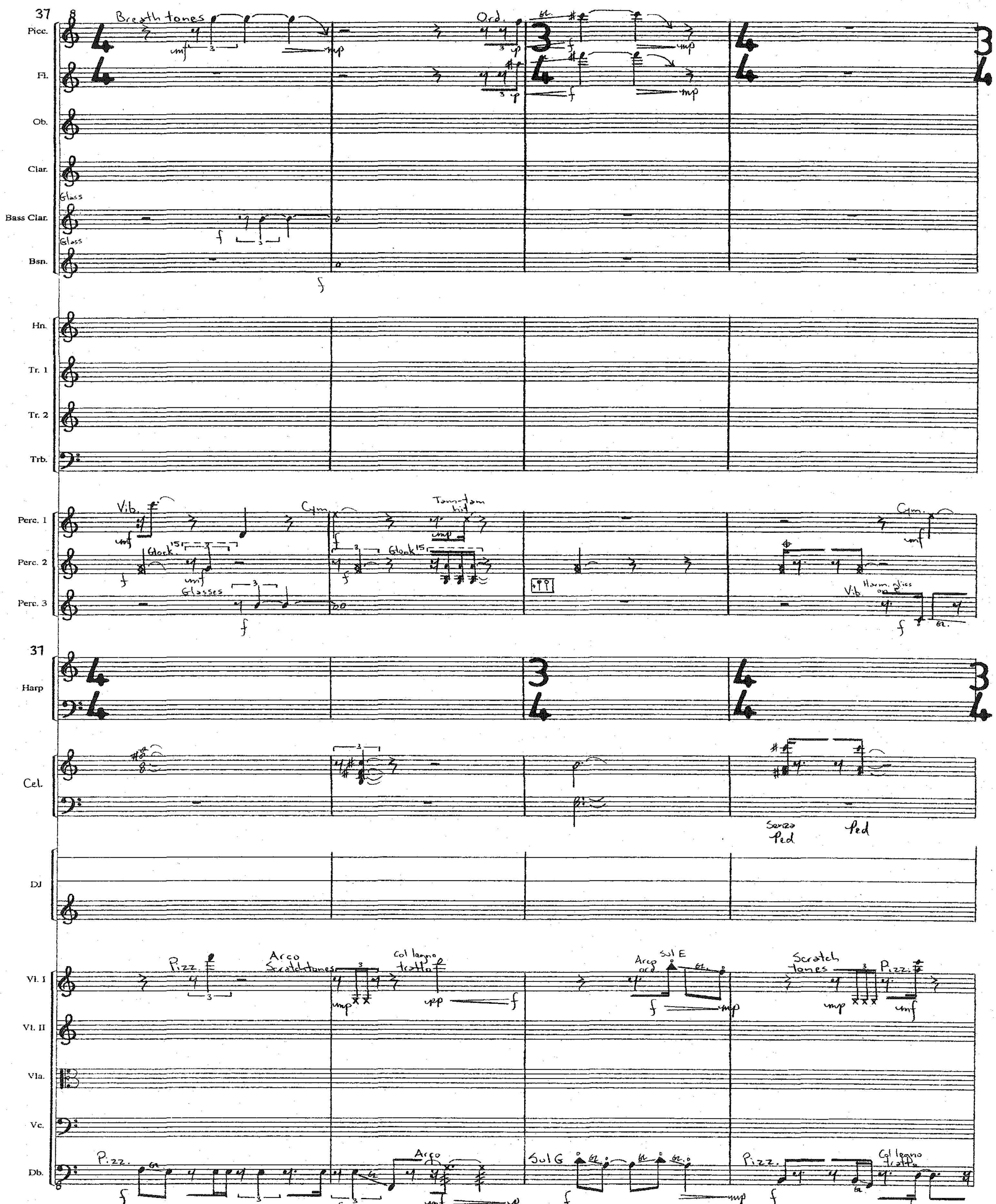

17
Picc.
Fl.
Ob.
Clar.
Gloss
Bass Clar.
Gloss
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Glock
15
mf
Tam-Tam
mp
Perc. 2
Sizz. Cym.
Brake Dr.
f
Gl. Glasses
Perc. 3
17
Harp
Cel.
DJ
Vl. I
Collegno tratto
Vl. II
Vla.
Vc.
Db.
sul G
unf
p

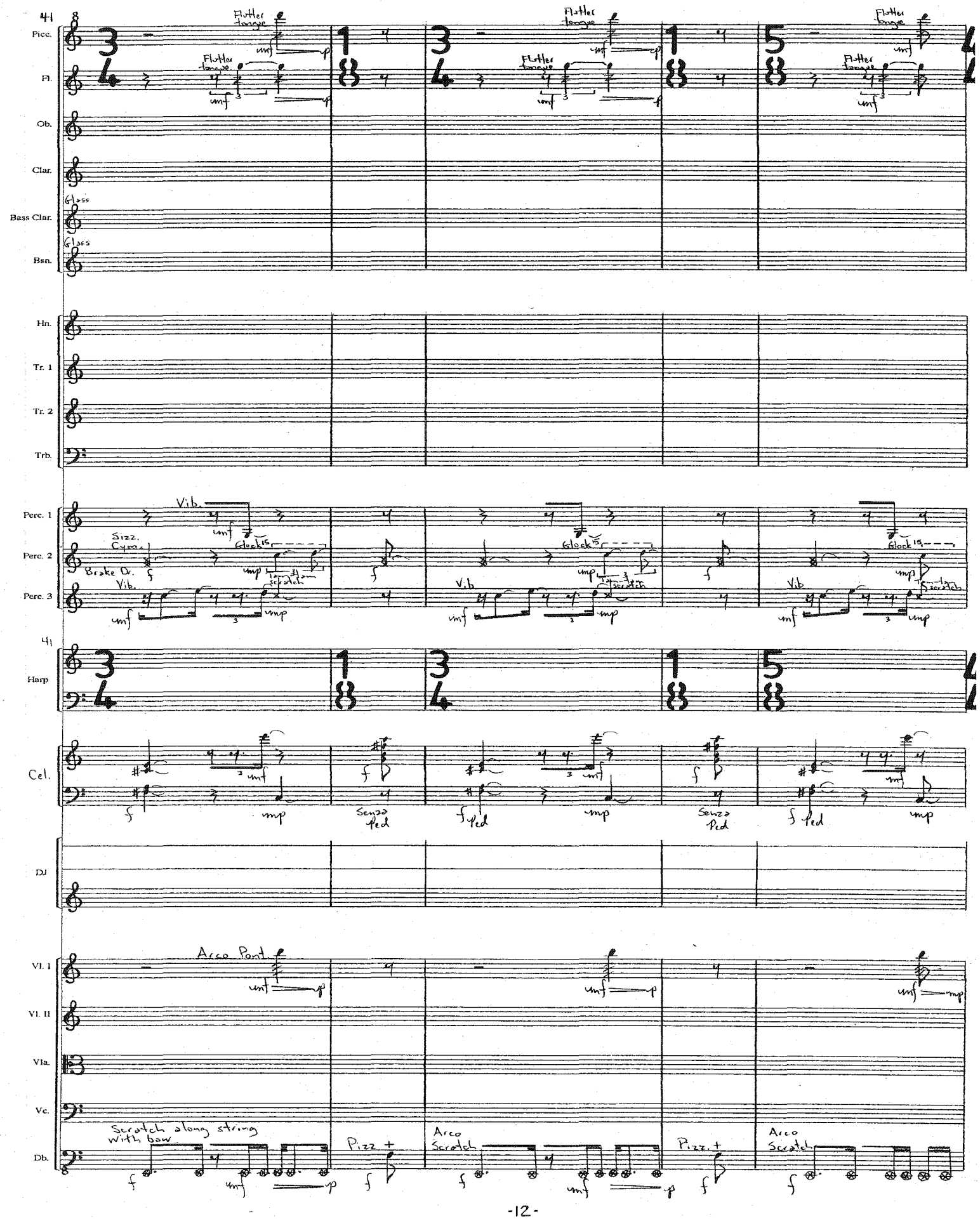

22
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Gloss
Bsn.
Gloss
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Gliss
Cym.
Harmonics on C.
Vib.
22
Harp
Cel.
Senza Ped
Ped
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Col legno tratto
Scratch tones
Pizz
Sul G
Pizz
Col legno tratto

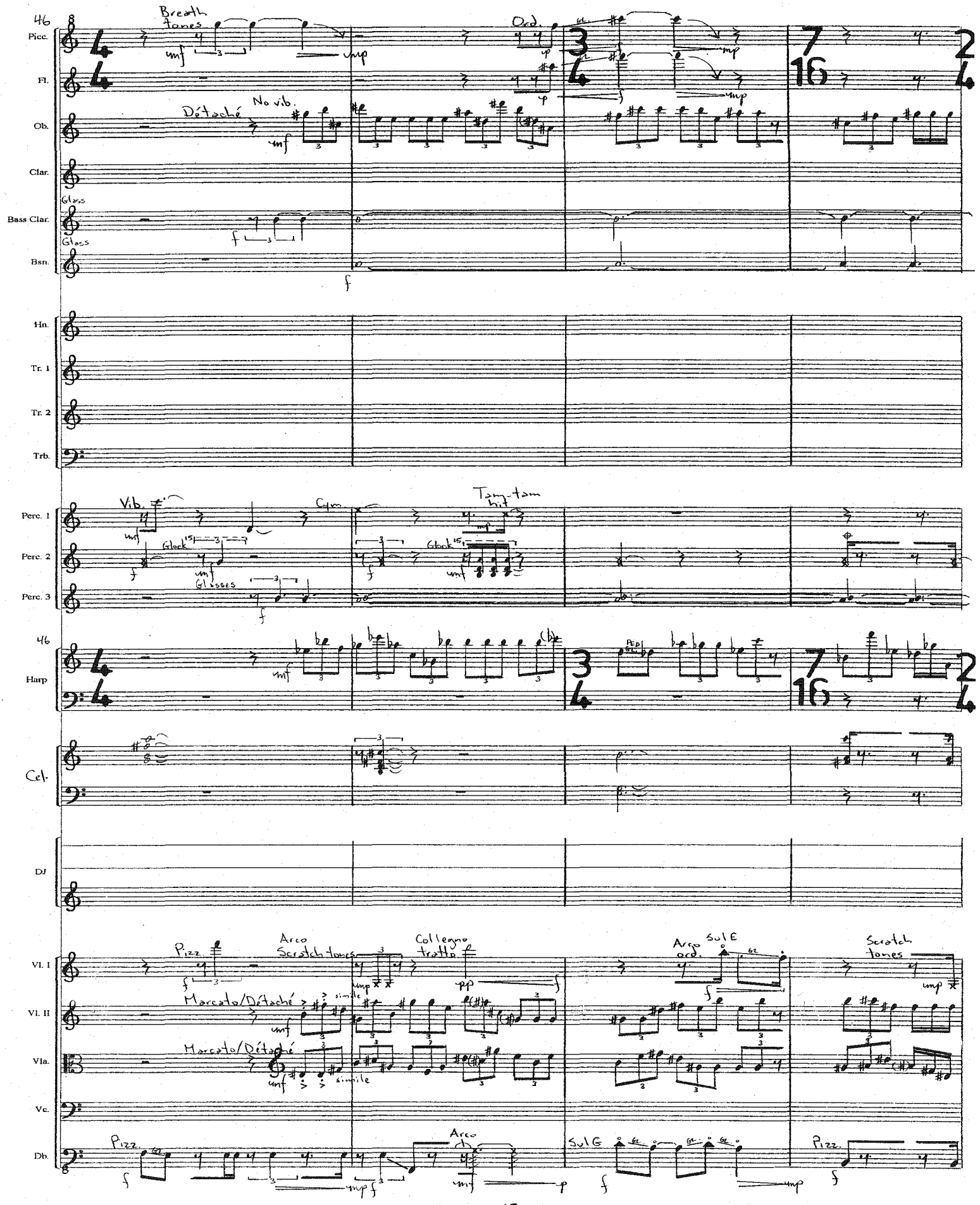

26
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Harp
Cel.
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Flutter tongue
Gloss
Vib.
Glock
Tam-tam
Scratch
Arco
Pont.
Scratch along string with bow

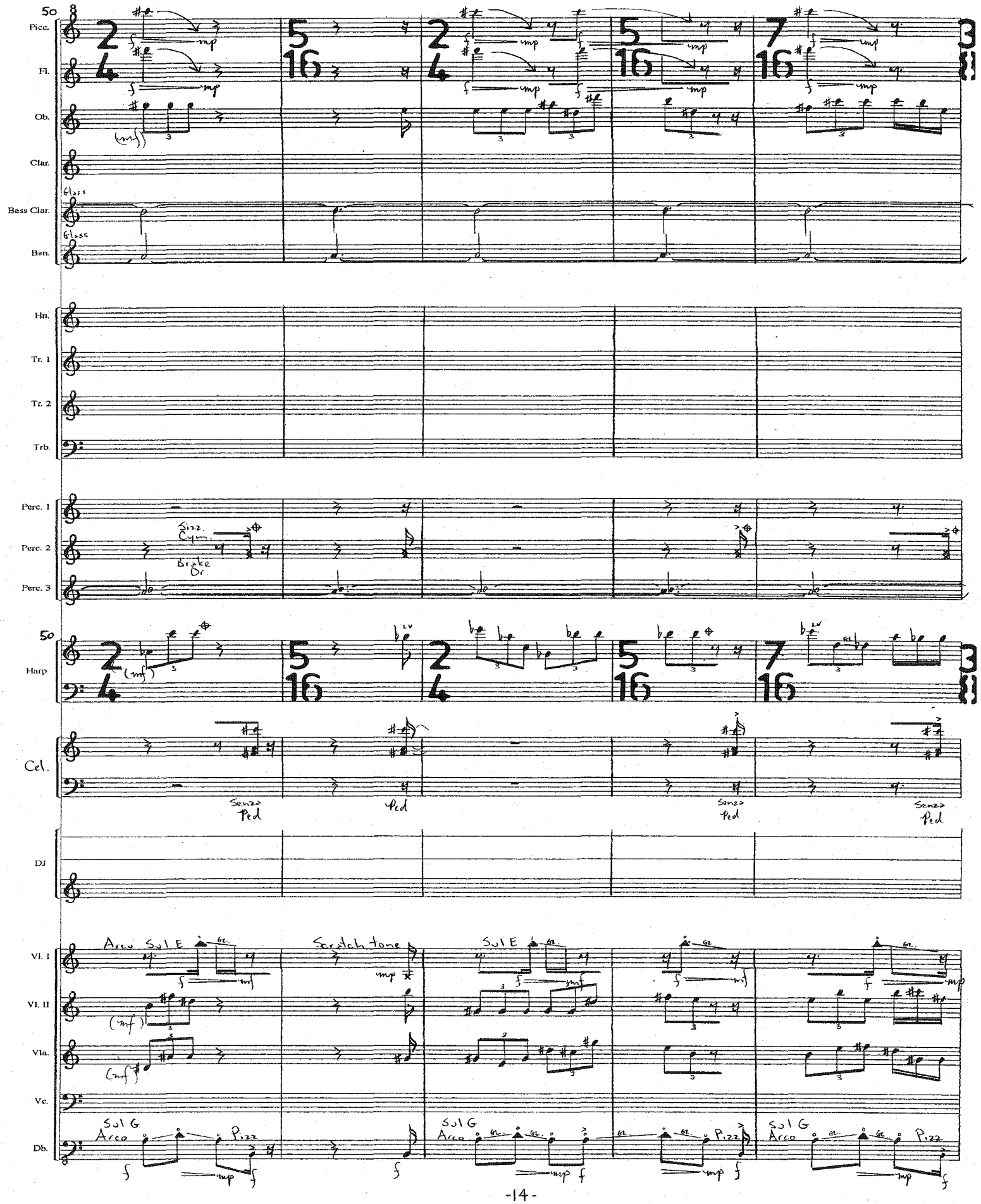

29
Picc.
Breath tone
mf
mp
Ord.
mp
Fl.
Ob.
Clar.
Gloss
Bass Clar.
Gloss
Bsn.
f
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Vib.
mf
Cym.
f
Tam-tam
hit
Perc. 2
Sizz. Cym.
Gluck
mf
Gluck
mf
Perc. 3
Brake Dr.
mf
Glissss
f
f
29
Harp
Cel.
f
Senza Ped
Ped
DJ
Vl. I
Pizz.
f
Arco
Scratch tone
mp
Col legno tratto
pp
f
Arco Sul E ord.
f
mp
Scratch tone
mp
Vl. II
Vla.
Vc.
Db.
Pizz
f
mp
Arco
Sul G
f
mp
Pizz
f

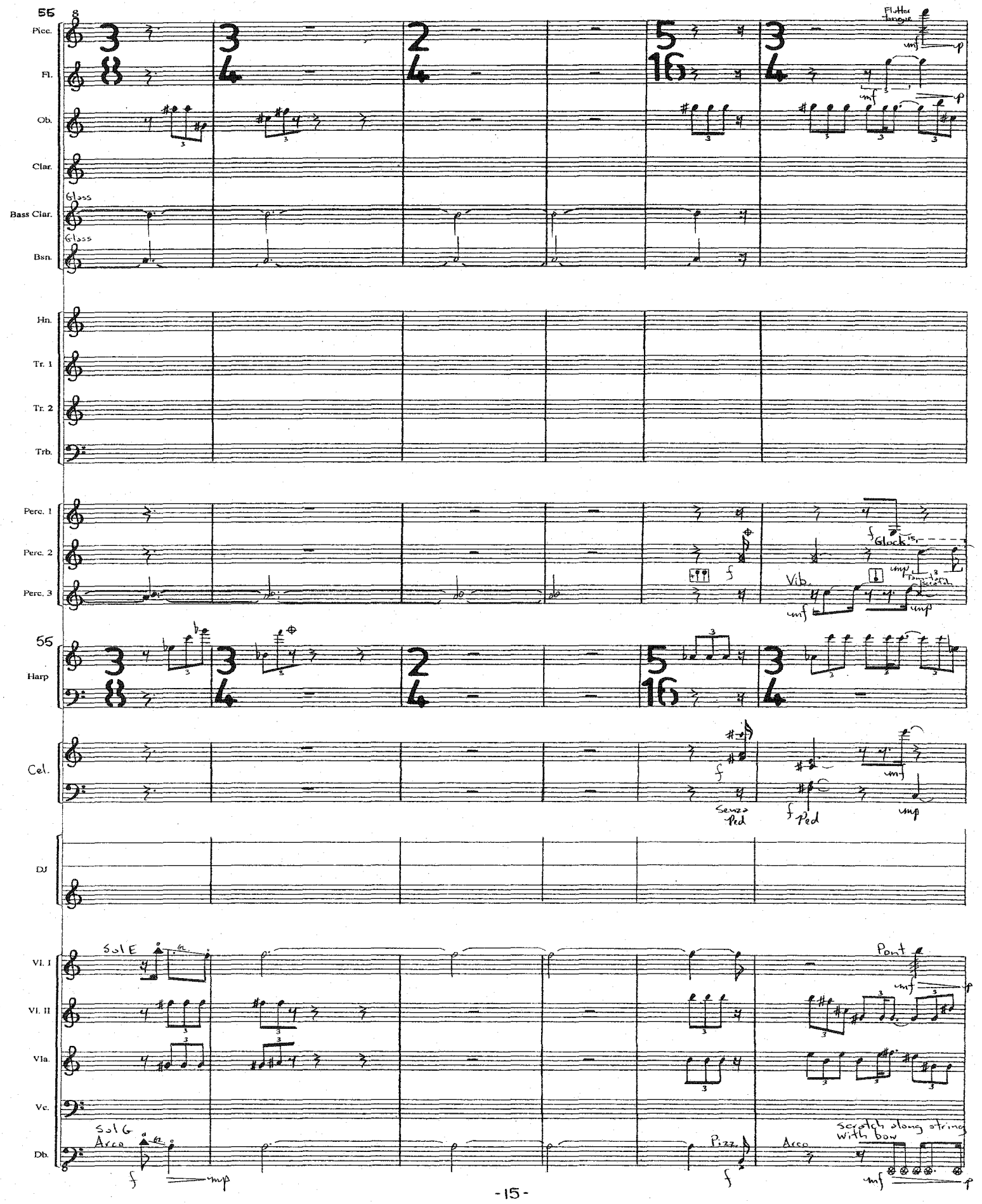

33
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Harp
Cel.
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Flutter tongue
Glass
Glasses
Vib.
Glock
Sizz. Cym.
Brake Dr.
Tam-tam scratch
Senza Ped
Ped
Sul E
Scratch tone
Pont.
Sul G
Pizz.
Arco Sul G
Scratch along string with bow

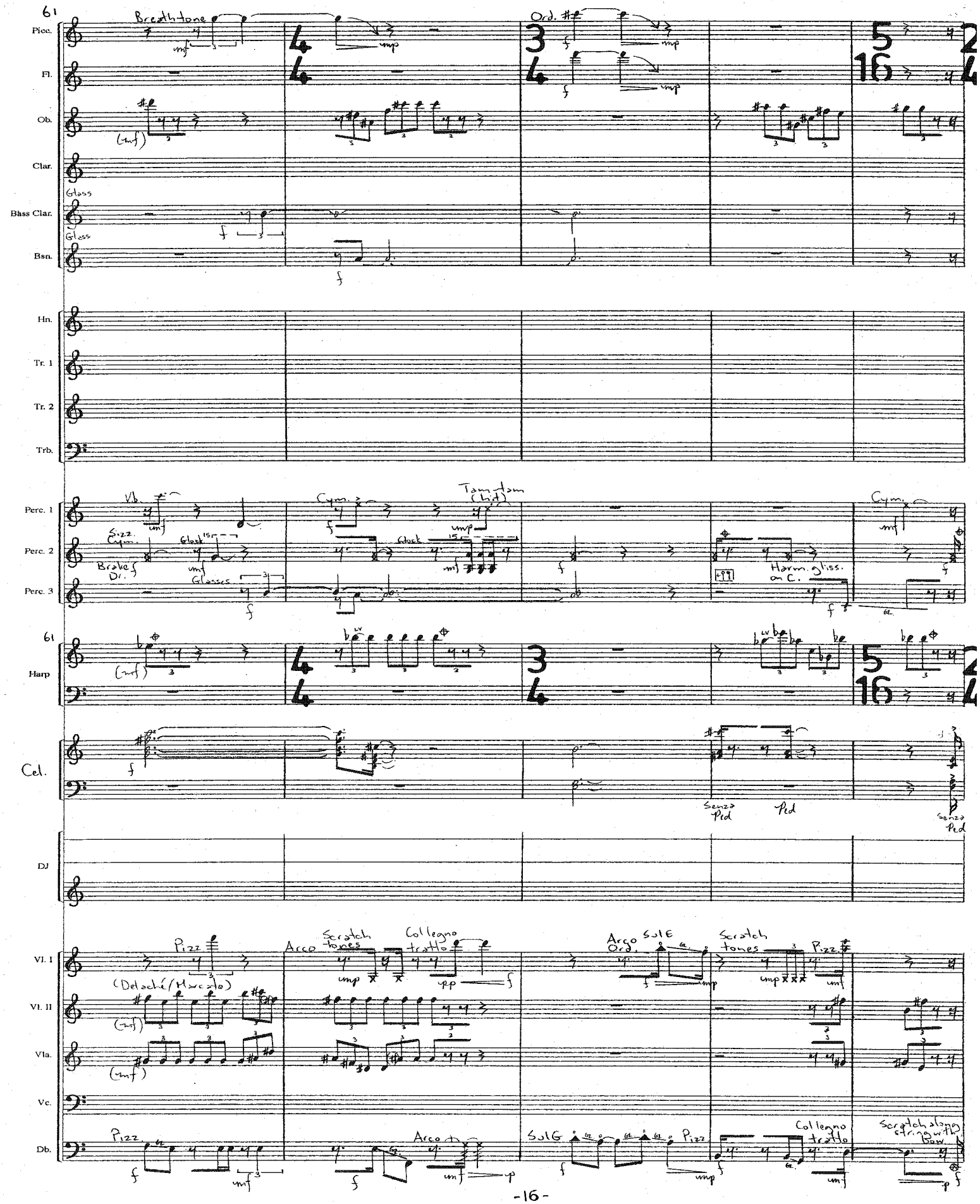

37
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Harp
Cel.
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Breath tones
Ord.
Glass
Vib.
Cym.
Tam-tam
Glock.
Glasses
Harm. glis
Senza Ped
Ped
Pizz.
Arco
Scratch tones
Col legno tratto
Arco ord.
Sul E
Sul G

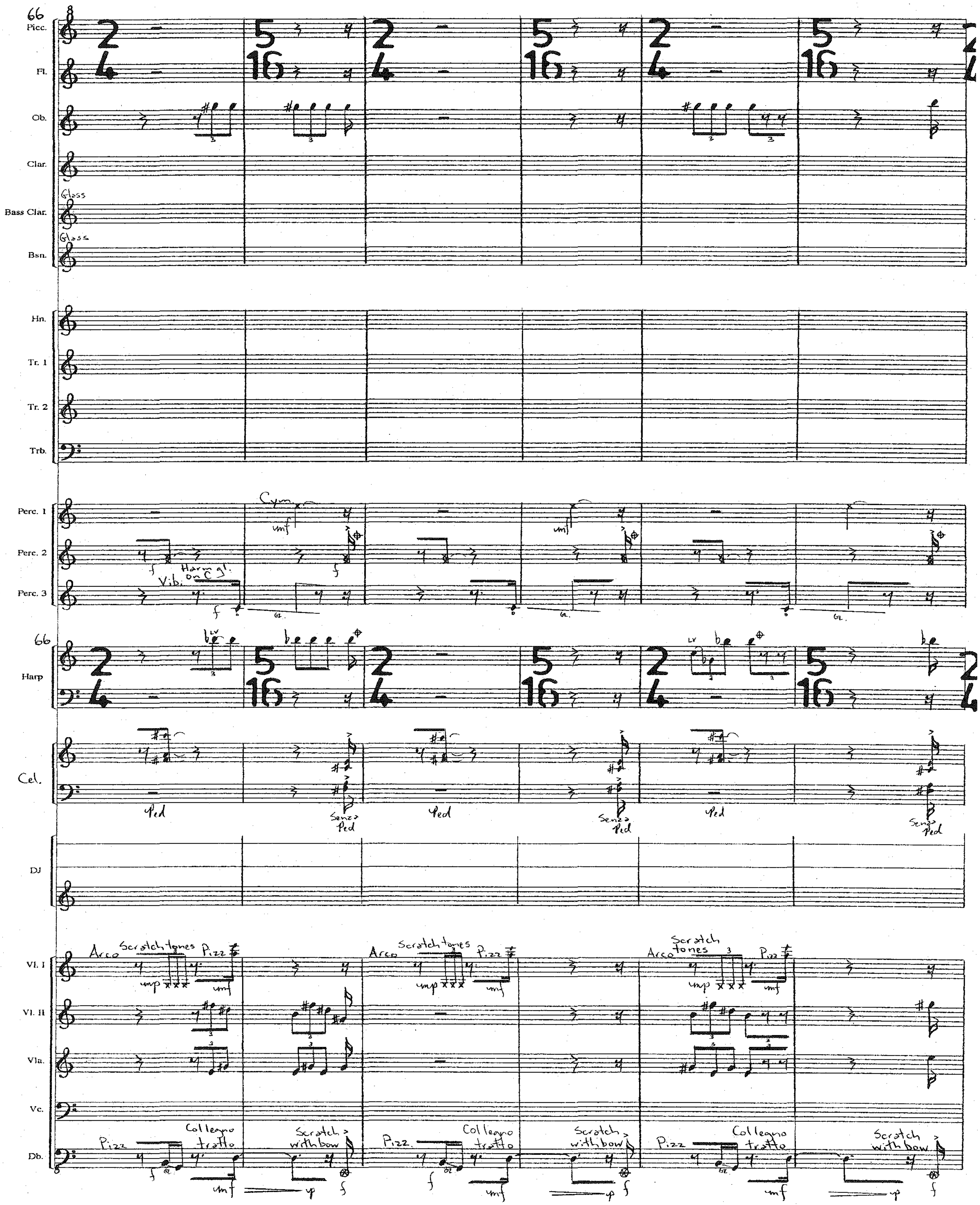

41
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Harp
Cel.
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Flutter tongue
Glass
Vib.
Sizz. Cym.
Brake D.
Glock 15
Scratch
Senza Ped
Ped
Arco Pont.
Scratch along string with bow
Pizz. +
Arco Scratch

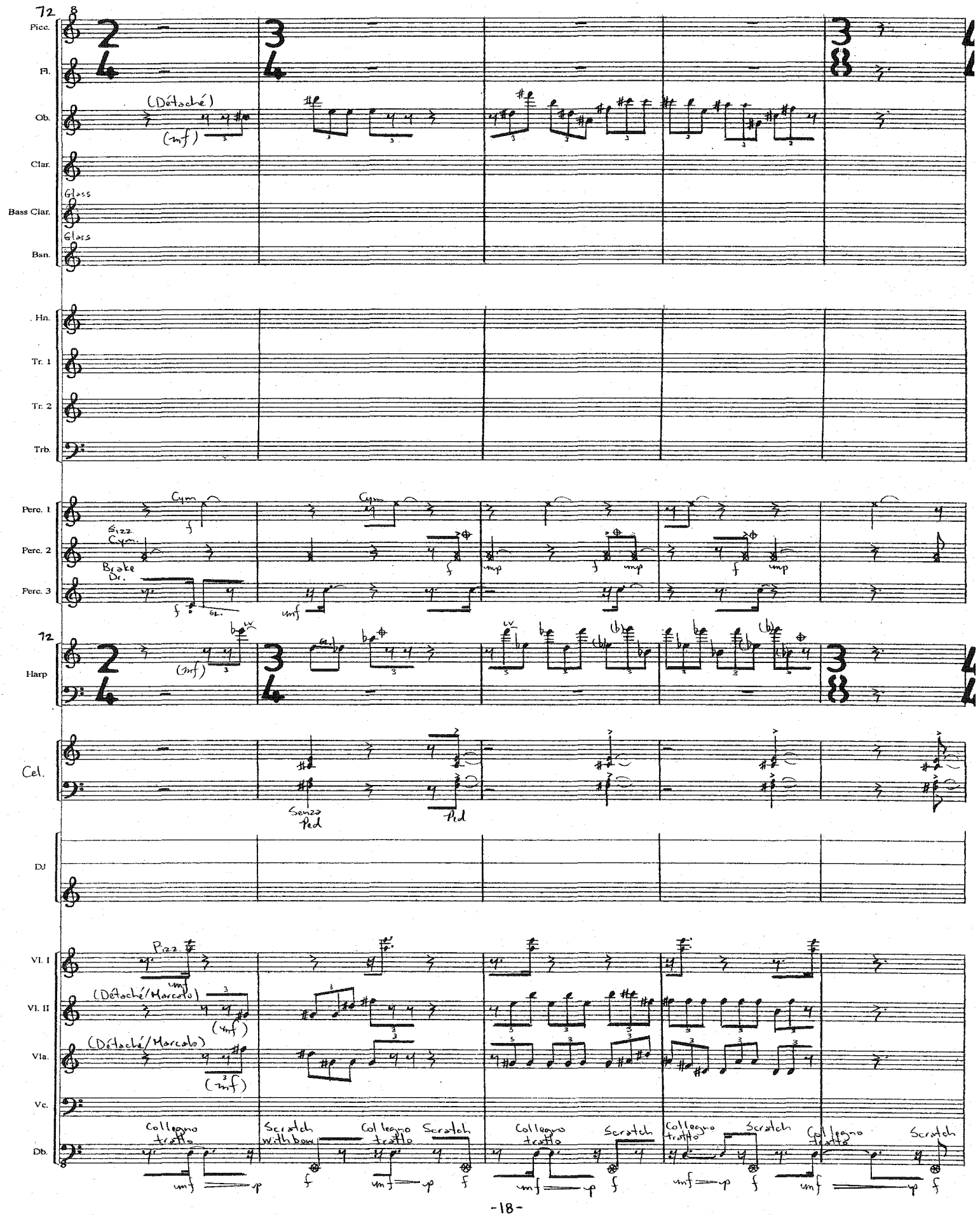

46
Breath tones
Ord.
Détaché
No vib.
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Vib.
Cym
Tam-tam
Glock
Glisses
46
Harp
Cel.
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Pizz.
Arco
Scratch tones
Collegno tratto
Marcato/Détaché
simile
Arco ord.
Sul E
Sul G

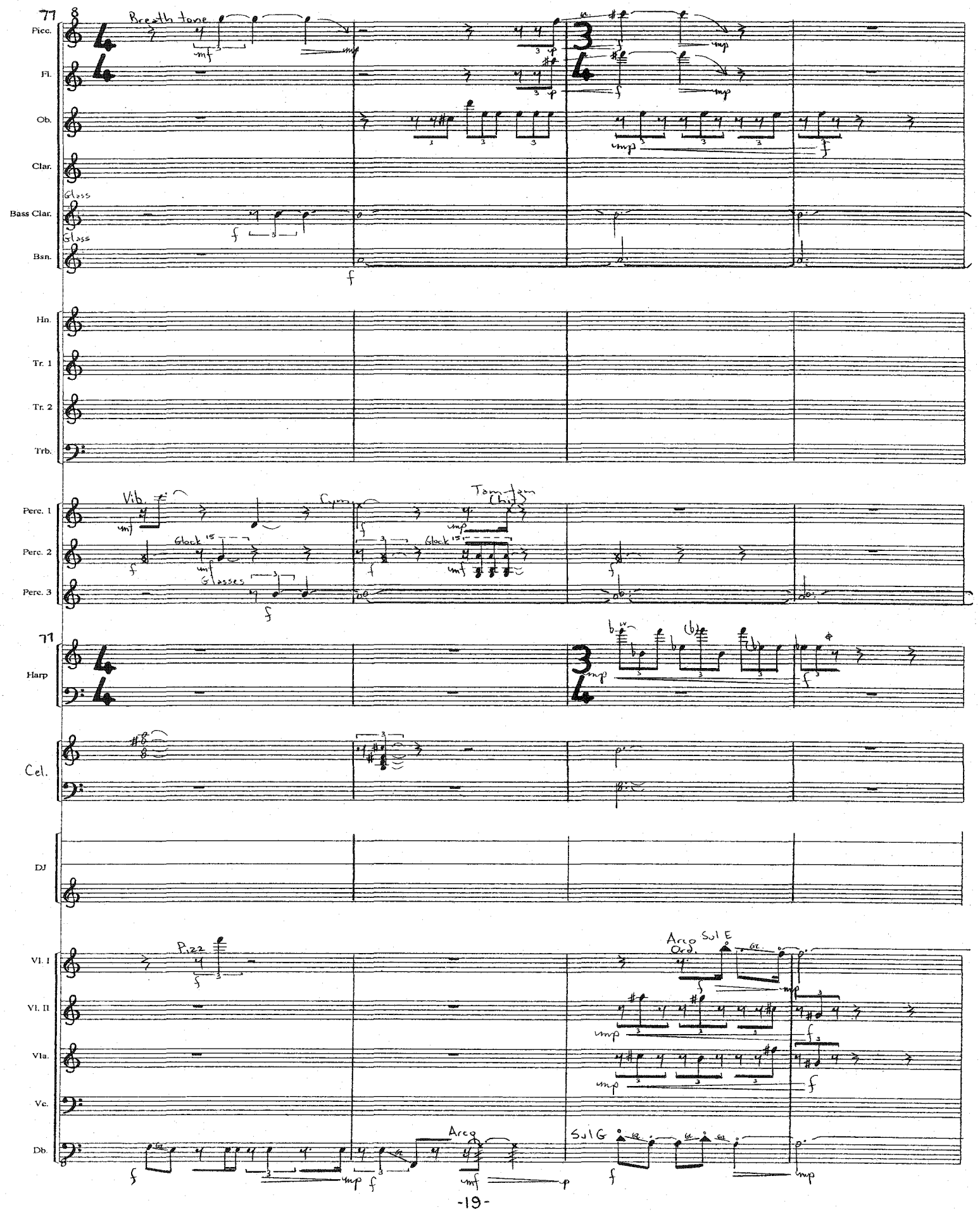

50
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Sizz. Cym.
Brake Dr.
50
Harp
Cel.
Senza Ped
Ped
Senza Ped
Senza Ped
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Arco Sul E
Scratch tone
Sul E
Sul G
Arco
Pizz.
Sul G
Arco
Pizz.
Sul G
Arco
Pizz.

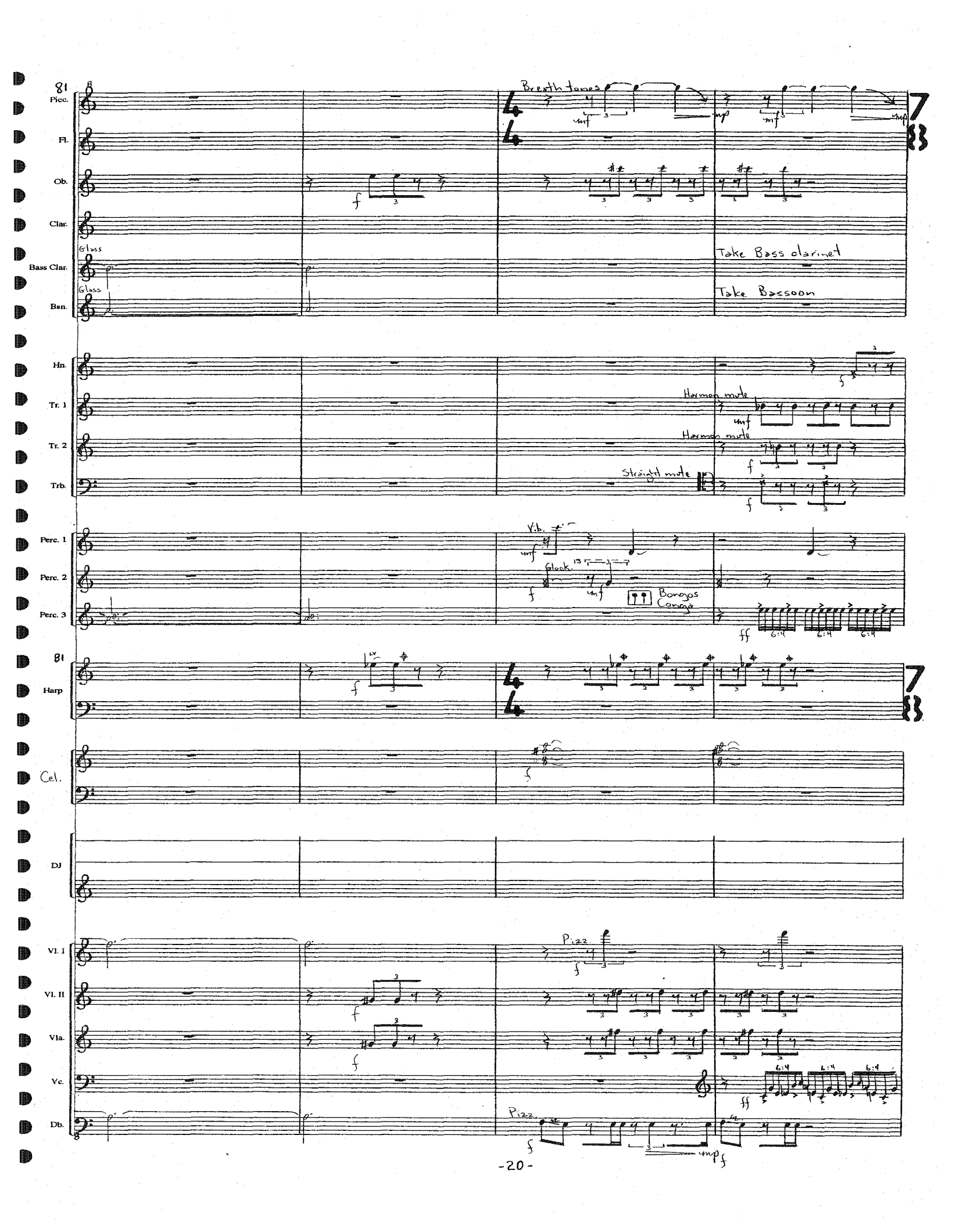

55
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Harp
Cel.
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Flutter tongue
Glock
Vib.
Tom-toms
Senza Ped
Ped
Solo
Arco
Pizz.
Pont
scratch along string with bow

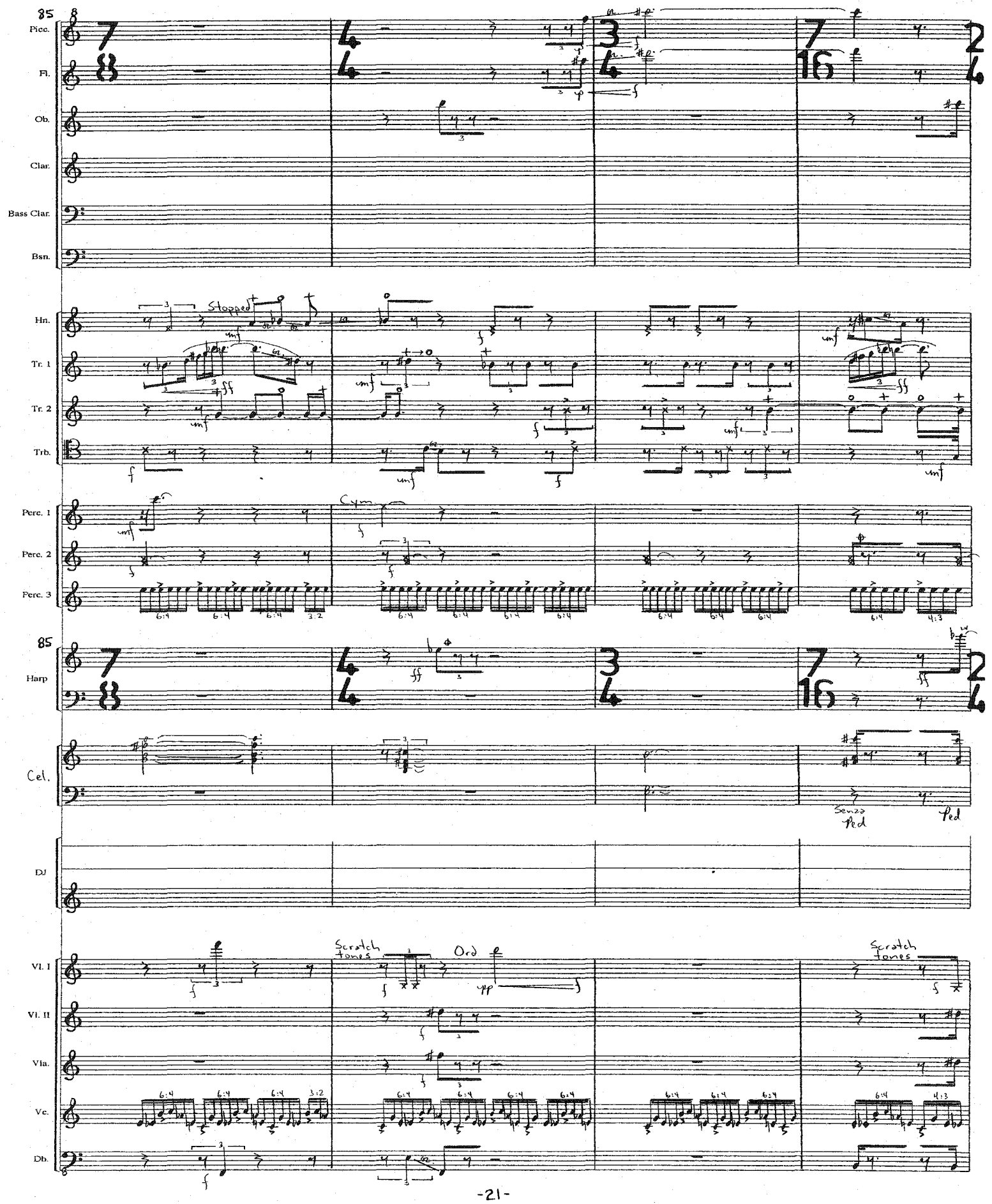

61
Picc.
Breath tone
mf
mp
Ord.
Fl.
Ob.
(mf)
Clar.
Gliss
Bass Clar.
Gliss
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Vb.
Cym.
Tam-tam (Lid)
Perc. 2
Sizz. Cym.
Glock
Brake Dr.
Glock
Glasses
Perc. 3
Cym.
Harm. gliss. on C.
61
Harp
Cel.
Senza Ped
Ped
Senza Ped
DJ
Vl. I
Pizz
(Detaché/Marcato)
Arco
Scratch tones
Collegno tratto
Arco
Ord.
Sul E
Scratch tones
Pizz
Vl. II
(mf)
Vla.
(mf)
Vc.
Db.
Pizz
Arco
Sul G
Pizz
Collegno tratto
Scratch slapping string with bow

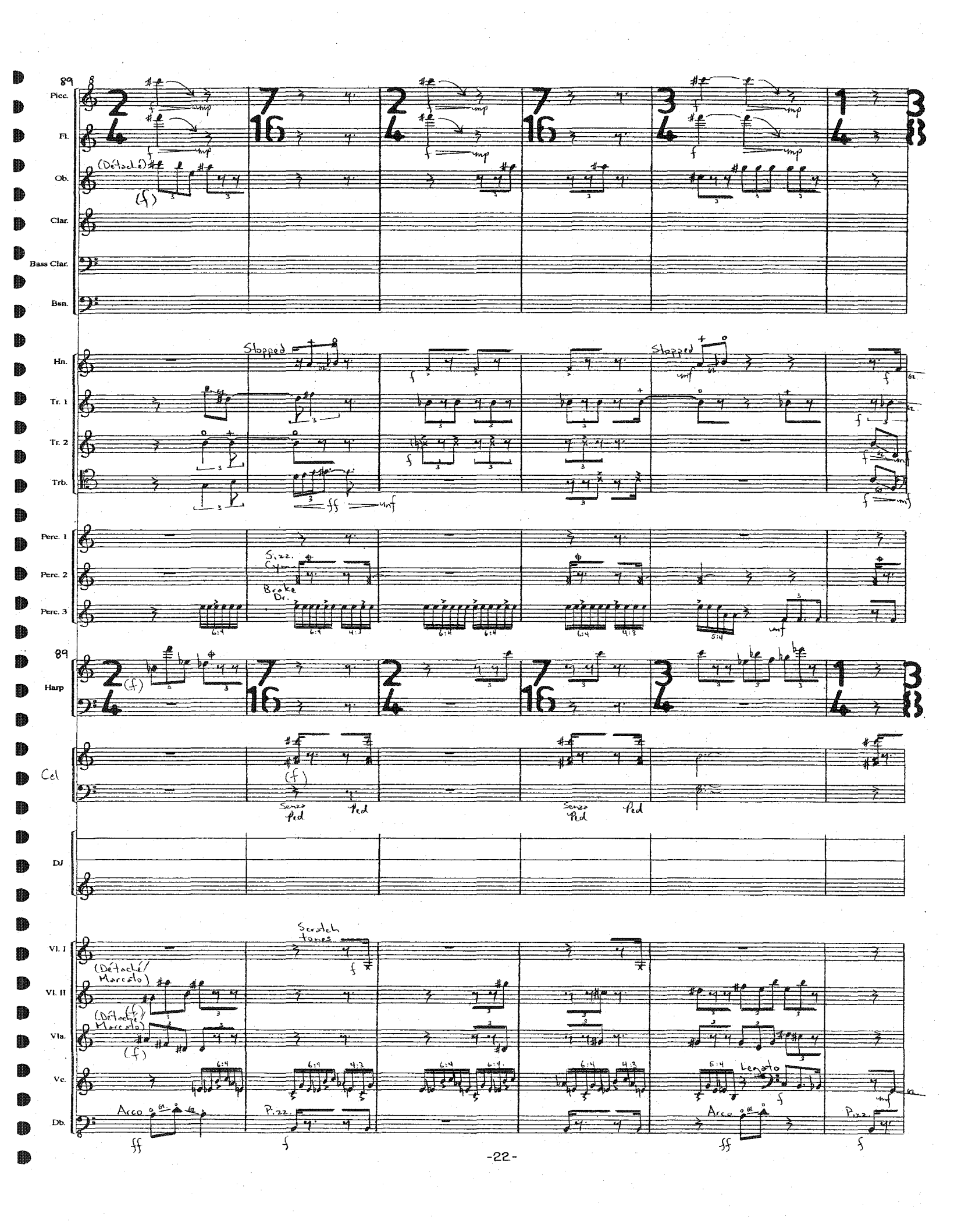

66
Picc.
Fl.
Ob.
Clar.
Glass
Bass Clar.
Glass
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Cym
Perc. 1
Perc. 2
Harm gl. on C
Vib.
Perc. 3
Gl.
66
Harp
LV
Cel.
Ped
Senza Ped
DJ
Arco
Scratch tones
Pizz
Vl. I
Vl. II
Vla.
Vc.
Pizz
Col legno tratto
Scratch with bow
Db.

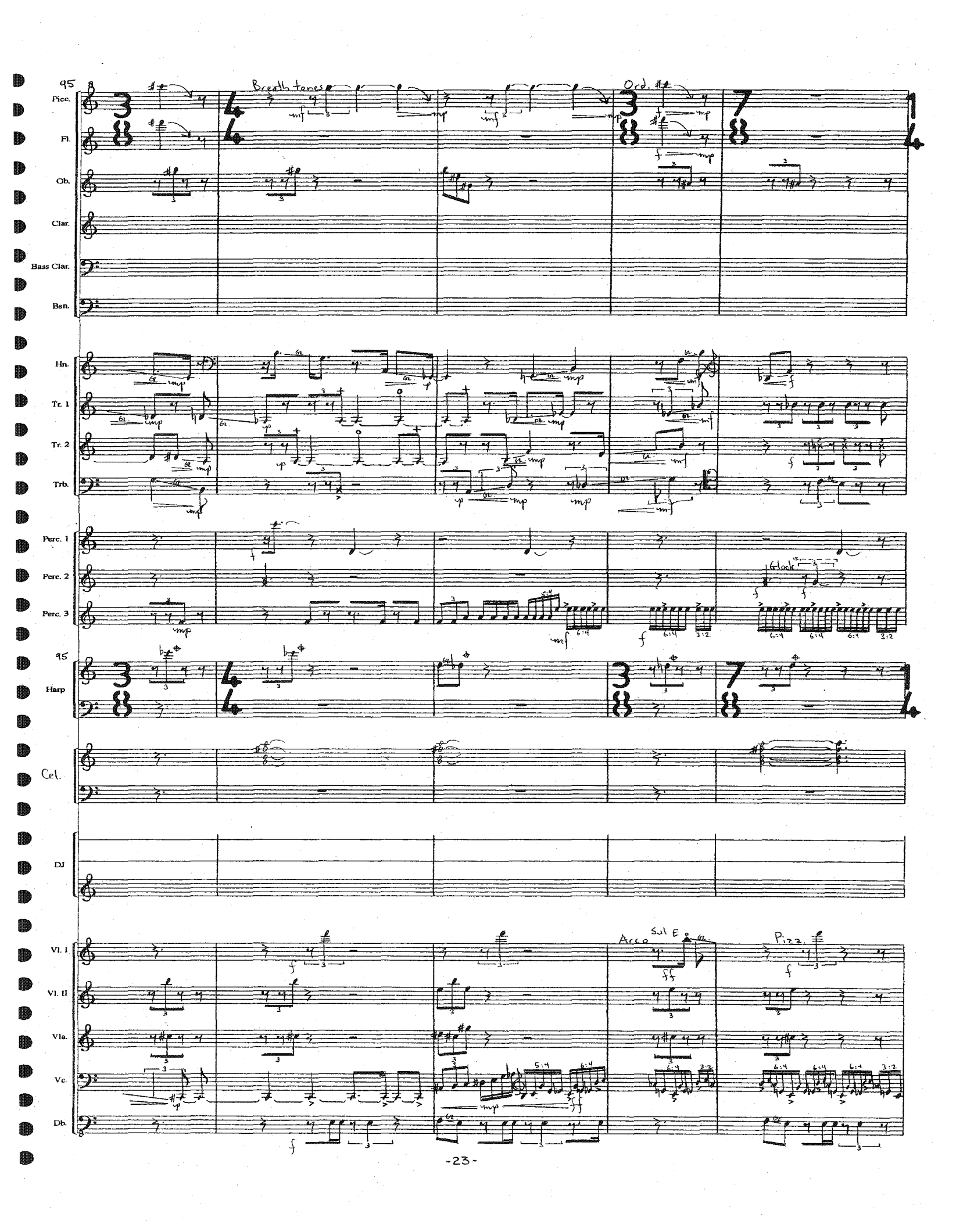

72
Picc.
Fl.
Ob.
(Détaché)
(mf)
Clar.
Bass Clar.
Glass
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Cym
Perc. 2
Sizz. Cym.
Perc. 3
Brake Dr.
72
Harp
Cel.
Senza Ped
Ped
DJ
Vl. I
Pizz.
Vl. II
(Détaché/Marcato)
Vla.
Vc.
Db.
Collegno tratto
Scratch with bow
Scratch

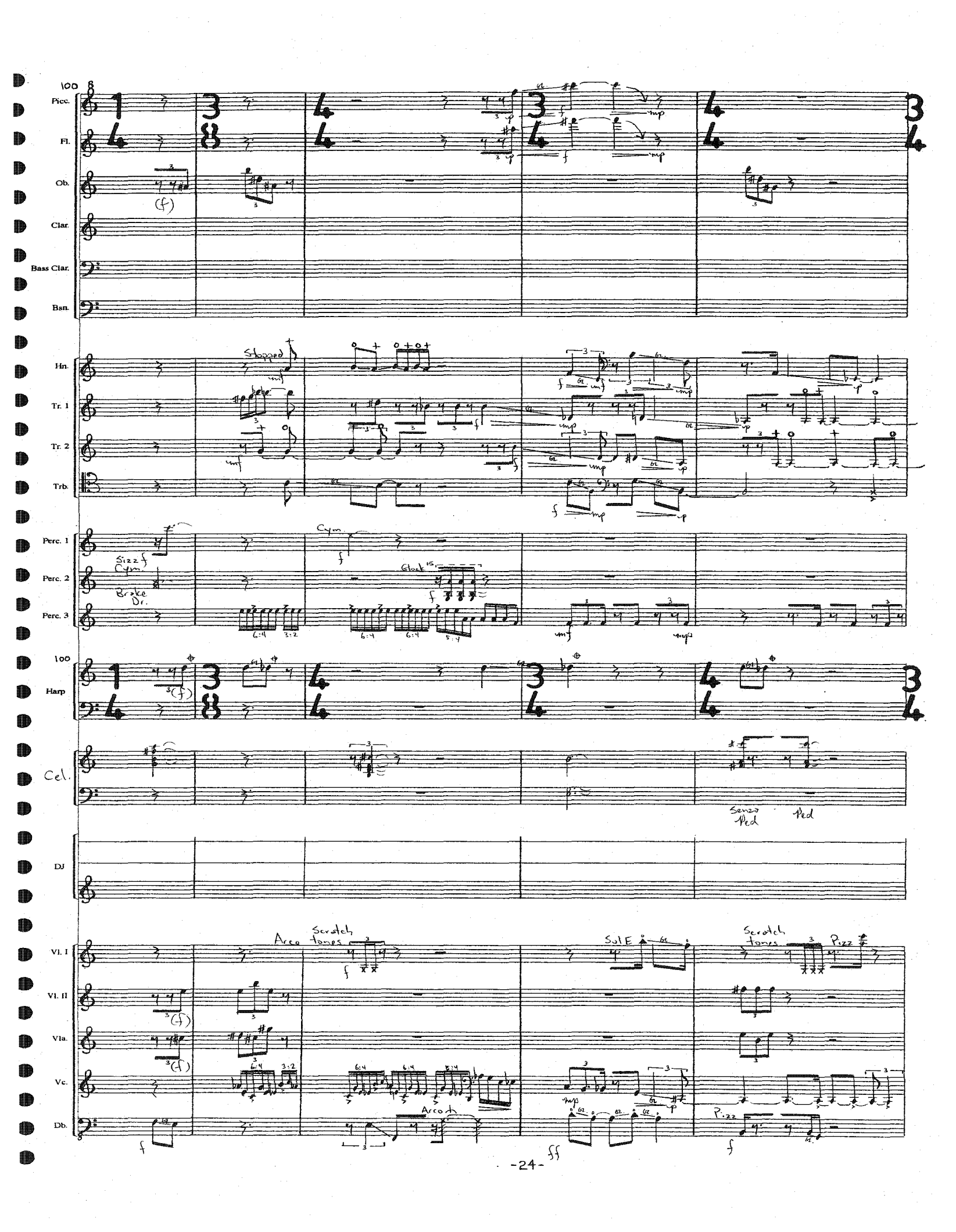

77
Breath tone
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Glass
Hn.
Tr. 1
Tr. 2
Trb.
Vib.
Cym.
Tam-tam
Chimes
Perc. 1
Perc. 2
Perc. 3
Glock
Glasses
77
Harp
Cel.
DJ
Pizz.
Arco
Ord.
Sul E
Vl. I
Vl. II
Vla.
Vc.
Db.
Sul G

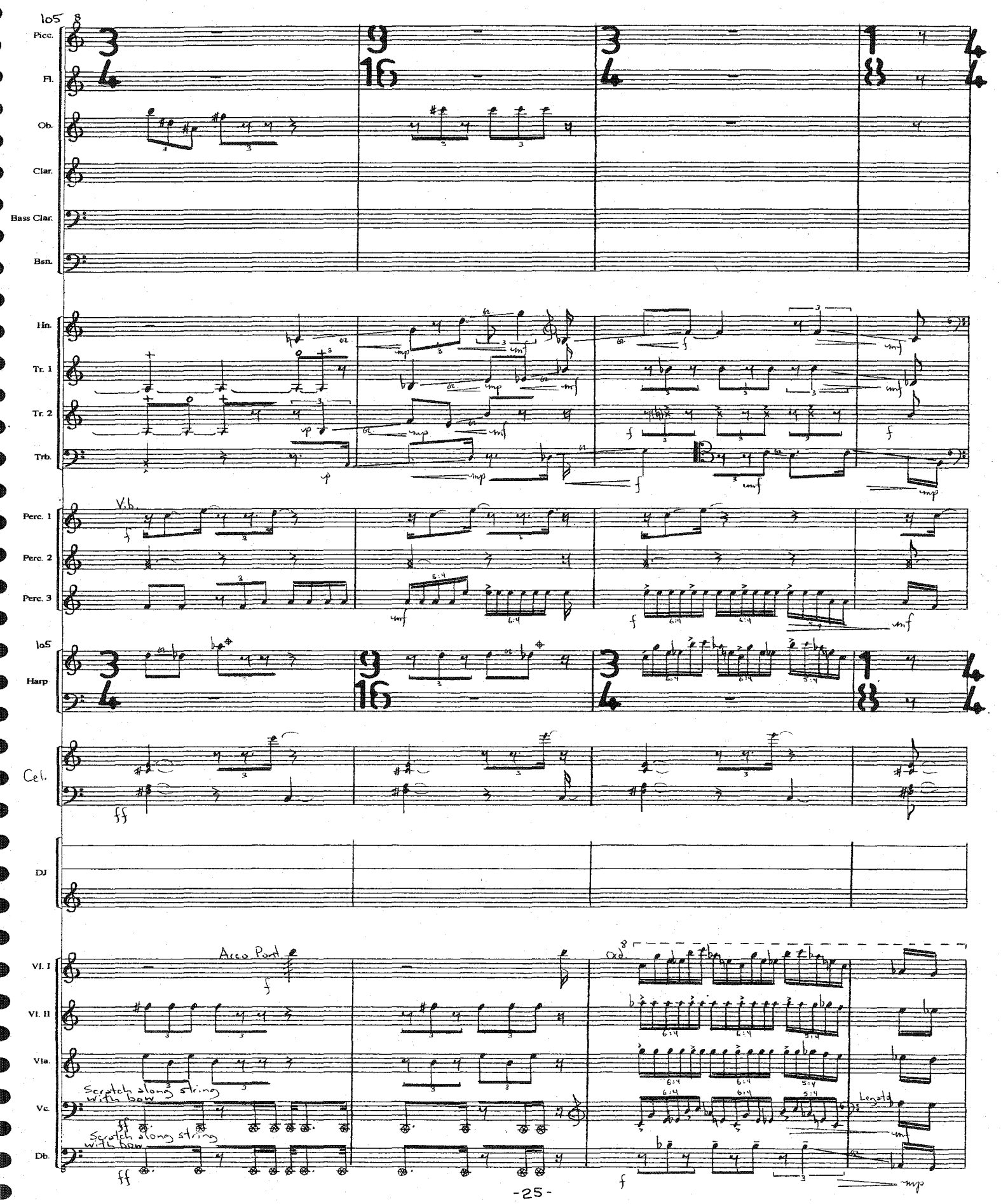

81
Picc.
Fl.
Ob.
Clar.
Glass
Bass Clar.
Glass
Bsn.
Breath tones
Take Bass clarinet
Take Bassoon
Hn.
Tr. 1
Tr. 2
Trb.
Harmon mute
Harmon mute
Straight mute
Perc. 1
Perc. 2
Perc. 3
Vib.
Glock.
Bongos
Congo
81
Harp
Cel.
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Pizz.
Pizz.

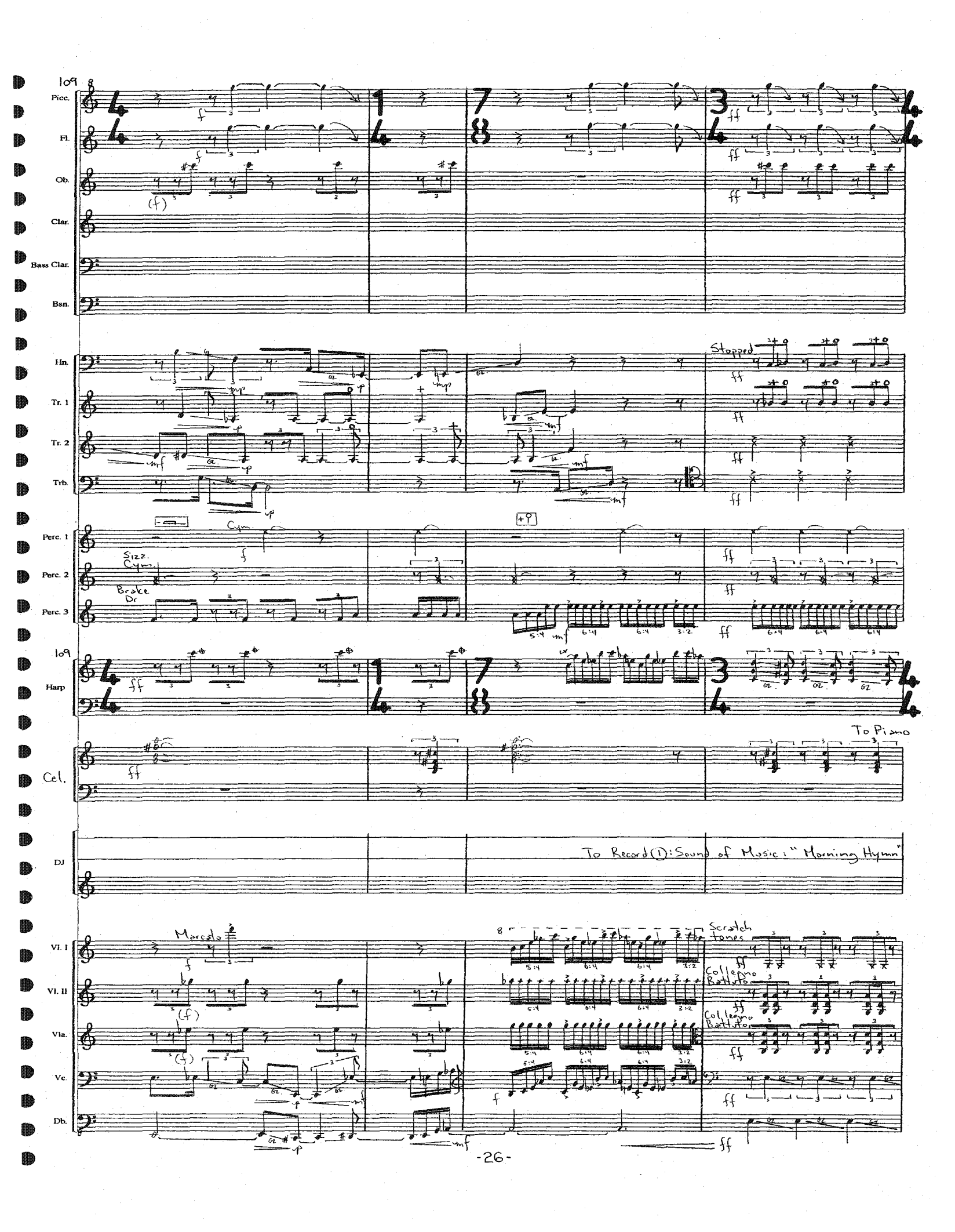

85
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Stopped
Tr. 1
Tr. 2
Trb.
Perc. 1
Cym
Perc. 2
Perc. 3
85
Harp
Cel.
Senza Ped
Ped
DJ
Vl. I
Scratch tones
Ord
Scratch tones
Vl. II
Vla.
Vc.
Db.

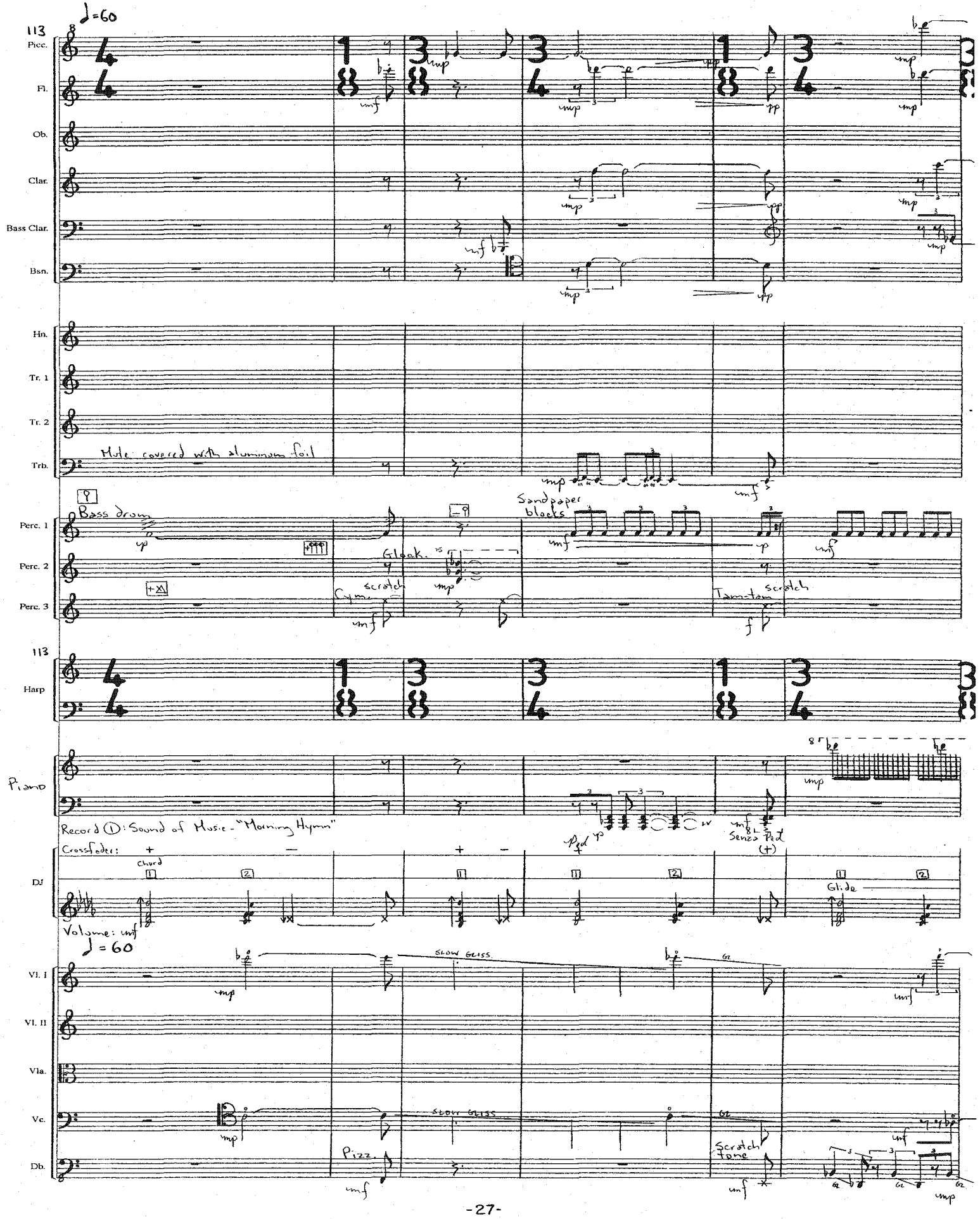

89
Picc.
Fl.
Ob.
(Détaché)
Clar.
Bass Clar.
Bsn.
Hn.
Stopped
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Sizz. Cym.
Broke Dr.
89
Harp
Cel
Senza Ped
Ped
DJ
Vl. I
Scratch tones
(Détaché/ Marcato)
Vl. II
Vla.
Ve.
Db.
Arco
Pizz.
Legato

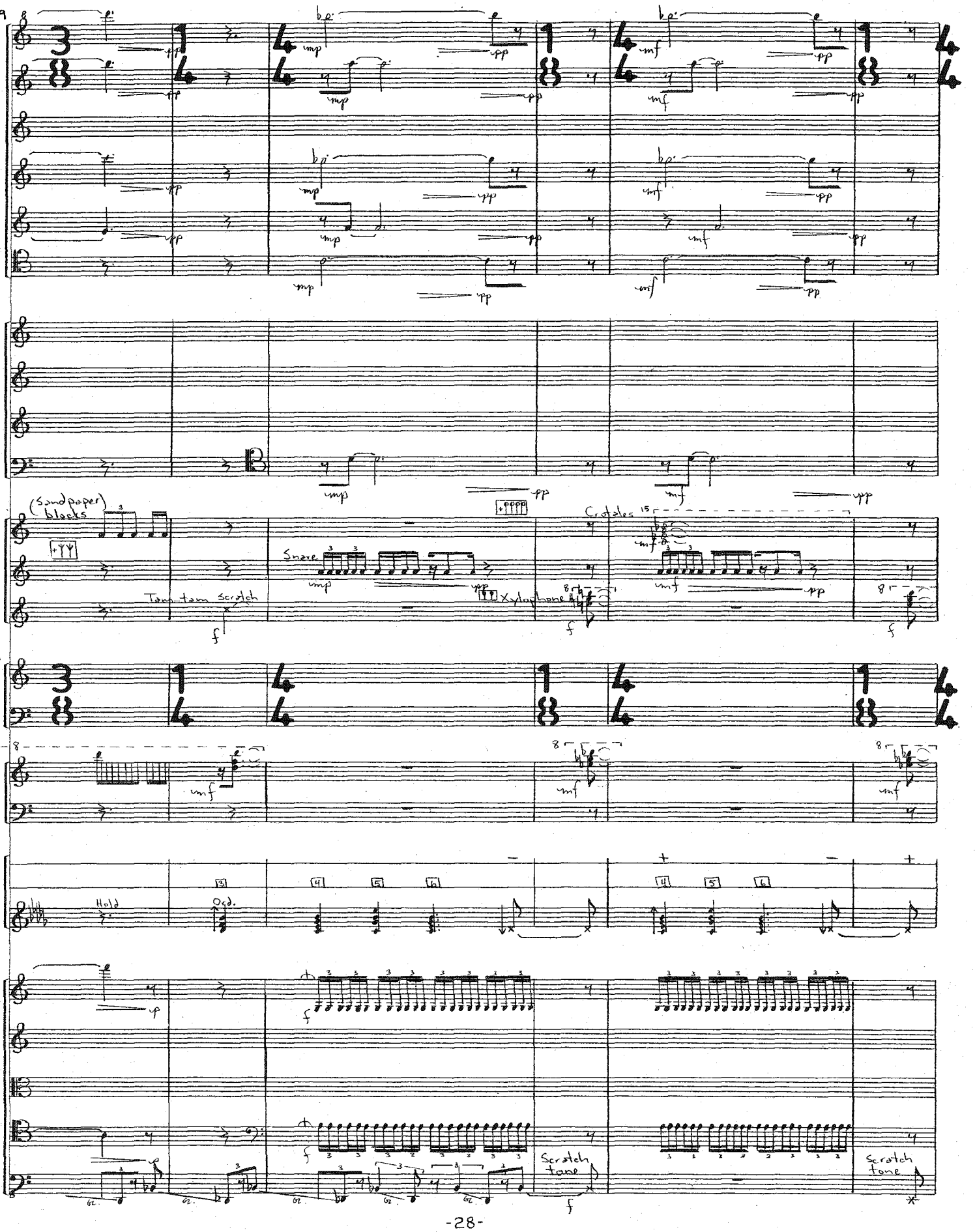

95
Breath tones
Ord.
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Glock.
95
Harp
Cel.
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Arco
Sul E
Pizz.

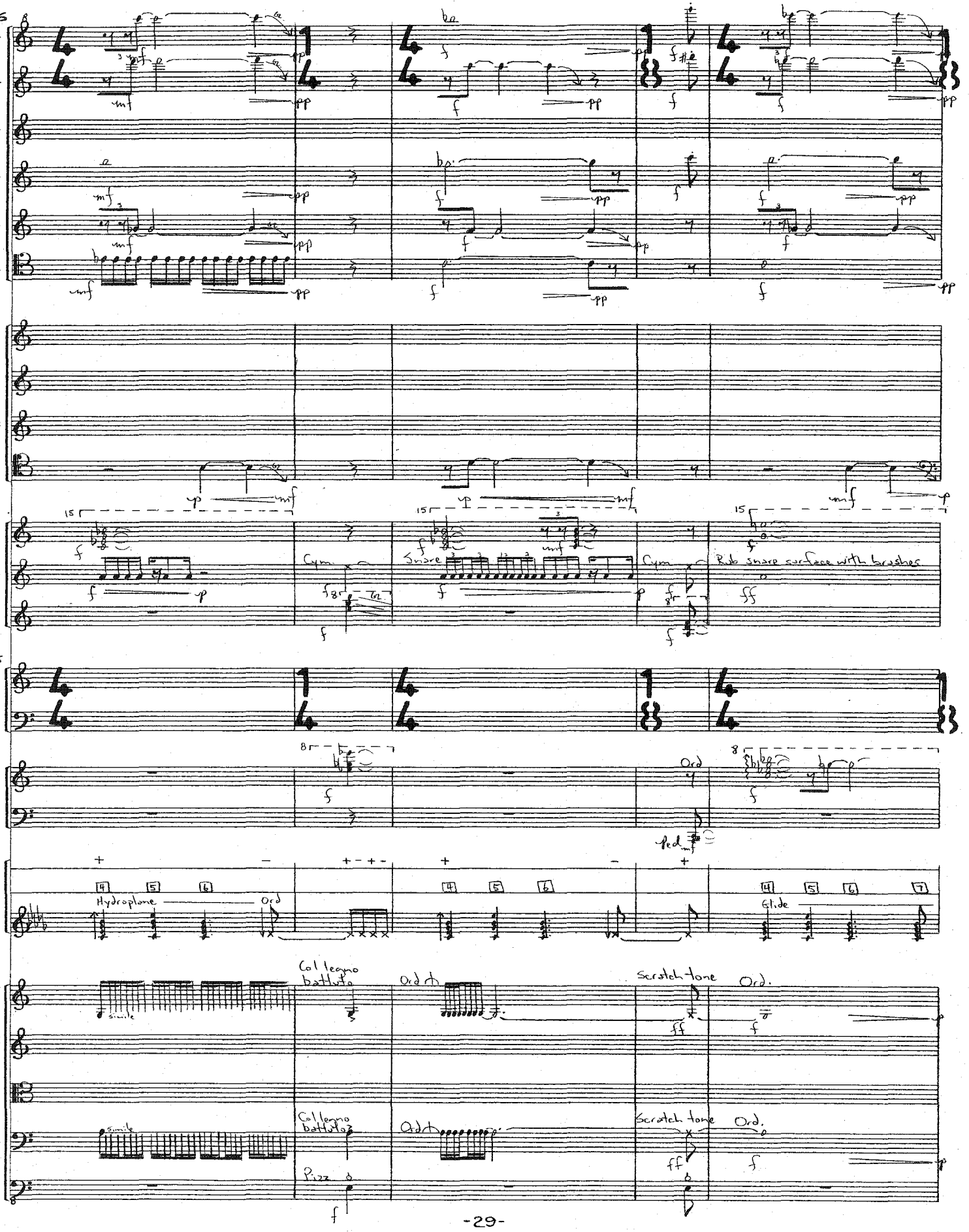

100
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Sizz Cym.
Broke Dr.
Cym
Glock
100
Harp
Cel.
Senza Ped
Ped
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Arco
Scratch tones
Sul E
Scratch tones
Pizz
Arco
Pizz

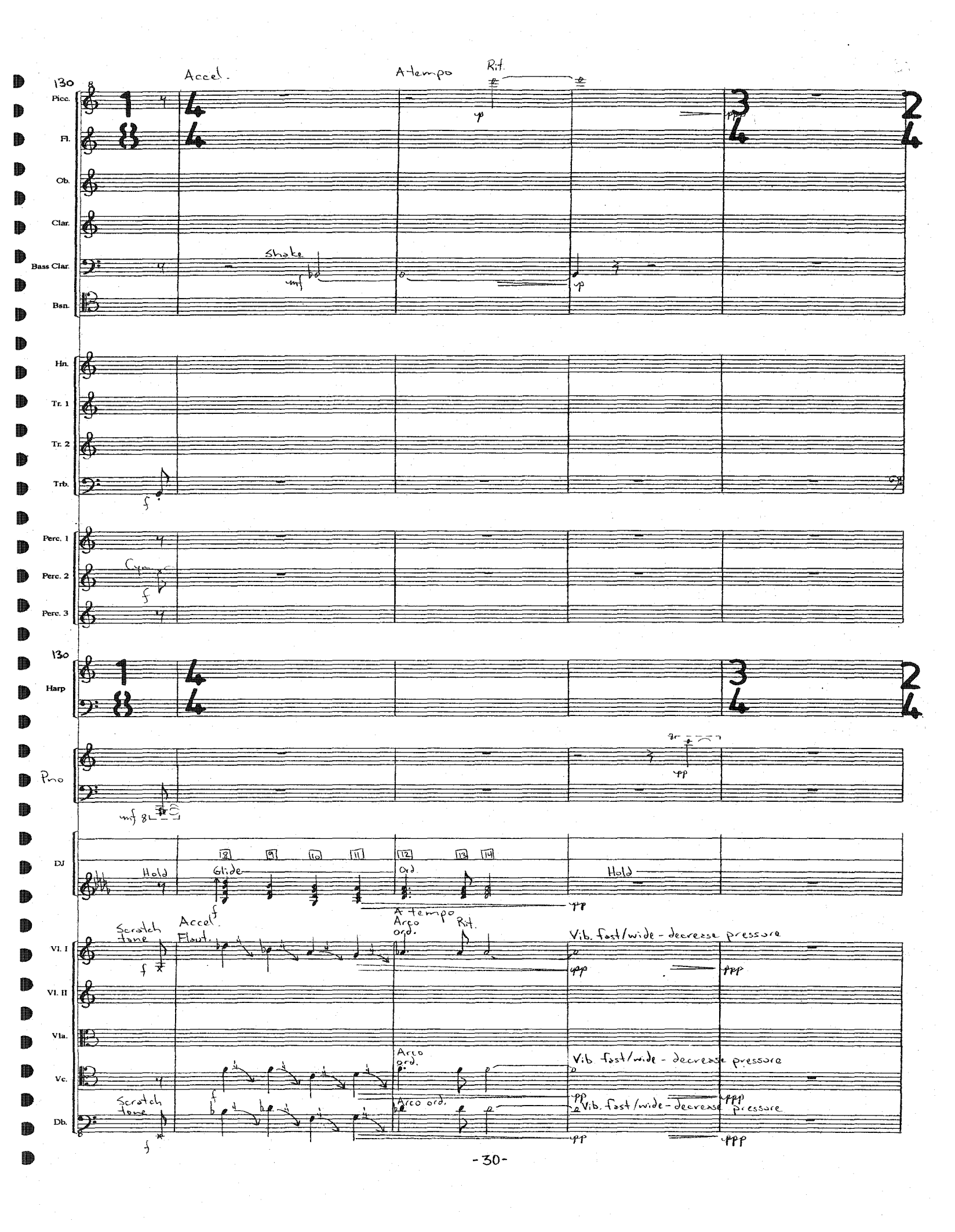

105
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Vib.
Perc. 1
Perc. 2
Perc. 3
105
Harp
Cel.
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Arco Port.
Scratch along string with bow
Scratch along string with bow
Legato

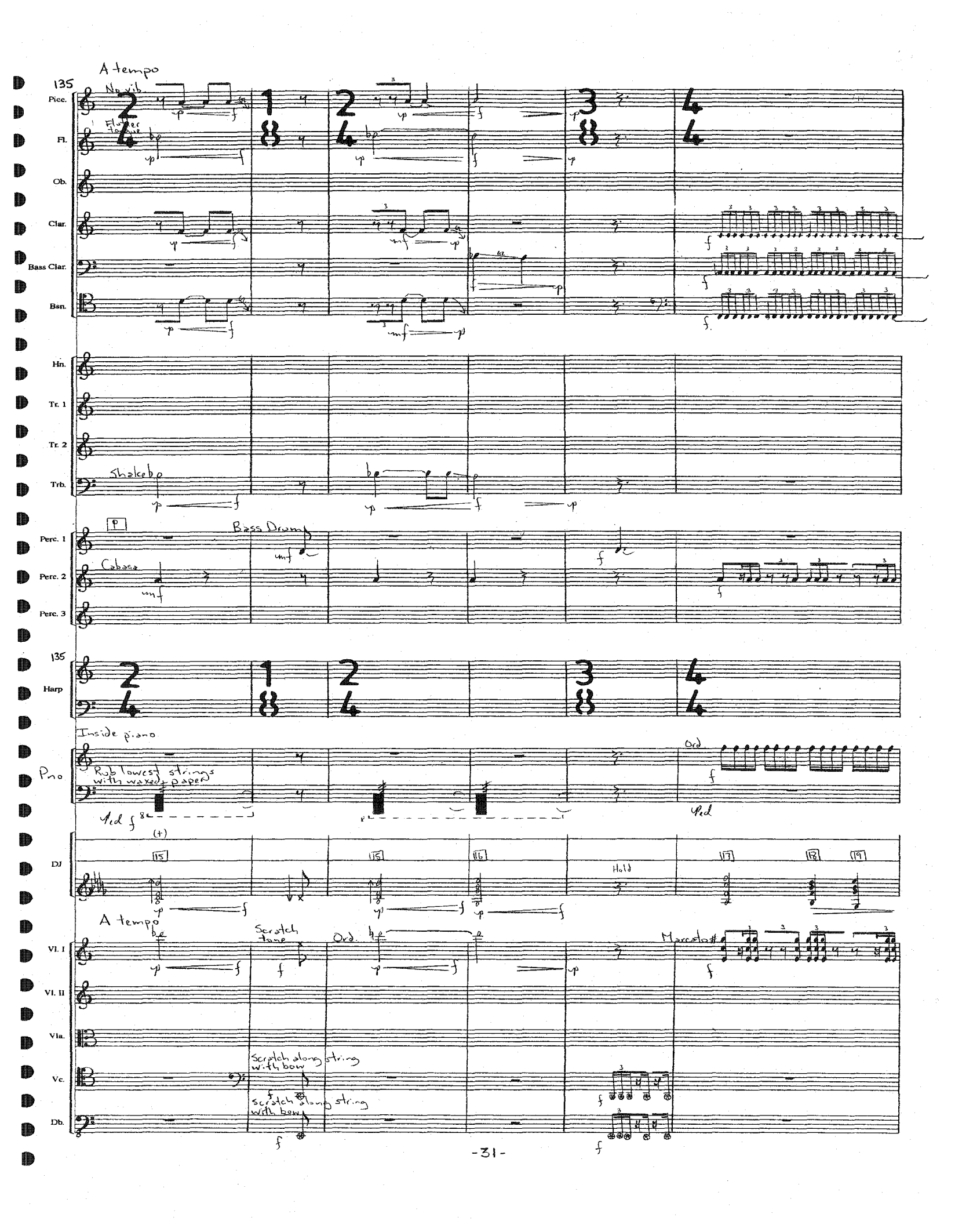

109
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Stopped
Perc. 1
Perc. 2
Perc. 3
Cym.
Sizz. Cym.
Broke Dr.
109
Harp
Cel.
To Piano
DJ
To Record (1): Sound of Music: "Morning Hymn"
Vl. I
Vl. II
Vla.
Vc.
Db.
Marcato
Scratch tones
Collegno Bottato
Collegno Bottato

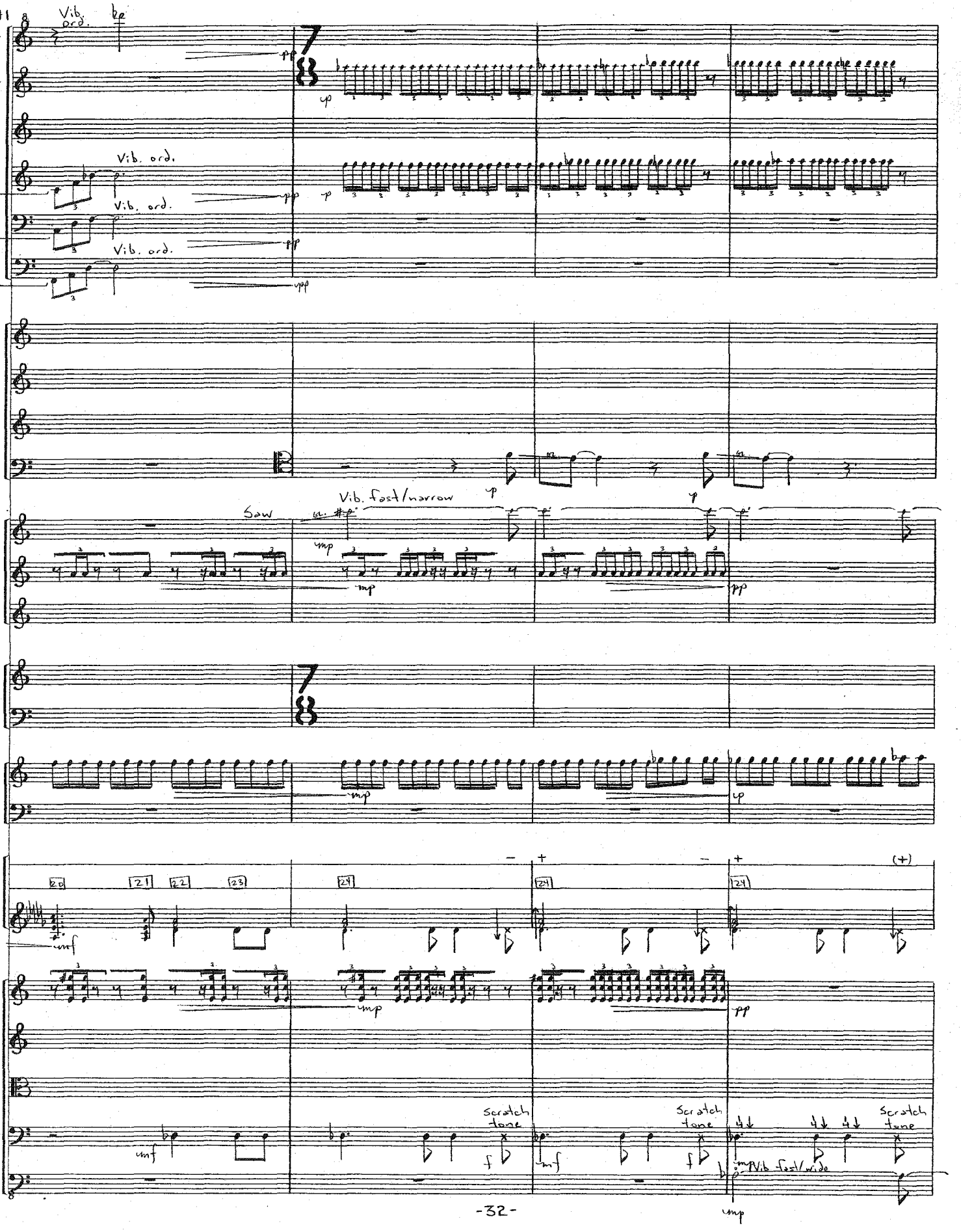

113
♩=60
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Mute covered with aluminum foil
Perc. 1
Perc. 2
Perc. 3
Bass drum
Gloock.
Cym.
scratch
Sandpaper blocks
Tam-tam
scratch
113
Harp
Piano
Record ① Sound of Music - "Morning Hymn"
Crossfader:
Chord
Glide
Volume: mf
DJ
♩=60
Vl. I
Vl. II
Vla.
Vc.
Db.
SLOW GLISS.
Pizz.
Scratch tone

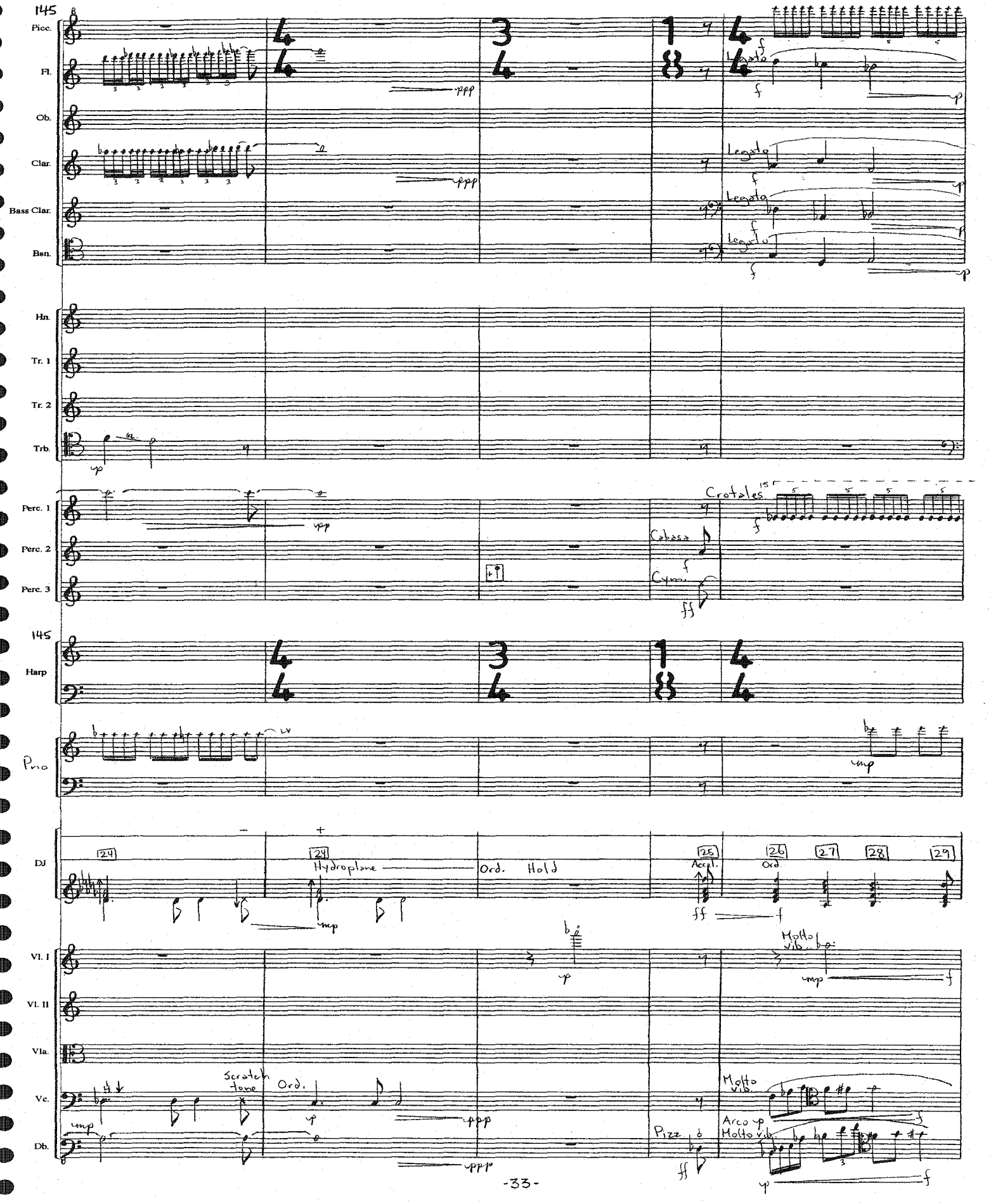

119
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
(Sandpaper) blocks
Perc. 1
Perc. 2
Perc. 3
Snare
Tam-tam scratch
Crotales
Xylophone
119
Harp
Pno
DJ
Hold
Orch.
Vl. I
Vl. II
Vla.
Vc.
Db.
Scratch tone
Scratch tone

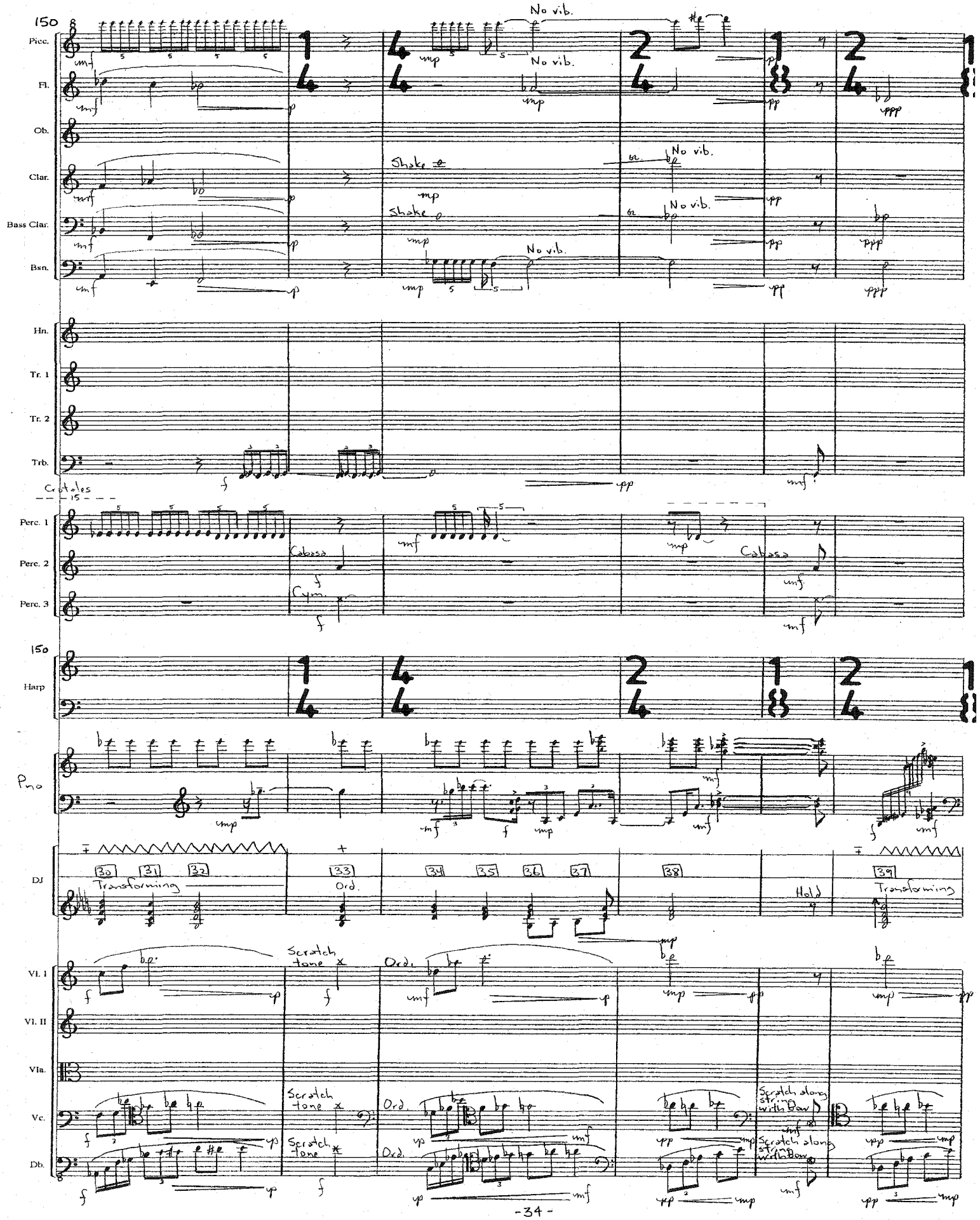

125
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Cym.
Snare
Rub snare surface with brushes
Harp
Pno
Ped.
DJ
Hydroplane
Ord.
Glide
Vl. I
Vl. II
Vla.
Vc.
Db.
Col legno battuto
Scratch tone
Pizz.

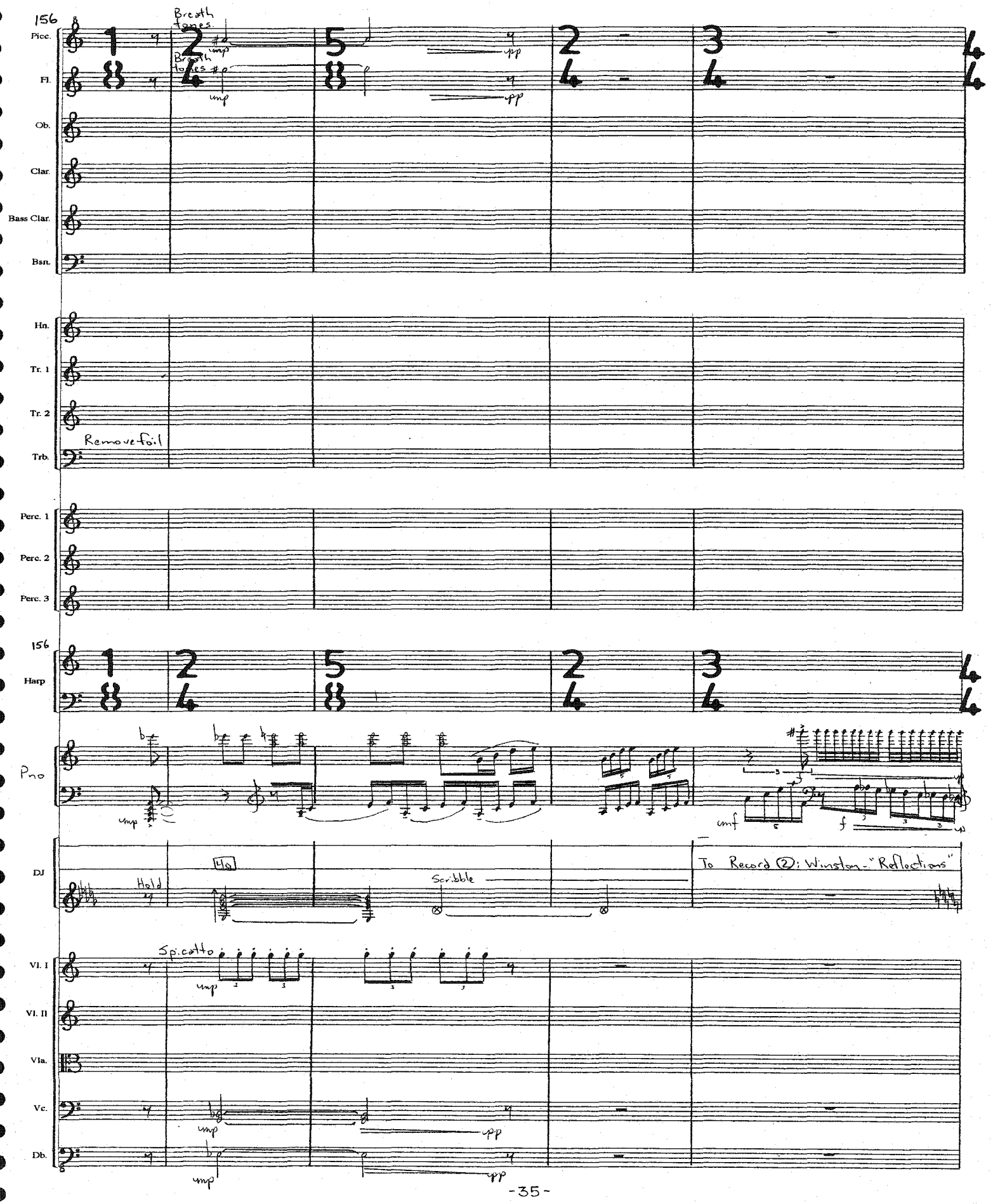

130
Accel.
A tempo
Rit.
Picc.
Fl.
Ob.
Clar.
Shake
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Cym
Perc. 2
Perc. 3
130
Harp
Pno
DJ
Hold
Glide
Ord.
Hold
Scratch tone
Accel.
Flaut.
A tempo
Arco ord.
Rit.
Vib. fast/wide - decrease pressure
Vl. I
Vl. II
Vla.
Arco ord.
Vib. fast/wide - decrease pressure
Vc.
Scratch tone
Arco ord.
Vib. fast/wide - decrease pressure
Db.

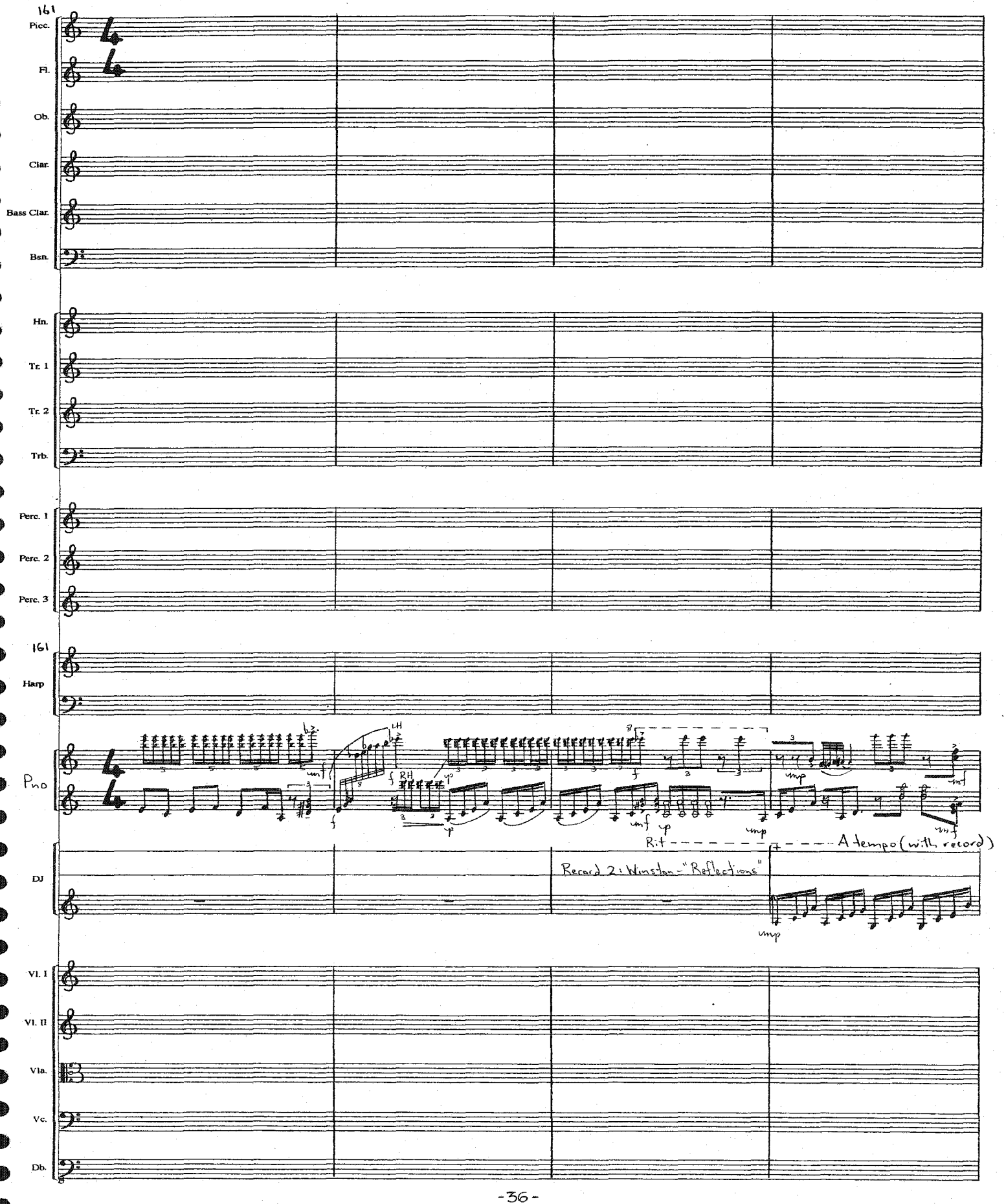

A tempo
135
No vib.
Flutter tongue
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Shakebo
Perc. 1
Perc. 2
Perc. 3
Bass Drum
Cabasa
135
Harp
Inside piano
Pno
Rub lowest strings with waxed paper
Ped
Ord
Ped
DJ
Hold
A tempo
Scratch tone
Ord.
Marcato
Vl. I
Vl. II
Vla.
Vc.
Db.
Scratch along string with bow
Scratch along string with bow

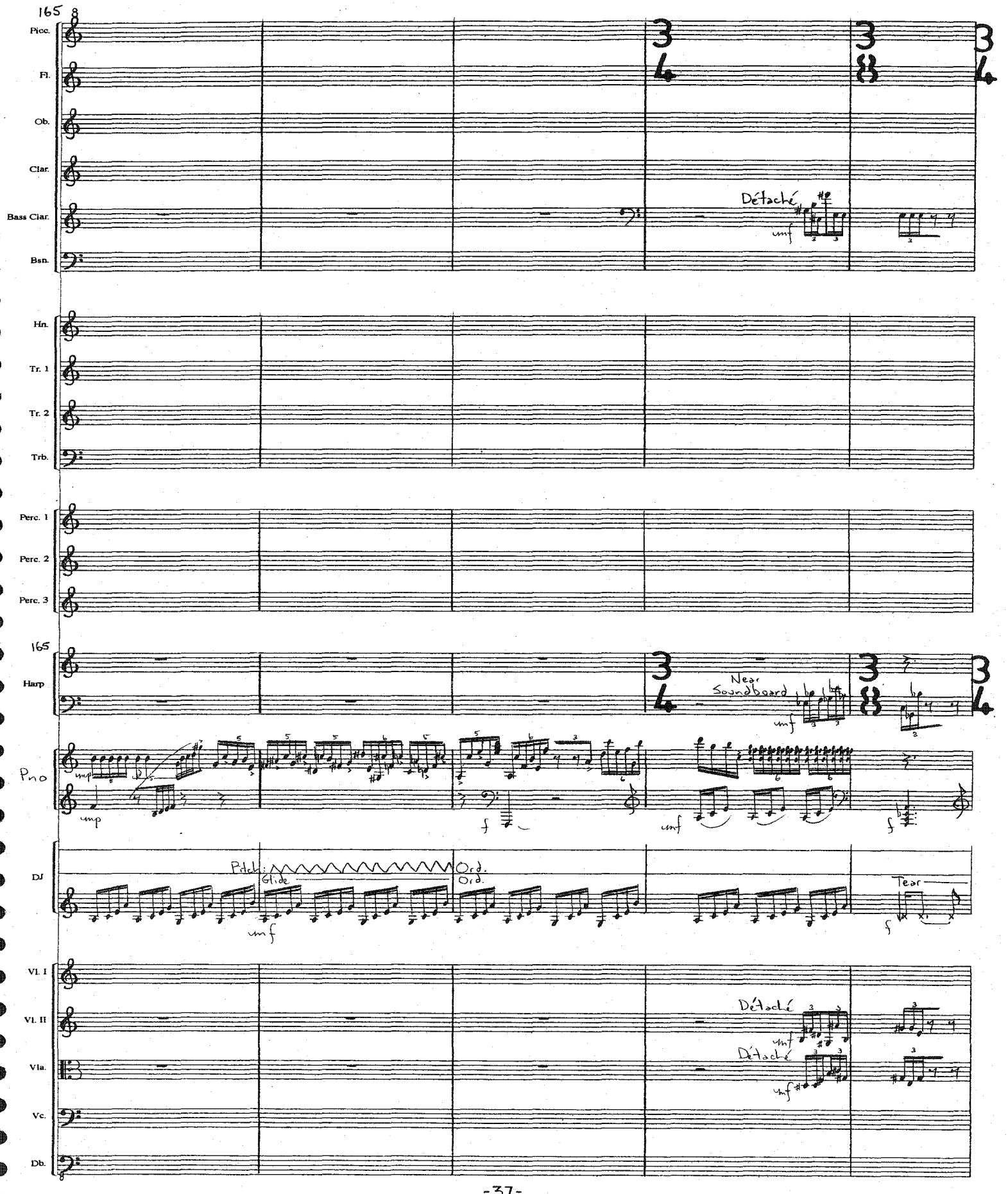

141
Vib. ord.
Picc.
Fl.
Ob.
Clar.
Vib. ord.
Bass Clar.
Vib. ord.
Bsn.
Vib. ord.
Hn.
Tr. 1
Tr. 2
Trb.
Saw
Vib. fast/narrow
Perc. 1
Perc. 2
Perc. 3
141
Harp
Pno
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Scratch tone
Scratch tone
Scratch tone
Vib fast/wide

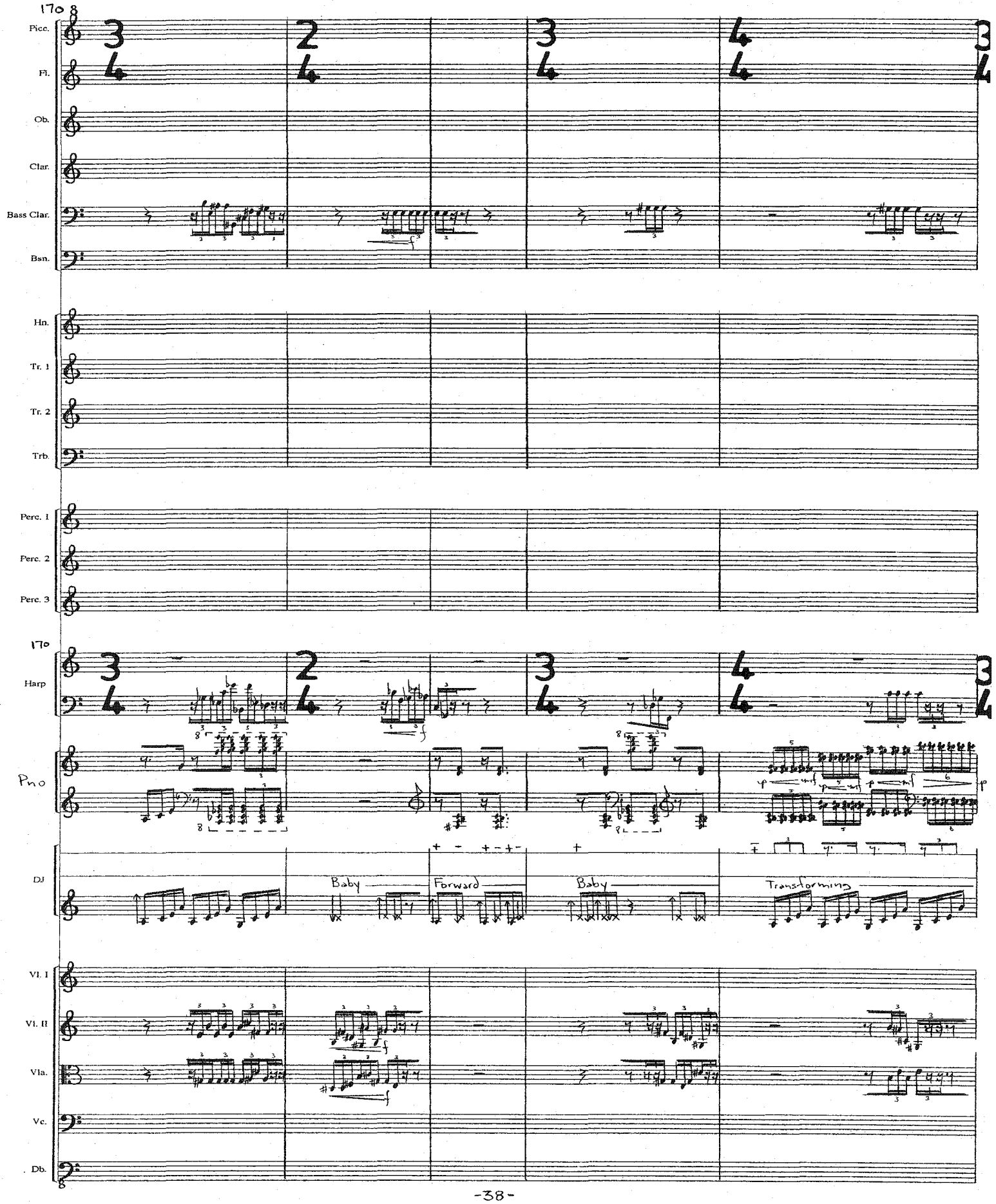

145
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Crotales
Cabasa
Cym.
145
Harp
Pno
DJ
24
Hydroplane
Ord. Hold
25
Accel.
26
Ord.
27
28
29
Vl. I
Vl. II
Vla.
Vc.
Db.
Scratch tone
Ord.
Molto vib.
Arco
Pizz.

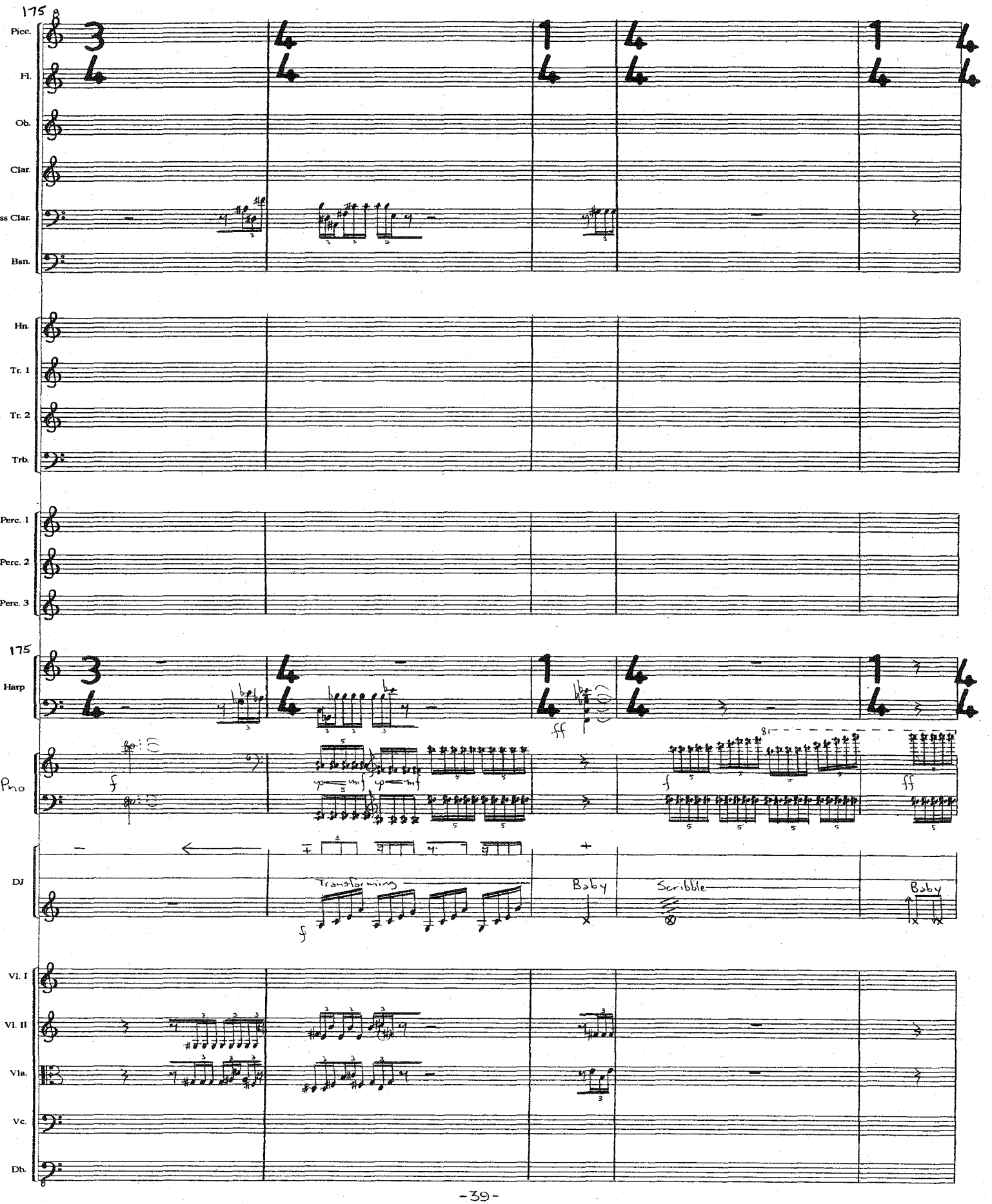

150
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
No vib.
Shake
Hn.
Tr. 1
Tr. 2
Trb.
Crotales
Perc. 1
Perc. 2
Perc. 3
Cabasa
Cym.
Harp
Pno
DJ
Transforming
Ord.
Hold
Scratch tone
Vl. I
Vl. II
Vla.
Vc.
Db.
Scratch along string with Bow

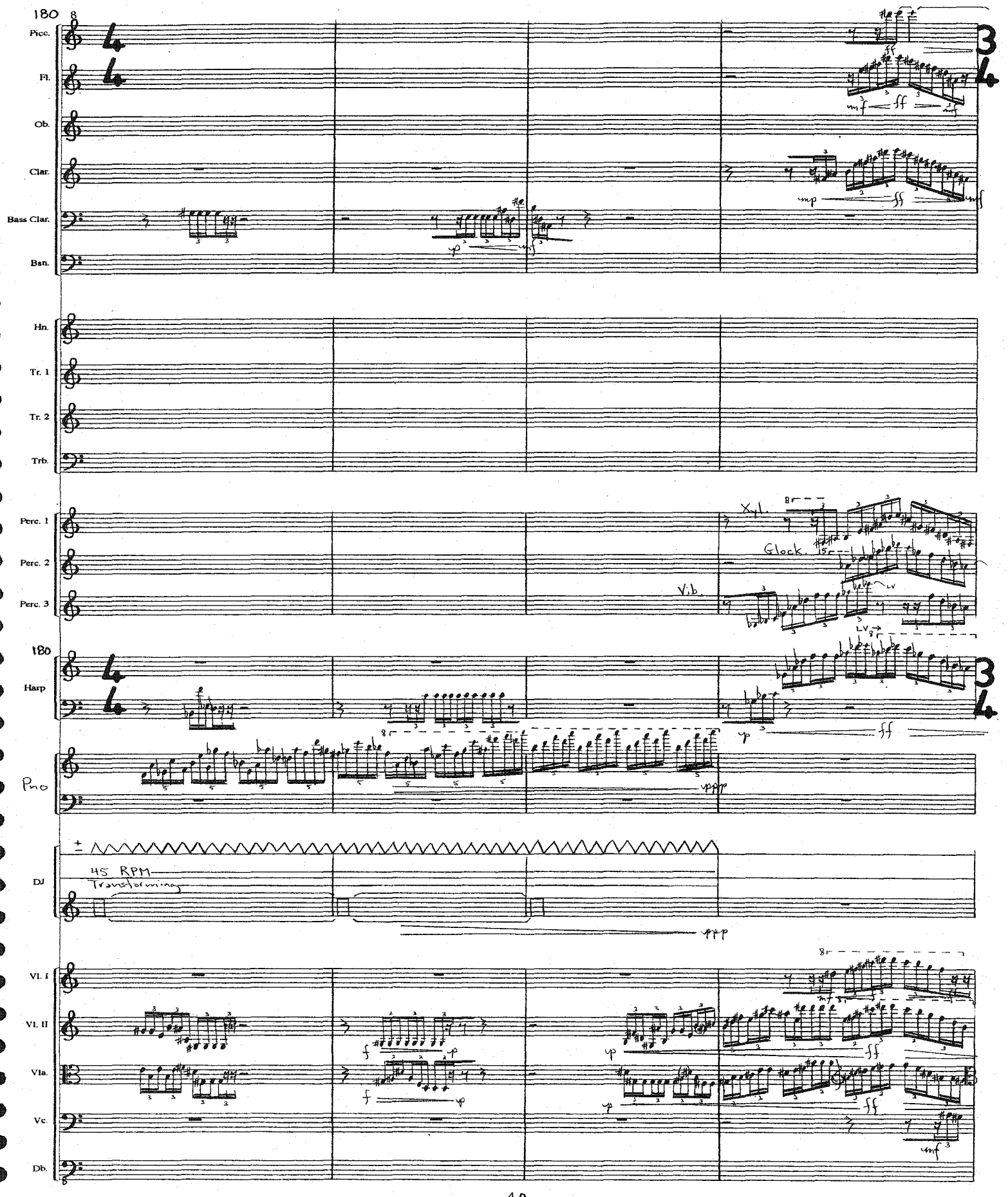

156
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Breath tones
Breath tones
Hn.
Tr. 1
Tr. 2
Remove foil
Trb.
Perc. 1
Perc. 2
Perc. 3
156
Harp
Pno
DJ
Hold
Scribble
To Record ②: Winston - "Reflections"
Vl. I
Spiccato
Vl. II
Vla.
Vc.
Db.

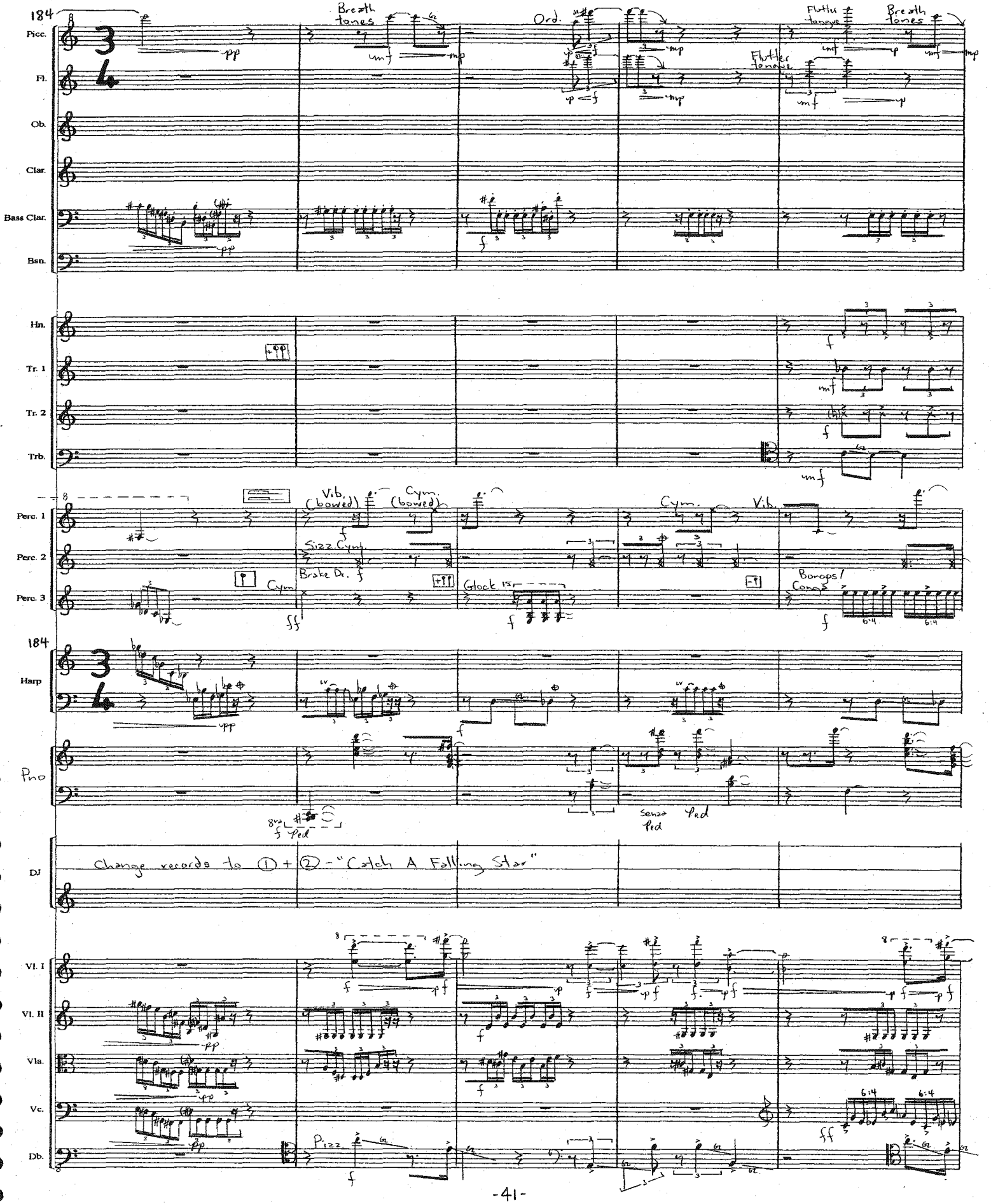

161
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
161
Harp
Pno
LH
RH
R.f
A tempo (with record)
DJ
Record 2: Winston - "Reflections"
Vl. I
Vl. II
Vla.
Vc.
Db.

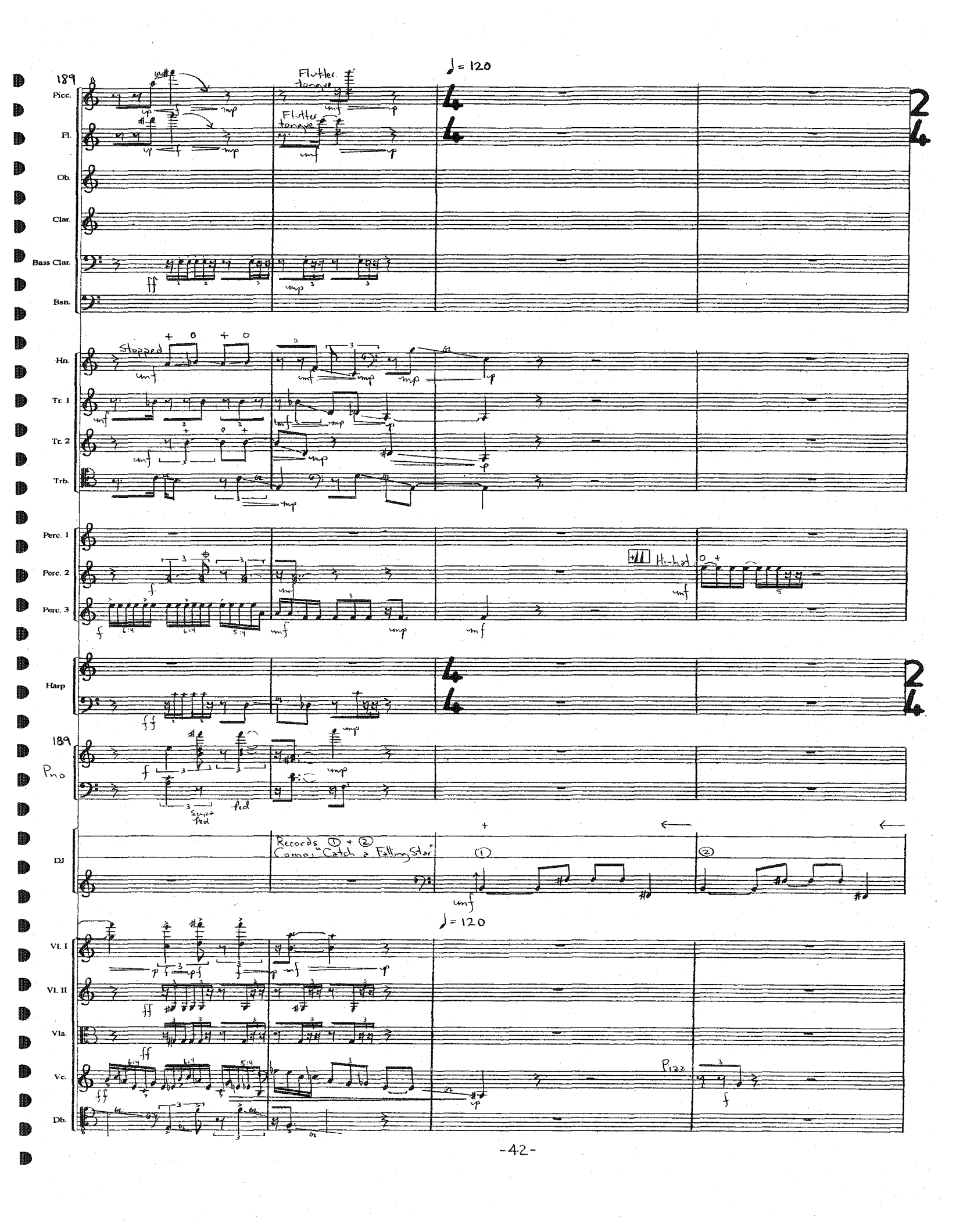

165
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Détaché
unf
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
165
Harp
Near Soundboard
unf
Pno
mp
f
unf
f
DJ
Pitch:
Glide
Ord.
Ord.
unf
Tear
f
Vl. I
Vl. II
Vla.
Vc.
Db.
Détaché
unf
Détaché
unf

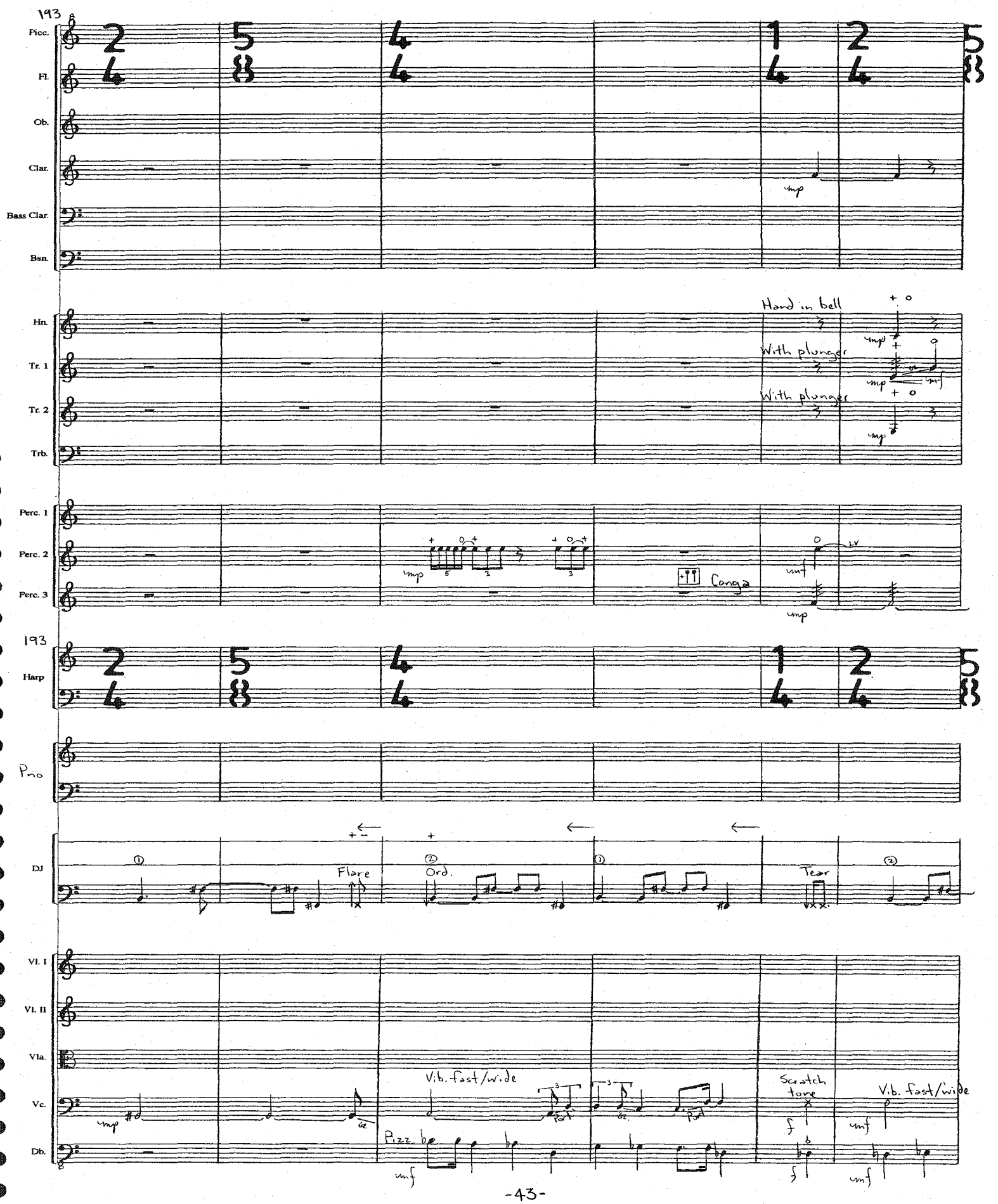

170
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
170
Harp
Pno
DJ
Baby
Forward
Baby
Transforming
Vl. I
Vl. II
Vla.
Vc.
Db.

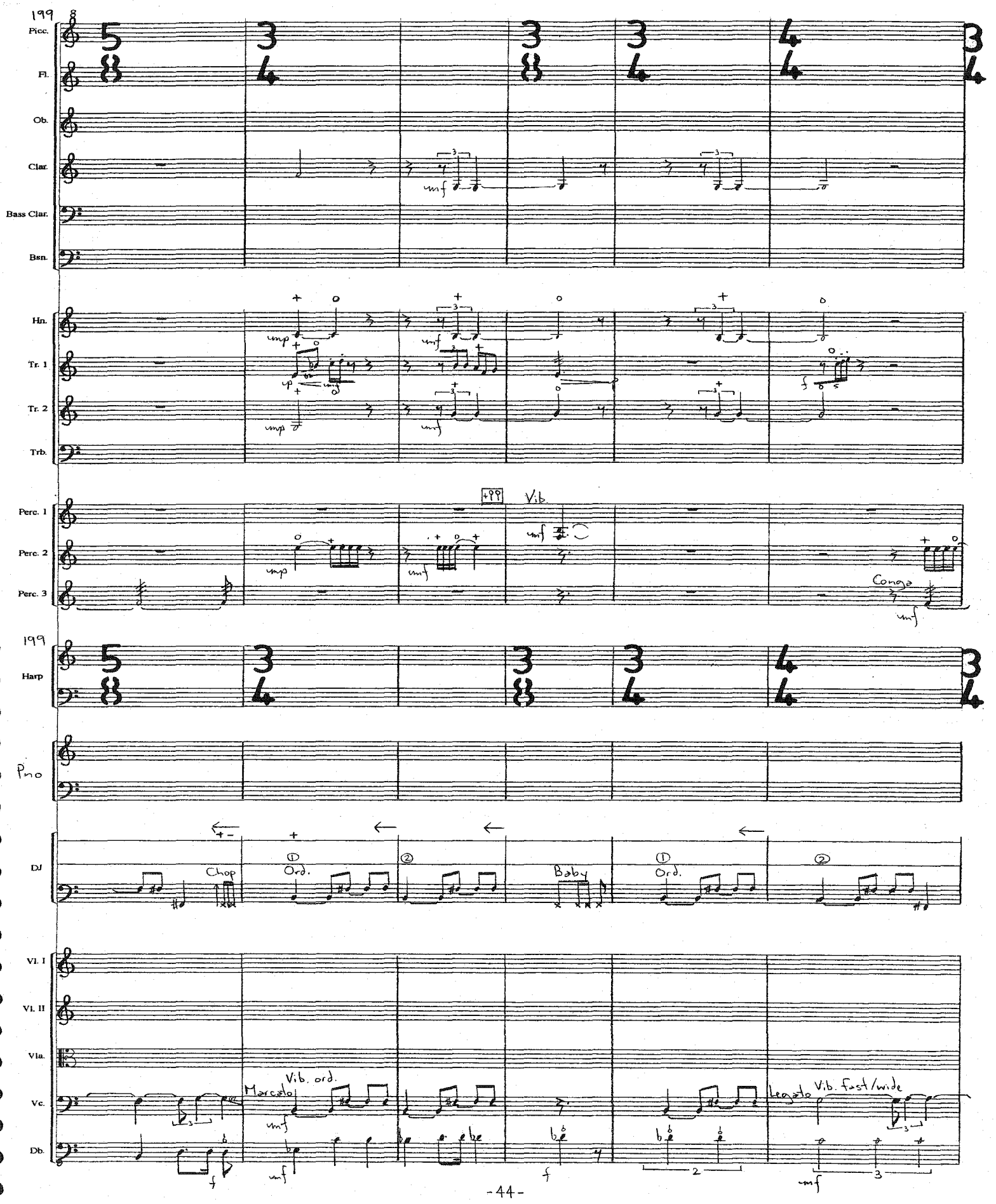

175
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
175
Harp
Pno
DJ
Transforming
Baby
Scribble
Baby
Vl. I
Vl. II
Vla.
Vc.
Db.

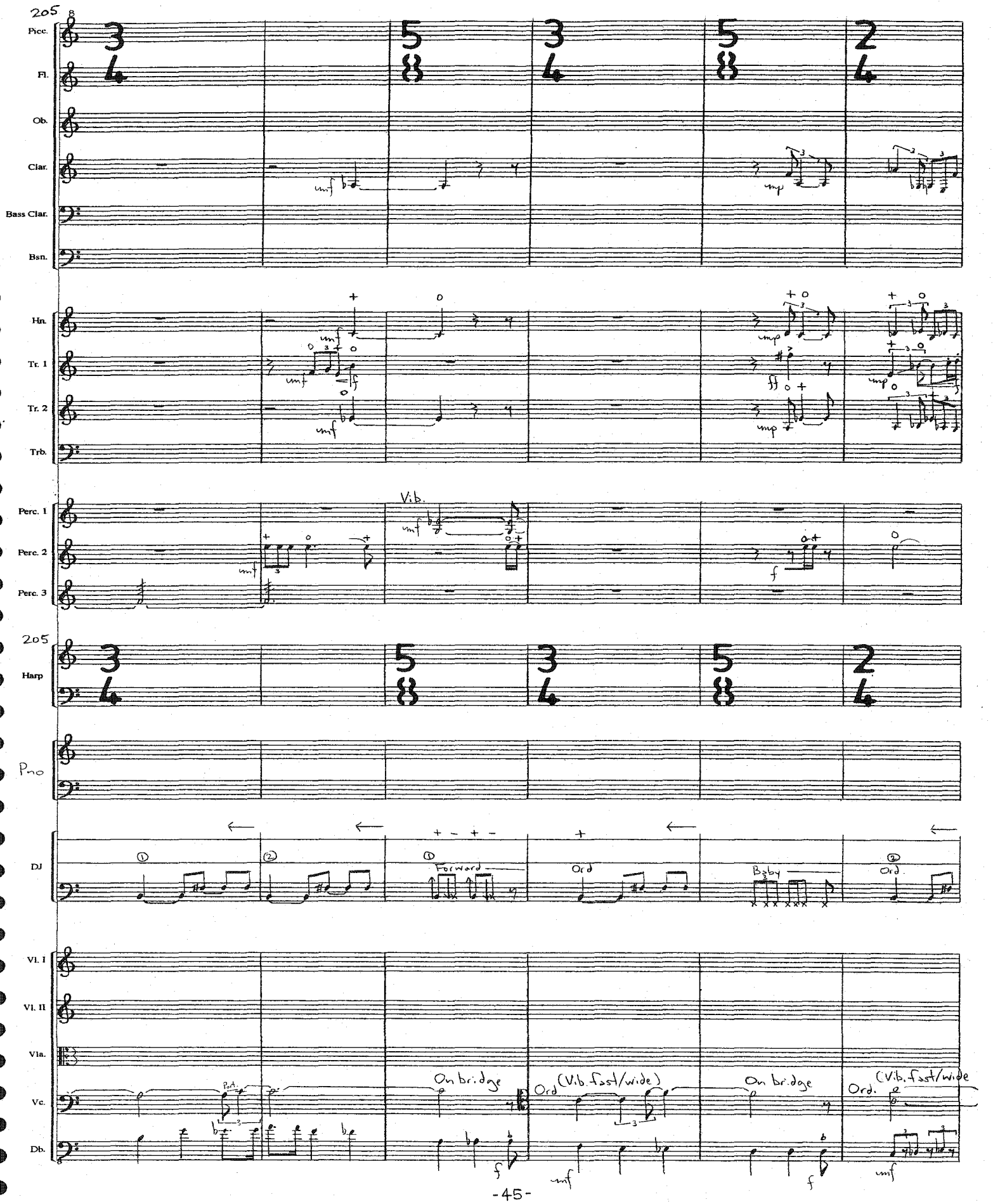

180
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Xyl.
Glock.
Vib.
180
Harp
Pno
DJ
45 RPM
Transforming
Vl. I
Vl. II
Vla.
Vc.
Db.

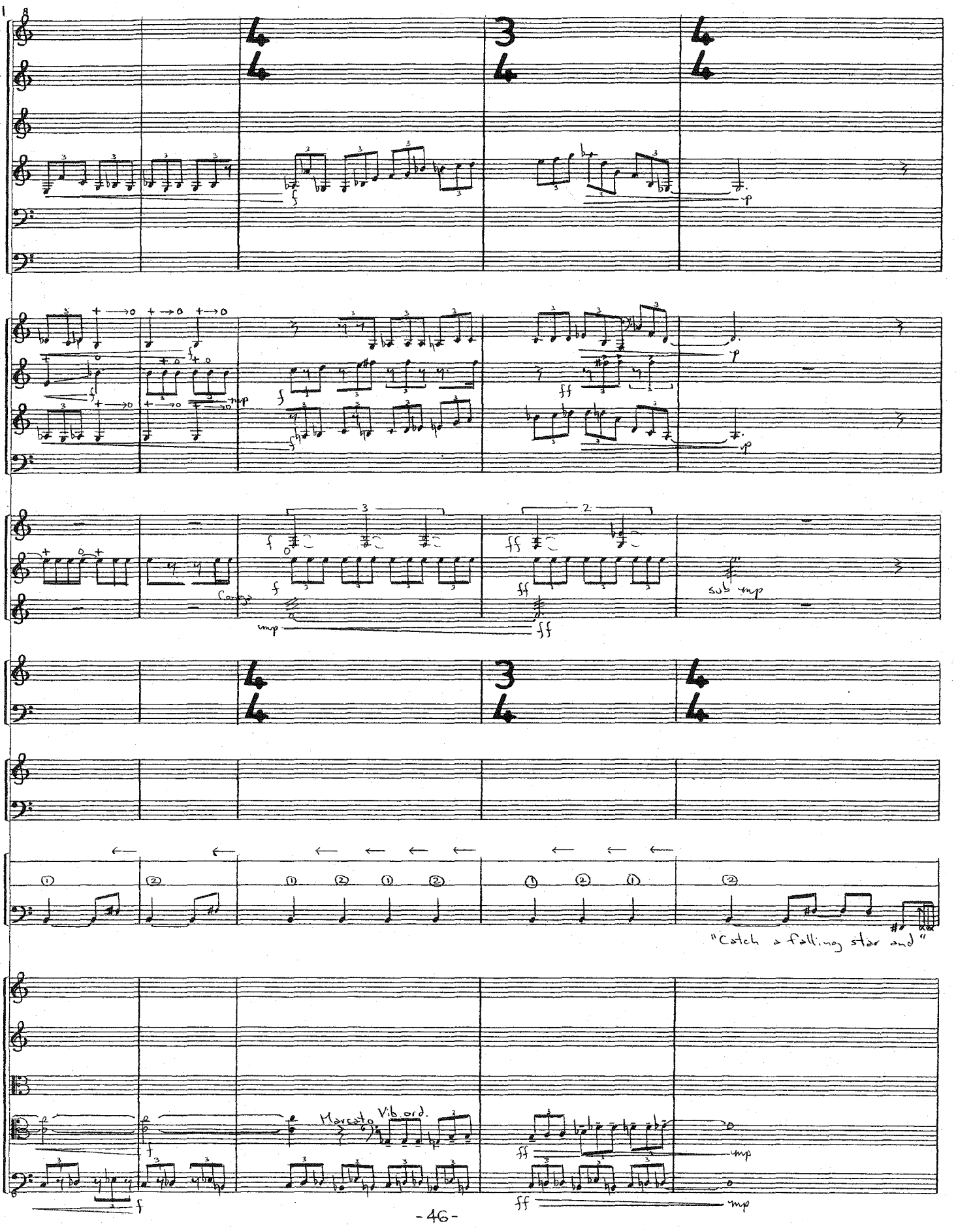

184
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Breath tones
Ord.
Flutter tongue
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Vib. (bowed)
Cym. (bowed)
Cym.
Vib.
Sizz. Cym.
Broke Di.
Glock
Bongos / Congas
Harp
Pno
Ped
Senza Ped
DJ
Change records to ① + ② - "Catch A Falling Star"
Vl. I
Vl. II
Vla.
Vc.
Db.
Pizz.

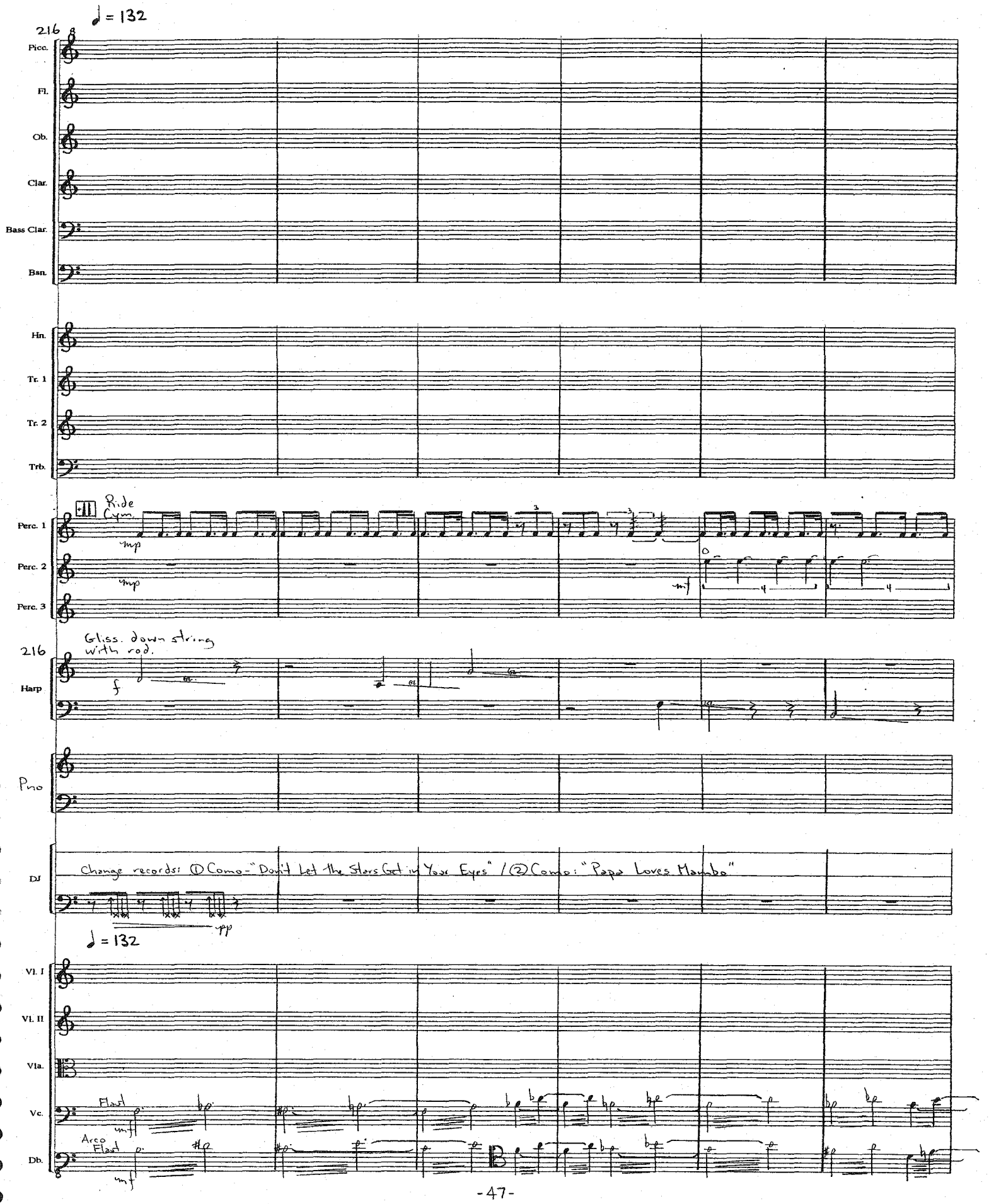

189
♩ = 120
Flutter tongue
Flutter tongue
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Stopped
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Hi-hat
Harp
189
Pno
ped
DJ
Records ① + ②
Comes "Catch a Falling Star"
♩ = 120
Vl. I
Vl. II
Vla.
Vc.
Db.
Pizz.

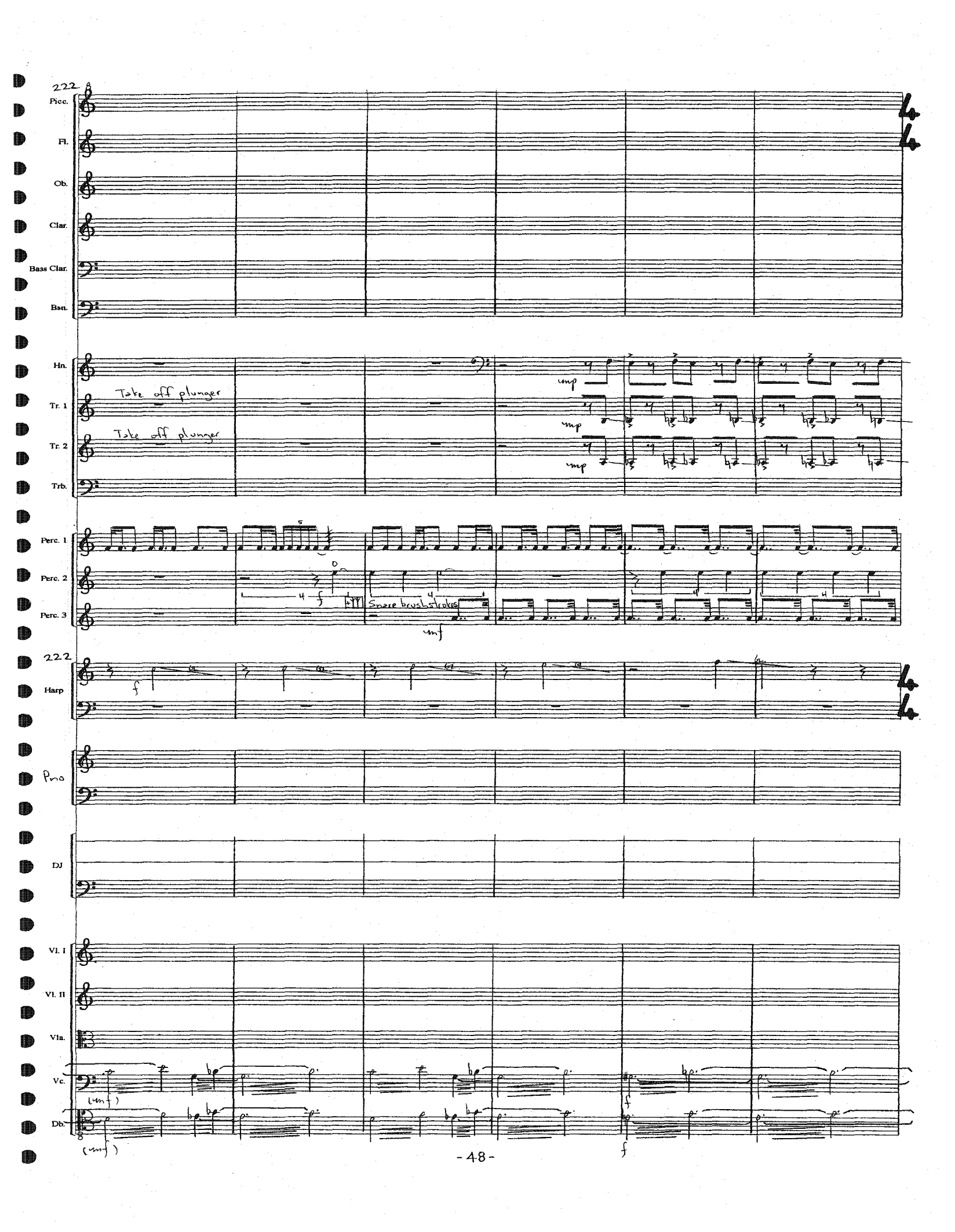

193
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Hand in bell
With plunger
With plunger
Perc. 1
Perc. 2
Perc. 3
Conga
193
Harp
Pno
DJ
Flare
Ord.
Tear
Vl. I
Vl. II
Vla.
Vc.
Db.
Vib. fast/wide
Pizz.
Scratch tone
Vib. fast/wide

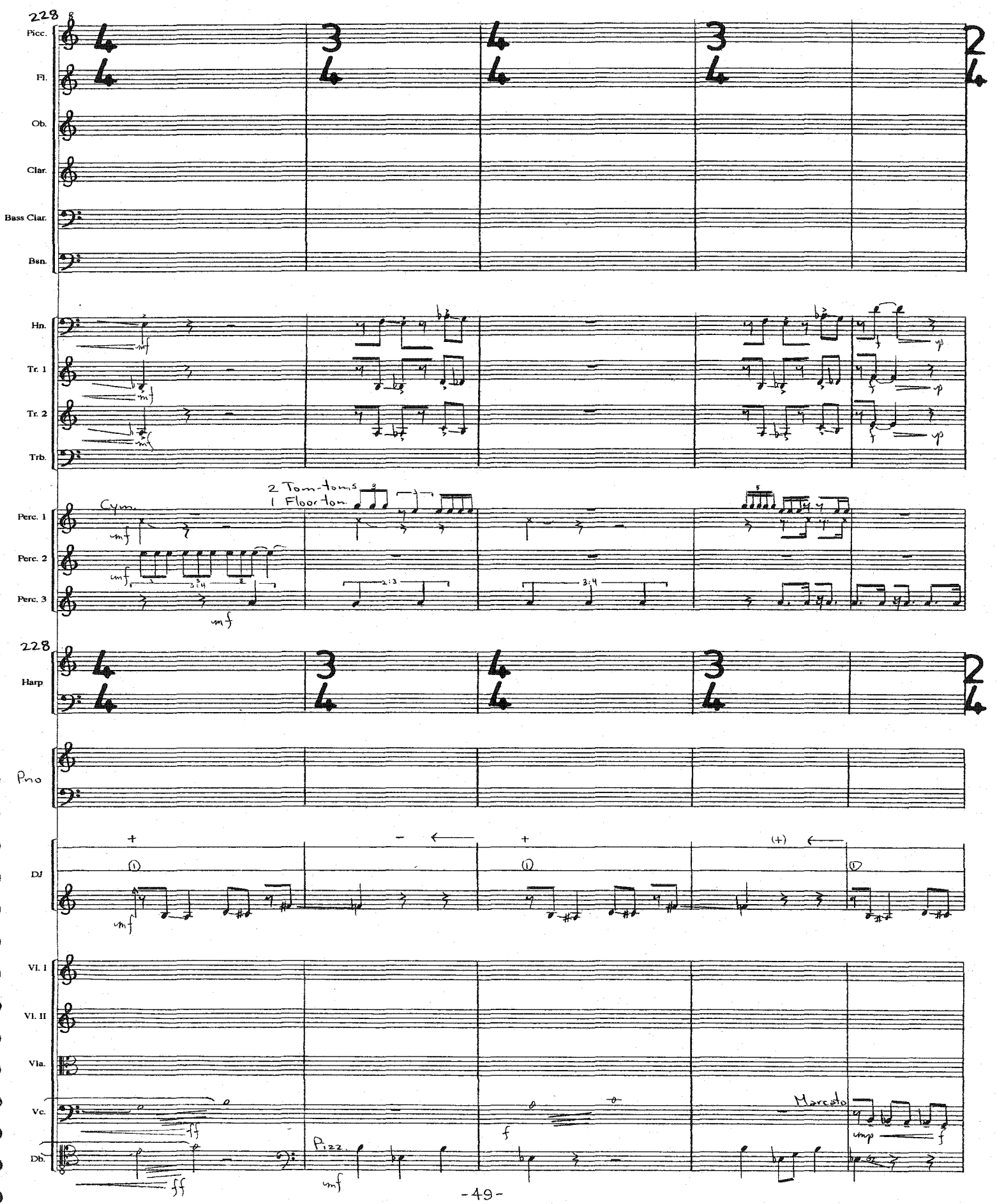

199
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
+99
Vib
Congo
199
Harp
Pno
DJ
Chop
Ord.
Baby
Ord.
Vl. I
Vl. II
Vla.
Vc.
Db.
Marcato
Vib. ord.
Legato
Vib. fast/wide

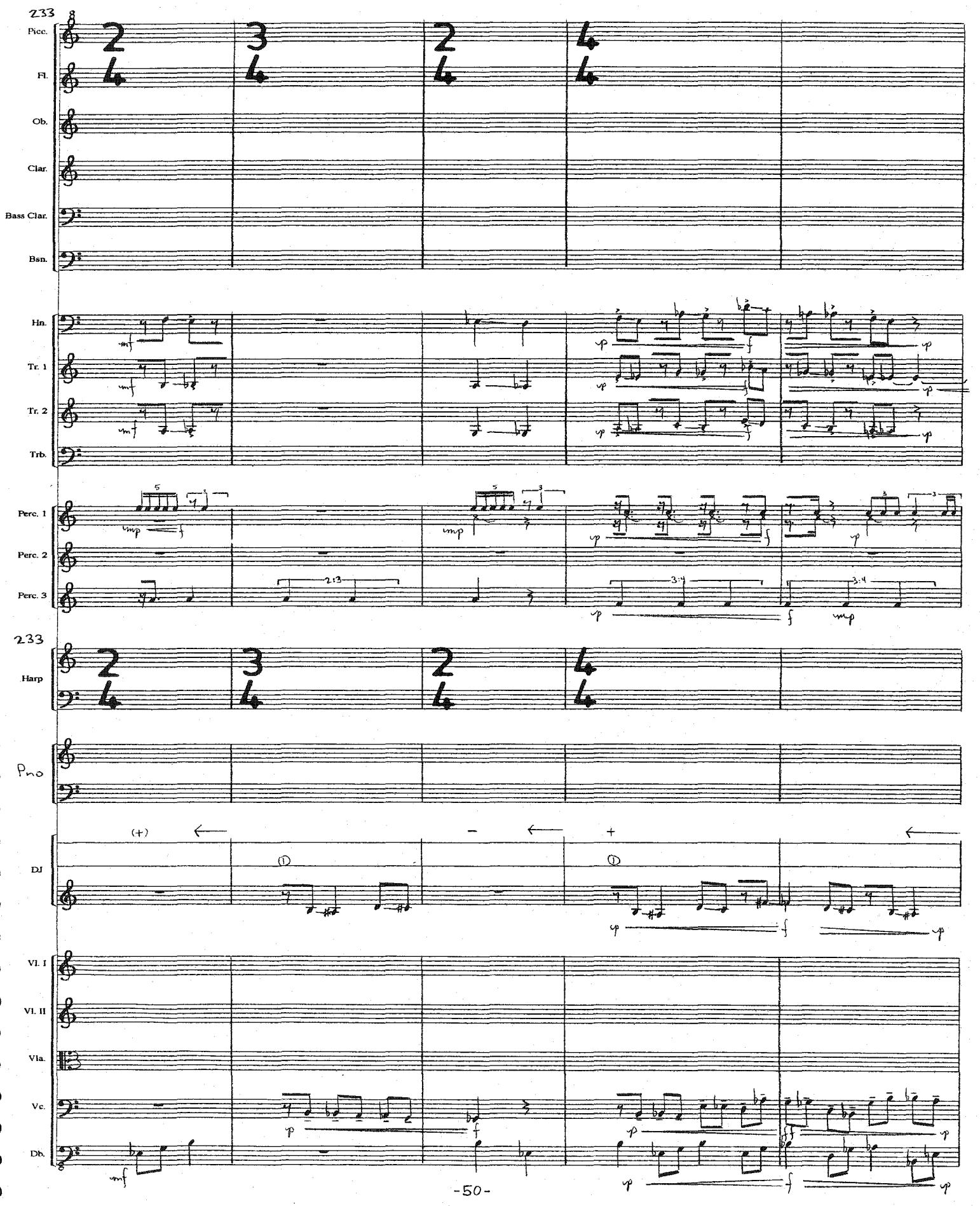

205
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Vib.
205
Harp
Pno
DJ
Forward
Ord
Baby
Ord
Vl. I
Vl. II
Vla.
Vc.
Db.
On bridge
Ord (Vib. fast/wide)
On bridge
Ord. (Vib. fast/wide

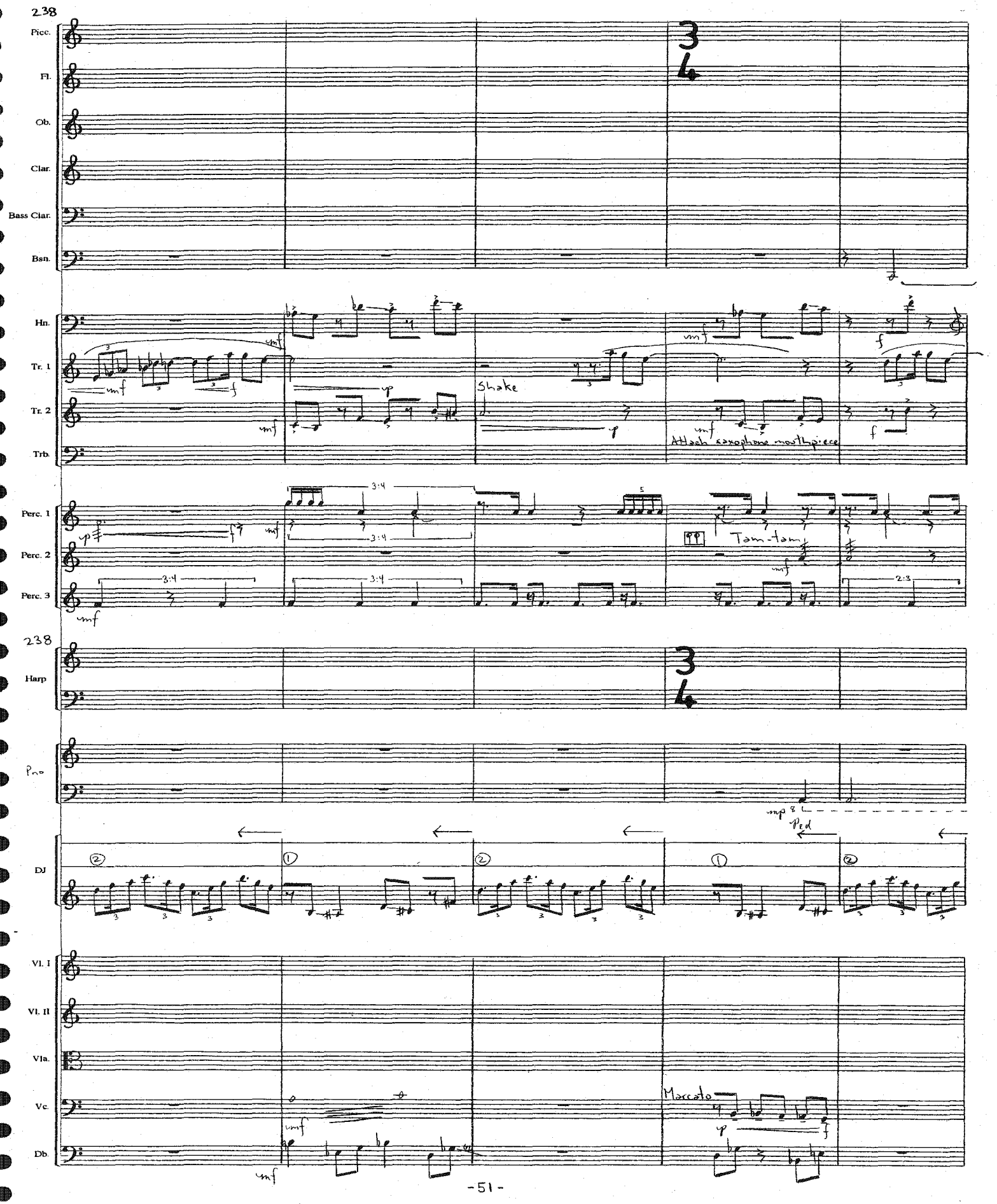

211
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Congas
sub mp
211
Harp
Pno
DJ
"Catch a falling star and"
Vl. I
Vl. II
Vla.
Vc.
Db.
Marcato
Vib. ord.

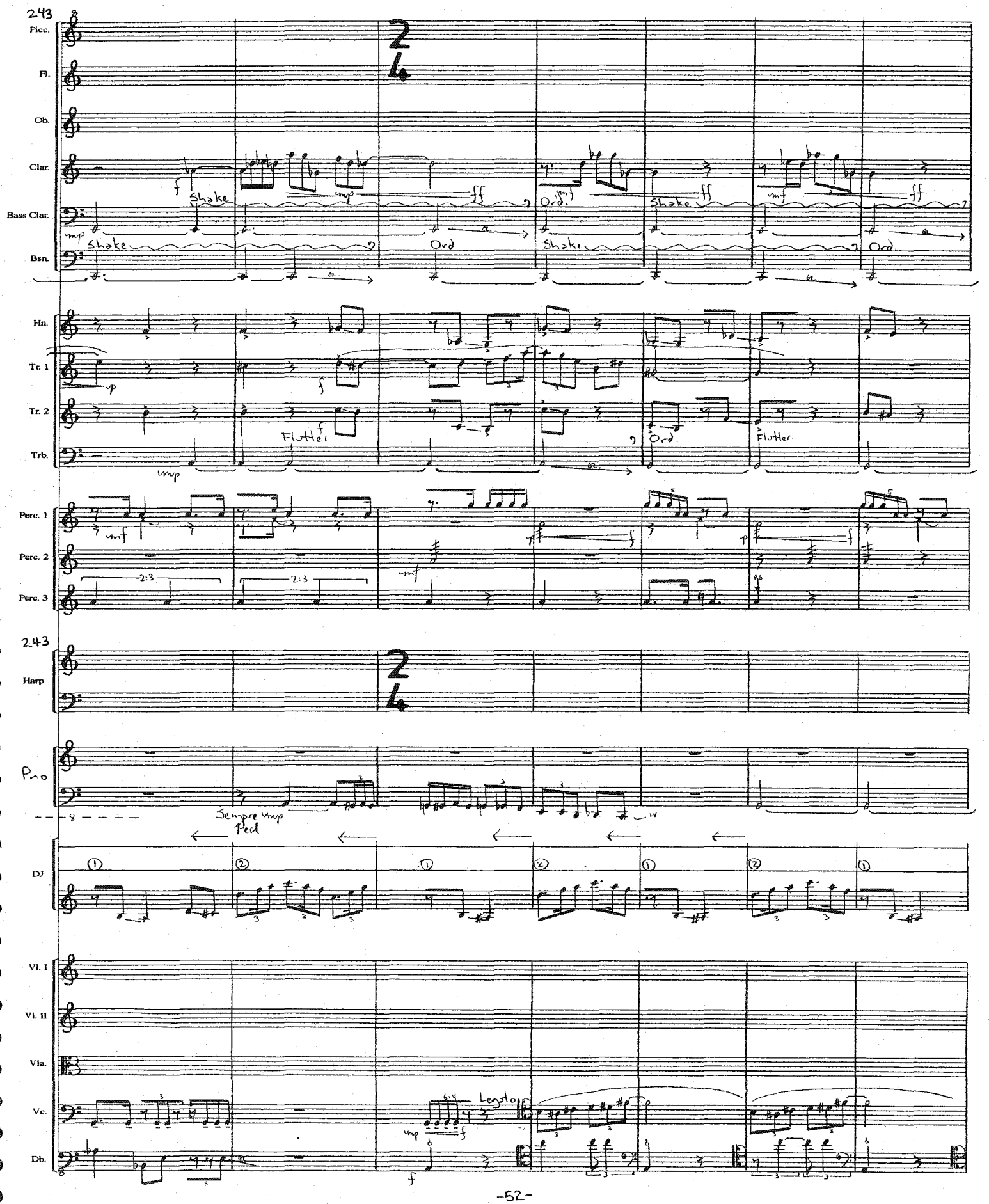

♩ = 132
216
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Ride Cym.
mp
Perc. 1
Perc. 2
Perc. 3
mf
Gliss. down string with rod.
216
Harp
f
Pno
Change records: ① Como-"Don't Let the Stars Get in Your Eyes" / ② Como: "Papa Loves Mambo"
pp
♩ = 132
Vl. I
Vl. II
Vla.
Vc.
Db.
Flaut
mf
Arco
Flaut
mf

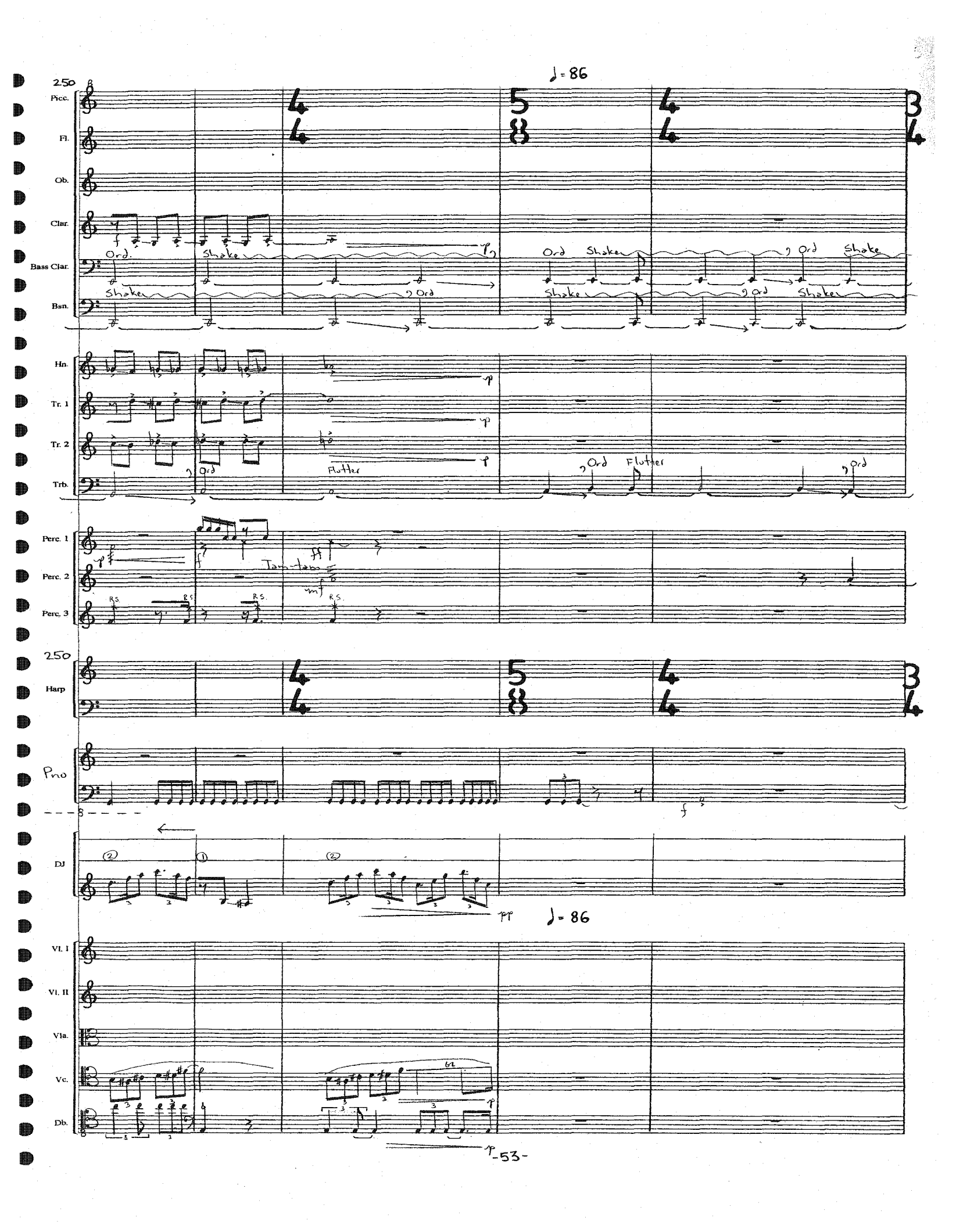

222
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Take off plunger
Tr. 1
Take off plunger
Tr. 2
Trb.
mp
mp
mp
Perc. 1
Perc. 2
Perc. 3
5
4
f
Snare brushstrokes
mf
222
Harp
f
Pno
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
(mf)
(mf)
f
f

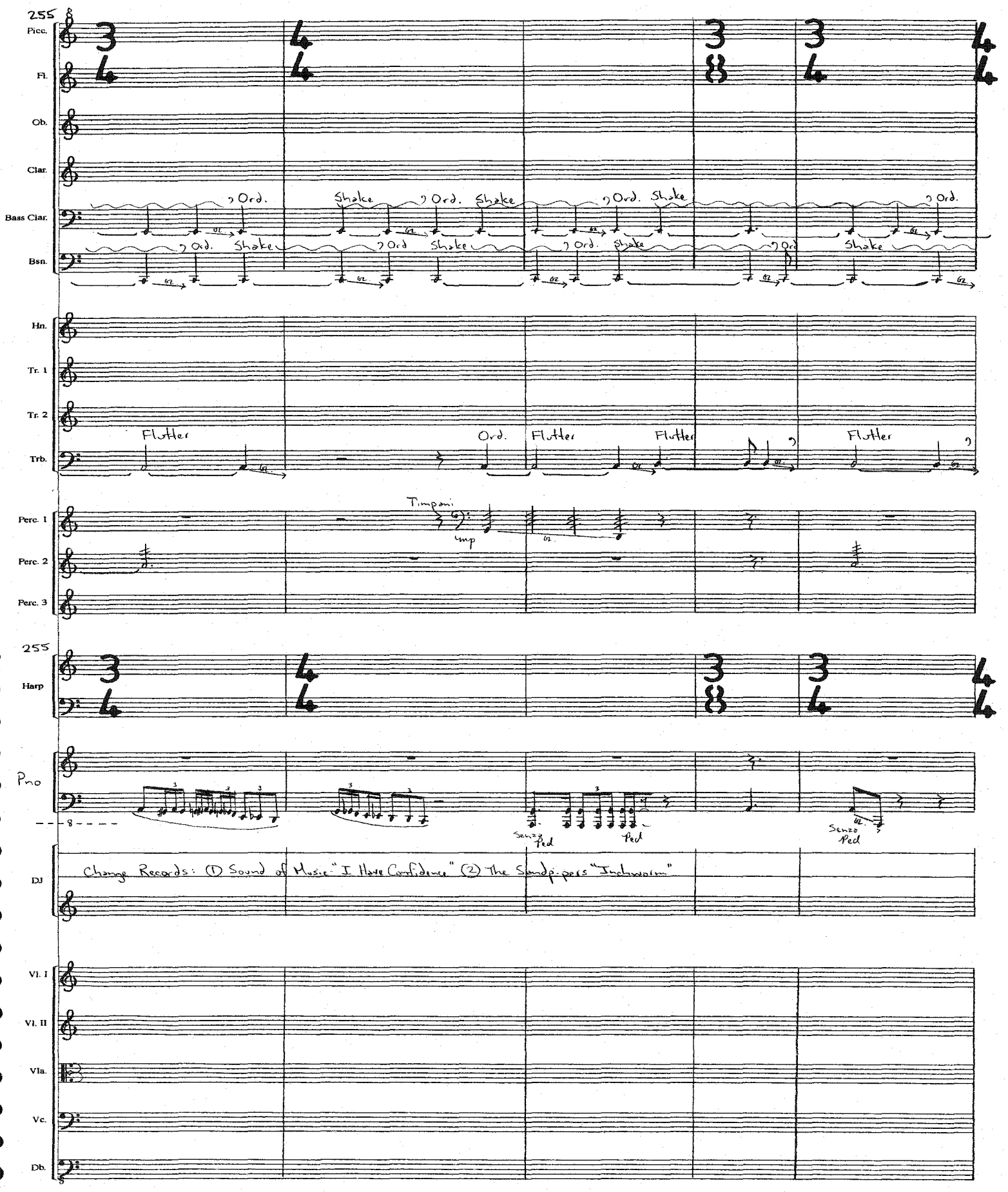

228
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Cym.
2 Tom-toms
1 Floor tom
228
Harp
Pno
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Pizz.
Marcato

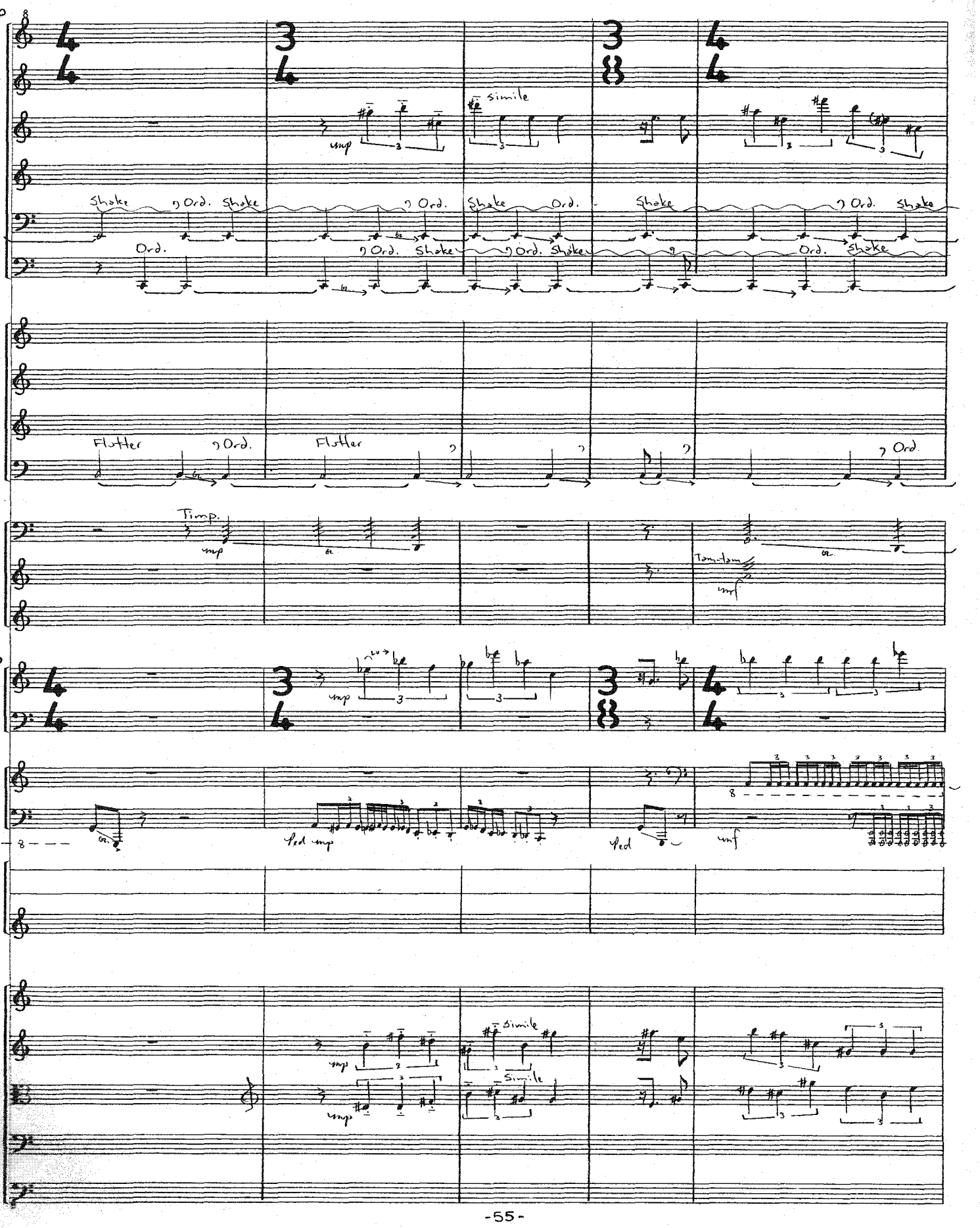

233
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
233
Harp
Pno
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.

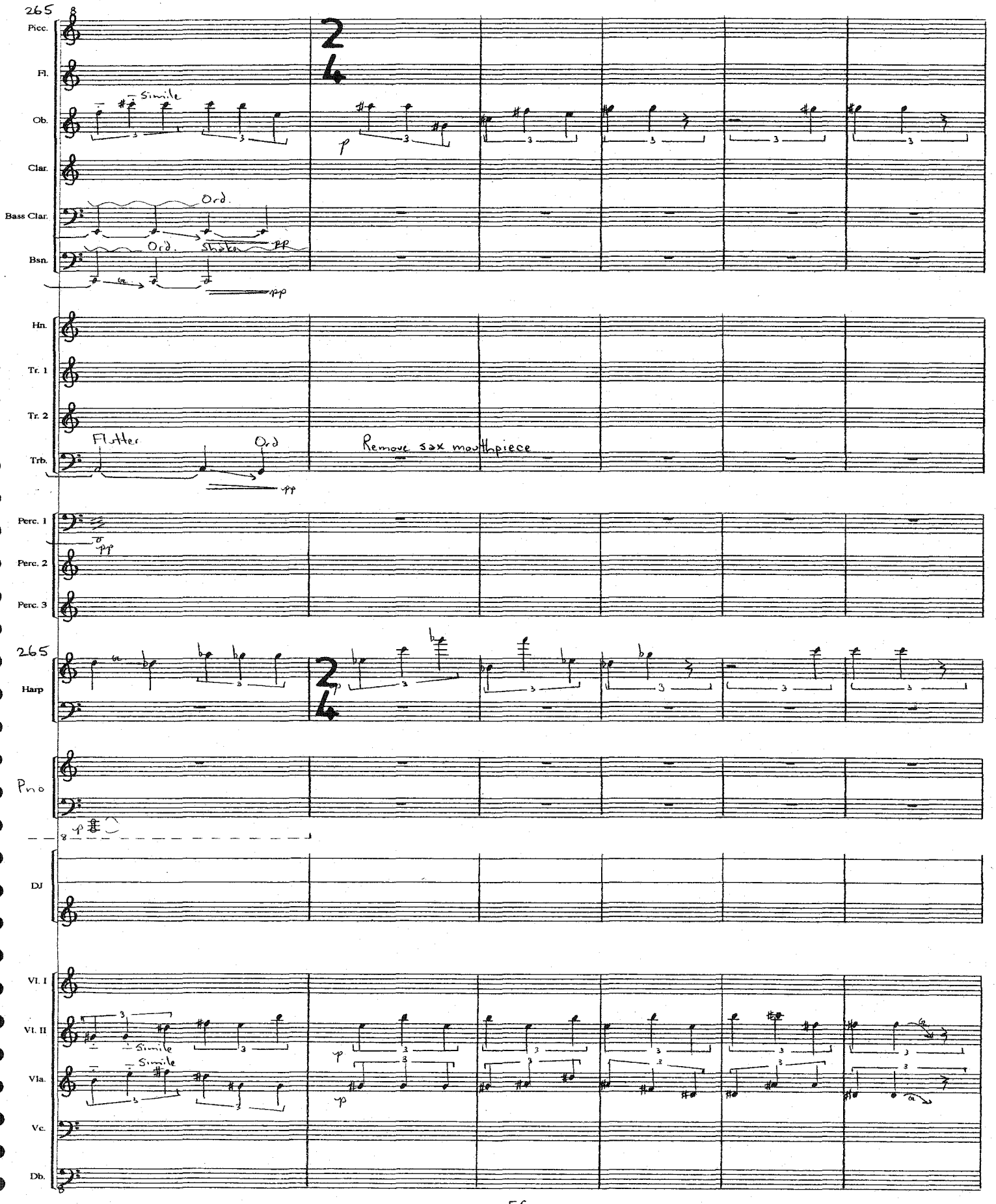

238
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Shake
Attach saxophone mouthpiece
Tam-tam
238
Harp
Pno
Ped
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Marcato

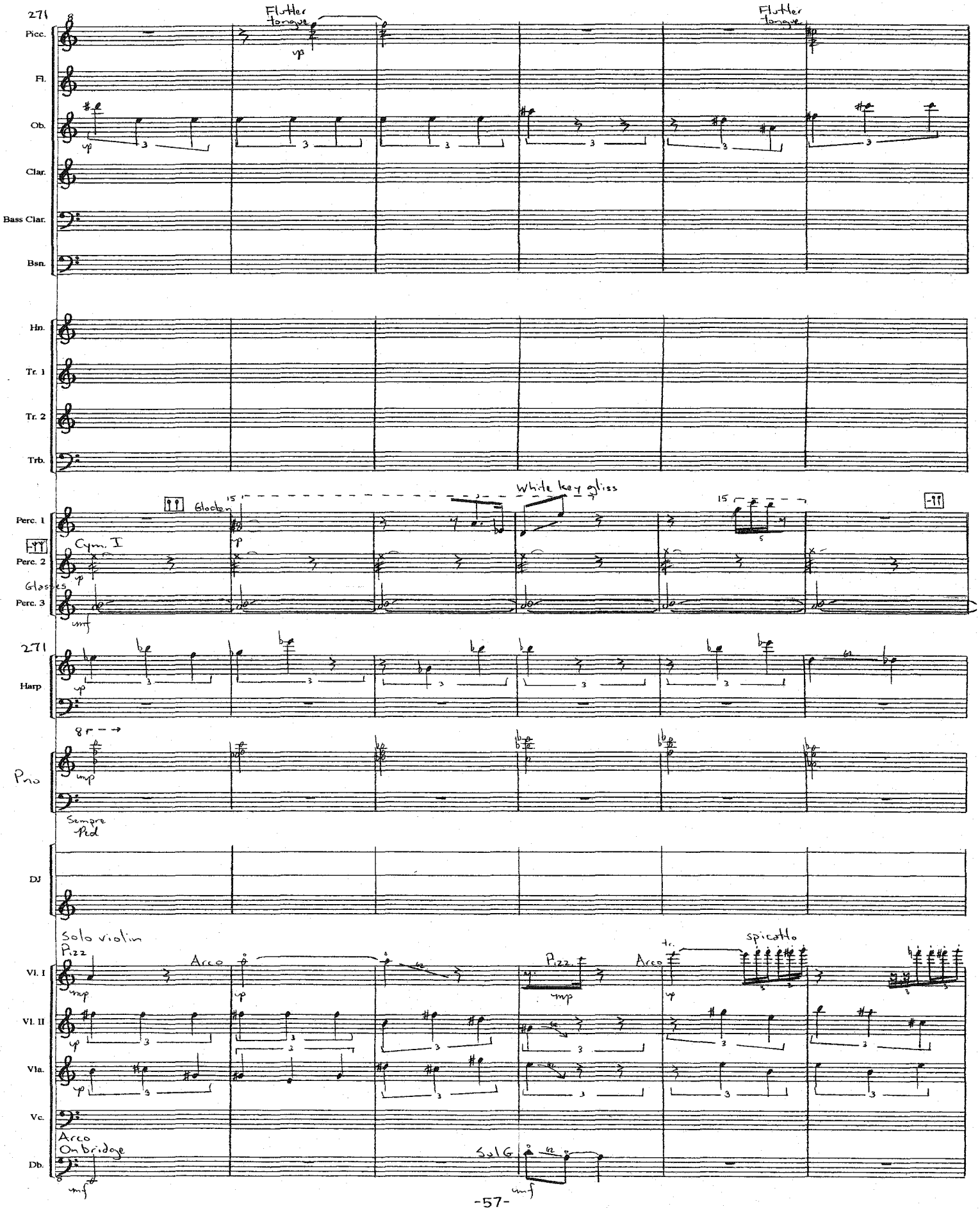

243
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
243
Harp
Pno
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Shake
Ord.
Flutter
Sempre mp
Ped
Legato

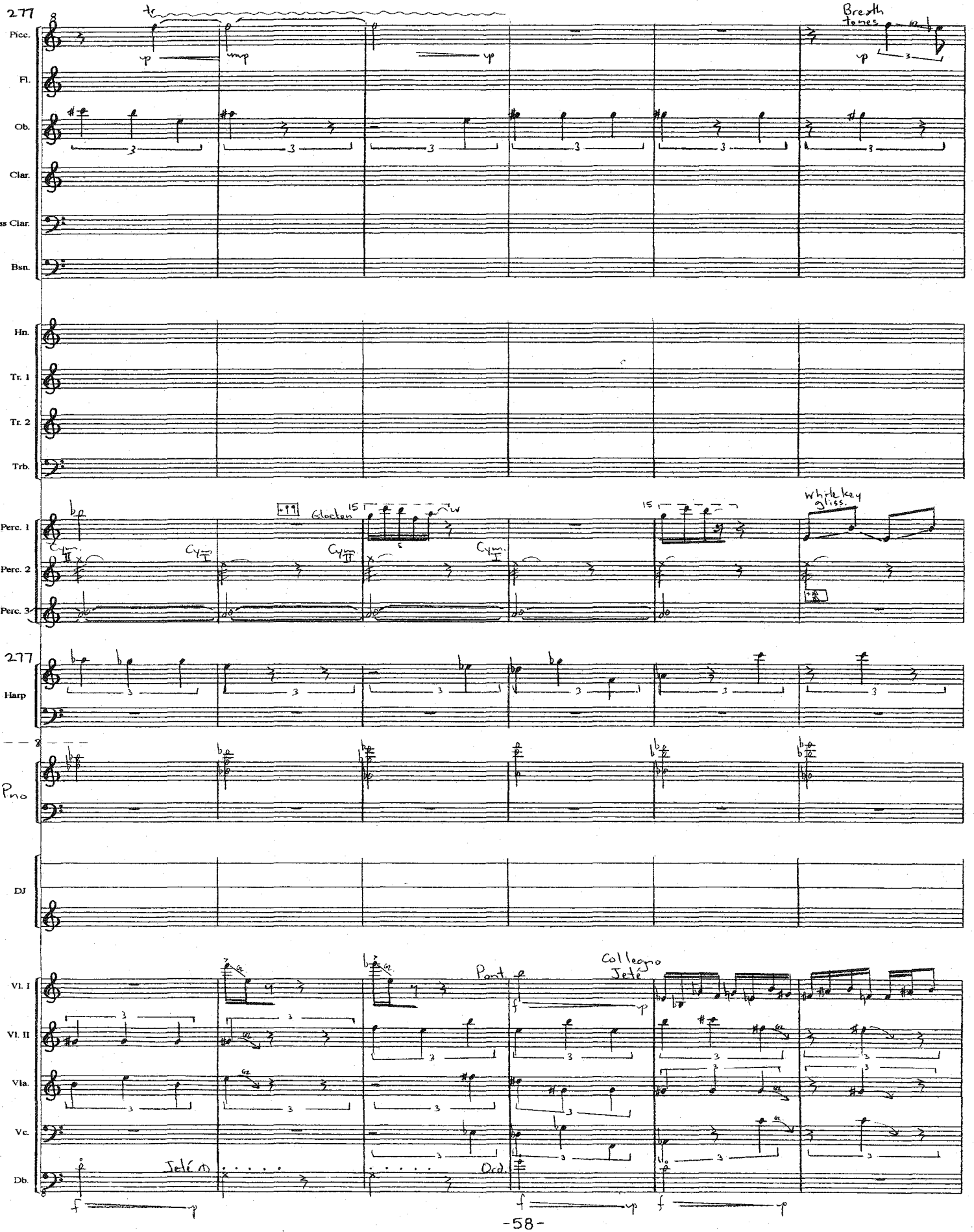

250
♩ = 86
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Ord.
Shake
Ord
Hn.
Tr. 1
Tr. 2
Trb.
Flutter
Perc. 1
Perc. 2
Perc. 3
Tam-tam
RS.
Harp
Pno
DJ
pp
Vl. I
Vl. II
Vla.
Vc.
Db.

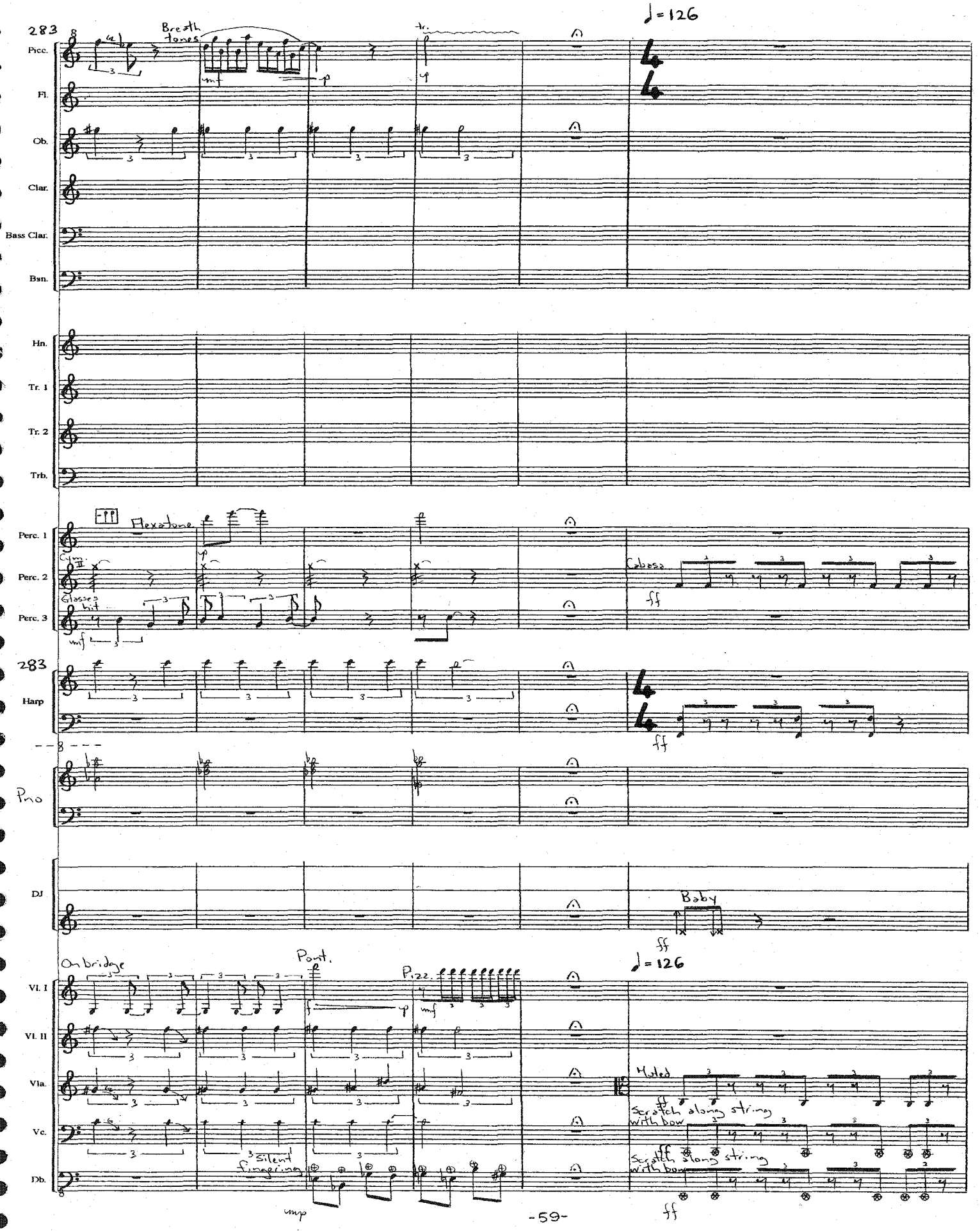

255
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Ord.
Shake
Hn.
Tr. 1
Tr. 2
Trb.
Flutter
Timpani
Perc. 1
Perc. 2
Perc. 3
Harp
Pno
Senza Ped
Ped
DJ
Change Records: (1) Sound of Music "I Have Confidence" (2) The Steelpeers "Inchworm"
Vl. I
Vl. II
Vla.
Vc.
Db.

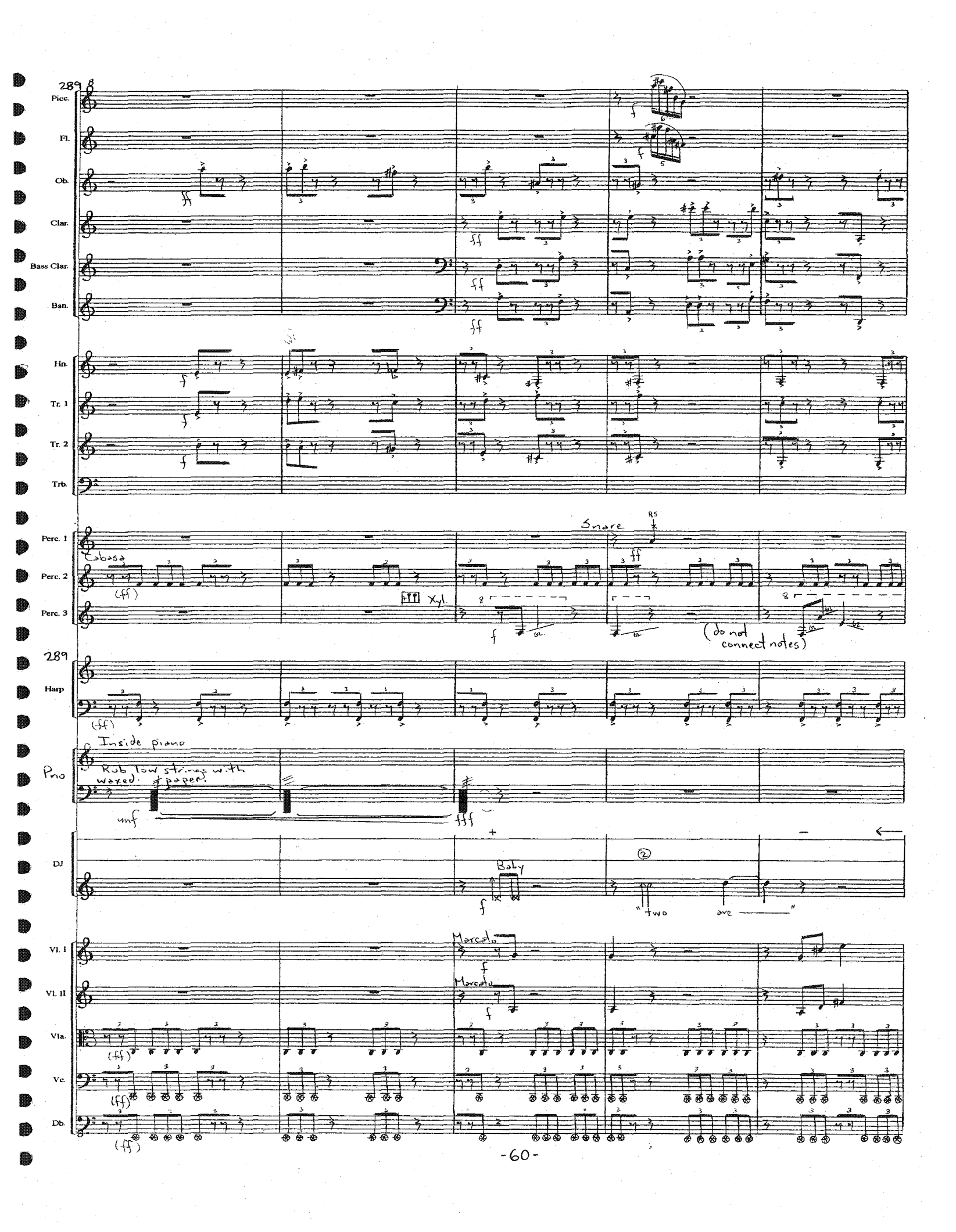

260
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Harp
Pno
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
simile
Shake
Ord.
Flutter
Timp.
Tam-tam
Ped
mp
mf

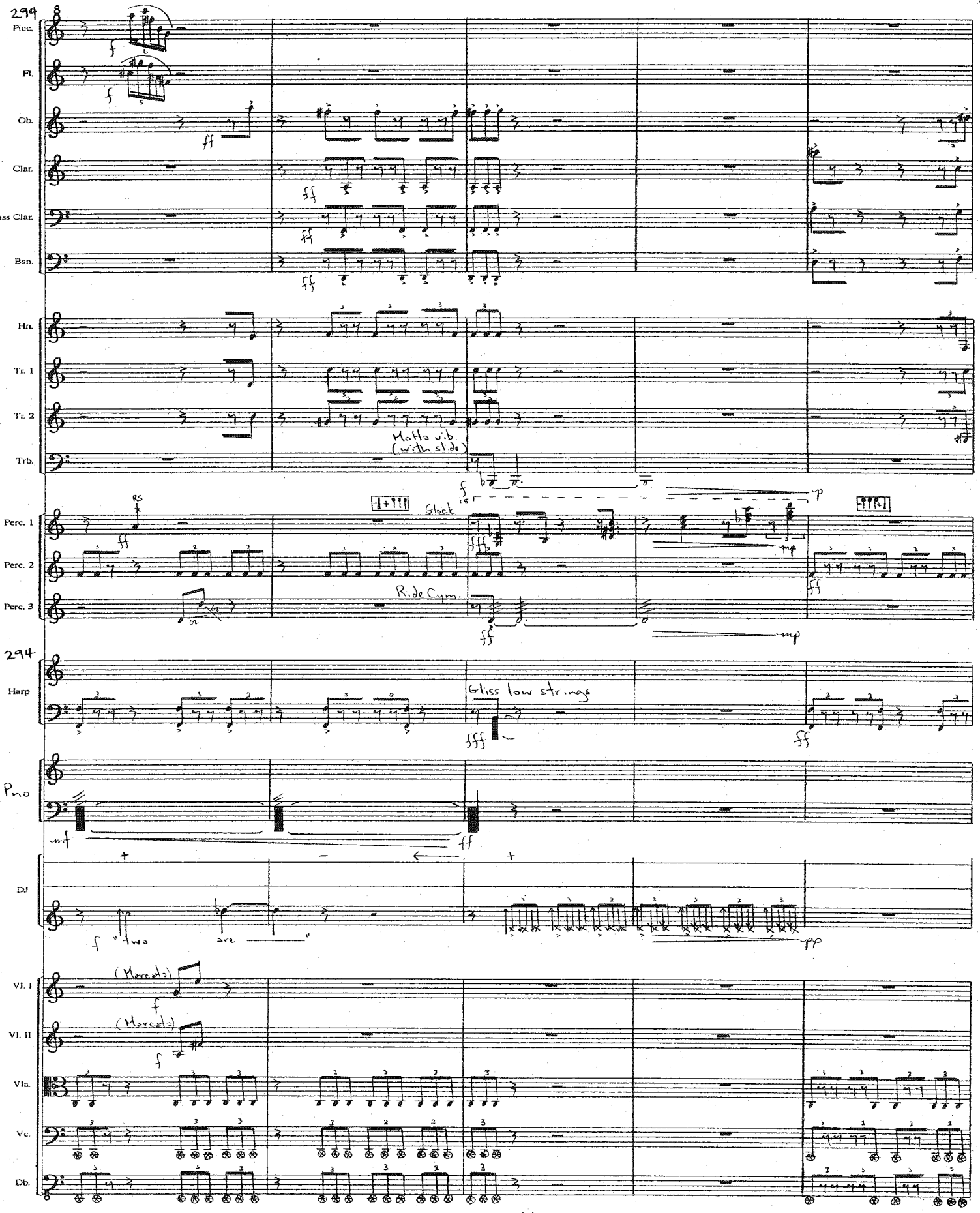

265
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
265
Harp
Pno
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Simile
Ord.
Shake
Flutter
Remove sax mouthpiece

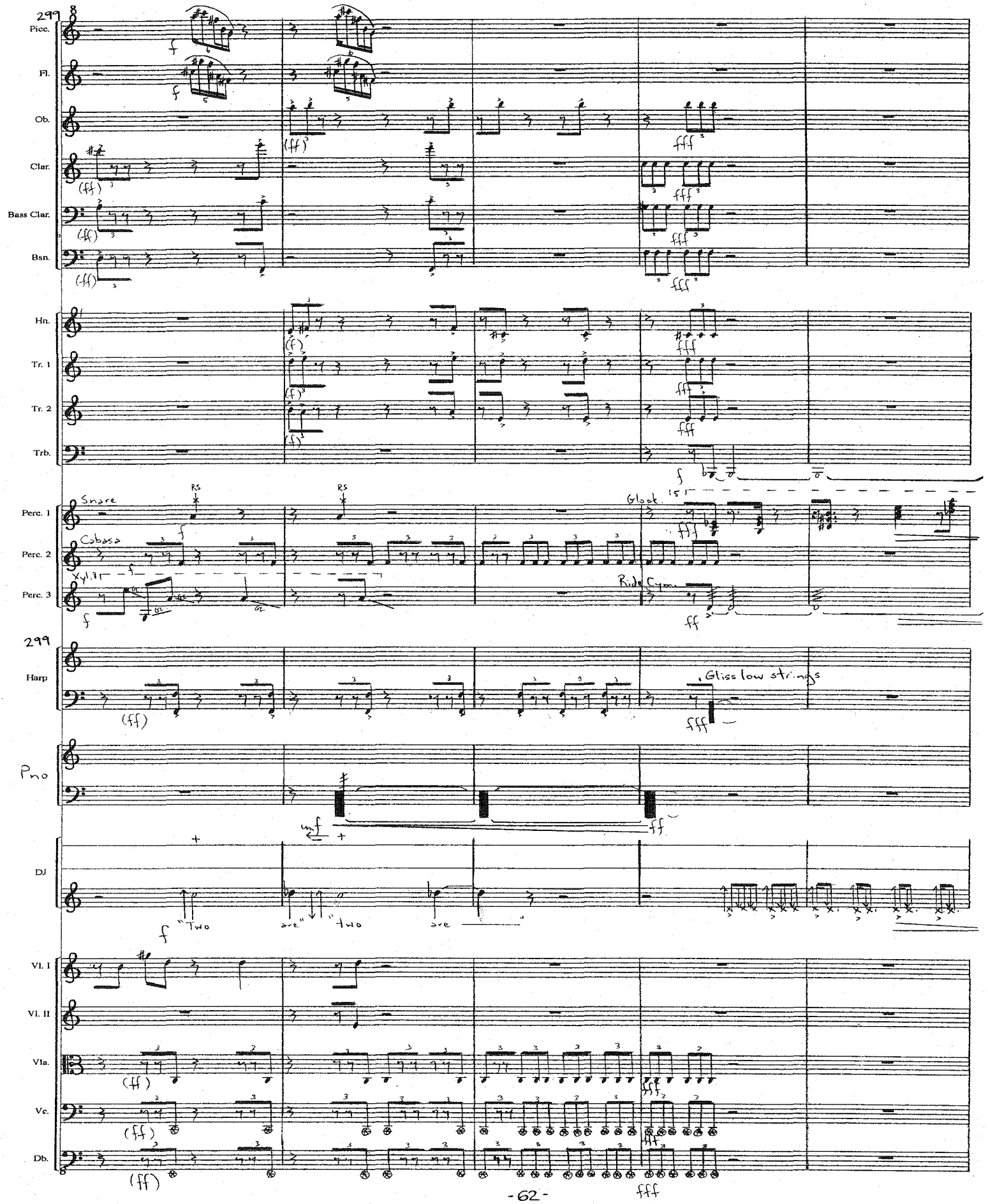

271
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Flutter tongue
Flutter tongue
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Glasses
Perc. 3
Glocken
White key gliss
Cym. I
271
Harp
Pno
Sempre Ped
DJ
Solo violin
Pizz
Arco
Pizz.
Arco
spicatto
Vl. I
Vl. II
Vla.
Vc.
Db.
Arco On Bridge
Sul G

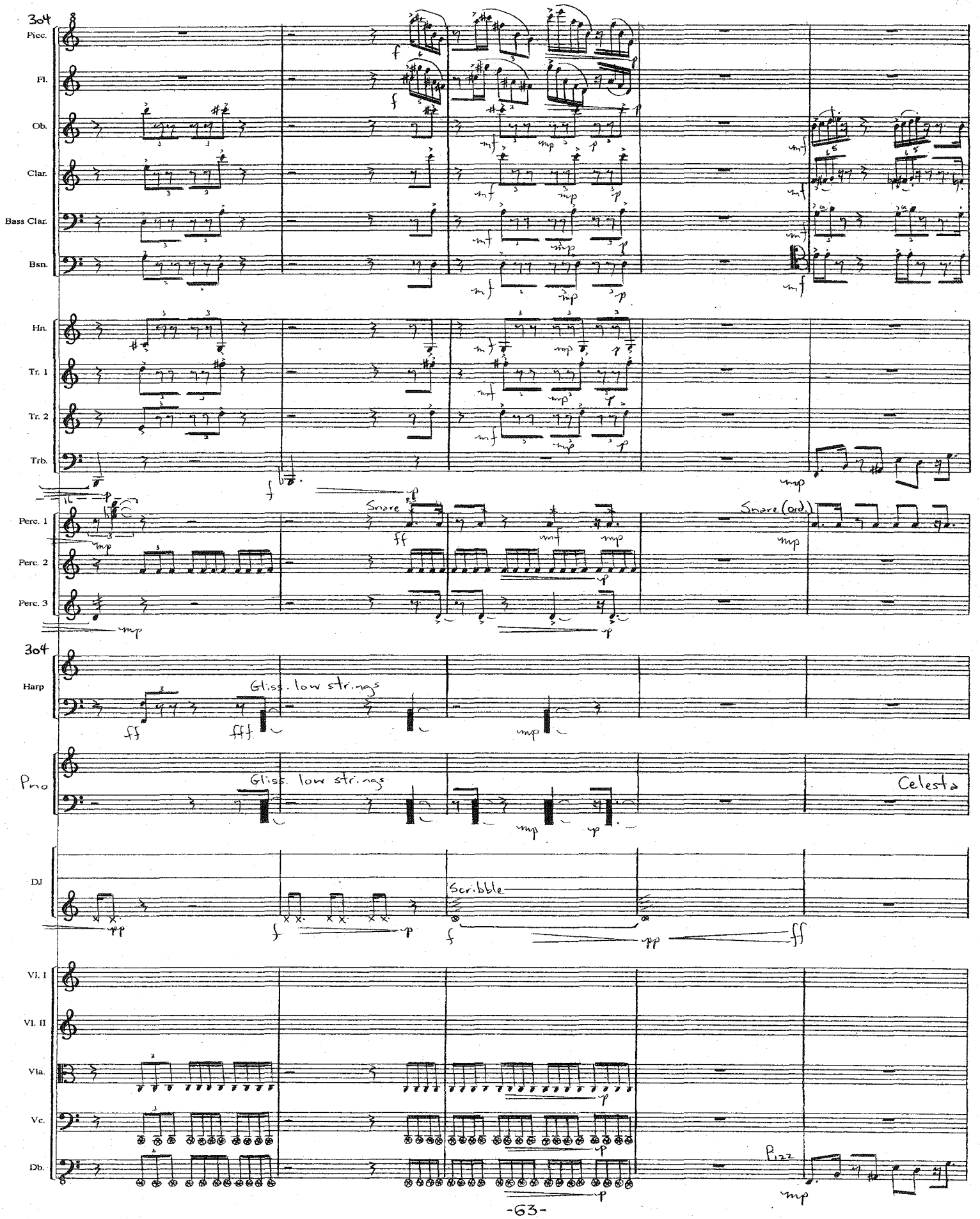

277
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Harp
Pno
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
tr
mp
Breath tones
Glocken
Cym.
Whistle key gliss.
Pont.
Collegno
Jete
Ord.

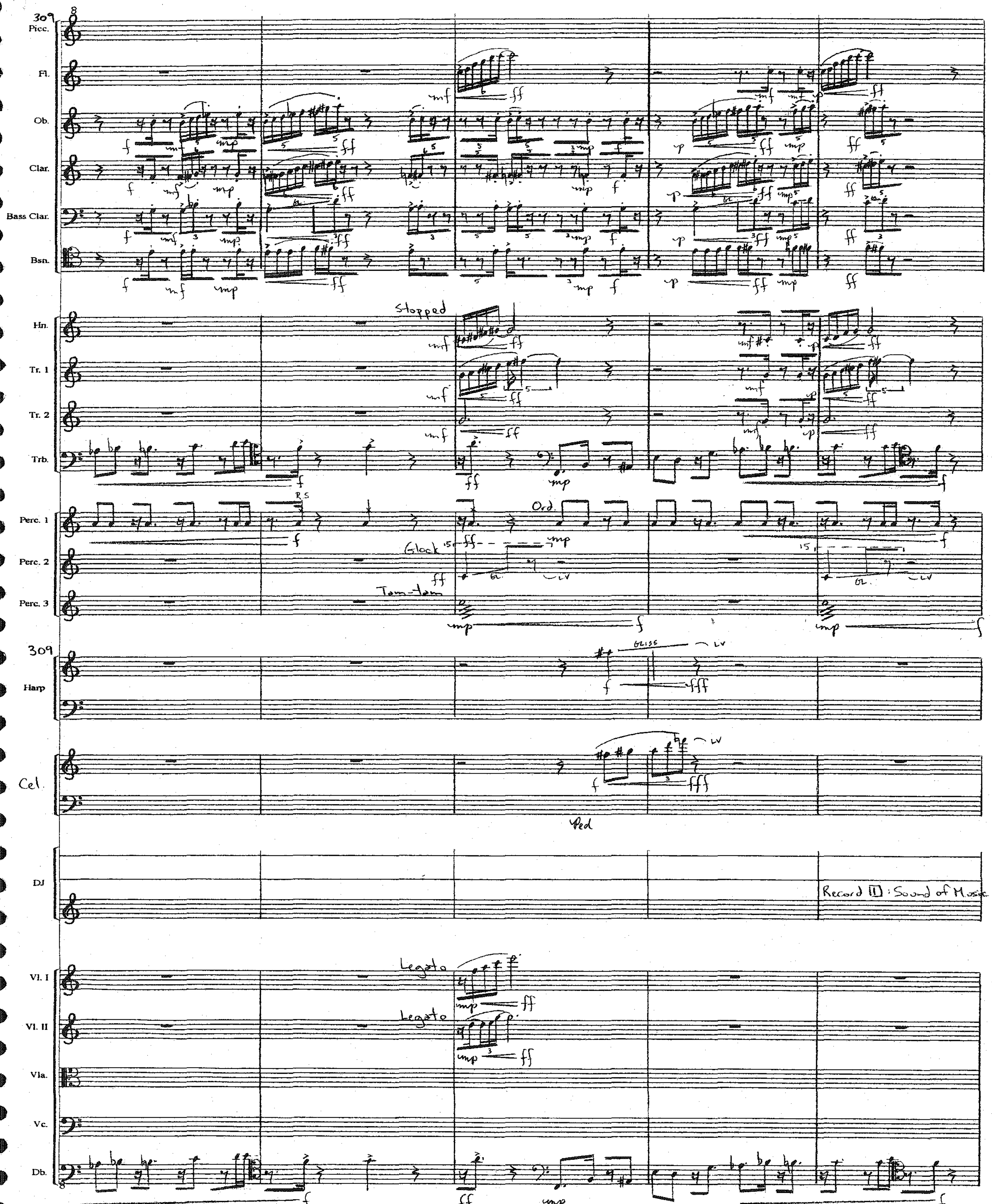

283
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Breath tones
tr.
♩=126
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Flexatone
Cym.
Glasses hit
Cabasa
283
Harp
Pno
DJ
Baby
Vl. I
Vl. II
Vla.
Vc.
Db.
On bridge
Pont.
Pizz.
Silent fingering
♩=126
Muted
Scratch along string with bow
Scratch along string with bow

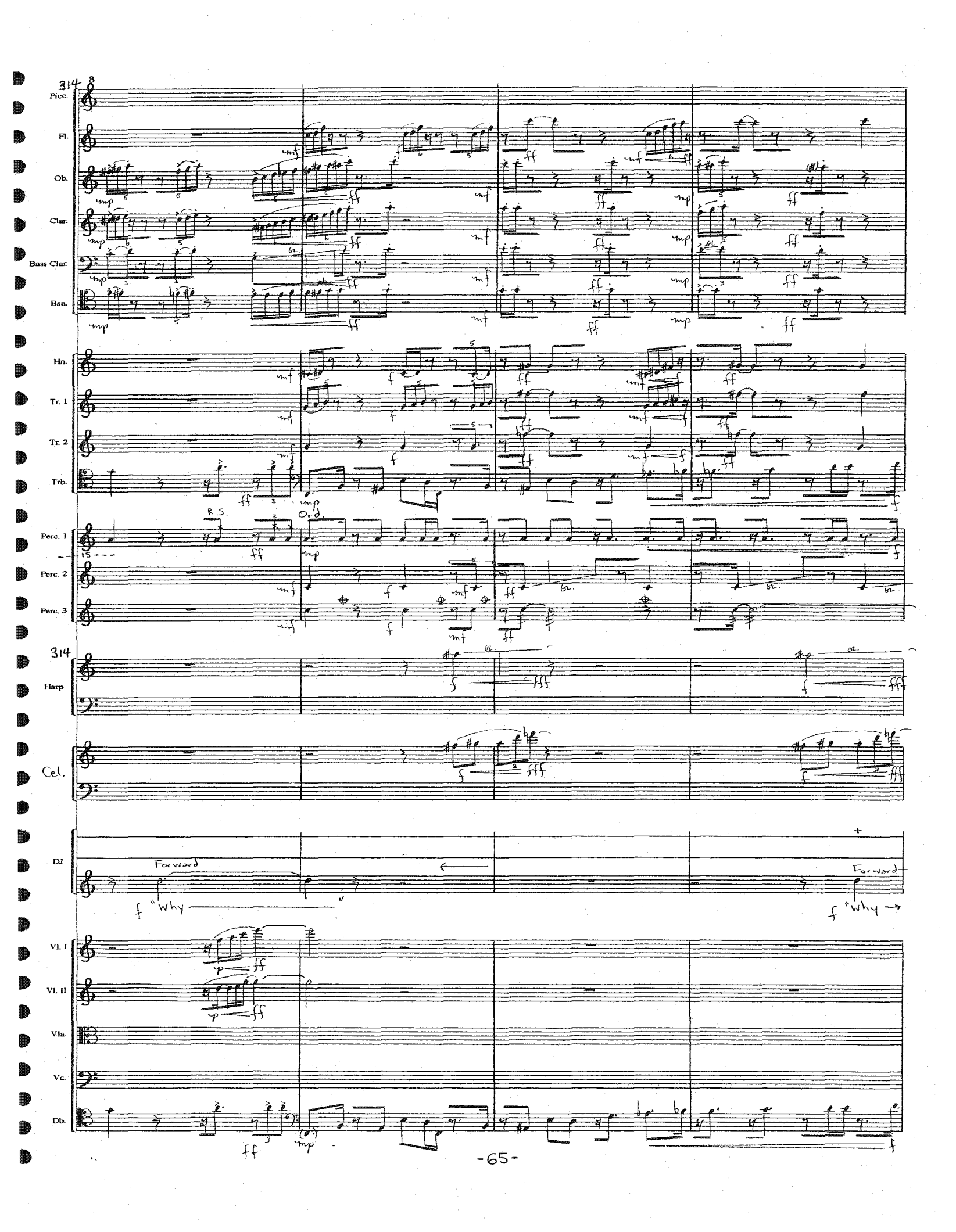

289
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Cabasa
(ff)
Xyl.
Snare
RS
(do not connect notes)
289
Harp
(ff)
Inside piano
Pno
Rub low strings with waxed paper.
unf
fff
DJ
Baby
"two
ave
Vl. I
Vl. II
Vla.
Vc.
Db.
Marcato
(fff)

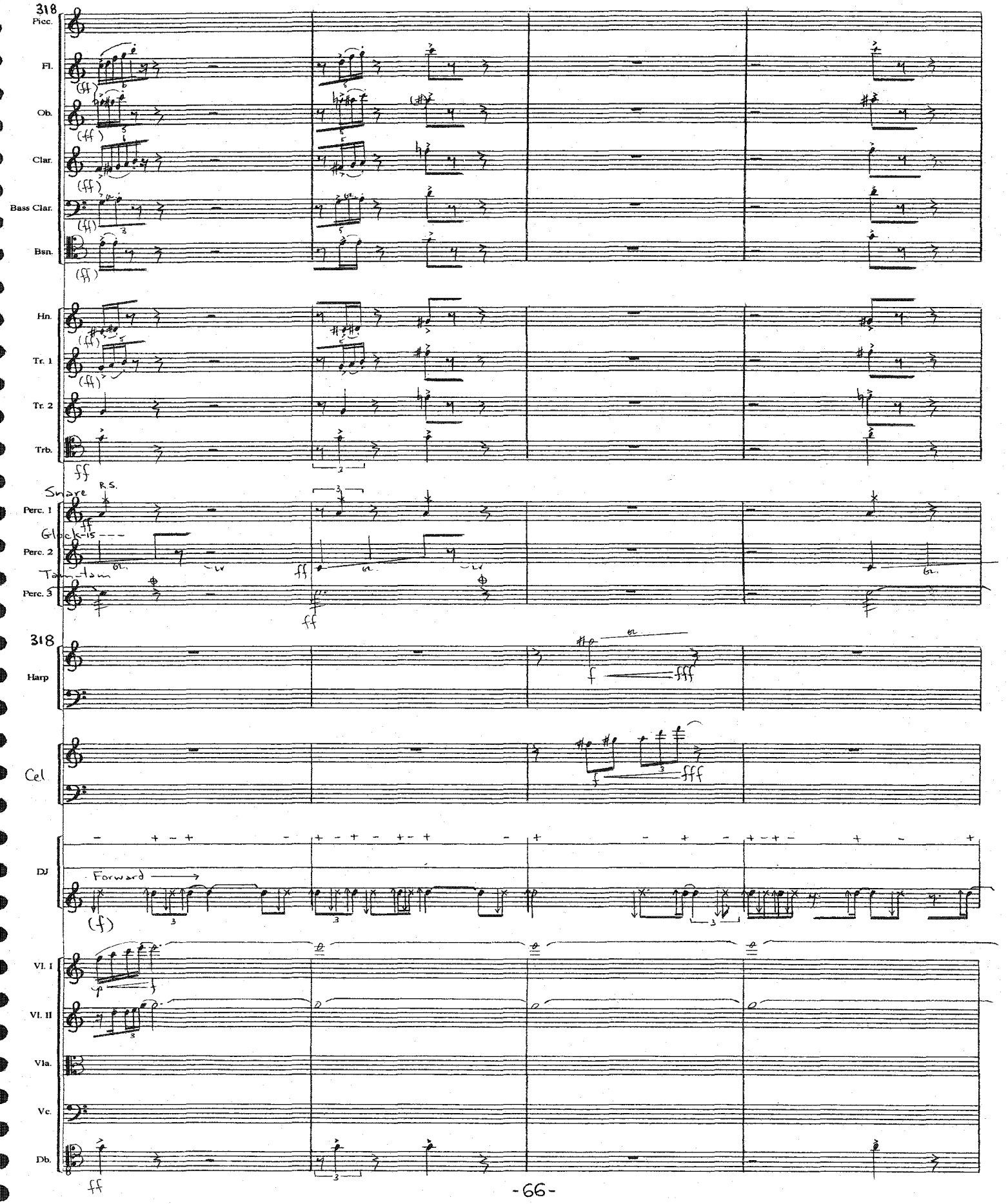

294
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Motto v.b.
(with slide)
Perc. 1
Perc. 2
Perc. 3
Glock
R. de Cym.
294
Harp
Gliss low strings
Pno
DJ
"two
are"
Vl. I
(Marcato)
Vl. II
(Marcato)
Vla.
Vc.
Db.

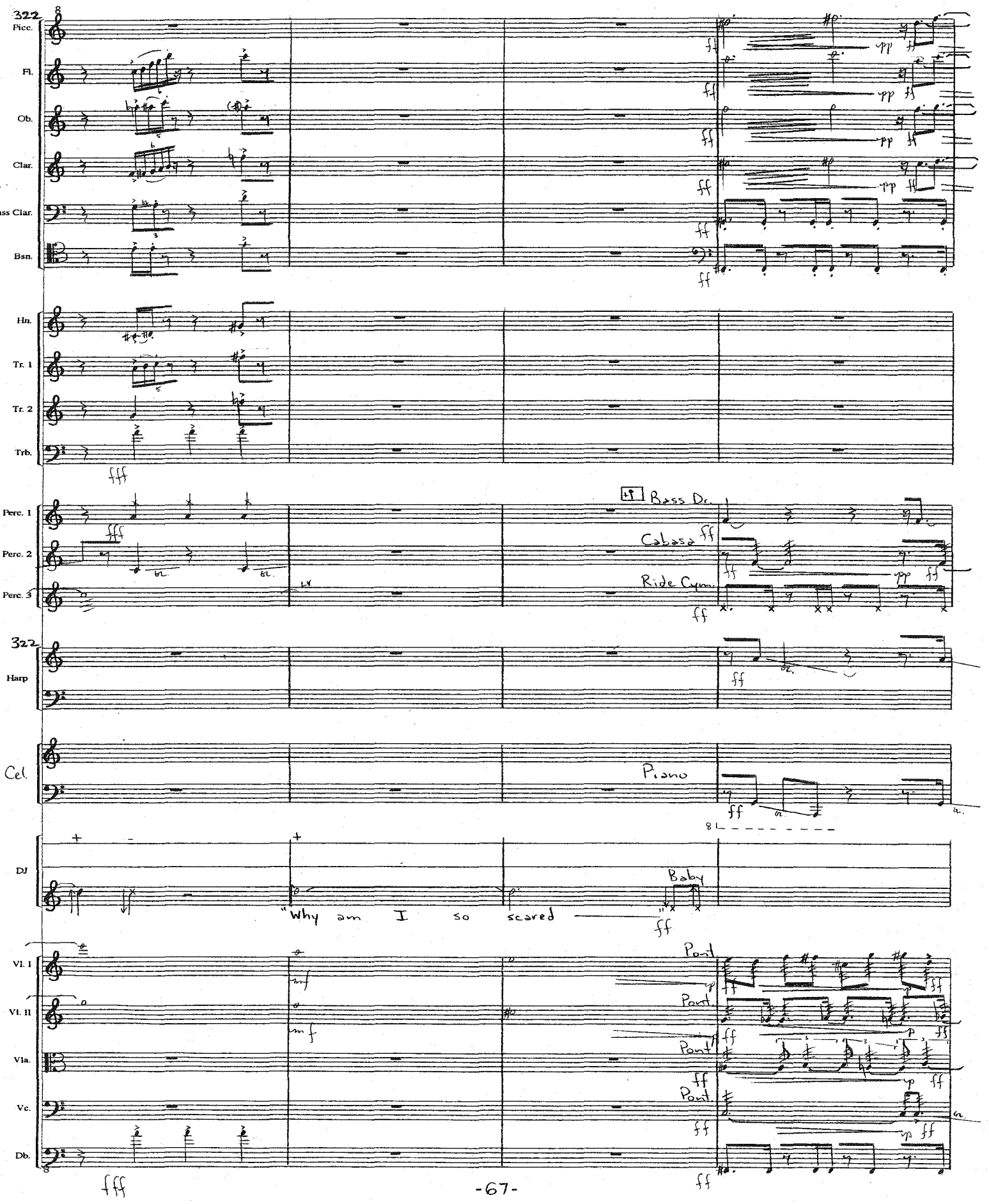

299
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Snare
RS
Perc. 2
Cabasa
Perc. 3
Xyl.
Glock
Ride Cym.
299
Harp
Gliss low strings
Pno
DJ
"Two
ore"
"Two
ore"
Vl. I
Vl. II
Vla.
Vc.
Db.

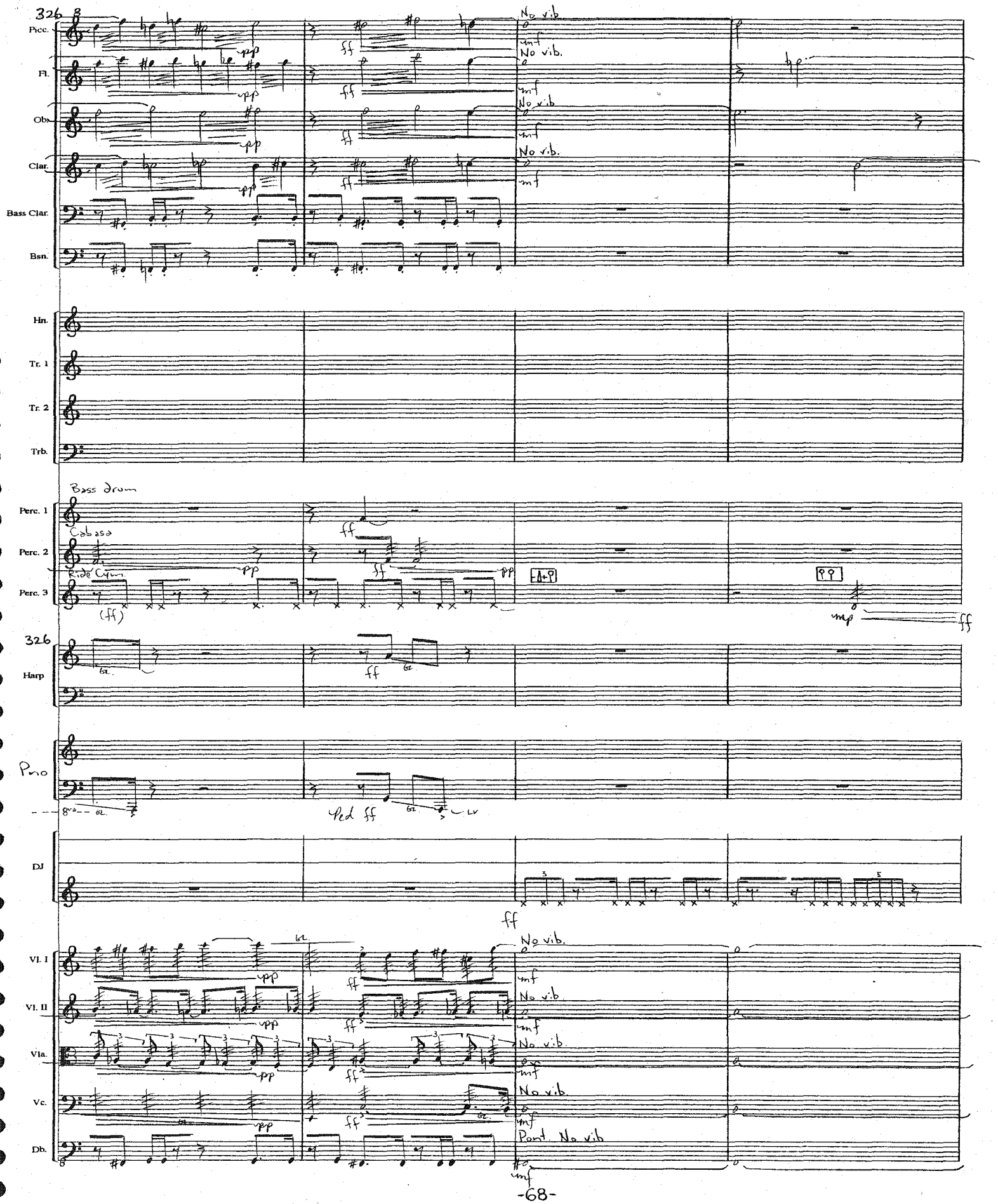

304
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Snare
Snare (ord.)
304
Harp
Gliss. low strings
Pno
Gliss. low strings
Celesta
DJ
Scribble
Vl. I
Vl. II
Vla.
Vc.
Db.
Pizz

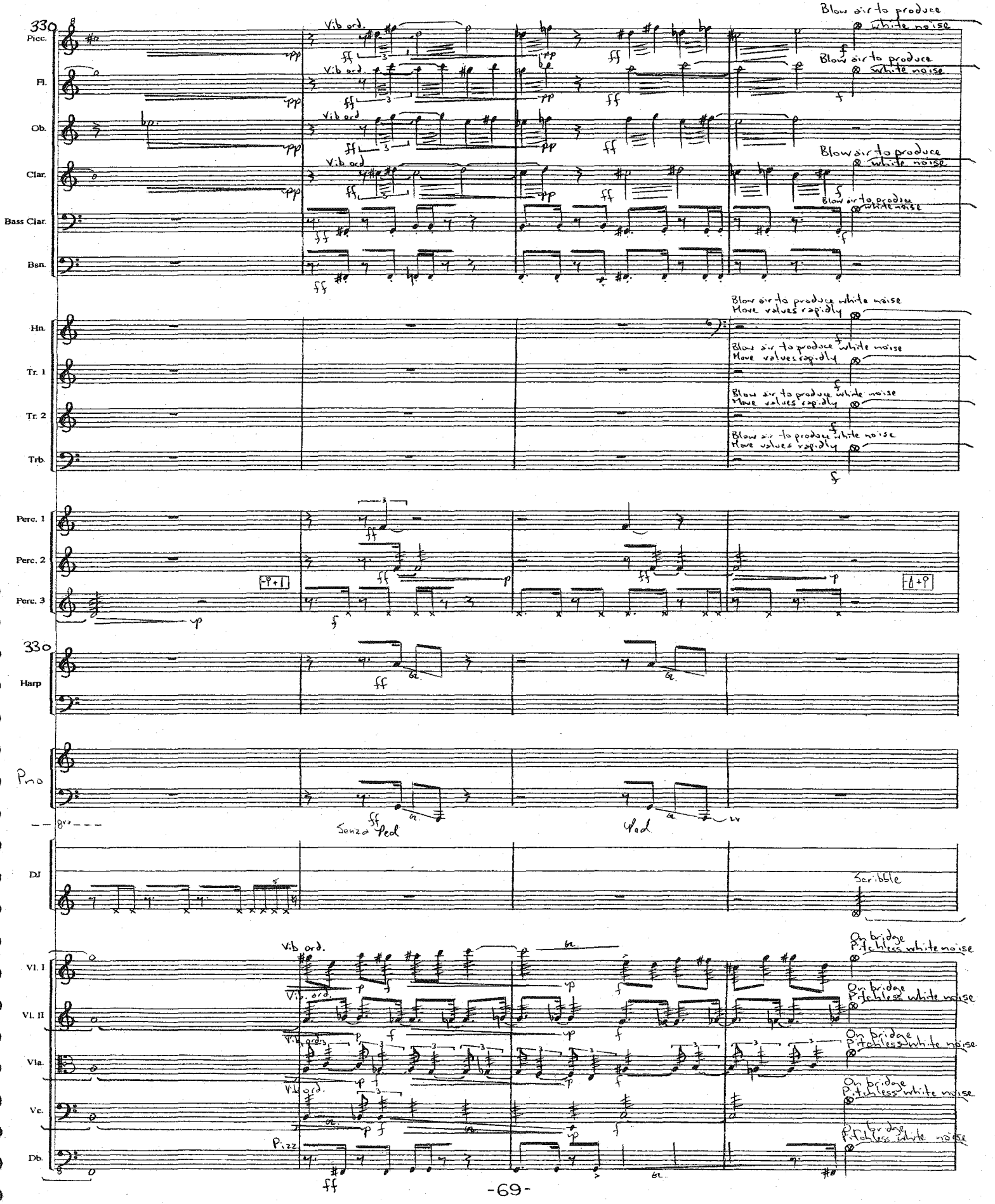

309
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Stopped
Hn.
Tr. 1
Tr. 2
Trb.
R.S
Ord.
Perc. 1
Glock
Perc. 2
Tam-tam
Perc. 3
309
GLISS
LV
Harp
Cel.
Ped
DJ
Record II: Sound of Music
Legato
Vl. I
Legato
Vl. II
Vla.
Vc.
Db.

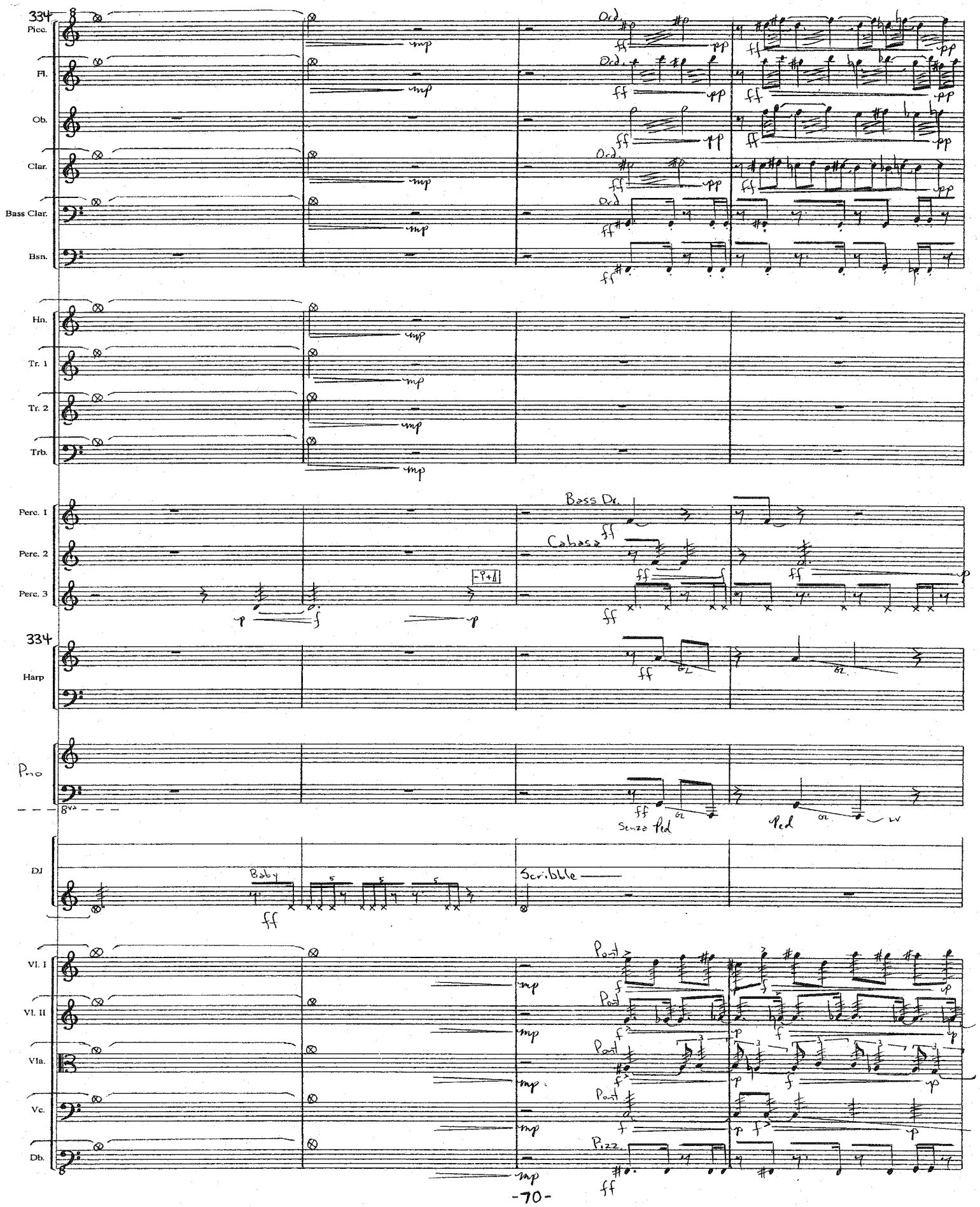

314
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
R.S.
Ord.
Perc. 1
Perc. 2
Perc. 3
314
Harp
Cel.
DJ
Forward
f "Why"
Forward
f "Why"
Vl. I
Vl. II
Vla.
Vc.
Db.

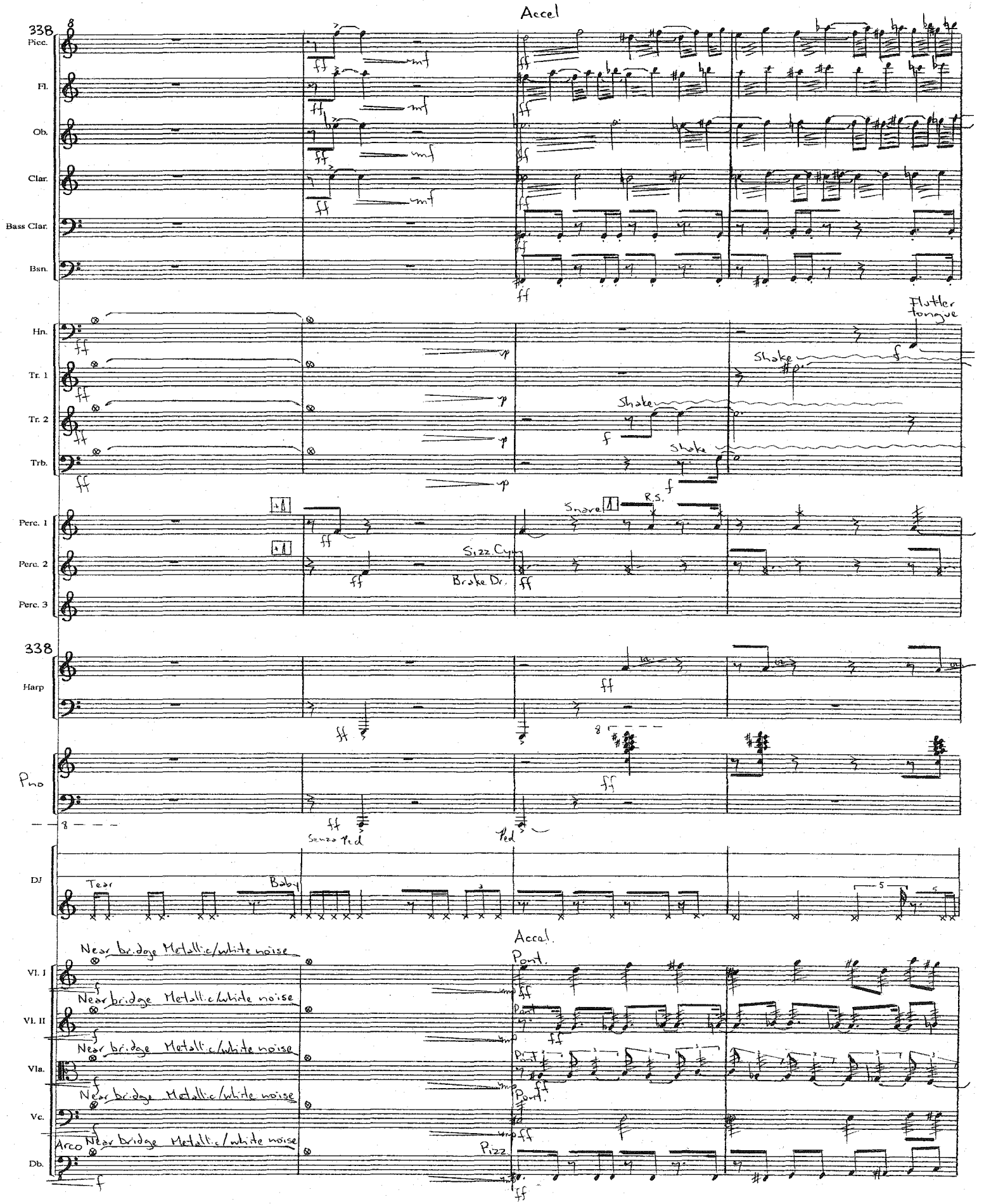

318
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Snare
R.S.
Perc. 1
Glock-is
Perc. 2
Tom-tom
Perc. 3
318
Harp
Cel
DJ
Forward
Vl. I
Vl. II
Vla.
Vc.
Db.

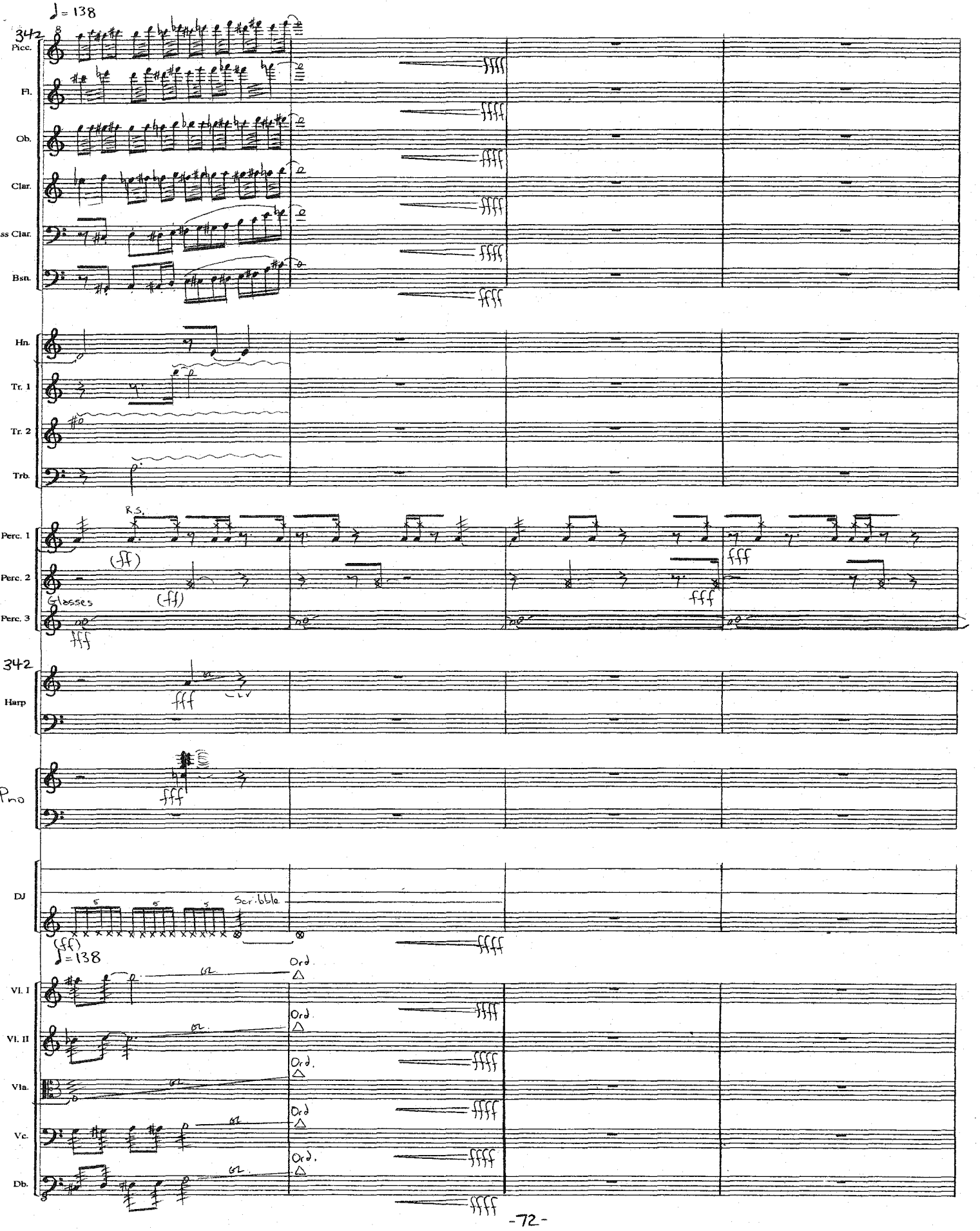

322
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
49 Bass Dr.
Cabasa
Ride Cym.
322
Harp
Cel.
Piano
DJ
"Why am I so scared
Baby
Vl. I
Vl. II
Vla.
Vc.
Db.
Pont.
Pont.
Pont.
Pont.

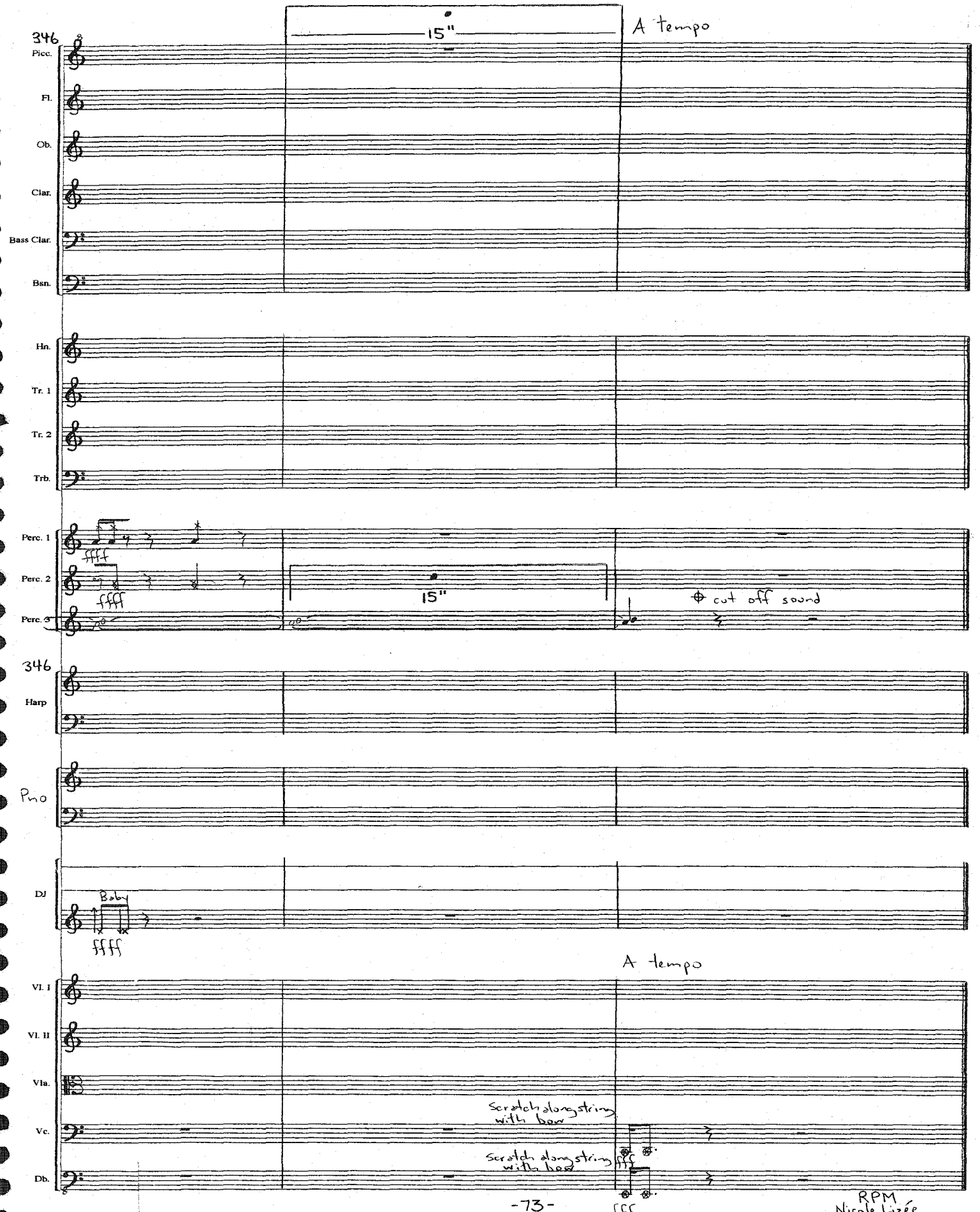

326
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
No vib.
Hn.
Tr. 1
Tr. 2
Trb.
Bass drum
Perc. 1
Perc. 2
Perc. 3
Cabasa
Ride Cym.
(ff)
mp
ff
326
Harp
Pno
Ped ff
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Pont. No vib.


330
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
330
Harp
Pno
DJ
Vl. I
Vl. II
Vla.
Vc.
Db.
Vib ord.
Blow air to produce white noise
Move values rapidly
Senza Ped
Ped
Scribble
On bridge
Pitchless white noise
Pizz
-P+f
-f+p


334
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Ord.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
Bass Dr.
Cabasa
334
Harp
Pno
8va
Senza Ped
Ped
DJ
Baby
Scribble
Vl. I
Vl. II
Vla.
Vc.
Db.
Pont.
Pizz.


Accel
338
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Flutter tongue
Shake
Perc. 1
Perc. 2
Perc. 3
Snare
R.S.
Sizz. Cym
Brake Dr.
338
Harp
Pno
Senza Ped
Ped
DJ
Tear
Baby
Accel.
Near bridge Metallic/white noise
Vl. I
Vl. II
Vla.
Vc.
Db.
Arco
Pizz.


♩= 138
342
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Glasses
Perc. 3
342
Harp
Pno
DJ
Scribble
(ff)
♩= 138
Vl. I
Vl. II
Vla.
Vc.
Db.
Ord.


346
15"
A tempo
Picc.
Fl.
Ob.
Clar.
Bass Clar.
Bsn.
Hn.
Tr. 1
Tr. 2
Trb.
Perc. 1
Perc. 2
Perc. 3
ffff
ffff
15"
cut off sound
346
Harp
Pno
DJ
Baby
ffff
A tempo
Vl. I
Vl. II
Vla.
Vc.
Db.
Scratch along string with bow
Scratch along string with bow
fff
-73-
RPM
Nicole Lizée
2000