Amelia, After Harbour Grace

for piano, fixed media and live electronics

(2022)

Paul Frehner

Program Note

Amelia: After Harbour Grace is a work for solo piano, fixed media and optional live electronics. The piece draws its inspiration from Amelia Earhart's historic 1932 solo flight across the Atlantic Ocean. Evidently, it was not an easy 15-hour flight. In her Lockheed Vega she departed Harbour Grace, Newfoundland with the intent of arriving the next day in Paris, France. Instead, she landed in a farmer's pasture near Londonderry, Ireland. In radio and television interviews after the crossing she detailed the challenges she faced. She encountered severe thunderstorms which made it difficult to stay on course. There were other dangers too: when flying low she encountered fog which made it difficult to see; at higher altitudes ice formed on the wings of the plane; furthermore, a weld broke on her plane shortly after leaving Harbour Grace causing its exhaust manifold to burn all night long.

Most of the audio files used in this piece were developed by processing, in various ways, fragments of a television interview Earhart gave on Paramount News in London shortly after her transatlantic flight. These audio files are juxtaposed against the piano part, creating a multilayered musical texture.

The piece is divided into several sections. Inspired by the excitement and momentum of Earhart's flight the opening section is fast paced, mapping additive rhythms onto melodic fragments derived from an Irish folk song. In a transitory passage a short recording of the piano's music is captured and transformed using granular synthesis, first into a machinelike sonority before finally morphing into a cloudy texture. An extended slow section portrays the isolation of being alone over the great expanse of an ocean. A modulation and a crescendo highlight the excitement of finally seeing land. The piece closes with an enigmatic and melancholic passage, acknowledging the fact that this great aviator would go missing five years later while trying to become the first person to circumnavigate the globe at the equator.

Amelia: After Harbour Grace was composed for Louise Bessette, a great Canadian pianist who herself is a pioneer, pushing the boundaries of contemporary piano music.

Note de programme

Amelia: After Harbour Grace est une œuvre pour piano solo, des fichiers audio et dispositif électronique. La pièce s'inspire du vol historique en solo d'Amelia Earhart en 1932 à travers l'océan atlantique. Évidemment, ce n'était pas un vol facile de 15 heures. Dans son Lockheed Vega, elle a quittè Harbour Grace, Terre-Neuve avec l'intention d'arriver le lendemain à Paris, France. Au lieu de cela, elle a atterri dans le pâturage d'un fermier près de Londonderry, en Irlande. Dans des entrevues à la radio et à la television après la traverse, elle a détaillé les défis auxquels elle était confrontée. Elle a rencontré de violents orages qui on rendu difficile le maintien du cap. Il y avait d'autres dangers: en volant bas, elle rencontrait du brouillard qui rendait la visibilité difficile; à des altitudes plus élevées, de la glace s'est formée sur les ailes de l'avion. De plus, une soudure s'est rompue sur son avion peu de temps après avoir quitté Harbour Grace, provoquant la combustion de son collecteur d'échappement toute la nuit.

La plupart des fichiers audio utilisés dans cette pièce ont été développés en traitant de diverses manières, des fragments d'une entrevue télévisée qu'Earhart a donnée sur Paramount News à Londres peu après son vol transatlantique. Ces fichiers audio sont juxtaposés à la partie de piano, créant une texture musicale multicouche.

La pièce est divisée en plusieurs sections. Inspirée par l'excitation et l'élan du vol d'Earhart, la section d'ouverture est rapide, mappant des rythmes additifs sur des fragments mélodiques dérivés d'une chanson folklorique irlandaise. Dans un passage transitoire, un court enregistrement de la musique du piano est capturé et transformé à l'aide d'une synthèse granulaire, d'abord en une sonorité semblable à une machine avant de se transformer finalement

en une texture nuageuse. Une longue section lente dépeint l'isolement d'être seul sur la grande étendue d'un océan. Une modulation et un crescendo soulignent l'excitation de voir enfin la terre. La pièce se termine par un passage énigmatique et mélancolique, reconnaissant le fait que cette grande aviatrice disparaîtra cinq ans plus tard alors qu'elle tentait de devenir la première à faire le tour du monde à l'équateur.

Amelia: After Harbour Grace a été composé pour Louise Bessette, une grande pianiste canadienne qui est elle-même une pionnière, repoussant les limites de la musique pour piano contemporaine.

Performance Notes

Duration: approximately 14’00”

Accidentals function in the traditional manner. However, cautionary accidentals are frequently used.

Pedal: mm. 1-135, a minimal amount of the sustain pedal can be used in this passage.
mm. 136-149 and 163-end, the sustain pedal can be used judiciously throughout the rest of the piece.
In some places there are specific instructions regarding use of the sustain or *sostenuto* pedals.

Three stave notation, mm. 181-273: this passage is contrapuntal in nature, featuring 3-4 voices. The music is notated so that the melodic line of each voice is clear. This required more than two staves. The music in the top stave is almost exclusively played by the right hand. Music in the middle stave requires alternately the right hand or the left hand. Music in the bottom stave, of course, would be played entirely by the left hand.

Fixed Media and Optional Live Electronics Notes

<u>Fixed Media - Playback of Audio Files</u>
There are seven audio files that accompany this piece. These files are to be triggered at the indicated moments in the score. Once triggered they should be allowed to play in their entirety. In a couple instances the playback of multiple audio files overlap. Thus, the technician should set up a playback system using an audio software application that allows multiple files to be played back simultaneously, for instance, Max/MSP or VCV Rack.

The seven audio files and their respective durations are as follows:

1_Exhaust Manifold Burning Through.wav	1’13”
2_I Took Off While Sunset Lasted.wav	0’27”
3_ Exhaust Manifold Variation.wav	1’00”
4_All Night_Noise_F#5.wav	0’58”
5_Rising_From BEADS.wav	2’46”
6_I Had Been Troubled_I Saw Land.wav	2’27”
7_Miss Earhart_Descending_From BEADS.wav	1’36”

In the score these files are referred to simply to by their assigned integer - for instance, “Audio File 1”.

Live Electronics (Optional) – Amplification, Rotary Effect and Reverb

The piece may be played without live electronics. In this case, all instructions for playing the 7 audio files should be followed, while instructions for the Rotary Effect can be ignored. However, performing the piece with the live electronics is highly encouraged, as they add another dimension to the music. Below are explanations for the implementation of the live electronics.

Amplification: the live piano may be amplified slightly so that some of its sonority comes from the stereo sound system used for the playback of the 7 audio files. The amplification of the piano should be supportive and very subtle, set lower than the level of the acoustic piano.

Reverb: a small amount of digital reverb may be added to the amplified piano signal. The amount used depends on the acoustics of the concert hall. A less reverberant space could use more digital reverb and a more reverberant space would use less. This can all be fine-tuned by the performer and technician according to their preferences.

Rotary Effect: if possible, a rotary effect, that simulates the sound of a Leslie rotating speaker cabinet, mic'd in stereo, should be employed. The rotary effect may be an external unit, such as the Neo Instruments Ventilator II or the Strymon Lex. Alternatively, a good quality VST Rotary plugin, such as UA's Waterfall Rotary, could be used.

Rotary Specs: the effect should have a Bypass switch and two speed modes: Fast and Slow. The speed of the Fast mode should be variable between 2.5 – 8 Hz. The Slow mode should be set slower than the slowest setting of the Fast mode, so between 0.5 - 2 Hz. Additionally, the effect should have a brake switch that causes the rotation to gradually slow to a stop when engaged. Some rotary effects have overdrive features. However, the sonority of the piano should never become overdriven. Rather, what is being sought is a watery movement in the sonority.

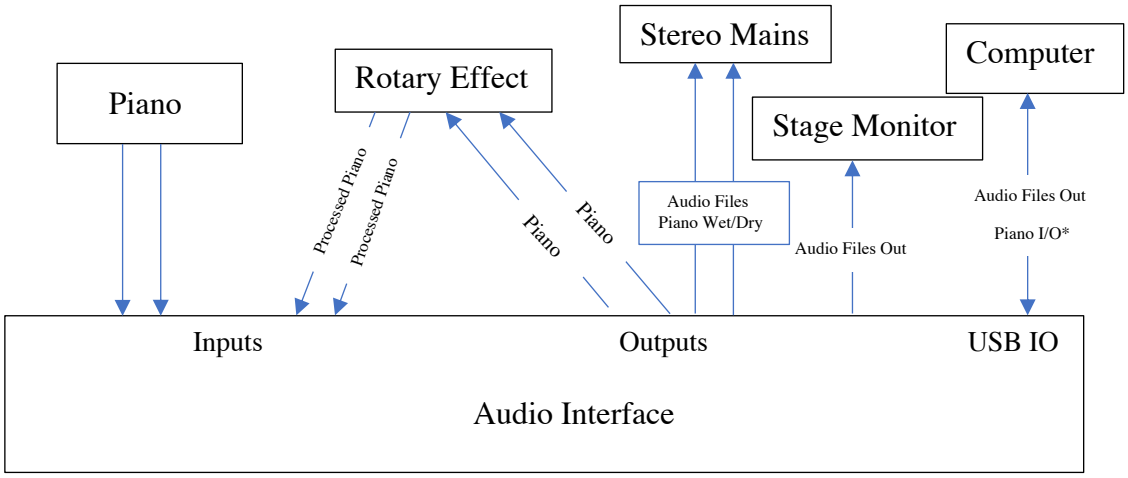
The composer uses the Neo Instruments Ventilator II in performances of this work. Instructions in the score are based on using this hardware unit. If another unit or VST plugin is being used the technician should freely adapt the instructions in the score to the performance situation.

Gear and Software Required

- 2 Microphones – good quality condenser cardioid mics for capturing the live piano. These should be placed close enough to the piano strings so that the potential of a feedback loop between the mic and speakers is minimized.
- 2 Microphone Stands
- Stereo Speakers – 2 good quality full-range speakers that can balance with the acoustic sound of a professional grand piano
- Stage monitor – depending on the live situation it might be necessary to route the playback of the audio files to a stage monitor to help the pianist time their entries.
- Amplifier – if the speakers are passive a suitable amplifier is required.
- Cables – appropriate XLR and ¼" balanced cables for connected all audio hardware units. Various computer cables are required too.
- Audio Interface – minimum, 2 XLR inputs for mics, phantom power, TRS IO to send and receive to an external stereo rotary effect unit
- Computer Software – such as Max/MSP of VCV Rack for triggering and monitoring playback of the 7 audio files and for overall control of volume levels and signal routing.

Rotary effect – hardware effect unit or VST plugin. See above description.

Signal Routing Example Diagram



*The diagram above illustrates that the piano signal may be sent to and from the computer. This is in case the rotary effect and reverb are added using VSTs.

Note: addition of reverb is not indicated in this diagram. If reverb is used it may be added in several ways: from the audio interface, the computer or an outboard effects unit. Additionally, if a mixing board is used the reverb may be added there.

The audio files for performing this piece can be acquired by contacting the composer at: info@paulfrehner.com

Notes d’éxécution

Durée: environ 14’00”

Les altérations fonctionnent de manière traditionnelle. Cependant, les altérations de précaution sont fréquemment utilisées.

Pédale: mm. 1-135, une quantité minimale de la pédale de sustain peut être utilisée dans ce passage.
mm. 136-149 et 163-end, la pédale de sustain peut être utilisée judicieusement tout au long du reste de la pièce.
À certains endroits, il y a des instructions spécifiques concernant l'utilisation du sustain ou du sostenuto pédales.

Notation à trois portées, mm. 181-273 : ce passage est de nature contrapuntique, avec 3-4 voix. La musique est notée de manière à ce que la ligne mélodique de chaque voix soit claire. Cela nécessitait plus de deux portées. La musique de la portée supérieure est presque exclusivement jouée par la main droite. La musique sur la portée médiane nécessite alternativement la main droite ou la main gauche. Bien entendu, la musique de la portée inférieure serait entièrement jouée par la main gauche.

Notes sur les médias fixes et l'électronique en direct en option

Support fixe - Lecture de fichiers audio
Sept fichiers audio accompagnent cette pièce. Ces fichiers sont à déclencher aux moments indiqués dans la partition. Une fois déclenchés, ils devraient être autorisés à jouer dans leur intégralité. Dans quelques cas, la lecture de plusieurs fichiers audio se chevauche. Ainsi, le technicien doit mettre en place un système permettant la lecture simultanée de plusieurs fichiers, par exemple Max/MSP ou VCV Rack.

Les sept fichiers audio et leurs durées respectives sont les suivants :

1_Exhaust Manifold Burning Through.wav	1’13”
2_I Took Off While Sunset Lasted.wav	0’27”
3_ Exhaust Manifold Variation.wav	1’00”
4_All Night_Noise_F#5.wav	0’58”
5_Rising_From BEADS.wav	2’46”
6_I Had Been Troubled_I Saw Land.wav	2’27”
7_Miss Earhart_Descending_From BEADS.wav	1’36”

Dans la partition, ces fichiers sont simplement désignés par leur nombre entier attribué - par exemple, "Fichier audio 1".

Live Electronics (en option) – Amplification, effet rotatif et reverberation

Le morceau peut être joué sans électronique en direct. Dans ce cas, toutes les instructions pour la lecture des 7 fichiers audio doivent être suivies, tandis que les instructions pour l'effet rotatif peuvent être ignorées. Cependant, interpréter le morceau avec l’électronique live est fortement encouragé, car ils ajoutent une autre dimension à la musique. Ci-dessous les explications pour la mise en œuvre de l'électronique live

Amplification : le piano live peut être légèrement amplifié pour qu'une partie de sa sonorité revienne du système de son stéréo utilisé pour la lecture des 7 fichiers audio. L'amplification du piano doit être favorable et très subtile, réglée plus bas que le niveau du piano acoustique.

Réverbération : une petite quantité de réverbération numérique peut être ajoutée au signal amplifié du piano. Le la quantité utilisée dépend de l'acoustique de la salle de concert. Un espace moins reverberant pourrait utiliser plus de réverbération numérique et un espace plus réverbérant en utiliserait moins. Tout cela peut être affiné par l'interprète et le technicien selon leurs préférences.

Effet rotatif : si possible, un effet rotatif, qui simule le son d'une enceinte rotative Leslie, micro en stéréo, doit être utilisé. L'effet rotatif peut être une unité externe, telle que le Neo Instruments Ventilator II ou le Strymon Lex. Alternativement, un plugin VST Rotary de bonne qualité, tel que Waterfall Rotary de UA, pourrait être utilisé.

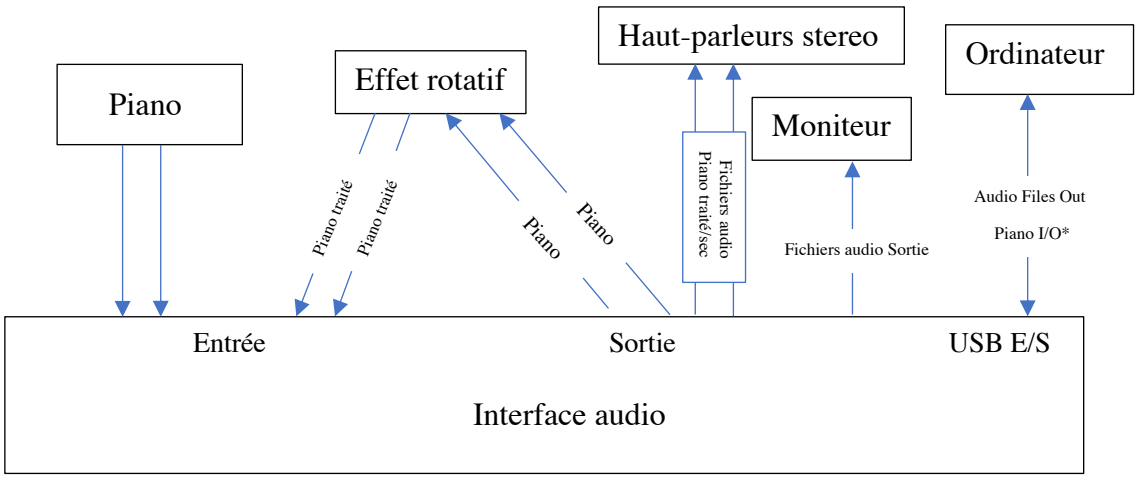
Spécifications de l'effet rotatif : l'effet doit avoir un Bypass et deux modes de vitesse : rapide et lent. La vitesse du mode rapide doit être variable entre 2,5 et 8 Hz. Le mode Lent doit être réglé plus lentement que le réglage le plus lent du mode Rapide, donc entre 0,5 et 2 Hz. De plus, l'effet devrait avoir un Brake qui ralentit progressivement la rotation jusqu'à l'arrêt lorsqu'elle est engagée. Certains modules rotatifs ont des fonctionnalités d'overdrive. Cependant, la sonorité du piano ne doit jamais être saturée. Ce qui est recherché, c'est plutôt un mouvement aqueux dans le sonorité.

Le compositeur utilise le Neo Instruments Ventilator II dans les interprétations de cette Pièce. Les instructions de la partition sont basées sur l'utilisation de cette module. Si un autre module ou un plugin VST est utilisé, le technicien doit librement adapter les instructions de la partition à la situation de performance.

Équipement et logiciels requis

2 microphones – micros cardioïdes à condensateur de bonne qualité pour capturer le live piano. Ceux-ci doivent être placés suffisamment près des cordes du piano pour que le potentiel d'une boucle de rétroaction entre le micro et les haut-parleurs est minimisé.
2 pieds de micro
Haut-parleurs stéréo – 2 haut-parleurs large bande de bonne qualité pouvant s'équilibrer avec le son acoustique d'un piano à queue professionnel
Retour de scène – en fonction de la situation en direct, il peut être nécessaire d'acheminer le lecture des fichiers audio sur un moniteur de scène pour aider le pianiste à chronométrer ses entrées.
Amplificateur – si les enceintes sont passives, un amplificateur approprié est requis.
Câbles – câbles symétriques XLR et ¼" appropriés pour connecter tout l'audio unités matérielles. Divers câbles informatiques sont également nécessaires.
Interface audio – minimum, 2 entrées XLR pour micros, alimentation fantôme, TRS IO pour envoyer et recevoir vers une unité d'effet externe
Logiciel informatique – tel que Max/MSP de VCV Rack pour le déclenchement et surveillance de la lecture des 7 fichiers audio et pour le contrôle global des niveaux de volume et du routage du signal.
Effet rotatif – unité d'effet matériel ou plugin VST. Voir description ci-dessus.

Exemple de dispositive de sonorisation



*Le diagramme ci-dessus montre que le signal du piano peut être envoyé vers et depuis l'ordinateur. C'est dans le cas où l'effet rotatif et la réverbération sont ajoutés à l'aide de VST.

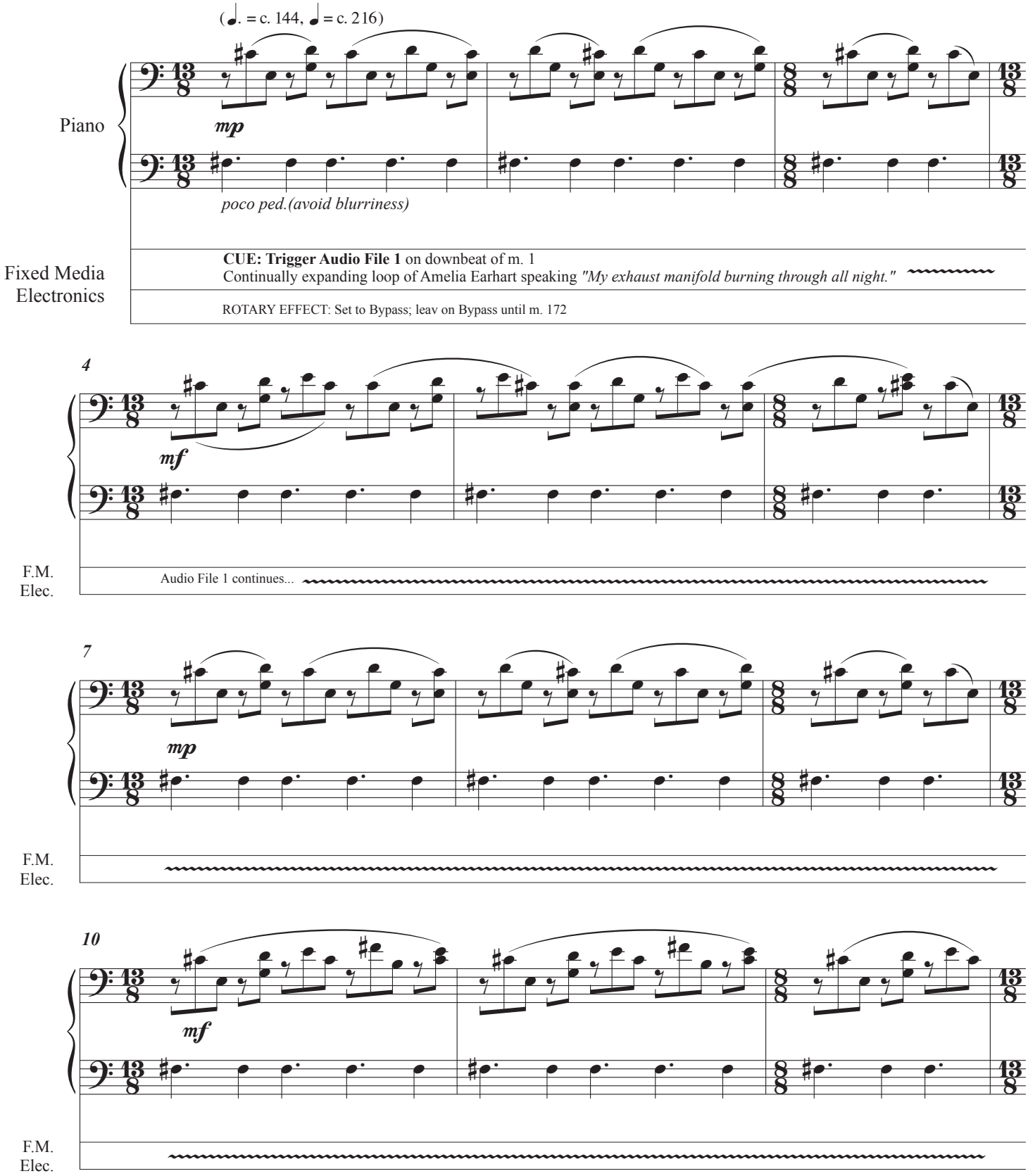
Remarque : l'ajout de réverbération n'est pas indiqué dans ce schéma. Si la réverbération est utilisée, elle peut être ajoutée de plusieurs manières : depuis l'interface audio, l'ordinateur ou une unité d'effets externe. De plus, si une table de mixage est utilisée, la réverbération peut y être ajoutée.

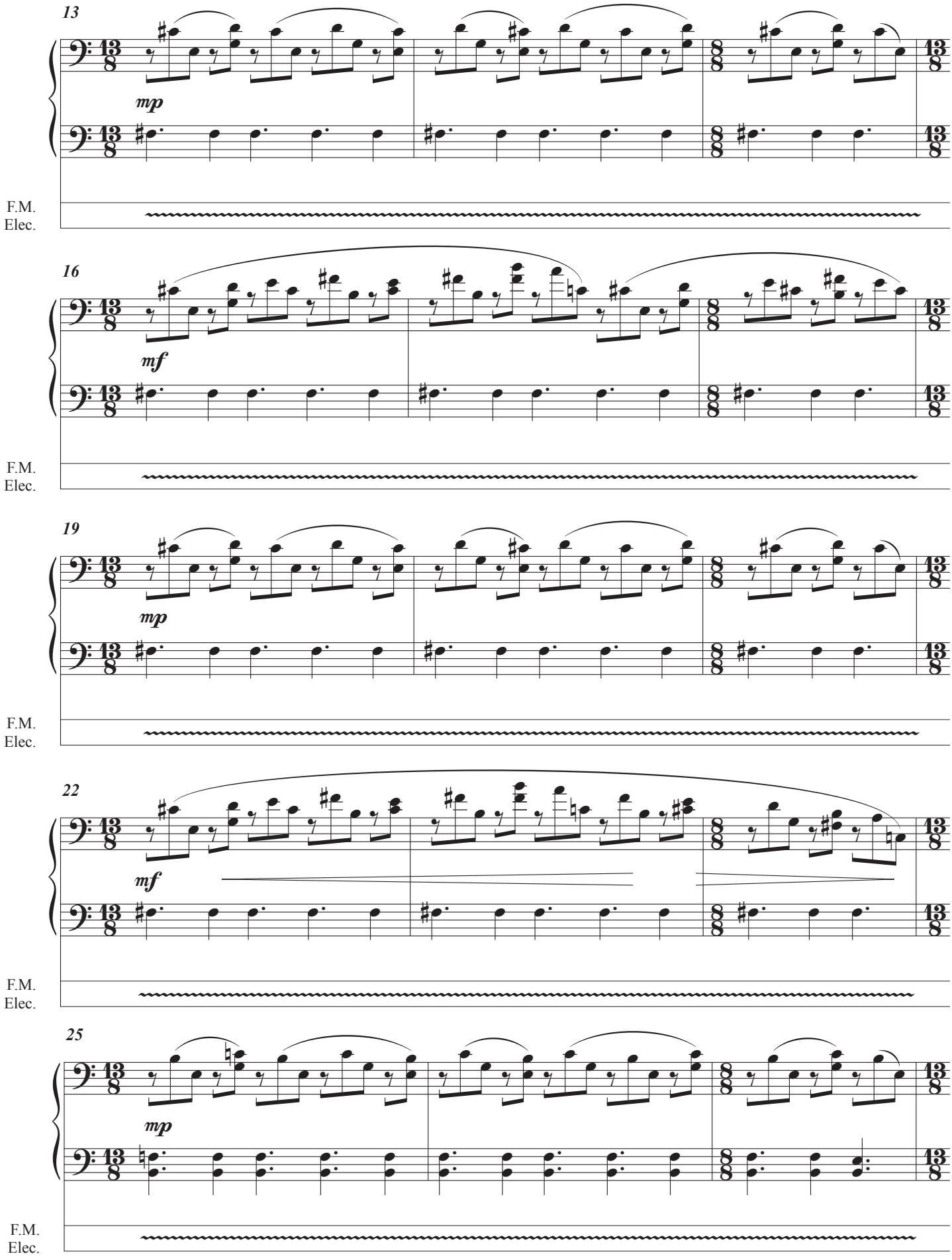
Les fichiers audio pour interpréter cette pièce peuvent être acquis en contactant le compositeur au: info@paulfrehner.com

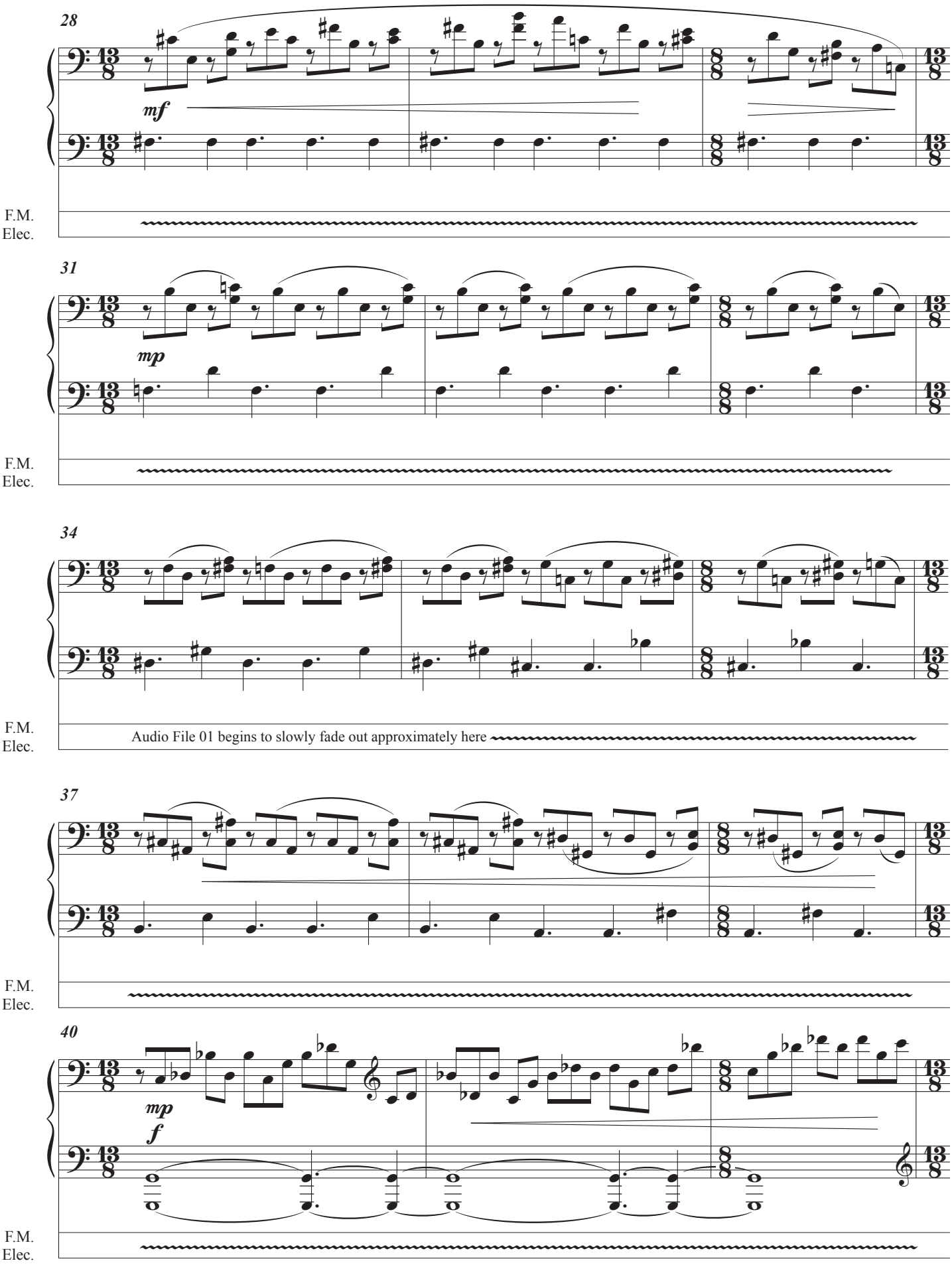
Amelia, After Harbour Grace

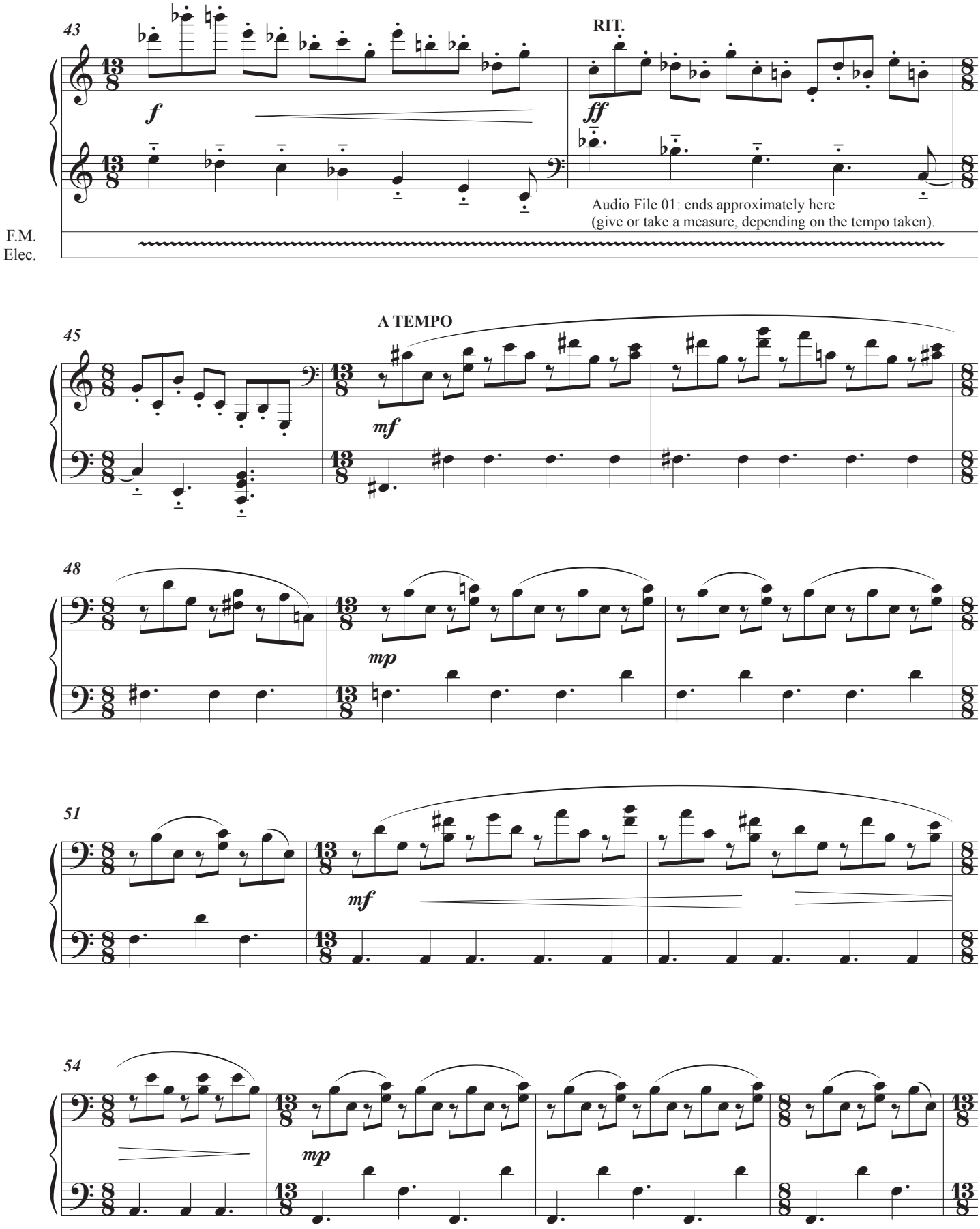
For Louise Bessette

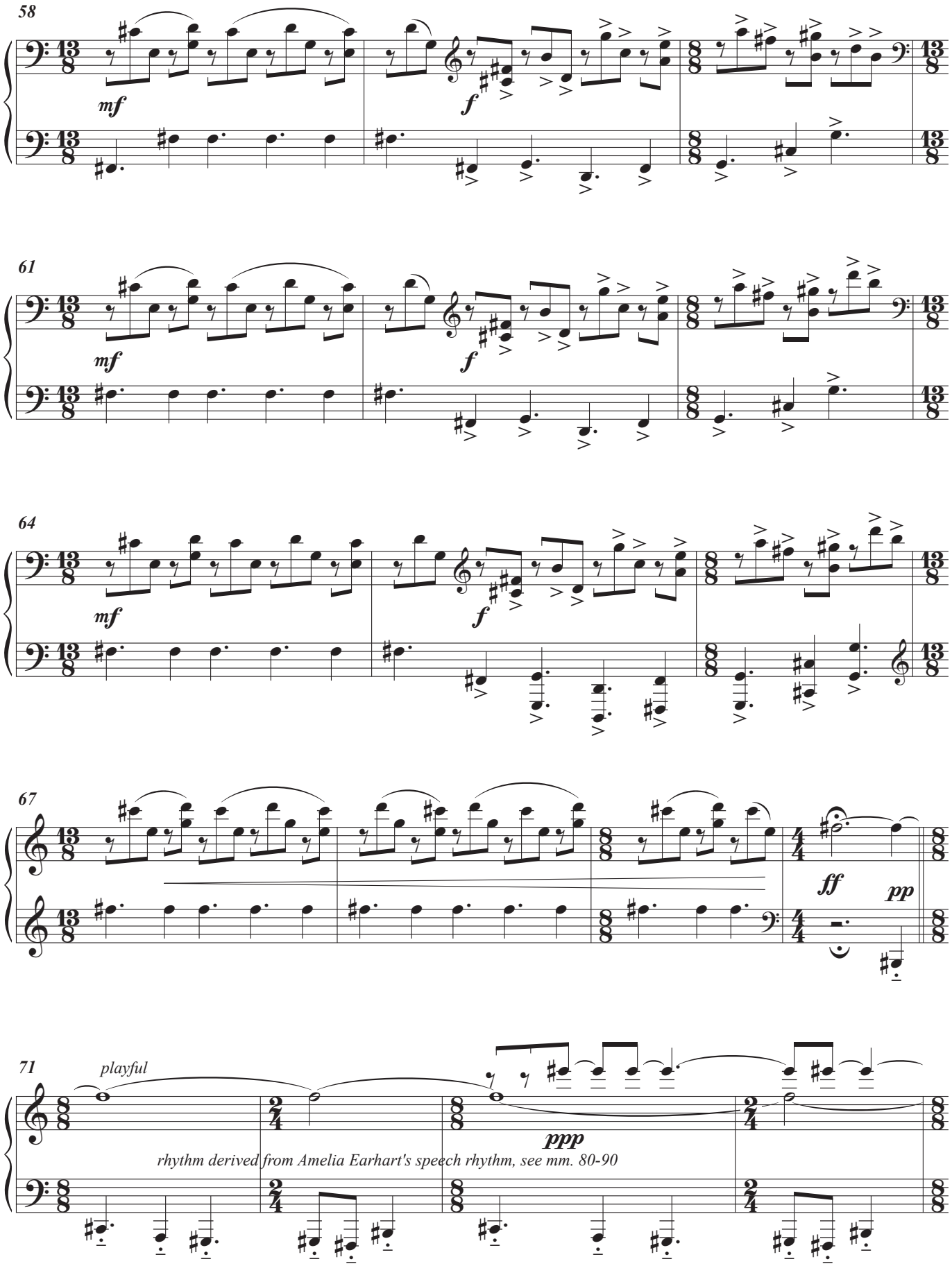
Paul Frehner, 2022

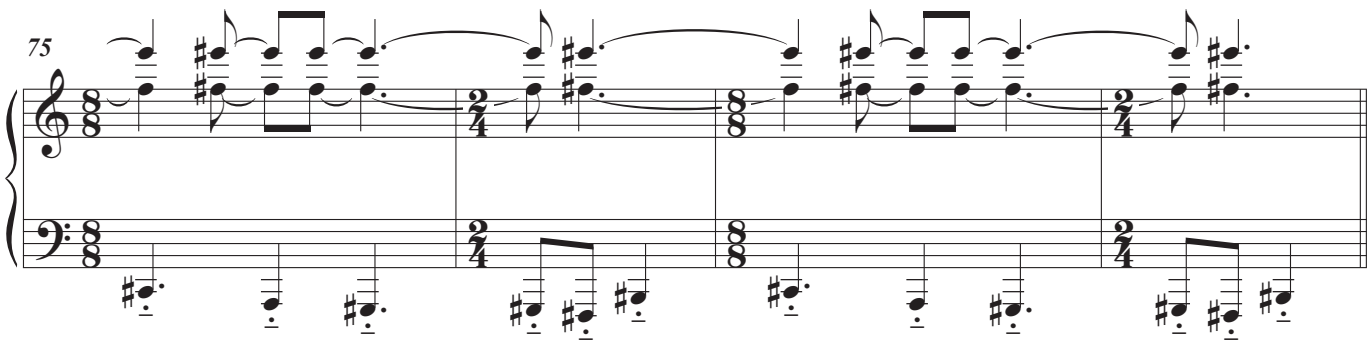


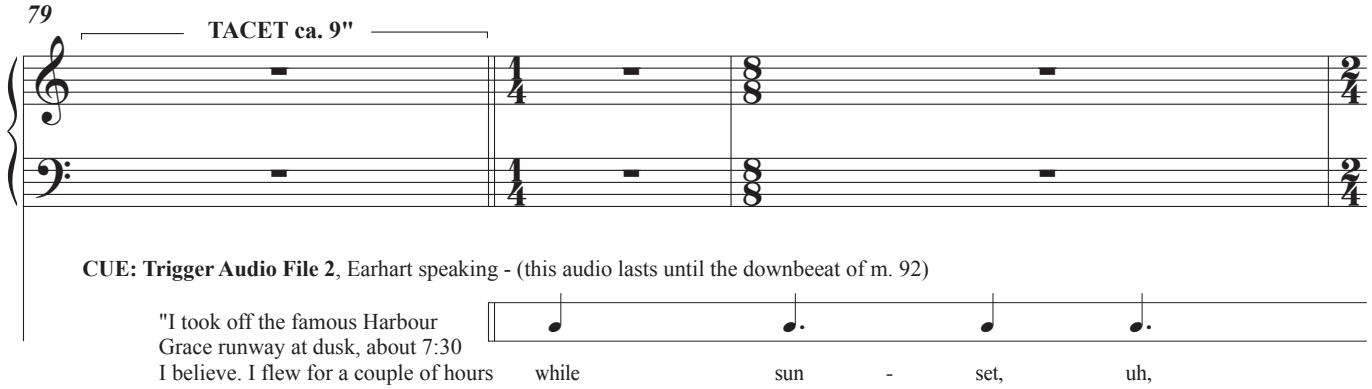

13
mp
F.M.
Elec.
16
mf
F.M.
Elec.
19
mp
F.M.
Elec.
22
mf
F.M.
Elec.
25
mp
F.M.
Elec.

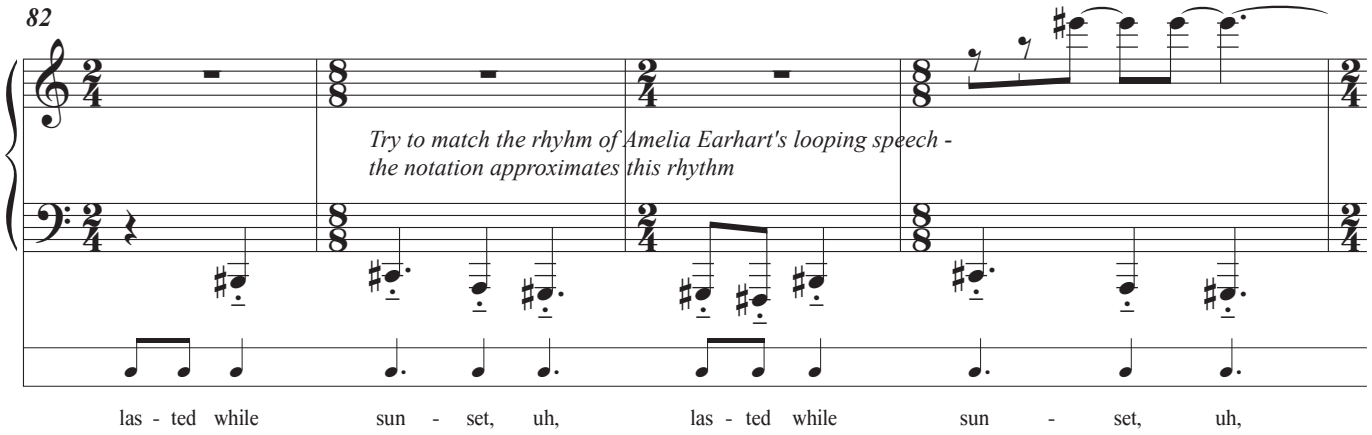

28
mf
F.M.
Elec.
31
mp
F.M.
Elec.
34
F.M.
Elec.
Audio File 01 begins to slowly fade out approximately here
37
F.M.
Elec.
40
mp
f
F.M.
Elec.

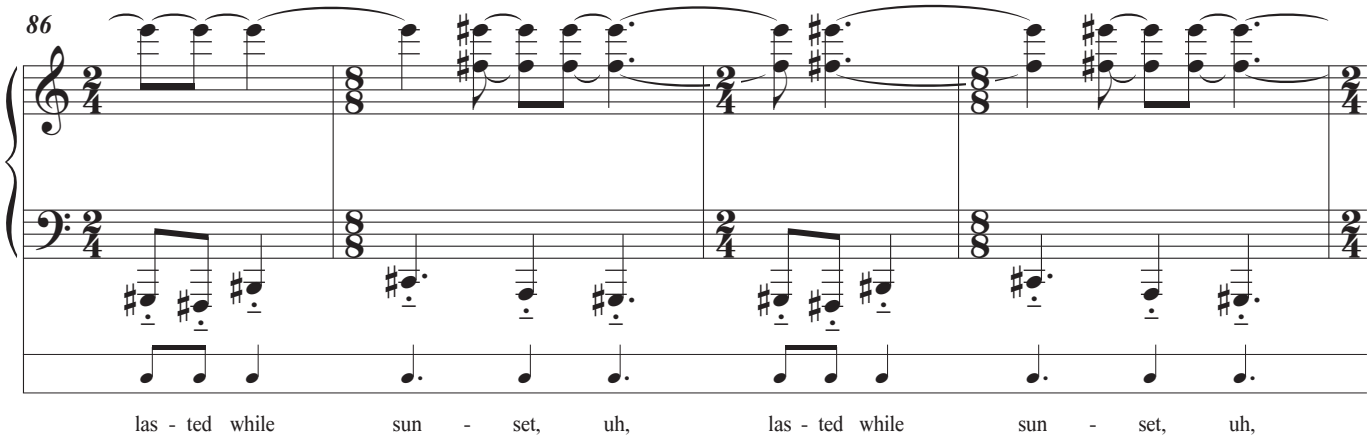

43
RIT.
f
ff
Audio File 01: ends approximately here
(give or take a measure, depending on the tempo taken).
F.M.
Elec.
45
A TEMPO
mf
48
mp
51
mf
54
mp

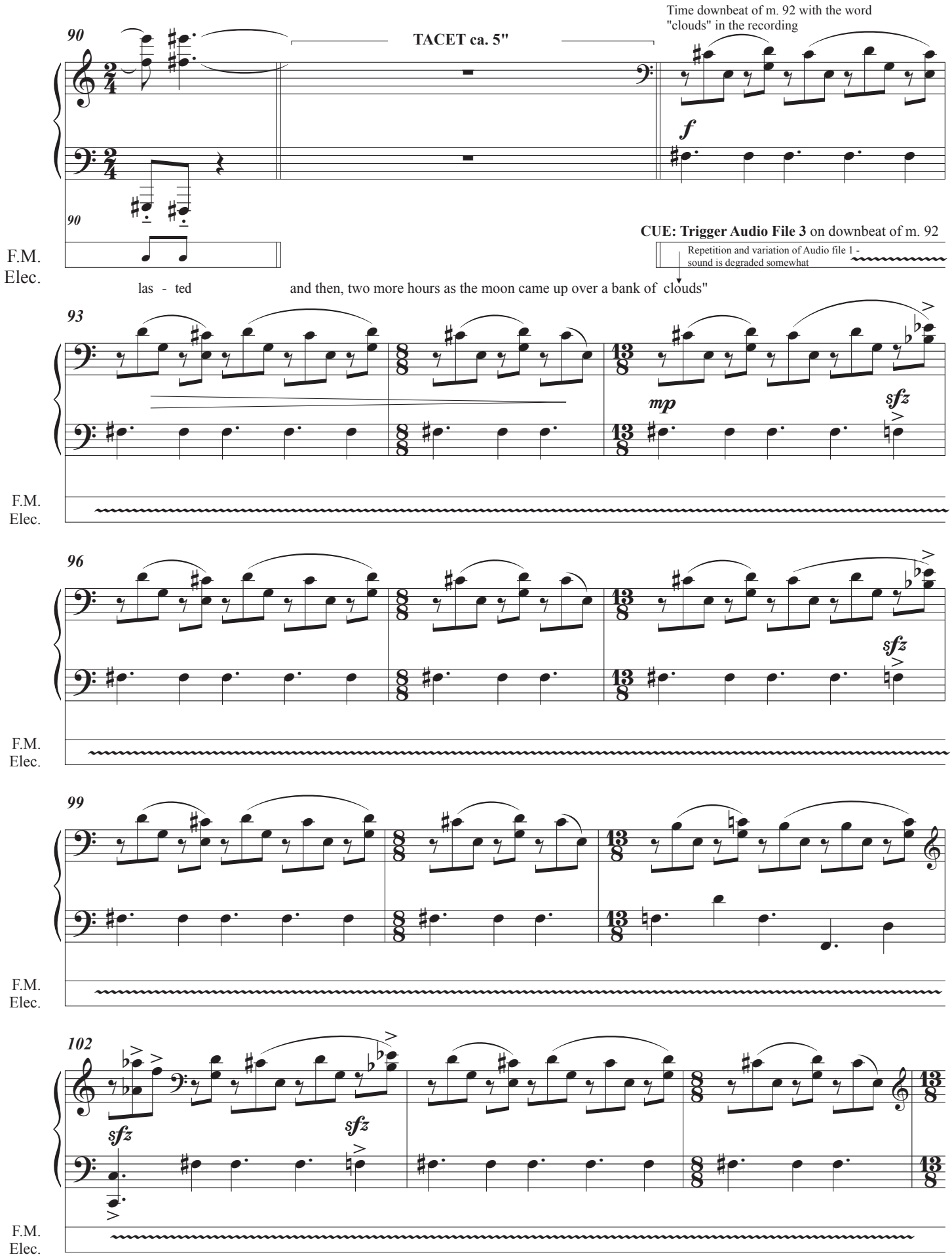

58
mf
f
61
mf
f
64
mf
f
67
ff
pp
71
playful
ppp
rhythm derived from Amelia Earhart's speech rhythm, see mm. 80-90

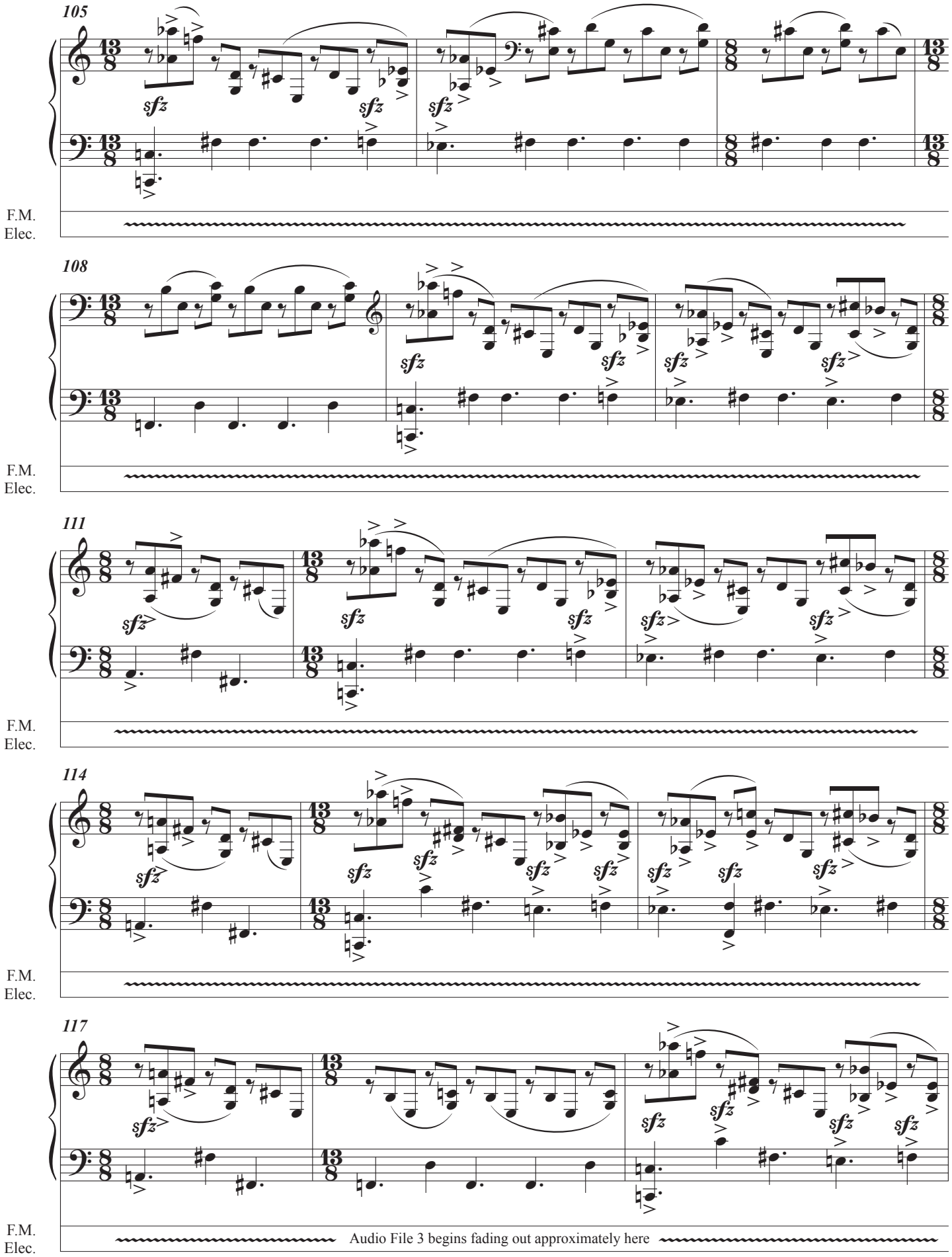

75

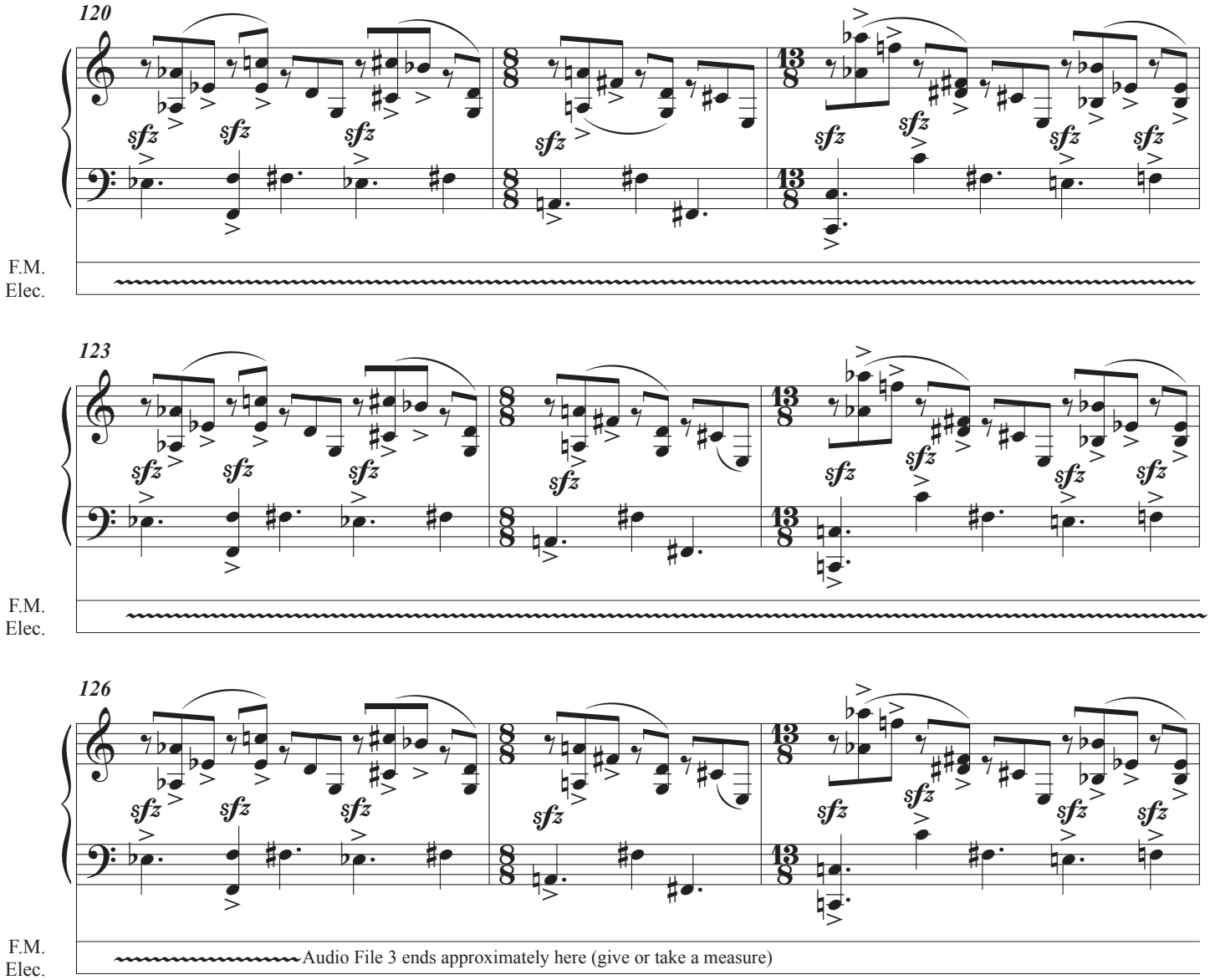

79
TACET ca. 9"
CUE: Trigger Audio File 2, Earhart speaking - (this audio lasts until the downbeeat of m. 92)
F.M.
Elec.
"I took off the famous Harbour
Grace runway at dusk, about 7:30
I believe. I flew for a couple of hours
while
sun - set, uh,

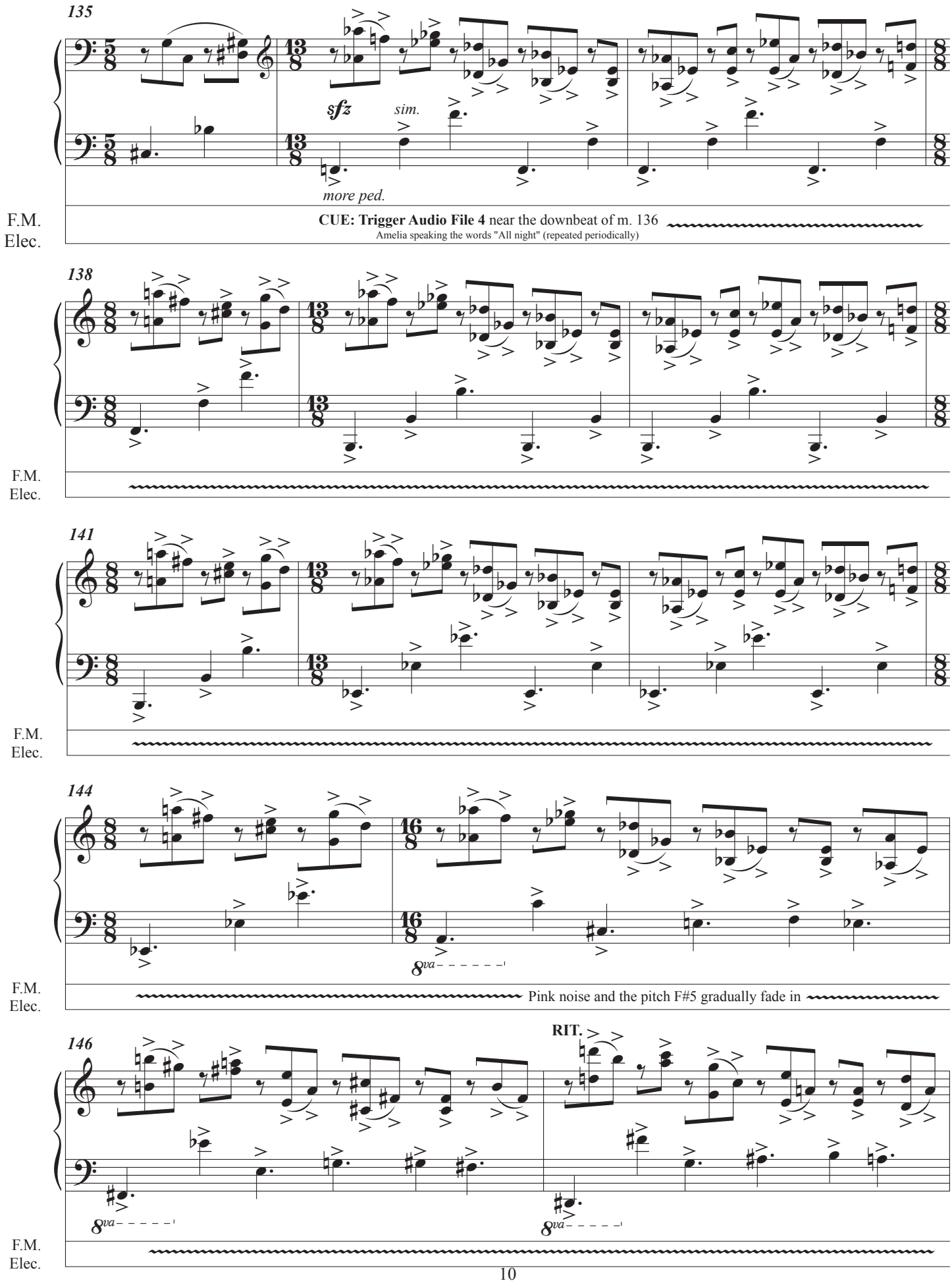

82
Try to match the rhyhm of Amelia Earhart's looping speech -
the notation approximates this rhythm
F.M.
Elec.
las - ted while sun - set, uh, las - ted while sun - set, uh,

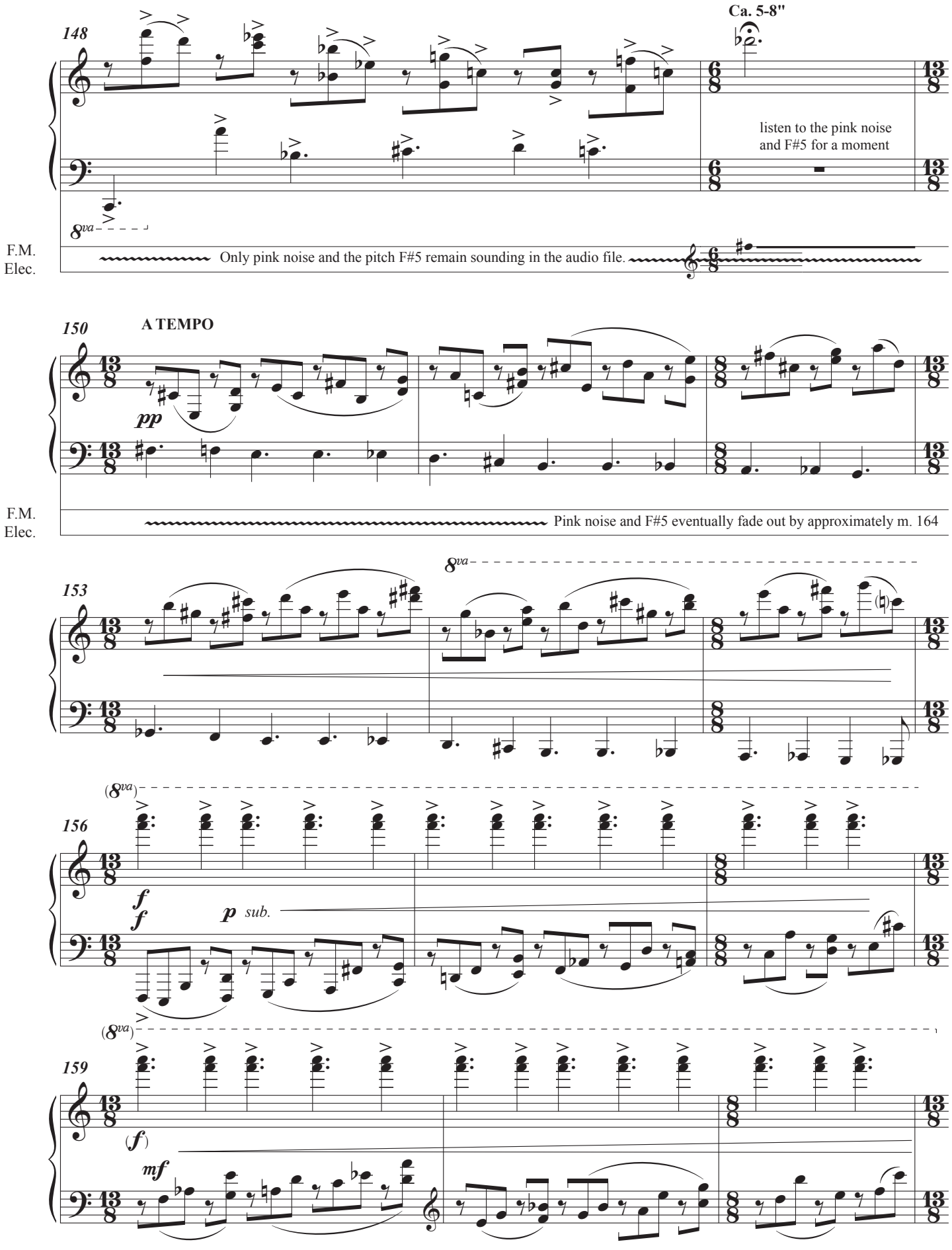

86
F.M.
Elec.
las - ted while sun - set, uh, las - ted while sun - set, uh,

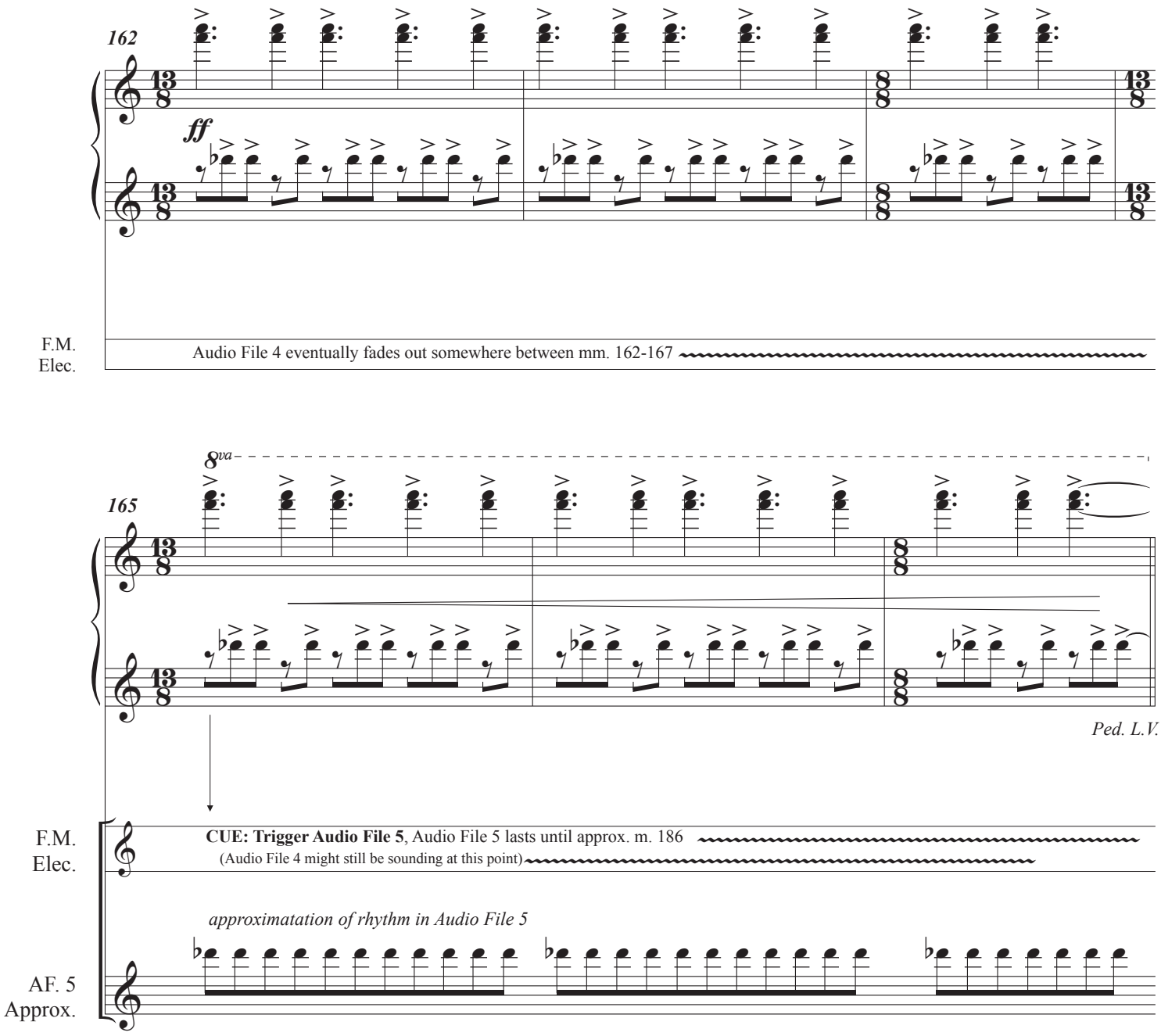

90
TACET ca. 5"
Time downbeat of m. 92 with the word "clouds" in the recording
f
90
CUE: Trigger Audio File 3 on downbeat of m. 92
Repetition and variation of Audio file 1 - sound is degraded somewhat
F.M. Elec.
las - ted
and then, two more hours as the moon came up over a bank of clouds"
93
mp
sfz
F.M. Elec.
96
sfz
F.M. Elec.
99
F.M. Elec.
102
sfz
sfz
F.M. Elec.


105
F.M.
Elec.
108
F.M.
Elec.
111
F.M.
Elec.
114
F.M.
Elec.
117
F.M.
Elec.
Audio File 3 begins fading out approximately here


120
sfz
F.M.
Elec.
123
sfz
F.M.
Elec.
126
sfz
F.M.
Elec.
Audio File 3 ends approximately here (give or take a measure)
129
sfz
mp
132


135
sfz
sim.
more ped.
F.M.
Elec.
CUE: Trigger Audio File 4 near the downbeat of m. 136
Amelia speaking the words "All night" (repeated periodically)
138
F.M.
Elec.
141
F.M.
Elec.
144
8va
F.M.
Elec.
Pink noise and the pitch F#5 gradually fade in
146
RIT.
8va
8va
F.M.
Elec.


148
Ca. 5-8"
listen to the pink noise
and F#5 for a moment
8va
F.M.
Elec.
Only pink noise and the pitch F#5 remain sounding in the audio file.
150
A TEMPO
pp
F.M.
Elec.
Pink noise and F#5 eventually fade out by approximately m. 164
153
8va
156
(8va)
f
f
p sub.
159
(8va)
(f)
mf



***Explanation of Audio File 5 - Granular Transition Music (mm. 165 - 186 approx.),** beginning under the piano part in m. 165 -

Trigger Audio File #5 at the beginning of m. 165. This file lasts 2'46" and it overlaps both the ending of the section that closes in m. 167 and the beginning of the passage that starts in m. 174.

N.B. The audio file was created by the composer improvising on a 4" sample of the piano part, mm. 163-165, using Mutable Instruments' BEADS Texture Synthesizer

SENZA MISURA

Listen to the live granular improv or audio file playback and interact with the music according to the guidelines.

Ca. 20"

Repeat the figures below, ad. lib.
Tempo of repeat notes should be slighly slower than the tempo of the granular synthesis

PAUSE
Ca. 5"

Listen to granular texture

168

8va

8va

Sometimes overlap figures, sometimes have pauses between figures

F.M. Elec.

(Audio File 5 cont.)

8va

Steady, rhythmic repetition at first but then the pulse gradually speeds up.
The pulsations increase until "human" rhythms eventualy become machine rhythms

AF. 5 Approx

Ca. 30"

Repeated notes and tremolo:
gradually increase and decrease speed

169

8va

8va

When low frequencies start to emerge from the electronics move on to the figure below.

(Mute string at the agraffe with one hand and play on keys with the other)

M.

8vb

Fast, irregular repetition - use 1 finger and vibrate up and down like a jackhammer

f < *fff* >

F.M. Elec.

(Audio File 5 cont.)

8va

The pulsations increase until "human" rhythms eventualy become machine rhythms
as density (speed) is further repeated notes eventually become sustained pitches

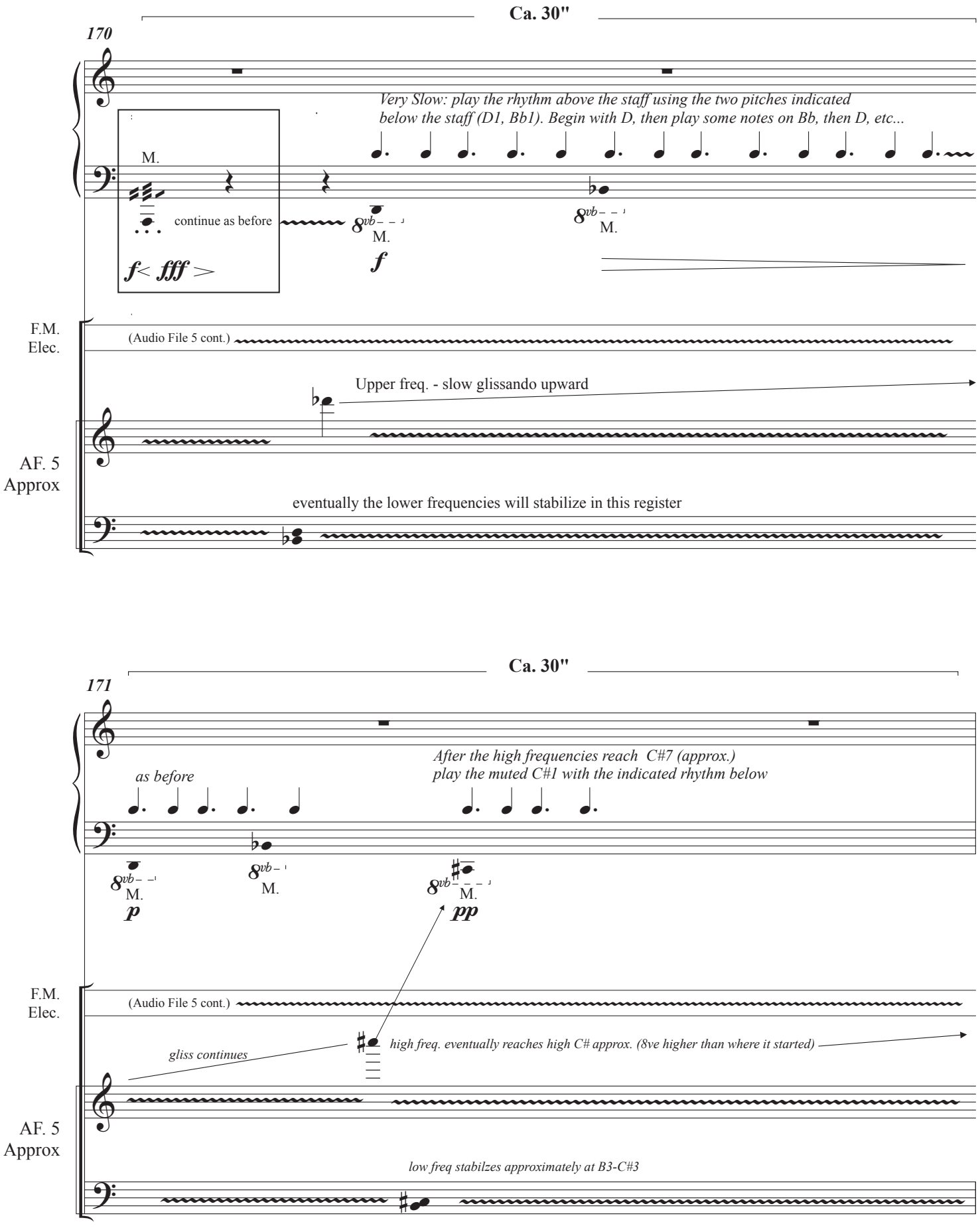
AF. 5 Approx

Low sustained frequencies are eventually heard

low freq. will eventually rise

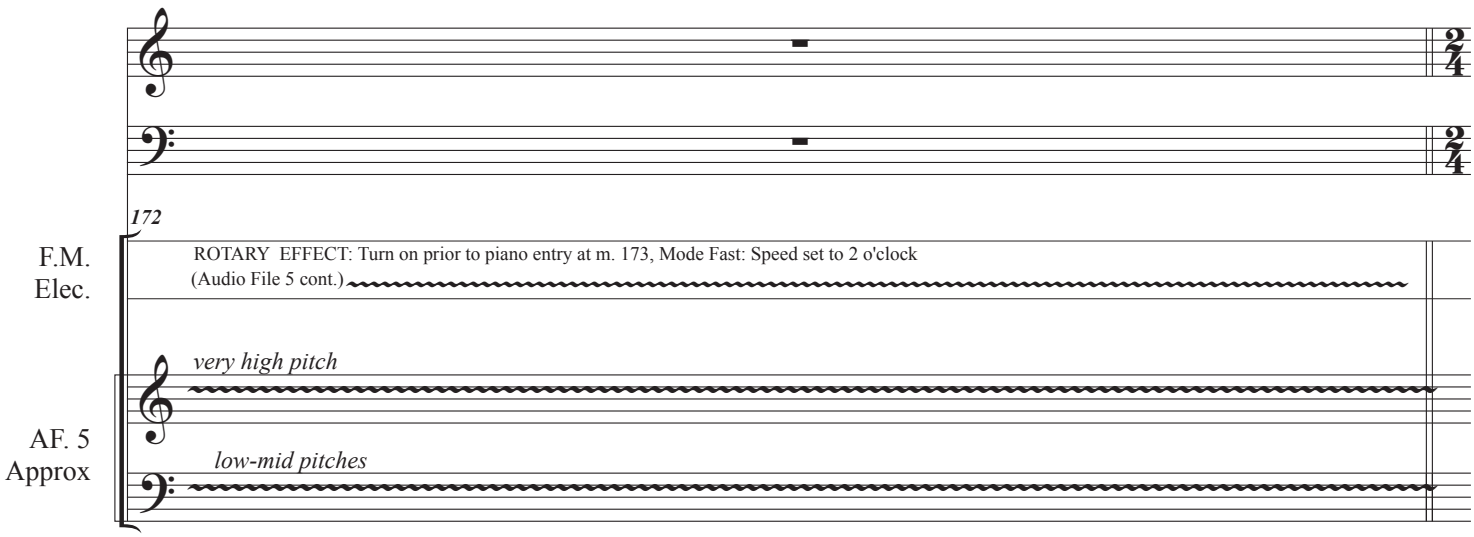
approximatation of register

8vb


Ca. 30"
170
Very Slow: play the rhythm above the staff using the two pitches indicated
below the staff (D1, Bb1). Begin with D, then play some notes on Bb, then D, etc...
M.
continue as before
8vb
M.
f
8vb
M.
f< fff >
F.M.
Elec.
(Audio File 5 cont.)
Upper freq. - slow glissando upward
AF. 5
Approx
eventually the lower frequencies will stabilize in this register
Ca. 30"
171
as before
After the high frequencies reach C#7 (approx.)
play the muted C#1 with the indicated rhythm below
8vb
M.
p
8vb
M.
8vb
M.
pp
F.M.
Elec.
(Audio File 5 cont.)
gliss continues
high freq. eventually reaches high C# approx. (8ve higher than where it started)
AF. 5
Approx
low freq stabilzes approximately at B3-C#3

TACET ca. 10"

172



172

F.M. Elec.

ROTARY EFFECT: Turn on prior to piano entry at m. 173, Mode Fast: Speed set to 2 o'clock
(Audio File 5 cont.)

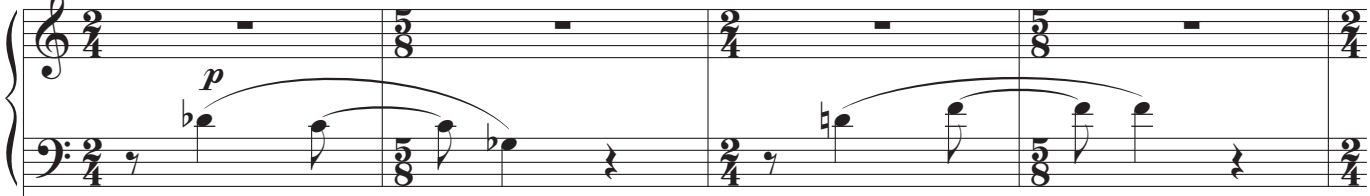
AF. 5 Approx

very high pitch

low-mid pitches

173

♩ = 36



F.M. Elec.

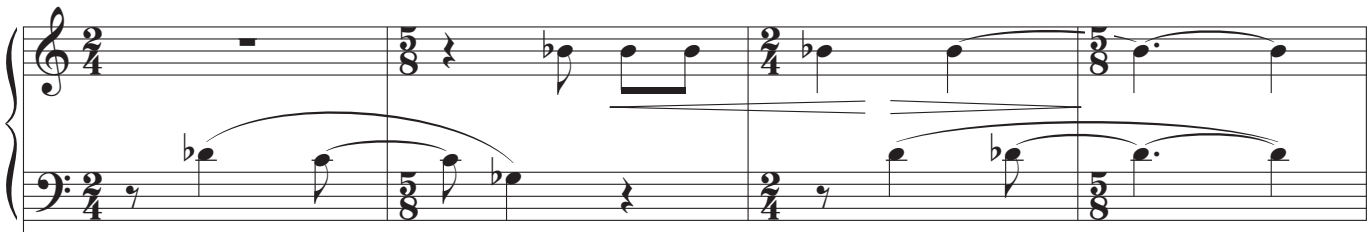
ROTARY EFFECT - remains on until the end of the piece. Instructions for speed variation are provided.
(Audio File 5 cont.)

AF. 5 Approx

Very high pitch

low-mid pitches

177



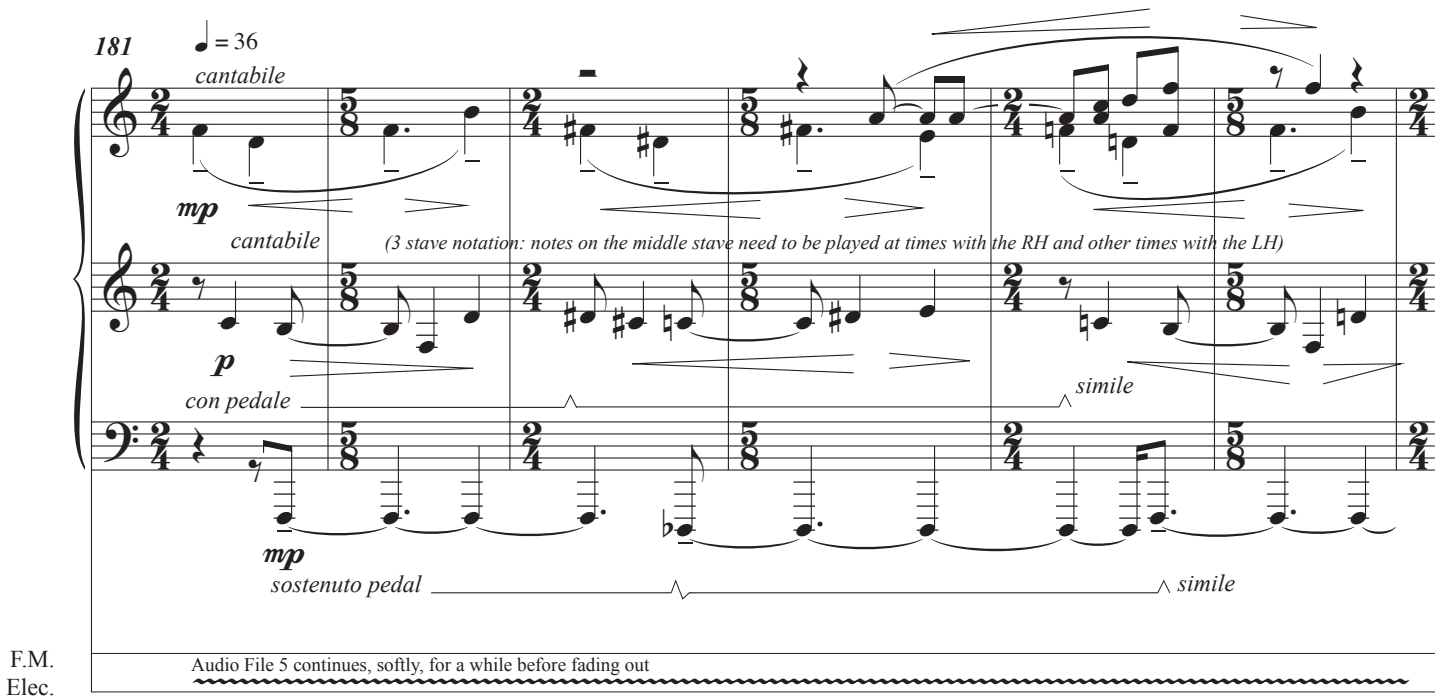
F.M. Elec.

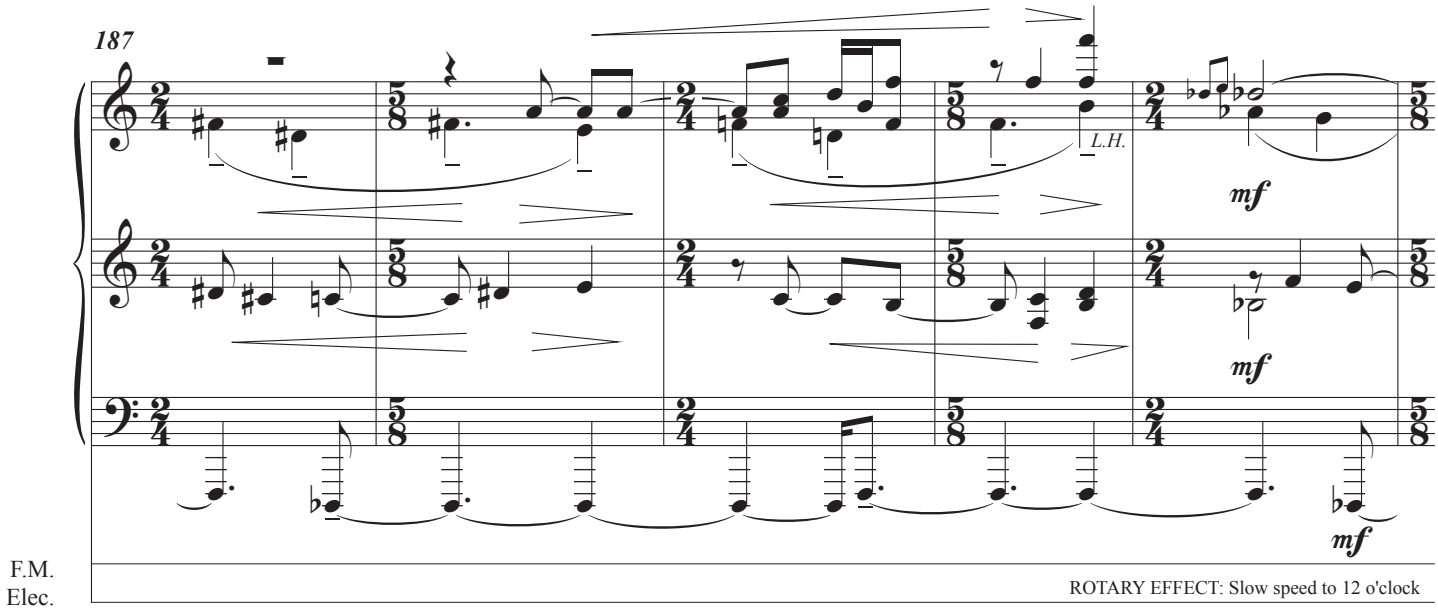
(Audio File 5 cont.)

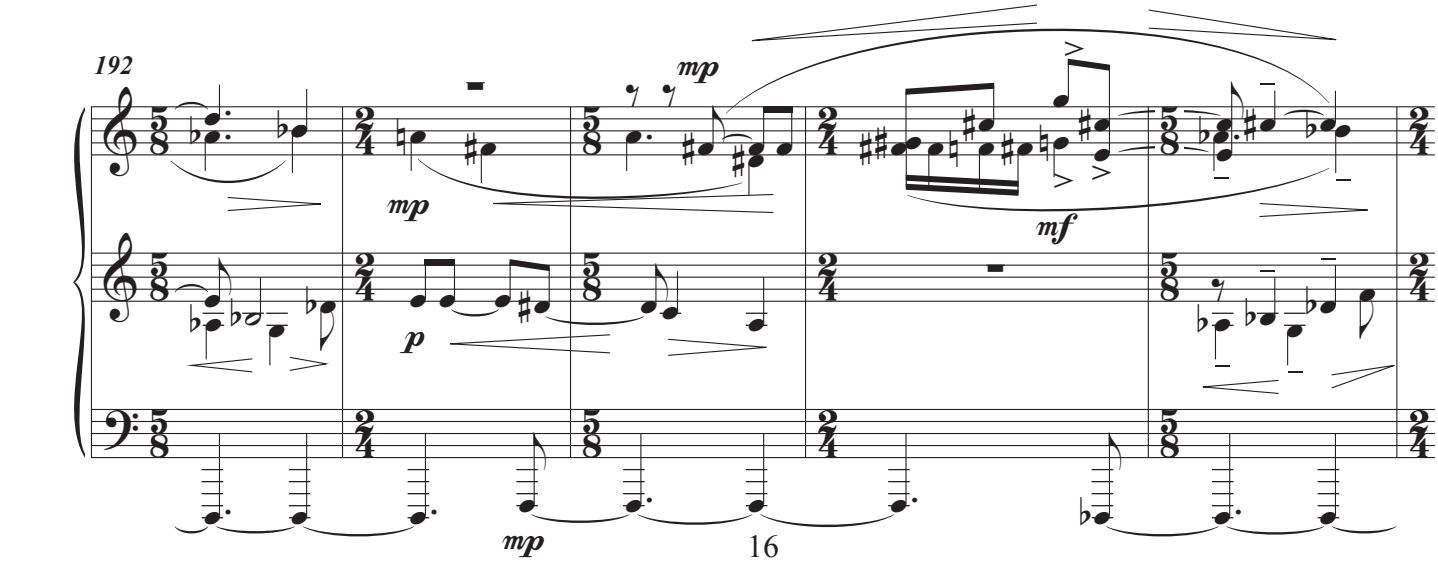
AF. 5 Approx

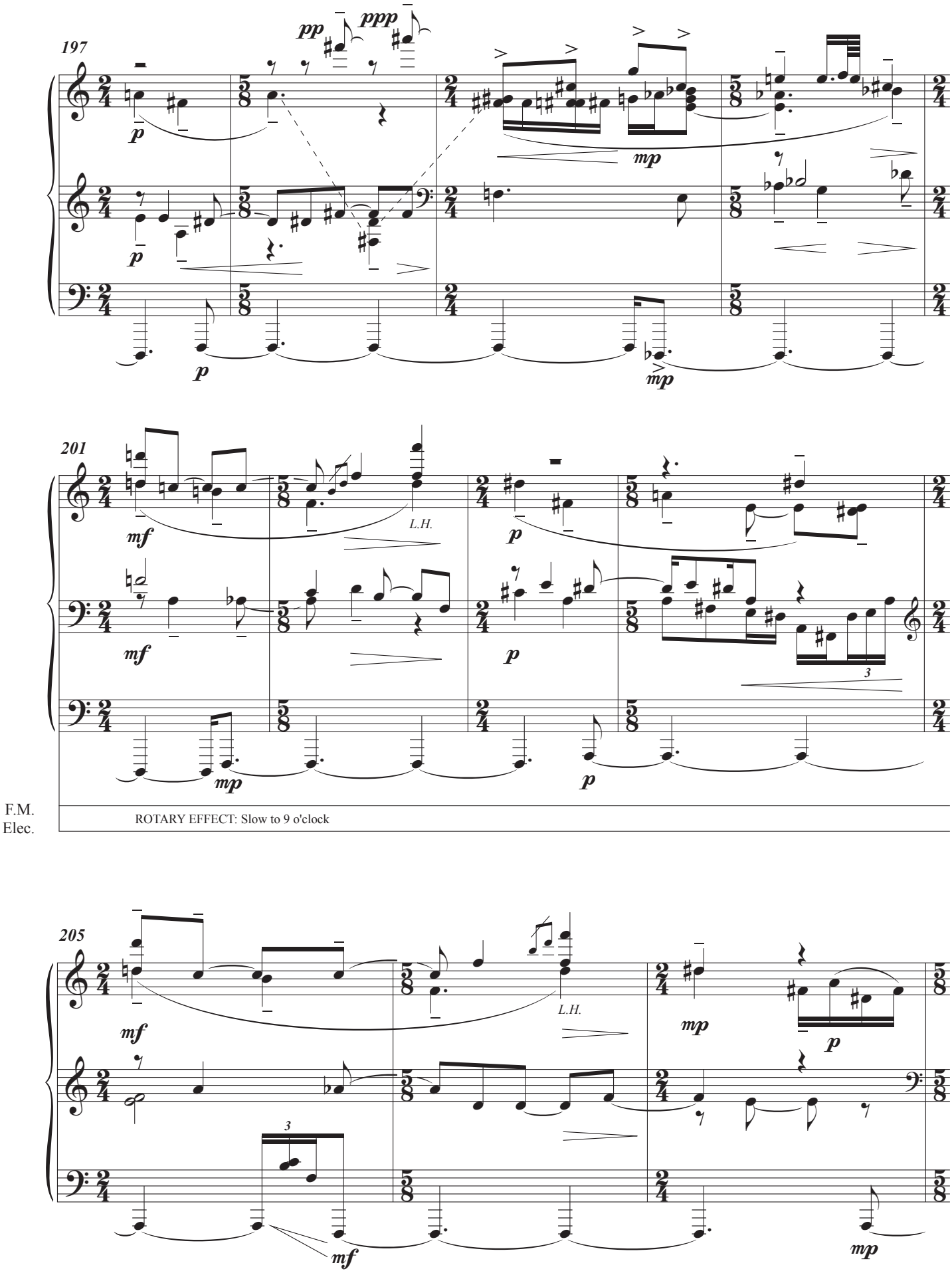
Very high pitch

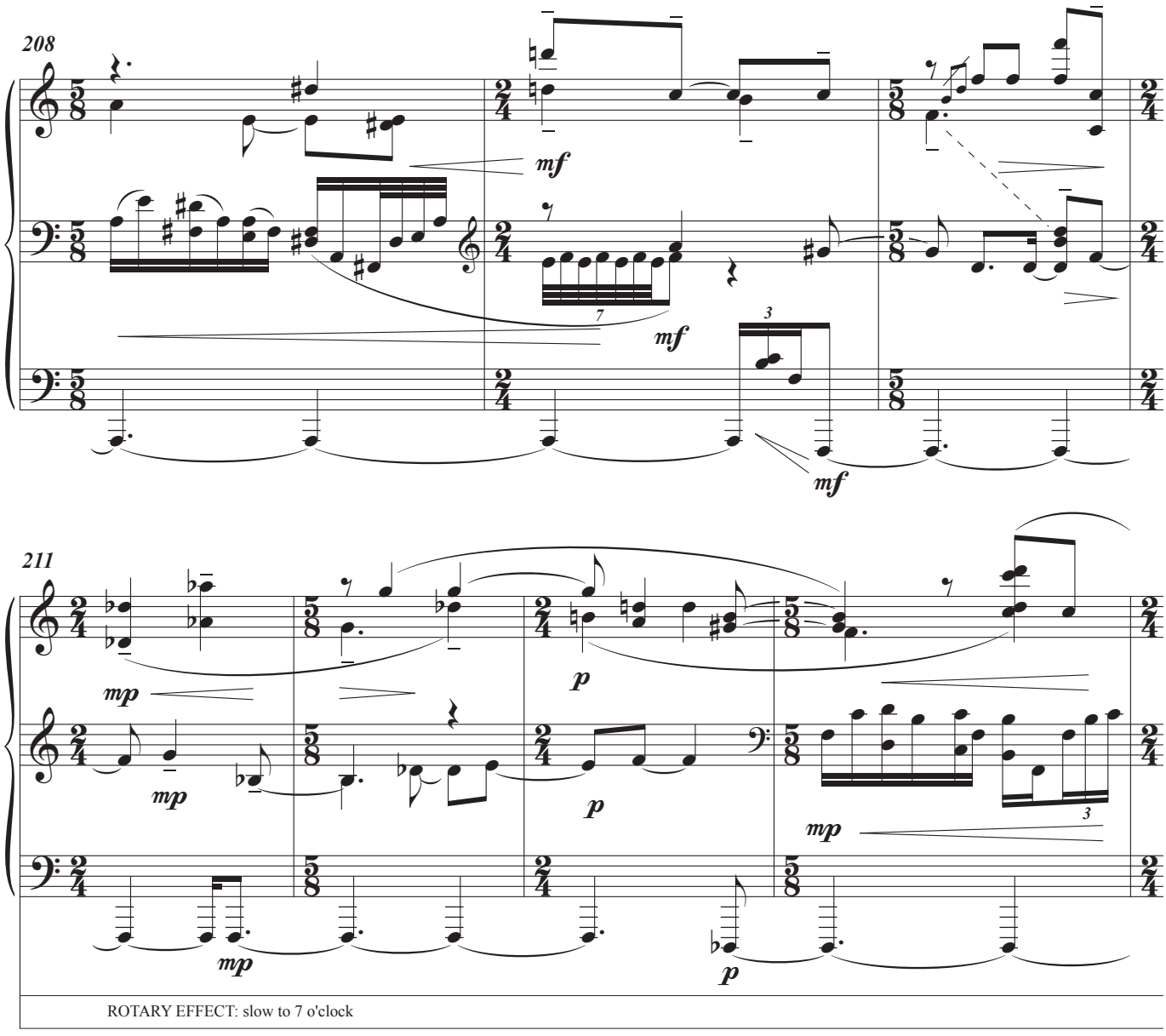
low-mid pitches

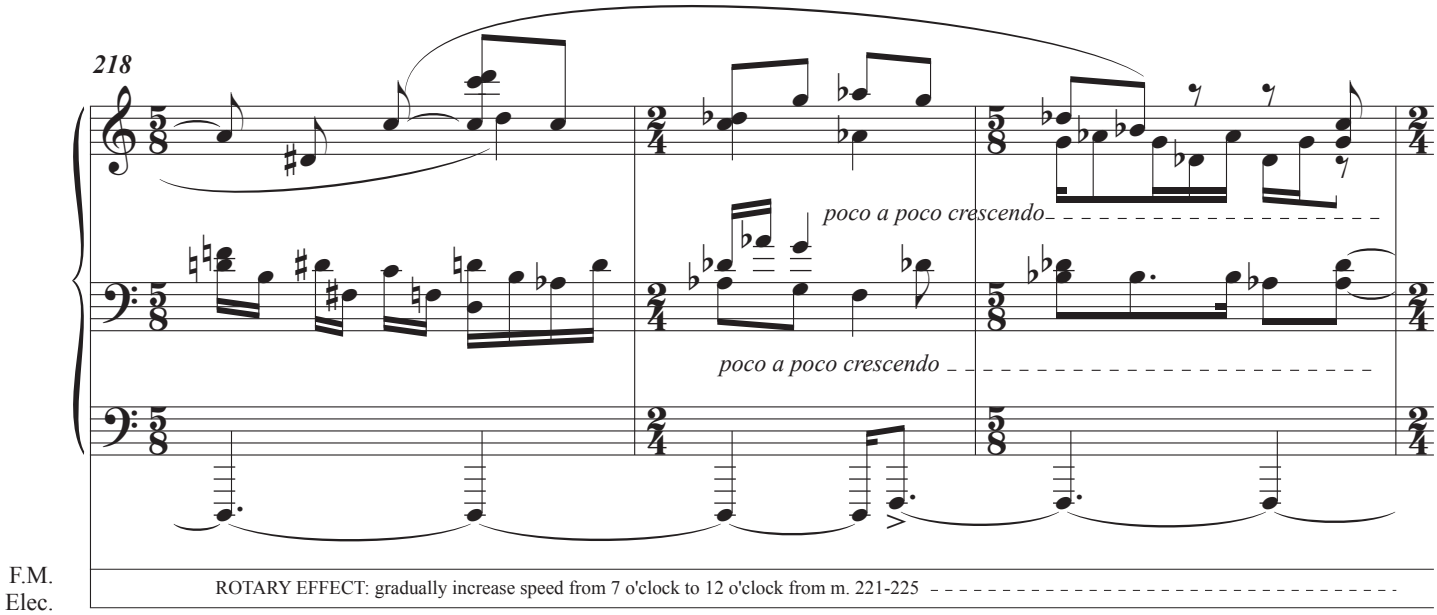

181
♩ = 36
cantabile
mp
cantabile
(3 stave notation: notes on the middle stave need to be played at times with the RH and other times with the LH)
p
con pedale
simile
mp
sostenuto pedal
simile
F.M.
Elec.
Audio File 5 continues, softly, for a while before fading out

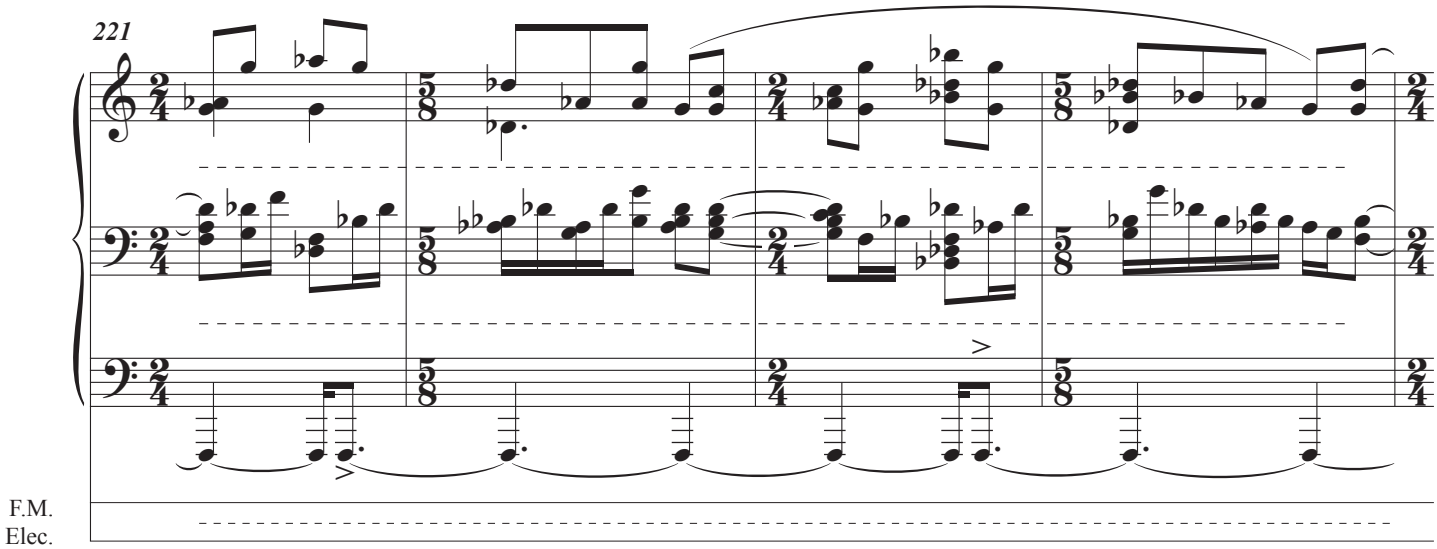

187
L.H.
mf
mf
mf
F.M.
Elec.
ROTARY EFFECT: Slow speed to 12 o'clock

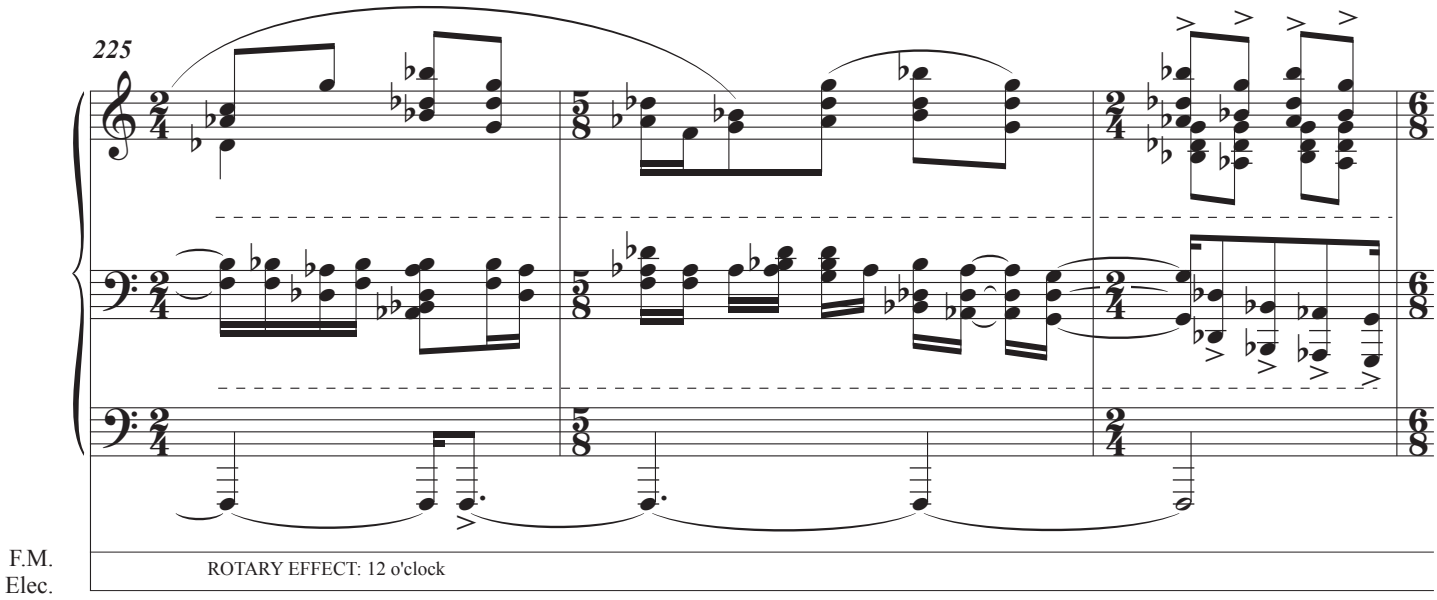

192
mp
mp
mf
p
mp

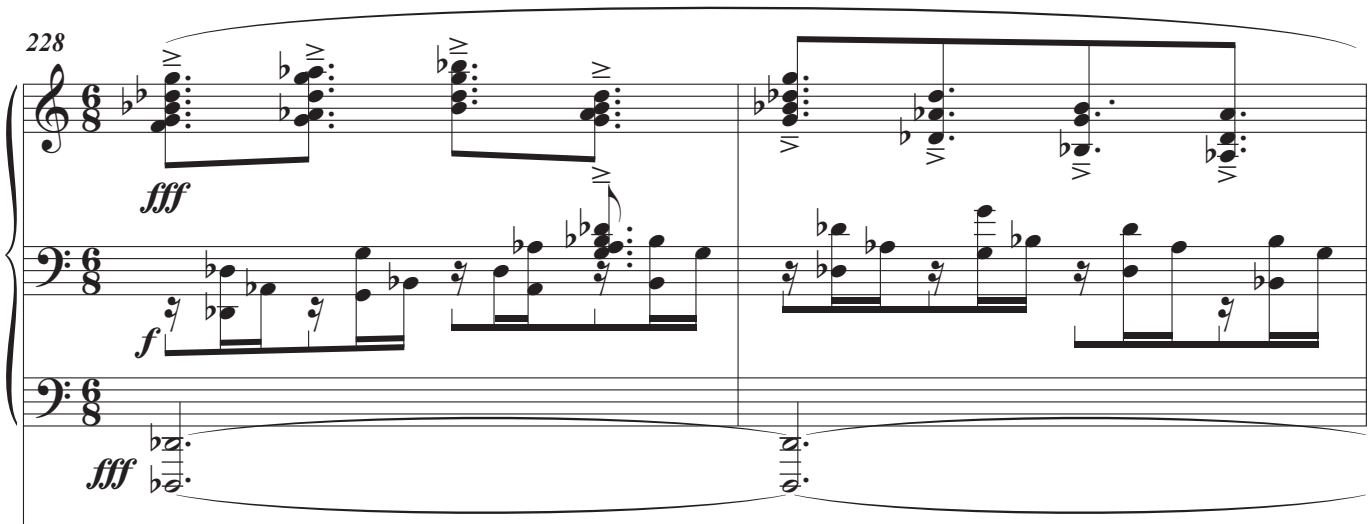

197
pp
ppp
p
mp
201
mf
L.H.
3
205
F.M.
Elec.
ROTARY EFFECT: Slow to 9 o'clock


208
mf
mf
mf
211
mp
mp
p
p
mp
mp
p
F.M.
Elec.
ROTARY EFFECT: slow to 7 o'clock
215
f
f
mf
mp
mp
p


218
poco a poco crescendo
poco a poco crescendo
F.M.
Elec.
ROTARY EFFECT: gradually increase speed from 7 o'clock to 12 o'clock from m. 221-225


221
F.M.
Elec.

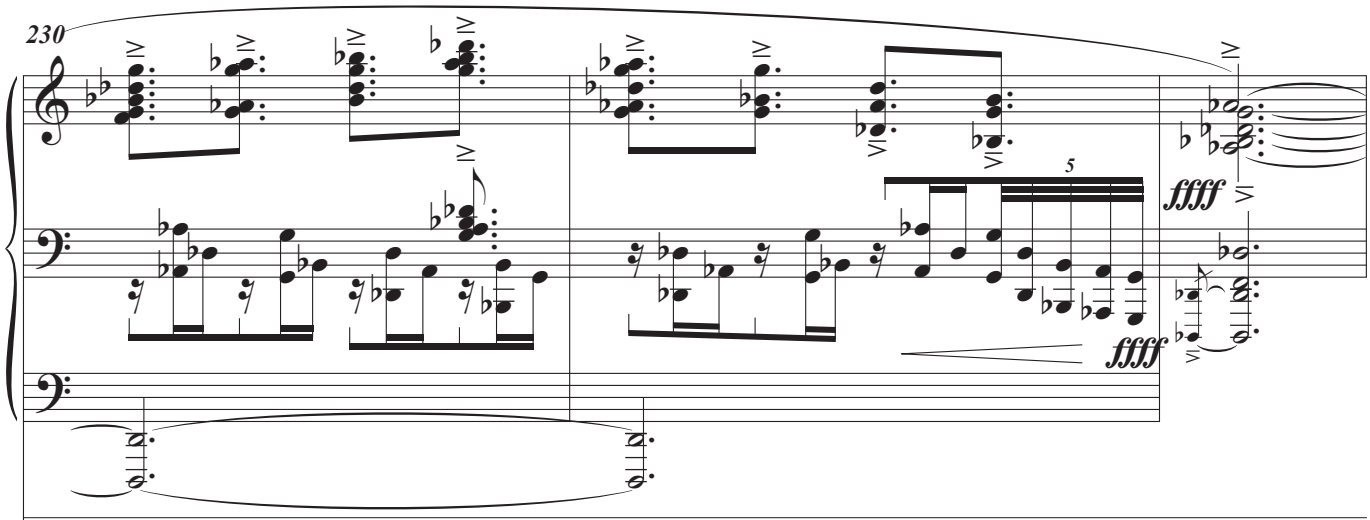

225
F.M.
Elec.
ROTARY EFFECT: 12 o'clock



CUE: trigger Audio File 6 shortly after beat 1 of m. 228; Earhart speaking, extremly distorted, lo-fi tone

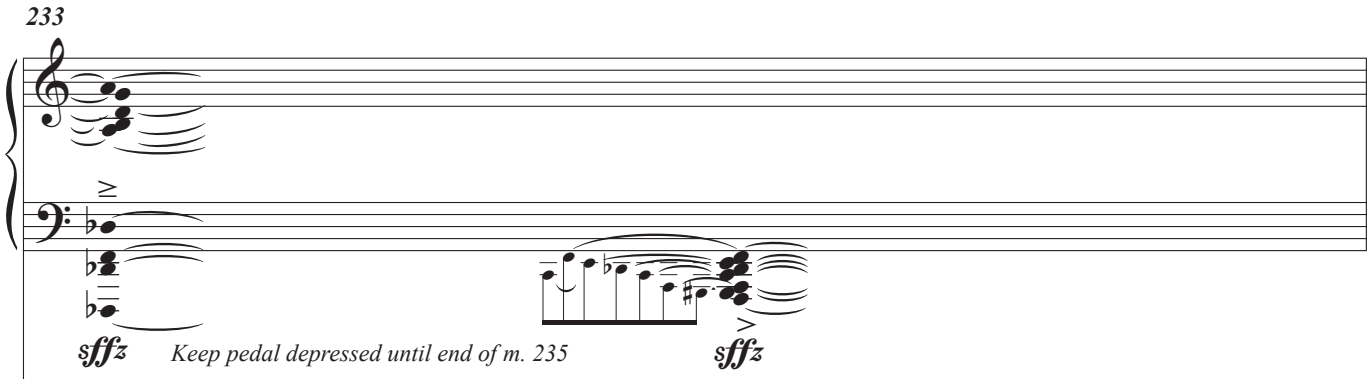
F.M. Elec.

I had been troubled, I had been troubled, I had been troubled with my exhaust manifold burning through all night.



F.M. Elec.

burning through all night, ... burning through all night,..... a weld broke shortly after I left Harbour Grace, and I could see the

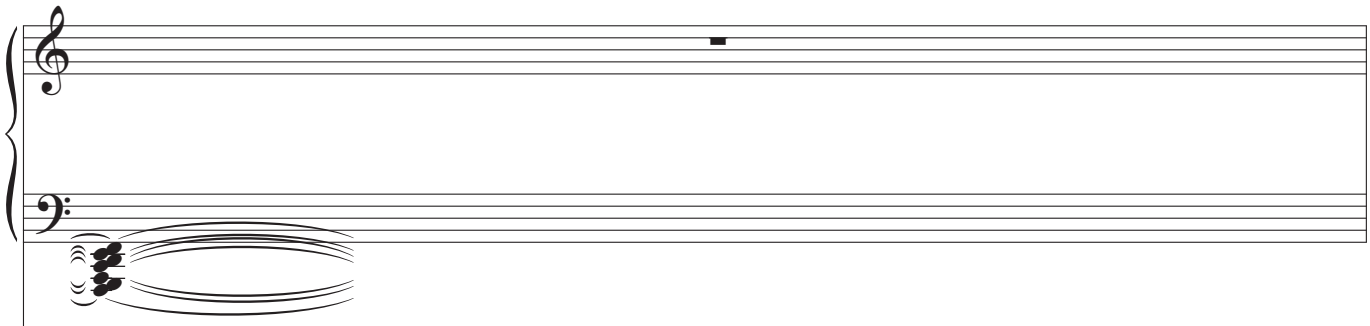


F.M. Elec.

damage increasing as the night wore on, a weld broke shortly after I left Harbour Grace, and I could see the damage

ROTARY EFFECT: Increase speed to 3 o'clock

234

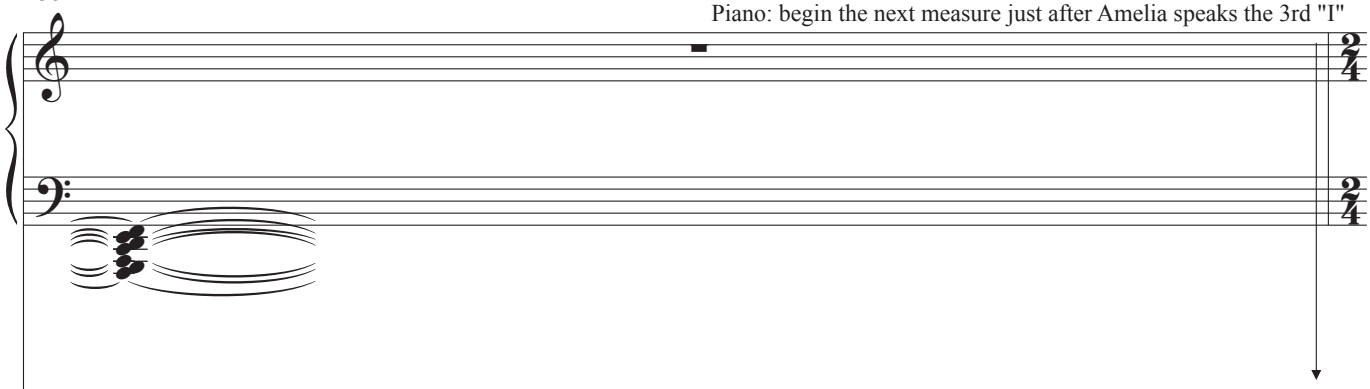


F.M. increasing as the night wore on ..... (repeated static distortion)..... a weld broke shortly after I left Harbour Grace.....a weld

Elec. ROTARY EFFECT: Gradually lower speed to 7 o'clock

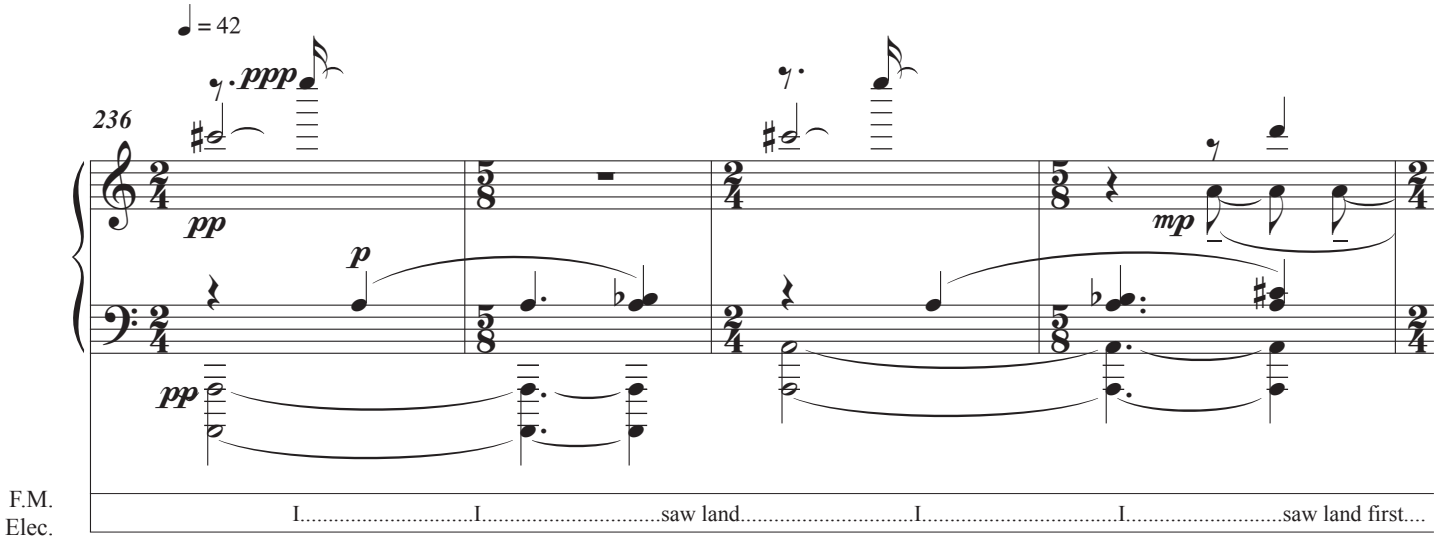
235

Piano: begin the next measure just after Amelia speaks the 3rd "I"

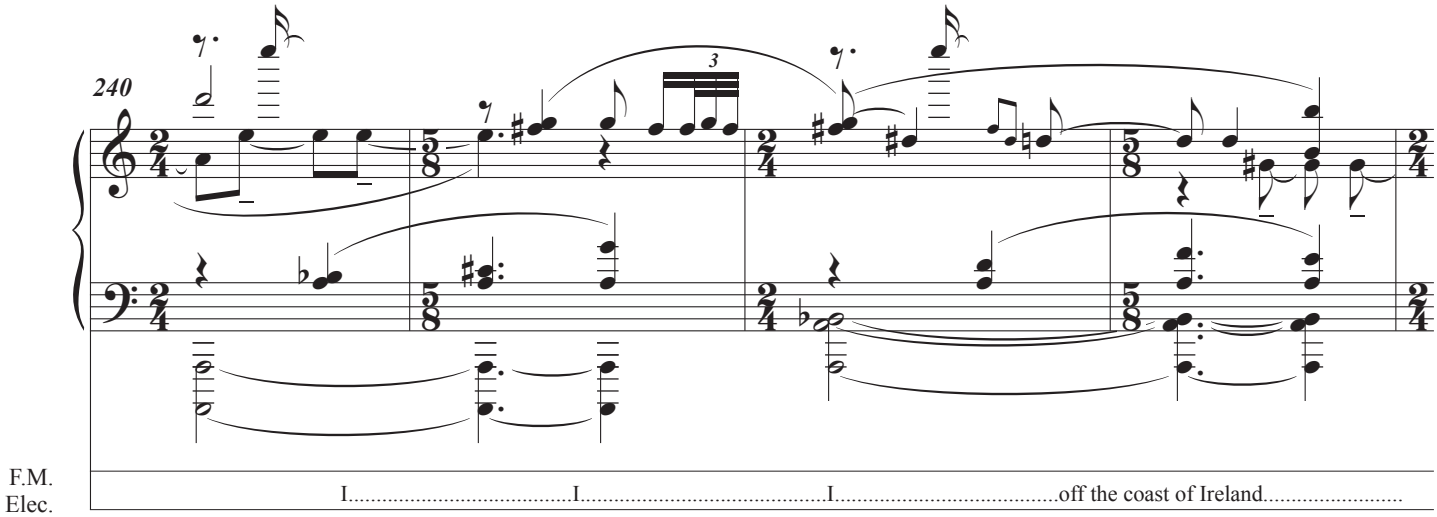


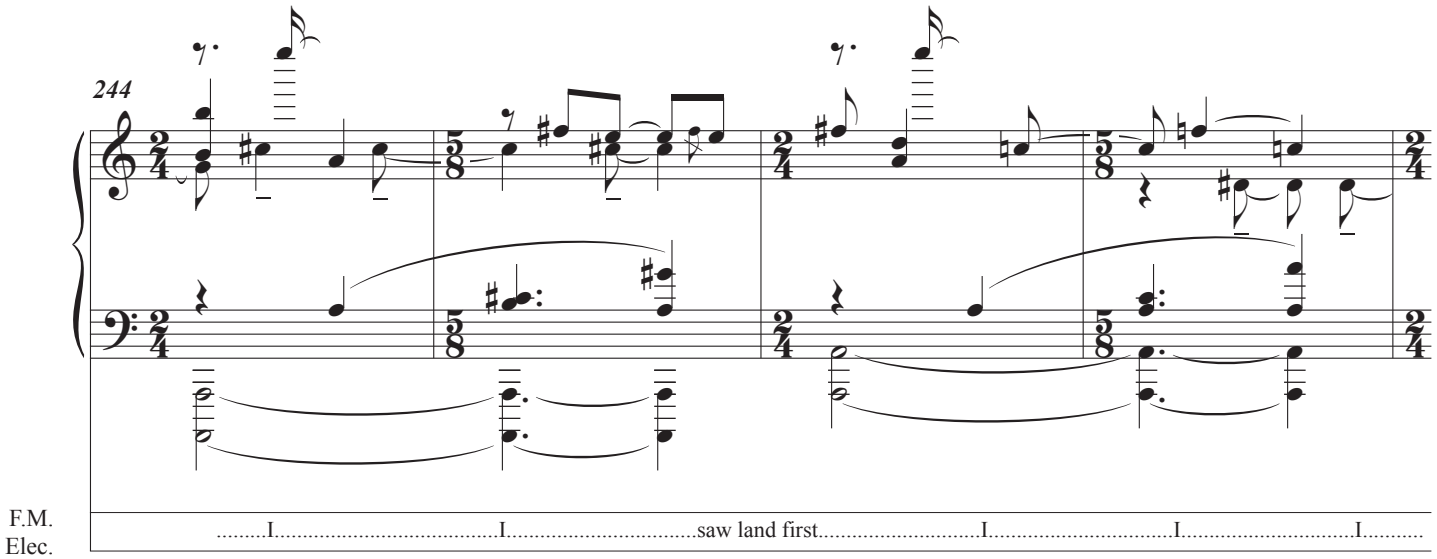
F.M. broke shortly after I left Harbour Grace..... I left Harbour Grace.....I left Harbour Grace I left.....I left.....I.....I.....I..

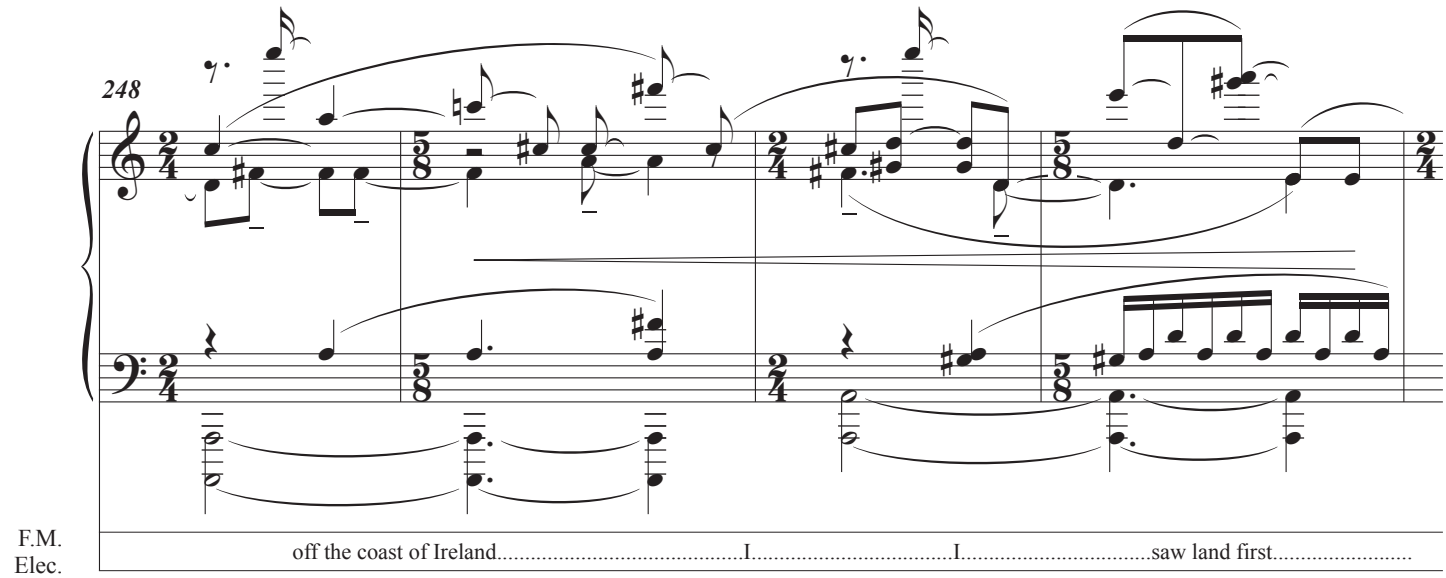
Elec. ROTARY EFFECT: set speed to SLOW MODE

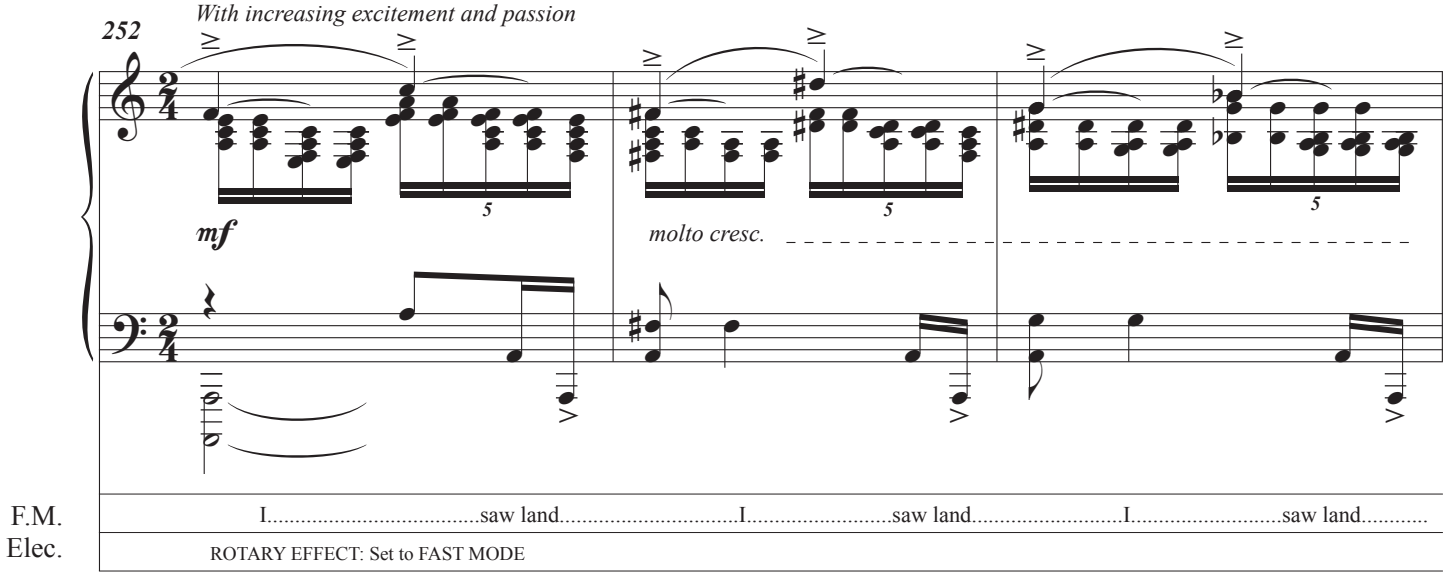


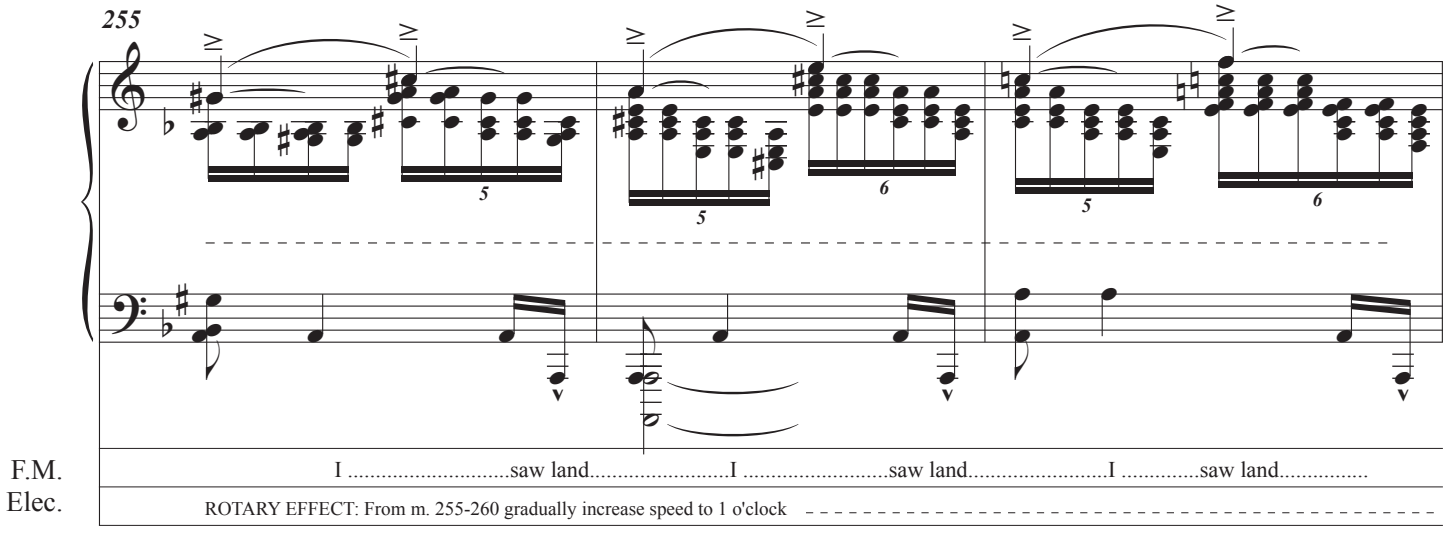
After beginning m. 236 (after the 3rd spoken "I") it is not necessary for the pianist to try to align the piano part with the recorded spoken voice. The notated placement of the text is approximate. The playback of this audio file should end somewhere between mm. 256-259

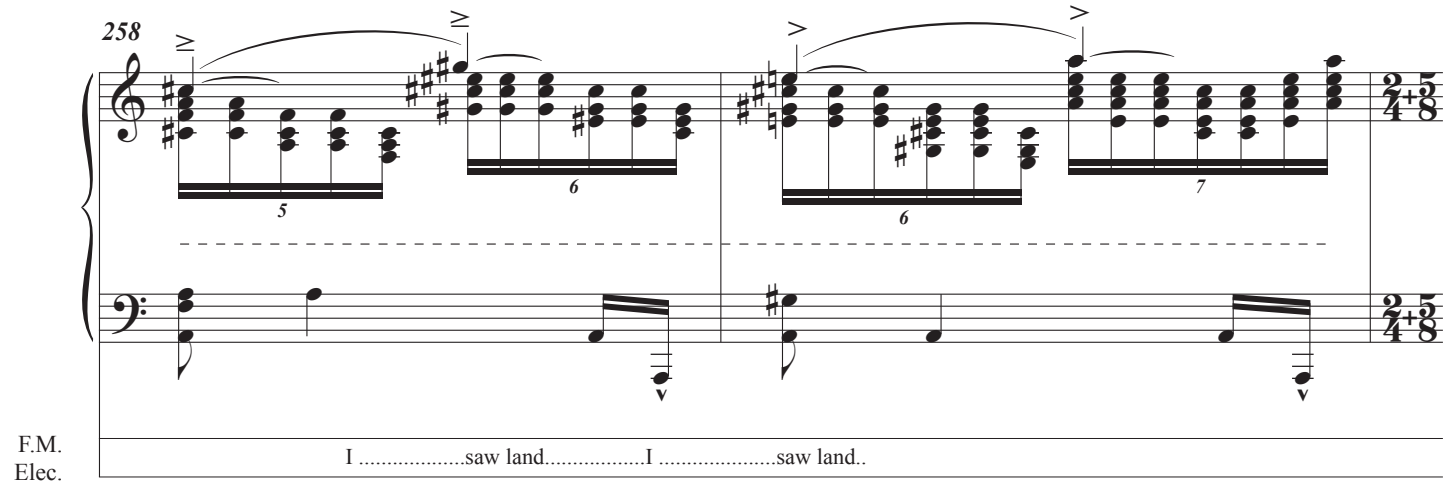


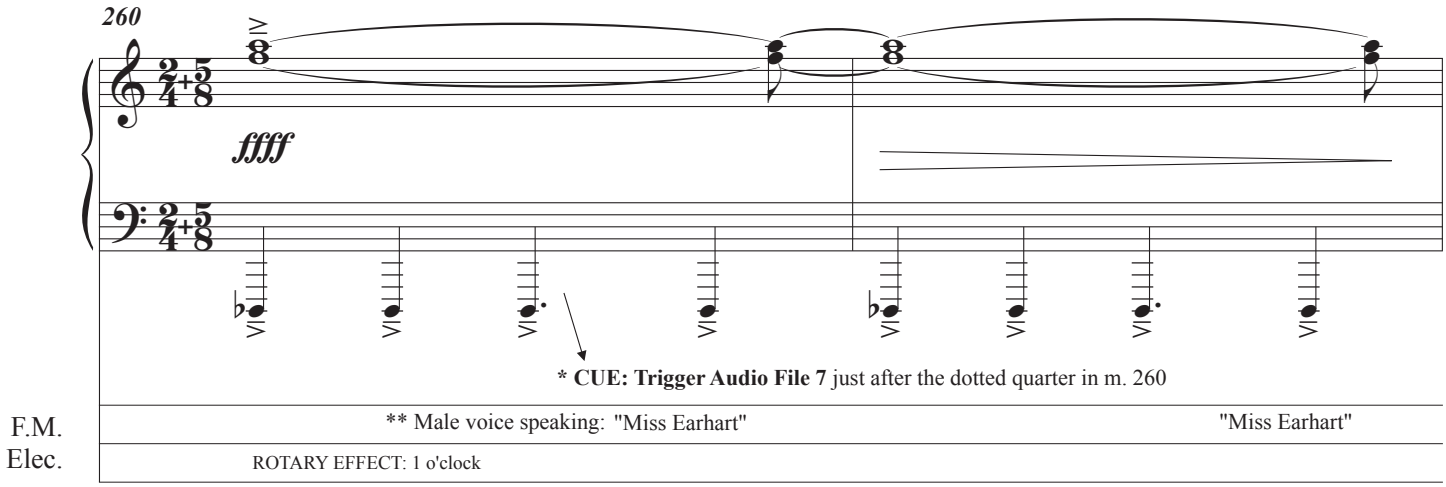


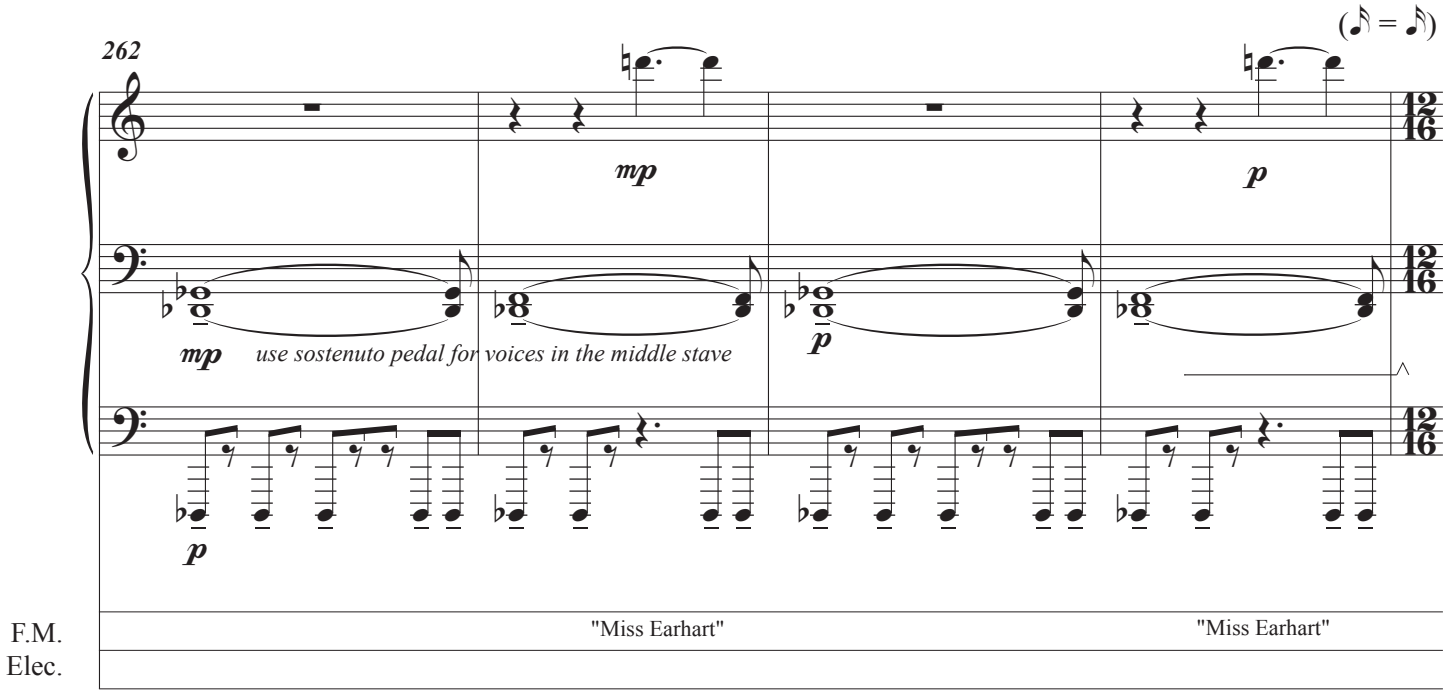

248
F.M.
Elec.
off the coast of Ireland.....I.....I.....saw land first.....

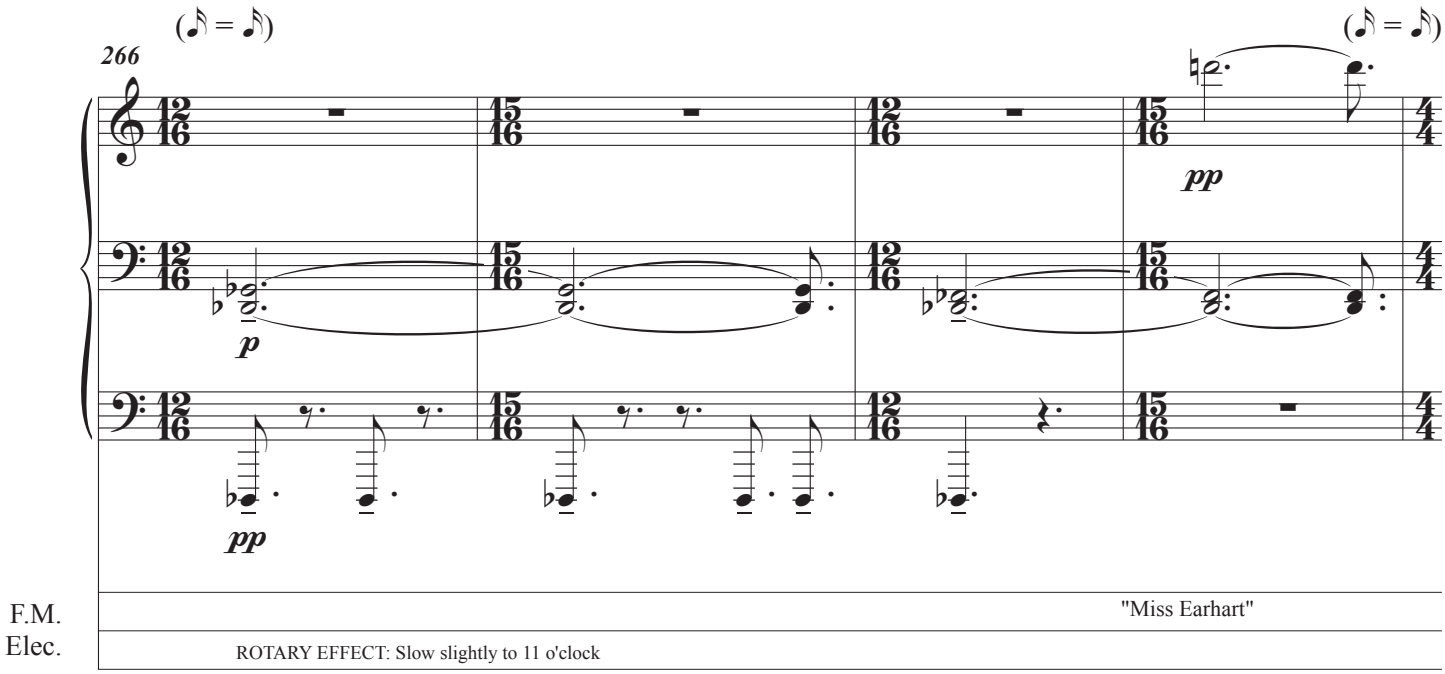

With increasing excitement and passion
252
mf
molto cresc.
F.M.
Elec.
I.....saw land.....I.....saw land.....I.....saw land.....
ROTARY EFFECT: Set to FAST MODE

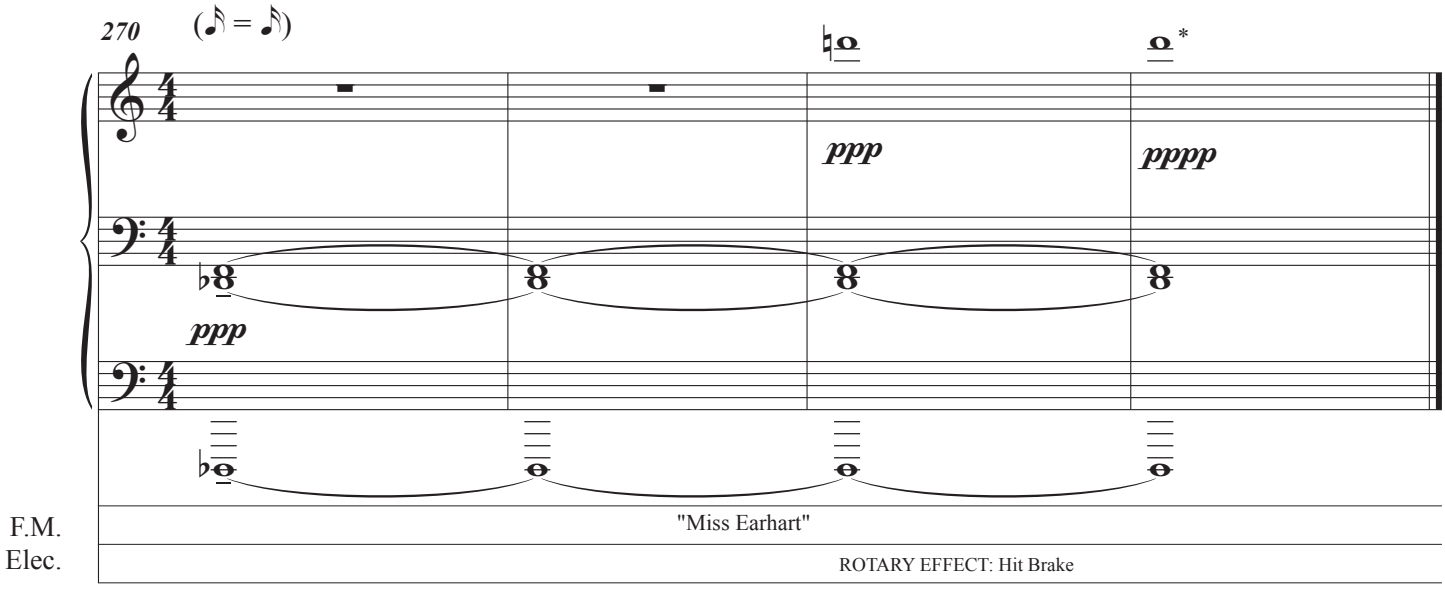

255
F.M.
Elec.
I .....saw land.....I .....saw land.....I .....saw land.....
ROTARY EFFECT: From m. 255-260 gradually increase speed to 1 o'clock


258
F.M.
Elec.
I .....saw land.....I .....saw land..


260
fffff
* CUE: Trigger Audio File 7 just after the dotted quarter in m. 260
F.M.
** Male voice speaking: "Miss Earhart"
"Miss Earhart"
Elec.
ROTARY EFFECT: 1 o'clock


262
mp
p
mp
use sostenuto pedal for voices in the middle stave
p
p
F.M.
"Miss Earhart"
"Miss Earhart"
Elec.





** Try to coordinate the last note with the audio file being almost completely faded out.*