Francesco Filidei

Notturno sulle corde vuote

per quartetto ed elettronica

Edizioni Musicali RAI COM

Notturno Sulle Corde Vuote

Technical Rider

This document gives sound information to perform the piece:
Notturno Sulle Corde Vuote, 2016
Composer: Francesco Filidei
RIM: Greg Beller
Research: SMART instrument, Adrien Mamou-Mani
Sound Engineer: Jérémie Bourgogne

Audio setup

Speaker setup

The major information / novelty / technical interest of this work is that it is using the first versions of smart string quatuor, coala V1. That means that the piece need these systems (4 little computer) to be performed. Other coala version could be used but with no warranty of the connections made with the global computer. There is no need for additional speakers.
Each instrument of the quatuor is equipped with a piezo mic in the chevalet and 2 transducers near by the chevalet.

Coala <-> SoundBoard <-> Fireface UCX + Computer

As usual. The very difference is that the sound inputs are coming from the coalas and the output of the soundboard is going to the coalas. Let's say a coala is a plug'n'play instrument that involve the wood part of the instrument as well. There is one coala for each of the instrument: Violin1, Violon2, Alto and Cello.

Coala:

Note that the sound coming from the coala (piezo mics in the chevalet) is the sound taken more or less at the string. It can be perceived as phasy and noisy, even saturated. But so is the sound in the string. The setting of the pre-amp on the coala is of most importance and can be tricky because the course of the potentiometer does not match very well the course of the pre-amp.

Here is a scheme to adjust the potentiometers of the coala:

- Turn all coala output potentiometer to the maximum value.
- Start to play fortississimo on the instrument.
- Turn up gently the input potentiometer while listening to the sound till it starts to become really saturated.
- Go back and stop before the saturation.
- Then, at the soundboard, adjust the gain so as to provide to the computer an homogeneous quatuor.

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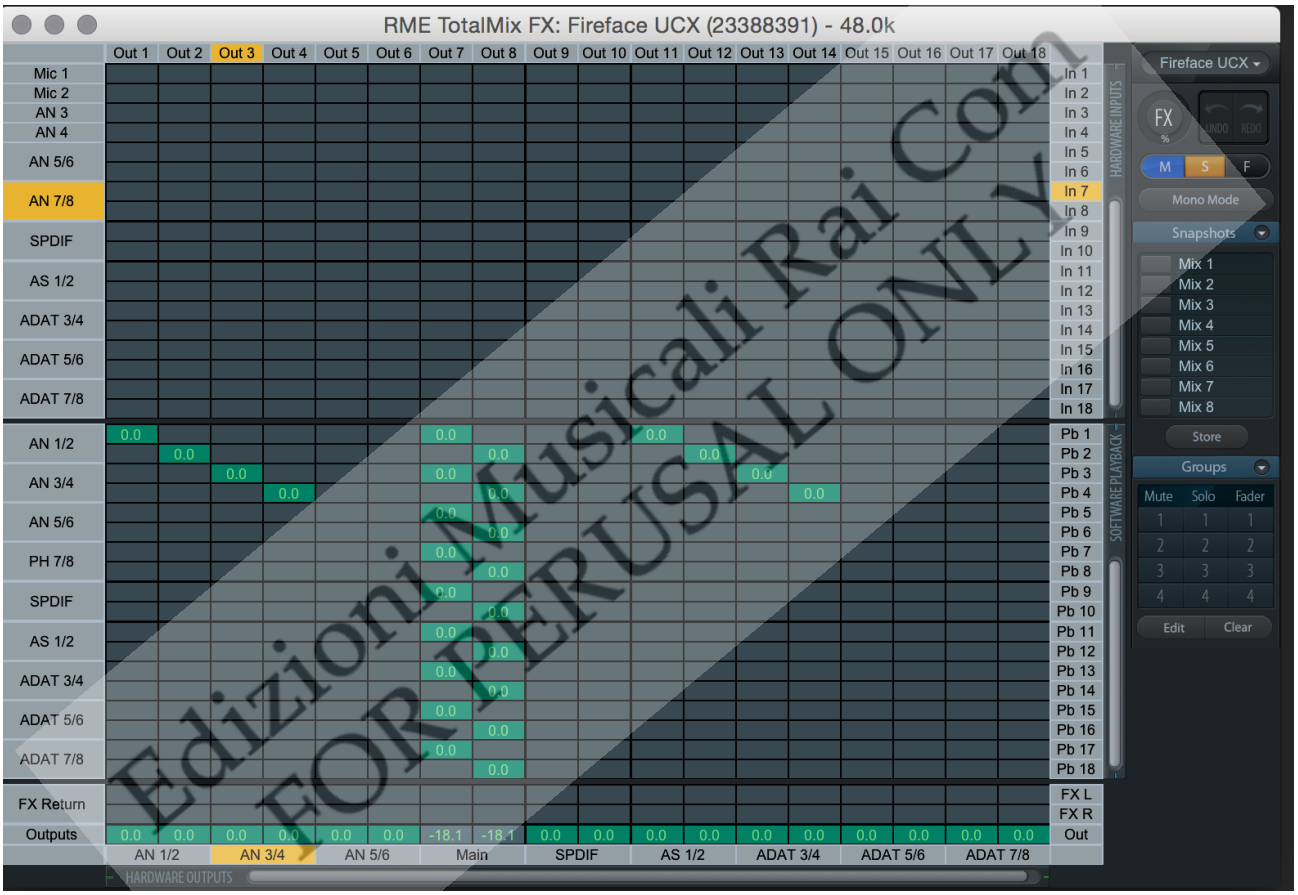
The 22nd of January 2016

SoundBoard

Nothing especially at this level. No need to set up delays, so a analogical board is OK.
Input: 4 instruments coming from the 4 coalas + 4 computer input
Ouput: 4 instruments going out the 4 coalas + 4 computer output
(+ spare)

Fireface UCX

Nothing complicated. It can be Digital or Analogical connections.



Computer

The performance uses (main computer only):

- 4 Terminal
- 1 Ableton live 9.5 64bits.
- 1 Max 7.1 64 bits

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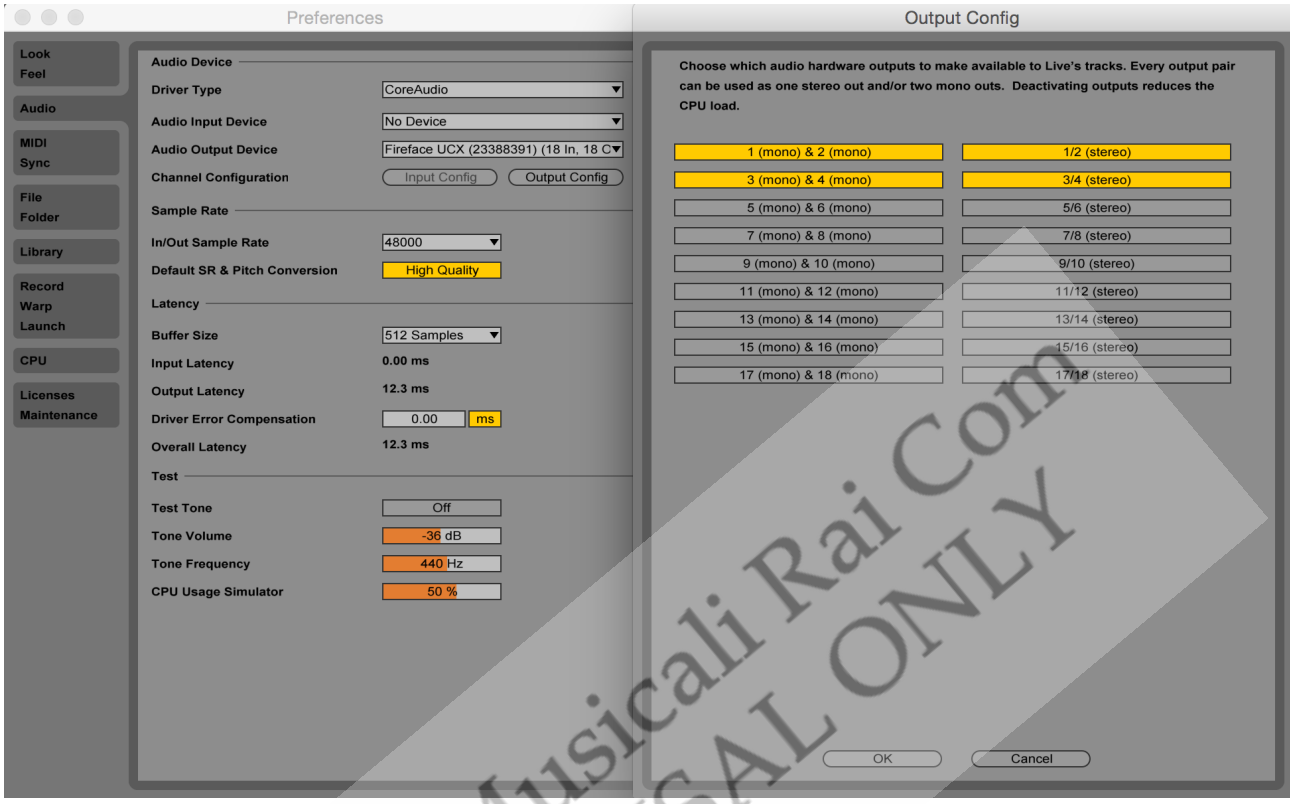
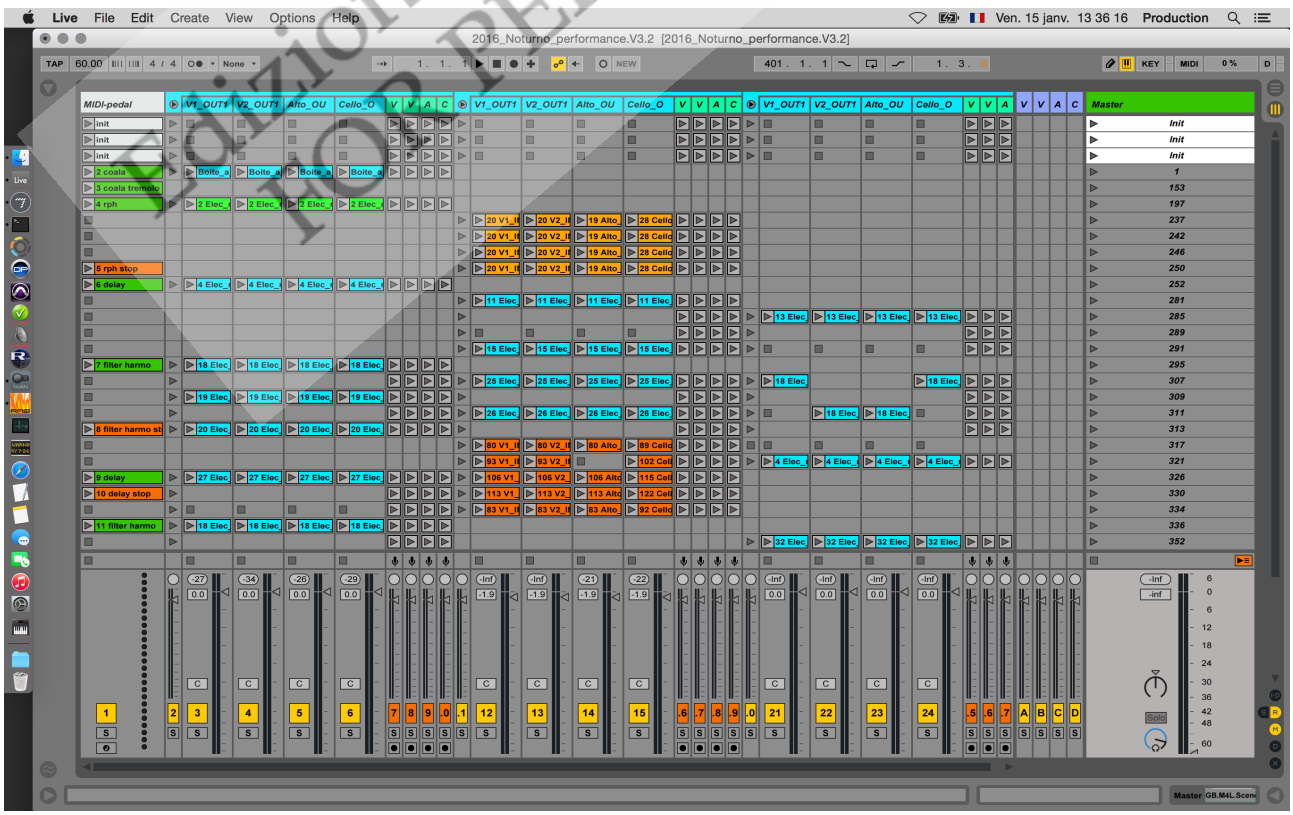
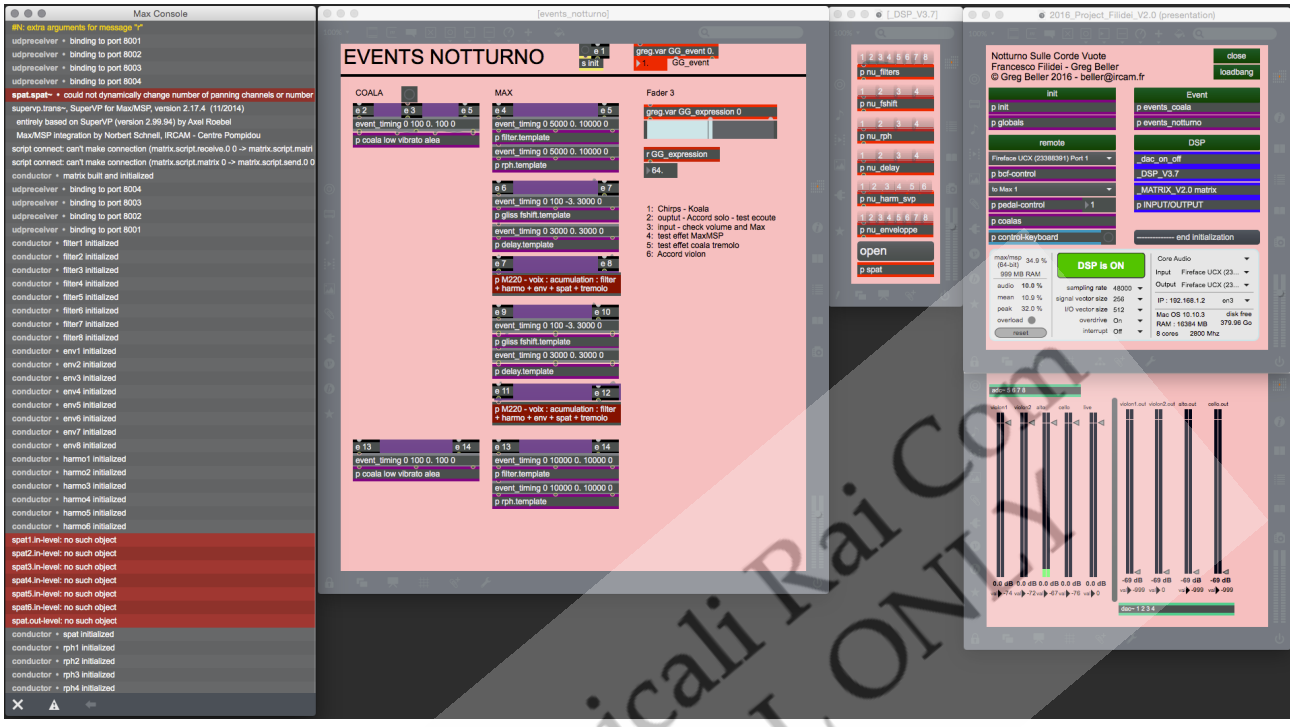
Live configuration



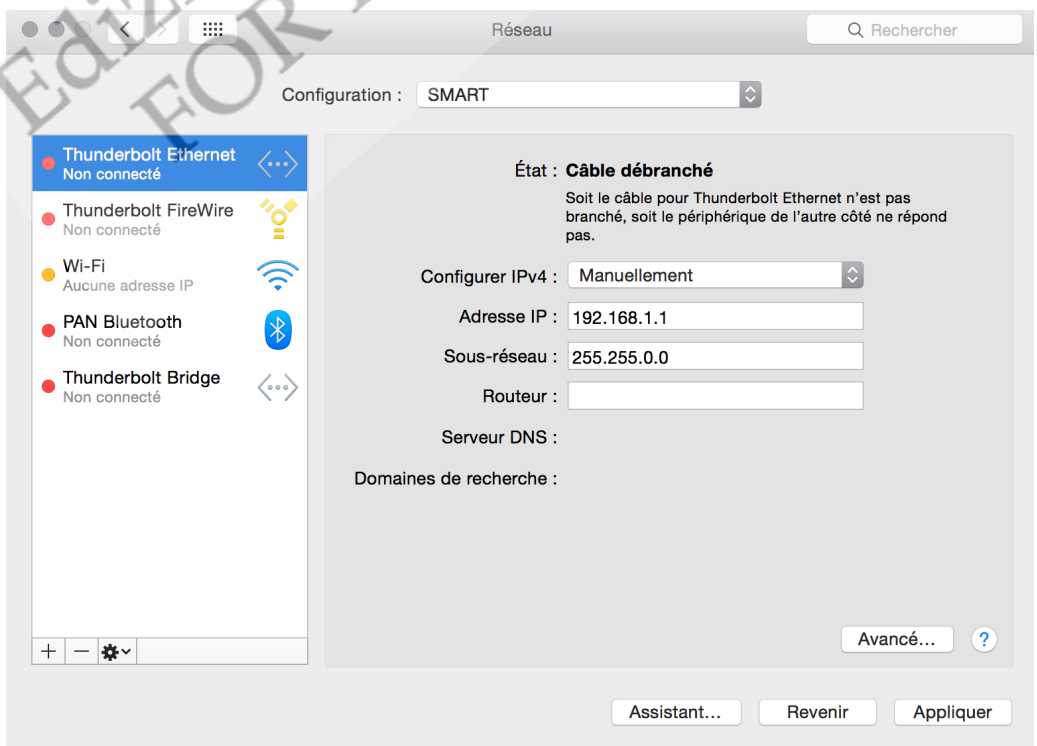


Max configuration



Coala configuration

A router is needed to address the 4 computers (coalas) from the main computer.
The main computer has to be network configured like this:
IP adress: 192.168.1.1
Network: 255.255.0.0



Then for each of the instruments you have to log on the coala using ssh and then, start the coala server program. Messages are addressed using OSC protocol.

Violon1:
ssh root@192.168.1.11
no password
-> coala -oscserver=8001

Violon2:
ssh root@192.168.1.12
no password
-> coala -oscserver=8002

Alto:
ssh root@192.168.1.13
no password
-> coala -oscserver=8003

Cello:
ssh root@192.168.1.14
no password
-> coala -oscserver=8004

```
production — ssh — 80×37
Last login: Fri Jan 15 13:09:05 on console
PRO-2537-Concert:~ production$ ssh root@192.168.1.11
c^C
PRO-2537-Concert:~ production$
PRO-2537-Concert:~ production$ ssh root@192.168.1.11
ssh: connect to host 192.168.1.11 port 22: Host is down
PRO-2537-Concert:~ production$ ssh root@192.168.1.11
ssh: connect to host 192.168.1.11 port 22: Host is down
PRO-2537-Concert:~ production$
PRO-2537-Concert:~ production$
PRO-2537-Concert:~ production$ ssh root@192.168.1.11
ssh: connect to host 192.168.1.11 port 22: Host is down
PRO-2537-Concert:~ production$
PRO-2537-Concert:~ production$
PRO-2537-Concert:~ production$ ssh root@192.168.1.11
root@192.168.1.11's password:
beaglebone:~# coala -oscserver=8001
parameter passed: OSC server (port 8001)


Coala Wrapper : opening...
software version: 0.9.8.4
Neon optimization off.

Control Loop : starting up
RealTime: initializing PRU_0 (clock services)
RealTime: initializing PRU_1 (converter services)
SignalConverter: initialisation
COALA OSC server initializing on port 8001...
OSC server started at port no. 8001 with root directory as /home/root/src/contro
l_loop/projects/COALA1/
OSCServer: now listening...
incoming OSC message: /coala/get/status
incoming OSC message: /coala/set/outputgain/0.000000
incoming OSC message: /coala/set/modulatedgainfreq/0.000000
incoming OSC message: /coala/set/fadetime/1.000000
fading time set to: 1 sec.
```

Resulting in:

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Software interaction (midi setup)

There is a midi pedal on stage. The signal is merged with a BCF2000 (regie) and doubled to attack both spare and main computer (as usual). The pedal triggers scene launch in a Live master session. Live does every samples play. A midi internal channel ("tomax1") is used to take the control over the max msp patch, from the live session. The Max MSP patch is used to process the sound in realtime and to control the coalas using OSC. The BCF2000 control both the coala's effects, the live session and the max msp patch. There is no order in the firing of this softwares…

Software installation

Nothing special here.
The performance uses (main computer only):

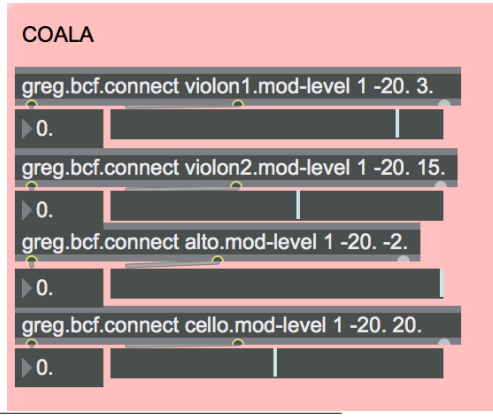
- 4 Terminal
- 1 Ableton live 9.5 64bits.
- 1 Max 7.1 64 bits

Simulation installation

You can use the simulation (pedal and recording of a last rehearsal) BUT! The coalas effect can be felt plainly, only when the instruments are played. Be careful not to work to much with the simulation. The simulation also contains the pedal triggered by the violon2 (with Bela quatuor)

BCF2000 installation

The first fader of the BCF modulates the gain of the coalas. To avoid to produce larsens during the show, it is highly advised to limit the curse of the fader to the best dynamics of the coala effects. To do so, use the vibrato effect and process instrument by instrument. Push the gain until it starts to larsen, mark it (the value) and replace the corresponding value in the sub patcher [bcf-control]. For instance, here is the setting for the premiere. Be careful that all that relies on the previous setting of the pre-amp of the coala that is a bit unreliable. That's why the values (in dB) (3 15 -2 20) are so different



Initialization routine

1: Chirp - Koala
    Trigger chirps using max interface (bang next to chirp)
2: Ouptut - test ecoute
    Put a sound to be played with the live session (last scene)
3: input - check volume and Max
    Instrumentalists play fortissimo one after the other
4: test effet MaxMSP
    Try the delay FX to test the pipes
5: test effet coala tremolo
    Try the max events 2 and 3 with vibrato effect and turn gently the gain of the coala on (fader 1 on the BCF2000)
6: Tune in instruments
    Play the last scene (accord) to allow the instrumentalists to tune up onto the recorded tuning

Performance notes

You can adjust the global volume on the citation (Measure 317). They should sound as if they were played. So you can ask the instrumentalists to play it and play it afterwards (or meanwhile) to adjust the global volume of the electronic.

The Scene are indexed by the measure. There is no off-beat pedal, every pedals are on the first beat.

The piece is all in nuance and the electronic effect should remain behind the instrumental play.

You can easily modulate the effects with the BCF2000 to make them more dynamic.

Follow the score.
In rehearsal, you can start back from every measure. Just trigger manually what you left behind.

Enjoy ;-)

Master
Init
Init
Init
1
153
197
237
242
246
250
252
281
285
289
291
295
307
309
311
313
317
321
326
330
334
336
352
361
366
391
416
Fin
Fin
Fin
Fin
accord

For any questions: beller@ircam.fr

a François Bernard Mâche

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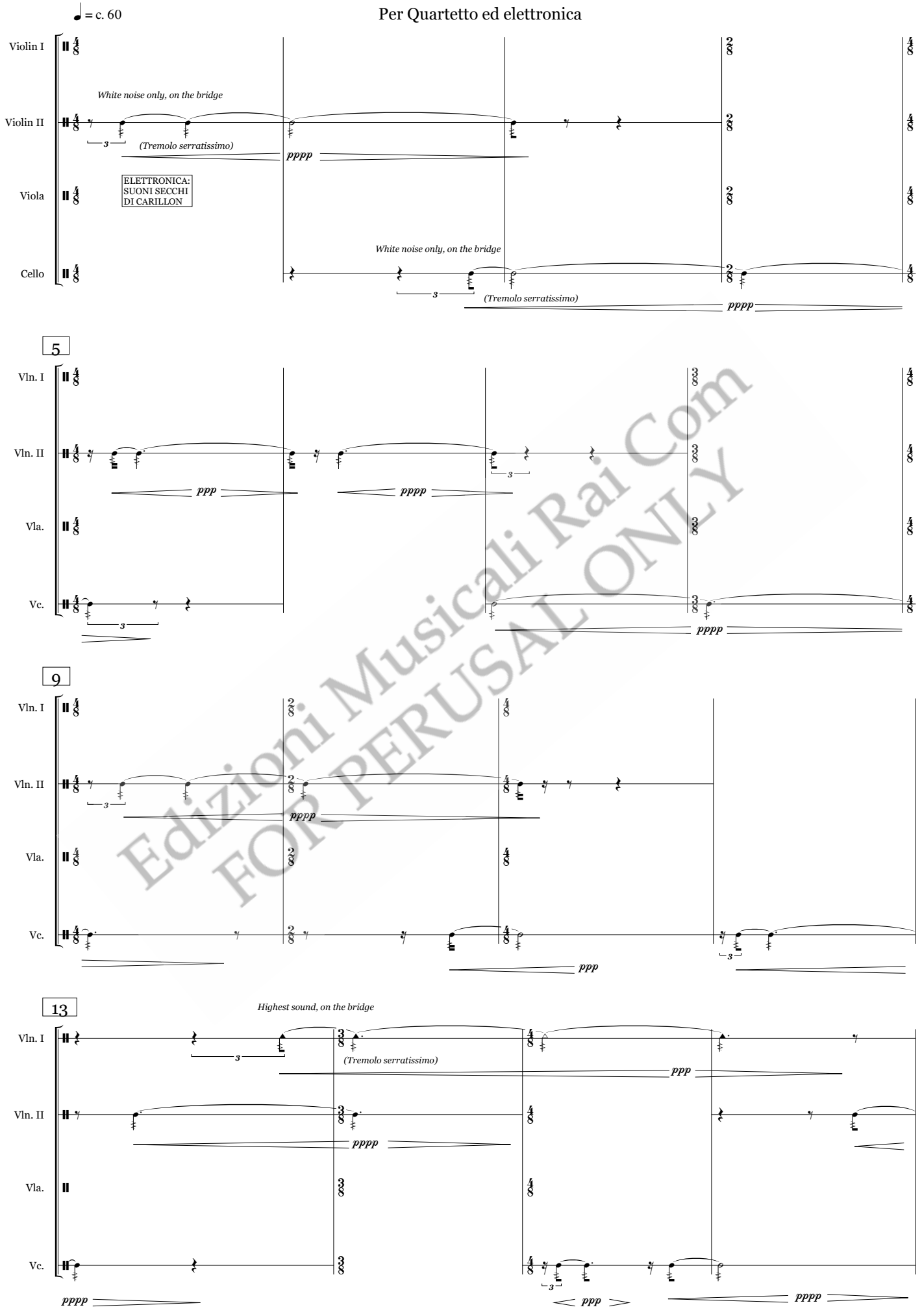

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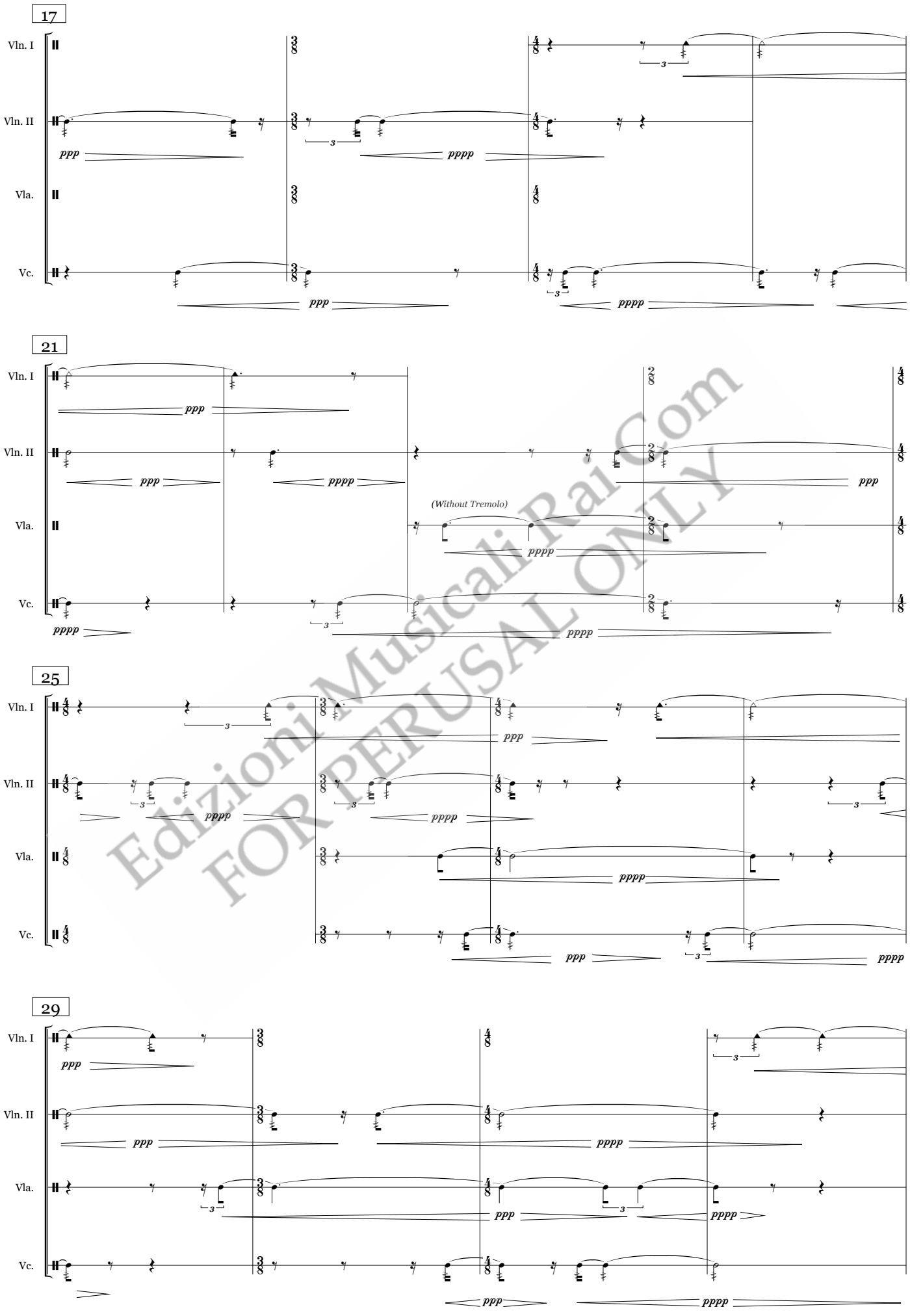

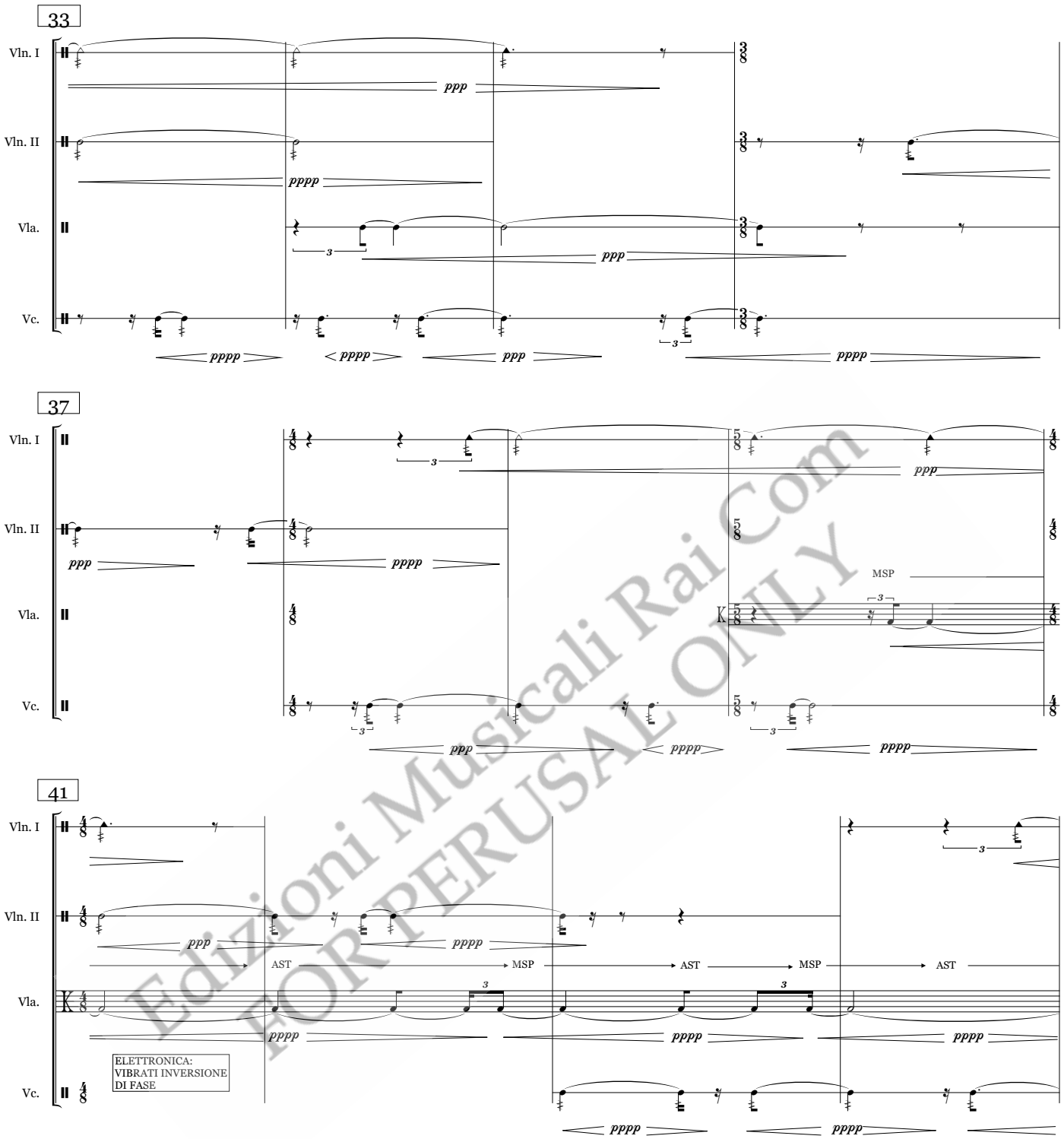

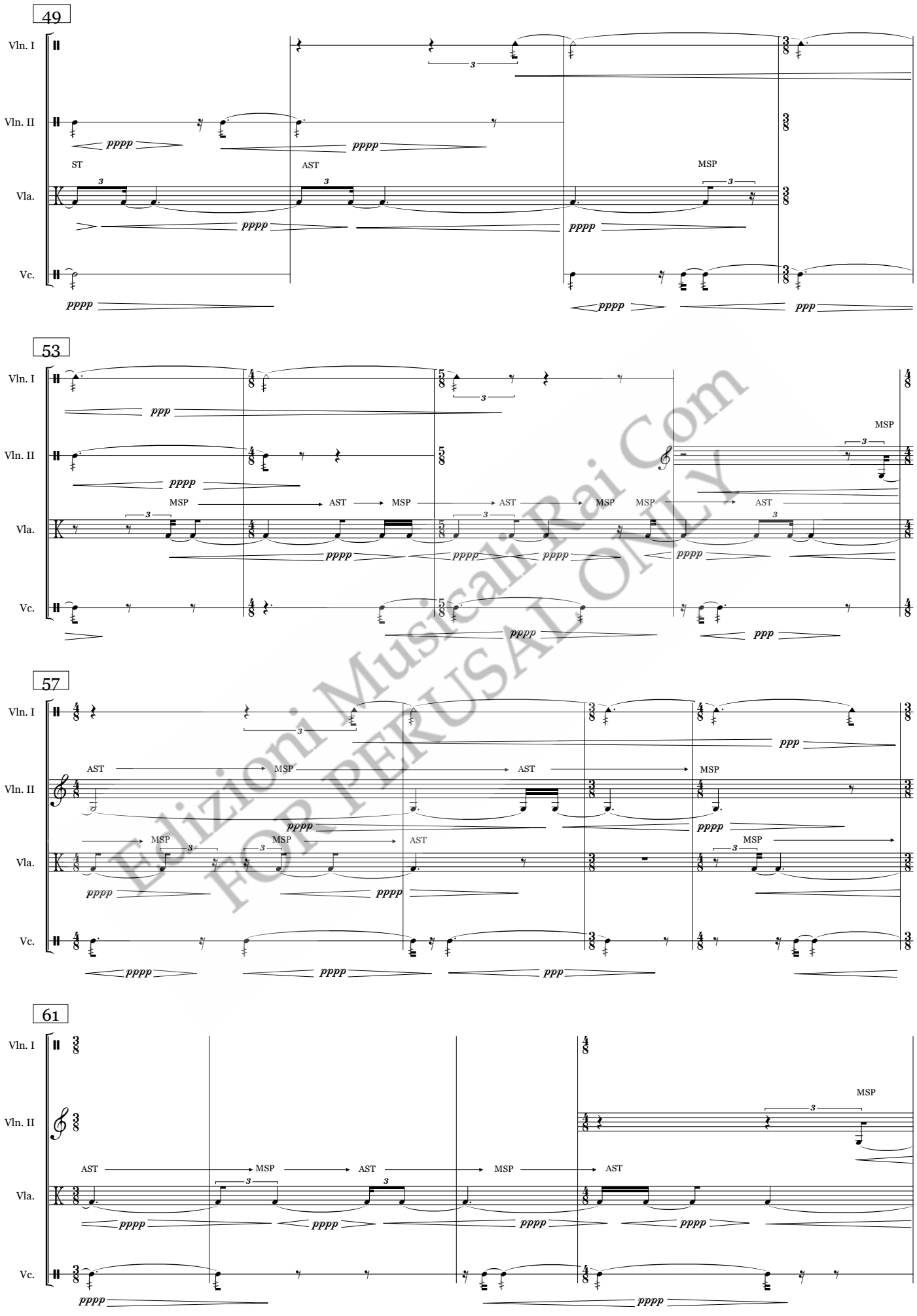

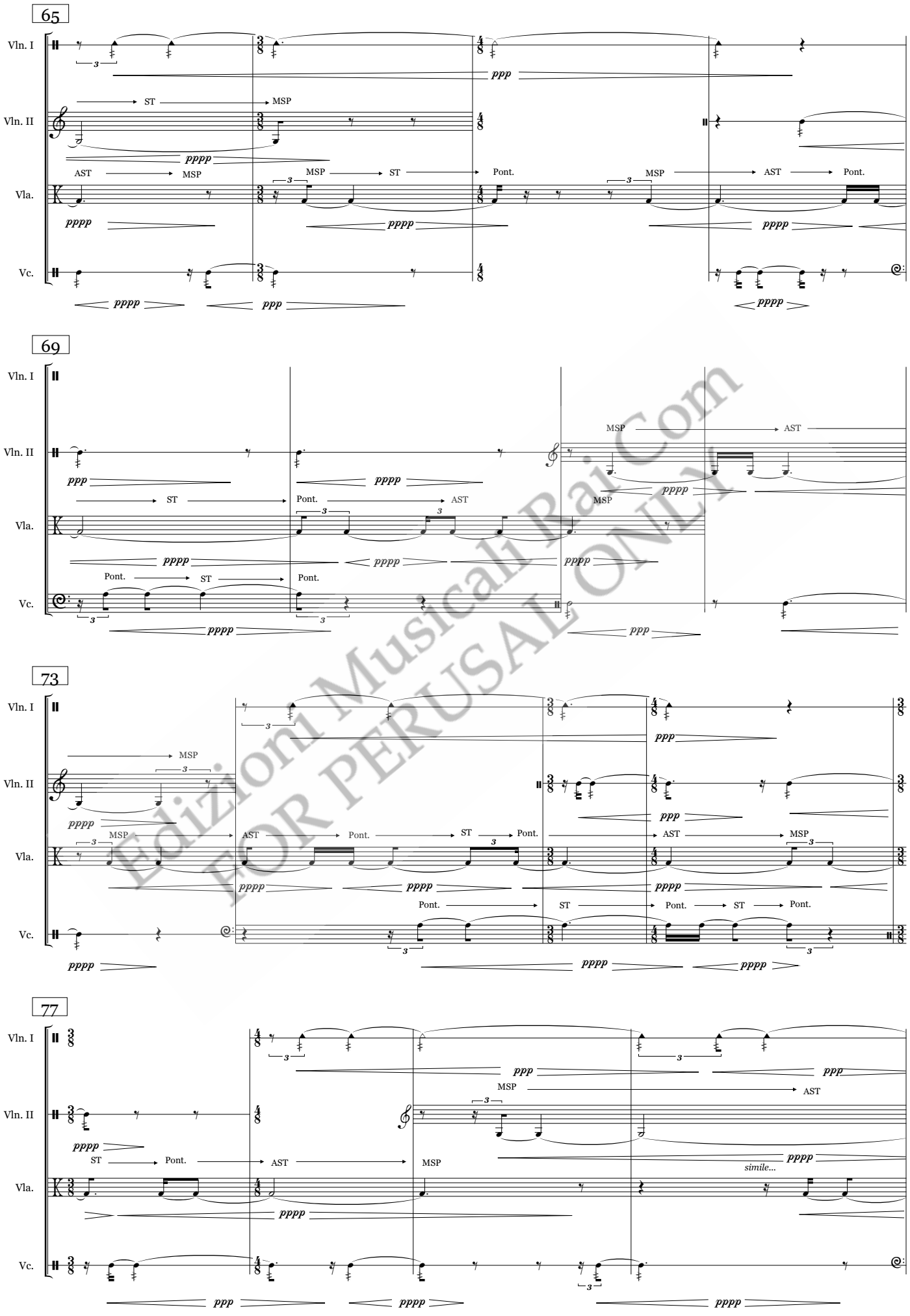

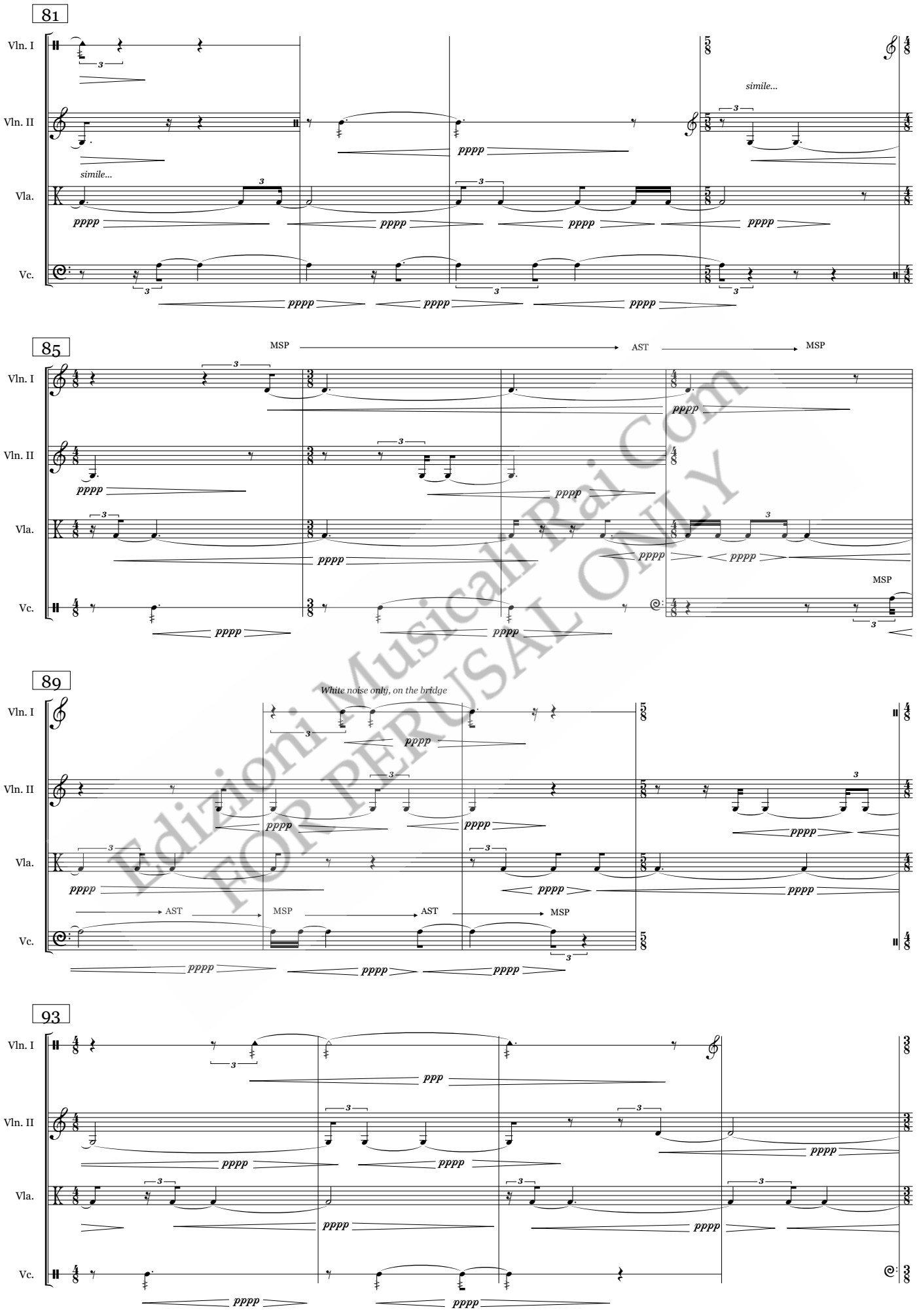

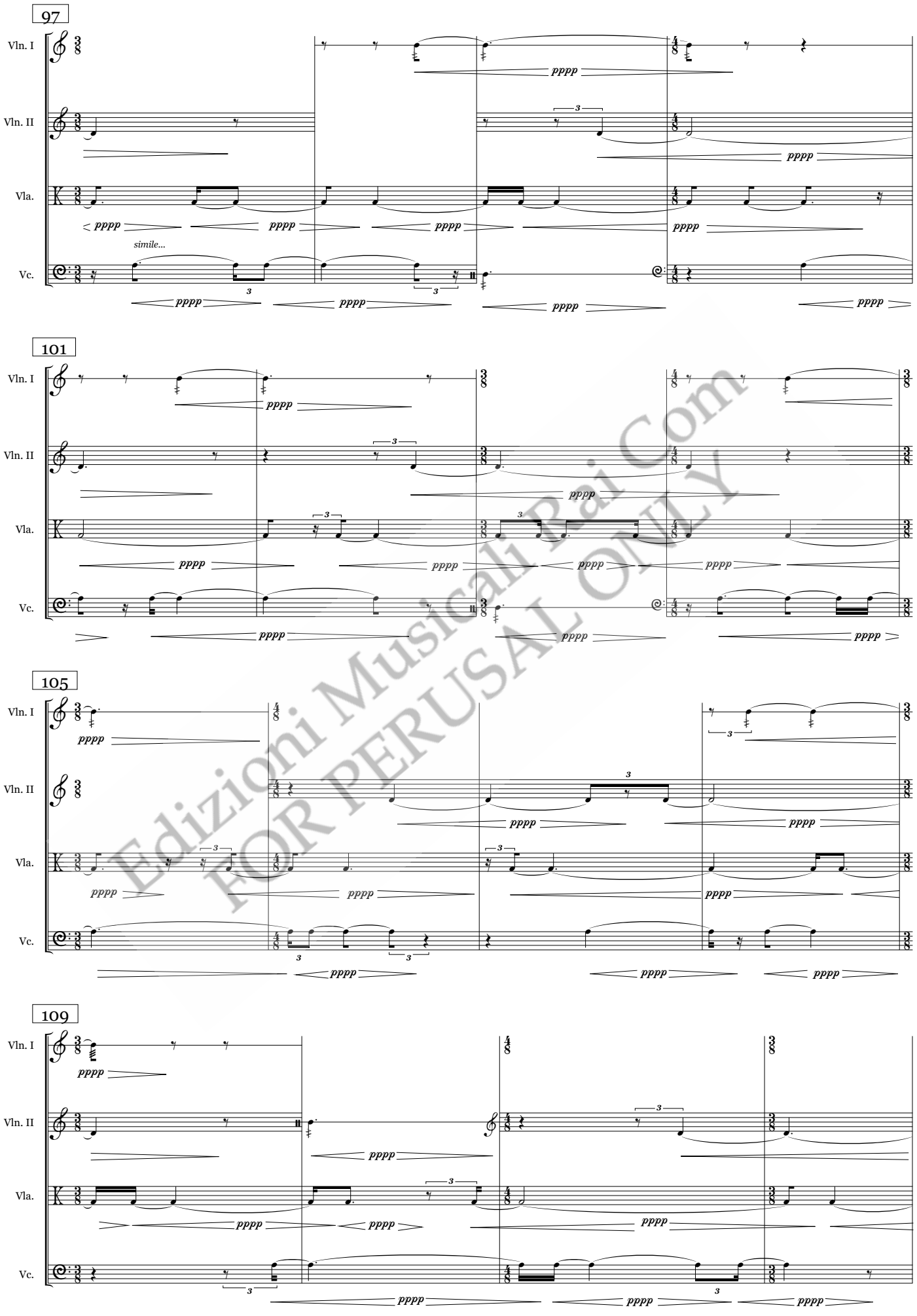

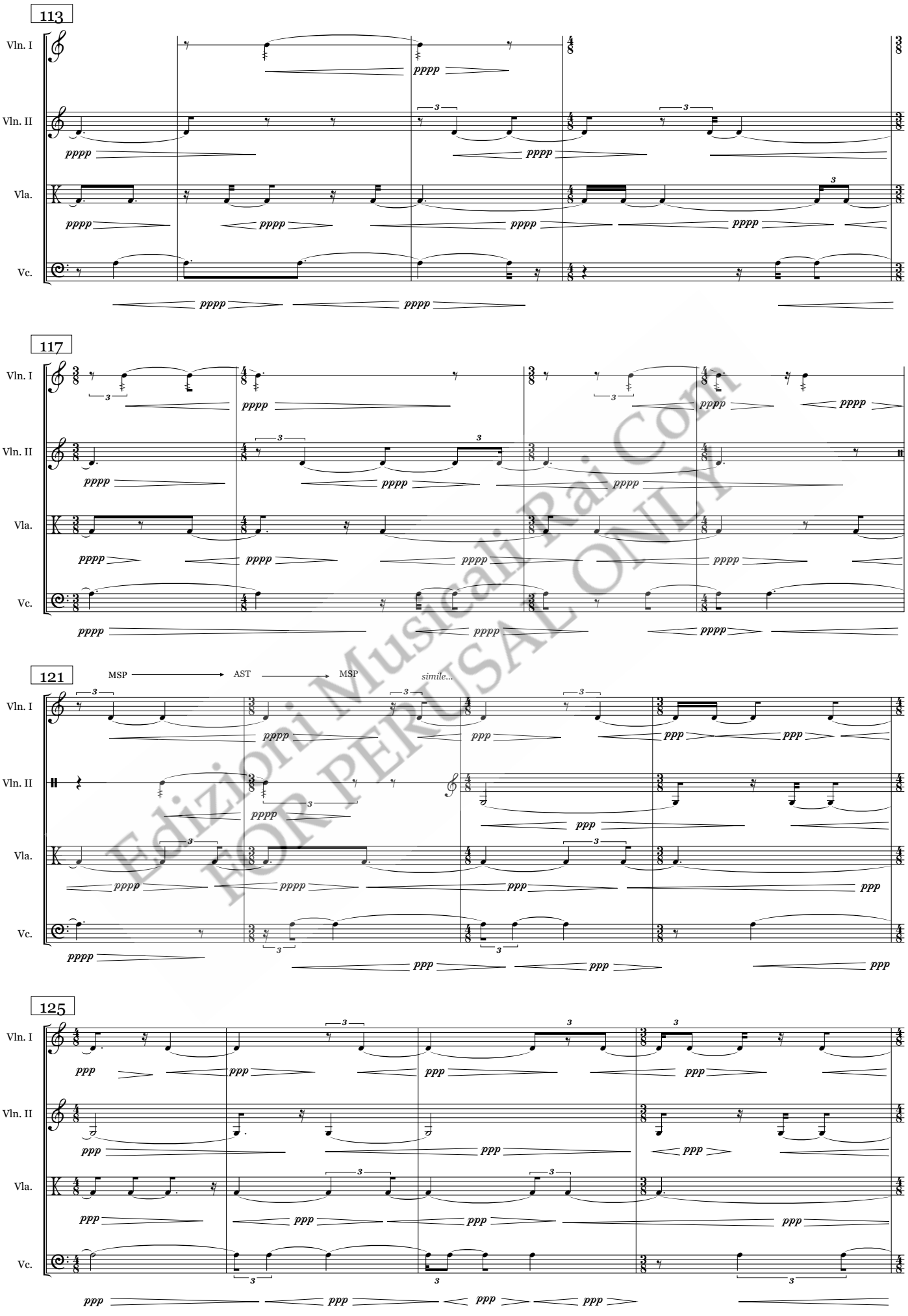

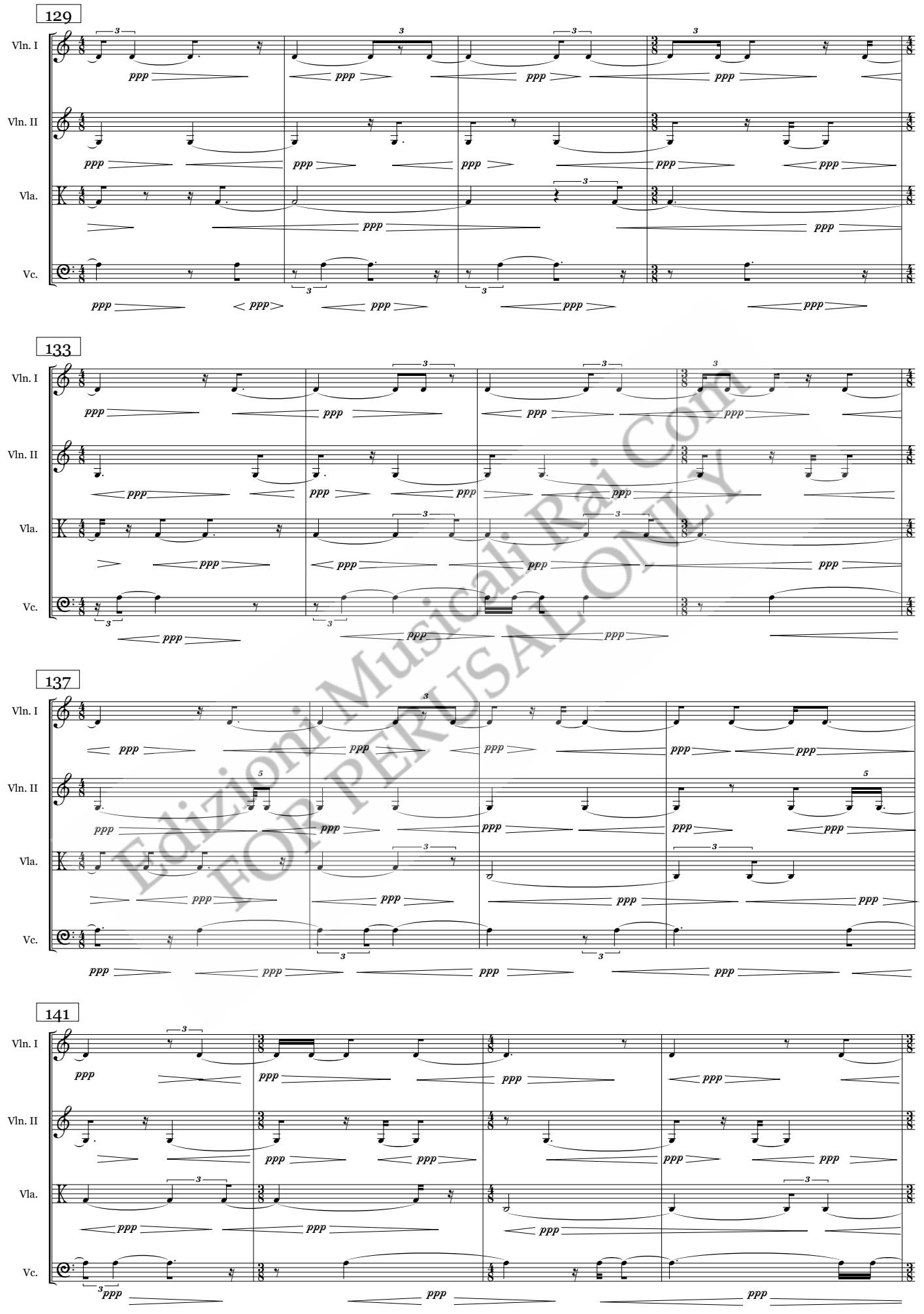

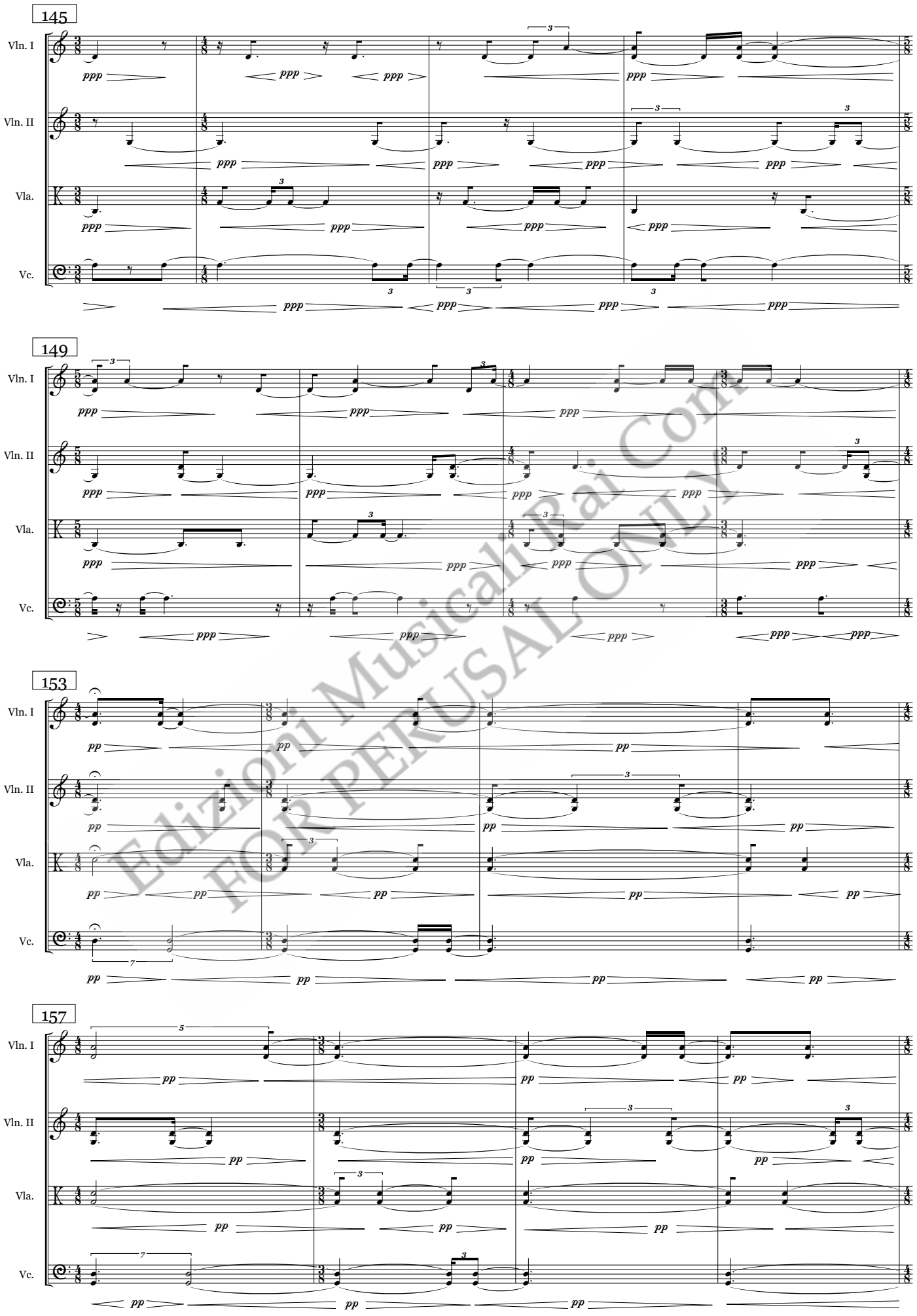

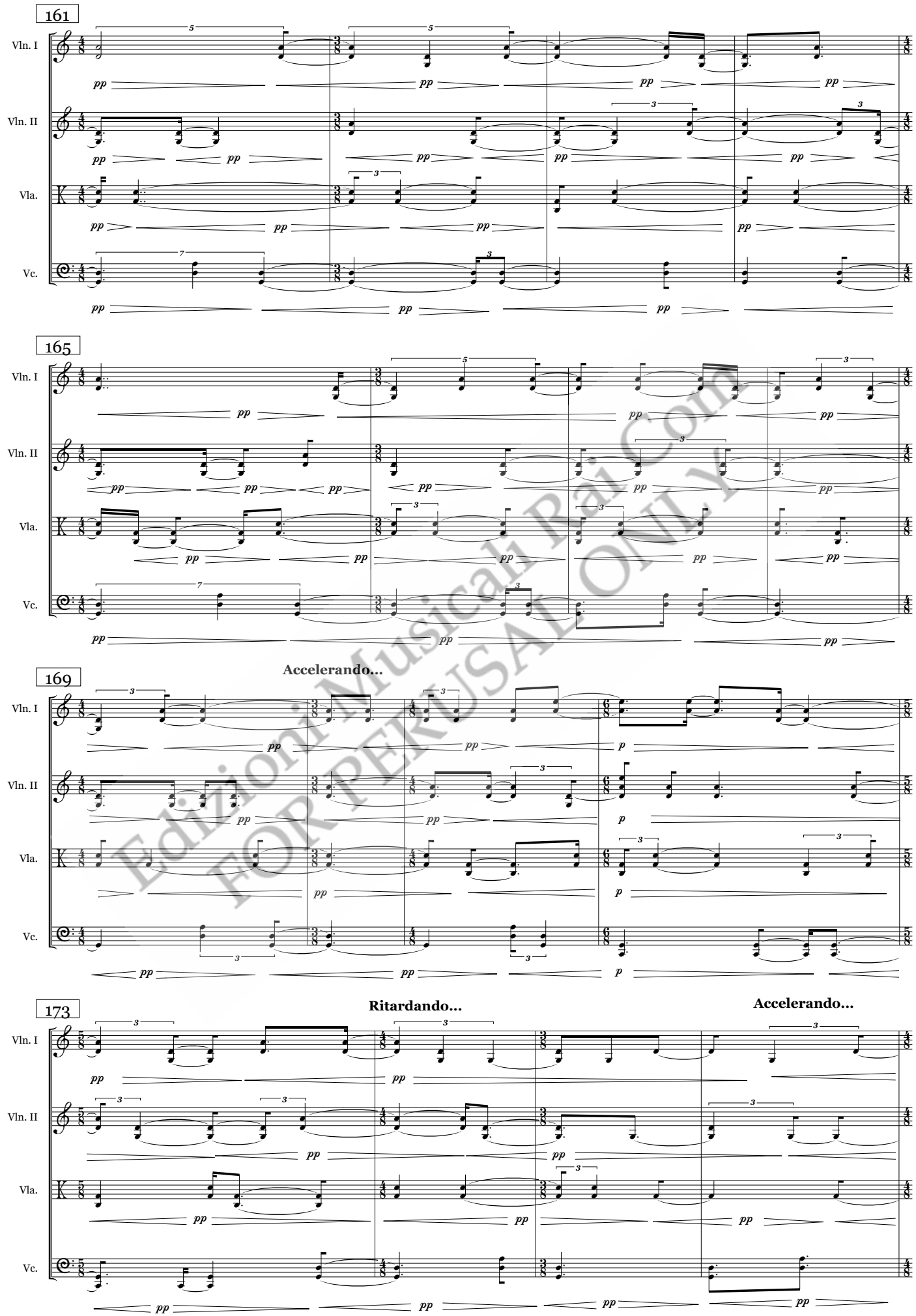

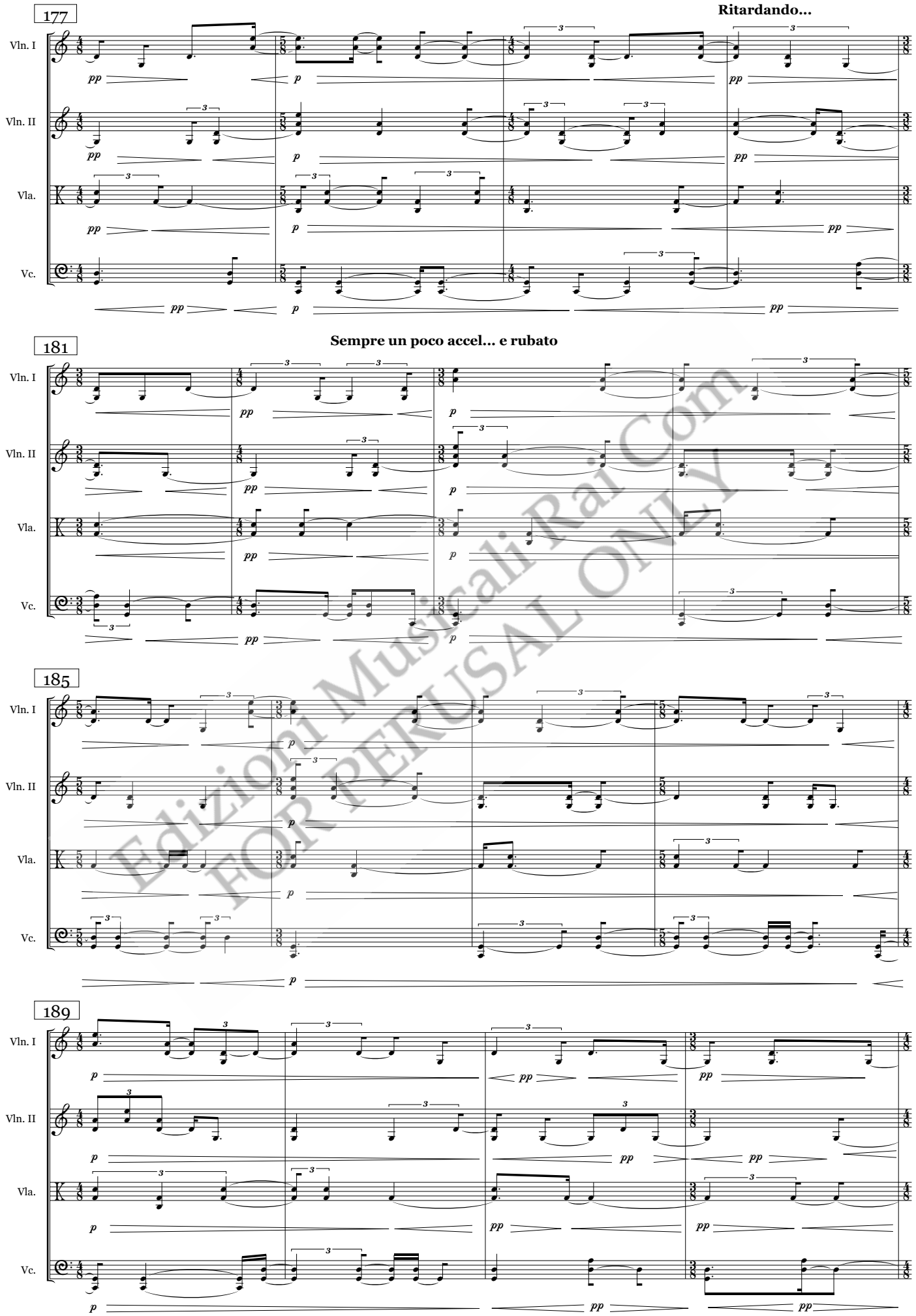

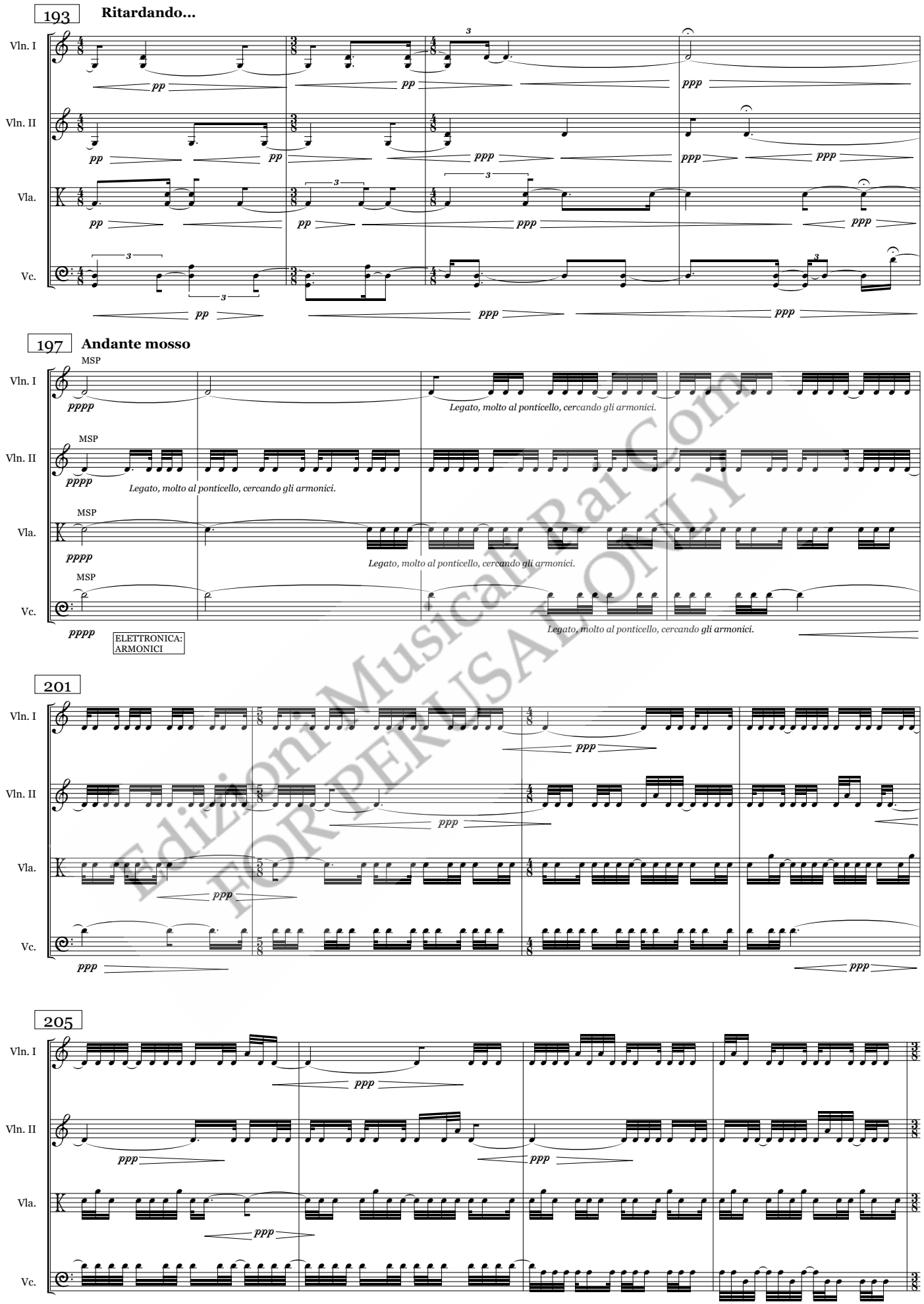

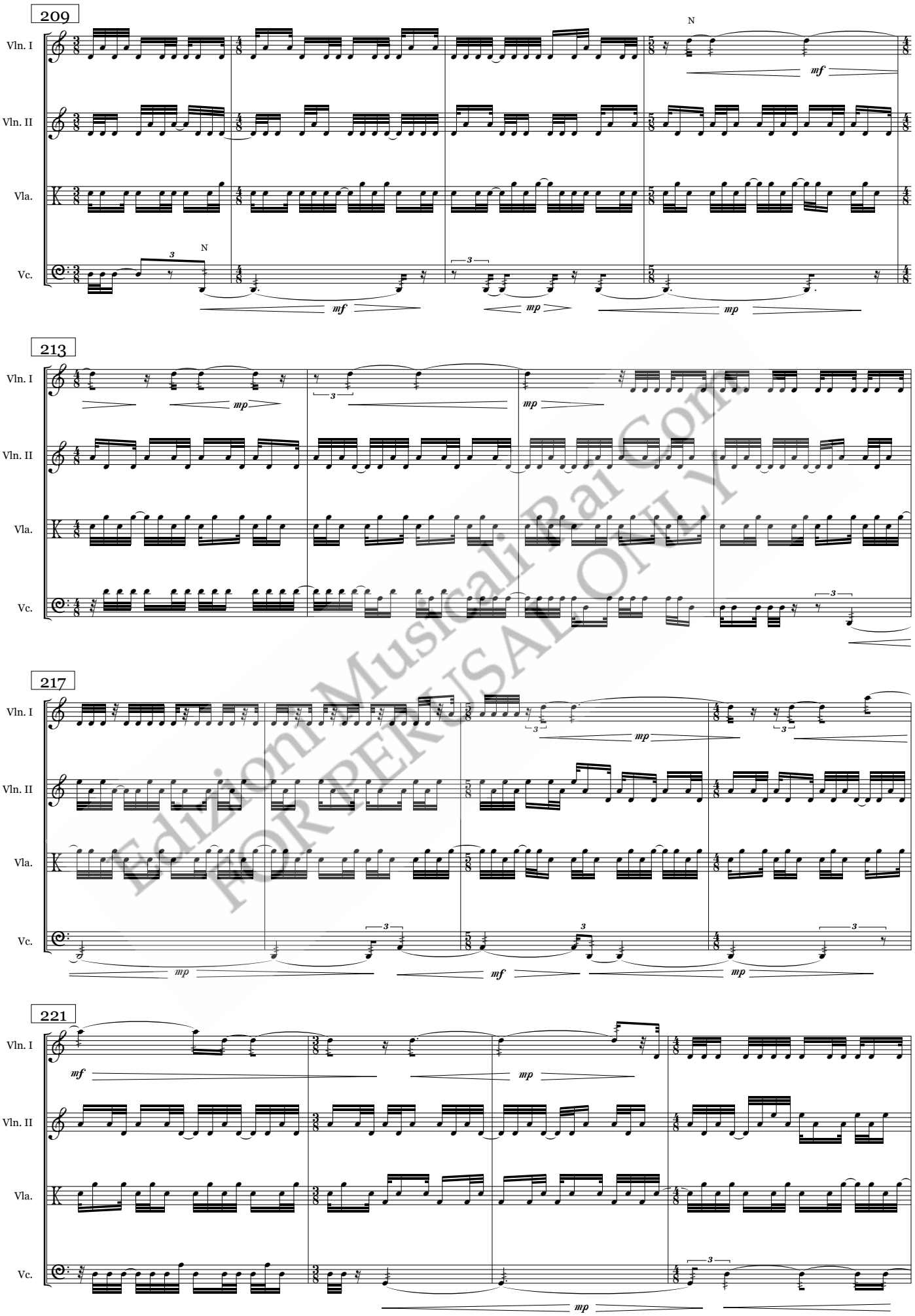

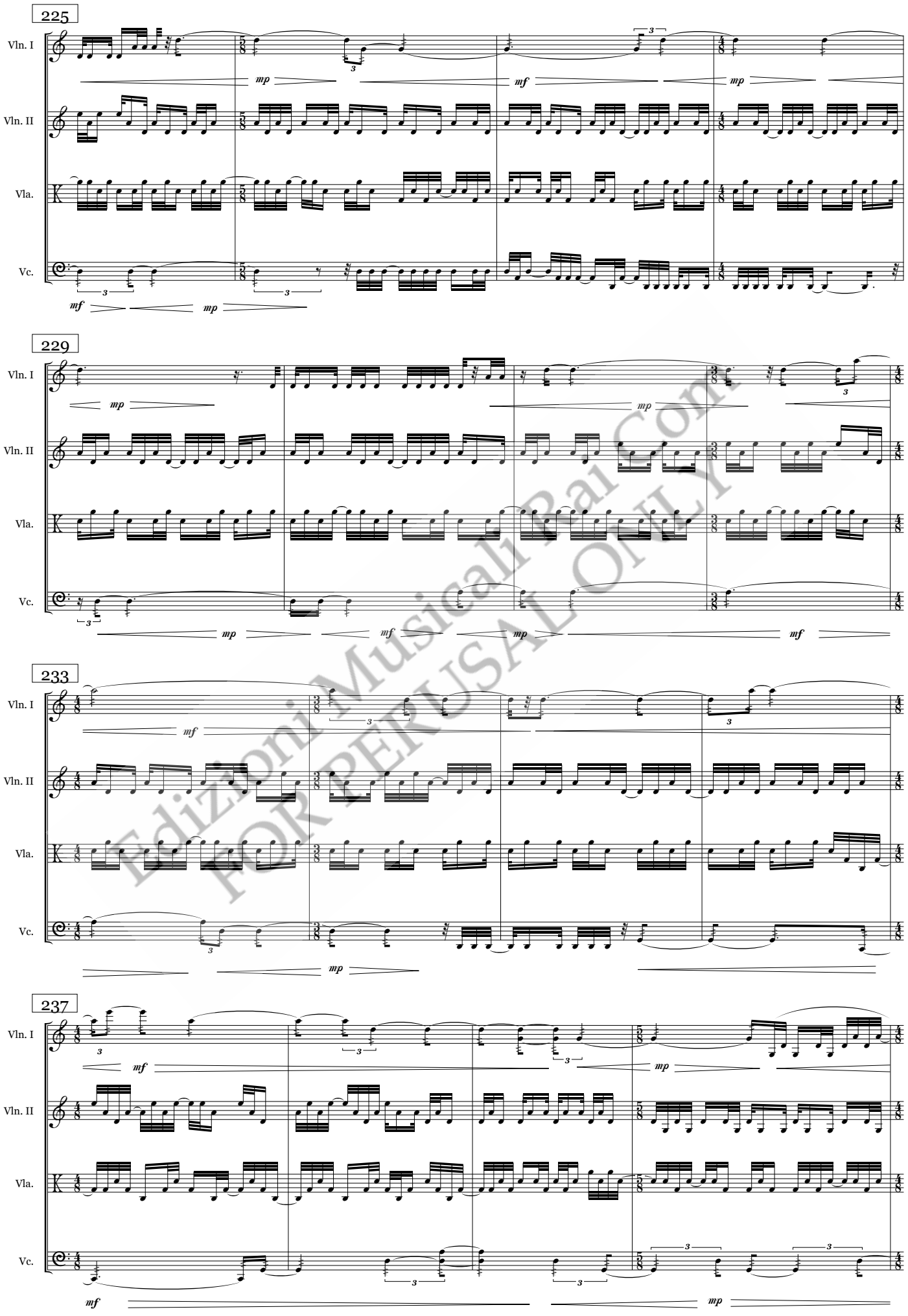

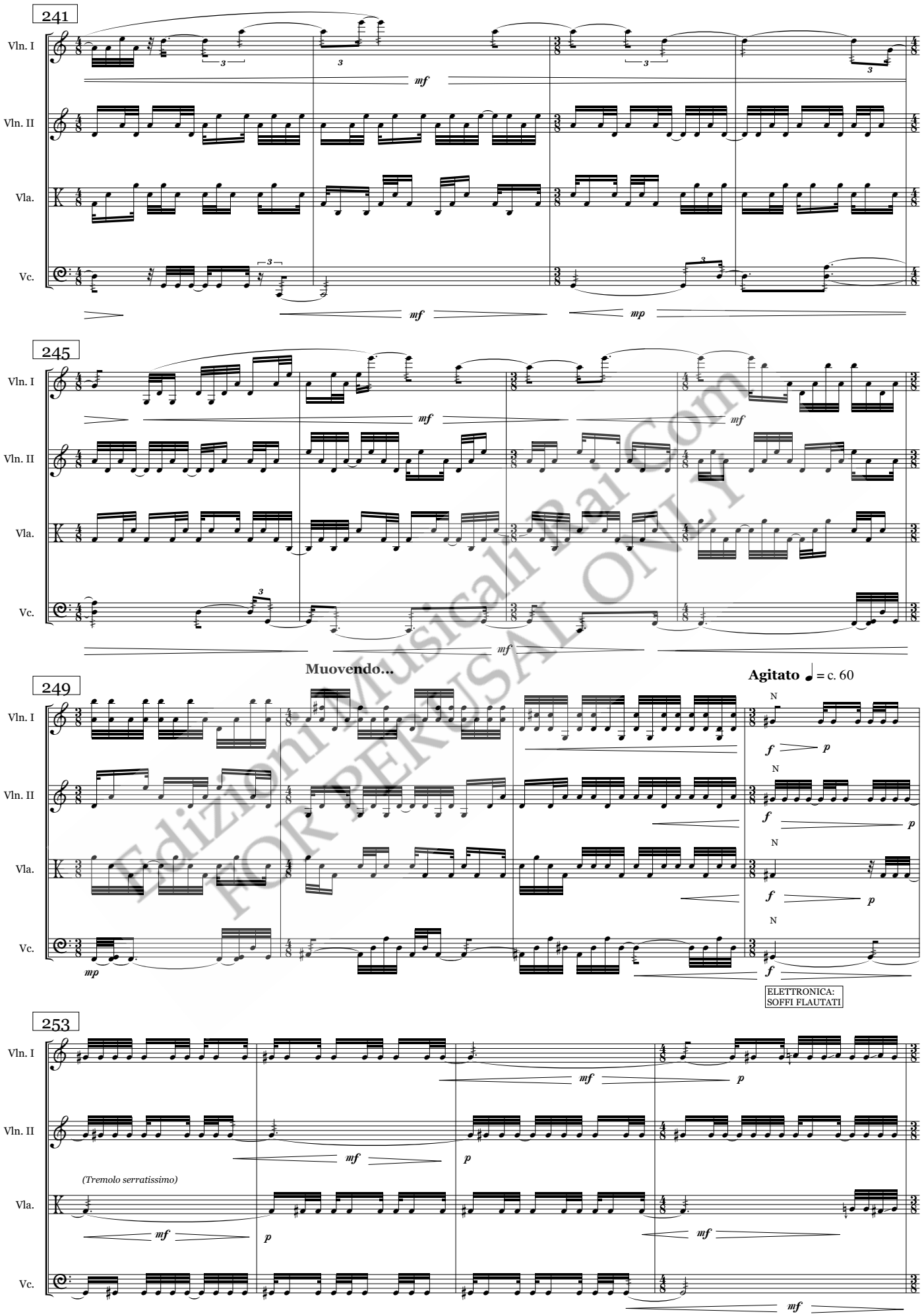

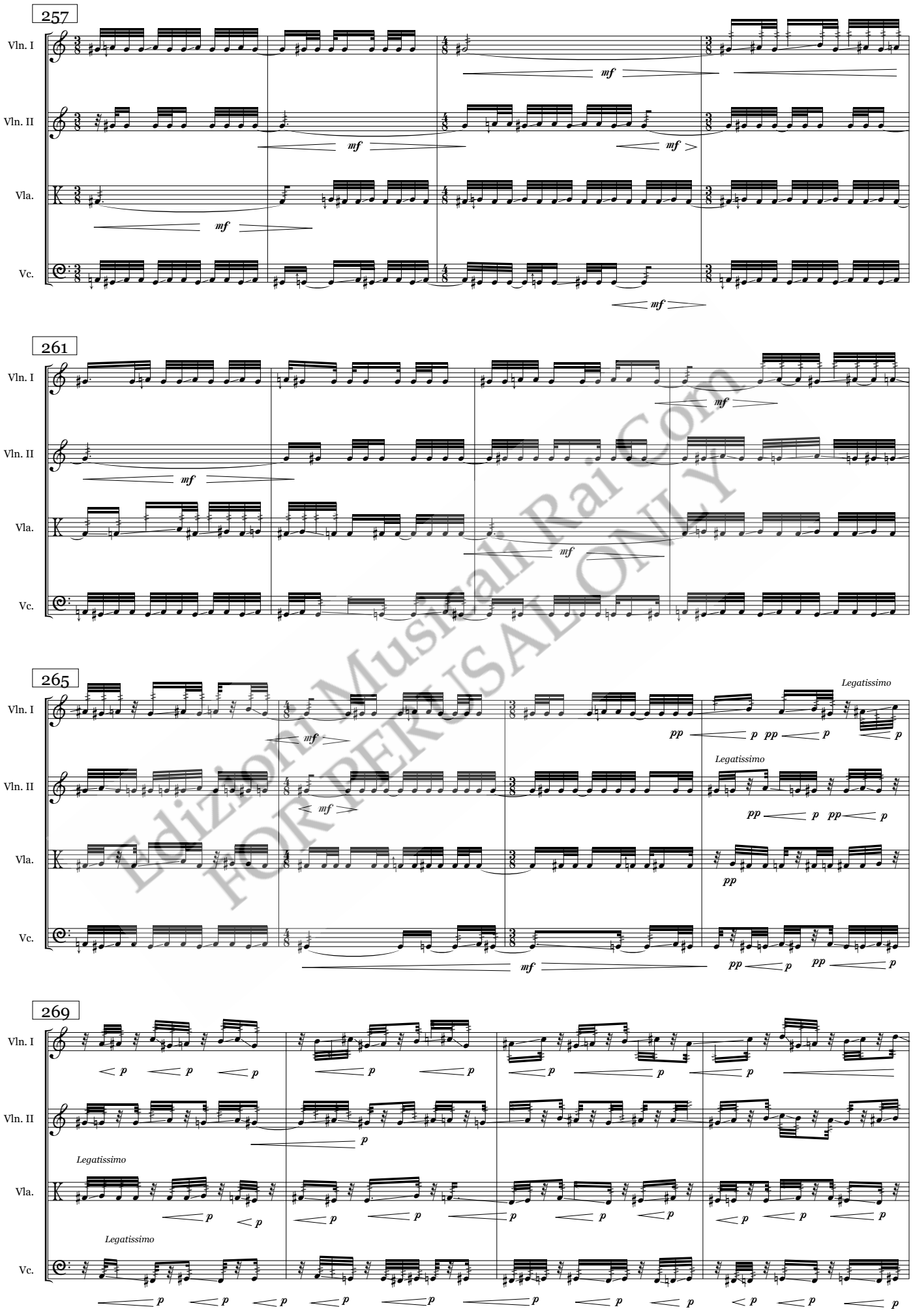

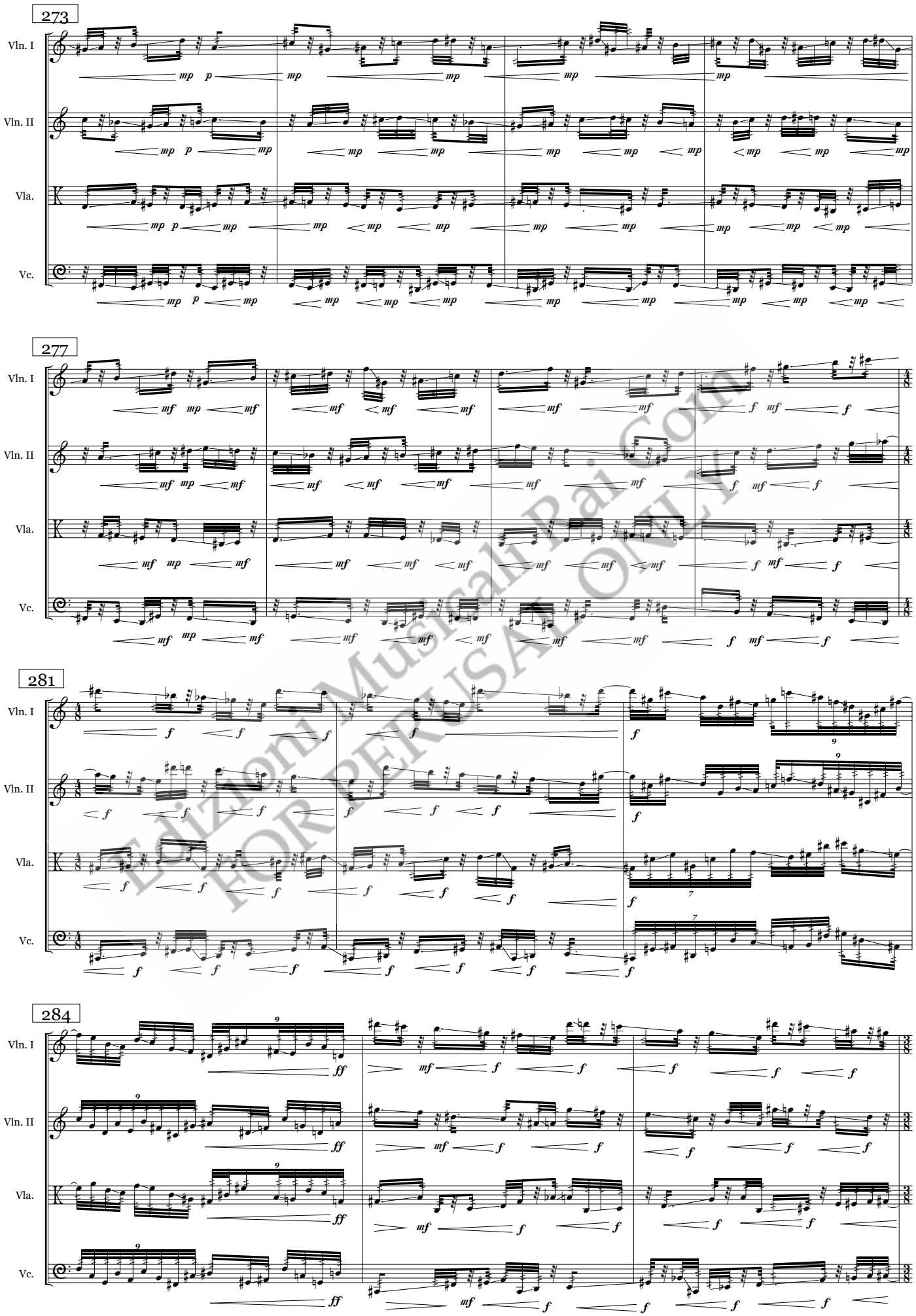

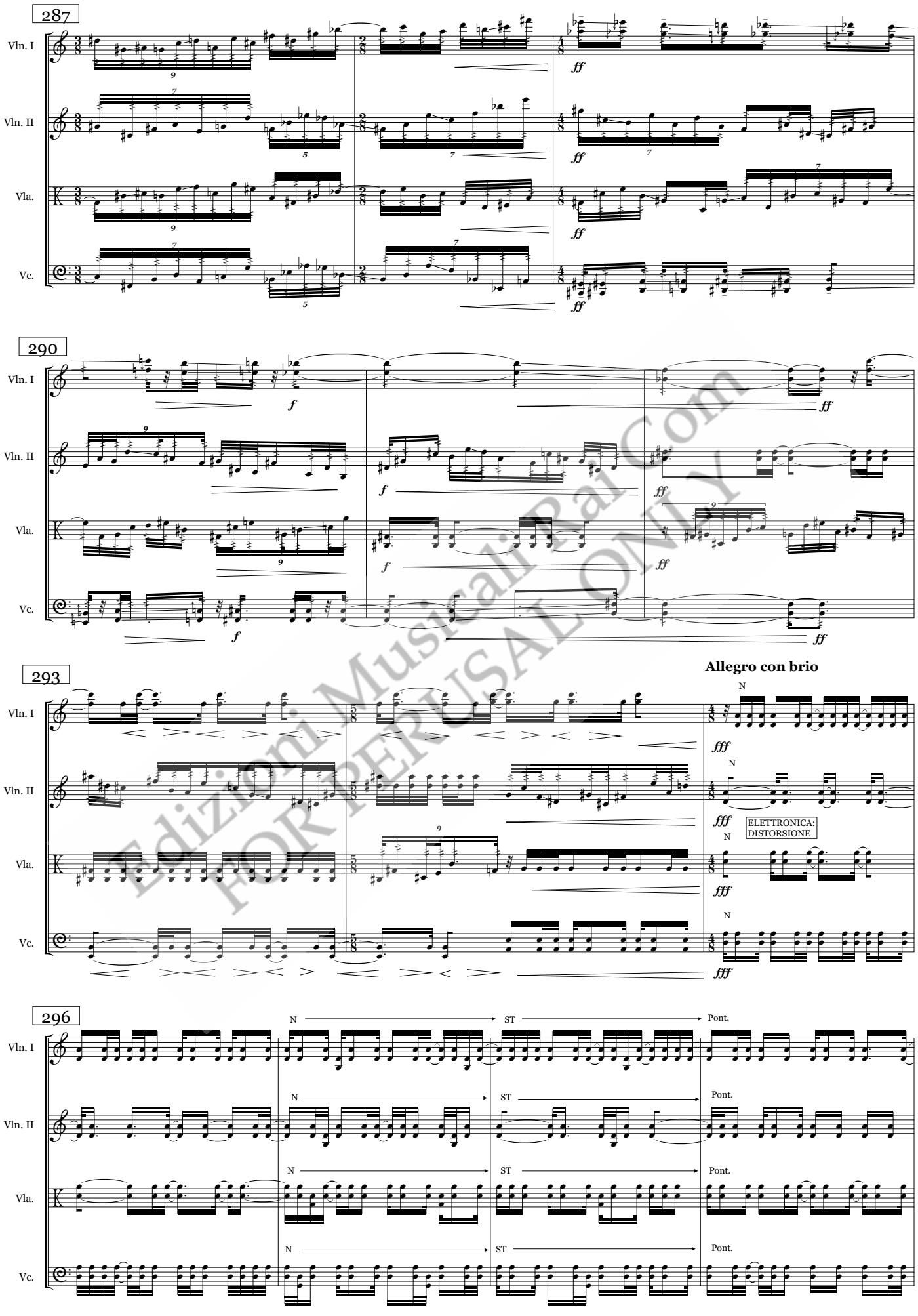

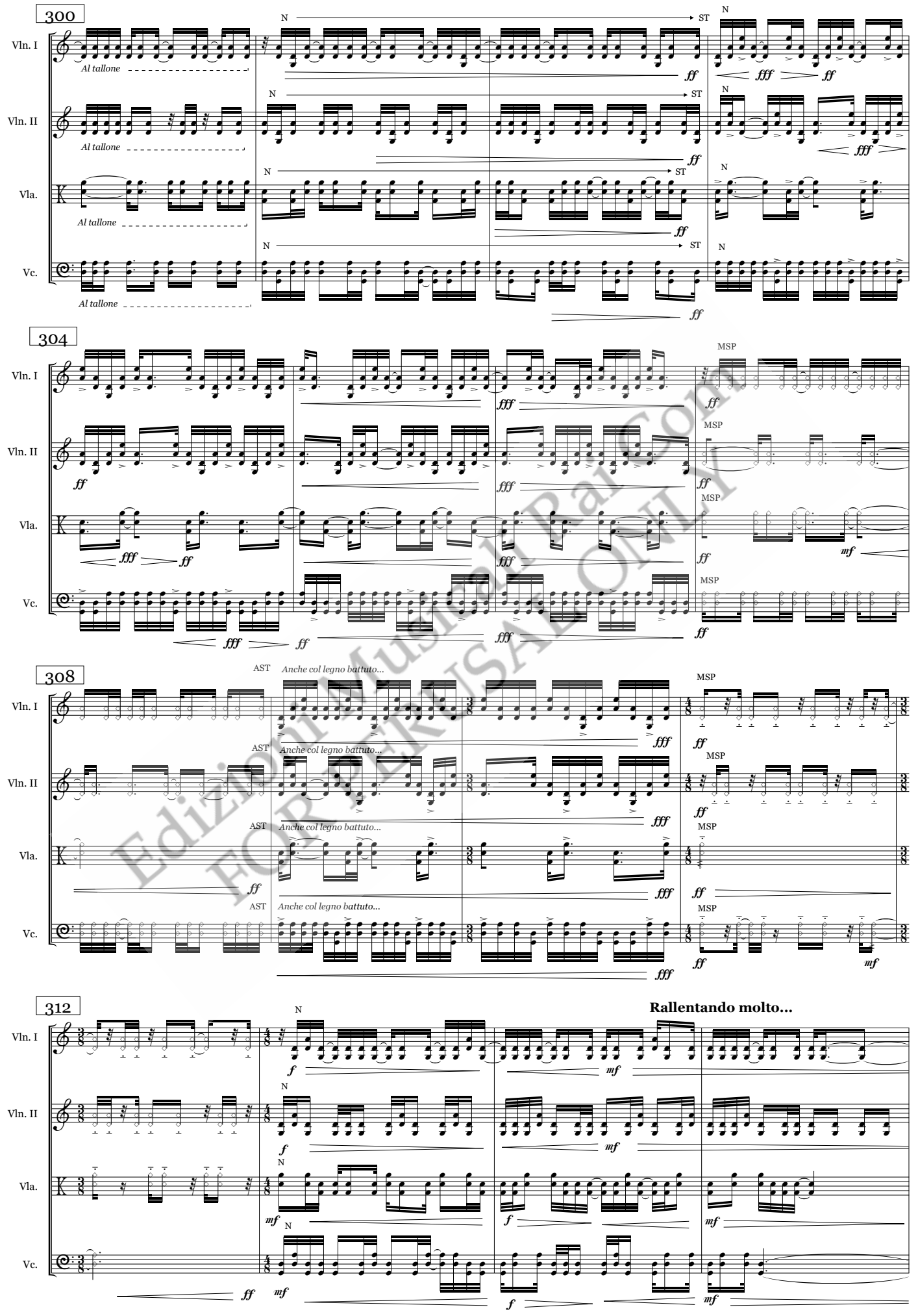

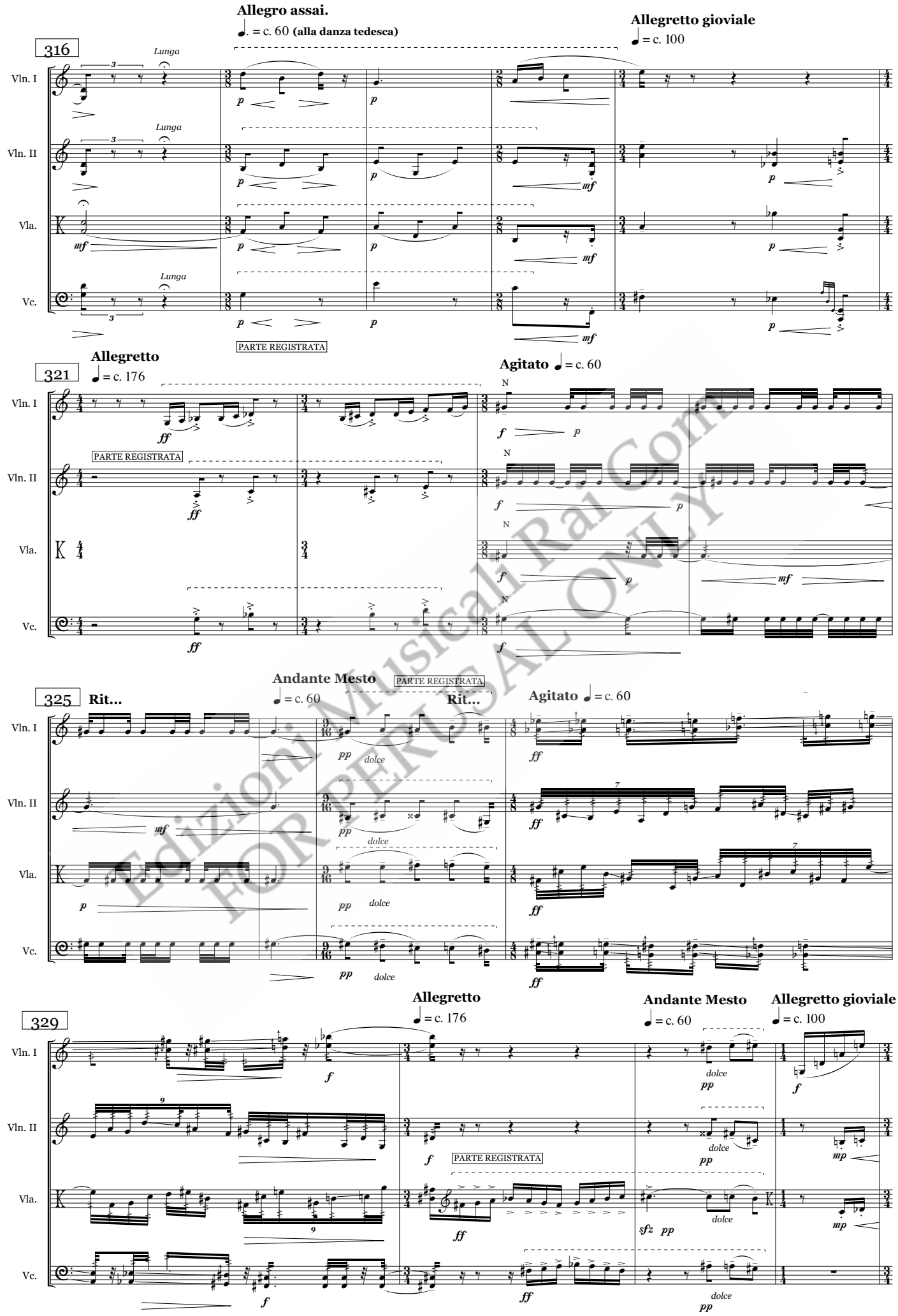

Allegro assai.

♩. = c. 60 **(alla danza tedesca)**

PARTE REGISTRATA

Allegro con brio