Peter McKenzie Armstrong

Thin Rake

c/o 'The Game of Life'

for piano 4 hands

Opus 22

Edition Ottaviano Petrucci

NOTES

Net–surfing recently for image output from John Horton Conway's Game of Life, I encountered "Thin Rake", a 832x132–unit pattern created (by designing and specifying the game's initial input) by Dean Hickerson and Paul Callahan. *

The figure struck me immediately as an apt candidate for musical mapping, for several reasons. First, its height (112 units without margins) exceeded not too wildly the range of an Imperial model Bosendorfer. Second, its width (>6 times the height) suggested a sensibly proportional overall duration. Thirdly and mainly, its structure – as though [Intro, A, B, A', Coda] – vividly incarnated a universal musical form.

There soon emerged a fourth reason, though relating mostly to my personal taste. I saw that a 3x3–unit figure (termed "glider" in Game of Life speak) was recurring – not only in inversion or retrogression at 180 degrees, but as well – in rotation at 90 deg! (Compare, e.g., the right–hand figures in bar #38.) I recalled a Darmstadt paper explicating this transform, but had missed or overlooked it in subsequent compositional practice.

Mapping figure details to the chromatic was straightforward with two exceptions. As vertical units exceeded normal piano range by an octave at each end, I had either to elide, or to transpose inward by that octave, the figure's outermost excursions. The latter proved feasible with minimal collision, yielding a range of just(!) 88 keys. Details of pitch spelling required a compromise between clarifying pattern and minimizing near–cluster smudge.

Staff choices for the assignment of material have hinged entirely on considerations of range. Where either pianist's part turns out relatively much overloaded, she/he may invite the other to come to rescue.

The final chord, a "Whack!" I couldn't resist, is not a part of the source material and may in performance be omitted.

– PMA

Duration: ca 100 sec.

* See at <www.radicaleye.com/lifepage/patterns/cat14.html> or at Alan Hensel's <www.ibiblio.org/lifepatterns>.

to J. H. Conway

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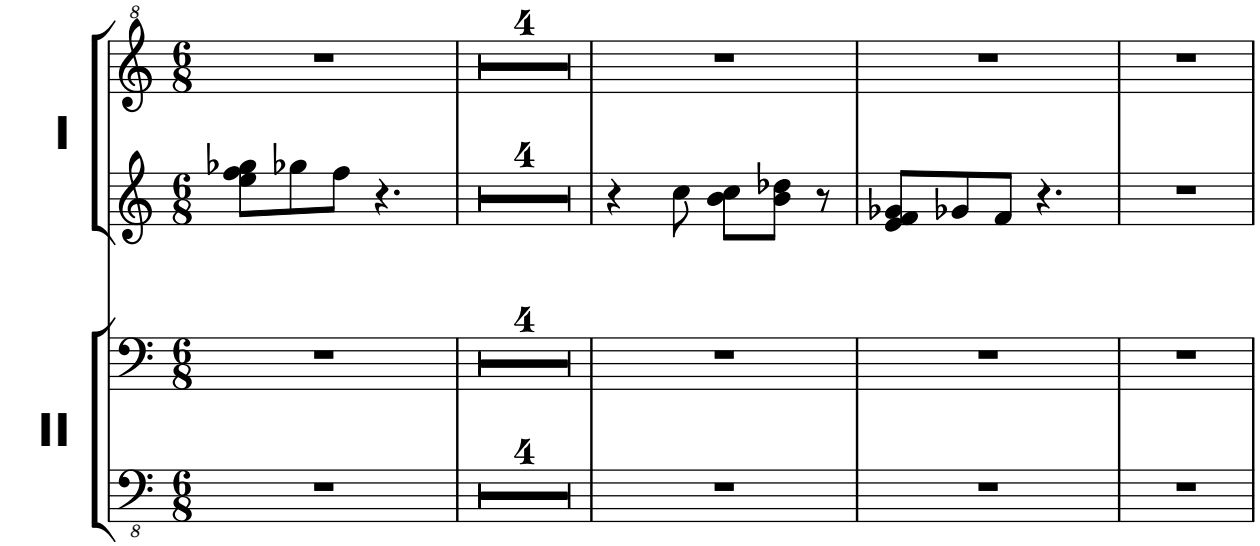
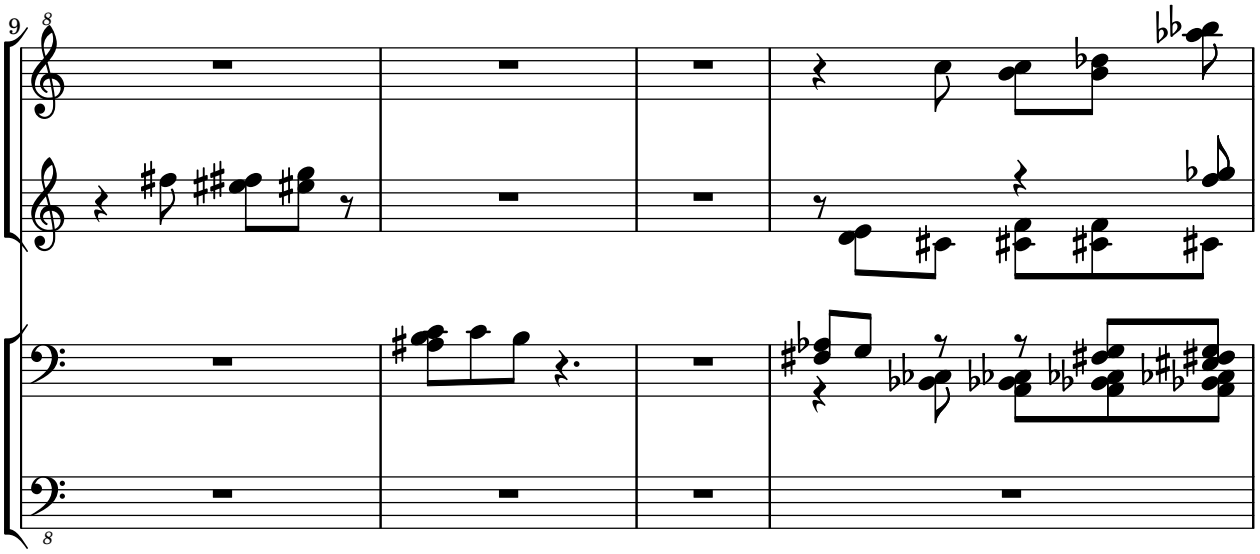
Tempo ♩. = 176

Opus 22





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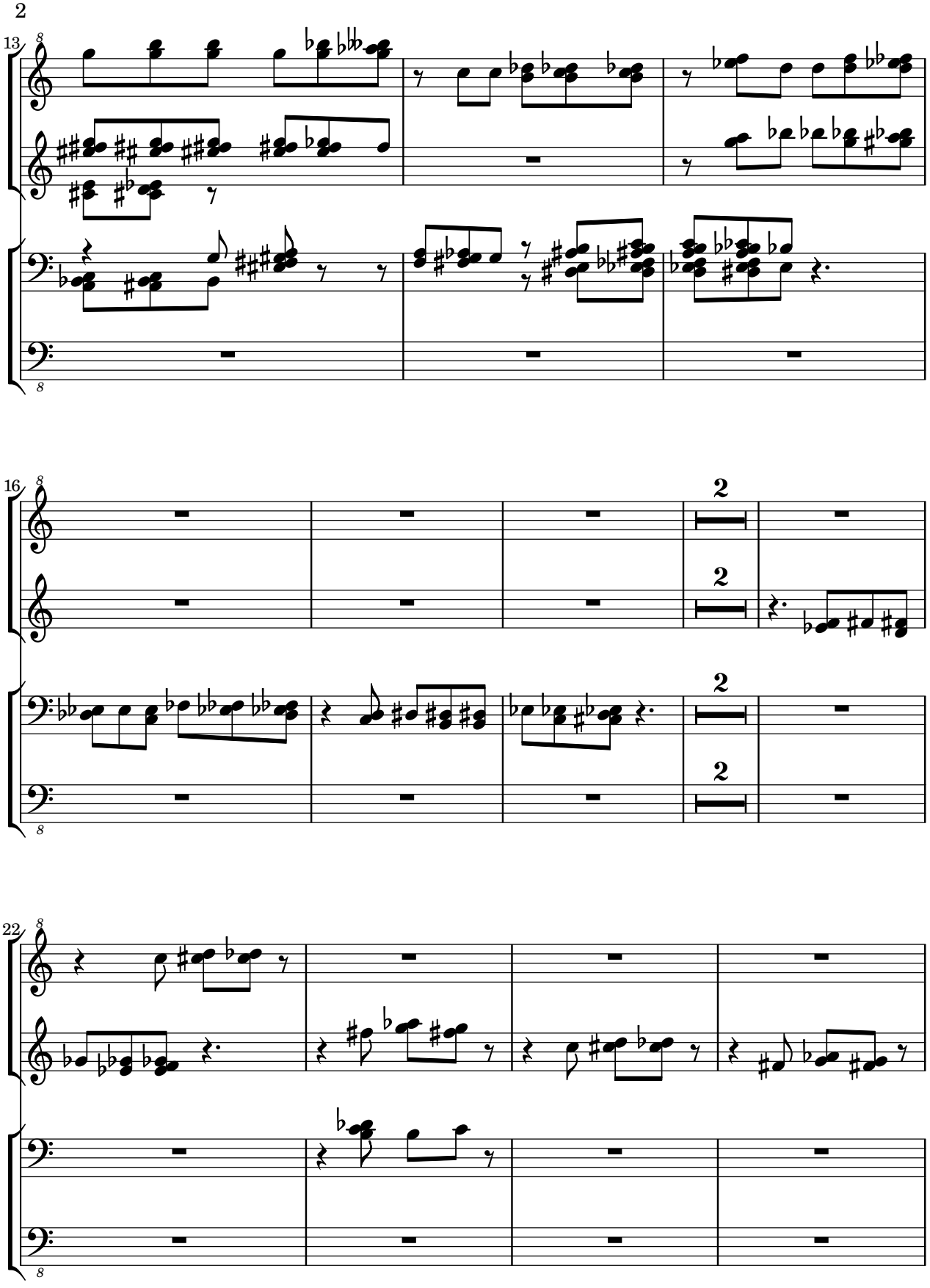
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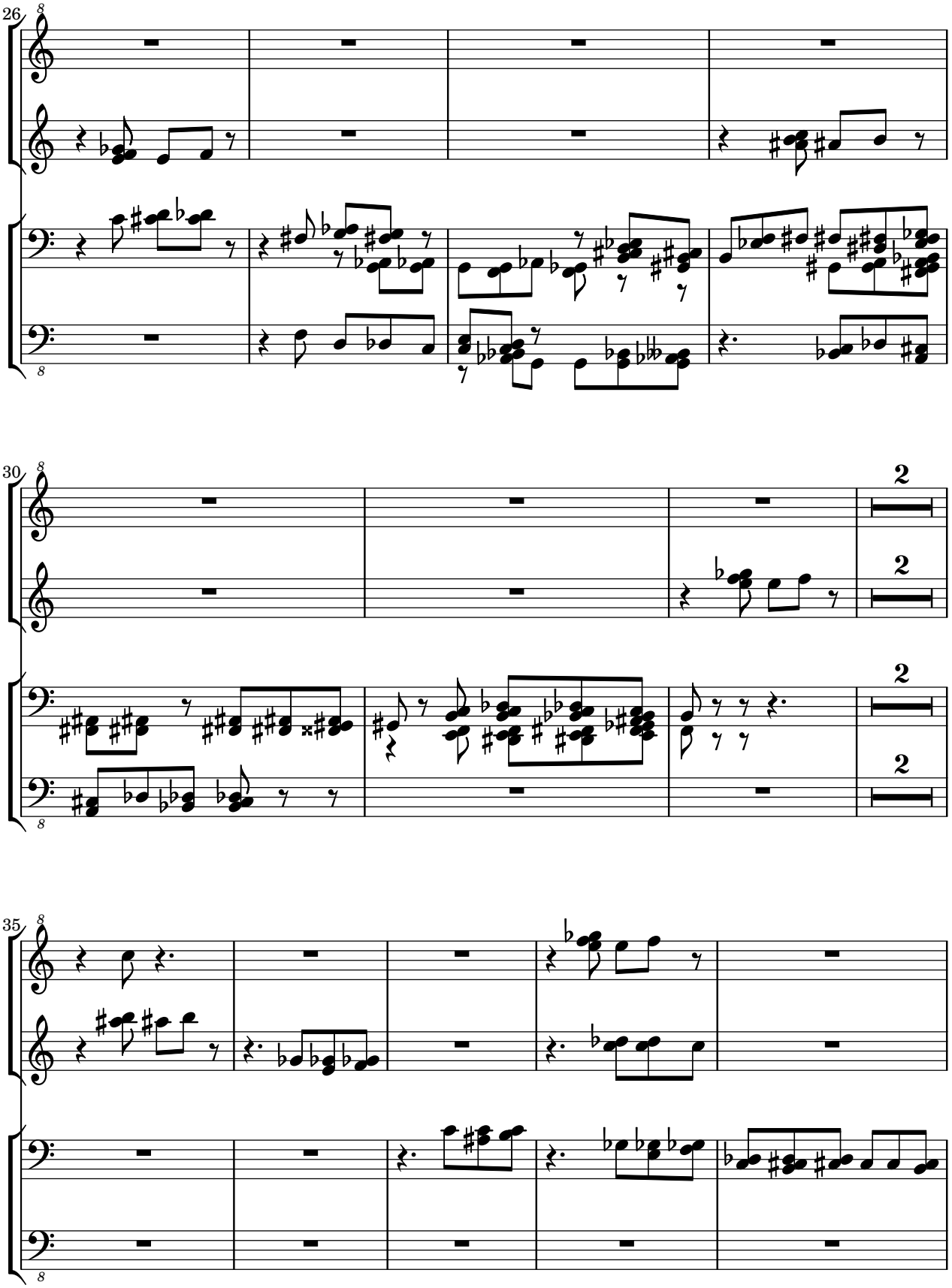
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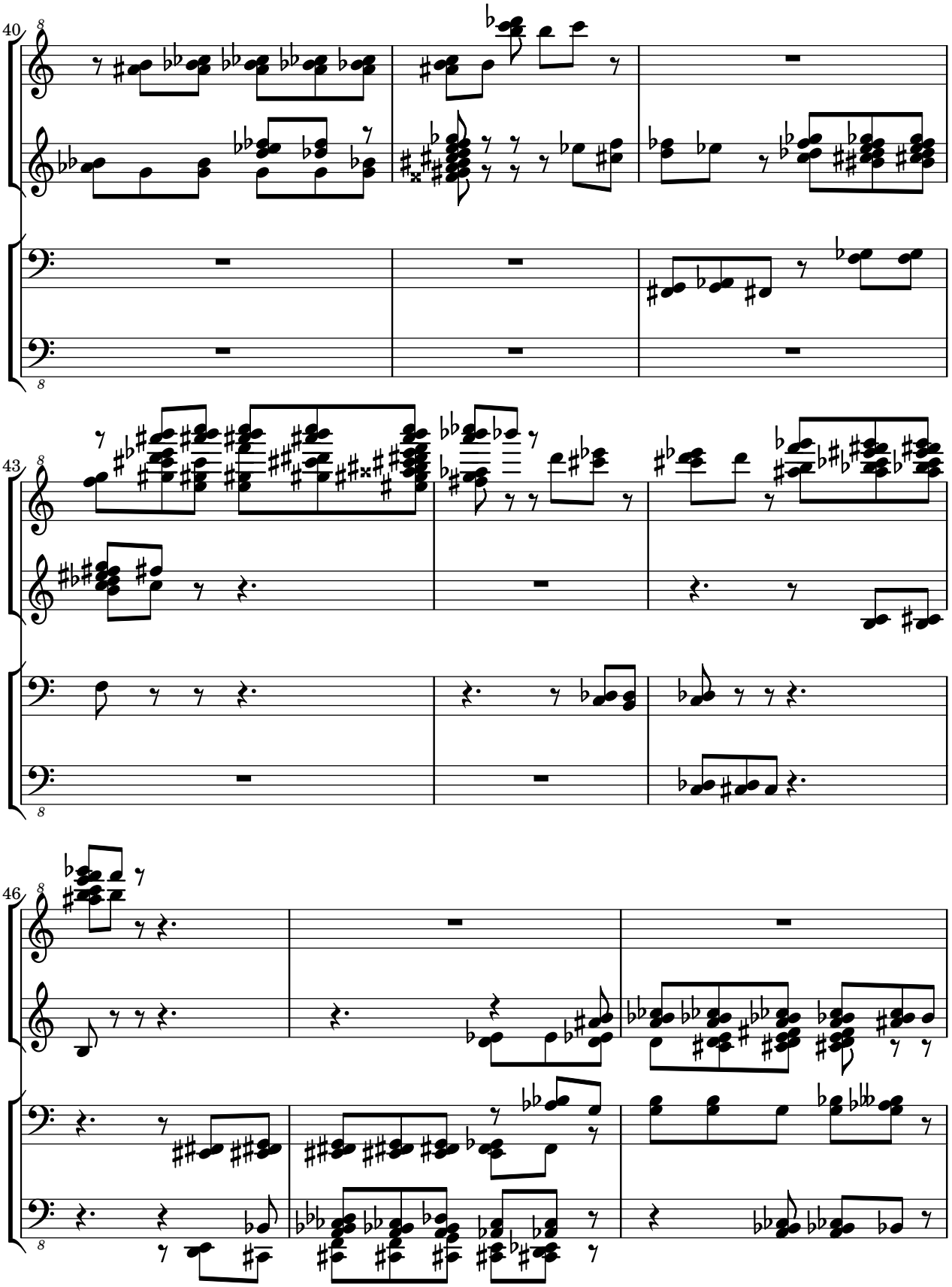
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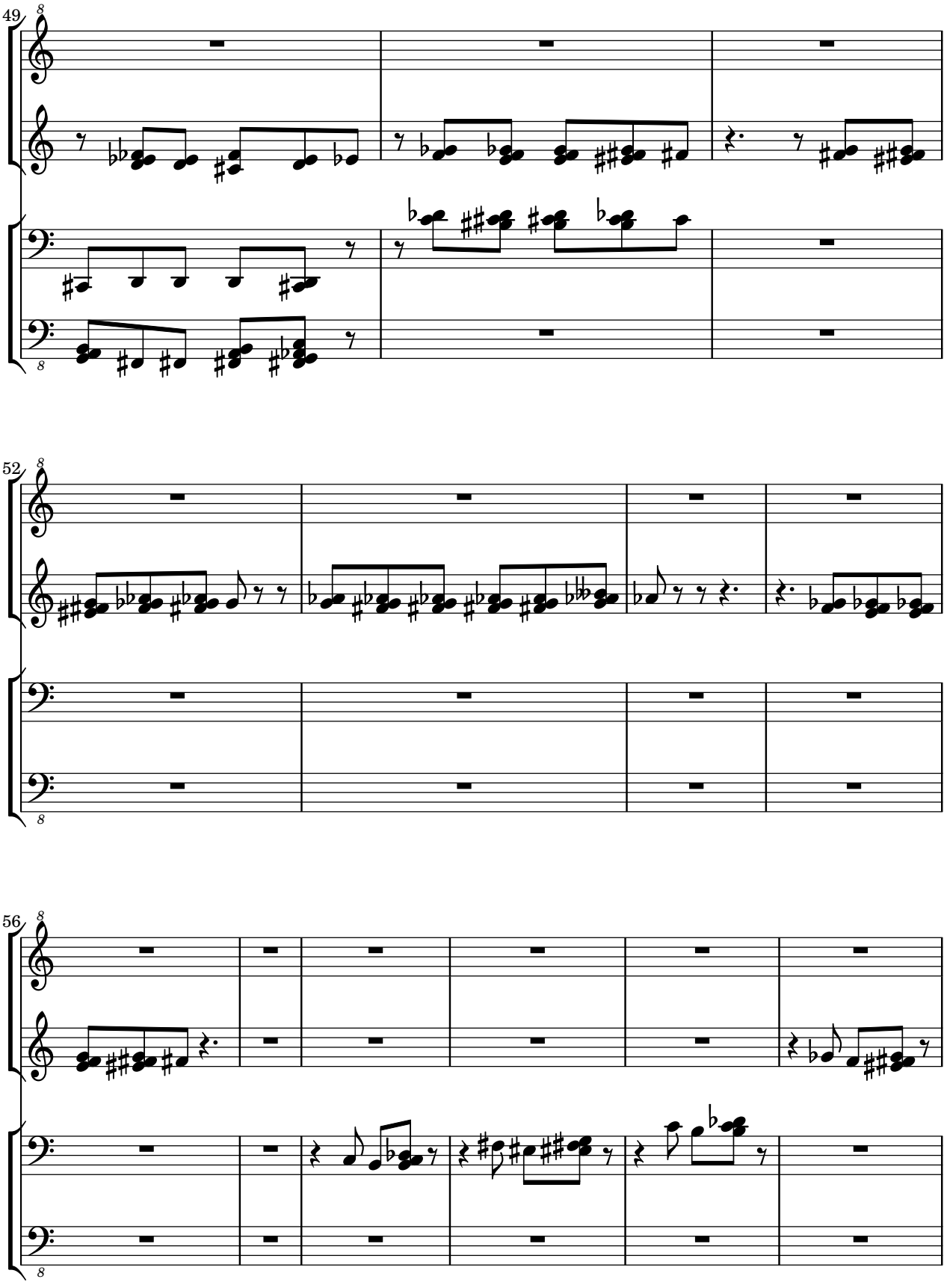
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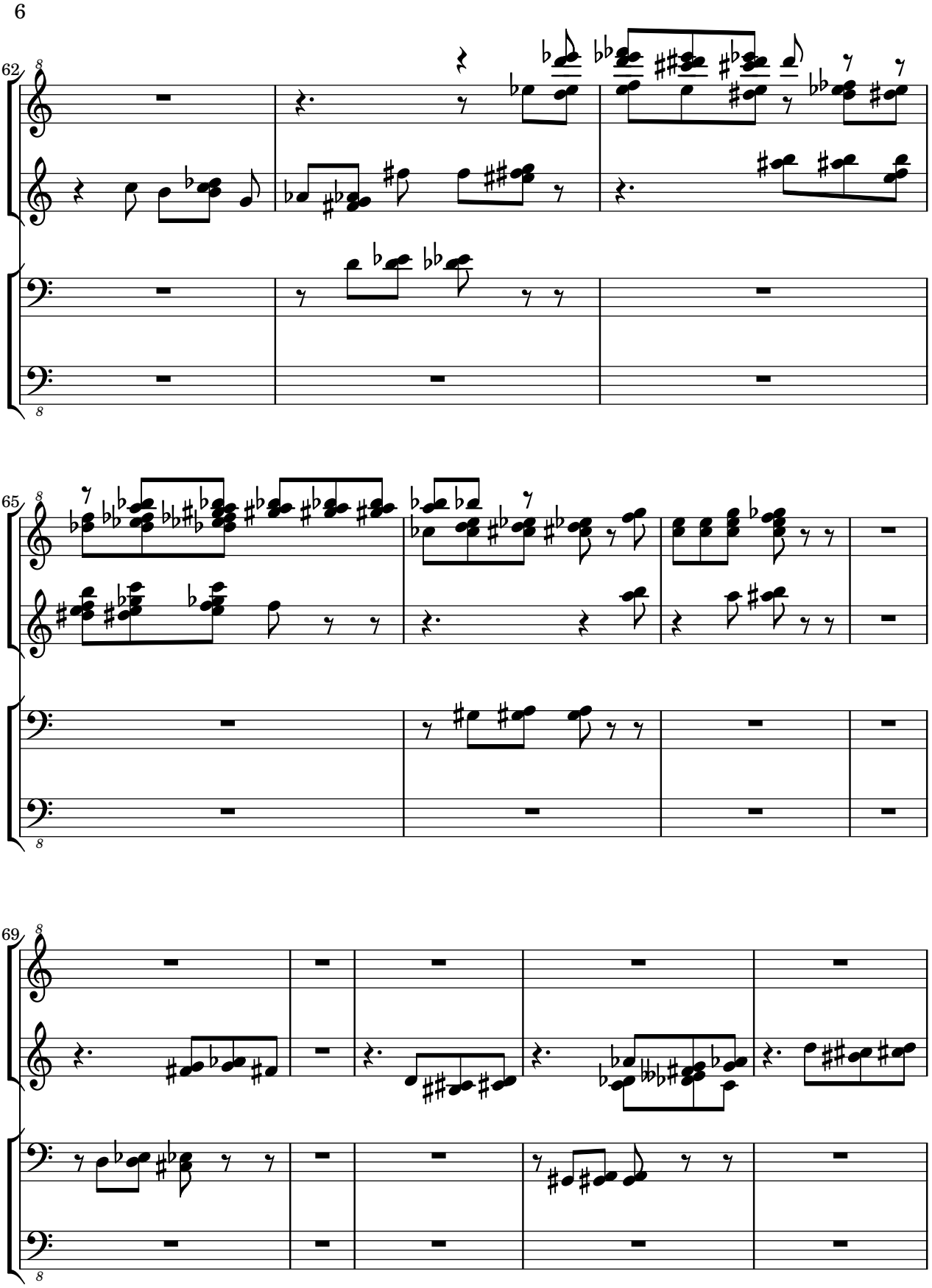
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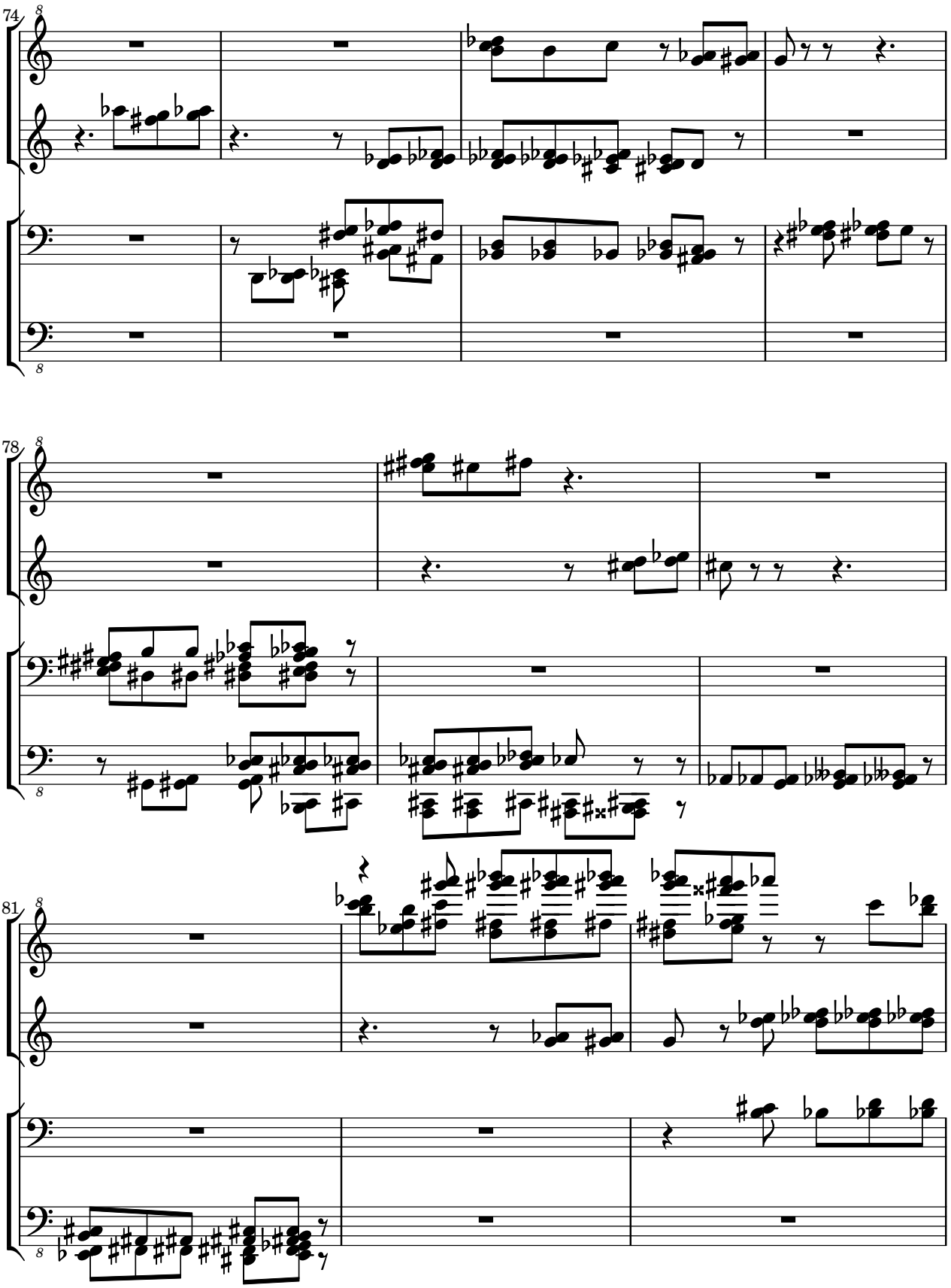
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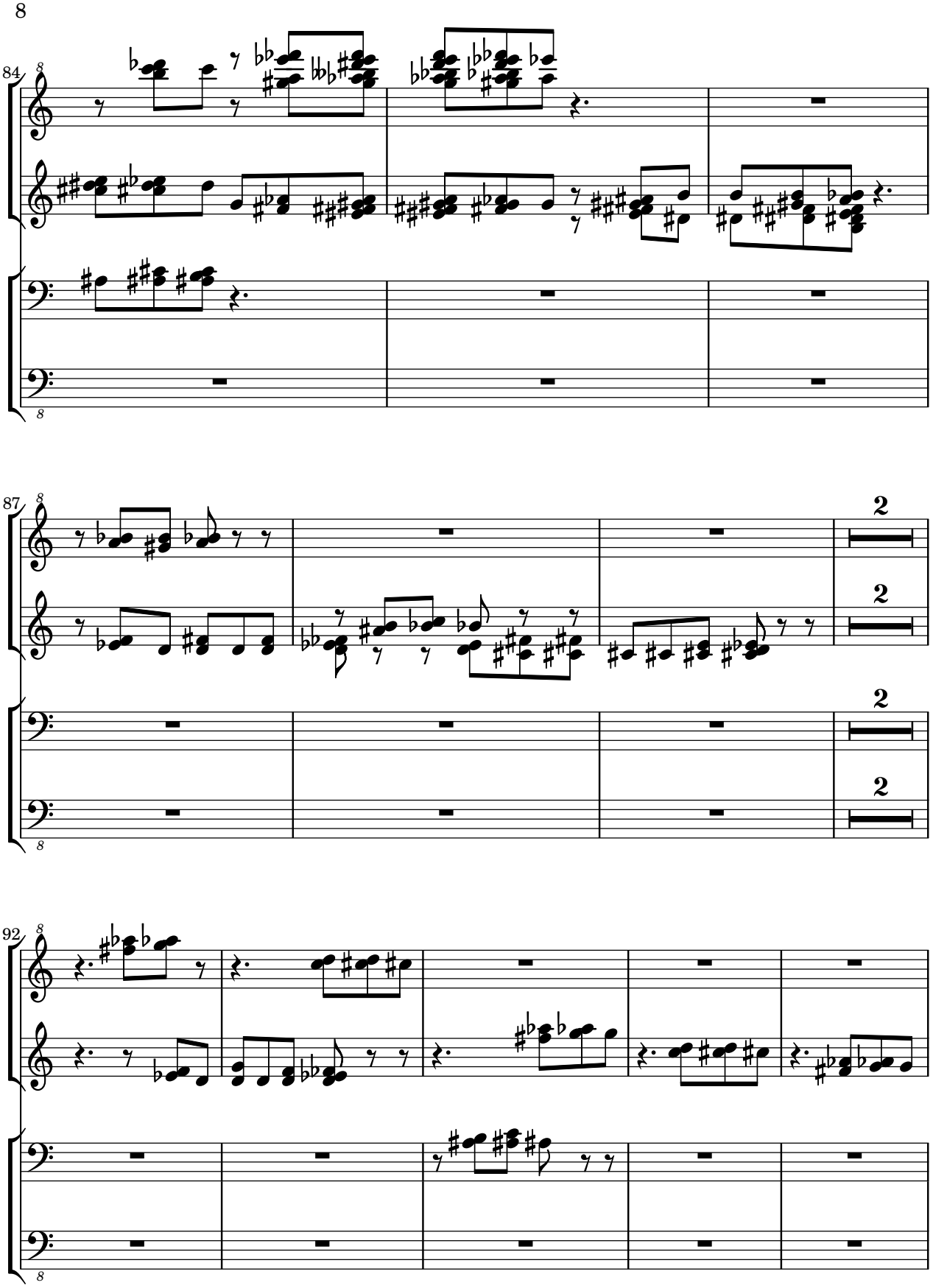
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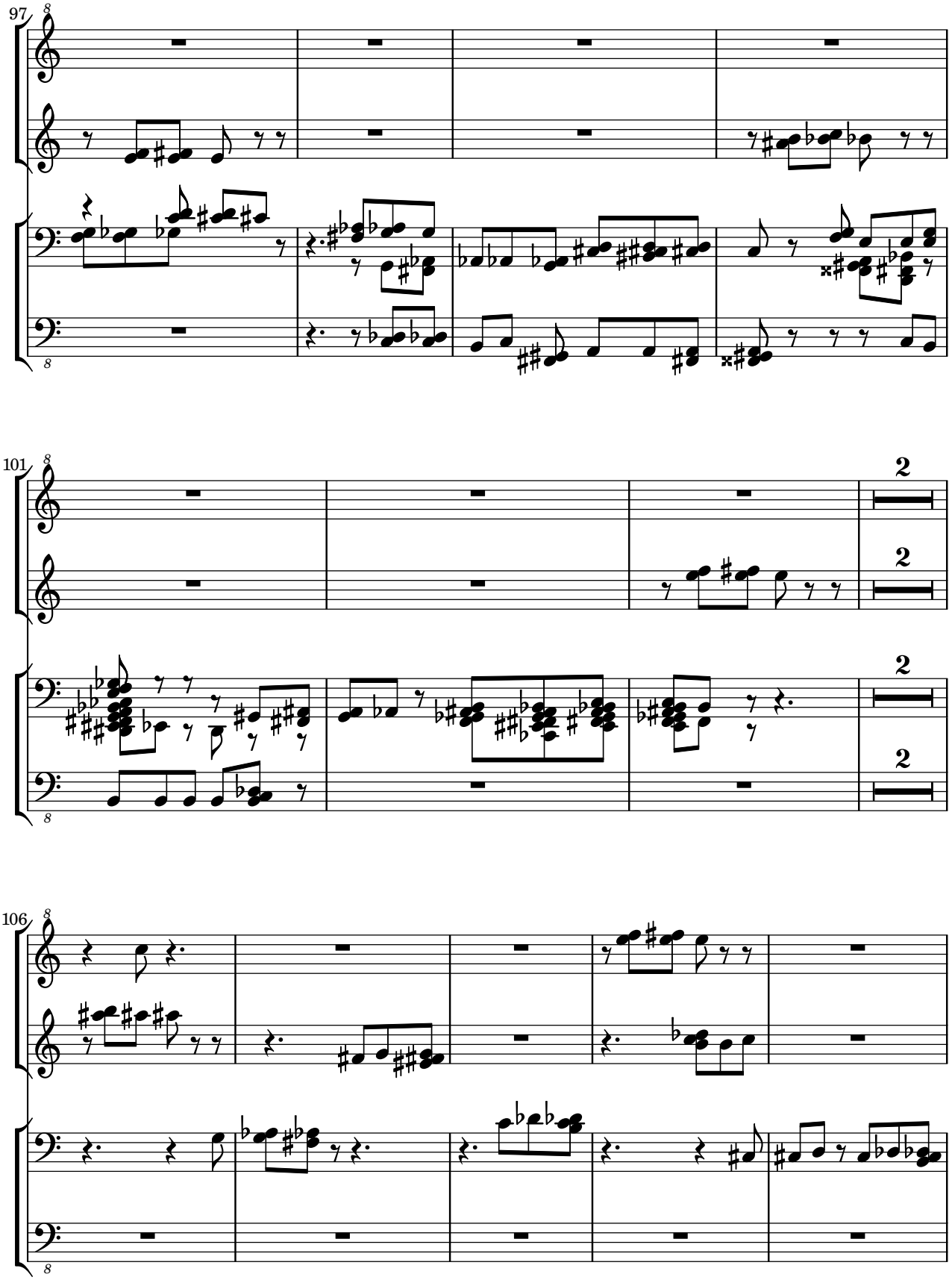
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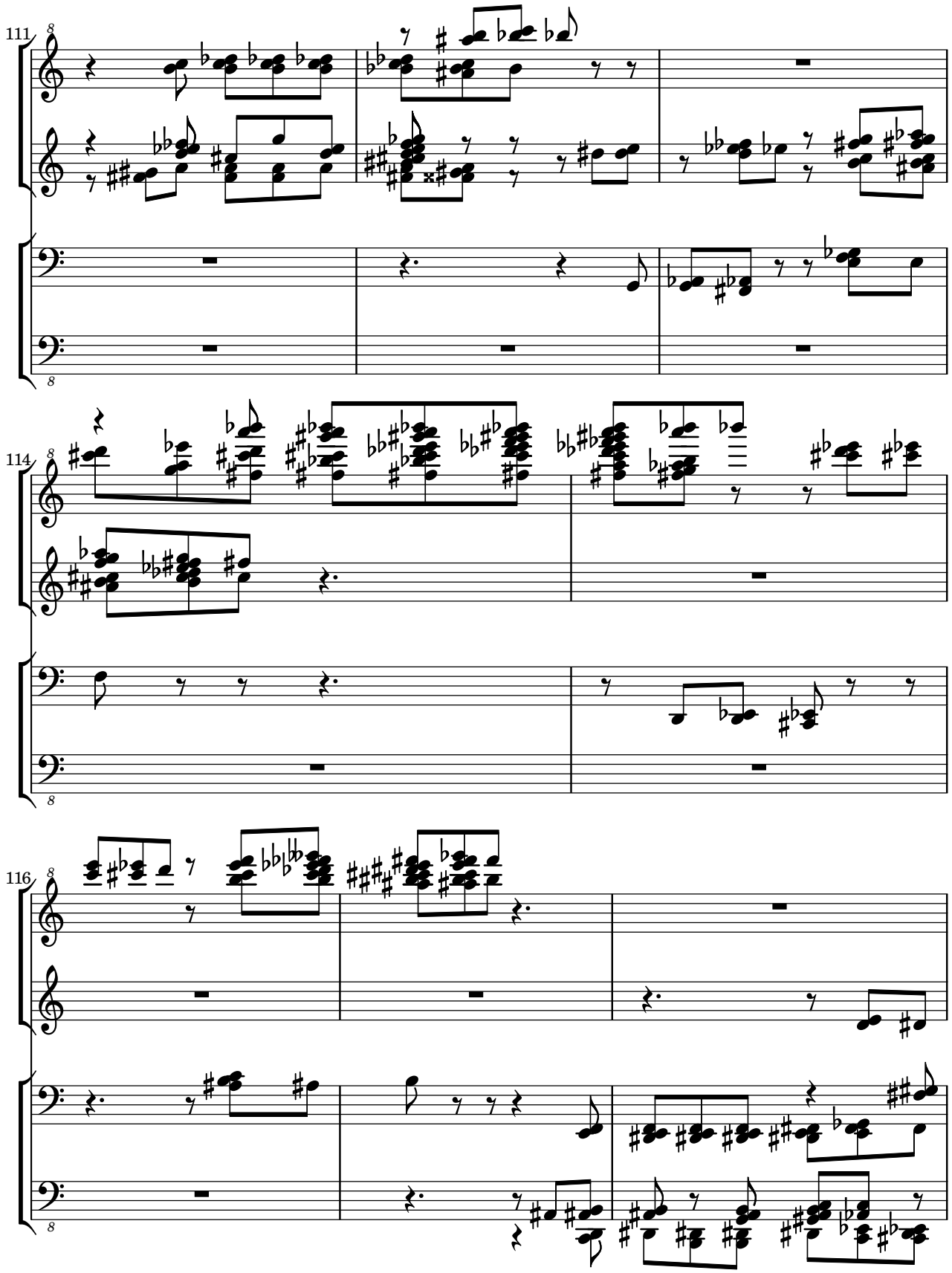
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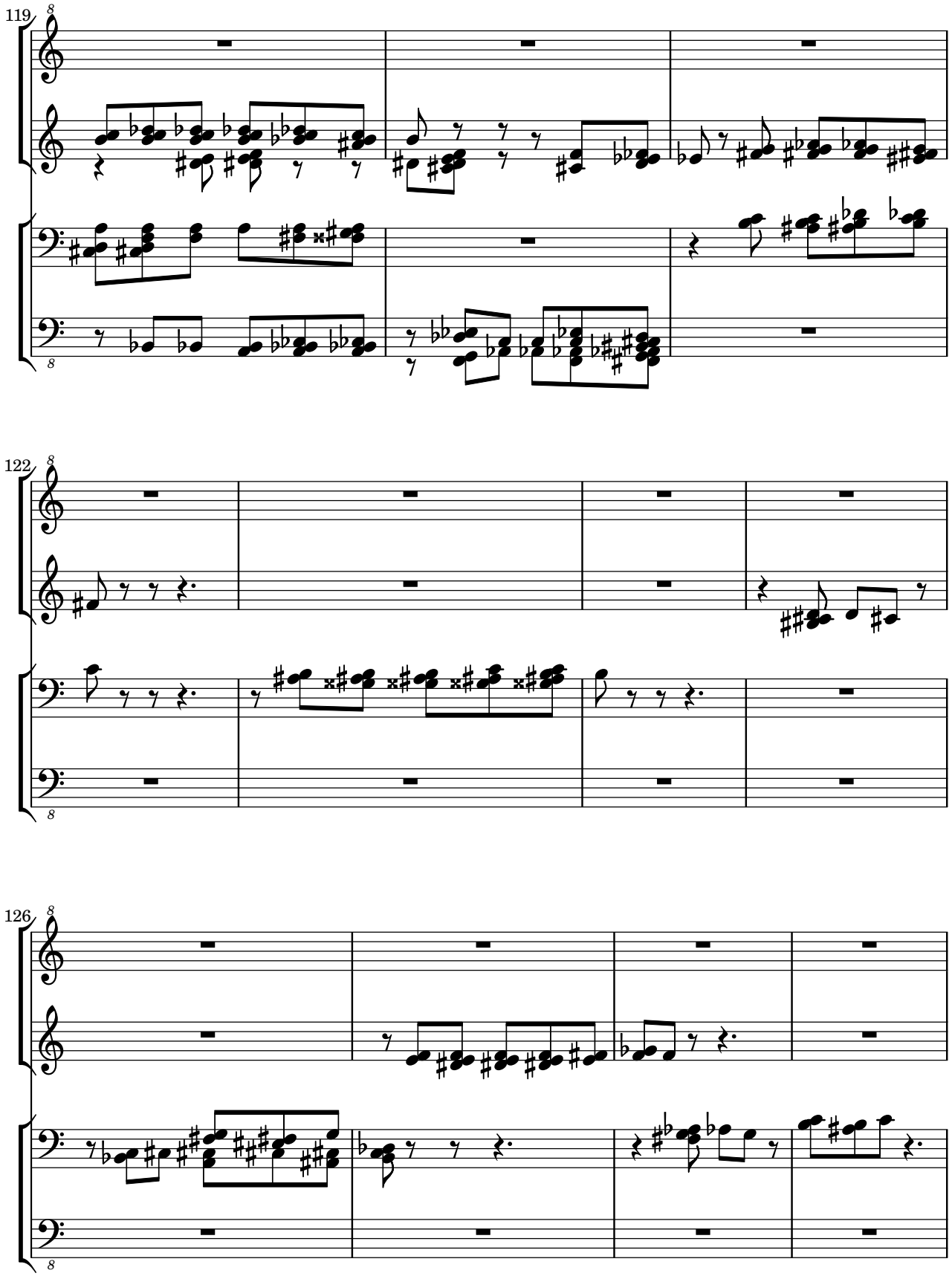
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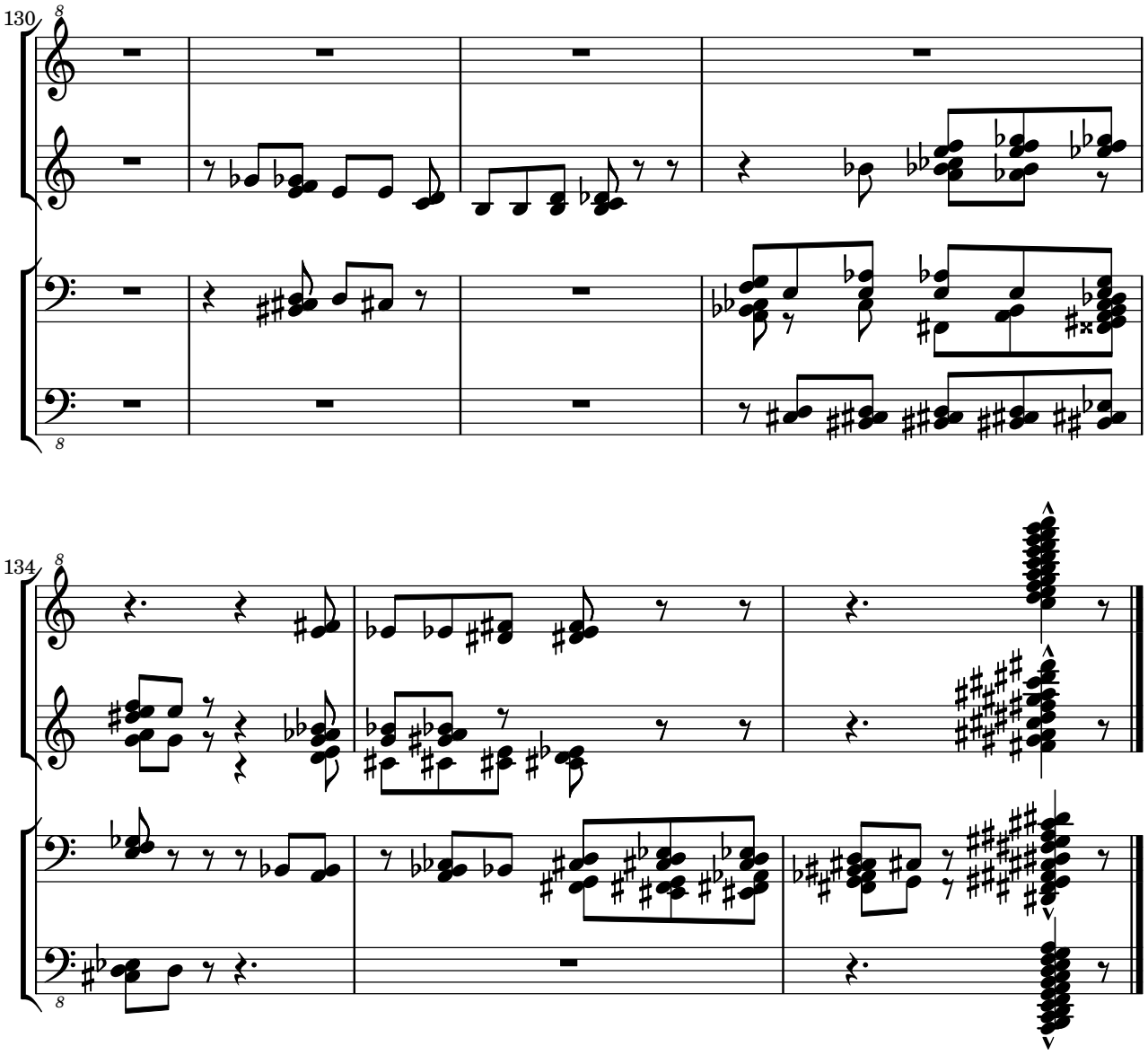
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