Dániel Péter Biró

De Natura et Origine

(2022)

For Countertenor, Shawm, Accordion and Live-Electronics
Für Countertenor, Schalmei, Akkordeon und Live-Elektronik

SPIELPARTITUR
PERFORMANCE SCORE

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IMPRESSUM

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Tue Nov 29 2022,
TH

Daniel Biro
De natura et Origine

Technical documentation

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Equipment

8 PA loudspeakers
1 digital mixing
1 Behringer XTouch
1 MacBookPro with Max8

microphones
Counter tenor: Headset
Shawm: Sennheiser MKE1 clipped onto the instrument
Accordion: 2 x KMS105 (left/right)

To do

Sigmund~ and timbre do not work reliable, ie. they may stop to output after a while. They can be restarted by switching off and on dac-.
In this version, a second max clone was used to send pitch tracker and timbre values to the first max clone through OSC. Use the file *second pitch tracker.maxpat*. In this patch, the day is switched automatically from time to time.

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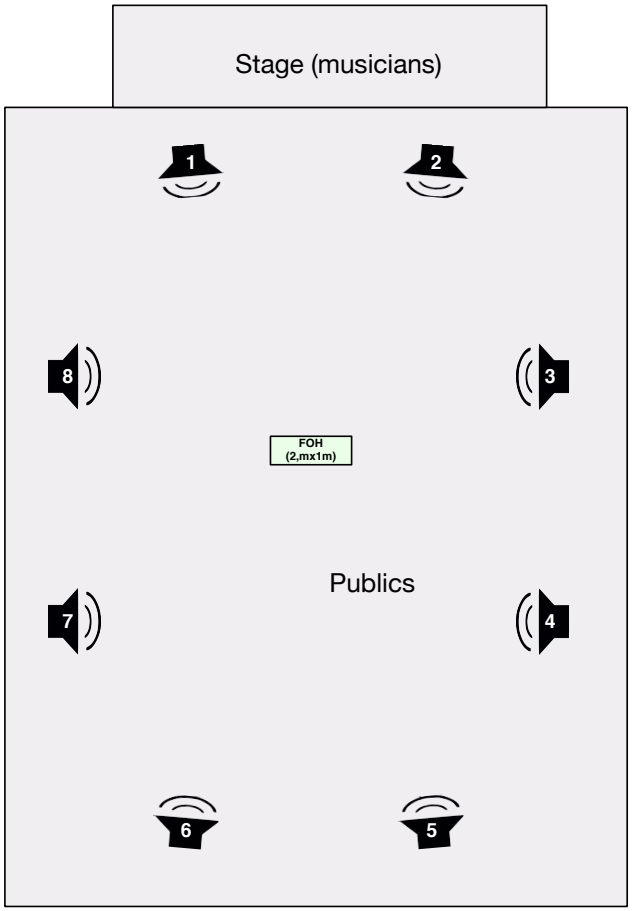
Loudspeakers



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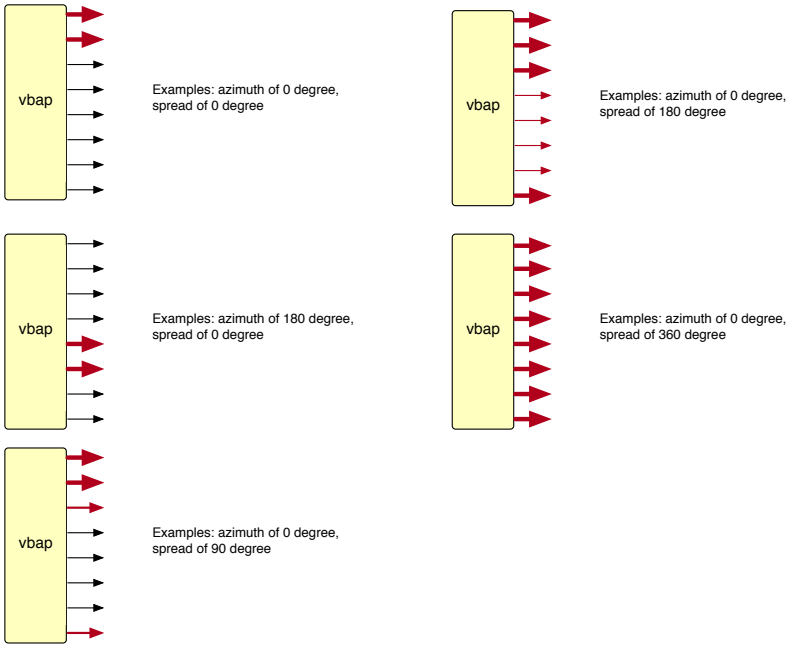
Explanations

vbap is a max external and spatializes an audio signal input to n loudspeakers. In this case, n is 8. It takes two parameters:
- The direction (azimuth) in degrees from 0 to 360
- The spread in degrees from 0 to 360

Examples:



Control of vbap

The vbaps are controlled by input signals, ie. pitch, timbre and loudness.
The control value (ie. pitch) is scaled to degrees (iew. of the direction)

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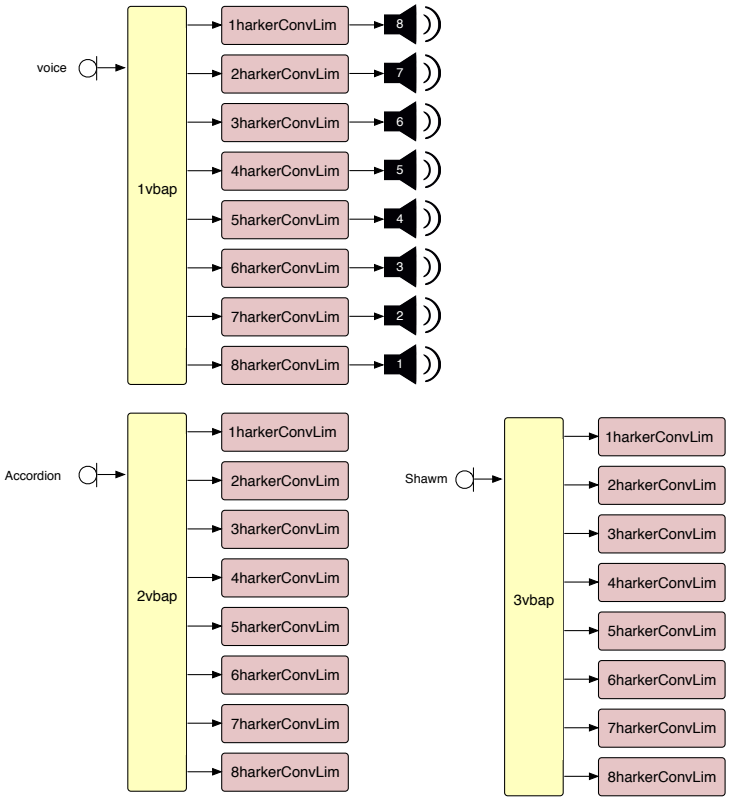
P1



1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 1_Hamilton Mausoleum
4harkerConv: model 1_Hamilton Mausoleum
5harkerConv: model 1_Hamilton Mausoleum
6harkerConv: model 1_Hamilton Mausoleum
7harkerConv: model 1_Hamilton Mausoleum
8harkerConv: model 1_Hamilton Mausoleum

All peak limiters at -10dB

azimuth1 is controlled by the pitch of the voice, scaling MIDI 61 63 to 1 360 degree
spread1 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 61 63 to 181 540 degree
spread2 is controlled by the loudness of the accordion, scaling 0 0.02 to 2 180 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 61 63 to 181 540 degree
spread3 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree

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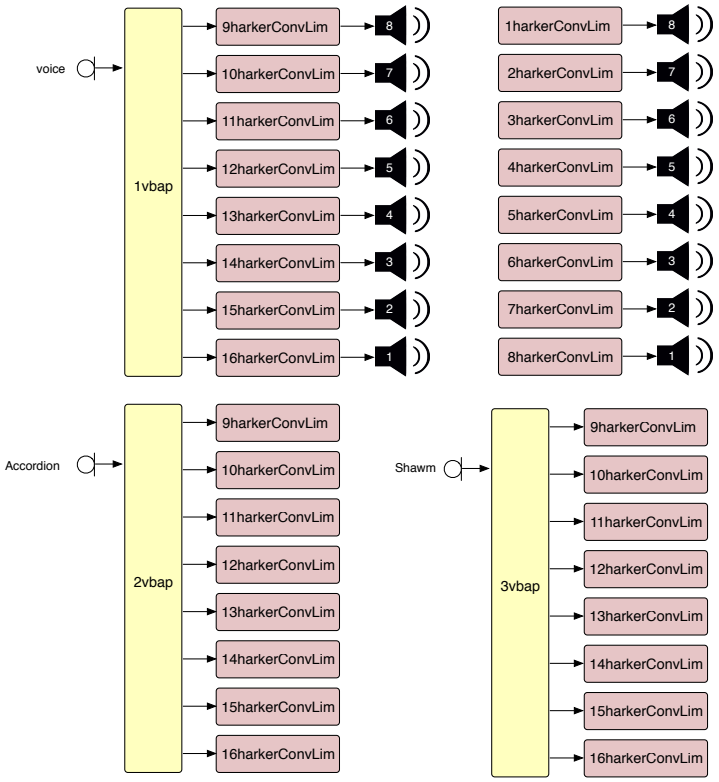
P2



1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 1_Hamilton Mausoleum
4harkerConv: model 1_Hamilton Mausoleum
5harkerConv: model 2_NYC Sportscenter
6harkerConv: model 2_NYC Sportscenter
7harkerConv: model 2_NYC Sportscenter
8harkerConv: model 2_NYC Sportscenter

All peak limiters at -10dB

azimuth1 is controlled by the pitch of the voice, scaling MIDI 61 64 to 0 360 degree
spread1 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 61 64 to 180 540 degree
spread2 is controlled by the timbre of the voice, scaling 0 10 2 180 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 61 64 to 180 540 degree
spread3 is controlled by the timbre of the voice, scaling 0 10 2 180 degree

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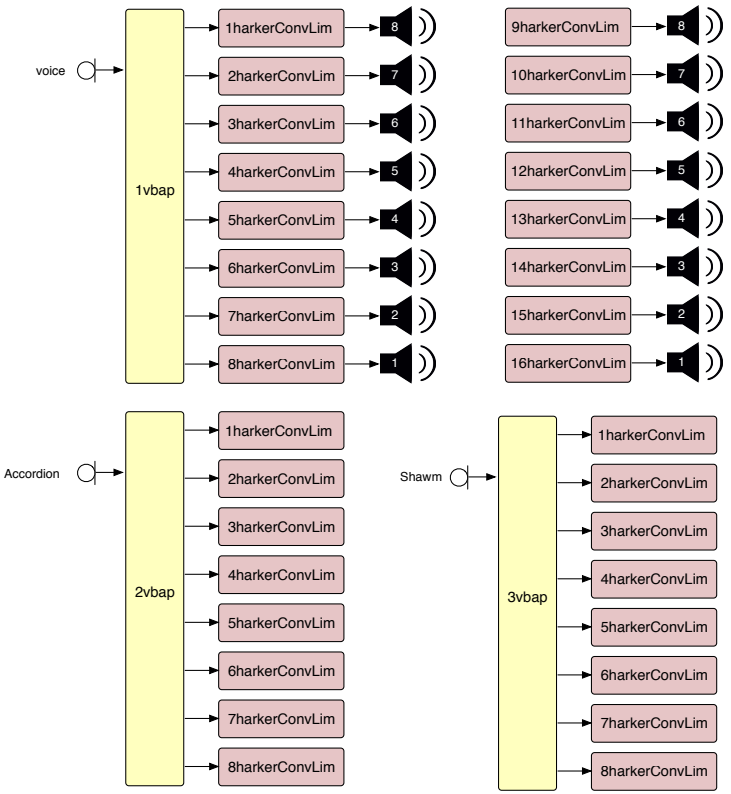
P3



1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 1_Hamilton Mausoleum
4harkerConv: model 2_NYC Sportscenter
5harkerConv: model 2_NYC Sportscenter
6harkerConv: model 2_NYC Sportscenter
7harkerConv: model 3_Giant Basilica
8harkerConv: model 3_Giant Basilica

All peak limiters at -10dB

azimuth1 is controlled by the pitch of the voice, scaling MIDI 61 70 to 1 360 degree
spread1 is controlled by the timbre of the voice, scaling 0 10 to 2 360 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 61 70 to 181 540 degree
spread2 is controlled by the timbre of the voice, scaling 0 10 to 2 360 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 61 70 to 181 540 degree
spread3 is controlled by the timbre of the voice, scaling 0 10 to 2 360 degree

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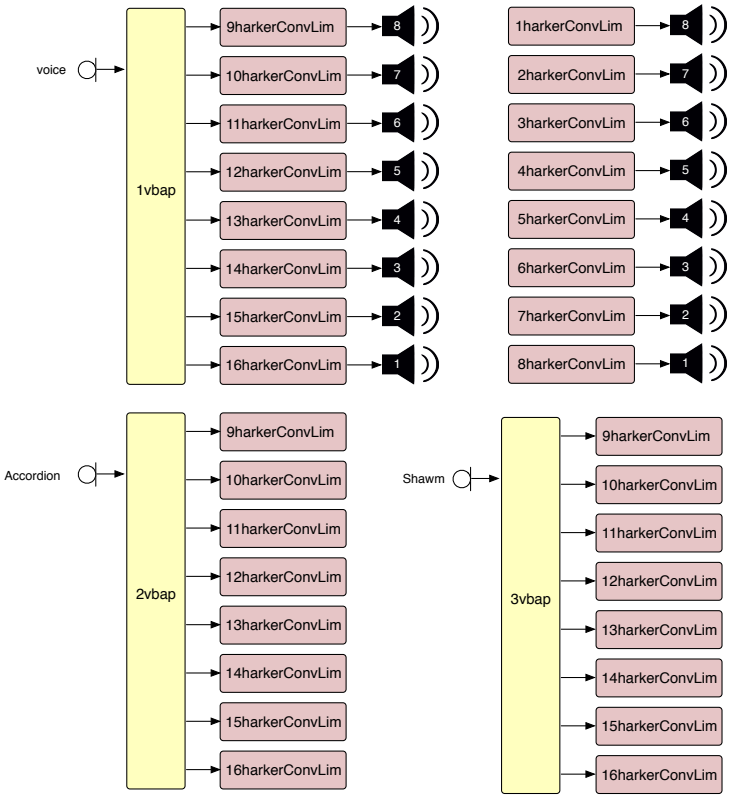
P4



1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 2_NYC Sportscenter
4harkerConv: model 2_NYC Sportscenter
5harkerConv: model 3_Giant Basilica
6harkerConv: model 3_Giant Basilica
7harkerConv: model 4_German Large Church
8harkerConv: model 4_German Large Church

All peak limiters at -10dB

azimuth1 is controlled by the pitch of the voice, scaling MIDI 54 72 to 1 360 degree
spread1 is controlled by the timbre of the voice, scaling 0 10 to 2 80 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 54 72 to 181 540 degree
spread2 is controlled by the timbre of the voice, scaling 0 10 to 2 80 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 54 72 to 181 540 degree
spread3 is controlled by the timbre of the voice, scaling 0 10 to 2 80 degree

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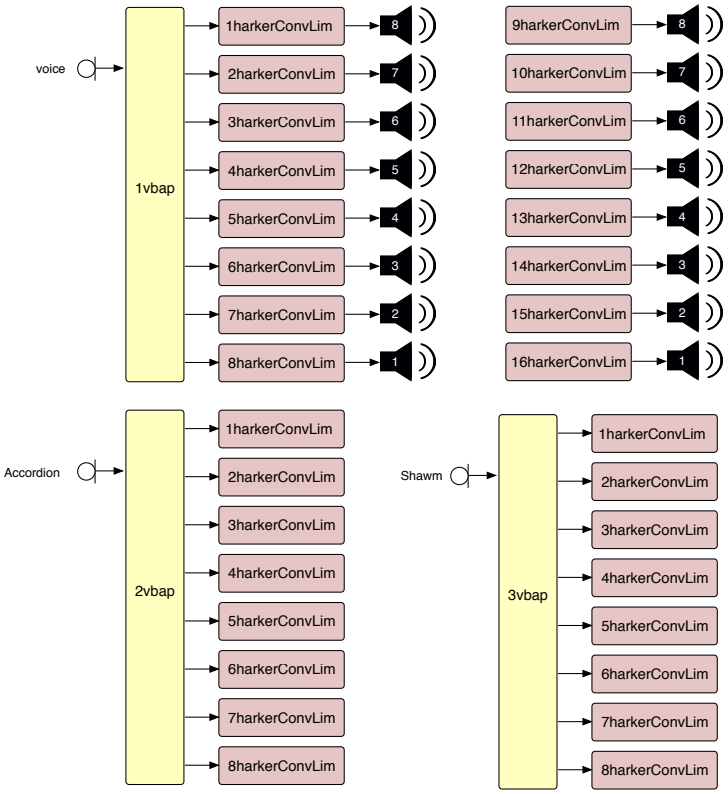
P5



1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 2_NYC Sportscenter
4harkerConv: model 2_NYC Sportscenter
5harkerConv: model 3_Giant Basilica
6harkerConv: model 3_Giant Basilica
7harkerConv: model 4_German Large Church
8harkerConv: model 4_German Large Church

All peak limiters at -10dB

azimuth1 is controlled by the pitch of the voice, scaling MIDI 61 63 to 1 360 degree
spread1 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 61 63 to 181 540 degree
spread2 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 61 63 to 181 540 degree
spread3 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree

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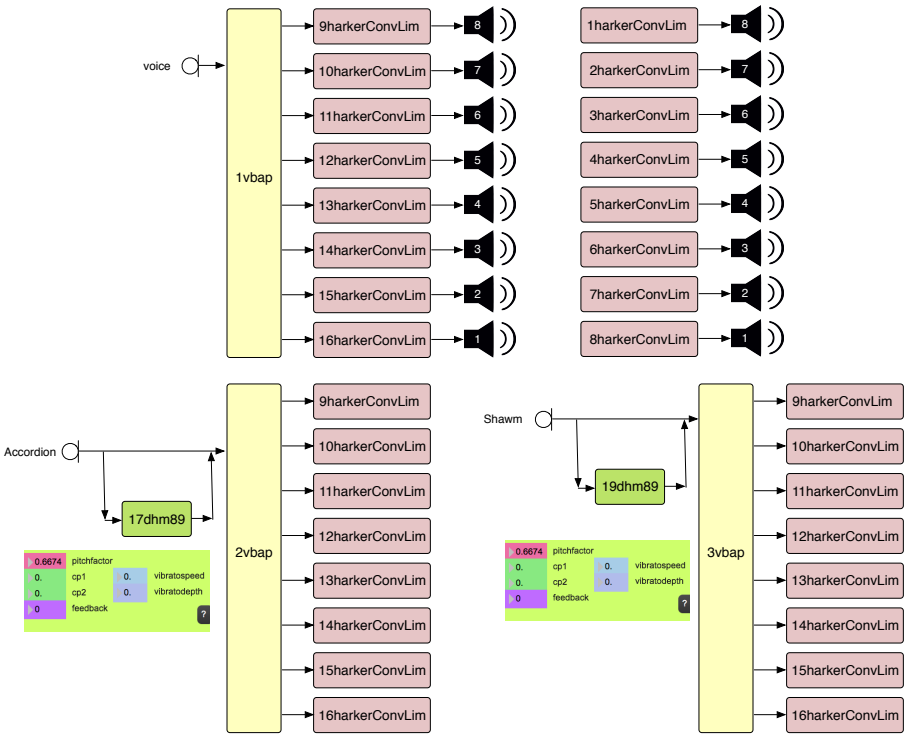
P6



1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 1_Hamilton Mausoleum
4harkerConv: model 1_Hamilton Mausoleum
5harkerConv: model 1_Hamilton Mausoleum
6harkerConv: model 1_Hamilton Mausoleum
7harkerConv: model 1_Hamilton Mausoleum
8harkerConv: model 1_Hamilton Mausoleum

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the shawm

azimuth1 is controlled by the pitch of the voice, scaling MIDI 66.5 74.5 to 0 360 degree
spread1 is controlled by the timbre of the voice, scaling 0 10 to 2 45 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 66.5 74.5 to 180 540 degree
spread2 is controlled by the timbre of the voice, scaling 0 10 to 2 45 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 66.5 74.5 to 180 540 degree
spread3 is controlled by the timbre of the voice, scaling 0 10 to 2 45 degree

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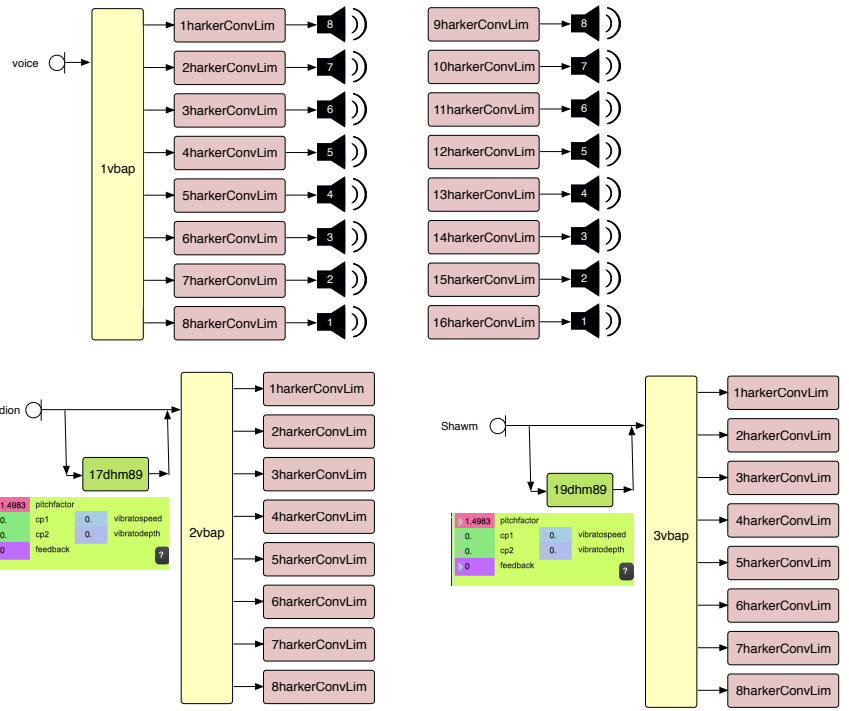

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 1_Hamilton Mausoleum
4harkerConv: model 1_Hamilton Mausoleum
5harkerConv: model 2_NYC Sportscenter
6harkerConv: model 2_NYC Sportscenter
7harkerConv: model 2_NYC Sportscenter
8harkerConv: model 2_NYC Sportscenter

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the shawm

azimuth1 is controlled by the pitch of the voice, scaling MIDI 61 63 to 1 360 degree
spread1 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 61 63 to 181 540 degree
spread2 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 61 63 to 181 540 degree
spread3 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree

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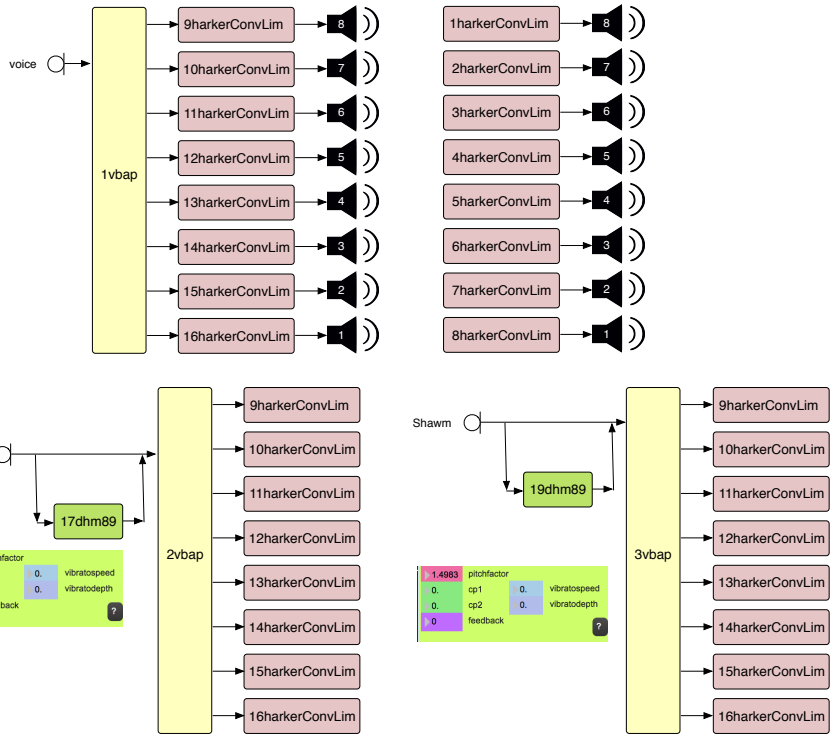
P8



1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 2_NYC Sportscenter
4harkerConv: model 2_NYC Sportscenter
5harkerConv: model 3_Giant Basilica
6harkerConv: model 3_Giant Basilica
7harkerConv: model 4_German Large Church
8harkerConv: model 4_German Large Church

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the shawm

azimuth1 is controlled by the pitch of the voice, scaling MIDI 66.5 67.5 to 0 360 degree
spread1 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 66.5 67.5 to 180 540 degree
spread2 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 66.5 67.5 to 180 540 degree
spread3 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree

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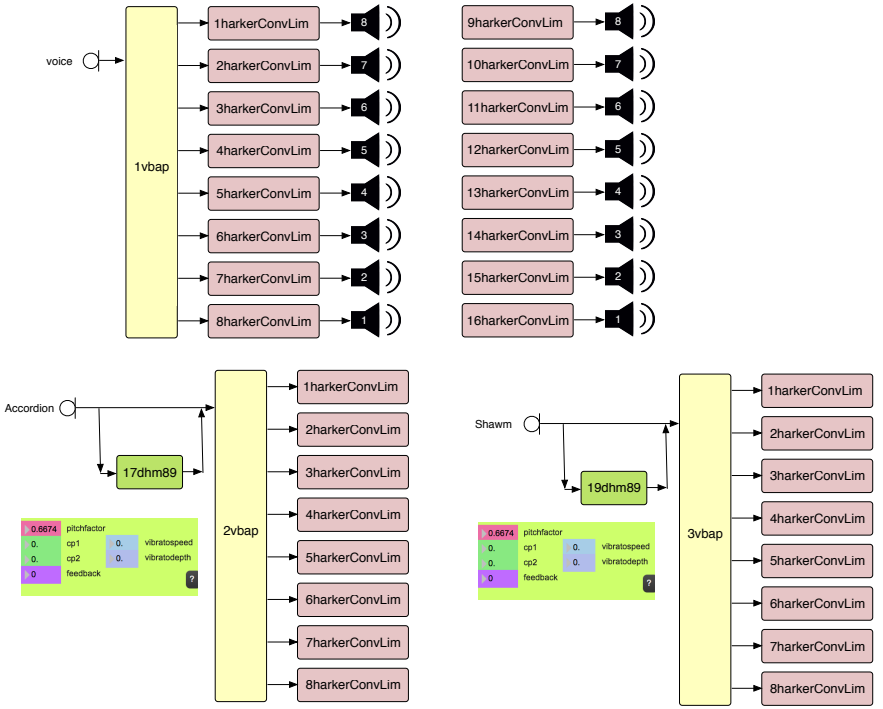

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 1_Hamilton Mausoleum
4harkerConv: model 1_Hamilton Mausoleum
5harkerConv: model 2_NYC Sportscenter
6harkerConv: model 2_NYC Sportscenter
7harkerConv: model 2_NYC Sportscenter
8harkerConv: model 2_NYC Sportscenter

All peak limiters at -10dB

azimuth1 is controlled by the pitch of the voice, scaling MIDI 66.5 67.5 to 0 360 degree
spread1 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 66.5 67.5 to 180 540 degree
spread2 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 66.5 67.5 to 180 540 degree
spread3 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree

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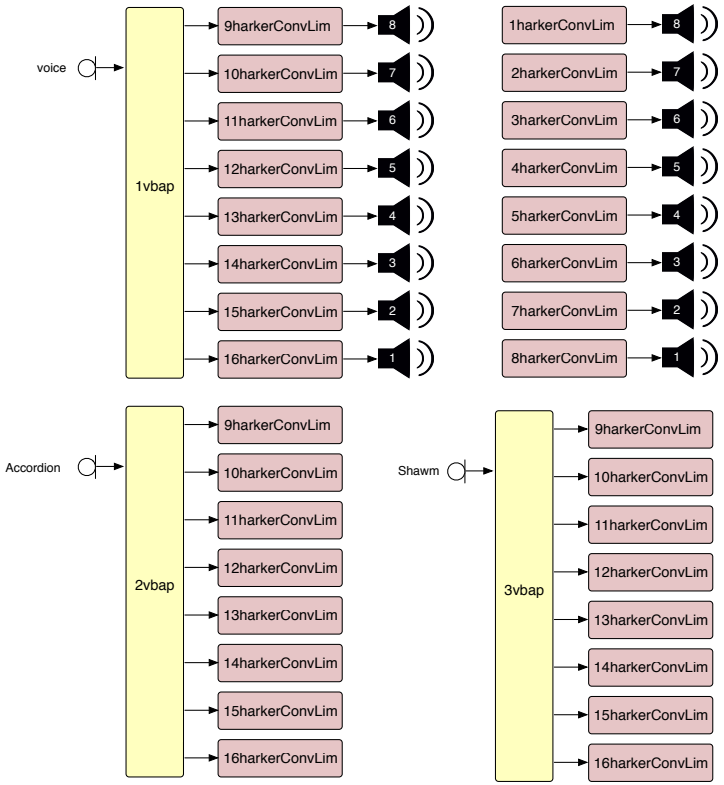
P10



1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 1_Hamilton Mausoleum
4harkerConv: model 1_Hamilton Mausoleum
5harkerConv: model 2_NYC Sportscenter
6harkerConv: model 2_NYC Sportscenter
7harkerConv: model 2_NYC Sportscenter
8harkerConv: model 2_NYC Sportscenter

All peak limiters at -10dB

azimuth1 is controlled by the pitch of the voice, scaling MIDI 61.5 74.5 to 0 360 degree
spread1 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 61.5 74.5 to 180 540 degree
spread2 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 61.5 74.5 to 180 540 degree
spread3 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree

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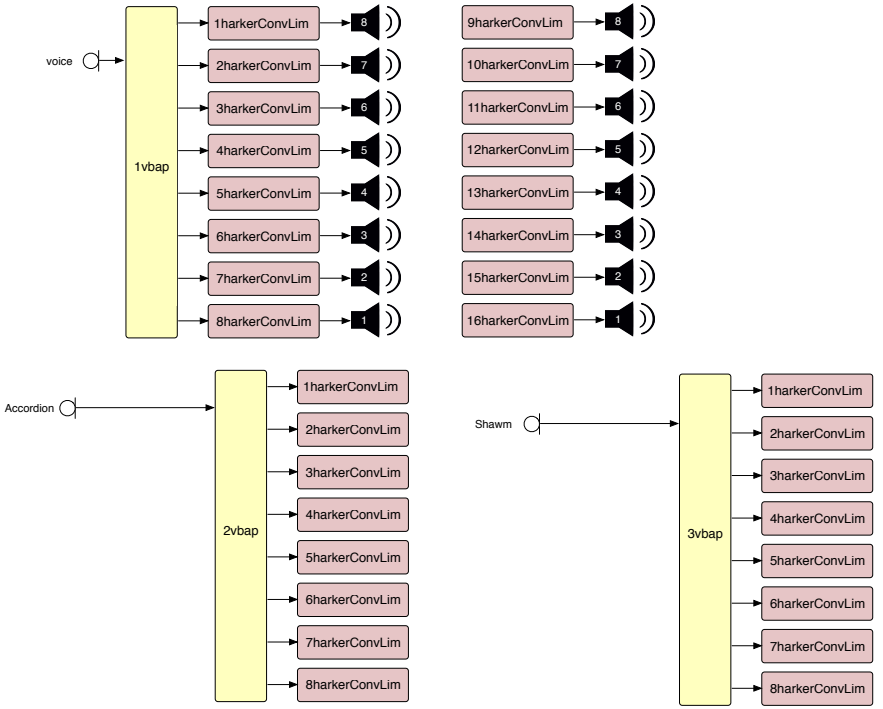

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 1_Hamilton Mausoleum
4harkerConv: model 1_Hamilton Mausoleum
5harkerConv: model 1_Hamilton Mausoleum
6harkerConv: model 1_Hamilton Mausoleum
7harkerConv: model 1_Hamilton Mausoleum
8harkerConv: model 1_Hamilton Mausoleum

All peak limiters at -10dB

azimuth1 is controlled by the pitch of the voice, scaling MIDI 61.5 72.5 to 0 360 degree;
spread1 isControlledBy timbre1 scaling 0 10 to 2 45 degree;
azimuth2 is controlled by the pitch of the voice, scaling MIDI 61.5 72.5 to 180 540 degree;
spread2 isControlledBy timbre1 scaling 0 10 to 2 45 degree;
azimuth3 is controlled by the pitch of the voice, scaling MIDI 61.5 72.5 to 180 540 degree;
spread3 isControlledBy timbre1 scaling 0 10 to 2 45 degree;

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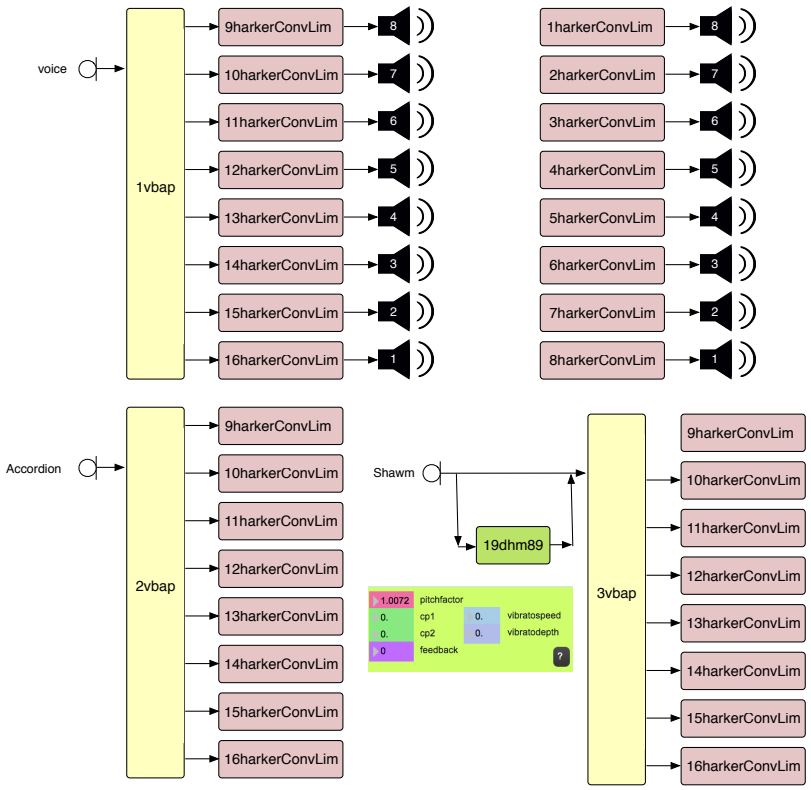

1harkerConv: model 5_German Concert Hall
2harkerConv: model 5_German Concert Hall
3harkerConv: model 5_German Concert Hall
4harkerConv: model 5_German Concert Hall
5harkerConv: model 6_BM7 Hall Small
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 6_BM7 Hall Small
8harkerConv: model 6_BM7 Hall Small

All peak limiters at -10dB
The loudness (trim) of the dhm is controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 60 120 to 0 90 degree;
spread1 isControlledBy timbre1 scaling 0 10 to 2 45 degree;
azimuth2 is controlled by the pitch of the voice, scaling MIDI 60 120 to 180 270 degree;
spread2 isControlledBy timbre1 scaling 0 10 to 2 45 degree;
azimuth3 is controlled by the pitch of the voice, scaling MIDI 60 120 to 180 270 degree;
spread3 isControlledBy timbre1 scaling 0 10 to 2 45 degree;

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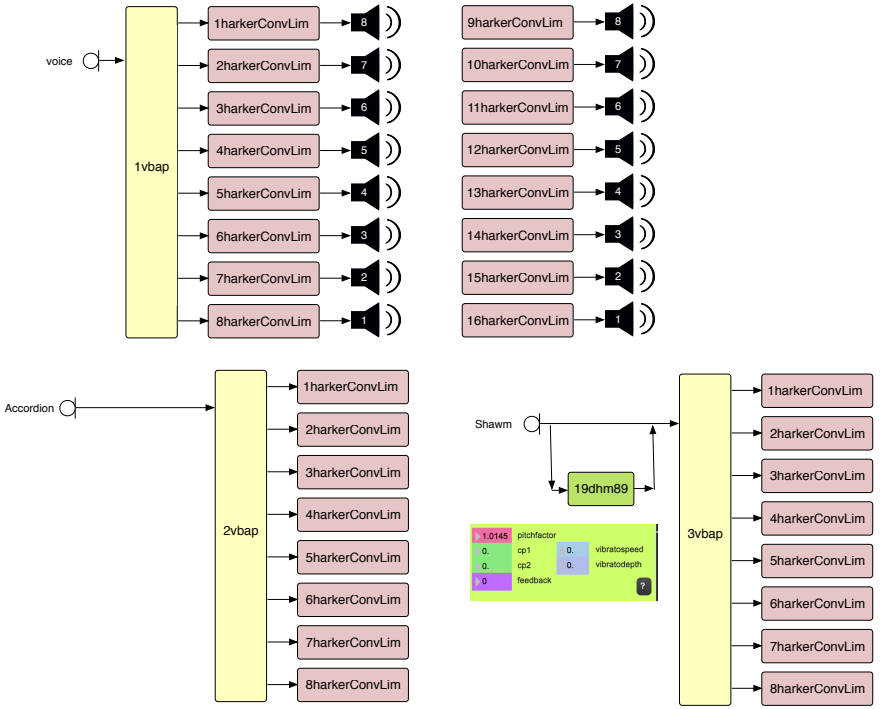

1harkerConv: model 5_German Concert Hall
2harkerConv: model 5_German Concert Hall
3harkerConv: model 5_German Concert Hall
4harkerConv: model 5_German Concert Hall
5harkerConv: model 6_BM7 Hall Small
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 7_BM7 Vocal Chamber
8harkerConv: model 7_BM7 Vocal Chamber

All peak limiters at -10dB
The loudness (trim) of the dhm is controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 60 120 to 0 225 degree;
spread1 isControlledBy timbre1 scaling 0 10 to 2 45 degree;
azimuth2 is controlled by the pitch of the voice, scaling MIDI 60 120 to 180 405 degree;
spread2 isControlledBy timbre1 scaling 0 10 to 2 45 degree;
azimuth3 is controlled by the pitch of the voice, scaling MIDI 60 120 to 180 405 degree;
spread3 isControlledBy timbre1 scaling 0 10 to 2 45 degree;

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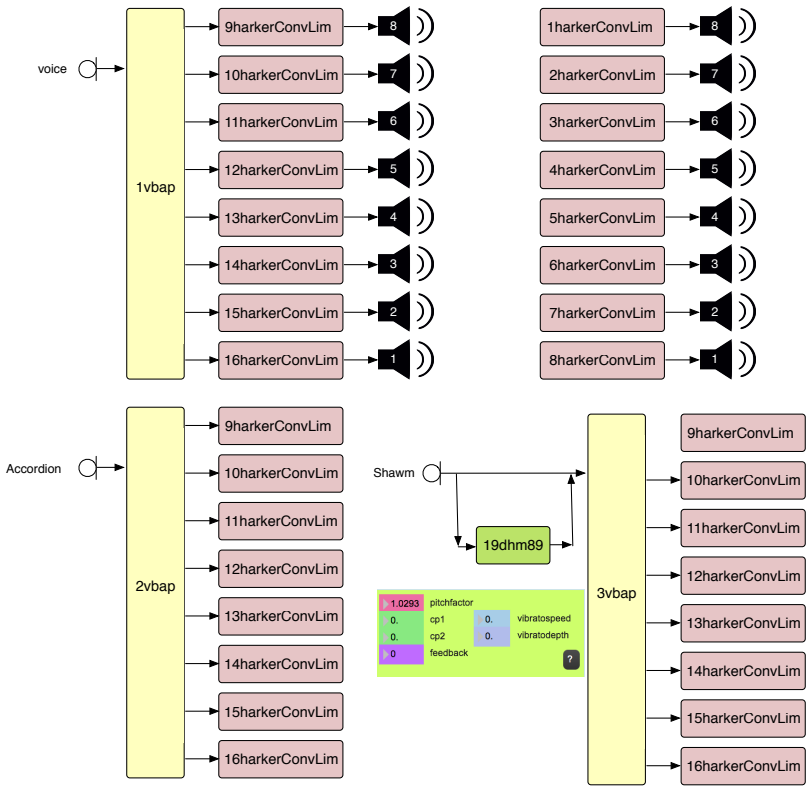

1harkerConv: model 5_German Concert Hall
2harkerConv: model 5_German Concert Hall
3harkerConv: model 6_BM7 Hall Small
4harkerConv: model 6_BM7 Hall Small
5harkerConv: model 7_BM7 Vocal Chamber
6harkerConv: model 7_BM7 Vocal Chamber
7harkerConv: model 8_ECRR Wooden Hall
8harkerConv: model 8_ECRR Wooden Hall

All peak limiters at -10dB
The loudness (trim) of the dhm is controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 60 120 to 0 90 degree;
spread1 isControlledBy timbre1 scaling 0 10 to 2 45 degree;
azimuth2 is controlled by the pitch of the voice, scaling MIDI 60 120 to 180 270 degree;
spread2 isControlledBy timbre1 scaling 0 10 to 2 45 degree;
azimuth3 is controlled by the pitch of the voice, scaling MIDI 60 120 to 180 270 degree;
spread3 isControlledBy timbre1 scaling 0 10 to 2 45 degree;

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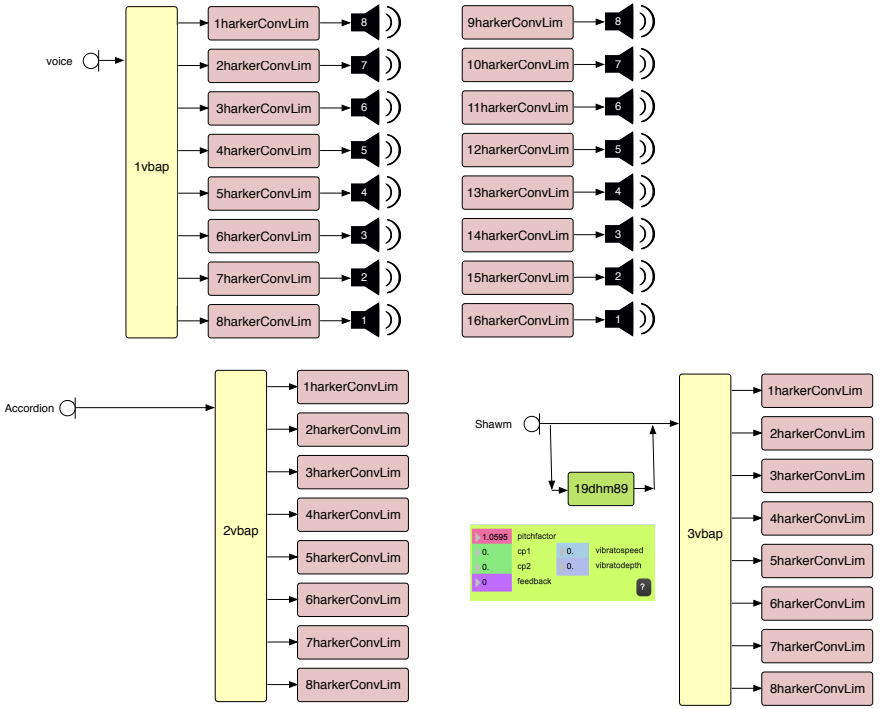

1harkerConv: model 4_German Large Church
2harkerConv: model 5_German Concert Hall
3harkerConv: model 5_German Concert Hall
4harkerConv: model 6_BM7 Hall Small
5harkerConv: model 7_BM7 Vocal Chamber
6harkerConv: model 7_BM7 Vocal Chamber
7harkerConv: model 8_ECRR Wooden Hall
8harkerConv: model 8_ECRR Wooden Hall

All peak limiters at -10dB
The loudness (trim) of the dhm is controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 53.5 56.5 to 0 315 degree;
spread1 isControlledBy timbre1 scaling 0 10 to 2 135 degree;
azimuth2 is controlled by the pitch of the voice, scaling MIDI 53.5 56.5 to 180 495 degree;
spread2 isControlledBy timbre1 scaling 0 10 to 2 135 degree;
azimuth3 is controlled by the pitch of the voice, scaling MIDI 53.5 56.5 to 180 495 degree;
spread3 isControlledBy timbre1 scaling 0 10 to 2 135 degree;

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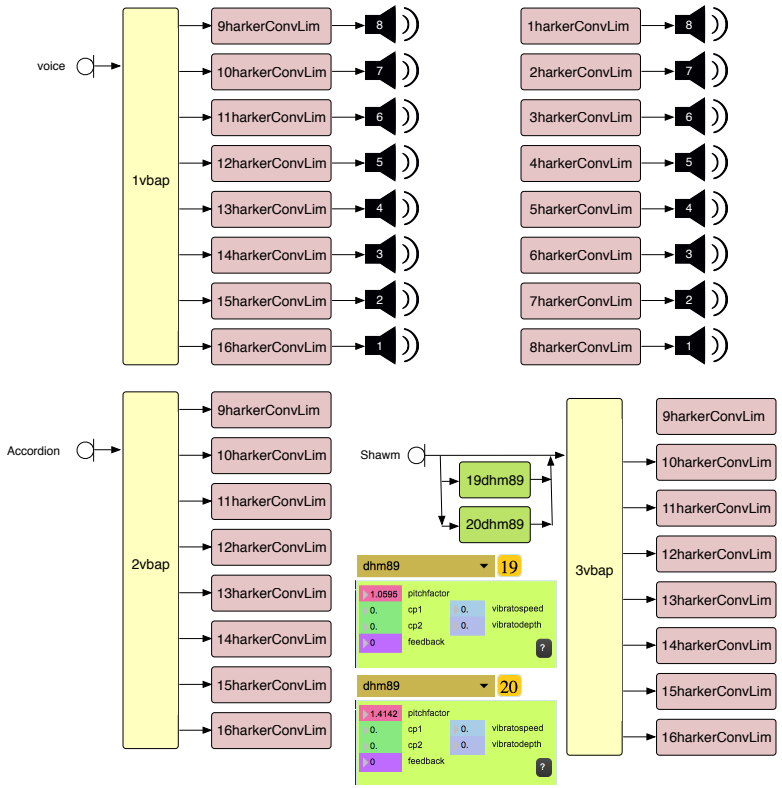

1harkerConv: model 3_Giant Basilica
2harkerConv: model 4_German Large Church
3harkerConv: model 5_German Concert Hall
4harkerConv: model 5_German Concert Hall
5harkerConv: model 6_BM7 Hall Small
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 8_ECRR Wooden Hall
8harkerConv: model 8_ECRR Wooden Hall

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 60.5 69.5 to 0 360 degree;
spread1 isControlledBy timbre1 scaling 0 10 to 2 90 degree;
azimuth2 is controlled by the pitch of the voice, scaling MIDI 60.5 69.5 to 180 540 degree;
spread2 isControlledBy timbre1 scaling 0 10 to 2 90 degree;
azimuth3 is controlled by the pitch of the voice, scaling MIDI 60.5 69.5 to 180 540 degree;
spread3 isControlledBy timbre1 scaling 0 10 to 2 90 degree;

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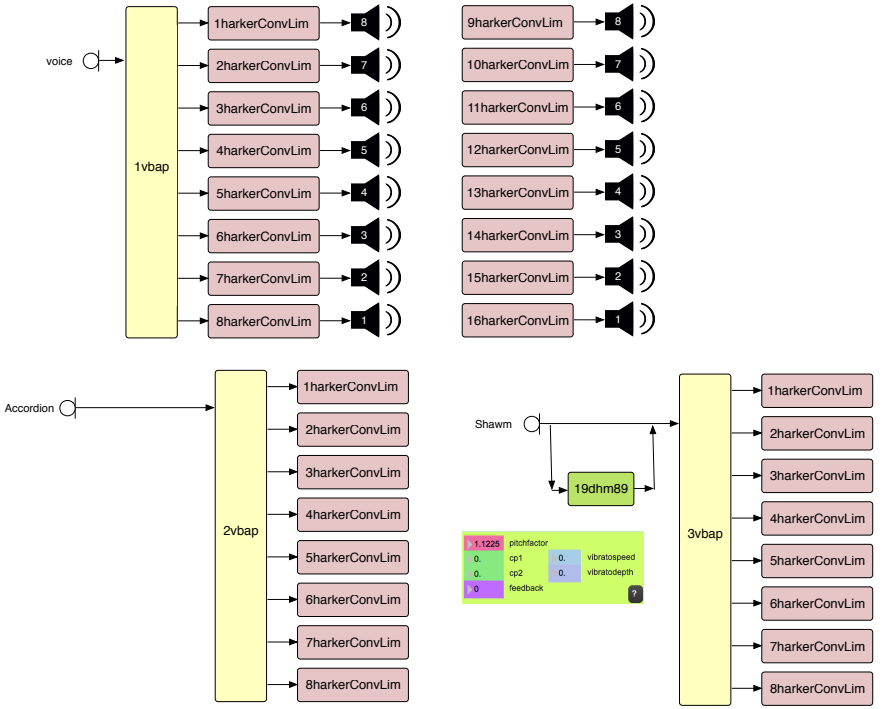

1harkerConv: model 3_Giant Basilica
2harkerConv: model 4_German Large Church
3harkerConv: model 5_German Concert Hall
4harkerConv: model 5_German Concert Hall
5harkerConv: model 6_BM7 Hall Small
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 8_ECRR Wooden Hall
8harkerConv: model 8_ECRR Wooden Hall

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 60.5 69.5 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 2 90 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 60.5 69.5 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 2 90 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 60.5 69.5 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 2 90 degree

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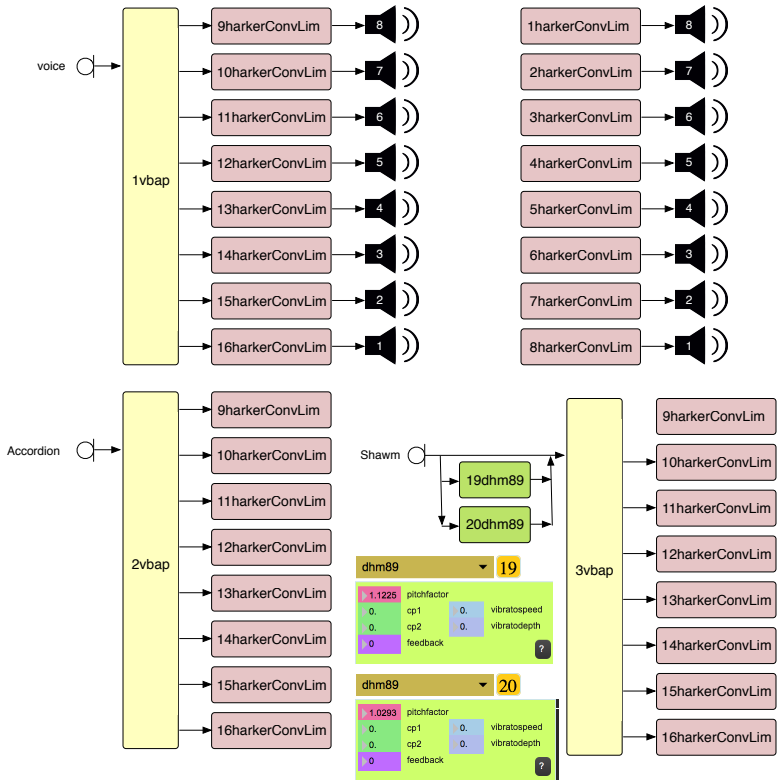

1harkerConv: model 2_NYC Sportscenter
2harkerConv: model 4_German Large Church
3harkerConv: model 4_German Large Church
4harkerConv: model 5_German Concert Hall
5harkerConv: model 5_German Concert Hall
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 7_BM7 Vocal Chamber
8harkerConv: model 8_ECRR Wooden Hall

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 60.5 71.5 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 45 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 60.5 71.5 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 45 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 60.5 71.5 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 45 degree

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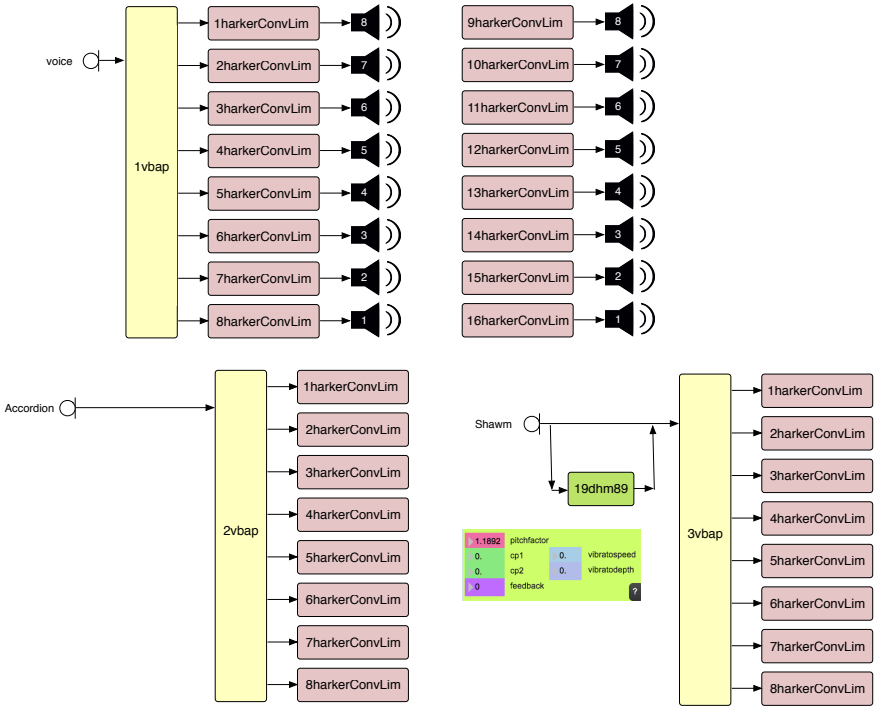

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 2_NYC Sportscenter
3harkerConv: model 3_Giant Basilica
4harkerConv: model 4_German Large Church
5harkerConv: model 5_German Concert Hall
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 7_BM7 Vocal Chamber
8harkerConv: model 7_BM7 Vocal Chamber

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 65.5 120 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 90 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 65.5 120 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 90 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 65.5 120 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 90 degree

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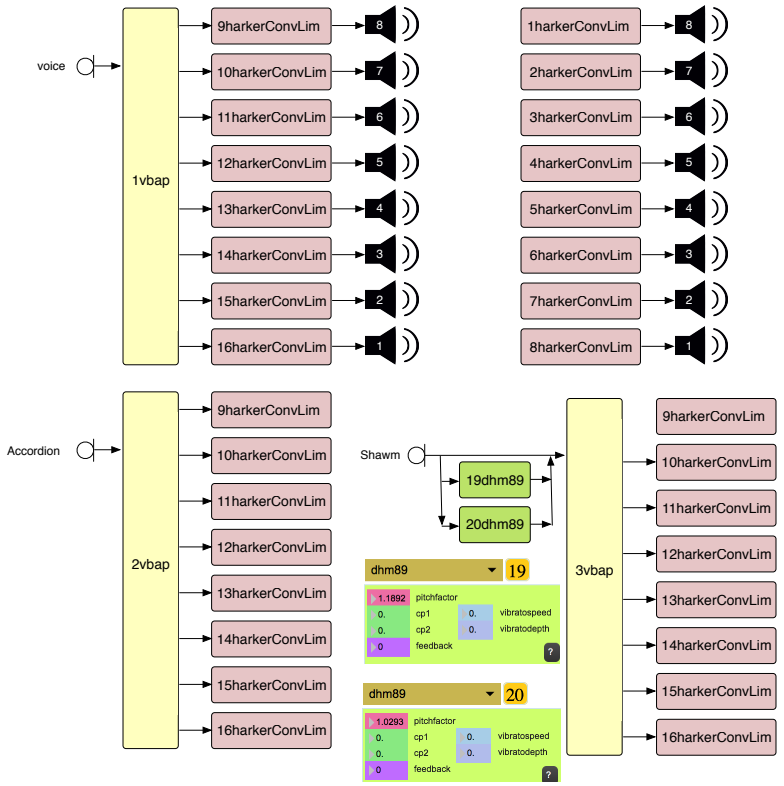

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 2_NYC Sportscenter
3harkerConv: model 3_Giant Basilica
4harkerConv: model 4_German Large Church
5harkerConv: model 5_German Concert Hall
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 7_BM7 Vocal Chamber
8harkerConv: model 8_ECRR Wooden Hall

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 65.5 120 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 135 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 65.5 120 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 135 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 65.5 120 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 135 degree

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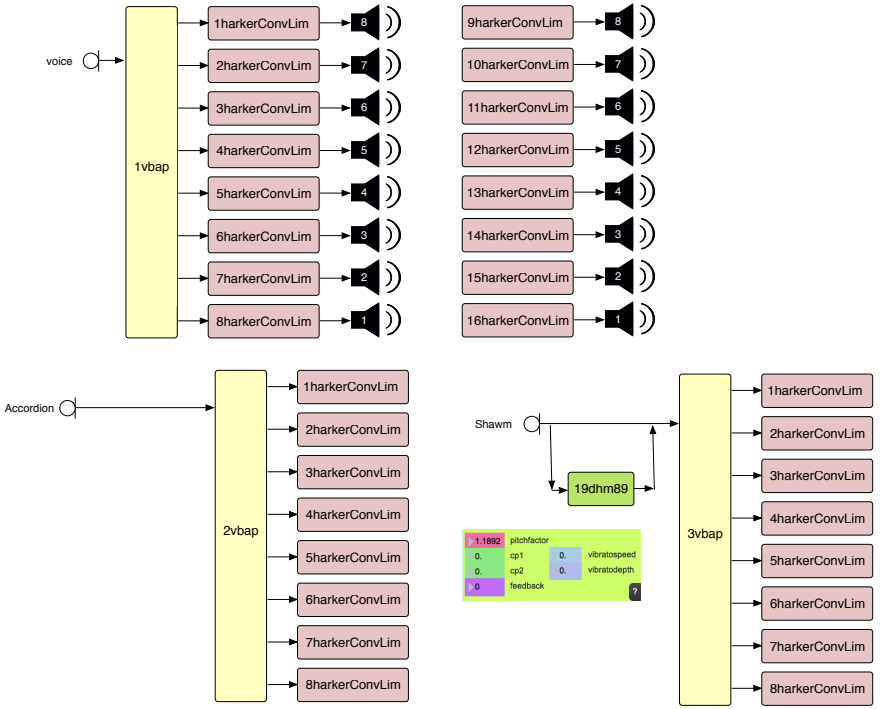

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 2_NYC Sportscenter
3harkerConv: model 3_Giant Basilica
4harkerConv: model 4_German Large Church
5harkerConv: model 5_German Concert Hall
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 7_BM7 Vocal Chamber
8harkerConv: model 8_ECRR Wooden Hall

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 62.5 75.5 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 180 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 62.5 75.5 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 180 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 62.5 75.5 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 180 degree

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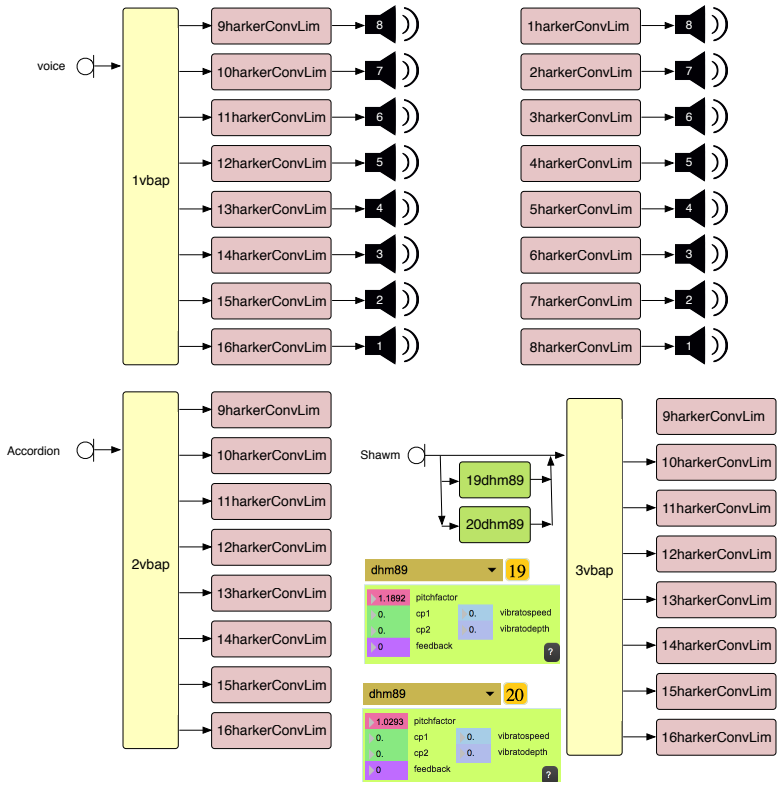

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 2_NYC Sportscenter
4harkerConv: model 3_Giant Basilica
5harkerConv: model 5_German Concert Hall
6harkerConv: model 5_German Concert Hall
7harkerConv: model 6_BM7 Hall Small
8harkerConv: model 6_BM7 Hall Small

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 45.5 to 74.5 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 180 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 45.5 74.5 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 180 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 45.5 74.5 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 180 degree

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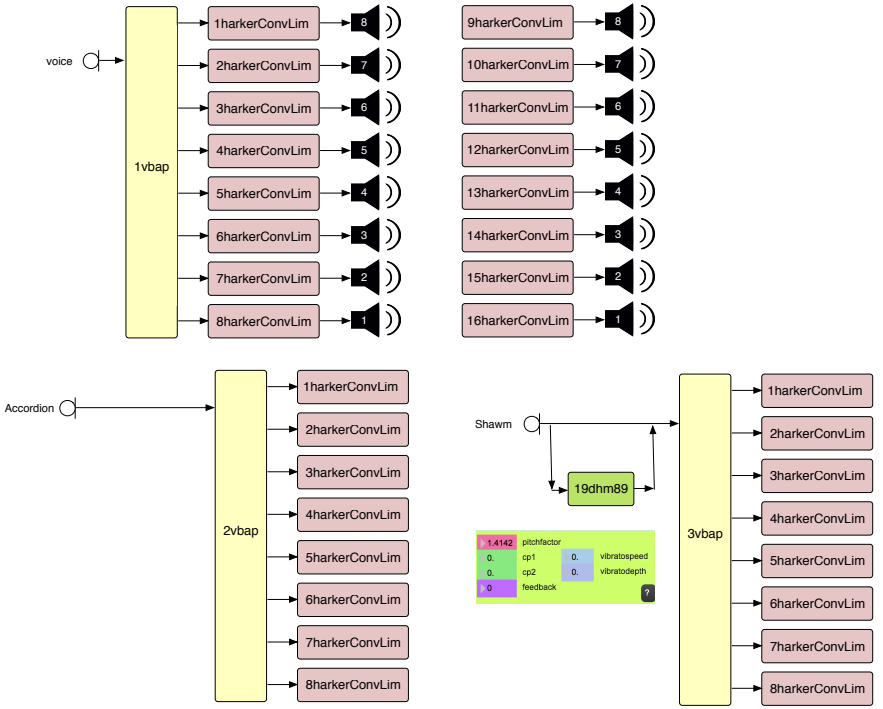

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 2_NYC Sportscenter
4harkerConv: model 2_NYC Sportscenter
5harkerConv: model 3_Giant Basilica
6harkerConv: model 4_German Large Church
7harkerConv: model 5_German Concert Hall
8harkerConv: model 6_BM7 Hall Small

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 45.5 74.5 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 2 135 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 45.5 74.5 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 2 135 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 45.5 74.5 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 2 135 degree

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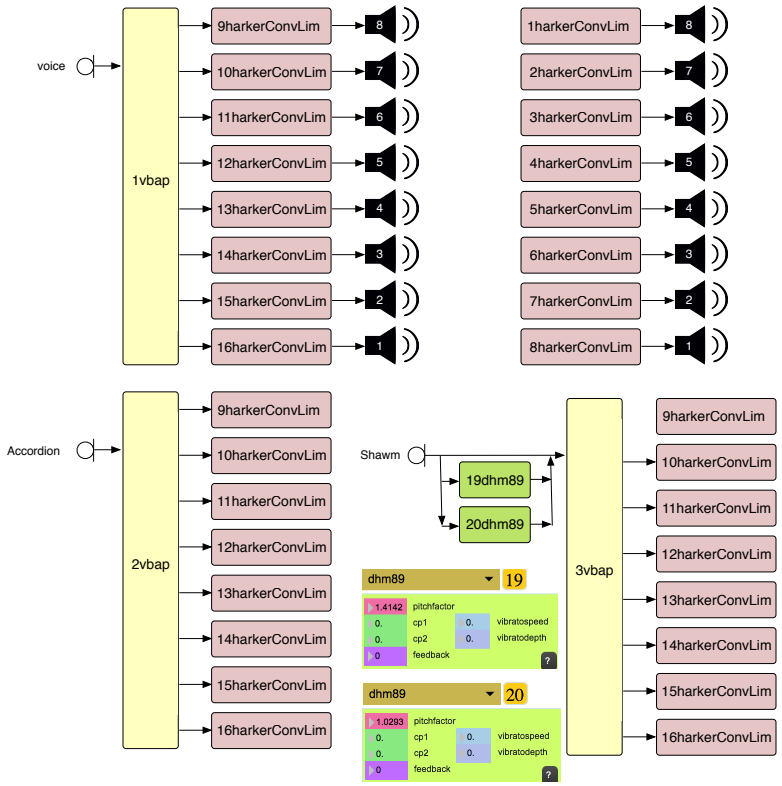

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 2_NYC Sportscenter
4harkerConv: model 2_NYC Sportscenter
5harkerConv: model 3_Giant Basilica
6harkerConv: model 4_German Large Church
7harkerConv: model 4_German Large Church
8harkerConv: model 4_German Large Church

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 59.5 72.5 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 45 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 59.5 72.5 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 45 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 59.5 72.5 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 45 degree

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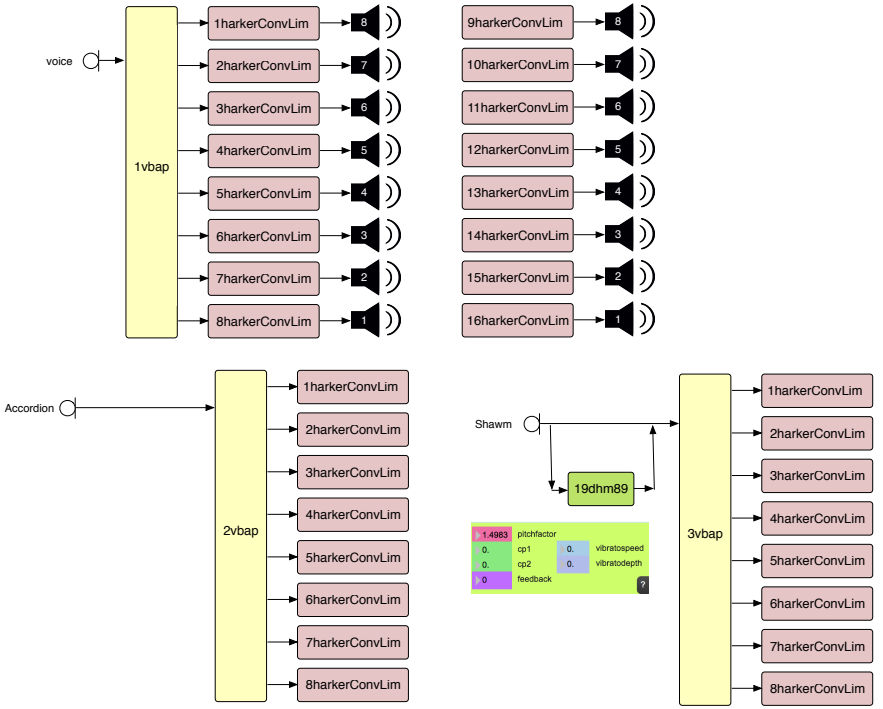

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 2_NYC Sportscenter
4harkerConv: model 2_NYC Sportscenter
5harkerConv: model 3_Giant Basilica
6harkerConv: model 4_German Large Church
7harkerConv: model 4_German Large Church
8harkerConv: model 4_German Large Church

All peak limiters at -10dB
The loudness (trim) of the dhm is controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 60 120 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 45 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 60 120 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 45 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 60 120 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 45 degree

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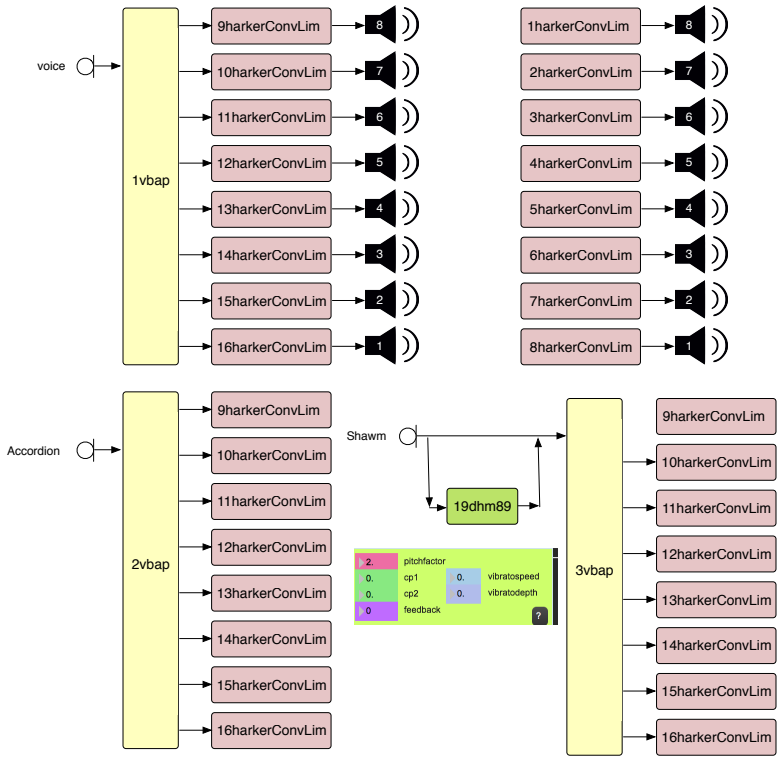

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 2_NYC Sportscenter
4harkerConv: model 2_NYC Sportscenter
5harkerConv: model 3_Giant Basilica
6harkerConv: model 4_German Large Church
7harkerConv: model 4_German Large Church
8harkerConv: model 4_German Large Church

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 59.5 72.5 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 45 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 59.5 72.5 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 45 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 59.5 72.5 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 45 degree

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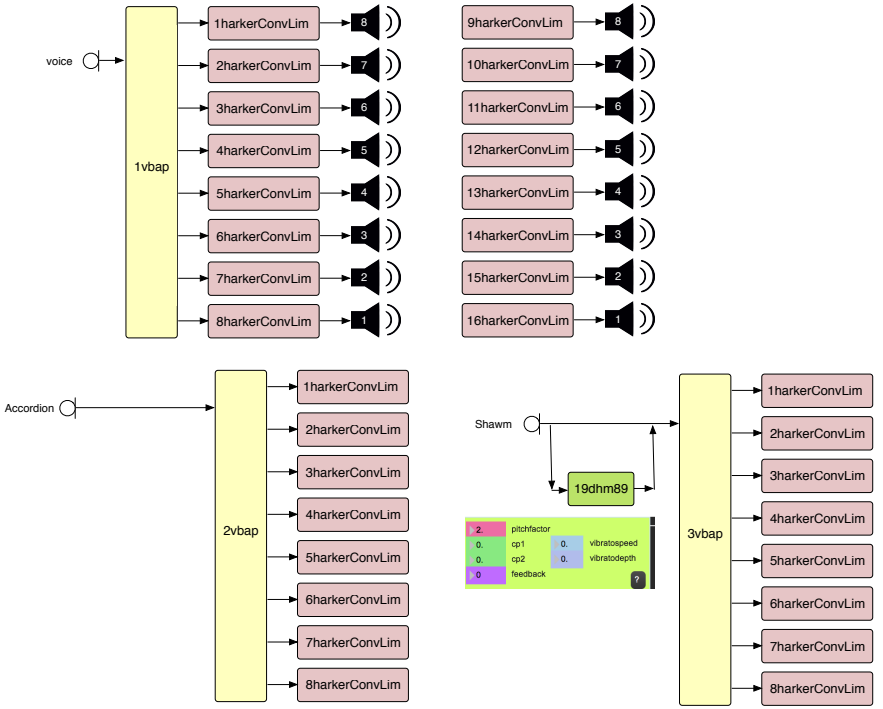

1harkerConv: model 8_ECRR Wooden Hall
2harkerConv: model 7_BM7 Vocal Chamber
3harkerConv: model 6_BM7 Hall Small
4harkerConv: model 5_German Concert Hall
5harkerConv: model 4_German Large Church
6harkerConv: model 3_Giant Basilica
7harkerConv: model 2_NYC Sportscenter
8harkerConv: model 1_Hamilton Mausoleum

All peak limiters at -10dB
The loudness (trim) of the dhm is controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 59.5 74.5 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 180 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 59.5 74.5 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 180 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 59.5 74.5 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 180 degree

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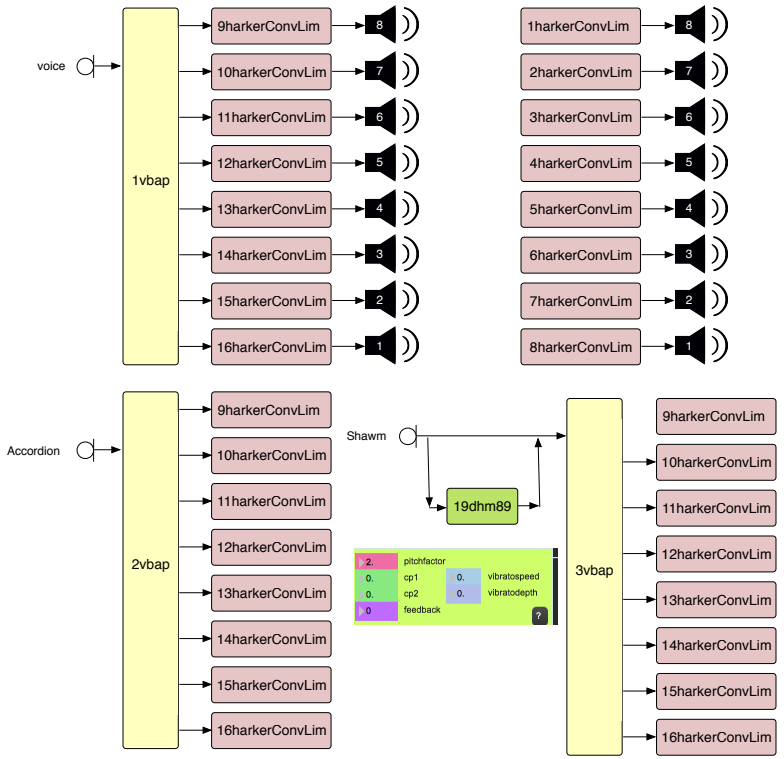

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 2_NYC Sportscenter
3harkerConv: model 3_Giant Basilica
4harkerConv: model 4_German Large Church
5harkerConv: model 5_German Concert Hall
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 7_BM7 Vocal Chamber
8harkerConv: model 8_ECRR Wooden Hall

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 59.5 74.5 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 180 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 59.5 74.5 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 180 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 59.5 74.5 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 180 degree

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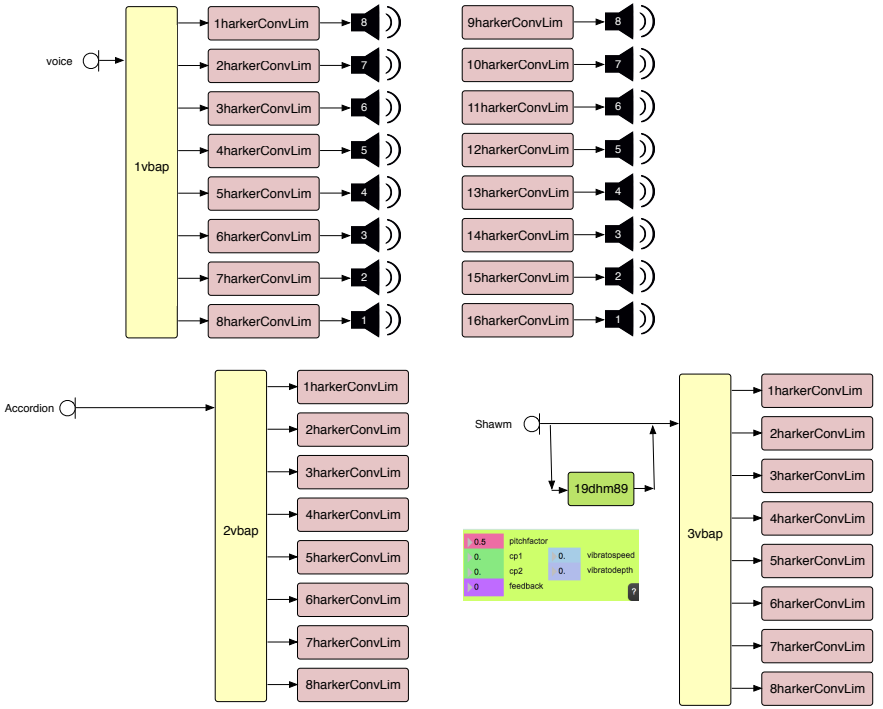

1harkerConv: model 8_ECRR Wooden Hall
2harkerConv: model 7_BM7 Vocal Chamber
3harkerConv: model 6_BM7 Hall Small
4harkerConv: model 5_German Concert Hall
5harkerConv: model 4_German Large Church
6harkerConv: model 3_Giant Basilica
7harkerConv: model 2_NYC Sportscenter
8harkerConv: model 1_Hamilton Mausoleum

All peak limiters at -10dB
The loudness (trim) of the dhm is controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 59.5 74.5 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 180 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 59.5 74.5 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 180 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 59.5 74.5 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 180 degree

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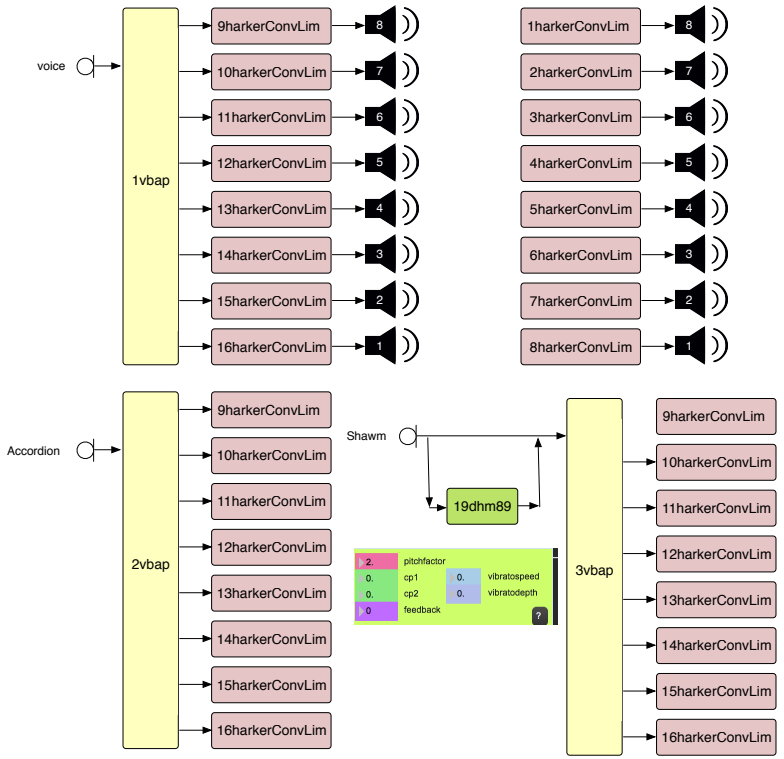

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 2_NYC Sportscenter
3harkerConv: model 3_Giant Basilica
4harkerConv: model 4_German Large Church
5harkerConv: model 5_German Concert Hall
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 7_BM7 Vocal Chamber
8harkerConv: model 8_ECRR Wooden Hall

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 59.5 74.5 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 180 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 59.5 74.5 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 180 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 59.5 74.5 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 180 degree

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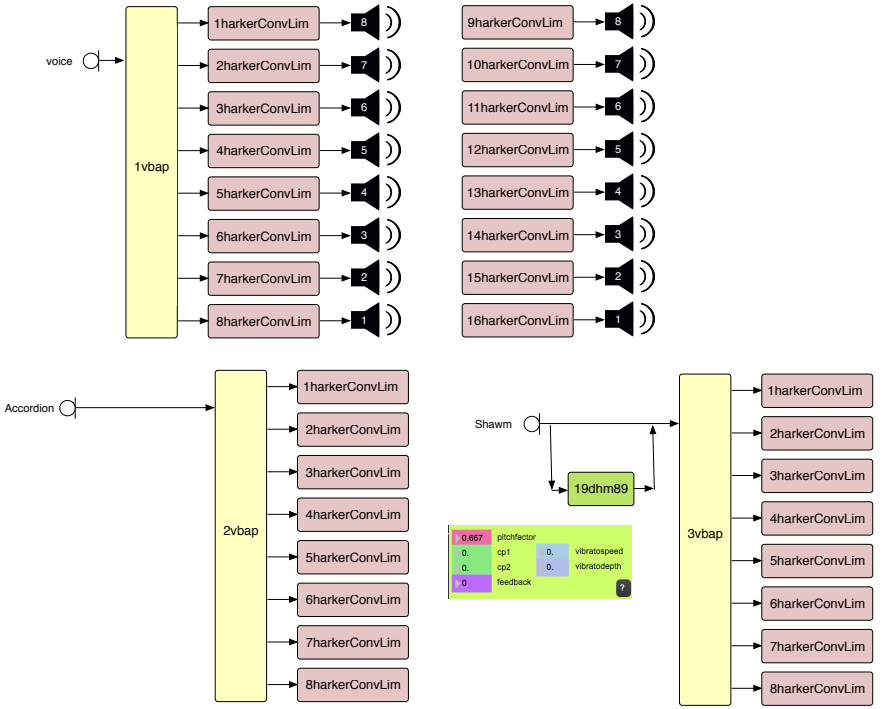

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 2_NYC Sportscenter
3harkerConv: model 3_Giant Basilica
4harkerConv: model 4_German Large Church
5harkerConv: model 5_German Concert Hall
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 7_BM7 Vocal Chamber
8harkerConv: model 8_ECRR Wooden Hall

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 56.5 63.5 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 30 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 56.5 63.5 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 30 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 56.5 63.5 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 30 degree

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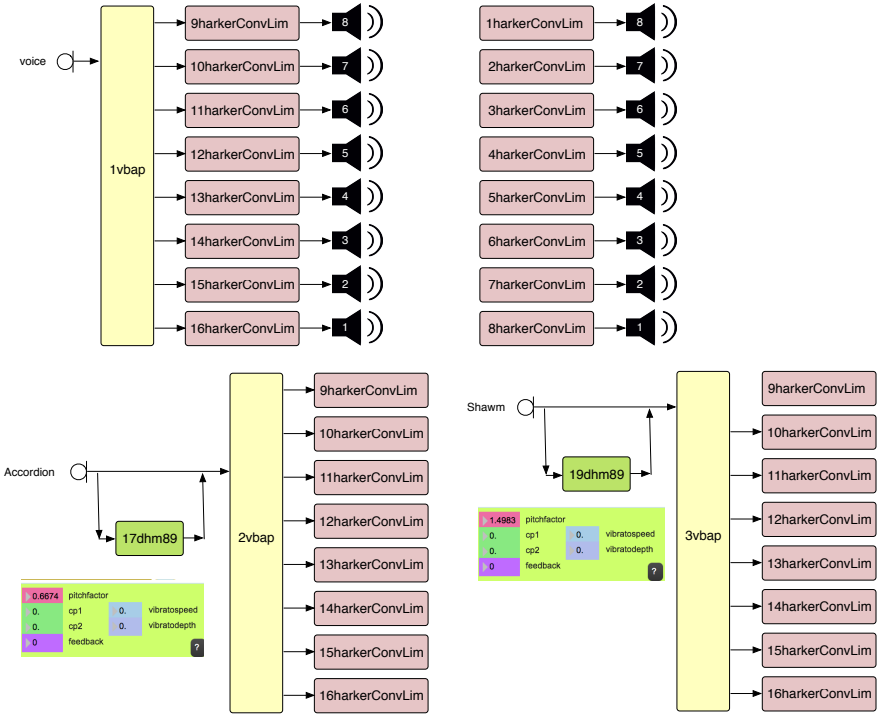

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 2_NYC Sportscenter
3harkerConv: model 3_Giant Basilica
4harkerConv: model 4_German Large Church
5harkerConv: model 5_German Concert Hall
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 7_BM7 Vocal Chamber
8harkerConv: model 8_ECRR Wooden Hall

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 56.5 63.5 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 15 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 56.5 63.5 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 15 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 56.5 63.5 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 15 degree

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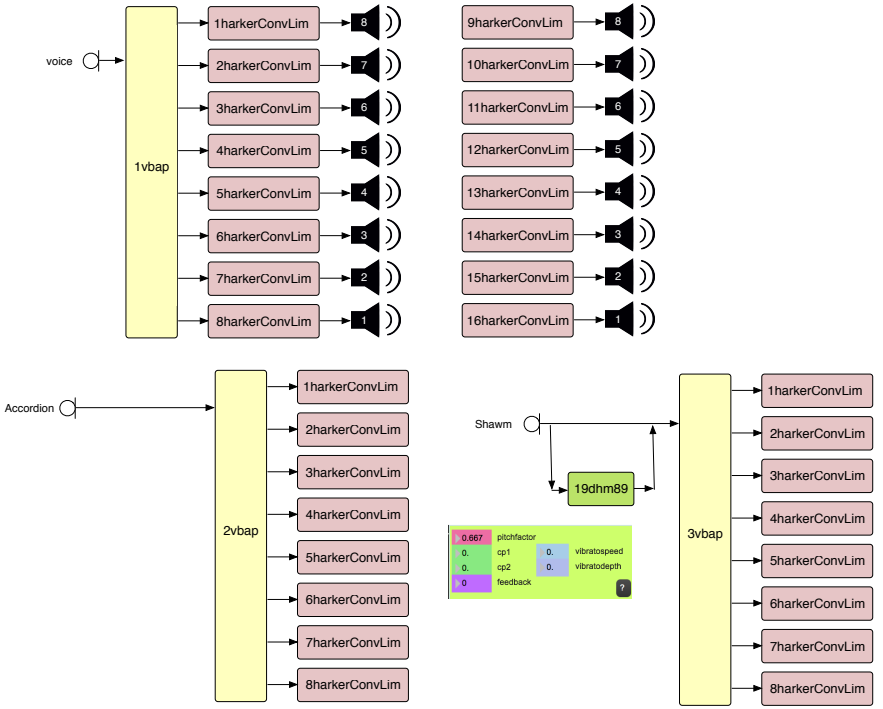

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 2_NYC Sportscenter
3harkerConv: model 3_Giant Basilica
4harkerConv: model 4_German Large Church
5harkerConv: model 5_German Concert Hall
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 7_BM7 Vocal Chamber
8harkerConv: model 8_ECRR Wooden Hall

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 67.5 69.5 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 30 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 67.5 69.5 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 30 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 67.5 69.5 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 30 degree

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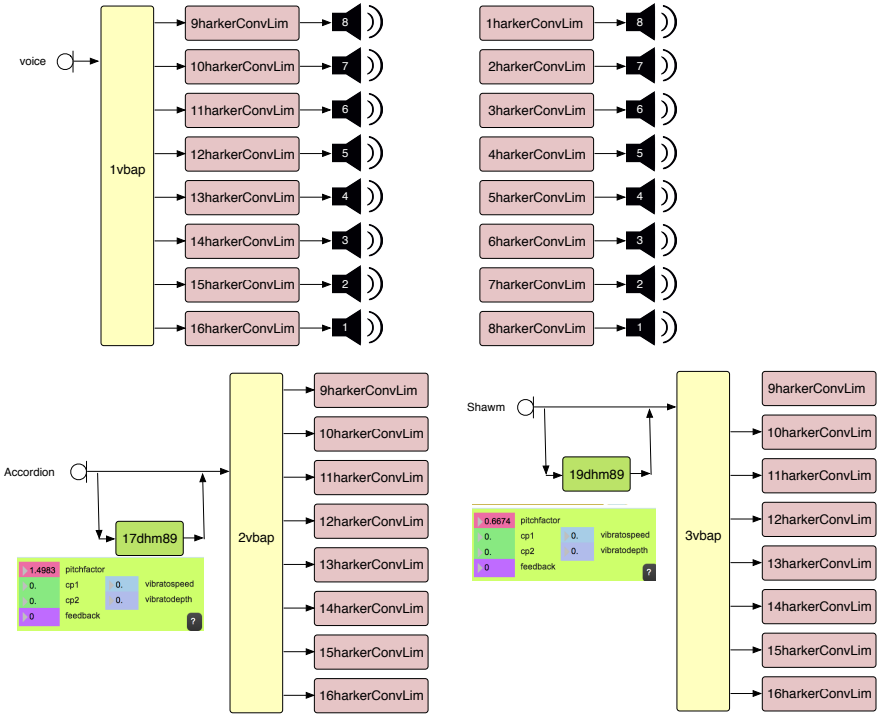

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 2_NYC Sportscenter
3harkerConv: model 3_Giant Basilica
4harkerConv: model 4_German Large Church
5harkerConv: model 5_German Concert Hall
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 7_BM7 Vocal Chamber
8harkerConv: model 8_ECRR Wooden Hall

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 54.5 63.5 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 15 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 54.5 63.5 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 15 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 54.5 63.5 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 15 degree

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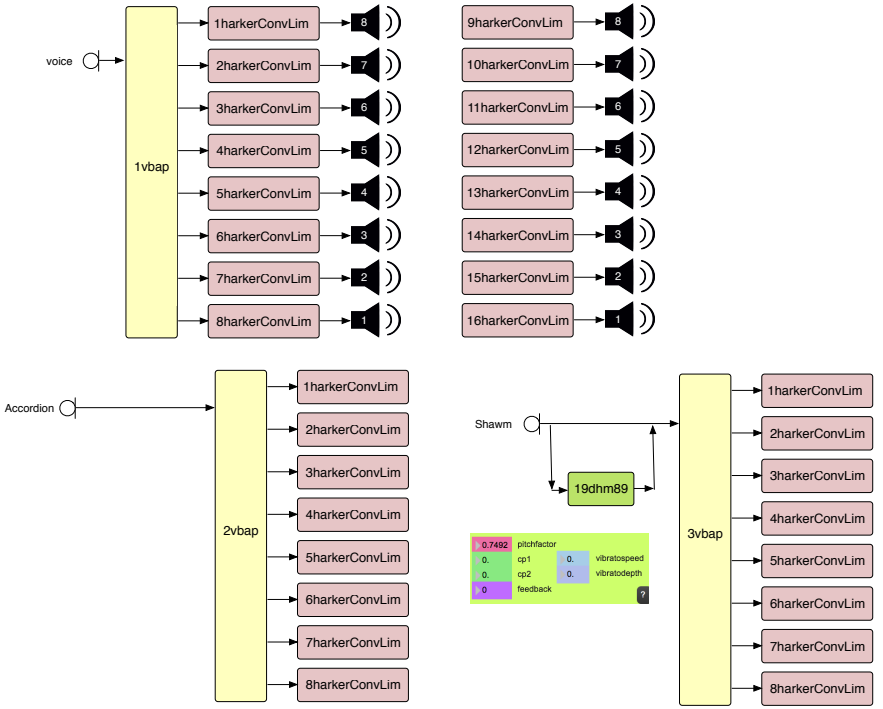

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 2_NYC Sportscenter
3harkerConv: model 3_Giant Basilica
4harkerConv: model 4_German Large Church
5harkerConv: model 5_German Concert Hall
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 7_BM7 Vocal Chamber
8harkerConv: model 8_ECRR Wooden Hall

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 55.5 69.5 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 30 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 55.5 69.5 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 30 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 55.5 69.5 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 30 degree

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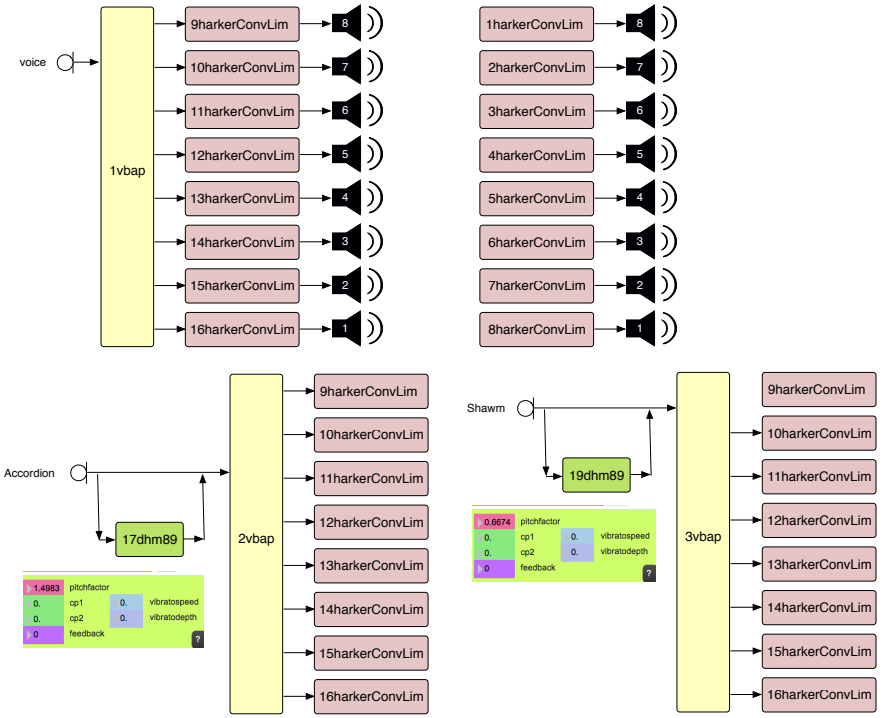

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 2_NYC Sportscenter
3harkerConv: model 3_Giant Basilica
4harkerConv: model 4_German Large Church
5harkerConv: model 5_German Concert Hall
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 7_BM7 Vocal Chamber
8harkerConv: model 8_ECRR Wooden Hall

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 55.5 70 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 45 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 55.5 70 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 45 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 55.5 70 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 45 degree

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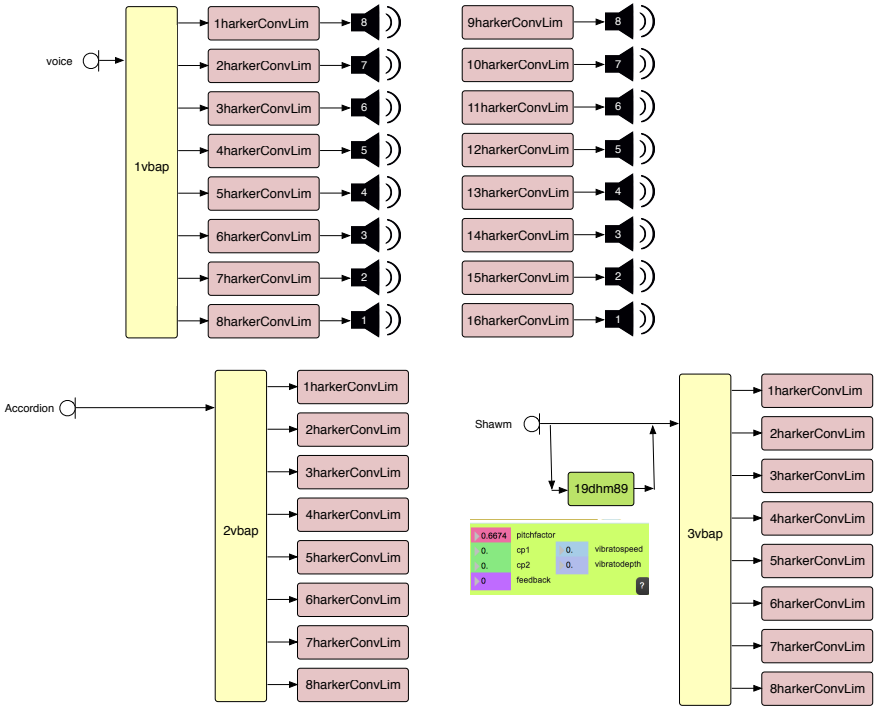

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 2_NYC Sportscenter
3harkerConv: model 3_Giant Basilica
4harkerConv: model 4_German Large Church
5harkerConv: model 5_German Concert Hall
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 7_BM7 Vocal Chamber
8harkerConv: model 8_ECRR Wooden Hall

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 54.5 64.5 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 90 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 54.5 64.5 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 90 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 54.5 64.5 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 90 degree

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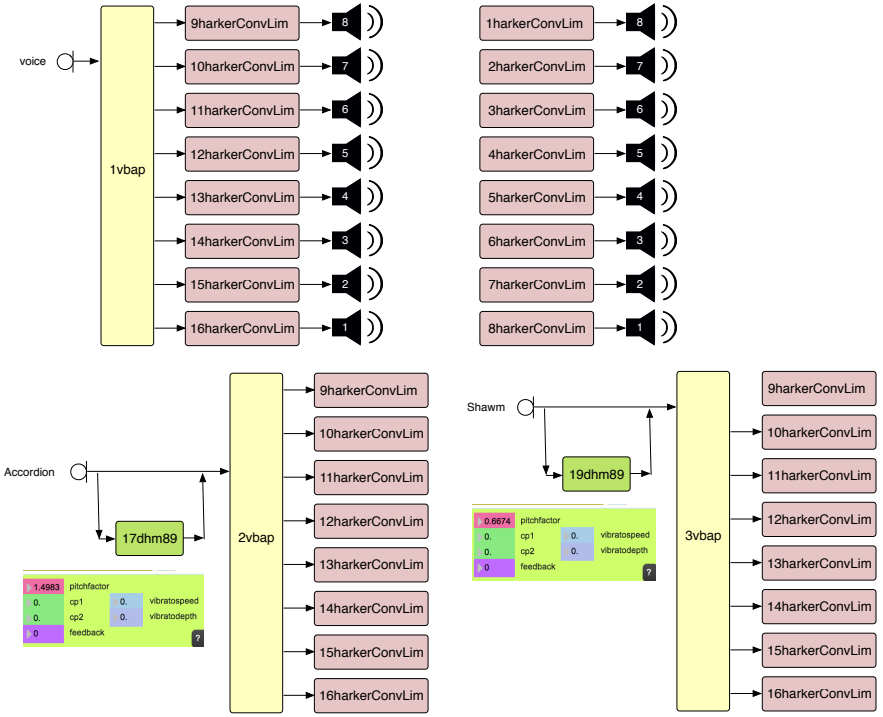

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 2_NYC Sportscenter
3harkerConv: model 3_Giant Basilica
4harkerConv: model 4_German Large Church
5harkerConv: model 5_German Concert Hall
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 7_BM7 Vocal Chamber
8harkerConv: model 8_ECRR Wooden Hall

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 54.5 64.5 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 135 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 54.5 64.5 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 135 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 54.5 64.5 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 135 degree

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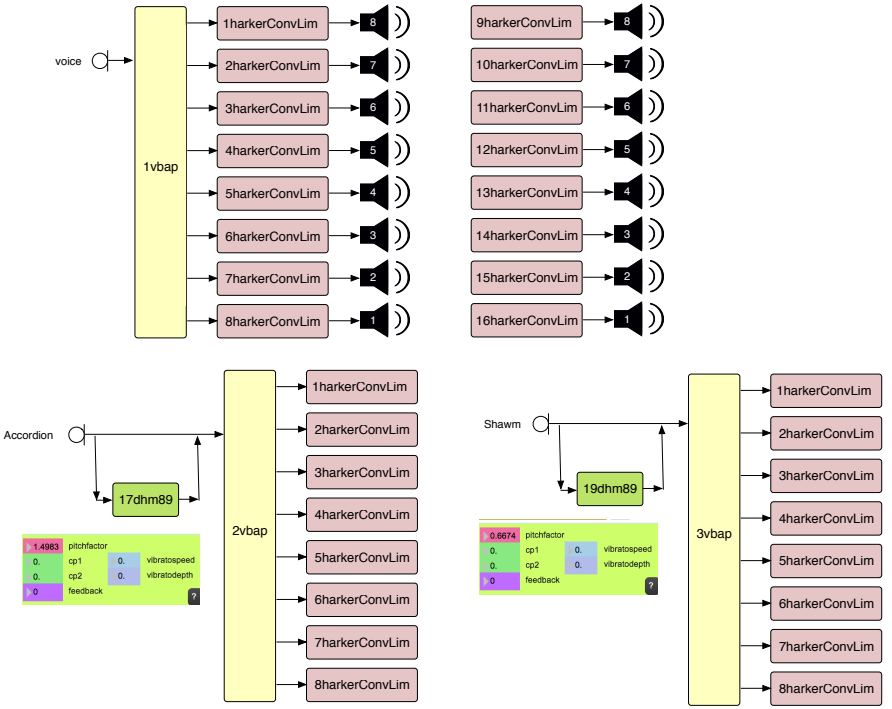

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 2_NYC Sportscenter
3harkerConv: model 3_Giant Basilica
4harkerConv: model 4_German Large Church
5harkerConv: model 5_German Concert Hall
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 7_BM7 Vocal Chamber
8harkerConv: model 8_ECRR Wooden Hall

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 54.5 71 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 180 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 54.5 71 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 180 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 54.5 71 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 180 degree

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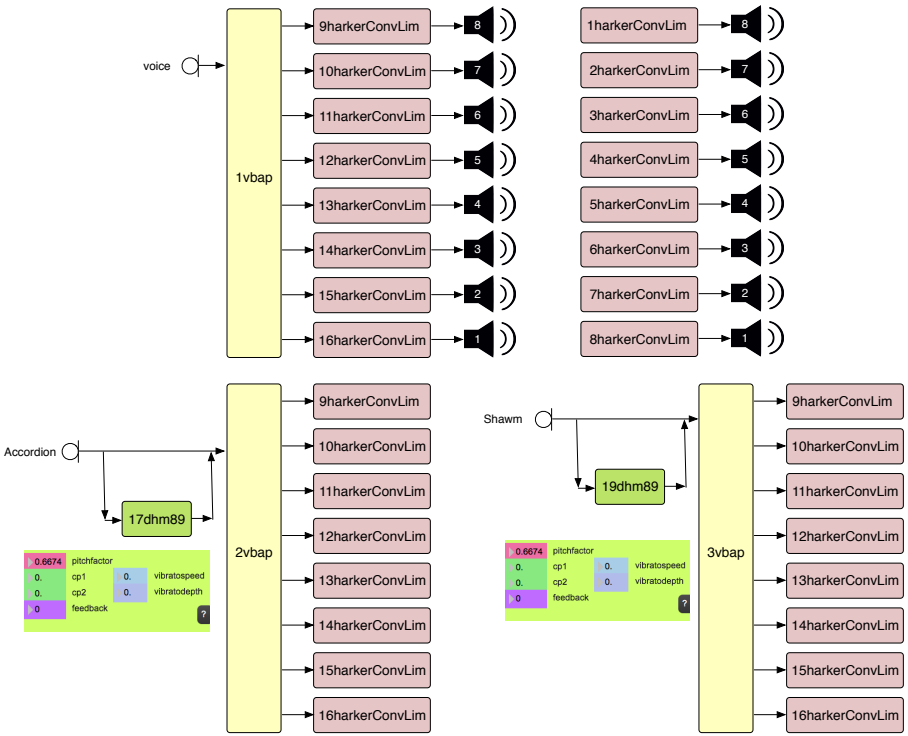
P6A



1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 1_Hamilton Mausoleum
4harkerConv: model 1_Hamilton Mausoleum
5harkerConv: model 1_Hamilton Mausoleum
6harkerConv: model 1_Hamilton Mausoleum
7harkerConv: model 1_Hamilton Mausoleum
8harkerConv: model 1_Hamilton Mausoleum

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the shawm

azimuth1 is controlled by the pitch of the voice, scaling MIDI 66.5 74.5 to 0 360 degree
spread1 is controlled by the timbre of the voice, scaling 0 10 to 2 45 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 66.5 74.5 to 180 540 degree
spread2 is controlled by the timbre of the voice, scaling 0 10 to 2 45 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 66.5 74.5 to 180 540 degree
spread3 is controlled by the timbre of the voice, scaling 0 10 to 2 45 degree

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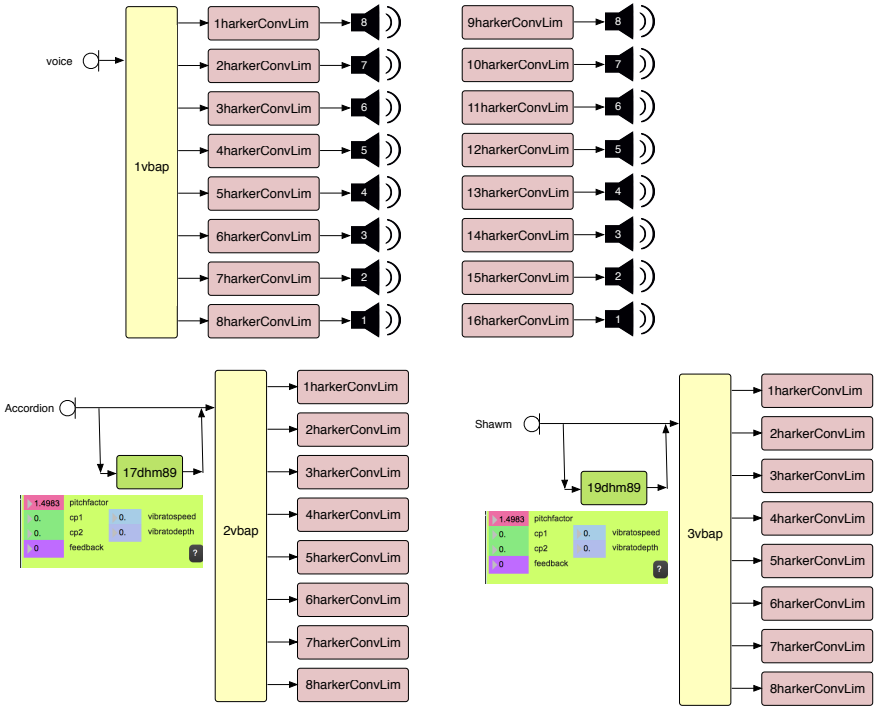

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 1_Hamilton Mausoleum
4harkerConv: model 1_Hamilton Mausoleum
5harkerConv: model 2_NYC Sportscenter
6harkerConv: model 2_NYC Sportscenter
7harkerConv: model 2_NYC Sportscenter
8harkerConv: model 2_NYC Sportscenter

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the shawm

azimuth1 is controlled by the pitch of the voice, scaling MIDI 61 63 to 1 360 degree
spread1 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 61 63 to 181 540 degree
spread2 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 61 63 to 181 540 degree
spread3 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree

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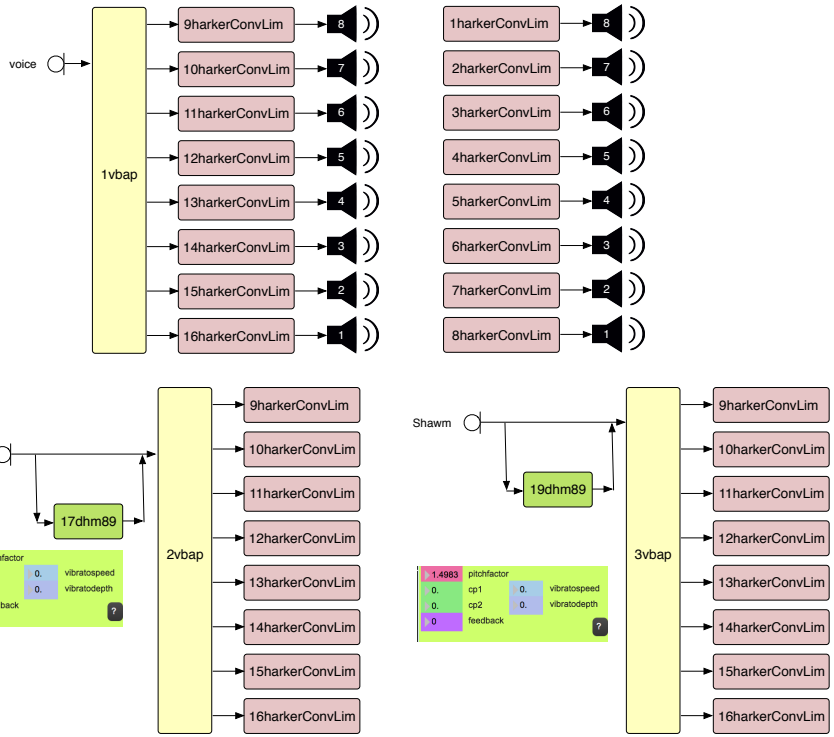

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 2_NYC Sportscenter
4harkerConv: model 2_NYC Sportscenter
5harkerConv: model 3_Giant Basilica
6harkerConv: model 3_Giant Basilica
7harkerConv: model 4_German Large Church
8harkerConv: model 4_German Large Church

All peak limiters at -10dB
The loudness (trim) of the dhms are controlled by the loudness of the shawm

azimuth1 is controlled by the pitch of the voice, scaling MIDI 66.5 67.5 to 0 360 degree
spread1 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 66.5 67.5 to 180 540 degree
spread2 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 66.5 67.5 to 180 540 degree
spread3 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree

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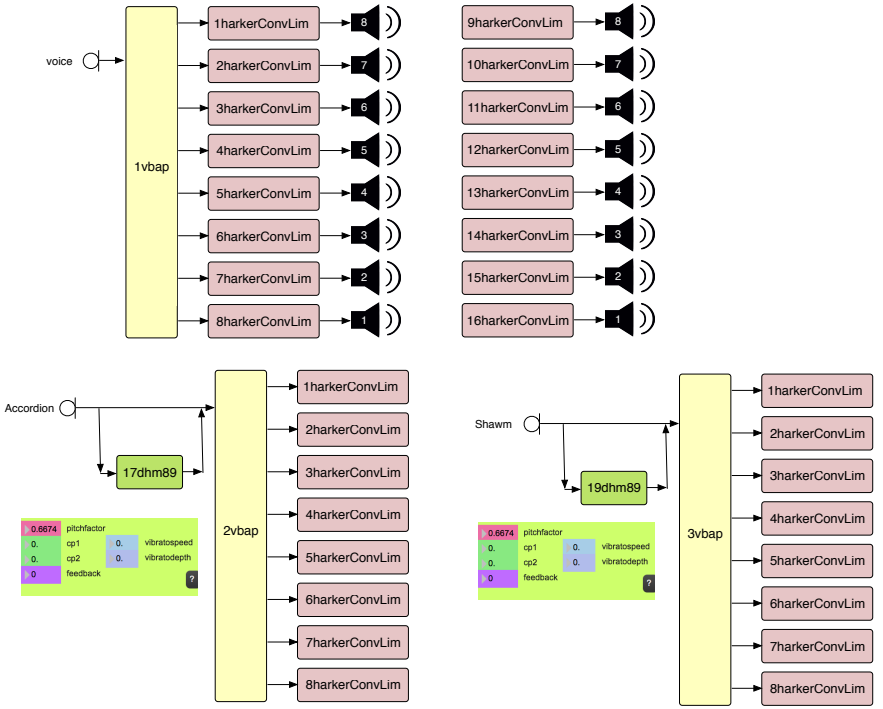

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 1_Hamilton Mausoleum
4harkerConv: model 1_Hamilton Mausoleum
5harkerConv: model 2_NYC Sportscenter
6harkerConv: model 2_NYC Sportscenter
7harkerConv: model 2_NYC Sportscenter
8harkerConv: model 2_NYC Sportscenter

All peak limiters at -10dB

azimuth1 is controlled by the pitch of the voice, scaling MIDI 66.5 67.5 to 0 360 degree
spread1 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 66.5 67.5 to 180 540 degree
spread2 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 66.5 67.5 to 180 540 degree
spread3 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree

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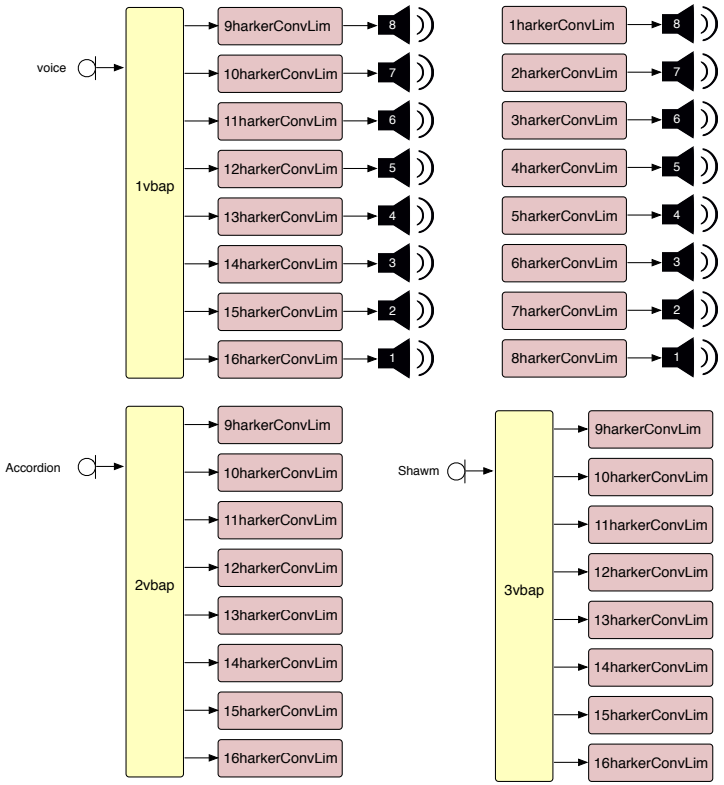
P10A



1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 1_Hamilton Mausoleum
4harkerConv: model 1_Hamilton Mausoleum
5harkerConv: model 2_NYC Sportscenter
6harkerConv: model 2_NYC Sportscenter
7harkerConv: model 2_NYC Sportscenter
8harkerConv: model 2_NYC Sportscenter

All peak limiters at -10dB

azimuth1 is controlled by the pitch of the voice, scaling MIDI 61.5 74.5 to 0 360 degree
spread1 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 61.5 74.5 to 180 540 degree
spread2 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 61.5 74.5 to 180 540 degree
spread3 is controlled by the timbre of the voice, scaling 0 10 to 2 180 degree

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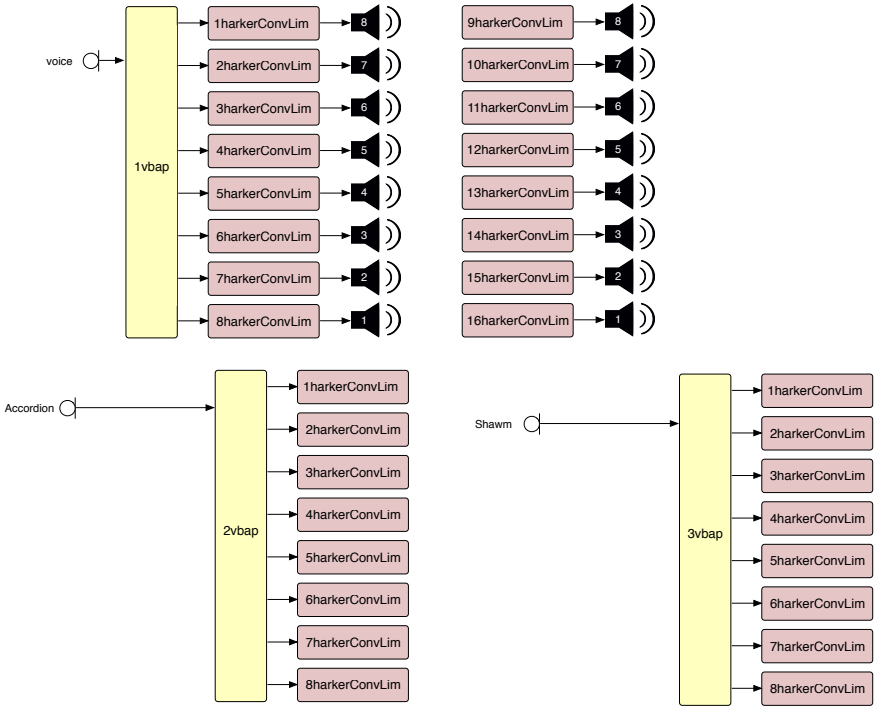

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 1_Hamilton Mausoleum
4harkerConv: model 1_Hamilton Mausoleum
5harkerConv: model 1_Hamilton Mausoleum
6harkerConv: model 1_Hamilton Mausoleum
7harkerConv: model 1_Hamilton Mausoleum
8harkerConv: model 1_Hamilton Mausoleum

All peak limiters at -10dB

azimuth1 is controlled by the pitch of the voice, scaling MIDI 61.5 72.5 to 0 360 degree;
spread1 isControlledBy timbre1 scaling 0 10 to 2 45 degree;
azimuth2 is controlled by the pitch of the voice, scaling MIDI 61.5 72.5 to 180 540 degree;
spread2 isControlledBy timbre1 scaling 0 10 to 2 45 degree;
azimuth3 is controlled by the pitch of the voice, scaling MIDI 61.5 72.5 to 180 540 degree;
spread3 isControlledBy timbre1 scaling 0 10 to 2 45 degree;

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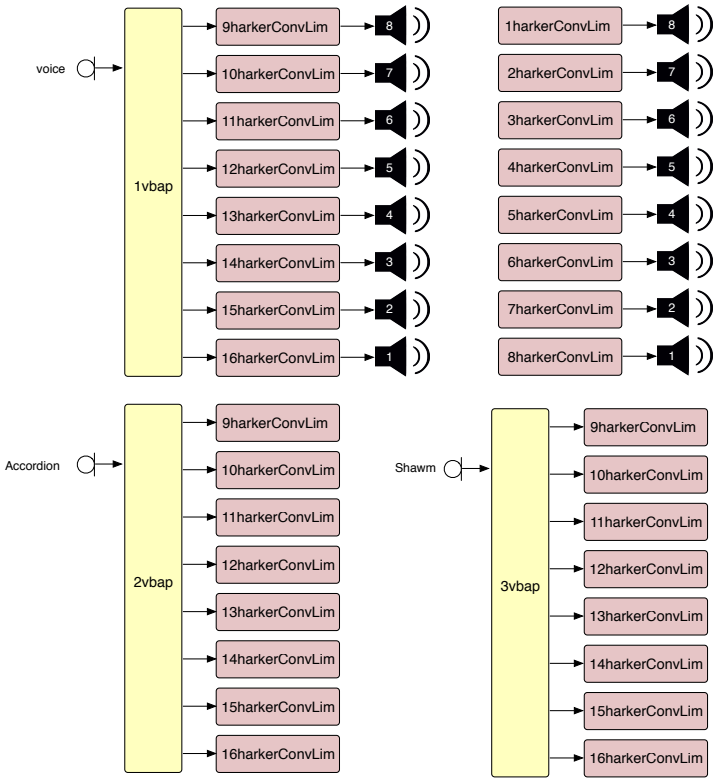

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 1_Hamilton Mausoleum
4harkerConv: model 1_Hamilton Mausoleum
5harkerConv: model 1_Hamilton Mausoleum
6harkerConv: model 1_Hamilton Mausoleum
7harkerConv: model 1_Hamilton Mausoleum
8harkerConv: model 1_Hamilton Mausoleum

All peak limiters at -10dB

azimuth1 is controlled by the pitch of the voice, scaling MIDI 30 120 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 15 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 30 120 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 15 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 30 120 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 15 degree

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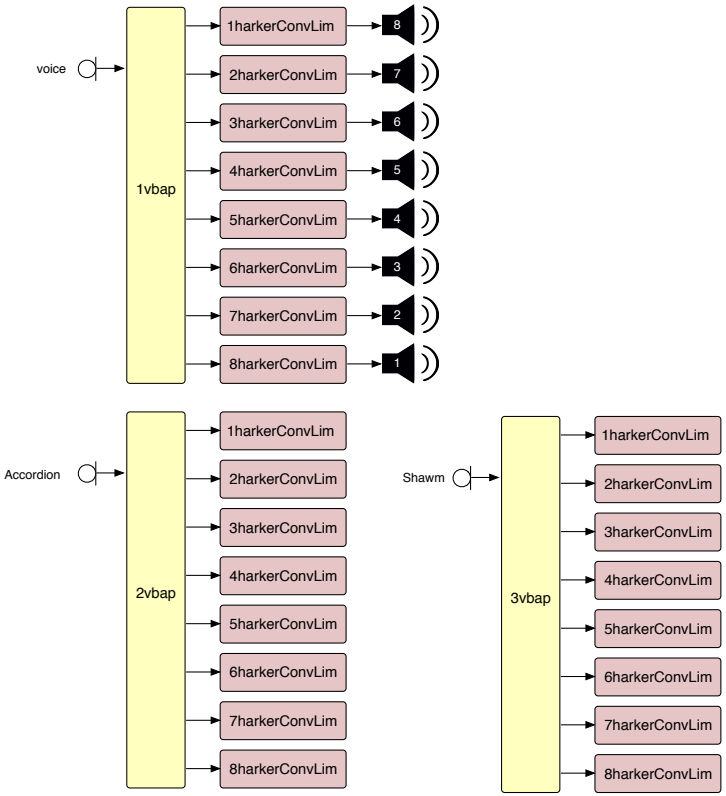

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 1_Hamilton Mausoleum
4harkerConv: model 1_Hamilton Mausoleum
5harkerConv: model 2_NYC Sportscenter
6harkerConv: model 2_NYC Sportscenter
7harkerConv: model 2_NYC Sportscenter
8harkerConv: model 2_NYC Sportscenter

All peak limiters at -10dB

azimuth1 is controlled by the pitch of the voice, scaling MIDI 30 120 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 15 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 30 120 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 15 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 30 120 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 15 degree

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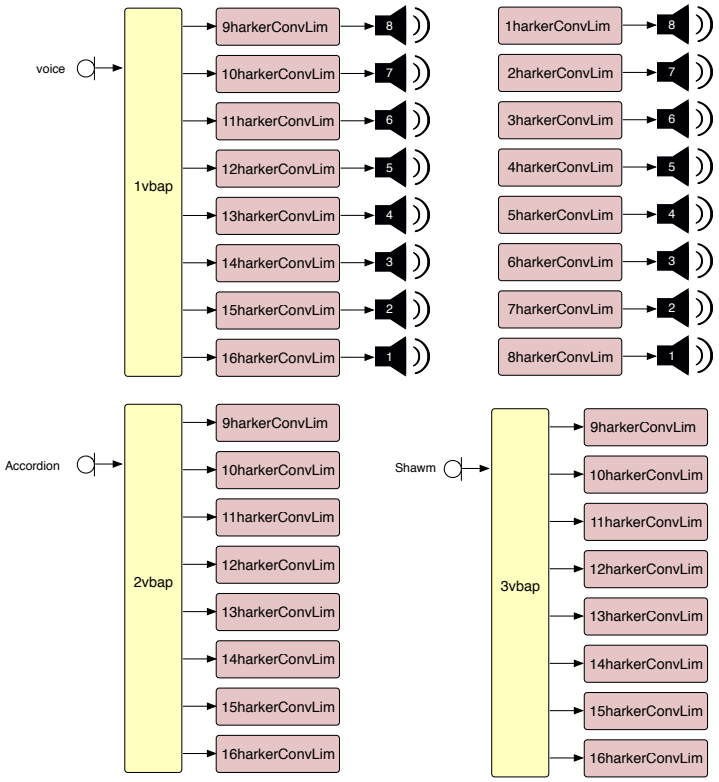

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 1_Hamilton Mausoleum
4harkerConv: model 2_NYC Sportscenter
5harkerConv: model 2_NYC Sportscenter
6harkerConv: model 2_NYC Sportscenter
7harkerConv: model 3_Giant Basilica
8harkerConv: model 3_Giant Basilica

All peak limiters at -10dB

azimuth1 is controlled by the pitch of the voice, scaling MIDI 30 120 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 15 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 30 120 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 15 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 30 120 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 15 degree

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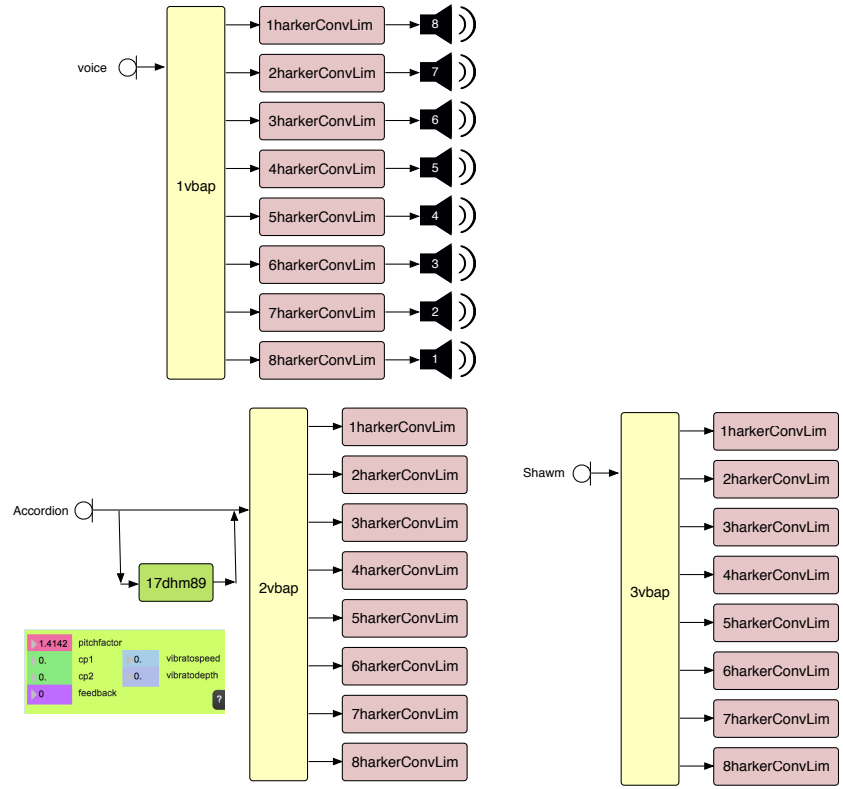

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 1_Hamilton Mausoleum
3harkerConv: model 2_NYC Sportscenter
4harkerConv: model 2_NYC Sportscenter
5harkerConv: model 3_Giant Basilica
6harkerConv: model 3_Giant Basilica
7harkerConv: model 4_German Large Church
8harkerConv: model 4_German Large Church

All peak limiters at -10dB
The loudness (trim) of the dhm is controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 30 120 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 15 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 30 120 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 15 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 30 120 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 15 degree

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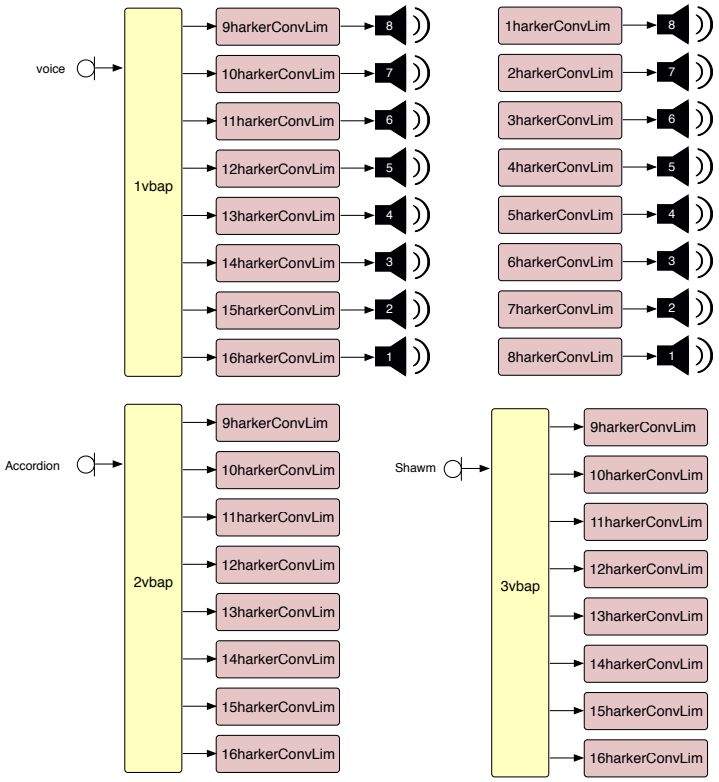
P44



1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 2_NYC Sportscenter
3harkerConv: model 2_NYC Sportscenter
4harkerConv: model 3_Giant Basilica
5harkerConv: model 3_Giant Basilica
6harkerConv: model 4_German Large Church
7harkerConv: model 4_German Large Church
8harkerConv: model 5_German Concert Hall

All peak limiters at -10dB

azimuth1 is controlled by the pitch of the voice, scaling MIDI 30 120 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 15 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 30 120 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 15 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 30 120 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 15 degree

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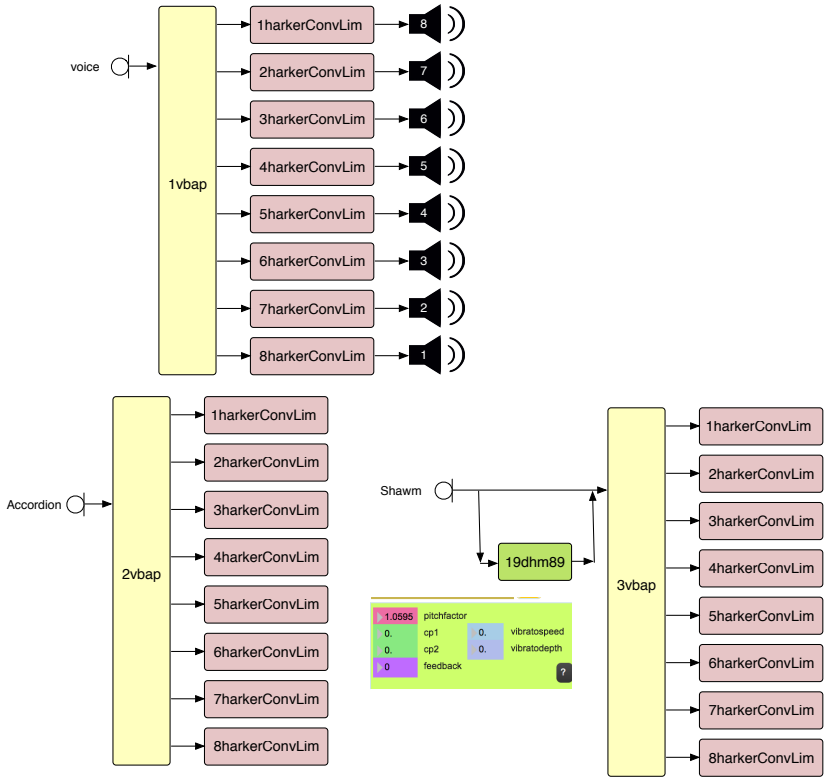

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 2_NYC Sportscenter
3harkerConv: model 3_Giant Basilica
4harkerConv: model 4_German Large Church
5harkerConv: model 4_German Large Church
6harkerConv: model 5_German Concert Hall
7harkerConv: model 5_German Concert Hall
8harkerConv: model 6_BM7 Hall Small

All peak limiters at -10dB
The loudness (trim) of the dhm is controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 30 120 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 30 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 30 120 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 30 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 30 120 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 30 degree

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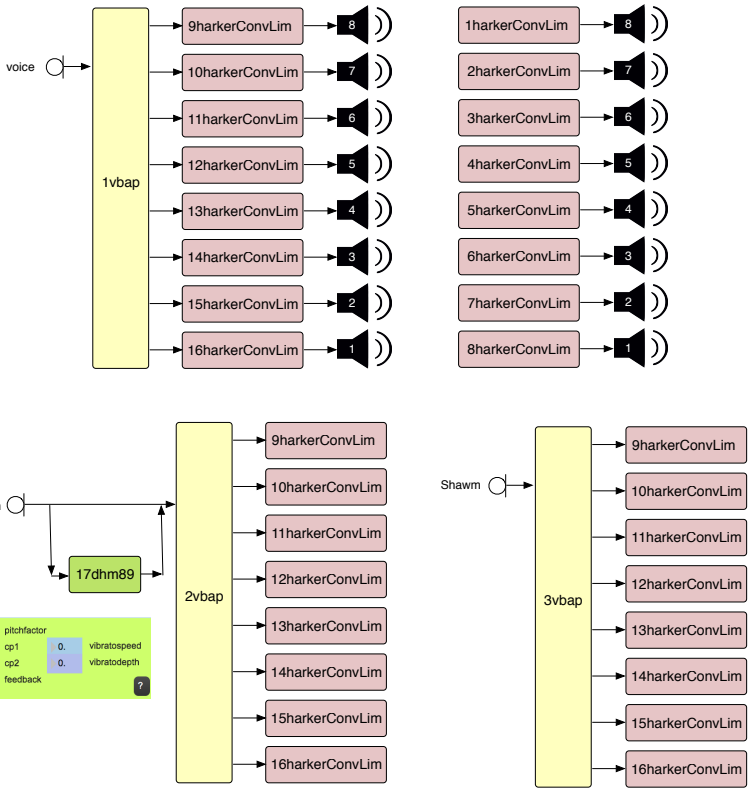

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 2_NYC Sportscenter
3harkerConv: model 3_Giant Basilica
4harkerConv: model 4_German Large Church
5harkerConv: model 5_German Concert Hall
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 7_BM7 Vocal Chamber
8harkerConv: model 7_BM7 Vocal Chamber

All peak limiters at -10dB
The loudness (trim) of the dhm is controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 30 120 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 15 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 30 120 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 15 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 30 120 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 15 degree

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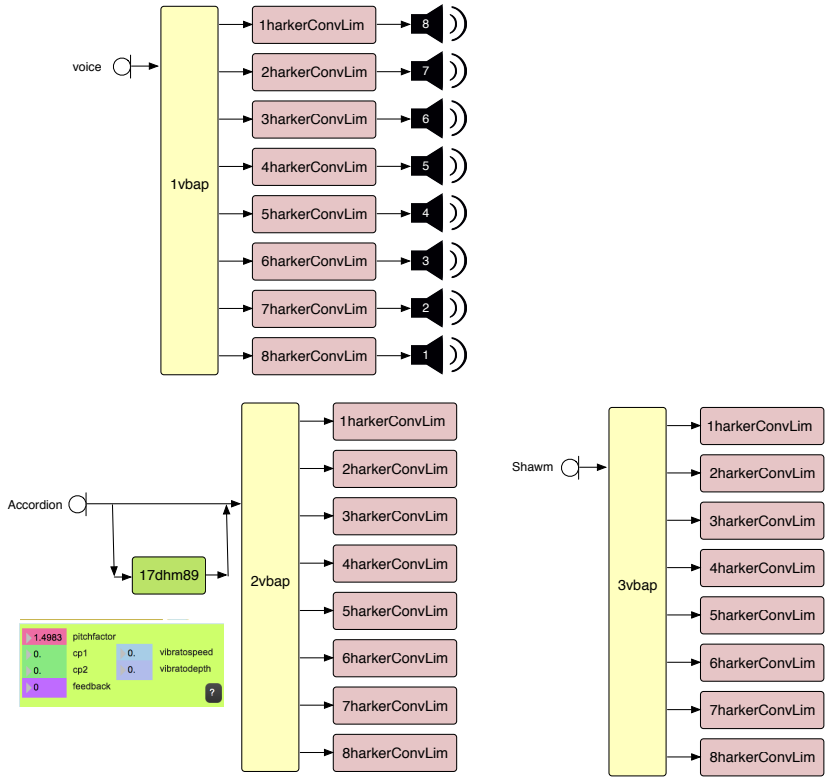

1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 2_NYC Sportscenter
3harkerConv: model 3_Giant Basilica
4harkerConv: model 4_German Large Church
5harkerConv: model 5_German Concert Hall
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 7_BM7 Vocal Chamber
8harkerConv: model 8_ECRR Wooden Hall

All peak limiters at -10dB
The loudness (trim) of the dhm is controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 30 120 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 60 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 30 120 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 60 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 30 120 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 60 degree

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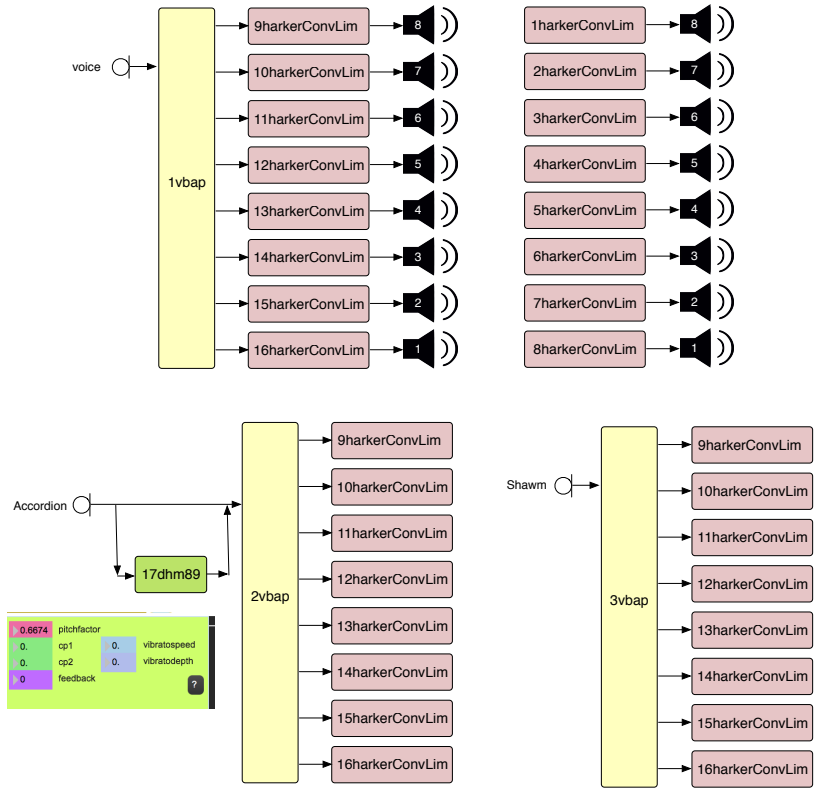


1harkerConv: model 1_Hamilton Mausoleum
2harkerConv: model 2_NYC Sportscenter
3harkerConv: model 3_Giant Basilica
4harkerConv: model 4_German Large Church
5harkerConv: model 5_German Concert Hall
6harkerConv: model 6_BM7 Hall Small
7harkerConv: model 7_BM7 Vocal Chamber
8harkerConv: model 8_ECRR Wooden Hall

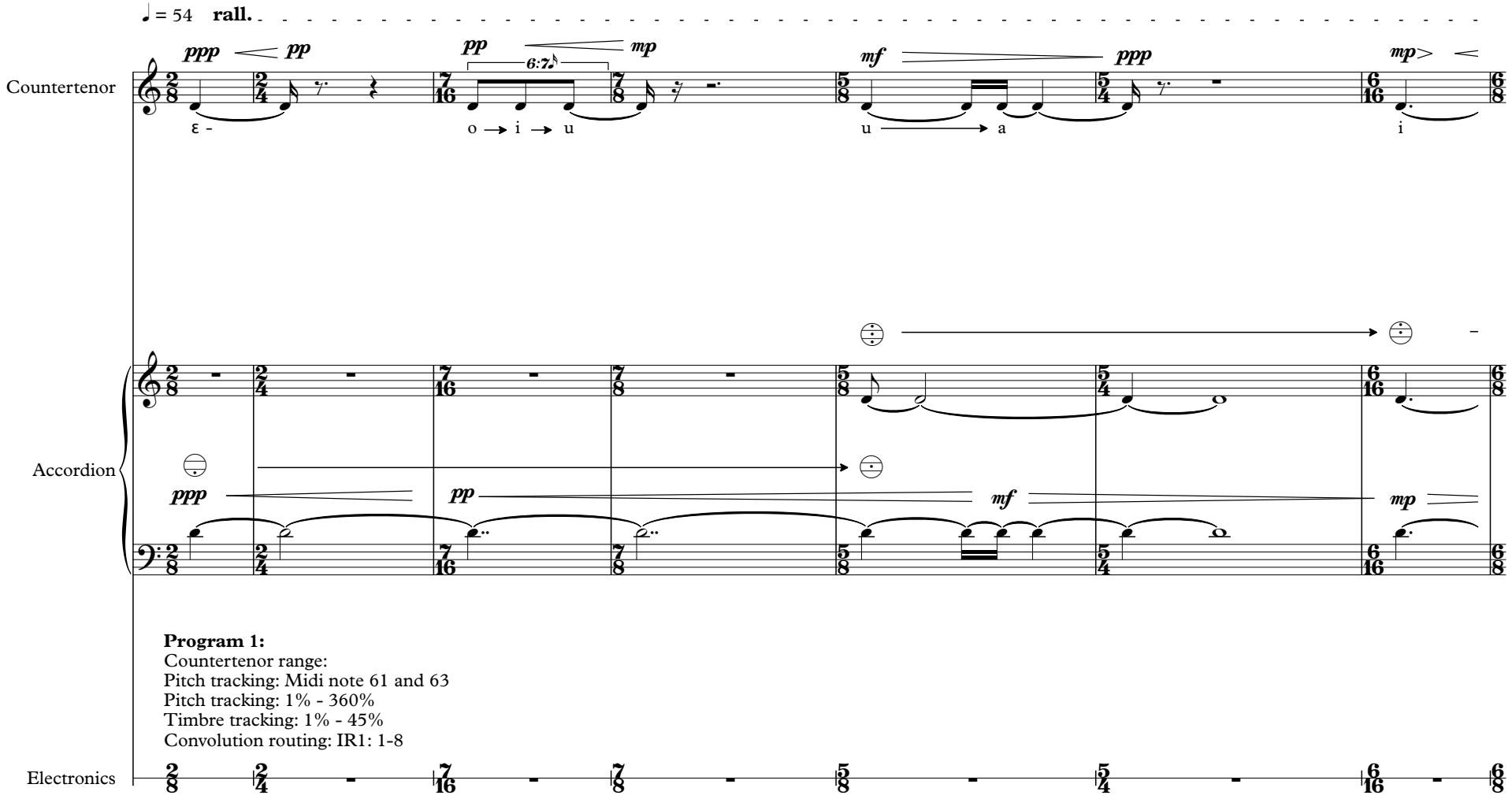
All peak limiters at -10dB
The loudness (trim) of the dhm is controlled by the loudness of the accordion

azimuth1 is controlled by the pitch of the voice, scaling MIDI 61.5 62.5 to 0 360 degree
spread1 isControlledBy timbre1 scaling 0 10 to 2 45 degree
azimuth2 is controlled by the pitch of the voice, scaling MIDI 61.5 62.5 to 180 540 degree
spread2 isControlledBy timbre1 scaling 0 10 to 2 45 degree
azimuth3 is controlled by the pitch of the voice, scaling MIDI 61.5 62.5 to 180 540 degree
spread3 isControlledBy timbre1 scaling 0 10 to 2 45 degree

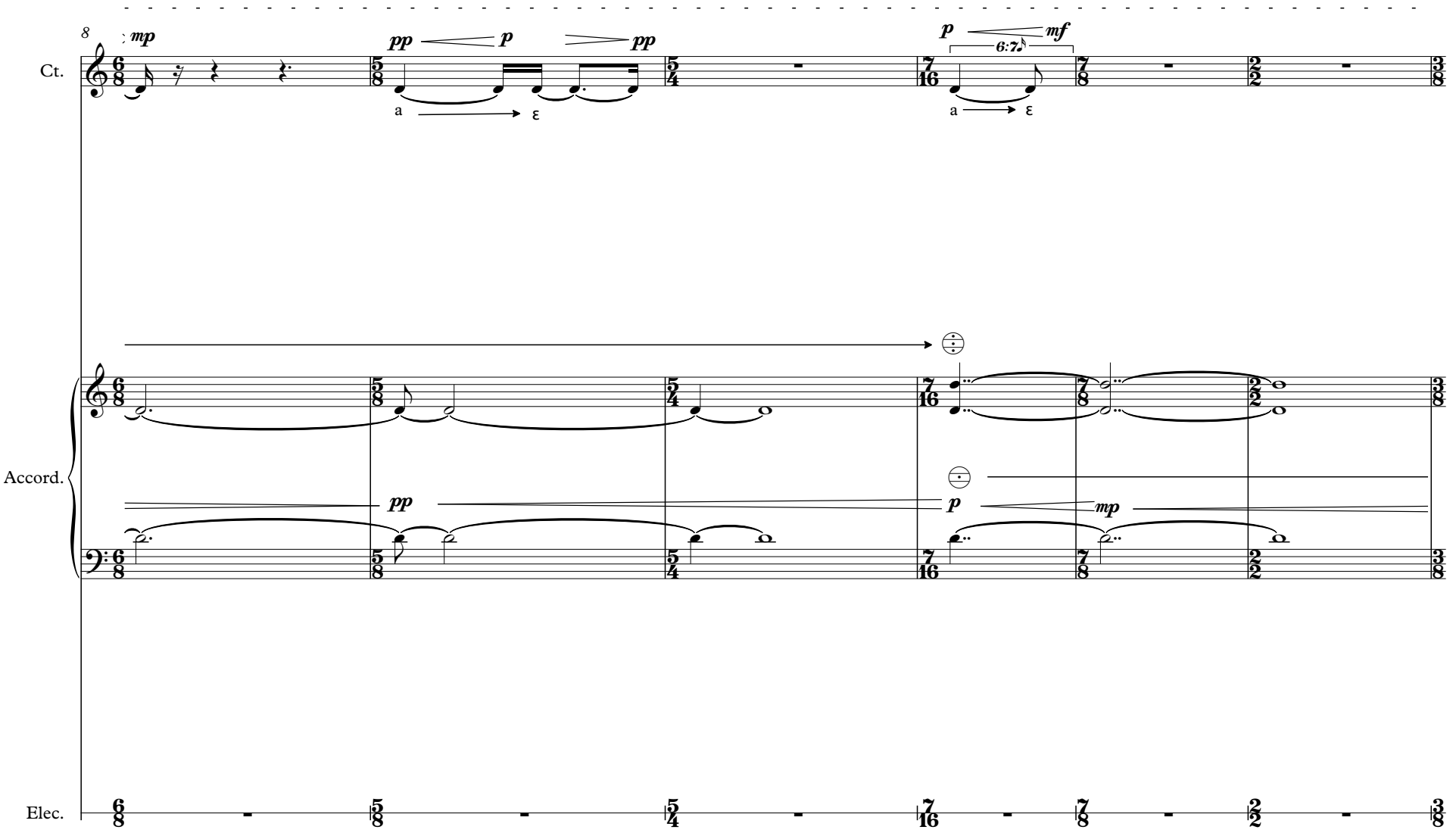
Ex omnibus supra dictis clare apparet,
nos multa percipere, et notiones universales formare

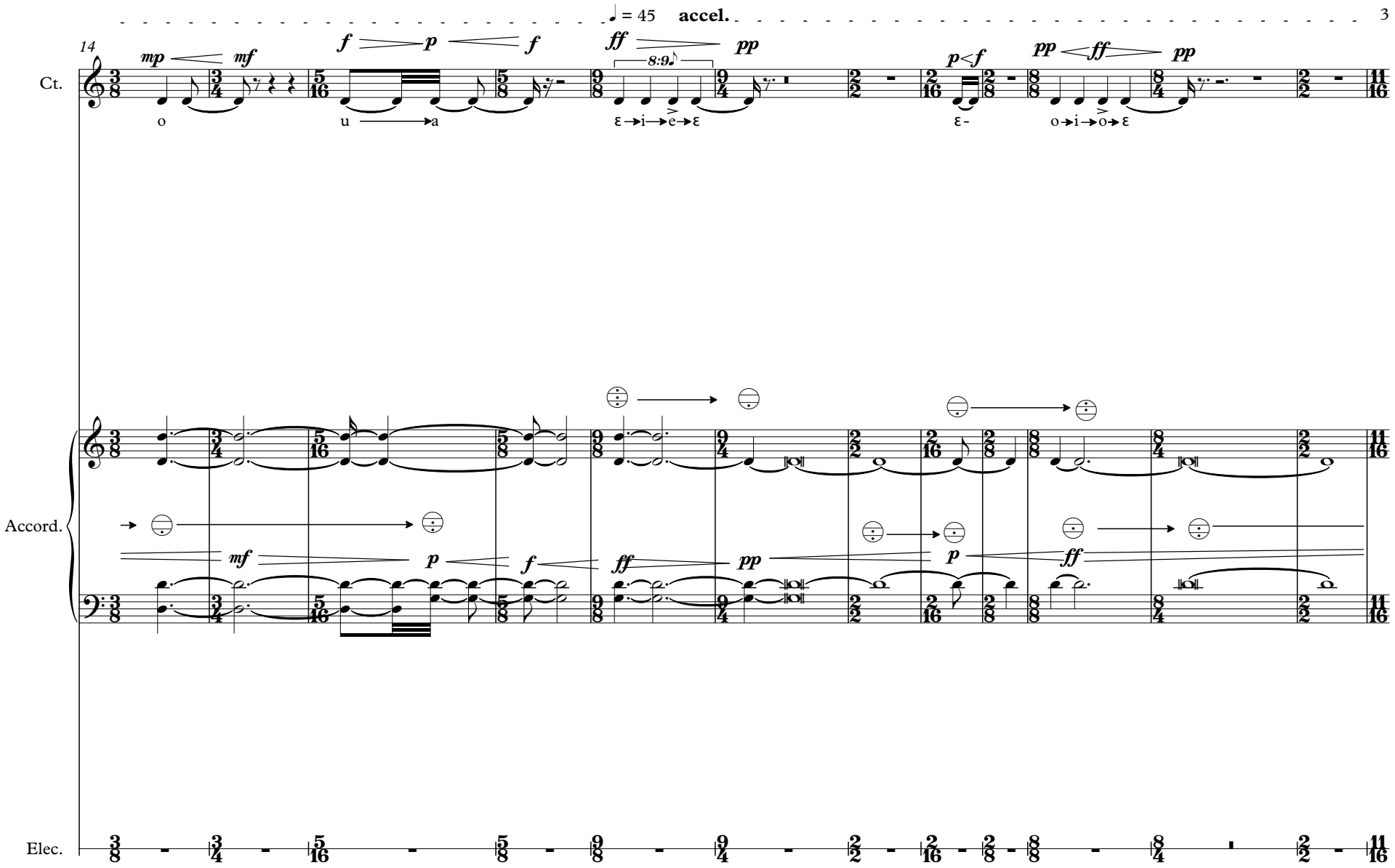
De Natura et Origine
I. Ex Omnibus

Dániel Péter Biró



2




♩ = 45 accel.
14
Ct.
Accord.
Elec.
mp
mf
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mf
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f
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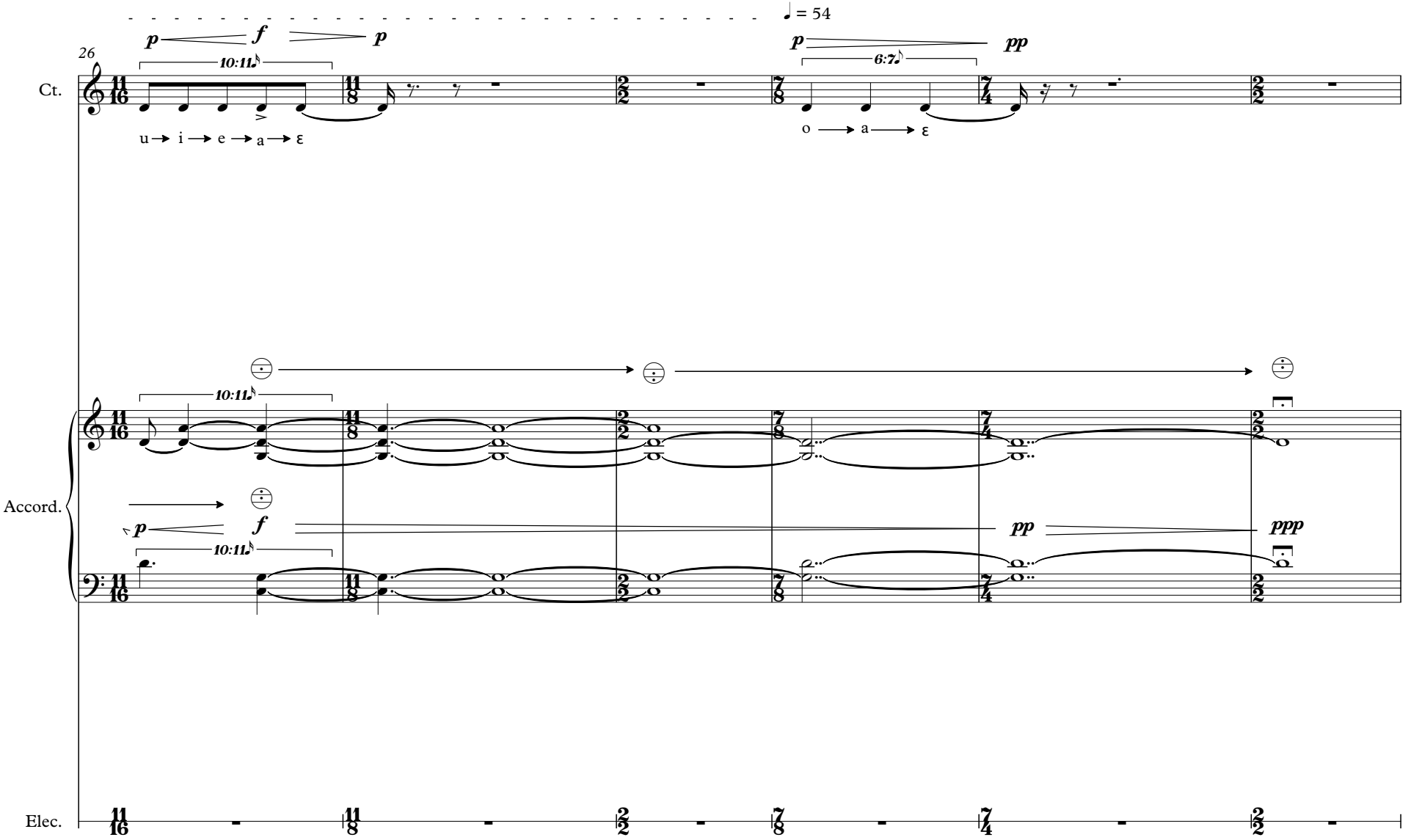
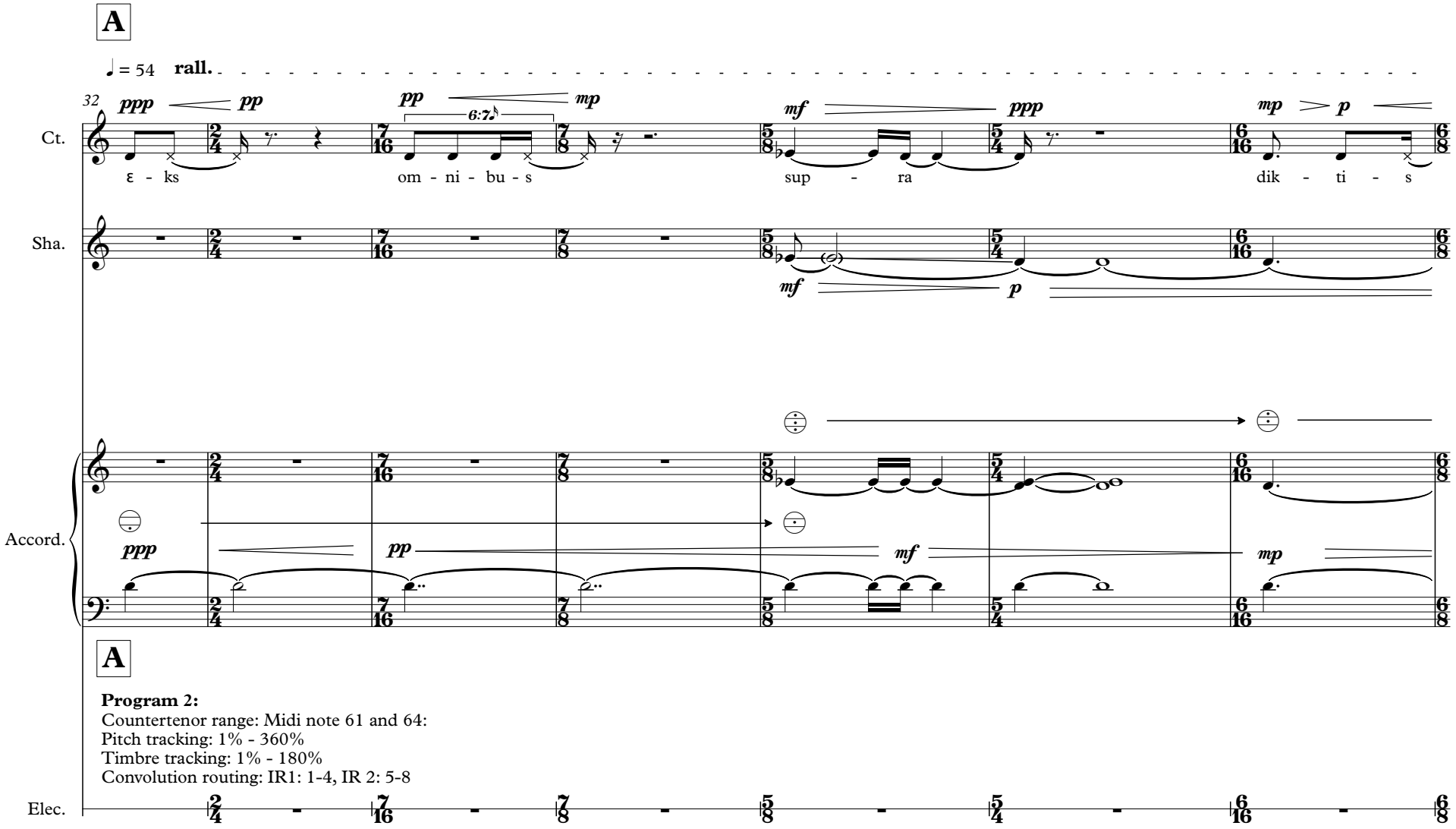
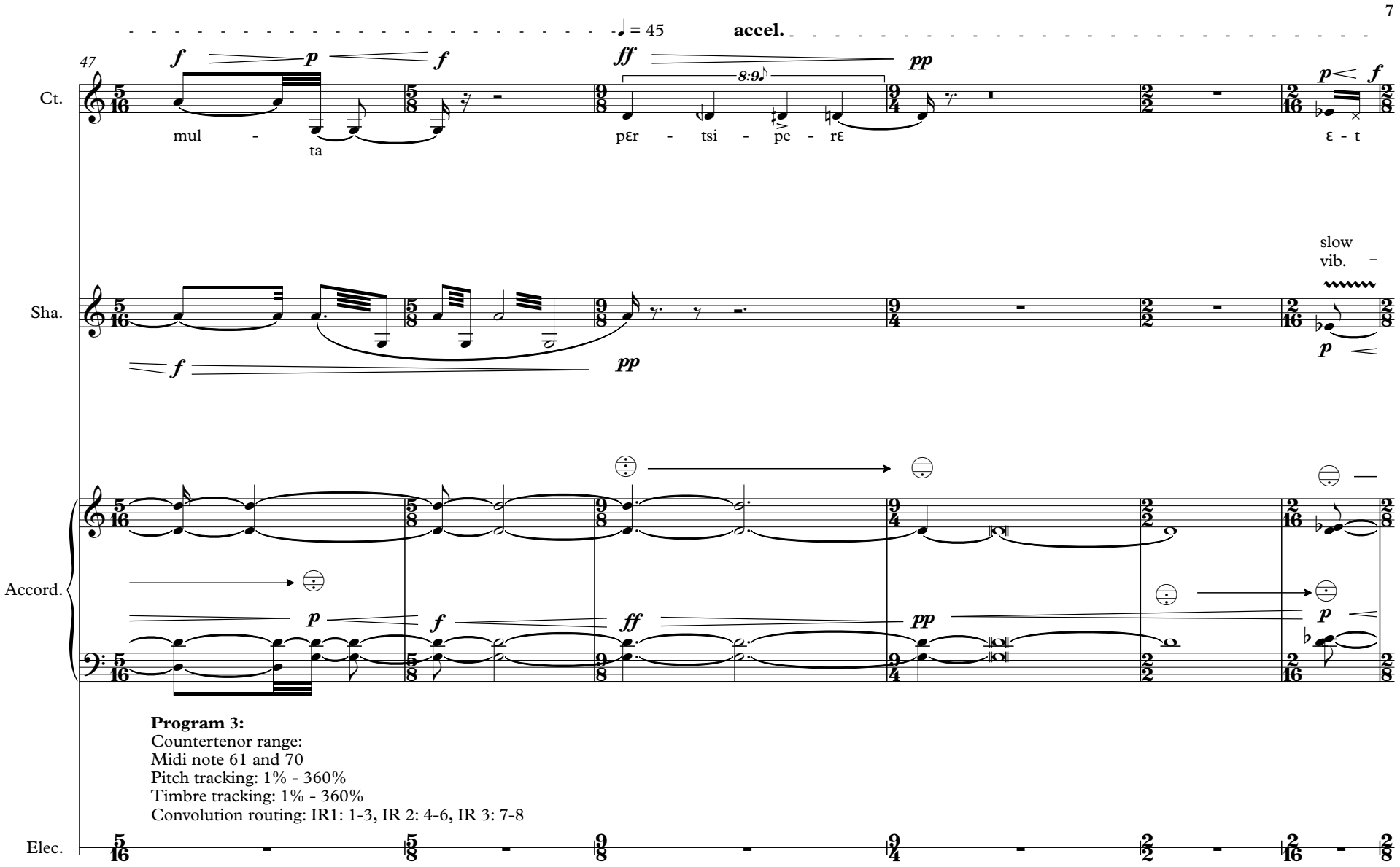
pp
p
ff

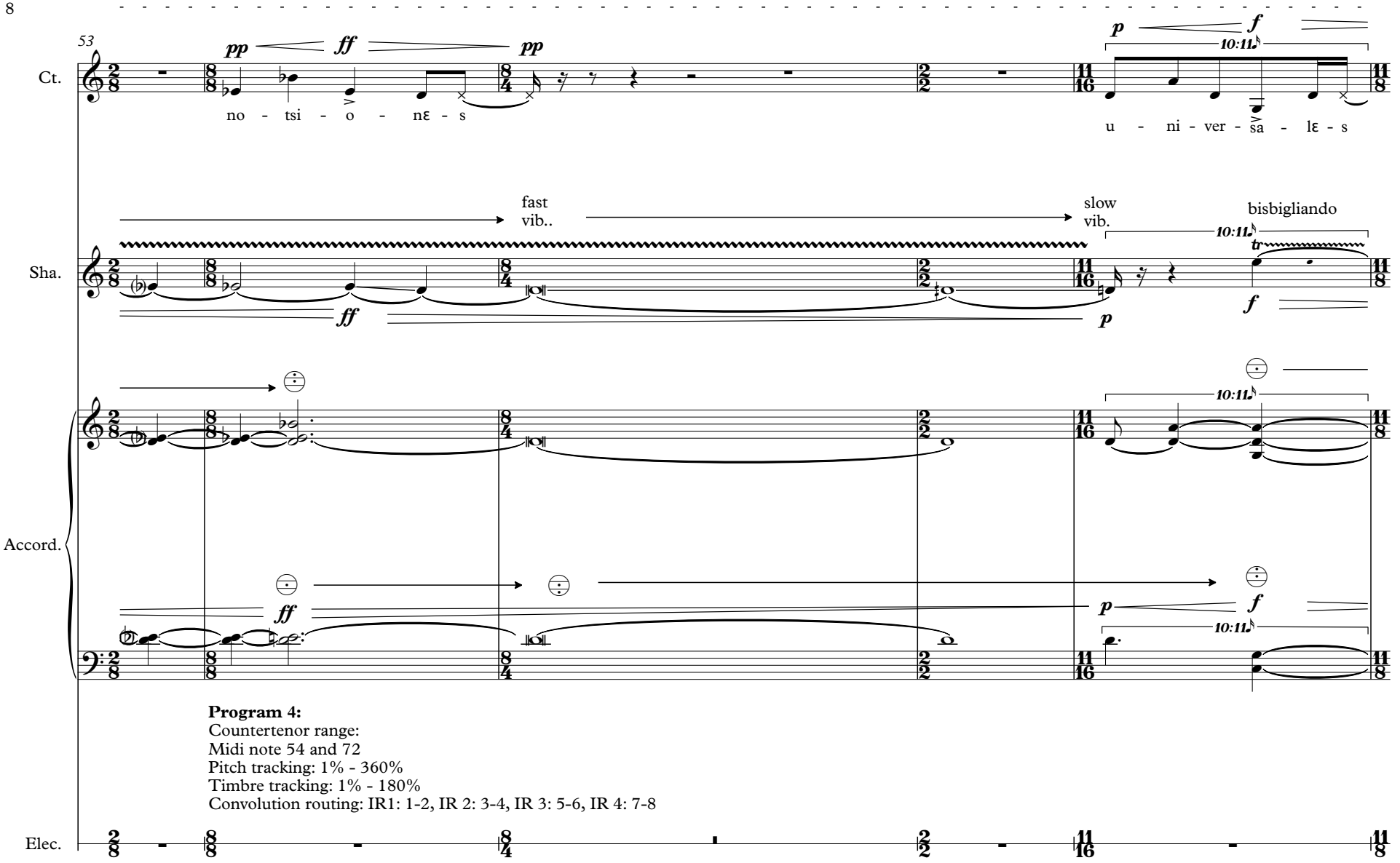

♩ = 54
26
Ct.
p
f
p
10:11
u → i → e → a → ɛ
p
pp
6:7
o → a → ɛ
Accord.
10:11
p
f
pp
ppp
10:11
Elec.


A
♩ = 54 rall.
32
ppp pp pp mp mf ppp mp p
6:7
Ct.
ɛ - ks om - ni - bu - s sup - ra dik - ti - s
Sha.
mf p
Accord.
ppp pp mf mp
A
Program 2:
Countertenor range: Midi note 61 and 64:
Pitch tracking: 1% - 360%
Timbre tracking: 1% - 180%
Convolution routing: IR1: 1-4, IR 2: 5-8
Elec.

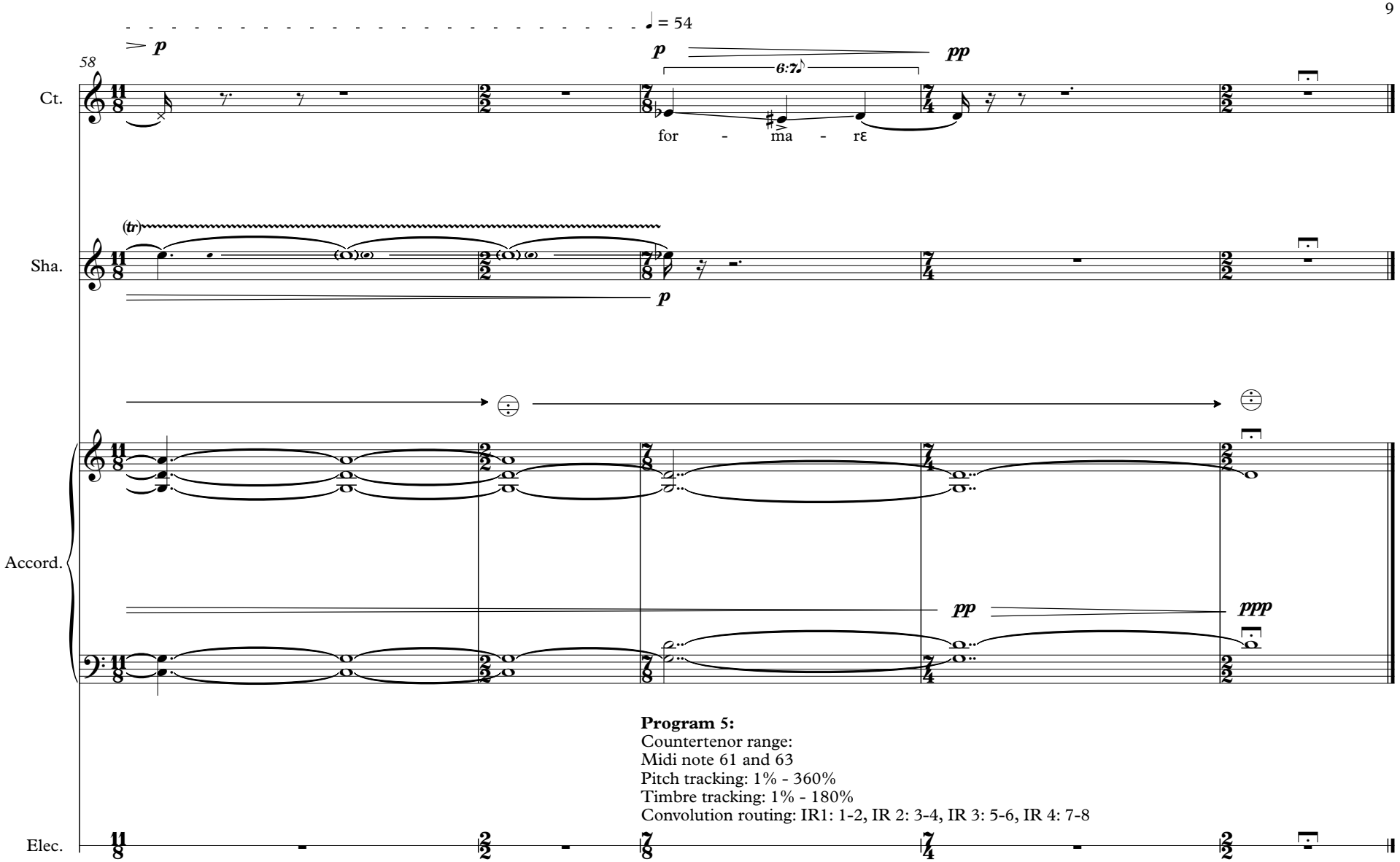
6


♩ = 45
accel.
47
Ct.
mul - ta
pɛr - tsi - pe - rɛ
ɛ - t
Sha.
slow vib.
Accord.
Elec.
Program 3:
Countertenor range:
Midi note 61 and 70
Pitch tracking: 1% - 360%
Timbre tracking: 1% - 360%
Convolution routing: IR1: 1-3, IR 2: 4-6, IR 3: 7-8

8

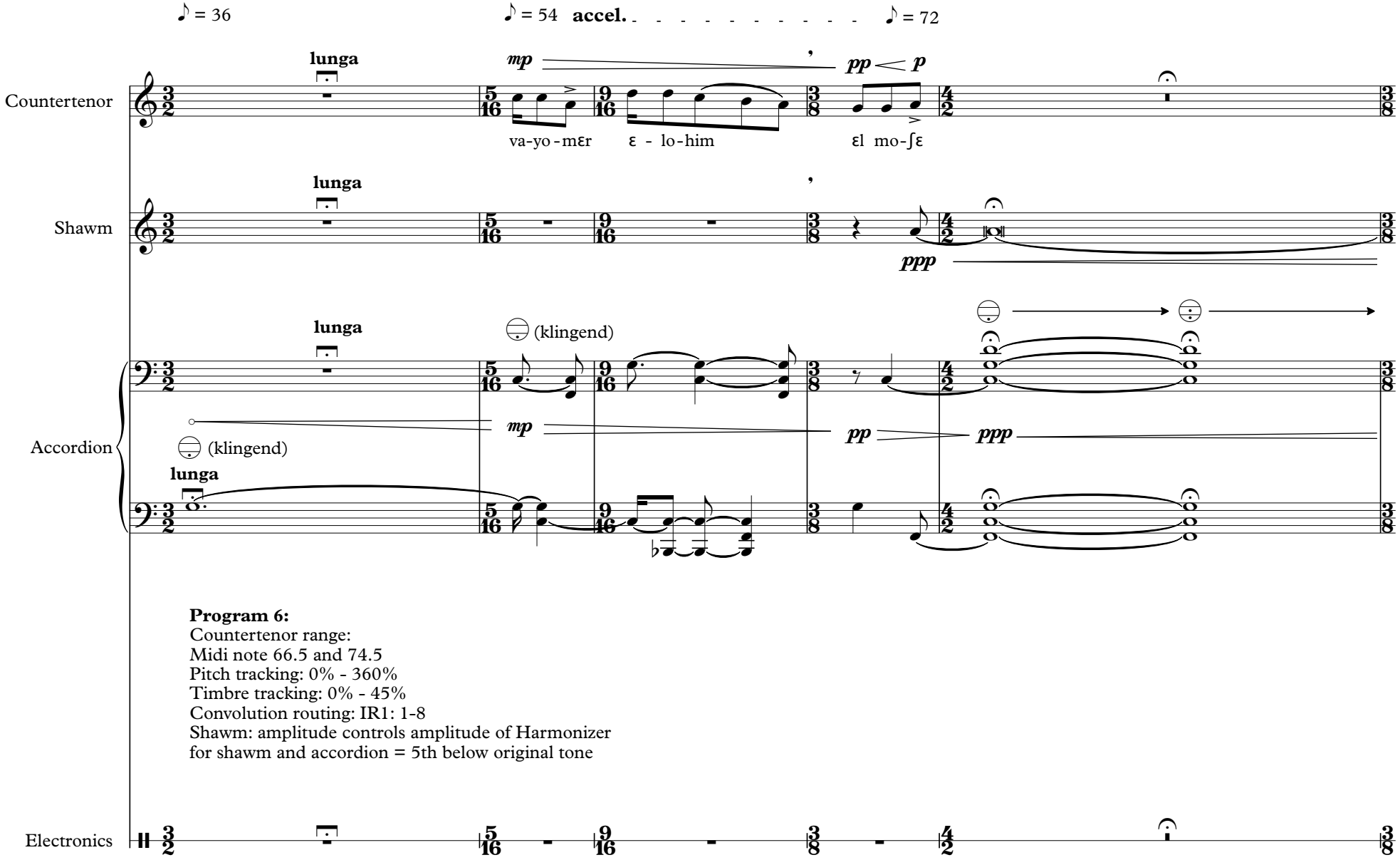


Program 4:
Countertenor range:
Midi note 54 and 72
Pitch tracking: 1% - 360%
Timbre tracking: 1% - 180%
Convolution routing: IR1: 1-2, IR 2: 3-4, IR 3: 5-6, IR 4: 7-8

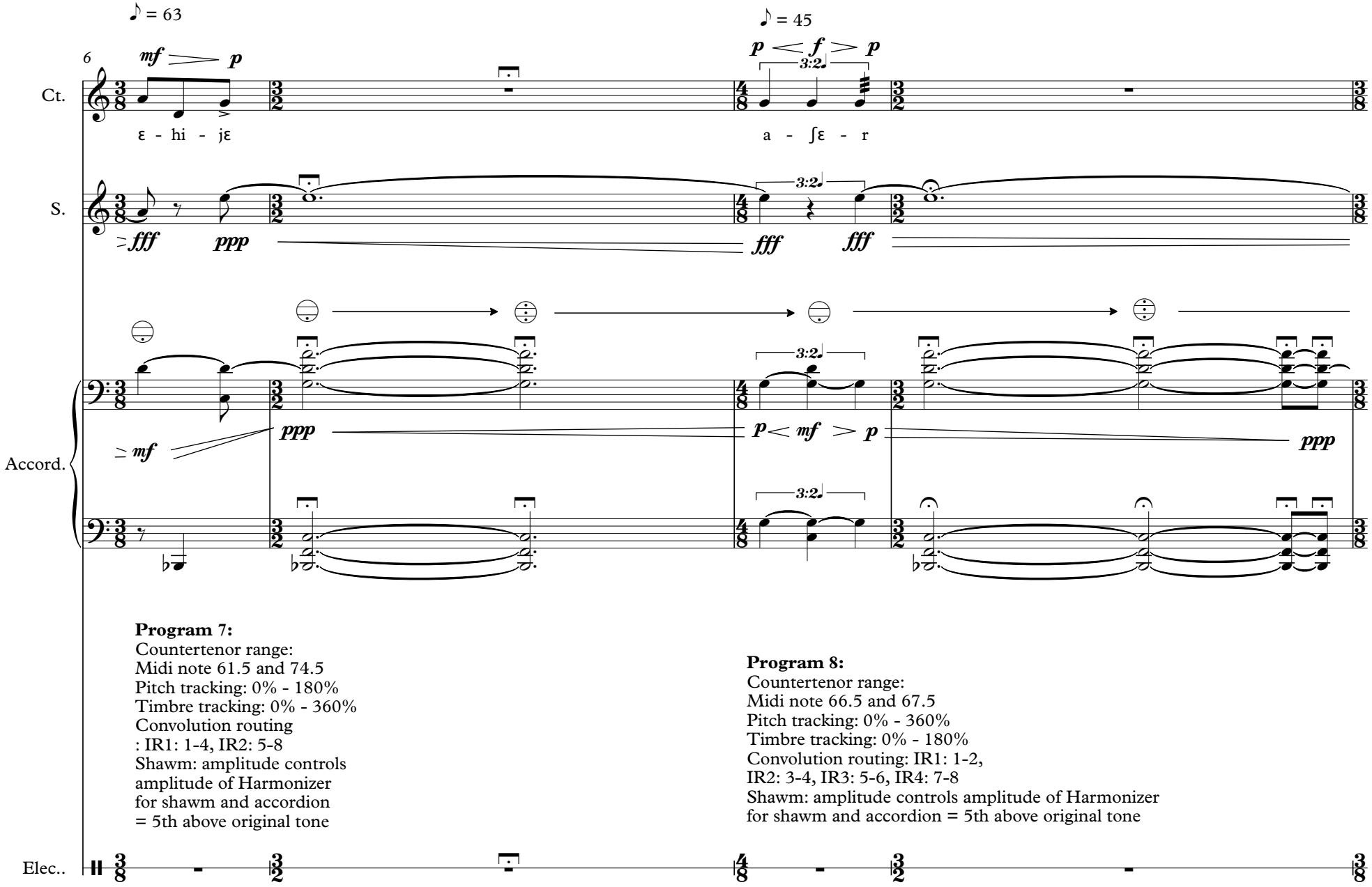


Program 5:
Countertenor range:
Midi note 61 and 63
Pitch tracking: 1% - 360%
Timbre tracking: 1% - 180%
Convolution routing: IR1: 1-2, IR 2: 3-4, IR 3: 5-6, IR 4: 7-8

IV. ויאמר
Version B

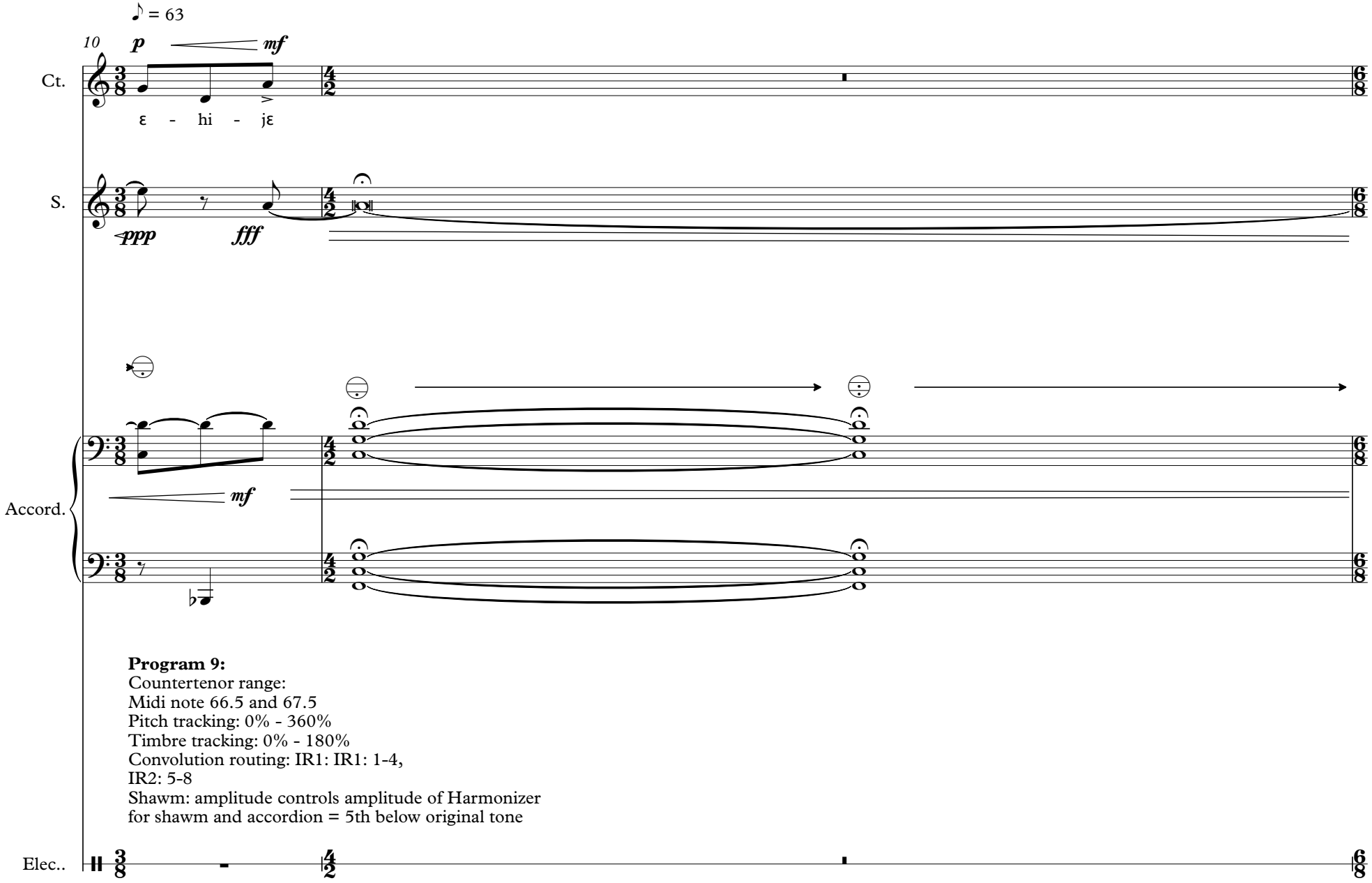


Program 6:
Countertenor range:
Midi note 66.5 and 74.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 45%
Convolution routing: IR1: 1-8
Shawm: amplitude controls amplitude of Harmonizer
for shawm and accordion = 5th below original tone

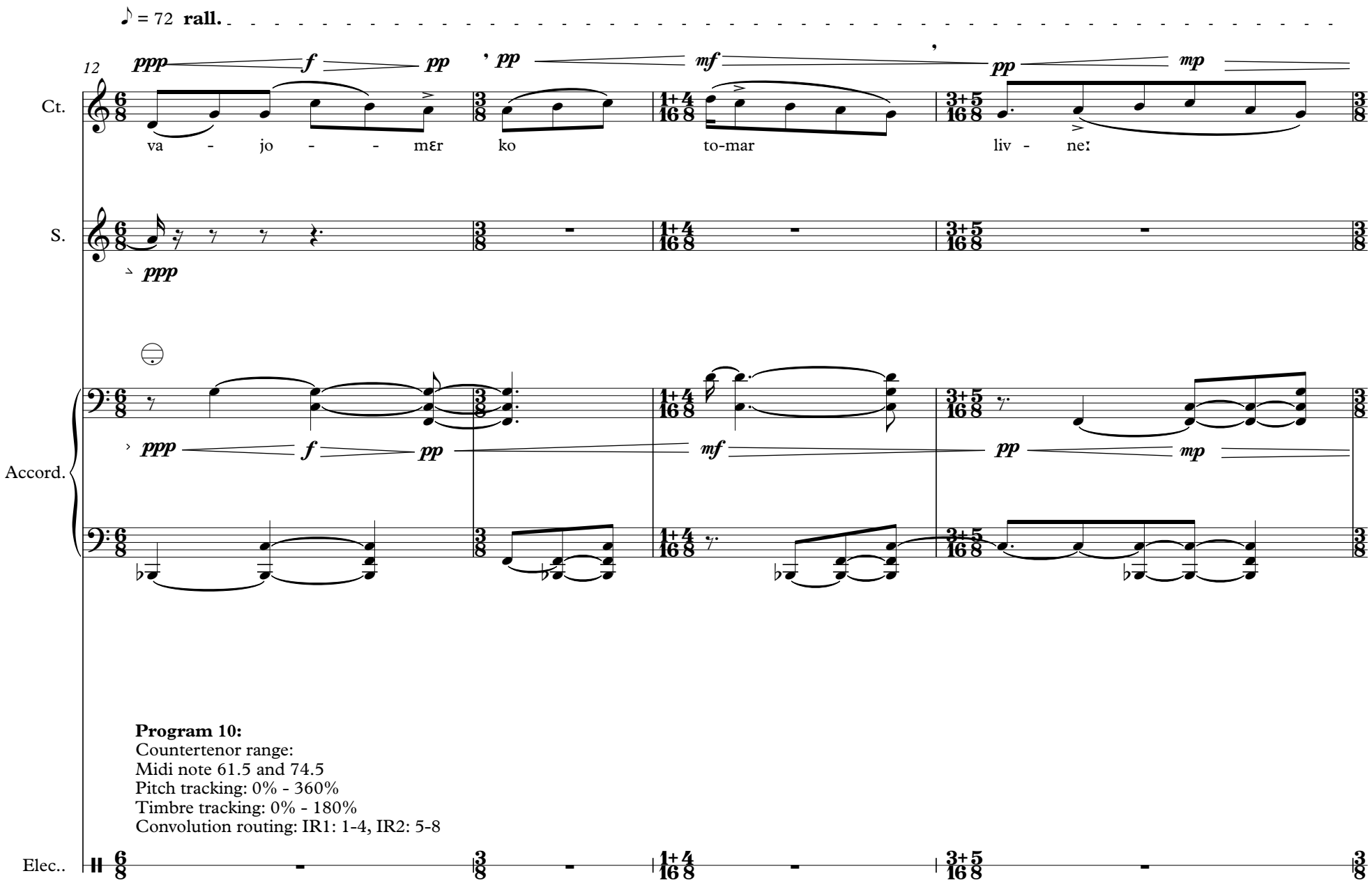


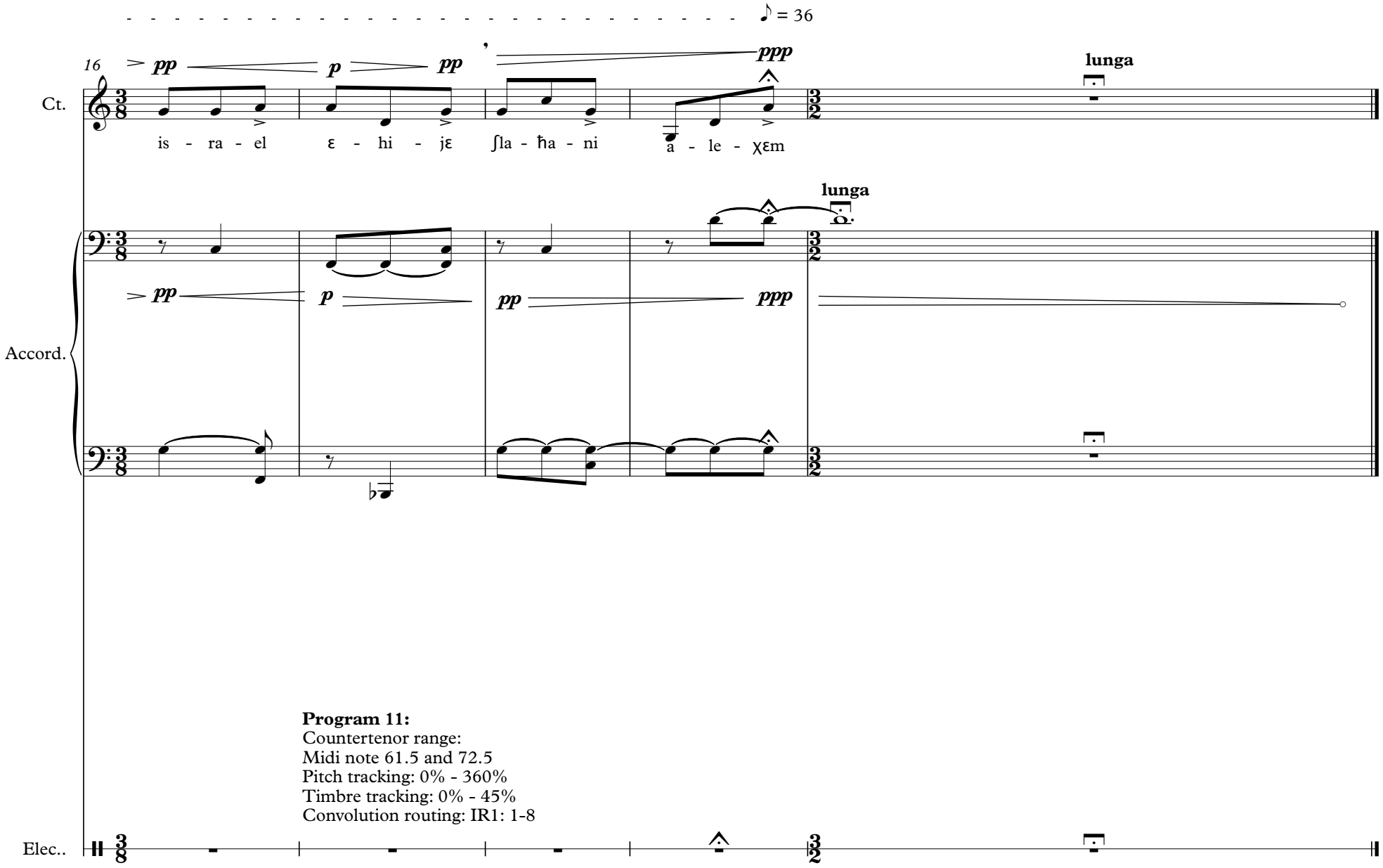
Program 7:
Countertenor range:
Midi note 61.5 and 74.5
Pitch tracking: 0% - 180%
Timbre tracking: 0% - 360%
Convolution routing
: IR1: 1-4, IR2: 5-8
Shawm: amplitude controls
amplitude of Harmonizer
for shawm and accordion
= 5th above original tone

Program 8:
Countertenor range:
Midi note 66.5 and 67.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 180%
Convolution routing: IR1: 1-2,
IR2: 3-4, IR3: 5-6, IR4: 7-8
Shawm: amplitude controls amplitude of Harmonizer
for shawm and accordion = 5th above original tone



Program 9:
Countertenor range:
Midi note 66.5 and 67.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 180%
Convolution routing: IR1: IR1: 1-4,
IR2: 5-8
Shawm: amplitude controls amplitude of Harmonizer
for shawm and accordion = 5th below original tone

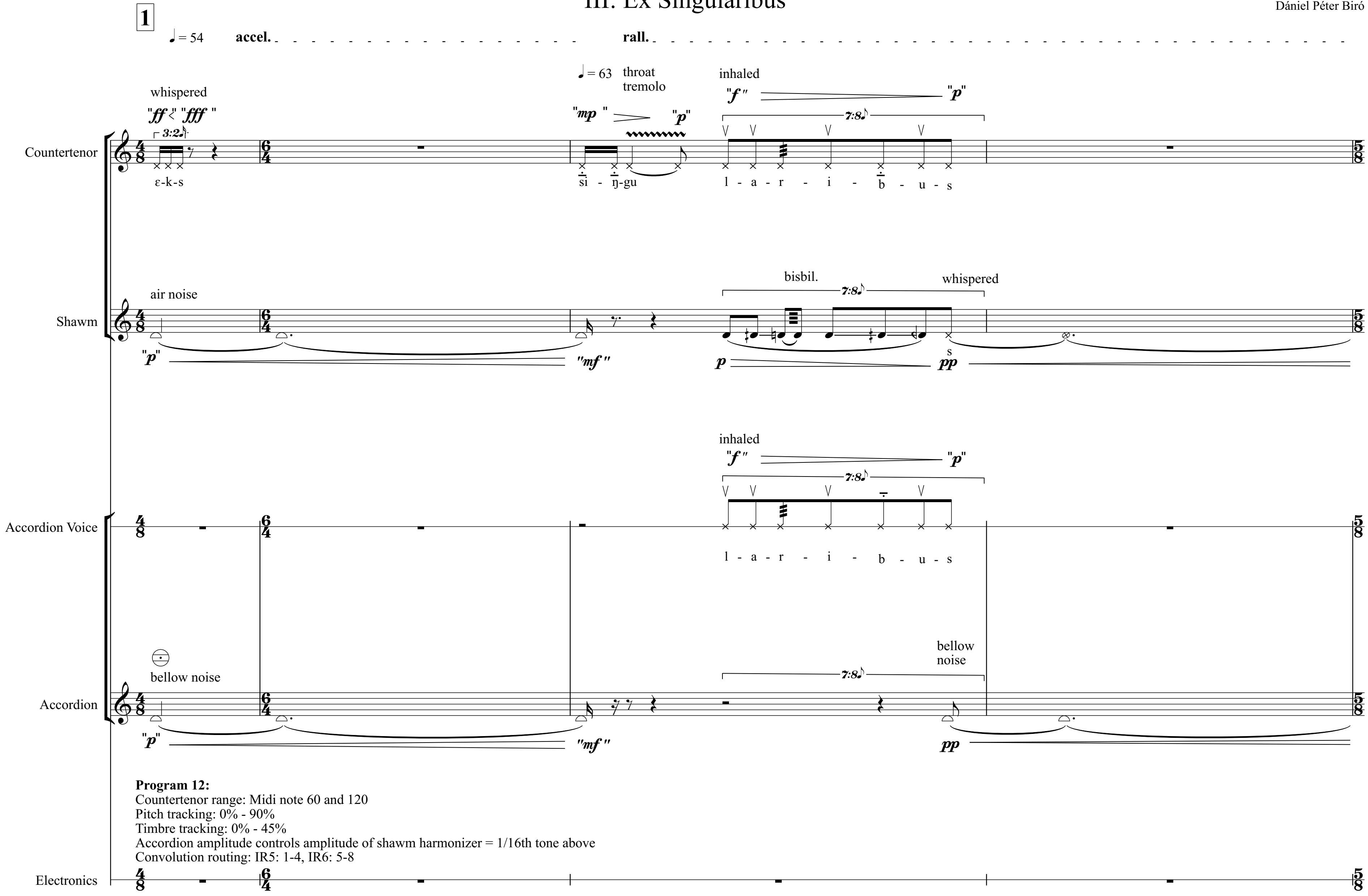

♪ = 72 rall.
12
ppp f pp pp mf pp mp
Ct.
va - jo - - mɛr ko to-mar liv - ne:
S.
ppp
Accord.
ppp f pp mf pp mp
Program 10:
Countertenor range:
Midi note 61.5 and 74.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 180%
Convolution routing: IR1: 1-4, IR2: 5-8
Elec..

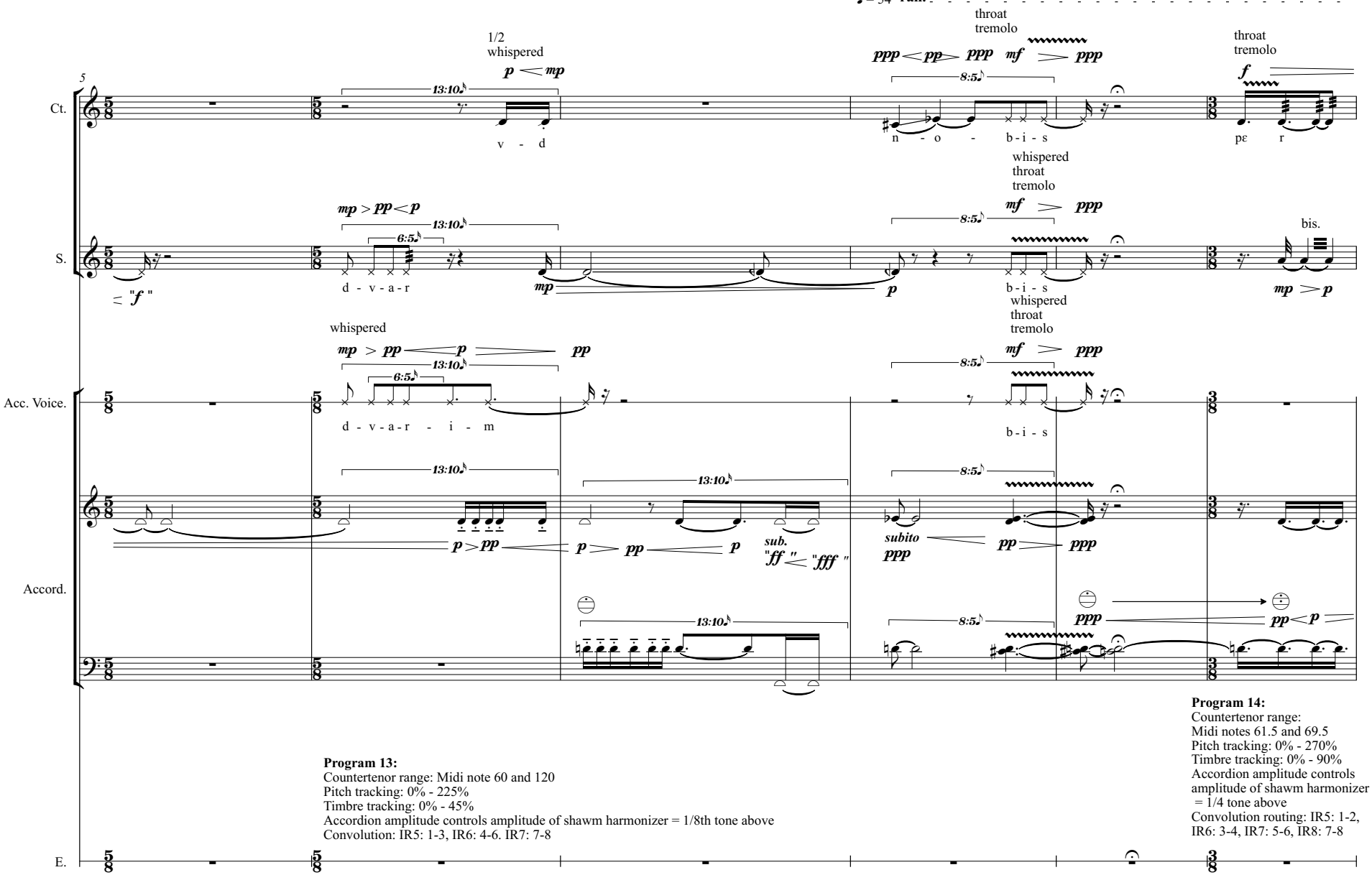

♪ = 36
16
pp
p
pp
ppp
lunga
Ct.
is - ra - el
ɛ - hi - jɛ
ʃla - ħa - ni
a - le - χɛm
lunga
Accord.
pp
p
pp
ppp
Program 11:
Countertenor range:
Midi note 61.5 and 72.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 45%
Convolution routing: IR1: 1-8
Elec..

Ex singularibus nobis per sensus mutilate,
confuse et sine ordine ad intellectum repraesentatis
et ideo tales perceptiones cognitionem
ab experientia vaga vocare consuevi.

III: Ex Singularibus

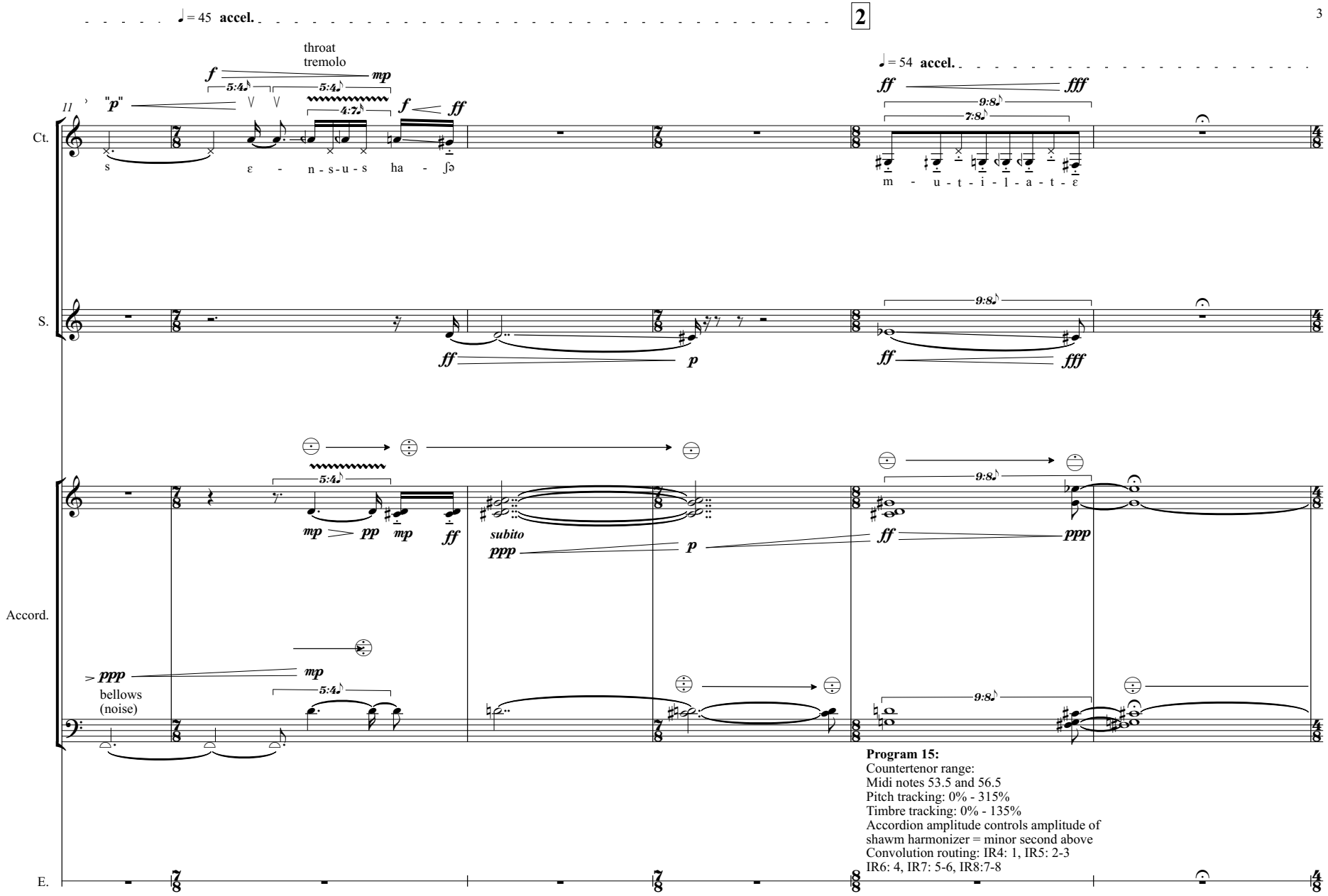
Dániel Péter Biró

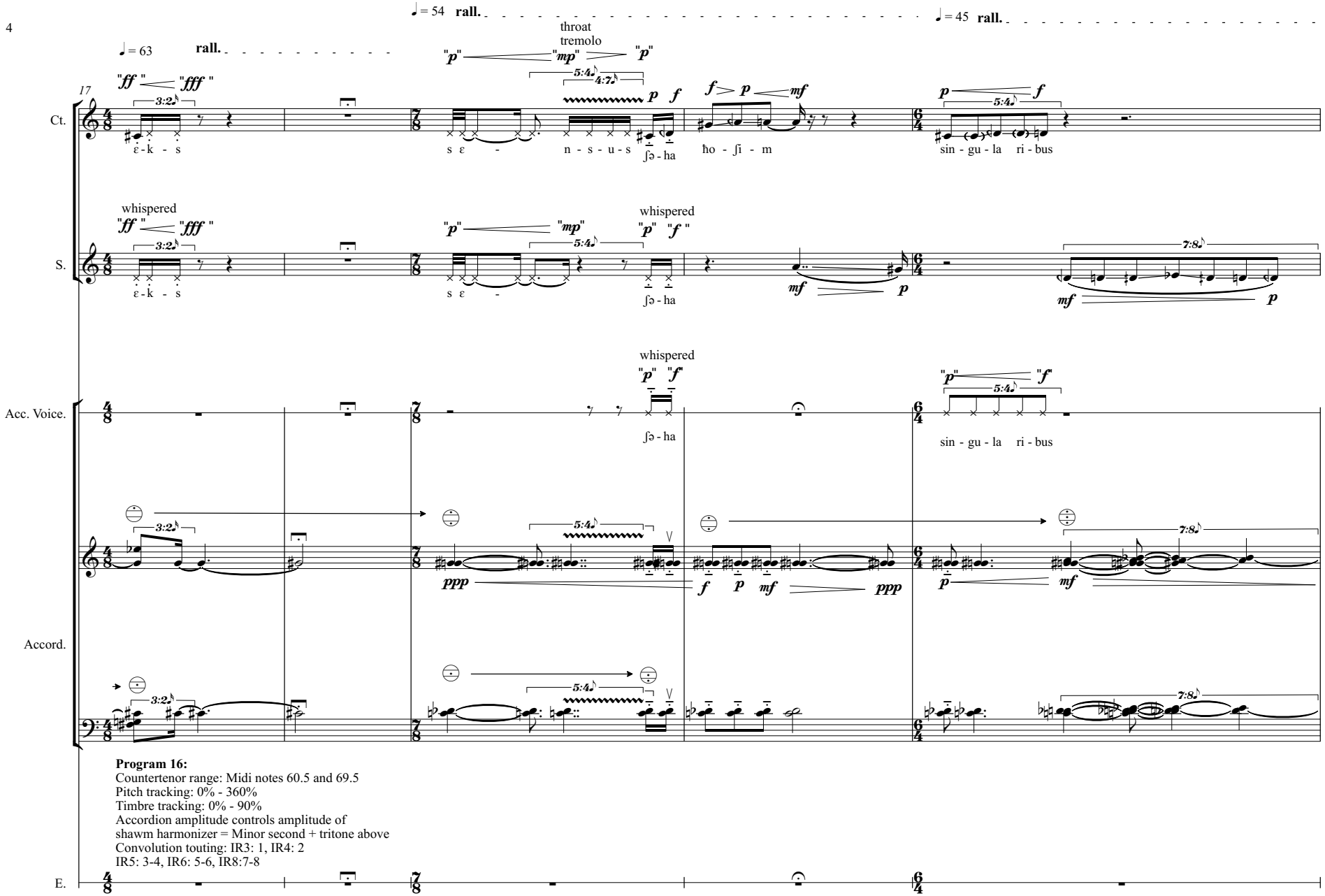

1
♩= 54 accel.
rall.
♩= 63 throat tremolo
whispered
inhaled
Countertenor
ε-k-s
si - ŋ-gu
l - a - r - i - b - u - s
bisbil.
whispered
air noise
Shawm
Accordion Voice
l - a - r - i - b - u - s
bellow noise
bellow noise
Accordion
Program 12:
Countertenor range: Midi note 60 and 120
Pitch tracking: 0% - 90%
Timbre tracking: 0% - 45%
Accordion amplitude controls amplitude of shawm harmonizer = 1/16th tone above
Convolution routing: IR5: 1-4, IR6: 5-8
Electronics



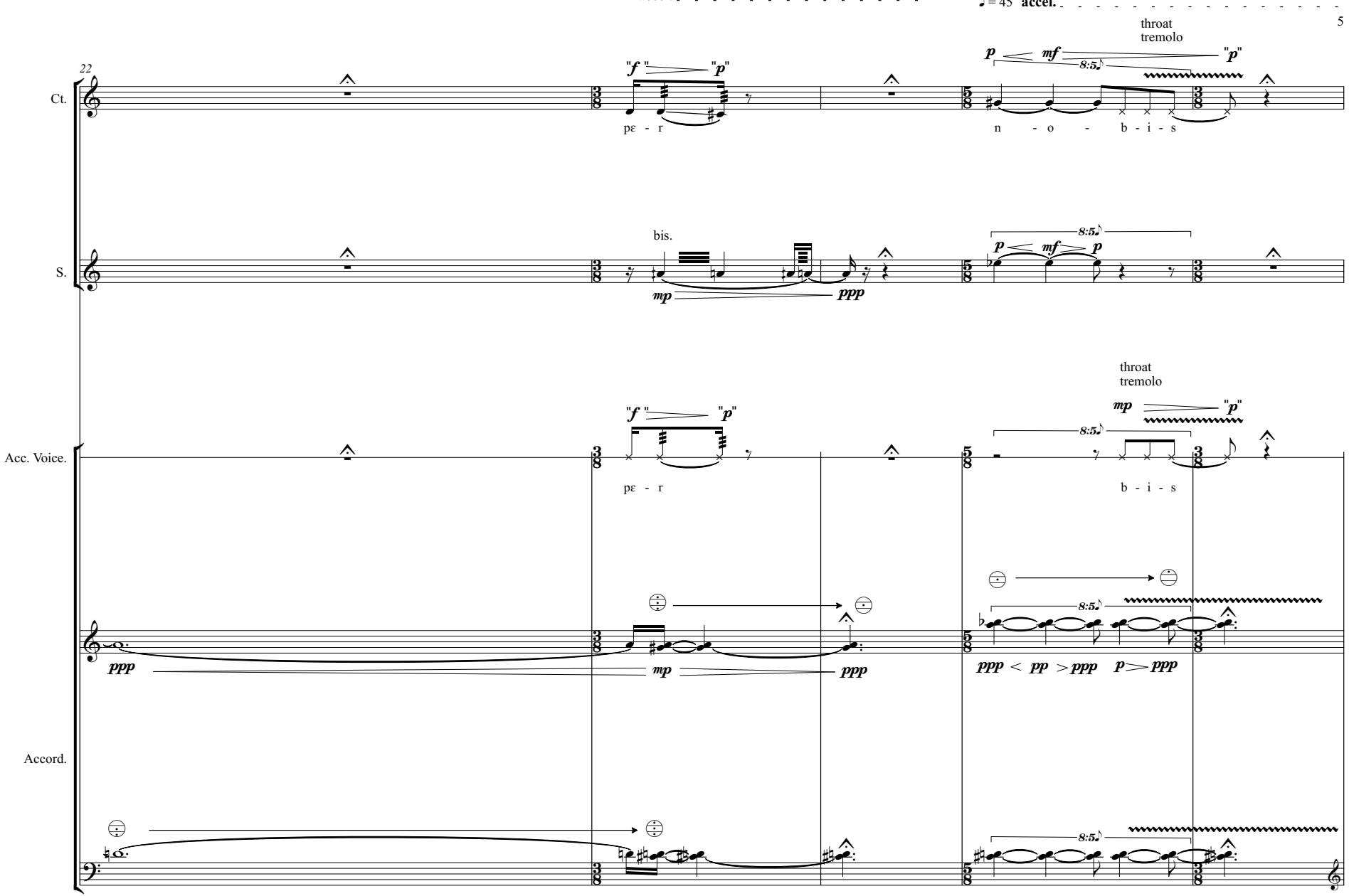
Program 13:
Countertenor range: Midi note 60 and 120
Pitch tracking: 0% - 225%
Timbre tracking: 0% - 45%
Accordion amplitude controls amplitude of shawm harmonizer = 1/8th tone above
Convolution: IR5: 1-3, IR6: 4-6. IR7: 7-8

Program 14:
Countertenor range:
Midi notes 61.5 and 69.5
Pitch tracking: 0% - 270%
Timbre tracking: 0% - 90%
Accordion amplitude controls amplitude of shawm harmonizer = 1/4 tone above
Convolution routing: IR5: 1-2, IR6: 3-4, IR7: 5-6, IR8: 7-8


♩= 45 accel.
2
♩= 54 accel.
throat
tremolo
Ct.
S.
Accord.
E.
"p"
s
ε - n-s-u-s ha - ʃə
m - u-t-i-l-a-t-ε
bellows
(noise)
subito
Program 15:
Countertenor range:
Midi notes 53.5 and 56.5
Pitch tracking: 0% - 315%
Timbre tracking: 0% - 135%
Accordion amplitude controls amplitude of
shawm harmonizer = minor second above
Convolution routing: IR4: 1, IR5: 2-3
IR6: 4, IR7: 5-6, IR8:7-8



Program 16:
Countertenor range: Midi notes 60.5 and 69.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 90%
Accordion amplitude controls amplitude of
shawm harmonizer = Minor second + tritone above
Convolution touting: IR3: 1, IR4: 2
IR5: 3-4, IR6: 5-6, IR8:7-8


♩= 36 accel.
♩= 45 accel.
22
Ct.
S.
Acc. Voice.
Accord.
"f" "p"
pɛ - r
bis.
mp
ppp
p mf "p"
8:5
throat tremolo
n - o - b - i - s
b - i - s
ppp mp ppp
ppp < pp > ppp p > ppp

3

6

27

♩ = 54 **accel.**

♩ = 63 **accel.**

Ct.

inhaled

fff *pp* *f*

9:8 3:2

k - a - - - t - e - i

p *ppp* *f*

4:7 12:7 4:5

ɛ - s kon - fu

S.

fff

9:8

k

f *ppp*

whispered

"*p*" "*mf*"

kon - fu - sɛ

Acc. Voice.

"*fff* "

k

whispered
throat tremolo

"*mf* " "*p*"

kon - fu

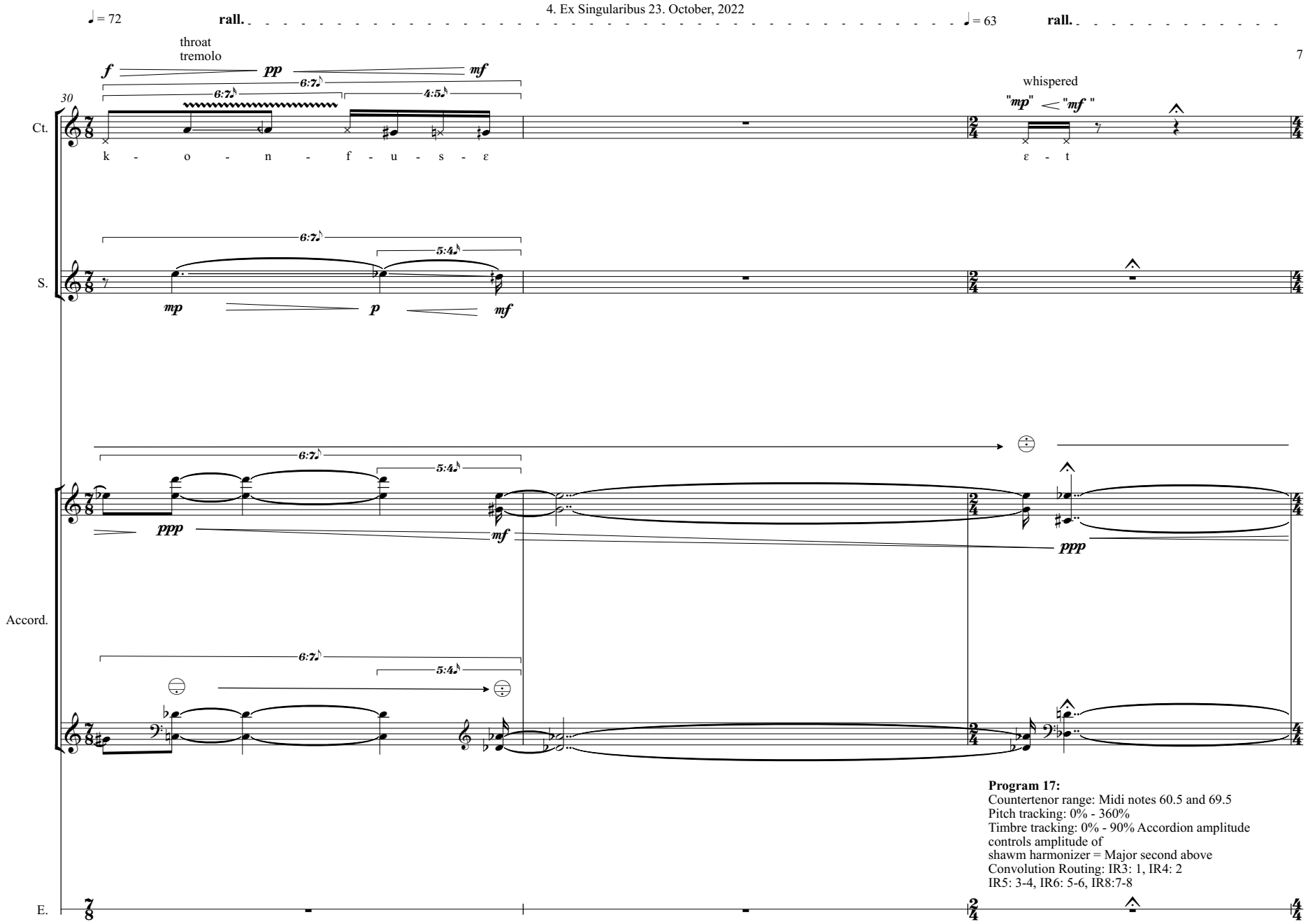
Accord.

9:8

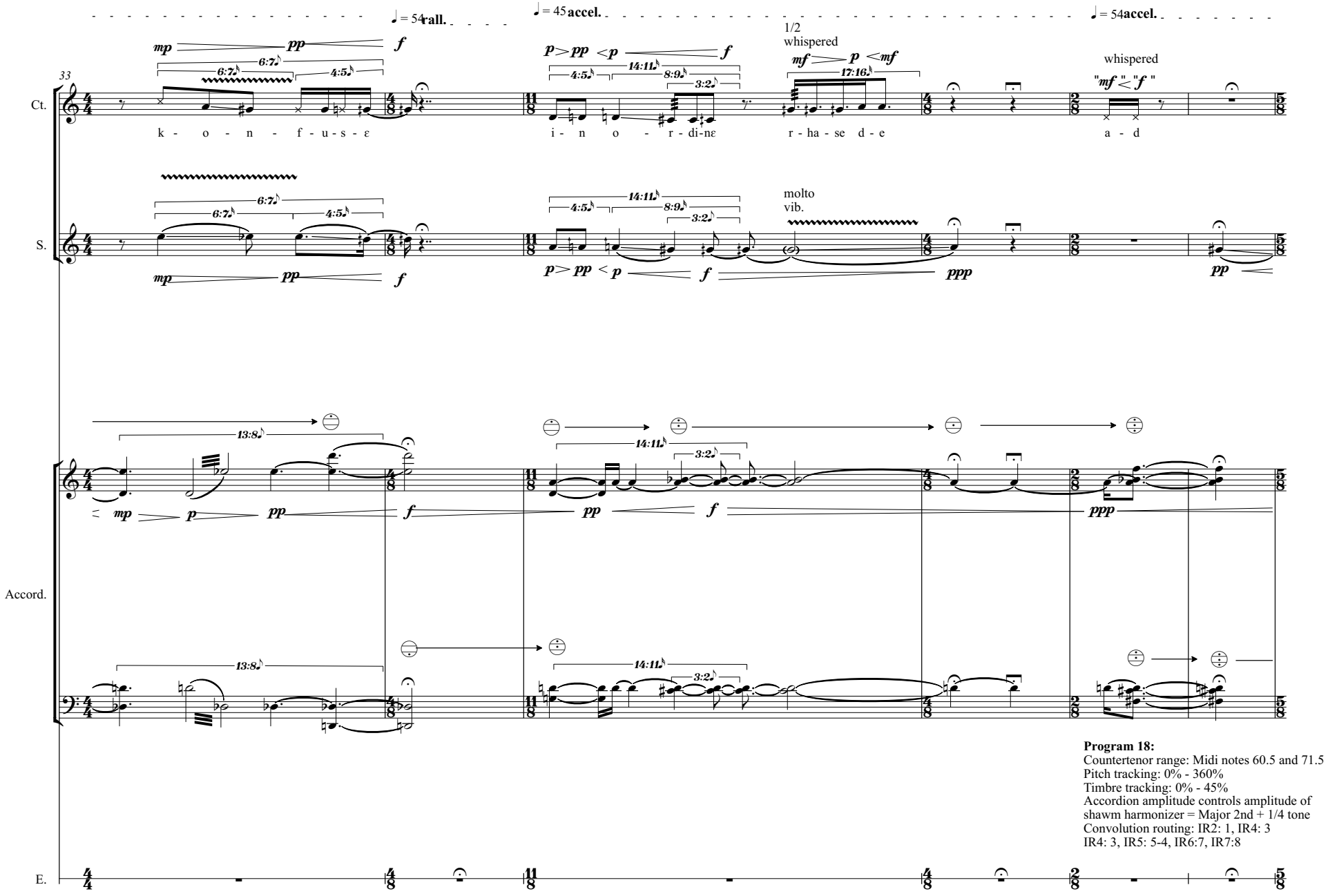
ppp *f*

ppp *f* *subito* *p*

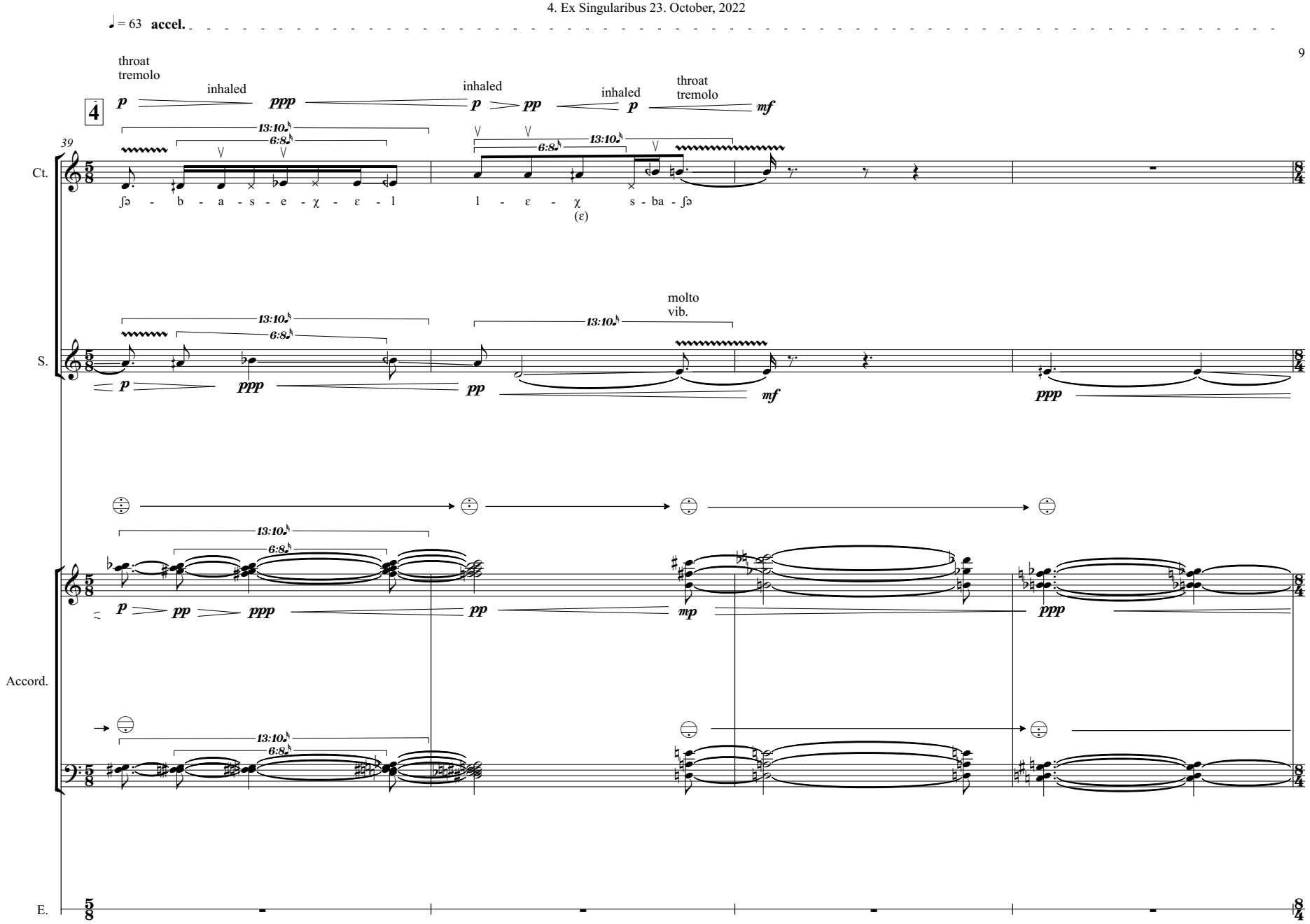
9:8

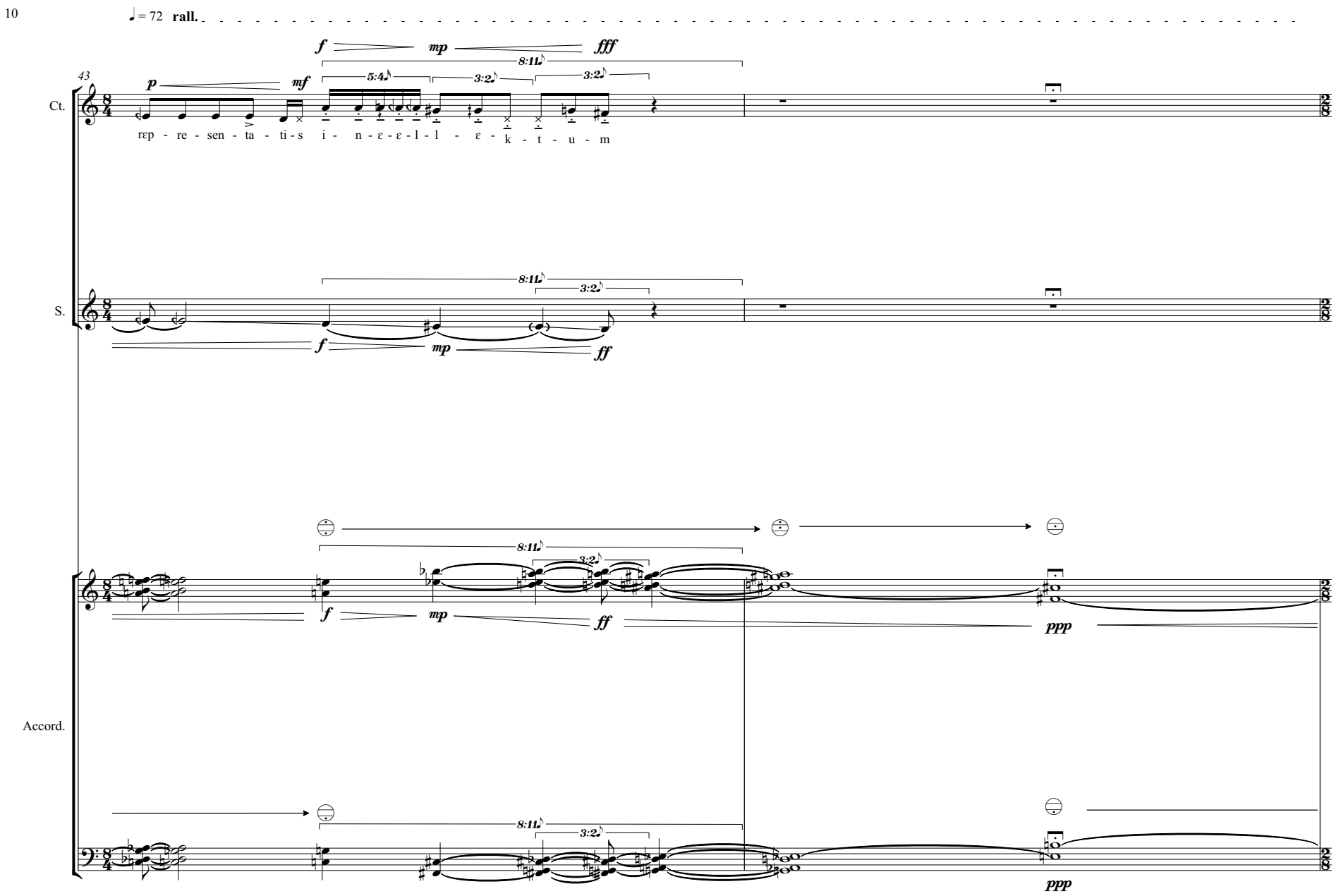


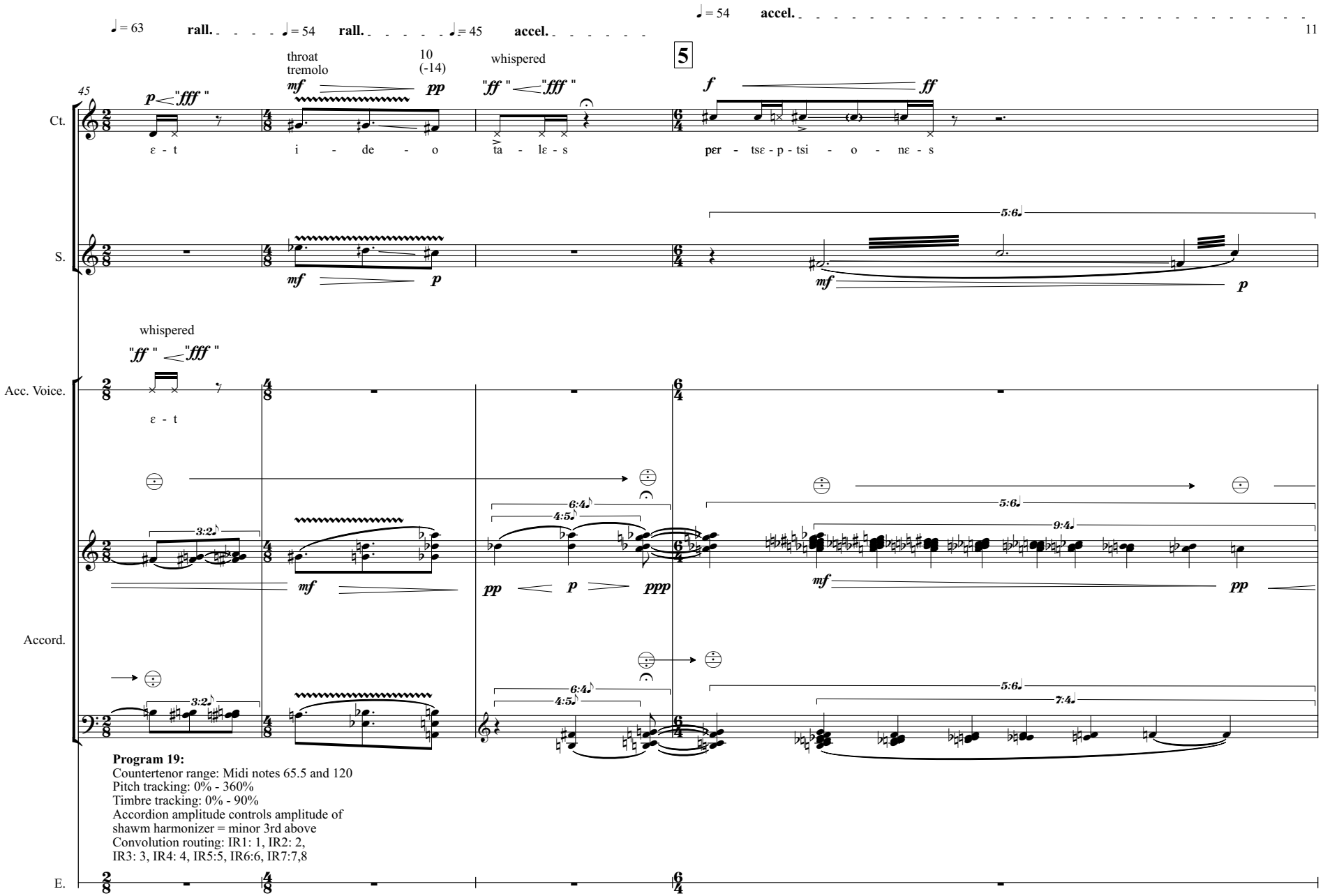
Program 17:
Countertenor range: Midi notes 60.5 and 69.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 90% Accordion amplitude controls amplitude of
shawm harmonizer = Major second above
Convolution Routing: IR3: 1, IR4: 2
IR5: 3-4, IR6: 5-6, IR8:7-8

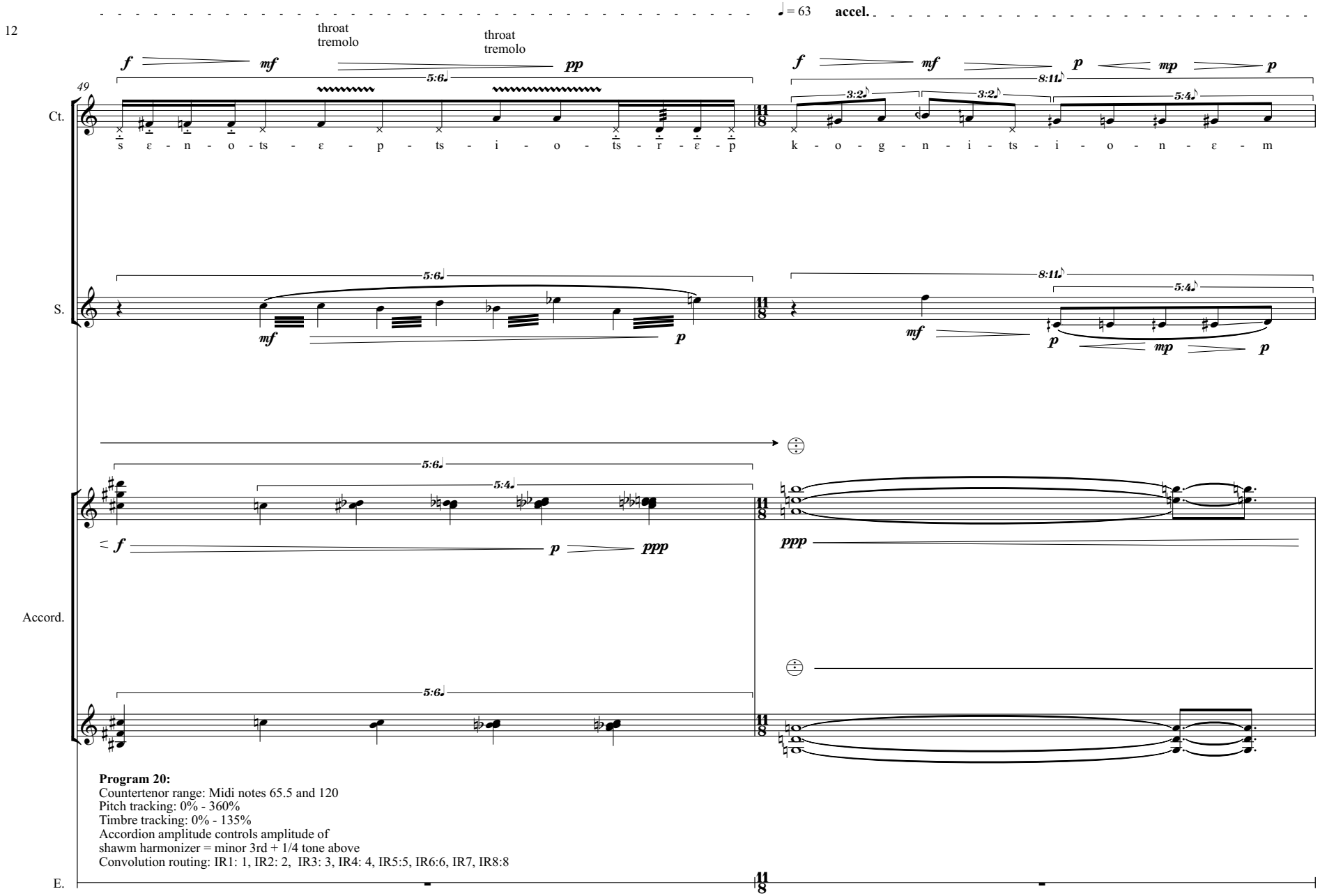


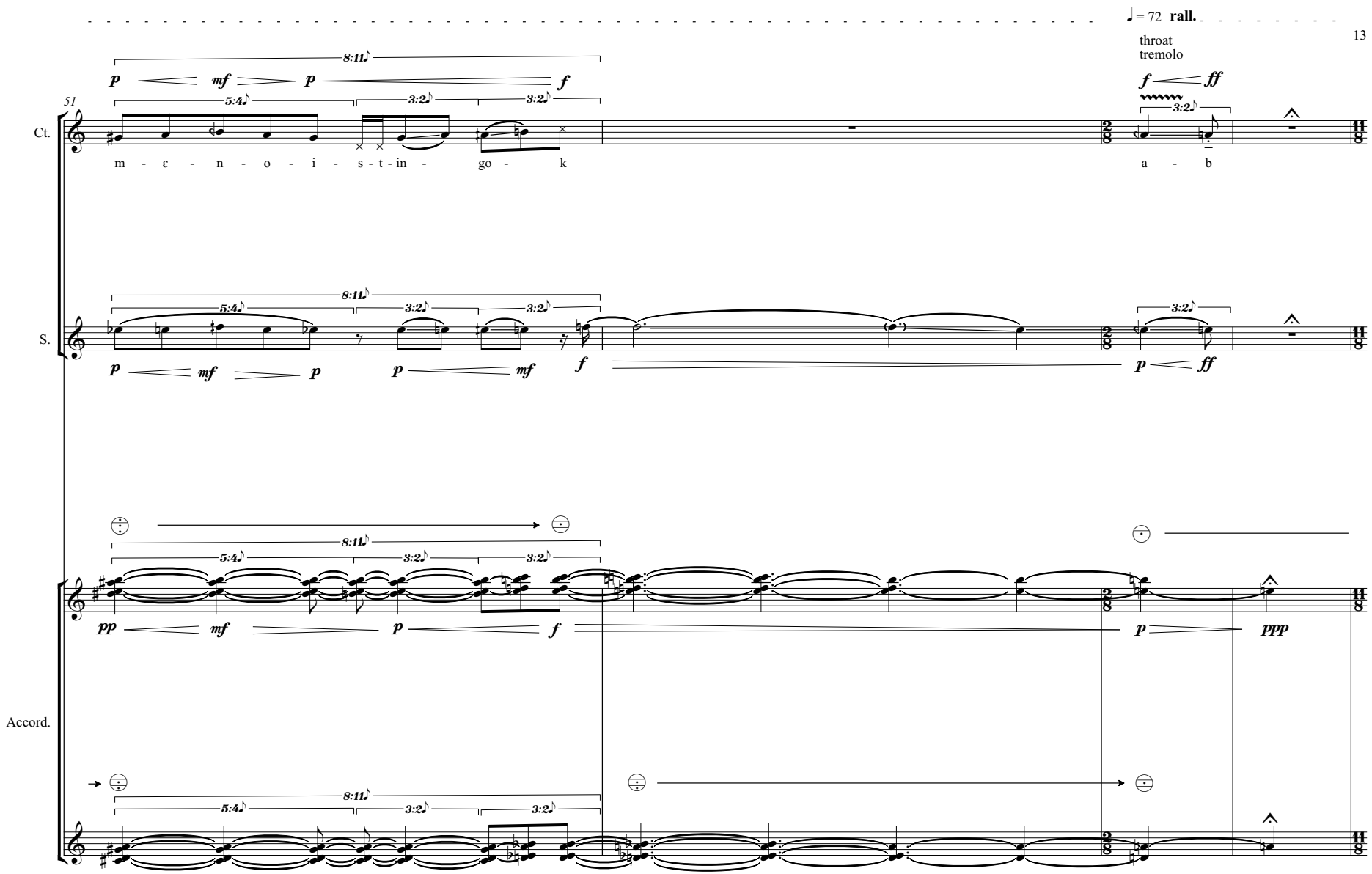
Program 18:
Countertenor range: Midi notes 60.5 and 71.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 45%
Accordion amplitude controls amplitude of shawm harmonizer = Major 2nd + 1/4 tone
Convolution routing: IR2: 1, IR4: 3
IR4: 3, IR5: 5-4, IR6:7, IR7:8


♩ = 63 accel.
4
39
Ct.
S.
Accord.
E.
throat tremolo
inhaled
ppp
inhaled
pp
inhaled
throat tremolo
mf
13:10
6:8
ʃə - b - a - s - e - χ - ε - l
l - ε - χ (ε) s - ba - ʃə
molto vib.
p
pp
mf
mp


10
♩= 72 rall.
43
Ct.
S.
Accord.
rɛp - re - sen - ta - ti - s i - n - ɛ - ɛ - l - l - ɛ - k - t - u - m


♩= 63 rall. ♩= 54 rall. ♩= 45 accel.
♩= 54 accel.
11
45
5
Ct.
S.
Acc. Voice.
Accord.
E.
throat tremolo
10 (-14)
whispered
p "fff"
mf pp
"ff" "fff"
f ff
ε - t
i - de - o
ta - lε - s
per - tsε - p - tsi - o - nε - s
3:2
6:4
4:5
5:6
9:4
7:4
mf p
pp p ppp
mf pp
Program 19:
Countertenor range: Midi notes 65.5 and 120
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 90%
Accordion amplitude controls amplitude of shawm harmonizer = minor 3rd above
Convolution routing: IR1: 1, IR2: 2, IR3: 3, IR4: 4, IR5:5, IR6:6, IR7:7,8


12
♩ = 63
accel.
throat tremolo
throat tremolo
49
Ct.
s ε - n - o - ts - ε - p - ts - i - o - ts - r - ε - p
k - o - g - n - i - ts - i - o - n - ε - m
S.
Accord.
E.
Program 20:
Countertenor range: Midi notes 65.5 and 120
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 135%
Accordion amplitude controls amplitude of
shawm harmonizer = minor 3rd + 1/4 tone above
Convolution routing: IR1: 1, IR2: 2, IR3: 3, IR4: 4, IR5:5, IR6:6, IR7, IR8:8


♩= 72 rall.
51
Ct.
S.
Accord.
throat
tremolo
m - ε - n - o - i - s - t - in - go - k
a - b
8:11
5:4
3:2
3:2
p mf p f
f ff
p mf p p mf f
p ff
pp mf p f
p ppp

6

♩ = 63 **accel.**

55

Ct.

ε - k - s pε - r - ε - n - tsi - a a - i - s - t - n - ε - i -r -ε - p - s - k - ε

S.

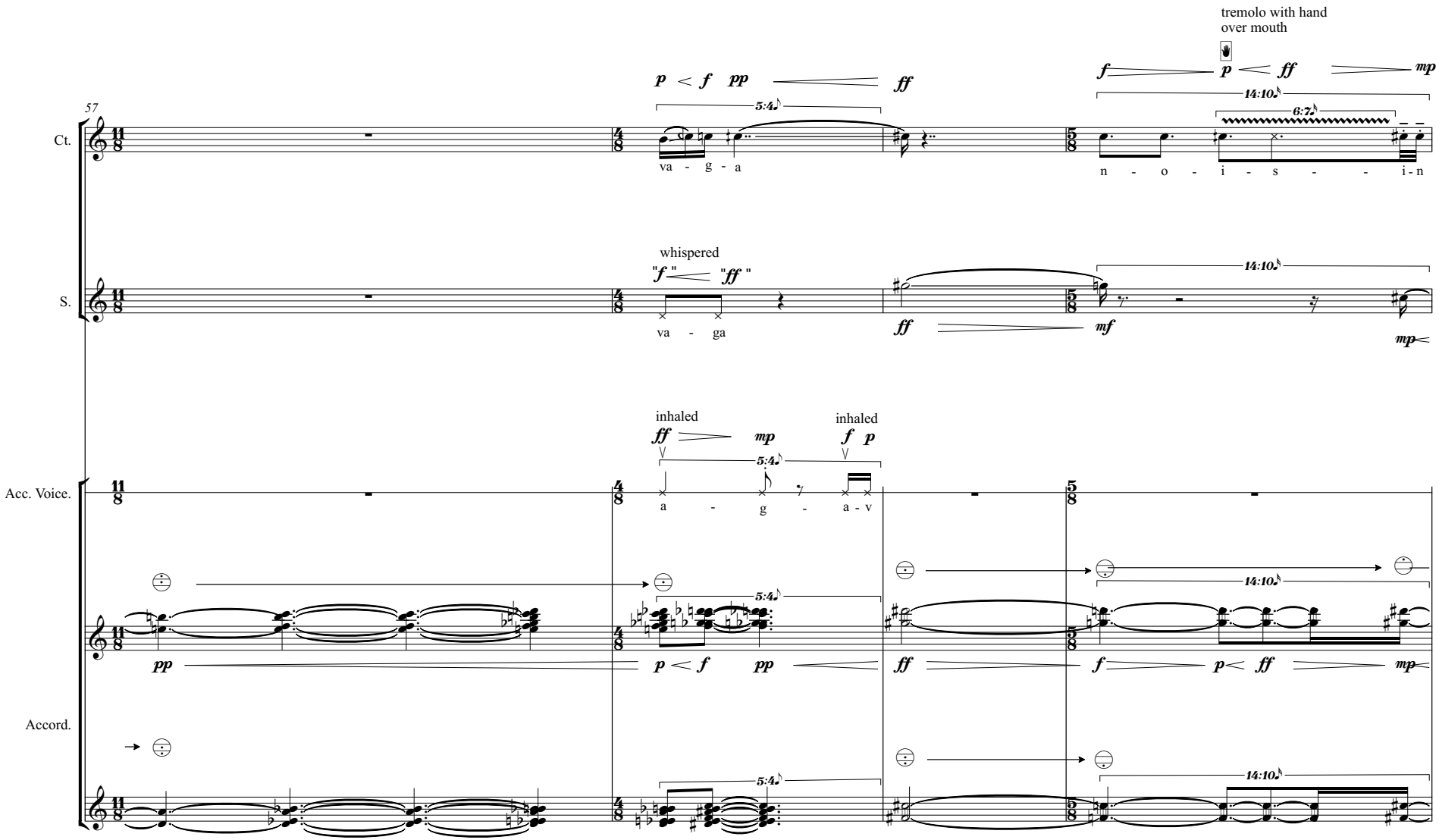
whispered

a - ist - nε - i - rεp - s - k -ε ε - ks - pεr - i - εn - tsi - a

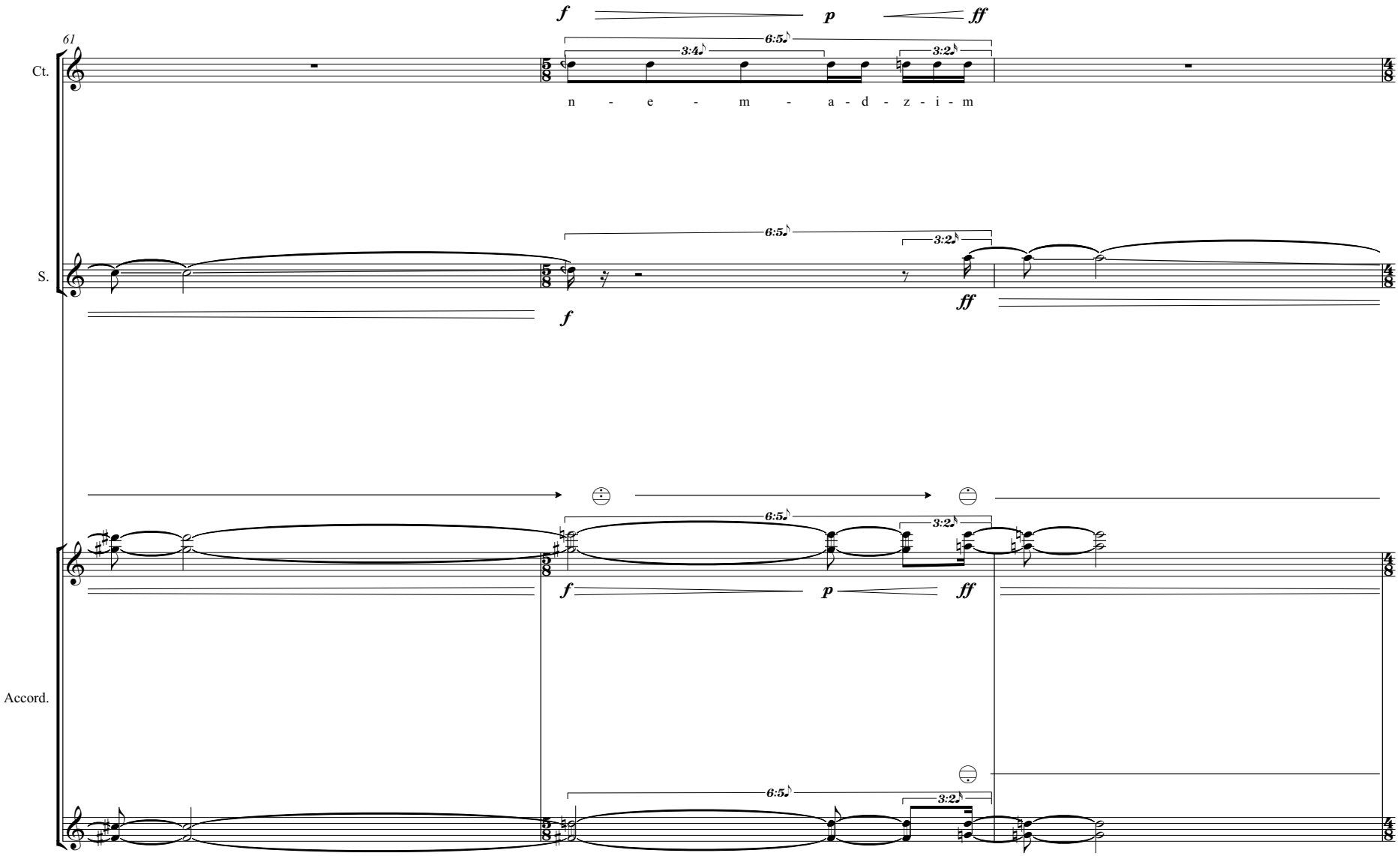
Accord.

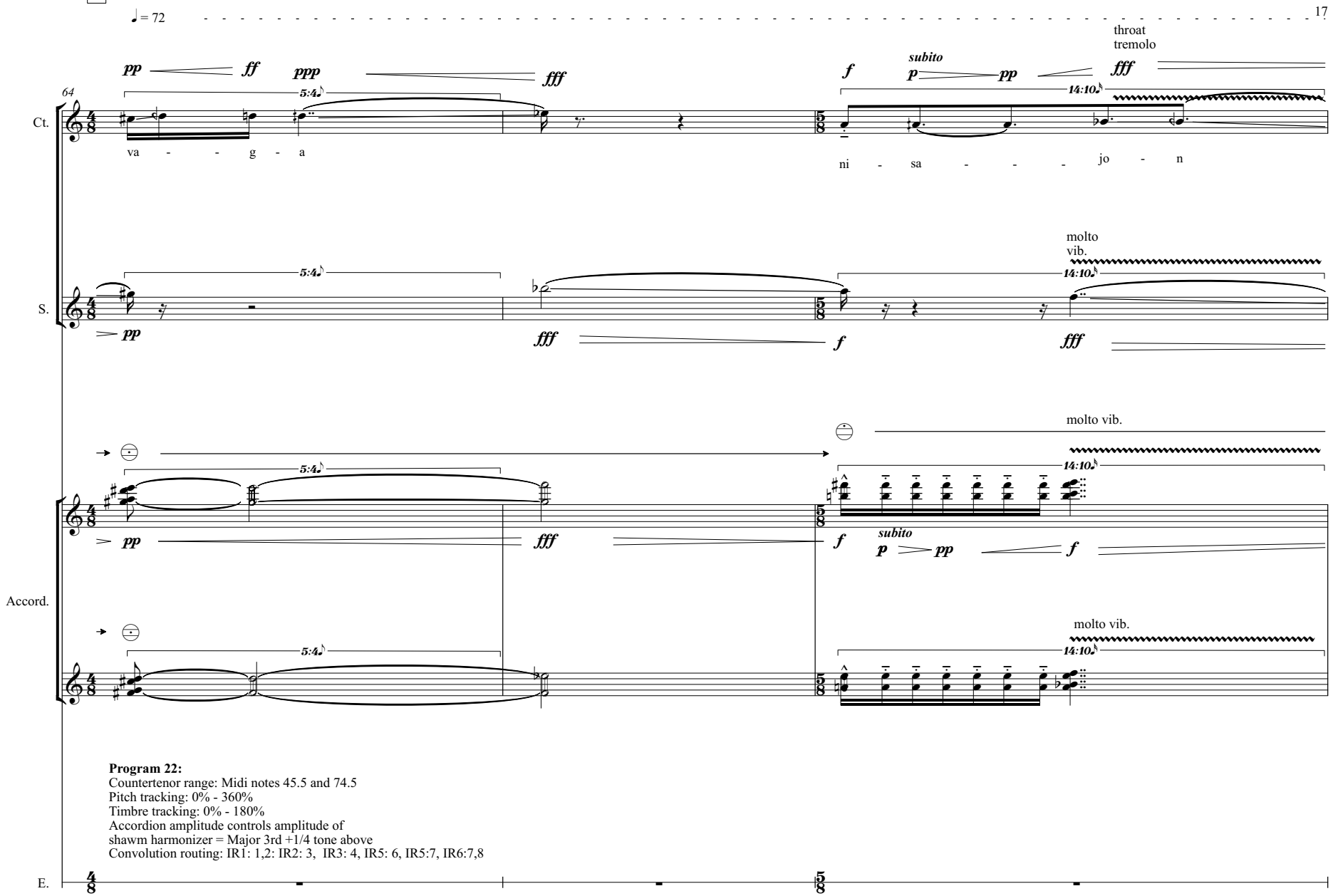
E.

Program 21:
Countertenor range: Midi notes 62.5 and 75.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 180%
Accordion amplitude controls amplitude of
shawm harmonizer = major 3rd above
Convolution routing: IR1: 1, IR2: 2, IR3: 3, IR4: 4, IR5:5, IR6:6, IR7, IR8:8

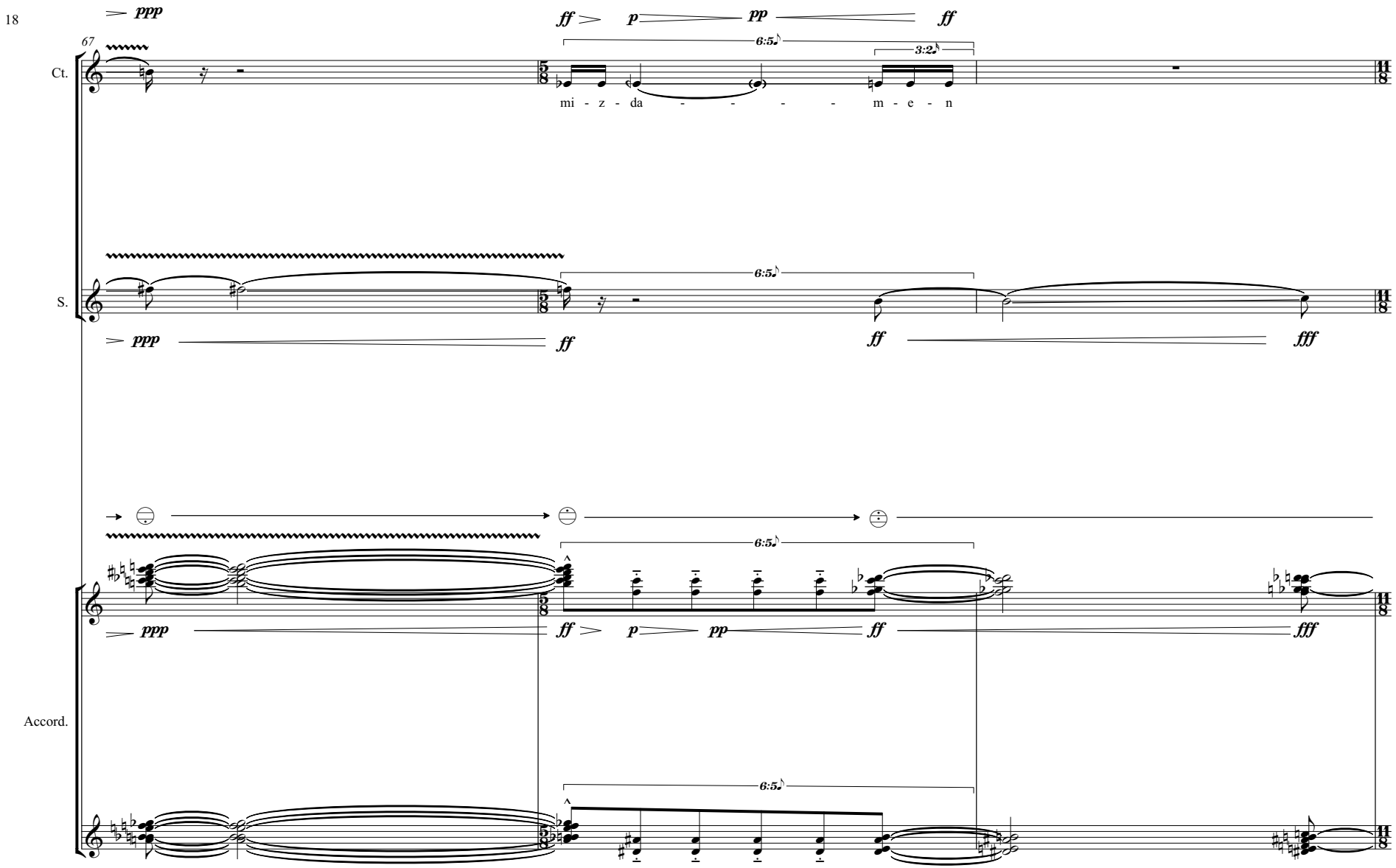

57
Ct.
S.
Acc. Voice.
Accord.
va - g - a
n - o - i - s - - i - n
tremolo with hand over mouth
whispered
va - ga
inhaled
inhaled
a - g - a - v
5:4
14:10
6:7

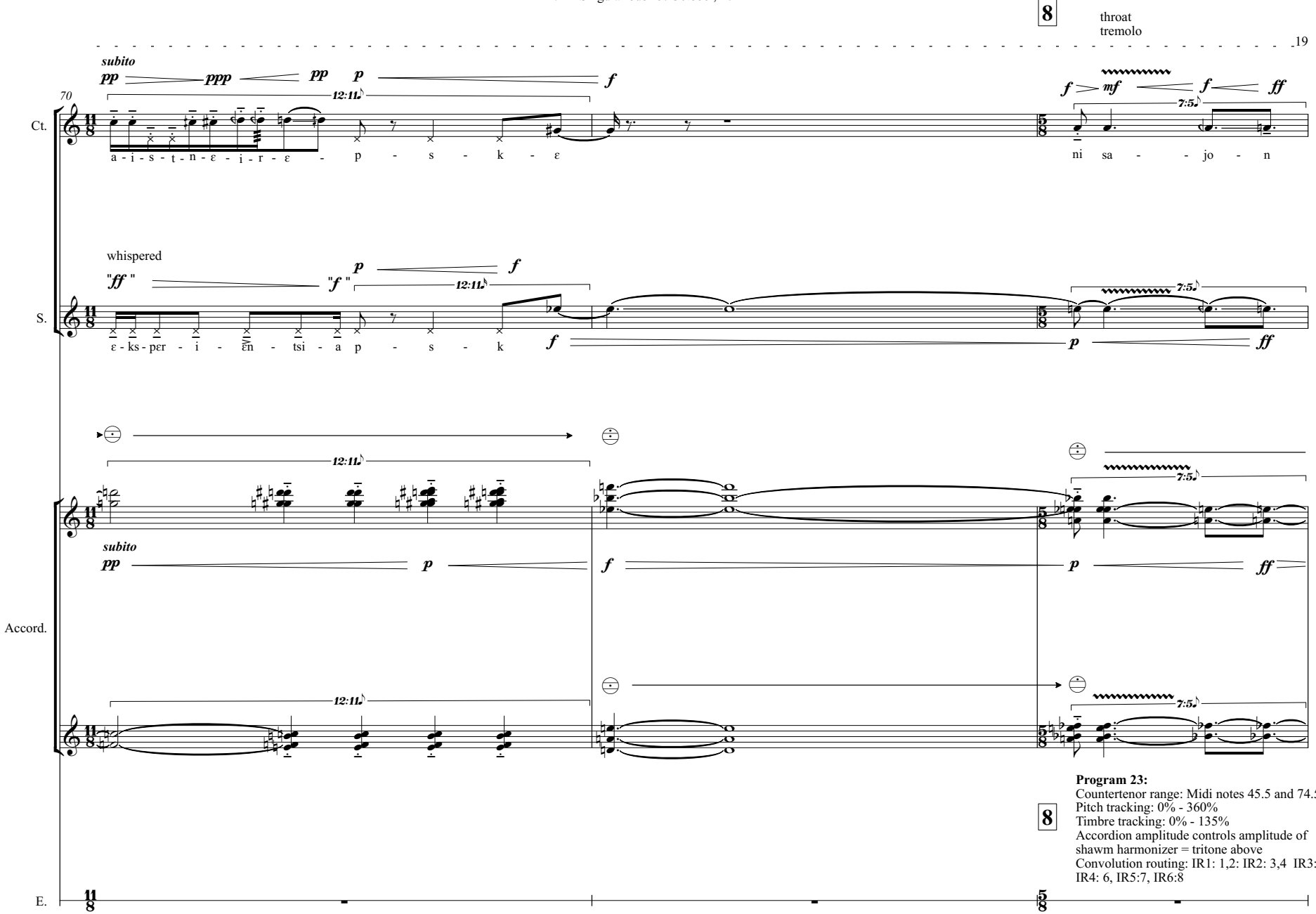
16



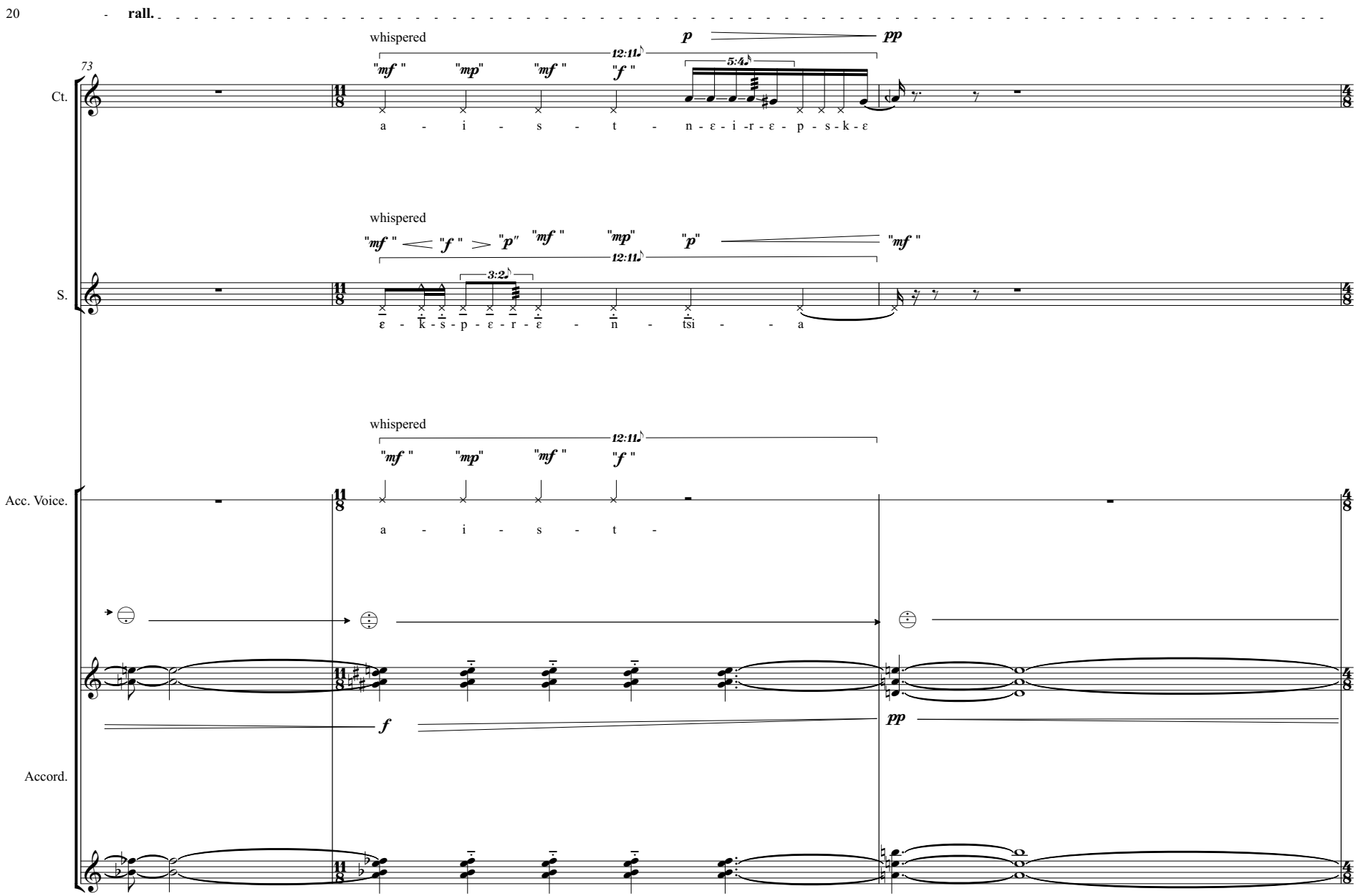

7
♩ = 72
64
Ct.
S.
Accord.
E.
pp
ff
ppp
fff
f
subito
p
pp
fff
throat
tremolo
va - - - g - a
ni - sa - - - jo - n
5:4♪
14:10♪
molto
vib.
molto vib.
molto vib.
Program 22:
Countertenor range: Midi notes 45.5 and 74.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 180%
Accordion amplitude controls amplitude of
shawm harmonizer = Major 3rd +1/4 tone above
Convolution routing: IR1: 1,2: IR2: 3, IR3: 4, IR5: 6, IR5:7, IR6:7,8

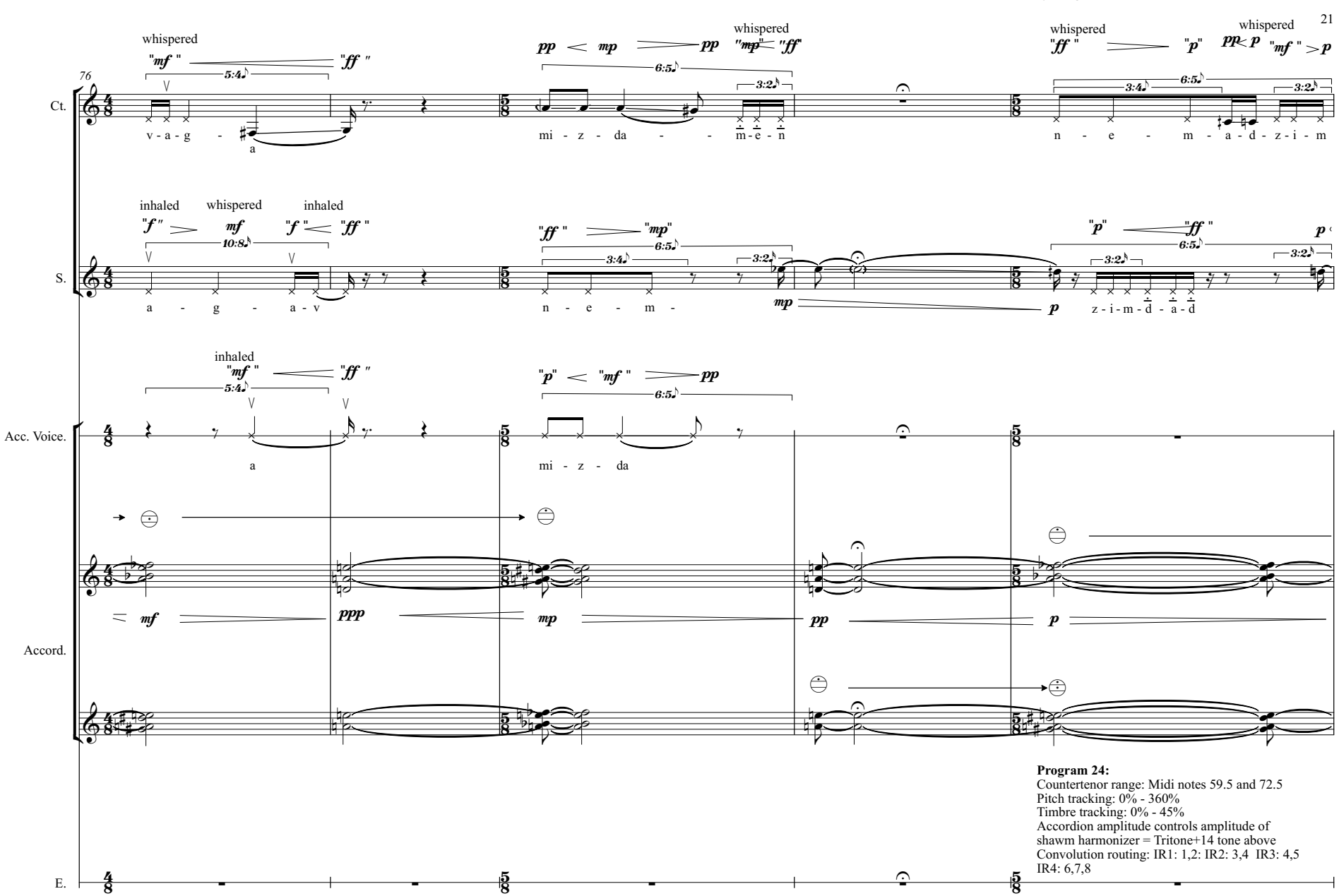
18





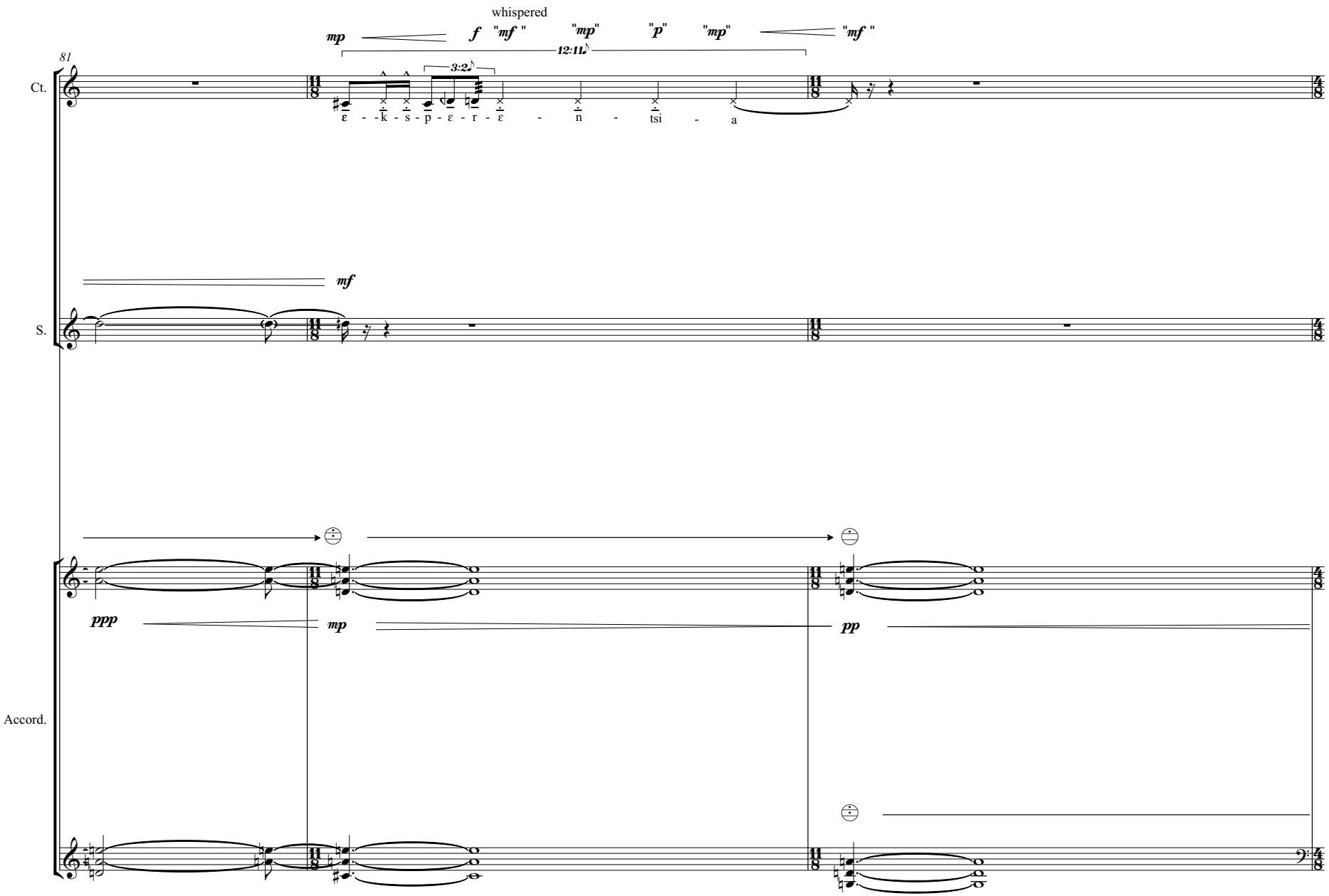
Program 23:
Countertenor range: Midi notes 45.5 and 74.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 135%
Accordion amplitude controls amplitude of shawm harmonizer = tritone above
Convolution routing: IR1: 1,2: IR2: 3,4 IR3: 5, IR4: 6, IR5:7, IR6:8

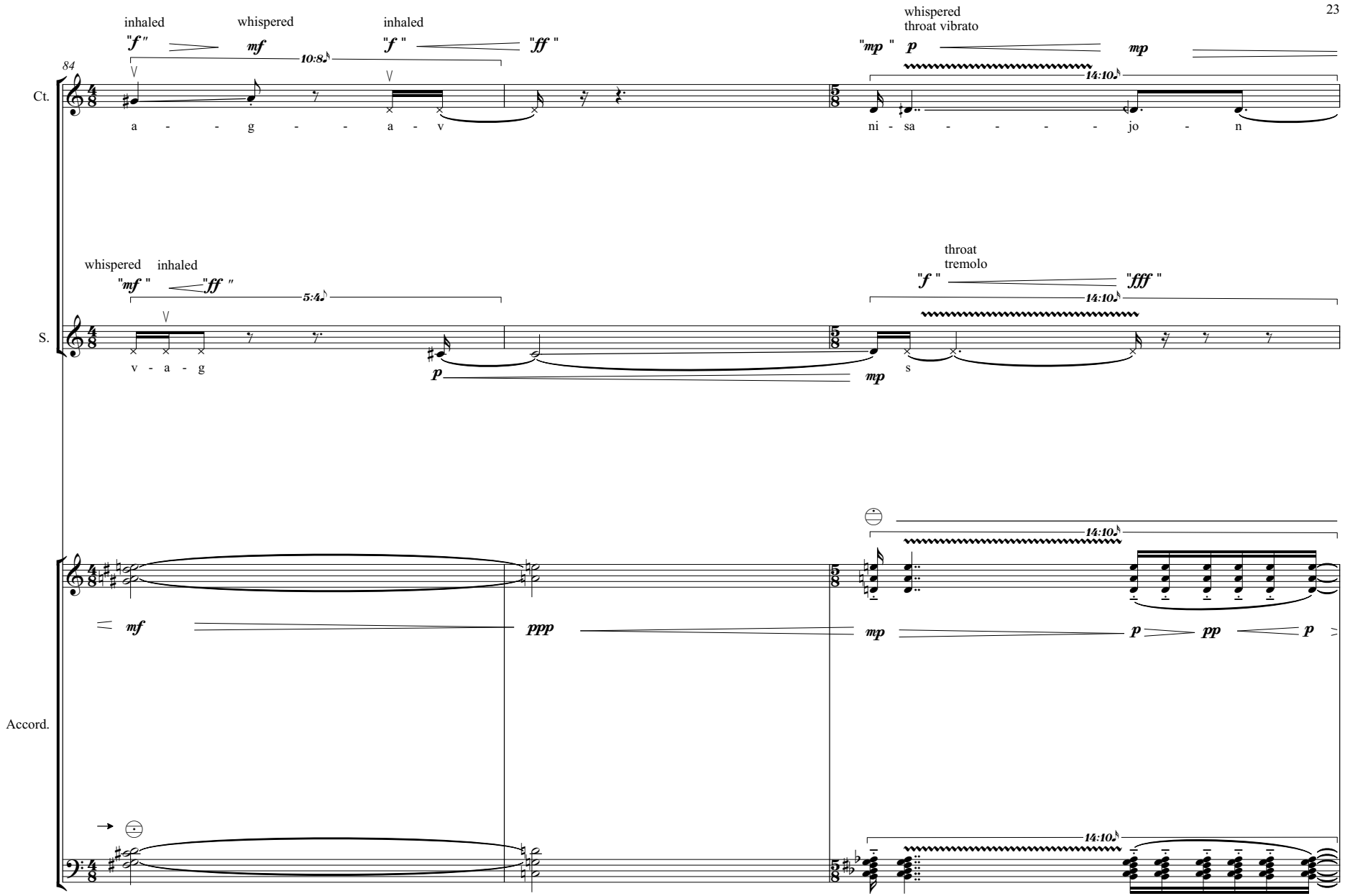

20
rall.
73
Ct.
whispered
"mf" "mp" "mf" "f"
12:11
5:4
p
pp
a - i - s - t - n - ɛ - i - r - ɛ - p - s - k - ɛ
S.
whispered
"mf" "f" "p" "mf" "mp" "p" "mf"
12:11
3:2
ɛ - k - s - p - ɛ - r - ɛ - n - tsi - a
Acc. Voice.
whispered
"mf" "mp" "mf" "f"
12:11
a - i - s - t -
Accord.
f
pp

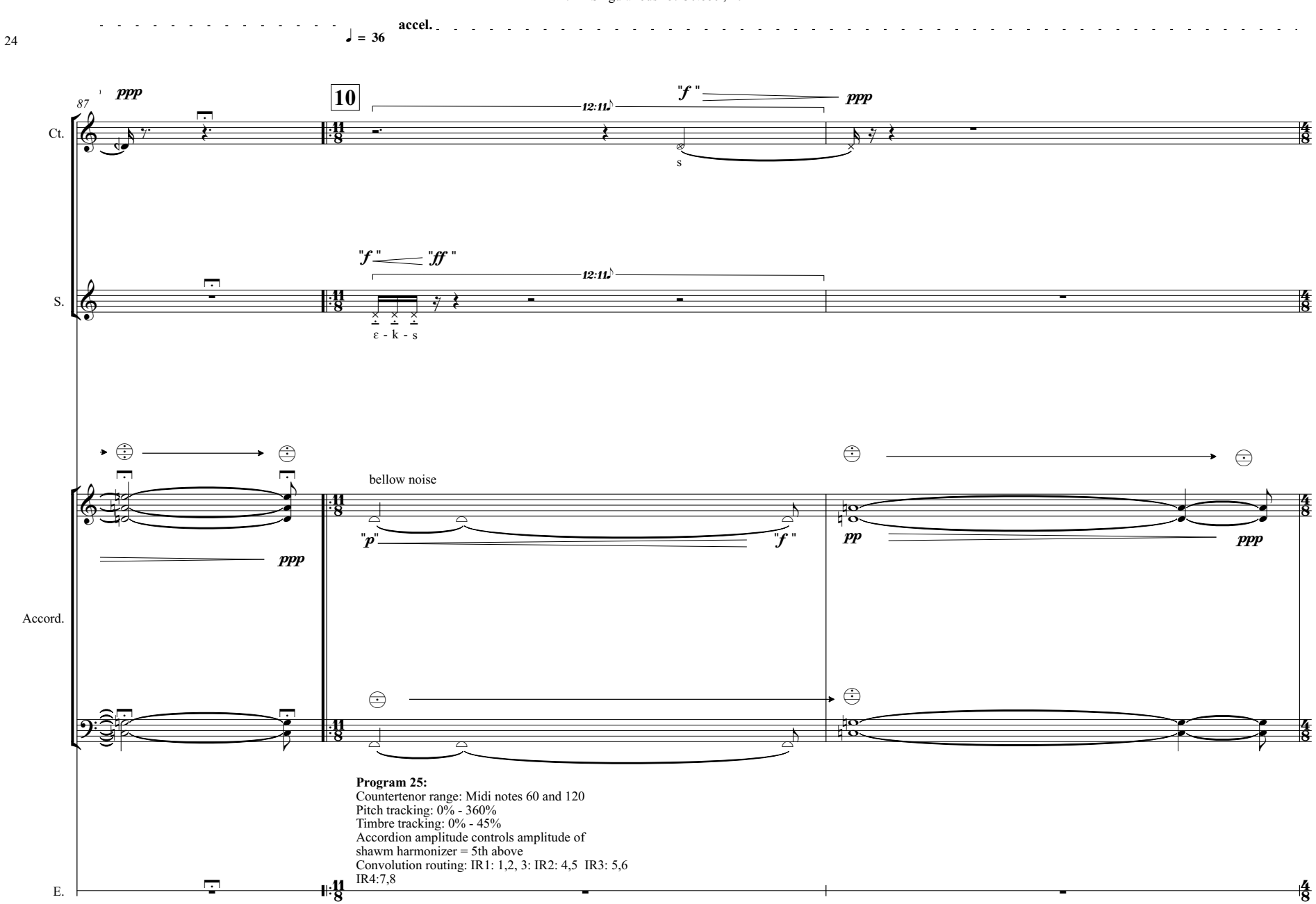


Program 24:
Countertenor range: Midi notes 59.5 and 72.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 45%
Accordion amplitude controls amplitude of shawm harmonizer = Tritone+14 tone above
Convolution routing: IR1: 1,2: IR2: 3,4 IR3: 4,5 IR4: 6,7,8

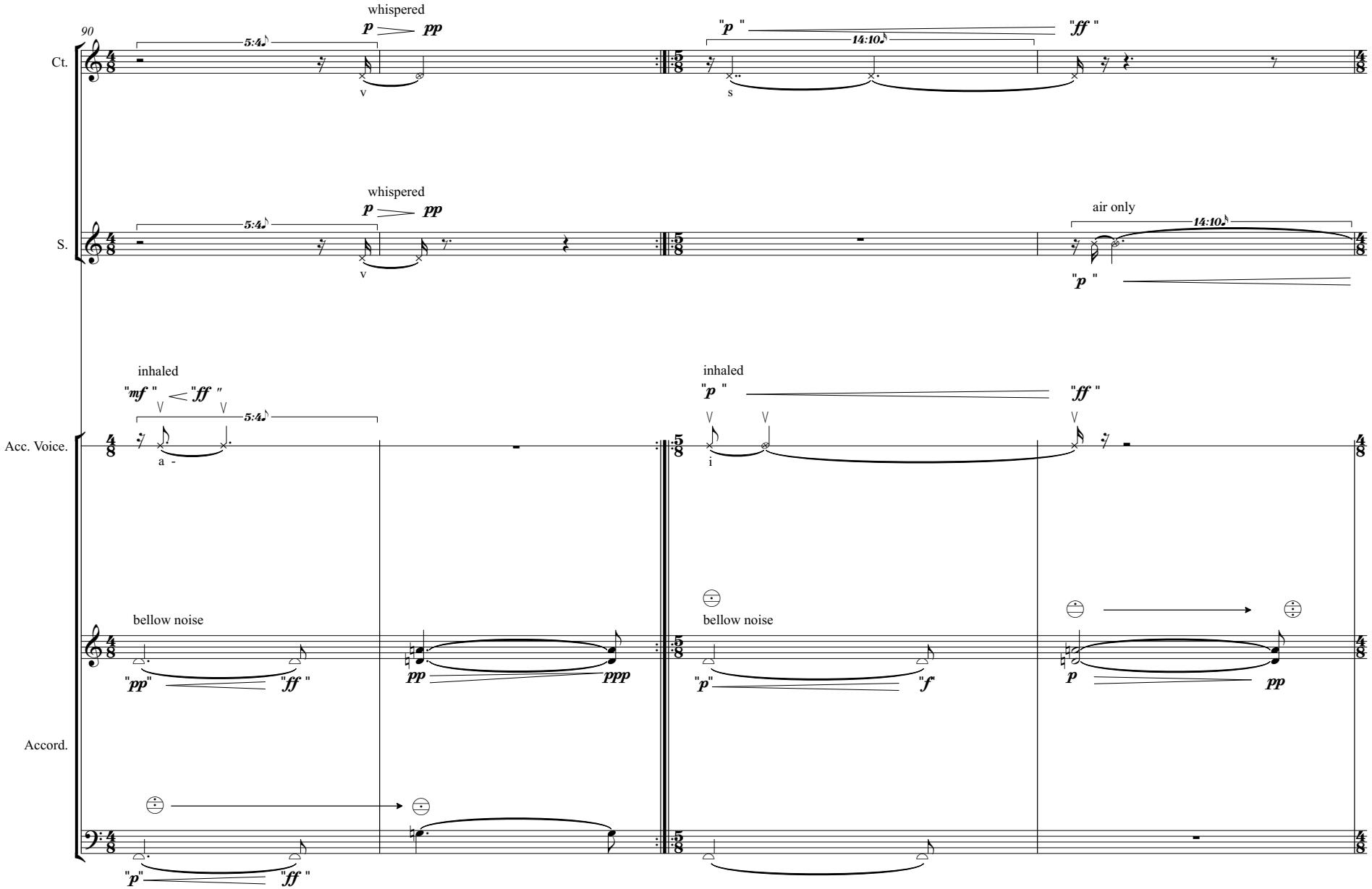
22


whispered
mp
f
"mf"
"mp"
"p"
"mp"
"mf"
12:11
81
3:2
Ct.
ε - k - s - p - ε - r - ε - n - tsi - a
mf
S.
ppp
mp
pp
Accord.

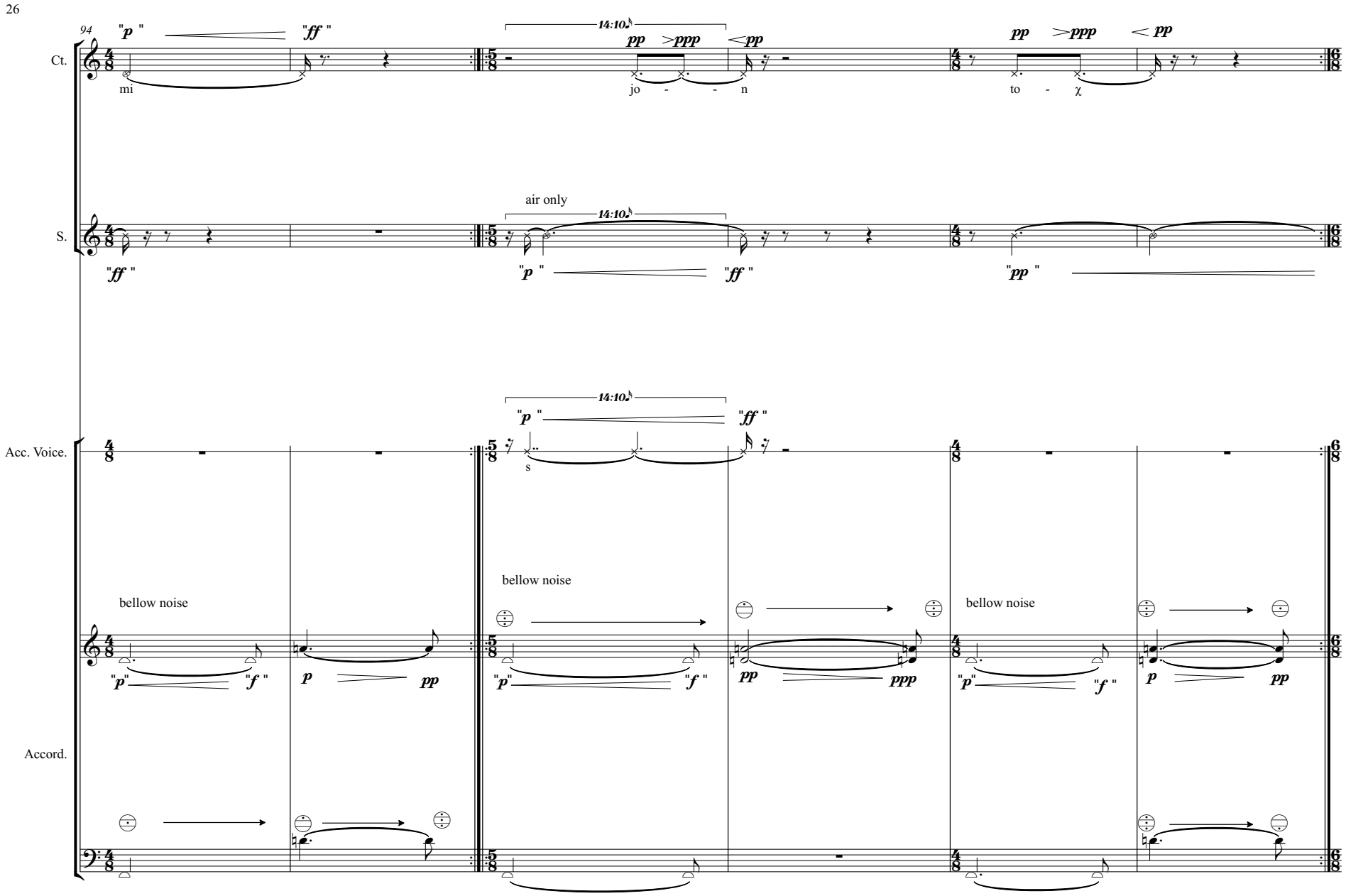

84
Ct.
inhaled
whispered
inhaled
"f"
mf
"f"
"ff"
10:8
a - - g - - a - v
whispered
throat vibrato
"mp"
p
mp
14:10
ni - sa - - - - - jo - n
S.
whispered
inhaled
"mf"
"ff"
5:4
v - a - g
p
throat
tremolo
"f"
"fff"
14:10
mp
s
Accord.
mf
ppp
14:10
mp
p
pp
p
14:10

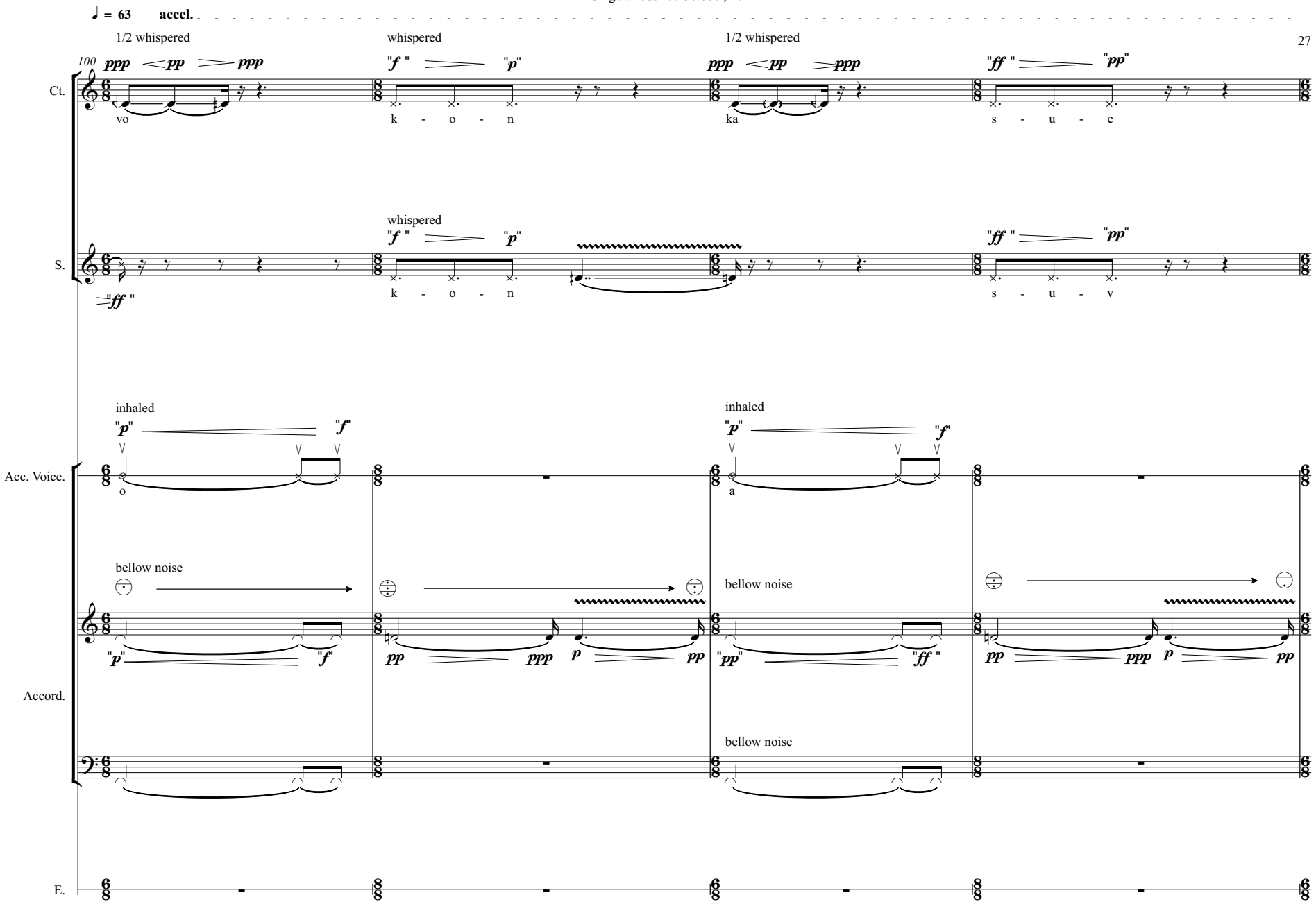


Program 25:
Countertenor range: Midi notes 60 and 120
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 45%
Accordion amplitude controls amplitude of
shawm harmonizer = 5th above
Convolution routing: IR1: 1,2, 3: IR2: 4,5 IR3: 5,6
IR4:7,8

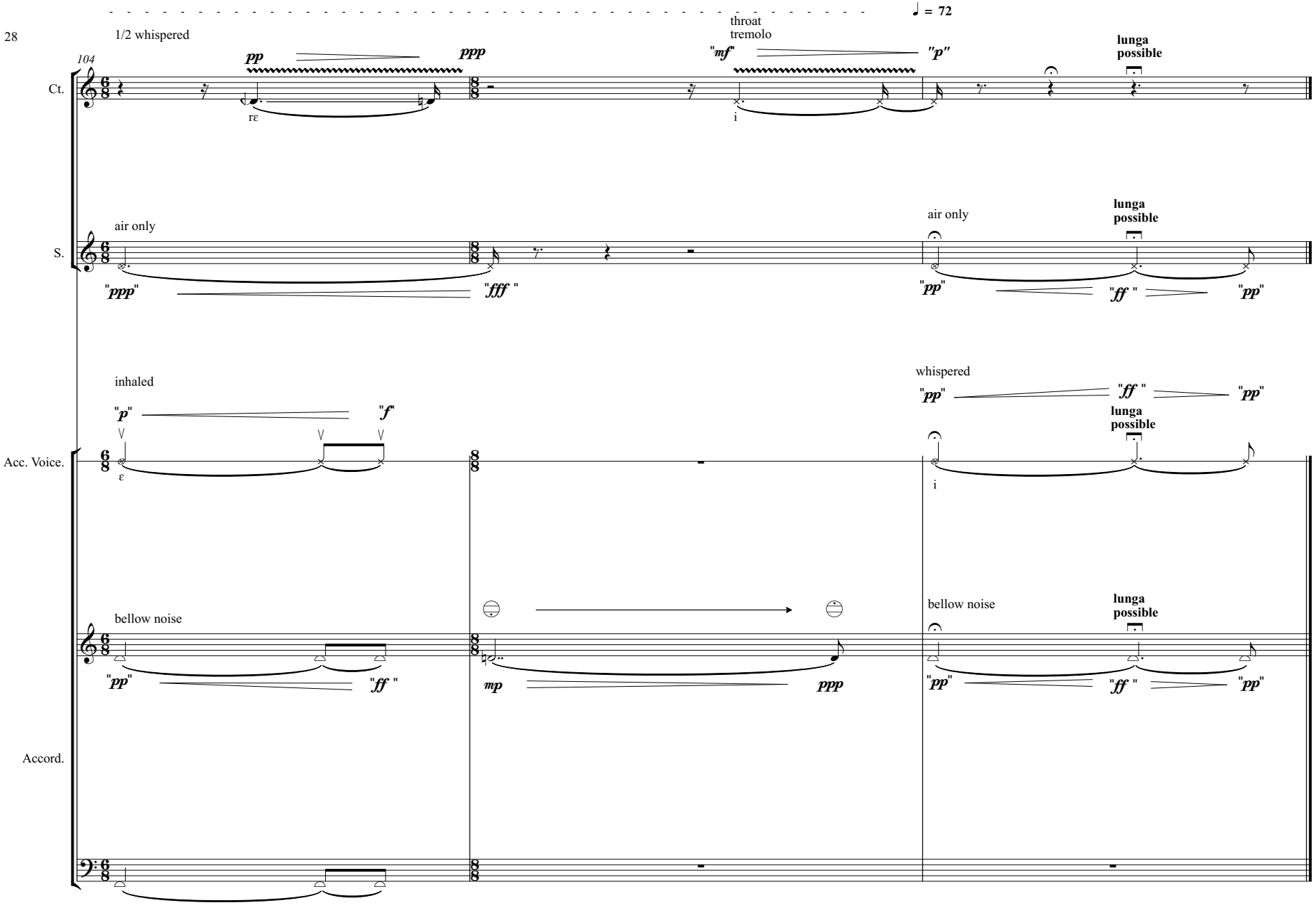

♩ = 45 accel.
90
Ct.
S.
Acc. Voice.
Accord.
whispered
p pp
5:4
v
"p "
"ff "
14:10
s
air only
"p "
inhaled
"mf " < "ff "
a -
"p "
i
bellow noise
"pp"
"ff "
pp
ppp
"p"
"f"
p
pp

26


94
Ct.
S.
Acc. Voice.
Accord.
mi
jo - - n
to - χ
air only
s
bellow noise
bellow noise
bellow noise


♩ = 63 accel.
1/2 whispered
whispered
1/2 whispered
100
ppp pp ppp
"f" "p"
ppp pp ppp
"ff" "pp"
Ct.
vo
k - o - n
ka
s - u - e
whispered
"f" "p"
"ff" "pp"
S.
"ff"
k - o - n
s - u - v
inhaled
"p" "f"
inhaled
"p" "f"
Acc. Voice.
o
a
bellow noise
bellow noise
"p" "f"
pp ppp p pp
"pp" "ff"
pp ppp p pp
Accord.
bellow noise
E.

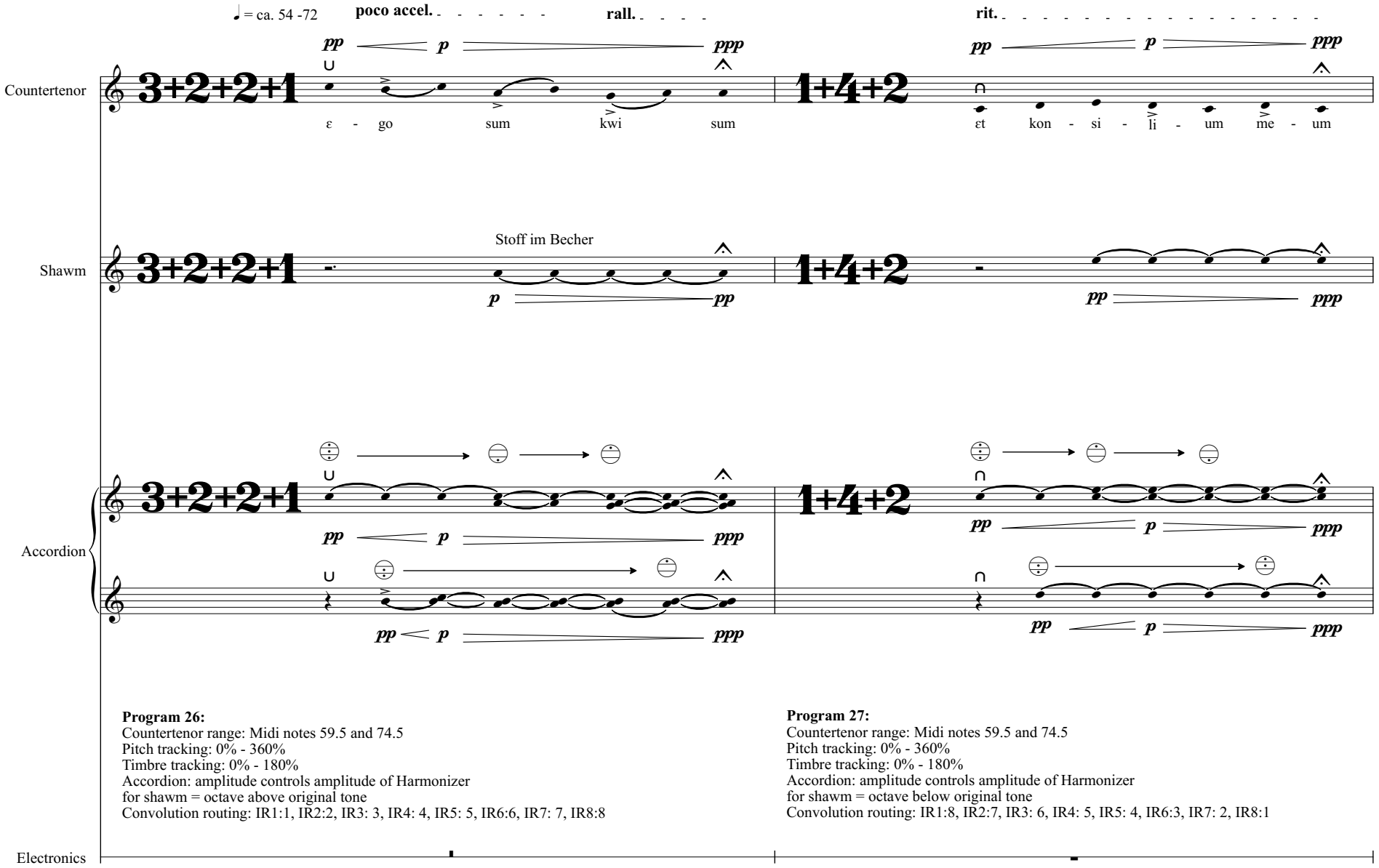
28


♩ = 72
104
Ct.
1/2 whispered
pp
ppp
rɛ
throat
tremolo
"mf"
"p"
i
lunga
possible
S.
air only
"ppp"
"fff "
air only
"pp"
lunga
possible
"ff "
"pp"
Acc. Voice.
inhaled
"p"
"f"
ɛ
whispered
"pp"
"ff "
"pp"
lunga
possible
i
Accord.
bellow noise
"pp"
"ff "
mp
ppp
bellow noise
lunga
possible
"pp"
"ff "
"pp"

Dániel Péter Biró

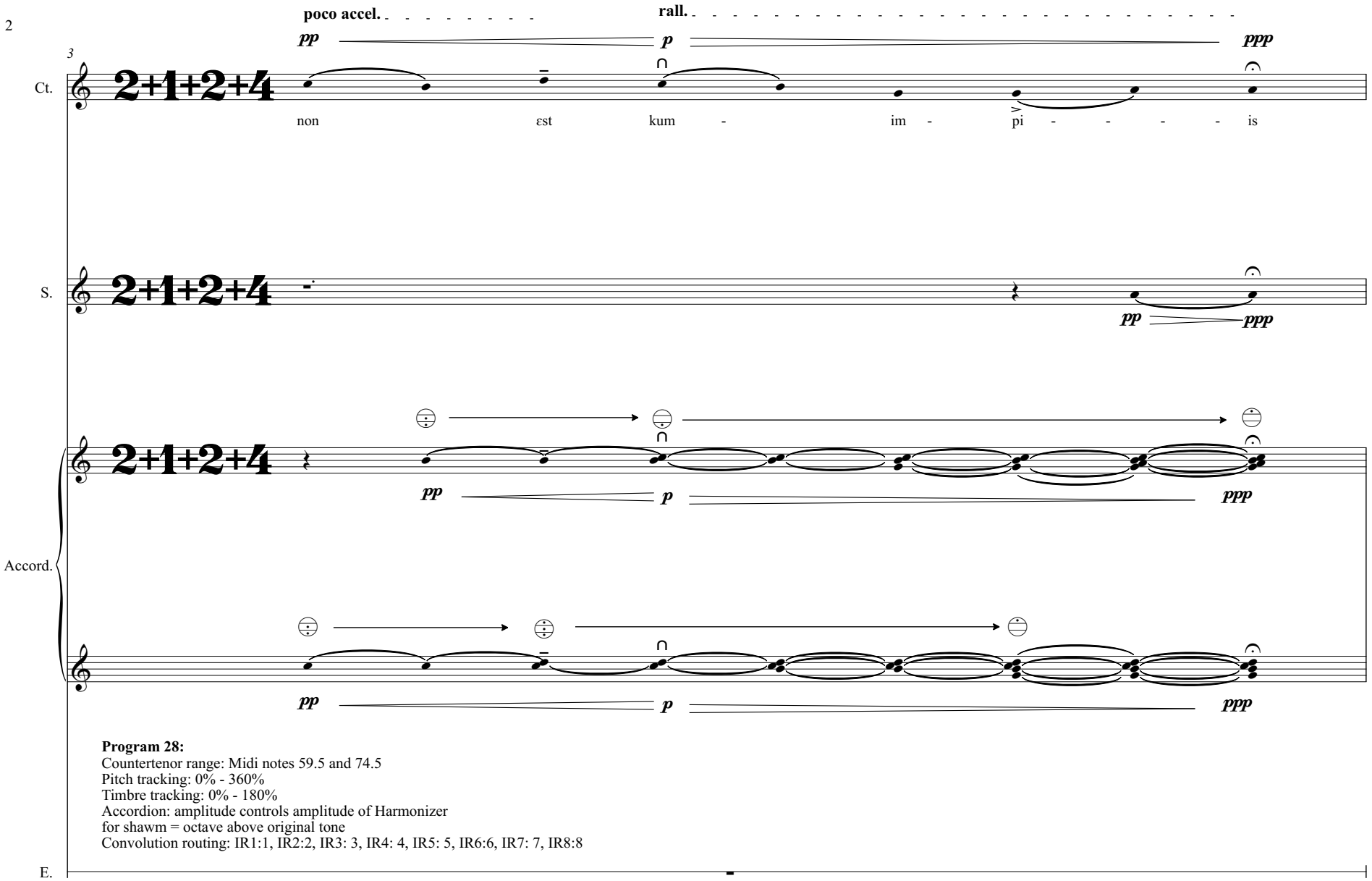
Ego sum qui sum, et consilium meum non est cum impiis;
sed in lege Domini voluntas mea est

IV. Ego sum qui sum

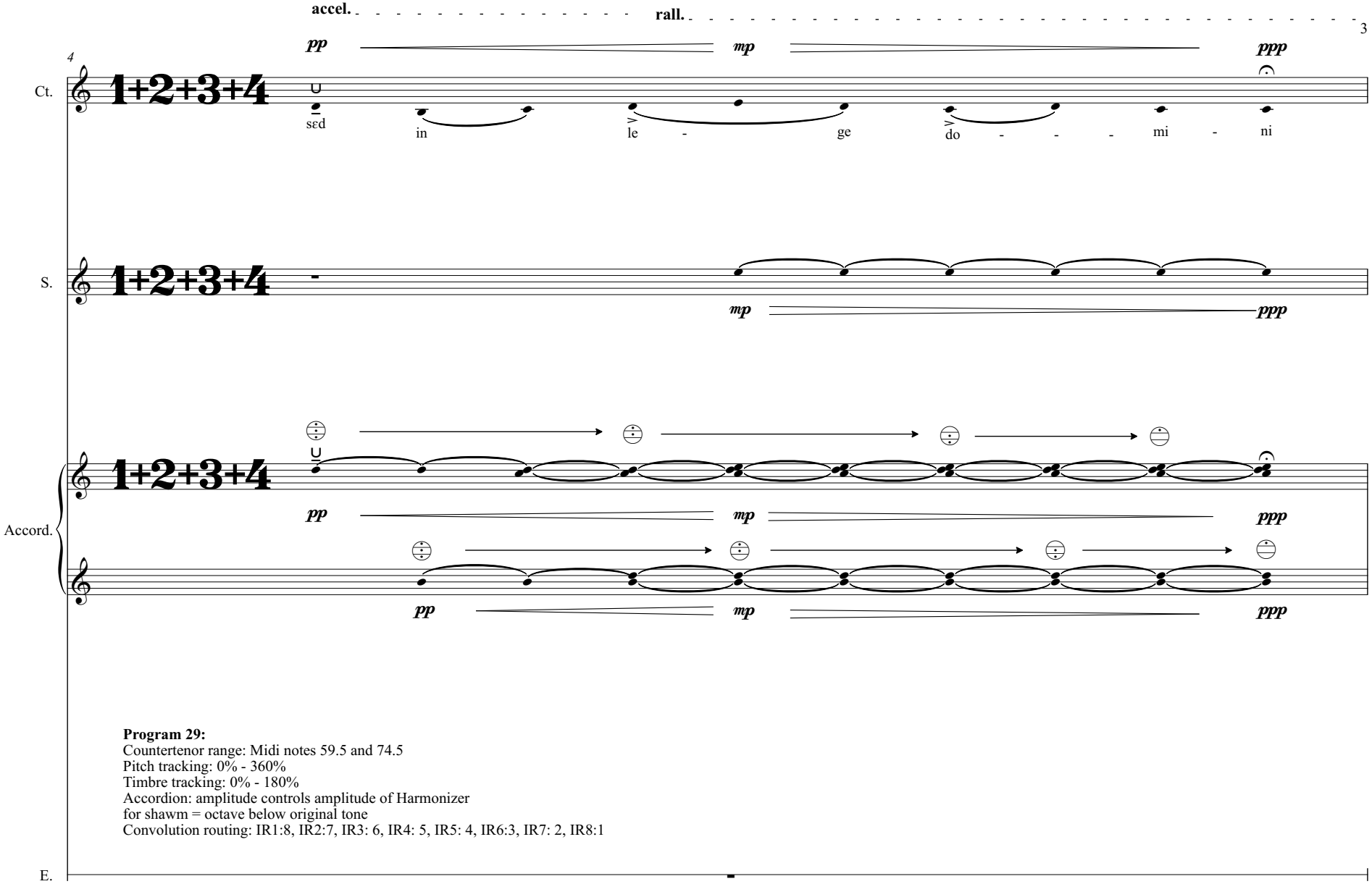


Program 26:
Countertenor range: Midi notes 59.5 and 74.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 180%
Accordion: amplitude controls amplitude of Harmonizer
for shawm = octave above original tone
Convolution routing: IR1:1, IR2:2, IR3: 3, IR4: 4, IR5: 5, IR6:6, IR7: 7, IR8:8

Program 27:
Countertenor range: Midi notes 59.5 and 74.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 180%
Accordion: amplitude controls amplitude of Harmonizer
for shawm = octave below original tone
Convolution routing: IR1:8, IR2:7, IR3: 6, IR4: 5, IR5: 4, IR6:3, IR7: 2, IR8:1

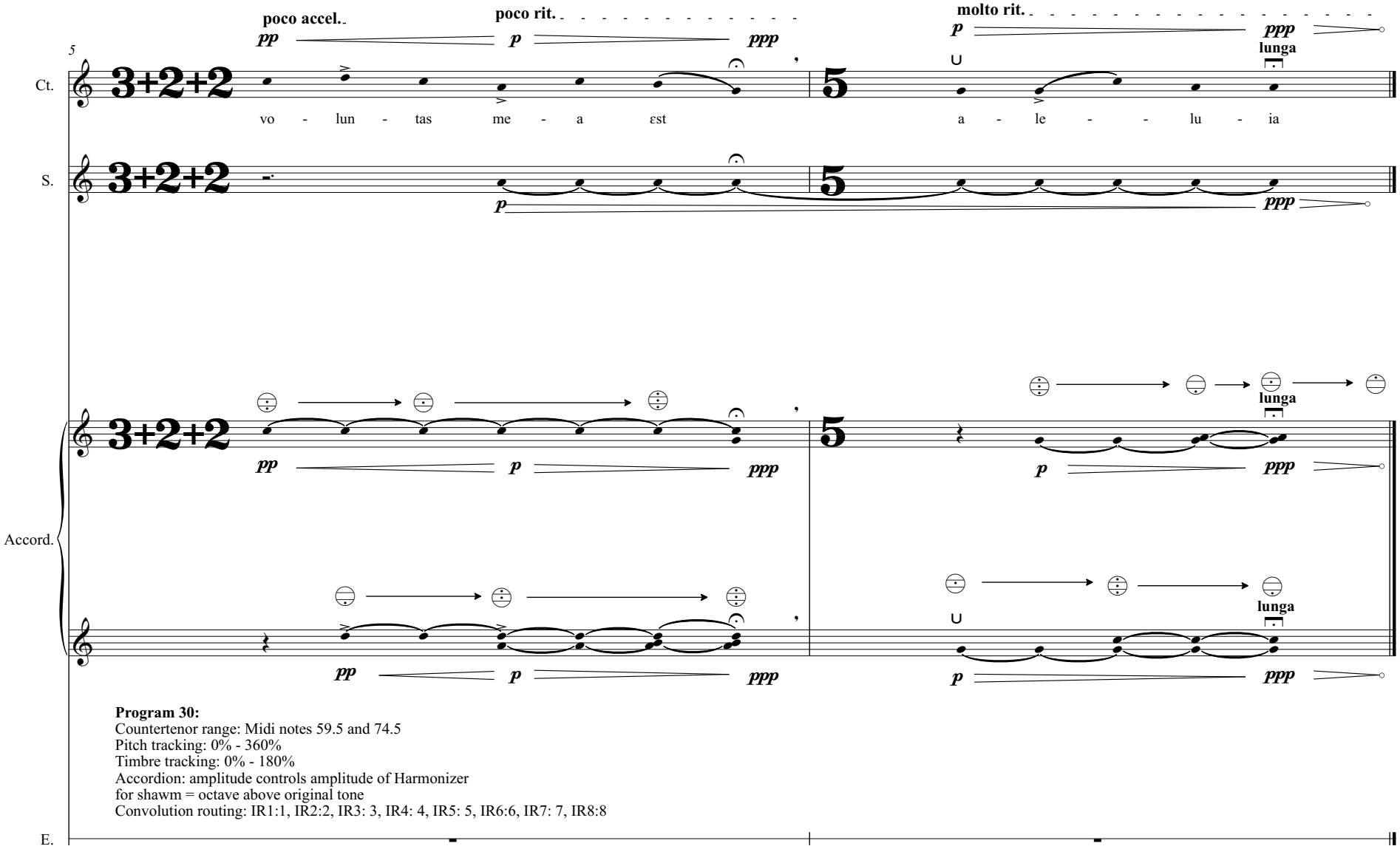


Program 28:
Countertenor range: Midi notes 59.5 and 74.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 180%
Accordion: amplitude controls amplitude of Harmonizer
for shawm = octave above original tone
Convolution routing: IR1:1, IR2:2, IR3: 3, IR4: 4, IR5: 5, IR6:6, IR7: 7, IR8:8



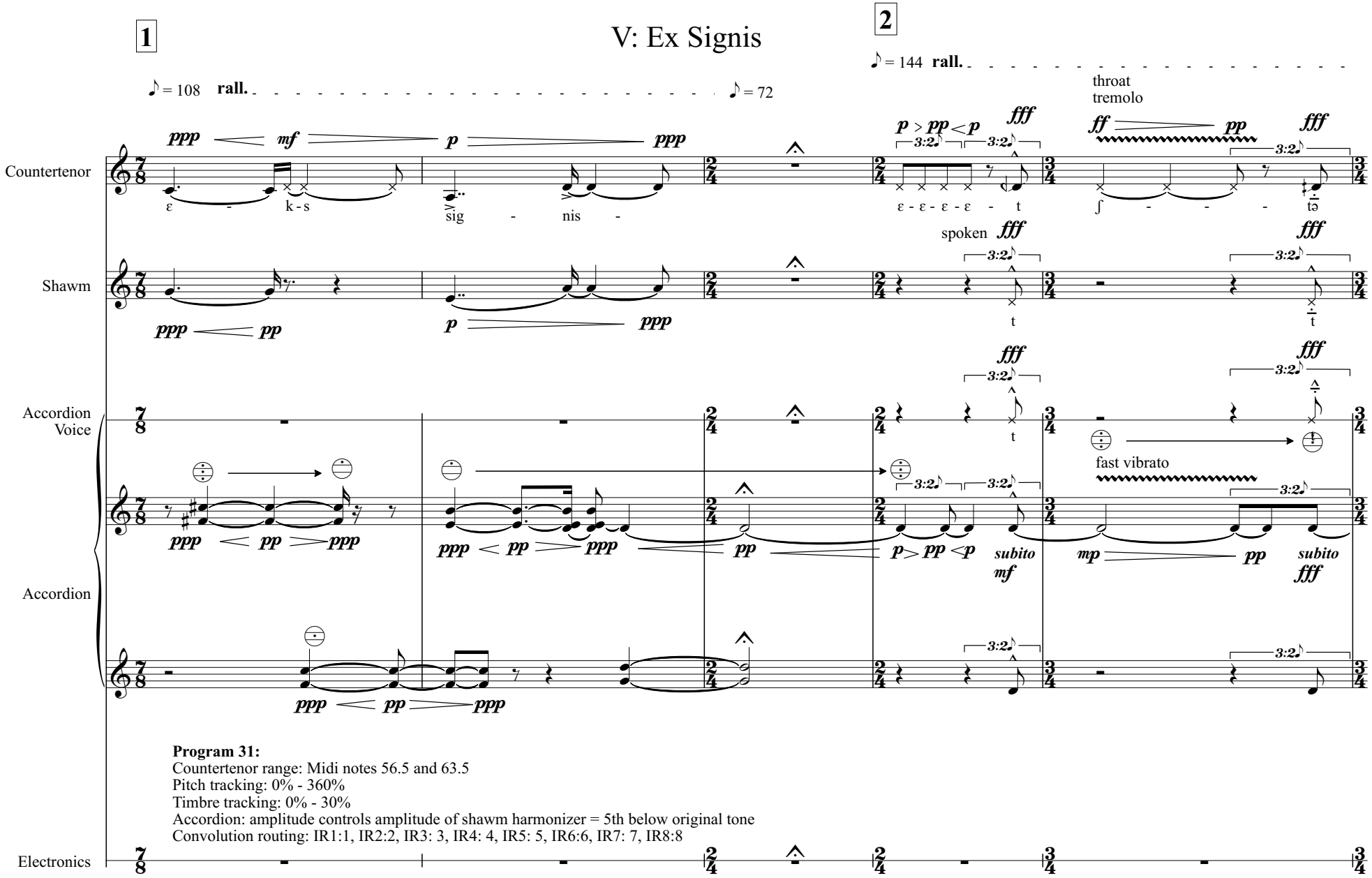
Program 29:
Countertenor range: Midi notes 59.5 and 74.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 180%
Accordion: amplitude controls amplitude of Harmonizer
for shawm = octave below original tone
Convolution routing: IR1:8, IR2:7, IR3: 6, IR4: 5, IR5: 4, IR6:3, IR7: 2, IR8:1

4



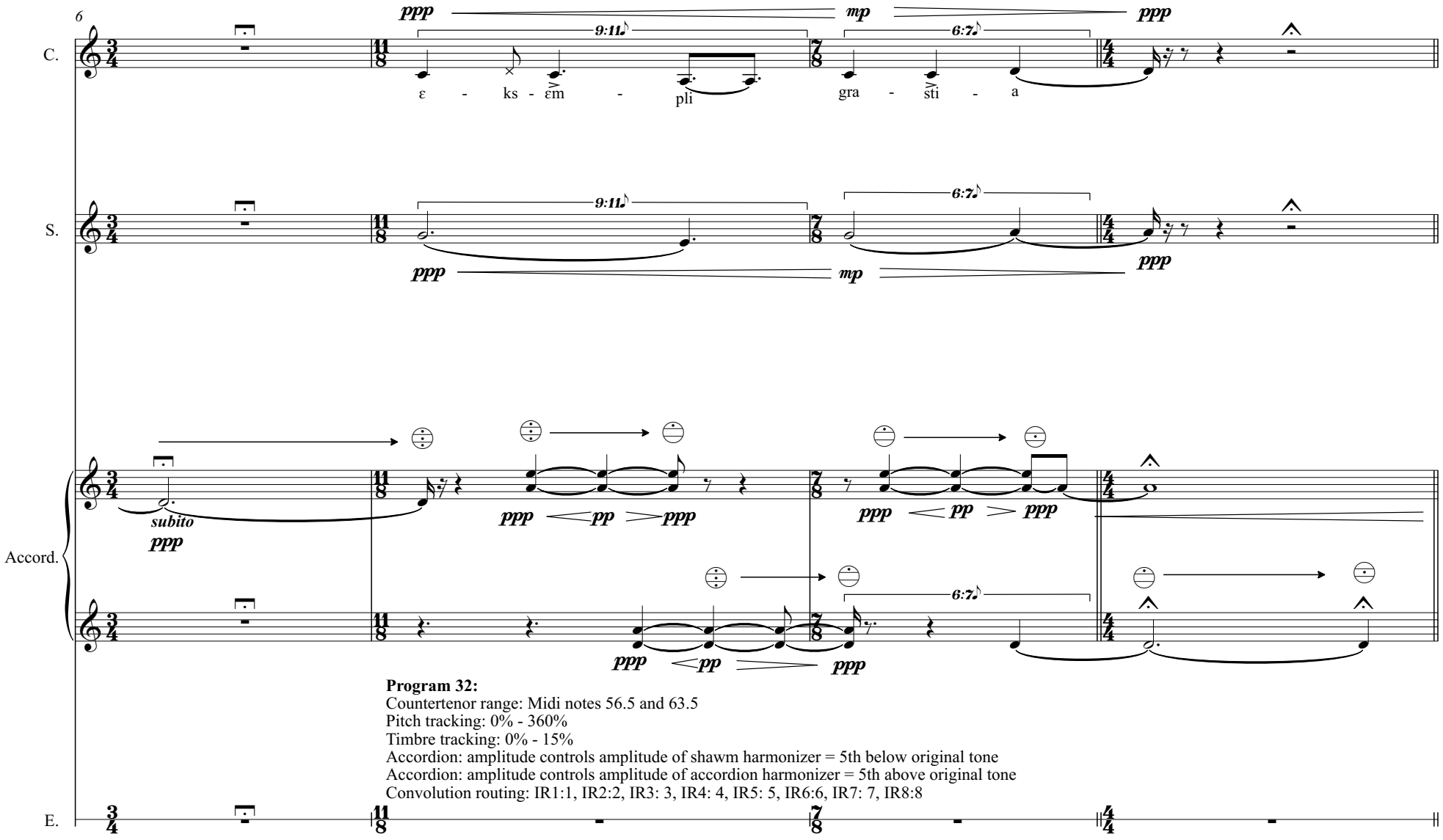
Program 30:
Countertenor range: Midi notes 59.5 and 74.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 180%
Accordion: amplitude controls amplitude of Harmonizer
for shawm = octave above original tone
Convolution routing: IR1:1, IR2:2, IR3: 3, IR4: 4, IR5: 5, IR6:6, IR7: 7, IR8:8

V: Ex Signis



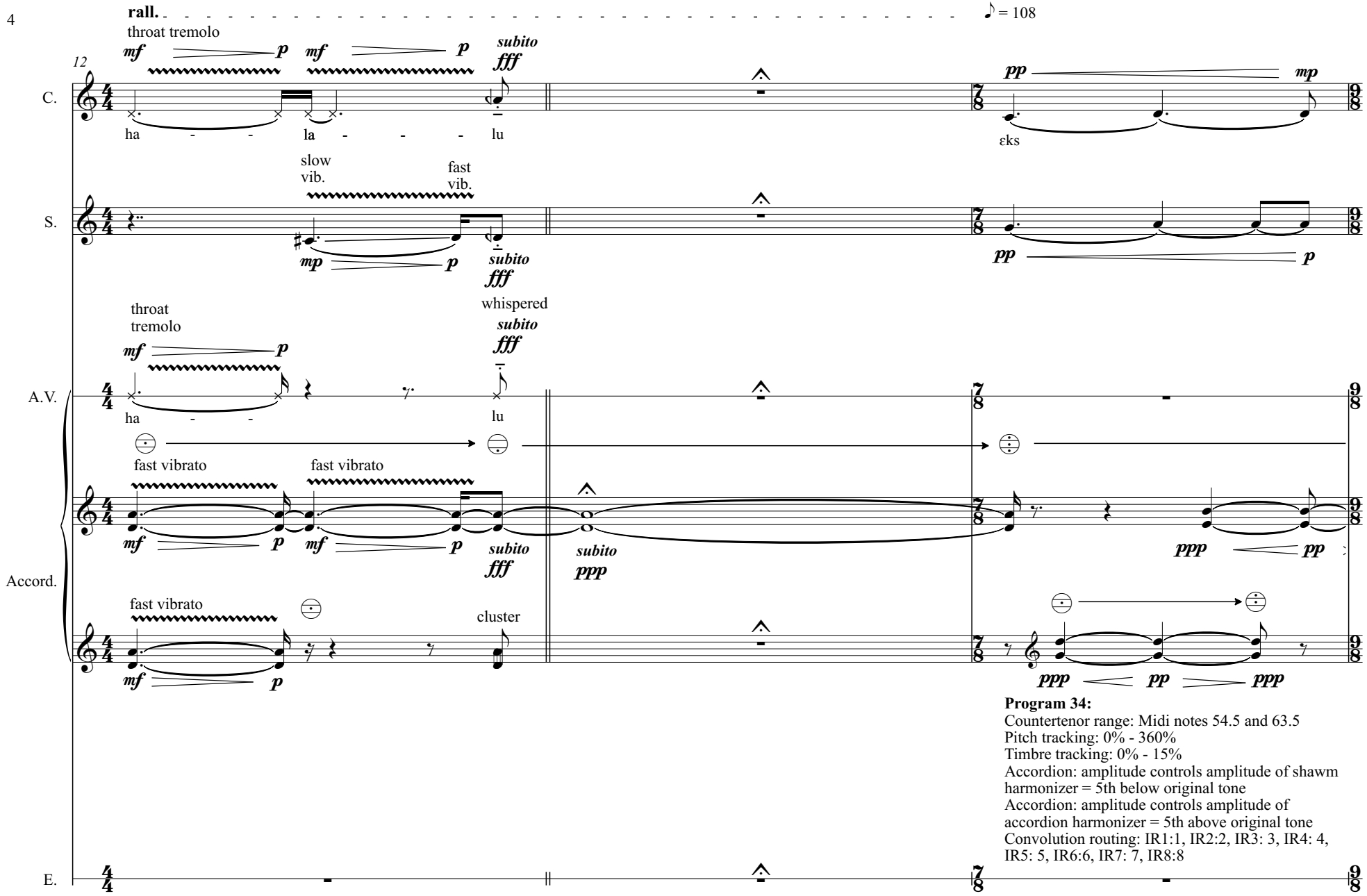
Program 31:
Countertenor range: Midi notes 56.5 and 63.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 30%
Accordion: amplitude controls amplitude of shawm harmonizer = 5th below original tone
Convolution routing: IR1:1, IR2:2, IR3: 3, IR4: 4, IR5: 5, IR6:6, IR7: 7, IR8:8

♪ = 108 **accel.**

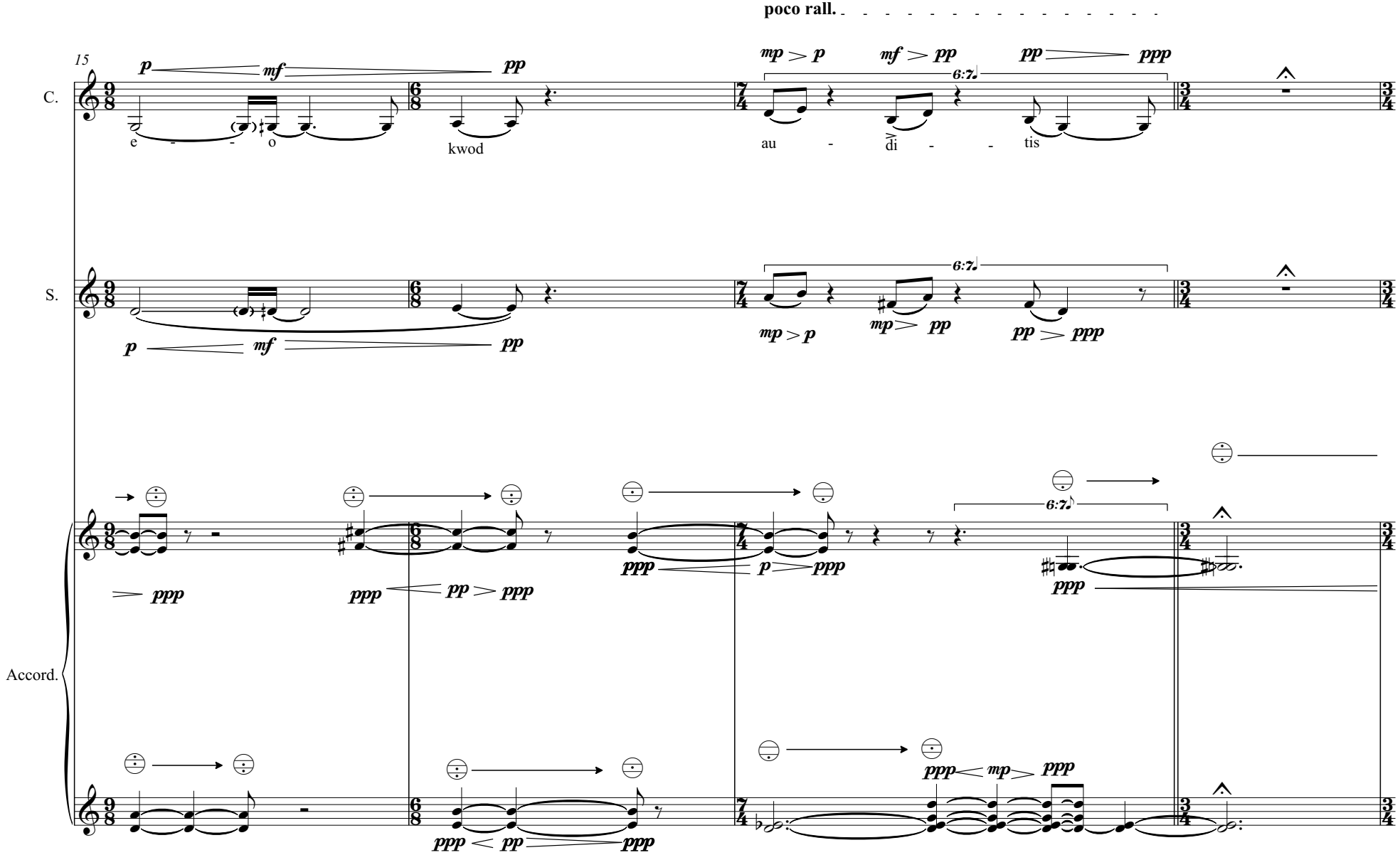


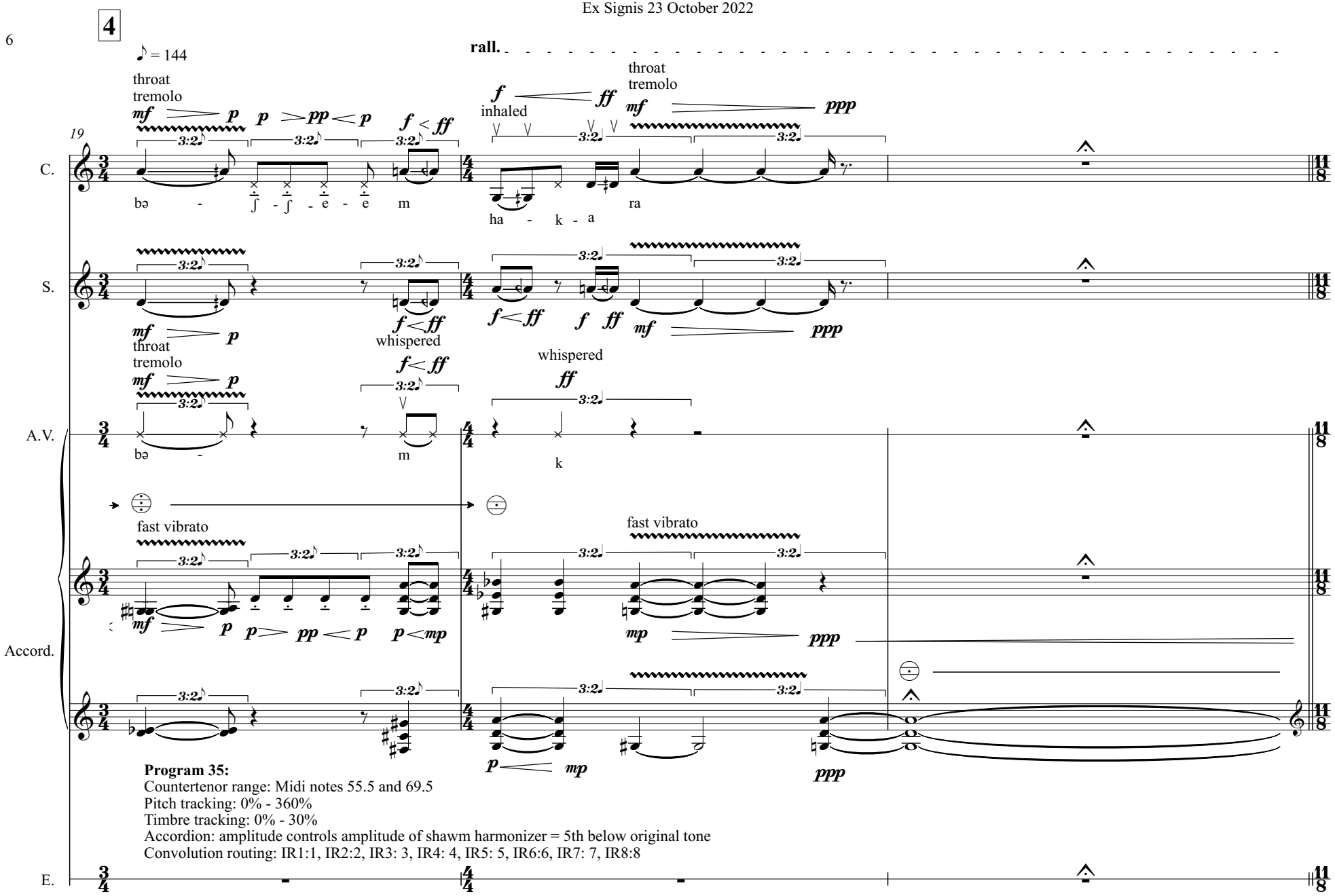
Program 32:
Countertenor range: Midi notes 56.5 and 63.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 15%
Accordion: amplitude controls amplitude of shawm harmonizer = 5th below original tone
Accordion: amplitude controls amplitude of accordion harmonizer = 5th above original tone
Convolution routing: IR1:1, IR2:2, IR3: 3, IR4: 4, IR5: 5, IR6:6, IR7: 7, IR8:8

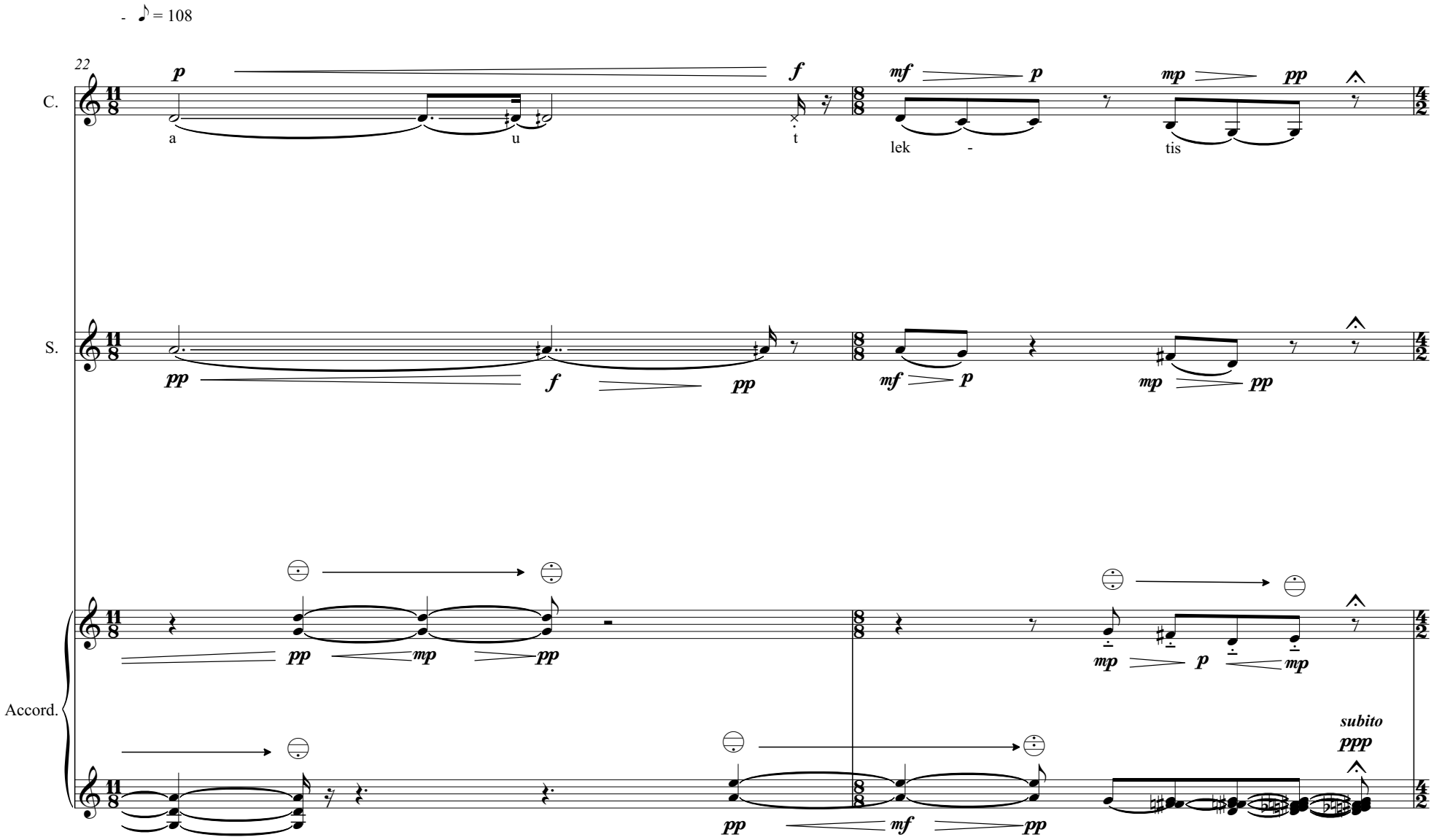
Program 33:
Countertenor range: Midi notes 67.5 and 69.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 30%
Accordion: amplitude controls amplitude of shawm harmonizer = 5th below original tone
Convolution routing: IR1:1, IR2:2, IR3: 3, IR4: 4, IR5: 5, IR6:6, IR7: 7, IR8:8

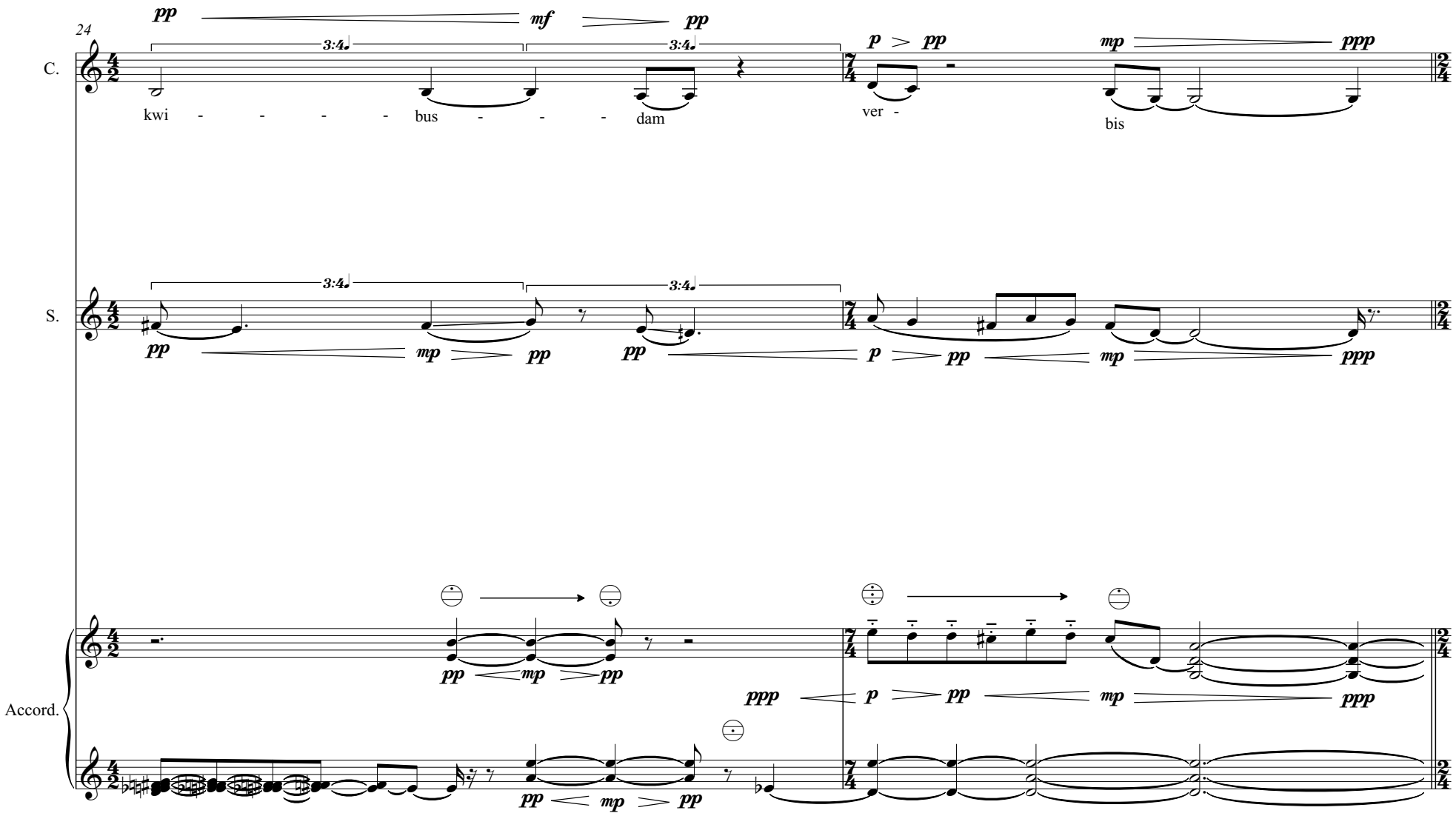


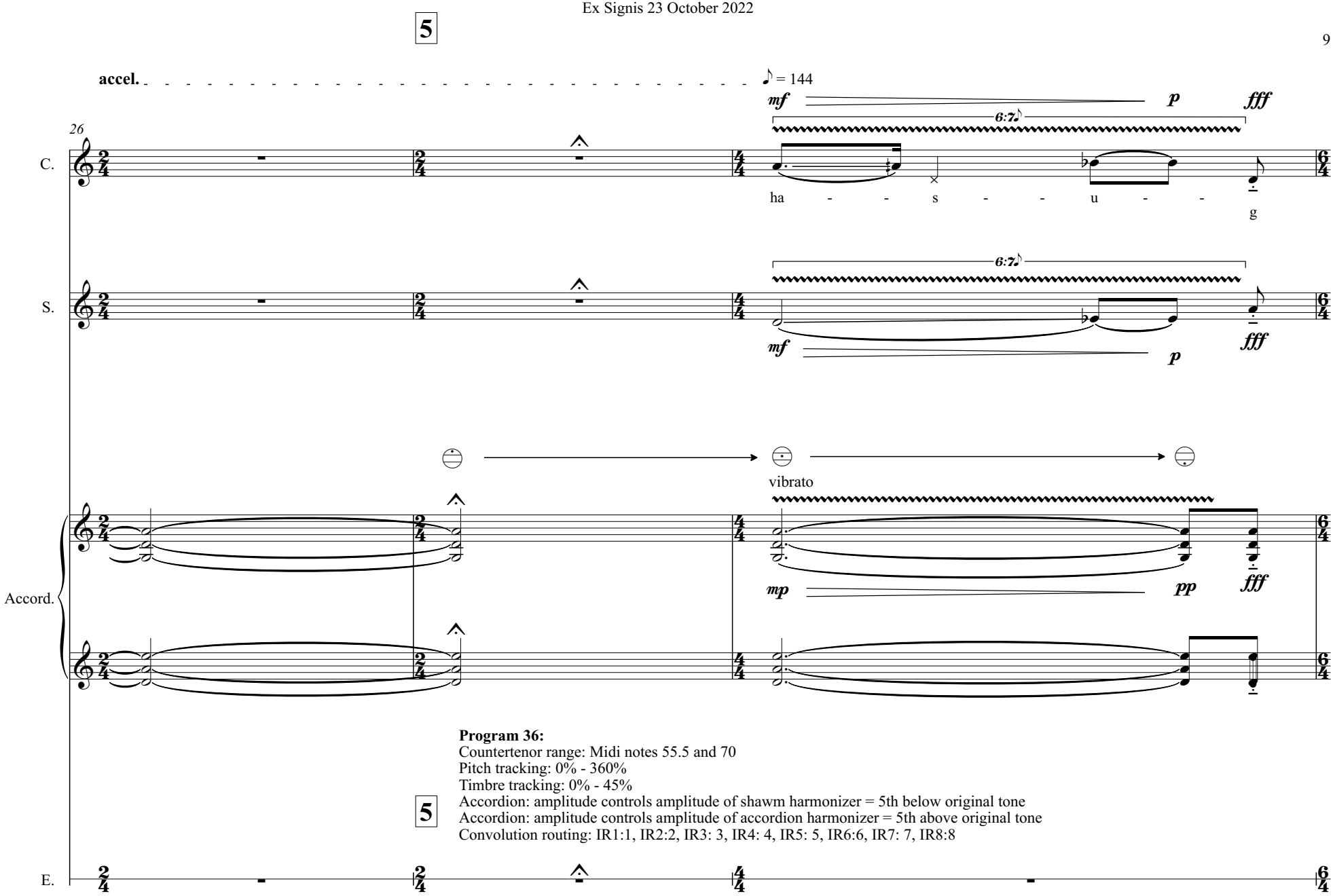
Program 34:
Countertenor range: Midi notes 54.5 and 63.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 15%
Accordion: amplitude controls amplitude of shawm harmonizer = 5th below original tone
Accordion: amplitude controls amplitude of accordion harmonizer = 5th above original tone
Convolution routing: IR1:1, IR2:2, IR3: 3, IR4: 4, IR5: 5, IR6:6, IR7: 7, IR8:8


poco rall.
15
C.
S.
Accord.
e - - - o
kwod
au - di - - tis
6:7
6:7
6:7


4
♪ = 144
rall.
19
C.
S.
A.V.
Accord.
E.
throat tremolo
inhaled
whispered
fast vibrato
bə - ∫ - ∫ - e - e m
ha - k - a ra
k
Program 35:
Countertenor range: Midi notes 55.5 and 69.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 30%
Accordion: amplitude controls amplitude of shawm harmonizer = 5th below original tone
Convolution routing: IR1:1, IR2:2, IR3: 3, IR4: 4, IR5: 5, IR6:6, IR7: 7, IR8:8

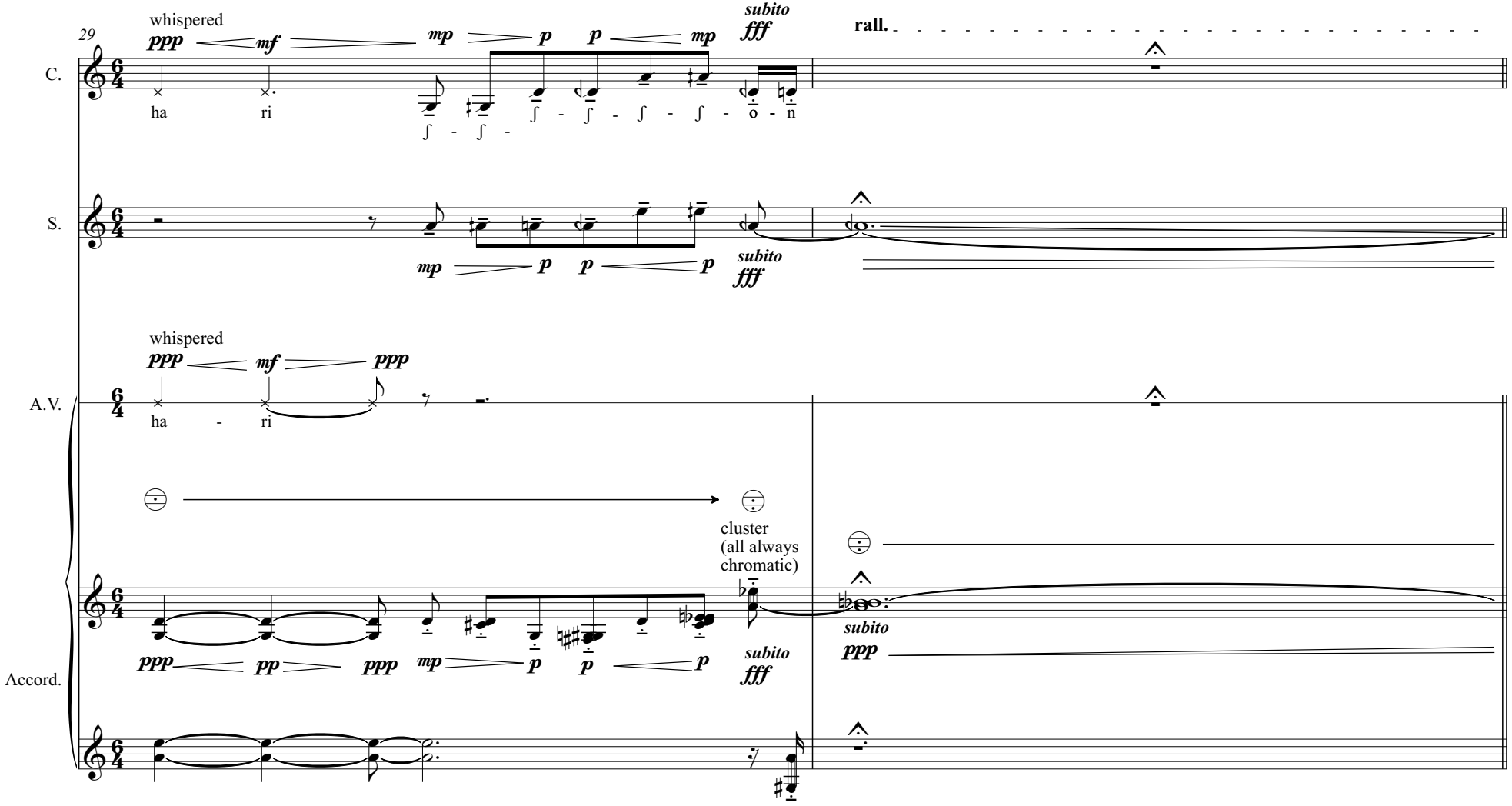

- ♪ = 108
22
C.
S.
Accord.
p
a
u
f
t
mf
p
lek
-
mp
pp
tis
pp
f
pp
mf
p
mp
pp
pp
mp
pp
mp
p
mp
subito
ppp
pp
mf
pp

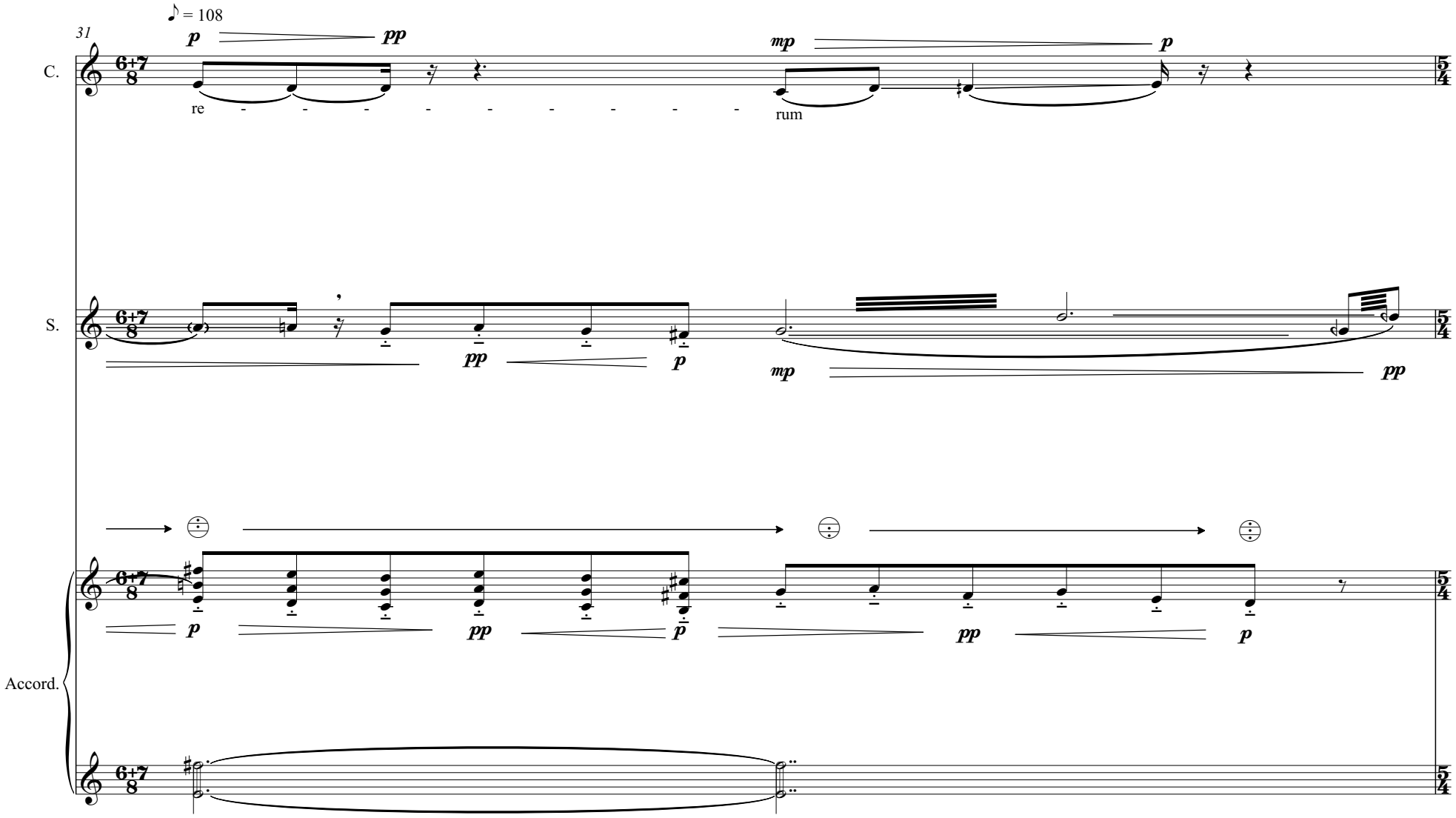

24
C.
S.
Accord.
pp
mf
pp
3:4.
3:4.
kwi - - - - bus - - - dam
p > pp
ver -
mp
ppp
bis
mp
pp
ppp
p
pp
mp
ppp



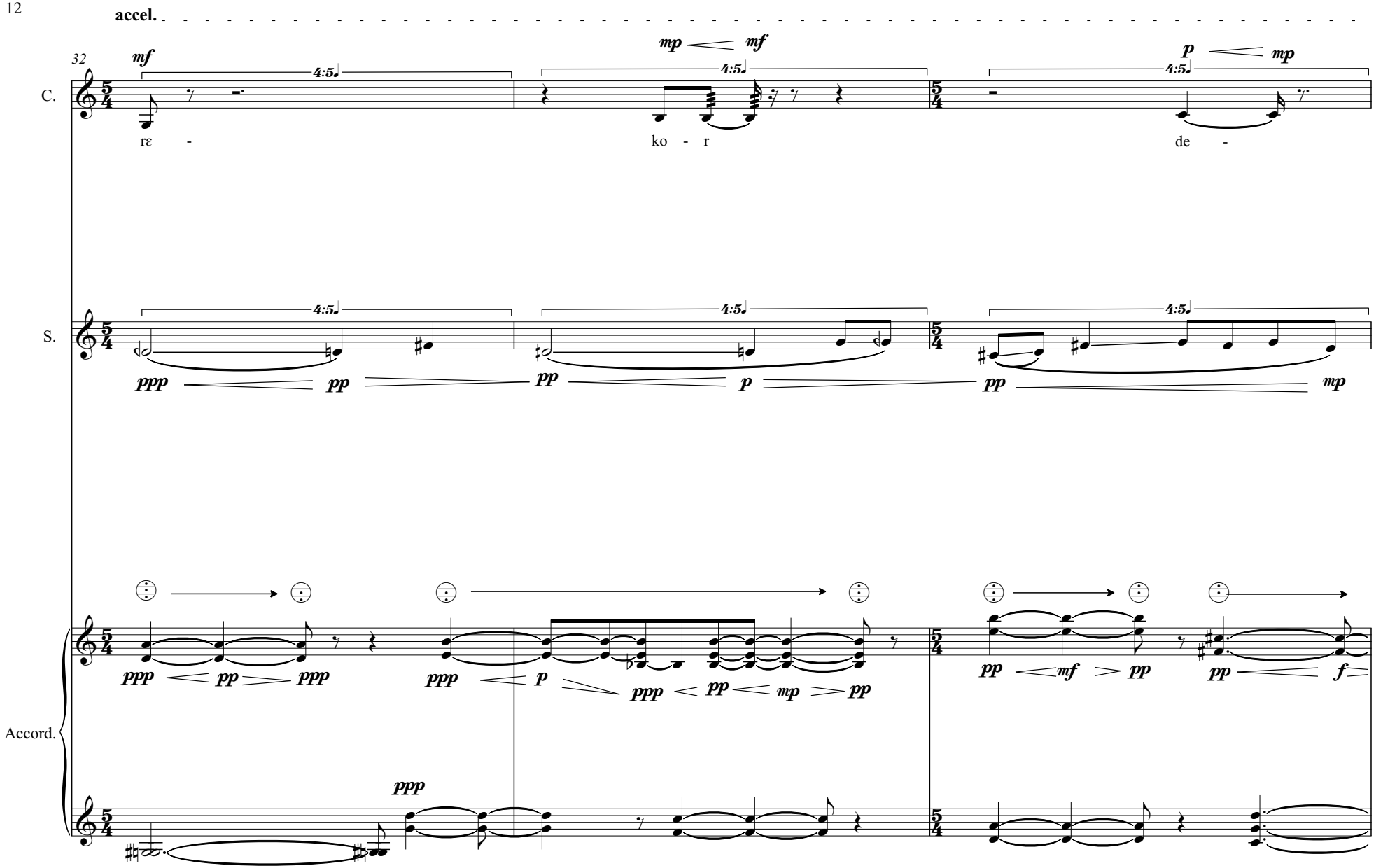
Program 36:
Countertenor range: Midi notes 55.5 and 70
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 45%
Accordion: amplitude controls amplitude of shawm harmonizer = 5th below original tone
Accordion: amplitude controls amplitude of accordion harmonizer = 5th above original tone
Convolution routing: IR1:1, IR2:2, IR3: 3, IR4: 4, IR5: 5, IR6:6, IR7: 7, IR8:8

5


29
C.
S.
A.V.
Accord.
whispered
ppp
mf
mp
p
subito
fff
rall.
ha
ri
ha - ri
cluster
(all always
chromatic)
pp

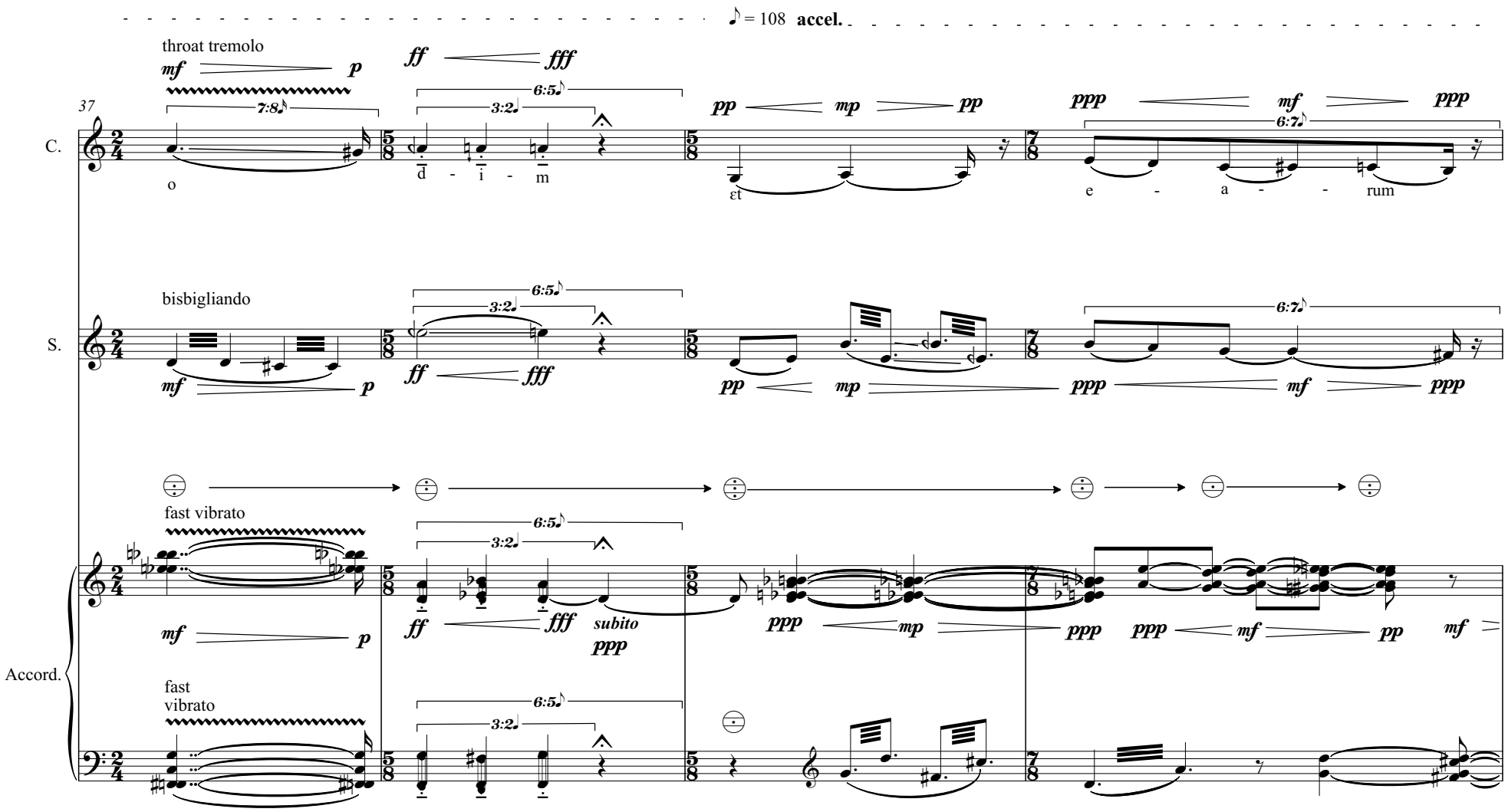

31
♪ = 108
C.
S.
Accord.
re
rum

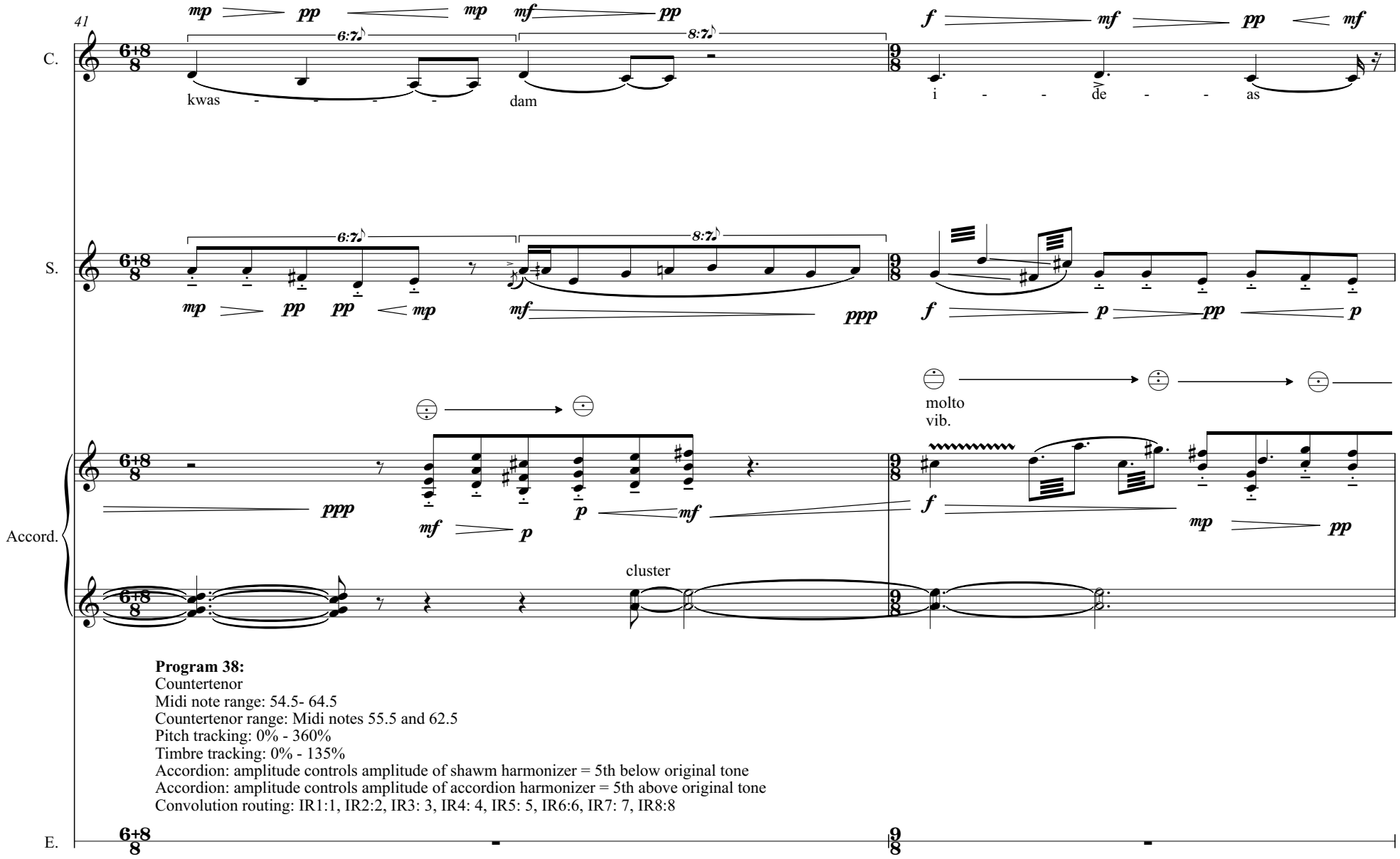
12



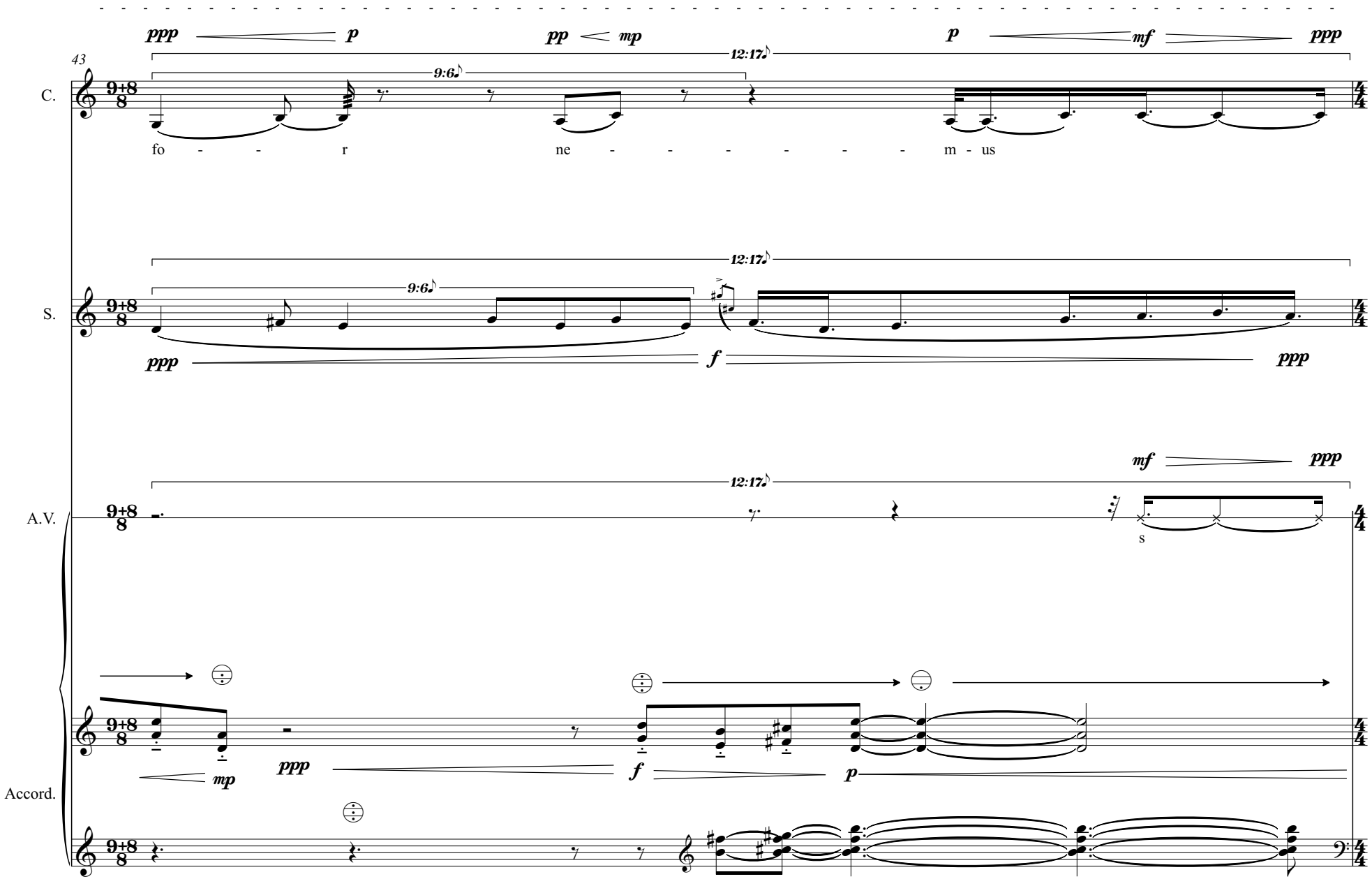
♪ = 144 **poco rall.**

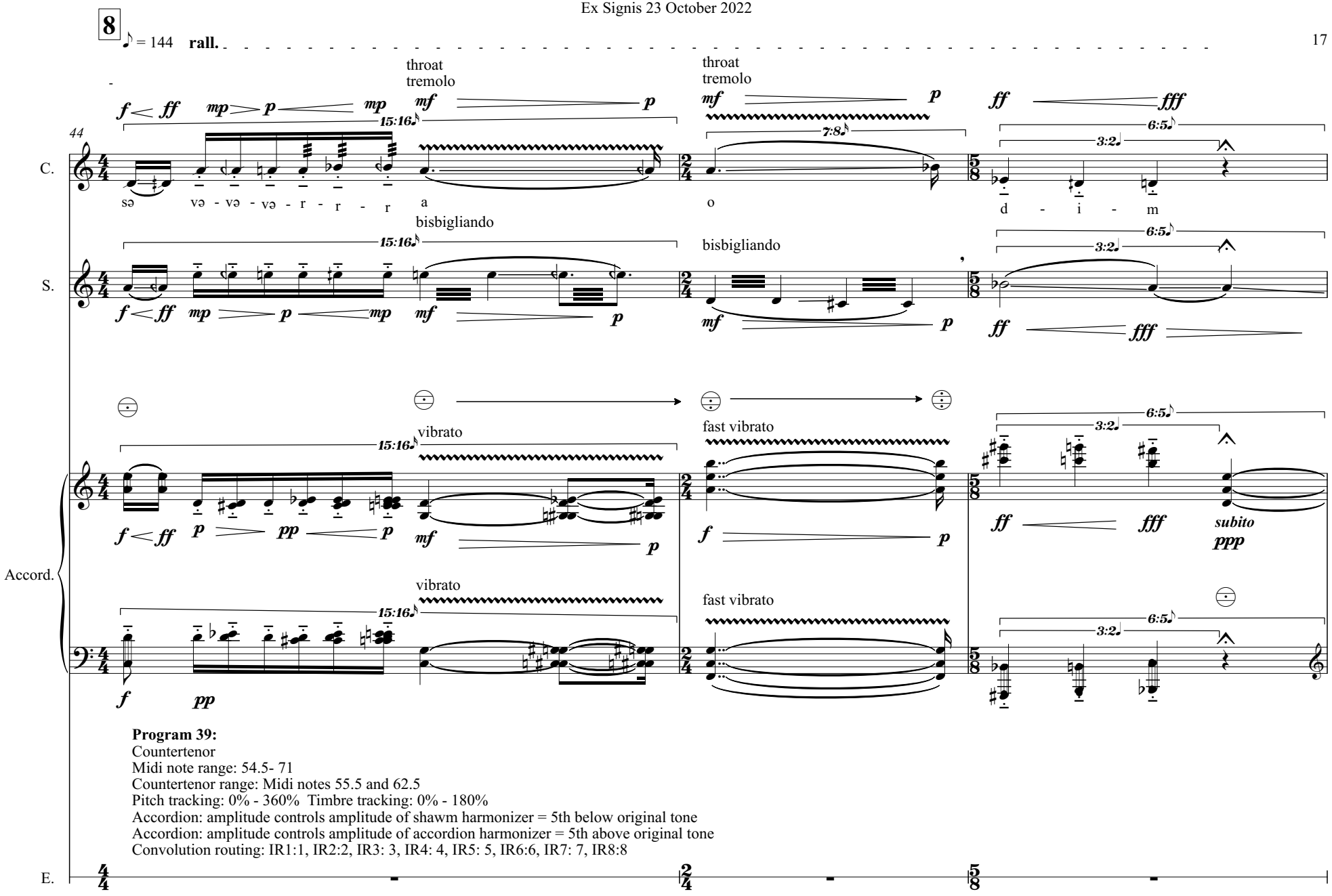
Program 37:
Countertenor range: Midi notes 54.5 and 64.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 90%
Accordion: amplitude controls amplitude of shawm harmonizer
= 5th below original tone
Convolution routing: IR1:1, IR2:2, IR3: 3, IR4: 4, IR5: 5, IR6:6, IR7: 7, IR8:8


♪ = 108 accel.
37
C.
S.
Accord.
throat tremolo
bisbigliando
fast vibrato
fast vibrato
o
d - i - m
et
e - a - - rum
subito ppp

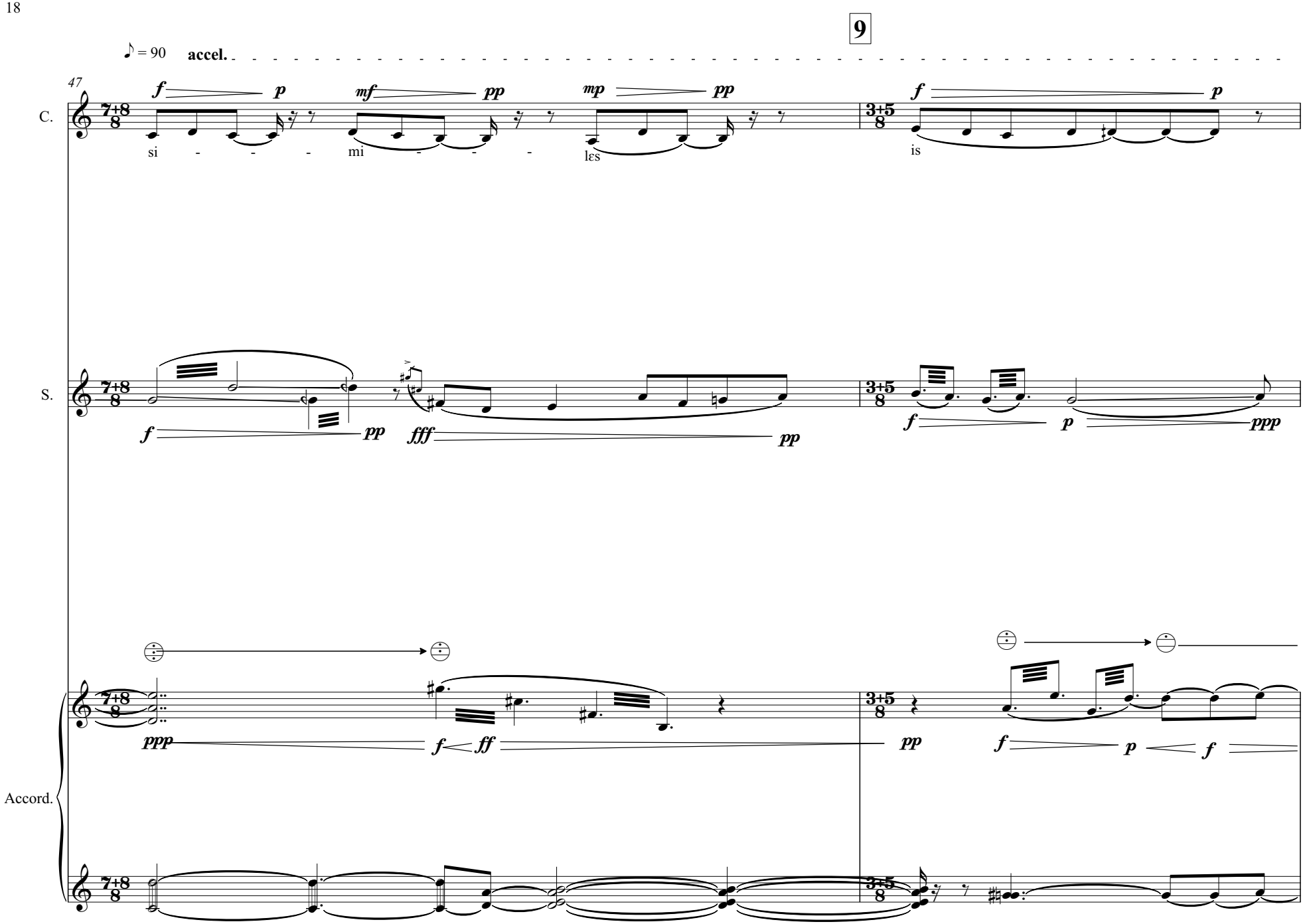


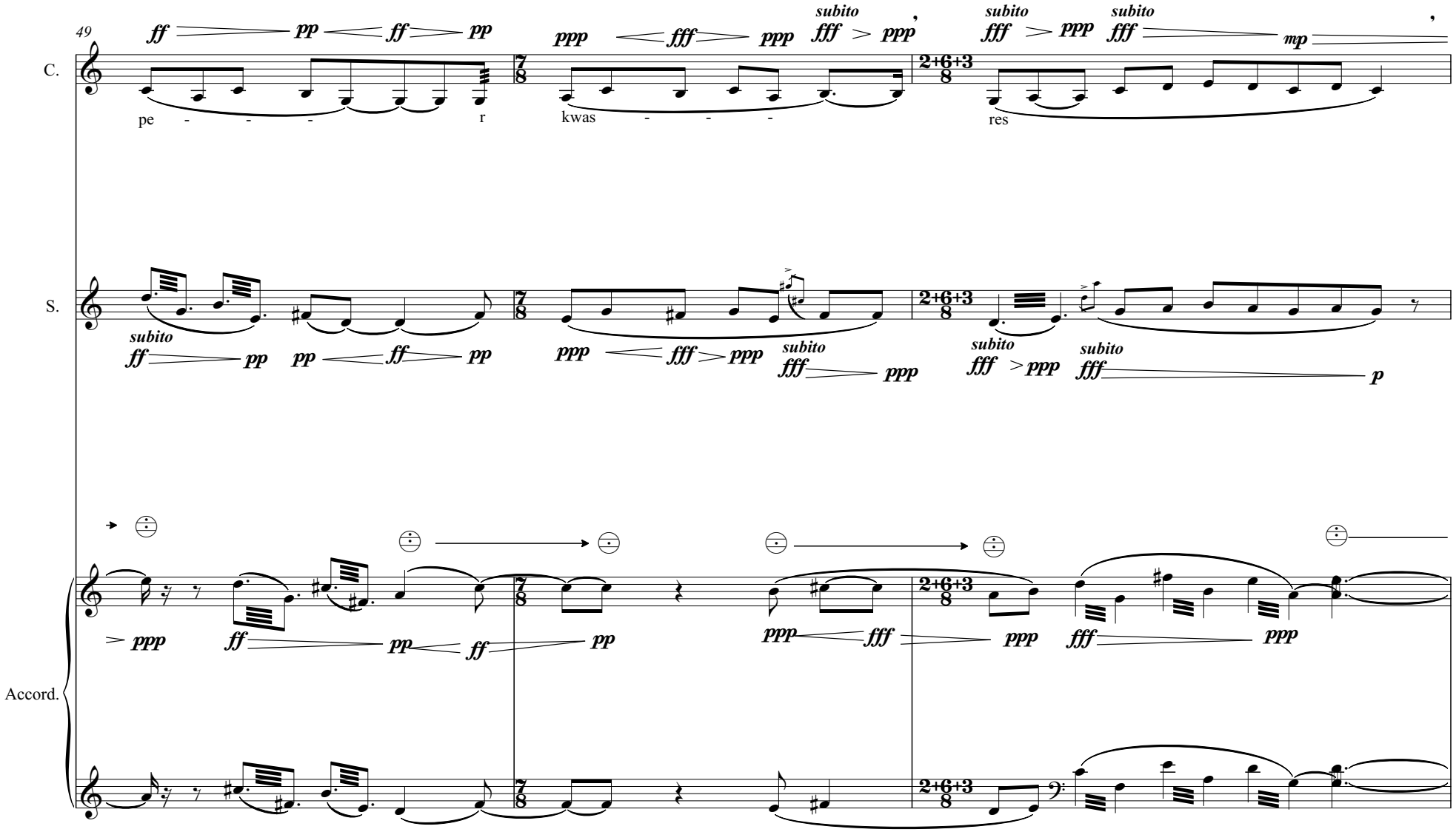
Program 38:
Countertenor
Midi note range: 54.5- 64.5
Countertenor range: Midi notes 55.5 and 62.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 135%
Accordion: amplitude controls amplitude of shawm harmonizer = 5th below original tone
Accordion: amplitude controls amplitude of accordion harmonizer = 5th above original tone
Convolution routing: IR1:1, IR2:2, IR3: 3, IR4: 4, IR5: 5, IR6:6, IR7: 7, IR8:8

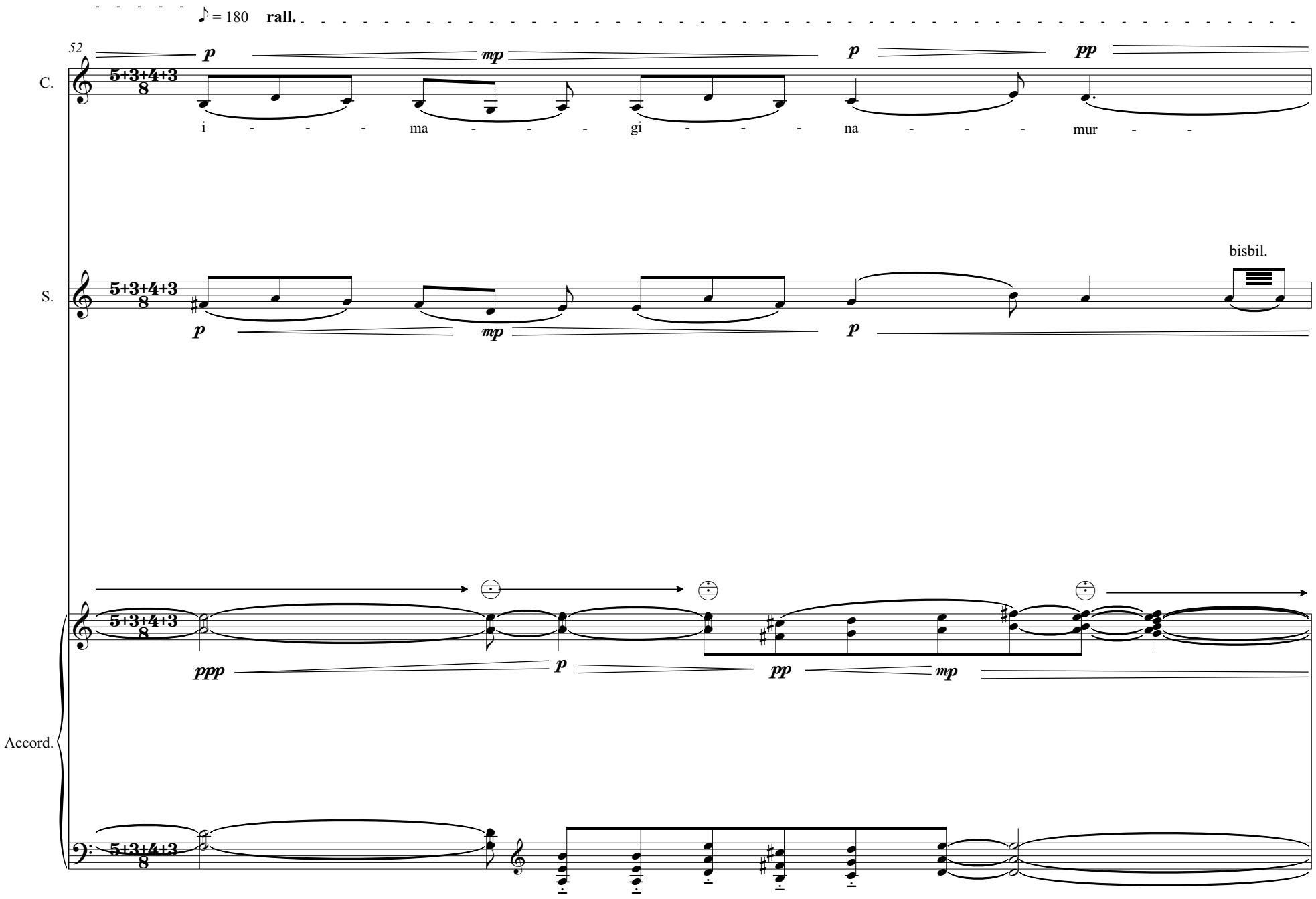

43
C.
S.
A.V.
Accord.
ppp
p
pp
mp
mf
12:17
9:6
fo - - - r
ne - - - - - - - m - us
f
s

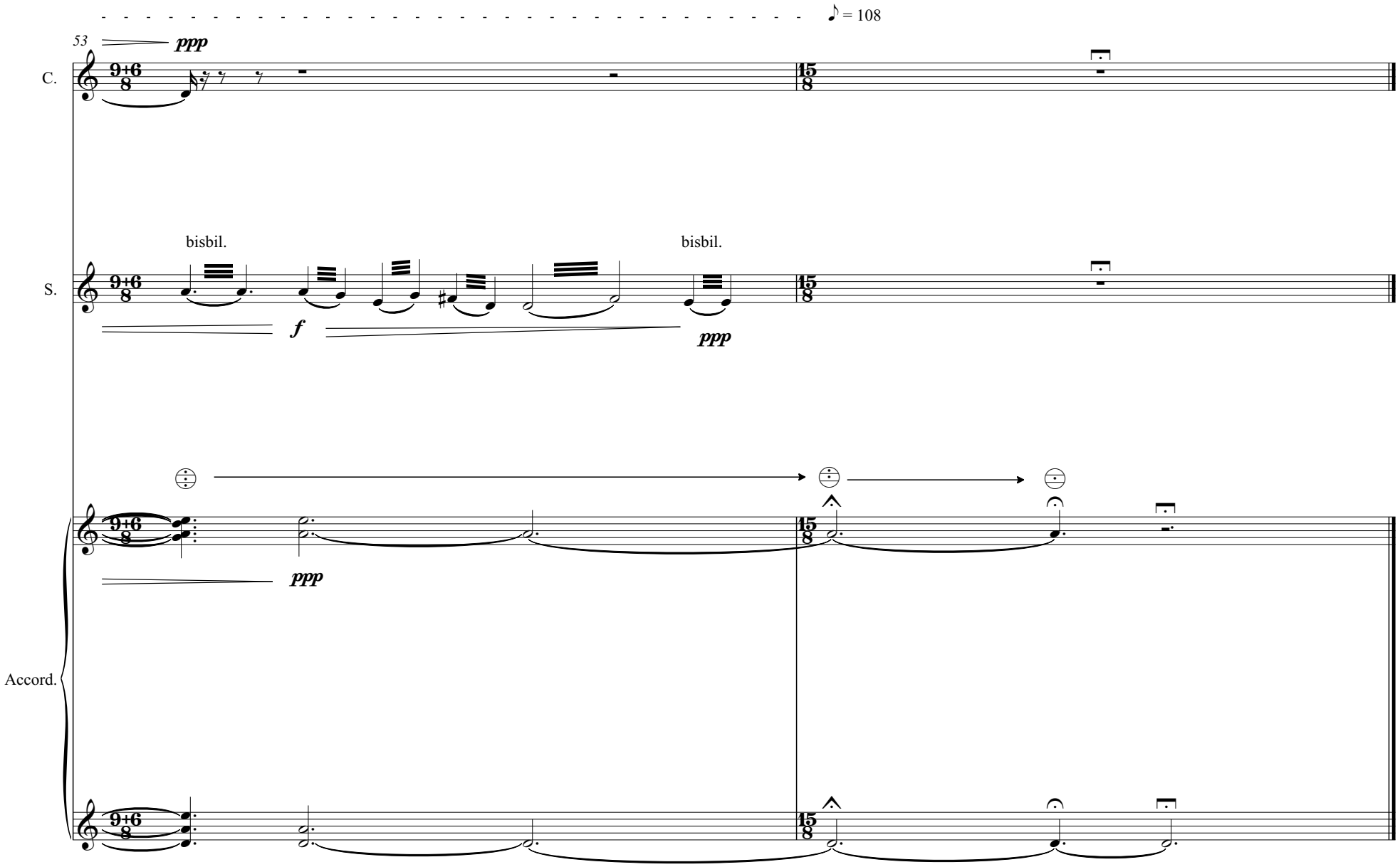


Program 39:
Countertenor
Midi note range: 54.5- 71
Countertenor range: Midi notes 55.5 and 62.5
Pitch tracking: 0% - 360% Timbre tracking: 0% - 180%
Accordion: amplitude controls amplitude of shawm harmonizer = 5th below original tone
Accordion: amplitude controls amplitude of accordion harmonizer = 5th above original tone
Convolution routing: IR1:1, IR2:2, IR3: 3, IR4: 4, IR5: 5, IR6:6, IR7: 7, IR8:8


9
♪ = 90
accel.
47
C.
si - - - mi - - - lɛs
is
S.
Accord.

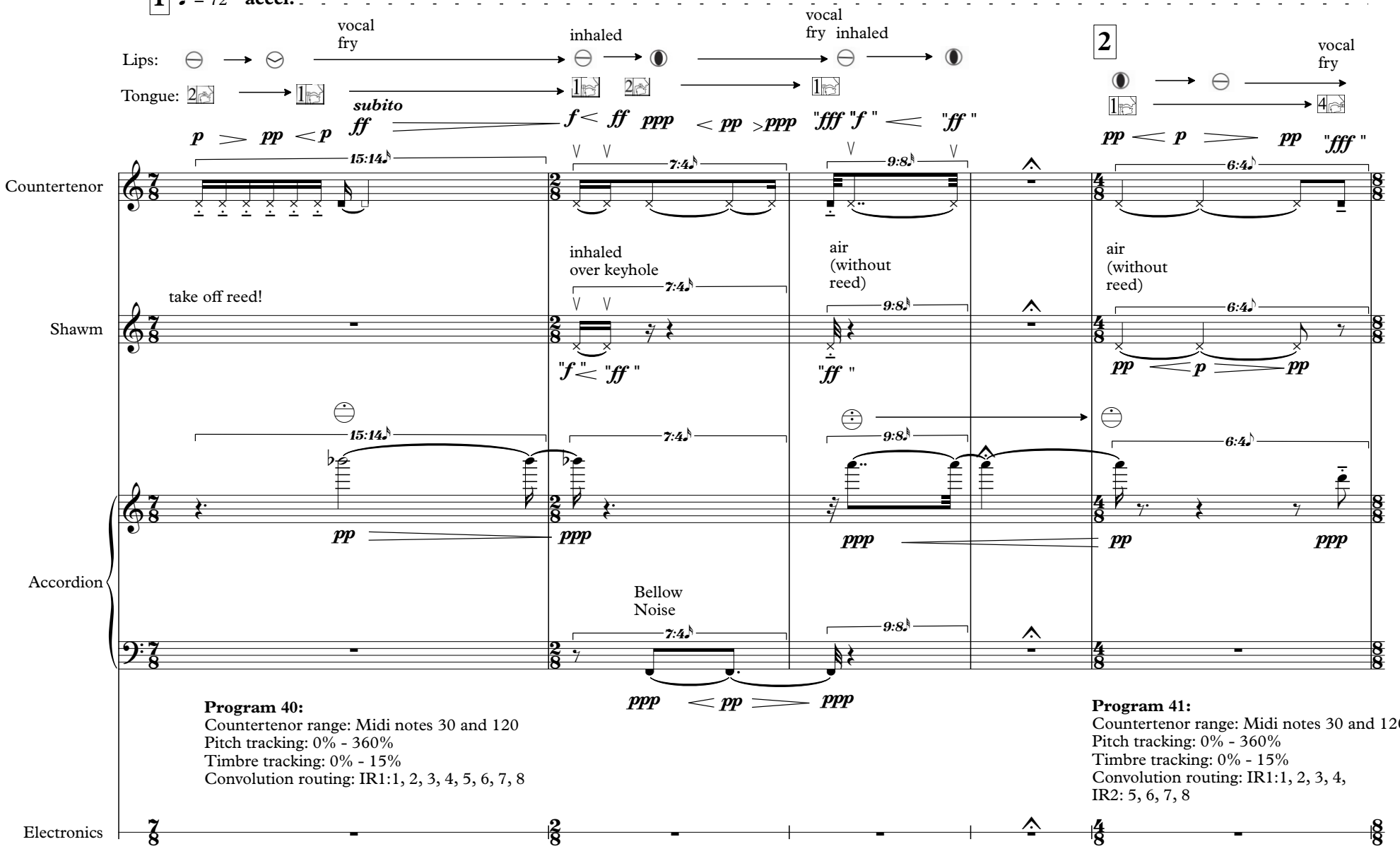

49
C.
S.
Accord.
pe - - - r
kwas - - -
res
subito
2+6+3
8


♪ = 180 rall.
52
C.
5+3+4+3
8
p
mp
p
pp
i - - - - ma - - - - gi - - - - na - - - - mur - -
S.
bisbil.
Accord.
ppp
p
pp
mp


♪ = 108
53
ppp
C.
bisbil.
bisbil.
S.
f
ppp
ppp
Accord.

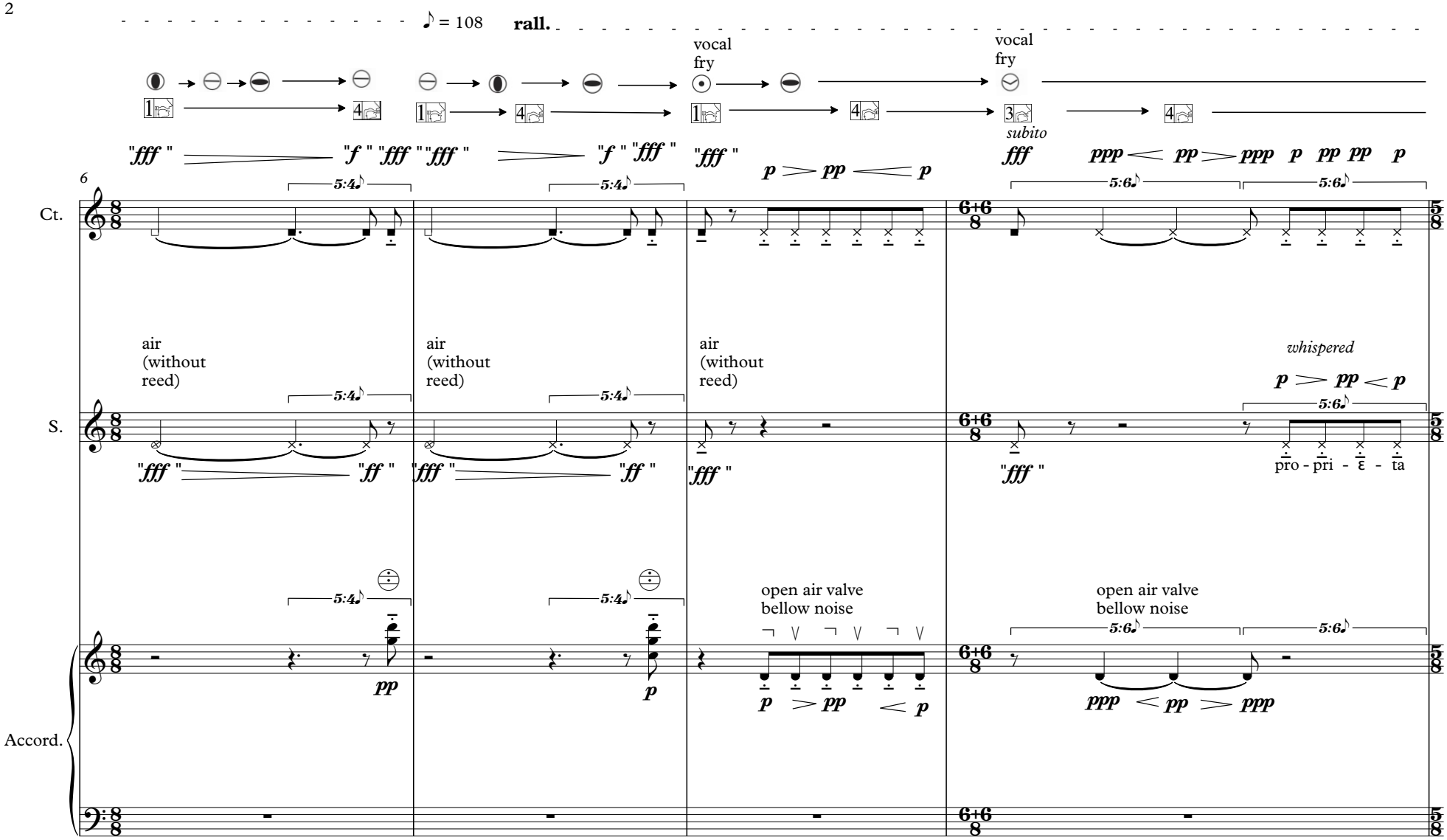
VI. Dei attributorum

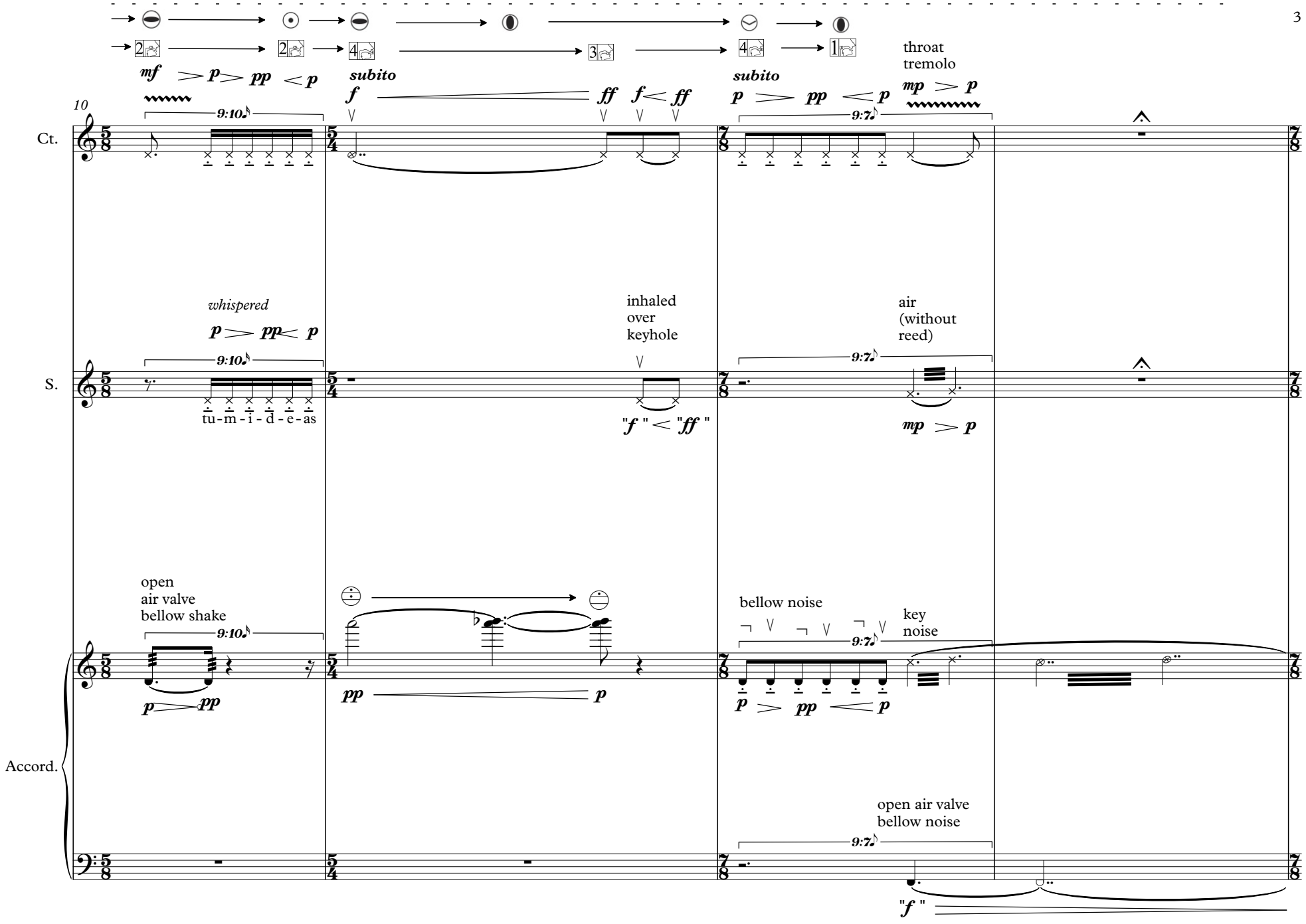
Dániel Péter Biró

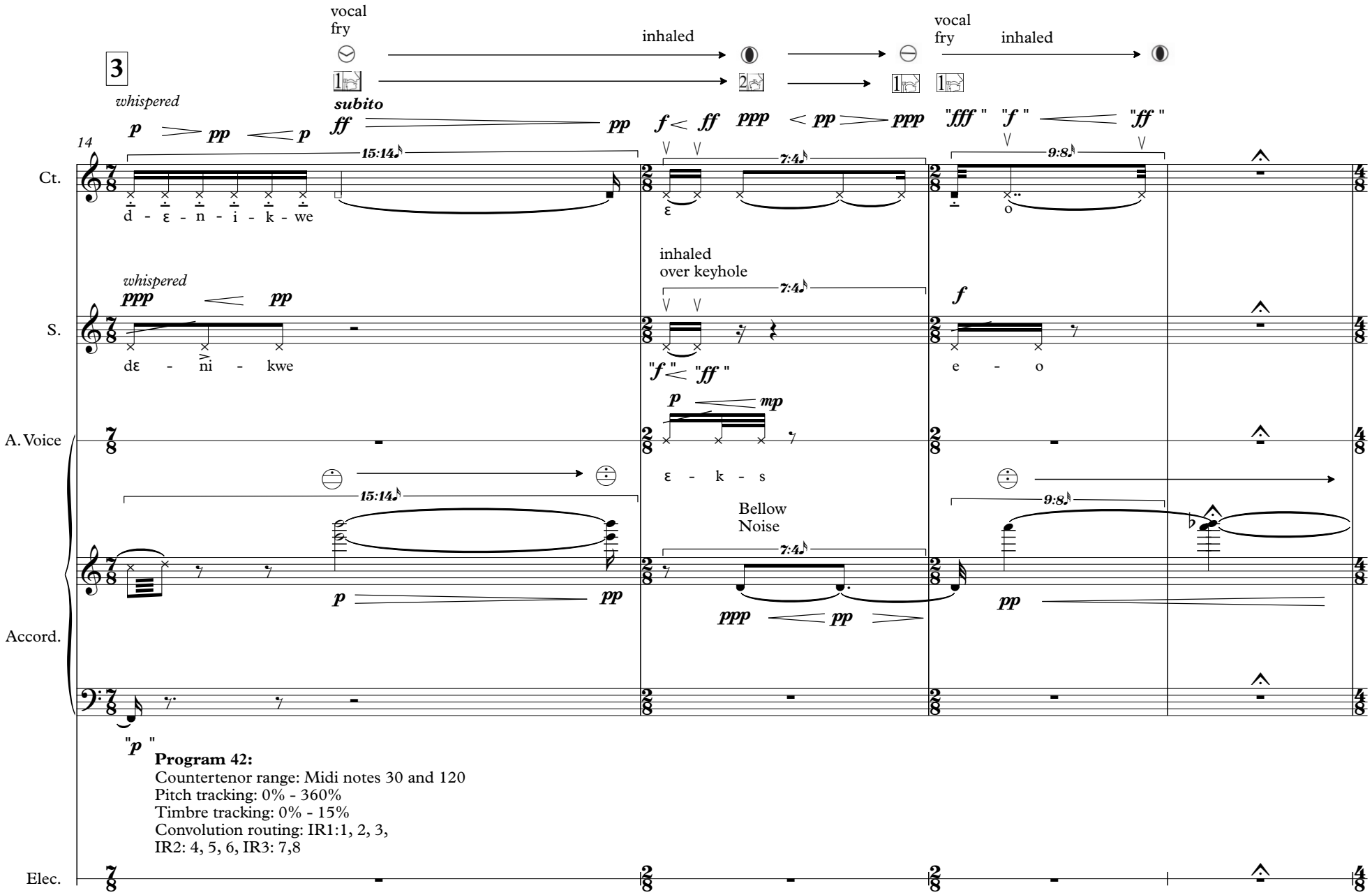


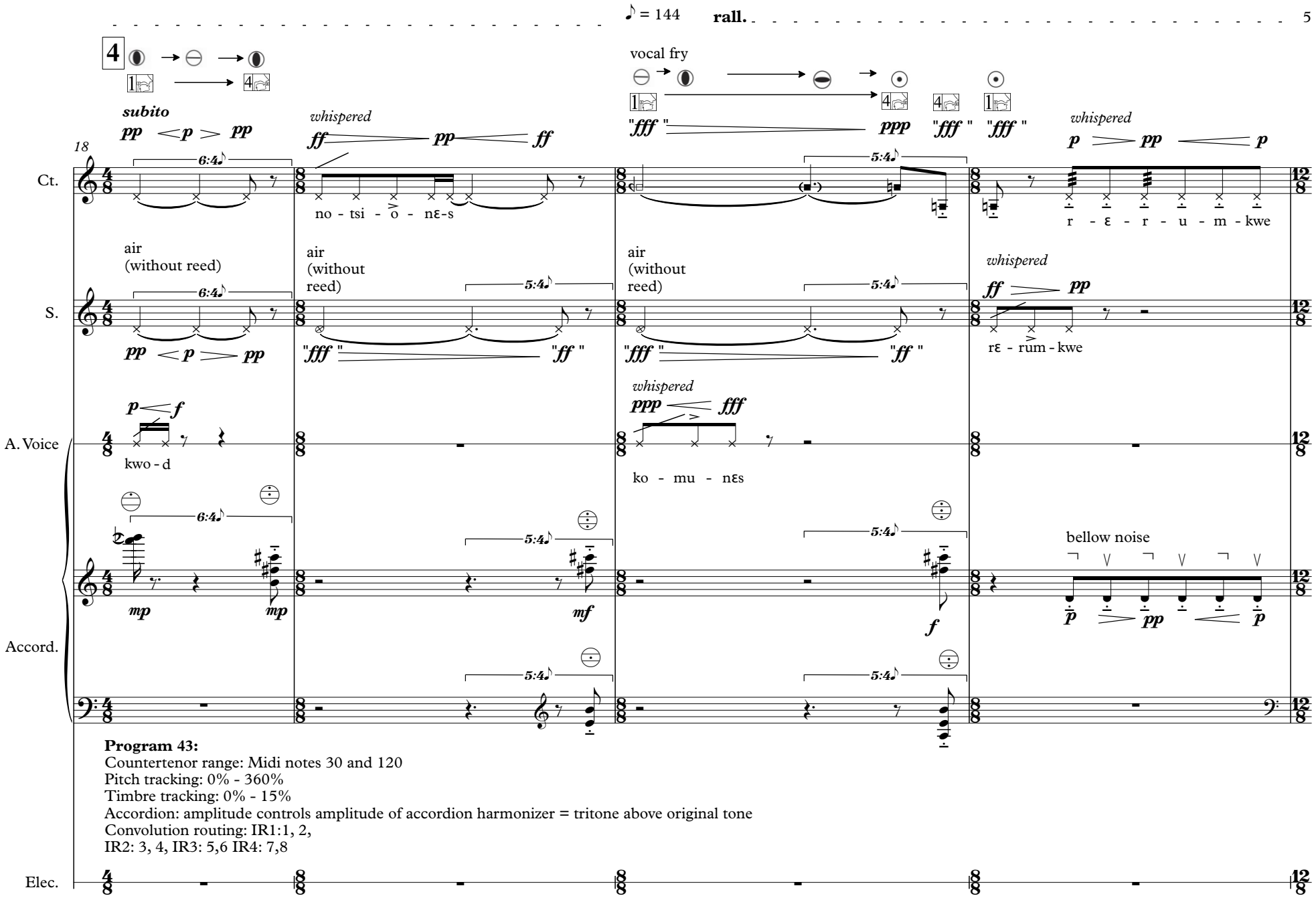
Program 40:
Countertenor range: Midi notes 30 and 120
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 15%
Convolution routing: IR1:1, 2, 3, 4, 5, 6, 7, 8

Program 41:
Countertenor range: Midi notes 30 and 120
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 15%
Convolution routing: IR1:1, 2, 3, 4,
IR2: 5, 6, 7, 8

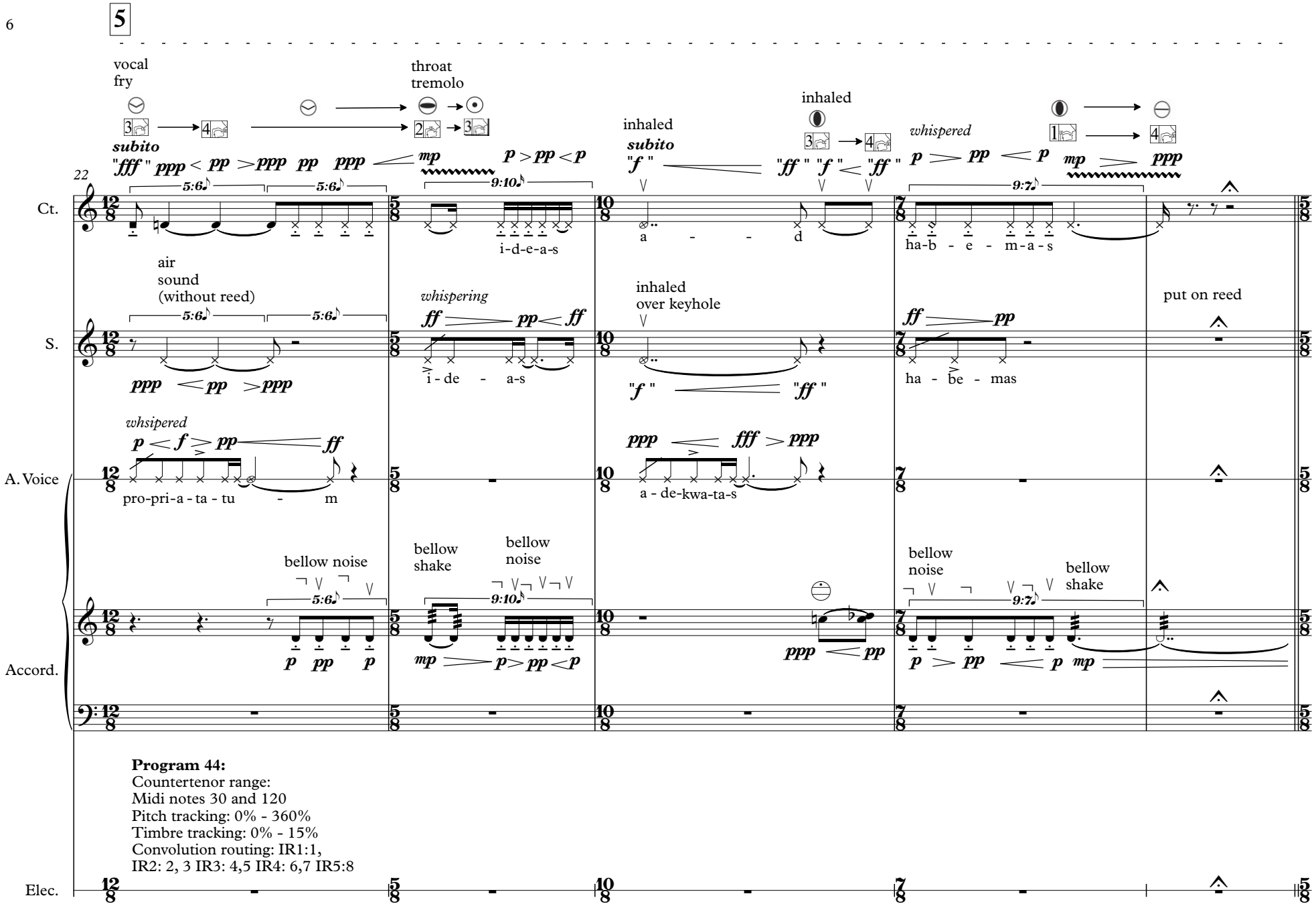

♪ = 108
rall.
vocal fry
vocal fry
subito
6
Ct.
S.
Accord.
air (without reed)
air (without reed)
air (without reed)
whispered
pro - pri - ɛ - ta
open air valve bellow noise
open air valve bellow noise

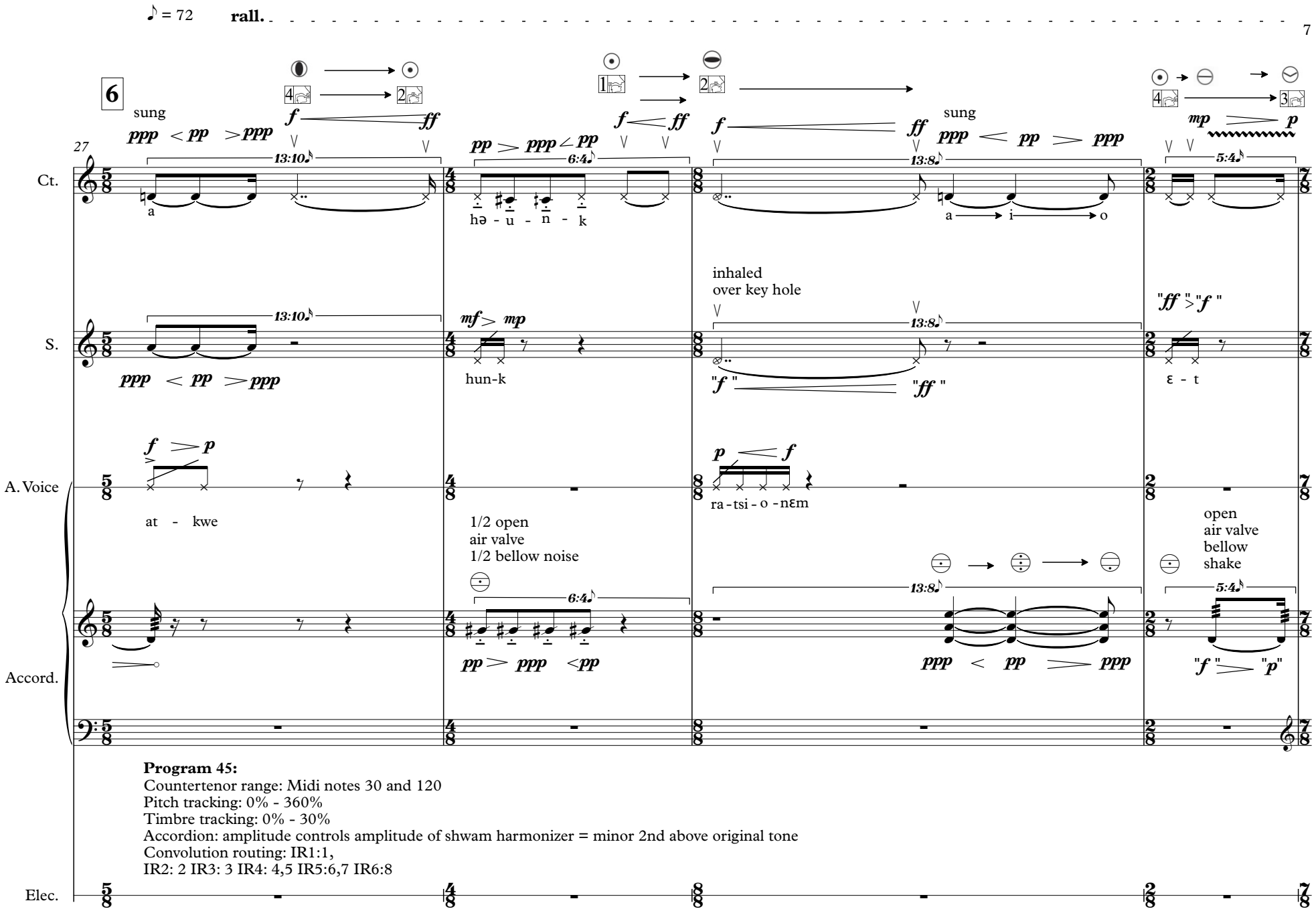

10
Ct.
S.
Accord.
mf > p > pp < p
subito f ff f < ff
subito p > pp < p
throat tremolo
mp > p
9:10
9:7
whispered
p > pp < p
tu-m-i-d-e-as
inhaled over keyhole
"f " < "ff "
air (without reed)
mp > p
open air valve bellow shake
p > pp
pp p
bellow noise
key noise
p > pp < p
open air valve bellow noise
"f "


♪ = 72
accel.
3
vocal fry
inhaled
vocal fry
inhaled
whispered
subito
14
Ct.
d - ɛ - n - i - k - we
ɛ
o
inhaled over keyhole
whispered
S.
dɛ - ni - kwe
e - o
A. Voice
ɛ - k - s
Bellow Noise
Accord.
Elec.
Program 42:
Countertenor range: Midi notes 30 and 120
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 15%
Convolution routing: IR1:1, 2, 3,
IR2: 4, 5, 6, IR3: 7,8

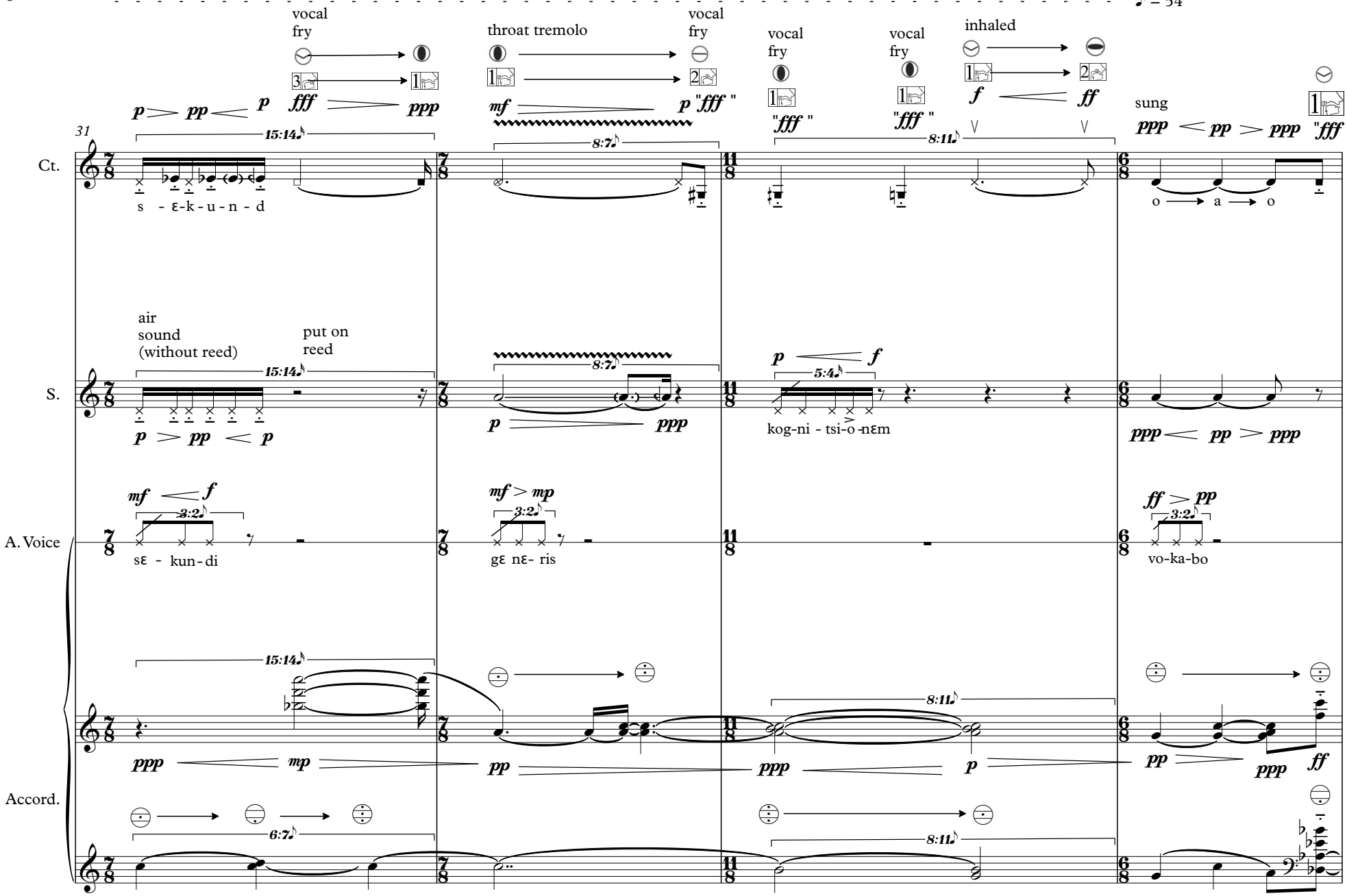


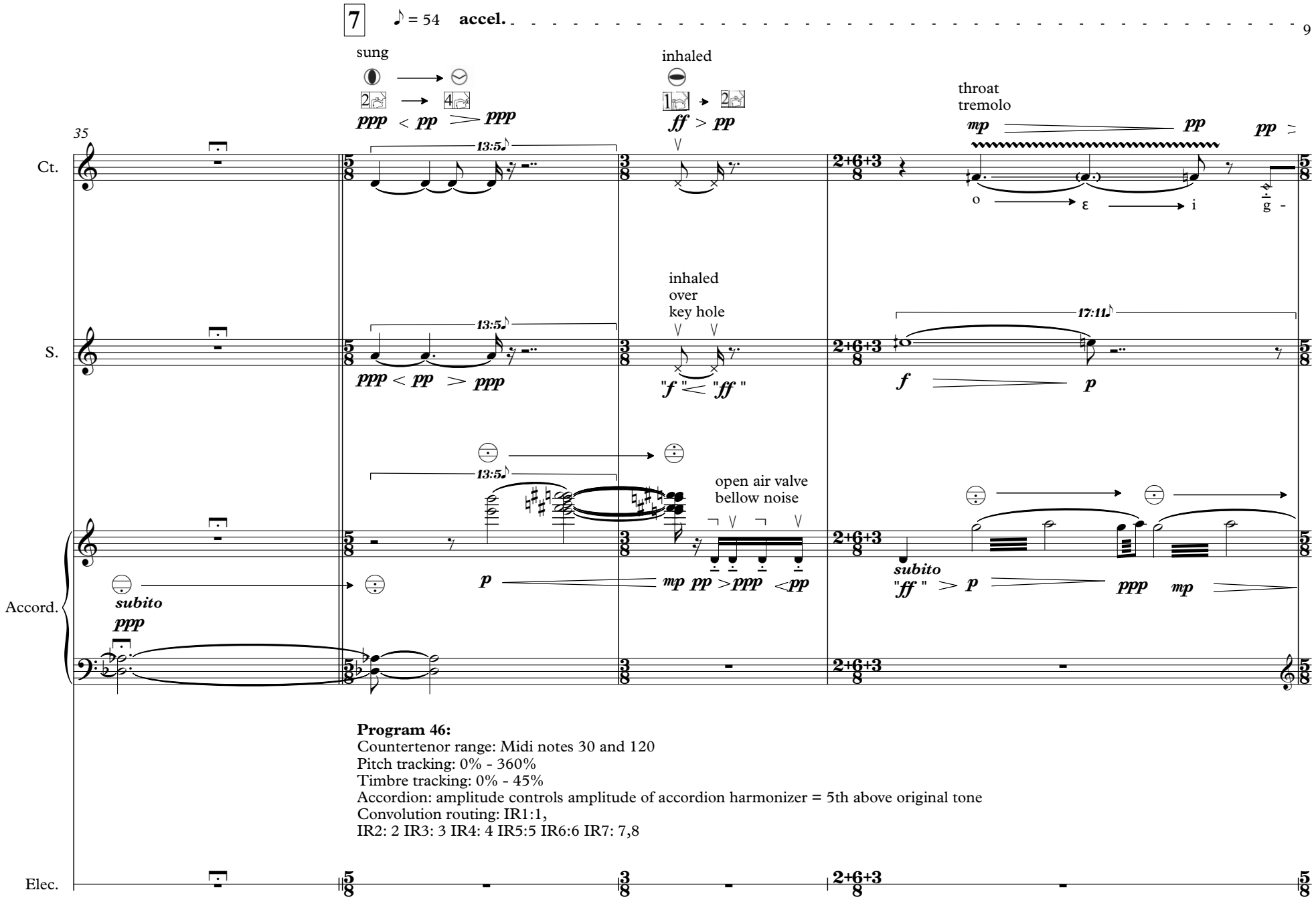
Program 43:
Countertenor range: Midi notes 30 and 120
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 15%
Accordion: amplitude controls amplitude of accordion harmonizer = tritone above original tone
Convolution routing: IR1:1, 2,
IR2: 3, 4, IR3: 5,6 IR4: 7,8


5
22
vocal fry
throat tremolo
inhaled
inhaled
whispered
subito
"fff" ppp < pp > ppp pp ppp
mp p > pp < p
subito
"f"
"ff" "f" "ff"
p > pp < p mp > ppp
Ct.
5:6 5:6
9:10
9:7
i-d-e-a-s
a - - d
ha-b - e - m-a-s
air sound (without reed)
whispering
inhaled over keyhole
put on reed
S.
ppp < pp > ppp
ff > pp < ff
i - de - a-s
"f" "ff"
ff > pp
ha - be - mas
whsipered
p < f > pp ff
ppp < fff > ppp
A. Voice
pro-pri-a - ta - tu - m
a - de-kwa-ta-s
bellow noise
bellow shake
bellow noise
bellow noise
bellow shake
Accord.
p pp p
mp p > pp < p
ppp < pp
p > pp < p mp
Elec.
Program 44:
Countertenor range:
Midi notes 30 and 120
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 15%
Convolution routing: IR1:1,
IR2: 2, 3 IR3: 4,5 IR4: 6,7 IR5:8

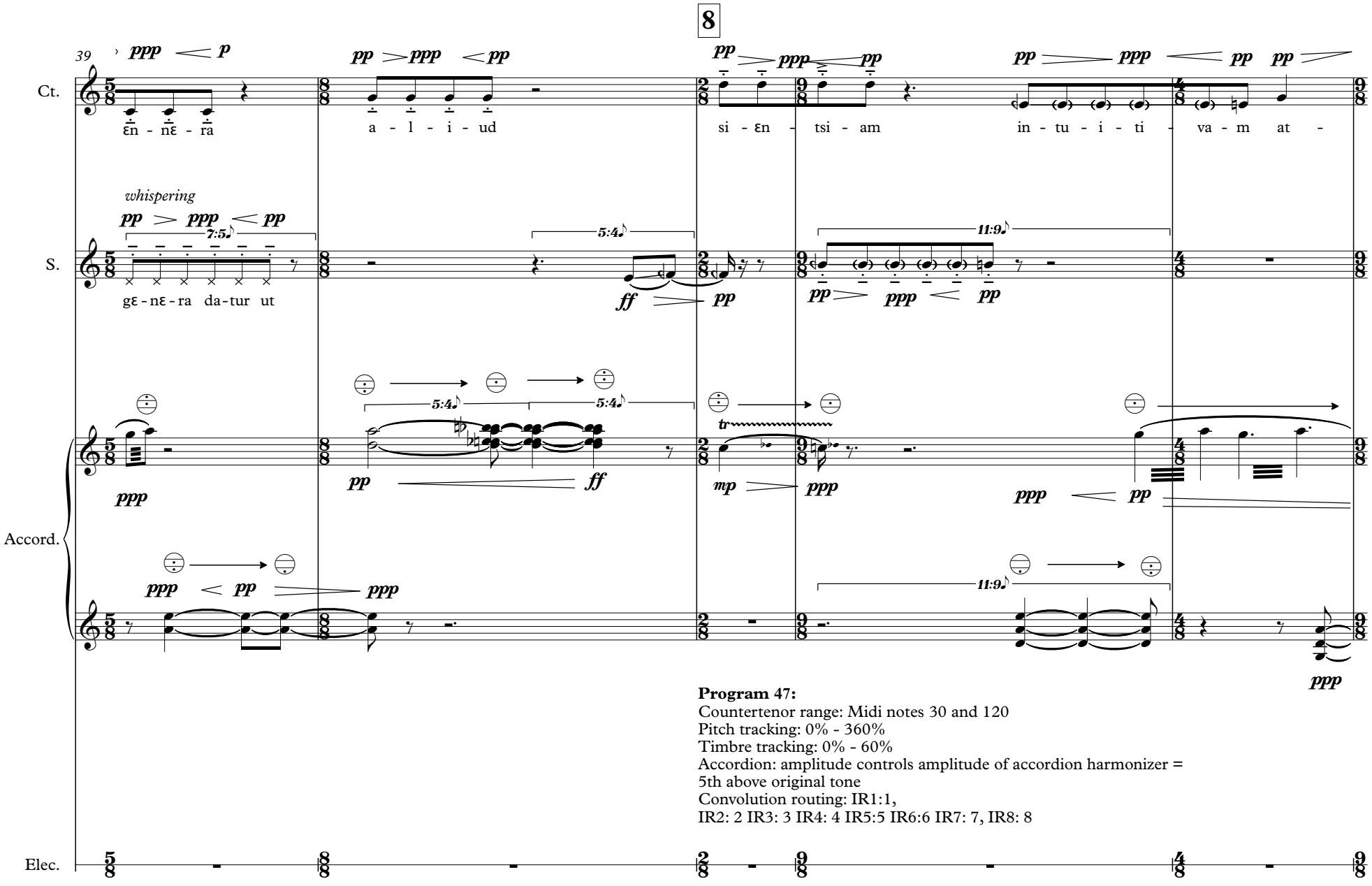


Program 45:
Countertenor range: Midi notes 30 and 120
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 30%
Accordion: amplitude controls amplitude of shwam harmonizer = minor 2nd above original tone
Convolution routing: IR1:1,
IR2: 2 IR3: 3 IR4: 4,5 IR5:6,7 IR6:8

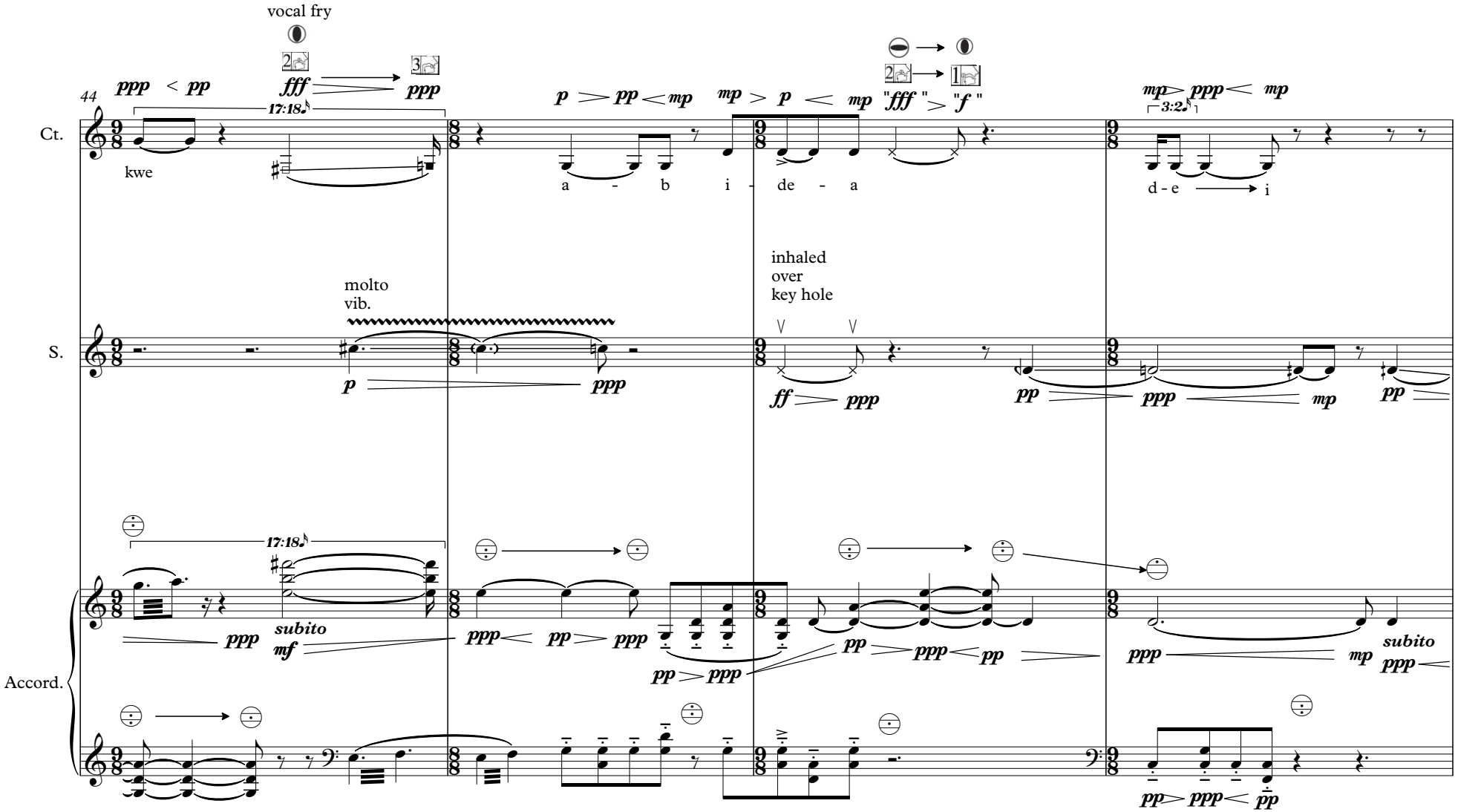

♪ = 54
31
Ct.
S.
A. Voice
Accord.
vocal fry
throat tremolo
vocal fry
vocal fry
vocal fry
inhaled
sung
s - ɛ-k-u-n - d
o → a → o
air sound (without reed)
put on reed
kog-ni - tsi-o -nɛm
sɛ - kun - di
gɛ nɛ- ris
vo-ka-bo
15:14
8:7
8:11
5:4
3:2
6:7

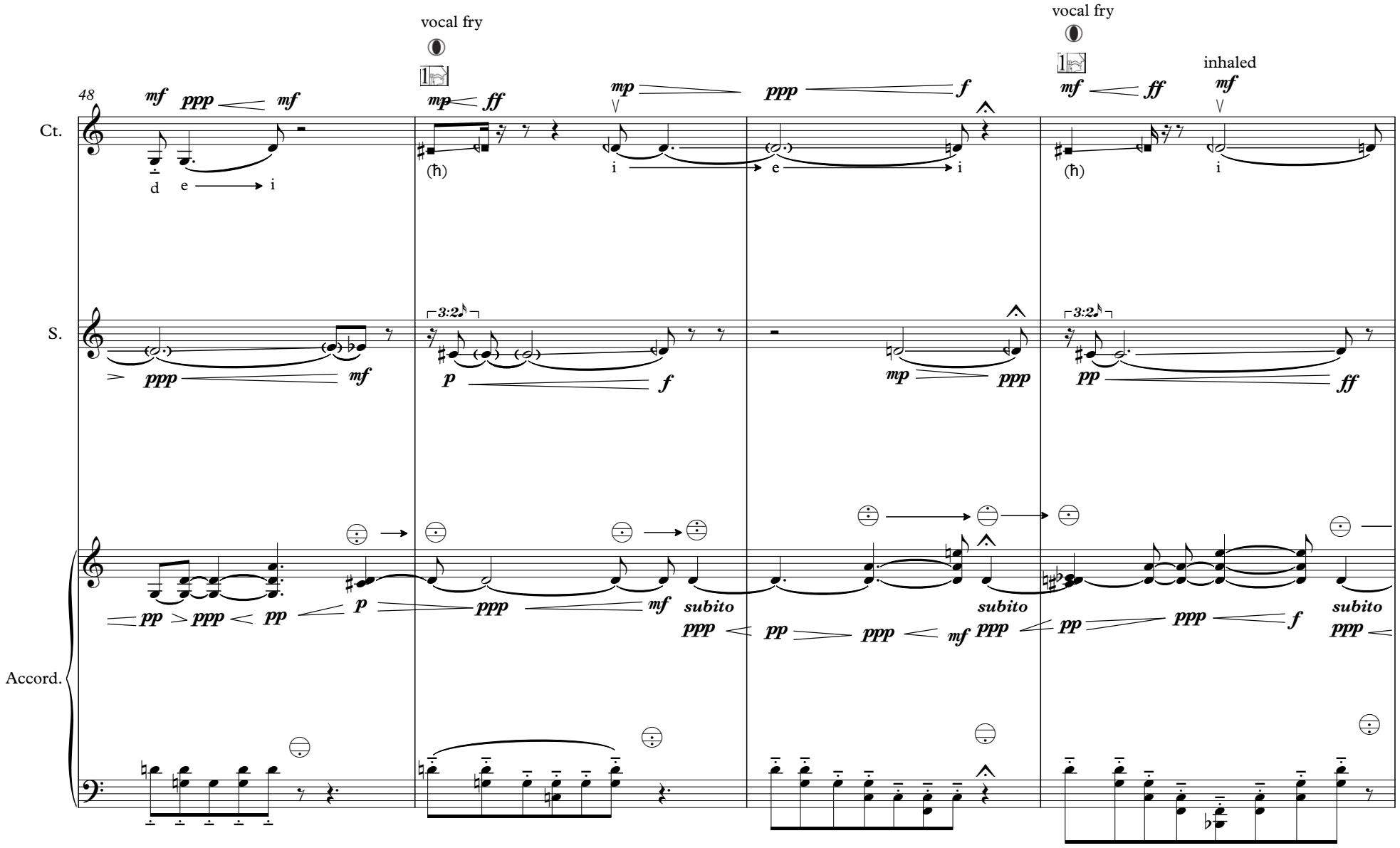


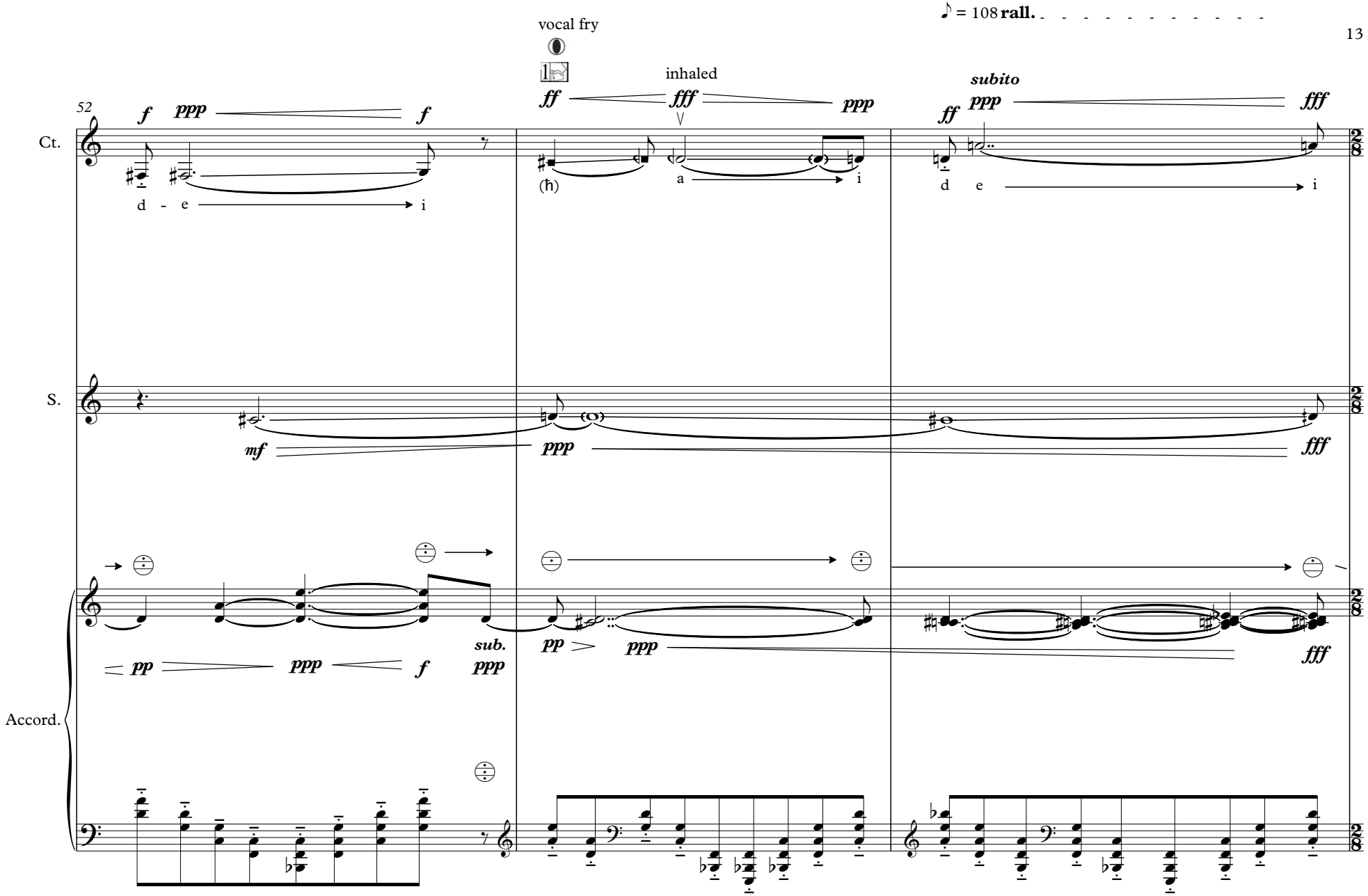
Program 46:
Countertenor range: Midi notes 30 and 120
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 45%
Accordion: amplitude controls amplitude of accordion harmonizer = 5th above original tone
Convolution routing: IR1:1,
IR2: 2 IR3: 3 IR4: 4 IR5:5 IR6:6 IR7: 7,8



Program 47:
Countertenor range: Midi notes 30 and 120
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 60%
Accordion: amplitude controls amplitude of accordion harmonizer = 5th above original tone
Convolution routing: IR1:1,
IR2: 2 IR3: 3 IR4: 4 IR5:5 IR6:6 IR7: 7, IR8: 8


vocal fry
44
Ct.
S.
Accord.
kwe
a - b i - de - a
d - e i
molto
vib.
inhaled
over
key hole
subito
subito


48
Ct.
S.
Accord.
vocal fry
vocal fry
inhaled
mf ppp mf
mp ff
mp ppp f
mf ff
mf
d e i
(ħ)
i e i
(ħ)
i
3:2
ppp mf
p f
mp ppp
pp ff
pp > ppp < pp
p ppp mf
subito ppp
pp ppp mf
subito ppp
pp ppp f
subito ppp

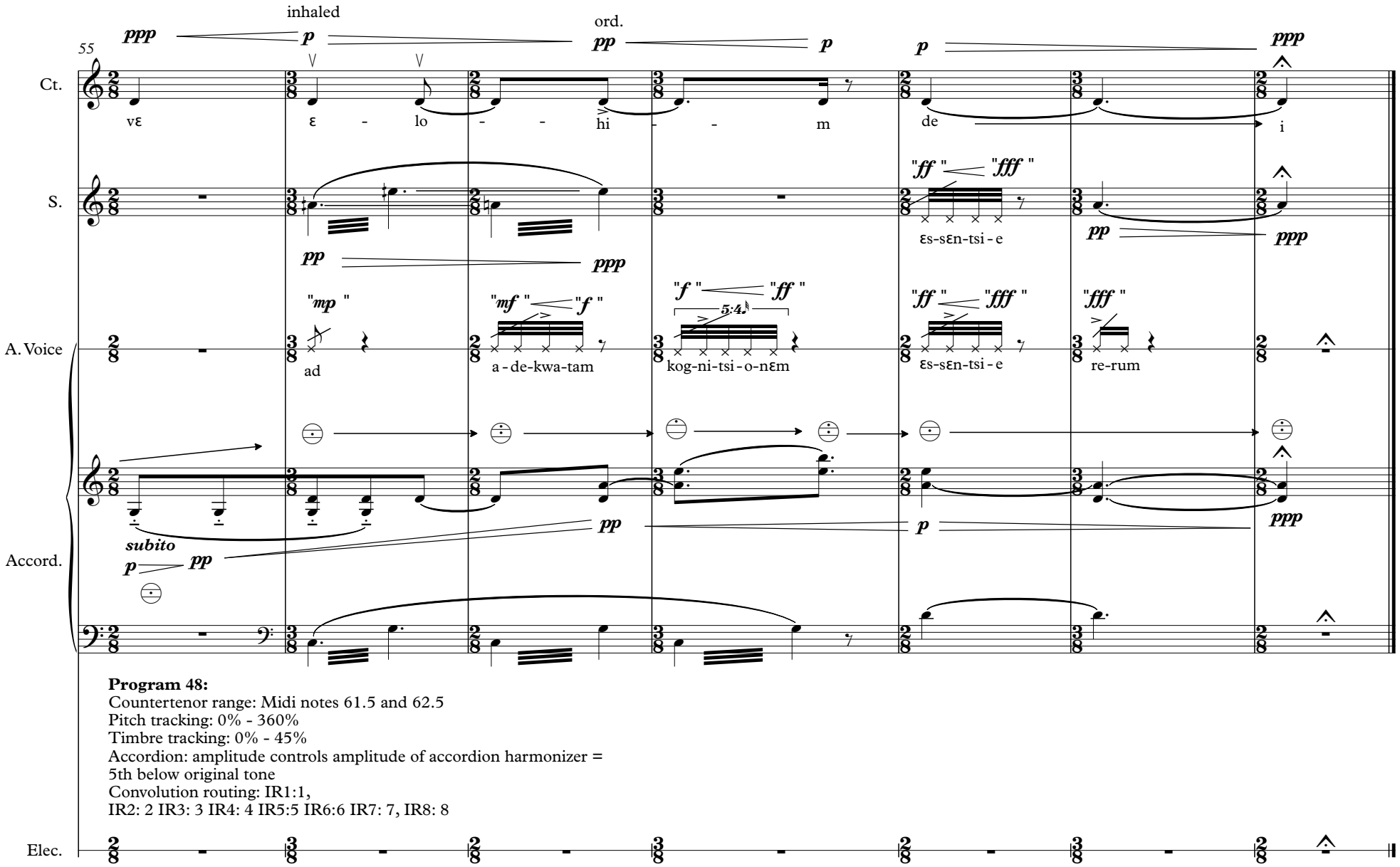

♪ = 108 rall.
vocal fry
inhaled
subito
52
Ct.
S.
Accord.
f ppp f
ff fff ppp
ff ppp fff
d - e i
(h) a i
d e i
mf ppp fff
pp ppp f sub. ppp
pp ppp fff

14

9

♪ = 72 **rall.**

♪ = 36



Program 48:
Countertenor range: Midi notes 61.5 and 62.5
Pitch tracking: 0% - 360%
Timbre tracking: 0% - 45%
Accordion: amplitude controls amplitude of accordion harmonizer =
5th below original tone
Convolution routing: IR1:1,
IR2: 2 IR3: 3 IR4: 4 IR5:5 IR6:6 IR7: 7, IR8: 8