

LilyPond

The music typesetter

LilyPond Regression Tests

The LilyPond development team

Introduction

This document presents proofs for LilyPond dev. When the text corresponds with the shown notation, we consider LilyPond Officially BugFree (tm). This document is intended for finding bugs and for documenting bugfixes.

In the web version of this document, you can click on the file name or figure for each example to see the corresponding input file.

TODO: order of tests (file names!), test only one feature per test. Smaller and neater tests.

Regression test cases

Natural signs don't displace accents.

`accidental-accent.ly`



Accidentals are available in different ancient styles, which all are collected here.

`accidental-ancient.ly`



When a tie is broken, the spacing engine must consider the accidental after the line break. The second and third lines should have the same note spacing.

`accidental-broken-tie-spacing.ly`



Test if cautionary accidentals have the same horizontal spacing correction as regular accidentals.

`accidental-cautionary-horizontal-spacing.ly`



Test if Scripts are placed over notes with accidentals the same way as over notes with cautionary accidentals.

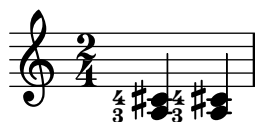
`accidental-cautionary-script-placement.ly`



If two forced accidentals happen at the same time, only one sharp sign is printed.
accidental-double.ly



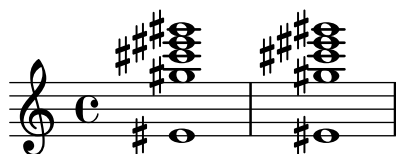
Horizontal Fingering grobs should not collide with accidentals.
accidental-fingering-collision.ly



Accidentals can be forced with ! and ? even if the notes are tied. Cautionary accidentals applied to tied notes after a bar line are valid for the whole measure.
accidental-forced-tie.ly



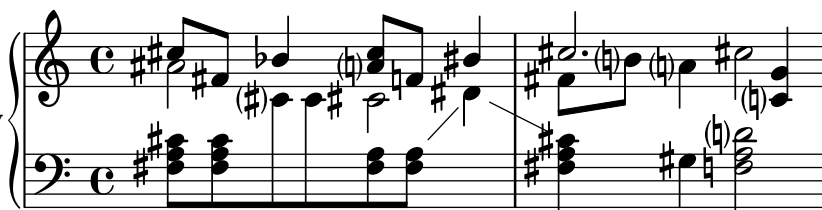
By setting accidentalGrouping to 'voice', LilyPond will horizontally stagger the accidentals of octaves in different voices as seen in this test's E-sharp.
accidental-grouping.ly



Ledger lines are shortened when there are accidentals. This happens only for the single ledger line close to the note head, and only if the accidental is horizontally close to the head.
accidental-ledger.ly

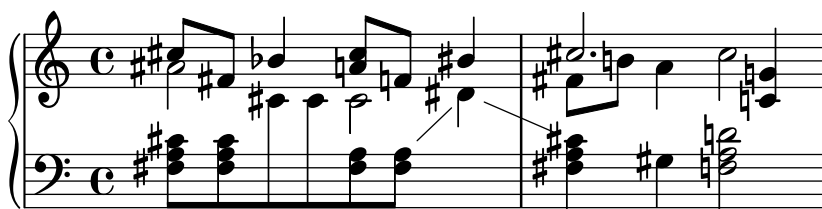


modern-voice-cautionary



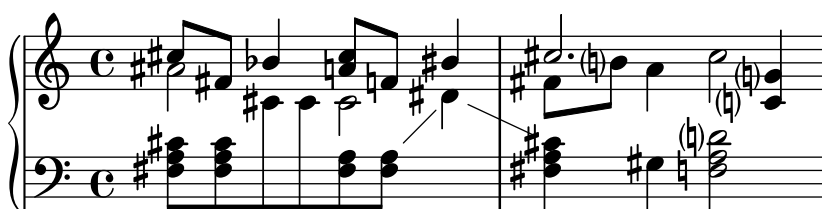
A musical score in C major, 4/4 time, consisting of two staves. The right staff (treble clef) contains a melodic line with various intervals and accidentals, including a sharp sign above the first measure. The left staff (bass clef) contains a bass line with chords and single notes. The key signature has two sharps (F# and C#).

piano



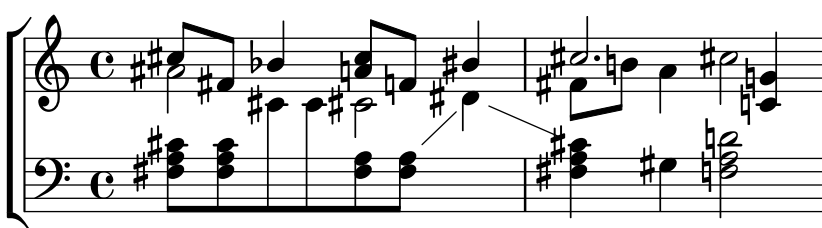
A musical score in C major, 4/4 time, consisting of two staves. The right staff (treble clef) contains a melodic line with various intervals and accidentals, including a sharp sign above the first measure. The left staff (bass clef) contains a bass line with chords and single notes. The key signature has two sharps (F# and C#).

piano-cautionary



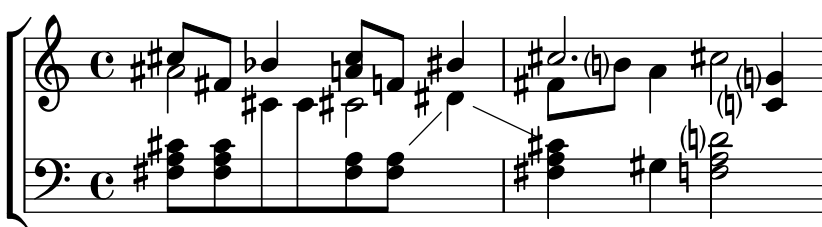
A musical score in C major, 4/4 time, consisting of two staves. The right staff (treble clef) contains a melodic line with various intervals and accidentals, including a sharp sign above the first measure. The left staff (bass clef) contains a bass line with chords and single notes. The key signature has two sharps (F# and C#).

choral



A musical score in C major, 4/4 time, consisting of two staves. The right staff (treble clef) contains a melodic line with various intervals and accidentals, including a sharp sign above the first measure. The left staff (bass clef) contains a bass line with chords and single notes. The key signature has two sharps (F# and C#).

choral-cautionary



A musical score in C major, 4/4 time, consisting of two staves. The right staff (treble clef) contains a melodic line with various intervals and accidentals, including a sharp sign above the first measure. The left staff (bass clef) contains a bass line with chords and single notes. The key signature has two sharps (F# and C#).

neo-modern



A musical score in C major, 4/4 time, consisting of two staves. The right staff (treble clef) contains a melodic line with various intervals and accidentals, including a sharp sign above the first measure. The left staff (bass clef) contains a bass line with chords and single notes. The key signature has two sharps (F# and C#).

neo-modern-cautionary



A musical score in C major, 4/4 time, consisting of two staves. The right staff (treble clef) contains a melodic line with various intervals and accidentals, including a sharp sign above the first measure. The left staff (bass clef) contains a bass line with chords and single notes. The key signature has two sharps (F# and C#).

neo-modern-voice

A musical score for piano in C major, common time. The right hand features a melodic line with eighth and sixteenth notes, while the left hand provides a harmonic accompaniment with chords and single notes. The key signature has two sharps (F# and C#).

neo-modern-voice-cautionary

A musical score for piano in C major, common time. This version includes cautionary flats (b) in the right hand and cautionary sharps (#) in the left hand, indicating a key signature change from C major to C minor.

dodecaphonic

A musical score for piano in C major, common time. The right hand features a melodic line with eighth and sixteenth notes, while the left hand provides a harmonic accompaniment with chords and single notes. The key signature has two sharps (F# and C#).

dodecaphonic-no-repeat

A musical score for piano in C major, common time. The right hand features a melodic line with eighth and sixteenth notes, while the left hand provides a harmonic accompaniment with chords and single notes. The key signature has two sharps (F# and C#).

dodecaphonic-first

A musical score for piano in C major, common time. The right hand features a melodic line with eighth and sixteenth notes, while the left hand provides a harmonic accompaniment with chords and single notes. The key signature has two sharps (F# and C#).

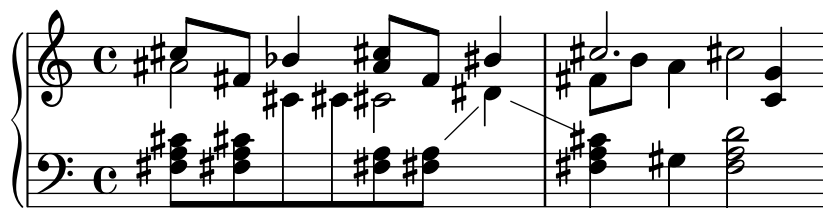
teaching

A musical score for piano in C major, common time. This version includes cautionary sharps (#) in the right hand and cautionary flats (b) in the left hand, indicating a key signature change from C major to C minor.

no-reset

A musical score for piano in C major, common time. The right hand features a melodic line with eighth and sixteenth notes, while the left hand provides a harmonic accompaniment with chords and single notes. The key signature has two sharps (F# and C#).

forget



setting the `suggestAccidentals` will print accidentals vertically relative to the note. This is useful for denoting Musica Ficta.

`accidental-suggestions.ly`



The second and third notes should not get accidentals, because they are tied to a note. However, an accidental is present if the line is broken at the tie, which happens for the G sharp.

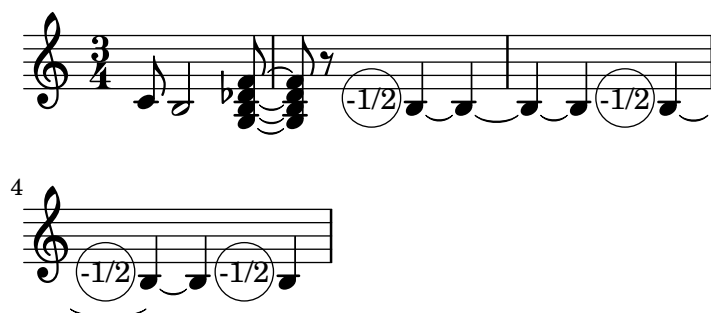
The presence of an accidental after a broken tie can be overridden.

`accidental-tie.ly`



Space is allowed for the actual size of accidentals on tied notes.

`accidental-unbroken-tie-spacing.ly`



This shows how modern cross voice auto cautionary accidentals are handled. The first two fisses get accidentals because they belong to different voices. The first f gets cautionary natural

because of previous measure. The last f gets cautionary natural because fis was only in the other voice.

accidental-voice.ly

Accidentals work: the second note does not get a sharp. The third and fourth show forced and cautionary accidentals.

accidental.ly

Accordion register symbols are available in the (lily accreg) module as `\markup` and as standalone music events.

accreg.ly

`\add-grace-property` can be used at various context levels in order to override grace properties. Overrides in different parallel contexts are independent.

add-grace-property.ly

`add-stem-support` can be removed or implemented only for beamed notes.

add-stem-support.ly


This is a test of combining post-events with various constructs. Problems are reported on the stderr of this run; there are no images produced.

added-post-event-test.ly


`\addlyrics` should be able to attach itself to named and unnamed `Voice` constructs. For all tests where this succeeds, the noteheads will be red.

addlyrics-existing-context.ly


`\new Staff \new Voice`




`\new Voice`



`\new Staff \new Voice = "named"`



`\new Voice = "named"`



`\addlyrics` may get used on a `Staff` context and will then consider all note events created below it for synchronization.

addlyrics-to-staff-context.ly



Life is___ love, live__ life.
No more let sins and sor-rows grow.

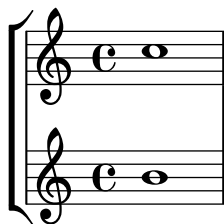
Delayed post-events and other types of music can be created with `\after` and `\afterGrace`.
after.ly



one four
two
three

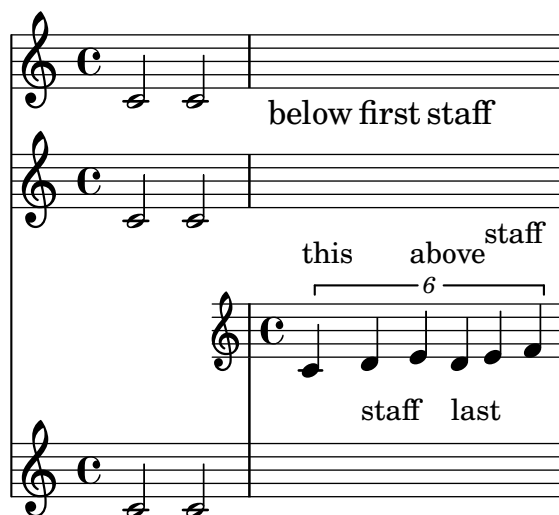
A warning is emitted when the context specified in `alignAboveContext` or `alignBelowContext` does not exist, such as when the context having the `alignAboveContext` or `alignBelowContext` property is created before the context that this property refers to.

alignment-order-unfound-context.ly



Newly created contexts can be inserted anywhere in the vertical alignment.

`alignment-order.ly`



Alignments may be changed per system by setting `alignment-distances` in the `line-break-system-details` property

`alignment-vertical-manual-setting.ly`

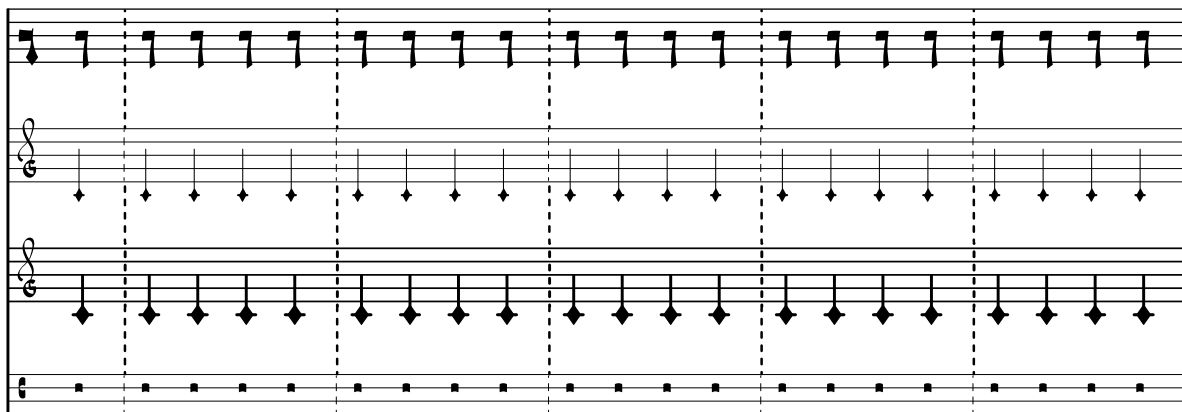
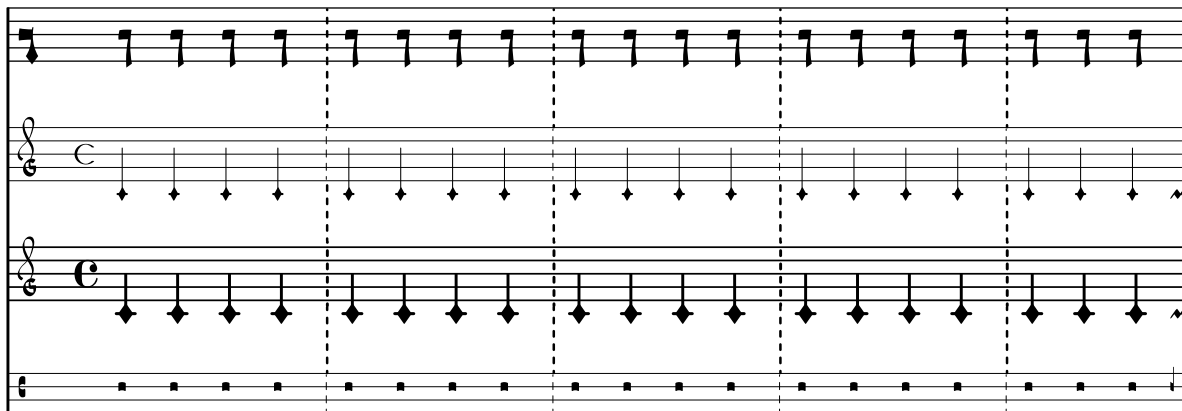
System 1: Three staves with treble clefs and common time signature. Each staff contains a whole note chord consisting of a quarter rest followed by a whole note G4.

System 2: Three staves with treble clefs. A second ending bracket is above the first two staves. Each staff contains a whole note chord consisting of a quarter rest followed by a whole note G4.

System 3: Three staves with treble clefs. A third ending bracket is above the first two staves. Each staff contains a whole note chord consisting of a quarter rest followed by a whole note G4.

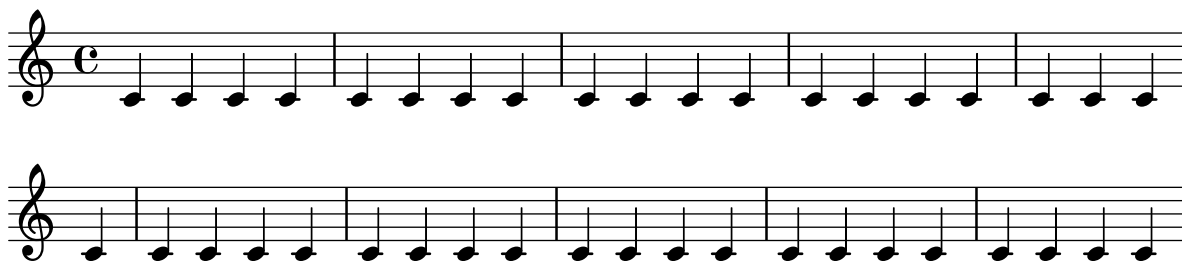
By default, certain staff contexts for ancient music do not forbid line breaks between bar lines. The output should have a break at a point without a bar line.

`allow-break-ancient.ly`



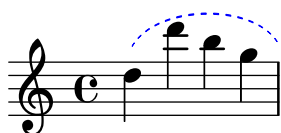
The `\allowBreak` command inserts a break point regardless of bar lines, unbreakable spanners, etc. This test should have a break in the middle of a measure.

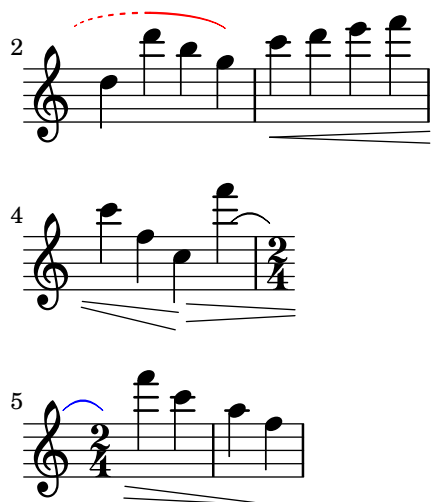
`allow-break.ly`



The command `\alterBroken` may be used to override the pieces of a broken spanner independently. The following example demonstrates its usage with a variety of data types.

`alter-broken.ly`





Alternative notation systems using accidentals different from the Western ones set them systematically, for standalone markups and all grobs that print accidentals.

This include file provides a function to draw many accidental in different contexts. It is used by various tests.

alteration-glyphs.ly

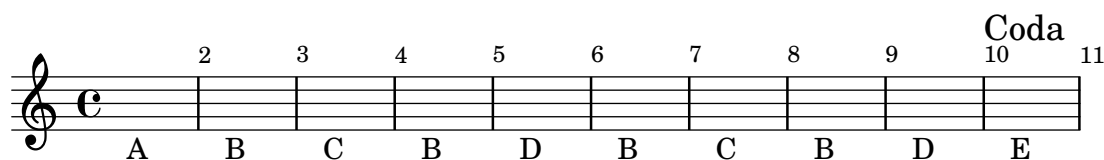
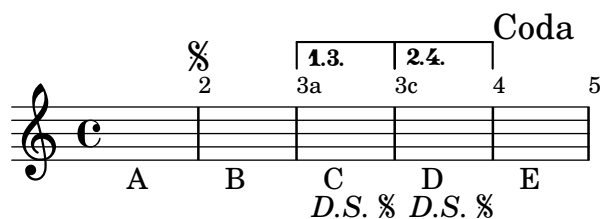
All \sharp



This case places `\alternative` within the body of a `\repeat segno`, with the alternatives at the end of the repeated section, but with volta numbers out of order. Alternative bar numbering is enabled.

The alternatives are notated with brackets rather than coda signs. Repetition is notated with a segno and simplified *D.S.* instructions that have no return counts or section labels. Alternative bar numbers appear.

alternative-end-segno.ly



This case places `\alternative` within the body of a `\repeat volta`, with the alternatives at the end of the repeated section. The alternatives receive volta brackets, bar numbers, and ending repeat bar lines. They unfold as expected.

`alternative-end.ly`

This case places `\alternative` within the body of a `\repeat segno`, neither at the start nor the end of the section. The alternatives receive volta brackets and bar numbers, but no coda marks or repeat bar lines. They unfold as expected.

`alternative-middle-segno.ly`

This case places `\alternative` within the body of a `\repeat volta`, neither at the start nor the end of the section. The alternatives receive volta brackets and bar numbers, but no repeat bar lines. They unfold as expected.

`alternative-middle.ly`

A whole-measure rest starting in a volta alternative is placed correctly.

`alternative-mmrest.ly`

This case nests one `\alternative` within another at the tail end of a `\repeat segno`. Alternative bar numbering is enabled.

The outer alternative receives a coda mark, no volta bracket, and normal bar numbering.

The inner alternative receives a volta bracket. Alternative bar numbering is used because it is the outermost volta bracket. The bracket communicates the return count, so the return count is omitted from the *D.C.* instruction to avoid redundancy.

The music unfolds to ABC ABC AD.

`alternative-nest-end-end-segno1.ly`

This case nests one `\alternative` within another at the tail end of a `\repeat segno`. Alternative bar numbering is enabled.

The outer alternative receives a coda mark, no volta bracket, and normal bar numbering.

The inner alternative receives volta brackets. Alternative bar numbering is used because they are the outermost volta brackets.

The music unfolds to ABC ABD AE.

`alternative-nest-end-end-segno2.ly`

This case nests one `\alternative` within another at the tail end of a `\repeat volta`. Alternative bar numbering is enabled.

The outer alternative receives a volta bracket and alternative bar numbering.

The inner alternative receives volta brackets and does not interrupt the bar numbering of the outer alternative.

The music unfolds to AB ACDE ACDF.

`alternative-nest-end-end.ly`

\alternative music can be assigned to a variable and used in multiple places, even with different repeat counts.

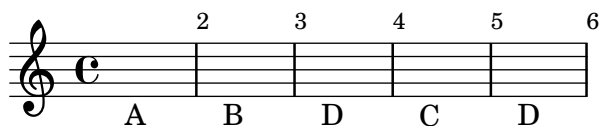
alternative-reuse.ly

This case places \alternative within the body of a \repeat segno, with the alternatives starting at the start of the repeated section and ending before the end of the section. The alternatives receive volta brackets and bar numbers, but no coda marks or ending repeat bar lines. They unfold as expected.

alternative-start-segno.ly

This case places \alternative within the body of a \repeat volta, with the alternatives starting at the start of the repeated section and ending before the end of the section. The alternatives receive volta brackets and bar numbers, but no ending repeat bar lines. They unfold as expected.

alternative-start.ly



A score with `\alternative` outside of `\repeat` is processed gracefully. The visual output is not important.

`alternative-top-level.ly`



Alternative music in a variable does not automatically attach to preceding `\repeat`, but `\alternative` attaches it.

`alternative-trailing-var.ly`



Ambitus for pieces beginning with `\cueDuringWithClef`.

Cues are often used at or near the beginning of a piece. Furthermore, a cue is frequently in a different clef, so the `\cueDuringWithClef` command is handy. Using this command at the beginning of a piece should leave the ambitus displayed based on the main clef.

An `Ambitus_engraver` should ignore notes in `CueVoice` contexts.

`ambitus-cue.ly`



The gaps between an `AmbitusLine` and its note heads are set by the `gap` property. By default, `gap` is a function that reduces the gap for small intervals (e.g. a fourth), so that the line remains visible.

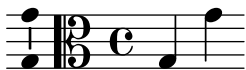
`ambitus-gap.ly`



Ambitus engraver should obey `middleCOffset`, `middleCPosition`, and the `staffLineLayoutFunction`.

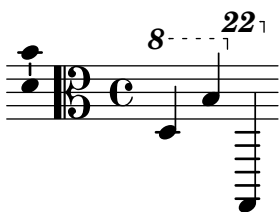
All three staves should look the same.

`ambitus-middleC.ly`



A voice with `\ottava` shouldn't confuse ambitus.

`ambitus-ottava.ly`



Adding ambitus to percussion contexts does not cause crashes, since the `Ambitus_engraver` will only acknowledge pitched note heads.

`ambitus-percussion-staves.ly`



Ambitus use actual pitch not lexicographic ordering.

`ambitus-pitch-ordering.ly`



Ambitus can be moved to various positions with correct horizontal spacing in all cases.

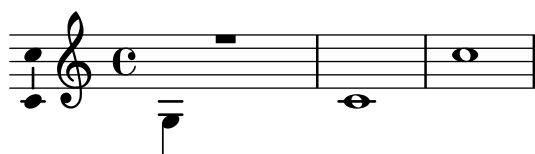
`ambitus-position.ly`





A voice with `Ambitus_engraver` that starts with a skip while another voice starts with a note does not cause a programming error.

`ambitus-skip-at-start.ly`



Ambitus accidentals (whether present or not) are ignored by the slur engravers.

`ambitus-slur.ly`



A `\Voice` should be able to contain both an `Ambitus_engraver` and a `Mensural_ligature_engraver` without segfaulting.

`ambitus-with-ligature.ly`



Ambitus indicate pitch ranges for voices.

Accidentals only show up if they're not part of key signature. `AmbitusNoteHead` grobs also have ledger lines. The noteheads are printed in overstrike, so there's only one visible; the accidentals are prevented from colliding.

`ambitus.ly`



Footnotes and balloons also work on system start delimiters.

annotate-system-start-delimiter.ly

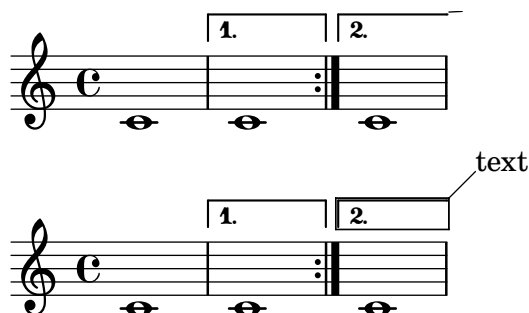


¹note

Music engraving by LilyPond 2.24.4—www.lilypond.org

Footnotes and balloons also work on volta brackets running to the end of the piece.

annotate-volta-spanner-end.ly



¹note

Music engraving by LilyPond 2.24.4—www.lilypond.org

With `\applyContext`, `\properties` can be modified procedurally. Applications include: checking bar numbers, smart octavation.

This example prints a bar-number during processing on `stdout`.

apply-context.ly



The `\applyOutput` expression is the most flexible way to tune properties for individual grobs. Here, the layout of a note head is changed depending on its vertical position.

apply-output.ly



Alternative notation systems using accidentals different from the Western ones set them systematically, for standalone markups and all grobs that print accidentals.

This include file provides a function to draw many accidental in different contexts. It is used by various tests.

arabic-accidental-glyphs.ly

All ♭



♭

A square bracket on the left indicates that the player should not arpeggiate the chord.

arpeggio-bracket.ly



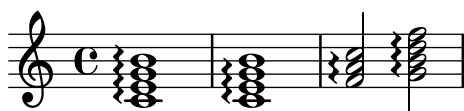
Arpeggio stays clear of accidentals and flipped note heads.

arpeggio-collision.ly



Arpeggios do not overshoot the highest note head. The first chord in this example simulates overshoot using 'positions for comparison with the correct behavior.

arpeggio-no-overshoot.ly



Arpeggios stil work in the absence of a staff-symbol.

arpeggio-no-staff-symbol.ly

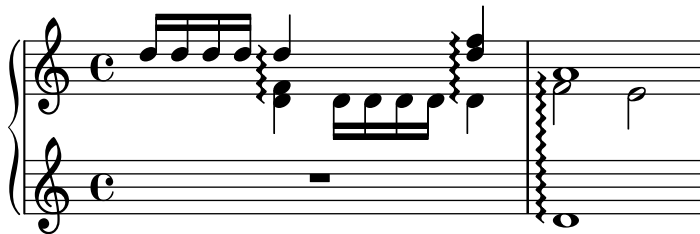


There is a variant of the arpeggio sign that uses a ‘vertical slur’ instead of the wiggly.
 arpeggio-parenthesis.ly



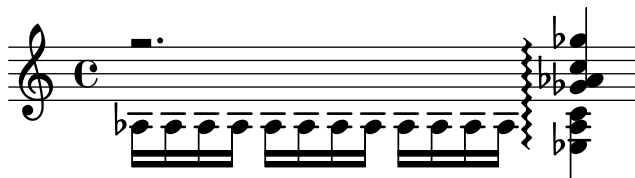
Cross-staff or -voice arpeggios which include single note heads as anchors do not collide with previous note heads or prefatory material.

arpeggio-span-collision.ly



Span arpeggios that are not cross-staff do not have horizontal spacing problems.

arpeggio-span-one-staff-collision.ly



Span arpeggios within one staff also work

arpeggio-span-one-staff.ly



Arpeggios are supported, both cross-staff and broken single staff.

arpeggio.ly



The snappizzicato articulation adds a snappizzicato sign to the note.

articulation-snappizzicato.ly



Augmentum dots are accounted for in horizontal spacing.
augmentum.ly



No auto beams will be put over (manual) repeat bars.
auto-beam-bar.ly



Autobeamer remembers subdivideBeams and other beaming pattern related functions at the start of an autobeam.
auto-beam-beaming-override.ly



Automatic beams are ended early if a breathing sign is encountered.
auto-beam-breathe.ly



beamExceptions is used to modify the automatic beaming for certain durations; the expected grouping is given after the note duration.
auto-beam-exceptions.ly





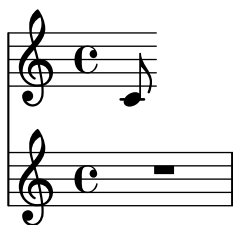
The autobeamer may be switched off for a single note with `\noBeam`.

`auto-beam-no-beam.ly`



Beamable notes do not extend a staff. The staff with the note should end immediately after the note.

`auto-beam-ossia.ly`



Grace notes at the start of a partial measure do not break autobeaming.

`auto-beam-partial-grace.ly`



Autobeaming works properly in partial measures.

`auto-beam-partial.ly`



In 4/4 time, the first and second and third and fourth beats should be beamed together if only eighth notes are involved. If any shorter notes are included, each beat should be beamed separately.

`auto-beam-recheck.ly`



Automatic beaming is also done on triplets.

auto-beam-triplet.ly



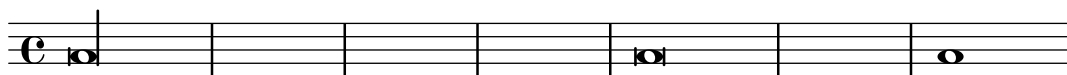
Tuplet-spanner should not put (visible) brackets on beams even if they're auto generated.

auto-beam-tuplets.ly



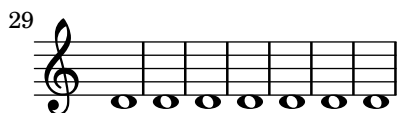
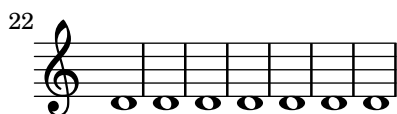
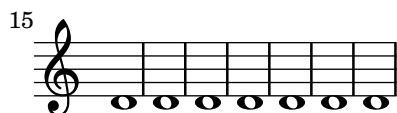
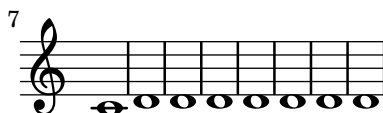
Beams are placed automatically; the last measure should have a single beam.

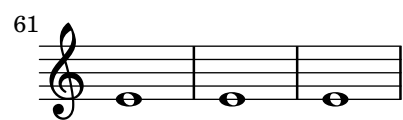
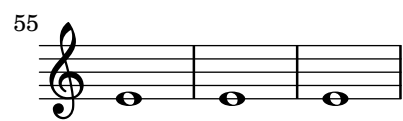
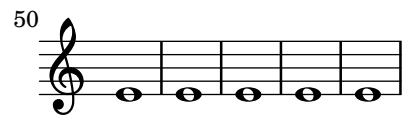
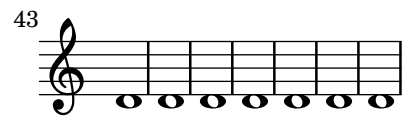
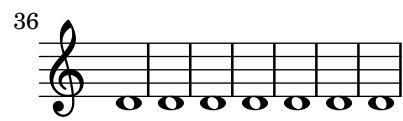
auto-beam.ly



\autoBreaksOff disables automatic line breaks and page breaks. \autoBreaksOn reenables both of them.

auto-breaks.ly





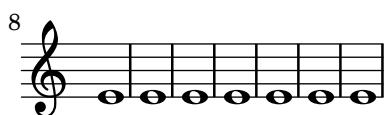
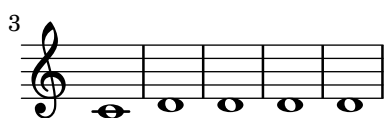
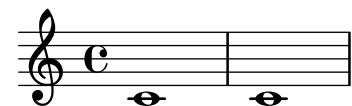
Auto change piano staff switches voices between up and down staves automatically; rests are switched along with the coming note. When central C is reached, staff is not yet switched (by default).

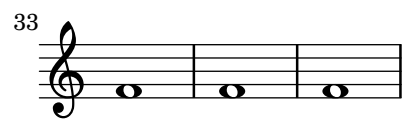
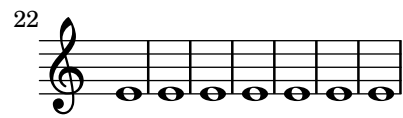
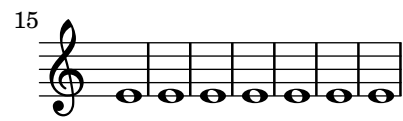
`auto-change.ly`



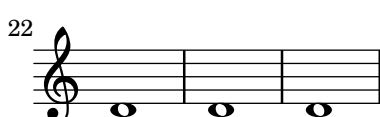
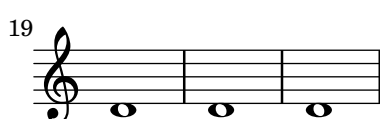
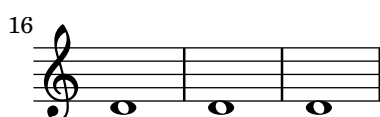
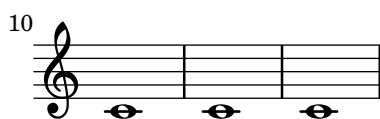
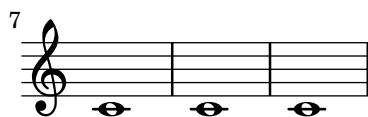
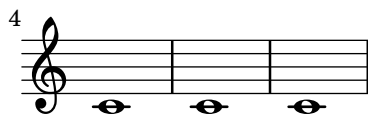
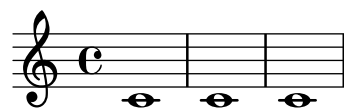
`\autoLineBreaksOff` can be used to turn off automatic line breaking. `\autoLineBreaksOn` reenables it.

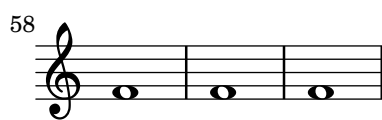
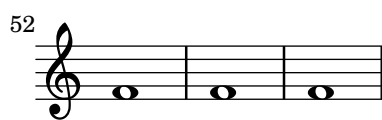
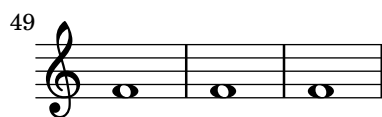
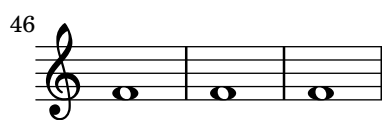
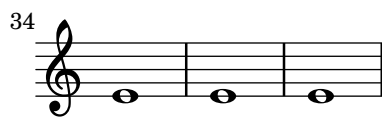
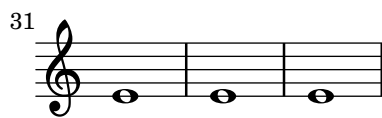
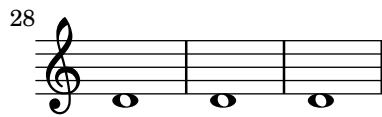
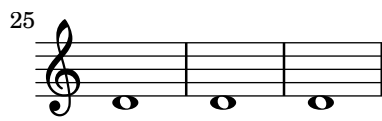
`auto-line-breaks.ly`





`\autoPageBreaksOff` turns off automatic page breaking; `\autoPageBreaksOn` reenables it.
auto-page-breaks.ly





Beaming in 3/4 time has special treatment. By default six eighth notes are beamed in one. Beams that would imply 6/8 time may be avoided with `beamHalfMeasure = ##f`. When the beaming is changed, beams should start at the beginning of the measure.

`autobeam-3-4-rules.ly`

Prevent beams that imply 6/8 time Or allow them

but these beams are okay

7 Beam to the beat Override to beam groups of 3 eighth notes

`\noBeam` should terminate an autobeam, even if it's not a recommended place for stopping a beam. In this example, the first three eighth notes should be beamed.

`autobeam-nobeam.ly`

Default autobeam settings have been set for a number of time signatures. Each score shows the desired beaming

`autobeam-show-defaults.ly`

Beams should end at 4/8, 6/8, and 8/8

Beams should end at 2/8 and 4/8

Beams should end at 1/8 and 2/8

Beams should end at 1/16 and 2/16

Beams should end at 4/8, 8/8, 10/8 and 12/8

1/8 beams should end at 3/4; smaller beams should end at 1/4, 2/4, and 3/4



Beams should end at 3/8



Beams should end at 1/16, 2/16, and 3/16



Beams should end at 4/8, 8/8, 12/8, 14/8, and 16/8



Beams should end at 4/8, 6/8, and 8/8



Beams should end at 1/16, 2/16, 3/16, and 4/16



Beams should end at 2/8 and 4/8



Beams should end at 6/8, 8/8, 10/8, and 12/8



Beams should end at 3/8 and 6/8



Beams should end at 6/8, 12/8, 14/8, 16/8, and 18/8



Beams should end at 3/8, 6/8, and 9/8



Beams should end at 3/16, 6/16, and 9/16

Beams should end at 6/8, 12/8, 18/8, 20/8, 22/8, and 24/8

Beams should end at 3/8, 6/8, 9/8, and 12/8

2

1/8 beams should end at 6/16 and 12/16
Shorter beams should end at 3/16, 6/16, 9/16, and 12/16

Beams should end at 3/8 and 5/8

Beams should end at 3/8, 6/8, and 8/8

2

Autobeam rechecking works properly with triplets. In the example, the first beat should be beamed completely together.

autobeam-triplet-recheck.ly

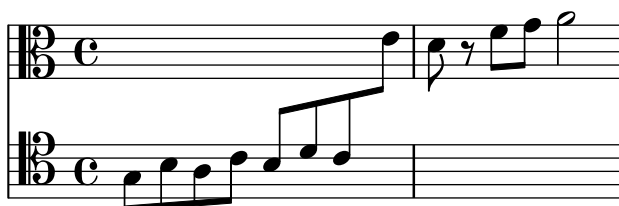
This is a regression test for an `\autochange` scenario reported in issue 6575. The stem of the C should point down.

autochange-after-rest.ly



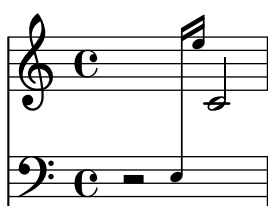
Other clefs for the autoChanger may be set. This works for implicitly created staves only. The first example should turn at b with soprano-clef in the upper Staff. The second example should turn at d' with alto-clef in the upper and tenor-clef in the lower Staff.

autochange-clefs.ly



Grace notes are placed on the appropriate staff.

autochange-inside-grace.ly



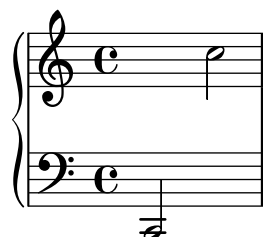
Music functions that scale durations also scale `\autoChange` decisions. The four measures should have identical notes.

autochange-inside-scale-durations.ly



`\keepWithTag` works with `\autoChange`.

autochange-keep-with-tag.ly



`\autoChange` needs to be given pitches in their final octaves, so if `\relative` is used it must be applied inside `\autoChange`. The pitches in `\autoChange` are unaffected by an outer `\relative`, so that the printed output shows the pitches that `\autoChange` used.

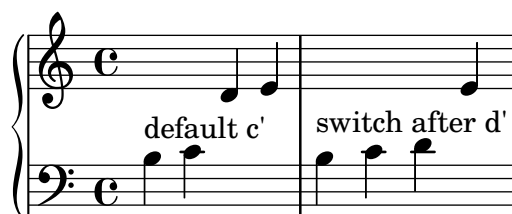
The expected output of this test is three identical measures.

`autochange-relative.ly`



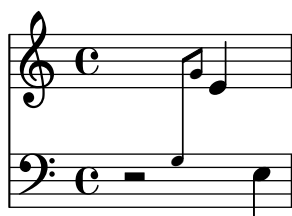
Other turning points for the `autoChanger` are possible.

`autochange-turning-pitch.ly`



Grace notes are placed on the appropriate staff.

`autochange-with-grace.ly`



The bottom-level contexts in polyphony shorthand are allocated a context id in order of creation, starting with "1". This snippet will fail to compile if either voice has an invalid `context-id` string.

`automatic-polyphony-context-id.ly`



In a DrumStaff, automatic polyphony can be used without explicitly initializing separate voices.

`automatic-polyphony-drumstaff.ly`



In a TabStaff, automatic polyphony can be used without explicitly initializing separate voices.

`automatic-polyphony-tabstaff.ly`

Exercise all output functions

`backend-exercise.ly`

The Bärenreiter edition of the Cello Suites is the most beautifully typeset piece of music in our collection of music (we both own one. It is also lovely on French Horn). This piece does not include articulation, but it does follow the same beaming and linebreaking as the printed edition. This is done in order to benchmark the quality of the LilyPond output.

As of lilypond 1.5.42, the spacing and beam quanting is almost identical.

There are two tweaks in this file: a line-break was forced before measure 25, we get back the linebreaking of Bärenreiter. The stem direction is forced in measure 24. The last beam of that measure is up in Bärenreiter because of context. We don't detect that yet.

Note that the Bärenreiter edition contains a few engraving mistakes. The second line begins with measure 6 (but prints 5). The |: half way in measure 13 has been forgotten.

`baerenreiter-sarabande.ly`

Solo Cello Suite II

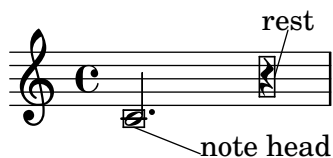
Johann Sebastian Bach (16

Sarabande

The image displays a musical score for the Sarabande from the Solo Cello Suite II by Johann Sebastian Bach. The score is written in bass clef with a key signature of one flat (B-flat) and a time signature of 3/4. It consists of six staves of music, with measure numbers 6, 11, 16, 21, and 25 indicated at the beginning of their respective lines. The notation includes various rhythmic values such as eighth and sixteenth notes, as well as rests. Trills are marked with 'tr' above the notes. The piece concludes with a final measure marked with a '7'.

The alignment of a balloon text can be customized as well as the attachment point of the line connecting it to the frame.

`balloon-attachments.ly`



Balloons on breakable items are visible if and only if the item they annotate is visible.

`balloon-breakable.ly`

A musical staff in treble clef with a key signature of three sharps (F#, C#, G#). It contains a complex rhythmic figure. A balloon labeled 'key cancellation' points to a key signature change to one sharp (F#) in the middle of the staff. Another balloon labeled 'key signature' points to the final key signature of one sharp (F#).

A musical staff in treble clef with a key signature of three flats (Bb, Eb, Ab). It contains a complex rhythmic figure. A balloon labeled 'key signature' points to the key signature.

Balloons work on cross-staff grobs.

`balloon-cross-staff.ly`

A grand staff with two treble clefs. The upper staff contains a melodic line with a 'marcato' marking. A balloon points to the 'marcato' text.

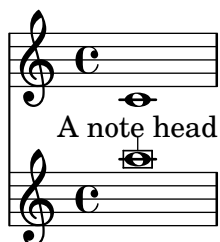
Balloons work on spanners that have no pure height.

`balloon-empty-pure-height.ly`

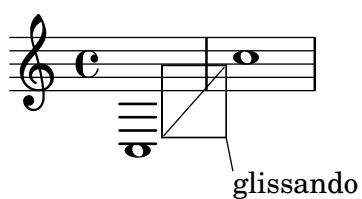
A musical staff in treble clef with a common time signature 'C'. It contains a note on a ledger line below the staff and a beam connecting two notes. Balloons labeled 'ledger line' and 'beam' point to these elements.

Balloons also reserve space vertically when the `Balloon_engraver` is in `Score` context.

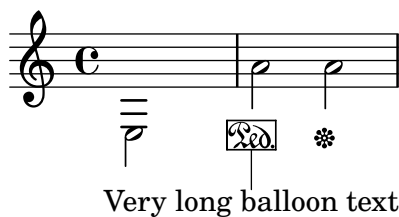
`balloon-engraver-score-spacing.ly`



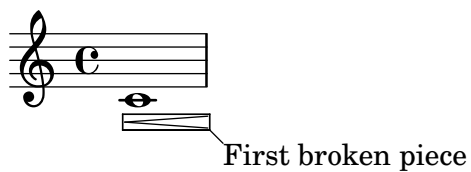
Balloons can be attached to glissandi.
balloon-glissando.ly

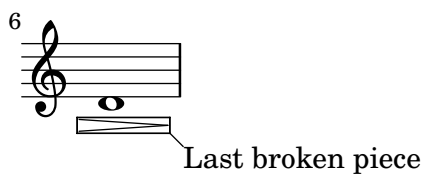


Outside-staff positioning correctly takes balloons into account.
balloon-outside-staff.ly



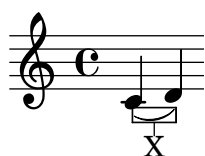
BalloonText supports the spanner-placement property.
balloon-spanner-placement.ly





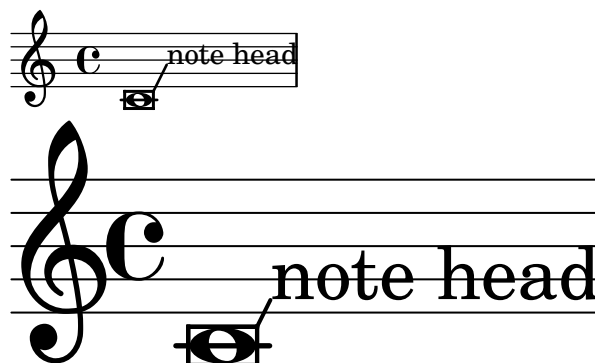
Balloons on spanners, such as slurs, are supported.

`balloon-spanner.ly`



The thickness of balloons scales with staff size.

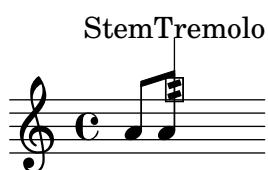
`balloon-staff-size.ly`



Music engraving by LilyPond 2.24.4—www.lilypond.org

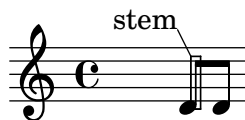
Balloons work on stem tremoli.

`balloon-stem-tremolo.ly`



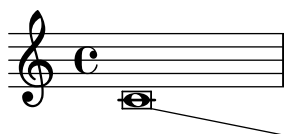
Balloons work on beamed stems.

`balloon-stem.ly`



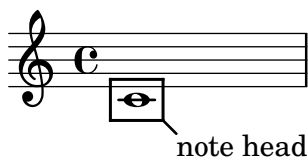
Stencils are copied before moved for Balloons instead of modified. In the test, the point-stencil in the second system should not inherit the extent from the `null-markup` in the first and the bar should be much shorter.

`balloon-stencil.ly`



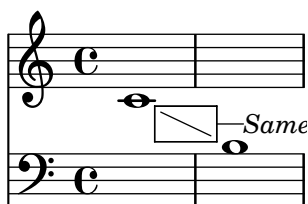
BalloonText has configurable thickness.

`balloon-thickness.ly`



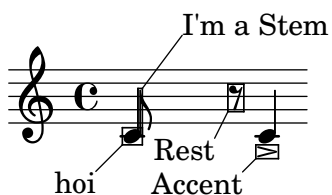
Balloons can be attached to voice followers.

`balloon-voice-follower.ly`



With balloon texts, objects in the output can be marked, with lines and explanatory text added.

`balloon.ly`



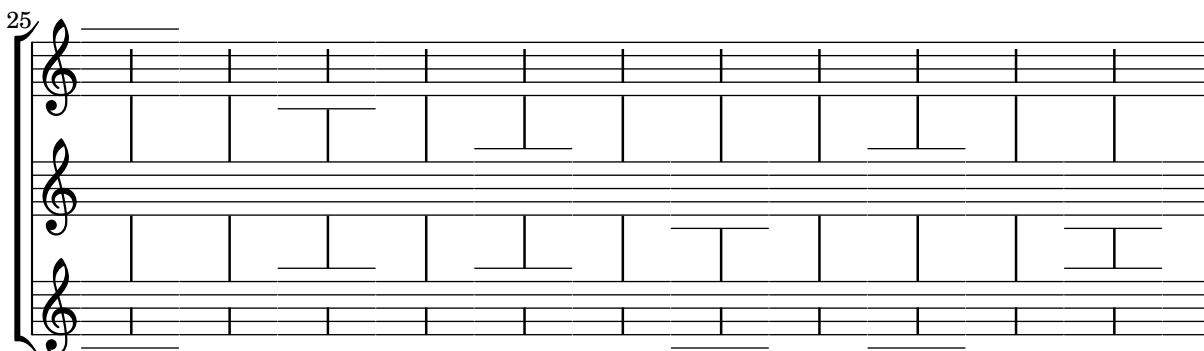
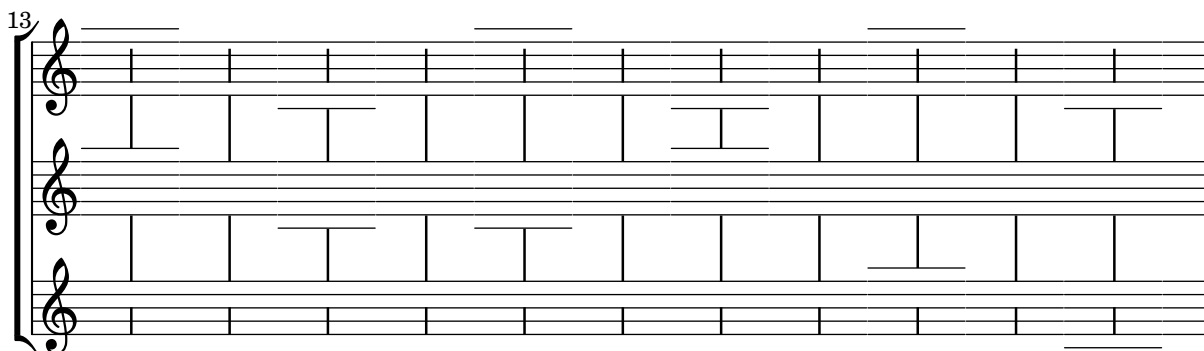
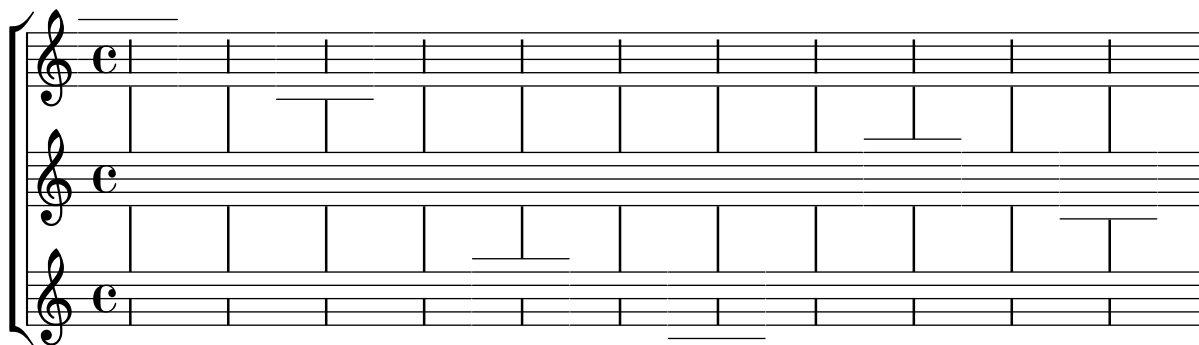
The meaning of `|` is stored in the identifier `"|"`.

`bar-check-redefine.ly`



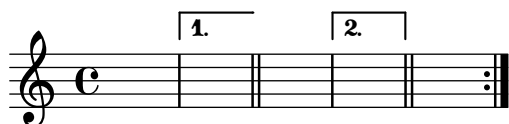
Bar line extent can be customised and the customised value must be respected when staff symbol is changed temporarily (e.g. to simulate ledger lines of renaissance prints and manuscripts); moreover, span bars should not enter the staves.

bar-extent.ly



`\defineBarLine` accepts annotations in the end-of-line glyph name that can be used to distinguish bar lines that should close a volta bracket from those that should not. Bracket 1 should end open and bracket 2 should end closed.

bar-line-allow-volta-hook.ly



Test predefined bar types at the beginning, middle, and end of a line. The types in this group are intended for a caesura at a line break.

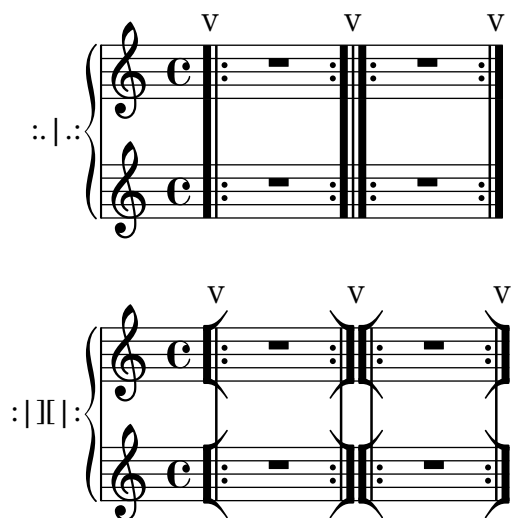
bar-line-built-in-caesura-eol.ly

The image displays three musical staves, each with two staves (treble and bass clefs) and a common time signature 'C'. Each staff contains three measures with a single note in each. Above the first measure of each staff is a 'V' symbol. The first staff is labeled 'x-|' on the left, indicating a caesura at the end of the line. The second staff is labeled 'x-||' on the left, indicating a caesura at the end of the line with a repeat sign. The third staff is labeled 'x-.' on the left, indicating a caesura at the end of the line with a fermata.

Test predefined bar types at the beginning, middle, and end of a line. The types in this group are intended for use where one repeated section ends and another begins.

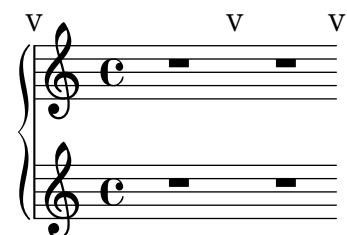
bar-line-built-in-double-repeat.ly

The image displays three musical staves, each with two staves (treble and bass clefs) and a common time signature 'C'. Each staff contains three measures with a single note in each. Above the first measure of each staff is a 'V' symbol. The first staff is labeled '...:' on the left, indicating a double repeat at the beginning of the line. The second staff is labeled ':|:' on the left, indicating a double repeat at the middle of the line. The third staff is labeled ':|.:' on the left, indicating a double repeat at the end of the line.



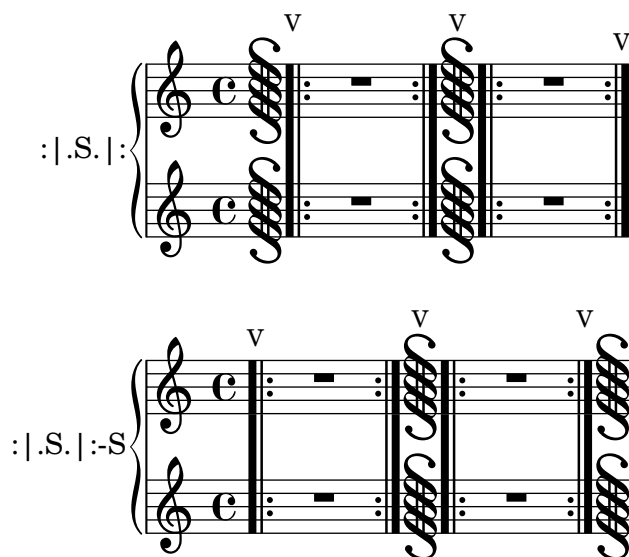
Test a spacer bar line at the beginning, middle, and end of a line.

`bar-line-built-in-empty.ly`



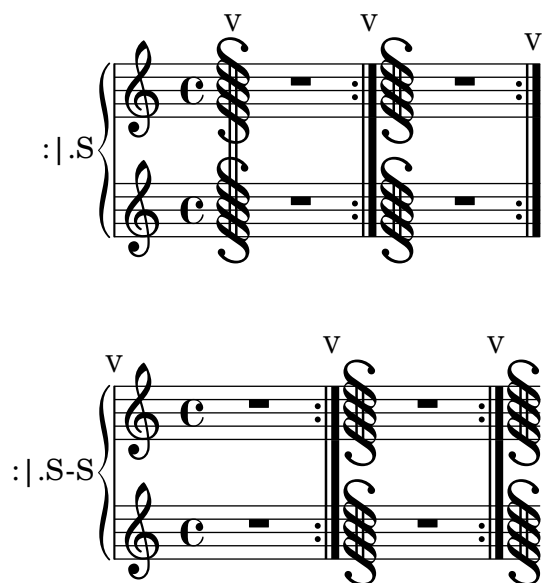
Test predefined bar types at the beginning, middle, and end of a line. The types in this group are intended for use where one repeated section ends, another begins, and there is an in-staff segno.

`bar-line-built-in-end-repeat-segno-start-repeat.ly`



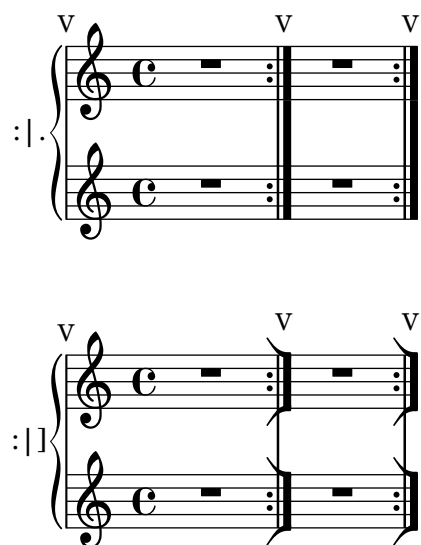
Test predefined bar types at the beginning, middle, and end of a line. The types in this group are intended for use where a repeated section ends and there is an in-staff segno.

`bar-line-built-in-end-repeat-segno.ly`



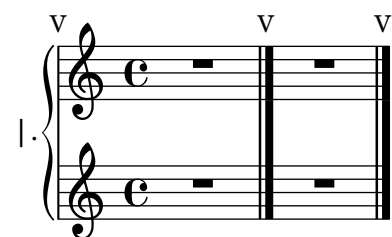
Test predefined bar types at the beginning, middle, and end of a line. The types in this group are intended for use at the end of a repeated section.

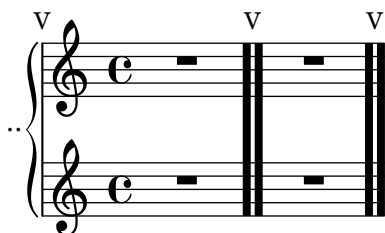
`bar-line-built-in-end-repeat.ly`



Test predefined bar types at the beginning, middle, and end of a line. The types in this group are intended for use at the end of a section.

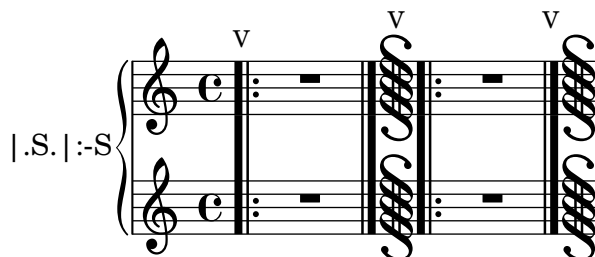
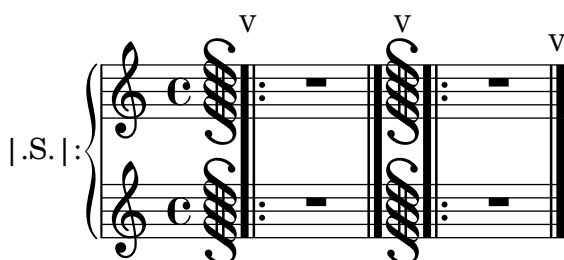
`bar-line-built-in-end-section.ly`





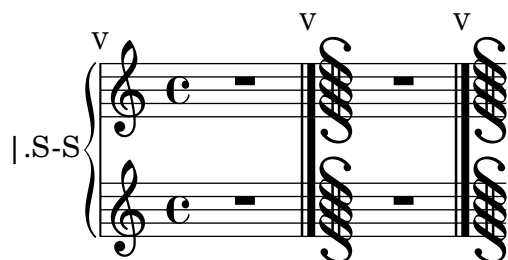
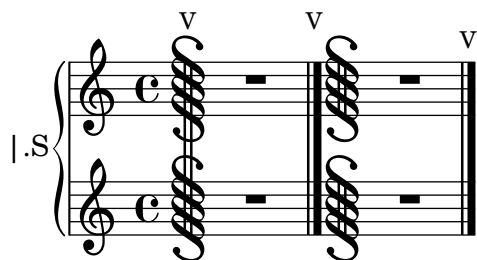
Test predefined bar types at the beginning, middle, and end of a line. The types in this group are intended for use where a repeated section begins and there are both a *Fine* and an in-staff segno.

`bar-line-built-in-fine-segno-start-repeat.ly`



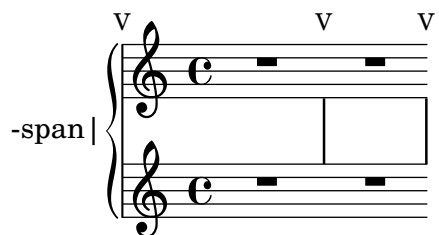
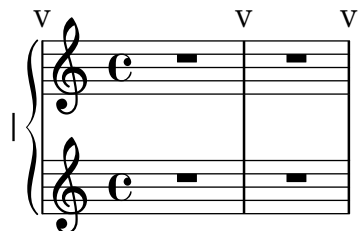
Test predefined bar types at the beginning, middle, and end of a line. The types in this group are intended for use where there are both a *Fine* and an in-staff segno.

`bar-line-built-in-fine-segno.ly`



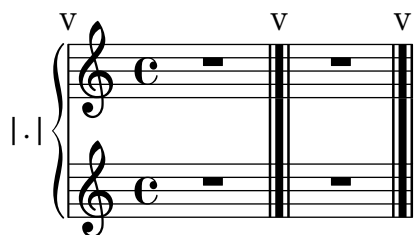
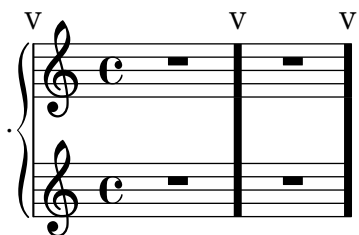
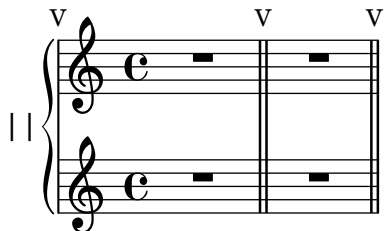
Test predefined bar types at the beginning, middle, and end of a line. The types in this group are intended for use as measure bar lines.

bar-line-built-in-measure.ly



Test predefined bar types at the beginning, middle, and end of a line. The types in this group are intended for use between sections.

bar-line-built-in-section.ly



Test predefined bar types at the beginning, middle, and end of a line. The types in this group are intended for use where a repeated section starts and there is an in-staff segno.

bar-line-built-in-segno-start-repeat.ly

Four musical staves illustrating different bar line types for a repeat sign (segno):

- Staff 1: `S. | :` (Repeat sign with repeat sign)
- Staff 2: `S. | :- |` (Repeat sign with end bar line)
- Staff 3: `S. | :- ||` (Repeat sign with double bar line)
- Staff 4: `S. | :- S` (Repeat sign with start bar line)

Test predefined bar types at the beginning, middle, and end of a line. The types in this group are intended for use where there is an in-staff segno.

`bar-line-built-in-segno.ly`

Two musical staves illustrating bar line types for a repeat sign (segno):

- Staff 1: `s` (Lowercase repeat sign)
- Staff 2: `S-|` (Uppercase repeat sign with start bar line)

Musical notation for the 'S-||' bar type. It shows a grand staff with two treble clefs. The first measure contains a common time signature 'C' and a complex, dense musical texture. The second and third measures contain a simple rhythmic pattern of a quarter note followed by a quarter rest. Vertical bar lines separate the measures, and a final double bar line is at the end. Three 'v' markers are positioned above the staves, one above each measure.

Musical notation for the 'S-S' bar type. It shows a grand staff with two treble clefs. The first measure contains a common time signature 'C' and a simple rhythmic pattern of a quarter note followed by a quarter rest. The second and third measures contain a complex, dense musical texture. Vertical bar lines separate the measures, and a final double bar line is at the end. Three 'v' markers are positioned above the staves, one above each measure.

Test predefined bar types at the beginning, middle, and end of a line. The types in this group are intended for use at the start of a repeated section.

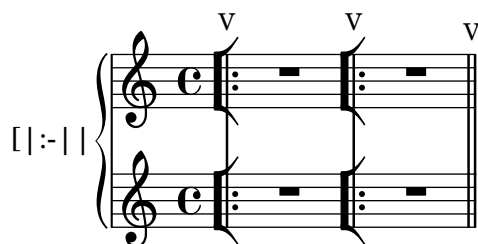
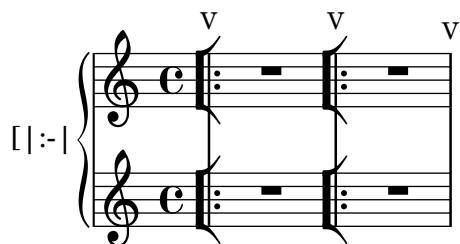
bar-line-built-in-start-repeat.ly

Musical notation for the '.|:' bar type. It shows a grand staff with two treble clefs. The first measure contains a common time signature 'C' and a simple rhythmic pattern of a quarter note followed by a quarter rest. The second and third measures contain a complex, dense musical texture. Vertical bar lines separate the measures, and a final double bar line is at the end. Three 'v' markers are positioned above the staves, one above each measure.

Musical notation for the '.|:-|' bar type. It shows a grand staff with two treble clefs. The first measure contains a common time signature 'C' and a simple rhythmic pattern of a quarter note followed by a quarter rest. The second and third measures contain a complex, dense musical texture. Vertical bar lines separate the measures, and a final double bar line is at the end. Three 'v' markers are positioned above the staves, one above each measure.

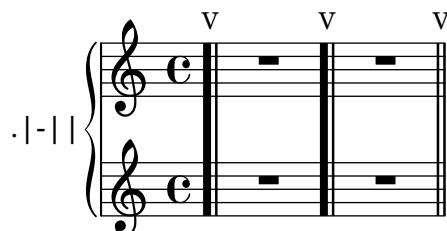
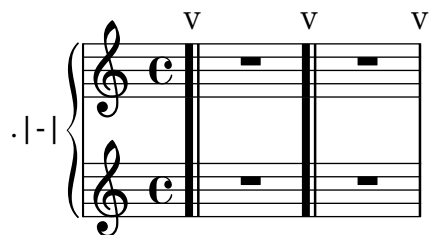
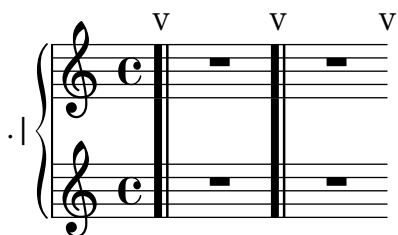
Musical notation for the '.|:-||' bar type. It shows a grand staff with two treble clefs. The first measure contains a common time signature 'C' and a simple rhythmic pattern of a quarter note followed by a quarter rest. The second and third measures contain a complex, dense musical texture. Vertical bar lines separate the measures, and a final double bar line is at the end. Three 'v' markers are positioned above the staves, one above each measure.

Musical notation for the '[|:' bar type. It shows a grand staff with two treble clefs. The first measure contains a common time signature 'C' and a simple rhythmic pattern of a quarter note followed by a quarter rest. The second and third measures contain a complex, dense musical texture. Vertical bar lines separate the measures, and a final double bar line is at the end. Three 'v' markers are positioned above the staves, one above each measure.



Test predefined bar types at the beginning, middle, and end of a line. The types in this group are intended for use at the start of a section.

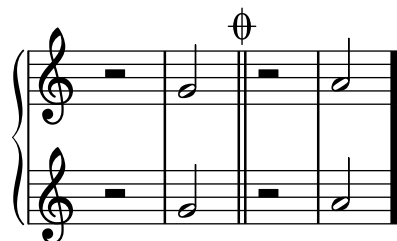
`bar-line-built-in-start-section.ly`



When `caesuraType` is set appropriately, `\caesura` inserts a double bar line with priority higher than a measure bar line and lower than a section bar line.

These notes should be followed by these bar lines: D, double; E, double; F, double; G, double; A, thick.

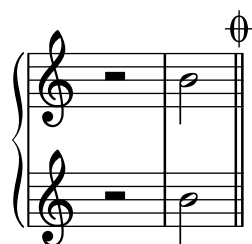
`bar-line-caesura-double.ly`



When `caesuraType` is set appropriately, `\caesura` inserts a double bar visible only at line break, with priority less than a measure bar.

These notes should be followed by these bar lines: D, none; E, single; F, dotted; G, single; A, double; B, double.

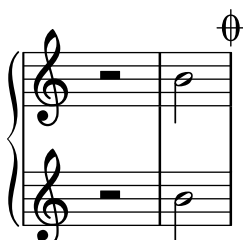
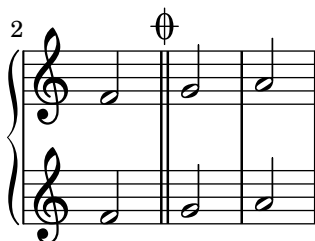
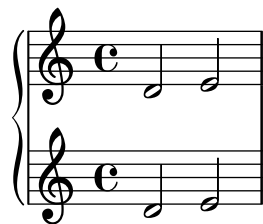
```
bar-line-caesura-eol-double.ly
```



When `caesuraType` is set appropriately, `\caesura` inserts a bar line that is visible only at a line break.

These notes should be followed by these bar lines: D, none; E, single; F, double; G, single; A, single; B, single.

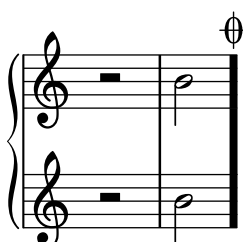
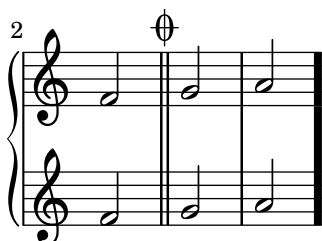
```
bar-line-caesura-eol-single.ly
```



When `caesuraType` is set appropriately, `\caesura` inserts a thick bar line that is visible only at a line break, with priority less than a measure bar.

These notes should be followed by these bar lines: D, none; E, single; F, double; G, single; A, thick; B, thick.

`bar-line-caesura-eol-thick.ly`



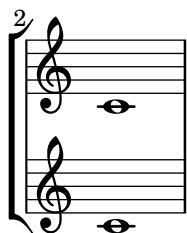
A user-defined empty bar glyph behaves like the built-in empty bar glyph. The horizontal space between notes should be the same in both measures.

```
bar-line-define-bar-glyph-empty.ly
```



New bar line glyphs can be defined in Scheme.

```
bar-line-define-bar-glyph.ly
```



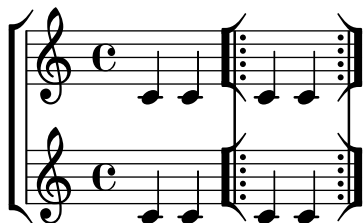
A user-defined empty bar line with an annotation in the name behaves like the built-in empty bar line. The horizontal space between notes should be the same in both measures.

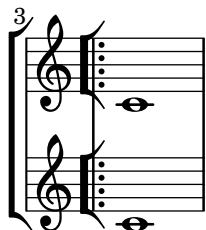
```
bar-line-define-bar-line-empty.ly
```



New bar line styles can be defined by `\defineBarLine`.

```
bar-line-define-bar-line.ly
```





Where `\fine` and `\inStaffSegno` occur together, user-defined bar lines can be printed by setting the `fineSegnoBarType`, `fineStartRepeatSegnoBarType`, `endRepeatSegnoBarType`, and `doubleRepeatSegnoBarType` context properties.

The output should show two adjacent repeated sections with doubled dots and thick bar lines, followed by a double thick bar line without dots. There should also be an in-staff segno in every case.

```
bar-line-define-fine-v-repeat-segno.ly
```



At `\fine` without `\inStaffSegno`, user-defined bar lines can be printed by setting the `fineBarType`, `startRepeatBarType`, `endRepeatBarType`, and `doubleRepeatBarType` context properties.

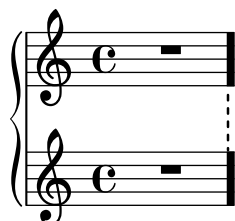
The output should show two adjacent repeated sections with doubled dots and thick bar lines, followed by a double thick bar line without dots.

```
bar-line-define-fine-v-repeat.ly
```



Customizing `measureBarType` is effective when appropriate bar lines are defined. The system should end with a single thick bar line with a dashed span.

```
bar-line-define-measure.ly
```



User-defined bar lines with in-staff segni can be printed by setting the `segnoBarType`, `startRepeatSegnoBarType`, `endRepeatSegnoBarType`, and `doubleRepeatSegnoBarType` context properties.

The output should show two adjacent repeated sections with unusually ornate bar lines with in-staff segni, followed by an in-staff segno that is flanked by thick bar lines.

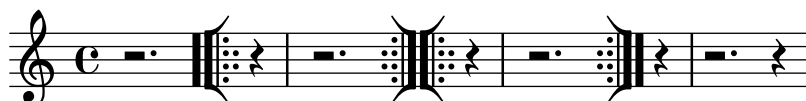
```
bar-line-define-repeat-segno.ly
```



User-defined bar lines can be printed for `\repeat volta` by setting the `startRepeatBarType`, `endRepeatBarType`, and `doubleRepeatBarType` context properties.

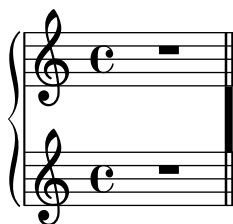
This output should show two adjacent repeated sections with unusually ornate bar lines.

`bar-line-define-repeat.ly`



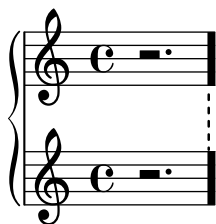
Customizing `sectionBarType` is effective when appropriate bar lines are defined. The system should end with a double bar line with a thick span.

`bar-line-define-section.ly`



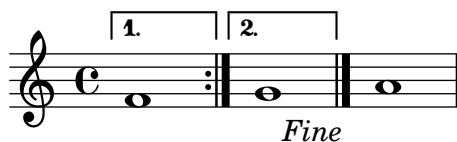
Customizing `underlyingRepeatBarType` is effective when appropriate bar lines are defined. The first system should end with a single thick bar line with a dashed span.

`bar-line-define-underlying-repeat.ly`



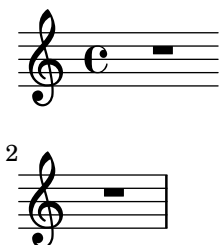
A final volta bracket closes at `\fine`.

`bar-line-fine-volta-hook.ly`



`\bar` can override repeat bar lines. The first system should end with no bar line. The second system should begin with no bar line and end with a measure bar line.

`bar-line-manual-v-repeat.ly`



An omitted bar line behaves like an empty bar line. The horizontal space between notes should be the same in both measures.

`bar-line-omit.ly`



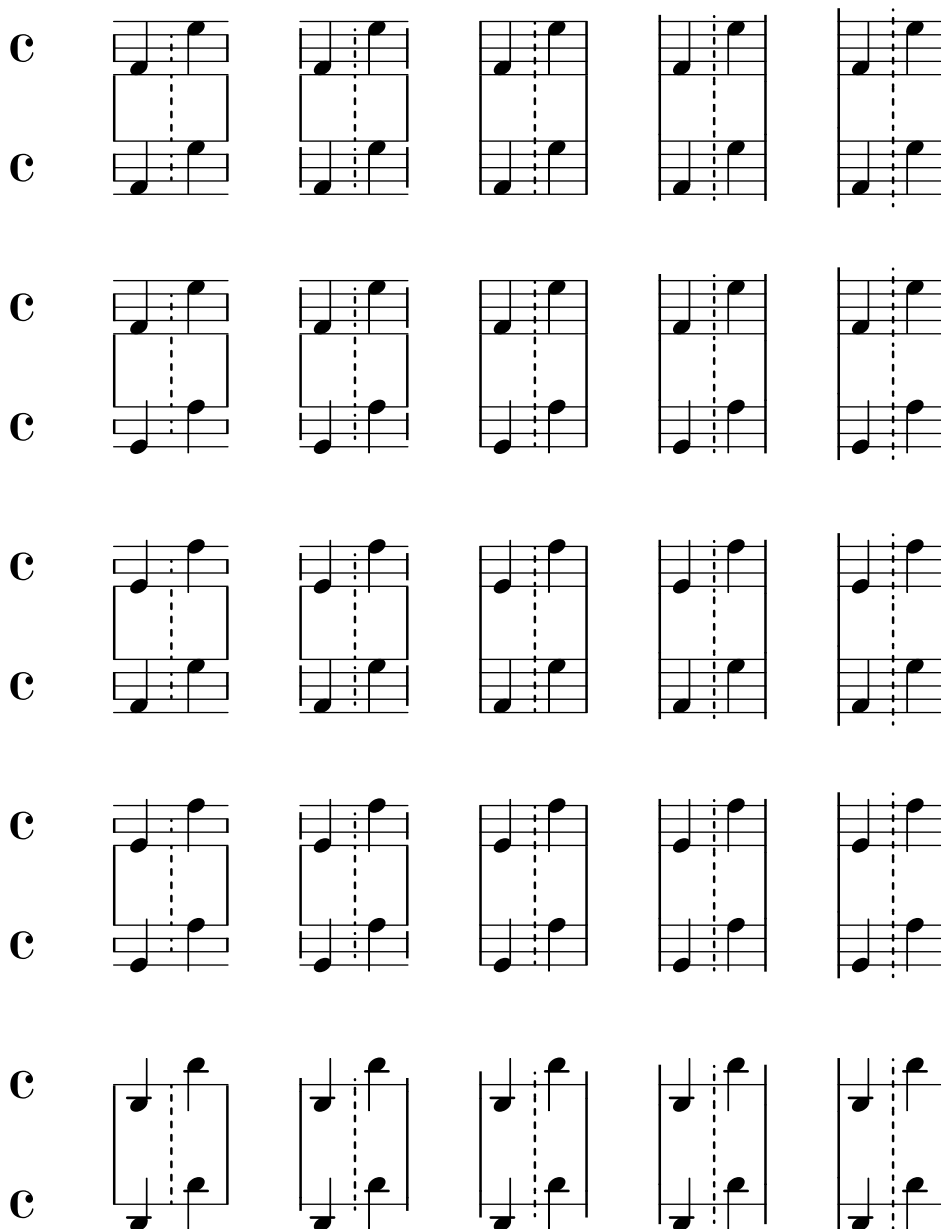
This test shows the placement of the two-dot bar line element in various staff configurations.

`bar-line-placement-colon.ly`



This test shows the placement of dashed bar lines with span bars in various staff configurations.

bar-line-placement-dashed-span.ly

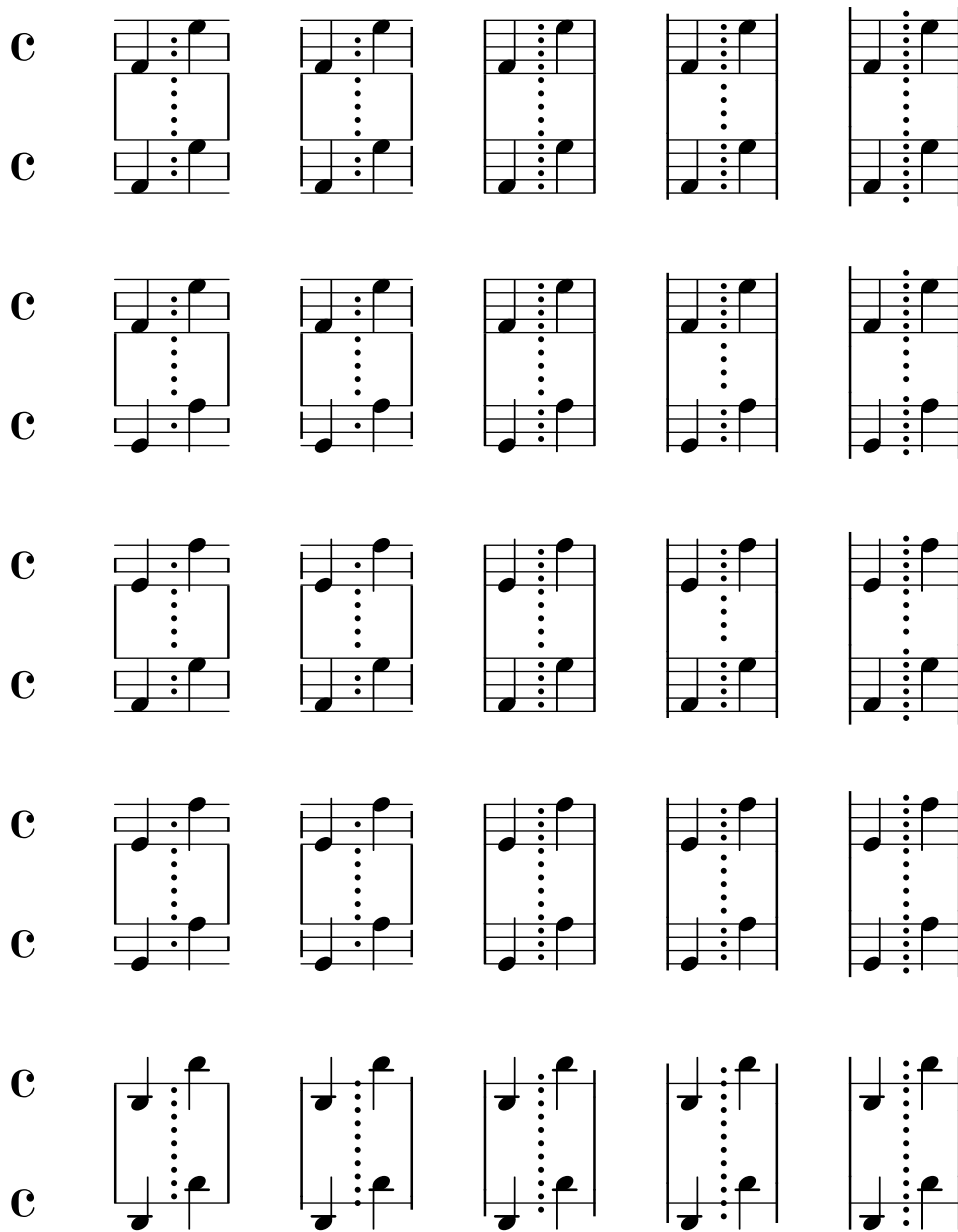


A dashed bar line extends approximately as far as a normal bar line. The center-to-center distance between dashes is uniformly one staff space. At the vertical center of the staff is either a dash or the midpoint between dashes.

bar-line-placement-dashed.ly



The center-to-center distance between the dots in a dotted span bar line is uniformly one staff space. The dots of the span bar do not collide with staff lines or with the dots of in-staff bar lines.



The center-to-center distance between the dots in a dotted bar line is uniformly one staff space. At the vertical center of the staff is either a dot or the midpoint between dots, whichever places fewer dots on staff lines.

The image displays a grid of 48 musical staves, arranged in 8 rows and 6 columns. Each staff is labeled with a 'C' on the left. The staves illustrate various bar line placements, showing how a short bar line is placed relative to a normal bar line. The staves are organized into four groups of two rows each, with each group containing three columns of staves. The first column in each group shows a single note with a short bar line. The second column shows a single note with a normal bar line. The third column shows a single note with a normal bar line and a short bar line. The fourth column shows a single note with a normal bar line and a short bar line. The fifth column shows a single note with a normal bar line and a short bar line. The sixth column shows a single note with a normal bar line and a short bar line. The staves are organized into four groups of two rows each, with each group containing three columns of staves. The first column in each group shows a single note with a short bar line. The second column shows a single note with a normal bar line. The third column shows a single note with a normal bar line and a short bar line. The fourth column shows a single note with a normal bar line and a short bar line. The fifth column shows a single note with a normal bar line and a short bar line. The sixth column shows a single note with a normal bar line and a short bar line.

The height of a short bar line is half the height of a normal bar line, rounded up to an integer number of staff spaces. It is usually centered vertically, but on very short staves, it is shifted down to distinguish it from a normal bar line.

The image displays a grid of 48 musical staves, arranged in 8 rows and 6 columns. Each staff begins with a 'C' time signature. The notes are quarter notes on a five-line staff. The bar lines are placed at different positions relative to the notes and staff lines, illustrating various tick bar line behaviors. The first row shows a normal bar line placement. The second row shows a tick bar line placed at the top of the staff. The third row shows a tick bar line placed at the bottom of the staff. The fourth row shows a tick bar line placed between the first and second lines. The fifth row shows a tick bar line placed between the second and third lines. The sixth row shows a tick bar line placed between the third and fourth lines. The seventh row shows a tick bar line placed between the fourth and fifth lines. The eighth row shows a tick bar line placed between the notes.

A tick bar line is a short line the length of a staff space. It is usually centered on the topmost bar line, but if there are fewer than two bar lines, it floats at the height of a normal bar line.

`\section` creates a section bar line whether or not it is aligned on a measure boundary, except at the start of the piece. This test should show a double bar line after each of the three notes.

`bar-line-section.ly`

This test exercises bar lines that are overridden in various built-in `Staff` contexts. Each `Staff` is in a separate `\score`.

`bar-line-staff-override-alone.ly`

The image shows four musical staves, each with a different bar line style. The staves are labeled on the left: Kievian, Mensural, Petrucci, and Vaticana. Each staff contains a sequence of notes and rests, with bar lines of varying thickness and spacing. The Kievian staff uses thin bar lines with a double bar line at the end. The Mensural staff uses thin bar lines with a double bar line at the end. The Petrucci staff uses thin bar lines with a double bar line at the end. The Vaticana staff uses thin bar lines with a double bar line at the end.

This test exercises bar lines that are overridden in various built-in `Staff` contexts. All staves are in one `StaffGroup`.

`bar-line-staff-override-grouped.ly`

The image shows a musical score with six staves. The staves are labeled on the left: Staff, Gregor. Transcr., Kievian, Mensural, Petrucci, and Vaticana. The top staff (Staff) has a treble clef and a 2/4 time signature. The other staves have different clefs and time signatures. The score shows a sequence of notes and rests across six measures. Bar lines are present at the end of each measure. Above the first measure, there are annotations: a vertical dashed line, an exclamation mark (!), a semicolon (;), a comma (,), and a vertical line followed by the text "-span".

Bar lines account for user tweaks to staff symbol height.

`bar-line-staff-symbol-height-override.ly`

The image shows a single musical staff with a treble clef and a common time signature (C). A single note is written on the staff, positioned on the second line from the bottom.

The `hair-thickness` property sets the thickness of thin bar lines, the `thick-thickness` property sets the thickness of thick bar lines, and the `kern` property sets the spacing within composite bar lines.

`bar-line-thickness.ly`

The image shows four musical staves, each with a different bar line style. The first staff is labeled 'default' and shows standard bar lines. The second staff is labeled '3x hair-thickness' and shows bar lines that are three times the thickness of the hair. The third staff is labeled '2x thick-thickness' and shows bar lines that are two times the thickness of the hair. The fourth staff is labeled '3x kern' and shows bar lines with three times the kerning between them. Each staff contains a sequence of notes and bar lines, with a final bar line at the end of the staff.

Automatic bar types that are set to '()' or are unset are ignored, allowing lower-priority bar types to appear. In this case, there should be no line breaks and a single thick bar line should appear at the end under a segno.

`bar-line-unset.ly`

The image shows a single musical staff with a dashed bar line at the end. The bar line consists of a series of short horizontal dashes. Above the end of the staff, there is a segno symbol (§).

Various types of bar lines can be drawn.

The dashes in a dashed bar line covers staff lines exactly. Dashed bar lines between staves start and end on a half dash precisely.

The dots in a dotted bar line are in spaces.

A thick bar line is created by `\bar ". "`, which is consistent with e.g. `\bar "|."`

A tick bar line is a short line of the same length as a staff space, centered on the top-most bar line.

A short bar line has a height of half the height of the staff, rounded up to an integer number of staff spaces. It is usually centered vertically, but on short staves, it is shifted down to distinguish it from a normal bar line.

`bar-lines.ly`

The `alternativeNumberingStyle` context property controls the bar-numbering scheme and style in volta repeat alternatives.

`bar-number-alternative-style.ly`

(default)

(unset)

#f

numbers

numbers-with-letters

Alignments for breakable items can have different values set for each break direction using the `break-alignment-list` function.

`bar-number-break-alignment-list.ly`

11 12 13

13 14 15

15 16 17

`\barNumberCheck` may be inserted to check whether the current bar number is correct. Checking is enabled by default for layout and disabled by default for MIDI.

`bar-number-check-warning.ly`

When there is a break without a bar line, a bar number can be printed nevertheless. Just like all bar numbers outside of measure boundaries, it is hidden by default, but it can be displayed using `barNumberVisibility`. On the other hand, a bar number resulting from a break point is not displayed if the break point does not become a break.

`bar-number-no-bar-line.ly`



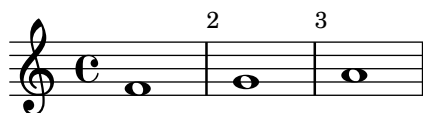
oBreak does not prevent bar numbers from being printed.

bar-number-nobreak.ly



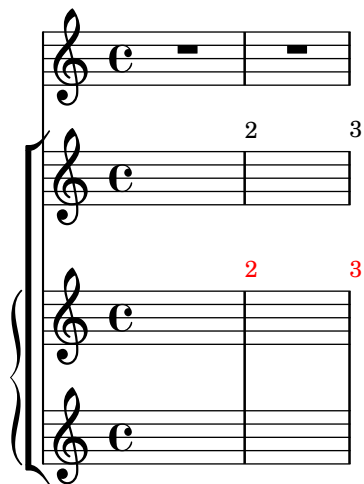
Alternative bar numbering does not apply to repeats in segno form. These measures should be numbered 1 to 3.

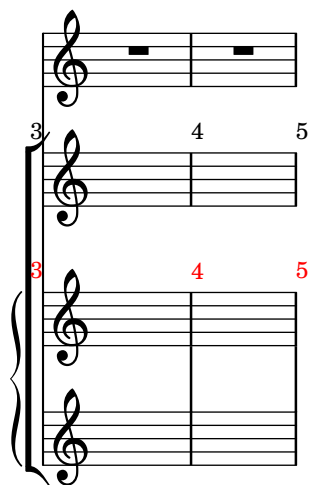
bar-number-segno-repeat.ly



Bar_number_engraver may be moved to staff-group contexts. Bar numbers should appear in black above the second staff from the top. The same numbers should appear in red above the third staff from the top.

bar-number-staff-group-context.ly





all-bar-numbers-visible is a bar number visibility where all bar numbers are printed, including bar numbers for the first measure and for broken measures.

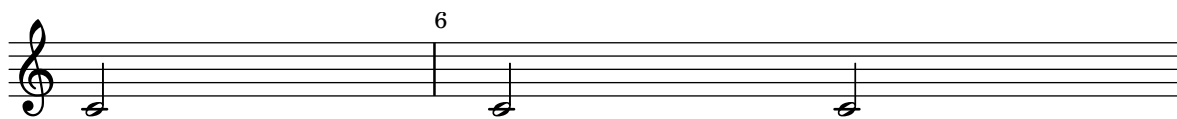
bar-number-visibility-all-bar-numbers-visible.ly



every-nth-bar-number-visible is a bar number visibility generator that prints bar numbers at regular intervals of n : n , $2n$, etc.

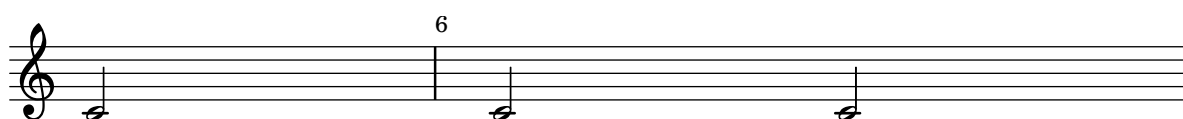
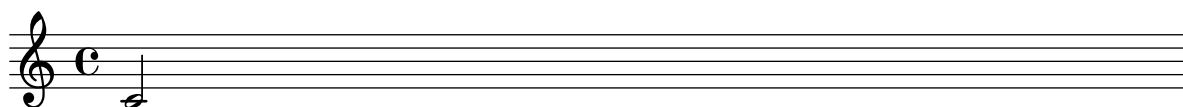
bar-number-visibility-every-nth-bar-number-visible.ly





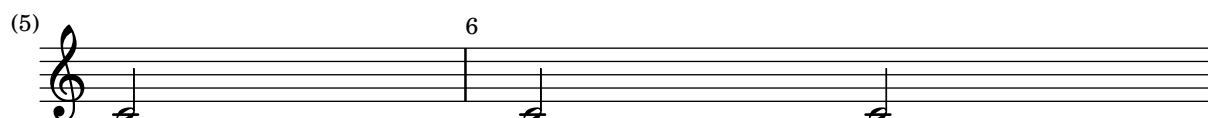
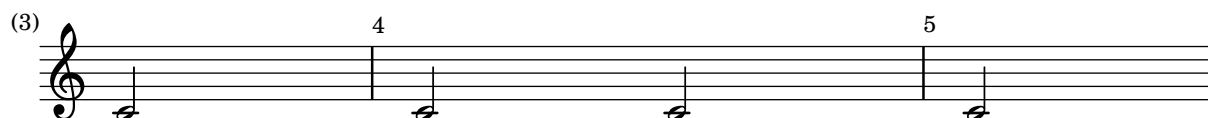
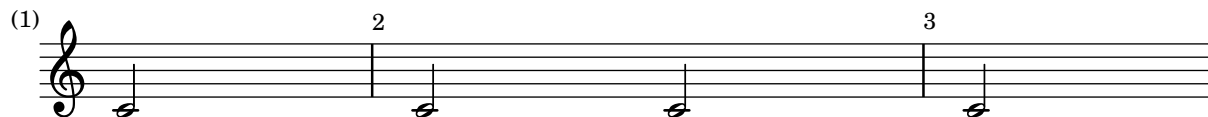
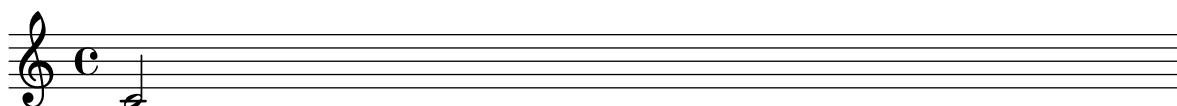
`first-bar-number-invisible-and-no-parenthesized-bar-numbers` is a bar number visibility where bar numbers are printed except for the first, and except for broken measures.

`bar-number-visibility-first-bar-number-invisible-and-no-parenthesized-bar-numbers.ly`



`first-bar-number-invisible-save-broken-bars` is a bar number visibility that prints all bar numbers, including for broken bars, except for an unbroken number of the first bar.

`bar-number-visibility-first-bar-number-invisible-save-broken-bars.ly`



`first-bar-number-invisible` is a bar number visibility where all bar numbers can be printed, including for broken bars, except for the first measure, not even when broken.

`bar-number-visibility-first-bar-number-invisible.ly`

The image shows five staves of musical notation in treble clef with a common time signature (C). Each staff contains a single quarter note on the first line of the staff. Above the staves, bar numbers are printed at regular intervals: the first staff has bar number 2, the second has 2 and 3, the third has 4 and 5, and the fourth has 6. The fifth staff is labeled with a circled 5 (5) on the left side.

`modulo-bar-number-visible` is a bar number visibility generator that generalizes `every-nth-bar-number-visible`, printing bar numbers at regular intervals of n that do not necessarily start at n : $k, k + n, k + 2n$, etc.

`bar-number-visibility-modulo-bar-number-visible.ly`

The image shows four staves of musical notation in treble clef with a common time signature (C). Each staff contains a single quarter note on the first line of the staff. Above the staves, bar numbers 2 and 5 are printed. The fourth staff is labeled with a circled 5 (5) on the left side and ends with a repeat sign (two vertical lines with a double bar line in the middle).

`numbers-with-letters` bar numbering resets at the end of the repeat even if the repeat ends where no bar number is visible.

`bar-number-volta-repeat-end.ly`

The image shows a single staff of musical notation in treble clef with a common time signature (C). It contains a first ending (marked '1.' above and '2a' below) and a second ending (marked '2.' above and '2b' below). The first ending consists of two quarter notes, and the second ending consists of two quarter notes. A repeat sign is placed between the two endings. Bar numbers 1, 2, and 3 are printed above the staff, with bar 1 starting at the beginning of the first ending, bar 2 at the beginning of the second ending, and bar 3 at the end of the second ending.

Bar numbers can automatically reset at volta repeats.

`bar-number-volta-repeat.ly`

Bar numbers may be set and their padding adjusted individually. The counting of bar numbers is started after the anacrusis.

To prevent clashes at the beginning of a line, the padding may have to be increased.

`bar-number.ly`

A knee is made automatically when a horizontal beam fits in a gap between note heads that is larger than a predefined threshold.

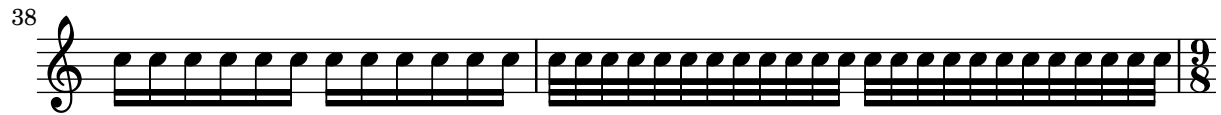
`beam-auto-knee.ly`

There are presets for the auto-beam engraver in the case of common time signatures.

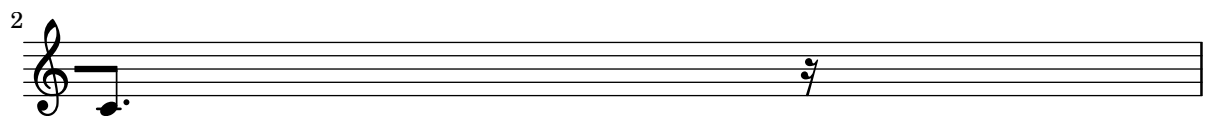
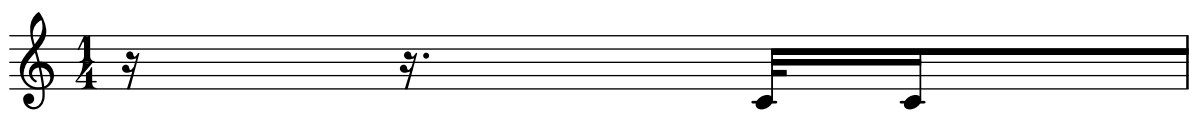
`beam-auto.ly`

The image displays 11 musical staves, numbered 10 through 31, each illustrating a unique rhythmic pattern. The patterns are as follows:

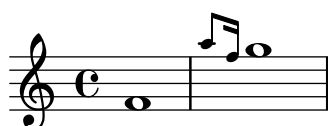
- Staff 10:** A sequence of quarter notes in a C major scale (C4-D4-E4-F4-G4-A4-B4-C5).
- Staff 12:** A sequence of eighth notes in a C major scale, followed by a change to a 2/4 time signature and a sequence of quarter notes.
- Staff 14:** A sequence of eighth notes in a C major scale, followed by a change to a 2/8 time signature and a sequence of quarter notes.
- Staff 18:** A sequence of eighth notes in a C major scale, followed by a change to a 3/2 time signature and a sequence of quarter notes.
- Staff 20:** A sequence of quarter notes in a C major scale.
- Staff 21:** A sequence of sixteenth notes in a C major scale, followed by a change to a 3/4 time signature and a sequence of quarter notes.
- Staff 22:** A sequence of quarter notes in a C major scale, starting in a 3/4 time signature.
- Staff 24:** A sequence of eighth notes in a C major scale, followed by a change to a 3/8 time signature and a sequence of quarter notes.
- Staff 26:** A sequence of quarter notes in a C major scale, starting in a common time (C) signature.
- Staff 29:** A sequence of quarter notes in a C major scale.
- Staff 30:** A sequence of eighth notes in a C major scale, followed by a change to a 4/8 time signature and a sequence of quarter notes.
- Staff 31:** A sequence of quarter notes in a C major scale, starting in a 4/8 time signature, followed by a change to a 4/16 time signature and a sequence of quarter notes.



beamlets don't run to end of line if there are no other beamlets on the same height.
 beam-beamlet-break.ly



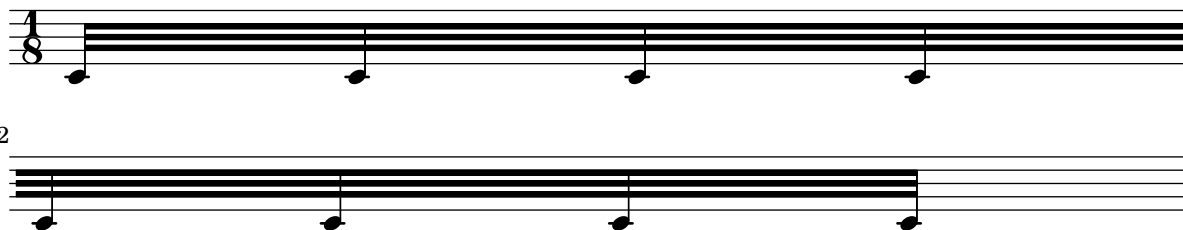
Beamlets in grace notes remain readable.
 beam-beamlet-grace.ly



Default beaming patterns can be set for the current time signature.
 beam-beat-grouping.ly



Broken beams have sane endings even if grobs are not present at the broken end.
 beam-break-no-bar.ly

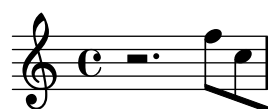


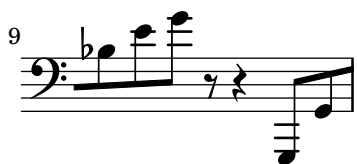
Beams can be printed across line breaks, if forced.
 beam-break.ly



Some classic examples of broken beams, all taken from Scriabin Op. 11, No. 1.
 beam-broken-classic.ly

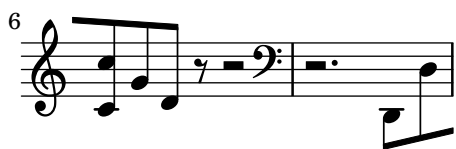
`\override Beam.positions = #beam::place-broken-parts-individually` (default)





`\override Beam.positions = #beam::align-with-broken-parts`

Returns y-positions at the ends of the beam such that beams align-across-breaks.



8

9

10

\override Beam.positions = #beam::slope-like-broken-parts

Approximates broken beam positioning in turn-of-the-century Editions Peters scores.

2

3

4

5

6

8



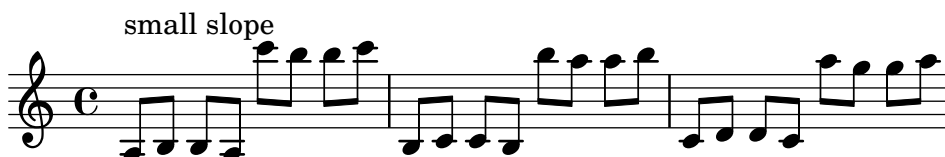
The functions passed to the `positions` property should handle complicated cases in the same manner that they handle more normal cases.

`beam-broken-difficult.ly`



Simple beams on middle staffline are allowed to be slightly sloped, even if the notes have ledgers. Beams reaching beyond middle line can have bigger slope.

`beam-center-slope.ly`



Beams only check for collisions with in-line accidentals.

beam-collision-accidentals.ly



Manual beams do not collide with notes.

beam-collision-basic.ly

Four staves of music in treble clef, common time (C). The first staff contains a sequence of eighth notes with beams, some marked with a '7' above them. The second staff is a triplet of eighth notes. The third and fourth staves show more complex rhythmic patterns with beams and notes.

Manual beams do not collide with notes.

beam-collision-beamcount.ly

A single staff of music in treble clef, common time (C). It shows a sequence of eighth notes with beams, some marked with a '7' above them, illustrating beam collisions.

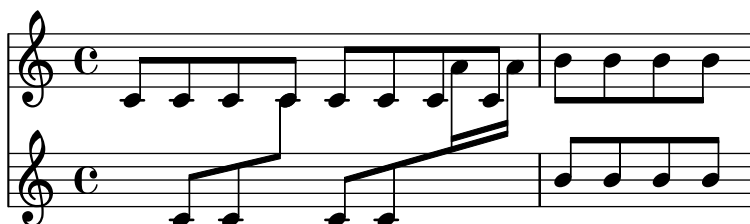
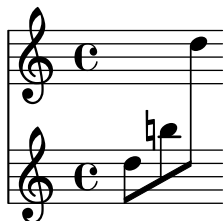
Beam collisions from modern works

beam-collision-classic.ly

Two staves of music. The first staff is in treble clef, common time (C), and shows a sequence of notes with beams and accidentals. The second staff is in bass clef, common time (C), and shows a sequence of notes with beams and accidentals.

cross staff beams work with collisions.

beam-collision-cross-staff.ly



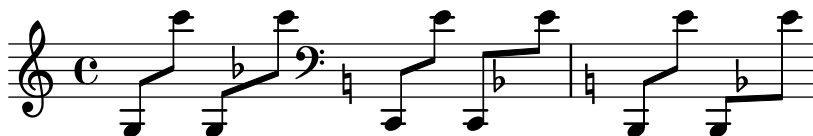
Cross staff beams do collision avoidance.

beam-collision-cross-staff2.ly



A rough guess for collisions is taken into account when choosing initial beam configurations; the initial position may be chosen to be either above or below large collisions.

beam-collision-feasible-region.ly



Beams do not collide with flags.

beam-collision-flag.ly



The beaming algorithm handles collisions between beams and grace notes too.

beam-collision-grace.ly





Behave sensibly in the presence of large collisions.

beam-collision-large-object.ly



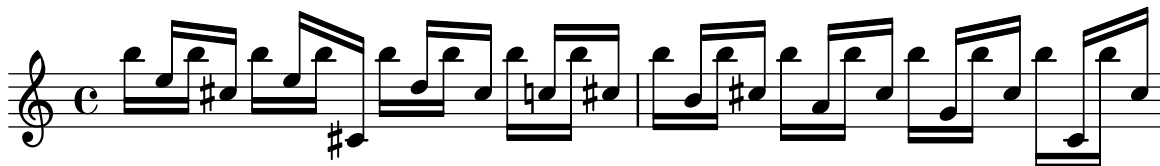
Beams can be allowed to collide with grobs by overriding the collision-interfaces property.

beam-collision-off.ly



Meshing stems in oppositely directed beams are handled correctly.

beam-collision-opposite-stem.ly



Beams do not collide with clefs, key signatures, time signatures

beam-collision-prefatory-matter.ly



Beam collisions are resistant to scaled down staves.

beam-collision-scaled-staff.ly



Beam collision can be tweaked to only apply to the grobs within the beam's original voice.

beam-collision-voice-only.ly



Concave beaming works for chords as well as monophonic music.

beam-concave-chord.ly



Beams that are not strictly concave are damped according to their concaveness.

beam-concave-damped.ly



Fully concave beams should be horizontal. Informally spoken, concave refers to the shape of the notes that are opposite a beam. If an up-beam has high notes on its center stems, then we call it concave.

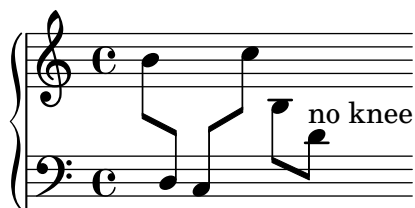
If a beam fails a test, the desired slope is printed next to it.

beam-concave.ly



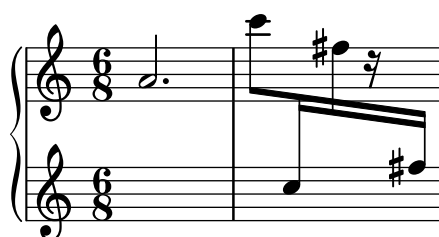
Automatic cross-staff knees work also (here they were produced with explicit staff switches).

beam-cross-staff-auto-knee.ly



Placement of beamed cross staff rests should be reasonably close to beam.

beam-cross-staff-rest.ly



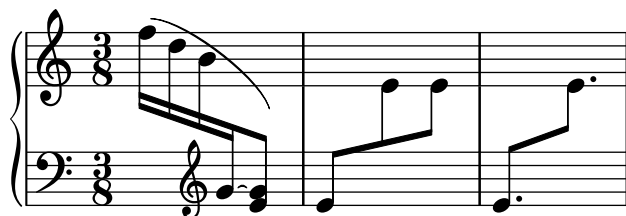
scripts don't trigger beam formatting. If this does happen, we can have a cyclic dependency on Y-positions of staves.

beam-cross-staff-script.ly



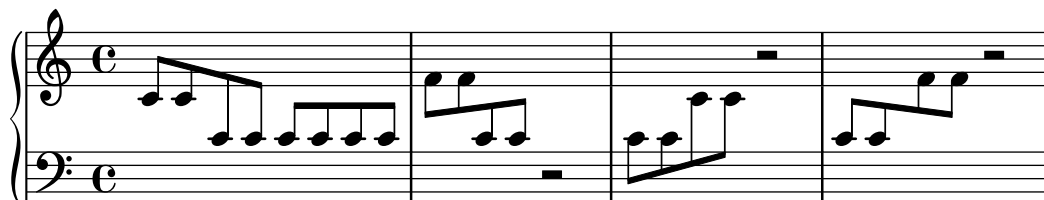
Cross staff (kneed) beams do not cause extreme slopes.

beam-cross-staff-slope.ly



Beams can be typeset over fixed distance aligned staves, beam beautification does not really work, but knees do. Beams should behave well, wherever the switching point is.

beam-cross-staff.ly



Beams are less steep than the notes they encompass.

beam-damp.ly



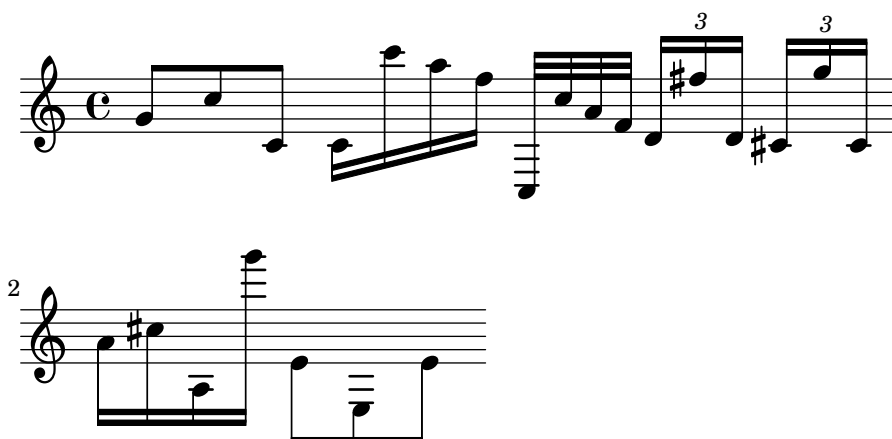
Beamed stems have standard lengths if possible. Quantization is switched off in this example.

beam-default-lengths.ly



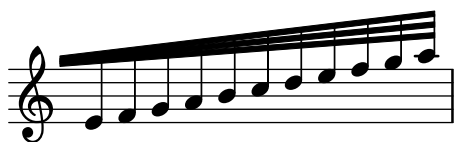
Beams should behave reasonably well, even under extreme circumstances. Stems may be short, but noteheads should never touch the beam. Note that under normal circumstances, these beams would get knees. Here `Beam.auto-knee-gap` was set to false.

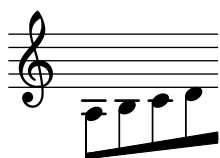
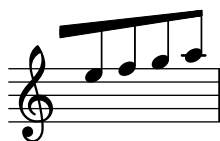
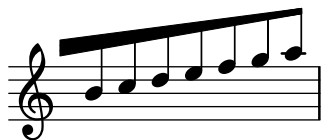
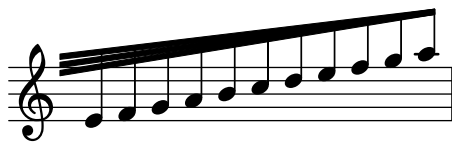
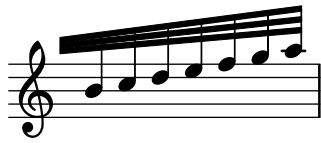
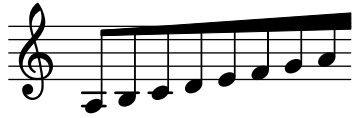
beam-extreme.ly

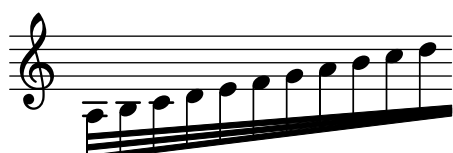
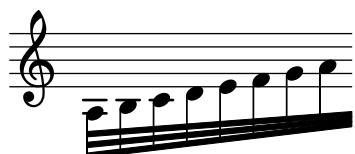
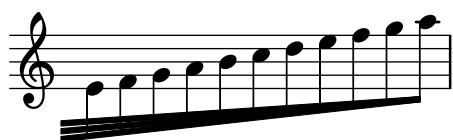
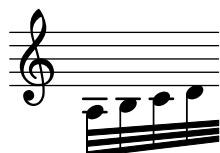
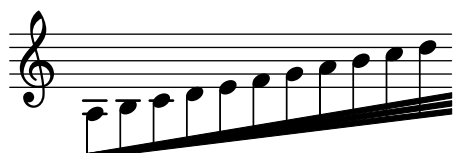
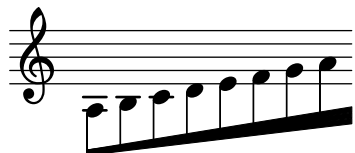
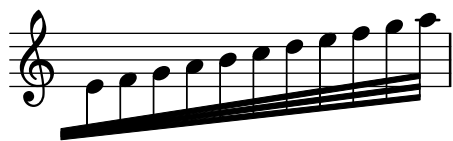


Feathered beams should have the same progress of their feathering at the end of a line break as they do at the beginning of the next line.

beam-feather-breaking.ly









In feathered beams, stems in knees reach up to the feathered part correctly.

beam-feather-knee-stem-length.ly



Specifying `grow-direction` on a beam, will cause feathered beaming. The `\featherDurations` function can be used to adjust note durations.

beam-feather.ly



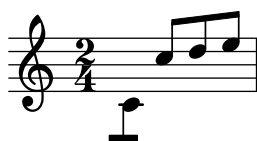
Even very flat but slanted patterns should give slanted beams.

beam-flat-retain-direction.ly



The direction of manual beams can be forced using `_` and `^`.

beam-forced-direction.ly



In French style beaming, the stems do not go between beams.

beam-french.ly



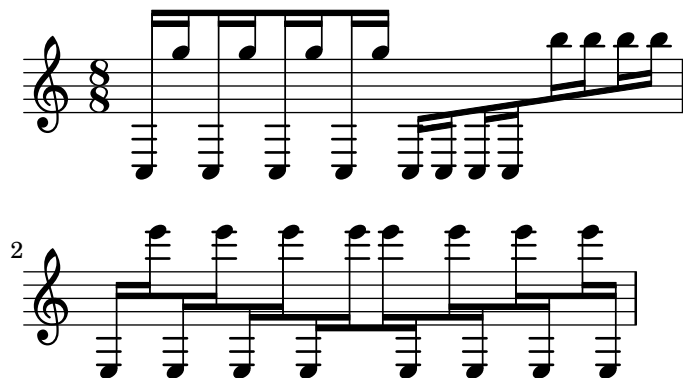
Funky kneed beams with beamlets also work. The beamlets should be pointing to the note head.

beam-funky-beamlet.ly



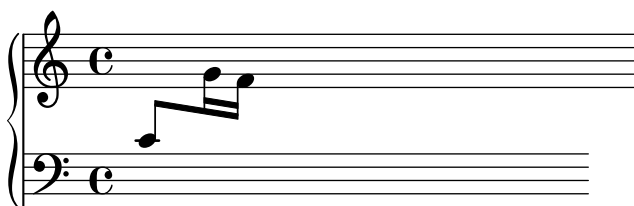
In complex configurations of knee beaming, according to Paul Roberts, the first stem of a beam determines the direction of the beam, and as such the way that following (kneed) stems attach to the beam. This is in disagreement with the current algorithm.

beam-funky.ly



Beams can be placed across a PianoStaff.

beam-isknee.ly



Kneed beams together with stemlets over rests work.

beam-knee-stemlet.ly



Point-symmetric beams should receive the same quanting. There is no up/down bias in the quanting code.

beam-knee-symmetry.ly



Beams should look the same.

beam-length.ly



Beaming can be overridden for individual stems.

beam-manual-beaming.ly



Kneaded beams (often happens with cross-staff beams) should look good when there are multiple beams: all the beams should go on continuously at the staff change. Stems in both staves reach up to the last beam.

beam-multiple-cross-staff.ly



When a beam goes over a rest, beamlets should be as necessary to show the beat structure.

beam-multiplicity-over-rests.ly



Beams may overshoot stems. This is also controlled with `break-overshoot`.

beam-outside-beamlets.ly



Explicit beams may cross bar lines.

beam-over-barline.ly



Beams on ledgered notes should always reach the middle staff line. The second beam, counting from the note head side, should never be lower than the second staff line. This does not hold for grace note beams. Override with `no-stem-extend`.

beam-position.ly



This file tests a few standard beam quant, taken from Ted Ross' book. If LilyPond finds another quant, the correct quant is printed over the beam.

beam-quant-standard.ly

The image shows six staves of musical notation in 3/4 time, illustrating various beam quant tests. The first staff shows a sequence of eighth notes. The second staff, starting at measure 6, shows a beam with the annotation (2.19,2.19). The third staff, starting at measure 12, shows a beam with the annotation (-0.19,-0.19) repeated three times. The fourth staff, starting at measure 18, shows a sequence of eighth notes. The fifth staff, starting at measure 24, shows a beam with the annotation (3.0,3.0).

Stem lengths take precedence over beam quant: 'forbidden' quants are only avoided for 32nd beams when they are outside of the staff. However, that leads to very long stems, which is even worse.

beam-quanting-32nd.ly

The image shows two staves of musical notation. The first staff is in 3/8 time and shows a sequence of 32nd beams. The second staff is in 2/4 time and shows a sequence of 32nd beams.

In this test for beam quant positions for horizontal beams, staff lines should be covered in all cases. For 32nd beams, the free stem lengths are between 2 and 1.5.

beam-quanting-horizontal.ly

The image shows two staves of musical notation. The first staff is in common time (C) and shows horizontal beams. The second staff is in 3/4 time and shows horizontal beams.

Beam quanting accounts for beam overhang. A beam ending above rests should always fall on a viable quant (straddle, sit, inter, or hang).

beam-quanting-overhang.ly



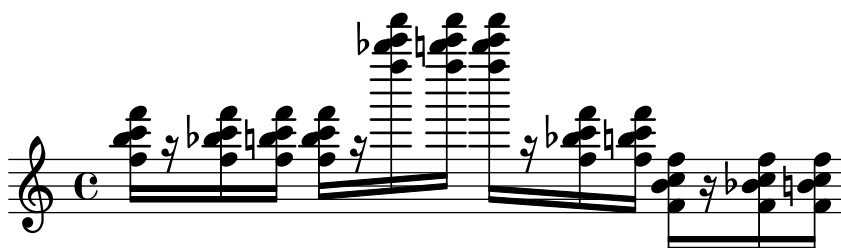
Quarter notes may be beamed: the beam is halted momentarily.

beam-quarter.ly



Beamed rests are given a pure height approximation that gets their spacing correct in the majority of circumstances.

beam-rest-extreme.ly



The number of beams does not change on a rest.

beam-rest.ly



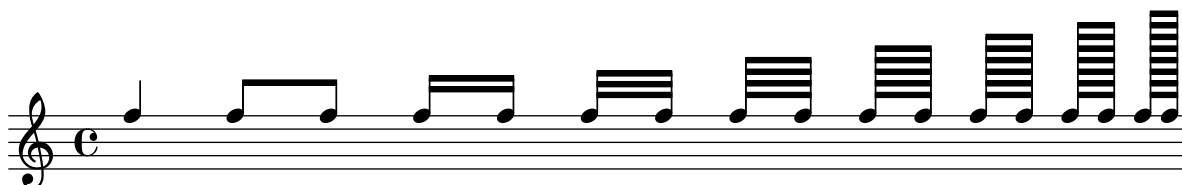
Engraving second intervals is tricky. We used to have problems with seconds being too steep, or getting too long stems. In a file like this, showing seconds, you'll spot something fishy very quickly.

beam-second.ly



Beams in unnatural direction, have shortened stems, but do not look too short.

beam-shortened-lengths.ly



Single stem beams are also allowed. For such beams, clip-edges is switched off automatically.

`beam-single-stem.ly`



Beams over skips do not cause a segfault.

`beam-skip.ly`



For slope calculations, stemlets are treated as invisible stems.

`beam-slope-stemlet.ly`



Beam positioning and placement of articulations, fingerings, tuplet numbers, and slurs must be identical in standard and French beaming style.

`beam-standard-french-compare.ly`

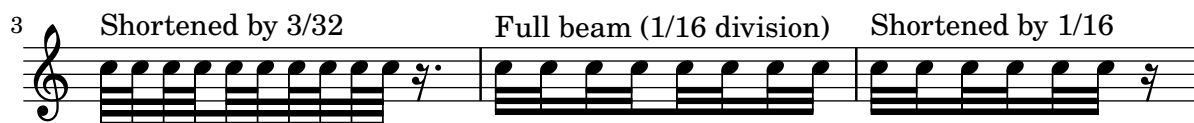
Beam count at subdivisions should match the location of the current subdivision. However, if the groups are equal or longer than quarter notes, one beam should always be left.

`beam-subdivide-quarter-notes.ly`



Beam count at subdivisions should match the count corresponding to the location of the current subdivision. However, if the remainder of the beam is shorter than that the beam count should be adopted accordingly.

`beam-subdivide-shortened-beam.ly`



If in a subdivided beam one single stem follows a subdivision the beam count should reflect the beam count of the subdivision as usual. That is, the beam count should not be increased according to the remaining length of the beam. The appended single stem has beamlets to the left.

beam-subdivide-trailing-stem.ly



Tuplets that span more than one beat should be subdivided if `subdivideBeams` is `#t`. In this example, the beams should be subdivided every 1/8.

beam-subdivide-tuplets.ly



Beam count at subdivisions should match the location of the current subdivision.

beam-subdivision.ly



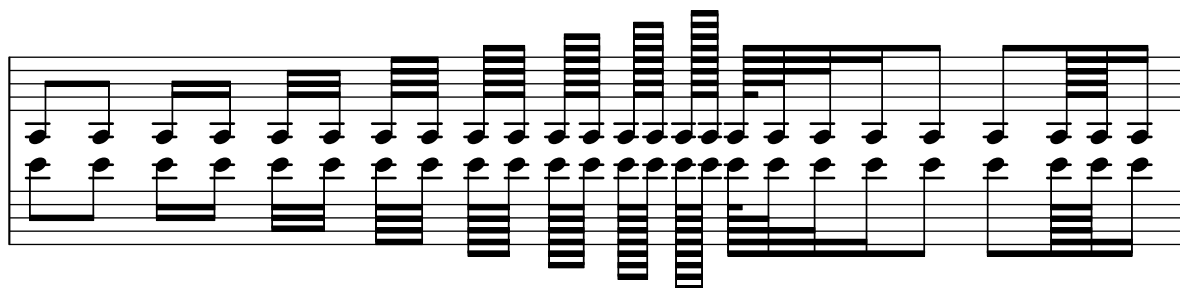
By setting `max-beam-connect`, it is possible to create pairs of unconnected beamlets.

beam-unconnected-beamlets.ly



Inside-staff beams should align with staff lines (sit, straddle, hang) as smoothly as possible (standard-sized beams). The outside-staff beams do not interfere with staff lines, so the inside-staff beams are more important when it comes to beam quanting/scoring/positioning.

beaming-more-than-4-beams-normal-size.ly



Automatic beaming works also in ternary time sigs. As desired, the measure is split in half, with beats 1-3 and 4-6 beamed together as a whole.

beaming-ternary-metrum.ly



Beams in a completed tuplet should be continuous.

beaming-tuplet-regular.ly



Beaming is generated automatically. Beams may cross bar lines. In that case, line breaks are forbidden.

beaming.ly

Three staves of music in common time (C). The first staff shows a triplet of eighth notes with a beam that crosses the bar line. The second staff shows a sequence of eighth notes with beams that cross bar lines. The third staff shows a sequence of eighth notes with beams that cross bar lines, with the text "over bar line" written above the staff.

Beamlets can be set to point in the direction of the beat to which they belong. The first beam avoids sticking out flags (the default); the second beam strictly follows the beat.

beamlet-point-toward-beat.ly



Beamlets should point away from complete beat units and toward off-beat or broken beat units. This should work in triplets as well as in ordinary time.

beamlet-test.ly

Two staves of music in common time (C). The first staff shows a sequence of eighth notes with beams that cross bar lines, with the text "3" written below the staff. The second staff shows a sequence of eighth notes with beams that cross bar lines, with the text "5" written below the staff. The third staff shows a sequence of eighth notes with beams that cross bar lines, with the text "5" written below the staff. The fourth staff shows a sequence of eighth notes with beams that cross bar lines, with the text "5" written below the staff.

Beaming can be also given explicitly.

beams.ly



Show the effect of the `Beat_performer` on drum tremolos: start of the bar and its beats are marked by `\marcato` and `\accent`, respectively, unless manual syncopes in less distance than the last 'regular' beat precede, indicated with one of those two articulations explicitly.

beat-performer.ly

Without `Beat_performer`

With `Beat_performer`

2

4

Falls and doits can be created with `bendAfter`. They run to the next note, or to the next bar line. Microtone bends (i.e., `\bendAfter #3.5`) are also supported.

bend-after.ly



Bends should not be affected by the full width of a `NonMusicalPaperColumn`. The bends should have identical X spans in the two scores. No bends should cross bar lines.

bend-bound.ly

200

(200) 201 (201)

202

(202) 203 (203)

Bends avoid dots, but only if necessary.

bend-dot.ly

Multiple consecutive BendSpanner grobs work. Every BendSpanner following another one starts at the arrow head of the previous one or at a TabNoteHead.

bend-spanner-consecutive.ly

consecutive bends up consecutive bends down with pre-bend-hold

Make first target parenthesized and visible

A BendSpanner may be customized by tweaking the subproperties of 'details.

- 'bend-arrowhead-height
- 'bend-arrowhead-width
- 'arrow-stencil best to override it with a procedure (as an argument to the after-line-breaking property) setting this subproperty.
- 'curvature-factor
- 'bend-amount-strings
- 'dashed-line-settings
- 'horizontal-left-padding
- 'vertical-padding
- 'y-distance-from-tabstaff-to-arrow-tip
- 'target-visibility

Line-breaking behavior may be customized with:

- 'curve-x-padding-line-end
- 'curve-y-padding-line-end
- 'head-text-break-visibility

bend-spanner-details.ly

subproperties of 'details

subproperties of 'details for line-breaking behavior

Per default notes played on open strings are disregarded by `BendSpanner` unless the property `'bend-me` is set to true for this note. Other notes may be excluded by setting the property `'bend-me` to false.

`bend-spanner-exclude-notes.ly`

open strings are not bent unless 'bend-me is set true.

③ is open/bend ② is open/bend

① is open/bend

7 other notes excluded via \tweak bend-me ##f

At a line break the BendSpanner avoids changed TimeSignature, KeySignature, KeyCancellation and Clef in other staves.

`bend-spanner-line-break.ly`

2

A BendSpanner prints a line and/or curve to a certain point above the TabStaff or above the target TabNoteHead. This line or curve ends in an arrow head. For an up-pointing BendSpanner the amount of bending is printed above the arrow head. For a down-pointing BendSpanner the target TabNoteHead will be parenthesized. Works at line breaks.

bend-spanner-simple.ly

8 simple bends up and down

This musical notation shows a sequence of six measures on a guitar staff. The top staff is a treble clef with a common time signature. The bottom staff is a guitar staff with strings G, A, and B labeled. The notes are: 3, 6, (3), 3, (3), 3, (3), 3, (3), 3, (3), 3, (3). Bend annotations include: 1 1/2, 1 1/4, 1, 3/4, 1, 1.

7 double bends up and down

This musical notation shows a sequence of four measures on a guitar staff. The top staff is a treble clef with a common time signature. The bottom staff is a guitar staff with strings G, A, and B labeled. The notes are: 3, 5, (3), 3, (3), 3, (3), 3, (3), 3, (3), 3, (3). Bend annotations include: 1, 1 1/2, 1, 1 1/2.

11

This musical notation shows three measures on a guitar staff. The top staff is a treble clef with a common time signature. The bottom staff is a guitar staff with strings G, A, and B labeled. The notes are: 3, (3), 7, (7), 7, (7), 7, (7). Bend annotations include: 1 1/2, 1 1/2, 1 1/2.

14 bends up and down

This musical notation shows a single measure on a guitar staff. The top staff is a treble clef with a common time signature. The bottom staff is a guitar staff with strings G, A, and B labeled. The notes are: 3, #5. A bend annotation of 1 1/2 is shown above the #5 note.

15

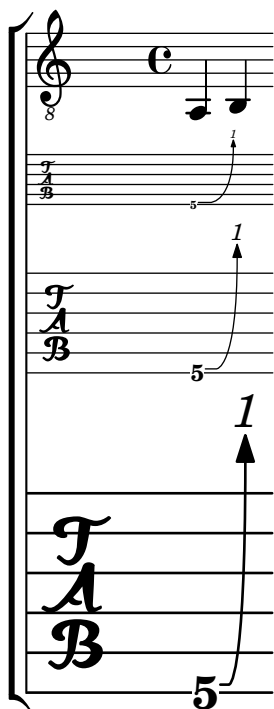
17

20

22

BendSpanner scales according to different staff sizes.

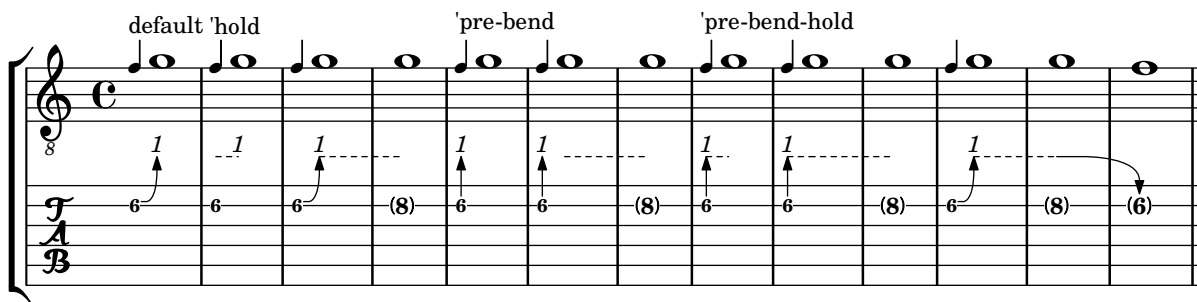
bend-spanner-staff-size.ly



BendSpanner can be used in different styles: the default, 'hold, printing a dashed line (only useful in combination with a previous BendSpanner), 'pre-bend, printing a vertical line, and 'pre-bend-hold, printing a vertical line continued by a dashed horizontal line.

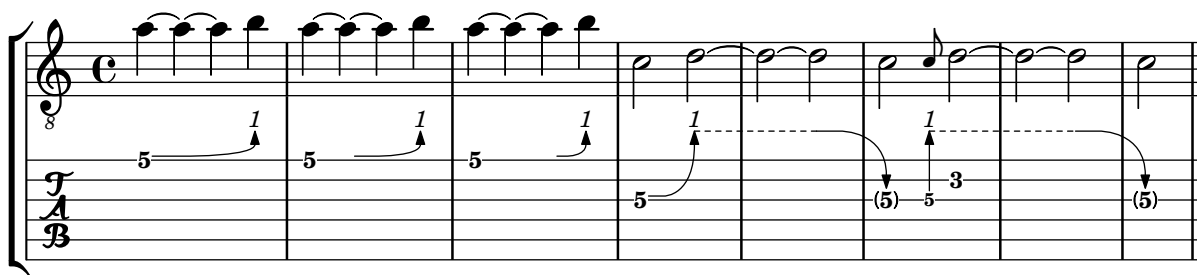
The 'style property may be set using \tweak, \override or one of \bendHold, \preBend and \preBendHold.

bend-spanner-styles.ly



BendSpanner may be started at a tied note. To skip tied notes NoteColumn.bend-me should be set to false. The following BendSpanner continues without a gap.

bend-spanner-tied-notes.ly



This input file contains a UTF-8 BOM not at the very beginning, but on the first line after the first byte. LilyPond should gracefully ignore this BOM as specified in RFC 3629, but print a warning.

bom-mark.ly



Changing `global-staff-size` between consecutive `\books` must not impair font spacing. While the Pango fonts stay the same and may be re-used, the internal LilyPond scaling factor will not be correct any more. Not only `\abs-fontsize`, but even `\fontsize` (in extreme cases) will be affected. The following output shows a 10pt book after a standard 20pt book:

book-change-global-staffsize-abs-fonts.ly

**Changing global staff size
from 20pt to 10pt in the 2nd book**

`\fontsize #6`
`\fontsize #0`

`\abs-fontsize #10 text`
`\abs-fontsize #10` `\dynamic fff`

A `\book` or `\bookpart` identifier can contain top-level markup and page-markers.

book-identifier-markup.ly



Page ?

A book(part) can contain only a label without causing a segfault.

book-label-no-segfault.ly

foo

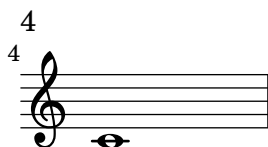
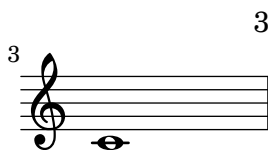
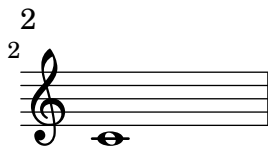
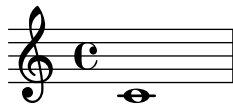
It is possible for one bookpart to have its independent page numbers while the others have a common sequence of page numbers.

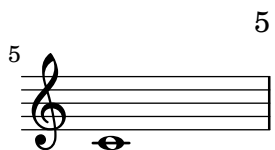
bookpart-level-page-numbering-one-bookpart.ly

Lorem ipsum
dolor sit amet,
consectetur
adipiscing elit.
Aenean aliquam
elementum tortor,
vitae euismod ex
malesuada

ii
lobortis. Nullam
iaculis lorem ante,
quis iaculis orci
ultrices vitae.
Suspendisse ac
lacus eget dolor
porttitor
elementum vitae

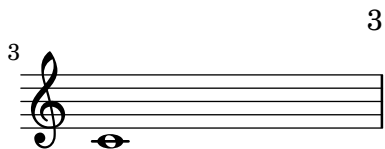
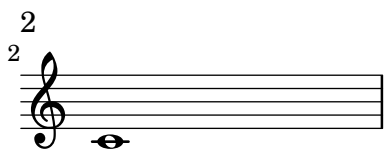
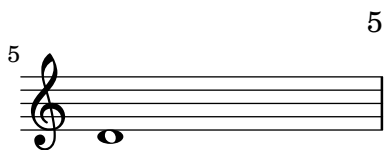
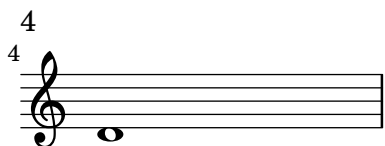
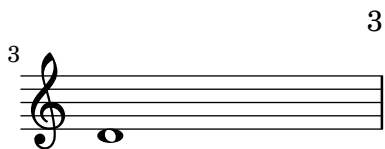
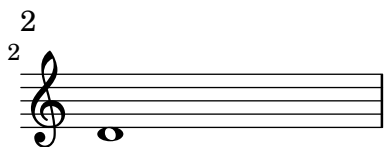
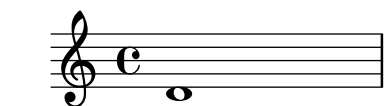
ut justo. Duis inⁱⁱⁱ
commodo diam.

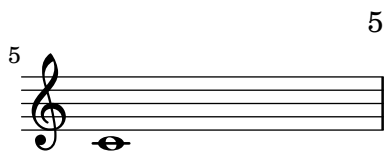
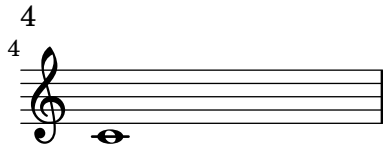




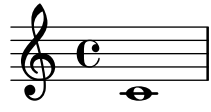
Music engraving by LilyPond 2.24.4—www.lilypond.org

Pages can be numbered per bookpart rather than per book.
bookpart-level-page-numbering.ly





Music engraving by LilyPond 2.24.4—www.lilypond.org



A book can be split into several parts with different paper settings, using `\bookpart`.

Fonts are loaded into the top-level paper. Page labels are also collected into the top-level paper.

`bookparts.ly`

Book with several parts

First part
with default paper settings.

ij SECOND PART

Book with several parts

Second part, with different margins
and page header.



3

Book with several parts

Third part

Table of Contents

First part	1
Second part	2
Third part	3

The default callback for break-align-anchor in clefs and time/key signatures reads the `break-align-anchor-alignment` property to align the anchor to the extent of the break-aligned grob.

`break-alignment-anchor-alignment.ly`



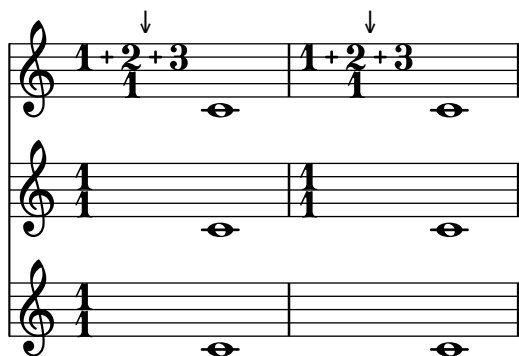
In this case, the compound time signature has a CENTER (0) anchor point and the 1/1 time signature has a LEFT (1) anchor point. The midpoint of these is 0.75, but it is not used for the “average” anchor point of the group because it would fall outside the range of anchor points that the isolated time signatures would choose. Instead, the average anchor point is the closer extreme of that range, which is the center of the compound time signature. The arrow should point there.

`break-alignment-anchor-average-clamp.ly`



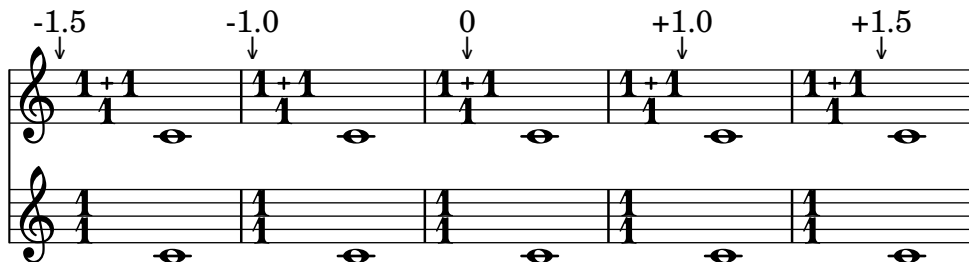
The “average” anchor of a diverse group of break-aligned items depends on the range of the particular anchors, but not on the number of items. In this case, the arrows should appear at the same horizontal position in both measures though the 1/1 time signature appears twice in one measure and only once in the next.

`break-alignment-anchor-average-midpoint.ly`



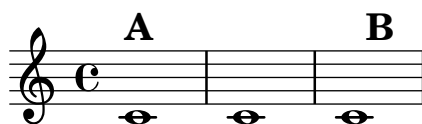
When a group of break-aligned items agree on the position of their own anchors with respect to their own extents, the “average” anchor of the group falls at that position with respect to the extent of the group. In this case, each rehearsal mark should point to the stated point relative to the compound time signature.

`break-alignment-anchor-average-unanimous.ly`



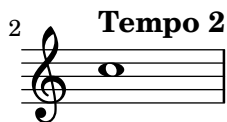
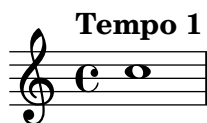
The break-align-anchor property of a break-aligned grob gives the horizontal offset at which other grobs should attach.

`break-alignment-anchors.ly`



A Dynamics context over a Staff does not impact the spacing of bar numbers relative to the staff at a line break. Bar number 2 should appear in its usual spot.

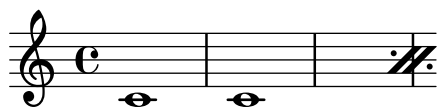
`break-alignment-dynamics-over-staff.ly`



`\break` forces a break, even in circumstances where LilyPond would normally not allow a break.

`break-bypass-default-break-points.ly`





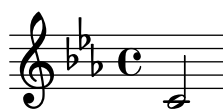
A clef is printed at a break, even without a bar line.

break-no-bar-clef.ly



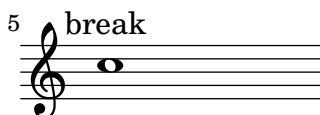
A key signature is printed at a break, even without a bar line.

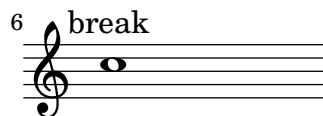
break-no-bar-key.ly



Breaks can be encouraged and discouraged using `\break` and `\noBreak`.

break.ly





The `breathMarkType` context property controls the sign that `\breathe` produces. The output should show two default breathing signs then two tick marks (check marks).

`breath-mark-type.ly`



Breathing signs do not collide with accidentals.

`breathing-sign-accidentals.ly`



Gregorian chant notation sometimes also uses commas and ticks, but in smaller font size (we call it ‘virgula’ and ‘caesura’). However, the most common breathing signs are *divisio minima/maior/maxima* and *finalis*, the latter three looking similar to bar glyphs.

`breathing-sign-ancient.ly`



Breathing signs are positioned correctly on custom staves which use `line-positions`.

`breathing-sign-custom-staff.ly`



Breathing signs do not collide with note heads even in very constrained spacing situations.

breathing-sign-tight-spacing.ly



This test shows the predefined values available for context properties that specify a type of BreathingSign. The dotted lines are bar lines.

breathing-sign-types-one-voice.ly

Breathing signs are available in different tastes: commas (default), ticks, vees and ‘railroad tracks’ (caesura).

breathing-sign.ly



LilyPond knows that breves and longas are wider than whole notes (because of vertical lines on their sides). Breves and longas don’t collide with accidentals, bar lines, neighbor notes, etc. The distance between accidental and note is the same for whole notes, breves and longas.

breve-extent.ly



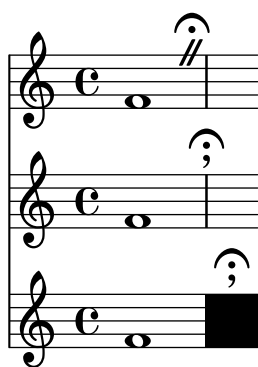
A grace note after \cadenzaOff does not keep autobeaming from resuming properly.

cadenza-grace-autobeam.ly



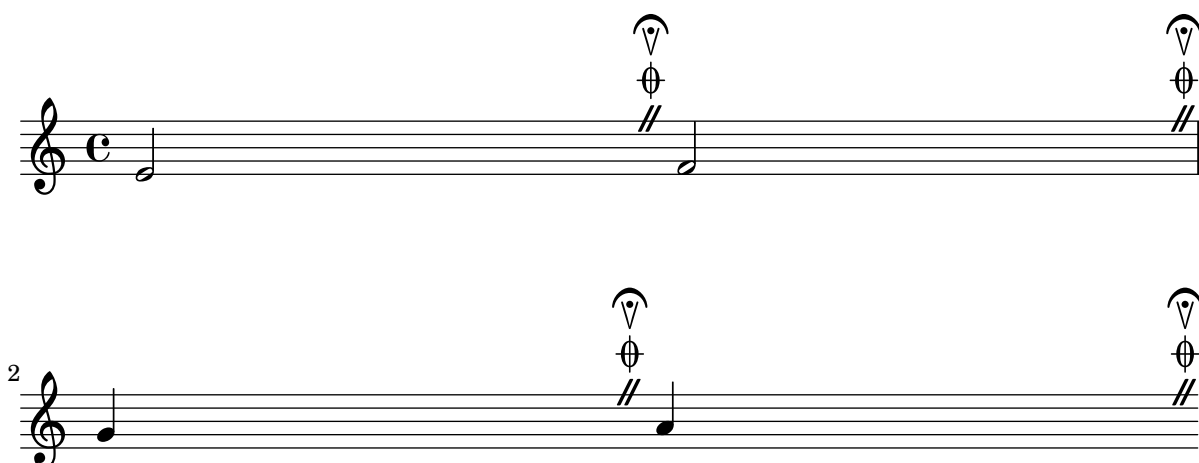
Caesura scripts can align to breath marks in some staves and to bar lines in others. The output should have one staff with a fermata over ‘railroad tracks’. The other staves should have a fermata over a comma at bar lines, and the scripts should align to the bar lines individually.

caesura-alignment-multiple.ly



Articulations following `\caesura` are stacked according to the same priorities as articulations following notes. These articulations should look the same though the input order is different each time.

caesura-articulation-multiple.ly



In staff groups where span bar lines are engraved, caesura marks aligned on bar lines appear outside the extremal staves only, even at points where no span bar is visible.

The top `PianoStaff` should not have fermatas between the staves where the other `PianoStaff` and `ChoirStaff`s do.

caesura-over-span-bar-line.ly

A caesura script is automatically shifted up to avoid colliding with a tall bar line.
`caesura-over-tall-bar-line.ly`

Context modifications can make `\caesura` appear as a stack of scripts. In this case, the caesura itself is engraved as a fermata over a comma, and a double-dot fermata is added as an articulation. The final caesura is colored red with `\tweak ... \caesura ...`, which affects both the fermata and the comma, but not the additional articulation.

`caesura-script-multiple.ly`

This test customization of `\caesura`. In mid measure, the caesura appears as a comma outside the staff. At a bar line, no caesura mark appears, but optional articulations still appear.

caesura-style-comma-not-at-bar-line.ly

The image shows four systems of musical notation. Each system consists of two staves: a top staff labeled 'B.Sign' and a bottom staff labeled 'C.Script'. Above the first staff, there are four labels: 'No Art.', 'Art. ↓', 'Art. ↑', and 'Art. Neutral'. The notes in the staves are quarter notes. The caesura symbols are placed in the middle of measures, not at the bar lines. In the 'C.Script' staves, the caesura symbols are represented by a comma (,) placed below the staff line. In the 'B.Sign' staves, the caesura symbols are represented by a semicolon (;) placed above the staff line. The 'Art. ↑' and 'Art. Neutral' labels have small upward-pointing arrows and neutral symbols above them, respectively.

This test customization of `\caesura`. In mid measure, the caesura appears as a comma outside the staff. At a bar line it appears as a fermata.

caesura-style-comma-or-fermata.ly

The image shows four systems of musical notation, similar to the previous one. Each system consists of two staves: a top staff labeled 'B.Sign' and a bottom staff labeled 'C.Script'. Above the first staff, there are four labels: 'No Art.', 'Art. ↓', 'Art. ↑', and 'Art. Neutral'. The notes in the staves are quarter notes. The caesura symbols are placed at the end of measures, aligned with the bar lines. In the 'C.Script' staves, the caesura symbols are represented by a comma (,) placed below the staff line. In the 'B.Sign' staves, the caesura symbols are represented by a semicolon (;) placed above the staff line. The 'Art. ↑' and 'Art. Neutral' labels have small upward-pointing arrows and neutral symbols above them, respectively.

Context modifications can make `\caesura` appear as a comma outside the staff. In this case, when the caesura comes at a measure boundary, the comma is aligned over the bar line rather than like a breath mark.

caesura-style-comma-over-bar-line.ly

No Art. Art. ↓ Art. ↑ Art. Neutral
 ; ; ; ; ; ; ;

B.Sign ↑

C.Script ↑

B.Sign ↓

C.Script ↑

B.Sign ↑

C.Script ↓

B.Sign ↓

C.Script ↓

Context modifications can make \caesura appear as a comma outside the staff. In this case, all commas are horizontally aligned like breath marks, even when the caesura comes at a measure boundary.

caesura-style-comma.ly

No Art. Art. ↓ Art. ↑ Art. Neutral
 ; ; ; ; ; ; ;

B.Sign ↑

C.Script ↑

B.Sign ↓

C.Script ↑

B.Sign ↑

C.Script ↓

B.Sign ↓

C.Script ↓

This test shows the default caesura mark style.

caesura-style-default.ly

The image shows a musical score with four systems of staves. Each system consists of a 'B.Sign' staff and a 'C.Script' staff. The first system is labeled 'No Art.' and shows a caesura mark as two parallel slanted lines. The second system is labeled 'Art. ↓' and shows a caesura mark as a downward-pointing arc. The third system is labeled 'Art. ↑' and shows a caesura mark as an upward-pointing arc. The fourth system is labeled 'Art. Neutral' and shows a caesura mark as a neutral arc. The 'C.Script' staff in each system contains notes with various articulation symbols (accents, slurs, etc.) and caesura marks.

This test customization of `\caesura`. In mid measure, the caesura appears as ‘railroad tracks’. At a bar line it appears as a fermata.

caesura-style-straight-or-fermata.ly

The image shows a musical score with four systems of staves, similar to the previous one. The first system is labeled 'No Art.' and shows a caesura mark as two parallel slanted lines. The second system is labeled 'Art. ↓' and shows a caesura mark as a downward-pointing arc. The third system is labeled 'Art. ↑' and shows a caesura mark as an upward-pointing arc. The fourth system is labeled 'Art. Neutral' and shows a caesura mark as a neutral arc. The 'C.Script' staff in each system contains notes with various articulation symbols and caesura marks.

Long titles should be properly centered.

center-title.ly

How Razorback Jumping Frogs Level Six Piqued Gymnast



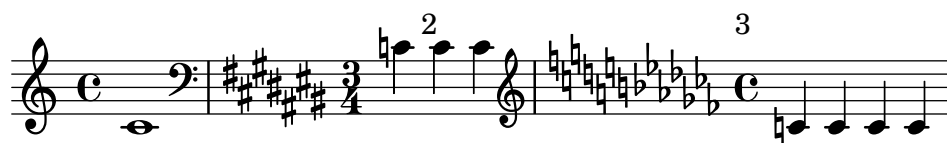
Centered bar numbers may be altered according to alternatives just like regular bar numbers.

centered-bar-numbers-alternative.ly



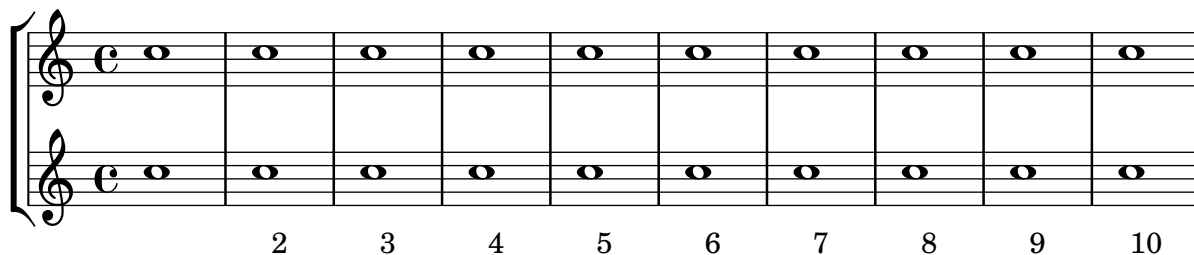
The centering of measure-centered bar numbers does not take prefatory material (such as clefs and time signatures) into account in the extent of the measure. This may be overridden by the user.

centered-bar-numbers-centering.ly



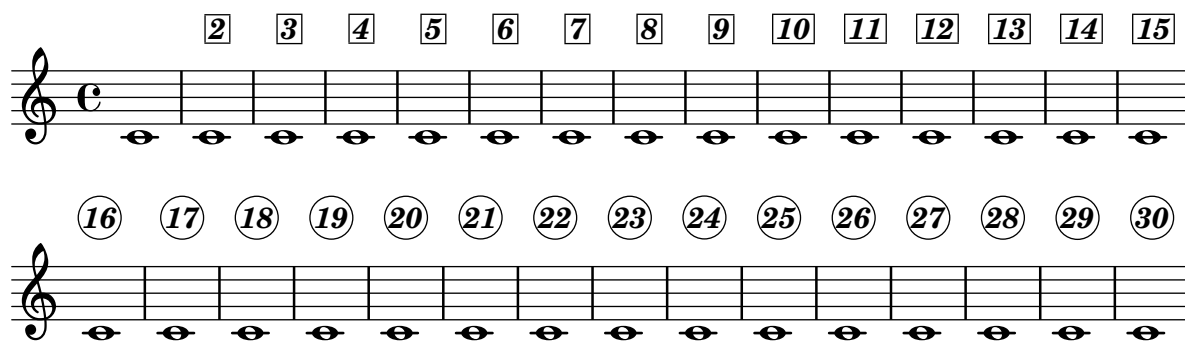
Measure-centered bar numbers may be placed beneath the staves.

centered-bar-numbers-down.ly



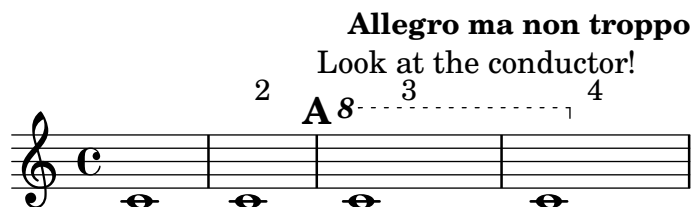
Centered bar numbers may be boxed or circled. Their appearance can be changed through properties of the text-interface.

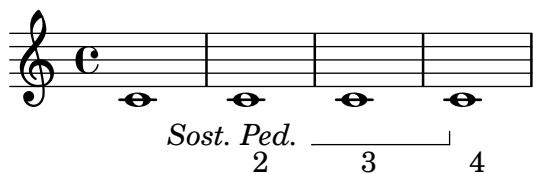
centered-bar-numbers-formatting.ly



Test the stacking of measure-centered bar numbers with other objects.

centered-bar-numbers-priority.ly





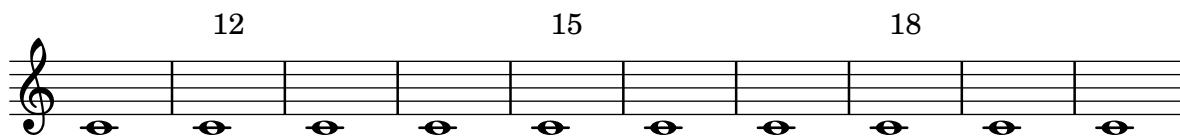
self-alignment-X can be overridden on centered bar numbers.

centered-bar-numbers-self-alignment-X.ly



Centered bar numbers honor the barNumberVisibility context property.

centered-bar-numbers-visibility.ly



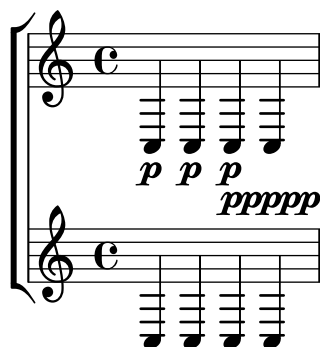
Bar numbers may be centered within their measure.

centered-bar-numbers.ly



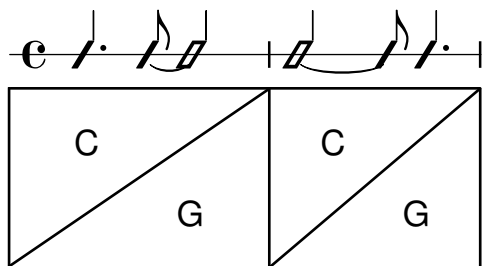
In ChoirStaff contexts, dynamics are allowed to cross columns.

choirstaff-dynamics-spacing.ly

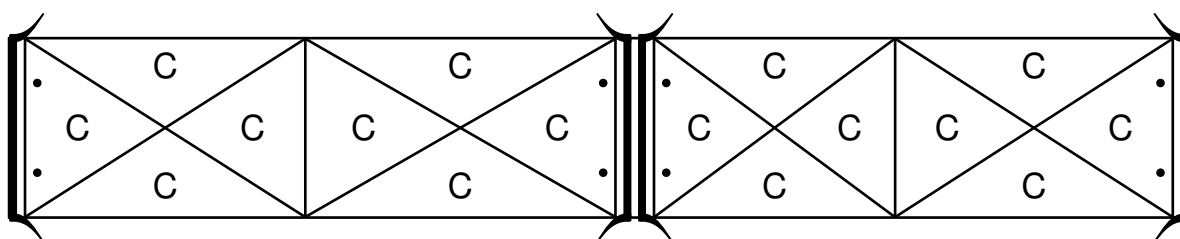


Chords containing unisons or seconds: Center articulation marks, dynamics, slurs, etc., on the notehead that is on the “correct” side of the stem.

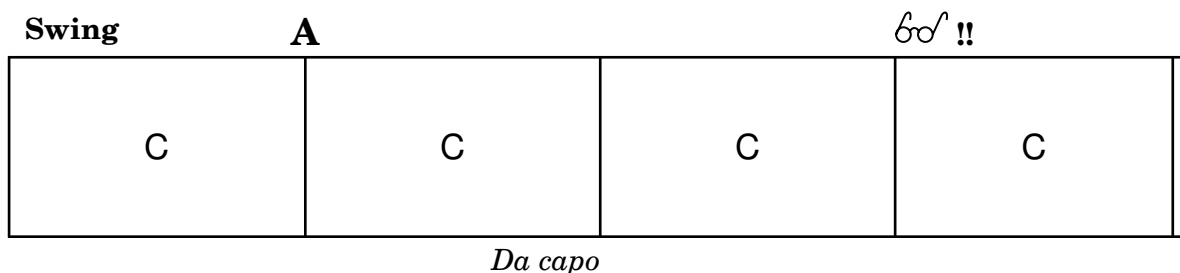
chord-X-align-on-main-noteheads.ly



In chord grids, lines inside squares attach to the innermost line of the bar line.
 chord-grid-bar-line-attachment.ly

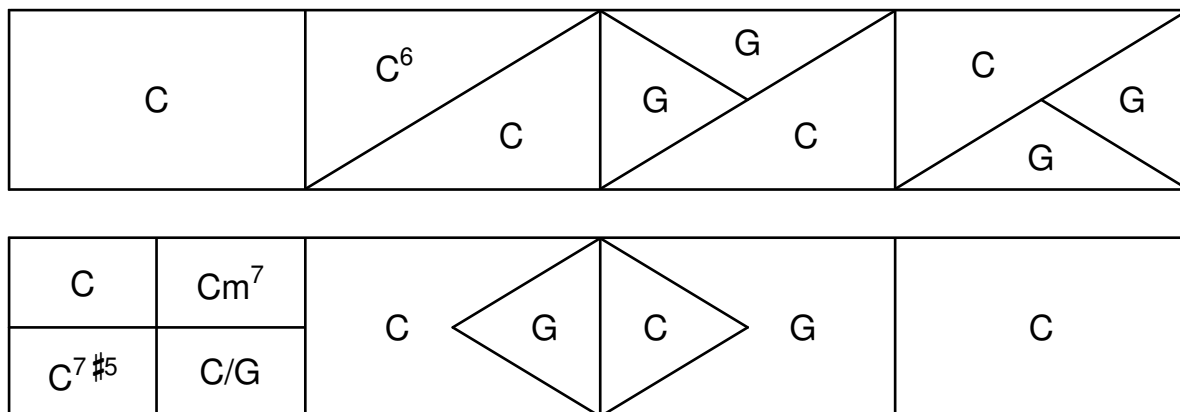


Various kinds of marks can be used within ChordGrid contexts.
 chord-grid-marks.ly



In chord grids, the `\medianChordGridStyle` command causes measures split in 4 equal parts to be printed with median rather than diagonal lines. This is the style recommended in Philippe Baudoin's book *Jazz, mode d'emploi*.

chord-grid-median-style.ly



Individual chords can be parenthesized in chord grids.
 chord-grid-parentheses.ly

C	(C)	D	(D)
---	-----	---	-----

Repeat notation can be used in chord grids.

chord-grid-repeats.ly

C	/:	C	C
---	----	---	---

C	C	//	
---	---	----	--

	E		
--	---	--	--

%

	E	E	E
--	---	---	---

D.S. %

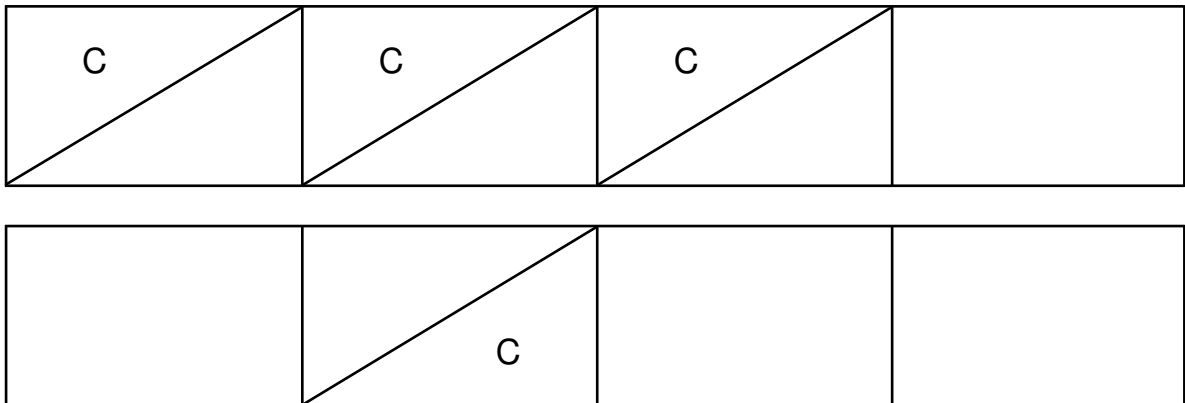
Chord grids can contain rests. This causes the noChordSymbol to be printed.

chord-grid-rests.ly

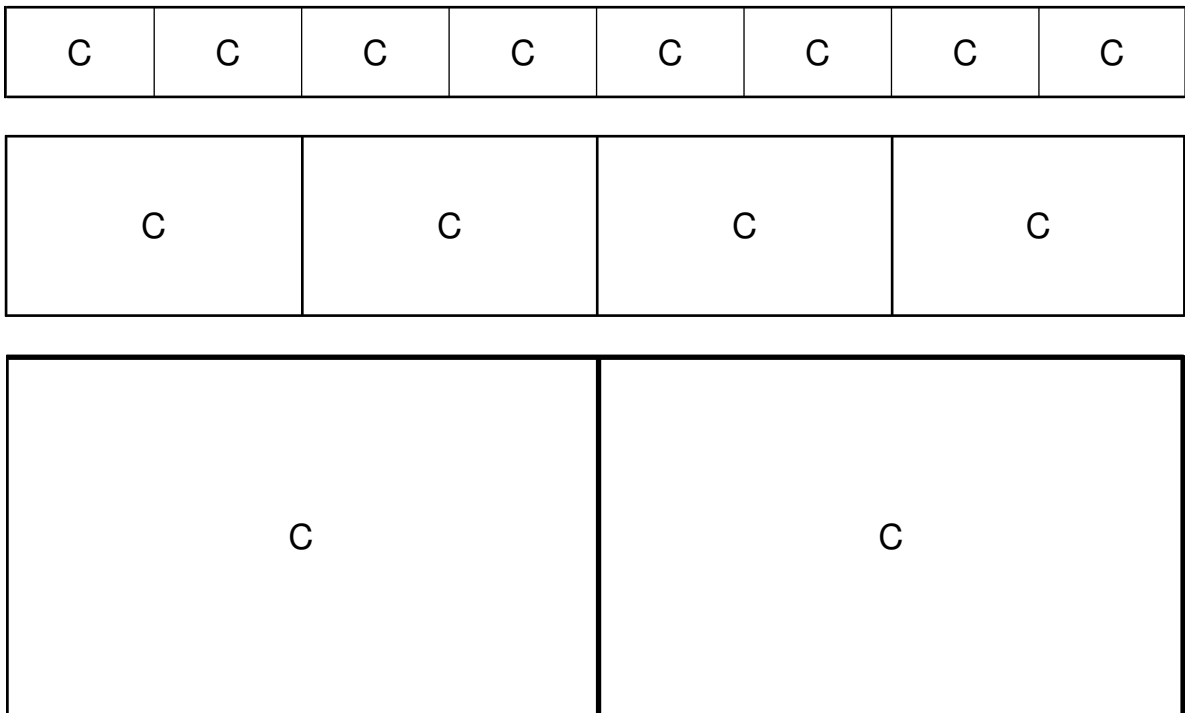
C	N.C.			N.C.
---	------	--	--	------

Chord grids may contain skips. They cause a blank space in chord squares.

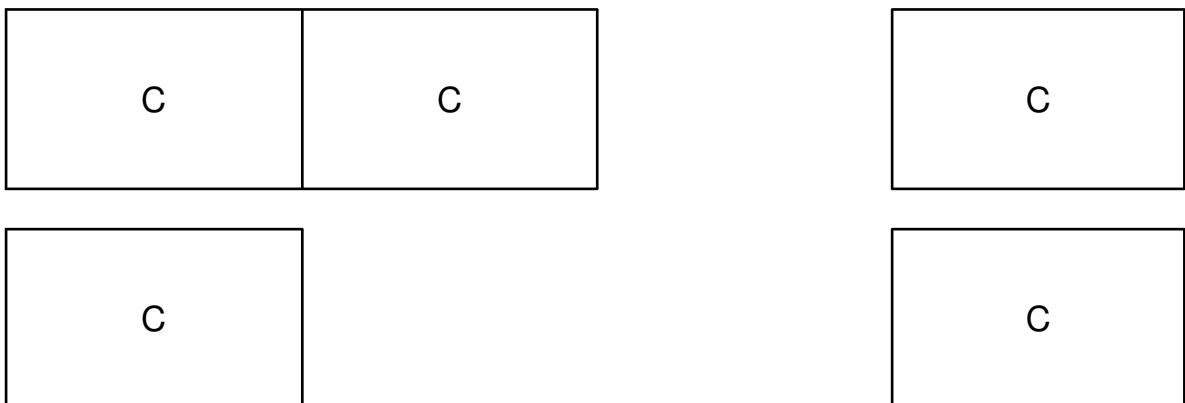
chord-grid-skips.ly

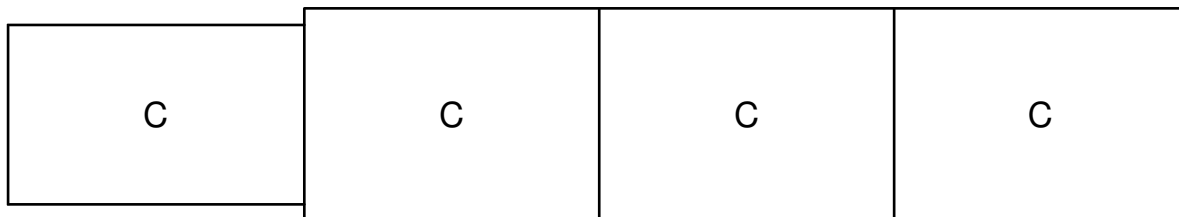


Chord grids are properly scaled with staff size.
`chord-grid-staff-sizes.ly`



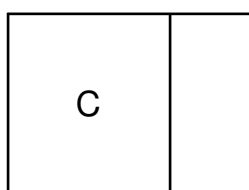
`\stopStaff` and `\startStaff` can be used in chord grids.
`chord-grid-stopstaff.ly`





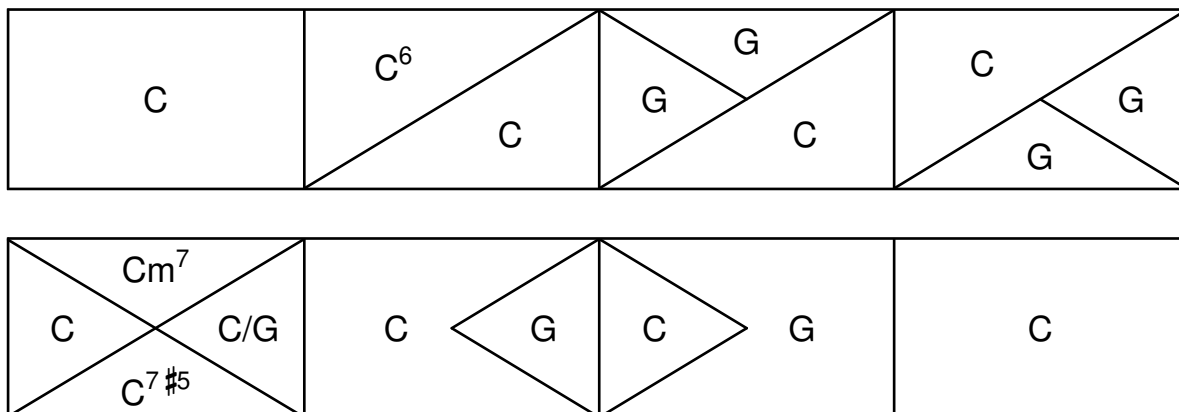
Within chord grids, an unterminated measure should be handled gracefully.

chord-grid-unterminated-measure.ly



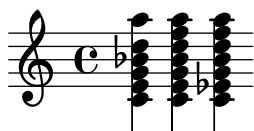
The ChordGrid context creates chord grid notation.

chord-grid.ly



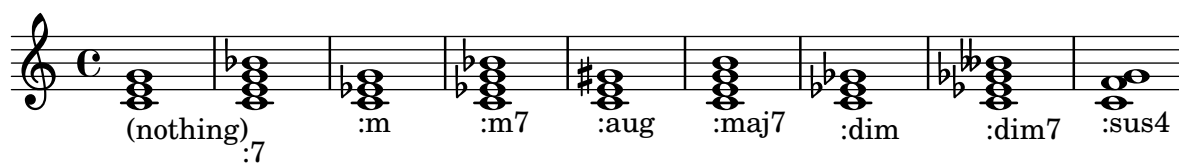
The 11 is only added to major-13 if it is mentioned explicitly.

chord-name-11-entry.ly



Chords can be produced with the chordname entry code (`\chordmode mode`), using a pitch and a suffix. Here, the suffixes are printed below pitches.

chord-name-entry.ly



10

19

The property `chordNameExceptions` can be used to store a list of special notations for specific chords.

`chord-name-exceptions.ly`

The layout of the major 7 can be tuned with `majorSevenSymbol`. It does not break if `majorSevenSymbol` is unset. One should see: triangle - j7 - triangle - #7.

`chord-name-major7.ly`

$C^\Delta C^{j7} C^\Delta C^{\#7}$

The layout of the minor chord can be tuned with `minorChordModifier`.

`chord-name-minor.ly`

$C^m C^{m7} C^- C^{-7}$

Users can override the `text` property of `ChordName`.

`chord-name-override-text.ly`

A B C^7 foo

In `ignatzek` inversions, a note is dropped down to act as the bass note of the chord. Bass note may be also added explicitly. Above the staff: computed chord names. Below staff: entered chord name.

`chord-names-bass.ly`

`GrandStaff` contexts accept chord names. The chord name in this example should be printed above the top staff.

chord-names-in-grand-staff.ly



The english naming of chords (default) can be changed to german (`\germanChords` replaces B and Bes to H and B), semi-german (`\semiGermanChords` replaces B and Bes to H and Bb), italian (`\italianChords` uses Do Re Mi Fa Sol La Si), or french (`\frenchChords` replaces Re to Ré).

chord-names-languages.ly

default	E/D	Cm	B/B	B#/B#	Bb/Bb
german	E/d	Cm	H/h	H#/his	B/b
semi-german	E/d	Cm	H/h	H#/his	Bb/b
italian	Mi/Re	Do m	Si/Si	Si#/Si#	Si b/Si b
french	Mi/Ré	Do m	Si/Si	Si#/Si#	Si b/Si b

Minor chords may be printed as lowercase letters, in which case the ‘m’ suffix is omitted in the output.

chord-names-lower-case-minor.ly

Dm d

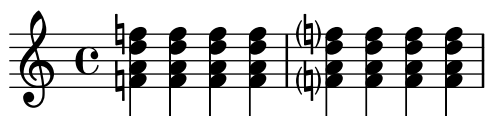
In `ChordNames`, both normal rests and multi-measure rests cause `noChordSymbol` to be printed. Skips do not print anything.

chord-names-rests.ly



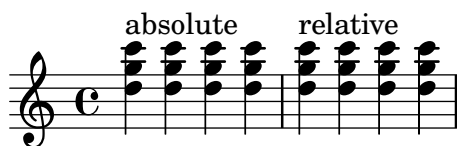
Chord repeats should omit forced and reminder accidentals.

chord-repetition-accidentals.ly



Chord repetition handles `\relative mode`: the repeated chords have the same octaves as the original one.

chord-repetition-relative.ly



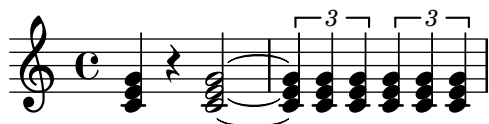
Post events such as fingerings and scripts added to a chord repetition follow the same basic stacking order as chords.

`chord-repetition-script-stack.ly`



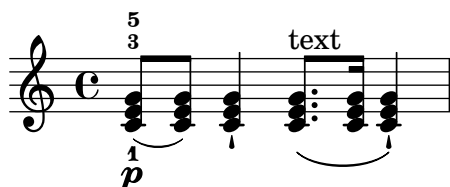
Chord repetitions are expanded late in the processing order and get their note events only then. Check that `\times` still works correctly on them.

`chord-repetition-times.ly`



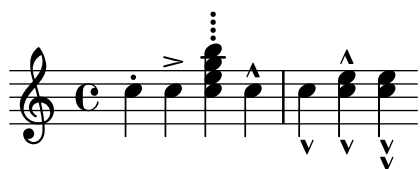
A repetition symbol can be used to repeat the previous chord and save typing. Only note events are copied: articulations, text scripts, fingerings, etc are not repeated.

`chord-repetition.ly`



Scripts can also be attached to chord elements. They obey manual direction indicators.

`chord-scripts.ly`



The layout of chord inversions can be tuned with `slashChordSeparator`.

`chord-slash-separator.ly`

D \flat /C D \flat over C

Chord tremolos adapt to the presence of accidentals.

`chord-tremolo-accidental.ly`



Articulations on chord tremolos should not confuse the time-scaling of the notes. In particular, only the number of real notes should be considered.

chord-tremolo-articulations.ly



To calculate the total duration of chord tremolos, only real notes shall be counted, no other commands.

chord-tremolo-other-commands.ly



Don't allow scaled durations to confuse the tremolo beaming. The tremolos should each have 3 beams.

chord-tremolo-scaled-durations.ly



Tremolo repeats can be constructed for short tremolos (total duration smaller than 1/4) too. Only some of the beams are connected to the stems.

chord-tremolo-short.ly



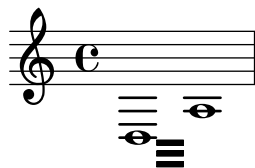
Chord tremolos on a single note.

chord-tremolo-single.ly



Stem directions influence positioning of whole note tremolo beams.

chord-tremolo-stem-direction.ly



chord tremolos don't collide with whole notes.

chord-tremolo-whole.ly



Chord tremolos look like beams, but are a kind of repeat symbol. To avoid confusion, chord tremolo beams do not reach the stems, but leave a gap. Chord tremolo beams on half notes are not ambiguous, as half notes cannot appear in a regular beam, and should reach the stems.

In this example, each tremolo lasts exactly one measure.

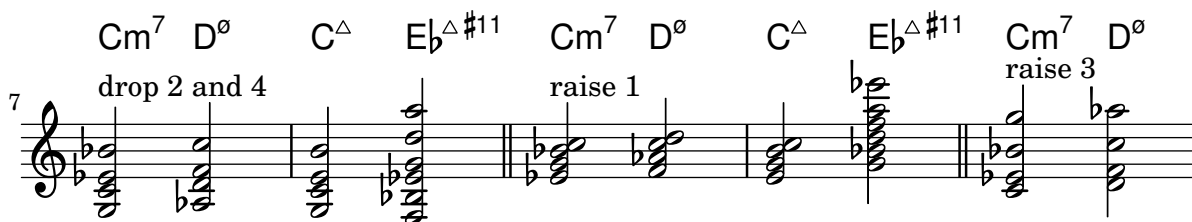
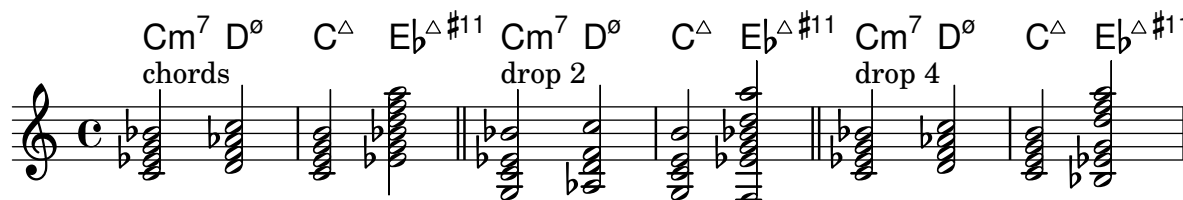
(To ensure that the spacing engine is not confused we add some regular notes as well.)

chord-tremolo.ly



Chord voicings may be transformed or inverted automatically through Scheme functions. These work even when chord notes are not entered in order (e.g. from the lowest to the uppermost note), and may also be used in chordmode. Even when using voicings, chord names remain unchanged.

chord-voicings.ly



C^Δ E_b^Δ#11 Cm⁷ D[∅] C^Δ E_b^Δ#11 Cm⁷ D[∅] C^Δ E_b^Δ#11

12

Rests in music passed to ChordNames context display noChordSymbol. noChordSymbol is treated like a ChordName with respect to chordChanges.

chordnames-nochord.ly

C N.C. N.C.

4

7

10

Jazz chords may have unusual combinations.

chords-funky-ignatzek.ly

C^{sus4 sus2} C^{sus4 sus2 3} C^{sus2 3} C^{b6 sus2 b3} C^{11 sus4 sus2 3} C^{7 sus4 sus2 3 8 9 10}

7

C⁺ C[∅] C[∅] C^{∅7} C^{7 8 9 10} C^{7 6} C^{6 9} C^{lyd} C^{alt}

`staffLineLayoutFunction` is used to change the position of the notes. This sets `staffLineLayoutFunction` to `ly:pitch-semitones` to produce a chromatic scale with the distance between a consecutive space and line equal to one semitone.

`chromatic-scales.ly`



Ottava brackets and clefs both modify `Staff.middleCPosition`, but they don't confuse one another.

`clef-ottava.ly`



Clef transposition symbols may be parenthesized or bracketed by using parentheses or brackets in the command string.

`clef-transposition-optional.ly`



Transposition symbols should be correctly positioned close to the parent clef. Horizontal alignment is fine-tuned for standard C, G and F clefs: for example, downwards transposition of a G clef should be centered exactly under the middle of clef hook. For clefs that don't have fine-tuned alignment the transposition number should be centered.

`clef-transposition-placement.ly`

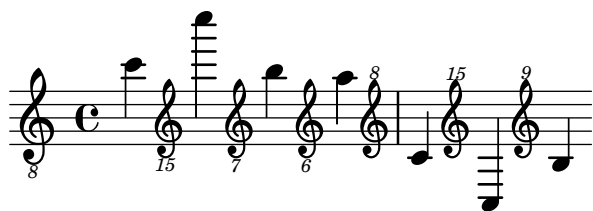
Even the smallest positioning changes may indicate a prob

Clefs may be transposed. By default, break-visibility of ClefModifiers is derived from the associated clef, but it may be overridden explicitly. The initial treble_8 clef should not have an 8, while the treble_8 clef after the tenor clef should. These settings also need to apply to clefs on new lines.

clef-transposition-visibility.ly



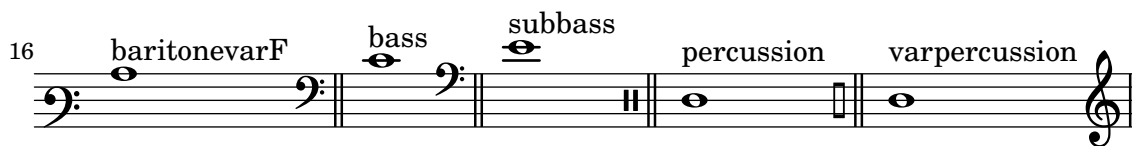
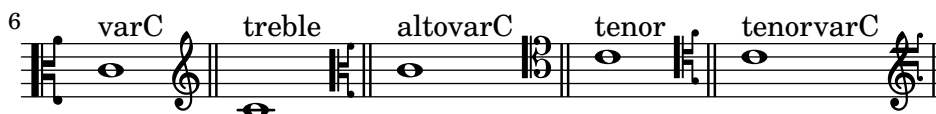
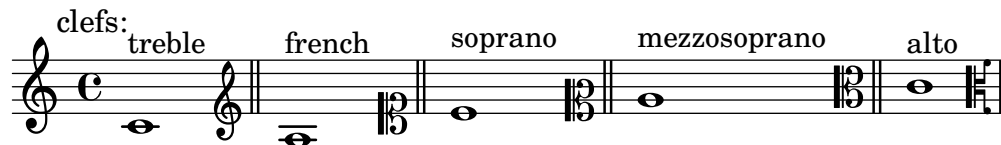
Clefs may be transposed up or down by arbitrary amount, including 15 for two octaves.
 clef-transposition.ly

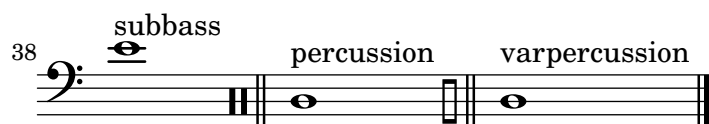
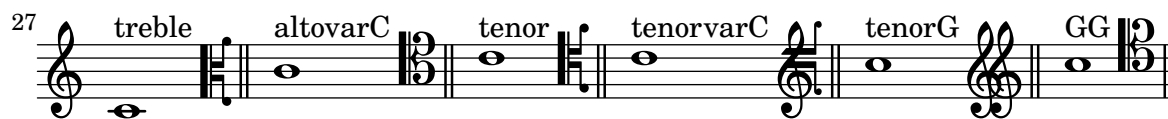


Unknown clef name warning displays available clefs
 clef-warn.ly



Clefs with full-size-change should be typeset in full size.
 clefs.ly





Clipping snippets from a finished score

Notes:

- If system starts and ends are included, they include extents of the System grob, eg. instrument names.
- Grace notes at the end point of the region are not included
- Regions can span multiple systems. In this case, multiple EPS files are generated.

This file needs to be run separately with `-dclip-systems`; the collated-files.html of the regression test does not adequately show the results.

The result will be files named `base-from-start-to-end[-count].eps`.

When using Cairo, this file only works when using the PostScript format.

`clip-systems.ly`



clips

from-2.0.1-to-4.0.1-clip.eps

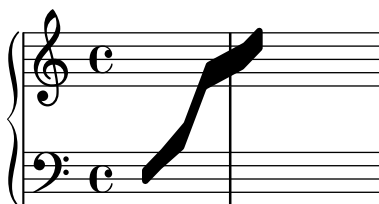
Clusters behave well across line breaks.

cluster-break.ly



Clusters can be written across staves.

cluster-cross-staff.ly



don't crash on single chord clusters.

cluster-single-note.ly



Clusters behave well across line breaks.

cluster-style.ly



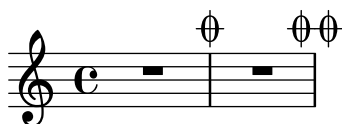
Clusters are a device to denote that a complete range of notes is to be played.

cluster.ly



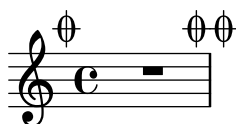
`\codaMark \default` at the beginning of the score does not create a mark. A single coda mark should appear at the beginning of the second measure and a double coda mark should appear at the end.

`coda-mark-begin-score-default.ly`



`\codaMark 1` at the beginning of the score creates a visible mark. A single coda mark should appear at the beginning of the measure and a double coda mark should appear at the end.

`coda-mark-begin-score-specific.ly`



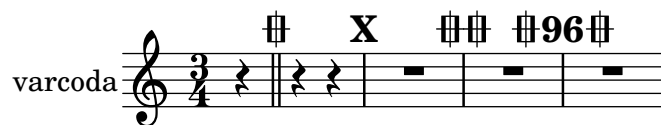
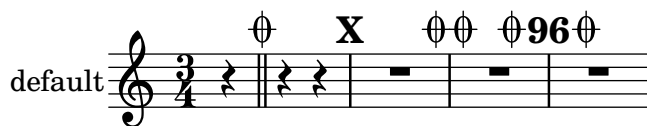
A coda mark at a line break appears at the end of the line.

`coda-mark-break.ly`



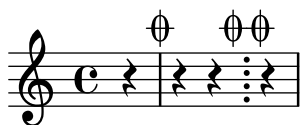
Coda marks are formatted with `codaMarkFormatter`, which the user can override. Rehearsal marks and coda marks are sequenced independently.

`coda-mark-formatters.ly`



Where a coda mark is not aligned on a measure boundary, the bar line defined by `underlyingRepeatBarType` appears by default. In this case, the single coda sign should have a normal bar line and the double coda sign should have a dotted bar line.

`coda-mark-unaligned.ly`



When notes are colliding, the resolution depends on the dots: notes with dots should go to the right, if there could be confusion to which notes the dots belong.

collision-dots-invert.ly



If dotted note heads must remain on the left side, collision resolution moves the dots to the right.

collision-dots-move.ly



For collisions where the upper note is dotted and in a space, the upper is moved to right. This behavior can be tuned by prefer-dotted-right.

collision-dots-up-space-dotted.ly



Collision resolution tries to put notes with dots on the right side.

collision-dots.ly



Collision resolution involving dotted harmonic heads succeeds when dots are hidden since rhythmic-head-interface will only retrieve 'dot-count' from live grobs.

collision-harmonic-no-dots.ly



Note heads in collisions should be merged if they have the same positions in the extreme note heads.

collision-head-chords.ly



'fa' shape note heads ('fa', 'faThin', etc.), which are right triangles, are merged to avoid creating a rectangular note.

Using property `NoteCollision.fa-merge-direction`, the direction of the merged 'fa' can be controlled independently of the stem direction. If this property is not set, the 'down' glyph variant is used.

`collision-head-solfa-fa.ly`



Open and black note heads are not merged by default.

`collision-heads.ly`



Colliding note-columns may be shifted manually with `force-hshift`. Arrangements of notes after collision-resolution have their main columns (not suspended notes) left-aligned, excluding columns with forced shifts.

`collision-manual.ly`



If `NoteCollision` has `merge-differently-dotted = ##t` note heads that have differing dot counts may be merged anyway. Dots should not disappear when merging similar note heads.

`collision-merge-differently-dotted.ly`



If `merge-differently-headed` is enabled, then open note heads may be merged with black noteheads, but only if the black note heads are from 8th or shorter notes.

`collision-merge-differently-headed.ly`



When merging heads, the dots are merged too.

`collision-merge-dots.ly`



Oppositely stemmed chords, meshing into each other, are resolved.

`collision-mesh.ly`



Seconds do not confuse the collision algorithm. The first pair of chords in each measure should merge, mesh, or come relatively close, but the second in each measure needs more space to make clear which notes belong to which voice.

`collision-seconds.ly`



Single head notes may collide.

`collision-single-head.ly`



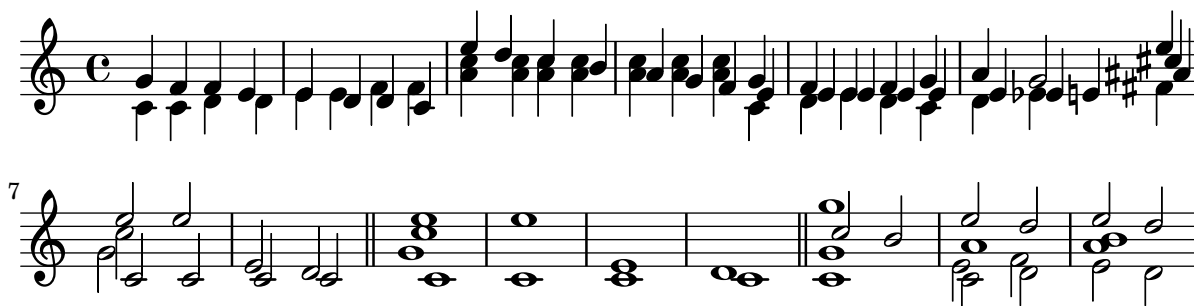
Mixed collisions with whole and longer notes require asymmetric shifts.

`collision-whole.ly`



In addition to normal collision rules, there is support for polyphony, where the collisions are avoided by shifting middle voices horizontally.

`collisions.ly`



CSS-style color codes are supported and must be prefixed with a hash. In SVG backend, the given color codes (as hexadecimal strings or predefined color names) are used directly; `rgb-color` lists are converted to `rgb()` or `rgba()` appropriately.

This test's output should be perceivably the same as `input/regression/color.ly`; alpha transparency is only visible in SVG output.

`color-css.ly`



Each grob can have a color assigned to it. Use the `\override` and `\revert` expressions to set the `color` property.

Colors may include an alpha channel, but that is only apparent in SVG output.

`color.ly`



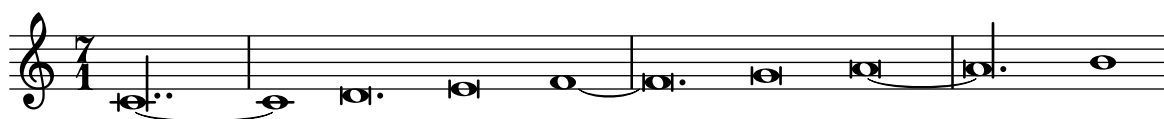
Complex completion heads work properly in a polyphonic environment.

`completion-heads-alternating-polyphony.ly`



The `Completion_heads_engraver` uses dotted breve/longa durations if possible.

`completion-heads-dotted-durations.ly`



If the `Note_heads_engraver` is replaced by the `Completion_heads_engraver`, long notes, longer than `measureLength`, are split into un-scaled notes, even if the original note used a `scale-factor`. `completionFactor` controls this behavior.

`completion-heads-factor.ly`



You can put lyrics under completion heads.

`completion-heads-lyrics.ly`



The `Completion_heads_engraver` correctly handles notes that need to be split into more than 2 parts.

`completion-heads-multiple-ties.ly`



Completion heads are broken across bar lines. This was intended as a debugging tool, but it can be used to ease music entry. Completion heads are not fooled by polyphony with a different rhythm.

`completion-heads-polyphony.ly`



Completion heads will remember ties, so they are started on the last note of the split note.

`completion-heads-tie.ly`



Completion heads may be used with tuplets (and compressed music) too.

`completion-heads-tuplets.ly`



Note head completion may be broken into sub-bar units by setting the `completionUnit` property.

`completion-heads-unit.ly`



If the `Note_heads_engraver` is replaced by the `Completion_heads_engraver`, notes that cross bar lines are split into tied notes.

`completion-heads.ly`



If the `Rest_engraver` is replaced by the `Completion_rest_engraver`, long rests, longer than `measureLength`, are split into un-scaled rests, even if the original duration used a scale-factor. `completionFactor` controls this behavior.

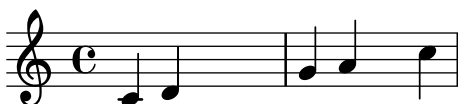
`completion-rest.ly`



10 explicitly request r1*1/2 rests

This tests `\once` applied to multiple property operations.

`complex-once.ly`



Simple-fraction components of a compound time signature are numeric regardless of the time signature style.

`compound-time-signature-style.ly`



Create compound time signatures. The argument is a Scheme list of lists. Each list describes one fraction, with the last entry being the denominator, while the first entries describe the summands in the numerator. If the time signature consists of just one fraction, the list can be given directly, i.e. not as a list containing a single list. For example, a time signature of $(3+1)/8 + 2/4$ would be created as `\compoundMeter #'((3 1 8) (2 4))`, and a time signature of $(3+2)/8$ as `\compoundMeter #'((3 2 8))` or shorter `\compoundMeter #'(3 2 8)`.

`compound-time-signatures.ly`

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15 

A `\defaultchild` cycle does not induce an endless loop. The output of this test is not important.

`context-defaultchild-cycle.ly`

`\defaultchild` can be overridden in a context definition. `CREATED` should appear in the left margin.

`context-defaultchild-def.ly`

CREATED 

`\defaultchild` can be overridden in `\with` blocks. `CREATED` should appear in the left margin.

`context-defaultchild-mod.ly`

CREATED 

`\denies context` in a context definition cancels a prior `\defaultchild context`. `CREATED` should appear in the left margin.

`context-denies-defaultchild-def.ly`

CREATED 

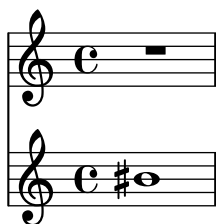
`\denies context` in a `\with` block cancels a prior `\defaultchild context`. CREATED should appear in the left margin.

context-denies-defaultchild-mod.ly



A `\denies` statement in a `\with` block applies to the local context only; it does not change the global context definition. The lower staff should hold a B-sharp.

context-denies-nondestructive-mod.ly



If the descend-to-context function cannot find or create its context below the current context, then it does not create its context anywhere, and it leaves the current context unchanged.

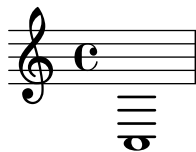
The expected output of this test is one staff with two notes.

context-descend-only-not-found.ly



a staff should die if there is reference to it.

context-die-staff.ly



`\context` finds a child by type and ID even when the parent also matches.

StaffGroup A

\
StaffGroup B (from here, find StaffGroup A)

\
StaffGroup A (this is found)

RESULT should appear in the left margin.

context-find-child.ly



`\context` finds the current context by type and ID even when there are matching contexts both above and below.

```
StaffGroup A
  \
  StaffGroup A (from here, find StaffGroup A)
    \
    StaffGroup A
```

INNER and RESULT should appear in the left margin.

`context-find-current.ly`

INNER

RESULT



`\context` finds a grandchild by type and ID when there are multiple matching contexts.


```
StaffGroup A (from here, find Staff D)
  /
  StaffGroup B  StaffGroup C
  /
  Staff D      Staff D
```

RESULT and either B or C should appear in the left margin.

`context-find-grandchild-ambiguous.ly`

RESULT

C



`\context` finds a grandchild by type and ID even when the parent also matches.

```
StaffGroup A
  \
  StaffGroup B (from here, find StaffGroup A)
    \
    StaffGroup C
      \
      StaffGroup A (this is found)
```

RESULT should appear in the left margin.

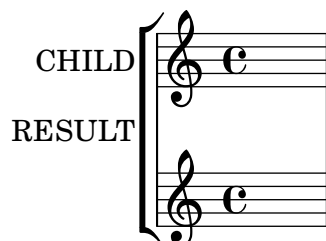
`context-find-grandchild.ly`

RESULT



`\context` can find the parent context by type and ID.

```
StaffGroup A
  \
    StaffGroup B (from here, find StaffGroup A)
CHILD and RESULT should appear in the left margin.
context-find-parent.ly
```



Attempting to find a Score context by alias before it exists triggers creation of a Score context. The output should have a note on the middle line of the staff.

```
context-find-score-alias.ly
```

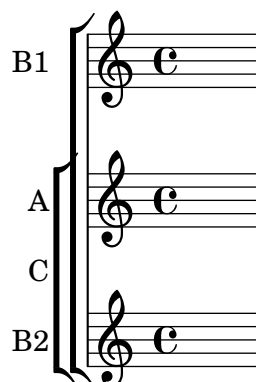


`\context` creates a new context rather than finding a matching context in another branch.

```
StaffGroup A
  /
StaffGroup B StaffGroup C (from here, find StaffGroup B)
                \
                  [StaffGroup B] (this is created)
```

B1, A, C, and B2 should appear in the left margin.

```
context-find-sibling.ly
```



User code is not allowed to access the Global context. The visual output of this test is not important.

```
context-global-find.ly
```



User code is not allowed to create a Global context. The visual output of this test is not important.

context-global-new.ly



Context modifications can be stored into a variable as a \with object. They can be later inserted directly into a context definition.

context-mod-context.ly



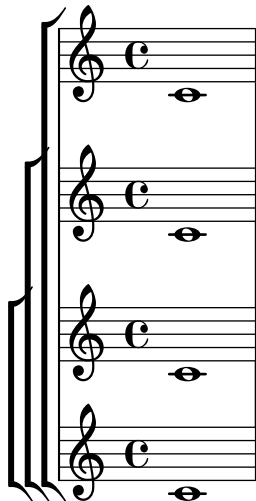
Context modifications can be stored into a variable as a \with object. They can be later inserted into another \with block.

context-mod-with.ly

	No modifications
	Remove time sig, add ambitus, set staff to 4 lines
	The same mods using a variable
	The same mods using a variable and \with
	Remove clef and use variable to add other changes as above
	Also remove clef and key engravers
	The same mods as staff 2
	Back to default

Contexts of the same type can be nested.

`context-nested-staffgroup.ly`



`\new` can create a child of the same type and name as its parent. PASS should appear in the left margin.

`context-new-child-same-name.ly`



`\new` can create a sibling of an existing context with the same type and name. The instrument name should be PASS.

`context-new-sibling-same-name.ly`



Let `ly:context-output-def` access some output variables from inside a `\applyContext` expression.

`context-output-def.ly`



It is possible to define contexts that, when instantiated, take the normal place of `Score`. This test should show a score with proportional notation and bigger note heads.

`context-score-level.ly`



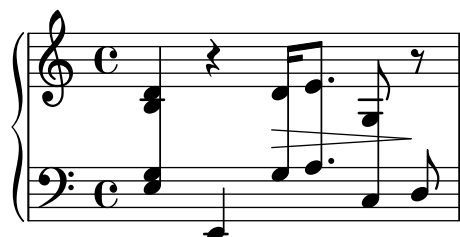
Using `\contextStringTuning` does not break compiling.
`context-string-tuning.ly`

Test for cross-staff beams. Three issues are covered. All stems, beams, and note heads should be positioned correctly and there should be no programming errors.

`cross-staff-beams.ly`

Test for cross-staff stems. The test produces a piano staff with cross-staff connected crochet, semi-quaver, dotted quaver (beamed with the semi-quaver) and finally a quaver. All stems should connect, showing correct spacing and stem length. The lower connected notes should have no flags.

`cross-staff-stems.ly`



Cue clefs can be printed after a bar line.

cue-clef-after-barline.ly



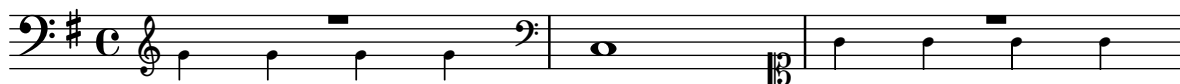
Clefs for cue notes at the start of a score should print the standard clef plus a small cue clef after the time/key signature.

cue-clef-begin-of-score.ly



Clefs for cue notes should not influence the printed key signature.

cue-clef-keysignature.ly

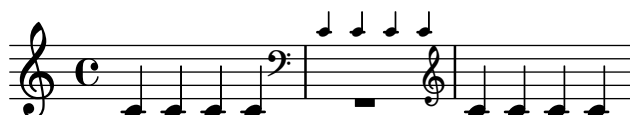


4



Cue clefs can be printed manually.

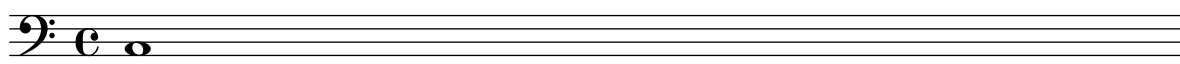
cue-clef-manually.ly



Clefs for cue notes and line breaks. If the cue notes start in a new line, the cue clef should not be printed at the end of the previous line. Similarly, an end clef for cue notes ending at a line break should only be printed at the end of the line.

Cue notes going over a line break should print the standard clef on the new line plus an additional cue clef after the time/key signature.

cue-clef-new-line.ly



2

3

5

Optional transposition for clefs for cue notes is supported by using parentheses or brackets around the transposition number.

cue-clef-transposition-optional.ly

8

Transposition for clefs for cue notes.

cue-clef-transposition.ly

4

8

11

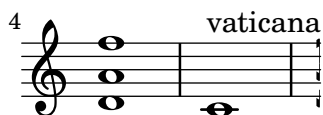
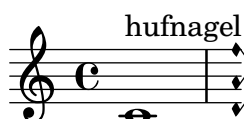
Clefs for cue notes: Print a cue clef at the begin of the cue notes and a canceling clef after the cue notes.

cue-clef.ly

Custos_engraver accepts (and ignores) unpitched notes.
 custos-unpitched.ly



Custodes may be engraved in various styles.
 custos.ly



Muted notes (also called dead notes) are supported within normal staves and tablature. They are printed correctly, even if another font for TabNoteHead is used.

dead-notes.ly

default-font	
TabNoteHead- font: DejaVu Sans Mono	

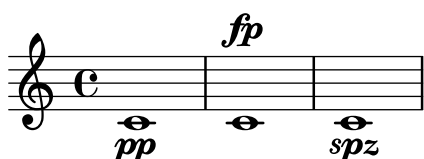
Cyclic dependencies are detected and warned about. When the `debug-property-callbacks` option is set, a backtrace is printed with the warning.

`debug-property-callbacks.ly`



Tests `define-event-function` by creating a trivial function converting a markup into a dynamic script post-event. As opposed to music functions, a direction indicator is not required.

`define-event-function.ly`



The `VerticalAxisGroup.remove-layer` property can be used for typesetting temporary divisi staves where the switch to split staves is done only at line breaks such that all complex passages are rendered in separate staves.

`divisi-staves.ly`

Violins

30
V I&II

36
V I&II

41
V I&II

46
V I&II

This test exercises semantic divisions with settings that are overridden in various built-in Staff contexts. Each Staff is in a separate `\score`.

`divisions-staff-override-alone.ly`

Staff

Meas. `\caesura ...` Sec.

Gregor. Transcr.

Kievan

Mensural

Petrucci

Vaticana

By default, `GregorianTranscriptionStaff` creates `BarLine` grobs for `\divisio...` commands, but `\EnableGregorianDivisiones` makes it create `Divisio` grobs like the ancient-notation staves.

`divisions-staff-override-gregorian-transcription-style.ly`

This test exercises semantic divisions with settings that are overridden in various built-in `Staff` contexts. All staves are in one `StaffGroup`.

`divisions-staff-override-grouped.ly`

`\cadenzaOn` should not confuse the `dodecaponic-no-repeat` accidental style. In this test, the second C should have a printed accidental since it is not immediately repeated.

`dodecaponic-no-repeat-cadenza.ly`



Partials do not confuse the `dodecaphonic-no-repeat` accidental style. In this test, the second C should have a printed accidental since it is not immediately repeated.

`dodecaphonic-no-repeat-partial.ly`



Dot Columns are engraved in the Staff by default, enabling dots to move vertically to make room for dots from another voice. If `Dot_column_engraver` is moved to `Voice`, separate dot columns are engraved, and these dots avoid notes in other voices.

`dot-column-engraver.ly`



move `Dot_column_engraver` to `Voice` :



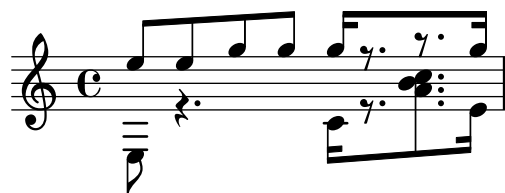
Dots and note-heads should not collide.

`dot-column-note-collision.ly`



Dot columns do not trigger beam slanting too early. This input should compile with no programming error message, and the dots should be correctly placed on their rests.

`dot-column-rest-collision.ly`



Dot columns should not trigger vertical spacing before line breaking. If the regtest issues a programming_error saying that vertical spacing has been called before line breaking, it has failed.

dot-column-vertical-positioning.ly



The dot-count property for Dots can be modified by the user.

dot-dot-count-override.ly



Dots move to the right when a collision with the (up)flag happens.

dot-flag-collision.ly



Dotted rests connected with beams do not trigger premature beam calculations. In this case, the beam should be sloped, and there should be no programming_error() warnings.

dot-rest-beam-trigger.ly



The dots on a dotted rest are correctly accounted for in horizontal spacing.

dot-rest-horizontal-spacing.ly



in collisions, the dots of outer voices avoid stems and flags of the inner voices.

dot-up-voice-collision.ly



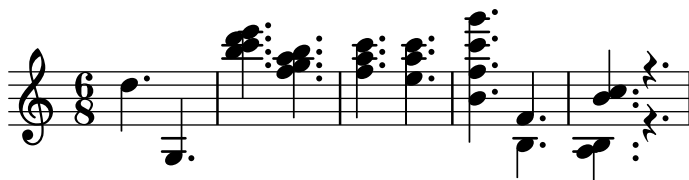
Both noteheads and rests can have dots. Augmentation dots should never be printed on a staff line, but rather be shifted vertically. They should go up, but in case of multiple parts, the down stems have down shifted dots. In case of chords, all dots should be in a column. The dots follow the shift of rests when avoiding collisions.

The priorities to print the dots are (ranked in importance):

- keeping dots off staff lines,

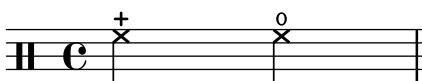
- keeping dots close to their note heads,
- moving dots in the direction specified by the voice,
- moving dots up.

`dots.ly`

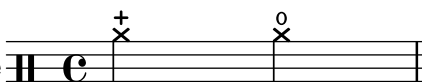


Pitches for drums may have a defined articulation sign. This test checks the predefined drum-styles and prints only drum-pitches with an articulation sign.

`drum-scripts.ly`

`drums-style` 
closedhihat openhihat

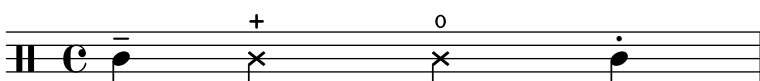
`agostini-drums-style` 
No scripts defined

`weinberg-drums-style` 
closedhihat openhihat

`timbales-style` 
No scripts defined

`congas-style` 
mutehiconga muteloconga openhiconga openloconga

`bongos-style` 
mutehibongo mutelobongo openhibongo openlobongo

`percussion-style` 
longguiro mutetriangle opentriangle shortguiro

In drum notation, there is a special clef symbol, drums are placed to their own staff positions and have note heads according to the drum, an extra symbol may be attached to the drum, and the number of lines may be restricted.

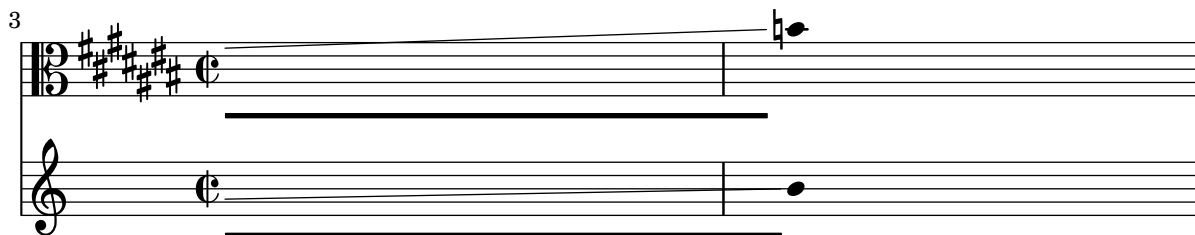
`drums.ly`

The compression factor of a duration identifier is correctly accounted for by the parser.
 duration-identifier-compressed.ly

Duration_line_engraver works nicely with \partCombine.
 If \partCombine combines notes to chords both note heads get a DurationLine.
 duration-line-and-partCombine.ly

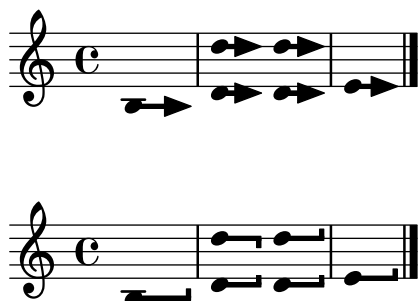
At line break a broken DurationLine, like Glissando, avoids items with break-aligned-interface, like KeySignature, BreathingSign etc., but not items with the break-alignable-interface, like TextMark, MetronomeMark, etc..
 duration-line-at-line-break.ly

2 **Allegretto, ma non troppo**



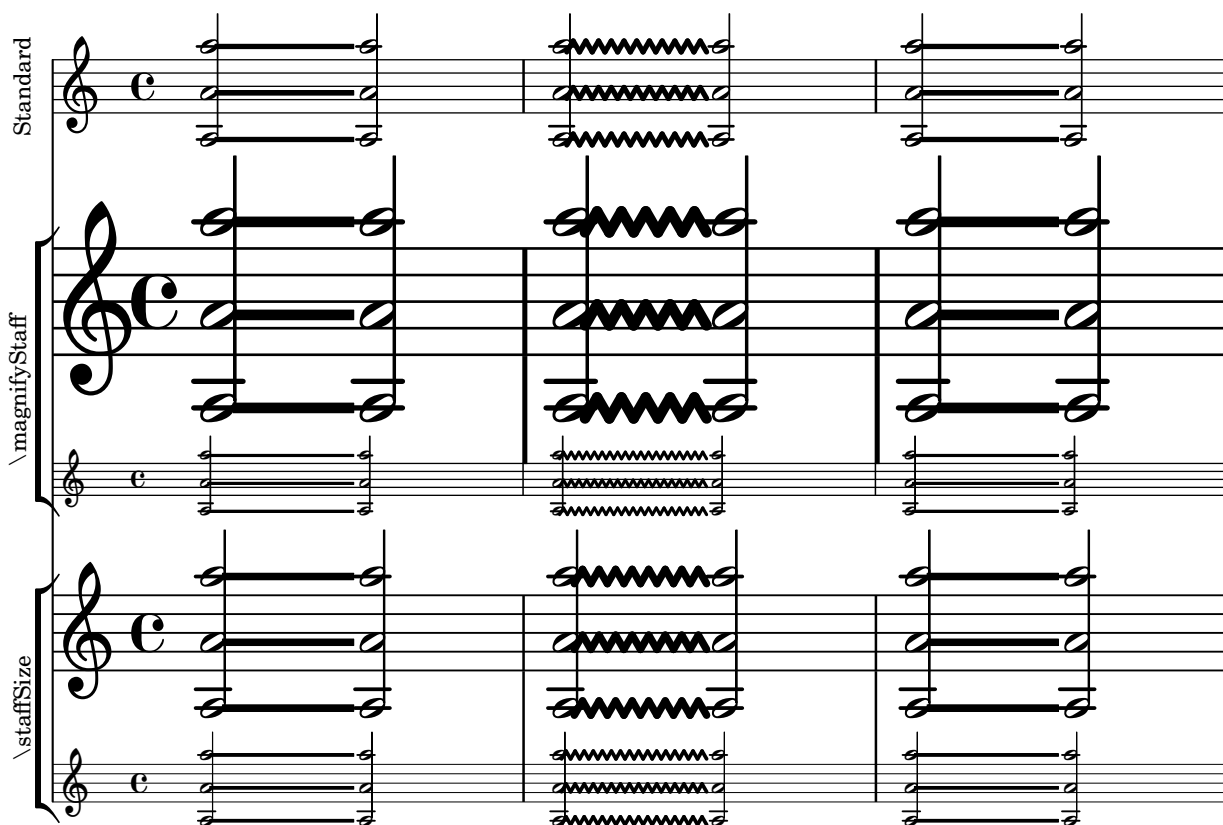
A DurationLine grob may end with a special behavior. Currently available are hooks (with settable direction) and arrows.

duration-line-end-items.ly



Duration lines are placed vertically correct for non-default staff sizes and all styles.

duration-line-magnified-staff.ly



A musical score consisting of four systems, each with two staves. The first system is marked with a '4' at the beginning. Each staff contains three measures. The first measure of each staff shows a complex rhythmic pattern with many notes. The second measure shows a dotted line representing a duration line. The third measure shows a dotted line with a note head at the end, indicating the end of the duration line. This pattern repeats across all four systems, demonstrating how duration lines span across multiple staves.

Duration lines work across staff changes.

duration-line-staff-change.ly

A musical score with two staves. The first staff has a treble clef and a common time signature 'c'. It contains a single measure with a note on the second line. The second staff has a treble clef and a common time signature 'c'. It contains a single measure with a note on the first line. This illustrates how duration lines can be placed relative to notes and rests across different staves.

A DurationLine grob may start/end at NoteHead, Rest, skip-event (if forced, otherwise skips are passed), NoteHeads of EventChord or at an entire NoteColumn. Start/end at MultiMeasureRest is only basically supported.

It stops automatically if the Voice pauses, i.e., no rhythmical events happen for some time, and at end of score.

Avoids Dots (if forced), Accidentals and Arpeggio (per changeable default).

duration-line-start-stop.ly

A musical score on a single staff with a treble clef and a common time signature 'c'. The score consists of several measures. Some measures contain notes, while others contain rests. Above the staff, there are two 'skip' labels with downward arrows pointing to specific measures. Below the staff, there are two 'skip' labels with upward arrows pointing to specific measures. This illustrates how skip events are handled in the duration line logic.



Several styles for the DurationLine grob are available: 'beam, 'line, 'dashed-line, 'dotted-line, 'zigzag, 'trill and 'none.

duration-line-styles.ly



The visible thickness of a duration line is adjusted properly according to the staff space for all styles, like for long compressed MultiMeasureRest. Changes in StaffSymbol.thickness are disregarded.

duration-line-thickness-staff-sizes.ly

With changed staff-space (and unchanged StaffSymbol.thickness), DurationLine is adjusted nicely. For trill style one would need to set grob.font-size (here done) or context.fontSize additionally.

The image displays three groups of musical staves, each containing three staves with a treble clef and a common time signature 'C'. Each staff begins with a whole note followed by a thick horizontal line representing a duration line.

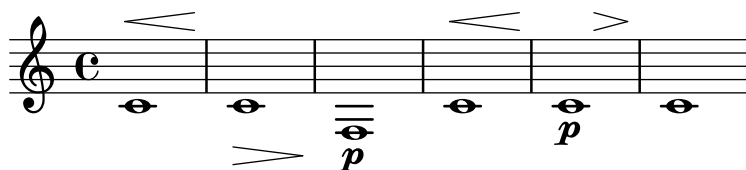
- Group 1:** Labeled 'changed StaffSymbol staff-space' on the left. The three staves show the same notation with varying vertical spacing between them.
- Group 2:** Labeled '\magnifyStaff' on the left. The top staff has a larger, more ornate treble clef and a larger note head. The text '\magnifyStaff' is written above the first staff. The duration line is also larger.
- Group 3:** Labeled 'changed StaffSymbol thickness' on the left. The three staves show the same notation with varying thicknesses for the staff lines and the duration line.

Duration multipliers can be specified as scheme expressions, either as rationals or as a moment.

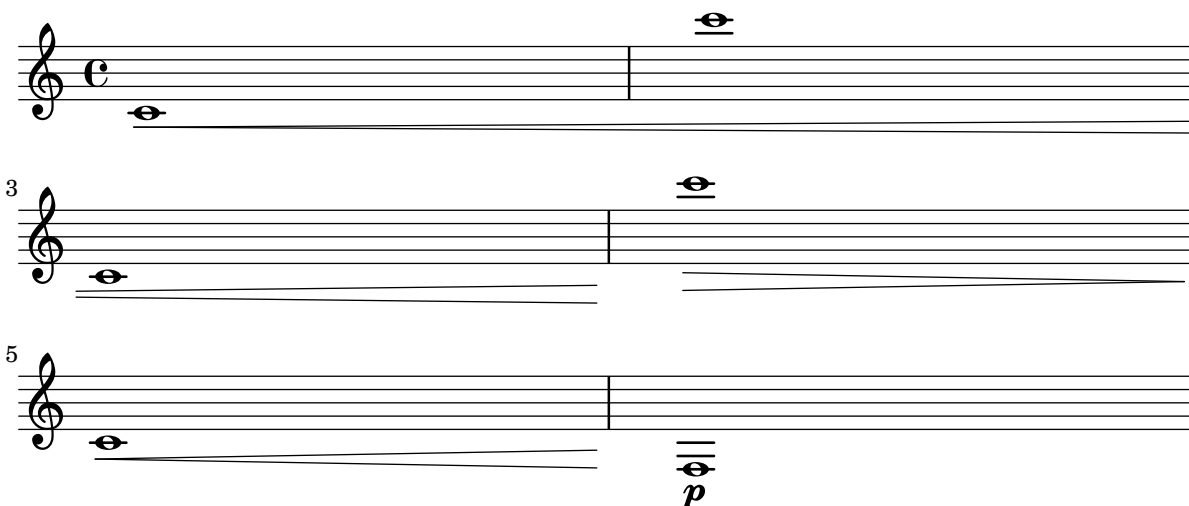
`duration-multiplier-scheme.ly`

If a dynamic has an explicit direction that differs from the dynamic line spanner's direction, automatically break the dynamic line spanner.

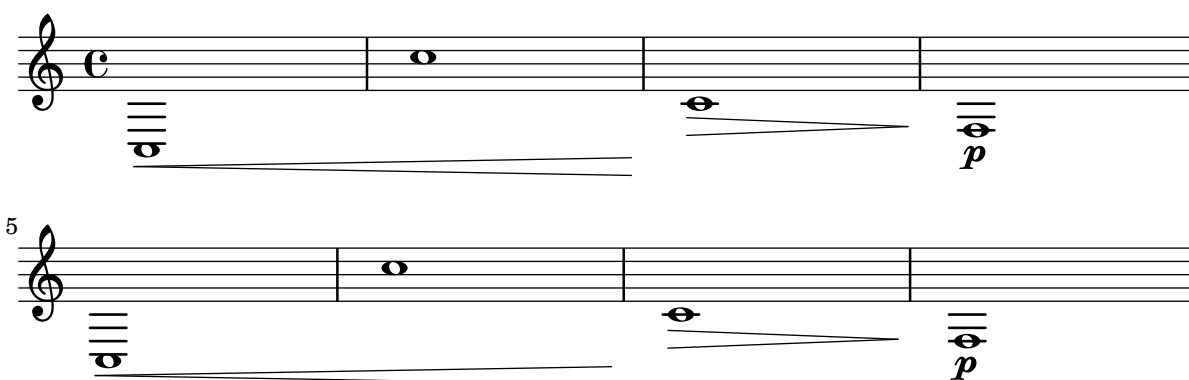
`dynamics-alignment-autobreak.ly`



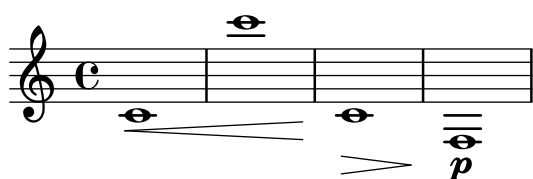
`\breakDynamicSpan` shall also work if a dynamic spanner crosses a line break.
 dynamics-alignment-breaker-linebreak.ly



`\breakDynamicSpan` work whether it is placed together with the start or the end of a spanner. Both lines should be identical.
 dynamics-alignment-breaker-order.ly



`\breakDynamicSpan` shall only have an effect on the current spanner, not on subsequent spanners.
 dynamics-alignment-breaker-subsequent-spanner.ly



Hairpins, `DynamicTextSpanners` and dynamics can be positioned independently using `\breakDynamicSpan`, which causes the alignment spanner to end prematurely.

dynamics-alignment-breaker.ly



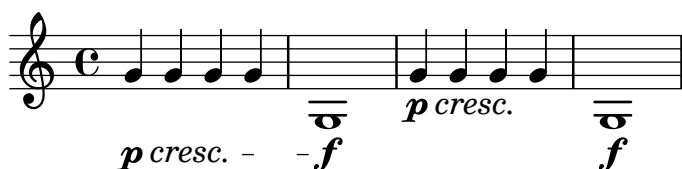
Setting the style of a DynamicTextSpanner to 'none' to hide the line altogether should also work over line breaks.

dynamics-alignment-no-line-linebreak.ly



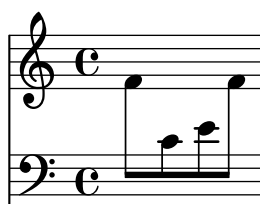
If the line for a DynamicTextSpanner is hidden, the alignment spanner for dynamics is ended early. This allows consecutive dynamics to be unlinked.

dynamics-alignment-no-line.ly



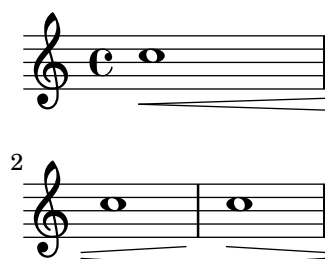
Cross-staff Dynamic does not trigger a cyclic dependency for direction look-up.

dynamics-avoid-cross-staff-stem.ly



When a hairpin is broken, the broken parts should be open at the 'breaking point'.

dynamics-broken-hairpin.ly



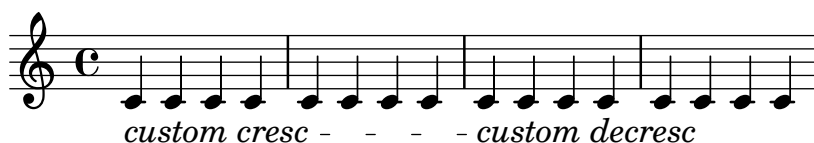


Text spanners work in the Dynamics context.
 dynamics-context-textspan.ly

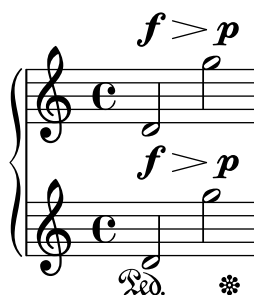


Postfix functions for custom crescendo text spanners. The spanners should start on the first note of the measure. One has to use `-\mycresc`, otherwise the spanner start will rather be assigned to the next note.

dynamics-custom-text-spanner-postfix.ly

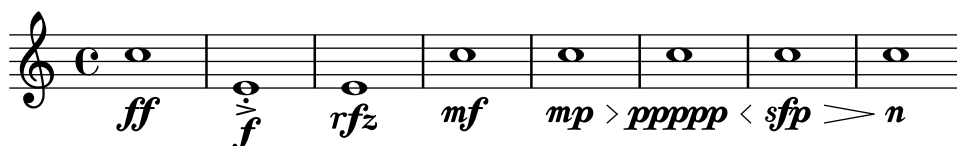


An empty Dynamics context does not confuse the spacing.
 dynamics-empty.ly



Dynamic letters are kerned, and their weight matches that of the hairpin signs. The dynamic scripts should be horizontally centered on the note head. Scripts that should appear closer to the note head (staccato, accent) are reckoned with.

dynamics-glyphs.ly



By default hairpins extend to the extremes of the bound if there is no adjacent hairpin or dynamic text. A hairpin may instead extend to the LEFT, CENTER or RIGHT of NoteColumn grobs by overriding property `endpoint-alignments`, which is a pair of numbers representing the left and right ends of the hairpin. `endpoint-alignments` are expected to be directions (either -1, 0

or 1). Other values will be transformed with a warning. The right end of a hairpin terminating at a rest is not affected, always ending at the left edge of the rest.

dynamics-hairpin-endpoint-alignment.ly

endpoint-alignments = #` (,LEFT . ,RIGHT)



10 **endpoint-alignments = #` (,LEFT . ,LEFT)**



19 **endpoint-alignments = #` (,RIGHT . ,LEFT)**



28 **endpoint-alignments = #` (,RIGHT . ,RIGHT)**



37 **endpoint-alignments = #` (,CENTER . ,CENTER)**



Ends adjacent to dynamic text are not influenced by endpoint-alignments

46

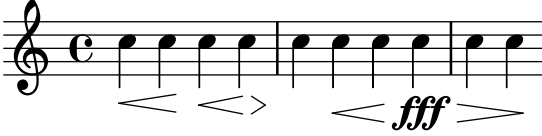


48



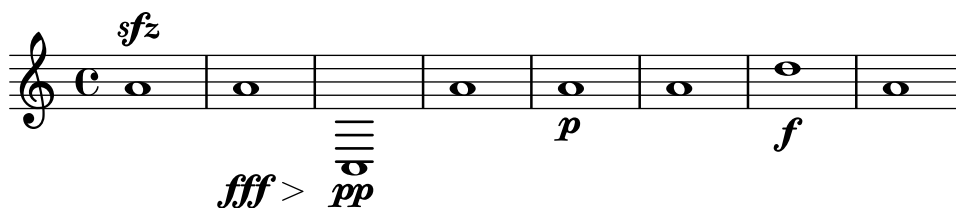
Hairpins extend to the extremes of the bound if there is no adjacent hairpin or dynamic-text. If there is, the hairpin extends to the center of the column or the bound of the text respectively.

dynamics-hairpin-length.ly



Dynamics appear below or above the staff. If multiple dynamics are linked with (de)crescendi, they should be on the same line. Isolated dynamics may be forced up or down.

dynamics-line.ly



DynamicText, DynamicLineSpanner, and Hairpin do not have `outside-staff-priority` in Dynamics contexts. This allows grobs with `outside-staff-priority` set to be positioned above and below them.

dynamics-outside-staff-priority.ly



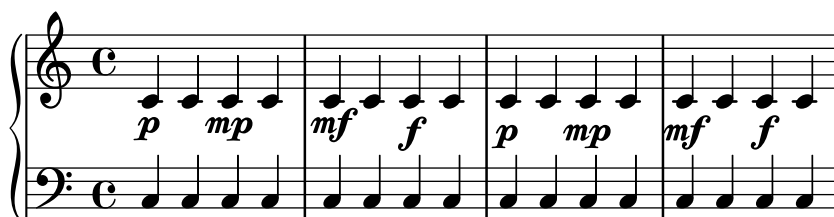
Text dynamics are positioned correctly on rests, i.e., centered on the parent object.

dynamics-rest-positioning.ly



The X-offset of DynamicText grobs in a Dynamics context should be averaged over the center of NoteColumn grobs in the DynamicText's PaperColumn.

dynamics-text-dynamics-context.ly



The left text of a DynamicTextSpanner is left-aligned to its anchor note.

dynamics-text-left-text-alignment.ly



The space between an absolute dynamic and a dynamic text span can be changed using `'right-padding`.

dynamics-text-right-padding.ly



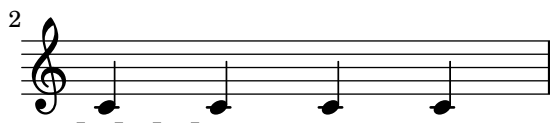
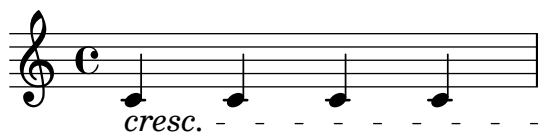
left attach dir for text crescendi starting on an absolute dynamic is changed, so `cresc.` and the absolute dynamic don't overstrike.

`dynamics-text-spanner-abs-dynamic.ly`



The 2nd half of the `cresc.` stays at a reasonable distance from the notes.

`dynamics-text-spanner-padding.ly`



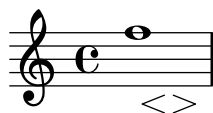
The `\cresc`, `\dim` and `\decrease` spanners are now postfix operators and produce one text spanner. Defining custom spanners is also easy. Hairpin and text crescendi can be easily mixed. `\<` and `\>` produce hairpins by default, `\cresc` etc. produce text spanners by default.

`dynamics-text-spanner-postfix.ly`



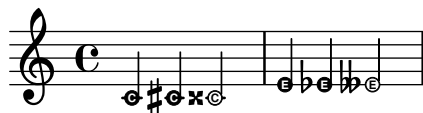
Crescendi may start off-notes, however, they should not collapse into flat lines.

`dynamics-unbound-hairpin.ly`



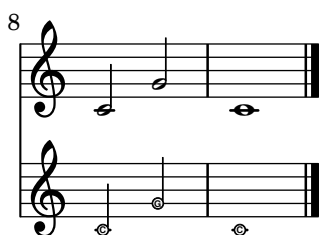
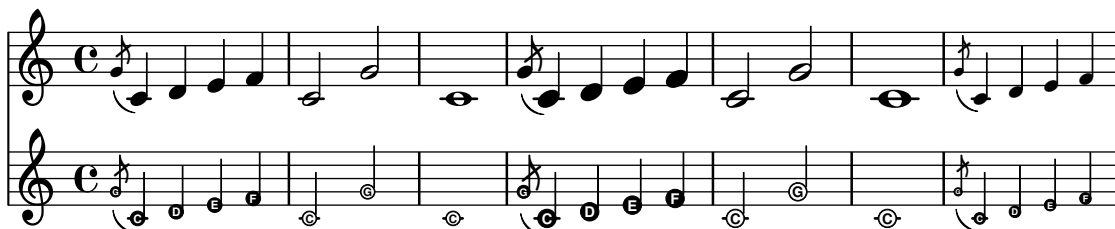
Accidentals are positioned correctly when using Easy notation.

`easy-notation-accidentals.ly`



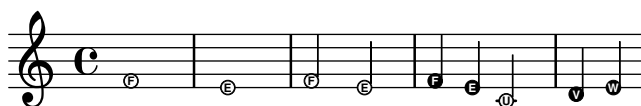
Easy noteheads should be scalable in size, like in grace notes.

`easy-notation-size.ly`



Easy-notation (or Ez-notation) prints names in note heads. You also get ledger lines, of course.

`easy-notation.ly`



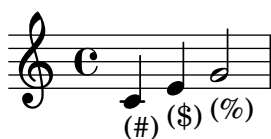
PostScript code can be directly inserted inside a `\markup` block.

`embedded-postscript.ly`



Strings and comments inside of `#{...#}` should not be confusing to the embedded LilyPond parser. If this test succeeds, three notes with (#), (\$), and (%) underneath will get displayed here.

`embedded-strings-comments.ly`



The Emmentaler font contains kerning for many number pairs.

`emmentaler-number-kerning.ly`

time-signatures:

00	01	02	03	04	05	06	07	08	09	0-	0+	0.	0,
10	11	12	13	14	15	16	17	18	19	1-	1+	1.	1,
20	21	22	23	24	25	26	27	28	29	2-	2+	2.	2,
30	31	32	33	34	35	36	37	38	39	3-	3+	3.	3,
40	41	42	43	44	45	46	47	48	49	4-	4+	4.	4,
50	51	52	53	54	55	56	57	58	59	5-	5+	5.	5,
60	61	62	63	64	65	66	67	68	69	6-	6+	6.	6,
70	71	72	73	74	75	76	77	78	79	7-	7+	7.	7,
80	81	82	83	84	85	86	87	88	89	8-	8+	8.	8,
90	91	92	93	94	95	96	97	98	99	9-	9+	9.	9,
-0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-	+	.	,
+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+	++	+	,
.0	.1	.2	.3	.4	.5	.6	.7	.8	.9	.	+	..	,
,0	,1	,2	,3	,4	,5	,6	,7	,8	,9	,	+	,	,

figured bass (tnum, cv47, ss01):

00	01	02	03	04	05	06	07	08	09	0-	0+	0.	0,
10	11	12	13	14	15	16	17	18	19	1-	1+	1.	1,
20	21	22	23	24	25	26	27	28	29	2-	2+	2.	2,
30	31	32	33	34	35	36	37	38	39	3-	3+	3.	3,
40	41	42	43	44	45	46	47	48	49	4-	4+	4.	4,
50	51	52	53	54	55	56	57	58	59	5-	5+	5.	5,
60	61	62	63	64	65	66	67	68	69	6-	6+	6.	6,
70	71	72	73	74	75	76	77	78	79	7-	7+	7.	7,
80	81	82	83	84	85	86	87	88	89	8-	8+	8.	8,
90	91	92	93	94	95	96	97	98	99	9-	9+	9.	9,
-0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-	+	.	,
+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+	++	+	,
.0	.1	.2	.3	.4	.5	.6	.7	.8	.9	.	+	..	,
,0	,1	,2	,3	,4	,5	,6	,7	,8	,9	,	+	,	,

fingering (cv47, ss01):

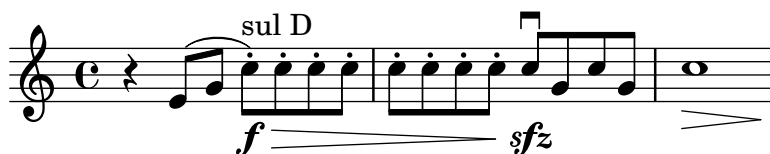
00	01	02	03	04	05	06	07	08	09	0-	0+	0.	0,
10	11	12	13	14	15	16	17	18	19	1-	1+	1.	1,
20	21	22	23	24	25	26	27	28	29	2-	2+	2.	2,
30	31	32	33	34	35	36	37	38	39	3-	3+	3.	3,
40	41	42	43	44	45	46	47	48	49	4-	4+	4.	4,
50	51	52	53	54	55	56	57	58	59	5-	5+	5.	5,
60	61	62	63	64	65	66	67	68	69	6-	6+	6.	6,
70	71	72	73	74	75	76	77	78	79	7-	7+	7.	7,
80	81	82	83	84	85	86	87	88	89	8-	8+	8.	8,
90	91	92	93	94	95	96	97	98	99	9-	9+	9.	9,
-0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-	+	.	,
+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+	++	+	,
.0	.1	.2	.3	.4	.5	.6	.7	.8	.9	.	+	..	,
,0	,1	,2	,3	,4	,5	,6	,7	,8	,9	,	+	,	,

fixed-width (tnum, cv47, -kern):

00	01	02	03	04	05	06	07	08	09	0-	0+	0.	0,
10	11	12	13	14	15	16	17	18	19	1-	1+	1.	1,
20	21	22	23	24	25	26	27	28	29	2-	2+	2.	2,
30	31	32	33	34	35	36	37	38	39	3-	3+	3.	3,
40	41	42	43	44	45	46	47	48	49	4-	4+	4.	4,
50	51	52	53	54	55	56	57	58	59	5-	5+	5.	5,
60	61	62	63	64	65	66	67	68	69	6-	6+	6.	6,
70	71	72	73	74	75	76	77	78	79	7-	7+	7.	7,
80	81	82	83	84	85	86	87	88	89	8-	8+	8.	8,
90	91	92	93	94	95	96	97	98	99	9-	9+	9.	9,
-0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-	+	.	,
+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+	++	+	,
.0	.1	.2	.3	.4	.5	.6	.7	.8	.9	.	+	.	,
,0	,1	,2	,3	,4	,5	,6	,7	,8	,9	,	+	,	,

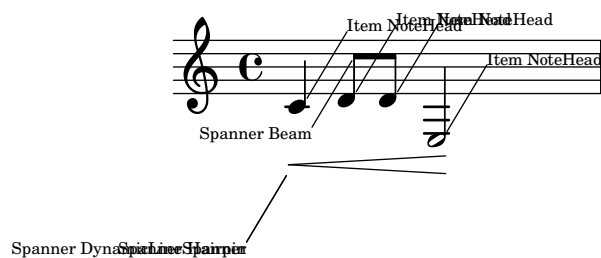
Empty chords accept articulations, occupy no time, and leave the current duration unchanged.

`empty-chord.ly`



The functions `ly:engraver-make-item` and `ly:engraver-make-spanner` are similar to `ly:engraver-make-grob`. They are useful when the grob definition does not mandate a particular grob class.

`engraver-make-item-spanner.ly`



An episema can be typeset over a single neume or a melisma. Its position is quantized between staff lines.

episema.ly



Music events can be extracted from a score with event listeners.

event-listener-output.ly

Black-box Testing

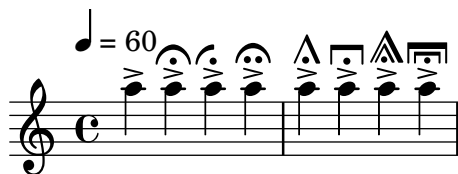
Graham Percival

A mode switching command like `\lyricsto` will ‘pop state’ when seeing the lookahead token `\time`, a music function, after its non-delimited argument. This must not cause the extra token parsing state for the music function to disappear.

extratoken.ly

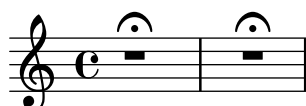
Fermatas have an appropriate distance to dots, note heads and other articulations.

fermata-dot-position.ly



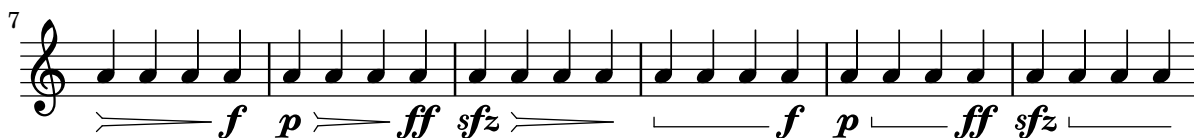
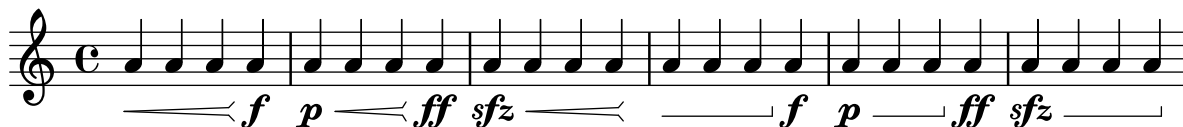
Fermatas over multimeasure rests are positioned as over normal rests.

fermata-rest-position.ly



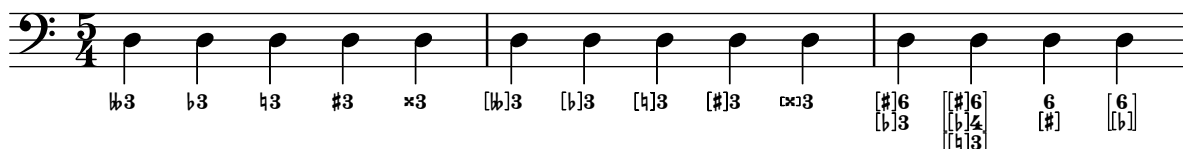
LilyPond creates hairpins found in Ferneyhough scores.

ferneyhough-hairpins.ly



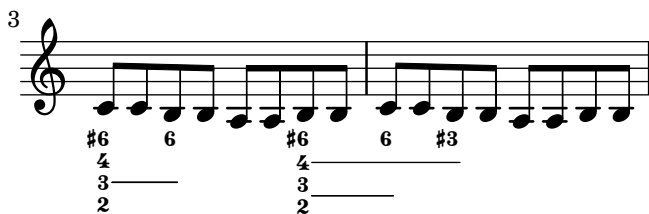
Bass figures can carry alterations, which may also be bracketed.

figured-bass-alteration.ly



Pairs of congruent figured bass extender lines are vertically centered if figuredBassCenterContinuations is set to true.

figured-bass-continuation-center.ly



Figured bass extender for figures of different width (e.g. with alteration or two-digit figures) should still stop at the same position.

figured-bass-continuation-end-position.ly

By adorning a bass figure with \!, an extender may be forbidden.

figured-bass-continuation-forbid.ly

Figured bass extender lines shall be broken when a figure has a different alteration, augmentation or diminishment.

figured-bass-continuation-modifiers.ly

Figured bass extender lines run between repeated bass figures. They are switched on with useBassFigureExtenders

figured-bass-continuation.ly

Bass figures and extenders shall also work correctly if the figure has a different duration than the bass note. In particular, if a timestep does not have a new figure (because the old figure still goes on), extenders should be drawn and not be reset.

figured-bass-durations.ly



Bass figures may be empty and still take up space.

figured-bass-empty-figures.ly

When using extender lines in FiguredBass, markup objects should be treated like ordinary figures and work correctly with extender lines.

Extenders should only be used if the markup is really identical.

figured-bass-extenders-markup.ly

Figured bass extenders do not distort vertical spacing.

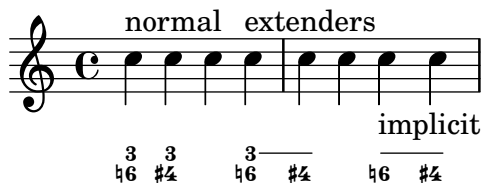
figured-bass-extenders-spacing.ly

When figures appear inside a voice, `ignoreFiguredBassRest` causes all figures on rests to be discarded and all spanners ended. If set to `#f`, figures on rests are printed.

figured-bass-ignore-rest.ly

Implicit bass figures are not printed, but they do get extenders.

figured-bass-implicit.ly



Bass figures with more than a single digit can be positioned differently.

`figured-bass-large-numbers.ly`



Figured bass supports numbers with slashes through them.

`figured-bass-slashed-numbers.ly`

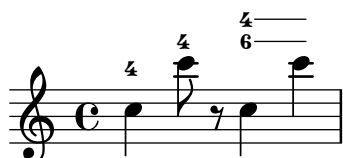
```

0 3 6 9 12 0 3 6 9 12 +3
1 4 7 10 13 1 4 7 10 13 6
2 5 8 11 14 2 5 8 11 14 7
    
```

Figured bass can also be added to Staff context directly. In that case, the figures must be entered with `\figuremode` and be directed to an existing `Staff` context.

Since these engravers are on `Staff` level, properties controlling figured bass should be set in `Staff` context.

`figured-bass-staff.ly`



Figured bass is created by the `FiguredBass` context which responds to figured bass events and rest events. You must enter these using the special `\figuremode { }` mode, which allows you to type numbers, like `<4 6+>` and add slashes, backslashes and pluses.

You can also enter markup strings. The vertical alignment may also be tuned.

`figured-bass.ly`



The fill-line markup command should align texts in columns. For example, the characters in the center should form one column.

`fill-line-test.ly`

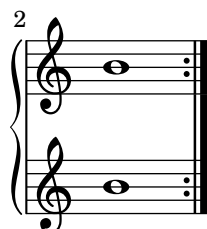
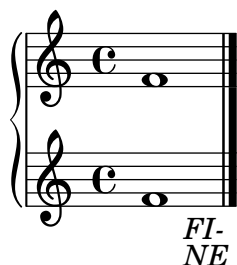
Context modification via `\with` filters translators of the wrong type: performers for an `Engraver_group` and engravers for a `Performer_group`. In this test, the `Instrument_name_engraver` is added to a `StaffGroup`, but does not affect midi output, since it is filtered out.

`filter-translators.ly`



`\fine` places a performance instruction below all staves and at end-of-line at a break, except at the written end of the music. The context property `fineText` controls the text.

`fine.ly`



Scripts left of a chord avoid accidentals.

`finger-chords-accidental.ly`



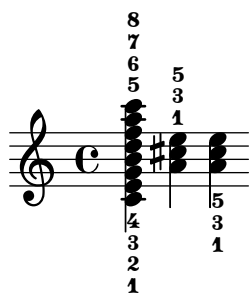
Scripts right of a chord avoid dots.

`finger-chords-dot.ly`



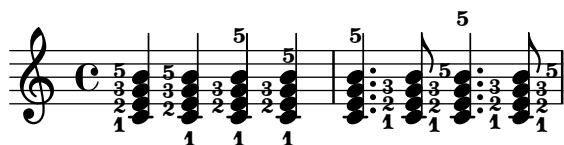
Ordering of the fingerings depends on vertical ordering of the notes, and is independent of up/down direction.

`finger-chords-order.ly`



It is possible to associate fingerings uniquely with notes. This makes it possible to add horizontal fingerings to notes. Fingering defaults to not clearing flags and stems unless there is a collision or a beam.

`finger-chords.ly`



The `FingerGlideSpanner` grob prints nicely for all styles if there are line breaks. For the styles `stub-right`, `stub-left` and `stub-right` the printed line is intentionally shorter.

`finger-glide-spanner-line-break-styles.ly`

The image displays 12 musical staves, each in treble clef with a common time signature 'C'. Each staff contains a single note with various annotations:

- Staff 1: A note with a beam connecting it to a note in the next measure.
- Staff 2: A note with a beam connecting it to a note in the next measure.
- Staff 3: A note with a beam connecting it to a note in the next measure, and a minus sign '-' above the second note.
- Staff 4: A note with a beam connecting it to a note in the next measure, and a minus sign '-' above the first note.
- Staff 5: A note with a beam connecting it to a note in the next measure, and a minus sign '-' above the second note.
- Staff 6: A note with a beam connecting it to a note in the next measure, and a dashed line above the first note.
- Staff 7: A note with a beam connecting it to a note in the next measure, and a dotted line above the first note.
- Staff 8: A note with a beam connecting it to a note in the next measure, and a wavy line above the first note.
- Staff 9: A note with a beam connecting it to a note in the next measure, and a wavy line above the first note.
- Staff 10: A note with a beam connecting it to a note in the next measure, and a slur above the first note.
- Staff 11: A note with a beam connecting it to a note in the next measure.

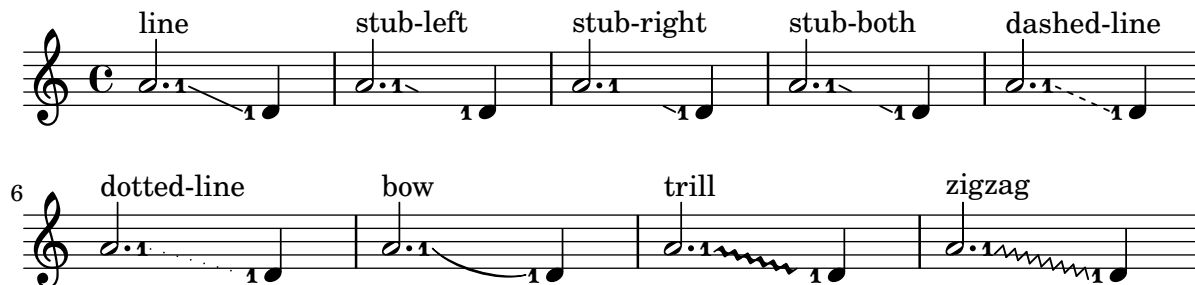
4

Nested FingerGlideSpanner grobs work. A breaking line does not disturb the printing, the part after the break continues with the same angle.

finger-glide-spanner-nested-line-break.ly

The FingerGlideSpanner may be printed in several styles.

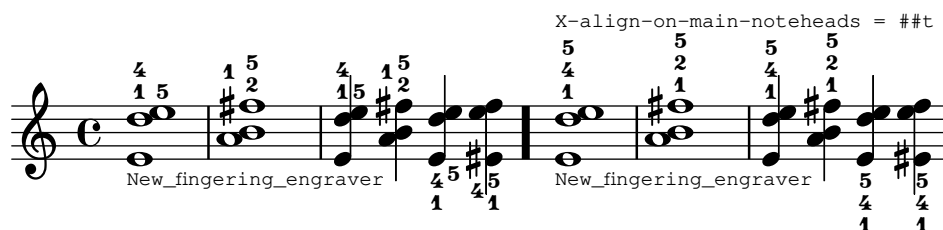
finger-glide-spanner-styles.ly



Fingering grobs created by the `New_fingering_engraver` (i.e. fingerings entered outside `<>`) with `fingeringOrientations` set to `up` or `down` avoid accidentals of displaced notes that might get into the way in chords containing adjacent notes (seconds) or unison notes.

With `\override Fingering.X-align-on-main-noteheads = ##t`, the fingerings oriented `up` and `down` will be arranged in a straight column aligned on the noteheads on the “correct” side of the stem.

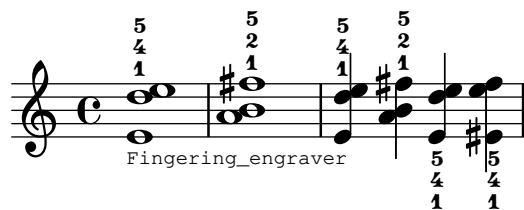
fingering-adjacent-note-chord-new.ly



Fingering grobs created by the `Fingering_engraver` (i.e. fingerings entered inside `<>`) above/below chords containing adjacent notes (seconds) or unison notes should be aligned on the main noteheads, i.e., on the noteheads that are on the “correct” side of the stem.

Incidentally, this also avoids collisions with accidentals.

fingering-adjacent-note-chord.ly



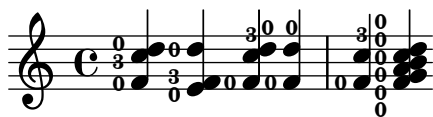
Horizontally-offset Fingerings align along the Y axis when they are within `FingeringColumn.snap-radius` of each other.

fingering-column-snap-radius.ly



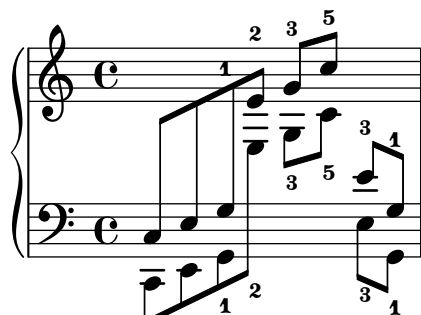
Horizontal Fingering grobs that collide do not intersect. Non-intersecting Fingering grobs are left alone. This is managed by the `FingeringColumn` grob.

fingering-column.ly



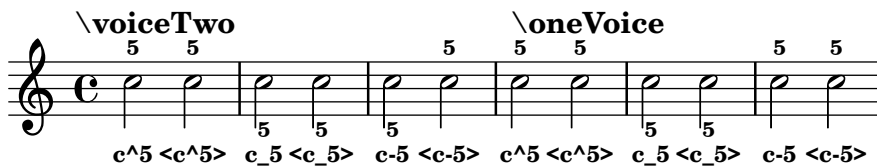
Fingerings work correctly with cross-staff beams.

fingering-cross-staff.ly



Fingering directions in directed and undirected contexts.

fingering-directions.ly



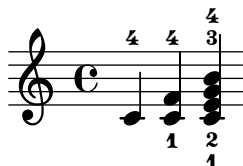
Fingerings don't segfault when their stencil is set to ##f.

fingering-no-stencil.ly



Automatic fingering tries to put fingering instructions next to noteheads.

fingering.ly



Stems reach correct begin points of merged noteheads.

flag-stem-begin-position.ly





`\flageolet` draws a small circle on top of the note when a natural harmonic is needed.

`flageolet.ly`



Default flag styles: `'()`, `'mensural` and `'no-flag`. Compare all three methods to print them: (1) C++ default implementation, (2) Scheme implementation using the `'style` grob property and (3) setting the `'flag` property explicitly to the desired Scheme function. All three systems should be absolutely identical.

`flags-default.ly`

Default flags (C++)	Symbol: 'mensural (C++)	Symbol: 'no-flag (C++)
Default flags (Scheme)	Symbol: 'mensural (Scheme)	Symbol: 'no-flag (Scheme)
Function: normal-flag	Function: mensural-flag	Function: no-flag

The `'stencil` property of the `Flag` grob can be set to a custom scheme function to generate the glyph for the flag.

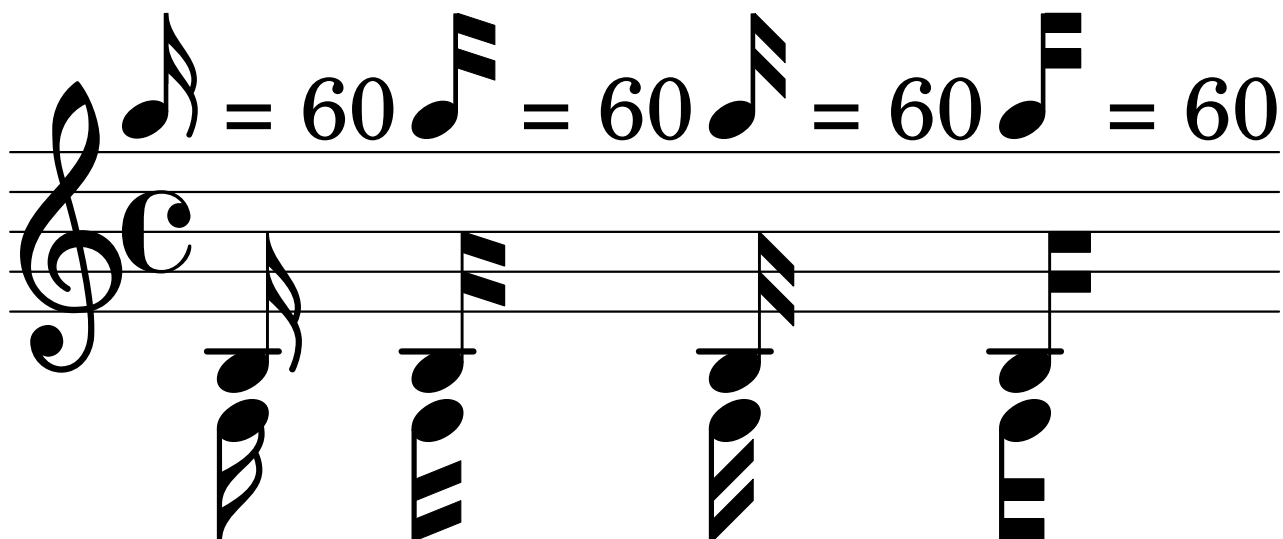
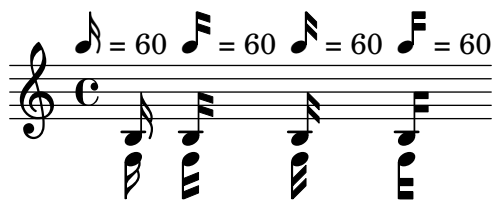
`flags-in-scheme.ly`

Function: weight-flag (custom)	Function: inverted-flag (custom)
--------------------------------	----------------------------------

Straight flags scale according to `layout-set-staff-size` in `MetronomeMark`, `TextScript` and music.

`flags-straight-layout-staff-size.ly`





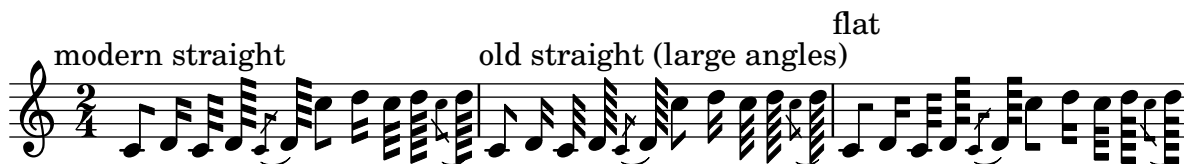
Flags can be drawn straight in the style used by Stockhausen and Boulez.

flags-straight-stockhausen-boulez.ly



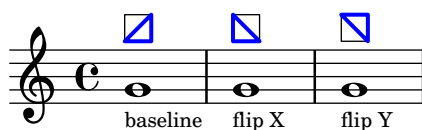
Straight flag styles.

flags-straight.ly



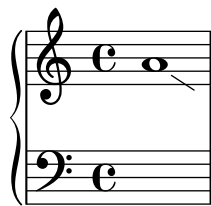
Stencils can be flipped horizontally or vertically within their bounding box using flip-stencil.

flip-stencil.ly

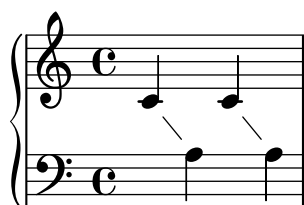


The line-spanners connects to the Y position of the note on the next line. When put across line breaks, only the part before the line break is printed.

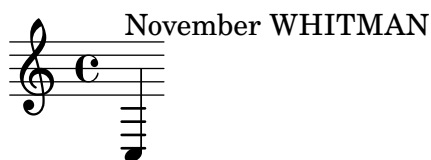
follow-voice-break.ly



The voice follower is not confused when set for consecutive sets of staff switches.
`follow-voice-consecutive.ly`



TM and No should not be changed into trademark/number symbols. This may happen with incorrect font versions.
`font-bogus-ligature.ly`



The default font families for text can be overridden with `make-pango-font-tree`.
`font-family-override.ly`



Exercise font features. Requires a font that supports the features. This ensures no errors using the interface.
`font-features.ly`

Hello

HELLO

HELLO

Hello

Hello


0123456789


0123456789

Hello 0123456789

Text gets kerned if the used font supports that.

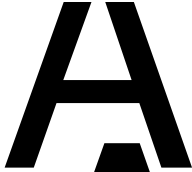
font-kern.ly

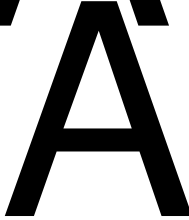
With kerning: 

Without kerning: 

External fonts may be used without being installed on the operating system, by loading either a specific font file or a directory that contains font files. In this example two logos ('GPL' and 'GFDL') should be printed, rather than letter glyphs.

font-name-add-files.ly

GPL logo: 

GFDL logo: 

Setting the `font-name` property does not change the font size. The two strings below should be concatenated and have the same font size.

Note that 'the same font size' is related to what lilypond reports on the console if in verbose mode (3.865234375 units for this regression test). If you actually look at the two fonts the optical size differs enormously.

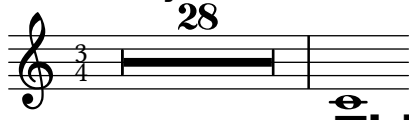
font-name-font-size.ly

`pfsmpfsm`

Other fonts can be used by setting `font-name` for the appropriate object. The string should be a Pango font description without size specification.

font-name.ly

Rest in DejaVu Sans Mono



This text is in large Vera Sans Bold

This file demonstrates how to load different (postscript) fonts. The file `font.scm` shows how to define the scheme-function `make-default-fonts-tree`.

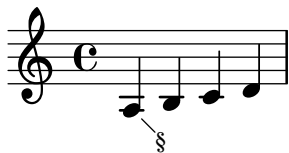
font-postscript.ly



This is an example of automatic footnote numbering where the number is reset on each page. It uses the `symbol-footnotes` numbering function, which assigns the symbols `*`, `†`, `‡`, `§` and `¶` to successive footnotes, doubling up on the symbol after five footnotes have been reached.

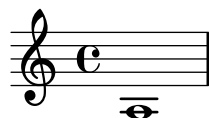
footnote-auto-numbering-page-reset.ly

a b* d† f‡
h i



*c
†e
‡g
§j

2
k l*



*m
†n
‡o
§p

Music engraving by LilyPond 2.24.4—www.lilypond.org

This regtest makes sure that footnote numbers are laid out in the correct vertical order.

The first system of music consists of two staves in common time (C). The upper staff begins with a treble clef and a common time signature. It contains a quarter rest, followed by a quarter note G4, a quarter note A4, and a quarter note B4. A triplet of eighth notes (C5, D5, E5) is marked with a '3' and a slur. This is followed by a quarter note F5, a quarter note G5, and a quarter note A5. A dynamic marking of *f* (forte) is placed below the staff. The lower staff begins with a bass clef and a common time signature. It contains a quarter rest, followed by a quarter note G3, a quarter note A3, and a quarter note B3. A triplet of eighth notes (C4, D4, E4) is marked with a '2' and a slur. This is followed by a quarter note F4, a quarter note G4, and a quarter note A4. A dynamic marking of *f* (forte) is placed below the staff.

The second system of music consists of two staves in common time (C). The upper staff begins with a treble clef and a common time signature. It contains a quarter rest, followed by a quarter note G4, a quarter note A4, and a quarter note B4. A triplet of eighth notes (C5, D5, E5) is marked with a '7' and a slur. This is followed by a quarter note F5, a quarter note G5, and a quarter note A5. A dynamic marking of *f* (forte) is placed below the staff. The lower staff begins with a bass clef and a common time signature. It contains a quarter rest, followed by a quarter note G3, a quarter note A3, and a quarter note B3. A triplet of eighth notes (C4, D4, E4) is marked with an '8' and a slur. This is followed by a quarter note F4, a quarter note G4, and a quarter note A4. A dynamic marking of *f* (forte) is placed below the staff.

- 1n
- 2n
- 3o
- 4o
- 5p
- 6p
- 7n
- 8n
- 9o
- 10o
- 11p
- 12p

2
7

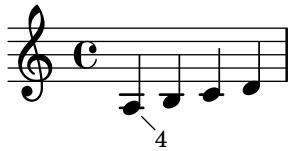
13 15 17
14 16 18

13n
14n
15o
16o
17p
18p

Music engraving by LilyPond 2.24.4—www.lilypond.org

This is an example of automatic footnote numbering where the number is not reset on each page. It uses the default numbering function, which assigns numbers starting at 1 to successive footnotes.

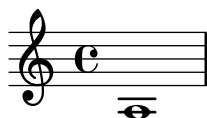
a b¹ d² f³
h i



1c
2e
3g
4j



2
k 15

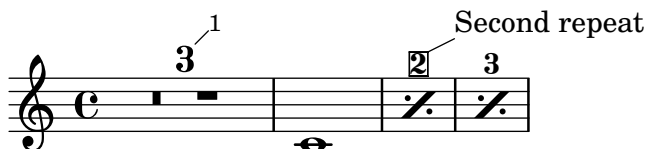


5m
6n
7o
8p

Music engraving by LilyPond 2.24.4—www.lilypond.org

Balloons and footnotes on multi-measure rest numbers and percent repeat counters are correctly placed.

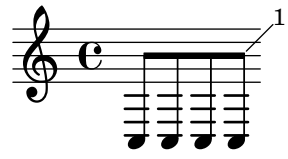
`footnote-balloon-on-counter.ly`



¹Rest during three measures

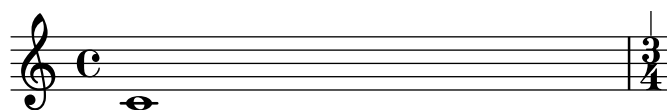
Music engraving by LilyPond 2.24.4—www.lilypond.org

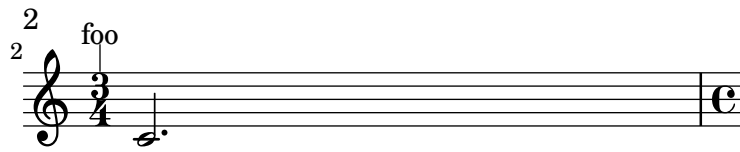
Automatic beams may receive footnotes.



With grobs that have break visibility, footnotes will automatically take the break visibility of the grob being footnoted. This behavior can be overridden.

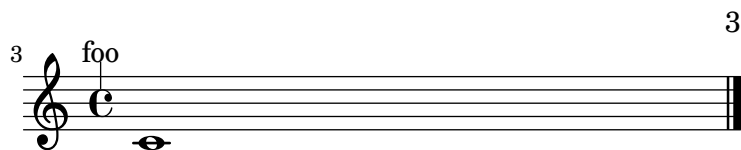
footnote-break-visibility.ly





bar



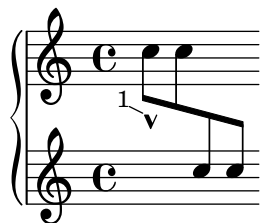


bar

Music engraving by LilyPond 2.24.4—www.lilypond.org

Footnotes work on cross-staff grobs.

`footnote-cross-staff.ly`

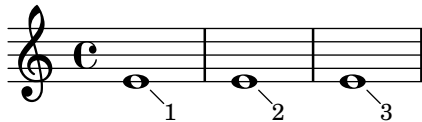


¹marcato

Music engraving by LilyPond 2.24.4—www.lilypond.org

The padding between a footnote and the footer can be tweaked.

footnote-footer-padding.ly



-
1. Tiny space below.
 2. Tiny space below.
 3. Big space below.

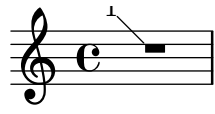
Music engraving by LilyPond 2.24.4—www.lilypond.org

Lyrics may receive footnotes.

footnote-lyrics.ly

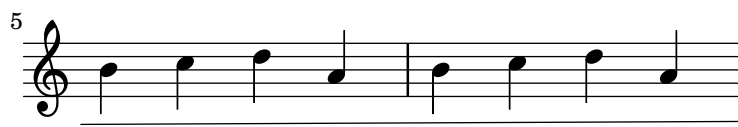
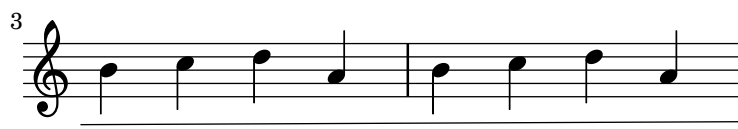
aaah
1

Multi-measure rests may receive footnotes.



Footnotes are annotated at the correct place, and the annotation goes to the correct page.

footnote-spanner.ly



1. Goes to the first broken spanner.



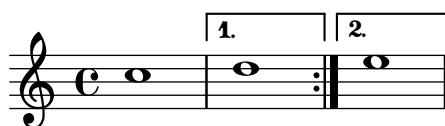


2. Goes to the last broken spanner.

Music engraving by LilyPond 2.24.4—www.lilypond.org

Footnotes on volta brackets also work

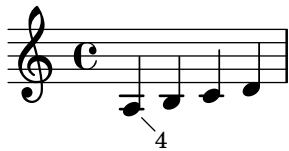
`footnote-volta-spanner.ly`



Lilypond does footnotes.

`footnote.ly`

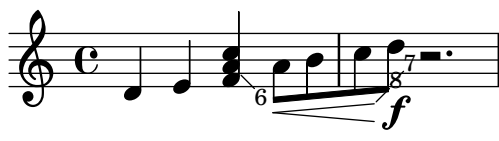
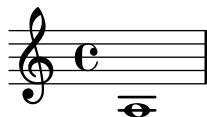
a b¹ d² f³
h i



1. c
2. e
3. g
4. j



2
k l⁵



5. m
6. n
7. o
8. p

Music engraving by LilyPond 2.24.4—www.lilypond.org

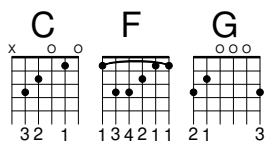
`forbidBreakBetweenBarLines` controls whether `Bar_engraver` forbids line breaks where there is no bar line. The output should have a break in the middle of a measure.

`forbid-break-between-bar-lines.ly`



`FretBoards` should be aligned in the Y direction at the fret-zero, string 1 intersection.

`fret-board-alignment.ly`



Frets can be assigned automatically. The results will be best when one string number is indicated in advance

fret-boards.ly

autofrets

Fret diagrams of different orientation should share a common origin of the topmost fret or string.

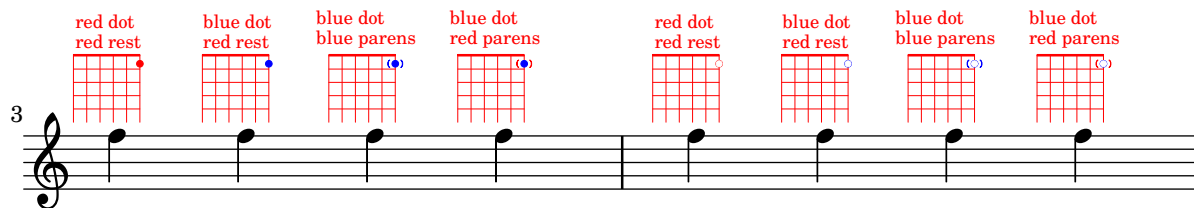
fret-diagram-origins.ly

A capo indicator can be added with a fret-diagram-verbose string, and its thickness can be changed.

fret-diagrams-capo.ly

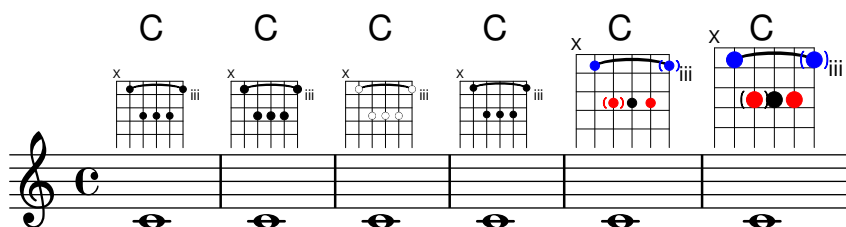
Dots in fret diagrams may be colored as well as the entire fret diagram. Not explicitly colored dots take the color from `TextScript` grob or from `with-color`. Otherwise the specified color is preserved. Parentheses take their color from the dot, if `default-paren-color` is used they take their color from the overall color. Works for inverted dots as well.

fret-diagrams-dot-color.ly



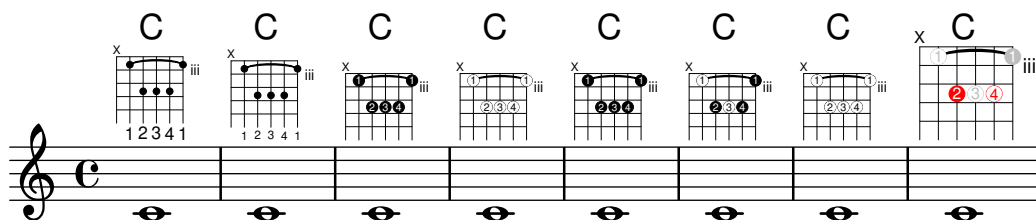
Dots indicating fingerings can be changed in location, size, and coloring. It is possible to parenthesize a single dot. The color of the paranthesis may be taken from dot or default. A possible collision between parathesis and fret-label- indication can be resolved by an override for fret-label-horizontal-offset in fret-diagram-details.

fret-diagrams-dots.ly



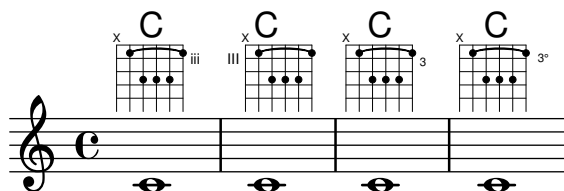
Finger labels can be added, either in dots or below strings. Dot color can be changed globally or on a per-dot basis, and fingering label font size can be adjusted.

fret-diagrams-fingering.ly



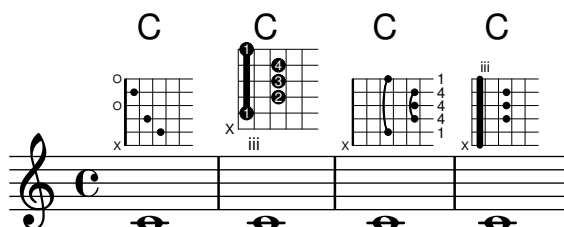
The label for the lowest fret can be changed in location, size, and number type.

fret-diagrams-fret-label.ly



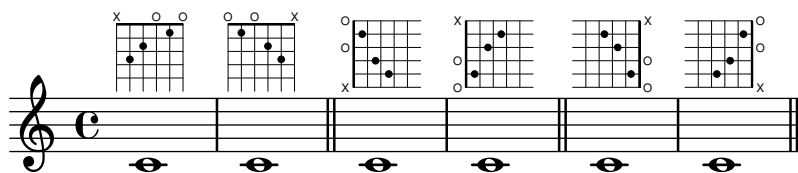
Fret diagrams can be presented in landscape mode.

fret-diagrams-landscape.ly



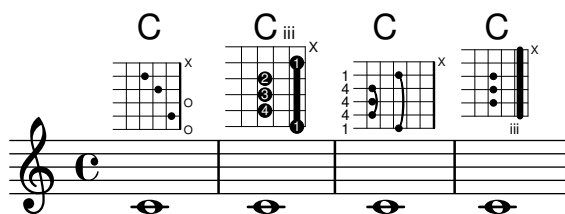
Fret-diagrams may be printed left-handed

fret-diagrams-left-handed.ly



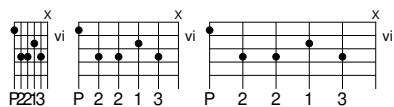
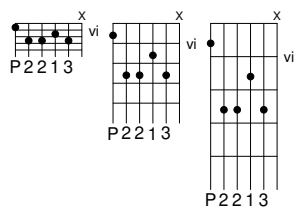
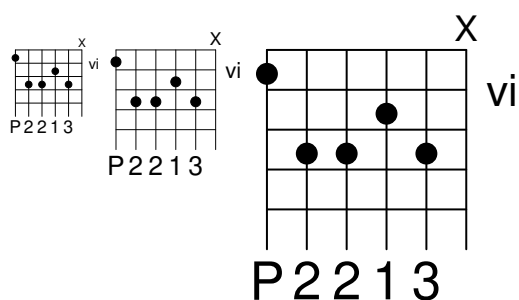
Fret diagrams can be presented in landscape mode.

fret-diagrams-opposing-landscape.ly



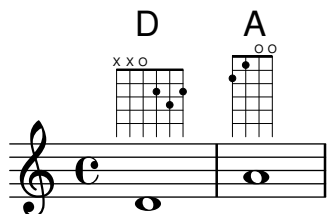
Fret diagrams can be scaled using the `size` property. Also, scaling the distance between the frets and/or strings is possible with the properties `fret-distance` and/or `string-distance` of `fret-diagram-details`. The position and size of first fret label, mute/open signs, fingers, relative to the diagram grid, shall be the same in all cases.

fret-diagrams-size.ly



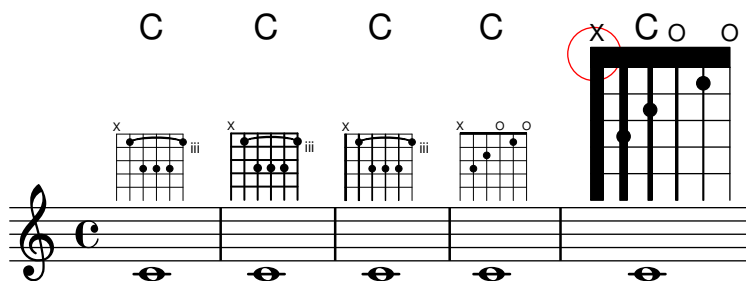
Number of frets and number of strings can be changed from the defaults.

fret-diagrams-string-frets.ly



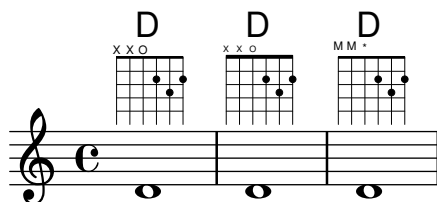
String thickness can be changed, and diagrams can have variable string thickness. The thick zero-fret is adjusted accordingly for changed size, `fret-diagram-details.string-thickness-factor` and `fret-diagram-details.top-fret-thickness`. There should be no visible gap inside the red circle.

`fret-diagrams-string-thickness.ly`



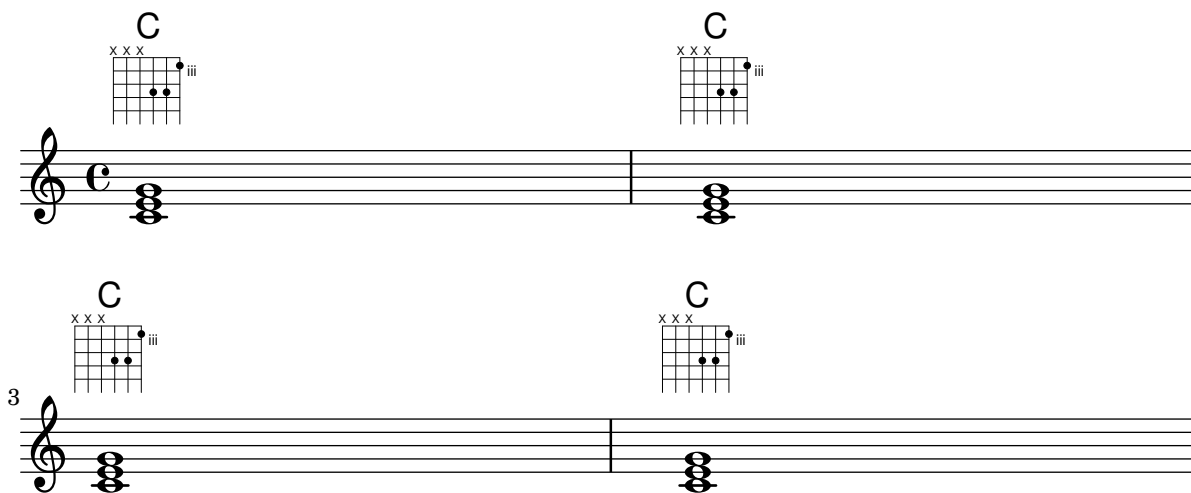
The size, spacing, and symbols used to indicate open and muted strings can be changed.

`fret-diagrams-xo-label.ly`



FretBoards can be set to display only when the chord changes or at the beginning of a new line.

`fretboard-chordchanges.ly`



5

6

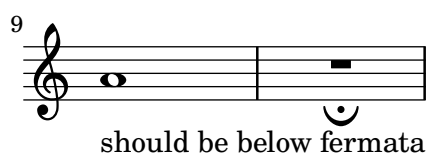
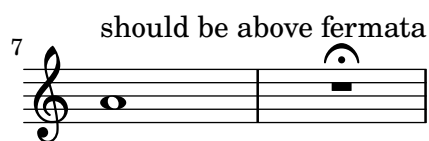
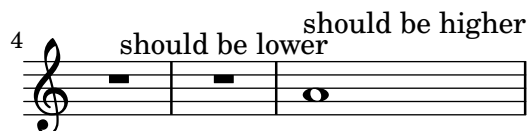
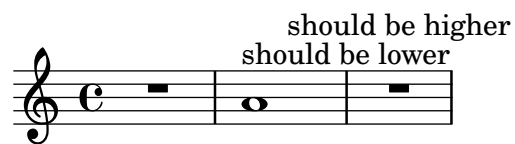
8

Markups can be put into the dots of a fret-diagram. Those markups are scaled automatically to fit into the dots.

fretdiagram-markup-in-dots.ly

Fermata over full-measure rests should invert when below and be closer to the staff than other articulations.

full-measure-rest-fermata.ly



This file tests various Scheme utility functions.

`general-scheme-bindings.ly`

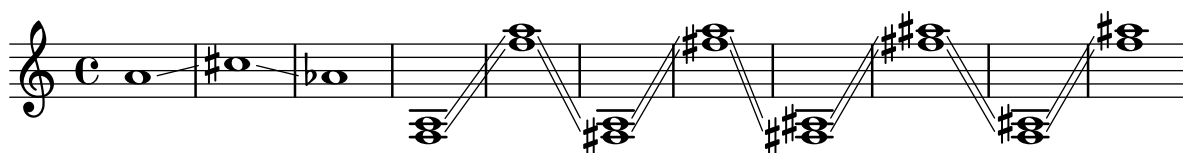
As a last resort, the placement of grobs can be adjusted manually, by setting the `extra-offset` of a grob.

`generic-output-property.ly`



Glissandi stop before hitting accidentals. Chord glissandi stop at the same horizontal position and have the same slope, they do not cross.

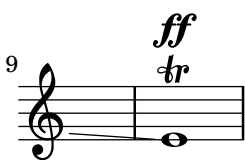
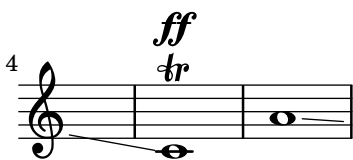
`glissando-accidental.ly`



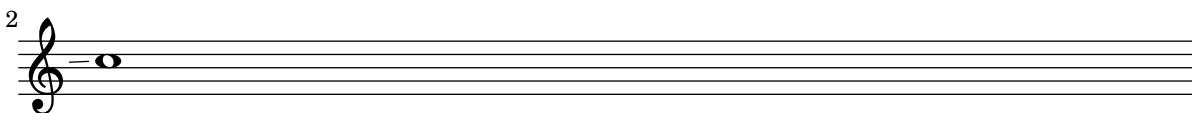
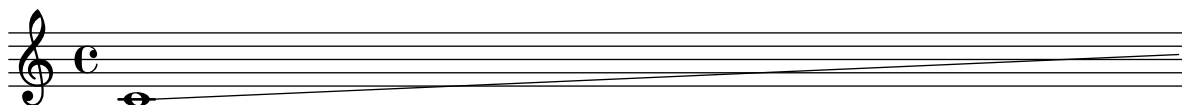
When broken, glissandi can span multiple lines.

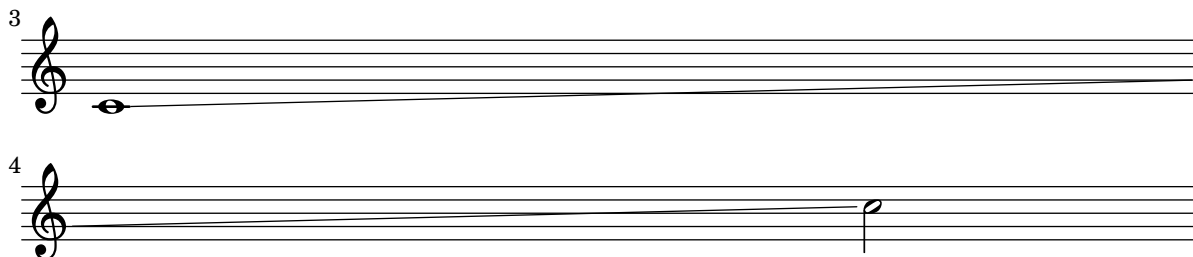
`glissando-broken-multiple.ly`





Broken glissandi anticipate the pitch on the next line.
glissando-broken-unkilled.ly





If broken, Glissandi anticipate on the pitch of the next line.

glissando-broken.ly



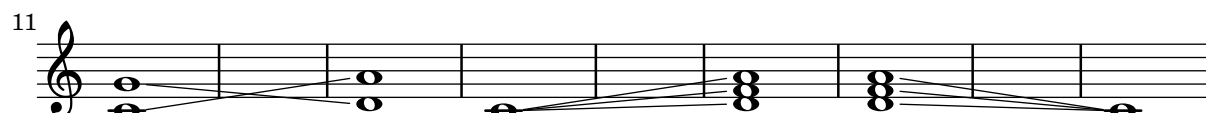
A glissando between chords should not interfere with line breaks. In this case, the music should be in two lines and there should be no warning messages issued. Also, the glissando should be printed.

glissando-chord-linebreak.ly



LilyPond typesets glissandi between chords.

glissando-chord.ly



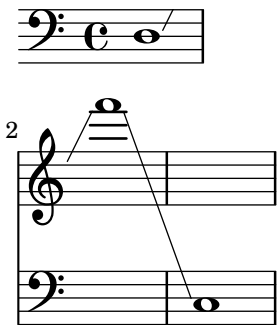
Lilypond prints consecutive glissandi.

glissando-consecutive.ly



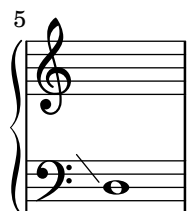
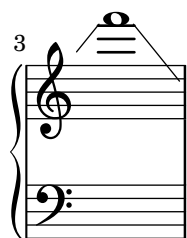
Broken cross-staff glissandi have acceptable slopes when one staff is removed.

glissando-cross-staff-broken-remove-empty.ly



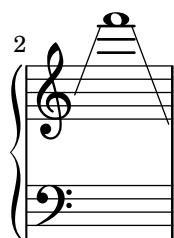
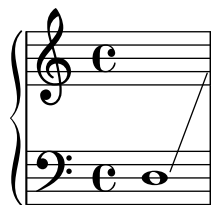
Broken cross-staff glissandi can span more than two systems.

glissando-cross-staff-broken-several-systems.ly



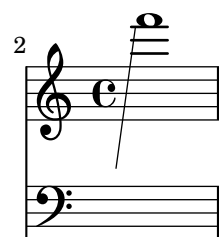
Cross-staff glissandi have acceptable slopes when they cross line breaks.

glissando-cross-staff-broken.ly



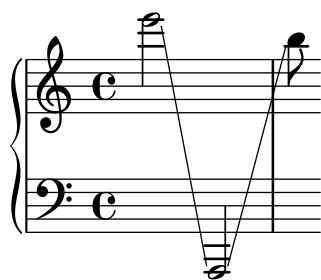
Broken cross-staff glissandi have acceptable slopes when one staff is removed.

glissando-cross-staff-staff-absent.ly



Cross staff glissandi reach their endpoints correctly.

glissando-cross-staff.ly



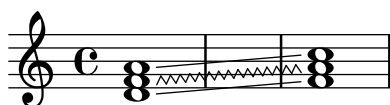
Glissandi begin after dots by default. This behavior may be changed by overriding the `start-at-dot` property.

`glissando-dots.ly`



Individual glissandi within a chord can be tweaked.

`glissando-index.ly`



Glissandi are not broken. Output of this test is expected to run off the page.

`glissando-no-break.ly`



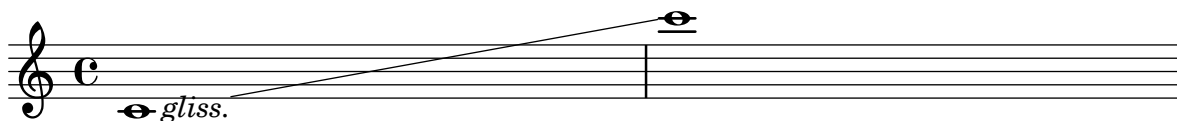
NoteColumn grobs can be skipped over by glissandi.

`glissando-skip.ly`



`stencil-align-dir-y` also works on glissandi.

`glissando-stencil-align-dir-y.ly`

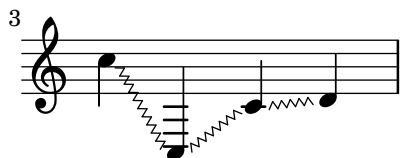


Between notes, there may be simple glissando lines. Here, the first two glissandi are not consecutive.

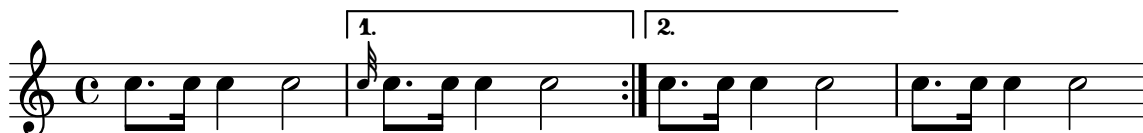
The engraver does no time-keeping, so it involves some trickery to get `<< { s8 s8 s4 } { c4 \gliss d4 } >>` working correctly.

`glissando.ly`





A grace in the first alternative does not cause the beaming to go awry in subsequent material
`grace-alternative.ly`



A separate 'Grace_auto_beam_engraver' initiates autobeaming at the start of each `\grace` command.

`grace-auto-beam-engraver.ly`



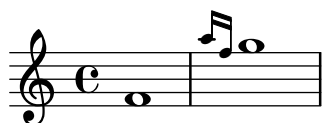
The autobeamer is not confused by grace notes.

`grace-auto-beam.ly`



Bar line should come before the grace note.

`grace-bar-line.ly`



Grace notes do tricky things with timing. If a measure starts with a grace note, the measure does not start at 0, but earlier. Nevertheless, lily should not get confused. For example, line breaks should be possible at grace notes, and the bar number should be printed correctly.

`grace-bar-number.ly`



Grace beams and normal beams may occur simultaneously. Unbeamed grace notes are not put into normal beams.

`grace-beam.ly`



The `\voiceOne` setting is retained after finishing the grace section.

`grace-direction-polyphony.ly`



Grace notes at the end of an expression don't cause crashes.

`grace-end-expression.ly`



Grace notes after the last note do not confuse the timing code.

`grace-end.ly`



Grace-timed elements in sequence line up before the next main note in the obvious way.

`grace-multiple.ly`



`startGraceMusic` and `stopGraceMusic` may be overridden to change the properties of grace notes. In this test, the stems of the grace notes point down.

`grace-music-override.ly`



Grace code should not be confused by nested sequential music containing grace notes; practically speaking, this means that the end-bar and measure bar coincide in this example.

`grace-nest1.ly`



Grace code should not be confused by nested sequential music containing grace notes; practically speaking, this means that the end-bar and measure bar coincide in this example.

`grace-nest2.ly`



In nested syntax, graces are still properly handled.

`grace-nest3.ly`



Also in the nested syntax here, grace notes appear rightly.

`grace-nest4.ly`



Graces notes may have the same duration as the main note.

grace-nest5.ly



Grace notes may be put in a `partCombiner`.

grace-part-combine.ly



A `\partial` may be combined with a `\grace`.

grace-partial.ly



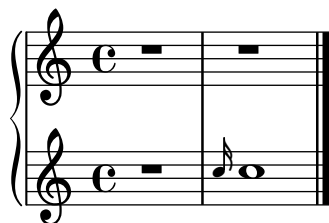
Create grace notes with slashed stem, but no slur. That can be used when the grace note is tied to the next note.

grace-slashed-no-slur.ly



Stripped version of `trip.ly`. Staves should be of correct length.

grace-staff-length.ly



Pieces may begin with grace notes.

grace-start.ly



Stem lengths for grace notes should be shorter than normal notes, if possible. They should never be longer, even if that would lead to beam quanting problems.

`grace-stem-length.ly`



Here `startGraceMusic` should set `no-stem-extend` to true; the two grace beams should be the same here.

`grace-stems.ly`



Grace notes in different voices/staves are synchronized.

`grace-sync.ly`



There are three different kinds of grace types: the base grace switches to smaller type, the appoggiatura inserts also a slur, and the acciaccatura inserts a slur and slashes the stem.

`grace-types.ly`



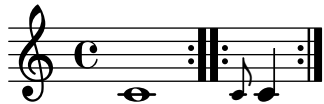
When grace notes are entered with unfolded repeats, line breaks take place before grace notes.

`grace-unfold-repeat.ly`



A volta repeat may begin with a grace. Consecutive ending and starting repeat bars are merged into one :...:

grace-volta-repeat-merge-barline.ly



Repeated music can start with grace notes. Bar checks preceding the grace notes do not cause synchronization effects.

grace-volta-repeat.ly



You can have beams, notes, chords, stems etc. within a `\grace` section. If there are tuplets, the grace notes will not be under the brace.

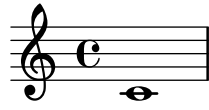
Main note scripts do not end up on the grace note.

grace.ly



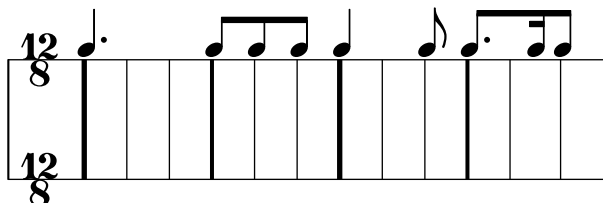
The `graphviz` feature draws dependency graphs for grob properties.

graphviz.ly



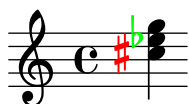
With grid lines, vertical lines can be drawn between staves synchronized with the notes.

`grid-lines.ly`



With the full form of the `\tweak` function, individual grobs that are indirectly caused by events may be tuned.

`grob-indirect-tweak.ly`



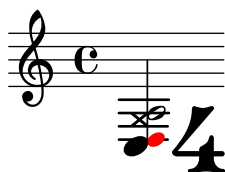
`ly:grob-object` supports a third optional parameter, the fallback value to use when the property is undefined in the grob. This test should print 'Test OK' twice.

`grob-object-fallback.ly`



With the `\tweak` function, individual grobs that are directly caused by events may be tuned directly.

`grob-tweak.ly`



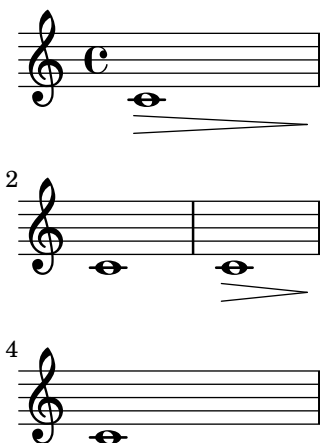
Hairpins in Dynamics contexts do not collide with arpeggios.

`hairpin-arpeggio.ly`



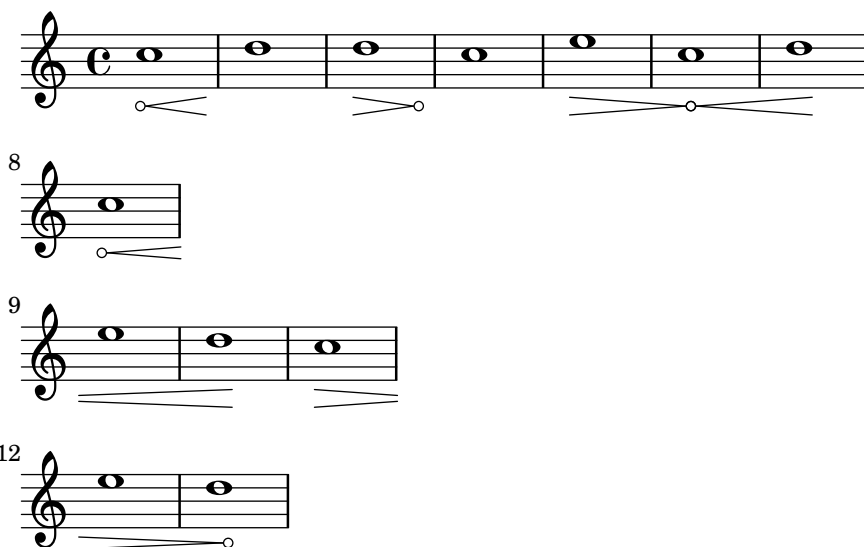
If a hairpin ends on the first note of a new staff, we do not print that ending. But on the previous line, this hairpin should not be left open, and should end at the bar line.

`hairpin-barline-break.ly`



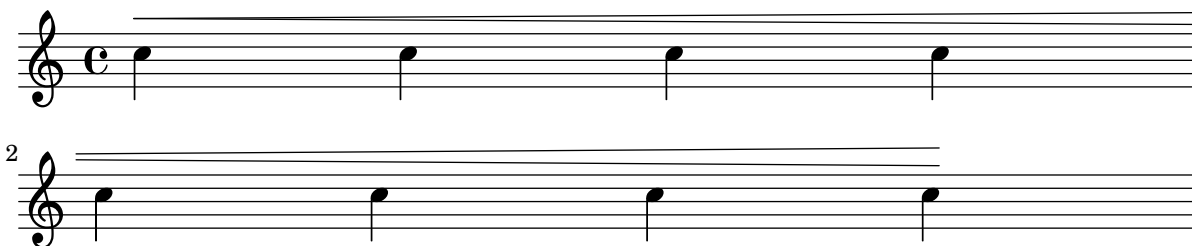
Hairpins can have circled tips. A decrescendo del niente followed by a crescendo al niente should only print one circle.

hairpin-circled.ly



Broken hairpins are not printed too high after treble clefs.

hairpin-clef.ly



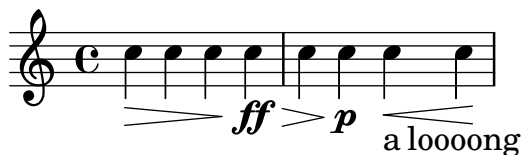
Hairpin crescendi may be dashed.

hairpin-dashed.ly



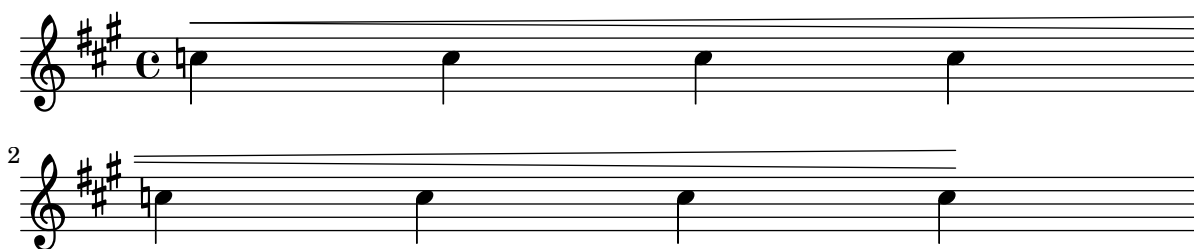
Hairpin dynamics start under notes if there are no text-dynamics. If there are text dynamics, the hairpin does not run into them.

hairpin-ending.ly



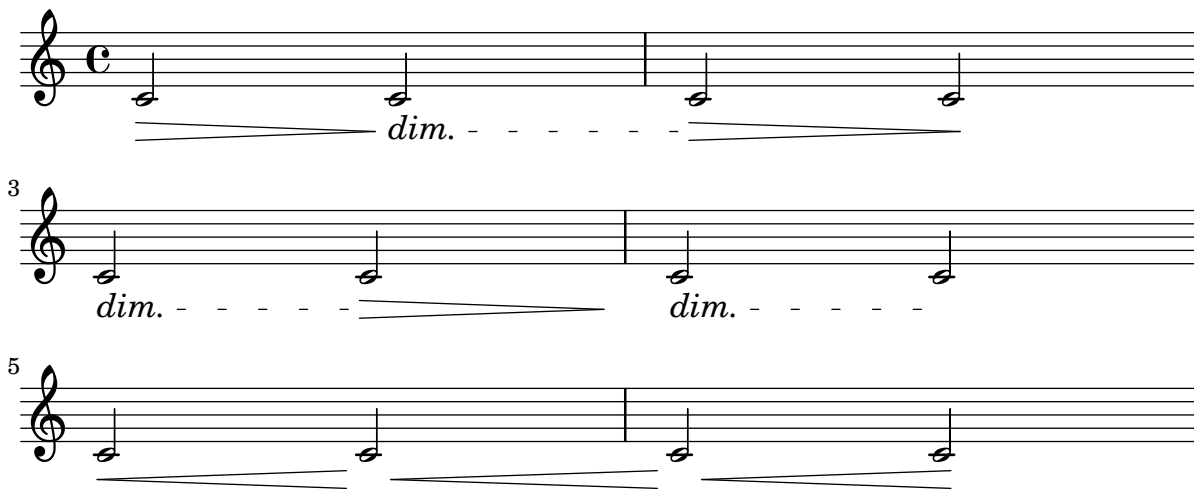
Broken hairpins are not printed too high after key signatures.

hairpin-key-signature.ly



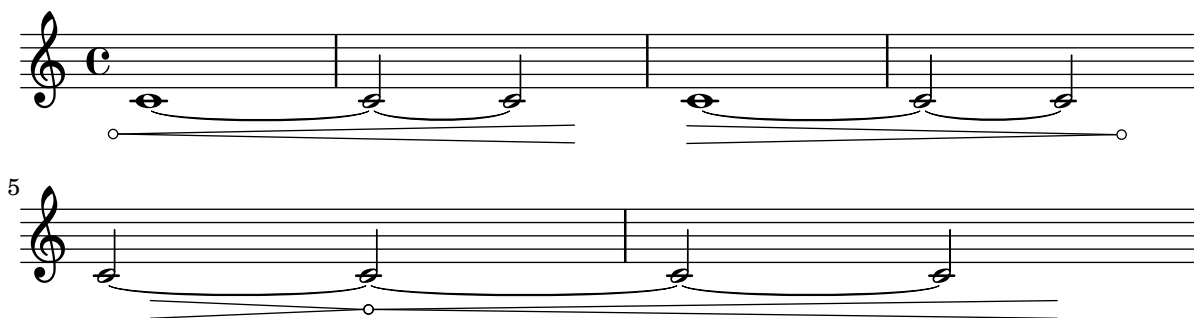
Bound padding for hairpins also applies before following DynamicTextSpanner grobs. In this case, bound-padding is not scaled down.

hairpin-neighbor-span-dynamics.ly



The shorten-pair property works with circled-tip hairpins. When two hairpins share a circle, the adjoining ends are not moved.

hairpin-shorten-pair-circled-tip.ly



The ends of hairpins may be offset with the `shorten-pair` property. Positive values offset ends to the right, negative values to the left.

`hairpin-shorten-pair.ly`

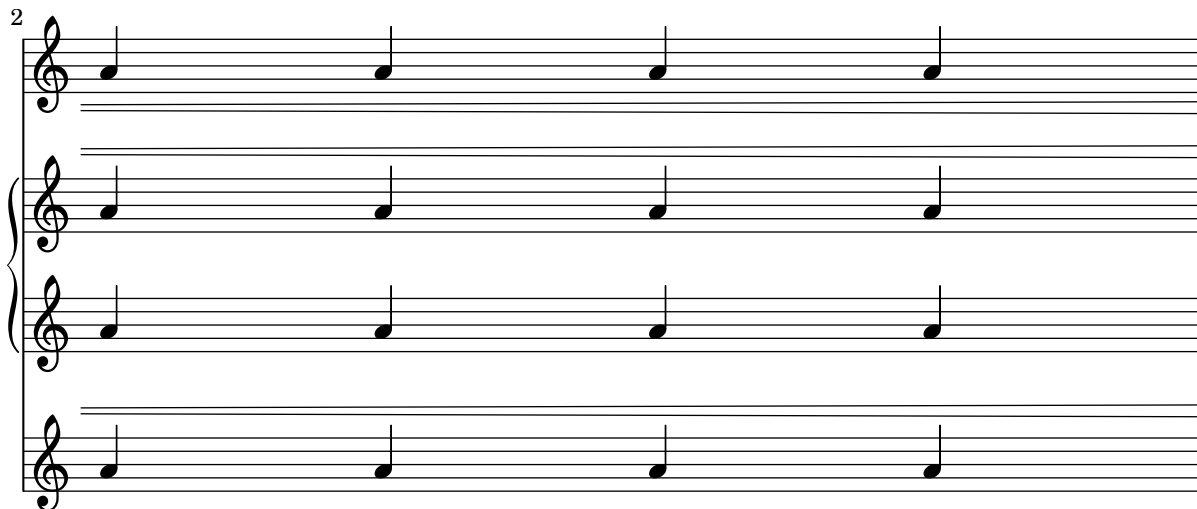
The image displays four musical staves illustrating hairpin and SpanBar grobs. The first staff shows a hairpin with a positive offset on its right end. The second staff shows a hairpin with a negative offset on its left end. The third staff shows a hairpin with a positive offset on its left end. The fourth staff shows a SpanBar with a positive offset on its right end.

Hairpin grobs do not collide with SpanBar grobs. Hairpin grobs should, however, go to the end of a line when the SpanBar is not present.

`hairpin-span-bar.ly`

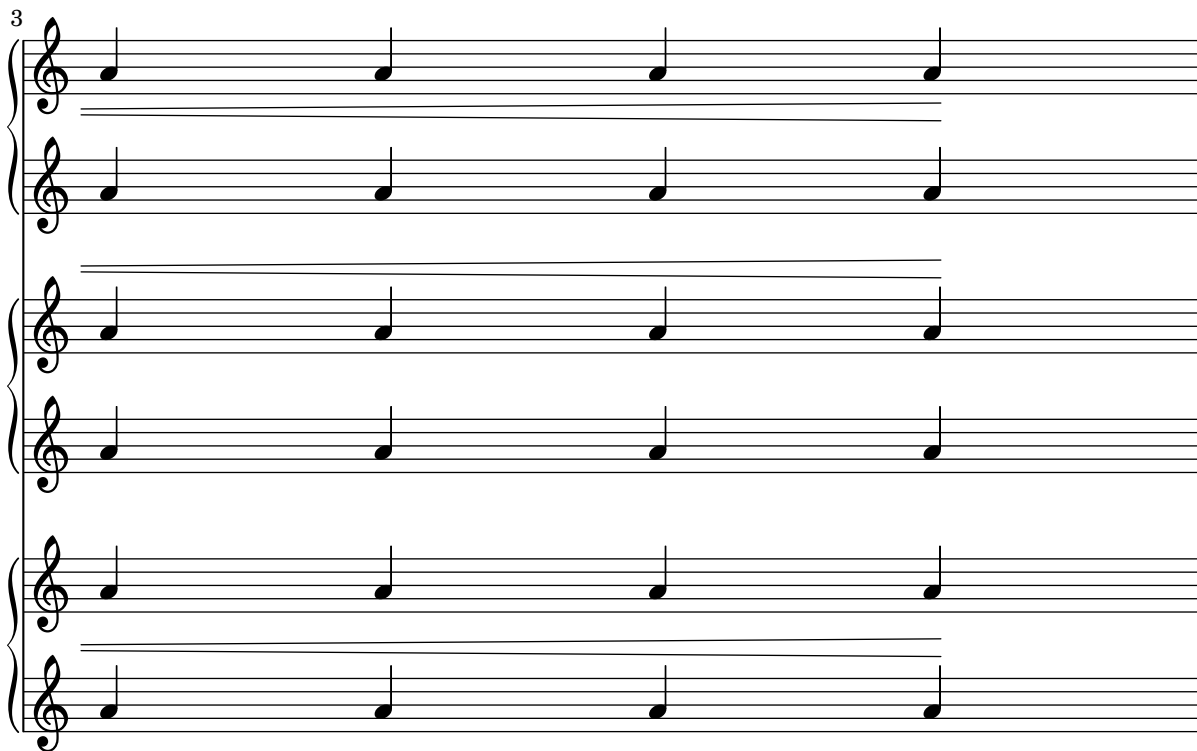
The image shows a musical score with six staves. The first two staves are grouped by a brace on the left and contain hairpin grobs. The last four staves are grouped by a brace on the left and contain SpanBar grobs. The hairpin grobs are positioned to the right of the SpanBar grobs, demonstrating that they do not collide.

2



A musical score for system 2, consisting of four staves. The first staff has a treble clef and contains four quarter notes. The second and third staves are grouped by a brace on the left and contain two staves each, each with four quarter notes. The fourth staff has a bass clef and contains four quarter notes. The notes are positioned at the first, second, third, and fourth lines of each staff.

3



A musical score for system 3, consisting of four staves. The first staff has a treble clef and contains four quarter notes. The second and third staves are grouped by a brace on the left and contain two staves each, each with four quarter notes. The fourth staff has a bass clef and contains four quarter notes. The notes are positioned at the first, second, third, and fourth lines of each staff.

'to-barline is not confused by very long marks.

hairpin-to-barline-mark.ly

This is quite a long mark text



A musical score for system 4, consisting of a single staff with a treble clef and a common time signature (C). The staff contains a half note followed by four quarter notes. A hairpin mark is placed below the notes, starting under the first note and ending under the fourth note, with a bar line at the end of the fourth note.

Hairpins whose end note is preceded by a bar line should end at that bar line.

hairpin-to-barline.ly



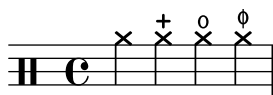
Hairpins end at the left edge of a rest.

hairpin-to-rest.ly



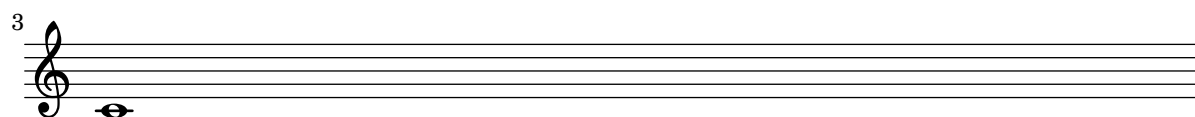
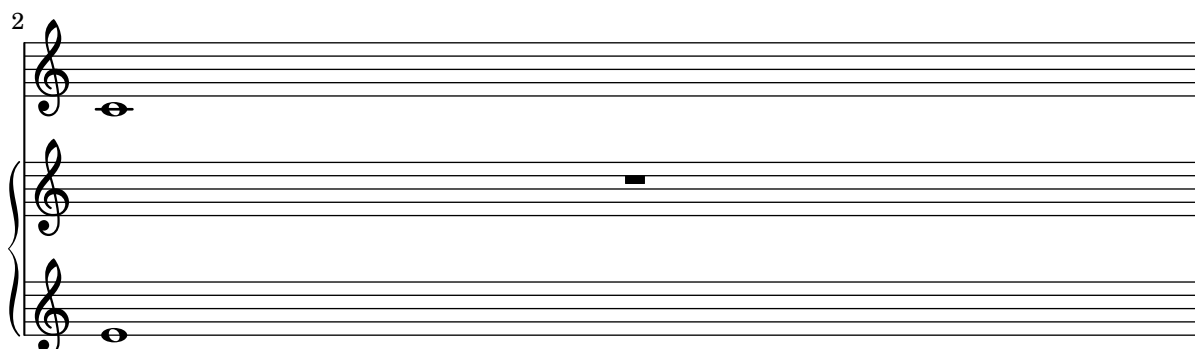
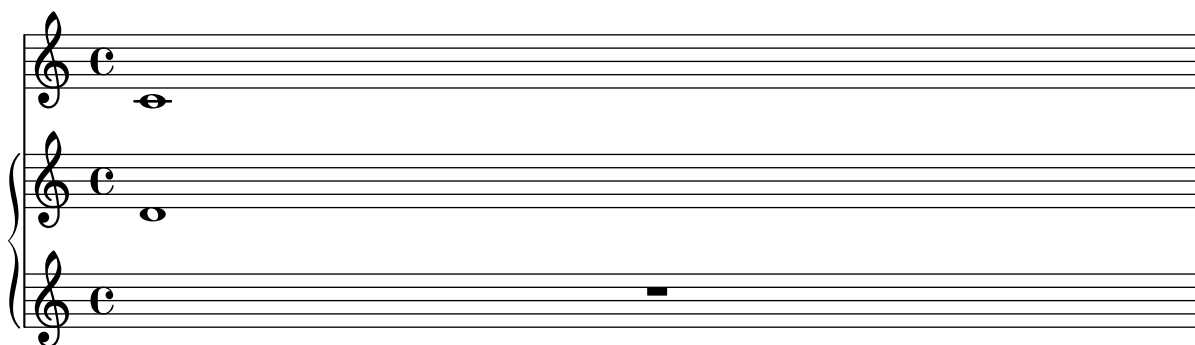
The halfopenvertical articulation is available.

halfopenvertical.ly



Staves in a PianoStaff remain alive as long as any of the staves has something interesting.

hara-kiri-alive-with.ly

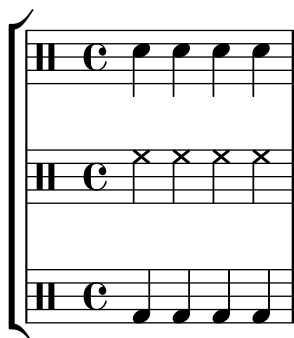


Hara-kiri staves are suppressed if they are empty. This example really contains three drum staves, but as it progresses, empty ones are removed: this example has three staves, but some of them disappear: note how the 2nd line only has the bar number 2. (That the bar number

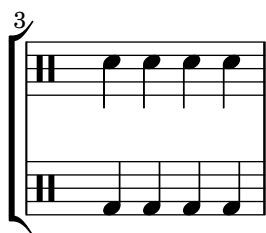
is printed might be considered a bug, however, the scenario of all staves disappearing does not happen in practice.)

Any staff brackets and braces are removed, both in the single staff and no staff case.

`hara-kiri-drumstaff.ly`



2



4

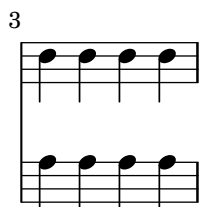


Inserting the harakiri settings globally into the Staff context should not erase previous settings to the Staff context.

`hara-kiri-keep-previous-settings.ly`



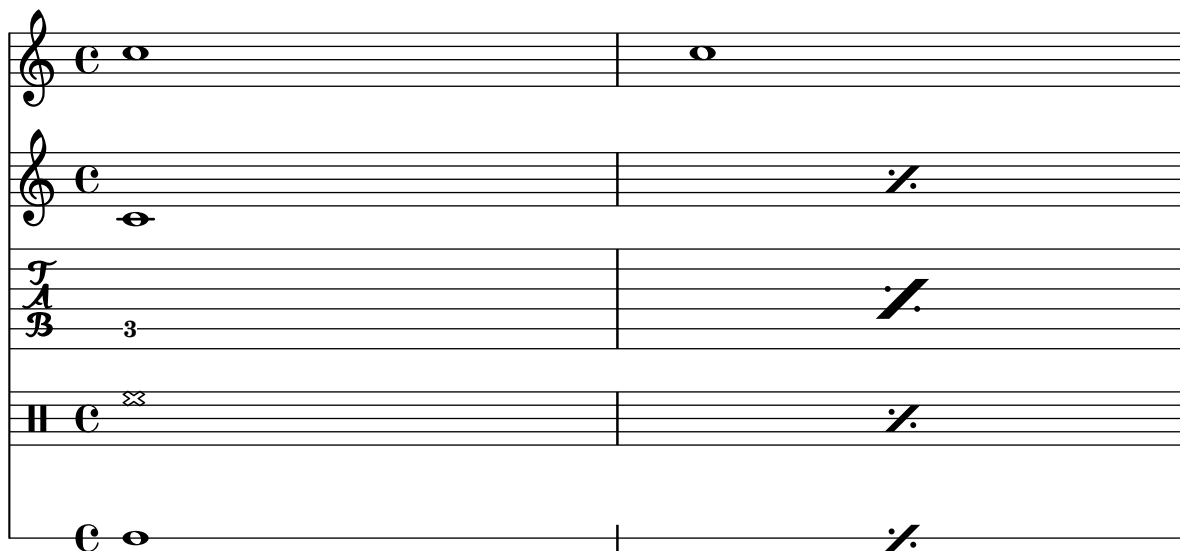
2



3

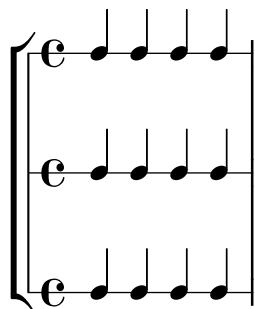


Staves, RhythmicStaves, TabStaves and DrumStaves with percent repeats are not suppressed.
 hara-kiri-percent-repeat.ly

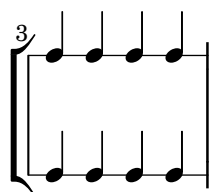


Hara-kiri staves are suppressed if they are empty. This example really contains three rhythmic staves, but as it progresses, empty ones are removed: this example has three staves, but some of them disappear: note how the 2nd line only has the bar number 2. (That the bar number is printed might be considered a bug, however, the scenario of all staves disappearing does not happen in practice.)

Any staff brackets and braces are removed, both in the single staff and no staff case.
 hara-kiri-rhythmicstaff.ly



2



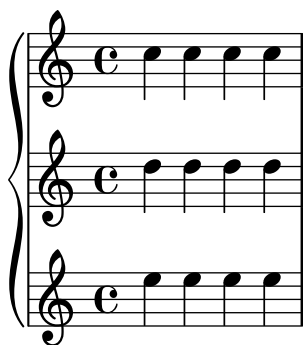
4



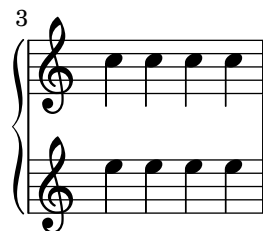
Hara-kiri staves kill themselves if they are empty. This example really contains three staves, but as they progress, empty ones are removed: this example has three staves, but some of them disappear: note how the 2nd line only has the bar number 2. (That the bar number is printed might be considered a bug, however, the scenario of all staves disappearing does not happen in practice.)

Any staff brackets and braces are removed, both in the single staff and no staff case.

`hara-kiri-staff.ly`



2





stanza numbers remain, even on otherwise empty lyrics lines.

hara-kiri-stanza-number.ly



Verse 2.



bla bla

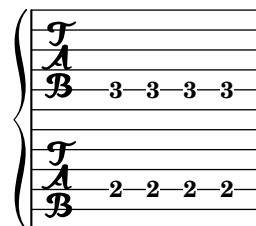
Hara-kiri staves are suppressed if they are empty. This example really contains three tab staves, but as it progresses, empty ones are removed: this example has three staves, but some of them disappear: note how the 2nd line only has the bar number 2. (That the bar number is printed might be considered a bug, however, the scenario of all staves disappearing does not happen in practice.)

hara-kiri-tabstaff.ly

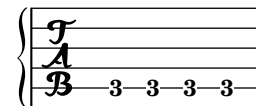


2

3

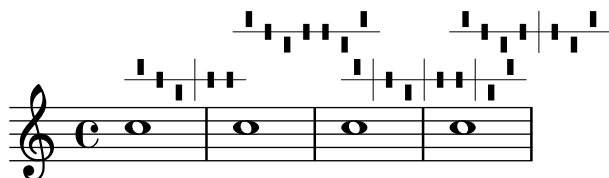


4



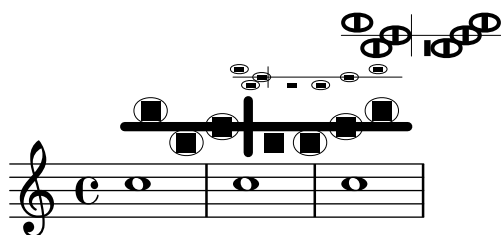
The harp-pedal markup function does some sanity checks. All the diagrams here violate the standard (7 pedals with divider after third), so a warning is printed out, but they should still look okay.

harp-pedals-sanity-checks.ly



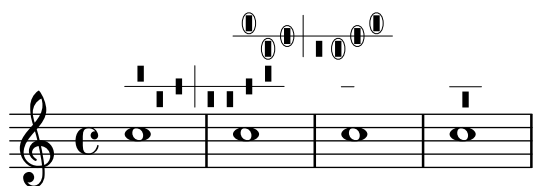
Harp pedals can be tweaked through the size, thickness and harp-pedal-details properties of TextScript.

harp-pedals-tweaking.ly



Basic harp diagram functionality, including circled pedal boxes. The third diagram uses an empty string, the third contains invalid characters. Both cases will create warnings, but should still not fail with an error.

harp-pedals.ly



A second book-level header block and headers nested in bookpart and score should not clear values from the first header block. This score should show composer, piece, subtitle and title.

header-book-multiple.ly

Title correct (superseded at book level)

Subtitle correct (superseded in bookpart)

Composer correct (set in book)

Note: title, subtitle, piece, and composer expected.

Piece correct (superseded in score)



Changing the header fields in a book or a bookpart shall not have any effect on the global default values.

Title correct (set at top level)
Subtitle (set at book level)

Note: expect title and subtitle.



A second bookpart-level header block shall retain previously set values from a first header block at the same or higher levels unless overridden.

Title correct (set in book)
Subtitle correct (superseded in bookpart)

Composer correct (set at top level)

Note: expect title, subtitle, piece and composer.

Piece correct (superseded at bookpart level)



Cyclic references in header fields should cause a warning, but not crash LilyPond with an endless loop

`header-cyclic-reference.ly`

Cyclic reference to

Cyclic reference to Cyclic reference to



A second score-level header block shall not entirely replace a first header block, but only update changed variables.

`header-score-multiple.ly`

Note: expect piece and opus.

Piece correct (set in score)

Opus correct (superseded at score level)



Header blocks may appear before and after the actual music in a score.

`header-score-reordered.ly`

Note: expect piece and opus.

Piece correct (set in score)

Opus correct (superseded at score level)



A second top-level header block shall not entirely replace a first header block, but only changed variables.

header-toplevel-multiple.ly

Title correct (superseded at top level)

Note: expect title and piece.

Piece correct (set at top level)



Alternative notation systems using accidentals different from the Western ones set them systematically, for standalone markups and all grobs that print accidentals.

This include file provides a function to draw many accidental in different contexts. It is used by various tests.

hel-arabic-accidental-glyphs.ly

All 𐌆

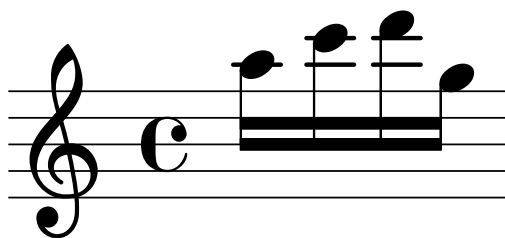


𐌆

Using `\override Beam.damping = #+inf.0` should always make beams horizontal. A threshold is implemented to avoid rounding errors that would cause non-horizontal beams otherwise.

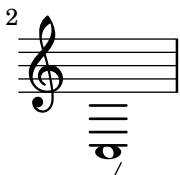
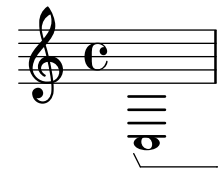
Here, the beam should be horizontal.

horizontal-beams-damping.ly



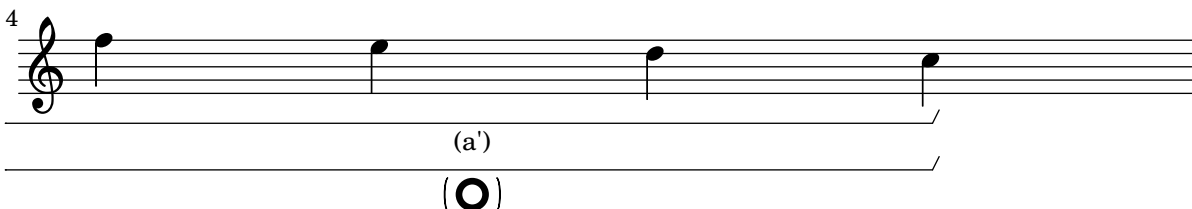
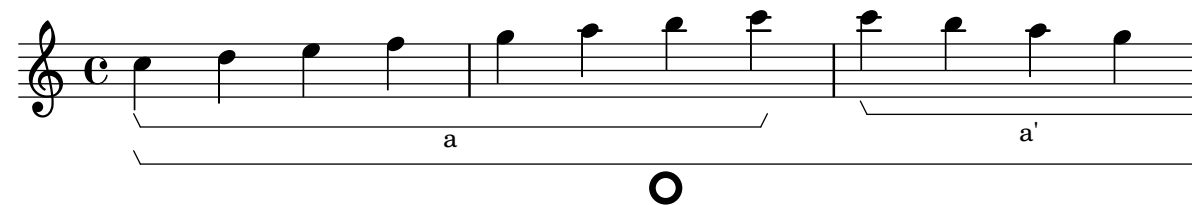
Horizontal brackets connect over line breaks.

horizontal-bracket-break.ly



Text is parenthesized when analysis brackets cross line breaks.

horizontal-bracket-broken-texted.ly



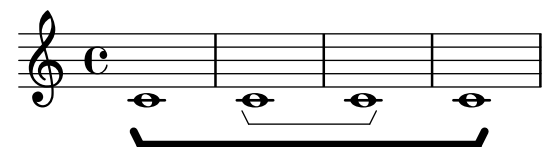
Labels may be added to analysis brackets through the `text` property of the `HorizontalBracketText` object. Use of the `weak` command is necessary for assigning text uniquely to brackets beginning at the same moment. Text assignments reflect the usual nesting order of brackets.

horizontal-bracket-texted.ly



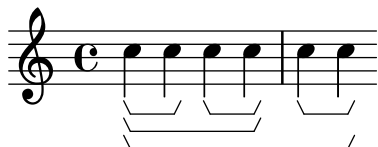
Horizontal brackets are created with the correct event-cause, ensuring tweaks are applied to the correct spanner.

horizontal-bracket-tweak.ly



Note grouping events are used to indicate where analysis brackets start and end.

`horizontal-bracket.ly`



Shows the id property of a grob being set. This should have no effect.

`id.ly`



Music variables may be structured into alists indexed by numbers or symbols.

`identifier-alists.ly`

Identifiers following a chordmode section are not interpreted as chordmode tokens. In the following snippet, the identifier 'm' is not interpreted by the lexer as a minor chord modifier.

`identifier-following-chordmode.ly`



Music identifiers containing arbitrary characters may be initialized using

```
"violin1" = { c''4 c'' c'' c'' }
```

and used as:

```
\new Voice { \"violin1" }
```

`identifier-quoted.ly`



test identifiers.

identifiers.ly

title

Composer

hoi polloi



LilyPond does in-notes.

in-note.ly

The image displays a musical score for the phrase "this is a test" in a single melodic line. The score is presented in six staves, each containing a measure of music. The first staff is labeled with the lyrics "this is a test" above it. The music is written in a treble clef with a common time signature (C). The notes are quarter notes, and the melody is a simple, repetitive sequence of notes. The staves are numbered 4, 8, 12, 16, and 20 on the left side. A legend at the bottom left identifies the first and second notes of the melody as "1foobar" and "2foobar" respectively.

1foobar
2foobar

2
24

28

32

36

40

44

1
2
3

1foobar
2foobar
3foobar

this is a test

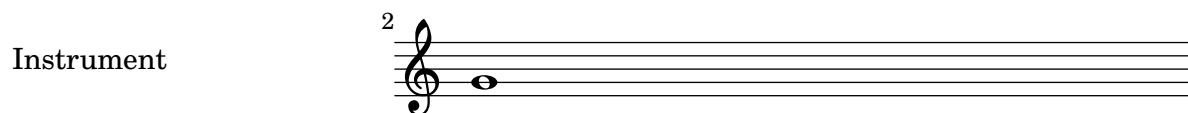
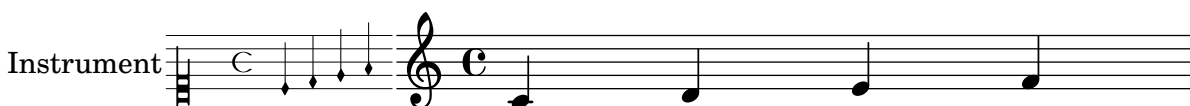
this is a test



Music engraving by LilyPond 2.24.4—www.lilypond.org

Incipits can be printed using an `InstrumentName` grob. In the second line of the second score the `InstrumentName` grob should appear left-aligned.

`incipit.ly`



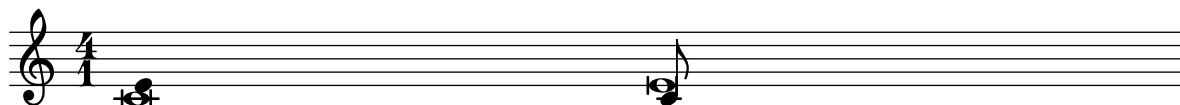
`ly:parser-include-string` should include the current string like a file `\include`.

`include-string.ly`



Combine several kinds of stems in parallel voices.

`incompatible-stem-warning.ly`



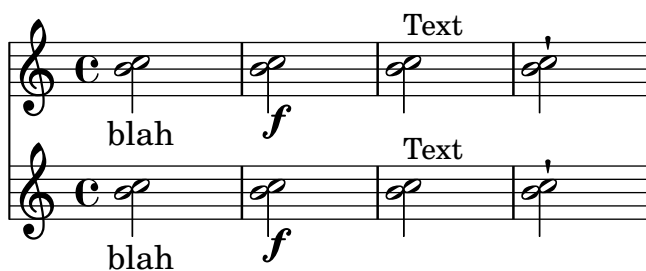
`\inherit-acceptability` allows for one context def to be accepted wherever an existing one is.

`inherit-acceptability.ly`



Alignment of lyrics, dynamics, textscripts and articulations attached to chords with suspended notes doesn't depend on input order. All these items are aligned on the "main" notehead (the one at the end of the stem).

`input-order-alignment.ly`



The `Voice.instrumentCueName` property generates instrument names for cue notes. It can also be unset properly.

`instrument-cue-name.ly`



Instrument names (aligned on axis group spanners) ignore dynamic and pedal line spanners.

`instrument-name-dynamic.ly`



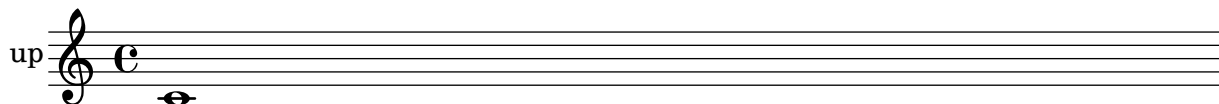
Instrument names can also be attached to staff groups.
instrument-name-groups.ly

The image shows a complex musical score layout with various staff groupings. On the left, labels are placed to the left of the staves, and curly braces on the right group the staves together. The groups are: 1. PianoStaff: A brace groups two staves, with 'Right' above the top staff and 'Left' below the bottom staff. 2. ChoirStaff: A brace groups three staves. 3. StaffGroup: A brace groups one staff. 4. GrandStaff: A brace groups two staves, with 'I' above the top staff and 'II' below the bottom staff. 5. nested group: A brace groups three staves. The music on the staves consists of quarter notes and rests.

Instrument names are removed when the staves are killed off.

In this example, the second staff (marked by the bar number 2) disappears, as does the instrument name.

```
instrument-name-hara-kiri.ly
```



2

Instrument names are set with `Staff.instrument` and `Staff.instr`. You can enter markup texts to create more funky names, including alterations.

```
instrument-name-markup.ly
```



Instrument names are also printed on partial starting measures.

```
instrument-name-partial.ly
```



Dynamics and Lyrics lines below a `PianoStaff` do not affect the placement of the instrument name.

```
instrument-name-pedal-lyrics.ly
```

Piano

Pia. *

la la

InstrumentName is reasonable positioned even for unusual system-start-delimiters.

Below, the instrumentName neither collides with the SystemStartBracket nor moves to far to the left.

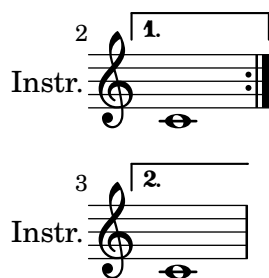
instrument-name-system-start-delimiter.ly

StaffGroup

StaffGroup

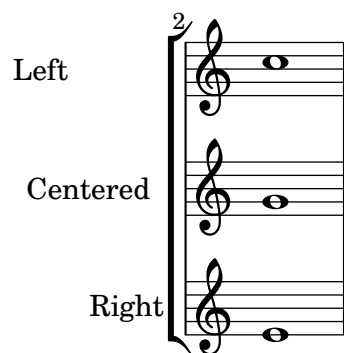
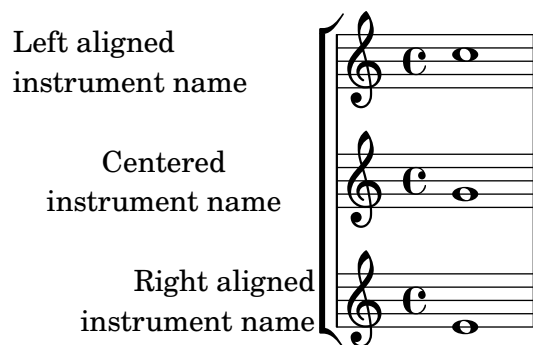
Moving the Volta_engraver to the Staff context does not affect InstrumentName alignment.

instrument-name-volta.ly



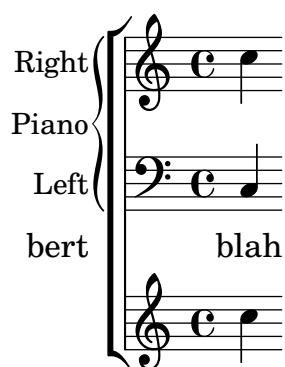
Instrument names horizontal alignment is tweaked by changing the `Staff.InstrumentName.self-alignment-X` property. The `\layout` variables `indent` and `short-indent` define the space where the instrument names are aligned before the first and the following systems, respectively.

`instrument-name-x-align.ly`



Staff margins are also markings attached to bar lines. They should be left of the staff, and be centered vertically with respect to the staff. They may be on normal staves, but also on compound staves, like the `PianoStaff`.

`instrument-name.ly`



The `switchInstrument` music function prints a warning if the given instrument definition does not exist.

`instrument-switch-invalid-warning.ly`



The `switchInstrument` music function modifies properties for an in staff instrument switch.

`instrument-switch.ly`



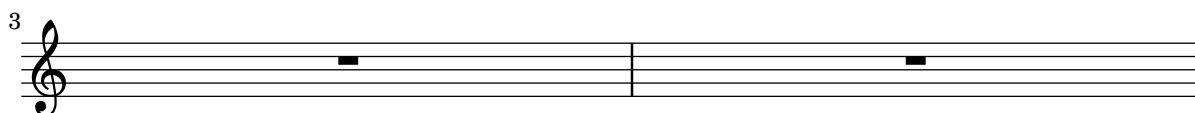
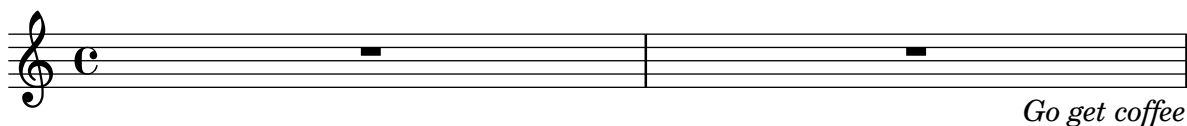
Engravers which do not exist produce a warning.

`invalid-engraver.ly`



When `\jump` is at a line break, the text appears at the end of the line.

`jump-break.ly`



Where a `\jump` is not aligned on a measure boundary, the bar line defined by `underlyingRepeatBarType` appears by default. In this case, "GOTO 10" should have a normal bar line and "GOTO 20" should have a dotted bar line.

`jump-unaligned.ly`



Each clef has its own accidental placing rules, which can be adjusted using sharp-positions and flat-positions.

key-clefs.ly

The image displays a musical score with six staves, each illustrating a different clef and key signature. The staves are numbered 1, 5, 8, 11, 15, and 19. The first staff (1) is in treble clef with a key signature of three sharps (F#, C#, G#). The second staff (5) is in alto clef with a key signature of three sharps. The third staff (8) is in alto clef with a key signature of three flats (Bb, Eb, Ab). The fourth staff (11) is in bass clef with a key signature of three sharps. The fifth staff (15) is in bass clef with a key signature of three flats; it includes annotations: "B-sharp on top" above the first measure and "Flats throughout the staff" above the second measure. The sixth staff (19) is in bass clef with a key signature of three flats, and it features a treble clef in the middle of the staff.

Key cancellation signs consists of naturals for pitches that are not in the new key signature. Naturals get a little padding so the stems don't collide.

key-signature-cancellation.ly

The image shows a musical score for key-signature-cancellation.ly on a single staff in treble clef. It starts with a key signature of three sharps (F#, C#, G#). The first measure contains a natural sign (C) for the pitch C4. The second measure contains a natural sign (F) for the pitch F4. The third measure contains a natural sign (C) for the pitch C5. The fourth measure contains a natural sign (F) for the pitch F5. The fifth measure contains a natural sign (C) for the pitch C6. The sixth measure contains a natural sign (F) for the pitch F6. The seventh measure contains a natural sign (C) for the pitch C7. The eighth measure contains a natural sign (F) for the pitch F7. The key signature changes to three flats (Bb, Eb, Ab) in the final measure.

If the clef engraver is removed, the key signature shall use a proper padding > 0 to the start of the staff lines.

key-signature-left-edge.ly

The image shows two musical staves for key-signature-left-edge.ly. The first staff is in treble clef with a key signature of one flat (Bb) and a common time signature (C). The second staff is in bass clef with a key signature of one flat (Bb) and a common time signature (C).

With the padding-pairs property, distances between individual key signature items can be adjusted.

key-signature-padding.ly



When a custom key signature has entries which are limited to a particular octave, such alterations should persist indefinitely or until a new key signature is set.

Here, only the fis' shows an accidental, since it is outside the octave defined in `keyAlterations`.

`key-signature-scordatura-persist.ly`



By setting `Staff.keyAlterations` directly, key signatures can be set individually per pitch.

`key-signature-scordatura.ly`



Key signatures get the required amount of horizontal space.

`key-signature-space.ly`



Key signatures may appear on key changes, even without a bar line. In the case of a line break, the restoration accidentals are printed at end of a line. If `createKeyOnClefChange` is set, key signatures are created also on a clef change.

`keys.ly`



Kievan notation can contain dots, also in ligatures.

`kievan-notation-dots.ly`



LilyPond typesets Kievan notation.

`kievan-notation.ly`



Го-спо-ди по-ми-луй.

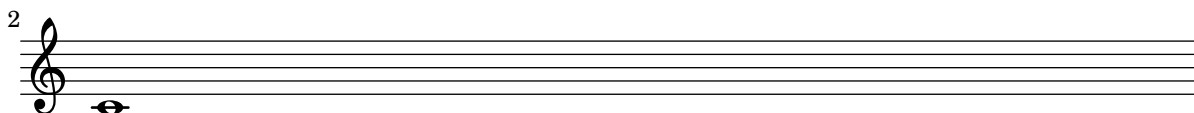
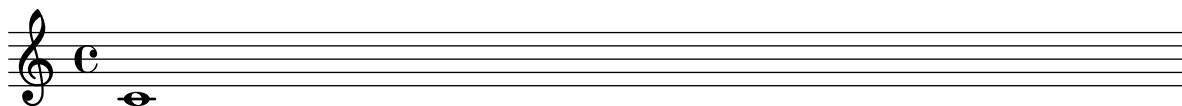
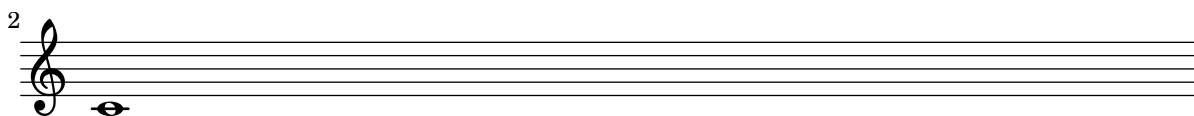
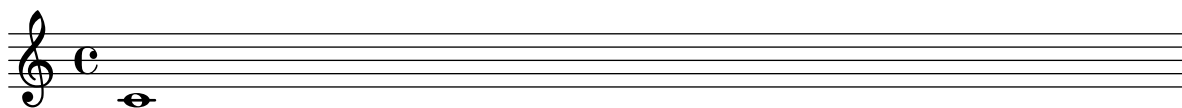
When a label straddles at a page break, the chosen page is the second one. This also works when there are several bookparts.

Note: you need to compile this regtest on its own to check it, as the `lilypond-book` setup does not work for page references.

`label-straddling-page-break-bookparts.ly`

Should be 3:??

Should be 5:??



l.v. ties should not collide with arpeggio indications.

`laissez-vibrer-arpeggio.ly`



`\laissezVibrer` ties should also work on individual notes of a chord.

`laissez-vibrer-chords.ly`



`\laissezVibrer` ties on beamed notes don't trigger premature beam slope calculation.

`laissez-vibrer-tie-beam.ly`



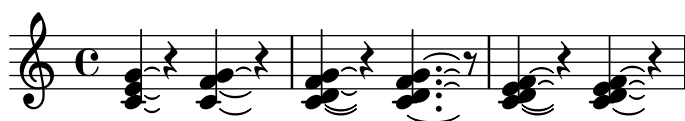
The 'head-direction of a `LaissezVibrerTieColumn` should be able to be set without causing a segmentation fault.

`laissez-vibrer-tie-head-direction.ly`



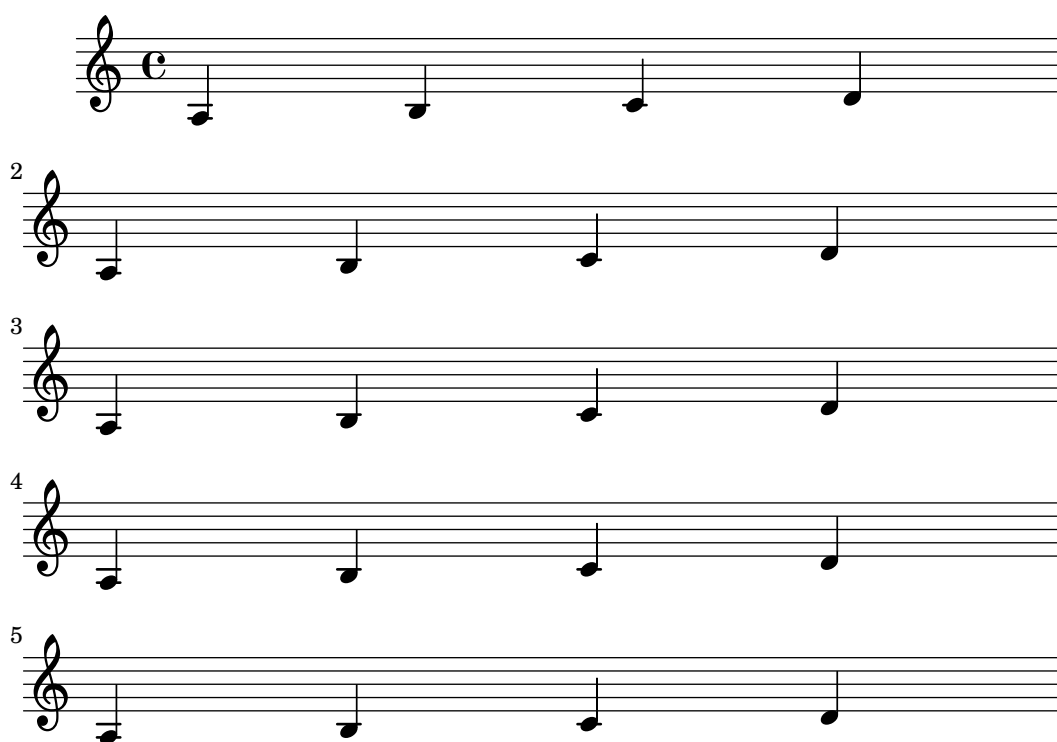
l.v. ties should avoid dots and staff lines, similar to normal ties. They have fixed size. Their formatting can be tuned with `tie-configuration`.

`laissez-vibrer-ties.ly`



Scores may be printed in landscape mode.

`landscape.ly`



The image displays a musical score consisting of 14 staves, numbered 2 through 15. Each staff begins with a treble clef and contains four quarter notes. The notes are positioned on the second, third, fourth, and fifth lines of the staff, representing the notes D4, E4, F4, and G4. The notes are spaced evenly across the staff. A measure number '3' is located at the end of the 11th staff.

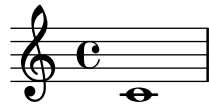
Music engraving by LilyPond 2.24.4—www.lilypond.org

Inside of output definitions like `\layout` or `\midi`, music is harvested for layout definitions in order to turn them into context modifications.

layout-from.ly



A `\layout` block inside a `\paper` block does not error out, and the variables from `\paper` are accessible in `\layout`.



The ledger-extra grob property increases the number of ledger lines drawn, but they are not drawn on top of staff lines.

ledger-extra.ly



When ledgered notes are very close, for example, in grace notes, they are kept at a minimum distance to prevent the ledgers from disappearing.

ledger-line-minimum.ly



Ledger lines are shortened when they are very close. This ensures that ledger lines stay separate.

ledger-line-shorten.ly



Dynamics and other outside staff objects avoid ledger lines.

ledger-lines-dynamics.ly



In some rare cases like these the extents of two ledger lines at the same vertical position in the same note column do not overlap horizontally, and they should not be merged into a single ledger line. See LSR 505: Displaying complex chords <http://lsr.di.unimi.it/LSR/Item?id=505>

ledger-lines-non-merging.ly



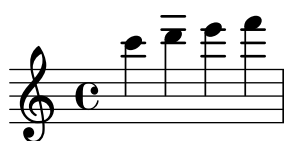
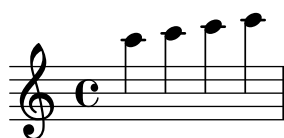
Ledger lines should appear at every other location for a variety of staves using both line-count and line-positions.

ledger-lines-varying-staves.ly



3 ways to customize ledger line positions.

ledger-positions-customization.ly



Highly tweaked example of lilypond output

les-nereides.ly

LES NÉRÉIDES

THE NEREIDS

ARTHUR GRAY

Allegretto scherzando

The musical score is written for piano and guitar. It begins with a treble clef, a key signature of two sharps (F# and C#), and a common time signature (C). The tempo is marked 'Allegretto scherzando'. The piano part starts with a forte (*f*) dynamic and includes several measures with 'Ped.' (pedal) markings and asterisks. The guitar part starts with a mezzo-forte (*mf*) dynamic and includes a 'm.g.' (mezzo-guitar) marking. The score features various performance markings such as 'rall.' (rallentando), 'a tempo', and 'm.d.' (mezzo-dolce). Fingerings are indicated with numbers 1-5. The piece concludes with a 'Ped.' marking in the piano part.

Ligature brackets should align to visible or transparent stems only. For stemless notes they should span the whole note width.

`ligature-bracket-X-positions.ly`



The ligature bracket right-end is not affected by other voices.

`ligature-bracket.ly`



LilyPond syntax can be used inside scheme to build music expressions, with the `#{ ... #}` syntax. Scheme forms can be introduced inside these blocks by escaping them with a `$`, both in a LilyPond context or in a Scheme context.

In this example, the `\withpaddingA`, `\withpaddingB` and `\withpaddingC` music functions set different kinds of padding on the `TextScript` grob.

`lily-in-scheme.ly`



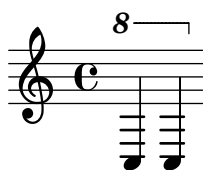
Arrows can be applied to text-spanners and line-spanners (such as the `Glissando`)

`line-arrows.ly`



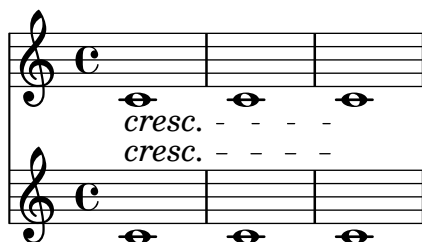
Generate valid postscript even if dash-period is small compared to line thickness.

`line-dash-small-period.ly`



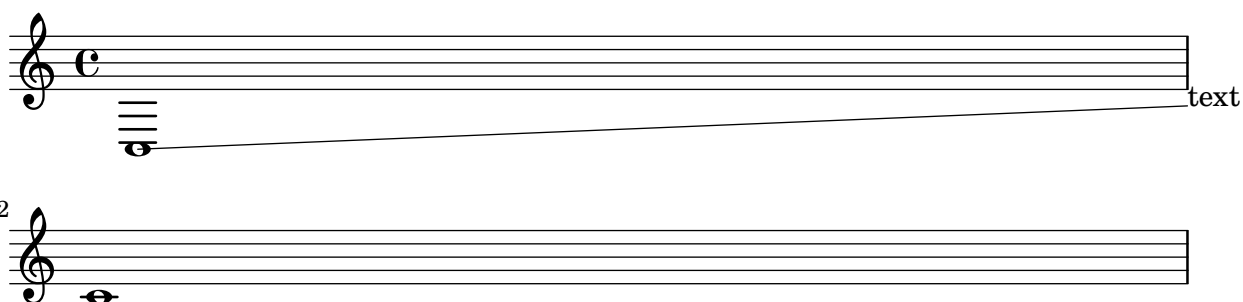
The period of a dashed line is adjusted such that it starts and ends on a full dash.

`line-dashed-period.ly`



The absence of left or right in the bound-details of a line spanner combined with the presence of non-empty left-broken or right-broken should not cause an error.

line-spanner-bound-details-right-broken-without-right.ly



Setting 'zigzag' style for spanners does not cause spacing problems: in this example, the first text markup and zigzag trillspanner have the same outside staff positioning as the second markup and default trillspanner.

line-style-zigzag-spacing.ly



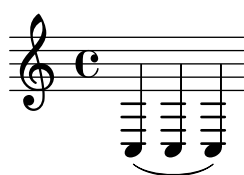
Cover all line styles available.

line-style.ly



Test the different loglevels of lilypond. Run this file with -loglevel=NONE, ERROR, WARNING, PROGRESS, DEBUG to see the different loglevels. The errors are commented out. Comment them in to check the output manually.

loglevels.ly



For Voice-derived contexts like CueVoice, the lyrics should still start with the first note.

lyric-combine-derived-voice.ly



If lyrics are assigned to a non-existing voice, a warning should be printed. However, if the lyrics context does not contain any lyrics, then no warning should be printed.

`lyric-combine-empty-warning.ly`



This tests `\lyricsto` as the first element of sequential music.

`lyric-combine-in-sequential.ly`



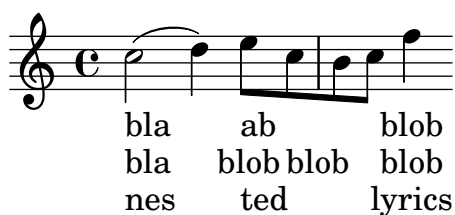
This tests `\lyricsto` as an element of simultaneous music.

`lyric-combine-in-simultaneous.ly`



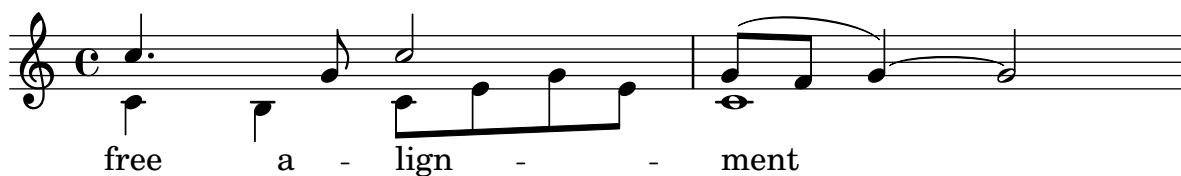
With the `\lyricsto` mechanism, individual lyric lines can be associated with one melody line. Each lyric line can be tuned to either follow or ignore melismata.

`lyric-combine-new.ly`



Lyrics can be aligned to a `NullVoice` context, which prints no notes, with the usual mechanisms for melismata.

`lyric-combine-nullvoice.ly`



Polyphonic rhythms and rests do not disturb `\lyricsto`.

lyric-combine-polyphonic.ly

Do mi nus ex
Do na

Switching the melody to a different voice works even if the switch occurs together with context instantiation.

lyric-combine-switch-new-voice.ly

Ty - ranno - sau - rus

switching voices in the middle of the lyrics is possible using lyricsto.

lyric-combine-switch-voice.ly

two two | this

A score with lyrics and no music fails gracefully.

lyric-combine-top-level-no-music.ly

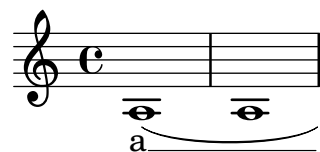
Lyrics can be set to a melody automatically. Excess lyrics will be discarded. Lyrics will not be set over rests. You can have melismata either by setting a property `melismaBusy`, or by setting `automaticMelismas` (which will set `melismas` during slurs and ties). If you want a different order than first Music, then Lyrics, you must precook a chord of staves/lyrics and label those. Of course, the lyrics ignore any other rhythms in the piece.

lyric-combine.ly

la — la - - la_ la la
da - da³ da - da da
melisma

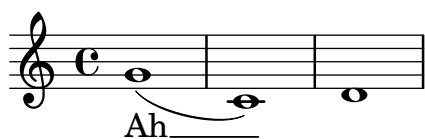
Lyric extenders run to the end of the line if it continues the next line. Otherwise, it should run to the last note of the melisma.

lyric-extender-broken.ly



A LyricExtender should end at the right place even if there are more notes in the voice than lyrics.

lyric-extender-completion.ly



If includeGraceNotes is enabled, lyric extenders work as expected also for syllables starting under grace notes.

lyric-extender-includegraces.ly



Extender engraver also notices the lack of note heads. Here the extender ends on the 2nd quarter note, despite the grace note without a lyric attached.

lyric-extender-no-heads.ly



If extendersOverRests is set, an extender is not terminated upon encountering a rest.

lyric-extender-rest.ly



Extenders will not protrude into the right margin

lyric-extender-right-margin.ly

Two staves of music. The first staff has a treble clef and a common time signature. It contains four quarter notes: 'c', 'd', 'e', and a long note with the letter 'e' repeated ten times underneath it. The second staff is labeled with a '2' and contains four quarter notes: a rest, 'e', 'd', and 'c'.

A LyricExtender may span several notes. A LyricExtender does not extend past a rest, or past the next lyric syllable.

lyric-extender.ly

A single staff of music with a treble clef and common time. It contains a sequence of notes: a quarter note 'a', an eighth note 'h', a quarter rest, a quarter note 'a', an eighth note 'h', and a quarter note 'a'. The lyrics 'ah ha a.haaaaaaaaaaaa' are printed below the notes, with hyphens under the first 'ah' and the final 'a'.

Hyphens are printed at the beginning of the line only when they go past the first note, or when property after-line-breaking is #t.

lyric-hyphen-break.ly

Five staves of music, each with a treble clef and common time. Each staff shows a sequence of four quarter notes. The lyrics are 'blablabla-' on the first four staves and '-verylongsyllableblablabla' on the fifth. The hyphen placement varies: under the first note, under the second note, under the first note of the second staff, and under the first note of the fifth staff.

No hyphen should be printed under a grace note at the start of a line if the grace's main note starts a new syllable.

lyric-hyphen-grace.ly

2

3

4

The minimum distance between lyrics is determined by the `minimum-distance` of `LyricHyphen` and `LyricSpace`.

The ideal length of a hyphen is determined by its `length` property, but it may be shortened down to `minimum-length` in tight situations. If in this it still does not fit, the hyphen will be omitted.

Like all overrides within `\lyricsto` and `\addlyrics`, the effect of a setting is delayed is one syllable.

lyric-hyphen-retain.ly

A lyric hyphen or vowel transition may occur anywhere in a sequence of skips. It spans the entire sequence.

lyric-hyphen-skip.ly

x→a - b - c

x a - b————→c

a - b - c

a————→b

a - b

a.b

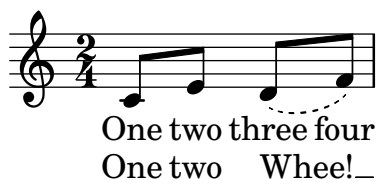
In lyrics, hyphens may be used.

lyric-hyphen.ly



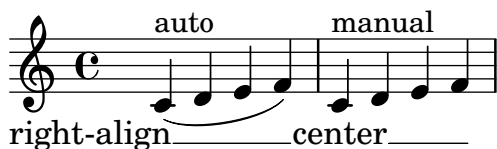
If ignoreMelismata is set, lyrics should remain center-aligned.

lyric-ignore-melisma-alignment.ly



lyricMelismaAlignment sets the default alignment for melismata. It works with both automatic and manual melismata.

lyric-melisma-alignment.ly



Melismata may be entered manually by substituting _ for lyrics on notes that are part of the melisma.

lyric-melisma-manual.ly



A syllable aligned with a melisma delimited with \melisma and \melismaEnd should be left-aligned.

lyric-melisma-melisma.ly



When lyrics are not associated with specific voices, the lyric placement should follow lyric rhythms. In particular, the second syllable here should not be attached to the first note of the first staff.

lyric-no-association-rhythm.ly



Lyrics should still slide under TimeSignature when an OctaveEight is present.

lyric-octave-eight.ly



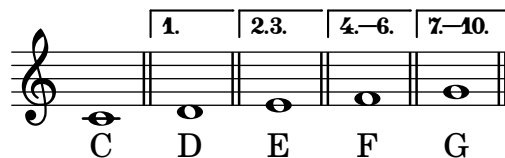
Normally, the lyric is centered on the note head. However, on melismata, the text is left aligned on the left-side of the note head.

lyric-phrasing.ly



No lyric repeat count appears at the end of a volta alternative.

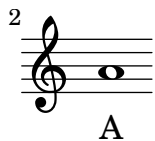
lyric-repeat-count-alternatives.ly



At a line break, a lyric repeat count is visible at the end of the line.

lyric-repeat-count-break.ly

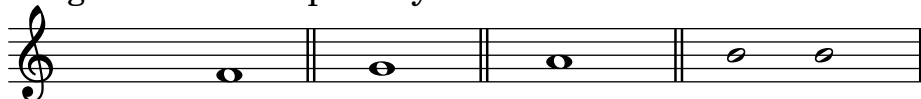




This shows the default format of `LyricRepeatCount` and that it can be overridden.

`lyric-repeat-count-format.ly`

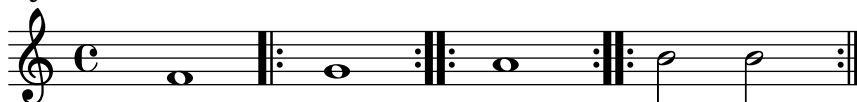
GregorianTranscriptionLyrics



default: Once. *j.* Twice. *ij.* Thrice. *ijj.* Four times. *iv.*

uppercase: Once. *J.* Twice. *IJ.* Thrice. *IIJ.* Four times. *IV.*

Lyrics

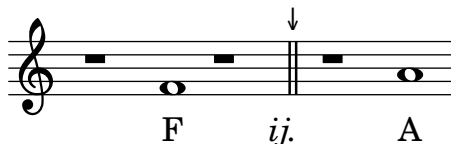


default: Once. *j.* Twice. *ij.* Thrice. *ijj.* Four times. *iv.*

silly: Once. ① Twice. ② Thrice. ③ Four times. ④

A lyric repeat count is placed at the end of a repeated section even when that occurs during a rest. In this test, an arrow marks the expected position of the repeat count.

`lyric-repeat-count-rest.ly`



This tests the default appearance of repeats for modern transcriptions of Gregorian chant. The repeat count appears in the lyric line under the finalis sign (double line) that ends the repeated section, even if the repeat count is 1. The count is an italicized lowercase roman number followed by a period. A final “i” is replaced by “j”.

`lyric-repeat-count.ly`



Lorem. *ij.* Ipsum. *ijj.* Dolor. *iv.* Sit. *j.* A-met.



Lorem. Lorem. Ipsum. Ipsum. Ipsum. Dolor. Dolor. Dolor. Dolor. Sit.



Tildes in lyric syllables are converted to tie symbols.

lyric-tie.ly

wa o a

The `\tweak` function can be used in Lyrics.

lyric-tweak.ly

One fish, *two* fish, red fish, blue fish.

Lyrics can be structured using repeats with alternative endings. This case has a repeat that ends at the end of the score.

lyric-volta-alternative-end.ly

The first staff shows a treble clef, common time signature, and a repeat sign. The first ending (1.) has notes for 'cee' and 'dee'. The second ending (2.) has a note for 'eee'. The second staff shows the full score with notes for 'cee', 'dee', 'cee', and 'eee'.

Lyrics can be structured using repeats with alternative endings. This case has a repeat that ends before the end of the score. The volta bracket ends before the rest.

lyric-volta-alternative.ly

The first staff shows a treble clef, common time signature, and a repeat sign. The first ending (1.) has notes for 'cee' and 'dee'. The second ending (2.) has notes for 'eee' and 'eff'. The second staff shows the full score with notes for 'cee', 'dee', 'cee', 'eee', and 'eff'.

Lyrics can be structured using repeats and `\fine`. In the folded output, *Fine* should appear at the end of the first measure.

lyric-volta-fine.ly

The first staff shows a treble clef, common time signature, and a repeat sign. The first ending (1.) has notes for 'cee' and 'dee'. The second ending (2.) has a note for 'cee'. The word *Fine* is written below the first measure. The second staff shows the full score with notes for 'cee', 'dee', and 'cee'.

Lyrics are ignored for aftergrace notes.

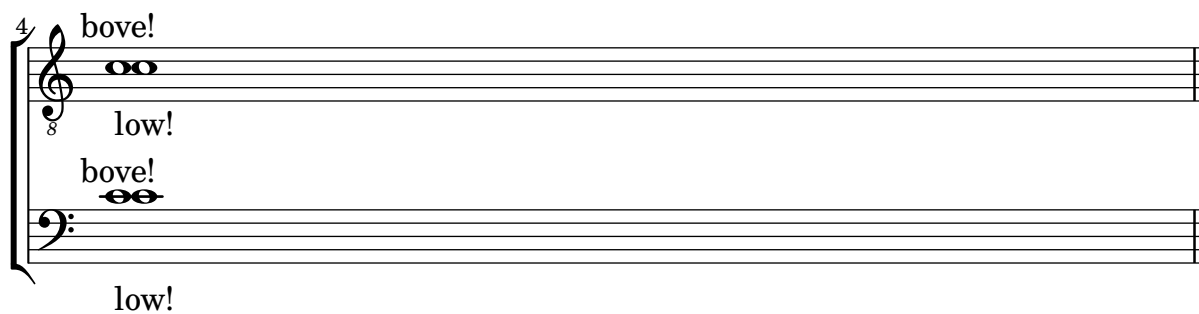
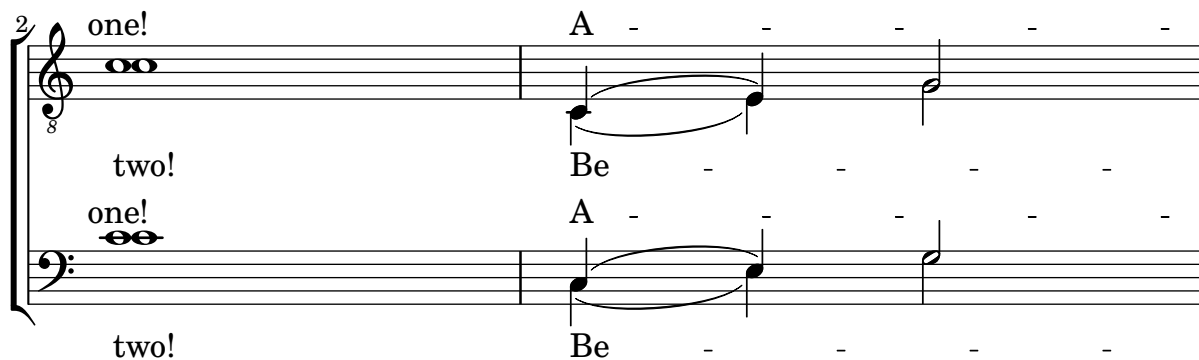
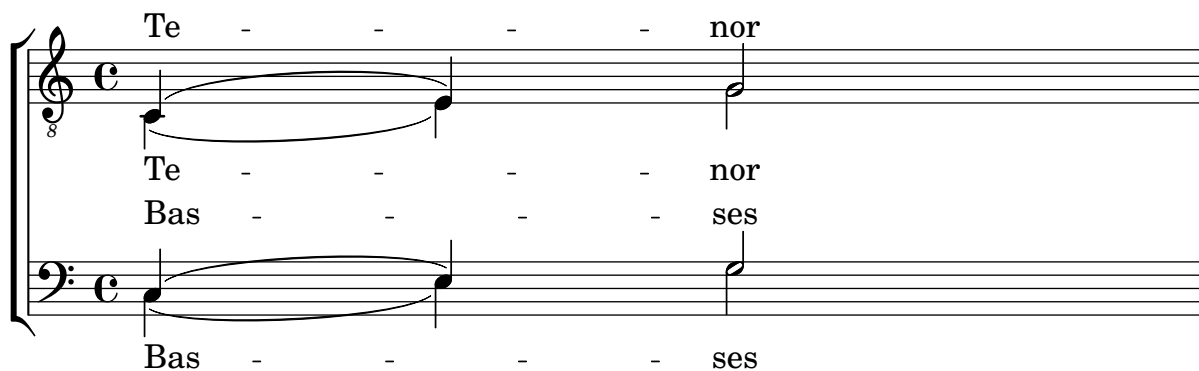
lyrics-after-grace.ly



Lyrics aligned above a context should stay close to that context when stretching. The Bass I lyric line stays with the Bass staff.

lyrics-aligned-above-stay-close-to-staff.ly

Aligned-above lyrics should stay close to their staff



Adding a Bar_engraver to the Lyrics context makes sure that lyrics do not collide with bar lines.

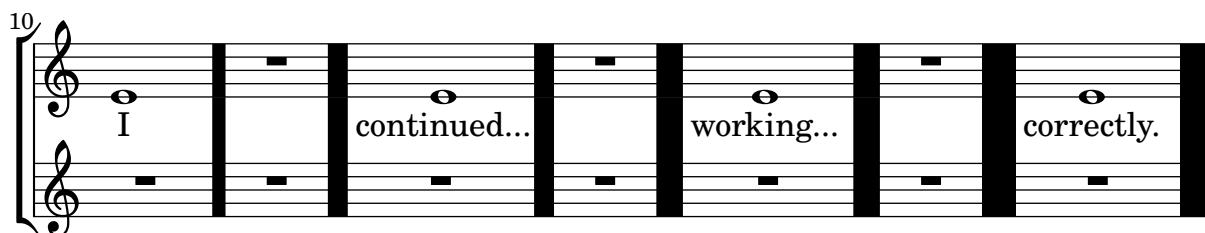
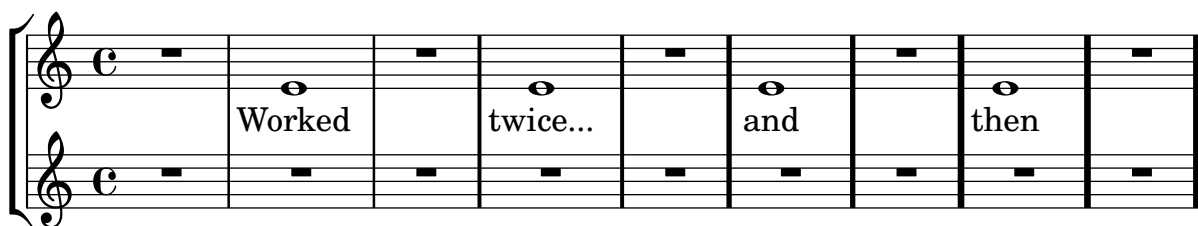
lyrics-bar.ly

lyrics-pass-under-bar.ly



Empty measures and extraordinary bar-line thickness do not confuse `SpanBarStub`. These lyrics should remain clear of the span bars.

lyrics-spanbar.ly



Lyrics are not lowered despite the presence of a clef transposition (8 below the clef).

lyrics-tenor-clef.ly



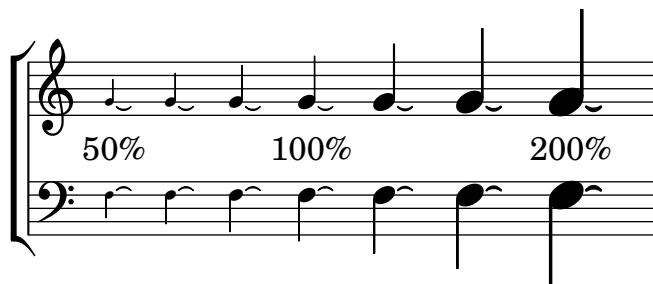
Dot size and beamlet length should be scaled along with notation size when using the `\magnifyMusic` command.

magnifyMusic-dots-beamlets.ly



Laissez vibrer ties should be scaled along with notation size when using the `\magnifyMusic` command. They can get thicker than the default, but not thinner.

magnifyMusic-laissez-vibrer-ties.ly



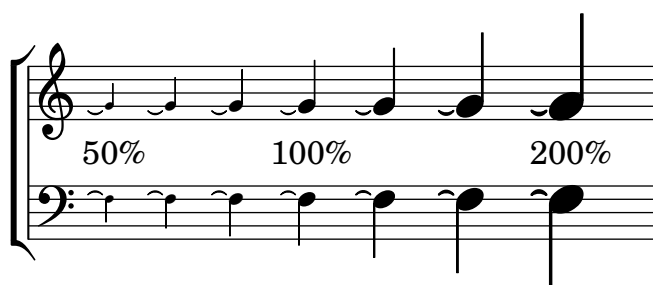
Phrasing slurs should be scaled along with notation size when using the `\magnifyMusic` command. They can get thicker than the default, but not thinner.

`magnifyMusic-phrasing-slurs.ly`



Repeat ties should be scaled along with notation size when using the `\magnifyMusic` command. They can get thicker than the default, but not thinner.

`magnifyMusic-repeat-ties.ly`



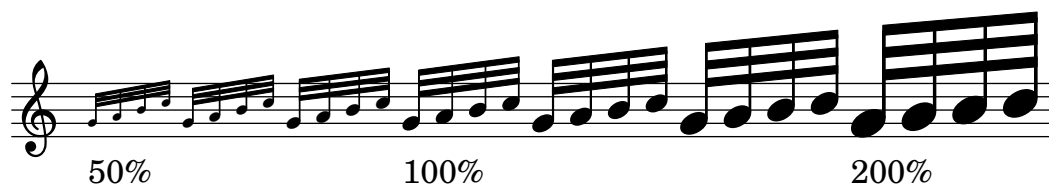
Slurs should be scaled along with notation size when using the `\magnifyMusic` command. They can get thicker than the default, but not thinner.

`magnifyMusic-slurs.ly`



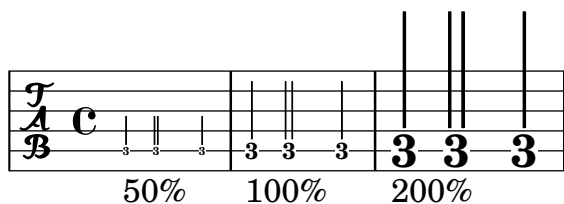
Stem length/thickness, beam spacing/thickness, and horizontal spacing should be scaled along with notation size when using the `\magnifyMusic` command. Stems can get thicker than the default, but not thinner.

`magnifyMusic-stem-beam-spacing.ly`



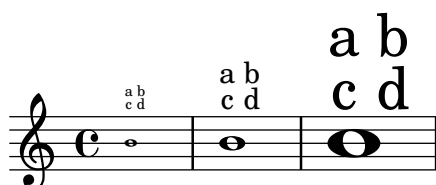
Tablature half-note double-stems should be scaled along with notation size when using the `\magnifyMusic` command.

`magnifyMusic-tablature-double-stems.ly`



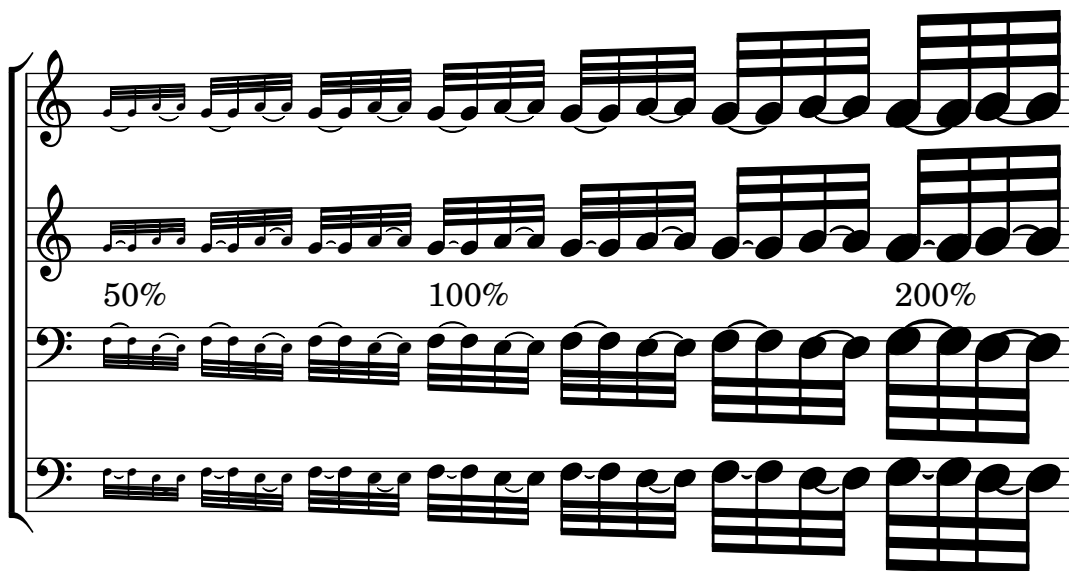
All text-interface grobs should have `baseline-skip` and `word-space` values scaled along with notation size when using the `\magnifyMusic` command.

`magnifyMusic-text-interface.ly`



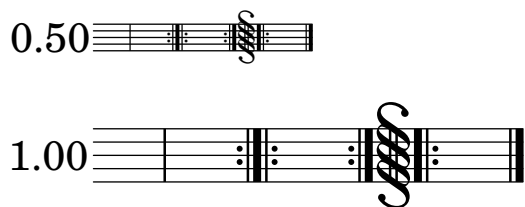
Ties should be scaled along with notation size when using the `\magnifyMusic` command. They can get thicker than the default, but not thinner.

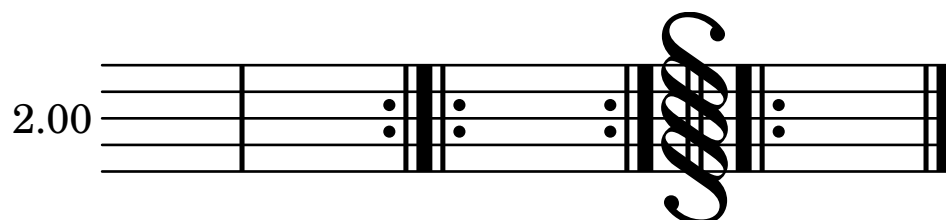
`magnifyMusic-ties.ly`



Bar line thickness and spacing should be scaled along with notation size when using the `\magnifyStaff` command.

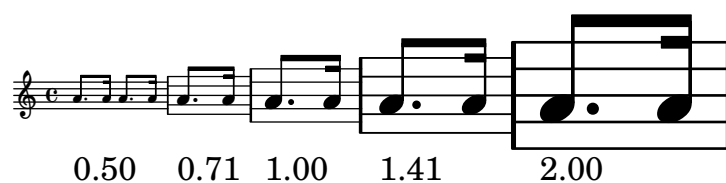
`magnifyStaff-bar-lines.ly`





Dot size and beamlet length should be scaled along with notation size when using the `\magnifyStaff` command.

`magnifyStaff-dots-beamlets.ly`



`\magnifyStaff` also works for Dynamics contexts. This test should print a huge forte dynamic.

`magnifyStaff-dynamics.ly`



In a piece with a single, magnified staff, the presence of a bar number does not affect spacing from the left edge. The clefs in the two systems should appear the same distance from the left edge.

`magnifyStaff-left-edge-bar-number.ly`



In a piece with a single, magnified staff, the presence of a rehearsal mark does not affect spacing from the left edge. The clefs in the two systems should appear the same distance from the left edge.

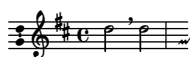
`magnifyStaff-left-edge-rehearsal-mark.ly`



space-alist values should be scaled along with notation size when using the `\magnifyStaff` command.

`magnifyStaff-space-alist.ly`

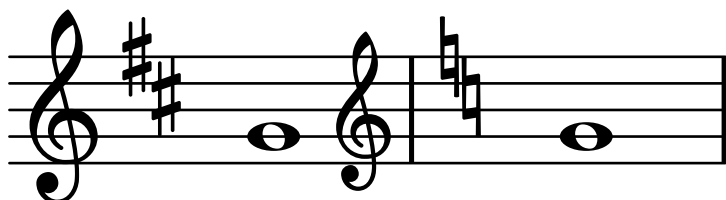
0.50:



1.00:

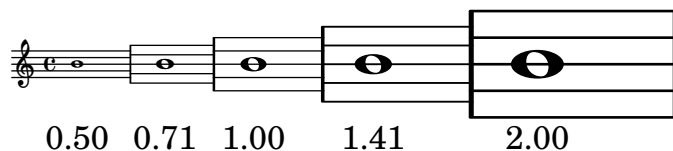


2.00:



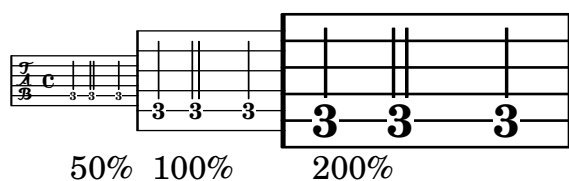
Staff line thickness should be scaled along with staff size when using the `\magnifyStaff` command. Staff lines can get thicker than the default, but not thinner.

`magnifyStaff-staff-line-thickness.ly`



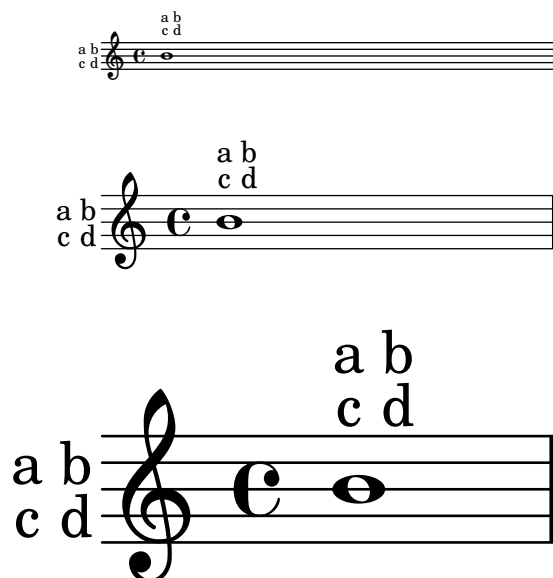
Tablature half-note double-stems should be scaled along with notation size when using the `\magnifyStaff` command.

`magnifyStaff-tablature-double-stems.ly`



All text-interface grobs that are within the Staff context should have `baseline-skip` and `word-space` values scaled along with notation size when using the `\magnifyStaff` command.

`magnifyStaff-text-interface.ly`



Alternative notation systems using accidentals different from the Western ones set them systematically, for standalone markups and all grobs that print accidentals.

This include file provides a function to draw many accidental in different contexts. It is used by various tests.

`makam-accidental-glyphs.ly`

All #



#

`make-relative` has to copy its argument expressions in case the generated music expression is getting copied and modified.

The code here defines a `\reltranspose` function working inside of `\relative` and uses it. Both staves should appear identical.

```
make-relative-copies.ly
```



`make-relative` can make relativization on music function calls behave as one would expect from looking at the function's arguments rather than at the actually resulting expressions. This regtest defines an example function `\withOctave` which works equally well inside and outside of `\relative`.

```
make-relative-music.ly
```

`make-relative` is a Scheme utility macro mainly useful for creating music functions accepting pitches as arguments. Its purpose is to make music functions taking pitch arguments for producing complex music fragments integrate nicely within a `\relative` section. This regtest typesets a short music fragment twice, once without using `\relative`, once using it. The fragment should appear identical in both cases.

make-relative.ly

First system of musical notation, measures 1-2. Treble clef, common time (C). The right hand plays a sequence of eighth notes: G4, A4, B4, C5, B4, A4, G4. The left hand plays a sequence of quarter notes: G3, F3, E3, D3.

Second system of musical notation, measures 3-4. Treble clef, common time (C). The right hand plays a sequence of eighth notes: G4, A4, B4, C5, B4, A4, G4. The left hand plays a sequence of quarter notes: G3, F3, E3, D3.

Third system of musical notation, measures 5-6. Treble clef, common time (C). The right hand plays a sequence of eighth notes: G4, A4, B4, C5, B4, A4, G4. The left hand plays a sequence of quarter notes: G3, F3, E3, D3. Measure 6 contains a repeat sign with the number 21 above and below it.

Fourth system of musical notation, measures 7-8. Treble clef, common time (C). The right hand plays a sequence of eighth notes: G4, A4, B4, C5, B4, A4, G4. The left hand plays a sequence of quarter notes: G3, F3, E3, D3. Measure 8 contains a repeat sign with the number 21 above and below it.

Fifth system of musical notation, measures 9-10. Treble clef, common time (C). The right hand plays a sequence of eighth notes: G4, A4, B4, C5, B4, A4, G4. The left hand plays a sequence of quarter notes: G3, F3, E3, D3. Measure 10 contains a repeat sign with the number 21 above and below it.

Sixth system of musical notation, measures 11-12. Treble clef, common time (C). The right hand plays a sequence of eighth notes: G4, A4, B4, C5, B4, A4, G4. The left hand plays a sequence of quarter notes: G3, F3, E3, D3.

The image displays four systems of musical notation for piano, each consisting of a grand staff (treble and bass clefs).
 - System 1: Starts at measure 2. The treble staff has a whole rest followed by eighth-note patterns. The bass staff has a whole rest followed by quarter-note patterns. A '7' is placed above the first measure.
 - System 2: Starts at measure 10. The treble staff has eighth-note patterns. The bass staff has quarter-note patterns. A '21' is placed above the final measure of both staves.
 - System 3: Starts at measure 32. The treble staff has eighth-note patterns. The bass staff has quarter-note patterns. A '32' is placed above the first measure.
 - System 4: Starts at measure 34. The treble staff has eighth-note patterns. The bass staff has quarter-note patterns. A '34' is placed above the first measure.

When the break-align-symbols property is given as a list, the alignment depends on which symbols are visible.

mark-align-priority.ly

A single staff of music with a treble clef. It shows a C-clef, a key signature change to G major (one sharp), and a bar line. Labels 'clef', 'clef', 'key', and 'bar' are placed above the staff with arrows pointing to the respective symbols. Small circles are placed below the staff to indicate alignment points.

Marks still align correctly if Mark_engraver is moved to Staff context.

mark-align-staff-context.ly

A single staff of music with a treble clef. It shows a C-clef, a key signature change to D major (two sharps), and a complex rhythmic passage. Labels 'foo', 'on-key', and 'on clef' are placed above the staff. Small circles are placed below the staff to indicate alignment points.

Text_mark_engraver may be moved to staff-group contexts. Five marks should appear in black above the second staff from the top. The same marks should appear in red above the third staff from the top.

mark-align-staff-group-context.ly

The image shows a musical score with four staves. The top staff is empty. The second staff has the lyrics 'foo' and 'on-key on clef' in black. The third staff has the same lyrics in red. The bottom staff contains musical notation, including a key signature change to three sharps and a clef change to bass clef. The lyrics are aligned with the notes in the bottom staff.

LilyPond issues warnings when `\mark markup` conflicts with certain other simultaneous marks, and engraves only the first.

Marks 1! to 3! should appear alone. Marks 4! to 8! should appear with various performance marks.

mark-tracking-conflict-ad-hoc-mark.ly

The image shows a musical staff with rehearsal marks 1! through 8! and Coda. The marks are placed above the staff. Mark 4! is followed by a percentage sign (%), mark 5! is followed by %5%, mark 6! is followed by a circle with a slash (⊕), and mark 7! is followed by ⊕5⊕.

LilyPond issues warnings when `\codaMark \default` conflicts with certain other simultaneous marks, and engraves only the first.

Coda marks 1 to 3 should appear with various rehearsal marks. Coda marks 4 to 6, 8, and 9 should appear alone.

mark-tracking-conflict-default-coda-mark.ly

The image shows a musical staff with rehearsal marks A! through 9 and Coda. The marks are placed above the staff. Mark A! is followed by a circle with a slash (⊕), mark 1 is followed by ⊕⊕, mark 3 is followed by ⊕3⊕, mark 4 is followed by ⊕4⊕, mark 5 is followed by ⊕5⊕, mark 6 is followed by ⊕6⊕, mark 8 is followed by ⊕8⊕, and mark 9 is followed by ⊕9⊕.

LilyPond issues warnings when `\mark \default` conflicts with certain other simultaneous marks, and engraves only the first.

Rehearsal marks 1, 2, and 4 should appear alone. Rehearsal marks 5 to 9 should appear with various performance marks.

mark-tracking-conflict-default-rehearsal-mark.ly

The image shows a musical staff with rehearsal marks 1 through 9 and Coda. The marks are placed above the staff. Mark 5 is followed by a percentage sign (%), mark 6 is followed by %%%, mark 7 is followed by a circle with a slash (⊕), and mark 8 is followed by ⊕⊕.

LilyPond issues warnings when `\segnoMark \default` conflicts with certain other simultaneous marks, and engraves only the first.

Segno marks 1 to 3 should appear with various rehearsal marks. Segno mark 4 and then 9 to 12 should appear alone.

mark-tracking-conflict-default-segno-mark.ly

A musical staff in treble clef with a common time signature 'c'. The staff contains nine measures, each with a horizontal bar. Above the staff, the following marks are placed: **A!** above the first bar, **%** below the first bar, **1** above the second bar, **%%** below the second bar, **9** above the third bar, **%3%** below the third bar, **%4%** below the fourth bar, **%9%** below the fifth bar, **%10%** below the sixth bar, **%11%** below the seventh bar, and **%12%** below the eighth bar.

LilyPond issues warnings when `\sectionLabel` conflicts with certain other simultaneous marks, and engraves only the first.

Section labels 1! to 3! should appear with various rehearsal marks. Section labels 4! to 8! should appear alone.

mark-tracking-conflict-section-label.ly

A musical staff in treble clef with a common time signature 'c'. The staff contains nine measures, each with a horizontal bar. Above the staff, the following marks are placed: **A!** above the first bar, **1!** below the first bar, **1** above the second bar, **2!** below the second bar, **3** above the third bar, **3!** below the third bar, **4!** below the fourth bar, **5!** below the fifth bar, **6!** below the sixth bar, **7!** below the seventh bar, and **8!** below the eighth bar.

LilyPond issues warnings when `\codaMark n` conflicts with certain other simultaneous marks, and engraves only the first.

Coda marks 1 to 3 should appear with various rehearsal marks. Coda marks 4 to 8 should appear alone.

mark-tracking-conflict-specific-coda-mark.ly

A musical staff in treble clef with a common time signature 'c'. The staff contains nine measures, each with a horizontal bar. Above the staff, the following marks are placed: **A!** above the first bar, **⌀** below the first bar, **1** above the second bar, **⌀⌀** below the second bar, **3** above the third bar, **⌀3⌀** below the third bar, **⌀4⌀** below the fourth bar, **⌀5⌀** below the fifth bar, **⌀6⌀** below the sixth bar, **⌀7⌀** below the seventh bar, and **⌀8⌀** below the eighth bar.

LilyPond issues warnings when `\mark n` conflicts with certain other simultaneous marks, and engraves only the first.

Rehearsal marks 1 to 3 should appear alone. Rehearsal marks 4 to 9 should appear with various performance marks.

mark-tracking-conflict-specific-rehearsal-mark.ly

A musical staff in treble clef with a common time signature 'c'. The staff contains nine measures, each with a horizontal bar. Above the staff, the following marks are placed: **1** above the first bar, **2** above the second bar, **3** above the third bar, **%** below the fourth bar, **4** above the fourth bar, **%5%** below the fifth bar, **⌀** below the sixth bar, **6** above the sixth bar, **⌀8⌀** below the seventh bar, **7** above the seventh bar, **8** above the eighth bar, and **Coda** above the eighth bar.

LilyPond issues warnings when `\segnoMark n` conflicts with certain other simultaneous marks, and engraves only the first.

Segno marks 1 to 3 should appear with various rehearsal marks. Segno marks 4 to 8 should appear alone.

mark-tracking-conflict-specific-segno-mark.ly

A single musical staff in treble clef with common time signature 'c'. The staff contains eight measures, each with a horizontal bar. Above the staff, rehearsal marks are placed: 'A!' above the first measure, '1' above the second, '3' above the third, and '%4%' through '%8%' above the remaining measures.

Mark_tracking_translators operate independently in independent contexts. The upper staff has marks 1, 2, and 3. The lower staff has marks 2, 3, and 1 at the same points.

mark-tracking-context.ly

Two musical staves in treble clef with common time signature 'c'. The upper staff has rehearsal marks '1', '2', and '3' above the first, second, and third measures respectively. The lower staff has rehearsal marks '2', '3', and '1' above the first, second, and third measures respectively.

The Mark_tracking_translator manages one rehearsal-mark sequence for (potentially) many Mark_engravers. The expected marks on both staves are these: 1, 2, 9, 10, 12, 13, 20, 21.

mark-tracking-sequence.ly

Two musical staves in treble clef with common time signature 'c'. Both staves have rehearsal marks '1', '2', '9', '10', '12', '13', '20', and '21' above the first, second, third, fourth, fifth, sixth, seventh, and eighth measures respectively.

The feta font has arrow heads

markup-arrows.ly

A row of eight directional arrowheads: a right-pointing triangle, a left-pointing triangle, an up-pointing triangle, a down-pointing triangle, a right-pointing triangle, a left-pointing triangle, a lambda symbol, and a gamma symbol.

The explicit directional embedding codes, U+202A and U+202B, are supported in single-line markup strings. The embeddings must be terminated with the pop directional formatting character, U+202C.

markup-bidi-explicit-embedding.ly

!אבה אבה "ABC" אבה אבה
!אבה אבה "ABC!" אבה אבה

abc def "אבה!" ghi jkl!
abc def "!אבה" ghi jkl!

The explicit directional override codes, U+202D and U+202E, are supported in single-line markup strings. The overrides must be terminated with the pop directional formatting character, U+202C.

```
markup-bidi-explicit-overrides.ly
```

```
אבג דהו זחט יךכ  
כרי טחז והד גבא
```

```
abc def ghi jkl  
lkj ihg fed cba
```

The implicit directional marks, U+200E and U+200F, are supported in single-line markup strings.

```
markup-bidi-implicit-marks.ly
```

```
אבה "!ABC" אבה  
אבה "ABC!" אבה
```

```
abc "אבה!" def  
abc "!אבה" def
```

A single Pango string is processed according to the Unicode Bidirectional Algorithm. The strong Hebrew characters in this example are set right-to-left, and the Latin numerals, space character, and punctuation are set according to the rules of the algorithm.

```
markup-bidi-pango.ly
```

```
.לל1ללל,רר2רר.
```

If `\left-brace` or `\right-brace` cannot find a match for the given point size, it should default gracefully to either `brace0` or `brace575` and display a warning.

```
markup-brace-warning.ly
```

```
{
```

The markup command `\left-brace` selects a `fetaBraces` glyph based on point size, using a binary search. `\right-brace` is simply a `\left-brace` rotated 180 degrees.

```
markup-braces.ly
```

```
{ }
```

Text markup using `center-column` shall still reserve space for its whole width and not overwrite the previous stencil.

```
markup-center-align-nocollision.ly
```

```
XXX + XXX  
Y     Y
```

Fixed horizontal alignment of columns of text can be set using `\left-column`, `\center-column` and `\right-column`.

```
markup-column-align.ly
```

one one one
 two two two
 three three three

test various markup commands.

markup-commands.ly



foo **foo** LOWER **normal** normal Small-Caps SMALL-CAPS

LOWER

justify:

This is a field containing text. Blah blah blah. This is a field containing text. Blah blah blah. This is a field containing text. Blah blah blah. This is a field containing text. Blah blah blah. This is a field containing text. Blah blah blah.

wordwrap:

This is a field containing text. Blah blah blah.
 This is a field containing text. Blah blah blah.
 This is a field containing text. Blah blah blah.
 This is a field containing text. Blah blah blah.
 This is a field containing text. Blah blah blah.

draw-line:



underlined

multiple underlines

The `\compound-meter` markup command can produce various kinds of numeric time signature.

markup-compound-meter.ly

These are conventional time signatures: $3 \frac{3}{4}$ $\frac{4}{4}$ (Aren't they pretty?)

This is single-digit compound time signature: $2 + 3$ (Isn't it pretty?)

This is an unusual time signature: $6.22e23 + \frac{4}{3} + 3.14 + \frac{9876}{0} + 5432 + _1$ (Isn't it pretty?)

Test markup commands used for conditional constructs. See also `markup-conditionals-single-page.ly`.

markup-conditionals-several-pages.ly

1

Very first page only

Part first page only

Everywhere

New part



2

Everywhere

Everywhere except on the first page

Also everywhere except on the first page



3

Part last page only

Everywhere

Everywhere except on the first page

Also everywhere except on the first page



4

Part first page only

Everywhere

Everywhere except on the first page

Also everywhere except on the first page

New part



5

Page 5 only

Everywhere

Everywhere except on the first page

Also everywhere except on the first page



6

Very last page only

Part last page only

Everywhere

Everywhere except on the first page

Also everywhere except on the first page



Music engraving by LilyPond 2.24.4—www.lilypond.org

Test markup commands used for conditional constructs. See also `markup-conditionals-several-pages.ly`.

`markup-conditionals-single-page.ly`

Printed because there is a single page.

Also printed, because `print-all-headers` is true.



Music engraving by LilyPond 2.24.4—www.lilypond.org

Cyclic markup definitions should cause a warning, but not crash LilyPond with an endless loop

`markup-cyclic-reference.ly`

Markups have a maximum depth to prevent non-termination.

`markup-depth-non-terminating.ly`

Test:

Diacritic marks are rendered and positioned correctly. The diacritic on line 1 looks like a lower-underline and is centered beneath the main character. The diacritic on line 2 is positioned to the left of the main character, with a tiny space of separation. The diacritic on line 3 is positioned directly above the main character, either centered or shifted slightly to the left.

`markup-diacritic-marks.ly`

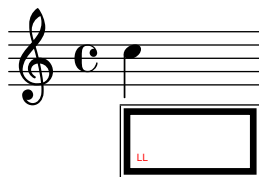
ᵐ

ᵐ

ᵐ

The epsfile markup command reads an EPS file

`markup-eps.ly`



The eyeglasses markup function prints out eyeglasses.

`markup-eyeglasses.ly`



The markup command `\first-visible` uses the first argument that produces a non-empty stencil and ignores the rest.

The expected markup on this score is "Lame Songs for Testing" followed by a "C" time signature symbol.

`markup-first-visible.ly`

Lame Songs for Testing **C**



No elements:

One element (expect 111): 111

Single markup list (expect aaa): aaa

Multiple markup lists (expect ccc): ccc

Mixed markup and markup lists (expect fff): fff

Nested markup lists (expect jjj): jjj

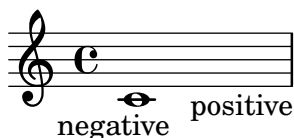
Text is framed properly with `\box`, `\circle`, `\oval` and `\ellipse`
`markup-frame-text.ly`

```

\text \in \boxes 1 12 123
\text \in \circles ① ①② ①②③
\text \in \ovals ① ①② ①②③
\text \in \ellipses ① ①② ①②③

```

Text markup using `\hspace` with positive and negative arguments.
`markup-hspace.ly`



A warning is emitted when a markup command does not return a stencil as it should.
`markup-invalid-stencil.ly`



The markup-commands `\draw-dashed-line`, `\draw-dotted-line` and `\draw-squiggle-line` should print the same visual length as `\draw-line`. Also testing possible overrides for `\draw-squiggle-line`

`markup-line-styles.ly`

```

· · \draw-dotted-line #(0.0 . 0)
-- \draw-dashed-line #(0.0 . 0)
— \draw-line #(0.0 . 0)

· · \draw-dotted-line #(0.75 . 0)
-- \draw-dashed-line #(0.75 . 0)
— \draw-line #(0.75 . 0)

· · \draw-dotted-line #(1.5 . 0)
-- \draw-dashed-line #(1.5 . 0)
— \draw-line #(1.5 . 0)

```



```

..... \draw-dotted-line #(2.25 . 0)
----- \draw-dashed-line #(2.25 . 0)
———— \draw-line #(2.25 . 0)

```

```

..... \draw-dotted-line #(3.0 . 0)
----- \draw-dashed-line #(3.0 . 0)
———— \draw-line #(3.0 . 0)

```

```

..... \draw-dotted-line #(3.75 . 0)
----- \draw-dashed-line #(3.75 . 0)
———— \draw-line #(3.75 . 0)

```

```

..... \draw-dotted-line #(4.5 . 0)
----- \draw-dashed-line #(4.5 . 0)
———— \draw-line #(4.5 . 0)

```

```

..... \draw-dotted-line #(5.25 . 0)
----- \draw-dashed-line #(5.25 . 0)
———— \draw-line #(5.25 . 0)

```

```

..... \draw-dotted-line #(6.0 . 0)
----- \draw-dashed-line #(6.0 . 0)
———— \draw-line #(6.0 . 0)

```

```

..... \draw-dotted-line #(6.75 . 0)
----- \draw-dashed-line #(6.75 . 0)
———— \draw-line #(6.75 . 0)

```

```

..... \draw-dotted-line #(7.5 . 0)
----- \draw-dashed-line #(7.5 . 0)
———— \draw-line #(7.5 . 0)

```

```

..... \draw-dotted-line #(8.25 . 0)
----- \draw-dashed-line #(8.25 . 0)
———— \draw-line #(8.25 . 0)

```

```

..... \draw-dotted-line #(9.0 . 0)
----- \draw-dashed-line #(9.0 . 0)
———— \draw-line #(9.0 . 0)

```

```

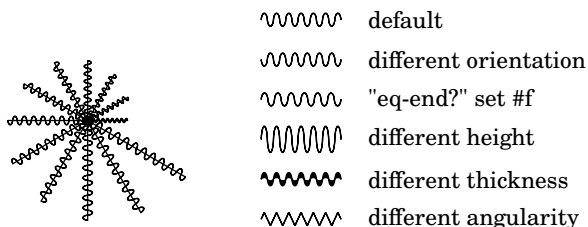
..... \draw-dotted-line #(9.75 . 0)
----- \draw-dashed-line #(9.75 . 0)
———— \draw-line #(9.75 . 0)

```

```

..... \draw-dotted-line #(10.5 . 0)
----- \draw-dashed-line #(10.5 . 0)
———— \draw-line #(10.5 . 0)

```



The thickness setting between markup lines and other lines is consistent.
 markup-line-thickness.ly



Text that can spread over pages is entered with the `\markuplist` command. It can be assigned to a variable and inserted at top-level with or without preceding it by `\markuplist`.

```
markup-lines-identifrier.ly
```

Lorem ipsum dolor sit amet, consectetur adipisicing elit,

sed eiusmod tempor incididunt ut labore et dolore

magna aliqua. ...

Lorem ipsum dolor sit amet, consectetur adipisicing elit,

sed eiusmod tempor incididunt ut labore et dolore

magna aliqua. ...

Text that can spread over pages is entered with the `\markuplist` command. Widowed and orphaned lines are avoided at the beginning and end of a `\markuplist` containing more than one line.

```
markup-lines.ly
```

Il y avait en Westphalie, dans le château de M. le baron de Thunder-ten-tronckh, un jeune garçon à qui la nature avait donné les mœurs les plus douces. Sa physionomie annonçait son âme. Il avait le jugement assez droit, avec l'esprit le plus simple ; c'est, je crois, pour cette raison qu'on le nommait Candide. Les anciens domestiques de la maison soupçonnaient qu'il était fils de la sœur de monsieur le baron et d'un bon et honnête gentilhomme du voisinage, que cette demoiselle ne voulut jamais épouser parce qu'il n'avait pu prouver que soixante et onze quartiers, et que le reste de son

2
 arbre généalogique avait été perdu
 par l'injure du temps. (not orphaned)

Monsieur le baron était un des plus
 puissants seigneurs de la Westphalie,
 car son château avait une porte et des
 fenêtres. Sa grande salle même était
 ornée d'une tapisserie. Tous les
 chiens de ses basses-cours
 composaient une meute dans le
 besoin ; ses palefreniers étaient ses
 piqueurs; le vicaire du village était
 son grand-aumônier. Ils l'appelaient
 tous monseigneur, et ils riaient quand
 il faisait des contes.

3

Madame la ... (may be orphaned)

This concatenates the same markup list several times.
 markup-list-append.ly

Test Test Test .

`\markupMap` can be used for applying a markup function to music properties throughout a
 music expressions, like the `text` of all contained lyric events.

markup-map.ly



Reset fontname for musicglyph. For unknown glyphs, we print a warning.
 markup-music-glyph.ly



A dotted whole note displayed via the `\note` command must separate the note head and the
 dot. The dot avoids the upflag.

markup-note-dot.ly



In the `\note` markup command, the position of dots may be changed.

`markup-note-dots-direction.ly`

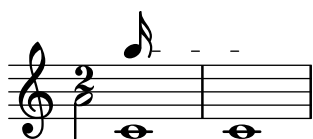
Default:

Dots shifted up:



The `'style` property from grobs such as `TimeSignature` and `TextSpanner` does not affect the default note head style for `\note` and `\note-by-number`.

`markup-note-grob-style.ly`



The `note-by-number` markup-command is robust with all kinds of size changings. For every `Stem` the vertical length and thickness prints reasonable.

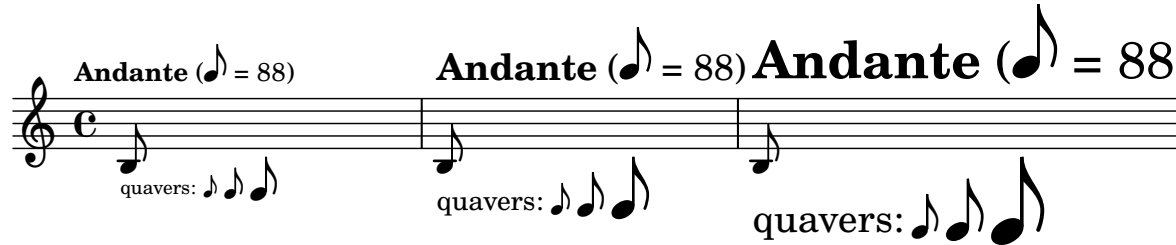
`markup-note-sizes.ly`

toplevel markup in \book: quavers: 

Andante (♩ = 88) **Andante** (♩ = 88) **Andante** (♩ = 88)



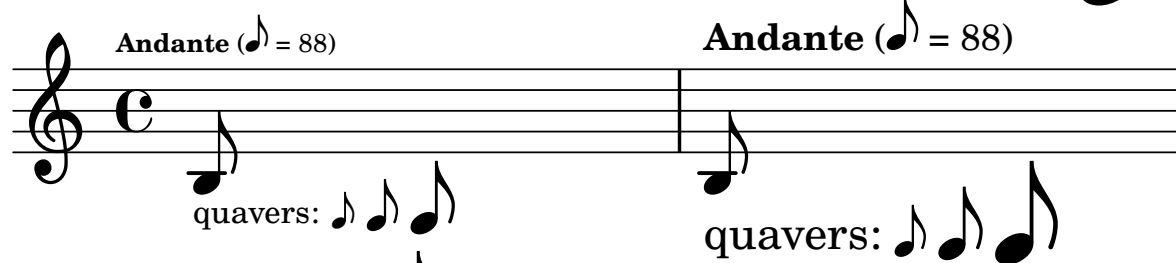
Andante (♩ = 88) **Andante** (♩ = 88) **Andante** (♩ = 88)



Andante (♩ = 88) **Andante** (♩ = 88) **Andante** (♩ = 88)



Andante (♩ = 88) **Andante** (♩ = 88)

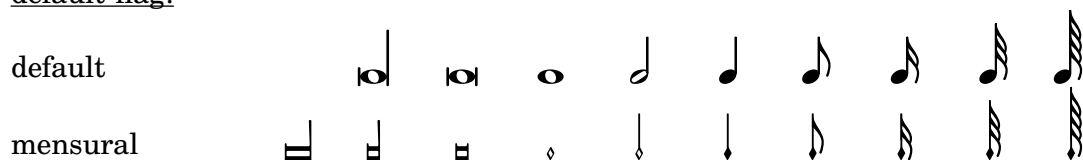


3 **Andante** (♩ = 88)



Andante (♩ = 88) **Andante** (♩ = 88) **Andante** (♩ = 88)



Old-straight-flag:Flat-flag:default-flag:

The note markup function may be used to make metronome markings. It works for a variety of flag, dot and duration settings.


`markup-note.ly`



Partial markups acts as a chain of markup commands where everything but some arguments of the final markup command has already been supplied.

`markup-partial.ly`

Bold red.

Bold**red****in****a****list.***Italic green.**Italic**green**in**a**list.*3/8: .

The `\path` markup command supports the `filled` property to toggle its fill.

`markup-path-fill.ly`



The `\path` markup command supports the `line-cap-style` property with values of `butt`, `round`, and `square`.

`markup-path-linecap.ly`



The `\path` markup command supports the `line-join-style` property with values of `bevel`, `round`, and `miter`.

`markup-path-linejoin.ly`



The rest markup function works for a variety of style, dot and duration settings. Printing symbols for `MultiMeasureRest` is supported.

markup-rest.ly

Simple Rests by rest-markup

default	
mensural	
neomensural	
classical	
baroque	
altdefault	
petrucci	
blackpetrucci	
semipetrucci	
kievan	
z	

MultiMeasureRests by rest-markup: church-rests and line-style

church-rests

		2	3	4	5	6	7	8	9	10
default	—	·	·	·	·	·	·	·	·	·
mensural	·	·	·		·	·	·		·	·
neomensural	·	·	·		·	·	·		·	·
classical	—	·	·		·	·	·		·	·
baroque	—	·	·		·	·	·		·	·
altdefault	—	·	·		·	·	·		·	·
petrucci	·	·	·		·	·	·		·	·
blackpetrucci	—	·	·		·	·	·		·	·
semipetrucci	—	·	·		·	·	·		·	·
kievan	—	·	·		·	·	·		·	·

line-style


default			
---------	---	---	---

The output of `\markup \rhythm` scales with font size automatically.

`markup-rhythm-font-size.ly`

A syncopation: 

A syncopation: 

A syncopation: 

`\markup \rhythm` is not affected by switching off ragged-right globally.

`markup-rhythm-ragged.ly`



Settings can be applied to `\markup \rhythm`, either using music commands in the music argument, or using a `\layout` block.

`markup-rhythm-tweaking.ly`



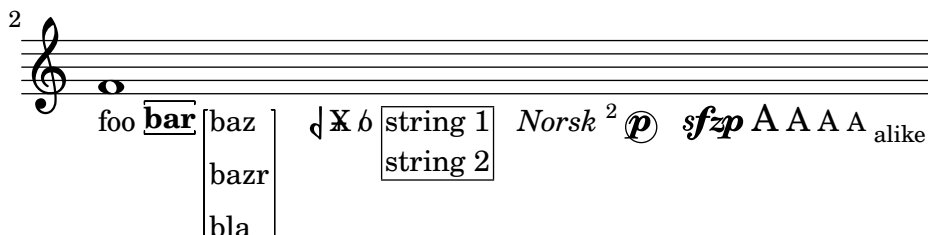
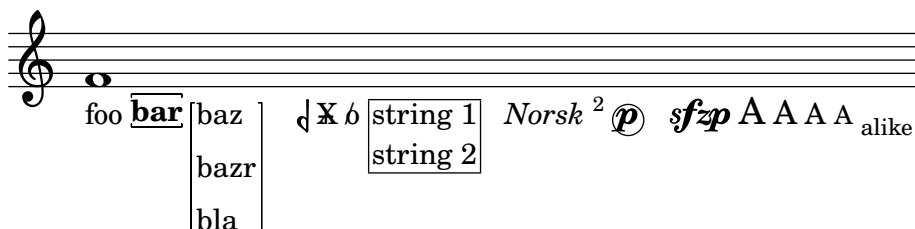
`\markup \rhythm` draws a standalone rhythmic pattern. All beaming is explicit.

`markup-rhythm.ly`



There is a Scheme macro `markup` to produce markup texts using a similar syntax as `\markup`.

`markup-scheme.ly`



`\markup \score` displays all systems. Spacing between systems is set using `baseline-skip`.

`markup-score-multi-system.ly`



Use `\score` block as markup command.

`markup-score.ly`

Solo Cello Suites

Suite IV





A list of special character ASCII aliases can be easily included. This works for markups and lyrics.

`markup-special-characters.ly`

Markup example:

Input:

`№2 – &OE;dipe…`

Output:

Nº2 – Œdipe...

Lyric example:

Ceffez Infidèles, un cœur innocent ne craint rien ;

It works to splice an empty list inside markup.

`markup-splice-empty-list.ly`

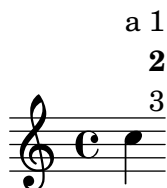
a b

a

b

Markup scripts may be stacked.

`markup-stack.ly`



The markup list command `\string-lines` splits a given string at line break characters and drops surrounding whitespace from the resulting strings. Other splitting points may be achieved by overriding the `split-char` property.

`markup-string-lines.ly`

All three instances should look equal!

Verse	Verse	Verse
Everywhere that Mary went	Everywhere that Mary went	Everywhere that Mary went
The lamb was sure to go.	The lamb was sure to go.	The lamb was sure to go.

Both lines should look equal!

aa bb cc dd ee
aa bb cc dd ee

Demo of markup texts, using LilyPond syntax.
markup-syntax.ly

foo **bar** baz] d X b
bazz
bla]
string 1 ○ ● Norsk² white-out
string 2 @p Green *sfzp* A A A A alike
fi

Triangles should scale appropriately with font size.
markup-triangle-scaling.ly

₆ △ ₄ △ ₂ △ 0 △ +2 △ +4 △ +6 △

Users may define non-standard markup commands using the `define-markup-command` scheme macro.
markup-user.ly

HELLO WORLD IN UPPER CASE

`\verbatim-file` works on Unicode data. It decodes the file as UTF-8.
markup-verbatim-file-utf8.ly

Sømê UTF-8 tét

The markup commands `\with-true-dimension` and `\with-true-dimensions` give a markup the extents given by the stencil's outline.
markup-with-true-dimensions.ly



The markup commands `\wordwrap` and `\justify` produce simple paragraph text.
`markup-word-wrap.ly`

this is normal text This is a test of the wordwrapping function. 1 This is a test continuing
of the wordwrapping function. 2 This is a test of the
wordwrapping function. 3 This is a test of the
wordwrapping function. 4 1a111 11111 **22222** 2222

this is normal text This is a test of the wordwrapping continuing
function, but with justification. 1 This is
a test of the wordwrapping function, but
with justification. 2 This is a test of ^a/_b the
wordwrapping function, but with
justification. 3 This is a test of the
wordwrapping function, but with
justification. bla bla

Om mani padme hum Om mani padme Om mani padme hum Om mani padme
hum Om mani padme hum Om mani hum Om mani padme hum Om mani
padme hum Om mani padme hum Om padme hum Om mani padme hum Om
mani padme hum Om mani padme mani padme hum Om mani padme hum
hum Om mani padme hum. Om mani padme hum.
Gate Gate paragate Gate Gate Gate Gate paragate Gate Gate paragate
paragate Gate Gate paragate Gate Gate Gate paragate Gate Gate paragate
Gate paragate Gate Gate paragate Gate Gate paragate Gate Gate paragate.
Gate Gate paragate.

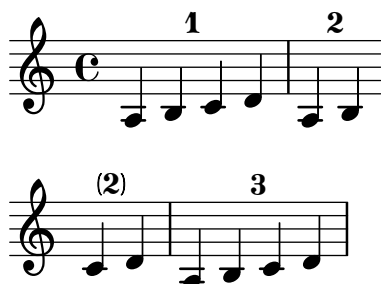
Measure counters follow alternative numbering when active. This also works with compressed
multi-measure rests.

`measure-counter-alternative-numbering.ly`

The image displays two musical staves illustrating measure counters and multi-measure rests. The first staff shows measures 1-3, 4, 4-5, 6a, 7a, 6b, 6c-7c, 8, and 8-10. The second staff shows measures 1-3, 4, 4-5, 6a, 6a, 7a, 7a, 6b, 6b, 6c, 8, and 8-10. The staves include multi-measure rests and are numbered accordingly.

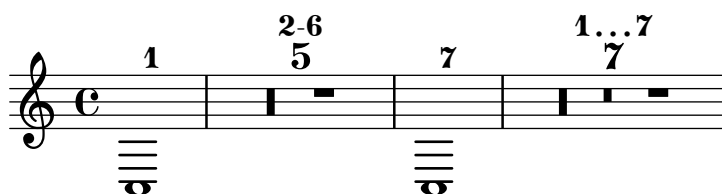
Measures split across line breaks may be numbered in a measure count. Each segment
receives a number. The first number has its ordinary appearance, but numbers after the break
are enclosed in parentheses.

measure-counter-broken.ly



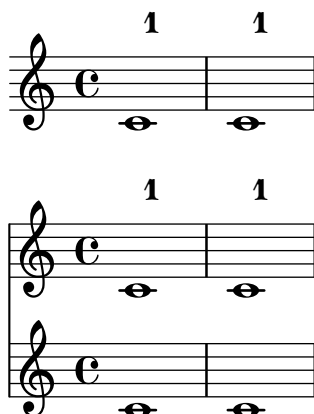
When a measure counter extends over a compressed multi-measure rest, it displays the full measure range. By default, the two measure numbers in the range are dash-separated; this is configurable.

measure-counter-compressed-mmrest.ly



`\startMeasureCount` and `\stopMeasureCount` coming in the same time step in this order do not cause a warning.

measure-counter-event-order.ly



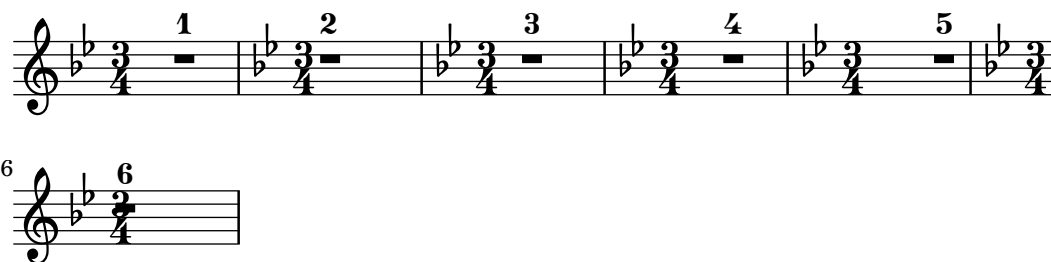
Measure counts are not confused by grace notes.

measure-counter-grace.ly



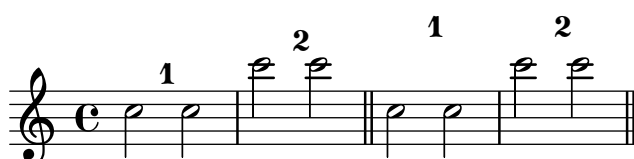
The `spacing-pair` property may be used to adjust the horizontal positioning of `MeasureCounter` objects relative to prefatory material. In the following example, the count should be aligned with the full-measure rests.

measure-counter-spacing-pair.ly



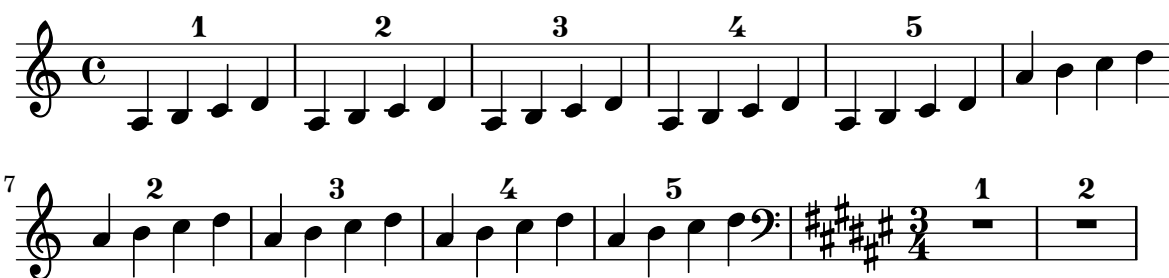
The `staff-padding` property may be used to adjust the distance of `MeasureCounter` objects from the staff. The following example uses `staff-padding` to align the count vertically.

`measure-counter-staff-padding.ly`



Measures can be numbered sequentially by enclosing them with `\startMeasureCount` and `\stopMeasureCount`.

`measure-counter.ly`



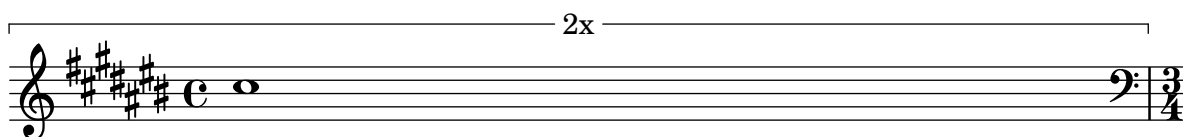
The `Measure_grouping_engraver` adds triangles and brackets above beats when the beats of a time signature are grouped.

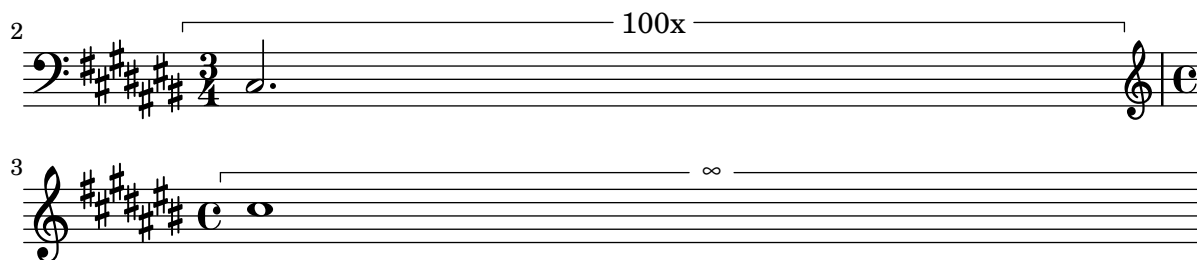
`measure-grouping.ly`



The ends of measure spanners may be aligned in various ways.

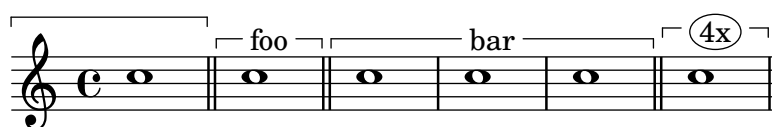
`measure-spanner-spacing-pair.ly`





Measure spanners can span single and multiple measures. They may be texted or untexted and hold markups.

`measure-spanner.ly`

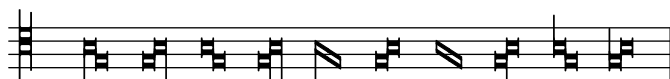


Mensural ligatures show different shapes, depending on the rhythmic pattern and direction of the melody line.

`mensural-ligatures.ly`

ligaturae binaria

BL BL LL LL BB BB LB LB SS SS



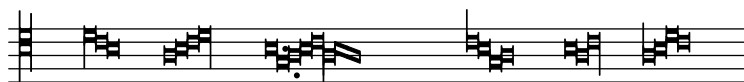
ligaturae ternariae, quaternariae, etc.

BBL BBBB SSBBLB LBMxBL BBBLL SSBLLBB



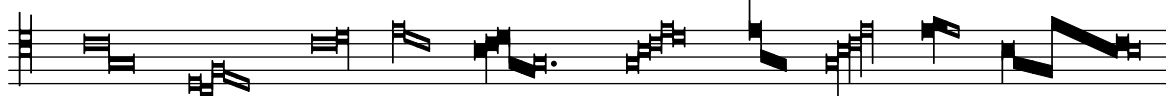
dtv-Atlas

BBL BBBL L.B.BBLBBB SSBB LBL SSBL



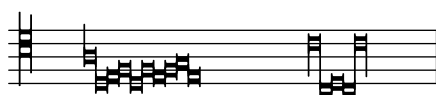
Ockeghem: Missa De plus en plus

MxMx LBBBB MxL BBB LBBBBB. BBBBL SSB LLLL LBB BBBBBL



Ockeghem: Requiem

SSBBBBBBL BBBBL



crazy ligatures

BBBBB BB B.B.B.B.B.B.B.B. B.B.



invalid ligatures

BBB



There is limited support for mensural notation: note head shapes are available. Mensural stems are centered on the note heads, both for up and down stems.

`mensural.ly`



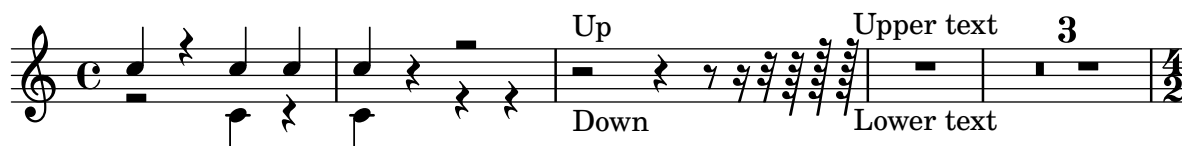
Test for merging rest numbers using the `Merge_mmrest_numbers_engraver`. The upper staff is the new default with the engraver enabled while the second one is the old default resulting in collisions. The final staff demonstrates the additional use of `Merge_rests_engraver`.

`merge-mmrest-numbers-engraver.ly`

default	
collision	
merge	

Test for merging rests in different voices.

`merge-rests-engraver.ly`



Test for vertical positions of merged rests in magnified staves.

merge-rests-magnify-staff.ly

A MetronomeMark, RehearsalMark and BarNumber should not effect the starting point of spanners.

metronome-mark-broken-bound.ly

2 **fooooo** (♩ = 90)

metronomeMarkFormatter supports all note head styles and flags styles. Setting font-name for MetronomeMark does not disturb the glyphs for note-head and flag.

metronome-mark-formatter.ly

default **Allegro** (♩ = 120 – 140) **Allegro** (♩ = 140)

default-note-head
old-straight-flag **Allegro** (♩ = 120 – 140) **Allegro** (♩ = 140)

default-note-head
modern-straight-flag **Allegro** (♩ = 120 – 140) **Allegro** (♩ = 140)

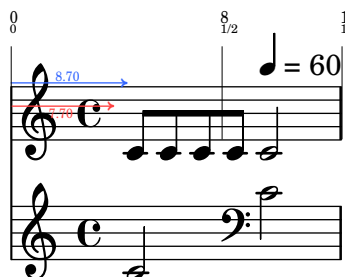
default-note-head
flat-flag **Allegro** (♩ = 120 – 140) **Allegro** (♩ = 140)

diamond-note-head
modern-straight-flag **Allegro** (♩ = 120 – 140) **Allegro** (♩ = 140)

mensural-note-head
mensural-flag **Allegro** (♩ = 120 – 140) **Allegro** (♩ = 140)

Metronome marks aligned on notes do not interfere with the positioning of loose columns in other staves. Here the loose column supporting the clef is correctly placed immediately before the second note in the lower staff.

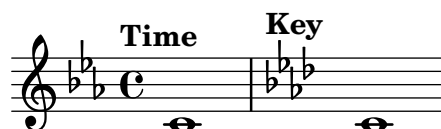
metronome-mark-loose-column.ly



Metronome marks respect symbol order in `break-align-symbols`.

In this example, the default is changed to `'(time-signature key-signature)`: since `key-signature` is second in the list, the mark should only be aligned with the key signature if there is no time signature present, as in the second measure.

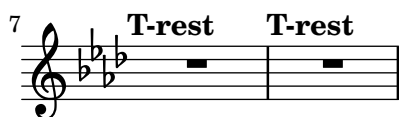
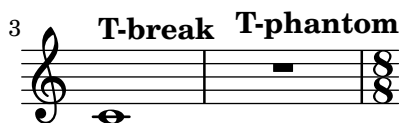
`metronome-marking-align-order.ly`



`\tempo` marks are aligned with the time signature or the position of the first note.

By overriding `break-align-symbols` the default alignment can be changed. If no symbol in `break-align-symbols` is present, the property `non-break-align-symbols` determines the alignment. If the alignment object is a multi-measure rest, the tempo mark is aligned with the preceding bar line.

`metronome-marking-break-align.ly`



Metronome marks are placed correctly if `Metronome_mark_engraver` is moved to `StaffGroup` context. Metronome marks should appear above the middle staff (the upper staff of the group) only.

`metronome-marking-staff-group-context.ly`

Here `\tempo` directives are printed as metronome markings.

The marking is left aligned with the time signature, if there is one.

`metronome-marking.ly`

A metronome marking can be added to a multimeasure rest whose engraver was moved to the Staff, without segfaulting.

`metronome-multimeasure-rest-no-segfault.ly`

Using an empty text in the metronome marks, one can generate parenthesized tempo marks.

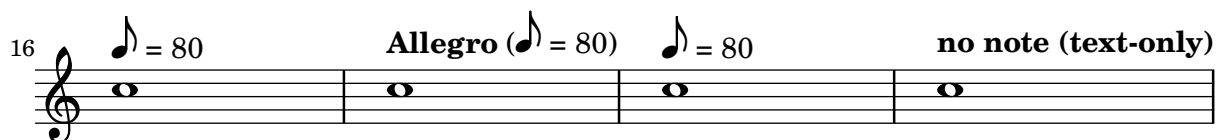
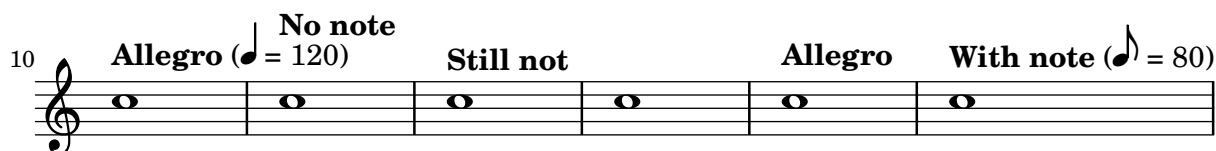
`metronome-parenthesized.ly`

Tempo ranges are supported. By default, numbers are printed with an en-dash character, separated by thin-spaces.

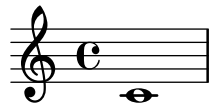
`metronome-range.ly`

The tempo command supports text markup and/or 'duration=count'. Using `Score.tempoHideNote`, one can hide the 'duration=count' in the tempo mark.

`metronome-text.ly`

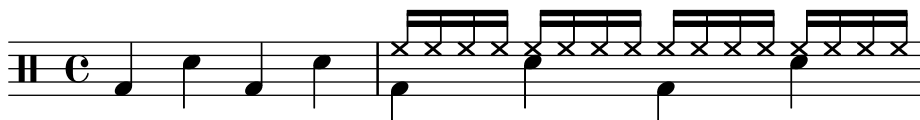


If `after-writing` is set in the `\midi` block, it is called after every MIDI file that is written. The visual and MIDI output are not important in this test.



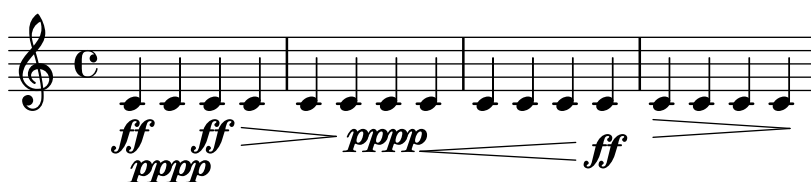
Midi can create drums.

`midi-drums.ly`



Midi also handles crescendo and decrescendo, either starting and ending from specified or unspecified sound level.

`midi-dynamics.ly`



Grace notes shorten previous notes only if they'd overlap them. The A should be a full quarter note, but the C should be shortened to $1/4 - 9/40 * 1/8 = 71/320$ (rounded down to 340/384 in MIDI).

`midi-grace-after-rest.ly`

Tied notes sound as one note in MIDI. Grace notes following a tied note shorten the resulting single note in MIDI.

`midi-grace-after-tie.ly`

Grace notes don't introduce syncing problems: the last note off will appear at tick 768 ($2 * 384$).

`midi-grace.ly`

MIDI key signatures are output, using an approximate key signature if MIDI format cannot represent the true key signature

`midi-key-signature.ly`



Lyrics in MIDI are aligned to ties and beams: this examples causes no bar checks in MIDI.

`midi-lyric-barcheck.ly`



Microtonal shifts should be corrected before the start of the next (possibly grace) note.

`midi-microtone-off.ly`

The pitch wheel is used for microtones.

`midi-microtone.ly`

A MIDI note-off event precedes a simultaneous note-on event for the same pitch in the same MIDI channel, so that all notes are heard. Run `timidity -idvvv file.midi |grep Midi` to see midi events.

midi-notes.ly



MIDI and partial measures work together.

midi-partial.ly

Pedals. Run `timidity -idvvv file.midi |grep Midi` to see midi events.

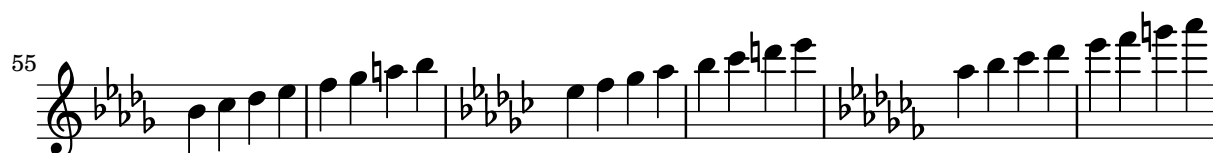
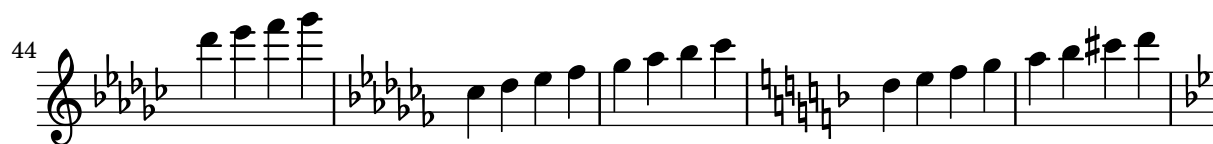
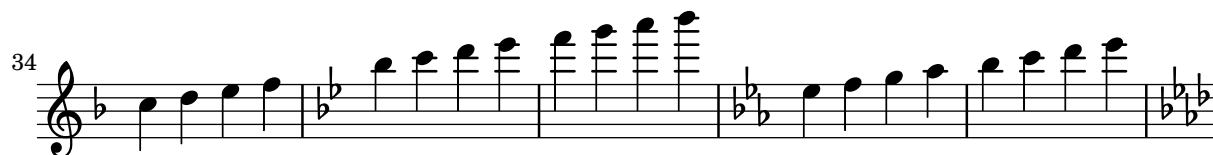
midi-pedal.ly



Converting LilyPond input to MIDI and then again back with `midi2ly.py` is a reversible procedure in some simple cases, which mean that the original `.ly` -file and the one converted back from the generated `.midi` -file do not differ. Here are produced some scales.

midi-scales.ly





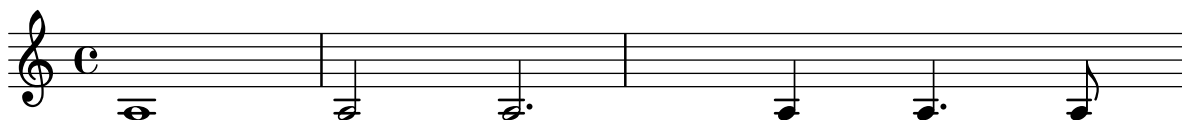
should deliver f' in MIDI
midi-transposition.ly

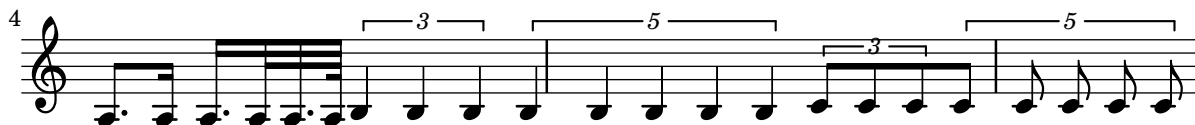


Midi2ly tuplet test.

```
python scripts/midi2ly.py --duration-quant=32 \  
  --allow-tuplet=4*2/3 \  
  --allow-tuplet=8*2/3 \  
  --allow-tuplet=4*3/5 \  
  --allow-tuplet=8*3/5 \  
  tu.midi
```

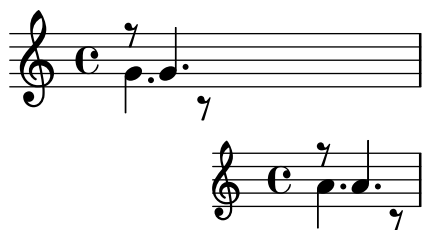
midi-tuplets.ly





In overlapping unisons, within a single MIDI channel, either the first note is truncated, or the notes are merged if `midiMergeUnisons` is `#t`. Run `timidity -idvfvv file.midi |grep Midi` to see midi events.

`midi-unisons.ly`

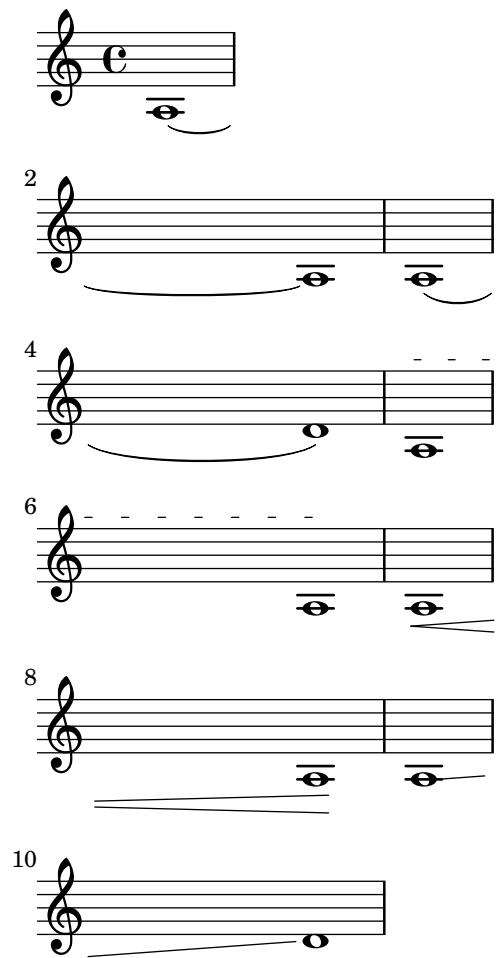


The full orchestra plays a note, where groups stop one after another. Use this to tune equalizer settings.

`midi-volume-equaliser.ly`

The property `minimum-length-after-break` can be used to stretch broken spanners starting after a line break. The following example shows usage for a variety of spanners.

`minimum-length-after-break.ly`



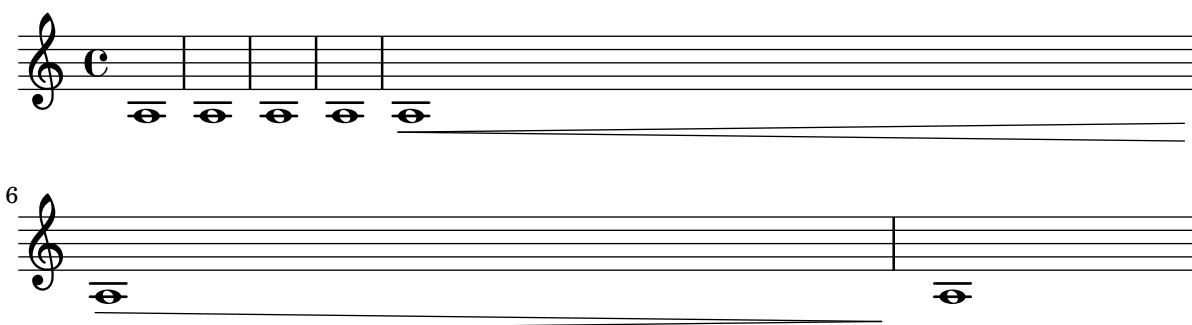
The following shows the interaction between the properties `minimum-length` and `minimum-length-after-break`. When `minimum-length` is used alone, both segments of the tie are affected. The properties `minimum-length-after-break` only affects the sibling starting a line. Both properties may be used together to create independent changes of both siblings. This example shows that both properties have an identical effect on the sibling after the break.

`minimum-length-broken-ties.ly`



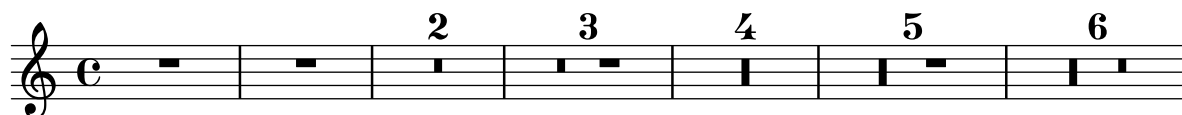
Long spanners at the end of the lines stretch measures correctly.

`minimum-length-end-line.ly`



If `Score.skipBars` is set, the signs for four, two, and one measure rest are combined to produce the graphical representation of rests for up to 10 bars. The number of bars will be written above the sign.

`mm-rests2.ly`



23

7 8 9 10 11

`\modalTranspose`, `\retrograde`, `\inversion` and `\modalInversion` work for an octatonic motif.
`modal-transforms.ly`

Octatonic motif motif transposed from c to f motif in retrograde

4

motif inverted around aes to b motif inverted exactly

The sans serif style tab clef is automatically adjusted to different string spacings.
`modern-tab-clef-scaled.ly`

T					
A					
B	3	0 2 3	2 0	3	

T					
A					
B	3	0 2 3	2 0	3	

Sans serif style tab clefs are supported by `\clef moderntab`. This alternative clef supports four- to seven-stringed instruments and is scaled automatically.

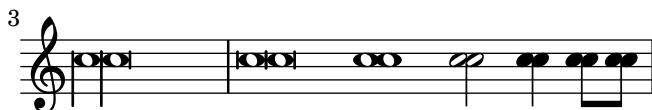
`modern-tab-clef.ly`

T			
A			
B	3	0 2 3	2 0 3

T					
A					
B	3	0 2 3	2 0	3	

Whole notes in a monochord must be properly offset so that the heads just touch each other. On the other hand, a stem should touch both notes.

monochords.ly



The source is a rather tightly set Peters in Edition is a heavy font. The Peters edition (4622c) was 'herausgegeben' by Paul Losse, whose name also appears on a 1956 edition of some other music. Strictly speaking, his editorial enhancements will not be in the PD - but I am assuming there are no notable ones in this small piece.

The original compresses the entire music onto a single page, in 4 systems. Lily does so too if you tune down spacing-increment, but chooses line breaks differently.

Further manual tweaks: the slur in measure 12 has been flattened manually. The beam in measure 3, left-hand, technically is wrong, but has been added following the original. The crescendo in measure 4 has been lowered

morgenlied.ly

Sängers Morgenlied

Franz Schubert (1797-1828)

Lieblich, etwas geschwind

1. Sü - ßes Licht! Aus gol - denen Pfor - ten brichst du
 2. Ach, der Lie - be sanf - tes We - hen schwellt mi

2.

5
 sie - gend durch die Nacht. Schön - er Tag, du bist er - wacht. Mit g
 das be - weg - te Herz, sanft, wie ein ge - lieb - ter Schmerz. Dürft ic

9
 heim - nis - vol - len Wor - ten, in me - lo - di - schen Ak - kor - den, grüß ich
 nur auf gold - nen Hö - hen mich im Mor - gen - duft er - ge - hen! Sehn - sucht

13
 dei - ne Ro - senpracht, grüß ich dei - ne Ro - senpracht.
 zieht mich him - mel - wärts, Sehn - sucht zieht mich him - mel wärts.

This is the Mozart 3 for horn. It's from an Edition Breitkopf EB 2563, edited by Henri Kling. Henri Kling (1842-1918) was a horn virtuoso that taught in Geneva.

Konzert № 3 Es dur

für Horn und Orchester

Horn in F

Wolfgang Amadeus Mozart (1

Allegro

4/4 Tutti

p

28 Solo **A**

34 3

42

47 *tr* **B**

55 *con espressione* *cre*

60 *f* *p*

67 *f* *tr* **C** 15 **D** *mf*

87

93 2

104

2 Horn in F

122

128 **F** 3

137 3 **G**

145

152 *f* *ff* *sempre f*

157 *tr* **H** 3 3 3 3 3 3

163 3 3 *f* *tr*

171 *tr* **8** *tutti* *f*

Cadenza ad lib.

Romanze

p con molto espressione

6 **A** 8 *mf*

18 2

Horn in F

Musical score for Horn in F, measures 38-73. The score is written in treble clef with a key signature of two flats (B-flat and E-flat). Measure 38 starts with a 4-measure rest. Measures 47-50 feature a section labeled 'C' with dynamics *sfp* and *p*. Measures 57-60 feature a section labeled 'D' with a 3-measure rest and a *p* dynamic. Measures 65-68 feature a 3-measure rest. Measures 73-76 continue the melodic line.

Rondo

Musical score for Rondo, measures 1-67. The score is written in treble clef with a key signature of two flats and a 6/8 time signature. Measure 1 starts with a *p* dynamic. Measure 7 has a 13-measure rest. Measure 26 has a 7-measure rest and a section labeled 'A' with a *p* dynamic. Measure 40 has a 4-measure rest. Measure 51 has a section labeled 'B' with a 3-measure rest. Measure 60 has a 4-measure rest. Measure 67 has a section labeled 'C'.

4 Horn in F

81 12 D

99 3

109 3

121 E 9

136

142

150 F *f* *p*

157

163 7 G 4 *mf* H

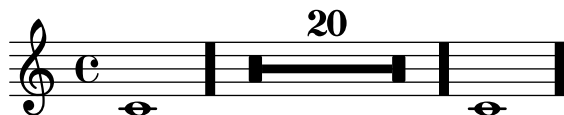
180 *cresc.* *f*

187 *tr* 5 *p*

198 5

The multimeasure rest is centered exactly between bar lines.

`multi-measure-rest-center.ly`



The existence of a text mark does not affect the placement of a multimeasure rest.

`multi-measure-rest-center2.ly`



A multi-measure rest implicitly creates a bottom context. The expected output is a repeated section with one whole-measure rest in the body and one whole-measure rest in one alternative.

`multi-measure-rest-create-context.ly`



Multi-measure rests are centered also in the case of grace notes.

`multi-measure-rest-grace.ly`



There are both long and short instrument names. Engraving instrument names should not be confused by the multimeasure rests.

`multi-measure-rest-instr-name.ly`



Though the default spacing for multi-measure rests is affected by prefatory matter in other staves, centering can be restored by overriding `spacing-pair`.

`multi-measure-rest-multi-staff-center.ly`



Multi measure rests don't segfault when there is no staff symbol.

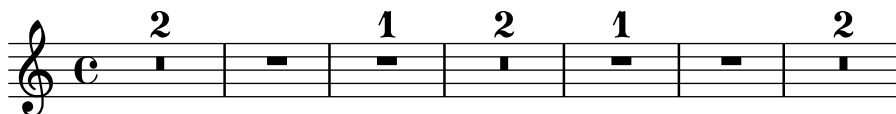
`multi-measure-rest-no-staff.ly`



Setting `restNumberThreshold` affects only future multi measure rests. Unsetting it works without crashes.

The rests should be numbered 2, (none), 1, 2, 1, (none), and 2.

`multi-measure-rest-number-threshold.ly`

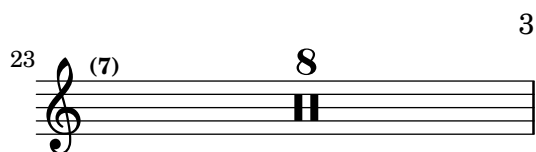
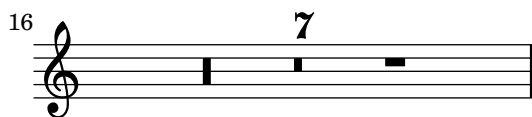
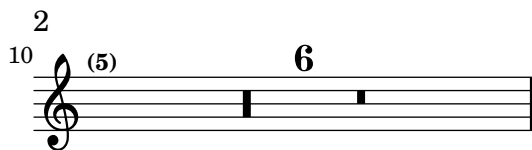


A multi measure rest reminder is a reminder printed at the top of the page, to remember how many measures you were counting.

This is a demo of user-defined engravers, and defining grobs using `ly:make-grob-properties`.

`multi-measure-rest-reminder.ly`

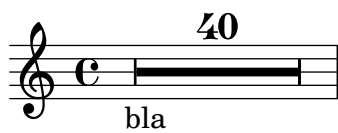




Music engraving by LilyPond 2.24.4—www.lilypond.org

By setting texts starting with a multi-measure rest, an extra spacing column is created. This should not cause problems.

`multi-measure-rest-spacing.ly`



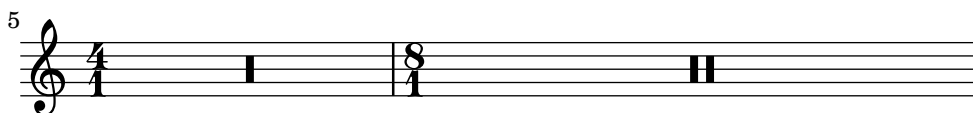
Multi measure rest staff position can be overridden to 0.

multi-measure-rest-staff-position.ly



Only whole, breve, longa and maxima rests are used by default for multi-measure rests.

multi-measure-rest-standard.ly



Scripts and texts may be added to the multi-measure rests. This test covers such rests under various spanners. This used to crash (issue #6085).

multi-measure-rest-text-spanned.ly



Scripts and texts may be added to the multi-measure rests.

By setting the appropriate `spacing-procedure`, we can make measures stretch to accommodate wide texts.

multi-measure-rest-text.ly

The image shows two staves of musical notation. The first staff is in 3/4 time and contains five measures. The first measure has a fermata and the annotation "Ad lib" below it. The second measure has an accent (^) above it. The third measure has a "4" above it. The fourth measure has a "3" above it. The fifth measure has "top", "inner", and "10" above it, and "inner" and "bot" below it. The second staff starts at measure 17 and contains the text "very very very very very very long text" above it, followed by a single note on the staff.

Multi-measure rests standard values can be tweaked.

`multi-measure-rest-tweaks.ly`

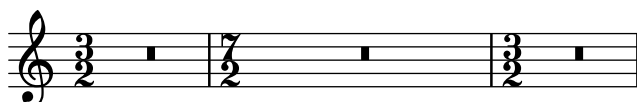
Use non-standard multi-measure rests:



Round up to the longer rest:



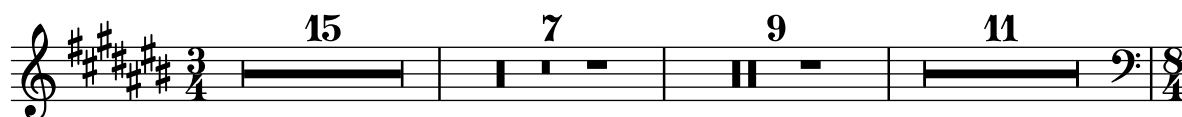
Round up to the longer rest only in specified time signatures:



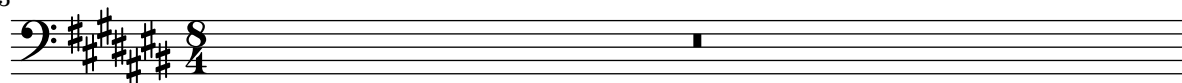
Multi-measure rests do not collide with bar lines and clefs. They are not expanded when you set `Score.skipBars`. Although the multi-measure-rest is a `Spanner`, minimum distances are set to stop it colliding with bar lines.

Rests over measures lasting longer than 2 wholes use breve rests. When more than 10 measures (tunable through `expand-limit`) are used then a different symbol is used.

`multi-measure-rest.ly`



43



Multiple overrides to the default time signature settings can be added. In this example, notes should be beamed as indicated by the markups.

`multiple-time-sig-settings.ly`



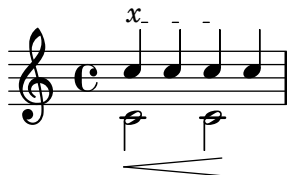
Music functions can be called directly from Scheme.

`music-function-direct-call.ly`



the `endSpanners` music function inserts end span events at the end of a note.

`music-function-end-spanners.ly`



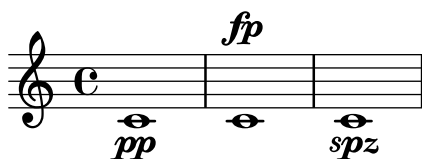
For defining a music function, one can supply one or several music function calls chained together, cutting the last call short using `\etc.` The remaining arguments are supplied when calling the music function defined in this manner.

`music-function-incomplete.ly`



Music functions may be attached to notes; in this case they must be introduced by a direction indicator. If a non-neutral direction is given (i.e. anything else than a dash), then the `'direction` property of the resulting object is set accordingly.

`music-function-post-event.ly`



Music functions accept strings as markup arguments when using the type predicate `markup?`

`music-function-string-markup.ly`



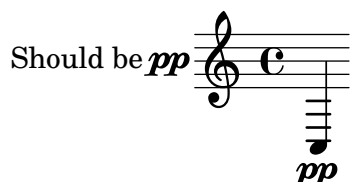
Music functions are generic music transformation functions, which can be used to extend music syntax seamlessly. Here we define and use a `\myBar` function which works like `\bar`.

`music-function.ly`



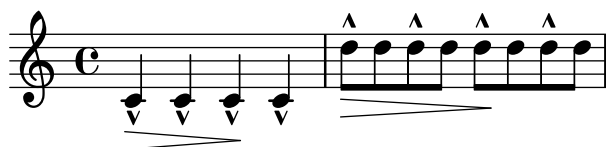
`music-map` also recurses into articulations.

`music-map-articulations.ly`



With `music-map`, you can apply functions operating on a single piece of music to an entire music expression. In this example, the function `notes-to-skip` changes a note to a skip. When applied to an entire music expression in the 1st measure, the scripts and dynamics are left over. These are put onto the 2nd measure.

`music-map.ly`



Nested fill-lines should work properly. In this example, both occurrences of FOO should be centered.

`nested-fill-lines.ly`

| FOO |
| FOO |



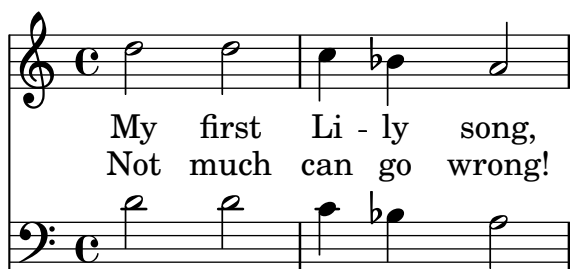
`addlyrics` do not need braces around their arguments, in particular if the arguments are variables.

`newaddlyrics-music-identifiers.ly`



`newlyrics`, multiple stanzas, multiple lyric voices.

`newaddlyrics.ly`



**MY FIRST LI - LY SONG,
NOT MUCH CAN GO WRONG!**

`no-header.ly`

This regtest does not contain any header and paper blocks. Its purpose is to test whether anything breaks if these blocks are absent.

LilyPond does not render zero-duration scores. This test should produce neither MIDI nor visual output.

`no-music.ly`

The printing of the staff lines may be suppressed by removing the corresponding engraver.

`no-staff.ly`



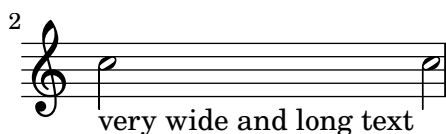
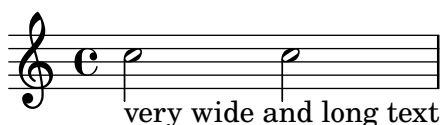
Bar lines are positioned correctly when using custom staves which are not centered around position 0.

`non-centered-bar-lines.ly`



By default, text is set with empty horizontal dimensions. The property `extra-spacing-width` in `TextScript` is used to control the horizontal size of text.

`non-empty-text.ly`



Whether simultaneous notes are identified as vertically colliding or not depends on the value of the `note-collision-threshold` property of the `Stem` grob (for notes in the same voice) and the `NoteCollision` grob (for notes in different voices).

`note-collision-threshold.ly`

collisions

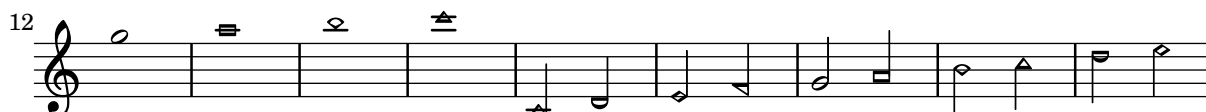


collisions prevented



Notes can be set in the Aiken (Christian Harmony) style.

`note-head-aiken.ly`



Note heads are placed on the correct side of the stem; this placement changed is not changed by magic values of `layout-set-staff-size`. (Fix of issue 5303.)

`note-head-chord-layout-set-staff-size.ly`



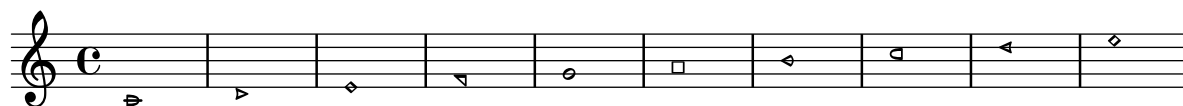
Note heads are flipped on the stem to prevent collisions. It also works for whole heads that have invisible stems.

`note-head-chord.ly`



Notes can be set in the Funk (Harmonia Sacra) style.

`note-head-funk.ly`



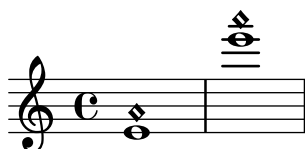
Dots on harmonic note heads can be shown by setting the property `harmonicDots`.

note-head-harmonic-dotted.ly



A harmonic note head must be centered if the base note is a whole note.

note-head-harmonic-whole.ly



The handling of stems for harmonic notes must be completely identical to normal note heads.

Harmonic heads do not get dots. If `harmonicAccidentals` is unset, they also don't get accidentals.

note-head-harmonic.ly



Notes can be set in the Sacred Harp style.

note-head-sacred-harp.ly



Shape notes can be set to work properly in minor keys.

note-head-shape-minor.ly



With `shapeNoteStyles`, the style of the note head is adjusted according to the step of the scale, as measured relative to the `tonic` property.

note-head-solfa.ly

11

20

Notes can be set in the Southern Harmony style.
 note-head-southern-harmony.ly

12

21

Note head shapes may be set from several choices. The stem endings should be adjusted according to the note head. If you want different note head styles on one stem, you must create a special context.

Harmonic notes have a different shape and different dimensions.
 note-head-style.ly

default altdefault

9 baroque neomensural

17 mensural petrucci

25 harmonic harmonic-black

33 harmonic-mixed diamond

41 cross xcircle

49 triangle slash

57 kievan

Notes can be set in the Walker (Christian Harmony) style.

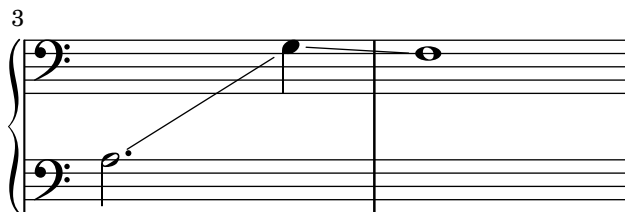
`note-head-walker.ly`

12

22

Note head lines (e.g. glissando) run between centers of the note heads.

`note-line.ly`



Note names may be printed in various languages, with or without accidentals and octave marks.

note-name-context-custom.ly

la sibb do# reb+fa+lab mid

(ref.)la sibb do# reb+fa+lab mid

do' ré# mi' la₅

(ref.)do' ré# mi' la5

NoteNames context should be close to the related notes, and should not collide with the tempo markings.

note-names-context.ly



NoteNames and ChordNames contexts have (limited) support for makam notation. The alteration glyphs displayed in these two contexts should be the same as the ones on the staff.

note-names-makam.ly



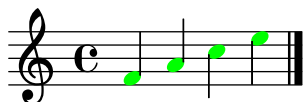
Various languages are supported for note names input. Selecting another language within a music expression is possible, and doesn't break point-and-click abilities.

note-names.ly



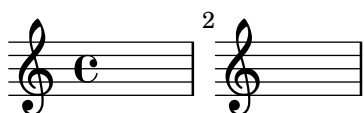
Noteheads do not extend above the upper staff line.

`notehead-height.ly`



'NullVoice' responds to `\change Staff` as a 'Voice' would. In consequence, in the first shown system it keeps a single treble-clef staff alive. In the second system, it is in a single bass-clef staff.

`nullvoice-change.ly`



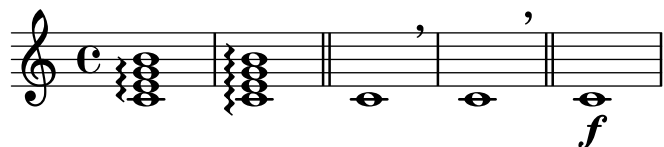
The number of stafflines of a staff can be set. Ledger lines both on note heads and rests, as well as bar lines, are adjusted accordingly.

`number-staff-lines.ly`



The `\offset` command may be used to displace various properties from the default settings contained in grob descriptions. Settings which may be offset are limited to those of type **number**, **number-pair**, or **number-pair-list**. Most of the following examples begin with the grob in its default appearance. The command is demonstrated as a tweak and as an override.

`offsets.ly`





heavily mutilated Edition Peters Morgenlied by Schubert

Lieblich, etwas geschwind

1. Sü - ßes Licht! Aus gol - den
2. いろはに かな た た ほへど

heavily mutilated Edition Peters Morgenlied by Schubert

Lieblieh, etwas geschwind

1. Sü - ßes Licht! Aus gol - den

2. いろはに かな た た ほへど

2.

heavily mutilated Edition Peters Morgenlied by Schubert

LilyPond demo

Lieblich, etwas geschwind

2.

2

1. Sü - ßes Licht! Aus gol - denen
2. いろはに ㄱ ㅏ ta ta ほへどちり

4

Pfor - ten brichst du sie - gend durch die
ぬるを Жъл дю ля ㅏ いろはに ㄱ

6

Nacht. Schön - er
ta ta ほへ

cresc.

7

Tag, du bist er - wacht.
ちり ぬる Жъл дю ля

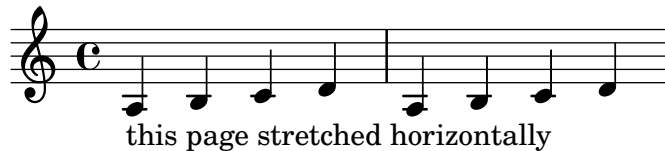
`OneStaff` contexts can be used for letting several contexts use the same vertical position. This example shows chords being placed in a staff and immediately following it.

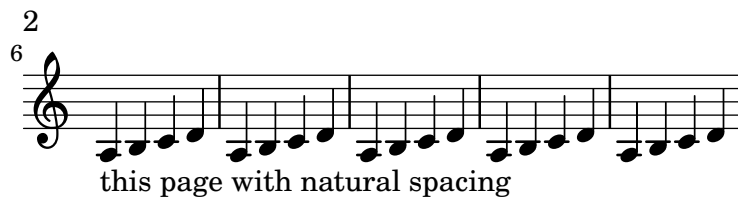
`one-staff.ly`



The optimal page breaker will make trade-offs between horizontal and vertical stretching so that the overall spacing will be more acceptable. The `page-spacing-weight` parameter controls the relative importance of vertical/horizontal spacing. Because `ragged-last-bottom` is on, there is no penalty for odd vertical spacing on the final page. As a result, only the first page should be horizontally stretched.

`optimal-page-breaking-hstretch.ly`





Music engraving by LilyPond 2.24.4—www.lilypond.org

Test functionality of the `-danti-alias-factor` command line option. Affects PNG output only.

`option-anti-alias-factor.ly`



Test functionality of the `-dpng-width` and `-dpng-height` command line options. Affects PNG output only.

`option-png-width-height.ly`



Test backup of predicate-based optional music function arguments.

Unit expressions like `3\cm` can't be parsed as optional arguments in one go since they would require lookahead after `3`. The predicate is checked after `3`, and if it is suitable, Lilypond commits

to parsing as a unit number, and checks the result again. For the predicate `integer?` and `3\cm`, you would actually get a syntax error (since the combination is no longer an integer) rather than Lilypond trying to see `3\cm` as two separate arguments.

`optional-args-backup.ly`

Test predicate-based optional music function argument skipping.

`optional-args-predicate.ly`

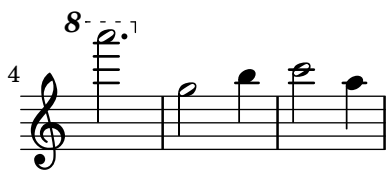
Test optional music function arguments. The output is nonsensical, but if you wrack your brain, you'll figure it out. Remember that optional arguments are matched left to right, and after the first non-match, the rest is skipped.

`optional-args.ly`



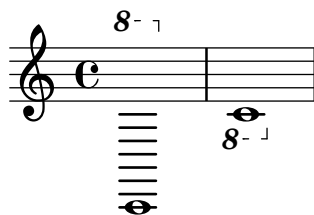
At line breaks, ottava brackets have no vertical line and their horizontal line does not stick out. The dashed line runs until the end of the line (regardless of prefatory matter).

`ottava-broken.ly`



Consecutive ottavas with the same label are not incorrectly merged.

`ottava-consecutive.ly`



Both edge heights of an ottava bracket can be specified.

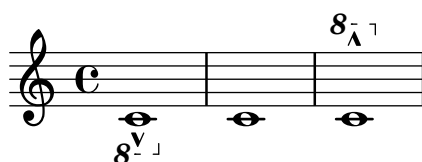
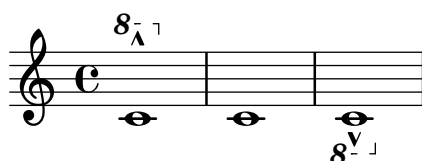
`ottava-edge.ly`



User tweaks to `OttavaBracket.direction` are honored in all cases.

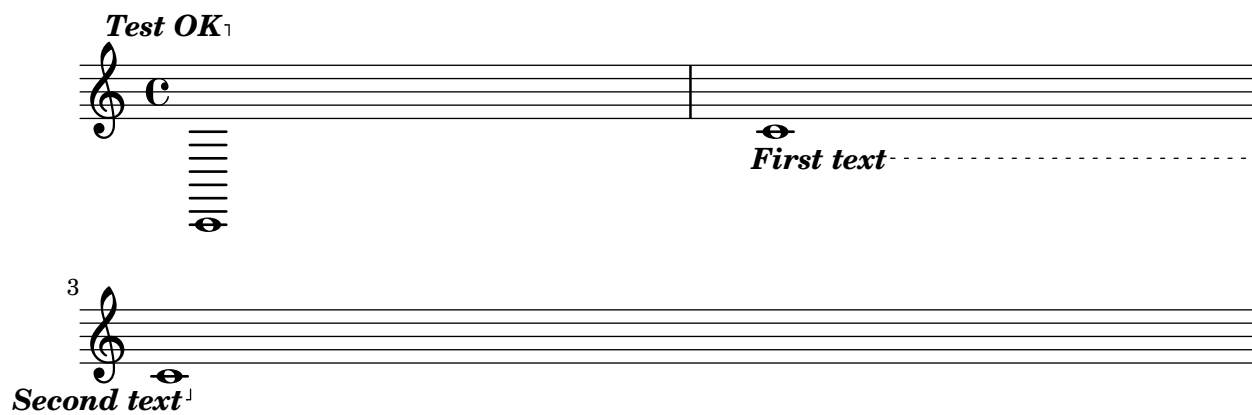
In this test, marcato marks show the expected placement.

`ottava-explicit-direction.ly`



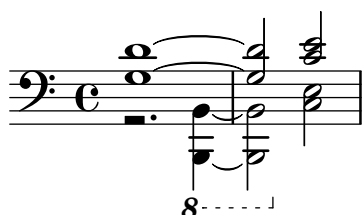
The text property of an `OttavaBracket` grob may be overridden.

`ottava-explicit-text.ly`



Ottava brackets can be made to apply to a single voice by moving the `Ottava_spanner_engraver` to `Voice` context.

`ottava-per-voice.ly`



Ottava brackets are supported, through the use of the music function `\ottava`.

The spanner should go below a staff for 8va bassa, and the ottavation markup can be tuned with `Staff.ottavation`.

`ottava.ly`

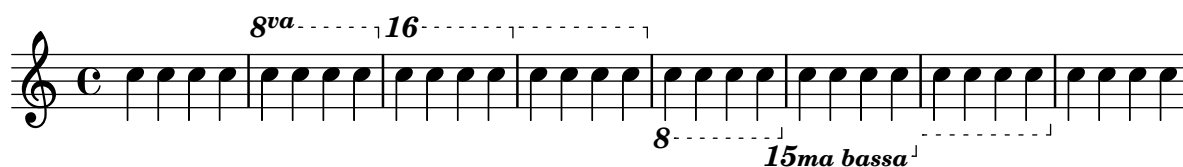


LilyPond should warn about missing ottavation markups only if there is a list of ottavation markups defined. This is not the case for MIDI performers, so do not output a warning.

ottavation-markups-midi.ly

Ottavation markups can be changed by the user. LilyPond warns about missing markups (in this example for +3 and -3 octaves).

ottavation-markups.ly



Shows the output-attributes property of a grob being set. This should have no effect in the Postscript backend. In the SVG backend these settings should produce this group tag: <g id="123" class="foo" data-whatever="bar"> ... </g>

output-attributes.ly



The outside-staff-placement-directive adjusts the order in which objects are placed outside the staff.

outside-staff-placement-directive.ly

left-to-right-polite

White E, Green U, voyels: "Voyels"
 Black A, Red I, Blue O: Rimbaud,



left-to-right-greedy

Red I, "Voyels"
 White E, Blue O: Rimbaud,
 Black A, Green U, voyels:



right-to-left-polite vowels:
 White E, Green U, Rimbaud,
 Black A, Red I, Blue O: "Voyels"

right-to-left-greedy
 White E, Green U, Rimbaud,
 Black A, Red I, Blue O: vowels: "Voyels"

A sublist of grob property lists may be overridden within a callback. This test uses a custom stencil callback which changes the Y coordinate of the right bound of the glissando spanner.

`override-nest-scheme.ly`

Sublist of grob property lists may be also tuned. In the next example, the `beamed-lengths` property of the `Stem` grob is tweaked.

`override-nest.ly`

Page breaks work when they are placed at the end of a score, or between scores.

`page-break-between-scores.ly`

2

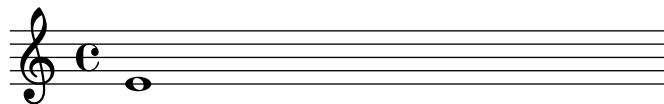
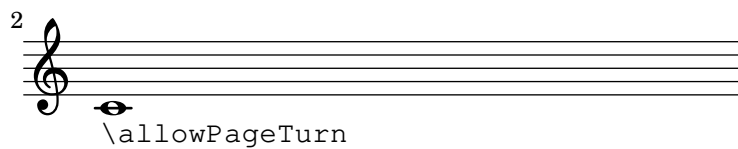
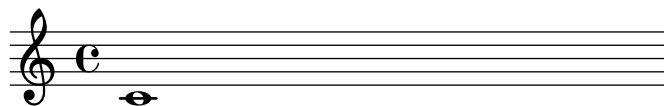
3

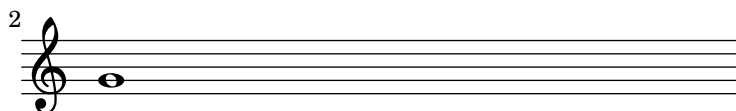
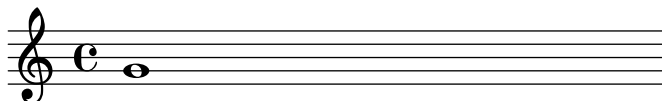


Music engraving by LilyPond 2.24.4—www.lilypond.org

Page breaking and page turning commands (`\pageBreak`, `\noPageBreak`, etc), can be used at top level.

`page-break-turn-toplevel.ly`





Page breaks are allowed by default at the end of the score, but the user can override them. There should be one line on the first page and two (colliding) lines on the second page.

page-breaking-end-of-score.ly



Music engraving by LilyPond 2.24.4—www.lilypond.org

The page breaking algorithm can handle clefs combined with lyrics. That is, the Y-extent approximations are a little more accurate than just using bounding boxes. In particular, everything should fit on one page here.

page-breaking-good-estimation.ly

The image displays a musical score for the phrase "ma ma ma ma ma ma". It is organized into two main systems, each containing four staves. The first system starts with a treble clef, a common time signature (C), and a key signature of one flat (Bb). The notes are quarter notes, and the lyrics "ma ma ma ma ma ma" are placed below each note. The second system begins with a measure rest (a '4' above the staff) and continues with the same melody and lyrics. The notes in the second system are vertically aligned with those in the first system, demonstrating consistent vertical alignment across systems.

Music engraving by LilyPond 2.24.4—www.lilypond.org

The height of marks is taken into account during page breaking.

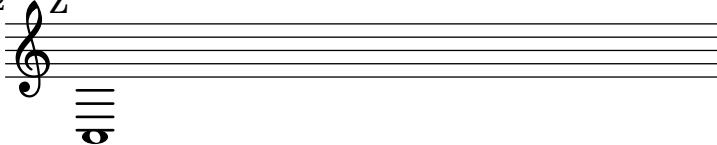
A
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C
D
D
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F
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|||

2

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G
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P
P
Q
Q
R
R
R
S
S
T
U
U
V
W
X
Y
Z

2



Music engraving by LilyPond 2.24.4—www.lilypond.org

Padding between markups is honored by the page breaker. This should take up two pages.

page-breaking-markup-padding.ly

2
01



Music engraving by LilyPond 2.24.4—www.lilypond.org

Padding between a markup and a system is honored by the page breaker. This should take up two pages.

page-breaking-markup-padding2.ly

00
01

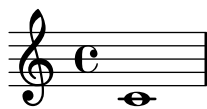
2



Music engraving by LilyPond 2.24.4—www.lilypond.org

Padding between a score and a markup is honored by the page breaker. This should take up two pages.

00
01

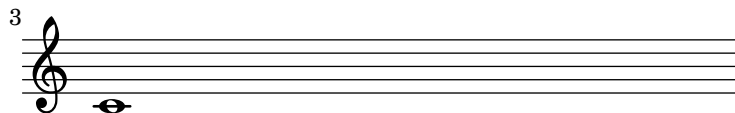
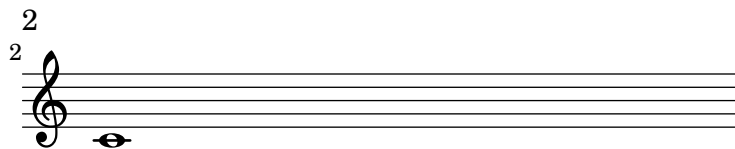
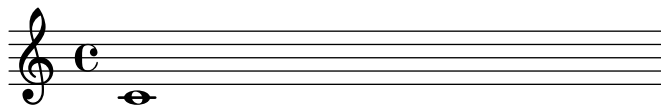


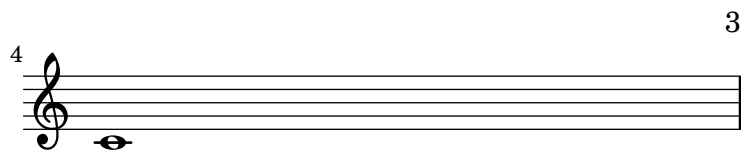
2
02

The `max-systems-per-page` variable prevents more than a given number of systems from being on a page. Titles are not counted as systems. `\noPageBreak` can override `max-systems-per-page` in unusual situations.

`page-breaking-max-systems-per-page.ly`

Title



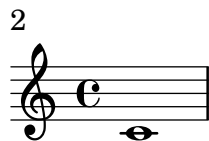


Music engraving by LilyPond 2.24.4—www.lilypond.org

minimum-distance is correctly accounted for in page breaking.

page-breaking-min-distance.ly





Music engraving by LilyPond 2.24.4—www.lilypond.org

minimum-distance within a system is correctly accounted for in page breaking.

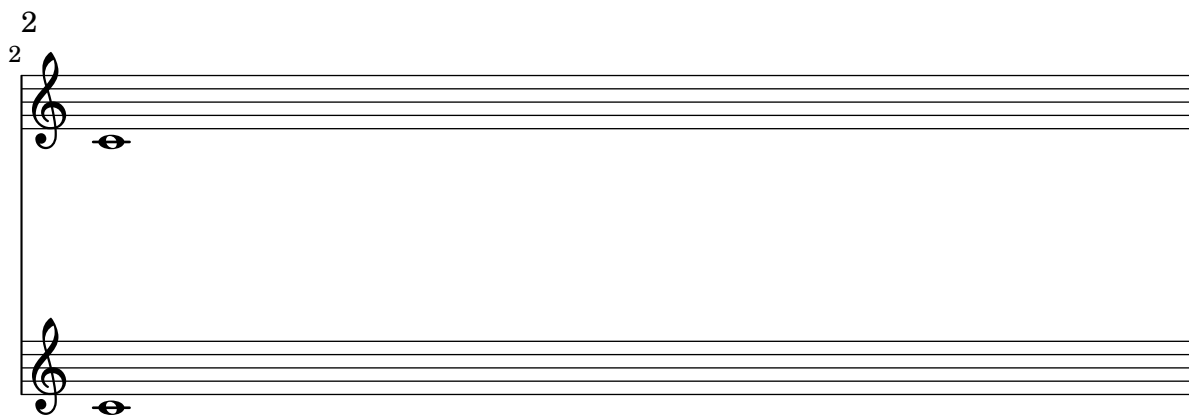
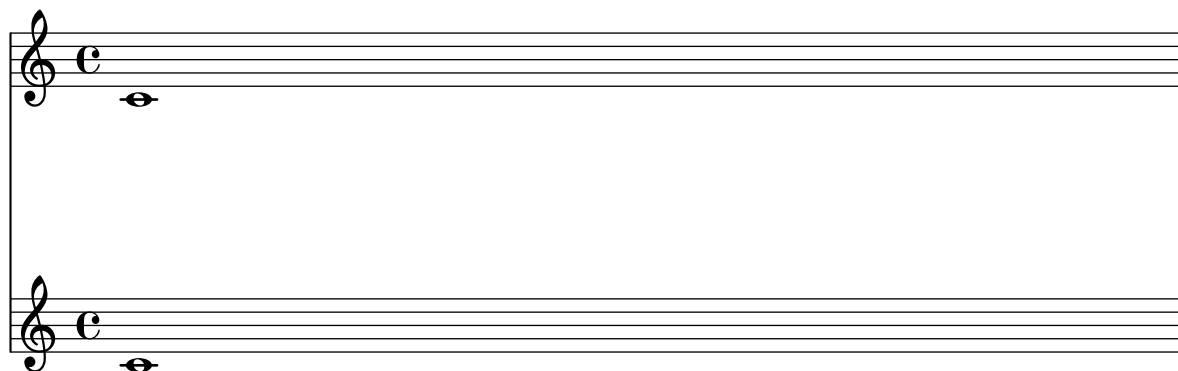
page-breaking-min-distance2.ly



Music engraving by LilyPond 2.24.4—www.lilypond.org

minimum-distance within a system is correctly accounted for in page breaking.

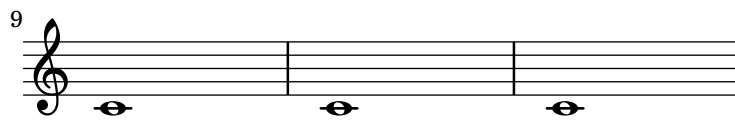
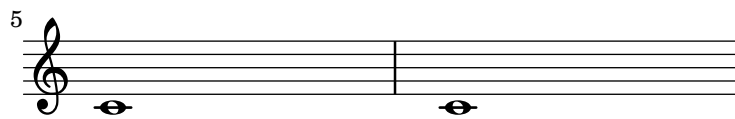
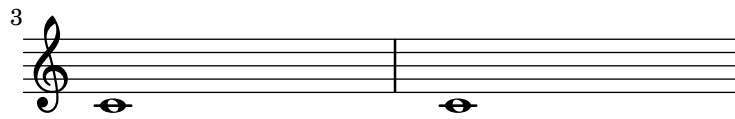
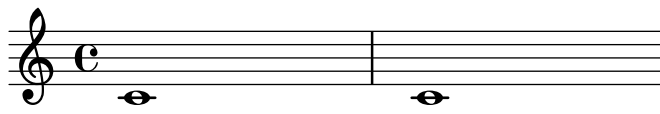
page-breaking-min-distance3.ly

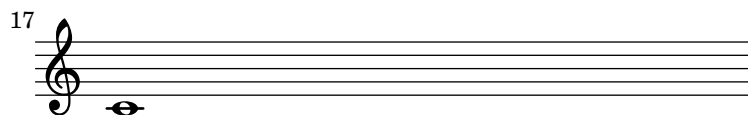
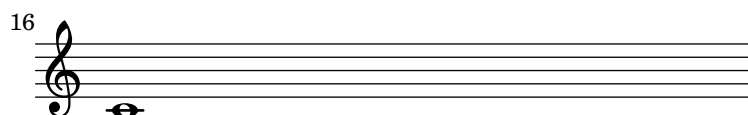
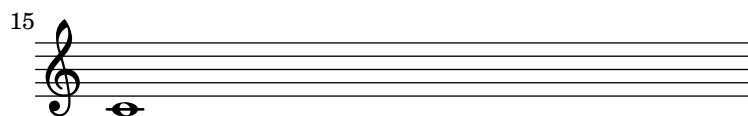
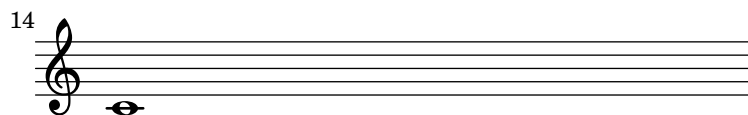
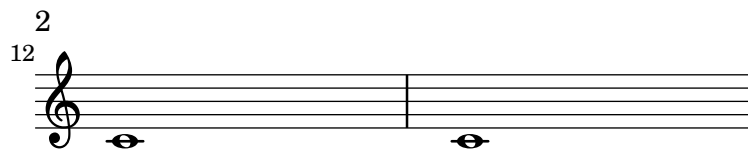


Music engraving by LilyPond 2.24.4—www.lilypond.org

The `min-systems-per-page` variable forces each page to have a minimum number of systems. Titles do not count as systems here.

Title





Music engraving by LilyPond 2.24.4—www.lilypond.org

The `min-systems-per-page` variable takes precedence over the desire not to overfill a page. In this case, systems will overlap because they are forced to be on the page.

Music engraving by LilyPond 2.24.4—www.lilypond.org

The height-estimation routine takes into account the fact that the TextScript needs to be moved up to avoid the note. This should be spaced on two pages.

The image displays five musical staves, each with a treble clef and a common time signature (C). Each staff contains a single note on the second line of the staff. Above each note, the word "Text" is written. The text is positioned above the note head, and the note head is positioned above the second line. The text is positioned above the note head, and the note head is positioned above the second line. The text is positioned above the note head, and the note head is positioned above the second line. The text is positioned above the note head, and the note head is positioned above the second line. The text is positioned above the note head, and the note head is positioned above the second line.

Staff 1: Note on line 2, text "Text" above it.

Staff 2: Note on line 2, text "Text" above it.

Staff 3: Note on line 2, text "Text" above it.

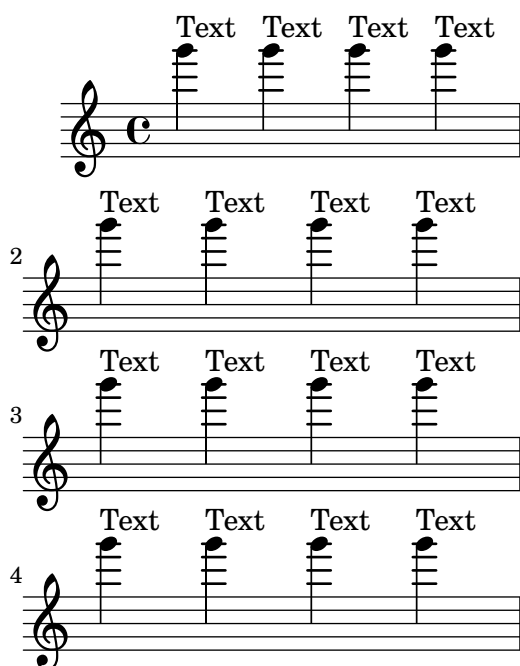
Staff 4: Note on line 2, text "Text" above it.

Staff 5: Note on line 2, text "Text" above it.

Music engraving by LilyPond 2.24.4—www.lilypond.org

The height-estimation routine doesn't get confused by multiple outside-staff grobs in the same measure.

page-breaking-outside-staff-estimation2.ly



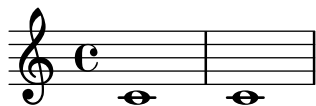
Music engraving by LilyPond 2.24.4—www.lilypond.org

A warning is emitted when `page-count` is negative or zero.



The number of pages in a score can be forced by setting `page-count` in the (book-level) paper block.

`page-breaking-page-count1.ly`

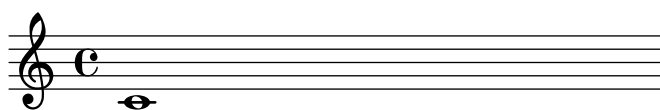


2

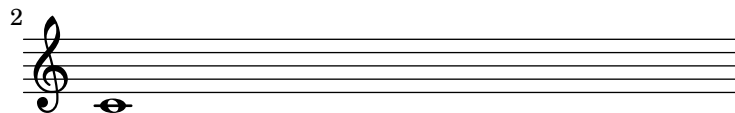
Music engraving by LilyPond 2.24.4—www.lilypond.org

The number of pages in a score can be forced by setting `page-count` in the (book-level) paper block. If there are too few systems for the number of pages, we append blank pages.

`page-breaking-page-count2.ly`



2

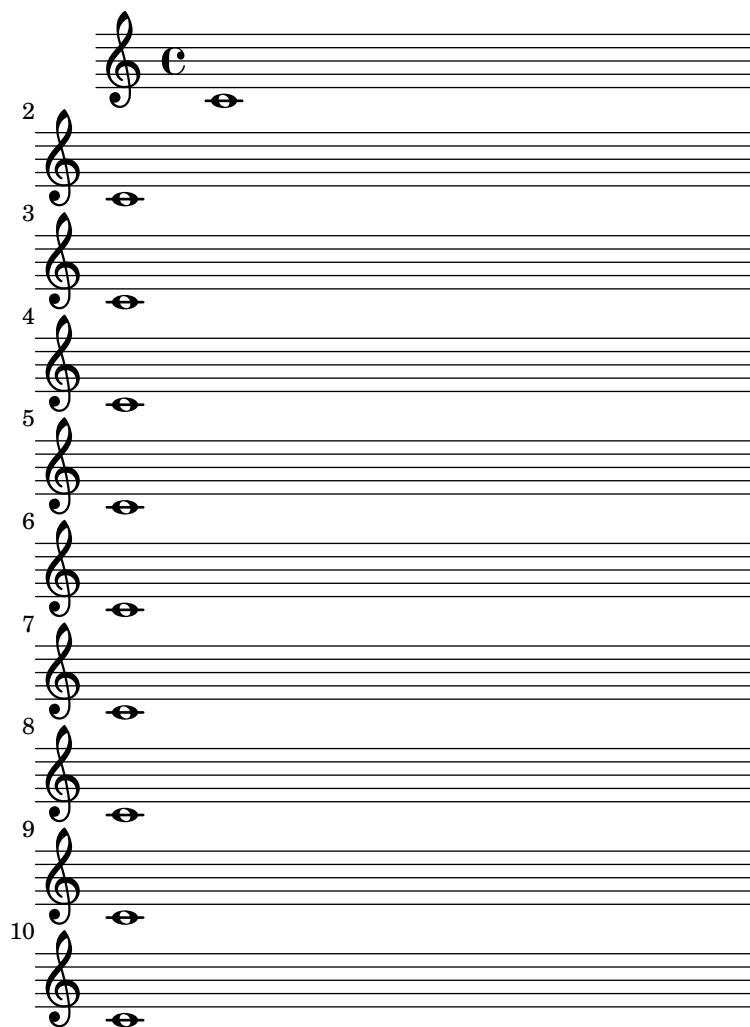


3

Music engraving by LilyPond 2.24.4—www.lilypond.org

The number of pages in a score can be forced by setting `page-count` in the (book-level) paper block. Even if there are too many systems for that number of pages, we will squeeze them in.

`page-breaking-page-count3.ly`



Music engraving by LilyPond 2.24.4—www.lilypond.org

system-count and \pageBreak are compatible.

page-breaking-system-count-forced-break.ly

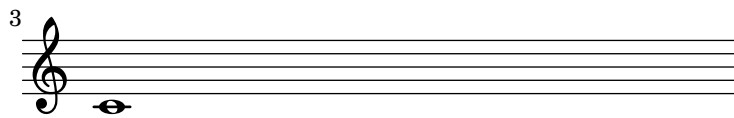
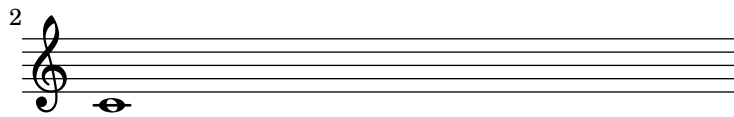
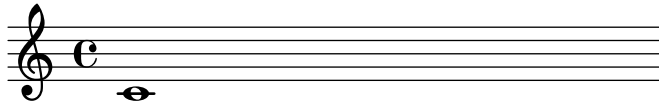


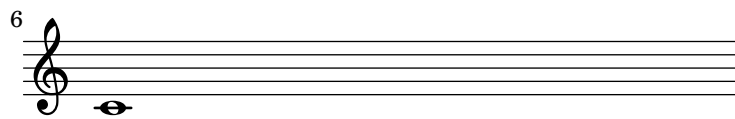
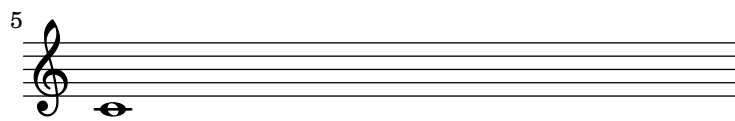
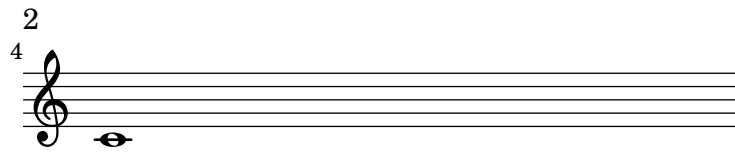


Music engraving by LilyPond 2.24.4—www.lilypond.org

The systems-per-page variable forces a certain number of systems per page. Titles are not counted as systems.

Title





Music engraving by LilyPond 2.24.4—www.lilypond.org

Stress optimal page breaking. This should look nice and even on 4 a6 pages.

Title
(and (the) subtitle)
Sub sub title

Poet	Instrument	Composer
Meter (huh?)		Arranger
Piece		opus 0

2

3

4

Copyright by /me

2 Instrument

5

6

7

8

9

10

Instrument 3

11



12



13



14



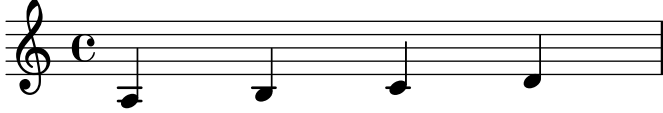
15



Music engraving by LilyPond 2.24.4 4
www.lilypond.org

Page-headers and -footers. All headers and footers should be printed on their specified page.

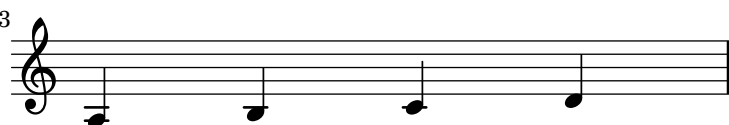
first-page-header-text



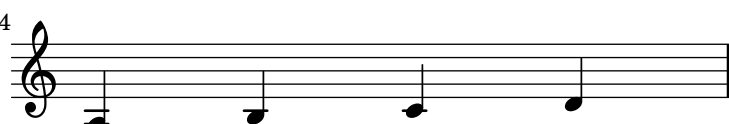
2



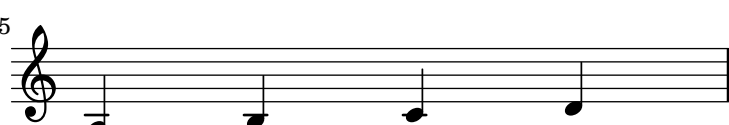
3




4



5



6



first-page-footer-text

2
page-2-header-text

7



8



9



10



11



12



page-2-footer-text

3
last-page-header-text

13



14



15



16



17



18



last-page-footer-text

Page labels on loose columns are not ignored: this includes both mid-line unbreakable columns which only contain labels and columns with empty bar lines (and no other break-aligned grobs).

Table of Contents

Mid-line	1
Empty bar line	1



Music engraving by LilyPond 2.24.4—www.lilypond.org

Page labels may be placed inside music or at top-level, and referred to in markups. Labels created with `\tocItem` (and thus bearing an internally-generated unique identifying symbol) remain referable by their user-specified name.

`page-label.ly`

Title Page

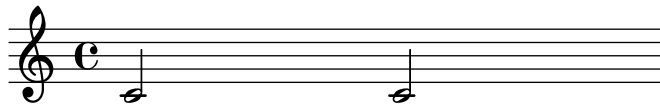
2

Table of contents

Table of contents	2
First Score	3
Mark A	3
Mark B	4
Mark C	4
Unknown label	?

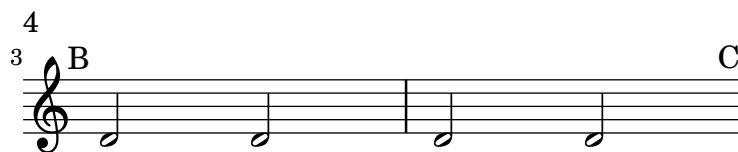
3

First score



2 A (page 3)

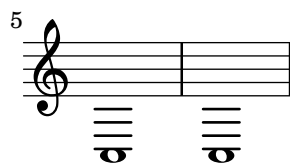
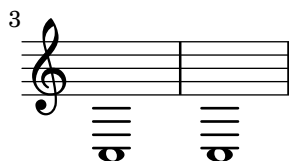
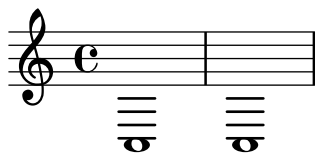




Music engraving by LilyPond 2.24.4—www.lilypond.org

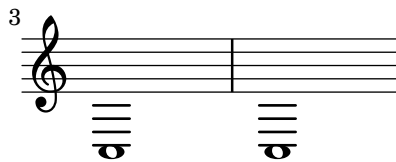
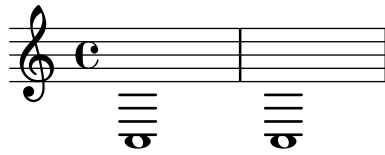
By setting `extra-offset` within the `line-break-system-details` of `NonMusicalPaperColumn`, systems may be moved in relation either to their default position on the printable area of the page or the absolute position specified by `X-offset` or `Y-offset` within `line-break-system-details`.

header



footer

By setting Y-offset and X-offset for the line-break-system-details of NonMusicalPaperColumn, systems may be placed absolutely on the printable area of the page.



this is the tagline

This shows how different settings on `\paper` modify the general page layout. Basically `\paper` will set the values for the whole paper while `\layout` for each `\score` block.

This file is best viewed outside the collated files document.

11.38 top-margin

0.00 basic-dist (top-markup-spacing) 0.00 min-dist (top-markup-spacing)
 1.00 basic-dist (markup-markup-spacing) 0.00 min-dist (markup-markup-spacing)

Title
(and (the) subtitle)

17.51 extra-dist (markup-markup-spacing)

Poet
 Meter
 Instrument
 Composer
 Arranger

5.00 basic-dist (markup-system-spacing) 5.92 extra-dist (markup-system-spacing)
 0.00 min-dist (markup-system-spacing)

12.00 basic-dist (system-system-spacing) 8.00 min-dist (system-system-spacing)
 4.00 extra-dist (system-system-spacing)
 0.00 min-dist (score-markup-spacing) (-7.35, 0.00)

6
 12.00 basic-dist (score-markup-spacing) 12.00 extra-dist (score-markup-spacing)
 0.00 min-dist (markup-system-spacing)

5.00 basic-dist (markup-system-spacing) 5.92 extra-dist (markup-system-spacing)
 8.00 min-dist (system-system-spacing) (-7.35, 0.51)

4
 12.00 basic-dist (system-system-spacing) 4.00 extra-dist (system-system-spacing) (-7.35, 0.51)
 8.00 min-dist (system-system-spacing)

169.01 paper-height 12.00 basic-dist (system-system-spacing) 4.00 extra-dist (system-system-spacing)
 1.00 basic-dist (last-bottom-spacing) 0.00 min-dist (last-bottom-spacing) (-7.35, 0.51) ext.

63.88 space left 67.91 extra-dist (last-bottom-spacing)

Links to labels should not break if the label doesn't exist.

[Link to non-existing label](#)

Links to labels and explicit page number (PDF backend only).

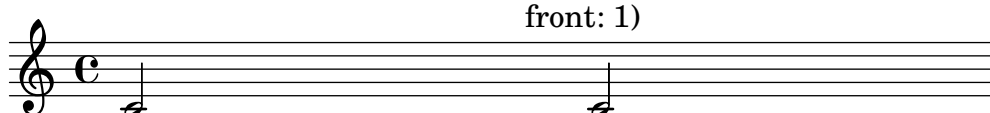
`page-links.ly`

Link to page 2 with label #second.

Explicit link to page 3


Link to mark B

2



front: 1)

2



B

3

Music engraving by LilyPond 2.24.4—www.lilypond.org

Minimal page breaker: special case when the last system is moved to an other page when there is not enough space because of the tagline.

`page-minimal-page-breaking-last-page.ly`

Text

Text

2

Text

Text

Tagline

The minimal page breaker stacks as many lines on pages, only accounting for manual page break commands.

Three staves of musical notation in treble clef with a common time signature 'c'. Each staff contains a sequence of 12 quarter notes. The notes are: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4, B3. A page break symbol '\pageBreak' is located below the third staff.

2

Three staves of musical notation in treble clef with a common time signature 'c'. Each staff contains a sequence of 12 quarter notes. The notes are: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4, B3.

4 3

`\noPageBreak`

Music engraving by LilyPond 2.24.4—www.lilypond.org

Test the different options for page number formatting.

`page-number-type.ly`

i

ii

2

I

II
2

1

2

j

ij
2

J

IJ
2

The image displays seven musical staves, each with a treble clef and a common time signature 'C'. Each staff contains a single note on the second line (G4) with a fermata. The staves are annotated with various characters and numbers: the first has 'II' above and '2' to the left; the second has '1' above; the third has '2' above and '2' to the left; the fourth has 'j' above; the fifth has 'ij' above and '2' to the left; the sixth has 'J' above; and the seventh has 'IJ' above and '2' to the left.

Music engraving by LilyPond 2.24.4—www.lilypond.org

Layouts that overflow a page will be compressed in order to fit on the page, even if it causes collisions. In this example, the tagline should not collide with the bottom staff.

`page-overflow-compression.ly`

The image shows three staves of music. Each staff begins with a treble clef and a common time signature 'C'. The first staff has a bass figure consisting of a note on the first line with three vertical lines below it. The second staff has a bass figure consisting of a note on the second line with three vertical lines below it. The third staff has a bass figure consisting of a note on the third line with three vertical lines below it. To the left of the second and third staves are the numbers '3' and '5' respectively. A vertical bar line is placed after the first measure of each staff. To the right of the bar line, the text 'Long Text' is written above each staff. The text is positioned such that it appears to be centered between the staves.

Music engraving by LilyPond 2.24.4—www.lilypond.org

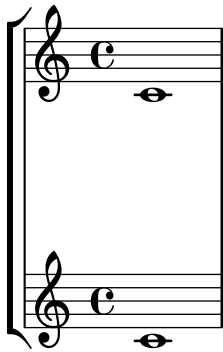
alignment-distances applies to the toplevel `VerticalAlignment` but not to `BassFigureAlignment`. The 4 in the bass figure line should be directly below the 6.

page-spacing-bass-figures.ly

The image shows two staves of music. Both staves begin with a treble clef and a common time signature 'C'. The first staff has a single note on the first line. The second staff has a single note on the first line. Below the second staff, the time signature '6/4' is written.

The spring at the bottom of a page is fairly flexible (much more so than the one at the top), so it does not drag the staff to the bottom of the page. However, it is sufficiently stiff to cause stretching.

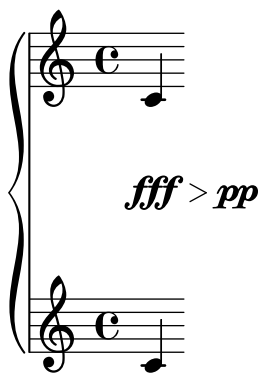
page-spacing-bottom-spring.ly



Music engraving by LilyPond 2.24.4—www.lilypond.org

Dynamic centering still works with alignment-distances.

`page-spacing-dynamics.ly`



Adjacent lines of markup are placed as closely together as possible.

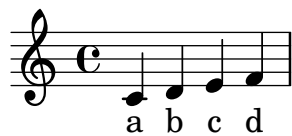
`page-spacing-markups.ly`

A
B
C
D
E

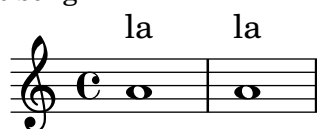
Music engraving by LilyPond 2.24.4—www.lilypond.org

Having markup after a non-staff line doesn't confuse the page layout engine.

`page-spacing-nonstaff-lines-and-markup.ly`

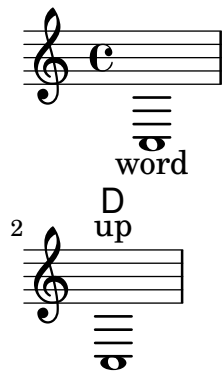


next song



Music engraving by LilyPond 2.24.4—www.lilypond.org

The vertical spacing engine is not confused by a non-staff line below a system followed by a loose line above the next system. Systems are spaced far enough that loose lines are not interleaved, even if gaps would allow interleaving.



Non-staff lines between two systems don't confuse the layout engine. In particular, they don't interfere with `system-system-spacing`, which controls the flexible spacing between the two closest staves of consecutive systems.

`page-spacing-nonstaff-lines-between.ly`

My first Li-ly song,
Not much can go wrong!

The image shows a single system of music on a five-line staff. The music is in treble clef and common time (C). It consists of five notes: a quarter note G4, a quarter note A4, a quarter note B4, a quarter note G4 with a flat, and a quarter note F4. The lyrics 'My first Li-ly song,' are positioned above the staff, and 'Not much can go wrong!' is positioned below it.

My first Li-ly song,
Not much can go wrong!

The image shows a single system of music on a five-line staff. The music is in treble clef and common time (C). It consists of five notes: a quarter note G4, a quarter note A4, a quarter note B4, a quarter note G4 with a flat, and a quarter note F4. The lyrics 'My first Li-ly song,' are positioned above the staff, and 'Not much can go wrong!' is positioned below it. A non-staff line, consisting of three vertical stems, is placed below the staff, aligned with the first three notes.

A non-staff line (such as Lyrics) at the bottom of a system gets spaced appropriately.

`page-spacing-nonstaff-lines-bottom.ly`

My first Li-ly song,
Not much can go wrong!

The image shows a single system of music on a five-line staff. The music is in treble clef and common time (C). It consists of five notes: a quarter note G4, a quarter note A4, a quarter note B4, a quarter note G4 with a flat, and a quarter note F4. The lyrics 'My first Li-ly song,' are positioned below the staff, and 'Not much can go wrong!' is positioned below that. A non-staff line, consisting of three vertical stems, is placed above the staff, aligned with the first three notes.

Not much can go wrong!

Padding from the header and footer is measured to the first non-staff line, whether or not it is spaceable.

`page-spacing-nonstaff-lines-header-padding.ly`

1.14 top-margin
1.00 basic-dist (top-system-spacing) 0.00 min-dist (top-system-spacing)

foo
foo
foo
foo

84.22 paper-height

1.00 basic-dist (last-bottom-spacing) 0.00 min-dist (last-bottom-spacing)

foo
foo
foo
foo

27.84 extra dist (last-bottom-spacing)

13.00 space left

Music engraving by LilyPond 2.24.4 - www.lilypond.org
1.71 bottom-margin

Spacing rules between Staves coexist with rules affecting non-staff lines. Here, the padding separating items on different staves is larger than the padding for associated lyrics.

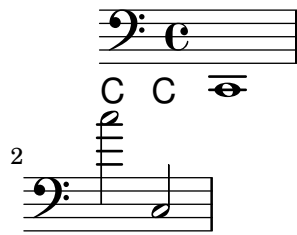
page-spacing-nonstaff-lines-independent.ly

high

bass

Relative indentation between systems is taken into account in allowing space for loose lines between systems.

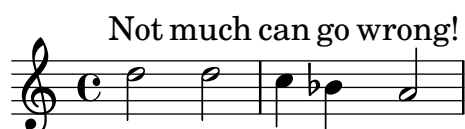
page-spacing-nonstaff-lines-skylines.ly



A non-staff line (such as Lyrics) at the top of a system is spaced appropriately.

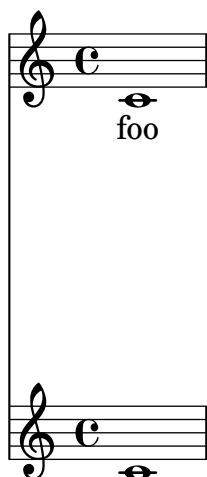
page-spacing-nonstaff-lines-top.ly

My first Li-ly song,



Non-staff lines (such as Lyrics) can specify their `padding` or `minimum-distance` to the staff for which they don't have affinity.

page-spacing-nonstaff-lines-unrelated.ly



The space taken up by rehearsal marks is correctly accounted for, even though they live in the Score context.

page-spacing-rehearsal-mark.ly

header

T
A
L
L
M
A
R
K

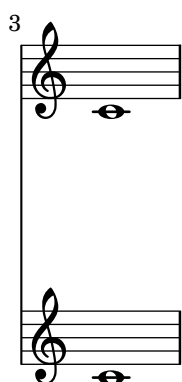
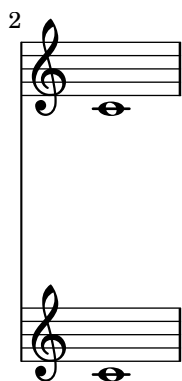
T
A
L
L
M
A
R
K

2

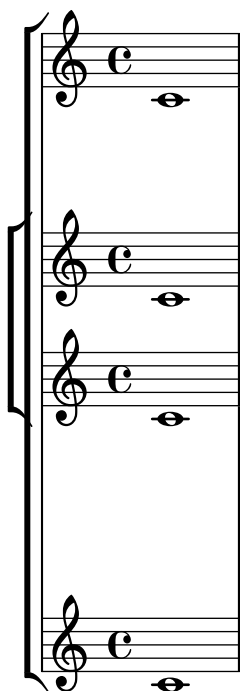
Music engraving by LilyPond 2.24.4—www.lilypond.org

StaffGrouper interacts correctly with `\RemoveEmptyStaves`. In both systems, there should be a large space between the staff groups.

page-spacing-staff-group-hara-kiri.ly

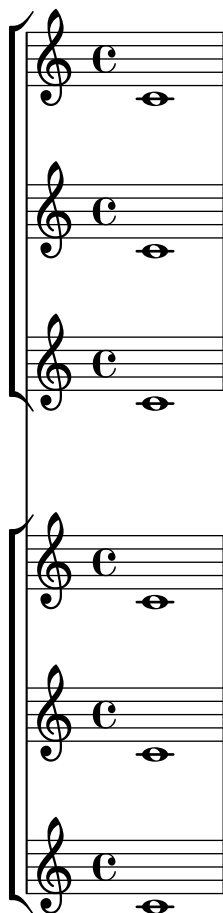


StaffGroups can be nested, in which case the inner StaffGroup wins.
`page-spacing-staff-group-nested.ly`



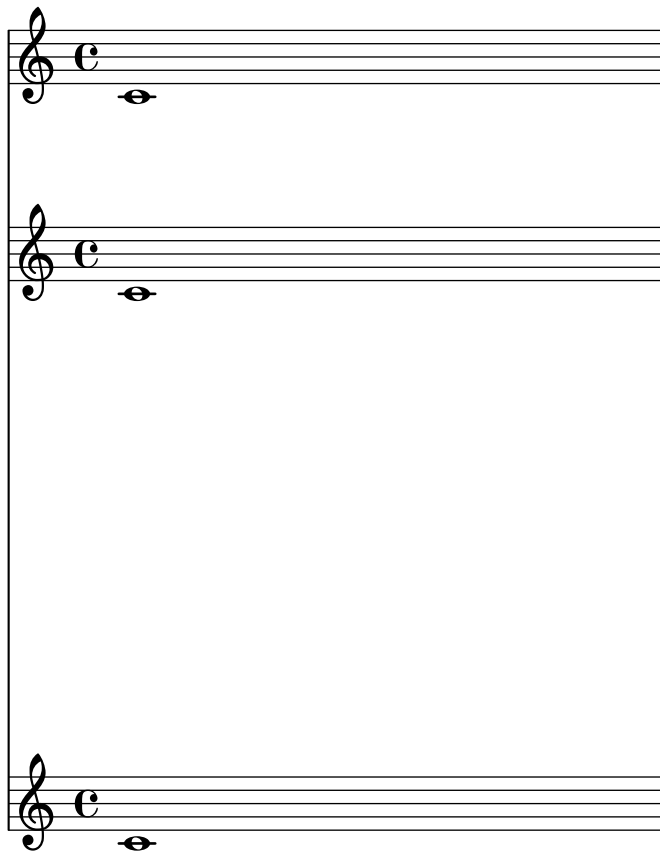
By default, the staves within a StaffGroup are spaced more closely than staves not in a StaffGroup.

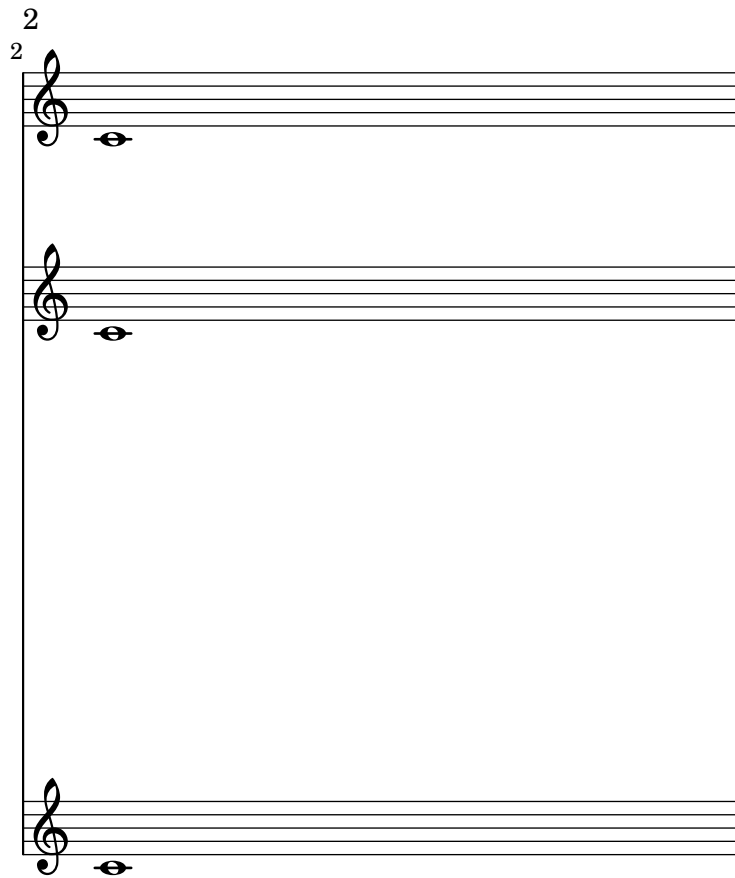
`page-spacing-staff-group.ly`



Music engraving by LilyPond 2.24.4—www.lilypond.org

The stretchability property affects the amount that staves will move under extreme stretching, but it does not affect the default distance between staves.

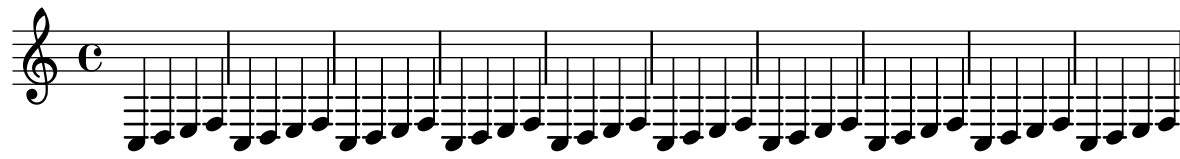




Music engraving by LilyPond 2.24.4—www.lilypond.org

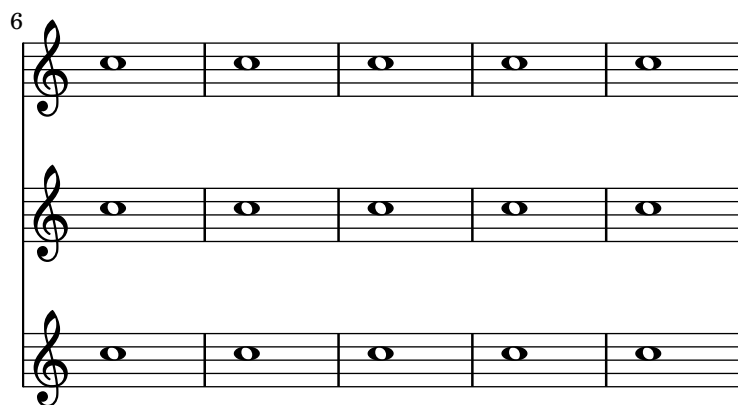
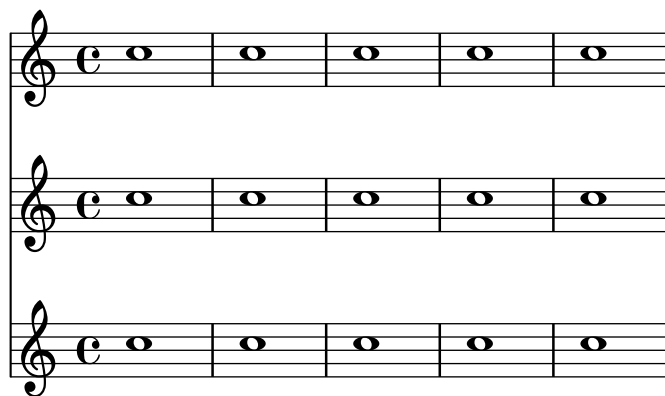
Page breaking doesn't crash when the line-breaking is invalid.

page-spacing-system-count-overfull.ly



Page layout and stretching work with system-count enabled.

page-spacing-system-count.ly

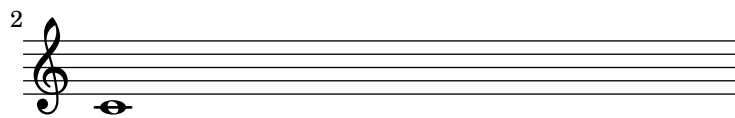
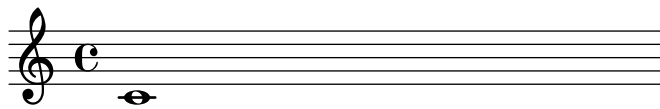


Music engraving by LilyPond 2.24.4—www.lilypond.org

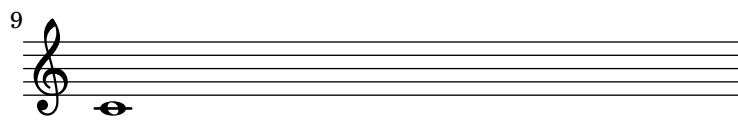
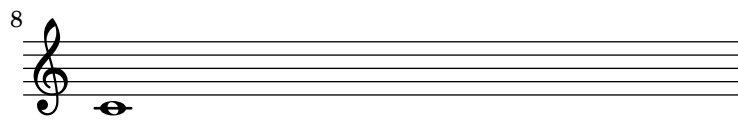
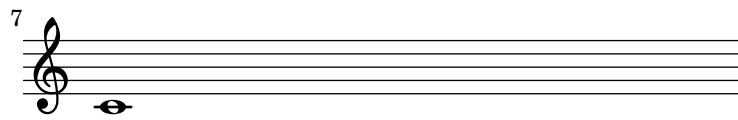
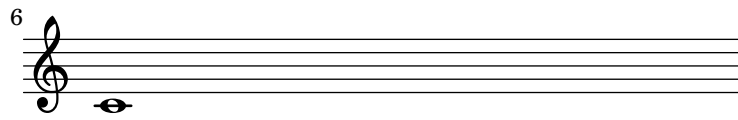
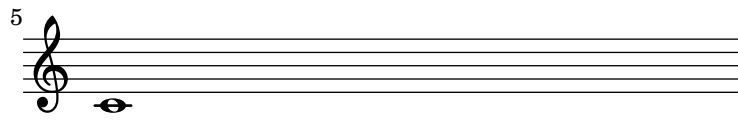
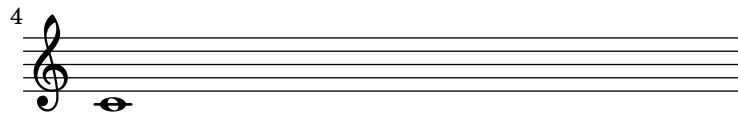
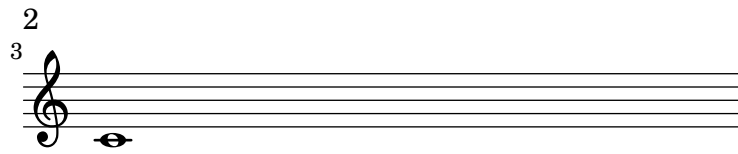
Both the page breaking and the page layout take account of the heights of the header and footer.

page-spacing-tall-headfoot.ly

t
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l
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h
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a
d
e
r



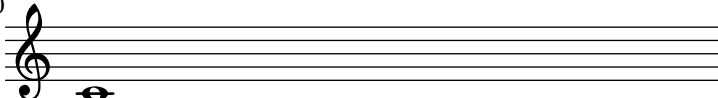
t
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small footer

t
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10



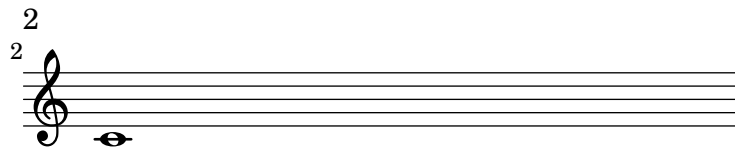
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t
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r

`top-markup-spacing` controls the spacing from the top of the printable area (i.e. the bottom of the top margin) to a title or markup, when it is the first item on a page.

`page-spacing-top-markup-spacing.ly`

Title



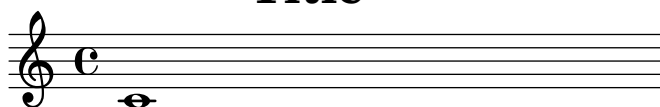


Music engraving by LilyPond 2.24.4—www.lilypond.org

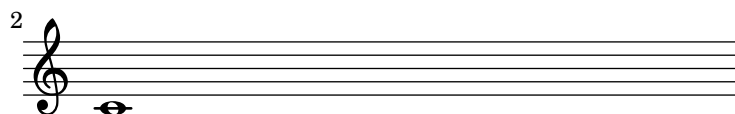
top-system-spacing controls the spacing to the first non-title staff on every page.

page-spacing-top-system-spacing.ly

Title



2



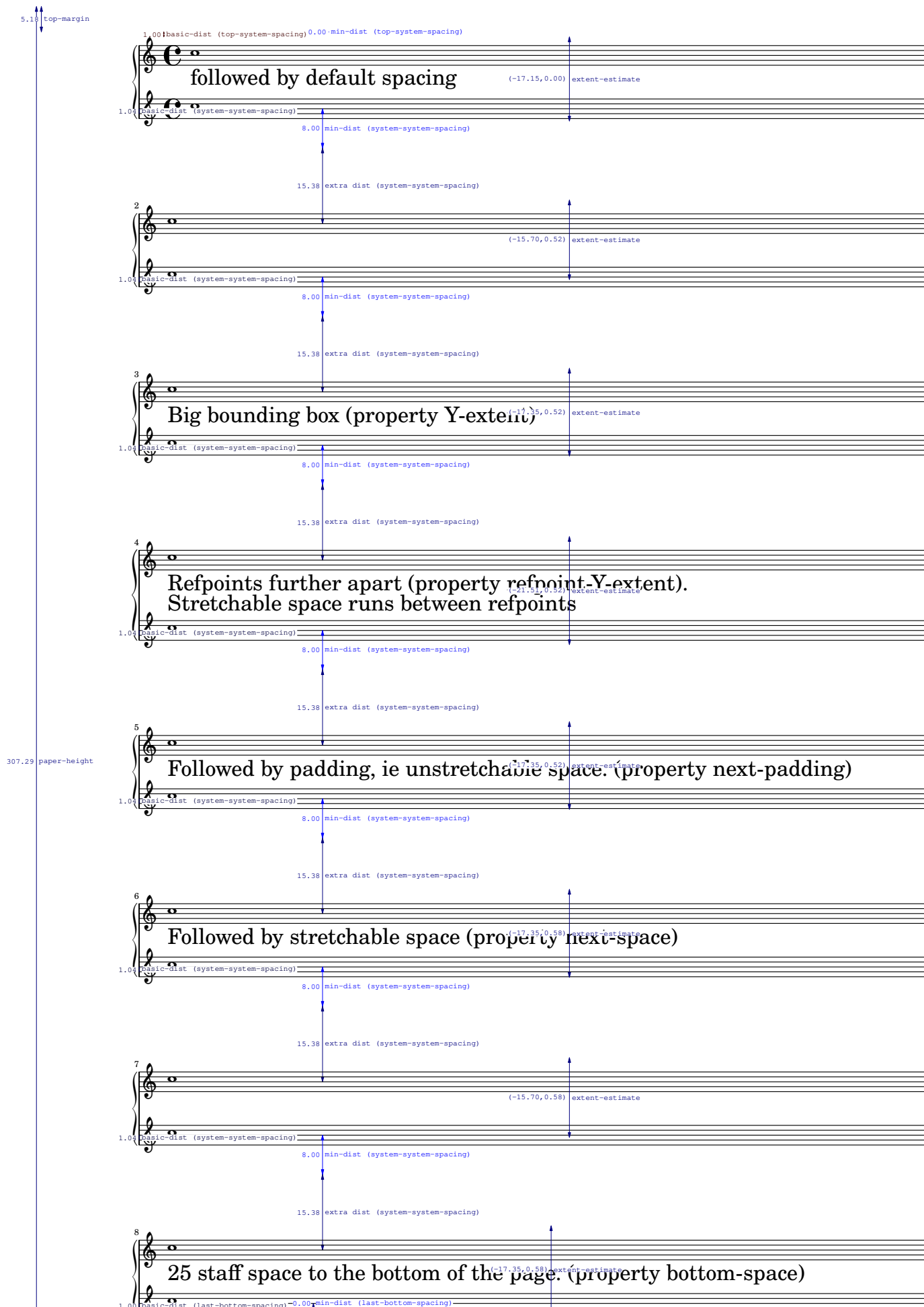
Music engraving by LilyPond 2.24.4—www.lilypond.org

By setting properties in `NonMusicalPaperColumn`, vertical spacing of page layout can be adjusted.

For technical reasons, `overrideProperty` has to be used for setting properties on individual object. `\override` may still be used for global overrides.

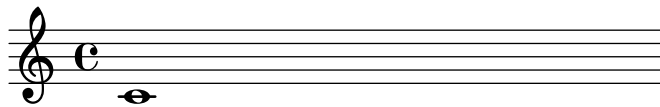
By setting `annotate-spacing`, we can see the effect of each property.

`page-spacing.ly`

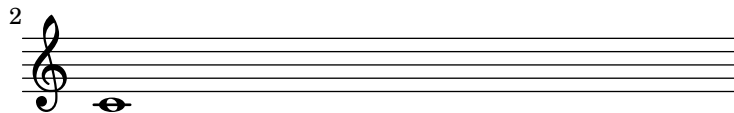


By setting `page-top-space`, the Y position of the first system can be forced to be uniform.

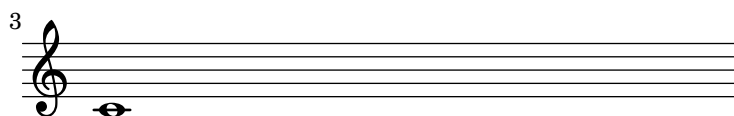
`page-top-space.ly`



2

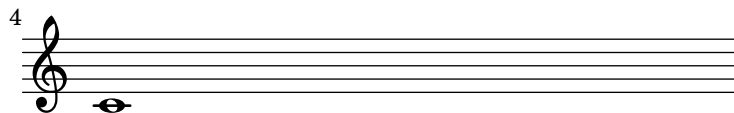


3



4

bla



Music engraving by LilyPond 2.24.4—www.lilypond.org

By default, we start with page 1, which is on the right hand side of a double page. In this example, `auto-first-page-number` is set to `##t` and the music won't fit on a single page, so we should automatically set the first page number to 2 in order to avoid a bad page turn.

`page-turn-page-breaking-auto-first-page.ly`

2



5



9



13



17



21



25



29



The image displays eight musical staves, each representing a regression test case. Each staff begins with a treble clef and a common time signature (C). The notes are arranged in a consistent, ascending pattern across four measures per staff. The staves are labeled with the numbers 2, 5, 9, 13, 17, 21, 25, and 29, indicating the sequence of test cases.

3

33
37
41
45
49
53
57

Music engraving by LilyPond 2.24.4—www.lilypond.org

By default, we start with page 1, which is on the right hand side of a double page. In this example, `auto-first-page-number` is set to `##t`. Although the first measure could go on a page by itself, this would require stretching the first page badly, so we should automatically set the first page number to 2 in order to avoid a bad page turn.

2

5

9

13

17

21

25

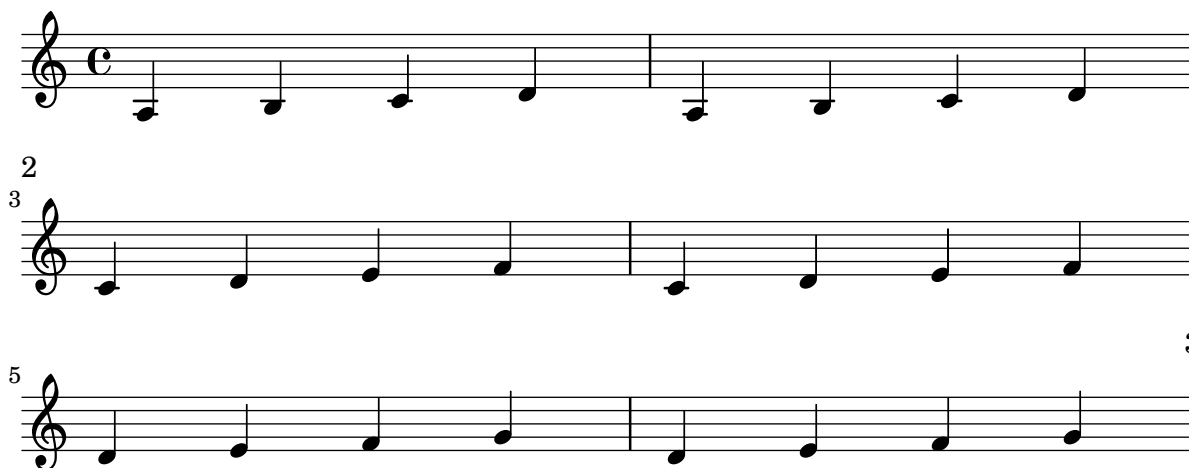
The image displays seven musical staves, each representing a regression test case. Each staff begins with a treble clef and a common time signature (C). The notes are organized into four measures per staff. The first measure of each staff contains a sequence of notes: G4, A4, B4, C5, B4, A4, G4. The second measure contains a sequence of notes: F4, G4, A4, B4, C5, B4, A4, G4. The third measure contains a sequence of notes: E4, F4, G4, A4, B4, C5, B4, A4, G4. The fourth measure contains a sequence of notes: D4, E4, F4, G4, A4, B4, C5, B4, A4, G4. The only exception is the first staff (test case 2), where the second measure contains a whole rest.



Music engraving by LilyPond 2.24.4—www.lilypond.org

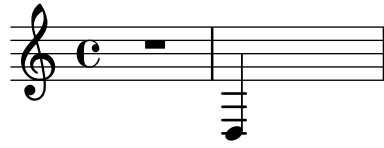
If there are no good places to have a page turn, the optimal-breaker will just have to recover gracefully. This should appear on 3 pages.

`page-turn-page-breaking-badturns.ly`



Music engraving by LilyPond 2.24.4—www.lilypond.org

Allowing the first command column to be breakable caused a crash in Page_turn_page_breaking.



The page-turn engraver will not count potential page turns if they occur in the middle of a repeat unless there is a long gap at the beginning or at the end of the repeat.

page-turn-page-breaking-repeats.ly

The image displays a musical score with seven staves, illustrating various repeat and page-turn scenarios. The first staff begins with a treble clef and a common time signature (C). The second staff starts at measure 6 and includes a repeat sign with a first ending bracket and a measure rest labeled '10'. The third staff starts at measure 20 and ends with a repeat sign. The fourth staff starts at measure 25 and contains a single melodic line. The fifth staff starts at measure 27 and features a repeat sign with a first ending bracket. The sixth staff starts at measure 30 and continues the melodic line. The seventh staff starts at measure 32 and includes a repeat sign with a first ending bracket and a measure rest labeled '10'.

4
44

48

3

This block contains two staves of musical notation. The first staff starts at measure 4 and ends at measure 44. It features a sequence of quarter notes followed by groups of eighth notes. The second staff starts at measure 48 and ends at measure 51. It follows a similar pattern but includes a triplet of eighth notes in the final measure, indicated by a '3' above the notes.

Music engraving by LilyPond 2.24.4—www.lilypond.org

`Page_turn_engraver` places a page turn after a rest unless there is a 'special' bar line within the rest, in which case it places the turn at the special bar line. In this case, the engraver operates in Score context.

`page-turn-page-breaking-score.ly`

2

3

4
9

14

6
18

22

This block contains eight staves of musical notation. The first staff (measure 2) shows a sequence of quarter notes in common time. The second staff (measure 3) shows quarter notes followed by rests. The third staff (measures 4-9) shows a sequence of quarter notes. The fourth staff (measures 14-18) shows a sequence of quarter notes. The fifth staff (measures 6-18) shows a sequence of quarter notes. The sixth staff (measures 22-25) shows quarter notes followed by rests.

8
26

35

Page_turn_engraver places a page turn after a rest unless there is a 'special' bar line within the rest, in which case it places the turn at the special bar line. In this case, the engraver operates in Voice context.

page-turn-page-breaking-voice.ly

2

3

4
9

14

6
18

22

8
26



`Page_turn_engraver` places a page turn after a rest unless there is a 'special' bar line within the rest, in which case it places the turn at the special bar line. In this case, the engraver operates in `Staff` context.

`page-turn-page-breaking.ly`

2
3
4
9
14
6
18
22
8
26
35

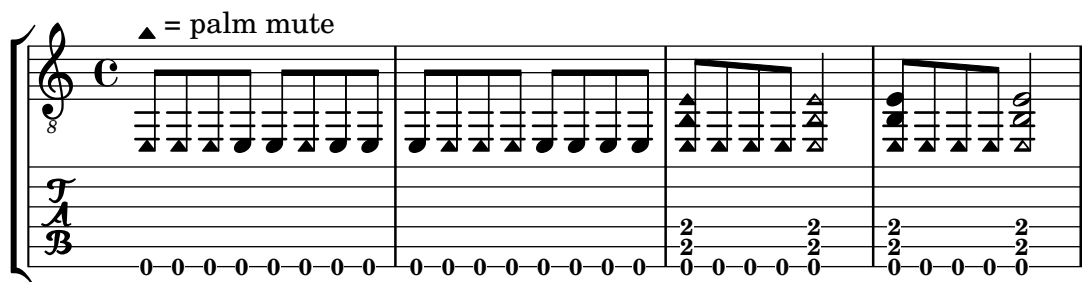
it is allowed to start a score with a page break
 page-turn-start-with-page-break.ly



Music engraving by LilyPond 2.24.4—www.lilypond.org

The palm mute technique for stringed instruments is supported by triangle-shaped note heads.

palm-mute.ly



Default values for margins, indents, and offsets are accessible in paper-defaults-init.ly and apply to the default paper size returned by (ly:get-option 'paper-size). For other paper sizes, they are scaled linearly.

paper-default-margins-a6.ly

For other paper sizes, margins are scaled accordingly.



Music engraving by LilyPond 2.24.4—www.lilypond.org

Default values for margins, indents, and offsets are accessible in `paper-defaults-init.ly` and apply to the default paper size returned by `(ly:get-option 'paper-size)`. For other paper sizes, they are scaled linearly.

If the paper size remains default, the margin values from paper-defaults-init.ly remain unchanged

The image displays eight musical staves, each containing a sequence of notes. The staves are labeled with numbers 8, 16, 24, 32, 40, 47, and 54 on the left side, indicating the starting measure number for each staff. The first staff starts with a treble clef and a common time signature 'C'. The notes are arranged in a regular, repeating pattern across all staves.

Margin values must fit the line-width, that means: $\text{paper-width} = \text{line-width} + \text{left-margin} + \text{right-margin}$. In case they do not, default margins are set and a warning is printed.

The image displays five staves of musical notation, each containing a continuous sequence of eighth notes. The notes are organized into measures by vertical bar lines. The first staff begins with a treble clef and a common time signature (C). The notes in each staff follow a consistent rhythmic and melodic pattern, consisting of a series of eighth notes that repeat every two measures. The staves are numbered on the left side: the first staff is unlabeled, the second is labeled '9', the third is labeled '17', the fourth is labeled '25', and the fifth is labeled '33'. The overall structure is a simple, repetitive musical exercise.

Here only left-margin is given, right-margin will remain default.



If only line-width is given, systems are horizontally centered.



All checks can be avoided by setting check-consistency to `##f` in `\paper`.

The image displays a musical score for regression testing, consisting of five staves of music. Each staff begins with a treble clef, a common time signature (C), and a key signature of one sharp (F#). The music consists of a sequence of eighth notes in a C major scale, with a bar line every two measures. The staves are labeled with their starting bar numbers: 1, 9, 17, 25, and 33.

Normally, margin settings must not cause systems to run off the page.



Here only right-margin is given, left-margin will remain default.

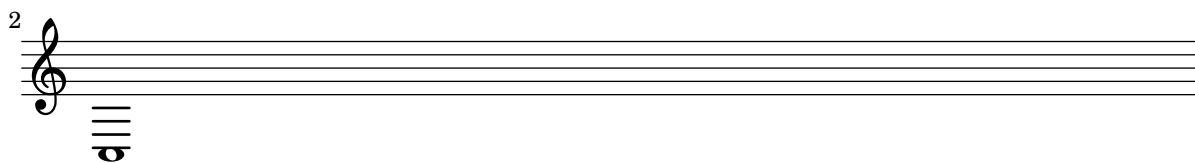
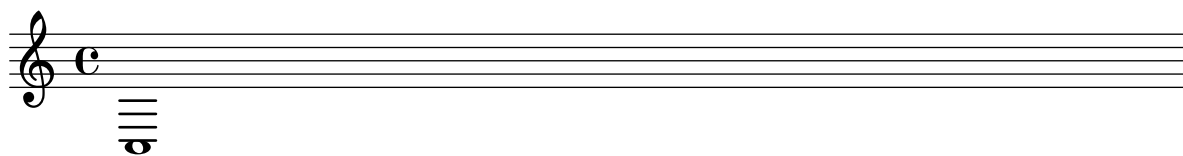


Paper margin settings do not have to be complete. Missing values are added automatically. If no paper settings are specified, default values are used.



Nested properties can be set in the paper block.

paper-nested-override.ly



Setting individual nested paper properties does not remove existing settings or break spacing annotation.

paper-nested-override2.ly



Setting a custom default paper size.

`paper-size-custom-default.ly`



Music engraving by LilyPond 2.24.4—www.lilypond.org

Setting a custom paper size (landscape).

`paper-size-custom-landscape.ly`



Music engraving by LilyPond 2.24.4—www.lilypond.org

Setting a custom paper size.

`paper-size-custom.ly`



Music engraving by LilyPond 2.24.4—www.lilypond.org

In two-sided mode, a binding offset can be specified, which is added to the inner margin automatically.

`paper-twosided-bcorr.ly`

A musical score consisting of 12 staves, each containing a repeating eighth-note pattern. The pattern starts on a middle C (C4) and moves up stepwise by one half note (D4, E4, F4, G4, A4, B4, C5) over the course of the staff. The notes are beamed in groups of four. The first staff begins with a treble clef and a common time signature (C). Each subsequent staff is preceded by a measure number: 8, 15, 22, 29, 36, 43, 50, 57, 64, 71, 78, and 85. The pattern is consistent across all staves, with the only variation being the starting pitch of the first note in each staff, which increases by one half note from the previous staff.

2

99

106

113

120

127

134

141

148

155

162

169

177

The image displays a series of 12 musical staves, each representing a regression test case. Each staff begins with a treble clef and a key signature of one flat (B-flat). The notes are organized into measures by vertical bar lines. The first staff is labeled with the number '2' above it and '99' to its left. Subsequent staves are labeled with the numbers 106, 113, 120, 127, 134, 141, 148, 155, 162, 169, and 177, positioned to the left of their respective staves. The musical notation consists of eighth and sixteenth notes, often beamed together in groups of four or eight, creating a rhythmic pattern that repeats across the staves.

193



Two-sided mode allows you to use different margins for odd and even pages.

A musical score consisting of 12 staves, each containing a repeating eighth-note pattern. The pattern starts on a middle C (C4) and moves up stepwise by half-steps (D4, E4, F4, G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4) over a 16-measure period. The first staff is in common time (C) and begins with a treble clef and a common time signature. The subsequent staves are numbered 8, 15, 22, 29, 36, 43, 50, 57, 64, 71, 78, and 85, indicating the starting measure of each staff. Each staff begins with a treble clef and contains the same repeating eighth-note pattern.

2
99

106

113

120

127

134

141

148

155

162

169

177

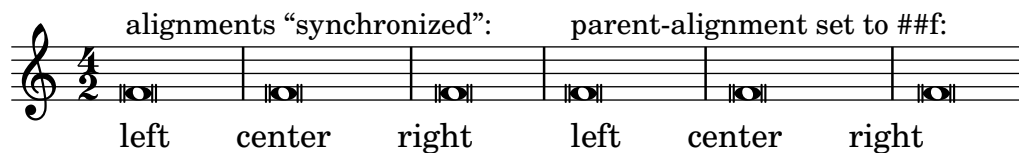
193



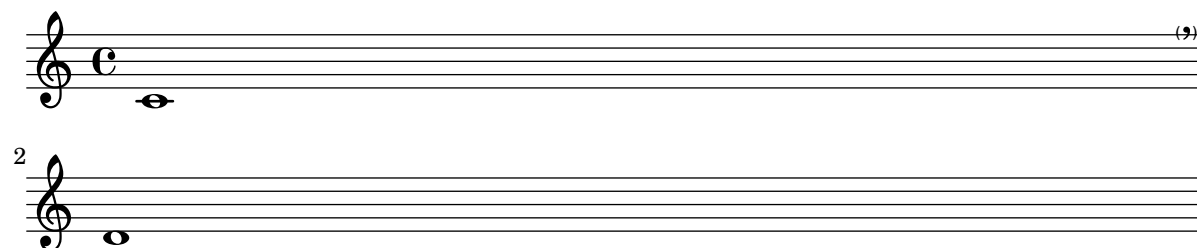
`\parallelMusic` does not complain about incomplete bars at its end.
`parallelmusic-partial.ly`



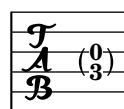
When `parent-alignment-X` property is unset, the value of `self-alignment-X` will be used as the factor for parent alignment. This happens e.g. for `LyricTexts`.
`parent-alignment-synchronized-with-self-alignment.ly`



Parenthesizing breakable items such as breathing signs also work at line ends.
`parenthesize-breakable.ly`



When `\parenthesize` applies to a chord, the parentheses enclose all notes in the chord.
`parenthesize-chords.ly`



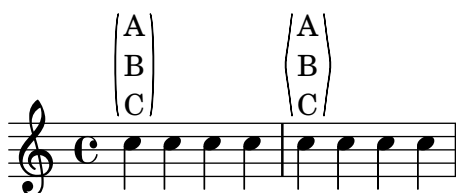
Parentheses are correctly placed when placed on a note head that is on the right of its stem and has an accidental.
`parenthesize-horizontal-placement.ly`



\laissezVibrer can be parenthesized without programming errors.
 parenthesesize-laissezvibrer.ly



The parenthesesize markup will place parentheses around any stencil.
 The angularity of the parentheses can be adjusted.
 parenthesesize-markup.ly



Parentheses around notes also include accidentals and dots; they are centered on the vertical center of the combined enclosed items.
 parenthesesize-notes-accidentals.ly



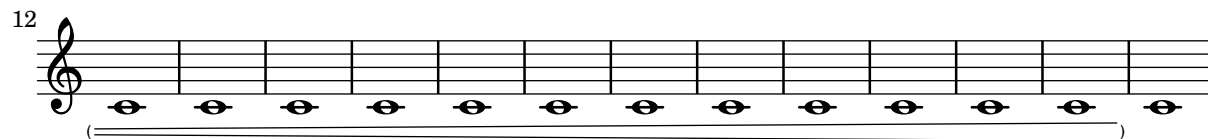
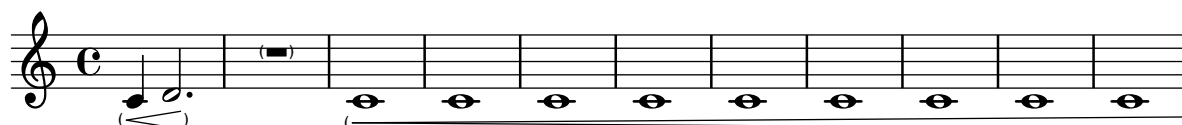
The \parenthesize function should also work on single notes (not inside chords), rests, and on whole chords. Also, parenthesizing articulations, dynamics and text markup is possible. On all other music expressions, \parenthesize does not have an effect.

Measure 1: Three parenthesized notes (staccato not parenthesized), one note with staccato in parentheses; Measure 2: Chord and two rests in parentheses (accent and markup not); Measure 3: note (no parentheses) with \p in parentheses, with text in parentheses, and note in parentheses with \p not in parentheses, rest (no parentheses); Measure 4: shows that \parenthesize does not apply to other expressions like SequentialMusic.

parenthesize-singlenotes-chords-rests.ly



Parenthesizing spanners is supported.
 parenthesesize-spanners.ly



`\parenthesize` can take the name of the grob to be parenthesized. It then acts like a `\once \override`.

`parenthesize-time-based.ly`



The `parenthesize` function is a special tweak that encloses objects in parentheses. The associated grob is `Score.Parentheses`.

`parenthesize.ly`



It is possible to use the part combiner for three voices with `\partCombineUp` and `\partCombineDown`.

`part-combine-3voices.ly`



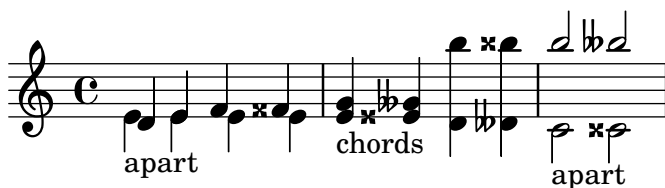
The `a2` string is printed only on notes (i.e. not on rests), and only after chords, solo or polyphony.

`part-combine-a2.ly`



The part combiner has an option to set the range of differences in steps between parts that may be combined into chords.

`part-combine-chord-range.ly`



The part combiner stays apart for crossing voices.

`part-combine-cross.ly`



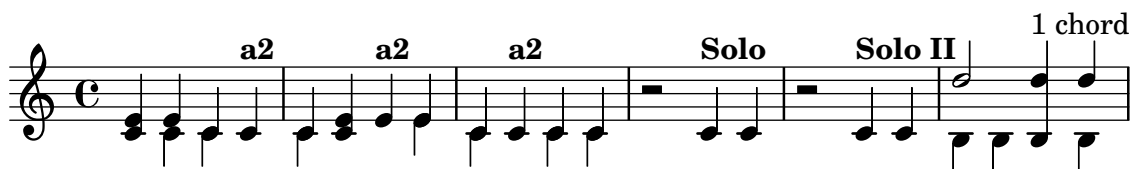
If the part-combiner shows two separate voices, multi-measure rests are supposed to use the same settings as `\voiceOnce` and `\voiceTwo`.

`part-combine-force-mmrest-position.ly`



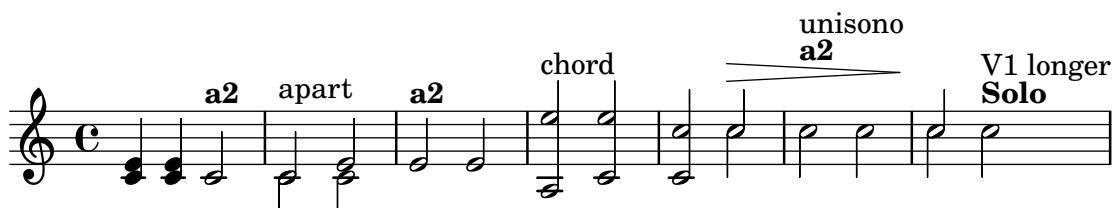
Overrides for the part-combiner, affecting only one moment. The `partCombine...Once` override applies only to one moment, after which the old override – if any – is in effect again.

`part-combine-force-once.ly`



Overrides for the part-combiner. All functions like `\partCombineApart` and `\once \partCombineApart` are internally implemented using a dedicated `partCombineForced` context property.

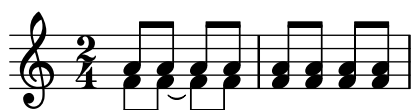
`part-combine-force.ly`



The analysis of the part combiner is non-local: in the following example, the decision for using separate voices in the 1st measure is made on the 2nd note, but influences the 1st note.

In the 2nd measure, the pattern without the tie, leads to combined voices.

`part-combine-global.ly`



The notes of the first chord share a stem but the notes of the second chord do not.


`part-combine-inside-grace.ly`




Music functions that scale durations also scale `\partCombine` decisions.

`part-combine-inside-scale-durations.ly`


expected




scale



times




tuplet



`\keepWithTag` works with `\partCombine`.

`part-combine-keep-with-tag.ly`



Part combine texts accept markup.

`part-combine-markup.ly`



Normal rests are preferred over multi-measure rests. A multi-measure rest beginning in one part in the middle of a multi-measure rest in the other part appears as expected.

`part-combine-mmrest-after-apart-silence.ly`



Multimeasure rests are printed after solos, both for `solo1` and for `solo2`.

`part-combine-mmrest-after-solo.ly`



The positioning of multimeasure rests in `\partCombineApart` passages corresponds with `\voiceOne` and `\voiceTwo` even when using non-standard staves.

`part-combine-mmrest-apart.ly`

`\partCombine`

<< ... \\ ... >>

Multi-measure rests do not have to begin and end simultaneously to be combined.

`part-combine-mmrest-shared.ly`

`\partCombine` needs to be given pitches in their final octaves, so if `\relative` is used it must be applied inside `\partCombine`. The pitches in `\partCombine` are unaffected by an outer `\relative`, so that the printed output shows the pitches that `\partCombine` used.

The expected output of this test is three identical measures.

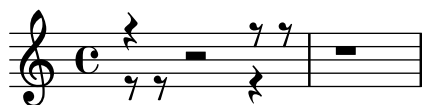
`part-combine-relative.ly`

Different kinds of silence are not merged into the shared voice even if they begin and end simultaneously; however, when rests and skips are present in the same part, the skips are ignored.

`part-combine-silence-mixed.ly`

Rests must begin and end simultaneously to be merged into the shared voice.

`part-combine-silence.ly`



SOLO is printed even if the solo voice ends before the other one. Unfortunately, the multi-rest of the 1st voice (which is 2 bars longer than the 2nd voice) does not get printed.

part-combine-solo-end.ly



In this example, solo1 should not be printed over the 1st note, because of the slur which is present from the one-voice to the two-voice situation.

part-combine-solo-global.ly



A solo string can only be printed when a note starts. Hence, in this example, there is no Solo-2 although the 2nd voice has a dotted quarter, while the first voice has a rest.

A Solo indication is only printed once; (shared) rests do not require reprinting a solo indication.

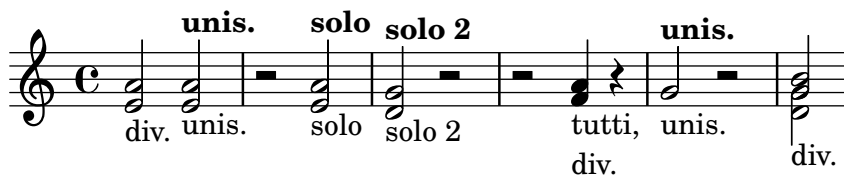
Solo 1/2 can not be used when a spanner is active, so there is no solo over any of the tied notes.

part-combine-solo.ly



Test some transitions that might be found in string parts produced with \partCombine.

part-combine-strings.ly



Wait for the next real note for part-combine texts (i.e. don't print part-combine texts on rests). This is needed because the part-combiner needs an override if one voice has a full-bar rest while the other has some rests and then a solo.

part-combine-text-wait.ly



The part combiner detects a2, solo1 and solo2, and prints texts accordingly.

part-combine-text.ly



End tuplets events are sent to the starting context, so even after a switch, a tuplet ends correctly.

part-combine-tuplet-end.ly



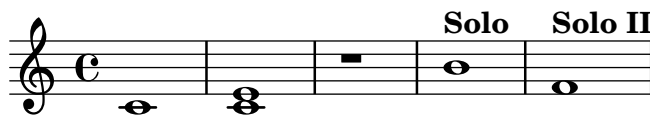
Tuplets in combined parts only print one bracket.

part-combine-tuplet-single.ly



The part combiner can combine parts of unequal lengths.

part-combine-unequal-lengths.ly



Grace notes in parts are combined.

part-combine-with-grace.ly



The new part combiner stays apart from:

- different durations,
- different articulations (taking into account only slur/beam/tie), and

- wide pitch ranges.

part-combine.ly



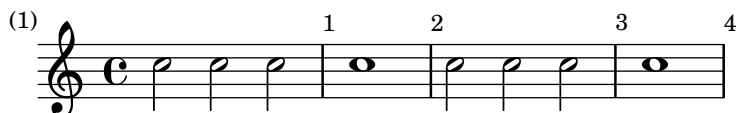
\partialial can be called in mid-piece in multiple contexts.

partial-in-mid-piece.ly



\partialial can create measures longer than the length dictated by the time signature.

partial-long.ly



\partialial works with polymetric staves.

partial-polymetric.ly



Ensure that certain paths are drawn correctly and do not cause division by zero.

path-edge-case.ly



Exercise various situations in path stencils.

path-exercise.ly



The extents of a path stencil are correctly computed when it contains consecutive `moveto` commands.

path-extents-consecutive-movetos.ly



Curve path stencils have correct extents.

`path-extents-curve.ly`



`\pattern` and `\fill-with-pattern` markup commands should interpret their arguments only once. This test calls them with a markup command that counts how often it is evaluated. The first line is supposed to show just ‘1’ multiple times, the second line uses numbers ‘2’ to ‘4’.

`pattern-markup-evaluation.ly`

1 1 1 1 1 1 1 1 1 1

3 2 4

In some fonts, the same glyph is used to render differing code points. In this file, the Japanese font uses the same glyph for representing U+898B and U+2F92. However, when running the output of this file through `pdftotext`, the original codepoints are returned.

`pdf-copy-paste.ly`

見見

Header fields can contain `\fromproperty #'header:xxx` markups. They are correctly converted to strings in PDF metadata.

Warning: the current regression testing infrastructure will not notice if this test breaks.

`pdf-metadata-fromproperty.ly`

This should end in "OK": OK



PDF metadata need either Latin1 encoding (not UTF8) or full UTF-16BE with BOM. The title field uses full UTF-16 (russian characters, euro, etc), while the composer uses normal european diacrits (which need to be encoded as Latin1, not as UTF8). Closing parenthesis need to be escaped by a backslash AFTER encoding!

`pdfmark-metadata-unicode.ly`

UTF-16BE title:² € ĀĀœŔŮufЖюљ)\ ;

UTF-16BE with parentheses:) € ĀĀœŔŮufЖюљ composer (with special chars): Jöhånñ Strauß



The PDF backend uses several header fields to store metadata in the resulting PDF file. Header fields with the prefix pdf override those without the prefix for PDF creation (not for visual display on the page).

`pdfmark-metadata.ly`

Title of the piece

Subtitle of the piece

The Genius Composer

The Arranger (f)



The brackets of a piano pedal should start and end at the left side of the main note-column. If a note is shared between two brackets, these ends are flared.

At a line-break, there are no vertical endings. Pedal changes can be placed at spacer rests.

pedal-bracket.ly



long mark



Unterminated piano pedal brackets run to the end of the piece.

pedal-end.ly



The standard piano pedals style comes with Ped symbols. The pedal string can be also tuned, for example, to a shorter tilde/P variant at the end of the melody.

pedal-ped.ly



One notation style for Persian music uses the *sori* and *koron* accidental glyphs.

persian-accidental-glyphs.ly



Test Persian key signatures.

`persian-key-signatures.ly`



The appearance of phrasing slurs may be changed from solid to dotted or dashed.

`phrasing-slur-dash.ly`



LilyPond does not support multiple concurrent phrasing slurs with the parentheses syntax. In this case, warnings will be given and the nested slur will not be generated. However, one can create a second slur with a different spanner-id.

`phrasing-slur-multiple.ly`



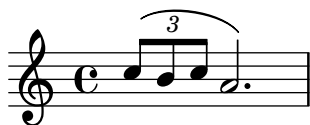
PhrasingSlurs go over normal slurs.

`phrasing-slur-slur-avoid.ly`



Phrasing slurs do not collide with tuplet numbers.

`phrasing-slur-tuplet.ly`



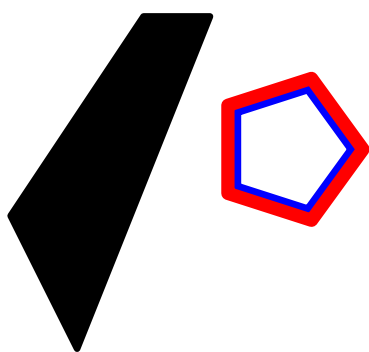
Point-and-click information can be generated only for certain event types.

point-and-click-types.ly



The `\polygon` markup command draws polygons according to the properties filled, thickness and extroversion.

polygon.ly



This tests polymeric staves beginning at different times. One staff in 4/4 time and another in 3/4 time should end simultaneously. A third staff in 2/4 time should begin simultaneously with the staff in 3/4 time (apart from its grace note) and end after 2 measures in 3/4 time.

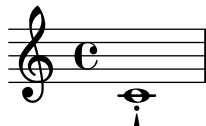
polymeter-ossia.ly

The `\enablePolymeter` command turns on polymeric notation, making time signatures independent between staves.

polymeter.ly

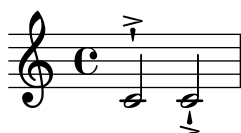
Multiple post events can be attached from Scheme expressions.

`post-events-from-scheme.ly`



Multiple post events can be grouped into a single post-event-like expression that dissolves into its constituents as soon as it becomes attached to a music expression. When property modifiers (such as tweaks or direction) or other are applied to those, they are transferred to the contained elements rather than being ignored.

`post-events-wrapper-direction.ly`



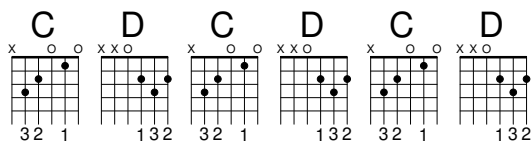
When multiple post events are wrapped, they are ordered the same as if they had not been wrapped. Tweaks applied to the wrapper are applied to every element.

`post-events-wrapper-ordering.ly`



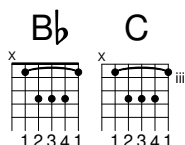
Transposition by less than one octave up or down should not affect predefined fretboards.

`predefined-fretboards-transpose.ly`



Predefined fretboards and chord shapes can be added.

`predefined-fretboards.ly`



Prefatory items maintain sufficient separation from musical notation for readability, even in tight spacing. The notes should remain generally on the correct side of the time signature, key signature and bar lines. A key change to G major should be legible.

`prefatory-separation.ly`

LilyPond demo

Lieblich, etwas geschwind

1. Sü - ßes
2. いろはに かな

3
Licht! Aus gol - denen Pfor - ten brichst du sie - gend durch die
та та ほへど ちり ぬるを Жъл дю ля かな いろはに かな

6
Nacht. Schön - er Tag, du bist er - wacht.
та та ほへ ちり ぬる Жъл дю ля

cresc. *f*

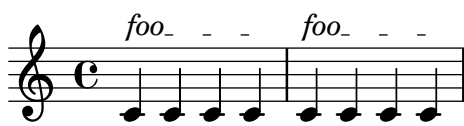
Property overrides and reverts from `\grace` do not interfere with the overrides and reverts from polyphony.

`property-grace-polyphony.ly`



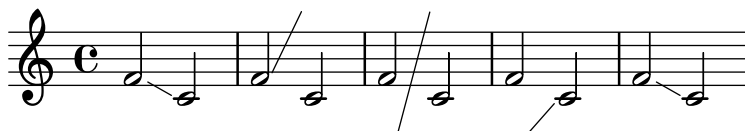
Nested properties may be overridden using Scheme list syntax. This test performs two property overrides: the first measure uses standard `\override` syntax; the second uses a list.

`property-nested-override.ly`



nested properties may also be reverted. This uses Scheme list syntax.

`property-nested-revert.ly`



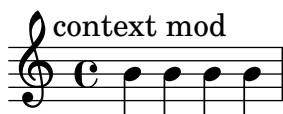
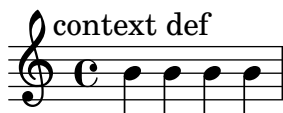
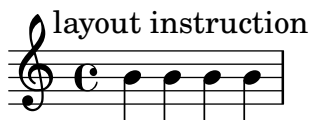
Once properties take effect during a single time step only.

`property-once.ly`



`\unset` should be able to unset the 'DrumStaff'-specific 'clefGlyph' equally well as layout instruction, in a context definition, or as context modification. All systems here should revert to the 'Score'-level violin clef.

`property-unset.ly`



Adding material to a tag in sequential and simultaneous expressions using `\pushToTag` and `\appendToTag`. One should get the equivalent of

`{ c' e' g' <<c' e' g' c''>> <<c'' g' e' c''>> g' e' c' }`

push-to-tag.ly



The `cueDuring` form of quotation will set stem directions on both quoted and main voice, and deliver the quoted voice in the `cue Voice`. The music function `\killCues` can remove all cue notes.

Spanners run to the end of a cue section, and are not started on the last note.

quote-cue-during.ly



The `cueDuring` and `quoteDuring` forms of quotation use the variables `quotedCueEventTypes` and `quotedEventTypes` to determine which events are quoted. This allows different events to be quoted for cue notes in comparison to normal quotes.

`quotedEventTypes` is also the fallback for cue notes if `quotedCueEventTypes` is not set.

quote-cue-event-types.ly



Two quoted voices may refer to each other. In this example, there are notes with each full-bar rest.

quote-cyclic.ly



`\quoteDuring` and `\cueDuring` shall properly quote voices that create a sub-voice. The sub-voice will not be quoted, though. Exceptions are sections of parallel music `<< {...} \ {...} >>`, which will be quoted.

`quote-during-subvoice.ly`



With `\cueDuring` and `\quoteDuring`, fragments of previously entered music may be quoted. `quotedEventTypes` will determines what things are quoted. In this example, a 16th rest is not quoted, since `rest-event` is not in `quotedEventTypes`.

`quote-during.ly`



A warning should be produced for empty quoted music.

`quote-empty.ly`

This space intentionally left blank.

Quotes may contain grace notes. The grace note leading up to an unquoted note is not quoted.

quote-grace.ly



\killCues shall only remove real cue notes generated by \cueDuring, but not other music quoted using \quoteDuring.

quote-kill-cues.ly



The \quoteDuring command shall also quote correctly all \override, \once \override, \revert, \set, \unset and \tweak events. The first line contains the original music, the second line quotes the whole music and should look identical.

By default, not all events are quoted. By setting the quoted event types to '(StreamEvent)', everything should be quoted.

quote-overrides.ly



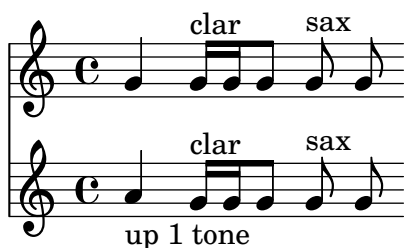
Voices from different cues must not be tied together. In this example, the first note has a tie. This note should not be tied to the second visible note (following the rest). Note that this behavior will not hold for cues in direct succession, since only one CueVoice context is created (with context-id 'cue').

quote-tie.ly



Quotations take into account the transposition of both source and target. In this example, all instruments play sounding central C, the target is an instrument in F. The target part may be \transposed. The quoted pitches will stay unchanged.

quote-transposition.ly



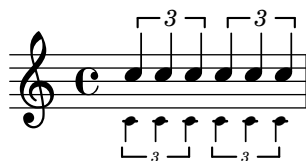
Tuplet bracket ends properly when quoting.

quote-tuplet-end.ly



In cue notes, Tuplet stops are handled before new tuplets start.

quote-tuplet.ly



With `\quote`, fragments of previously entered music may be quoted. `quotedEventTypes` will determines what things are quoted. In this example, a 16th rest is not quoted, since `rest-event` is not in `quotedEventTypes`.

quote.ly



For a one-page score, `ragged-bottom` should have the same effect as `ragged-last-bottom`.

ragged-bottom-one-page.ly



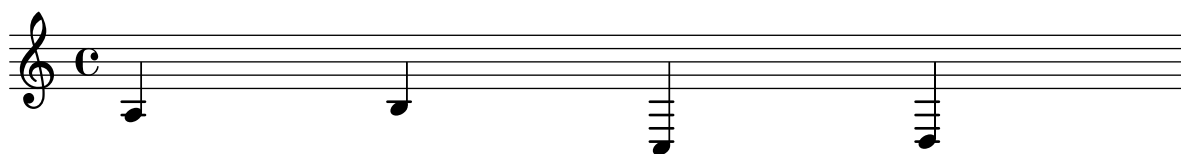
When a score takes up only a single line and it is compressed, it is not printed as ragged.

ragged-right-compressed.ly



When ragged-right is specifically disabled, a score with only one line will not be printed as ragged.

`ragged-right-disabled.ly`



When a score takes up only a single line and it is stretched, it is printed as ragged by default.

`ragged-right-one-line.ly`



Parts of a string that are the result of an automatic replacement are not processed themselves for replacements.

`recursive-text-replacement.ly`

This is good.

This is shorter.

Marks are put on top a breakable symbol, according to the value of `break-align-symbols` grob property. The same holds for `BarNumber` grobs.

`rehearsal-mark-align.ly`



Rehearsal marks with direction DOWN get placed at the bottom of the score.

`rehearsal-mark-direction.ly`



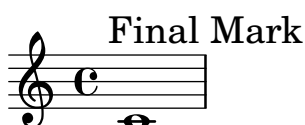
A rehearsal mark at the end of the score does not cause programming errors or strange output.

`rehearsal-mark-end-of-score.ly`



Rehearsal marks at the end of the last measure of a score are automatically made visible.

`rehearsal-mark-final-score.ly`



Comparison of `rehearsalMarkFormatter` functions.

The marks should read H, K, I, K, 93, XCVI, XCVJ, 8, AB, CC, Dd, xcvi, xcvj, iij., boxed A, circled B, ovalled C, medium font D.

`rehearsal-mark-formatters.ly`

Rehearsal marks in letter style: the I is skipped, and after Z, double letters are used. The mark may be set with `\mark NUMBER`, or with `Score.rehearsalMark`.

`rehearsal-mark-letter.ly`

Marks can be printed as numbers. By setting `rehearsalMarkFormatter` we may choose a different style of mark printing. Also, marks can be specified manually, with a markup argument.

`rehearsal-mark-number.ly`

Using `repeat unfold` within a relative block gives a different result from writing the notes out in full. The first system has all the notes within the staff. In the second, the notes get progressively higher.

relative-repeat.ly

Repeated

Using unfold Repeated Repeated

Alt1 Alt2 Alt3

The same notes, written out

Notes are entered using absolute octaves, octaves relative to the previous note, or relative to a fixed octave.

relative.ly

`\RemoveEmptyStaves` is defined separately from context definitions so it can be used outside of `\layout` blocks.

remove-empty-context-mod.ly

2

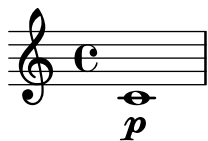
`RemoveEmptyStaves` should keep the pre-existing value of `auto-knee-gap`. In this case, the cross-staff beam should be between the two staves.

remove-empty-staves-auto-knee.ly

2

3

remove-empty-staves-dynamics.ly



Rests should not keep staves alive when `\RemoveEmptyStaves` is active. The following example should have only one staff.

remove-empty-staves-with-rests.ly



The `VerticalAxisGroup.remove-layer` property can be used to keep staves alive with reference to other staves in the `Keep_alive_together_engraver` group.

remove-layer-symbol.ly

The image shows two systems of musical notation. The first system begins at bar 10 and contains five staves: 'cont', 'with A or B', 'A', 'with A', and 'B'. The second system begins at bar 15 and contains three staves: 'cont', 'with A or B', and 'B'. The notation includes treble clefs, stems with notes, and repeat signs with first and second endings.

Bar numbers on repeat bar lines do not depend on the order in which Bar_number_engraver and Repeat_acknowledge_engraver run. The two systems in this test should be identical.

repeat-bar-number-engraver-order.ly

The notation shows a treble clef and a common time signature 'C'. It features a sequence of notes with repeat signs and first/second endings. Bar numbers 1, 2, 2, (2), and 3 are indicated above the staff.

The notation shows a treble clef and a common time signature 'C'. It features a sequence of notes with repeat signs and first/second endings. Bar numbers 1, 2, 2, (2), and 3 are indicated above the staff.

This tests *D.C. al Coda* form and how it unfolds.

repeat-dc-al-coda.ly

default

D.C. al Coda
e poi la Coda

brief

D.C.
al Coda

unfolded

This tests *D.C. al Fine* form and how it unfolds.
repeat-dc-al-fine.ly

default

Fine *D.C.*
al Fine

brief

Fine *D.C.*
al Fine

unfolded

This tests *D.C. al Coda* form, but with a segno where the Coda label would normally be.
The *D.C.* instructions refer to the segno.
repeat-dc-al-segno.ly

default

D.C. al Coda *D.S. Segno*
e poi la Segno

brief

D.C. *D.S. Segno*
al Segno

unfolded

A `\repeat segno` with a single alternative ending that is used for all volte receives a volta bracket rather than a coda sign because there is no material to skip. The bracket hooks down at the *D.C.*.

The bracket communicates the return count, so the return count is omitted from the *D.C.* instruction to avoid redundancy.

```
repeat-dc-one-alternative.ly
```

Musical notation showing a single alternative ending. The first measure contains a whole note 'c'. The second measure contains a whole note 'c' with a bracket above it labeled '1.2.'. The third measure contains a whole note 'c'. Below the first two measures is the instruction *D.C.*. Above the third measure is the instruction Coda.

Musical notation showing a simple *D.C.* form with a segno following. The first measure contains a whole note 'c'. The second measure contains a whole note 'c'. The third measure contains a whole note 'c'. The fourth measure contains a whole note 'c'. The fifth measure contains a whole note 'c'. Above the fifth measure is the instruction Coda.

This tests simple *D.C.* form with a segno following, and how it unfolds.

```
repeat-dc-then-ds.ly
```

Musical notation showing a simple *D.C.* form with a rehearsal mark following. The first measure contains a whole note 'c'. The second measure contains a whole note 'c'. Below the first measure is the instruction *D.C.*. Below the second measure is the instruction *D.S.* with a percent sign symbol above it.

Musical notation showing a simple *D.C.* form with a section label following. The first measure contains a whole note 'c'. The second measure contains a whole note 'c'. The third measure contains a whole note 'c'. The fourth measure contains a whole note 'c'.

This tests simple *D.C.* form with a rehearsal mark following.

```
repeat-dc-then-rehearsal-mark.ly
```

Musical notation showing a simple *D.C.* form with a section label following. The first measure contains a whole note 'c'. The second measure contains a whole note 'c'. Below the first measure is the instruction *D.C.*. Above the second measure is the instruction A.

Musical notation showing a simple *D.C.* form with a section label following. The first measure contains a whole note 'c'. The second measure contains a whole note 'c'. The third measure contains a whole note 'c'. Above the third measure is the instruction A.

This tests simple *D.C.* form with a section label following.

```
repeat-dc-then-section-label.ly
```

Musical notation showing a simple *D.C.* form with a section label following. The first measure contains a whole note 'c'. The second measure contains a whole note 'c'. Below the first measure is the instruction *D.C.*. Above the second measure is the instruction Refrain.

Musical notation showing a simple *D.C.* form with a section label following. The first measure contains a whole note 'c'. The second measure contains a whole note 'c'. The third measure contains a whole note 'c'. Above the third measure is the instruction Refrain.

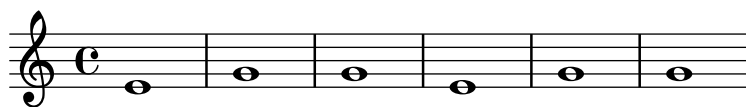
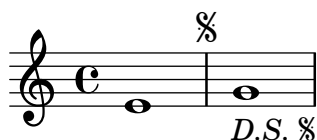
Where a *D.C.* or *D.S.* instruction is not aligned on a measure boundary, the bar line defined by `underlyingRepeatBarType` appears by default. In this case, the *D.C.* should have a normal bar line and the *D.S.* should have a dotted bar line.

```
repeat-dc-unaligned.ly
```



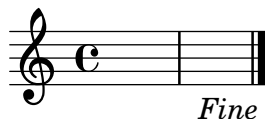
When jumps to different targets occur simultaneously, LilyPond ignores one and issues a warning. Either a *D.C.* or a *D.S.* instruction, but not both, is expected. Unfolding is not affected: this case unfolds to EGGEGG.

```
repeat-dc-v-ds.ly
```



By default, `\fine` does not create a *Fine* instruction at the written end of the music, but this can be changed with the `finalFineTextVisibility` context property. There is no warning when a simultaneous *D.C.* instruction must appear there.

```
repeat-dc-v-fine-end-visible.ly
```



By default, `\fine` does not create a *Fine* instruction at the written end of the music, so there is no conflict when a simultaneous *D.C.* instruction must appear there.

```
repeat-dc-v-fine-end.ly
```



When events creating *Fine* and *D.C.* occur simultaneously, both indications are printed. This use case is not valued, but it is included in the regression test suite for robustness and difference detection.

repeat-dc-v-fine.ly

D.C.
Fine

Fine

This tests *D.S. al Coda* form and how it unfolds.

repeat-ds-al-coda.ly

default

D.S. % al ϕ
e poi la Coda

brief

D.S. %
al Coda

unfolded

Coda

This tests *D.S. al Fine* form and how it unfolds.

repeat-ds-al-fine.ly

default

Fine D.S. %
al Fine

brief

Fine D.S. %
al Fine

unfolded

Setting `segnoStyle` to `bar-line` suppresses the first segno mark and causes a *D.S.* instruction to say simply *D.S.* without the mark. The second segno mark does appear and the corresponding *D.S.* instruction includes it.

`repeat-ds-bar-line.ly`

The first staff shows a treble clef with a common time signature. The first measure contains a complex repeat sign. The second measure contains a complex repeat sign followed by a whole note. Below the staff, the text *D.S.* is aligned under the first measure, and *D.S. %%* is aligned under the second measure.

The second staff shows a treble clef with a common time signature. It contains five measures, each with a single whole note: G4, A4, B4, C5, and B4.

If the body of a segno repeat is empty, the result might be ugly, but it does not manifestly contradict the input. The margin labels show the expected note performance sequence.

`repeat-ds-body-empty.ly`

The first staff shows a treble clef with a common time signature and two measures, each containing a whole rest.

The second staff is labeled 'A' on the left. It shows a treble clef with a common time signature. The first measure has a whole rest. The second measure has a whole note G4. The third measure has a whole rest. Above the second measure is a first ending bracket labeled '1.'. Below the staff is the text *D.S. %*.

The third staff is labeled 'AB' on the left. It shows a treble clef with a common time signature. The first measure has a whole rest. The second measure has a whole note G4. The third measure has a whole note A4. The fourth measure has a whole rest. Above the second and third measures is a first ending bracket labeled '1.' and a second ending bracket labeled '2.'. Below the staff is the text *D.S. %*.

The fourth staff is labeled 'AAB' on the left. It shows a treble clef with a common time signature. The first measure has a whole rest. The second measure has a whole note G4. The third measure has a whole note A4. The fourth measure has a whole rest. Above the second and third measures is a first ending bracket labeled '1.2.' and a second ending bracket labeled '3.'. Below the staff is the text *D.S. %*.

The fifth staff is labeled 'ABB' on the left. It shows a treble clef with a common time signature. The first measure has a whole rest. The second measure has a whole note G4. The third measure has a whole note A4. The fourth measure has a whole rest. Above the second measure is a first ending bracket labeled '1.' and above the third measure is a second ending bracket labeled '2.3.'. Below the staff is the text *D.S. % D.S. %*.

The sixth staff is labeled 'AABB' on the left. It shows a treble clef with a common time signature. The first measure has a whole rest. The second measure has a whole note G4. The third measure has a whole note A4. The fourth measure has a whole rest. Above the second and third measures is a first ending bracket labeled '1.2.' and above the third and fourth measures is a second ending bracket labeled '3.4.'. Below the staff is the text *D.S. % D.S. %*.

The format of *D.S.* and related instructions can be customized by overriding the `dalSegnoTextFormatter` context property. The line should end with the instruction *A SIGNO*.

`repeat-ds-formatter.ly`

Segno and coda marks created automatically by `\repeat segno` can be manually overridden with `\segnoMark` and `\codaMark`. A double segno and double coda sign should appear.

`repeat-ds-mark-override.ly`

When a *D.C.* or *D.S.* instruction is to be performed more than once, the default `dalSegnoTextFormatter` includes the count in the instruction. In this case, the *D.C.* instruction should indicate returning thrice and the *D.S.* instruction should indicate returning twice.

`repeat-ds-return-count.ly`

This tests mark formatting and placement for three sequential `\repeat segno` sections, each with three alternative endings, with some used for multiple volte.

`repeat-ds-torture.ly`

D.S. %3% al ϕ 6 ϕ **Fade-out**
e poi la Fade-out

Commencement **Bridge**

Fade-out

D.S. %3%
al Fade-out

Repeat constructs without alternatives can be abbreviated using `\etc .`
`repeat-etc.ly`

Across linebreaks, the left edge of a first and second alternative bracket should be equal.
`repeat-line-break.ly`

Percent repeat counters can be shown at regular intervals by setting `repeatCountVisibility`.
`repeat-percent-count-visibility.ly`



Percent repeats get incremental numbers when `countPercentRepeats` is set, to indicate the repeat counts, but only if there are more than two repeats.

`repeat-percent-count.ly`



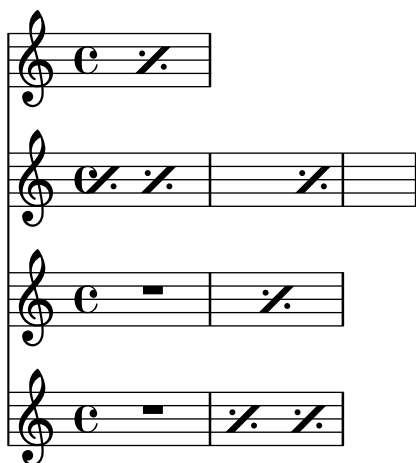
Percent repeats are also centered when there is a grace note in a parallel staff.

`repeat-percent-grace.ly`



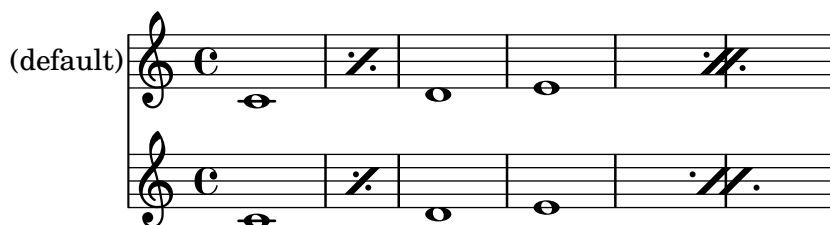
Isolated percent-repeat signs can be printed.

`repeat-percent-isolated.ly`



The positioning of dots and slashes in percent repeat glyphs can be altered using `dot-negative-kern` and `slash-negative-kern`.

`repeat-percent-kerning.ly`



Percent repeats are not skipped, even when skipBars is set.

repeat-percent-skipbars.ly



Slash and percent signs are correctly scaled at different staff sizes.

repeat-percent-staff-size.ly



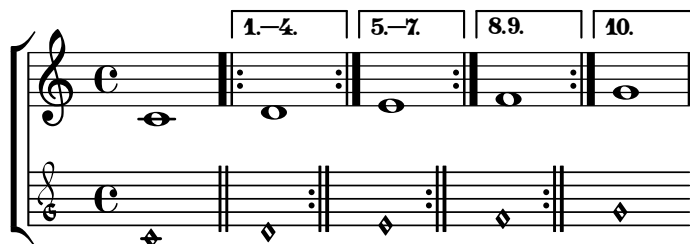
Measure repeats may be nested with beat repeats.

repeat-percent.ly



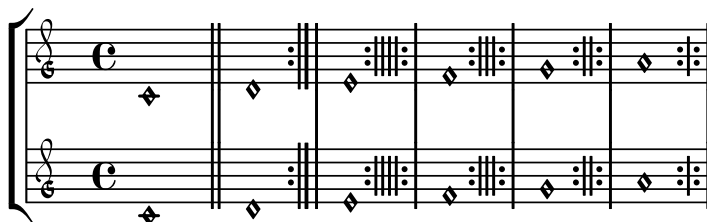
Alternative endings are not expected in ancient music. Here, the signum repetitionis resembles a modern repeat sign rather than telling the number of times the alternative is performed.

repeat-petrucchi-alternatives.ly



This test demonstrates an ancient repeat sign in the Petrucci style, but with measure bar lines enabled. A single bar line should follow each repeat sign.

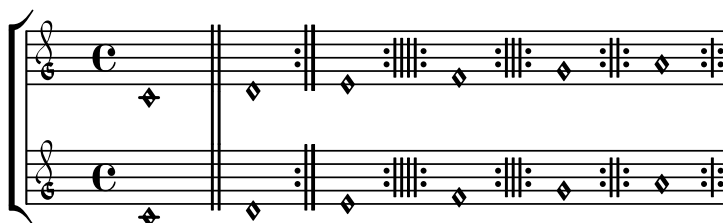
repeat-petrucchi-with-measure-bar-lines.ly



This test demonstrates an ancient repeat sign in the Petrucci style. The sign consists of 1 to 4 short strokes between repeat dots, with the number of strokes indicating the number of times the preceding section is to be performed. The number of strokes is determined by the argument to `\repeat volta`, and a count higher than 4 falls back on a modern-looking sign with two long strokes. Despite appearances, these repeat signs are not bar lines.

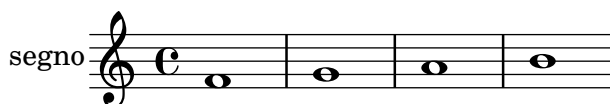
A double bar line should follow the first note. A repeat sign should follow each following note: modern, 4 strokes, 3 strokes, 2 strokes, 1 stroke.

`repeat-petrucci.ly`



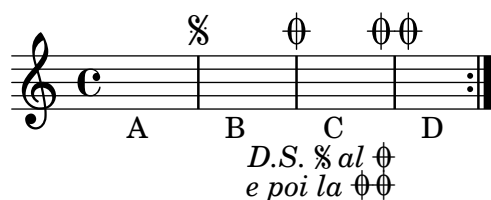
This piece consists of three consecutive sections using `\repeat segno 1`. Because of the count, no repeat notation should appear.

`repeat-segno-count-one.ly`



This tests a `\repeat segno` inside and at the end of a `\repeat volta`. The music unfolds to ABCBD ABCBD

`repeat-segno-in-volta-end.ly`



This tests a `\repeat segno` inside and in the middle of a `\repeat volta`. The music unfolds to ABCBDE ABCBDE.

repeat-segno-in-volta-middle.ly

This tests a `\repeat segno` inside and at the start of a `\repeat volta`. The music unfolds to A BCBDE BCBDE.

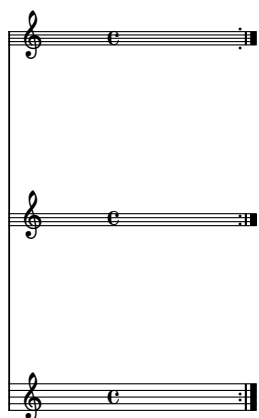
repeat-segno-in-volta-start.ly

The two dots of a repeat sign should be symmetric to the staff center and avoid staff lines even for exotic staves. Test `set-global-staff-size 10` (with `layout-set-staff-size`).

repeat-sign-global-size10.ly

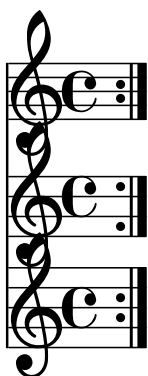
The two dots of a repeat sign should be symmetric to the staff center and avoid staff lines even for exotic staves. Test set-global-staff size 30 (with layout-set-staff-size).

repeat-sign-global-size30.ly



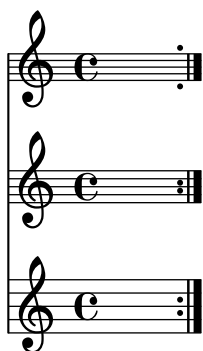
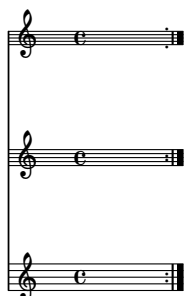
The two dots of a repeat sign should be symmetric to the staff center and avoid staff lines even for exotic staves. Test set-global-staff size 10 (with layout-set-staff-size).

repeat-sign-global-size5.ly



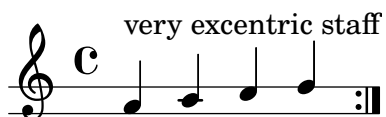
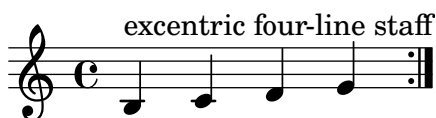
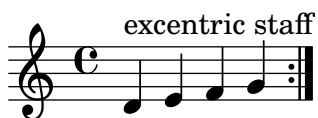
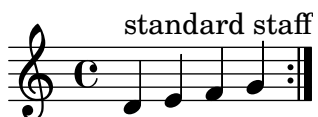
The two dots of a repeat sign should be symmetric to the staff center and avoid staff lines even for exotic staves. Test layout-set-staff-size.

repeat-sign-layout-size.ly

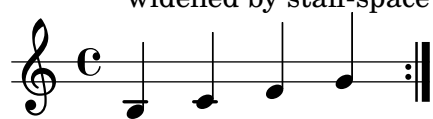


The two dots of a repeat sign should be symmetric to the staff center and avoid staff lines even for exotic staves.


repeat-sign.ly



widened by staff-space



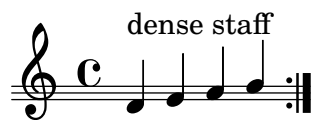
dots outside



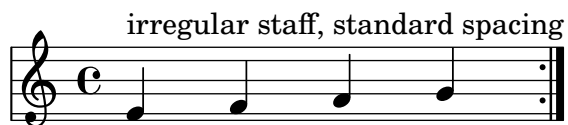
narrow staff



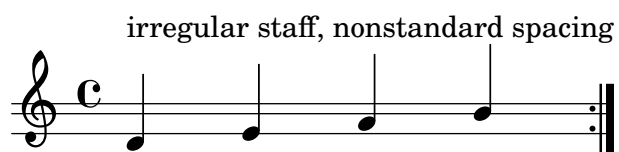
dense staff



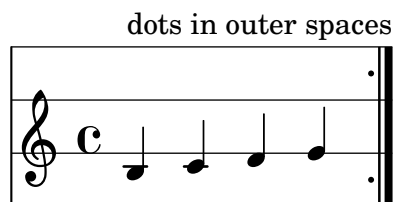
irregular staff, standard spacing



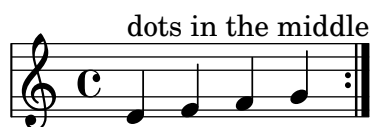
irregular staff, nonstandard spacing



dots in outer spaces



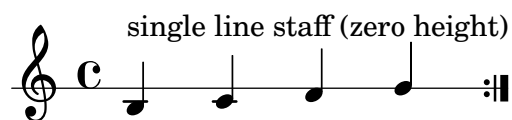
dots in the middle



thick-lined staff



single line staff (zero height)

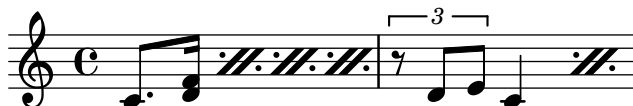


no staff



Beat repeats for patterns containing mixed durations use a double percent symbol.

`repeat-slash-mixed.ly`



Beat repeats for patterns containing identical durations shorter than an eighth note use multiple slashes.

`repeat-slash-multi.ly`



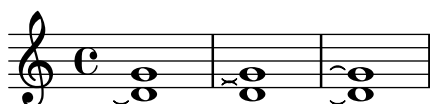
Within a bar, beat repeats denote that a music snippet should be played again.

`repeat-slash.ly`



`\repeatTie` ties should also work on individual notes of a chord.

`repeat-tie-chords.ly`



A `\repeatTie` may be parenthesized.

`repeat-tie-parenthesize.ly`



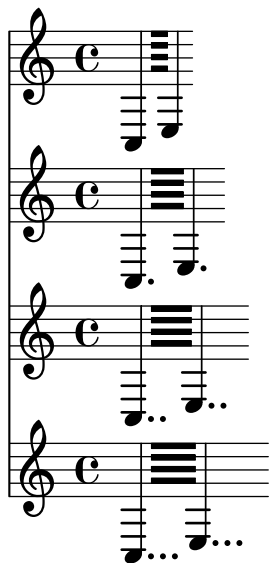
Repeat ties are only connected on the right side to a note head.

`repeat-tie.ly`



Each of the staves here should have four tremolo beams.

`repeat-tremolo-beams.ly`



Tremolos work with chord repetitions.
 repeat-tremolo-chord-rep.ly



Dots are added to tremolo notes if the durations involved require them.
 repeat-tremolo-dots.ly



A tremolo repeat containing only one note (no sequential music) shall not be scaled. An articulation or dynamic sign on the note should not confuse lilypond.
 repeat-tremolo-one-note-articulation.ly

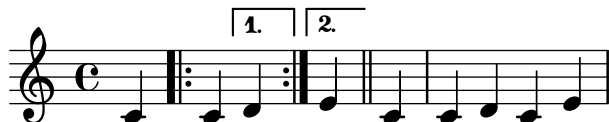


A tremolo can have more than two notes. Also check that linebreaks between tremolos still work and that empty tremolos don't crash.
 repeat-tremolo-three-notes.ly



Volta repeats may be unfolded through the music function `\unfoldRepeats`.

`repeat-unfold-all.ly`



`\repeat unfold 1` unfolds according to the count. This piece has one measure and `\unfoldRepeats` does not change that.

`repeat-unfold-count-one.ly`



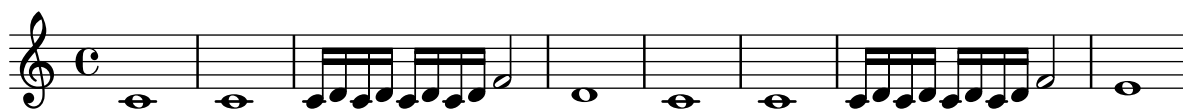
The music function `\unfoldRepeats` can take an optional argument-list specifying which type(s) of repeated music has to be unfolded.

`repeat-unfold-partial.ly`

not expanding



expanding all



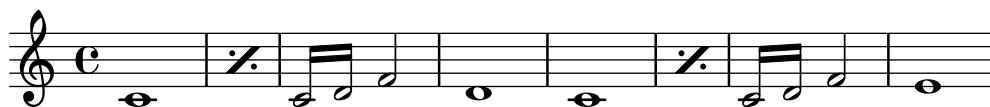
expanding percent-repeated-music



expanding tremolo-repeated-music



expanding volta-repeated-music



combinations are possible:

expanding percent-repeated-music and tremolo-repeated-music



Unfolding tremolo repeats. All fragments fill one measure with 16th notes exactly.

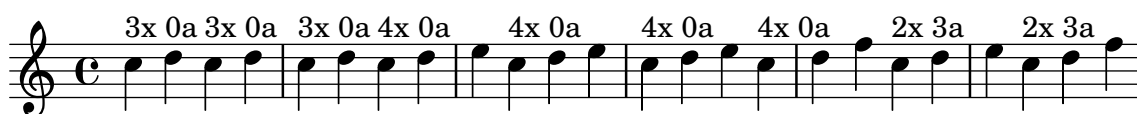
repeat-unfold-tremolo.ly



LilyPond has two modes for repeats: unfolded and semi-unfolded. Unfolded repeats are fully written out. Semi unfolded repeats have the body written and all alternatives sequentially. If the number of alternatives is larger than the repeat count, the excess alternatives are ignored. If the number of alternatives is smaller, the first alternative is multiplied to get to the number of repeats.

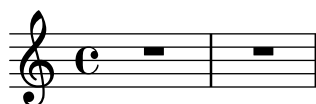
Unfolded behavior:

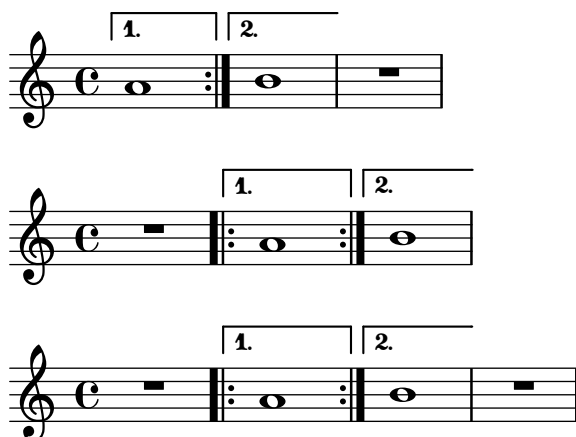
repeat-unfold.ly



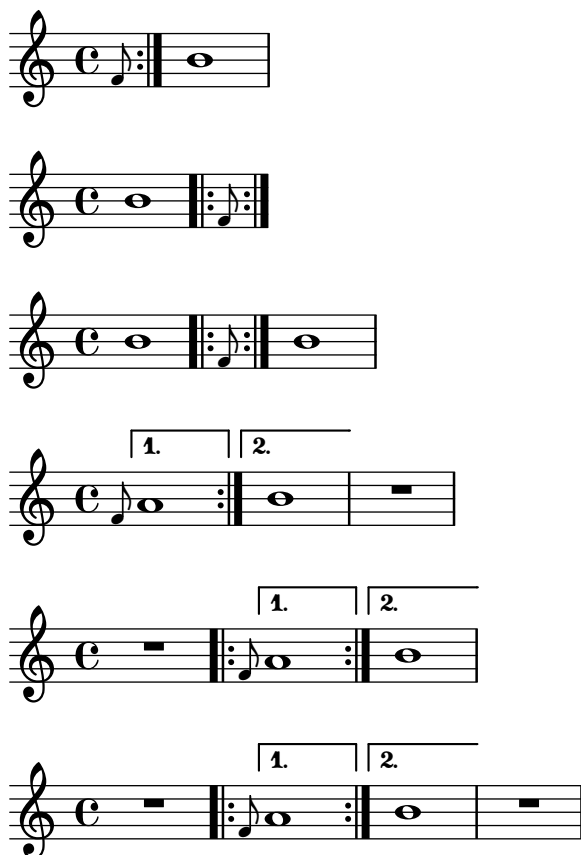
If the body of a volta repeat is empty, the alternatives are still rendered with the expected volta notation.

repeat-volta-body-empty.ly



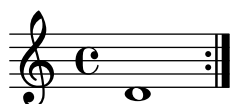


If the body of a volta repeat is only a grace note, it is still engraved as expected.
 repeat-volta-body-grace.ly



This test covers a volta repeat as top-level music with the repeat body being simultaneous music.

repeat-volta-body-simultaneous.ly



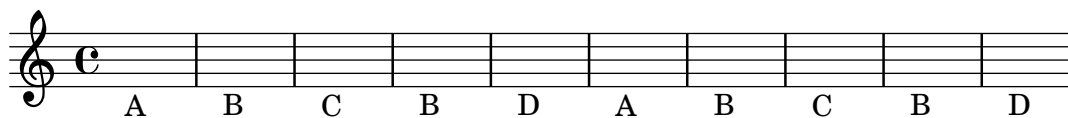
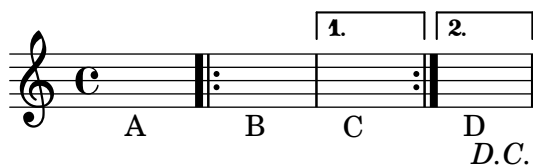
This piece consists of three consecutive sections using `\repeat volta 1`. Because of the count, no repeat notation should appear.

repeat-volta-count-one.ly



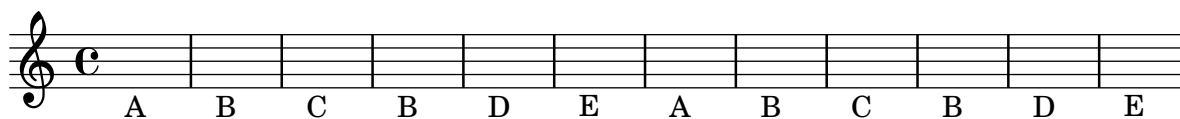
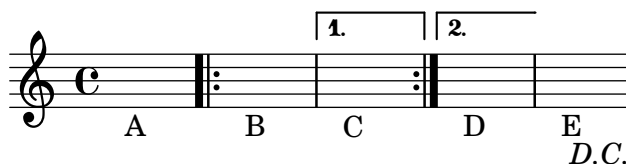
This tests a `\repeat volta` inside and at the end of a `\repeat segno`. The music unfolds to ABCBD ABCBD

repeat-volta-in-segno-end.ly



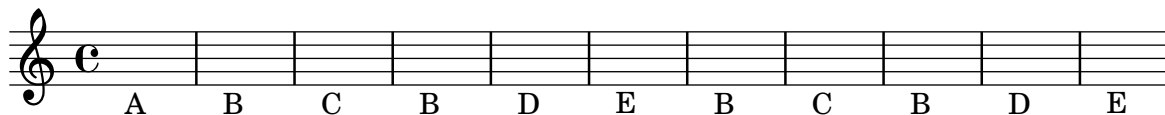
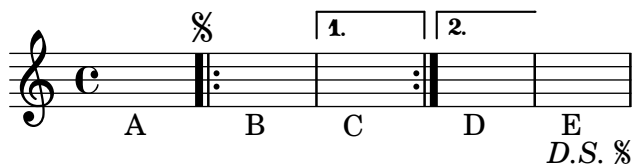
This tests a `\repeat volta` inside and in the middle of a `\repeat segno`. The music unfolds to ABCBDE ABCBDE.

repeat-volta-in-segno-middle.ly



This tests a `\repeat volta` inside and at the start of a `\repeat segno`. The music unfolds to A BCBDE BCBDE.

repeat-volta-in-segno-start.ly



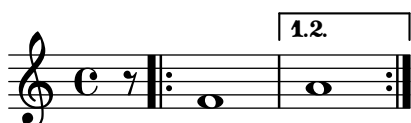
A piece beginning with grace notes followed by a volta repeat has an opening repeat bar in the expected position.

repeat-volta-initial-grace.ly



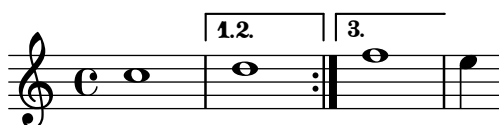
A single `\alternative` is a way to indicate a repeat count when there is no variation.

repeat-volta-one-alternative.ly



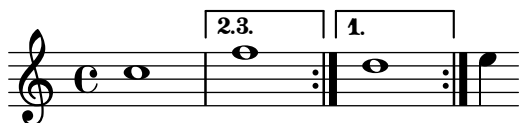
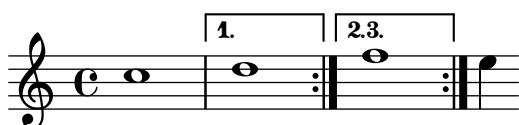
When too few alternatives are present, the first alternative is repeated, by printing a range for the 1st repeat.

repeat-volta-skip-alternatives.ly



`\volta` assigns bracket labels without reordering alternatives. A final alternative that is not exclusive to the final volta ends with a repeat bar.

repeat-volta-specified-alternatives.ly



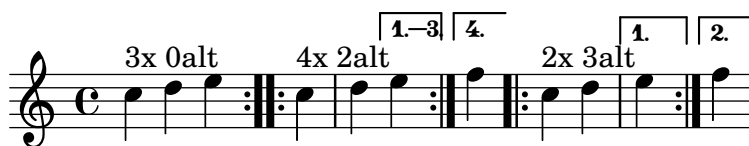
`\fine` ends the piece when it is found outside folded repeats.

repeat-volta-with-fine.ly



Volta (Semi folded) behavior. Voltas can start on non-bar line moments. If they don't bar lines should still be shown.

repeat-volta.ly



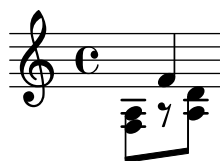
Rests avoid notes. Each rest is moved in the direction of the stems in its voice. Rests may overlap other rests in voices with the same stem direction, in which case a warning is given, but is suppressed if the rest has a pitch.

rest-avoid-note.ly



Beam/rest collision resolution and normal rest/note collisions can be combined.

rest-collision-beam-note.ly



Rests under beams are moved by whole staff spaces.

rest-collision-beam-quantized.ly



Beam/rest collision takes offset due to Rest #'direction into account properly.

rest-collision-beam-restdir.ly



Rests under beams are shifted upon collision.

rest-collision-beam.ly



Vertical rest positions in a multi-voice staff should obey the duration of notes; this is, they shouldn't return to a default position too early.

rest-collision-note-duration.ly



Rests should not collide with beams, stems and noteheads. Rests may be under beams. Rests should be moved by integral number of spaces inside the staff, and by half spaces outside. Notice that the half and whole rests just outside the staff get ledger lines in different cases.

rest-collision.ly

Two staves of music. The first staff shows a sequence of notes with rests placed above and below the notes. The second staff, starting with a measure number 7, shows a sequence of notes with rests placed above and below the notes, demonstrating the correct placement of dots for rests.

Dots of rests should follow the rest positions.

rest-dot-position.ly

Four staves of music, each showing a sequence of notes with rests hanging down from the staff lines. The rests are positioned in a way that they hang down from the staff lines, demonstrating the correct placement of rests in one line staves.

Breve, longa, and maxima rests should hang down from staff lines in one line staves, different staff space and font size.

rest-hanging-breve.ly

The image shows four staves of musical notation. Each staff contains a sequence of rests of various durations (breve, whole, half) positioned both above and below the staff lines. The number '127' is printed above each staff. The notation is in a standard staff with a treble clef and a common time signature.

Breve, whole and half rests moving outside the staff should get ledger lines.

rest-ledger.ly

The image shows a single staff of musical notation. It contains a sequence of rests of various durations (breve, whole, half) that extend significantly above and below the staff lines, necessitating the use of ledger lines. The notation is in a standard staff with a treble clef and a common time signature.

In rest-note collisions, the rest moves in discrete steps, and inside the staff, it moves in whole staff spaces.

rest-note-collision.ly

The image shows three staves of musical notation. Each staff contains a sequence of notes and rests. The rests are shown moving in discrete steps and inside the staff, illustrating rest-note collisions. The notation is in a standard staff with a treble clef and a common time signature.

half rests should lie on a staff line, whole rests should hang from a staff line by default even for non-standard staves, except when the position is set by pitch.

rest-on-nonstandard-staff.ly

A musical score for regression test case 1. It consists of a grand staff with four staves and a single staff below. The top staff is in treble clef with a common time signature 'C'. The music is composed of eighth notes, with some beamed pairs. The notes are arranged in a pattern that suggests a simple harmonic exercise or a specific test case for a music processing algorithm. The bottom staff is also in treble clef and contains a sequence of notes that appear to be a simplified or related version of the main melody.

A musical score for regression test case 2. It begins with a measure number '9' above the first staff. The score consists of a grand staff with four staves and a single staff below. The top staff is in treble clef with a common time signature 'C'. The music is composed of eighth notes, with some beamed pairs. The notes are arranged in a pattern that suggests a simple harmonic exercise or a specific test case for a music processing algorithm. The bottom staff is also in treble clef and contains a sequence of notes that appear to be a simplified or related version of the main melody.

19

Musical score for measures 19-28. The score consists of five staves. Measures 19-24 contain rhythmic patterns of eighth notes and quarter notes. Measures 25-28 contain rests and quarter notes. The notation includes treble clefs and various note heads and stems.

31

Musical score for measures 31-36. The score consists of five staves. Measures 31-36 contain rhythmic patterns of quarter notes and eighth notes. The notation includes treble clefs and various note heads and stems.

69

Musical score for regression test case 69. It consists of five staves. The top four staves are grouped by a brace on the left. Each staff contains a treble clef and a single vertical bar line in the first, fifth, and ninth measures. The fifth staff is a single treble clef with vertical bar lines in the first, fifth, and ninth measures.

81

Musical score for regression test case 81. It consists of five staves. The top four staves are grouped by a brace on the left. Each staff contains a treble clef and a single vertical bar line in the first, fifth, and ninth measures. The fifth staff is a single treble clef with vertical bar lines in the first, fifth, and ninth measures.

93

Musical score for regression test case 93. It consists of five staves. The top four staves are grouped by a brace on the left. Each staff contains a single vertical bar line in the first measure, followed by a single vertical bar line in the fifth measure, and a single vertical bar line in the ninth measure. The bottom staff contains a single vertical bar line in the first measure, followed by a single vertical bar line in the fifth measure, and a single vertical bar line in the ninth measure.

105

Musical score for regression test case 105. It consists of five staves. The top four staves are grouped by a brace on the left. Each staff contains a single vertical bar line in the first measure, followed by a single vertical bar line in the fifth measure, and a single vertical bar line in the ninth measure. The bottom staff contains a single vertical bar line in the first measure, followed by a single vertical bar line in the fifth measure, and a single vertical bar line in the ninth measure.

117

Rests can have pitches – these will be affected by transposition and relativization. If a rest has a pitch, rest/rest and beam/rest collision resolving will leave it alone.

rest-pitch.ly

Pitched rests under beams.

rest-pitched-beam.ly

In polyphonic situations, rests are moved according to their **direction** even if there is no opposite note or rest. The amount in **staff-positions** is set by **voiced-position**.

rest-polyphonic.ly

This shows the one-voice rest positions for various standard and tab staves.

rest-positioning-one-voice.ly

	R1*7	R1	r1	r2	r4
B^{\flat} C	7 -	-	-	-	~
B^{\flat} e	7 -	-	-	-	~
B^{\flat} c	7 -	-	-	-	~
B^{\flat} e	7 -	-	-	-	~
B^{\flat} c	7 -	-	-	-	~
B^{\flat} e	7 -	-	-	-	~
B^{\flat} c	7 -	-	-	-	~
B^{\flat} e	7 -	-	-	-	~
B^{\flat} c	7 -	-	-	-	~
B^{\flat} e	7 -	-	-	-	~
A^{\flat} C	7 -	-	-	-	~
A^{\flat} e	7 -	-	-	-	~
A^{\flat} c	7 -	-	-	-	~
A^{\flat} e	7 -	-	-	-	~

This shows the two-voice rest positions for various standard and tab staves.

	R1*7	7	R1	r1	r2	r4
$\text{B } \text{C}$	7	7				~
$\text{B } \text{c}$	7	7				~
$\text{B } \text{c}$	7	7				~
$\text{B } \text{c}$	7	7				~
$\text{B } \text{c}$	7	7				~
$\text{B } \text{c}$	7	7				~
$\text{B } \text{c}$	7	7				~
$\text{B } \text{c}$	7	7				~
$\text{B } \text{c}$	7	7				~
$\text{B } \text{c}$	7	7				~
$\text{A } \text{C}$ B	7	7				~
$\text{A } \text{c}$ B	7	7				~
$\text{A } \text{C}$ B	7	7				~

There is a big variety of rests. Note that the dot of 8th, 16th and 32nd rests rest should be next to the top of the rest. All rests except the whole rest are centered on the middle staff line.
rest.ly

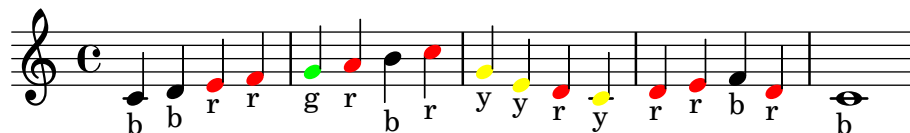
`\retrograde` can deal with crescendo and decrescendo as long as they are properly paired with `\endcr/\!` and `\enddecr`. Direction modifiers on slurs like `^` (need to be repeated as `^`) at the end. Ties and glissandi work mostly (in-chord ties are turned into ordinary per-chord/note ties, however).

`retrograde.ly`



`\once \revert` can be used for reverting a property once rather than permanently.

`revert-once.ly`



When an unpitched duration is parsed as a rhythmic event, it sets the default duration of the following note events. This happens even when it is the argument of a music function. In these examples, notes with an explicit duration are indicated with an accent and the following notes have to have the same duration.

`rhythm-sets-default-duration.ly`



Durations without pitches are placed into note events without pitch information. Those are directly useful in `RhythmicStaff`.

`rhythmic-sequence.ly`



In rhythmic staves stems should go up, and bar lines have the size for a 5 line staff. The whole rest hangs from the rhythmic staff.

`rhythmic-staff.ly`



This should produce an SATB score on two staves with 5 verses and piano accompaniment.

`satb-template-on-two-staves-with-verses.ly`

SOPRANO
ALTO

1. First stanza
2. Se-cond stanza
3. Third stanza
4. Fourth stanza
5. Fifth stanza

TENOR
BASS

PIANO

Soprano and tenor voices may be omitted without error, even when TwoVoicesPerStaff is specified and Alto and Bass lyrics are provided.

satb-template-soprano-and-tenor-may-be-omitted.ly

ALTO

Al-to lyrics

BASS

Bass lyrics

Instrument names and short instrument names can be changed when using the satb built-in template.

satb-template-with-changed-instrument-names.ly

SOPRANI
CONTRALTI

MEN DIV

ORGAN

A musical score for SATB voices and piano accompaniment. The first system consists of two staves: the top staff is labeled 'SOP' and 'CON' (Soprano and Contralto) and the bottom staff is labeled 'M UNI' (Men Unison). The second system is a grand staff for piano accompaniment. The music is in common time (C) and features a simple harmonic progression.

This should produce an SATB score with piano accompaniment, with four voices in the first system, unison women voices with descant in the second system and unison women and unison men voices in the third system.

satb-template-with-men-women-and-descant.ly

A musical score for SATB voices with lyrics and piano accompaniment. The first system consists of four staves for voices: SOPRANO, ALTO, TENOR, and BASS. The second system is a grand staff for piano accompaniment. The music is in common time (C). Lyrics are provided for each voice part: Soprano lyrics, Al - to lyrics, Te - nor lyrics, and Bass lyrics. The piano accompaniment is in the right and left hands of a grand staff.

2

3

Scores can be generated with scheme, too, and inserted into the current book(part). Generated and explicit scores can be mixed, the header informations from top- and booklevel stack correctly.

`scheme-book-scores.ly`

Main Title
Main subtitle

Score with a c

Piecetitle

Title 1
Sub1

Score with a d

Piecetitle



Piecetitle



Score with a e

Piecetitle



Main Title

Main subtitle

Piecetitle



Score with a f

Piecetitle



Main Title

Main subtitle

Score with a g

Piecetitle



Scheme engravers may be instantiated, with instance-scoped slots, by defining a 1 argument procedure which shall return the engraver definition as an alist, with the private slots defined in a closure. The argument procedure argument is the context where the engraver is instantiated.

`scheme-engraver-instance.ly`



`\consists` can take a scheme alist as arguments, which should be functions, which will be invoked as engraver functions.

`scheme-engraver.ly`



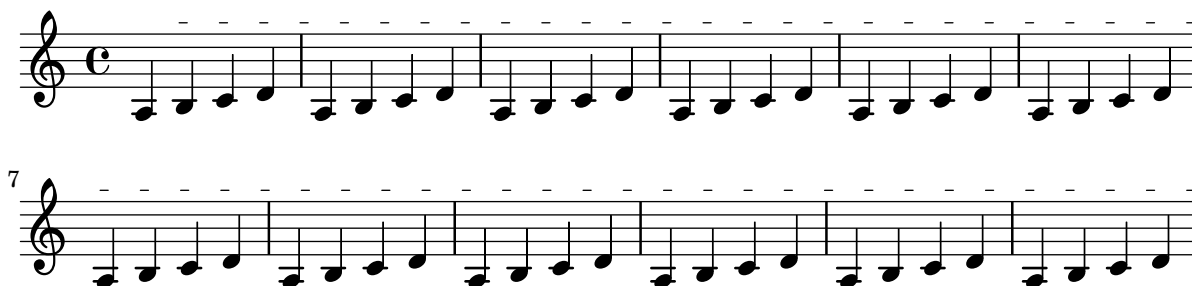
The `#@` and `$@` operators splice a list, returning multiple values to the parser. This is equivalent to returning the multiple values directly using `values`.

`scheme-list-splicing.ly`



Use `define-event-class`, scheme engraver methods, and grob creation methods to create a fully functional text spanner in scheme.

`scheme-text-spanner.ly`



13



19



25



31



38



Console output should indicate that translators created with `make-translator` are available in `\layout` and `\midi`, engravers created with `make-engraver` just in `\layout`, and performers created with `make-performer` just in `\midi`.

```
scheme-translators.ly
```



Ensures the zombie check actually works. This should print a log message 'object should be dead'

```
scheme-zombies.ly
```

The `\score-lines` markup returns individual score lines as stencils rather than a single stencil. Calling a function like `\rotate` on `\score-lines` rotates the lines individually, as contrasted with rotating an entire `\score` markup.

```
score-lines.ly
```

The image displays two musical score examples. The left example is titled `\score-lines` and consists of four staves, each containing a sequence of four quarter notes. The right example is titled `\score` and consists of four staves, each containing a sequence of four quarter notes. The first staff of the right example is labeled with a '2', the second with a '3', and the fourth with a '4', indicating different titling fields.

It works to set titling fields to `##f` on score level while they have been defined to markup values in the global header.

`score-suppress-title.ly`



Markup texts are rendered above or below a score.

`score-text.ly`

High up above

My first Li - ly song,

³
Not much can go wrong!

2. My next Li-ly verse
Now it's getting worse!
3. My last Li-ly text
See what will be next!

Scripts use skylines with accurate boxes to avoid accidentals.

`script-accidental-collision.ly`

Scripts on chords with seconds remain centered on the extremal note head

`script-center-seconds.ly`

Scripts are put on the utmost head, so they are positioned correctly when there are collisions.

`script-collision.ly`

Horizontal scripts don't have `avoid-slur` set.

`script-horizontal-slur.ly`

Omitted scripts on skips do not cause crashes.

`script-no-stencil.ly`

The horizontal placement of staccato dots above an upstem or below a downstem note differs from the placement of other scripts in that different positioning is used when the dot is alone and when it is part of a compound articulation. The property `toward-stem-shift-in-column` ensures good default positioning of the staccato (see first measure below), and allows precise horizontal control of a column containing a staccato and of the staccato within it (second measure). (0.0 means centered on the note head, 1.0 means centered on the stem.)

`script-shift-staccato.ly`



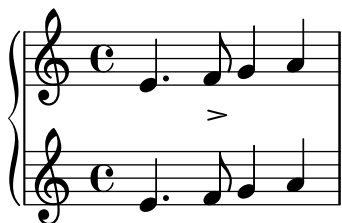
The `toward-stem-shift` property controls the precise horizontal location of scripts that are placed above an upstem or below a downstem note (0.0 means centered on the note head, 1.0 means centered on the stem).

`script-shift.ly`



Scripts on skips are supported.

`script-skip.ly`



horizontal scripts are ordered, so they do not overlap. The order may be set with `script-priority`.

The scripts should not be folded under the time signature.

`script-stack-horizontal.ly`



Scripts can be stacked. The order is determined by a priority field, but when objects have the same priority, the input order determines the order. Objects specified first are closest to the note.

`script-stack-order.ly`



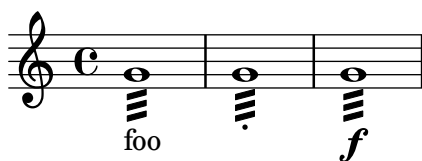
Scripts may be stacked.

script-stacked.ly



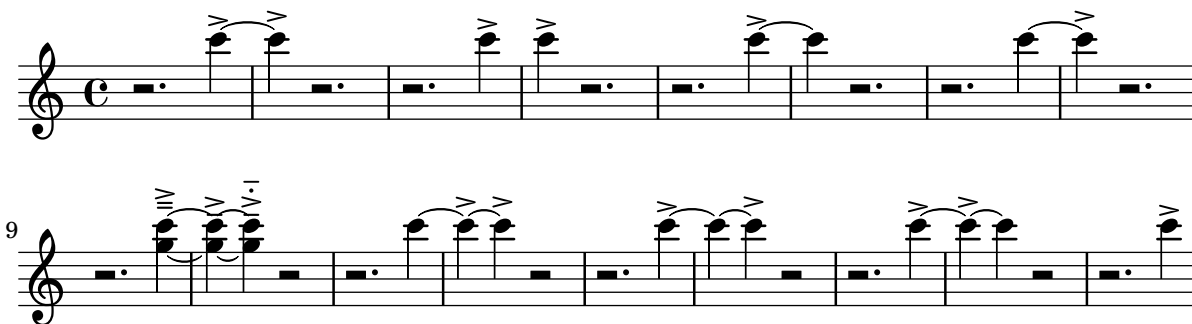
Scripts avoid stem tremolos even if there is no visible stem.

script-stem-tremolo.ly



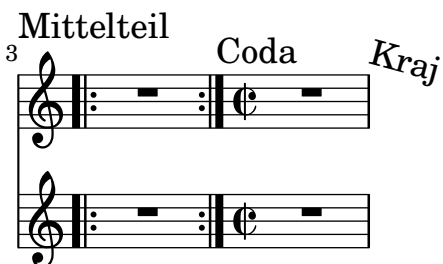
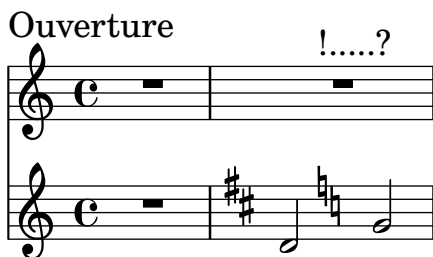
Scripts avoid ties.

script-tie-collision.ly



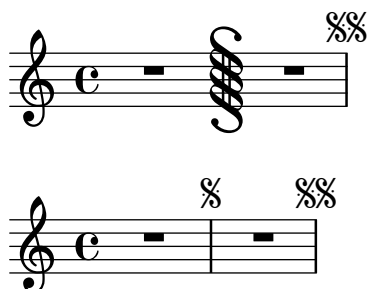
Section labels appear at the top of the system, appear at the beginning of a line at a break, remain visible at the end of the score, and can be styled via the SectionLabel grob.

section-label-style.ly



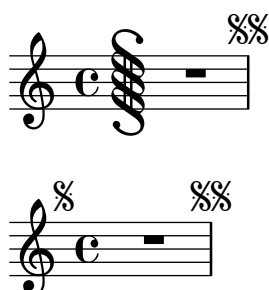
\segnoMark \default at the beginning of the score does not create a mark. A single segno should appear at the beginning of the second measure and a double segno should appear at the end.

segno-mark-begin-score-default.ly



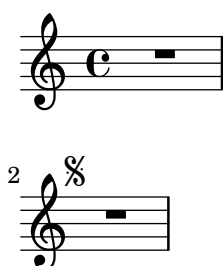
`\segnoMark 1` at the beginning of the score creates a visible mark. A single segno should appear at the beginning of the measure and a double segno should appear at the end.

segno-mark-begin-score-specific.ly



A segno at a line break appears at the beginning of the line.

segno-mark-break.ly



Where a segno mark is not aligned on a measure boundary, the bar line defined by `underlyingRepeatBarType` appears by default. In this case, the single segno should have a normal bar line and the double segno should have a dotted bar line.

segno-mark-unaligned.ly



Segni are printed as marks or bar lines according to the `segnoStyle` context property. The `mark` style, which is the default, yields marks only. When the style is set to `bar-line`, the default `segnoMarkFormatter` skips the mark for segno 1, but allows marks on later segni to eliminate ambiguity. The user can override the segno formatter with a rehearsal-mark formatter. Rehearsal marks and segni are sequenced independently.

segno-style.ly

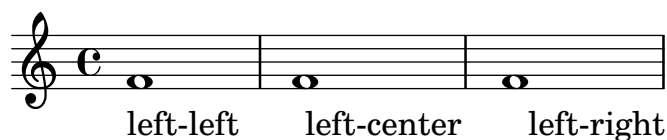
default 

bar-line 

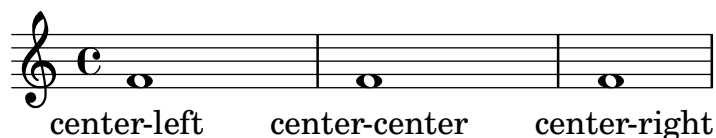
bar-line & formatter 

Grobs using `ly:self-alignment-interface::aligned-on-x-parent` and `ly:self-alignment-interface::aligned-on-y-parent` callbacks support separate alignments for self and parent.

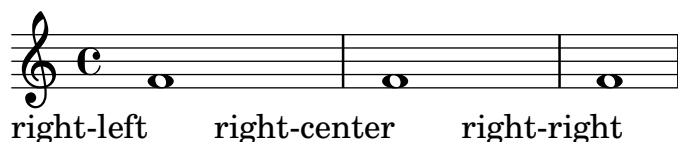
`self-alignment-and-parent-alignment.ly`



left-left left-center left-right



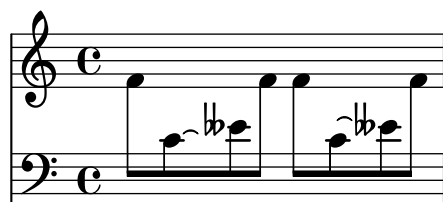
center-left center-center center-right



right-left right-center right-right

Cross-staff `RepeatTie` and `LaissezVibrerTie` do not trigger programming errors for circular dependencies in direction.

`semi-tie-cross-staff.ly`



Semi tie directions may be forced from the input.

`semi-tie-manual-direction.ly`



`\once \set` should change a context property value for just one timestep and then return to the previous value.

`set-once.ly`

A musical staff in treble clef with a common time signature. It contains a single note on the first line (F4) with a slur above it. A '1' is placed above the slur. Below the staff, the word 'left' is written under the first measure, 'right' under the second measure, and 'left' under the third measure.

In addition to `Slur`, the music function `\shape` works with `PhrasingSlur`, `Tie`, `LaissezVibrerTie`, and `RepeatTie`. Each is shown below, first unmodified and then (in blue) after application of the function.

`shape-other-curves.ly`

A musical staff in treble clef with a common time signature. It contains a sequence of notes: a quarter note (F4), a quarter note (G4), a quarter note (A4), a quarter note (B4), a quarter note (C5), a quarter note (B4), a quarter note (A4), a quarter note (G4), and a quarter note (F4). A slur is placed above the notes. A blue slur is also shown, which is shorter and starts later than the black slur.

5

A musical staff in treble clef with a key signature of one sharp (F#). It contains a single note on the first line (F#4) with a slur above it. A blue slur is also shown, which is shorter and starts later than the black slur.

6

A musical staff in treble clef with a key signature of one sharp (F#). It contains two notes on the first line (F#4) with a slur above them. A blue slur is also shown, which is shorter and starts later than the black slur.

8

A musical staff in treble clef with a key signature of one sharp (F#). It contains two notes on the first line (F#4) with a slur above them. A blue slur is also shown, which is shorter and starts later than the black slur.

9

A musical staff in treble clef with a key signature of one sharp (F#). It contains two notes on the first line (F#4) with a slur above them. A blue slur is also shown, which is shorter and starts later than the black slur.

11

A musical staff in treble clef with a key signature of one sharp (F#). It contains two notes on the first line (F#4) with a slur above them. A blue slur is also shown, which is shorter and starts later than the black slur.

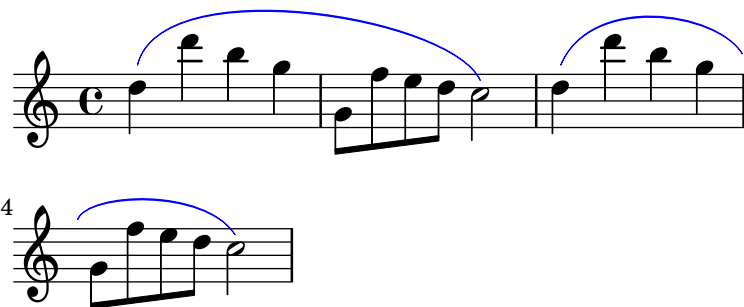
The control points of a broken or unbroken slur may be offset by `\shape`. The blue slurs are modified from the default slurs shown first.

`shape-slurs.ly`

A musical staff in treble clef with a common time signature. It contains a sequence of notes: a quarter note (F4), a quarter note (G4), a quarter note (A4), a quarter note (B4), a quarter note (C5), a quarter note (B4), a quarter note (A4), a quarter note (G4), and a quarter note (F4). A slur is placed above the notes. A blue slur is also shown, which is shorter and starts later than the black slur.

4

A musical staff in treble clef with a common time signature. It contains a sequence of notes: a quarter note (F4), a quarter note (G4), a quarter note (A4), a quarter note (B4), and a quarter note (C5). A slur is placed above the notes. A blue slur is also shown, which is shorter and starts later than the black slur.



\shiftDurations can use negative dot values without causing a crash.
 shift-durations-negative-dots.ly



A number of shorthands like (,), |, [,], ~, \(. \) and others can be redefined like normal commands. ly/declarations-init.ly serves as a regtest for a number of them. This test just demonstrates replacing (and) with melismata commands which are *not* articulations.

shorthands.ly



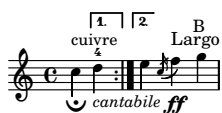
The show-horizontal-skylines and show-horizontal-skylines properties display sky-lines to assist debugging.

show-skylines.ly



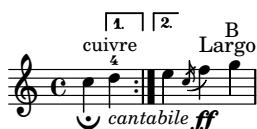
Different text styles are used for various purposes.

size11.ly



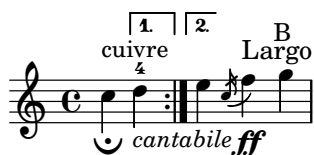
Different text styles are used for various purposes.

size13.ly



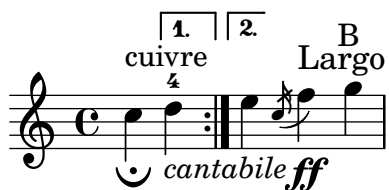
Different text styles are used for various purposes.

size16.ly



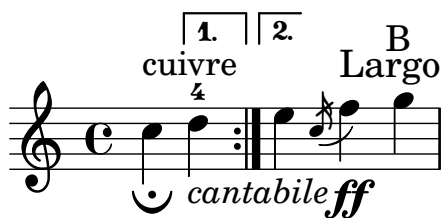
Different text styles are used for various purposes.

size20.ly



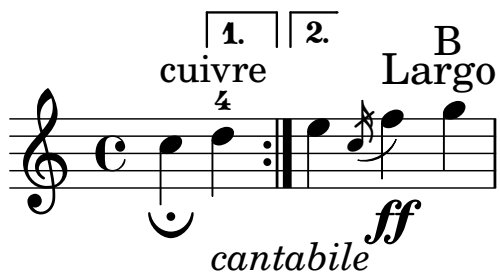
Different text styles are used for various purposes.

size23.ly



Different text styles are used for various purposes.

size26.ly



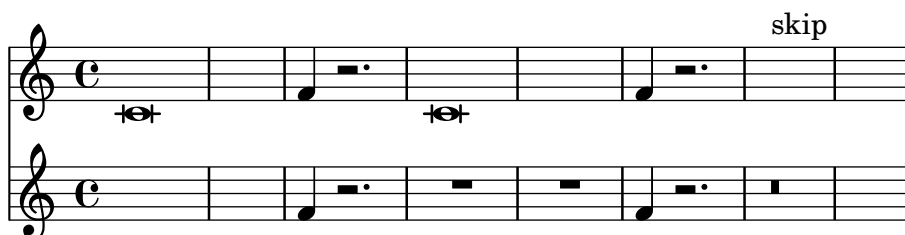
`\skip` can skip over music. The expected output is two A notes separated by two empty measures.

skip-music.ly



`skip-of-length` and `mmrest-of-length` create skips and rests that last as long as their arguments.

skip-of-length.ly



A score with `skipTypesetting` set for the whole score will not segfault.

`skiptypesetting-all-true.ly`

`skiptypesetting` doesn't affect bar checks.

`skiptypesetting-bar-check.ly`



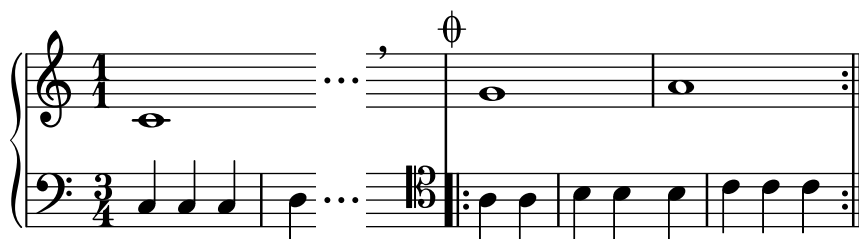
When `skipTypesetting` is set during a `skipBars`-induced `MultiMeasureRest` spanner, no segfault occurs.

`skiptypesetting-multimeasurerest.ly`



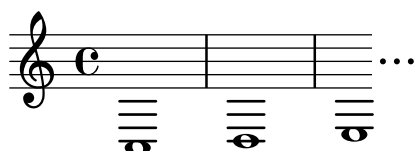
`showFirstLength` and `showLastLength` may be set at the same time; both the beginning and the end of the score will be printed.

`skiptypesetting-show-first-and-last.ly`



`showFirstLength` will only show the first bit of a score

`skiptypesetting-show-first.ly`



`showLastLength` will only show the last bit of a score

`skiptypesetting-show-last.ly`

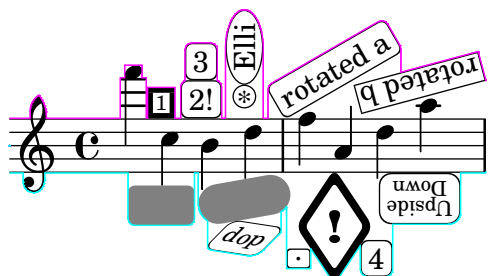


Tuplet brackets are also skipped with `skipTypesetting`.
`skiptypesetting-tuplet.ly`



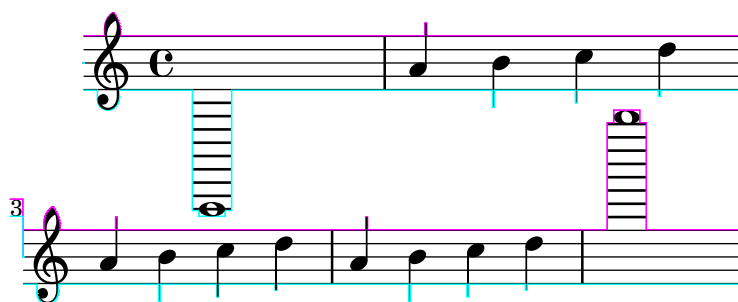
Skylines of boxes with and without rounded corners reflect the actual box outline even if rotated. Skylines of ellipses are stable when rotated.

`skyline-boxes-ellipses.ly`



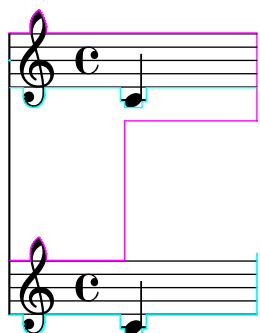
`-ddebug-skyline` draws the outline of the skyline used.

`skyline-debug.ly`



If no outline is available (eg. for embedded PS), the bounding box is used as a fallback.

`skyline-embedded-ps.ly`



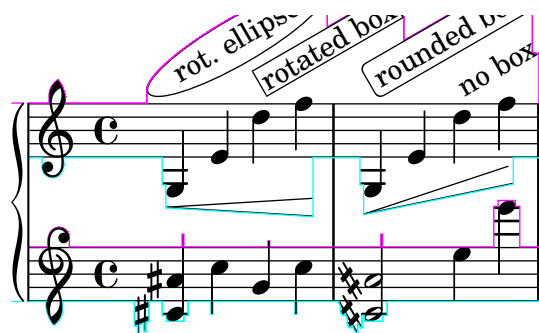
Do not crash on handling round-filled-box with infinite extents.

skyline-empty-box.ly



Skylines reflect grob rotation.

skyline-grob-rotation.ly



The skyline-horizontal-padding property can be set for System in order to keep systems from being spaced too closely together. In this example, the low notes from a system should not be interleaved with the high notes from the next system.

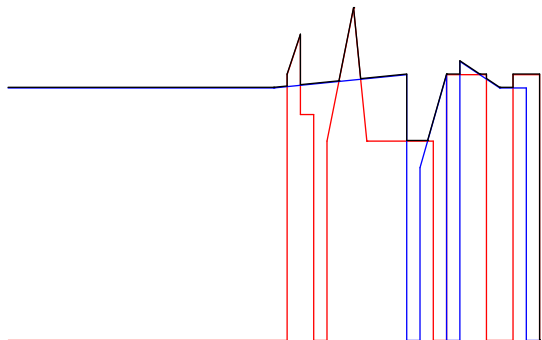
skyline-horizontal-padding.ly

The image displays three musical staves, labeled 1, 2, and 3, each representing a regression test case for guitar chord diagrams. Each staff consists of a treble clef, a chord diagram, and a sequence of notes with fingerings.

- Staff 1:** The chord diagram shows a barre on the first fret with fingers 5, 3, and 1 on strings 1, 2, and 3 respectively. The notes are G4 (fingering 1), A4 (fingering 1), B4 (fingering 1), and C5 (fingering 1).
- Staff 2:** The chord diagram shows a barre on the first fret with fingers 5, 3, and 1 on strings 1, 2, and 3 respectively. The notes are G4 (fingering 1), A4 (fingering 1), B4 (fingering 1), and C5 (fingering 1).
- Staff 3:** The chord diagram shows a barre on the first fret with fingers 5, 3, and 1 on strings 1, 2, and 3 respectively. The notes are G4 (fingering 1), A4 (fingering 1), B4 (fingering 1), and C5 (fingering 1).

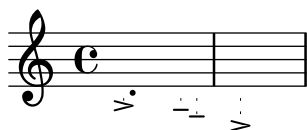
Test skyline merging. The red and blue lines are two skylines with direction UP, represented with the X axis as horizon axis. The black line is the merged skyline. At every point on the X axis, the black line should be at the maximum between the height of the red line and the height of the blue line at that point.

skyline-merging.ly



The `Script` grobs should follow the descending melody line, even though the `NoteHead` stencils are point stencils. The `Stem_engraver` is removed so that the only `side-support-element` is the `NoteHead`.

skyline-point-extent.ly



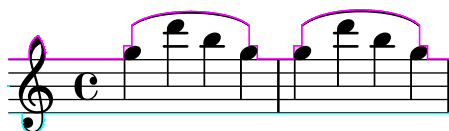
The skylines of side-positioned objects can be removed, without causing crashes.

skyline-removed.ly



Skylines cover all segments of slurs.

skyline-slur-segments.ly



Grobs that have `outside-staff-priority` set are positioned using a skyline algorithm so that they don't collide with other objects.

skyline-vertical-placement.ly

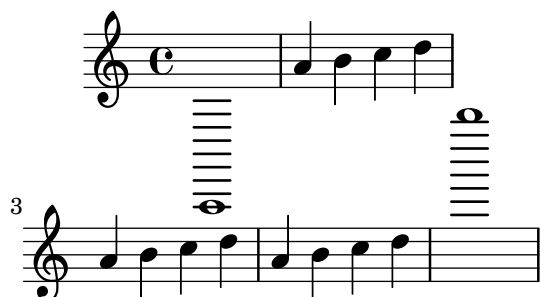
this goes above the previous markup
this doesn't collide with the c



this goes below the dynamic

We use a skyline algorithm to determine the distance to the next system instead of relying only on bounding boxes. This keeps gaps between systems more uniform.

skyline-vertical-spacing.ly



Music engraving by LilyPond 2.24.4—www.lilypond.org

Slurs handle avoid objects better.

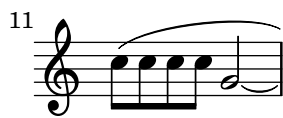
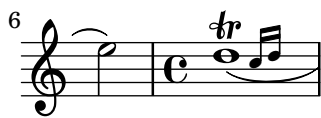
slur-avoid.ly



Across line breaks, slurs behave nicely. On the left, they extend to just after the preparatory matter, and on the right to the end of the staff. A slur should follow the same vertical direction it would have in unbroken state.

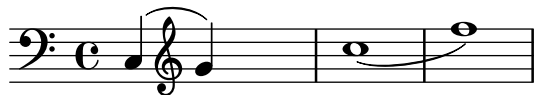
slur-broken-trend.ly





Slurs avoid clefs, but don't avoid bar lines.

`slur-clef.ly`



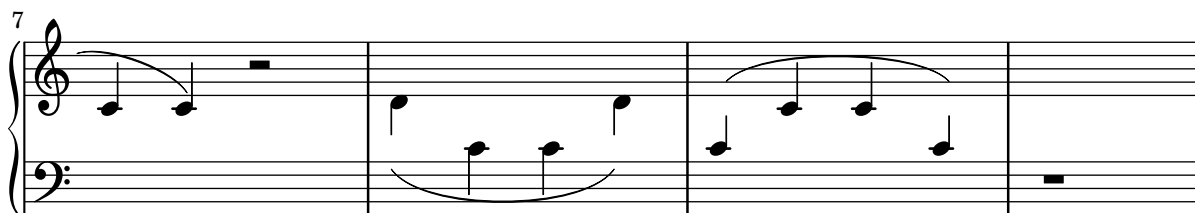
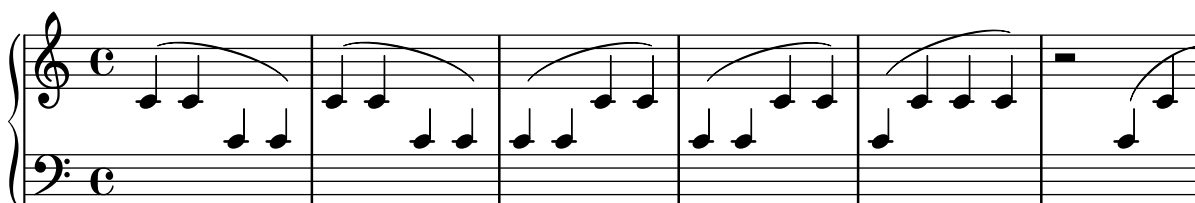
Slurs that depend on a cross-staff beam are not calculated until after line-breaking, and after inside-going articulations have been placed.

`slur-cross-staff-beam.ly`



Slurs behave decently when broken across a linebreak.

`slur-cross-staff.ly`



The appearance of slurs may be changed from solid to dotted or dashed.

`slur-dash.ly`



Slurs avoid dots.

`slur-dot-collision.ly`



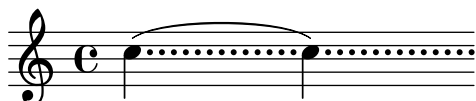
Slurs on dotted notes should have a similar distance to the note heads as slurs on non-dotted notes if this does not lead to a collision.

`slur-dot-distance.ly`



Slurs should not get confused by augmentation dots. With a lot of dots, the problems becomes more visible.

`slur-dots.ly`



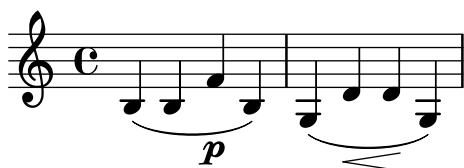
Some composers use slurs both above and below chords. This can be typeset by setting `doubleSlurs`

`slur-double.ly`



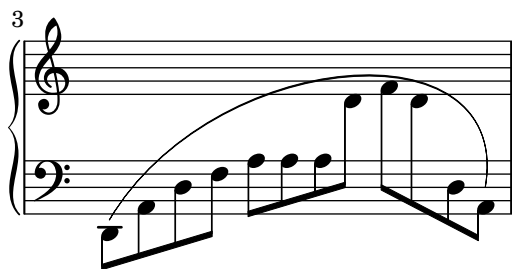
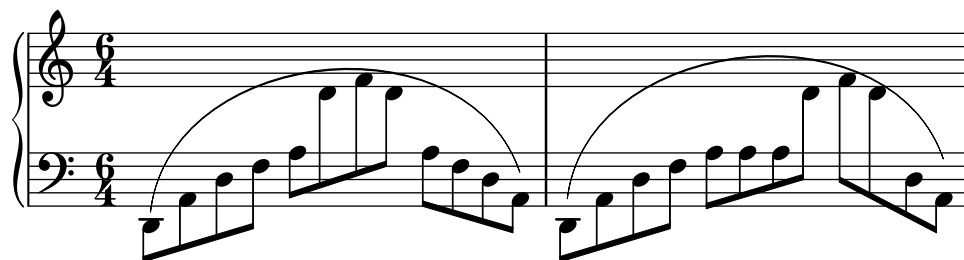
Dynamics avoid collision with slur.

`slur-dynamics.ly`



Extreme slurs are scaled to fit the pattern, but only symmetrically. Asymmetric slurs are created by setting `eccentricity`.

`slur-extreme.ly`



Slurs take flag extents into account.

`slur-flag.ly`



Appoggiatura and acciaccaturas use a different slur than the default, so they produce a nested slur without warnings.

`slur-grace.ly`



Slur shaping is not adapted to accommodate objects towards the edges of slur. Said objects are thus ignored, which should make the slur in this regtest flat. Objects towards the edges are not, however, ignored in the slur scoring.

`slur-height-capping.ly`



Specifying `inspect-quants`, will print out demerit scores for the given configuration. Here, there are demerits for slur slope going to melody slope, and the slur ending far from the right edge.

`slur-inspect-quants.ly`



slope=20.00, R edge=16.71 TOTAL=36.71 idx=7

Setting `positions` overrides the automatic positioning of the slur. It selects the slur configuration closest to the given pair.

`slur-manual.ly`



An additional opening slur during a running slur should be ignored (and a warning printed), but never influence the slur's extents.

`slur-multiple-linebreak.ly`



LilyPond does not support multiple concurrent slurs with the parentheses syntax. In this case, warnings will be given and the nested slur will not be generated. However, one can create a second slur with a different spanner-id.

`slur-multiple.ly`



Slurs should look nice and symmetric. The curvature may increase only to avoid noteheads, and as little as possible. Slurs never run through noteheads or stems.

`slur-nice.ly`





The slur between the stemless notes should begin and end in the same spaces as the slur between the stemmed notes.

`slur-no-stem.ly`



Rests don't change slur direction (default is down).

`slur-rest-direction.ly`



Slurs may be placed over rests. The slur will avoid colliding with the rests.

`slur-rest.ly`



Slur formatting is based on scoring. A large number of slurs are generated. Each esthetic aspect gets demerits, the best configuration (with least demerits) wins. This must be tested in one big file, since changing one score parameter for one situation may affect several other situations.

Tunable parameters are in `scm/slur.scm`.

`slur-scoring.ly`



Slurs avoid scripts with `avoid-slur` set to `inside`, scripts avoid slurs with `avoid-slur` set to `around`. Slurs and scripts keep a distance of `slur-padding`.

`slur-script-inside.ly`

A slur avoids collisions with scripts, which are placed either inside or outside the slur, depending on the script. The slur responds appropriately if a script is moved.

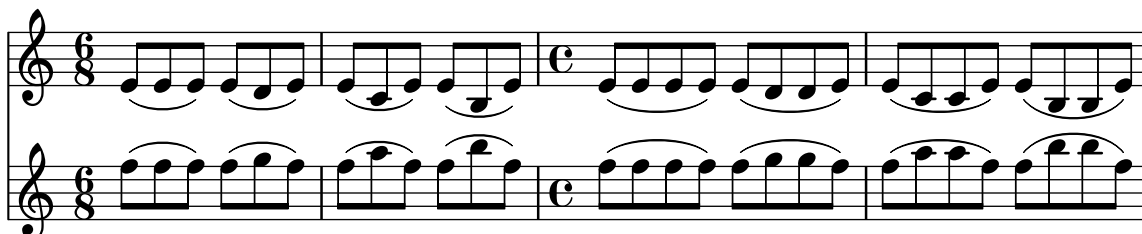
`slur-script.ly`

A slur's shift region is automatically made higher to accommodate extra encompass elements.

`slur-shift-region.ly`

Symmetric figures should lead to symmetric slurs.

`slur-symmetry.ly`



Slurs and ties should never share extremal control points.

`slur-tie-control-points.ly`



The attachment point for strongly sloped slurs is shifted horizontally slightly. Without this correction, slurs will point into one note head, and point over another note head.

`slur-tilt.ly`



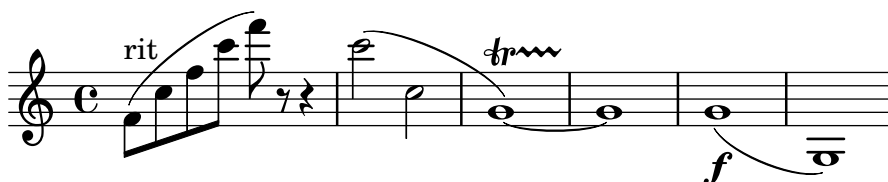
`TupletNumber` grobs are always inside slurs. This may not work if the slur starts after the tuplet.

`slur-tuplet.ly`



Slurs do not force grobs with outside-staff-priority too high.

`slur-vertical-skylines.ly`



Outside staff callbacks that no longer apply to grobs because they are outside the X boundary of a slur should terminate early. The example below should generate no warnings about Bezier curves and there should be no change in `StrokeFinger` position between the first and second examples.

`slur-vestigial-outside-staff-callback.ly`



`\smallCaps` works on an arbitrary markup argument.

`smallcaps-markup.ly`

GAVOTTE



Festival song synthesis output supports associated voices.

`song-associated-voice.ly`



play the game

Festival song synthesis output supports non-english syllables.

`song-basic-nonenglish.ly`



ov-čá-ci

Festival song synthesis output supports basic songs.

`song-basic.ly`



play the game

Festival song synthesis output supports breath marks.

`song-breathe.ly`



play the game

Festival song synthesis output supports melismas.

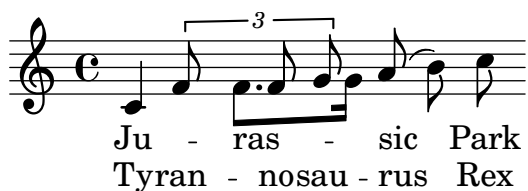
`song-melisma.ly`



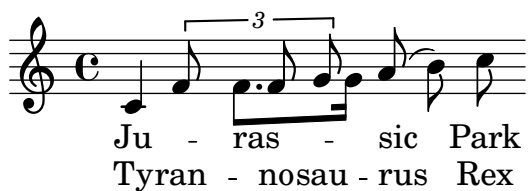
la di daah

Festival song synthesis output supports reordered lyrics.

`song-reordering.ly`



Festival song synthesis output supports reordered lyrics.
song-reordering2.ly



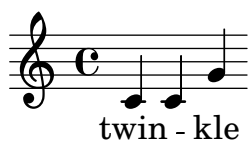
Festival song synthesis output supports repeat signs.
song-repetition.ly



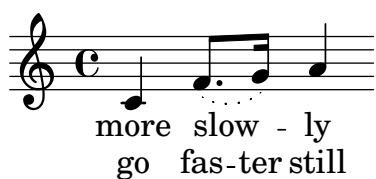
Festival song synthesis output supports lyrics which are not complete words.
song-skip-noword.ly



Festival song synthesis output supports skips.
song-skip.ly



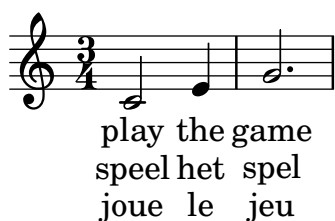
Festival song synthesis output supports slurs.
song-slurs.ly



Festival song synthesis output supports divided voices.
song-splitpart.ly



Festival song synthesis output supports multiple stanzas.
 song-stanzas.ly



Festival song synthesis output supports changing tempo in the middle of a piece.
 song-tempo.ly



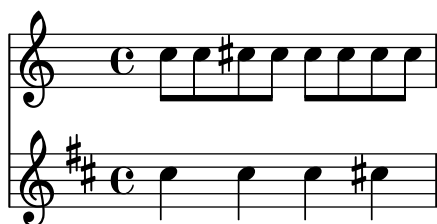
The output should include a clef, key signature, and time signature.
 spacer-no-notes.ly



Accidentals don't collide with shifted-down rests.
 spacing-accidental-rest.ly



Accidentals in different staves do not affect the spacing of the eighth notes here.
 spacing-accidental-staffs.ly



Accidentals do not influence the amount of stretchable space. The accidental does add a little non-stretchable space.

spacing-accidental-stretch.ly



Horizontal spacing works as expected on tied notes with accidentals. No space is reserved for accidentals that end up not being printed, but accidentals that are printed don't collide with anything.

spacing-accidental-tie.ly



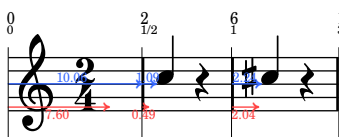
Accidentals sticking out to the left of a note will take a little more space, but only if the spacing is tight.

spacing-accidental.ly



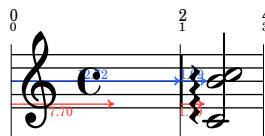
An accidental following a bar gets space so the left edge of the acc is at 0.3 staff space from the bar line

spacing-bar-accidental.ly



An arpeggio following a bar gets space

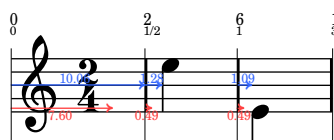
spacing-bar-arpeggio.ly



Downstem notes following a bar line are printed with some extra space. This is an optical correction similar to juxtaposed stems.

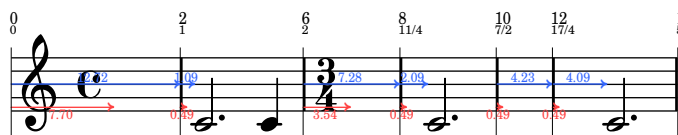
The bar upstem should be approx 1.1 staff space, the bar downstem 1.3 to 1.5 staff space.

spacing-bar-stem.ly



Notes that fill a whole measure are preceded by extra space.

spacing-bar-whole-measure.ly



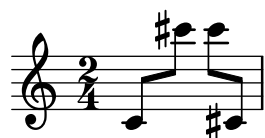
Clef changes at the start of a line get much more space than clef changes halfway the line.

spacing-clef-first-note.ly



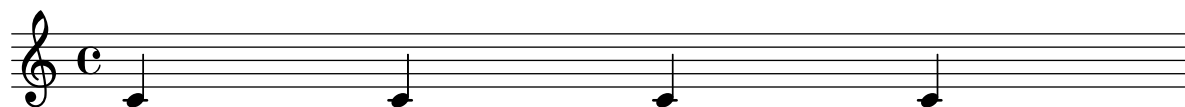
If right hand stems have accidentals, optical spacing correction is still applied, but only if the stem directions are different.

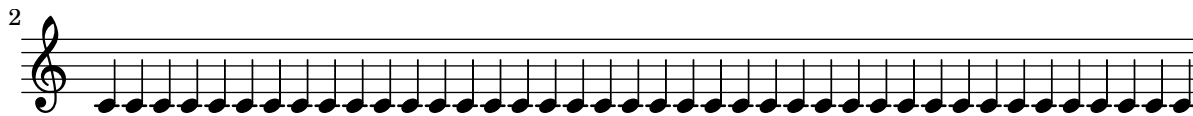
spacing-correction-accidentals.ly



Empty bar lines do not affect spacing.

spacing-empty-bar.ly





Broken engraving of a bar at the end of a line does not upset the space following rests and notes.

spacing-end-of-line.ly



A voicelet (a very short voice to get polyphonic chords correct) should not confuse the spacing engine.

spacing-ended-voice.ly



Clefs are also folded under cross staff constructs.

spacing-folded-clef-cross-staff.ly



A clef can be folded below notes in a different staff, if this does not disrupt the flow of the notes.

spacing-folded-clef.ly



A clef can be folded below notes in a different staff, if there is space enough. With `Paper_column` stencil callbacks we can show where columns are in the score.

spacing-folded-clef2.ly

Voices that go back and forth between staves do not confuse the spacing engine.

spacing-folded-clef3.ly

Spacing uses the duration of the notes, but disregards grace notes for this. In this example, the 8ths around the grace are spaced exactly as the other 8th notes.

spacing-grace-duration.ly

Grace note runs have their own spacing variables in `Score.GraceSpacing`. So differing grace note lengths inside a run are spaced accordingly.

spacing-grace.ly

Skyline horizontal spacing may fold non-adjacent columns together, but they still do not collide. In this case, the arpeggio and the bar line do not collide.

spacing-horizontal-skyline-grace.ly

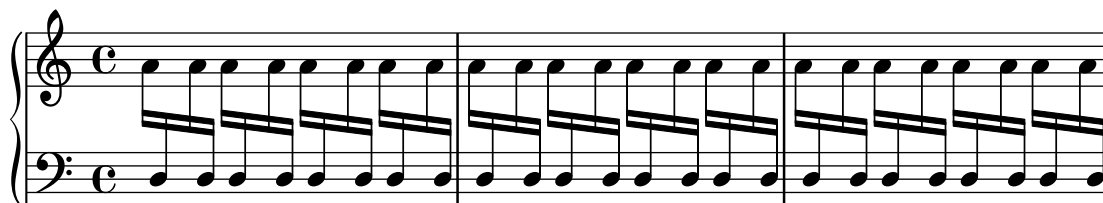
accidentals may be folded under preceding notes.

spacing-horizontal-skyline.ly



Spacing corrections for kneed beams still work when compression is involved.

spacing-knee-compressed.ly



For knees, the spacing correction is such that the stems are put at regular distances. This effect takes into account the width of the note heads and the thickness of the stem.

spacing-knee.ly



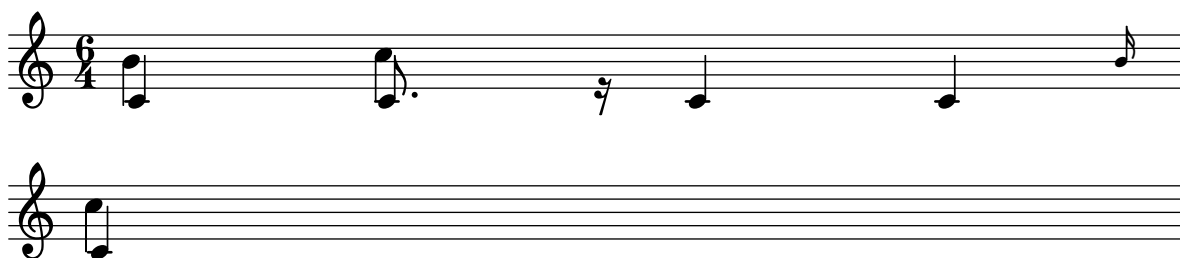
Even in case of incorrect contexts (eg. shortlived contexts) that break linking of columns through spacing wishes, `strict-note-spacing` defaults to a robust solution. This test passes if it does not seg fault; instead it should produce three programming error messages. Note that, in tight music with strict note spacing, grace notes will collide with normal notes. This is expected.

spacing-loose-grace-error.ly



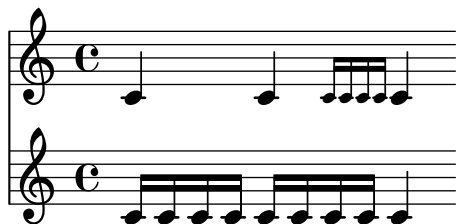
If a floating grace spacing section attaches to a note across a line break, it gets attached to the end of line.

spacing-loose-grace-linebreak.ly



With `strict-grace-spacing`, grace notes don't influence spacing.

spacing-loose-grace.ly



Loose columns (here, the treble clef) are spaced correctly in polyphonic music.
 spacing-loose-polyphony.ly

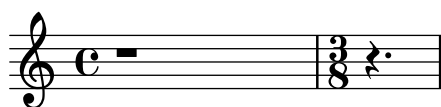


Width of marks does not affect spacing.
 spacing-mark-width.ly

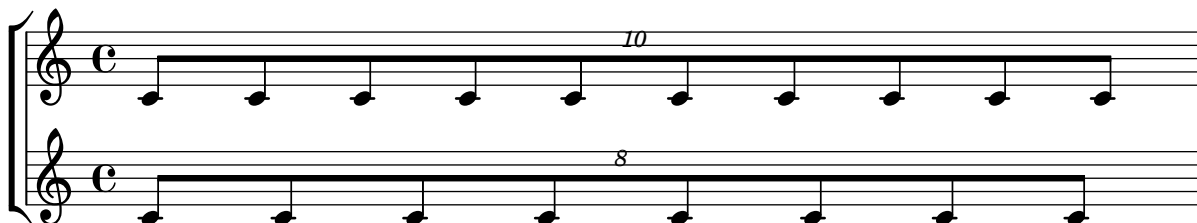
XX



Horizontal spacing is bounded by the current measure length. This means that the 3/8 setting does not affect the whole rest spacing.
 spacing-measure-length.ly



Concurrent tuplets should be equidistant on all staves.
 spacing-multi-tuplet.ly

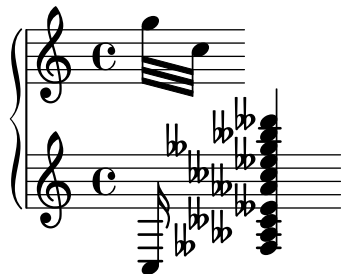


In the absence of NoteSpacings, wide objects still get extra space. In this case, the slash before the bar line gets a little more space.
 spacing-no-note.ly



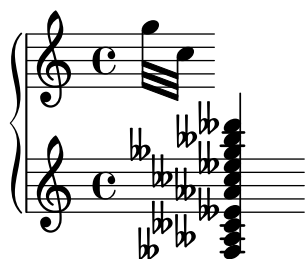
The spacing engine avoids collisions between non-adjacent columns.

spacing-non-adjacent-columns1.ly



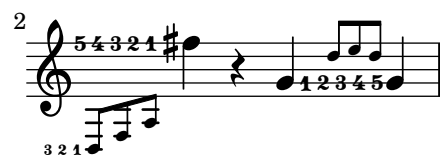
The spacing engine avoids collisions between non-adjacent columns.

spacing-non-adjacent-columns2.ly



The spacing engine avoids collisions between non-adjacent columns.

spacing-non-adjacent-columns3.ly



The flags of 8th notes take some space, but not too much: the space following a flag is less than the space following a beamed 8th head.

spacing-note-flags.ly



In packed mode, pack notes as tight as possible. This makes sense mostly in combination with ragged-right mode: the notes are then printed at minimum distance. This is mostly useful for ancient notation, but may also be useful for some flavours of contemporary music. If not in ragged-right mode, lily will pack as many bars of music as possible into a line, but the line will then be stretched to fill the whole linewidth.

spacing-packed.ly



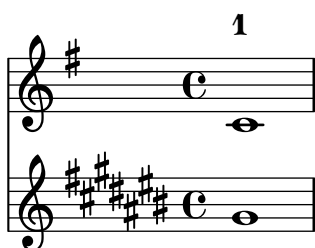
For `spacing-pair`, when an item matching a break align symbol is omitted, the alignment falls back on later break align symbols in the list. In this test, the measure counter should be centered using the right edge of the key signature.

`spacing-pair-omitted-item.ly`



The `spacing-pair` property takes the combined extents of all items having the given break align symbol into account. In this test, the centering of the measure counter should visibly happen with the left point being on the right of the wide key signature. The alignment of the measure counter should be the same for both scores.

`spacing-pair-several-matching-items.ly`



The space after a paper column can be increased by overriding the padding property.

`spacing-paper-column-padding.ly`



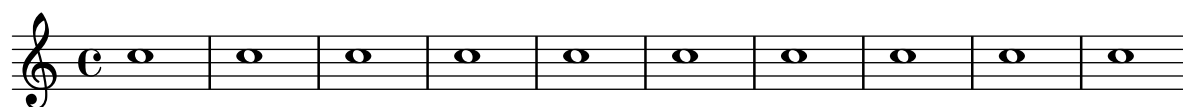
Proportional notation can be created by setting `proportionalNotationDuration`. Notes will be spaced proportional to the distance for the given duration.

`spacing-proportional.ly`



If `ragged-last` is set, the systems are broken similar to paragraph formatting in text: the last line is unjustified.

`spacing-ragged-last.ly`



Rests get a little less space, since they are narrower. However, the quarter rest in feta font is relatively wide, causing this effect to be very small.

`spacing-rest.ly`



New sections for spacing can be started with `\newSpacingSection`. In this example, a section is started at the 4/16, and a 16th in the second section takes as much space as a 8th in first section.

`spacing-section.ly`



Notes that are shorter than the common shortest note get a space (i.e. without the space needed for the note) proportional to their duration. So, the 16th notes get 1/2 of the space of an eighth note. The total distance for a 16th (which includes note head) is 3/4 of the eighth note.

`spacing-short-notes.ly`



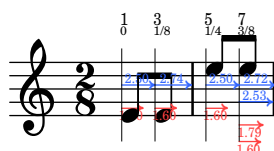
If `space-to-barline` is false, we measure the space between the note and the start of the clef. If `space-to-barline` is true, we measure the space between the note and the start of the bar line.

`spacing-space-to-barline.ly`



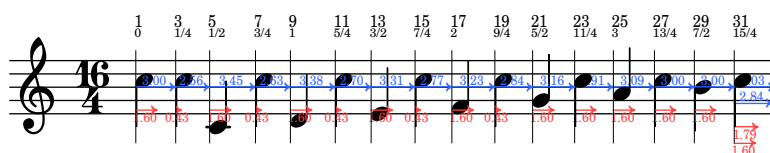
Upstem notes before a bar line are printed with some extra space. This is an optical correction similar to juxtaposed stems.

spacing-stem-bar.ly



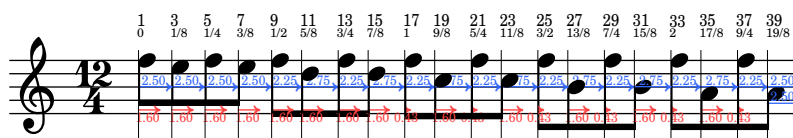
There are optical corrections to the spacing of stems. The overlap between two adjacent stems of different direction is used as a measure for how much to correct.

spacing-stem-direction.ly



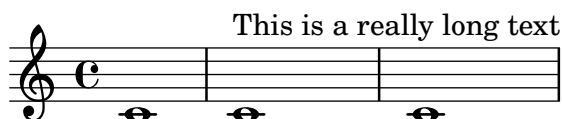
For juxtaposed chords with the same direction, a slight optical correction is used. It is constant, and works only if two chords have no common head-positions range.

spacing-stem-same-direction.ly



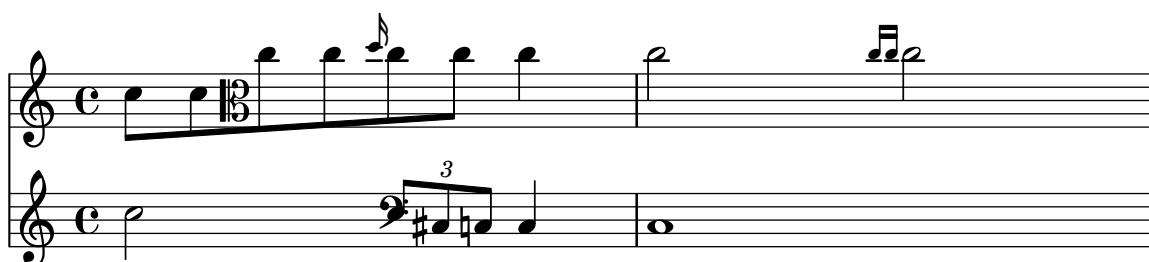
LilyPond will space a line to prevent text sticking out of the right margin unless `keep-inside-line` is false for the relevant `PaperColumn`.

spacing-stick-out.ly



If `strict-note-spacing` is set, then spacing of notes is not influenced by bars and clefs half-way on the system. Rather, they are put just before the note that occurs at the same time. This may cause collisions.

spacing-strict-notespacing.ly



With `strict-note-spacing` spacing for grace notes (even multiple ones), is floating as well.
`spacing-strict-spacing-grace.ly`



An empty bar line does not confuse the spacing engine too much. The two scores should look approximately the same.

`spacing-to-empty-barline.ly`



Space from a normal note (or bar line) to a grace note is smaller than to a normal note.

`spacing-to-grace.ly`



Notes are spaced exactly according to durations, if `uniform-stretching` is set. Accidentals are ignored, and no optical-stem spacing is performed.

`spacing-uniform-stretching.ly`



The `SpanBarStub` grob takes care of horizontal spacing for `SpanBar` grobs. When the `SpanBar` is disallowed, objects in contexts that the span bar would have otherwise crossed align as if the span bar were not there.

`span-bar-allow-span-bar.ly`

5

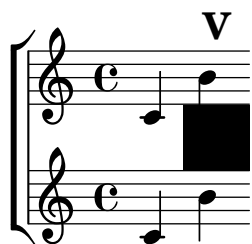
Articulations on cross-staff stems do not collide with span bars.
 span-bar-articulation.ly

This tests the calculation of the anchor point on a *mensurstrich* bar line.

The top staff has no span bar. A rehearsal mark should appear over an invisible bar line between the two notes.

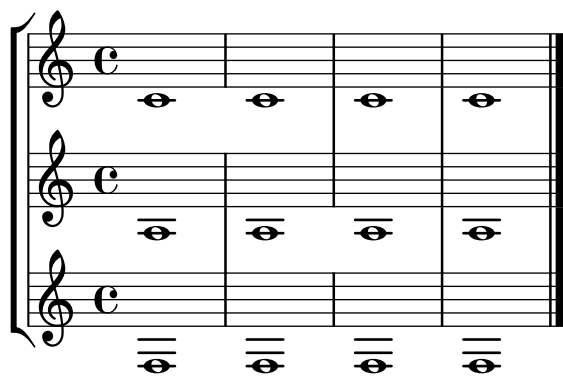
The lower pair of staves has a span bar of exaggerated width. A rehearsal mark should appear centered over it.

span-bar-break-align-anchor.ly



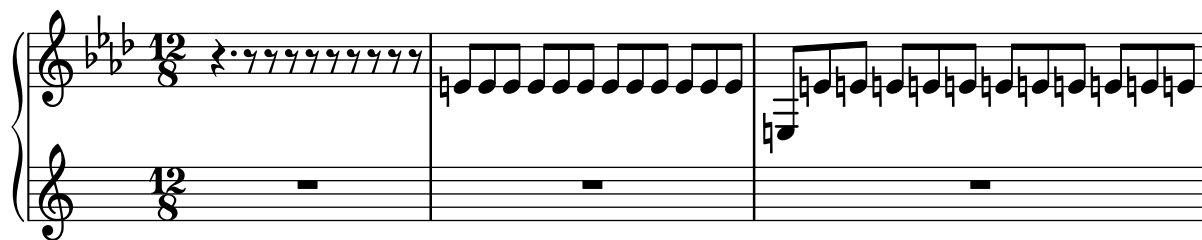
Span bars can be turned on/off on a staff-by-staff basis.

`span-bar-partial.ly`



Because BarLine grobs take their extra-positioning-height from their neighbors via the `pure-from-neighbor-interface`, the left edge of an accidental should never fall to the left of the right edge of a bar line. This spacing should also take place when SpanBar grobs are present.

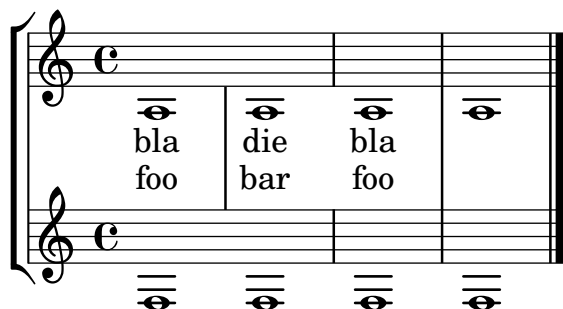
`span-bar-spacing.ly`



Span bars are drawn only between staff bar lines. By setting bar lines to transparent, they are shown only between systems.

Setting SpanBar transparent removes the bar lines between systems.

`span-bar.ly`



The visibility of left-broken line spanners and hairpins which end on the first note (i.e., span no time between bounds) is controlled by the callback `ly:spanner::kill-zero-spanned-time`.
`spanner-after-line-breaking.ly`

Three musical staves illustrating line spanners and hairpins. The first staff shows a line spanner labeled 'L' starting on the first note. The second staff shows two line spanners labeled 'R' and 'L' starting on the first and second notes respectively. The third staff shows a line spanner starting on the first note.

Spanners align to musical grobs in paper columns, ignoring things like pedal marks.
`spanner-alignment.ly`

Two musical staves showing piano parts with dynamic markings and line spanners. The first staff has dynamic markings 'cresc.', 'f', 'dim.', and 'p' with line spanners. The second staff has dynamic markings 'cresc.', 'f', 'dim.', and 'p' with line spanners.

Spanners parts that extend beyond their parents are killed in case of line breaks.
`spanner-break-beyond-parent.ly`

Two musical staves showing line spanners that extend beyond their parents. The first staff has a line spanner labeled 'welt' starting on the first note. The second staff has a line spanner starting on the first note.

The `break-overshoot` property sets the amount that a spanner (in this case: the beam and tuplet bracket) in case of a line break extends beyond the rightmost column and extends to the left beyond the prefatory matter.

`spanner-break-overshoot.ly`



Empty bounds on a line spanner do not cause LilyPond to get stuck in an infinite loop.

`spanner-empty-bound.ly`



This should produce a choral score with solo, descant, women, sop 1 and 2, sop, alto, alto 1 and 2, tenor 1 and 2, tenor, bass, bass 1 and 2, men and piano staves. Normally the various combinations would appear at different times in the score, not all at once.

`ssaattbb-template-with-all-staves.ly`

SOLO
 DESCANT
 WOMEN
 SOPRANO 1
 SOPRANO 2
 SOPRANO
 ALTO
 ALTO 1
 ALTO 2
 TENOR 1
 TENOR 2
 TENOR
 BASS
 BASS 1
 BASS 2
 MEN
 PIANO

So - - - ly - rics
 Des - - cant ly - rics
 Wo - men ly - rics
 So - pra - no One ly - rics
 So - pra - no Two ly - rics
 So - pra - no ly - rics
 Al - to ly - rics
 Al - to One ly - rics
 Al - to Two lyrics
 Te - nor One ly - rics
 Te - nor Two ly - rics
 Te - nor ly - rics
 Bass ly - rics
 Bass One ly - rics
 Bass Two ly - rics
 Men ly - rics

This should produce a choral score with solo, descant, women, sop divisi, sop and alto, alto divisi, tenor divisi, tenor and bass, bass divisi, men and piano staves. Normally the various combinations would appear at different times in the score, not all at once.

SOLO
 DESCANT
 WOMEN
 SOPRANO 1
 SOPRANO 2
 SOPRANO ALTO
 ALTO 1
 ALTO 2
 TENOR 1
 TENOR 2
 TENOR BASS
 BASS 1
 BASS 2
 MEN
 PIANO

So - lo ly - rics
 Des - cant ly - rics
 Wo - men ly - rics
 So - pra - no One ly - rics
 So - pra - no Two ly - rics
 So - pra - no ly - rics
 Al - to ly - rics
 Al - to One ly - rics
 Al - to Two lyrics
 Te - nor One ly - rics
 Te - nor Two ly - rics
 Te - nor ly - rics
 Bass ly - rics
 Bass One ly - rics
 Bass Two ly - rics
 Men ly - rics
 Men ly - rics

Instrument names and short instrument names can be changed when using the ssaattbb built-in template.

The first system of the musical score consists of four staves. The top three staves are grouped by a brace on the left and labeled 'SOP ONE', 'SOP TWO', and 'MEN DIV' from top to bottom. The top staff (SOP ONE) is in treble clef and contains four quarter notes: G4, A4, B4, and C5. The second staff (SOP TWO) is in treble clef and contains four quarter notes: E4, F4, G4, and A4. The third staff (MEN DIV) is in bass clef and contains four quarter notes: G3, F3, E3, and D3. The fourth staff is labeled 'ORGAN' and is a grand staff (treble and bass clefs). The treble clef part contains four quarter notes: G4, A4, B4, and C5. The bass clef part contains four quarter notes: G3, F3, E3, and D3. All staves are in common time (C).

The second system of the musical score consists of four staves. The top three staves are grouped by a brace on the left and labeled 'SOP 1', 'SOP 2', and 'M UNI' from top to bottom. The top staff (SOP 1) is in treble clef and contains four quarter notes: G4, A4, B4, and C5. The second staff (SOP 2) is in treble clef and contains four quarter notes: E4, F4, G4, and A4. The third staff (M UNI) is in bass clef and contains four quarter notes: G3, F3, E3, and D3. The fourth staff is labeled 'ORGAN' and is a grand staff (treble and bass clefs). The treble clef part contains four quarter notes: G4, A4, B4, and C5. The bass clef part contains four quarter notes: G3, F3, E3, and D3. All staves are in common time (C).

This should produce an SSAATTBB score with piano accompaniment, with divisi soprano and tenor on single staves, alto one and alto two on separate staves and unison bass in the first system, then unison soprano and alto voices with descant in the second system and unison women and unison men voices in the third system.

Musical score for Soprano, Alto, Tenor, Bass, and Piano. The score is in common time (C) and features lyrics for each part. The Soprano parts have lyrics: "So - pra - no One ly - rics" and "So - pra - no Two ly - rics". The Alto parts have lyrics: "Alto One ly - rics" and "Alto Two lyrics". The Tenor parts have lyrics: "Te - nor One ly - rics" and "Te - nor Two ly - rics". The Bass part has lyrics: "Bass ly - rics". The Piano part is a simple accompaniment.

Musical score for Descant, Soprano, Alto, and Piano. The score is in common time (C) and features lyrics for each part. The Descant part has lyrics: "Descant ly - rics". The Soprano part has lyrics: "So - pra - no ly - rics". The Alto part has lyrics: "Al - to ly - rics". The Piano part is a simple accompaniment.

A musical score snippet showing three staves. The top staff is labeled 'W' and contains a treble clef with a triplet of four quarter notes. Below it are the lyrics 'Wo-men ly - rics'. The middle staff is labeled 'M' and contains a bass clef with two quarter notes. Below it are the lyrics 'Men ly - rics'. The bottom two staves are a grand staff with a treble and bass clef, containing piano accompaniment.

Some scripts must have quantized positions. Vertical position descend monotonously for a descending scale. The staccato dot is close to the notehead. If the head is in a space, then the dot is in the space next to it.

staccato-pos.ly

A single musical staff in treble clef with a common time signature. It features a descending scale of eighth notes with staccato dots. The notes descend from the first space to the first line, then to the first space, and finally to the first line.

A musical staff in treble clef with a common time signature. It features a descending scale of eighth notes with staccato dots. The notes descend from the first space to the first line, then to the first space, and finally to the first line. There is a line break in the staff, indicated by a '6' at the beginning of the second line.

Adding a new staff at a line break doesn't crash.

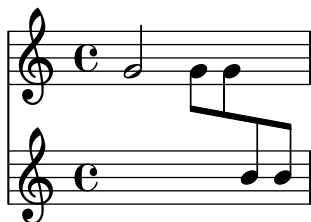
staff-add-at-linebreak.ly

A musical staff in treble clef with a common time signature. It features a single note on the first space. There is a line break in the staff, indicated by a '2' at the beginning of the second line.

A musical score snippet showing two staves. The top staff is in treble clef and the bottom staff is in bass clef. Both staves have a common time signature. The top staff has a single note on the first space, and the bottom staff has a single note on the first line. There is an automatic beam connecting the two notes.

Staves stay alive long enough to complete an automatic beam.

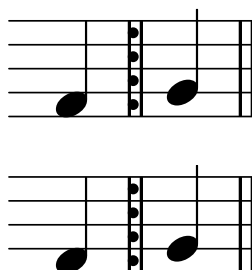
staff-change-autobeam.ly



When a `BreathingSign` is aligned as a `'staff-bar`, staff lines extend through it, even if it is accompanied by a zero-width `BarLine` at the end of the line.

The output should show two identical staves. Between the notes should appear a finalis sign (like a double bar line) overlapping with a dotted bar line; this shows that `BreathingSign` and `BarLine` are aligned alike. At the end of the line should appear a finalis sign with the staff lines extending to its right side.

`staff-extend-to-staff-bar.ly`



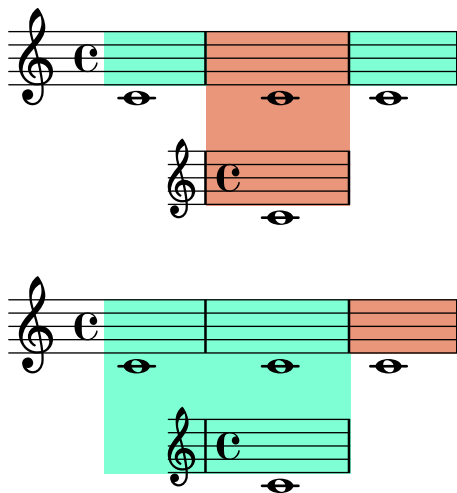
Staves can be started and stopped at command.

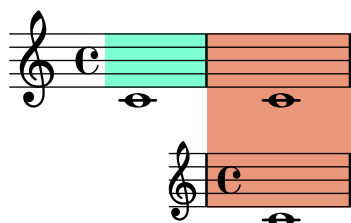
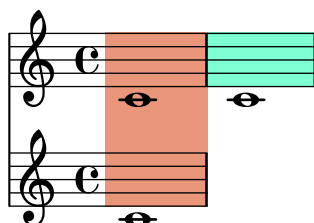
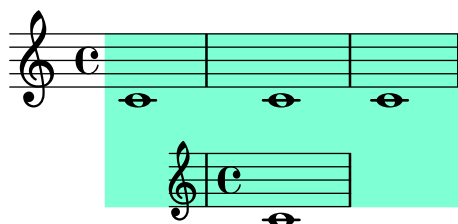
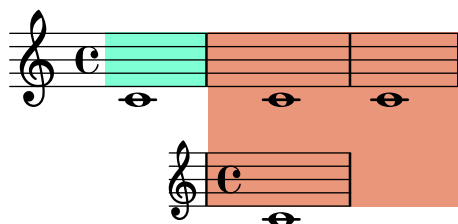
`staff-halfway.ly`



When highlights are used in combination with ossia staves, a highlight only extends to include the ossia staff if it actually spans a portion of it, but not if it ends at the start of the ossia or if it starts at the end of the ossia.

`staff-highlight-ossia.ly`



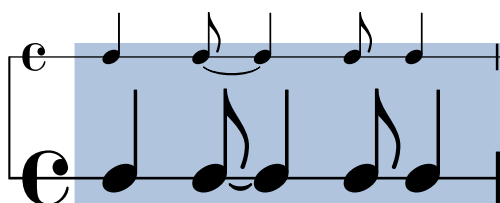


Highlights can be used in `RhythmicStaff`. They extend vertically as far as bar lines do.
[staff-highlight-rhythmicstaff.ly](#)

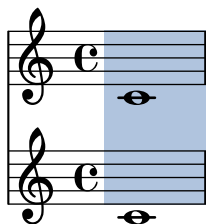


This test exercises highlights spanning a set of rhythmic staves with different font sizes. At the bottom and at the top, the highlight should extend as far as the bar lines do.

[staff-highlight-score-rhythmic-staves.ly](#)

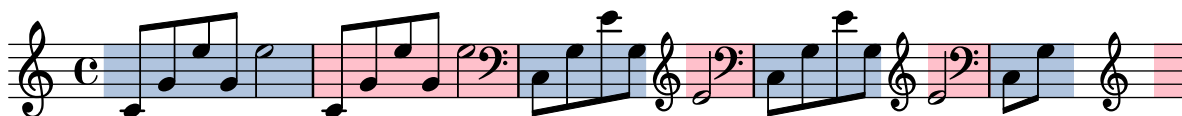


Highlights can be used in `Score`.
[staff-highlight-score.ly](#)

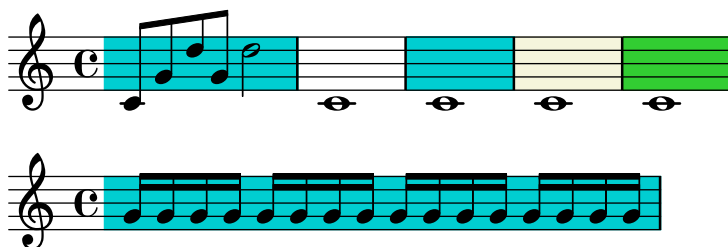


Highlights can be used in contexts at higher level than Staff.
`staff-highlight-staffgroup.ly`

This test shows highlights starting and ending on prefatory material in various situations.
`staff-highlight-start-end.ly`



The `\staffHighlight` command highlights a musical passage. A highlight is terminated by `\stopStaffHighlight`, by the start of another highlight, or by the end of the music.
`staff-highlight.ly`



When the vertical positions of ledger lines have been customized by setting the `ledger-positions` property of the `StaffSymbol`, and a dotted note falls on a ledger line, the dot is shifted up to avoid the ledger line (just as with uncustomized ledger lines).

`staff-ledger-positions-dotted-notes.ly`



The vertical positions of ledger lines may be customised by setting the `ledger-positions` property of the `StaffSymbol`. The given pattern is repeated. Bracketed groups are always shown together: either all or none are shown. Ledger lines can be set to appear sooner or later by setting the `ledger-extra` property.

`staff-ledger-positions.ly`



The vertical positions of staff lines may be specified individually, by setting the `line-positions` property of the `StaffSymbol`.

`staff-line-positions.ly`



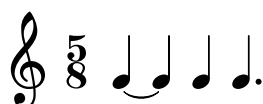
Staves may be present in several sizes within a score. This is achieved with an internal scaling factor. If the scaling factor is forgotten in some places, objects generally become too thick or too large on smaller staves.

`staff-mixed-size.ly`



Symbols that need on-staffline info (like dots and ties) continue to work in absence of a `staff-symbol`.

`staff-online-symbol-absence.ly`



An ossia staff without a `Time_signature_engraver` stops right at the bar line.

`staff-ossia-end-at-time-change.ly`



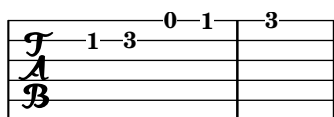
The space between scores containing Staves and TabStaves should be consistent. In this example, all of the spacings should be equivalent.

`staff-tabstaff-spacing.ly`

Title 1



Title 2



Title 3



The staff is a grob (graphical object) which may be adjusted as well, for example, to have 6 thick lines and a slightly large `staff-space`. However, beams remain correctly quantized.

`staff-tweak.ly`



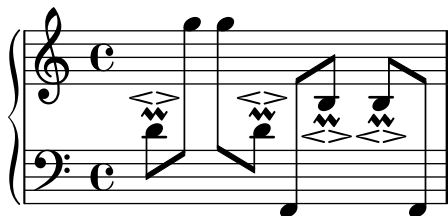
Stanza numbers are put left of their lyric. They are aligned in a column.

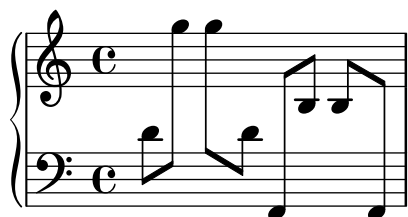
`stanza-number.ly`



Cross-staff stems avoid articulations. Articulations that don't get in the way of stems do not cause unwanted horizontal space.

`stem-cross-staff-articulation.ly`





The `Melody_engraver` decides stem direction for notes on the middle staff line based on neighboring notes. Mid-measure repeat bar lines break up the melody as do normal measure bar lines. In this test, marcato marks show the expected stem direction.

`stem-direction-context-bar-lines.ly`



Context-dependent orientation of the stem for a note on the middle line of the staff can be turned off locally using the `suspendMelodyDecisions` context property.

In this test, marcato marks show the expected stem direction.

`stem-direction-context-pause.ly`



Stem directions for notes on the middle staff line are determined by the directions of their neighbors.

`stem-direction-context.ly`



Stems, beams, ties and slurs should behave similarly, when placed on the middle staff line. Of course stem-direction is down for high notes, and up for low notes.

`stem-direction.ly`



Stems with overridden 'Y-extent' should not confuse height estimation. This example should fit snugly on one page.

`stem-length-estimation.ly`



Stem length and stem-begin-position can be set manually.

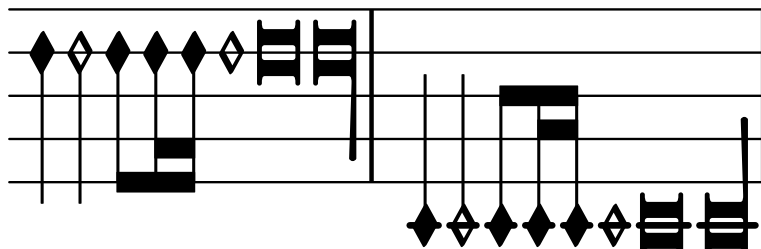
`stem-length.ly`



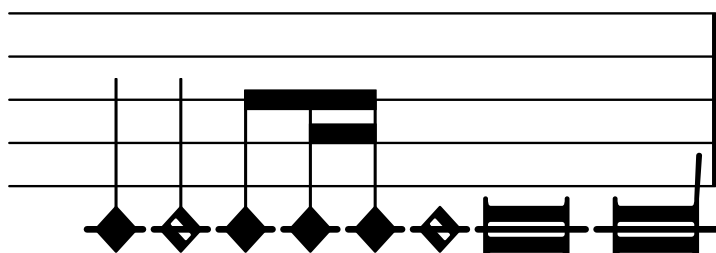
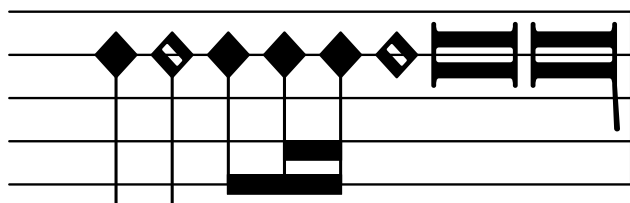
Mensural stems must have exact center alignment. This test was made to inspect pixel-granular misalignment bugs.

`stem-mensural.ly`

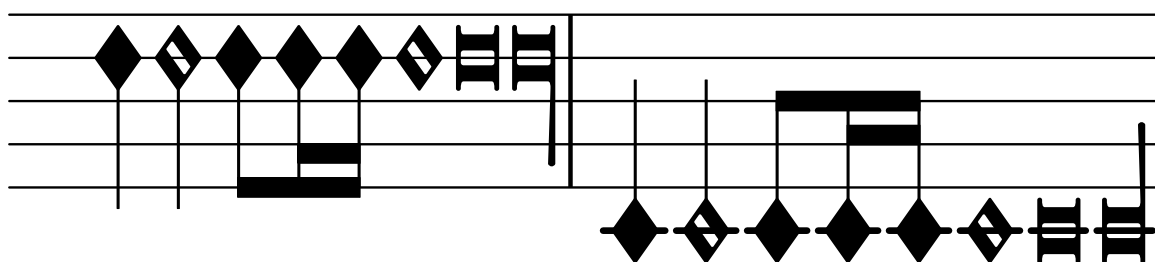
mensural



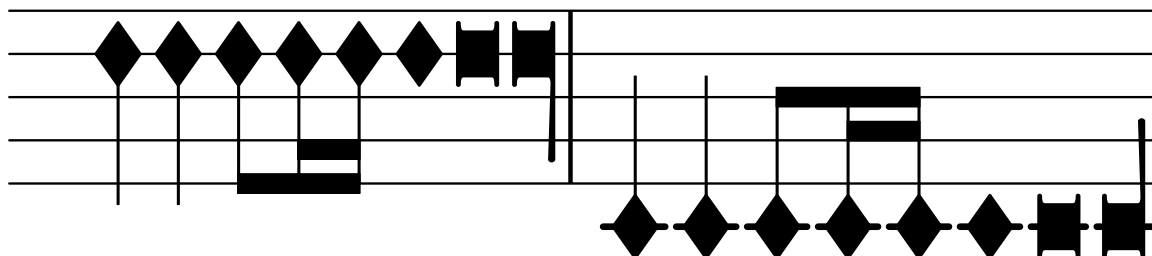
neomensural



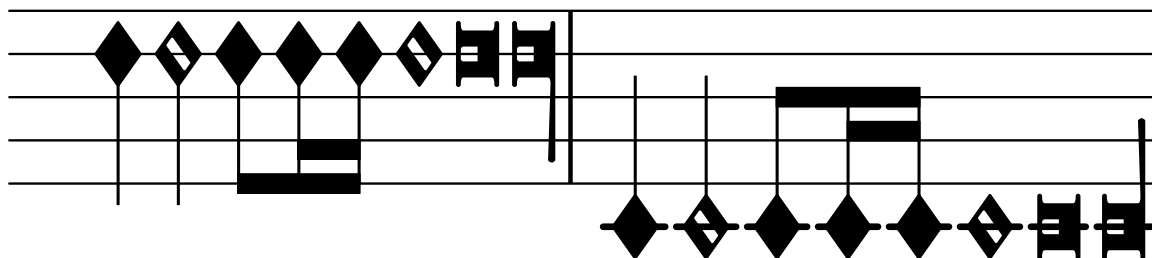
petrucci



blackpetrucci



semipetrucci



Setting `Stem.neutral-direction` to an invalid direction value does not result in a crash.
`stem-neutral-direction-crash.ly`



Lilypond gets beamed stem pure heights correct to avoid outside staff collisions.
`stem-pure-height-beamed.ly`



If note head is 'over' the center line, the stem is shortened. This happens with forced stem directions, and with some chord configurations.

`stem-shorten.ly`



Stemlets don't cause stems on whole notes.

stem-stemlet-whole.ly



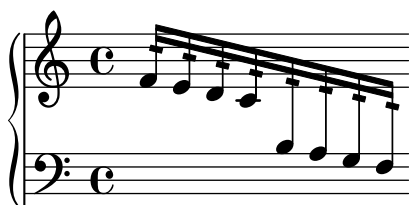
Stemlets are small stems under beams over rests. Their length can be set with `stemlet-length`.

stem-stemlet.ly



Stem tremolos on cross-staff beams do not cause circular dependencies.

stem-tremolo-cross-staff-beam.ly



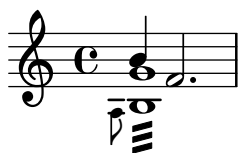
Tremolo works even when a stem is forced in a particular direction.

stem-tremolo-forced-dir.ly



Tremolos should avoid other notes in the staff as best as possible and issue a warning otherwise.

stem-tremolo-note-collision.ly



Stem tremolos count in a note column's horizontal skyline.

stem-tremolo-note-column.ly



Tremolos are positioned a fixed distance from the end of the beam. Tremolo flags are shortened and made rectangular on beamed notes or on stem-up notes with a flag. Tremolo flags are tilted extra on stem-down notes with a flag.

stem-tremolo-position.ly



stem tremolo vertical distance also obeys staff-space settings.

stem-tremolo-staff-space.ly



Controlling the appearance of tremolo slashes. Property `slope` is self-explanatory. Property `shape` determines whether slashes look like rectangles or like very small beams. Setting these properties directly cause all slashes behave in the specified way. However, one usually wants the slashes to behave differently depending on whether the note has flags, beams or only a plain stem. That's what the `style` property is used for: it sets `shape` and `slope` depending on the situation. There are two styles defined: `default` and `constant`.

stem-tremolo-style.ly

`default`. First three notes should have beam-like slashes. Slash of the third note should be more sloped than first two notes. Slashes on beamed notes should be rectangular and parallel to the beams.



`style=constant`. All slashes should be rectangular. All slashes should have the same slope except for downstem flagged notes.



`shape=rectangle`. All slashes should be rectangular. Slope like in default.



`shape=beam-like`. All slashes should be beam-like. Slope like in default.



slope=-0.2 All slashes should have the same downward slope. Shape like in default.



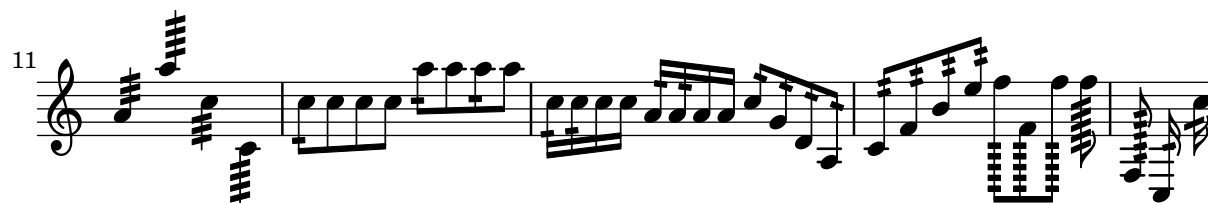
Stem tremolos or rolls are tremolo signs that look like beam segments crossing stems. If the stem is in a beam, the tremolo must be parallel to the beam. If the stem is invisible (e.g. on a whole note), the tremolo must be centered on the note. If the note has a flag (eg. an unbeamed 8th note), the tremolo should be shortened if the stem is up and tilted extra if the stem is down.

The tremolos should be positioned a fixed distance from the end of the stems unless there is no stem, in which case they should be positioned a fixed distance from the note head.

If an impossible tremolo duration (e.g. :4) is given, a warning is printed.

stem-tremolo.ly

:4 :8 :16 :32 x :



In this test, the vertical distance between two adjacent staves should be large enough to avoid a clash if the stems are very close.

stems-clash-between-staves.ly



Combinations of rotation and color do work.

stencil-color-rotation.ly



Tests all lilypond stencil commands that are relevant to PDF output

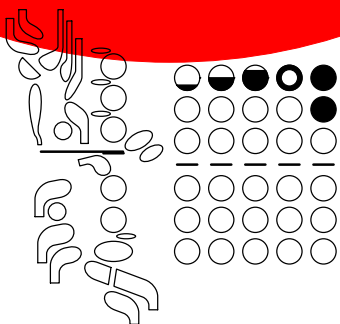
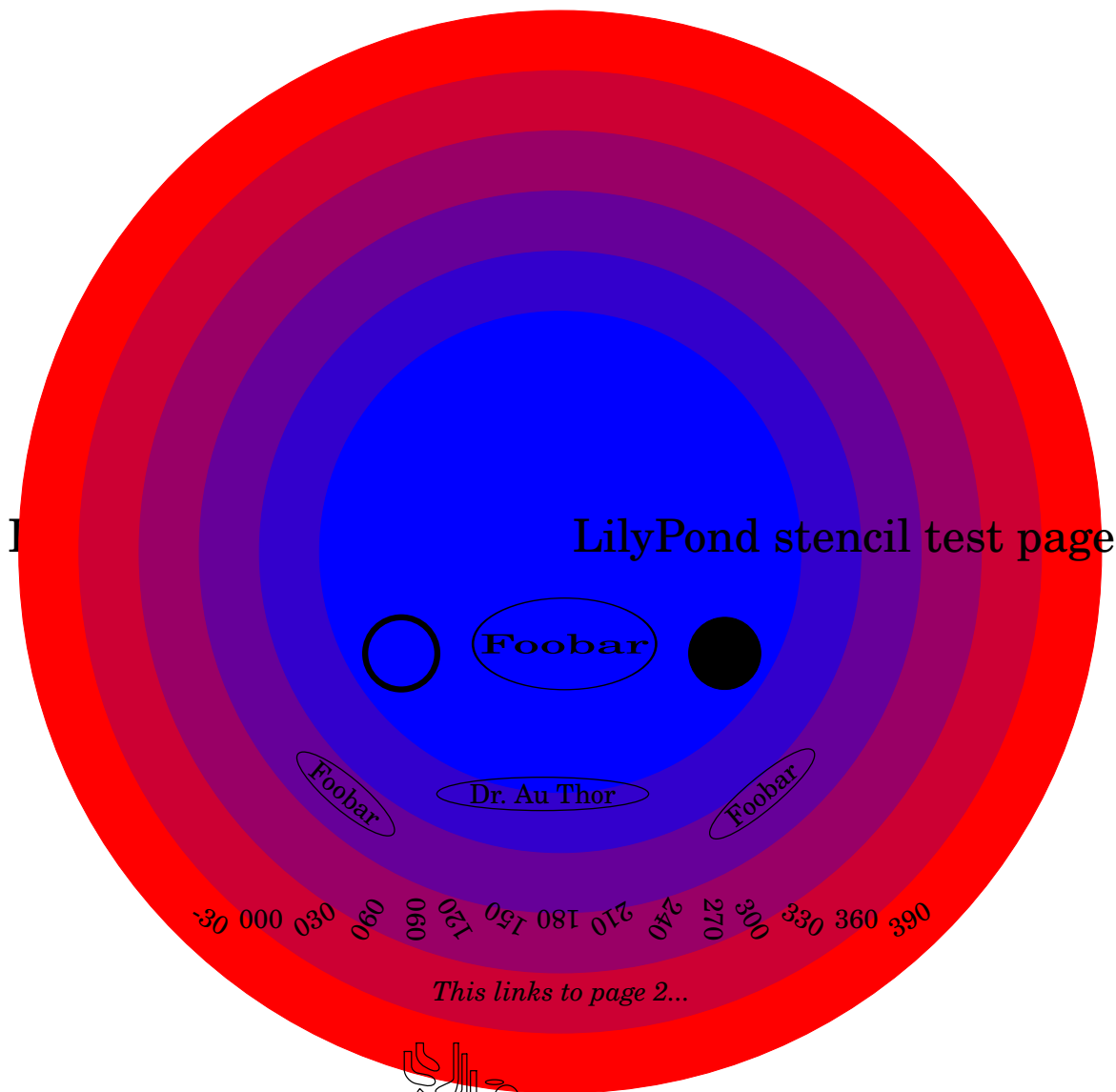
stencil-expressions.ly

Lilypond Stencil Tests

LilyPond

stæt l̄icn̄et̄a

LilyPond st̄encil̄ test̄ page



Test the textedit links in the score below ...

Violin

Lilypond Stencil Tests

This links to page 1...

This links to page 3...

Lilypond Stencil Tests

This links to page 2...

You can write stencil callbacks in Scheme, thus providing custom glyphs for notation elements. A simple example is adding parentheses to existing stencil callbacks.

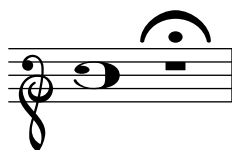
The parenthesized beam is less successful due to implementation of the Beam. The note head is also rather naive, since the extent of the parens are also not seen by accidentals.

```
stencil-hacking.ly
```



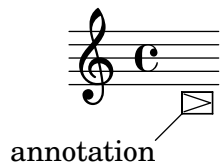
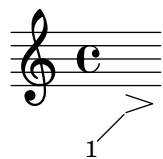
Stencils can be scaled using `ly:stencil-scale`. Negative values will flip or mirror the stencil without changing its origin; this may result in collisions unless the scaled stencil is realigned (e.g., the time signature in this test).

```
stencil-scale.ly
```



Sticky spanners also work when the host's bounds are not set immediately, such as with a hairpin ending on a skip.

```
sticky-late-bounds.ly
```

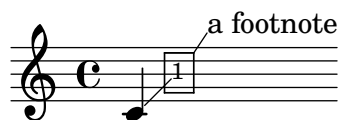


¹footnote

Music engraving by LilyPond 2.24.4—www.lilypond.org

Sticky grobs can be attached to other sticky grobs.

`sticky-second-order.ly`

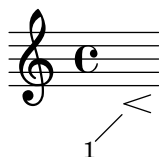


¹note

Music engraving by LilyPond 2.24.4—www.lilypond.org

Sticky spanners have their end announced as soon as their host's is announced.

sticky-spanner-end-announcement.ly

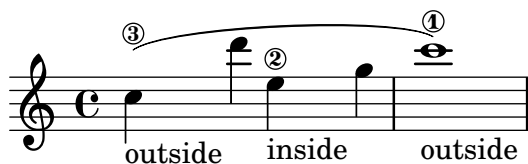


¹note

Music engraving by LilyPond 2.24.4—www.lilypond.org

String numbers should only be moved outside slurs when there is a collision.

string-number-around-slur.ly



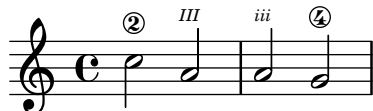
String numbers don't segfault when their stencil is set to ##f.

string-number-no-stencil.ly



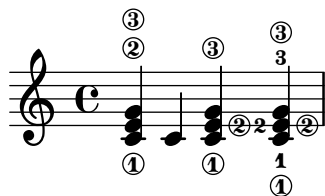
Different styles may be used for string number indications. Predefined options are arabic (used by default) and roman numerals.

string-number-styles.ly



String numbers can be added to chords. They use the same positioning mechanism as finger instructions.

string-number.ly



Stroke fingerings don't segfault when their stencil is set to ##f.

stroke-fingering-no-stencil.ly



Tests for swing.ly

swing-test.ly

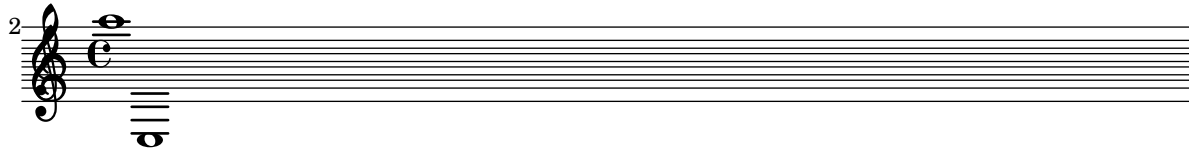
1. Swing type demos

	swung eighths <code>\tripletFeel 8</code>	smoother swung eighths <code>\applySwing 8 #'(3 2)</code>
notes with applied swing		
corresponding to		

	swung sixteenths <code>\tripletFeel 16</code>	straight fourths read as dotted <code>\applySwing 4 #'(3 1)</code>
3		

	samba swing <code>\applySwing 16 #'(3 2 2 3)</code>	smoother samba swing, start off-beat <code>\applySwingWithOffset 16 #'(4 3 3 4)</code> <code> #(ly:make-moment 1/8)</code>
5		

2. Triplet feel in various situations



System separator positioning works with all spaceable staff contexts.

1

A

B

C

C

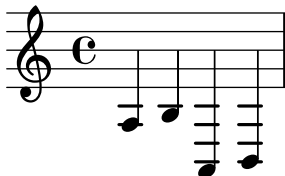
C

System separators may be defined as markups in the `system-separator-markup` field of the paper block. They are centered between the boundary staves of each system.

The image displays three systems of musical notation, each consisting of two staves (treble and bass clefs) and a common time signature 'C'. Each system is separated by a double bar line and a measure number (1, 3, and 5) positioned to the left of the first staff. The notation is minimalist, featuring only whole notes on the second line of the treble clef and the second space of the bass clef in each system. The first system is labeled '1', the second '3', and the third '5'. The notes are positioned as follows: in the first system, the treble note is on the second line and the bass note is on the second space; in the second system, the treble note is on the second space and the bass note is on the second line; in the third system, the treble note is on the second space and the bass note is on the second line.

When the staff-space is increased, the system-start delimiter should still be collapsed (i.e. the collapse-height should not give an absolute length, but a multiple of staff-spaces).

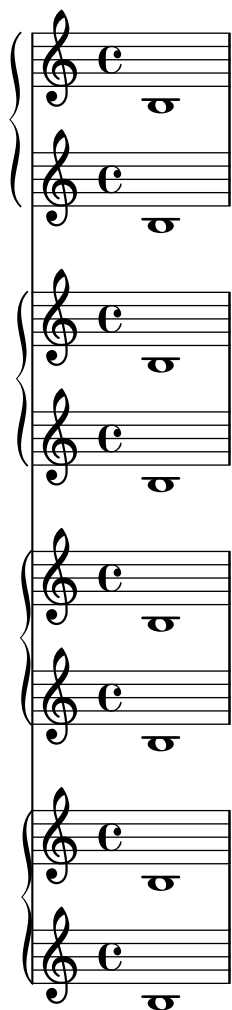
`system-start-bar-collapse-staffspace.ly`



Disregarding the value of `systemStartDelimiter`, setting `SystemStartGrob` style of `StaffGroup` to 'brace' always prints a `SystemStartBrace`.

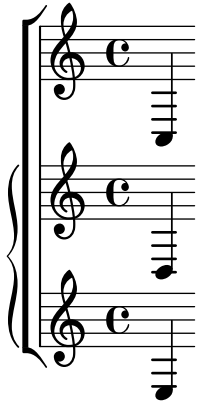
Every `StaffGroup` should start with a `SystemStartBrace`.

`system-start-brace-style.ly`



A piano context included within a staff group should cause the piano brace to be drawn to the left of the staff angle bracket.

`system-start-bracket.ly`

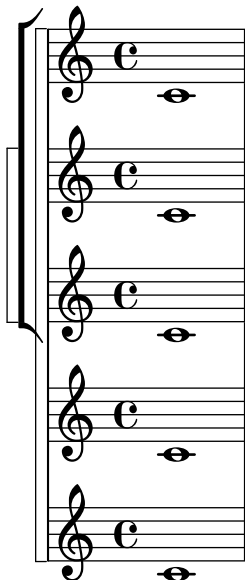


A heavy-bar system start delimiter may be created by tuning the `SystemStartBar` grob.
`system-start-heavy-bar.ly`



Deeply nested system braces, brackets, etc., may be created with the `systemStartDelimiterHierarchy` property.

`system-start-nesting.ly`



Additional bass strings (for baroque lute, etc.) are supported in TabStaff. They are printed below lowest line as: a, /a, //a, ///a, 4, 5 etc. `additionalBassStrings` needs to be set accordingly.

`tablature-additional-bass-strings.ly`

Tablature may also be tuned for banjo.

`tablature-banjo.ly`

In a TabStaff, the chord repetition function needs to retain string and fingering information. Using `\tabChordRepeats` achieves that, in contrast to the music on the main staff.

`tablature-chord-repetition-finger.ly`

In a TabStaff, the chord repetition function needs to save the string information. The obsolete function `\tabChordRepetition` establishes this setting score-wide. Nowadays, you would rather use just `\tabChordRepeat` on the music in the tabstaff, not affecting other contexts.

`tablature-chord-repetition.ly`

Context property `defaultStrings` defines desired strings for fret calculations if no strings are defined explicitly.

tablature-default-strings.ly

Musical notation for tablature-default-strings.ly. The top staff is a treble clef with a C-clef and a common time signature. It contains a sequence of notes: G4, A4, B4, C5, G4, A4, B4, C5. Below it is a tablature staff with fret numbers: 1, 5, 7, 9, 10, 3, 3, 5, 7, 8, 3.

With full notation, the dots on the tablature heads should respect two-digit fret numbers.

tablature-dot-placement.ly

Musical notation for tablature-dot-placement.ly. The top staff is a treble clef with a C-clef and a common time signature. It contains three chords, each with a circled '3' above it. Below it is a tablature staff with fret numbers: 8, 10, 10, 10, 8, 10, 10, 10, 10.

Tremoli applied to double stems in a TabVoice should be centered on the double stem.

tablature-double-stem-tremolo.ly

Musical notation for tablature-double-stem-tremolo.ly. The top staff is a treble clef with a C-clef and a common time signature. It contains a double stem with a sharp sign. Below it is a tablature staff with fret numbers: 2, #.

Tablatures derived from stored fretboard diagrams display open strings as fret 0 in the tablature. The tablature and fretboard should match.

tablature-fretboard-open-string.ly

Musical notation for tablature-fretboard-open-string.ly. The top staff is a treble clef with a C-clef and a common time signature. It contains a chord with an 'x' above it. Below it is a fretboard diagram for C major with fret numbers 3, 2, 1. Below that is a tablature staff with fret numbers: 0, 1, 0, 2, 3.

As default, tablature staves show only the fret numbers, because in most situations, they are combined with normal staves. When used without standard notation, `tabFullNotation` can be used.

tablature-full-notation.ly

Glissando lines in tablature have the right slope.

tablature-glissando.ly

Fret numbers belonging to grace notes are smaller.

tablature-grace-notes.ly

Harmonics can be specified either by ratio or by fret number.

tablature-harmonic-functions.ly

When a harmonic note is tied in tablature, neither the fret number nor the harmonic brackets for the second note appear in the tablature.

tablature-harmonic-tie.ly

Harmonics get angled brackets in tablature. Harmonics in chords should retain their proper position, regardless of whether or not strings are specified. In this example, the harmonics should always be on string 1.

tablature-harmonic.ly

A sample tablature with lettered tab, using fretLabels to modify the fret letters.

By default, letters are drawn sequentially from the alphabet, but if the context property fretLabels is defined, these are substituted. If specified, the length of fretLabels must be sufficient to label all the frets used. A warning is issued if the length is too short.

tablature-letter.ly

T				
A	a	b	c	
B	a	c	a	c

The TabStaff will print micro-tones as mixed numbers of fret-number and a fraction. The context-property supportNonIntegerFret needs to be set #t in Score-context. FretBoards will print those micro-tones only if they can be found in the chosen settings for stringTunings, otherwise a warning (surpressed here) will be printed and an empty FretBoard returned. Which should be the case for the last four of the examples pitches. Micro-tones assigned to strings work nicely.

tablature-micro-tone.ly

Negative fret numbers calculated due to assigning a string number can be displayed, ignored, or recalculated. Here we should have all three cases demonstrated.

`tablature-negative-fret.ly`

Open strings can always be part of a chord in tablature, even when frets above 4 have been used in the chord. In this case, both chords should show an open fourth string.

`tablature-open-string-chord.ly`

Open strings are part of a chord in tablature, even when `minimumFret` is set. This can be changed via `restrainOpenStrings`.

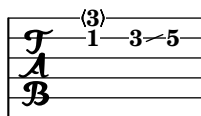
`tablature-open-string-handling.ly`

How a repeat sign looks in tablature.

`tablature-repeat.ly`

Tab supports slides.

`tablature-slide.ly`

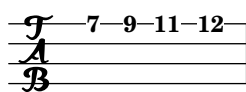


Slur placement in complementary tablatures should not be affected by either automatic or manual beaming.

tablature-slurs-with-beams.ly

For other tunings, it is sufficient to set `stringTunings`. The number of staff lines is adjusted accordingly.

tablature-string-tunings.ly



In tablature, notes that are tied to are invisible except after a line break or within a second volta; here, the fret number is displayed in parentheses.

As an option, the notes that are tied to may become invisible completely, even after line breaks.

tablature-tie-behaviour.ly

5

1. 2.

(1) 3 3 1 3 0 (0) 0

3 2 0 0 0 0 0 1

5

1. 2.

1 3 3 1 3 0 0 1

11

5

1. 2.

(1) 3 3 1 3 0 (0) 0

If a slur or a glissando follows a tie, the corresponding fret number is displayed in parentheses.
 tablature-tie-spanner.ly

1 (1) 3 1 (1) 3 1 3 1 3

Tremolos will appear on tablature staves only if `\tabFullNotation` is active. Otherwise, no tremolo indications are displayed on the TabStaff. Also, tablature beams are the same thickness on TabStaff and Staff.

tablature-tremolo.ly

The image shows a musical staff with a treble clef and a common time signature (C). The staff contains a chord of three notes (F#, C, F#) followed by a tremolo effect. Below the staff is a 6-line tablature staff with strings labeled T, A, and B. The fret numbers are: T: 0, 1, 1; A: 0, 2, 0-0; B: 3, 3, 3.

The image shows a 6-line tablature staff with strings labeled T, A, and B. The fret numbers are: T: 0, 1, 1; A: 0, 2, 0-0; B: 3, 3, 3. There are sharp symbols (#) above and below the staff.

A fingering indication of zero counts as an open string for fret calculations. An inappropriate request for an open string will generate a warning message and set the requested pitch in the tablature.

tablature-zero-finger.ly

The image shows a musical staff with a treble clef and a common time signature (C). The staff contains a chord of three notes (F#, C, F#) followed by a single note (C). Below the staff is a 6-line tablature staff with strings labeled T, A, and B. The fret numbers are: T: 5, 6, 0; A: 7, 0; B: 0, 3.

A sample tablature, with both normal staff and tab.

Tablature is done by overriding the note-head formatting function, and putting it on a 6-line staff. A special engraver takes care of going from string-number + pitch to number.

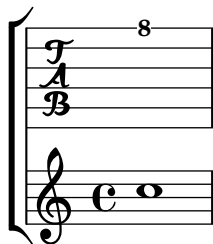
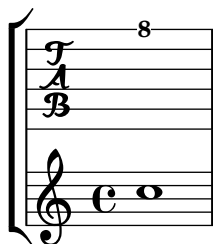
String numbers can be entered as note articulations (inside a chord) and chord articulations (outside a chord)

tablature.ly

The image shows a musical staff with a treble clef and a common time signature (C). The staff contains a chord of three notes (F#, C, F#) followed by a single note (C). Below the staff is a 6-line tablature staff with strings labeled T, A, and B. The fret numbers are: T: 4, 4, 4; A: 13, 2, 13, 13, 13; B: 7, 7, 7, 7, 7. There are circled numbers 4 and 5 above the staff.

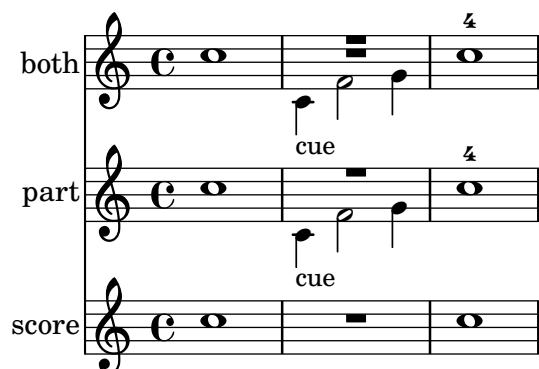
A TabStaff placed inside a ChoirStaff does not have an extraneous bracket. In this test, the two snippets should look the same.

tabstaff-choirstaff-brace.ly



The `\tag` command marks music expressions with a name. These tagged expressions can be filtered out later. This mechanism can be used to make different versions of the same music. In this example, the top staff displays the music expression with all tags included. The bottom two staves are filtered: the part has cue notes and fingerings, but the score has not.

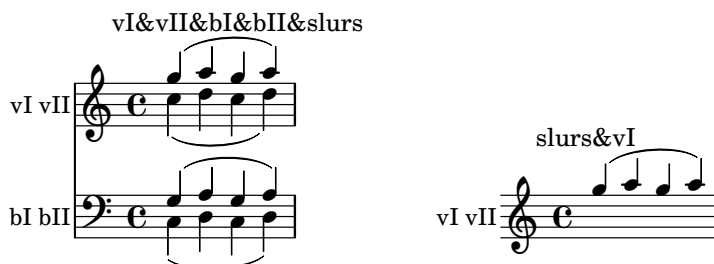
`tag-filter.ly`



The operation of `\keepWithTag` can be made more flexible by using `\tagGroup`.

`tag-group.ly`

`\keepWithTag`



<p>vI&bI&bII</p>	<p>vI&bI&bII&none</p>
--------------------------	-----------------------------------

\tagGroup vI.vII
\tagGroup bI.bII

<p>vI&vII&bI&bII&slurs</p>	<p>slurs&vI</p>
--	---------------------

<p>vI&bI&bII</p>	<p>vI&bI&bII&none</p>
--------------------------	-----------------------------------

The `\removeWithTag` and `\keepWithTag` commands can name multiple tags to remove or to keep.

`tag-multiple.ly`

\keepWithTag

none

flood&highball&buffoon

4

flood&buffoon

4

buffoon

\removeWithTag

none

4

flood&highball&buffoon

flood&buffoon

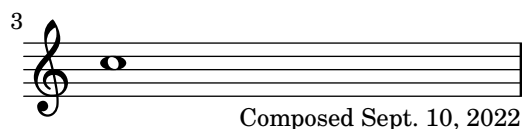
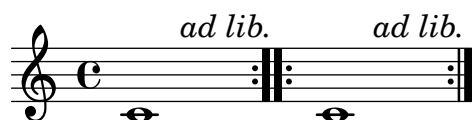
buffoon



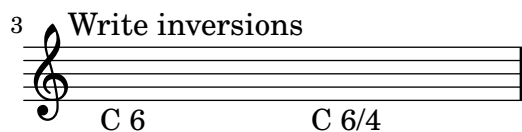
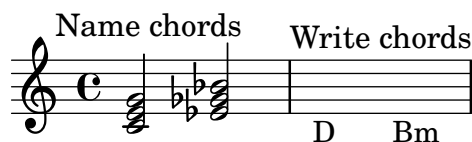
Compound articulations with `\tenuto` are stacked correctly, independent of input order.
`tenuto-priority.ly`



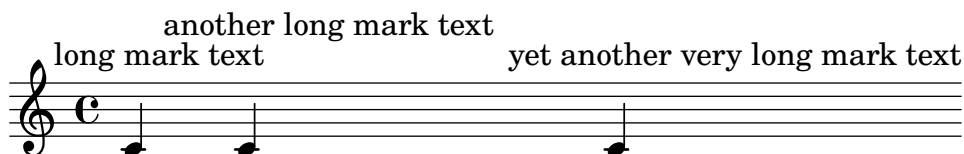
A text mark created by `\textEndMark` is visible everywhere except at the beginning of a line.
`text-end-mark-break-visibility.ly`



A text mark created by `\textMark` is visible everywhere except at the end of a line.
`text-mark-break-visibility.ly`



`\markLengthOn` also works on text marks.
`text-mark-marklengthon.ly`



The `\textMark` and `\textEndMark` commands draw arbitrary textual indications between notes.

`text-mark.ly`



text replacement settings are scoped to the `\paper` block

`text-replacement-scoping.ly`

good

Text replacements can replace strings with arbitrary markups.

`text-replacements-replace-with-markup.ly`

2nd time

When `\smallCaps` and text replacements are used together, the result of text replacements is also written in small caps.

`text-replacements-smallcaps.ly`

SECOND TIME

SECOND TIME

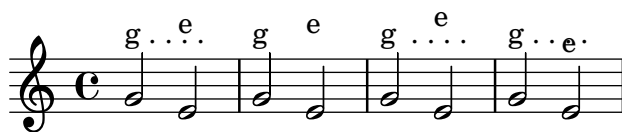
Text replacements can replace patterns containing non-ASCII characters. In particular, this test should also work if compiled under a non-Unicode-aware locale (e.g., `LC_ALL=C lilypond ...`).

`text-replacements-unicode.ly`

La troisième fois

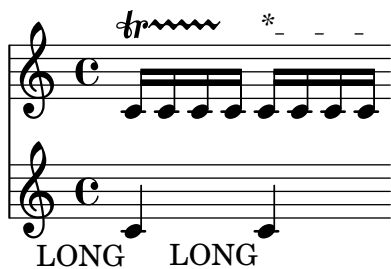
`TextScripts` are spaced closely, following outlines of the stencil. When markup commands like `pad-around` and `with-dimensions` change the extent of a stencil, these changed extents have effect in the stencil outline used to place the resulting `TextScript`.

`text-script-vertical-skylines.ly`



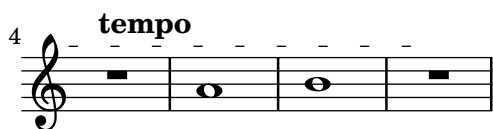
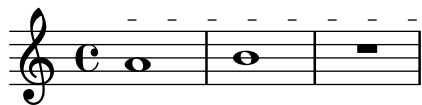
Text and trill spanners are attached to note columns, so attachments in other staves have no effect on them.

`text-spanner-attachment-alignment.ly`



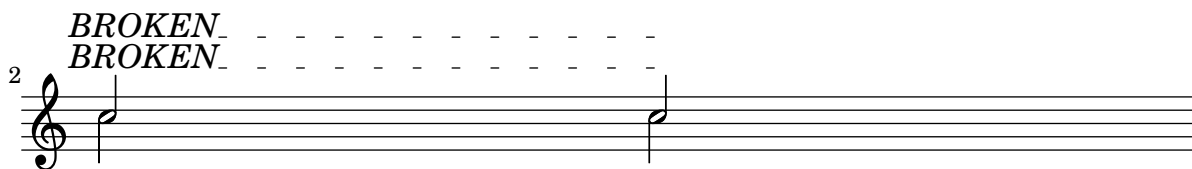
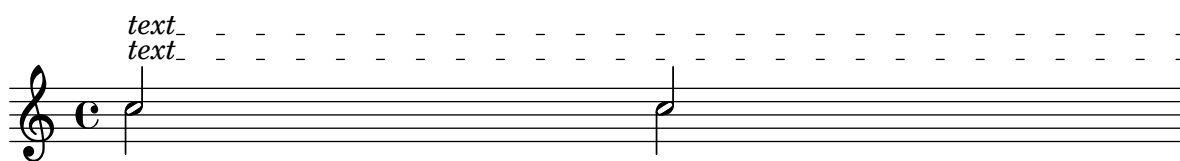
Text spanners ending on, or broken across, full-measure rests extend to the rests, or over the rests, as appropriate.

`text-spanner-full-rest.ly`



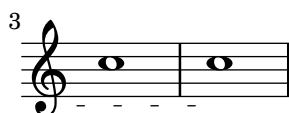
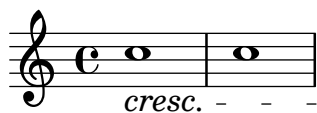
The order of setting nested properties does not influence text spanner layout.

text-spanner-override-order.ly



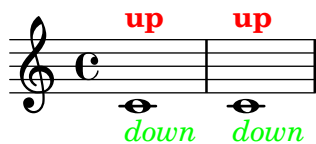
Text spanners should not repeat start text when broken.

text-spanner.ly



\etc can be used for constructing event functions for ‘TextScript’ events with sequences starting with ‘-’, ‘^’, or ‘_’. This example should have notes all adorned in the same manner.

textetc.ly



lilypond should flip the tie’s direction to avoid a collision with the sharp.

tie-accidental.ly



Advanced tie chord formatting also works with arpeggiated ties. Due to arpeggios, tie directions may be changed relative to the unarpeggiated case.

tie-arpeggio-collision.ly



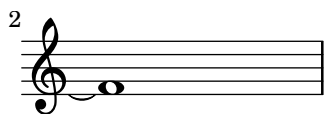
when `tieWaitForNote` is set, the right-tied note does not have to follow the left-tied note directly. When `tieWaitForNote` is set to false, any tie will erase all pending ties.

tie-arpeggio.ly



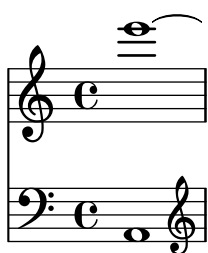
Broken ties honor `minimum-length` also. This tie has a `minimum-length` of 5.

tie-broken-minimum-length.ly



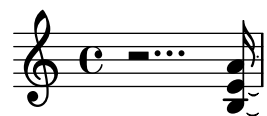
Broken tie lengths are not affected by clefs in other staves.

tie-broken-other-staff.ly



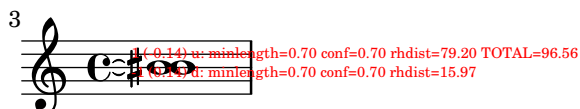
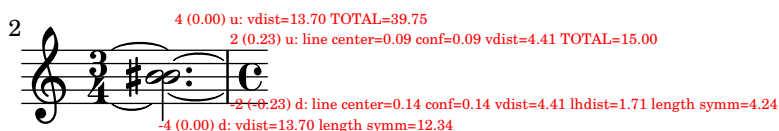
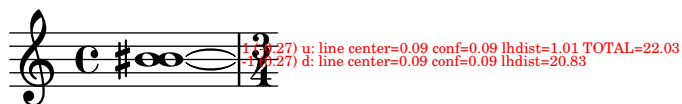
Ties behave properly at line breaks.

tie-broken.ly



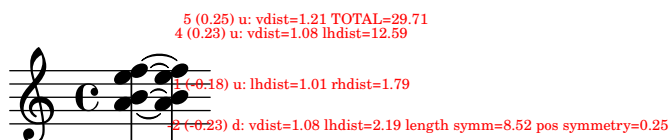
Tie detail property multi-tie-region-size controls how many variations are tried for the extremal ties in a chord.

tie-chord-broken-extremal.ly



Switching on debug-tie-scoring annotates the tie scoring decisions made.

tie-chord-debug.ly



Individual chord notes can also be tied

tie-chord-partial.ly

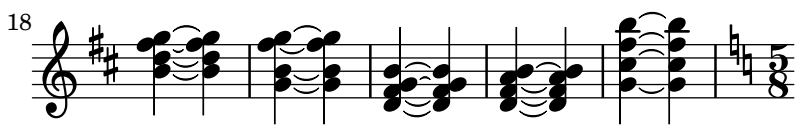
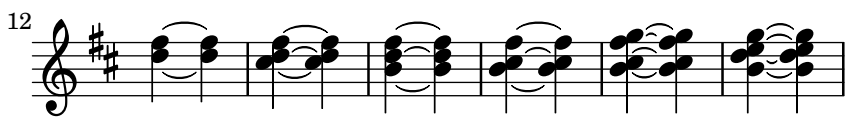
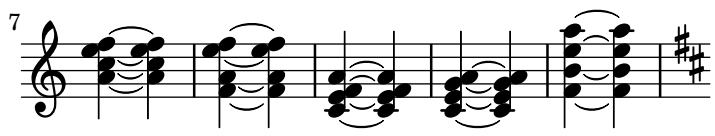


In chords, ties keep closer to the note head vertically, but never collide with heads or stems. Seconds are formatted up/down; the rest of the ties are positioned according to their vertical position.

The code does not handle all cases. Sometimes ties will printed on top of or very close to each other. This happens in the last chords of each system.

tie-chord.ly





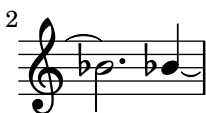
The appearance of ties may be changed from solid to dotted or dashed.

`tie-dash.ly`



In the single tie case, broken ties peek across line boundaries to determine which direction to take.

`tie-direction-broken.ly`





Tie directions can be set with `_` and `^`. This makes correction in complex chords easier.
`tie-direction-manual.ly`



Ties avoid collisions with dots.
`tie-dot.ly`



LilyPond should accept a tie between notes which are enharmonically identical.
`tie-enharmonic.ly`



Tying a grace to a following grace or main note works.
`tie-grace.ly`



If using exact values (this is, either integers or rational values like `'(/ 4 5)'`), `staff-position` is used to vertically tune the tie for staff line avoidance. If using an inexact value like a floating point number, it is taken as the vertical location.

`tie-manual-vertical-tune.ly`



Tie formatting may be adjusted manually, by setting the `tie-configuration` property. The override should be placed at the second note of the chord.

You can leave a Tie alone by introducing a non-pair value (eg. `#t`) in the `tie-configuration` list.

`tie-manual.ly`



The pitch of a pitched trill should not trigger a warning for unterminated ties.

tie-pitched-trill.ly



Like normal ties, single semities (LaissezVibrerTie or RepeatTie) get their direction from the stem direction, and may be tweaked with 'direction.

tie-semi-single.ly



Tie directions are also scored. In hairy configurations, the default rule for tie directions is overruled.

tie-single-chord.ly



Individual ties may be formatted manually by specifying their direction and/or staff-position.

tie-single-manual.ly



Formatting for isolated ties.

- short ties are in spaces
- long ties cross staff lines
- ties avoid flags of left stems.
- ties avoid dots of left notes.
- short ties are vertically centered in the space, as well those that otherwise don't fit in a space
- extremely short ties are put over the noteheads, instead of between.

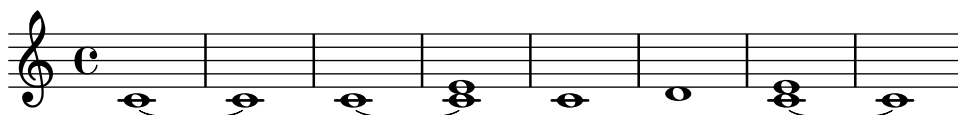
tie-single.ly





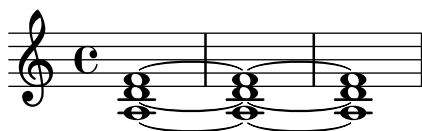
When a tie is followed only by unmatched notes and the tie cannot be created, Lilypond prints out a warning unless `tieWaitForNote` is set.

`tie-unterminated.ly`



For whole notes, the inside ties do not cross the center of the note head, horizontally.

`tie-whole.ly`



This test covers the mensural and neomensural time signature styles.

`time-signature-mensural.ly`



Mid-measure time signature changes not accompanied by `\partial` generate warnings.

`time-signature-midmeasure-warning.ly`



Mid-measure time signature changes must be accompanied by `\partial`.

In this example, no bar numbers should be omitted or repeated, and all double bar lines should have parenthesized bar numbers consistent with the single bar lines. Both scores should look identical.

- `\time 2/4` occurs at a negative position
- `\time 6/8` occurs at a position less than the new measure length
- `\time 3/8` occurs at a position equal to the new measure length
- `\time 3/16` occurs at a position greater than the new measure length

time-signature-midmeasure.ly

(1) 1 (1) 2 3 (3) 4 5 (5) 6 7

(1) 1 (1) 2 3 (3) 4 5 (5) 6 7

The numbered time signature style prints a fraction.

time-signature-numbered.ly

`\numericTimeSignature` and `\defaultTimeSignature`, like `\time`, affect all simultaneous staves.

time-signature-numeric-and-default.ly

Default values for time signature settings can vary by staff if the `Timing_translator` is moved from `Score` to `Staff`. In this case, the upper staff should be beamed 3/4, 1/4. The lower staff should be beamed 1/4, 3/4.

time-signature-settings-by-staff.ly

The single-digit time signature style prints the numerator only.

time-signature-single-digit.ly

Demonstrate all titling variables used by default.

titling.ly

Dedication

Title

Subtitle

Subsubtitle

Poet

Instrument

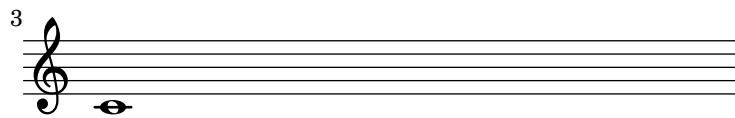
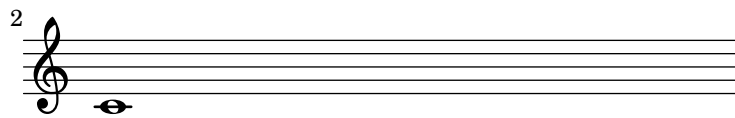
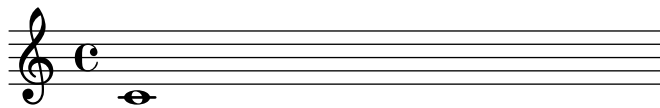
Composer

Meter

Arranger

Piece

Opus



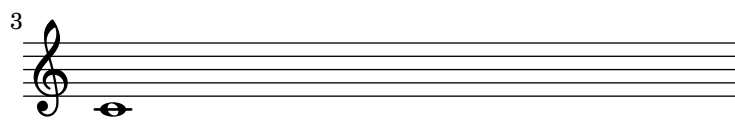
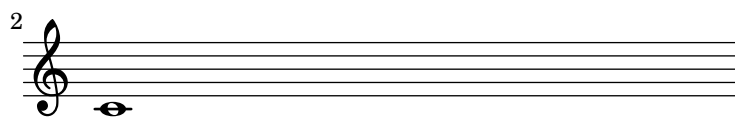
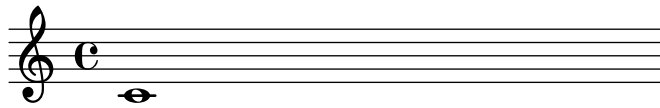
Copyright

2

Instrument

Piece 2

Opus 2



3

Dedication
Title
Subtitle
Subsubtitle
Instrument
Composer
Arranger

Poet
Meter

Dedication
Overridden title
Subtitle
Subsubtitle

Poet
Meter
Piece again

Composer
Arranger
Opus



Copyright

4

Instrument
Dedication**Title****Subtitle****Subsubtitle**

Poet

Instrument

Composer

Meter

Arranger

Piece 2 again

Opus 2

**Tagline**

The input representation is generic, and may be translated to XML.
to-xml.ly



A missing node in a structured TOC is handled gracefully.
toc-missing-node.ly

Table of Contents**oops**

?

spam

?

oops

?

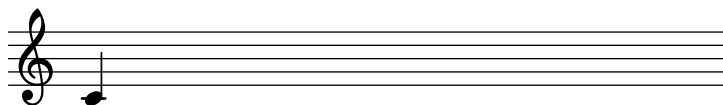
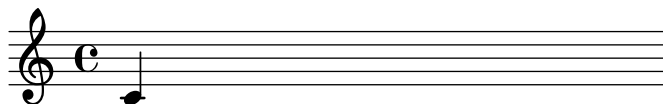


ToC items on the same page stay in the same order as PDF bookmarks. (The order of ToC items and PDF bookmarks may differ in other documents.)

`toc-multiple-entries-on-same-page.ly`

Table of Contents

1	1
2	1
3	1
4	1
5	1



Music engraving by LilyPond 2.24.4—www.lilypond.org

In structured tables of contents, the first path component of an entry can refer to a previously defined node anywhere in the tree. The rest of the path is directly interpreted from this initial node.

`toc-structured-naming-conflicts.ly`

Table of Contents

Foo	?
Foo 2	?

Bar	?
Baz	?
Spam	?
Spam bar	?
Spam bar eggs	?
Spam bar barbar	?



TOC labels can be explicitly specified, and structured hierarchically; they appear in PDF bookmarks as well (the ‘table of contents’ panel in PDF viewers). PDF bookmarks are reordered so as to not ‘go back in time’.

toc-structured.ly

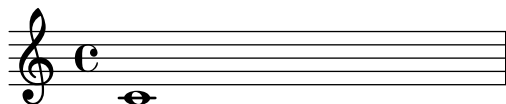
Table of Contents

<u>Introduction</u>	2
First-level I.	3
Second level I. a	4
Third level I. a, 1	4
First-level II.	5
The end	6
Before the end	5

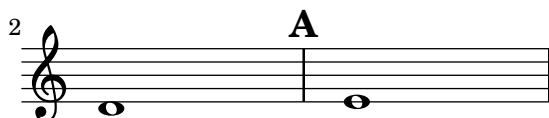
2

Hello World.

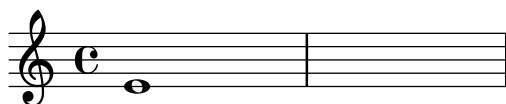
3

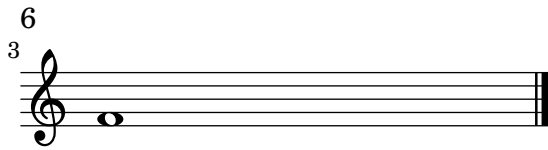


4



5



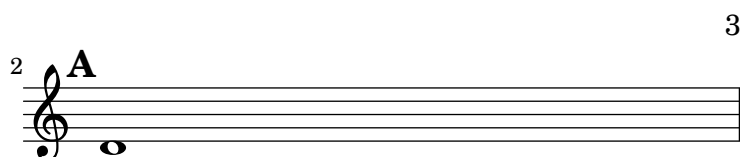
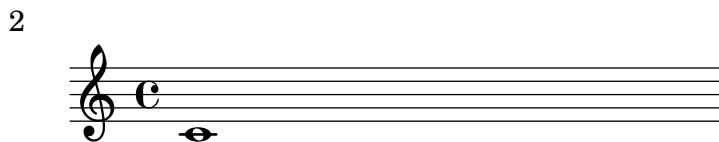


A table of contents is included using `\markuplist \table-of-contents`. The toc items are added with the `\tocItem` command. In the PDF backend, the toc items are linked to the corresponding pages.

`toc.ly`

Table of Contents

The first score	2
(score begins here)	2
Mark A	3
The second score	4



3

4

Second score



Music engraving by LilyPond 2.24.4—www.lilypond.org

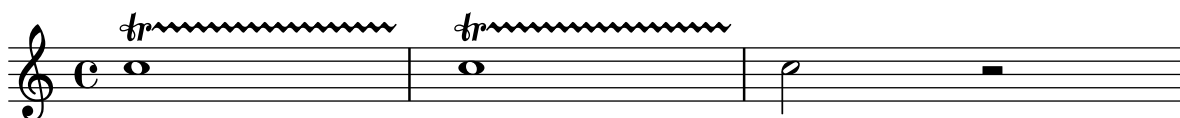
Trill spanners stop before the accidental of the following note, if any.

`trill-spanner-accidental.ly`



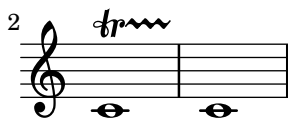
Consecutive trill spans work without explicit `\stopTrillSpan` commands, since successive trill spanners will automatically become the right bound of the previous trill.

`trill-spanner-auto-stop.ly`



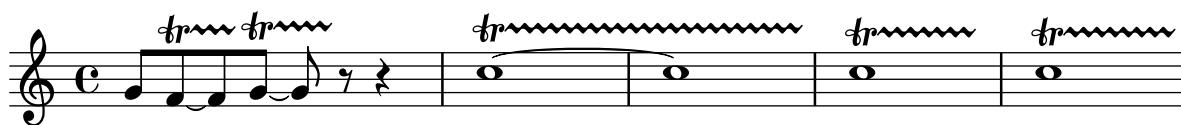
A `TrillSpanner` crossing a line break should restart exactly above the first note on the new line.

`trill-spanner-broken.ly`



Chained trills end at the next trill or bar line. Collisions can be prevented by overriding bound-details.

trill-spanner-chained.ly



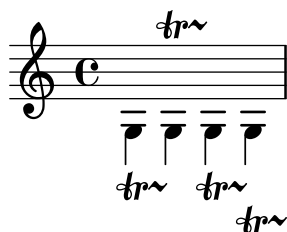
Consecutive trill spanners never overlap.

trill-spanner-consecutive.ly



The direction of a trill spanner can be set with `_` and `^` indicators.

trill-spanner-direction.ly



Trill spanner can end on a grace note

trill-spanner-grace.ly



Trill spanners with `outside-staff-priority` turned off do not collide with notes.
`trill-spanner-no-outside-staff-priority.ly`

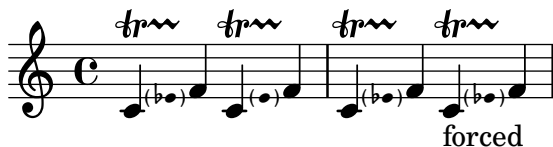


Pitched trills on consecutive notes with the same name and octave should not lose accidentals; in the following example, accidentals should be visible for all trill-pitches.

`trill-spanner-pitched-consecutive.ly`



Pitched trill accidentals can be forced.
`trill-spanner-pitched-forced.ly`



Pitched trills are denoted by a small note head in parentheses following the main note. This note head is properly ledgered, and parentheses include the accidental.

`trill-spanner-pitched.ly`



The horizontal position of the beginning of a trill spanner is positioned correctly relative to the note head it is attached to, even if scaled to a smaller size.

`trill-spanner-scaled.ly`



A trill spanner can be made to run to the end of the score by never issuing a `\stopTrillSpan` command.

`trill-spanner-terminated-implicitly.ly`



By default, a trill spanner ending on the first note on a bar extends no further than the preceding bar line.

`trill-spanner-to-barline.ly`



The trill symbol and the wavy line are neatly aligned: the wavy line should appear to come from the crook of the r

`trill-spanner.ly`



Paths can be empty, or contain just a `moveto` command. The extents of such a path are empty.

`trivial-path.ly`

X X X X

X X X X



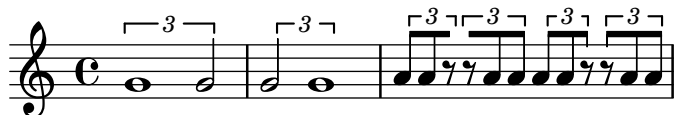
In combination with a beam, the bracket of the tuplet bracket is removed. This only happens if there is one beam, as long as the bracket.

`tuplet-beam.ly`



Tuplet brackets should align to visible or transparent stems only. For stemless notes or rests they should span the whole note width.

`tuplet-bracket-X-positions.ly`



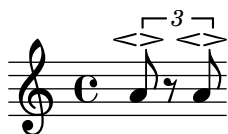
TupletBracket grobs avoid Fingering grobs.

tuplet-bracket-avoid-fingering.ly



Tuplet brackets avoid scripts by default.

tuplet-bracket-avoid-scripts.ly



TupletBracket grobs avoid StringNumber grobs.

tuplet-bracket-avoid-string-number.ly



When the tuplet number is wider than the bracket, no tuplet bracket is printed.

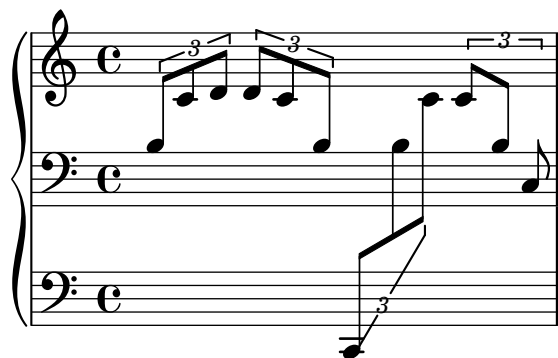
tuplet-bracket-backwards.ly





Cross-staff tuplets are drawn correctly, even across multiple staves.

tuplet-bracket-cross-staff.ly



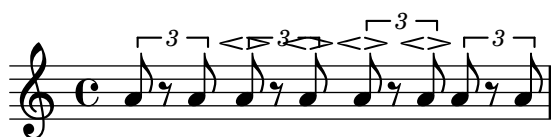
The direction of tuplet brackets is the direction of the majority of the stems under the bracket, with ties going to UP.

tuplet-bracket-direction.ly



Tuplet brackets' outside staff priority can be set. Brackets, by default, carry their numbers with them.

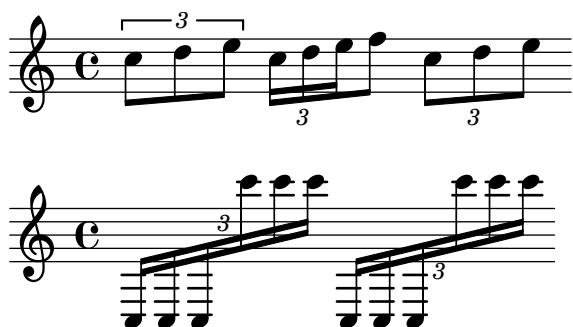
tuplet-bracket-outside-staff-priority.ly



Tuplet brackets can be set to always be printed when the direction of the bracket is forced to be on the note head side. This setting doesn't have any effect on kneed tuplets.

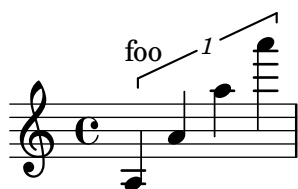
tuplet-bracket-over-note-heads.ly





Tuplet brackets do not push objects with outside-staff-priority too high.

tuplet-bracket-vertical-skylines.ly



The default behavior of tuplet-bracket visibility is to print a bracket unless there is a beam of the same length as the tuplet. Overriding `'bracket-visibility` changes the bracket visibility as follows:

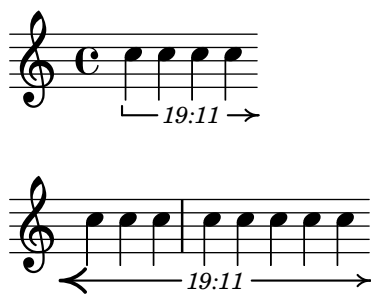
- `#t` (always print a bracket)
- `#f` (never print a bracket)
- `'if-no-beam` (only print a bracket if there is no beam)

tuplet-bracket-visibility.ly



Broken tuplets are adorned with little arrows. The arrows come from the `edge-text` property, and thus be replaced with larger glyphs or other text.

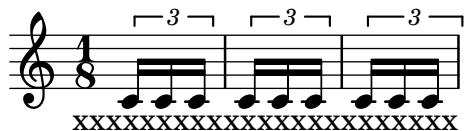
tuplet-broken.ly





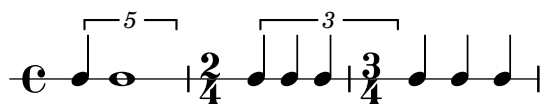
With `full-length-to-extent`, the extent of the attaching column for a full-length tuplet bracket can be ignored.

`tuplet-full-length-extent.ly`



`tuplet` can be made to run to prefatory matter or the next note, by setting `tupletFullLengthNote`.

`tuplet-full-length-note.ly`



If `tupletFullLength` is set, tuplets end at the start of the next non-tuplet note.

`tuplet-full-length.ly`



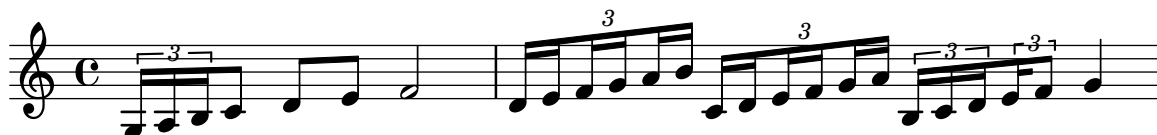
The size of the tuplet bracket gap is adjusted to the width of the text.

`tuplet-gap.ly`



Overlong tuplet span specifications are reduced to the actual length.

`tuplet-long-spanner.ly`



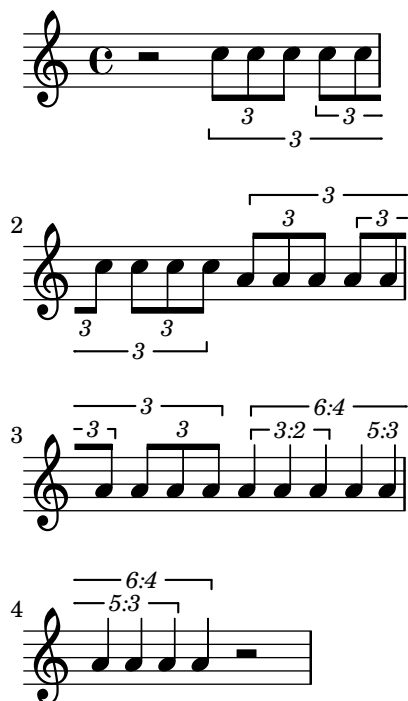
Nested triplets do collision resolution, also when they span beams.

tuplet-nest-beam.ly



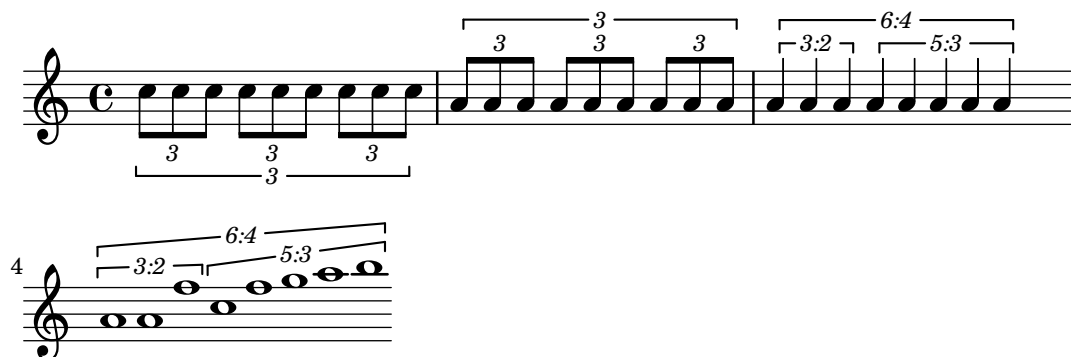
Broken nested triplets avoid each other correctly.

tuplet-nest-broken.ly



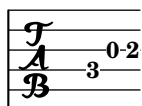
Tuplets may be nested.

tuplet-nest.ly



Removing Stem_engraver doesn't cause crashes.

tuplet-no-stems.ly



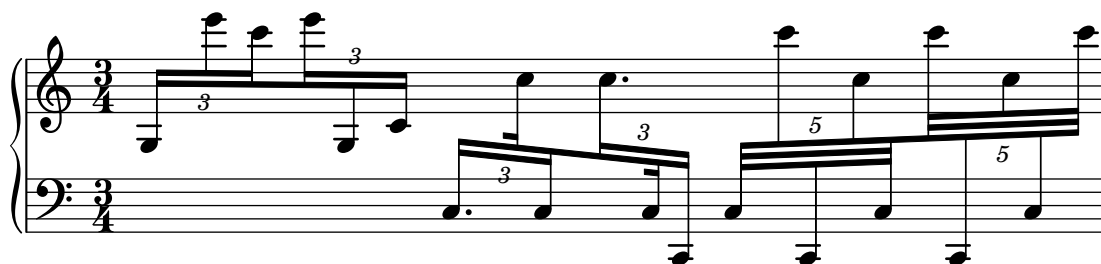
Tuplet numbers of flat beams vertically align with similar looking beams.

`tuplet-number-alignment.ly`



Tuplet numbers are positioned correctly on kneed French-style beams.

`tuplet-number-french-knead-beams.ly`



In tuplets with an even number of stems, the number may be placed on either side of the beam when the central stems point in different directions. The exception to this is when there is a fractional beam on one of the central stems, in which case the number is placed opposite the partial beam.

`tuplet-number-knead-beam-even-stem-count.ly`



Tuplet numbers are placed next to the beam unless there is insufficient horizontal space for them, in which case bracket-based positioning is used and a programming error is issued.

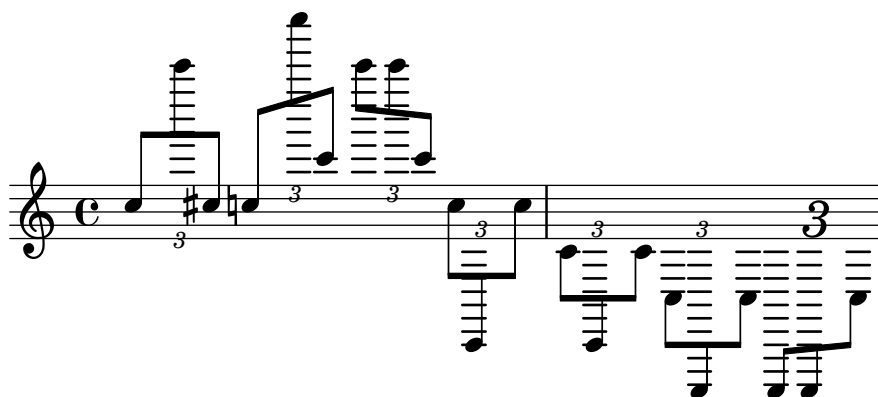
The first tuplet number should be between stems; the second should be below the noteheads.

`tuplet-number-knead-beam-horizontal-fit.ly`

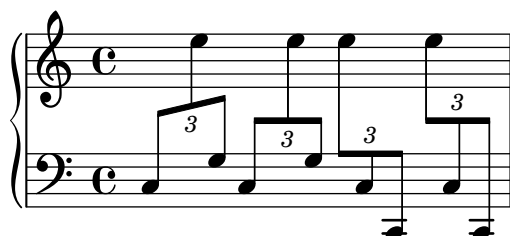


A tuplet number associated with a knead beam is not placed between beam and staff where it may collide with ledger lines.

`tuplet-number-knead-beam-ledger-lines.ly`

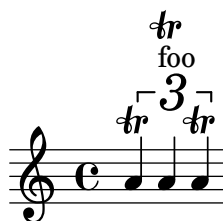


Tuplet numbers are placed next to kneed beams when `Beam.positions` is overridden.
`tuplet-number-kneed-beam-positions.ly`



Grobs whose parents have `outside-staff-priority` set should figure into the vertical sky-line of the `VerticalAxisGroup` such that grobs with a higher `outside-staff-priority` are correctly positioned above them.

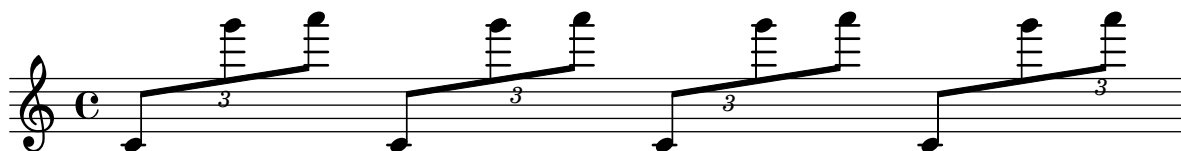
`tuplet-number-outside-staff-positioning.ly`



Tuplet numbers' outside staff priority can be set.
`tuplet-number-outside-staff-priority.ly`

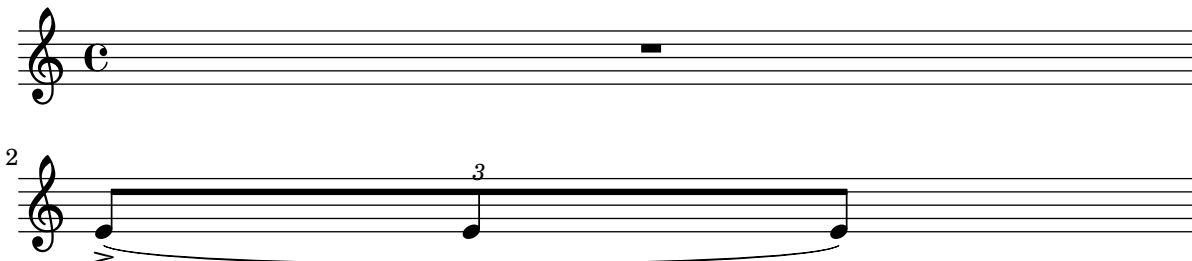


Tuplet numbers will maintain a constant distance from kneed beams when offset horizontally.
`tuplet-number-shift-along-kneed-beam.ly`



Tuplet number position is correct when slurs and scripts are present.

tuplet-number-slur-script.ly



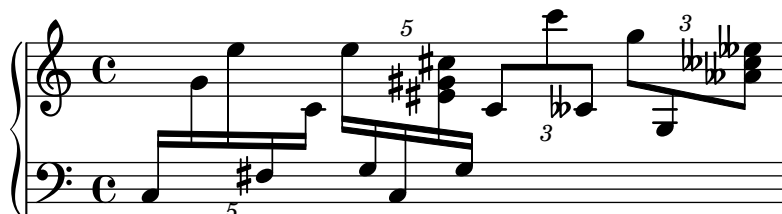
Tuplet numbers that are slightly outside the staff sit on the staff line.

tuplet-number-staffline.ly



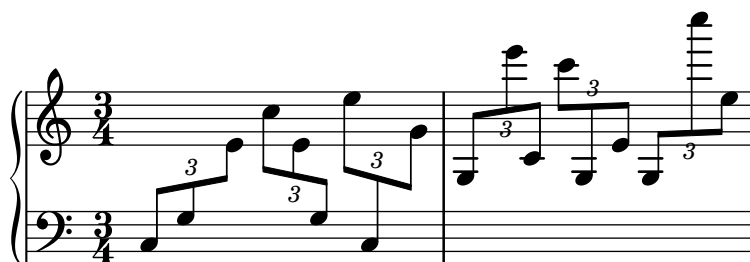
Tuplet numbers associated with kneed beams will avoid accidentals.

tuplet-numbers-kneed-beams-accidentals.ly



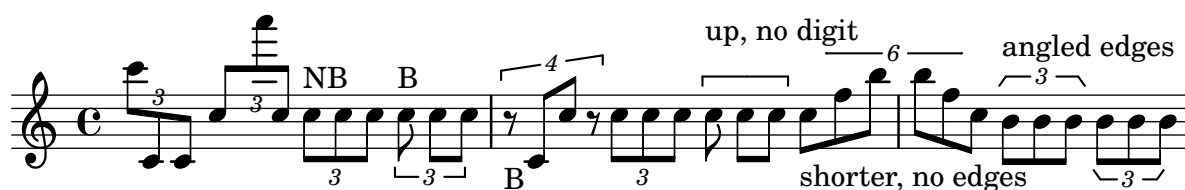
Tuplet numbers are positioned next to kneed beams.

tuplet-numbers-kneed-beams.ly



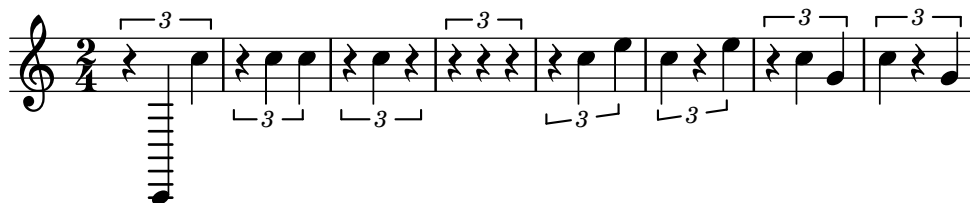
Tuplet bracket formatting supports numerous options, for instance, bracketed (B) and non-bracketed (NB).

tuplet-properties.ly



Tuplets may contain rests.

tuplet-rest.ly



Regression test for Issue #6205. Expected output is a single staff with notes C and E.

tuplet-set.ly



Show tuplet numbers also on single-note tuplets (otherwise the timing would look messed up!), but don't show a bracket. Make sure that tuplets without any notes don't show any number, either.

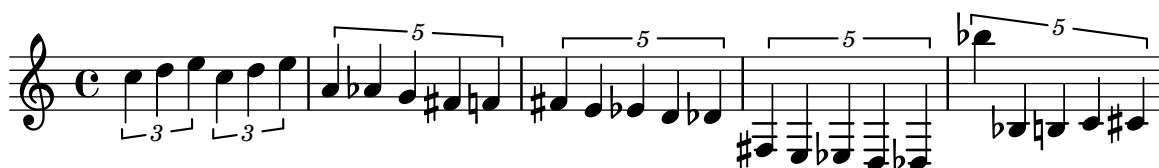
tuplet-single-note.ly



Tuplet brackets stay clear of the staff. The slope is determined by the graphical characteristic of the notes, but if the musical pattern does not follow graphical slope, then the bracket is horizontal

The bracket direction is determined by the dominating stem direction.

tuplet-slope.ly



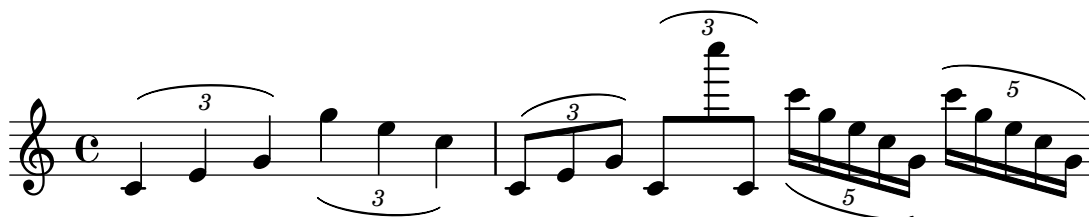
Tuplet slurs may be tweaked through the shorten-pair and dash-definition properties.

tuplet-slur-tweaks.ly



Slurs may be used instead of brackets for tuplets through the tuplet-slur property of TupletBracket. Rules for visibility are the same as for regular brackets, so bracket-visibility should be set to #t if the slur is desired for beamed groups.

tuplet-slurs.ly



Horizontal tuplet brackets are shifted vertically to avoid staff line collisions.

tuplet-staffline-collision.ly



Subdivision works properly for tuplets.

tuplet-subdivision.ly



Non-standard tuplet texts: Printing other tuplet fractions than the ones actually assigned.

tuplet-text-different-numbers.ly



Non-standard tuplet texts: Printing a tuplet fraction with note durations assigned to both the denominator and the numerator.

tuplet-text-fraction-with-notes.ly



Non-standard tuplet texts: Appending a note value to the normal text and to the fraction text.

tuplet-text-note-appended.ly



Tuplets are indicated by a bracket with a number. There should be no bracket if there is a beam exactly matching the length of the tuplet. The bracket does not interfere with the stafflines, and the number is centered in the gap in the bracket.

The bracket stops at the end of the stems, if the stems have the same direction as the bracket. The endings can be adjusted with `bracket-flare`.

`tuplets.ly`



Alternative notation systems using accidentals different from the Western ones set them systematically, for standalone markups and all grobs that print accidentals.

This include file provides a function to draw many accidental in different contexts. It is used by various tests.

`turkish-makam-accidental-glyphs.ly`

All †



†

Overrides can be the target of a `\propertyTweak`, with the tweaks accumulating as override. The main application is for stacking commands implemented in terms of `\propertyTweak`. This example should show the starting chord with blue, cross-styled note heads and a red stem.

`tweaks-as-overrides.ly`



heavily mutilated Edition Peters Morgenlied by Schubert

`typography-demo.ly`

LilyPond demo

Lieblich, etwas geschwind

1. Sü - ßes
2. いろはに かな

3
Licht! Aus gol - denen Pfor - ten brichst du sie - gend durch die
та та ほへど ちり ぬるを Жъл дю ля かな いろはに かな

6
Nacht. Schön - er Tag, du bist er - wacht.
та та ほへ ちり ぬる Жъл дю ля

cresc. *f*

Lyrics without an `associatedVoice` should align properly. If there are notes in the `PaperColumn`, they should align to them, and when there are no notes, they should align relative to the `PaperColumn` itself (represented with blue `GridLines` here)

`unassociated-lyrics-alignment.ly`

default (centered):

foo bar mmmm a bom

right-aligned:

foo bar mmmm a bom

`\unfolded` hides music until a repeat is unfolded. In this case, a second staff appears when the piece is unfolded.

`unfolded-spec.ly`

`unpure-pure` containers take two arguments: an unpure property and a pure property. The pure property is evaluated (and cached) for all pure calculations, and the unpure is evaluated for all unpure calculations. In this regtest, there are three groups of two eighth notes. In the first group, the second note should move to accommodate the flag, whereas it should not in the second group because it registers the flag as being higher. The flag, however, remains at the Y-offset dictated by `ly:flag::calc-y-offset`. In the third set of two 8th notes, the flag should be pushed up to a Y-offset of 8.

`unpure-pure-container.ly`

\once \unset should change a context property value for just one timestep and then return to the previous value.

unset-once.ly



words in mixed font in a single string are separated by spaces as in the input string. Here a Russian word followed by a roman word.

utf-8-mixed-text.ly

Здравствуйге Hallo

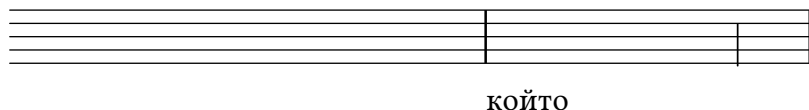
In GUILE v2, embedded Scheme can contain UTF-8 strings and identifiers. Here, identifier bööh contains music with the text "bööh"

utf-8-scheme.ly



Various scripts may be used for texts (like titles and lyrics) by entering them in UTF-8 encoding, and using a Pango based backend. Depending on the fonts installed, this fragment will render Bulgarian (Cyrillic), Hebrew, Japanese and Portuguese.

utf-8.ly



gal

version-seen.ly

Score level Vertical_align_engraver ignore axis groups that are not spanners. In this case, the Devnull context has no Axis_group_engraver, so the NoteColumn appears like a parent-less axis group; even so, the Score level alignment ignores it.

vertical-alignment-spanner-only.ly



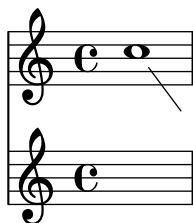
Voice followers can be broken across more than two systems.

voice-follower-broken-several-systems.ly



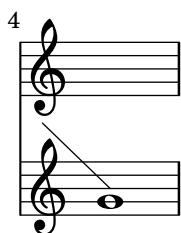
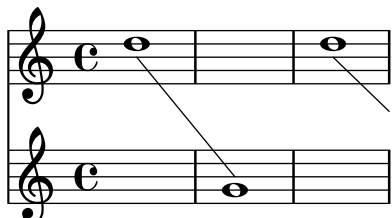
Voice followers have acceptable slopes across lines breaks.

voice-follower-broken.ly



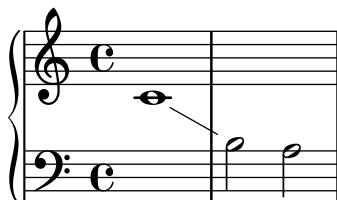
Adjustments to `VoiceFollower.bound-details.left.Y` are relative to the `VoiceFollower` grob's start staff. In this test, the lines should start and end at the exact middle of the respective staves.

`voice-follower-y-tweaks.ly`



Whenever a voice switches to another staff a line connecting the notes can be printed automatically. This is enabled if the property `followVoice` is set to true.

`voice-follower.ly`



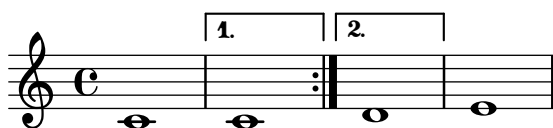
The `\voices` command can be used for continuing voices and changing the order of `\voiceOne... \voiceFour` style overrides.

`voices-command.ly`



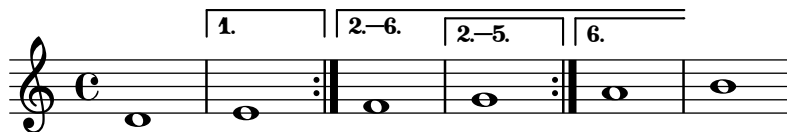
Volta bracket end hooks can be added for other bar line types.

`volta-bracket-add-volta-hook.ly`



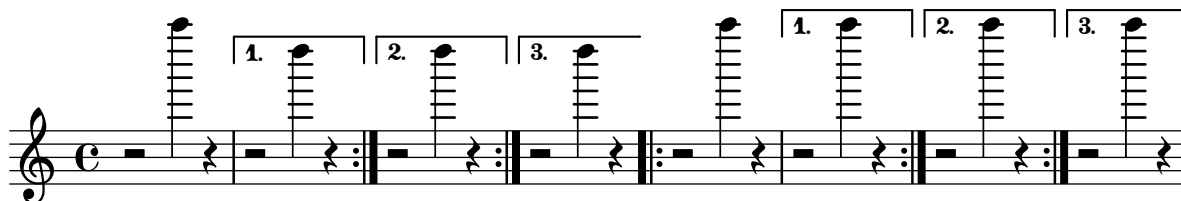
When alternatives are nested, volta brackets stack with the outermost alternative on top. In this case, alternatives for volte 2-5 and 6 are nested inside an alternative for volte 2-6.

`volta-bracket-nest.ly`



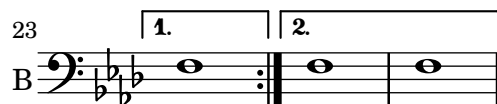
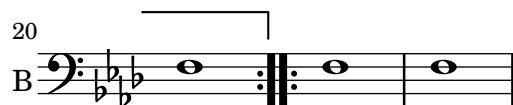
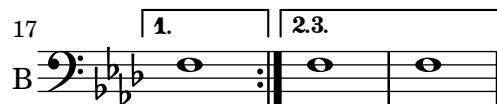
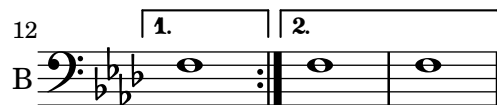
Volta brackets are vertically fit to objects below them.

volta-bracket-vertical-skylines.ly



Broken volta spanners behave correctly at their left edge in all cases.

volta-broken-left-edge.ly



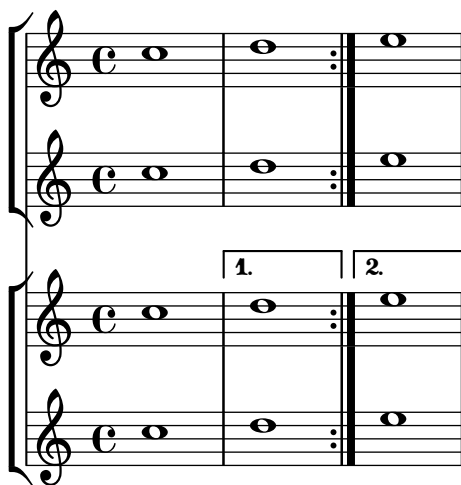
Volte using `repeatCommands` can have markup text.

`volta-markup-text.ly`



By putting `Volta_engraver` in a staff context, one can get volta brackets on staves other than the topmost one.

`volta-multi-staff-inner-staff.ly`



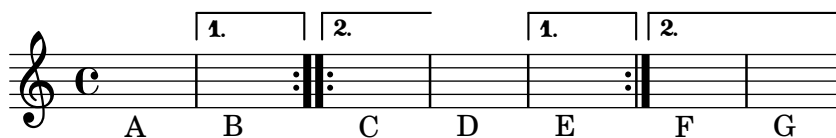
By default, the volta brackets appear only in the topmost staff.

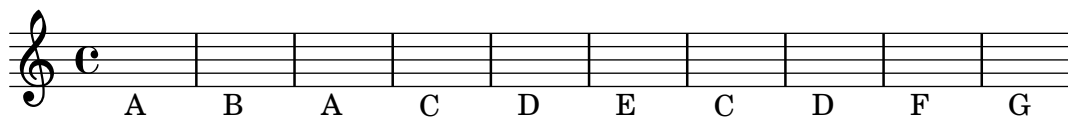
`volta-multi-staff.ly`



A final volta bracket overhanging the next section can be achieved with the `repeatCommands` property.

`volta-overhang.ly`





\volta can add volta-specific grace notes.
 volta-spec-after-grace.ly



\volta can add a volta-specific dynamic.
 volta-spec-dynamic.ly

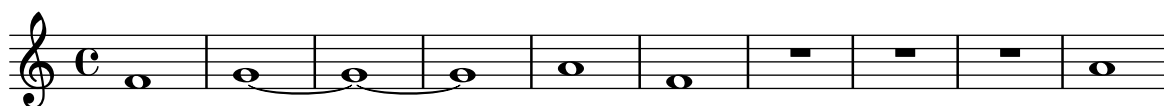


Simultaneous alternatives can appear as elements of sequential alternatives. The simultaneous alternatives are used in order as the sequential alternative is unfolded.

volta-spec-in-alternative.ly

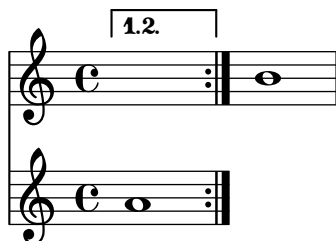


\volta is useful for nth-time-only music. Desired explanatory text must be added manually.
 volta-spec-once.ly



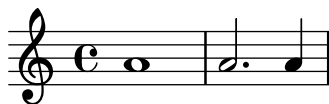
A new context inside \volta ends at the proper time. The staff with an A note should have only one measure.

volta-spec-ossia.ly



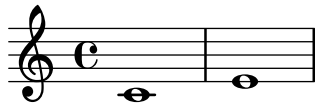
`\volta` is useful for volta-specific rhythms.

`volta-spec-rhythm.ly`



Regression test for Issue #6207. Expected output is a single staff with notes C and E.

`volta-spec-set.ly`



`\volta` can add a volta-specific tie.

`volta-spec-tie.ly`



Simultaneous alternatives in nested repeats are unfolded according to the innermost repeat. In this test, the upper voice has two groups of three and the lower voice has three groups of two.

`volta-spec-unfold-in-unfold.ly`



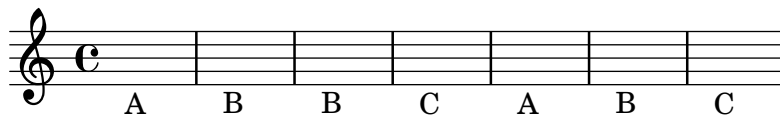
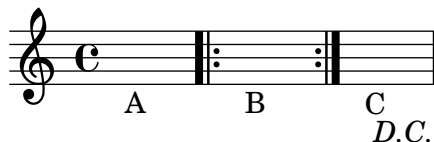
When unfolding volta-specific music, music marked for an out-of-range volta is ignored. In this case, four notes marked 1-4 should appear.

`volta-spec-unused.ly`



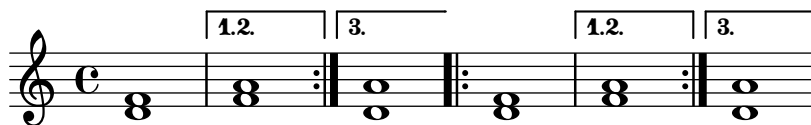
`\volta` and `\unfolded` can remove/add music in the main body of a repeated section even if they change the length. In this case, a repeat is skipped after *D.C.*

`volta-spec-volta-in-segno.ly`



`\volta` pertains to the innermost repeat. In this case, alternative notes are inside a volta repeat, so they are engraved as chords even though the volta repeat is inside an unfolded repeat.

`volta-spec-volta-in-unfold.ly`



`\volta` can remove arbitrary music from the main body of a repeated section. In each staff, a rest between those marked 1 and 2 has been removed.

`volta-unused.ly`



A vowel transition runs to the end of the line if it continues on the next line, or if the next lyric syllable is at the first note on the next line. Transition arrows are printed at the beginning of the line only when they go past the first note, or when property `after-line-breaking` is `#t`.

`vowel-transition-broken.ly`

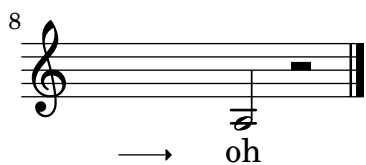
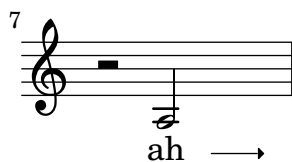
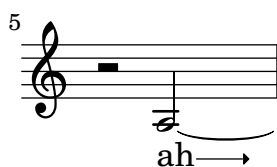
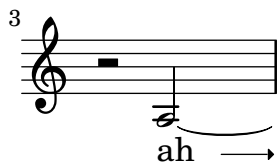
The length of the transition between one syllable and the next is indicated by the length of the arrow, which may not start immediately after a new syllable.

`vowel-transition-delayed-start.ly`

For vowel transitions, `minimum-length` refers to the drawn length of the arrow. The protrusion of the syllables and padding is in effect added to `minimum-length` for spacing. This default behavior can be changed by overriding `springs-and-rods`, which may cause the transition arrow not to be drawn if there is insufficient space (rather than adding the space necessary to draw it at `minimum-length`). `minimum-length-after-break` controls the minimum length of the segment following a system break.

`vowel-transition-minimum-length.ly`

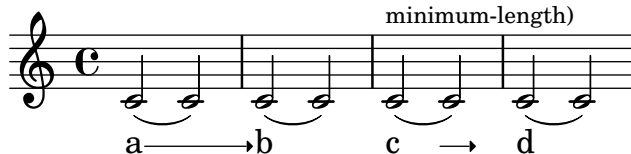
Padding increases spacing	Padding shortens arrow	Not enough space to draw arrow at minimum-length.
---------------------------------	------------------------------	---



Padding does not cause VowelTransitions to become shorter than minimum-length. Instead, space is added if necessary leaving the arrow at minimum-length.

vowel-transition-padding.ly

Padded, but
spacing is
not changed.
(Arrow is still
longer than
minimum-length)



Space is added
to allow for
padding. Arrow
is drawn at
minimum-length

5
eeeee→ffff ggggg → hhhhh

Vowel transition arrows are always drawn, but they do not protrude into the margin. Instead, space is added so that the arrow can be drawn at minimum-length.

vowel-transition-right-margin.ly

c d e VeryLongSyllable→

2

e d c VeryLongSyllable→

3

c

A vowel transition arrow may span several notes. The arrow may extend past a rest, but not past the next lyric syllable.

vowel-transition.ly

ah→oh ah→oh

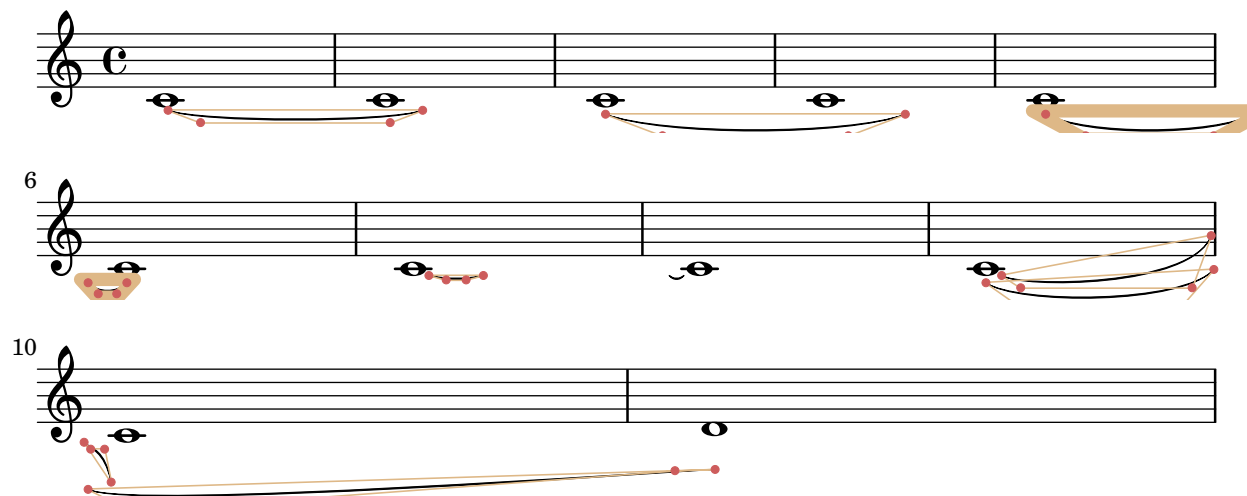
\vshape works on cross-staff slurs.

vshape-cross-staff.ly

The `\vshape` command acts like the `\shape` command, and additionally displays control points and polygons for easier tweaking of the values.

The polygons are drawn on top of other notation, and the points on top of the polygons.

vshape.ly



If you specify two different key signatures at one point, a warning is printed.

warn-conflicting-key-signatures.ly



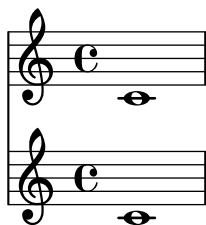
If a warning is expected, but not triggered, print out a warning about this fact. This will be used to detect missing warnings in our regtests.

warn-expected-warning-missing.ly



A warning is printed if a dynamic spanner is unterminated.

warn-unterminated-span-dynamic.ly



If the 'whiteout' property of a grob is set to a number or #t, that part of all objects in lower layers which falls under the extent of the grob's whiteout area is whited out. Here the TimeSignature whites out the Tie but not the StaffSymbol.

whiteout-lower-layers.ly





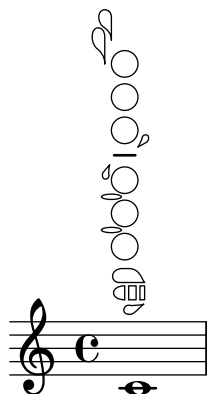
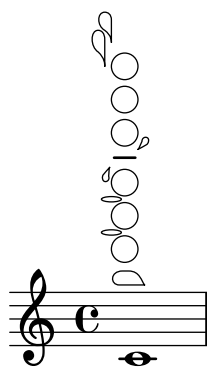
The whiteout command underlays a white background under a markup. The shape is determined by `whiteout-style`. The default is `box` which produces a rectangle. `rounded-box` produces a rounded rectangle. `outline` approximates the outline of the markup.

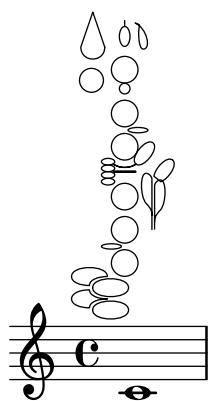
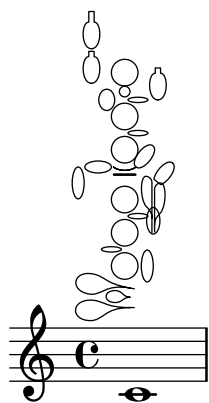
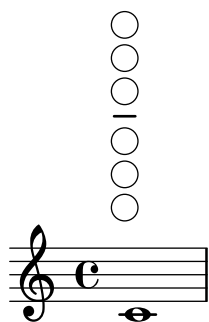
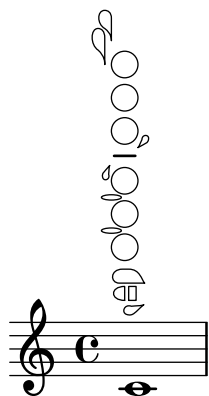
`whiteout.ly`

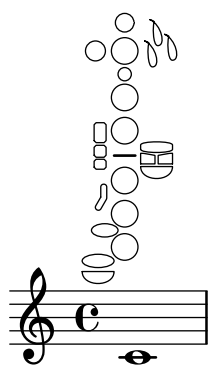
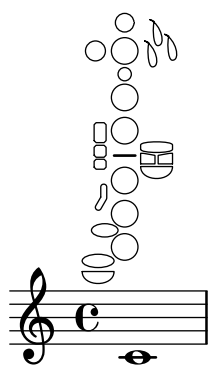
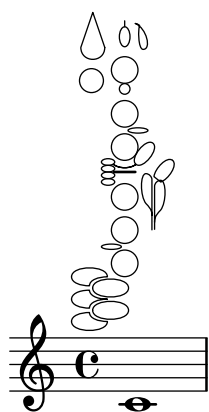
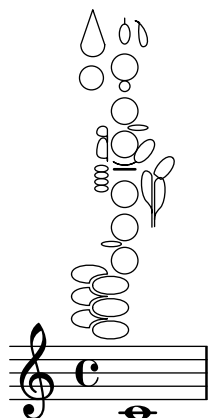


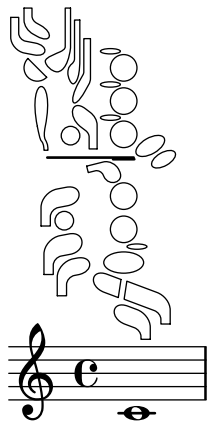
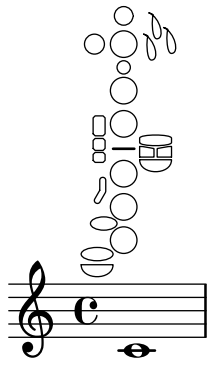
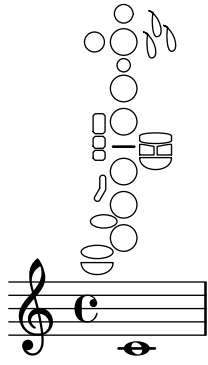
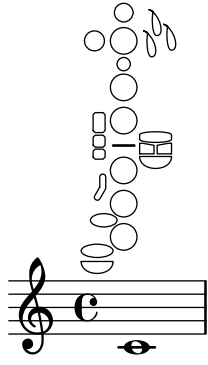
Empty woodwind diagrams for all instruments in `woodwind-diagrams.scm`.

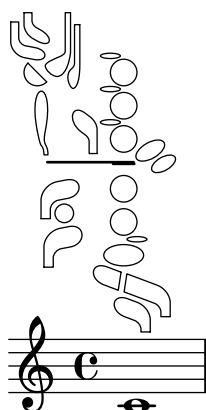
`woodwind-diagrams-empty.ly`











Woodwind diagram with partial fill and trills.

woodwind-diagrams-fill-and-trill.ly

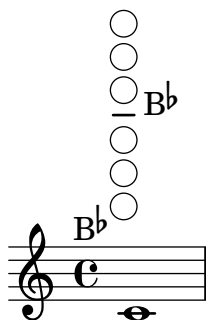
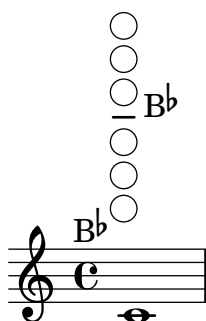
- ○ one1q
- ◐ ◑ two1h
- ◑ ◑ three3q
- ◐ ◐ four1qT
- ◐ ◑ five1qT3q
- ◑ ◑ sixT

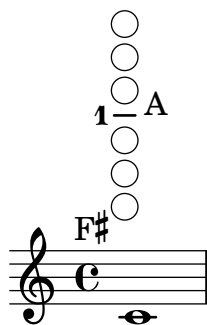
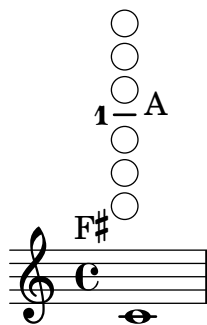
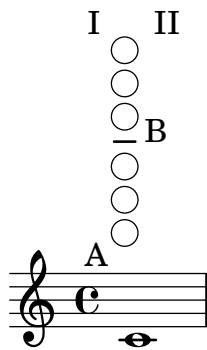
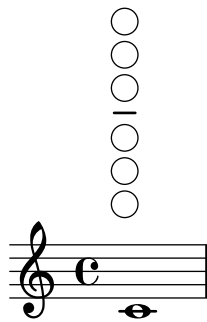
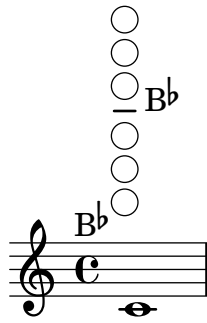
Lists all possible keys for all instruments in woodwind-diagrams.scm

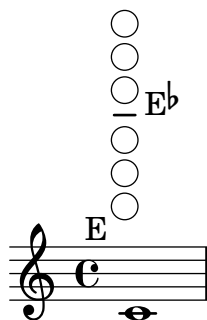
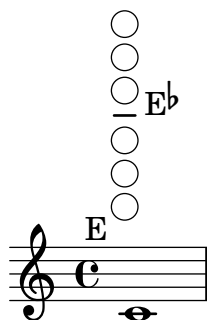
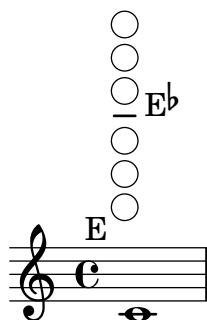
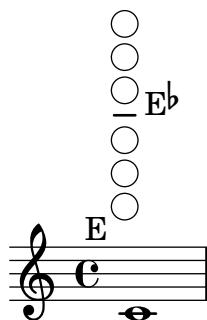
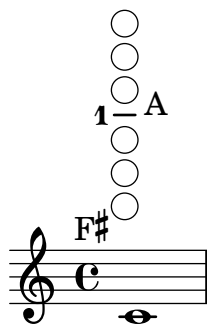
woodwind-diagrams-key-lists.ly

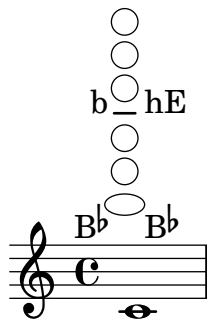
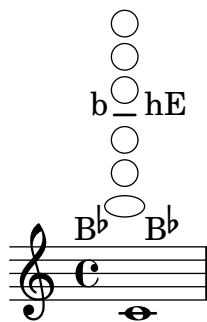
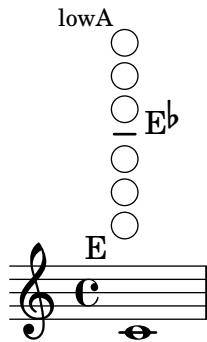
Woodwind diagrams for all instruments in woodwind-diagrams.scm with key names, one pressed per text stencil.

woodwind-diagrams-key-names.ly



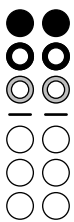






Woodwind diagram with ring key and ring trill.

woodwind-diagrams-ring-keys.ly



Woodwind diagrams with text.

woodwind-diagrams-text.ly

