

## LilyPond Regression Tests

# Introduction

This document presents proofs for LilyPond 2.19.44. 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

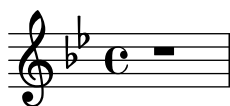
Accidentals are available in different ancient styles, which all are collected here.

`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`



Cautionary accidentals may be indicated using either parentheses (default) or smaller accidentals.

`accidental-cautionary.ly`



Accidentals are invalidated at clef changes.

`accidental-clef-change.ly`



accidentals avoid stems of other notes too.

`accidental-collision.ly`



Several automatic accidental rules aim to reproduce contemporary music notation practices:

- 'dodecaphonic style prints accidentals on every note (including naturals)

- 'neo-modern style prints accidentals on every note (not including naturals), except when a note is immediately repeated
- 'neo-modern-cautionary style acts like neo-modern, adding cautionary parentheses around accidentals.
- 'teaching prints accidentals normally, but adds cautionary accidentals when an accidental is already included in the key signature.

Both scores should show the same accidentals.

accidental-contemporary.ly



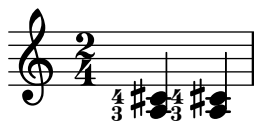
If two forced accidentals happen at the same time, only one sharp sign is printed.

accidental-double.ly



Horizontal Fingering grobs should not collide with accidentals.

accidental-fingering-collision.ly



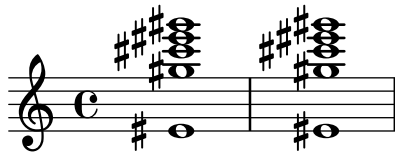
Accidentals can be forced with ! and ? even if the notes are tied. Cautionary accidentals applied to tied notes after a bar line are valid for the whole measure.

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`



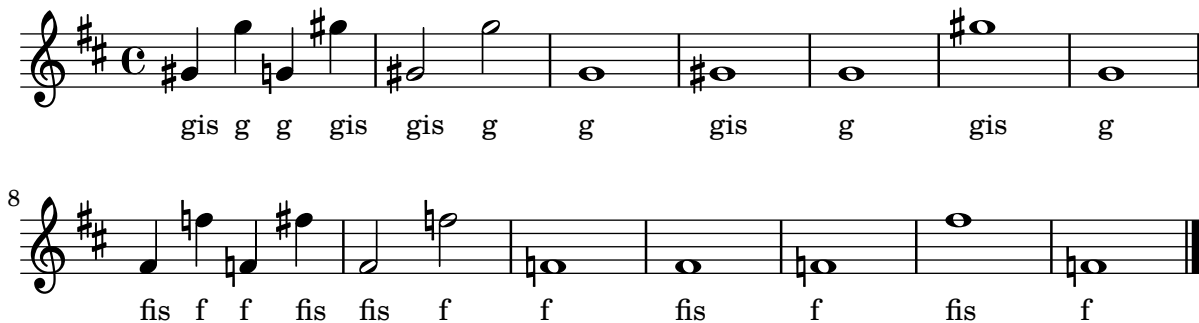
Ledger lines are shortened when there are accidentals. This happens only for the single ledger line close to the note head, and only if the accidental is horizontally close to the head.

`accidental-ledger.ly`



This shows how accidentals in different octaves are handled. The note names are also automatically printed but the octavation has been dropped out.

`accidental-octave.ly`



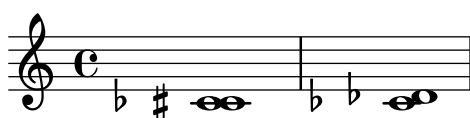
In piano accidental style, notes in both staves influence each other. In this example, each note should have an accidental.

`accidental-piano.ly`



Accidental padding works for all accidentals, including those modifying the same pitch.

`accidental-placement-padding.ly`




accidental-placement-samepitch.ly

accidental-placement.ly

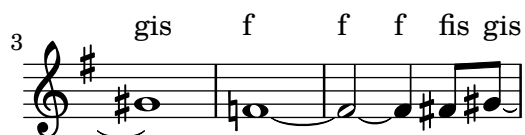


paren

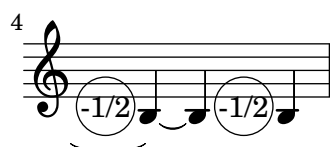
f f f fis gis



f      f      f    fis   gis



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



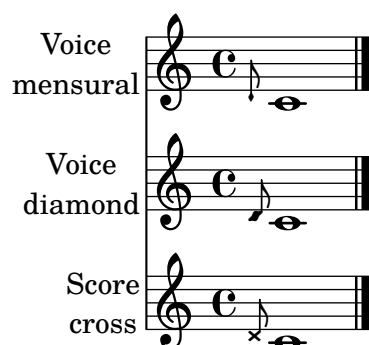
Accidentals work: the second note does not get a sharp. The third and fourth show forced and cautionary accidentals.

accidental.ly



`\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



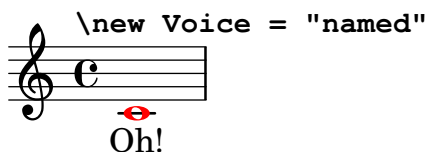
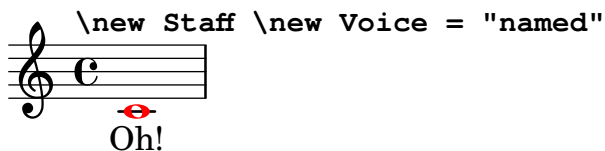
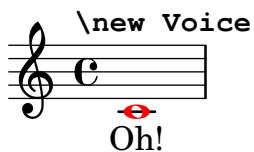
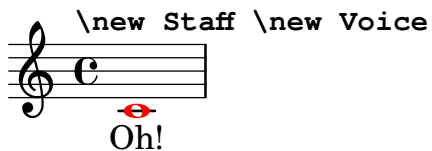
`add-stem-support` can be removed or implemented only for beamed notes.

`add-stem-support.ly`



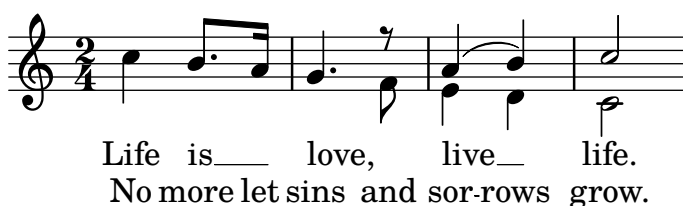
`\addlyrics` should be able to attach itself to named and unnamed `Voice` constructs. For all tests where this succeeds, the noteheads will be red.

`addlyrics-existing-context.ly`



`\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`



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

alignment-order.ly

A musical score snippet consisting of four staves. The first staff contains a treble clef, a common time signature 'C', and two eighth notes. Below the first staff is the text 'below first staff'. The second staff also contains a treble clef, a common time signature 'C', and two eighth notes. The third staff contains a treble clef, a common time signature 'C', and a sixteenth-note triplet of six notes. Above the triplet is the text 'this' and 'above staff' with a brace and the number '6' indicating the triplet. Below the triplet is the text 'staff last'. The fourth staff contains a treble clef, a common time signature 'C', and two eighth notes.

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

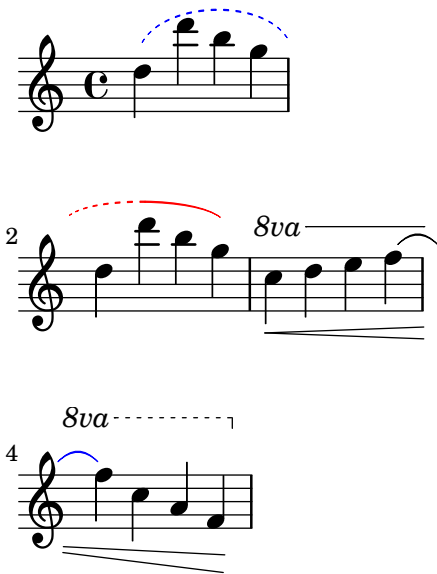
alignment-vertical-manual-setting.ly

The image displays three systems of musical notation, each consisting of three staves. The first system shows three whole notes (crotchets) on the first staff, aligned vertically with two whole notes on the second staff and one whole note on the third staff. The second system shows two whole notes on the first staff, aligned vertically with two whole notes on the second staff and one whole note on the third staff. The third system shows one whole note on the first staff, aligned vertically with two whole notes on the second staff and one whole note on the third staff. The notes are positioned such that they are vertically aligned across the staves, demonstrating manual setting for alignment.



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`



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`



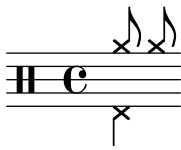
The gaps between an `AmbitusLine` and its note heads are set by the `gap` property. By default, `gap` is a function that reduces the gap for small intervals (e.g. a fourth), so that the line remains visible.

`ambitus-gap.ly`



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 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



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`



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

`arpeggio-bracket.ly`



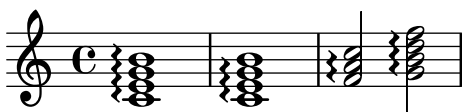
Arpeggios stays clear of accidentals and flipped note heads.

`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 behaviour.

`arpeggio-no-overshoot.ly`



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

`arpeggio-no-staff-symbol.ly`



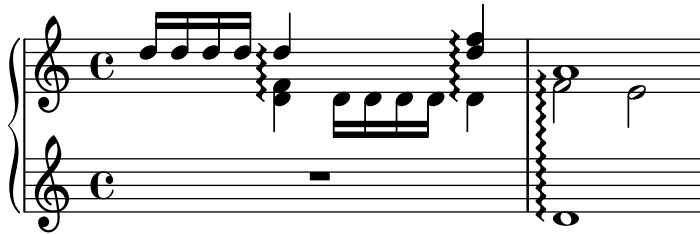
There is a variant of the arpeggio sign that uses a 'vertical slur' instead of the wiggle.

`arpeggio-parenthesis.ly`



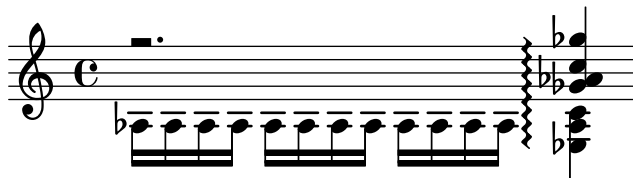
Cross-staff or -voice arpeggios which include single note heads as anchors do not collide with previous note heads or prefatory material.

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



auto-beam-exceptions.ly

A series of five musical staves illustrating exceptions to autobeamer rules. Staff 1: 2/4 time, eighth notes beamed in pairs. Staff 2: 3/4 time, eighth notes beamed in pairs. Staff 3: 3/4 time, eighth notes beamed in pairs, with a common time signature change at the end. Staff 4: Common time, eighth notes beamed in pairs, with a 6/8 time signature change at the end. Staff 5: 6/8 time, eighth notes beamed in pairs.

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

auto-beam-no-beam.ly



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

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



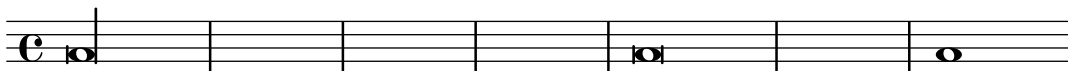
Tuplet-spanner should not put (visible) brackets on beams even if they're auto generated.

auto-beam-tuplets.ly



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

auto-beam.ly



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).

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



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

The image shows a musical staff with a treble clef and a key signature of one flat (B-flat). The staff contains three measures of music. The first measure has a beam connecting four eighth notes (G4, A4, B4, C5). The second measure has a beam connecting six eighth notes (G4, A4, B4, C5, B4, A4). The third measure has a beam connecting eight eighth notes (G4, A4, B4, C5, B4, A4, G4, F4). The beams are correctly placed to end at the 4/8, 6/8, and 8/8 marks.

Beams should end at 2/8 and 4/8



The image shows a musical staff in 2/4 time with a treble clef. It contains six groups of beamed eighth notes. The first three groups are pairs of eighth notes, and the last three are groups of four eighth notes. The beams for the first three groups end at the 2/8 mark, and the beams for the last three groups end at the 4/8 mark.

[illegible]

Beams should end at 1/16 and 2/16

The image shows a musical staff with a treble clef and a 2/16 time signature. It contains several measures of music. The first measure has a single eighth note. The second measure has two eighth notes beamed together. The third measure has a single eighth note. The fourth measure has a single eighth note. The fifth measure has a single eighth note. The sixth measure has a single eighth note. The seventh measure has a single eighth note. The eighth measure has a single eighth note. The ninth measure has a single eighth note. The tenth measure has a single eighth note. The eleventh measure has a single eighth note. The twelfth measure has a single eighth note. The thirteenth measure has a single eighth note. The fourteenth measure has a single eighth note. The fifteenth measure has a single eighth note. The sixteenth measure has a single eighth note. The seventeenth measure has a single eighth note. The eighteenth measure has a single eighth note. The nineteenth measure has a single eighth note. The twentieth measure has a single eighth note. The twenty-first measure has a single eighth note. The twenty-second measure has a single eighth note. The twenty-third measure has a single eighth note. The twenty-fourth measure has a single eighth note. The twenty-fifth measure has a single eighth note. The twenty-sixth measure has a single eighth note. The twenty-seventh measure has a single eighth note. The twenty-eighth measure has a single eighth note. The twenty-ninth measure has a single eighth note. The thirtieth measure has a single eighth note. The thirty-first measure has a single eighth note. The thirty-second measure has a single eighth note. The thirty-third measure has a single eighth note. The thirty-fourth measure has a single eighth note. The thirty-fifth measure has a single eighth note. The thirty-sixth measure has a single eighth note. The thirty-seventh measure has a single eighth note. The thirty-eighth measure has a single eighth note. The thirty-ninth measure has a single eighth note. The fortieth measure has a single eighth note. The forty-first measure has a single eighth note. The forty-second measure has a single eighth note. The forty-third measure has a single eighth note. The forty-fourth measure has a single eighth note. The forty-fifth measure has a single eighth note. The forty-sixth measure has a single eighth note. The forty-seventh measure has a single eighth note. The forty-eighth measure has a single eighth note. The forty-ninth measure has a single eighth note. The fiftieth measure has a single eighth note. The fifty-first measure has a single eighth note. The fifty-second measure has a single eighth note. The fifty-third measure has a single eighth note. The fifty-fourth measure has a single eighth note. The fifty-fifth measure has a single eighth note. The fifty-sixth measure has a single eighth note. The fifty-seventh measure has a single eighth note. The fifty-eighth measure has a single eighth note. The fifty-ninth measure has a single eighth note. The sixtieth measure has a single eighth note. The sixty-first measure has a single eighth note. The sixty-second measure has a single eighth note. The sixty-third measure has a single eighth note. The sixty-fourth measure has a single eighth note. The sixty-fifth measure has a single eighth note. The sixty-sixth measure has a single eighth note. The sixty-seventh measure has a single eighth note. The sixty-eighth measure has a single eighth note. The sixty-ninth measure has a single eighth note. The seventieth measure has a single eighth note. The seventy-first measure has a single eighth note. The seventy-second measure has a single eighth note. The seventy-third measure has a single eighth note. The seventy-fourth measure has a single eighth note. The seventy-fifth measure has a single eighth note. The seventy-sixth measure has a single eighth note. The seventy-seventh measure has a single eighth note. The seventy-eighth measure has a single eighth note. The seventy-ninth measure has a single eighth note. The eightieth measure has a single eighth note. The eighty-first measure has a single eighth note. The eighty-second measure has a single eighth note. The eighty-third measure has a single eighth note. The eighty-fourth measure has a single eighth note. The eighty-fifth measure has a single eighth note. The eighty-sixth measure has a single eighth note. The eighty-seventh measure has a single eighth note. The eighty-eighth measure has a single eighth note. The eighty-ninth measure has a single eighth note. The ninetieth measure has a single eighth note. The ninety-first measure has a single eighth note. The ninety-second measure has a single eighth note. The ninety-third measure has a single eighth note. The ninety-fourth measure has a single eighth note. The ninety-fifth measure has a single eighth note. The ninety-sixth measure has a single eighth note. The ninety-seventh measure has a single eighth note. The ninety-eighth measure has a single eighth note. The ninety-ninth measure has a single eighth note. The hundredth measure has a single eighth note.

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



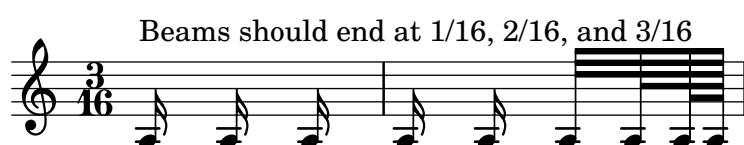
1/8 beams should end at 3/4; smaller beams should end at 1/4, 2/4, and 3/4



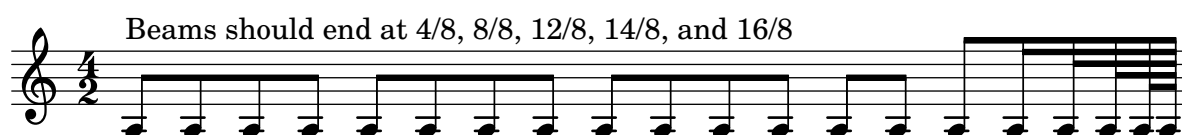
Beams should end at 3/8



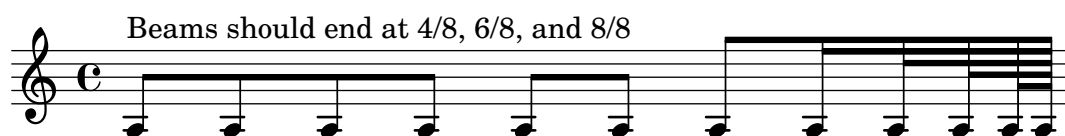
Beams should end at 1/16, 2/16, and 3/16



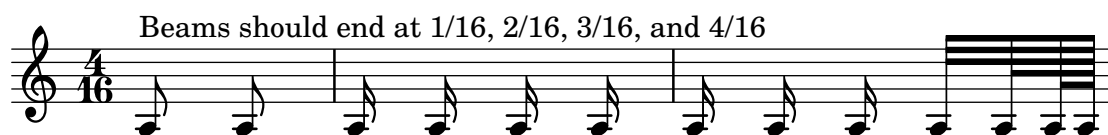
Beams should end at 4/8, 8/8, 12/8, 14/8, and 16/8



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



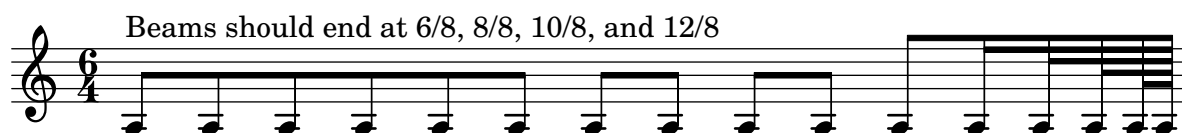
Beams should end at 1/16, 2/16, 3/16, and 4/16



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

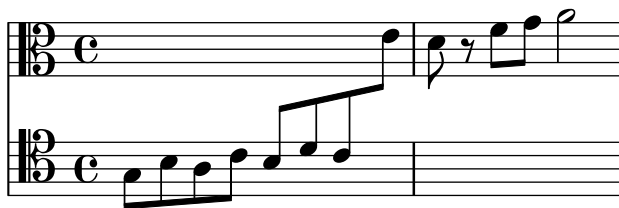
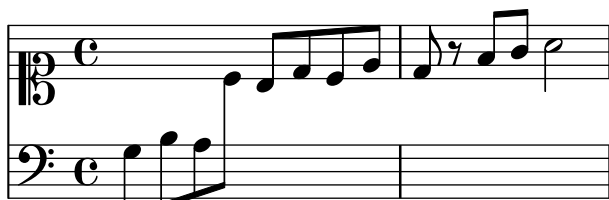
2

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

autobeam-tuplet-recheck.ly

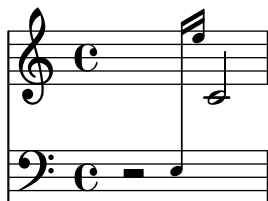
Other clefs for the autochanger may be set. This works for implicitly created staves only. The first example should turn at b with soprano-clef in the upper Staff. The second example should turn at d' with alto-clef in the upper and tenor-clef in the lower Staff.

autochange-clefs.ly



Grace notes are placed on the appropriate staff.

autochange-inside-grace.ly



`\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.

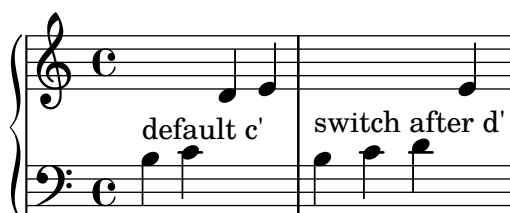
The expected output of this test is three identical measures.

autochange-relative.ly



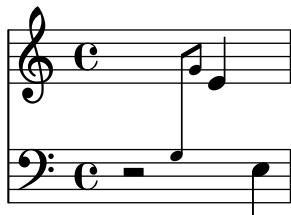
Other turning points for the autochanger are possible.

autochange-turning-pitch.ly



Grace notes are placed on the appropriate staff.

autochange-with-grace.ly



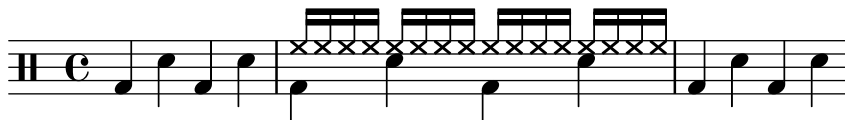
The bottom-level contexts in polyphony shorthand are allocated a context id in order of creation, starting with "1". This snippet will fail to compile if either voice has an invalid context-id string.

automatic-polyphony-context-id.ly



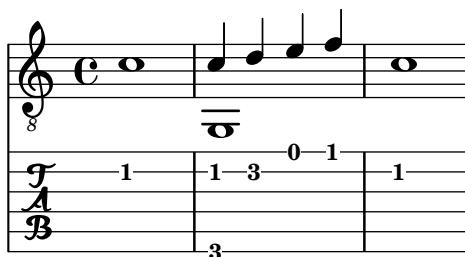
In a DrumStaff, automatic polyphony can be used without explicitly initializing separate voices.

automatic-polyphony-drumstaff.ly



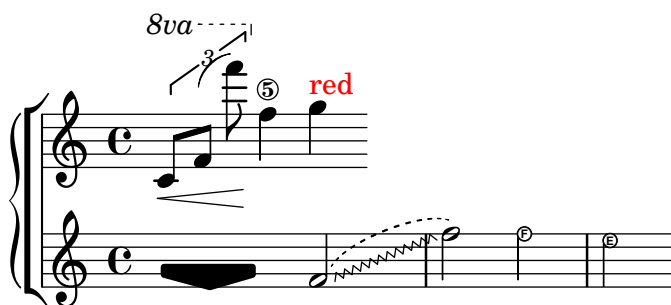
In a TabStaff, automatic polyphony can be used without explicitly initializing separate voices.

automatic-polyphony-tabstaff.ly



Exercise all output functions

backend-exercice.ly



backend-svg.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.

## Solo Cello Suite II

Johann Sebastian Bach (1685–1750)

### Sarabande

6

11

16

21

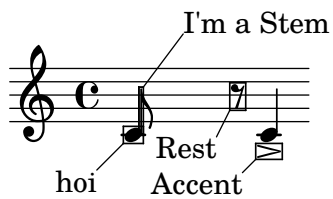
25

7

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, 3/4 time, and B-flat major. It consists of six staves of music. The first staff begins with a treble clef and a key signature of one flat. The second staff is marked with a '6' at the beginning. The third staff is marked with an '11' at the beginning. The fourth staff is marked with a '16' at the beginning. The fifth staff is marked with a '21' at the beginning. The sixth staff is marked with a '25' at the beginning. The score includes various musical notations such as eighth notes, sixteenth notes, and trills (tr). The piece concludes with a final measure marked with a '7'.

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

`balloon.ly`



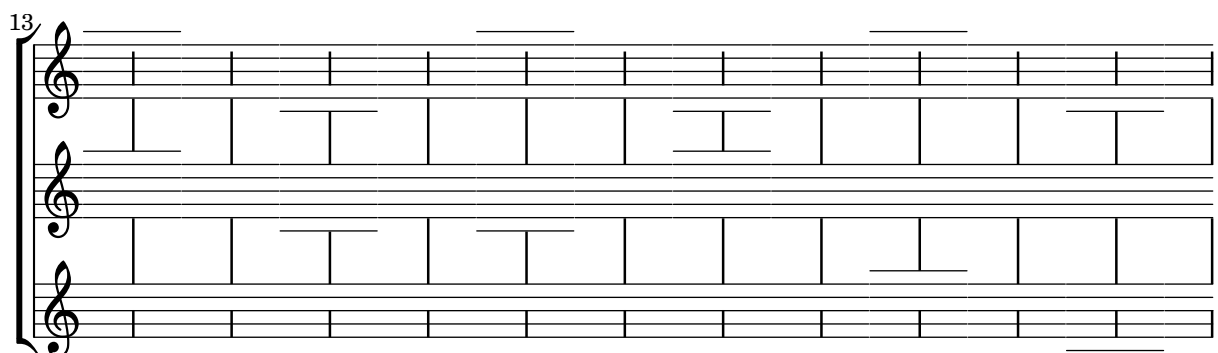
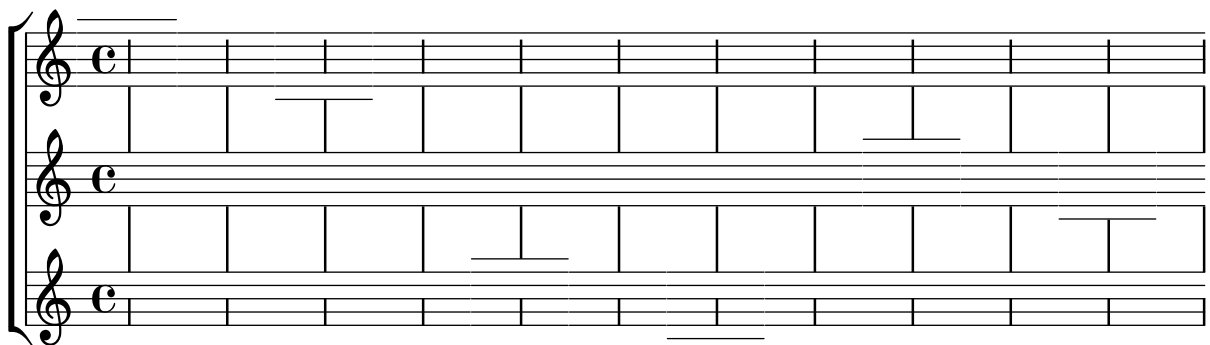
The meaning of `|` is stored in the identifier `"|"`.

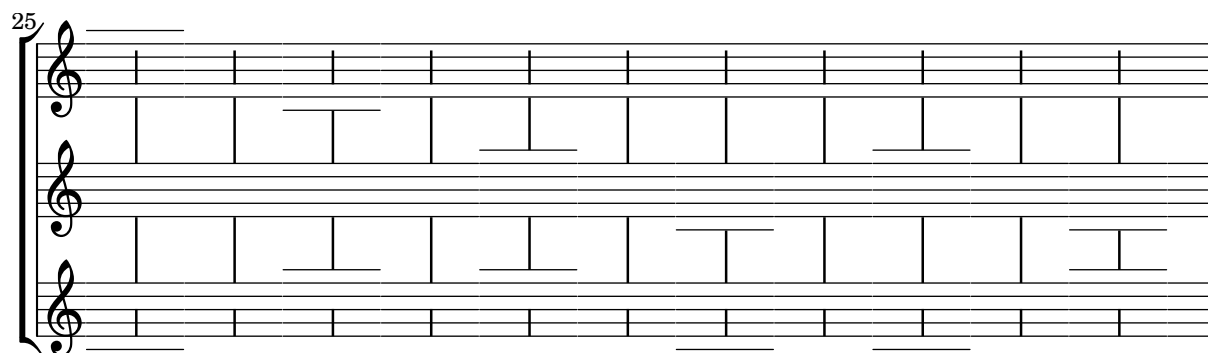
`bar-check-redefine.ly`



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.

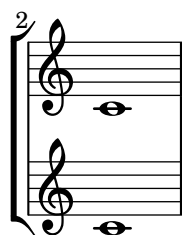
`bar-extent.ly`





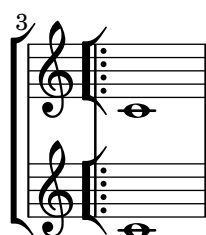
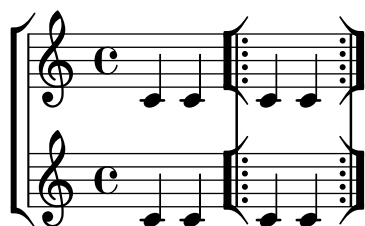
New bar line glyphs can be defined in Scheme.

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



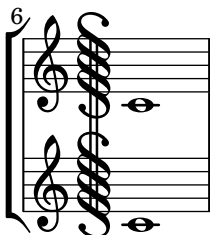
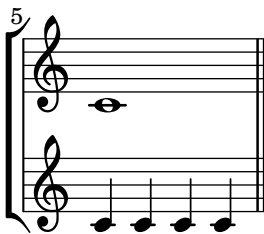
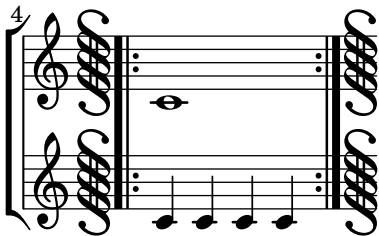
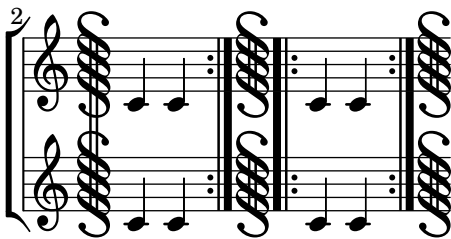
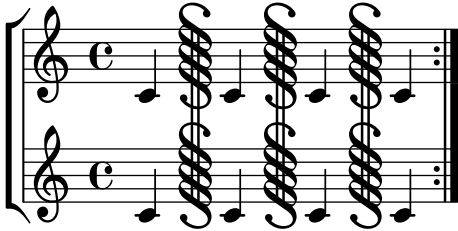
New bar line styles can be defined by `\defineBarLine`.

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



Segno bar lines can be used to mark the begin and the end of a segno part.

bar-line-segno.ly



Various types of bar lines can be drawn.



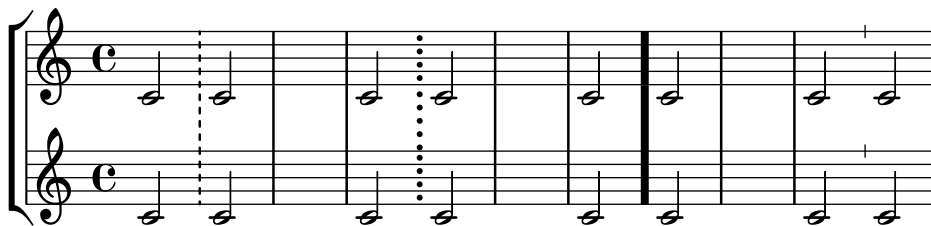
The dashes in a dashed bar line covers staff lines exactly. Dashed barlines between staves start and end on a half dash precisely.

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 "|."`

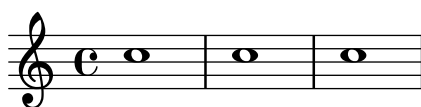
A ticked bar line is a short line of the same length as a staff space, centered on the top-most barline.

`bar-lines.ly`



Bar numbers check may be inserted to check whether the current bar number is correct.


`bar-number-check-warning.ly`



This checks the warning of `\barNumberCheck`.

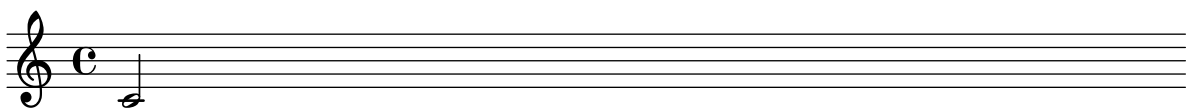
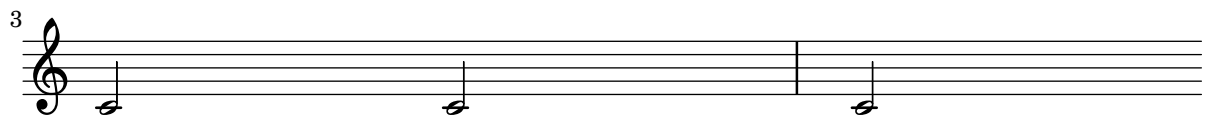
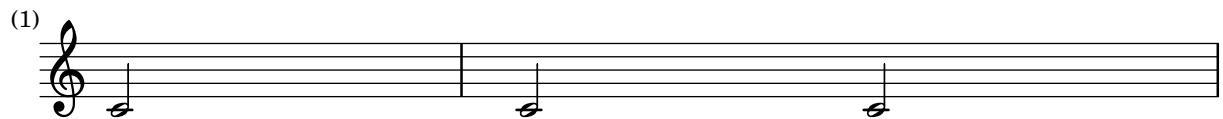
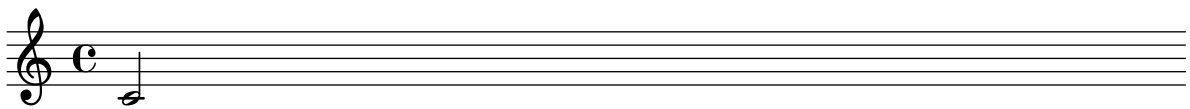
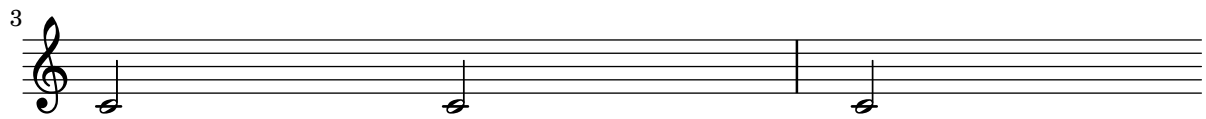
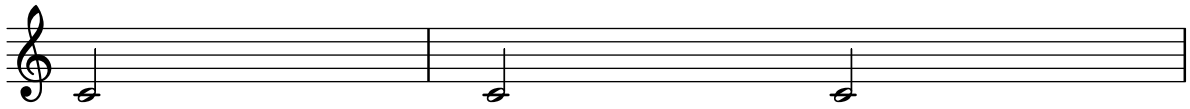
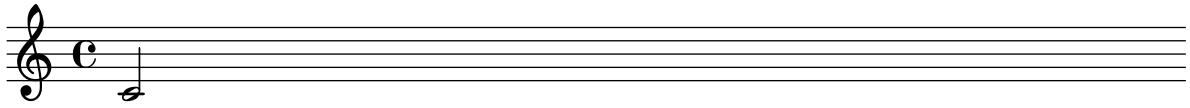
bar-number-check.ly

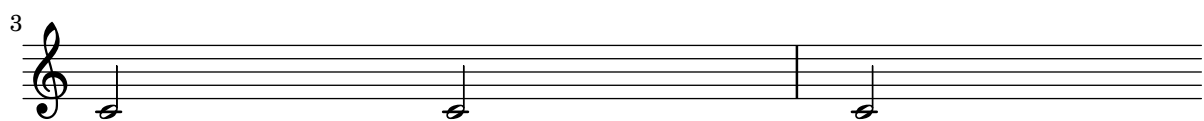
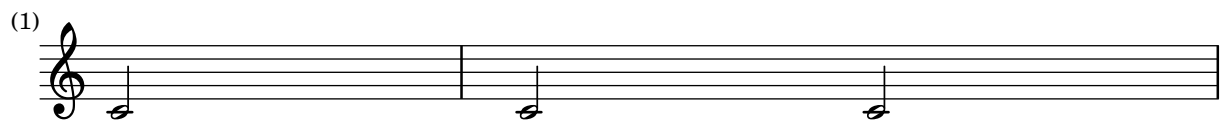
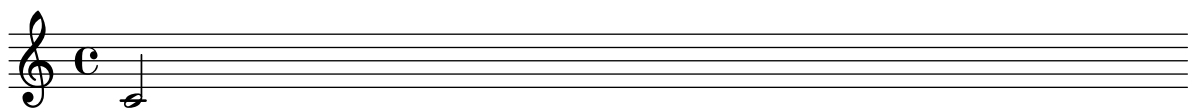
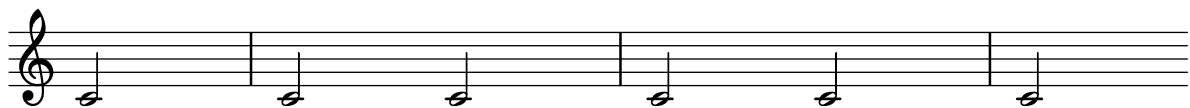
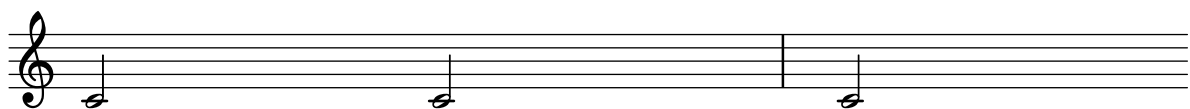
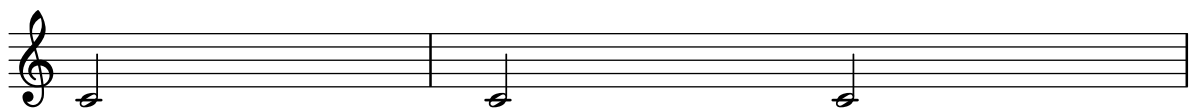
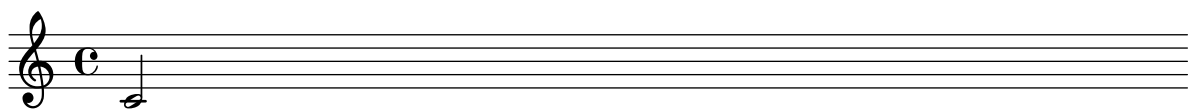
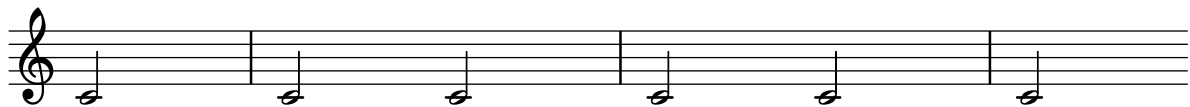
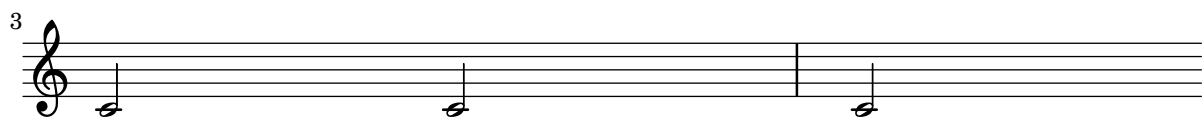
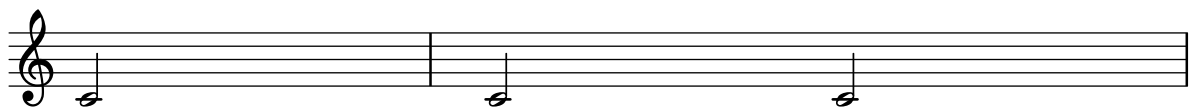
**\barNumberCheck #3**  
**\barNumberCheck #1**



A musical staff with a treble clef and a common time signature (C). It contains two quarter notes: the first on the second line (F4) and the second on the third line (G4).

The `barNumberVisibility` property controls at what intervals bar numbers are printed.  
`bar-number-visibility.ly`





(7)

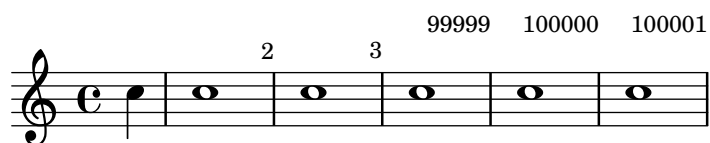
Bar numbers can automatically reset at volta repeats.

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.

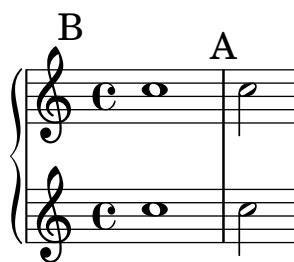
To prevent clashes at the beginning of a line, the padding may have to be increased.

bar-number.ly



Markings can be attached to (invisible) barlines.

bar-scripts.ly



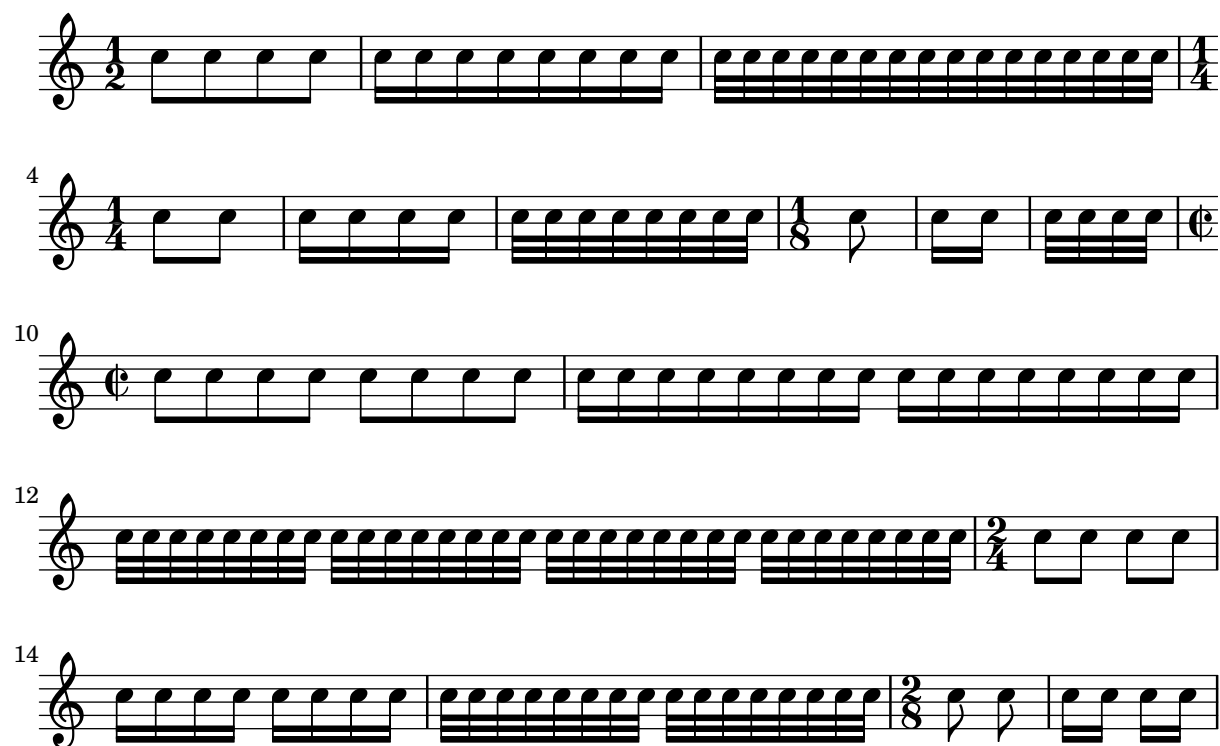
A knee is made automatically when a horizontal beam fits in a gap between note heads that is larger than a predefined threshold.

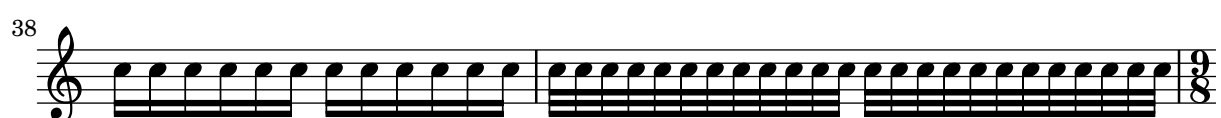
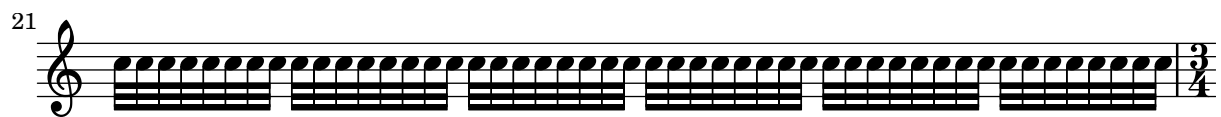
beam-auto-knee.ly

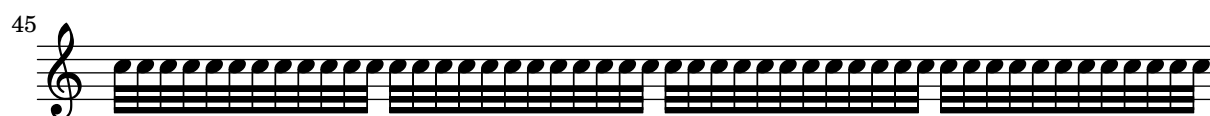


There are presets for the auto-beam engraver in the case of common time signatures.

beam-auto.ly

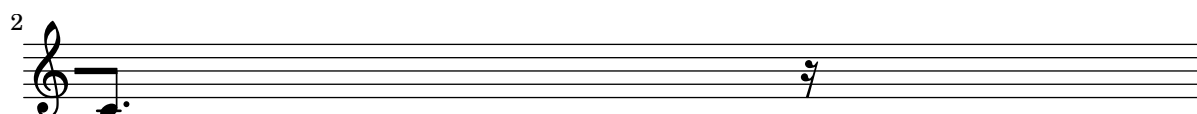
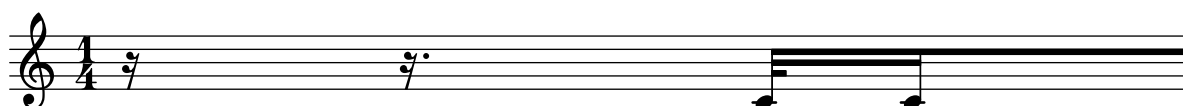






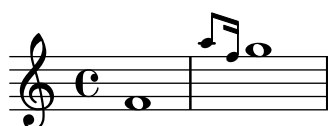
beamlets don't run to end of line if there are no other beamlets on the same height.

beam-beamlet-break.ly



Beamlets in grace notes remain readable.

beam-beamlet-grace.ly



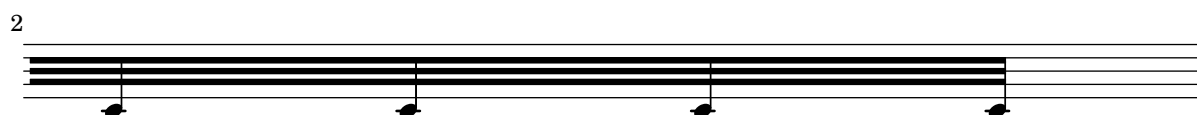
Default beaming patterns can be set for the current time signature.

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.

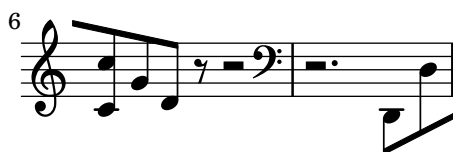
beam-break.ly

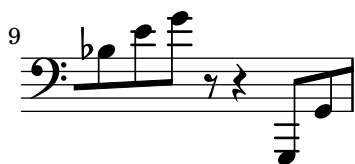


Some classic examples of broken beams, all taken from Scriabin Op. 11, No. 1.

beam-broken-classic.ly

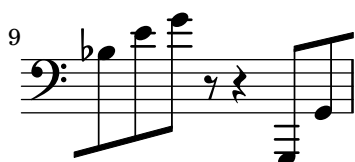
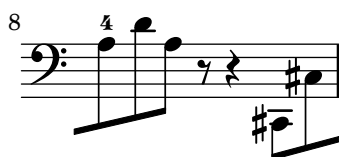
\override Beam.positions = #beam::place-broken-parts-individually (default)





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

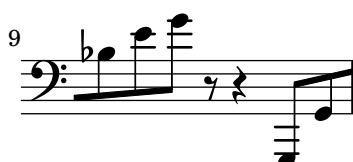
Returns y-positions at the ends of the beam such that beams align-across-breaks.





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

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



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



Manual beams do not collide with notes.

beam-collision-beamcount.ly



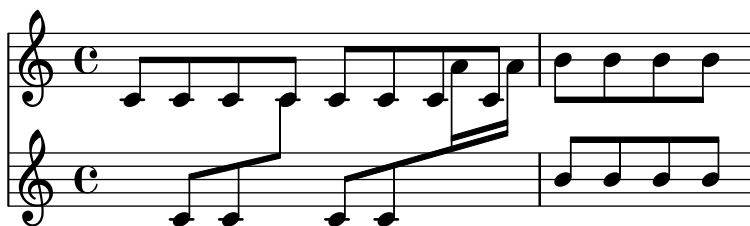
beam-collision-classic.ly



cross staff beams work with collisions.

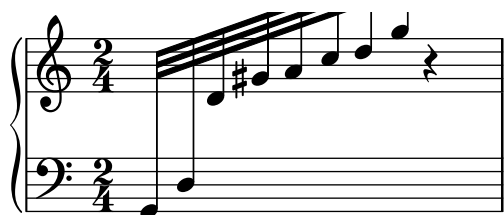
beam-collision-cross-staff.ly





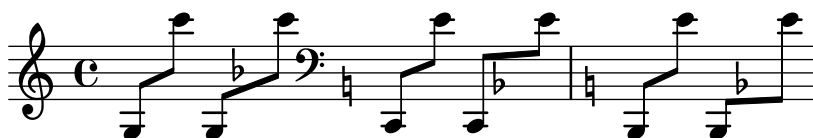
Cross staff beams do collision avoidance.

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



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

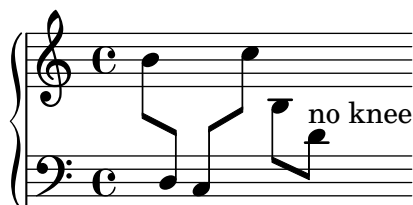


Fully concave beams should be horizontal. Informally spoken, concave refers to the shape of the notes that are opposite a beam. If an up-beam has high notes on its center stems, then we call it concave.

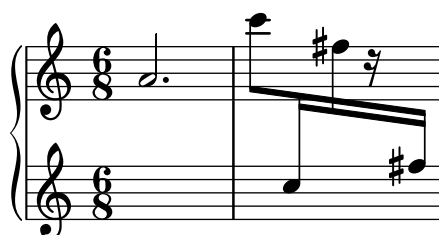
If a beam fails a test, the desired slope is printed next to it.  
 beam-concave.ly



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



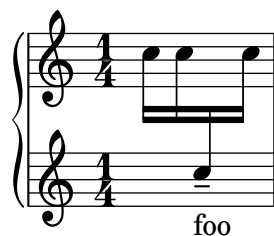
Placement of beamed cross staff rests should be reasonably close to beam.  
 beam-cross-staff-rest.ly





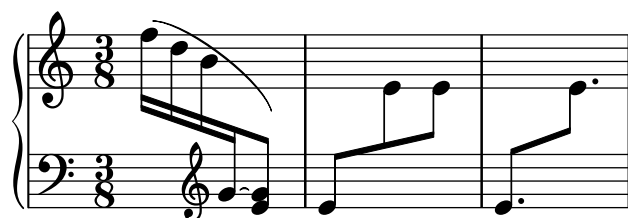
scripts don't trigger beam formatting. If this does happen, we can have a cyclic dependency on Y-positions of staves.

`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`



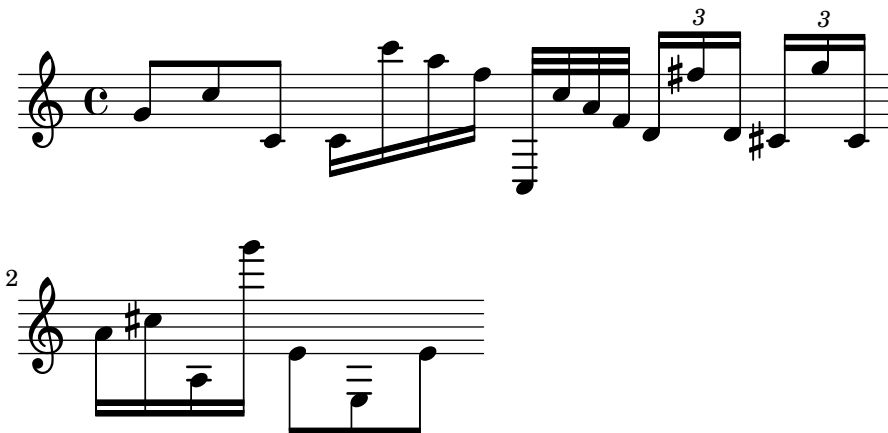
Beamed stems have standard lengths if possible. Quantization is switched off in this example.

`beam-default-lengths.ly`



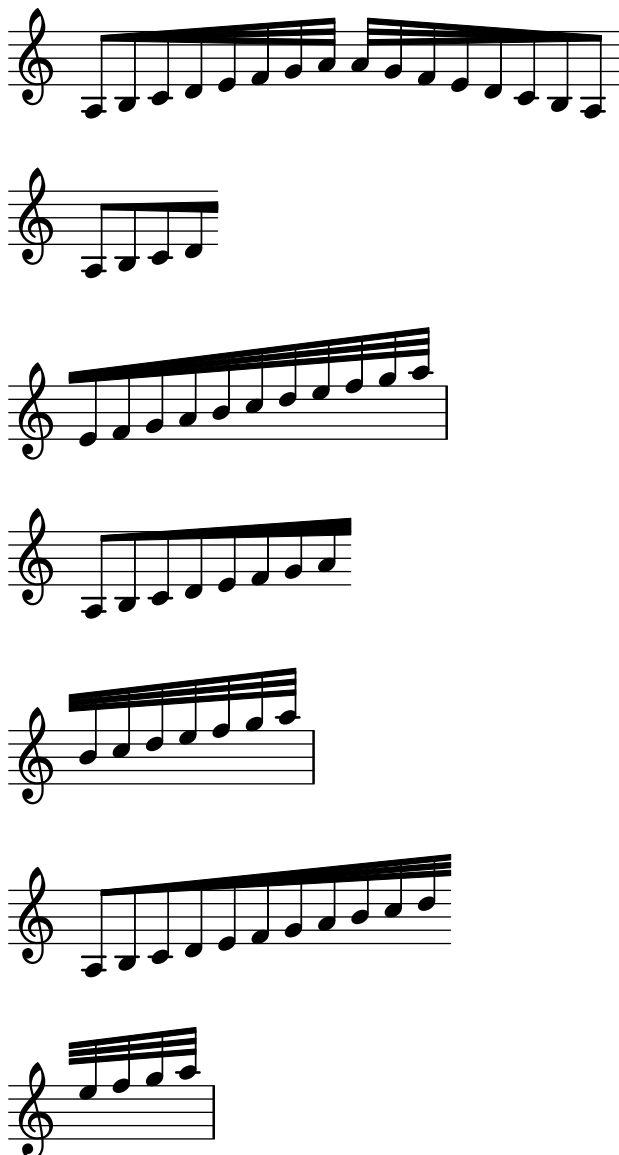
Beams should behave reasonably well, even under extreme circumstances. Stems may be short, but noteheads should never touch the beam. Note that under normal circumstances, these beams would get knees. Here `Beam.auto-knee-gap` was set to false.

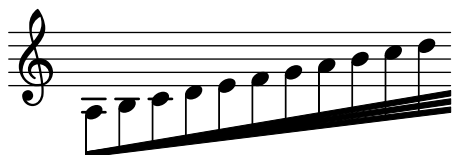
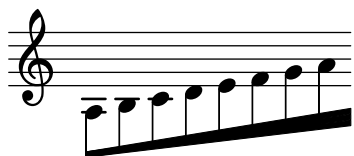
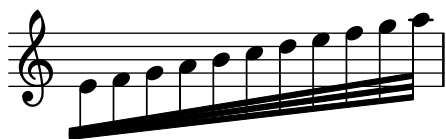
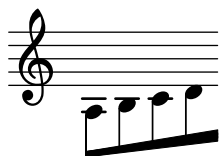
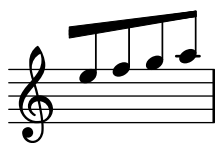
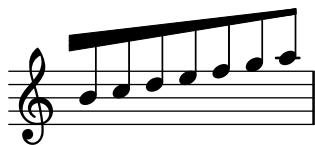
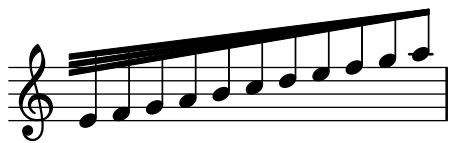
beam-extreme.ly

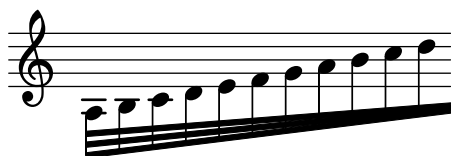
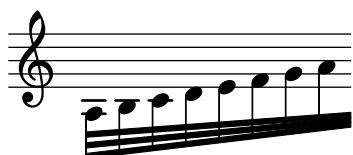
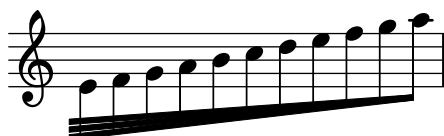
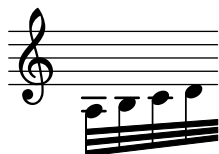


Feathered beams should have the same progress of their feathering at the end of a line break as they do at the beginning of the next line.

beam-feather-breaking.ly







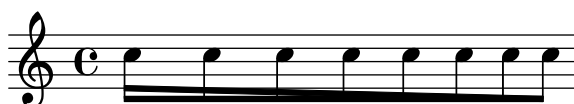
In feathered beams, stems in knees reach up to the feathered part correctly.

`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`



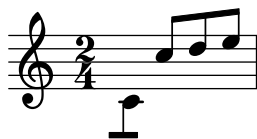
Even very flat but slanted patterns should give slanted beams.

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



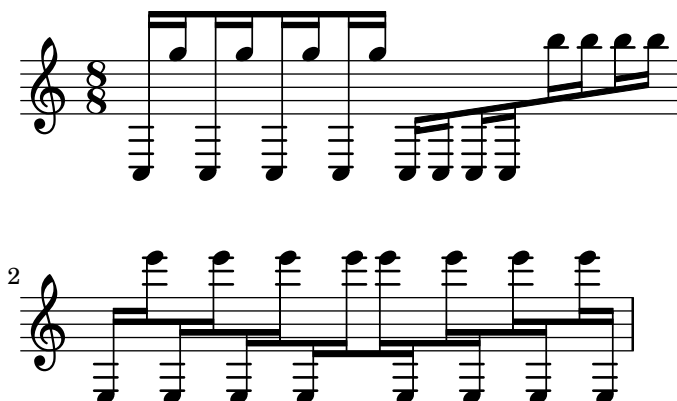
Funky kneed beams with beamlets also work. The beamlets should be pointing to the note head.

beam-funky-beamlet.ly



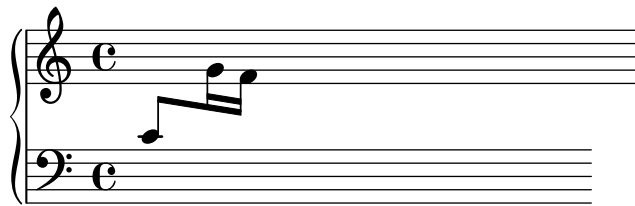
In complex configurations of knee beaming, according to Paul Roberts, the first stem of a beam determines the direction of the beam, and as such the way that following (kneed) stems attach to the beam. This is in disagreement with the current algorithm.

beam-funky.ly



Beams can be placed across a PianoStaff.

beam-isknee.ly



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

beam-knee-symmetry.ly



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

`beam-outside-beamlets.ly`



Explicit beams may cross barlines.

`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`

A series of musical staves in treble clef, 3/4 time, testing different beam quantization rules. The first staff shows a sequence of eighth notes. The second staff, starting at measure 6, shows eighth notes with a '(2.19,2.19)' quant label above the first beam. The third staff, starting at measure 12, shows eighth notes with '(-0.19,-0.19)' quant labels above three of the beams. The fourth staff, starting at measure 18, shows eighth notes. The fifth staff, starting at measure 24, shows eighth notes with a '(3,3)' quant label above the first beam.

Stem lengths take precedence over beam quants: ‘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



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



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



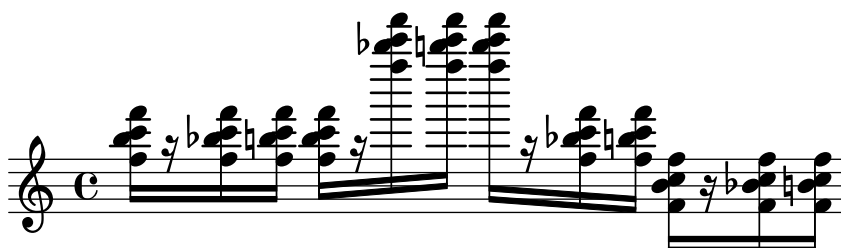
Quarter notes may be beamed: the beam is halted momentarily.

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



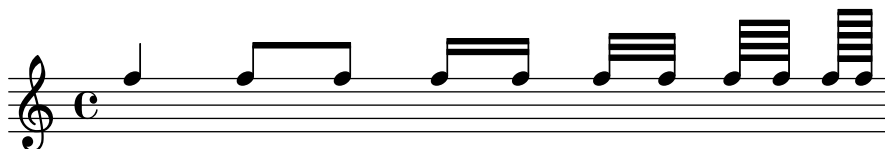
Engraving second intervals is tricky. We used to have problems with seconds being too steep, or getting too long stems. In a file like this, showing seconds, you'll spot something fishy very quickly.

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



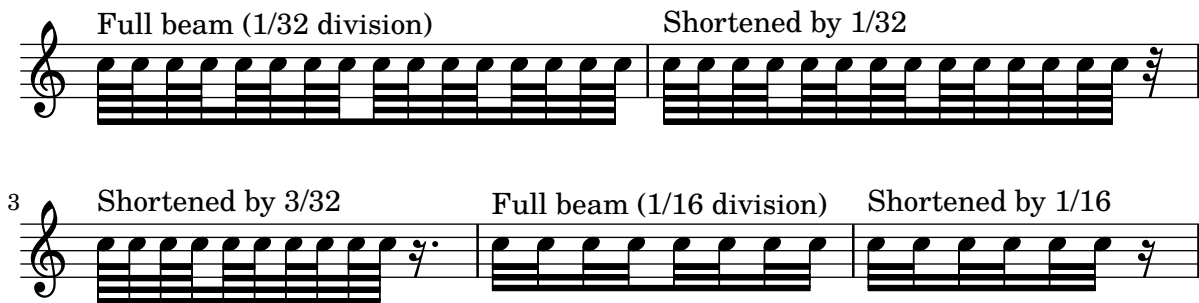
Beam count at subdivisions should match the location of the current subdivision. However, if the groups are equal or longer than quarter notes, one beam should always be left.

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



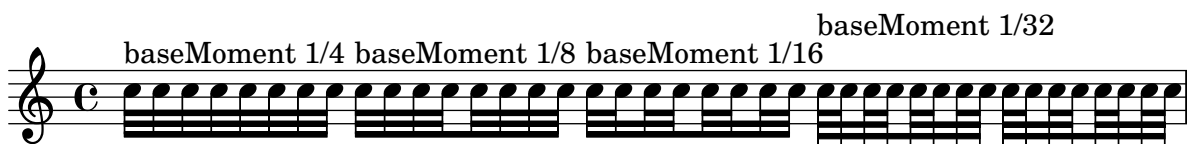
Tuplets that span more than one beat should be subdivided if subdivideBeams is  $\#t$ . In this example, the beams should be subdivided every 1/8.

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



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



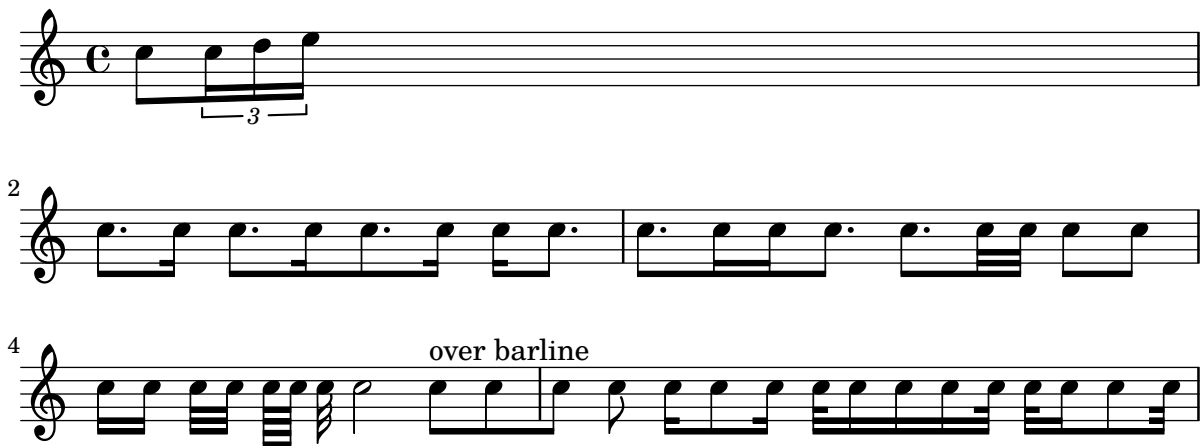
Beams in a completed tuplet should be continuous.

beaming-tuplet-regular.ly



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

beaming.ly



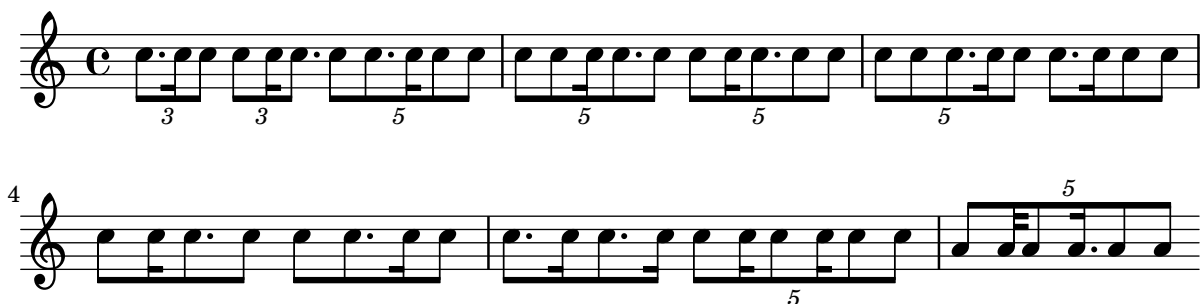
Beamlets can be set to point in the direction of the beat to which they belong. The first beam avoids sticking out flags (the default); the second beam strictly follows the beat.

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 tuplets as well as in ordinary time.

beamlet-test.ly



Beaming can be also given explicitly.

beams.ly



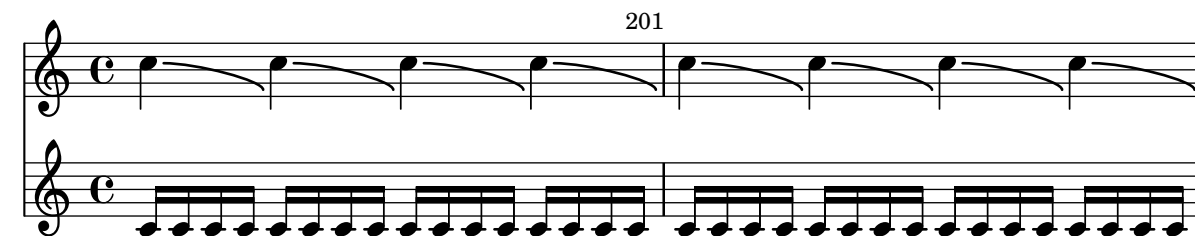
Falls and doits can be created with bendAfter. They run to the next note, or to the next barline. Microtone bends (i.e. \bendAfter #3.5) are also supported.

bend-after.ly



Bends should not be effected by the full width of a NonMusicalPaperColumn. The bends should have identical X spans in the two examples.

bend-bound.ly



Bends avoid dots, but only if necessary.

bend-dot.ly



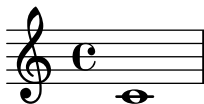
This input file contains a UTF-8 BOM not at the very beginning, but on the first line after the first byte. LilyPond should gracefully ignore this BOM as specified in RFC 3629, but print a warning.

bom-mark.ly



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

book-identifier-markup.ly



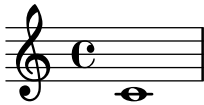
Page ?

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

book-label-no-segfault.ly

foo

bookpart-variable.ly



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.

### II SECOND PART

## **Book with several parts**

Second part, with different margins  
and page header.



3

## **Book with several parts**

Third part

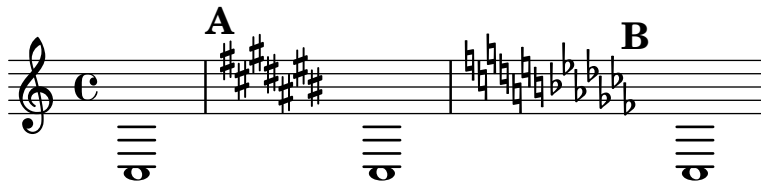
### Table of Contents

First part	1
Second part	2
Third part	3



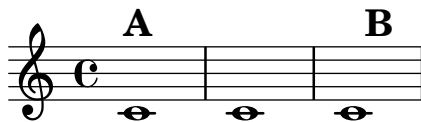
The default callback for `break-align-anchor` in clefs and time/key signatures reads the `break-align-anchor-alignment` property to align the anchor to the extent of the break-aligned grob.

`break-alignment-anchor-alignment.ly`



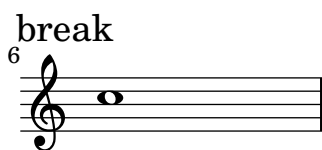
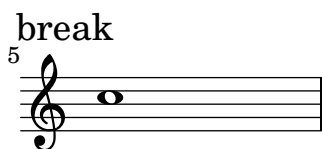
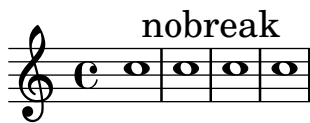
The `break-align-anchor` property of a break-aligned grob gives the horizontal offset at which other grobs should attach.

`break-alignment-anchors.ly`



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

`break.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 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, barlines, 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`



Long titles should be properly centered.

center-title.ly

# How Razorback Jumping Frogs Level Six Piqued Gymnast



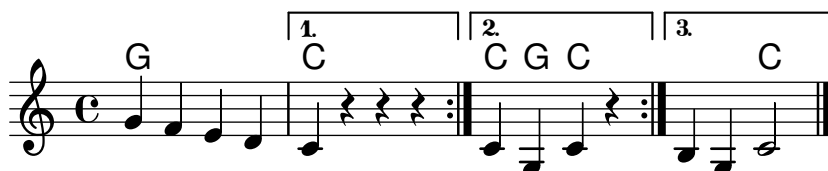
The prefix of additional chord pitches can be tuned with `additionalPitchPrefix`.

`chord-additional-pitch-prefix.ly`

$C^9$   $C^{add9}$

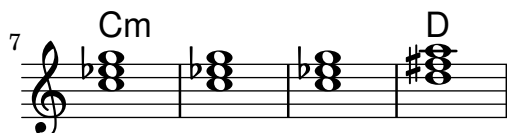
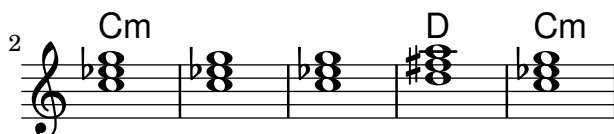
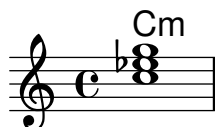
Chord change detection in repeat alternatives happens in relation to the chord active at the beginning of the first alternative.

`chord-changes-alternative.ly`



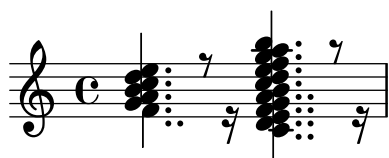
Property `chordChanges`: display chord names only when there's a change in the chords scheme, but always display the chord name after a line break.

`chord-changes.ly`



The column of dots on a chord is limited to the height of the chord plus `chord-dots-limit` staff-positions.

`chord-dots.ly`



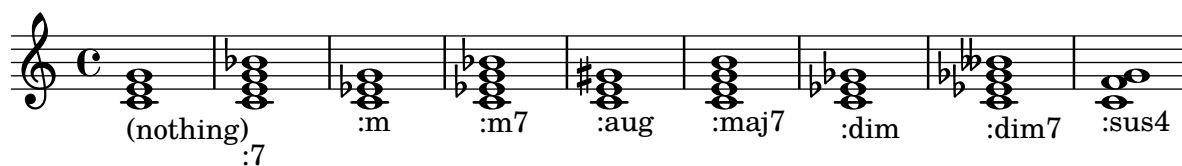
The 11 is only added to major-13 if it is mentioned explicitly.

chord-name-entry-11.ly



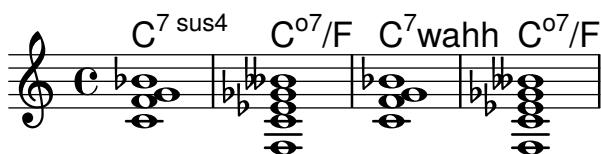
Chords can be produced with the chordname entry code (`\chordmode` mode), using a pitch and a suffix. Here, the suffixes are printed below pitches.

chord-name-entry.ly



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



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

chord-name-minor.ly



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

chord-name-override-text.ly

A B C<sup>7</sup> 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

A musical staff in C major showing six chords. Above the staff, the computed chord names are: F<sup>△</sup>/E, F<sup>△</sup>/F, F<sup>△</sup>/G, F<sup>△</sup>/E, F<sup>△</sup>/F, F<sup>△</sup>/G. Below the staff, the entered chord names are: :maj7/e, :maj7/f, :maj7/g, :maj7/+e, :maj7/+f, :maj7/+g.

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

chord-names-in-grand-staff.ly

A grand staff (treble and bass clef) showing a single F chord. The chord name 'F' is printed above the treble staff.

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 <sup>#</sup> /B <sup>#</sup>	B <sup>b</sup> /B <sup>b</sup>
german	E/d	Cm	H/h	H <sup>#</sup> /his	B/b
semi-german	E/d	Cm	H/h	H <sup>#</sup> /his	B <sup>b</sup> /b
italian	Mi/Re	Do m	Si/Si	Si <sup>#</sup> /Si <sup>#</sup>	Si <sup>b</sup> /Si <sup>b</sup>
french	Mi/Ré	Do m	Si/Si	Si <sup>#</sup> /Si <sup>#</sup>	Si <sup>b</sup> /Si <sup>b</sup>

A musical staff in C major showing the chords from the table: E/D, Cm, B/B, B<sup>#</sup>/B<sup>#</sup>, and B<sup>b</sup>/B<sup>b</sup>.

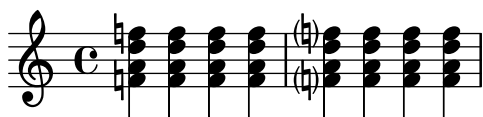
Minor chords may be printed as lowercase letters, in which case the ‘m’ suffix is omitted in the output.

chord-names-lower-case-minor.ly

Dm d

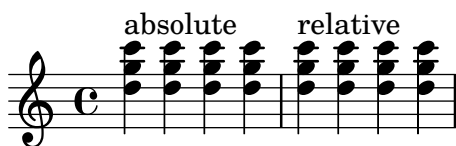
Chord repeats should omit forced and reminder accidentals.

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



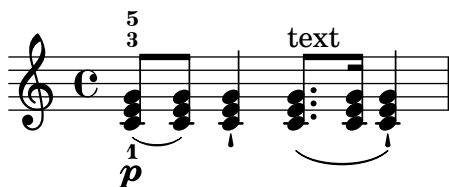
Chord repetitions are expanded late in the processing order and get their note events only then. Check that \times still works correctly on them.

chord-repetition-times.ly



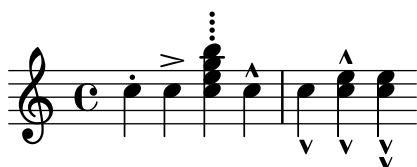
A repetition symbol can be used to repeat the previous chord and save typing. Only note events are copied: articulations, text scripts, fingerings, etc are not repeated.

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`



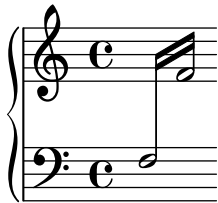
Articulations on chord tremolos should not confuse the time-scaling of the notes. In particular, only the number of real notes should be considered.

`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`



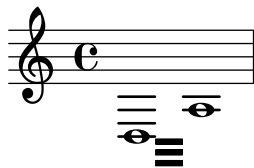
Chord tremolos on a single note.

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

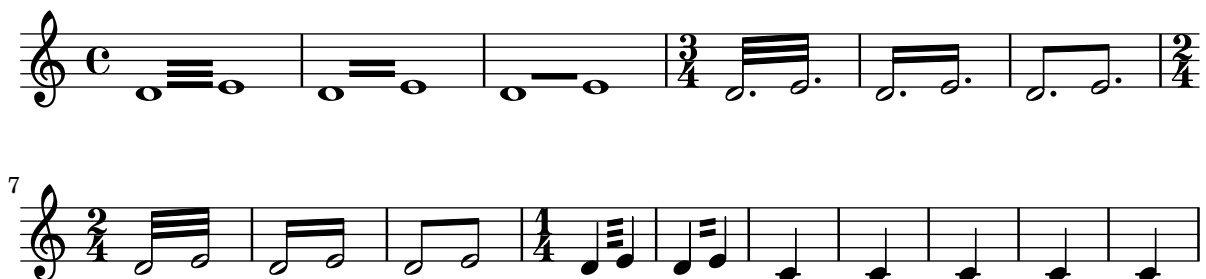


Chord tremolos look like beams, but are a kind of repeat symbol. To avoid confusion, chord tremolo beams do not reach the stems, but leave a gap. Chord tremolo beams on half notes are not ambiguous, as half notes cannot appear in a regular beam, and should reach the stems.

In this example, each tremolo lasts exactly one measure.

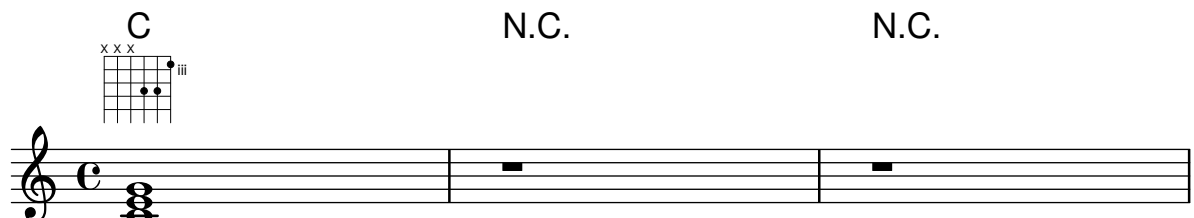
(To ensure that the spacing engine is not confused we add some regular notes as well.)

chord-tremolo.ly



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

chordnames-nochord.ly





4

N.C. G C

7

C N.C.

10

N.C. G C

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  $C^+$   $C^{\circ}$   $C^{\circ}$   $C^{\circ 7}$   $C^{7\ 8\ 9\ 10}$   $C^{7\ 6}$   $C^{6\ 9}$   $C^{lyd}$   $C^{alt}$

`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

a aisb c cisd dise f fisg gis a

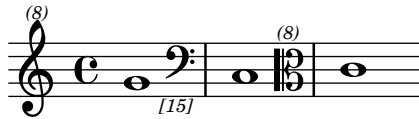
Ottava brackets and clefs both modify `Staff.middleCPosition`, but they don't confuse one another.

clef-ottava.ly

8va 15ma 8vb

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 problem

8	15	(8)	(141)	8	15	(8)	(141)
8	15	(8)	(141)	8	15	(8)	(141)
8	15	(8)	(141)	8	15	(8)	(141)
8	15	(8)	(141)	8	15	(8)	(141)
8	15	(8)	(141)	8	15	(8)	(141)

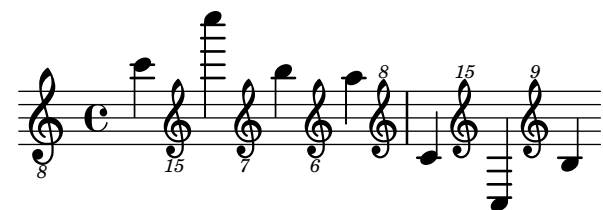
Clefs may be transposed. By default, break-visibility of ClefModifiers is derived from the associated clef, but it may be overridden explicitly. The initial treble\_8 clef should not have an 8, while the treble\_8 clef after the tenor clef should. These settings also need to apply to clefs on new lines.

clef-transposition-visibility.ly



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

clef-transposition.ly



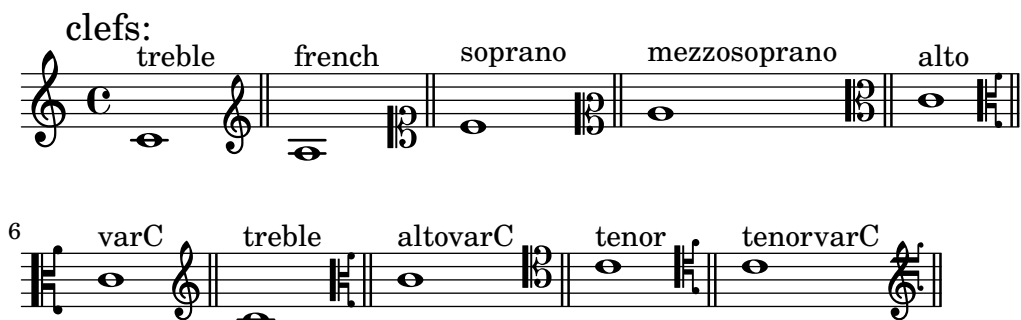
Unknown clef name warning displays available clefs

clef-warn.ly



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

clefs.ly



11 tenorG GG baritone varbaritone baritonevarC

16 baritonevarF bass subbass percussion varpercussion

21 with full-size-change = #t: treble french soprano mezzosoprano alto varC

27 treble altovarC tenor tenorvarC tenorG GG

33 baritone varbaritone baritonevarC baritonevarF bass

38 subbass percussion varpercussion

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`.

clip-systems.ly

bla

5

Detailed description: This block contains two staves of musical notation. The top staff is in treble clef with a common time signature 'C'. It contains four measures: the first has a whole note on G4, the second has a whole note on A4, the third has a quarter note on B4 followed by a whole note on C5, and the fourth has a quarter note on D5, a quarter note on E5, and a whole note on F#5. The bottom staff is in bass clef with a key signature of two sharps (F# and C#). It contains two measures: the first has a whole note on B2, and the second has a whole note on D3. A small number '5' is positioned to the left of the first measure of the bottom staff.

clips

from-2.0.1-to-4.0.1-clip.eps

Detailed description: This block contains a single staff of musical notation. It is in treble clef and contains three measures: the first has a whole note on G4, the second has a quarter note on A4 followed by a whole note on B4, and the third has a quarter note on C5, a quarter note on D5, and a whole note on E5.

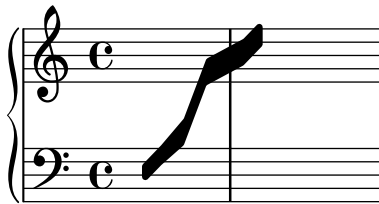
Clusters behave well across line breaks.

`cluster-break.ly`



Clusters can be written across staves.

`cluster-cross-staff.ly`



don't crash on single chord clusters.

`cluster-single-note.ly`



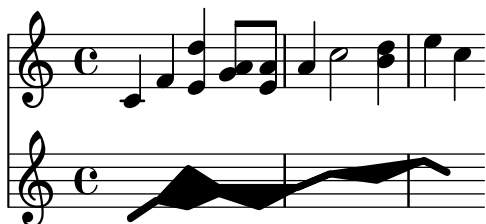
Clusters behave well across line breaks.

`cluster-style.ly`



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

`cluster.ly`



Single head notes may collide.

collision-2.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



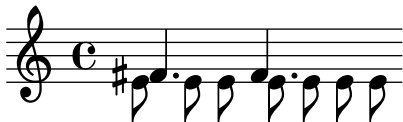
If dotted note heads must remain on the left side, collision resolution moves the dots to the right.

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



The FA note (a triangle) is merged to avoid creating a block-shaped note.

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



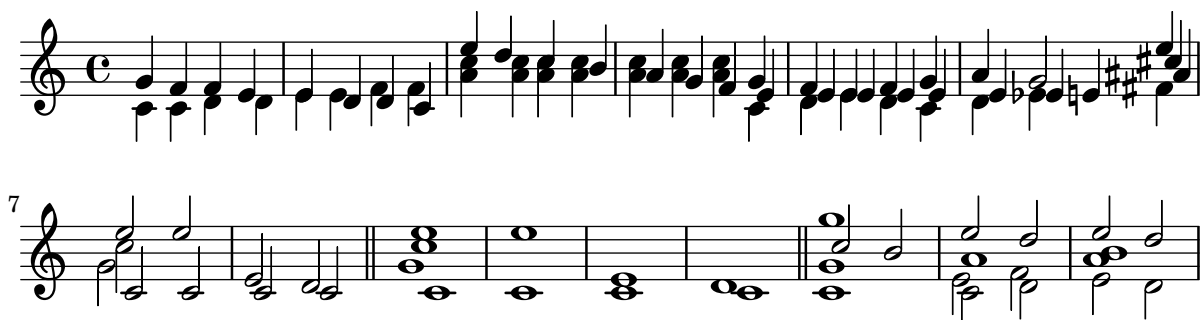
Mixed collisions with whole and longer notes require asymmetric shifts.

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



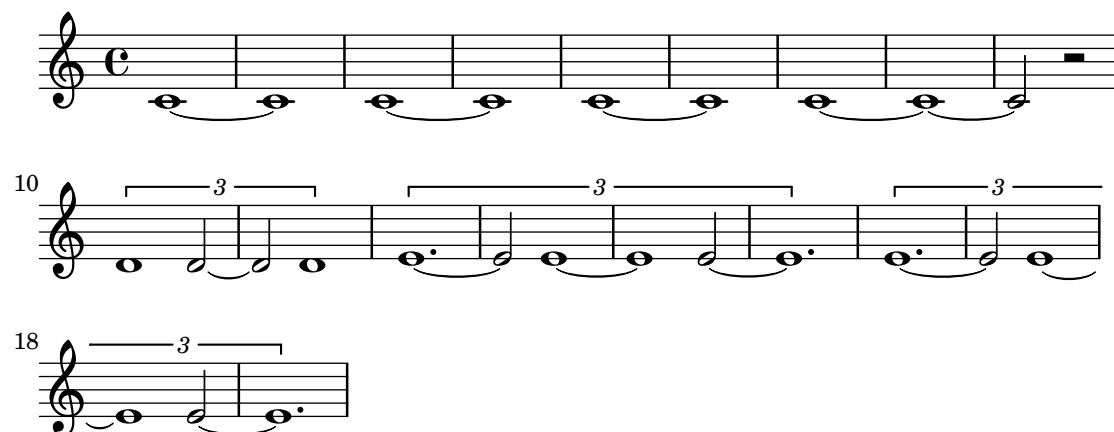
Each grob can have a color assigned to it. Use the `\override` and `\revert` expressions to set the `color` property.

color.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`



Complex completion heads work properly in a polyphonic environment.

`completion-heads-polyphony-2.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



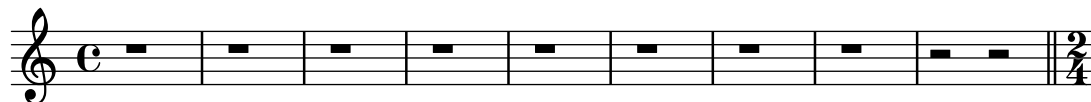
If the `Note_heads_engraver` is replaced by the `Completion_heads_engraver`, notes that cross bar lines are split into tied notes.

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



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)`.

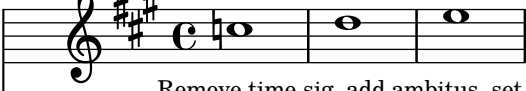
compound-time-signatures.ly

A series of musical staves in treble clef, each showing a different compound time signature and its corresponding rhythmic pattern. The staves are numbered 1 through 11. The time signatures are: 1+2+3+4/8, 3/4, 1+2+3+4+2/8, 6/8, 1+2+3+4+2+2+3/8, 8/8, 1+2+3+4/8, and 11/8. Each staff contains a sequence of eighth notes and quarter notes that correspond to the time signature.




context-mod-with.ly

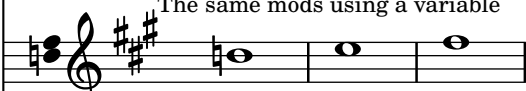
No modifications



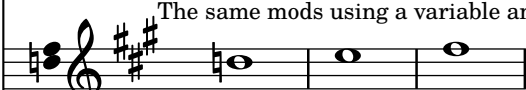
Remove time sig, add ambitus, set staff to 4 lines



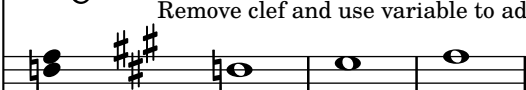
The same mods using a variable



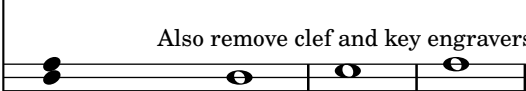
The same mods using a variable and \with



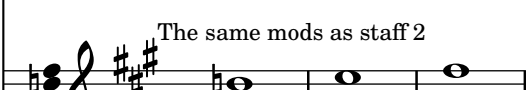
Remove clef and use variable to add other changes as above



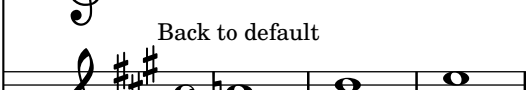
Also remove clef and key engravers



The same mods as staff 2

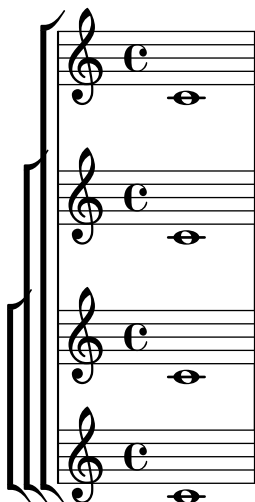


Back to default



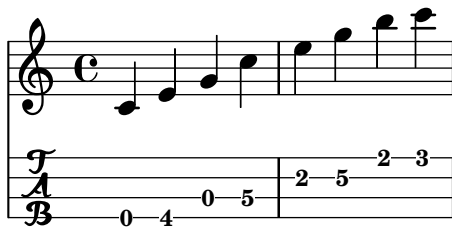
Contexts of the same type can be nested.

context-nested-staffgroup.ly



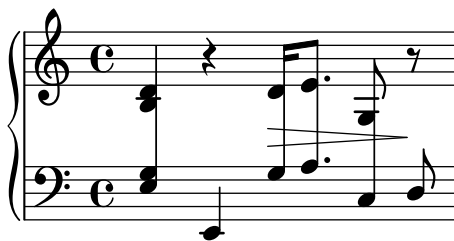
Using `\contextStringTuning` does not break compiling.

context-string-tuning.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-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.

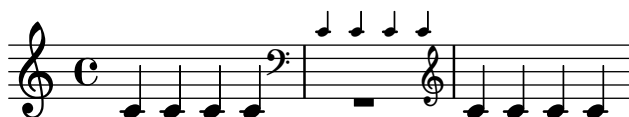
cue-clef-keysignature.ly



4



cue-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

The image shows four staves of musical notation. The first staff starts with a bass clef and a common time signature, followed by a whole note. The second staff is labeled '2' and starts with a bass clef, a key signature change to one flat, and a whole note. The third staff is labeled '3' and starts with a bass clef, a whole note, a key signature change to one flat, and then four eighth notes. The fourth staff is labeled '5' and starts with a bass clef, a key signature change to one flat, and four eighth notes, followed by a line break and a whole note.

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

cue-clef-transposition-optional.ly

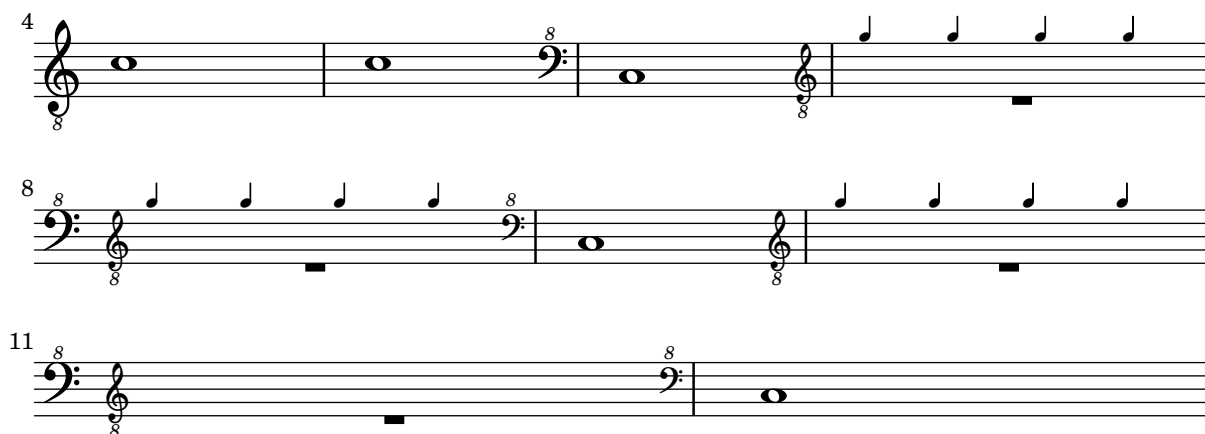
The image shows four staves of musical notation. The first staff starts with a treble clef, a common time signature, and a whole note, followed by a line break and a bass clef with a transposition number '(15)' above it. The second staff is labeled '4' and starts with a treble clef, a whole note, a line break, a bass clef with a transposition number '8' above it, and then a whole note. The third staff is labeled '8' and starts with a bass clef, a whole note, a line break, a treble clef with a transposition number '[8]' below it, and then four eighth notes. The fourth staff is labeled '11' and starts with a bass clef, a whole note, a line break, a treble clef with a transposition number '(8)' below it, and then a whole note.

Transposition for clefs for cue notes.

cue-clef-transposition.ly

The image shows one staff of musical notation. It starts with a treble clef, a common time signature, and a whole note, followed by a line break and a bass clef with a transposition number '8' above it.





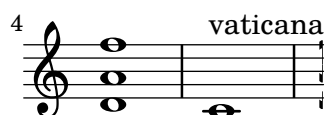
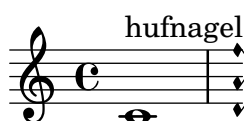
Clefs for cue notes: Print a cue clef at the begin of the cue notes and a canceling clef after the cue notes.

cue-clef.ly



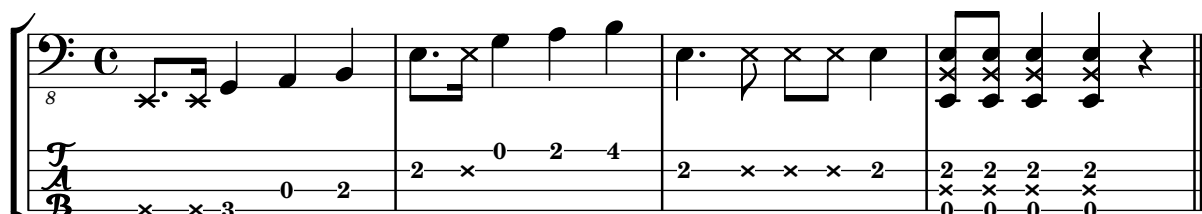
Custodes may be engraved in various styles.

custos.ly



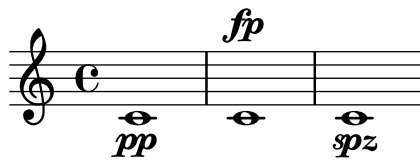
Muted notes (also called dead notes) are supported within normal staves and tablature.

dead-notes.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`



This is a test of the `display-lily-music` unit. Problems are reported on the stderr of this run.

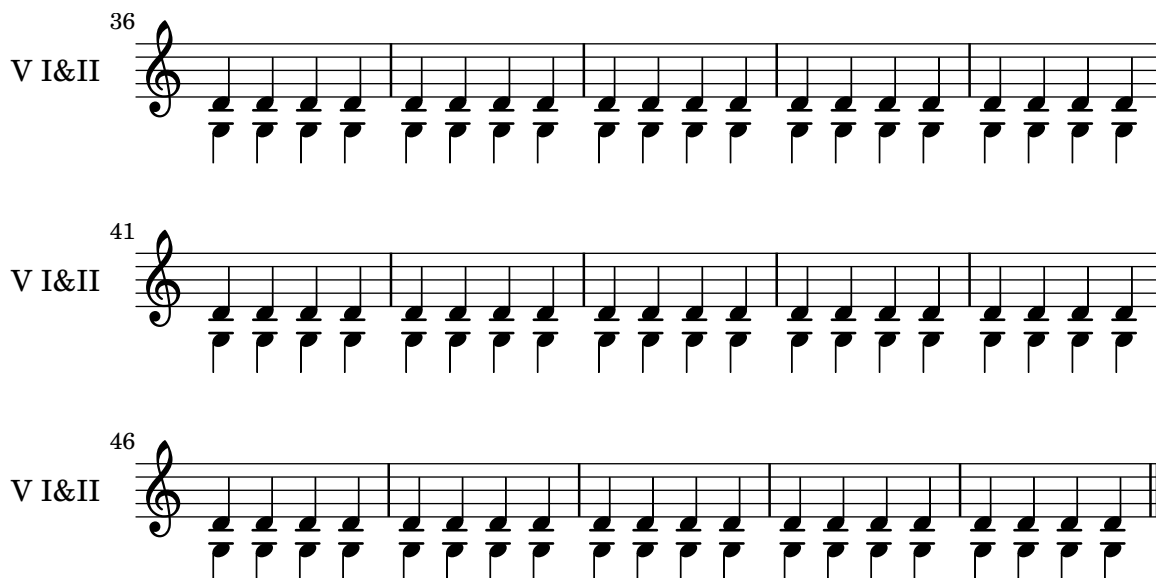
`display-lily-tests.ly`

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

A series of musical staves for a string ensemble. The first staff is labeled 'Violins' and contains a single melodic line. The following four staves are labeled 'V I&II' and each contains a single melodic line. The next two staves are labeled 'V I' and 'V II' and are grouped together with a brace, indicating a split staff. The final staff is labeled 'V I&II' and contains a single melodic line. The notation includes various musical symbols such as clefs, time signatures, and note heads.



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 :



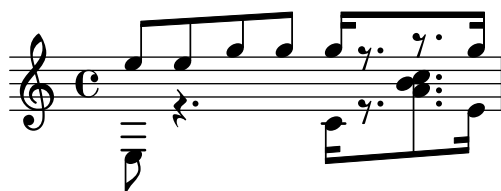
Dots and note-heads should not collide.

`dot-column-note-collision.ly`



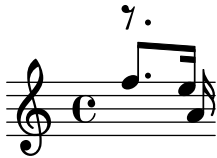
Dot columns do not trigger beam slanting too early. This input should compile with no programming error message, and the dots should be correctly placed on their rests.

`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



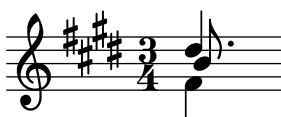
The dots on a dotted rest are correctly accounted for in horizontal spacing.

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



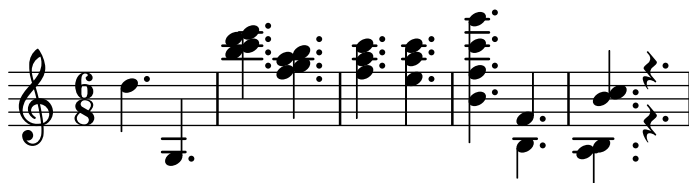
Both noteheads and rests can have dots. Augmentation dots should never be printed on a staff line, but rather be shifted vertically. They should go up, but in case of multiple parts, the down stems have down shifted dots. In case of chords, all dots should be in a column. The dots follow the shift of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



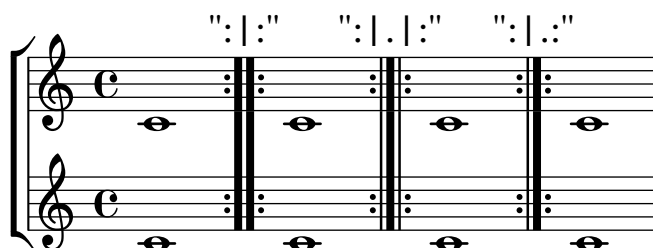
For volte, the style of double repeats can be set using `doubleRepeatType`.

double-repeat-default-volta.ly



Three types of double repeat bar line are supported.

double-repeat.ly



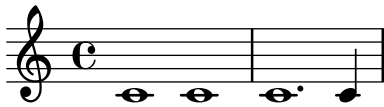
In drum notation, there is a special clef symbol, drums are placed to their own staff positions and have note heads according to the drum, an extra symbol may be attached to the drum, and the number of lines may be restricted.

drums.ly



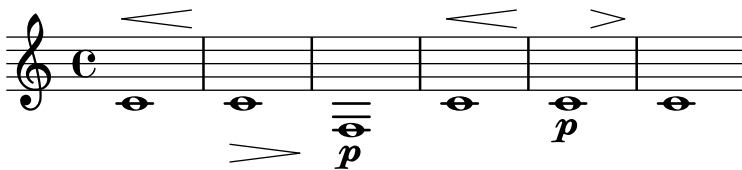
The compression factor of a duration identifier is correctly accounted for by the parser.

duration-identifier-compressed.ly



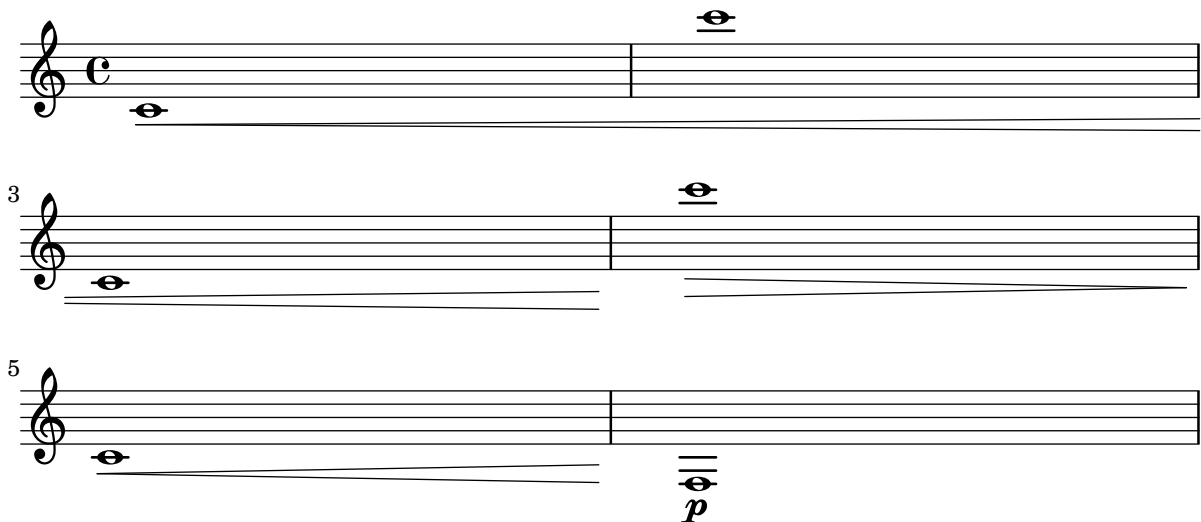
If a dynamic has an explicit direction that differs from the dynamic line spanner's direction, automatically break the dynamic line spanner.

dynamics-alignment-autobreak.ly



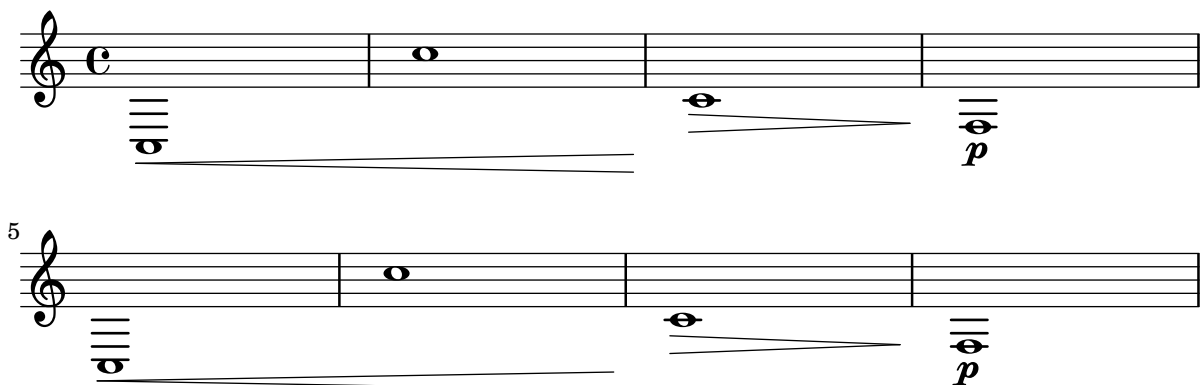
`\breakDynamicSpan` shall also work if a dynamic spanner crosses a line break.

dynamics-alignment-breaker-linebreak.ly



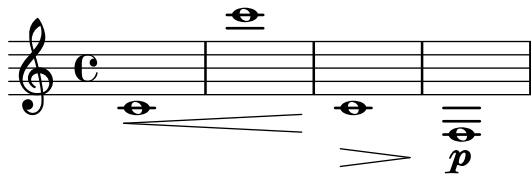
`\breakDynamicSpan` work whether it is placed together with the start or the end of a spanner. Both lines should be identical.

dynamics-alignment-breaker-order.ly



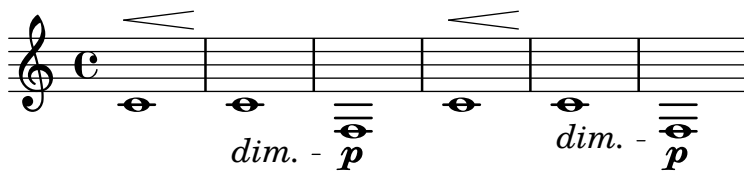
`\breakDynamicSpan` shall only have an effect on the current spanner, not on subsequent spanners.

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



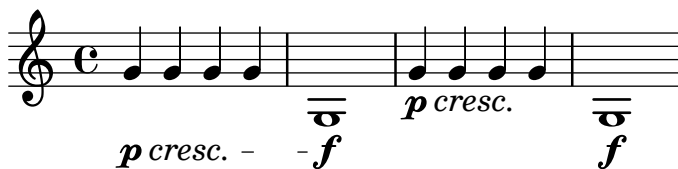
Setting the style of a DynamicTextSpanner to 'none' to hide the line altogether should also work over line breaks.

dynamics-alignment-no-line-linebreak.ly



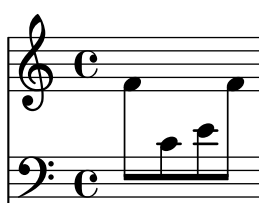
If the line for a DynamicTextSpanner is hidden, the alignment spanner for dynamics is ended early. This allows consecutive dynamics to be unlinked.

dynamics-alignment-no-line.ly



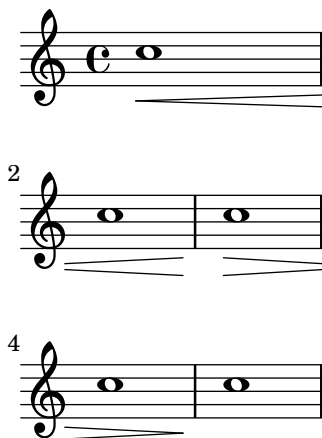
Cross-staff Dynamic does not trigger a cyclic dependency for direction look-up.

dynamics-avoid-cross-staff-stem-3.ly



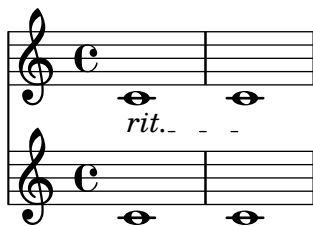
When a hairpin is broken, the broken parts should be open at the 'breaking point'.

dynamics-broken-hairpin.ly



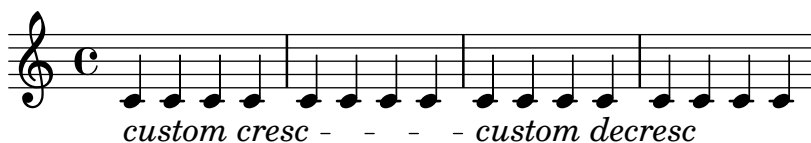
Text spanners work in the `Dynamics` context.

dynamics-context-textspan.ly



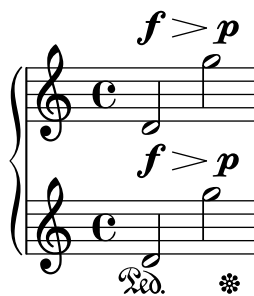
Postfix functions for custom crescendo text spanners. The spanners should start on the first note of the measure. One has to use `-\mycresc`, otherwise the spanner start will rather be assigned to the next note.

dynamics-custom-text-spanner-postfix.ly



An empty `Dynamics` context does not confuse the spacing.

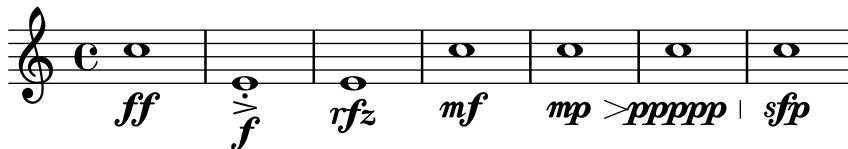
dynamics-empty.ly



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



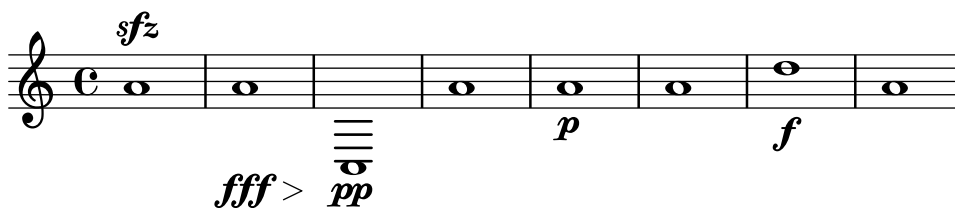
Hairpins extend to the extremes of the bound if there is no adjacent hairpin or dynamic-text. If there is, the hairpin extends to the center of the column or the bound of the text respectively.

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



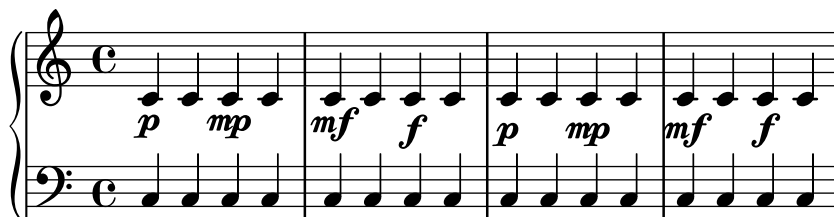
Text dynamics are positioned correctly on rests, i.e., centered on the parent object.

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



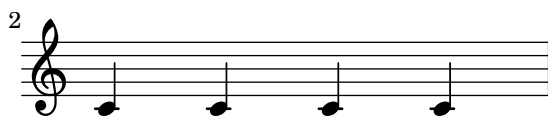
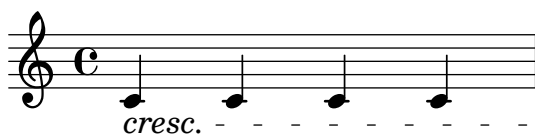
left attach dir for text crescendi starting on an absolute dynamic is changed, so *cresc.* and the absolute dynamic don't overstrike.

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



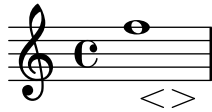
The `\cresc`, `\dim` and `\decrec` spanners are now postfix operators and produce one text spanner. Defining custom spanners is also easy. Hairpin and text crescendi can be easily mixed. `\<` and `\>` produce hairpins by default, `\cresc` etc. produce text spanners by default.

dynamics-text-spanner-postfix.ly



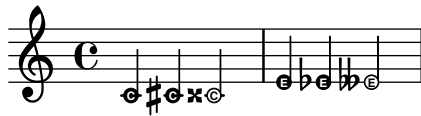
Crescendi may start off-notes, however, they should not collapse into flat lines.

dynamics-unbound-hairpin.ly



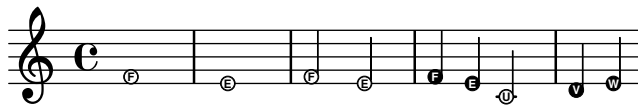
Accidentals are positioned correctly when using Easy notation.

easy-notation-accidentals.ly



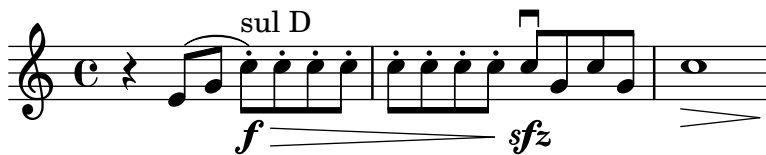
Easy-notation (or Ez-notation) prints names in note heads. You also get ledger lines, of course.

easy-notation.ly



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

empty-chord.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

violin-1

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 over multimeasure rests are positioned as over normal rests.

`fermata-rest-position.ly`

LilyPond creates hairpins found in Ferneyhough scores.

`ferneyhough-hairpins.ly`

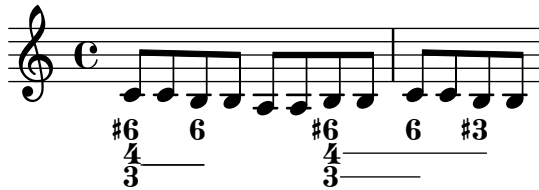
Bass figures can carry alterations.

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



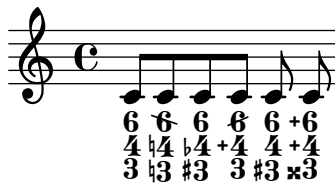
By adorning a bass figure with \!, an extender may be forbidden.

figured-bass-continuation-forbid.ly



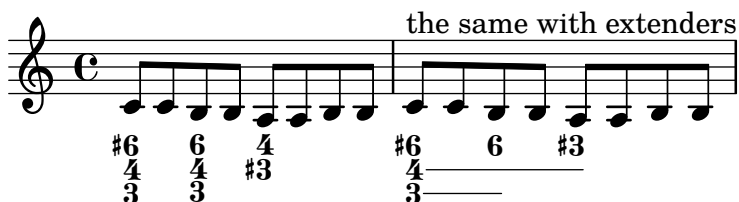
Figured bass extender lines shall be broken when a figure has a different alteration, augmentation or diminishment.

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



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-extendere-markup.ly



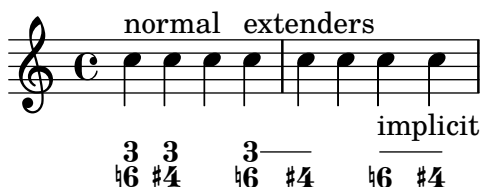
When figures appear inside a voice, ignoreFiguredBassRest causes all figures on rests to be discarded and all spanners ended. If set to #f, figures on rests are printed.

figured-bass-ignore-rest.ly



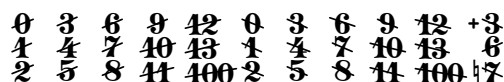
Implicit bass figures are not printed, but they do get extenders.

figured-bass-implicit.ly



Figured bass supports numbers with slashes through them.

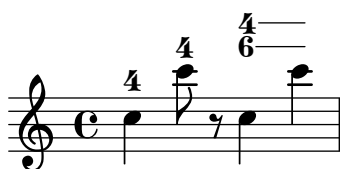
figured-bass-slashed-numbers.ly



Figured bass can also be added to Staff context directly. In that case, the figures must be entered with \figuredmode 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.

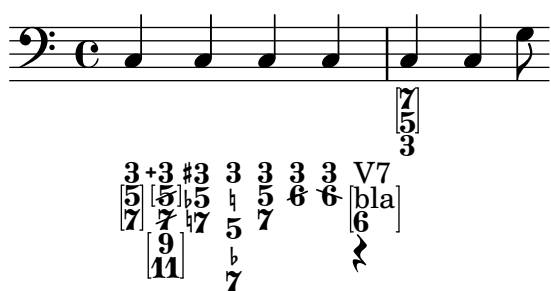
figured-bass-staff.ly



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.

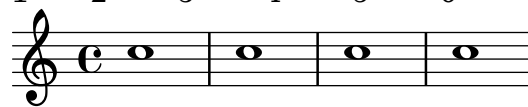
`figured-bass.ly`



The image shows a musical staff in bass clef with a common time signature 'C'. The staff contains a sequence of notes: a half note on G2, a quarter note on F2, a quarter note on E2, a quarter note on D2, a quarter note on C2, a quarter note on B1, a quarter note on A1, and a half note on G1. Below the staff, there are several layers of figured bass notation. The first layer consists of numbers: 3, +3, #3, 3, 3, 3, 3, V7. The second layer consists of numbers in brackets: [5], [5], [5], [5], [5], [5], [5], [bla]. The third layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 6. The fourth layer consists of numbers: 9, 7, 5, 6, 6, 6, 6, 6. The fifth layer consists of numbers: 11, 7, 7, 7, 7, 7, 7, 7. The sixth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The seventh layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The eighth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The ninth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The tenth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The eleventh layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The twelfth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The thirteenth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The fourteenth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The fifteenth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The sixteenth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The seventeenth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The eighteenth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The nineteenth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The twentieth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The twenty-first layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The twenty-second layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The twenty-third layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The twenty-fourth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The twenty-fifth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The twenty-sixth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The twenty-seventh layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The twenty-eighth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The twenty-ninth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The thirtieth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The thirty-first layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The thirty-second layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The thirty-third layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The thirty-fourth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The thirty-fifth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The thirty-sixth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The thirty-seventh layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The thirty-eighth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The thirty-ninth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The fortieth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The forty-first layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The forty-second layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The forty-third layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The forty-fourth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The forty-fifth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The forty-sixth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The forty-seventh layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The forty-eighth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The forty-ninth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The fiftieth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The fifty-first layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The fifty-second layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The fifty-third layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The fifty-fourth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The fifty-fifth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The fifty-sixth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The fifty-seventh layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The fifty-eighth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The fifty-ninth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The sixtieth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The sixty-first layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The sixty-second layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The sixty-third layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The sixty-fourth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The sixty-fifth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The sixty-sixth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The sixty-seventh layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The sixty-eighth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The sixty-ninth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The seventieth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The seventy-first layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The seventy-second layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The seventy-third layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The seventy-fourth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The seventy-fifth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The seventy-sixth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The seventy-seventh layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The seventy-eighth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The seventy-ninth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The eightieth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The eighty-first layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The eighty-second layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The eighty-third layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The eighty-fourth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The eighty-fifth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The eighty-sixth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The eighty-seventh layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The eighty-eighth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The eighty-ninth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The ninetieth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The ninety-first layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The ninety-second layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The ninety-third layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The ninety-fourth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The ninety-fifth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The ninety-sixth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The ninety-seventh layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The ninety-eighth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The ninety-ninth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7. The hundredth layer consists of numbers: 7, 7, 7, 7, 7, 7, 7, 7.

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

[illegible]



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`



Scripts left of a chord avoid accidentals.

`finger-chords-accidental.ly`



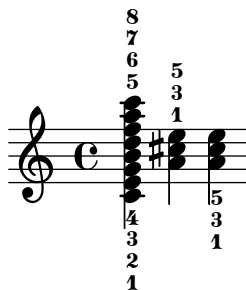
Scripts right of a chord avoid dots.

`finger-chords-dot.ly`



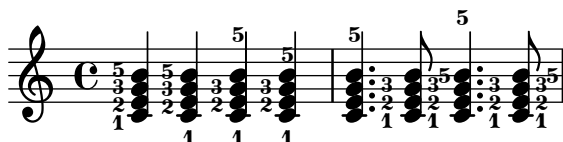
Ordering of the fingerings depends on vertical ordering of the notes, and is independent of up/down direction.

`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`



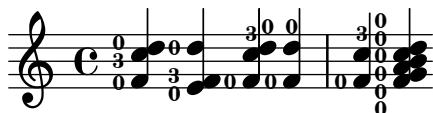
Horizontally-offset Fingerings align along the Y axis when they are within `FingeringColumn.snap-radius` of each other.

`fingering-column-snap-radius.ly`



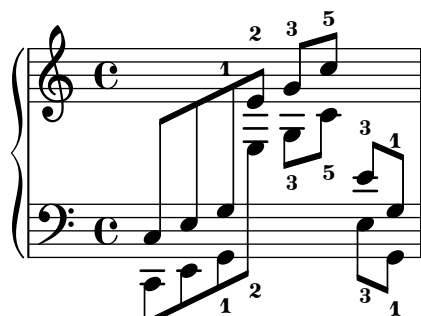
Horizontal **Fingering** grobs that collide do not intersect. Non-intersecting **Fingering** grobs are left alone. This is managed by the **FingeringColumn** grob.

`fingering-column.ly`



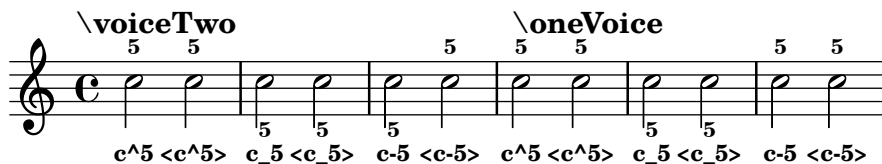
Fingerings work correctly with cross-staff beams.

`fingering-cross-staff.ly`



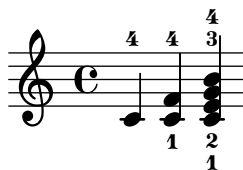
Fingering directions in directed and undirected contexts.

`fingering-directions.ly`



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`





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)
--------------------------------	----------------------------------

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

flags-straight-stockhausen-boulez.ly



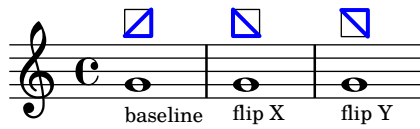
Straight flag styles.

flags-straight.ly

modern straight	old straight (large angles)	flat
-----------------	-----------------------------	------

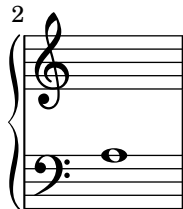
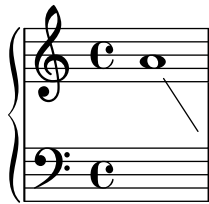
Stencils can be flipped horizontally or vertically within their bounding box using  
 flip-stencil.

flip-stencil.ly



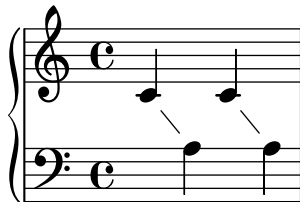
The line-spanners connects to the Y position of the note on the next line. When put across line breaks, only the part before the line break is printed.

follow-voice-break.ly



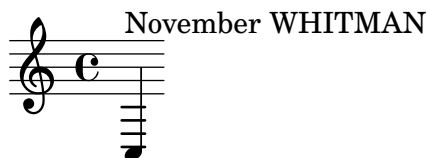
The voice follower is not confused when set for consecutive sets of staff switches.

follow-voice-consecutive.ly

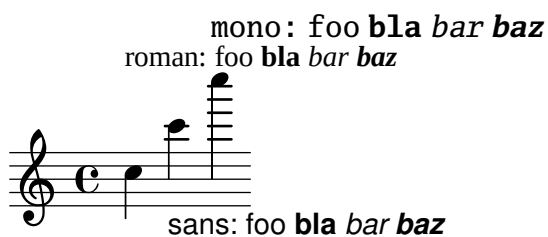


TM and No should not be changed into trademark/number symbols. This may happen with incorrect font versions.

font-bogus-ligature.ly



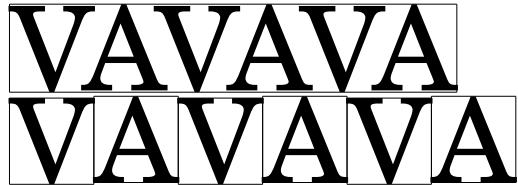
The default font families for text can be overridden with `make-pango-font-tree`  
`font-family-override.ly`



Text set in TrueType Fonts that contain kerning tables, are kerned.

font-kern.ly

With kerning:



Without kerning:

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



**This text is in large Vera 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`.

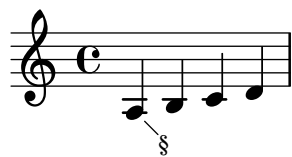
font-postscript.ly



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

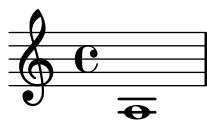
a b\* d† f‡  
h i



\*c  
†e  
‡g  
§j

---

2  
kl\*

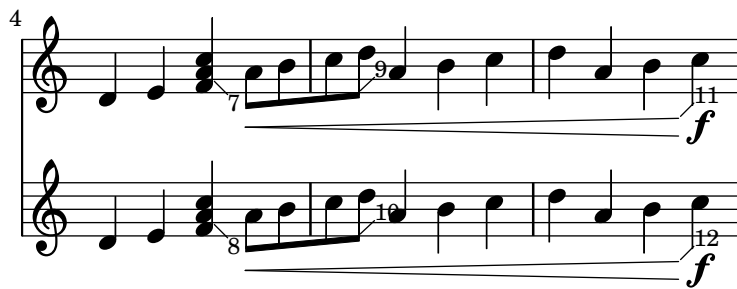


\*m  
†n  
‡o  
§p

Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

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

footnote-auto-numbering-vertical-order.ly



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





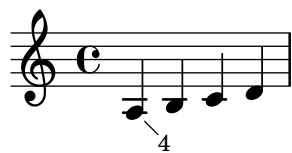
13n  
14n  
15o  
16o  
17p  
18p

Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://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.

footnote-auto-numbering.ly

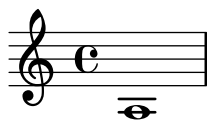
a b<sup>1</sup> d<sup>2</sup> f<sup>3</sup>  
h i



1c  
2e  
3g  
4j

\_\_\_\_\_

2  
k l<sup>5</sup>

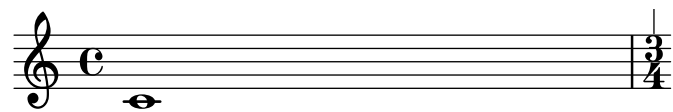


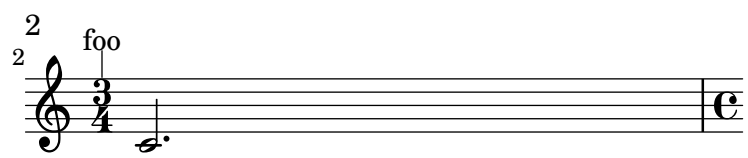
5m  
6n  
7o  
8p

Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

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

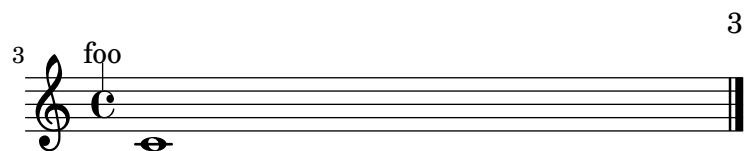
footnote-break-visibility.ly





bar





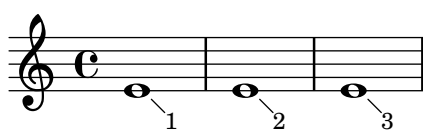
bar

---

Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

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

footnote-footer-padding.ly

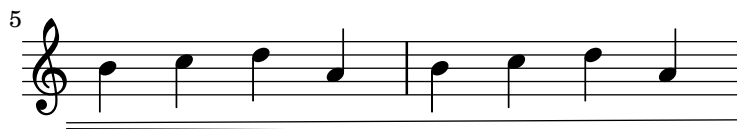


- 
1. Tiny space below.
  2. Tiny space below.
  3. Big space below.

Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

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.





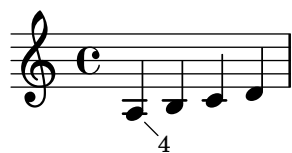
2. Goes to the last broken spanner.



Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

footnote.ly

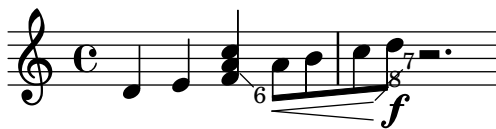
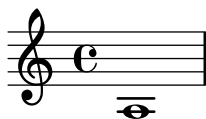
a b<sup>1</sup> d<sup>2</sup> f<sup>3</sup>  
h i



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

\_\_\_\_\_

2  
kl<sup>5</sup>

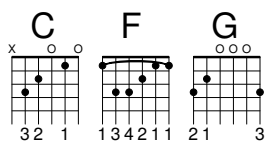


5. m  
6. n  
7. o  
8. p

Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

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

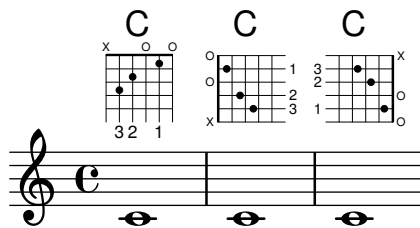
fret-boards.ly

autofrets



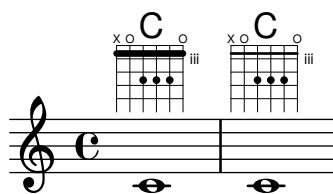
Fret diagrams of different orientation should share a common origin of the topmost fret or string.

fret-diagram-origins.ly



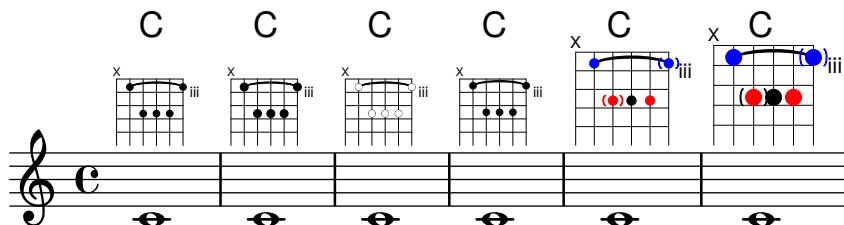
A capo indicator can be added with a fret-diagram-verbose string, and its thickness can be changed.

fret-diagrams-capo.ly



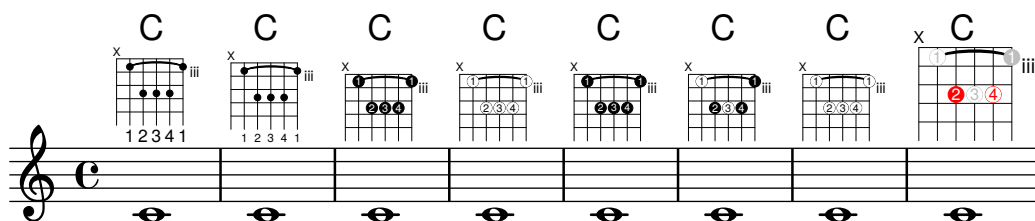
Dots indicating fingerings can be changed in location, size, and coloring. It is possible to parenthesize a single dot. The color of the paranthesis may be taken from dot or default. A possible collision between paranthesis and fret-label- indication can be resolved by an override for fret-label-horizontal-offset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

fret-diagrams-dots.ly



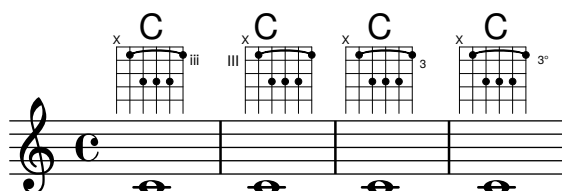
Finger labels can be added, either in dots or below strings. Dot color can be changed globally or on a per-dot basis, and fingering label font size can be adjusted.

fret-diagrams-fingering.ly



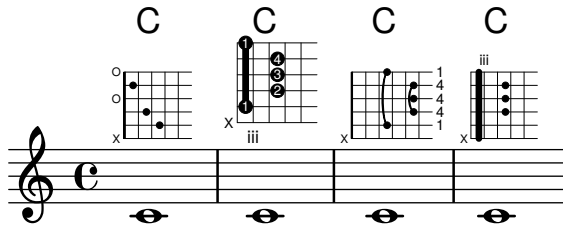
The label for the lowest fret can be changed in location, size, and number type.

fret-diagrams-fret-label.ly



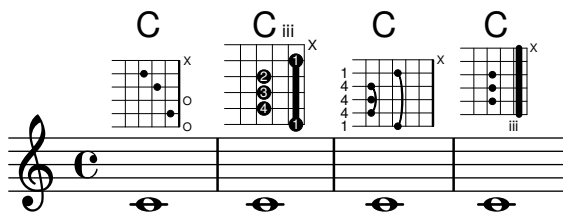
Fret diagrams can be presented in landscape mode.

fret-diagrams-landscape.ly



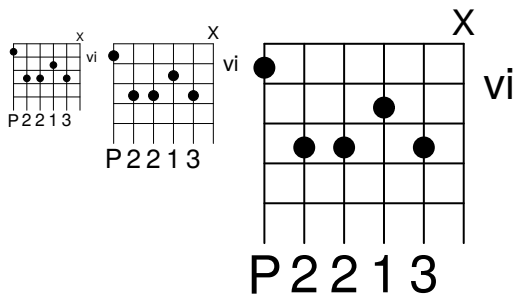
Fret diagrams can be presented in landscape mode.

fret-diagrams-opposing-landscape.ly



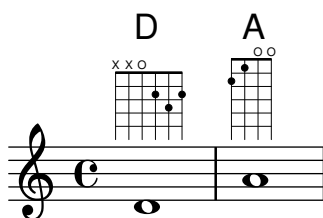
Fret diagrams can be scaled using the **size** property. The position and size of first fret label, mute/open signs, fingers, relative to the diagram grid, shall be the same in all cases.

fret-diagrams-size.ly



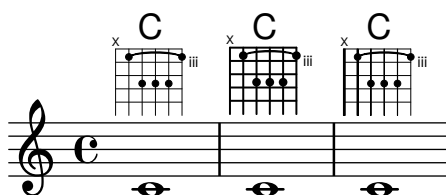
Number of frets and number of strings can be changed from the defaults.

fret-diagrams-string-frets.ly



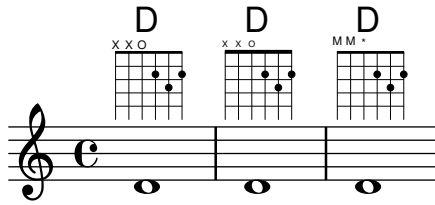
String thickness can be changed, and diagrams can have variable string thickness.

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



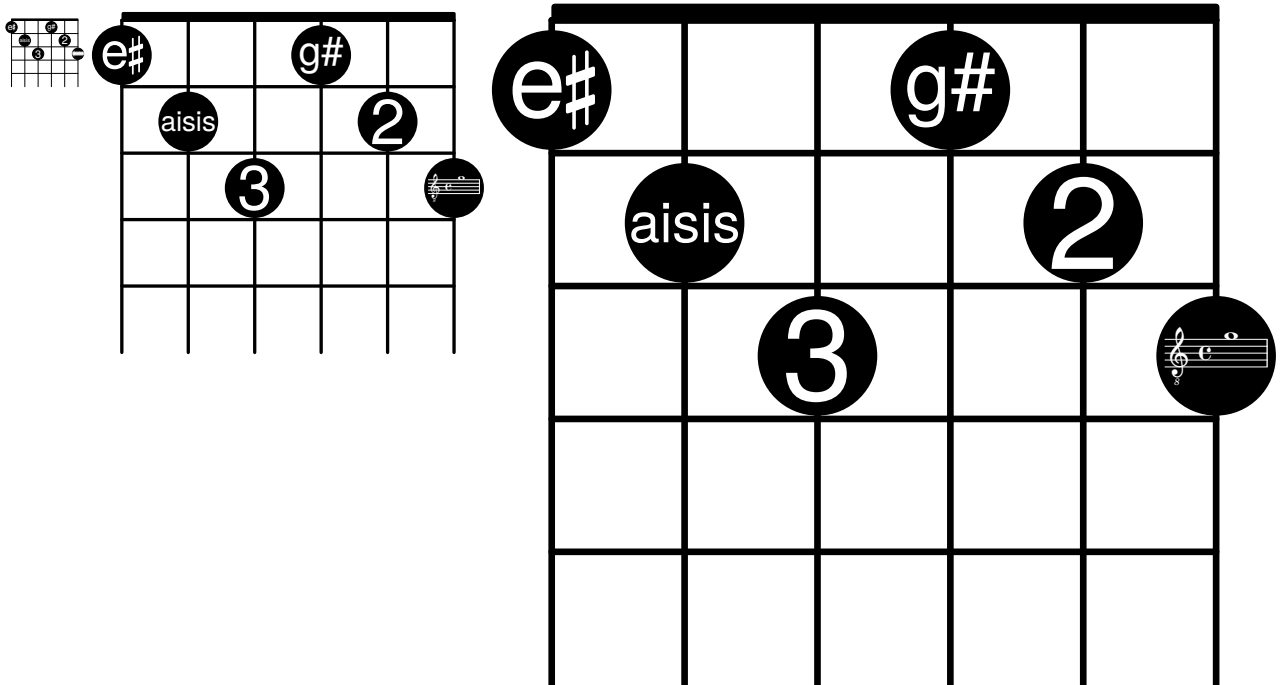
FretBoards can be set to display only when the chord changes or at the beginning of a new line.

fretboard-chordchanges.ly

A series of five musical staves, each starting with a measure number (1, 3, 5, 6, 8) and a treble clef. Each staff contains a C major chord represented by a whole note on the open string (C4). Above the first measure of each staff is a fretboard diagram for a C major chord, showing muted strings (x) on the 1st, 2nd, and 3rd strings and an open string (o) on the 4th string. The diagrams are positioned at the beginning of each line, indicating when the chord changes or at the start of a new line.

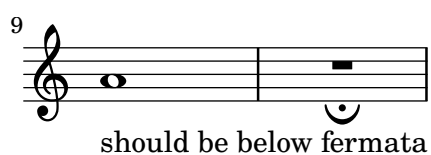
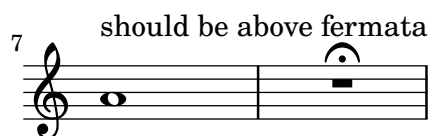
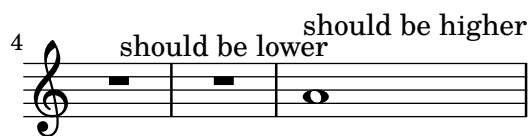
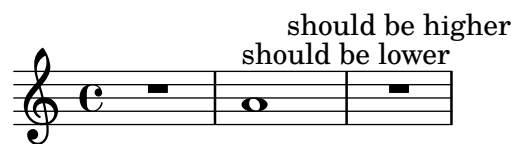
Markups can be put into the dots of a fret-diagram. Those markups are scaled automatically to fit into the dots.

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



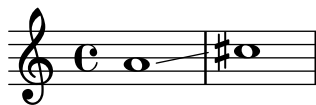
As a last resort, the placement of grobs can be adjusted manually, by setting the `extra-offset` of a grob.

`generic-output-property.ly`



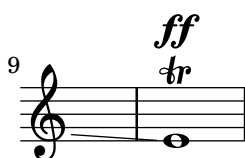
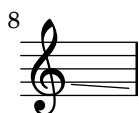
Glissandi stop before hitting accidentals.

`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

The image displays a musical score for the file 'glissando-broken-unkilled.ly'. It consists of four systems of staves, each with a treble clef and a common time signature 'C'.  
System 1: The first staff shows a glissando starting from a whole note on the second line (F4) and sliding down to a whole note on the first line (E4). The second staff is a broken chord with a '2' above it, containing a whole note on the second line (F4) and a whole note on the first line (E4).  
System 2: The first staff shows a glissando starting from a whole note on the first line (E4) and sliding up to a whole note on the second line (F4). The second staff is a broken chord with a '3' above it, containing a whole note on the first line (E4) and a whole note on the second line (F4).  
System 3: The first staff shows a glissando starting from a whole note on the first line (E4) and sliding up to a whole note on the second line (F4). The second staff is a broken chord with a '4' above it, containing a whole note on the first line (E4) and a whole note on the second line (F4).  
System 4: The first staff shows a glissando starting from a whole note on the first line (E4) and sliding up to a whole note on the second line (F4). The second staff is a broken chord with a '4' above it, containing a whole note on the first line (E4) and a whole note on the second line (F4).

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

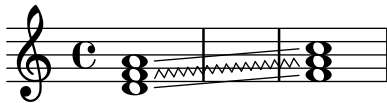
glissando-broken.ly

The image displays a musical score for the file 'glissando-broken.ly'. It consists of two systems of staves, each with a treble clef and a common time signature 'C'.  
System 1: The first staff shows a glissando starting from a whole note on the second line (F4) and sliding down to a whole note on the first line (E4). The second staff is a broken chord with a '2' above it, containing a whole note on the second line (F4) and a whole note on the first line (E4).  
System 2: The first staff shows a glissando starting from a whole note on the first line (E4) and sliding up to a whole note on the second line (F4). The second staff is a broken chord with a '3' above it, containing a whole note on the first line (E4) and a whole note on the second line (F4).

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.

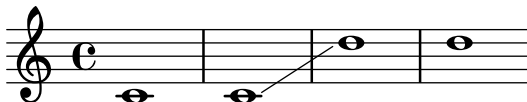


glissando-index.ly



Glissandi are not broken. Here a `\break` is ineffective. Use `breakable` grob property to override.

glissando-no-break.ly



NoteColumn grobs can be skipped over by glissandi.

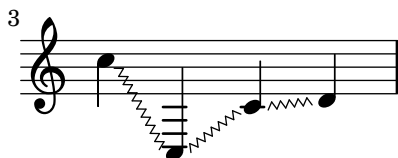
glissando-skip.ly



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



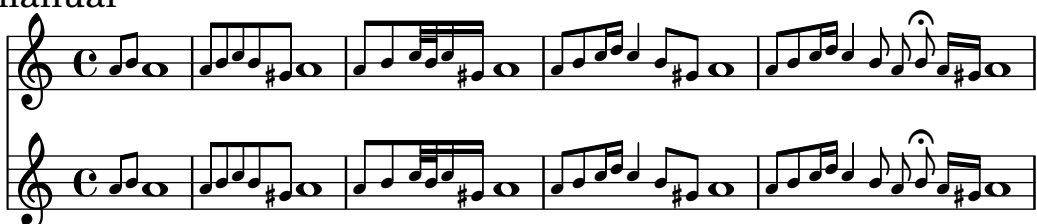
A separate 'Grace\_auto\_beam\_engraver' initiates autobeaming at the start of each `\grace` command.

grace-auto-beam-engraver.ly

manual

without  
engraver

with  
engraver



automatic



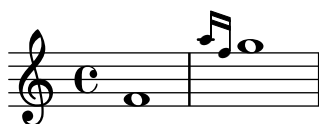
The autobeamer is not confused by grace notes.

grace-auto-beam.ly



Bar line should come before the grace note.

grace-bar-line.ly



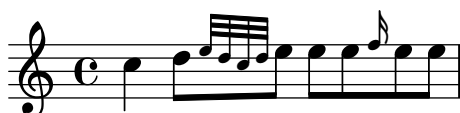
Grace notes do tricky things with timing. If a measure starts with a grace note, the measure does not start at 0, but earlier. Nevertheless, Lily should not get confused. For example, line breaks should be possible at grace notes, and the bar number should be printed correctly.

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-2.ly



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

grace-end.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



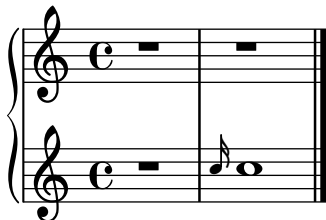
Create grace notes with slashed stem, but no slur. That can be used when the grace note is tied to the next note.

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



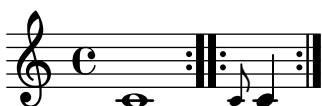
When grace notes are entered with unfolded repeats, line breaks take place before grace notes.

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-2.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



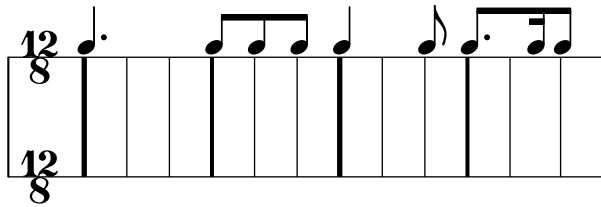
The graphviz feature draws dependency graphs for grob properties.

graphviz.ly



With grid lines, vertical lines can be drawn between staves synchronized with the notes.

`grid-lines.ly`



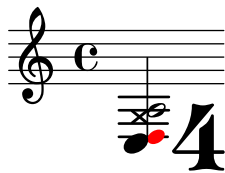
With the full form of the `\tweak` function, individual grobs that are indirectly caused by events may be tuned.

`grob-indirect-tweak.ly`



With the `\tweak` function, individual grobs that are directly caused by events may be tuned directly.

`grob-tweak.ly`



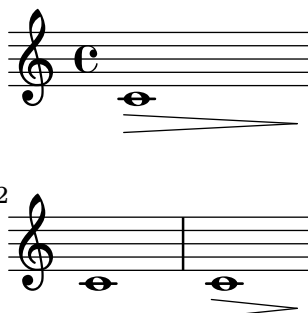
Hairpins in `Dynamics` contexts do not collide with arpeggios.

`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.

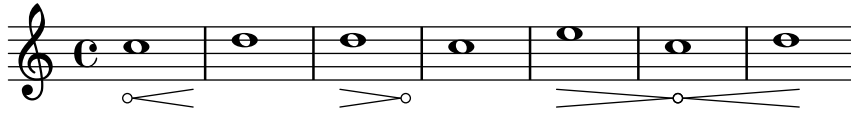
`hairpin-barline-break.ly`





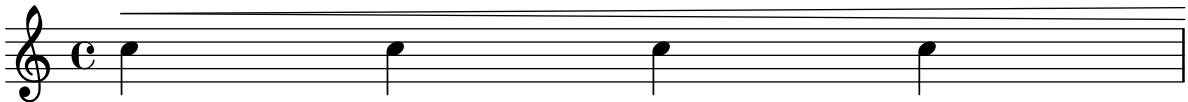
Hairpins can have circled tips. A decrescendo del niente followed by a crescendo al niente should only print one circle.

hairpin-circled.ly



Broken hairpins are not printed too high after treble clefs.

hairpin-clef.ly



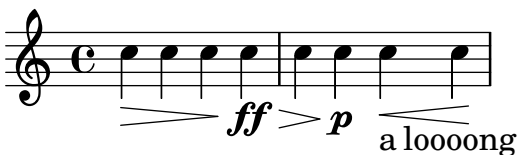
Hairpin crescendi may be dashed.

hairpin-dashed.ly



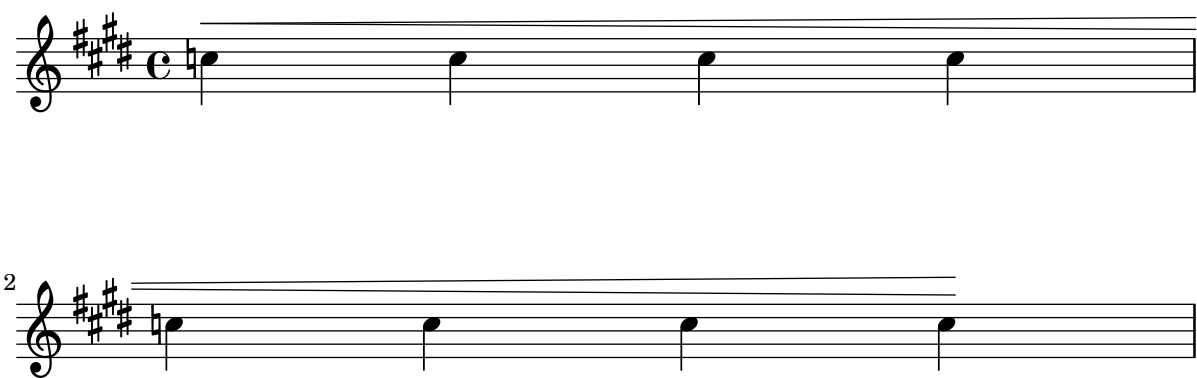
Hairpin dynamics start under notes if there are no text-dynamics. If there are text dynamics, the hairpin does not run into them.

hairpin-ending.ly



Broken hairpins are not printed too high after key signatures.

```
hairpin-key-signature.ly
```



The image shows two musical staves. The first staff is in treble clef with a key signature of three sharps (F#, C#, G#) and a common time signature (C). It contains four quarter notes on a single pitch. A hairpin (a line with a triangular head) is placed above the notes, starting from the first note and extending to the end of the staff. The second staff is identical to the first, but it has a measure number '2' at the beginning.

Bound padding for hairpins also applies before following `DynamicTextSpanner` grobs. In this case, `bound-padding` is not scaled down.

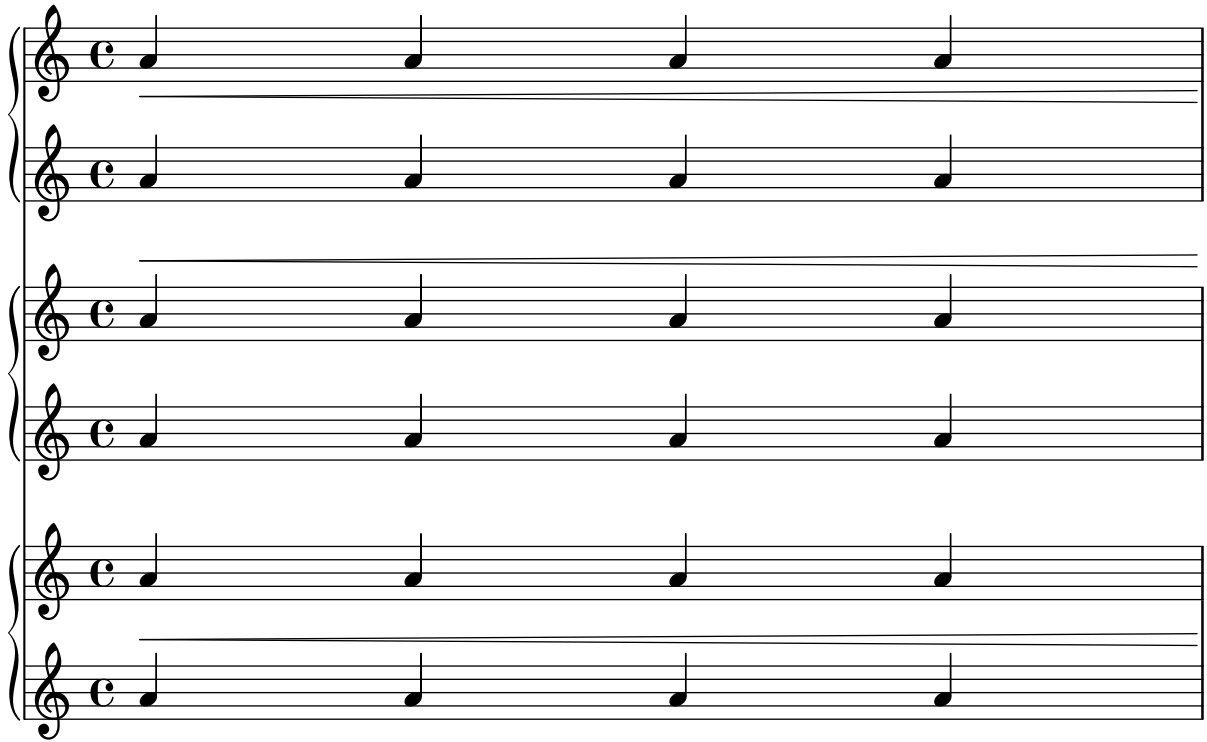
```
hairpin-neighboring-span-dynamics.ly
```



The image shows three musical staves. The first staff is in treble clef with a common time signature (C). It contains four quarter notes on a single pitch. A hairpin is placed below the notes, starting from the first note and extending to the end of the staff. The word 'dim.' is written below the hairpin, followed by a dashed line. The second staff is identical to the first, but it has a measure number '3' at the beginning. The third staff is identical to the first, but it has a measure number '5' at the beginning.

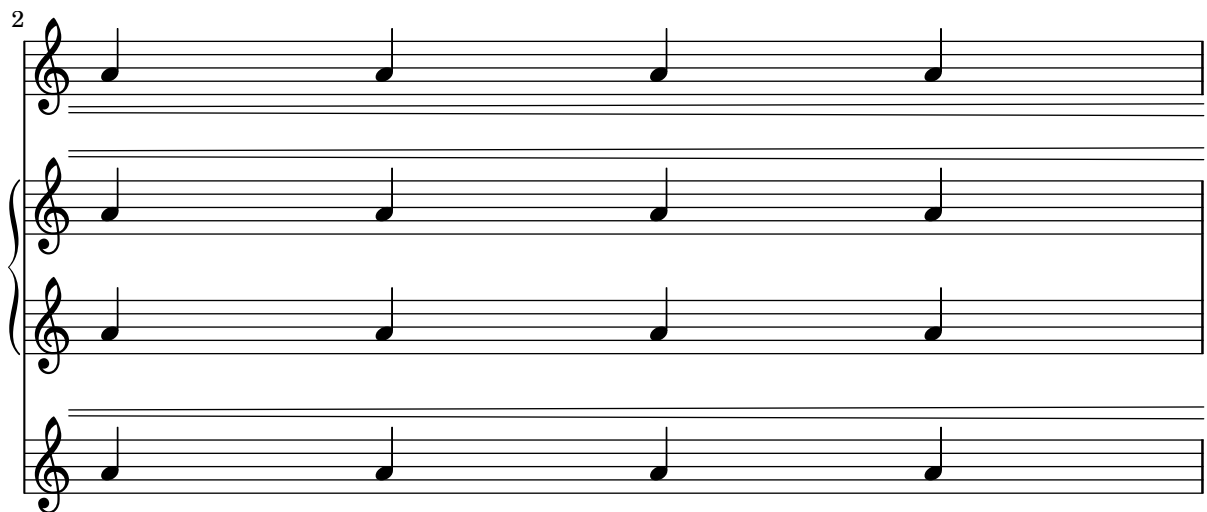
Hairpin grobs do not collide with `SpanBar` grobs. Hairpin grobs should, however, go to the end of a line when the `SpanBar` is not present.

hairpin-span-bar.ly

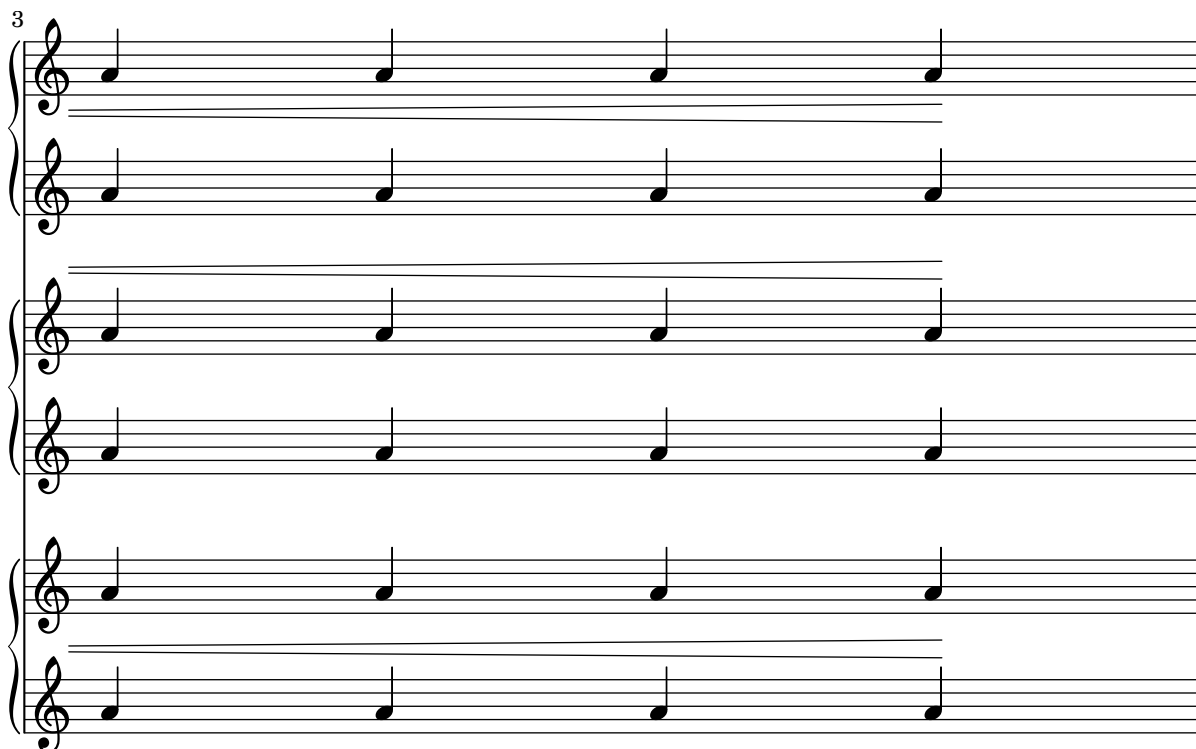


A musical score system consisting of six staves. The first two staves are grouped by a brace on the left. The first staff has a treble clef and a common time signature 'C'. The second staff has a bass clef. The next two staves are also grouped by a brace, with the first having a treble clef and the second a bass clef. The final two staves are grouped by a brace, with the first having a treble clef and the second a bass clef. Each staff contains four quarter notes, all positioned on the second line of the staff.

2

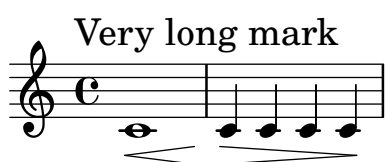


A musical score system consisting of four staves. The first staff has a treble clef. The second staff has a bass clef. The third staff has a treble clef. The fourth staff has a bass clef. Each staff contains four quarter notes, all positioned on the second line of the staff.



'to-barline is not confused by very long marks.

hairpin-to-barline.mark.ly



Hairpins whose end note is preceded by a bar line should end at that bar line.

hairpin-to-barline.ly



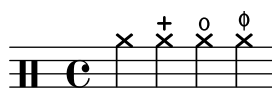
Hairpins end at the left edge of a rest.

hairpin-to-rest.ly



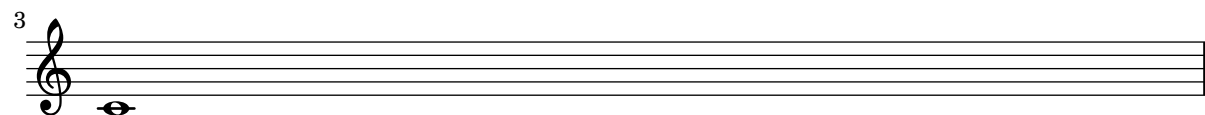
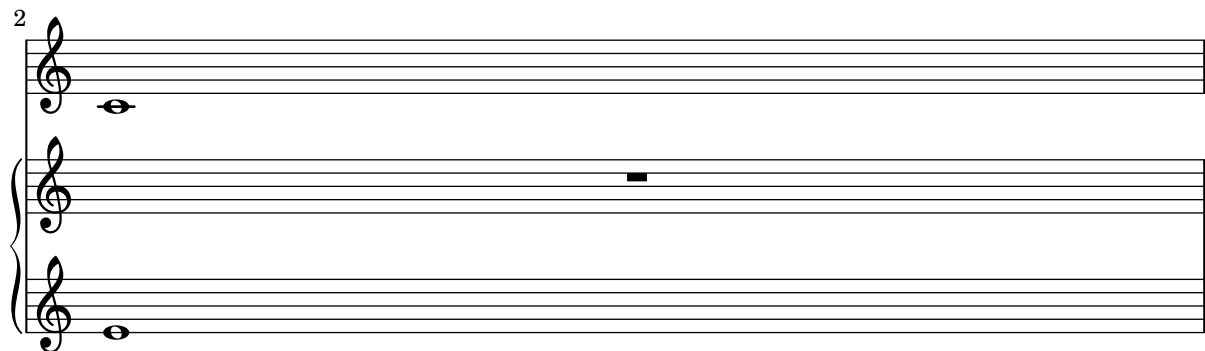
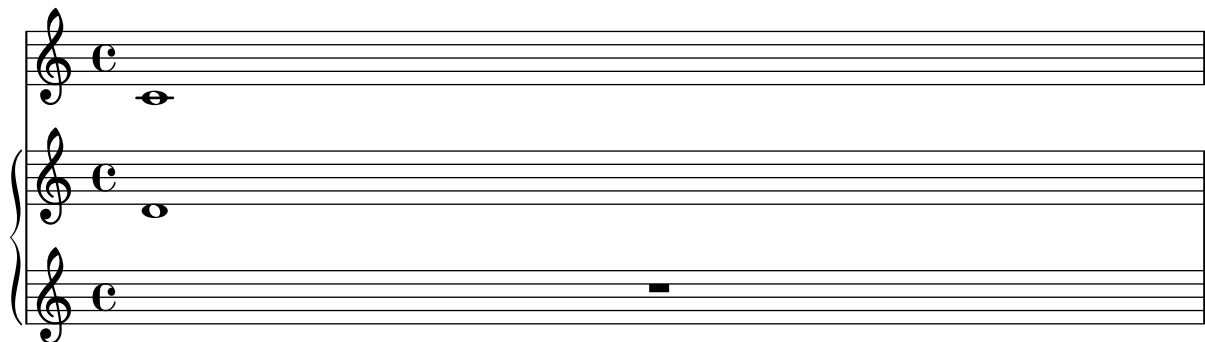
The halfopenvertical articulation is available.

halfopenvertical.ly



Staves in a PianoStaff remain alive as long as any of the staves has something interesting.

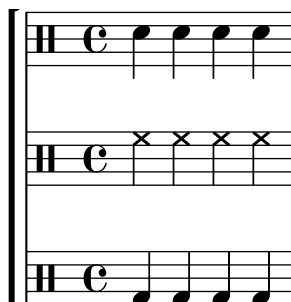
hara-kiri-alive-with.ly



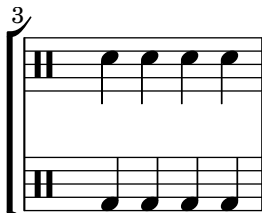
Hara-kiri staves are suppressed if they are empty. This example really contains three drum staves, but as it progresses, empty ones are removed: this example has three staves, but some of them disappear: note how the 2nd line only has the bar number 2. (That the bar number is printed might be considered 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





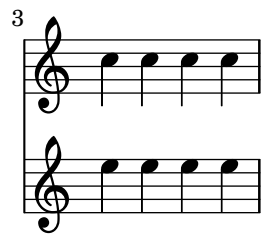


Inserting the harakiri settings globally into the Staff context should not erase previous settings to the Staff context.

`hara-kiri-keep-previous-settings.ly`

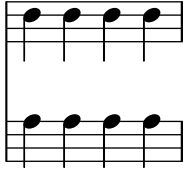


2



2

3



4



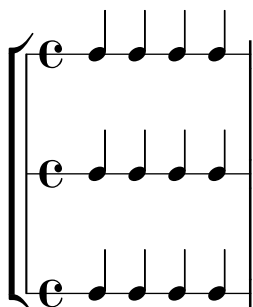
Staves, RhythmicStaves, TabStaves and DrumStaves with percent repeats are not suppressed.  
hara-kiri-percent-repeat.ly

3

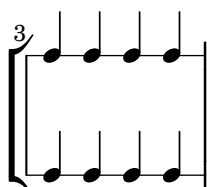
Hara-kiri staves are suppressed if they are empty. This example really contains three rhythmic staves, but as it progresses, empty ones are removed: this example has three staves, but some of them disappear: note how the 2nd line only has the bar number 2. (That the bar number is printed might be considered 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



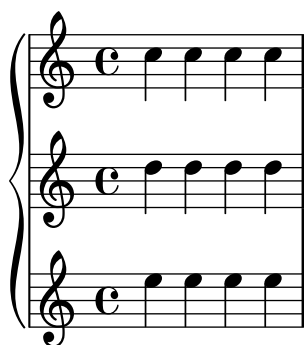
2



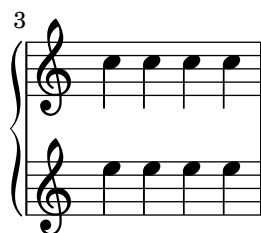
Hara-kiri staves kill themselves if they are empty. This example really contains three staves, but as they progress, empty ones are removed: this example has three staves, but some of them disappear: note how the 2nd line only has the bar number 2. (That the bar number is printed might be considered 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

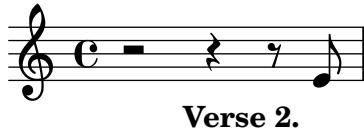


2



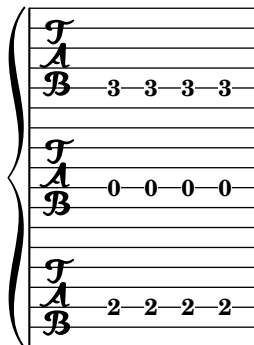


stanza numbers remain, even on otherwise empty lyrics lines.  
 hara-kiri-stanza-number.ly



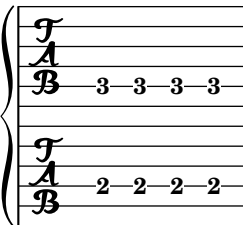
Hara-kiri staves are suppressed if they are empty. This example really contains three tab staves, but as it progresses, empty ones are removed: this example has three staves, but some of them disappear: note how the 2nd line only has the bar number 2. (That the bar number is printed might be considered a bug, however, the scenario of all staves disappearing does not happen in practice.)

hara-kiri-tabstaff.ly

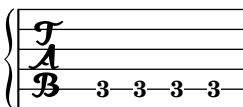


2

3

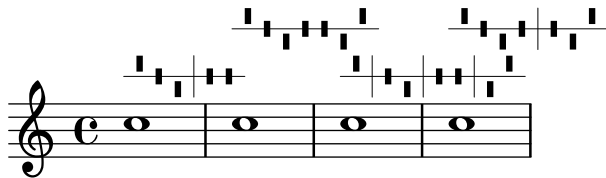


4



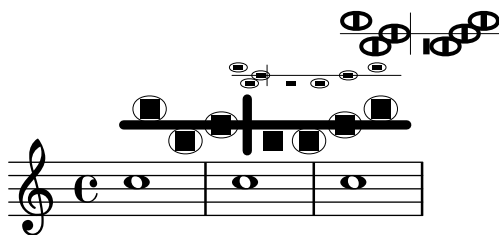
The harp-pedal markup function does some sanity checks. All the diagrams here violate the standard (7 pedals with divider after third), so a warning is printed out, but they should still look okay.

harp-pedals-sanity-checks.ly



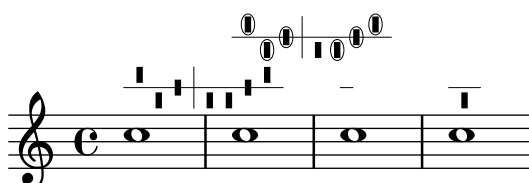
Harp pedals can be tweaked through the size, thickness and harp-pedal-details properties of TextScript.

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

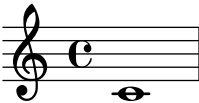
**Title correct (superseded at book level)**

**Subtitle correct (superseded in bookpart)**

Composer correct (set in bookpart)

**Note:** title, subtitle, piece, and composer expected.

Piece correct (superseded in score)

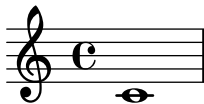


Changing the header fields in a book or a bookpart shall not have any effect on the global default values.

`header-book-multiplescores.ly`

## **Title correct (set at top level)**

**Note:** expect only title.



A second bookpart-level header block shall retain previously set values from a first header block at the same or higher levels unless overridden.

header-bookpart-multiple.ly

**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)



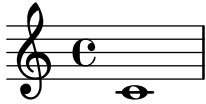
Header blocks may appear before and after the actual music in a score.

`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)

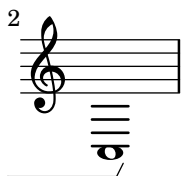
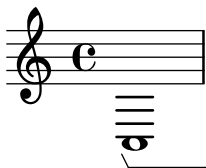
**Note:** expect title and piece.

Piece correct (set at top level)



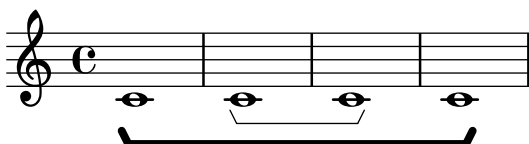
Horizontal brackets connect over line breaks.

`horizontal-bracket-break.ly`



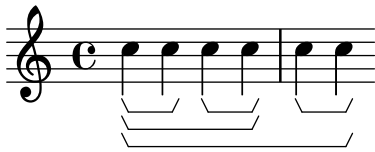
Horizontal brackets are created with the correct event-cause, ensuring tweaks are applied to the correct spanner.

`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 in the PS backend.

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



LilyPond does in-notes.

in-note.ly

The image displays a musical score for a file named 'in-note.ly'. It consists of six staves of music, each containing a sequence of notes. The first staff begins with a treble clef and a common time signature 'C'. The notes are organized into groups of four, with slurs indicating phrasing. The subsequent staves are numbered 4, 8, 12, 16, and 20 on the left margin. The sixth staff includes a fingering '2' under the first note. Below the staves, there are three lines of lyrics, each enclosed in a rectangular box. The first line is preceded by a superscripted '1', and the second by a superscripted '2'. The lyrics are 'this is a test'.

1<sup>1</sup>foobar  
this is a test

2<sup>2</sup>foobar  
this is a test

2

24

28

32

36

40

44

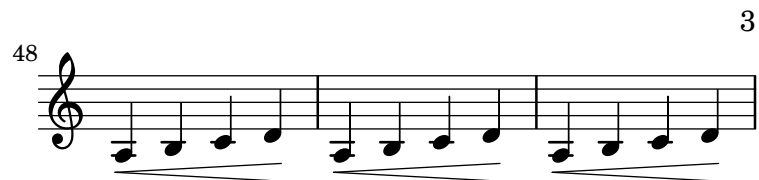
<sup>1</sup>foobar

this is a test
----------------

<sup>2</sup>foobar

this is a test
----------------

<sup>3</sup>foobar



Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

Incipits can be printed using an `InstrumentName` grob.

`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`





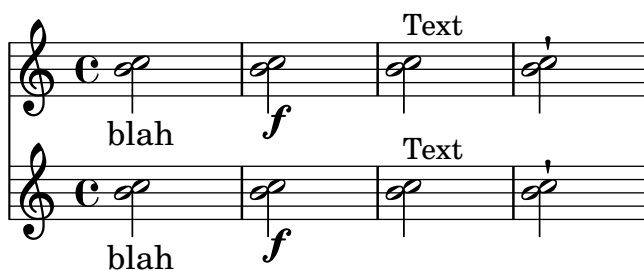
`\inherit-acceptability` allows for one context def to be accepted wherever an existing one is.

`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 diagram illustrates different ways to group musical staves. It shows a 'PianoStaff' with 'Right' and 'Left' parts, a 'ChoirStaff' with three staves, a 'StaffGroup' with two staves labeled 'I' and 'II', a 'GrandStaff' with two staves, and a 'nested group' with three staves. Each staff contains a single note in common time.

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

The diagram shows a single staff with a treble clef and a common time signature. A single note is present on the first staff, and a bar number '2' is indicated below it. The staff is labeled 'up' on the left.

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

Clarinetti  
in B $\flat$



Cl(B $\flat$ )



Instrument names are also printed on partial starting measures.

instrument-name-partial.ly


foo




Dynamics and Lyrics lines below a PianoStaff do not affect the placement of the instrument name.

instrument-name-pedal-lyrics.ly


Piano



Piano

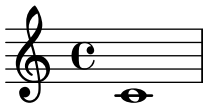


Piano



Moving the Volta\_engraver to the Staff context does not affect InstrumentName alignment.

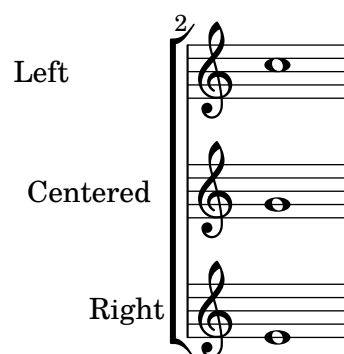
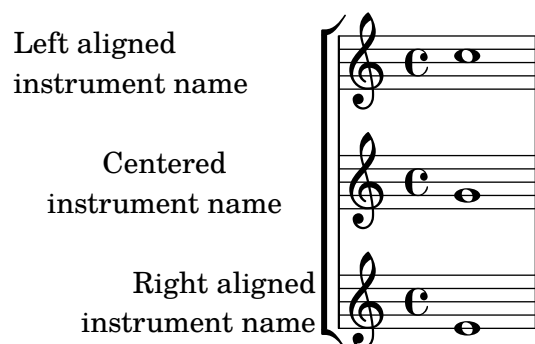
instrument-name-volta.ly





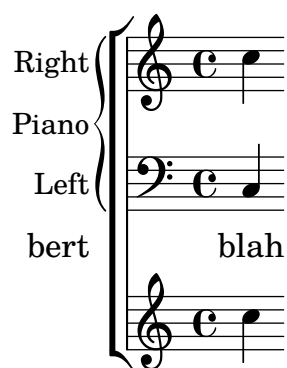
Instrument names horizontal alignment is tweaked by changing the `Staff.Instrument` #’self-alignment-X property. The `\layout` variables `indent` and `short-indent` define the space where the instrument names are aligned before the first and the following systems, respectively.

`instrument-name-x-align.ly`



Staff margins are also markings attached to barlines. 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



Each clef has its own accidental placing rules, which can be adjusted using `sharp-positions` and `flat-positions`.

key-clefs.ly

2

5

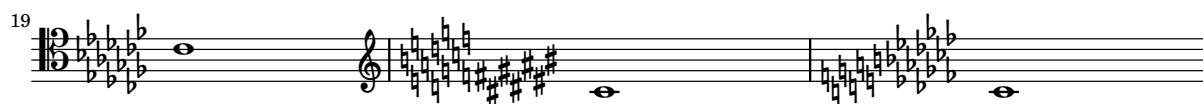
8

11

15

B-sharp on top

Flats throughout 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



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



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



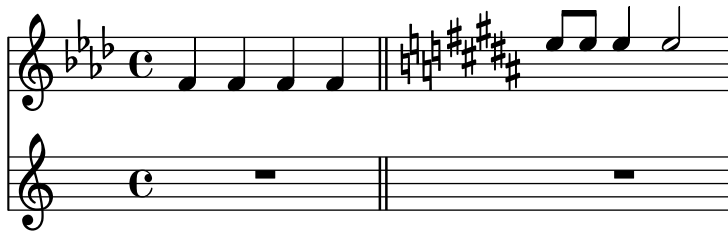
By setting Staff.keyAlterations directly, key signatures can be set invidually per pitch.

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 barline. 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



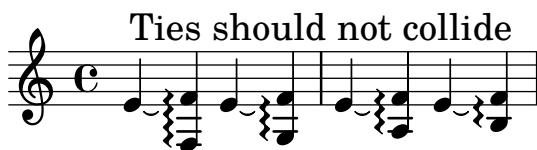
LilyPond typesets Kievan notation.

kievan-notation.ly



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`







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



Ledger lines should appear at every other location for a variety of staves using both line-count and line-positions.

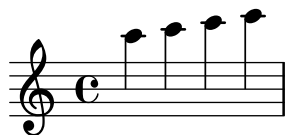
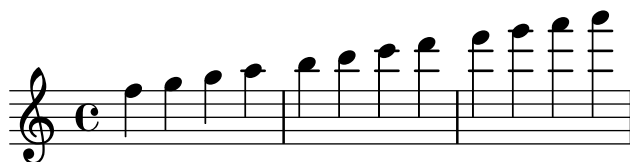
ledger-lines-varying-staves.ly





3 ways to customize ledger line positions.

`ledger-positions-customization.ly`



Highly tweaked example of lilypond output

les-nerides.ly

# LES NÉRÉIDES

## THE NEREIDS

ARTHUR GRAY

Allegretto scherzando

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



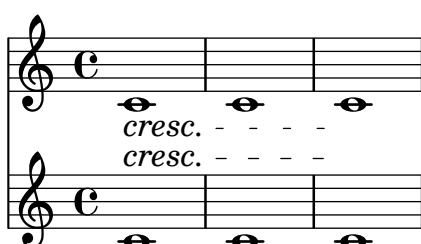
Generate valid postscript even if dash-period is small compared to line thickness.

line-dash-small-period.ly



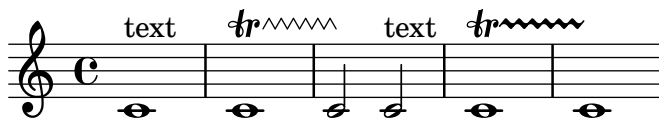
The period of a dashed line is adjusted such that it starts and ends on a full dash.

line-dashed-period.ly



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



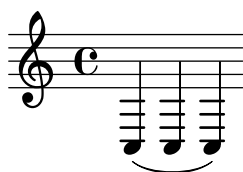
Cover all line styles available.

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



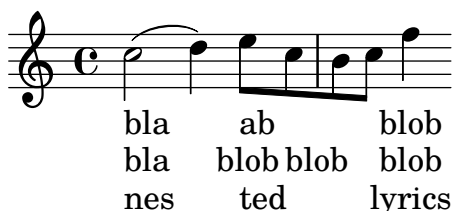
If lyrics are assigned to a non-existing voice, a warning should be printed. However, if the lyrics context does not contain any lyrics, then no warning should be printed.

lyric-combine-empty-warning.ly



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



lyric-combine-nullvoice.ly

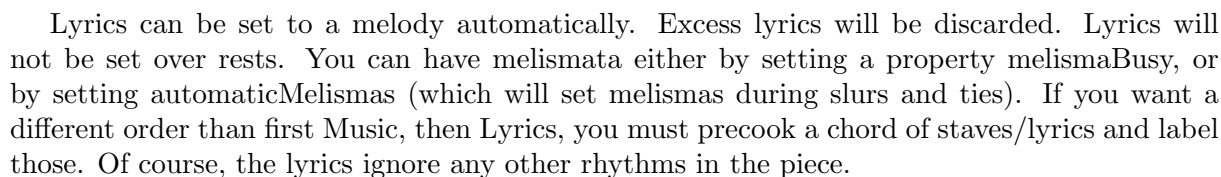


Do mi nus ex



A musical staff in treble clef with a common time signature (C). The melody consists of five notes: a quarter note on G4, a quarter note on A4, a quarter note on G4, a quarter note on F4, and a quarter note on E4. The notes are labeled 'two', 'two', and 'this' respectively under the first three notes.

lyric-combine-switch-voice.ly



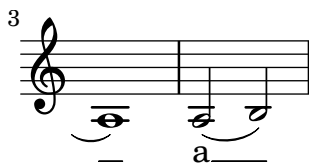
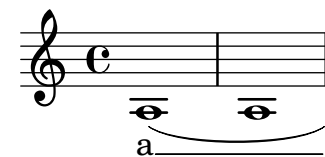
la da da

melisma

la da da

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, a common time signature 'C', and four quarter notes with lyrics 'c', 'd', 'e', and 'e' followed by a series of 'f' characters. The second staff has a treble clef, a common time signature 'C', and four quarter notes with lyrics '-', '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 a common time signature 'C'. It contains a series of eighth notes with lyrics 'ah', 'ha', and 'a.haaaaaaaaaaaaa'.

Hyphens are printed at the beginning of the line only when they go past the first note.

lyric-hyphen-break.ly

Three staves of music. The first staff has a treble clef and a common time signature 'C', with a series of eighth notes and the lyric 'blablabla-'. The second staff has a treble clef and a common time signature 'C', with a series of eighth notes and the lyric 'blablabla-'. The third staff has a treble clef and a common time signature 'C', with a series of eighth notes and the lyric '- blablabla'.

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

Two staves of music. The first staff has a treble clef and a common time signature 'C', with a series of eighth notes and the lyric 'bla - - - bla - - -'. The second staff has a treble clef and a common time signature 'C', with a series of eighth notes and the lyric 'bla - - - bla - - -'.



2

bla - - - - - bla - - - - -

3

bla - - - - - bla - - - - -

4

bla - - - - - bla

bla - - - - - bla

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`

syllab word syl-lab word syl-labword

In lyrics, hyphens may be used.

`lyric-hyphen.ly`

a - b

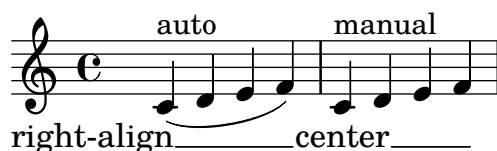
If `ignoreMelismata` is set, lyrics should remain center-aligned.

`lyric-ignore-melisma-alignment.ly`

One two three four  
One two Whee!\_

`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



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 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

A musical score with two staves, Treble and Bass, in common time (C). The Treble staff has a treble clef and the Bass staff has a bass clef. Both staves have a key signature of one flat (Bb). The lyrics are: "Te - - - - nor" for the Treble staff and "Te - - - - nor" for the Bass staff. The lyrics "Bas - - - - ses" are written below the Bass staff. The lyrics "Bas - - - - ses" are written below the Bass staff. The lyrics "Bas - - - - ses" are written below the Bass staff.

A musical score with two staves, Treble and Bass, in common time (C). The Treble staff has a treble clef and the Bass staff has a bass clef. Both staves have a key signature of one flat (Bb). The lyrics are: "one!" for the Treble staff and "two!" for the Bass staff. The lyrics "A - - - -" are written above the Treble staff. The lyrics "Be - - - -" are written below the Treble staff. The lyrics "A - - - -" are written above the Bass staff. The lyrics "Be - - - -" are written below the Bass staff.

Adding a `Bar_engraver` to the `Lyrics` context makes sure that lyrics do not collide with barlines.

bars lengthened: if required for noncollision

lyrics-includegraces.ly

Melismata are triggered by manual beams. Notes in a melisma take their natural spacing over a long syllable.

bla bla - bla

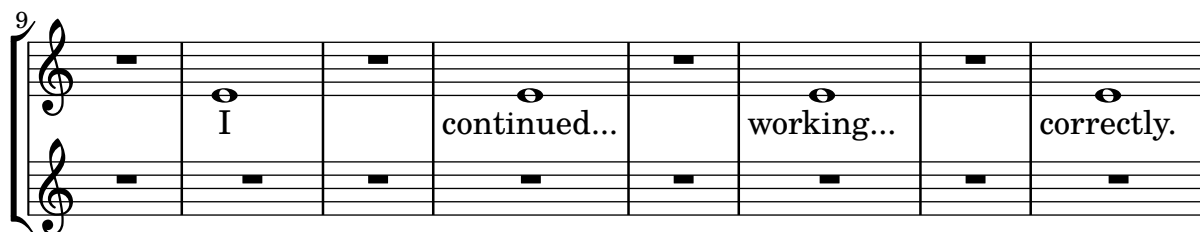
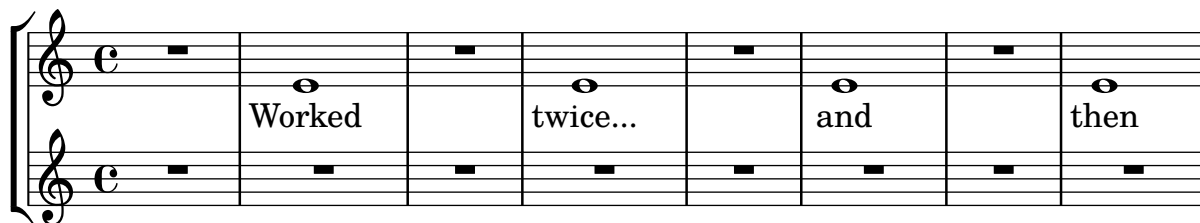
lyrics-no-notes.ly

lyrics-pass-under-bar.ly

A musical staff in treble clef with a common time signature (C). It contains four quarter notes, each with a sharp sign (#) above it, positioned on the first line of the staff. Below the staff, the text "foo bar foooooooooo bar" is written, where the length of the word "oooooooooo" corresponds to the duration of the four notes above.

Empty measures 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`



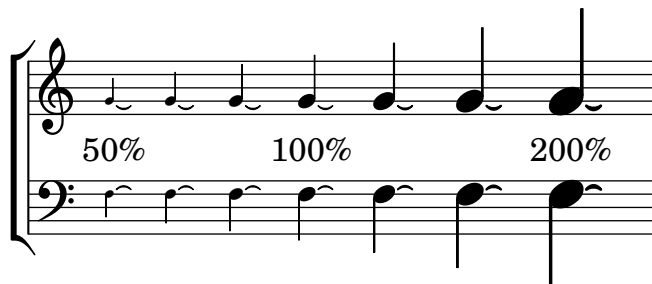
Dot size and beamlet length should be scaled along with notation size when using the `\magnifyMusic` command.

`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`



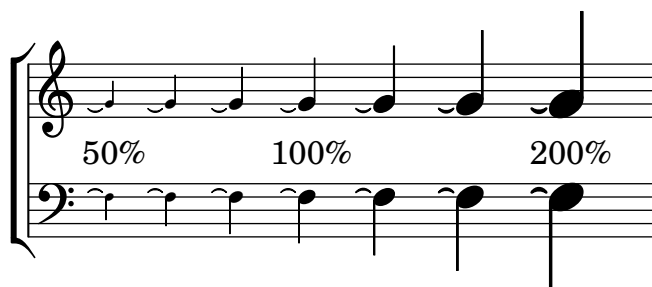
Phrasing slurs should be scaled along with notation size when using the `\magnifyMusic` command. They can get thicker than the default, but not thinner.

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



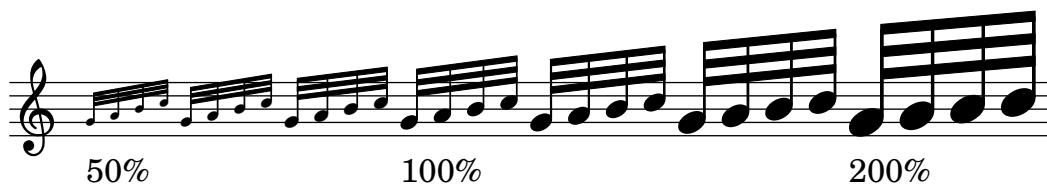
Slurs should be scaled along with notation size when using the `\magnifyMusic` command. They can get thicker than the default, but not thinner.

magnifyMusic-slurs.ly



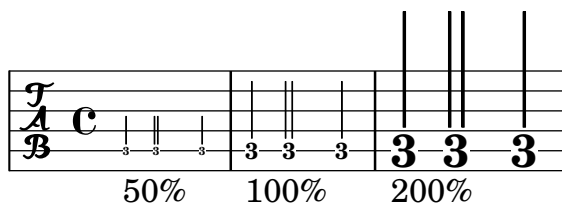
Stem length/thickness, beam spacing/thickness, and horizontal spacing should be scaled along with notation size when using the `\magnifyMusic` command. Stems can get thicker than the default, but not thinner.

magnifyMusic-stem-beam-spacing.ly



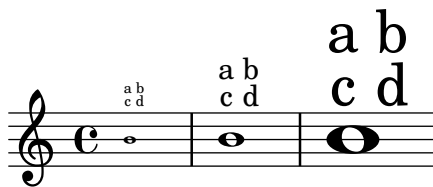
Tablature half-note double-stems should be scaled along with notation size when using the `\magnifyMusic` command.

magnifyMusic-tablature-double-stems.ly



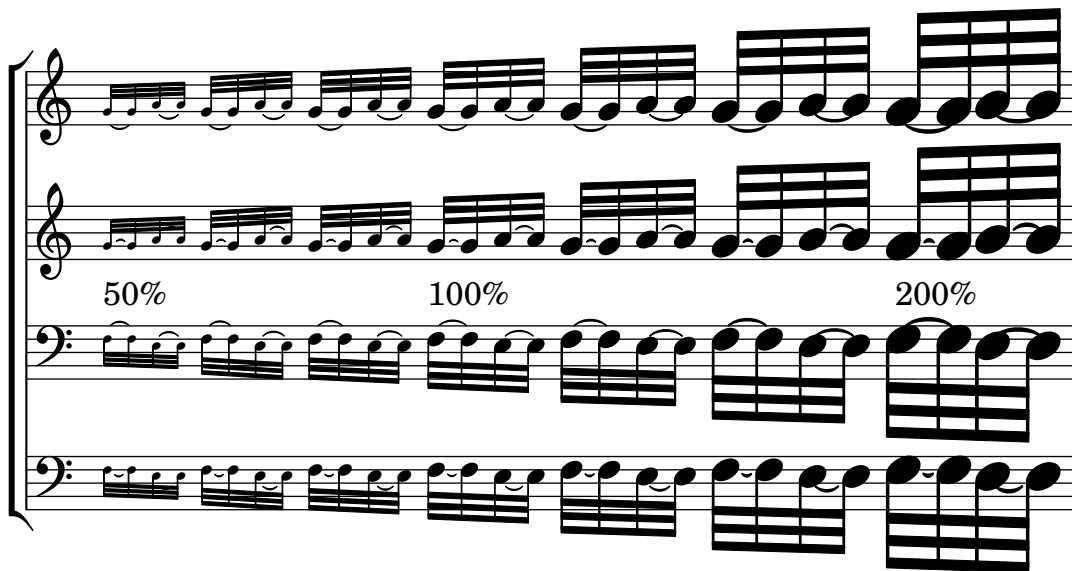
All text-interface grobs should have `baseline-skip` and `word-space` values scaled along with notation size when using the `\magnifyMusic` command.

`magnifyMusic-text-interface.ly`



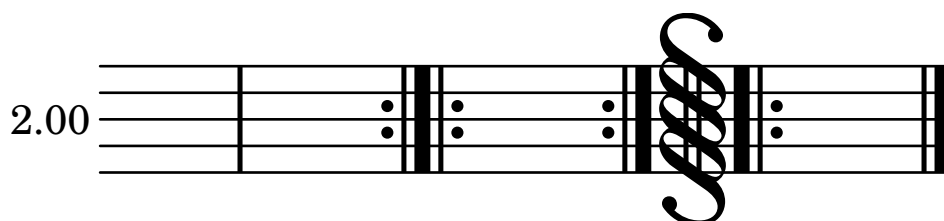
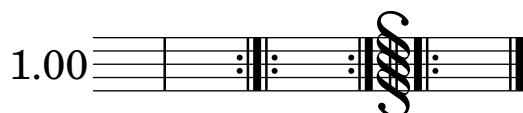
Ties should be scaled along with notation size when using the `\magnifyMusic` command. They can get thicker than the default, but not thinner.

`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.

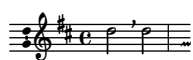
magnifyStaff-dots-beamlets.ly



space-alist values should be scaled along with notation size when using the `\magnifyStaff` command.

magnifyStaff-space-alist.ly

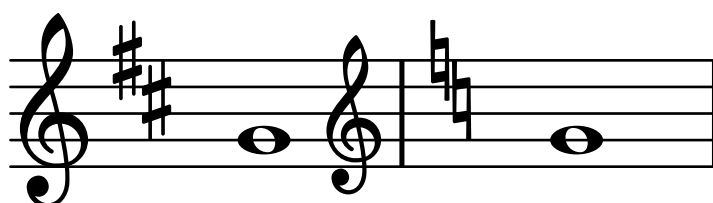
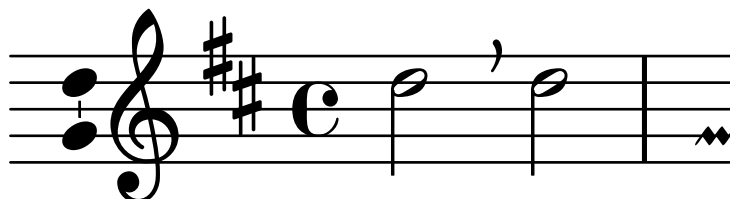
0.50:



1.00:



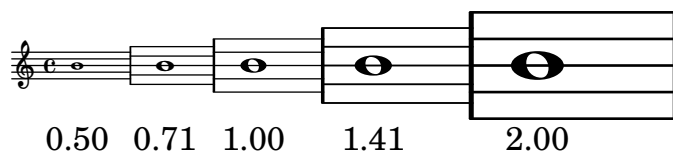
2.00:



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.

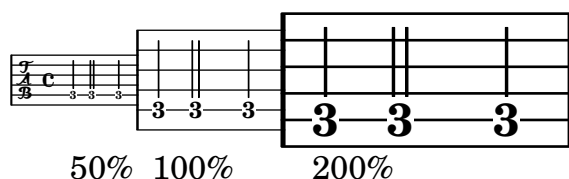


`magnifyStaff-staff-line-thickness.ly`



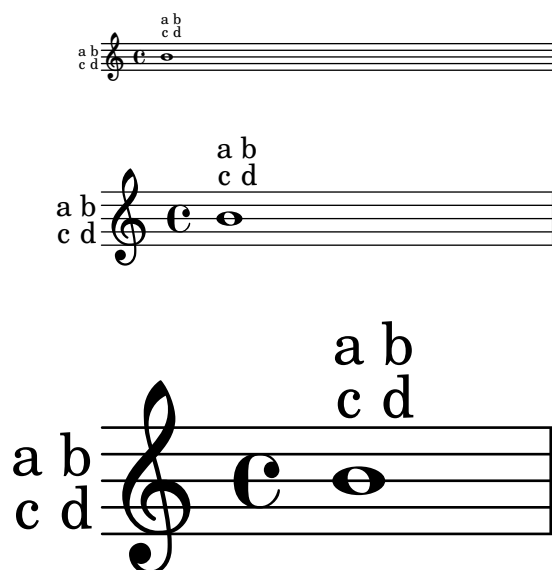
Tablature half-note double-stems should be scaled along with notation size when using the `\magnifyStaff` command.

`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`



`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`

original

`\relative \withOctave`

`\withOctave \relative`

`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`

32

32

34

34

37

2

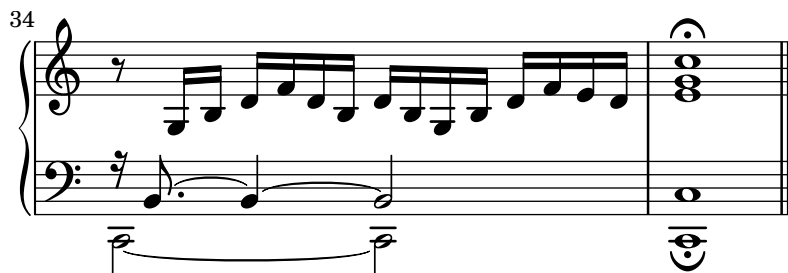
2

10

10

32

32



The feta font has arrow heads  
markup-arrows.ly

► ◄ ▲ ▼ > < ♪ ♫

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  
כךי טחז והר 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

ללל1ללל,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

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:  $6.22\frac{e}{1}23 + \frac{4}{3} + 3.14 + 9876 + \frac{5432}{0} + .1$  (Isn't it pretty?)

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:

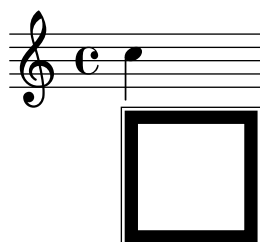
Diacritic marks are rendered and positioned correctly. The diacritic on line 1 looks like a lower-underline and is centered beneath the main character. The diacritic on line 2 is positioned to the left of the main character, with a tiny space of separation. The diacritic on line 3 is positioned directly above the main character, either centered or shifted slightly to the left.

`markup-diacritic-marks.ly`

כ  
י  
י

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

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)
. \draw-dashed-line #(0 . 0)
. \draw-line #(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)

```

```

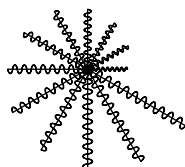
... \draw-dotted-line #(9.75 . 0)
-- \draw-dashed-line #(9.75 . 0)
— \draw-line #(9.75 . 0)

```

```

... \draw-dotted-line #(10.5 . 0)
-- \draw-dashed-line #(10.5 . 0)
— \draw-line #(10.5 . 0)

```



- ~~~~~ default
- ~~~~~ different orientation
- ~~~~~ "eq-end?" set #f
- ~~~~~ different height
- ~~~~~ different thickness
- ~~~~~ different angularity



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-identifier.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)

`\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`



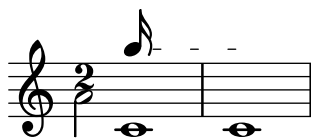
A dotted whole note displayed via the `\note` command must separate the note head and the dot. The dot avoids the upflag.

`markup-note-dot.ly`



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





`\note-by-number` and `\note` support all note head styles and all flag styles (default, straight, flat, mensural).

markup-note-styles.ly

Note-head-styles:

Note head styles										
default										
altdefault										
baroque										
neomensural										
mensural										
petrucci										
semipetrucci										
blackpetrucci										
harmonic										
harmonic-black										
harmonic-mixed										
diamond										
cross										
xcircle										
triangle										
slash										

### Modern-straight-flag:

default	
mensural	



### Old-straight-flag:

default	
---------	--

### Flat-flag:

default	
---------	--

### default-flag:

default	
mensural	

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



The image displays a series of musical staves illustrating various metronome markings generated using the `markup-note.ly` function. The staves show a variety of note values (half notes, quarter notes, eighth notes, sixteenth notes) and their corresponding mensural symbols. The markings are arranged in a sequence that demonstrates the flexibility of the markup-note.ly function, including different flag, dot, and duration settings. The final staff shows a standard musical staff with a treble clef and a common time signature (C), followed by a sequence of notes.

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 `\path` markup command allows the user to draw arbitrary paths using a simple syntax. The two paths below should be identical.

markup-path.ly

















































































































`\rest-by-number` and `\rest` support all rest styles.

markup-rest-styles.ly

default											
mensural											
neomensural											
classical											
baroque											
altdefault											
petrucci											
blackpetrucci											
semipetrucci											
kievan											

The rest markup function works for a variety of style, dot and duration settings.

Simple Rests

default											
mensural											
neomensural											
classical											
baroque											
altdefault											
petrucci											
blackpetrucci											
semipetrucci											
kievan											

MultiMeasureRests

default	<b>—</b>	<b>2</b> <b> </b>	<b>3</b> <b>┌─</b>	<b>4</b> <b> </b>	<b>5</b> <b>┌─</b>	<b>6</b> <b> </b>	<b>7</b> <b>┌─</b>	<b>8</b> <b>  </b>	<b>9</b> <b>  ─</b>	<b>10</b> <b>  </b>	<b>11</b> <b>  ─</b>	<b>12</b> <b>   </b>
mensural	<b>'</b>	<b> </b>	<b>"</b>	<b> </b>	<b> </b>	<b> </b>	<b> </b>	<b> </b>	<b> </b>	<b> </b>	<b> </b>	<b>  </b>
neomensural	<b>'</b>	<b> </b>	<b>"</b>	<b> </b>	<b> </b>	<b> </b>	<b> </b>	<b>  </b>	<b>  </b>	<b>  </b>	<b>  </b>	<b>   </b>
classical	<b>—</b>	<b>2</b> <b> </b>	<b>3</b> <b>┌─</b>	<b>4</b> <b> </b>	<b>5</b> <b>┌─</b>	<b>6</b> <b> </b>	<b>7</b> <b>┌─</b>	<b>8</b> <b>  </b>	<b>9</b> <b>  ─</b>	<b>10</b> <b>  </b>	<b>11</b> <b>  ─</b>	<b>12</b> <b>   </b>
baroque	<b>—</b>	<b>2</b> <b> </b>	<b>3</b> <b>┌─</b>	<b>4</b> <b> </b>	<b>5</b> <b>┌─</b>	<b>6</b> <b> </b>	<b>7</b> <b>┌─</b>	<b>8</b> <b>  </b>	<b>9</b> <b>  ─</b>	<b>10</b> <b>  </b>	<b>11</b> <b>  ─</b>	<b>12</b> <b>   </b>
altdefault	<b>—</b>	<b>2</b> <b> </b>	<b>3</b> <b>┌─</b>	<b>4</b> <b> </b>	<b>5</b> <b>┌─</b>	<b>6</b> <b> </b>	<b>7</b> <b>┌─</b>	<b>8</b> <b>  </b>	<b>9</b> <b>  ─</b>	<b>10</b> <b>  </b>	<b>11</b> <b>  ─</b>	<b>12</b> <b>   </b>
petrucci	<b>'</b>	<b> </b>	<b>"</b>	<b> </b>	<b> </b>	<b> </b>	<b> </b>	<b> </b>	<b> </b>	<b> </b>	<b> </b>	<b>  </b>
blackpetrucci	<b>—</b>	<b>2</b> <b> </b>	<b>3</b> <b>┌─</b>	<b>4</b> <b> </b>	<b>5</b> <b>┌─</b>	<b>6</b> <b> </b>	<b>7</b> <b>┌─</b>	<b>8</b> <b>  </b>	<b>9</b> <b>  ─</b>	<b>10</b> <b>  </b>	<b>11</b> <b>  ─</b>	<b>12</b> <b>   </b>
semipetrucci	<b>—</b>	<b>2</b> <b> </b>	<b>3</b> <b>┌─</b>	<b>4</b> <b> </b>	<b>5</b> <b>┌─</b>	<b>6</b> <b> </b>	<b>7</b> <b>┌─</b>	<b>8</b> <b>  </b>	<b>9</b> <b>  ─</b>	<b>10</b> <b>  </b>	<b>11</b> <b>  ─</b>	<b>12</b> <b>   </b>
kievan	<b>—</b>	<b>2</b> <b> </b>	<b>3</b> <b>┌─</b>	<b>4</b> <b> </b>	<b>5</b> <b>┌─</b>	<b>6</b> <b> </b>	<b>7</b> <b>┌─</b>	<b>8</b> <b>  </b>	<b>9</b> <b>  ─</b>	<b>10</b> <b>  </b>	<b>11</b> <b>  ─</b>	<b>12</b> <b>   </b>

There is a Scheme macro `markup` to produce markup texts using a similar syntax as `\markup`.

`markup-scheme.ly`

foo **bar** baz  
bazr  
bla string 1  
string 2 *Norsk*<sup>2</sup> *p* *sfzp* A A A A<sub>alike</sub>

foo **bar** baz  
bazr  
bla string 1  
string 2 *Norsk*<sup>2</sup> *p* *sfzp* A A A A<sub>alike</sub>

`\markup \score` displays all systems. Spacing between systems is set using `baseline-skip`.



markup-score-multi-system.ly

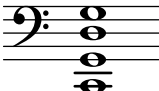


Use \score block as markup command.

markup-score.ly

## Solo Cello Suites

### Suite IV

Originalstimmung: 



A list of special character ASCII aliases can be easily included. This works for markups and lyrics.

markup-special-characters.ly

### Markup example:

Input:

&numero;2 &ndash; &OE;dipe&hellip;

Output:

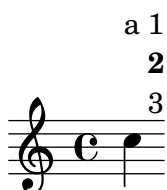
*No2 – Œdipe...*

### Lyric example:

Ceffez Infidèles, un cœur innocent ne craint rien ;

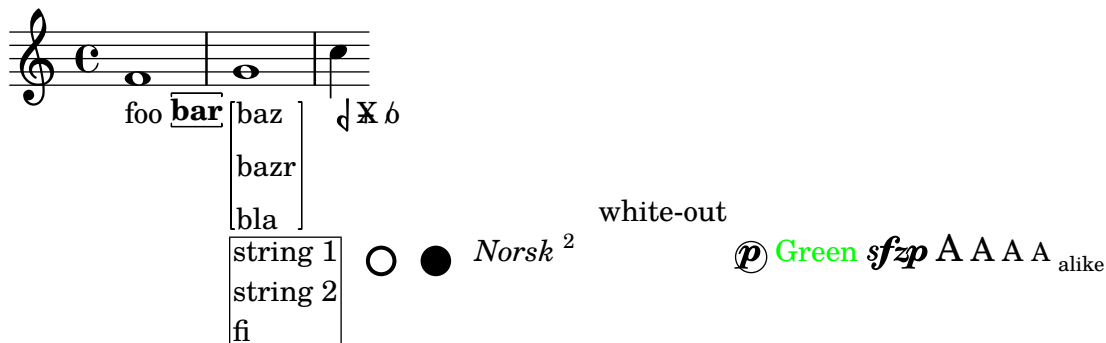
Markup scripts may be stacked.

markup-stack.ly



Demo of markup texts, using LilyPond syntax.

markup-syntax.ly



Users may define non-standard markup commands using the `define-markup-command` scheme macro.

markup-user.ly



The markup commands `\wordwrap` and `\justify` produce simple paragraph text.

markup-word-wrap.ly

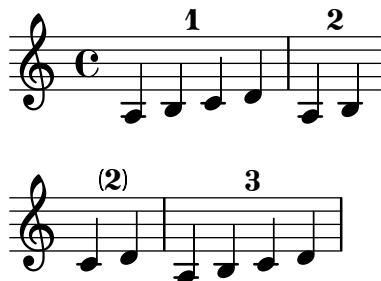
this is normal text This is a test of the wordwrapping function. 1 This is a test continuing  
of the wordwrapping function. 2 This is a test of the  
wordwrapping function. 3 This is a test of the  
wordwrapping function. 4 1a111 11111 **22222** 2222

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 <sup>a</sup>/<sub>b</sub> 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  
Gate Gate paragate Gate Gate paragate Gate Gate paragate Gate Gate  
Gate Gate paragate. Gate Gate paragate.

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



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



Mensural ligatures show different shapes, depending on the rhythmic pattern and direction of the melody line.

mensural-ligatures.ly

### ligaturae binariae



### ligaturae ternariae, quaternariae, etc.



**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 BBL

**Ockeghem: Requiem**

SSBBBBBBBL BBBBL

**crazy ligatures**

BBBBB BB B.B.B.B.B.B.B.B. B.B.

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`

9

A MetronomeMark, RehearsalMark and BarNumber should not effect the starting point of spanners.

`metronome-mark-broken-bound.ly`

**foooooo** (♩ = 90)

8va

tr

1

ah

ah

2 **f**ooooo (♩ = 90)

8va

1

rrgh

rrgh

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)

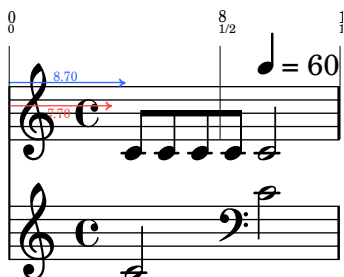
default-note-head  
flat-flag **Allegro** (♩ = 120 – 140) **Allegro** (♩ = 140)

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.

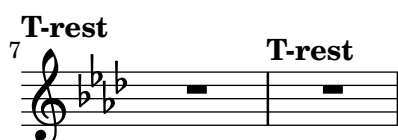
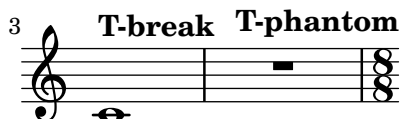
metronome-marking-align-order.ly



`\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



Here `\tempo` directives are printed as metronome markings.

The marking is left aligned with the time signature, if there is one.

metronome-marking.ly



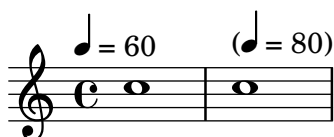
A metronome marking can be added to a multimeasure rest whose engraver was moved to the Staff, without segfaulting.

metronome-multimeasure-rest-no-segfault.ly



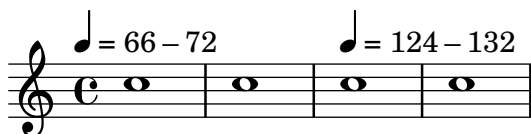
Using an empty text in the metronome marks, one can generate parenthesized tempo marks.

metronome-parenthesized.ly



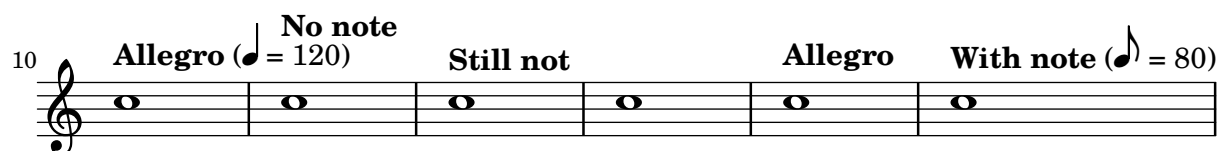
Tempo ranges are supported. By default, numbers are printed with an en-dash character, separated by thin-spaces.

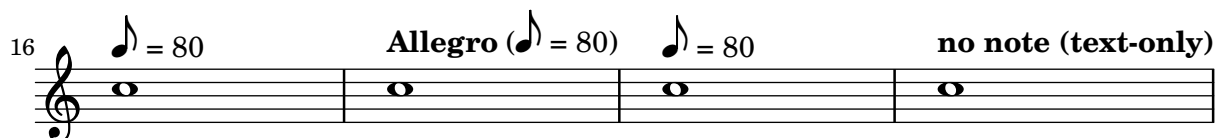
metronome-range.ly



The tempo command supports text markup and/or 'duration=count'. Using Score.tempoHideNote, one can hide the 'duration=count' in the tempo mark.

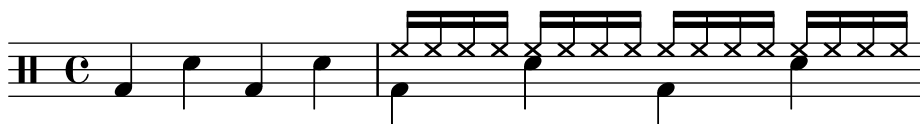
metronome-text.ly





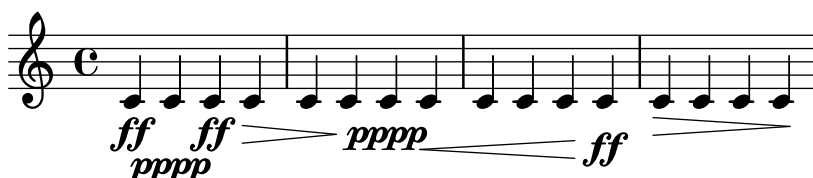
Midi can create drums.

`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`

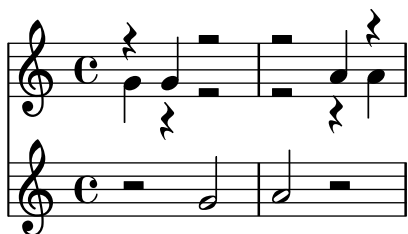
The pitch wheel is used for microtones.

`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`



26

30

34

39

44

49

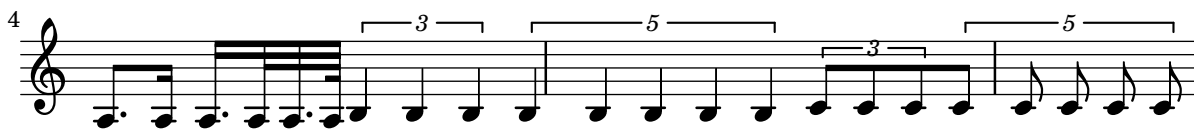
55

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 -idvvv file.midi |grep Midi` to see midi events.

`midi-unisons.ly`

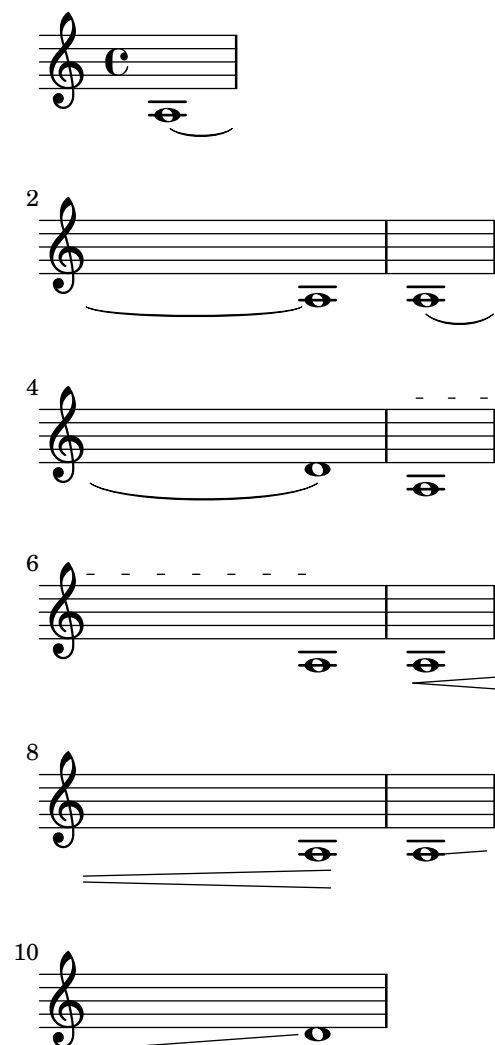


The full orchestra plays a note, where groups stop one after another. Use this to tune equalizer settings.

`midi-volume-equaliser.ly`

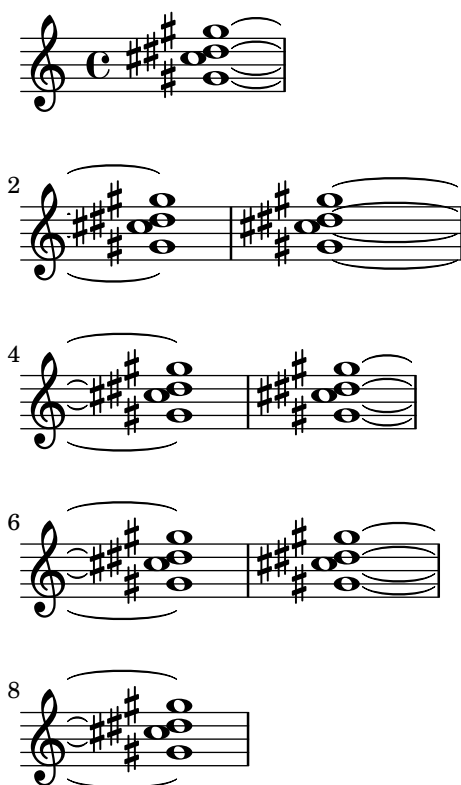
The property `minimum-length-after-break` can be used to stretch broken spanners starting after a line break. The following example shows usage for a variety of spanners.

`minimum-length-after-break.ly`



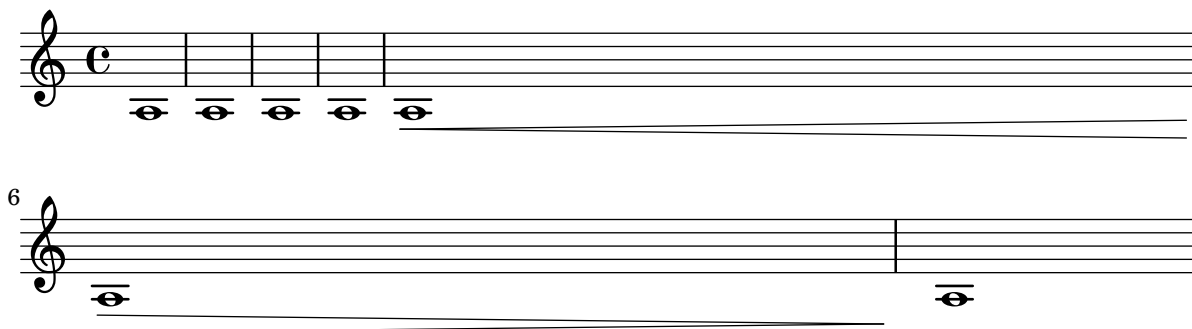
The following shows the interaction between the properties `minimum-length` and `minimum-length-after-break`. When `minimum-length` is used alone, both segments of the tie are affected. The properties `minimum-length-after-break` only affects the sibling starting a line. Both properties may be used together 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.

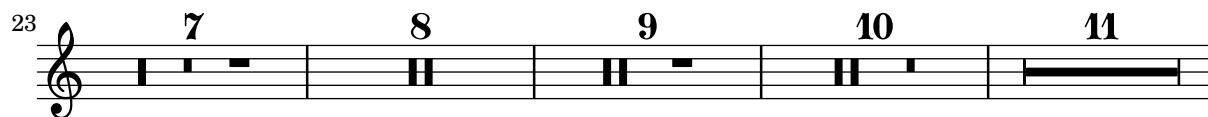
`minimum-length-end-line.ly`



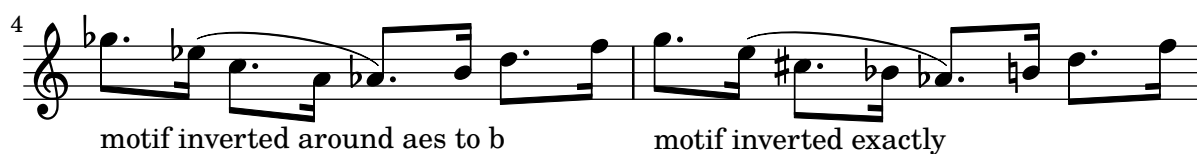
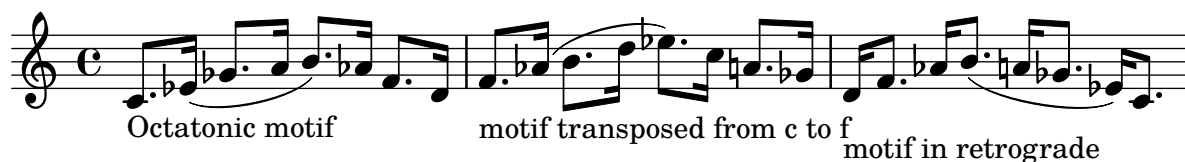
If `Score.skipBars` is set, the signs for four, two, and one measure rest are combined to produce the graphical representation of rests for up to 10 bars. The number of bars will be written above the sign.

`mm-rests2.ly`

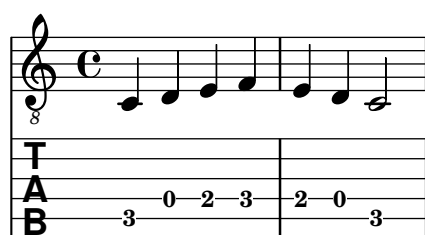




`\modalTranspose`, `\retrograde`, `\inversion` and `\modalInversion` work for an octatonic motif.  
`modal-transforms.ly`

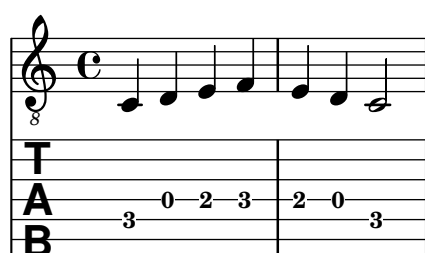
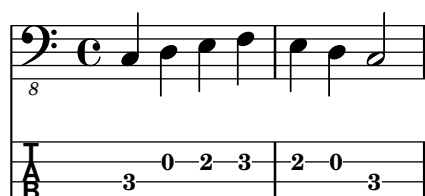


The sans serif style tab clef is automatically adjusted to different string spacings.  
`modern-tab-clef-scaled.ly`



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`



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

# 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. Schö - ner 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 Nr. 3 Es dur

für Horn und Orchester

Horn in F

Wolfgang Amadeus Mozart (1

Allegro

**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  
122 Horn in F

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

25 **B** 9

Horn in F

38 47 57 65 73

**C** **D**

*sfp* *sfp* *sfp* *sfp* *p*

Rondo

7 26 39 50 59 65 72

**A** **B** **C**

*p* *p*

4 Horn in F

79

97 **D** 3

107 3

116 3

125 **E** 9

139

147 **F**  
*cresc.* - - - - *f*

155 *p*

162 7 **G** 4  
*mf*

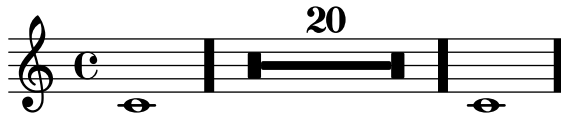
179 **H**  
*cresc.* - - - - *f*

187 *tr* 5 *p*

198 5  
*cresc.* - - - - *f*

The multi-measure 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 multi-measure rest.

`multi-measure-rest-center2.ly`

foo foo foo foo foo



Multi-measure rests are centered also in the case of grace notes.

`multi-measure-rest-grace.ly`



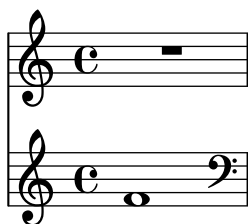
There are both long and short instrument names. Engraving instrument names should not be confused by the multi-measure rests.

`multi-measure-rest-instr-name.ly`



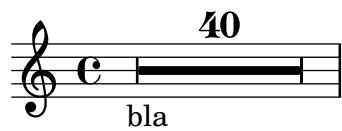
Though the default spacing for multi-measure rests is affected by prefatory matter in other staves, centering can be restored by overriding `spacing-pair`.

`multi-measure-rest-multi-staff-center.ly`



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



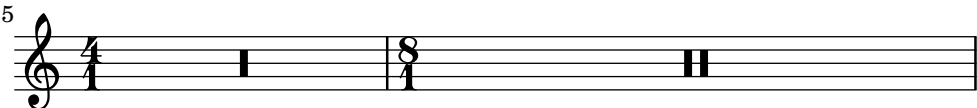
Multi measure rest staff position can be overridden to 0.

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



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

top

inner

**10**

Ad lib

a1b2c3

inner  
bot

4

3

17

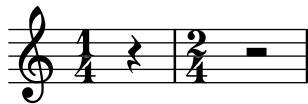
very very very very very very long text

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 multi-measure rest for 1 measure with the annotation 'Ad lib' below it. The second measure has a multi-measure rest for 4 measures with a '4' above it. The third measure has a multi-measure rest for 3 measures with a '3' above it. The fourth measure has a multi-measure rest for 10 measures with 'top', 'inner', and '10' above it, and 'a1b2c3' below it. The fifth measure has a multi-measure rest for 10 measures with '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. It shows a multi-measure rest for 17 measures, followed by a single measure containing a quarter note.

Multi-measure rests standard values can be tweaked.

`multi-measure-rest-tweaks.ly`

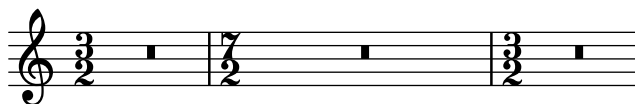
Use non-standard multi-measure rests:



Round up to the longer rest:



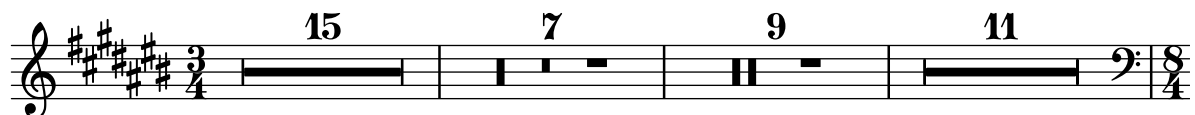
Round up to the longer rest only in specified time signatures:



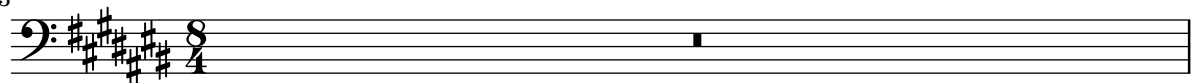
Multi-measure rests do not collide with bar lines and clefs. They are not expanded when you set `Score.skipBars`. Although the multi-measure-rest is a `Spanner`, minimum distances are set to stop it colliding with bar lines.

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`

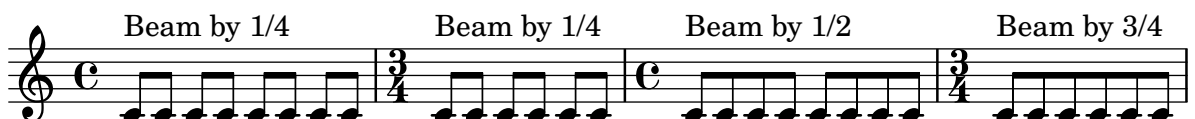


43



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.

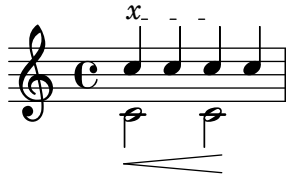
`music-function-direct-call.ly`





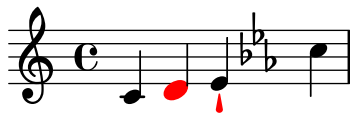
the `endSpanners` music function inserts end span events at the end of a note.

`music-function-end-spanners.ly`



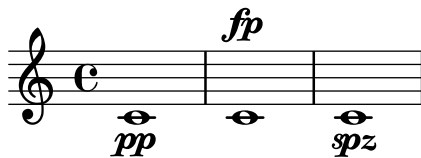
For defining a music function, one can supply one or several music function calls chained together, cutting the last call short using `\etc`. The remaining arguments are supplied when calling the music function defined in this manner.

`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`



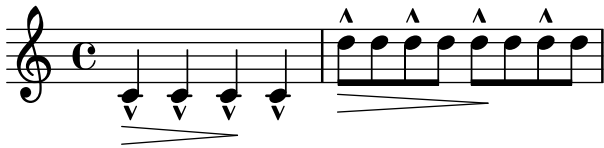
Music functions are generic music transformation functions, which can be used to extend music syntax seamlessly. Here we demonstrate a `\myBar` function, which works similar to `\bar`, but is implemented completely in Scheme.

`music-function.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** |



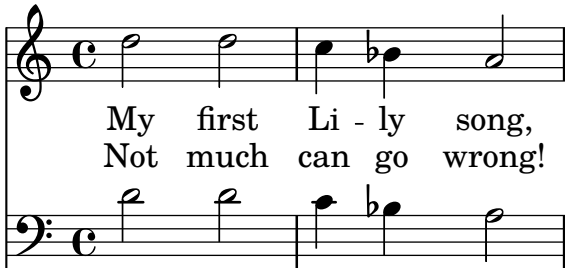
addlyrics do not need braces around their arguments, in particular if the arguments are variables.

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.

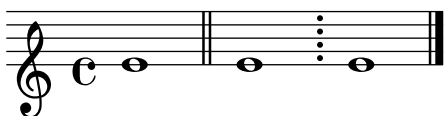
The printing of the staff lines may be suppressed by removing the corresponding engraver.

`no-staff.ly`



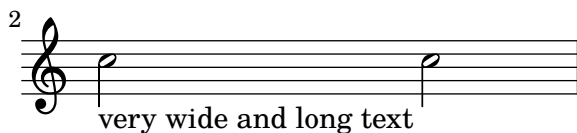
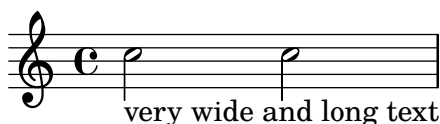
Bar lines are positioned correctly when using custom staves which are not centered around position 0.

`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

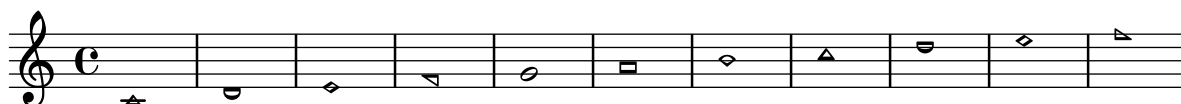


collisions prevented



Notes can be set in the Aiken (Christian Harmony) style.

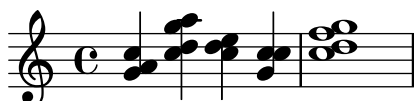
`note-head-aiken.ly`





Note heads are 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 (Harmonica Sacra) style.

`note-head-funk.ly`



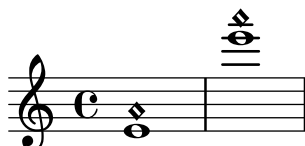
Dots on harmonic note heads can be shown by setting the property `harmonicDots`.

`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`



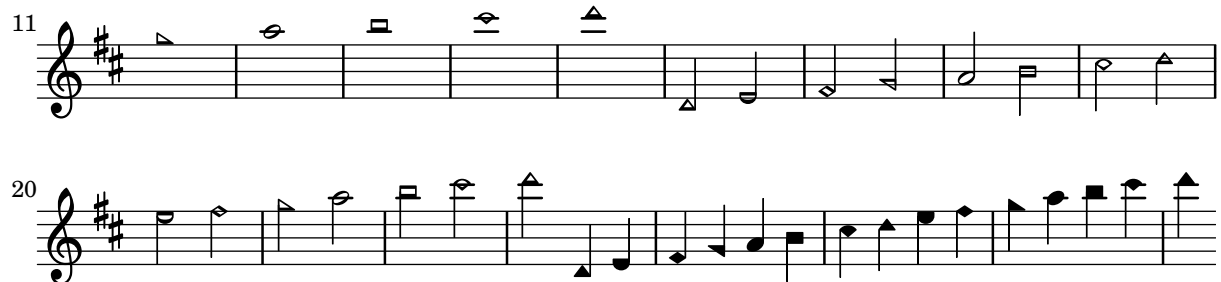
note-head-sacred-harp.ly



note-head-shape-minor.ly



note-head-solfa.ly



note-head-southern-harmony.ly

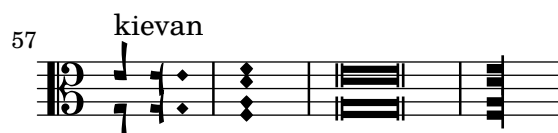
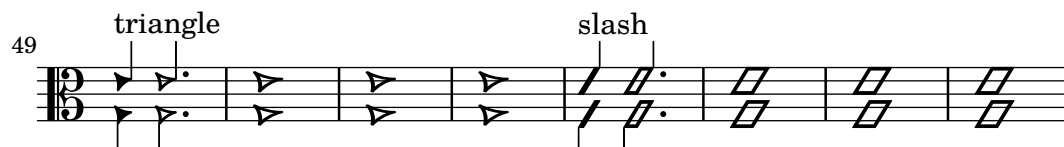
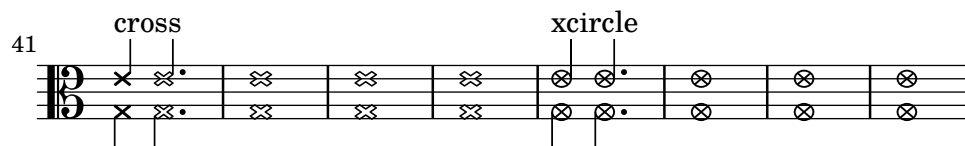
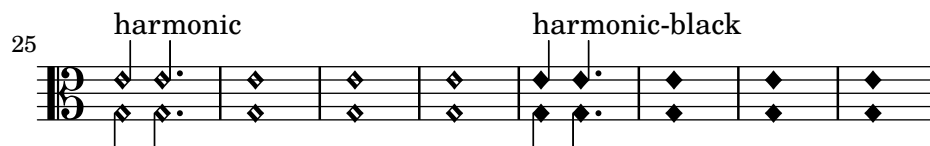
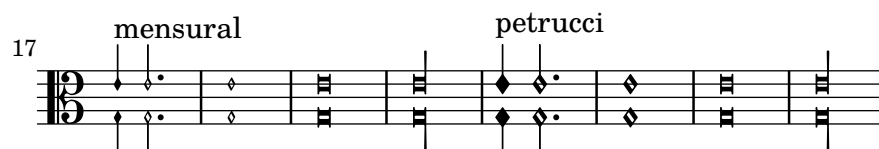





Note head shapes may be set from several choices. The stem endings should be adjusted according to the note head. If you want different note head styles on one stem, you must create a special context.

Harmonic notes have a different shape and different dimensions.

`note-head-style.ly`



Notes can be set in the Walker (Christian Harmony) style.

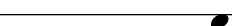
12 

22



note-line.ly

3



note-names-context.ly

Allegro      Allegro      Allegro      Allegro      Allegro      Allegro

ly-ric ly-ric   ly-ric ly-ric   ly-ric ly-ric   ly-ric ly-ric   ly-ric ly-ric   ly-ric ly-ric

[illegible]

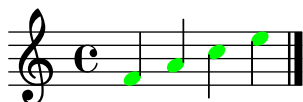
Various languages are supported for note names input. Selecting another language within a music expression is possible, and doesn't break point-and-click abilities.

note-names.ly



Noteheads do not extend above the upper staff line.

notehead-height.ly



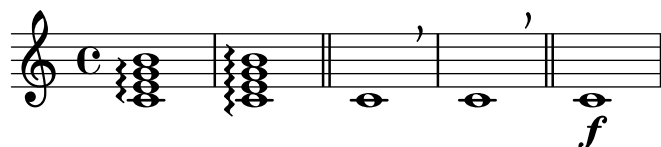
The number of stafflines of a staff can be set. Ledger lines both on note heads and rests, as well as barlines, are adjusted accordingly.

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

one-line-auto-height-breaking.ly

Lieblich, etwas geschwind

1. Sü - ßes Licht! Aus gol - den

2. いろはに 𐤀𐤓 ta ta ほへど

2.

heavily mutilated Edition Peters Morgenlied by Schubert

one-line-breaking.ly

Lieblich, etwas geschwind

1. Sü - ßes Licht! Aus gol - den

2. いろはに 𐤀𐤁 ta ta ほへど

2.

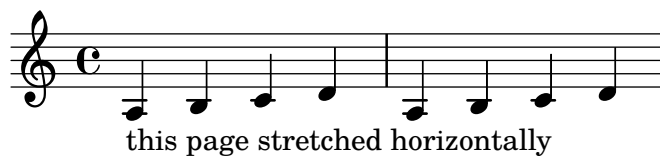
`OneStaff` contexts can be used for letting several contexts use the same vertical position. This example shows chords being placed in a staff and immediately following it.

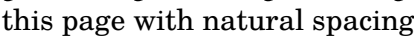
`one-staff.ly`



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`





Print the option help text, for comparison against previous releases.

Test backup of predicate-based optional music function arguments.

optional-args-backup.ly

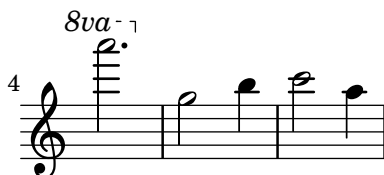
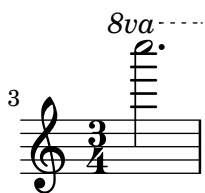
optional-args-predicate.ly

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



Both edge heights of an ottava bracket can be specified.

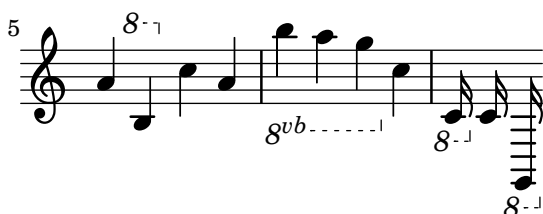
ottava-edge.ly



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`.

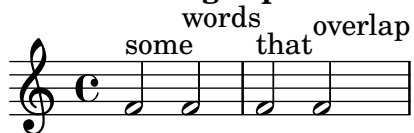
ottava.ly



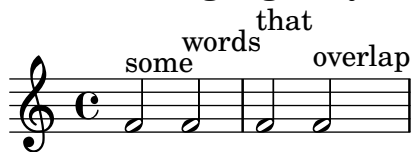
The `outside-staff-placement-directive` adjusts the order in which objects are placed outside the staff.

outside-staff-placement-directive.ly

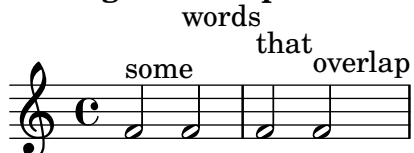
**left-to-right-polite**



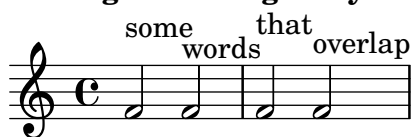
**left-to-right-greedy**



**right-to-left-polite**

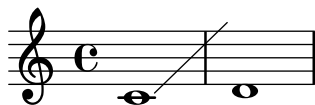


**right-to-left-greedy**



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



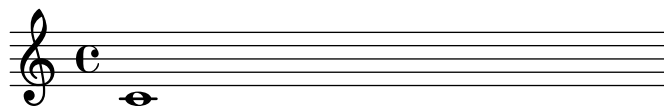
3



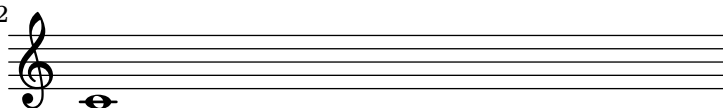
Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

Page breaking and page turning commands (`\pageBreak`, `\noPageBreak`, etc), can be used at top level.

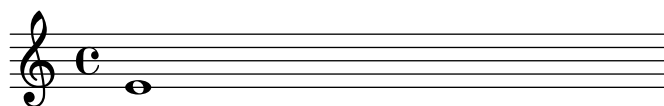
`page-break-turn-toplevel.ly`

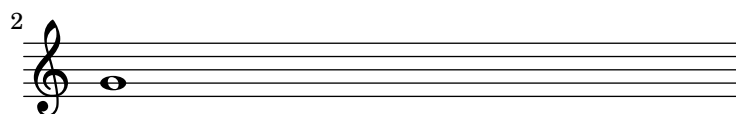
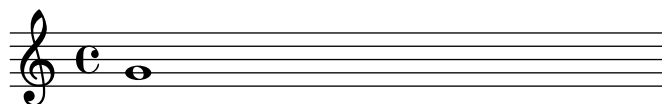
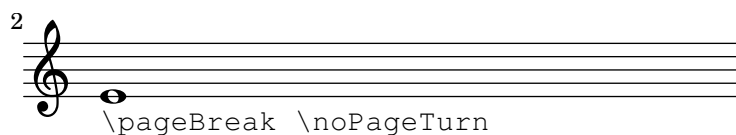


2



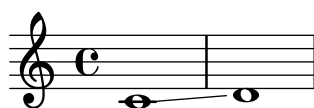
`\allowPageTurn`





If a page break is forced where it is forbidden, a warning is printed.

`page-break-warn-forbidden.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 2.19.44—[www.lilypond.org](http://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

A musical score consisting of two systems of four staves each. Each staff begins with a treble clef and a common time signature 'C'. The notes are quarter notes, and the lyrics 'ma ma ma ma ma ma' are written below each staff. The first system contains the first three measures of the piece, and the second system contains the next three measures. The lyrics are aligned with the notes across all staves.

Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://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 2.19.44—[www.lilypond.org](http://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

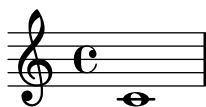


Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

Padding between a score and a markup is honored by the page breaker. This should take up two pages.

page-breaking-markup-padding3.ly

00  
01

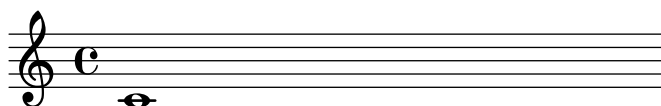


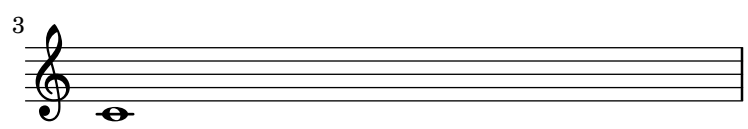
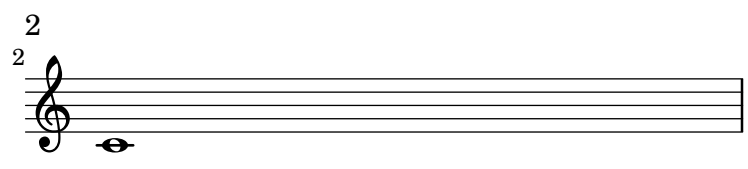
Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

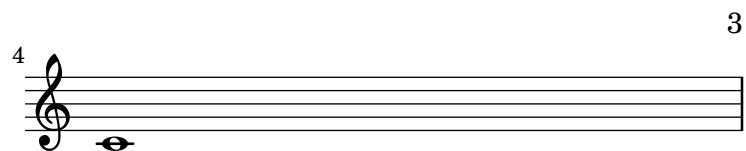
The max-systems-per-page variable prevents more than a given number of systems from being on a page. Titles are not counted as systems. `\noPageBreak` can override max-systems-per-page in unusual situations.

`page-breaking-max-systems-per-page.ly`

## Title







Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

minimum-distance is correctly accounted for in page breaking.

page-breaking-min-distance.ly



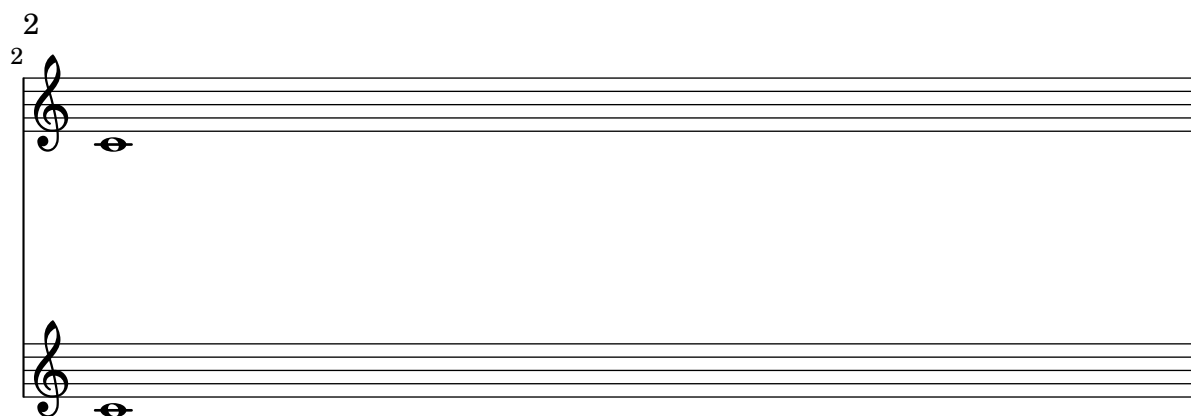
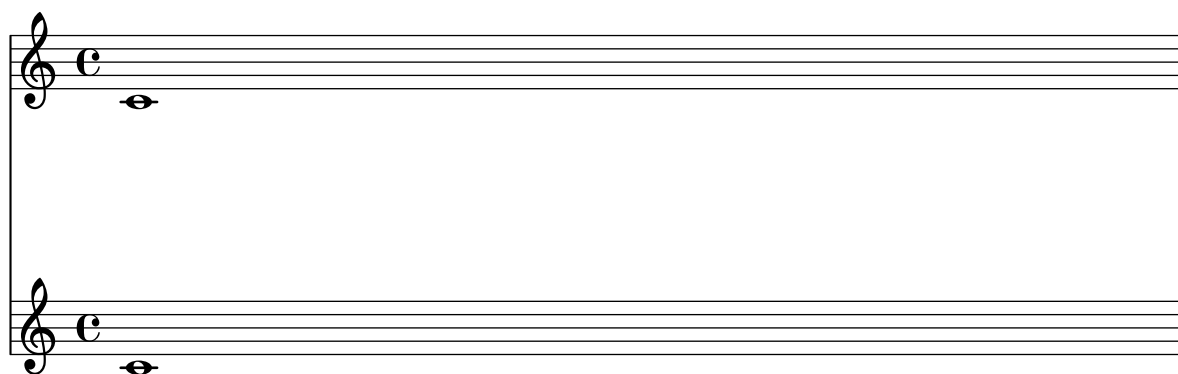




Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

minimum-distance within a system is correctly accounted for in page breaking.

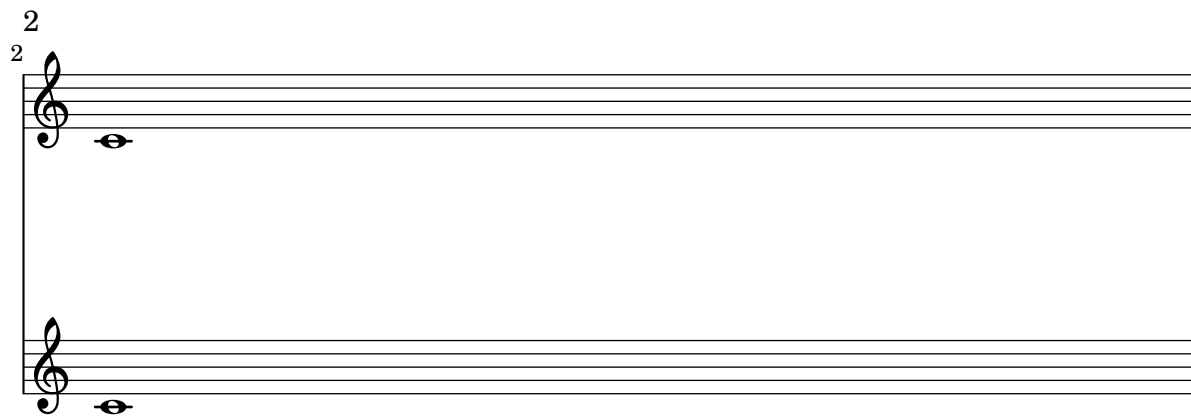
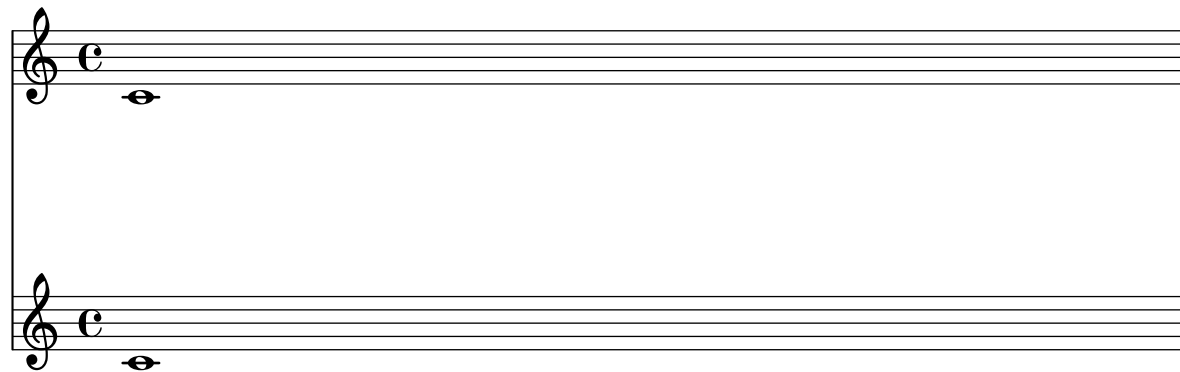
page-breaking-min-distance2.ly



Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

minimum-distance within a system is correctly accounted for in page breaking.

page-breaking-min-distance3.ly



The min-systems-per-page variable forces each page to have a minimum number of systems. Titles do not count as systems here.

Title

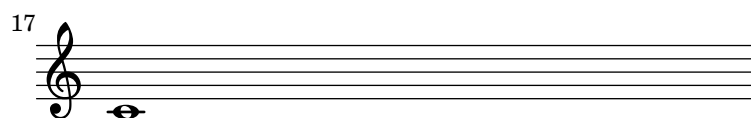
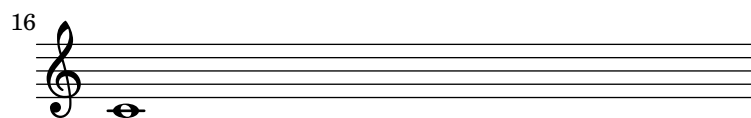
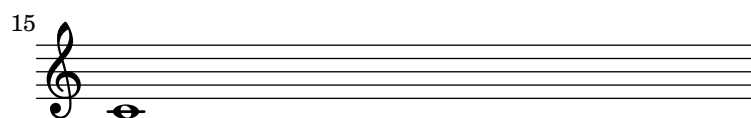
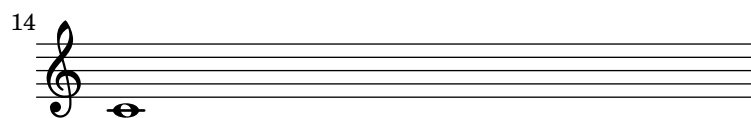
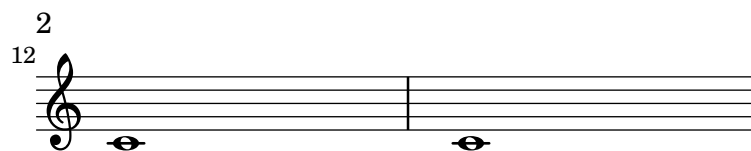
Musical staff 1: Treble clef, common time signature (C). The staff contains two measures, each with a whole note (semibreve) on the second line (F4).

Musical staff 2: Treble clef, common time signature (C). The staff contains two measures, each with a whole note (semibreve) on the second line (F4). A measure number '3' is placed above the first measure.

Musical staff 3: Treble clef, common time signature (C). The staff contains two measures, each with a whole note (semibreve) on the second line (F4). A measure number '5' is placed above the first measure.

Musical staff 4: Treble clef, common time signature (C). The staff contains two measures, each with a whole note (semibreve) on the second line (F4). A measure number '7' is placed above the first measure.

Musical staff 5: Treble clef, common time signature (C). The staff contains three measures, each with a whole note (semibreve) on the second line (F4). A measure number '9' is placed above the first measure.



Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://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.

page-breaking-min-systems-per-page2.ly

3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21

Music engraving by LilyPond 2.19.44—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.

page-breaking-outside-staff-estimation.ly

The image displays five musical staves, each with a treble clef and a common time signature 'C'. The staves are arranged vertically. Above each staff, the word 'Text' is written, followed by a series of horizontal lines representing the staff lines. The text is positioned such that it appears to be outside the staff, demonstrating the height-estimation routine. The staves are numbered 1, 2, 3, 4, and 5 from top to bottom. The first staff has a common time signature 'C'. The second staff has a '2' above it. The third staff has a '3' above it. The fourth staff has a '4' above it. The fifth staff has a '2' above it and a '5' below it.

Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://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

A musical score consisting of four staves, each with a treble clef and a common time signature 'C'. Each staff contains four notes, each with the word 'Text' written above it. The staves are numbered 1, 2, 3, and 4 on the left side.

Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

The number of pages in a score can be forced by setting `page-count` in the (book-level) paper block.

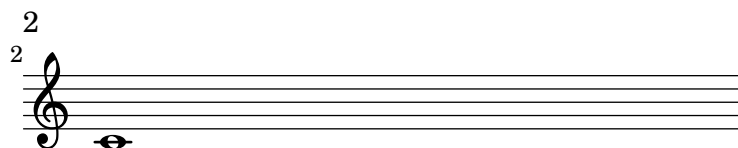
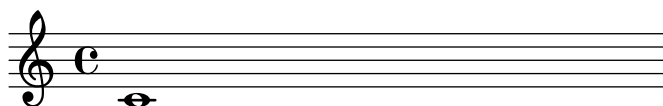
page-breaking-page-count1.ly

A musical score consisting of a single staff with a treble clef and a common time signature 'C'. The staff contains two notes, each with a 'Text' label below it.

Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://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





Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

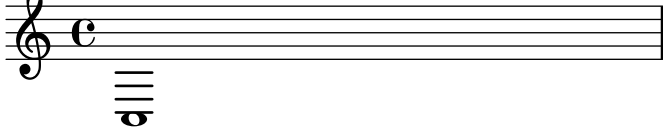
The number of pages in a score can be forced by setting **page-count** in the (book-level) paper block. Even if there are too many systems for that number of pages, we will squeeze them in.

A musical score consisting of 10 staves. Each staff begins with a treble clef and a common time signature 'C'. A single note is placed on the second line of each staff. The staves are numbered 2 through 10 on the left side, with the first staff (containing the clef and time signature) being the first line of the system.

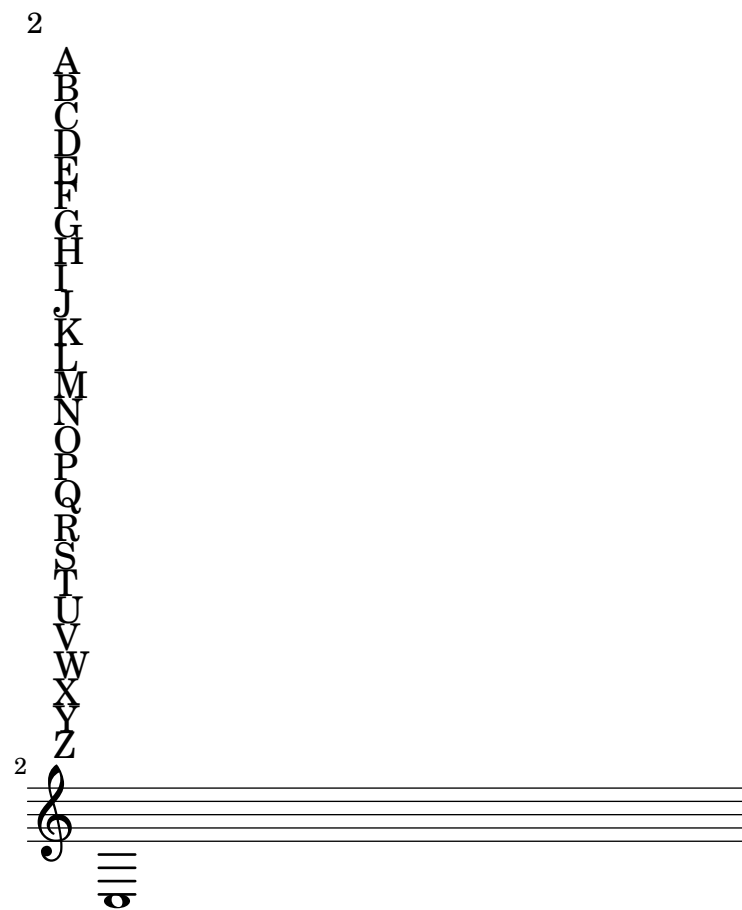
Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

page-breaking-rehearsal-mark.ly

ABCDEFGHIJKLMNOPQRSTUVWXYZ



A musical staff with a treble clef and a common time signature (C). The staff is empty except for a double bar line at the end.



Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

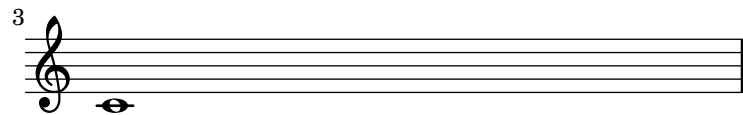
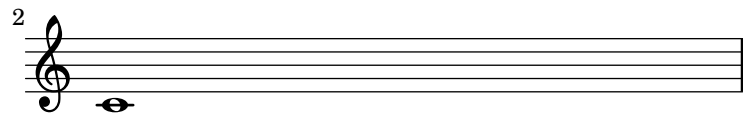
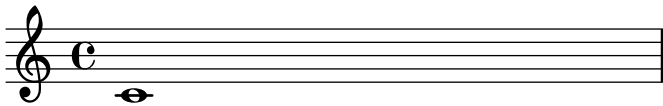
page-breaking-system-count-forced-break.ly

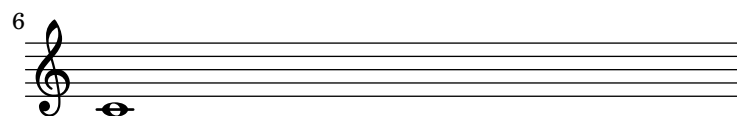
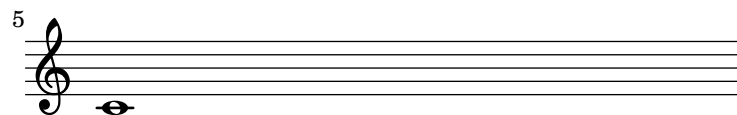
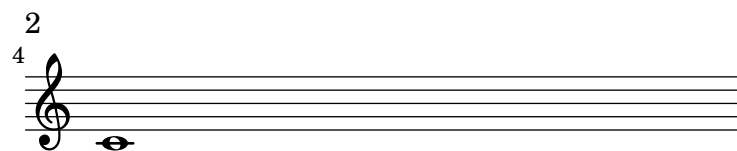




Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

Title





Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

Stress optimal page breaking. This should look nice and even on 4 a6 pages.



page-breaks.ly

# Title

**(and (the) subtitle)**

### Sub sub title

Poet

## Instrument

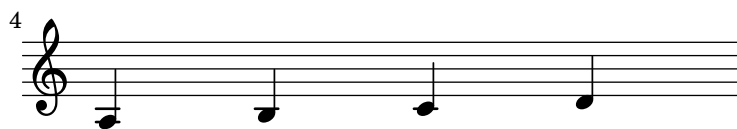
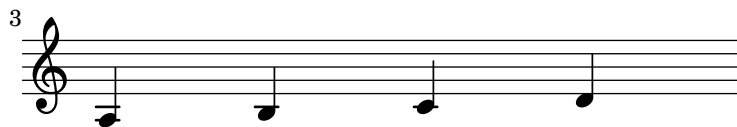
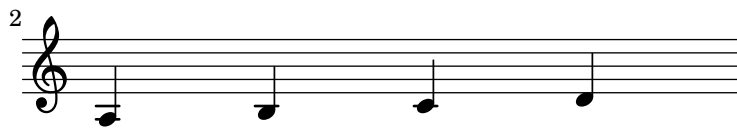
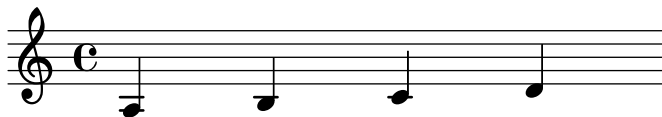
Composer

Meter (huh?)

Arranger

Piece

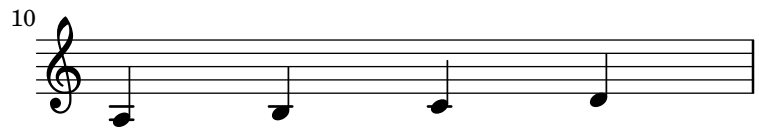
opus 0



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Copyright by /me

2 Instrument



Instrument3

11



12



13



14



15

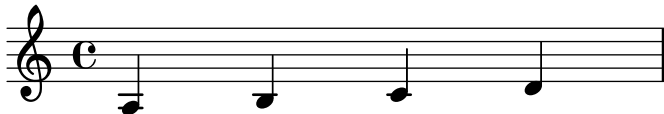


Music engraving by LilyPond 2.19.44 4  
www.lilypond.org

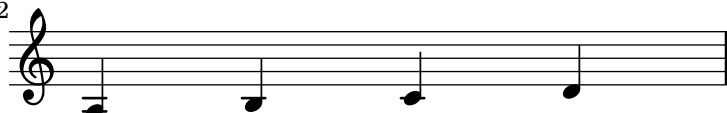
---

---


first-page-header-text



2



3



4



5



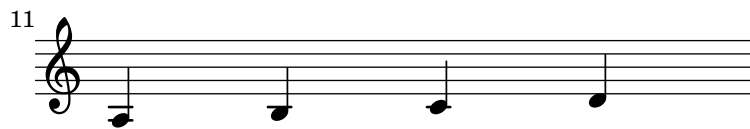
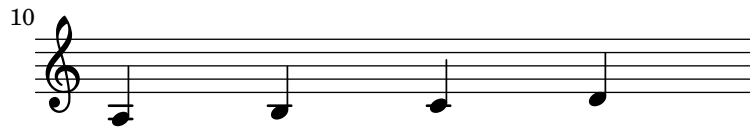
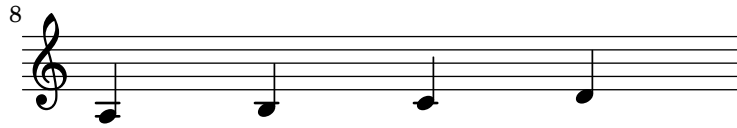
6



---

---

first-page-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).

page-label-loose-column.ly

Table of Contents

Mid-line	1
Empty bar line	1



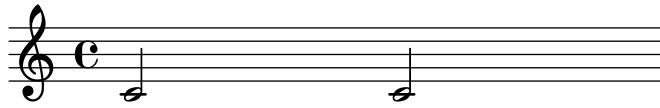
Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

Page labels may be placed inside music or at top-level, and referred to in markups.

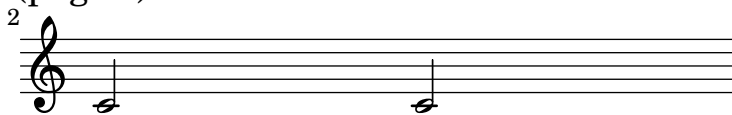
page-label.ly

Title Page

2	
	Table of contents
Table of contents	2
First Score	3
Mark A	3
Mark B	4
Mark C	4
Unknown label	?



A (page 3)



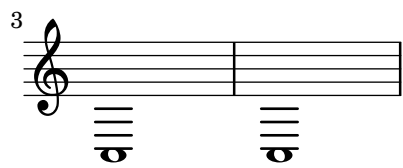
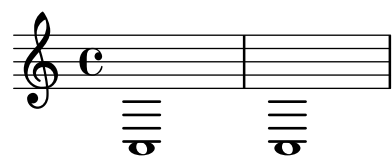




Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

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.

page-layout-manual-position.ly



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

**Title**  
(and (the) subtitle)

Arranger

67.91	extra dist (last-bottom-spacing)
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Links to labels should not break if the label doesn't exist.

page-links-nolabel.ly

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

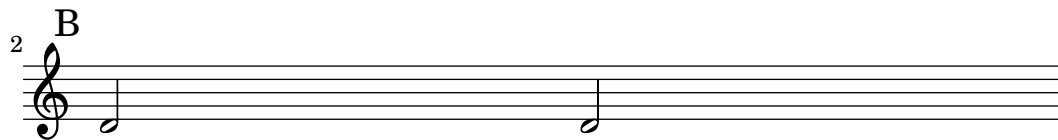
Link to mark B

2

front: 1)



3



Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://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.

Text
Text

Text

Text

Tagline

The minimal page breaker stacks as many lines on pages, only accounting for manual page break commands.

`page-minimal-page-breaking.ly`

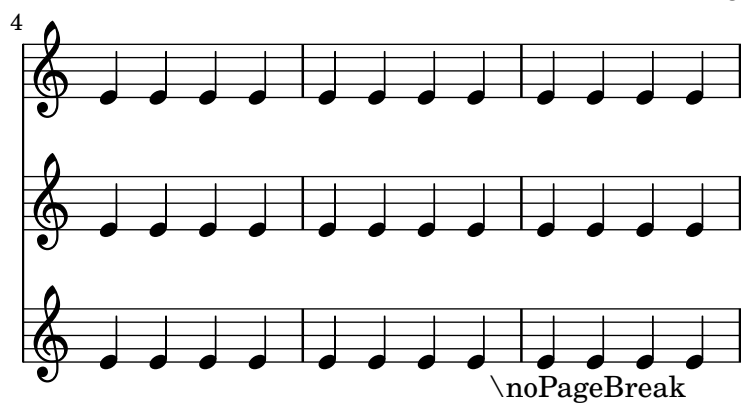




2



3



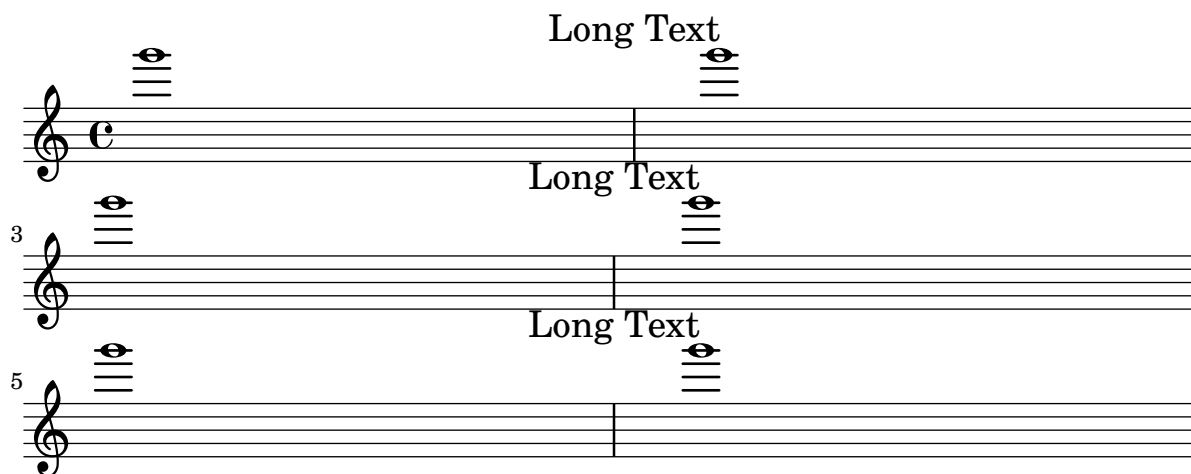
\noPageBreak



Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://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



A musical score consisting of three staves. Each staff begins with a treble clef and a common time signature 'C'. The first staff has a measure with a whole note on the fifth line, followed by a measure with a whole note on the fifth line. The second staff has a measure with a whole note on the fifth line, followed by a measure with a whole note on the fifth line. The third staff has a measure with a whole note on the fifth line, followed by a measure with a whole note on the fifth line. The text 'Long Text' is placed above the first measure of each staff. The text 'Long Text' is placed below the second measure of each staff. The text 'Long Text' is placed below the first measure of each staff.

Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://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.

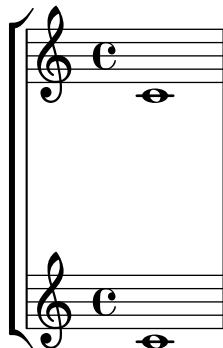
page-spacing-bass-figures.ly



A musical score consisting of two staves. The first staff has a treble clef and a common time signature 'C', followed by a whole note on the fifth line. The second staff has a treble clef and a common time signature 'C', followed by a whole note on the fifth line. Below the second staff is a bass figure consisting of the numbers 6 and 4 stacked vertically.

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.

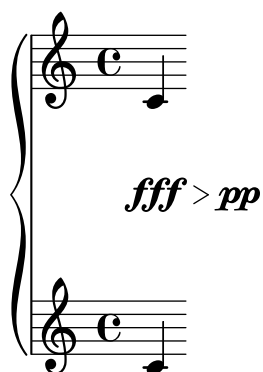
page-spacing-bottom-spring.ly



Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://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

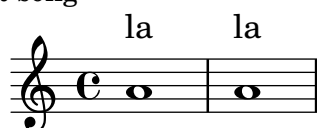
Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

Having markup after a non-staff line doesn't confuse the page layout engine.

page-spacing-nonstaff-lines-and-markup.ly



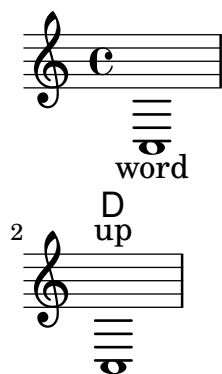
next song



Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

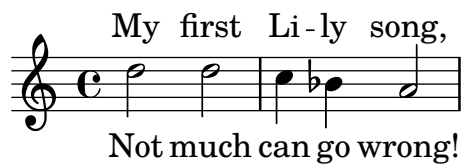
The vertical spacing engine is not confused by a non-staff line below a system followed by a loose line above the next system. Systems are spaced far enough that loose lines are not interleaved, even if gaps would allow interleaving.

page-spacing-nonstaff-lines-between-systems.ly



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`



A non-staff line (such as Lyrics) at the bottom of a system gets spaced appropriately.

`page-spacing-nonstaff-lines-bottom.ly`



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

Diagram illustrating page spacing for non-staff lines and header padding. The diagram shows two staves of music. The first staff has a treble clef and a common time signature. The second staff has a bass clef and a common time signature. Above the first staff, the word "foo" is repeated four times. Below the second staff, the word "foo" is repeated four times. The diagram includes several vertical arrows indicating distances and padding:

- 1.14** top-margin
- 1.00** basic-dist (top-system-spacing) **0.00** min-dist (top-system-spacing)
- 84.22** paper-height
- 1.00** basic-dist (last-bottom-spacing) **0.00** min-dist (last-bottom-spacing)
- 27.81** extra dist (last-bottom-spacing)
- 13.00** space left
- 1.71** bottom-margin

Music engraving by LilyPond 2.19.44—www.lilypond.org

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

Diagram illustrating page spacing for non-staff lines independent of staff lines. The diagram shows two staves of music. The first staff has a treble clef and a common time signature. The second staff has a bass clef and a common time signature. The word "high" is written below the first staff, and the word "bass" is written below the second staff.

Relative indentation between systems is taken into account in allowing space for loose lines between systems.



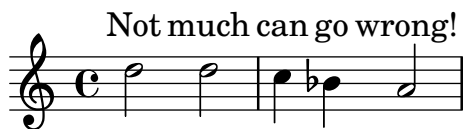
page-spacing-nonstaff-lines-skylines.ly

</

A non-staff line (such as Lyrics) at the top of a system is spaced appropriately.

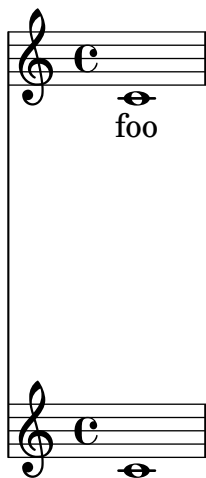
page-spacing-nonstaff-lines-top.ly

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

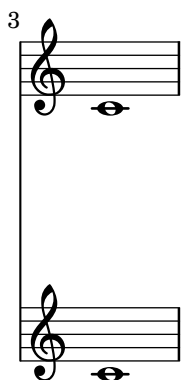
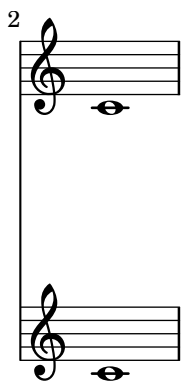
T  
A  
L  
L  
M  
A  
R  
K

2

Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

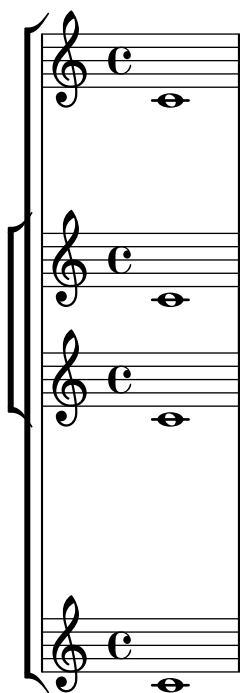
StaffGrouper interacts correctly with `\RemoveEmptyStaffContext`. In both systems, there should be a large space between the staff groups.

page-spacing-staff-group-hara-kiri.ly



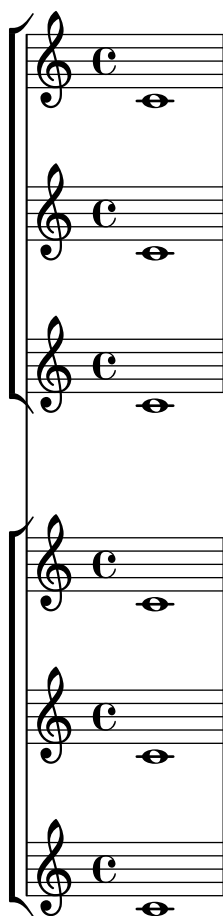
StaffGroups can be nested, in which case the inner StaffGroup wins.

`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 2.19.44—[www.lilypond.org](http://www.lilypond.org)

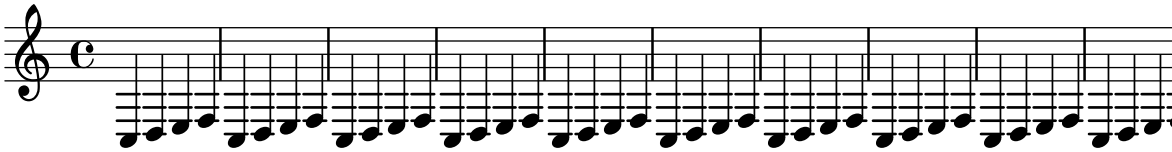
The stretchability property affects the amount that staves will move under extreme stretching, but it does not affect the default distance between staves.

The image displays three staves of musical notation, arranged vertically. Each staff begins with a treble clef, followed by a common time signature 'C'. A single note is present on each staff, positioned on the second line from the bottom. The notes are all identical in pitch and duration, represented by a half note. The staves are connected by a vertical line on the left side, and each staff ends with a short horizontal bar line.



Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

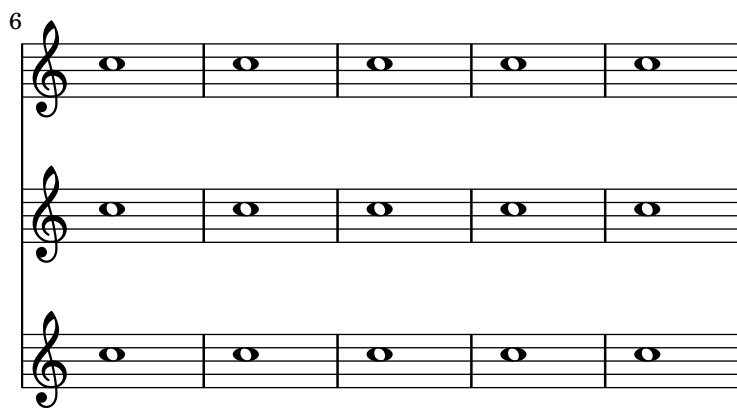
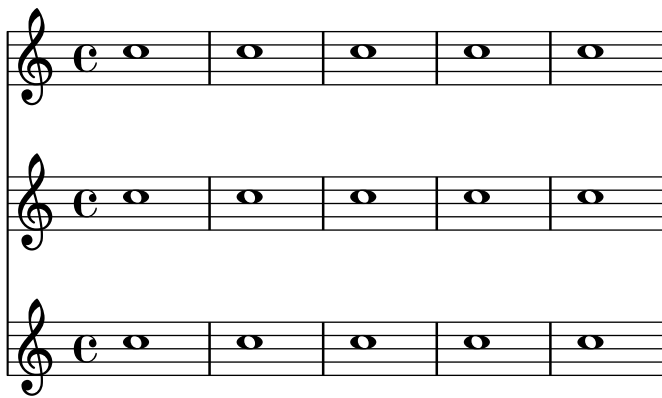
page-spacing-system-count-overfull.ly





Page layout and stretching work with system-count enabled.

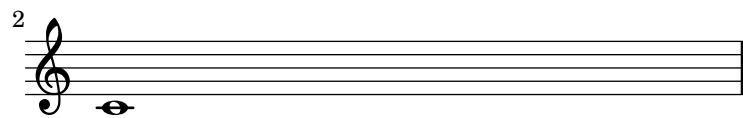
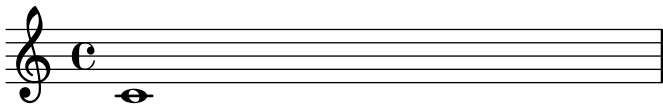
page-spacing-system-count.ly



Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

Both the page breaking and the page layout take account of the heights of the header and footer.

t  
a  
l  
l  
h  
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r



t  
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e  
r

2

3

4

5

6

7

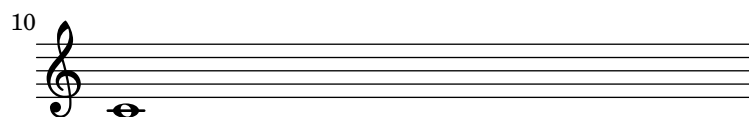
8

9



small footer

t  
a  
l  
l  
h  
e  
a  
d  
e  
r

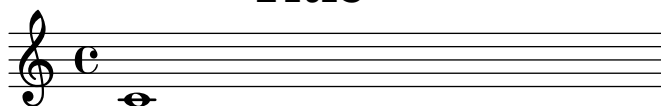


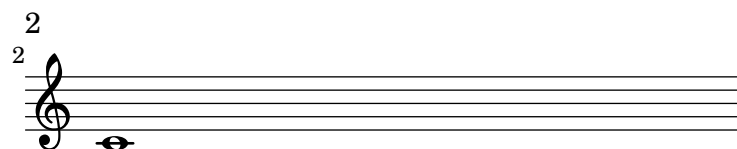
t  
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l  
l  
f  
o  
o  
t  
e  
r

`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**



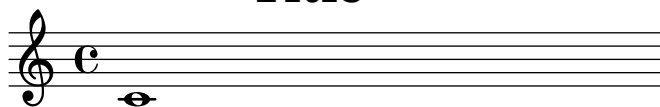


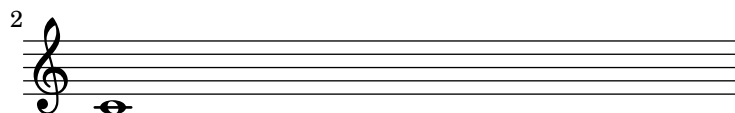
Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

`top-system-spacing` controls the spacing to the first non-title staff on every page.

`page-spacing-top-system-spacing.ly`

**Title**





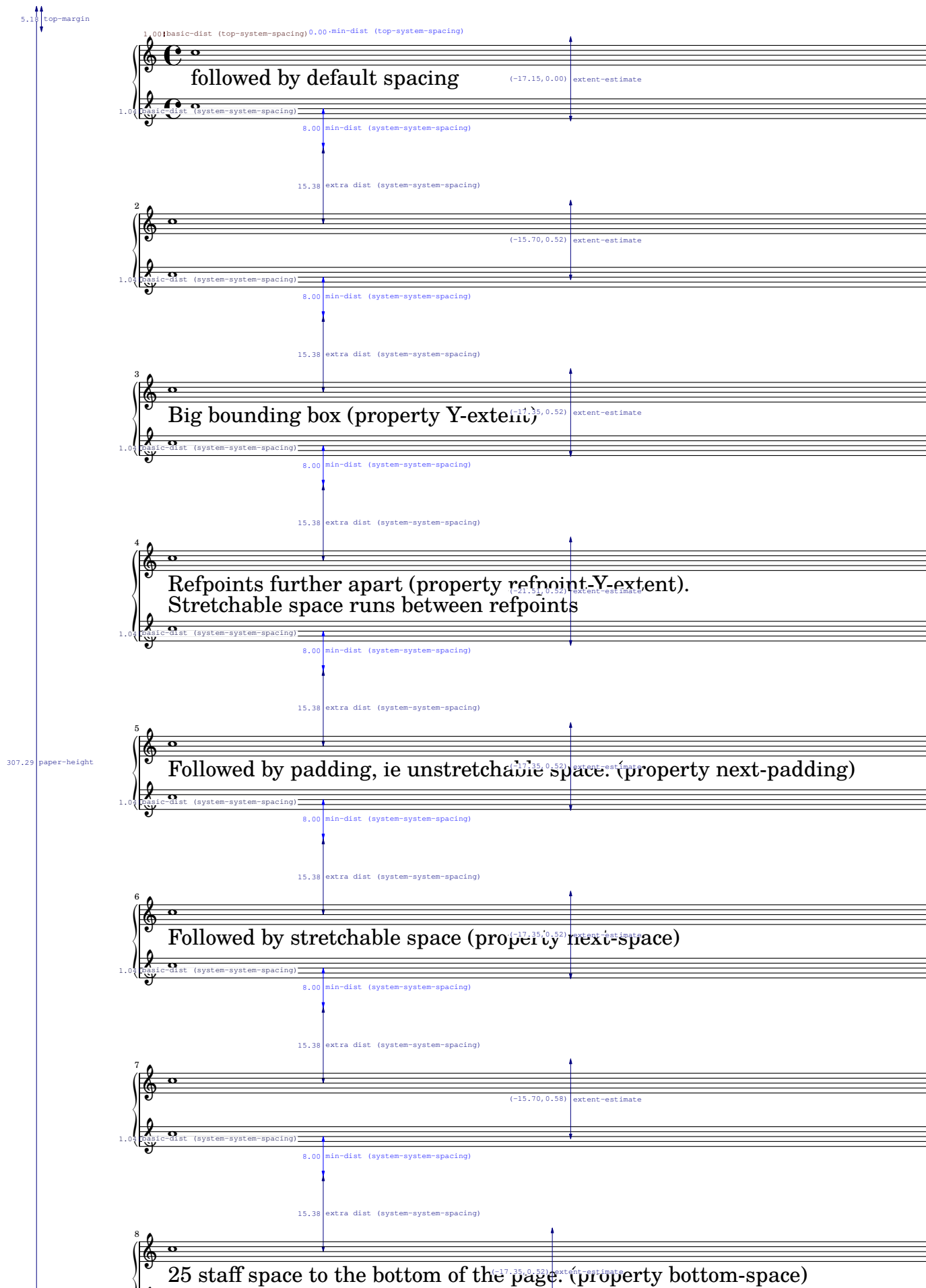
Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

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.

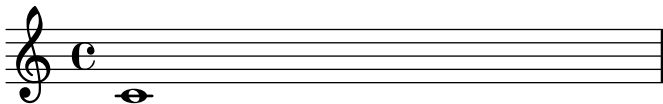
By setting `annotate-spacing`, we can see the effect of each property.

page-spacing.ly

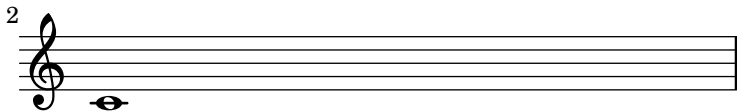


By setting `page-top-space`, the Y position of the first system can be forced to be uniform.

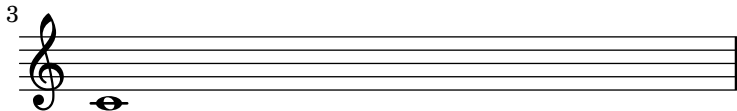
`page-top-space.ly`



2

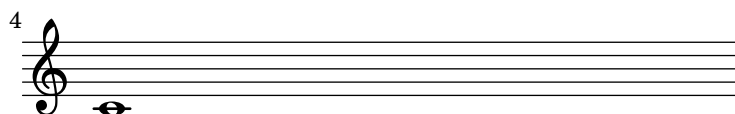


3





bla



Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://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.

2



5



9



13



17



21



25



29





Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://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

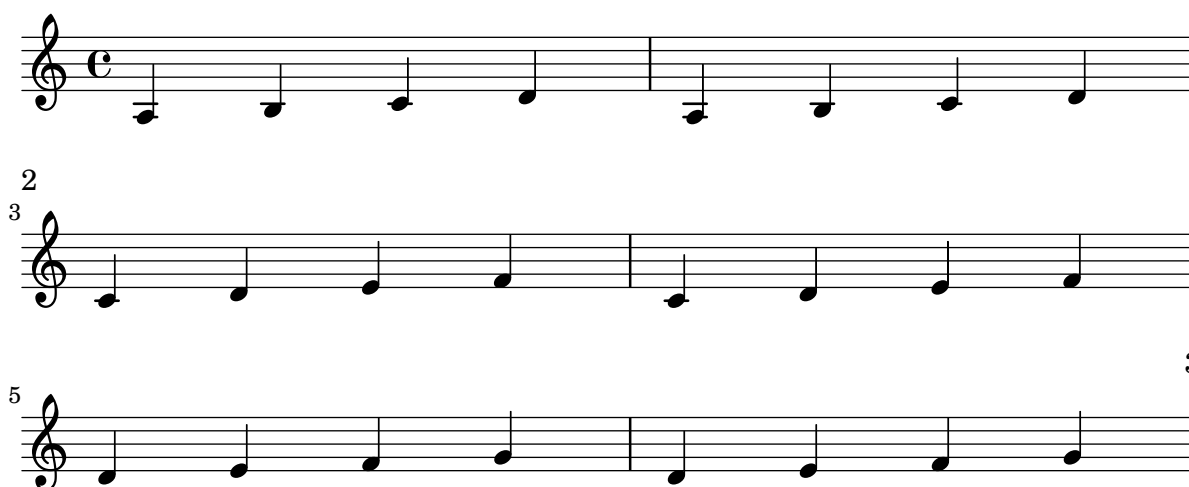
This image shows a musical score for a single staff, spanning measures 2 through 25. The score is written in a single system with a common time signature (C). The notation consists of a series of eighth and sixteenth notes, often beamed together in groups of four or eight. The notes are primarily located in the lower half of the staff, suggesting a bass line or a specific melodic contour. The measures are grouped into four-measure phrases, with measure numbers 2, 5, 9, 13, 17, 21, and 25 marking the beginning of each phrase. The overall structure is repetitive and rhythmic.



Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://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.

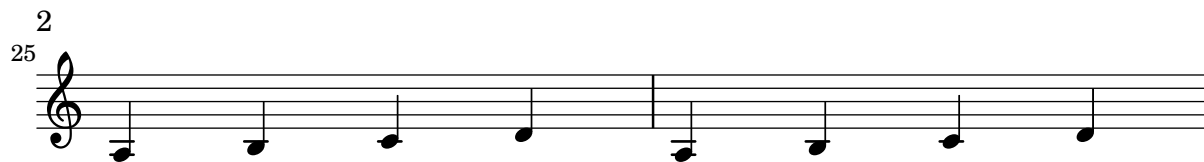
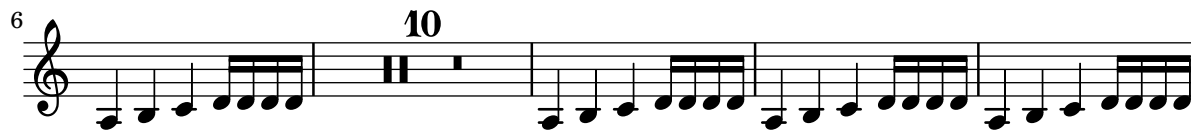
`page-turn-page-breaking-badturns.ly`



Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

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





Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

The page-turn breaker will put a page turn after a rest unless there is a 'special' barline within the rest, in which case the turn will go after the special barline.

`page-turn-page-breaking.ly`





The palm mute technique for stringed instruments is supported by triangle-shaped note heads.

`palm-mute.ly`

▲ = palm mute

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 2.19.44—[www.lilypond.org](http://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.

paper-default-margins-def.ly

If the paper size remains default, the margin values from paper-defaults-init.ly remain unchanged.

The image displays a musical score consisting of eight staves. Each staff contains a continuous melody of eighth notes, starting on a middle C and ascending stepwise. The staves are numbered on the left margin: 8, 16, 24, 32, 40, 47, and 54. The first staff begins with a treble clef and a common time signature (C). The notation is consistent across all staves, with no rests or other musical symbols present.

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.

paper-margins-consistency.ly

Handwritten musical notation on five staves. Each staff begins with a treble clef and a common time signature (C). The notation consists of a continuous sequence of eighth notes across all staves. Measure numbers 9, 17, 25, and 33 are written at the beginning of their respective staves.

Here only left-margin is given, right-margin will remain default.

paper-margins-left-margin.ly



If only line-width is given, systems are horizontally centered.

paper-margins-line-width.ly

A musical score consisting of ten staves of music. Each staff begins with a treble clef and a common time signature 'C'. The music is written in a single melodic line, featuring a sequence of eighth notes. The notes are organized into measures, with four measures per staff. The staves are numbered 5, 9, 13, 17, 21, 25, 29, 33, and 37, indicating the measure number at the start of each line. The notation is clean and professional, with clear note heads and stems.



All checks can be avoided by setting check-consistency to `##f` in `\paper`.

paper-margins-no-checks.ly

Handwritten musical notation on five staves. Each staff begins with a treble clef and a common time signature 'C'. The notation consists of a continuous sequence of eighth notes across all staves. Measure numbers 9, 17, 25, and 33 are written at the beginning of their respective staves.

Normally, margin settings must not cause systems to run off the page.

paper-margins-overflow.ly

8

16

24

32

The image displays a musical score consisting of five staves, each containing a continuous sequence of eighth notes. The first staff begins with a treble clef and a common time signature (C). The notes are organized into measures by vertical bar lines. The staves are labeled with measure numbers 8, 16, 24, and 32 on the left side, indicating the starting point of each staff. The notes are all eighth notes, and the overall pattern is a steady, repeating eighth-note rhythm across all staves.

Here only right-margin is given, left-margin will remain default.

paper-margins-right-margin.ly

A musical score consisting of six staves, each containing a continuous sequence of eighth notes. The first staff begins with a treble clef and a common time signature 'C'. The notes on each staff follow a consistent rhythmic pattern, with the pitch of the notes increasing from left to right across the staves. The staves are numbered 7, 14, 21, 28, and 35 on the left side, indicating the starting measure for each line.

Paper margin settings do not have to be complete. Missing values are added automatically. If no paper settings are specified, default values are used.

paper-margins.ly

8

16

24

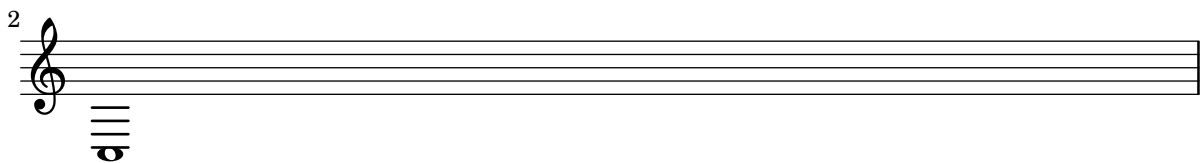
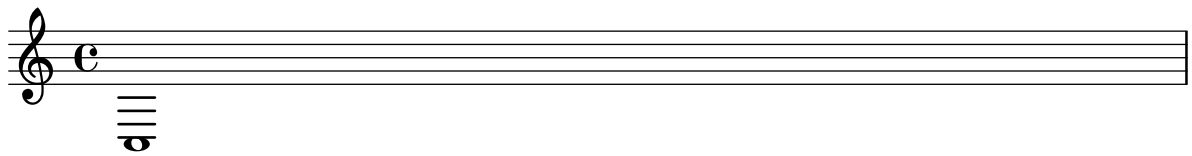
32

The image displays a musical score for a piece titled "paper-margins.ly". It consists of five staves of music, each containing a continuous sequence of eighth notes. The notes are grouped in pairs, creating a steady, rhythmic pattern. The first staff begins with a treble clef and a common time signature 'C'. Measure numbers 8, 16, 24, and 32 are indicated at the start of their respective staves, suggesting a 32-measure piece. The notation is clean and minimalist, focusing on the rhythmic structure of the music.



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

2.85

↑

top-margin

1.00

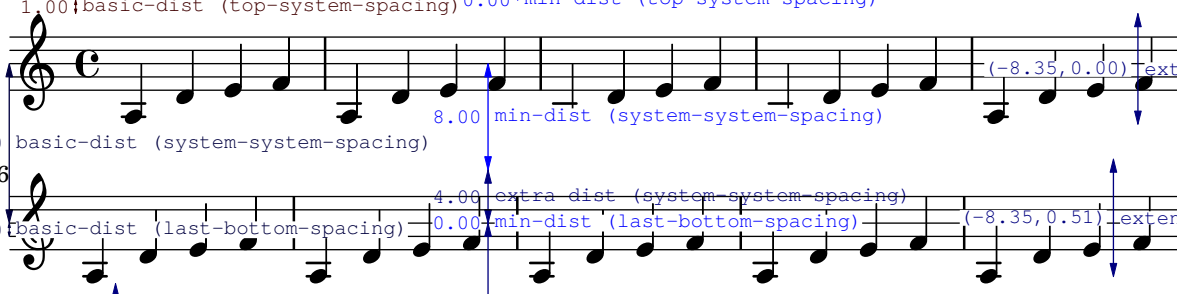
↓

basic-dist (top-system-spacing)

0.00

↓

min-dist (top-system-spacing)



(-8.35, 0.00)

Text

8.00

↓

min-dist (system-system-spacing)

12.00

↓

basic-dist (system-system-spacing)

6

↓

4.00

↓

extra-dist (system-system-spacing)

1.00

↓

basic-dist (last-bottom-spacing)

0.00

↓

min-dist (last-bottom-spacing)



(-8.35, 0.51)

Text

169.01

paper-height

140.99

space left

145.98

extra-dist (last-bottom-spacing)

In two-sided mode, a binding offset can be specified, which is added to the inner margin automatically.

paper-twosided-bcorr.ly

This musical score is written for a single melodic line in treble clef, common time (C). The piece consists of 85 measures, organized into 13 staves of 7 measures each. The notation is minimalist, featuring only quarter notes and rests. The melody is a continuous sequence of quarter notes, with the pitch alternating between the first and second lines of the staff (G4 and A4) for the first 7 measures, then between the second and third lines (B4 and C5) for the next 7 measures, and so on, creating a simple, stepwise melodic line. The score is labeled with measure numbers 8, 15, 22, 29, 36, 43, 50, 57, 64, 71, 78, and 85 at the beginning of each staff.

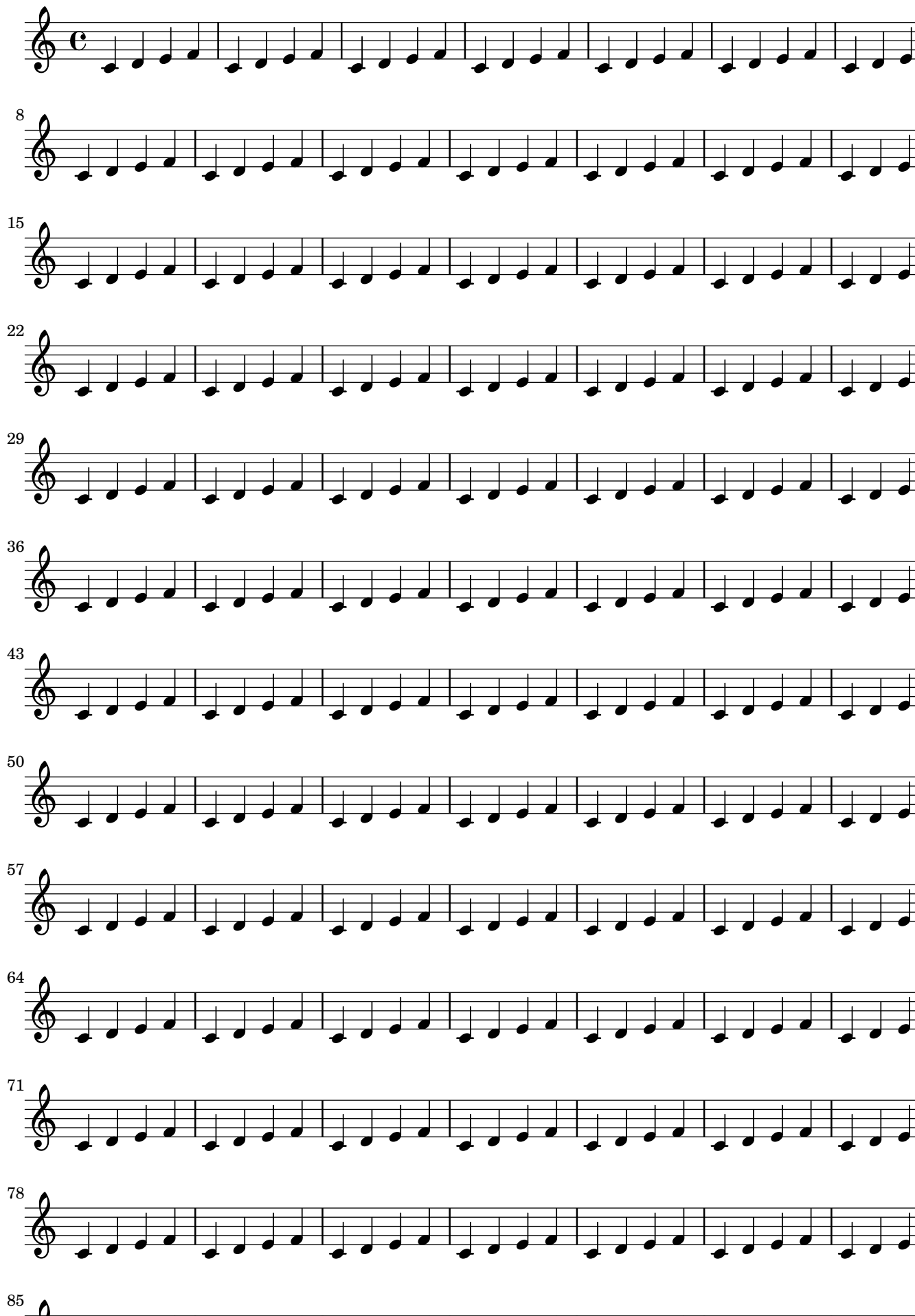


193



Two-sided mode allows you to use different margins for odd and even pages.

paper-twosided.ly







193



`\parallelMusic` does not complain about incomplete bars at its end.  
`parallelmusic-partial.ly`



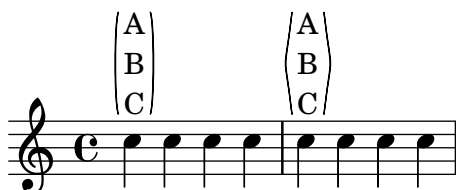
When `parent-alignment-X` property is unset, the value of `self-alignment-X` will be used as the factor for parent alignment. This happens e.g. for `LyricTexts`.

`parent-alignment-synchronized-with-self-alignment.ly`



The `parenthesize` markup will place parentheses around any stencil.  
The angularity of the parentheses can be adjusted.

`parenthesize-markup.ly`



Parentheses around notes also include accidentals and dots; they are centered on the vertical center of the combined enclosed items.

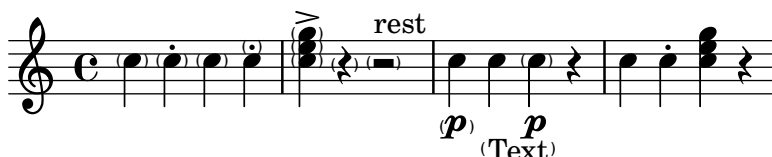
`parenthesize-notes-accidentals.ly`



The `parenthesize` function should also work on single notes (not inside chords), rests and on whole chords (each note of the chord is parenthesized). 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`



The `parenthesize` function is a special tweak that encloses objects in parentheses. The associated grob is `Score.ParenthesesItem`.

`parenthesize.ly`



It is possible to use the part combiner for three voices with `\partcombineUp` and `\partcombineDown`.

`part-combine-3voices.ly`



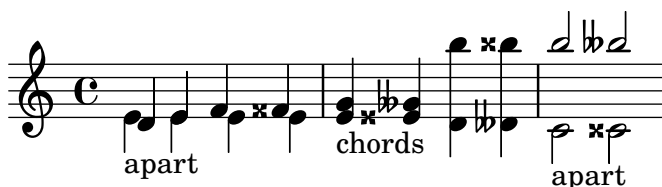
The `a2` string is printed only on notes (i.e. not on rests), and only after chords, solo or polyphony.

`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`



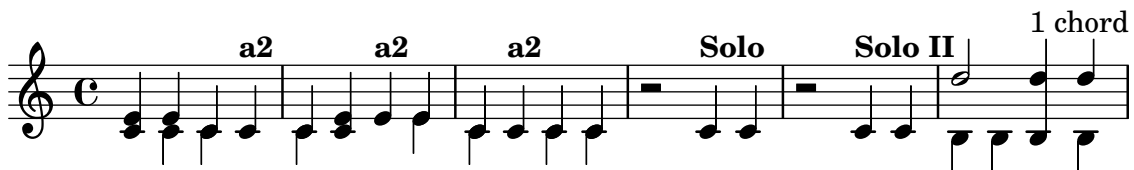
If the part-combiner shows two separate voices, multi-measure rests are supposed to use the same settings as `\voiceOnce` and `\voiceTwo`.

part-combine-force-mmrest-position.ly



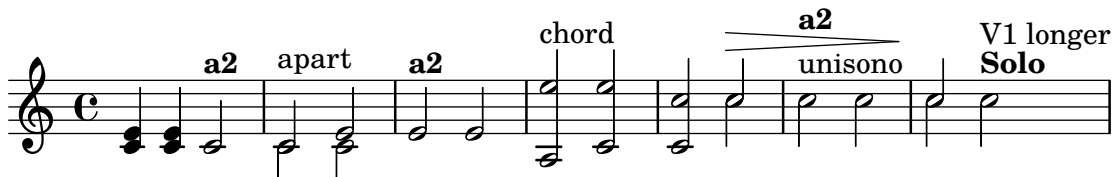
Overrides for the part-combiner, affecting only one moment. The `partcombine...Once` override applies only to one moment, after which the old override – if any – is in effect again.

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



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`



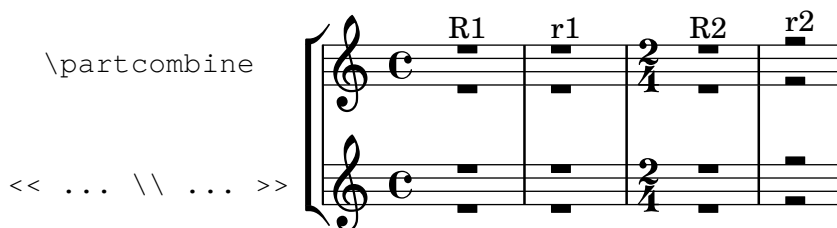
Multimeasure rests are printed after solos, both for solo1 and for solo2.

`part-combine-mmrest-after-solo.ly`



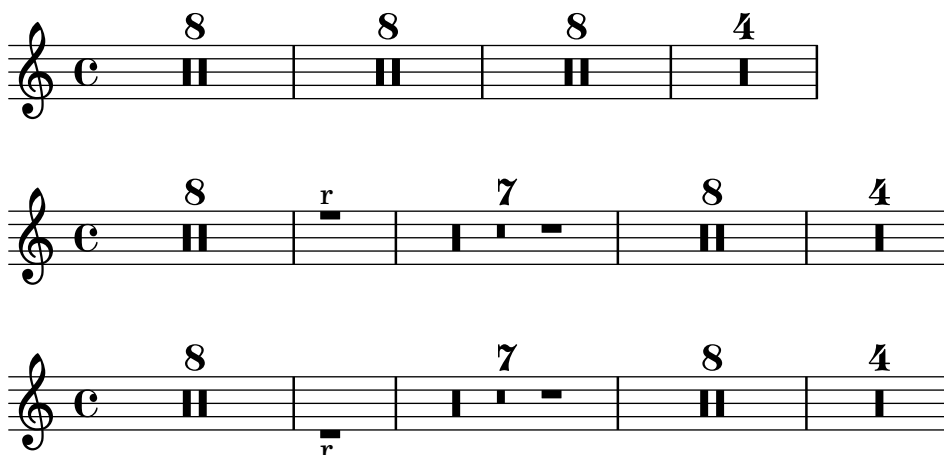
The positioning of multimeasure rests in `\partcombineApart` passages corresponds with `\voiceOne` and `\voiceTwo` even when using non-standard staves.

`part-combine-mmrest-apart.ly`



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.

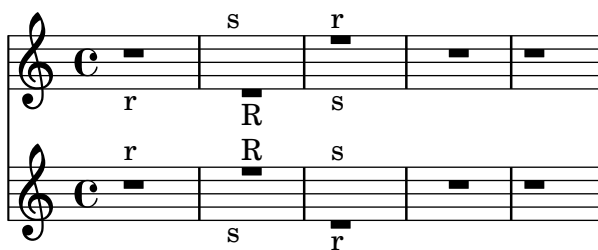
The expected output of this test is three identical measures.

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.

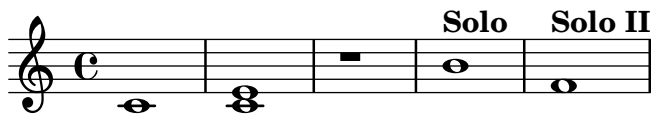
part-combine-tuplet-single.ly





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 can be called in mid-piece in multiple contexts.

partial-in-mid-piece.ly



\partialial works with polymetric staves.

partial-polymetric.ly



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 € ĄœŔŮufЖюль)\ ;**

UTF-16BE with parentheses: ) € ĄœŔŮufЖюль) composer (with special chars): Jöhåññ 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

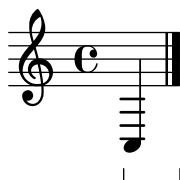


long mark



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



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



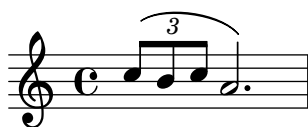
PhrasingSlurs go over normal slurs.

phrasing-slur-slur-avoid.ly



Phrasing slurs do not collide with tuplet numbers.

phrasing-slur-tuplet.ly

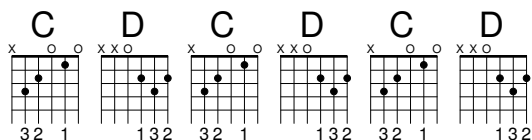


point-and-click-types.ly



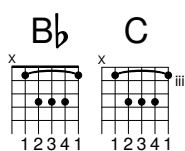
Transposition by less than one octave up or down should not affect predefined fretboards.

predefined-fretboards-transpose.ly



Predefined fretboards and chord shapes can be added.

predefined-fretboards.ly



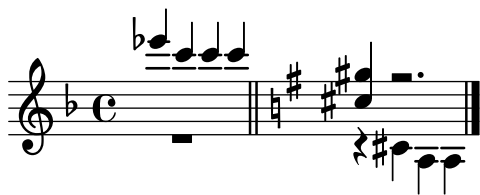
The A is atop an invisible barline. The barline, although invisible, is also translated because it is the last one of the break alignment.

prefatory-empty-spacing.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 barlines. A key change to G major should be legible.

prefatory-separation.ly



Distances between prefatory items (e.g. clef, bar, etc.) are determined by engraving standards. These distances depend on which items are combined. Mid-line, the order for clef and bar-line is different from the start of line.

prefatory-spacing-matter.ly



heavily mutilated Edition Peters Morgenlied by Schubert

## LilyPond demo

Lieblich, etwas geschwind

1. Sü - ßes  
2. いろはに כף

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 זה いろ はに כף

6

Nacht. Schö - ner 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`

layout instruction



context def



context mod



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`

quoteMe

orig (killCues)

orig+quote

The `cueDuring` and `quoteDuring` forms of quotation will use the variables `quotedCueEventTypes` and `quotedEventTypes` to determine which events are quoted. This allows different events to be quoted for cue notes than for normal quotes.

`quotedEventTypes` is also the fallback for cue notes if `quotedCueEventTypes` is not set.

  
`quote-cue-event-types.ly`

Quoted Voice

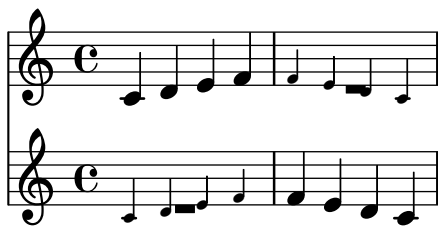
quoteDuring

cueDuring

Fallback

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

quoteMe

orig

orig+quote

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



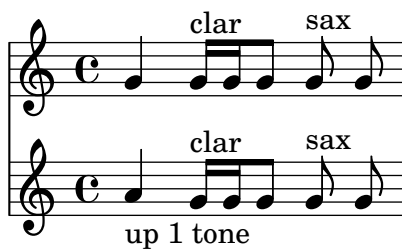
Voices from different cues must not be tied together. In this example, the first note has a tie. This note should not be tied to the second visible note (following the rest). Note that this behavior will not hold for cues in direct succession, since only one `CueVoice` context is created (with `context-id` '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



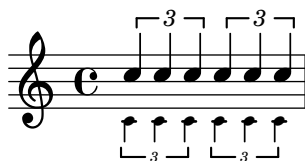
Tuplet bracket ends properly when quoting.

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

quoteMe

orig

orig+quote

For a one-page score, `ragged-bottom` should have the same effect as `ragged-last-bottom`.

ragged-bottom-one-page.ly



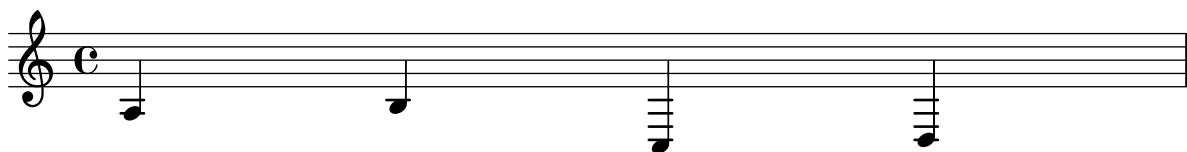
When a score takes up only a single line and it is compressed, it is not printed as ragged.

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



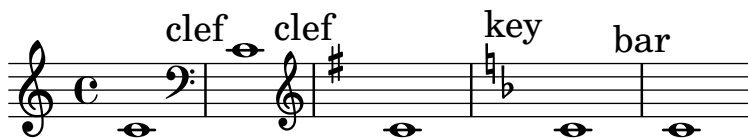
When a score takes up only a single line and it is stretched, it is printed as ragged by default.

ragged-right-one-line.ly



When the break-align-symbols property is given as a list, the alignment depends on which symbols are visible.

rehearsal-mark-align-priority.ly



RehearsalMarks still align correctly if Mark\_engraver is moved to another context.

rehearsal-mark-align-staff-context.ly



The rehearsal mark is put on top a breakable symbol, according to the value of break-align-symbols value of the RehearsalMark. The same holds for BarNumber grobs.

rehearsal-mark-align.ly



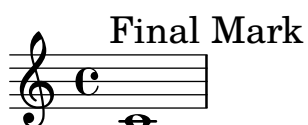
Rehearsal marks with direction DOWN get placed at the bottom of the score.

rehearsal-mark-direction.ly



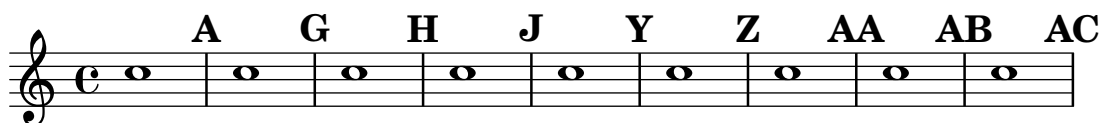
Rehearsal marks at the end of the last measure of a score are automatically made visible.

rehearsal-mark-final-score.ly



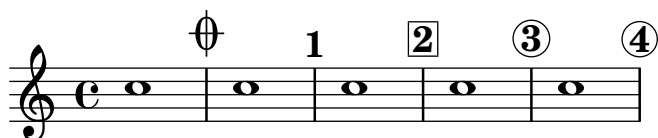
Rehearsal marks in letter style: the I is skipped, and after Z, double letters are used. The mark may be set with `\mark NUMBER`, or with `Score.rehearsalMark`.

rehearsal-mark-letter.ly



Marks can be printed as numbers. By setting `markFormatter` 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



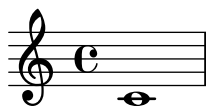
Notes are entered using absolute octaves, octaves relative to the previous note, or relative to a fixed octave.

`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.

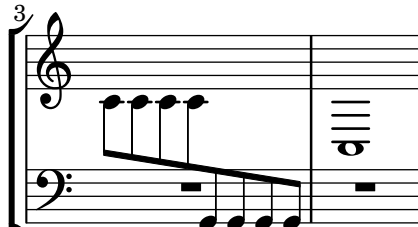
`remove-empty-staves-auto-knee.ly`



2



3



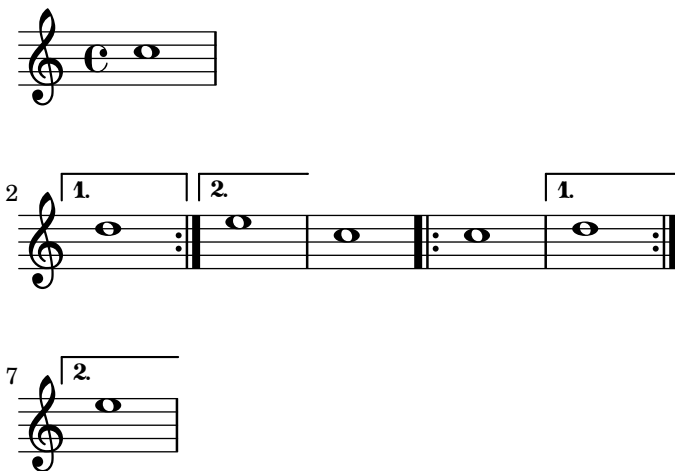
Rests should not keep staves alive when `\RemoveEmptyStaffContext` is active. The following example should have only one staff.

`remove-empty-staves-with-rests.ly`



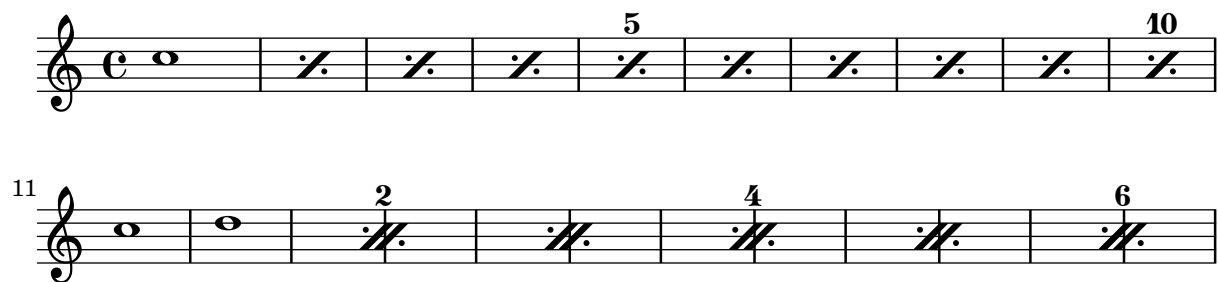
Across linebreaks, the left edge of a first and second alternative bracket should be equal.

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.

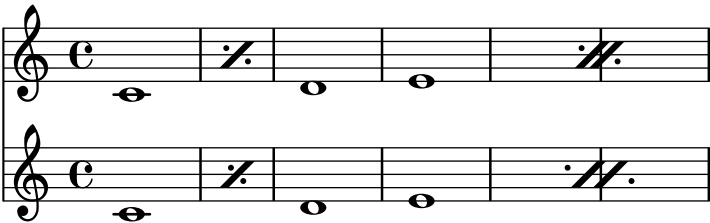
repeat-percent-grace.ly



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

(default)



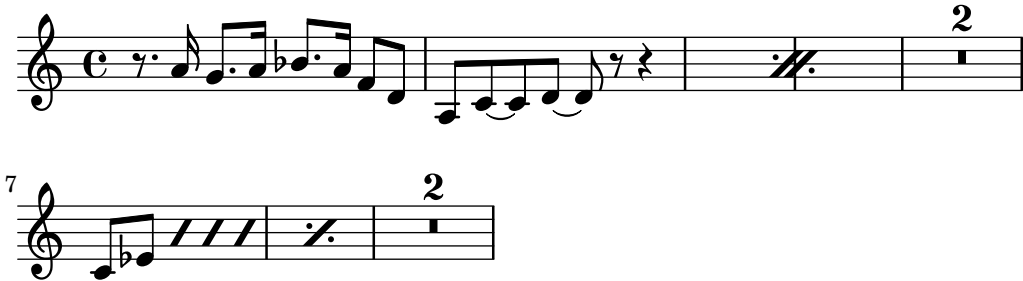
Percent repeats are not skipped, even when skipBars is set.

repeat-percent-skipbars.ly



Measure repeats may be nested with beat repeats.

repeat-percent.ly



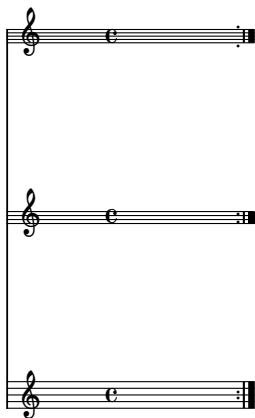
The two dots of a repeat sign should be symmetric to the staff centre and avoid staff lines even for exotic staves. Test set-global-staff size 10 (with layout-set-staff-size).

repeat-sign-global-size-10.ly



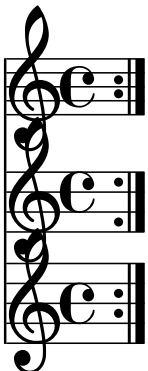
The two dots of a repeat sign should be symmetric to the staff centre and avoid staff lines even for exotic staves. Test set-global-staff size 30 (with layout-set-staff-size).

repeat-sign-global-size-30.ly



The two dots of a repeat sign should be symmetric to the staff centre and avoid staff lines even for exotic staves. Test set-global-staff size 10 (with layout-set-staff-size).

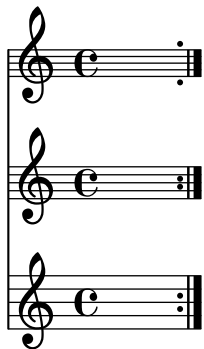
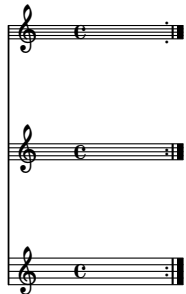
repeat-sign-global-size-5.ly





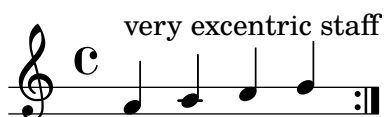
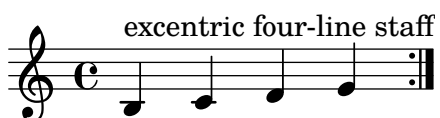
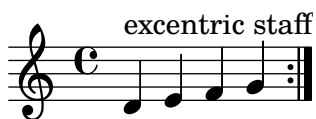
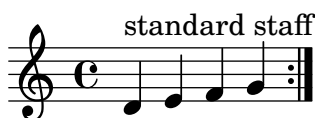
The two dots of a repeat sign should be symmetric to the staff centre and avoid staff lines even for exotic staves. Test layout-set-staff-size.

repeat-sign-layout-size.ly



The two dots of a repeat sign should be symmetric to the staff centre and avoid staff lines even for exotic staves.

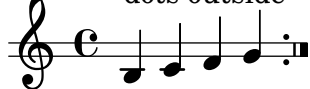
repeat-sign.ly



widened by staff-space



dots outside



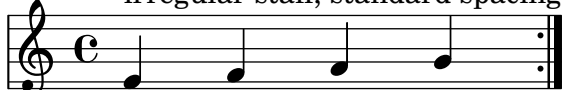
narrow staff



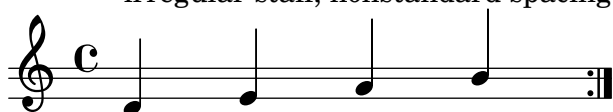
dense staff



irregular staff, standard spacing



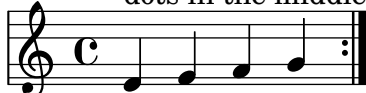
irregular staff, nonstandard spacing



dots in outer spaces



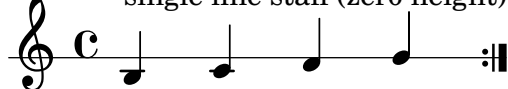
dots in the middle



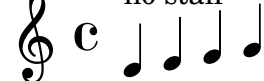
thick-lined staff



single line staff (zero height)

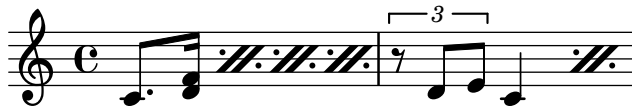


no staff



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`



A `\repeatTie` may be parenthesized.

`repeat-tie-parenthesize.ly`



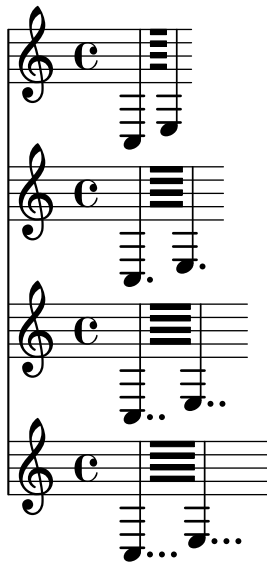
Repeat ties are only connected on the right side to a note head.

`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



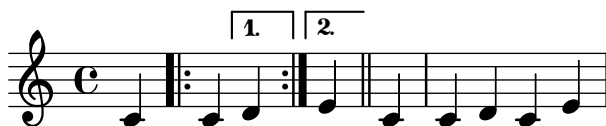
A tremolo can have more than two notes. Also check that linebreaks between tremolos still work and that empty tremolos don't crash.

repeat-tremolo-three-notes.ly





Volta repeats may be unfolded through the music function `\unfoldRepeats`.  
`repeat-unfold-all.ly`

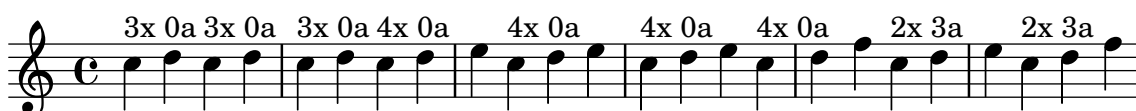


Unfolding tremolo repeats. All fragments fill one measure with 16th notes exactly.  
`repeat-unfold-tremolo.ly`



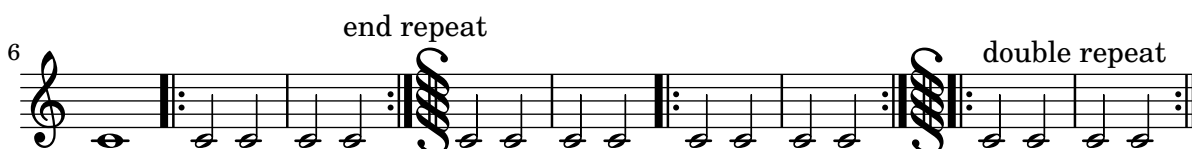
LilyPond has two modes for repeats: unfolded and semi-unfolded. Unfolded repeats are fully written out. Semi unfolded repeats have the body written and all alternatives sequentially. If the number of alternatives is larger than the repeat count, the excess alternatives are ignored. If the number of alternatives is smaller, the first alternative is multiplied to get to the number of repeats.

Unfolded behavior:  
`repeat-unfold.ly`



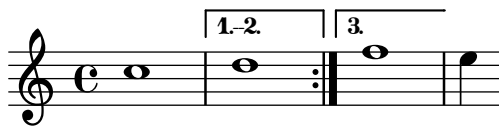
The segno sign should be automatically combined with the appropriate repeat bar line when `\inStaffSegno` is used.

`repeat-volta-segno.ly`



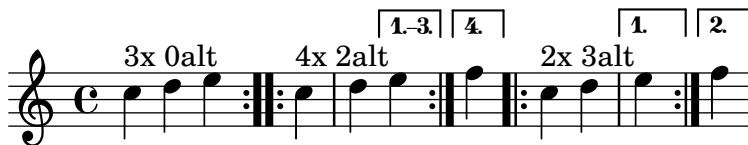
When too few alternatives are present, the first alternative is repeated, by printing a range for the 1st repeat.

repeat-volta-skip-alternatives.ly



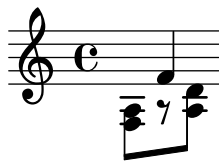
Volta (Semi folded) behavior. Voltas can start on non-barline moments. If they don't barlines should still be shown.

repeat-volta.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



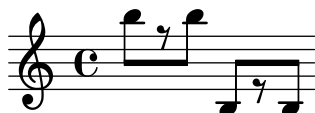
Beam/rest collision takes offset due to Rest #'direction into account properly.

rest-collision-beam-restdir.ly



Rests under beams are shifted upon collision.

rest-collision-beam.ly

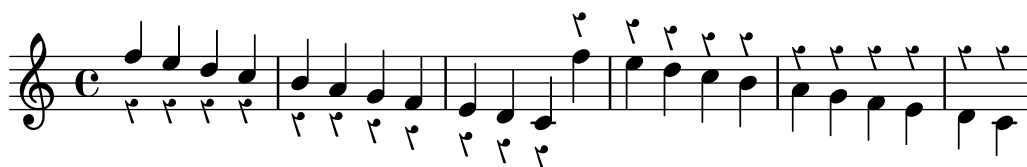


Vertical rest positions in a multi-voice staff should obey the duration of notes; this is, they shouldn't return to a default position too early.

The musical score for 'The Rose Tree' is presented in two systems. The first system consists of two staves. The upper staff is in treble clef with a common time signature (C). It begins with a whole rest, followed by a half note G4, a half note F4, and then a series of eighth notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4. The lower staff is in bass clef and begins with a whole rest, followed by a half note G3, a half note F3, and then a series of eighth notes: G3, A3, B3, C4, B3, A3, G3, F3, E3, D3, C3. The second system also consists of two staves. The upper staff is in treble clef and begins with a series of eighth notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4. The lower staff is in bass clef and begins with a series of eighth notes: G3, A3, B3, C4, B3, A3, G3, F3, E3, D3, C3. The score concludes with a final whole note G4 in the upper staff and a final whole note G3 in the lower staff.

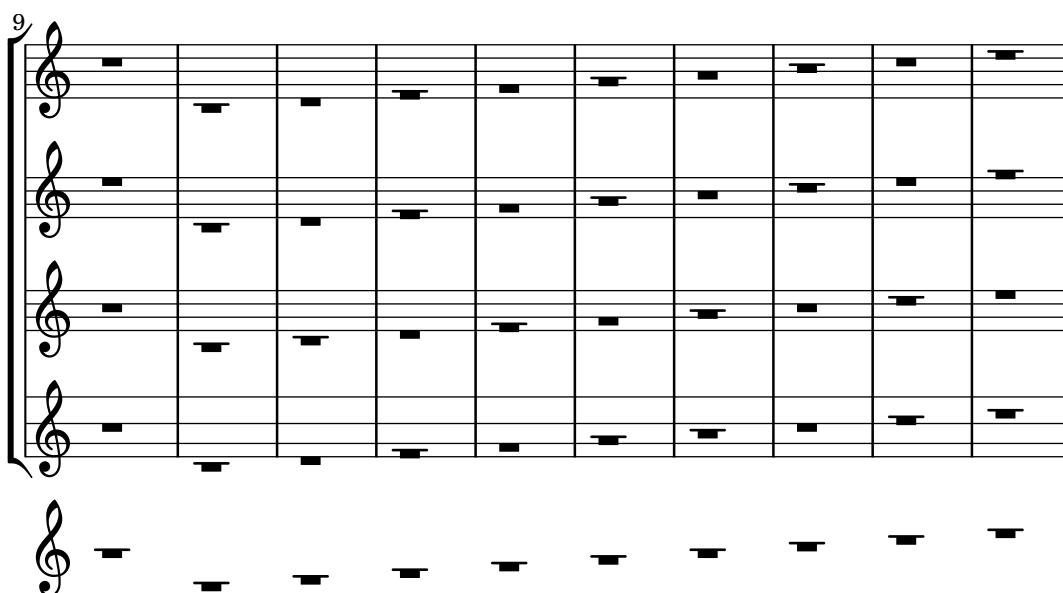
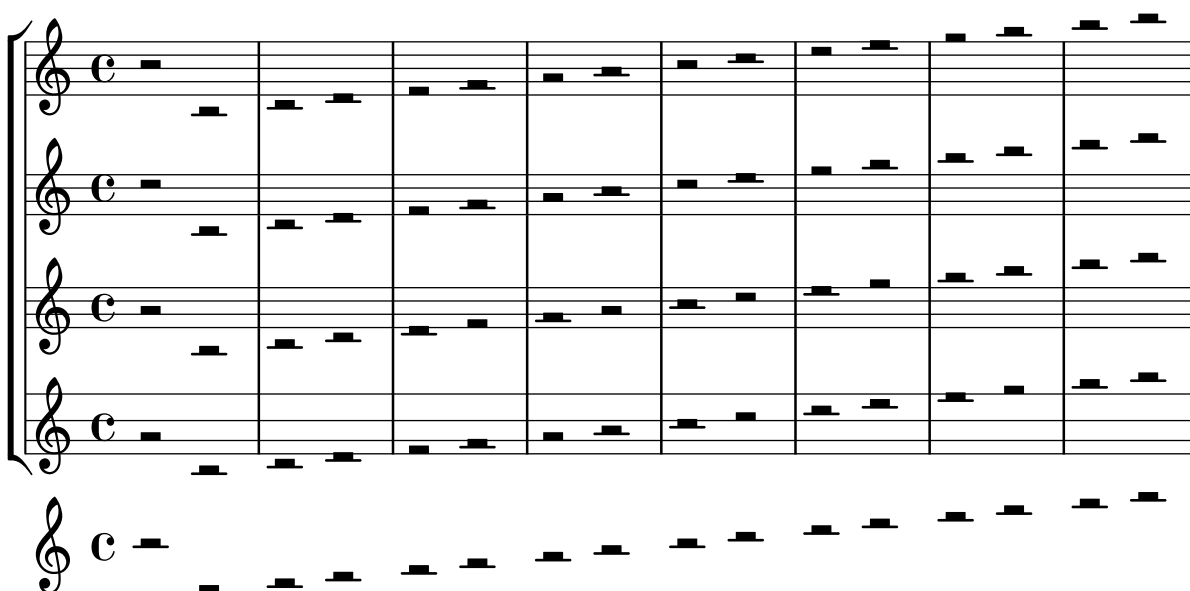
The first system of the musical score consists of two staves. The top staff is a single melodic line in treble clef. The bottom staff is a two-part accompaniment, with a treble clef on the upper line and a bass clef on the lower line. The music is written in a simple, folk-like style with a key signature of one flat (B-flat) and a common time signature (C). The melody begins with a quarter note on G4, followed by a quarter note on A4, a quarter note on B4, and a quarter note on A4. The accompaniment consists of a steady eighth-note pattern in the bass line and a series of chords in the treble line.

The first system of the musical score is written on a single five-line staff in treble clef with a common time signature (C). It contains four measures of music. The first measure has a quarter note G4, a quarter note A4, and a quarter note B4, with a quarter rest below. The second measure has a quarter note A4, a quarter note G4, and a quarter note F#4, with a quarter rest below. The third measure has a quarter note F#4, a quarter note E4, and a quarter note D4, with a quarter rest below. The fourth measure has a quarter note D4, a quarter note C4, and a quarter note B3, with a quarter rest below. The notes are beamed in pairs (G-A, A-G#, F#-E, E-D, D-C, C-B).



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`





19

This system contains measures 19 through 30. It features five staves. The first four staves are grouped by a brace on the left. Each staff contains a series of horizontal lines with various musical notations, including beams, flags, and stems. The fifth staff is positioned below the group and contains a single musical note. The notation is dense and appears to be a complex rhythmic or melodic sequence.

31

This system contains measures 31 through 42. It features five staves. The first four staves are grouped by a brace on the left. Each staff contains a series of horizontal lines with various musical notations, including beams, flags, and stems. The fifth staff is positioned below the group and contains a single musical note. The notation is dense and appears to be a complex rhythmic or melodic sequence.

43

This system contains measures 43 through 48. It features five staves. The first four staves are grouped by a brace on the left. Each staff contains a series of horizontal lines with various musical notations, including beams, flags, and stems. The fifth staff is positioned below the group and contains a single musical note. The notation is dense and appears to be a complex rhythmic or melodic sequence.

55

This system contains measures 55 through 68. It features five staves: four for a string quartet (Violin I, Violin II, Viola, and Violoncello) and one for the Bass. Each staff begins with a treble clef and a key signature of one sharp (F#). The notation is minimalist, consisting of vertical stems and beams. In measures 55, 59, and 63, the four upper staves have a single vertical stem, while the Bass staff has a single vertical stem. In measures 56, 60, and 64, the four upper staves have a single vertical stem, while the Bass staff has a single vertical stem. In measures 57, 61, and 65, the four upper staves have a single vertical stem, while the Bass staff has a single vertical stem. In measures 58, 62, and 66, the four upper staves have a single vertical stem, while the Bass staff has a single vertical stem. In measures 59, 63, and 67, the four upper staves have a single vertical stem, while the Bass staff has a single vertical stem. In measures 60, 64, and 68, the four upper staves have a single vertical stem, while the Bass staff has a single vertical stem.

69

This system contains measures 69 through 80. It features five staves: four for a string quartet (Violin I, Violin II, Viola, and Violoncello) and one for the Bass. Each staff begins with a treble clef and a key signature of one sharp (F#). The notation is minimalist, consisting of vertical stems and beams. In measures 69, 73, and 77, the four upper staves have a single vertical stem, while the Bass staff has a single vertical stem. In measures 70, 74, and 78, the four upper staves have a single vertical stem, while the Bass staff has a single vertical stem. In measures 71, 75, and 79, the four upper staves have a single vertical stem, while the Bass staff has a single vertical stem. In measures 72, 76, and 80, the four upper staves have a single vertical stem, while the Bass staff has a single vertical stem.

81

This system contains measures 81 through 92. It features five staves: four for a string quartet (Violin I, Violin II, Viola, and Violoncello) and one for the Bass. Each staff begins with a treble clef and a key signature of one sharp (F#). The notation is minimalist, consisting of vertical stems and beams. In measures 81, 85, and 89, the four upper staves have a single vertical stem, while the Bass staff has a single vertical stem. In measures 82, 86, and 90, the four upper staves have a single vertical stem, while the Bass staff has a single vertical stem. In measures 83, 87, and 91, the four upper staves have a single vertical stem, while the Bass staff has a single vertical stem. In measures 84, 88, and 92, the four upper staves have a single vertical stem, while the Bass staff has a single vertical stem.

93

Musical score for measures 93-104. The score consists of a grand staff with four staves and a single staff below. The grand staff contains vertical bar lines at measures 93, 97, and 101. The single staff below contains vertical bar lines at measures 93, 97, and 101.

105

Musical score for measures 105-116. The score consists of a grand staff with four staves and a single staff below. The grand staff contains vertical bar lines at measures 105, 109, and 113. The single staff below contains vertical bar lines at measures 105, 109, and 113.

117

Musical score for measures 117-128. The score consists of a grand staff with four staves and a single staff below. The grand staff contains vertical bar lines at measures 117, 121, 125, and 129. The single staff below contains vertical bar lines at measures 117, 121, 125, and 129.

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



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-polyphonic-2.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 single and multi voice rest positions for various standard and tab staves.

rest-positioning.ly

R1\*7

R1 r1 r2 r4

R1\*7

7

R1 r1

The image displays a musical score for a piece titled 'rest-positioning.ly'. It consists of 15 staves, all in common time (C). The first staff is a treble clef, while the remaining 14 staves are grouped by a brace on the left and each begins with a 'T' (Tenor) and 'B' (Bass) clef. The score is divided into two main sections by a double bar line. The first section contains 5 measures, and the second section contains 3 measures. Rests are indicated by horizontal lines on the staves, and articulation marks (vertical lines with flags) are present at the beginning of several measures. The notation 'R1\*7' appears above the first measure of the first section and the first measure of the second section. The notation 'R1 r1 r2 r4' appears above the second, third, fourth, and fifth measures of the first section. The notation '7' appears above the first measure of the second section. The notation 'R1 r1' appears above the second and third measures of the second section.

20

r2 r4

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

\once \revert can be used for reverting a property once rather than permanently.

revert-once.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 not survive lilypond `-safe-mode`

`safe.ly`

This should produce an SATB score on two staves with 5 verses and piano accompaniment.

`satb-template-on-two-staves-with-verses.ly`

A musical score template for SATB voices and piano accompaniment. The score is divided into two systems. The first system shows the vocal staves (Soprano, Alto, Tenor, Bass) and the piano accompaniment (Piano). The lyrics for the first system are: 1. First stanza, 2. Second stanza, 3. Third stanza, 4. Fourth stanza, 5. Fifth stanza. The second system shows the vocal staves and the piano accompaniment.

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`

A musical score template for SATB voices and piano accompaniment, showing the result of omitting the soprano and tenor voices. The score is divided into two systems. The first system shows the vocal staves (Alto, Bass) and the piano accompaniment (Piano). The lyrics for the first system are: Alto lyrics, Bass lyrics. The second system shows the vocal staves and the piano accompaniment.

Instrument names and short instrument names can be changed when using the satb built-in template.

```
satb-template-with-changed-instrument-names.ly
```

A musical score for SATB choir and organ. The first system features four vocal staves: Soprani (SOPRANI), Contralti (CONTRALTI), Men (MEN), and Divi (DIV). The organ part is on a grand staff. The second system features the organ part on a grand staff. The music is in common time (C) and consists of a series of chords and single notes.

A musical score for SATB choir and organ. The first system features four vocal staves: Soprani (SOP), Contralti (CON), Men (M), and Divi (UNI). The organ part is on a grand staff. The second system features the organ part on a grand staff. The music is in common time (C) and consists of a series of chords and single notes.

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.



SOPRANO

ALTO

TENOR

BASS

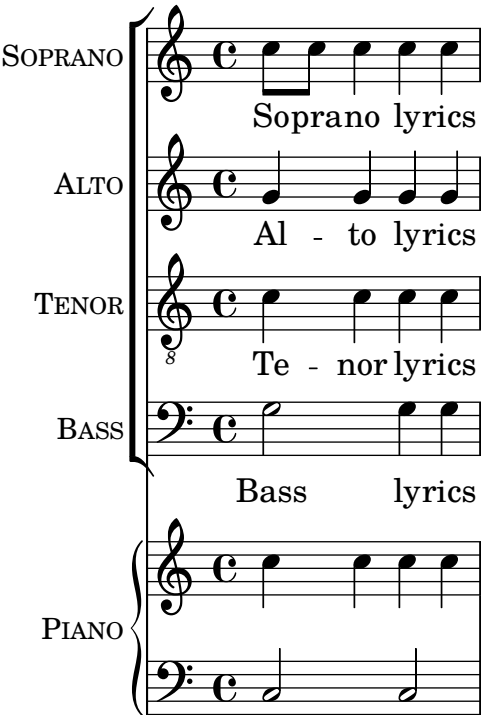
PIANO

Soprano lyrics

Al - to lyrics

Te - nor lyrics

Bass lyrics

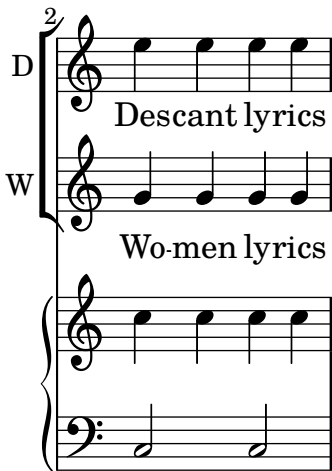


D

W

Descant lyrics

Wo-men lyrics

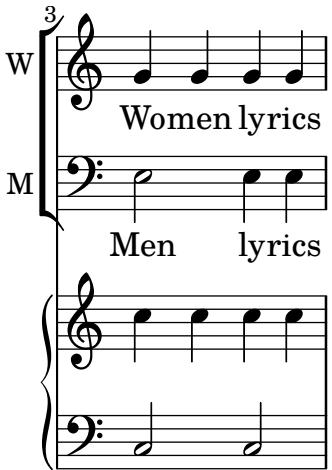


W

M

Women lyrics

Men lyrics



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



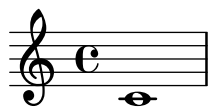
**Title 1**  
**Sub1**

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**

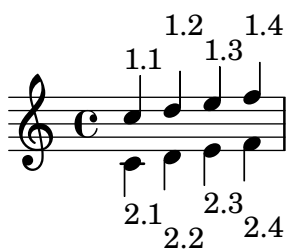
Score with a g

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
```



Use `define-event-class`, scheme engraver methods, and grob creation methods to create a fully functional text spanner in scheme.

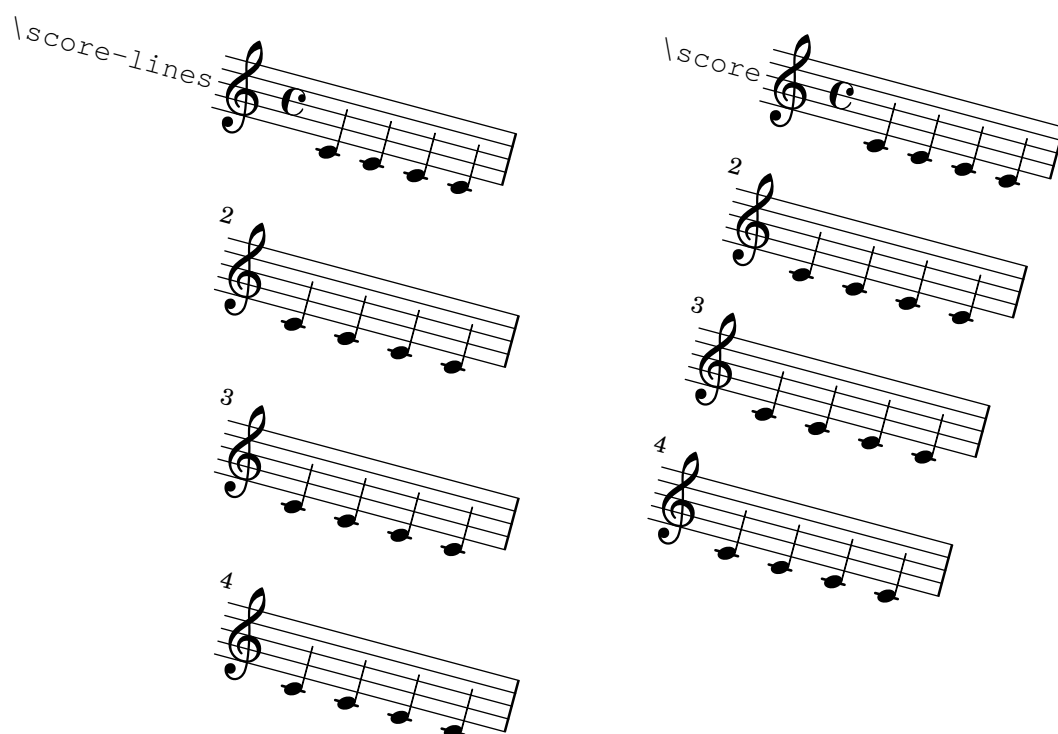
```
scheme-text-spanner.ly
```





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`



Markup texts are rendered above or below a score.

score-text.ly

High up above

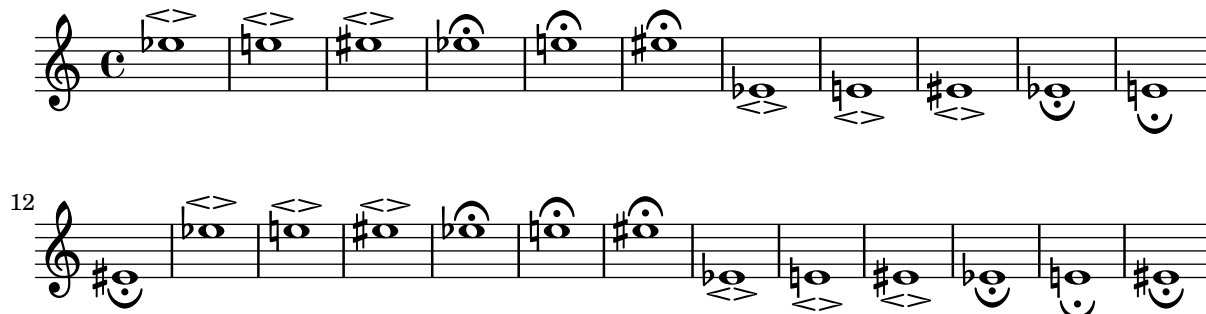
My first Li - ly song,

<sup>3</sup>  
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`



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



horizontal scripts are ordered, so they do not overlap. The order may be set with script-priority.

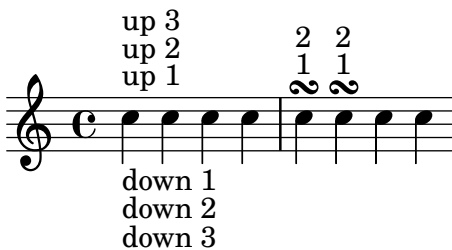
The scripts should not be folded under the time signature.

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



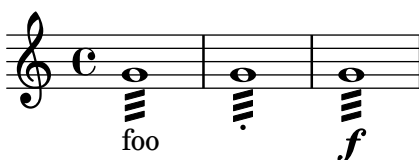
Scripts may be stacked.

script-stacked.ly



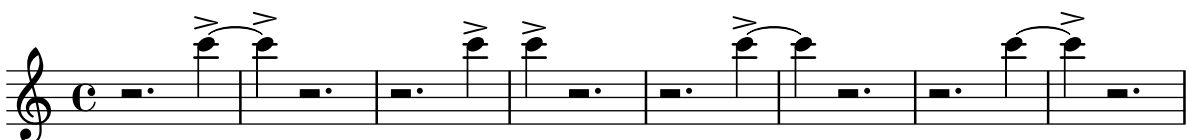
Scripts avoid stem tremolos even if there is no visible stem.

script-stem-tremolo.ly

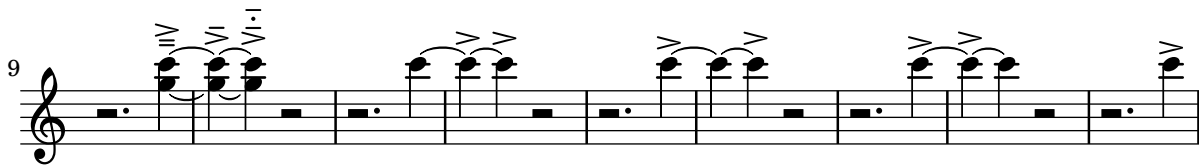


Scripts avoid ties.

script-tie-collision.ly

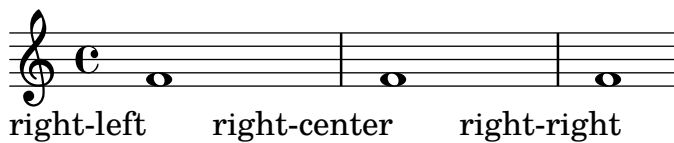
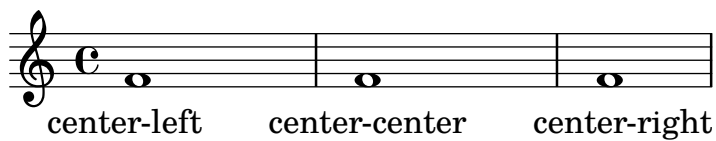
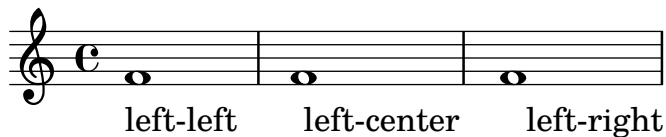






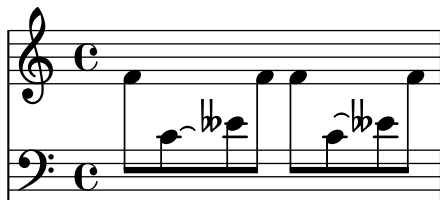
Grobs using `ly:self-alignment-interface::aligned-on-x-parent` and `ly:self-alignment-interface::aligned-on-y-parent` callbacks support separate alignments for self and parent.

`self-alignment-and-parent-alignment.ly`



Cross-staff `RepeatTie` and `LaissezVibrerTie` do not trigger programming errors for circular dependencies in direction.

`semi-tie-cross-staff.ly`



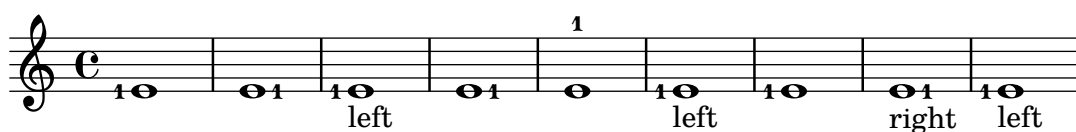
Semi tie directions may be forced from the input.

`semi-tie-manual-direction.ly`



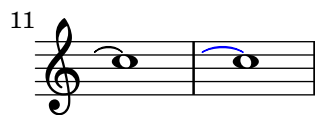
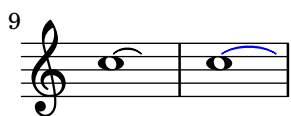
`\once \set` should change a context property value for just one timestep and then return to the previous value.

`set-once.ly`



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



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



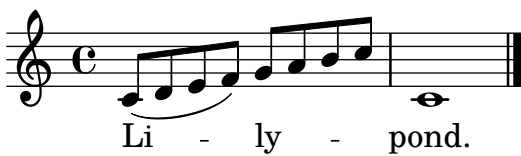
\shiftDurations can use negative dot values without causing a crash.

shift-durations-negative-dots.ly



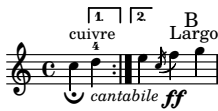
A number of shorthands like (, ), |, [, ], ~, \{, \} and others can be redefined like normal commands. ly/declarations-init.ly serves as a regtest for a number of them. This test just demonstrates replacing ( and ) with melismata commands which are *not* articulations.

shorthands.ly



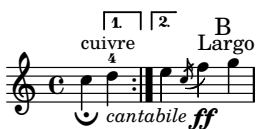
Different text styles are used for various purposes.

size11.ly



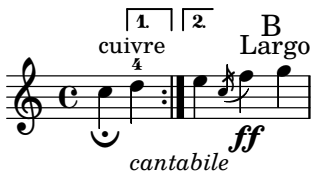
Different text styles are used for various purposes.

size13.ly



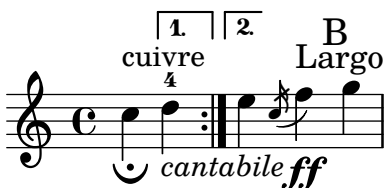
Different text styles are used for various purposes.

size16.ly



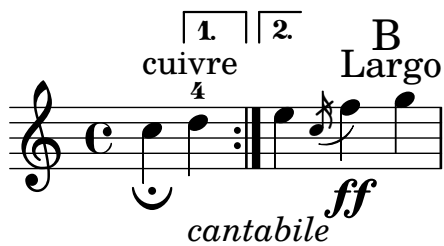
Different text styles are used for various purposes.

size20.ly



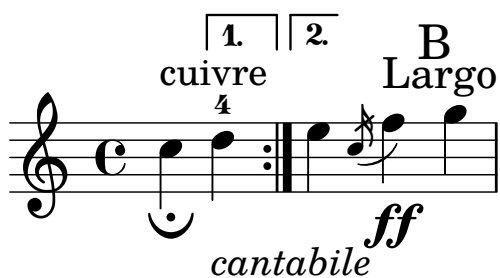
Different text styles are used for various purposes.

size23.ly



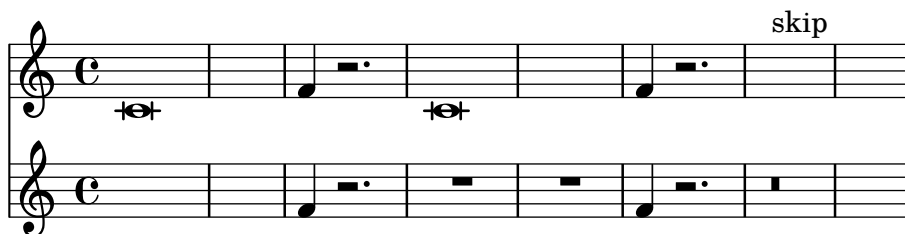
Different text styles are used for various purposes.

size26.ly



skip-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

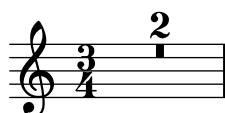
skipTypesetting doesn't affect bar checks.

skiptypesetting-bar-check.ly



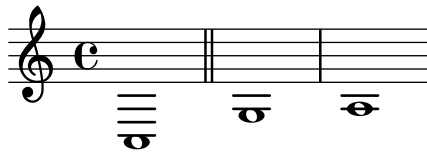
When skipTypesetting is set during a skipBars-induced MultiMeasureRest spanner, no segfault occurs.

skiptypesetting-multimeasurereast.ly



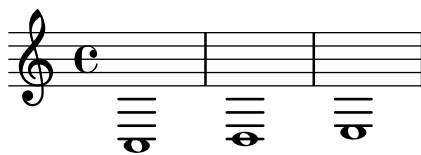
`showFirstLength` and `showLastLength` may be set at the same time; both the beginning and the end of the score will be printed.

`skiptypesetting-show-first-and-last.ly`



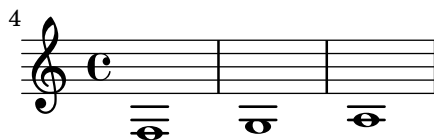
`showFirstLength` will only show the first bit of a score

`skiptypesetting-show-first.ly`



`showLastLength` will only show the last bit of a score

`skiptypesetting-show-last.ly`



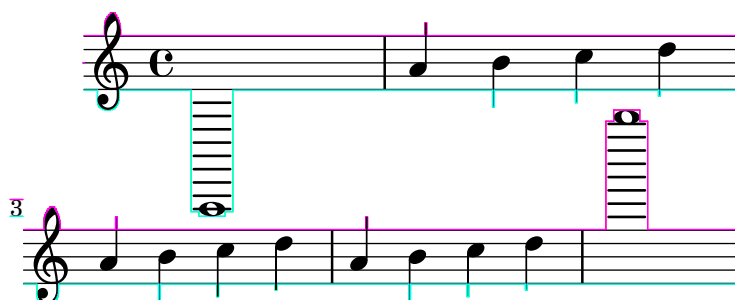
Tuplet brackets are also skipped with `skipTypesetting`.

`skiptypesetting-tuplet.ly`



`-ddebug-skyline` draws the outline of the skyline used.


`skyline-debug.ly`



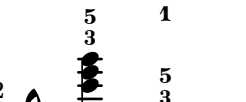
The `skyline-horizontal-padding` property can be set for `System` in order to keep systems from being spaced too closely together. In this example, the low notes from a system should not be interleaved with the high notes from the next system.

skyline-horizontal-padding.ly


5  
3



5  
3



5  
3



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`



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`

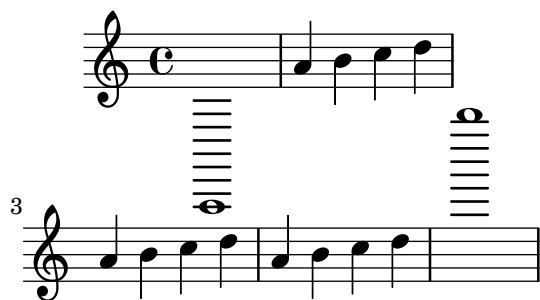
this goes above the previous markup

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 2.19.44—[www.lilypond.org](http://www.lilypond.org)

Slurs handle avoid objects better.

slur-avoid.ly

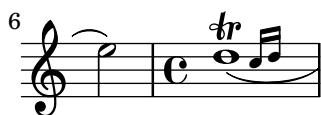


Across line breaks, slurs behave nicely. On the left, they extend to just after the preparatory matter, and on the right to the end of the staff. A slur should follow the same vertical direction it would have in unbroken state.

slur-broken-trend.ly

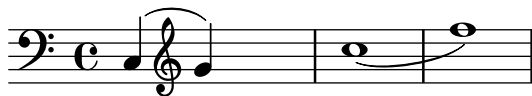






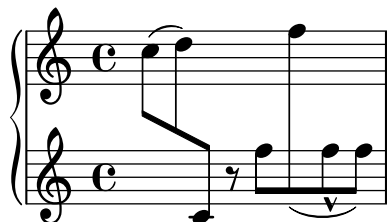
Slurs avoid clefs, but don't avoid barlines.

slur-clef.ly



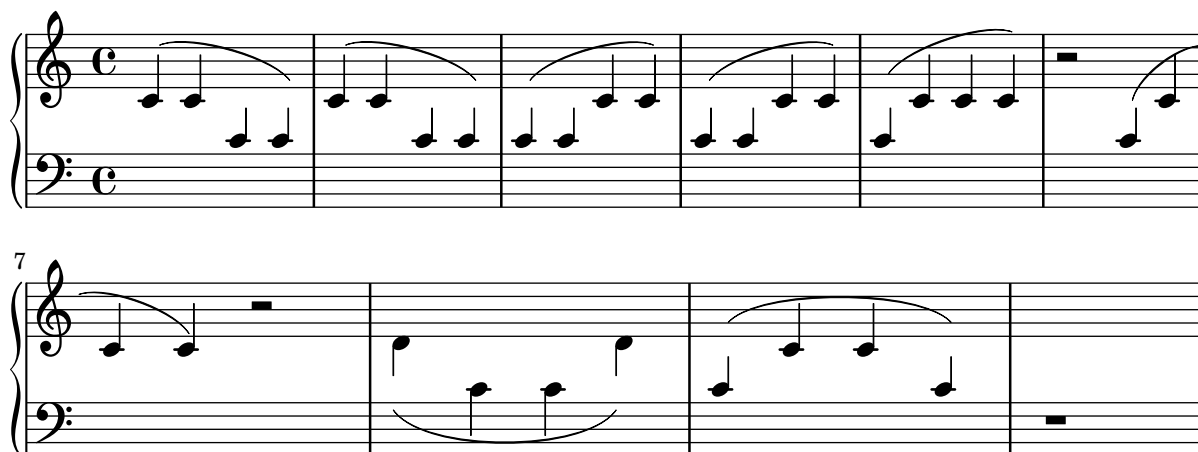
Slurs that depend on a cross-staff beam are not calculated until after line-breaking, and after inside-going articulations have been placed.

slur-cross-staff-beam.ly



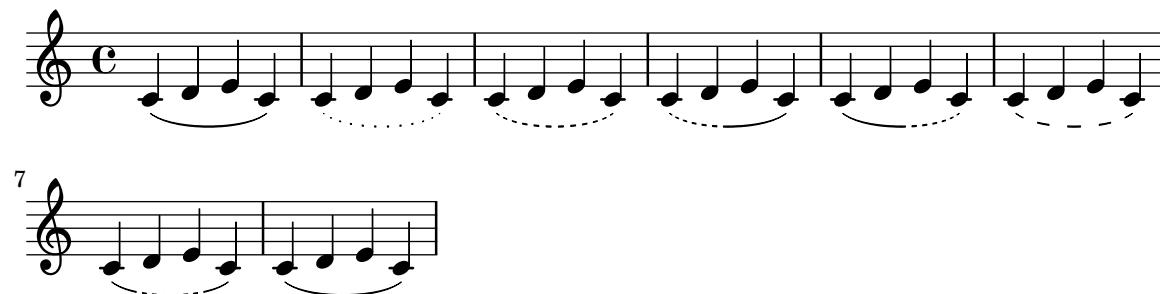
Slurs behave decently when broken across a linebreak.

slur-cross-staff.ly



The appearance of slurs may be changed from solid to dotted or dashed.

slur-dash.ly



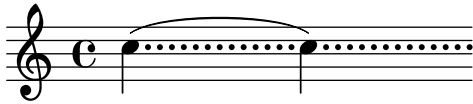
Slurs avoid dots.

slur-dot-collision.ly



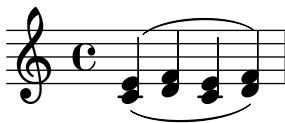
Slurs should not get confused by augmentation dots. With a lot of dots, the problems becomes more visible.

`slur-dots.ly`



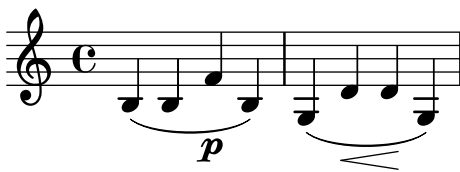
Some composers use slurs both above and below chords. This can be typeset by setting `doubleSlurs`

`slur-double.ly`



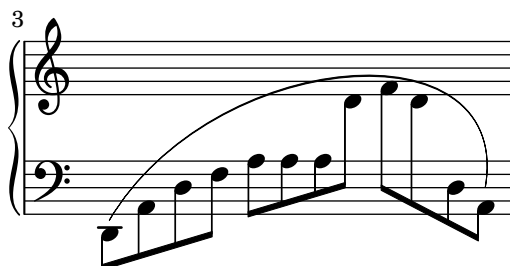
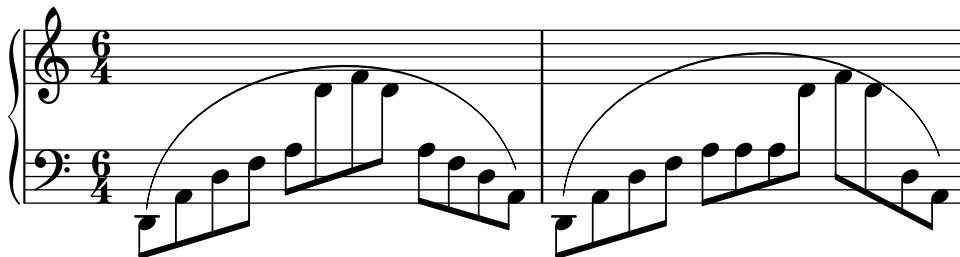
Dynamics avoid collision with slur.

`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`



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



Slurs may be placed over rests. The slur will avoid colliding with the rests.

slur-rest.ly

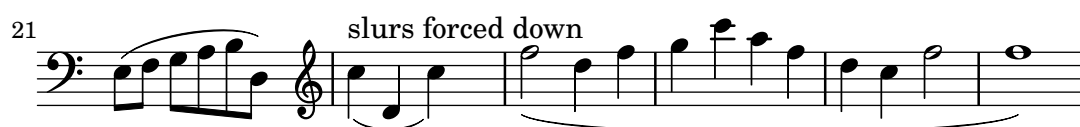


Slur formatting is based on scoring. A large number of slurs are generated. Each esthetic aspect gets demerits, the best configuration (with least demerits) wins. This must be tested in one big file, since changing one score parameter for one situation may affect several other situations.

Tunable parameters are in `scm/slur.scm`.

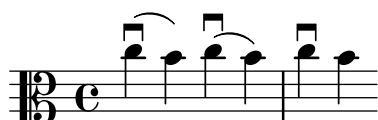
slur-scoring.ly





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`



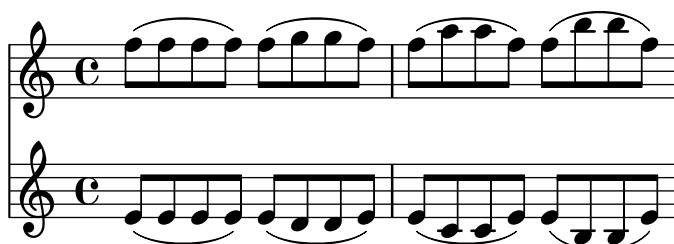
A slur's shift region is automatically made higher to accommodate extra encompass elements.

`slur-shift-region.ly`



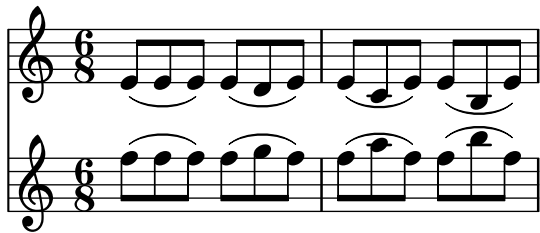
Symmetric figures should lead to symmetric slurs.

`slur-symmetry-1.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



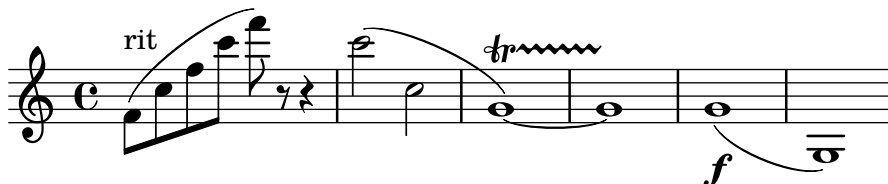
TupletNumber grobs are always inside slurs. This may not work if the slur starts after the tuplet.

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



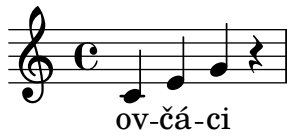
Festival song synthesis output supports associated voices.

song-associated-voice.ly



Festival song synthesis output supports non-english syllables.

song-basic-nonenglish.ly



Festival song synthesis output supports basic songs.

song-basic.ly



Festival song synthesis output supports breath marks.

song-breathe.ly



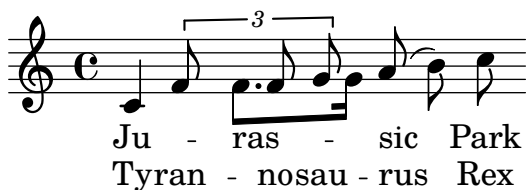
Festival song synthesis output supports melismas.

song-melisma.ly



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



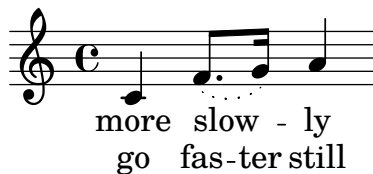
Festival song synthesis output supports skips.

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



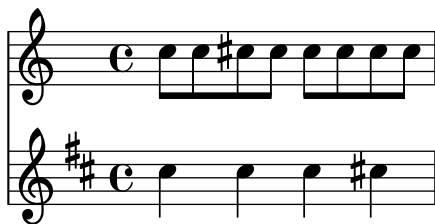
Accidentals don't collide with shifted-down rests.

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





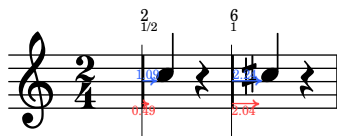
Accidentals sticking out to the left of a note will take a little more space, but only if the spacing is tight.

`spacing-accidental.ly`



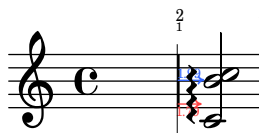
An accidental following a bar gets space so the left edge of the acc is at 0.3 staff space from the bar line

`spacing-bar-accidental.ly`



An arpeggio following a bar gets space

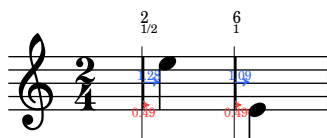
`spacing-bar-arpeggio.ly`



Downstem notes following a barline are printed with some extra space. This is an optical correction similar to juxtaposed stems.

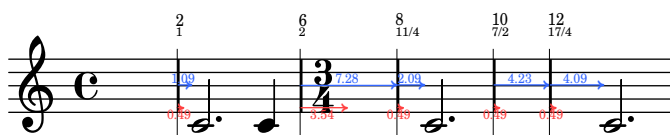
The bar upstem should be approx 1.1 staff space, the bar downstem 1.3 to 1.5 staff space.

`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



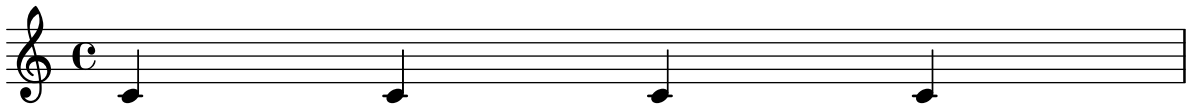
If right hand stems have accidentals, optical spacing correction is still applied, but only if the stem directions are different.

spacing-correction-accidentals.ly



Empty barlines 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`



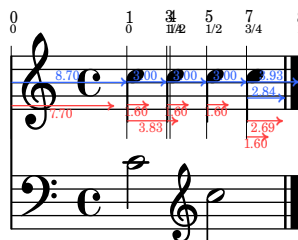
A clef can be folded below notes in a different staff, if this does not disrupt the flow of the notes.

`spacing-folded-clef.ly`



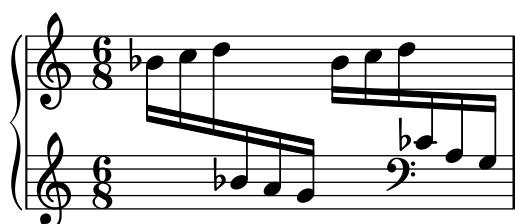
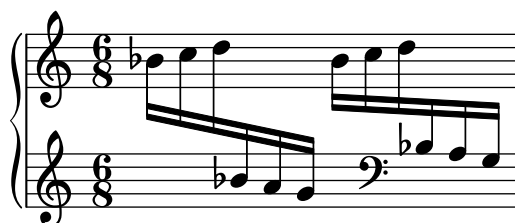
A clef can be folded below notes in a different staff, if there is space enough. With `Paper_column` stencil callbacks we can show where columns are in the score.

`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`



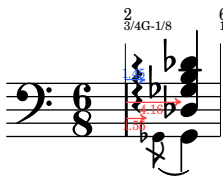
Grace note runs have their own spacing variables in `Score.GraceSpacing`. So differing grace note lengths inside a run are spaced accordingly.

`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 barline do not collide.

`spacing-horizontal-skyline-grace.ly`



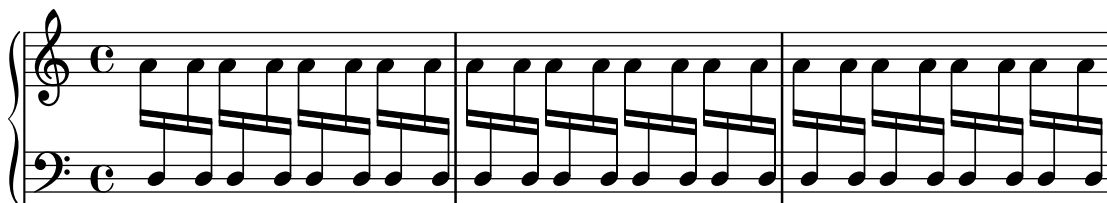
accidentals may be folded under preceding notes.

`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`



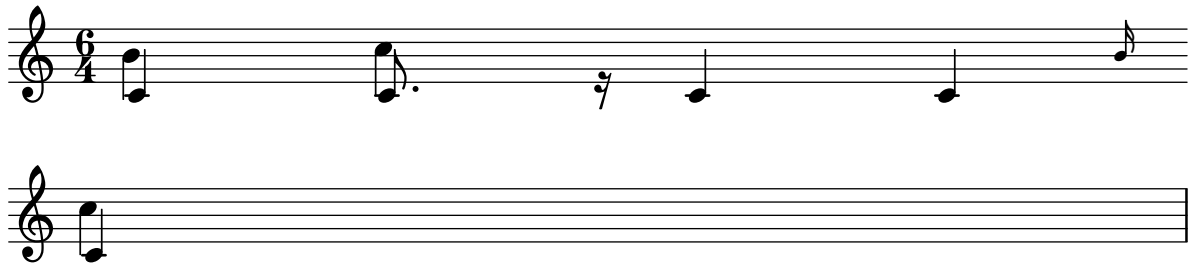
Even in case of incorrect contexts (eg. shortlived contexts) that break linking of columns through spacing wishes, **strict-note-spacing** defaults to a robust solution. This test passes if it does not seg fault; instead it should produce three programming error messages. Note that, in tight music with strict note spacing, grace notes will collide with normal notes. This is expected.

spacing-loose-grace-error.ly



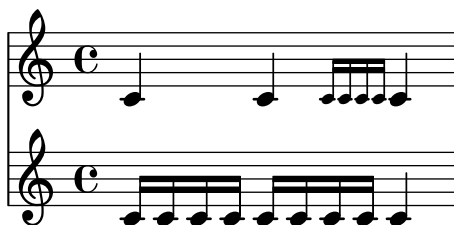
If a floating grace spacing section attaches to a note across a line break, it gets attached to the end of line.

spacing-loose-grace-linebreak.ly



With **strict-grace-spacing**, grace notes don't influence spacing.

spacing-loose-grace.ly



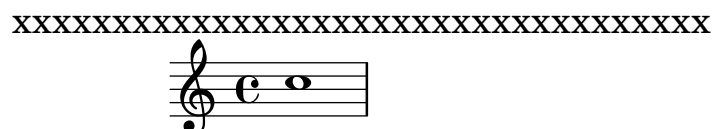
Loose columns (here, the treble clef) are spaced correctly in polyphonic music.

spacing-loose-polyphony.ly



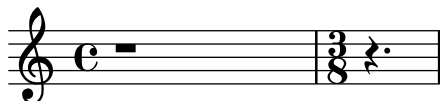
Width of marks does not affect spacing.

spacing-mark-width.ly



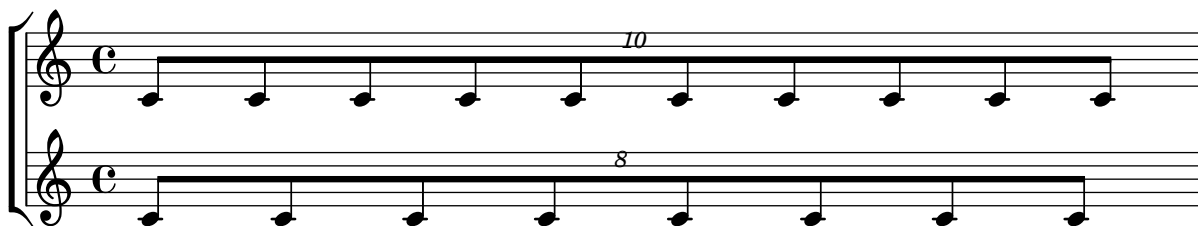
Horizontal spacing is bounded by the current measure length. This means that the 3/8 setting does not affect the whole rest spacing.

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 barline 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



The space after a paper column can be increased by overriding the padding property.

spacing-paper-column-padding.ly



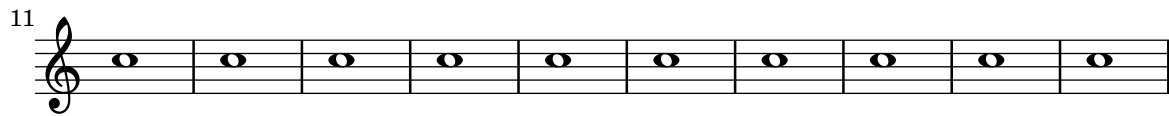
Proportional notation can be created by setting `proportionalNotationDuration`. Notes will be spaced proportional to the distance for the given duration.

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



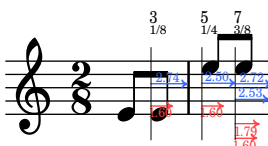
When `space-to-barline` is false, we measure the space between the note and the start of the clef. When `space-to-barline` is true, we measure the space between the note and the start of the barline.

spacing-space-to-barline.ly



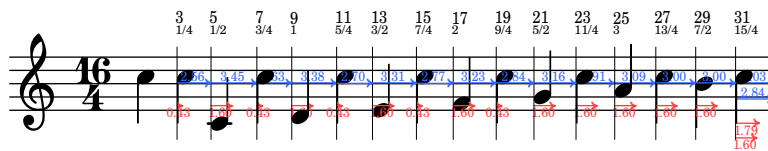
Upstem notes before a barline are printed with some extra space. This is an optical correction similar to juxtaposed stems.

spacing-stem-bar.ly



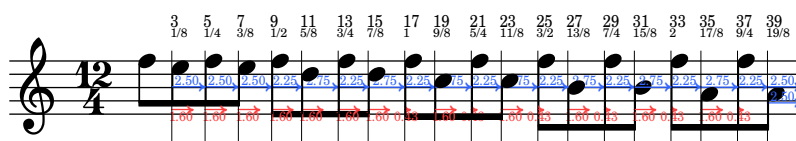
There are optical corrections to the spacing of stems. The overlap between two adjacent stems of different direction is used as a measure for how much to correct.

spacing-stem-direction.ly



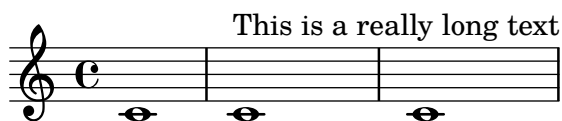
For juxtaposed chords with the same direction, a slight optical correction is used. It is constant, and works only if two chords have no common head-positions range.

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 barline 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 barline) 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

long-syllable a      b      c      long-syllable a      b      c

syllable a      b      c      syllable a      b      c

word a      b      c      word a      b      c

5

long-syllable a b c long-syllable a b c

syllable a b c syllable a b c

word a b c word a b c

Articulations on cross-staff stems do not collide with span bars.

`span-bar-articulation.ly`

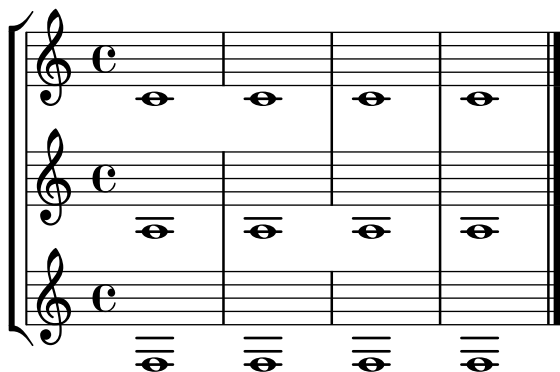
At the beginning of a system, the `.|:` repeat barline is drawn between the staves, but the `:|.` is not.

`span-bar-break.ly`

2

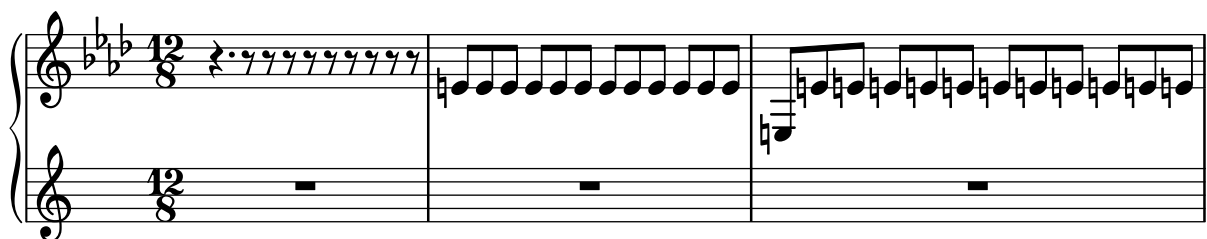
Span bars can be turned on/off on a staff-by-staff basis.

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.

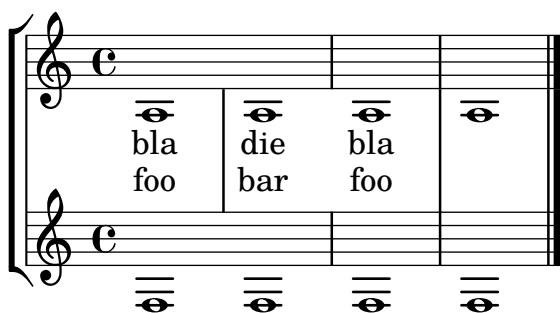
span-bar-spacing.ly



Span bars are drawn only between staff bar lines. By setting bar lines to transparent, they are shown only between systems.

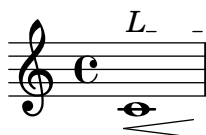
Setting `SpanBar` transparent removes the barlines between systems.

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





Spanners align to musical grobs in paper columns, ignoring things like pedal marks.  
spanner-alignment.ly

Spanners parts that extend beyond their parents are killed in case of line breaks.  
spanner-break-beyond-parent.ly

The `break-overshoot` property sets the amount that a spanner (in this case: the beam and triplet 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



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

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.



ssaattbb-template-with-all-voices-on-one-staff.ly

A musical score for a SSAATTBB choir and piano. The score is written on a single staff with multiple systems of staves. The instruments are listed on the left: SOLO, DESCANT, WOMEN, SOPRANO 1, SOPRANO 2, SOPRANO, ALTO, ALTO 1, ALTO 2, TENOR 1, TENOR 2, TENOR, BASS, BASS 1, BASS 2, MEN, and PIANO. The music is in common time (C) and features various vocal parts with lyrics. The piano part is at the bottom, consisting of a grand staff (treble and bass clef). The lyrics are: SOLO: So - lo ly - rics; DESCANT: Des - cant ly - rics; WOMEN: Wo - men ly - rics; SOPRANO 1: So - pra - no One ly - rics; SOPRANO 2: So - pra - no Two ly - rics; SOPRANO: So - pra - no ly - rics; ALTO: Al - to ly - rics; ALTO 1: Alto One ly - rics; ALTO 2: Alto Two lyrics; TENOR 1: Te - nor One ly - rics; TENOR 2: Te - nor Two ly - rics; TENOR: Te - nor ly - rics; BASS: Bass ly - rics; BASS 1: Bass One ly - rics; BASS 2: Bass Two ly - rics; MEN: Men ly - rics; PIANO: Men ly - rics.

Instrument names and short instrument names can be changed when using the ssaattbb built-in template.

ssaattbb-template-with-changed-instrument-names.ly

First system of a musical score. It consists of three staves for voices and one grand staff for piano accompaniment. The voice staves are labeled 'SOP ONE', 'SOP TWO', and 'MEN DIV' from top to bottom. They are grouped by a large left-facing curly brace. The piano accompaniment is a grand staff with a treble and bass clef, labeled 'ORGAN' to its left. All staves have a common time signature 'C'. The vocal staves show a melody with eighth notes, while the piano accompaniment shows a simple harmonic accompaniment with quarter notes.

Second system of the musical score. It consists of three staves for voices and one grand staff for piano accompaniment. The voice staves are labeled 'SOP 1', 'SOP 2', and 'M UNI' from top to bottom. They are grouped by a large left-facing curly brace. The piano accompaniment is a grand staff with a treble and bass clef. A second ending bracket with a '2' above it spans the first two staves of the vocal system. All staves have a common time signature 'C'. The vocal staves show a melody with eighth notes, while the piano accompaniment shows a simple harmonic accompaniment with quarter notes.

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.

So - pra - no One ly - rics

SOPRANO 1

SOPRANO 2

So - pra - no Two ly - rics

ALTO 1

Alto One ly - - rics

ALTO 2

Alto Two lyrics

Te - nor One ly - rics

TENOR 1

TENOR 2

Te - nor Two ly - rics

BASS

Bass ly - rics

PIANO

2

D

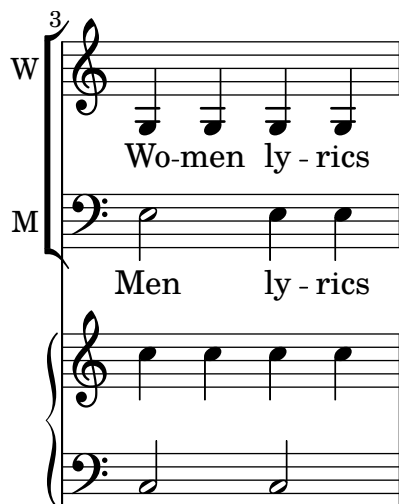
Descant ly - rics

S

So - pra - no ly - rics

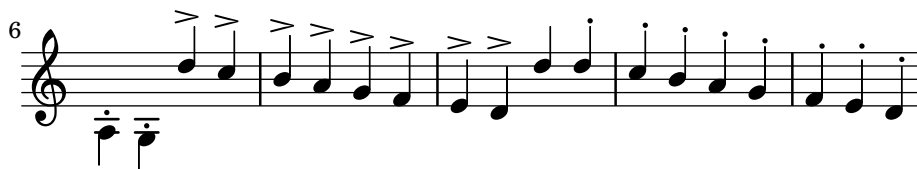
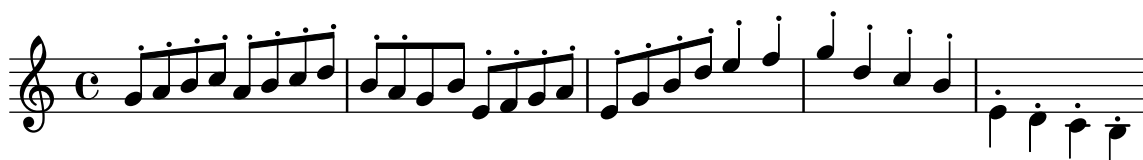
A

Al - to ly - rics



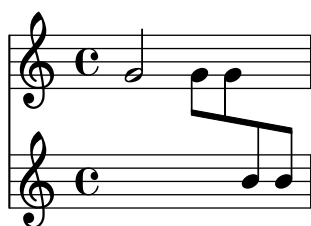
Some scripts must have quantized positions. Vertical position descend monotonously for a descending scale. The staccato dot is close to the notehead. If the head is in a space, then the dot is in the space next to it.

`staccato-pos.ly`



Staves stay alive long enough to complete an automatic beam.

`staff-change-autobeam.ly`



Staves can be started and stopped at command.

`staff-halfway.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



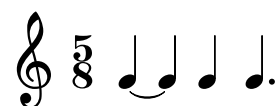
Staves may be present in several sizes within a score. This is achieved with an internal scaling factor. If the scaling factor is forgotten in some places, objects generally become too thick or too large on smaller staves.

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



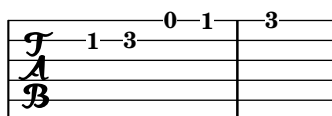
The space between scores containing `Staffs` and `TabStaffs` should be consistent. In this example, all of the spacings should be equivalent.

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



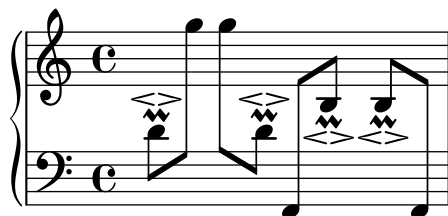
Stanza numbers are put left of their lyric. They are aligned in a column.

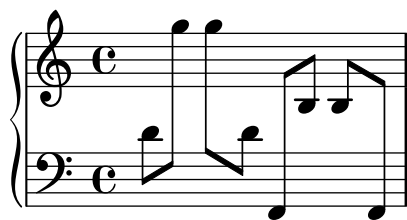
stanza-number.ly



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





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



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.



The first staff of music is written in treble clef with a common time signature (C). It begins with a series of eighth notes: C4, D4, E4, F4, G4, A4, B4, and C5. This is followed by a series of chords: a C4-E4-G4 triad, a C4-E4-G4 triad, a C4-E4-G4 triad, and a C4-E4-G4 triad.

A musical staff in treble clef with a common time signature (C). The staff contains a series of eighth notes, starting on the middle C (C4) and ascending stepwise to G4.

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.



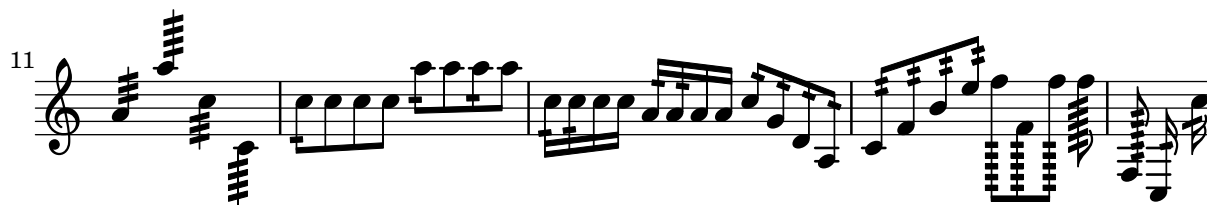
Stem tremolos or rolls are tremolo signs that look like beam segments crossing stems. If the stem is in a beam, the tremolo must be parallel to the beam. If the stem is invisible (e.g. on a whole note), the tremolo must be centered on the note. If the note has a flag (eg. an unbeamed 8th note), the tremolo 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 :



Combinations of rotation and color do work.

stencil-color-rotation.ly



You can write stencil callbacks in Scheme, thus providing custom glyphs for notation elements. A simple example is adding parentheses to existing stencil callbacks.

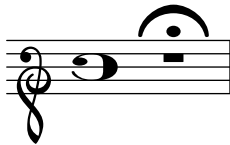
The parenthesized beam is less successful due to implementation of the Beam. The note head is also rather naive, since the extent of the parens are also not seen by accidentals.

stencil-hacking.ly



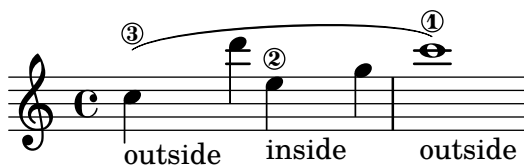
Stencils can be scaled using `ly:stencil-scale`. Negative values will flip or mirror the stencil without changing its origin; this may result in collisions unless the scaled stencil is realigned (e.g., the time signature in this test).

stencil-scale.ly



String numbers should only be moved outside slurs when there is a collision.

string-number-around-slur.ly



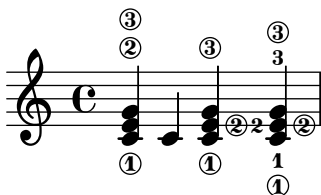
Different styles may be used for string number indications. Predefined options are arabic (used by default) and roman numerals.

string-number-styles.ly



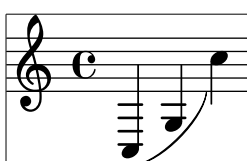
String numbers can be added to chords. They use the same positioning mechanism as finger instructions.

string-number.ly



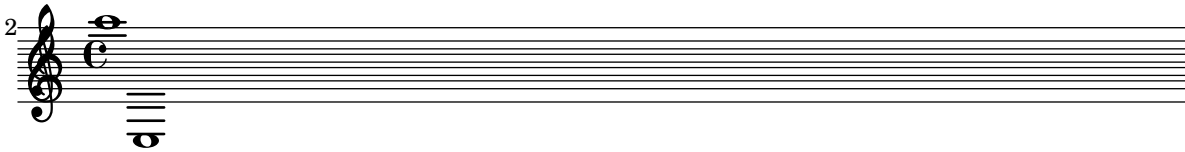
The size of every system is correctly determined; this includes postscript constructs such as slurs.

system-extents.ly



By setting the padding between systems to a negative value, it is possible to eliminate the anti-collision constraints.

system-overstrike.ly



System separator positioning works with all spaceable staff contexts.

system-separator-spaceable-staves.ly

$\mathcal{T}$   
 $\mathcal{A}$   
 $\mathcal{B}$

1



$\text{C}$

$\text{C}$



$\text{C}$

$\text{C}$



$\text{C}$

$\text{C}$

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.

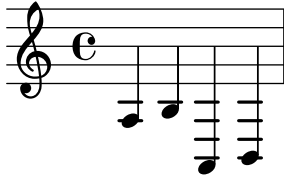


system-separator.ly

The image displays three systems of musical notation, each consisting of a grand staff (treble and bass clef) and a repeat sign. The first system is marked with a 'c' time signature. The second system is marked with a '3' time signature. The third system is marked with a '5' time signature. Each system contains two measures of music, with a repeat sign at the end of the first measure. The notes are represented by stylized symbols, possibly indicating a specific musical notation style or a placeholder for a specific note.

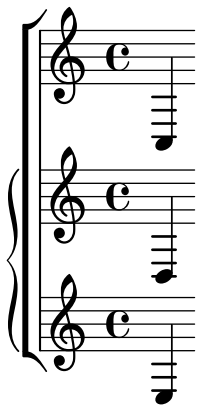
When the staff-space is increased, the system-start delimiter should still be collapsed (i.e. the collapse-height should not give an absolute length, but a multiple of staff-spaces).

```
system-start-bar-collapse-staffspace.ly
```



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
```



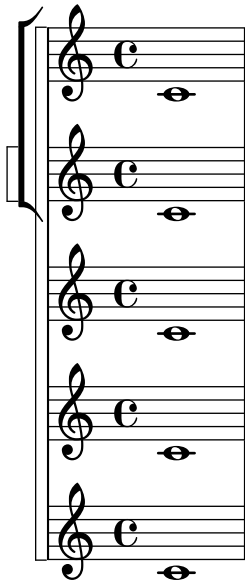
A heavy-bar system start delimiter may be created by tuning the `SystemStartBar` grob.

```
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`

tablature-fretboard-open-string.ly

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`

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 here for the first pitch: `gih`

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`.

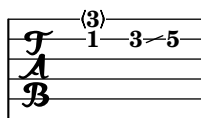
tablature-open-string-handling.ly

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.

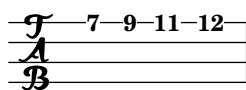
tablature-slurs-with-beams.ly

**Manual beams**      **Automatic beams**

The image shows two examples of musical notation and tablature. The left example, labeled 'Manual beams', shows a treble staff with a slur over a sequence of notes, and a corresponding tablature with a slur over the notes 6, 0, 1, 4. The right example, labeled 'Automatic beams', shows the same sequence of notes and tablature, but with automatic beaming applied to the notes in the treble staff.

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

The image shows a musical score with four measures. The first measure has a treble staff with a slur over a sequence of notes, and a corresponding tablature with a slur over the notes 3 and 2. The second measure has a treble staff with a sequence of notes, and a corresponding tablature with a sequence of notes 0, 0, 0, 0, 0. The third measure has a treble staff with a single note, and a corresponding tablature with a single note 1. The fourth measure has a treble staff with a single note, and a corresponding tablature with a single note 1.



5

8

(1)

3 3 3 3

1 3 0

(0) 0

1.

2.

8

3

2

0 0 0 0

1

5

8

3 3 3 3

1 3 0

0 1

1.

2.

11

8

(1)

3 3 3 3

1 3 0

(0) 0

1.

2.

If a slur or a glissando follows a tie, the corresponding fret number is displayed in parentheses.  
 tablature-tie-spanner.ly

8

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

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

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 `\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 stave 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

both

part

score

cue

cue

cue

The operation of `\keepWithTag` can be made more flexible by using `\tagGroup`.  
tag-group.ly

## `\keepWithTag`

vI&vII&bI&bII&slurs

vI vII

bI bII

slurs&vI

vI vII

vI&bI&bII

vI vII

bI bII

vI&bI&bII&none

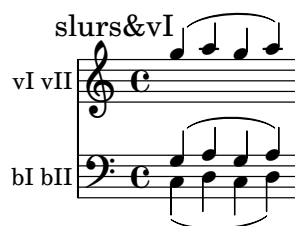
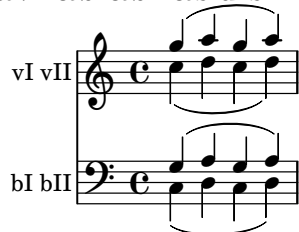
vI vII

bI bII

`\tagGroup vI.vII`

`\tagGroup bI.bII`

vI&vII&bI&bII&slurs



vI&bI&bII



vI&bI&bII&none



The `\removeWithTag` and `\keepWithTag` commands can name multiple tags to remove or to keep.

`tag-multiple.ly`

## `\keepWithTag`

none



flood&highball&buffoon



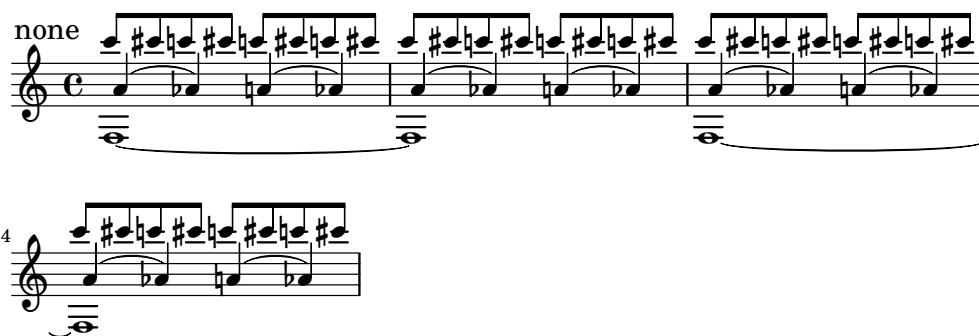
flood&buffoon



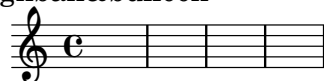
buffoon



`\removeWithTag`



flood&highball&buffoon



flood&buffoon

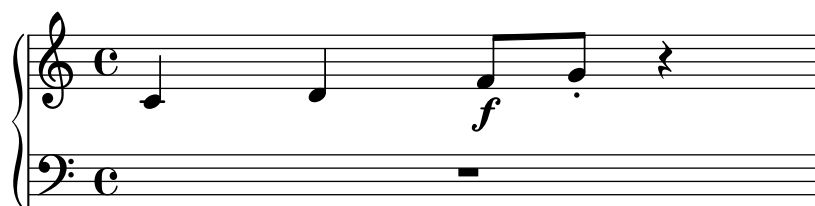


buffoon



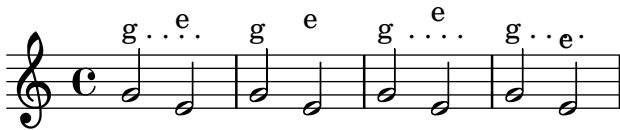
This file gives a different result each time it is run, so it should always show up in the output-distance testing.

test-output-distance.ly



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



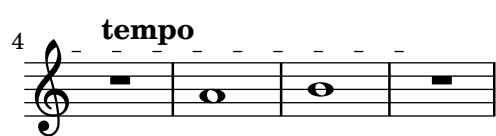
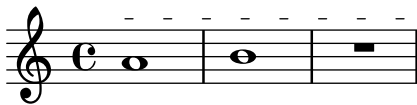
Text and trill spanners are attached to note columns, so attachments in other staves have no effect on them.

text-spanner-attachment-alignment.ly



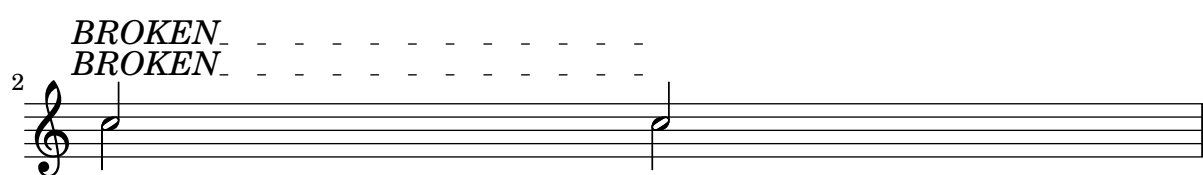
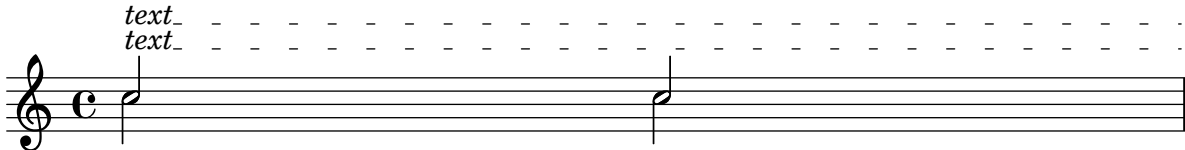
Text spanners ending on, or broken across, full-measure rests extend to the rests, or over the rests, as appropriate.

text-spanner-full-rest.ly



The order of setting nested properties does not influence text spanner layout.

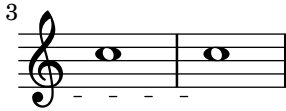
text-spanner-override-order.ly



Text spanners should not repeat start text when broken.

text-spanner.ly





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`



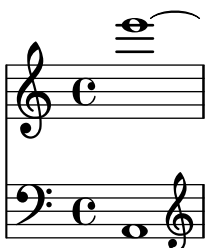
Broken ties honor `minimum-length` also. This tie has a `minimum-length` of 5.

`tie-broken-minimum-length.ly`



Broken tie lengths are not affected by clefs in other staves.

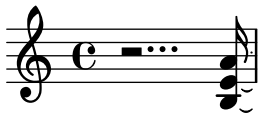
`tie-broken-other-staff.ly`





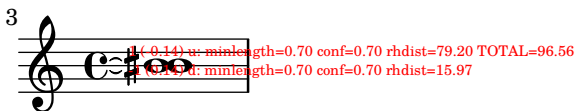
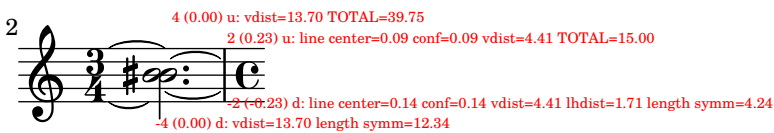
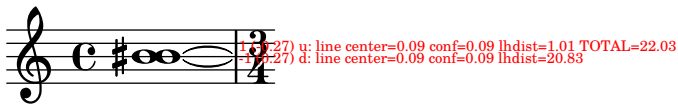
Ties behave properly at line breaks.

`tie-broken.ly`



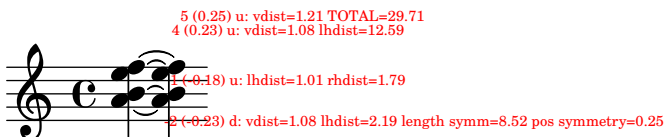
Tie detail property `multi-tie-region-size` controls how many variations are tried for the extremal ties in a chord.

`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 be printed on top of or very close to each other. This happens in the last chords of each system.

`tie-chord.ly`

The image displays a musical score generated by the `tie-chord.ly` program. It consists of eight systems of music, each containing a single staff with a treble clef. The first system is in 2/4 time, while the subsequent systems are in 3/4 time. The key signature is one sharp (F#). The score features a variety of chords, including dyads, triads, and dyads with a suspended fourth. Ties are used to connect notes across measures, and the program's formatting ensures they are placed vertically close to the note heads without overlapping them. Measure numbers 7, 12, 18, 23, 29, 34, and 42 are indicated at the start of their respective systems.

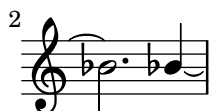
The appearance of ties may be changed from solid to dotted or dashed.

`tie-dash.ly`

The image shows a musical score generated by the `tie-dash.ly` program. It consists of a single staff with a treble clef and a common time signature (C). The score contains a series of eighth notes, some of which are connected by ties. The ties are rendered as dashed lines, as specified in the program name. The notes are arranged in a way that demonstrates the program's ability to handle different tie styles.

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 integers, the tie will vertically tune for staff line avoidance. If using a floating point number, this is taken as the exact 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.

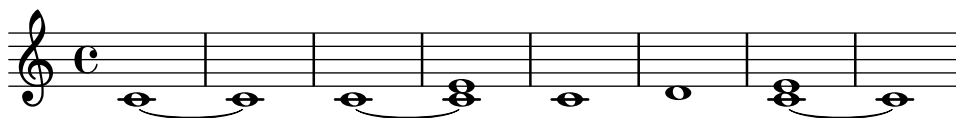
- short ties are in spaces
- long ties cross staff lines
- ties avoid flags of left stems.
- ties avoid dots of left notes.
- short ties are vertically centered in the space, as well those that otherwise don't fit in a space
- extremely short ties are put over the noteheads, instead of between.

tie-single.ly



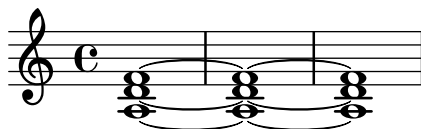
When a tie is followed only by unmatching notes and the tie cannot be created, lilypond prints out a warning unless `tieWaitForNote` is set.

tie-unterminated.ly



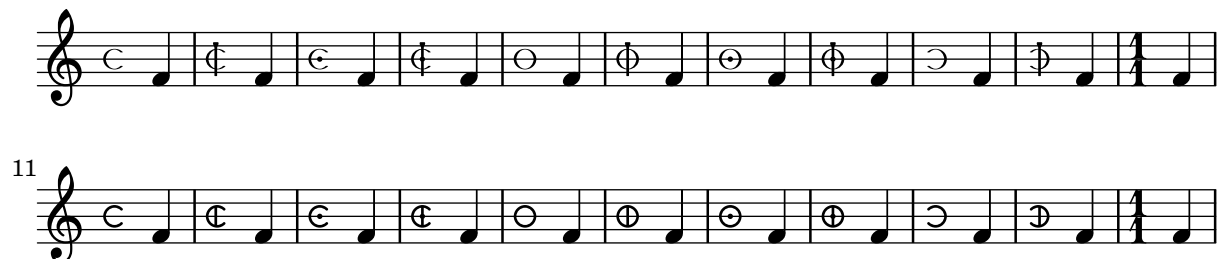
For whole notes, the inside ties do not cross the center of the note head, horizontally.

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`



The numbered time signature style prints a fraction.

`time-signature-numbered.ly`



Default values for time signature settings can vary by staff if the `Timing_translator` and `Default_bar_line_engraver` are 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`



The input representation is generic, and may be translated to XML.

`to-xml.ly`



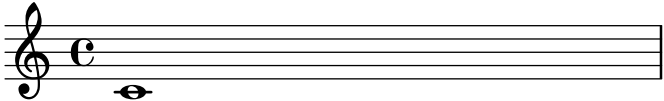
A table of contents is included using `\markuplist \table-of-contents`. The toc items are added with the `\tocItem` command. In the PDF backend, the toc items are linked to the corresponding pages.

toc.ly

Table of Contents

The first score	2
Mark A	3
The second score	4

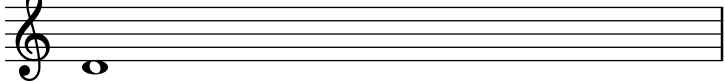
2



3

2

A



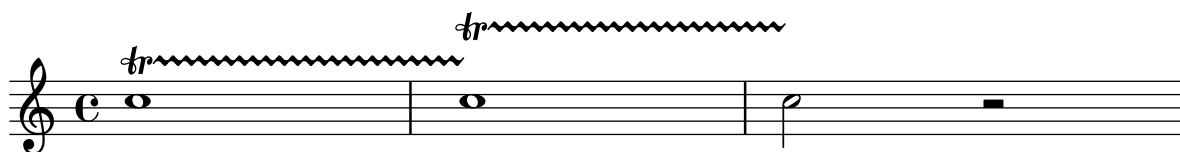
4  
Second score



Music engraving by LilyPond 2.19.44—[www.lilypond.org](http://www.lilypond.org)

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`



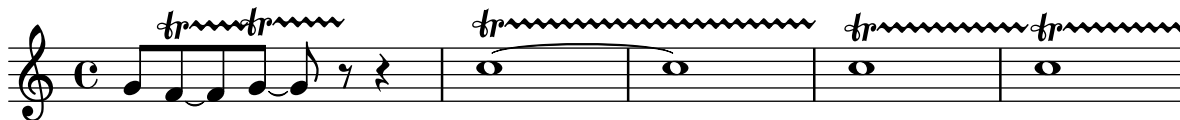
A `TrillSpanner` crossing a line break should restart exactly above the first note on the new line.

`trill-spanner-broken.ly`



Chained trills end at the next trill or barline. Collisions can be prevented by overriding `bound-details`.

`trill-spanner-chained.ly`



Trill spanner can end on a grace note

`trill-spanner-grace.ly`



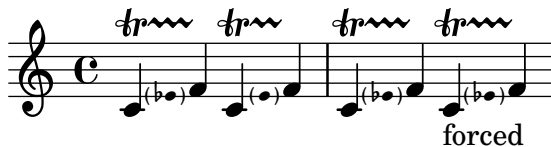
Pitched trills on consecutive notes with the same name and octave should not lose accidentals; in the following example, accidentals should be visible for all trill-pitches.

`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.

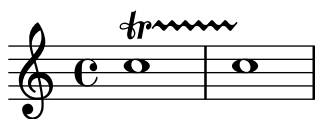
`trill-spanner-scaled.ly`



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



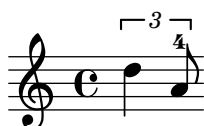
In combination with a beam, the bracket of the tuplet bracket is removed. This only happens if there is one beam, as long as the bracket.

tuplet-beam.ly



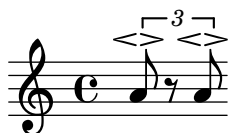
TupletBracket grobs avoid Fingering grobs.

tuplet-bracket-avoid-fingering.ly



Tuplet brackets avoid scripts by default.

tuplet-bracket-avoid-scripts.ly



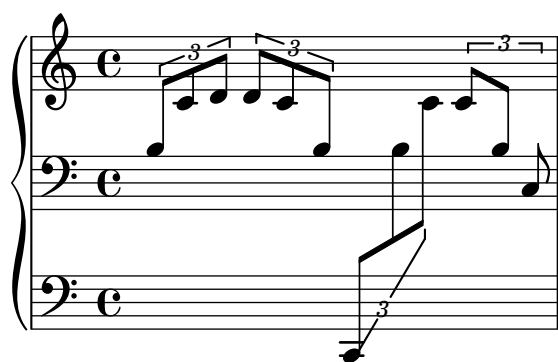
TupletBracket grobs avoid StringNumber grobs.

tuplet-bracket-avoid-string-number.ly



Cross-staff triplets are drawn correctly, even across multiple staves.

tuplet-bracket-cross-staff.ly



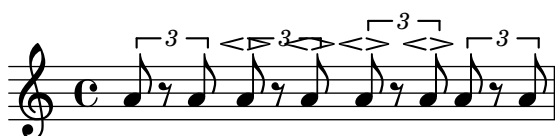
The direction of tuplet brackets is the direction of the majority of the stems under the bracket, with ties going to UP.

`tuplet-bracket-direction.ly`



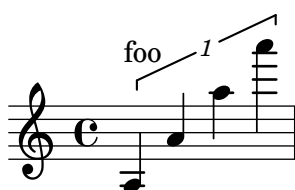
Tuplet brackets' outside staff priority can be set. Brackets, by default, carry their numbers with them.

`tuplet-bracket-outside-staff-priority.ly`



Tuplet brackets 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`





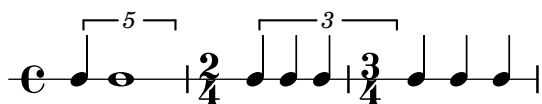
With `full-length-to-extent`, the extent of the attaching column for a full-length tuplet bracket can be ignored.

`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, triplets end at the start of the next non-triplet note.

`tuplet-full-length.ly`



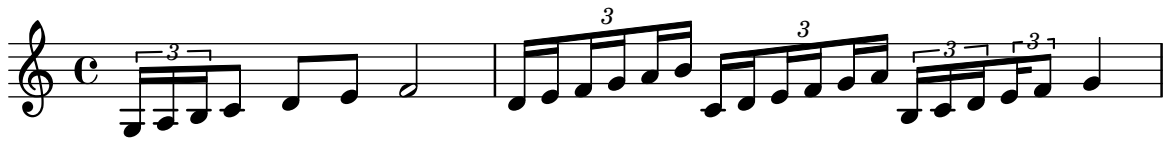
The size of the tuplet bracket gap is adjusted to the width of the text.

`tuplet-gap.ly`



Overlong tuplet span specifications are reduced to the actual length.

tuplet-long-spanner.ly



Nested tuplets do collision resolution, also when they span beams.

tuplet-nest-beam.ly



Broken nested tuplets avoid each other correctly.

tuplet-nest-broken.ly

A multi-staff musical score with four staves, each starting with a treble clef and a common time signature 'C'. The first staff shows a sequence of notes with two nested triplet markings. The second staff shows a sequence of notes with two nested triplet markings. The third staff shows a sequence of notes with two nested triplet markings. The fourth staff shows a sequence of notes with two nested triplet markings.

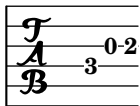
Tuplets may be nested.

tuplet-nest.ly

A multi-staff musical score with two staves, each starting with a treble clef and a common time signature 'C'. The first staff shows a sequence of notes with two nested triplet markings. The second staff shows a sequence of notes with two nested triplet markings.

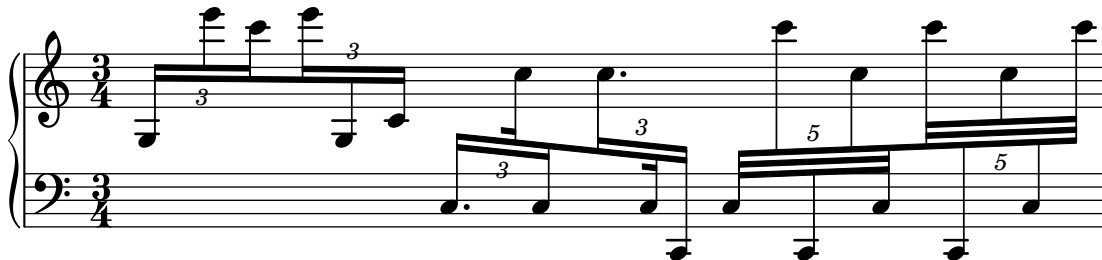
Removing Stem\_engraver doesn't cause crashes.

tuplet-no-stems.ly



Tuplet numbers are positioned correctly on kneed French-style beams.

tuplet-number-french-kneed-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-kneed-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.

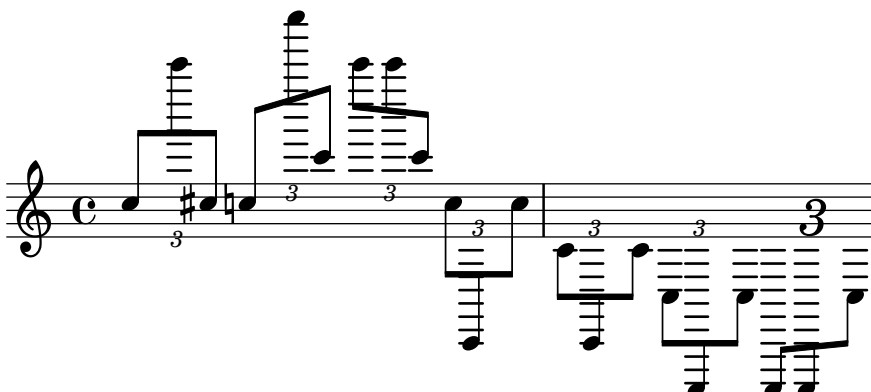
The first tuplet number should be between stems; the second should be below the noteheads.

tuplet-number-kneed-beam-horizontal-fit.ly



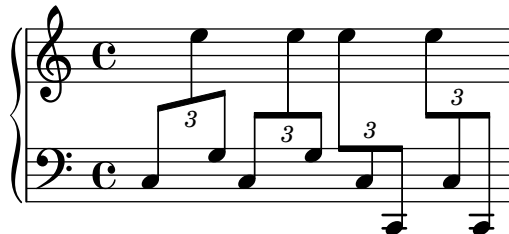
A tuplet number associated with a kneed beam is not placed between beam and staff where it may collide with ledger lines.

tuplet-number-kneed-beam-ledger-lines.ly



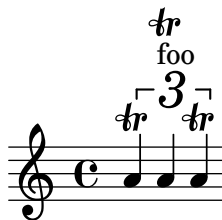
Tuplet numbers are placed next to kneed beams when `Beam.positions` is overridden.

`tuplet-number-knead-beam-positions.ly`



Grobs whose parents have `outside-staff-priority` set should figure into the vertical skyline of the `VerticalAxisGroup` such that grobs with a higher `outside-staff-priority` are correctly positioned above them.

`tuplet-number-outside-staff-positioning.ly`



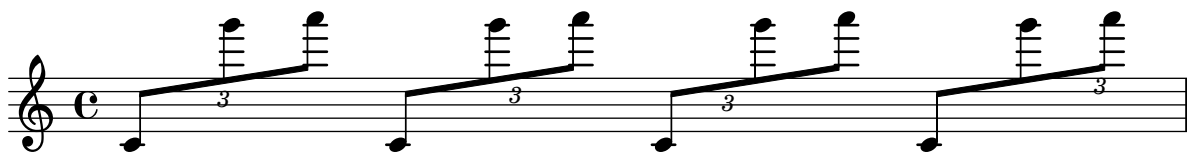
Tuplet numbers' outside staff priority can be set.

`tuplet-number-outside-staff-priority.ly`



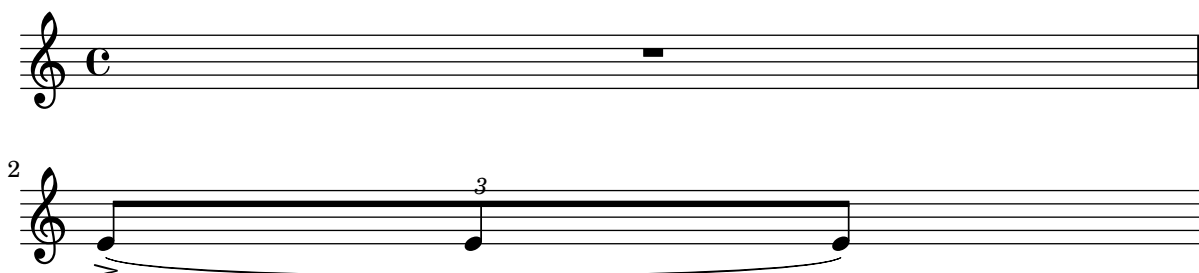
Tuplet numbers will maintain a constant distance from kneed beams when offset horizontally.

`tuplet-number-shift-along-knead-beam.ly`



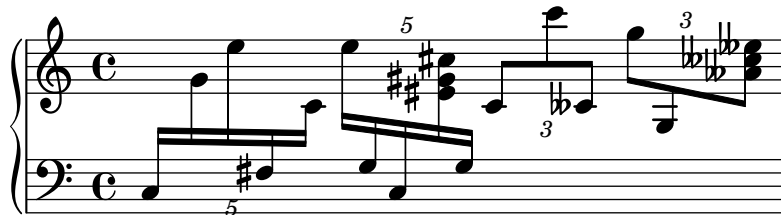
Tuplet number position is correct when slurs and scripts are present.

`tuplet-number-slur-script.ly`



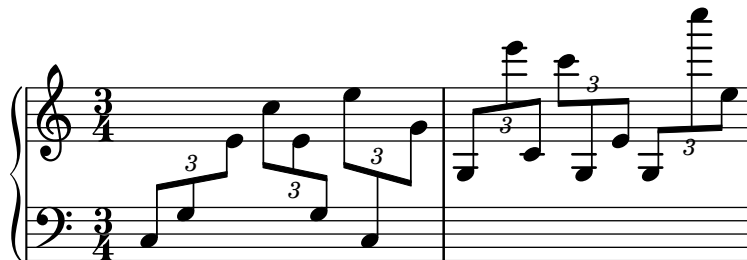
Tuplet numbers associated with kneed beams will avoid accidentals.

tuplet-numbers-kneed-beams-accidentals.ly



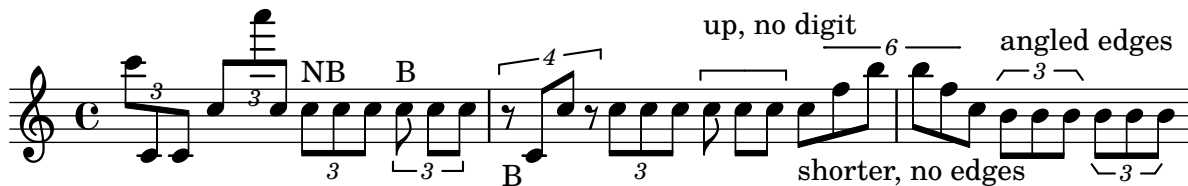
Tuplet numbers are positioned next to kneed beams.

tuplet-numbers-kneed-beams.ly



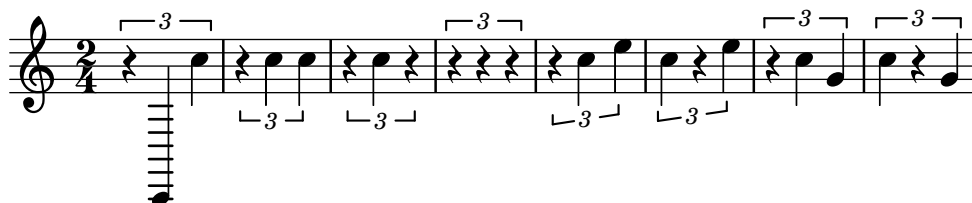
Tuplet bracket formatting supports numerous options, for instance, bracketed (B) and non-bracketed (NB).

tuplet-properties.ly



Tuplets may contain rests.

tuplet-rest.ly



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.

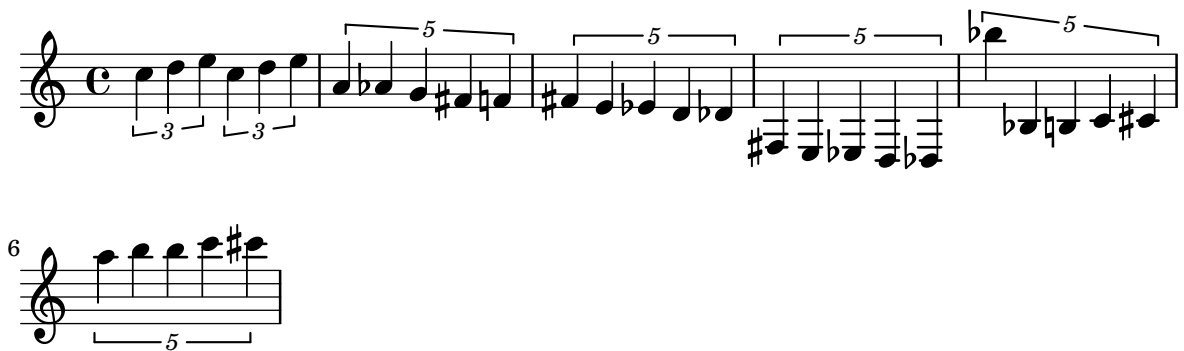
tuplet-single-note.ly



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

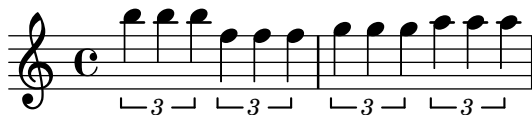
The bracket direction is determined by the dominating stem direction.

tuplet-slope.ly

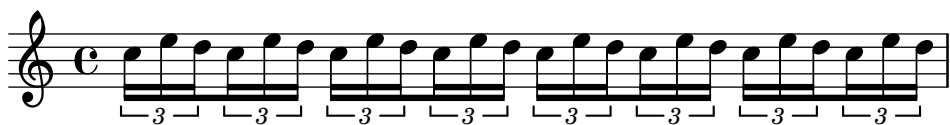


Horizontal tuplet brackets are shifted vertically to avoid staff line collisions.

tuplet-staffline-collision.ly



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





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`.

heavily mutilated Edition Peters Morgenlied by Schubert

## LilyPond demo

Lieulich, etwas geschwind

1. Sü - ßes  
2. いろはに כף

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 זה いろ はに כף

6

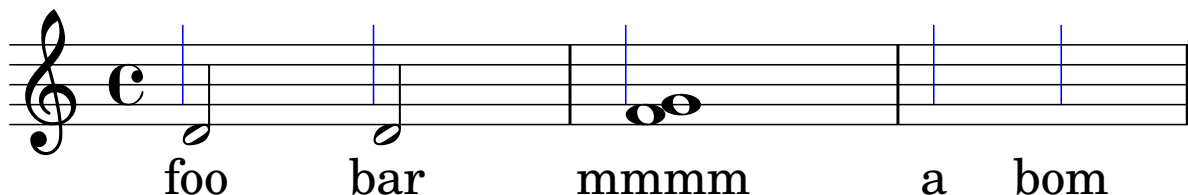
Nacht. Schö - ner Tag, du bist er - wacht.  
та та ほへ ちり ぬる Жъл дю ля

*cresc. - f*

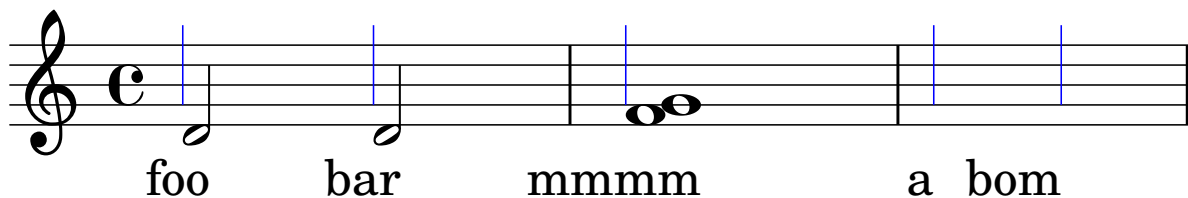
Lyrics without an `associatedVoice` should align properly. If there are notes in the `PaperColumn`, they should align to them, and when there are no notes, they should align relative to the `PaperColumn` itself (represented with blue `GridLines` here)

`unassociated-lyrics-alignment.ly`

default (centered):

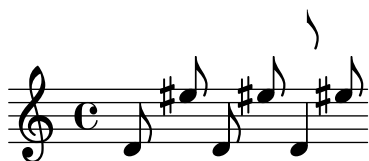


right-aligned:



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`

Здравствуйте Hallo

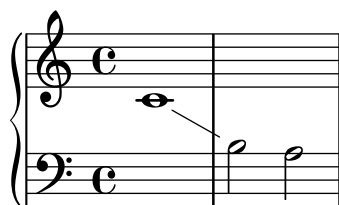
Various scripts may be used for texts (like titles and lyrics) introduced by entering them in UTF-8 encoding, and using a Pango based backend. Depending on the fonts installed, this fragment will render Bulgarian (Cyrillic), Hebrew, Japanese and Portuguese.

utf-8.ly



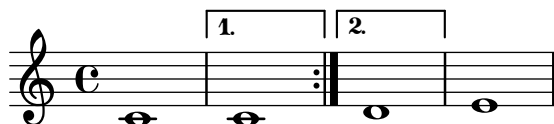
Whenever a voice switches to another staff a line connecting the notes can be printed automatically. This is enabled if the property `followVoice` is set to true.

voice-follower.ly



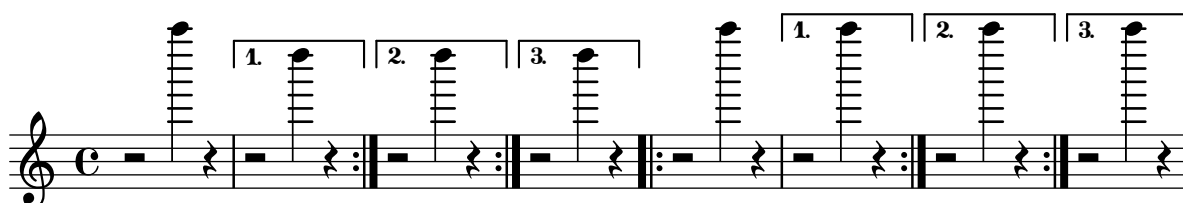
Volta bracket end hooks can be added for other bar line types.

volta-bracket-add-volta-hook.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

Bass

The image displays a musical score for a Bass staff in G major (one sharp) and common time. The score consists of nine measures. The first measure is a whole note G. The second measure is a whole note G. The third measure is a whole note G. The fourth measure is a whole note G. The fifth measure is a whole note G. The sixth measure is a whole note G. The seventh measure is a whole note G. The eighth measure is a whole note G. The ninth measure is a whole note G. The score includes several volta brackets and first/second endings. The first ending is marked with a '1.' and a bracket over measures 3, 4, and 5. The second ending is marked with a '2.' and a bracket over measures 6, 7, and 8. The third ending is marked with a '1.' and a bracket over measures 9 and 10. The fourth ending is marked with a '2.' and a bracket over measures 11 and 12. The fifth ending is marked with a '1.' and a bracket over measures 13 and 14. The sixth ending is marked with a '2.' and a bracket over measures 15 and 16. The seventh ending is marked with a '1.' and a bracket over measures 17 and 18. The eighth ending is marked with a '2.' and a bracket over measures 19 and 20. The ninth ending is marked with a '1.' and a bracket over measures 21 and 22. The tenth ending is marked with a '2.' and a bracket over measures 23 and 24. The score ends with a double bar line.

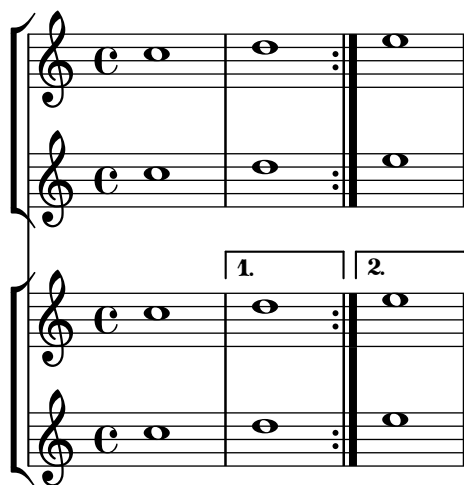
Volte using `repeatCommands` can have markup text.

volta-markup-text.ly

The image displays a musical score for a Treble staff in C major and common time. The score consists of four measures. The first measure is a whole note C. The second measure is a whole note C. The third measure is a whole note C. The fourth measure is a whole note C. The score includes several volta brackets and first/second endings. The first ending is marked with a '1. 2. 3. ad lib.' and a bracket over measures 3, 4, and 5. The second ending is marked with a '4.' and a bracket over measures 6 and 7. The score ends with a double bar line.

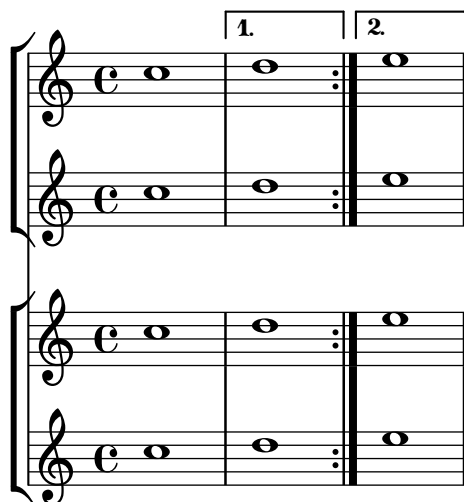
By putting `Volta_engraver` in a staff context, one can get volta brackets on staves other than the topmost one.

volta-multi-staff-inner-staff.ly



By default, the volta brackets appear only in the topmost staff.

volta-multi-staff.ly



If you specify two different key signatures at one point, a warning is printed.

warn-conflicting-key-signatures.ly



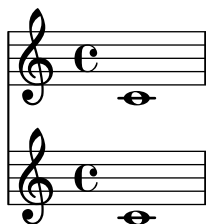
If a warning is expected, but not triggered, print out a warning about this fact. This will be used to detect missing warnings in our regtests.

warn-expected-warning-missing.ly



A warning is printed if a dynamic spanner is unterminated.

warn-unterspanned-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



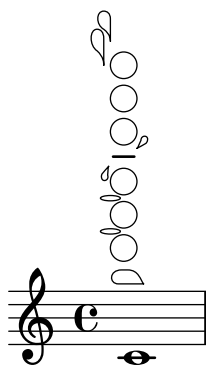
The whiteout command underlays a white background under a markup. The shape is determined by **whiteout-style**. The default is **box** which produces a rectangle. **rounded-box** produces a rounded rectangle. **outline** approximates the outline of the markup.

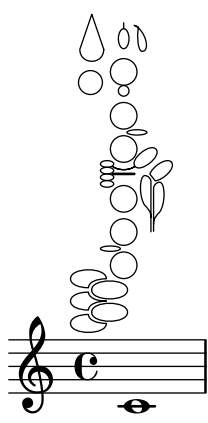
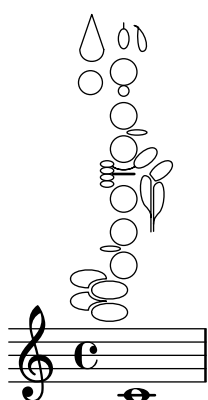
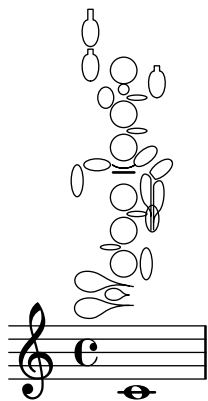
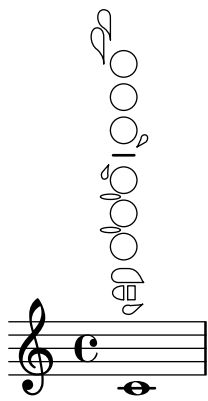
whiteout.ly



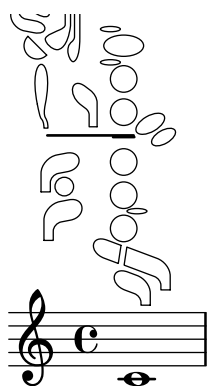
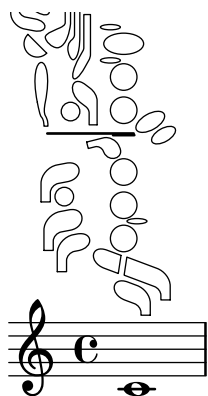
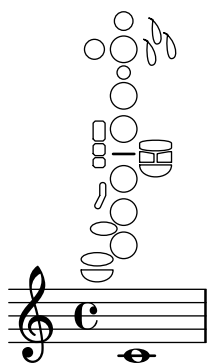
Empty woodwind diagrams for all instruments in woodwind-diagrams.scm.

woodwind-diagrams-empty.ly









Lists all possible keys for all instruments in woodwind-diagrams.scm

woodwind-diagrams-key-lists.ly

Setting staff-space to 0 does not cause a segmentation fault.

zero-staff-space.ly

