LilyPond

Il compositore tipografico per la musica

Frammenti

Il team di sviluppo di LilyPond

Questo documento contiene una selezione di frammenti LilyPond tratti dal LilyPond Snippet Repository (`http://lsr.di.unimi.it`) (LSR). I frammenti sono nel pubblico dominio.

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Questo documento non è un sottoinsieme esatto dell'LSR: alcuni frammenti vengono dalla directory `input/new` dei sorgenti di LilyPond; i frammenti tratti dall'LSR vengono convertiti con `convert-ly`, perché l'LSR usa una versione stabile di LilyPond, mentre questo manuale è valido per la versione 2.23.5.

I frammenti sono raggruppati per categorie; le categorie elencate nell'indice corrispondono a una sezione del manuale di notazione di LilyPond. Un frammento potrebbe avere più di una categoria, e non tutte le categorie dell'LSR saranno presenti in questo documento.

Nella versione HTML di questo manuale, si può fare clic sul nome del file o sull'immagine di ciascun esempio per vedere il corrispondente file di input.

Questo manuale è disponibile in altri formati ed è integrato col resto della documentazione. Maggiori informazioni in Sezione "Manuali" in *Informazioni generali*.

La documentazione completa si trova all'indirizzo `http://lilypond.org/`.

Questo documento è stato posto nel pubblico dominio.

Per la versione di LilyPond 2.23.5

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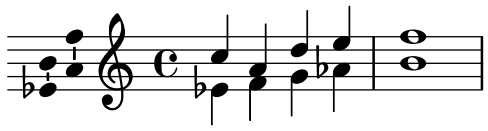
Pitches

Sezione “Pitches” in *Guida alla Notazione*

Un ambitus per voce

L’ambitus può essere specificato per voce. In tal caso occorre spostarlo manualmente per evitare collisioni.

```
\new Staff <<
  \new Voice \with {
    \consists "Ambitus_engraver"
  } \relative c'' {
    \override Ambitus.X-offset = #2.0
    \voiceOne
    c4 a d e
    f1
  }
  \new Voice \with {
    \consists "Ambitus_engraver"
  } \relative c' {
    \voiceTwo
    es4 f g as
    b1
  }
>>
```



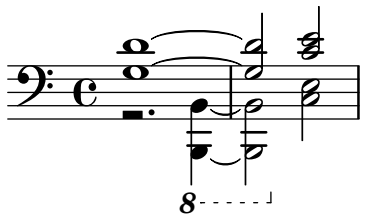
Aggiungere un segno di ottava a una sola voce

Se il rigo ha più di una voce, l’ottavazione in una voce trasporrà la posizione delle note in tutte le voci per la durata della parentesi dell’ottava. Se si intende applicare l’ottavazione a una sola voce, si possono impostare esplicitamente middleCPosition e la parentesi di ottava. In questo frammento, la chiave di basso ha di norma il MiddleCPosition impostato su 6, ovvero sei posizioni sopra la linea centrale, dunque nella porzione con l’ottava il MiddleCPosition è più alto di sette posizioni (un’ottava).

```
\layout {
  \context {
    \Staff
    \remove Ottava_spanner_engraver
  }
  \context {
    \Voice
    \consists Ottava_spanner_engraver
  }
}

{
  \clef bass
  << { <g d'>1~ q2 <c' e'> }
```

```
  \\
    {
      r2.
      \ottava -1
      <b,,, b,,>4 ~ |
      q2
      \ottava 0
      <c e>2
    }
  >>
}
```
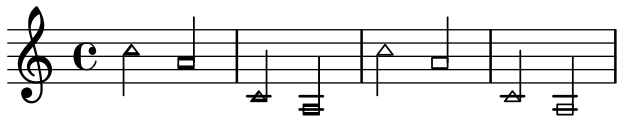


Aiken head thin variant noteheads

Aiken head white notes get harder to read at smaller staff sizes, especially with ledger lines. Losing interior white space makes them appear as quarter notes.

```
\score {
  {
    \aikenHeads
    c''2 a' c' a

    % Switch to thin-variant noteheads
    \set shapeNoteStyles = ##(doThin reThin miThin
                              faThin sol laThin tiThin)
    c'' a' c' a
  }
}
% END EXAMPLE
```

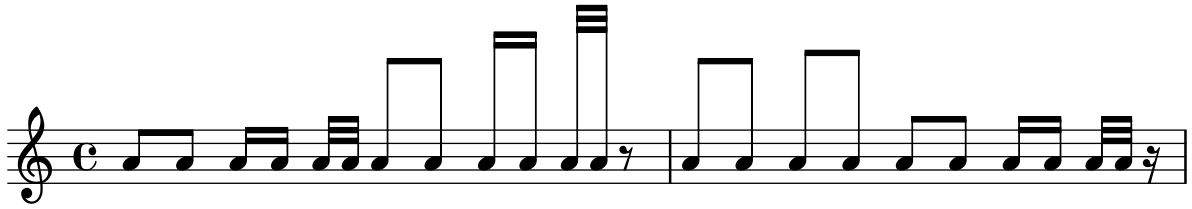


Altering the length of beamed stems

Stem lengths on beamed notes can be varied by overriding the `beamed-lengths` property of the `details` of the `Stem`. If a single value is used as an argument, the length applies to all stems. When multiple arguments are used, the first applies to eighth notes, the second to sixteenth notes and so on. The final argument also applies to all notes shorter than the note length of the final argument. Non-integer arguments may also be used.

```
\relative c'' {
  \override Stem.details.beamed-lengths = #'(2)
  a8[ a] a16[ a] a32[ a]
  \override Stem.details.beamed-lengths = #'(8 10 12)
  a8[ a] a16[ a] a32[ a] r8
```
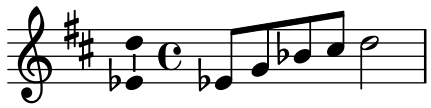
```
  \override Stem.details.beamed-lengths = #'(8)
  a8[ a]
  \override Stem.details.beamed-lengths = #'(8.5)
  a8[ a]
  \revert Stem.details.beamed-lengths
  a8[ a] a16[ a] a32[ a] r16
}
```



Ambitus after key signature

By default, ambitus are positioned at the left of the clef. The `\ambitusAfter` function allows for changing this placement. Syntax is `\ambitusAfter` *`grob-interface`* (see Sezione "Graphical Object Interfaces" in *Guida al Funzionamento Interno* for a list of possible values for *`grob-interface`*). A common use case is printing the ambitus between key signature and time signature.

```
\new Staff \with {
  \consists Ambitus_engraver
} \relative {
  \ambitusAfter key-signature
  \key d \major
  es'8 g bes cis d2
}
```
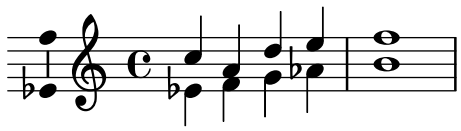


Ambitus su più voci

Se si aggiunge l'incisore `Ambitus_engraver` al contesto `Staff` viene creato un solo ambitus per il rigo, anche nel caso di righi che hanno più voci.

```
\new Staff \with {
  \consists "Ambitus_engraver"
  }
<<
  \new Voice \relative c'' {
    \voiceOne
    c4 a d e
    f1
  }
  \new Voice \relative c' {
    \voiceTwo
    es4 f g as
    b1
  }
```
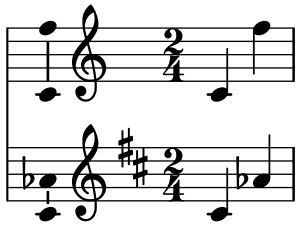
```
>>
```



Ambitus

Ambitus indicate pitch ranges for voices.

Accidentals only show up if they are not part of the key signature. `AmbitusNoteHead` grobs also have ledger lines.

```
\layout {
  \context {
    \Voice
    \consists "Ambitus_engraver"
  }
}

<<
  \new Staff {
    \relative c' {
      \time 2/4
      c4 f'
    }
  }
  \new Staff {
    \relative c' {
      \time  2/4
      \key d \major
      cis4 as'
    }
  }
>>
```



Applicazione degli stili delle teste di nota in base al grado della scala

La proprietà `shapeNoteStyles` può essere usata per definire vari stili di teste di nota per ogni grado della scala (definita dall'armatura di chiave o dalla proprietà `tonic`). Questa proprietà richiede un insieme di simboli, che può essere puramente arbitrario (sono permesse espressioni geometriche come `triangle`, `cross` e `xcircle`) o basato sull'antica tradizione tipografica americana (sono consentiti anche alcuni nomi di nota latini).

Detto questo, per imitare gli antichi canzionieri americani, ci sono vari stili predefiniti disponibili attraverso dei comodi comandi come `\aikenHeads` o `\sacredHarpHeads`.

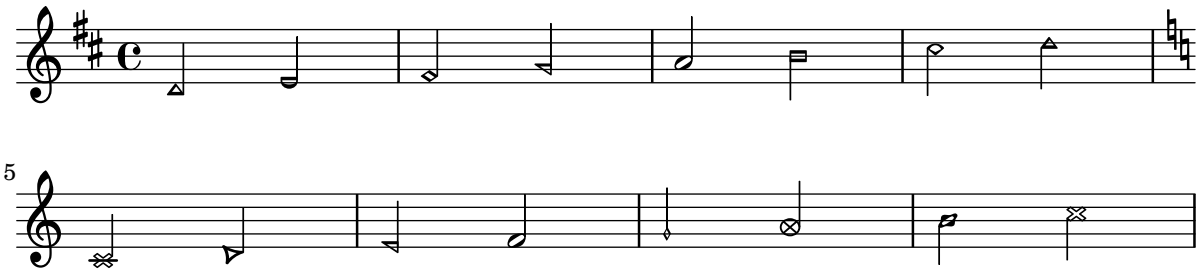
Questo esempio mostra modi diversi di ottenere teste di nota di varie forme e illustra la possibilità di trasporre una melodia senza perdere la corrispondenza tra le funzioni armoniche e gli stili delle teste.

```
fragment = {
  \key c \major
  c2 d
  e2 f
  g2 a
  b2 c
}

\new Staff {
  \transpose c d
  \relative c' {
    \set shapeNoteStyles = ##(do re mi fa
                              #f la ti)
    \fragment
  }

  \break

  \relative c' {
    \set shapeNoteStyles = ##(cross triangle fa #f
                              mensural xcircle diamond)
    \fragment
  }
}
```
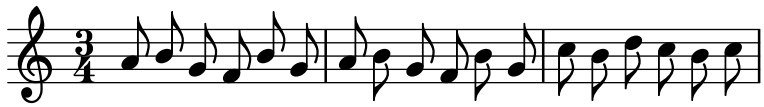


Cambiare automaticamente la direzione del gambo della nota centrale in base alla melodia

LilyPond può modificare la direzione del gambo della nota centrale di un rigo in modo che segua la melodia: occorre aggiungere l'incisore `Melody_engraver` al contesto Voice.

```
\relative c'' {
  \time 3/4
  a8 b g f b g |
  \set suspendMelodyDecisions = ##t
  a  b g f b g |
  \unset suspendMelodyDecisions
  c  b d c b c |
}

\layout {
```

```
  \context {
    \Voice
    \consists "Melody_engraver"
    \autoBeamOff
  }
}
```
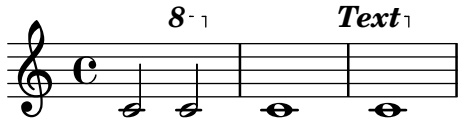


Changing ottava text

Internally, `\ottava` sets the properties `ottavation` (for example, to `8va` or `8vb`) and `middleCPosition`. To override the text of the bracket, set `ottavation` after invoking `\ottava`.

Short text is especially useful when a brief ottava is used.

```
{
  c'2
  \ottava #1
  \set Staff.ottavation = #"8"
  c''2
  \ottava #0
  c'1
  \ottava #1
  \set Staff.ottavation = #"Text"
  c''1
}
```



Modifica dell'intervallo dell'ambitus

È possibile cambiare le impostazioni predefinite dell'intervallo tra le teste di nota dell'ambitus e la linea che le collega.

```
\layout {
  \context {
    \Voice
    \consists "Ambitus_engraver"
  }
}

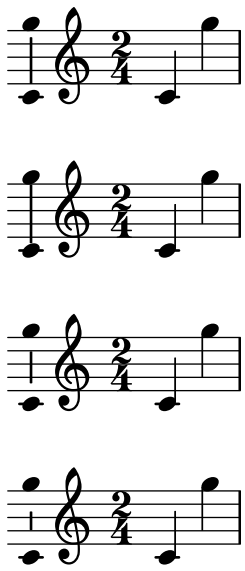
\new Staff {
  \time 2/4
  % Default setting
  c'4 g''
}

\new Staff {
  \time 2/4
  \override AmbitusLine.gap = #0
```

```
  c'4 g''
}

\new Staff {
  \time 2/4
  \override AmbitusLine.gap = #1
  c'4 g''
}

\new Staff {
  \time 2/4
  \override AmbitusLine.gap = #1.5
  c'4 g''
}
```
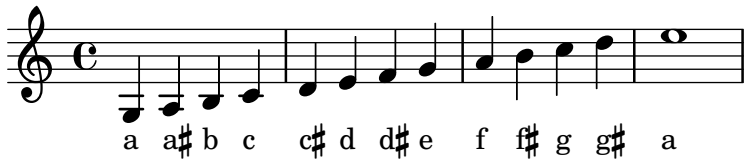


Changing the interval of lines on the stave

`staffLineLayoutFunction` is used to change the position of notes. This snippet shows setting its value to `ly:pitch-semitones` in order to produce a chromatic scale with the distance between each space and line of the stave equal to one semitone.

```
scale = \relative c' {
  a4 ais b c
  cis4 d dis e
  f4 fis g gis
  a1
}

\new Staff \with {
  \remove "Accidental_engraver"
  staffLineLayoutFunction = #ly:pitch-semitones
}
{
  <<
    \scale
    \context NoteNames {
```
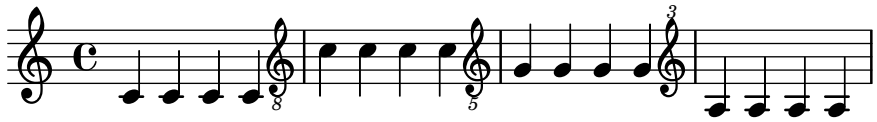
```
      \set printOctaveNames = ##f
      \scale
    }
  >>
}
```



Clefs can be transposed by arbitrary amounts

Clefs can be transposed by arbitrary amounts, not just by octaves.

```
\relative c' {
  \clef treble
  c4 c c c
  \clef "treble_8"
  c4 c c c
  \clef "treble_5"
  c4 c c c
  \clef "treble^3"
  c4 c c c
}
```



Coloring notes depending on their pitch

It is possible to color note heads depending on their pitch and/or their names: the function used in this example even makes it possible to distinguish enharmonics.

```
%Association list of pitches to colors.
#(define color-mapping
   (list
    (cons (ly:make-pitch 0 0 NATURAL) (x11-color 'red))
    (cons (ly:make-pitch 0 0 SHARP) (x11-color 'green))
    (cons (ly:make-pitch 0 1 FLAT) (x11-color 'green))
    (cons (ly:make-pitch 0 2 NATURAL) (x11-color 'red))
    (cons (ly:make-pitch 0 2 SHARP) (x11-color 'green))
    (cons (ly:make-pitch 0 3 FLAT) (x11-color 'red))
    (cons (ly:make-pitch 0 3 NATURAL) (x11-color 'green))
    (cons (ly:make-pitch 0 4 SHARP) (x11-color 'red))
    (cons (ly:make-pitch 0 5 NATURAL) (x11-color 'green))
    (cons (ly:make-pitch 0 5 FLAT) (x11-color 'red))
    (cons (ly:make-pitch 0 6 SHARP) (x11-color 'red))
    (cons (ly:make-pitch 0 1 NATURAL) (x11-color 'blue))
    (cons (ly:make-pitch 0 3 SHARP) (x11-color 'blue))
    (cons (ly:make-pitch 0 4 FLAT) (x11-color 'blue))
    (cons (ly:make-pitch 0 5 SHARP) (x11-color 'blue))
```
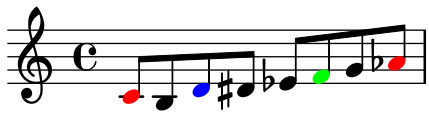
```
    (cons (ly:make-pitch 0 6 FLAT) (x11-color 'blue))))

%Compare pitch and alteration (not octave).
#(define (pitch-equals? p1 p2)
   (and
    (= (ly:pitch-alteration p1) (ly:pitch-alteration p2))
    (= (ly:pitch-notename p1) (ly:pitch-notename p2))))

#(define (pitch-to-color pitch)
   (let ((color (assoc pitch color-mapping pitch-equals?)))
     (if color
         (cdr color))))

#(define (color-notehead grob)
   (pitch-to-color
    (ly:event-property (event-cause grob) 'pitch)))

\score {
  \new Staff \relative c' {
    \override NoteHead.color = #color-notehead
    c8 b d dis ees f g aes
  }
}
```
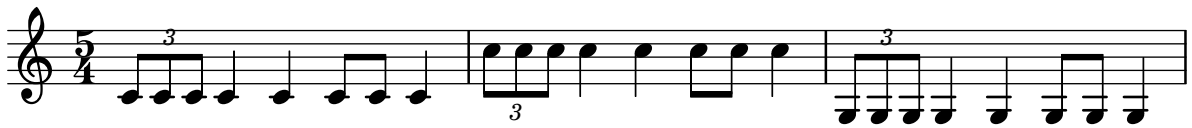


Creating a sequence of notes on various pitches

In music that contains many occurrences of the same sequence of notes at different pitches, the following music function may prove useful. It takes a note, of which only the pitch is used. This example creates the rhythm used throughout Mars, from Gustav Holst's The Planets.

```
rhythm =
#(define-music-function (p) (ly:pitch?)
   "Make the rhythm in Mars (the Planets) at the given pitch"
  #{ \tuplet 3/2 { $p 8 8 8 } 4 4 8 8 4 #})

\new Staff {
  \time 5/4
  \rhythm c'
  \rhythm c''
  \rhythm g
}
```



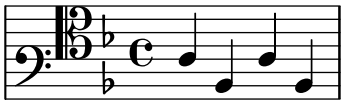
Creating custom key signatures

LilyPond supports custom key signatures. In this example, print for D minor with an extended range of printed flats.

```
\new Staff \with {
  \override StaffSymbol.line-count = #8
  \override KeySignature.flat-positions = #'((-7 . 6))
  \override KeyCancellation.flat-positions = #'((-7 . 6))
  % presumably sharps are also printed in both octaves
  \override KeySignature.sharp-positions = #'((-6 . 7))
  \override KeyCancellation.sharp-positions = #'((-6 . 7))

  \override Clef.stencil = #
  (lambda (grob)(grob-interpret-markup grob
  #{ \markup\combine
    \musicglyph "clefs.C"
    \translate #'(-3 . -2)
    \musicglyph "clefs.F"
   #}))
    clefPosition = #3
    middleCPosition = #3
    middleCClefPosition = #3
}
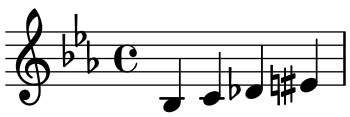
{
  \key d\minor
  f bes, f bes,
}
```



Force a cancellation natural before accidentals

The following example shows how to force a natural sign before an accidental.

```
\relative c' {
  \key es \major
  bes c des
  \tweak Accidental.restore-first ##t
  eis
}
```
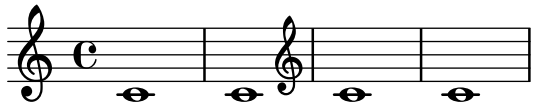


Forcing a clef symbol to be displayed

When a clef sign has already been displayed and it has not been changed to a different clef, then repeating the `\clef` command will be ignored by LilyPond, since it is not a change of clef. It is possible to force the clef to be redisplayed using the command `\set Staff.forceClef = ##t`.

```
\relative c' {
```
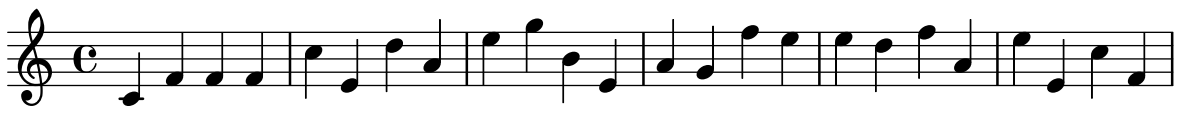
```
  \clef treble
  c1
  \clef treble
  c1
  \set Staff.forceClef = ##t
  c1
  \clef treble
  c1
}
```



Generating random notes

This Scheme-based snippet generates 24 random notes (or as many as required), based on the current time (or any randomish number specified instead, in order to obtain the same random notes each time): i.e., to get different random note patterns, just change this number.

```
\score {
  {
    $(let ((random-state (seed->random-state (current-time))))
       (make-sequential-music
         (map (lambda (x)
                (let ((idx (random 12 random-state)))
                  (make-event-chord
                   (list
                    (make-music 'NoteEvent
                                'duration (ly:make-duration 2 0 1/1)
                                'pitch (ly:make-pitch
                                        (quotient idx 7)
                                        (remainder idx 7)
                                        0))))))
              (make-list 24))))
  }
}
```

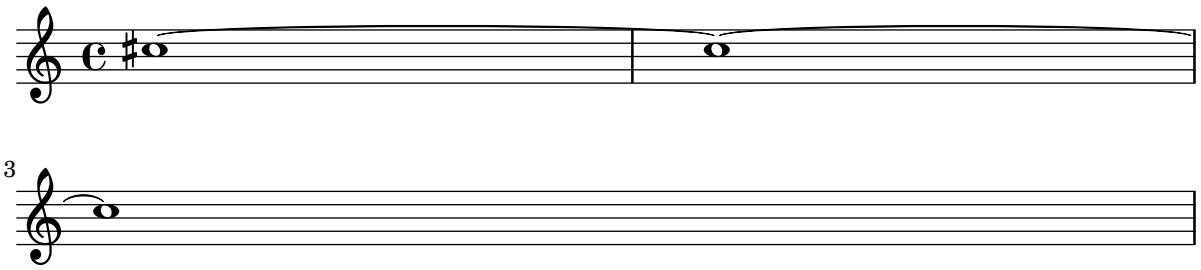


Nascondere le alterazioni delle note con legatura di valore

all'inizio di un nuovo sistema

Questo frammento mostra come nascondere le alterazioni delle note unite alla figura precedente mediante una legatura di valore all'inizio di un nuovo sistema
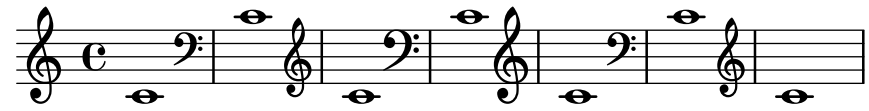
```
\relative c'' {
  \override Accidental.hide-tied-accidental-after-break = ##t
  cis1~ cis~
  \break
  cis
}
```



Keep change clefs full sized

When a clef is changed, the clef sign displayed is smaller than the initial clef. This can be overridden with `full-size-change`.

```
\relative c' {
  \clef "treble"
  c1
  \clef "bass"
  c1
  \clef "treble"
  c1
  \override Staff.Clef.full-size-change = ##t
  \clef "bass"
  c1
  \clef "treble"
  c1
  \revert Staff.Clef.full-size-change
  \clef "bass"
  c1
  \clef "treble"
  c1
}
```
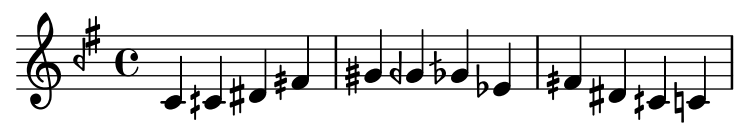


Esempio di makam

Makam è un tipo di melodia proveniente dalla Turchia che usa alterazioni microtonali di 1/9. Consultare il file di inizializzazione '`ly/makam.ly`' per vedere come sono definiti i nomi delle altezze e le alterazioni.

```
% Initialize makam settings
\include "makam.ly"

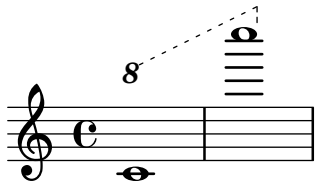
\relative c' {
  \set Staff.keyAlterations = #`((6 . ,(- KOMA)) (3 . ,BAKIYE))
  c4 cc db fk
  gbm4 gfc gfb efk
  fk4 db cc c
}
```



Modificare l'inclinazione dell'estensore dell'ottava

È possibile cambiare l'inclinazione dell'estensore dell'ottava.

```
\relative c'' {
  \override Staff.OttavaBracket.stencil = #ly:line-spanner::print
  \override Staff.OttavaBracket.bound-details =
    #`((left . ((Y . 0) ; Change the integer here
                (attach-dir . ,LEFT)
                (padding . 0)
                (stencil-align-dir-y . ,CENTER)))
       (right . ((Y . 5) ; Change the integer here
                 (padding . 0)
                 (attach-dir . ,RIGHT)
                 (text . ,(make-draw-dashed-line-markup
                           (cons 0 -1.2))))))
  \override Staff.OttavaBracket.left-bound-info =
     #ly:line-spanner::calc-left-bound-info-and-text
  \override Staff.OttavaBracket.right-bound-info =
     #ly:line-spanner::calc-right-bound-info
  \ottava #1
  c1
  c'''1
}
```



Armature di chiave non tradizionali

Il comando `\key` comunemente usato imposta la proprietà `keyAlterations` del contesto `Staff`. Per creare armature di chiave non standard, tale proprietà va impostata esplicitamente.

Il formato di questo comando è una lista:
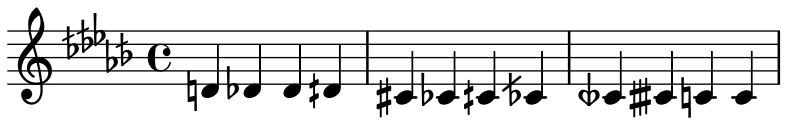
`\set Staff.keyAlterations = #`(((ottava . grado) . alterazione) ((ottava . grado) . alterazione) ...)`

dove, per ogni elemento della lista, `ottava` indica l'ottava (0 è l'ottava dal Do centrale al Si precedente), `grado` indica la nota all'interno dell'ottava (0 significa Do e 6 significa Si) e `alterazione` può essere `,SHARP ,FLAT ,DOUBLE-SHARP` etc.

Altrimenti, usando il formato breve per ogni elemento della lista, `(grado . alterazione)`, ciò indica che la stessa alterazione deve essere presente in tutte le ottave. Per le scale microtonalidove un "diesis" non è 100 centesimi, `alterazione` si riferisce alla proporzione di un duecentesimo di tono intero.

```
\include "arabic.ly"
\relative do' {
  \set Staff.keyAlterations = #`((0 . ,SEMI-FLAT)
                                 (1 . ,SEMI-FLAT)
                                 (2 . ,FLAT)
                                 (5 . ,FLAT)
                                 (6 . ,SEMI-FLAT))
```

```
%\set Staff.extraNatural = ##f
  re reb \dwn reb resd
  dod dob dosd \dwn dob |
  dobsb dodsd do do |
}
```



Numeri dentro le teste di nota

Le teste di nota con nome della nota usano la proprietà `note-names` dell'oggetto `NoteHead` per determinare cosa appaia all'interno della testa. È possibile sovrascrivere questa proprietà e mostrare numeri corrispondenti ai gradi della scala.

Si può creare un semplice incisore che faccia questo per ogni oggetto testa di nota che incontra.

```
#(define Ez_numbers_engraver
   (make-engraver
    (acknowledgers
     ((note-head-interface engraver grob source-engraver)
      (let* ((context (ly:translator-context engraver))
             (tonic-pitch (ly:context-property context 'tonic))
             (tonic-name (ly:pitch-notename tonic-pitch))
             (grob-pitch
              (ly:event-property (event-cause grob) 'pitch))
             (grob-name (ly:pitch-notename grob-pitch))
             (delta (modulo (- grob-name tonic-name) 7))
             (note-names
              (make-vector 7 (number->string (1+ delta)))))
        (ly:grob-set-property! grob 'note-names note-names))))))

#(set-global-staff-size 26)

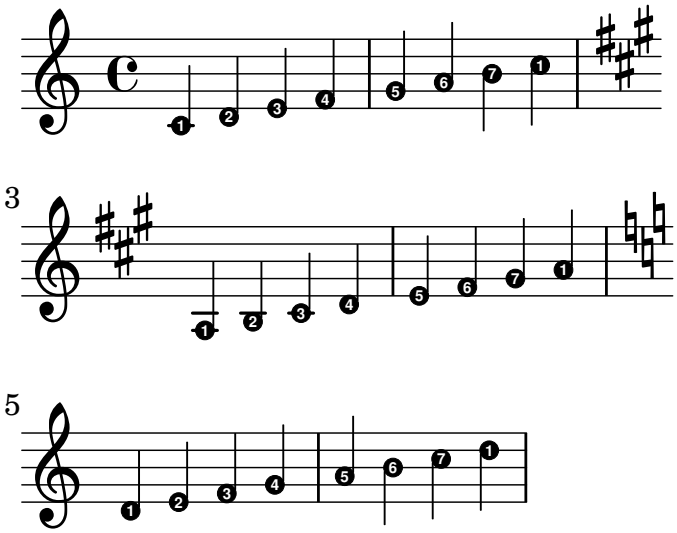
\layout {
  ragged-right = ##t
  \context {
    \Voice
    \consists \Ez_numbers_engraver
  }
}

\relative c' {
  \easyHeadsOn
  c4 d e f
  g4 a b c \break

  \key a \major
  a,4 b cis d
  e4 fis gis a \break

  \key d \dorian
```

```
  d,4 e f g
  a4 b c d
}
```



Modello per orchestra, coro e pianoforte

Questo modello mostra come usare i contesti annidati `StaffGroup` e `GrandStaff` per creare sottogruppi degli strumenti dello stesso tipo. Mostra anche come usare `\transpose` in modo che le variabili mantengano la musica per gli strumenti traspositori nell'intonazione reale.

```
#(set-global-staff-size 17)
\paper {
  indent = 3.0\cm  % add space for instrumentName
  short-indent = 1.5\cm  % add less space for shortInstrumentName
}

fluteMusic = \relative c' { \key g \major g'1 b }

% Pitches as written on a manuscript for Clarinet in A
% are transposed to concert pitch.

clarinetMusic = \transpose c' a
  \relative c'' { \key bes \major bes1 d }

trumpetMusic = \relative c { \key g \major g''1 b }

% Key signature is often omitted for horns

hornMusic = \transpose c' f
  \relative c { d'1 fis }

percussionMusic = \relative c { \key g \major g1 b }

sopranoMusic = \relative c'' { \key g \major g'1 b }

sopranoLyrics = \lyricmode { Lyr -- ics }
```

```
altoIMusic = \relative c' { \key g \major g'1 b }

altoIIMusic = \relative c' { \key g \major g'1 b }

altoILyrics =  \sopranoLyrics

altoIILyrics = \lyricmode { Ah -- ah }

tenorMusic = \relative c' { \clef "treble_8" \key g \major g1 b }

tenorLyrics = \sopranoLyrics

pianoRHMusic = \relative c { \key g \major g''1 b }

pianoLHMusic = \relative c { \clef bass \key g \major g1 b }

violinIMusic = \relative c' { \key g \major g'1 b }

violinIIMusic = \relative c' { \key g \major g'1 b }

violaMusic = \relative c { \clef alto \key g \major g'1 b }

celloMusic = \relative c { \clef bass \key g \major g1 b }

bassMusic = \relative c { \clef "bass_8" \key g \major g,1 b }

\score {
  <<
    \new StaffGroup = "StaffGroup_woodwinds" <<
      \new Staff = "Staff_flute" \with { instrumentName = "Flute" }
      \fluteMusic

      \new Staff = "Staff_clarinet" \with {
        instrumentName = \markup { \concat { "Clarinet in B" \flat } }
      }

      % Declare that written Middle C in the music
      % to follow sounds a concert B flat, for
      % output using sounded pitches such as MIDI.
      %\transposition bes

      % Print music for a B-flat clarinet
      \transpose bes c' \clarinetMusic
    >>

    \new StaffGroup = "StaffGroup_brass" <<
      \new Staff = "Staff_hornI" \with { instrumentName = "Horn in F" }
       % \transposition f
        \transpose f c' \hornMusic

      \new Staff = "Staff_trumpet" \with { instrumentName = "Trumpet in  C" }
      \trumpetMusic
```

```
>>
\new RhythmicStaff = "RhythmicStaff_percussion"
\with { instrumentName = "Percussion" }
<<
  \percussionMusic
>>
\new PianoStaff \with { instrumentName = "Piano" }
<<
  \new Staff { \pianoRHMusic }
  \new Staff { \pianoLHMusic }
>>
\new ChoirStaff = "ChoirStaff_choir" <<
  \new Staff = "Staff_soprano" \with { instrumentName = "Soprano" }
  \new Voice = "soprano"
  \sopranoMusic

  \new Lyrics \lyricsto "soprano" { \sopranoLyrics }
  \new GrandStaff = "GrandStaff_altos"
  \with { \accepts Lyrics } <<
    \new Staff = "Staff_altoI"  \with { instrumentName = "Alto I" }
    \new Voice = "altoI"
    \altoIMusic

    \new Lyrics \lyricsto "altoI" { \altoILyrics }
    \new Staff = "Staff_altoII" \with { instrumentName = "Alto II" }
    \new Voice = "altoII"
    \altoIIMusic

    \new Lyrics \lyricsto "altoII" { \altoIILyrics }
  >>

  \new Staff = "Staff_tenor" \with { instrumentName = "Tenor" }
    \new Voice = "tenor"
    \tenorMusic

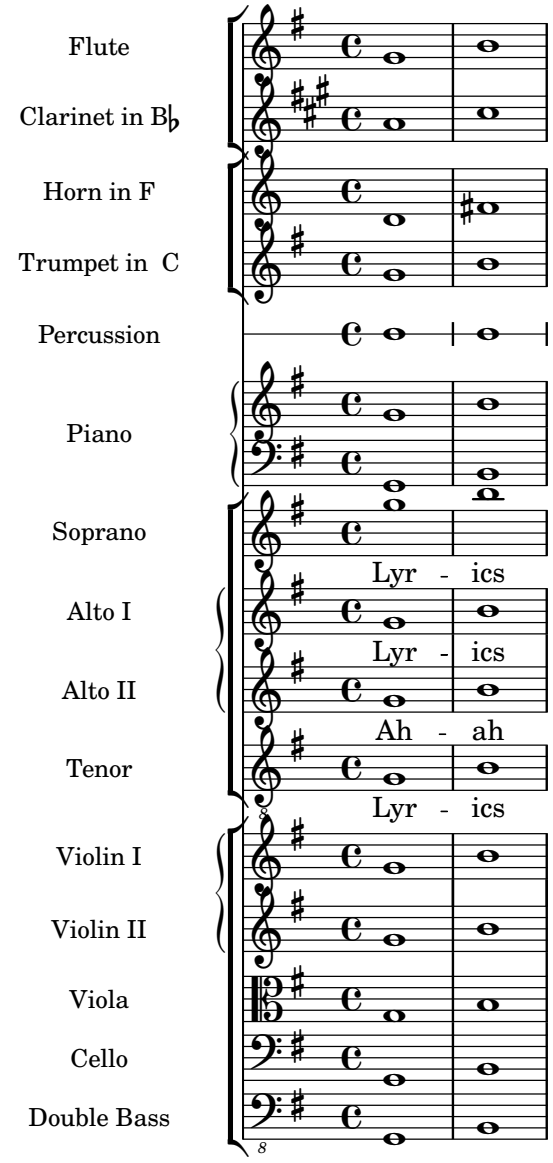
  \new Lyrics \lyricsto "tenor" { \tenorLyrics }
>>
\new StaffGroup = "StaffGroup_strings" <<
  \new GrandStaff = "GrandStaff_violins" <<
    \new Staff = "Staff_violinI" \with { instrumentName = "Violin I" }
    \violinIMusic

    \new Staff = "Staff_violinII" \with { instrumentName = "Violin II" }
    \violinIIMusic
  >>

  \new Staff = "Staff_viola" \with { instrumentName = "Viola" }
  \violaMusic

  \new Staff = "Staff_cello" \with { instrumentName = "Cello" }
  \celloMusic
```

```
      \new Staff = "Staff_bass" \with { instrumentName = "Double Bass" }
      \bassMusic
    >>
  >>
  \layout { }
}
```
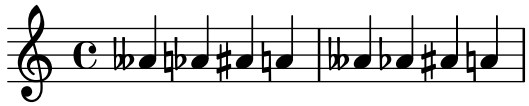


Impedire l'inserimento automatico dei bequadri supplementari

Secondo le norme tipografiche tradizionali, un segno di bequadro viene inserito prima di un diesis o di un bemolle se un precedente doppio diesis o bemolle sulla stessa nota è cancellato. Per cambiare questo comportamento e seguire la pratica contemporanea, si imposta la proprietà `extraNatural` su `f` (falso) nel contesto `Staff`.

```
\relative c'' {
  aeses4 aes ais a
  \set Staff.extraNatural = ##f
  aeses4 aes ais a
```
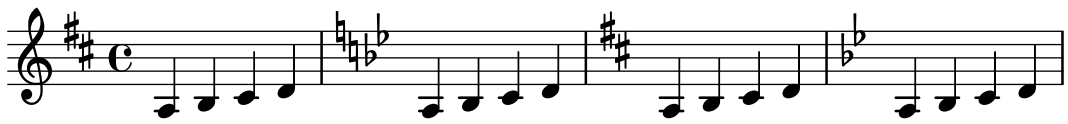
```
}
```



Impedire l'inserimento dei segni di bequadro quando cambia l'armatura di chiave

Quando l'armatura di chiave cambia, vengono inseriti automaticamente i segni di bequadro per annulare le alterazioni di precedenti armature. Si può evitare questo comportamento impostando su `f` (falso) la proprietà `printKeyCancellation` nel contesto `Staff`.

```
\relative c' {
  \key d \major
  a4 b cis d
  \key g \minor
  a4 bes c d
  \set Staff.printKeyCancellation = ##f
  \key d \major
  a4 b cis d
  \key g \minor
  a4 bes c d
}
```



Quoting another voice with transposition
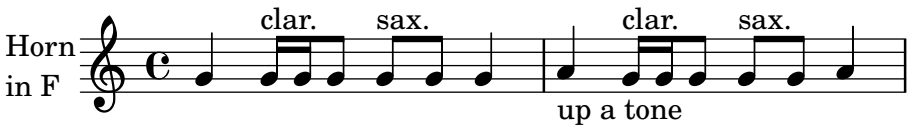
Quotations take into account the transposition of both source and target. In this example, all instruments play sounding middle C; the target is an instrument in F. The target part may be transposed using `\transpose`. In this case, all the pitches (including the quoted ones) are transposed.

```
\addQuote clarinet {
  \transposition bes
  \repeat unfold 8 { d'16 d' d'8 }
}

\addQuote sax {
  \transposition es'
  \repeat unfold 16 { a8 }
}

quoteTest = {
  % french horn
  \transposition f
  g'4
  << \quoteDuring "clarinet" { \skip 4 } s4^"clar." >>
  << \quoteDuring "sax" { \skip 4 } s4^"sax." >>
  g'4
}
```

```
{
  \new Staff \with {
    instrumentName = \markup { \column { Horn "in F" } }
  }
  \quoteTest
  \transpose c' d' << \quoteTest s4_"up a tone" >>
}
```



Separating key cancellations from key signature changes

By default, the accidentals used for key cancellations are placed adjacent to those for key signature changes. This behavior can be changed by overriding the `'break-align-orders` property of the `BreakAlignment` grob.
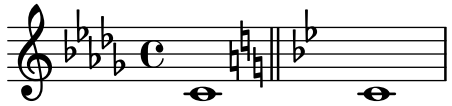
The value of `'break-align-orders` is a vector of length 3, with quoted lists of breakable items as elements. This example only modifies the second list, moving `key-cancellation` before `staff-bar`; by modifying the second list, break alignment behavior only changes in the middle of a system, not at the beginning or the end.

```
\new Staff {
  \override Score.BreakAlignment.break-align-orders =
    ##((left-edge ambitus breathing-sign clef staff-bar
                  key-cancellation key-signature time-signature custos)

       (left-edge ambitus breathing-sign clef key-cancellation
                  staff-bar key-signature time-signature custos)

       (left-edge ambitus breathing-sign clef key-cancellation
                  key-signature staff-bar time-signature custos))

  \key des \major
  c'1
  \bar "||"
  \key bes \major
  c'1
}
```



Trasposizione delle altezze con numero minimo di alterazioni

Questo esempio usa del codice Scheme per imporre delle modifiche enarmoniche alle note che permettano di avere il numero minimo di alterazioni. In questo caso si applica la seguente regola:

Le doppie alterazioni devono essere eliminate

Si diesis -> Do

Mi diesis -> Fa

Do bemolle -> Si

Fa bemolle -> Mi

In questo modo vengono scelti i suoni enarmonici più semplici.

```
#(define (naturalize-pitch p)
   (let ((o (ly:pitch-octave p))
         (a (* 4 (ly:pitch-alteration p)))
         ;; alteration, a, in quarter tone steps,
         ;; for historical reasons
         (n (ly:pitch-notename p)))
     (cond
      ((and (> a 1) (or (eqv? n 6) (eqv? n 2)))
       (set! a (- a 2))
       (set! n (+ n 1)))
      ((and (< a -1) (or (eqv? n 0) (eqv? n 3)))
       (set! a (+ a 2))
       (set! n (- n 1))))
     (cond
      ((> a 2) (set! a (- a 4)) (set! n (+ n 1)))
      ((< a -2) (set! a (+ a 4)) (set! n (- n 1))))
     (if (< n 0) (begin (set! o (- o 1)) (set! n (+ n 7))))
     (if (> n 6) (begin (set! o (+ o 1)) (set! n (- n 7))))
     (ly:make-pitch o n (/ a 4))))
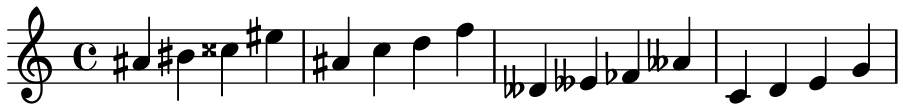
#(define (naturalize music)
   (let ((es (ly:music-property music 'elements))
         (e (ly:music-property music 'element))
         (p (ly:music-property music 'pitch)))
     (if (pair? es)
         (ly:music-set-property!
          music 'elements
          (map naturalize es)))
     (if (ly:music? e)
         (ly:music-set-property!
          music 'element
          (naturalize e)))
     (if (ly:pitch? p)
         (begin
           (set! p (naturalize-pitch p))
           (ly:music-set-property! music 'pitch p)))
     music))

naturalizeMusic =
#(define-music-function (m)
   (ly:music?)
   (naturalize m))

music = \relative c' { c4 d e g }

\score {
  \new Staff {
    \transpose c ais { \music }
```

```
    \naturalizeMusic \transpose c ais { \music }
    \transpose c deses { \music }
    \naturalizeMusic \transpose c deses { \music }
  }
  \layout { }
}
```



Turkish Makam example

This template uses the start of a well-known Turkish Saz Semai that is familiar in the repertoire in order to illustrate some of the elements of Turkish music notation.

```
% Initialize makam settings
\include "turkish-makam.ly"

\header {
    title = "Hüseyni Saz Semaisi"
    composer = "Lavtacı Andon"
}

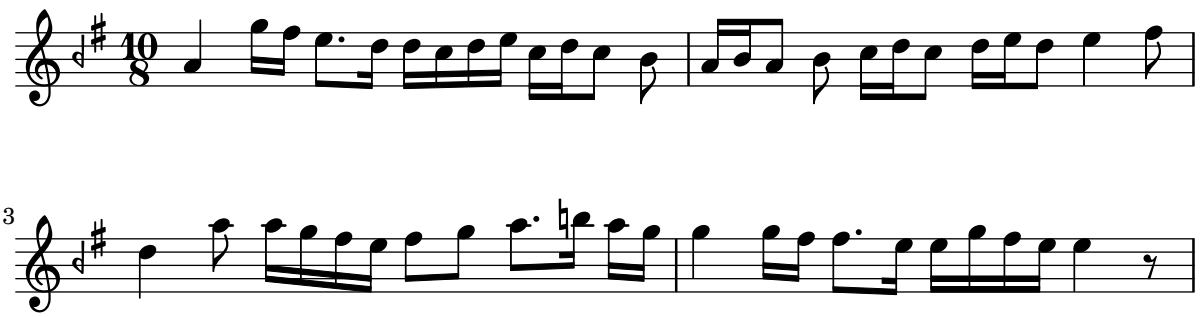
\relative {
  \set Staff.extraNatural = ##f
  \set Staff.autoBeaming = ##f

  \key a \huseyni
  \time 10/8

  a'4 g'16 [fb] e8. [d16] d [c d e] c [d c8] bfc |
  a16 [bfc a8] bfc c16 [d c8] d16 [e d8] e4 fb8 |
  d4 a'8 a16 [g fb e] fb8 [g] a8. [b16] a16 [g] |
  g4 g16 [fb] fb8. [e16] e [g fb e] e4 r8 |
}
```

Hüseyni Saz Semaisi

Lavtacı Andon



Modifiche manuali della proprietà della chiave

Cambiando il glifo della chiave, la sua posizione o l'ottavazione non cambia la posizione delle note successive nel rigo. Per far sì che le armature di chiave si trovino sulle linee del rigo corrette, bisogna specificare anche `middleCPosition`, con valori positivi o negativi che spostano il `Do centrale` rispettivamente su o giù in senso relativo alla linea centrale del rigo.

Per esempio, `\clef "treble_8"` equivale a impostare `clefGlyph`, `clefPosition` (che regola la posizione verticale della chiave), `middleCPosition` e `clefTransposition`. Viene stampata una chiave quando cambia una di queste proprietà, eccetto `middleCPosition`.

Gli esempi seguenti mostrano le possibilità date dall'impostazione manuale di tali proprietà. Sulla prima linea le modifiche manuali preservano il posizionamento relativo standard di chiavi e note, mentre sulla seconda linea non lo fanno.

```
{
  % The default treble clef
  \key f \major
  c'1
  % The standard bass clef
  \set Staff.clefGlyph = #"clefs.F"
  \set Staff.clefPosition = #2
  \set Staff.middleCPosition = #6
  \set Staff.middleCClefPosition = #6
  \key g \major
  c'1
  % The baritone clef
  \set Staff.clefGlyph = #"clefs.C"
  \set Staff.clefPosition = #4
  \set Staff.middleCPosition = #4
  \set Staff.middleCClefPosition = #4
  \key f \major
  c'1
  % The standard choral tenor clef
  \set Staff.clefGlyph = #"clefs.G"
  \set Staff.clefPosition = #-2
  \set Staff.clefTransposition = #-7
  \set Staff.middleCPosition = #1
  \set Staff.middleCClefPosition = #1
  \key f \major
  c'1
  % A non-standard clef
  \set Staff.clefPosition = #0
  \set Staff.clefTransposition = #0
  \set Staff.middleCPosition = #-4
  \set Staff.middleCClefPosition = #-4
  \key g \major
  c'1 \break

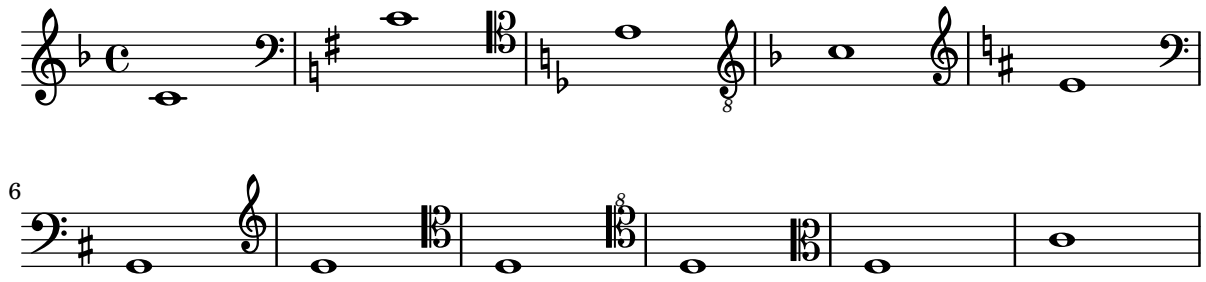
  % The following clef changes do not preserve
  % the normal relationship between notes, key signatures
  % and clefs:

  \set Staff.clefGlyph = #"clefs.F"
  \set Staff.clefPosition = #2
```

```
  c'1
  \set Staff.clefGlyph = #"clefs.G"
  c'1
  \set Staff.clefGlyph = #"clefs.C"
  c'1
  \set Staff.clefTransposition = #7
  c'1
  \set Staff.clefTransposition = #0
  \set Staff.clefPosition = #0
  c'1

  % Return to the normal clef:

  \set Staff.middleCPosition = #0
  c'1
}
```



Using autochange with more than one voice

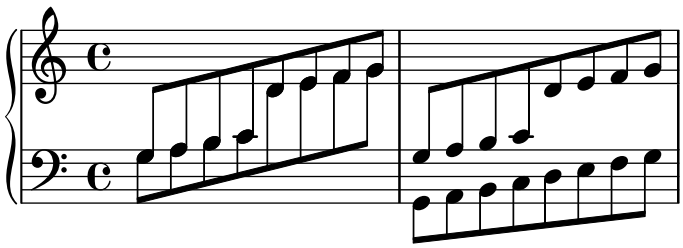
Using `autochange` with more than one voice.

```
\score
{
  \new PianoStaff
  <<
    \new Staff = "up" {
      <<
        \set Timing.beamExceptions = #'()
        \set Timing.beatStructure = #'(4)
        \new Voice {
          \voiceOne
          \autoChange
          \relative c' {
            g8 a b c d e f g
            g,8 a b c d e f g
          }
        }

        \new Voice {
          \voiceTwo
          \autoChange
          \relative c' {
            g8 a b c d e f g
            g,,8 a b c d e f g
```

```
          }
        }
      >>
    }

    \new Staff = "down" {
      \clef bass
    }
  >>
}
```



Rhythms

Sezione “Rhythms” in *Guida alla Notazione*
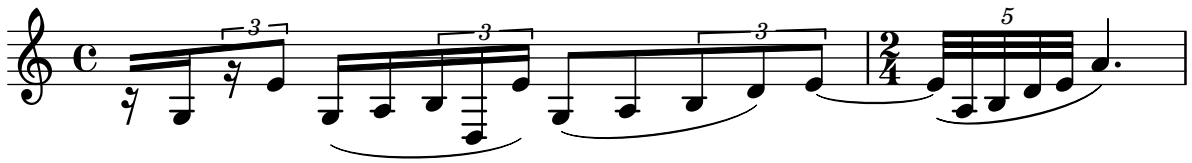
Adding beams, slurs, ties etc. when using tuplet and non-tuplet rhythms

LilyPond syntax can involve many unusual placements for parentheses, brackets etc., which might sometimes have to be interleaved.

For example, when entering a manual beam, the left square bracket has to be placed *after* the starting note and its duration, not before. Similarly, the right square bracket should directly follow the note which is to be at the end of the requested beaming, even if this note happens to be inside a tuplet section.

This snippet demonstrates how to combine manual beaming, manual slurs, ties and phrasing slurs with tuplet sections (enclosed within curly braces).

```
{
  r16[ g16 \tuplet 3/2 { r16 e'8] }
  g16( a \tuplet 3/2 { b d e') }
  g8[( a \tuplet 3/2 { b d') e'] ~ }
  \time 2/4
  \tuplet 5/4 { e'32\( a b d' e' } a'4.\)
}
```



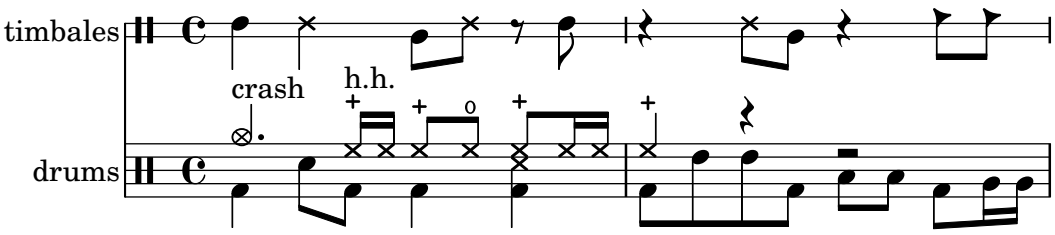
Adding drum parts

Using the powerful pre-configured tools such as the `\drummode` function and the `DrumStaff` context, inputting drum parts is quite easy: drums are placed at their own staff positions (with a special clef symbol) and have note heads according to the drum. Attaching an extra symbol to the drum or restricting the number of lines is possible.

```
drh = \drummode {
        cymc4.^"crash" hhc16^"h.h." hh hhc8 hho hhc8 hh16 hh
        hhc4 r4 r2
      }
drl = \drummode {
        bd4 sn8 bd bd4 << bd ss >>
        bd8 tommh tommh bd toml toml bd tomfh16 tomfh
      }
timb = \drummode {
         timh4 ssh timl8 ssh r timh r4
         ssh8 timl r4 cb8 cb
       }

\score {
  <<
    \new DrumStaff \with {
      instrumentName = "timbales"
```

```
      drumStyleTable = #timbales-style
      \override StaffSymbol.line-count = #2
      \override BarLine.bar-extent = #'(-1 . 1)
    }
    <<
      \timb
    >>
    \new DrumStaff \with { instrumentName = "drums" }
    <<
      \new DrumVoice { \stemUp \drh }
      \new DrumVoice { \stemDown \drl }
    >>
  >>
  \layout { }
  \midi { \tempo 4 = 120 }
}
```
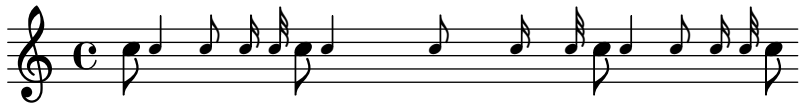


Adjusting grace note spacing

The space given to grace notes can be adjusted using the `spacing-increment` property of `Score.GraceSpacing`.

```
graceNotes = {
  \grace { c4 c8 c16 c32 }
  c8
}

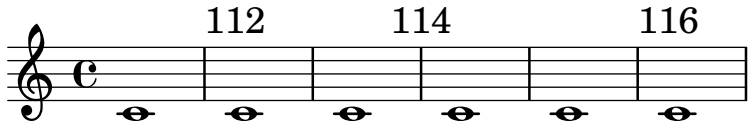
\relative c'' {
  c8
  \graceNotes
  \override Score.GraceSpacing.spacing-increment = #2.0
  \graceNotes
  \revert Score.GraceSpacing.spacing-increment
  \graceNotes
}
```



Allineare i numeri di battuta

Per impostazione predefinita i numeri di battuta sono allineati a destra rispetto al loro oggetto genitore. Di solito si tratta del margine sinistro della linea oppure, se i numeri appaiono all'interno della linea, del lato sinistro della stanghetta. I numeri possono essere posizionati anche direttamente sopra la stanghetta oppure allineati a sinistra della stanghetta.

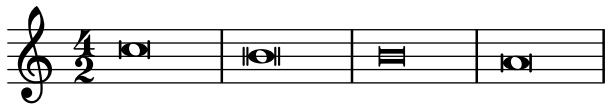
```
\relative c' {
  \set Score.currentBarNumber = #111
  \override Score.BarNumber.break-visibility = #all-visible
  % Increase the size of the bar number by 2
  \override Score.BarNumber.font-size = #2
  % Print a bar number every second measure
  \set Score.barNumberVisibility = #(every-nth-bar-number-visible 2)
  c1 | c1
  % Center-align bar numbers
  \override Score.BarNumber.self-alignment-X = #CENTER
  c1 | c1
  % Left-align bar numbers
  \override Score.BarNumber.self-alignment-X = #LEFT
  c1 | c1
}
```



Note brevi alternative

Le note brevi sono disponibili anche con due linee verticali su ciascun lato della testa invece di una sola e in stile barocco.
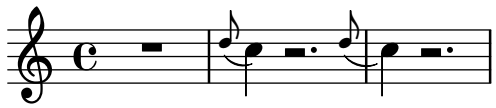
```
\relative c'' {
  \time 4/2
  c\breve |
  \override Staff.NoteHead.style = #'altdefault
  b\breve
  \override Staff.NoteHead.style = #'baroque
  b\breve
  \revert Staff.NoteHead.style
  a\breve
}
```



Appoggiatura or grace note before a bar line

By default, appoggiaturas and grace notes that occur on the first beat of a measure are printed after the bar line. They can however be printed before, simply by adding an invisible BarLine and then the visible one, as demonstrated here.

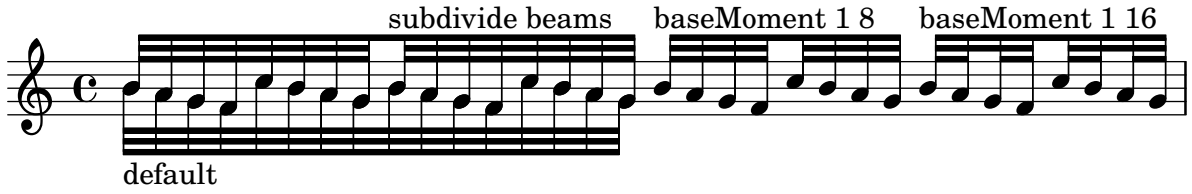
```
{
  R1
  %% default
  \appoggiatura d''8 c''4 r2.
  %% cheated
  \appoggiatura { \bar "" d''8 \bar "|" } c''4 r2.
}
```



Automatic beam subdivisions

Beams can be subdivided automatically. By setting the property `subdivideBeams`, beams are subdivided at beat positions (as specified in `baseMoment`).

```
\new Staff {
  \relative c'' {
    <<
      {
        \voiceOne
        \set subdivideBeams = ##t
        b32[ a g f c' b a g
        b32^"subdivide beams" a g f c' b a g]
      }
      \new Voice {
        \voiceTwo
        b32_"default"[ a g f c' b a g
        b32 a g f c' b a g]
      }
    >>
    \oneVoice
    \set baseMoment = #(ly:make-moment 1/8)
    \set beatStructure = 2,2,2,2
    b32^"baseMoment 1 8"[ a g f c' b a g]
    \set baseMoment = #(ly:make-moment 1/16)
    \set beatStructure = 4,4,4,4
    b32^"baseMoment 1 16"[ a g f c' b a g]
  }
}
```



Automatically change durations

`shiftDurations` can be used to change the note lengths of a piece of music.
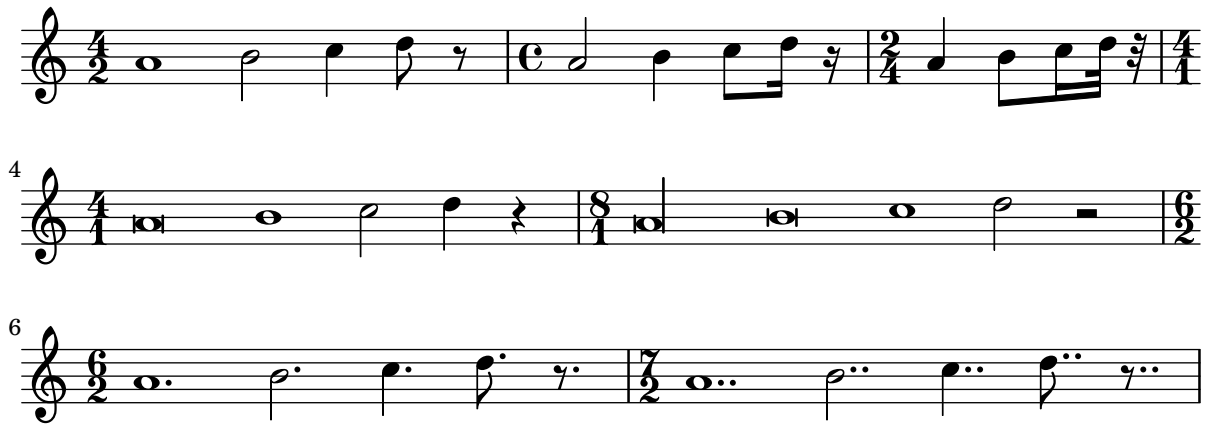
It takes two arguments - the scaling factor as a power of two, and the number of dots to be added as a positive integer.

```
\paper { indent = 0 }

music = \relative c'' { a1 b2 c4 d8 r }

\score {
  \new Voice {
    \time 4/2
    \music
    \time 4/4
    \shiftDurations #1 #0 { \music }
```

```
    \time 2/4
    \shiftDurations #2 #0 { \music }
    \time 4/1
    \shiftDurations #-1 #0 { \music }
    \time 8/1
    \shiftDurations #-2 #0 { \music }
    \time 6/2
    \shiftDurations #0 #1 { \music }
    \time 7/2
    \shiftDurations #0 #2 { \music }
  }
}
```
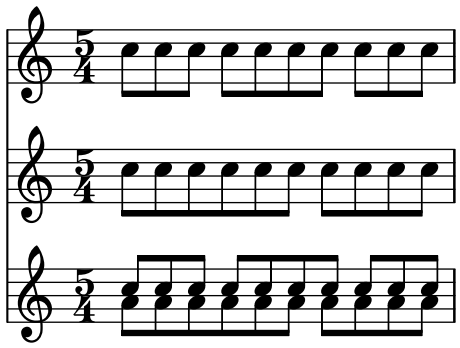


Estremità delle travature nel contesto Score

Le regole relative alle estremità delle travature definite nel contesto `Score` si applicano a tutti i righi, ma possono essere modificate anche ai livelli `Staff` e `Voice`:

```
\relative c'' {
  \time 5/4
  % Set default beaming for all staves
  \set Score.baseMoment = #(ly:make-moment 1/8)
  \set Score.beatStructure = 3,4,3
  <<
    \new Staff {
      c8 c c c c c c c c c
    }
    \new Staff {
      % Modify beaming for just this staff
      \set Staff.beatStructure = 6,4
      c8 c c c c c c c c c
    }
    \new Staff {
      % Inherit beaming from Score context
      <<
        {
          \voiceOne
          c8 c c c c c c c c c
        }
        % Modify beaming for this voice only
```

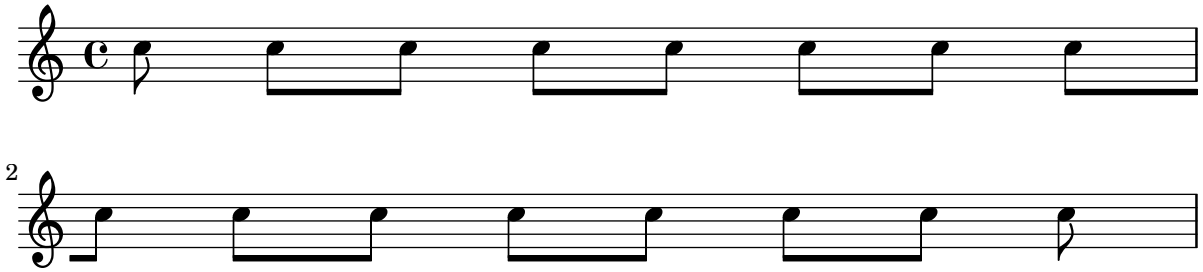
```
        \new Voice {
          \voiceTwo
          \set Voice.beatStructure = 6,4
          a8 a a a a a a a a
        }
      >>
    }
  >>
}
```



Travature che attraversano le interruzioni di linea

Le interruzioni di linea sono di norma proibite quando le travature attraversano la stanghetta di una battuta. Si può cambiare questo comportamento nel modo seguente:
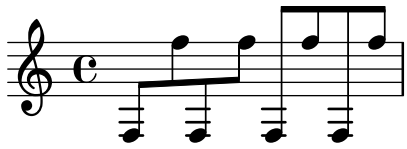
```
\relative c'' {
  \override Beam.breakable = ##t
  c8 c[ c] c[ c] c[ c] c[ \break
  c8] c[ c] c[ c] c[ c] c
}
```



Modificare la distanza delle travature angolari

Le travature angolari vengono inserite automaticamente quando viene rilevata un'ampia distanza tra le teste di nota. Questo comportamento può essere regolato attraverso la proprietà `auto-knee-gap`. Viene disegnata una travatura angolare se la distanza è più grande del valore di `auto-knee-gap` più la larghezza della travatura (che dipende dalla durata delle note e dall'inclinazione della travatura). Il valore predefinito di `auto-knee-gap` è 5.5 spazi rigo.

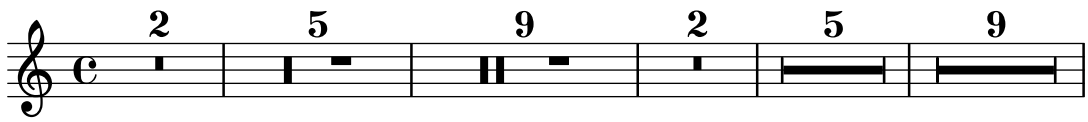
```
{
  f8 f''8 f8 f''8
  \override Beam.auto-knee-gap = #6
  f8 f''8 f8 f''8
}
```



Modificare la forma delle pause multiple

Se la pausa multipla dura dieci misure o un numero inferiore a dieci, nel rigo apparirà una serie di pause di longa e di breve (chiamate in tedesco “Kirchenpausen” - pause ecclesiastiche); altrimenti apparirà una semplice linea. Il numero predefinito di dieci può essere cambiato sovrascrivendo la proprietà `expand-limit`..
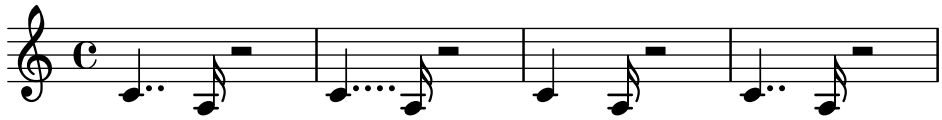
```
\relative c'' {
  \compressMMRests {
    R1*2 | R1*5 | R1*9
    \override MultiMeasureRest.expand-limit = #3
    R1*2 | R1*5 | R1*9
  }
}
```



Modifica del numero di punti di aumentazione per nota

Il numero di punti di aumentazione su una singola nota può essere modificato in modo indipendente dai punti posizionati dopo la nota.

```
\relative c' {
  c4.. a16 r2 |
  \override Dots.dot-count = #4
  c4.. a16 r2 |
  \override Dots.dot-count = #0
  c4.. a16 r2 |
  \revert Dots.dot-count
  c4.. a16 r2 |
}
```
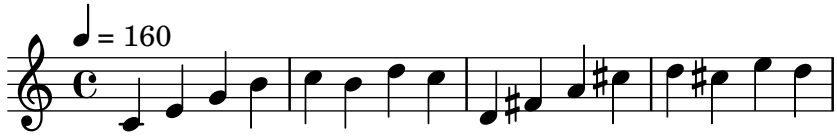


Modificare il tempo senza mostrare l’indicazione metronomica

Per cambiare il tempo del file MIDI senza che appaia l’indicazione metronomica, basta renderla invisibile.

```
\score {
  \new Staff \relative c' {
    \tempo 4 = 160
    c4 e g b
    c4 b d c
    \set Score.tempoHideNote = ##t
    \tempo 4 = 96
    d,4 fis a cis
    d4 cis e d
```
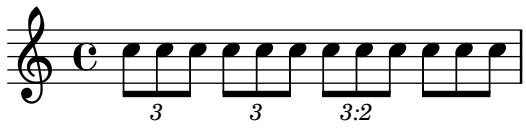
```
  }
  \layout { }
  \midi { }
}
```



Modifica del numero del gruppo irregolare

Di norma compare sulla parentesi del gruppo irregolare solo il numeratore del numero del gruppo irregolare, ovvero il numeratore dell'argomento del comando `\tuplet`. Ma è possibile mostrare la frazione *num*:*den* del numero del gruppo irregolare oppure nascondere del tutto il numero.

```
\relative c'' {
  \tuplet 3/2 { c8 c c }
  \tuplet 3/2 { c8 c c }
  \override TupletNumber.text = #tuplet-number::calc-fraction-text
  \tuplet 3/2 { c8 c c }
  \omit TupletNumber
  \tuplet 3/2 { c8 c c }
}
```



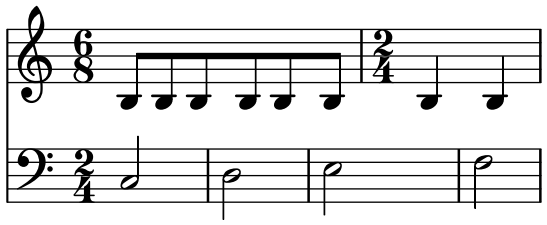
Changing time signatures inside a polymetric section using \scaleDurations

The `measureLength` property, together with `measurePosition`, determines when a bar line is needed. However, when using `\scaleDurations`, the scaling of durations makes it difficult to change time signatures. In this case, `measureLength` should be set manually, using the `ly:make-moment` callback. The second argument must be the same as the second argument of `\scaleDurations`.

```
\layout {
  \context {
    \Score
    \remove "Timing_translator"
    \remove "Default_bar_line_engraver"
  }
  \context {
    \Staff
    \consists "Timing_translator"
    \consists "Default_bar_line_engraver"
  }
}

<<
  \new Staff {
    \scaleDurations 8/5 {
```

```
      \time 6/8
      \set Timing.measureLength = #(ly:make-moment 6/5)
      b8 b b b b b
      \time 2/4
      \set Timing.measureLength = #(ly:make-moment 4/5)
      b4 b
    }
  }
  \new Staff {
    \clef bass
    \time 2/4
    c2 d e f
  }
>>
```

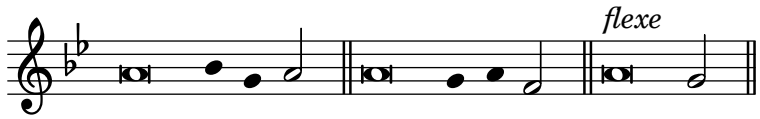


Notazione per canti e salmi

Questa forma di notazione è utilizzata per i salmi, dove i versi non sono sempre della stessa lunghezza.

```
stemOff = \hide Staff.Stem
stemOn  = \undo \stemOff

\score {
  \new Staff \with { \remove "Time_signature_engraver" }
  {
    \key g \minor
    \cadenzaOn
    \stemOff a'\breve bes'4 g'4
    \stemOn a'2 \bar "||"
    \stemOff a'\breve g'4 a'4
    \stemOn f'2 \bar "||"
    \stemOff a'\breve^\markup { \italic flexe }
    \stemOn g'2 \bar "||"
  }
}
```
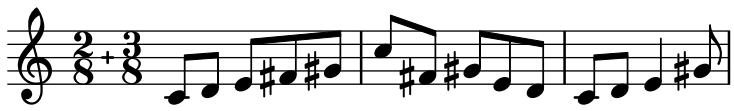


Compound time signatures

Odd 20th century time signatures (such as "5/8") can often be played as compound time signatures (e.g. "3/8 + 2/8"), which combine two or more inequal metrics.

LilyPond can make such music quite easy to read and play, by explicitly printing the compound time signatures and adapting the automatic beaming behavior.

```
\relative c' {
  \compoundMeter #'((2 8) (3 8))
  c8 d e fis gis
  c8 fis, gis e d
  c8 d e4 gis8
}
```



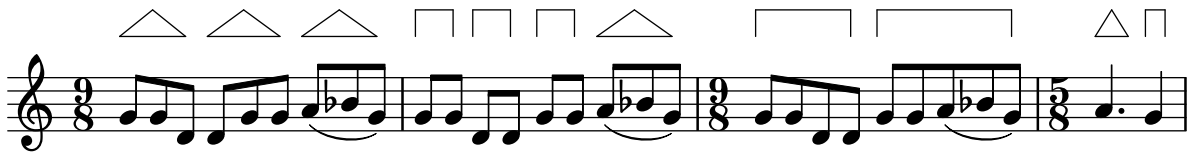
Segni per la conduzione, segni di raggruppamento della misura

Il raggruppamento delle pulsazioni all'interno della misura è regolato dalla proprietà di contesto `beatStructure`. I valori di `beatStructure` per varie indicazioni di tempo vengono stabiliti in `scm/time-signature-settings.scm`. Questi valori possono essere impostati o modificati con `\set`. Altrimenti, si può usare `\time` per impostare sia l'indicazione di tempo che la struttura delle pulsazioni. Per farlo si specifica il raggruppamento interno delle pulsazioni in una misura in una lista di numeri (nella sintassi di Scheme) prima dell'indicazione di tempo.

`\time` agisce nel contesto `Timing`, dunque non reimposterà i i valori di `beatStructure` e `baseMoment` che sono impostati in altri contesti di più basso livello, come `Voice`.

Se si include l'incisore `Measure_grouping_engraver` in uno dei contesti che regolano l'aspetto, appariranno i segni di raggruppamento della misura. Tali segni facilitano la lettura di musica moderna ritmicamente complessa. Nell'esempio la misura di 9/8 è raggruppata in due diversi schemi usando due metodi differenti, mentre la misura di 5/8 è raggruppata in base alle impostazioni predefinite in `scm/time-signature-settings.scm`:

```
\score {
  \new Voice \relative c'' {
    \time 9/8
    g8 g d d g g a( bes g) |
    \set Timing.beatStructure = 2,2,2,3
    g8 g d d g g a( bes g) |
    \time 4,5 9/8
    g8 g d d g g a( bes g) |
    \time 5/8
    a4. g4 |
  }
  \layout {
    \context {
      \Staff
      \consists "Measure_grouping_engraver"
    }
  }
}
```



Consistently left aligned bar numbers

When left aligning bar numbers, overlapping problems may occur with Staves brackets.

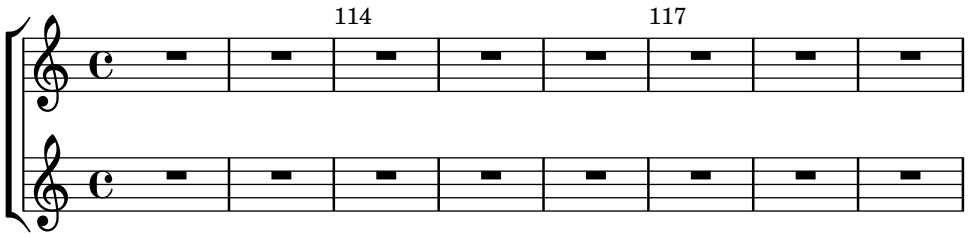
The snippet solves this by keeping right aligned the first bar number following line breaks.

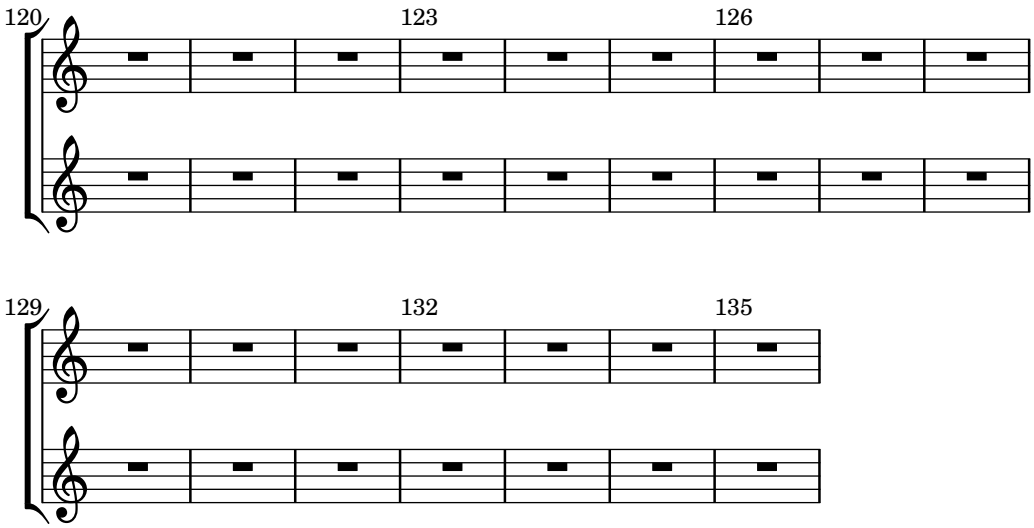
```
consistentlyLeftAlignedBarNumbers = {
  \override Score.BarNumber.break-visibility = #end-of-line-invisible
  \override Score.BarNumber.self-alignment-X =
    #(lambda (grob)
       (let ((break-dir (ly:item-break-dir grob)))
         (if (= break-dir RIGHT) RIGHT LEFT)))
}

\new ChoirStaff <<
  \new Staff {
    \relative c' {
      \set Score.barNumberVisibility = #(every-nth-bar-number-visible 3)
      \bar ""
      \consistentlyLeftAlignedBarNumbers

      \set Score.currentBarNumber = #112
      \repeat unfold 8 { R1 }
      \break
      \repeat unfold 9 { R1 }
      \break
      \repeat unfold 7 { R1 }
    }
  }
  \new Staff {
    \relative c' {
      \repeat unfold 24 { R1 }
    }
  }
>>

\layout {
  indent = #0
  ragged-right = ##t
  ragged-last = ##t
}
```





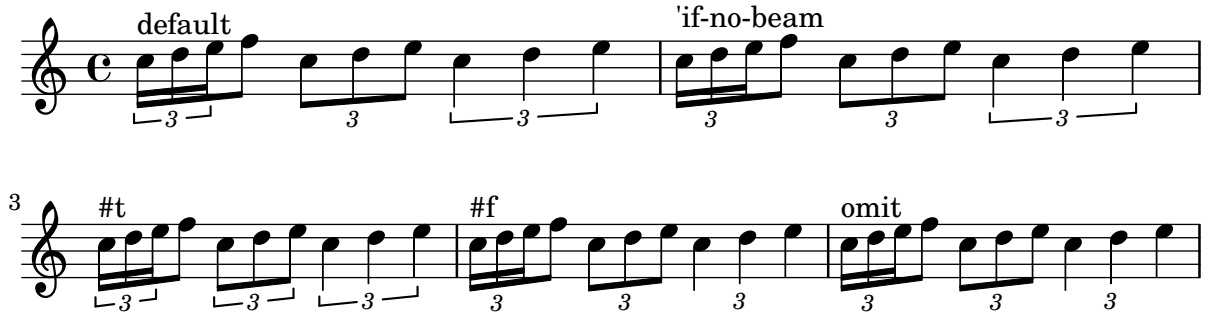
Controllare la visibilità della parentesi del gruppo irregolare

Il comportamento predefinito relativo alla visibilità della parentesi quadra del gruppo irregolare è di mostrare una parentesi a meno che non ci sia una travatura della stessa lunghezza del gruppo.

Per controllare la visibilità di tale parentesi, si imposta la proprietà `'bracket-visibility` su `#t` (mostra sempre la parentesi), `#'if-no-beam` (mostra la parentesi solo se non c'è una travatura, che è il comportamento predefinito) o `#f` (non mostrare mai la parentesi). L'ultima opzione equivale a omettere l'oggetto @code{TupletBracket} dall'output.

```
music = \relative c'' {
  \tuplet 3/2 { c16[ d e } f8]
  \tuplet 3/2 { c8 d e }
  \tuplet 3/2 { c4 d e }
}

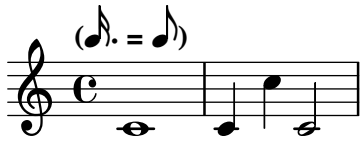
\new Voice {
  \relative c' {
    << \music s4^"default" >>
    \override TupletBracket.bracket-visibility = #'if-no-beam
    << \music s4^"'if-no-beam" >>
    \override TupletBracket.bracket-visibility = ##t
    << \music s4^"#t" >>
    \override TupletBracket.bracket-visibility = ##f
    << \music s4^"#f" >>
    \omit TupletBracket
    << \music s4^"omit" >>
  }
}
```



Creare indicazioni metronomiche in modalità testuale

Si possono creare nuove indicazioni metronomiche in modalità testuale, ma non modificheranno il tempo del file MIDI.

```
\relative c' {
  \tempo \markup {
    \concat {
      (
      \smaller \general-align #Y #DOWN \note {16.} #1
      " = "
      \smaller \general-align #Y #DOWN \note {8} #1
      )
    }
  }
  c1
  c4 c' c,2
}
```
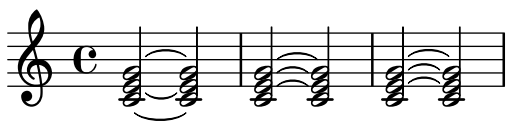


Disegnare manualmente le legature di valore

Le legature di valore possono essere disegnate a mano cambiando la proprietà `tie-configuration` dell'oggetto `TieColumn`. Il primo numero indica la distanza dal centro del rigo nell'unità di metà spazio rigo, mentre il secondo numero indica la direzione (1 = su, -1 = giù).

Si noti che LilyPond fa una distinzione tra valori precisi e imprecisi per il primo numero. Se si usa un valore preciso (ovvero un intero o una frazione come `(/ 4 5)`), il valore serve come posizione verticale approssimata che viene ulteriormente aggiustata da LilyPond per far sì che la legatura di valore eviti le linee del rigo. Se si usa un valore impreciso, come una virgola mobile, viene usato per la posizione verticale senza ulteriori regolazioni.

```
\relative c' {
  <c e g>2~ <c e g>
  \override TieColumn.tie-configuration =
    #'((0.0 . 1) (-2.0 . 1) (-4.0 . 1))
  <c e g>2~ <c e g>
  \override TieColumn.tie-configuration =
    #'((0 . 1) (-2 . 1) (-4 . 1))
  <c e g>2~ <c e g>
}
```
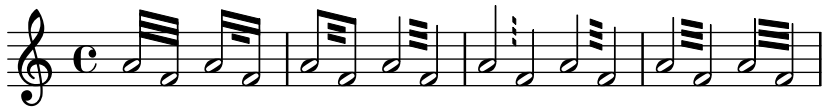


Engraving tremolos with floating beams

If a tremolo's total duration is less than a quarter-note, or exactly a half-note, or between a half-note and a whole-note, it is normally typeset with all beams touching the stems. Certain

engraving styles typeset some of these beams as centered floating beams that do not touch the stems. The number of floating beams in this type of tremolo is controlled with the `'gap-count` property of the `Beam` object, and the size of the gaps between beams and stems is set with the `'gap` property.

```
\relative c'' {
  \repeat tremolo 8 { a32 f }
  \override Beam.gap-count = #1
  \repeat tremolo 8 { a32 f }
  \override Beam.gap-count = #2
  \repeat tremolo 8 { a32 f }
  \override Beam.gap-count = #3
  \repeat tremolo 8 { a32 f }

  \override Beam.gap-count = #3
  \override Beam.gap = #1.33
  \repeat tremolo 8 { a32 f }
  \override Beam.gap = #1
  \repeat tremolo 8 { a32 f }
  \override Beam.gap = #0.67
  \repeat tremolo 8 { a32 f }
  \override Beam.gap = #0.33
  \repeat tremolo 8 { a32 f }
}
```

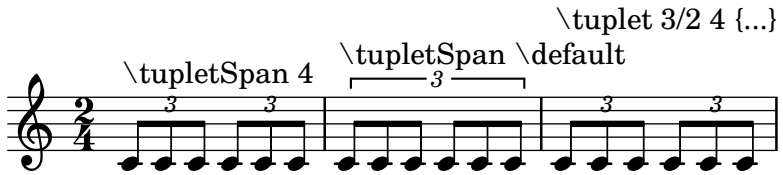


Inserire vari gruppi irregolari usando una sola volta il comando \tuplet

La proprietà `tupletSpannerDuration` imposta la durata di ognuno dei gruppi irregolari compresi tra parentesi dopo il comando `\tuplet`. In questo modo si possono inserire molti gruppi irregolari consecutivi all'interno di una singola espressione `\tuplet`, risparmiando così tempo e spazio.

Ci sono vari modi per impostare `tupletSpannerDuration`. Il comando `\tupletSpan` la imposta su una certa durata e poi la annulla quando invece di una durata viene specificato `\default`. Altrimenti si può usare un argomento opzionale con `\tuplet`.

```
\relative c' {
  \time 2/4
  \tupletSpan 4
  \tuplet 3/2 { c8^"\\tupletSpan 4" c c c c c }
  \tupletSpan \default
  \tuplet 3/2 { c8^"\\tupletSpan \\default" c c c c c }
  \tuplet 3/2 4 { c8^"\\tuplet 3/2 4 {...}" c c c c c }
}
```



Code e punte delle travature

È possibile ottenere delle codette su note isolate e dei tratti di suddivisione all'estremità della travatura con una combinazione di `stemLeftBeamCount`, `stemRightBeamCount` e una coppia di indicatori della travatura `[]`.

Per ottenere delle codette rivolte a destra, si usa la coppia di indicatori `[]` e si imposta `stemLeftBeamCount` a zero (vedi Example 1).

Per ottenere delle codette rivolte a sinistra, si imposta invece `stemRightBeamCount` (Example 2).

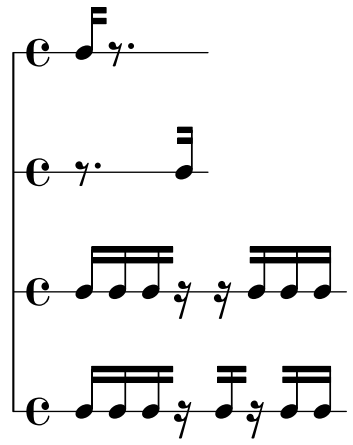
Perché i tratti di suddivisione alla fine di un gruppo di note unite da travatura siano rivolti a destra, si imposta `stemRightBeamCount` su un valore positivo. Perché i tratti di suddivisione all'inizio di un gruppo di note unite da travatura siano rivolti a sinistra, si imposta invece `stemLeftBeamCount` (Example 3).

Talvolta, ad esempio per una nota isolata circondata da pause, ha senso avere una coda che punti sia a destra che a sinistra. Lo si può fare con una coppia di indicatori di travatura `[]` da soli (Example 4).

(Nota che `\set stemLeftBeamCount` è sempre equivalente a `\once \set`. In altre parole, le impostazioni che definiscono il conteggio delle travature non "permangono", quindi la coppia di code attaccate al `16[]` solitario nell'ultimo esempio non hanno nulla a che fare con l'impostazione `\set` di due note prima.)

```
\score {
  <<
    % Example 1
    \new RhythmicStaff {
      \set stemLeftBeamCount = #0
      c16[]
      r8.
    }
    % Example 2
    \new RhythmicStaff {
      r8.
      \set stemRightBeamCount = #0
      16[]
    }
    % Example 3
    \new RhythmicStaff {
      16 16
      \set stemRightBeamCount = #2
      16 r r
      \set stemLeftBeamCount = #2
      16 16 16
    }
    % Example 4
    \new RhythmicStaff {
      16 16
      \set stemRightBeamCount = #2
      16 r16
      16[]
      r16
      \set stemLeftBeamCount = #2
      16 16
```

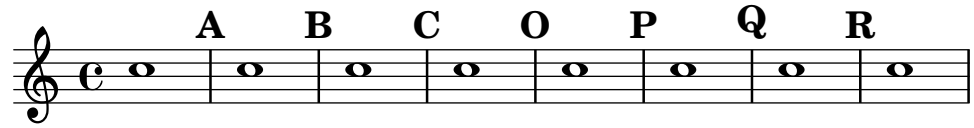
```
    }
  >>
}
```



Forcing rehearsal marks to start from a given letter or number

This snippet demonstrates how to obtain automatic ordered rehearsal marks, but from the letter or number desired.

```
\relative c'' {
  c1 \mark \default
  c1 \mark \default
  c1 \mark \default
  c1 \mark #14
  c1 \mark \default
  c1 \mark \default
  c1 \mark \default
  c1
}
```



Generating custom flags

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

```
#(define-public (weight-flag grob)
   (let* ((stem-grob (ly:grob-parent grob X))
          (log (- (ly:grob-property stem-grob 'duration-log) 2))
          (is-up? (eqv? (ly:grob-property stem-grob 'direction) UP))
          (yext (if is-up? (cons (* log -0.8) 0) (cons 0 (* log 0.8))))
          (flag-stencil (make-filled-box-stencil '(-0.4 . 0.4) yext))
          (stroke-style (ly:grob-property grob 'stroke-style))
          (stroke-stencil (if (equal? stroke-style "grace")
                              (make-line-stencil 0.2 -0.9 -0.4 0.9 -0.4)
                              empty-stencil)))
     (ly:stencil-add flag-stencil stroke-stencil)))
```

```
% Create a flag stencil by looking up the glyph from the font
#(define (inverted-flag grob)
   (let* ((stem-grob (ly:grob-parent grob X))
          (dir (if (eqv? (ly:grob-property stem-grob 'direction) UP) "d" "u"))
          (flag (retrieve-glyph-flag "" dir "" grob))
          (line-thickness (ly:staff-symbol-line-thickness grob))
          (stem-thickness (ly:grob-property stem-grob 'thickness))
          (stem-width (* line-thickness stem-thickness))
          (stroke-style (ly:grob-property grob 'stroke-style))
          (stencil (if (null? stroke-style)
                       flag
                       (add-stroke-glyph flag stem-grob dir stroke-style "")))
          (rotated-flag (ly:stencil-rotate-absolute stencil 180 0 0)))
     (ly:stencil-translate rotated-flag (cons (- (/ stem-width 2)) 0))))
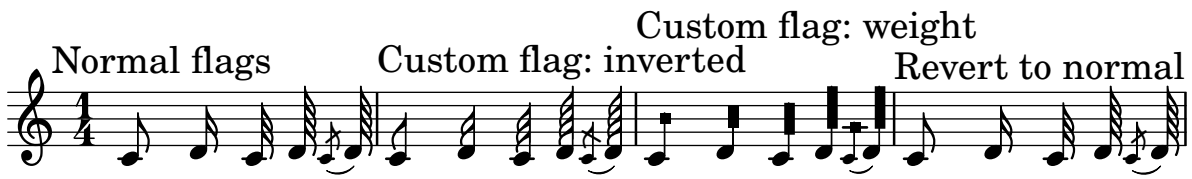
snippetexamplenotes =
{
  \autoBeamOff c'8 d'16 c'32 d'64 \acciaccatura {c'8} d'64
}

{
  \override Score.RehearsalMark.self-alignment-X = #LEFT
  \time 1/4
  \mark "Normal flags"
  \snippetexamplenotes

  \mark "Custom flag: inverted"
  \override Flag.stencil = #inverted-flag
  \snippetexamplenotes

  \mark "Custom flag: weight"
  \override Flag.stencil = #weight-flag
  \snippetexamplenotes

  \mark "Revert to normal"
  \revert Flag.stencil
  \snippetexamplenotes
}
```

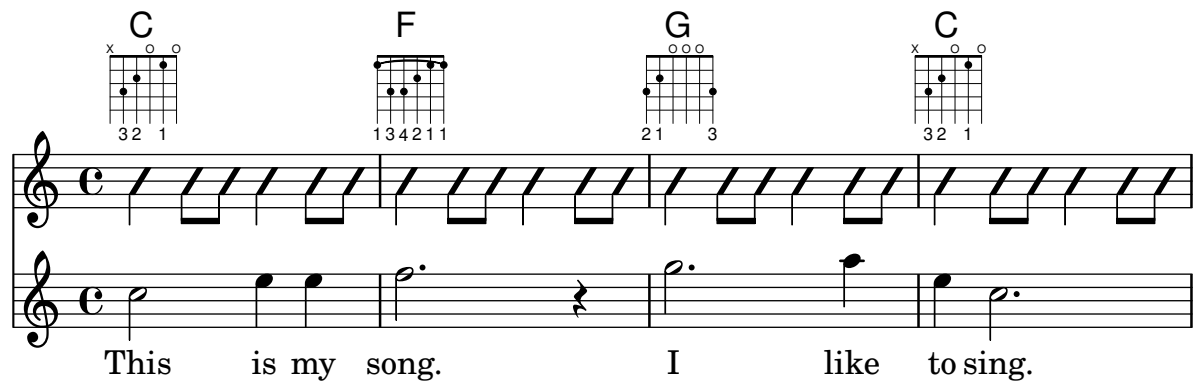


Ritmi di accompagnamento per chitarra

Per la musica per chitarra, è possibile mostrare i ritmi di accompagnamento, insieme alle note della melodia e ai nomi e ai diagrammi degli accordi.

```
\include "predefined-guitar-fretboards.ly"
```

```
<<
  \new ChordNames {
    \chordmode {
      c1 | f | g | c
    }
  }
  \new FretBoards {
    \chordmode {
      c1 | f | g | c
    }
  }
  \new Voice \with {
    \consists "Pitch_squash_engraver"
  } {
    \relative c'' {
      \improvisationOn
      c4 c8 c c4 c8 c
      f4 f8 f f4 f8 f
      g4 g8 g g4 g8 g
      c4 c8 c c4 c8 c
    }
  }
  \new Voice = "melody" {
    \relative c'' {
      c2 e4 e4
      f2. r4
      g2. a4
      e4 c2.
    }
  }
  \new Lyrics {
    \lyricsto "melody" {
      This is my song.
      I like to sing.
    }
  }
>>
```



Heavily customized polymetric time signatures
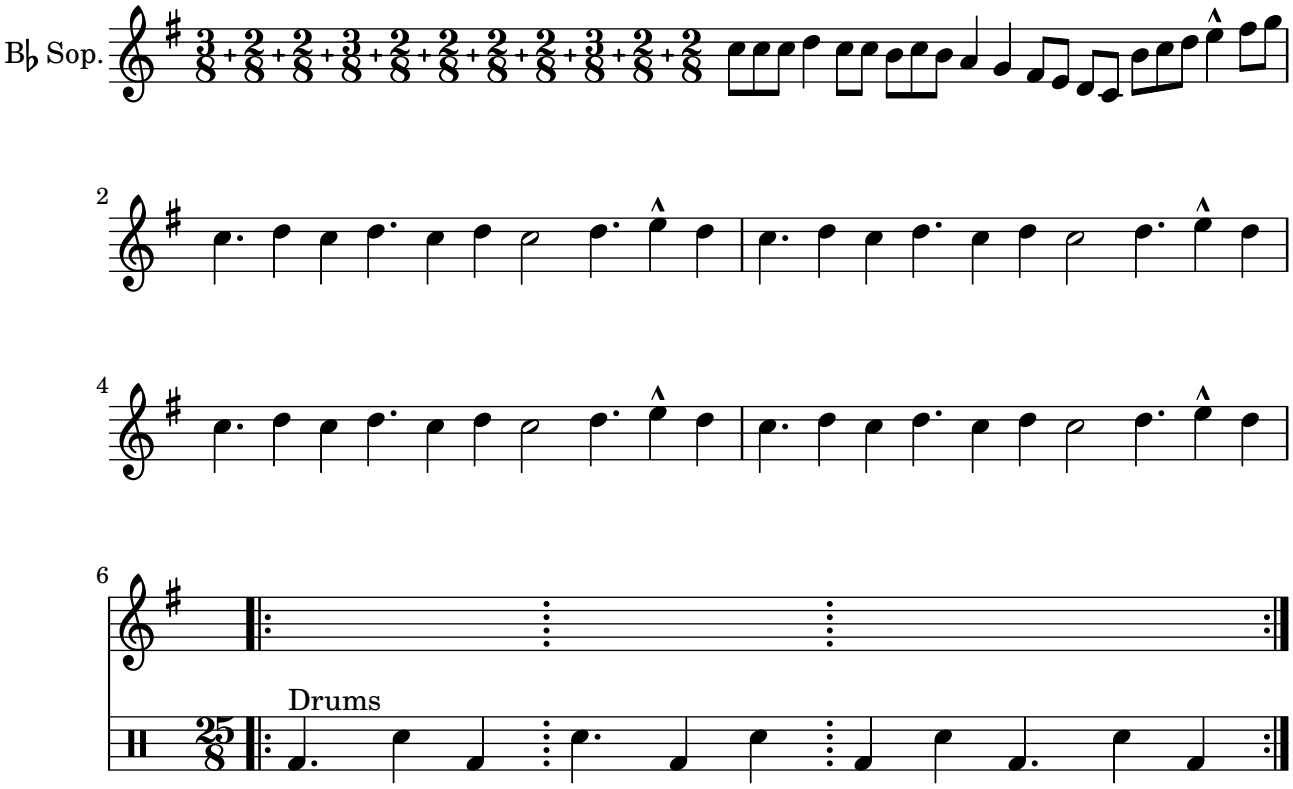
Though the polymetric time signature shown was not the most essential item here, it has been included to show the beat of this piece (which is the template of a real Balkan song!).

```
melody = \relative c'' {
  \key g \major
  \compoundMeter #'((3 8) (2 8) (2 8) (3 8) (2 8) (2 8)
                    (2 8) (2 8) (3 8) (2 8) (2 8))
  c8 c c d4 c8 c b c b a4 g fis8 e d c b' c d e4-^ fis8 g \break
  c,4. d4 c4 d4. c4 d c2 d4. e4-^ d4
  c4. d4 c4 d4. c4 d c2 d4. e4-^ d4 \break
  c4. d4 c4 d4. c4 d c2 d4. e4-^ d4
  c4. d4 c4 d4. c4 d c2 d4. e4-^ d4 \break
}

drum = \new DrumStaff \drummode {
  \bar ".|:" bd4.^\markup { Drums } sn4 bd \bar ";" sn4.
  bd4 sn \bar ";" bd sn bd4. sn4 bd \bar ":|."
}

  \new Staff \with {
    instrumentName = \markup { \concat { "B" \flat " Sop." } }
  }

{
  \melody
  \drum
}
```
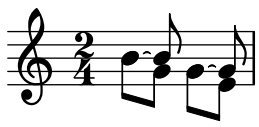


Making an object invisible with the 'transparent property

Setting the `transparent` property will cause an object to be printed in "invisible ink": the object is not printed, but all its other behavior is retained. The object still takes up space, it takes part in collisions, and slurs, ties and beams can be attached to it.

This snippet demonstrates how to connect different voices using ties. Normally, ties only connect two notes in the same voice. By introducing a tie in a different voice, and blanking the first up-stem in that voice, the tie appears to cross voices.

```
\relative {
  \time 2/4
  <<
    {
      \once \hide Stem
      \once \override Stem.length = #8
      b'8 ~ 8\noBeam
      \once \hide Stem
      \once \override Stem.length = #8
      g8 ~ 8\noBeam
    }
    \\
    {
      b8 g g e
    }
  >>
}
```
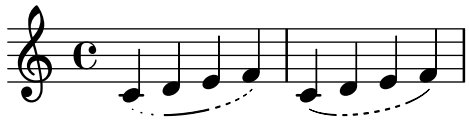


Legature di portamento con complesse strutture di tratteggio

Le legature di portamento possono avere schemi di tratteggio complessi definendo la proprietà `dash-definition`. `dash-definition` è una lista di `dash-elements`. Un `dash-element` è una lista di parametri che definiscono il comportamento del tratteggio per un segmento della legatura.

La legatura di portamento è definita come il parametro t della curva di bezier che va da 0 sul margine sinistro della legatura fino a 1 su quello destro. `dash-element` è una lista di `(inizio-t fine-t frazione-trattino punto-trattino)`. La regione della legatura di portamento che va da `inizio-t` a `fine-t` avrà una frazione `frazione-trattino` di ogni `punto-trattino` nero. `punto-trattino` viene definito in spazi rigo. `frazione-trattino` è impostato su 1 per una legatura di portamento continua.

```
\relative c' {
  \once \override
    Slur.dash-definition = #'((0 0.3 0.1 0.75)
                              (0.3 0.6 1 1)
                              (0.65 1.0 0.4 0.75))
  c4( d e f)
  \once \override
    Slur.dash-definition = #'((0 0.25 1 1)
                              (0.3 0.7 0.4 0.75)
                              (0.75 1.0 1 1))
```
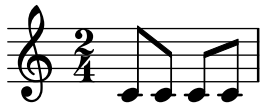
```
  c4( d e f)
}
```



Manually controlling beam positions

Beam positions may be controlled manually, by overriding the `positions` setting of the `Beam` grob.

```
\relative c' {
  \time 2/4
  % from upper staff-line (position 2) to center (position 0)
  \override Beam.positions = #'(2 . 0)
  c8 c
  % from center to one above center (position 1)
  \override Beam.positions = #'(0 . 1)
  c8 c
}
```

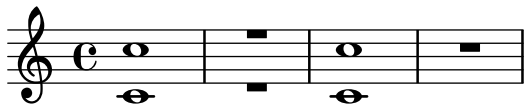


Merging multi-measure rests in a polyphonic part

When using multi-measure rests in a polyphonic staff, the rests will be placed differently depending on the voice they belong to. However they can be printed on the same staff line, using the following setting.

```
normalPos = \revert MultiMeasureRest.direction

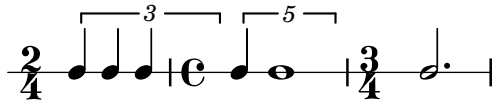
{
  <<
    {
      c''1
      R1
      c''1
      \normalPos
      R1
    }
    \\
    {
      c'1
      R1
      c'1
      \normalPos
      R1
    }
  >>
}
```



Modifying tuplet bracket length

Tuplet brackets can be made to run to prefatory matter or the next note. Default tuplet brackets end at the right edge of the final note of the tuplet; full-length tuplet brackets extend farther to the right, either to cover all the non-rhythmic notation up to the following note, or to cover only the whitespace before the next item of notation, be that a clef, time signature, key signature, or another note. The example shows how to switch tuplets to full length mode and how to modify what material they cover.
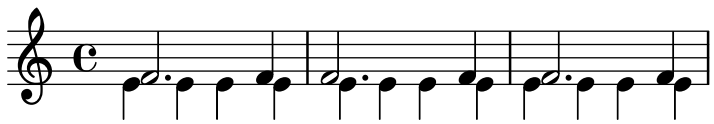
```
\new RhythmicStaff {
  % Set tuplets to be extendable...
  \set tupletFullLength = ##t
  % ...to cover all items up to the next note
  \set tupletFullLengthNote = ##t
  \time 2/4
  \tuplet 3/2 { c4 4 4 }
  % ...or to cover just whitespace
  \set tupletFullLengthNote = ##f
  \time 4/4
  \tuplet 5/4 { 4 1 }
  \time 3/4
  2.
}
```



Spostare le note puntate in polifonia

Quando una nota puntata della voce più alta viene spostata per evitare una collisione con una nota di un'altra voce, il comportamento predefinito è spostare la nota più alta a destra. Tale comportamento può essere modificato tramite la proprietà `prefer-dotted-right` di `NoteCollision`.

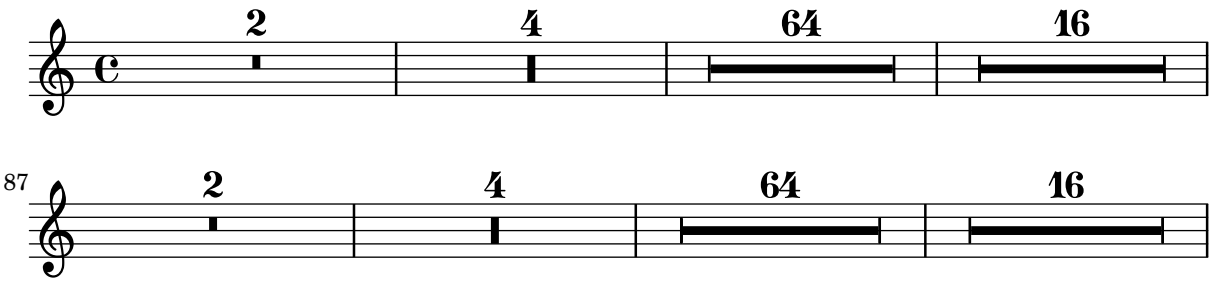
```
\new Staff \relative c' <<
  {
    f2. f4
    \override Staff.NoteCollision.prefer-dotted-right = ##f
    f2. f4
    \override Staff.NoteCollision.prefer-dotted-right = ##t
    f2. f4
  }
  \\
  { e4 e e e e e e e e e e }
>>
```



Regolazione della lunghezza delle pause multiple

Le pause multiple hanno una lunghezza che dipende dalla loro durata totale e tale lunghezza è regolata da `MultiMeasureRest.space-increment`. Nota che il valore predefinito è `2.0`.

```
\relative c' {
  \compressEmptyMeasures
  R1*2 R1*4 R1*64 R1*16
  \override Staff.MultiMeasureRest.space-increment = 2.5
  R1*2 R1*4 R1*64 R1*16
}
```

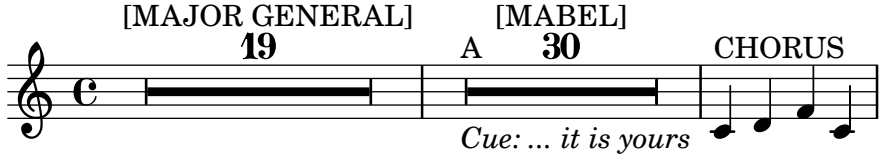


Testo a margine delle pause multiple

Il testo a margine di una pausa multipla viene centrato sopra o sotto di essa. Se il testo è lungo, la misura non si espanderà. Per espandere la pausa multipla in modo che si allinei col testo, conviene usare un accordo vuoto con del testo attaccato prima della pausa multipla.

Il testo così attaccato a una nota spaziatrice viene allineato a sinistra della posizione in cui la nota sarebbe posta nella misura, ma se la lunghezza della misura è determinata dalla lunghezza del testo, il testo verrà centrato.

```
\relative c' {
  \compressMMRests {
    \textLengthOn
    <>^\markup { [MAJOR GENERAL] }
    R1*19
    <>_\markup { \italic { Cue: ... it is yours } }
    <>^\markup { A }
    R1*30^\markup { [MABEL] }
    \textLengthOff
    c4^\markup { CHORUS } d f c
  }
}
```

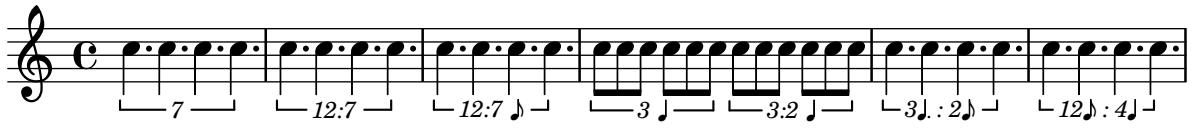


Numeri non predefiniti per i gruppi irregolari

LilyPond fornisce anche funzioni di formattazione che permettono di creare numeri di gruppi irregolari diversi dalla frazione vera e propria, così come di aggiungere un valore di nota al numero o alla frazione di un gruppo irregolare.

```
\relative c'' {
```

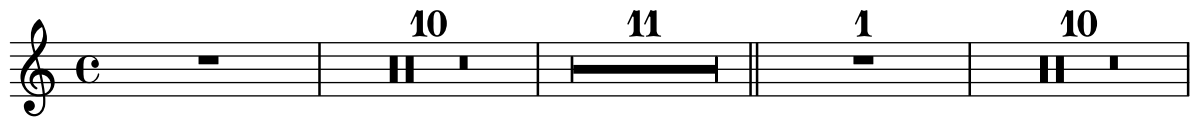
```
  \once \override TupletNumber.text =
    #(tuplet-number::non-default-tuplet-denominator-text 7)
  \tuplet 3/2  { c4. c4. c4. c4. }
  \once \override TupletNumber.text =
    #(tuplet-number::non-default-tuplet-fraction-text 12 7)
  \tuplet 3/2  { c4. c4. c4. c4. }
  \once \override TupletNumber.text =
    #(tuplet-number::append-note-wrapper
      (tuplet-number::non-default-tuplet-fraction-text 12 7)
      (ly:make-duration 3 0))
  \tuplet 3/2  { c4. c4. c4. c4. }
  \once \override TupletNumber.text =
    #(tuplet-number::append-note-wrapper
      tuplet-number::calc-denominator-text
      (ly:make-duration 2 0))
  \tuplet 3/2  { c8 c8 c8 c8 c8 c8 }
  \once \override TupletNumber.text =
    #(tuplet-number::append-note-wrapper
      tuplet-number::calc-fraction-text
      (ly:make-duration 2 0))
  \tuplet 3/2  { c8 c8 c8 c8 c8 c8 }
  \once \override TupletNumber.text =
    #(tuplet-number::fraction-with-notes
      (ly:make-duration 2 1) (ly:make-duration 3 0))
  \tuplet 3/2  { c4. c4. c4. c4. }
  \once \override TupletNumber.text =
    #(tuplet-number::non-default-fraction-with-notes 12
      (ly:make-duration 3 0) 4 (ly:make-duration 2 0))
  \tuplet 3/2  { c4. c4. c4. c4. }
}
```

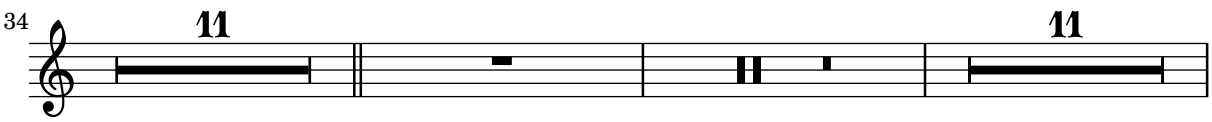


Numbering single measure rests

Multi measure rests show their length by a number except for single measures. This can be changed by setting `restNumberThreshold`.

```
{
  \compressEmptyMeasures
  R1 R1*10 R1*11 \bar "||"
  \set restNumberThreshold = 0
  R1 R1*10 R1*11 \bar "||"
  \set restNumberThreshold = 10
  R1 R1*10 R1*11
}
```





PartCombine e autoBeamOff

La funzione `\autoBeamOff`, se usata insieme a `\partCombine`, può essere difficile da comprendere.

È preferibile usare invece

`\set Staff.autoBeaming = ##f`
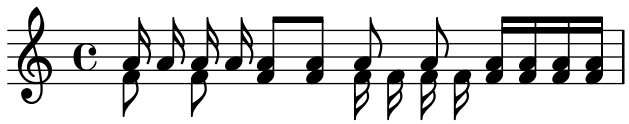
per assicurarsi che la disposizione delle travature sia disabilitata per tutto il rigo.

`\partCombine` funziona con 3 voci – gambo in su singolo, gambo in giù singolo, gambo in su unito.

L'uso di `\autoBeamOff` all'interno del primo argomento di partCombine ha effetto sulla voce che è attiva al momento in cui la funzione viene elaborata, ovvero sul gambo in su singolo o sul gambo in giù unito. L'uso di `\autoBeamOff` nel secondo argomento avrà effetto sulla voce che ha il gambo in giù singolo.

Per poter usare `\autoBeamOff` per impedire tutte le disposizioni automatiche delle travature, se usato con `\partCombine`, è necessario richiamare tre volte la funzione `\autoBeamOff`.

```
{
  %\set Staff.autoBeaming = ##f % turns off all autobeaming
  \partCombine
  {
    \autoBeamOff % applies to split up stems
    \repeat unfold 4 a'16
    %\autoBeamOff % applies to combined up stems
    \repeat unfold 4 a'8
    \repeat unfold 4 a'16
  }
  {
    \autoBeamOff % applies to down stems
    \repeat unfold 4 f'8
    \repeat unfold 8 f'16 |
  }
}
```



Percussion example

A short example taken from Stravinsky's L'histoire du Soldat.

```
#(define mydrums '((bassdrum   default #t  4)
                   (snare      default #t -4)
                   (tambourine default #t  0)))

global = {
  \time 3/8 s4.
  \time 2/4 s2*2
  \time 3/8 s4.
  \time 2/4 s2
```

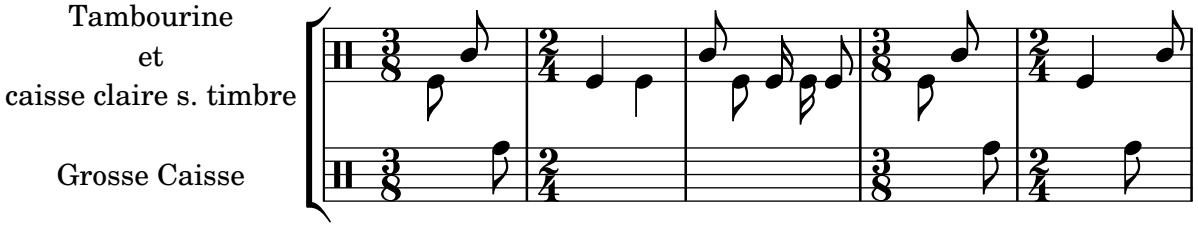
```
}

drumsA = {
  \context DrumVoice <<
    { \global }
    { \drummode {
        \autoBeamOff
        \stemDown sn8 \stemUp tamb s8 |
        sn4 \stemDown sn4 |
        \stemUp tamb8 \stemDown sn8 \stemUp sn16 \stemDown sn \stemUp sn8 |
        \stemDown sn8 \stemUp tamb s8 |
        \stemUp sn4 s8 \stemUp tamb
      }
    }
  >>
}

drumsB = {
  \drummode {
    s4 bd8 s2*2 s4 bd8 s4 bd8 s8
  }
}

\layout {
  indent = #40
}

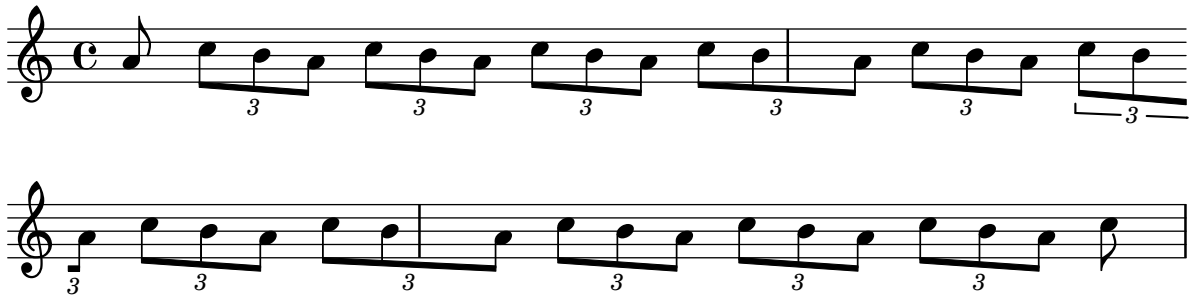
\score {
  \new StaffGroup <<
    \new DrumStaff \with {
      instrumentName = \markup {
        \center-column {
          "Tambourine"
          "et"
          "caisse claire s. timbre"
        }
      }
    drumStyleTable = #(alist->hash-table mydrums)
  }
  \drumsA
  \new DrumStaff \with {
    instrumentName = #"Grosse Caisse"
    drumStyleTable = #(alist->hash-table mydrums)
  }
  \drumsB
  >>
}
```



Consentire l'interruzione del rigo all'interno di gruppi irregolari con travature

Questo esempio artificioso mostra come permettere interruzioni del rigo sia manuali che automatiche all'interno di un gruppo irregolare con travature. Si noti che le travature di questi gruppi irregolari fuori dal ritmo devono essere disposte manualmente.

```
\layout {
  \context {
    \Voice
    % Permit line breaks within tuplets
    \remove "Forbid_line_break_engraver"
    % Allow beams to be broken at line breaks
    \override Beam.breakable = ##t
  }
}
\relative c'' {
  a8
  \repeat unfold 5 { \tuplet 3/2 { c[ b a] } }
  % Insert a manual line break within a tuplet
  \tuplet 3/2 { c[ b \bar "" \break a] }
  \repeat unfold 5 { \tuplet 3/2 { c[ b a] } }
  c8
}
```
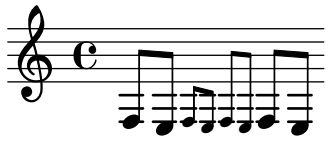


Positioning grace note beams at the height of normal note beams

When notes are placed on ledger lines, their beams are usually centred on the stave. Grace notes beams are shorter and grace notes on ledger lines may well have beams outside the stave. You can override this beaming for grace notes.

```
\relative c {
  f8[ e]
  \grace {
    f8[ e]
    \override Stem.no-stem-extend = ##f
    f8[ e]
    \revert Stem.no-stem-extend
  }
```

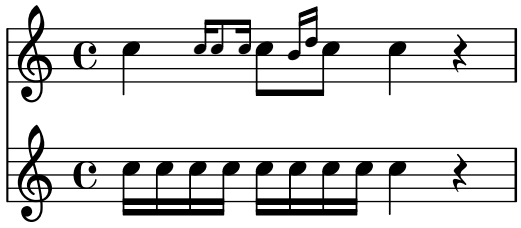
```
  f8[ e]
}
```



Posizionare gli abbellimenti con dello spazio fluttuante

Se si imposta la proprietà `'strict-grace-spacing`, le colonne musicali degli abbellimenti 'fluttuano', ovvero si scollegano dalle note normali: prima vengono spaziate le note normali, poi le colonne musicali degli abbellimenti vengono messe a sinistra delle colonne delle note principali.

```
\relative c'' {
  <<
    \override Score.SpacingSpanner.strict-grace-spacing = ##t
    \new Staff \new Voice {
      \afterGrace c4 { c16[ c8 c16] }
      c8[ \grace { b16 d } c8]
      c4 r
    }
    \new Staff {
      c16 c c c c c c c c4 r
    }
  >>
}
```



Posizionamento delle pause multiple

Diversamente dalle pause normali, non esiste un comando predefinito per cambiare la posizione sul rigo di un simbolo di pausa multipla di qualsiasi tipo connettendolo a una nota. Tuttavia, nella musica polifonica le pause multiple nelle voci dispari e pari sono separate verticalmente. Il posizionamento delle pause multiple si controlla nel modo seguente:

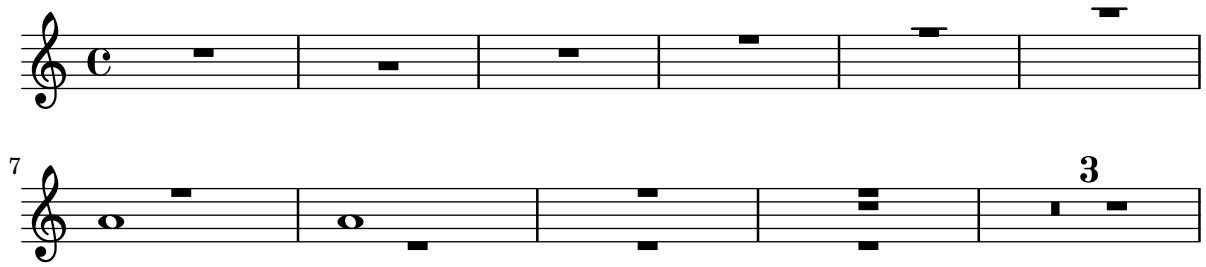
```
\relative c'' {
  % Multi-measure rests by default are set under the fourth line
  R1
  % They can be moved using an override
  \override MultiMeasureRest.staff-position = #-2
  R1
  \override MultiMeasureRest.staff-position = #0
  R1
  \override MultiMeasureRest.staff-position = #2
  R1
  \override MultiMeasureRest.staff-position = #3
  R1
```

```
  \override MultiMeasureRest.staff-position = #6
  R1
  \revert MultiMeasureRest.staff-position
  \break

  % In two Voices, odd-numbered voices are under the top line
  << { R1 } \\ { a1 } >>
  % Even-numbered voices are under the bottom line
  << { a1 } \\ { R1 } >>
  % Multi-measure rests in both voices remain separate
  << { R1 } \\ { R1 } >>

  % Separating multi-measure rests in more than two voices
  % requires an override
  << { R1 } \\ { R1 } \\
     \once \override MultiMeasureRest.staff-position = #0
     { R1 }
  >>

  % Using compressed bars in multiple voices requires another override
  % in all voices to avoid multiple instances being printed
  \compressMMRests
  <<
   \revert MultiMeasureRest.direction
    { R1*3 }
    \\
   \revert MultiMeasureRest.direction
    { R1*3 }
  >>
}
```



Preventing final mark from removing final tuplet

The addition of a final `mark` can result in the loss of a final tuplet marking. This can be overcome by setting `TupletBracket.full-length-to-extent` to `false`.

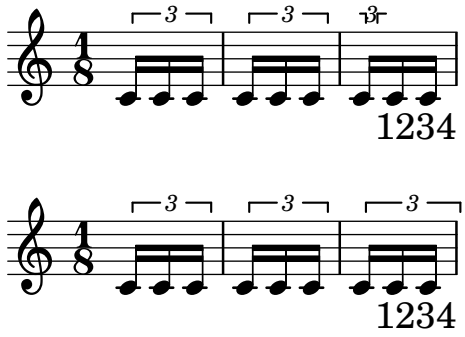
```
% due to issue 2362 a long mark such as
%   \mark "Composed Feb 2007 - Feb 2008"
% cannot be used here.

\new Staff {
   \set tupletFullLength = ##t
   \time 1/8
   \tuplet 3/2 8 { c'16 c' c' c' c' c' c' c' }
   \override Score.RehearsalMark.break-visibility = ##(#t #t #t)
```

```
   \override Score.RehearsalMark.direction = #DOWN
   \override Score.RehearsalMark.self-alignment-X = #RIGHT
   \mark "1234"
}

\new Staff {
  \set tupletFullLength = ##t
  \override TupletBracket.full-length-to-extent = ##f

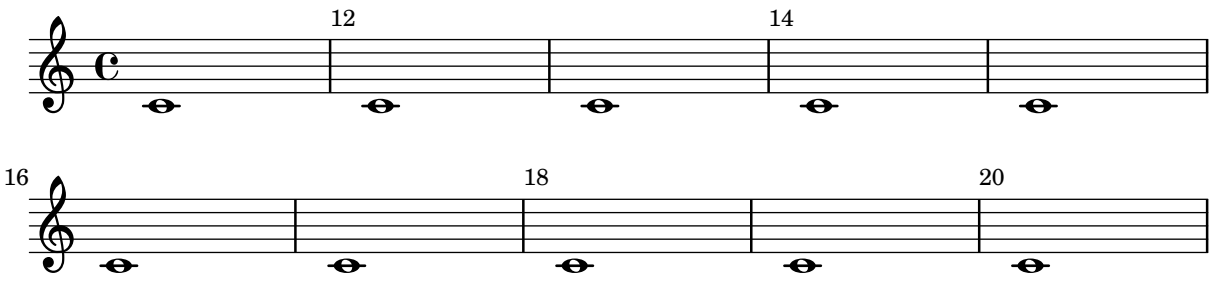
  \time 1/8
   \tuplet 3/2 8 { c'16 c' c' c' c' c' c' c' }
  \override Score.RehearsalMark.break-visibility = ##(#t #t #t)
  \override Score.RehearsalMark.direction = #DOWN
  \override Score.RehearsalMark.self-alignment-X = #RIGHT
   \mark "1234"
}
```



Mostrare i numeri di battuta a intervalli regolari

I numeri di battuta possono essere resi visbili a intervalli regolari attraverso la proprietà `barNumberVisibility`. In questo esempio vengono mostrati ogni due misure eccetto alla fine della linea.

```
\relative c' {
  \override Score.BarNumber.break-visibility = #end-of-line-invisible
  \set Score.currentBarNumber = #11
  % Permit first bar number to be printed
  \bar ""
  % Print a bar number every second measure
  \set Score.barNumberVisibility = #(every-nth-bar-number-visible 2)
  c1 | c | c | c | c
  \break
  c1 | c | c | c | c
}
```

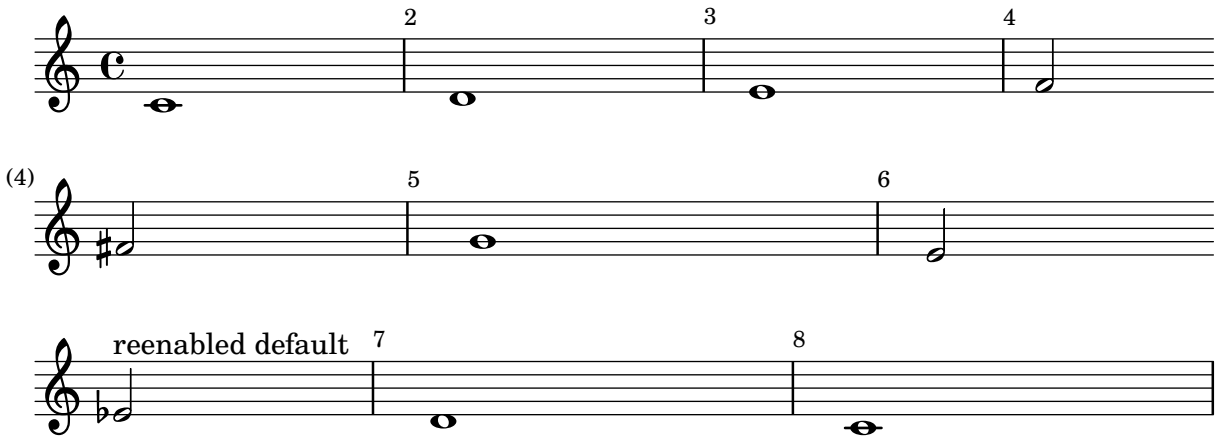


Printing bar numbers for broken measures

By default a `BarNumber` of a broken measure is not repeated at the beginning of the new line. Use `first-bar-number-invisible-save-broken-bars` for `barNumberVisibility` to get a parenthesized `BarNumber` there.

```
\layout {
  \context {
    \Score
    barNumberVisibility = #first-bar-number-invisible-save-broken-bars
    \override BarNumber.break-visibility = ##(#f #t #t)
  }
}

\relative c' {
  c1 | d | e | f2 \bar "" \break
  fis | g1 | e2 \bar "" \break
  <>^"reenabled default"
  % back to default -
  % \unset Score.barNumberVisibility would do so as well
  \set Score.barNumberVisibility =
    #first-bar-number-invisible-and-no-parenthesized-bar-numbers
  es | d1 | c
}
```



Numeri di battuta racchiusi in rettangoli o cerchi

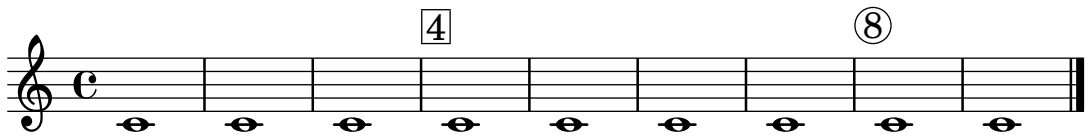
I numeri di battuta possono apparire anche all'interno di rettangoli o cerchi.

```
\relative c' {
  % Prevent bar numbers at the end of a line and permit them elsewhere
  \override Score.BarNumber.break-visibility = #end-of-line-invisible
  \set Score.barNumberVisibility = #(every-nth-bar-number-visible 4)

  % Increase the size of the bar number by 2
  \override Score.BarNumber.font-size = #2

  % Draw a box round the following bar number(s)
  \override Score.BarNumber.stencil
    = #(make-stencil-boxer 0.1 0.25 ly:text-interface::print)
  \repeat unfold 5 { c1 }
```

```
  % Draw a circle round the following bar number(s)
  \override Score.BarNumber.stencil
    = #(make-stencil-circler 0.1 0.25 ly:text-interface::print)
  \repeat unfold 4 { c1 } \bar "|."
}
```



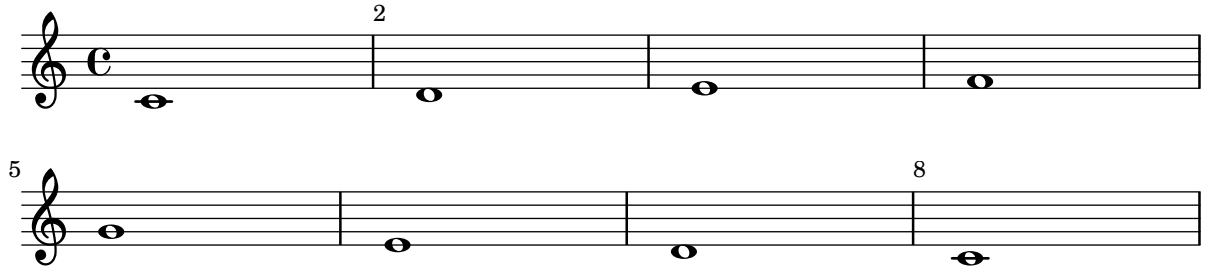
Printing bar numbers using modulo-bar-number-visible

If the remainder of the division of the current `BarNumber` by the first argument of `modulo-bar-number-visible` equals its second argument print the `BarNumber`.
Useful to print the `BarNumber` at certain distances, p.e:

- `(modulo-bar-number-visible 3 2)` -> prints 2,5,8
- `(modulo-bar-number-visible 4 2)` -> prints 2,6,10
- `(modulo-bar-number-visible 3 1)` -> prints 3,5,7
- `(modulo-bar-number-visible 5 2)` -> prints 2,7,12

```
\layout {
  \context {
    \Score
    \override BarNumber.break-visibility = ##(#f #t #t)
    barNumberVisibility = #(modulo-bar-number-visible 3 2)
  }
}

\relative c' {
  \bar ""
  c1 | d | e | f \break
  g1 | e | d | c
}
```

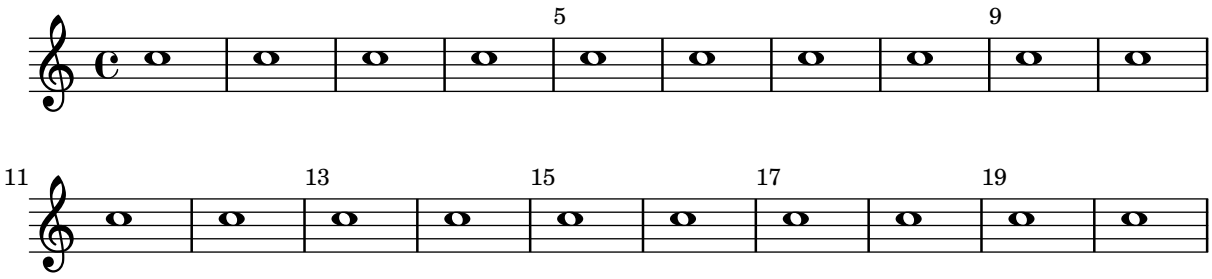


Stampare i numeri di battuta a intervalli regolari variabili

L'intervallo dei numeri di battuta può essere modificato cambiando la funzione di contesto `{set-bar-number-visibility}`.

```
\relative c' {
  \override Score.BarNumber.break-visibility = #end-of-line-invisible
  \context Score \applyContext #(set-bar-number-visibility 4)
  \repeat unfold 10 c'1
```

```
  \context Score \applyContext #(set-bar-number-visibility 2)
  \repeat unfold 10 c
}
```



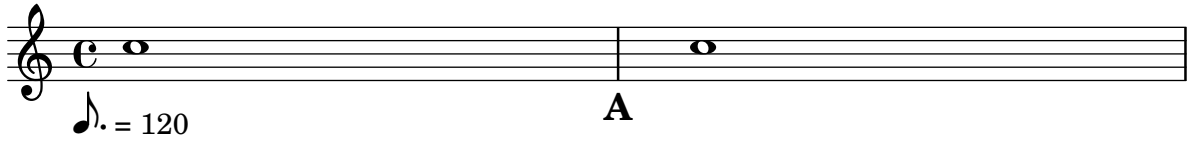
Posizionare il metronomo e i numeri di chiamata sotto il rigo

Di norma, il metronomo e i numeri di chiamata vengono posizionati sopra il rigo. Per metterli sotto il rigo basta impostare correttamente la proprietà `direction` di `MetronomeMark` o `RehearsalMark`.

```
\layout {
  indent = 0
  ragged-right = ##f
}

{
  % Metronome marks below the staff
  \override Score.MetronomeMark.direction = #DOWN
  \tempo 8. = 120
  c''1

  % Rehearsal marks below the staff
  \override Score.RehearsalMark.direction = #DOWN
  \mark \default
  c''1
}
```



Printing music with different time signatures

In the following snippet, two parts have a completely different time signature, yet remain synchronized.

The bar lines can no longer be printed at the `Score` level; to allow independent bar lines in each part, the `Default_barline_engraver` and `Timing_translator` are moved from the `Score` context to the `Staff` context.

If bar numbers are required, the `Bar_number_engraver` should also be moved, since it relies on properties set by the `Timing_translator`; a `\with` block can be used to add bar numbers to the relevant staff.

```
\paper {
  indent = #0
```

```
  ragged-right = ##t
}

global = { \time 3/4 { s2.*3 } \bar "" \break { s2.*3 } }

\layout {
  \context {
    \Score
    \remove "Timing_translator"
    \remove "Default_bar_line_engraver"
    \remove "Bar_number_engraver"
    \override SpacingSpanner.uniform-stretching = ##t
    \override SpacingSpanner.strict-note-spacing = ##t
    proportionalNotationDuration = #(ly:make-moment 1/64)
  }
  \context {
    \Staff
    \consists "Timing_translator"
    \consists "Default_bar_line_engraver"
  }
  \context {
    \Voice
    \remove "Forbid_line_break_engraver"
    tupletFullLength = ##t
  }
}

Bassklarinette = \new Staff \with {
  \consists "Bar_number_engraver"
  barNumberVisibility = #(every-nth-bar-number-visible 2)
  \override BarNumber.break-visibility = #end-of-line-invisible
} <<
  \global {
    \bar "|"
    \clef treble
    \time 3/8
    d''4.

    \bar "|"
    \time 3/4
    r8 des''2( c''8)

    \bar "|"
    \time 7/8
    r4. ees''2 ~

    \bar "|"
    \time 2/4
    \tupletUp
    \tuplet 3/2 { ees''4 r4 d''4 ~ }

    \bar "|"
```

```
    \time 3/8
    \tupletUp
    \tuplet 4/3 { d''4 r4 }

    \bar "|"
    \time 2/4
    e''2

    \bar "|"
    \time 3/8
    es''4.

    \bar "|"
    \time 3/4
    r8 d''2 r8
    \bar "|"
  }
>>

Perkussion = \new StaffGroup <<
  \new Staff <<
    \global {
      \bar "|"
      \clef percussion
      \time 3/4
      r4 c'2 ~

      \bar "|"
      c'2.

      \bar "|"
      R2.

      \bar "|"
      r2 g'4 ~

      \bar "|"
      g'2. ~

      \bar "|"
      g'2.
    }
  >>
  \new Staff <<
    \global {
      \bar "|"
      \clef percussion
      \time 3/4
      R2.

      \bar "|"
      g'2. ~
```

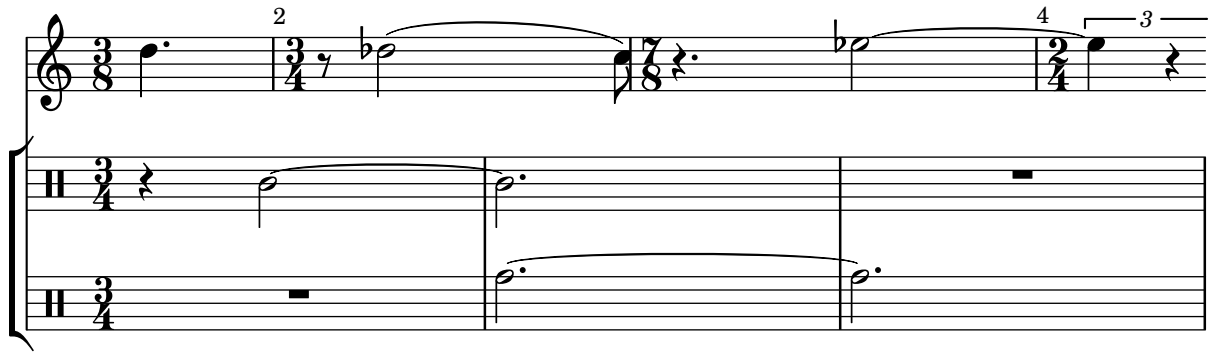
```
      \bar "|"
      g'2.

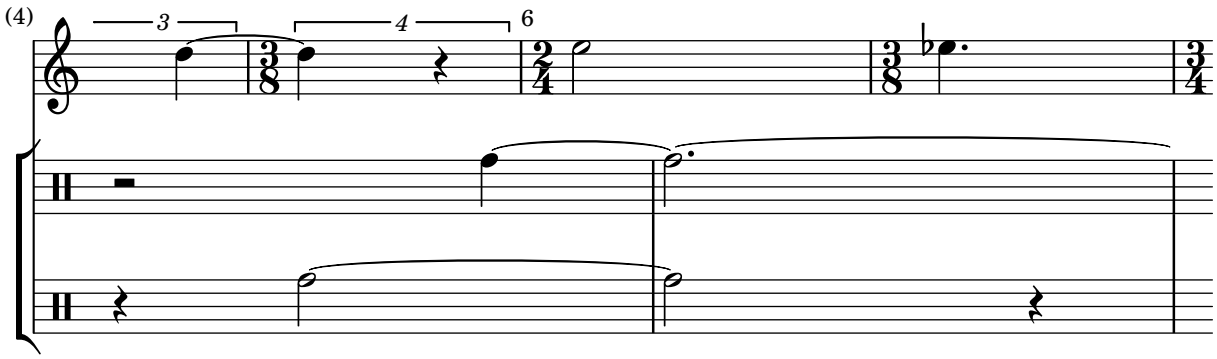
      \bar "|"
      r4 g'2 ~

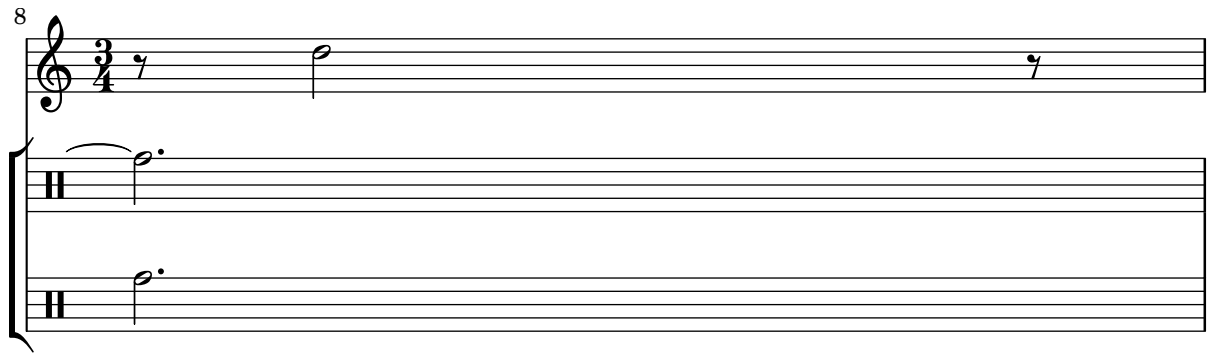
      \bar "|"
      g'2 r4

      \bar "|"
      g'2.
    }
  >>
>>

\score {
  <<
    \Bassklarinette
    \Perkussion
  >>
}
```





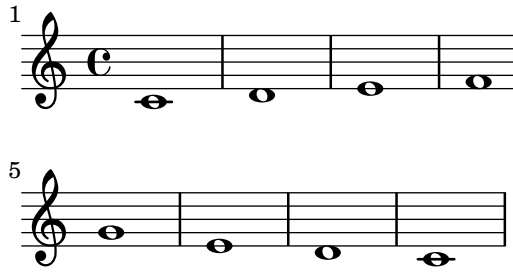


Mostrare il numero di battuta nella prima misura

Il primo numero di battuta di una partitura viene soppresso se è inferiore o uguale a '1'. Se si imposta `barNumberVisibility` su `all-bar-numbers-visible`, verrà mostrato il numero di battuta della prima misura e di tutte quelle successive. Si noti che perché funzioni è necessario inserire una stanghetta invisibile prima della prima nota.

```
\layout {
  indent = 0
  ragged-right = ##t
}

\relative c' {
  \set Score.barNumberVisibility = #all-bar-numbers-visible
  \bar ""
  c1 | d | e | f \break
  g1 | e | d | c
}
```
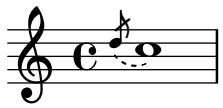


Ridefinire le impostazioni predefinite globali degli abbellimenti

Le impostazioni globali predefinite degli abbellimenti sono salvate negli identificatori `startGraceMusic`, `stopGraceMusic`, `startAcciaccaturaMusic`, `stopAcciaccaturaMusic`, `startAppoggiaturaMusic` e `stopAppoggiaturaMusic`, che sono definiti nel file `ly/grace-init.ly`. Ridefinendoli si possono ottenere effetti diversi.

```
startAcciaccaturaMusic = {
  <>(
  \override Flag.stroke-style = #"grace"
  \slurDashed
}

stopAcciaccaturaMusic = {
  \revert Flag.stroke-style
  \slurSolid
  <>)
}
```

```
\relative c'' {
  \acciaccatura d8 c1
}
```

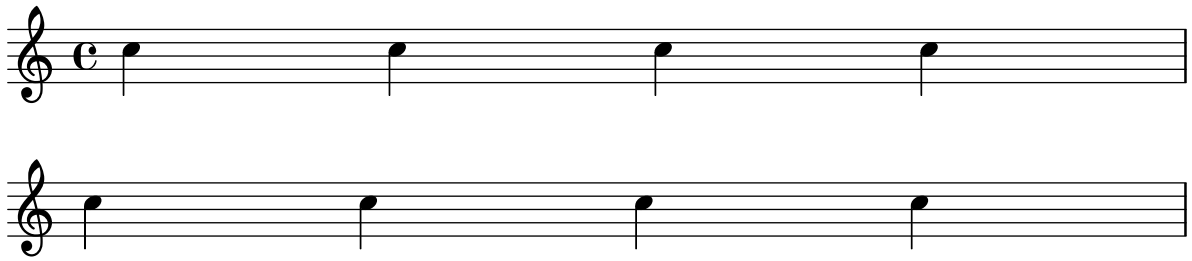


Togliere i numeri di battuta da uno spartito

I numeri di battuta possono essere tolti rimuovendo l'incisore `Bar_number_engraver` dal contesto `Score`.

```
\layout {
  \context {
    \Score
    \omit BarNumber
    % or:
    %\remove "Bar_number_engraver"
  }
}

\relative c'' {
  c4 c c c \break
  c4 c c c
}
```

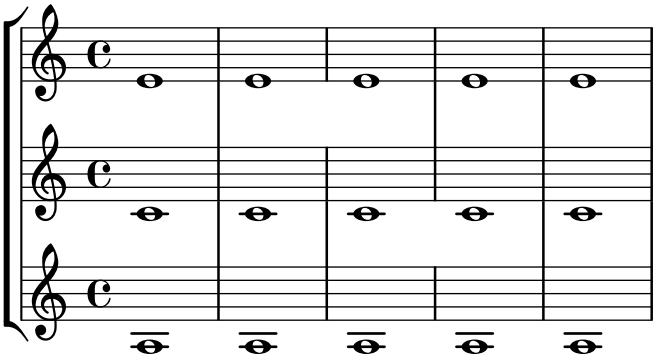


Removing connecting bar lines on StaffGroup, PianoStaff, or GrandStaff

By default, bar lines in StaffGroup, PianoStaff, or GrandStaff groups are connected between the staves, i.e. a SpanBar is printed. This behaviour can be overridden on a staff-by-staff basis.

```
\relative c' {
  \new StaffGroup <<
    \new Staff {
      e1 | e
      \once \override Staff.BarLine.allow-span-bar = ##f
      e1 | e | e
    }
    \new Staff {
      c1 | c | c
      \once \override Staff.BarLine.allow-span-bar = ##f
      c1 | c
    }
```

```
    \new Staff {
      a1 | a | a | a | a
    }
  >>
}
```



Stili di pausa

Esistono vari stili di pausa.

```
\new Staff \relative c {
  \omit Score.TimeSignature
  \cadenzaOn

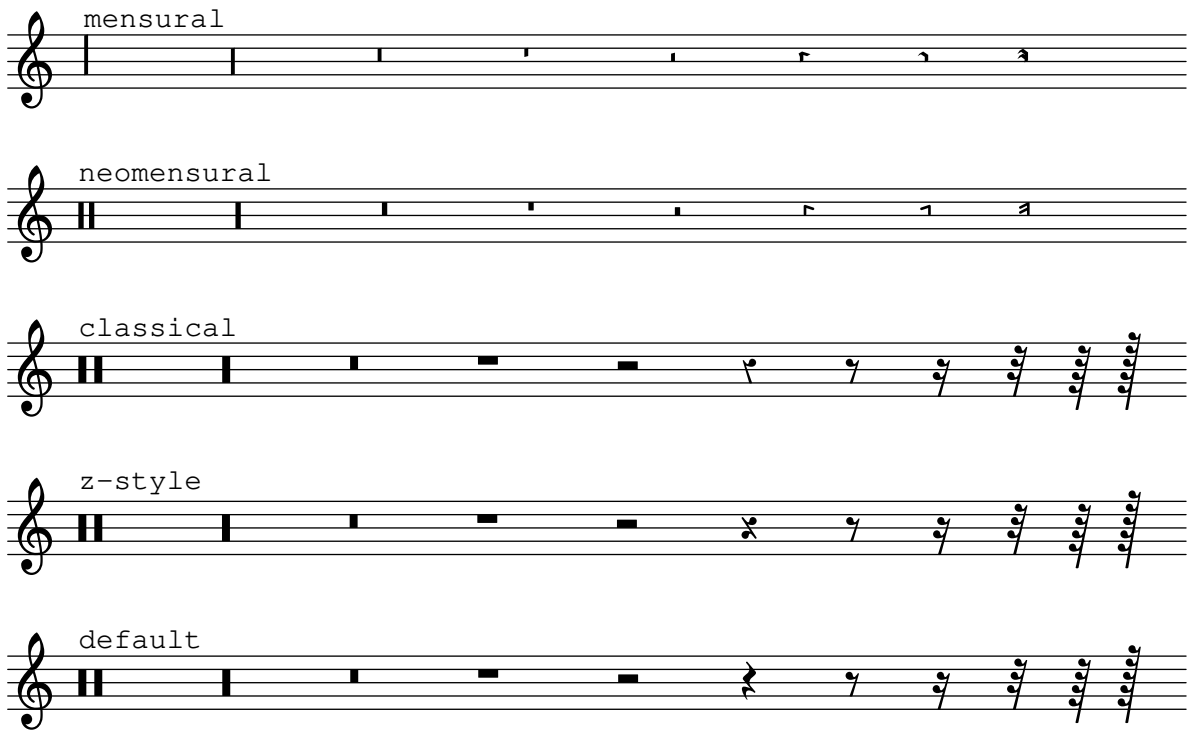
  \override Staff.Rest.style = #'mensural
  r\maxima^\markup \typewriter { mensural }
  r\longa r\breve r1 r2 r4 r8 r16 s32 s64 s128 s128
  \bar ""
  \break

  \override Staff.Rest.style = #'neomensural
  r\maxima^\markup \typewriter { neomensural }
  r\longa r\breve r1 r2 r4 r8 r16 s32 s64 s128 s128
  \bar ""
  \break

  \override Staff.Rest.style = #'classical
  r\maxima^\markup \typewriter { classical }
  r\longa r\breve r1 r2 r4 r8 r16 r32 r64 r128 s128
  \bar ""
  \break

  \override Staff.Rest.style = #'z
  r\maxima^\markup \typewriter { z-style }
  r\longa r\breve r1 r2 r4 r8 r16 r32 r64 r128 s128
  \bar ""
  \break

  \override Staff.Rest.style = #'default
  r\maxima^\markup \typewriter { default }
  r\longa r\breve r1 r2 r4 r8 r16 r32 r64 r128 s128
}
```



Reverting default beam endings

To typeset beams grouped `3-4-3-2` in 12/8 it is necessary first to override the default beam endings in 12/8, and then to set up the new beaming endings:

```
\relative c'' {
  \time 12/8

  % Default beaming
  a8 a a a a a a a a a a a

  % Set new values for beam endings
  \set Score.beatStructure = 3,4,3,2
  a8 a a a a a a a a a a a
}
```



Rhythmic slashes

In “simple” lead-sheets, sometimes no actual notes are written, instead only “rhythmic patterns” and chords above the measures are notated giving the structure of a song. Such a feature is for example useful while creating/transcribing the structure of a song and also when sharing lead sheets with guitarists or jazz musicians.

The standard support for this using `\repeat percent` is unsuitable here since the first beat has to be an ordinary note or rest.

This example shows two solutions to this problem, by redefining ordinary rests to be printed as slashes. (If the duration of each beat is not a quarter note, replace the `r4` in the definitions with a rest of the appropriate duration).

```
% Macro to print single slash
rs = {
```

```
  \once \override Rest.stencil = #ly:percent-repeat-item-interface::beat-slash
  \once \override Rest.thickness = #0.48
  \once \override Rest.slope = #1.7
  r4
}

% Function to print a specified number of slashes
comp = #(define-music-function (count) (integer?)
  #{
    \override Rest.stencil = #ly:percent-repeat-item-interface::beat-slash
    \override Rest.thickness = #0.48
    \override Rest.slope = #1.7
    \repeat unfold $count { r4 }
    \revert Rest.stencil
  #}
)

\score {
  \relative c' {
    c4 d e f |
    \rs \rs \rs \rs |
    \comp #4 |
  }
}
```
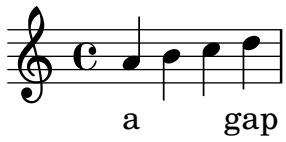


Skips in lyric mode (2)

Although `s` skips cannot be used in `\lyricmode` (it is taken to be a literal "s", not a space), double quotes (`""`) or underscores (`_`) are available.

So for example:

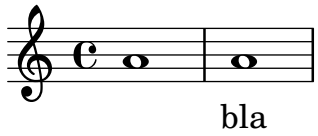
```
<<
  \relative c'' { a4 b c d }
  \new Lyrics \lyricmode { a4 "" _ gap }
>>
```



Skips in lyric mode

The `s` syntax for skips is only available in note mode and chord mode. In other situations, for example, when entering lyrics, using the `\skip` command is recommended.

```
<<
  \relative c'' { a1 | a }
  \new Lyrics \lyricmode { \skip 1 bla1 }
>>
```



Stemlets

In some notational conventions beams are allowed to extend over rests. Depending on preference, these beams may drop 'stemlets' to help the eye appreciate the rhythm better, and in some modern music the rest itself is omitted and only the stemlet remains.

This snippet shows a progression from traditional notation, to beams over the rest, to stemlets over the rest, to stemlets alone. Stemlets are generated by overriding the `'stemlet-length` property of `Stem`, while rests are hidden by setting `'transparent = ##t`.

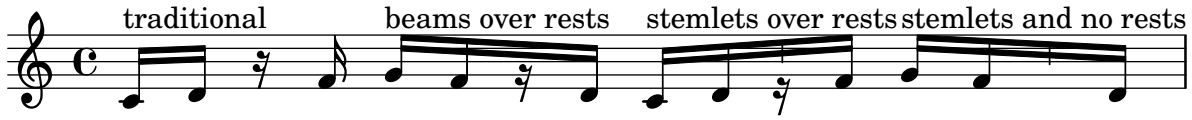
Some `\markup` elements are included in the source to highlight the different notations.

```
\paper { ragged-right = ##f }

{
  c'16^\markup { traditional } d' r f'
  g'16[^\markup { beams over rests } f' r d']

  % N.B. use Score.Stem to set for the whole score.
  \override Staff.Stem.stemlet-length = #0.75
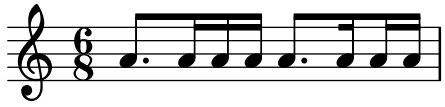
  c'16[^\markup { stemlets over rests } d' r f']
  g'16[^\markup { stemlets and no rests } f'
  \once \hide Rest
  r16 d']
}
```



Travatura che segue strettamente il battito

Si possono impostare i tratti di suddivisione della travatura in modo che siano rivolti verso la relativa pulsazione. La prima travatura fa sì che non spuntino i tratti di suddivisione (comportamento predefinito); la seconda travatura è orientata verso la pulsazione.

```
\relative c'' {
  \time 6/8
  a8. a16 a a
  \set strictBeatBeaming = ##t
  a8. a16 a a
}
```



Suddividere le travature

Le travature di note consecutive di un sedicesimo (o più brevi) non vengono suddivise, ovvero i tre (o più) tratti della travatura si estendono, senza spezzarsi, sugli interi gruppi di note. Questo comportamento può essere modificato in modo da suddividere le travature in sottogruppi attraverso la proprietà `subdivideBeams`. Se impostata, le travature che comprendono più sottogruppi

verranno suddivise a intervalli definiti dal valore attuale di `baseMoment`, riducendo le travature multiple al numero di travature che indica il valore metrico della suddivisione. Se il gruppo successivo alla suddivisione è più breve del valore metrico corrente (di solito perché la travatura è incompleta), il numero di travature riflette il gruppo di suddivisione più lungo possibile. Tuttavia, se rimane una sola nota dopo la divisione, questa restrizione non viene applicata. Si noti che `baseMoment`, se non impostata esplicitamente, equivale a uno fratto il denominatore dell'attuale indicazione di tempo. Deve quindi essere impostata su una frazione che stabilisca la durata del sottogruppo di travature; lo si può fare usando la funzione `ly:make-moment`, come è mostrato in questo frammento di codice. Inoltre quando `baseMoment` cambia, anche `beatStructure` deve essere modificato per accordarsi con `baseMoment`:
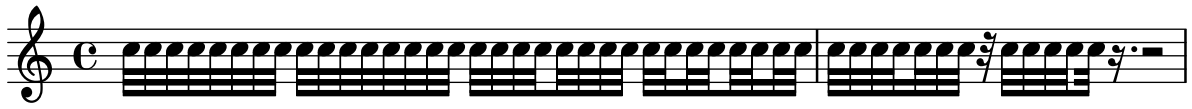
```
\relative c'' {
  c32[ c c c c c c]
  \set subdivideBeams = ##t
  c32[ c c c c c c]

  % Set beam sub-group length to an eighth note
  \set baseMoment = #(ly:make-moment 1/8)
  \set beatStructure = 2,2,2,2
  c32[ c c c c c c]

  % Set beam sub-group length to a sixteenth note
  \set baseMoment = #(ly:make-moment 1/16)
  \set beatStructure = 4,4,4,4
  c32[ c c c c c c]

  % Shorten beam by 1/32
  \set baseMoment = #(ly:make-moment 1/8)
  \set beatStructure = 2,2,2,2
  c32[ c c c c c] r32

  % Shorten beam by 3/32
  \set baseMoment = #(ly:make-moment 1/8)
  \set beatStructure = 2,2,2,2
  c32[ c c c] r16.
  r2
}
```



Tam-tam example

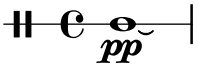
A tam-tam example, entered with 'tt'

```
#(define mydrums '((tamtam default #t 0)))

\new DrumStaff \with { instrumentName = #"Tamtam" }

\drummode {
  \set DrumStaff.drumStyleTable = #(alist->hash-table mydrums)
  \override Staff.StaffSymbol.line-positions = #'( 0 )
  \override Staff.BarLine.bar-extent = #'(-1.5 . 1.5)
```

```
  tt 1 \pp \laissezVibrer
}
```

Tamtam 

Three-sided box

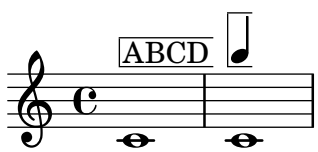
This example shows how to add a markup command to get a three sided box around some text (or other markup).

```
% New command to add a three sided box, with sides north, west and south
% Based on the box-stencil command defined in scm/stencil.scm
% Note that ";;" is used to comment a line in Scheme
#(define-public (NWS-box-stencil stencil thickness padding)
   "Add a box around STENCIL, producing a new stencil."
   (let* ((x-ext (interval-widen (ly:stencil-extent stencil X) padding))
          (y-ext (interval-widen (ly:stencil-extent stencil Y) padding))
          (y-rule (make-filled-box-stencil (cons 0 thickness) y-ext))
          (x-rule (make-filled-box-stencil
                   (interval-widen x-ext thickness) (cons 0 thickness))))
     ;; (set! stencil (ly:stencil-combine-at-edge stencil X 1 y-rule padding))
     (set! stencil (ly:stencil-combine-at-edge stencil X LEFT y-rule padding))
     (set! stencil (ly:stencil-combine-at-edge stencil Y UP x-rule 0.0))
     (set! stencil (ly:stencil-combine-at-edge stencil Y DOWN x-rule 0.0))
     stencil))

% The corresponding markup command, based on the \box command defined
% in scm/define-markup-commands.scm
#(define-markup-command (NWS-box layout props arg) (markup?)
   #:properties ((thickness 0.1) (font-size 0) (box-padding 0.2))
   "Draw a box round @var{arg}.  Looks at @code{thickness},
@code{box-padding} and @code{font-size} properties to determine line
thickness and padding around the markup."
   (let ((pad (* (magstep font-size) box-padding))
         (m (interpret-markup layout props arg)))
     (NWS-box-stencil m thickness pad)))

% Test it:
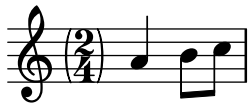
\relative c' {
  c1^\markup { \NWS-box ABCD }
  c1^\markup { \NWS-box \note {4} #1.0 }
}
```



Time signature in parentheses - method 3

Another way to put the time signature in parenthesis
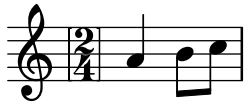
```
\relative c'' {
  \override Staff.TimeSignature.stencil = #(lambda (grob)
    (parenthesize-stencil (ly:time-signature::print grob) 0.1 0.4 0.4 0.1 ))
  \time 2/4
  a4 b8 c
}
```



Time signature in parentheses

The time signature can be enclosed within parentheses.

```
\relative c'' {
  \override Staff.TimeSignature.stencil = #(lambda (grob)
    (bracketify-stencil (ly:time-signature::print grob) Y 0.1 0.2 0.1))
  \time 2/4
  a4 b8 c
}
```
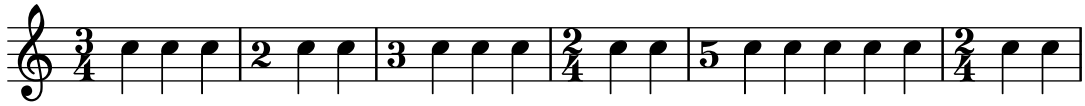


Indicazione di tempo che mostra solo il numeratore (invece della frazione)

Talvolta un'indicazione di tempo non deve mostrare la frazione intera (ad esempio 7/4), ma solo il numeratore (7 in questo caso). Si può ottenere facilmente con `\override Staff.TimeSignature.style = #'single-digit`, che cambia lo stile in modo permanente. Con `\revert Staff.TimeSignature.style`, questa impostazione può essere annullata. Per applicare lo stile a cifra singola (`single-digit`) a una sola indicazione di tempo, si usa il comando `\override` preceduto da `\once`.

```
\relative c'' {
  \time 3/4
  c4 c c
  % Change the style permanently
  \override Staff.TimeSignature.style = #'single-digit
  \time 2/4
  c4 c
  \time 3/4
  c4 c c
  % Revert to default style:
  \revert Staff.TimeSignature.style
  \time 2/4
  c4 c
  % single-digit style only for the next time signature
  \once \override Staff.TimeSignature.style = #'single-digit
  \time 5/4
  c4 c c c c
  \time 2/4
```
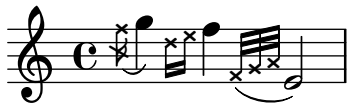
```
  c4 c
}
```



Modificare l'aspetto degli abbellimenti di un intero brano

L'aspetto di tutte le espressioni contenute nei blocchi `\grace` di un brano può essere modificato con le funzioni `add-grace-property` e `remove-grace-property`. L'esempio seguente toglie la definizione della direzione di `Stem` nell'abbellimento, in modo che gli abbellimenti non siano sempre rivolti in su, e barra le teste di nota.

```
\relative c'' {
  \new Staff {
    $(remove-grace-property 'Voice 'Stem 'direction)
    $(add-grace-property 'Voice 'NoteHead 'style 'cross)
    \new Voice {
       \acciaccatura { f16 } g4
       \grace { d16 e } f4
       \appoggiatura { f,32 g a } e2
    }
  }
}
```
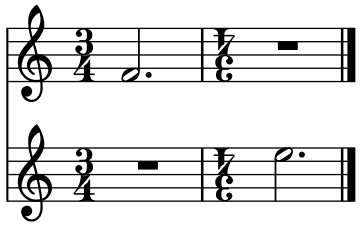


User defined time signatures

New time signature styles can be defined. The time signature in the second measure should be upside down in both staves.

```
#(add-simple-time-signature-style 'topsy-turvy
   (lambda (fraction)
     (make-rotate-markup 180 (make-compound-meter-markup fraction))))

<<
  \new Staff {
    \time 3/4 f'2.
    \override Score.TimeSignature.style = #'topsy-turvy
    \time 3/4 R2. \bar "|."
  }
  \new Staff {
    R2. e''
  }
>>
```



Using alternative flag styles

Alternative styles of flag on eighth and shorter notes can be displayed by overriding the `stencil` property of `Flag`. Valid values are `modern-straight-flag`, `old-straight-flag` and `flat-flag`.

```
testnotes = {
  \autoBeamOff
  c8 d16 c32 d64 \acciaccatura { c8 } d64 r4
}
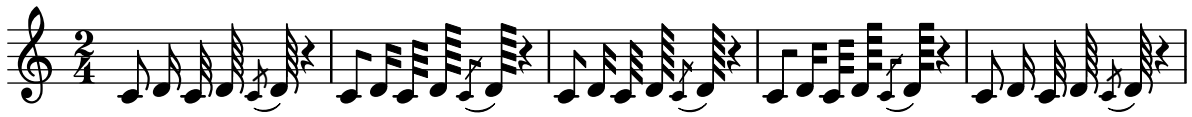
\score {
  \relative c' {
    \time 2/4
    \testnotes

    \override Flag.stencil = #modern-straight-flag
    \testnotes

    \override Flag.stencil = #old-straight-flag
    \testnotes

    \override Flag.stencil = #flat-flag
    \testnotes
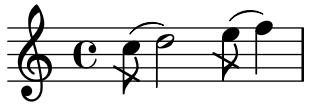
    \revert Flag.stencil
    \testnotes
  }
  \layout {
    indent = 0
    \context {
      \Score
      \override NonMusicalPaperColumn.line-break-permission = ##f
    }
  }
}
```



Usare il gambo barrato degli abbellimenti con le teste normali

Il gambo barrato presente nelle acciaccature può essere applicato in altre situazioni.

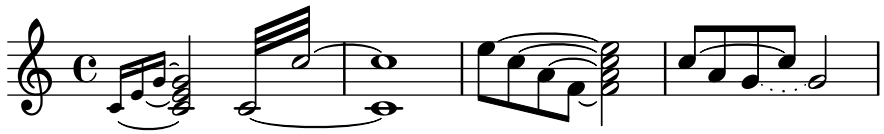
```
\relative c'' {
  \override Flag.stroke-style = #"grace"
  c8( d2) e8( f4)
}
```



Usare le legature di valore con un arpeggio

Le legature di valore vengono usate talvolta per scrivere un arpeggio. In questo caso, le due note da legare devono non essere consecutive. Per ottenere tale risultato occorre impostare la proprietà `tieWaitForNote` su `#t`. Questa funzionalità serve anche a legare un tremolo a un accordo e in generale qualsiasi coppia di note consecutive.

```
\relative c' {
  \set tieWaitForNote = ##t
  \grace { c16[ ~ e ~ g] ~ } <c, e g>2
  \repeat tremolo 8 { c32 ~ c' ~ } <c c,>1
  e8 ~ c ~ a ~ f ~ <e' c a f>2
  \tieUp
  c8 ~ a
  \tieDown
  \tieDotted
  g8 ~ c g2
}
```



Expressive marks

Sezione “Expressive marks” in *Guida alla Notazione*
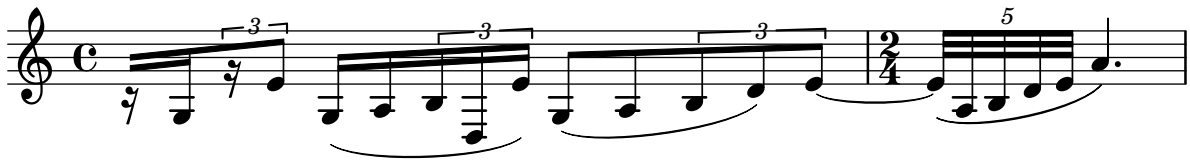
Adding beams, slurs, ties etc. when using tuplet and non-tuplet rhythms

LilyPond syntax can involve many unusual placements for parentheses, brackets etc., which might sometimes have to be interleaved.

For example, when entering a manual beam, the left square bracket has to be placed *after* the starting note and its duration, not before. Similarly, the right square bracket should directly follow the note which is to be at the end of the requested beaming, even if this note happens to be inside a tuplet section.

This snippet demonstrates how to combine manual beaming, manual slurs, ties and phrasing slurs with tuplet sections (enclosed within curly braces).
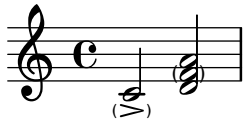
```
{
  r16[ g16 \tuplet 3/2 { r16 e'8] }
  g16( a \tuplet 3/2 { b d e') }
  g8[( a \tuplet 3/2 { b d') e'] ~ }
  \time 2/4
  \tuplet 5/4 { e'32\( a b d' e' } a'4.\)
}
```



Adding parentheses around an expressive mark or chordal note

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

```
\relative c' {
  c2-\parenthesize ->
  \override Parentheses.padding = #0.1
  \override Parentheses.font-size = #-4
  <d \parenthesize f a>2
}
```



Aggiungere i segni di tempo per i glissandi lunghi

I battiti saltati nei glissandi molto lunghi vengono talvolta segnalati con delle indicazioni di tempo, che consistono solitamente in dei gambi privi di teste di nota. Questi gambi possono essere usati anche per contenere segni di espressione intermedi.

Se i gambi non si allineano bene al glissando, può essere necessario riposizionarli leggermente.

```
glissandoSkipOn = {
  \override NoteColumn.glissando-skip = ##t
```
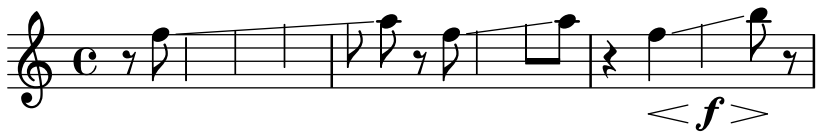
```
  \hide NoteHead
  \override NoteHead.no-ledgers = ##t
}

glissandoSkipOff = {
  \revert NoteColumn.glissando-skip
  \undo \hide NoteHead
  \revert NoteHead.no-ledgers
}

\relative c'' {
  r8 f8\glissando
  \glissandoSkipOn
  f4 g a a8\noBeam
  \glissandoSkipOff
  a8

  r8 f8\glissando
  \glissandoSkipOn
  g4 a8
  \glissandoSkipOff
  a8 |

  r4 f\glissando \<
  \glissandoSkipOn
  a4\f \>
  \glissandoSkipOff
  b8\! r |
}
```



Cambiare la forma dei portamenti indeterminati verso il basso o verso l'alto

La proprietà `shortest-duration-space` può essere modificata per cambiare la forma dei portamenti indeterminati verso il basso o verso l'alto.

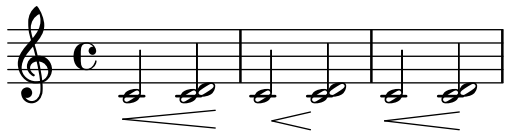
```
\relative c'' {
  \override Score.SpacingSpanner.shortest-duration-space = #4.0
  c2-\bendAfter #5
  c2-\bendAfter #-4.75
  c2-\bendAfter #8.5
  c2-\bendAfter #-6
}
```



Aligning the ends of hairpins to NoteColumn directions

The ends of hairpins may be aligned to the `LEFT`, `CENTER` or `RIGHT` of `NoteColumn` grobs by overriding the property `endpoint-alignments`, which is a pair of numbers representing the left and right ends of the hairpin. `endpoint-alignments` are expected to be directions (either -1, 0 or 1). Other values will be transformed with a warning. The right end of a hairpin terminating at a rest is not affected, always ending at the left edge of the rest.

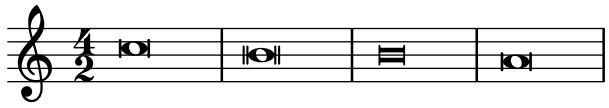
```
{
  c'2\< <c' d'>\! |
  \override Hairpin.endpoint-alignments = #'(1 . -1)
  c'2\< <c' d'>\! |
  \override Hairpin.endpoint-alignments = #`(,LEFT . ,CENTER)
  c'2\< <c' d'>\! |
}
```



Note brevi alternative

Le note brevi sono disponibili anche con due linee verticali su ciascun lato della testa invece di una sola e in stile barocco.

```
\relative c'' {
  \time 4/2
  c\breve |
  \override Staff.NoteHead.style = #'altdefault
  b\breve
  \override Staff.NoteHead.style = #'baroque
  b\breve
  \revert Staff.NoteHead.style
  a\breve
}
```

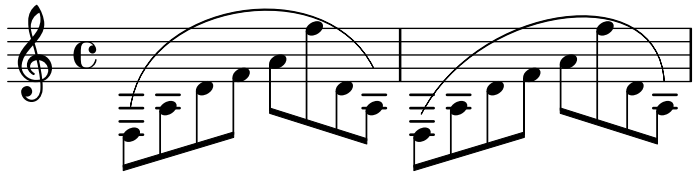


Asymmetric slurs

Slurs can be made asymmetric to match an asymmetric pattern of notes better.

```
slurNotes = { d,8( a' d f a f' d, a) }

\relative c' {
  \stemDown
  \slurUp
  \slurNotes
  \once \override Slur.eccentricity = #3.0
  \slurNotes
}
```



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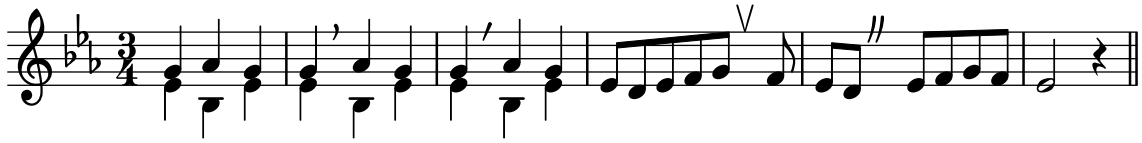
Breathing signs are available in different tastes: commas (default), ticks, vees and “railroad tracks” (caesura).

```
\new Staff \relative c'' {
  \key es \major
  \time 3/4
  % this bar contains no \breathe
  << { g4 as g } \\ { es4 bes es } >> |
  % Modern notation:
  % by default, \breathe uses the rcomma, just as if saying:
  % \override BreathingSign.text = #(make-musicglyph-markup "scripts.rcomma")
  << { g4 as g } \\ { es4 \breathe bes es } >> |

  % rvarcomma and lvarcomma are variations of the default rcomma and lcomma
  % N.B.: must use Staff context here, since we start a Voice below
  \override Staff.BreathingSign.text =
    \markup { \musicglyph "scripts.rvarcomma" }
  << { g4 as g } \\ { es4 \breathe bes es } >> |

  % vee
  \override BreathingSign.text = \markup { \musicglyph "scripts.upbow" }
  es8[ d es f g] \breathe f |

  % caesura
  \override BreathingSign.text =
    \markup { \musicglyph "scripts.caesura.curved" }
  es8[ d] \breathe es[ f g f] |
  es2 r4 \bar "||"
}
```



Broken Crescendo Hairpin

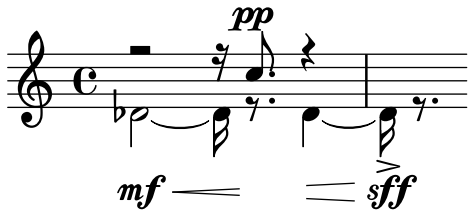
In order to make parts of a crescendo hairpin invisible, the following method is used: A white rectangle is drawn on top of the respective part of the crescendo hairpin, making it invisible. The rectangle is defined as postscript code within a text markup.

The markup command `with-dimensions` tells LilyPond to consider only the bottom edge of the rectangle when spacing it against the hairpin. The property `staff-padding` prevents the rectangle from fitting between the hairpin and staff.

Make sure the hairpin is in a lower layer than the text markup to draw the rectangle over the hairpin.

```
\relative c' {
  <<
```
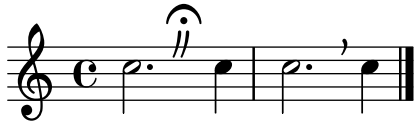
```
    {
      \dynamicUp
      r2 r16 c'8.\pp r4
    }
    \\
    {
      \override DynamicLineSpanner.layer = #0
      des,2\mf\< ~
      \override TextScript.layer = #2
      \once\override TextScript.staff-padding = #6
      \once\override TextScript.vertical-skylines = #'()
      des16_\markup \with-dimensions #'(2 . 7) #'(0 . 0)
                    \with-color #white
                    \filled-box #'(2 . 7) #'(0 . 2) #0
      r8. des4 ~ des16->\sff r8.
    }
  >>
}
```



Caesura ("railtracks") with fermata

A caesura is sometimes denoted by a double "railtracks" breath mark with a fermata sign positioned above. This snippet shows an optically pleasing combination of railtracks and fermata.

```
\relative c'' {
  c2.
  % construct the symbol
  \override BreathingSign.text = \markup {
    \override #'(direction . 1)
    \override #'(baseline-skip . 1.8)
    \dir-column {
      \translate #'(0.155 . 0)
        \center-align \musicglyph "scripts.caesura.curved"
      \center-align \musicglyph "scripts.ufermata"
    }
  }
  \breathe c4
  % set the breathe mark back to normal
  \revert BreathingSign.text
  c2. \breathe c4
  \bar "|."
}
```



Center text below hairpin dynamics

This example provides a function to typeset a hairpin (de)crescendo with some additional text below it, such as “molto” or “poco”. The added text will change the direction according to the direction of the hairpin. The Hairpin is aligned to DynamicText.

The example also illustrates how to modify the way an object is normally printed, using some Scheme code.

```
\paper { tagline = ##f }

hairpinWithCenteredText =
#(define-music-function (text) (markup?)
  #{
    \once \override Voice.Hairpin.after-line-breaking =
      #(lambda (grob)
        (let* ((stencil (ly:hairpin::print grob))
               (par-y (ly:grob-parent grob Y))
               (dir (ly:grob-property par-y 'direction))
               (staff-line-thickness
                 (ly:output-def-lookup (ly:grob-layout grob) 'line-thickness))
               (new-stencil (ly:stencil-aligned-to
                 (ly:stencil-combine-at-edge
                   (ly:stencil-aligned-to stencil X CENTER)
                   Y dir
                   (ly:stencil-aligned-to
                     (grob-interpret-markup
                       grob
                       (make-fontsize-markup
                         (magnification->font-size
                           (+ (ly:staff-symbol-staff-space grob)
                              (/ staff-line-thickness 2)))
                         text)) X CENTER))
                 X LEFT))
               (staff-space (ly:output-def-lookup
                 (ly:grob-layout grob) 'staff-space))
               (par-x (ly:grob-parent grob X))
               (dyn-text (grob::has-interface par-x 'dynamic-text-interface))
               (dyn-text-stencil-x-length
                 (if dyn-text
                   (interval-length
                     (ly:stencil-extent (ly:grob-property par-x 'stencil) X))
                   0))
               (x-shift
                 (if dyn-text
                   (-
                     (+ staff-space dyn-text-stencil-x-length)
                     (* 0.5 staff-line-thickness)) 0)))

          (ly:grob-set-property! grob 'Y-offset 0)
          (ly:grob-set-property! grob 'stencil
             (ly:stencil-translate-axis
              new-stencil
              x-shift X))))
```

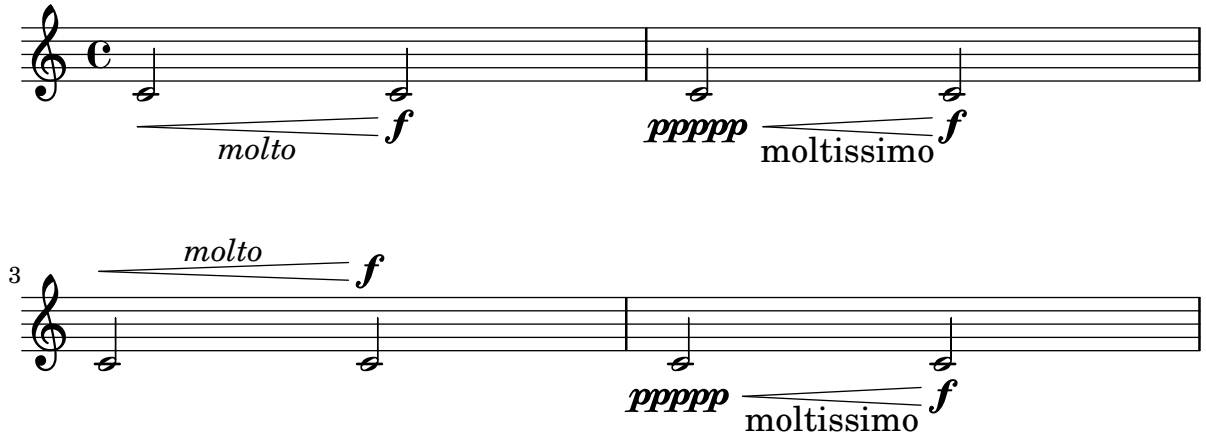
```
  #})

hairpinMolto =
\hairpinWithCenteredText \markup { \italic molto }

hairpinMore =
\hairpinWithCenteredText \markup { \larger moltissimo }

\layout { ragged-right = ##f }

\relative c' {
  \hairpinMolto
  c2\< c\f
  \hairpinMore
  c2\ppppp\< c\f
  \break
  \hairpinMolto
  c2^\< c\f
  \hairpinMore
  c2\ppppp\< c\f
}
```



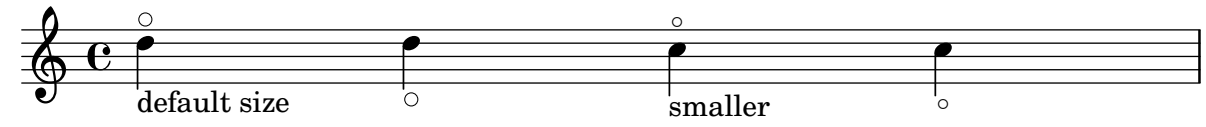
Modifica della dimensione del segno di \flageolet

Per ridurre la dimensione del cerchio di `\flageolet`, usare la seguente funzione Scheme.

```
smallFlageolet = \tweak font-size -3 \flageolet

\layout { ragged-right = ##f }

\relative c'' {
  d4^\flageolet_\markup { default size } d_\flageolet
  c4^\smallFlageolet_\markup { smaller } c_\smallFlageolet
}
```
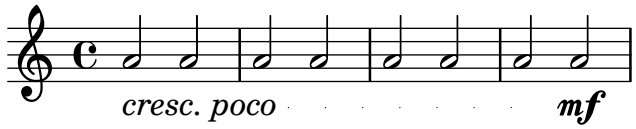


Nascondere la linea di estensione per le dinamiche testuali

Il testo usato per i *crescendo* e i *decrescendo* può essere cambiato modificando le proprietà di contesto `crescendoText` e `decrescendoText`.

Lo stile della linea dell'estensore può essere cambiato modificando la proprietà `'style` di `DynamicTextSpanner`. Il valore predefinito è `'dashed-line`; gli altri valori possibili sono `'line`, `'dotted-line` e `'none`.
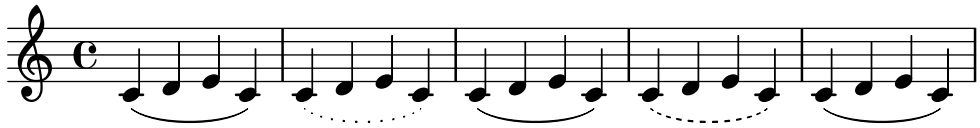
```
\relative c'' {
  \set crescendoText = \markup { \italic { cresc. poco } }
  \set crescendoSpanner = #'text
  \override DynamicTextSpanner.style = #'dotted-line
  a2\< a
  a2 a
  a2 a
  a2 a\mf
}
```



Changing the appearance of a slur from solid to dotted or dashed

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

```
\relative c' {
  c4( d e c)
  \slurDotted
  c4( d e c)
  \slurSolid
  c4( d e c)
  \slurDashed
  c4( d e c)
  \slurSolid
  c4( d e c)
}
```
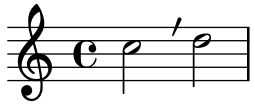


Cambiare il simbolo del segno di respiro

Il glifo del respiro può essere modificato sovrascrivendo la proprietà `text` dell'oggetto di formattazione `BreathingSign` con qualsiasi testo incluso in un blocco markup.

```
\relative c'' {
  c2
  \override BreathingSign.text =
    \markup { \musicglyph "scripts.rvarcomma" }
  \breathe
  d2
```
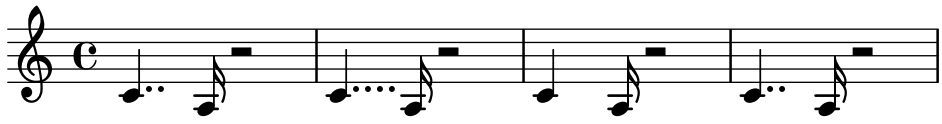
```
}
```



Modifica del numero di punti di aumentazione per nota

Il numero di punti di aumentazione su una singola nota può essere modificato in modo indipendente dai punti posizionati dopo la nota.

```
\relative c' {
  c4.. a16 r2 |
  \override Dots.dot-count = #4
  c4.. a16 r2 |
  \override Dots.dot-count = #0
  c4.. a16 r2 |
  \revert Dots.dot-count
  c4.. a16 r2 |
}
```



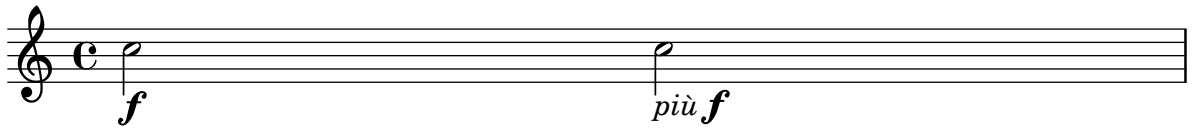
Combining dynamics with markup texts

Some dynamics may involve text indications (such as “più forte” or “piano subito”). These can be produced using a `\markup` block.

```
piuF = \markup { \italic più \dynamic f }

\layout { ragged-right = ##f }

\relative c'' {
  c2\f c-\piuF
}
```
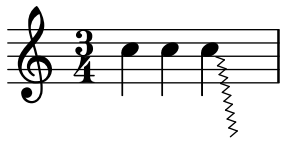


Glissando contemporaneo

Un glissando contemporaneo senza una nota finale può essere creato usando una nota nascosta e un tempo di cadenza.

```
\relative c'' {
  \time 3/4
  \override Glissando.style = #'zigzag
  c4 c
  \cadenzaOn
  c4\glissando
  \hideNotes
```

```
  c,,4
  \unHideNotes
  \cadenzaOff
  \bar "|"
}
```



Controlling spanner visibility after a line break
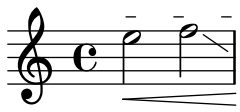
The visibility of spanners which end on the first note following a line break is controlled by the `after-line-breaking` callback `ly:spanner::kill-zero-spanned-time`.

For objects such as glissandos and hairpins, the default behaviour is to hide the spanner after a break; disabling the callback will allow the left-broken span to be shown.

Conversely, spanners which are usually visible, such as text spans, can be hidden by enabling the callback.

```
\paper { ragged-right = ##t }

\relative c'' {
  \override Hairpin.to-barline = ##f
  \override Glissando.breakable = ##t
  % show hairpin
  \override Hairpin.after-line-breaking = ##t
  % hide text span
  \override TextSpanner.after-line-breaking =
    #ly:spanner::kill-zero-spanned-time
  e2\<\startTextSpan
  % show glissando
  \override Glissando.after-line-breaking = ##t
  f2\glissando
  \break
  f,1\!\stopTextSpan
}
```
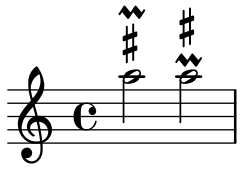




Controllo dell'ordine verticale degli script

L'ordine verticale degli script è determinato dalla proprietà `'script-priority`. Più il numero è piccolo, più sarà posto vicino alla nota. In questo esempio, il simbolo di *diesis* (oggetto `TextScript`) ha prima la priorità più bassa, dunque è posto più in basso nel primo esempio. Nel

secondo, il *trillo* (oggetto `Script`) ha la priorità più bassa, quindi si trova all'interno. Quando due oggetti hanno la stessa priorità, l'ordine in cui sono inseriti determina quale viene prima.

```
\relative c''' {
  \once \override TextScript.script-priority = #-100
  a2^\prall^\markup { \sharp }

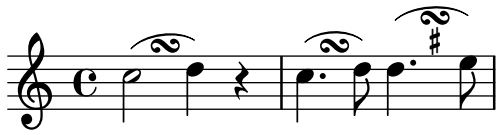
  \once \override Script.script-priority = #-100
  a2^\prall^\markup { \sharp }
}
```



Creare un gruppetto ritardato

Creare un gruppetto ritardato, dove la nota più bassa del gruppetto usa l'alterazione, richiede vari \override. La proprietà `outside-staff-priority` deve essere impostata su `#f`, perché altrimenti questa avrebbe la precedenza sulla proprietà `avoid-slur`. Cambiando le frazioni `2/3` e `1/3` si aggiusta la posizione orizzontale.

```
\relative c'' {
  \after 2*2/3 \turn c2( d4) r |
  \after 4 \turn c4.( d8)
  \after 4
  {
    \once \set suggestAccidentals = ##t
    \once \override AccidentalSuggestion.outside-staff-priority = ##f
    \once \override AccidentalSuggestion.avoid-slur = #'inside
    \once \override AccidentalSuggestion.font-size = -3
    \once \override AccidentalSuggestion.script-priority = -1
    \once \hideNotes
    cis8\turn \noBeam
  }
  d4.( e8)
}
```
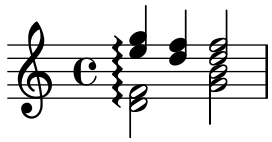


Creare degli arpeggi che attraversano note appartenenti a voci diverse

Si può disegnare un *arpeggio* che attraversa delle note in voci diverse dello stesso rigo se si aggiunge l'incisore `Span_arpeggio_engraver` nel contesto `Staff`:

```
\new Staff \with {
  \consists "Span_arpeggio_engraver"
}
\relative c' {
  \set Staff.connectArpeggios = ##t
```

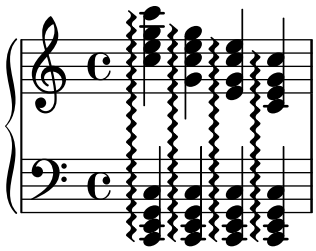
```
  <<
    { <e' g>4\arpeggio <d f> <d f>2 }
    \\
    { <d, f>2\arpeggio <g b>2 }
  >>
}
```



Creare degli arpeggi che attraversano il rigo del pianoforte

In un rigo per pianoforte (`PianoStaff`), è possibile far sì che un *arpeggio* attraversi i righi impostando la proprietà `PianoStaff.connectArpeggios`.

```
\new PianoStaff \relative c'' <<
  \set PianoStaff.connectArpeggios = ##t
  \new Staff {
    <c e g c>4\arpeggio
    <g c e g>4\arpeggio
    <e g c e>4\arpeggio
    <c e g c>4\arpeggio
  }
  \new Staff {
    \clef bass
    \repeat unfold 4 {
      <c,, e g c>4\arpeggio
    }
  }
>>
```

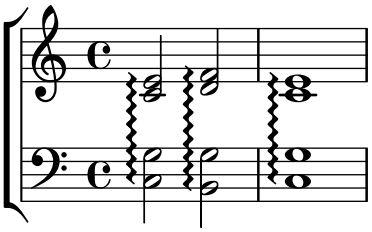


Creare degli arpeggi che attraversano i righi in altri contesti

Si possono creare *arpeggi* che attraversano i righi in contesti diversi da `GrandStaff`, `PianoStaff` e `StaffGroup` se l'incisore `Span_arpeggio_engraver` è incluso nel contesto `Score`.

```
\score {
  \new ChoirStaff {
    \set Score.connectArpeggios = ##t
    <<
      \new Voice \relative c' {
        <c e>2\arpeggio
        <d f>2\arpeggio
        <c e>1\arpeggio
```

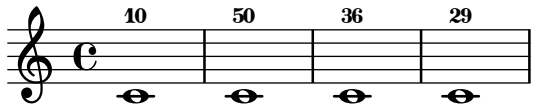
```
      }
      \new Voice \relative c {
        \clef bass
        <c g'>2\arpeggio
        <b g'>2\arpeggio
        <c g'>1\arpeggio
      }
    >>
  }
  \layout {
    \context {
      \Score
      \consists "Span_arpeggio_engraver"
    }
  }
}
```



Creating double-digit fingerings

Creating fingerings larger than 5 is possible.

```
\relative c' {
  c1-10
  c1-50
  c1-36
  c1-29
}
```



Creating "real" parenthesized dynamics
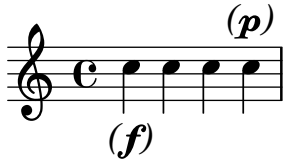
Although the easiest way to add parentheses to a dynamic mark is to use a `\markup` block, this method has a downside: the created objects will behave like text markups, and not like dynamics.

However, it is possible to create a similar object using the equivalent Scheme code (as described in the Notation Reference), combined with the `make-dynamic-script` function. This way, the markup will be regarded as a dynamic, and therefore will remain compatible with commands such as `\dynamicUp` or `\dynamicDown`.

```
paren =
#(define-event-function (dyn) (ly:event?)
   (make-dynamic-script
    #{ \markup \concat {
```

```
        \normal-text \italic \fontsize #2 (
        \pad-x #0.2 #(ly:music-property dyn 'text)
        \normal-text \italic \fontsize #2 )
      }
    #}))

\relative c'' {
  c4\paren\f c c \dynamicUp c\paren\p
}
```



Creating simultaneous rehearsal marks
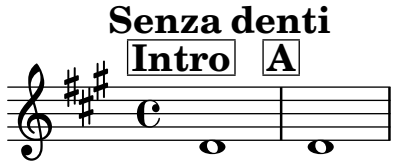
Unlike text scripts, rehearsal marks cannot be stacked at a particular point in a score: only one `RehearsalMark` object is created. Using an invisible measure and bar line, an extra rehearsal mark can be added, giving the appearance of two marks in the same column.

This method may also prove useful for placing rehearsal marks at both the end of one system and the start of the following system.

```
{
  \key a \major
  \set Score.markFormatter = #format-mark-box-letters
  \once \override Score.RehearsalMark.outside-staff-priority = #5000
  \once \override Score.RehearsalMark.self-alignment-X = #LEFT
  \once \override Score.RehearsalMark.break-align-symbols = #'(key-signature)
  \mark \markup { \bold { Senza denti } }

  % the hidden measure and bar line
  % \cadenzaOn turns off automatic calculation of bar numbers
  \cadenzaOn
  \once \override Score.TimeSignature.stencil = ##f
  \time 1/16
  s16 \bar ""
  \cadenzaOff

  \time 4/4
  \once \override Score.RehearsalMark.self-alignment-X = #LEFT
  \mark \markup { \box \bold Intro }
  d'1
  \mark \default
  d'1
}
```
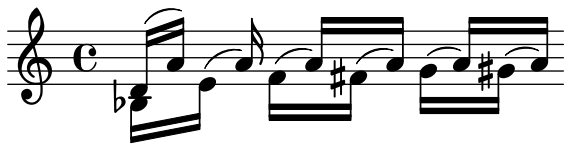


Creating slurs across voices

In some situations, it may be necessary to create slurs between notes from different voices. The solution is to add invisible notes to one of the voices, using `\hideNotes`.

This example is measure 235 of the Ciaconna from Bach's 2nd Partita for solo violin, BWV 1004.

```
\relative c' {
  <<
    {
      d16( a') s a s a[ s a] s a[ s a]
    }
    \\
    {
      \slurUp
      bes,16[ s e](
      \hideNotes a)
      \unHideNotes f[(
      \hideNotes a)
      \unHideNotes fis](
      \hideNotes a)
      \unHideNotes g[(
      \hideNotes a)
      \unHideNotes gis](
      \hideNotes a)
    }
  >>
}
```



Creating text spanners

The `\startTextSpan` and `\stopTextSpan` commands allow the creation of text spanners as easily as pedal indications or octavations. Override some properties of the `TextSpanner` object to modify its output.

```
\paper { ragged-right = ##f }

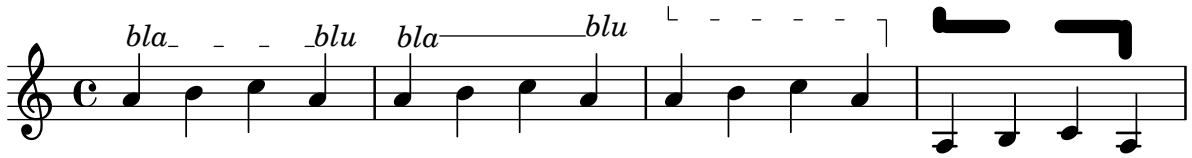
\relative c'' {
  \override TextSpanner.bound-details.left.text = #"bla"
  \override TextSpanner.bound-details.right.text = #"blu"
  a4 \startTextSpan
  b4 c
  a4 \stopTextSpan

  \override TextSpanner.style = #'line
  \once \override TextSpanner.bound-details.left.stencil-align-dir-y = #CENTER
  a4 \startTextSpan
  b4 c
  a4 \stopTextSpan
```

```
  \override TextSpanner.style = #'dashed-line
  \override TextSpanner.bound-details.left.text =
    \markup { \draw-line #'(0 . 1) }
  \override TextSpanner.bound-details.right.text =
    \markup { \draw-line #'(0 . -2) }
  \once \override TextSpanner.bound-details.right.padding = #-2

  a4 \startTextSpan
  b4 c
  a4 \stopTextSpan

  \set Staff.middleCPosition = #-13
  \override TextSpanner.dash-period = #10
  \override TextSpanner.dash-fraction = #0.5
  \override TextSpanner.thickness = #10
  a4 \startTextSpan
  b4 c
  a4 \stopTextSpan
}
```

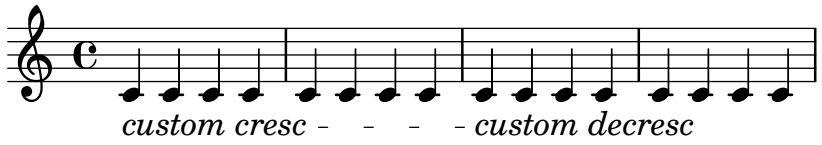


Estensore testuale della dinamica personalizzato

Funzioni postfix per estensori testuali personalizzati del crescendo. Gli estensori devono iniziare sulla prima nota della misura; e bisogna usare `-\mycresc`, altrimenti l'inizio dell'estensore viene assegnato alla nota successiva.

```
% Two functions for (de)crescendo spanners where you can explicitly
% give the spanner text.
mycresc =
#(define-music-function (mymarkup) (markup?)
   (make-music 'CrescendoEvent
               'span-direction START
               'span-type 'text
               'span-text mymarkup))
mydecresc =
#(define-music-function (mymarkup) (markup?)
   (make-music 'DecrescendoEvent
               'span-direction START
               'span-type 'text
               'span-text mymarkup))

\relative c' {
  c4-\mycresc "custom cresc" c4 c4 c4 |
  c4 c4 c4 c4 |
  c4-\mydecresc "custom decresc" c4 c4 c4 |
  c4 c4\! c4 c4
}
```
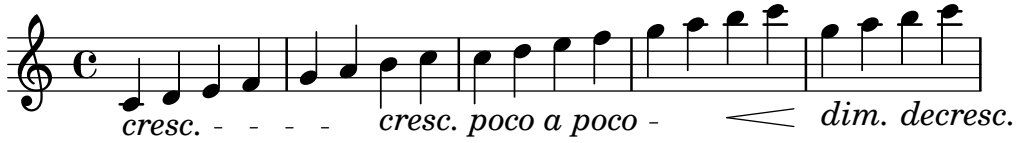


Estensore testuale della dinamica personalizzato

Si possono definire estensori testuali personalizzati che fanno uso delle forcine e dei crescendo testuali. `\<` e `\>` generano le forcine, `\cresc` etc. generano gli estensori testuali.

```
% Some sample text dynamic spanners, to be used as postfix operators
crpoco =
#(make-music 'CrescendoEvent
             'span-direction START
             'span-type 'text
             'span-text "cresc. poco a poco")
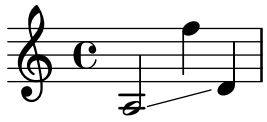
\relative c' {
  c4\cresc d4 e4 f4 |
  g4 a4\! b4\crpoco c4 |
  c4 d4 e4 f4 |
  g4 a4\! b4\< c4 |
  g4\dim a4 b4\decresc c4\!
}
```



Glissandi can skip grobs

`NoteColumn` grobs can be skipped over by glissandi.

```
\relative c' {
  a2 \glissando
  \once \override NoteColumn.glissando-skip = ##t
  f''4 d,
}
```

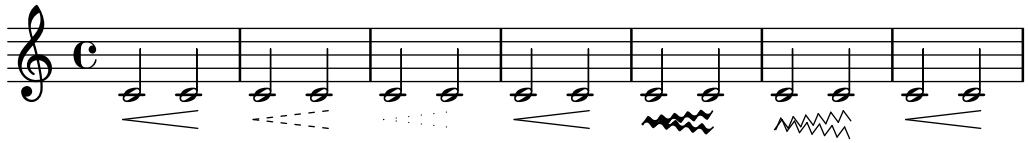


Hairpins with different line styles

Hairpins can take any style from `line-interface` - dashed-line, dotted-line, line, trill or zigzag.

```
\relative c' {
  c2\< c\!
  \override Hairpin.style = #'dashed-line
  c2\< c\!
  \override Hairpin.style = #'dotted-line
  c2\< c\!
  \override Hairpin.style = #'line
  c2\< c\!
  \override Hairpin.style = #'trill
```

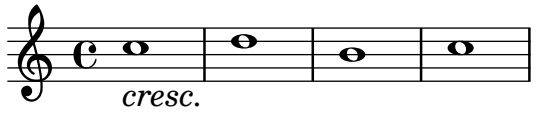
```
  c2\< c\!
  \override Hairpin.style = #'zigzag
  c2\< c\!
  \revert Hairpin.style
  c2\< c\!
}
```



Nascondere la linea di estensione per le dinamiche testuali

I cambi di dinamica in stile testuale (come *cresc.* e *dim.*) appaiono con una linea tratteggiata che mostra la loro estensione. Questa linea può essere soppressa nel modo seguente:

```
\relative c'' {
  \override DynamicTextSpanner.style = #'none
  \crescTextCresc
  c1\< | d | b | c\!
}
```



Horizontally aligning custom dynamics (e.g. "sempre pp" "piu f" "subito p")

Some dynamic expressions involve additional text, like “sempre pp”. Since dynamics are usually centered under the note, the \pp would be displayed way after the note it applies to.

To correctly align the “sempre pp” horizontally, so that it is aligned as if it were only the \pp, there are several approaches:

* Simply use `\once\override DynamicText.X-offset = #-9.2` before the note with the dynamics to manually shift it to the correct position. Drawback: This has to be done manually each time you use that dynamic markup...

* Add some padding (`#:hspace 7.1`) into the definition of your custom dynamic mark, so that after lilypond center-aligns it, it is already correctly aligned. Drawback: The padding really takes up that space and does not allow any other markup or dynamics to be shown in that position.

* Shift the dynamic script `\once\override ... .X-offset = ...` Drawback: `\once\override` is needed for every invocation!

* Set the dimensions of the additional text to 0 (using `#:with-dimensions '(0 . 0) '(0 . 0)`). Drawback: To LilyPond “sempre” has no extent, so it might put other stuff there and create collisions (which are not detected by the collision detection!). Also, there seems to be some spacing, so it’s not exactly the same alignment as without the additional text

* Add an explicit shifting directly inside the scheme function for the dynamic-script.

* Set an explicit alignment inside the dynamic-script. By default, this won’t have any effect, only if one sets X-offset! Drawback: One needs to set `DynamicText.X-offset`, which will apply

to all dynamic texts! Also, it is aligned at the right edge of the additional text, not at the center of pp.

```
\paper {
  ragged-right = ##f
  indent = 2.5\cm
}

% Solution 1: Using a simple markup with a particular halign value
% Drawback: It's a markup, not a dynamic command, so \dynamicDown
%           etc. will have no effect
semppMarkup = \markup { \halign #1.4 \italic "sempre" \dynamic "pp" }

% Solution 2: Using a dynamic script & shifting with
%             \once \override ...X-offset = ..
% Drawback: \once \override needed for every invocation
semppK =
#(make-dynamic-script
  (markup #:line
          (#:normal-text
           #:italic "sempre"
           #:dynamic "pp")))

% Solution 3: Padding the dynamic script so the center-alignment
%             puts it at the correct position
% Drawback: the padding really reserves the space, nothing else can be there
semppT =
#(make-dynamic-script
  (markup #:line
          (#:normal-text
           #:italic "sempre"
           #:dynamic "pp"
           #:hspace 7.1)))

% Solution 4: Dynamic, setting the dimensions of the additional text to 0
% Drawback: To lilypond "sempre" has no extent, so it might put
%           other stuff there => collisions
% Drawback: Also, there seems to be some spacing, so it's not exactly the
%           same alignment as without the additional text
semppM =
#(make-dynamic-script
  (markup #:line
          (#:with-dimensions '(0 . 0) '(0 . 0)
                             #:right-align
                             #:normal-text
                             #:italic "sempre"
                             #:dynamic "pp")))

% Solution 5: Dynamic with explicit shifting inside the scheme function
semppG =
#(make-dynamic-script
  (markup #:hspace 0
```
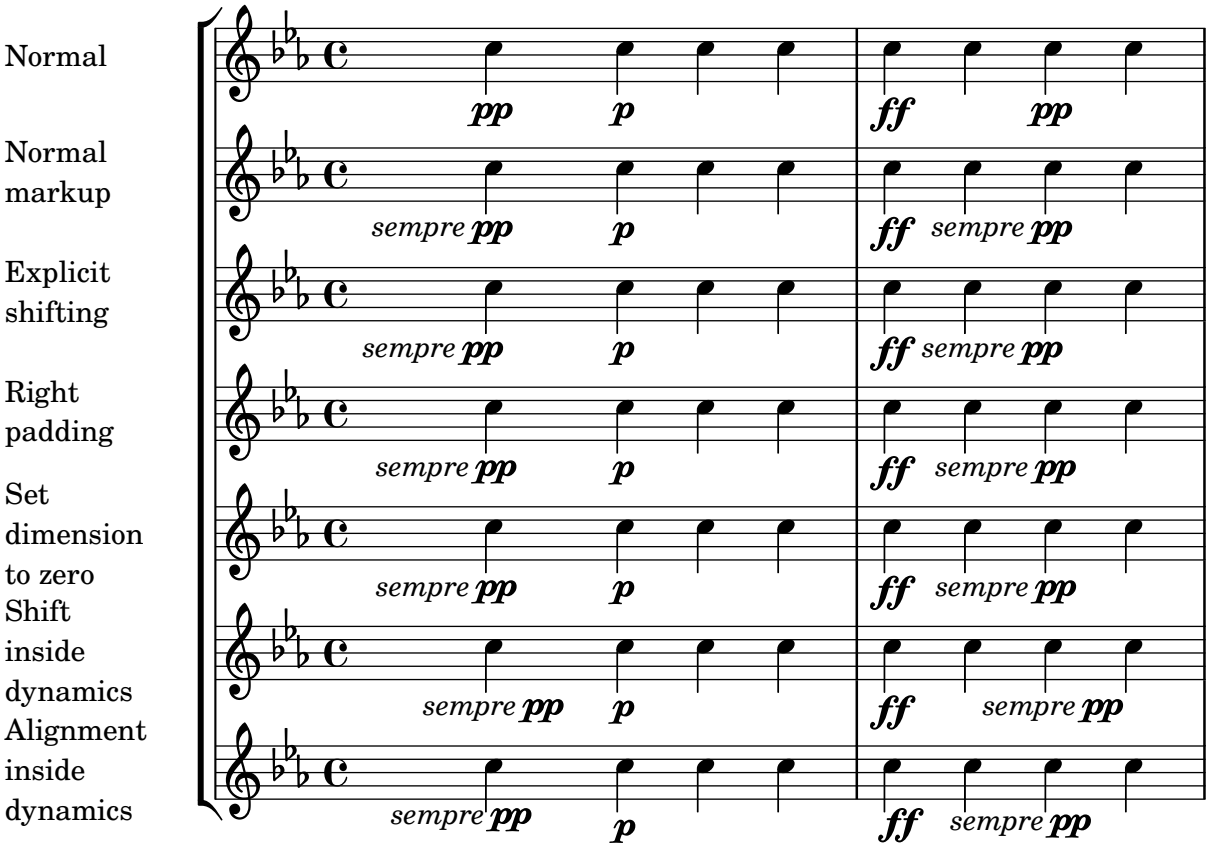
```
          #:translate '(-18.85 . 0)
          #:line (#:normal-text
                  #:italic "sempre"
                  #:dynamic "pp")))

% Solution 6: Dynamic with explicit alignment. This has only effect
%             if one sets X-offset!
% Drawback: One needs to set DynamicText.X-offset!
% Drawback: Aligned at the right edge of the additional text,
%           not at the center of pp
semppMII =
#(make-dynamic-script
  (markup #:line (#:right-align
                  #:normal-text
                  #:italic "sempre"
                  #:dynamic "pp")))

\new StaffGroup <<
  \new Staff = "s" \with { instrumentName = \markup \column { Normal } }
  <<
    \relative c'' {
      \key es \major
      c4\pp c\p c c | c\ff c c\pp c
    }
  >>
  \new Staff = "sMarkup" \with {
    instrumentName = \markup \column { Normal markup }
  }
  <<
    \relative c'' {
      \key es \major
      c4-\semppMarkup c\p c c | c\ff c c-\semppMarkup c
    }
  >>
  \new Staff = "sK" \with {
    instrumentName = \markup \column { Explicit shifting }
  }
  <<
    \relative c'' {
      \key es \major
      \once \override DynamicText.X-offset = #-9.2
      c4\semppK c\p c c
      c4\ff c
      \once \override DynamicText.X-offset = #-9.2
      c4\semppK c
    }
  >>
  \new Staff = "sT" \with {
    instrumentName = \markup \column { Right padding }
  }
  <<
    \relative c'' {
```

```
      \key es \major
      c4\semppT c\p c c | c\ff c c\semppT c
    }
  >>
  \new Staff = "sM" \with {
    instrumentName = \markup \column { Set dimension "to zero" }
  }
  <<
    \relative c'' {
      \key es \major
      c4\semppM c\p c c | c\ff c c\semppM c
    }
  >>
  \new Staff = "sG" \with {
    instrumentName = \markup \column { Shift inside dynamics}
  }
  <<
    \relative c'' {
      \key es \major
      c4\semppG c\p c c | c\ff c c\semppG c
    }
  >>
  \new Staff = "sMII" \with {
    instrumentName = \markup \column { Alignment inside dynamics }
  }
  <<
    \relative c'' {
      \key es \major
      % Setting to ##f (false) gives the same result
      \override DynamicText.X-offset = #0
      c4\semppMII c\p c c | c\ff c c\semppMII c
    }
  >>
>>

\layout { \override Staff.InstrumentName.self-alignment-X = #LEFT }
```



How to print two rehearsal marks above and below the same barline (method 1)

This method prints two 'rehearsal marks', one on top of the other. It shifts the lower rehearsal mark below the staff and then adds padding above it in order to place the upper rehearsal mark above the staff.

By adjusting the extra-offset and baseline-skip values you can increase or decrease the overall space between the rehearsal mark and the staff.

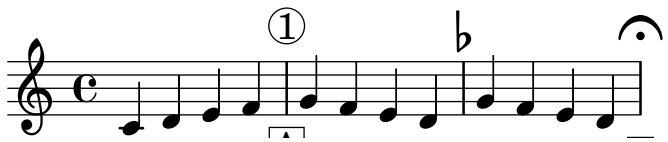
Because nearly every type of glyph or string can be made to behave like a rehearsal mark it is possible to centre those above and below a bar line.

Adding the appropriate 'break visibility' as shown in snippet 1 (`\%22http://lsr.di.unimi.it/LSR/Item?id=1\%22`) will allow you to position two marks at the end of a line as well.

Note: Method 1 is less complex than Method 2 but does not really allow for fine tuning of placement of one of the rehearsal marks without affecting the other. It may also give some problems with vertical spacing, since using `extra-offset` does not change the bounding box of the mark from its original value.

```
\relative c'{
  c d e f |
  \once \override Score.RehearsalMark.extra-offset = #'(0 . -8.5)
  \once \override Score.RehearsalMark.baseline-skip = #9
  \mark \markup \center-column { \circle 1 \box A }
  g f e d |
  \once \override Score.RehearsalMark.extra-offset = #'(0 . -8.5)
  \once \override Score.RehearsalMark.baseline-skip = #9
  \mark \markup \center-column { \flat { \bold \small \italic Fine. } }
  g f e d |
  \once \override Score.RehearsalMark.extra-offset = #'(0 . -8.5)
  \once \override Score.RehearsalMark.baseline-skip = #9
  \override Score.RehearsalMark.break-visibility = #begin-of-line-invisible
```

```
  \mark \markup \center-column { \fermata \box z }
}
```

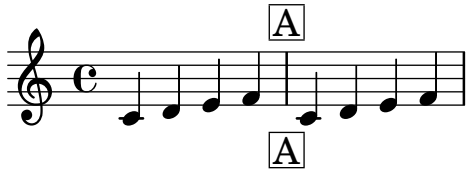


How to print two rehearsal marks above and below the same barline (method 2)

This method prints two 'rehearsal marks' - one above the stave and one below, by creating two voices, adding the Rehearsal Mark engraver to each voice - without this no rehearsal mark is printed - and then placing each rehearsal mark UP and DOWN in each voice respectively.

This method (as opposed to method 1) is more complex, but allows for more flexibility, should it be needed to tweak each rehearsal mark independently of the other.

```
\score {
  \relative c'
  <<
    \new Staff {
      <<
        \new Voice \with {
          \consists Mark_engraver
          \consists "Staff_collecting_engraver"
        }
        { c4 d e f
          \mark \markup { \box A }
          c4 d e f
        }
        \new Voice \with {
          \consists Mark_engraver
          \consists "Staff_collecting_engraver"
          \override RehearsalMark.direction = #DOWN
        }
        { s4 s s s
          \mark \markup { \circle 1 }
          s4 s s s
        }
      >>
    }
  >>
  \layout {
    \context {
      \Score
      \remove "Mark_engraver"
      \remove "Staff_collecting_engraver"
    }
  }
}
```
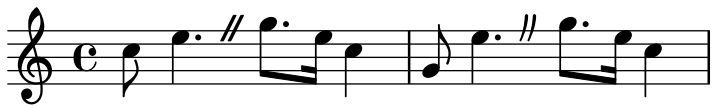


Inserire una cesura

I segni di cesura possono essere creati sovrascrivendo la proprietà `'text` dell'oggetto `BreathingSign`. È disponibile anche un segno di cesura curvo.

```
\relative c'' {
  \override BreathingSign.text = \markup {
    \musicglyph "scripts.caesura.straight"
  }
  c8 e4. \breathe g8. e16 c4

  \override BreathingSign.text = \markup {
    \musicglyph "scripts.caesura.curved"
  }
  g8 e'4. \breathe g8. e16 c4
}
```
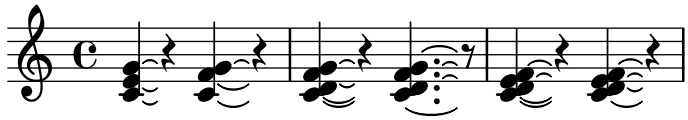


Laissez vibrer ties

Laissez vibrer ties have a fixed size. Their formatting can be tuned using `'tie-configuration`.

```
\relative c' {
  <c e g>4\laissezVibrer r <c f g>\laissezVibrer r
  <c d f g>4\laissezVibrer r <c d f g>4.\laissezVibrer r8

  <c d e f>4\laissezVibrer r
  \override LaissezVibrerTieColumn.tie-configuration
     = #`((-7 . ,DOWN)
          (-5 . ,DOWN)
          (-3 . ,UP)
          (-1 . ,UP))
  <c d e f>4\laissezVibrer r
}
```



Line arrows

Arrows can be applied to text-spanners and line-spanners (such as the Glissando).

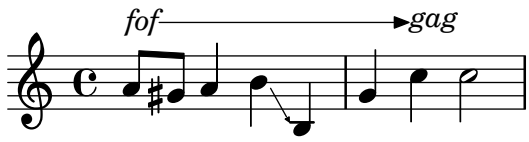
```
\relative c'' {
  \override TextSpanner.bound-padding = #1.0
  \override TextSpanner.style = #'line
  \override TextSpanner.bound-details.right.arrow = ##t
  \override TextSpanner.bound-details.left.text = #"fof"
  \override TextSpanner.bound-details.right.text = #"gag"
```

```
  \override TextSpanner.bound-details.right.padding = #0.6

  \override TextSpanner.bound-details.right.stencil-align-dir-y = #CENTER
  \override TextSpanner.bound-details.left.stencil-align-dir-y = #CENTER

  \override Glissando.bound-details.right.arrow = ##t
  \override Glissando.arrow-length = #0.5
  \override Glissando.arrow-width = #0.25

  a8\startTextSpan gis a4 b\glissando b,
  g'4 c\stopTextSpan c2
}
```
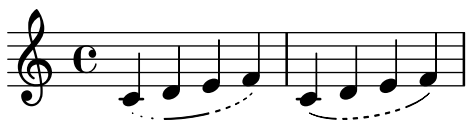


Legature di portamento con complesse strutture di tratteggio

Le legature di portamento possono avere schemi di tratteggio complessi definendo la proprietà `dash-definition`. `dash-definition` è una lista di `dash-elements`. Un `dash-element` è una lista di parametri che definiscono il comportamento del tratteggio per un segmento della legatura.

La legatura di portamento è definita come il parametro t della curva di bezier che va da 0 sul margine sinistro della legatura fino a 1 su quello destro. `dash-element` è una lista di `(inizio-t fine-t frazione-trattino punto-trattino)`. La regione della legatura di portamento che va da `inizio-t` a `fine-t` avrà una frazione `frazione-trattino` di ogni `punto-trattino` nero. `punto-trattino` viene definito in spazi rigo. `frazione-trattino` è impostato su 1 per una legatura di portamento continua.

```
\relative c' {
  \once \override
    Slur.dash-definition = #'((0 0.3 0.1 0.75)
                              (0.3 0.6 1 1)
                              (0.65 1.0 0.4 0.75))
  c4( d e f)
  \once \override
    Slur.dash-definition = #'((0 0.25 1 1)
                              (0.3 0.7 0.4 0.75)
                              (0.75 1.0 1 1))
  c4( d e f)
}
```



Modificare i valori predefiniti per le abbreviazioni delle articolazioni

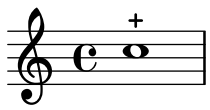
Le abbreviazioni sono definite in '`ly/script-init.ly`', dove sono assegnati valori predefiniti alle variabili `dashHat`, `dashPlus`, `dashDash`, `dashBang`, `dashLarger`, `dashDot` e `dashUnderscore`. Questi valori predefiniti possono essere modificati. Ad esempio, per associare l'abbreviazione `-+`
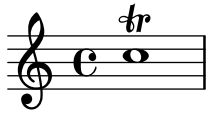
(`dashPlus`) al simbolo del *trillo* invece che al simbolo `+` predefinito, si assegna il valore `trill` alla variabile `dashPlus`:

```
\relative c'' { c1-+ }

dashPlus = "trill"

\relative c'' { c1-+ }
```
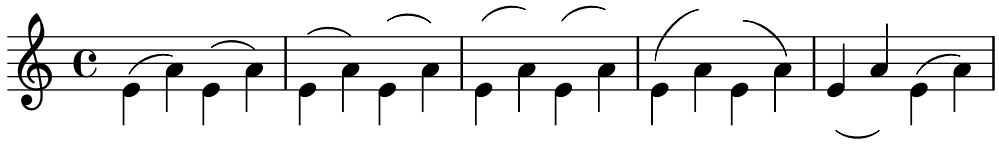




Moving slur positions vertically

The vertical position of a slur can be adjusted using the `positions` property of `Slur`. The property has 2 parameters, the first referring to the left end of the slur and the second to the right. The values of the parameters are not used by LilyPond to make an exact movement of the slur - instead it selects what placement of the slur looks best, taking into account the parameter values. Positive values move the slur up, and are appropriate for notes with stems down. Negative values move downward slurs further down.

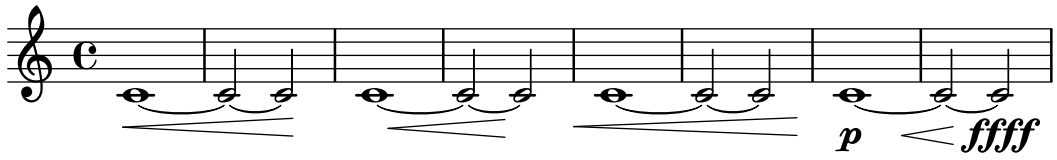
```
\relative c' {
  \stemDown
  e4( a)
  \override Slur.positions = #'(1 . 1)
  e4( a)
  \override Slur.positions = #'(2 . 2)
  e4( a)
  \override Slur.positions = #'(3 . 3)
  e4( a)
  \override Slur.positions = #'(4 . 4)
  e4( a)
  \override Slur.positions = #'(5 . 5)
  e4( a)
  \override Slur.positions = #'(0 . 5)
  e4( a)
  \override Slur.positions = #'(5 . 0)
  e4( a)
  \stemUp
  \override Slur.positions = #'(-5 . -5)
  e4( a)
  \stemDown
  \revert Slur.positions
  e4( a)
}
```



Spostare le estremità delle forcelle

Le estremità delle forcelle possono essere spostate in modo relativo alla loro posizione predefinita (offset) impostando la proprietà `shorten-pair` dell'oggetto `Hairpin`. Valori positivi spostano le estremità a destra, valori negativi le spostano a sinistra. Diversamente dalla proprietà `minimum-length`, questa proprietà modifica solo l'aspetto della forcella; non cambia la spaziatura orizzontale (inclusa la posizione delle dinamiche confinanti). Questo metodo è quindi utile per ritoccare una forcella entro lo spazio ad essa allocato.

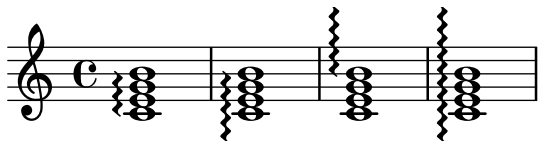
```
{
  c'1~\<
  c'2~ c'\!
  \once \override Hairpin.shorten-pair = #'(2 . 2)
  c'1~\<
  c'2~ c'\!
  \once \override Hairpin.shorten-pair = #'(-2 . -2)
  c'1~\<
  c'2~ c'\!
  c'1~\p-\tweak shorten-pair #'(2 . 0)\<
  c'2~ c'\ffff
}
```



Positioning arpeggios

If you need to extend or shorten an arpeggio, you can modify the upper and lower start positions independently.

```
\relative c' {
  <c e g b>1\arpeggio
  \once \override Arpeggio.positions = #'(-5 . 0)
  <c e g b>1\arpeggio
  \once \override Arpeggio.positions = #'(0 . 5)
  <c e g b>1\arpeggio
  \once \override Arpeggio.positions = #'(-5 . 5)
  <c e g b>1\arpeggio
}
```
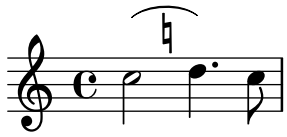


Posizionare il testo a margine dentro le legature di portamento

I testi a margine devono avere la proprietà `outside-staff-priority` impostata su false per poter apparire dentro le legature di portamento.

```
\relative c'' {
```

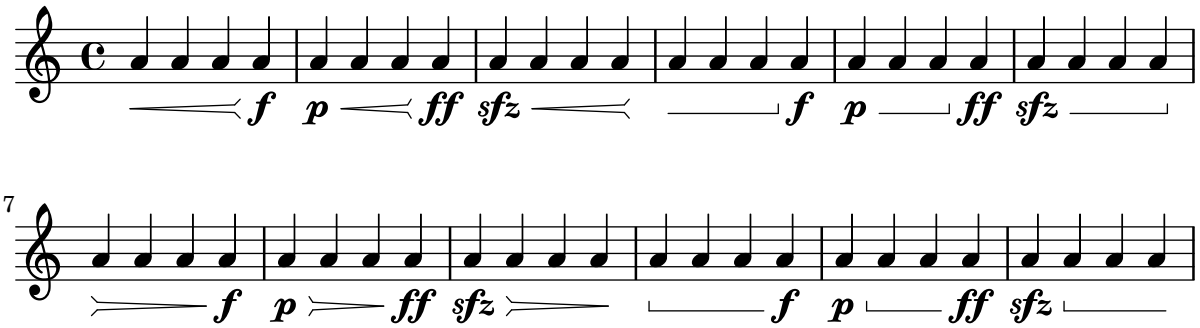
```
  \override TextScript.avoid-slur = #'inside
  \override TextScript.outside-staff-priority = ##f
  c2(^\markup { \halign #-10 \natural } d4.) c8
}
```



Stampare le forcelle in vari stili

Il segno di dinamica della forcella può avere diversi stili

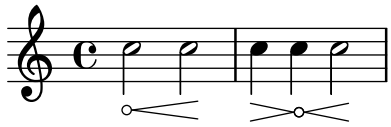
```
\relative c'' {
  \override Hairpin.stencil = #flared-hairpin
  a4\< a a a\f
  a4\p\< a a a\ff
  a4\sfz\< a a a\!
  \override Hairpin.stencil = #constante-hairpin
  a4\< a a a\f
  a4\p\< a a a\ff
  a4\sfz\< a a a\!
  \override Hairpin.stencil = #flared-hairpin
  a4\> a a a\f
  a4\p\> a a a\ff
  a4\sfz\> a a a\!
  \override Hairpin.stencil = #constante-hairpin
  a4\> a a a\f
  a4\p\> a a a\ff
  a4\sfz\> a a a\!
}
```



Forcelle con notazione al niente

Le forcelle di dinamica possono essere rappresentate con ua punta tonda (notazione “al niente”) impostando la proprietà `circled-tip` dell’oggetto `Hairpin` su `#t`.

```
\relative c'' {
  \override Hairpin.circled-tip = ##t
  c2\< c\!
  c4\> c\< c2\!
}
```



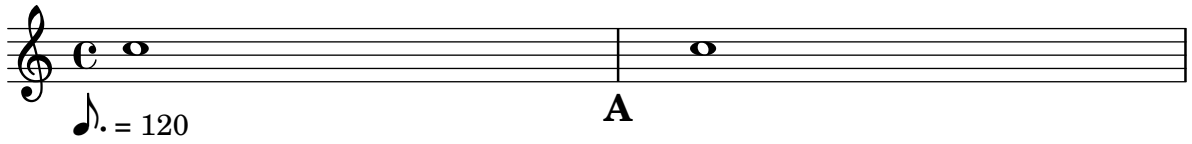
Posizionare il metronomo e i numeri di chiamata sotto il rigo

Di norma, il metronomo e i numeri di chiamata vengono posizionati sopra il rigo. Per metterli sotto il rigo basta impostare correttamente la proprietà `direction` di `MetronomeMark` o `RehearsalMark`.

```
\layout {
  indent = 0
  ragged-right = ##f
}

{
  % Metronome marks below the staff
  \override Score.MetronomeMark.direction = #DOWN
  \tempo 8. = 120
  c''1

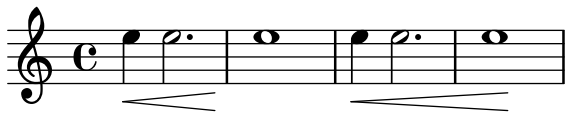
  % Rehearsal marks below the staff
  \override Score.RehearsalMark.direction = #DOWN
  \mark \default
  c''1
}
```



Impostare il comportamento delle forcelle sulle stanghette

Se la nota che termina una forcella si trova sul primo battito di una battuta, la forcella si ferma prima della stanghetta che precede la nota. Si può controllare questo comportamento modificando la proprietà `'to-barline`.

```
\relative c'' {
  e4\< e2.
  e1\!
  \override Hairpin.to-barline = ##f
  e4\< e2.
  e1\!
}
```

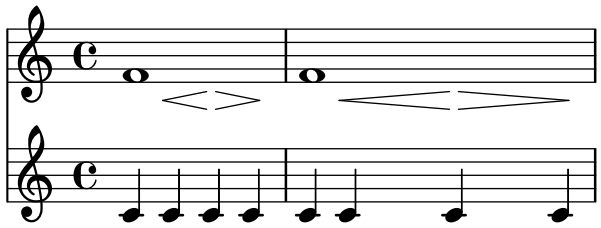


Impostare la lunghezza minima delle forcelle

Se le forcelle sono troppo corte, possono essere allungate modificando la proprietà `minimum-length` dell'oggetto `Hairpin`.

```
<<
  {
```

```
    \after 4 \< \after 2 \> \after 2. \! f'1
    \override Hairpin.minimum-length = #8
    \after 4 \< \after 2 \> \after 2. \! f'1
  }
  {
    \repeat unfold 8 c'4
  }
>>
```



Showing the same articulation above and below a note or chord

By default, LilyPond does not allow the same articulation (e.g., an accent, a fermata, a flageolet, etc.) to be displayed above and below a note. For example, `c4_\fermata^\fermata` only shows a fermata below. The fermata above gets simply ignored.

However, one can stick scripts (just like fingerings) inside a chord, which means it is possible to have as many articulations as desired. This approach has the advantage that it ignores the stem and positions the articulation relative to the note head. This can be seen in the case of the flageolets in the snippet. To mimic the behaviour of scripts outside a chord, `'add-stem-support` would be required.

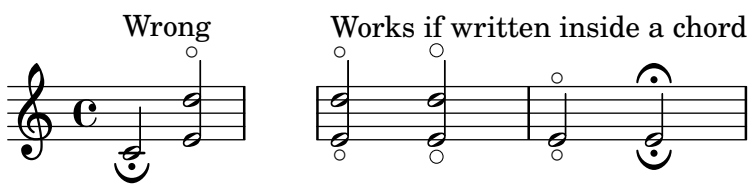
The solution is thus to write the note as a chord and add the articulations inside of `<...>`, using the direction modifiers `^` and `_` as appropriate.

```
% The same as \flageolet, just a little smaller
smallFlageolet = \tweak font-size #-2 \flageolet

\relative c' {
  <>^"Wrong"
  c2_\fermata^\fermata % The second fermata is ignored!
  <e d'>2^\smallFlageolet_\smallFlageolet

  \stopStaff s1 \startStaff

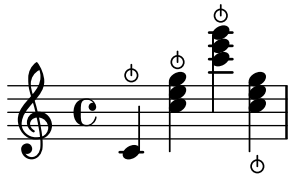
  <>^"Works if written inside a chord"
  <e_\smallFlageolet d'^\smallFlageolet>2
  <e_\flageolet d'^\flageolet>2
  <e_\smallFlageolet^\smallFlageolet>2
  <e_\fermata^\fermata>2
}
```



Snap-pizzicato or Bartok pizzicato

A snap-pizzicato (also known as “Bartok pizzicato”) is a “strong pizzicato where the string is plucked vertically by snapping and rebounds off the fingerboard of the instrument” (Wikipedia). It is denoted by a circle with a vertical line going from the center upwards outside the circle.
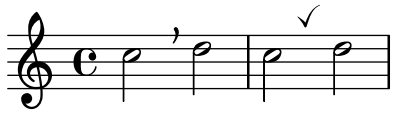
```
\relative c' {
  c4\snappizzicato
  <c' e g>4\snappizzicato
  <c' e g>4^\snappizzicato
  <c, e g>4_\snappizzicato
}
```



Usare un segno di spunta come simbolo di respiro

La musica vocale e per fiati usa frequentemente il segno di spunta come segno di respiro. Questo indica un respiro che sottrae un po’ di tempo alla nota precedente invece di prendere una piccola pausa, indicata dal segno di respiro rappresentato dalla virgola. Il segno può essere spostato un po’ su per allontanarlo dal rigo.

```
\relative c'' {
  c2
  \breathe
  d2
  \override BreathingSign.Y-offset = #2.6
  \override BreathingSign.text =
    \markup { \musicglyph "scripts.tickmark" }
  c2
  \breathe
  d2
}
```



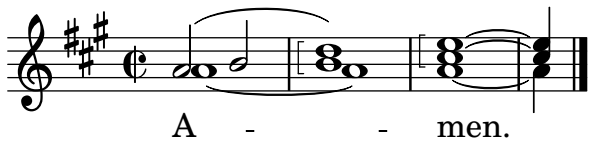
Usare arpeggioBracket per rendere i divisi più visibili

Si può usare `arpeggioBracket` per indicare la divisione delle voci quando non ci sono gambi che forniscano questa informazione. Questo caso è frequente nella musica corale.

```
\include "english.ly"

\score {
  \relative c'' {
    \key a \major
    \time 2/2
    <<
      \new Voice = "upper"
```

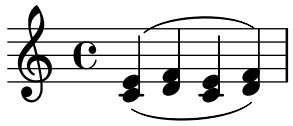
```
      <<
        { \voiceOne \arpeggioBracket
          a2( b2
          <b d>1\arpeggio)
          <cs e>\arpeggio ~
          <cs e>4
        }
        \addlyrics { \lyricmode { A -- men. } }
      >>
      \new Voice = "lower"
      { \voiceTwo
        a1 ~
        a
        a ~
        a4 \bar "|."
      }
    >>
  }
  \layout { ragged-right = ##t }
}
```



Uso delle doppie legature di portamento per gli accordi legati

Alcuni compositori scrivono due *legature di portamento* per indicare gli accordi legati. Si può ottenere questo risultato impostando `doubleSlurs`.

```
\relative c' {
  \set doubleSlurs = ##t
  <c e>4( <d f> <c e> <d f>)
}
```
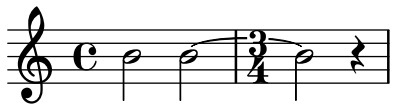


Using the whiteout property

Any graphical object can be printed over a white background to mask parts of objects that lie beneath. This can be useful to improve the appearance of collisions in complex situations when repositioning objects is impractical. It is necessary to explicitly set the `layer` property to control which objects are masked by the white background.

In this example the collision of the tie with the time signature is improved by masking out the part of the tie that crosses the time signature by setting the `whiteout` property of `TimeSignature`. To do this `TimeSignature` is moved to a layer above `Tie`, which is left in the default layer of 1, and `StaffSymbol` is moved to a layer above `TimeSignature` so it is not masked.

```
{
  \override Score.StaffSymbol.layer = #4
```

```
  \override Staff.TimeSignature.layer = #3
  b'2 b'~
  \once \override Staff.TimeSignature.whiteout = ##t
  \time 3/4
  b' r4
}
```
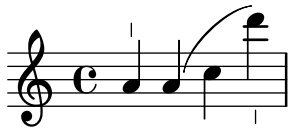


Vertical line as a baroque articulation mark

This short vertical line placed above the note is commonly used in baroque music. Its meaning can vary, but generally indicates notes that should be played with more “weight”. The following example demonstrates how to achieve such a notation.

```
upline =
\tweak stencil
  #(lambda (grob)
    (grob-interpret-markup grob #{ \markup \draw-line #'(0 . 1) #}))
  \stopped

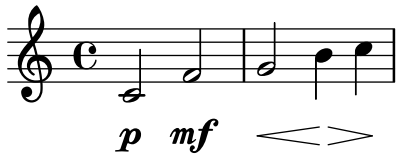
\relative c' {
  a'4^\upline a( c d')_\upline
}
```



Vertically aligning dynamics across multiple notes

Dynamics that occur at, begin on, or end on the same note will be vertically aligned. To ensure that dynamics are aligned when they do not occur on the same note, increase the `staff-padding` property of the `DynamicLineSpanner` object.

```
\relative c' {
  \override DynamicLineSpanner.staff-padding = #4
  c2\p f\mf
  g2\< b4\> c\!
}
```



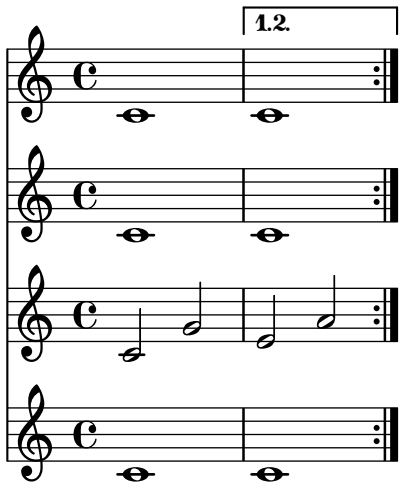
Repeats

Sezione “Repeats” in *Guida alla Notazione*

Aggiungere le parentesi delle volte a altri righi

L’incisore `Volta_engraver` risiede nel contesto `Score`, quindi le parentesi delle ripetizioni appaiono di norma soltanto sul rigo superiore. Questo comportamento può essere modificato aggiungendo l’incisore `Volta_engraver` al contesto `Staff` in cui si desidera far apparire le parentesi; si veda anche il frammento “Volta multirigo”.

```
<<
  \new Staff { \repeat volta 2 { c'1 } \alternative { c' } }
  \new Staff { \repeat volta 2 { c'1 } \alternative { c' } }
  \new Staff \with { \consists "Volta_engraver" } { c'2 g' e' a' }
  \new Staff { \repeat volta 2 { c'1 } \alternative { c' } }
>>
```



Centered measure numbers

Scores of large ensemble works often have bar numbers placed beneath the system, centered horizontally on the measure’s extent. This snippet shows how the `Measure_counter_engraver` may be used to simulate this notational practice. Here, the engraver has been added to a `Dynamics` context.

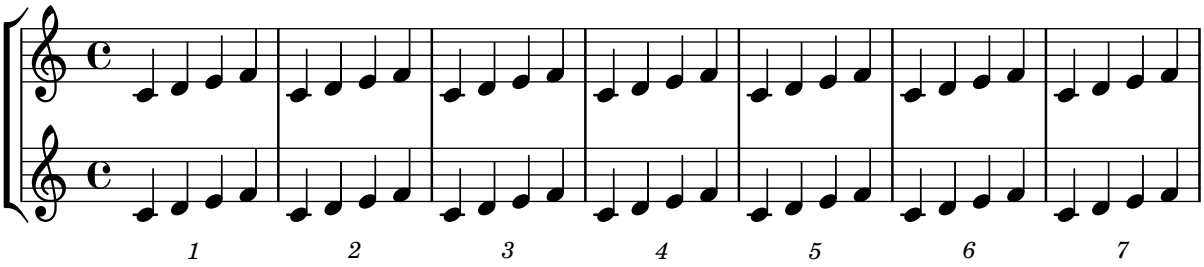
This snippet presents a legacy method: starting from LilyPond 2.23.3, `\set Score.centerBarNumbers = ##t` is enough.

```
\layout {
  \context {
    \Dynamics
    \consists #Measure_counter_engraver
    \override MeasureCounter.direction = #DOWN
    \override MeasureCounter.font-encoding = #'latin1
    \override MeasureCounter.font-shape = #'italic
    % to control the distance of the Dynamics context from the staff:
    \override VerticalAxisGroup.nonstaff-relatedstaff-spacing.padding = #2
  }
  \context {
    \Score
```

```
    \remove "Bar_number_engraver"
  }
}

pattern = \repeat unfold 7 { c'4 d' e' f' }

\new StaffGroup <<
  \new Staff {
    \pattern
  }
  \new Staff {
    \pattern
  }
  \new Dynamics {
    \startMeasureCount
    s1*7
    \stopMeasureCount
  }
>>
```



Changing the default bar lines

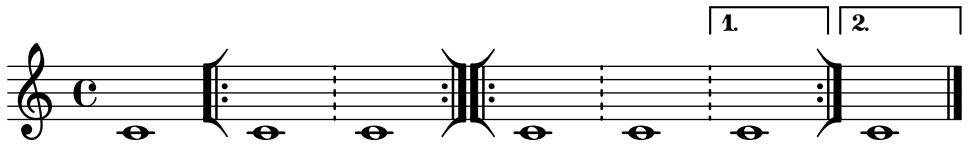
Default bar lines can be changed when re-defined in a score context.

```
% http://lsr.di.unimi.it/LSR/Item?id=964
%%=> http://lists.gnu.org/archive/html/lilypond-user/2014-03/msg00126.html
%%=> http://lilypond.1069038.n5.nabble.com/Changing-the-default-end-repeat-bracket-tc169357

\layout {
  \context {
    \Score
    %% Changing the defaults from engraver-init.ly
    defaultBarType = #"!"
    startRepeatType = #"[|:"
    endRepeatType = #":|]"
    doubleRepeatType = #":|][|:"
  }
}

%% example:
{
  c'1
  \repeat volta 2 { \repeat unfold 2 c' }
  \repeat volta 2 { \repeat unfold 2 c' }
  \alternative {
```
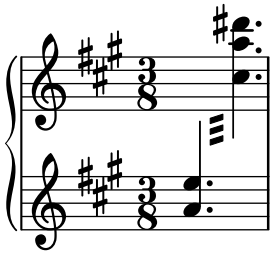
```
    { c' }
    {
      %% v2.18 workaround
      \once\override Score.VoltaBracket.shorten-pair = #'(1 . -1)
      c'
    }
  }
  \bar "|."
}
```



Tremoli attraverso i righi

Dato che `\repeat tremolo` si aspetta esattamente due argomenti musicali per i tremoli di accordi, la nota o l'accordo che cambiano rigo in un tremolo che attraversa i righi devono essere posti tra parentesi graffe insieme al comando `\change Staff`.

```
\new PianoStaff <<
  \new Staff = "up" \relative c'' {
    \key a \major
    \time 3/8
    s4.
  }
  \new Staff = "down" \relative c'' {
    \key a \major
    \time 3/8
    \voiceOne
    \repeat tremolo 6 {
      <a e'>32
      {
        \change Staff = "up"
        \voiceTwo
        <cis a' dis>32
      }
    }
  }
>>
```
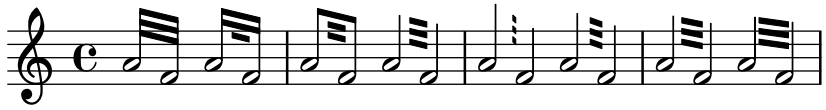


Engraving tremolos with floating beams

If a tremolo's total duration is less than a quarter-note, or exactly a half-note, or between a half-note and a whole-note, it is normally typeset with all beams touching the stems. Certain

engraving styles typeset some of these beams as centered floating beams that do not touch the stems. The number of floating beams in this type of tremolo is controlled with the `'gap-count` property of the `Beam` object, and the size of the gaps between beams and stems is set with the `'gap` property.

```
\relative c'' {
  \repeat tremolo 8 { a32 f }
  \override Beam.gap-count = #1
  \repeat tremolo 8 { a32 f }
  \override Beam.gap-count = #2
  \repeat tremolo 8 { a32 f }
  \override Beam.gap-count = #3
  \repeat tremolo 8 { a32 f }

  \override Beam.gap-count = #3
  \override Beam.gap = #1.33
  \repeat tremolo 8 { a32 f }
  \override Beam.gap = #1
  \repeat tremolo 8 { a32 f }
  \override Beam.gap = #0.67
  \repeat tremolo 8 { a32 f }
  \override Beam.gap = #0.33
  \repeat tremolo 8 { a32 f }
}
```
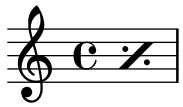


Ripetizioni con segni di percentuale isolati

Si possono stampare anche segni di percentuale isolati.

```
makePercent =
#(define-music-function (note) (ly:music?)
   "Make a percent repeat the same length as NOTE."
   (make-music 'PercentEvent
               'length (ly:music-length note)))

\relative c'' {
  \makePercent s1
}
```
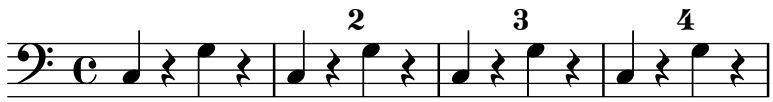


Measure counter

This snippet provides a workaround for emitting measure counters using transparent percent repeats.

```
<<
  \context Voice = "foo" {
    \clef bass
```

```
    c4 r g r
    c4 r g r
    c4 r g r
    c4 r g r
  }
  \context Voice = "foo" {
    \set countPercentRepeats = ##t
    \hide PercentRepeat
    \override PercentRepeatCounter.staff-padding = #1
    \repeat percent 4 { s1 }
  }
>>
```



Numbering groups of measures

This snippet demonstrates the use of the `Measure_counter_engraver` to number groups of successive measures. Any stretch of measures may be numbered, whether consisting of repetitions or not.

The engraver must be added to the appropriate context. Here, a `Staff` context is used; another possibility is a `Dynamics` context.

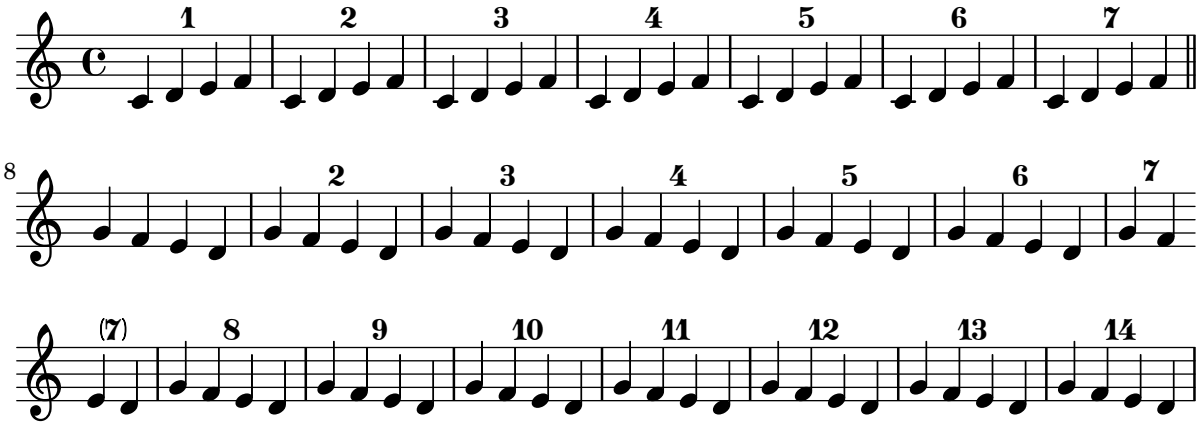
The counter is begun with `\startMeasureCount` and ended with `\stopMeasureCount`. Numbering will start by default with `1`, but this behavior may be modified by overriding the `count-from` property.

When a measure extends across a line break, the number will appear twice, the second time in parentheses.

```
\layout {
  \context {
    \Staff
    \consists #Measure_counter_engraver
  }
}

\new Staff {
  \startMeasureCount
  \repeat unfold 7 {
    c'4 d' e' f'
  }
  \stopMeasureCount
  \bar "||"
  g'4 f' e' d'
  \override Staff.MeasureCounter.count-from = #2
  \startMeasureCount
  \repeat unfold 5 {
    g'4 f' e' d'
  }
  g'4 f'
  \bar ""
  \break
```

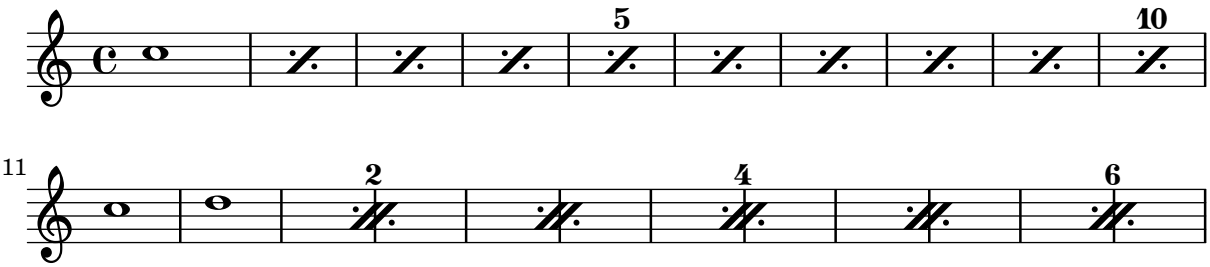
```
  e'4 d'
  \repeat unfold 7 {
    g'4 f' e' d'
  }
  \stopMeasureCount
}
```



Visibilità del conto della ripetizione con segno percentuale

I contatori della ripetizione con segno percentuale possono essere mostrati a intervalli regolari impostando la proprietà di contesto `repeatCountVisibility`.
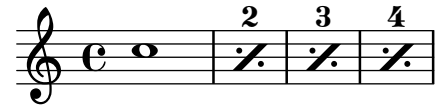
```
\relative c'' {
  \set countPercentRepeats = ##t
  \set repeatCountVisibility = #(every-nth-repeat-count-visible 5)
  \repeat percent 10 { c1 } \break
  \set repeatCountVisibility = #(every-nth-repeat-count-visible 2)
  \repeat percent 6 { c1 d1 }
}
```



Contatore della ripetizione con segno percentuale

Le ripetizioni di misura che hanno più di due ripetizioni possono avere un contatore se si cambia la proprietà opportuna, come mostra questo esempio:

```
\relative c'' {
  \set countPercentRepeats = ##t
  \repeat percent 4 { c1 }
}
```



Positioning segno and coda (with line break)

If you want to place an exiting segno sign and add text like “D.S. al Coda” next to it where usually the staff lines are you can use this snippet. The coda will resume in a new line. There is a variation documented in this snippet, where the coda will remain on the same line.

```
{
  \clef treble
  \key g \major
  \time 4/4
  \relative c'' {
    \repeat unfold 4 {
      c4 c c c
    }

    % Set segno sign as rehearsal mark and adjust size if needed
    % \once \override Score.RehearsalMark.font-size = #3
    \mark \markup { \musicglyph "scripts.segno" }
    \repeat unfold 2 {
      c4 c c c
    }

    % Set coda sign as rehearsal mark and adjust size if needed
    \once \override Score.RehearsalMark.font-size = #4
    \mark \markup { \musicglyph "scripts.coda" }
    \repeat unfold 2 {
      c4 c c c
    }

    % Should Coda be on anew line?
    % Coda NOT on new line: use \nobreak
    % Coda on new line: DON'T use \nobreak
    % \noBreak

    \bar "||"

    % Set segno sign as rehearsal mark and adjust size if needed
    \once \override Score.RehearsalMark.break-visibility =
      #begin-of-line-invisible
    % \once \override Score.RehearsalMark.font-size = #3
    \mark \markup { \musicglyph "scripts.segno" }

    % Here begins the trickery!
    % \cadenzaOn will suppress the bar count
    % and \stopStaff removes the staff lines.
    \cadenzaOn
    \stopStaff
        % Some examples of possible text-displays

        % text line-aligned
        % ==================
        % Move text to the desired position
        % \once \override TextScript.extra-offset = #'( 2 . -3.5 )
```

```
    % | <>^\markup { D.S. al Coda } }

    % text center-aligned
    % ====================
    % Move text to the desired position
    % \once \override TextScript.extra-offset = #'( 6 . -5.0 )
    % | <>^\markup { \center-column { D.S. "al Coda" } }

    % text and symbols center-aligned
    % ===============================
    % Move text to the desired position
    % and tweak spacing for optimum text alignment
    \repeat unfold 1 {
      s1
      \bar ""
    }
    \once \override TextScript.extra-offset = #'( 0 . -3.0 )
    \once \override TextScript.word-space = #1.5
    <>^\markup { \center-column { "D.S. al Coda"
      \line {
        \musicglyph "scripts.coda"
        \musicglyph "scripts.tenuto"
        \musicglyph "scripts.coda"} } }

    % Increasing the unfold counter will expand the staff-free space
    \repeat unfold 3 {
      s1
      \bar ""
    }
    % Resume bar count and show staff lines again
\startStaff
\cadenzaOff

% Should Coda be on new line?
% Coda NOT on new line: DON'T use \break
% Coda on new line: use \break
\break

% Show up, you clef and key!
\once \override Staff.KeySignature.break-visibility = #end-of-line-invisible
\once \override Staff.Clef.break-visibility = #end-of-line-invisible

% Set coda sign as rehearsal mark and adjust size and position

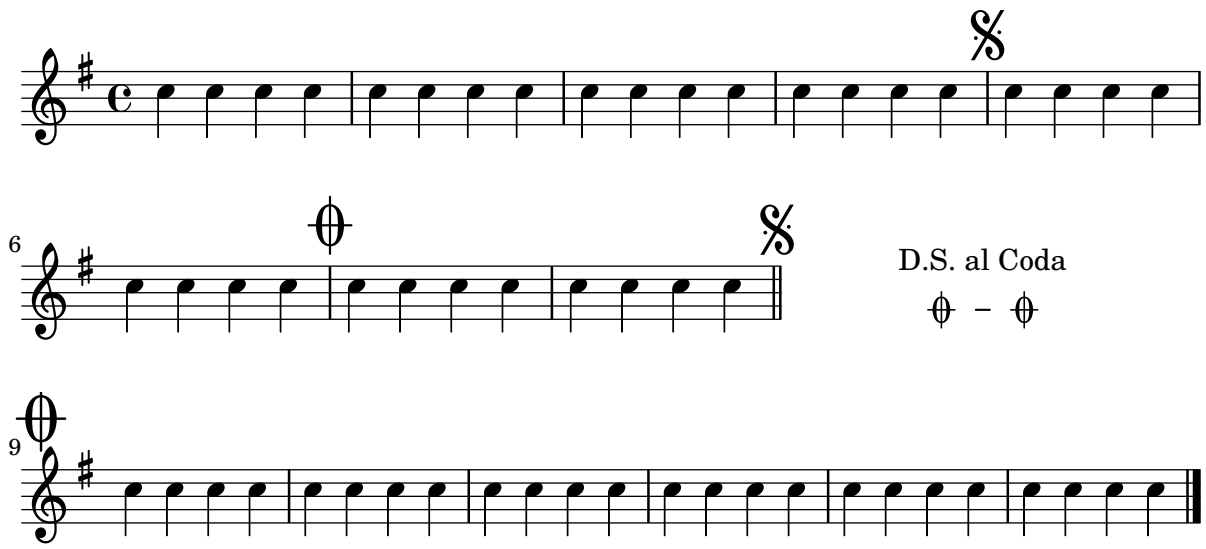
% Put the coda sign on top of the (treble-)clef
% depending on coda's line-position

% Coda NOT on new line, use this:
% \once \override Score.RehearsalMark.extra-offset = #'( -2 . 1.75 )

% Coda on new line, use this:
\once \override Score.RehearsalMark.extra-offset = #'( -5 . .5 )
```

```
    \once \override Score.RehearsalMark.font-size = #5
    \mark \markup { \musicglyph "scripts.coda" }

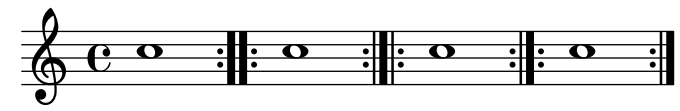
    % The coda
    \repeat unfold 6 {
      c4 c c c
    }
    \bar"|."
  }
}
```



Impostare la doppia ripetizione predefinita per le volte

Esistono tre diversi stili di doppie ripetizioni per le volte, che si possono impostare con `doubleRepeatType`.

```
\relative c'' {
  \repeat volta 1 { c1 }
  \set Score.doubleRepeatType = #":..:"
  \repeat volta 1 { c1 }
  \set Score.doubleRepeatType = #":|.|:"
  \repeat volta 1 { c1 }
  \set Score.doubleRepeatType = #":|.:"
  \repeat volta 1 { c1 }
}
```
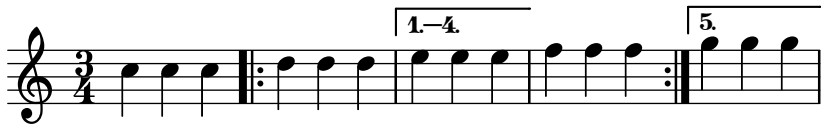


Accorciare le parentesi delle volte

Per impostazione predefinita, le parentesi delle volte si estendono per tutta l'alternativa, ma si possono accorciare impostando `voltaSpannerDuration`. Nell'esempio seguente, la parentesi dura una misura, che ha una durata di 3/4.

```
\relative c'' {
```

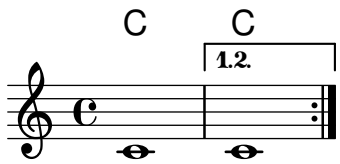
```
  \time 3/4
  c4 c c
  \set Score.voltaSpannerDuration = #(ly:make-moment 3/4)
  \repeat volta 5 { d4 d d }
  \alternative {
    {
      e4 e e
      f4 f f
    }
    { g4 g g }
  }
}
```



Volta sotto gli accordi

Aggiungendo l'incisore `Volta_engraver` al rigo, è possibile inserire le volte sotto gli accordi.

```
\score {
  <<
    \chords {
      c1
      c1
    }
    \new Staff \with {
      \consists "Volta_engraver"
    }
    {
      \repeat volta 2 { c'1 }
      \alternative { c' }
    }
  >>
  \layout {
    \context {
      \Score
      \remove "Volta_engraver"
    }
  }
}
```



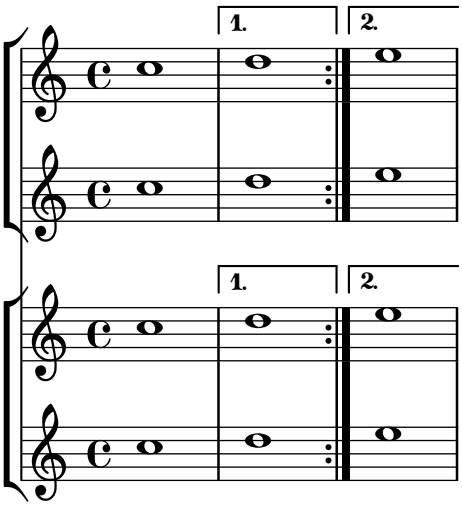
Volta multi staff

By adding the `Volta_engraver` to the relevant staff, volte can be put over staves other than the topmost one in a score.

```
voltaMusic = \relative c'' {
```

```
  \repeat volta 2 {
    c1
  }
  \alternative {
    d1
    e1
  }
}

<<
  \new StaffGroup <<
    \new Staff \voltaMusic
    \new Staff \voltaMusic
  >>
  \new StaffGroup <<
    \new Staff \with { \consists "Volta_engraver" }
      \voltaMusic
    \new Staff \voltaMusic
  >>
>>
```



Volta text markup using repeatCommands
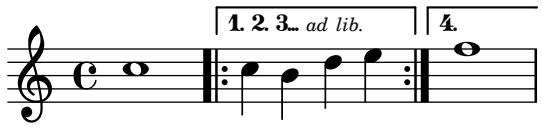
Though volte are best specified using `\repeat volta`, the context property `repeatCommands` must be used in cases where the volta text needs more advanced formatting with `\markup`.

Since `repeatCommands` takes a list, the simplest method of including markup is to use an identifier for the text and embed it in the command list using the Scheme syntax `#(list (list 'volta textIdentifier))`. Start- and end-repeat commands can be added as separate list elements:

```
voltaAdLib = \markup { 1. 2. 3... \text \italic { ad lib. } }

\relative c'' {
  c1
  \set Score.repeatCommands = #(list (list 'volta voltaAdLib) 'start-repeat)
  c4 b d e
  \set Score.repeatCommands = #'((volta #f) (volta "4.") end-repeat)
  f1
```

```
  \set Score.repeatCommands = #'((volta #f))
}
```



Simultaneous notes
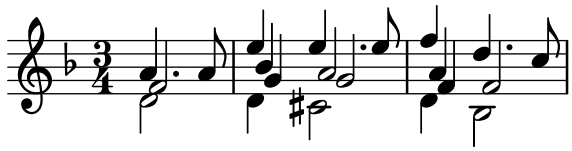
Sezione “Simultaneous notes” in *Guida alla Notazione*

Voci ulteriori per evitare le collisioni

In alcuni casi di musica polifonica complessa sono necessarie delle voci ulteriori per evitare le collisioni tra note. Se servono più di quattro voci parallele, si possono aggiungere altre voci definendo una variabile con la funzione Scheme function `context-spec-music`.

```
voiceFive = #(context-spec-music (make-voice-props-set 4) 'Voice)

\relative c'' {
  \time 3/4
  \key d \minor
  \partial 2
  <<
    \new Voice  {
      \voiceOne
      a4. a8
      e'4 e4. e8
      f4 d4. c8
    }
    \new Voice {
      \voiceTwo
      d,2
      d4 cis2
      d4 bes2
    }
    \new Voice {
      \voiceThree
      f'2
      bes4 a2
      a4 s2
    }
    \new Voice {
      \voiceFive
      s2
      g4 g2
      f4 f2
    }
  >>
}
```

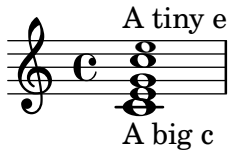


Changing a single note’s size in a chord

Individual note heads in a chord can be modified with the `\tweak` command inside a chord, by altering the `font-size` property.

Inside the chord (within the brackets `< >`), before the note to be altered, place the `\tweak` command, followed by `font-size` and define the proper size like `#-2` (a tiny note head).
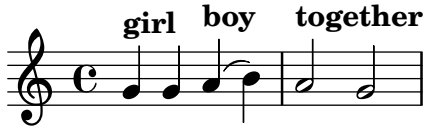
```
\relative c' {
  <\tweak font-size #+2 c e g c
   \tweak font-size #-2 e>1
   ^\markup { A tiny e }_\markup { A big c }
}
```



Modificare le indicazioni testuali di partCombine

Quando si usa la funzionalità di combinazione automatica delle parti, si può modificare il testo delle sezioni soliste e dell'unisono:

```
\new Staff <<
  \set Staff.soloText = #"girl"
  \set Staff.soloIIText = #"boy"
  \set Staff.aDueText = #"together"
  \partCombine
    \relative c'' {
      g4 g r r
      a2 g
    }
    \relative c'' {
      r4 r a( b)
      a2 g
    }
>>
```

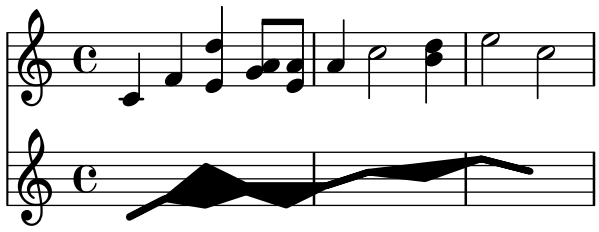


Clusters

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

```
fragment = \relative c' {
  c4 f <e d'>4
  <g a>8 <e a> a4 c2 <d b>4
  e2 c
}

<<
  \new Staff \fragment
  \new Staff \makeClusters \fragment
>>
```



Combinare due parti sullo stesso rigo

Lo strumento di unione delle parti (il comando `\partCombine`) permette di combinare varie parti sullo stesso rigo. Indicazioni testuali come “solo” e “a2” sono aggiunte automaticamente; per toglierele basta impostare la proprietà `printPartCombineTexts` su `f`. Per le partiture vocali (inni), non c’è bisogno di aggiungere i testi “solo/a2”, quindi dovrebbero essere disattivati. Tuttavia potrebbe convenire non usarlo se c’è una qualche parte solista, perché non verrebbe indicata. In tali casi è preferibile usare la notazione polifonica normale.

Questo frammento illustra i tre modi con cui due parti possono essere stampate su uno stesso rigo: normale polifonia, `\partCombine` senza testo e `\partCombine` con testo.

```
%% Combining pedal notes with clef changes

musicUp = \relative c'' {
  \time 4/4
  a4 c4.( g8) a4 |
  g4 e' g,( a8 b) |
  c b a2.
}

musicDown = \relative c'' {
  g4 e4.( d8) c4 |
  r2 g'4( f8 e) |
  d2 \stemDown a
}

\score {
    <<
    \new Staff \with { instrumentName = "Standard polyphony" }

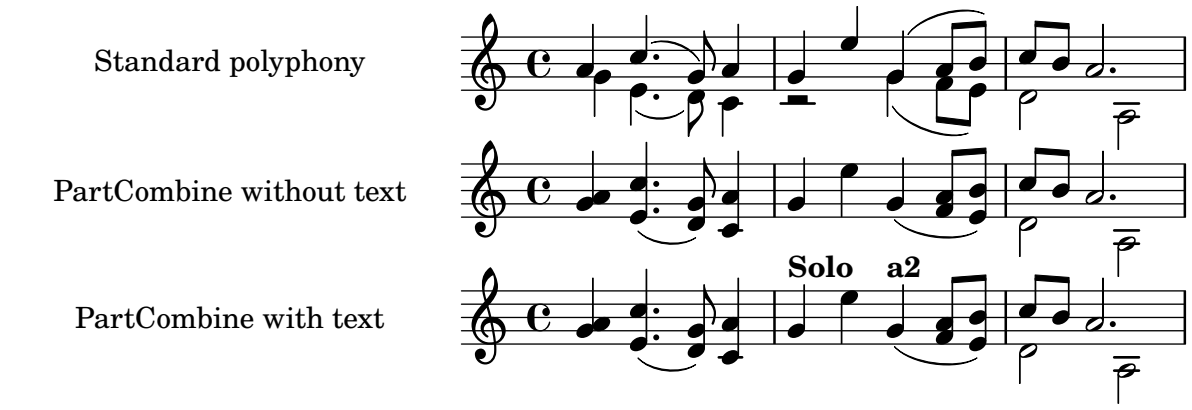
      << \musicUp \\ \musicDown >>

    \new Staff \with {
      instrumentName = "PartCombine without text"
      printPartCombineTexts = ##f
    }

    \partCombine \musicUp \musicDown

    \new Staff \with { instrumentName = "PartCombine with text" }
      \partCombine \musicUp \musicDown
    >>
  \layout {
    indent = 6.0\cm
    \context {
      \Score
      \override SystemStartBar.collapse-height = #30
    }
```

```
  }
}
```



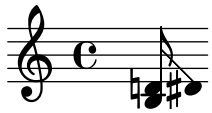
Displaying complex chords

Here is a way to display a chord where the same note is played twice with different accidentals.

```
fixA = {
  \once \override Stem.length = #11
}

fixB = {
  \once \override NoteHead.X-offset = #1.7
  \once \override Stem.length = #7
  \once \override Stem.rotation = #'(45 0 0)
  \once \override Stem.extra-offset = #'(-0.1 . -0.2)
  \once \override Flag.style = #'no-flag
  \once \override Accidental.extra-offset = #'(4 . -.1)
}


\relative c' {
  << { \fixA <b d!>8 } \\ { \voiceThree \fixB dis } >> s
}
```

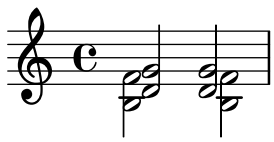


Forzare lo spostamento orizzonatale delle note

Quando il motore tipografico non riesce a risolvere una situazione, si può usare la sintassi che sovrascrive le decisioni tipografiche. L'unità di misura usata è lo spazio del rigo.

```
\relative c' <<
  {
    <d g>2 <d g>
  }
  \\
  {
    <b f'>2
    \once \override NoteColumn.force-hshift = #1.7
```

```
    <b f'>2
  }
>>
```
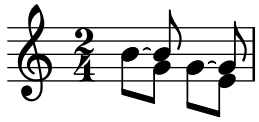


Making an object invisible with the 'transparent property

Setting the `transparent` property will cause an object to be printed in "invisible ink": the object is not printed, but all its other behavior is retained. The object still takes up space, it takes part in collisions, and slurs, ties and beams can be attached to it.

This snippet demonstrates how to connect different voices using ties. Normally, ties only connect two notes in the same voice. By introducing a tie in a different voice, and blanking the first up-stem in that voice, the tie appears to cross voices.

```
\relative {
  \time 2/4
  <<
    {
      \once \hide Stem
      \once \override Stem.length = #8
      b'8 ~ 8\noBeam
      \once \hide Stem
      \once \override Stem.length = #8
      g8 ~ 8\noBeam
    }
    \\
    {
      b8 g g e
    }
  >>
}
```
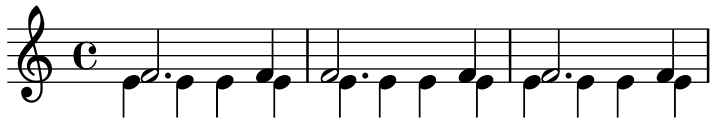


Spostare le note puntate in polifonia

Quando una nota puntata della voce più alta viene spostata per evitare una collisione con una nota di un'altra voce, il comportamento predefinito è spostare la nota più alta a destra. Tale comportamento può essere modificato tramite la proprietà `prefer-dotted-right` di `NoteCollision`.

```
\new Staff \relative c' <<
  {
    f2. f4
    \override Staff.NoteCollision.prefer-dotted-right = ##f
    f2. f4
    \override Staff.NoteCollision.prefer-dotted-right = ##t
    f2. f4
```

```
  }
  \\
  { e4 e e e e e e e e e e e }
>>
```
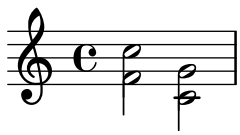


Suppressing warnings for clashing note columns

If notes from two voices with stems in the same direction are placed at the same position, and both voices have no shift or the same shift specified, the error message '`warning: ignoring too many clashing note columns`' will appear when compiling the LilyPond file. This message can be suppressed by setting the `'ignore-collision` property of the `NoteColumn` object to `#t`. Please note that this does not just suppress warnings but stops LilyPond trying to resolve collisions at all and so may have unintended results unless used with care.

```
ignore = \override NoteColumn.ignore-collision = ##t

\relative c' {
  \new Staff <<
    \new Voice { \ignore \stemDown f2 g }
    \new Voice { c2 \stemDown c, }
  >>
}
```



Two \partCombine pairs on one staff

The `\partCombine` function takes two music expressions each containing a part, and distributes them among four `Voice`s named "two" "one" "solo" and "chords" depending on when and how the parts merged into a common voice. The voices output from `\partCombine` can have their layout properties adjusted in the usual way. Here we define extensions of `\partCombine` to make it easier to put four voices on a staff.

```
soprano = { d'4 | cis'  b  e'  d'8 cis' | cis'2 b }
alto = { fis4 | e8 fis gis ais b4 b | b ais fis2 }
tenor = { a8 b | cis' dis' e'4 b8 cis' d'4 | gis cis' dis'2 }
bass = { fis8 gis | a4 gis g fis | eis fis b,2 }

\new Staff <<
  \key b\minor
  \clef alto
  \partial 4
  \transpose b b'
  \partCombineUp \soprano \alto
  \partCombineDown \tenor \bass
>>
\layout {
```

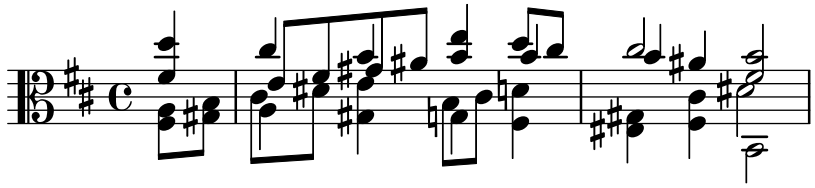
```
  \context {
    \Staff
    \accepts "VoiceBox"
  }
  \context {
    \name "VoiceBox"
    \type "Engraver_group"
    \defaultchild "Voice"
    \accepts "Voice"
    \accepts "NullVoice"
  }
}

customPartCombineUp =
#(define-music-function (partOne partTwo)
  (ly:music? ly:music?)
"Take the music in @var{partOne} and @var{partTwo} and return
a @code{VoiceBox} named @q{Up} containing @code{Voice}s
that contain @var{partOne} and @var{partTwo} merged into one
voice where feasible.  This variant sets the default voicing
in the output to use upward stems."
#{
  \new VoiceBox = "Up" <<
    \context Voice = "one" { \voiceOne }
    \context Voice = "two" { \voiceThree }
    \context Voice = "shared" { \voiceOne }
    \context Voice = "solo" { \voiceOne }
    \context NullVoice = "null" {}
    \partCombine #partOne #partTwo
  >>
#})

customPartCombineDown = #
(define-music-function (partOne partTwo)
  (ly:music? ly:music?)
"Take the music in @var{partOne} and @var{partTwo} and return
a @code{VoiceBox} named @q{Down} containing @code{Voice}s
that contain @var{partOne} and @var{partTwo} merged into one
voice where feasible.  This variant sets the default voicing
in the output to use downward stems."
#{
  \new VoiceBox = "Down" <<
    \set VoiceBox.soloText = #"Solo III"
    \set VoiceBox.soloIIText = #"Solo IV"
    \context Voice ="one" { \voiceFour }
    \context Voice ="two" { \voiceTwo }
    \context Voice ="shared" { \voiceFour }
    \context Voice ="solo" { \voiceFour }
    \context NullVoice = "null" {}
    \partCombine #partOne #partTwo
  >>
#})
```

```
soprano = { d'4 | cis'  b  e'  d'8 cis' | cis'2 b }
alto = { fis4 | e8 fis gis ais b4 b | b ais fis2 }
tenor = { a8 b | cis' dis' e'4 b8 cis' d'4 | gis cis' dis'2 }
bass = { fis8 gis | a4 gis g fis | eis fis b,2 }

\new Staff <<
  \key b\minor
  \clef alto
  \partial 4
  \transpose b b'
  \customPartCombineUp \soprano \alto
  \customPartCombineDown \tenor \bass
>>
```
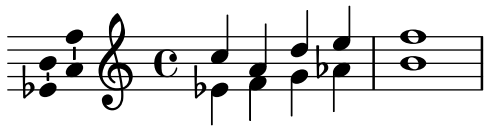


Staff notation

Sezione “Staff notation” in *Guida alla Notazione*

Un ambitus per voce

L’ambitus può essere specificato per voce. In tal caso occorre spostarlo manualmente per evitare collisioni.

```
\new Staff <<
  \new Voice \with {
    \consists "Ambitus_engraver"
  } \relative c'' {
    \override Ambitus.X-offset = #2.0
    \voiceOne
    c4 a d e
    f1
  }
  \new Voice \with {
    \consists "Ambitus_engraver"
  } \relative c' {
    \voiceTwo
    es4 f g as
    b1
  }
>>
```

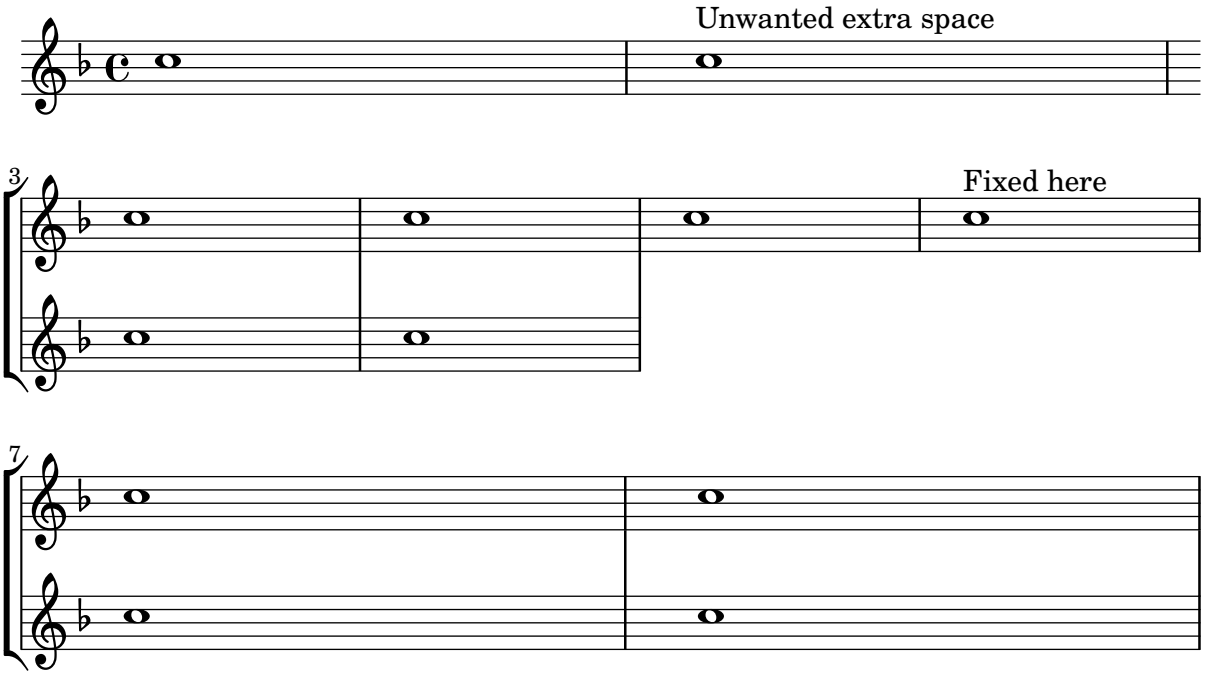


Adding an extra staff at a line break

When adding a new staff at a line break, some extra space is unfortunately added at the end of the line before the break (to fit in a key signature change, which will never be printed anyway). The workaround is to add a setting of `Staff.explicitKeySignatureVisibility` as is shown in the example.

```
\score {
  \new StaffGroup \relative c'' {
    \new Staff
    \key f \major
    c1 c^"Unwanted extra space" \break
    << { c1 | c }
       \new Staff {
         \key f \major
         \once \omit Staff.TimeSignature
         c1 | c
       }
    >>
    c1 | c^"Fixed here" \break
    << { c1 | c }
       \new Staff {
         \once \set Staff.explicitKeySignatureVisibility = #end-of-line-invisible
```

```
        \key f \major
        \once \omit Staff.TimeSignature
        c1 | c
      }
    >>
  }
}
```

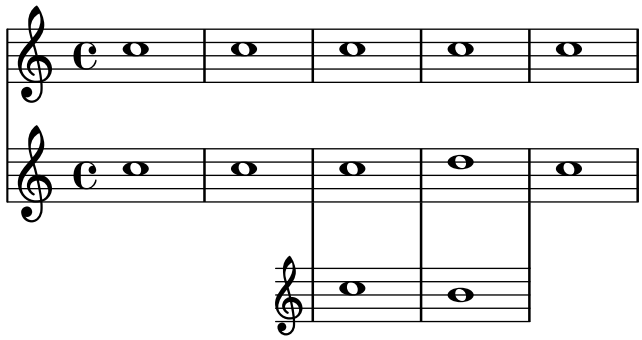


Adding an extra staff

An extra staff can be added (possibly temporarily) after the start of a piece.

```
\score {
  <<
    \new Staff \relative c'' {
      c1 | c | c | c | c
    }
    \new StaffGroup \relative c'' {
      \new Staff {
        c1 | c
        <<
          {
            c1 | d
          }
          \new Staff {
            \once \omit Staff.TimeSignature
            c1 | b
          }
        >>
        c1
      }
    }
  >>
```

```
}
```



Adding indicators to staves which get split after a break

This snippet defines the `\splitStaffBarLine`, `convUpStaffBarLine` and `convDownStaffBarLine` commands. These add arrows at a bar line, to denote that several voices sharing a staff will each continue on a staff of their own in the next system, or that voices split in this way recombine.

```
#(define-markup-command (arrow-at-angle layout props angle-deg length fill)
   (number? number? boolean?)
   (let* (
           (PI-OVER-180 (/ (atan 1 1) 34))
           (degrees->radians (lambda (degrees) (* degrees PI-OVER-180)))
           (angle-rad (degrees->radians angle-deg))
           (target-x (* length (cos angle-rad)))
           (target-y (* length (sin angle-rad))))
     (interpret-markup layout props
       (markup
        #:translate (cons (/ target-x 2) (/ target-y 2))
        #:rotate angle-deg
        #:translate (cons (/ length -2) 0)
        #:concat (#:draw-line (cons length 0)
                   #:arrow-head X RIGHT fill)))))


splitStaffBarLineMarkup = \markup \with-dimensions #'(0 . 0) #'(0 . 0) {
  \combine
  \arrow-at-angle #45 #(sqrt 8) ##t
  \arrow-at-angle #-45 #(sqrt 8) ##t
}

splitStaffBarLine = {
  \once \override Staff.BarLine.stencil =
  #(lambda (grob)
     (ly:stencil-combine-at-edge
      (ly:bar-line::print grob)
      X RIGHT
      (grob-interpret-markup grob splitStaffBarLineMarkup)
      0))
  \break
}
```

```
convDownStaffBarLine = {
  \once \override Staff.BarLine.stencil =
  #(lambda (grob)
     (ly:stencil-combine-at-edge
      (ly:bar-line::print grob)
      X RIGHT
      (grob-interpret-markup grob #{
        \markup\with-dimensions #'(0 . 0) #'(0 . 0) {
          \translate #'(0 . -.13)\arrow-at-angle #-45 #(sqrt 8) ##t
        }#})
      0))
  \break
}

convUpStaffBarLine = {
  \once \override Staff.BarLine.stencil =
  #(lambda (grob)
     (ly:stencil-combine-at-edge
      (ly:bar-line::print grob)
      X RIGHT
      (grob-interpret-markup grob #{
        \markup\with-dimensions #'(0 . 0) #'(0 . 0) {
          \translate #'(0 . .14)\arrow-at-angle #45 #(sqrt 8) ##t
        }#})
      0))
  \break
}


\paper {
  ragged-right = ##t
  short-indent = 10\mm
}

separateSopranos = {
  \set Staff.instrumentName = "AI AII"
  \set Staff.shortInstrumentName = "AI AII"
  \splitStaffBarLine
  \change Staff = "up"
}
convSopranos = {
  \convDownStaffBarLine
  \change Staff = "shared"
  \set Staff.instrumentName = "S A"
  \set Staff.shortInstrumentName = "S A"
}

sI = {
  \voiceOne
  \repeat unfold 4 f''2
  \separateSopranos
```

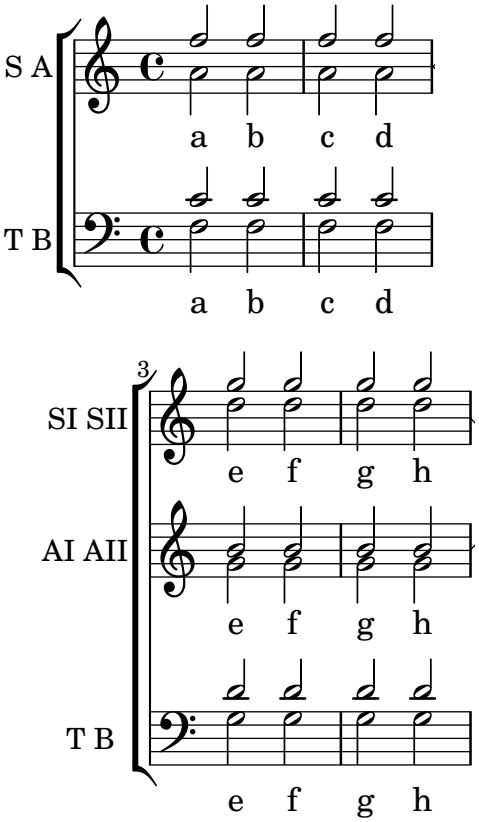
```
  \repeat unfold 4 g''2
  \convSopranos
  \repeat unfold 4 c''2
}
sII = {
  s1*2
  \voiceTwo
  \change Staff = "up"
  \repeat unfold 4 d''2
}
aI = {
  \voiceTwo
  \repeat unfold 4 a'2
  \voiceOne
  \repeat unfold 4 b'2
  \convUpStaffBarLine
  \voiceTwo
  \repeat unfold 4 g'2
}
aII = {
  s1*2
  \voiceTwo
  \repeat unfold 4 g'2
}
ten = {
  \voiceOne
  \repeat unfold 4 c'2
  \repeat unfold 4 d'2
  \repeat unfold 4 c'2
}
bas = {
  \voiceTwo
  \repeat unfold 4 f2
  \repeat unfold 4 g2
  \repeat unfold 4 c2
}

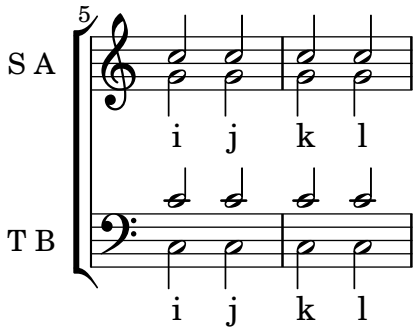
\score {
  <<
    \new ChoirStaff <<
      \new Staff = up \with {
        instrumentName = "SI SII"
        shortInstrumentName = "SI SII"
      } {
        s1*4
      }

      \new Staff = shared \with {
        instrumentName = "S A"
        shortInstrumentName = "S A"
      } <<
        \new Voice = sopI \sI
```

```
        \new Voice = sopII \sII
        \new Voice = altI \aI
        \new Voice = altII \aII
      >>
      \new Lyrics \with {
        alignBelowContext = up
      }
      \lyricsto sopII { e f g h }
      \new Lyrics \lyricsto altI { a b c d e f g h i j k l }

      \new Staff = men \with {
        instrumentName = "T B"
        shortInstrumentName = "T B"
      } <<
        \clef F
        \new Voice = ten \ten
        \new Voice = bas \bas
      >>
      \new Lyrics \lyricsto bas { a b c d e f g h i j k l }
    >>
  >>
  \layout {
    \context {
      \Staff \RemoveEmptyStaves
      \override VerticalAxisGroup.remove-first = ##t
    }
  }
}
```





Aggiungere citazioni orchestrali a una partitura vocale

L'esempio seguente mostra un approccio per simplificare l'aggiunta di citazioni orchestrali a una riduzione per pianoforte di una partitura vocale. La funzione musicale `\cueWhile` prende quattro argomenti: la musica da cui prendere la citazione, come è definita da `\addQuote`, il nome da inserire prima delle notine, poi o `#UP` o `#DOWN` per specificare o `\voiceOne` col nome sopra il rigo o `\voiceTwo` col nome sotto il rigo, e infine la musica per pianoforte che deve apparire in parallelo alle notine. Il nome dello strumento citato è posto a sinistra delle notine. Molti passaggi possono essere citati, ma non possono sovrapporsi l'un l'altro nel tempo.

```
cueWhile =
#(define-music-function
   (instrument name dir music)
   (string? string? ly:dir? ly:music?)
   #{
     \cueDuring $instrument #dir {
       \once \override TextScript.self-alignment-X = #RIGHT
       \once \override TextScript.direction = $dir
       <>-\markup { \tiny #name }
       $music
     }
   #})
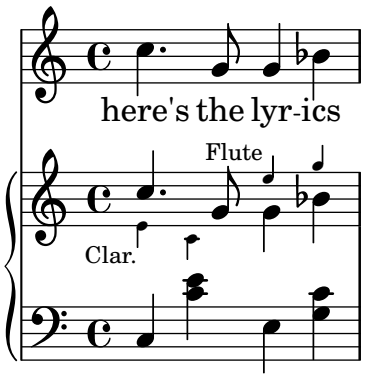
flute = \relative c'' {
  \transposition c'
  s4 s4 e g
}
\addQuote "flute" { \flute }

clarinet = \relative c' {
  \transposition bes
  fis4 d d c
}
\addQuote "clarinet" { \clarinet }

singer = \relative c'' { c4. g8 g4 bes4 }
words = \lyricmode { here's the lyr -- ics }

pianoRH = \relative c'' {
  \transposition c'
  \cueWhile "clarinet" "Clar." #DOWN { c4. g8 }
  \cueWhile "flute" "Flute" #UP { g4 bes4 }
}
pianoLH = \relative c { c4 <c' e> e, <g c> }
```

```
\score {
  <<
    \new Staff {
      \new Voice = "singer" {
        \singer
      }
    }
    \new Lyrics {
      \lyricsto "singer"
      \words
    }
    \new PianoStaff <<
      \new Staff {
        \new Voice {
          \pianoRH
        }
      }
      \new Staff {
        \clef "bass"
        \pianoLH
      }
    >>
  >>
}
```



Aggiungere i segni di tempo per i glissandi lunghi

I battiti saltati nei glissandi molto lunghi vengono talvolta segnalati con delle indicazioni di tempo, che consistono solitamente in dei gambi privi di teste di nota. Questi gambi possono essere usati anche per contenere segni di espressione intermedi.

Se i gambi non si allineano bene al glissando, può essere necessario riposizionarli leggermente.

```
glissandoSkipOn = {
  \override NoteColumn.glissando-skip = ##t
  \hide NoteHead
  \override NoteHead.no-ledgers = ##t
}
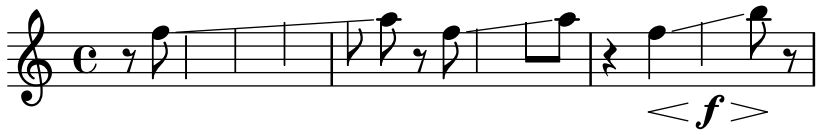
glissandoSkipOff = {
  \revert NoteColumn.glissando-skip
  \undo \hide NoteHead
```

```
  \revert NoteHead.no-ledgers
}

\relative c'' {
  r8 f8\glissando
  \glissandoSkipOn
  f4 g a a8\noBeam
  \glissandoSkipOff
  a8

  r8 f8\glissando
  \glissandoSkipOn
  g4 a8
  \glissandoSkipOff
  a8 |

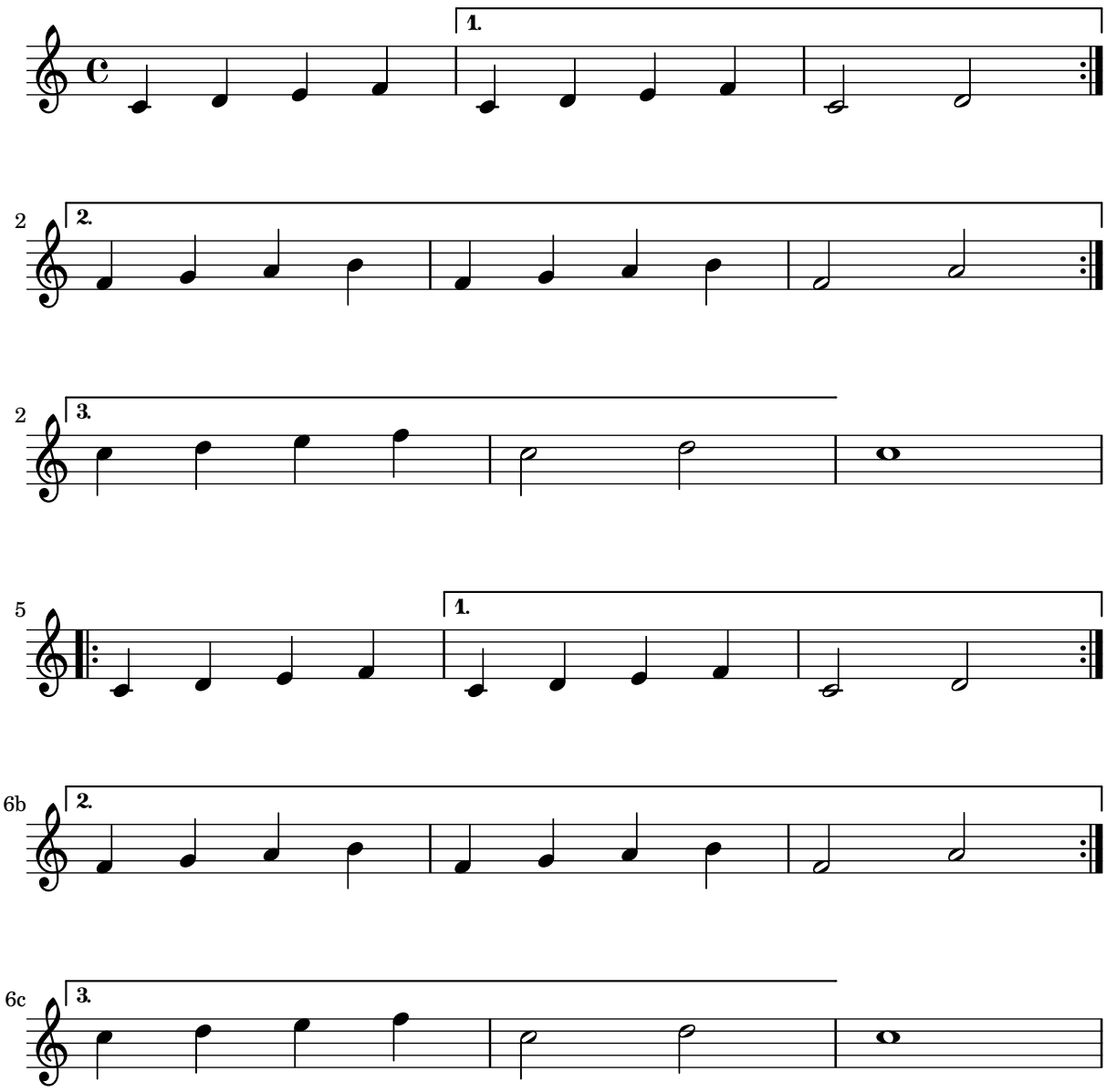
  r4 f\glissando \<
  \glissandoSkipOn
  a4\f \>
  \glissandoSkipOff
  b8\! r |
}
```



Numeri di battuta alternativi

Si possono impostare due metodi alternativi di numerazione della battuta, utili specialmente per le ripetizioni.
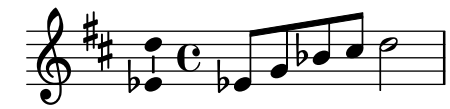
```
\relative c'{
  \set Score.alternativeNumberingStyle = #'numbers
  \repeat volta 3 { c4 d e f | }
    \alternative {
      { c4 d e f | c2 d \break }
      { f4 g a b | f4 g a b | f2 a | \break }
      { c4 d e f | c2 d }
    }
  c1 \break
  \set Score.alternativeNumberingStyle = #'numbers-with-letters
  \repeat volta 3 { c,4 d e f | }
    \alternative {
      { c4 d e f | c2 d \break }
      { f4 g a b | f4 g a b | f2 a | \break }
      { c4 d e f | c2 d }
    }
  c1
}
```



Ambitus after key signature

By default, ambitus are positioned at the left of the clef. The `\ambitusAfter` function allows for changing this placement. Syntax is `\ambitusAfter` *`grob-interface`* (see Sezione "Graphical Object Interfaces" in *Guida al Funzionamento Interno* for a list of possible values for *`grob-interface`*). A common use case is printing the ambitus between key signature and time signature.

```
\new Staff \with {
  \consists Ambitus_engraver
} \relative {
  \ambitusAfter key-signature
  \key d \major
  es'8 g bes cis d2
}
```



Centered measure numbers

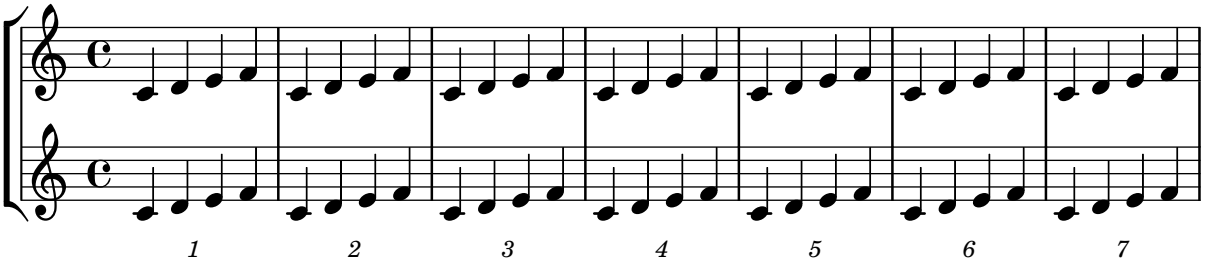
Scores of large ensemble works often have bar numbers placed beneath the system, centered horizontally on the measure's extent. This snippet shows how the `Measure_counter_engraver` may be used to simulate this notational practice. Here, the engraver has been added to a `Dynamics` context.

This snippet presents a legacy method: starting from LilyPond 2.23.3, `\set Score.centerBarNumbers = ##t` is enough.

```
\layout {
  \context {
    \Dynamics
    \consists #Measure_counter_engraver
    \override MeasureCounter.direction = #DOWN
    \override MeasureCounter.font-encoding = #'latin1
    \override MeasureCounter.font-shape = #'italic
    % to control the distance of the Dynamics context from the staff:
    \override VerticalAxisGroup.nonstaff-relatedstaff-spacing.padding = #2
  }
  \context {
    \Score
    \remove "Bar_number_engraver"
  }
}

pattern = \repeat unfold 7 { c'4 d' e' f' }

\new StaffGroup <<
  \new Staff {
    \pattern
  }
  \new Staff {
    \pattern
  }
  \new Dynamics {
    \startMeasureCount
    s1*7
    \stopMeasureCount
  }
>>
```



Changing the default bar lines

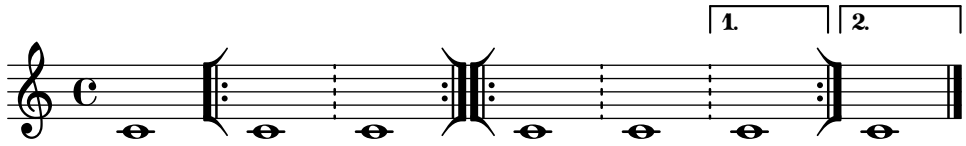
Default bar lines can be changed when re-defined in a score context.

```
% http://lsr.di.unimi.it/LSR/Item?id=964
```

```
%%=> http://lists.gnu.org/archive/html/lilypond-user/2014-03/msg00126.html
%%=> http://lilypond.1069038.n5.nabble.com/Changing-the-default-end-repeat-bracket-tc169357

\layout {
  \context {
    \Score
    %% Changing the defaults from engraver-init.ly
    defaultBarType = #"!"
    startRepeatType = #"[|:"
    endRepeatType = #":|]"
    doubleRepeatType = #":|][|:"
  }
}

%% example:
{
  c'1
  \repeat volta 2 { \repeat unfold 2 c' }
  \repeat volta 2 { \repeat unfold 2 c' }
  \alternative {
    { c' }
    {
      %% v2.18 workaround
      \once\override Score.VoltaBracket.shorten-pair = #'(1 . -1)
      c'
    }
  }
  \bar "|."
}
```



Changing the number of lines in a staff

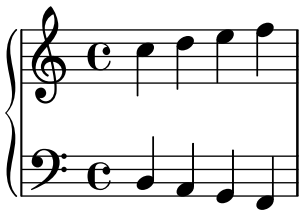
The number of lines in a staff may changed by overriding the `StaffSymbol` property `line-count`.

```
upper = \relative c'' {
  c4 d e f
}

lower = \relative c {
  \clef bass
  c4 b a g
}

\score {
  \context PianoStaff <<
    \new Staff {
      \upper
    }
```

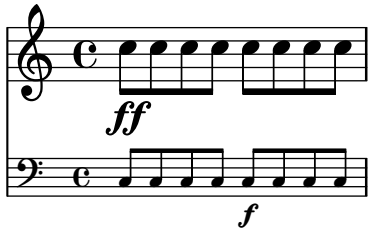
```
    \new Staff {
      \override Staff.StaffSymbol.line-count = #4
      \lower
    }
  >>
}
```



Changing the staff size

Though the simplest way to resize staves is to use `#(set-global-staff-size xx)`, an individual staff's size can be changed by scaling the properties `'staff-space` and `fontSize`.

```
<<
  \new Staff {
    \relative c'' {
      \dynamicDown
      c8\ff c c c c c c c
    }
  }
  \new Staff \with {
    fontSize = #-3
    \override StaffSymbol.staff-space = #(magstep -3)
  } {
    \clef bass
    c8 c c c c\f c c c
  }
>>
```



Creating blank staves

To create blank staves, generate empty measures then remove the `Bar_number_engraver` from the `Score` context, and the `Time_signature_engraver`, `Clef_engraver` and `Bar_engraver` from the `Staff` context.

```
#(set-global-staff-size 20)

\score {
  {
    \repeat unfold 12 { s1 \break }
  }
```

```
  \layout {
    indent = 0\in
    \context {
      \Staff
      \remove "Time_signature_engraver"
      \remove "Clef_engraver"
      \remove "Bar_engraver"
    }
    \context {
      \Score
      \remove "Bar_number_engraver"
    }
  }
}

% uncomment these lines for "letter" size
%{
\paper {
  #(set-paper-size "letter")
  ragged-last-bottom = ##f
  line-width = 7.5\in
  left-margin = 0.5\in
  bottom-margin = 0.25\in
  top-margin = 0.25\in
}
%}

% uncomment these lines for "A4" size
%{
\paper {
  #(set-paper-size "a4")
  ragged-last-bottom = ##f
  line-width = 180
  left-margin = 15
  bottom-margin = 10
  top-margin = 10
}
%}
```





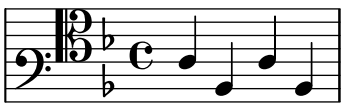
Creating custom key signatures

LilyPond supports custom key signatures. In this example, print for D minor with an extended range of printed flats.

```
\new Staff \with {
  \override StaffSymbol.line-count = #8
  \override KeySignature.flat-positions = #'((-7 . 6))
  \override KeyCancellation.flat-positions = #'((-7 . 6))
  % presumably sharps are also printed in both octaves
  \override KeySignature.sharp-positions = #'((-6 . 7))
  \override KeyCancellation.sharp-positions = #'((-6 . 7))

  \override Clef.stencil = #
  (lambda (grob)(grob-interpret-markup grob
  #{ \markup\combine
    \musicglyph "clefs.C"
    \translate #'(-3 . -2)
    \musicglyph "clefs.F"
   #}))
    clefPosition = #3
    middleCPosition = #3
    middleCClefPosition = #3
}

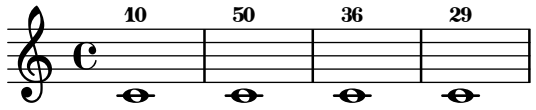
{
  \key d\minor
  f bes, f bes,
}
```



Creating double-digit fingerings

Creating fingerings larger than 5 is possible.

```
\relative c' {
  c1-10
  c1-50
  c1-36
  c1-29
}
```



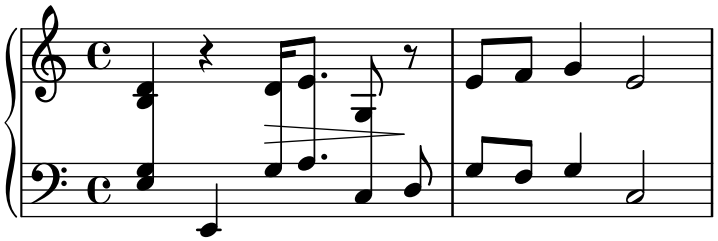
Cross staff stems

This snippet shows the use of the `Span_stem_engraver` and `\crossStaff` to connect stems across staves automatically.

The stem length need not be specified, as the variable distance between noteheads and staves is calculated automatically.

```
\layout {
  \context {
    \PianoStaff
    \consists "Span_stem_engraver"
  }
}

{
  \new PianoStaff <<
    \new Staff {
      <b d'>4 r d'16\> e'8. g8 r\!
      e'8 f' g'4 e'2
    }
    \new Staff {
      \clef bass
      \voiceOne
      \autoBeamOff
      \crossStaff { <e g>4 e, g16 a8. c8} d
      \autoBeamOn
      g8 f g4 c2
    }
  >>
}
```
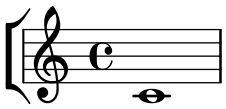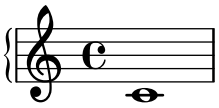


Mostrare la parentesi anche se c'è un solo rigo nel sistema

Se c'è un solo rigo in uno dei tipi di rigo `ChoirStaff` o `StaffGroup`, la parentesi e la stanghetta iniziale non appaiono. Si può modificare questo comportamento predefinito sovrascrivendo `collapse-height` e impostando un valore inferiore al numero di linee del rigo.

Nei contesti `PianoStaff` e `GrandStaff`, dove i sistemi iniziano con una parentesi graffa invece di una parentesi quadra, occorre impostare un'altra proprietà, come si vede nel secondo sistema dell'esempio.

```
\score {
  \new StaffGroup <<
    % Must be lower than the actual number of staff lines
    \override StaffGroup.SystemStartBracket.collapse-height = #4
    \override Score.SystemStartBar.collapse-height = #4
    \new Staff {
      c'1
    }
  >>
}
\score {
  \new PianoStaff <<
    \override PianoStaff.SystemStartBrace.collapse-height = #4
    \override Score.SystemStartBar.collapse-height = #4
    \new Staff {
      c'1
    }
  >>
}
```





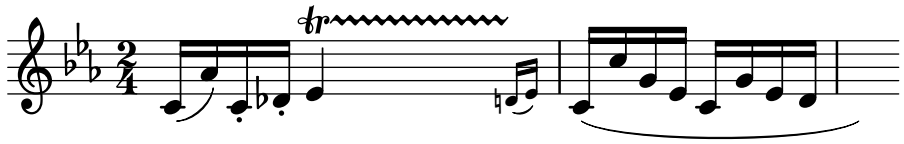
Extending a TrillSpanner

For `TrillSpanner`, the `minimum-length` property becomes effective only if the `set-spacing-rods` procedure is called explicitly.

To do this, the `springs-and-rods` property should be set to `ly:spanner::set-spacing-rods`.

```
\relative c' {
\key c\minor
  \time 2/4
  c16( as') c,-. des-.
  \once\override TrillSpanner.minimum-length = #15
  \once\override TrillSpanner.springs-and-rods = #ly:spanner::set-spacing-rods
  \afterGrace es4
  \startTrillSpan { d16[( \stopTrillSpan es)] }
  c( c' g es c g' es d
  \hideNotes
```

```
  c8)
}
```



Estendere i glissandi sulle volte delle ripetizioni

Un glissando che si estende in vari blocchi `\alternative` può essere simulato aggiungendo all'inizio di ogni blocco `\alternative` una nota di abbellimento nascosta da cui inizia un glissando. La nota di abbellimento deve avere la stessa altezza della nota da cui parte il glissando iniziale. In questo frammento si usa una funzione musicale che prende come argomento l'altezza della nota di abbellimento.

Attenzione: nella musica polifonica la nota di abbellimento deve avere una nota di abbellimento corrispondente in tutte le altre voci.

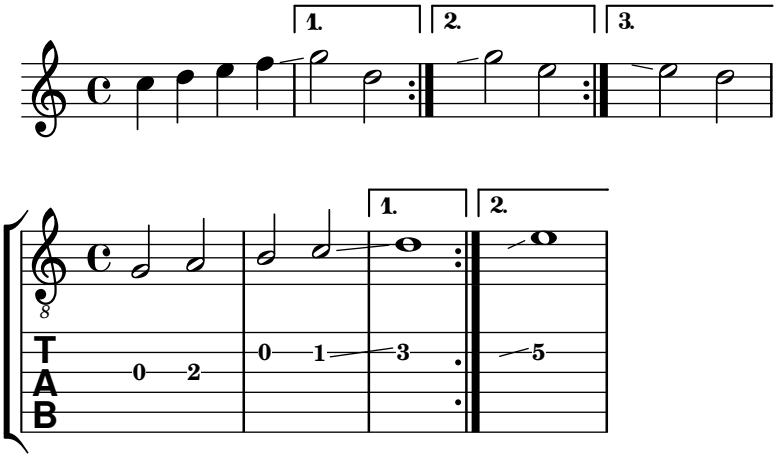
```
repeatGliss = #(define-music-function (grace)
  (ly:pitch?)
  #{
    % the next two lines ensure the glissando is long enough
    % to be visible
    \once \override Glissando.springs-and-rods
      = #ly:spanner::set-spacing-rods
    \once \override Glissando.minimum-length = #3.5
    \once \hideNotes
    \grace $grace \glissando
  #})

\score {
  \relative c'' {
    \repeat volta 3 { c4 d e f\glissando }
    \alternative {
      { g2 d }
      { \repeatGliss f g2 e }
      { \repeatGliss f e2 d }
    }
  }
}

music =  \relative c' {
  \voiceOne
  \repeat volta 2 {
    g a b c\glissando
  }
  \alternative {
    { d1 }
    { \repeatGliss c \once \omit StringNumber e1\2 }
  }
}

\score {
```

```
  \new StaffGroup <<
    \new Staff <<
      \new Voice { \clef "G_8" \music }
    >>
    \new TabStaff  <<
      \new TabVoice { \clef "moderntab" \music }
    >>
  >>
}
```



Flat Ties

The function takes the default `Tie.stencil` as an argument, calculating the result relying on the extents of this default.

Further tweaking is possible by overriding `Tie.details.height-limit` or with `\shape`. It's also possible to change the custom-definition on the fly.

```
%% http://lsr.di.unimi.it/LSR/Item?id=1031

#(define ((flared-tie coords) grob)

  (define (pair-to-list pair)
     (list (car pair) (cdr pair)))

  (define (normalize-coords goods x y dir)
    (map
      (lambda (coord)
        ;(coord-scale coord (cons x (* y dir)))
        (cons (* x (car coord)) (* y dir (cdr coord))))
      goods))

  (define (my-c-p-s points thick)
    (make-connected-path-stencil
      points
      thick
      1.0
      1.0
      #f
      #f))
```

```
  ;; outer let to trigger suicide
  (let ((sten (ly:tie::print grob)))
    (if (grob::is-live? grob)
        (let* ((layout (ly:grob-layout grob))
               (line-thickness (ly:output-def-lookup layout 'line-thickness))
               (thickness (ly:grob-property grob 'thickness 0.1))
               (used-thick (* line-thickness thickness))
               (dir (ly:grob-property grob 'direction))
               (xex (ly:stencil-extent sten X))
               (yex (ly:stencil-extent sten Y))
               (lenx (interval-length xex))
               (leny (interval-length yex))
               (xtrans (car xex))
               (ytrans (if (> dir 0)(car yex) (cdr yex)))
               (uplist
                 (map pair-to-list
                      (normalize-coords coords lenx (* leny 2) dir))))

   (ly:stencil-translate
       (my-c-p-s uplist used-thick)
     (cons xtrans ytrans)))
   '())))

#(define flare-tie
  (flared-tie '((0 . 0)(0.1 . 0.2) (0.9 . 0.2) (1.0 . 0.0))))

\layout {
  \context {
    \Voice
    \override Tie.stencil = #flare-tie
  }
}

\paper { ragged-right = ##f }

\relative c' {
  a4~a
  \override Tie.height-limit = 4
  a'4~a
  a'4~a
  <a,, c e a c e a c e>~ q

  \break

  a'4~a
  \once \override Tie.details.height-limit = 14
  a4~a

  \break

  a4~a
```

```
  \once \override Tie.details.height-limit = 0.5
  a4~a
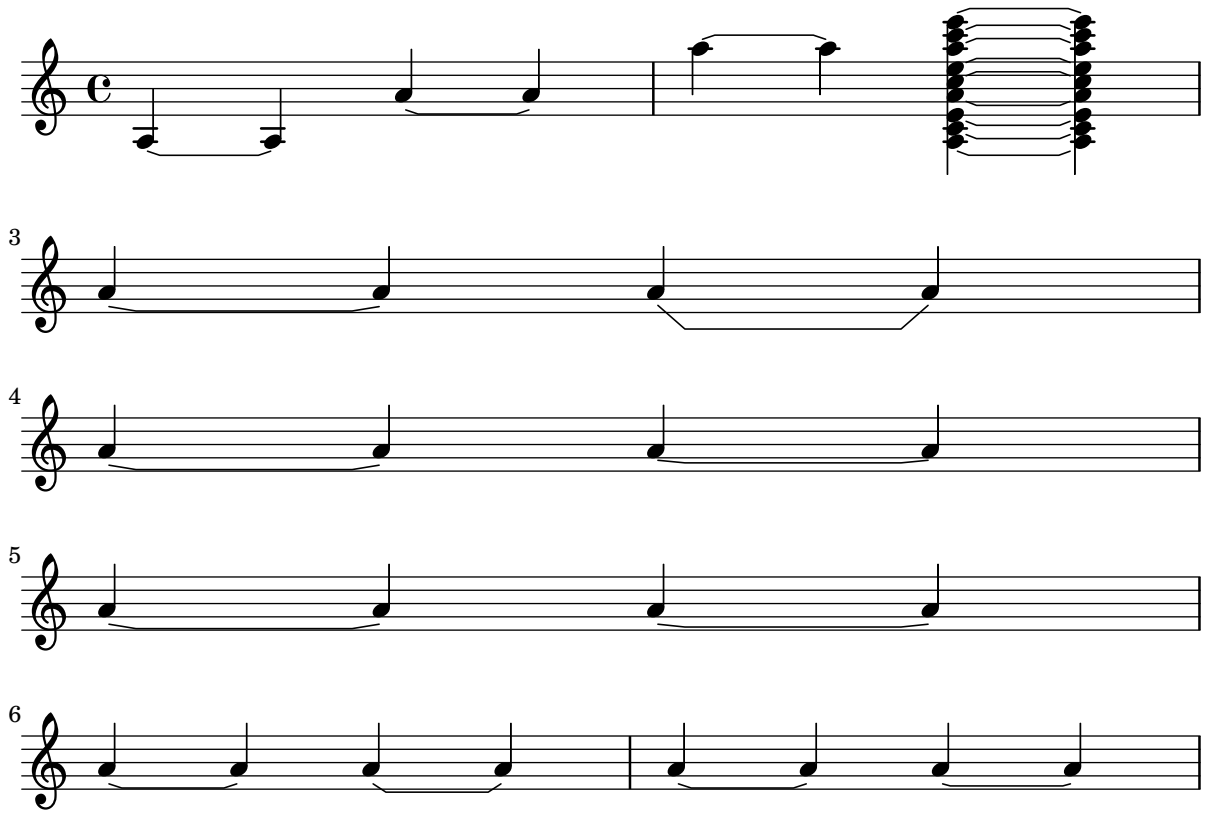
  \break

  a4~a
  \shape #'((0 . 0) (0 . 0.4) (0 . 0.4) (0 . 0)) Tie
  a4~a

  \break

  a4~a
  \once \override Tie.stencil =
    #(flared-tie '((0 . 0)(0.1 . 0.4) (0.9 . 0.4) (1.0 . 0.0)))
  a4~a

  a4~a
  \once \override Tie.stencil =
    #(flared-tie '((0 . 0)(0.06 . 0.1) (0.94 . 0.1) (1.0 . 0.0)))
  a4~a
}
```



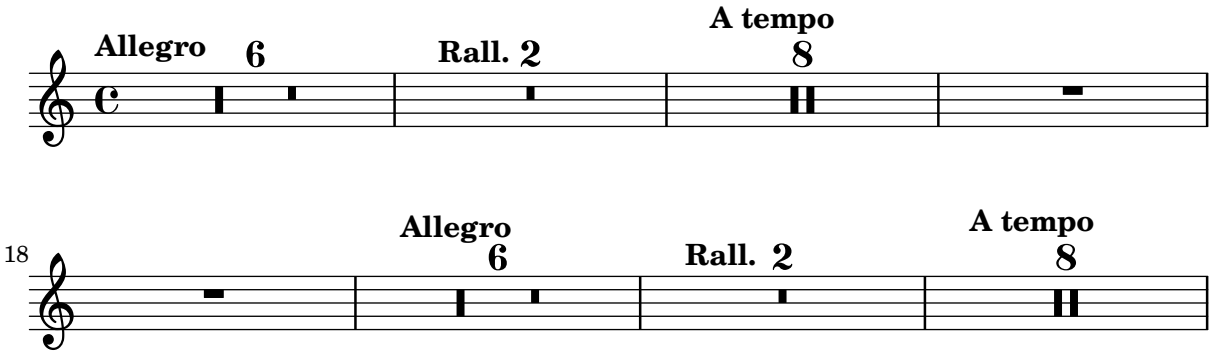
Forcing measure width to adapt to MetronomeMark's width

By default, metronome marks do not influence horizontal spacing. This can be solved through a simple override, as shown in the second half of the example.

```
example = {
  \tempo "Allegro"
```

```
  R1*6
  \tempo "Rall."
  R1*2
  \tempo "A tempo"
  R1*8
}
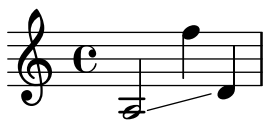
{
  \compressMMRests {
    \example
    R1
    R1
    \override Score.MetronomeMark.extra-spacing-width = #'(-3 . 0)
    \example
  }
}
```



Glissandi can skip grobs

`NoteColumn` grobs can be skipped over by glissandi.

```
\relative c' {
  a2 \glissando
  \once \override NoteColumn.glissando-skip = ##t
  f''4 d,
}
```



How to print two rehearsal marks above and below the same barline (method 1)

This method prints two 'rehearsal marks', one on top of the other. It shifts the lower rehearsal mark below the staff and then adds padding above it in order to place the upper rehearsal mark above the staff.

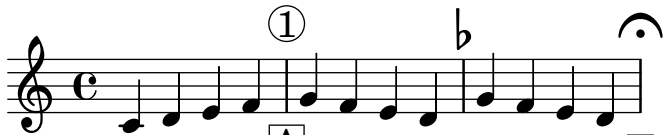
By adjusting the extra-offset and baseline-skip values you can increase or decrease the overall space between the rehearsal mark and the staff.

Because nearly every type of glyph or string can be made to behave like a rehearsal mark it is possible to centre those above and below a bar line.

Adding the appropriate 'break visibility' as shown in snippet 1 (\%22http://lsr.di.unimi.it/LSR/Item?id=1\%22) will allow you to position two marks at the end of a line as well.

Note: Method 1 is less complex than Method 2 but does not really allow for fine tuning of placement of one of the rehearsal marks without affecting the other. It may also give some problems with vertical spacing, since using `extra-offset` does not change the bounding box of the mark from its original value.

```
\relative c'{
  c d e f |
  \once \override Score.RehearsalMark.extra-offset = #'(0 . -8.5)
  \once \override Score.RehearsalMark.baseline-skip = #9
  \mark \markup \center-column { \circle 1 \box A }
  g f e d |
  \once \override Score.RehearsalMark.extra-offset = #'(0 . -8.5)
  \once \override Score.RehearsalMark.baseline-skip = #9
  \mark \markup \center-column { \flat { \bold \small \italic Fine. } }
  g f e d |
  \once \override Score.RehearsalMark.extra-offset = #'(0 . -8.5)
  \once \override Score.RehearsalMark.baseline-skip = #9
  \override Score.RehearsalMark.break-visibility = #begin-of-line-invisible
  \mark \markup \center-column { \fermata \box z }
}
```



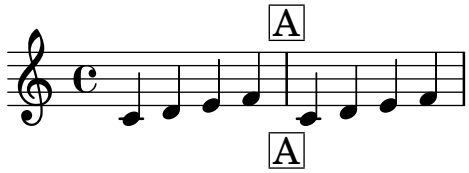
How to print two rehearsal marks above and below the same barline (method 2)

This method prints two 'rehearsal marks' - one above the stave and one below, by creating two voices, adding the Rehearsal Mark engraver to each voice - without this no rehearsal mark is printed - and then placing each rehearsal mark UP and DOWN in each voice respectively.

This method (as opposed to method 1) is more complex, but allows for more flexibility, should it be needed to tweak each rehearsal mark independently of the other.

```
\score {
  \relative c'
  <<
    \new Staff {
      <<
        \new Voice \with {
          \consists Mark_engraver
          \consists "Staff_collecting_engraver"
        }
        { c4 d e f
          \mark \markup { \box A }
          c4 d e f
        }
```

```
        \new Voice \with {
          \consists Mark_engraver
          \consists "Staff_collecting_engraver"
          \override RehearsalMark.direction = #DOWN
        }
        { s4 s s s
          \mark \markup { \circle 1 }
          s4 s s s
        }
      >>
    }
  >>
  \layout {
    \context {
      \Score
      \remove "Mark_engraver"
      \remove "Staff_collecting_engraver"
    }
  }
}
```



Incipit

Quando si trascrive musica mensurale, un incipit all'inizio del brano è utile per indicare il tempo e l'armatura di chiave originali. I musicisti oggi sono abituati alle stanghette, ma queste non erano note all'epoca della musica mensurale. Come compromesso, spesso le stanghette vengono poste tra i righi, uno stile di formattazione chiamato mensurstriche.

```
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% A short excerpt from the Jubilate Deo by Orlande de Lassus
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

global = {
  \set Score.skipBars = ##t
  \key g \major
  \time 4/4

  % the actual music
  \skip 1*8

  % let finis bar go through all staves
  \override Staff.BarLine.transparent = ##f

  % finis bar
  \bar "|."
}
```

```
discantusIncipit = {
  \clef "neomensural-c1"
  \key f \major
  \time 2/2
  c''1.
}

discantusNotes = {
  \transpose c' c'' {
    \clef "treble"
    d'2. d'4 |
    b e' d'2 |
    c'4 e'4.( d'8 c' b |
    a4) b a2 |
    b4.( c'8 d'4) c'4 |
    \once \hide NoteHead
    c'1 |
    b\breve |
  }
}

discantusLyrics = \lyricmode {
  Ju -- bi -- la -- te De -- o,
  om -- nis ter -- ra, __ om-
  "..."
  -us.
}

altusIncipit = {
  \clef "neomensural-c3"
  \key f \major
  \time 2/2
  r1 f'1.
}

altusNotes = {
  \transpose c' c'' {
    \clef "treble"
    r2 g2. e4 fis g |
    a2 g4 e |
    fis g4.( fis16 e fis4) |
    g1 |
    \once \hide NoteHead
    g1 |
    g\breve |
  }
}

altusLyrics = \lyricmode {
  Ju -- bi -- la -- te
  De -- o, om -- nis ter -- ra,
  "..."
```

```
  -us.
}

tenorIncipit = {
  \clef "neomensural-c4"
  \key f \major
  \time 2/2
  r\longa
  r\breve
  r1 c'1.
}

tenorNotes = {
  \transpose c' c' {
    \clef "treble_8"
    R1 |
    R1 |
    R1 |
    % two measures
    r2 d'2. d'4 b e' |
    \once \hide NoteHead
    e'1 |
    d'\breve |
  }
}

tenorLyrics = \lyricmode {
  Ju -- bi -- la -- te
  "..."
  -us.
}

bassusIncipit = {
  \clef "mensural-f"
  \key f \major
  \time 2/2
  r\maxima
  f1.
}
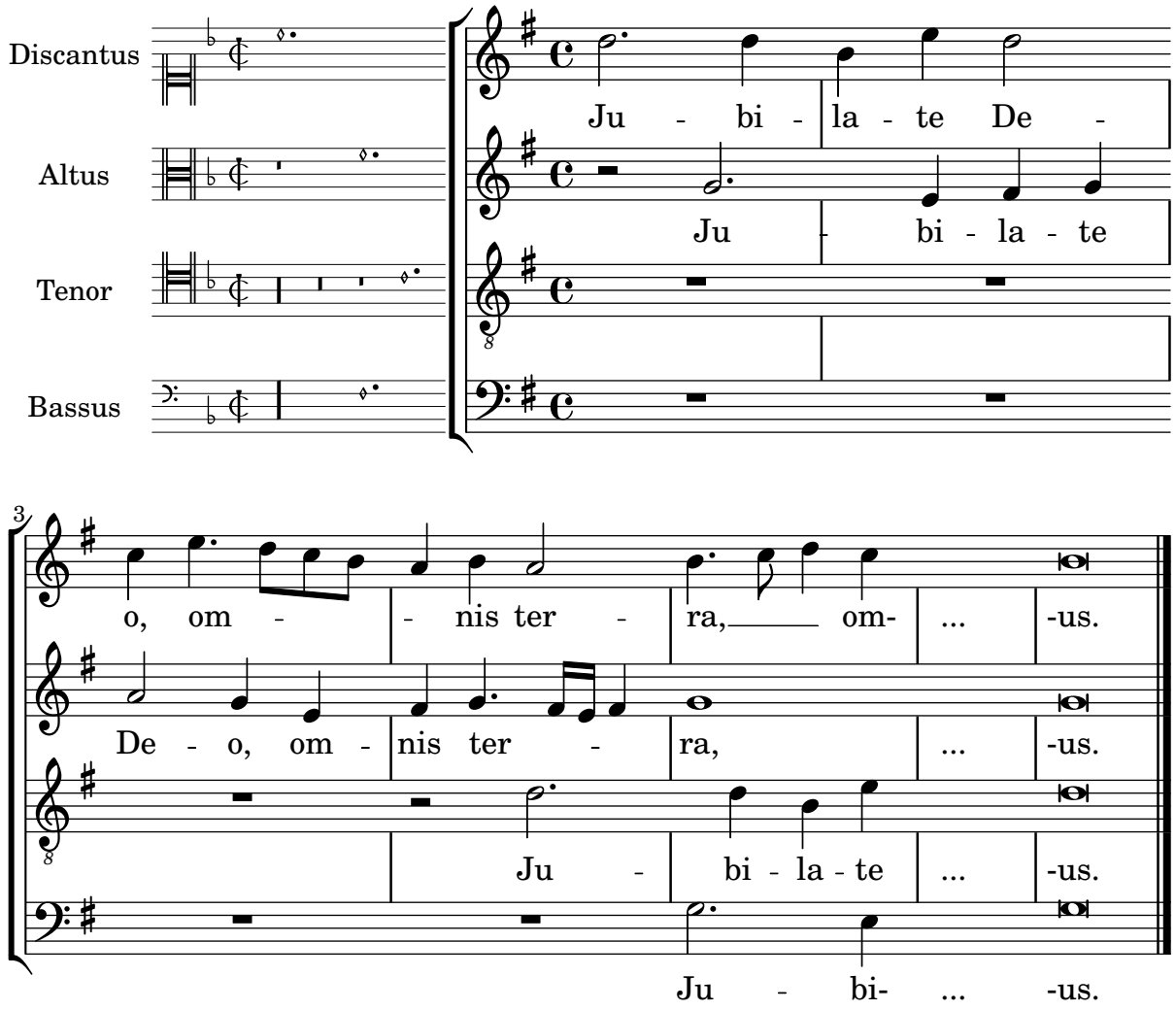
bassusNotes = {
  \transpose c' c' {
    \clef "bass"
    R1 |
    R1 |
    R1 |
    R1 |
    g2. e4 |
    \once \hide NoteHead
    e1 |
    g\breve |
  }
```

```
}

bassusLyrics = \lyricmode {
  Ju -- bi-
  "..."
  -us.
}

\score {
  <<
    \new StaffGroup = choirStaff <<
      \new Voice = "discantusNotes" <<
        \set Staff.instrumentName = "Discantus"
        \incipit \discantusIncipit
        \global
        \discantusNotes
      >>
      \new Lyrics \lyricsto discantusNotes { \discantusLyrics }
      \new Voice = "altusNotes" <<
        \set Staff.instrumentName = "Altus"
        \global
        \incipit \altusIncipit
        \altusNotes
      >>
      \new Lyrics \lyricsto altusNotes { \altusLyrics }
      \new Voice = "tenorNotes" <<
        \set Staff.instrumentName = "Tenor"
        \global
        \incipit \tenorIncipit
        \tenorNotes
      >>
      \new Lyrics \lyricsto tenorNotes { \tenorLyrics }
      \new Voice = "bassusNotes" <<
        \set Staff.instrumentName = "Bassus"
        \global
        \incipit \bassusIncipit
        \bassusNotes
      >>
      \new Lyrics \lyricsto bassusNotes { \bassusLyrics }
    >>
  >>
  \layout {
    \context {
      \Score
      %% no bar lines in staves or lyrics
      \hide BarLine
    }
    %% the next two instructions keep the lyrics between the bar lines
    \context {
      \Lyrics
      \consists "Bar_engraver"
      \consists "Separating_line_group_engraver"
```

```
    }
    \context {
      \Voice
      %% no slurs
      \hide Slur
      %% Comment in the below "\remove" command to allow line
      %% breaking also at those bar lines where a note overlaps
      %% into the next measure.  The command is commented out in this
      %% short example score, but especially for large scores, you
      %% will typically yield better line breaking and thus improve
      %% overall spacing if you comment in the following command.
      %%\remove "Forbid_line_break_engraver"
    }
    indent = 6\cm
    incipit-width = 4\cm
  }
}
```



Inserting score fragments above a staff, as markups

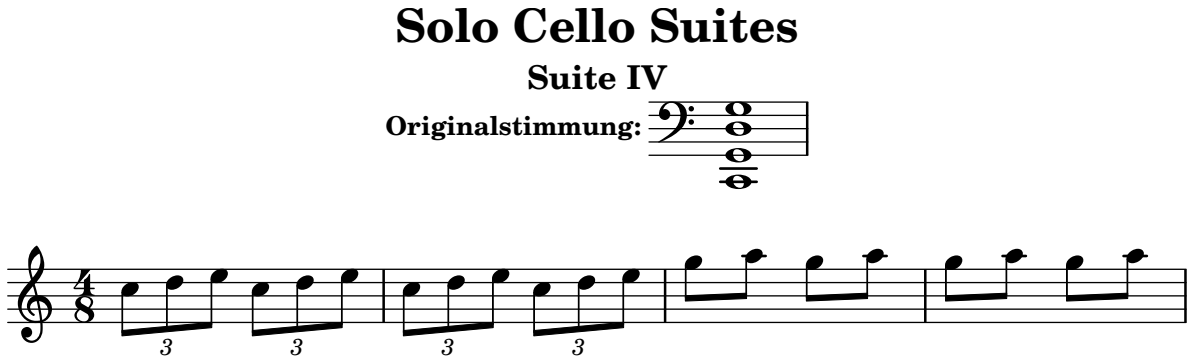
The `\markup` command is quite versatile. In this snippet, it contains a `\score` block instead of texts or marks.

```
tuning = \markup {
  \score {
    \new Staff \with { \remove "Time_signature_engraver" }
    {
      \clef bass
      <c, g, d g>1
    }
    \layout { ragged-right = ##t  indent = 0\cm }
  }
}

\header {
  title = "Solo Cello Suites"
  subtitle = "Suite IV"
  subsubtitle = \markup { Originalstimmung: \raise #0.5 \tuning }
}

\layout { ragged-right = ##f }

\relative c'' {
  \time 4/8
  \tuplet 3/2 { c8 d e } \tuplet 3/2 { c d e }
  \tuplet 3/2 { c8 d e } \tuplet 3/2 { c d e }
  g8 a g a
  g8 a g a
}
```



Let TabStaff print the topmost string at bottom

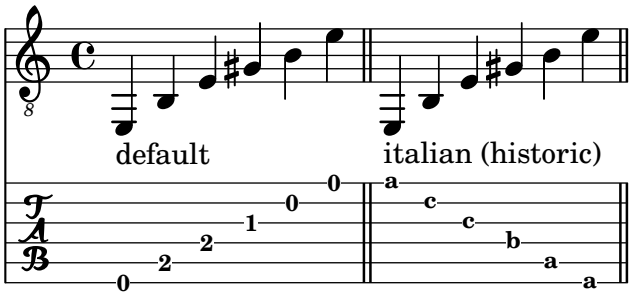
In tablatures usually the first string is printed topmost. If you want to have it at the bottom change the `stringOneTopmost`-context-property. For a context-wide setting this could be done in `layout` as well.

```
%
%\layout {
%  \context {
%    \Score
%    stringOneTopmost = ##f
%  }
%  \context {
%    \TabStaff
%    tablatureFormat = #fret-letter-tablature-format
```

```
%  }
%}

m = {
  \cadenzaOn
  e, b, e gis! b e'
  \bar "||"
}

<<
  \new Staff { \clef "G_8" <>_"default" \m <>_"italian (historic)"\m }
  \new TabStaff
  {
    \m
    \set Score.stringOneTopmost = ##f
    \set TabStaff.tablatureFormat = #fret-letter-tablature-format
    \m
  }
>>
```

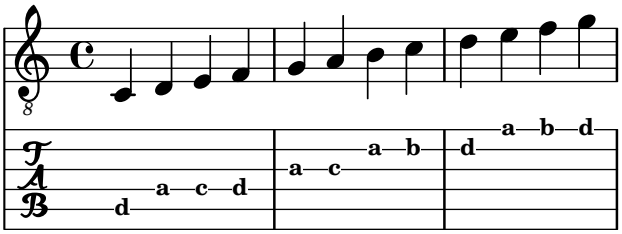


Letter tablature formatting

Tablature can be formatted using letters instead of numbers.

```
music = \relative c {
  c4 d e f
  g4 a b c
  d4 e f g
}

<<
  \new Staff {
    \clef "G_8"
    \music
  }
  \new TabStaff \with {
    tablatureFormat = #fret-letter-tablature-format
  }
  {
    \music
  }
>>
```

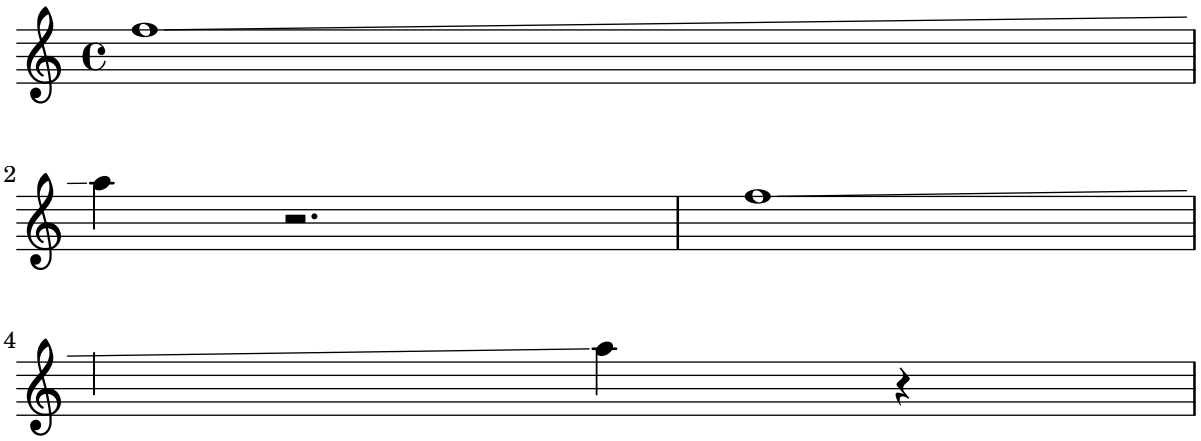


Lasciare che i glissandi vadano a capo

Per permettere a un glissando di andare a capo se capita su un'interruzione di riga, si impostano le proprietà `breakable` e `after-line-breaking` su `#t`:

```
glissandoSkipOn = {
  \override NoteColumn.glissando-skip = ##t
  \hide NoteHead
  \override NoteHead.no-ledgers = ##t
}
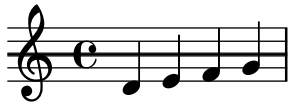
\relative c'' {
  \override Glissando.breakable = ##t
  \override Glissando.after-line-breaking = ##t
  f1\glissando |
  \break
  a4 r2. |
  f1\glissando
  \once \glissandoSkipOn
  \break
  a2 a4 r4 |
}
```



Rendere alcune linee del rigo più spesse delle altre

In ambito didattico può essere utile rendere più spesso una linea del rigo (per esempio, la linea centrale, o per sottolineare la linea della chiave di Sol). Per farlo si possono aggiungere altre linee e posizionarle molto vicino alla linea che deve essere evidenziata, usando la proprietà `line-positions` dell'oggetto `StaffSymbol`.
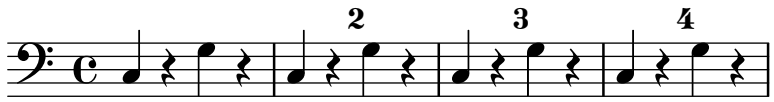
```
{
  \override Staff.StaffSymbol.line-positions =
    #'(-4 -2 -0.2 0 0.2 2 4)
  d'4 e' f' g'
}
```



Measure counter

This snippet provides a workaround for emitting measure counters using transparent percent repeats.

```
<<
  \context Voice = "foo" {
    \clef bass
    c4 r g r
    c4 r g r
    c4 r g r
    c4 r g r
  }
  \context Voice = "foo" {
    \set countPercentRepeats = ##t
    \hide PercentRepeat
    \override PercentRepeatCounter.staff-padding = #1
    \repeat percent 4 { s1 }
  }
>>
```

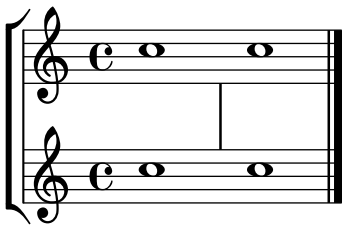


Formattazione mensurale (stanghette tra i righi)

La formattazione mensurale, in cui le stanghette non appaiono sui righi ma nello spazio tra i righi, si può ottenere usando `StaffGroup` al posto di `ChoirStaff`. La stanghetta sui righi viene nascosta con `\hide`.

```
global = {
  \hide Staff.BarLine
  s1 s
  % the final bar line is not interrupted
  \undo \hide Staff.BarLine
  \bar "|."
}

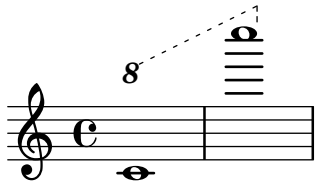
\new StaffGroup \relative c'' {
  <<
    \new Staff { << \global { c1 c } >> }
    \new Staff { << \global { c c } >> }
  >>
}
```



Modificare l'inclinazione dell'estensore dell'ottava

È possibile cambiare l'inclinazione dell'estensore dell'ottava.

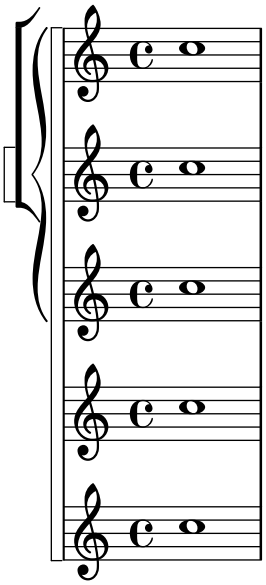
```
\relative c'' {
  \override Staff.OttavaBracket.stencil = #ly:line-spanner::print
  \override Staff.OttavaBracket.bound-details =
    #`((left . ((Y . 0) ; Change the integer here
                (attach-dir . ,LEFT)
                (padding . 0)
                (stencil-align-dir-y . ,CENTER)))
       (right . ((Y . 5) ; Change the integer here
                 (padding . 0)
                 (attach-dir . ,RIGHT)
                 (text . ,(make-draw-dashed-line-markup
                           (cons 0 -1.2))))))
  \override Staff.OttavaBracket.left-bound-info =
     #ly:line-spanner::calc-left-bound-info-and-text
  \override Staff.OttavaBracket.right-bound-info =
     #ly:line-spanner::calc-right-bound-info
  \ottava #1
  c1
  c'''1
}
```



Annidare i righi

Si può usare la proprietà `systemStartDelimiterHierarchy` per creare gruppi di righi annidati più complessi. Il comando `\set StaffGroup.systemStartDelimiterHierarchy` prende come argomento una lista alfabetica dell'insieme di righi prodotti. Prima di ogni rigo si può assegnare un delimitatore di inizio del sistema. Deve essere racchiuso tra parentesi e collega tutti i righi compresi tra le parentesi. Gli elementi nella lista possono essere omessi, ma la prima parentesi quadra collega sempre tutti i righi. Le possibilità sono `SystemStartBar`, `SystemStartBracket`, `SystemStartBrace` e `SystemStartSquare`.

```
\new StaffGroup
\relative c'' <<
  \override StaffGroup.SystemStartSquare.collapse-height = #4
  \set StaffGroup.systemStartDelimiterHierarchy
    = #'(SystemStartSquare (SystemStartBrace (SystemStartBracket a
                             (SystemStartSquare b)  ) c ) d)
  \new Staff { c1 }
  \new Staff { c1 }
  \new Staff { c1 }
  \new Staff { c1 }
  \new Staff { c1 }
>>
```



Armature di chiave non tradizionali

Il comando `\key` comunemente usato imposta la proprietà `keyAlterations` del contesto `Staff`. Per creare armature di chiave non standard, tale proprietà va impostata esplicitamente.
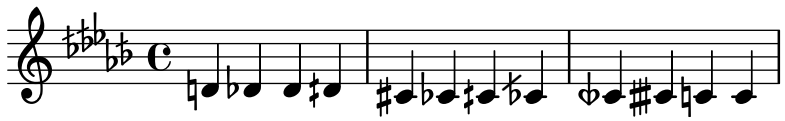
Il formato di questo comando è una lista:

`\set Staff.keyAlterations = #`(((ottava . grado) . alterazione) ((ottava . grado) . alterazione) ...)`

dove, per ogni elemento della lista, `ottava` indica l'ottava (0 è l'ottava dal Do centrale al Si precedente), `grado` indica la nota all'interno dell'ottava (0 significa Do e 6 significa Si) e `alterazione` può essere `,SHARP` `,FLAT` `,DOUBLE-SHARP` etc.

Altrimenti, usando il formato breve per ogni elemento della lista, `(grado . alterazione)`, ciò indica che la stessa alterazione deve essere presente in tutte le ottave. Per le scale microtonalidove un "diesis" non è 100 centesimi, `alterazione` si riferisce alla proporzione di un duecentesimo di tono intero.

```
\include "arabic.ly"
\relative do' {
  \set Staff.keyAlterations = #`((0 . ,SEMI-FLAT)
                                 (1 . ,SEMI-FLAT)
                                 (2 . ,FLAT)
                                 (5 . ,FLAT)
                                 (6 . ,SEMI-FLAT))
%\set Staff.extraNatural = ##f
  re reb \dwn reb resd
  dod dob dosd \dwn dob |
  dobsb dodsd do do |
}
```



Numbering groups of measures

This snippet demonstrates the use of the `Measure_counter_engraver` to number groups of successive measures. Any stretch of measures may be numbered, whether consisting of repetitions or not.
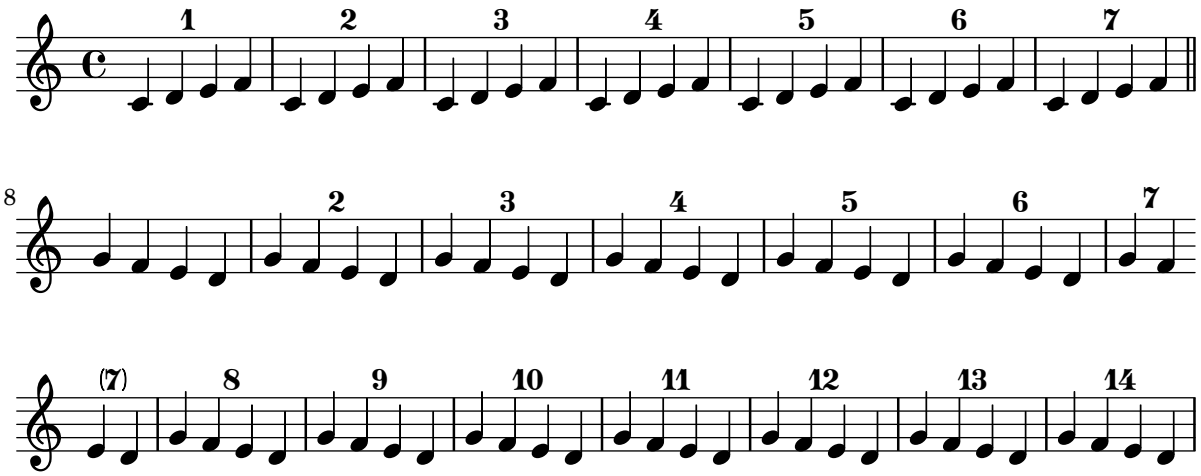
The engraver must be added to the appropriate context. Here, a `Staff` context is used; another possibility is a `Dynamics` context.

The counter is begun with `\startMeasureCount` and ended with `\stopMeasureCount`. Numbering will start by default with `1`, but this behavior may be modified by overriding the `count-from` property.

When a measure extends across a line break, the number will appear twice, the second time in parentheses.

```
\layout {
  \context {
    \Staff
    \consists #Measure_counter_engraver
  }
}

\new Staff {
  \startMeasureCount
  \repeat unfold 7 {
    c'4 d' e' f'
  }
  \stopMeasureCount
  \bar "||"
  g'4 f' e' d'
  \override Staff.MeasureCounter.count-from = #2
  \startMeasureCount
  \repeat unfold 5 {
    g'4 f' e' d'
  }
  g'4 f'
  \bar ""
  \break
  e'4 d'
  \repeat unfold 7 {
    g'4 f' e' d'
  }
  \stopMeasureCount
}
```



Modello per orchestra, coro e pianoforte

Questo modello mostra come usare i contesti annidati `StaffGroup` e `GrandStaff` per creare sottogruppi degli strumenti dello stesso tipo. Mostra anche come usare `\transpose` in modo che le variabili mantengano la musica per gli strumenti traspositori nell'intonazione reale.

```
#(set-global-staff-size 17)
\paper {
  indent = 3.0\cm  % add space for instrumentName
  short-indent = 1.5\cm  % add less space for shortInstrumentName
}

fluteMusic = \relative c' { \key g \major g'1 b }

% Pitches as written on a manuscript for Clarinet in A
% are transposed to concert pitch.

clarinetMusic = \transpose c' a
  \relative c'' { \key bes \major bes1 d }

trumpetMusic = \relative c { \key g \major g''1 b }

% Key signature is often omitted for horns

hornMusic = \transpose c' f
  \relative c { d'1 fis }

percussionMusic = \relative c { \key g \major g1 b }

sopranoMusic = \relative c'' { \key g \major g'1 b }

sopranoLyrics = \lyricmode { Lyr -- ics }

altoIMusic = \relative c' { \key g \major g'1 b }

altoIIMusic = \relative c' { \key g \major g'1 b }

altoILyrics =  \sopranoLyrics

altoIILyrics = \lyricmode { Ah -- ah }

tenorMusic = \relative c' { \clef "treble_8" \key g \major g1 b }

tenorLyrics = \sopranoLyrics

pianoRHMusic = \relative c { \key g \major g''1 b }

pianoLHMusic = \relative c { \clef bass \key g \major g1 b }

violinIMusic = \relative c' { \key g \major g'1 b }

violinIIMusic = \relative c' { \key g \major g'1 b }
```

```
violaMusic = \relative c { \clef alto \key g \major g'1 b }

celloMusic = \relative c { \clef bass \key g \major g1 b }

bassMusic = \relative c { \clef "bass_8" \key g \major g,1 b }

\score {
  <<
    \new StaffGroup = "StaffGroup_woodwinds" <<
      \new Staff = "Staff_flute" \with { instrumentName = "Flute" }
      \fluteMusic

      \new Staff = "Staff_clarinet" \with {
        instrumentName = \markup { \concat { "Clarinet in B" \flat } }
      }

      % Declare that written Middle C in the music
      % to follow sounds a concert B flat, for
      % output using sounded pitches such as MIDI.
      %\transposition bes

      % Print music for a B-flat clarinet
      \transpose bes c' \clarinetMusic
    >>

    \new StaffGroup = "StaffGroup_brass" <<
      \new Staff = "Staff_hornI" \with { instrumentName = "Horn in F" }
       % \transposition f
        \transpose f c' \hornMusic

      \new Staff = "Staff_trumpet" \with { instrumentName = "Trumpet in  C" }
      \trumpetMusic

    >>
    \new RhythmicStaff = "RhythmicStaff_percussion"
    \with { instrumentName = "Percussion" }
    <<
      \percussionMusic
    >>
    \new PianoStaff \with { instrumentName = "Piano" }
    <<
      \new Staff { \pianoRHMusic }
      \new Staff { \pianoLHMusic }
    >>
    \new ChoirStaff = "ChoirStaff_choir" <<
      \new Staff = "Staff_soprano" \with { instrumentName = "Soprano" }
      \new Voice = "soprano"
      \sopranoMusic

      \new Lyrics \lyricsto "soprano" { \sopranoLyrics }
      \new GrandStaff = "GrandStaff_altos"
      \with { \accepts Lyrics } <<
```

```
        \new Staff = "Staff_altoI"  \with { instrumentName = "Alto I" }
        \new Voice = "altoI"
        \altoIMusic

        \new Lyrics \lyricsto "altoI" { \altoILyrics }
        \new Staff = "Staff_altoII" \with { instrumentName = "Alto II" }
        \new Voice = "altoII"
        \altoIIMusic

        \new Lyrics \lyricsto "altoII" { \altoIILyrics }
      >>

      \new Staff = "Staff_tenor" \with { instrumentName = "Tenor" }
        \new Voice = "tenor"
        \tenorMusic

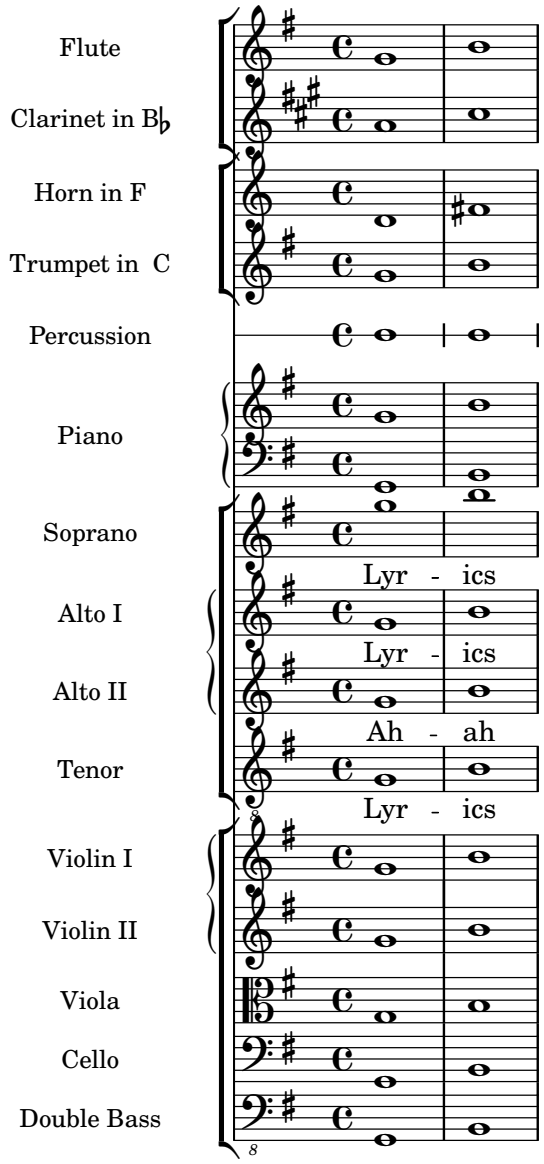
      \new Lyrics \lyricsto "tenor" { \tenorLyrics }
    >>
    \new StaffGroup = "StaffGroup_strings" <<
      \new GrandStaff = "GrandStaff_violins" <<
        \new Staff = "Staff_violinI" \with { instrumentName = "Violin I" }
        \violinIMusic

        \new Staff = "Staff_violinII" \with { instrumentName = "Violin II" }
        \violinIIMusic
      >>

      \new Staff = "Staff_viola" \with { instrumentName = "Viola" }
      \violaMusic

      \new Staff = "Staff_cello" \with { instrumentName = "Cello" }
      \celloMusic
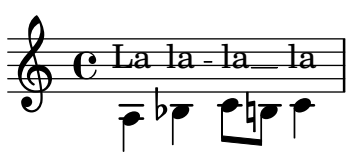
      \new Staff = "Staff_bass" \with { instrumentName = "Double Bass" }
      \bassMusic
    >>
  >>
  \layout { }
}
```



Putting lyrics inside the staff

Lyrics can be moved vertically to place them inside the staff. The lyrics are moved with `\override LyricText.extra-offset = #'(0 . dy)` and there are similar commands to move the extenders and hyphens. The offset needed is established with trial and error.

```
<<
  \new Staff <<
    \new Voice = "voc" \relative c' { \stemDown a bes c8 b c4 }
  >>
  \new Lyrics \with {
    \override LyricText.extra-offset = #'(0 . 8.6)
    \override LyricExtender.extra-offset = #'(0 . 8.6)
    \override LyricHyphen.extra-offset = #'(0 . 8.6)
  } \lyricsto "voc" { La la -- la __ _ la }
>>
```



Quoting another voice with transposition
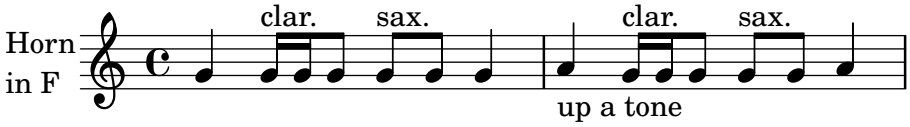
Quotations take into account the transposition of both source and target. In this example, all instruments play sounding middle C; the target is an instrument in F. The target part may be transposed using `\transpose`. In this case, all the pitches (including the quoted ones) are transposed.

```
\addQuote clarinet {
  \transposition bes
  \repeat unfold 8 { d'16 d' d'8 }
}

\addQuote sax {
  \transposition es'
  \repeat unfold 16 { a8 }
}

quoteTest = {
  % french horn
  \transposition f
  g'4
  << \quoteDuring "clarinet" { \skip 4 } s4^"clar." >>
  << \quoteDuring "sax" { \skip 4 } s4^"sax." >>
  g'4
}

{
  \new Staff \with {
    instrumentName = \markup { \column { Horn "in F" } }
  }
  \quoteTest
  \transpose c' d' << \quoteTest s4_"up a tone" >>
}
```



Quoting another voice

The `quotedEventTypes` property determines the music event types which should be quoted. The default value is `(note-event rest-event tie-event beam-event tuplet-span-event)`, which means that only the notes, rests, ties, beams and tuplets of the quoted voice will appear in the `\quoteDuring` expression. In the following example, a 16th rest is not quoted since `rest-event` is not in `quotedEventTypes`.

For a list of event types, consult the "Music classes" section of the Internals Reference.

```
quoteMe = \relative c' {
  fis4 r16 a8.-> b4\ff c
}
\addQuote quoteMe \quoteMe
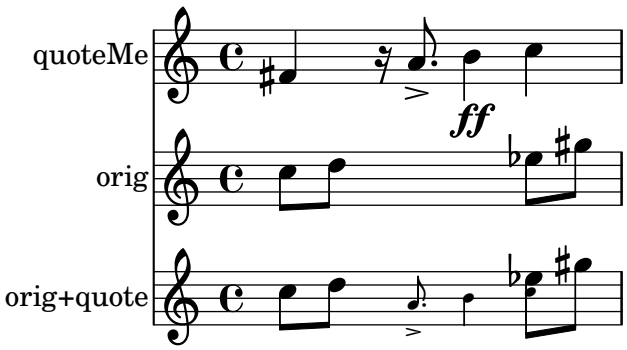
original = \relative c'' {
  c8 d s2
```

```
  \once \override NoteColumn.ignore-collision = ##t
  es8 gis8
}

<<
  \new Staff \with { instrumentName = "quoteMe" }
  \quoteMe

  \new Staff \with { instrumentName = "orig" }
  \original

  \new Staff \with {
    instrumentName = "orig+quote"
    quotedEventTypes = #'(note-event articulation-event)
  }
  \relative c''
  <<
    \original
    \new Voice {
      s4
      \set fontSize = #-4
      \override Stem.length-fraction = #(magstep -4)
      \quoteDuring "quoteMe" { \skip 2. }
    }
  >>
>>
```



Removing brace on first line of piano score

This snippet removes the first brace from a `PianoStaff` or a `GrandStaff`.

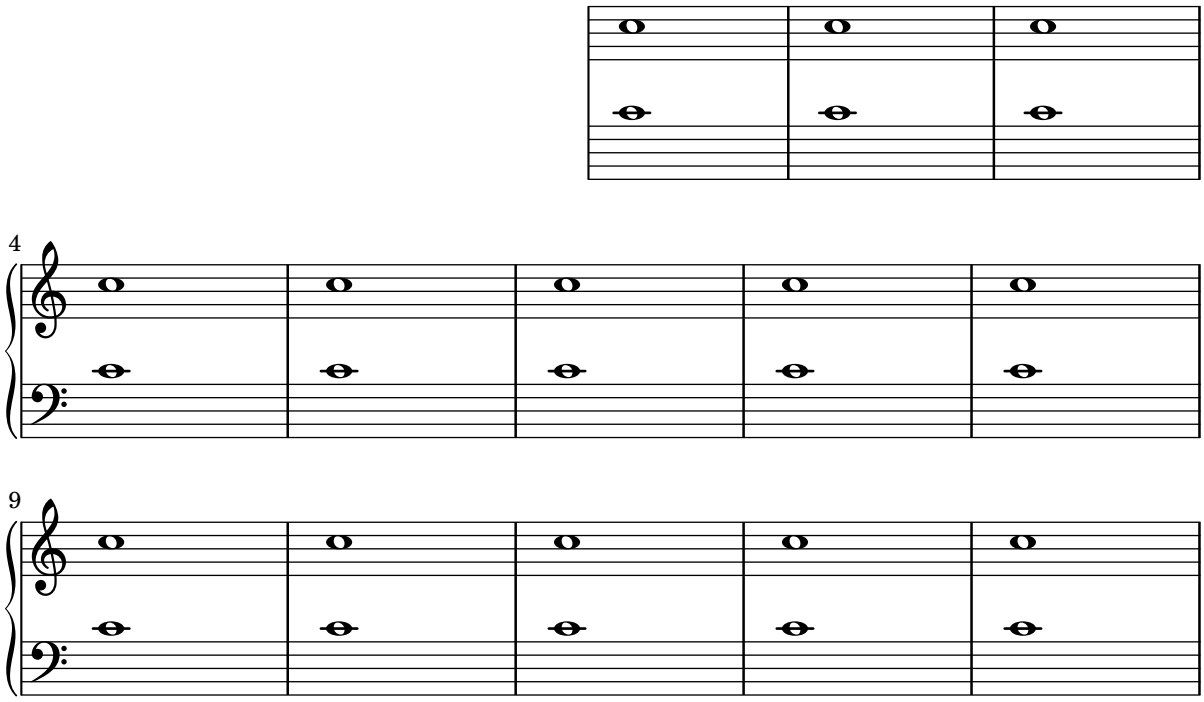
It may be useful when cutting and pasting the engraved image into existing music.

It uses `\alterBroken`.

```
someMusic =  {
  \once \override Staff.Clef.stencil = ##f
  \once \override Staff.TimeSignature.stencil = ##f
  \repeat unfold 3 c1 \break
  \repeat unfold 5 c1 \break
  \repeat unfold 5 c1
}

\score {
```

```
  \new PianoStaff
  <<
    \new Staff = "right" \relative c'' \someMusic
    \new Staff = "left" \relative c' { \clef F \someMusic }
  >>
  \layout {
    indent=75
    \context {
      \PianoStaff
      \alterBroken transparent #'(#t) SystemStartBrace
    }
  }
}
```



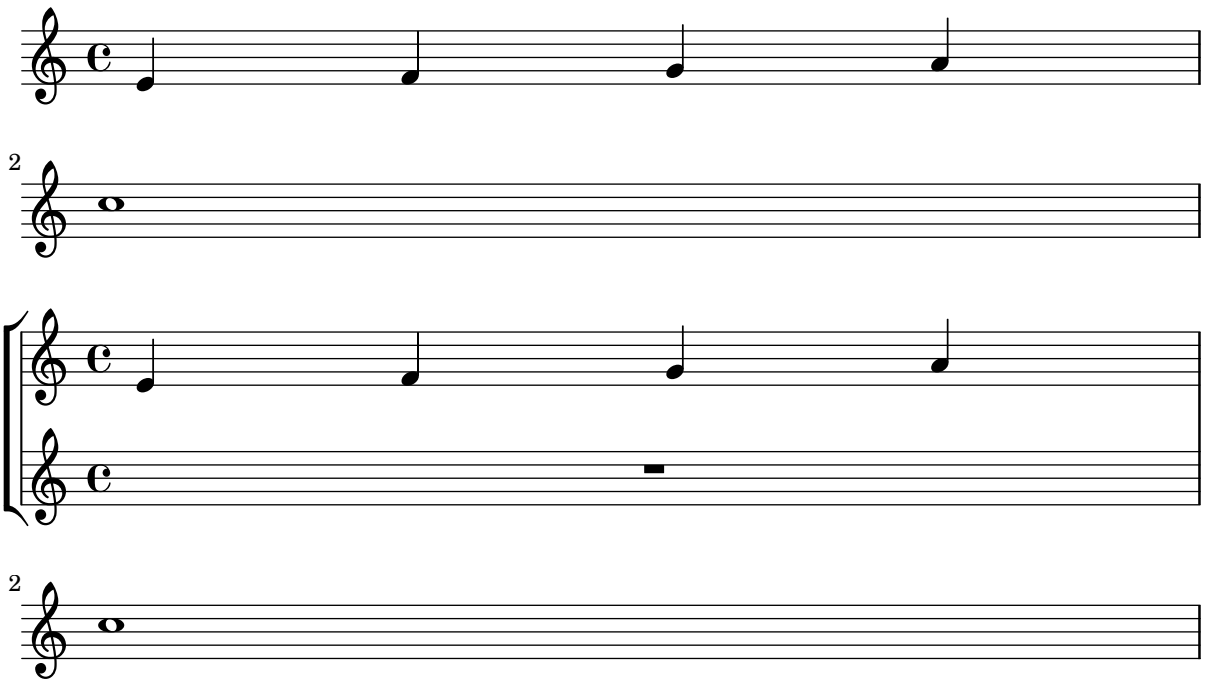
Eliminare la prima linea vuota

Il primo rigo vuoto si può togliere dalla partitura impostando la proprietà `remove-first` di `VerticalAxisGroup`. Questa impostazione agisce a livello globale se posta nel blocco `\layout`, a livello locale se posta nel rigo specifico che deve essere tolto. Nel secondo caso, si deve specificare il contesto (`Staff` si applica solo al rigo corrente) prima della proprietà.

Il rigo inferiore del secondo gruppo di righi non viene rimosso, perché l'impostazione ha effetto solo sul rigo in cui si trova.

```
\layout {
  \context {
    \Staff \RemoveEmptyStaves
    % To use the setting globally, uncomment the following line:
    % \override VerticalAxisGroup.remove-first = ##t
  }
}
\new StaffGroup <<
  \new Staff \relative c' {
```

```
    e4 f g a \break
    c1
  }
  \new Staff {
    % To use the setting globally, comment this line,
    % uncomment the line in the \layout block above
    \override Staff.VerticalAxisGroup.remove-first = ##t
    R1 \break
    R
  }
>>
\new StaffGroup <<
  \new Staff \relative c' {
    e4 f g a \break
    c1
  }
  \new Staff {
    R1 \break
    R
  }
>>
```



Setting system separators

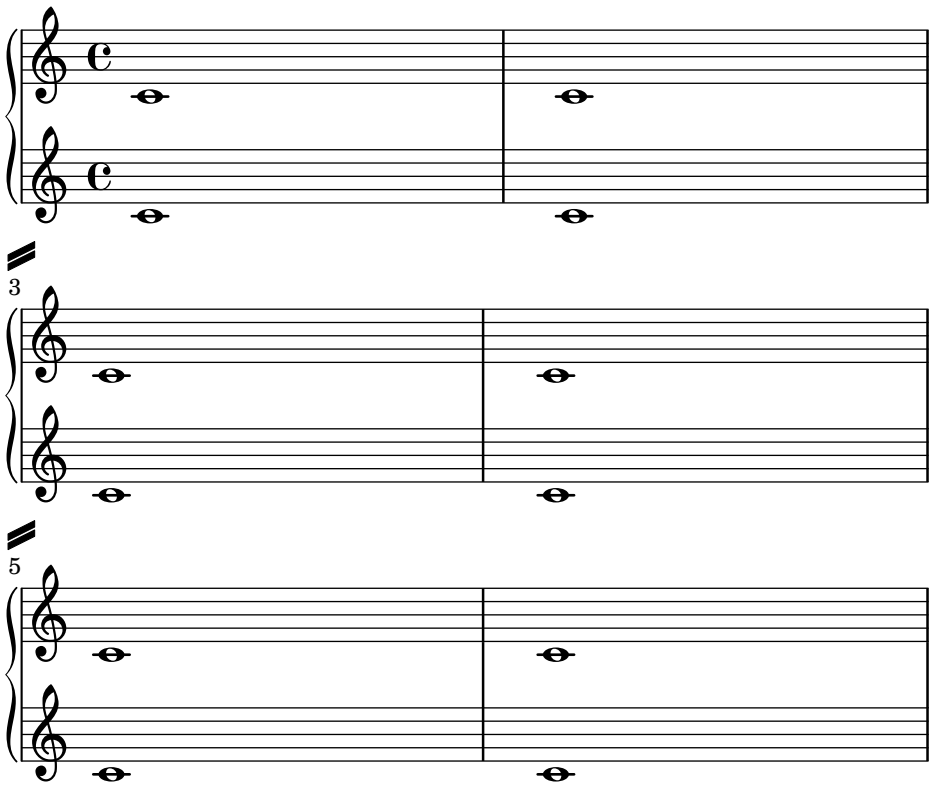
System separators can be inserted between systems. Any markup can be used, but `\slashSeparator` has been provided as a sensible default.

```
\paper {
  system-separator-markup = \slashSeparator
  line-width = 120
}

notes = \relative c' {
```

```
  c1 | c \break
  c1 | c \break
  c1 | c
}
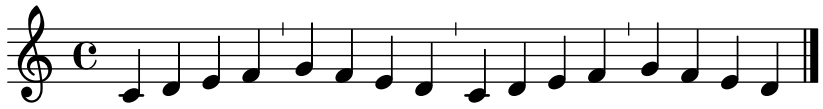
\book {
  \score {
    \new GrandStaff <<
      \new Staff \notes
      \new Staff \notes
    >>
  }
}
```


3
5

Tick bar lines

'Tick' bar lines are often used in music where the bar line is used only for coordination and is not meant to imply any rhythmic stress.
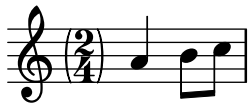
```
\relative c' {
  \set Score.defaultBarType = #"'"
  c4 d e f
  g4 f e d
  c4 d e f
  g4 f e d
  \bar "|."
}
```



Time signature in parentheses - method 3

Another way to put the time signature in parenthesis
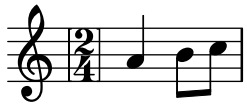
```
\relative c'' {
  \override Staff.TimeSignature.stencil = #(lambda (grob)
    (parenthesize-stencil (ly:time-signature::print grob) 0.1 0.4 0.4 0.1 ))
  \time 2/4
  a4 b8 c
}
```



Time signature in parentheses

The time signature can be enclosed within parentheses.

```
\relative c'' {
  \override Staff.TimeSignature.stencil = #(lambda (grob)
    (bracketify-stencil (ly:time-signature::print grob) Y 0.1 0.2 0.1))
  \time 2/4
  a4 b8 c
}
```



Modifiche manuali della proprietà della chiave

Cambiando il glifo della chiave, la sua posizione o l'ottavazione non cambia la posizione delle note successive nel rigo. Per far sì che le armature di chiave si trovino sulle linee del rigo corrette, bisogna specificare anche `middleCPosition`, con valori positivi o negativi che spostano il `Do centrale` rispettivamente su o giù in senso relativo alla linea centrale del rigo.

Per esempio, `\clef "treble_8"` equivale a impostare `clefGlyph`, `clefPosition` (che regola la posizione verticale della chiave), `middleCPosition` e `clefTransposition`. Viene stampata una chiave quando cambia una di queste proprietà, eccetto `middleCPosition`.

Gli esempi seguenti mostrano le possibilità date dall'impostazione manuale di tali proprietà. Sulla prima linea le modifiche manuali preservano il posizionamento relativo standard di chiavi e note, mentre sulla seconda linea non lo fanno.

```
{
  % The default treble clef
  \key f \major
  c'1
  % The standard bass clef
  \set Staff.clefGlyph = #"clefs.F"
  \set Staff.clefPosition = #2
  \set Staff.middleCPosition = #6
  \set Staff.middleCClefPosition = #6
  \key g \major
  c'1
  % The baritone clef
  \set Staff.clefGlyph = #"clefs.C"
  \set Staff.clefPosition = #4
  \set Staff.middleCPosition = #4
  \set Staff.middleCClefPosition = #4
  \key f \major
  c'1
  % The standard choral tenor clef
  \set Staff.clefGlyph = #"clefs.G"
  \set Staff.clefPosition = #-2
  \set Staff.clefTransposition = #-7
  \set Staff.middleCPosition = #1
  \set Staff.middleCClefPosition = #1
  \key f \major
  c'1
  % A non-standard clef
  \set Staff.clefPosition = #0
  \set Staff.clefTransposition = #0
  \set Staff.middleCPosition = #-4
  \set Staff.middleCClefPosition = #-4
  \key g \major
  c'1 \break

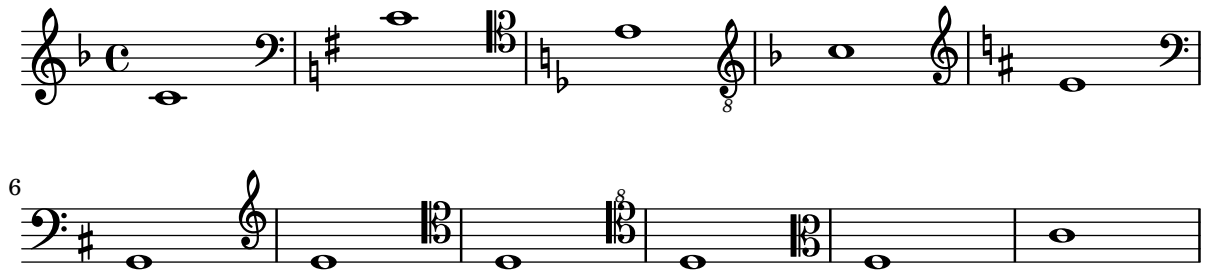
  % The following clef changes do not preserve
  % the normal relationship between notes, key signatures
  % and clefs:

  \set Staff.clefGlyph = #"clefs.F"
  \set Staff.clefPosition = #2
  c'1
  \set Staff.clefGlyph = #"clefs.G"
  c'1
  \set Staff.clefGlyph = #"clefs.C"
  c'1
  \set Staff.clefTransposition = #7
  c'1
  \set Staff.clefTransposition = #0
```

```
  \set Staff.clefPosition = #0
  c'1

  % Return to the normal clef:

  \set Staff.middleCPosition = #0
  c'1
}
```



Two \partCombine pairs on one staff

The `\partCombine` function takes two music expressions each containing a part, and distributes them among four `Voice`s named “two” “one” “solo” and “chords” depending on when and how the parts merged into a common voice. The voices output from `\partCombine` can have their layout properties adjusted in the usual way. Here we define extensions of `\partCombine` to make it easier to put four voices on a staff.

```
soprano = { d'4 | cis'  b  e'  d'8 cis' | cis'2 b }
alto = { fis4 | e8 fis gis ais b4 b | b ais fis2 }
tenor = { a8 b | cis' dis' e'4 b8 cis' d'4 | gis cis' dis'2 }
bass = { fis8 gis | a4 gis g fis | eis fis b,2 }

\new Staff <<
  \key b\minor
  \clef alto
  \partial 4
  \transpose b b'
  \partCombineUp \soprano \alto
  \partCombineDown \tenor \bass
>>
\layout {
  \context {
    \Staff
    \accepts "VoiceBox"
  }
  \context {
    \name "VoiceBox"
    \type "Engraver_group"
    \defaultchild "Voice"
    \accepts "Voice"
    \accepts "NullVoice"
  }
}
```

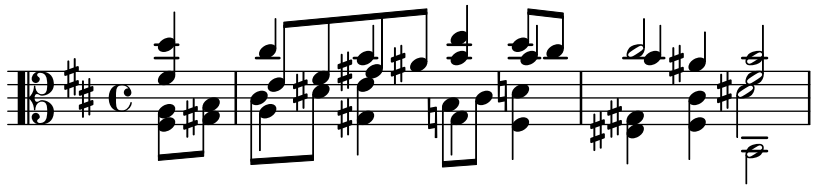
```
customPartCombineUp =
#(define-music-function (partOne partTwo)
  (ly:music? ly:music?)
"Take the music in @var{partOne} and @var{partTwo} and return
a @code{VoiceBox} named @q{Up} containing @code{Voice}s
that contain @var{partOne} and @var{partTwo} merged into one
voice where feasible.  This variant sets the default voicing
in the output to use upward stems."
#{
  \new VoiceBox = "Up" <<
    \context Voice = "one" { \voiceOne }
    \context Voice = "two" { \voiceThree }
    \context Voice = "shared" { \voiceOne }
    \context Voice = "solo" { \voiceOne }
    \context NullVoice = "null" {}
    \partCombine #partOne #partTwo
  >>
#})

customPartCombineDown = #
(define-music-function (partOne partTwo)
  (ly:music? ly:music?)
"Take the music in @var{partOne} and @var{partTwo} and return
a @code{VoiceBox} named @q{Down} containing @code{Voice}s
that contain @var{partOne} and @var{partTwo} merged into one
voice where feasible.  This variant sets the default voicing
in the output to use downward stems."
#{
  \new VoiceBox = "Down" <<
    \set VoiceBox.soloText = #"Solo III"
    \set VoiceBox.soloIIText = #"Solo IV"
    \context Voice ="one" { \voiceFour }
    \context Voice ="two" { \voiceTwo }
    \context Voice ="shared" { \voiceFour }
    \context Voice ="solo" { \voiceFour }
    \context NullVoice = "null" {}
    \partCombine #partOne #partTwo
  >>
#})

soprano = { d'4 | cis'  b  e'  d'8 cis' | cis'2 b }
alto = { fis4 | e8 fis gis ais b4 b | b ais fis2 }
tenor = { a8 b | cis' dis' e'4 b8 cis' d'4 | gis cis' dis'2 }
bass = { fis8 gis | a4 gis g fis | eis fis b,2 }

\new Staff <<
  \key b\minor
  \clef alto
  \partial 4
  \transpose b b'
  \customPartCombineUp \soprano \alto
  \customPartCombineDown \tenor \bass
```

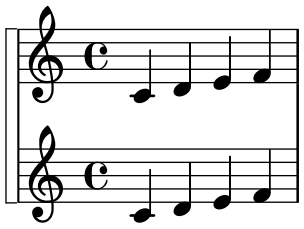
```
>>
```



Usare una parentesi quadra all'inizio di un gruppo di righi

Si può usare il segno `SystemStartSquare` (uno dei segni che delimitano l'inizio del sistema) impostandolo esplicitamente in un contesto `StaffGroup` o `ChoirStaff`.

```
\score {
  \new StaffGroup { <<
  \set StaffGroup.systemStartDelimiter = #'SystemStartSquare
    \new Staff { c'4 d' e' f' }
    \new Staff { c'4 d' e' f' }
  >> }
}
```



Using autochange with more than one voice

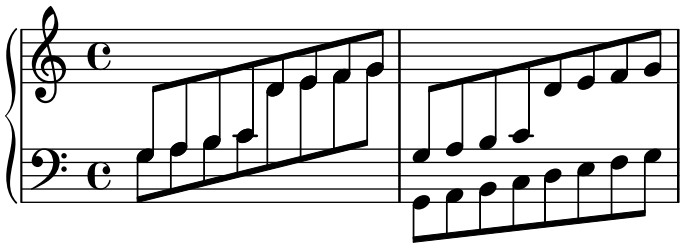
Using `autochange` with more than one voice.

```
\score
{
  \new PianoStaff
  <<
    \new Staff = "up" {
      <<
        \set Timing.beamExceptions = #'()
        \set Timing.beatStructure = #'(4)
        \new Voice {
          \voiceOne
          \autoChange
          \relative c' {
            g8 a b c d e f g
            g,8 a b c d e f g
          }
        }

        \new Voice {
          \voiceTwo
          \autoChange
          \relative c' {
            g8 a b c d e f g
```

```
            g,,8 a b c d e f g
          }
        }
      >>
    }

    \new Staff = "down" {
      \clef bass
    }
  >>
}
```



Using marklines in a Frenched score

Using `MarkLine` contexts (such as in LSR1010 (`http://lsr.di.unimi.it/LSR/Item?id=1010`)) in a Frenched score can be problematic if all the staves between two `MarkLine`s are removed in one system. The `Keep_alive_together_engraver` can be used within each `StaffGroup` to keep the `MarkLine` alive only as long as the other staves in the group stay alive.

```
bars = {
  \tempo "Allegro" 4=120
  s1*2
  \repeat unfold 5 { \mark \default s1*2 }
  \bar "||"
  \tempo "Adagio" 4=40
  s1*2
  \repeat unfold 8 { \mark \default s1*2 }
  \bar "|."
}
winds = \repeat unfold 120 { c''4 }
trumpet = { \repeat unfold 8 g'2 R1*16 \repeat unfold 4 g'2 R1*8 }
trombone = { \repeat unfold 4 c'1 R1*8 d'1 R1*17 }
strings = \repeat unfold 240 { c''8 }
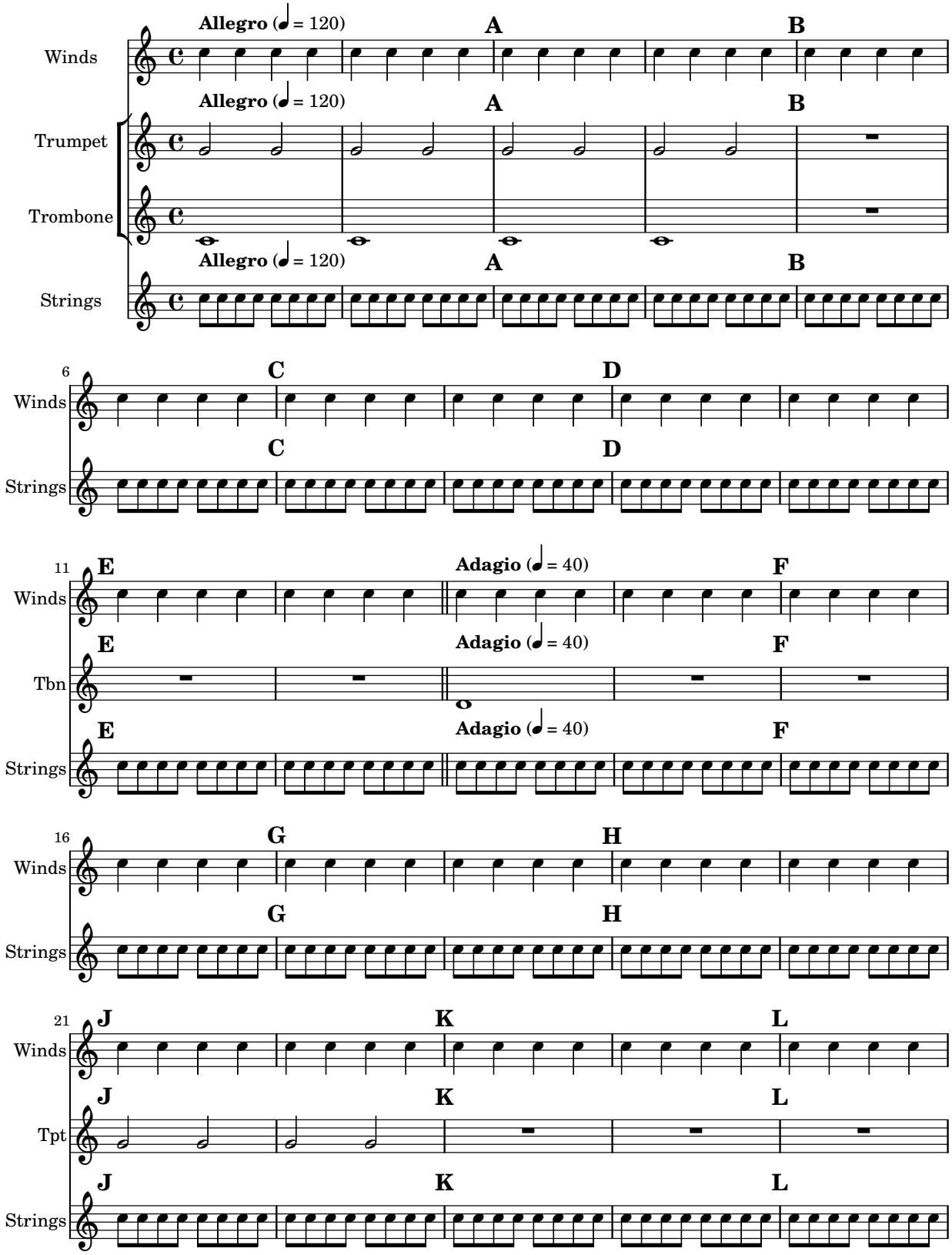
#(set-global-staff-size 16)
\paper {
  systems-per-page = 5
  ragged-last-bottom = ##f
}
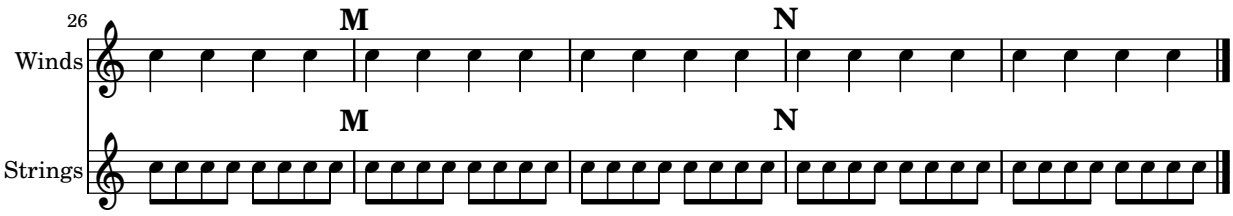
\layout {
  indent = 15\mm
  short-indent = 5\mm
  \context {
    \name MarkLine
```

```
    \type Engraver_group
    \consists Output_property_engraver
    \consists Axis_group_engraver
    \consists Mark_engraver
    \consists Metronome_mark_engraver
    \override VerticalAxisGroup.remove-empty = ##t
    \override VerticalAxisGroup.remove-layer = #'any
    \override VerticalAxisGroup.staff-affinity = #DOWN
    \override VerticalAxisGroup.nonstaff-relatedstaff-spacing.basic-distance = 1
    keepAliveInterfaces = #'()
  }
  \context {
    \Staff
    \override VerticalAxisGroup.remove-empty = ##t
    \override VerticalAxisGroup.remove-layer = ##f
  }
  \context {
    \StaffGroup
    \accepts MarkLine
    \consists Keep_alive_together_engraver
  }
  \context {
    \Score
    \remove Mark_engraver
    \remove Metronome_mark_engraver
  }
}

\score {
  <<
    \new StaffGroup = "winds" \with {
      instrumentName = "Winds"
      shortInstrumentName = "Winds"
    } <<
      \new MarkLine \bars
      \new Staff \winds
    >>
    \new StaffGroup = "brass" <<
      \new MarkLine \bars
      \new Staff = "trumpet" \with {
        instrumentName = "Trumpet"
        shortInstrumentName = "Tpt"
      } \trumpet
      \new Staff = "trombone" \with {
        instrumentName = "Trombone"
        shortInstrumentName = "Tbn"
      } \trombone
    >>
    \new StaffGroup = "strings" \with {
      instrumentName = "Strings"
      shortInstrumentName = "Strings"
    } <<
```

```
      \new MarkLine \bars
      \new Staff = "strings" { \strings }
    >>
  >>
}
```





Vertical aligned StaffGroups without connecting SystemStartBar

This snippet shows how to achieve vertically aligned StaffGroups with a SystemStartBar for each StaffGroup, but without connecting them.

```
% by Thomas Morley

#(set-global-staff-size 18)

\paper {
  indent = 0
  ragged-right = ##f
  print-all-headers = ##t
}

\layout {
  \context {
    \Staff
    \consists "Mark_engraver"
    \override RehearsalMark.self-alignment-X = #LEFT
  }
  \context {
    \StaffGroup
    systemStartDelimiterHierarchy =
      #'(SystemStartBrace (SystemStartBracket a b))
  }
  \context {
    \Score
    \override SystemStartBrace.style = #'bar-line
    \omit SystemStartBar
    \override SystemStartBrace.padding = #-0.1
    \override SystemStartBrace.thickness = #1.6
    \remove "Mark_engraver"
    \override StaffGrouper.staffgroup-staff-spacing.basic-distance = #15
  }
}

%%%% EXAMPLE

txt =
\lyricmode {
  Wer4 nur den lie -- ben Gott läßt wal2 -- ten4
  und4 hof -- fet auf ihn al -- le Zeit2.
}

% First StaffGroup "exercise"

eI =
```

```
\relative c' {
        \mark \markup {
                \bold Teacher:
                This is a simple setting of the choral. Please improve it.
                }
        \key a \minor
        \time 4/4
        \voiceOne

        \partial 4
        e4
        a b c b
        a b gis2
        e4\fermata g! g f
        e a a gis
        a2.\fermata
        \bar ":|."
}

eII =
\relative c' {
        \key a \minor
        \time 4/4
        \voiceTwo
        \partial 4
        c4
        e e e gis
        a f e2
        b4 b d d
        c c d d
        c2.
        \bar ":|."
}

eIII =
\relative c' {
        \key a \minor
        \time 4/4
        \clef bass
        \voiceOne

        \partial 4
        a4
        c b a b
        c d b2
        gis4 g g b
        c a f e
        e2.
}

eIV =
\relative c' {
```

```
        \key a \minor
        \time 4/4
        \clef bass
        \voiceTwo

        \partial 4
        a,4
        a' gis a e
        a, d e2
        e,4\fermata e' b g
        c f d e
        a,2.\fermata
        \bar ":|."
}

exercise =
\new StaffGroup = "exercise"
<<

  \new Staff
    <<
      \new Voice \eI
      \new Voice \eII
    >>

  \new Lyrics \txt

  \new Staff
    <<
      \new Voice \eIII
      \new Voice \eIV
    >>
>>

% Second StaffGroup "simple Bach"

sbI =
\relative c' {
        \mark \markup { \bold" Pupil:" Here's my version! }
        \key a \minor
        \time 4/4
        \voiceOne

        \partial 4
        e4
        a b c b
        a b gis2
        e4\fermata g! g f
        e a a gis
        a2.\fermata
        \bar ":|."
}
```

```
sbII =
\relative c' {
        \key a \minor
        \time 4/4
        \voiceTwo
        \partial 4
        c8 d
        e4 e e8 f g4
        f f e2
        b4 b8 c d4 d
        e8 d c4 b8 c d4
        c2.
        \bar ":|."
}

sbIII =
\relative c' {
        \key a \minor
        \time 4/4
        \clef bass
        \voiceOne

        \partial 4
        a8 b
        c4 b a b8 c
        d4 d8 c b2
        gis4 g g8 a b4
        b a8 g f4 e
        e2.
}

sbIV =
\relative c' {
        \key a \minor
        \time 4/4
        \clef bass
        \voiceTwo

        \partial 4
        a,4
        a' gis a e
        f8 e d4 e2
        e,4\fermata e' b a8 g
        c4 f8 e d4 e
        a,2.\fermata
        \bar ":|."
}

simpleBach =
\new StaffGroup = "simple Bach"
<<
```

```
  \new Staff
    <<
      \new Voice \sbI
      \new Voice \sbII
    >>

  \new Lyrics \txt

  \new Staff
    <<
      \new Voice \sbIII
      \new Voice \sbIV
    >>
>>

% Third StaffGroup "chromatic Bach"

cbI =
\relative c' {
        \mark \markup {
          \bold "Teacher:"
          \column {
            "Well, you simply copied and transposed a version of J.S.Bach."
            "Do you know this one?"
          }
        }
        \key a \minor
        \time 4/4
        \voiceOne

        \partial 4
        e4
        a b c b
        a b gis4. fis8
        e4\fermata g! g f
        e a a8 b gis4
        a2.\fermata
        \bar ":|."
}

cbII =
\relative c' {
        \key a \minor
        \time 4/4
        \voiceTwo
        \partial 4
        c8 d
        e4 e e8 fis gis4
        a8 g! f!4 e2
        b4 e e d
        d8[ cis] d dis e fis e4
```

```
        e2.
        \bar ":|."
}

cbIII =
\relative c' {
        \key a \minor
        \time 4/4
        \clef bass
        \voiceOne

        \partial 4
        a8 b
        c[ b] a gis8 a4 d,
        e8[ e'] d c b4. a8
        gis4 b c d8 c
        b[ a] a b c b b c16 d
        c2.
}

cbIV =
\relative c' {
        \key a \minor
        \time 4/4
        \clef bass
        \voiceTwo

        \partial 4
        a4
        c, e a, b
        c d e2
        e4\fermata e a b8 c
        gis[ g] fis f e dis e4
        a,2.\fermata
        \bar ":|."
}

chromaticBach =
\new StaffGroup = "chromatic Bach"
<<

  \new Staff
    <<
      \new Voice \cbI
      \new Voice \cbII
    >>

  \new Lyrics \txt

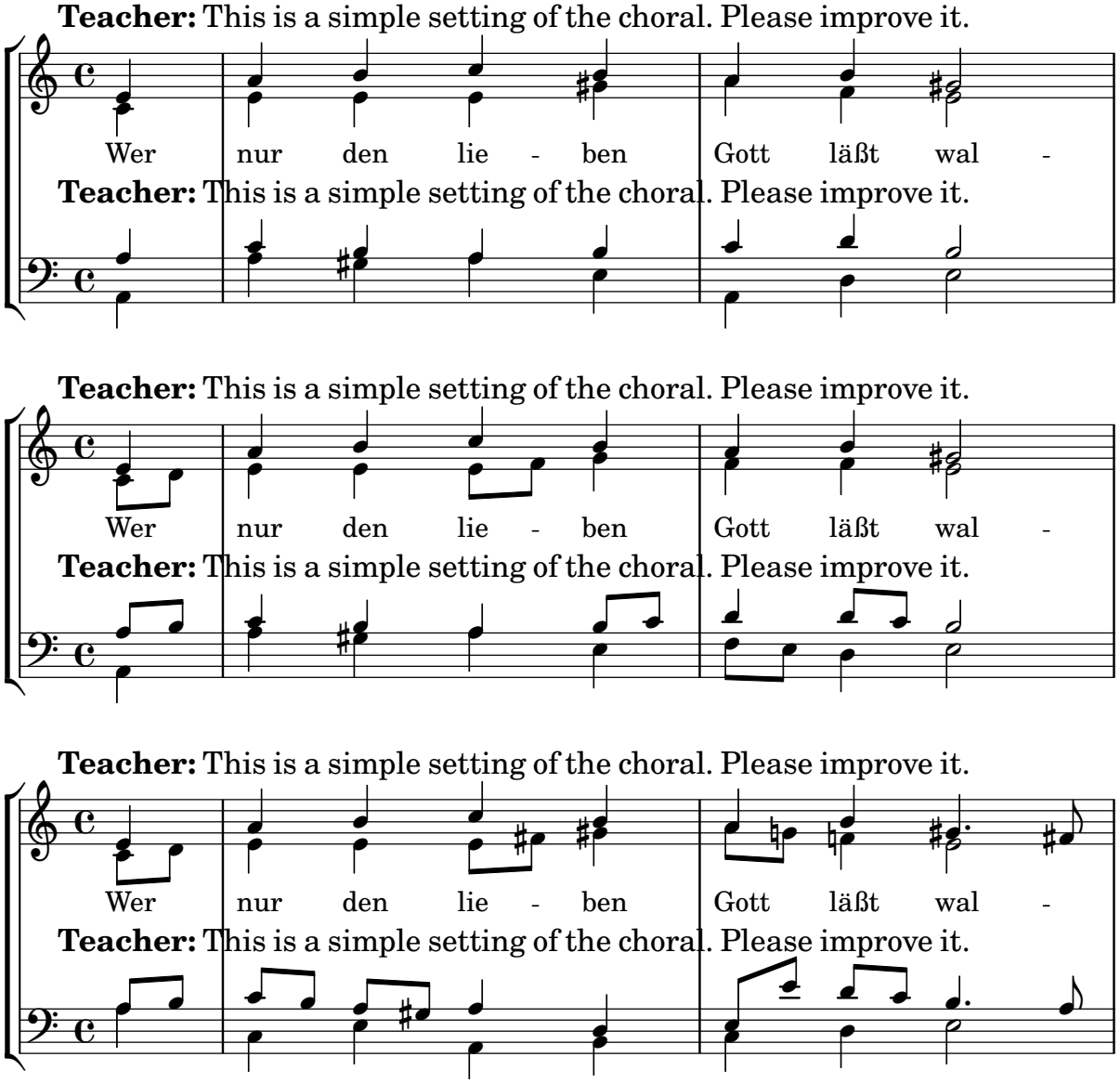
  \new Staff
    <<
      \new Voice \cbIII
```
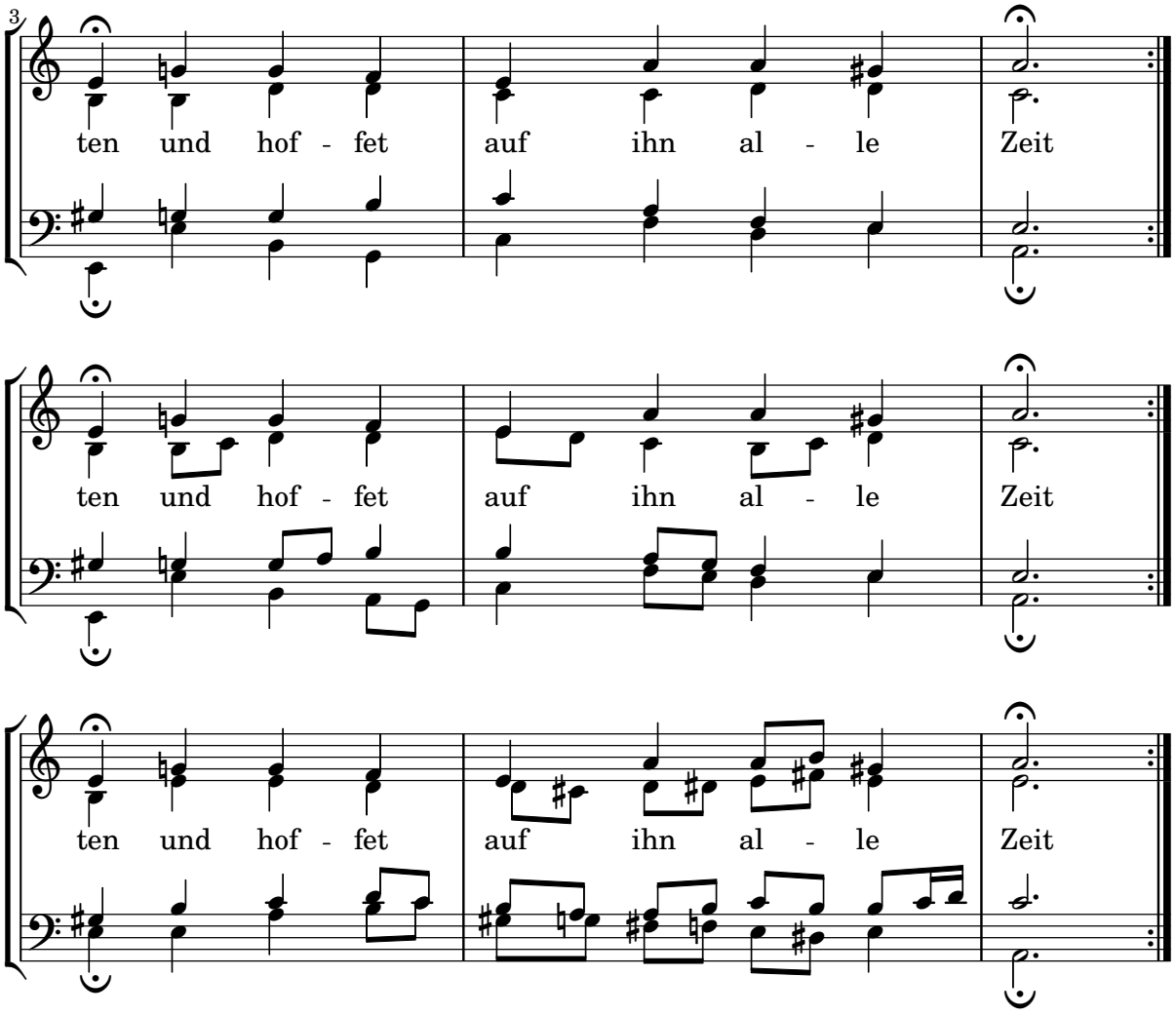
```
      \new Voice \cbIV
    >>
>>


% Score

\score {
        <<
        \exercise
        \simpleBach
        \chromaticBach
        >>
        \header {
                title = \markup
                           \column {
                             \combine \null \vspace #1
                             "Exercise: Improve the given choral"
                             " "
                            }
        }
        \layout {
                \context {
                        \Lyrics
                        \override LyricText.X-offset = #-1
                }
        }
}
```

Exercise: Improve the given choral

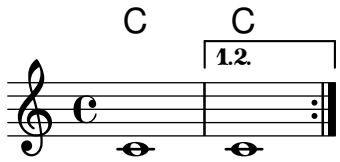

Teacher: This is a simple setting of the choral. Please improve it.
Wer nur den lie - ben Gott läßt wal -
Teacher: This is a simple setting of the choral. Please improve it.
Teacher: This is a simple setting of the choral. Please improve it.
Wer nur den lie - ben Gott läßt wal -
Teacher: This is a simple setting of the choral. Please improve it.
Teacher: This is a simple setting of the choral. Please improve it.
Wer nur den lie - ben Gott läßt wal -
Teacher: This is a simple setting of the choral. Please improve it.



Volta sotto gli accordi

Aggiungendo l'incisore `Volta_engraver` al rigo, è possibile inserire le volte sotto gli accordi.

```
\score {
  <<
    \chords {
      c1
      c1
    }
    \new Staff \with {
      \consists "Volta_engraver"
    }
    {
      \repeat volta 2 { c'1 }
      \alternative { c' }
    }
  >>
  \layout {
    \context {
      \Score
      \remove "Volta_engraver"
    }
  }
}
```

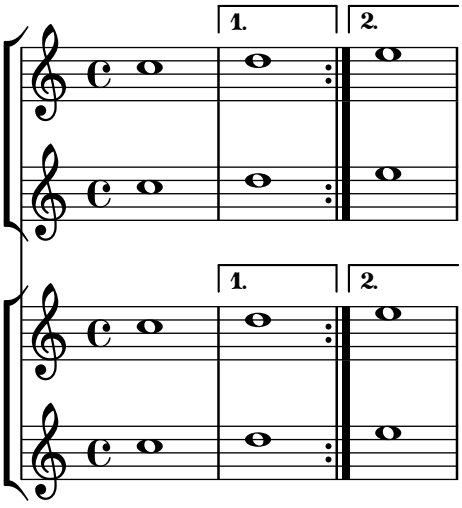


Volta multi staff

By adding the `Volta_engraver` to the relevant staff, volte can be put over staves other than the topmost one in a score.

```
voltaMusic = \relative c'' {
  \repeat volta 2 {
    c1
  }
  \alternative {
    d1
    e1
  }
}

<<
  \new StaffGroup <<
    \new Staff \voltaMusic
    \new Staff \voltaMusic
  >>
  \new StaffGroup <<
    \new Staff \with { \consists "Volta_engraver" }
      \voltaMusic
    \new Staff \voltaMusic
  >>
>>
```
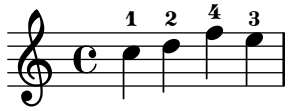


Editorial annotations

Sezione “Editorial annotations” in *Guida alla Notazione*

Adding fingerings to a score

Fingering instructions can be entered using a simple syntax.

```
\relative c'' {
  c4-1 d-2 f-4 e-3
}
```



Adding links to objects

To add a link to a grob stencil you can use `add-link` as defined here. It works both with `\override` and `\tweak`.

Drawback: `point-and-click` is disturbed for the linked grobs.

Limitation: Works for PDF only.

The linked objects are colored with a separate command. Note that the links are not displayed and are not clickable from inside the LSR.

```
#(define (add-link url-strg)
  (lambda (grob)
    (let* ((stil (ly:grob-property grob 'stencil)))
      (if (ly:stencil? stil)
          (let* ((x-ext (ly:stencil-extent stil X))
                 (y-ext (ly:stencil-extent stil Y))
                 (url-expr `(url-link ,url-strg ,x-ext ,y-ext))
                 (new-stil
                   (ly:stencil-add
                     (ly:make-stencil url-expr x-ext y-ext)
                     stil)))
          (ly:grob-set-property! grob 'stencil new-stil))))))

%%%% test

%% For easier maintenance of this snippet the URL is formatted to use the
%% actually used LilyPond version.
%% Of course a literal URL would work as well.

#(define major.minor-version
  (string-join (take (string-split (lilypond-version) #\.) 2) "."))

urlI =
#(format #f
  "http://lilypond.org/doc/v~a/Documentation/notation/writing-pitches"
  major.minor-version)

urlII =
```

```
#(format #f
  "http://lilypond.org/doc/v~a/Documentation/notation/rhythms"
  major.minor-version)

urlIII =
#(format #f
  "http://lilypond.org/doc/v~a/Documentation/notation/note-heads"
  major.minor-version)

urlIV =
#(format #f
  "http://lilypond.org/doc/v~a/Documentation/notation/beams"
  major.minor-version)

urlV =
#(format #f
  "http://lilypond.org/doc/v~a/Documentation/notation/note-head-styles"
  major.minor-version)

urlVI =
#(format #f
  "http://lilypond.org/doc/v~a/Documentation/notation/writing-pitches"
  major.minor-version)

\relative c' {
   \key cis \minor
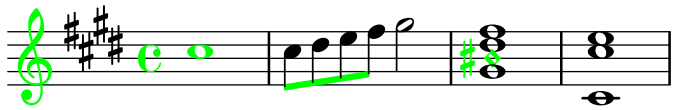
   \once \override Staff.Clef.color = #green
   \once \override Staff.Clef.after-line-breaking =
     #(add-link urlI)

   \once \override Staff.TimeSignature.color = #green
   \once \override Staff.TimeSignature.after-line-breaking =
     #(add-link urlII)

   \once \override NoteHead.color = #green
   \once \override NoteHead.after-line-breaking =
     #(add-link urlIII)

   cis'1
   \once \override Beam.color = #green
   \once \override Beam.after-line-breaking =
     #(add-link urlIV)
   cis8 dis e fis gis2
   <gis,
    \tweak Accidental.color #green
    \tweak Accidental.after-line-breaking #(add-link urlVI)
    \tweak color #green
    \tweak after-line-breaking #(add-link urlV)
    \tweak style #'harmonic
    bis
    dis
```

```
    fis
   >1
   <cis, cis' e>
}
```



Adding markups in a tablature

By default markups does not show in a tablature.

To make them appear, simply use the command `\revert TabStaff.TextScript.stencil`

```
%% http://lsr.di.unimi.it/LSR/Item?id=919
% by P.P.Schneider on June 2014

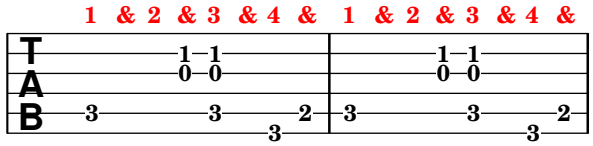
high  = { r4 r8 <g c'> q r8 r4 }

low = { c4 r4 c8 r8 g,8 b, }

pulse = { s8^"1" s^"&" s^"2" s^"&" s^"3" s^"&" s^"4" s^"&" }

\score {
 \new TabStaff {
   \repeat unfold 2 << \high \\ \low \\ \pulse >>
  }
  \layout {
    \context {
      \TabStaff
      \clef moderntab
      \revert TextScript.stencil
      \override TextScript.font-series = #'bold
      \override TextScript.font-size = #-2
      \override TextScript.color = #red

    }
    \context {
      \Score
      proportionalNotationDuration = #(ly:make-moment 1/8)
    }
  }
}
```
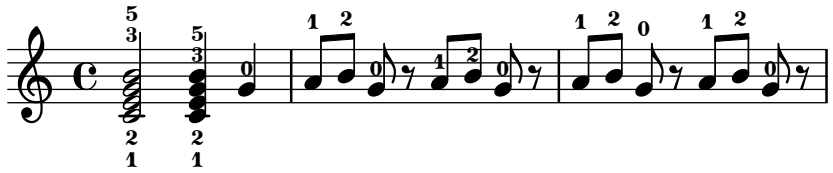


Far sì che la diteggiatura appaia dentro il rigo

Per impostazione predefinita, le diteggiature orientate verticalmente sono poste fuori dal rigo; questo comportamento tuttavia può essere disabilitato. Occorre fare attenzione alle situazioni

in cui le diteggiature e i gambi sono rivolti nella stessa direzione: normalmente le diteggiature evitano soltanto i gambi con travature. Questa impostazione predefinita può essere cambiata in modo da evitare tutti i gambi oppure nessuno. L'esempio seguente mostra queste due opzioni, così come tornare al comportamento predefinito.
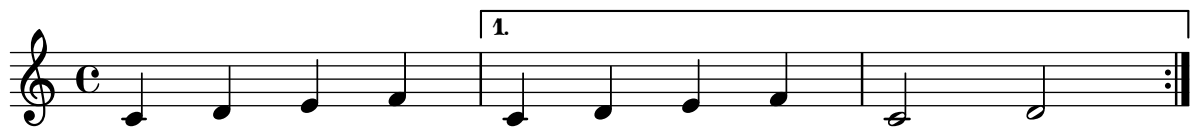
```
\relative c' {
  <c-1 e-2 g-3 b-5>2
  \override Fingering.staff-padding = #'()
  <c-1 e-2 g-3 b-5>4 g'-0
  a8[-1 b]-2 g-0 r
  \override Fingering.add-stem-support = ##f
  a[-1 b]-2 g-0 r
  \override Fingering.add-stem-support = ##t
  a[-1 b]-2 g-0 r
  \override Fingering.add-stem-support = #only-if-beamed
  a[-1 b]-2 g-0 r
}
```
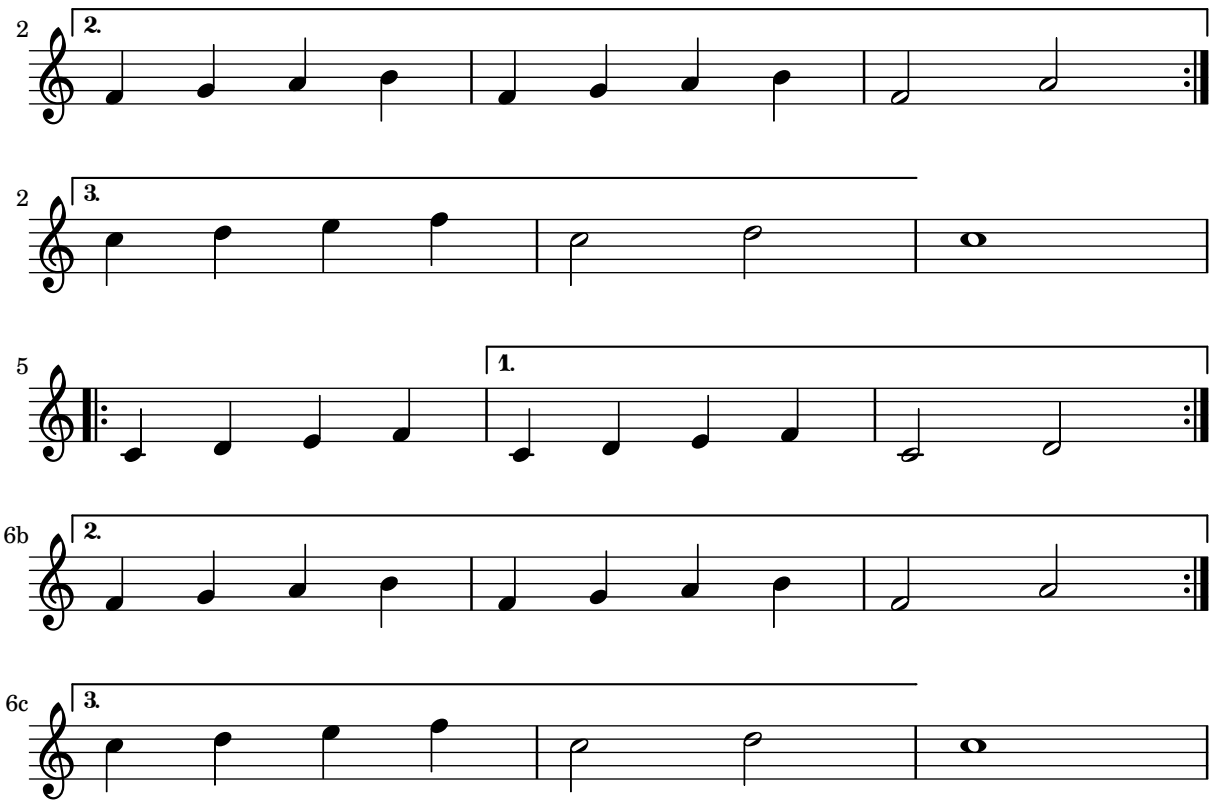


Numeri di battuta alternativi

Si possono impostare due metodi alternativi di numerazione della battuta, utili specialmente per le ripetizioni.

```
\relative c'{
  \set Score.alternativeNumberingStyle = #'numbers
  \repeat volta 3 { c4 d e f | }
    \alternative {
      { c4 d e f | c2 d \break }
      { f4 g a b | f4 g a b | f2 a | \break }
      { c4 d e f | c2 d }
    }
  c1 \break
  \set Score.alternativeNumberingStyle = #'numbers-with-letters
  \repeat volta 3 { c,4 d e f | }
    \alternative {
      { c4 d e f | c2 d \break }
      { f4 g a b | f4 g a b | f2 a | \break }
      { c4 d e f | c2 d }
    }
  c1
}
```
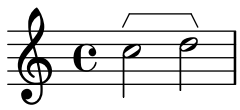




Parentesi analitiche sopra il rigo

Delle semplici parentesi analitiche orizzontali vengono aggiunte, per impostazione predefinita, sotto il rigo. L'esempio seguente mostra un modo per posizionarle sopra il rigo.

```
\layout {
  \context {
    \Voice
    \consists "Horizontal_bracket_engraver"
  }
}

\relative c'' {
  \once \override HorizontalBracket.direction = #UP
  c2\startGroup
  d2\stopGroup
}
```



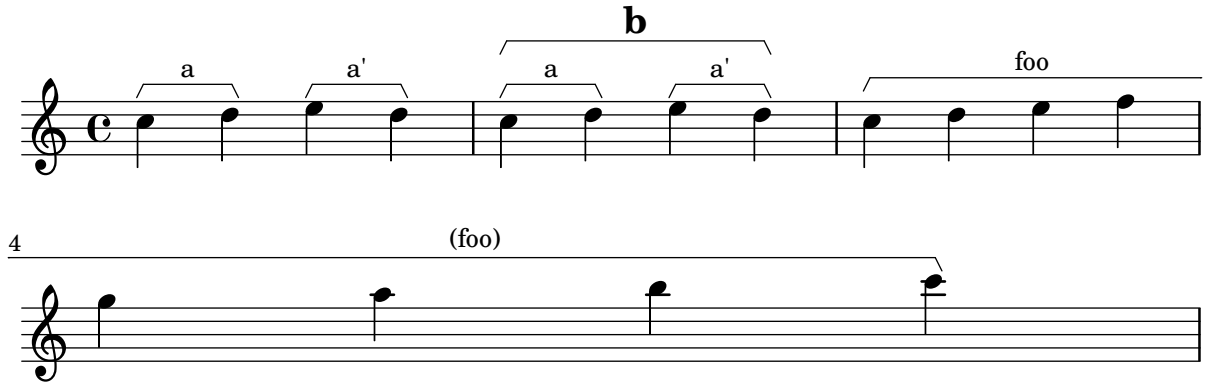
Parentesi analitiche con etichette

Si può aggiungere del testo alle parentesi analitiche tramite la proprietà `text` del grob `HorizontalBracketText`. L'aggiunta di vari frammenti di testo alle parentesi che iniziano nello stesso momento musicale richiede l'uso del comando `\tweak`. Dopo un'interruzione di linea il testo viene messo tra parentesi.

```
\layout {
  \context {
    \Voice
    \consists "Horizontal_bracket_engraver"
```

```
    \override HorizontalBracket.direction = #UP
  }
}

{
  \once\override HorizontalBracketText.text = "a"
    c''\startGroup d''\stopGroup
    \once\override HorizontalBracketText.text = "a'"
    e''\startGroup d''\stopGroup |
  c''-\tweak HorizontalBracketText.text
        \markup \bold \huge "b" \startGroup
     -\tweak HorizontalBracketText.text "a" \startGroup
    d''\stopGroup
    e''-\tweak HorizontalBracketText.text "a'" \startGroup
    d''\stopGroup\stopGroup |
  c''-\tweak HorizontalBracketText.text foo \startGroup
    d'' e'' f'' | \break
  g'' a'' b'' c'''\stopGroup
}
```



Applicazione degli stili delle teste di nota in base al grado della scala

La proprietà `shapeNoteStyles` può essere usata per definire vari stili di teste di nota per ogni grado della scala (definita dall'armatura di chiave o dalla proprietà `tonic`). Questa proprietà richiede un insieme di simboli, che può essere puramente arbitrario (sono permesse espressioni geometriche come `triangle`, `cross` e `xcircle`) o basato sull'antica tradizione tipografica americana (sono consentiti anche alcuni nomi di nota latini).

Detto questo, per imitare gli antichi canzionieri americani, ci sono vari stili predefiniti disponibili attraverso dei comodi comandi come `\aikenHeads` o `\sacredHarpHeads`.

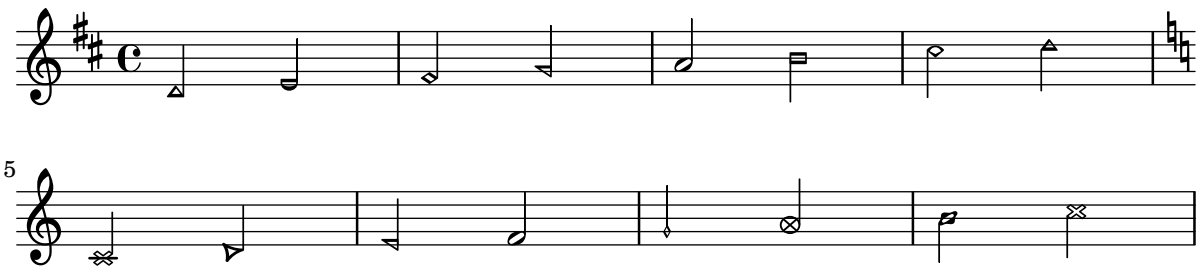
Questo esempio mostra modi diversi di ottenere teste di nota di varie forme e illustra la possibilità di trasporre una melodia senza perdere la corrispondenza tra le funzioni armoniche e gli stili delle teste.

```
fragment = {
  \key c \major
  c2 d
  e2 f
  g2 a
  b2 c
}
```

```
\new Staff {
  \transpose c d
  \relative c' {
    \set shapeNoteStyles = ##(do re mi fa
                              #f la ti)
    \fragment
  }

  \break

  \relative c' {
    \set shapeNoteStyles = ##(cross triangle fa #f
                              mensural xcircle diamond)
    \fragment
  }
}
```

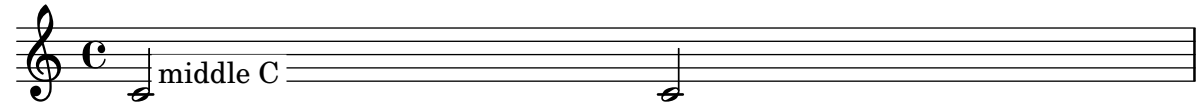


Blanking staff lines using the \whiteout command

The `\whiteout` command underlays a markup with a white box. Since staff lines are in a lower layer than most other grobs, this white box will not overlap any other grob.

```
\layout {
  ragged-right = ##f
}

\relative c' {
  \override TextScript.extra-offset = #'(2 . 4)
  c2-\markup { \whiteout \pad-markup #0.5 "middle C" } c
}
```



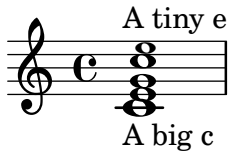
Changing a single note's size in a chord

Individual note heads in a chord can be modified with the `\tweak` command inside a chord, by altering the `font-size` property.

Inside the chord (within the brackets `< >`), before the note to be altered, place the `\tweak` command, followed by `font-size` and define the proper size like `#-2` (a tiny note head).

```
\relative c' {
```
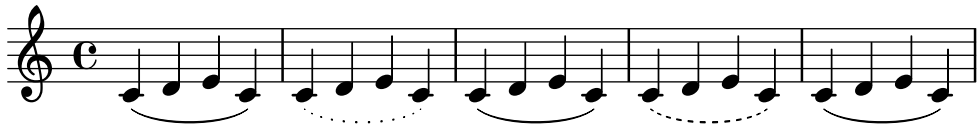
```
  <\tweak font-size #+2 c e g c
   \tweak font-size #-2 e>1
   ^\markup { A tiny e }_\markup { A big c }
}
```



Changing the appearance of a slur from solid to dotted or dashed

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

```
\relative c' {
  c4( d e c)
  \slurDotted
  c4( d e c)
  \slurSolid
  c4( d e c)
  \slurDashed
  c4( d e c)
  \slurSolid
  c4( d e c)
}
```



Coloring notes depending on their pitch

It is possible to color note heads depending on their pitch and/or their names: the function used in this example even makes it possible to distinguish enharmonics.

```
%Association list of pitches to colors.
#(define color-mapping
   (list
    (cons (ly:make-pitch 0 0 NATURAL) (x11-color 'red))
    (cons (ly:make-pitch 0 0 SHARP) (x11-color 'green))
    (cons (ly:make-pitch 0 1 FLAT) (x11-color 'green))
    (cons (ly:make-pitch 0 2 NATURAL) (x11-color 'red))
    (cons (ly:make-pitch 0 2 SHARP) (x11-color 'green))
    (cons (ly:make-pitch 0 3 FLAT) (x11-color 'red))
    (cons (ly:make-pitch 0 3 NATURAL) (x11-color 'green))
    (cons (ly:make-pitch 0 4 SHARP) (x11-color 'red))
    (cons (ly:make-pitch 0 5 NATURAL) (x11-color 'green))
    (cons (ly:make-pitch 0 5 FLAT) (x11-color 'red))
    (cons (ly:make-pitch 0 6 SHARP) (x11-color 'red))
    (cons (ly:make-pitch 0 1 NATURAL) (x11-color 'blue))
    (cons (ly:make-pitch 0 3 SHARP) (x11-color 'blue))
    (cons (ly:make-pitch 0 4 FLAT) (x11-color 'blue))
```
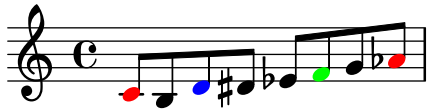
```
    (cons (ly:make-pitch 0 5 SHARP) (x11-color 'blue))
    (cons (ly:make-pitch 0 6 FLAT) (x11-color 'blue))))

%Compare pitch and alteration (not octave).
#(define (pitch-equals? p1 p2)
   (and
    (= (ly:pitch-alteration p1) (ly:pitch-alteration p2))
    (= (ly:pitch-notename p1) (ly:pitch-notename p2))))

#(define (pitch-to-color pitch)
   (let ((color (assoc pitch color-mapping pitch-equals?)))
     (if color
         (cdr color))))

#(define (color-notehead grob)
   (pitch-to-color
    (ly:event-property (event-cause grob) 'pitch)))

\score {
  \new Staff \relative c' {
    \override NoteHead.color = #color-notehead
    c8 b d dis ees f g aes
  }
}
```

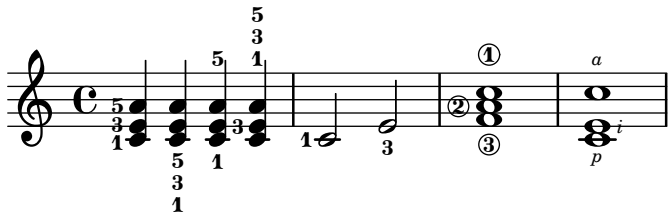


Controllare il posizionamento delle diteggiature di un accordo

Il posizionamento dei numeri della diteggiatura può essere regolato in modo preciso. Perché l'orientamento funzioni, occorre usare il costrutto per gli accordi <> anche per le note singole. Si può impostare in modo simile l'orientamento dei numeri di corda e delle diteggiature della mano destra.

```
\relative c' {
  \set fingeringOrientations = #'(left)
  <c-1 e-3 a-5>4
  \set fingeringOrientations = #'(down)
  <c-1 e-3 a-5>4
  \set fingeringOrientations = #'(down right up)
  <c-1 e-3 a-5>4
  \set fingeringOrientations = #'(up)
  <c-1 e-3 a-5>4
  \set fingeringOrientations = #'(left)
  <c-1>2
  \set fingeringOrientations = #'(down)
  <e-3>2
  \set stringNumberOrientations = #'(up left down)
  <f\3 a\2 c\1>1
  \set strokeFingerOrientations = #'(down right up)
  <c\rightHandFinger #1 e\rightHandFinger #2 c'\rightHandFinger #4 >
```

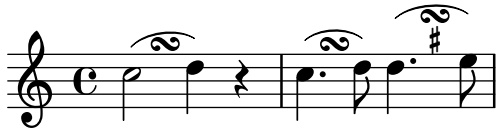
```
}
```



Creare un gruppetto ritardato

Creare un gruppetto ritardato, dove la nota più bassa del gruppetto usa l'alterazione, richiede vari \override. La proprietà `outside-staff-priority` deve essere impostata su `#f`, perché altrimenti questa avrebbe la precedenza sulla proprietà `avoid-slur`. Cambiando le frazioni `2/3` e `1/3` si aggiusta la posizione orizzontale.

```
\relative c'' {
  \after 2*2/3 \turn c2( d4) r |
  \after 4 \turn c4.( d8)
  \after 4
  {
    \once \set suggestAccidentals = ##t
    \once \override AccidentalSuggestion.outside-staff-priority = ##f
    \once \override AccidentalSuggestion.avoid-slur = #'inside
    \once \override AccidentalSuggestion.font-size = -3
    \once \override AccidentalSuggestion.script-priority = -1
    \once \hideNotes
    cis8\turn \noBeam
  }
  d4.( e8)
}
```



Creating blank staves

To create blank staves, generate empty measures then remove the `Bar_number_engraver` from the `Score` context, and the `Time_signature_engraver`, `Clef_engraver` and `Bar_engraver` from the `Staff` context.

```
#(set-global-staff-size 20)

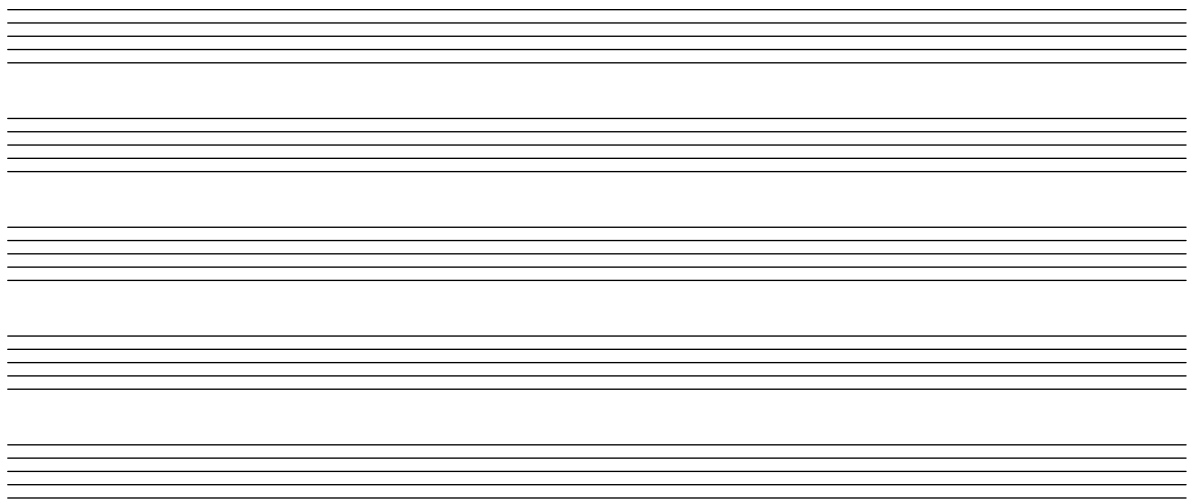
\score {
  {
    \repeat unfold 12 { s1 \break }
  }
  \layout {
    indent = 0\in
    \context {
      \Staff
      \remove "Time_signature_engraver"
      \remove "Clef_engraver"
```

```
      \remove "Bar_engraver"
    }
    \context {
      \Score
      \remove "Bar_number_engraver"
    }
  }
}

% uncomment these lines for "letter" size
%{
\paper {
  #(set-paper-size "letter")
  ragged-last-bottom = ##f
  line-width = 7.5\in
  left-margin = 0.5\in
  bottom-margin = 0.25\in
  top-margin = 0.25\in
}
%}

% uncomment these lines for "A4" size
%{
\paper {
  #(set-paper-size "a4")
  ragged-last-bottom = ##f
  line-width = 180
  left-margin = 15
  bottom-margin = 10
  top-margin = 10
}
%}
```

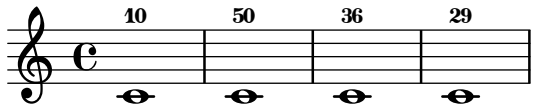




Creating double-digit fingerings

Creating fingerings larger than 5 is possible.
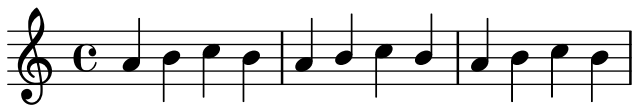
```
\relative c' {
  c1-10
  c1-50
  c1-36
  c1-29
}
```



Direzione predefinita dei gambi sulla linea centrale del rigo

La direzione predefinita dei gambi sulla linea centrale del rigo si imposta con la proprietà `neutral-direction` dell'oggetto `Stem`.

```
\relative c'' {
  a4 b c b
  \override Stem.neutral-direction = #up
  a4 b c b
  \override Stem.neutral-direction = #down
  a4 b c b
}
```



Different font size settings for instrumentName and shortInstrumentName

Choose different font sizes for instrumentName and shortInstrumentName as a context override.

```
InstrumentNameFontSize =
#(define-music-function (font-size-pair)(pair?)
"Sets the @code{font-size} of @code{InstrumentName}.
The font-size for the initial @code{instrumentName} is taken from the first
```

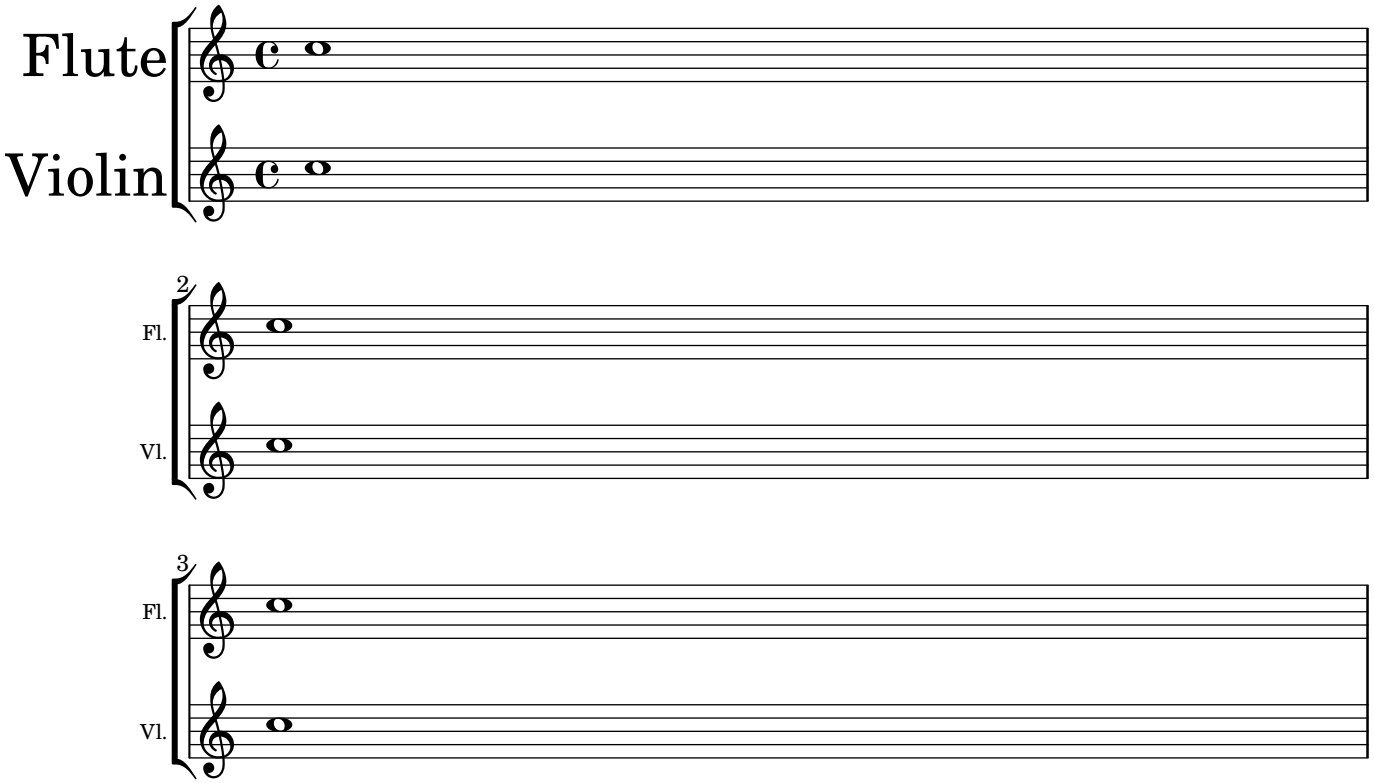
```
value in @var{font-size-pair}.  @code{shortInstrumentName} will get the second
value of @var{font-size-pair}.
"

;; This code could be changed/extended to set different values for each
;; occurance of `shortInstrumentName'

#{
  \override InstrumentName.after-line-breaking =
    #(lambda (grob)
       (let* ((orig (ly:grob-original grob))
              (siblings (if (ly:grob? orig)
                            (ly:spanner-broken-into orig)
                            '())))
         (if (pair? siblings)
             (begin
               (ly:grob-set-property!
                 (car siblings)
                 'font-size
                 (car font-size-pair))
               (for-each
                 (lambda (g)
                   (ly:grob-set-property! g 'font-size (cdr font-size-pair)))
                 (cdr siblings))))))
#})

\layout {
  \context {
    \Staff
    \InstrumentNameFontSize #'(6 . -3)
  }
}

\new StaffGroup <<
  \new Staff
     \with {
       instrumentName = "Flute"
       shortInstrumentName = "Fl."
     }
     { c''1 \break c'' \break c'' }
  \new Staff
   \with {
     instrumentName = "Violin"
     shortInstrumentName = "Vl."
   }
   { c''1 \break c'' \break c'' }
>>
```



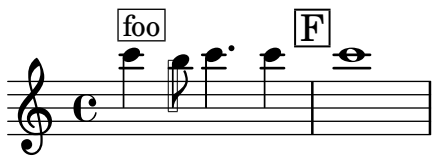
Drawing boxes around grobs

The `print-function` can be overridden to draw a box around an arbitrary grob.

```
\relative c'' {
  \override TextScript.stencil =
    #(make-stencil-boxer 0.1 0.3 ly:text-interface::print)
  c'4^"foo"

  \override Stem.stencil =
    #(make-stencil-boxer 0.05 0.25 ly:stem::print)
  \override Score.RehearsalMark.stencil =
    #(make-stencil-boxer 0.15 0.3 ly:text-interface::print)
  b8

  \revert Stem.stencil
  \revert Flag.stencil
  c4. c4
  \mark "F"
  c1
}
```
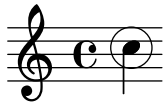


Drawing circles around note heads

Here is how to circle a note.

```
circle =
\once \override NoteHead.stencil = #(lambda (grob)
```

```
    (let* ((note (ly:note-head::print grob))
           (combo-stencil (ly:stencil-add
               note
               (circle-stencil note 0.1 0.8))))
          (ly:make-stencil (ly:stencil-expr combo-stencil)
            (ly:stencil-extent note X)
            (ly:stencil-extent note Y))))

{ \circle c'' }
```

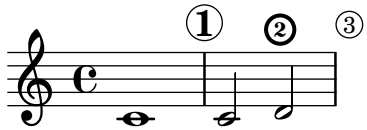


Drawing circles around various objects

The `\circle` markup command draws circles around various objects, for example fingering indications. For other objects, specific tweaks may be required: this example demonstrates two strategies for rehearsal marks and measure numbers.

```
\relative c' {
  c1
  \set Score.markFormatter =
    #(lambda (mark context)
              (make-circle-markup (format-mark-numbers mark context)))
  \mark \default

  c2 d^\markup {
    \override #'(thickness . 3) {
      \circle \finger 2
    }
  }
  \override Score.BarNumber.break-visibility = #all-visible
  \override Score.BarNumber.stencil =
    #(make-stencil-circler 0.1 0.25 ly:text-interface::print)
}
```



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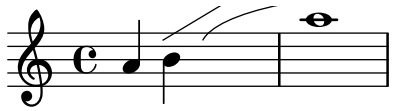
PostScript code can be directly inserted inside a `\markup` block.

```
% PostScript is a registered trademark of Adobe Systems Inc.

\relative c'' {
  a4-\markup { \postscript "3 4 moveto 5 3 rlineto stroke" }
  -\markup { \postscript "[ 0 1 ] 0 setdash 3 5 moveto 5 -3 rlineto stroke " }

  b4-\markup { \postscript "3 4 moveto 0 0 1 2 8 4 20 3.5 rcurveto stroke" }
  s2
  a'1
```

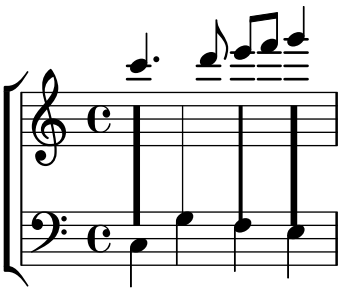
```
}
```



Modificare l'aspetto delle linee della griglia

L'aspetto delle linee della griglia può essere modificato sovrascrivendo alcune delle loro proprietà.

```
\score {
  \new ChoirStaff <<
    \new Staff {
      \relative c'' {
        \stemUp
        c'4. d8 e8 f g4
      }
    }
    \new Staff {
      \relative c {
        % this moves them up one staff space from the default position
        \override Score.GridLine.extra-offset = #'(0.0 . 1.0)
        \stemDown
        \clef bass
        \once \override Score.GridLine.thickness = #5.0
        c4
        \once \override Score.GridLine.thickness = #1.0
        g'4
        \once \override Score.GridLine.thickness = #3.0
        f4
        \once \override Score.GridLine.thickness = #5.0
        e4
      }
    }
  >>
  \layout {
    \context {
      \Staff
      % set up grids
      \consists "Grid_point_engraver"
      % set the grid interval to one quarter note
      gridInterval = #(ly:make-moment 1/4)
    }
    \context {
      \Score
      \consists "Grid_line_span_engraver"
      % this moves them to the right half a staff space
      \override NoteColumn.X-offset = #-0.5
    }
  }
}
```



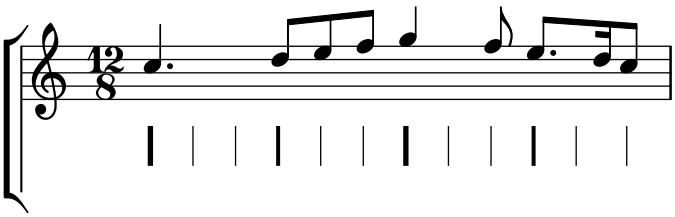
Grid lines: emphasizing rhythms and notes synchronization

Regular vertical lines can be drawn between staves to show note synchronization; however, in case of monophonic music, you may want to make the second stave invisible, and make the lines shorter like in this snippet.

```
\score {
  \new ChoirStaff {
    \relative c'' <<
      \new Staff {
        \time 12/8
        \stemUp
        c4. d8 e8 f g4 f8 e8. d16 c8
      }
      \new Staff {
        % hides staff and notes so that only the grid lines are visible
        \hideNotes
        \hide Staff.BarLine
        \override Staff.StaffSymbol.line-count = #0
        \hide Staff.TimeSignature
        \hide Staff.Clef

        % dummy notes to force regular note spacing
        \once  \override Score.GridLine.thickness = #4.0
        c8 c c
        \once  \override Score.GridLine.thickness = #3.0
        c8 c c
        \once  \override Score.GridLine.thickness = #4.0
        c8 c c
        \once  \override Score.GridLine.thickness = #3.0
        c8 c c
      }
    >>
  }
  \layout {
    \context {
      \Score
      \consists "Grid_line_span_engraver"
      % center grid lines horizontally below note heads
      \override NoteColumn.X-offset = #-0.5
    }
    \context {
      \Staff
      \consists "Grid_point_engraver"
      gridInterval = #(ly:make-moment 1/8)
      % set line length and positioning:
```

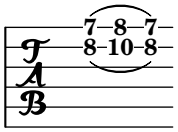
```
      % two staff spaces above center line on hidden staff
      % to four spaces below center line on visible staff
      \override GridPoint.Y-extent = #'(2 . -4)
    }
    ragged-right = ##t
  }
}
```



Martellato e strappato usando accordi

Quando il martellato o lo strappato si applicano a delle note in un accordo, viene disegnato un solo arco. Ma è possibile avere un "doppio arco" impostando la proprietà `doubleSlurs` su `#t`.

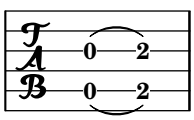
```
\new TabStaff {
  \relative c' {
    % chord hammer-on and pull-off
    \set doubleSlurs = ##t
    <g' b>8( <a c> <g b>)
  }
}
```



Martellato e strappato usando le voci

L'arco del martellato o dello strappato è rivolto in alto nella prima e terza voce, mentre è rivolto in basso nella seconda e quarta voce.

```
\new TabStaff {
  \relative c' {
    << { \voiceOne g2( a) }
    \\ { \voiceTwo a,( b) }
    >> \oneVoice
  }
}
```

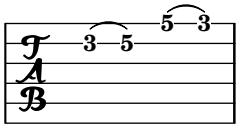


Martellato e strappato

Il martellato (hammer on) e lo strappato (pull off) si possono ottenere con le legature di portamento.

```
\new TabStaff {
```

```
  \relative c' {
    d4( e\2)
    a( g)
  }
}
```



How to print two rehearsal marks above and below the same barline (method 1)

This method prints two 'rehearsal marks', one on top of the other. It shifts the lower rehearsal mark below the staff and then adds padding above it in order to place the upper rehearsal mark above the staff.

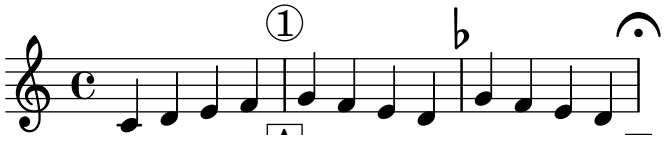
By adjusting the extra-offset and baseline-skip values you can increase or decrease the overall space between the rehearsal mark and the staff.

Because nearly every type of glyph or string can be made to behave like a rehearsal mark it is possible to centre those above and below a bar line.

Adding the appropriate 'break visibility' as shown in snippet 1 (`\%22http://lsr.di.unimi.it/LSR/Item?id=1\%22`) will allow you to position two marks at the end of a line as well.

Note: Method 1 is less complex than Method 2 but does not really allow for fine tuning of placement of one of the rehearsal marks without affecting the other. It may also give some problems with vertical spacing, since using `extra-offset` does not change the bounding box of the mark from its original value.

```
\relative c'{
  c d e f |
  \once \override Score.RehearsalMark.extra-offset = #'(0 . -8.5)
  \once \override Score.RehearsalMark.baseline-skip = #9
  \mark \markup \center-column { \circle 1 \box A }
  g f e d |
  \once \override Score.RehearsalMark.extra-offset = #'(0 . -8.5)
  \once \override Score.RehearsalMark.baseline-skip = #9
  \mark \markup \center-column { \flat { \bold \small \italic Fine. } }
  g f e d |
  \once \override Score.RehearsalMark.extra-offset = #'(0 . -8.5)
  \once \override Score.RehearsalMark.baseline-skip = #9
  \override Score.RehearsalMark.break-visibility = #begin-of-line-invisible
  \mark \markup \center-column { \fermata \box z }
}
```

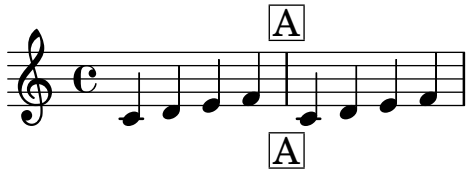


How to print two rehearsal marks above and below the same barline (method 2)

This method prints two 'rehearsal marks' - one above the stave and one below, by creating two voices, adding the Rehearsal Mark engraver to each voice - without this no rehearsal mark is printed - and then placing each rehearsal mark UP and DOWN in each voice respectively.

This method (as opposed to method 1) is more complex, but allows for more flexibility, should it be needed to tweak each rehearsal mark independently of the other.
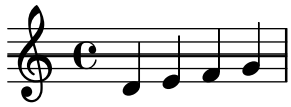
```
\score {
  \relative c'
  <<
    \new Staff {
      <<
        \new Voice \with {
          \consists Mark_engraver
          \consists "Staff_collecting_engraver"
        }
        { c4 d e f
          \mark \markup { \box A }
          c4 d e f
        }
        \new Voice \with {
          \consists Mark_engraver
          \consists "Staff_collecting_engraver"
          \override RehearsalMark.direction = #DOWN
        }
        { s4 s s s
          \mark \markup { \circle 1 }
          s4 s s s
        }
      >>
    }
  >>
  \layout {
    \context {
      \Score
      \remove "Mark_engraver"
      \remove "Staff_collecting_engraver"
    }
  }
}
```



Rendere alcune linee del rigo più spesse delle altre

In ambito didattico può essere utile rendere più spesso una linea del rigo (per esempio, la linea centrale, o per sottolineare la linea della chiave di Sol). Per farlo si possono aggiungere altre linee e posizionarle molto vicino alla linea che deve essere evidenziata, usando la proprietà `line-positions` dell'oggetto `StaffSymbol`.

```
{
  \override Staff.StaffSymbol.line-positions =
    #'(-4 -2 -0.2 0 0.2 2 4)
  d'4 e' f' g'
}
```



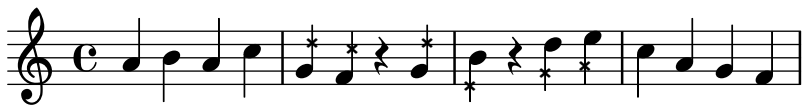
Marking notes of spoken parts with a cross on the stem (Sprechstimme)

This example shows how to put crosses on stems. Mark the beginning of a spoken section with the `\speakOn` keyword, and end it with the `\speakOff` keyword.

```
speakOn = {
  \override Stem.stencil =
    #(lambda (grob)
       (let* ((x-parent (ly:grob-parent grob X))
              (is-rest? (ly:grob? (ly:grob-object x-parent 'rest))))
         (if is-rest?
             empty-stencil
             (ly:stencil-combine-at-edge
              (ly:stem::print grob)
              Y
              (- (ly:grob-property grob 'direction))
              (grob-interpret-markup grob
                                     (markup #:center-align #:fontsize -4
                                             #:musicglyph "noteheads.s2cross"))
              -2.3))))
}

speakOff = {
  \revert Stem.stencil
  \revert Flag.stencil
}
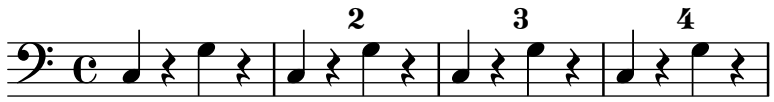
\score {
  \new Staff {
    \relative c'' {
      a4 b a c
      \speakOn
      g4 f r g
      b4 r d e
      \speakOff
      c4 a g f
    }
  }
}
```



Measure counter

This snippet provides a workaround for emitting measure counters using transparent percent repeats.

```
<<
  \context Voice = "foo" {
    \clef bass
    c4 r g r
    c4 r g r
    c4 r g r
    c4 r g r
  }
  \context Voice = "foo" {
    \set countPercentRepeats = ##t
    \hide PercentRepeat
    \override PercentRepeatCounter.staff-padding = #1
    \repeat percent 4 { s1 }
  }
>>
```



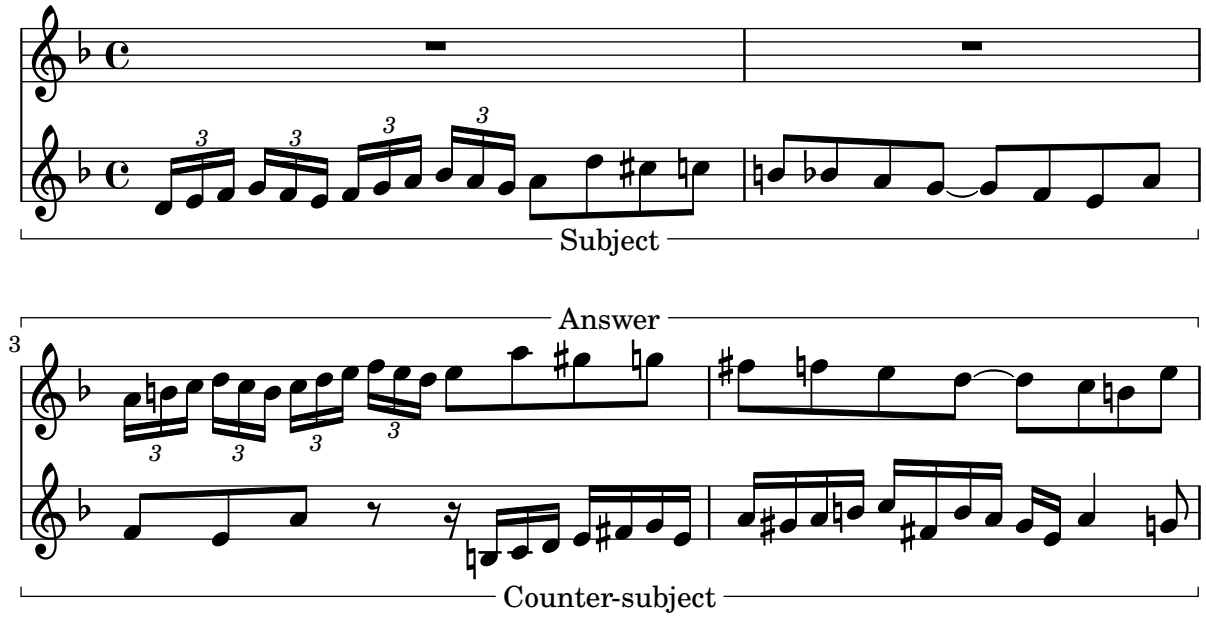
Measure spanners

Measure spanners are an alternate way to print annotated brackets. As opposed to horizontal brackets, they extend between two bar lines rather than two notes. The text is displayed in the center of the bracket.

```
\layout {
  \context {
    \Staff
    \consists Measure_spanner_engraver
  }
}

<<
  \new Staff \relative c'' {
    \key d \minor
    R1*2
    \tweak text "Answer"
    \startMeasureSpanner
    \tuplet 3/2 8 {
      a16[ b c] d[ c b]  c[ d e] f[ e d]
    }
    e8 a gis g
    fis f e d~ d c b e
    \stopMeasureSpanner
  }
  \new Staff \relative c' {
    \key d \minor
    \tweak text "Subject"
    \tweak direction #DOWN
```

```
    \startMeasureSpanner
    \tuplet 3/2 8 {
      d16[ e f] g[ f e] f[ g a] bes[ a g]
    }
    a8 d cis c
    b bes a g~ g f e a
    \stopMeasureSpanner
    \tweak text "Counter-subject"
    \tweak direction #DOWN
    \startMeasureSpanner
    f8 e a r r16 b, c d e fis g e
    a gis a b c fis, b a gis e a4 g8
    \stopMeasureSpanner
  }
>>
```



Numbering groups of measures

This snippet demonstrates the use of the `Measure_counter_engraver` to number groups of successive measures. Any stretch of measures may be numbered, whether consisting of repetitions or not.

The engraver must be added to the appropriate context. Here, a `Staff` context is used; another possibility is a `Dynamics` context.

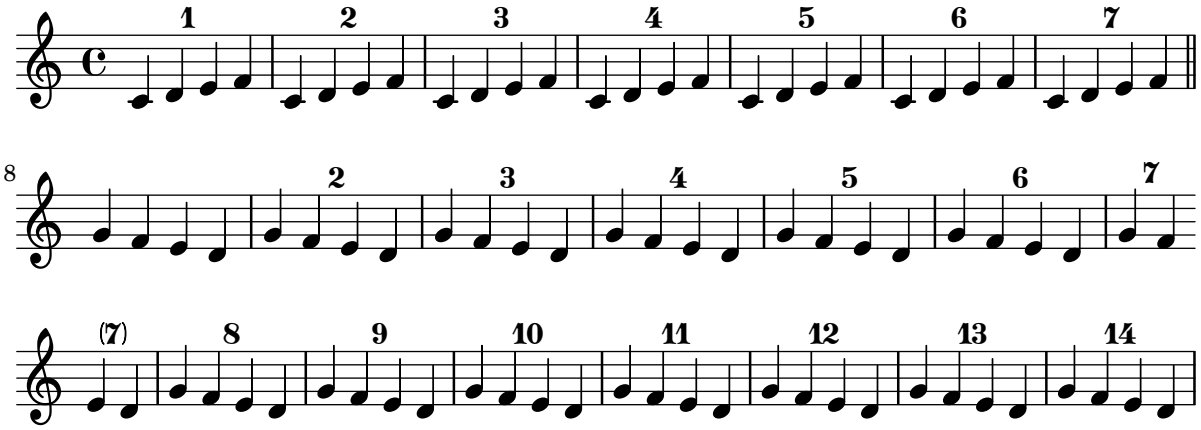
The counter is begun with `\startMeasureCount` and ended with `\stopMeasureCount`. Numbering will start by default with `1`, but this behavior may be modified by overriding the `count-from` property.

When a measure extends across a line break, the number will appear twice, the second time in parentheses.

```
\layout {
  \context {
    \Staff
    \consists #Measure_counter_engraver
  }
```

```
}

\new Staff {
  \startMeasureCount
  \repeat unfold 7 {
    c'4 d' e' f'
  }
  \stopMeasureCount
  \bar "||"
  g'4 f' e' d'
  \override Staff.MeasureCounter.count-from = #2
  \startMeasureCount
  \repeat unfold 5 {
    g'4 f' e' d'
  }
  g'4 f'
  \bar ""
  \break
  e'4 d'
  \repeat unfold 7 {
    g'4 f' e' d'
  }
  \stopMeasureCount
}
```

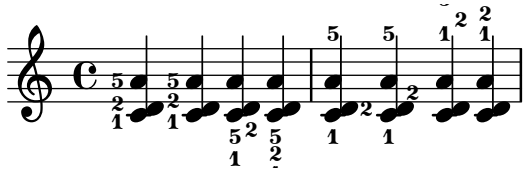


Positioning fingering indications precisely

Generally the options available for positioning the fingering of chords work well by default, but if one of the indications needs to positioned more precisely the following tweak may be used. This is particularly useful for correcting the positioning when intervals of a second are involved.

```
\relative c' {
  \set fingeringOrientations = #'(left)
  <c-1 d-2 a'-5>4
  <c-1 d-\tweak extra-offset #'(0 . 0.2)-2 a'-5>4
  \set fingeringOrientations = #'(down)
  <c-1 d-2 a'-5>4
  <c-\tweak extra-offset #'(0 . -1.1)-1
   d-\tweak extra-offset #'(-1.2 . -1.8)-2 a'-5>4
  \set fingeringOrientations = #'(down right up)
```
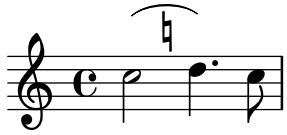
```
  <c-1 d-\tweak extra-offset #'(-0.3 . 0)-2 a'-5>4
  <c-1 d-\tweak extra-offset #'(-1 . 1.2)-2 a'-5>4
  \set fingeringOrientations = #'(up)
  <c-1 d-\tweak extra-offset #'(0 . 1.1)-2
   a'-\tweak extra-offset #'(0 . 1)-5>4
  <c-1 d-\tweak extra-offset #'(-1.2 . 1.5)-2
   a'-\tweak extra-offset #'(0 . 1.4)-5>4
}
```



Posizionare il testo a margine dentro le legature di portamento

I testi a margine devono avere la proprietà `outside-staff-priority` impostata su false per poter apparire dentro le legature di portamento.

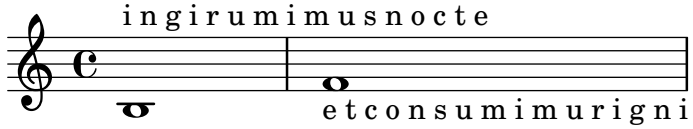
```
\relative c'' {
  \override TextScript.avoid-slur = #'inside
  \override TextScript.outside-staff-priority = ##f
  c2(^\markup { \halign #-10 \natural } d4.) c8
}
```



Printing text from right to left

It is possible to print text from right to left in a markup object, as demonstrated here.

```
{
  b1^\markup {
    \line { i n g i r u m i m u s n o c t e }
  }
  f'_\markup {
    \override #'(text-direction . -1)
    \line { i n g i r u m i m u s n o c t e }
  }
}
```



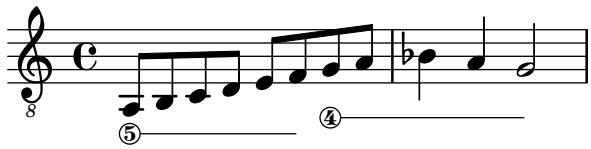
String number extender lines

Make an extender line for string number indications, showing that a series of notes is supposed to be played all on the same string.

```
stringNumberSpanner =
```

```
  #(define-music-function (StringNumber) (string?)
    #{
      \override TextSpanner.style = #'solid
      \override TextSpanner.font-size = #-5
      \override TextSpanner.bound-details.left.stencil-align-dir-y = #CENTER
      \override TextSpanner.bound-details.left.text =
        \markup { \circle \number $StringNumber }
    #})


\relative c {
  \clef "treble_8"
  \stringNumberSpanner "5"
  \textSpannerDown
  a8\startTextSpan
  b c d e f\stopTextSpan
  \stringNumberSpanner "4"
  g\startTextSpan a
  bes4 a g2\stopTextSpan
}
```



Using PostScript to generate special note head shapes
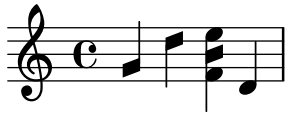
When a note head with a special shape cannot easily be generated with graphic markup, PostScript code can be used to generate the shape. This example shows how a parallelogram-shaped note head is generated.

```
parallelogram =
  #(ly:make-stencil (list 'embedded-ps
    "gsave
      currentpoint translate
      newpath
      0 0.25 moveto
      1.3125 0.75 lineto
      1.3125 -0.25 lineto
      0 -0.75 lineto
      closepath
      fill
      grestore" )
    (cons 0 1.3125)
    (cons -.75 .75))

myNoteHeads = \override NoteHead.stencil = \parallelogram
normalNoteHeads = \revert NoteHead.stencil

\relative c'' {
  \myNoteHeads
  g4 d'
```

```
  \normalNoteHeads
  <f, \tweak stencil \parallelogram b e>4 d
}
```
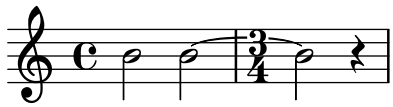


Using the whiteout property

Any graphical object can be printed over a white background to mask parts of objects that lie beneath. This can be useful to improve the appearance of collisions in complex situations when repositioning objects is impractical. It is necessary to explicitly set the `layer` property to control which objects are masked by the white background.

In this example the collision of the tie with the time signature is improved by masking out the part of the tie that crosses the time signature by setting the `whiteout` property of `TimeSignature`. To do this `TimeSignature` is moved to a layer above `Tie`, which is left in the default layer of 1, and `StaffSymbol` is moved to a layer above `TimeSignature` so it is not masked.

```
{
  \override Score.StaffSymbol.layer = #4
  \override Staff.TimeSignature.layer = #3
  b'2 b'~
  \once \override Staff.TimeSignature.whiteout = ##t
  \time 3/4
  b' r4
}
```



Text

Sezione “Text” in *Guida alla Notazione*

Adding markups in a tablature

By default markups does not show in a tablature.

To make them appear, simply use the command `\revert TabStaff.TextScript.stencil`

```
%% http://lsr.di.unimi.it/LSR/Item?id=919
% by P.P.Schneider on June 2014

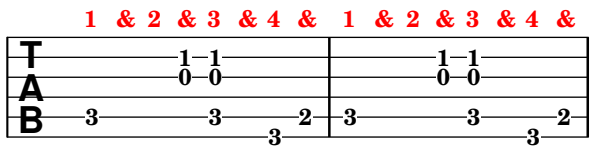
high  = { r4 r8 <g c'> q r8 r4 }

low = { c4 r4 c8 r8 g,8 b, }

pulse = { s8^"1" s^"&" s^"2" s^"&" s^"3" s^"&" s^"4" s^"&" }

\score {
 \new TabStaff {
   \repeat unfold 2 << \high \\ \low \\ \pulse >>
  }
  \layout {
    \context {
      \TabStaff
      \clef moderntab
      \revert TextScript.stencil
      \override TextScript.font-series = #'bold
      \override TextScript.font-size = #-2
      \override TextScript.color = #red

    }
    \context {
      \Score
      proportionalNotationDuration = #(ly:make-moment 1/8)
    }
  }
}
```



Adding the current date to a score

With a little Scheme code, the current date can easily be added to a score.

```
% first, define a variable to hold the formatted date:
date = #(strftime "%d-%m-%Y" (localtime (current-time)))
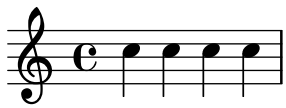
% use it in the title block:
\header {
  title = "Including the date!"
```

```
  subtitle = \date
}

\score {
  \relative c'' {
    c4 c c c
  }
}
% and use it in a \markup block:
\markup {
  \date
}
```

Including the date!

28-11-2021
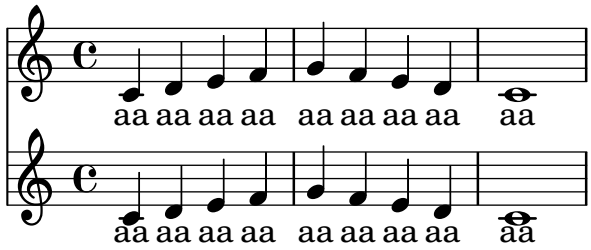


28-11-2021

Adjusting lyrics vertical spacing

This snippet shows how to bring the lyrics line closer to the staff.

```
% Default layout:
<<
  \new Staff \new Voice = melody \relative c' {
    c4 d e f
    g4 f e d
    c1
  }
  \new Lyrics \lyricsto melody { aa aa aa aa aa aa aa aa aa }

  \new Staff {
    \new Voice = melody \relative c' {
      c4 d e f
      g4 f e d
      c1
    }
  }
  % Reducing the minimum space below the staff and above the lyrics:
  \new Lyrics \with {
    \override VerticalAxisGroup.nonstaff-relatedstaff-spacing =
      #'((basic-distance . 1))
  }
  \lyricsto melody { aa aa aa aa aa aa aa aa aa }
>>
```



Aligning and centering instrument names

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

```
\paper { left-margin = 3\cm }

\score {
  \new StaffGroup <<

    \new Staff \with {
      \override InstrumentName.self-alignment-X = #LEFT
      instrumentName = \markup \left-column {
        "Left aligned"
        "instrument name"
        }
        shortInstrumentName = "Left"
      }

      {  c''1 \break c''1 }

    \new Staff \with {
      \override InstrumentName.self-alignment-X = #CENTER
      instrumentName = \markup \center-column {
        Centered
        "instrument name"
        }
      shortInstrumentName = "Centered"
    }

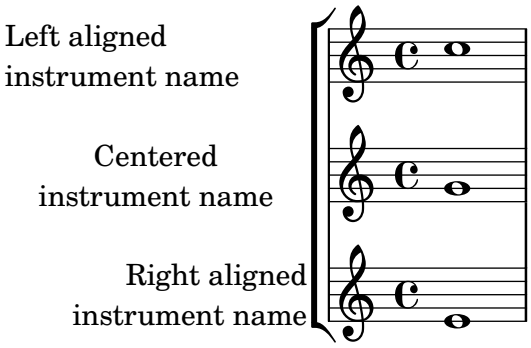
    { g'1 g'1}

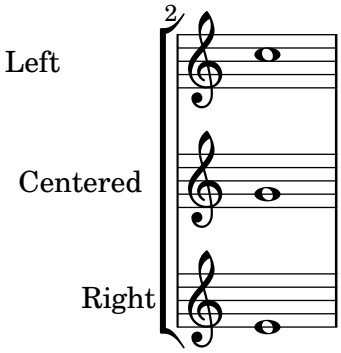
    \new Staff \with {
      \override InstrumentName.self-alignment-X = #RIGHT
      instrumentName = \markup \right-column {
        "Right aligned"
        "instrument name"
      }
      shortInstrumentName = "Right"
    }

    { e'1 e'1 }

  >>
```

```
  \layout {
    ragged-right = ##t
    indent = 4\cm
    short-indent = 2\cm
  }
}
```

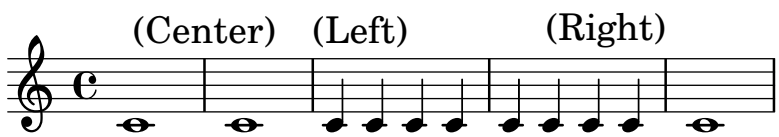




Aligning objects created with the \mark command

By default the \mark command centers objects over a bar line. This behavior can be modified to align at right or left.
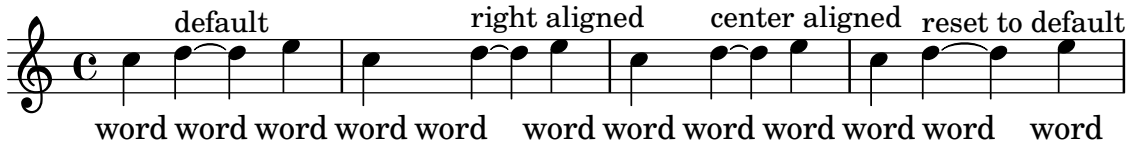
```
\relative c' {
  c1 \mark "(Center)"
  c1
  \once \override Score.RehearsalMark.self-alignment-X = #LEFT
  \mark "(Left)"
  c4 c c c
  c4 c c c
  \once \override Score.RehearsalMark.self-alignment-X = #RIGHT
  \mark "(Right)"
  c1
}
```



Aligning syllables with melisma

By default, lyrics syllables that start a melisma are left aligned on their note. The alignment can be altered using the `lyricMelismaAlignment` property.

```
\score {
  <<
    \new Staff {
      \relative c''
      \new Voice = "vocal" {
        c d~^\markup default  d e
        c d~^\markup "right aligned" d e
        c d~^\markup "center aligned" d e
        c d~^\markup "reset to default" d e
      }
    }
    \new Lyrics \lyricsto "vocal" {
      word word word
      \set lyricMelismaAlignment = #RIGHT
      word word word
      \set lyricMelismaAlignment = #CENTER
      word word word
      \unset lyricMelismaAlignment
      word word word
    }
  >>
}
```

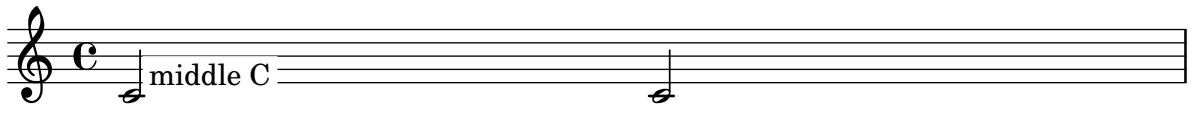


Blanking staff lines using the \whiteout command

The `\whiteout` command underlays a markup with a white box. Since staff lines are in a lower layer than most other grobs, this white box will not overlap any other grob.

```
\layout {
  ragged-right = ##f
}

\relative c' {
  \override TextScript.extra-offset = #'(2 . 4)
  c2-\markup { \whiteout \pad-markup #0.5 "middle C" } c
}
```



Center text below hairpin dynamics

This example provides a function to typeset a hairpin (de)crescendo with some additional text below it, such as “molto” or “poco”. The added text will change the direction according to the direction of the hairpin. The Hairpin is aligned to DynamicText.

The example also illustrates how to modify the way an object is normally printed, using some Scheme code.

```
\paper { tagline = ##f }

hairpinWithCenteredText =
#(define-music-function (text) (markup?)
  #{
    \once \override Voice.Hairpin.after-line-breaking =
      #(lambda (grob)
        (let* ((stencil (ly:hairpin::print grob))
               (par-y (ly:grob-parent grob Y))
               (dir (ly:grob-property par-y 'direction))
               (staff-line-thickness
                 (ly:output-def-lookup (ly:grob-layout grob) 'line-thickness))
               (new-stencil (ly:stencil-aligned-to
                 (ly:stencil-combine-at-edge
                   (ly:stencil-aligned-to stencil X CENTER)
                   Y dir
                   (ly:stencil-aligned-to
                     (grob-interpret-markup
                       grob
                       (make-fontsize-markup
                         (magnification->font-size
                           (+ (ly:staff-symbol-staff-space grob)
                              (/ staff-line-thickness 2)))
                         text)) X CENTER))
                 X LEFT))
               (staff-space (ly:output-def-lookup
                 (ly:grob-layout grob) 'staff-space))
               (par-x (ly:grob-parent grob X))
               (dyn-text (grob::has-interface par-x 'dynamic-text-interface))
               (dyn-text-stencil-x-length
                 (if dyn-text
                   (interval-length
                     (ly:stencil-extent (ly:grob-property par-x 'stencil) X))
                   0))
               (x-shift
                 (if dyn-text
                   (-
                     (+ staff-space dyn-text-stencil-x-length)
                     (* 0.5 staff-line-thickness)) 0)))

          (ly:grob-set-property! grob 'Y-offset 0)
          (ly:grob-set-property! grob 'stencil
             (ly:stencil-translate-axis
              new-stencil
              x-shift X))))
```

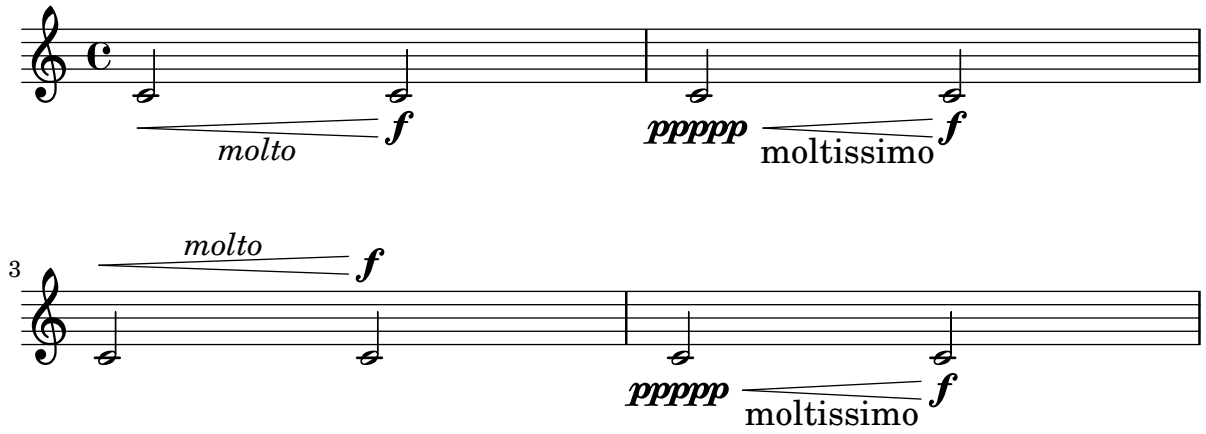
```
  #})

hairpinMolto =
\hairpinWithCenteredText \markup { \italic molto }

hairpinMore =
\hairpinWithCenteredText \markup { \larger moltissimo }

\layout { ragged-right = ##f }

\relative c' {
  \hairpinMolto
  c2\< c\f
  \hairpinMore
  c2\ppppp\< c\f
  \break
  \hairpinMolto
  c2^\< c\f
  \hairpinMore
  c2\ppppp\< c\f
}
```

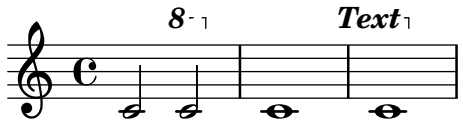


Changing ottava text

Internally, `\ottava` sets the properties `ottavation` (for example, to `8va` or `8vb`) and `middleCPosition`. To override the text of the bracket, set `ottavation` after invoking `\ottava`.

Short text is especially useful when a brief ottava is used.

```
{
  c'2
  \ottava #1
  \set Staff.ottavation = #"8"
  c''2
  \ottava #0
  c'1
  \ottava #1
  \set Staff.ottavation = #"Text"
  c''1
}
```



Changing the default text font family

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

```
%{
You may have to install additional fonts.

Red Hat Fedora

  dejavu-fonts-all

Debian GNU/Linux, Ubuntu

  fonts-dejavu-core
  fonts-dejavu-extra
%}

\paper {
  % change for other default global staff size.
  myStaffSize = #20
  %{
     run
         lilypond -dshow-available-fonts
     to show all fonts available in the process log.
  %}

  #(define fonts
    (make-pango-font-tree "DejaVu Serif"
                          "DejaVu Sans"
                          "DejaVu Sans Mono"
     (/ myStaffSize 20)))
}

{
  g'''4^\markup {
    DejaVu Serif: \bold bold
                  \italic italic
                  \italic \bold { bold italic }
  }
  g4_\markup {
    \override #'(font-family . sans) {
      DejaVu Sans: \bold bold
                   \italic italic
                   \italic \bold { bold italic }
    }
  }
  g''2^\markup {
    \override #'(font-family . typewriter) {
      DejaVu Sans Mono: \bold bold
                        \italic italic
                        \italic \bold { bold italic }
```

```
    }
  }
}
```



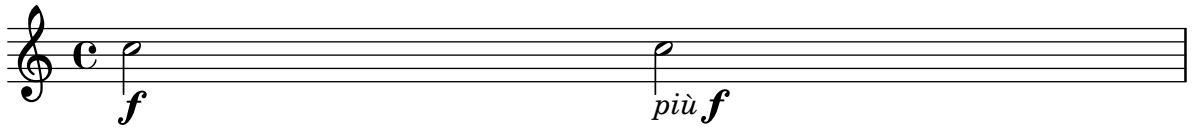
Combining dynamics with markup texts

Some dynamics may involve text indications (such as “più forte” or “piano subito”). These can be produced using a `\markup` block.

```
piuF = \markup { \italic più \dynamic f }

\layout { ragged-right = ##f }

\relative c'' {
  c2\f c-\piuF
}
```



Combinare due parti sullo stesso rigo

Lo strumento di unione delle parti (il comando `\partCombine`) permette di combinare varie parti sullo stesso rigo. Indicazioni testuali come “solo” e “a2” sono aggiunte automaticamente; per toglierele basta impostare la proprietà `printPartCombineTexts` su `f`. Per le partiture vocali (inni), non c’è bisogno di aggiungere i testi “solo/a2”, quindi dovrebbero essere disattivati. Tuttavia potrebbe convenire non usarlo se c’è una qualche parte solista, perché non verrebbe indicata. In tali casi è preferibile usare la notazione polifonica normale.

Questo frammento illustra i tre modi con cui due parti possono essere stampate su uno stesso rigo: normale polifonia, `\partCombine` senza testo e `\partCombine` con testo.

```
%% Combining pedal notes with clef changes

musicUp = \relative c'' {
  \time 4/4
  a4 c4.( g8) a4 |
  g4 e' g,( a8 b) |
  c b a2.
}

musicDown = \relative c'' {
  g4 e4.( d8) c4 |
  r2 g'4( f8 e) |
  d2 \stemDown a
}
```
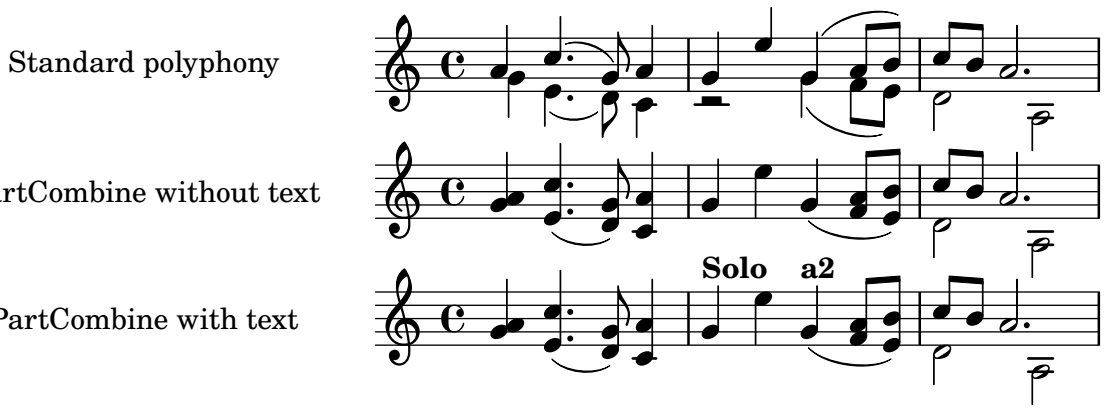
```
\score {
    <<
    \new Staff \with { instrumentName = "Standard polyphony" }

      << \musicUp \\ \musicDown >>

    \new Staff \with {
      instrumentName = "PartCombine without text"
      printPartCombineTexts = ##f
    }

    \partCombine \musicUp \musicDown

    \new Staff \with { instrumentName = "PartCombine with text" }
      \partCombine \musicUp \musicDown
    >>
  \layout {
    indent = 6.0\cm
    \context {
      \Score
      \override SystemStartBar.collapse-height = #30
    }
  }
}
```



Creating "real" parenthesized dynamics
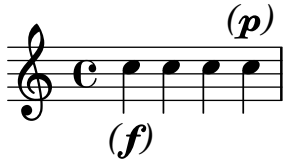
Although the easiest way to add parentheses to a dynamic mark is to use a `\markup` block, this method has a downside: the created objects will behave like text markups, and not like dynamics.

However, it is possible to create a similar object using the equivalent Scheme code (as described in the Notation Reference), combined with the `make-dynamic-script` function. This way, the markup will be regarded as a dynamic, and therefore will remain compatible with commands such as `\dynamicUp` or `\dynamicDown`.

```
paren =
#(define-event-function (dyn) (ly:event?)
   (make-dynamic-script
    #{ \markup \concat {
```

```
        \normal-text \italic \fontsize #2 (
        \pad-x #0.2 #(ly:music-property dyn 'text)
        \normal-text \italic \fontsize #2 )
      }
    #}))

\relative c'' {
  c4\paren\f c c \dynamicUp c\paren\p
}
```



Creating simultaneous rehearsal marks
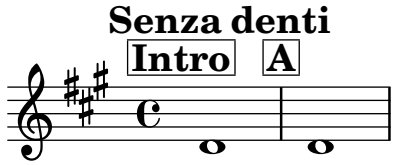
Unlike text scripts, rehearsal marks cannot be stacked at a particular point in a score: only one `RehearsalMark` object is created. Using an invisible measure and bar line, an extra rehearsal mark can be added, giving the appearance of two marks in the same column.

This method may also prove useful for placing rehearsal marks at both the end of one system and the start of the following system.

```
{
  \key a \major
  \set Score.markFormatter = #format-mark-box-letters
  \once \override Score.RehearsalMark.outside-staff-priority = #5000
  \once \override Score.RehearsalMark.self-alignment-X = #LEFT
  \once \override Score.RehearsalMark.break-align-symbols = #'(key-signature)
  \mark \markup { \bold { Senza denti } }

  % the hidden measure and bar line
  % \cadenzaOn turns off automatic calculation of bar numbers
  \cadenzaOn
  \once \override Score.TimeSignature.stencil = ##f
  \time 1/16
  s16 \bar ""
  \cadenzaOff

  \time 4/4
  \once \override Score.RehearsalMark.self-alignment-X = #LEFT
  \mark \markup { \box \bold Intro }
  d'1
  \mark \default
  d'1
}
```



Creating text spanners

The `\startTextSpan` and `\stopTextSpan` commands allow the creation of text spanners as easily as pedal indications or octavations. Override some properties of the `TextSpanner` object to modify its output.

```
\paper { ragged-right = ##f }

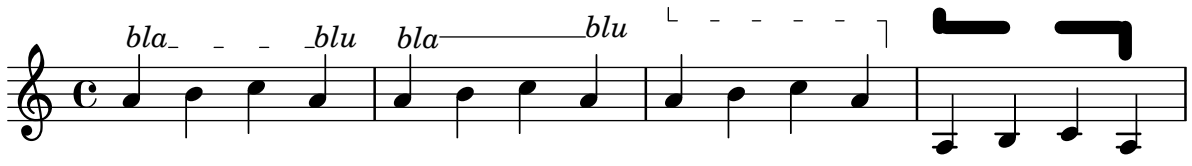
\relative c'' {
  \override TextSpanner.bound-details.left.text = #"bla"
  \override TextSpanner.bound-details.right.text = #"blu"
  a4 \startTextSpan
  b4 c
  a4 \stopTextSpan

  \override TextSpanner.style = #'line
  \once \override TextSpanner.bound-details.left.stencil-align-dir-y = #CENTER
  a4 \startTextSpan
  b4 c
  a4 \stopTextSpan

  \override TextSpanner.style = #'dashed-line
  \override TextSpanner.bound-details.left.text =
    \markup { \draw-line #'(0 . 1) }
  \override TextSpanner.bound-details.right.text =
    \markup { \draw-line #'(0 . -2) }
  \once \override TextSpanner.bound-details.right.padding = #-2

  a4 \startTextSpan
  b4 c
  a4 \stopTextSpan

  \set Staff.middleCPosition = #-13
  \override TextSpanner.dash-period = #10
  \override TextSpanner.dash-fraction = #0.5
  \override TextSpanner.thickness = #10
  a4 \startTextSpan
  b4 c
  a4 \stopTextSpan
}
```



Demonstrating all headers

All header fields with special meanings.

```
\header {
  copyright = "copyright"
  title = "title"
  subtitle = "subtitle"
```

```
  composer = "composer"
  arranger = "arranger"
  instrument = "instrument"
  meter = "meter"
  opus = "opus"
  piece = "piece"
  poet = "poet"
  texidoc = "All header fields with special meanings."
  copyright = "public domain"
  enteredby = "jcn"
  source = "urtext"
}

\layout {
  ragged-right = ##f
}

\score {
  \relative c'' { c1 | c | c | c }
}

\score {
   \relative c'' { c1 | c | c | c }
   \header {
     title = "localtitle"
     subtitle = "localsubtitle"
     composer = "localcomposer"
     arranger = "localarranger"
     instrument = "localinstrument"
     metre = "localmetre"
     opus = "localopus"
     piece = "localpiece"
     poet = "localpoet"
     copyright = "localcopyright"
   }
}
```

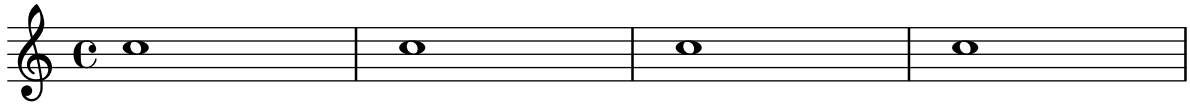
title

subtitle
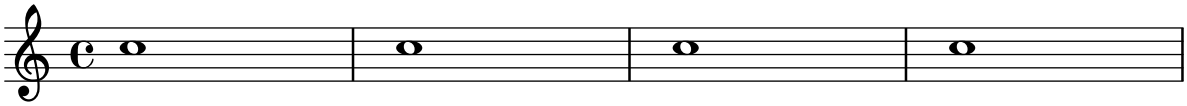
poet **instrument** composer

meter arranger

piece opus



localpiece localopus
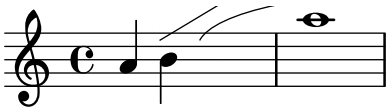


Embedding native PostScript in a \markup block

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

```
% PostScript is a registered trademark of Adobe Systems Inc.

\relative c'' {
  a4-\markup { \postscript "3 4 moveto 5 3 rlineto stroke" }
  -\markup { \postscript "[ 0 1 ] 0 setdash 3 5 moveto 5 -3 rlineto stroke " }

  b4-\markup { \postscript "3 4 moveto 0 0 1 2 8 4 20 3.5 rcurveto stroke" }
  s2
  a'1
}
```
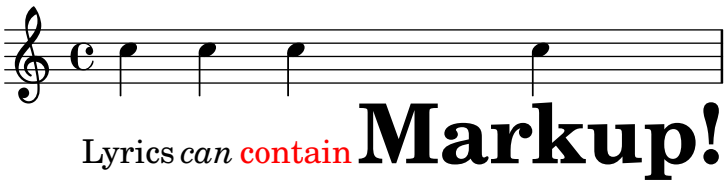


Formattazione delle sillabe del testo vocale

La modalità markup può essere usata per formattare le singole sillabe del testo vocale.

```
mel = \relative c'' { c4 c c c }
lyr = \lyricmode {
  Lyrics \markup { \italic can } \markup { \with-color #red contain }
  \markup { \fontsize #8 \bold Markup! }
}

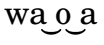
<<
  \new Voice = melody \mel
  \new Lyrics \lyricsto melody \lyr
>>
```



How to put ties between syllables in lyrics

This can be achieved by separating those syllables by tildes.

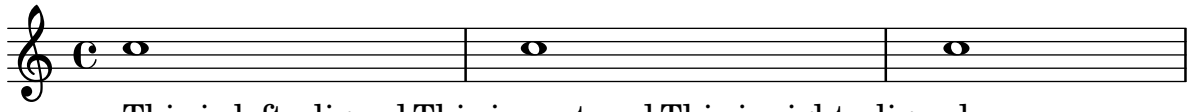
```
\lyrics {
  wa~o~a
}
```



Allineamento del testo vocale

L'allineamento orizzontale del testo vocale si imposta attraverso la proprietà `self-alignment-X` dell'oggetto `LyricText`. `#-1` è sinistra, `#0` è centro e `#1` è destra; si possono usare anche `#LEFT`, `#CENTER` e `#RIGHT`.

```
\layout { ragged-right = ##f }
\relative c'' {
  c1
  c1
  c1
}
\addlyrics {
  \once \override LyricText.self-alignment-X = #LEFT
  "This is left-aligned"
  \once \override LyricText.self-alignment-X = #CENTER
  "This is centered"
  \once \override LyricText.self-alignment-X = #1
  "This is right-aligned"
}
```



Markup list

Text that can spread over pages is entered with the `\markuplist` command.

```
%% updated/modified by P.P.Schneider on Feb. 2014

#(set-default-paper-size "a6")

#(define-markup-list-command (paragraph layout props args) (markup-list?)
  (interpret-markup-list layout props
   (make-justified-lines-markup-list (cons (make-hspace-markup 2) args))))

% Candide, Voltaire
\markuplist {
  \override-lines #'(baseline-skip . 2.5) {
    \paragraph {
      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
      \concat { simple \hspace #.3 ; }
      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 arbre généalogique avait été
      perdu par l'injure du temps.
```

```
    }
    \vspace #.3
    \paragraph {
      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
      \concat { besoin \hspace #.3 ; }
      ses palefreniers étaient ses
      \concat { piqueurs \hspace #.3 ; }
      le vicaire du village était
      son grand-aumônier.  Ils l'appelaient tous monseigneur, et ils
      riaient quand il faisait des contes.
    }
  }
}
```

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 arbre généalogique avait été perdu par l'injure du temps.

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

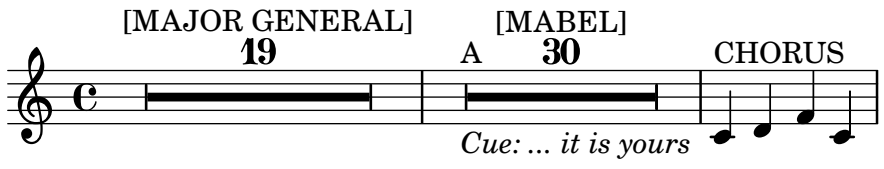
monseigneur, et ils riaient quand il faisait des contes.

Testo a margine delle pause multiple

Il testo a margine di una pausa multipla viene centrato sopra o sotto di essa. Se il testo è lungo, la misura non si espanderà. Per espandere la pausa multipla in modo che si allinei col testo, conviene usare un accordo vuoto con del testo attaccato prima della pausa multipla.

Il testo così attaccato a una nota spaziatrice viene allineato a sinistra della posizione in cui la nota sarebbe posta nella misura, ma se la lunghezza della misura è determinata dalla lunghezza del testo, il testo verrà centrato.

```
\relative c' {
  \compressMMRests {
    \textLengthOn
    <>^\markup { [MAJOR GENERAL] }
    R1*19
    <>_\markup { \italic { Cue: ... it is yours } }
    <>^\markup { A }
    R1*30^\markup { [MABEL] }
    \textLengthOff
    c4^\markup { CHORUS } d f c
  }
}
```



Of the ubiquity of markup objects

Text objects are entered either as simple strings between double quotes or as `\markup` blocks that can accept a variety of advanced text formatting and graphical enhancements.

As such, markup blocks may be used:

- in any TextScript object (attached to notes with `-`, `^` or `_`),
- any RehearsalMark introduced with the `\mark` keyword, or other similar objects such as MetronomeMark introduced with `\tempo`,
- as standalone markup blocks, entered at the top level outside of any `\score` block,
- in any definition inside the `\header` block (e.g. title, subtitle, composer) or in some variables defined inside the `\paper` block such as `evenHeaderMarkup` for page numbers.

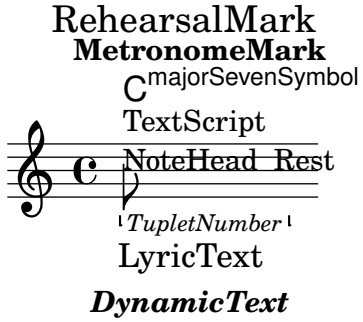
`\markup` may additionally be used for lyrics, in chord names, and as dynamics. In fact, it is possible to use `\markup` to customize the appearance of virtually any object, as demonstrated in this example using various methods.

```
%% Thanks to Aaron Hill https://lists.gnu.org/archive/html/lilypond-user/2019-01/msg00437.ht

\paper {
  paper-width = 8\cm paper-height = 8\cm
}
\header {
  title = \markup "Header"
  tagline = \markup "(tagline)"
}
\markup "Top-level markup"
dyn = #(make-dynamic-script #{ \markup \text "DynamicText" #})
\score {
  <<
    \new ChordNames
    \with { majorSevenSymbol = \markup "majorSevenSymbol" }
    \chordmode { c1:maj7 }
    \new Staff {
      \tempo \markup "MetronomeMark"
      \mark \markup "RehearsalMark"
      \once \override TupletNumber.text = \markup "TupletNumber"
      \tuplet 3/2 {
        \once \override NoteHead.stencil = #ly:text-interface::print
        \once \override NoteHead.text = \markup \lower #0.5 "NoteHead"
        c''8^\markup "TextScript"
        \once \override Rest.stencil = #(lambda (grob)
          (grob-interpret-markup grob #{
            \markup  "Rest"
            #}))
        r4
      }
    }
    \new Lyrics \lyricmode { \markup "LyricText" 1 }
    \new Dynamics { s1\dyn }
  >>
}
```



Top-level markup



Outputting the version number

By putting the output of `lilypond-version` into a lyric, it is possible to print the version number of LilyPond in a score, or in a document generated with `lilypond-book`. Another possibility is to append the version number to the doc-string, in this manner:

```
\score {
  \new Lyrics {
    \override Score.RehearsalMark.self-alignment-X = #LEFT
    \mark #(string-append "Processed with LilyPond version " (lilypond-version))
    s2
  }
}
```

Processed with LilyPond version 2.23.5

Modello per pianoforte con testo al centro

Invece di destinare un rigo a parte alla linea melodica e al suo testo, è possibile collocare il testo al centro di un doppio pentagramma per pianoforte.

```
upper = \relative c'' {
  \clef treble
  \key c \major
  \time 4/4

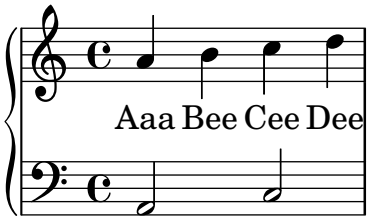
  a4 b c d
}

lower = \relative c {
  \clef bass
  \key c \major
  \time 4/4

  a2 c
}

text = \lyricmode {
  Aaa Bee Cee Dee
}
```

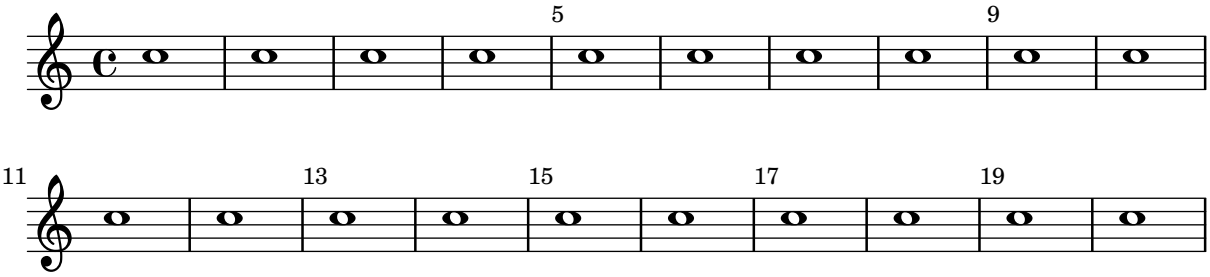
```
\score {
  \new PianoStaff <<
    \new Staff = upper { \new Voice = "singer" \upper }
    \new Lyrics \lyricsto "singer" \text
    \new Staff = lower { \lower }
  >>
  \layout { }
  \midi { }
}
```



Stampare i numeri di battuta a intervalli regolari variabili

L'intervallo dei numeri di battuta può essere modificato cambiando la funzione di contesto {set-bar-number-visibility}.

```
\relative c' {
  \override Score.BarNumber.break-visibility = #end-of-line-invisible
  \context Score \applyContext #(set-bar-number-visibility 4)
  \repeat unfold 10 c'1
  \context Score \applyContext #(set-bar-number-visibility 2)
  \repeat unfold 10 c
}
```

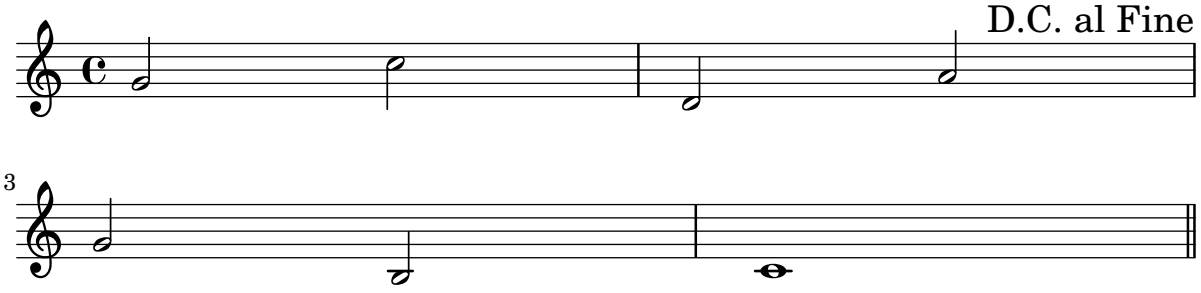


Posizionare le indicazioni alla fine di una linea

È possibile posizionare le indicazioni alla fine della linea corrente, invece che all'inizio della linea successiva. In tali casi, può essere preferibile allineare l'estremità destra dell'indicazione alla stanghetta.

```
\relative c'' {
  g2 c
  d,2 a'
  \once \override Score.RehearsalMark.break-visibility =
    #end-of-line-visible
  \once \override Score.RehearsalMark.self-alignment-X =
    #RIGHT
  \mark "D.C. al Fine"
  \break
```

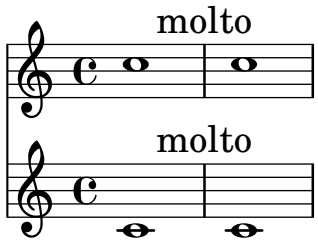
```
  g2 b,
  c1 \bar "||"
}
```



Stampare le indicazioni su ogni rigo

Sebbene le indicazioni testuali siano di norma collocate solo sopra il rigo più alto, è possibile farle apparire su ogni rigo.

```
\score {
  <<
    \new Staff { c''1 \mark "molto" c'' }
    \new Staff { c'1 \mark "molto" c' }
  >>
  \layout {
    \context {
      \Score
      \remove "Mark_engraver"
      \remove "Staff_collecting_engraver"
    }
    \context {
      \Staff
      \consists "Mark_engraver"
      \consists "Staff_collecting_engraver"
    }
  }
}
```

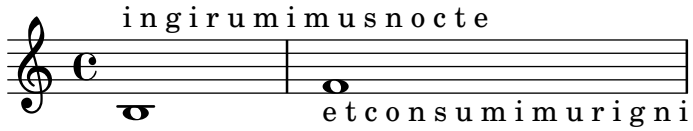


Printing text from right to left

It is possible to print text from right to left in a markup object, as demonstrated here.

```
{
  b1^\markup {
    \line { i n g i r u m i m u s n o c t e }
  }
  f'_\markup {
```
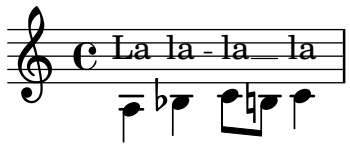
```
    \override #'(text-direction . -1)
    \line { i n g i r u m i m u s n o c t e }
  }
}
```



Putting lyrics inside the staff

Lyrics can be moved vertically to place them inside the staff. The lyrics are moved with `\override LyricText.extra-offset = #'(0 . dy)` and there are similar commands to move the extenders and hyphens. The offset needed is established with trial and error.

```
<<
  \new Staff <<
    \new Voice = "voc" \relative c' { \stemDown a bes c8 b c4 }
  >>
  \new Lyrics \with {
    \override LyricText.extra-offset = #'(0 . 8.6)
    \override LyricExtender.extra-offset = #'(0 . 8.6)
    \override LyricHyphen.extra-offset = #'(0 . 8.6)
  } \lyricsto "voc" { La la -- la __ _ la }
>>
```



Testo separato su due colonne

Il testo separato può essere disposto su varie colonne con i comandi di `\markup`:

```
\markup {
  \fill-line {
    \hspace #1
    \column {
      \line { O sacrum convivium }
      \line { in quo Christus sumitur, }
      \line { recolitur memoria passionis ejus, }
      \line { mens impletur gratia, }
      \line { futurae gloriae nobis pignus datur. }
      \line { Amen. }
    }
    \hspace #2
    \column \italic {
      \line { O sacred feast }
      \line { in which Christ is received, }
      \line { the memory of His Passion is renewed, }
      \line { the mind is filled with grace, }
      \line { and a pledge of future glory is given to us. }
```

```
      \line { Amen. }
    }
    \hspace #1
  }
}
```

O sacrum convivium
in quo Christus sumitur,
recolitur memoria passionis ejus,
mens impletur gratia,
futurae gloriae nobis pignus datur.
Amen.

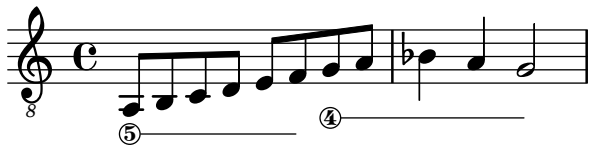
O sacred feast
in which Christ is received,
the memory of His Passion is renewed,
the mind is filled with grace,
and a pledge of future glory is given to us.
Amen.

String number extender lines

Make an extender line for string number indications, showing that a series of notes is supposed to be played all on the same string.

```
stringNumberSpanner =
  #(define-music-function (StringNumber) (string?)
    #{
      \override TextSpanner.style = #'solid
      \override TextSpanner.font-size = #-5
      \override TextSpanner.bound-details.left.stencil-align-dir-y = #CENTER
      \override TextSpanner.bound-details.left.text =
        \markup { \circle \number $StringNumber }
    #})


\relative c {
  \clef "treble_8"
  \stringNumberSpanner "5"
  \textSpannerDown
  a8\startTextSpan
  b c d e f\stopTextSpan
  \stringNumberSpanner "4"
  g\startTextSpan a
  bes4 a g2\stopTextSpan
}
```



Three-sided box

This example shows how to add a markup command to get a three sided box around some text (or other markup).

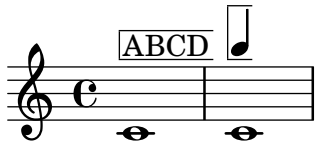
```
% New command to add a three sided box, with sides north, west and south
% Based on the box-stencil command defined in scm/stencil.scm
% Note that ";;" is used to comment a line in Scheme
#(define-public (NWS-box-stencil stencil thickness padding)
```

```
   "Add a box around STENCIL, producing a new stencil."
   (let* ((x-ext (interval-widen (ly:stencil-extent stencil X) padding))
          (y-ext (interval-widen (ly:stencil-extent stencil Y) padding))
          (y-rule (make-filled-box-stencil (cons 0 thickness) y-ext))
          (x-rule (make-filled-box-stencil
                   (interval-widen x-ext thickness) (cons 0 thickness))))
     ;; (set! stencil (ly:stencil-combine-at-edge stencil X 1 y-rule padding))
     (set! stencil (ly:stencil-combine-at-edge stencil X LEFT y-rule padding))
     (set! stencil (ly:stencil-combine-at-edge stencil Y UP x-rule 0.0))
     (set! stencil (ly:stencil-combine-at-edge stencil Y DOWN x-rule 0.0))
     stencil))

% The corresponding markup command, based on the \box command defined
% in scm/define-markup-commands.scm
#(define-markup-command (NWS-box layout props arg) (markup?)
   #:properties ((thickness 0.1) (font-size 0) (box-padding 0.2))
   "Draw a box round @var{arg}.  Looks at @code{thickness},
@code{box-padding} and @code{font-size} properties to determine line
thickness and padding around the markup."
   (let ((pad (* (magstep font-size) box-padding))
         (m (interpret-markup layout props arg)))
     (NWS-box-stencil m thickness pad)))

% Test it:

\relative c' {
  c1^\markup { \NWS-box ABCD }
  c1^\markup { \NWS-box \note {4} #1.0 }
}
```



UTF-8

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

```
%{
You may have to install additional fonts.

Red Hat Fedora

  linux-libertine-fonts (Latin, Cyrillic, Hebrew)
  google-noto-serif-jp-fonts (Japanese)

Debian GNU/Linux, Ubuntu

  fonts-linuxlibertine (Latin, Cyrillic, Hebrew)
  fonts-noto-cjk (Japanese)
```

```
%}

% 'Linux Libertine' fonts also contain Cyrillic and Hebrew glyphs.
\paper {
  #(define fonts
    (set-global-fonts
     #:roman "Linux Libertine O, Noto Serif CJK JP, Noto Serif JP"
   ))
}

bulgarian = \lyricmode {
  Жълтата дюля беше щастлива, че пухът, който цъфна, замръзна като гьон.
}

hebrew = \lyricmode {
           .
}

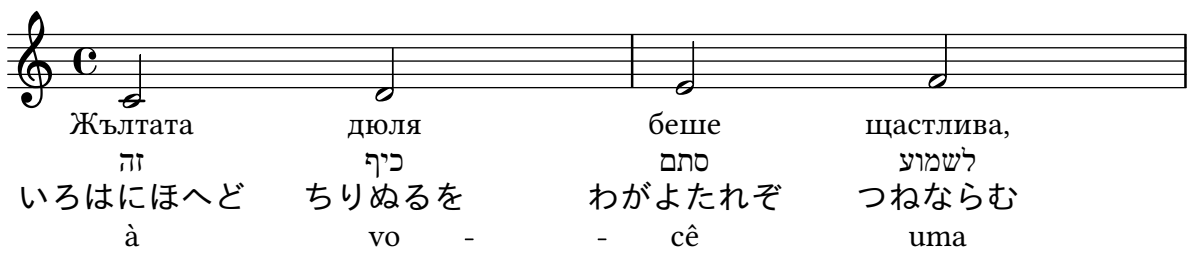
japanese = \lyricmode {
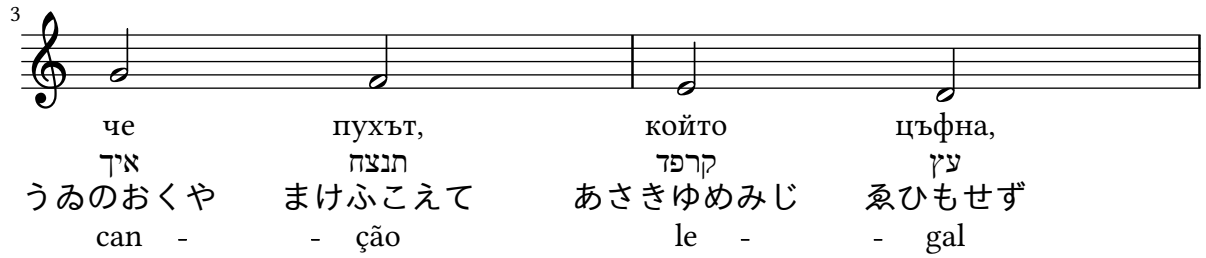



}

% "a nice song for you"
portuguese = \lyricmode {
  à vo -- cê uma can -- ção le -- gal
}

\relative c' {
  c2 d
  e2 f
  g2 f
  e2 d
}
\addlyrics { \bulgarian }
\addlyrics { \hebrew }
\addlyrics { \japanese }
\addlyrics { \portuguese }
```





Modello per gruppo vocale con testo allineato sotto e sopra i righi

Questo modello è fondamentalmente analogo al semplice modello “Complesso vocale”, con l’unica differenza che qui tutti i versi del testo sono posizionati usando `alignAboveContext` e `alignBelowContext`.

```
global = {
  \key c \major
  \time 4/4
}

sopMusic = \relative c'' {
  c4 c c8[( b)] c4
}
sopWords = \lyricmode {
  hi hi hi hi
}

altoMusic = \relative c' {
  e4 f d e
}
altoWords = \lyricmode {
  ha ha ha ha
}
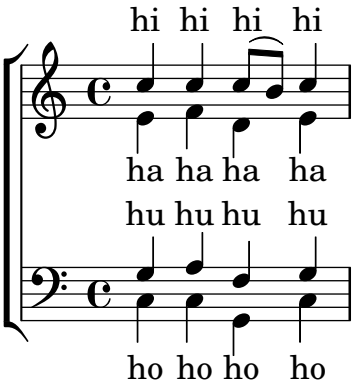
tenorMusic = \relative c' {
  g4 a f g
}
tenorWords = \lyricmode {
  hu hu hu hu
}

bassMusic = \relative c {
  c4 c g c
}
bassWords = \lyricmode {
  ho ho ho ho
}

\score {
  \new ChoirStaff <<
    \new Staff = "women" <<
      \new Voice = "sopranos" { \voiceOne << \global \sopMusic >> }
      \new Voice = "altos" { \voiceTwo << \global \altoMusic >> }
    >>
    \new Lyrics \with { alignAboveContext = #"women" }
```

```
      \lyricsto "sopranos" \sopWords
    \new Lyrics \with { alignBelowContext = #"women" }
      \lyricsto "altos" \altoWords
    % we could remove the line about this with the line below, since
    % we want the alto lyrics to be below the alto Voice anyway.
    % \new Lyrics \lyricsto "altos" \altoWords

    \new Staff = "men" <<
      \clef bass
      \new Voice = "tenors" { \voiceOne << \global \tenorMusic >> }
      \new Voice = "basses" { \voiceTwo << \global \bassMusic >> }
    >>
    \new Lyrics \with { alignAboveContext = #"men" }
      \lyricsto "tenors" \tenorWords
    \new Lyrics \with { alignBelowContext = #"men" }
      \lyricsto "basses" \bassWords
    % again, we could replace the line above this with the line below.
    % \new Lyrics \lyricsto "basses" \bassWords
  >>
}
```
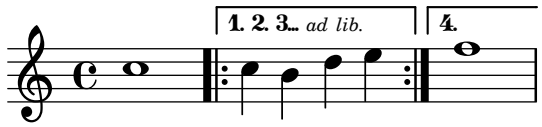


Volta text markup using repeatCommands

Though volte are best specified using `\repeat volta`, the context property `repeatCommands` must be used in cases where the volta text needs more advanced formatting with `\markup`.

Since `repeatCommands` takes a list, the simplest method of including markup is to use an identifier for the text and embed it in the command list using the Scheme syntax `#(list (list 'volta textIdentifier))`. Start- and end-repeat commands can be added as separate list elements:

```
voltaAdLib = \markup { 1. 2. 3... \text \italic { ad lib. } }

\relative c'' {
  c1
  \set Score.repeatCommands = #(list (list 'volta voltaAdLib) 'start-repeat)
  c4 b d e
  \set Score.repeatCommands = #'((volta #f) (volta "4.") end-repeat)
  f1
  \set Score.repeatCommands = #'((volta #f))
}
```


1. 2. 3... ad lib.
4.
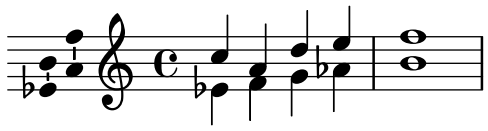
Vocal music

Sezione “Vocal music” in *Guida alla Notazione*

Un ambitus per voce

L’ambitus può essere specificato per voce. In tal caso occorre spostarlo manualmente per evitare collisioni.

```
\new Staff <<
  \new Voice \with {
    \consists "Ambitus_engraver"
  } \relative c'' {
    \override Ambitus.X-offset = #2.0
    \voiceOne
    c4 a d e
    f1
  }
  \new Voice \with {
    \consists "Ambitus_engraver"
  } \relative c' {
    \voiceTwo
    es4 f g as
    b1
  }
>>
```



Adding indicators to staves which get split after a break

This snippet defines the `\splitStaffBarLine`, `convUpStaffBarLine` and `convDownStaffBarLine` commands. These add arrows at a bar line, to denote that several voices sharing a staff will each continue on a staff of their own in the next system, or that voices split in this way recombine.

```
#(define-markup-command (arrow-at-angle layout props angle-deg length fill)
   (number? number? boolean?)
   (let* (
           (PI-OVER-180 (/ (atan 1 1) 34))
           (degrees->radians (lambda (degrees) (* degrees PI-OVER-180)))
           (angle-rad (degrees->radians angle-deg))
           (target-x (* length (cos angle-rad)))
           (target-y (* length (sin angle-rad))))
     (interpret-markup layout props
       (markup
        #:translate (cons (/ target-x 2) (/ target-y 2))
        #:rotate angle-deg
        #:translate (cons (/ length -2) 0)
        #:concat (#:draw-line (cons length 0)
                   #:arrow-head X RIGHT fill)))))
```

```
splitStaffBarLineMarkup = \markup \with-dimensions #'(0 . 0) #'(0 . 0) {
  \combine
  \arrow-at-angle #45 #(sqrt 8) ##t
  \arrow-at-angle #-45 #(sqrt 8) ##t
}

splitStaffBarLine = {
  \once \override Staff.BarLine.stencil =
  #(lambda (grob)
     (ly:stencil-combine-at-edge
      (ly:bar-line::print grob)
      X RIGHT
      (grob-interpret-markup grob splitStaffBarLineMarkup)
      0))
  \break
}

convDownStaffBarLine = {
  \once \override Staff.BarLine.stencil =
  #(lambda (grob)
     (ly:stencil-combine-at-edge
      (ly:bar-line::print grob)
      X RIGHT
      (grob-interpret-markup grob #{
        \markup\with-dimensions #'(0 . 0) #'(0 . 0) {
          \translate #'(0 . -.13)\arrow-at-angle #-45 #(sqrt 8) ##t
        }#})
      0))
  \break
}

convUpStaffBarLine = {
  \once \override Staff.BarLine.stencil =
  #(lambda (grob)
     (ly:stencil-combine-at-edge
      (ly:bar-line::print grob)
      X RIGHT
      (grob-interpret-markup grob #{
        \markup\with-dimensions #'(0 . 0) #'(0 . 0) {
          \translate #'(0 . .14)\arrow-at-angle #45 #(sqrt 8) ##t
        }#})
      0))
  \break
}


\paper {
  ragged-right = ##t
  short-indent = 10\mm
}
```

```
separateSopranos = {
  \set Staff.instrumentName = "AI AII"
  \set Staff.shortInstrumentName = "AI AII"
  \splitStaffBarLine
  \change Staff = "up"
}
convSopranos = {
  \convDownStaffBarLine
  \change Staff = "shared"
  \set Staff.instrumentName = "S A"
  \set Staff.shortInstrumentName = "S A"
}

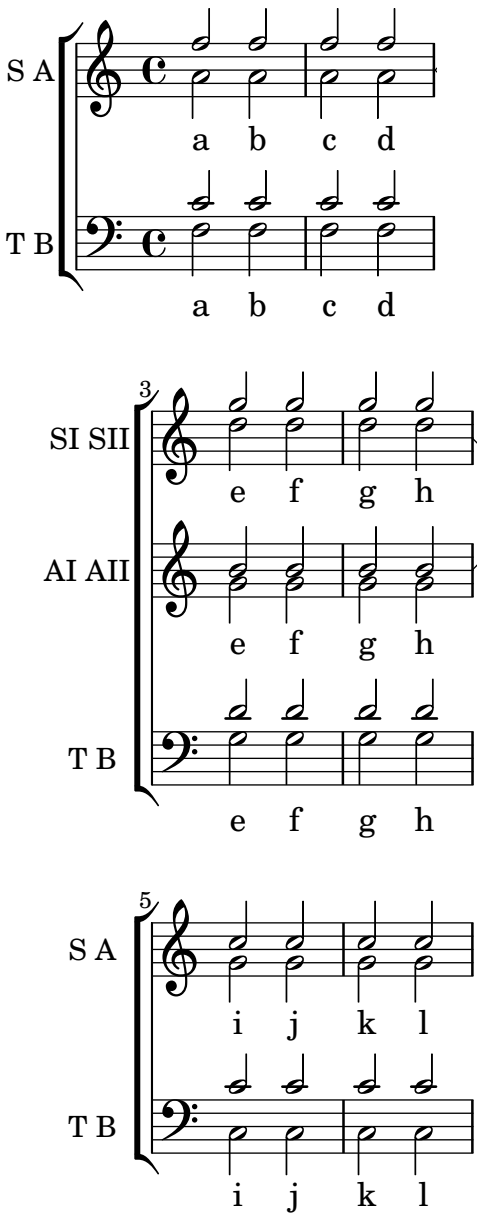
sI = {
  \voiceOne
  \repeat unfold 4 f''2
  \separateSopranos
  \repeat unfold 4 g''2
  \convSopranos
  \repeat unfold 4 c''2
}
sII = {
  s1*2
  \voiceTwo
  \change Staff = "up"
  \repeat unfold 4 d''2
}
aI = {
  \voiceTwo
  \repeat unfold 4 a'2
  \voiceOne
  \repeat unfold 4 b'2
  \convUpStaffBarLine
  \voiceTwo
  \repeat unfold 4 g'2
}
aII = {
  s1*2
  \voiceTwo
  \repeat unfold 4 g'2
}
ten = {
  \voiceOne
  \repeat unfold 4 c'2
  \repeat unfold 4 d'2
  \repeat unfold 4 c'2
}
bas = {
  \voiceTwo
  \repeat unfold 4 f2
  \repeat unfold 4 g2
  \repeat unfold 4 c2
```

```
}

\score {
  <<
    \new ChoirStaff <<
      \new Staff = up \with {
        instrumentName = "SI SII"
        shortInstrumentName = "SI SII"
      } {
        s1*4
      }

      \new Staff = shared \with {
        instrumentName = "S A"
        shortInstrumentName = "S A"
      } <<
        \new Voice = sopI \sI
        \new Voice = sopII \sII
        \new Voice = altI \aI
        \new Voice = altII \aII
      >>
      \new Lyrics \with {
        alignBelowContext = up
      }
      \lyricsto sopII { e f g h }
      \new Lyrics \lyricsto altI { a b c d e f g h i j k l }

      \new Staff = men \with {
        instrumentName = "T B"
        shortInstrumentName = "T B"
      } <<
        \clef F
        \new Voice = ten \ten
        \new Voice = bas \bas
      >>
      \new Lyrics \lyricsto bas { a b c d e f g h i j k l }
    >>
  >>
  \layout {
    \context {
      \Staff \RemoveEmptyStaves
      \override VerticalAxisGroup.remove-first = ##t
    }
  }
}
```



Aggiungere citazioni orchestrali a una partitura vocale

L'esempio seguente mostra un approccio per simplificare l'aggiunta di citazioni orchestrali a una riduzione per pianoforte di una partitura vocale. La funzione musicale `\cueWhile` prende quattro argomenti: la musica da cui prendere la citazione, come è definita da `\addQuote`, il nome da inserire prima delle notine, poi o `#UP` o `#DOWN` per specificare o `\voiceOne` col nome sopra il rigo o `\voiceTwo` col nome sotto il rigo, e infine la musica per pianoforte che deve apparire in parallelo alle notine. Il nome dello strumento citato è posto a sinistra delle notine. Molti passaggi possono essere citati, ma non possono sovrapporsi l'un l'altro nel tempo.

```
cueWhile =
#(define-music-function
   (instrument name dir music)
   (string? string? ly:dir? ly:music?)
   #{
     \cueDuring $instrument #dir {
       \once \override TextScript.self-alignment-X = #RIGHT
       \once \override TextScript.direction = $dir
       <>-\markup { \tiny #name }
       $music
```
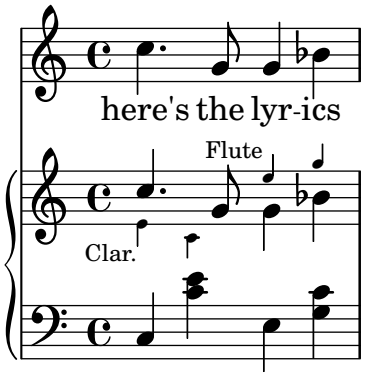
```
     }
   #})

flute = \relative c'' {
  \transposition c'
  s4 s4 e g
}
\addQuote "flute" { \flute }

clarinet = \relative c' {
  \transposition bes
  fis4 d d c
}
\addQuote "clarinet" { \clarinet }

singer = \relative c'' { c4. g8 g4 bes4 }
words = \lyricmode { here's the lyr -- ics }

pianoRH = \relative c'' {
  \transposition c'
  \cueWhile "clarinet" "Clar." #DOWN { c4. g8 }
  \cueWhile "flute" "Flute" #UP { g4 bes4 }
}
pianoLH = \relative c { c4 <c' e> e, <g c> }

\score {
  <<
    \new Staff {
      \new Voice = "singer" {
        \singer
      }
    }
    \new Lyrics {
      \lyricsto "singer"
      \words
    }
    \new PianoStaff <<
      \new Staff {
        \new Voice {
          \pianoRH
        }
      }
      \new Staff {
        \clef "bass"
        \pianoLH
      }
    >>
  >>
}
```
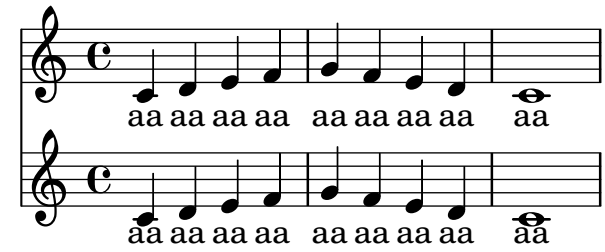


Adjusting lyrics vertical spacing

This snippet shows how to bring the lyrics line closer to the staff.

```
% Default layout:
<<
  \new Staff \new Voice = melody \relative c' {
    c4 d e f
    g4 f e d
    c1
  }
  \new Lyrics \lyricsto melody { aa aa aa aa aa aa aa aa aa }

  \new Staff {
    \new Voice = melody \relative c' {
      c4 d e f
      g4 f e d
      c1
    }
  }
  % Reducing the minimum space below the staff and above the lyrics:
  \new Lyrics \with {
    \override VerticalAxisGroup.nonstaff-relatedstaff-spacing =
      #'((basic-distance . 1))
  }
  \lyricsto melody { aa aa aa aa aa aa aa aa aa }
>>
```
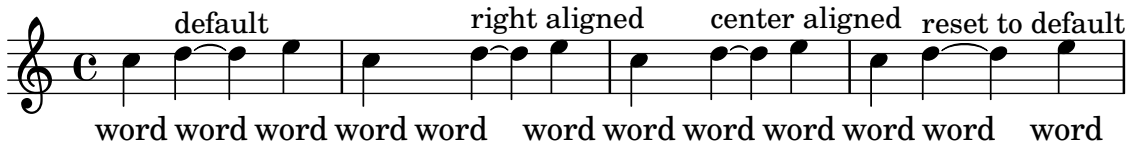


Aligning syllables with melisma

By default, lyrics syllables that start a melisma are left aligned on their note. The alignment can be altered using the `lyricMelismaAlignment` property.

```
\score {
  <<
    \new Staff {
      \relative c''
```
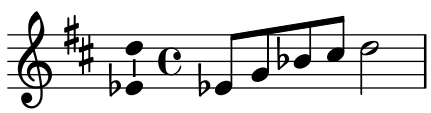
```
      \new Voice = "vocal" {
        c d~^\markup default  d e
        c d~^\markup "right aligned" d e
        c d~^\markup "center aligned" d e
        c d~^\markup "reset to default" d e
      }
    }
    \new Lyrics \lyricsto "vocal" {
      word word word
      \set lyricMelismaAlignment = #RIGHT
      word word word
      \set lyricMelismaAlignment = #CENTER
      word word word
      \unset lyricMelismaAlignment
      word word word
    }
  >>
}
```



Ambitus after key signature

By default, ambitus are positioned at the left of the clef. The `\ambitusAfter` function allows for changing this placement. Syntax is `\ambitusAfter` *`grob-interface`* (see Sezione "Graphical Object Interfaces" in *Guida al Funzionamento Interno* for a list of possible values for *`grob-interface`*). A common use case is printing the ambitus between key signature and time signature.

```
\new Staff \with {
  \consists Ambitus_engraver
} \relative {
  \ambitusAfter key-signature
  \key d \major
  es'8 g bes cis d2
}
```
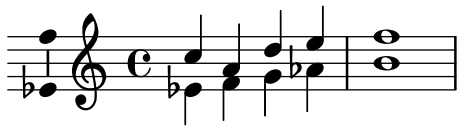


Ambitus su più voci

Se si aggiunge l'incisore `Ambitus_engraver` al contesto `Staff` viene creato un solo ambitus per il rigo, anche nel caso di righi che hanno più voci.

```
\new Staff \with {
  \consists "Ambitus_engraver"
  }
<<
  \new Voice \relative c'' {
```

```
    \voiceOne
    c4 a d e
    f1
  }
  \new Voice \relative c' {
    \voiceTwo
    es4 f g as
    b1
  }
>>
```
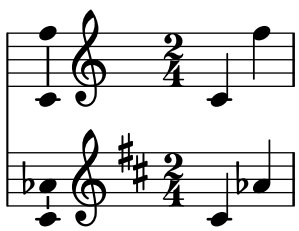


Ambitus

Ambitus indicate pitch ranges for voices.

Accidentals only show up if they are not part of the key signature. `AmbitusNoteHead` grobs also have ledger lines.

```
\layout {
  \context {
    \Voice
    \consists "Ambitus_engraver"
  }
}

<<
  \new Staff {
    \relative c' {
      \time 2/4
      c4 f'
    }
  }
  \new Staff {
    \relative c' {
      \time  2/4
      \key d \major
      cis4 as'
    }
  }
>>
```



Modello per notazione antica – trascrizione moderna di musica gregoriana
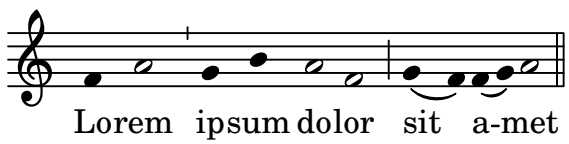
Questo esempio mostra come realizzare una trascrizione moderna di musica gregoriana. La musica gregoriana non presenta la suddivisione in misure né gambi; impiega soltanto le teste della minima e della semiminima, e dei segni appositi che indicano pause di diversa lunghezza.

```
\include "gregorian.ly"

chant = \relative c' {
  \set Score.timing = ##f
  f4 a2 \divisioMinima
  g4 b a2 f2 \divisioMaior
  g4( f) f( g) a2 \finalis
}

verba = \lyricmode {
  Lo -- rem ip -- sum do -- lor sit a -- met
}

\score {
  \new Staff <<
    \new Voice = "melody" \chant
    \new Lyrics = "one" \lyricsto melody \verba
  >>
  \layout {
    \context {
      \Staff
      \remove "Time_signature_engraver"
      \remove "Bar_engraver"
      \hide Stem
    }
    \context {
      \Voice
      \override Stem.length = #0
    }
    \context {
      \Score
      barAlways = ##t
    }
  }
}
```



Modello per salmo anglicano

Questo modello presenta un modo per impostare un salmo anglicano. Mostra anche come le strofe possano essere aggiunte come testo separato al di sotto della musica. Le due strofe sono scritte con stili diversi per illustrare le varie possibilità.

```
SopranoMusic = \relative g' {
```

```
  g1 | c2 b | a1 | \bar "||"
  a1 | d2 c | c b | c1 | \bar "||"
}

AltoMusic = \relative c' {
  e1 | g2 g | f1 |
  f1 | f2 e | d d | e1 |
}

TenorMusic = \relative a {
  c1 | c2 c | c1 |
  d1 | g,2 g | g g | g1 |
}

BassMusic =  \relative c {
  c1 | e2 e | f1 |
  d1 | b2 c | g' g | c,1 |
}

global = {
  \time 2/2
}

dot = \markup {
  \raise #0.7 \musicglyph "dots.dot"
}

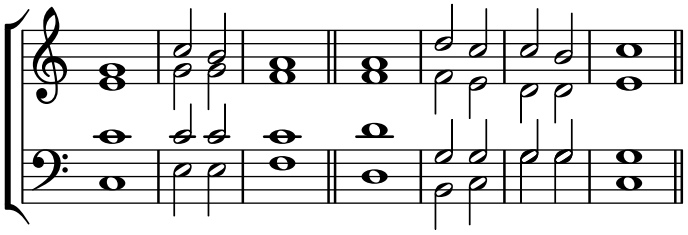
tick = \markup {
  \raise #1 \fontsize #-5 \musicglyph "scripts.rvarcomma"
}

% Use markup to center the chant on the page
\markup {
  \fill-line {
    \score {  % centered
      <<
        \new ChoirStaff <<
          \new Staff <<
            \global
            \clef "treble"
            \new Voice = "Soprano" <<
              \voiceOne
              \SopranoMusic
            >>
            \new Voice = "Alto" <<
              \voiceTwo
              \AltoMusic
            >>
          >>
          \new Staff <<
            \clef "bass"
            \global
```

```
            \new Voice = "Tenor" <<
              \voiceOne
              \TenorMusic
            >>
            \new Voice = "Bass" <<
              \voiceTwo
              \BassMusic
            >>
          >>
        >>
      >>
      \layout {
        \context {
          \Score
          \override SpacingSpanner.base-shortest-duration = #(ly:make-moment 1/2)
        }
        \context {
          \Staff
          \remove "Time_signature_engraver"
        }
      }
    }  % End score
  }
}  % End markup

\markup {
  \fill-line {
    \column {
      \left-align {
        \null \null \null
        \line {
          \fontsize #5 O
          \fontsize #3 come
          let us \bold sing | unto \dot the | Lord : let
        }
        \line {
          us heartily
          \concat { re \bold joice }
          in the | strength of | our
        }
        \line {
          sal | vation.
        }
        \null
        \line {
          \hspace #2.5 8. Today if ye will hear his voice *
        }
        \line {
          \concat { \bold hard en }
          \tick not your \tick hearts : as in the pro-
        }
        \line {
```

```
          vocation * and as in the \bold day of tempt- \tick
        }
        \line {
          -ation \tick in the \tick wilderness.
        }
      }
    }
  }
}
```



O come let us **sing** | unto • the | Lord : let us heartily re**joice** in the | strength of | our sal | vation.

8. Today if ye will hear his voice * **hard**en ' not your ' hearts : as in the provocation * and as in the **day** of tempt- ' -ation ' in the ' wilderness.

Arranging separate lyrics on a single line

Sometimes you may want to put lyrics for different performers on a single line: where there is rapidly alternating text, for example. This snippet shows how this can be done with `\override VerticalAxisGroup.nonstaff-nonstaff-spacing.minimum-distance = ##f`.

```
\layout {
  \context {
    \Lyrics
    \override VerticalAxisGroup.nonstaff-nonstaff-spacing.minimum-distance = ##f
  }
}

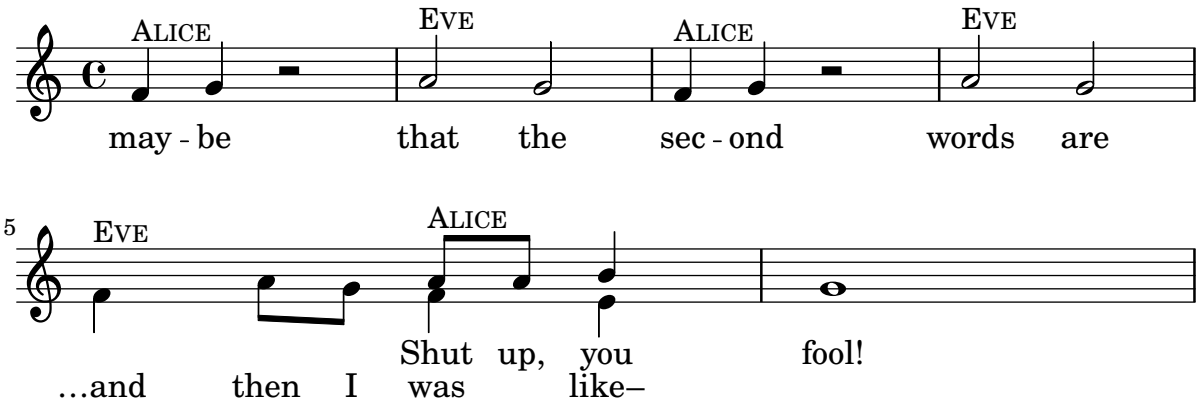
aliceSings = \markup { \smallCaps "Alice" }
eveSings = \markup { \smallCaps "Eve" }

<<
  \new Staff <<
    \new Voice = "alice" {
      f'4^\aliceSings g' r2 |
      s1 |
      f'4^\aliceSings g' r2 |
      s1 | \break
```

```
      % ...

      \voiceOne
      s2 a'8^\aliceSings a' b'4 |
      \oneVoice
      g'1
    }
    \new Voice = "eve" {
      s1 |
      a'2^\eveSings g' |
      s1 |
      a'2^\eveSings g'
      % ...

      \voiceTwo
      f'4^\eveSings a'8 g' f'4 e' |
      \oneVoice
      s1
    }
  >>
  \new Lyrics \lyricsto "alice" {
    may -- be
    sec -- ond
    % ...
    Shut up, you fool!
  }
  \new Lyrics \lyricsto "eve" {
    that the
    words are
    % ...
    ...and then I was like--
  }
>>
```



Changing stanza fonts

Fonts can be changed independently for each stanza, including the font used for printing the stanza number.

```
%{
You may have to install additional fonts.
```
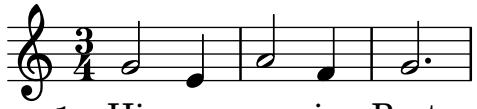
```
Red Hat Fedora

  dejavu-fonts-all

Debian GNU/Linux, Ubuntu

  fonts-dejavu-core
  fonts-dejavu-extra
%}

\relative c'' {
  \time 3/4
  g2 e4
  a2 f4
  g2.
}
\addlyrics {
  \set stanza = #"1. "
  Hi, my name is Bert.
}
\addlyrics {
  \override StanzaNumber.font-name = #"DejaVu Sans"
  \set stanza = #"2. "
  \override LyricText.font-family = #'typewriter
  Oh, ché -- ri, je t'aime
}
```



1. Hi, my name is Bert.
2. Oh, ché-ri, je t'aime

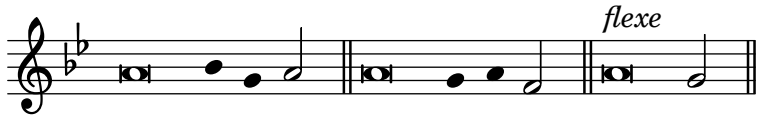
Notazione per canti e salmi

Questa forma di notazione è utilizzata per i salmi, dove i versi non sono sempre della stessa lunghezza.

```
stemOff = \hide Staff.Stem
stemOn  = \undo \stemOff

\score {
  \new Staff \with { \remove "Time_signature_engraver" }
  {
    \key g \minor
    \cadenzaOn
    \stemOff a'\breve bes'4 g'4
    \stemOn a'2 \bar "||"
    \stemOff a'\breve g'4 a'4
    \stemOn f'2 \bar "||"
    \stemOff a'\breve^\markup { \italic flexe }
    \stemOn g'2 \bar "||"
```

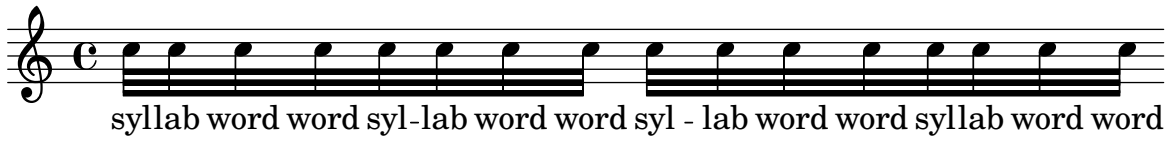
```
  }
}
```



Forcing hyphens to be shown

If LilyPond does not think there is space for a hyphen, it will be omitted. The behaviour can be overridden with the `minimum-distance` property of `LyricHyphen`.

```
\relative c'' {
  c32 c c c
  c32 c c c
  c32 c c c
  c32 c c c
}
\addlyrics {
  syl -- lab word word
  \override LyricHyphen.minimum-distance = #1.0
  syl -- lab word word
  \override LyricHyphen.minimum-distance = #2.0
  syl -- lab word word
  \revert LyricHyphen.minimum-distance
  syl -- lab word word
}
```
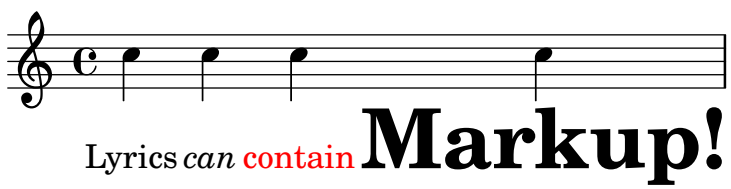


Formattazione delle sillabe del testo vocale

La modalità markup può essere usata per formattare le singole sillabe del testo vocale.

```
mel = \relative c'' { c4 c c c }
lyr = \lyricmode {
  Lyrics \markup { \italic can } \markup { \with-color #red contain }
  \markup { \fontsize #8 \bold Markup! }
}

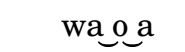
<<
  \new Voice = melody \mel
  \new Lyrics \lyricsto melody \lyr
>>
```



How to put ties between syllables in lyrics

This can be achieved by separating those syllables by tildes.

```
\lyrics {
  wa~o~a
}
```



Modello per inno

Il codice seguente presenta un modo di impostare un inno in cui ogni verso inizia e finisce con una misura parziale. Mostra anche come aggiungere delle strofe come testo separato sotto la musica.

```
Timeline = {
  \time 4/4
  \tempo 4=96
  \partial 2
  s2 | s1 | s2 \breathe s2 | s1 | s2 \bar "||" \break
  s2 | s1 | s2 \breathe s2 | s1 | s2 \bar "||"
}

SopranoMusic = \relative g' {
  g4 g | g g g g | g g g g | g g g g | g2
  g4 g | g g g g | g g g g | g g g g | g2
}

AltoMusic = \relative c' {
  d4 d | d d d d | d d d d | d d d d | d2
  d4 d | d d d d | d d d d | d d d d | d2
}

TenorMusic = \relative a {
  b4 b | b b b b | b b b b | b b b b | b2
  b4 b | b b b b | b b b b | b b b b | b2
}

BassMusic =  \relative g {
  g4 g | g g g g | g g g g | g g g g | g2
  g4 g | g g g g | g g g g | g g g g | g2
}

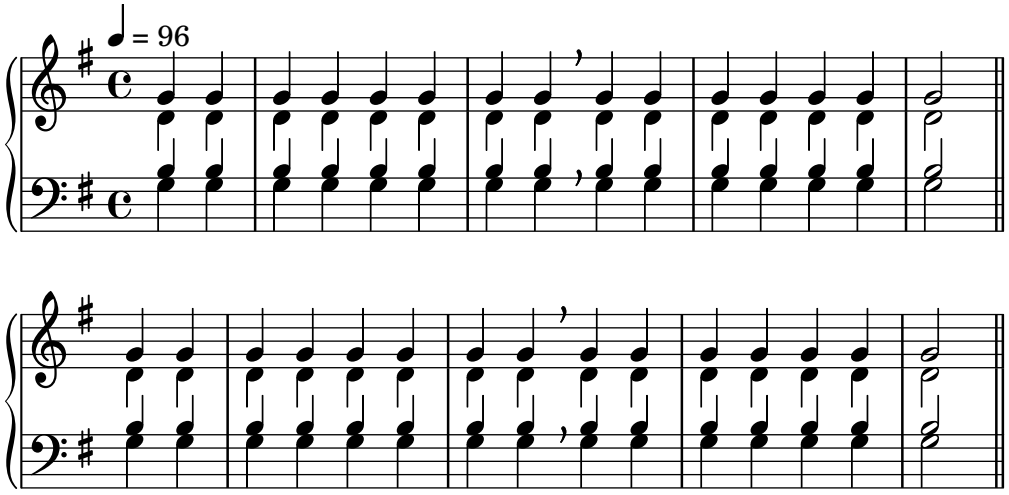
global = {
 \key g \major
}

\score {  % Start score
  <<
    \new PianoStaff <<  % Start pianostaff
      \new Staff <<  % Start Staff = RH
        \global
        \clef "treble"
```

```
        \new Voice = "Soprano" <<  % Start Voice = "Soprano"
          \Timeline
          \voiceOne
          \SopranoMusic
        >>  % End Voice = "Soprano"
        \new Voice = "Alto" <<  % Start Voice = "Alto"
          \Timeline
          \voiceTwo
          \AltoMusic
        >>  % End Voice = "Alto"
      >>  % End Staff = RH
      \new Staff <<  % Start Staff = LH
        \global
        \clef "bass"
        \new Voice = "Tenor" <<  % Start Voice = "Tenor"
          \Timeline
          \voiceOne
          \TenorMusic
        >>  % End Voice = "Tenor"
        \new Voice = "Bass" <<  % Start Voice = "Bass"
          \Timeline
          \voiceTwo
          \BassMusic
        >>  % End Voice = "Bass"
      >>  % End Staff = LH
    >>  % End pianostaff
  >>
}  % End score

\markup {
  \fill-line {
    ""
    {
      \column {
        \left-align {
          "This is line one of the first verse"
          "This is line two of the same"
          "And here's line three of the first verse"
          "And the last line of the same"
        }
      }
    }
    ""
  }
}

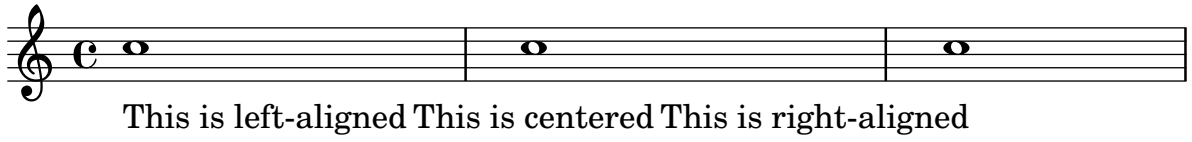
\paper {  % Start paper block
  indent = 0     % don't indent first system
  line-width = 130   % shorten line length to suit music
}  % End paper block
```



Allineamento del testo vocale

L'allineamento orizzontale del testo vocale si imposta attraverso la proprietà `self-alignment-X` dell'oggetto `LyricText`. `#-1` è sinistra, `#0` è centro e `#1` è destra; si possono usare anche `#LEFT`, `#CENTER` e `#RIGHT`.

```
\layout { ragged-right = ##f }
\relative c'' {
  c1
  c1
  c1
}
\addlyrics {
  \once \override LyricText.self-alignment-X = #LEFT
  "This is left-aligned"
  \once \override LyricText.self-alignment-X = #CENTER
  "This is centered"
  \once \override LyricText.self-alignment-X = #1
  "This is right-aligned"
}
```



Marking notes of spoken parts with a cross on the stem (Sprechstimme)

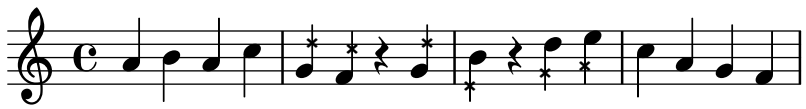
This example shows how to put crosses on stems. Mark the beginning of a spoken section with the `\speakOn` keyword, and end it with the `\speakOff` keyword.

```
speakOn = {
  \override Stem.stencil =
    #(lambda (grob)
       (let* ((x-parent (ly:grob-parent grob X))
```

```
             (is-rest? (ly:grob? (ly:grob-object x-parent 'rest))))
        (if is-rest?
            empty-stencil
            (ly:stencil-combine-at-edge
             (ly:stem::print grob)
             Y
             (- (ly:grob-property grob 'direction))
             (grob-interpret-markup grob
                                    (markup #:center-align #:fontsize -4
                                            #:musicglyph "noteheads.s2cross"))
             -2.3))))
}

speakOff = {
  \revert Stem.stencil
  \revert Flag.stencil
}

\score {
  \new Staff {
    \relative c'' {
      a4 b a c
      \speakOn
      g4 f r g
      b4 r d e
      \speakOff
      c4 a g f
    }
  }
}
```



Ottenere la spaziatura del testo della vecchia versione 2.12

Il motore di spaziatura verticale è cambiato a partire dalla versione 2.14. Ciò può far sì che il testo vocale abbia un posizionamento diverso.

È possibile impostare delle proprietà dei contesti `Lyric` e `Staff` che facciano sì che il motore di spaziatura si comporti come nella versione 2.12.

```
global = {
  \key d \major
  \time 3/4
}

sopMusic = \relative c' {
  % VERSE ONE
  fis4 fis fis | \break
  fis4. e8 e4
}
```

```
altoMusic = \relative c' {
  % VERSE ONE
  d4 d d |
  d4. b8 b4 |
}
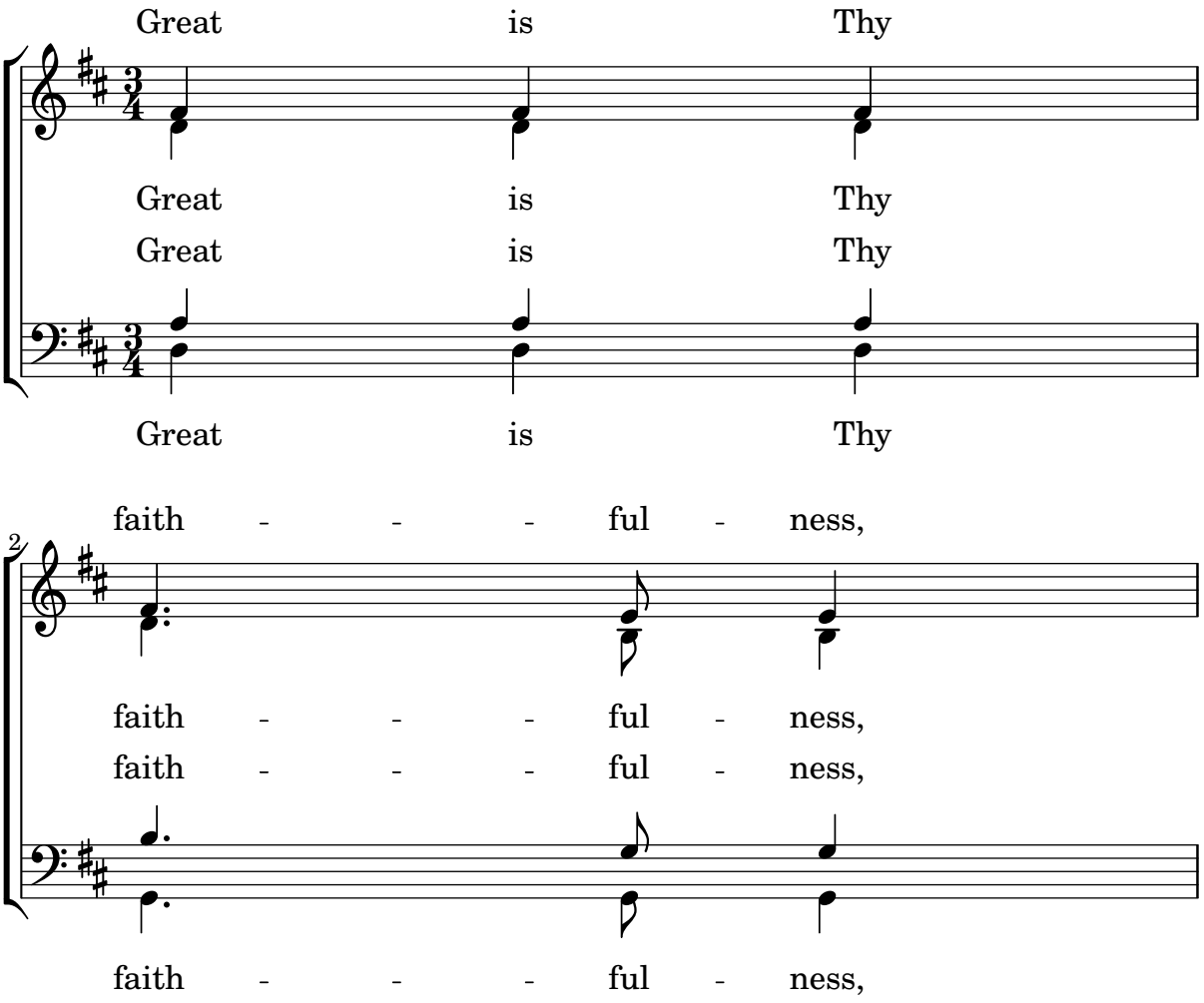
tenorMusic = \relative c' {
  a4 a a |
  b4. g8 g4 |
}

bassMusic = \relative c {
  d4 d d |
  g,4. g8 g4 |
}

words = \lyricmode {
  Great is Thy faith -- ful -- ness,
}

\score {
  \new ChoirStaff <<
    \new Lyrics = sopranos
    \new Staff = women <<
      \new Voice = "sopranos" {
        \voiceOne
        \global \sopMusic
      }
      \new Voice = "altos" {
        \voiceTwo
        \global \altoMusic
      }
    >>
    \new Lyrics = "altos"
    \new Lyrics = "tenors"
    \new Staff = men <<
      \clef bass
      \new Voice = "tenors" {
        \voiceOne
        \global \tenorMusic
      }
      \new Voice = "basses" {
        \voiceTwo  \global \bassMusic
      }
    >>
    \new Lyrics = basses
    \context Lyrics = sopranos \lyricsto sopranos \words
    \context Lyrics = altos \lyricsto altos \words
    \context Lyrics = tenors \lyricsto tenors \words
    \context Lyrics = basses \lyricsto basses \words
  >>
  \layout {
```

```
    \context {
      \Lyrics
      \override VerticalAxisGroup.staff-affinity = ##f
      \override VerticalAxisGroup.staff-staff-spacing =
        #'((basic-distance . 0)
           (minimum-distance . 2)
           (padding . 2))
    }
    \context {
      \Staff
      \override VerticalAxisGroup.staff-staff-spacing =
        #'((basic-distance . 0)
           (minimum-distance . 2)
           (padding . 2))
    }
  }
}
```



Modello per orchestra, coro e pianoforte

Questo modello mostra come usare i contesti annidati `StaffGroup` e `GrandStaff` per creare sottogruppi degli strumenti dello stesso tipo. Mostra anche come usare `\transpose` in modo che le variabili mantengano la musica per gli strumenti traspositori nell'intonazione reale.

```
#(set-global-staff-size 17)
\paper {
  indent = 3.0\cm  % add space for instrumentName
  short-indent = 1.5\cm  % add less space for shortInstrumentName
}

fluteMusic = \relative c' { \key g \major g'1 b }

% Pitches as written on a manuscript for Clarinet in A
% are transposed to concert pitch.

clarinetMusic = \transpose c' a
  \relative c'' { \key bes \major bes1 d }

trumpetMusic = \relative c { \key g \major g''1 b }

% Key signature is often omitted for horns

hornMusic = \transpose c' f
  \relative c { d'1 fis }

percussionMusic = \relative c { \key g \major g1 b }

sopranoMusic = \relative c'' { \key g \major g'1 b }

sopranoLyrics = \lyricmode { Lyr -- ics }

altoIMusic = \relative c' { \key g \major g'1 b }

altoIIMusic = \relative c' { \key g \major g'1 b }

altoILyrics =  \sopranoLyrics

altoIILyrics = \lyricmode { Ah -- ah }

tenorMusic = \relative c' { \clef "treble_8" \key g \major g1 b }

tenorLyrics = \sopranoLyrics

pianoRHMusic = \relative c { \key g \major g''1 b }

pianoLHMusic = \relative c { \clef bass \key g \major g1 b }

violinIMusic = \relative c' { \key g \major g'1 b }

violinIIMusic = \relative c' { \key g \major g'1 b }

violaMusic = \relative c { \clef alto \key g \major g'1 b }

celloMusic = \relative c { \clef bass \key g \major g1 b }

bassMusic = \relative c { \clef "bass_8" \key g \major g,1 b }
```

```
\score {
  <<
    \new StaffGroup = "StaffGroup_woodwinds" <<
      \new Staff = "Staff_flute" \with { instrumentName = "Flute" }
      \fluteMusic

      \new Staff = "Staff_clarinet" \with {
        instrumentName = \markup { \concat { "Clarinet in B" \flat } }
      }

      % Declare that written Middle C in the music
      % to follow sounds a concert B flat, for
      % output using sounded pitches such as MIDI.
      %\transposition bes

      % Print music for a B-flat clarinet
      \transpose bes c' \clarinetMusic
    >>

    \new StaffGroup = "StaffGroup_brass" <<
      \new Staff = "Staff_hornI" \with { instrumentName = "Horn in F" }
       % \transposition f
        \transpose f c' \hornMusic

      \new Staff = "Staff_trumpet" \with { instrumentName = "Trumpet in  C" }
      \trumpetMusic

    >>
    \new RhythmicStaff = "RhythmicStaff_percussion"
    \with { instrumentName = "Percussion" }
    <<
      \percussionMusic
    >>
    \new PianoStaff \with { instrumentName = "Piano" }
    <<
      \new Staff { \pianoRHMusic }
      \new Staff { \pianoLHMusic }
    >>
    \new ChoirStaff = "ChoirStaff_choir" <<
      \new Staff = "Staff_soprano" \with { instrumentName = "Soprano" }
      \new Voice = "soprano"
      \sopranoMusic

      \new Lyrics \lyricsto "soprano" { \sopranoLyrics }
      \new GrandStaff = "GrandStaff_altos"
      \with { \accepts Lyrics } <<
        \new Staff = "Staff_altoI"  \with { instrumentName = "Alto I" }
        \new Voice = "altoI"
        \altoIMusic

        \new Lyrics \lyricsto "altoI" { \altoILyrics }
```

```
        \new Staff = "Staff_altoII" \with { instrumentName = "Alto II" }
        \new Voice = "altoII"
        \altoIIMusic

        \new Lyrics \lyricsto "altoII" { \altoIILyrics }
      >>

      \new Staff = "Staff_tenor" \with { instrumentName = "Tenor" }
        \new Voice = "tenor"
        \tenorMusic

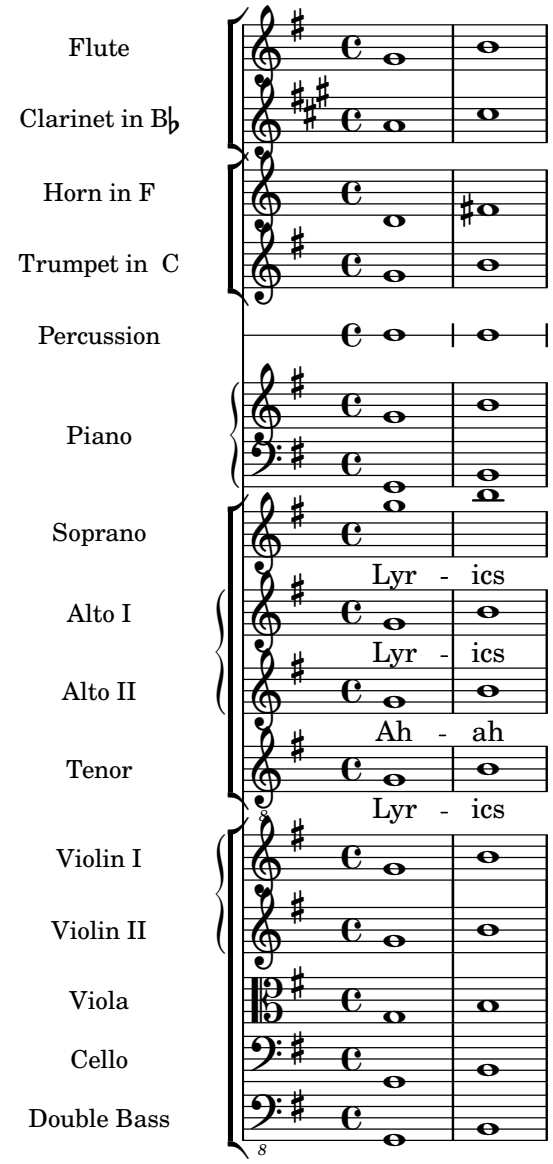
      \new Lyrics \lyricsto "tenor" { \tenorLyrics }
    >>
    \new StaffGroup = "StaffGroup_strings" <<
      \new GrandStaff = "GrandStaff_violins" <<
        \new Staff = "Staff_violinI" \with { instrumentName = "Violin I" }
        \violinIMusic

        \new Staff = "Staff_violinII" \with { instrumentName = "Violin II" }
        \violinIIMusic
      >>

      \new Staff = "Staff_viola" \with { instrumentName = "Viola" }
      \violaMusic

      \new Staff = "Staff_cello" \with { instrumentName = "Cello" }
      \celloMusic

      \new Staff = "Staff_bass" \with { instrumentName = "Double Bass" }
      \bassMusic
    >>
  >>
  \layout { }
}
```



Modello per pianoforte con melodia e testo

Ecco un tipico formato per canzoni: un rigo con linea melodica e testo, e sotto l'accompagnamento per pianoforte.

```
melody = \relative c'' {
  \clef treble
  \key c \major
  \time 4/4

  a b c d
}

text = \lyricmode {
  Aaa Bee Cee Dee
}

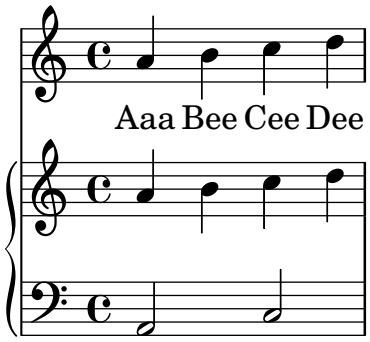
upper = \relative c'' {
  \clef treble
  \key c \major
  \time 4/4
```

```
  a4 b c d
}

lower = \relative c {
  \clef bass
  \key c \major
  \time 4/4

  a2 c
}

\score {
  <<
    \new Voice = "mel" { \autoBeamOff \melody }
    \new Lyrics \lyricsto mel \text
    \new PianoStaff <<
      \new Staff = "upper" \upper
      \new Staff = "lower" \lower
    >>
  >>
  \layout {
    \context { \Staff \RemoveEmptyStaves }
  }
  \midi { }
}
```
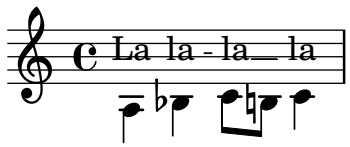


Putting lyrics inside the staff

Lyrics can be moved vertically to place them inside the staff. The lyrics are moved with `\override LyricText.extra-offset = #'(0 . dy)` and there are similar commands to move the extenders and hyphens. The offset needed is established with trial and error.

```
<<
  \new Staff <<
    \new Voice = "voc" \relative c' { \stemDown a bes c8 b c4 }
  >>
  \new Lyrics \with {
    \override LyricText.extra-offset = #'(0 . 8.6)
    \override LyricExtender.extra-offset = #'(0 . 8.6)
    \override LyricHyphen.extra-offset = #'(0 . 8.6)
  } \lyricsto "voc" { La la -- la __ _ la }
```
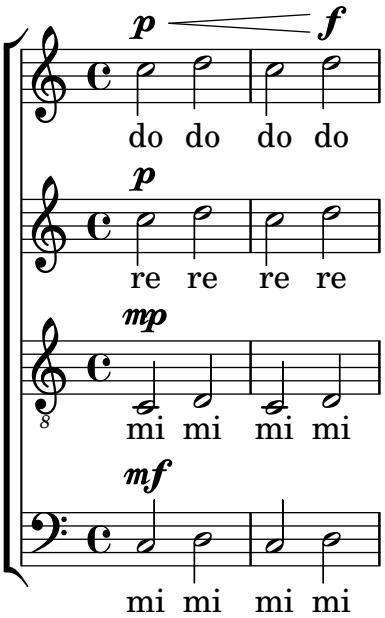
```
>>
```



Modello per coro SATB - quattro righi

Modello per coro SATB (quattro righi)

```
global = {
  \key c \major
  \time 4/4
  \dynamicUp
}
sopranonotes = \relative c'' {
  c2 \p \< d c d \f
}
sopranowords = \lyricmode { do do do do }
altonotes = \relative c'' {
  c2\p d c d
}
altowords = \lyricmode { re re re re }
tenornotes = {
  \clef "G_8"
  c2\mp d c d
}
tenorwords = \lyricmode { mi mi mi mi }
bassnotes = {
  \clef bass
  c2\mf d c d
}
basswords = \lyricmode { mi mi mi mi }

\score {
  \new ChoirStaff <<
    \new Staff <<
      \new Voice = "soprano" <<
        \global
        \sopranonotes
      >>
      \new Lyrics \lyricsto "soprano" \sopranowords
    >>
    \new Staff <<
      \new Voice = "alto" <<
        \global
        \altonotes
      >>
      \new Lyrics \lyricsto "alto" \altowords
    >>
    \new Staff <<
```

```
      \new Voice = "tenor" <<
        \global
        \tenornotes
      >>
      \new Lyrics \lyricsto "tenor" \tenorwords
    >>
    \new Staff <<
      \new Voice = "bass" <<
        \global
        \bassnotes
      >>
      \new Lyrics \lyricsto "bass" \basswords
    >>
  >>
}
```



Modello di rigo singolo con note, testo e accordi

Ecco il modello di un comune spartito semplificato (lead sheet): include linea melodica, testo vocale e sigle degli accordi.

```
melody = \relative c' {
  \clef treble
  \key c \major
  \time 4/4

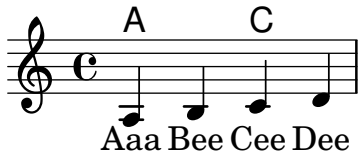
  a4 b c d
}

text = \lyricmode {
  Aaa Bee Cee Dee
}

harmonies = \chordmode {
  a2 c
```

```
}

\score {
  <<
    \new ChordNames {
      \set chordChanges = ##t
      \harmonies
    }
    \new Voice = "one" { \autoBeamOff \melody }
    \new Lyrics \lyricsto "one" \text
  >>
  \layout { }
  \midi { }
}
```



Single staff template with notes, lyrics, chords and frets

Here is a simple lead sheet template with melody, lyrics, chords and fret diagrams.

```
verseI = \lyricmode {
  \set stanza = #"1."
  This is the first verse
}

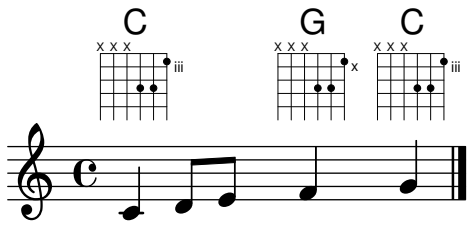
verseII = \lyricmode {
  \set stanza = #"2."
  This is the second verse.
}

theChords = \chordmode {
  % insert chords for chordnames and fretboards here
  c2 g4 c
}

staffMelody = \relative c' {
   \key c \major
   \clef treble
   % Type notes for melody here
   c4 d8 e f4 g
   \bar "|."
}

\score {
  <<
    \context ChordNames { \theChords }
    \context FretBoards { \theChords }
    \new Staff {
      \context Voice = "voiceMelody" { \staffMelody }
```

```
    }
    \new Lyrics = "lyricsI" {
      \lyricsto "voiceMelody" \verseI
    }
    \new Lyrics = "lyricsII" {
      \lyricsto "voiceMelody" \verseII
    }
  >>
  \layout { }
  \midi { }
}
```



1. This is the first verse
2. This is the second verse.

Modello di rigo singolo con note e testo

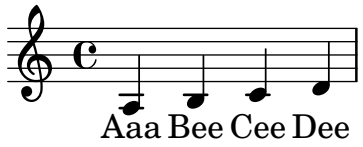
Questo piccolo modello presenta una semplice linea melodica con un testo. Copialo e incollalo, aggiungi le note e le parole. Questo esempio disabilita la disposizione automatica delle travature, come è consuetudine per le parti vocali. Per usare la disposizione automatica delle travature, cambia o commenta la relativa linea di codice.

```
melody = \relative c' {
  \clef treble
  \key c \major
  \time 4/4

  a4 b c d
}

text = \lyricmode {
  Aaa Bee Cee Dee
}

\score{
  <<
    \new Voice = "one" {
      \autoBeamOff
      \melody
    }
    \new Lyrics \lyricsto "one" \text
  >>
  \layout { }
  \midi { }
}
```
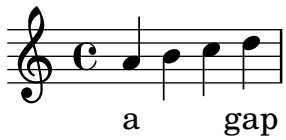


Skips in lyric mode (2)

Although `s` skips cannot be used in `\lyricmode` (it is taken to be a literal "s", not a space), double quotes (`""`) or underscores (`_`) are available.

So for example:

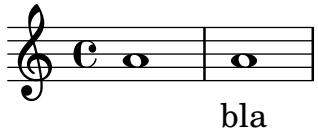
```
<<
  \relative c'' { a4 b c d }
  \new Lyrics \lyricmode { a4 "" _ gap }
>>
```



Skips in lyric mode

The `s` syntax for skips is only available in note mode and chord mode. In other situations, for example, when entering lyrics, using the `\skip` command is recommended.

```
<<
  \relative c'' { a1 | a }
  \new Lyrics \lyricmode { \skip 1 bla1 }
>>
```



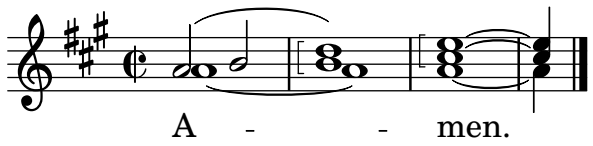
Usare arpeggioBracket per rendere i divisi più visibili

Si può usare `arpeggioBracket` per indicare la divisione delle voci quando non ci sono gambi che forniscano questa informazione. Questo caso è frequente nella musica corale.

```
\include "english.ly"

\score {
  \relative c'' {
    \key a \major
    \time 2/2
    <<
      \new Voice = "upper"
      <<
        { \voiceOne \arpeggioBracket
          a2( b2
          <b d>1\arpeggio)
          <cs e>\arpeggio ~
          <cs e>4
        }
        \addlyrics { \lyricmode { A -- men. } }
      >>
```

```
      \new Voice = "lower"
      { \voiceTwo
        a1 ~
        a
        a ~
        a4 \bar "|."
      }
    >>
  }
  \layout { ragged-right = ##t }
}
```



Usare le etichette per produrre musica mensurale e moderna dallo stesso sorgente

Usando le etichette (tag), è possibile usare la stessa musica per produrre sia la musica mensurale che quella moderna. In questo frammento, viene introdotta la funzione `menrest`, che permette alle pause mensurali di essere posizionate precisamente sul rigo come nell'originale, ma con le pause moderne nella posizione standard. Le etichette vengono usate per produrre diversi tipi di stanghetta alla fine della musica, ma possono essere usate anche quando sono necessarie altre differenze: per esempio se si vogliono usare "pause d'intero" (R1, R\breve, etc.) nella musica moderna, ma pause normali (r1, r\breve, etc.) nella versione mensurale. La conversione di musica mensurale nel suo equivalente moderno viene solitamente chiamata `trascrizione`.

```
menrest = #(define-music-function (note)
  (ly:music?)
#{
    \tag #'mens $(make-music 'RestEvent note)
    \tag #'mod $(make-music 'RestEvent note 'pitch '())
#})

MensStyle = {
  \autoBeamOff
  \override NoteHead.style = #'petrucci
  \override Score.BarNumber.transparent = ##t
  \override Stem.neutral-direction = #up
}

finalis = {
  \once \override BreathingSign.stencil = #ly:breathing-sign::finalis
  \once \override BreathingSign.Y-offset = #0
  \once \override BreathingSign.minimum-X-extent = #'(-1.0 . 0.0)
  \once \override BreathingSign.minimum-Y-extent = #'(-2.5 . 2.5)

  \breathe
}

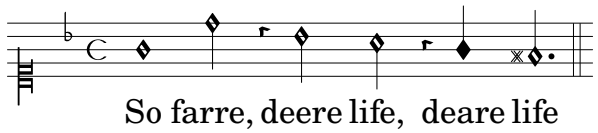
Music = \relative c'' {
```
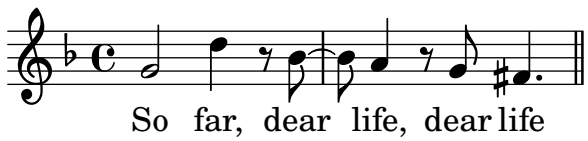
```
  \set Score.tempoHideNote = ##t
  \key f \major
  \time 4/4
  g1 d'2 \menrest bes4 bes2 a2 r4 g4 fis2.
  \tag #'mens { \finalis }
  \tag #'mod { \bar "||" }
}

MenLyr = \lyricmode { So farre, deere life, deare life }
ModLyr = \lyricmode { So far, dear life, dear life }

\score {
  \keepWithTag #'mens {
    <<
      \new MensuralStaff
      {
        \new MensuralVoice = Cantus
          \clef "mensural-c1" \MensStyle \Music
      }
      \new Lyrics \lyricsto Cantus \MenLyr
    >>
  }
}

\score {
  \keepWithTag #'mod {
    \new ChoirStaff <<
      \new Staff
      {
        \new Voice = Sop \with {
          \remove "Note_heads_engraver"
          \consists "Completion_heads_engraver"
          \remove "Rest_engraver"
          \consists "Completion_rest_engraver" }
        {
          \shiftDurations #1 #0 { \autoBeamOff \Music }
        }
      }
      \new Lyrics \lyricsto Sop \ModLyr
    >>
  }
}
```



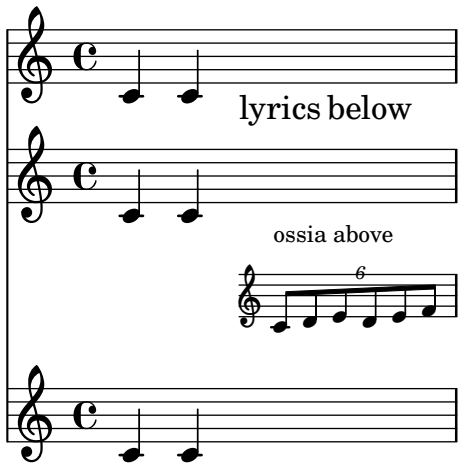


Allineare verticalmente gli ossia e il testo vocale

Questo frammento mostra come usare le proprietà di contesto `alignBelowContext` e `alignAboveContext` per controllare il posizionamento del testo vocale e degli ossia.

```
\paper {
  ragged-right = ##t
}

\relative c' <<
  \new Staff = "1" { c4 c s2 }
  \new Staff = "2" { c4 c s2 }
  \new Staff = "3" { c4 c s2 }
  { \skip 2
    <<
      \lyrics {
        \set alignBelowContext = #"1"
        lyrics4 below
      }
      \new Staff \with {
        alignAboveContext = #"3"
        fontSize = #-2
        \override StaffSymbol.staff-space = #(magstep -2)
        \remove "Time_signature_engraver"
      } {
        \tuplet 6/4 {
          \override TextScript.padding = #3
          c8[^"ossia above" d e d e f]
        }
      }
    >>
  }
>>
```



Vertically centered common lyrics

In a vocal piece where there are several (two, four or more) lines of lyrics and common lyrics for all voices at some point, the common lyrics may be made to appear vertically centered, as shown in the following example:

```
dropLyrics = {
  \override LyricText.extra-offset = #'(0 . -4.5)
  \override LyricHyphen.extra-offset = #'(0 . -4.5)
  \override LyricExtender.extra-offset = #'(0 . -4.5)
  \override StanzaNumber.extra-offset = #'(0 . -4.5)
}

raiseLyrics = {
  \revert LyricText.extra-offset
  \revert LyricHyphen.extra-offset
  \revert LyricExtender.extra-offset
  \revert StanzaNumber.extra-offset
}

skipFour = \repeat unfold 4 { \skip 8 }

lyricsA = \lyricmode {
  The first verse has
  \dropLyrics
  \set stanza = #"   All:"
  the com -- mon __ words
  \raiseLyrics
  used in all four.
}
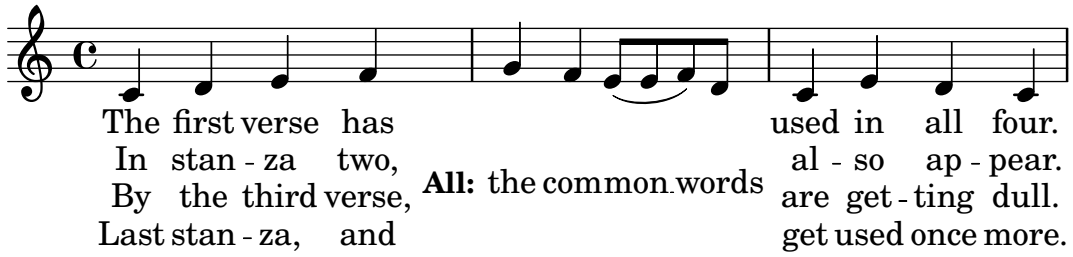
lyricsB = \lyricmode { In stan -- za two,   \skipFour al -- so ap -- pear. }

lyricsC = \lyricmode { By the third verse,  \skipFour are get -- ting dull. }

lyricsD = \lyricmode { Last stan -- za, and \skipFour get used once more. }

melody = \relative c' {
  c4 d e f |
  g f e8( e f) d |
  c4 e d c |
}

\score {
  <<
    \new Voice = m \melody
    \new Lyrics \lyricsto m \lyricsA
    \new Lyrics \lyricsto m \lyricsB
    \new Lyrics \lyricsto m \lyricsC
    \new Lyrics \lyricsto m \lyricsD
  >>
}
```



Modello per gruppo vocale con riduzione per pianoforte automatica

Questo modello aggiunge una riduzione automatica per pianoforte alla tipica partitura vocale SATB illustrata in "Modello per complesso vocale". Si dimostra così uno dei punti di forza di LilyPond – è possibile usare una definizione musicale più di una volta. Qualsiasi modifica venga fatta alle note delle voci (ad esempio, `tenorMusic`) verrà applicata anche alla riduzione per pianoforte.

```
\paper {
  top-system-spacing.basic-distance = #10
  score-system-spacing.basic-distance = #20
  system-system-spacing.basic-distance = #20
  last-bottom-spacing.basic-distance = #10
}

global = {
  \key c \major
  \time 4/4
}

sopMusic = \relative {
  c''4 c c8[( b)] c4
}
sopWords = \lyricmode {
  hi hi hi hi
}

altoMusic = \relative {
  e'4 f d e
}
altoWords =\lyricmode {
  ha ha ha ha
}

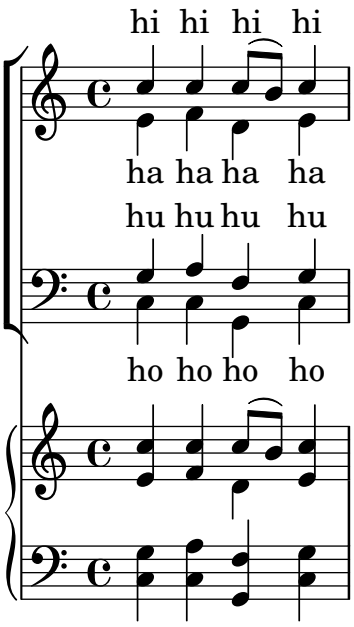
tenorMusic = \relative {
  g4 a f g
}
tenorWords = \lyricmode {
  hu hu hu hu
}

bassMusic = \relative {
  c4 c g c
}
bassWords = \lyricmode {
  ho ho ho ho
```

```
}

\score {
  <<
    \new ChoirStaff <<
      \new Lyrics = "sopranos" \with {
        % This is needed for lyrics above a staff
        \override VerticalAxisGroup.staff-affinity = #DOWN
      }
      \new Staff = "women" <<
        \new Voice = "sopranos" { \voiceOne << \global \sopMusic >> }
        \new Voice = "altos" { \voiceTwo << \global \altoMusic >> }
      >>
      \new Lyrics = "altos"
      \new Lyrics = "tenors" \with {
        % This is needed for lyrics above a staff
        \override VerticalAxisGroup.staff-affinity = #DOWN
      }

      \new Staff = "men" <<
        \clef bass
        \new Voice = "tenors" { \voiceOne << \global \tenorMusic >> }
        \new Voice = "basses" { \voiceTwo << \global \bassMusic >> }
      >>
      \new Lyrics = "basses"
      \context Lyrics = "sopranos" \lyricsto "sopranos" \sopWords
      \context Lyrics = "altos" \lyricsto "altos" \altoWords
      \context Lyrics = "tenors" \lyricsto "tenors" \tenorWords
      \context Lyrics = "basses" \lyricsto "basses" \bassWords
    >>
    \new PianoStaff <<
      \new Staff <<
        \set Staff.printPartCombineTexts = ##f
        \partCombine
        << \global \sopMusic >>
        << \global \altoMusic >>
      >>
      \new Staff <<
        \clef bass
        \set Staff.printPartCombineTexts = ##f
        \partCombine
        << \global \tenorMusic >>
        << \global \bassMusic >>
      >>
    >>
  >>
}
```



Modello per gruppo vocale con testo allineato sotto e sopra i righi

Questo modello è fondamentalmente analogo al semplice modello "Complesso vocale", con l'unica differenza che qui tutti i versi del testo sono posizionati usando `alignAboveContext` e `alignBelowContext`.

```
global = {
  \key c \major
  \time 4/4
}

sopMusic = \relative c'' {
  c4 c c8[( b)] c4
}
sopWords = \lyricmode {
  hi hi hi hi
}

altoMusic = \relative c' {
  e4 f d e
}
altoWords = \lyricmode {
  ha ha ha ha
}
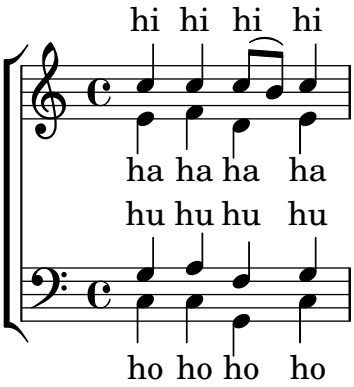
tenorMusic = \relative c' {
  g4 a f g
}
tenorWords = \lyricmode {
  hu hu hu hu
}

bassMusic = \relative c {
  c4 c g c
}
bassWords = \lyricmode {
```

```
  ho ho ho ho
}

\score {
  \new ChoirStaff <<
    \new Staff = "women" <<
      \new Voice = "sopranos" { \voiceOne << \global \sopMusic >> }
      \new Voice = "altos" { \voiceTwo << \global \altoMusic >> }
    >>
    \new Lyrics \with { alignAboveContext = #"women" }
      \lyricsto "sopranos" \sopWords
    \new Lyrics \with { alignBelowContext = #"women" }
      \lyricsto "altos" \altoWords
    % we could remove the line about this with the line below, since
    % we want the alto lyrics to be below the alto Voice anyway.
    % \new Lyrics \lyricsto "altos" \altoWords

    \new Staff = "men" <<
      \clef bass
      \new Voice = "tenors" { \voiceOne << \global \tenorMusic >> }
      \new Voice = "basses" { \voiceTwo << \global \bassMusic >> }
    >>
    \new Lyrics \with { alignAboveContext = #"men" }
      \lyricsto "tenors" \tenorWords
    \new Lyrics \with { alignBelowContext = #"men" }
      \lyricsto "basses" \bassWords
    % again, we could replace the line above this with the line below.
    % \new Lyrics \lyricsto "basses" \bassWords
  >>
}
```



Modello per gruppo vocale con strofa e ritornello

Questo modello crea una partitura che inizia con una sezione solistica e prosegue in un ritornello a due voci. Illustra anche l'uso delle pause spaziatrici all'interno della variabile `\global` per definire i cambi di tempo (e altri elementi comuni a tutte le parti) nel corso di tutta la partitura.

```
global = {
  \key g \major

  % verse
```

```
  \time 3/4
  s2.*2
  \break

  % refrain
  \time 2/4
  s2*2
  \bar "|."
}

SoloNotes = \relative g' {
  \clef "treble"

  % verse
  g4 g g |
  b4 b b |

  % refrain
  R2*2 |
}

SoloLyrics = \lyricmode {
  One two three |
  four five six |
}

SopranoNotes = \relative c'' {
  \clef "treble"

  % verse
  R2.*2 |

  % refrain
  c4 c |
  g4 g |
}

SopranoLyrics = \lyricmode {
  la la |
  la la |
}

BassNotes = \relative c {
  \clef "bass"

  % verse
  R2.*2 |
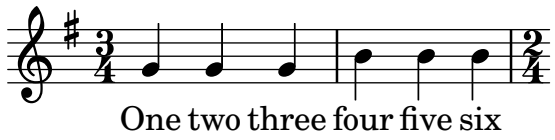
  % refrain
  c4 e |
  d4 d |
}
```
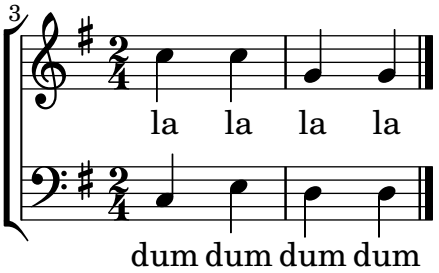
```
BassLyrics = \lyricmode {
  dum dum |
  dum dum |
}

\score {
  <<
    \new Voice = "SoloVoice" << \global \SoloNotes >>
    \new Lyrics \lyricsto "SoloVoice" \SoloLyrics

    \new ChoirStaff <<
      \new Voice = "SopranoVoice" << \global \SopranoNotes >>
      \new Lyrics \lyricsto "SopranoVoice" \SopranoLyrics

      \new Voice = "BassVoice" << \global \BassNotes >>
      \new Lyrics \lyricsto "BassVoice" \BassLyrics
    >>
  >>
  \layout {
    ragged-right = ##t
    \context { \Staff
      % these lines prevent empty staves from being printed
      \RemoveEmptyStaves
      \override VerticalAxisGroup.remove-first = ##t
    }
  }
}
```





Modello per complesso vocale

Ecco una tipica partitura corale a quattro parti, SATB. Se il complesso è più ampio, è spesso comodo scrivere gli elementi comuni in un'unica sezione, che verrà poi inclusa in tutte le parti. Ad esempio, l'indicazione di tempo e l'armatura di chiave sono quasi sempre le stesse per tutte le parti. Come nel modello dell'"Inno", le quattro voci sono ripartite in due soli righi.

```
\paper {
  top-system-spacing.basic-distance = #10
  score-system-spacing.basic-distance = #20
```

```
  system-system-spacing.basic-distance = #20
  last-bottom-spacing.basic-distance = #10
}

global = {
  \key c \major
  \time 4/4
}

sopMusic = \relative {
  c''4 c c8[( b)] c4
}
sopWords = \lyricmode {
  hi hi hi hi
}
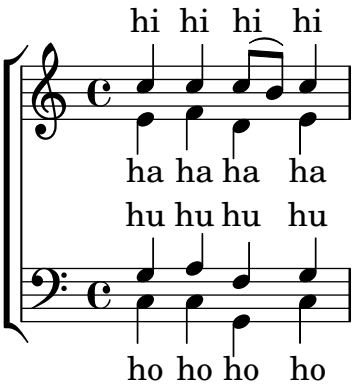
altoMusic = \relative {
  e'4 f d e
}
altoWords = \lyricmode {
  ha ha ha ha
}

tenorMusic = \relative {
  g4 a f g
}
tenorWords = \lyricmode {
  hu hu hu hu
}

bassMusic = \relative {
  c4 c g c
}
bassWords = \lyricmode {
  ho ho ho ho
}

\score {
  \new ChoirStaff <<
    \new Lyrics = "sopranos" \with {
      % this is needed for lyrics above a staff
      \override VerticalAxisGroup.staff-affinity = #DOWN
    }
    \new Staff = "women" <<
      \new Voice = "sopranos" {
        \voiceOne
        << \global \sopMusic >>
      }
      \new Voice = "altos" {
        \voiceTwo
        << \global \altoMusic >>
      }
```

```
    >>
    \new Lyrics = "altos"
    \new Lyrics = "tenors" \with {
      % this is needed for lyrics above a staff
      \override VerticalAxisGroup.staff-affinity = #DOWN
    }
    \new Staff = "men" <<
      \clef bass
      \new Voice = "tenors" {
        \voiceOne
        << \global \tenorMusic >>
      }
      \new Voice = "basses" {
        \voiceTwo << \global \bassMusic >>
      }
    >>
    \new Lyrics = "basses"
    \context Lyrics = "sopranos" \lyricsto "sopranos" \sopWords
    \context Lyrics = "altos" \lyricsto "altos" \altoWords
    \context Lyrics = "tenors" \lyricsto "tenors" \tenorWords
    \context Lyrics = "basses" \lyricsto "basses" \bassWords
  >>
}
```



Chords

Sezione “Chord notation” in *Guida alla Notazione*

Adding a figured bass above or below the notes
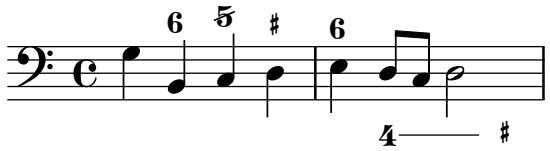
When writing a figured bass, you can place the figures above or below the bass notes, by defining the `BassFigureAlignmentPositioning.direction` property (exclusively in a `Staff` context). Choices are `#UP` (or `#1`), `#CENTER` (or `#0`) and `#DOWN` (or `#-1`).

This property can be changed as many times as you wish. Use `\once \override` if you don't want the override to apply to the whole score.

```
bass = {
  \clef bass
  g4 b, c d
  e d8 c d2
}

continuo = \figuremode {
  <_>4 <6>4 <5/>4
  \override Staff.BassFigureAlignmentPositioning.direction = #UP
  %\bassFigureStaffAlignmentUp
  < _+ >4 <6>
  \set Staff.useBassFigureExtenders = ##t
  \override Staff.BassFigureAlignmentPositioning.direction = #DOWN
  %\bassFigureStaffAlignmentDown
  <4>4. <4>8 <_+>4
}

\score {
  <<
    \new Staff = bassStaff \bass
    \context Staff = bassStaff \continuo
  >>
}
```

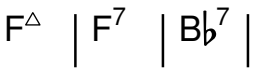


Aggiungere stanghette al contesto ChordNames

Per mostrare le stanghette nel contesto `ChordNames`, aggiungere l'incisore `Bar_engraver`.

```
\new ChordNames \with {
  \override BarLine.bar-extent = #'(-2 . 2)
  \consists "Bar_engraver"
}

\chordmode {
  f1:maj7 f:7 bes:7
}
```



Bar chords notation for Guitar (with Text Spanner)

Here is how to print bar chords (or barre chords) or half-bar chords (just uncomment the appropriate line for to select either one).

The syntax is : `\bbarre #"fret_number" note(s)`

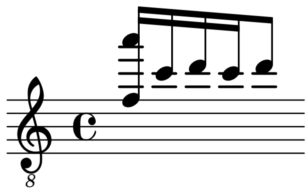
```
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%% %%%%%%  Cut here ----- Start 'bbarred.ly'

%% C with slash --------------------------------
cWithSlash = \markup {
  \combine \roman C \translate #'(0.6 . -0.4) \draw-line #'(0 . 2.0)
}
%% Span -----------------------------------
%% Syntax: \bbarre #"text" { notes } - text = any number of box
bbarre =
#(define-music-function (barre location str music) (string? ly:music?)
   (let ((elts (extract-named-music music 'rhythmic-event)))
     (if (pair? elts)
         (let ((first-element (first elts))
               (last-element (last elts)))
           (set! (ly:music-property first-element 'articulations)
                 (cons (make-music 'TextSpanEvent 'span-direction -1)
                       (ly:music-property first-element 'articulations)))
           (set! (ly:music-property last-element 'articulations)
                 (cons (make-music 'TextSpanEvent 'span-direction 1)
                       (ly:music-property last-element 'articulations))))))
   #{
       \once \override TextSpanner.font-size = #-2
       \once \override TextSpanner.font-shape = #'upright
       \once \override TextSpanner.staff-padding = #3
       \once \override TextSpanner.style = #'line
       \once \override TextSpanner.to-barline = ##f
       \once \override TextSpanner.bound-details =
            #`((left
                (text . ,#{ \markup { \draw-line #'( 0 . -.5) } #})
                (Y . 0)
                (padding . 0.25)
                (attach-dir . -2))
               (right
                (text . ,#{ \markup { \cWithSlash #str } #})
                (Y . 0)
                (padding . 0.25)
                (attach-dir . 2)))
%% uncomment this line for make full barred
      % \once \override TextSpanner.bound-details.left.text = \markup{"B" #str}
      $music
   #})

%% %%%%%%%  Cut here ----- End 'bbarred.ly'
%% Copy and change the last line for full barred. Rename in 'fbarred.ly'
```

```
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

%% Syntaxe: \bbarre #"text" { notes } - text = any number of box
\relative c'{ \clef "G_8" \stemUp \bbarre #"III" { <f a'>16[  c' d c d8] } }
```



Modifica del separatore dell'accordo

L'elemento che separa le diverse parti di un accordo può essere impostato su qualsiasi testo di tipo markup.

```
\chords {
  c:7sus4
  \set chordNameSeparator
    = \markup { \typewriter | }
  c:7sus4
}
```

C7 sus4 C7|sus4

Changing the chord names to German or semi-German notation

The english naming of chords (default) can be changed to german (`\germanChords` replaces B and Bes with H and B) or semi-german (`\semiGermanChords` replaces B and Bes with H and Bb).

```
scm = \chordmode {
  c1/c | cis/cis
  b1/b | bis/bis | bes/bes
}


\layout {
  ragged-right = ##t
  \context {
    \ChordNames
    \consists "Instrument_name_engraver"
  }
}

<<
  \new ChordNames {
    \set instrumentName = #"default"
    \scm
  }
  \new ChordNames {
    \set instrumentName = #"german"
    \germanChords \scm
```

```
  }
  \new ChordNames {
    \set instrumentName = #"semi-german"
    \semiGermanChords \scm
  }
  \new ChordNames {
    \set instrumentName = #"italian"
    \italianChords \scm
  }
  \new ChordNames {
    \set instrumentName = #"french"
    \frenchChords \scm
  }
  \context Voice { \scm }
>>
```



Cambiare la posizione delle alterazioni del basso continuo

Le alterazioni e i segni più possono apparire prima o dopo i numeri, a seconda delle proprietà `figuredBassAlterationDirection` e `figuredBassPlusDirection`.

```
\figures {
  <6\+> <5+> <6 4-> r
  \set figuredBassAlterationDirection = #RIGHT
  <6\+> <5+> <6 4-> r
  \set figuredBassPlusDirection = #RIGHT
  <6\+> <5+> <6 4-> r
  \set figuredBassAlterationDirection = #LEFT
  <6\+> <5+> <6 4-> r
}
```



Eccezioni dei nomi degli accordi

La proprietà `chordNameExceptions` permette di salvare un elenco di notazioni speciali per accordi specifici.

```
% modify maj9 and 6(add9)
% Exception music is chords with markups
chExceptionMusic = {
```

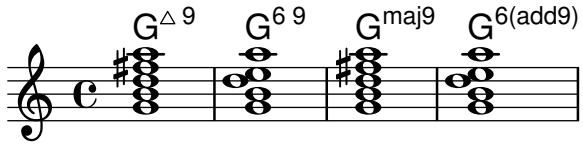
```
  <c e g b d'>1-\markup { \super "maj9" }
  <c e g a d'>1-\markup { \super "6(add9)" }
}

% Convert music to list and prepend to existing exceptions.
chExceptions = #(append
  (sequential-music-to-chord-exceptions chExceptionMusic #t)
  ignatzekExceptions)

theMusic = \chordmode {
  g1:maj9 g1:6.9
  \set chordNameExceptions = #chExceptions
  g1:maj9 g1:6.9
}

\layout {
  ragged-right = ##t
}

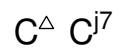
<<
   \new ChordNames \theMusic
   \new Voice \theMusic
>>
```



Nome dell'accordo di settima maggiore

La formattazione dell'accordo di settima maggiore può essere regolata con la proprietà `majorSevenSymbol`.

```
\chords {
  c:7+
  \set majorSevenSymbol = \markup { j7 }
  c:7+
}
```



Chord names alternative

Chord names are generated from a list of pitches. The functions which construct these names can be customised.

Here are shown chords following Ignatzek (pp. 17-18, 1995), used by default since LilyPond 1.7.20, compared with an alternative Jazz chord notation and Harald Banter's (1987) notation. A smaller font is used in the latter case, as these tend to be overly verbose.

This mirrors the mechanism originally used in early LilyPond versions (pre-1.7); not having been properly maintained, however, some features have been lost (mainly chord exception lists) and bugs have been introduced.

```
%%%% Legacy chord naming functions (formerly in scm/chord-generic-names.scm)
```

```
%%%% Copyright (C) 2003--2015 Jan Nieuwenhuizen <janneke@gnu.org>

#(set-global-staff-size 19.7)

#(define-public (banter-chordnames pitches bass inversion context)
  (old_chord->markup 'banter pitches bass inversion context))

#(define-public (jazz-chordnames pitches bass inversion context)
  (old_chord->markup 'jazz pitches bass inversion context))

#(define (define-translator-property symbol type? description)
  (if (not (and (symbol? symbol)
    (procedure? type?)
    (string? description)))
      (ly:error "error in call of define-translator-property"))
  (if (not (equal? (object-property symbol 'translation-doc) #f))
      (ly:error (_ "symbol ~S redefined") symbol))

  (set-object-property! symbol 'translation-type? type?)
  (set-object-property! symbol 'translation-doc description)
  symbol)

#(for-each
  (lambda (x)
    (apply define-translator-property x))
  `((chordNameExceptionsFull ,list? "An alist of full chord
exceptions.  Contains @code{(@var{chord} . @var{markup})} entries.")
    (chordNameExceptionsPartial ,list? "An alist of partial chord
exceptions.  Contains @code{(@var{chord} . (@var{prefix-markup}
@var{suffix-markup}))} entries.")))

#(define-public (old_chord->markup
                 style pitches bass inversion context)
  "Entry point for @code{Chord_name_engraver}.
@var{pitches}, @var{bass}, and @var{inversion} are lily pitches."
  (define (default-note-namer pitch)
    (note-name->markup pitch #f))

  (define (markup-or-empty-markup markup)
    "Return MARKUP if markup, else empty-markup"
    (if (markup? markup) markup empty-markup))

  (define (accidental->markup alteration)
    "Return accidental markup for ALTERATION."
    (if (= alteration 0)
        (make-line-markup (list empty-markup))
        (conditional-kern-before
         (alteration->text-accidental-markup alteration)
         (= alteration FLAT) 0.094725)))

  (define (list-minus a b)
    "Return list of elements in A that are not in B."
```

```
  (lset-difference eq? a b))

(define (markup-join markups sep)
  "Return line-markup of MARKUPS, joining them with markup SEP"
  (if (pair? markups)
      (make-line-markup (list-insert-separator markups sep))
      empty-markup))

(define (conditional-kern-before markup bool amount)
  "Add AMOUNT of space before MARKUP if BOOL is true."
  (if bool
      (make-line-markup
       (list (make-hspace-markup amount)
         markup))
      markup))

(define (step-nr pitch)
  (let* ((pitch-nr (+ (* 7 (ly:pitch-octave pitch))
                      (ly:pitch-notename pitch)))
         (root-nr (+ (* 7 (ly:pitch-octave (car pitches)))
                     (ly:pitch-notename (car pitches)))))
    (+ 1 (- pitch-nr root-nr))))

(define (next-third pitch)
  (ly:pitch-transpose pitch
                      (ly:make-pitch 0 2 (if (or (= (step-nr pitch) 3)
                                                 (= (step-nr pitch) 5))
                                             FLAT 0))))

(define (step-alteration pitch)
  (let* ((diff (ly:pitch-diff (ly:make-pitch 0 0 0) (car pitches)))
         (normalized-pitch (ly:pitch-transpose pitch diff))
         (alteration (ly:pitch-alteration normalized-pitch)))
    (if (= (step-nr pitch) 7) (+ alteration SEMI-TONE) alteration)))

(define (pitch-unalter pitch)
  (let ((alteration (step-alteration pitch)))
    (if (= alteration 0)
        pitch
        (ly:make-pitch (ly:pitch-octave pitch) (ly:pitch-notename pitch)
                       (- (ly:pitch-alteration pitch) alteration)))))

(define (step-even-or-altered? pitch)
  (let ((nr (step-nr pitch)))
    (if (!= (modulo nr 2) 0)
        (!= (step-alteration pitch) 0)
        #t)))

(define (step->markup-plusminus pitch)
  (let ((alt (step-alteration pitch)))
    (make-line-markup
     (list
```

```
       (number->string (step-nr pitch))
       (cond
        ((= alt DOUBLE-FLAT) "--")
        ((= alt FLAT) "-")
        ((= alt NATURAL) "")
        ((= alt SHARP) "+")
        ((= alt DOUBLE-SHARP) "++"))))))

(define (step->markup-accidental pitch)
  (make-line-markup
   (list (accidental->markup (step-alteration pitch))
         (make-simple-markup (number->string (step-nr pitch))))))

(define (step->markup-ignatzek pitch)
  (make-line-markup
   (if (and (= (step-nr pitch) 7)
            (= (step-alteration pitch) 1))
       (list (ly:context-property context 'majorSevenSymbol))
       (list (accidental->markup (step-alteration pitch))
             (make-simple-markup (number->string (step-nr pitch)))))))

;; tja, kennok
(define (make-sub->markup step->markup)
  (lambda (pitch)
    (make-line-markup (list (make-simple-markup "no")
                            (step->markup pitch)))))

(define (step-based-sub->markup step->markup pitch)
  (make-line-markup (list (make-simple-markup "no") (step->markup pitch))))

(define (get-full-list pitch)
  (if (<= (step-nr pitch) (step-nr (last pitches)))
      (cons pitch (get-full-list (next-third pitch)))
      '()))

(define (get-consecutive nr pitches)
  (if (pair? pitches)
      (let* ((pitch-nr (step-nr (car pitches)))
             (next-nr (if (!= (modulo pitch-nr 2) 0) (+ pitch-nr 2) nr)))
        (if (<= pitch-nr nr)
            (cons (car pitches) (get-consecutive next-nr (cdr pitches)))
            '()))
      '()))

;;; FIXME -- exceptions no longer work. -vv

(define (full-match exceptions)
  (if (pair? exceptions)
      (let* ((e (car exceptions))
             (e-pitches (car e)))
        (if (equal? e-pitches pitches)
            e
```

```
            (full-match (cdr exceptions))))
      #f))

(define (partial-match exceptions)
  (if (pair? exceptions)
      (let* ((e (car exceptions))
             (e-pitches (car e)))
        (if (equal? e-pitches (take pitches (length e-pitches)))
            e
            (partial-match (cdr exceptions))))
      #f))

;; FIXME: exceptions don't work anyway.
(if #f (begin
         (write-me "pitches: " pitches)))
(let* ((full-exceptions
        (ly:context-property context 'chordNameExceptionsFull))
       (full-exception (full-match full-exceptions))
       (full-markup (if full-exception (cadr full-exception) '()))
       (partial-exceptions
        (ly:context-property context 'chordNameExceptionsPartial))
       (partial-exception (partial-match partial-exceptions))
       (partial-pitches (if partial-exception (car partial-exception) '()))
       (partial-markup-prefix
        (if partial-exception (markup-or-empty-markup
                               (cadr partial-exception)) empty-markup))
       (partial-markup-suffix
        (if (and partial-exception (pair? (cddr partial-exception)))
            (markup-or-empty-markup (caddr partial-exception)) empty-markup))
       (root (car pitches))
       (full (get-full-list root))
       ;; kludge alert: replace partial matched lower part of all with
       ;; 'normal' pitches from full
       ;; (all pitches)
       (all (append (take full (length partial-pitches))
                    (drop pitches (length partial-pitches))))

       (highest (last all))
       (missing (list-minus full (map pitch-unalter all)))
       (consecutive (get-consecutive 1 all))
       (rest (list-minus all consecutive))
       (altered (filter step-even-or-altered? all))
       (cons-alt (filter step-even-or-altered? consecutive))
       (base (list-minus consecutive altered)))


  (if #f (begin
           (write-me "full:" full)
           ;; (write-me "partial-pitches:" partial-pitches)
           (write-me "full-markup:" full-markup)
           (write-me "partial-markup-perfix:" partial-markup-prefix)
           (write-me "partial-markup-suffix:" partial-markup-suffix)
```

```
          (write-me "all:" all)
          (write-me "altered:" altered)
          (write-me "missing:" missing)
          (write-me "consecutive:" consecutive)
          (write-me "rest:" rest)
          (write-me "base:" base)))

    (case style
      ((banter)
       ;;    root
       ;;    + steps:altered + (highest all -- if not altered)
       ;;    + subs:missing

       (let* ((root->markup default-note-namer)
              (step->markup step->markup-plusminus)
              (sub->markup (lambda (x)
                             (step-based-sub->markup step->markup x)))
              (sep (make-simple-markup "/")))

         (if
          (pair? full-markup)
          (make-line-markup (list (root->markup root) full-markup))

          (make-line-markup
           (list
            (root->markup root)
            partial-markup-prefix
            (make-super-markup
             (markup-join
              (append
               (map step->markup
                    (append altered
                            (if (and (> (step-nr highest) 5)
                                     (not
                                      (step-even-or-altered? highest)))
                                (list highest) '())))
               (list partial-markup-suffix)
               (map sub->markup missing))
              sep)))))))


      ((jazz)
       ;;    root
       ;;    + steps:(highest base) + cons-alt
       ;;    + 'add'
       ;;    + steps:rest
       (let* ((root->markup default-note-namer)
              (step->markup step->markup-ignatzek)
              (sep (make-simple-markup " "))
              (add-prefix (make-simple-markup " add")))

         (if
```

```
          (pair? full-markup)
          (make-line-markup (list (root->markup root) full-markup))

          (make-line-markup
           (list
            (root->markup root)
            partial-markup-prefix
            (make-super-markup
             (make-line-markup
              (list

               ;; kludge alert: omit <= 5
               ;;(markup-join (map step->markup
               ;;                        (cons (last base) cons-alt)) sep)

               ;; This fixes:
               ;;  c     C5       -> C
               ;;  c:2   C5 2     -> C2
               ;;  c:3-  Cm5      -> Cm
               ;;  c:6.9 C5 6add9 -> C6 add 9 (add?)
               ;;  ch = \chords { c c:2 c:3- c:6.9^7 }
               (markup-join (map step->markup
                                 (let ((tb (last base)))
                                   (if (> (step-nr tb) 5)
                                       (cons tb cons-alt)
                                       cons-alt))) sep)

               (if (pair? rest)
                   add-prefix
                   empty-markup)
               (markup-join (map step->markup rest) sep)
               partial-markup-suffix))))))))

      (else empty-markup))))
```

```
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%%%%
%%%% Here begins the actual snippet:

chs = \transpose c' c' {
  <c e g>1
  <c es g>  % m = minor triad
  <c e gis>
  <c es ges> \break
  <c e g bes>
  <c es g bes>
  <c e g b>  % triangle = maj
  <c es ges beses>
  <c es ges b> \break
  <c e gis bes>
  <c es g b>
```

```
  <c e gis b>
  <c es ges bes> \break
  <c e g a>  % 6 = major triad with added sixth
  <c es g a>  % m6 = minor triad with added sixth
  <c e g bes d'>
  <c es g bes d'> \break
  <c es g bes d' f' a' >
  <c es g bes d' f' >
  <c es ges bes d' >
  <c e g bes des' > \break
  <c e g bes dis'>
  <c e g bes d' f'>
  <c e g bes d' fis'>
  <c e g bes d' f' a'> \break
  <c e g bes d' fis' as'>
  <c e gis bes dis'>
  <c e g bes dis' fis'>
  <c e g bes d' f' as'> \break
  <c e g bes des' f' as'>
  <c e g bes d' fis'>
  <c e g b d'>
  <c e g bes d' f' as'> \break
  <c e g bes des' f' as'>
  <c e g bes des' f' a'>
  <c e g b d'>
  <c e g b d' f' a'> \break
  <c e g b d' fis'>
  <c e g bes des' f ' a'>
  <c f g>
  <c f g bes> \break
  <c f g bes d'>
  <c e g d'>  % add9
  <c es g f'>
  <c e g b fis'>  % Lydian
  <c e g bes des' ees' fis' aes'>  % altered chord
}


%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% alternate Jazz notation

efullmusicJazzAlt = {
  <c e gis>1-\markup { "+" }
  <c e g b>-\markup {
    \normal-size-super
    % \override #'(font-family . math) "N"
    \override #'(font-family . math) "M"
  }
  %%c:3.5.7 = \markup { \override #'(font-family . math) "M" }
  %%c:3.5.7 = \markup { \normal-size-super "maj7" }

  <c es ges>-\markup { \super "o" }  % should be $\circ$ ?
```

```
  <c es ges bes>-\markup { \super \combine "o" "/" }
  <c es ges beses>-\markup { \super  "o7" }
}

efullJazzAlt = #(sequential-music-to-chord-exceptions efullmusicJazzAlt #f)

epartialmusicJazzAlt = {
  <c d>1-\markup { \normal-size-super "2" }
  <c es>-\markup { "m" }
  <c f>-\markup { \normal-size-super "sus4" }
  <c g>-\markup { \normal-size-super "5" }
  %% TODO, partial exceptions
  <c es f>-\markup { "m" }-\markup { \normal-size-super "sus4" }
  <c d es>-\markup { "m" }-\markup { \normal-size-super "sus2" }
}

epartialJazzAlt = #(sequential-music-to-chord-exceptions epartialmusicJazzAlt #f)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

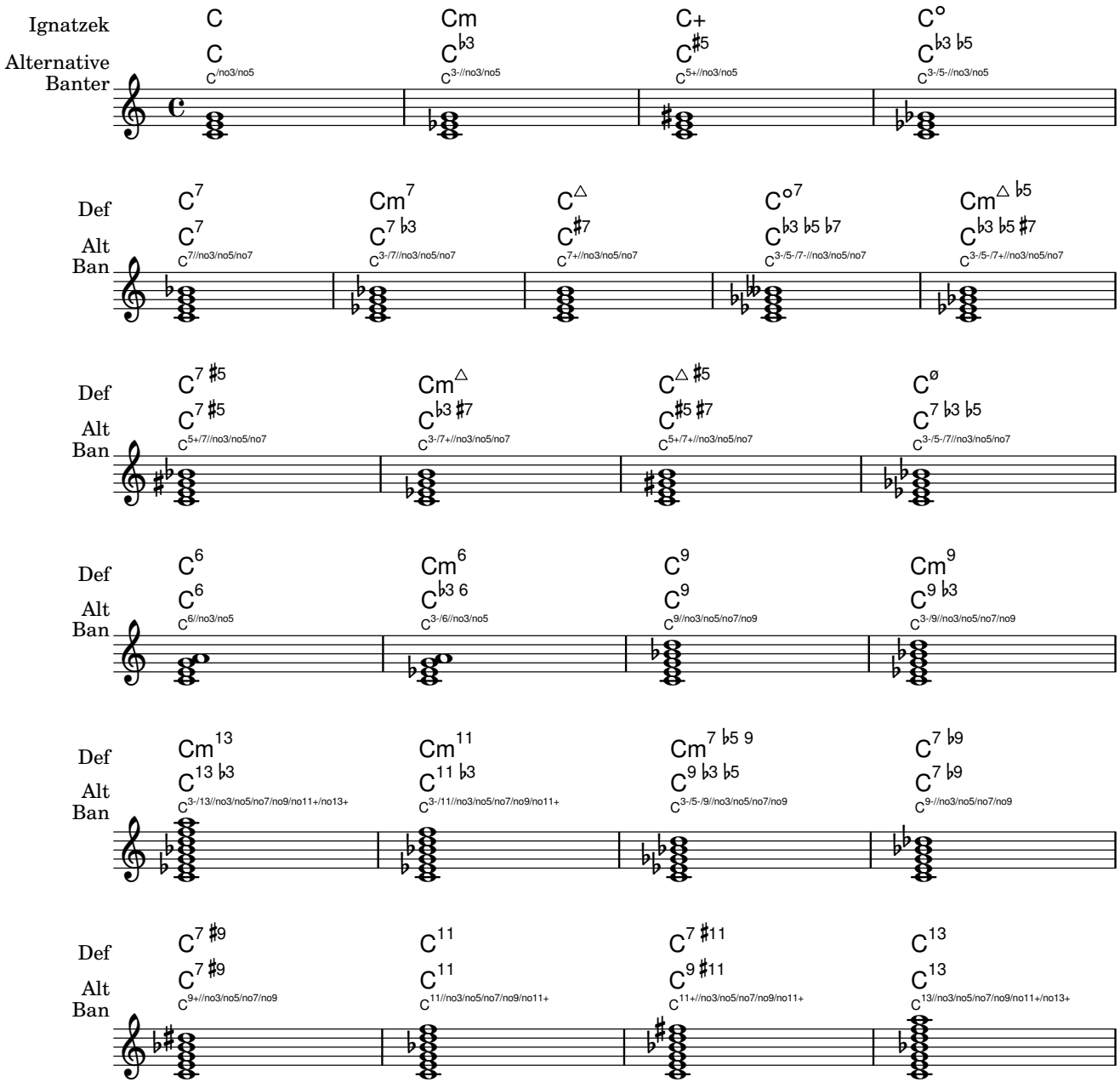
\score {
  <<
    \new ChordNames {
      %% Already set by default:
      %\set chordNameFunction = #ignatzek-chord-names
      \set instrumentName = "Ignatzek"
      \set shortInstrumentName = "Def"
      \chs
    }
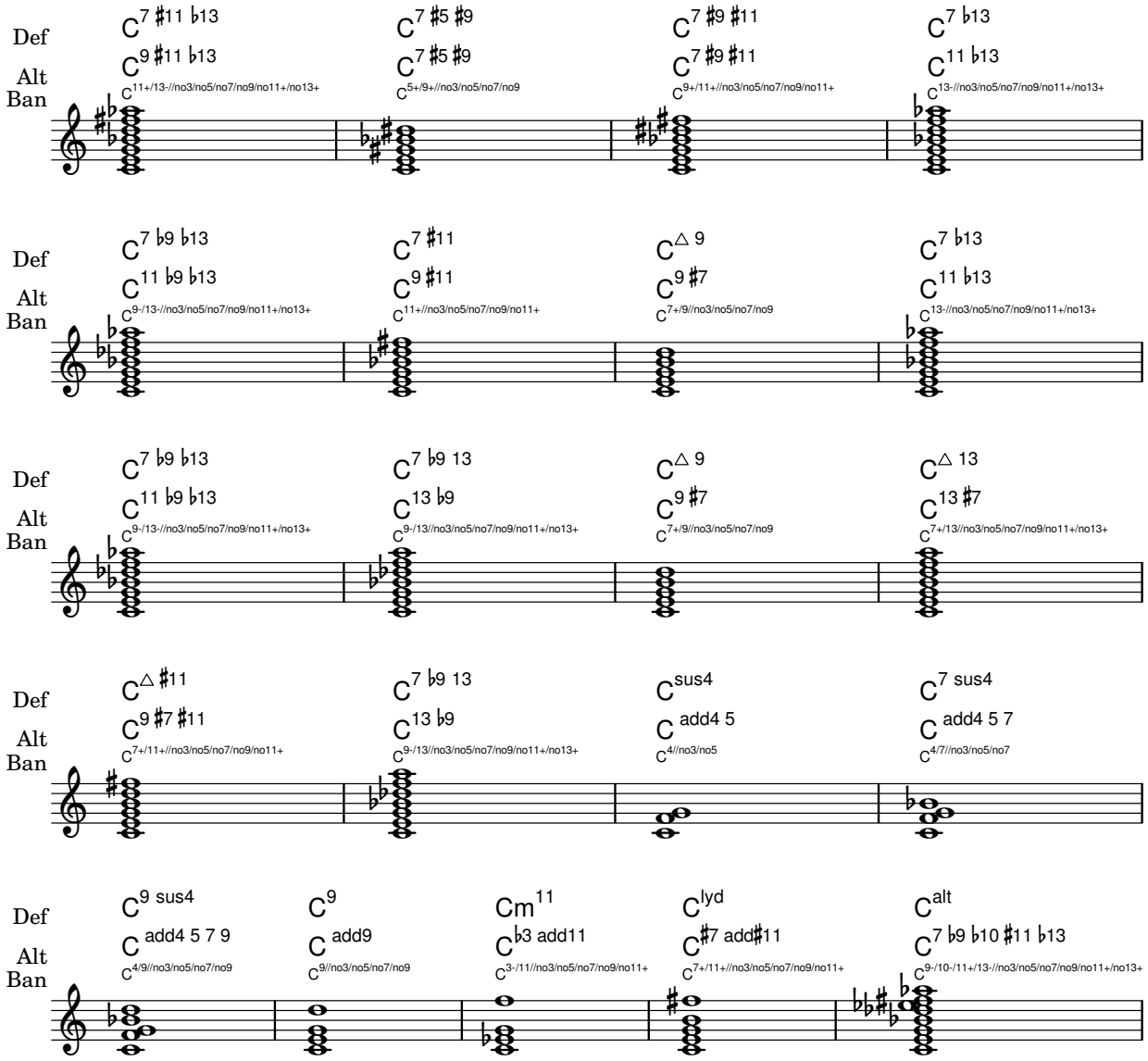
    \new ChordNames {
      \set chordNameFunction = #jazz-chordnames
      \set majorSevenSymbol = \whiteTriangleMarkup
      \set chordNameSeparator = "/"
      \set chordNameExceptionsFull = \efullJazzAlt
      \set chordNameExceptionsPartial = \epartialJazzAlt
      \set instrumentName = "Alternative"
      \set shortInstrumentName = "Alt"
      \chs
    }

    %% This is the Banter (1987) style.  It gives exceedingly
    %% verbose (wide) names, making the output file take up to 4 pages.

    \new ChordNames {
      \set chordNameFunction = #banter-chordnames
      \override ChordName.font-size = #-3
      \set instrumentName = "Banter"
      \set shortInstrumentName = "Ban"
      \chs
    }
```

```
  \new Staff \transpose c c' { \chs }
  >>
  \layout {
    #(layout-set-staff-size 16)
    system-system-spacing.basic-distance = #0
    \context {
      \ChordNames
      \consists "Instrument_name_engraver"
    }
    \context {
      \Score
      \remove "Bar_number_engraver"
    }
  }
}
```





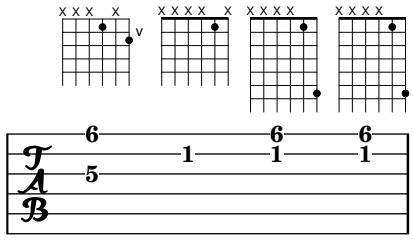
Chords with stretched fingering for FretBoards and TabVoice

Sometimes chords with a stretched fingering are required. If not otherwise specified the context-property `maximumFretStretch` is set to 4, though. Resulting in a warning about "No string for pitch ..." and the note is omitted. You may set `maximumFretStretch` to an appropppriate value or explecitely assign string-numbers to all notes of a chord.

```
%% The code below will print two warnings, which may be omitted by uncommenting:
%#(for-each (lambda (x) (ly:expect-warning "No string for pitch")) (iota 2))

mus = {
  <c' bes'>
  <c'\2 bes'>
  \set maximumFretStretch = 5
  <c' bes'>
  <c'\2 bes'\1>
}

<<
  \new FretBoards \mus
  \new TabVoice \mus
>>
```

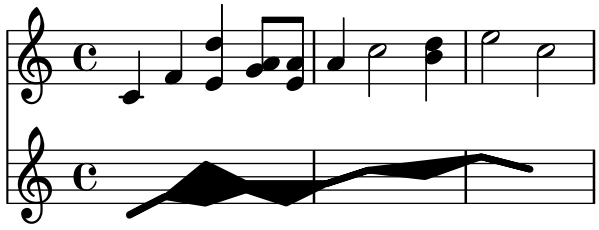


Clusters

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

```
fragment = \relative c' {
  c4 f <e d'>4
  <g a>8 <e a> a4 c2 <d b>4
  e2 c
}

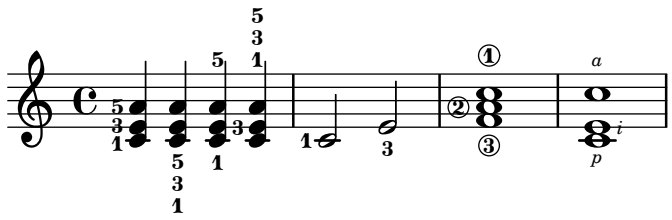
<<
  \new Staff \fragment
  \new Staff \makeClusters \fragment
>>
```



Controllare il posizionamento delle diteggiature di un accordo

Il posizionamento dei numeri della diteggiatura può essere regolato in modo preciso. Perché l'orientamento funzioni, occorre usare il costrutto per gli accordi `<>` anche per le note singole. Si può impostare in modo simile l'orientamento dei numeri di corda e delle diteggiature della mano destra.

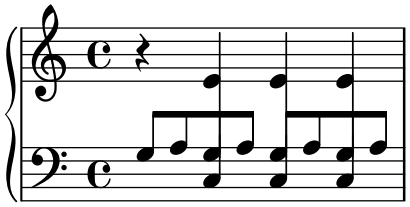
```
\relative c' {
  \set fingeringOrientations = #'(left)
  <c-1 e-3 a-5>4
  \set fingeringOrientations = #'(down)
  <c-1 e-3 a-5>4
  \set fingeringOrientations = #'(down right up)
  <c-1 e-3 a-5>4
  \set fingeringOrientations = #'(up)
  <c-1 e-3 a-5>4
  \set fingeringOrientations = #'(left)
  <c-1>2
  \set fingeringOrientations = #'(down)
  <e-3>2
  \set stringNumberOrientations = #'(up left down)
  <f\3 a\2 c\1>1
  \set strokeFingerOrientations = #'(down right up)
  <c\rightHandFinger #1 e\rightHandFinger #2 c'\rightHandFinger #4 >
}
```



Cross-staff chords - beaming problems workaround

Sometimes it is better to use stems from the upper staff for creating cross-staff chords, because no problems with automatic beam collision avoidance then arise. If the stems from the lower staff were used in the following example, it would be necessary to change the automatic beam collision avoidance settings so that it doesn't detect collisions between staves using `\override Staff.Beam.collision-voice-only = ##t`

```
\new PianoStaff <<
  \new Staff = up
    \relative c' {
      <<
        { r4
          \override Stem.cross-staff = ##t
          \override Stem.length = #19 % this is in half-spaces,
              % so it makes stems 9.5 staffspaces long
          \override Stem.Y-offset = #-6 % stems are normally lengthened
              % upwards, so here we must lower the stem by the amount
              % equal to the lengthening - in this case (19 - 7) / 2
              % (7 is default stem length)
          e e e }
        { s4
          \change Staff = "bottom"
          \override NoteColumn.ignore-collision = ##t
          c, c c
        }
      >>
    }
  \new Staff = bottom
    \relative c' {
      \clef bass
      \voiceOne
      g8 a g a g a g a
    }
>>
```
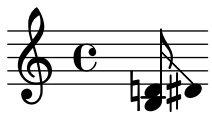


Displaying complex chords

Here is a way to display a chord where the same note is played twice with different accidentals.

```
fixA = {
  \once \override Stem.length = #11
}
```

```
fixB = {
  \once \override NoteHead.X-offset = #1.7
  \once \override Stem.length = #7
  \once \override Stem.rotation = #'(45 0 0)
  \once \override Stem.extra-offset = #'(-0.1 . -0.2)
  \once \override Flag.style = #'no-flag
  \once \override Accidental.extra-offset = #'(4 . -.1)
}


\relative c' {
  << { \fixA <b d!>8 } \\ { \voiceThree \fixB dis } >> s
}
```

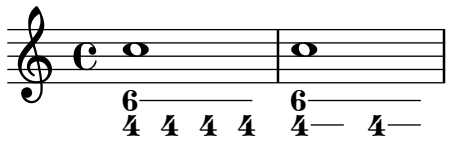


Manually break figured bass extenders for only some numbers

Figured bass often uses extenders to indicate continuation of the corresponding step. However, in this case lilypond is in greedy-mode and uses extenders whenever possible. To break individual extenders, one can simply use a modifier `\!` to a number, which breaks any extender attributed to that number right before the number.

```
bassfigures = \figuremode {
  \set useBassFigureExtenders = ##t
  <6 4>4 <6 4\!> <6 4\!> <6 4\!> |  <6\! 4\!>  <6 4> <6 4\!> <6 4>
}

<<
  \new Staff \relative c'' { c1 c1 }
  \new FiguredBass \bassfigures
>>
```



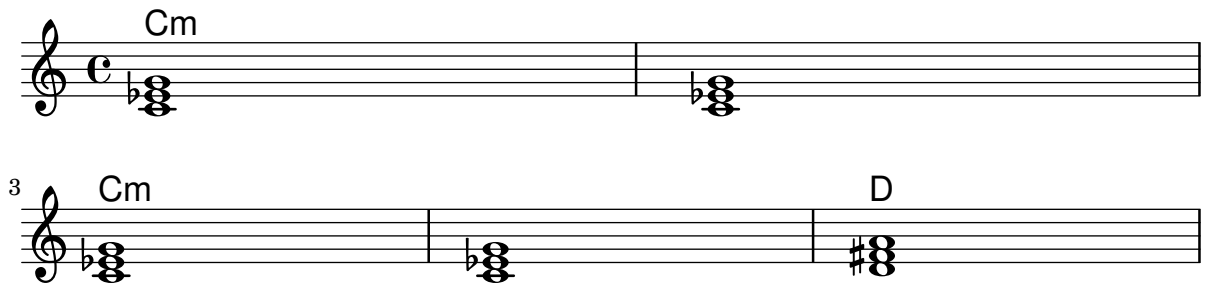
Mostrare gli accordi nei cambi

Per impostazione predefinita, ogni accordo inserito viene visualizzato; tale comportamento può essere modificato in modo che i nomi degli accordi siano mostrati solo all'inizio delle linee e quando l'accordo cambia.

```
harmonies = \chordmode {
  c1:m c:m \break c:m c:m d
}

<<
  \new ChordNames {
    \set chordChanges = ##t
```
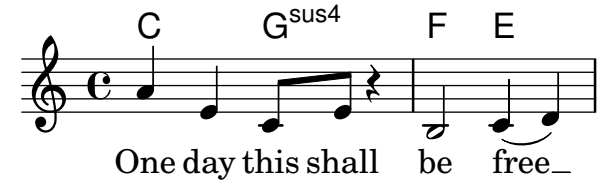
```
    \harmonies
  }
  \new Staff {
    \relative c' { \harmonies }
  }
>>
```



Canzoniere semplice

Mettendo insieme nomi degli accordi, melodia e testo si ottiene un canzoniere (in inglese “lead sheet”):

```
<<
  \chords { c2 g:sus4 f e }
  \new Staff \relative c'' {
    a4 e c8 e r4
    b2 c4( d)
  }
  \addlyrics { One day this shall be free __ }
>>
```



Modello di rigo singolo con note, testo e accordi

Ecco il modello di un comune spartito semplificato (lead sheet): include linea melodica, testo vocale e sigle degli accordi.

```
melody = \relative c' {
  \clef treble
  \key c \major
  \time 4/4

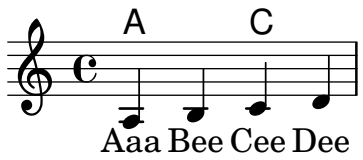
  a4 b c d
}

text = \lyricmode {
  Aaa Bee Cee Dee
}

harmonies = \chordmode {
```

```
  a2 c
}

\score {
  <<
    \new ChordNames {
      \set chordChanges = ##t
      \harmonies
    }
    \new Voice = "one" { \autoBeamOff \melody }
    \new Lyrics \lyricsto "one" \text
  >>
  \layout { }
  \midi { }
}
```



Single staff template with notes, lyrics, chords and frets

Here is a simple lead sheet template with melody, lyrics, chords and fret diagrams.

```
verseI = \lyricmode {
  \set stanza = #"1."
  This is the first verse
}

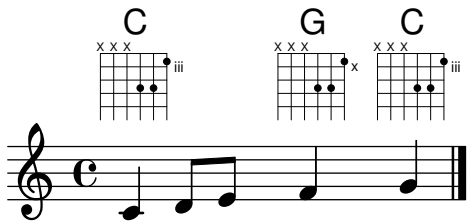
verseII = \lyricmode {
  \set stanza = #"2."
  This is the second verse.
}

theChords = \chordmode {
  % insert chords for chordnames and fretboards here
  c2 g4 c
}

staffMelody = \relative c' {
   \key c \major
   \clef treble
   % Type notes for melody here
   c4 d8 e f4 g
   \bar "|."
}

\score {
  <<
    \context ChordNames { \theChords }
    \context FretBoards { \theChords }
    \new Staff {
```

```
      \context Voice = "voiceMelody" { \staffMelody }
    }
    \new Lyrics = "lyricsI" {
      \lyricsto "voiceMelody" \verseI
    }
    \new Lyrics = "lyricsII" {
      \lyricsto "voiceMelody" \verseII
    }
  >>
  \layout { }
  \midi { }
}
```



Modello di rigo singolo con note e accordi
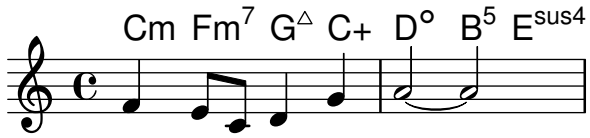
Vuoi preparare uno spartito semplificato (lead sheet) con melodia e accordi? La tua ricerca è finita!

```
melody = \relative c' {
  \clef treble
  \key c \major
  \time 4/4

  f4 e8[ c] d4 g
  a2 ~ a
}

harmonies = \chordmode {
  c4:m f:min7 g:maj c:aug
  d2:dim b4:5 e:sus
}

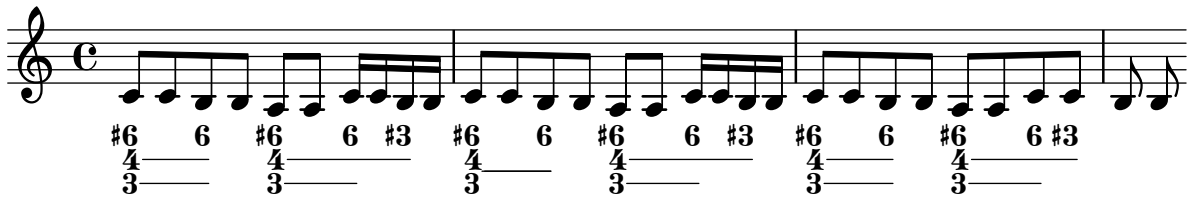
\score {
  <<
    \new ChordNames {
      \set chordChanges = ##t
      \harmonies
    }
    \new Staff \melody
  >>
  \layout{ }
  \midi { }
}
```



Vertically centering paired figured bass extenders

Where figured bass extender lines are being used by setting `useBassFigureExtenders` to true, pairs of congruent figured bass extender lines are vertically centered if `figuredBassCenterContinuations` is set to true.

```
<<
  \relative c' {
    c8 c b b a a c16 c b b
    c8 c b b a a c16 c b b
    c8 c b b a a c c b b
  }
  \figures {
    \set useBassFigureExtenders = ##t
    <6+ 4 3>4 <6 4 3>8 r
    <6+ 4 3>4 <6 4 3>8 <4 3+>16 r
    \set figuredBassCenterContinuations = ##t
    <6+ 4 3>4 <6 4 3>8 r
    <6+ 4 3>4 <6 4 3>8 <4 3+>16 r
    \set figuredBassCenterContinuations = ##f
    <6+ 4 3>4 <6 4 3>8 r
    <6+ 4 3>4 <6 4 3>8 <4 3+>8
  }
>>
```

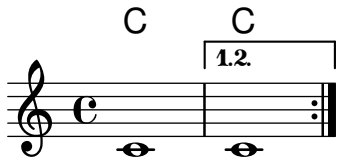


Volta sotto gli accordi

Aggiungendo l'incisore `Volta_engraver` al rigo, è possibile inserire le volte sotto gli accordi.

```
\score {
  <<
    \chords {
      c1
      c1
    }
    \new Staff \with {
      \consists "Volta_engraver"
    }
    {
      \repeat volta 2 { c'1 }
      \alternative { c' }
    }
  >>
  \layout {
    \context {
```

```
      \Score
      \remove "Volta_engraver"
    }
  }
}
```



Keyboards

Sezione “Keyboard and other multi-staff instruments” in *Guida alla Notazione*

Accordion-discant symbols

This snippet has been obsoleted by predefined markup commands, see 'Discant symbols' in the Notation Reference. It's still useful as a simple demonstration of how to combine symbols: the placement of the symbols added with `\markup` can be tweaked by changing the `\translate-scaled` arguments. `\translate-scaled` is used here rather than `\translate` in order to let the positioning of the symbol parts adapt to changes of `font-size`.

```
discant = \markup {
  \musicglyph "accordion.discant"
}
dot = \markup {
  \musicglyph "accordion.dot"
}

\layout { ragged-right = ##t }

% 16 voets register
accBasson = ^\markup {
  \combine
  \discant
  \translate-scaled #'(0 . 0.5) \dot
}

% een korig 8 en 16 voets register
accBandon = ^\markup {
  \combine
    \discant
    \combine
      \translate-scaled #'(0 . 0.5) \dot
      \translate-scaled #'(0 . 1.5) \dot
}

accVCello = ^\markup {
  \combine
    \discant
    \combine
      \translate-scaled #'(0 . 0.5) \dot
      \combine
        \translate-scaled #'(0 . 1.5) \dot
        \translate-scaled #'(1 . 1.5) \dot
}

% 4-8-16 voets register
accHarmon = ^\markup {
  \combine
    \discant
    \combine
      \translate-scaled #'(0 . 0.5) \dot
```

```
      \combine
        \translate-scaled #'(0 . 1.5) \dot
        \translate-scaled #'(0 . 2.5) \dot
}

accTrombon = ^\markup {
  \combine
    \discant
    \combine
      \translate-scaled #'(0 . 0.5) \dot
      \combine
        \translate-scaled #'(0 . 1.5) \dot
        \combine
          \translate-scaled #'(1 . 1.5) \dot
          \translate-scaled #'(-1 . 1.5) \dot
}

% eenkorig 4 en 16 voets register
accOrgan = ^\markup {
  \combine
    \discant
    \combine
      \translate-scaled #'(0 . 0.5) \dot
      \translate-scaled #'(0 . 2.5) \dot
}

accMaster = ^\markup {
  \combine
    \discant
    \combine
      \translate-scaled #'(0 . 0.5) \dot
      \combine
        \translate-scaled #'(0 . 1.5) \dot
        \combine
          \translate-scaled #'(1 . 1.5) \dot
          \combine
            \translate-scaled #'(-1 . 1.5) \dot
            \translate-scaled #'(0 . 2.5) \dot
}

accAccord = ^\markup {
  \combine
    \discant
    \combine
      \translate-scaled #'(0 . 1.5) \dot
      \combine
        \translate-scaled #'(1 . 1.5) \dot
        \combine
          \translate-scaled #'(-1 . 1.5) \dot
          \translate-scaled #'(0 . 2.5) \dot
}
```

```
accMusette = ^\markup {
  \combine
    \discant
    \combine
      \translate-scaled #'(0 . 1.5) \dot
      \combine
        \translate-scaled #'(1 . 1.5) \dot
        \translate-scaled #'(-1 . 1.5) \dot
}

accCeleste = ^\markup {
  \combine
    \discant
    \combine
      \translate-scaled #'(0 . 1.5) \dot
      \translate-scaled #'(-1 . 1.5) \dot
}

accOboe = ^\markup {
  \combine
    \discant
    \combine
      \translate-scaled #'(0 . 1.5) \dot
      \translate-scaled #'(0 . 2.5) \dot
}

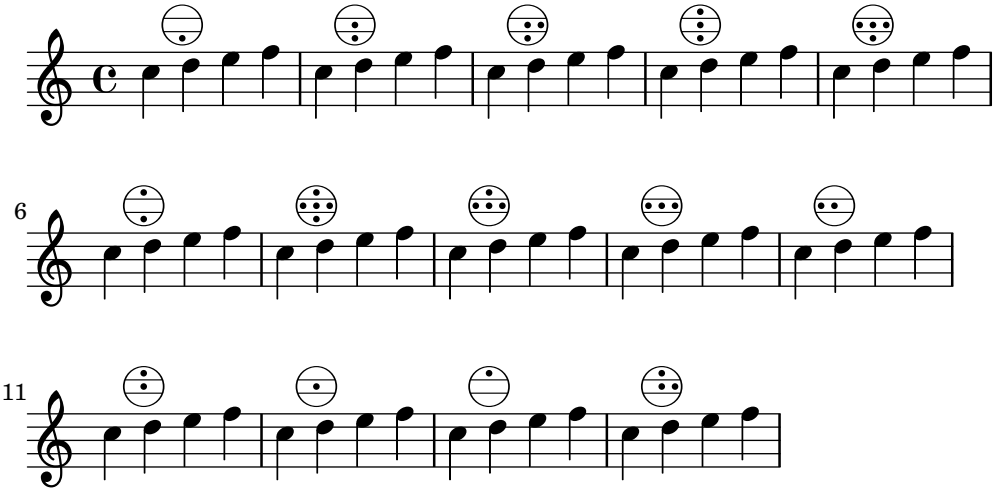
accClarin = ^\markup {
  \combine
    \discant
    \translate-scaled #'(0 . 1.5) \dot
}

accPiccolo = ^\markup {
    \combine
       \discant
       \translate-scaled #'(0 . 2.5) \dot
}

accViolin = ^\markup {
  \combine
    \discant
    \combine
      \translate-scaled #'(0 . 1.5) \dot
      \combine
        \translate-scaled #'(1 . 1.5) \dot
        \translate-scaled #'(0 . 2.5) \dot
}

\relative c'' {
  c4 d\accBasson e f
  c4 d\accBandon e f
  c4 d\accVCello e f
```

```
  c4 d\accHarmon e f
  c4 d\accTrombon e f
  \break
  c4 d\accOrgan e f
  c4 d\accMaster e f
  c4 d\accAccord e f
  c4 d\accMusette e f
  c4 d\accCeleste e f
  \break
  c4 d\accOboe e f
  c4 d\accClarin e f
  c4 d\accPiccolo e f
  c4 d\accViolin e f
}
```



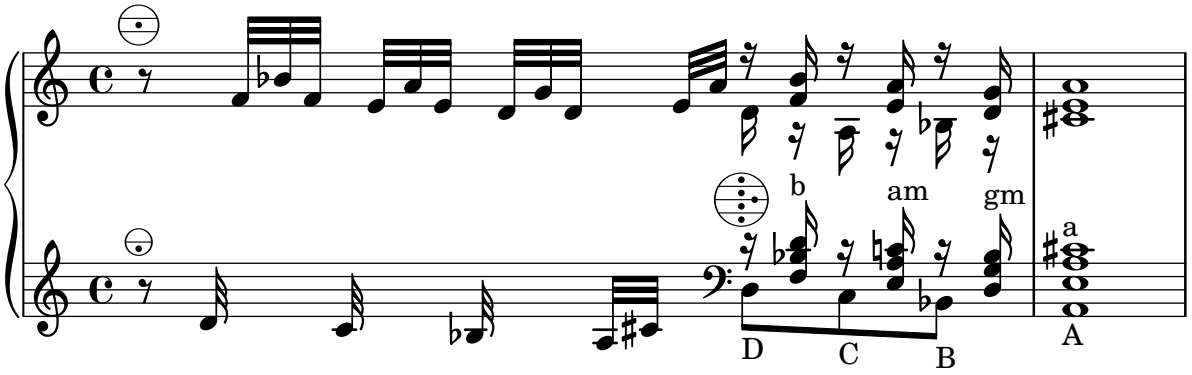
Simboli di registro della fisarmonica

I simboli di registro della fisarmonica sono disponibili sia come `\markup` sia come eventi musicali autonomi (perché i cambi di registro capitano solitamente tra reali eventi musicali). I registri bassi non sono troppo standardizzati. I comandi disponibili si trovano nella sezione «Registri della fisarmonica» della Guida alla notazione.

```
#(use-modules (lily accreg))

\new PianoStaff
<<
  \new Staff \relative {
    \clef treble
    \discant "10"
    r8 s32 f'[ bes f] s e[ a e] s d[ g d] s16 e32[ a]
    <<
      { r16 <f bes> r <e a> r <d g> }
      \\
      { d r a r bes r }
    >> |
    <cis e a>1
  }
```

```
  \new Staff \relative {
    \clef treble
    \freeBass "1"
    r8 d'32 s16. c32 s16. bes32 s16. a32[ cis] s16
    \clef bass \stdBass "Master"
    <<
      { r16 <f, bes d>^"b" r <e a c>^"am" r <d g bes>^"gm" |
      <e a cis>1^"a" }
      \\
      { d8_"D" c_"C" bes_"B" | a1_"A" }
    >>
  }
>>
```
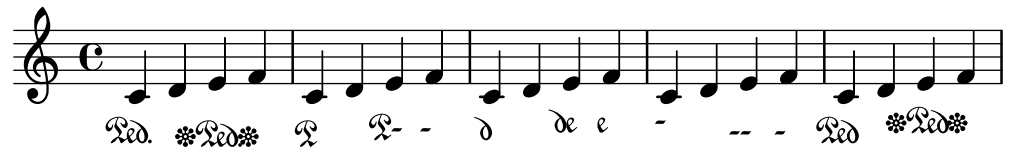


Changing the text for sustain markings

`Staff.pedalSustainStrings` can be used to set the text used for pedal down and up. Note that the only valid strings are those found in the list of pedal glyphs - the values used this snippet constitute an exhaustive list.

```
sustainNotes = { c4\sustainOn d e\sustainOff\sustainOn f\sustainOff }

\relative c' {
  \sustainNotes
  \set Staff.pedalSustainStrings = #'("P" "P-" "-")
  \sustainNotes
  \set Staff.pedalSustainStrings = #'("d" "de" "e")
  \sustainNotes
  \set Staff.pedalSustainStrings = #'("M" "M-" "-")
  \sustainNotes
  \set Staff.pedalSustainStrings = #'("Ped" "*Ped" "*")
  \sustainNotes
}
```

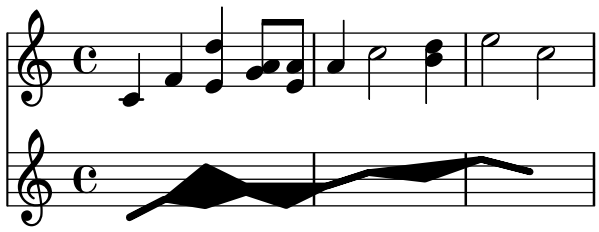


Clusters

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

```
fragment = \relative c' {
  c4 f <e d'>4
  <g a>8 <e a> a4 c2 <d b>4
  e2 c
}

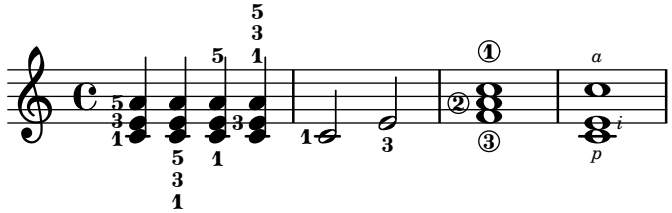
<<
  \new Staff \fragment
  \new Staff \makeClusters \fragment
>>
```



Controllare il posizionamento delle diteggiature di un accordo

Il posizionamento dei numeri della diteggiatura può essere regolato in modo preciso. Perché l'orientamento funzioni, occorre usare il costrutto per gli accordi <> anche per le note singole. Si può impostare in modo simile l'orientamento dei numeri di corda e delle diteggiature della mano destra.

```
\relative c' {
  \set fingeringOrientations = #'(left)
  <c-1 e-3 a-5>4
  \set fingeringOrientations = #'(down)
  <c-1 e-3 a-5>4
  \set fingeringOrientations = #'(down right up)
  <c-1 e-3 a-5>4
  \set fingeringOrientations = #'(up)
  <c-1 e-3 a-5>4
  \set fingeringOrientations = #'(left)
  <c-1>2
  \set fingeringOrientations = #'(down)
  <e-3>2
  \set stringNumberOrientations = #'(up left down)
  <f\3 a\2 c\1>1
  \set strokeFingerOrientations = #'(down right up)
  <c\rightHandFinger #1 e\rightHandFinger #2 c'\rightHandFinger #4 >
}
```
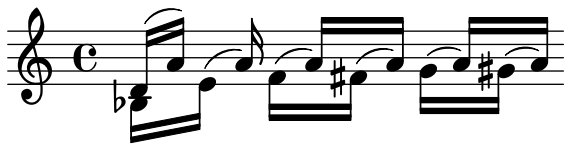


Creating slurs across voices

In some situations, it may be necessary to create slurs between notes from different voices. The solution is to add invisible notes to one of the voices, using `\hideNotes`.

This example is measure 235 of the Ciaconna from Bach's 2nd Partita for solo violin, BWV 1004.

```
\relative c' {
  <<
    {
      d16( a') s a s a[ s a] s a[ s a]
    }
    \\
    {
      \slurUp
      bes,16[ s e](
      \hideNotes a)
      \unHideNotes f[(
      \hideNotes a)
      \unHideNotes fis](
      \hideNotes a)
      \unHideNotes g[(
      \hideNotes a)
      \unHideNotes gis](
      \hideNotes a)
    }
  >>
}
```

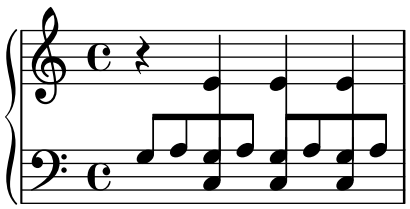


Cross-staff chords - beaming problems workaround

Sometimes it is better to use stems from the upper staff for creating cross-staff chords, because no problems with automatic beam collision avoidance then arise. If the stems from the lower staff were used in the following example, it would be necessary to change the automatic beam collision avoidance settings so that it doesn't detect collisions between staves using `\override Staff.Beam.collision-voice-only = ##t`

```
\new PianoStaff <<
  \new Staff = up
    \relative c' {
      <<
        { r4
          \override Stem.cross-staff = ##t
          \override Stem.length = #19 % this is in half-spaces,
              % so it makes stems 9.5 staffspaces long
          \override Stem.Y-offset = #-6 % stems are normally lengthened
              % upwards, so here we must lower the stem by the amount
              % equal to the lengthening - in this case (19 - 7) / 2
              % (7 is default stem length)
```
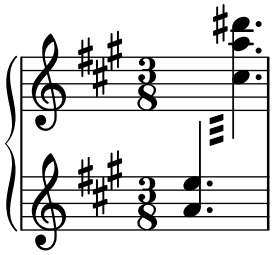
```
          e e e }
        { s4
          \change Staff = "bottom"
          \override NoteColumn.ignore-collision = ##t
          c, c c
        }
      >>
    }
  \new Staff = bottom
    \relative c' {
      \clef bass
      \voiceOne
      g8 a g a g a g a
    }
>>
```



Tremoli attraverso i righi

Dato che `\repeat tremolo` si aspetta esattamente due argomenti musicali per i tremoli di accordi, la nota o l'accordo che cambiano rigo in un tremolo che attraversa i righi devono essere posti tra parentesi graffe insieme al comando `\change Staff`.
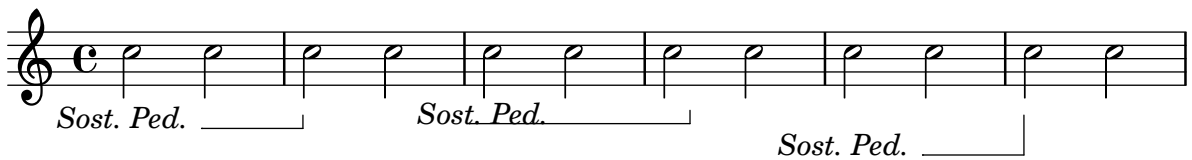
```
\new PianoStaff <<
  \new Staff = "up" \relative c'' {
    \key a \major
    \time 3/8
    s4.
  }
  \new Staff = "down" \relative c'' {
    \key a \major
    \time 3/8
    \voiceOne
    \repeat tremolo 6 {
      <a e'>32
      {
        \change Staff = "up"
        \voiceTwo
        <cis a' dis>32
      }
    }
  }
>>
```



Fine-tuning pedal brackets

The appearance of pedal brackets may be altered in different ways.

```
\paper { ragged-right = ##f }
\relative c'' {
  c2\sostenutoOn c
  c2\sostenutoOff c
  \once \override Staff.PianoPedalBracket.shorten-pair = #'(-7 . -2)
  c2\sostenutoOn c
  c2\sostenutoOff c
  \once \override Staff.PianoPedalBracket.edge-height = #'(0 . 3)
  c2\sostenutoOn c
  c2\sostenutoOff c
}
```



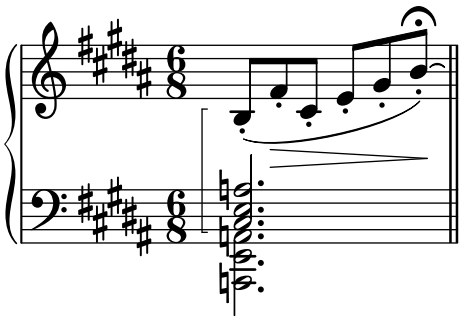
Indicare accordi trasversali al rigo con la parentesi quadrata dell'arpeggio

Una parentesi quadrata dell'arpeggio può indicare che delle note su due righi diversi devono essere suonate con la stessa mano. Per farlo, bisogna far sì che `PianoStaff` accetti gli arpeggi trasversali ai righi e gli arpeggi siano impostati nella forma della parentesi quadrata nel contesto `PianoStaff`.

(Debussy, *Les collines d'Anacapri,* m. 65)

```
\new PianoStaff <<
  \set PianoStaff.connectArpeggios = ##t
  \override PianoStaff.Arpeggio.stencil =
    #ly:arpeggio::brew-chord-bracket
  \new Staff {
    \relative c' {
      \key b \major
      \time 6/8
      b8-.(\arpeggio fis'-.\> cis-.
        e-. gis-. b-.)\!\fermata^\laissezVibrer \bar "||"
    }
  }
  \new Staff {
    \relative c' {
      \clef bass
      \key b \major
      <<
        {
```

```
          <a e cis>2.\arpeggio
        }
        \\
        {
          <a, e a,>2.
        }
      >>
    }
  }
>>
```



Modello per combo jazz

Ecco un modello piuttosto complesso, per un gruppo jazz. Si noti che tutti gli strumenti sono in `\key c \major`. Si tratta della tonalità reale; sarà trasposta automaticamente includendo la musica all'interno di una sezione `\transpose`.

```
\header {
  title = "Song"
  subtitle = "(tune)"
  composer = "Me"
  meter = "moderato"
  piece = "Swing"
  tagline = \markup {
    \column {
      "LilyPond example file by Amelie Zapf,"
      "Berlin 07/07/2003"
    }
  }
}
% To make the example display in the documentation
\paper {
  paper-width = 130
}
%#(set-global-staff-size 16)
\include "english.ly"

%%%%%%%%%%% Some macros %%%%%%%%%%%%%%%%%%

sl = {
  \override NoteHead.style = #'slash
  \hide Stem
}
```

```
nsl = {
  \revert NoteHead.style
  \undo \hide Stem
}
crOn = \override NoteHead.style = #'cross
crOff = \revert NoteHead.style

%% insert chord name style stuff here.

jazzChords = { }

%%%%%%%%%%% Keys'n'thangs %%%%%%%%%%%%%%%%

global = { \time 4/4 }

Key = { \key c \major }

% ############ Horns ############

% ------ Trumpet ------
trpt = \transpose c d \relative c'' {
  \Key
  c1 | c | c |
}
trpHarmony = \transpose c' d {
  \jazzChords
}
trumpet = {
  \global
  \clef treble
  <<
    \trpt
  >>
}

% ------ Alto Saxophone ------
alto = \transpose c a \relative c' {
  \Key
  c1 | c | c |
}
altoHarmony = \transpose c' a {
  \jazzChords
}
altoSax = {
  \global
  \clef treble
  <<
    \alto
  >>
}

% ------ Baritone Saxophone ------
```

```
bari = \transpose c a' \relative c {
  \Key
  c1
  c1
  \sl
  d4^"Solo" d d d
  \nsl
}
bariHarmony = \transpose c' a \chordmode {
  \jazzChords s1 s d2:maj e:m7
}
bariSax = {
  \global
  \clef treble
  <<
    \bari
  >>
}

% ------ Trombone ------
tbone = \relative c {
  \Key
  c1 | c | c
}
tboneHarmony = \chordmode {
  \jazzChords
}
trombone = {
  \global
  \clef bass
  <<
    \tbone
  >>
}

% ############ Rhythm Section #############

% ------ Guitar ------
gtr = \relative c'' {
  \Key
  c1
  \sl
  b4 b b b
  \nsl
  c1
}
gtrHarmony = \chordmode {
  \jazzChords
  s1 c2:min7+ d2:maj9
}
guitar = {
  \global
```

```
  \clef treble
  <<
    \gtr
  >>
}

%% ------ Piano ------
rhUpper = \relative c'' {
  \voiceOne
  \Key
  c1 | c | c
}
rhLower = \relative c' {
  \voiceTwo
  \Key
  e1 | e | e
}

lhUpper = \relative c' {
  \voiceOne
  \Key
  g1 | g | g
}
lhLower = \relative c {
  \voiceTwo
  \Key
  c1 | c | c
}

PianoRH = {
  \clef treble
  \global
  <<
    \new Voice = "one" \rhUpper
    \new Voice = "two" \rhLower
  >>
}
PianoLH = {
  \clef bass
  \global
  <<
    \new Voice = "one" \lhUpper
    \new Voice = "two" \lhLower
  >>
}

piano = {
  <<
    \new Staff = "upper" \PianoRH
    \new Staff = "lower" \PianoLH
  >>
}
```

```
% ------ Bass Guitar ------
Bass = \relative c {
  \Key
  c1 | c | c
}
bass = {
  \global
  \clef bass
  <<
    \Bass
  >>
}

% ------ Drums ------
up = \drummode {
  \voiceOne
  hh4 <hh sn> hh <hh sn>
  hh4 <hh sn> hh <hh sn>
  hh4 <hh sn> hh <hh sn>
}
down = \drummode {
  \voiceTwo
  bd4 s bd s
  bd4 s bd s
  bd4 s bd s
}

drumContents = {
  \global
  <<
    \new DrumVoice \up
    \new DrumVoice \down
  >>
}

%%%%%%%% It All Goes Together Here %%%%%%%%%%%%%%%%%%%%%

\score {
  <<
    \new StaffGroup = "horns" <<
      \new Staff = "trumpet" \with { instrumentName = "Trumpet" }
      \trumpet
      \new Staff = "altosax" \with { instrumentName = "Alto Sax" }
      \altoSax
      \new ChordNames = "barichords" \with { instrumentName = "Trumpet" }
      \bariHarmony
      \new Staff = "barisax" \with { instrumentName = "Bari Sax" }
      \bariSax
      \new Staff = "trombone" \with { instrumentName = "Trombone" }
      \trombone
    >>
```

```
    \new StaffGroup = "rhythm" <<
      \new ChordNames = "chords" \gtrHarmony
      \new Staff = "guitar" \with { instrumentName = "Guitar" }
      \guitar
      \new PianoStaff = "piano" \with {
        instrumentName = "Piano"
        midiInstrument = "acoustic grand"
      }
      \piano
      \new Staff = "bass" \with { instrumentName = "Bass" }
      \bass
      \new DrumStaff \with { instrumentName = "Drums" }
      \drumContents
    >>
  >>
  \layout {
    \context { \Staff \RemoveEmptyStaves }
    \context {
      \Score
      \override BarNumber.padding = #3
      \override RehearsalMark.padding = #2
      skipBars = ##t
    }
  }
  \midi { }
}
```

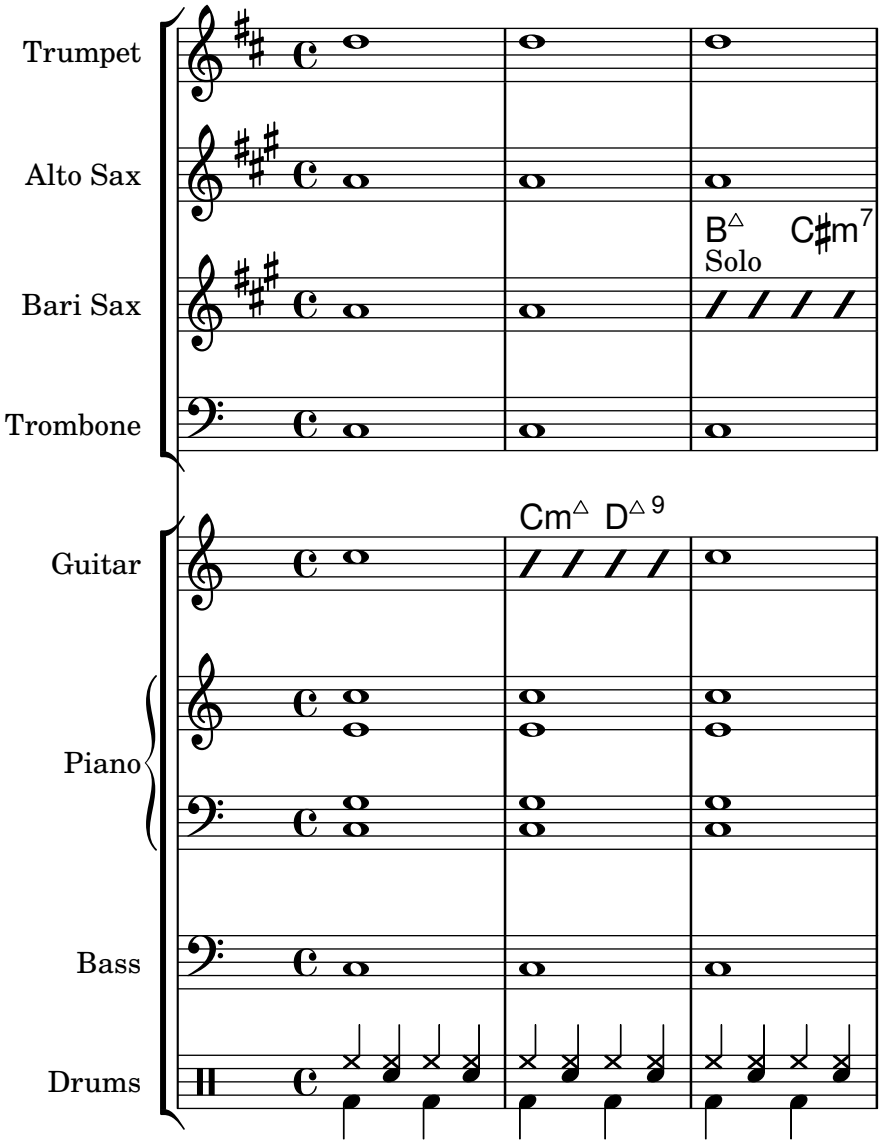
Song

(tune)

Me

moderato

Swing
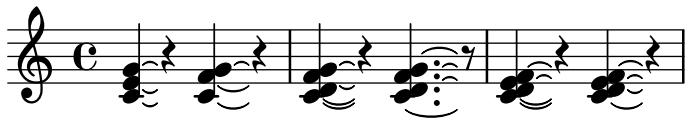


Laissez vibrer ties

Laissez vibrer ties have a fixed size. Their formatting can be tuned using `'tie-configuration`.

```
\relative c' {
  <c e g>4\laissezVibrer r <c f g>\laissezVibrer r
  <c d f g>4\laissezVibrer r <c d f g>4.\laissezVibrer r8

  <c d e f>4\laissezVibrer r
  \override LaissezVibrerTieColumn.tie-configuration
     = #`((-7 . ,DOWN)
          (-5 . ,DOWN)
          (-3 . ,UP)
          (-1 . ,UP))
  <c d e f>4\laissezVibrer r
}
```



Modello per pianoforte (semplice)

Ecco un comune doppio pentagramma per pianoforte con un po' di note.
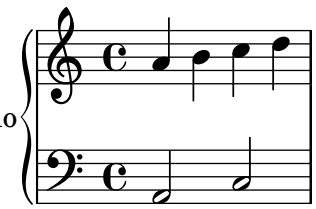
```
upper = \relative c'' {
  \clef treble
  \key c \major
  \time 4/4

  a4 b c d
}

lower = \relative c {
  \clef bass
  \key c \major
  \time 4/4

  a2 c
}

\score {
  \new PianoStaff \with { instrumentName = "Piano" }
  <<
    \new Staff = "upper" \upper
    \new Staff = "lower" \lower
  >>
  \layout { }
  \midi { }
}
```



Modello per pianoforte con testo al centro

Invece di destinare un rigo a parte alla linea melodica e al suo testo, è possibile collocare il testo al centro di un doppio pentagramma per pianoforte.

```
upper = \relative c'' {
  \clef treble
  \key c \major
  \time 4/4

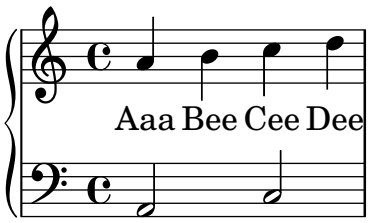
  a4 b c d
}

lower = \relative c {
  \clef bass
  \key c \major
  \time 4/4
```

```
  a2 c
}

text = \lyricmode {
  Aaa Bee Cee Dee
}

\score {
  \new PianoStaff <<
    \new Staff = upper { \new Voice = "singer" \upper }
    \new Lyrics \lyricsto "singer" \text
    \new Staff = lower { \lower }
  >>
  \layout { }
  \midi { }
}
```



Modello per pianoforte con melodia e testo

Ecco un tipico formato per canzoni: un rigo con linea melodica e testo, e sotto l'accompagnamento per pianoforte.

```
melody = \relative c'' {
  \clef treble
  \key c \major
  \time 4/4

  a b c d
}

text = \lyricmode {
  Aaa Bee Cee Dee
}

upper = \relative c'' {
  \clef treble
  \key c \major
  \time 4/4

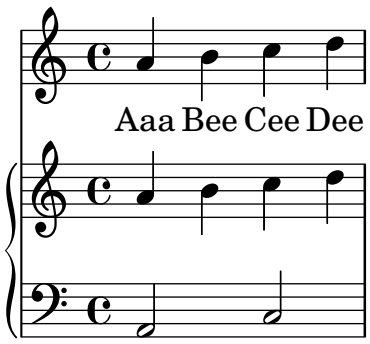
  a4 b c d
}

lower = \relative c {
  \clef bass
  \key c \major
```

```
  \time 4/4

  a2 c
}

\score {
  <<
    \new Voice = "mel" { \autoBeamOff \melody }
    \new Lyrics \lyricsto mel \text
    \new PianoStaff <<
      \new Staff = "upper" \upper
      \new Staff = "lower" \lower
    >>
  >>
  \layout {
    \context { \Staff \RemoveEmptyStaves }
  }
  \midi { }
}
```



Removing brace on first line of piano score

This snippet removes the first brace from a `PianoStaff` or a `GrandStaff`.

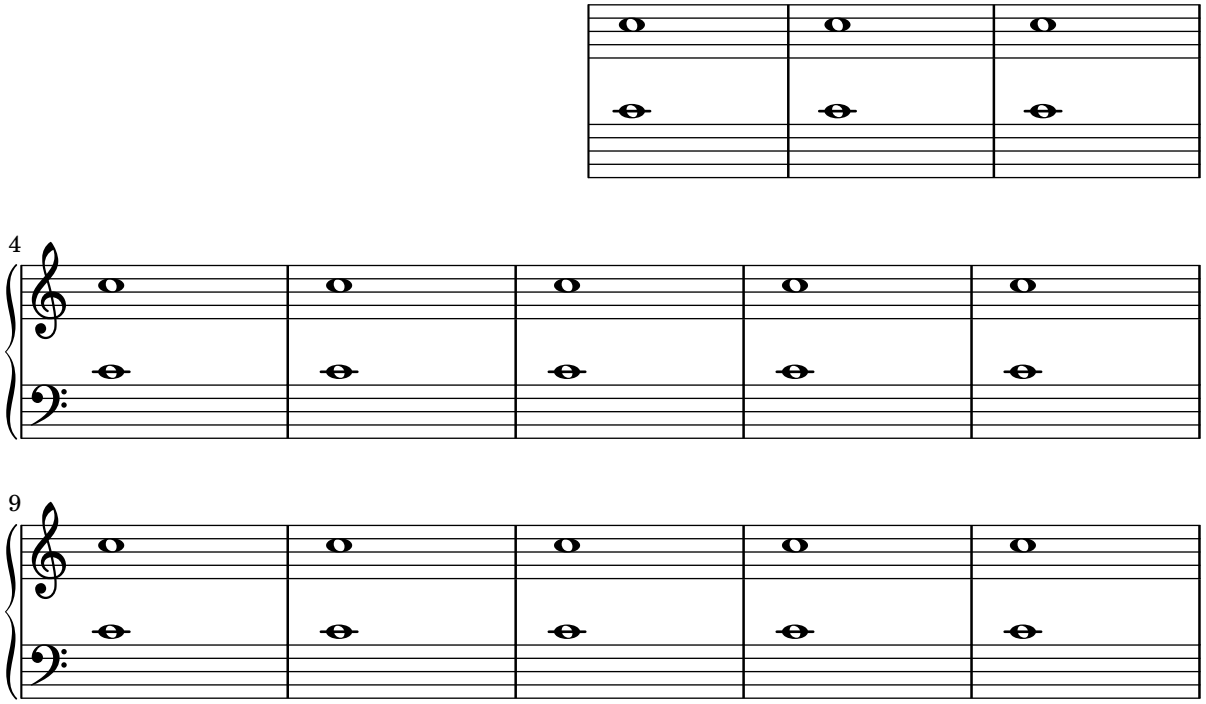
It may be useful when cutting and pasting the engraved image into existing music.

It uses `\alterBroken`.

```
someMusic =  {
  \once \override Staff.Clef.stencil = ##f
  \once \override Staff.TimeSignature.stencil = ##f
  \repeat unfold 3 c1 \break
  \repeat unfold 5 c1 \break
  \repeat unfold 5 c1
}

\score {
  \new PianoStaff
  <<
    \new Staff = "right" \relative c'' \someMusic
    \new Staff = "left" \relative c' { \clef F \someMusic }
  >>
  \layout {
    indent=75
```

```
    \context {
      \PianoStaff
      \alterBroken transparent #'(#t) SystemStartBrace
    }
  }
}
```



Using autochange with more than one voice

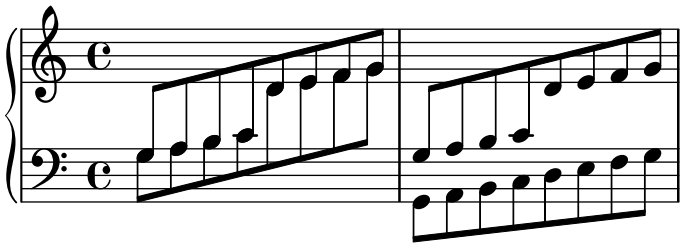
Using `autochange` with more than one voice.

```
\score
{
  \new PianoStaff
  <<
    \new Staff = "up" {
      <<
        \set Timing.beamExceptions = #'()
        \set Timing.beatStructure = #'(4)
        \new Voice {
          \voiceOne
          \autoChange
          \relative c' {
            g8 a b c d e f g
            g,8 a b c d e f g
          }
        }

        \new Voice {
          \voiceTwo
          \autoChange
          \relative c' {
```

```
            g8 a b c d e f g
            g,,8 a b c d e f g
          }
        }
      >>
    }

    \new Staff = "down" {
      \clef bass
    }
  >>
}
```



Modello per gruppo vocale con riduzione per pianoforte automatica

Questo modello aggiunge una riduzione automatica per pianoforte alla tipica partitura vocale SATB illustrata in “Modello per complesso vocale”. Si dimostra così uno dei punti di forza di LilyPond – è possibile usare una definizione musicale più di una volta. Qualsiasi modifica venga fatta alle note delle voci (ad esempio, `tenorMusic`) verrà applicata anche alla riduzione per pianoforte.

```
\paper {
  top-system-spacing.basic-distance = #10
  score-system-spacing.basic-distance = #20
  system-system-spacing.basic-distance = #20
  last-bottom-spacing.basic-distance = #10
}

global = {
  \key c \major
  \time 4/4
}

sopMusic = \relative {
  c''4 c c8[( b)] c4
}
sopWords = \lyricmode {
  hi hi hi hi
}

altoMusic = \relative {
  e'4 f d e
}
altoWords =\lyricmode {
```

```
  ha ha ha ha
}

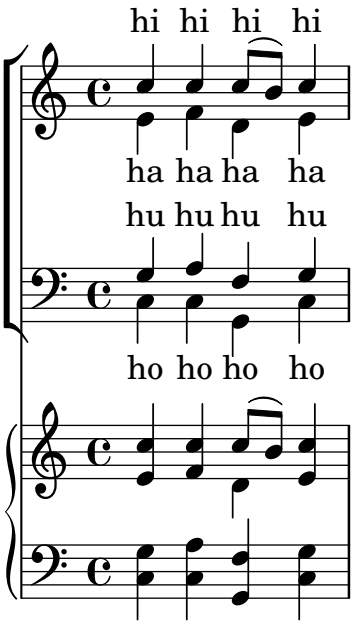
tenorMusic = \relative {
  g4 a f g
}
tenorWords = \lyricmode {
  hu hu hu hu
}

bassMusic = \relative {
  c4 c g c
}
bassWords = \lyricmode {
  ho ho ho ho
}

\score {
  <<
    \new ChoirStaff <<
      \new Lyrics = "sopranos" \with {
        % This is needed for lyrics above a staff
        \override VerticalAxisGroup.staff-affinity = #DOWN
      }
      \new Staff = "women" <<
        \new Voice = "sopranos" { \voiceOne << \global \sopMusic >> }
        \new Voice = "altos" { \voiceTwo << \global \altoMusic >> }
      >>
      \new Lyrics = "altos"
      \new Lyrics = "tenors" \with {
        % This is needed for lyrics above a staff
        \override VerticalAxisGroup.staff-affinity = #DOWN
      }

      \new Staff = "men" <<
        \clef bass
        \new Voice = "tenors" { \voiceOne << \global \tenorMusic >> }
        \new Voice = "basses" { \voiceTwo << \global \bassMusic >> }
      >>
      \new Lyrics = "basses"
      \context Lyrics = "sopranos" \lyricsto "sopranos" \sopWords
      \context Lyrics = "altos" \lyricsto "altos" \altoWords
      \context Lyrics = "tenors" \lyricsto "tenors" \tenorWords
      \context Lyrics = "basses" \lyricsto "basses" \bassWords
    >>
    \new PianoStaff <<
      \new Staff <<
        \set Staff.printPartCombineTexts = ##f
        \partCombine
        << \global \sopMusic >>
        << \global \altoMusic >>
      >>
```

```
      \new Staff <<
        \clef bass
        \set Staff.printPartCombineTexts = ##f
        \partCombine
        << \global \tenorMusic >>
        << \global \bassMusic >>
      >>
    >>
  >>
}
```



Percussion

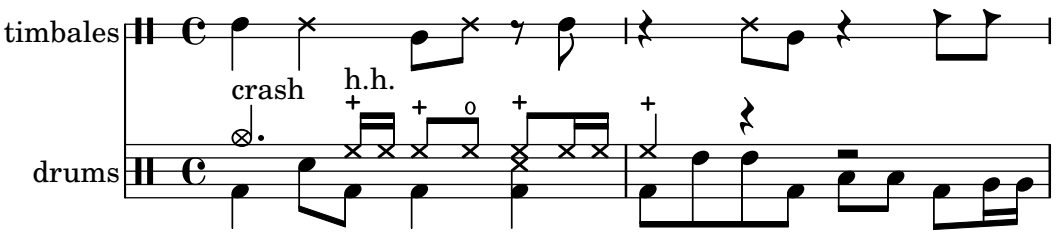
Sezione “Percussion” in *Guida alla Notazione*

Adding drum parts

Using the powerful pre-configured tools such as the `\drummode` function and the `DrumStaff` context, inputting drum parts is quite easy: drums are placed at their own staff positions (with a special clef symbol) and have note heads according to the drum. Attaching an extra symbol to the drum or restricting the number of lines is possible.

```
drh = \drummode {
        cymc4.^"crash" hhc16^"h.h." hh hhc8 hho hhc8 hh16 hh
        hhc4 r4 r2
      }
drl = \drummode {
        bd4 sn8 bd bd4 << bd ss >>
        bd8 tommh tommh bd toml toml bd tomfh16 tomfh
      }
timb = \drummode {
         timh4 ssh timl8 ssh r timh r4
         ssh8 timl r4 cb8 cb
       }

\score {
  <<
    \new DrumStaff \with {
      instrumentName = "timbales"
      drumStyleTable = #timbales-style
      \override StaffSymbol.line-count = #2
      \override BarLine.bar-extent = #'(-1 . 1)
    }
    <<
      \timb
    >>
    \new DrumStaff \with { instrumentName = "drums" }
    <<
      \new DrumVoice { \stemUp \drh }
      \new DrumVoice { \stemDown \drl }
    >>
  >>
  \layout { }
  \midi { \tempo 4 = 120 }
}
```



Customized drum notation in printed and MIDI output

Customized drum "pitch" names (suitable for a custom drum style, for example) may be used both in printed and MIDI output by defining such variables as `drumPitchNames`, `drumStyleTable` and `midiDrumPitches`, as demonstrated here. In short, this snippet:

- defines some "pitch" names
- defines how they will be rendered
- tell LilyPond to use them for layout
- assigns pitches to the names
- tell LilyPond to use them for MIDI output

```
%% This snippet tries to amend
%% NR 2.5.1 Common notation for percussion - Custom percussion staves
%% http://lilypond.org/doc/v2.18/Documentation/notation/common-notation-for-percussion#custo

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%%
%% To use custom drum-pitch-names for your score and midi you need to follow
%% this route:
%%
%%%%%%%%%%%%
%% LAYOUT:
%%%%%%%%%%%%
%%
%% (1) Define a name and put it in `drumPitchNames'
%%     This can be done at toplevel with
%%         drumPitchNames.my-name  = #'my-name
%%     It's possible to add an alias as well.
%% (2) Define how it should be printed
%%     Therefore put them into a toplevel-list, where each entry should look:
%%         (my-name
%%           note-head-style-or-default
%%             articulation-string-or-#f
%%               staff-position)
%%     Example:
%%         #(define my-style
%%           '(
%%             (my-name default "tenuto" -1)
%%             ; ...
%%             ))
%% (3) Tell LilyPond to use this custom-definitions, with
%%         drumStyleTable = #(alist->hash-table my-style)
%%     in a \layout or \with
%%
%%     Now we're done for layout, here a short, but complete example:
%%         \new DrumStaff
%%           \with { drumStyleTable = #(alist->hash-table my-style) }
%%           \drummode { my-name }
%%
%%%%%%%%%%%%
%% MIDI:
%%%%%%%%%%%%
```

```
%%
%% (1) Again at toplvel, assign a pitch to your custom-note-name
%%         midiDrumPitches.my-name = ges
%%     Note that you have to use the name, which is in drumPitchNames, no alias
%% (2) Tell LilyPond to use this pitch(es), with
%%         drumPitchTable = #(alist->hash-table midiDrumPitches)
%%
%%     Example:
%%         \score {
%%            \new DrumStaff
%%             \with {
%%               drumStyleTable = #(alist->hash-table my-style)
%%               drumPitchTable = #(alist->hash-table midiDrumPitches)
%%             }
%%             \drummode { my-name4 }
%%           \layout {}
%%           \midi {}
%%         }
%%
%%%%%%%%%%%
%% TESTING
%%%%%%%%%%%
%%
%% To test whether all is fine, run the following sequence in terminal:
%%         lilypond my-file.ly
%%         midi2ly my-file.midi
%%         gedit my-file-midi.ly
%%
%% Which will do:
%% 1. create pdf and midi
%% 2. transform the midi back to a .ly-file
%%    (note: midi2ly is not always good in correctly identifying enharmonic pitches)
%% 3. open this file in gedit (or use another editor)
%% Now watch what you've got.
%%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%% FULL EXAMPLE
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
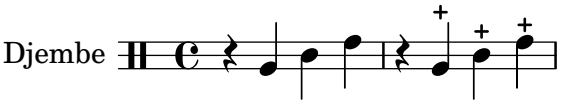
drumPitchNames.dbass      = #'dbass
drumPitchNames.dba        = #'dbass  % 'db is in use already
drumPitchNames.dbassmute  = #'dbassmute
drumPitchNames.dbm        = #'dbassmute
drumPitchNames.do         = #'dopen
drumPitchNames.dopenmute  = #'dopenmute
drumPitchNames.dom        = #'dopenmute
drumPitchNames.dslap      = #'dslap
drumPitchNames.ds         = #'dslap
drumPitchNames.dslapmute  = #'dslapmute
drumPitchNames.dsm        = #'dslapmute
```

```
#(define djembe
  '((dbass      default  #f         -2)
    (dbassmute  default  "stopped"  -2)
    (dopen      default  #f          0)
    (dopenmute  default  "stopped"   0)
    (dslap      default  #f          2)
    (dslapmute  default  "stopped"   2)))

midiDrumPitches.dbass = g
midiDrumPitches.dbassmute = fis
midiDrumPitches.dopen =  a
midiDrumPitches.dopenmute = gis
midiDrumPitches.dslap =  b
midiDrumPitches.dslapmute = ais

one = \drummode { r4 dba4 do ds r dbm dom dsm }

\score {
   \new DrumStaff
    \with {
      \override StaffSymbol.line-count =  #3
      instrumentName = #"Djembe "
      drumStyleTable = #(alist->hash-table djembe)
      drumPitchTable = #(alist->hash-table midiDrumPitches)
    }
    \one
  \layout {}
  \midi {}
}
```



Heavily customized polymetric time signatures

Though the polymetric time signature shown was not the most essential item here, it has been included to show the beat of this piece (which is the template of a real Balkan song!).

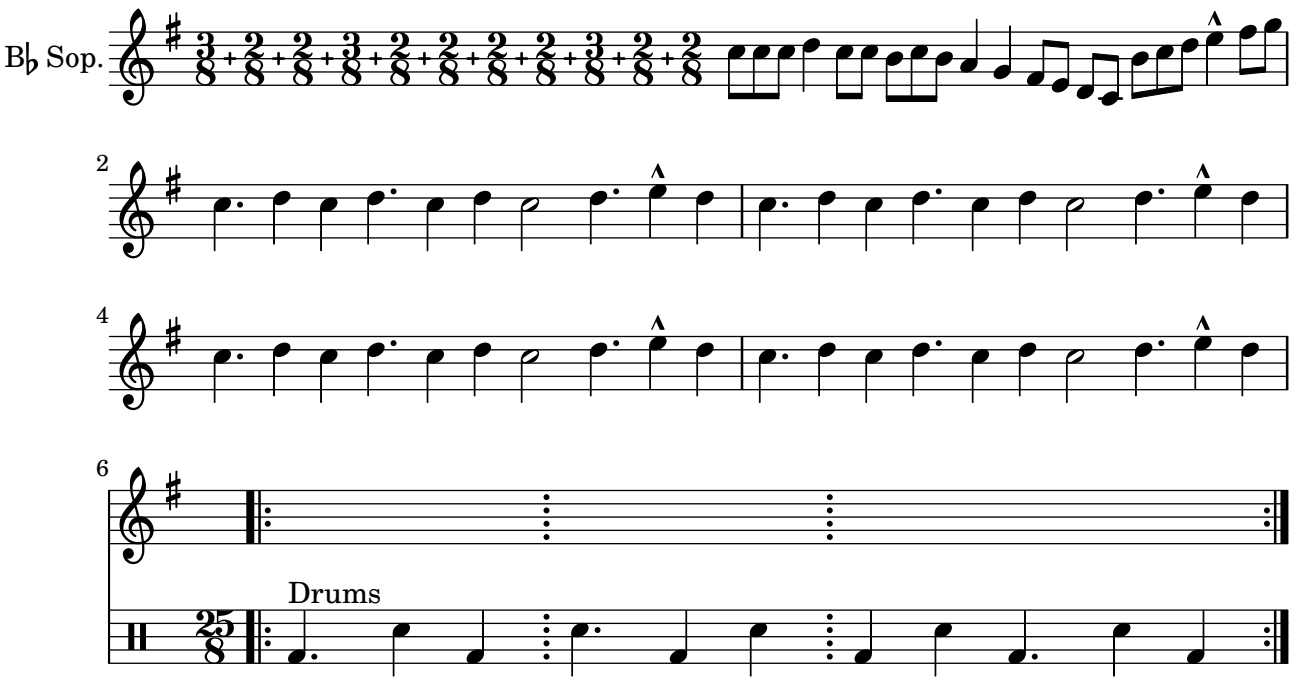
```
melody = \relative c'' {
  \key g \major
  \compoundMeter #'((3 8) (2 8) (2 8) (3 8) (2 8) (2 8)
                    (2 8) (2 8) (3 8) (2 8) (2 8))
  c8 c c d4 c8 c b c b a4 g fis8 e d c b' c d e4-^ fis8 g \break
  c,4. d4 c4 d4. c4 d c2 d4. e4-^ d4
  c4. d4 c4 d4. c4 d c2 d4. e4-^ d4 \break
  c4. d4 c4 d4. c4 d c2 d4. e4-^ d4
  c4. d4 c4 d4. c4 d c2 d4. e4-^ d4 \break
}

drum = \new DrumStaff \drummode {
  \bar ".|:" bd4.^\markup { Drums } sn4 bd \bar ";" sn4.
```

```
  bd4 sn \bar ";" bd sn bd4. sn4 bd \bar ":|."
}

  \new Staff \with {
    instrumentName = \markup { \concat { "B" \flat " Sop." } }
  }

{
  \melody
  \drum
}
```



Modello per combo jazz

Ecco un modello piuttosto complesso, per un gruppo jazz. Si noti che tutti gli strumenti sono in `\key c \major`. Si tratta della tonalità reale; sarà trasposta automaticamente includendo la musica all'interno di una sezione `\transpose`.

```
\header {
  title = "Song"
  subtitle = "(tune)"
  composer = "Me"
  meter = "moderato"
  piece = "Swing"
  tagline = \markup {
    \column {
      "LilyPond example file by Amelie Zapf,"
      "Berlin 07/07/2003"
    }
  }
}
% To make the example display in the documentation
\paper {
```

```
  paper-width = 130
}
%#(set-global-staff-size 16)
\include "english.ly"

%%%%%%%%%%% Some macros %%%%%%%%%%%%%%%%%%

sl = {
  \override NoteHead.style = #'slash
  \hide Stem
}
nsl = {
  \revert NoteHead.style
  \undo \hide Stem
}
crOn = \override NoteHead.style = #'cross
crOff = \revert NoteHead.style

%% insert chord name style stuff here.

jazzChords = { }

%%%%%%%%%%% Keys'n'thangs %%%%%%%%%%%%%%%%

global = { \time 4/4 }

Key = { \key c \major }

% ############ Horns ############

% ------ Trumpet ------
trpt = \transpose c d \relative c'' {
  \Key
  c1 | c | c |
}
trpHarmony = \transpose c' d {
  \jazzChords
}
trumpet = {
  \global
  \clef treble
  <<
    \trpt
  >>
}

% ------ Alto Saxophone ------
alto = \transpose c a \relative c' {
  \Key
  c1 | c | c |
}
altoHarmony = \transpose c' a {
```

```
  \jazzChords
}
altoSax = {
  \global
  \clef treble
  <<
    \alto
  >>
}

% ------ Baritone Saxophone ------
bari = \transpose c a' \relative c {
  \Key
  c1
  c1
  \sl
  d4^"Solo" d d d
  \nsl
}
bariHarmony = \transpose c' a \chordmode {
  \jazzChords s1 s d2:maj e:m7
}
bariSax = {
  \global
  \clef treble
  <<
    \bari
  >>
}

% ------ Trombone ------
tbone = \relative c {
  \Key
  c1 | c | c
}
tboneHarmony = \chordmode {
  \jazzChords
}
trombone = {
  \global
  \clef bass
  <<
    \tbone
  >>
}

% ############ Rhythm Section #############

% ------ Guitar ------
gtr = \relative c'' {
  \Key
  c1
```

```
  \sl
  b4 b b b
  \nsl
  c1
}
gtrHarmony = \chordmode {
  \jazzChords
  s1 c2:min7+ d2:maj9
}
guitar = {
  \global
  \clef treble
  <<
    \gtr
  >>
}

%% ------ Piano ------
rhUpper = \relative c'' {
  \voiceOne
  \Key
  c1 | c | c
}
rhLower = \relative c' {
  \voiceTwo
  \Key
  e1 | e | e
}

lhUpper = \relative c' {
  \voiceOne
  \Key
  g1 | g | g
}
lhLower = \relative c {
  \voiceTwo
  \Key
  c1 | c | c
}

PianoRH = {
  \clef treble
  \global
  <<
    \new Voice = "one" \rhUpper
    \new Voice = "two" \rhLower
  >>
}
PianoLH = {
  \clef bass
  \global
  <<
```

```
    \new Voice = "one" \lhUpper
    \new Voice = "two" \lhLower
  >>
}

piano = {
  <<
    \new Staff = "upper" \PianoRH
    \new Staff = "lower" \PianoLH
  >>
}

% ------ Bass Guitar ------
Bass = \relative c {
  \Key
  c1 | c | c
}
bass = {
  \global
  \clef bass
  <<
    \Bass
  >>
}

% ------ Drums ------
up = \drummode {
  \voiceOne
  hh4 <hh sn> hh <hh sn>
  hh4 <hh sn> hh <hh sn>
  hh4 <hh sn> hh <hh sn>
}
down = \drummode {
  \voiceTwo
  bd4 s bd s
  bd4 s bd s
  bd4 s bd s
}

drumContents = {
  \global
  <<
    \new DrumVoice \up
    \new DrumVoice \down
  >>
}

%%%%%%%% It All Goes Together Here %%%%%%%%%%%%%%%%%%%%%

\score {
  <<
    \new StaffGroup = "horns" <<
```

```
      \new Staff = "trumpet" \with { instrumentName = "Trumpet" }
      \trumpet
      \new Staff = "altosax" \with { instrumentName = "Alto Sax" }
      \altoSax
      \new ChordNames = "barichords" \with { instrumentName = "Trumpet" }
      \bariHarmony
      \new Staff = "barisax" \with { instrumentName = "Bari Sax" }
      \bariSax
      \new Staff = "trombone" \with { instrumentName = "Trombone" }
      \trombone
    >>

    \new StaffGroup = "rhythm" <<
      \new ChordNames = "chords" \gtrHarmony
      \new Staff = "guitar" \with { instrumentName = "Guitar" }
      \guitar
      \new PianoStaff = "piano" \with {
        instrumentName = "Piano"
        midiInstrument = "acoustic grand"
      }
      \piano
      \new Staff = "bass" \with { instrumentName = "Bass" }
      \bass
      \new DrumStaff \with { instrumentName = "Drums" }
      \drumContents
    >>
  >>
  \layout {
    \context { \Staff \RemoveEmptyStaves }
    \context {
      \Score
      \override BarNumber.padding = #3
      \override RehearsalMark.padding = #2
      skipBars = ##t
    }
  }
  \midi { }
}
```

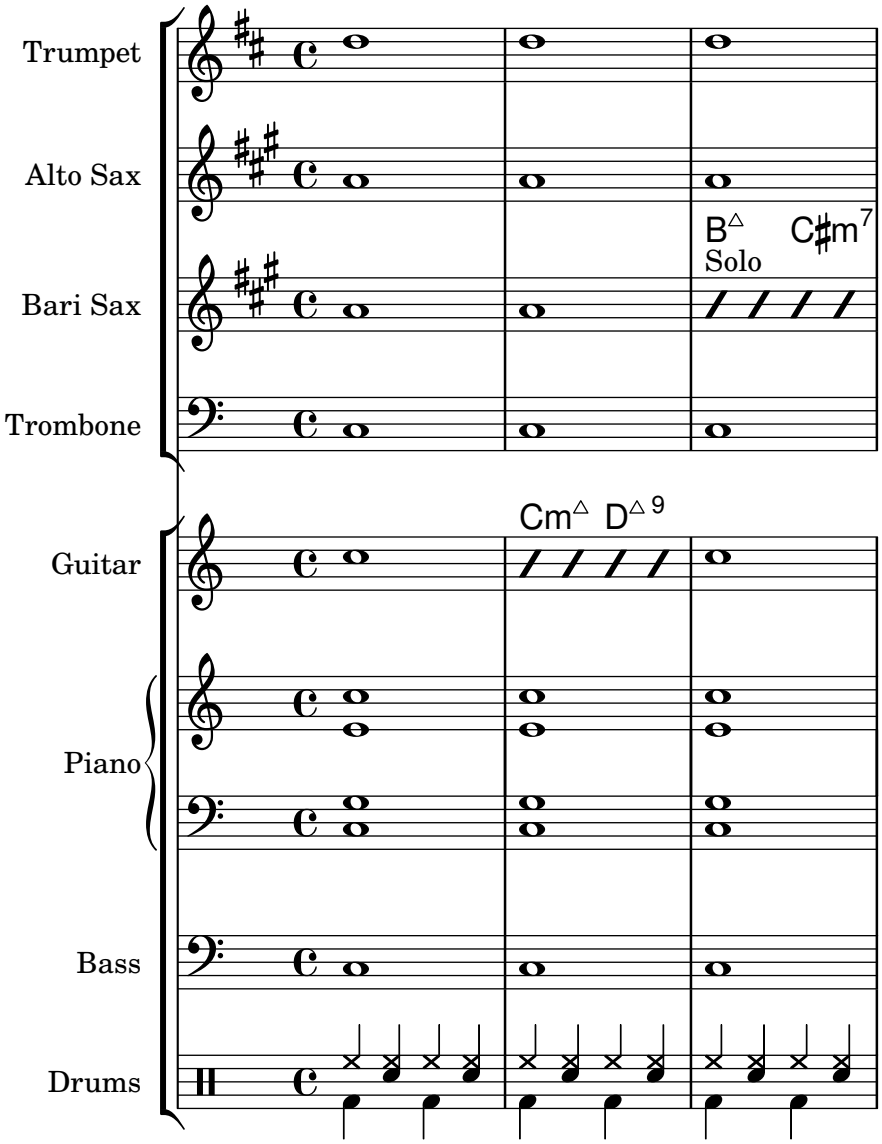
Song

(tune)

Me

moderato

Swing



Percussion beaters

Graphic symbols for percussion instruments are not natively supported; however it is possible to include such symbols, either as an external EPS file or as embedded PostScript code inside a markup, as demonstrated in this example.

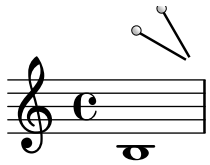
```
stick = \markup {
  \with-dimensions #'(0 . 5) #'(0 . 5)
  \postscript "
    0 6 translate
    0.8 -0.8 scale
    0 0 0 setrgbcolor
    [] 0 setdash
    1 setlinewidth
    0 setlinejoin
    0 setlinecap
    gsave [1 0 0 1 0 0] concat
    gsave [1 0 0 1 -3.5406095 -199.29342] concat
    gsave
    0 0 0 setrgbcolor
    newpath
    7.1434065 200.94354 moveto
```

```
7.2109628 200.90454 7.2785188 200.86554 7.3460747 200.82654 curveto
8.2056347 202.31535 9.0651946 203.80414 9.9247546 205.29295 curveto
9.8571989 205.33195 9.7896429 205.37095 9.7220864 205.40996 curveto
8.8625264 203.92115 8.0029664 202.43233 7.1434065 200.94354 curveto
closepath
eofill
grestore
gsave
0 0 0 setrgbcolor
newpath
4.9646672 203.10444 moveto
5.0036707 203.03688 5.0426744 202.96933 5.0816777 202.90176 curveto
6.5704792 203.76133 8.0592809 204.6209 9.5480824 205.48045 curveto
9.5090791 205.54801 9.4700754 205.61556 9.4310717 205.68311 curveto
7.94227 204.82356 6.4534687 203.96399 4.9646672 203.10444 curveto
closepath
eofill
grestore
gsave
<<
/ShadingType 3
/ColorSpace /DeviceRGB
/Coords [113.13708 207.87465 0 113.13708 207.87465 16.162441]
/Extend [true true]
/Domain [0 1]
/Function <<
/FunctionType 3
/Functions
[
<<
/FunctionType 2
/Domain [0 1]
/C0 [1 1 1]
/C1 [0.72941178 0.72941178 0.72941178]
/N 1
>>
]
/Domain [0 1]
/Bounds [ ]
/Encode [ 0 1 ]
>>
>>
newpath
7.6422017 200.76488 moveto
7.6505696 201.02554 7.3905363 201.24867 7.1341335 201.20075 curveto
6.8759501 201.16916 6.6949602 200.87978 6.7801462 200.63381 curveto
6.8480773 200.39155 7.1438307 200.25377 7.3728389 200.35861 curveto
7.5332399 200.42458 7.6444521 200.59122 7.6422017 200.76488 curveto
closepath
clip
gsave [
  0.052859054 0.063089841 -0.020912282 0.017521108 5.7334261 189.76443
```

```
] concat
shfill
grestore
grestore
0 0 0 setrgbcolor
[] 0 setdash
0.027282091 setlinewidth
0 setlinejoin
0 setlinecap
newpath
7.6422017 200.76488 moveto
7.6505696 201.02554 7.3905363 201.24867 7.1341335 201.20075 curveto
6.8759501 201.16916 6.6949602 200.87978 6.7801462 200.63381 curveto
6.8480773 200.39155 7.1438307 200.25377 7.3728389 200.35861 curveto
7.5332399 200.42458 7.6444521 200.59122 7.6422017 200.76488 curveto
closepath
stroke
gsave
<<
/ShadingType 3
/ColorSpace /DeviceRGB
/Coords [113.13708 207.87465 0 113.13708 207.87465 16.162441]
/Extend [true true]
/Domain [0 1]
/Function <<
/FunctionType 3
/Functions
[
<<
/FunctionType 2
/Domain [0 1]
/C0 [1 1 1]
/C1 [0.72941178 0.72941178 0.72941178]
/N 1
>>
]
/Domain [0 1]
/Bounds [ ]
/Encode [ 0 1 ]
>>
>>
newpath
5.2721217 202.83181 moveto
5.2804896 203.09247 5.0204563 203.3156 4.7640539 203.26768 curveto
4.5058701 203.23609 4.3248803 202.94671 4.4100662 202.70074 curveto
4.4779975 202.45848 4.7737511 202.3207 5.0027593 202.42554 curveto
5.1631598 202.49149 5.2743721 202.65813 5.2721217 202.83181 curveto
closepath
clip
gsave [
  0.052859054 0.063089841 -0.020912282 0.017521108 3.363346 191.83136
] concat
```

```
    shfill
    grestore
    grestore
    0 0 0 setrgbcolor
    [] 0 setdash
    0.027282091 setlinewidth
    0 setlinejoin
    0 setlinecap
    newpath
    5.2721217 202.83181 moveto
    5.2804896 203.09247 5.0204563 203.3156 4.7640539 203.26768 curveto
    4.5058701 203.23609 4.3248803 202.94671 4.4100662 202.70074 curveto
    4.4779975 202.45848 4.7737511 202.3207 5.0027593 202.42554 curveto
    5.1631598 202.49149 5.2743721 202.65813 5.2721217 202.83181 curveto
    closepath
    stroke
    grestore
    grestore
  "
}

\score {
  b1^\stick
}
```



Percussion example

A short example taken from Stravinsky's L'histoire du Soldat.

```
#(define mydrums '((bassdrum   default #t  4)
                   (snare      default #t -4)
                   (tambourine default #t  0)))

global = {
  \time 3/8 s4.
  \time 2/4 s2*2
  \time 3/8 s4.
  \time 2/4 s2
}

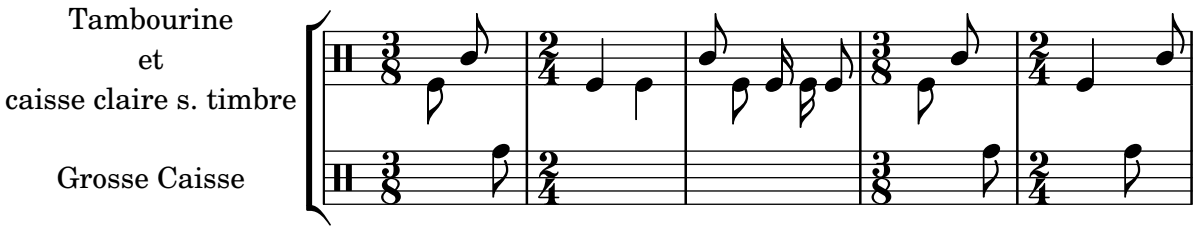
drumsA = {
  \context DrumVoice <<
    { \global }
    { \drummode {
        \autoBeamOff
        \stemDown sn8 \stemUp tamb s8 |
        sn4 \stemDown sn4 |
        \stemUp tamb8 \stemDown sn8 \stemUp sn16 \stemDown sn \stemUp sn8 |
```

```
        \stemDown sn8 \stemUp tamb s8 |
        \stemUp sn4 s8 \stemUp tamb
      }
    }
  >>
}

drumsB = {
  \drummode {
    s4 bd8 s2*2 s4 bd8 s4 bd8 s8
  }
}

\layout {
  indent = #40
}

\score {
  \new StaffGroup <<
    \new DrumStaff \with {
      instrumentName = \markup {
        \center-column {
          "Tambourine"
          "et"
          "caisse claire s. timbre"
        }
      }
    drumStyleTable = #(alist->hash-table mydrums)
  }
  \drumsA
  \new DrumStaff \with {
    instrumentName = #"Grosse Caisse"
    drumStyleTable = #(alist->hash-table mydrums)
  }
  \drumsB
  >>
}
```



Printing music with different time signatures

In the following snippet, two parts have a completely different time signature, yet remain synchronized.

The bar lines can no longer be printed at the `Score` level; to allow independent bar lines in each part, the `Default_barline_engraver` and `Timing_translator` are moved from the `Score` context to the `Staff` context.

If bar numbers are required, the `Bar_number_engraver` should also be moved, since it relies on properties set by the `Timing_translator`; a `\with` block can be used to add bar numbers to the relevant staff.

```
\paper {
  indent = #0
  ragged-right = ##t
}

global = { \time 3/4 { s2.*3 } \bar "" \break { s2.*3 } }

\layout {
  \context {
    \Score
    \remove "Timing_translator"
    \remove "Default_bar_line_engraver"
    \remove "Bar_number_engraver"
    \override SpacingSpanner.uniform-stretching = ##t
    \override SpacingSpanner.strict-note-spacing = ##t
    proportionalNotationDuration = #(ly:make-moment 1/64)
  }
  \context {
    \Staff
    \consists "Timing_translator"
    \consists "Default_bar_line_engraver"
  }
  \context {
    \Voice
    \remove "Forbid_line_break_engraver"
    tupletFullLength = ##t
  }
}

Bassklarinette = \new Staff \with {
  \consists "Bar_number_engraver"
  barNumberVisibility = #(every-nth-bar-number-visible 2)
  \override BarNumber.break-visibility = #end-of-line-invisible
} <<
  \global {
    \bar "|"
    \clef treble
    \time 3/8
    d''4.

    \bar "|"
    \time 3/4
    r8 des''2( c''8)

    \bar "|"
    \time 7/8
    r4. ees''2 ~
```

```
    \bar "|"
    \time 2/4
    \tupletUp
    \tuplet 3/2 { ees''4 r4 d''4 ~ }

    \bar "|"
    \time 3/8
    \tupletUp
    \tuplet 4/3 { d''4 r4 }

    \bar "|"
    \time 2/4
    e''2

    \bar "|"
    \time 3/8
    es''4.

    \bar "|"
    \time 3/4
    r8 d''2 r8
    \bar "|"
  }
>>

Perkussion = \new StaffGroup <<
  \new Staff <<
    \global {
      \bar "|"
      \clef percussion
      \time 3/4
      r4 c'2 ~

      \bar "|"
      c'2.

      \bar "|"
      R2.

      \bar "|"
      r2 g'4 ~

      \bar "|"
      g'2. ~

      \bar "|"
      g'2.
    }
  >>
  \new Staff <<
    \global {
      \bar "|"
```

```
      \clef percussion
      \time 3/4
      R2.

      \bar "|"
      g'2. ~
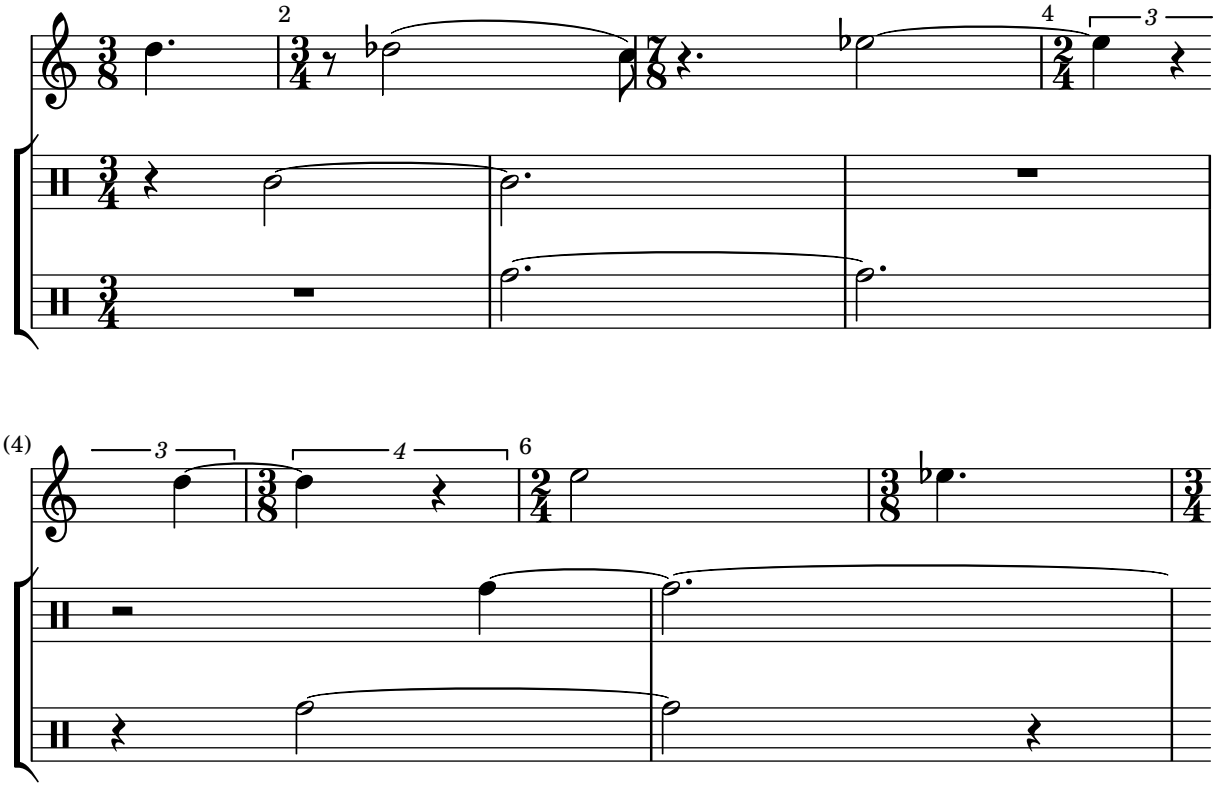
      \bar "|"
      g'2.

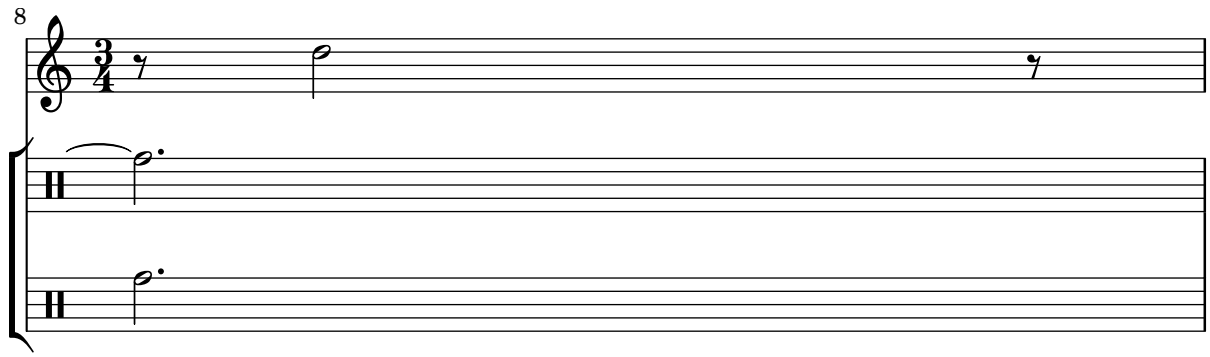
      \bar "|"
      r4 g'2 ~

      \bar "|"
      g'2 r4

      \bar "|"
      g'2.
    }
  >>
>>

\score {
  <<
    \Bassklarinette
    \Perkussion
  >>
}
```





Tam-tam example

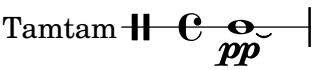
A tam-tam example, entered with 'tt'

```
#(define mydrums '((tamtam default #t 0)))

\new DrumStaff \with { instrumentName = #"Tamtam" }

\drummode {
  \set DrumStaff.drumStyleTable = #(alist->hash-table mydrums)
  \override Staff.StaffSymbol.line-positions = #'( 0 )
  \override Staff.BarLine.bar-extent = #'(-1.5 . 1.5)

  tt 1 \pp \laissezVibrer
}
```
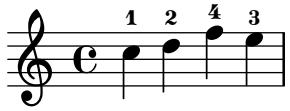


Fretted strings

Sezione “Fretted string instruments” in *Guida alla Notazione*

Adding fingerings to a score

Fingering instructions can be entered using a simple syntax.

```
\relative c'' {
  c4-1 d-2 f-4 e-3
}
```

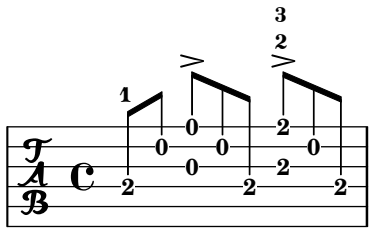


Adding fingerings to tablatures

To add fingerings to tablatures, use a combination of `\markup` and `\finger`.

```
one = \markup { \finger 1 }
two = \markup { \finger 2 }
threeTwo = \markup {
  \override #'(baseline-skip . 2)
  \column {
    \finger 3
    \finger 2
  }
}
threeFour = \markup {
  \override #'(baseline-skip . 2)
  \column {
    \finger 3
    \finger 4
  }
}

\score {
  \new TabStaff {
    \tabFullNotation
    \stemUp
    e8\4^\one b\2 <g\3 e'\1>^>[ b\2 e\4]
    <a\3 fis'\1>^>^\threeTwo[ b\2 e\4]
  }
}
```



Adding markups in a tablature

By default markups does not show in a tablature.

To make them appear, simply use the command `\revert TabStaff.TextScript.stencil`

```
%% http://lsr.di.unimi.it/LSR/Item?id=919
% by P.P.Schneider on June 2014

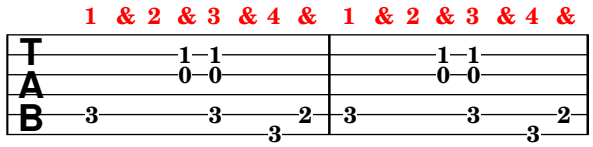
high  = { r4 r8 <g c'> q r8 r4 }

low = { c4 r4 c8 r8 g,8 b, }

pulse = { s8^"1" s^"&" s^"2" s^"&" s^"3" s^"&" s^"4" s^"&" }

\score {
 \new TabStaff {
   \repeat unfold 2 << \high \\ \low \\ \pulse >>
  }
  \layout {
    \context {
      \TabStaff
      \clef moderntab
      \revert TextScript.stencil
      \override TextScript.font-series = #'bold
      \override TextScript.font-size = #-2
      \override TextScript.color = #red

    }
    \context {
      \Score
      proportionalNotationDuration = #(ly:make-moment 1/8)
    }
  }
}
```
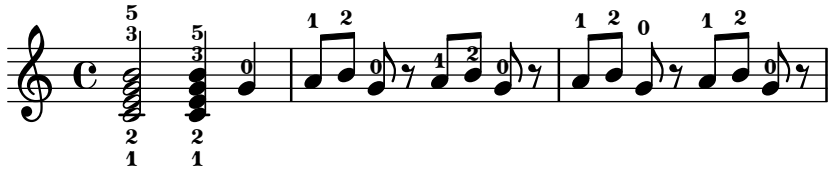


Far sì che la diteggiatura appaia dentro il rigo

Per impostazione predefinita, le diteggiature orientate verticalmente sono poste fuori dal rigo; questo comportamento tuttavia può essere disabilitato. Occorre fare attenzione alle situazioni in cui le diteggiature e i gambi sono rivolti nella stessa direzione: normalmente le diteggiature evitano soltanto i gambi con travature. Questa impostazione predefinita può essere cambiata in modo da evitare tutti i gambi oppure nessuno. L'esempio seguente mostra queste due opzioni, così come tornare al comportamento predefinito.

```
\relative c' {
  <c-1 e-2 g-3 b-5>2
  \override Fingering.staff-padding = #'()
  <c-1 e-2 g-3 b-5>4 g'-0
  a8[-1 b]-2 g-0 r
```

```
  \override Fingering.add-stem-support = ##f
  a[-1 b]-2 g-0 r
  \override Fingering.add-stem-support = ##t
  a[-1 b]-2 g-0 r
  \override Fingering.add-stem-support = #only-if-beamed
  a[-1 b]-2 g-0 r
}
```

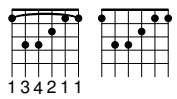


Barres in automatic fretboards

When automatic fretboards are used, barre indicators will be drawn whenever one finger is responsible for multiple strings.

If no finger indications are given in the chord from which the automatic fretboard is created, no barre indicators will be included, because there is no way to identify where barres should be placed.

```
\new FretBoards {
  <f,-1 c-3 f-4 a-2 c'-1 f'-1>1
  <f, c f a c' f'>1
}
```



Bar chords notation for Guitar (with Text Spanner)

Here is how to print bar chords (or barre chords) or half-bar chords (just uncomment the appropriate line for to select either one).

The syntax is : `\bbarre #"fret_number" note(s)`

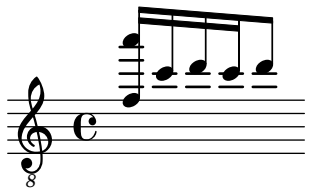
```
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%% %%%%%%  Cut here ----- Start 'bbarred.ly'

%% C with slash --------------------------------
cWithSlash = \markup {
  \combine \roman C \translate #'(0.6 . -0.4) \draw-line #'(0 . 2.0)
}
%% Span -----------------------------------
%% Syntax: \bbarre #"text" { notes } - text = any number of box
bbarre =
#(define-music-function (barre location str music) (string? ly:music?)
   (let ((elts (extract-named-music music 'rhythmic-event)))
     (if (pair? elts)
         (let ((first-element (first elts))
               (last-element (last elts)))
           (set! (ly:music-property first-element 'articulations)
                 (cons (make-music 'TextSpanEvent 'span-direction -1)
```

```
                    (ly:music-property first-element 'articulations)))
          (set! (ly:music-property last-element 'articulations)
                (cons (make-music 'TextSpanEvent 'span-direction 1)
                      (ly:music-property last-element 'articulations))))))
   #{
       \once \override TextSpanner.font-size = #-2
       \once \override TextSpanner.font-shape = #'upright
       \once \override TextSpanner.staff-padding = #3
       \once \override TextSpanner.style = #'line
       \once \override TextSpanner.to-barline = ##f
       \once \override TextSpanner.bound-details =
            #`((left
                (text . ,#{ \markup { \draw-line #'( 0 . -.5) } #})
                (Y . 0)
                (padding . 0.25)
                (attach-dir . -2))
               (right
                (text . ,#{ \markup { \cWithSlash #str } #})
                (Y . 0)
                (padding . 0.25)
                (attach-dir . 2)))
%% uncomment this line for make full barred
      % \once \override TextSpanner.bound-details.left.text = \markup{"B" #str}
      $music
   #})

%% %%%%%%%  Cut here ----- End 'bbarred.ly'
%% Copy and change the last line for full barred. Rename in 'fbarred.ly'
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

%% Syntaxe: \bbarre #"text" { notes } - text = any number of box
\relative c'{ \clef "G_8" \stemUp \bbarre #"III" { <f a'>16[  c' d c d8] } }
```



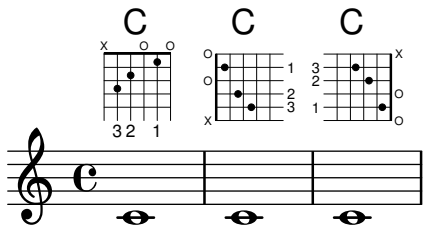
Cambiare l'orientamento della tastiera

I diagrammi dei tasti possono essere orientati in tre modi.

```
\include "predefined-guitar-fretboards.ly"

<<
  \chords {
    c1
    c1
    c1
  }
  \new FretBoards {
    \chordmode {
```

```
      c1
      \override FretBoard.fret-diagram-details.orientation =
        #'landscape
      c1
      \override FretBoard.fret-diagram-details.orientation =
        #'opposing-landscape
      c1
    }
  }
  \new Voice {
    c'1
    c'1
    c'
  }
>>
```



Glissando di accordi in intavolatura

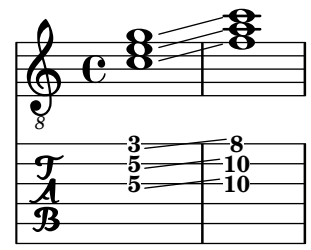
I glissati (o slide) di accordi vengono indicati sia nel rigo (contesto `Staff`) sia nell'intavolatura (contesto `TabStaff`). I numeri di corda sono necessari per `TabStaff`, perché i calcoli automatici della corda sono diversi per gli accordi e per le note singole.

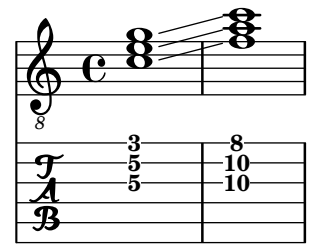
```
myMusic = \relative c' {
  <c e g>1 \glissando <f a c>
}

\score {
  <<
    \new Staff {
      \clef "treble_8"
      \myMusic
    }
    \new TabStaff \myMusic
  >>
}

\score {
  <<
    \new Staff {
      \clef "treble_8"
      \myMusic
    }
    \new TabStaff \with { \override Glissando.style = #'none } {
      \myMusic
    }
  >>
```

```
}
```





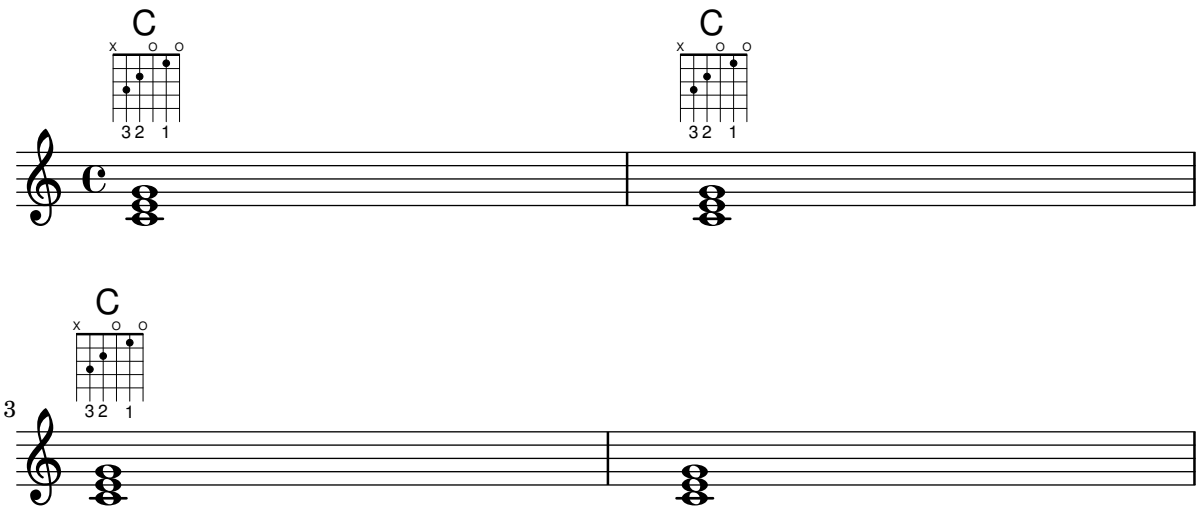
Cambi di accordo nei diagrammi dei tasti

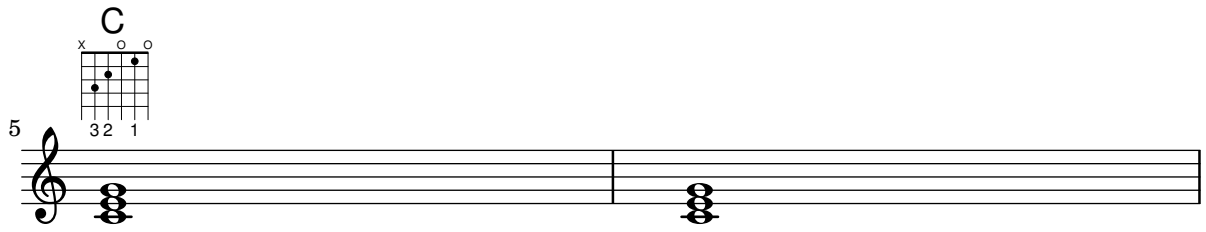
Si può impostare il contesto FretBoards in modo che mostri il diagramma solo quando l'accordo cambia o all'inizio di una nuova linea.

```
\include "predefined-guitar-fretboards.ly"

myChords = \chordmode {
  c1 c1 \break
  \set chordChanges = ##t
  c1 c1 \break
  c1 c1
}

<<
  \new ChordNames { \myChords }
  \new FretBoards { \myChords }
  \new Staff { \myChords }
>>
```





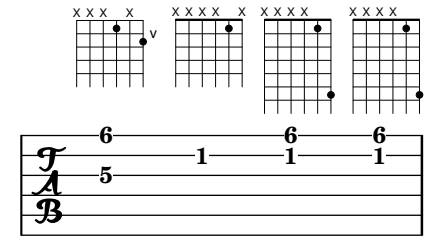
Chords with stretched fingering for FretBoards and TabVoice

Sometimes chords with a stretched fingering are required. If not otherwise specified the context-property `maximumFretStretch` is set to 4, though. Resulting in a warning about "No string for pitch ..." and the note is omitted. You may set `maximumFretStretch` to an appropriate value or explecitely assign string-numbers to all notes of a chord.

```
%% The code below will print two warnings, which may be omitted by uncommenting:
%#(for-each (lambda (x) (ly:expect-warning "No string for pitch")) (iota 2))

mus = {
  <c' bes'>
  <c'\2 bes'>
  \set maximumFretStretch = 5
  <c' bes'>
  <c'\2 bes'\1>
}

<<
  \new FretBoards \mus
  \new TabVoice \mus
>>
```

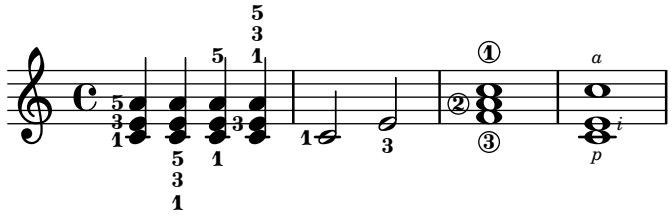


Controllare il posizionamento delle diteggiature di un accordo

Il posizionamento dei numeri della diteggiatura può essere regolato in modo preciso. Perché l'orientamento funzioni, occorre usare il costrutto per gli accordi `<>` anche per le note singole. Si può impostare in modo simile l'orientamento dei numeri di corda e delle diteggiature della mano destra.

```
\relative c' {
  \set fingeringOrientations = #'(left)
  <c-1 e-3 a-5>4
  \set fingeringOrientations = #'(down)
  <c-1 e-3 a-5>4
  \set fingeringOrientations = #'(down right up)
  <c-1 e-3 a-5>4
  \set fingeringOrientations = #'(up)
  <c-1 e-3 a-5>4
  \set fingeringOrientations = #'(left)
  <c-1>2
  \set fingeringOrientations = #'(down)
```

```
  <e-3>2
  \set stringNumberOrientations = #'(up left down)
  <f\3 a\2 c\1>1
  \set strokeFingerOrientations = #'(down right up)
  <c\rightHandFinger #1 e\rightHandFinger #2 c'\rightHandFinger #4 >
}
```



Personalizzare la tastiera del diagramma dei tasti

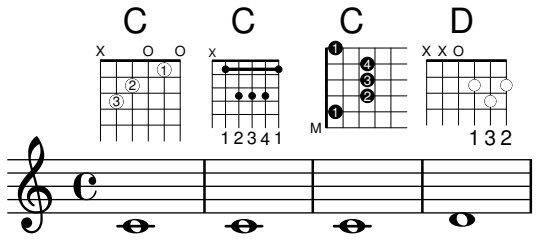
Le proprietà del diagramma dei tasti possono essere impostate tramite `'fret-diagram-details`. Per i diagrammi dell'oggetto FretBoard, gli override vengono applicati all'oggetto `FretBoards.FretBoard`. Come `Voice`, `FretBoards` è un contesto di basso livello, dunque può essere omesso negli override delle proprietà.

```
\include "predefined-guitar-fretboards.ly"
\storePredefinedDiagram #default-fret-table \chordmode { c' }
                        #guitar-tuning
                        #"x;1-1-(;3-2;3-3;3-4;1-1-);"

% shorthand
oo = #(define-music-function
       (grob-path value)
       (list? scheme?)
       #{ \once \override $grob-path = #value #})

<<
  \new ChordNames {
    \chordmode { c1 | c | c | d }
  }
  \new FretBoards {
    % Set global properties of fret diagram
    \override FretBoards.FretBoard.size = #'1.2
    \override FretBoard.fret-diagram-details.finger-code = #'in-dot
    \override FretBoard.fret-diagram-details.dot-color = #'white
    \chordmode {
      c
      \oo FretBoard.size #'1.0
      \oo FretBoard.fret-diagram-details.barre-type #'straight
      \oo FretBoard.fret-diagram-details.dot-color #'black
      \oo FretBoard.fret-diagram-details.finger-code #'below-string
      c'
      \oo FretBoard.fret-diagram-details.barre-type #'none
      \oo FretBoard.fret-diagram-details.number-type #'arabic
      \oo FretBoard.fret-diagram-details.orientation #'landscape
      \oo FretBoard.fret-diagram-details.mute-string #"M"
      \oo FretBoard.fret-diagram-details.label-dir #LEFT
```

```
      \oo FretBoard.fret-diagram-details.dot-color #'black
      c'
      \oo FretBoard.fret-diagram-details.finger-code #'below-string
      \oo FretBoard.fret-diagram-details.dot-radius #0.35
      \oo FretBoard.fret-diagram-details.dot-position #0.5
      \oo FretBoard.fret-diagram-details.fret-count #3
      d
    }
  }
  \new Voice {
    c'1 | c' | c' | d'
  }
>>
```



Personalizzare il diagramma dei tasti di tipo markup

Le proprietà del diagramma dei tasti si possono impostare tramite `'fret-diagram-details`. Per diagrammi di tipo markup, gli override possono essere applicati all'oggetto `Voice.TextScript` o direttamente al markup.

```
<<
  \chords { c1 | c | c | d }

  \new Voice = "mel" {
    \textLengthOn
    % Set global properties of fret diagram
    \override TextScript.size = #'1.2
    \override TextScript.fret-diagram-details.finger-code = #'in-dot
    \override TextScript.fret-diagram-details.dot-color = #'white

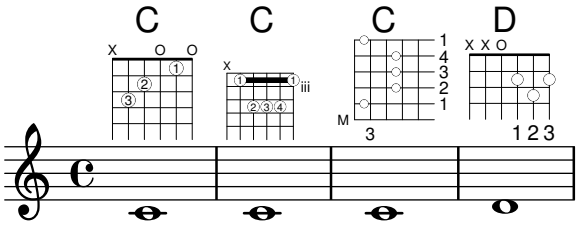
    %% C major for guitar, no barre, using defaults
       % terse style
    c'1^\markup { \fret-diagram-terse "x;3-3;2-2;o;1-1;o;" }

    %% C major for guitar, barred on third fret
       % verbose style
       % size 1.0
       % roman fret label, finger labels below string, straight barre
    c'1^\markup {
      % standard size
      \override #'(size . 1.0) {
        \override #'(fret-diagram-details . (
                     (number-type . roman-lower)
                     (finger-code . in-dot)
                     (barre-type . straight))) {
```

```
          \fret-diagram-verbose #'((mute 6)
                                   (place-fret 5 3 1)
                                   (place-fret 4 5 2)
                                   (place-fret 3 5 3)
                                   (place-fret 2 5 4)
                                   (place-fret 1 3 1)
                                   (barre 5 1 3))
        }
      }
    }

    %% C major for guitar, barred on third fret
       % verbose style
       % landscape orientation, arabic numbers, M for mute string
       % no barre, fret label down or left, small mute label font
    c'1^\markup {
      \override #'(fret-diagram-details . (
                  (finger-code . below-string)
                  (number-type . arabic)
                  (label-dir . -1)
                  (mute-string . "M")
                  (orientation . landscape)
                  (barre-type . none)
                  (xo-font-magnification . 0.4)
                  (xo-padding . 0.3))) {
        \fret-diagram-verbose #'((mute 6)
                                 (place-fret 5 3 1)
                                 (place-fret 4 5 2)
                                 (place-fret 3 5 3)
                                 (place-fret 2 5 4)
                                 (place-fret 1 3 1)
                                 (barre 5 1 3))
      }
    }

    %% simple D chord
       % terse style
       % larger dots, centered dots, fewer frets
       % label below string
    d'1^\markup {
      \override #'(fret-diagram-details . (
                  (finger-code . below-string)
                  (dot-radius . 0.35)
                  (dot-position . 0.5)
                  (fret-count . 3))) {
        \fret-diagram-terse "x;x;o;2-1;3-2;2-3;"
      }
    }
  }
>>
```



Definire diagrammi dei tasti predefiniti per altri strumenti

Si possono aggiungere diagrammi dei tasti predefiniti per nuovi strumenti oltre a quelli standard per chitarra. Questo frammento mostra come farlo definendo una nuova accordatura e alcuni diagrammi predefiniti per il *quatro* venezuelano.

Mostra anche come includere le diteggiature negli accordi usati come punti di riferimento per la consultazione degli accordi e come mostrarle nel diagramma dei tasti e in `TabStaff`, ma non nella musica.

Questi diagrammi non sono trasponibili perché contengono informazioni sulle corde. È prevista una correzione in futuro.

```
% add FretBoards for the Cuatro
%   Note: This section could be put into a separate file
%      predefined-cuatro-fretboards.ly
%      and \included into each of your compositions

cuatroTuning = #`(,(ly:make-pitch 0 6 0)
                  ,(ly:make-pitch 1 3 SHARP)
                  ,(ly:make-pitch 1 1 0)
                  ,(ly:make-pitch 0 5 0))

dSix = { <a\4 b\1 d\3 fis\2> }
dMajor = { <a\4 d\1 d\3 fis \2> }
aMajSeven = { <a\4 cis\1 e\3 g\2> }
dMajSeven = { <a\4 c\1 d\3 fis\2> }
gMajor = { <b\4 b\1 d\3 g\2> }

\storePredefinedDiagram #default-fret-table \dSix
                        #cuatroTuning
                        #"o;o;o;o;"
\storePredefinedDiagram #default-fret-table \dMajor
                        #cuatroTuning
                        #"o;o;o;3-3;"
\storePredefinedDiagram #default-fret-table \aMajSeven
                        #cuatroTuning
                        #"o;2-2;1-1;2-3;"
\storePredefinedDiagram #default-fret-table \dMajSeven
                        #cuatroTuning
                        #"o;o;o;1-1;"
\storePredefinedDiagram #default-fret-table \gMajor
                        #cuatroTuning
                        #"2-2;o;1-1;o;"

% end of potential include file /predefined-cuatro-fretboards.ly


#(set-global-staff-size 16)
```

```
primerosNames = \chordmode {
  d:6 d a:maj7 d:maj7
  g
}
primeros = {
  \dSix \dMajor \aMajSeven \dMajSeven
  \gMajor
}

\score {
  <<
    \new ChordNames {
      \set chordChanges = ##t
      \primerosNames
    }

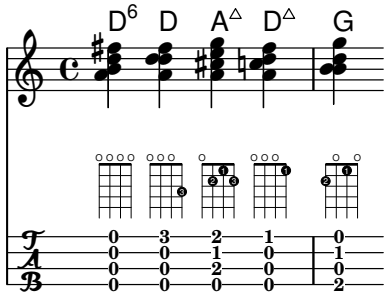
    \new Staff {
      \new Voice \with {
        \remove "New_fingering_engraver"
      }
      \relative c'' {
        \primeros
      }
    }

    \new FretBoards {
      \set Staff.stringTunings = #cuatroTuning
%      \override FretBoard
%        #'(fret-diagram-details string-count) = 4
      \override FretBoard.fret-diagram-details.finger-code = #'in-dot
      \primeros
    }

    \new TabStaff \relative c'' {
      \set TabStaff.stringTunings = #cuatroTuning
      \primeros
    }

  >>

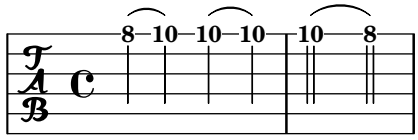
  \layout {
    \context {
      \Score
      \override SpacingSpanner.base-shortest-duration =
        #(ly:make-moment 1 16)
    }
  }
  \midi { }
}
```



Faking a hammer in tablatures

A hammer in tablature can be faked with slurs.

```
\score {
  \new TabStaff {
    \relative c'' {
      \tabFullNotation
      c4( d) d( d)
      d2( c)
    }
  }
}
```

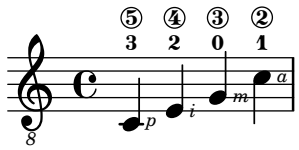


Diteggiature, indicazioni di corda e diteggiature della mano destra

Questo esempio combina la diteggiatura per la mano sinistra, le indicazioni di stringa e la diteggiatura della mano destra.

```
#(define RH rightHandFinger)

\relative c {
  \clef "treble_8"
  <c-3\5\RH #1 >4
  <e-2\4\RH #2 >4
  <g-0\3\RH #3 >4
  <c-1\2\RH #4 >4
}
```



Flamenco notation

For flamenco guitar, special notation is used:

- a *golpe* symbol to indicate a slap on the guitar body with the nail of the ring finger
- an arrow to indicate (the direction of) strokes
- different letters for fingering ("p": thumb, "i": index finger, "m": middle finger, "a": ring finger and "x": little finger)

- 3- and 4-finger *rasgueados*; stroke upwards with all fingers, ending with an up- and down using the index finger
- *abanicos*: strokes (in tuples) with thumb (down), little and index finger (both up). There's also an *abanico 2* where middle and ring finger are used instead of the little finger.
- *alza pua*: fast playing with the thumb

Most figures use arrows in combination with fingering; with abanicos and rasgueados, noteheads are printed only for the first chord.

This snippet contains some header-like code that can be copied as '`flamenco.ly`' and included in source files.

```
%%%%%%  Cut here ----- Start 'flamenco.ly'

% Text indicators :
abanico = ^\markup\small { \italic Abanico }
rasgueado = ^\markup\small { \italic Ras. }
alzapua = ^\markup\small { \italic Alzapua }

% Finger stroke symbols :
strokeUp = \markup\combine\override #'(thickness . 1.3) \draw-line #'(0 . 2)\raise #2 \arrow
strokeDown = \markup\combine\arrow-head #Y #DOWN ##f \override #'(thickness . 1.3) \draw-lin

% Golpe symbol :
golpe = \markup {
  \filled-box #'(0 . 1) #'(0 . 1) #0
  \hspace #-1.6
  \with-color #white
  \filled-box #'(0.15 . 0.85) #'(0.15 . 0.85) #0
}

% Strokes, fingers and golpe command :
RHp = \rightHandFinger #1
RHi = \rightHandFinger #2
RHm = \rightHandFinger #3
RHa = \rightHandFinger #4
RHx = \rightHandFinger #5
RHu = \rightHandFinger \strokeUp
RHd = \rightHandFinger \strokeDown
RHg = \rightHandFinger \golpe

% Just handy :)
tupletOff = {
  \once \omit TupletNumber
  \once \omit TupletBracket
}

tupletsOff = {
  \omit TupletNumber
  \override TupletBracket.bracket-visibility = #'if-no-beam
}

tupletsOn = {
  \override TupletBracket.bracket-visibility = #'default
```

```
  \undo \omit TupletNumber
}

headsOff = {
  \hide TabNoteHead
  \hide NoteHead
  \override NoteHead.no-ledgers = ##t
}

headsOn = {
  \override TabNoteHead.transparent = ##f
  \override NoteHead.transparent = ##f
  \override NoteHead.no-ledgers = ##f
}

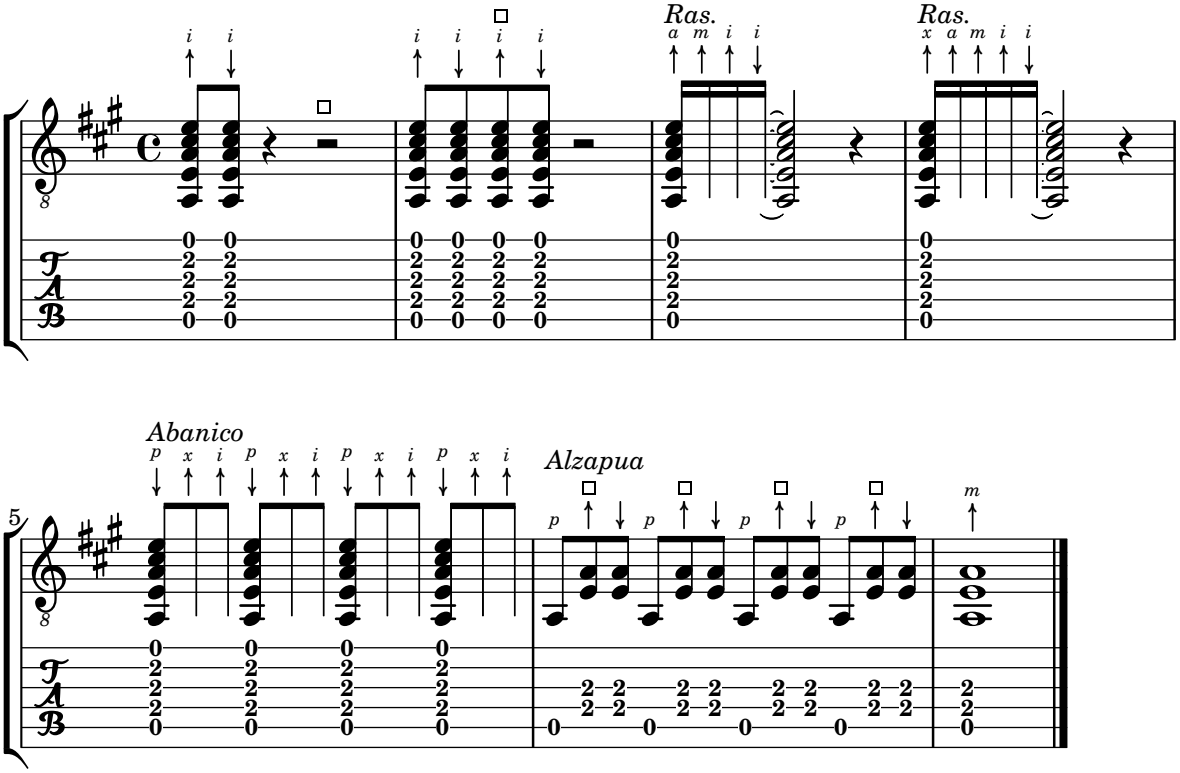
%%%%%%  Cut here ----- End 'flamenco.ly'
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

part = \relative c' {
  \set strokeFingerOrientations = #'(up)
  \key a\major
  <a, e' a cis e\RHu\RHi>8
  <a e' a cis e\RHd\RHi>8
  r4
  r2^\markup\golpe
  <a e' a cis e\RHu\RHi>8
  <a e' a cis e\RHd\RHi>8
  <a e' a cis e\RHu\RHi\RHg>8
  <a e' a cis e\RHd\RHi>8
  r2
  <a e' a cis e\RHu\RHa>16\rasgueado
  \headsOff
  <a e' a cis e\RHu\RHm>
  <a e' a cis e\RHu\RHi>
  <a e' a cis e\RHd\RHi>~
  \headsOn
  <a e' a cis e>2
  r4
  \tupletOff
  \tuplet 5/4 {
    <a e' a cis e\RHu\RHx>16\rasgueado
    \headsOff
    <a e' a cis e\RHu\RHa>
    <a e' a cis e\RHu\RHm>
    <a e' a cis e\RHu\RHi>
    <a e' a cis e\RHd\RHi>~
    \headsOn
  }
  <a e' a cis e>2
  r4
  \tupletsOff
  \tuplet 3/2 {
```

```
    <a e' a cis e\RHd\RHp>8\abanico
    \headsOff
    <a e' a cis e\RHu\RHx>
    <a e' a cis e\RHu\RHi>
    \headsOn
  }
  \tuplet 3/2 {
    <a e' a cis e\RHd\RHp>8
    \headsOff
    <a e' a cis e\RHu\RHx>
    <a e' a cis e\RHu\RHi>
    \headsOn
  }
  \tuplet 3/2 {
    <a e' a cis e\RHd\RHp>8
    \headsOff
    <a e' a cis e\RHu\RHx>
    <a e' a cis e\RHu\RHi>
    \headsOn
  }
  \tuplet 3/2 {
    <a e' a cis e\RHd\RHp>8
    \headsOff
    <a e' a cis e\RHu\RHx>
    <a e' a cis e\RHu\RHi>
    \headsOn
  }
  \tupletsOff
  \override Beam.positions = #'(2 . 2)
  \tuplet 3/2 {
    a8\RHp\alzapua
    <e' a\RHu\RHg>
    <e a\RHd>
  }
  \tuplet 3/2 {
    a,8\RHp
    <e' a\RHu\RHg>
    <e a\RHd>
  }
  \tuplet 3/2 {
    a,8\RHp
    <e' a\RHu\RHg>
    <e a\RHd>
  }
  \tuplet 3/2 {
    a,8\RHp
    <e' a\RHu\RHg>
    <e a\RHd>
  }
  \tupletsOn
  <a, e' a\RHu\RHm>1
  \bar "|."
```

```
}

\score {
  \new StaffGroup <<
    \context Staff = "part" <<
      \clef "G_8"
      {
        \part
      }
    >>
    \context TabStaff {
      \part
    }
  >>
  \layout {
    ragged-right = ##t
  }
}
```



Fret diagrams explained and developed

This snippet shows many possibilities for obtaining and tweaking fret diagrams.

```
<<
  \chords {
    a2 a
    \repeat unfold 3 {
      c c c d d
    }
  }
```

```
\new Voice = "mel" {
  \textLengthOn
  % Set global properties of fret diagram
  \override TextScript.size = #1.2
  \override TextScript.fret-diagram-details.finger-code = #'below-string
  \override TextScript.fret-diagram-details.dot-color = #'black

  %% A chord for ukulele
  a'2^\markup {
    \override #'(fret-diagram-details . (
                 (string-count . 4)
                 (dot-color . white)
                 (finger-code . in-dot))) {
      \fret-diagram "4-2-2;3-1-1;2-o;1-o;"
    }
  }

  %% A chord for ukulele, with formatting defined in definition string
  %  1.2 * size, 4 strings, 4 frets, fingerings below string
  %  dot radius .35 of fret spacing, dot position 0.55 of fret spacing
  a'2^\markup {
    \override #'(fret-diagram-details . (
                 (dot-color . white)
                 (open-string . "o"))) {
      \fret-diagram "s:1.2;w:4;h:3;f:2;d:0.35;p:0.55;4-2-2;3-1-1;2-o;1-o;"
    }
  }

    %% These chords will be in normal orientation

  %% C major for guitar, barred on third fret
  %  verbose style
  %  roman fret label, finger labels below string, straight barre
  c'2^\markup {
    % 110% of default size
    \override #'(size . 1.1) {
      \override #'(fret-diagram-details . (
                   (number-type . roman-lower)
                   (finger-code . below-string)
                   (barre-type . straight))) {
        \fret-diagram-verbose #'((mute 6)
                                 (place-fret 5 3 1)
                                 (place-fret 4 5 2)
                                 (place-fret 3 5 3)
                                 (place-fret 2 5 4)
                                 (place-fret 1 3 1)
                                 (barre 5 1 3))
      }
    }
  }
```

```
%% C major for guitar, barred on third fret
%% Double barre used to test barre function
%  verbose style
c'2^\markup {
  % 110% of default size
  \override #'(size . 1.1) {
    \override #'(fret-diagram-details . (
                 (number-type . arabic)
                 (dot-label-font-mag . 0.9)
                 (finger-code . in-dot)
                 (fret-label-font-mag . 0.6)
                 (fret-label-vertical-offset . 0)
                 (label-dir . -1)
                 (mute-string . "M")
                 (xo-font-magnification . 0.4)
                 (xo-padding . 0.3))) {
      \fret-diagram-verbose #'((mute 6)
                               (place-fret 5 3 1)
                               (place-fret 4 5 2)
                               (place-fret 3 5 3)
                               (place-fret 2 5 4)
                               (place-fret 1 3 1)
                               (barre 4 2 5)
                               (barre 5 1 3))
    }
  }
}

%% C major for guitar, with capo on third fret
%  verbose style
c'2^\markup {
  % 110% of default size
  \override #'(size . 1.1) {
    \override #'(fret-diagram-details . (
                 (number-type . roman-upper)
                 (dot-label-font-mag . 0.9)
                 (finger-code . none)
                 (fret-label-vertical-offset . 0.5)
                 (xo-font-magnification . 0.4)
                 (xo-padding . 0.3))) {
      \fret-diagram-verbose #'((mute 6)
                               (capo 3)
                               (open 5)
                               (place-fret 4 5 1)
                               (place-fret 3 5 2)
                               (place-fret 2 5 3)
                               (open 1))
    }
  }
}

%% simple D chord
```

```
d'2^\markup {
  \override #'(fret-diagram-details . (
               (finger-code . below-string)
               (dot-radius . 0.35)
               (string-thickness-factor . 0.3)
               (dot-position . 0.5)
               (fret-count . 3))) {
    \fret-diagram-terse "x;x;o;2-1;3-2;2-3;"
  }
}

%% simple D chord, large top fret thickness
d'2^\markup  {
  \override #'(fret-diagram-details . (
               (finger-code . below-string)
               (dot-radius . 0.35)
               (dot-position . 0.5)
               (top-fret-thickness . 7)
               (fret-count . 3))) {
    \fret-diagram-terse "x;x;o;2-1;3-2;2-3;"
  }
}

  % These chords will be in landscape orientation
\override TextScript.fret-diagram-details.orientation = #'landscape

%% C major for guitar, barred on third fret
%  verbose style
%  roman fret label, finger labels below string, straight barre
c'2^\markup {
  % 110% of default size
  \override #'(size . 1.1) {
    \override #'(fret-diagram-details . (
                 (number-type . roman-lower)
                 (finger-code . below-string)
                 (barre-type . straight))) {
      \fret-diagram-verbose #'((mute 6)
                               (place-fret 5 3 1)
                               (place-fret 4 5 2)
                               (place-fret 3 5 3)
                               (place-fret 2 5 4)
                               (place-fret 1 3 1)
                               (barre 5 1 3))
    }
  }
}

%% C major for guitar, barred on third fret
%% Double barre used to test barre function
%  verbose style
c'2^\markup {
  % 110% of default size
```

```
  \override #'(size . 1.1) {
    \override #'(fret-diagram-details . (
                 (number-type . arabic)
                 (dot-label-font-mag . 0.9)
                 (finger-code . in-dot)
                 (fret-label-font-mag . 0.6)
                 (fret-label-vertical-offset . 0)
                 (label-dir . -1)
                 (mute-string . "M")
                 (xo-font-magnification . 0.4)
                 (xo-padding . 0.3))) {
      \fret-diagram-verbose #'((mute 6)
                               (place-fret 5 3 1)
                               (place-fret 4 5 2)
                               (place-fret 3 5 3)
                               (place-fret 2 5 4)
                               (place-fret 1 3 1)
                               (barre 4 2 5)
                               (barre 5 1 3))
    }
  }
}

%% C major for guitar, with capo on third fret
%  verbose style
c'2^\markup {
  % 110% of default size
  \override #'(size . 1.1) {
    \override #'(fret-diagram-details . (
                 (number-type . roman-upper)
                 (dot-label-font-mag . 0.9)
                 (finger-code . none)
                 (fret-label-vertical-offset . 0.5)
                 (xo-font-magnification . 0.4)
                 (xo-padding . 0.3))) {
      \fret-diagram-verbose #'((mute 6)
                               (capo 3)
                               (open 5)
                               (place-fret 4 5 1)
                               (place-fret 3 5 2)
                               (place-fret 2 5 3)
                               (open 1))
    }
  }
}

%% simple D chord
d'2^\markup {
  \override #'(fret-diagram-details . (
                (finger-code . below-string)
                (dot-radius . 0.35)
                (dot-position . 0.5)
```

```
                (fret-count . 3))) {
    \fret-diagram-terse "x;x;o;2-1;3-2;2-3;"
  }
}

%% simple D chord, large top fret thickness
d'2^\markup {
  \override #'(fret-diagram-details . (
                (finger-code . below-string)
                (dot-radius . 0.35)
                (dot-position . 0.5)
                (top-fret-thickness . 7)
                (fret-count . 3))) {
    \fret-diagram-terse "x;x;o;2-1;3-2;2-3;"
  }
}

  % These chords will be in opposing-landscape orientation
\override TextScript.fret-diagram-details.orientation = #'opposing-landscape

%% C major for guitar, barred on third fret
%  verbose style
%  roman fret label, finger labels below string, straight barre
c'2^\markup {
  % 110% of default size
  \override #'(size . 1.1) {
    \override #'(fret-diagram-details . (
                  (number-type . roman-lower)
                  (finger-code . below-string)
                  (barre-type . straight))) {
      \fret-diagram-verbose #'((mute 6)
                               (place-fret 5 3 1)
                               (place-fret 4 5 2)
                               (place-fret 3 5 3)
                               (place-fret 2 5 4)
                               (place-fret 1 3 1)
                               (barre 5 1 3))
    }
  }
}

%% C major for guitar, barred on third fret
%% Double barre used to test barre function
%  verbose style
c'2^\markup {
  % 110% of default size
  \override #'(size . 1.1) {
    \override #'(fret-diagram-details . (
                  (number-type . arabic)
                  (dot-label-font-mag . 0.9)
                  (finger-code . in-dot)
                  (fret-label-font-mag . 0.6)
```

```
                (fret-label-vertical-offset . 0)
                (label-dir . -1)
                (mute-string . "M")
                (xo-font-magnification . 0.4)
                (xo-padding . 0.3))) {
      \fret-diagram-verbose #'((mute 6)
                               (place-fret 5 3 1)
                               (place-fret 4 5 2)
                               (place-fret 3 5 3)
                               (place-fret 2 5 4)
                               (place-fret 1 3 1)
                               (barre 4 2 5)
                               (barre 5 1 3))
    }
  }
}

%% C major for guitar, with capo on third fret
%  verbose style
c'2^\markup {
  % 110% of default size
  \override #'(size . 1.1) {
    \override #'(fret-diagram-details . (
                (number-type . roman-upper)
                (dot-label-font-mag . 0.9)
                (finger-code . none)
                (fret-label-vertical-offset . 0.5)
                (xo-font-magnification . 0.4)
                (xo-padding . 0.3))) {
      \fret-diagram-verbose #'((mute 6)
                               (capo 3)
                               (open 5)
                               (place-fret 4 5 1)
                               (place-fret 3 5 2)
                               (place-fret 2 5 3)
                               (open 1))
    }
  }
}

%% simple D chord
d'2^\markup {
  \override #'(fret-diagram-details . (
              (finger-code . below-string)
              (dot-radius . 0.35)
              (dot-position . 0.5)
              (fret-count . 3))) {
    \fret-diagram-terse "x;x;o;2-1;3-2;2-3;"
  }
}

%% simple D chord, large top fret thickness
```

```
    d'2^\markup {
      \override #'(fret-diagram-details . (
                    (finger-code . below-string)
                    (dot-radius . 0.35)
                    (dot-position . 0.5)
                    (top-fret-thickness . 7)
                    (fret-count . 3))) {
        \fret-diagram-terse "x;x;o;2-1;3-2;2-3;"
      }
    }
  }
>>
```

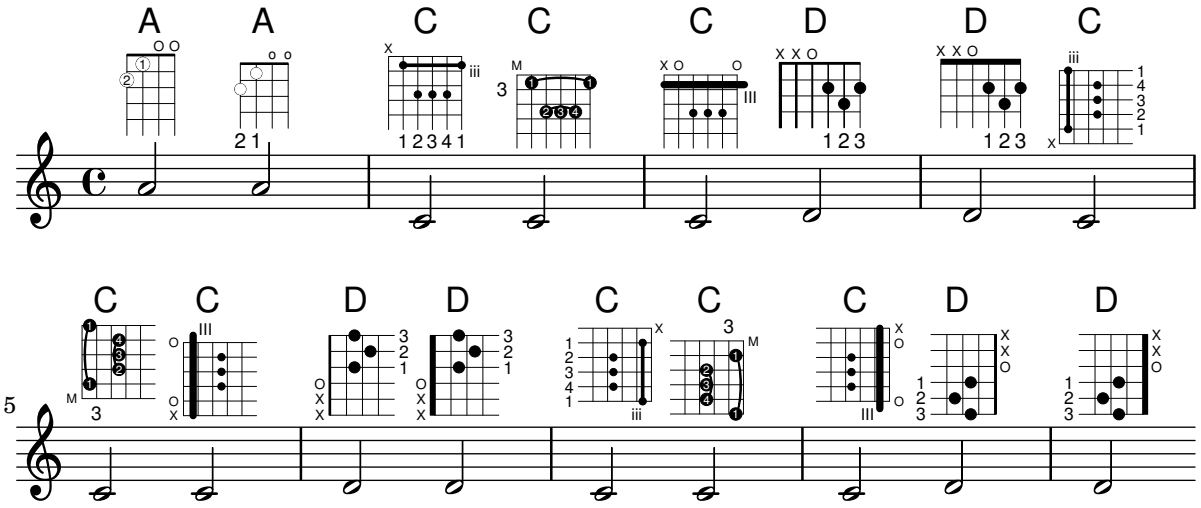


Tabelle alternative per i diagrammi dei tasti

Si possono creare tabelle alternative per i diagrammi dei tasti. Queste possono essere usate per avere diagrammi alternativi per uno stesso accordo.

Per poter usare una tabella alternativa, deve prima essere creata. Quindi si aggiungono i diagrammi alla tabella.

La tabella può essere vuota oppure ricopiata da una tabella esistente.

La tabella da usare nel mostrare i diagrammi predefiniti viene selezionata dalla proprietà `\predefinedDiagramTable`.

```
\include "predefined-guitar-fretboards.ly"

% Make a blank new fretboard table
#(define custom-fretboard-table-one
   (make-fretboard-table))

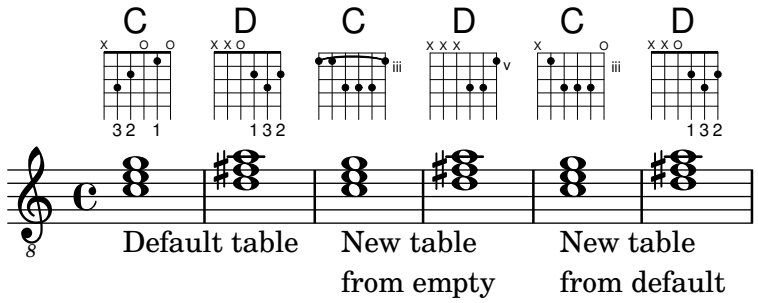
% Make a new fretboard table as a copy of default-fret-table
#(define custom-fretboard-table-two
   (make-fretboard-table default-fret-table))

% Add a chord to custom-fretboard-table-one
\storePredefinedDiagram #custom-fretboard-table-one
                        \chordmode {c}
                        #guitar-tuning
```

```
                          "3-(;3;5;5;5;3-);"

% Add a chord to custom-fretboard-table-two
\storePredefinedDiagram #custom-fretboard-table-two
                          \chordmode {c}
                          #guitar-tuning
                          "x;3;5;5;5;o;"

<<
  \chords {
    c1 | d1 |
    c1 | d1 |
    c1 | d1 |
  }
  \new FretBoards {
    \chordmode {
      \set predefinedDiagramTable = #default-fret-table
      c1 | d1 |
      \set predefinedDiagramTable = #custom-fretboard-table-one
      c1 | d1 |
      \set predefinedDiagramTable = #custom-fretboard-table-two
      c1 | d1 |
    }
  }
  \new Staff {
    \clef "treble_8"
    <<
      \chordmode {
        c1 | d1 |
        c1 | d1 |
        c1 | d1 |
      }
      {
        s1_\markup "Default table" | s1 |
        s1_\markup \column {"New table" "from empty"} | s1 |
        s1_\markup \column {"New table" "from default"} | s1 |
      }
    >>
  }
>>
```



Armonici su corde premute in intavolatura

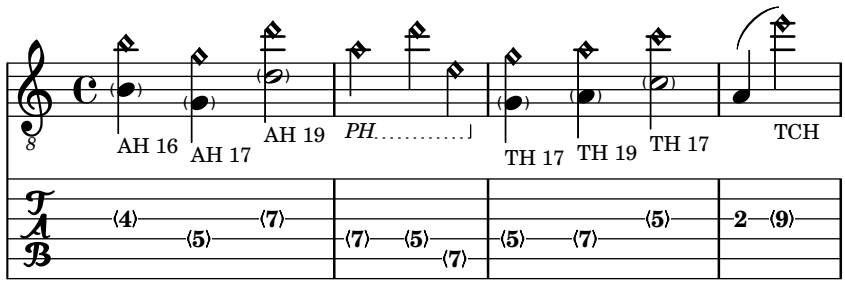
Questo frammento mostra come scrivere su intavolatura armonici su corde premute.

```
pinchedHarmonics = {
   \textSpannerDown
   \override TextSpanner.bound-details.left.text =
      \markup {\halign #-0.5 \teeny "PH" }
      \override TextSpanner.style =
         #'dashed-line
   \override TextSpanner.dash-period = #0.6
   \override TextSpanner.bound-details.right.attach-dir = #1
   \override TextSpanner.bound-details.right.text =
      \markup { \draw-line #'(0 . 1) }
   \override TextSpanner.bound-details.right.padding = #-0.5
}

harmonics = {
  %artificial harmonics (AH)
  \textLengthOn
  <\parenthesize b b'\harmonic>4_\markup { \teeny "AH 16" }
  <\parenthesize g g'\harmonic>4_\markup { \teeny "AH 17" }
  <\parenthesize d' d''\harmonic>2_\markup { \teeny "AH 19" }
  %pinched harmonics (PH)
  \pinchedHarmonics
  <a'\harmonic>2\startTextSpan
  <d''\harmonic>4
  <e'\harmonic>4\stopTextSpan
  %tapped harmonics (TH)
  <\parenthesize g\4 g'\harmonic>4_\markup { \teeny "TH 17" }
  <\parenthesize a\4 a'\harmonic>4_\markup { \teeny "TH 19" }
  <\parenthesize c'\3 c''\harmonic>2_\markup { \teeny "TH 17" }
  %touch harmonics (TCH)
  a4( <e''\harmonic>2. )_\markup { \teeny "TCH" }
}

frettedStrings = {
  %artificial harmonics (AH)
  \harmonicByFret #4 g4\3
  \harmonicByFret #5 d4\4
  \harmonicByFret #7 g2\3
  %pinched harmonics (PH)
  \harmonicByFret #7 d2\4
  \harmonicByFret #5 d4\4
  \harmonicByFret #7 a4\5
  %tapped harmonics (TH)
  \harmonicByFret #5 d4\4
  \harmonicByFret #7 d4\4
  \harmonicByFret #5 g2\3
  %touch harmonics (TCH)
  a4 \harmonicByFret #9 g2.\3
}
```

```
\score {
  <<
    \new Staff
    \with { \omit StringNumber } {
      \new Voice {
        \clef "treble_8"
        \harmonics
      }
    }
    \new TabStaff {
      \new TabVoice {
        \frettedStrings
      }
    }
  >>
}
```



Guitar slides

Unlike glissandos, slides may go from an imprecise point of the fretboard to a specific fret. A good way to do this is to add a hidden grace note before the note which is actually played, as demonstrated in the following example.

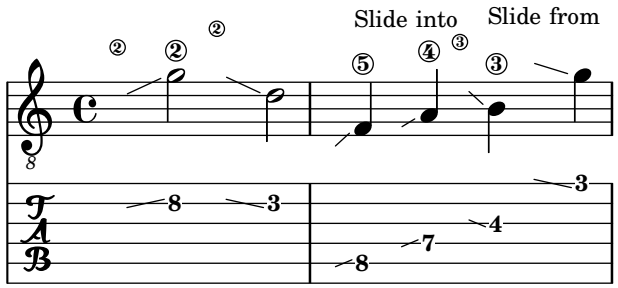
```
%% Hide fret number: useful to draw slide into/from a casual point of
%% the fretboard.
hideFretNumber = {
  \once \hide TabNoteHead
  \once \hide NoteHead
  \once \hide Stem
  \once \override NoteHead.no-ledgers = ##t
  \once \override Glissando.bound-details.left.padding = #0.3
}

music= \relative c' {
  \grace { \hideFretNumber d8\2 \glissando s2 } g2\2
  \grace { \hideFretNumber g8\2 \glissando s2 } d2 |

  \grace { \hideFretNumber c,8 \glissando s } f4\5^\markup \tiny { Slide into }
  \grace { \hideFretNumber f8 \glissando s } a4\4
  \grace { \hideFretNumber e'8\3 \glissando s } b4\3^\markup \tiny { Slide from }
  \grace { \hideFretNumber b'8 \glissando s2 } g4 |
}

\score {
```

```
  <<
    \new Staff {
      \clef "G_8"
      \music
    }
    \new TabStaff {
      \music
    }
  >>
}
```

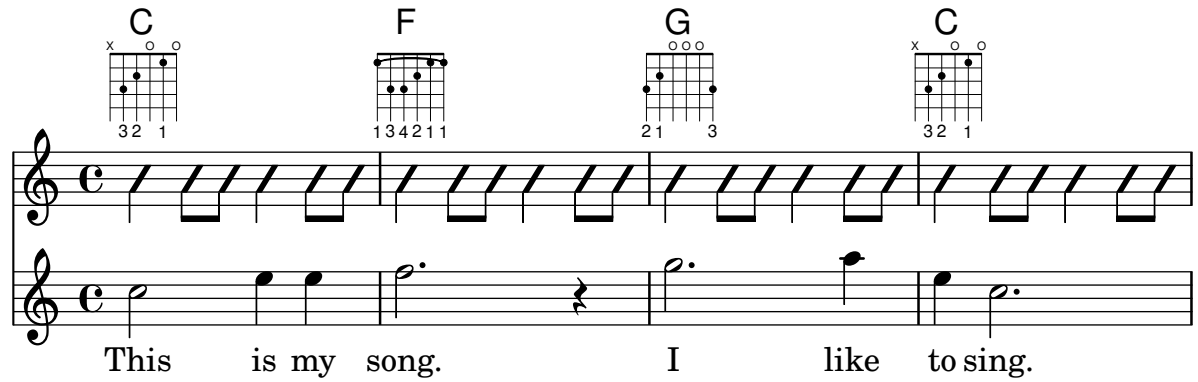


Ritmi di accompagnamento per chitarra

Per la musica per chitarra, è possibile mostrare i ritmi di accompagnamento, insieme alle note della melodia e ai nomi e ai diagrammi degli accordi.

```
\include "predefined-guitar-fretboards.ly"
<<
  \new ChordNames {
    \chordmode {
      c1 | f | g | c
    }
  }
  \new FretBoards {
    \chordmode {
      c1 | f | g | c
    }
  }
  \new Voice \with {
    \consists "Pitch_squash_engraver"
  } {
    \relative c'' {
      \improvisationOn
      c4 c8 c c4 c8 c
      f4 f8 f f4 f8 f
      g4 g8 g g4 g8 g
      c4 c8 c c4 c8 c
    }
  }
  \new Voice = "melody" {
    \relative c'' {
      c2 e4 e4
      f2. r4
      g2. a4
```

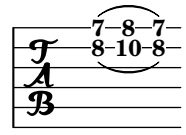
```
      e4 c2.
    }
  }
  \new Lyrics {
    \lyricsto "melody" {
      This is my song.
      I like to sing.
    }
  }
>>
```



Martellato e strappato usando accordi

Quando il martellato o lo strappato si applicano a delle note in un accordo, viene disegnato un solo arco. Ma è possibile avere un "doppio arco" impostando la proprietà `doubleSlurs` su `#t`.

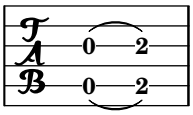
```
\new TabStaff {
  \relative c' {
    % chord hammer-on and pull-off
    \set doubleSlurs = ##t
    <g' b>8( <a c> <g b>)
  }
}
```



Martellato e strappato usando le voci

L'arco del martellato o dello strappato è rivolto in alto nella prima e terza voce, mentre è rivolto in basso nella seconda e quarta voce.

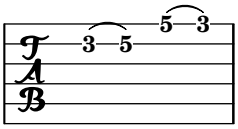
```
\new TabStaff {
  \relative c' {
    << { \voiceOne g2( a) }
    \\ { \voiceTwo a,( b) }
    >> \oneVoice
  }
}
```



Martellato e strappato

Il martellato (hammer on) e lo strappato (pull off) si possono ottenere con le legature di portamento.

```
\new TabStaff {
  \relative c' {
    d4( e\2)
    a( g)
  }
}
```



How to change fret diagram position

If you want to move the position of a fret diagram, for example, to avoid collision, or to place it between two notes, you have various possibilities:

1) modify #'padding or #'extra-offset values (as shown in the first snippet)

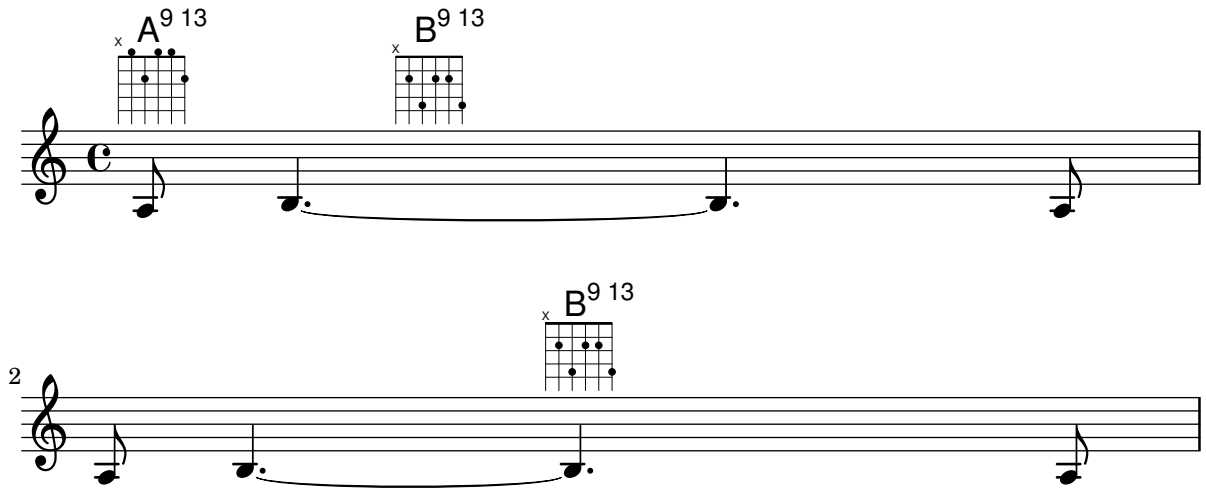
2) you can add an invisible voice and attach the fret diagrams to the invisible notes in that voice (as shown in the second example).

If you need to move the fret according with a rythmic position inside the bar (in the example, the third beat of the measure) the second example is better, because the fret is aligned with the third beat itself.

```
harmonies = \chordmode
{
  a8:13
% THE FOLLOWING IS THE COMMAND TO MOVE THE CHORD NAME
  \once \override ChordNames.ChordName.extra-offset = #'(10 . 0)
  b8:13 s2.
% THIS LINE IS THE SECOND METHOD
    s4 s4  b4:13
}

\score
{
  <<
    \new ChordNames \harmonies
    \new Staff
    {a8^\markup { \fret-diagram  "6-x;5-0;4-2;3-0;2-0;1-2;"  }
% THE FOLLOWING IS THE COMMAND TO MOVE THE FRET DIAGRAM
     \once \override TextScript.extra-offset = #'(10 . 0)
     b4.~^\markup { \fret-diagram  "6-x;5-2;4-4;3-2;2-2;1-4;"  } b4. a8\break
% HERE IS THE SECOND METHOD
     <<
       { a8 b4.~ b4. a8}
       { s4 s4 s4^\markup { \fret-diagram  "6-x;5-2;4-4;3-2;2-2;1-4;"  }
       }
```

```
    >>
  }
 >>
}
```



Modello per combo jazz

Ecco un modello piuttosto complesso, per un gruppo jazz. Si noti che tutti gli strumenti sono in `\key c \major`. Si tratta della tonalità reale; sarà trasposta automaticamente includendo la musica all'interno di una sezione `\transpose`.

```
\header {
  title = "Song"
  subtitle = "(tune)"
  composer = "Me"
  meter = "moderato"
  piece = "Swing"
  tagline = \markup {
    \column {
      "LilyPond example file by Amelie Zapf,"
      "Berlin 07/07/2003"
    }
  }
}
% To make the example display in the documentation
\paper {
  paper-width = 130
}
%#(set-global-staff-size 16)
\include "english.ly"

%%%%%%%%%% Some macros %%%%%%%%%%%%%%%%%%

sl = {
  \override NoteHead.style = #'slash
  \hide Stem
}
nsl = {
```

```
  \revert NoteHead.style
  \undo \hide Stem
}
crOn = \override NoteHead.style = #'cross
crOff = \revert NoteHead.style

%% insert chord name style stuff here.

jazzChords = { }

%%%%%%%%%%% Keys'n'thangs %%%%%%%%%%%%%%%

global = { \time 4/4 }

Key = { \key c \major }

% ############ Horns ############

% ------ Trumpet ------
trpt = \transpose c d \relative c'' {
  \Key
  c1 | c | c |
}
trpHarmony = \transpose c' d {
  \jazzChords
}
trumpet = {
  \global
  \clef treble
  <<
    \trpt
  >>
}

% ------ Alto Saxophone ------
alto = \transpose c a \relative c' {
  \Key
  c1 | c | c |
}
altoHarmony = \transpose c' a {
  \jazzChords
}
altoSax = {
  \global
  \clef treble
  <<
    \alto
  >>
}

% ------ Baritone Saxophone ------
bari = \transpose c a' \relative c {
```

```
  \Key
  c1
  c1
  \sl
  d4^"Solo" d d d
  \nsl
}
bariHarmony = \transpose c' a \chordmode {
  \jazzChords s1 s d2:maj e:m7
}
bariSax = {
  \global
  \clef treble
  <<
    \bari
  >>
}

% ------ Trombone ------
tbone = \relative c {
  \Key
  c1 | c | c
}
tboneHarmony = \chordmode {
  \jazzChords
}
trombone = {
  \global
  \clef bass
  <<
    \tbone
  >>
}

% ############ Rhythm Section #############

% ------ Guitar ------
gtr = \relative c'' {
  \Key
  c1
  \sl
  b4 b b b
  \nsl
  c1
}
gtrHarmony = \chordmode {
  \jazzChords
  s1 c2:min7+ d2:maj9
}
guitar = {
  \global
  \clef treble
```

```
  <<
    \gtr
  >>
}

%% ------ Piano ------
rhUpper = \relative c'' {
  \voiceOne
  \Key
  c1 | c | c
}
rhLower = \relative c' {
  \voiceTwo
  \Key
  e1 | e | e
}

lhUpper = \relative c' {
  \voiceOne
  \Key
  g1 | g | g
}
lhLower = \relative c {
  \voiceTwo
  \Key
  c1 | c | c
}

PianoRH = {
  \clef treble
  \global
  <<
    \new Voice = "one" \rhUpper
    \new Voice = "two" \rhLower
  >>
}
PianoLH = {
  \clef bass
  \global
  <<
    \new Voice = "one" \lhUpper
    \new Voice = "two" \lhLower
  >>
}

piano = {
  <<
    \new Staff = "upper" \PianoRH
    \new Staff = "lower" \PianoLH
  >>
}
```

```
% ------ Bass Guitar ------
Bass = \relative c {
  \Key
  c1 | c | c
}
bass = {
  \global
  \clef bass
  <<
    \Bass
  >>
}

% ------ Drums ------
up = \drummode {
  \voiceOne
  hh4 <hh sn> hh <hh sn>
  hh4 <hh sn> hh <hh sn>
  hh4 <hh sn> hh <hh sn>
}
down = \drummode {
  \voiceTwo
  bd4 s bd s
  bd4 s bd s
  bd4 s bd s
}

drumContents = {
  \global
  <<
    \new DrumVoice \up
    \new DrumVoice \down
  >>
}

%%%%%%%% It All Goes Together Here %%%%%%%%%%%%%%%%%%%%%

\score {
  <<
    \new StaffGroup = "horns" <<
      \new Staff = "trumpet" \with { instrumentName = "Trumpet" }
      \trumpet
      \new Staff = "altosax" \with { instrumentName = "Alto Sax" }
      \altoSax
      \new ChordNames = "barichords" \with { instrumentName = "Trumpet" }
      \bariHarmony
      \new Staff = "barisax" \with { instrumentName = "Bari Sax" }
      \bariSax
      \new Staff = "trombone" \with { instrumentName = "Trombone" }
      \trombone
    >>
```

```
    \new StaffGroup = "rhythm" <<
      \new ChordNames = "chords" \gtrHarmony
      \new Staff = "guitar" \with { instrumentName = "Guitar" }
      \guitar
      \new PianoStaff = "piano" \with {
        instrumentName = "Piano"
        midiInstrument = "acoustic grand"
      }
      \piano
      \new Staff = "bass" \with { instrumentName = "Bass" }
      \bass
      \new DrumStaff \with { instrumentName = "Drums" }
      \drumContents
    >>
  >>
  \layout {
    \context { \Staff \RemoveEmptyStaves }
    \context {
      \Score
      \override BarNumber.padding = #3
      \override RehearsalMark.padding = #2
      skipBars = ##t
    }
  }
  \midi { }
}
```

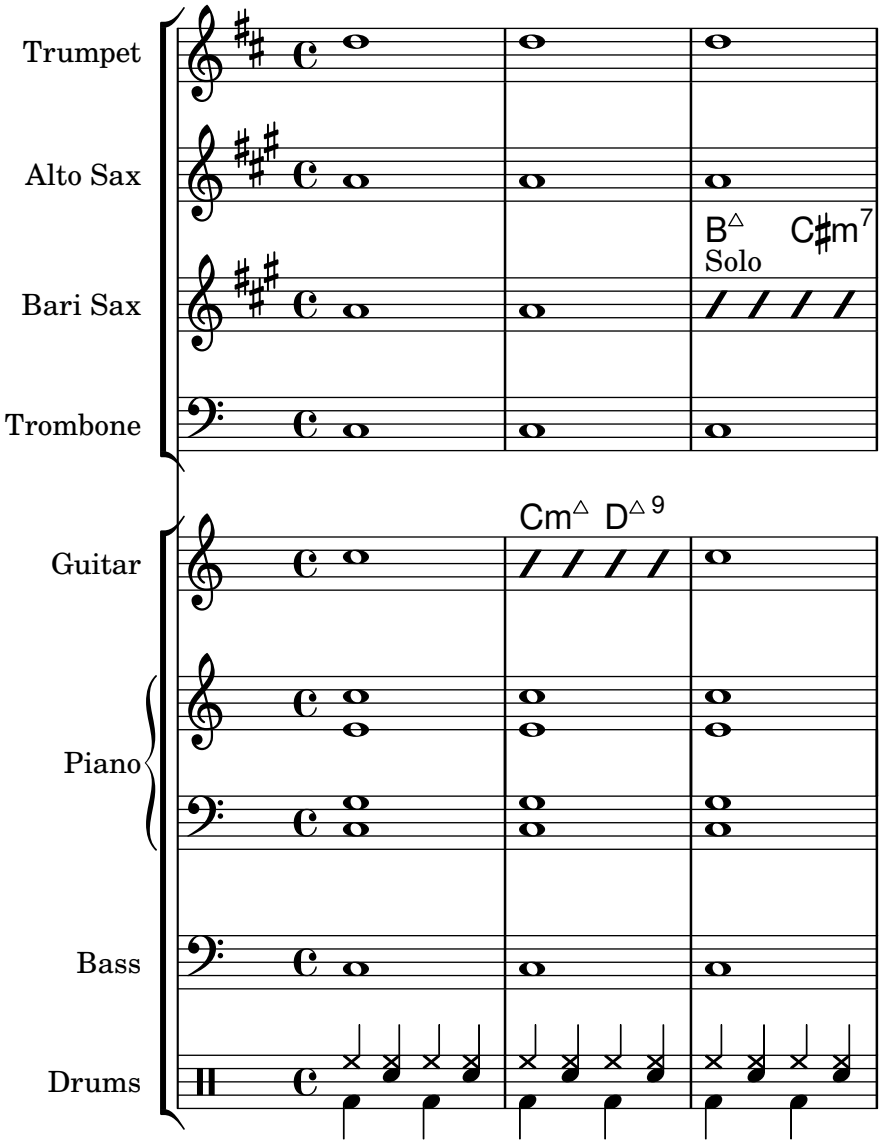
Song

(tune)

Me

moderato

Swing
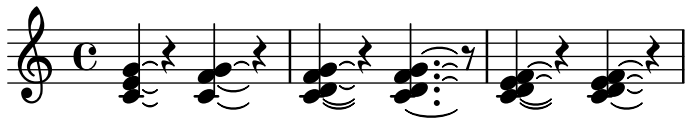


Laissez vibrer ties

Laissez vibrer ties have a fixed size. Their formatting can be tuned using `'tie-configuration`.

```
\relative c' {
  <c e g>4\laissezVibrer r <c f g>\laissezVibrer r
  <c d f g>4\laissezVibrer r <c d f g>4.\laissezVibrer r8

  <c d e f>4\laissezVibrer r
  \override LaissezVibrerTieColumn.tie-configuration
     = #`((-7 . ,DOWN)
          (-5 . ,DOWN)
          (-3 . ,UP)
          (-1 . ,UP))
  <c d e f>4\laissezVibrer r
}
```



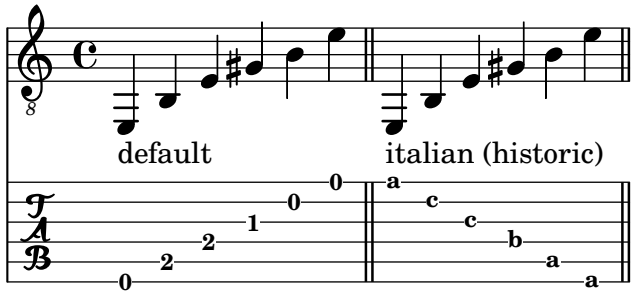
Let TabStaff print the topmost string at bottom

In tablatures usually the first string is printed topmost. If you want to have it at the bottom change the `stringOneTopmost`-context-property. For a context-wide setting this could be done in `layout` as well.

```
%
%\layout {
%  \context {
%    \Score
%    stringOneTopmost = ##f
%  }
%  \context {
%    \TabStaff
%    tablatureFormat = #fret-letter-tablature-format
%  }
%}

m = {
  \cadenzaOn
  e, b, e gis! b e'
  \bar "||"
}

<<
  \new Staff { \clef "G_8" <>_"default" \m <>_"italian (historic)"\m }
  \new TabStaff
  {
    \m
    \set Score.stringOneTopmost = ##f
    \set TabStaff.tablatureFormat = #fret-letter-tablature-format
    \m
  }
>>
```

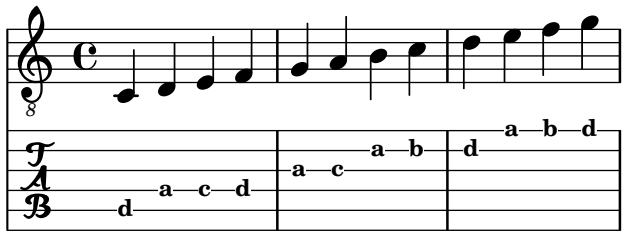


Letter tablature formatting

Tablature can be formatted using letters instead of numbers.

```
music = \relative c {
  c4 d e f
  g4 a b c
  d4 e f g
}
```

```
<<
  \new Staff {
    \clef "G_8"
    \music
  }
  \new TabStaff \with {
    tablatureFormat = #fret-letter-tablature-format
  }
  {
    \music
  }
>>
```



Armonici su corde a vuoto in intavolatura

Questo frammento mostra come scrivere armonici su corde a vuoto.

```
openStringHarmonics = {
  \textSpannerDown
  \override TextSpanner.staff-padding = #3
  \override TextSpanner.dash-fraction = #0.3
  \override TextSpanner.dash-period = #1

  %first harmonic
  \override TextSpanner.bound-details.left.text =
    \markup\small "1st harm. "
  \harmonicByFret #12 e,2\6\startTextSpan
  \harmonicByRatio #1/2 e,\6\stopTextSpan

  %second harmonic
  \override TextSpanner.bound-details.left.text =
    \markup\small "2nd harm. "
  \harmonicByFret #7 e,\6\startTextSpan
  \harmonicByRatio #1/3 e,\6
  \harmonicByFret #19 e,\6
  \harmonicByRatio #2/3 e,\6\stopTextSpan
  %\harmonicByFret #19 < e,\6 a,\5 d\4 >
  %\harmonicByRatio #2/3 < e,\6 a,\5 d\4 >

  %third harmonic
  \override TextSpanner.bound-details.left.text =
    \markup\small "3rd harm. "
  \harmonicByFret #5 e,\6\startTextSpan
  \harmonicByRatio #1/4 e,\6
  \harmonicByFret #24 e,\6
```

```
  \harmonicByRatio #3/4 e,\6\stopTextSpan
  \break

  %fourth harmonic
  \override TextSpanner.bound-details.left.text =
    \markup\small "4th harm. "
  \harmonicByFret #4 e,\6\startTextSpan
  \harmonicByRatio #1/5 e,\6
  \harmonicByFret #9 e,\6
  \harmonicByRatio #2/5 e,\6
  \harmonicByFret #16 e,\6
  \harmonicByRatio #3/5 e,\6\stopTextSpan

  %fifth harmonic
  \override TextSpanner.bound-details.left.text =
    \markup\small "5th harm. "
  \harmonicByFret #3 e,\6\startTextSpan
  \harmonicByRatio #1/6 e,\6\stopTextSpan
  \break

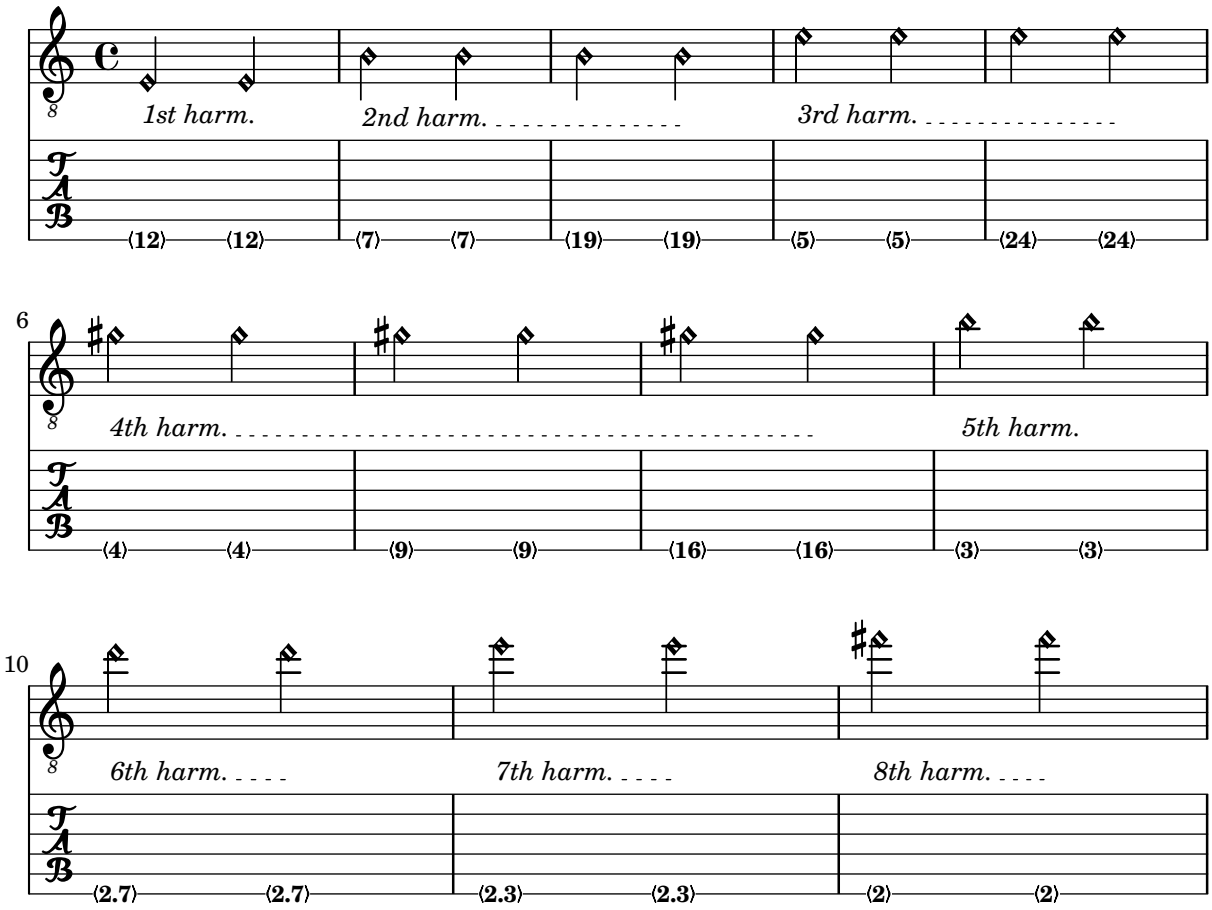
  %sixth harmonic
  \override TextSpanner.bound-details.left.text =
    \markup\small "6th harm. "
  \harmonicByFret #2.7 e,\6\startTextSpan
  \harmonicByRatio #1/7 e,\6\stopTextSpan

  %seventh harmonic
  \override TextSpanner.bound-details.left.text =
    \markup\small "7th harm. "
  \harmonicByFret #2.3 e,\6\startTextSpan
  \harmonicByRatio #1/8 e,\6\stopTextSpan

  %eighth harmonic
  \override TextSpanner.bound-details.left.text =
    \markup\small "8th harm. "
  \harmonicByFret #2 e,\6\startTextSpan
  \harmonicByRatio #1/9 e,\6\stopTextSpan
}

\score {
  <<
    \new Staff
    \with { \omit StringNumber } {
      \new Voice {
        \clef "treble_8"
        \openStringHarmonics
      }
    }
    \new TabStaff {
      \new TabVoice {
        \openStringHarmonics
      }
```

```
    }
  >>
}
```



Posizionamento delle diteggiature della mano destra

È possibile avere un maggior controllo sul posizionamento delle diteggiature della mano destra impostando una specifica proprietà, come illustrato nell'esempio seguente.

```
#(define RH rightHandFinger)

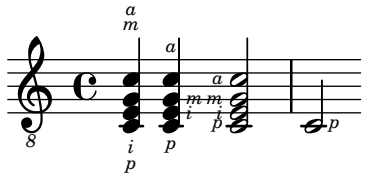
\relative c {
  \clef "treble_8"

  \set strokeFingerOrientations = #'(up down)
  <c\RH #1 e\RH #2 g\RH #3 c\RH #4 >4

  \set strokeFingerOrientations = #'(up right down)
  <c\RH #1 e\RH #2 g\RH #3 c\RH #4 >4

  \set strokeFingerOrientations = #'(left)
  <c\RH #1 e\RH #2 g\RH #3 c\RH #4 >2

  \set strokeFingerOrientations = #'(right)
  c\RH #1
}
```



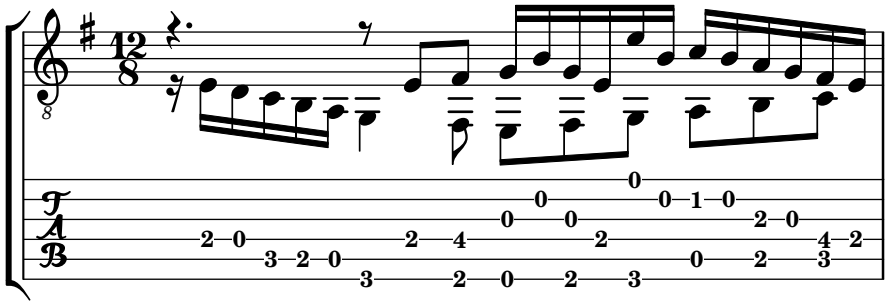
Polifonia in intavolatura

La polifonia in `TabStaff` funziona proprio come nel rigo normale.

```
upper = \relative c' {
  \time 12/8
  \key e \minor
  \voiceOne
  r4. r8 e, fis g16 b g e e' b c b a g fis e
}

lower = \relative c {
  \key e \minor
  \voiceTwo
  r16 e d c b a g4 fis8 e fis g a b c
}

\score {
  <<
    \new StaffGroup = "tab with traditional" <<
      \new Staff = "guitar traditional" <<
        \clef "treble_8"
        \new Voice = "upper" \upper
        \new Voice = "lower" \lower
      >>
      \new TabStaff = "guitar tab" <<
        \new TabVoice = "upper" \upper
        \new TabVoice = "lower" \lower
      >>
    >>
  >>
}
```



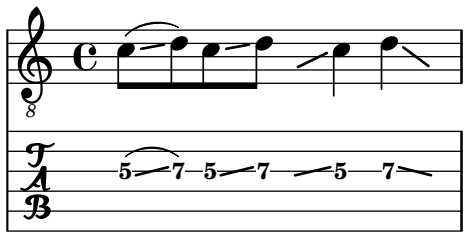
Slides in tablature

Slides can be typeset in both `Staff` and `TabStaff` contexts:

```
slides = {
  c'8\3(\glissando d'8\3)
  c'8\3\glissando d'8\3
  \hideNotes
```

```
  \grace { g16\glissando }
  \unHideNotes
  c'4\3
  \afterGrace d'4\3\glissando {
  \stemDown \hideNotes
  g16 }
  \unHideNotes
}

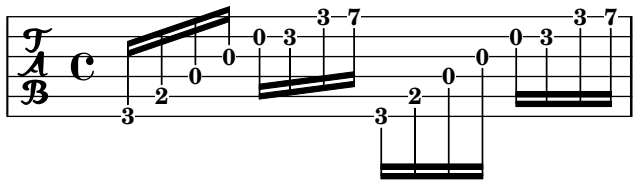
\score {
  <<
    \new Staff { \clef "treble_8" \slides }
    \new TabStaff { \slides }
  >>
  \layout {
    \context {
      \Score
      \override Glissando.minimum-length = #4
      \override Glissando.springs-and-rods =
                          #ly:spanner::set-spacing-rods
      \override Glissando.thickness = #2
      \omit StringNumber
      % or:
      %\override StringNumber.stencil = ##f
    }
  }
}
```



Comportamento di gambi e travature in intavolatura

La direzione dei gambi nell'intavolatura è regolata nello stesso modo della notazione tradizionale. Le travature possono essere rese orizzontali, come illustrato in questo esempio.

```
\new TabStaff {
  \relative c {
    \tabFullNotation
    g16 b d g b d g b
    \stemDown
    \override Beam.concaveness = #10000
    g,,16 b d g b d g b
  }
}
```

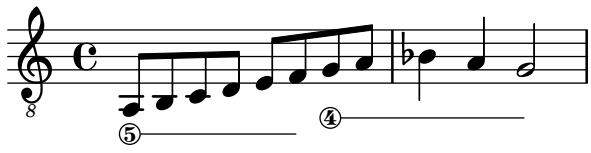


String number extender lines

Make an extender line for string number indications, showing that a series of notes is supposed to be played all on the same string.

```
stringNumberSpanner =
  #(define-music-function (StringNumber) (string?)
    #{
      \override TextSpanner.style = #'solid
      \override TextSpanner.font-size = #-5
      \override TextSpanner.bound-details.left.stencil-align-dir-y = #CENTER
      \override TextSpanner.bound-details.left.text =
        \markup { \circle \number $StringNumber }
    #})


\relative c {
  \clef "treble_8"
  \stringNumberSpanner "5"
  \textSpannerDown
  a8\startTextSpan
  b c d e f\stopTextSpan
  \stringNumberSpanner "4"
  g\startTextSpan a
  bes4 a g2\stopTextSpan
}
```



Unfretted strings
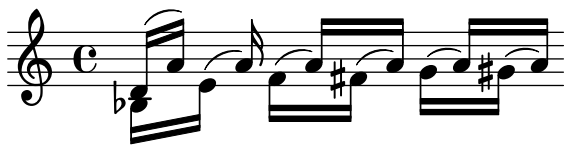
Sezione “Unfretted string instruments” in *Guida alla Notazione*

Creating slurs across voices

In some situations, it may be necessary to create slurs between notes from different voices. The solution is to add invisible notes to one of the voices, using `\hideNotes`.

This example is measure 235 of the Ciaconna from Bach’s 2nd Partita for solo violin, BWV 1004.
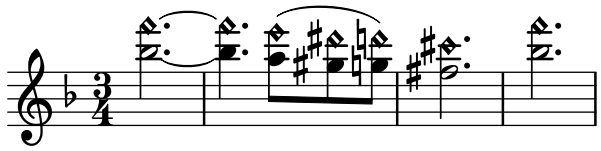
```
\relative c' {
  <<
    {
      d16( a') s a s a[ s a] s a[ s a]
    }
    \\
    {
      \slurUp
      bes,16[ s e](
      \hideNotes a)
      \unHideNotes f[(
      \hideNotes a)
      \unHideNotes fis](
      \hideNotes a)
      \unHideNotes g[(
      \hideNotes a)
      \unHideNotes gis](
      \hideNotes a)
    }
  >>
}
```



Dotted harmonics

Artificial harmonics using `\harmonic` do not show dots. To override this behavior, set the context property `harmonicDots`.

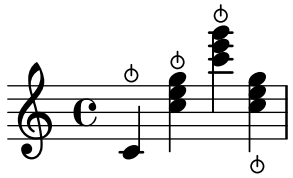
```
\relative c''' {
  \time 3/4
  \key f \major
  \set harmonicDots = ##t
  <bes f'\harmonic>2. ~
  <bes f'\harmonic>4. <a e'\harmonic>8( <gis dis'\harmonic> <g d'\harmonic>)
  <fis cis'\harmonic>2.
  <bes f'\harmonic>2.
}
```



Snap-pizzicato or Bartok pizzicato

A snap-pizzicato (also known as “Bartok pizzicato”) is a “strong pizzicato where the string is plucked vertically by snapping and rebounds off the fingerboard of the instrument” (Wikipedia). It is denoted by a circle with a vertical line going from the center upwards outside the circle.

```
\relative c' {
  c4\snappizzicato
  <c' e g>4\snappizzicato
  <c' e g>4^\snappizzicato
  <c, e g>4_\snappizzicato
}
```



Modello per quartetto d’archi (semplice)

Questo modello presenta un semplice quartetto d’archi. Impiega anche una sezione `\global` per definire il tempo e l’armatura di chiave.

```
global= {
  \time 4/4
  \key c \major
}

violinOne = \new Voice \relative c'' {
  c2 d
  e1
  \bar "|."
}

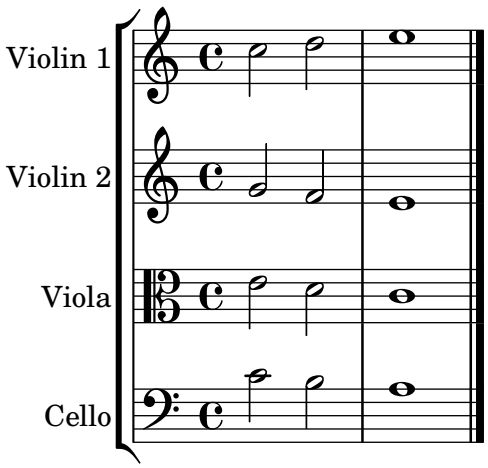
violinTwo = \new Voice \relative c'' {
  g2 f
  e1
  \bar "|."
}

viola = \new Voice \relative c' {
  \clef alto
  e2 d
  c1
  \bar "|."
}

cello = \new Voice \relative c' {
  \clef bass
  c2 b
```

```
  a1
  \bar "|."
}

\score {
  \new StaffGroup <<
    \new Staff \with { instrumentName = "Violin 1" }
    << \global \violinOne >>
    \new Staff \with { instrumentName = "Violin 2" }
    << \global \violinTwo >>
    \new Staff \with { instrumentName = "Viola" }
    << \global \viola >>
    \new Staff \with { instrumentName = "Cello" }
    << \global \cello >>
  >>
  \layout { }
  \midi { }
}
```



Modello per quartetto d'archi con parti separate

Il frammento di codice del "Modello per quartetto d'archi" crea un bel quartetto, ma cosa fare se si ha bisogno di creare le singole parti? Questo nuovo modello mostra come usare la funzionalità `\tag` per dividere facilmente un pezzo in parti staccate.

Occorre dividere questo modello in file separati; i nomi dei file sono indicati nei commenti all'inizio di ogni file. `piece.ly` contiene tutte le definizioni musicali. Gli altri file – `score.ly`, `vn1.ly`, `vn2.ly`, `vla.ly` e `vlc.ly` – creano ciascuna parte.

Non dimenticare di togliere i commenti quando usi i file separati!

```
%%%%% piece.ly
%%%%% (This is the global definitions file)

global= {
  \time 4/4
  \key c \major
}
```

```
Violinone = \new Voice {
  \relative c'' {
    c2 d e1
    \bar "|."
  }
}


Violintwo = \new Voice {
  \relative c'' {
    g2 f e1
    \bar "|."
  }
}


Viola = \new Voice {
  \relative c' {
    \clef alto
    e2 d c1
    \bar "|."
  }
}


Cello = \new Voice {
  \relative c' {
    \clef bass
    c2 b a1
    \bar "|."
  }
}


music = {
  <<
    \tag #'score \tag #'vn1
    \new Staff \with { instrumentName = "Violin 1" }
    << \global \Violinone >>

    \tag #'score \tag #'vn2
    \new Staff \with { instrumentName = "Violin 2" }
    << \global \Violintwo>>

    \tag #'score \tag #'vla
    \new Staff \with { instrumentName = "Viola" }
    << \global \Viola>>

    \tag #'score \tag #'vlc
    \new Staff \with { instrumentName = "Cello" }
    << \global \Cello >>
  >>
```

```
}

% These are the other files you need to save on your computer

% score.ly
% (This is the main file)

% uncomment the line below when using a separate file
%\include "piece.ly"

#(set-global-staff-size 14)

\score {
  \new StaffGroup \keepWithTag #'score \music
  \layout { }
  \midi { }
}


%{ Uncomment this block when using separate files

% vn1.ly
% (This is the Violin 1 part file)

\include "piece.ly"
\score {
  \keepWithTag #'vn1 \music
  \layout { }
}


% vn2.ly
% (This is the Violin 2 part file)

\include "piece.ly"
\score {
  \keepWithTag #'vn2 \music
  \layout { }
}


% vla.ly
% (This is the Viola part file)

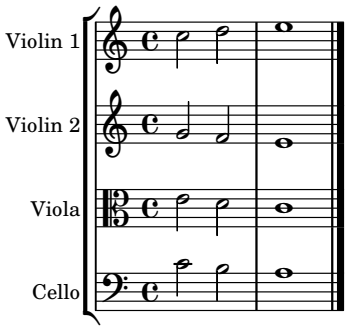
\include "piece.ly"
\score {
  \keepWithTag #'vla \music
  \layout { }
}


% vlc.ly
```

```
% (This is the Cello part file)

\include "piece.ly"
\score {
  \keepWithTag #'vlc \music
  \layout { }
}

%}
```



Winds

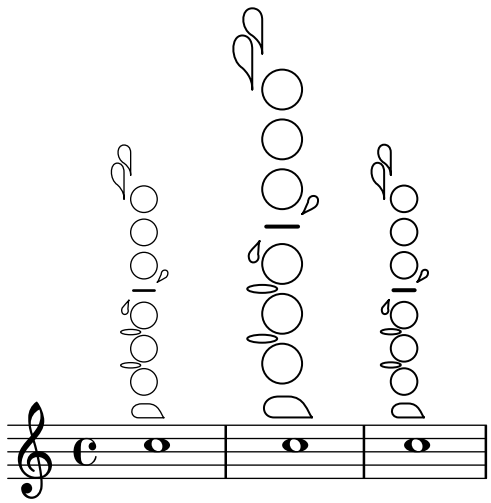
Sezione “Wind instruments” in *Guida alla Notazione*

Cambiare la dimensione dei diagrammi per legni

La dimensione e lo spessore dei diagrammi per legni possono essere modificati.

```
\relative c'' {
  \textLengthOn
  c1^\markup
    \woodwind-diagram
      #'piccolo
      #'()

  c^\markup
    \override #'(size . 1.5) {
      \woodwind-diagram
        #'piccolo
        #'()
    }
  c^\markup
    \override #'(thickness . 0.15) {
      \woodwind-diagram
        #'piccolo
        #'()
    }
}
```



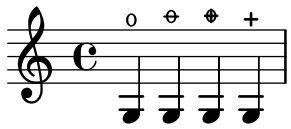
Simboli di diteggiatura per strumenti aerofoni

Si possono ottenere simboli speciali combinando glifi esistenti; ciò è utile per gli strumenti aerofoni.

```
centermarkup = {
  \once \override TextScript.self-alignment-X = #CENTER
  \once \override TextScript.X-offset =#(lambda (g)
  (+ (ly:self-alignment-interface::centered-on-x-parent g)
     (ly:self-alignment-interface::x-aligned-on-self g)))
```

```
}

\score {
  \relative c'{
    g\open
    \once \override TextScript.staff-padding = #-1.0
    \centermarkup
    g^\markup {
      \combine
        \musicglyph "scripts.open"
        \musicglyph "scripts.tenuto"
    }
    \centermarkup
    g^\markup {
      \combine
        \musicglyph "scripts.open"
        \musicglyph "scripts.stopped"
    }
    g\stopped
  }
}
```



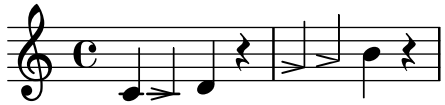
Flute slap notation

It is possible to indicate special articulation techniques such as a flute “tongue slap” by replacing the note head with the appropriate glyph.

```
slap =
#(define-music-function (music) (ly:music?)
#{
  \temporary \override NoteHead.stencil =
  #(lambda (grob)
     (grob-interpret-markup grob
      (markup #:musicglyph "scripts.sforzato")))
  \temporary \override NoteHead.stem-attachment =
  #(lambda (grob)
     (let* ((thickness (ly:staff-symbol-line-thickness grob))
            (stem (ly:grob-object grob 'stem))
            (dir (ly:grob-property stem 'direction UP)))
       (cons 1 (+ (if (= dir DOWN)
                      0.5
                      0)
                  (/ thickness 2)))))
  #music
  \revert NoteHead.stencil
  \revert NoteHead.stem-attachment
#})

\relative c' {
```

```
  c4 \slap c d r
  \slap { g4 a } b r
}
```



Diagrammi grafici e testuali per i legni

In molti casi, le chiavi diverse da quelle della colonna centrale possono essere visualizzate per nome oltre che in forma grafica.

```
\relative c'' {
  \textLengthOn
  c1^\markup
    \woodwind-diagram
      #'piccolo
      #'((cc . (one three))
         (lh . (gis))
         (rh . (ees)))

  c^\markup
    \override #'(graphical . #f) {
      \woodwind-diagram
        #'piccolo
        #'((cc . (one three))
           (lh . (gis))
           (rh . (ees)))
    }
}
```

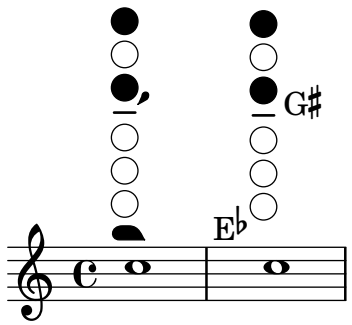


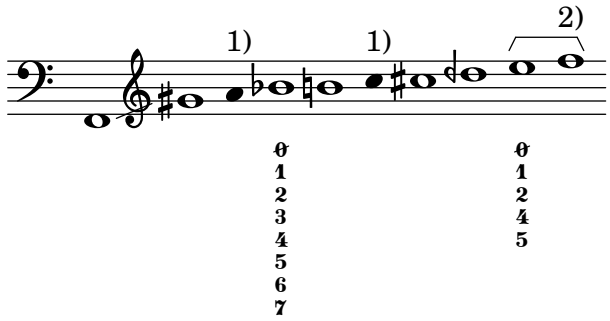
Grafico della diteggiatura per flauto dolce

L'esempio seguente illustra come realizzare grafici delle diteggiature per strumenti aerofoni.

```
% range chart for paetzold contrabass recorder

centermarkup = {
  \once \override TextScript.self-alignment-X = #CENTER
  \once \override TextScript.X-offset = #(lambda (g)
    (+ (ly:self-alignment-interface::centered-on-x-parent g)
       (ly:self-alignment-interface::x-aligned-on-self g)))
}
```

```
\score {
  \new Staff \with {
    \remove "Time_signature_engraver"
    \omit Stem
    \omit Flag
    \consists "Horizontal_bracket_engraver"
  }
  {
    \clef bass
    \set Score.timing = ##f
    f,1*1/4 \glissando
    \clef violin
    gis'1*1/4
    \stemDown a'4^\markup {1)}
    \centermarkup
    \once \override TextScript.padding = #2
    bes'1*1/4_\markup {\override #'(baseline-skip . 1.7) \column
      { \fontsize #-5 \slashed-digit #0 \finger 1 \finger 2
        \finger 3 \finger 4 \finger 5 \finger 6 \finger 7} }
    b'1*1/4
    c''4^\markup {1)}
    \centermarkup
    \once \override TextScript.padding = #2
    cis''1*1/4
    deh''1*1/4
    \centermarkup
    \once \override TextScript.padding = #2
    \once \override Staff.HorizontalBracket.direction = #UP
    e''1*1/4_\markup {\override #'(baseline-skip . 1.7) \column
      { \fontsize #-5 \slashed-digit #0 \finger 1 \finger 2
        \finger 4 \finger 5} }\startGroup
    f''1*1/4^\markup {2)}\stopGroup
  }
}
```
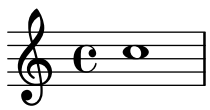


Elenco delle chiavi dei diagrammi per legni

Il seguente frammento produce un elenco di tutte le possibili chiavi e delle loro impostazioni per i diagrammi per legni, come sono definite in `scm/define-woodwind-diagrams.scm`. L'elenco sarà visualizzato nel file di log, ma non nello spartito. Se si desidera che l'output appaia nella console, omettere dai comandi `(current-error-port)`.

```
#(print-keys-verbose 'piccolo (current-error-port))
#(print-keys-verbose 'flute (current-error-port))
#(print-keys-verbose 'flute-b-extension (current-error-port))
#(print-keys-verbose 'tin-whistle (current-error-port))
#(print-keys-verbose 'oboe (current-error-port))
#(print-keys-verbose 'clarinet (current-error-port))
#(print-keys-verbose 'bass-clarinet (current-error-port))
#(print-keys-verbose 'low-bass-clarinet (current-error-port))
#(print-keys-verbose 'saxophone (current-error-port))
#(print-keys-verbose 'soprano-saxophone (current-error-port))
#(print-keys-verbose 'alto-saxophone (current-error-port))
#(print-keys-verbose 'tenor-saxophone (current-error-port))
#(print-keys-verbose 'baritone-saxophone (current-error-port))
#(print-keys-verbose 'bassoon (current-error-port))
#(print-keys-verbose 'contrabassoon (current-error-port))

\score {c''1}
```



Elenco dei diagrammi per i legni

L'esempio seguente mostra tutti i diagrammi per i legni attualmente definiti in LilyPond.

```
\layout {
  indent = 0
}

\relative c' {
  \textLengthOn
  c1^
  \markup {
    \center-column {
      'tin-whistle
      " "
       \woodwind-diagram
                 #'tin-whistle
                 #'()
    }
  }

  c1^
  \markup {
    \center-column {
      'piccolo
      " "
       \woodwind-diagram
                 #'piccolo
                 #'()
    }
  }
```

```
c1^
\markup {
  \center-column {
     'flute
     " "
     \woodwind-diagram
        #'flute
        #'()
  }
}
c1^\markup {
  \center-column {
    'oboe
    " "
    \woodwind-diagram
      #'oboe
      #'()
  }
}

c1^\markup {
  \center-column {
    'clarinet
    " "
    \woodwind-diagram
      #'clarinet
      #'()
  }
}

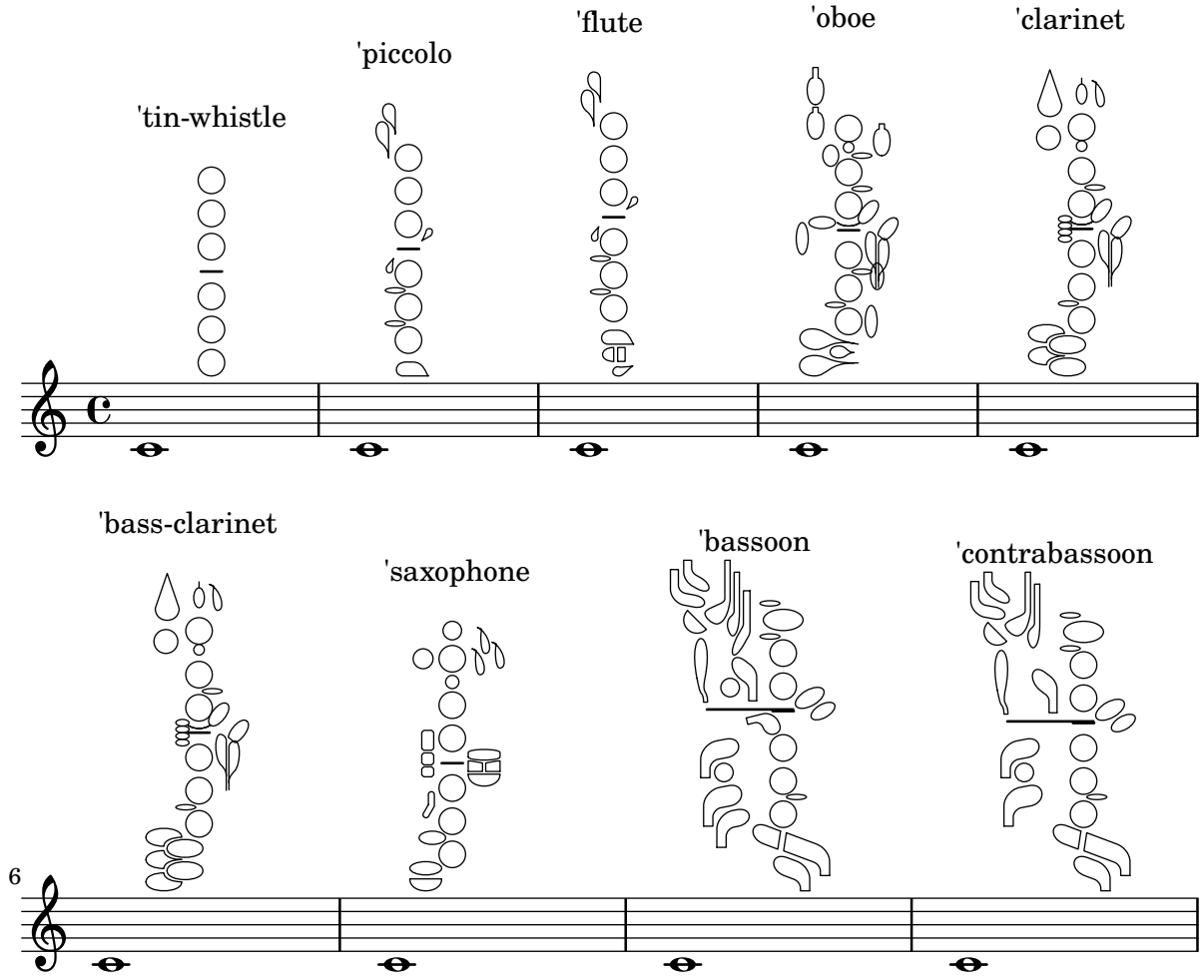
c1^\markup {
  \center-column {
    'bass-clarinet
    " "
    \woodwind-diagram
      #'bass-clarinet
      #'()
  }
}

c1^\markup {
  \center-column {
    'saxophone
    " "
    \woodwind-diagram
      #'saxophone
      #'()
  }
}

c1^\markup {
```

```
    \center-column {
      'bassoon
      " "
      \woodwind-diagram
        #'bassoon
        #'()
    }
  }

  c1^\markup {
    \center-column {
      'contrabassoon
      " "
      \woodwind-diagram
        #'contrabassoon
        #'()
    }
  }
}
```



Ancient notation

Sezione “Ancient notation” in *Guida alla Notazione*

Adding a figured bass above or below the notes
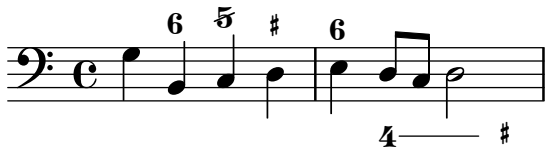
When writing a figured bass, you can place the figures above or below the bass notes, by defining the `BassFigureAlignmentPositioning.direction` property (exclusively in a `Staff` context). Choices are `#UP` (or `#1`), `#CENTER` (or `#0`) and `#DOWN` (or `#-1`).

This property can be changed as many times as you wish. Use `\once \override` if you don’t want the override to apply to the whole score.

```
bass = {
  \clef bass
  g4 b, c d
  e d8 c d2
}

continuo = \figuremode {
  <_>4 <6>4 <5/>4
  \override Staff.BassFigureAlignmentPositioning.direction = #UP
  %\bassFigureStaffAlignmentUp
  < _+ >4 <6>
  \set Staff.useBassFigureExtenders = ##t
  \override Staff.BassFigureAlignmentPositioning.direction = #DOWN
  %\bassFigureStaffAlignmentDown
  <4>4. <4>8 <_+>4
}

\score {
  <<
    \new Staff = bassStaff \bass
    \context Staff = bassStaff \continuo
  >>
}
```



Ancient fonts

Shown here are many of the symbols that are included in LilyPond’s ancient notation.

```
upperStaff = \new VaticanaStaff = "upperStaff" <<
  \context VaticanaVoice <<
    \transpose c c {

      \override NoteHead.style = #'vaticana.punctum
      \key es \major
      \clef "vaticana-fa2"
      c1 des e f ges
```

```
\override NoteHead.style = #'vaticana.inclinatum
a! b ces'
\bar "|"

\override NoteHead.style = #'vaticana.quilisma
b! des'! ges! fes!
\breathe
\clef "vaticana-fa1"
\override NoteHead.style = #'vaticana.plica
es d
\override NoteHead.style = #'vaticana.reverse.plica
c d
\bar "|"

\override NoteHead.style = #'vaticana.punctum.cavum
es f
\override NoteHead.style = #'vaticana.lpes
g as
\override NoteHead.style = #'vaticana.upes
bes as
\override NoteHead.style = #'vaticana.vupes
g f
\override NoteHead.style = #'vaticana.linea.punctum
\once \override Staff.BarLine.bar-extent = #'(-1 . 1) \bar "|"

es d
\override NoteHead.style = #'vaticana.epiphonus
c d
\override NoteHead.style = #'vaticana.cephalicus
es f

\set Staff.alterationGlyphs =
  #alteration-medicaea-glyph-name-alist
\override Staff.Custos.style = #'medicaea
\override NoteHead.style = #'medicaea.punctum
\clef "medicaea-fa2"
ces des
\bar "|"

e! f! ges
\clef "medicaea-do2"
\override NoteHead.style = #'medicaea.inclinatum
a! b! ces'
\override NoteHead.style = #'medicaea.virga
b! a!
\bar "|"

ges fes
\clef "medicaea-fa1"
\override NoteHead.style = #'medicaea.rvirga
e des ces
```

```
      \set Staff.alterationGlyphs =
        #alteration-hufnagel-glyph-name-alist
      \override Staff.Custos.style = #'hufnagel
      \override NoteHead.style = #'hufnagel.punctum
      \clef "hufnagel-fa2"
      ces des es
      \bar "|"

      fes ges
      \clef "hufnagel-do2"
      \override NoteHead.style = #'hufnagel.lpes
      as! bes! ces'
      \override NoteHead.style = #'hufnagel.virga
      bes! as!
      \bar "|"

      ges! fes!
      \clef "hufnagel-do-fa"
      \override NoteHead.style = #'hufnagel.punctum
      es! des ces des! es! fes!
      \bar "||"

      s32*1
    }
  >>
>>

lowerStaff = \new MensuralStaff = "lowerStaff" <<
  \context MensuralVoice <<
    \transpose c c {

      \key a \major
      cis'1 d'\breve gis'\breve e'\breve \[ e'\longa fis'\longa \]
      \set Staff.forceClef = ##t
      \clef "neomensural-c2"
      cis1
      \bar "|"

      \[ g\breve dis''\longa \]
      b\breve \[ a\longa d\longa \]
      \clef "petrucci-c2"

      fis1 ces1
      \clef "petrucci-c2"
      r\longa
      \set Staff.forceClef = ##t
      \clef "mensural-c2"
      r\breve
      \bar "|"

      r2
      \clef "mensural-g"
```

```
      r4 r8 r16 r16
      \override NoteHead.style = #'mensural
      \override Rest.style = #'mensural
      \clef "petrucci-f"
      c8 b, c16 b, c32 b, c64 b, c64 b,
      d8 e d16 e d32 e d64 e d64 e
      r\longa
      \set Staff.forceClef = ##t
      \clef "petrucci-f"
      r\breve
      \bar "|"

      r\breve
      \clef "mensural-f"
      r2 r4 r8 r16 r16

      \set Staff.forceClef = ##t
      \clef "mensural-f"
      e\breve f g a1
      \clef "mensural-g"

      \[ bes'!\longa a'!\longa c''!\longa \]
      e'1 d' c' d' \bar "|"
      \bar "|"

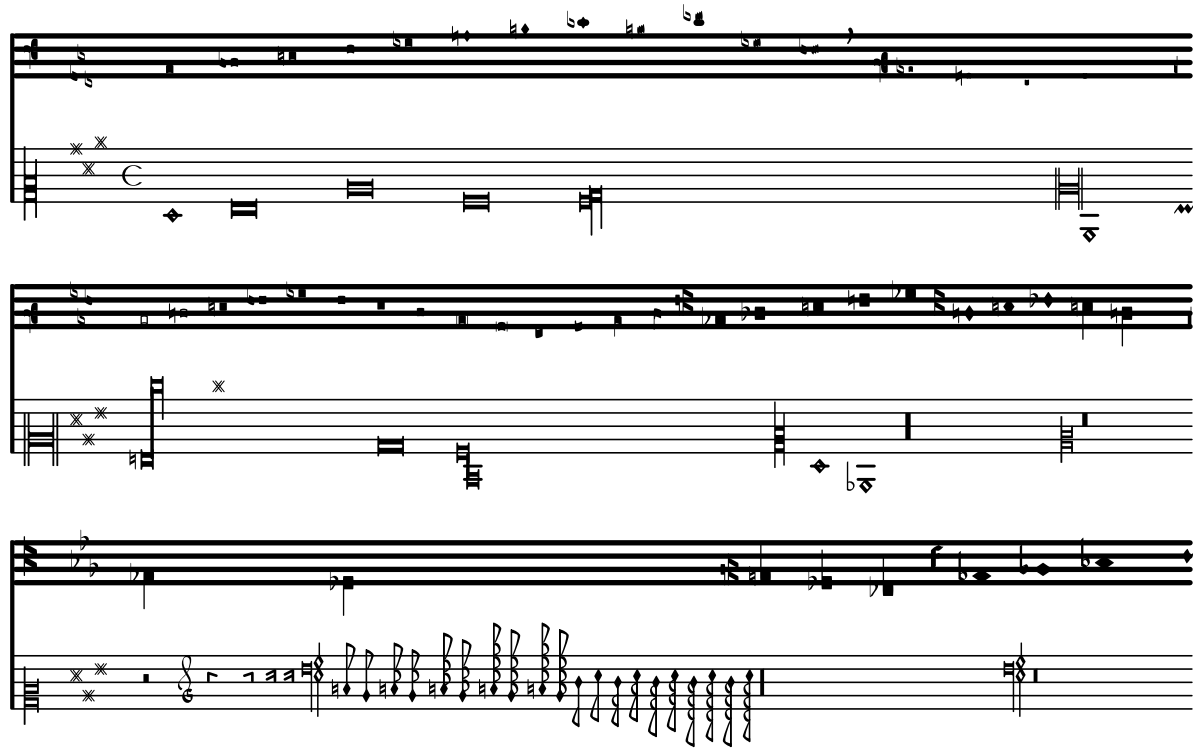
      bes'!\longa fis'!1 as'!1 ges'!\longa % lig
      \set Staff.forceClef = ##t
      \clef "mensural-g"
      e'2 d' c' \bar "|"

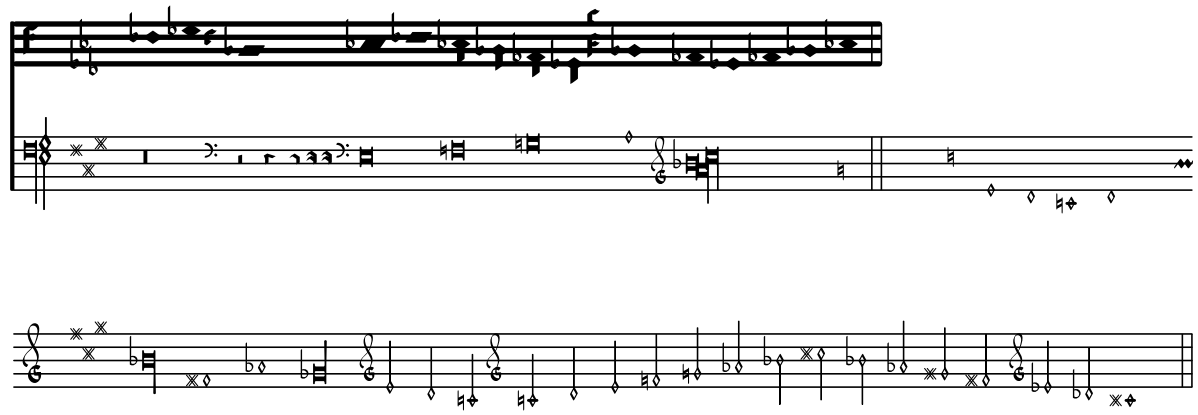
      \set Staff.forceClef = ##t
      \clef "petrucci-g"
      c'2 d' e' f'
      \clef "petrucci-g"
      g' as'! bes'! cis''!
      bes'! as'! gis'! fis'!
      \set Staff.forceClef = ##t
      \clef "mensural-g"
      es'! des'! cis'!1 \bar "||"
    }
  >>
>>

\paper {
  line-thickness = #(/ staff-space 5.0)
}

\score {
  <<
    \upperStaff
    \lowerStaff
  >>
```

```
  \layout {
    indent = 0.0
    \context {
      \Score
      timing = ##f
    }
    \context {
      \MensuralVoice
      \override NoteHead.style = #'neomensural
      \override Rest.style = #'neomensural
      \override Flag.style = #'mensural
      \override Stem.thickness = #1.0
    }
    \context {
      \MensuralStaff
      \revert  BarLine.transparent
      alterationGlyphs =
        #alteration-mensural-glyph-name-alist
      clefGlyph = #"clefs.petrucci.c2"
    }
    \context {
      \VaticanaStaff
      \revert  BarLine.transparent
      \override StaffSymbol.thickness = #2.0
      alterationGlyphs =
        #alteration-vaticana-glyph-name-alist
      \override Custos.neutral-position = #4
    }
  }
}
```





Modello per notazione antica – trascrizione moderna di musica gregoriana
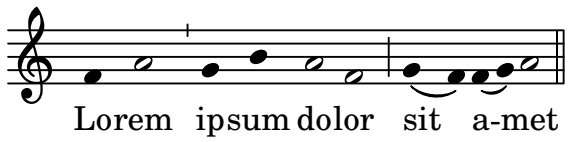
Questo esempio mostra come realizzare una trascrizione moderna di musica gregoriana. La musica gregoriana non presenta la suddivisione in misure né gambi; impiega soltanto le teste della minima e della semiminima, e dei segni appositi che indicano pause di diversa lunghezza.

```
\include "gregorian.ly"

chant = \relative c' {
  \set Score.timing = ##f
  f4 a2 \divisioMinima
  g4 b a2 f2 \divisioMaior
  g4( f) f( g) a2 \finalis
}

verba = \lyricmode {
  Lo -- rem ip -- sum do -- lor sit a -- met
}

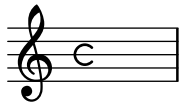
\score {
  \new Staff <<
    \new Voice = "melody" \chant
    \new Lyrics = "one" \lyricsto melody \verba
  >>
  \layout {
    \context {
      \Staff
      \remove "Time_signature_engraver"
      \remove "Bar_engraver"
      \hide Stem
    }
    \context {
      \Voice
      \override Stem.length = #0
    }
    \context {
      \Score
      barAlways = ##t
    }
  }
}
```



Ancient time signatures

Time signatures may also be engraved in an old style.

```
{
  \override Staff.TimeSignature.style = #'neomensural
  s1
}
```

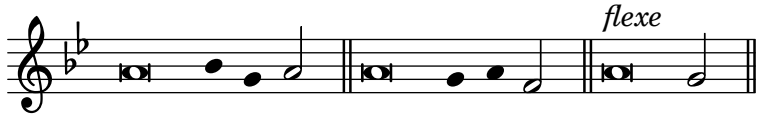


Notazione per canti e salmi

Questa forma di notazione è utilizzata per i salmi, dove i versi non sono sempre della stessa lunghezza.

```
stemOff = \hide Staff.Stem
stemOn  = \undo \stemOff

\score {
  \new Staff \with { \remove "Time_signature_engraver" }
  {
    \key g \minor
    \cadenzaOn
    \stemOff a'\breve bes'4 g'4
    \stemOn a'2 \bar "||"
    \stemOff a'\breve g'4 a'4
    \stemOn f'2 \bar "||"
    \stemOff a'\breve^\markup { \italic flexe }
    \stemOn g'2 \bar "||"
  }
}
```



Custodes

Custodes may be engraved in various styles.

```
\layout { ragged-right = ##t }

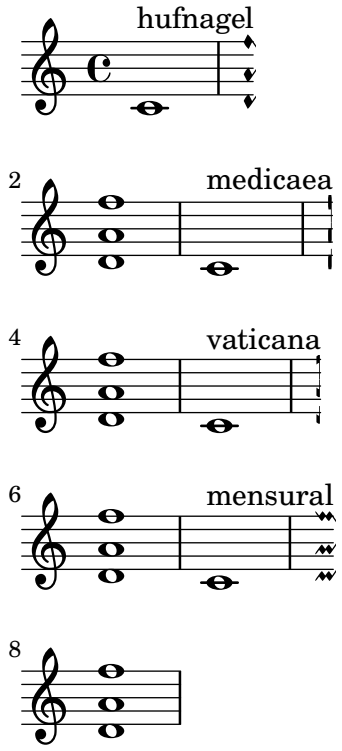
\new Staff \with { \consists "Custos_engraver" } \relative c' {
  \override Staff.Custos.neutral-position = #4

  \override Staff.Custos.style = #'hufnagel
  c1^"hufnagel" \break
  <d a' f'>1
```

```
  \override Staff.Custos.style = #'medicaea
  c1^"medicaea" \break
  <d a' f'>1

  \override Staff.Custos.style = #'vaticana
  c1^"vaticana" \break
  <d a' f'>1

  \override Staff.Custos.style = #'mensural
  c1^"mensural" \break
  <d a' f'>1
}
```



Incipit

Quando si trascrive musica mensurale, un incipit all'inizio del brano è utile per indicare il tempo e l'armatura di chiave originali. I musicisti oggi sono abituati alle stanghette, ma queste non erano note all'epoca della musica mensurale. Come compromesso, spesso le stanghette vengono poste tra i righi, uno stile di formattazione chiamato mensurstriche.

```
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% A short excerpt from the Jubilate Deo by Orlande de Lassus
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

global = {
  \set Score.skipBars = ##t
  \key g \major
  \time 4/4

  % the actual music
  \skip 1*8
```

```
  % let finis bar go through all staves
  \override Staff.BarLine.transparent = ##f

  % finis bar
  \bar "|."
}

discantusIncipit = {
  \clef "neomensural-c1"
  \key f \major
  \time 2/2
  c''1.
}

discantusNotes = {
  \transpose c' c'' {
    \clef "treble"
    d'2. d'4 |
    b e' d'2 |
    c'4 e'4.( d'8 c' b |
    a4) b a2 |
    b4.( c'8 d'4) c'4 |
    \once \hide NoteHead
    c'1 |
    b\breve |
  }
}

discantusLyrics = \lyricmode {
  Ju -- bi -- la -- te De -- o,
  om -- nis ter -- ra, __ om-
  "..."
  -us.
}

altusIncipit = {
  \clef "neomensural-c3"
  \key f \major
  \time 2/2
  r1 f'1.
}

altusNotes = {
  \transpose c' c'' {
    \clef "treble"
    r2 g2. e4 fis g |
    a2 g4 e |
    fis g4.( fis16 e fis4) |
    g1 |
    \once \hide NoteHead
    g1 |
```

```
    g\breve |
  }
}

altusLyrics = \lyricmode {
  Ju -- bi -- la -- te
  De -- o, om -- nis ter -- ra,
  "..."
  -us.
}

tenorIncipit = {
  \clef "neomensural-c4"
  \key f \major
  \time 2/2
  r\longa
  r\breve
  r1 c'1.
}

tenorNotes = {
  \transpose c' c' {
    \clef "treble_8"
    R1 |
    R1 |
    R1 |
    % two measures
    r2 d'2. d'4 b e' |
    \once \hide NoteHead
    e'1 |
    d'\breve |
  }
}

tenorLyrics = \lyricmode {
  Ju -- bi -- la -- te
  "..."
  -us.
}

bassusIncipit = {
  \clef "mensural-f"
  \key f \major
  \time 2/2
  r\maxima
  f1.
}

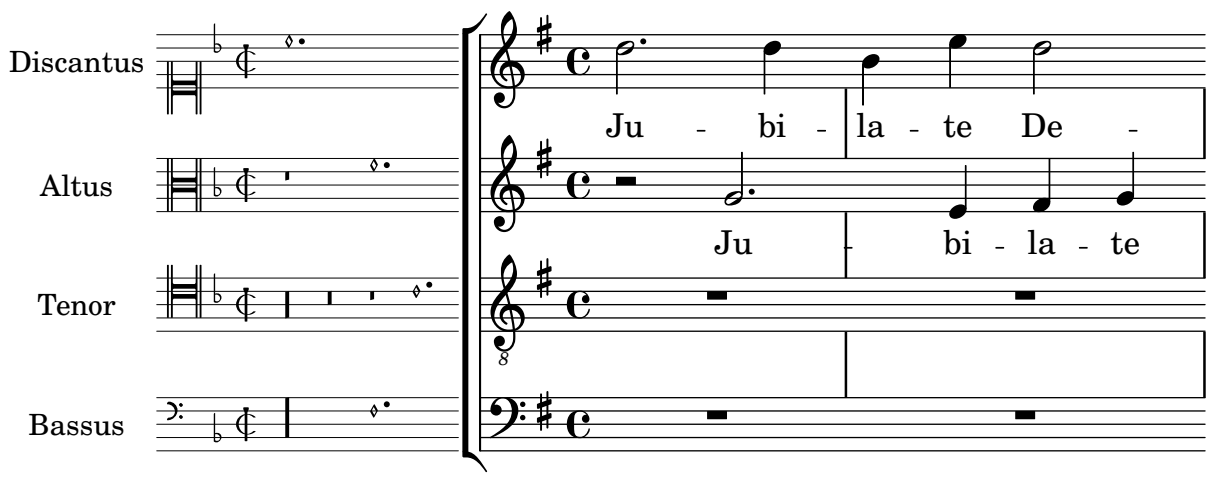
bassusNotes = {
  \transpose c' c' {
    \clef "bass"
    R1 |
```

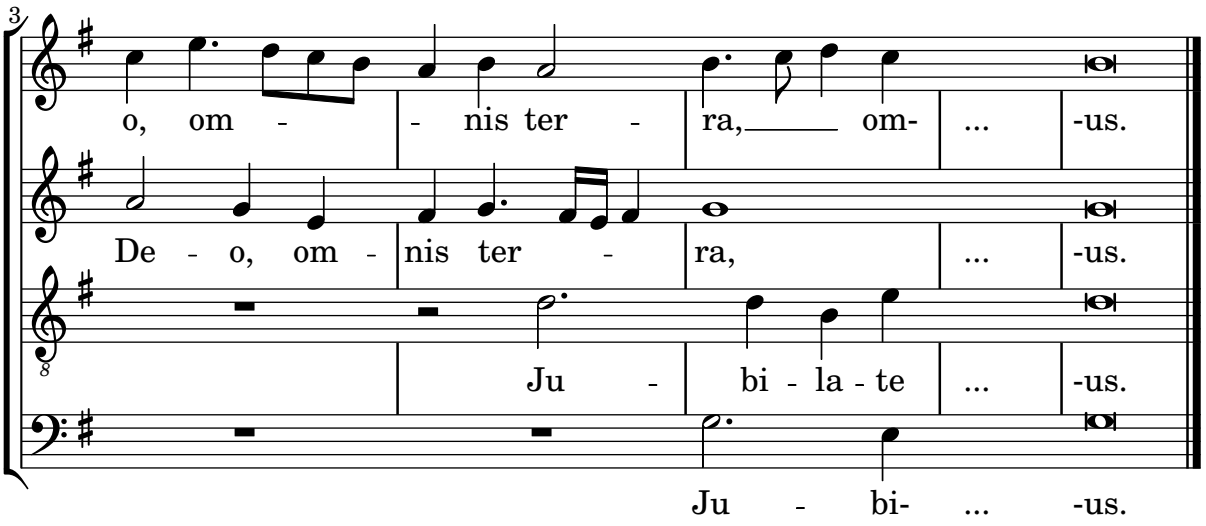
```
    R1 |
    R1 |
    R1 |
    g2. e4 |
    \once \hide NoteHead
    e1 |
    g\breve |
  }
}

bassusLyrics = \lyricmode {
  Ju -- bi-
  "..."
  -us.
}

\score {
  <<
    \new StaffGroup = choirStaff <<
      \new Voice = "discantusNotes" <<
        \set Staff.instrumentName = "Discantus"
        \incipit \discantusIncipit
        \global
        \discantusNotes
      >>
      \new Lyrics \lyricsto discantusNotes { \discantusLyrics }
      \new Voice = "altusNotes" <<
        \set Staff.instrumentName = "Altus"
        \global
        \incipit \altusIncipit
        \altusNotes
      >>
      \new Lyrics \lyricsto altusNotes { \altusLyrics }
      \new Voice = "tenorNotes" <<
        \set Staff.instrumentName = "Tenor"
        \global
        \incipit \tenorIncipit
        \tenorNotes
      >>
      \new Lyrics \lyricsto tenorNotes { \tenorLyrics }
      \new Voice = "bassusNotes" <<
        \set Staff.instrumentName = "Bassus"
        \global
        \incipit \bassusIncipit
        \bassusNotes
      >>
      \new Lyrics \lyricsto bassusNotes { \bassusLyrics }
    >>
  >>
  \layout {
    \context {
      \Score
```

```
      %% no bar lines in staves or lyrics
      \hide BarLine
    }
    %% the next two instructions keep the lyrics between the bar lines
    \context {
      \Lyrics
      \consists "Bar_engraver"
      \consists "Separating_line_group_engraver"
    }
    \context {
      \Voice
      %% no slurs
      \hide Slur
      %% Comment in the below "\remove" command to allow line
      %% breaking also at those bar lines where a note overlaps
      %% into the next measure.  The command is commented out in this
      %% short example score, but especially for large scores, you
      %% will typically yield better line breaking and thus improve
      %% overall spacing if you comment in the following command.
      %%\remove "Forbid_line_break_engraver"
    }
    indent = 6\cm
    incipit-width = 4\cm
  }
}
```



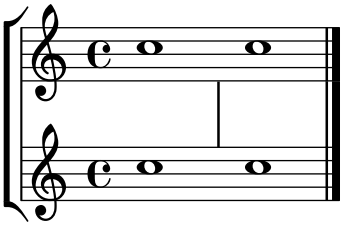


Formattazione mensurale (stanghette tra i righi)

La formattazione mensurale, in cui le stanghette non appaiono sui righi ma nello spazio tra i righi, si può ottenere usando `StaffGroup` al posto di `ChoirStaff`. La stanghetta sui righi viene nascosta con `\hide`.

```
global = {
  \hide Staff.BarLine
  s1 s
  % the final bar line is not interrupted
  \undo \hide Staff.BarLine
  \bar "|."
}

\new StaffGroup \relative c'' {
  <<
    \new Staff { << \global { c1 c } >> }
    \new Staff { << \global { c c } >> }
  >>
}
```



Stili di pausa

Esistono vari stili di pausa.

```
\new Staff \relative c {
  \omit Score.TimeSignature
  \cadenzaOn

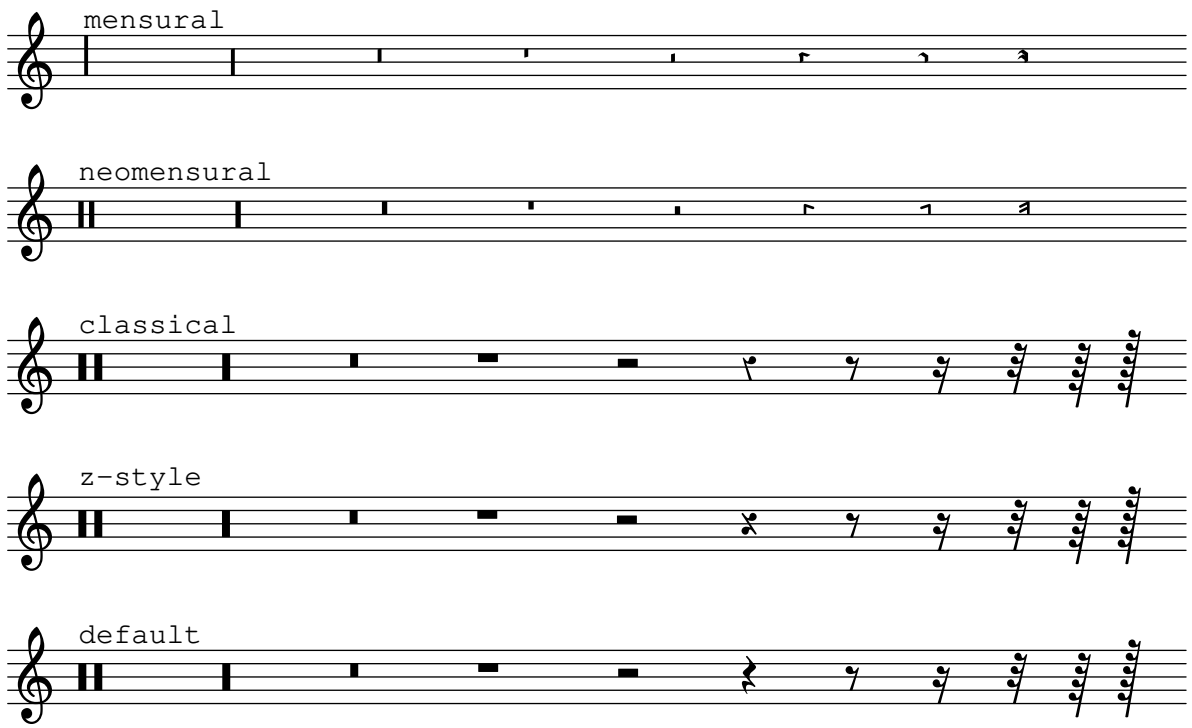
  \override Staff.Rest.style = #'mensural
  r\maxima^\markup \typewriter { mensural }
  r\longa r\breve r1 r2 r4 r8 r16 s32 s64 s128 s128
  \bar ""
  \break
```

```
  \override Staff.Rest.style = #'neomensural
  r\maxima^\markup \typewriter { neomensural }
  r\longa r\breve r1 r2 r4 r8 r16 s32 s64 s128 s128
  \bar ""
  \break

  \override Staff.Rest.style = #'classical
  r\maxima^\markup \typewriter { classical }
  r\longa r\breve r1 r2 r4 r8 r16 r32 r64 r128 s128
  \bar ""
  \break

  \override Staff.Rest.style = #'z
  r\maxima^\markup \typewriter { z-style }
  r\longa r\breve r1 r2 r4 r8 r16 r32 r64 r128 s128
  \bar ""
  \break

  \override Staff.Rest.style = #'default
  r\maxima^\markup \typewriter { default }
  r\longa r\breve r1 r2 r4 r8 r16 r32 r64 r128 s128
}
```



Usare le etichette per produrre musica mensurale e moderna dallo stesso sorgente

Usando le etichette (tag), è possibile usare la stessa musica per produrre sia la musica mensurale che quella moderna. In questo frammento, viene introdotta la funzione `menrest`, che permette alle pause mensurali di essere posizionate precisamente sul rigo come nell'originale, ma con le pause moderne nella posizione standard. Le etichette vengono usate per produrre diversi tipi di

stanghetta alla fine della musica, ma possono essere usate anche quando sono necessarie altre differenze: per esempio se si vogliono usare "pause d'intero" (R1, R\breve, etc.) nella musica moderna, ma pause normali (r1, r\breve, etc.) nella versione mensurale. La conversione di musica mensurale nel suo equivalente moderno viene solitamente chiamata `trascrizione`.

```
menrest = #(define-music-function (note)
  (ly:music?)
#{
    \tag #'mens $(make-music 'RestEvent note)
    \tag #'mod $(make-music 'RestEvent note 'pitch '())
#})

MensStyle = {
  \autoBeamOff
  \override NoteHead.style = #'petrucci
  \override Score.BarNumber.transparent = ##t
  \override Stem.neutral-direction = #up
}

finalis = {
  \once \override BreathingSign.stencil = #ly:breathing-sign::finalis
  \once \override BreathingSign.Y-offset = #0
  \once \override BreathingSign.minimum-X-extent = #'(-1.0 . 0.0)
  \once \override BreathingSign.minimum-Y-extent = #'(-2.5 . 2.5)

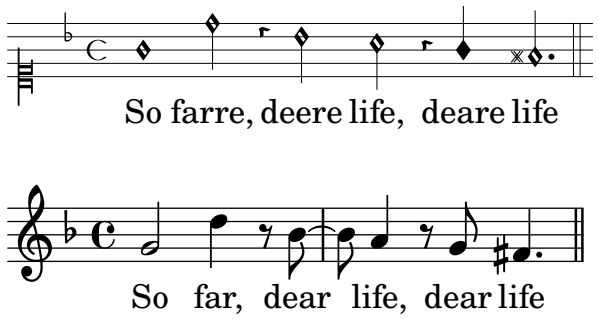
  \breathe
}

Music = \relative c'' {
  \set Score.tempoHideNote = ##t
  \key f \major
  \time 4/4
  g1 d'2 \menrest bes4 bes2 a2 r4 g4 fis2.
  \tag #'mens { \finalis }
  \tag #'mod { \bar "||" }
}

MenLyr = \lyricmode { So farre, deere life, deare life }
ModLyr = \lyricmode { So far, dear life, dear life }

\score {
  \keepWithTag #'mens {
    <<
      \new MensuralStaff
      {
        \new MensuralVoice = Cantus
          \clef "mensural-c1" \MensStyle \Music
      }
      \new Lyrics \lyricsto Cantus \MenLyr
    >>
  }
}
```

```
\score {
  \keepWithTag #'mod {
    \new ChoirStaff <<
      \new Staff
      {
        \new Voice = Sop \with {
          \remove "Note_heads_engraver"
          \consists "Completion_heads_engraver"
          \remove "Rest_engraver"
          \consists "Completion_rest_engraver" }
        {
          \shiftDurations #1 #0 { \autoBeamOff \Music }
        }
      }
      \new Lyrics \lyricsto Sop \ModLyr
    >>
  }
}
```
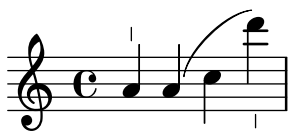


Vertical line as a baroque articulation mark

This short vertical line placed above the note is commonly used in baroque music. Its meaning can vary, but generally indicates notes that should be played with more “weight”. The following example demonstrates how to achieve such a notation.

```
upline =
\tweak stencil
  #(lambda (grob)
    (grob-interpret-markup grob #{ \markup \draw-line #'(0 . 1) #}))
  \stopped

\relative c' {
  a'4^\upline a( c d')_\upline
}
```



World music

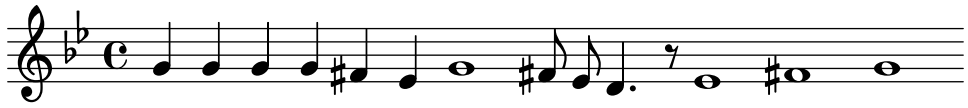
Sezione “World music” in *Guida alla Notazione*

Improvvisazione araba

Per improvvisazioni o *taqasim* a tempo libero, si può omettere l’indicazione di tempo e usare `\cadenzaOn`. Può essere necessaria la modifica dello stile delle alterazioni, perché l’assenza delle stanghette farà sì che l’alterazione sia contrassegnata una volta sola. Ecco un esempio di quello che potrebbe essere l’inizio di un’improvvisazione *hijaz*:

```
\include "arabic.ly"

\relative sol' {
  \key re \kurd
  \accidentalStyle forget
  \cadenzaOn
  sol4 sol sol sol fad mib sol1 fad8 mib re4. r8 mib1 fad sol
}
```
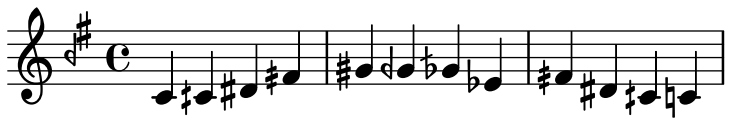


Esempio di makam

Makam è un tipo di melodia proveniente dalla Turchia che usa alterazioni microtonali di 1/9. Consultare il file di inizializzazione ‘`ly/makam.ly`’ per vedere come sono definiti i nomi delle altezze e le alterazioni.

```
% Initialize makam settings
\include "makam.ly"

\relative c' {
  \set Staff.keyAlterations = #`((6 . ,(- KOMA)) (3 . ,BAKIYE))
  c4 cc db fk
  gbm4 gfc gfb efk
  fk4 db cc c
}
```



Armature di chiave non tradizionali

Il comando `\key` comunemente usato imposta la proprietà `keyAlterations` del contesto `Staff`. Per creare armature di chiave non standard, tale proprietà va impostata esplicitamente.
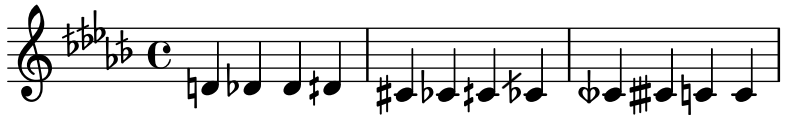
Il formato di questo comando è una lista:

`\set Staff.keyAlterations = #`(((ottava . grado) . alterazione) ((ottava . grado) . alterazione) ...)`

dove, per ogni elemento della lista, `ottava` indica l’ottava (0 è l’ottava dal Do centrale al Si precedente), `grado` indica la nota all’interno dell’ottava (0 significa Do e 6 significa Si) e `alterazione` può essere `,SHARP` `,FLAT` `,DOUBLE-SHARP` etc.

Altrimenti, usando il formato breve per ogni elemento della lista, `(grado . alterazione)`, ciò indica che la stessa alterazione deve essere presente in tutte le ottave. Per le scale microtonalidove un "diesis" non è 100 centesimi, `alterazione` si riferisce alla proporzione di un duecentesimo di tono intero.

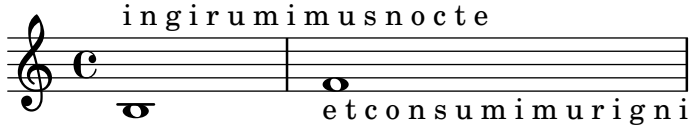
```
\include "arabic.ly"
\relative do' {
  \set Staff.keyAlterations = #`((0 . ,SEMI-FLAT)
                                 (1 . ,SEMI-FLAT)
                                 (2 . ,FLAT)
                                 (5 . ,FLAT)
                                 (6 . ,SEMI-FLAT))
%\set Staff.extraNatural = ##f
  re reb \dwn reb resd
  dod dob dosd \dwn dob |
  dobsb dodsd do do |
}
```



Printing text from right to left

It is possible to print text from right to left in a markup object, as demonstrated here.

```
{
  b1^\markup {
    \line { i n g i r u m i m u s n o c t e }
  }
  f'_\markup {
    \override #'(text-direction . -1)
    \line { i n g i r u m i m u s n o c t e }
  }
}
```



Turkish Makam example

This template uses the start of a well-known Turkish Saz Semai that is familiar in the repertoire in order to illustrate some of the elements of Turkish music notation.

```
% Initialize makam settings
\include "turkish-makam.ly"

\header {
    title = "Hüseyni Saz Semaisi"
    composer = "Lavtacı Andon"
}

\relative {
```

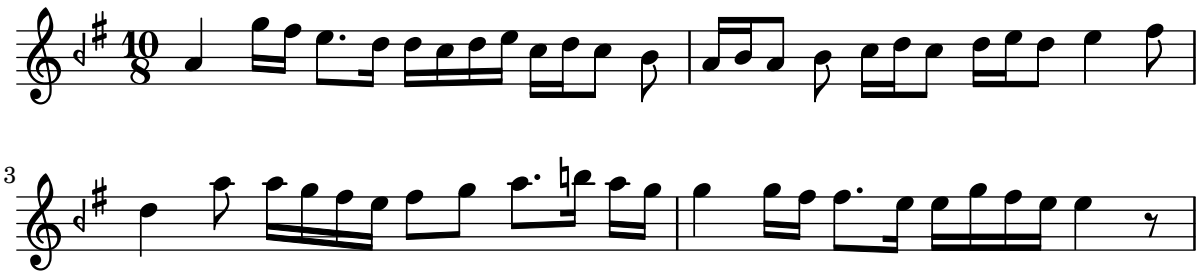
```
  \set Staff.extraNatural = ##f
  \set Staff.autoBeaming = ##f

  \key a \huseyni
  \time 10/8

  a'4 g'16 [fb] e8. [d16] d [c d e] c [d c8] bfc |
  a16 [bfc a8] bfc c16 [d c8] d16 [e d8] e4 fb8 |
  d4 a'8 a16 [g fb e] fb8 [g] a8. [b16] a16 [g] |
  g4 g16 [fb] fb8. [e16] e [g fb e] e4 r8 |
}
```

Hüseyni Saz Semaisi

Lavtacı Andon



Contexts and engravers

Sezione “Changing defaults” in *Guida alla Notazione*

Sezione “Contexts and engravers” in *Manuale di Apprendimento*

Adding a figured bass above or below the notes
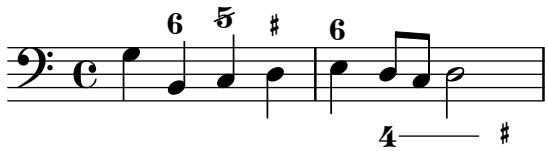
When writing a figured bass, you can place the figures above or below the bass notes, by defining the `BassFigureAlignmentPositioning.direction` property (exclusively in a `Staff` context). Choices are `#UP` (or `#1`), `#CENTER` (or `#0`) and `#DOWN` (or `#-1`).

This property can be changed as many times as you wish. Use `\once \override` if you don't want the override to apply to the whole score.

```
bass = {
  \clef bass
  g4 b, c d
  e d8 c d2
}

continuo = \figuremode {
  <_>4 <6>4 <5/>4
  \override Staff.BassFigureAlignmentPositioning.direction = #UP
  %\bassFigureStaffAlignmentUp
  < _+ >4 <6>
  \set Staff.useBassFigureExtenders = ##t
  \override Staff.BassFigureAlignmentPositioning.direction = #DOWN
  %\bassFigureStaffAlignmentDown
  <4>4. <4>8 <_+>4
}

\score {
  <<
    \new Staff = bassStaff \bass
    \context Staff = bassStaff \continuo
  >>
}
```

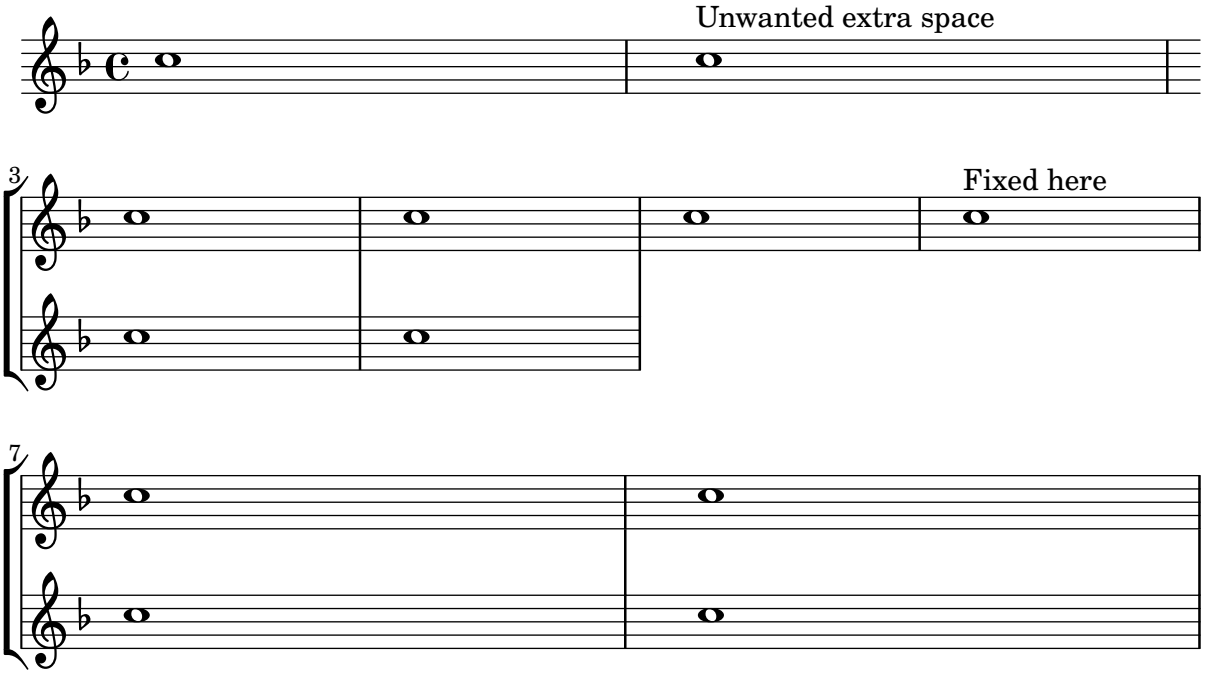


Adding an extra staff at a line break

When adding a new staff at a line break, some extra space is unfortunately added at the end of the line before the break (to fit in a key signature change, which will never be printed anyway). The workaround is to add a setting of `Staff.explicitKeySignatureVisibility` as is shown in the example.

```
\score {
  \new StaffGroup \relative c'' {
    \new Staff
    \key f \major
```

```
    c1 c^"Unwanted extra space" \break
    << { c1 | c }
       \new Staff {
         \key f \major
         \once \omit Staff.TimeSignature
         c1 | c
       }
    >>
    c1 | c^"Fixed here" \break
    << { c1 | c }
       \new Staff {
         \once \set Staff.explicitKeySignatureVisibility = #end-of-line-invisible
         \key f \major
         \once \omit Staff.TimeSignature
         c1 | c
       }
    >>
  }
}
```

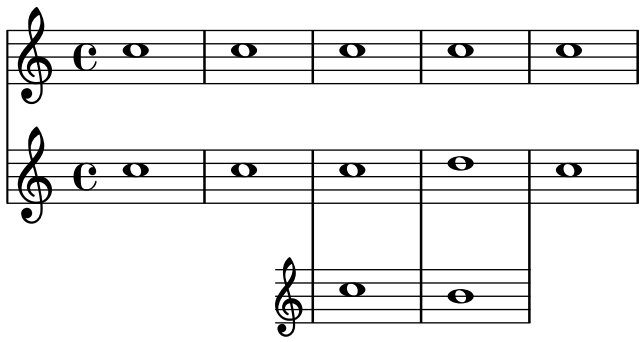


Adding an extra staff

An extra staff can be added (possibly temporarily) after the start of a piece.

```
\score {
  <<
    \new Staff \relative c'' {
      c1 | c | c | c | c
    }
    \new StaffGroup \relative c'' {
      \new Staff {
        c1 | c
        <<
```

```
          {
            c1 | d
          }
          \new Staff {
            \once \omit Staff.TimeSignature
            c1 | b
          }
        >>
        c1
      }
    }
  >>
}
```
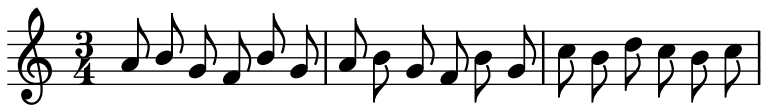


Cambiare automaticamente la direzione del gambo della nota centrale in base alla melodia

LilyPond può modificare la direzione del gambo della nota centrale di un rigo in modo che segua la melodia: occorre aggiungere l'incisore `Melody_engraver` al contesto Voice.

```
\relative c'' {
  \time 3/4
  a8 b g f b g |
  \set suspendMelodyDecisions = ##t
  a  b g f b g |
  \unset suspendMelodyDecisions
  c  b d c b c |
}

\layout {
  \context {
    \Voice
    \consists "Melody_engraver"
    \autoBeamOff
  }
}
```



Centered measure numbers

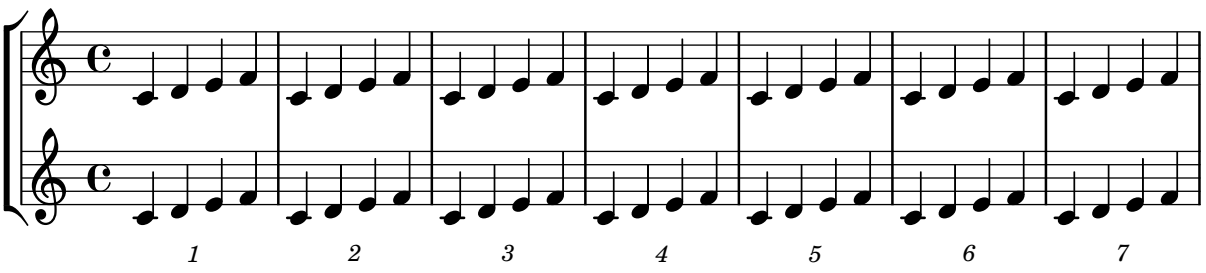
Scores of large ensemble works often have bar numbers placed beneath the system, centered horizontally on the measure's extent. This snippet shows how the `Measure_counter_engraver` may be used to simulate this notational practice. Here, the engraver has been added to a `Dynamics` context.

This snippet presents a legacy method: starting from LilyPond 2.23.3, `\set Score.centerBarNumbers = ##t` is enough.

```
\layout {
  \context {
    \Dynamics
    \consists #Measure_counter_engraver
    \override MeasureCounter.direction = #DOWN
    \override MeasureCounter.font-encoding = #'latin1
    \override MeasureCounter.font-shape = #'italic
    % to control the distance of the Dynamics context from the staff:
    \override VerticalAxisGroup.nonstaff-relatedstaff-spacing.padding = #2
  }
  \context {
    \Score
    \remove "Bar_number_engraver"
  }
}

pattern = \repeat unfold 7 { c'4 d' e' f' }

\new StaffGroup <<
  \new Staff {
    \pattern
  }
  \new Staff {
    \pattern
  }
  \new Dynamics {
    \startMeasureCount
    s1*7
    \stopMeasureCount
  }
>>
```
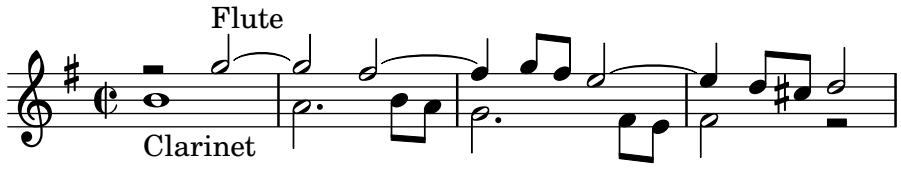


Impostare l'output MIDI su un canale per voce

Nella creazione del file di output MIDI, il comportamento predefinito prevede che ogni rigo sia assegnato a un canale MIDI, con tutte le voci del rigo amalgamate in un canale. Ciò diminuisce il rischio di esaurire i canali MIDI disponibili, dato che ce ne sono solo 16 per traccia.

Tuttavia, spostando `Staff_performer` nel contesto `Voice`, ogni voce in un rigo può avere il proprio canale MIDI, come è illustrato nell'esempio seguente: sebbene le voci siano sullo stesso rigo, vengono creati due canali MIDI, ciascuno con un diverso strumento MIDI (`midiInstrument`).

```
\score {
  \new Staff <<
    \new Voice \relative c''' {
      \set midiInstrument = #"flute"
      \voiceOne
      \key g \major
      \time 2/2
      r2 g-"Flute" ~
      g fis ~
      fis4 g8 fis e2 ~
      e4 d8 cis d2
    }
    \new Voice \relative c'' {
      \set midiInstrument = #"clarinet"
      \voiceTwo
      b1-"Clarinet"
      a2. b8 a
      g2. fis8 e
      fis2 r
    }
  >>
  \layout { }
  \midi {
    \context {
      \Staff
      \remove "Staff_performer"
    }
    \context {
      \Voice
      \consists "Staff_performer"
    }
    \tempo 2 = 72
  }
}
```

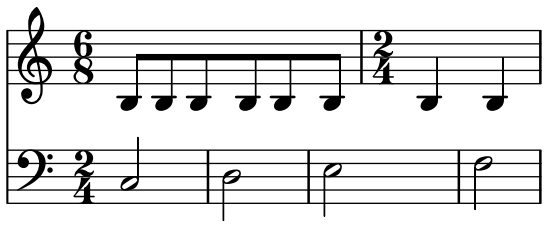


Changing time signatures inside a polymetric section using \scaleDurations

The `measureLength` property, together with `measurePosition`, determines when a bar line is needed. However, when using `\scaleDurations`, the scaling of durations makes it difficult to change time signatures. In this case, `measureLength` should be set manually, using the `ly:make-moment` callback. The second argument must be the same as the second argument of `\scaleDurations`.

```
\layout {
  \context {
    \Score
    \remove "Timing_translator"
    \remove "Default_bar_line_engraver"
  }
  \context {
    \Staff
    \consists "Timing_translator"
    \consists "Default_bar_line_engraver"
  }
}

<<
  \new Staff {
    \scaleDurations 8/5 {
      \time 6/8
      \set Timing.measureLength = #(ly:make-moment 6/5)
      b8 b b b b b
      \time 2/4
      \set Timing.measureLength = #(ly:make-moment 4/5)
      b4 b
    }
  }
  \new Staff {
    \clef bass
    \time 2/4
    c2 d e f
  }
>>
```

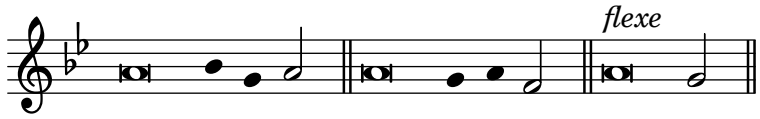


Notazione per canti e salmi

Questa forma di notazione è utilizzata per i salmi, dove i versi non sono sempre della stessa lunghezza.

```
stemOff = \hide Staff.Stem
stemOn  = \undo \stemOff
```

```
\score {
  \new Staff \with { \remove "Time_signature_engraver" }
  {
    \key g \minor
    \cadenzaOn
    \stemOff a'\breve bes'4 g'4
    \stemOn a'2 \bar "||"
    \stemOff a'\breve g'4 a'4
    \stemOn f'2 \bar "||"
    \stemOff a'\breve^\markup { \italic flexe }
    \stemOn g'2 \bar "||"
  }
}
```



Creating blank staves

To create blank staves, generate empty measures then remove the `Bar_number_engraver` from the `Score` context, and the `Time_signature_engraver`, `Clef_engraver` and `Bar_engraver` from the `Staff` context.

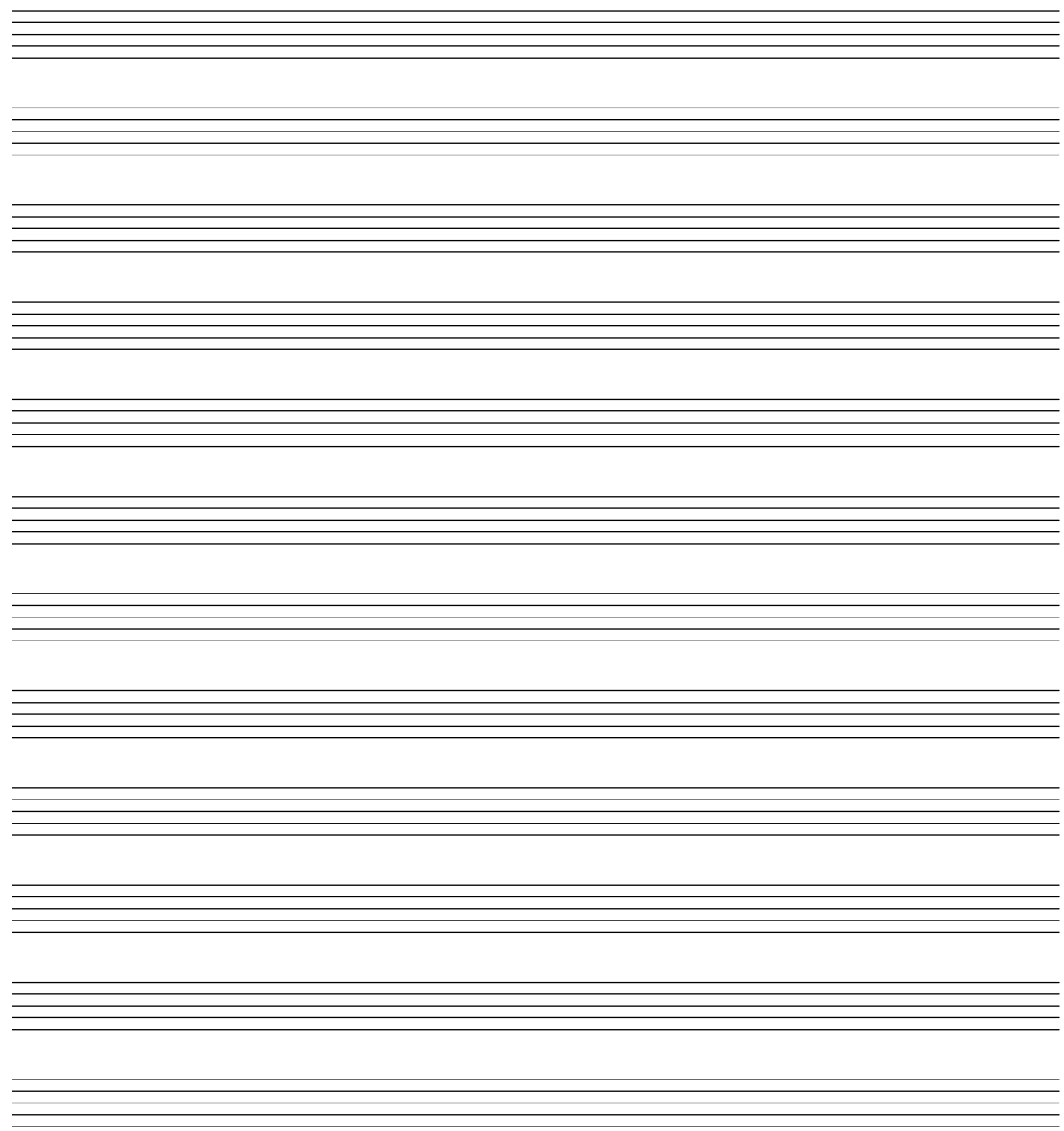
```
#(set-global-staff-size 20)

\score {
  {
    \repeat unfold 12 { s1 \break }
  }
  \layout {
    indent = 0\in
    \context {
      \Staff
      \remove "Time_signature_engraver"
      \remove "Clef_engraver"
      \remove "Bar_engraver"
    }
    \context {
      \Score
      \remove "Bar_number_engraver"
    }
  }
}

% uncomment these lines for "letter" size
%{
\paper {
  #(set-paper-size "letter")
  ragged-last-bottom = ##f
  line-width = 7.5\in
  left-margin = 0.5\in
  bottom-margin = 0.25\in
```

```
  top-margin = 0.25\in
}
%}

% uncomment these lines for "A4" size
%{
\paper {
  #(set-paper-size "a4")
  ragged-last-bottom = ##f
  line-width = 180
  left-margin = 15
  bottom-margin = 10
  top-margin = 10
}
%}
```



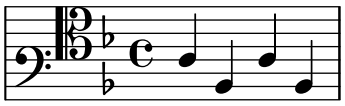
Creating custom key signatures

LilyPond supports custom key signatures. In this example, print for D minor with an extended range of printed flats.

```
\new Staff \with {
  \override StaffSymbol.line-count = #8
  \override KeySignature.flat-positions = #'((-7 . 6))
  \override KeyCancellation.flat-positions = #'((-7 . 6))
  % presumably sharps are also printed in both octaves
  \override KeySignature.sharp-positions = #'((-6 . 7))
  \override KeyCancellation.sharp-positions = #'((-6 . 7))

  \override Clef.stencil = #
  (lambda (grob)(grob-interpret-markup grob
  #{ \markup\combine
    \musicglyph "clefs.C"
    \translate #'(-3 . -2)
    \musicglyph "clefs.F"
   #}))
    clefPosition = #3
    middleCPosition = #3
    middleCClefPosition = #3
}

{
  \key d\minor
  f bes, f bes,
}
```



Cross staff stems

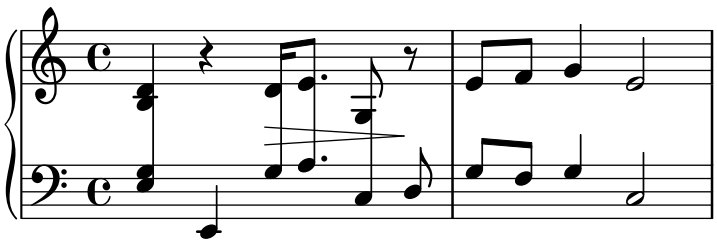
This snippet shows the use of the `Span_stem_engraver` and `\crossStaff` to connect stems across staves automatically.

The stem length need not be specified, as the variable distance between noteheads and staves is calculated automatically.

```
\layout {
  \context {
    \PianoStaff
    \consists "Span_stem_engraver"
  }
}

{
  \new PianoStaff <<
    \new Staff {
      <b d'>4 r d'16\> e'8. g8 r\!
      e'8 f' g'4 e'2
    }
```

```
    \new Staff {
      \clef bass
      \voiceOne
      \autoBeamOff
      \crossStaff { <e g>4 e, g16 a8. c8} d
      \autoBeamOn
      g8 f g4 c2
    }
  >>
}
```



Defining an engraver in Scheme: ambitus engraver

This example demonstrates how the ambitus engraver may be defined on the user side, with a Scheme engraver.

This is basically a rewrite in Scheme of the code from `lily/ambitus-engraver.cc`.

```
#(use-modules (oop goops))

%%%
%%% Grob utilities
%%%
%%% These are literal rewrites of some C++ methods used by the ambitus engraver.

#(define (ly:separation-item::add-conditional-item grob grob-item)
   "Add @var{grob-item} to the array of conditional elements of @var{grob}.
Rewrite of @code{Separation_item::add_conditional_item} from @file{lily/separation-item.cc}
   (ly:pointer-group-interface::add-grob grob 'conditional-elements grob-item))

#(define (ly:accidental-placement::accidental-pitch accidental-grob)
   "Get the pitch from the grob cause of @var{accidental-grob}.
Rewrite of @code{accidental_pitch} from @file{lily/accidental-placement.cc}."
   (ly:event-property (ly:grob-property (ly:grob-parent accidental-grob Y) 'cause)
                      'pitch))

#(define (ly:accidental-placement::add-accidental grob accidental-grob)
   "Add @var{accidental-grob}, an @code{Accidental} grob, to the
list of the accidental grobs of @var{grob}, an @code{AccidentalPlacement}
grob.
Rewrite of @code{Accidental_placement::add_accidental} from @file{lily/accidental-placement
   (let ((pitch (ly:accidental-placement::accidental-pitch accidental-grob)))
     (set! (ly:grob-parent accidental-grob X) grob)
     (let* ((accidentals (ly:grob-object grob 'accidental-grobs))
            (handle (assq (ly:pitch-notename pitch) accidentals))
            (entry (if handle (cdr handle) '())))
```

```
       (set! (ly:grob-object grob 'accidental-grobs)
             (assq-set! accidentals
                        (ly:pitch-notename pitch)
                        (cons accidental-grob entry))))))

%%%
%%% Ambitus data structure
%%%

%%% The <ambitus> class holds the various grobs that are created
%%% to print an ambitus:
%%% - ambitus-group: the grob that groups all the components of an ambitus
%%% (Ambitus grob);
%%% - ambitus-line: the vertical line between the upper and lower ambitus
%%% notes (AmbitusLine grob);
%%% - ambitus-up-note and ambitus-down-note: the note head and accidental
%%% for the lower and upper note of the ambitus (see <ambitus-note> class
%%% below).
%%% The other slots define the key and clef context of the engraver:
%%% - start-c0: position of middle c at the beginning of the piece.  It
%%% is used to place the ambitus notes according to their pitch;
%%% - start-key-sig: the key signature at the beginning of the piece.  It
%%% is used to determine if accidentals shall be printed next to ambitus
%%% notes.

#(define-class <ambitus> ()
   (ambitus-group #:accessor ambitus-group)
   (ambitus-line #:accessor ambitus-line)
   (ambitus-up-note #:getter ambitus-up-note
                    #:init-form (make <ambitus-note>))
   (ambitus-down-note #:getter ambitus-down-note
                      #:init-form (make <ambitus-note>))
   (start-c0 #:accessor ambitus-start-c0
             #:init-value #f)
   (start-key-sig #:accessor ambitus-start-key-sig
                  #:init-value '()))

%%% Accessor for the lower and upper note data of an ambitus
#(define-method (ambitus-note (ambitus <ambitus>) direction)
   "If @var{direction} is @code{UP}, then return the upper ambitus note
of @var{ambitus}, otherwise return the lower ambitus note."
   (if (= direction UP)
       (ambitus-up-note ambitus)
       (ambitus-down-note ambitus)))

%%% The <ambitus-note> class holds the grobs that are specific to ambitus
%%% (lower and upper) notes:
%%% - head: an AmbitusNoteHead grob;
%%% - accidental: an AmbitusAccidental grob, to be possibly printed next
%%% to the ambitus note head.
%%% Moreover:
%%% - pitch is the absolute pitch of the note
```

```
%%% - cause is the note event that causes this ambitus note, i.e. the lower
%%% or upper note of the considered music sequence.

#(define-class <ambitus-note> ()
   (head #:accessor ambitus-note-head
         #:init-value #f)
   (accidental #:accessor ambitus-note-accidental
               #:init-value #f)
   (cause #:accessor ambitus-note-cause
          #:init-value #f)
   (pitch #:accessor ambitus-note-pitch
          #:init-value #f))

%%%
%%% Ambitus engraving logics
%%%
%%% Rewrite of the code from @file{lily/ambitus-engraver.cc}.

#(define (make-ambitus translator)
   "Build an ambitus object: initialize all the grobs and their relations.

The Ambitus grob contain all other grobs:
 Ambitus
  |- AmbitusLine
  |- AmbitusNoteHead   for upper note
  |- AmbitusAccidental for upper note
  |- AmbitusNoteHead   for lower note
  |- AmbitusAccidental for lower note

The parent of an accidental is the corresponding note head,
and the accidental is set as the 'accidental-grob of the note head
so that is printed by the function that prints notes."
   ;; make the ambitus object
   (let ((ambitus (make <ambitus>)))
     ;; build the Ambitus grob, which will contain all other grobs
     (set! (ambitus-group ambitus) (ly:engraver-make-grob translator 'Ambitus '()))
     ;; build the AmbitusLine grob (line between lower and upper note)
     (set! (ambitus-line ambitus) (ly:engraver-make-grob translator 'AmbitusLine '()))
     ;; build the upper and lower AmbitusNoteHead and AmbitusAccidental
     (for-each (lambda (direction)
                 (let ((head (ly:engraver-make-grob translator 'AmbitusNoteHead '()))
                       (accidental (ly:engraver-make-grob translator 'AmbitusAccidental '()
                       (group (ambitus-group ambitus)))
                   ;; The parent of the AmbitusAccidental grob is the
                   ;; AmbitusNoteHead grob
                   (set! (ly:grob-parent accidental Y) head)
                   ;; The AmbitusAccidental grob is set as the accidental-grob
                   ;; object of the AmbitusNoteHead.  This is later used by the
                   ;; function that prints notes.
                   (set! (ly:grob-object head 'accidental-grob) accidental)
                   ;; both the note head and the accidental grobs are added
                   ;; to the main ambitus grob.
```

```
                    (ly:axis-group-interface::add-element group head)
                    (ly:axis-group-interface::add-element group accidental)
                    ;; the note head and the accidental grobs are added to the
                    ;; ambitus object
                    (set! (ambitus-note-head (ambitus-note ambitus direction))
                          head)
                    (set! (ambitus-note-accidental (ambitus-note ambitus direction))
                          accidental)))
                (list DOWN UP))
      ;; The parent of the ambitus line is the lower ambitus note head
      (set! (ly:grob-parent (ambitus-line ambitus) X)
            (ambitus-note-head (ambitus-note ambitus DOWN)))
      ;; the ambitus line is added to the ambitus main grob
      (ly:axis-group-interface::add-element (ambitus-group ambitus) (ambitus-line ambitus))
      ambitus))

#(define-method (initialize-ambitus-state (ambitus <ambitus>) translator)
   "Initialize the state of @var{ambitus}, by getting the starting
position of middle C and key signature from @var{translator}'s context."
   (if (not (ambitus-start-c0 ambitus))
       (begin
         (set! (ambitus-start-c0 ambitus)
               (ly:context-property (ly:translator-context translator)
                                    'middleCPosition
                                    0))
         (set! (ambitus-start-key-sig ambitus)
               (ly:context-property (ly:translator-context translator)
                                    'keyAlterations)))))

#(define-method (update-ambitus-notes (ambitus <ambitus>) note-grob)
   "Update the upper and lower ambitus pithes of @var{ambitus}, using
@var{note-grob}."
   ;; Get the event that caused the note-grob creation
   ;; and check that it is a note-event.
   (let ((note-event (ly:grob-property note-grob 'cause)))
     (if (ly:in-event-class? note-event 'note-event)
         ;; get the pitch from the note event
         (let ((pitch (ly:event-property note-event 'pitch)))
           ;; if this pitch is lower than the current ambitus lower
           ;; note pitch (or it has not been initialized yet),
           ;; then this pitch is the new ambitus lower pitch,
           ;; and conversely for upper pitch.
           (for-each (lambda (direction pitch-compare)
                       (if (or (not (ambitus-note-pitch (ambitus-note ambitus direction)))
                               (pitch-compare pitch
                                              (ambitus-note-pitch (ambitus-note ambitus dire
                           (begin
                             (set! (ambitus-note-pitch (ambitus-note ambitus direction))
                                   pitch)
                             (set! (ambitus-note-cause (ambitus-note ambitus direction))
                                   note-event))))
                     (list DOWN UP)
```

```
                    (list ly:pitch<? (lambda (p1 p2)
                                       (ly:pitch<? p2 p1))))))))

#(define-method (typeset-ambitus (ambitus <ambitus>) translator)
   "Typeset the ambitus:
- place the lower and upper ambitus notes according to their pitch and
  the position of the middle C;
- typeset or delete the note accidentals, according to the key signature.
  An accidental, if it is to be printed, is added to an AccidentalPlacement
  grob (a grob dedicated to the placement of accidentals near a chord);
- both note heads are added to the ambitus line grob, so that a line should
  be printed between them."
   ;; check if there are lower and upper pitches
   (if (and (ambitus-note-pitch (ambitus-note ambitus UP))
            (ambitus-note-pitch (ambitus-note ambitus DOWN)))
       ;; make an AccidentalPlacement grob, for placement of note accidentals
       (let ((accidental-placement (ly:engraver-make-grob
                                    translator
                                    'AccidentalPlacement
                                    (ambitus-note-accidental (ambitus-note ambitus DOWN)))))
         ;; For lower and upper ambitus notes:
         (for-each (lambda (direction)
                     (let ((pitch (ambitus-note-pitch (ambitus-note ambitus direction))))
                       ;; set the cause and the staff position of the ambitus note
                       ;; according to the associated pitch
                       (set! (ly:grob-property (ambitus-note-head (ambitus-note ambitus dire
                                               'cause)
                             (ambitus-note-cause (ambitus-note ambitus direction)))
                       (set! (ly:grob-property (ambitus-note-head (ambitus-note ambitus dire
                                               'staff-position)
                             (+ (ambitus-start-c0 ambitus)
                                (ly:pitch-steps pitch)))
                       ;; determine if an accidental shall be printed for this note,
                       ;; according to the key signature
                       (let* ((handle (or (assoc (cons (ly:pitch-octave pitch)
                                                       (ly:pitch-notename pitch))
                                                 (ambitus-start-key-sig ambitus))
                                          (assoc (ly:pitch-notename pitch)
                                                 (ambitus-start-key-sig ambitus))))
                              (sig-alter (if handle (cdr handle) 0)))
                         (cond ((= (ly:pitch-alteration pitch) sig-alter)
                                ;; the note alteration is in the key signature
                                ;; => it does not have to be printed
                                (ly:grob-suicide!
                                 (ambitus-note-accidental (ambitus-note ambitus direction)))
                                (set! (ly:grob-object (ambitus-note-head (ambitus-note ambit
                                                      'accidental-grob)
                                      '()))
                               (else
                                ;; otherwise, the accidental shall be printed
                                (set! (ly:grob-property (ambitus-note-accidental
                                                         (ambitus-note ambitus direction))
```

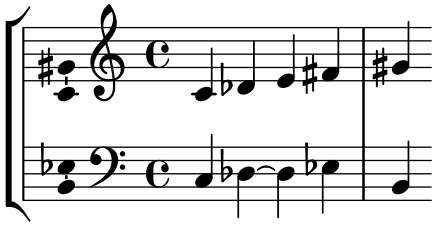
```
                                                    'alteration)
                                    (ly:pitch-alteration pitch)))))
                        ;; add the AccidentalPlacement grob to the
                        ;; conditional items of the AmbitusNoteHead
                        (ly:separation-item::add-conditional-item
                         (ambitus-note-head (ambitus-note ambitus direction))
                         accidental-placement)
                        ;; add the AmbitusAccidental to the list of the
                        ;; AccidentalPlacement grob accidentals
                        (ly:accidental-placement::add-accidental
                         accidental-placement
                         (ambitus-note-accidental (ambitus-note ambitus direction)))
                        ;; add the AmbitusNoteHead grob to the AmbitusLine grob
                        (ly:pointer-group-interface::add-grob
                         (ambitus-line ambitus)
                         'note-heads
                         (ambitus-note-head (ambitus-note ambitus direction)))))
                    (list DOWN UP))
          ;; add the AccidentalPlacement grob to the main Ambitus grob
          (ly:axis-group-interface::add-element (ambitus-group ambitus) accidental-placement)
        ;; no notes ==> suicide the grobs
        (begin
          (for-each (lambda (direction)
                      (ly:grob-suicide! (ambitus-note-accidental (ambitus-note ambitus direct
                      (ly:grob-suicide! (ambitus-note-head (ambitus-note ambitus direction))
                    (list DOWN UP))
          (ly:grob-suicide! ambitus-line))))

%%%
%%% Ambitus engraver definition
%%%
#(define ambitus-engraver
   (lambda (context)
     (let ((ambitus #f))
       ;; when music is processed: make the ambitus object, if not already built
       (make-engraver
    ((process-music translator)
     (if (not ambitus)
         (set! ambitus (make-ambitus translator))))
    ;; set the ambitus clef and key signature state
    ((stop-translation-timestep translator)
     (if ambitus
         (initialize-ambitus-state ambitus translator)))
    ;; when a note-head grob is built, update the ambitus notes
    (acknowledgers
          ((note-head-interface engraver grob source-engraver)
       (if ambitus
           (update-ambitus-notes ambitus grob))))
    ;; finally, typeset the ambitus according to its upper and lower notes
    ;; (if any).
    ((finalize translator)
     (if ambitus
```

```
         (typeset-ambitus ambitus translator)))))))

%%%
%%% Example
%%%

\score {
  \new StaffGroup <<
    \new Staff { c'4 des' e' fis' gis' }
    \new Staff { \clef "bass" c4 des ~ des ees b, }
  >>
  \layout { \context { \Staff \consists #ambitus-engraver } }
}
```



Displaying a whole GrandStaff system if only one of its staves is alive
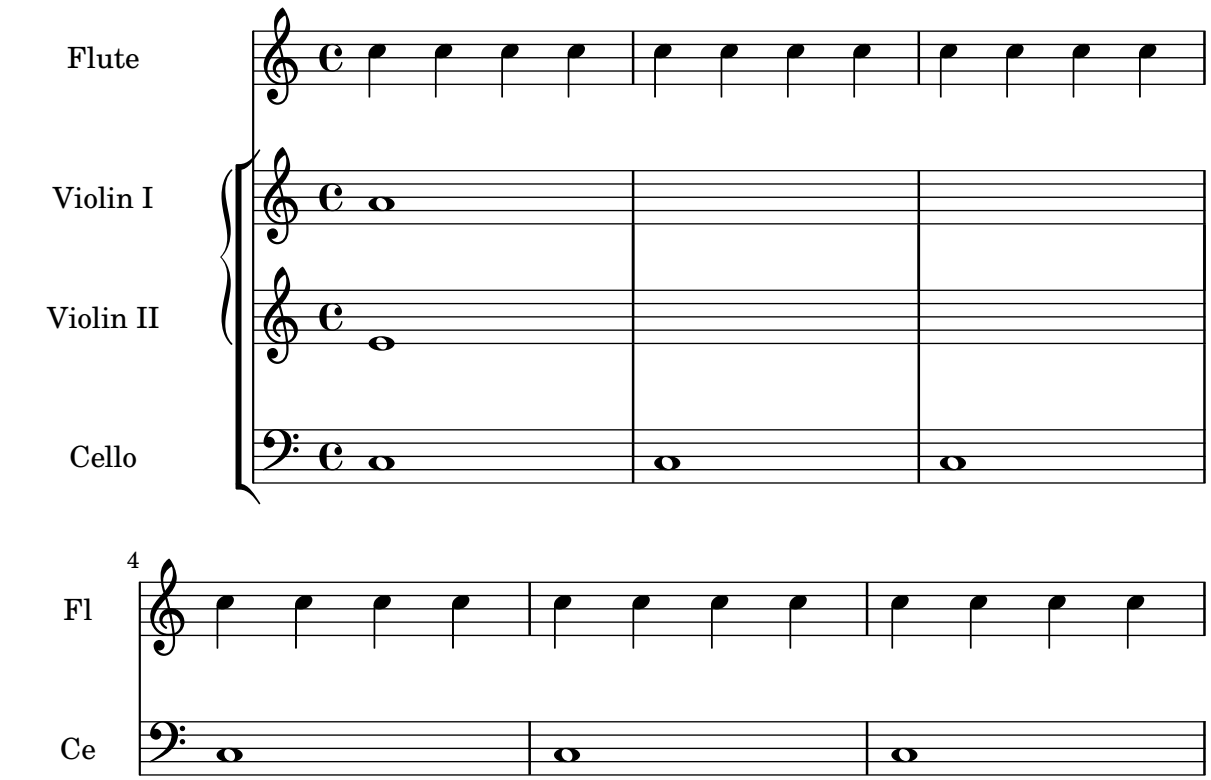
In orchestral scores sometimes single or groups of instruments are silent for a while and their staves can be removed for that time (with `\removeEmptyStaves`).
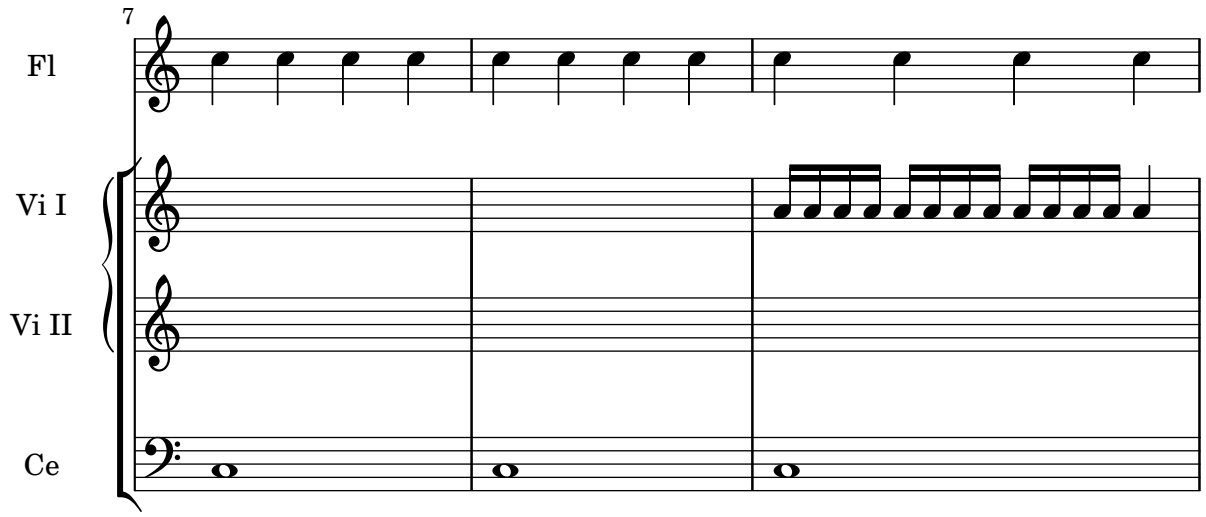
When they play again it is often preferred to show the staves of *all instruments of such a group*. This can be done adding the `Keep_alive_together_engraver` in the grouper (e.g., a GrandStaff or a StaffGroup).

In the example the violins are silent in the 2nd system and in the 3rd system. Only the first violin plays the last measure but the staff of the second violin is also displayed.

```
\score {
  <<
    \new StaffGroup = "StaffGroup_woodwinds"
    <<
      \new Staff = "Staff_flute" \with {
        instrumentName = "Flute"
        shortInstrumentName = "Fl"
      }
      \relative c' {
        \repeat unfold 3 { c'4 c c c | c c c c | c c c c | \break }
      }
    >>
    \new StaffGroup = "StaffGroup_Strings"
    <<
      \new GrandStaff = "GrandStaff_violins"
      <<
        \new Staff = "StaffViolinI" \with {
          instrumentName = "Violin I"
          shortInstrumentName = "Vi I"
        }
```

```
        \relative c'' {
          a1 \repeat unfold 7 { s1 } \repeat unfold 12 a16  a4
        }
        \new Staff = "StaffViolinII" \with {
          instrumentName = "Violin II"
          shortInstrumentName = "Vi II"
        }
        \relative c' { e1 \repeat unfold 8 { s1 } }
      >>
      \new Staff = "Staff_cello" \with {
        instrumentName = "Cello"
        shortInstrumentName = "Ce"
      }
      \relative c { \clef bass \repeat unfold 9 { c1 }}
    >>
  >>
}
\layout {
  indent = 3.0\cm
  short-indent = 1.5\cm
  \context {
    \GrandStaff
    \consists Keep_alive_together_engraver
  }
  \context {
    \Staff
    \RemoveEmptyStaves
  }
}
```





Engravers one-by-one

The notation problem, creating a certain symbol, is handled by plugins. Each plugin is called an Engraver. In this example, engravers are switched on one by one, in the following order:

- note heads,
- staff symbol,
- clef,
- stem,
- beams, slurs, accents,
- accidentals, bar lines, time signature and key signature.

Engravers are grouped. For example, note heads, slurs, beams etc. form a `Voice` context. Engravers for key signature, accidentals, bar line, etc. form a `Staff` context.

```
%% sample music
topVoice = \relative c' {
  \key d \major
  es8([ g] a[ fis])
  b4
  b16[-. b-. b-. cis-.]
  d4->
}

botVoice = \relative c' {
  \key d \major
  c8[( f] b[ a)]
  es4
  es16[-. es-. es-. fis-.]
  b4->
}

hoom = \relative c {
  \key d \major
  \clef bass
  g8-. r
  r4
  fis8-.
  r8
  r4
```

```
  b'4->
}

pah = \relative c' {
  r8 b-.
  r4
  r8 g8-.
  r16 g-. r8
  \clef treble
  fis'4->
}

%
% setup for Request->Element conversion. Guru-only
%

MyStaff = \context {
  \type "Engraver_group"
  \name Staff

  \description "Handles clefs, bar lines, keys, accidentals.  It can contain
@code{Voice} contexts."

  \consists "Output_property_engraver"

  \consists "Font_size_engraver"

  \consists "Volta_engraver"
  \consists "Separating_line_group_engraver"
  \consists "Dot_column_engraver"

  \consists "Ottava_spanner_engraver"
  \consists "Rest_collision_engraver"
  \consists "Piano_pedal_engraver"
  \consists "Piano_pedal_align_engraver"
  \consists "Instrument_name_engraver"
  \consists "Grob_pq_engraver"
  \consists "Forbid_line_break_engraver"
  \consists "Axis_group_engraver"

  \consists "Pitch_squash_engraver"

  localAlterations = #'()

  % explicitly set instrumentName, so we don't get
  % weird effects when doing instrument names for
  % piano staves

  instrumentName = #'()
  shortInstrumentName = #'()

  \accepts "Voice"
```

```
  \defaultchild "Voice"
}


MyVoice = \context {
  \type "Engraver_group"
  \name Voice

  \description "
    Corresponds to a voice on a staff.  This context handles the
    conversion of dynamic signs, stems, beams, super- and subscripts,
    slurs, ties, and rests.

    You have to instantiate this explicitly if you want to have
    multiple voices on the same staff."

  localAlterations = #'()
  \consists "Font_size_engraver"

  % must come before all
  \consists "Output_property_engraver"
  \consists "Arpeggio_engraver"
  \consists "Multi_measure_rest_engraver"
  \consists "Text_spanner_engraver"
  \consists "Grob_pq_engraver"
  \consists "Note_head_line_engraver"
  \consists "Glissando_engraver"
  \consists "Ligature_bracket_engraver"
  \consists "Breathing_sign_engraver"
  % \consists "Rest_engraver"
  \consists "Grace_beam_engraver"
  \consists "New_fingering_engraver"
  \consists "Chord_tremolo_engraver"
  \consists "Percent_repeat_engraver"
  \consists "Slash_repeat_engraver"

  %{
    Must come before text_engraver, but after note_column engraver.
  %}
  \consists "Text_engraver"
  \consists "Dynamic_engraver"
  \consists "Dynamic_align_engraver"
  \consists "Fingering_engraver"

  \consists "Script_column_engraver"
  \consists "Rhythmic_column_engraver"
  \consists "Cluster_spanner_engraver"
  \consists "Tie_engraver"
  \consists "Tie_engraver"
  \consists "Tuplet_engraver"
  \consists "Note_heads_engraver"
  \consists "Rest_engraver"
```

```
}


\score {
  \topVoice
  \layout {
    \context { \MyStaff }
    \context { \MyVoice }
  }
}


MyStaff = \context {
  \MyStaff
  \consists "Staff_symbol_engraver"
}

\score {
  \topVoice
  \layout {
    \context { \MyStaff }
    \context { \MyVoice }
  }
}

MyStaff = \context {
  \MyStaff
  \consists "Clef_engraver"
  \remove "Pitch_squash_engraver"
}

\score {
  \topVoice
  \layout {
    \context { \MyStaff }
    \context { \MyVoice }
  }
}

MyVoice = \context {
  \MyVoice
  \consists "Stem_engraver"
}

\score {
  \topVoice
  \layout {
    \context { \MyStaff }
    \context { \MyVoice }
  }
}
```

```
MyVoice = \context {
  \MyVoice
  \consists "Beam_engraver"
}

\score {
  \topVoice
  \layout {
    \context { \MyStaff }
    \context { \MyVoice }
  }
}

MyVoice = \context {
  \MyVoice
  \consists "Phrasing_slur_engraver"
  \consists "Slur_engraver"
  \consists "Script_engraver"
}
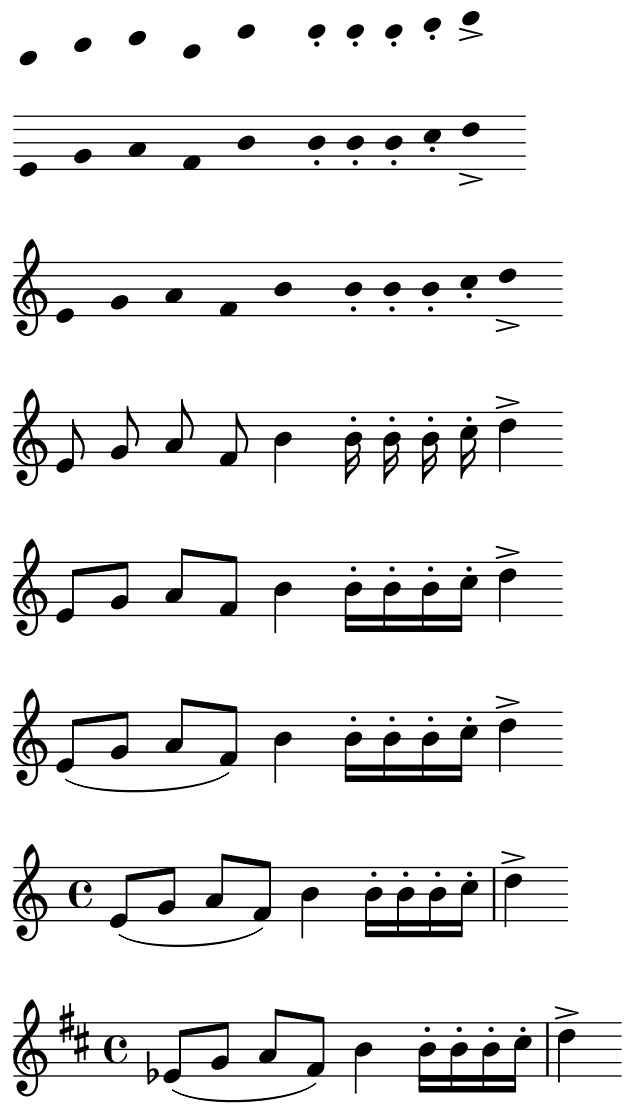

\score {
  \topVoice
  \layout {
    \context { \MyStaff }
    \context { \MyVoice }
  }
}

MyStaff = \context {
  \MyStaff
  \consists "Bar_engraver"
  \consists "Time_signature_engraver"
}

\score {
  \topVoice
  \layout {
    \context { \MyStaff }
    \context { \MyVoice }
  }
}

MyStaff = \context {
  \MyStaff
  \consists "Accidental_engraver"
  \consists "Key_engraver"
}
\score {
  \topVoice
  \layout {
    \context { \MyStaff }
```

```
    \context { \MyVoice }
  }
}
```



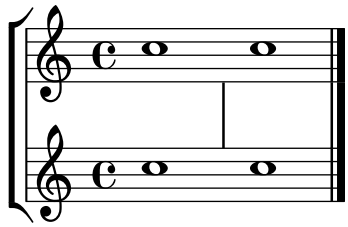
Formattazione mensurale (stanghette tra i righi)

La formattazione mensurale, in cui le stanghette non appaiono sui righi ma nello spazio tra i righi, si può ottenere usando `StaffGroup` al posto di `ChoirStaff`. La stanghetta sui righi viene nascosta con `\hide`.

```
global = {
  \hide Staff.BarLine
  s1 s
  % the final bar line is not interrupted
  \undo \hide Staff.BarLine
  \bar "|."
}

\new StaffGroup \relative c'' {
  <<
    \new Staff { << \global { c1 c } >> }
```

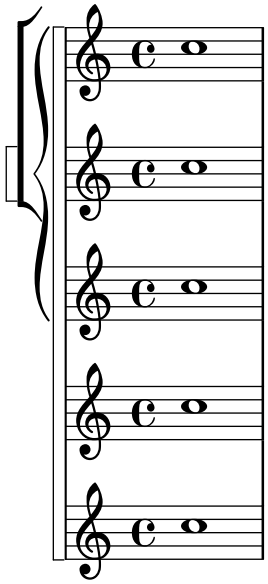
```
    \new Staff { << \global { c c } >> }
  >>
}
```



Annidare i righi

Si può usare la proprietà `systemStartDelimiterHierarchy` per creare gruppi di righi annidati più complessi. Il comando `\set StaffGroup.systemStartDelimiterHierarchy` prende come argomento una lista alfabetica dell'insieme di righi prodotti. Prima di ogni rigo si può assegnare un delimitatore di inizio del sistema. Deve essere racchiuso tra parentesi e collega tutti i righi compresi tra le parentesi. Gli elementi nella lista possono essere omessi, ma la prima parentesi quadra collega sempre tutti i righi. Le possibilità sono `SystemStartBar`, `SystemStartBracket`, `SystemStartBrace` e `SystemStartSquare`.

```
\new StaffGroup
\relative c'' <<
  \override StaffGroup.SystemStartSquare.collapse-height = #4
  \set StaffGroup.systemStartDelimiterHierarchy
    = #'(SystemStartSquare (SystemStartBrace (SystemStartBracket a
                              (SystemStartSquare b)  ) c ) d)
  \new Staff { c1 }
  \new Staff { c1 }
  \new Staff { c1 }
  \new Staff { c1 }
  \new Staff { c1 }
>>
```



Numbering groups of measures

This snippet demonstrates the use of the `Measure_counter_engraver` to number groups of successive measures. Any stretch of measures may be numbered, whether consisting of repetitions or not.

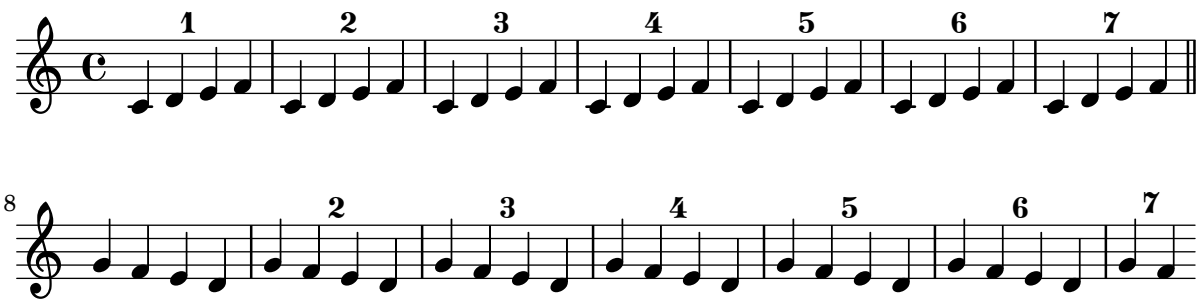
The engraver must be added to the appropriate context. Here, a `Staff` context is used; another possibility is a `Dynamics` context.
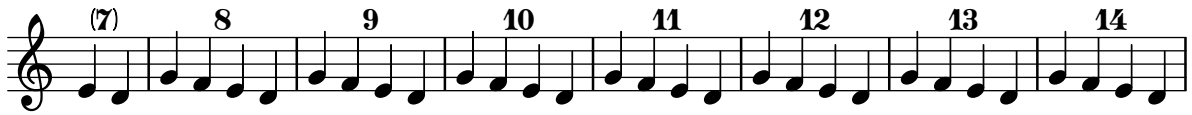
The counter is begun with `\startMeasureCount` and ended with `\stopMeasureCount`. Numbering will start by default with `1`, but this behavior may be modified by overriding the `count-from` property.

When a measure extends across a line break, the number will appear twice, the second time in parentheses.

```
\layout {
  \context {
    \Staff
    \consists #Measure_counter_engraver
  }
}

\new Staff {
  \startMeasureCount
  \repeat unfold 7 {
    c'4 d' e' f'
  }
  \stopMeasureCount
  \bar "||"
  g'4 f' e' d'
  \override Staff.MeasureCounter.count-from = #2
  \startMeasureCount
  \repeat unfold 5 {
    g'4 f' e' d'
  }
  g'4 f'
  \bar ""
  \break
  e'4 d'
  \repeat unfold 7 {
    g'4 f' e' d'
  }
  \stopMeasureCount
}
```



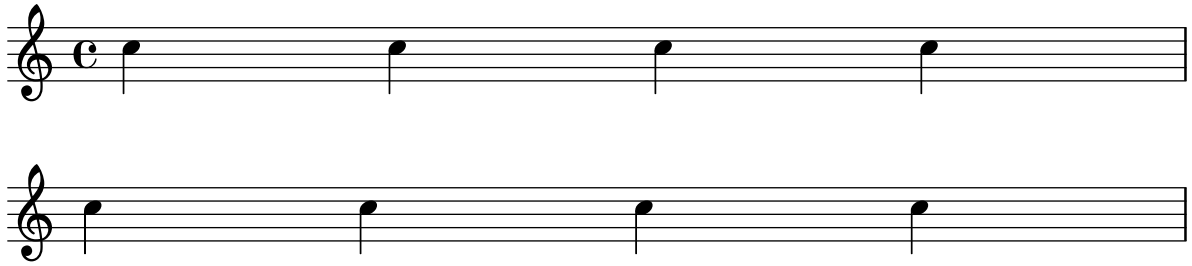


Togliere i numeri di battuta da uno spartito

I numeri di battuta possono essere tolti rimuovendo l'incisore `Bar_number_engraver` dal contesto `Score`.

```
\layout {
  \context {
    \Score
    \omit BarNumber
    % or:
    %\remove "Bar_number_engraver"
  }
}

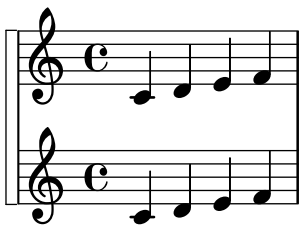
\relative c'' {
  c4 c c c \break
  c4 c c c
}
```



Usare una parentesi quadra all'inizio di un gruppo di righi

Si può usare il segno `SystemStartSquare` (uno dei segni che delimitano l'inizio del sistema) impostandolo esplicitamente in un contesto `StaffGroup` o `ChoirStaff`.

```
\score {
  \new StaffGroup { <<
  \set StaffGroup.systemStartDelimiter = #'SystemStartSquare
    \new Staff { c'4 d' e' f' }
    \new Staff { c'4 d' e' f' }
  >> }
}
```



Using marklines in a Frenched score

Using `MarkLine` contexts (such as in LSR1010 (`http://lsr.di.unimi.it/LSR/Item?id=1010`)) in a Frenched score can be problematic if all the staves between two `MarkLine`s are removed in

one system. The `Keep_alive_together_engraver` can be used within each `StaffGroup` to keep the `MarkLine` alive only as long as the other staves in the group stay alive.

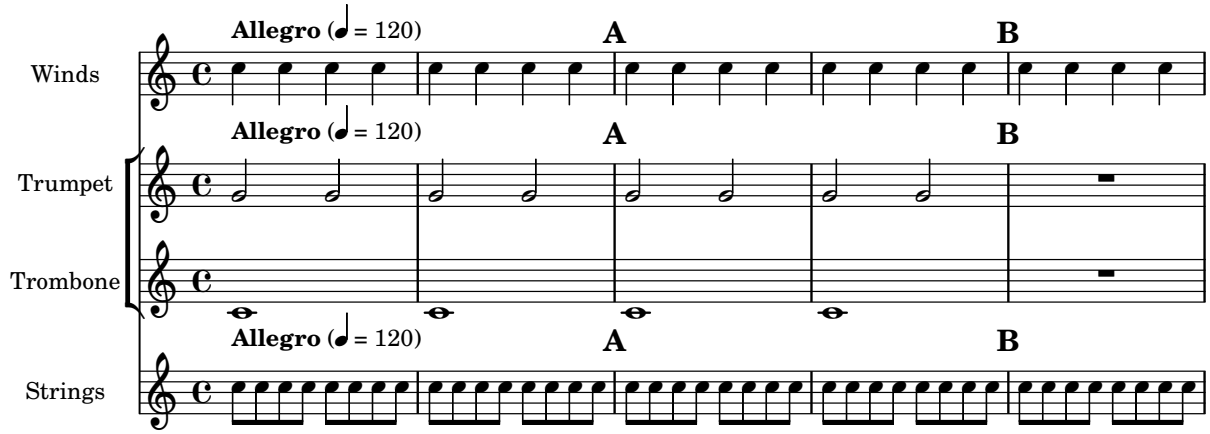
```
bars = {
  \tempo "Allegro" 4=120
  s1*2
  \repeat unfold 5 { \mark \default s1*2 }
  \bar "||"
  \tempo "Adagio" 4=40
  s1*2
  \repeat unfold 8 { \mark \default s1*2 }
  \bar "|."
}
winds = \repeat unfold 120 { c''4 }
trumpet = { \repeat unfold 8 g'2 R1*16 \repeat unfold 4 g'2 R1*8 }
trombone = { \repeat unfold 4 c'1 R1*8 d'1 R1*17 }
strings = \repeat unfold 240 { c''8 }

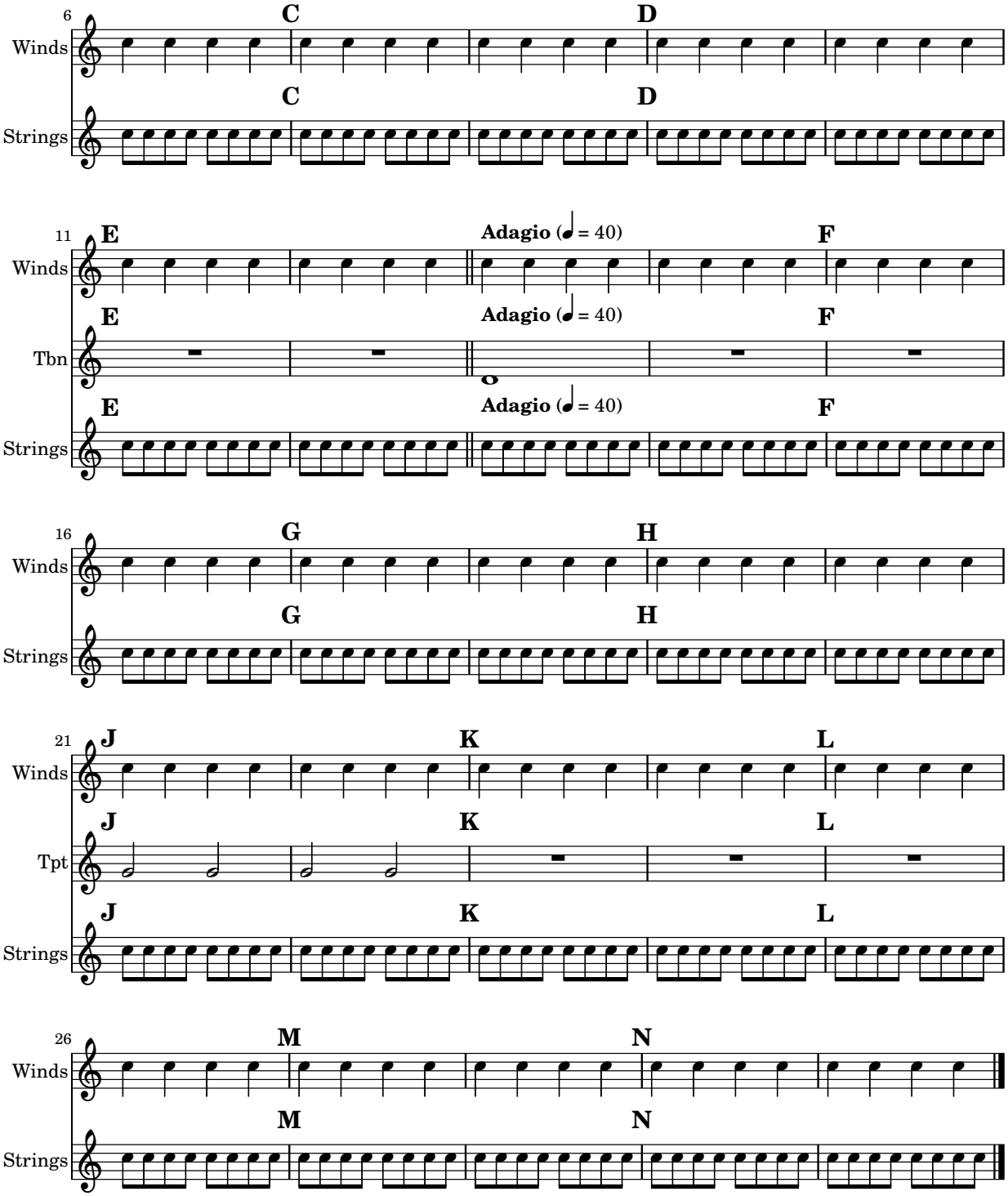
#(set-global-staff-size 16)
\paper {
  systems-per-page = 5
  ragged-last-bottom = ##f
}

\layout {
  indent = 15\mm
  short-indent = 5\mm
  \context {
    \name MarkLine
    \type Engraver_group
    \consists Output_property_engraver
    \consists Axis_group_engraver
    \consists Mark_engraver
    \consists Metronome_mark_engraver
    \override VerticalAxisGroup.remove-empty = ##t
    \override VerticalAxisGroup.remove-layer = #'any
    \override VerticalAxisGroup.staff-affinity = #DOWN
    \override VerticalAxisGroup.nonstaff-relatedstaff-spacing.basic-distance = 1
    keepAliveInterfaces = #'()
  }
  \context {
    \Staff
    \override VerticalAxisGroup.remove-empty = ##t
    \override VerticalAxisGroup.remove-layer = ##f
  }
  \context {
    \StaffGroup
    \accepts MarkLine
    \consists Keep_alive_together_engraver
  }
  \context {
    \Score
```

```
    \remove Mark_engraver
    \remove Metronome_mark_engraver
  }
}

\score {
  <<
    \new StaffGroup = "winds" \with {
      instrumentName = "Winds"
      shortInstrumentName = "Winds"
    } <<
      \new MarkLine \bars
      \new Staff \winds
    >>
    \new StaffGroup = "brass" <<
      \new MarkLine \bars
      \new Staff = "trumpet" \with {
        instrumentName = "Trumpet"
        shortInstrumentName = "Tpt"
      } \trumpet
      \new Staff = "trombone" \with {
        instrumentName = "Trombone"
        shortInstrumentName = "Tbn"
      } \trombone
    >>
    \new StaffGroup = "strings" \with {
      instrumentName = "Strings"
      shortInstrumentName = "Strings"
    } <<
      \new MarkLine \bars
      \new Staff = "strings" { \strings }
    >>
  >>
}
```





Modello per gruppo vocale con testo allineato sotto e sopra i righi

Questo modello è fondamentalmente analogo al semplice modello “Complesso vocale”, con l’unica differenza che qui tutti i versi del testo sono posizionati usando `alignAboveContext` e `alignBelowContext`.

```
global = {
  \key c \major
  \time 4/4
}

sopMusic = \relative c'' {
```

```
  c4 c c8[( b)] c4
}
sopWords = \lyricmode {
  hi hi hi hi
}

altoMusic = \relative c' {
  e4 f d e
}
altoWords = \lyricmode {
  ha ha ha ha
}
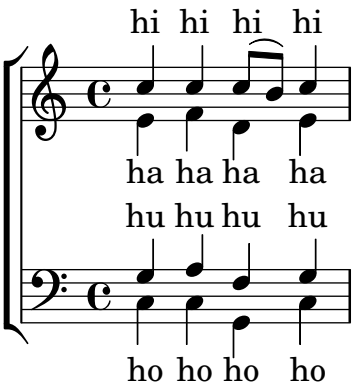
tenorMusic = \relative c' {
  g4 a f g
}
tenorWords = \lyricmode {
  hu hu hu hu
}

bassMusic = \relative c {
  c4 c g c
}
bassWords = \lyricmode {
  ho ho ho ho
}

\score {
  \new ChoirStaff <<
    \new Staff = "women" <<
      \new Voice = "sopranos" { \voiceOne << \global \sopMusic >> }
      \new Voice = "altos" { \voiceTwo << \global \altoMusic >> }
    >>
    \new Lyrics \with { alignAboveContext = #"women" }
      \lyricsto "sopranos" \sopWords
    \new Lyrics \with { alignBelowContext = #"women" }
      \lyricsto "altos" \altoWords
    % we could remove the line about this with the line below, since
    % we want the alto lyrics to be below the alto Voice anyway.
    % \new Lyrics \lyricsto "altos" \altoWords

    \new Staff = "men" <<
      \clef bass
      \new Voice = "tenors" { \voiceOne << \global \tenorMusic >> }
      \new Voice = "basses" { \voiceTwo << \global \bassMusic >> }
    >>
    \new Lyrics \with { alignAboveContext = #"men" }
      \lyricsto "tenors" \tenorWords
    \new Lyrics \with { alignBelowContext = #"men" }
      \lyricsto "basses" \bassWords
    % again, we could replace the line above this with the line below.
    % \new Lyrics \lyricsto "basses" \bassWords
```

```
  >>
}
```



Modello per gruppo vocale con strofa e ritornello

Questo modello crea una partitura che inizia con una sezione solistica e prosegue in un ritornello a due voci. Illustra anche l'uso delle pause spaziatrici all'interno della variabile `\global` per definire i cambi di tempo (e altri elementi comuni a tutte le parti) nel corso di tutta la partitura.

```
global = {
  \key g \major

  % verse
  \time 3/4
  s2.*2
  \break

  % refrain
  \time 2/4
  s2*2
  \bar "|."
}

SoloNotes = \relative g' {
  \clef "treble"

  % verse
  g4 g g |
  b4 b b |

  % refrain
  R2*2 |
}

SoloLyrics = \lyricmode {
  One two three |
  four five six |
}

SopranoNotes = \relative c'' {
  \clef "treble"
```

```
  % verse
  R2.*2 |

  % refrain
  c4 c |
  g4 g |
}

SopranoLyrics = \lyricmode {
  la la |
  la la |
}

BassNotes = \relative c {
  \clef "bass"

  % verse
  R2.*2 |

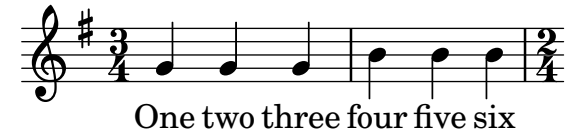
  % refrain
  c4 e |
  d4 d |
}
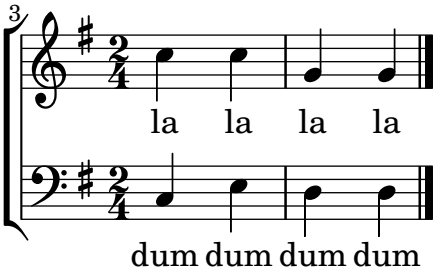
BassLyrics = \lyricmode {
  dum dum |
  dum dum |
}

\score {
  <<
    \new Voice = "SoloVoice" << \global \SoloNotes >>
    \new Lyrics \lyricsto "SoloVoice" \SoloLyrics

    \new ChoirStaff <<
      \new Voice = "SopranoVoice" << \global \SopranoNotes >>
      \new Lyrics \lyricsto "SopranoVoice" \SopranoLyrics

      \new Voice = "BassVoice" << \global \BassNotes >>
      \new Lyrics \lyricsto "BassVoice" \BassLyrics
    >>
  >>
  \layout {
    ragged-right = ##t
    \context { \Staff
      % these lines prevent empty staves from being printed
      \RemoveEmptyStaves
      \override VerticalAxisGroup.remove-first = ##t
    }
  }
}
```


One two three four five six


3
la la la la
dum dum dum dum

Tweaks and overrides

Sezione “Changing defaults” in *Guida alla Notazione*

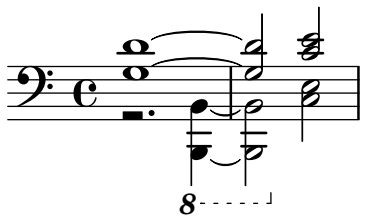
Sezione “Tweaking output” in *Manuale di Apprendimento*

Aggiungere un segno di ottava a una sola voce

Se il rigo ha più di una voce, l’ottavazione in una voce trasporrà la posizione delle note in tutte le voci per la durata della parentesi dell’ottava. Se si intende applicare l’ottavazione a una sola voce, si possono impostare esplicitamente middleCPosition e la parentesi di ottava. In questo frammento, la chiave di basso ha di norma il MiddleCPosition impostato su 6, ovvero sei posizioni sopra la linea centrale, dunque nella porzione con l’ottava il MiddleCPosition è più alto di sette posizioni (un’ottava).

```
\layout {
  \context {
    \Staff
    \remove Ottava_spanner_engraver
  }
  \context {
    \Voice
    \consists Ottava_spanner_engraver
  }
}

{
  \clef bass
  << { <g d'>1~ q2 <c' e'> }
  \\
    {
      r2.
      \ottava -1
      <b,,, b,,>4 ~ |
      q2
      \ottava 0
      <c e>2
    }
  >>
}
```



Adding links to objects

To add a link to a grob stencil you can use `add-link` as defined here. It works both with `\override` and `\tweak`.

Drawback: `point-and-click` is disturbed for the linked grobs.

Limitation: Works for PDF only.

The linked objects are colored with a separate command. Note that the links are not displayed and are not clickable from inside the LSR.

```
#(define (add-link url-strg)
  (lambda (grob)
    (let* ((stil (ly:grob-property grob 'stencil)))
      (if (ly:stencil? stil)
          (let* ((x-ext (ly:stencil-extent stil X))
                 (y-ext (ly:stencil-extent stil Y))
                 (url-expr `(url-link ,url-strg ,x-ext ,y-ext))
                 (new-stil
                   (ly:stencil-add
                     (ly:make-stencil url-expr x-ext y-ext)
                     stil)))
          (ly:grob-set-property! grob 'stencil new-stil))))))

%%%% test

%% For easier maintenance of this snippet the URL is formatted to use the
%% actually used LilyPond version.
%% Of course a literal URL would work as well.

#(define major.minor-version
  (string-join (take (string-split (lilypond-version) #\.) 2) "."))

urlI =
#(format #f
  "http://lilypond.org/doc/v~a/Documentation/notation/writing-pitches"
  major.minor-version)

urlII =
#(format #f
  "http://lilypond.org/doc/v~a/Documentation/notation/rhythms"
  major.minor-version)

urlIII =
#(format #f
  "http://lilypond.org/doc/v~a/Documentation/notation/note-heads"
  major.minor-version)

urlIV =
#(format #f
  "http://lilypond.org/doc/v~a/Documentation/notation/beams"
  major.minor-version)

urlV =
#(format #f
  "http://lilypond.org/doc/v~a/Documentation/notation/note-head-styles"
  major.minor-version)

urlVI =
#(format #f
```

```
  "http://lilypond.org/doc/v~a/Documentation/notation/writing-pitches"
  major.minor-version)
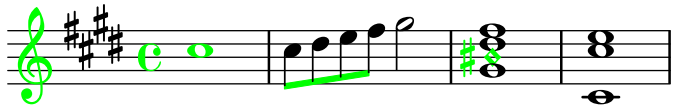
\relative c' {
   \key cis \minor

   \once \override Staff.Clef.color = #green
   \once \override Staff.Clef.after-line-breaking =
     #(add-link urlI)

   \once \override Staff.TimeSignature.color = #green
   \once \override Staff.TimeSignature.after-line-breaking =
     #(add-link urlII)

   \once \override NoteHead.color = #green
   \once \override NoteHead.after-line-breaking =
     #(add-link urlIII)

   cis'1
   \once \override Beam.color = #green
   \once \override Beam.after-line-breaking =
     #(add-link urlIV)
   cis8 dis e fis gis2
   <gis,
    \tweak Accidental.color #green
    \tweak Accidental.after-line-breaking #(add-link urlVI)
    \tweak color #green
    \tweak after-line-breaking #(add-link urlV)
    \tweak style #'harmonic
    bis
    dis
    fis
   >1
   <cis, cis' e>
}
```



Adding markups in a tablature

By default markups does not show in a tablature.

To make them appear, simply use the command `\revert TabStaff.TextScript.stencil`

```
%% http://lsr.di.unimi.it/LSR/Item?id=919
% by P.P.Schneider on June 2014

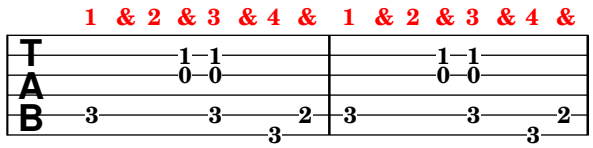
high  = { r4 r8 <g c'> q r8 r4 }

low = { c4 r4 c8 r8 g,8 b, }

pulse = { s8^"1" s^"&" s^"2" s^"&" s^"3" s^"&" s^"4" s^"&" }
```

```
\score {
 \new TabStaff {
   \repeat unfold 2 << \high \\ \low \\ \pulse >>
  }
  \layout {
    \context {
      \TabStaff
      \clef moderntab
      \revert TextScript.stencil
      \override TextScript.font-series = #'bold
      \override TextScript.font-size = #-2
      \override TextScript.color = #red

    }
    \context {
      \Score
      proportionalNotationDuration = #(ly:make-moment 1/8)
    }
  }
}
```



Aggiungere i segni di tempo per i glissandi lunghi

I battiti saltati nei glissandi molto lunghi vengono talvolta segnalati con delle indicazioni di tempo, che consistono solitamente in dei gambi privi di teste di nota. Questi gambi possono essere usati anche per contenere segni di espressione intermedi.

Se i gambi non si allineano bene al glissando, può essere necessario riposizionarli leggermente.
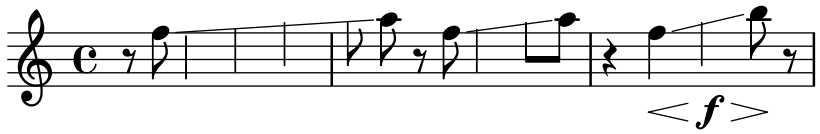
```
glissandoSkipOn = {
  \override NoteColumn.glissando-skip = ##t
  \hide NoteHead
  \override NoteHead.no-ledgers = ##t
}

glissandoSkipOff = {
  \revert NoteColumn.glissando-skip
  \undo \hide NoteHead
  \revert NoteHead.no-ledgers
}

\relative c'' {
  r8 f8\glissando
  \glissandoSkipOn
  f4 g a a8\noBeam
  \glissandoSkipOff
  a8
```

```
  r8 f8\glissando
  \glissandoSkipOn
  g4 a8
  \glissandoSkipOff
  a8 |

  r4 f\glissando \<
  \glissandoSkipOn
  a4\f \>
  \glissandoSkipOff
  b8\! r |
}
```
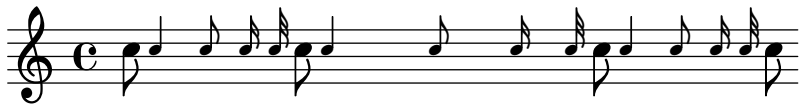


Adjusting grace note spacing

The space given to grace notes can be adjusted using the `spacing-increment` property of `Score.GraceSpacing`.

```
graceNotes = {
  \grace { c4 c8 c16 c32 }
  c8
}

\relative c'' {
  c8
  \graceNotes
  \override Score.GraceSpacing.spacing-increment = #2.0
  \graceNotes
  \revert Score.GraceSpacing.spacing-increment
  \graceNotes
}
```
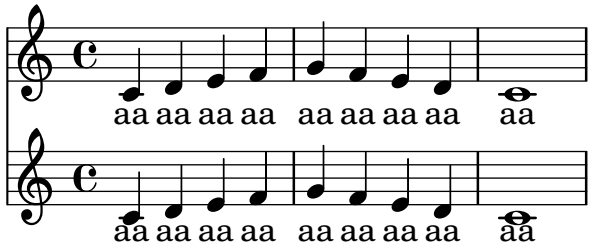


Adjusting lyrics vertical spacing

This snippet shows how to bring the lyrics line closer to the staff.

```
% Default layout:
<<
  \new Staff \new Voice = melody \relative c' {
    c4 d e f
    g4 f e d
    c1
  }
  \new Lyrics \lyricsto melody { aa aa aa aa aa aa aa aa aa }

  \new Staff {
```

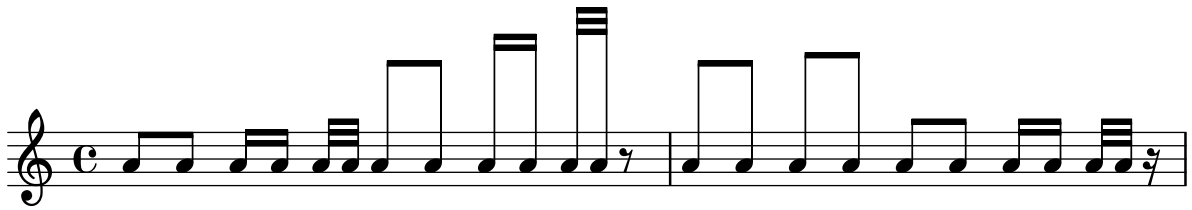
```
    \new Voice = melody \relative c' {
      c4 d e f
      g4 f e d
      c1
    }
  }
  % Reducing the minimum space below the staff and above the lyrics:
  \new Lyrics \with {
    \override VerticalAxisGroup.nonstaff-relatedstaff-spacing =
      #'((basic-distance . 1))
  }
  \lyricsto melody { aa aa aa aa aa aa aa aa }
>>
```



Altering the length of beamed stems

Stem lengths on beamed notes can be varied by overriding the `beamed-lengths` property of the `details` of the `Stem`. If a single value is used as an argument, the length applies to all stems. When multiple arguments are used, the first applies to eighth notes, the second to sixteenth notes and so on. The final argument also applies to all notes shorter than the note length of the final argument. Non-integer arguments may also be used.
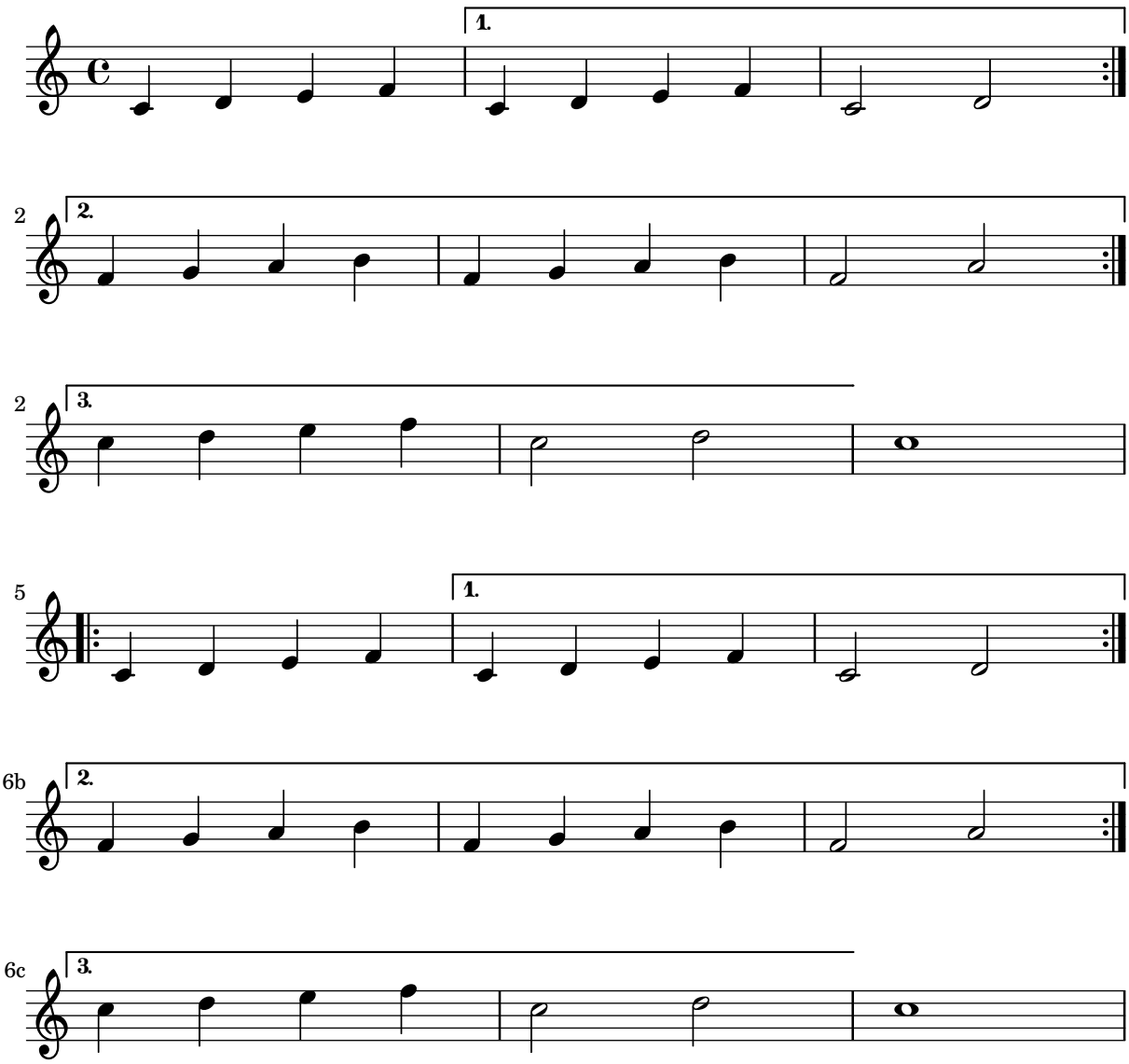
```
\relative c'' {
  \override Stem.details.beamed-lengths = #'(2)
  a8[ a] a16[ a] a32[ a]
  \override Stem.details.beamed-lengths = #'(8 10 12)
  a8[ a] a16[ a] a32[ a] r8
  \override Stem.details.beamed-lengths = #'(8)
  a8[ a]
  \override Stem.details.beamed-lengths = #'(8.5)
  a8[ a]
  \revert Stem.details.beamed-lengths
  a8[ a] a16[ a] a32[ a] r16
}
```



Numeri di battuta alternativi

Si possono impostare due metodi alternativi di numerazione della battuta, utili specialmente per le ripetizioni.

```
\relative c'{
  \set Score.alternativeNumberingStyle = #'numbers
  \repeat volta 3 { c4 d e f | }
    \alternative {
      { c4 d e f | c2 d \break }
      { f4 g a b | f4 g a b | f2 a | \break }
      { c4 d e f | c2 d }
    }
  c1 \break
  \set Score.alternativeNumberingStyle = #'numbers-with-letters
  \repeat volta 3 { c,4 d e f | }
    \alternative {
      { c4 d e f | c2 d \break }
      { f4 g a b | f4 g a b | f2 a | \break }
      { c4 d e f | c2 d }
    }
  c1
}
```
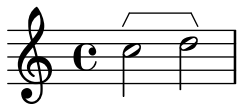


Parentesi analitiche sopra il rigo

Delle semplici parentesi analitiche orizzontali vengono aggiunte, per impostazione predefinita, sotto il rigo. L'esempio seguente mostra un modo per posizionarle sopra il rigo.

```
\layout {
  \context {
    \Voice
    \consists "Horizontal_bracket_engraver"
  }
}

\relative c'' {
  \once \override HorizontalBracket.direction = #UP
  c2\startGroup
  d2\stopGroup
}
```

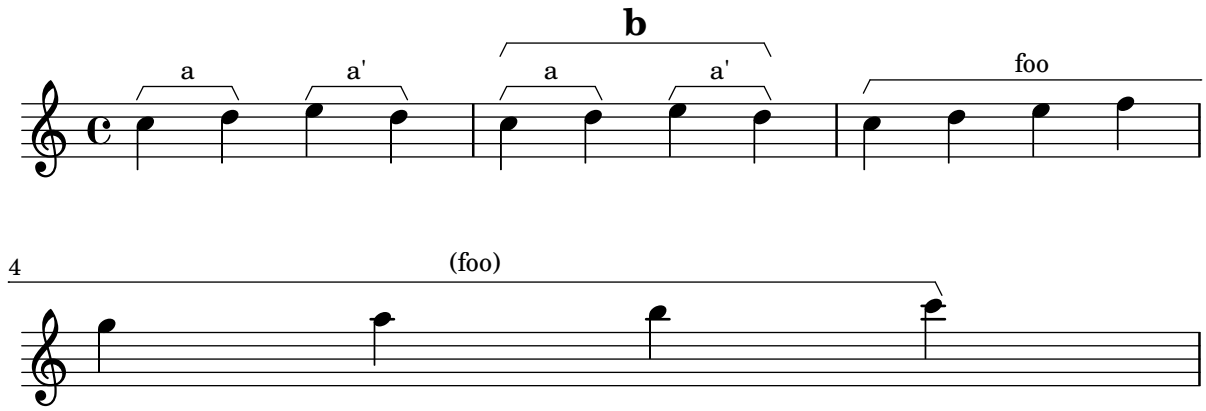


Parentesi analitiche con etichette

Si può aggiungere del testo alle parentesi analitiche tramite la proprietà `text` del grob `HorizontalBracketText`. L'aggiunta di vari frammenti di testo alle parentesi che iniziano nello stesso momento musicale richiede l'uso del comando `\tweak`. Dopo un'interruzione di linea il testo viene messo tra parentesi.

```
\layout {
  \context {
    \Voice
    \consists "Horizontal_bracket_engraver"
    \override HorizontalBracket.direction = #UP
  }
}

{
  \once\override HorizontalBracketText.text = "a"
    c''\startGroup d''\stopGroup
    \once\override HorizontalBracketText.text = "a'"
    e''\startGroup d''\stopGroup |
  c''-\tweak HorizontalBracketText.text
        \markup \bold \huge "b" \startGroup
     -\tweak HorizontalBracketText.text "a" \startGroup
    d''\stopGroup
    e''-\tweak HorizontalBracketText.text "a'" \startGroup
    d''\stopGroup\stopGroup |
  c''-\tweak HorizontalBracketText.text foo \startGroup
    d'' e'' f'' | \break
  g'' a'' b'' c'''\stopGroup
}
```

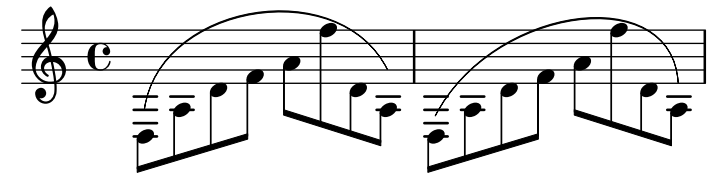


Asymmetric slurs

Slurs can be made asymmetric to match an asymmetric pattern of notes better.

```
slurNotes = { d,8( a' d f a f' d, a) }
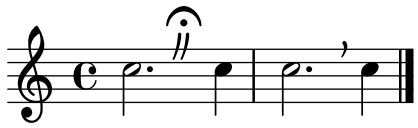
\relative c' {
  \stemDown
  \slurUp
  \slurNotes
  \once \override Slur.eccentricity = #3.0
  \slurNotes
}
```



Caesura ("railtracks") with fermata

A caesura is sometimes denoted by a double “railtracks” breath mark with a fermata sign positioned above. This snippet shows an optically pleasing combination of railtracks and fermata.

```
\relative c'' {
  c2.
  % construct the symbol
  \override BreathingSign.text = \markup {
    \override #'(direction . 1)
    \override #'(baseline-skip . 1.8)
    \dir-column {
      \translate #'(0.155 . 0)
        \center-align \musicglyph "scripts.caesura.curved"
      \center-align \musicglyph "scripts.ufermata"
    }
  }
  \breathe c4
  % set the breathe mark back to normal
  \revert BreathingSign.text
  c2. \breathe c4
  \bar "|."
}
```

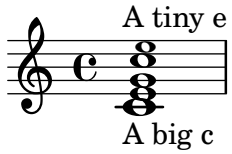


Changing a single note's size in a chord

Individual note heads in a chord can be modified with the `\tweak` command inside a chord, by altering the `font-size` property.

Inside the chord (within the brackets `< >`), before the note to be altered, place the `\tweak` command, followed by `font-size` and define the proper size like `#-2` (a tiny note head).
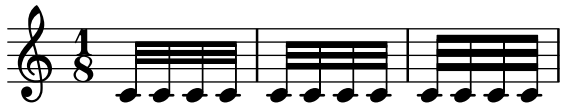
```
\relative c' {
  <\tweak font-size #+2 c e g c
   \tweak font-size #-2 e>1
   ^\markup { A tiny e }_\markup { A big c }
}
```



Changing beam thickness and spacing

To make beams thicker or thinner alter the `Beam.beam-thickness` property. To adjust the spacing between beams alter the `Beam.length-fraction` property.

```
\relative f' {
  \time 1/8
  \override Beam.beam-thickness = #0.4
  \override Beam.length-fraction = #0.8
  c32 c c c
  \revert Beam.beam-thickness  % 0.48 is default thickness
  \revert Beam.length-fraction  % 1.0 is default spacing
  c32 c c c
  \override Beam.beam-thickness = #0.6
  \override Beam.length-fraction = #1.3
  c32 c c c
}
```

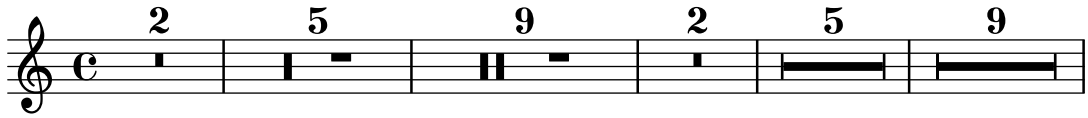


Modificare la forma delle pause multiple

Se la pausa multipla dura dieci misure o un numero inferiore a dieci, nel rigo apparirà una serie di pause di longa e di breve (chiamate in tedesco "Kirchenpausen" - pause ecclesiastiche); altrimenti apparirà una semplice linea. Il numero predefinito di dieci può essere cambiato sovrascrivendo la proprietà `expand-limit`..

```
\relative c'' {
  \compressMMRests {
    R1*2 | R1*5 | R1*9
    \override MultiMeasureRest.expand-limit = #3
    R1*2 | R1*5 | R1*9
  }
```
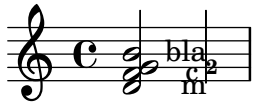
```
}
```



Changing properties for individual grobs

The `\applyOutput` command allows the tuning of any layout object, in any context. It requires a Scheme function with three arguments.

```
#(define (mc-squared grob grob-origin context)
   (let ((sp (ly:grob-property grob 'staff-position)))
     (ly:grob-set-property!
      grob 'stencil
      (grob-interpret-markup grob
                             #{ \markup \lower #0.5
                                #(case sp
                                   ((-5) "m")
                                   ((-3) "c ")
                                   ((-2) #{ \markup \teeny \bold 2 #})
                                   (else "bla")) #}))))

\relative c' {
  <d f g b>2
  \applyOutput Voice.NoteHead #mc-squared
  <d f g b>2
}
```
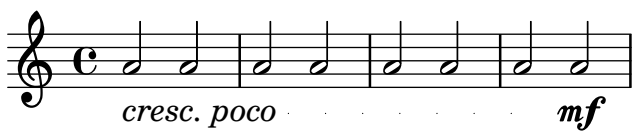


Nascondere la linea di estensione per le dinamiche testuali

Il testo usato per i *crescendo* e i *decrescendo* può essere cambiato modificando le proprietà di contesto `crescendoText` e `decrescendoText`.

Lo stile della linea dell'estensore può essere cambiato modificando la proprietà `'style` di `DynamicTextSpanner`. Il valore predefinito è `'dashed-line`; gli altri valori possibili sono `'line`, `'dotted-line` e `'none`.

```
\relative c'' {
  \set crescendoText = \markup { \italic { cresc. poco } }
  \set crescendoSpanner = #'text
  \override DynamicTextSpanner.style = #'dotted-line
  a2\< a
  a2 a
  a2 a
  a2 a\mf
}
```



Changing the default text font family

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

```
%{
You may have to install additional fonts.

Red Hat Fedora

  dejavu-fonts-all

Debian GNU/Linux, Ubuntu

  fonts-dejavu-core
  fonts-dejavu-extra
%}

\paper {
  % change for other default global staff size.
  myStaffSize = #20
  %{
     run
         lilypond -dshow-available-fonts
     to show all fonts available in the process log.
  %}

  #(define fonts
    (make-pango-font-tree "DejaVu Serif"
                          "DejaVu Sans"
                          "DejaVu Sans Mono"
     (/ myStaffSize 20)))
}

{
  g'''4^\markup {
    DejaVu Serif: \bold bold
                  \italic italic
                  \italic \bold { bold italic }
  }
  g4_\markup {
    \override #'(font-family . sans) {
      DejaVu Sans: \bold bold
                   \italic italic
                   \italic \bold { bold italic }
    }
  }
  g''2^\markup {
    \override #'(font-family . typewriter) {
      DejaVu Sans Mono: \bold bold
                        \italic italic
                        \italic \bold { bold italic }
    }
  }
```

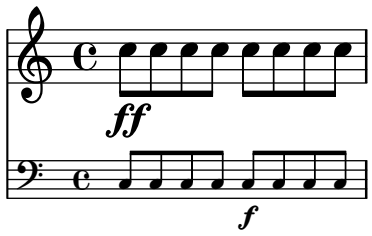
```
}
```



Changing the staff size

Though the simplest way to resize staves is to use `#(set-global-staff-size xx)`, an individual staff's size can be changed by scaling the properties `'staff-space` and `fontSize`.

```
<<
  \new Staff {
    \relative c'' {
      \dynamicDown
      c8\ff c c c c c c c
    }
  }
  \new Staff \with {
    fontSize = #-3
    \override StaffSymbol.staff-space = #(magstep -3)
  } {
    \clef bass
    c8 c c c c\f c c c
  }
>>
```
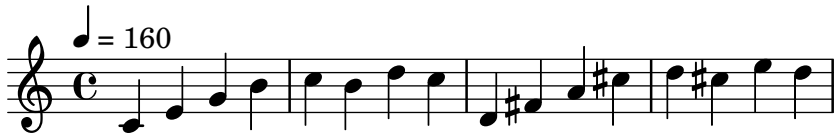


Modificare il tempo senza mostrare l'indicazione metronomica

Per cambiare il tempo del file MIDI senza che appaia l'indicazione metronomica, basta renderla invisibile.

```
\score {
  \new Staff \relative c' {
    \tempo 4 = 160
    c4 e g b
    c4 b d c
    \set Score.tempoHideNote = ##t
    \tempo 4 = 96
    d,4 fis a cis
    d4 cis e d
  }
  \layout { }
```

```
  \midi { }
}
```
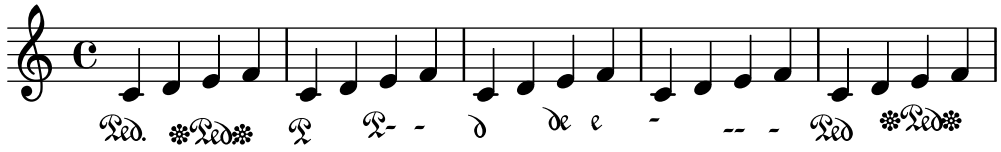


Changing the text for sustain markings

`Staff.pedalSustainStrings` can be used to set the text used for pedal down and up. Note that the only valid strings are those found in the list of pedal glyphs - the values used this snippet constitute an exhaustive list.

```
sustainNotes = { c4\sustainOn d e\sustainOff\sustainOn f\sustainOff }

\relative c' {
  \sustainNotes
  \set Staff.pedalSustainStrings = #'("P" "P-" "-")
  \sustainNotes
  \set Staff.pedalSustainStrings = #'("d" "de" "e")
  \sustainNotes
  \set Staff.pedalSustainStrings = #'("M" "M-" "-")
  \sustainNotes
  \set Staff.pedalSustainStrings = #'("Ped" "*Ped" "*")
  \sustainNotes
}
```



Controlling spanner visibility after a line break

The visibility of spanners which end on the first note following a line break is controlled by the `after-line-breaking` callback `ly:spanner::kill-zero-spanned-time`.

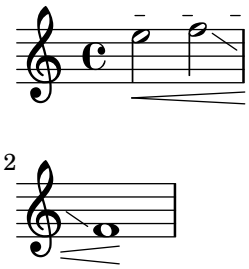
For objects such as glissandos and hairpins, the default behaviour is to hide the spanner after a break; disabling the callback will allow the left-broken span to be shown.

Conversely, spanners which are usually visible, such as text spans, can be hidden by enabling the callback.

```
\paper { ragged-right = ##t }

\relative c'' {
  \override Hairpin.to-barline = ##f
  \override Glissando.breakable = ##t
  % show hairpin
  \override Hairpin.after-line-breaking = ##t
  % hide text span
  \override TextSpanner.after-line-breaking =
    #ly:spanner::kill-zero-spanned-time
  e2\<\startTextSpan
  % show glissando
```

```
  \override Glissando.after-line-breaking = ##t
  f2\glissando
  \break
  f,1\!\stopTextSpan
}
```
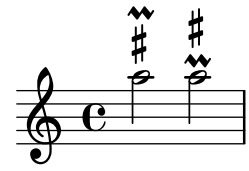


Controllo dell'ordine verticale degli script

L'ordine verticale degli script è determinato dalla proprietà `'script-priority`. Più il numero è piccolo, più sarà posto vicino alla nota. In questo esempio, il simbolo di *diesis* (oggetto `TextScript`) ha prima la priorità più bassa, dunque è posto più in basso nel primo esempio. Nel secondo, il *trillo* (oggetto `Script`) ha la priorità più bassa, quindi si trova all'interno. Quando due oggetti hanno la stessa priorità, l'ordine in cui sono inseriti determina quale viene prima.

```
\relative c''' {
  \once \override TextScript.script-priority = #-100
  a2^\prall^\markup { \sharp }

  \once \override Script.script-priority = #-100
  a2^\prall^\markup { \sharp }
}
```



Controllare la visibilità della parentesi del gruppo irregolare

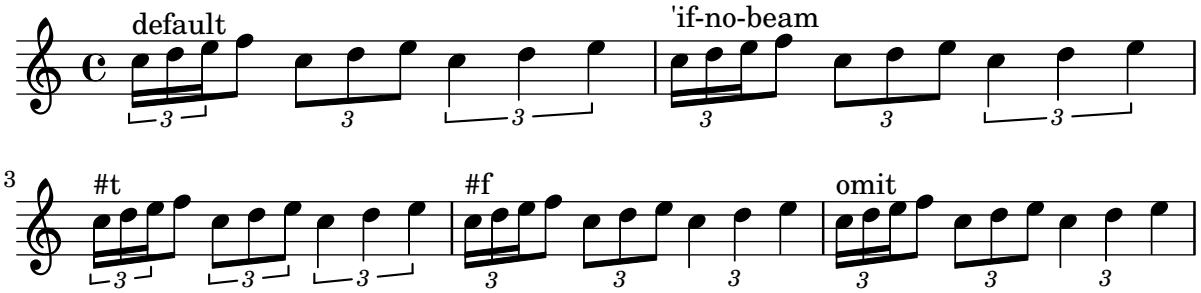
Il comportamento predefinito relativo alla visibilità della parentesi quadra del gruppo irregolare è di mostrare una parentesi a meno che non ci sia una travatura della stessa lunghezza del gruppo.

Per controllare la visibilità di tale parentesi, si imposta la proprietà `'bracket-visibility` su `#t` (mostra sempre la parentesi), `#'if-no-beam` (mostra la parentesi solo se non c'è una travatura, che è il comportamento predefinito) o `#f` (non mostrare mai la parentesi). L'ultima opzione equivale a omettere l'oggetto @code{TupletBracket} dall'output.

```
music = \relative c'' {
  \tuplet 3/2 { c16[ d e } f8]
  \tuplet 3/2 { c8 d e }
  \tuplet 3/2 { c4 d e }
}

\new Voice {
  \relative c' {
```
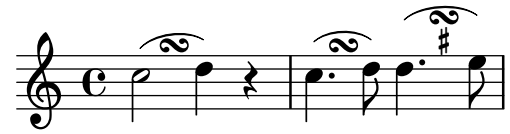
```
    << \music s4^"default" >>
    \override TupletBracket.bracket-visibility = #'if-no-beam
    << \music s4^"'if-no-beam" >>
    \override TupletBracket.bracket-visibility = ##t
    << \music s4^"#t" >>
    \override TupletBracket.bracket-visibility = ##f
    << \music s4^"#f" >>
    \omit TupletBracket
    << \music s4^"omit" >>
  }
}
```



Creare un gruppetto ritardato

Creare un gruppetto ritardato, dove la nota più bassa del gruppetto usa l'alterazione, richiede vari \override. La proprietà `outside-staff-priority` deve essere impostata su `#f`, perché altrimenti questa avrebbe la precedenza sulla proprietà `avoid-slur`. Cambiando le frazioni `2/3` e `1/3` si aggiusta la posizione orizzontale.

```
\relative c'' {
  \after 2*2/3 \turn c2( d4) r |
  \after 4 \turn c4.( d8)
  \after 4
  {
    \once \set suggestAccidentals = ##t
    \once \override AccidentalSuggestion.outside-staff-priority = ##f
    \once \override AccidentalSuggestion.avoid-slur = #'inside
    \once \override AccidentalSuggestion.font-size = -3
    \once \override AccidentalSuggestion.script-priority = -1
    \once \hideNotes
    cis8\turn \noBeam
  }
  d4.( e8)
}
```



Creating custom key signatures

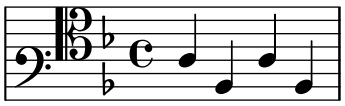
LilyPond supports custom key signatures. In this example, print for D minor with an extended range of printed flats.

```
\new Staff \with {
```

```
  \override StaffSymbol.line-count = #8
  \override KeySignature.flat-positions = #'((-7 . 6))
  \override KeyCancellation.flat-positions = #'((-7 . 6))
  % presumably sharps are also printed in both octaves
  \override KeySignature.sharp-positions = #'((-6 . 7))
  \override KeyCancellation.sharp-positions = #'((-6 . 7))

  \override Clef.stencil = #
  (lambda (grob)(grob-interpret-markup grob
  #{ \markup\combine
    \musicglyph "clefs.C"
    \translate #'(-3 . -2)
    \musicglyph "clefs.F"
   #}))
    clefPosition = #3
    middleCPosition = #3
    middleCClefPosition = #3
}

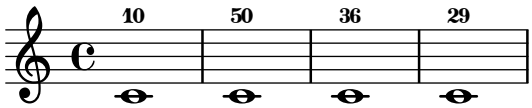
{
  \key d\minor
  f bes, f bes,
}
```



Creating double-digit fingerings

Creating fingerings larger than 5 is possible.

```
\relative c' {
  c1-10
  c1-50
  c1-36
  c1-29
}
```



Creating simultaneous rehearsal marks

Unlike text scripts, rehearsal marks cannot be stacked at a particular point in a score: only one `RehearsalMark` object is created. Using an invisible measure and bar line, an extra rehearsal mark can be added, giving the appearance of two marks in the same column.
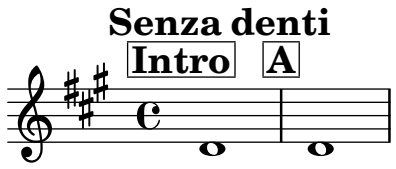
This method may also prove useful for placing rehearsal marks at both the end of one system and the start of the following system.

```
{
  \key a \major
  \set Score.markFormatter = #format-mark-box-letters
```

```
  \once \override Score.RehearsalMark.outside-staff-priority = #5000
  \once \override Score.RehearsalMark.self-alignment-X = #LEFT
  \once \override Score.RehearsalMark.break-align-symbols = #'(key-signature)
  \mark \markup { \bold { Senza denti } }

  % the hidden measure and bar line
  % \cadenzaOn turns off automatic calculation of bar numbers
  \cadenzaOn
  \once \override Score.TimeSignature.stencil = ##f
  \time 1/16
  s16 \bar ""
  \cadenzaOff

  \time 4/4
  \once \override Score.RehearsalMark.self-alignment-X = #LEFT
  \mark \markup { \box \bold Intro }
  d'1
  \mark \default
  d'1
}
```



Creating text spanners

The `\startTextSpan` and `\stopTextSpan` commands allow the creation of text spanners as easily as pedal indications or octavations. Override some properties of the `TextSpanner` object to modify its output.

```
\paper { ragged-right = ##f }

\relative c'' {
  \override TextSpanner.bound-details.left.text = #"bla"
  \override TextSpanner.bound-details.right.text = #"blu"
  a4 \startTextSpan
  b4 c
  a4 \stopTextSpan

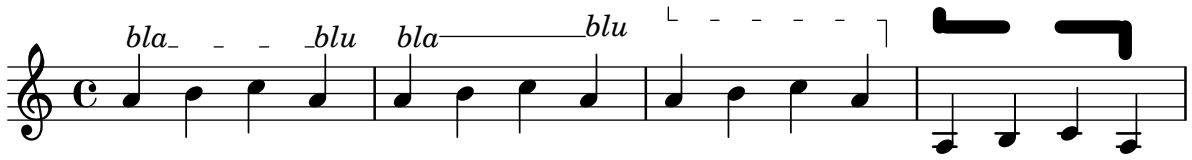
  \override TextSpanner.style = #'line
  \once \override TextSpanner.bound-details.left.stencil-align-dir-y = #CENTER
  a4 \startTextSpan
  b4 c
  a4 \stopTextSpan

  \override TextSpanner.style = #'dashed-line
  \override TextSpanner.bound-details.left.text =
    \markup { \draw-line #'(0 . 1) }
  \override TextSpanner.bound-details.right.text =
    \markup { \draw-line #'(0 . -2) }
```

```
  \once \override TextSpanner.bound-details.right.padding = #-2

  a4 \startTextSpan
  b4 c
  a4 \stopTextSpan

  \set Staff.middleCPosition = #-13
  \override TextSpanner.dash-period = #10
  \override TextSpanner.dash-fraction = #0.5
  \override TextSpanner.thickness = #10
  a4 \startTextSpan
  b4 c
  a4 \stopTextSpan
}
```

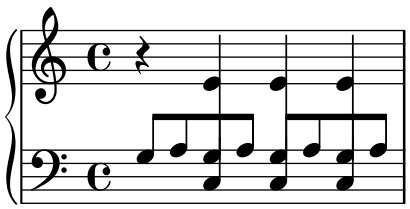


Cross-staff chords - beaming problems workaround

Sometimes it is better to use stems from the upper staff for creating cross-staff chords, because no problems with automatic beam collision avoidance then arise. If the stems from the lower staff were used in the following example, it would be necessary to change the automatic beam collision avoidance settings so that it doesn't detect collisions between staves using `\override Staff.Beam.collision-voice-only = ##t`

```
\new PianoStaff <<
  \new Staff = up
    \relative c' {
      <<
        { r4
          \override Stem.cross-staff = ##t
          \override Stem.length = #19 % this is in half-spaces,
              % so it makes stems 9.5 staffspaces long
          \override Stem.Y-offset = #-6 % stems are normally lengthened
              % upwards, so here we must lower the stem by the amount
              % equal to the lengthening - in this case (19 - 7) / 2
              % (7 is default stem length)
          e e e }
        { s4
          \change Staff = "bottom"
          \override NoteColumn.ignore-collision = ##t
          c, c c
        }
      >>
    }
  \new Staff = bottom
    \relative c' {
      \clef bass
      \voiceOne
      g8 a g a g a g a
```

```
    }
>>
```



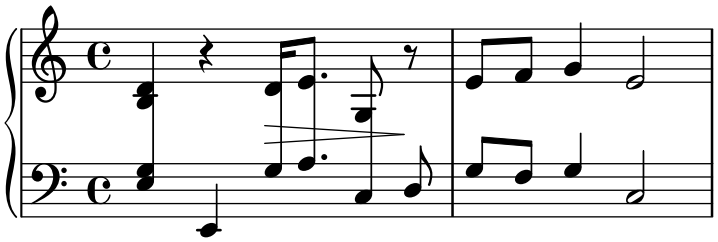
Cross staff stems

This snippet shows the use of the `Span_stem_engraver` and `\crossStaff` to connect stems across staves automatically.

The stem length need not be specified, as the variable distance between noteheads and staves is calculated automatically.

```
\layout {
  \context {
    \PianoStaff
    \consists "Span_stem_engraver"
  }
}

{
  \new PianoStaff <<
    \new Staff {
      <b d'>4 r d'16\> e'8. g8 r\!
      e'8 f' g'4 e'2
    }
    \new Staff {
      \clef bass
      \voiceOne
      \autoBeamOff
      \crossStaff { <e g>4 e, g16 a8. c8} d
      \autoBeamOn
      g8 f g4 c2
    }
  >>
}
```



Custodes

Custodes may be engraved in various styles.

```
\layout { ragged-right = ##t }
```

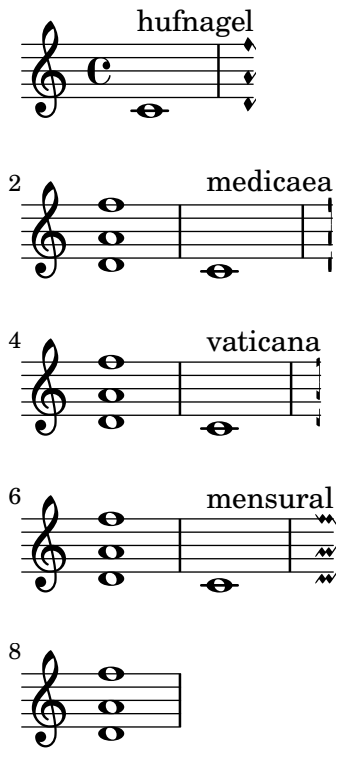
```
\new Staff \with { \consists "Custos_engraver" } \relative c' {
  \override Staff.Custos.neutral-position = #4

  \override Staff.Custos.style = #'hufnagel
  c1^"hufnagel" \break
  <d a' f'>1

  \override Staff.Custos.style = #'medicaea
  c1^"medicaea" \break
  <d a' f'>1

  \override Staff.Custos.style = #'vaticana
  c1^"vaticana" \break
  <d a' f'>1

  \override Staff.Custos.style = #'mensural
  c1^"mensural" \break
  <d a' f'>1
}
```



Personalizzare la tastiera del diagramma dei tasti

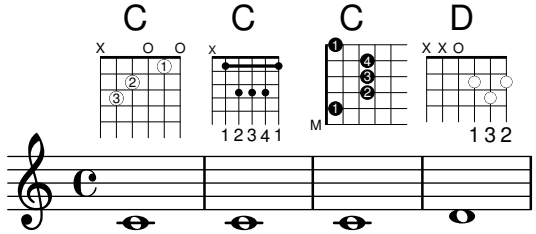
Le proprietà del diagramma dei tasti possono essere impostate tramite `'fret-diagram-details`. Per i diagrammi dell'oggetto FretBoard, gli override vengono applicati all'oggetto `FretBoards.FretBoard`. Come `Voice`, `FretBoards` è un contesto di basso livello, dunque può essere omesso negli override delle proprietà.

```
\include "predefined-guitar-fretboards.ly"
\storePredefinedDiagram #default-fret-table \chordmode { c' }
                        #guitar-tuning
```

```
                        #"x;1-1-(;3-2;3-3;3-4;1-1-);"

% shorthand
oo = #(define-music-function
       (grob-path value)
       (list? scheme?)
       #{ \once \override $grob-path = #value #})

<<
  \new ChordNames {
    \chordmode { c1 | c | c | d }
  }
  \new FretBoards {
    % Set global properties of fret diagram
    \override FretBoards.FretBoard.size = #'1.2
    \override FretBoard.fret-diagram-details.finger-code = #'in-dot
    \override FretBoard.fret-diagram-details.dot-color = #'white
    \chordmode {
      c
      \oo FretBoard.size #'1.0
      \oo FretBoard.fret-diagram-details.barre-type #'straight
      \oo FretBoard.fret-diagram-details.dot-color #'black
      \oo FretBoard.fret-diagram-details.finger-code #'below-string
      c'
      \oo FretBoard.fret-diagram-details.barre-type #'none
      \oo FretBoard.fret-diagram-details.number-type #'arabic
      \oo FretBoard.fret-diagram-details.orientation #'landscape
      \oo FretBoard.fret-diagram-details.mute-string #"M"
      \oo FretBoard.fret-diagram-details.label-dir #LEFT
      \oo FretBoard.fret-diagram-details.dot-color #'black
      c'
      \oo FretBoard.fret-diagram-details.finger-code #'below-string
      \oo FretBoard.fret-diagram-details.dot-radius #0.35
      \oo FretBoard.fret-diagram-details.dot-position #0.5
      \oo FretBoard.fret-diagram-details.fret-count #3
      d
    }
  }
  \new Voice {
    c'1 | c' | c' | d'
  }
>>
```



Personalizzare il diagramma dei tasti di tipo markup

Le proprietà del diagramma dei tasti si possono impostare tramite `'fret-diagram-details`. Per diagrammi di tipo markup, gli override possono essere applicati all'oggetto `Voice.TextScript` o direttamente al markup.

```
<<
  \chords { c1 | c | c | d }

  \new Voice = "mel" {
    \textLengthOn
    % Set global properties of fret diagram
    \override TextScript.size = #'1.2
    \override TextScript.fret-diagram-details.finger-code = #'in-dot
    \override TextScript.fret-diagram-details.dot-color = #'white

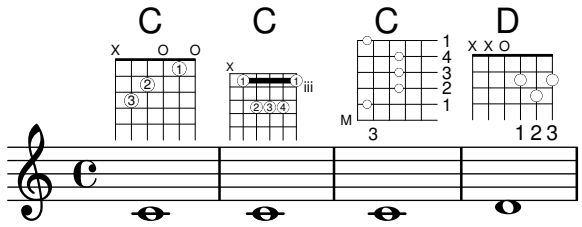
    %% C major for guitar, no barre, using defaults
       % terse style
    c'1^\markup { \fret-diagram-terse "x;3-3;2-2;o;1-1;o;" }

    %% C major for guitar, barred on third fret
       % verbose style
       % size 1.0
       % roman fret label, finger labels below string, straight barre
    c'1^\markup {
      % standard size
      \override #'(size . 1.0) {
        \override #'(fret-diagram-details . (
                     (number-type . roman-lower)
                     (finger-code . in-dot)
                     (barre-type . straight))) {
          \fret-diagram-verbose #'((mute 6)
                                   (place-fret 5 3 1)
                                   (place-fret 4 5 2)
                                   (place-fret 3 5 3)
                                   (place-fret 2 5 4)
                                   (place-fret 1 3 1)
                                   (barre 5 1 3))
        }
      }
    }

    %% C major for guitar, barred on third fret
       % verbose style
       % landscape orientation, arabic numbers, M for mute string
       % no barre, fret label down or left, small mute label font
    c'1^\markup {
      \override #'(fret-diagram-details . (
                   (finger-code . below-string)
                   (number-type . arabic)
                   (label-dir . -1)
                   (mute-string . "M")
                   (orientation . landscape)
```

```
                  (barre-type . none)
                  (xo-font-magnification . 0.4)
                  (xo-padding . 0.3))) {
        \fret-diagram-verbose #'((mute 6)
                                 (place-fret 5 3 1)
                                 (place-fret 4 5 2)
                                 (place-fret 3 5 3)
                                 (place-fret 2 5 4)
                                 (place-fret 1 3 1)
                                 (barre 5 1 3))
      }
    }

    %% simple D chord
       % terse style
       % larger dots, centered dots, fewer frets
       % label below string
    d'1^\markup {
      \override #'(fret-diagram-details . (
                  (finger-code . below-string)
                  (dot-radius . 0.35)
                  (dot-position . 0.5)
                  (fret-count . 3))) {
        \fret-diagram-terse "x;x;o;2-1;3-2;2-3;"
      }
    }
  }
>>
```



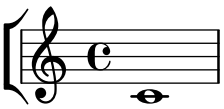
Mostrare la parentesi anche se c'è un solo rigo nel sistema

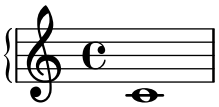
Se c'è un solo rigo in uno dei tipi di rigo `ChoirStaff` o `StaffGroup`, la parentesi e la stanghetta iniziale non appaiono. Si può modificare questo comportamento predefinito sovrascrivendo `collapse-height` e impostando un valore inferiore al numero di linee del rigo.

Nei contesti `PianoStaff` e `GrandStaff`, dove i sistemi iniziano con una parentesi graffa invece di una parentesi quadra, occorre impostare un'altra proprietà, come si vede nel secondo sistema dell'esempio.

```
\score {
  \new StaffGroup <<
    % Must be lower than the actual number of staff lines
    \override StaffGroup.SystemStartBracket.collapse-height = #4
    \override Score.SystemStartBar.collapse-height = #4
    \new Staff {
      c'1
    }
```

```
  >>
}
\score {
  \new PianoStaff <<
    \override PianoStaff.SystemStartBrace.collapse-height = #4
    \override Score.SystemStartBar.collapse-height = #4
    \new Staff {
      c'1
    }
  >>
}
```





Displaying grob ancestry

When working with grob callbacks, it can be helpful to understand a grob's ancestry. Most grobs have parents which influence the positioning of the grob. X- and Y-parents influence the horizontal and vertical positions for the grob, respectively. Additionally, each parent may have parents of its own.

Unfortunately, there are several aspects of a grob's ancestry that can lead to confusion:

- The types of parents a grob has may depend on context.
- For some grobs, the X- and Y-parents are the same.
- A particular *ancestor* may be related to a grob in multiple ways.
- The concept of *generations* is misleading.

For example, the `System` grob can be both parent (on the Y-side) and grandparent (twice on the X-side) to a `VerticalAlignment` grob.

This macro prints (to the console) a textual representation of a grob's ancestry.

When called this way:

```
{ \once \override NoteHead.before-line-breaking = #display-ancestry c }
```

The following output is generated:

```
NoteHead
X,Y: NoteColumn
     X: PaperColumn
        X,Y: System
     Y: VerticalAxisGroup
        X: NonMusicalPaperColumn
           X,Y: System
        Y: VerticalAlignment
           X: NonMusicalPaperColumn
              X,Y: System
           Y: System
%% http://lsr.di.unimi.it/LSR/Item?id=622
```

```
%% see also http://www.lilypond.org/doc/v2.18/Documentation/snippets/tweaks-and-overrides#tw
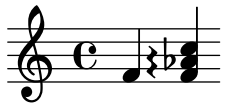
%% Remark:
%% grob::name is in the source since 2.19.x could be deleted during next LSR-upgrade
#(define (grob::name grob)
  (assq-ref (ly:grob-property grob 'meta) 'name))

#(define (get-ancestry grob)
  (if (not (null? (ly:grob-parent grob X)))
      (list (grob::name grob)
            (get-ancestry (ly:grob-parent grob X))
            (get-ancestry (ly:grob-parent grob Y)))
      (grob::name grob)))

#(define (format-ancestry lst padding)
   (string-append
    (symbol->string (car lst))
    "\n"
    (let ((X-ancestry
           (if (list? (cadr lst))
               (format-ancestry (cadr lst) (+ padding 3))
               (symbol->string (cadr lst))))
          (Y-ancestry
           (if (list? (caddr lst))
               (format-ancestry (caddr lst) (+ padding 3))
               (symbol->string (caddr lst)))))
      (if (equal? X-ancestry Y-ancestry)
          (string-append
           (format #f "~&")
           (make-string padding #\space)
           "X,Y: "
           (if (list? (cadr lst))
               (format-ancestry (cadr lst) (+ padding 5))
               (symbol->string (cadr lst))))
          (string-append
           (format #f "~&")
           (make-string padding #\space)
           "X: " X-ancestry
           "\n"
           (make-string padding #\space)
           "Y: " Y-ancestry
           (format #f "~&"))))
    (format #f "~&")))

#(define (display-ancestry grob)
   (format (current-error-port)
      "~3&~a~2%~a~&"
      (make-string 36 #\-)
      (if (ly:grob? grob)
          (format-ancestry (get-ancestry grob) 0)
          (format #f "~a is not a grob" grob))))
```
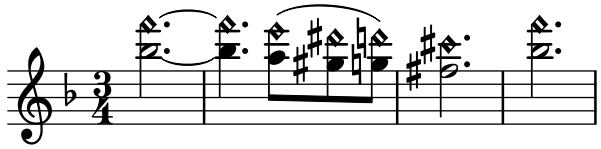
```
\relative c' {
  \once \override NoteHead.before-line-breaking = #display-ancestry
  f4
  \once \override Accidental.before-line-breaking = #display-ancestry
  \once \override Arpeggio.before-line-breaking = #display-ancestry
  <f as c>4\arpeggio
}
```



Dotted harmonics

Artificial harmonics using `\harmonic` do not show dots. To override this behavior, set the context property `harmonicDots`.

```
\relative c''' {
  \time 3/4
  \key f \major
  \set harmonicDots = ##t
  <bes f'\harmonic>2. ~
  <bes f'\harmonic>4. <a e'\harmonic>8( <gis dis'\harmonic> <g d'\harmonic>)
  <fis cis'\harmonic>2.
  <bes f'\harmonic>2.
}
```



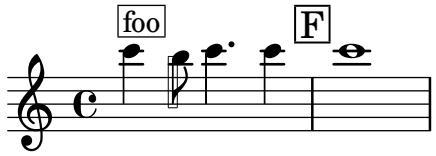
Drawing boxes around grobs

The `print-function` can be overridden to draw a box around an arbitrary grob.

```
\relative c'' {
  \override TextScript.stencil =
    #(make-stencil-boxer 0.1 0.3 ly:text-interface::print)
  c'4^"foo"

  \override Stem.stencil =
    #(make-stencil-boxer 0.05 0.25 ly:stem::print)
  \override Score.RehearsalMark.stencil =
    #(make-stencil-boxer 0.15 0.3 ly:text-interface::print)
  b8

  \revert Stem.stencil
  \revert Flag.stencil
  c4. c4
  \mark "F"
  c1
}
```

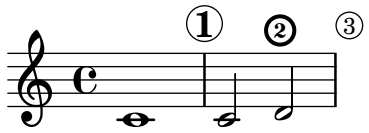


Drawing circles around various objects

The `\circle` markup command draws circles around various objects, for example fingering indications. For other objects, specific tweaks may be required: this example demonstrates two strategies for rehearsal marks and measure numbers.

```
\relative c' {
  c1
  \set Score.markFormatter =
    #(lambda (mark context)
             (make-circle-markup (format-mark-numbers mark context)))
  \mark \default

  c2 d^\markup {
    \override #'(thickness . 3) {
      \circle \finger 2
    }
  }
  \override Score.BarNumber.break-visibility = #all-visible
  \override Score.BarNumber.stencil =
    #(make-stencil-circler 0.1 0.25 ly:text-interface::print)
}
```



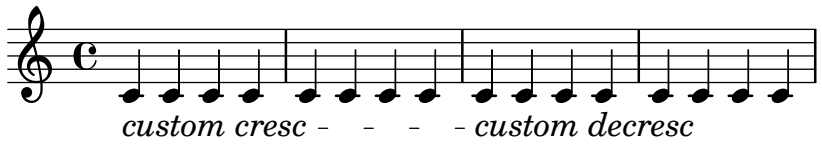
Estensore testuale della dinamica personalizzato

Funzioni postfix per estensori testuali personalizzati del crescendo. Gli estensori devono iniziare sulla prima nota della misura; e bisogna usare `-\mycresc`, altrimenti l'inizio dell'estensore viene assegnato alla nota successiva.

```
% Two functions for (de)crescendo spanners where you can explicitly
% give the spanner text.
mycresc =
#(define-music-function (mymarkup) (markup?)
   (make-music 'CrescendoEvent
               'span-direction START
               'span-type 'text
               'span-text mymarkup))
mydecresc =
#(define-music-function (mymarkup) (markup?)
   (make-music 'DecrescendoEvent
               'span-direction START
               'span-type 'text
               'span-text mymarkup))

\relative c' {
  c4-\mycresc "custom cresc" c4 c4 c4 |
  c4 c4 c4 c4 |
```

```
  c4-\mydecresc "custom decresc" c4 c4 c4 |
  c4 c4\! c4 c4
}
```
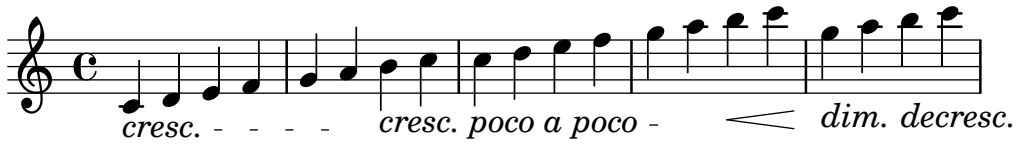


Estensore testuale della dinamica personalizzato

Si possono definire estensori testuali personalizzati che fanno uso delle forcine e dei crescendo testuali. `\<` e `\>` generano le forcine, `\cresc` etc. generano gli estensori testuali.

```
% Some sample text dynamic spanners, to be used as postfix operators
crpoco =
#(make-music 'CrescendoEvent
             'span-direction START
             'span-type 'text
             'span-text "cresc. poco a poco")

\relative c' {
  c4\cresc d4 e4 f4 |
  g4 a4\! b4\crpoco c4 |
  c4 d4 e4 f4 |
  g4 a4\! b4\< c4 |
  g4\dim a4 b4\decresc c4\!
}
```

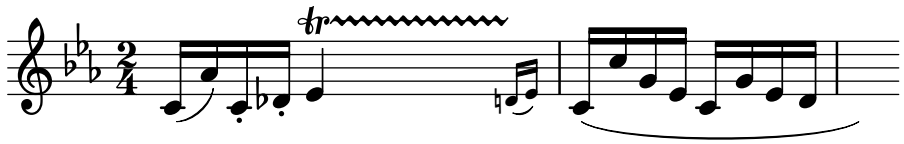


Extending a TrillSpanner

For `TrillSpanner`, the `minimum-length` property becomes effective only if the `set-spacing-rods` procedure is called explicitly.

To do this, the `springs-and-rods` property should be set to `ly:spanner::set-spacing-rods`.

```
\relative c' {
\key c\minor
  \time 2/4
  c16( as') c,-. des-.
  \once\override TrillSpanner.minimum-length = #15
  \once\override TrillSpanner.springs-and-rods = #ly:spanner::set-spacing-rods
  \afterGrace es4
  \startTrillSpan { d16[( \stopTrillSpan es)] }
  c( c' g es c g' es d
  \hideNotes
  c8)
}
```



Estendere i glissandi sulle volte delle ripetizioni

Un glissando che si estende in vari blocchi `\alternative` può essere simulato aggiungendo all'inizio di ogni blocco `\alternative` una nota di abbellimento nascosta da cui inizia un glissando. La nota di abbellimento deve avere la stessa altezza della nota da cui parte il glissando iniziale. In questo frammento si usa una funzione musicale che prende come argomento l'altezza della nota di abbellimento.

Attenzione: nella musica polifonica la nota di abbellimento deve avere una nota di abbellimento corrispondente in tutte le altre voci.

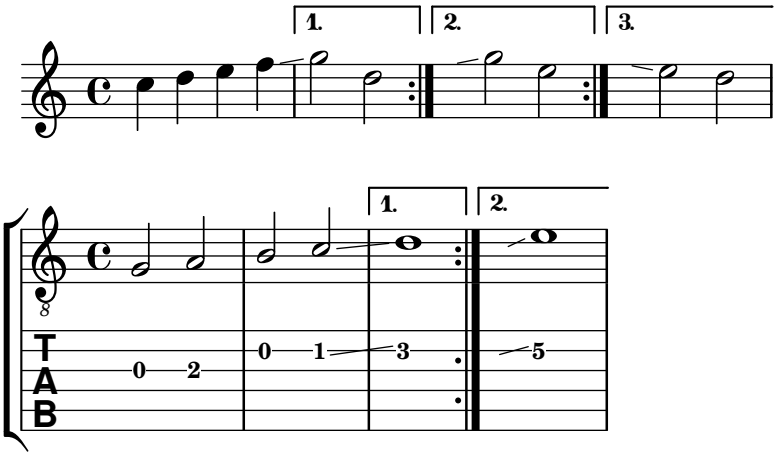
```
repeatGliss = #(define-music-function (grace)
  (ly:pitch?)
  #{
    % the next two lines ensure the glissando is long enough
    % to be visible
    \once \override Glissando.springs-and-rods
      = #ly:spanner::set-spacing-rods
    \once \override Glissando.minimum-length = #3.5
    \once \hideNotes
    \grace $grace \glissando
  #})

\score {
  \relative c'' {
    \repeat volta 3 { c4 d e f\glissando }
    \alternative {
      { g2 d }
      { \repeatGliss f g2 e }
      { \repeatGliss f e2 d }
    }
  }
}

music =  \relative c' {
  \voiceOne
  \repeat volta 2 {
    g a b c\glissando
  }
  \alternative {
    { d1 }
    { \repeatGliss c \once \omit StringNumber e1\2 }
  }
}

\score {
  \new StaffGroup <<
    \new Staff <<
      \new Voice { \clef "G_8" \music }
    >>
    \new TabStaff  <<
```
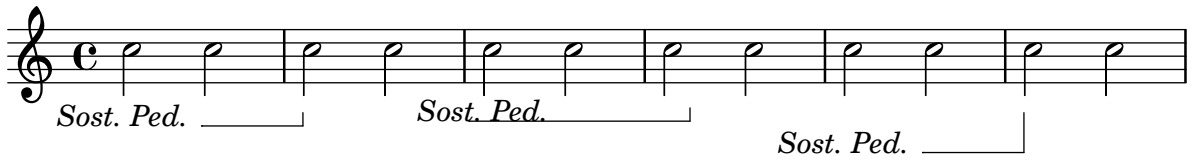
```
      \new TabVoice { \clef "moderntab" \music }
    >>
  >>
}
```



Fine-tuning pedal brackets

The appearance of pedal brackets may be altered in different ways.

```
\paper { ragged-right = ##f }
\relative c'' {
  c2\sostenutoOn c
  c2\sostenutoOff c
  \once \override Staff.PianoPedalBracket.shorten-pair = #'(-7 . -2)
  c2\sostenutoOn c
  c2\sostenutoOff c
  \once \override Staff.PianoPedalBracket.edge-height = #'(0 . 3)
  c2\sostenutoOn c
  c2\sostenutoOff c
}
```



Flat Ties

The function takes the default `Tie.stencil` as an argument, calculating the result relying on the extents of this default.

Further tweaking is possible by overriding `Tie.details.height-limit` or with `\shape`. It's also possible to change the custom-definition on the fly.

```
%% http://lsr.di.unimi.it/LSR/Item?id=1031

#(define ((flared-tie coords) grob)

  (define (pair-to-list pair)
     (list (car pair) (cdr pair)))
```

```
  (define (normalize-coords goods x y dir)
    (map
      (lambda (coord)
        ;(coord-scale coord (cons x (* y dir)))
        (cons (* x (car coord)) (* y dir (cdr coord))))
      goods))

  (define (my-c-p-s points thick)
    (make-connected-path-stencil
      points
      thick
      1.0
      1.0
      #f
      #f))

  ;; outer let to trigger suicide
  (let ((sten (ly:tie::print grob)))
    (if (grob::is-live? grob)
        (let* ((layout (ly:grob-layout grob))
               (line-thickness (ly:output-def-lookup layout 'line-thickness))
               (thickness (ly:grob-property grob 'thickness 0.1))
               (used-thick (* line-thickness thickness))
               (dir (ly:grob-property grob 'direction))
               (xex (ly:stencil-extent sten X))
               (yex (ly:stencil-extent sten Y))
               (lenx (interval-length xex))
               (leny (interval-length yex))
               (xtrans (car xex))
               (ytrans (if (> dir 0)(car yex) (cdr yex)))
               (uplist
                 (map pair-to-list
                      (normalize-coords coords lenx (* leny 2) dir))))

   (ly:stencil-translate
       (my-c-p-s uplist used-thick)
     (cons xtrans ytrans)))
   '())))

#(define flare-tie
  (flared-tie '((0 . 0)(0.1 . 0.2) (0.9 . 0.2) (1.0 . 0.0))))

\layout {
  \context {
    \Voice
    \override Tie.stencil = #flare-tie
  }
}

\paper { ragged-right = ##f }

\relative c' {
```

```
  a4~a
  \override Tie.height-limit = 4
  a'4~a
  a'4~a
  <a,, c e a c e a c e>~ q

  \break

  a'4~a
  \once \override Tie.details.height-limit = 14
  a4~a

  \break

  a4~a
  \once \override Tie.details.height-limit = 0.5
  a4~a

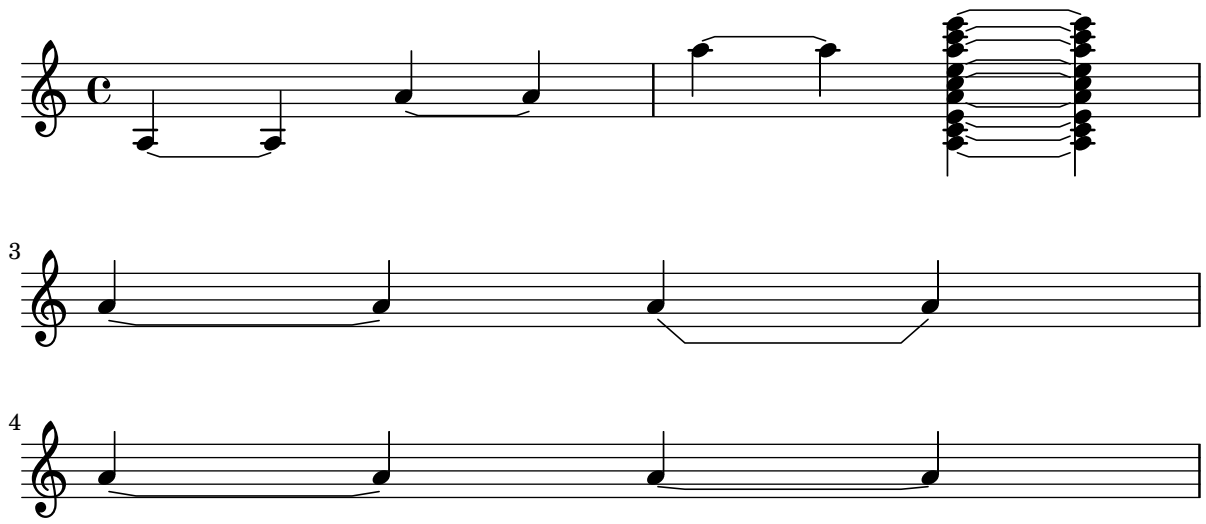
  \break

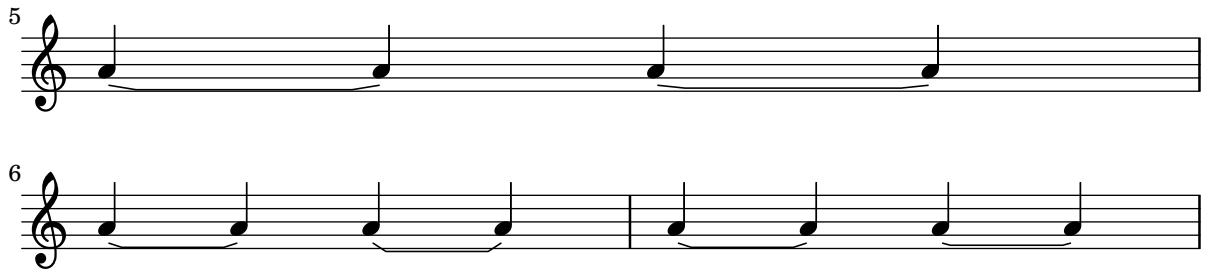
  a4~a
  \shape #'((0 . 0) (0 . 0.4) (0 . 0.4) (0 . 0)) Tie
  a4~a

  \break

  a4~a
  \once \override Tie.stencil =
    #(flared-tie '((0 . 0)(0.1 . 0.4) (0.9 . 0.4) (1.0 . 0.0)))
  a4~a

  a4~a
  \once \override Tie.stencil =
    #(flared-tie '((0 . 0)(0.06 . 0.1) (0.94 . 0.1) (1.0 . 0.0)))
  a4~a
}
```
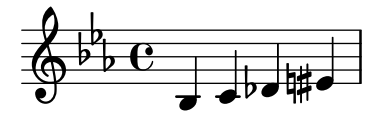




Force a cancellation natural before accidentals

The following example shows how to force a natural sign before an accidental.
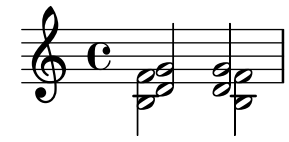
```
\relative c' {
  \key es \major
  bes c des
  \tweak Accidental.restore-first ##t
  eis
}
```



Forzare lo spostamento orizzonatale delle note

Quando il motore tipografico non riesce a risolvere una situazione, si può usare la sintassi che sovrascrive le decisioni tipografiche. L'unità di misura usata è lo spazio del rigo.

```
\relative c' <<
  {
    <d g>2 <d g>
  }
  \\
  {
    <b f'>2
    \once \override NoteColumn.force-hshift = #1.7
    <b f'>2
  }
>>
```



Fret diagrams explained and developed

This snippet shows many possibilities for obtaining and tweaking fret diagrams.

```
<<
  \chords {
    a2 a
    \repeat unfold 3 {
      c c c d d
    }
  }
```

```
\new Voice = "mel" {
  \textLengthOn
  % Set global properties of fret diagram
  \override TextScript.size = #1.2
  \override TextScript.fret-diagram-details.finger-code = #'below-string
  \override TextScript.fret-diagram-details.dot-color = #'black

  %% A chord for ukulele
  a'2^\markup {
    \override #'(fret-diagram-details . (
                 (string-count . 4)
                 (dot-color . white)
                 (finger-code . in-dot))) {
      \fret-diagram "4-2-2;3-1-1;2-o;1-o;"
    }
  }

  %% A chord for ukulele, with formatting defined in definition string
  %  1.2 * size, 4 strings, 4 frets, fingerings below string
  %  dot radius .35 of fret spacing, dot position 0.55 of fret spacing
  a'2^\markup {
    \override #'(fret-diagram-details . (
                 (dot-color . white)
                 (open-string . "o"))) {
      \fret-diagram "s:1.2;w:4;h:3;f:2;d:0.35;p:0.55;4-2-2;3-1-1;2-o;1-o;"
    }
  }

    %% These chords will be in normal orientation

  %% C major for guitar, barred on third fret
  %  verbose style
  %  roman fret label, finger labels below string, straight barre
  c'2^\markup {
    % 110% of default size
    \override #'(size . 1.1) {
      \override #'(fret-diagram-details . (
                   (number-type . roman-lower)
                   (finger-code . below-string)
                   (barre-type . straight))) {
        \fret-diagram-verbose #'((mute 6)
                                 (place-fret 5 3 1)
                                 (place-fret 4 5 2)
                                 (place-fret 3 5 3)
                                 (place-fret 2 5 4)
                                 (place-fret 1 3 1)
                                 (barre 5 1 3))
      }
    }
  }

  %% C major for guitar, barred on third fret
```

```
%% Double barre used to test barre function
%  verbose style
c'2^\markup {
  % 110% of default size
  \override #'(size . 1.1) {
    \override #'(fret-diagram-details . (
                 (number-type . arabic)
                 (dot-label-font-mag . 0.9)
                 (finger-code . in-dot)
                 (fret-label-font-mag . 0.6)
                 (fret-label-vertical-offset . 0)
                 (label-dir . -1)
                 (mute-string . "M")
                 (xo-font-magnification . 0.4)
                 (xo-padding . 0.3))) {
      \fret-diagram-verbose #'((mute 6)
                               (place-fret 5 3 1)
                               (place-fret 4 5 2)
                               (place-fret 3 5 3)
                               (place-fret 2 5 4)
                               (place-fret 1 3 1)
                               (barre 4 2 5)
                               (barre 5 1 3))
    }
  }
}

%% C major for guitar, with capo on third fret
%  verbose style
c'2^\markup {
  % 110% of default size
  \override #'(size . 1.1) {
    \override #'(fret-diagram-details . (
                 (number-type . roman-upper)
                 (dot-label-font-mag . 0.9)
                 (finger-code . none)
                 (fret-label-vertical-offset . 0.5)
                 (xo-font-magnification . 0.4)
                 (xo-padding . 0.3))) {
      \fret-diagram-verbose #'((mute 6)
                               (capo 3)
                               (open 5)
                               (place-fret 4 5 1)
                               (place-fret 3 5 2)
                               (place-fret 2 5 3)
                               (open 1))
    }
  }
}

%% simple D chord
d'2^\markup {
```

```
  \override #'(fret-diagram-details . (
               (finger-code . below-string)
               (dot-radius . 0.35)
               (string-thickness-factor . 0.3)
               (dot-position . 0.5)
               (fret-count . 3))) {
    \fret-diagram-terse "x;x;o;2-1;3-2;2-3;"
  }
}

%% simple D chord, large top fret thickness
d'2^\markup  {
  \override #'(fret-diagram-details . (
               (finger-code . below-string)
               (dot-radius . 0.35)
               (dot-position . 0.5)
               (top-fret-thickness . 7)
               (fret-count . 3))) {
    \fret-diagram-terse "x;x;o;2-1;3-2;2-3;"
  }
}

  % These chords will be in landscape orientation
\override TextScript.fret-diagram-details.orientation = #'landscape

%% C major for guitar, barred on third fret
%  verbose style
%  roman fret label, finger labels below string, straight barre
c'2^\markup {
  % 110% of default size
  \override #'(size . 1.1) {
    \override #'(fret-diagram-details . (
                 (number-type . roman-lower)
                 (finger-code . below-string)
                 (barre-type . straight))) {
      \fret-diagram-verbose #'((mute 6)
                               (place-fret 5 3 1)
                               (place-fret 4 5 2)
                               (place-fret 3 5 3)
                               (place-fret 2 5 4)
                               (place-fret 1 3 1)
                               (barre 5 1 3))
    }
  }
}

%% C major for guitar, barred on third fret
%% Double barre used to test barre function
%  verbose style
c'2^\markup {
  % 110% of default size
  \override #'(size . 1.1) {
```

```
    \override #'(fret-diagram-details . (
                 (number-type . arabic)
                 (dot-label-font-mag . 0.9)
                 (finger-code . in-dot)
                 (fret-label-font-mag . 0.6)
                 (fret-label-vertical-offset . 0)
                 (label-dir . -1)
                 (mute-string . "M")
                 (xo-font-magnification . 0.4)
                 (xo-padding . 0.3))) {
      \fret-diagram-verbose #'((mute 6)
                               (place-fret 5 3 1)
                               (place-fret 4 5 2)
                               (place-fret 3 5 3)
                               (place-fret 2 5 4)
                               (place-fret 1 3 1)
                               (barre 4 2 5)
                               (barre 5 1 3))
    }
  }
}

%% C major for guitar, with capo on third fret
%  verbose style
c'2^\markup {
  % 110% of default size
  \override #'(size . 1.1) {
    \override #'(fret-diagram-details . (
                 (number-type . roman-upper)
                 (dot-label-font-mag . 0.9)
                 (finger-code . none)
                 (fret-label-vertical-offset . 0.5)
                 (xo-font-magnification . 0.4)
                 (xo-padding . 0.3))) {
      \fret-diagram-verbose #'((mute 6)
                               (capo 3)
                               (open 5)
                               (place-fret 4 5 1)
                               (place-fret 3 5 2)
                               (place-fret 2 5 3)
                               (open 1))
    }
  }
}

%% simple D chord
d'2^\markup {
  \override #'(fret-diagram-details . (
                (finger-code . below-string)
                (dot-radius . 0.35)
                (dot-position . 0.5)
                (fret-count . 3))) {
```

```
    \fret-diagram-terse "x;x;o;2-1;3-2;2-3;"
  }
}

%% simple D chord, large top fret thickness
d'2^\markup {
  \override #'(fret-diagram-details . (
              (finger-code . below-string)
              (dot-radius . 0.35)
              (dot-position . 0.5)
              (top-fret-thickness . 7)
              (fret-count . 3))) {
    \fret-diagram-terse "x;x;o;2-1;3-2;2-3;"
  }
}

  % These chords will be in opposing-landscape orientation
\override TextScript.fret-diagram-details.orientation = #'opposing-landscape

%% C major for guitar, barred on third fret
%  verbose style
%  roman fret label, finger labels below string, straight barre
c'2^\markup {
  % 110% of default size
  \override #'(size . 1.1) {
    \override #'(fret-diagram-details . (
                (number-type . roman-lower)
                (finger-code . below-string)
                (barre-type . straight))) {
      \fret-diagram-verbose #'((mute 6)
                               (place-fret 5 3 1)
                               (place-fret 4 5 2)
                               (place-fret 3 5 3)
                               (place-fret 2 5 4)
                               (place-fret 1 3 1)
                               (barre 5 1 3))
    }
  }
}

%% C major for guitar, barred on third fret
%% Double barre used to test barre function
%  verbose style
c'2^\markup {
  % 110% of default size
  \override #'(size . 1.1) {
    \override #'(fret-diagram-details . (
                (number-type . arabic)
                (dot-label-font-mag . 0.9)
                (finger-code . in-dot)
                (fret-label-font-mag . 0.6)
                (fret-label-vertical-offset . 0)
```

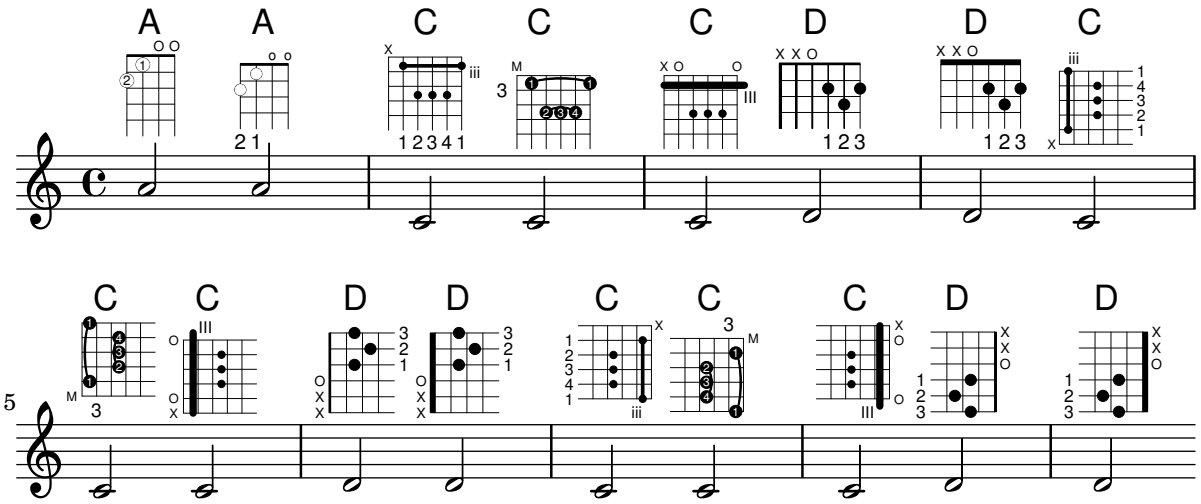
```
                (label-dir . -1)
                (mute-string . "M")
                (xo-font-magnification . 0.4)
                (xo-padding . 0.3))) {
      \fret-diagram-verbose #'((mute 6)
                               (place-fret 5 3 1)
                               (place-fret 4 5 2)
                               (place-fret 3 5 3)
                               (place-fret 2 5 4)
                               (place-fret 1 3 1)
                               (barre 4 2 5)
                               (barre 5 1 3))
    }
  }
}

%% C major for guitar, with capo on third fret
%  verbose style
c'2^\markup {
  % 110% of default size
  \override #'(size . 1.1) {
    \override #'(fret-diagram-details . (
                (number-type . roman-upper)
                (dot-label-font-mag . 0.9)
                (finger-code . none)
                (fret-label-vertical-offset . 0.5)
                (xo-font-magnification . 0.4)
                (xo-padding . 0.3))) {
      \fret-diagram-verbose #'((mute 6)
                               (capo 3)
                               (open 5)
                               (place-fret 4 5 1)
                               (place-fret 3 5 2)
                               (place-fret 2 5 3)
                               (open 1))
    }
  }
}

%% simple D chord
d'2^\markup {
  \override #'(fret-diagram-details . (
               (finger-code . below-string)
               (dot-radius . 0.35)
               (dot-position . 0.5)
               (fret-count . 3))) {
    \fret-diagram-terse "x;x;o;2-1;3-2;2-3;"
  }
}

%% simple D chord, large top fret thickness
d'2^\markup {
```

```
      \override #'(fret-diagram-details . (
                   (finger-code . below-string)
                   (dot-radius . 0.35)
                   (dot-position . 0.5)
                   (top-fret-thickness . 7)
                   (fret-count . 3))) {
        \fret-diagram-terse "x;x;o;2-1;3-2;2-3;"
      }
    }
  }
>>
```



Generating custom flags

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

```
#(define-public (weight-flag grob)
   (let* ((stem-grob (ly:grob-parent grob X))
          (log (- (ly:grob-property stem-grob 'duration-log) 2))
          (is-up? (eqv? (ly:grob-property stem-grob 'direction) UP))
          (yext (if is-up? (cons (* log -0.8) 0) (cons 0 (* log 0.8))))
          (flag-stencil (make-filled-box-stencil '(-0.4 . 0.4) yext))
          (stroke-style (ly:grob-property grob 'stroke-style))
          (stroke-stencil (if (equal? stroke-style "grace")
                              (make-line-stencil 0.2 -0.9 -0.4 0.9 -0.4)
                              empty-stencil)))
     (ly:stencil-add flag-stencil stroke-stencil)))


% Create a flag stencil by looking up the glyph from the font
#(define (inverted-flag grob)
   (let* ((stem-grob (ly:grob-parent grob X))
          (dir (if (eqv? (ly:grob-property stem-grob 'direction) UP) "d" "u"))
          (flag (retrieve-glyph-flag "" dir "" grob))
          (line-thickness (ly:staff-symbol-line-thickness grob))
          (stem-thickness (ly:grob-property stem-grob 'thickness))
          (stem-width (* line-thickness stem-thickness))
```

```
          (stroke-style (ly:grob-property grob 'stroke-style))
          (stencil (if (null? stroke-style)
                       flag
                       (add-stroke-glyph flag stem-grob dir stroke-style "")))
          (rotated-flag (ly:stencil-rotate-absolute stencil 180 0 0)))
     (ly:stencil-translate rotated-flag (cons (- (/ stem-width 2)) 0))))
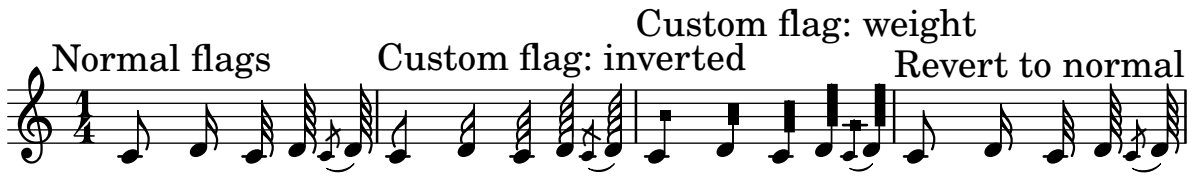
snippetexamplenotes =
{
  \autoBeamOff c'8 d'16 c'32 d'64 \acciaccatura {c'8} d'64
}

{
  \override Score.RehearsalMark.self-alignment-X = #LEFT
  \time 1/4
  \mark "Normal flags"
  \snippetexamplenotes

  \mark "Custom flag: inverted"
  \override Flag.stencil = #inverted-flag
  \snippetexamplenotes

  \mark "Custom flag: weight"
  \override Flag.stencil = #weight-flag
  \snippetexamplenotes
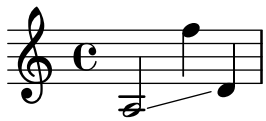
  \mark "Revert to normal"
  \revert Flag.stencil
  \snippetexamplenotes
}
```



Glissandi can skip grobs

`NoteColumn` grobs can be skipped over by glissandi.

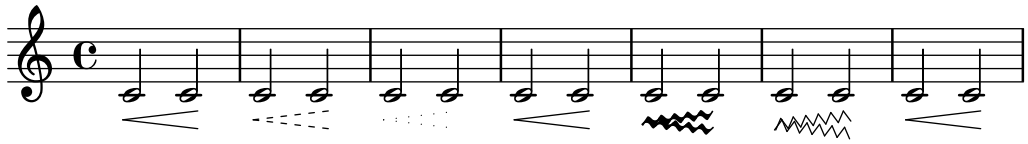
```
\relative c' {
  a2 \glissando
  \once \override NoteColumn.glissando-skip = ##t
  f''4 d,
}
```



Hairpins with different line styles

Hairpins can take any style from `line-interface` - dashed-line, dotted-line, line, trill or zigzag.

```
\relative c' {
  c2\< c\!
  \override Hairpin.style = #'dashed-line
  c2\< c\!
  \override Hairpin.style = #'dotted-line
  c2\< c\!
  \override Hairpin.style = #'line
  c2\< c\!
  \override Hairpin.style = #'trill
  c2\< c\!
  \override Hairpin.style = #'zigzag
  c2\< c\!
  \revert Hairpin.style
  c2\< c\!
}
```



Horizontally aligning custom dynamics (e.g. "sempre pp" "piu f" "subito p")

Some dynamic expressions involve additional text, like “sempre pp”. Since dynamics are usually centered under the note, the \pp would be displayed way after the note it applies to.

To correctly align the “sempre pp” horizontally, so that it is aligned as if it were only the \pp, there are several approaches:

* Simply use `\once\override DynamicText.X-offset = #-9.2` before the note with the dynamics to manually shift it to the correct position. Drawback: This has to be done manually each time you use that dynamic markup...

* Add some padding (`#:hspace 7.1`) into the definition of your custom dynamic mark, so that after lilypond center-aligns it, it is already correctly aligned. Drawback: The padding really takes up that space and does not allow any other markup or dynamics to be shown in that position.

* Shift the dynamic script `\once\override ... .X-offset = ...` Drawback: `\once\override` is needed for every invocation!

* Set the dimensions of the additional text to 0 (using `#:with-dimensions '(0 . 0) '(0 . 0)`). Drawback: To LilyPond “sempre” has no extent, so it might put other stuff there and create collisions (which are not detected by the collision detection!). Also, there seems to be some spacing, so it’s not exactly the same alignment as without the additional text

* Add an explicit shifting directly inside the scheme function for the dynamic-script.

* Set an explicit alignment inside the dynamic-script. By default, this won’t have any effect, only if one sets X-offset! Drawback: One needs to set `DynamicText.X-offset`, which will apply to all dynamic texts! Also, it is aligned at the right edge of the additional text, not at the center of pp.

```
\paper {
  ragged-right = ##f
  indent = 2.5\cm
}
```

```
% Solution 1: Using a simple markup with a particular halign value
% Drawback: It's a markup, not a dynamic command, so \dynamicDown
%           etc. will have no effect
semppMarkup = \markup { \halign #1.4 \italic "sempre" \dynamic "pp" }

% Solution 2: Using a dynamic script & shifting with
%             \once \override ...X-offset = ..
% Drawback: \once \override needed for every invocation
semppK =
#(make-dynamic-script
  (markup #:line
          (#:normal-text
           #:italic "sempre"
           #:dynamic "pp")))

% Solution 3: Padding the dynamic script so the center-alignment
%             puts it at the correct position
% Drawback: the padding really reserves the space, nothing else can be there
semppT =
#(make-dynamic-script
  (markup #:line
          (#:normal-text
           #:italic "sempre"
           #:dynamic "pp"
           #:hspace 7.1)))

% Solution 4: Dynamic, setting the dimensions of the additional text to 0
% Drawback: To lilypond "sempre" has no extent, so it might put
%           other stuff there => collisions
% Drawback: Also, there seems to be some spacing, so it's not exactly the
%           same alignment as without the additional text
semppM =
#(make-dynamic-script
  (markup #:line
          (#:with-dimensions '(0 . 0) '(0 . 0)
                             #:right-align
                             #:normal-text
                             #:italic "sempre"
                             #:dynamic "pp")))

% Solution 5: Dynamic with explicit shifting inside the scheme function
semppG =
#(make-dynamic-script
  (markup #:hspace 0
          #:translate '(-18.85 . 0)
          #:line (#:normal-text
                  #:italic "sempre"
                  #:dynamic "pp")))
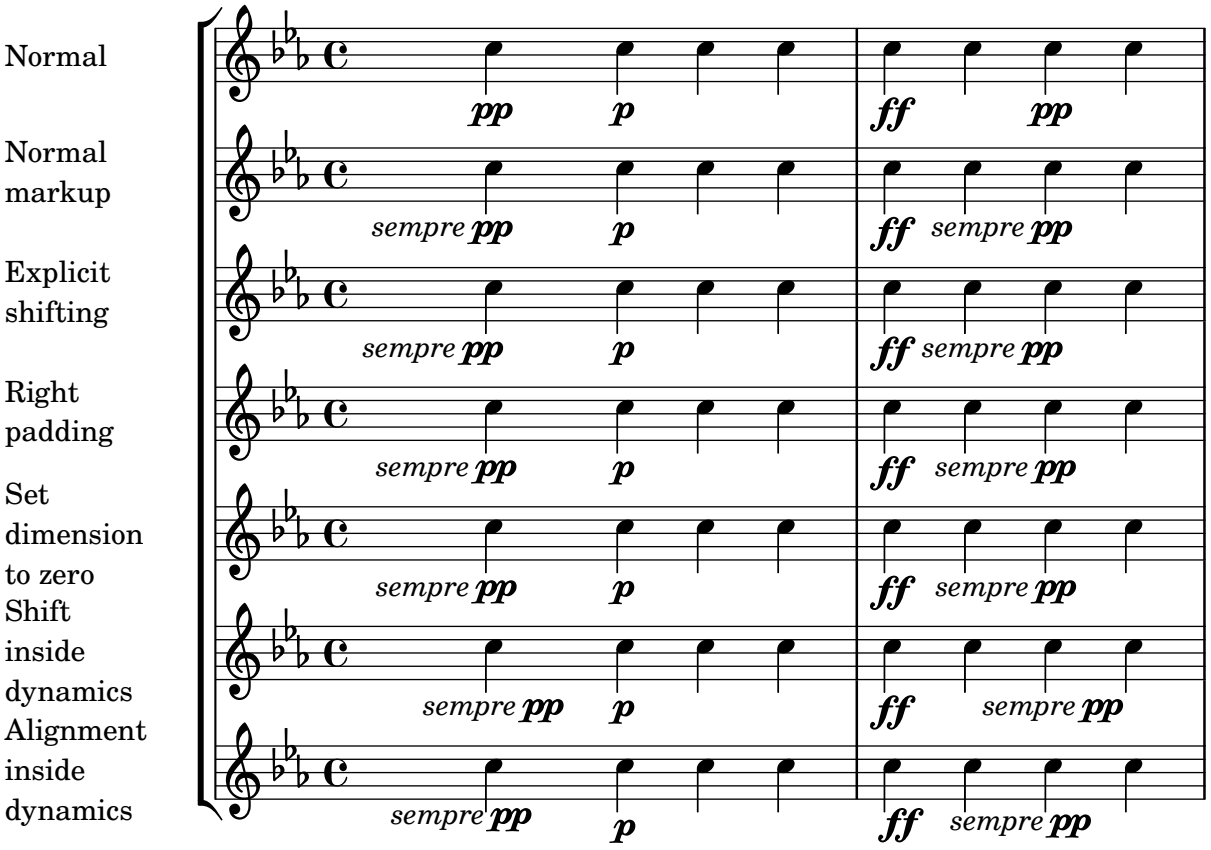
% Solution 6: Dynamic with explicit alignment. This has only effect
%             if one sets X-offset!
```

```
% Drawback: One needs to set DynamicText.X-offset!
% Drawback: Aligned at the right edge of the additional text,
%           not at the center of pp
semppMII =
#(make-dynamic-script
  (markup #:line (#:right-align
                  #:normal-text
                  #:italic "sempre"
                  #:dynamic "pp")))

\new StaffGroup <<
  \new Staff = "s" \with { instrumentName = \markup \column { Normal } }
  <<
    \relative c'' {
      \key es \major
      c4\pp c\p c c | c\ff c c\pp c
    }
  >>
  \new Staff = "sMarkup" \with {
    instrumentName = \markup \column { Normal markup }
  }
  <<
    \relative c'' {
      \key es \major
      c4-\semppMarkup c\p c c | c\ff c c-\semppMarkup c
    }
  >>
  \new Staff = "sK" \with {
    instrumentName = \markup \column { Explicit shifting }
  }
  <<
    \relative c'' {
      \key es \major
      \once \override DynamicText.X-offset = #-9.2
      c4\semppK c\p c c
      c4\ff c
      \once \override DynamicText.X-offset = #-9.2
      c4\semppK c
    }
  >>
  \new Staff = "sT" \with {
    instrumentName = \markup \column { Right padding }
  }
  <<
    \relative c'' {
      \key es \major
      c4\semppT c\p c c | c\ff c c\semppT c
    }
  >>
  \new Staff = "sM" \with {
    instrumentName = \markup \column { Set dimension "to zero" }
  }
```

```
  <<
    \relative c'' {
      \key es \major
      c4\semppM c\p c c | c\ff c c\semppM c
    }
  >>
  \new Staff = "sG" \with {
    instrumentName = \markup \column { Shift inside dynamics}
  }
  <<
    \relative c'' {
      \key es \major
      c4\semppG c\p c c | c\ff c c\semppG c
    }
  >>
  \new Staff = "sMII" \with {
    instrumentName = \markup \column { Alignment inside dynamics }
  }
  <<
    \relative c'' {
      \key es \major
      % Setting to ##f (false) gives the same result
      \override DynamicText.X-offset = #0
      c4\semppMII c\p c c | c\ff c c\semppMII c
    }
  >>
>>

\layout { \override Staff.InstrumentName.self-alignment-X = #LEFT }
```



How to change fret diagram position

If you want to move the position of a fret diagram, for example, to avoid collision, or to place it between two notes, you have various possibilities:

1) modify #'padding or #'extra-offset values (as shown in the first snippet)

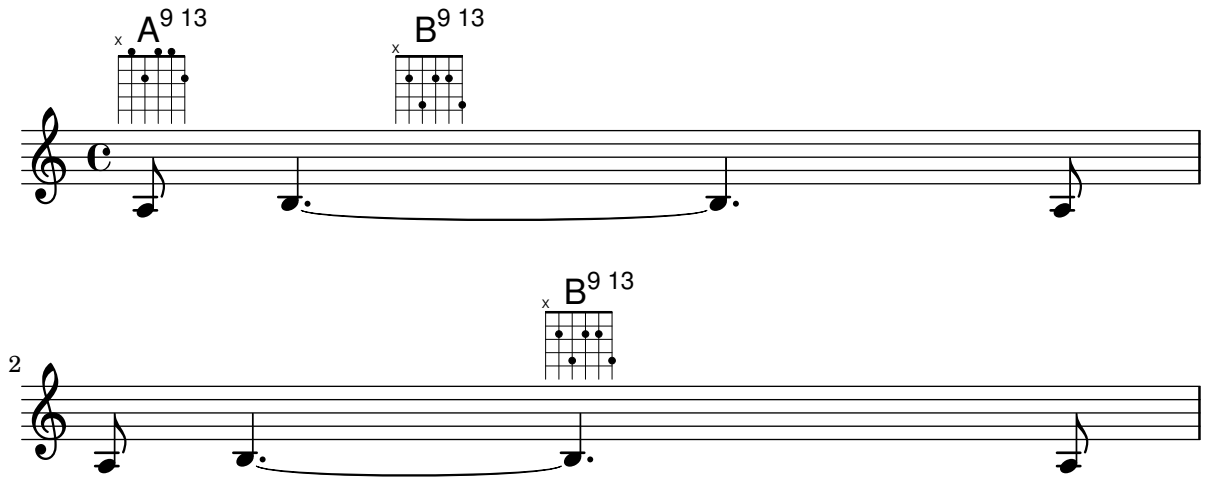
2) you can add an invisible voice and attach the fret diagrams to the invisible notes in that voice (as shown in the second example).

If you need to move the fret according with a rythmic position inside the bar (in the example, the third beat of the measure) the second example is better, because the fret is aligned with the third beat itself.

```
harmonies = \chordmode
{
  a8:13
% THE FOLLOWING IS THE COMMAND TO MOVE THE CHORD NAME
  \once \override ChordNames.ChordName.extra-offset = #'(10 . 0)
  b8:13 s2.
% THIS LINE IS THE SECOND METHOD
    s4 s4  b4:13
}

\score
{
  <<
    \new ChordNames \harmonies
    \new Staff
    {a8^\markup { \fret-diagram  "6-x;5-0;4-2;3-0;2-0;1-2;"  }
% THE FOLLOWING IS THE COMMAND TO MOVE THE FRET DIAGRAM
     \once \override TextScript.extra-offset = #'(10 . 0)
     b4.~^\markup { \fret-diagram  "6-x;5-2;4-4;3-2;2-2;1-4;"  } b4. a8\break
```

```
% HERE IS THE SECOND METHOD
     <<
       { a8 b4.~ b4. a8}
       { s4 s4 s4^\markup { \fret-diagram  "6-x;5-2;4-4;3-2;2-2;1-4;"  }
       }
     >>
   }
  >>
}
```



How to print two rehearsal marks above and below the same barline (method 1)

This method prints two 'rehearsal marks', one on top of the other. It shifts the lower rehearsal mark below the staff and then adds padding above it in order to place the upper rehearsal mark above the staff.

By adjusting the extra-offset and baseline-skip values you can increase or decrease the overall space between the rehearsal mark and the staff.

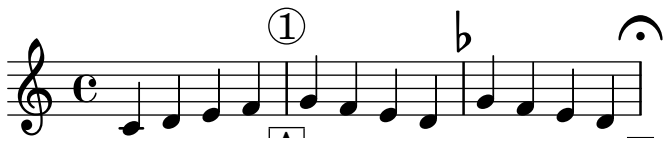
Because nearly every type of glyph or string can be made to behave like a rehearsal mark it is possible to centre those above and below a bar line.

Adding the appropriate 'break visibility' as shown in snippet 1 (`\%22http://lsr.di.unimi.it/LSR/Item?id=1\%22`) will allow you to position two marks at the end of a line as well.

Note: Method 1 is less complex than Method 2 but does not really allow for fine tuning of placement of one of the rehearsal marks without affecting the other. It may also give some problems with vertical spacing, since using `extra-offset` does not change the bounding box of the mark from its original value.

```
\relative c'{
  c d e f |
  \once \override Score.RehearsalMark.extra-offset = #'(0 . -8.5)
  \once \override Score.RehearsalMark.baseline-skip = #9
  \mark \markup \center-column { \circle 1 \box A }
  g f e d |
  \once \override Score.RehearsalMark.extra-offset = #'(0 . -8.5)
  \once \override Score.RehearsalMark.baseline-skip = #9
  \mark \markup \center-column { \flat { \bold \small \italic Fine. } }
  g f e d |
  \once \override Score.RehearsalMark.extra-offset = #'(0 . -8.5)
```

```
  \once \override Score.RehearsalMark.baseline-skip = #9
  \override Score.RehearsalMark.break-visibility = #begin-of-line-invisible
  \mark \markup \center-column { \fermata \box z }
}
```



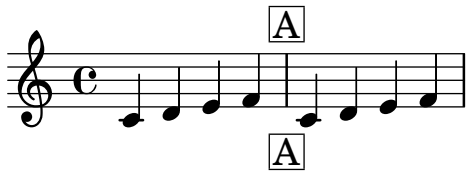
How to print two rehearsal marks above and below the same barline (method 2)

This method prints two 'rehearsal marks' - one above the stave and one below, by creating two voices, adding the Rehearsal Mark engraver to each voice - without this no rehearsal mark is printed - and then placing each rehearsal mark UP and DOWN in each voice respectively.

This method (as opposed to method 1) is more complex, but allows for more flexibility, should it be needed to tweak each rehearsal mark independently of the other.

```
\score {
  \relative c'
  <<
    \new Staff {
      <<
        \new Voice \with {
          \consists Mark_engraver
          \consists "Staff_collecting_engraver"
        }
        { c4 d e f
          \mark \markup { \box A }
          c4 d e f
        }
        \new Voice \with {
          \consists Mark_engraver
          \consists "Staff_collecting_engraver"
          \override RehearsalMark.direction = #DOWN
        }
        { s4 s s s
          \mark \markup { \circle 1 }
          s4 s s s
        }
      >>
    }
  >>
  \layout {
    \context {
      \Score
      \remove "Mark_engraver"
      \remove "Staff_collecting_engraver"
    }
```
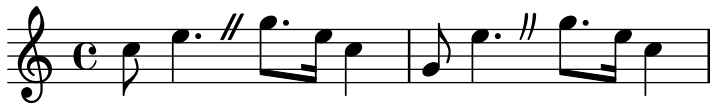
```
  }
}
```



Inserire una cesura

I segni di cesura possono essere creati sovrascrivendo la proprietà `'text` dell'oggetto `BreathingSign`. È disponibile anche un segno di cesura curvo.

```
\relative c'' {
  \override BreathingSign.text = \markup {
    \musicglyph "scripts.caesura.straight"
  }
  c8 e4. \breathe g8. e16 c4

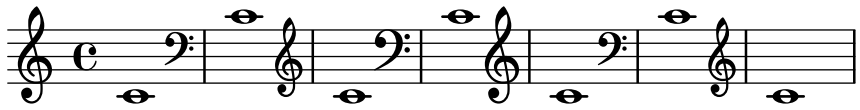
  \override BreathingSign.text = \markup {
    \musicglyph "scripts.caesura.curved"
  }
  g8 e'4. \breathe g8. e16 c4
}
```



Keep change clefs full sized

When a clef is changed, the clef sign displayed is smaller than the initial clef. This can be overridden with `full-size-change`.

```
\relative c' {
  \clef "treble"
  c1
  \clef "bass"
  c1
  \clef "treble"
  c1
  \override Staff.Clef.full-size-change = ##t
  \clef "bass"
  c1
  \clef "treble"
  c1
  \revert Staff.Clef.full-size-change
  \clef "bass"
  c1
  \clef "treble"
  c1
}
```



Line arrows
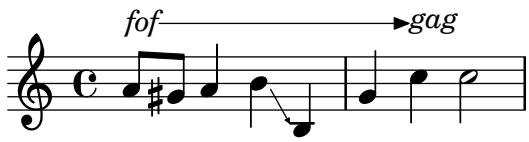
Arrows can be applied to text-spanners and line-spanners (such as the Glissando).

```
\relative c'' {
  \override TextSpanner.bound-padding = #1.0
  \override TextSpanner.style = #'line
  \override TextSpanner.bound-details.right.arrow = ##t
  \override TextSpanner.bound-details.left.text = #"fof"
  \override TextSpanner.bound-details.right.text = #"gag"
  \override TextSpanner.bound-details.right.padding = #0.6

  \override TextSpanner.bound-details.right.stencil-align-dir-y = #CENTER
  \override TextSpanner.bound-details.left.stencil-align-dir-y = #CENTER

  \override Glissando.bound-details.right.arrow = ##t
  \override Glissando.arrow-length = #0.5
  \override Glissando.arrow-width = #0.25

  a8\startTextSpan gis a4 b\glissando b,
  g'4 c\stopTextSpan c2
}
```
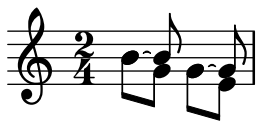


Making an object invisible with the 'transparent property

Setting the `transparent` property will cause an object to be printed in "invisible ink": the object is not printed, but all its other behavior is retained. The object still takes up space, it takes part in collisions, and slurs, ties and beams can be attached to it.

This snippet demonstrates how to connect different voices using ties. Normally, ties only connect two notes in the same voice. By introducing a tie in a different voice, and blanking the first up-stem in that voice, the tie appears to cross voices.

```
\relative {
  \time 2/4
  <<
    {
      \once \hide Stem
      \once \override Stem.length = #8
      b'8 ~ 8\noBeam
      \once \hide Stem
      \once \override Stem.length = #8
      g8 ~ 8\noBeam
    }
    \\
    {
      b8 g g e
    }
```

```
  >>
}
```

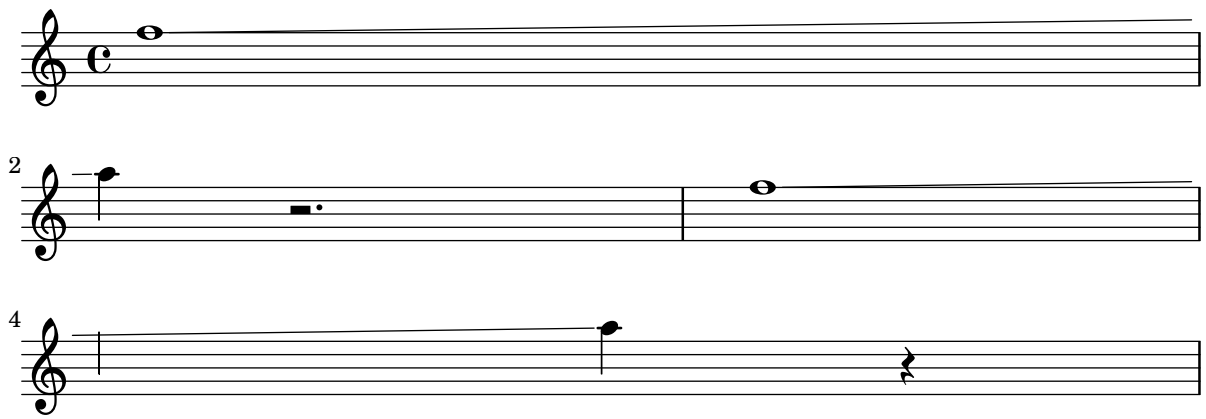


Lasciare che i glissandi vadano a capo

Per permettere a un glissando di andare a capo se capita su un'interruzione di riga, si impostano le proprietà `breakable` e `after-line-breaking` su `#t`:

```
glissandoSkipOn = {
  \override NoteColumn.glissando-skip = ##t
  \hide NoteHead
  \override NoteHead.no-ledgers = ##t
}

\relative c'' {
  \override Glissando.breakable = ##t
  \override Glissando.after-line-breaking = ##t
  f1\glissando |
  \break
  a4 r2. |
  f1\glissando
  \once \glissandoSkipOn
  \break
  a2 a4 r4 |
}
```
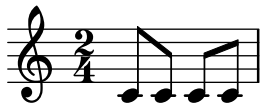


Manually controlling beam positions

Beam positions may be controlled manually, by overriding the `positions` setting of the `Beam` grob.

```
\relative c' {
  \time 2/4
  % from upper staff-line (position 2) to center (position 0)
  \override Beam.positions = #'(2 . 0)
  c8 c
  % from center to one above center (position 1)
```

```
  \override Beam.positions = #'(0 . 1)
  c8 c
}
```



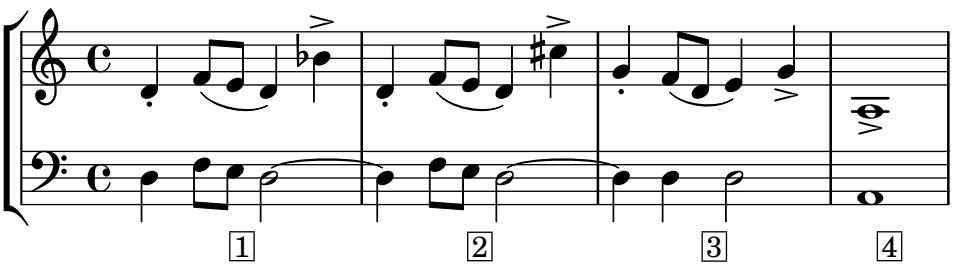
Measure-centered bar numbers

For film scores, a common convention is to center bar numbers within their measure. This is achieved through setting the `centerBarNumbers` context property to true. When this is used, the type of the bar number grobs is `CenteredBarNumber` rather than `BarNumber`.

This example demonstrates a number of settings: the centered bar numbers are boxed and placed below the staves.

```
\layout {
  \context {
    \Score
    centerBarNumbers = ##t
    barNumberVisibility = #all-bar-numbers-visible
    \override CenteredBarNumber.stencil
      = #(make-stencil-boxer 0.1 0.25 centered-text-interface::print)
    \override CenteredBarNumberLineSpanner.direction = #DOWN
  }
}

\new StaffGroup <<
  \new Staff \relative c' {
    \bar ""
    d4-. f8( e d4) bes'-> |
    d,-. f8( e d4) cis'-> |
    g-. f8( d e4) g-> |
    a,1-> |
  }
  \new Staff \relative c {
    \clef bass
    d4 f8 e d2~ |
    4 f8 e d2~ |
    4 4 2 |
    a1 |
  }
>>
```

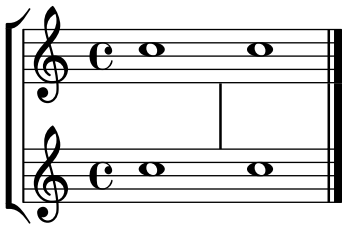


Formattazione mensurale (stanghette tra i righi)

La formattazione mensurale, in cui le stanghette non appaiono sui righi ma nello spazio tra i righi, si può ottenere usando `StaffGroup` al posto di `ChoirStaff`. La stanghetta sui righi viene nascosta con `\hide`.

```
global = {
  \hide Staff.BarLine
  s1 s
  % the final bar line is not interrupted
  \undo \hide Staff.BarLine
  \bar "|."
}

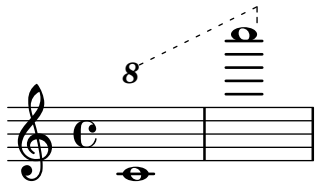
\new StaffGroup \relative c'' {
  <<
    \new Staff { << \global { c1 c } >> }
    \new Staff { << \global { c c } >> }
  >>
}
```



Modificare l'inclinazione dell'estensore dell'ottava

È possibile cambiare l'inclinazione dell'estensore dell'ottava.
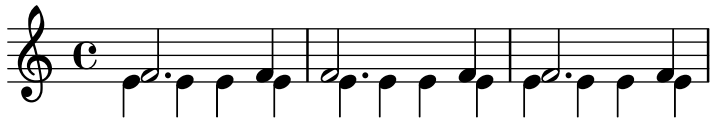
```
\relative c'' {
  \override Staff.OttavaBracket.stencil = #ly:line-spanner::print
  \override Staff.OttavaBracket.bound-details =
    #`((left . ((Y . 0) ; Change the integer here
                (attach-dir . ,LEFT)
                (padding . 0)
                (stencil-align-dir-y . ,CENTER)))
       (right . ((Y . 5) ; Change the integer here
                 (padding . 0)
                 (attach-dir . ,RIGHT)
                 (text . ,(make-draw-dashed-line-markup
                           (cons 0 -1.2))))))
  \override Staff.OttavaBracket.left-bound-info =
     #ly:line-spanner::calc-left-bound-info-and-text
  \override Staff.OttavaBracket.right-bound-info =
     #ly:line-spanner::calc-right-bound-info
  \ottava #1
  c1
  c'''1
}
```



Spostare le note puntate in polifonia

Quando una nota puntata della voce più alta viene spostata per evitare una collisione con una nota di un'altra voce, il comportamento predefinito è spostare la nota più alta a destra. Tale comportamento può essere modificato tramite la proprietà `prefer-dotted-right` di `NoteCollision`.

```
\new Staff \relative c' <<
  {
    f2. f4
    \override Staff.NoteCollision.prefer-dotted-right = ##f
    f2. f4
    \override Staff.NoteCollision.prefer-dotted-right = ##t
    f2. f4
  }
  \\
  { e4 e e e e e e e e e e }
>>
```
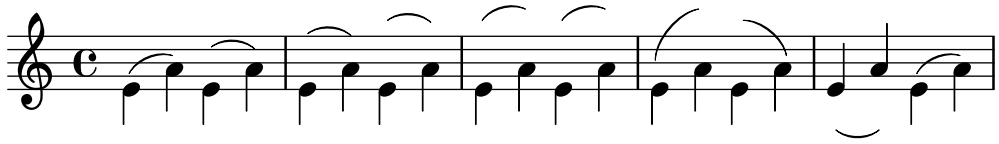


Moving slur positions vertically

The vertical position of a slur can be adjusted using the `positions` property of `Slur`. The property has 2 parameters, the first referring to the left end of the slur and the second to the right. The values of the parameters are not used by LilyPond to make an exact movement of the slur - instead it selects what placement of the slur looks best, taking into account the parameter values. Positive values move the slur up, and are appropriate for notes with stems down. Negative values move downward slurs further down.

```
\relative c' {
  \stemDown
  e4( a)
  \override Slur.positions = #'(1 . 1)
  e4( a)
  \override Slur.positions = #'(2 . 2)
  e4( a)
  \override Slur.positions = #'(3 . 3)
  e4( a)
  \override Slur.positions = #'(4 . 4)
  e4( a)
  \override Slur.positions = #'(5 . 5)
  e4( a)
  \override Slur.positions = #'(0 . 5)
  e4( a)
  \override Slur.positions = #'(5 . 0)
  e4( a)
  \stemUp
```

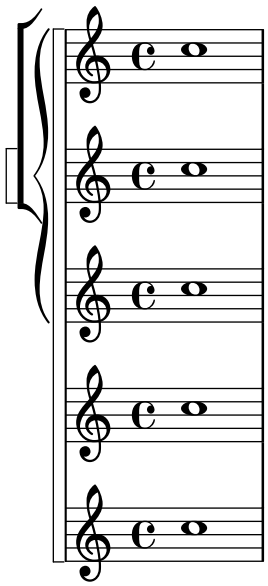
```
  \override Slur.positions = #'(-5 . -5)
  e4( a)
  \stemDown
  \revert Slur.positions
  e4( a)
}
```



Annidare i righi

Si può usare la proprietà `systemStartDelimiterHierarchy` per creare gruppi di righi annidati più complessi. Il comando `\set StaffGroup.systemStartDelimiterHierarchy` prende come argomento una lista alfabetica dell'insieme di righi prodotti. Prima di ogni rigo si può assegnare un delimitatore di inizio del sistema. Deve essere racchiuso tra parentesi e collega tutti i righi compresi tra le parentesi. Gli elementi nella lista possono essere omessi, ma la prima parentesi quadra collega sempre tutti i righi. Le possibilità sono `SystemStartBar`, `SystemStartBracket`, `SystemStartBrace` e `SystemStartSquare`.

```
\new StaffGroup
\relative c'' <<
  \override StaffGroup.SystemStartSquare.collapse-height = #4
  \set StaffGroup.systemStartDelimiterHierarchy
    = #'(SystemStartSquare (SystemStartBrace (SystemStartBracket a
                             (SystemStartSquare b)  ) c ) d)
  \new Staff { c1 }
  \new Staff { c1 }
  \new Staff { c1 }
  \new Staff { c1 }
  \new Staff { c1 }
>>
```



Overriding articulations of destinct type

Sometimes you may want to affect a single articulation-type. Although it is always possible to use `\tweak`, it might become tedious to do so for every single sign of a whole score. The following shows how to tweak articulations with a list of custom-settings. One use-case might be to create a style-sheet.

With 2.16.2 it is possible to put the proposed function, `\customScripts`, into a `\layout`-block.

```
% Code by David Nalesnik and Thomas Morley

#(define (custom-script-tweaks ls)
  (lambda (grob)
    (let* ((type (ly:prob-property
                   (ly:grob-property grob 'cause)
                   'articulation-type))
           (tweaks (assoc-ref ls type)))
      (if tweaks
          (for-each
            (lambda (x) (ly:grob-set-property! grob (car x) (cdr x)))
            tweaks)))))

customScripts =
#(define-music-function (settings)(list?)
#{
  \override Script.before-line-breaking =
    #(custom-script-tweaks settings)
#})

revertCustomScripts = { \revert Script.before-line-breaking }

%%%%%%%%%%%%
% Example:
%%%%%%%%%%%%

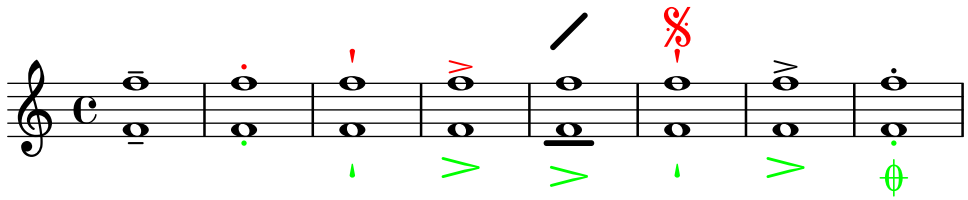
% Predefine a list of desired tweaks.
#(define my-settings-1
  '(
    ("staccato" . ((color . (1 0 0))(padding . 0.5)))
    ("accent" . ((font-size . 0)(color . (1 0 0))))
    ("tenuto" . ((rotation . (45 0 0)) (padding . 2)(font-size . 10)))
    ("staccatissimo" . ((padding . 1) (color . (1 0 0))))
    ("segno" . ((font-size . 0)(color . (1 0 0))))
    ))

#(define my-settings-2
  '(
    ("staccato" . ((color . (0 1 0))))
    ("accent" . ((font-size . 4)(color . (0 1 0))(padding . 1.5)))
    ("tenuto" . ((font-size . 10)))
    ("staccatissimo" . ((padding . 2) (color . (0 1 0))))
    ("coda" . ((color . (0 1 0)) (padding . 1)))
    ))
```

```
one =
\relative c'' {
  f1--
  \customScripts #my-settings-1
  f-. f-! f-> f-- f-!\segno
  \revertCustomScripts
  f-> f-.
}

two =
\relative c' {
  f1--
  \customScripts #my-settings-2
  f-. f-! f-> f---> f-!
  f-> f-.\coda
}

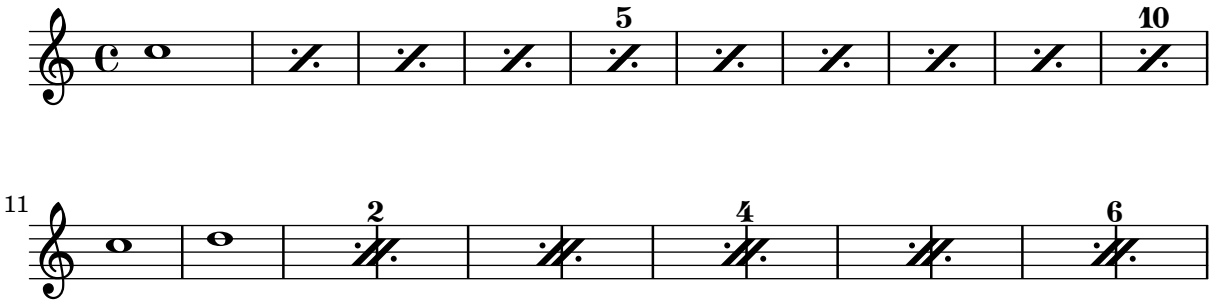
\new Staff <<
   \new Voice { \voiceOne \one }
   \new Voice { \voiceTwo \two }
   >>
```



Visibilità del conto della ripetizione con segno percentuale

I contatori della ripetizione con segno percentuale possono essere mostrati a intervalli regolari impostando la proprietà di contesto `repeatCountVisibility`.

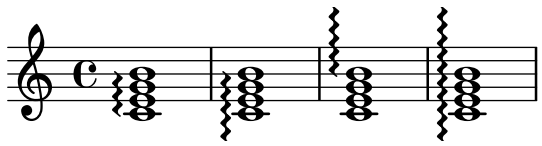
```
\relative c'' {
  \set countPercentRepeats = ##t
  \set repeatCountVisibility = #(every-nth-repeat-count-visible 5)
  \repeat percent 10 { c1 } \break
  \set repeatCountVisibility = #(every-nth-repeat-count-visible 2)
  \repeat percent 6 { c1 d1 }
}
```



Positioning arpeggios

If you need to extend or shorten an arpeggio, you can modify the upper and lower start positions independently.

```
\relative c' {
  <c e g b>1\arpeggio
  \once \override Arpeggio.positions = #'(-5 . 0)
  <c e g b>1\arpeggio
  \once \override Arpeggio.positions = #'(0 . 5)
  <c e g b>1\arpeggio
  \once \override Arpeggio.positions = #'(-5 . 5)
  <c e g b>1\arpeggio
}
```



Posizionamento delle pause multiple

Diversamente dalle pause normali, non esiste un comando predefinito per cambiare la posizione sul rigo di un simbolo di pausa multipla di qualsiasi tipo connettendolo a una nota. Tuttavia, nella musica polifonica le pause multiple nelle voci dispari e pari sono separate verticalmente. Il posizionamento delle pause multiple si controlla nel modo seguente:

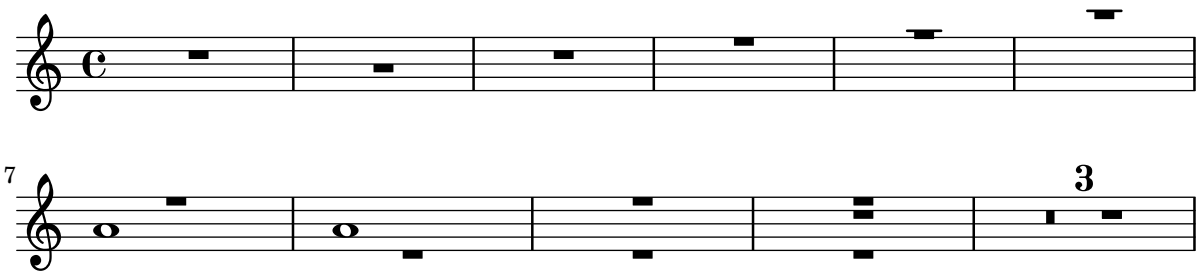
```
\relative c'' {
  % Multi-measure rests by default are set under the fourth line
  R1
  % They can be moved using an override
  \override MultiMeasureRest.staff-position = #-2
  R1
  \override MultiMeasureRest.staff-position = #0
  R1
  \override MultiMeasureRest.staff-position = #2
  R1
  \override MultiMeasureRest.staff-position = #3
  R1
  \override MultiMeasureRest.staff-position = #6
  R1
  \revert MultiMeasureRest.staff-position
  \break

  % In two Voices, odd-numbered voices are under the top line
  << { R1 } \\ { a1 } >>
  % Even-numbered voices are under the bottom line
  << { a1 } \\ { R1 } >>
  % Multi-measure rests in both voices remain separate
  << { R1 } \\ { R1 } >>

  % Separating multi-measure rests in more than two voices
  % requires an override
  << { R1 } \\ { R1 } \\
```

```
    \once \override MultiMeasureRest.staff-position = #0
    { R1 }
  >>
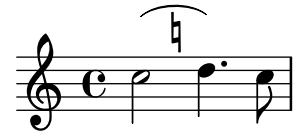
  % Using compressed bars in multiple voices requires another override
  % in all voices to avoid multiple instances being printed
  \compressMMRests
  <<
   \revert MultiMeasureRest.direction
    { R1*3 }
    \\
   \revert MultiMeasureRest.direction
    { R1*3 }
  >>
}
```



Posizionare il testo a margine dentro le legature di portamento

I testi a margine devono avere la proprietà `outside-staff-priority` impostata su false per poter apparire dentro le legature di portamento.

```
\relative c'' {
  \override TextScript.avoid-slur = #'inside
  \override TextScript.outside-staff-priority = ##f
  c2(^\markup { \halign #-10 \natural } d4.) c8
}
```



Numeri di battuta racchiusi in rettangoli o cerchi

I numeri di battuta possono apparire anche all'interno di rettangoli o cerchi.

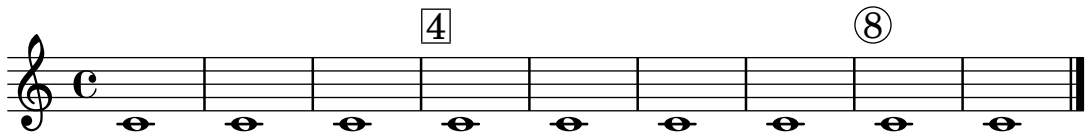
```
\relative c' {
  % Prevent bar numbers at the end of a line and permit them elsewhere
  \override Score.BarNumber.break-visibility = #end-of-line-invisible
  \set Score.barNumberVisibility = #(every-nth-bar-number-visible 4)

  % Increase the size of the bar number by 2
  \override Score.BarNumber.font-size = #2

  % Draw a box round the following bar number(s)
  \override Score.BarNumber.stencil
```

```
    = #(make-stencil-boxer 0.1 0.25 ly:text-interface::print)
  \repeat unfold 5 { c1 }

  % Draw a circle round the following bar number(s)
  \override Score.BarNumber.stencil
    = #(make-stencil-circler 0.1 0.25 ly:text-interface::print)
  \repeat unfold 4 { c1 } \bar "|."
}
```



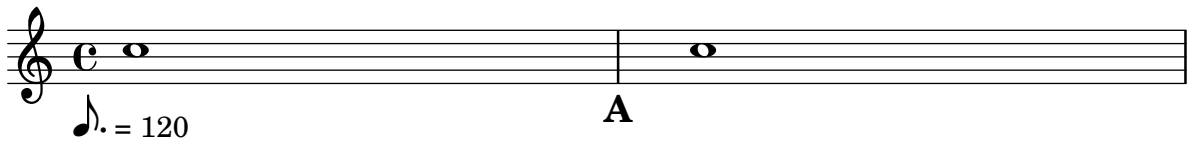
Posizionare il metronomo e i numeri di chiamata sotto il rigo

Di norma, il metronomo e i numeri di chiamata vengono posizionati sopra il rigo. Per metterli sotto il rigo basta impostare correttamente la proprietà `direction` di `MetronomeMark` o `RehearsalMark`.

```
\layout {
  indent = 0
  ragged-right = ##f
}

{
  % Metronome marks below the staff
  \override Score.MetronomeMark.direction = #DOWN
  \tempo 8. = 120
  c''1

  % Rehearsal marks below the staff
  \override Score.RehearsalMark.direction = #DOWN
  \mark \default
  c''1
}
```
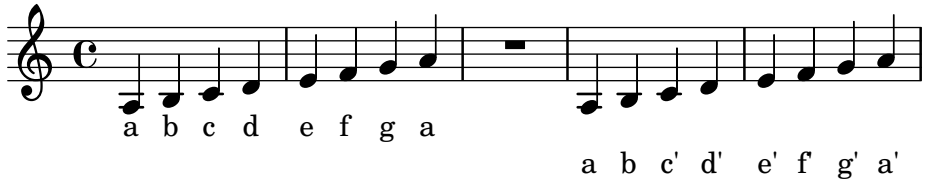


Printing note names with and without an octave marker

The `NoteNames` context can be used to print the text value of notes. The `printOctaveNames` property turns on or off the representation of the octave of the note.

```
scale = \relative c' {
  a4 b c d
  e4 f g a
}

\new Staff {
  <<
    \scale
```

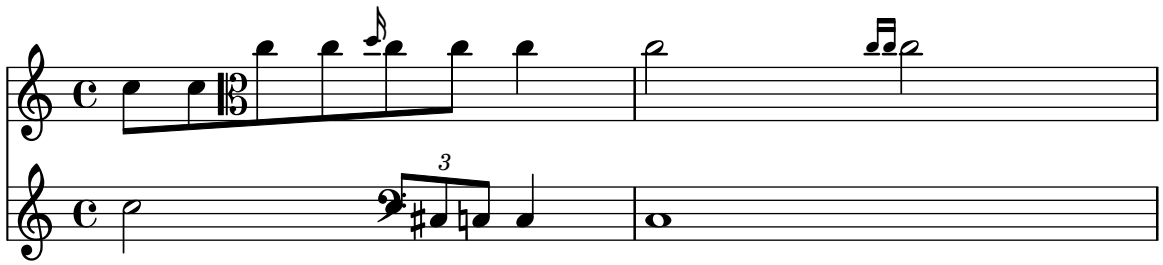
```
    \context NoteNames {
      \set printOctaveNames = ##f
      \scale
    }
  >>
  R1
  <<
    \scale
    \context NoteNames {
      \set printOctaveNames = ##t
      \scale
    }
  >>
}
```



Proportional strict notespacing

If `strict-note-spacing` is set spacing of notes is not influenced by bars or clefs within a system. Rather, they are placed just before the note that occurs at the same time. This may cause collisions.

```
\relative c'' <<
  \override Score.SpacingSpanner.strict-note-spacing = ##t
  \set Score.proportionalNotationDuration = #(ly:make-moment 1/16)
  \new Staff {
    c8[ c \clef alto c c \grace { d16 } c8 c] c4
    c2 \grace { c16[ c16] } c2
  }
  \new Staff {
    c2 \tuplet 3/2 { c8 \clef bass cis,, c } c4
    c1
  }
>>
```



Removing brace on first line of piano score

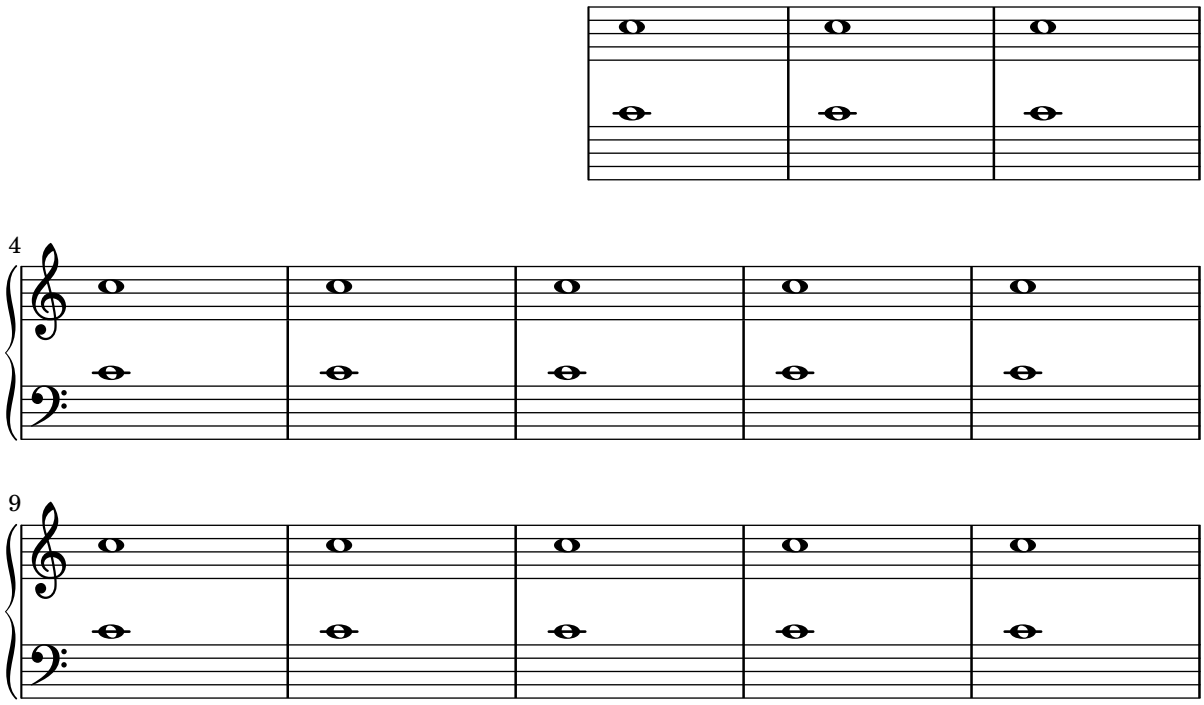
This snippet removes the first brace from a `PianoStaff` or a `GrandStaff`.

It may be useful when cutting and pasting the engraved image into existing music.

It uses `\alterBroken`.

```
someMusic =  {
  \once \override Staff.Clef.stencil = ##f
  \once \override Staff.TimeSignature.stencil = ##f
  \repeat unfold 3 c1 \break
  \repeat unfold 5 c1 \break
  \repeat unfold 5 c1
}

\score {
  \new PianoStaff
  <<
    \new Staff = "right" \relative c'' \someMusic
    \new Staff = "left" \relative c' { \clef F \someMusic }
  >>
  \layout {
    indent=75
    \context {
      \PianoStaff
      \alterBroken transparent #'(#t) SystemStartBrace
    }
  }
}
```

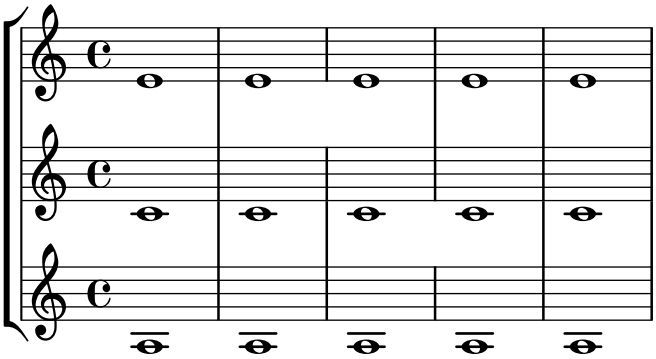


Removing connecting bar lines on StaffGroup, PianoStaff, or GrandStaff

By default, bar lines in StaffGroup, PianoStaff, or GrandStaff groups are connected between the staves, i.e. a SpanBar is printed. This behaviour can be overridden on a staff-by-staff basis.

```
\relative c' {
  \new StaffGroup <<
```

```
    \new Staff {
      e1 | e
      \once \override Staff.BarLine.allow-span-bar = ##f
      e1 | e | e
    }
    \new Staff {
      c1 | c | c
      \once \override Staff.BarLine.allow-span-bar = ##f
      c1 | c
    }
    \new Staff {
      a1 | a | a | a | a
    }
  >>
}
```



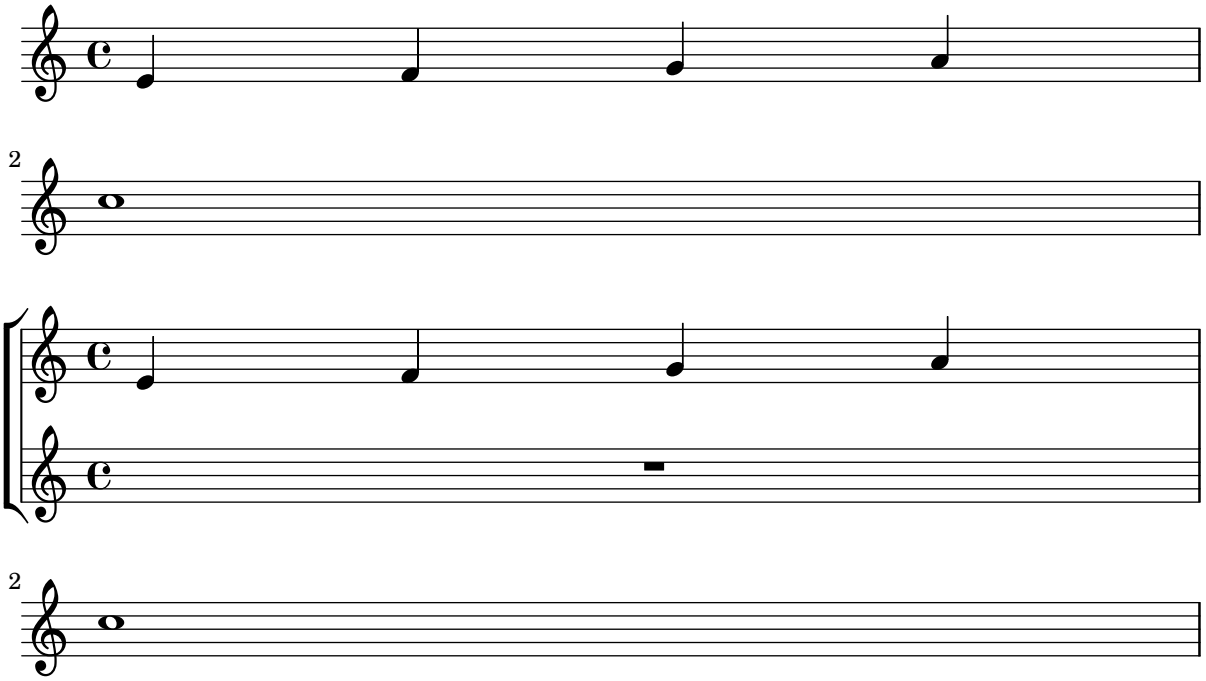
Eliminare la prima linea vuota

Il primo rigo vuoto si può togliere dalla partitura impostando la proprietà `remove-first` di `VerticalAxisGroup`. Questa impostazione agisce a livello globale se posta nel blocco `\layout`, a livello locale se posta nel rigo specifico che deve essere tolto. Nel secondo caso, si deve specificare il contesto (`Staff` si applica solo al rigo corrente) prima della proprietà.

Il rigo inferiore del secondo gruppo di righi non viene rimosso, perché l'impostazione ha effetto solo sul rigo in cui si trova.

```
\layout {
  \context {
    \Staff \RemoveEmptyStaves
    % To use the setting globally, uncomment the following line:
    % \override VerticalAxisGroup.remove-first = ##t
  }
}
\new StaffGroup <<
  \new Staff \relative c' {
    e4 f g a \break
    c1
  }
  \new Staff {
    % To use the setting globally, comment this line,
    % uncomment the line in the \layout block above
    \override Staff.VerticalAxisGroup.remove-first = ##t
    R1 \break
```

```
    R
  }
>>
\new StaffGroup <<
  \new Staff \relative c' {
    e4 f g a \break
    c1
  }
  \new Staff {
    R1 \break
    R
  }
>>
```



Stili di pausa

Esistono vari stili di pausa.

```
\new Staff \relative c {
  \omit Score.TimeSignature
  \cadenzaOn

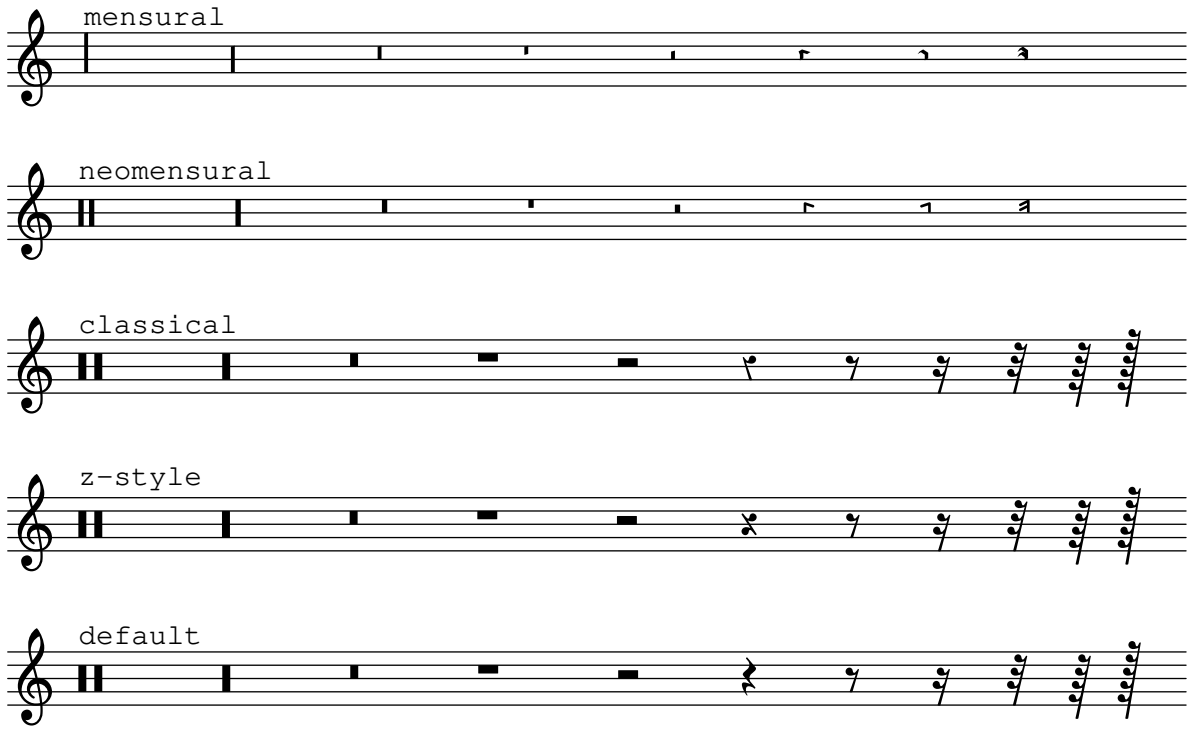
  \override Staff.Rest.style = #'mensural
  r\maxima^\markup \typewriter { mensural }
  r\longa r\breve r1 r2 r4 r8 r16 s32 s64 s128 s128
  \bar ""
  \break

  \override Staff.Rest.style = #'neomensural
  r\maxima^\markup \typewriter { neomensural }
  r\longa r\breve r1 r2 r4 r8 r16 s32 s64 s128 s128
  \bar ""
  \break
```

```
  \override Staff.Rest.style = #'classical
  r\maxima^\markup \typewriter { classical }
  r\longa r\breve r1 r2 r4 r8 r16 r32 r64 r128 s128
  \bar ""
  \break

  \override Staff.Rest.style = #'z
  r\maxima^\markup \typewriter { z-style }
  r\longa r\breve r1 r2 r4 r8 r16 r32 r64 r128 s128
  \bar ""
  \break

  \override Staff.Rest.style = #'default
  r\maxima^\markup \typewriter { default }
  r\longa r\breve r1 r2 r4 r8 r16 r32 r64 r128 s128
}
```



Rhythmic slashes

In “simple” lead-sheets, sometimes no actual notes are written, instead only “rhythmic patterns” and chords above the measures are notated giving the structure of a song. Such a feature is for example useful while creating/transcribing the structure of a song and also when sharing lead sheets with guitarists or jazz musicians.

The standard support for this using `\repeat percent` is unsuitable here since the first beat has to be an ordinary note or rest.

This example shows two solutions to this problem, by redefining ordinary rests to be printed as slashes. (If the duration of each beat is not a quarter note, replace the `r4` in the definitions with a rest of the appropriate duration).

```
% Macro to print single slash
```

```
rs = {
  \once \override Rest.stencil = #ly:percent-repeat-item-interface::beat-slash
  \once \override Rest.thickness = #0.48
  \once \override Rest.slope = #1.7
  r4
}

% Function to print a specified number of slashes
comp = #(define-music-function (count) (integer?)
  #{
    \override Rest.stencil = #ly:percent-repeat-item-interface::beat-slash
    \override Rest.thickness = #0.48
    \override Rest.slope = #1.7
    \repeat unfold $count { r4 }
    \revert Rest.stencil
  #}
)

\score {
  \relative c' {
    c4 d e f |
    \rs \rs \rs \rs |
    \comp #4 |
  }
}
```



Separating key cancellations from key signature changes

By default, the accidentals used for key cancellations are placed adjacent to those for key signature changes. This behavior can be changed by overriding the `'break-align-orders` property of the `BreakAlignment` grob.

The value of `'break-align-orders` is a vector of length 3, with quoted lists of breakable items as elements. This example only modifies the second list, moving `key-cancellation` before `staff-bar`; by modifying the second list, break alignment behavior only changes in the middle of a system, not at the beginning or the end.
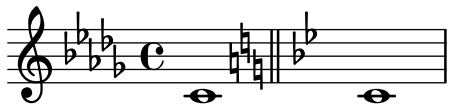
```
\new Staff {
  \override Score.BreakAlignment.break-align-orders =
    ##((left-edge ambitus breathing-sign clef staff-bar
                  key-cancellation key-signature time-signature custos)

       (left-edge ambitus breathing-sign clef key-cancellation
                  staff-bar key-signature time-signature custos)

       (left-edge ambitus breathing-sign clef key-cancellation
                  key-signature staff-bar time-signature custos))

  \key des \major
  c'1
```

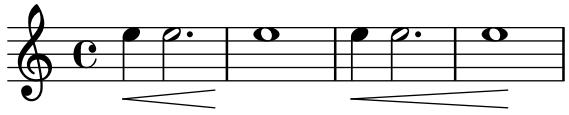
```
  \bar "||"
  \key bes \major
  c'1
}
```



Impostare il comportamento delle forcelle sulle stanghette

Se la nota che termina una forcella si trova sul primo battito di una battuta, la forcella si ferma prima della stanghetta che precede la nota. Si può controllare questo comportamento modificando la proprietà `'to-barline`.

```
\relative c'' {
  e4\< e2.
  e1\!
  \override Hairpin.to-barline = ##f
  e4\< e2.
  e1\!
}
```



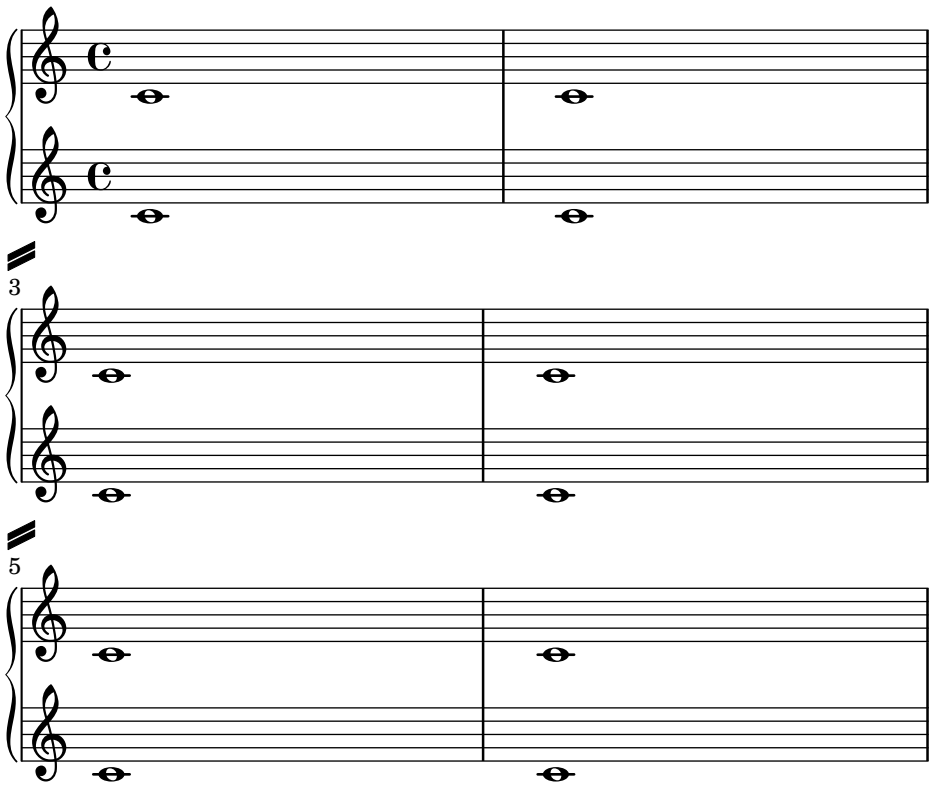
Setting system separators

System separators can be inserted between systems. Any markup can be used, but `\slashSeparator` has been provided as a sensible default.

```
\paper {
  system-separator-markup = \slashSeparator
  line-width = 120
}

notes = \relative c' {
  c1 | c \break
  c1 | c \break
  c1 | c
}

\book {
  \score {
    \new GrandStaff <<
      \new Staff \notes
      \new Staff \notes
    >>
  }
}
```


3
5

Showing the same articulation above and below a note or chord

By default, LilyPond does not allow the same articulation (e.g., an accent, a fermata, a flageolet, etc.) to be displayed above and below a note. For example, `c4_\fermata^\fermata` only shows a fermata below. The fermata above gets simply ignored.

However, one can stick scripts (just like fingerings) inside a chord, which means it is possible to have as many articulations as desired. This approach has the advantage that it ignores the stem and positions the articulation relative to the note head. This can be seen in the case of the flageolets in the snippet. To mimic the behaviour of scripts outside a chord, `'add-stem-support` would be required.

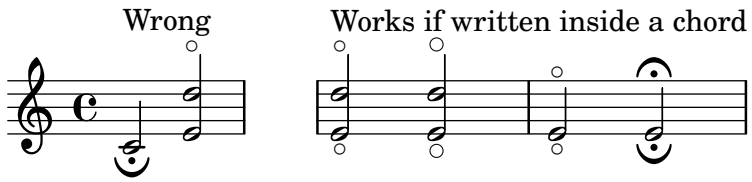
The solution is thus to write the note as a chord and add the articulations inside of `<...>`, using the direction modifiers `^` and `_` as appropriate.

```
% The same as \flageolet, just a little smaller
smallFlageolet = \tweak font-size #-2 \flageolet

\relative c' {
  <>^"Wrong"
  c2_\fermata^\fermata % The second fermata is ignored!
  <e d'>2^\smallFlageolet_\smallFlageolet

  \stopStaff s1 \startStaff

  <>^"Works if written inside a chord"
  <e_\smallFlageolet d'^\smallFlageolet>2
  <e_\flageolet d'^\flageolet>2
  <e_\smallFlageolet^\smallFlageolet>2
  <e_\fermata^\fermata>2
}
```



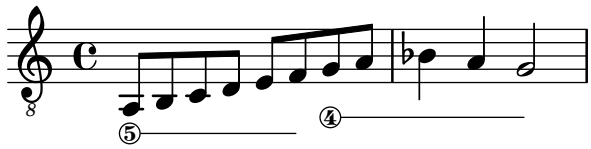
String number extender lines

Make an extender line for string number indications, showing that a series of notes is supposed to be played all on the same string.

```
stringNumberSpanner =
  #(define-music-function (StringNumber) (string?)
    #{
      \override TextSpanner.style = #'solid
      \override TextSpanner.font-size = #-5
      \override TextSpanner.bound-details.left.stencil-align-dir-y = #CENTER
      \override TextSpanner.bound-details.left.text =
        \markup { \circle \number $StringNumber }
    #})


\relative c {
  \clef "treble_8"
```

```
  \stringNumberSpanner "5"
  \textSpannerDown
  a8\startTextSpan
  b c d e f\stopTextSpan
  \stringNumberSpanner "4"
  g\startTextSpan a
  bes4 a g2\stopTextSpan
}
```
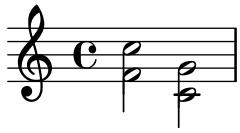


Suppressing warnings for clashing note columns

If notes from two voices with stems in the same direction are placed at the same position, and both voices have no shift or the same shift specified, the error message '`warning: ignoring too many clashing note columns`' will appear when compiling the LilyPond file. This message can be suppressed by setting the `'ignore-collision` property of the `NoteColumn` object to `#t`. Please note that this does not just suppress warnings but stops LilyPond trying to resolve collisions at all and so may have unintended results unless used with care.

```
ignore = \override NoteColumn.ignore-collision = ##t
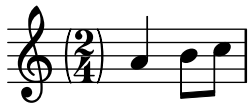
\relative c' {
  \new Staff <<
    \new Voice { \ignore \stemDown f2 g }
    \new Voice { c2 \stemDown c, }
  >>
}
```



Time signature in parentheses - method 3

Another way to put the time signature in parenthesis
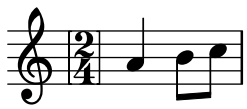
```
\relative c'' {
  \override Staff.TimeSignature.stencil = #(lambda (grob)
    (parenthesize-stencil (ly:time-signature::print grob) 0.1 0.4 0.4 0.1 ))
  \time 2/4
  a4 b8 c
}
```



Time signature in parentheses

The time signature can be enclosed within parentheses.
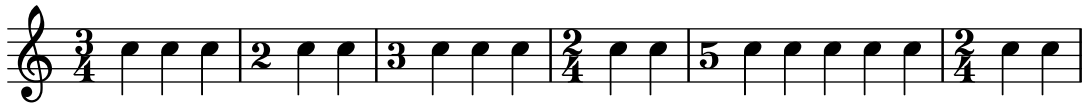
```
\relative c'' {
  \override Staff.TimeSignature.stencil = #(lambda (grob)
    (bracketify-stencil (ly:time-signature::print grob) Y 0.1 0.2 0.1))
  \time 2/4
  a4 b8 c
}
```



Indicazione di tempo che mostra solo il numeratore (invece della frazione)

Talvolta un'indicazione di tempo non deve mostrare la frazione intera (ad esempio 7/4), ma solo il numeratore (7 in questo caso). Si può ottenere facilmente con `\override Staff.TimeSignature.style = #'single-digit`, che cambia lo stile in modo permanente. Con `\revert Staff.TimeSignature.style`, questa impostazione può essere annullata. Per applicare lo stile a cifra singola (`single-digit`) a una sola indicazione di tempo, si usa il comando `\override` preceduto da `\once`.

```
\relative c'' {
  \time 3/4
  c4 c c
  % Change the style permanently
  \override Staff.TimeSignature.style = #'single-digit
  \time 2/4
  c4 c
  \time 3/4
  c4 c c
  % Revert to default style:
  \revert Staff.TimeSignature.style
  \time 2/4
  c4 c
  % single-digit style only for the next time signature
  \once \override Staff.TimeSignature.style = #'single-digit
  \time 5/4
  c4 c c c c
  \time 2/4
  c4 c
}
```



Tuplet bracket and change staff

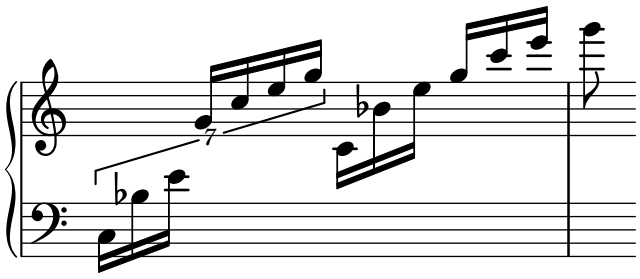
This snippet shows how to set a tuplet starting in a lower staff and finishing in the upper one.

```
aigues = \relative c' {
  \time 6/8
```

```
  s4.
  \stemDown
  c16[ bes' e]
  \stemUp
  g c e
  \stemDown
  g8
}

basses = \relative c {
  \time 3/4
  \clef F
  \tweak positions #'(4.5 . 9.5)
  \tweak edge-height #'(1 . -1)
  \tuplet 7/6 {
    c16[ bes' e]
    \change Staff = md
    \stemUp
    g[ c e g]
  }
  s4.s8
}

\new PianoStaff
\with { \omit TimeSignature }
<<
  \new Staff = md \aigues
  \new Staff = mg \basses
>>
```



Modifiche manuali della proprietà della chiave

Cambiando il glifo della chiave, la sua posizione o l'ottavazione non cambia la posizione delle note successive nel rigo. Per far sì che le armature di chiave si trovino sulle linee del rigo corrette, bisogna specificare anche `middleCPosition`, con valori positivi o negativi che spostano il `Do centrale` rispettivamente su o giù in senso relativo alla linea centrale del rigo.

Per esempio, `\clef "treble_8"` equivale a impostare `clefGlyph`, `clefPosition` (che regola la posizione verticale della chiave), `middleCPosition` e `clefTransposition`. Viene stampata una chiave quando cambia una di queste proprietà, eccetto `middleCPosition`.

Gli esempi seguenti mostrano le possibilità date dall'impostazione manuale di tali proprietà. Sulla prima linea le modifiche manuali preservano il posizionamento relativo standard di chiavi e note, mentre sulla seconda linea non lo fanno.

```
{
```

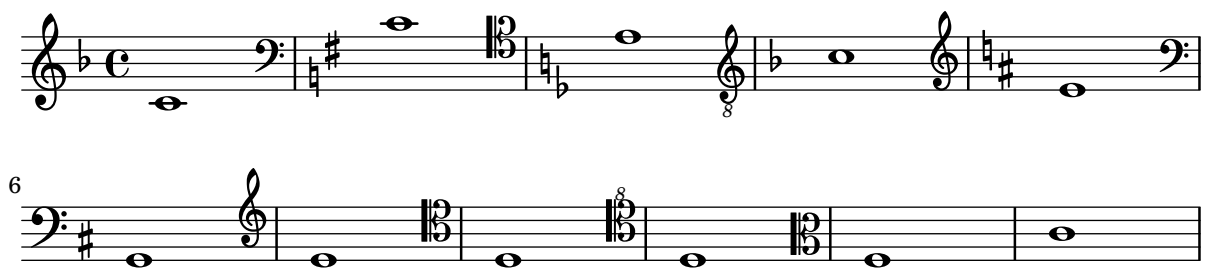
```
% The default treble clef
\key f \major
c'1
% The standard bass clef
\set Staff.clefGlyph = #"clefs.F"
\set Staff.clefPosition = #2
\set Staff.middleCPosition = #6
\set Staff.middleCClefPosition = #6
\key g \major
c'1
% The baritone clef
\set Staff.clefGlyph = #"clefs.C"
\set Staff.clefPosition = #4
\set Staff.middleCPosition = #4
\set Staff.middleCClefPosition = #4
\key f \major
c'1
% The standard choral tenor clef
\set Staff.clefGlyph = #"clefs.G"
\set Staff.clefPosition = #-2
\set Staff.clefTransposition = #-7
\set Staff.middleCPosition = #1
\set Staff.middleCClefPosition = #1
\key f \major
c'1
% A non-standard clef
\set Staff.clefPosition = #0
\set Staff.clefTransposition = #0
\set Staff.middleCPosition = #-4
\set Staff.middleCClefPosition = #-4
\key g \major
c'1 \break

% The following clef changes do not preserve
% the normal relationship between notes, key signatures
% and clefs:

\set Staff.clefGlyph = #"clefs.F"
\set Staff.clefPosition = #2
c'1
\set Staff.clefGlyph = #"clefs.G"
c'1
\set Staff.clefGlyph = #"clefs.C"
c'1
\set Staff.clefTransposition = #7
c'1
\set Staff.clefTransposition = #0
\set Staff.clefPosition = #0
c'1

% Return to the normal clef:
```
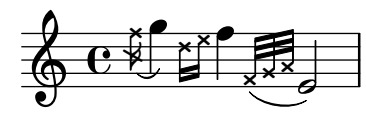
```
  \set Staff.middleCPosition = #0
  c'1
}
```



Modificare l'aspetto degli abbellimenti di un intero brano

L'aspetto di tutte le espressioni contenute nei blocchi `\grace` di un brano può essere modificato con le funzioni `add-grace-property` e `remove-grace-property`. L'esempio seguente toglie la definizione della direzione di `Stem` nell'abbellimento, in modo che gli abbellimenti non siano sempre rivolti in su, e barra le teste di nota.

```
\relative c'' {
  \new Staff {
    $(remove-grace-property 'Voice 'Stem 'direction)
    $(add-grace-property 'Voice 'NoteHead 'style 'cross)
    \new Voice {
       \acciaccatura { f16 } g4
       \grace { d16 e } f4
       \appoggiatura { f,32 g a } e2
    }
  }
}
```



Using alternative flag styles

Alternative styles of flag on eighth and shorter notes can be displayed by overriding the `stencil` property of `Flag`. Valid values are `modern-straight-flag`, `old-straight-flag` and `flat-flag`.

```
testnotes = {
  \autoBeamOff
  c8 d16 c32 d64 \acciaccatura { c8 } d64 r4
}

\score {
  \relative c' {
    \time 2/4
    \testnotes
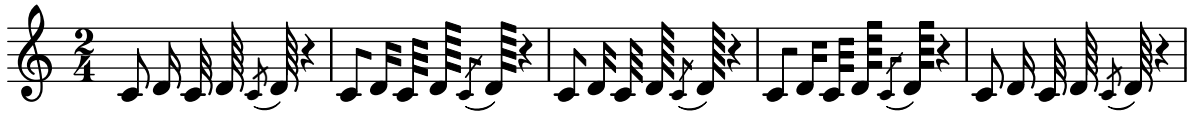
    \override Flag.stencil = #modern-straight-flag
    \testnotes

    \override Flag.stencil = #old-straight-flag
```

```
    \testnotes

    \override Flag.stencil = #flat-flag
    \testnotes

    \revert Flag.stencil
    \testnotes
  }
  \layout {
    indent = 0
    \context {
      \Score
      \override NonMusicalPaperColumn.line-break-permission = ##f
    }
  }
}
```



Using ly:grob-object to access grobs with \tweak

Some grobs can be accessed "laterally" from within another grob's callback. These are usually listed as "layout objects" in the "Internal properties" section of a grob-interface. The function ly:grob-object is used to access these grobs.

Demonstrated below are some ways of accessing grobs from within a NoteHead callback, but the technique is not limited to NoteHeads. However, the NoteHead callback is particularly important, since it is the implicit callback used by the `\tweak` command.

The example function defined below ("display-grobs") is probably not that useful, but it demonstrates that the grobs are indeed being accessed.

Example console output:

```
#Grob Accidental () #Grob Stem
```

```
#(define (notehead-get-accidental notehead)
   ;; notehead is grob
   (ly:grob-object notehead 'accidental-grob))
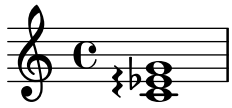
#(define (notehead-get-arpeggio notehead)
   ;; notehead is grob
   (let ((notecolumn (notehead-get-notecolumn notehead)))
     (ly:grob-object notecolumn 'arpeggio)))

#(define (notehead-get-notecolumn notehead)
   ;; notehead is grob
   (ly:grob-parent notehead X))

#(define (notehead-get-stem notehead)
   ;; notehead is grob
   (let ((notecolumn (notehead-get-notecolumn notehead)))
     (ly:grob-object notecolumn 'stem)))
```

```
#(define (display-grobs notehead)
   ;; notehead is grob
   (let ((accidental (notehead-get-accidental notehead))
         (arpeggio (notehead-get-arpeggio notehead))
         (stem (notehead-get-stem notehead)))
     (format (current-error-port) "~2&~a\n" (make-string 20 #\-))
     (for-each
      (lambda (x) (format (current-error-port) "~a\n" x))
      (list accidental arpeggio stem))))

\relative c' {
  %% display grobs for each note head:
  %\override NoteHead.before-line-breaking = #display-grobs
  <c
  %% or just for one:
  \tweak before-line-breaking #display-grobs
  es
  g>1\arpeggio
}
```



Using PostScript to generate special note head shapes
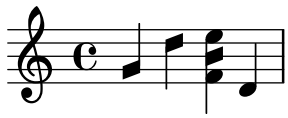
When a note head with a special shape cannot easily be generated with graphic markup, PostScript code can be used to generate the shape. This example shows how a parallelogram-shaped note head is generated.

```
parallelogram =
  #(ly:make-stencil (list 'embedded-ps
    "gsave
      currentpoint translate
      newpath
      0 0.25 moveto
      1.3125 0.75 lineto
      1.3125 -0.25 lineto
      0 -0.75 lineto
      closepath
      fill
      grestore" )
    (cons 0 1.3125)
    (cons -.75 .75))

myNoteHeads = \override NoteHead.stencil = \parallelogram
normalNoteHeads = \revert NoteHead.stencil

\relative c'' {
  \myNoteHeads
  g4 d'
  \normalNoteHeads
  <f, \tweak stencil \parallelogram b e>4 d
```

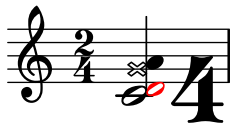
```
}
```



Using the \tweak command to tweak individual grobs

With the `\tweak` command, every grob can be tuned directly. Here are some examples of available tweaks.

```
\relative c' {
  \time 2/4
  \set fingeringOrientations = #'(right)
  <
    \tweak font-size #3 c
    \tweak color #red d-\tweak font-size #8 -4
    \tweak style #'cross g
    \tweak duration-log #2 a
  >2
}
```

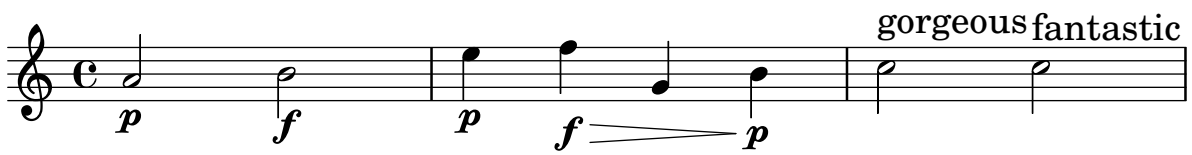


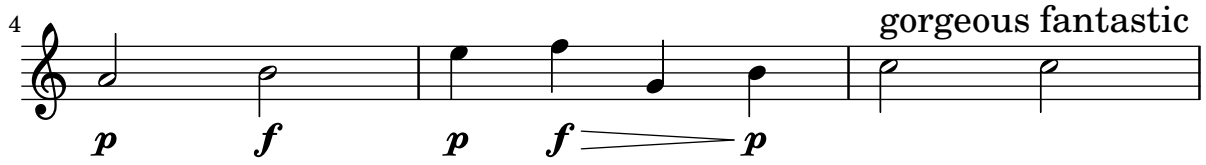
Dinamiche e segni testuali allineati verticalmente

Tutti gli oggetti `DynamicLineSpanner` (forcelle e testi di dinamica) sono posti a una distanza minima dal rigo determinata da `'staff-padding`. Se si imposta `'staff-padding` su un valore abbastanza grande, le dinamiche saranno allineate.

```
music = \relative c' {
  a'2\p b\f
  e4\p f\f\> g, b\p
  c2^\markup { \huge gorgeous } c^\markup { \huge fantastic }
}

{
  \music
  \break
  \override DynamicLineSpanner.staff-padding = #3
  \textLengthOn
  \override TextScript.staff-padding = #1
  \music
}
```



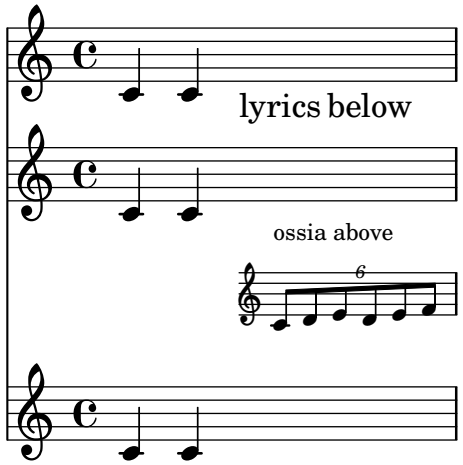


Allineare verticalmente gli ossia e il testo vocale

Questo frammento mostra come usare le proprietà di contesto `alignBelowContext` e `alignAboveContext` per controllare il posizionamento del testo vocale e degli ossia.

```
\paper {
  ragged-right = ##t
}

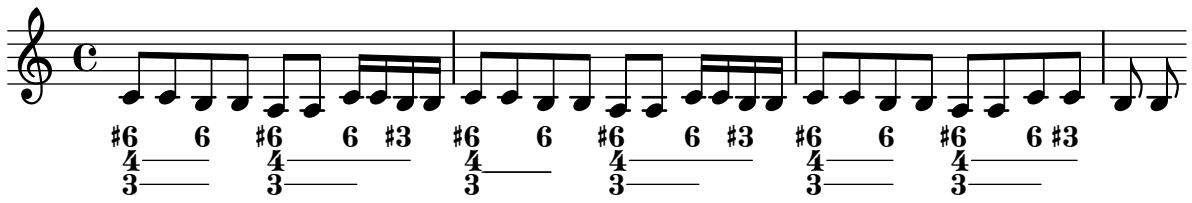
\relative c' <<
  \new Staff = "1" { c4 c s2 }
  \new Staff = "2" { c4 c s2 }
  \new Staff = "3" { c4 c s2 }
  { \skip 2
    <<
      \lyrics {
        \set alignBelowContext = #"1"
        lyrics4 below
      }
      \new Staff \with {
        alignAboveContext = #"3"
        fontSize = #-2
        \override StaffSymbol.staff-space = #(magstep -2)
        \remove "Time_signature_engraver"
      } {
        \tuplet 6/4 {
          \override TextScript.padding = #3
          c8[^"ossia above" d e d e f]
        }
      }
    >>
  }
>>
```



Vertically centering paired figured bass extenders

Where figured bass extender lines are being used by setting `useBassFigureExtenders` to true, pairs of congruent figured bass extender lines are vertically centered if `figuredBassCenterContinuations` is set to true.

```
<<
  \relative c' {
    c8 c b b a a c16 c b b
    c8 c b b a a c16 c b b
    c8 c b b a a c c b b
  }
  \figures {
    \set useBassFigureExtenders = ##t
    <6+ 4 3>4 <6 4 3>8 r
    <6+ 4 3>4 <6 4 3>8 <4 3+>16 r
    \set figuredBassCenterContinuations = ##t
    <6+ 4 3>4 <6 4 3>8 r
    <6+ 4 3>4 <6 4 3>8 <4 3+>16 r
    \set figuredBassCenterContinuations = ##f
    <6+ 4 3>4 <6 4 3>8 r
    <6+ 4 3>4 <6 4 3>8 <4 3+>8
  }
>>
```



Paper and layout

Sezione “Spacing issues” in *Guida alla Notazione*

Aligning and centering instrument names

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

```
\paper { left-margin = 3\cm }

\score {
  \new StaffGroup <<

    \new Staff \with {
      \override InstrumentName.self-alignment-X = #LEFT
      instrumentName = \markup \left-column {
        "Left aligned"
        "instrument name"
        }
        shortInstrumentName = "Left"
      }

      {  c''1 \break c''1 }

    \new Staff \with {
      \override InstrumentName.self-alignment-X = #CENTER
      instrumentName = \markup \center-column {
        Centered
        "instrument name"
        }
      shortInstrumentName = "Centered"
    }

    { g'1 g'1}

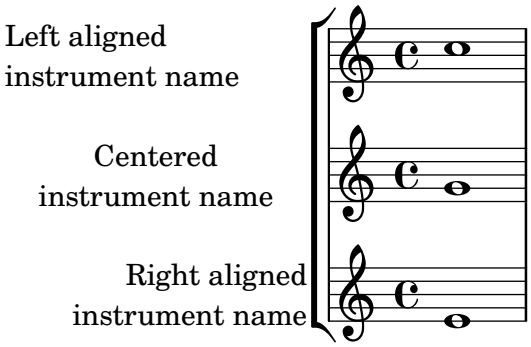
    \new Staff \with {
      \override InstrumentName.self-alignment-X = #RIGHT
      instrumentName = \markup \right-column {
        "Right aligned"
        "instrument name"
      }
      shortInstrumentName = "Right"
    }

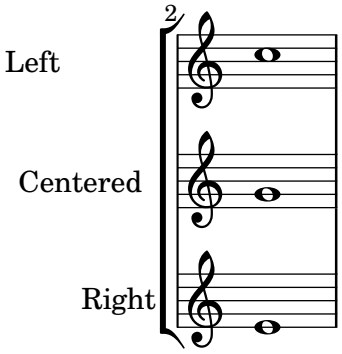
    { e'1 e'1 }

  >>

  \layout {
    ragged-right = ##t
```

```
    indent = 4\cm
    short-indent = 2\cm
  }
}
```





Arranging separate lyrics on a single line

Sometimes you may want to put lyrics for different performers on a single line: where there is rapidly alternating text, for example. This snippet shows how this can be done with `\override VerticalAxisGroup.nonstaff-nonstaff-spacing.minimum-distance = ##f`.

```
\layout {
  \context {
    \Lyrics
    \override VerticalAxisGroup.nonstaff-nonstaff-spacing.minimum-distance = ##f
  }
}

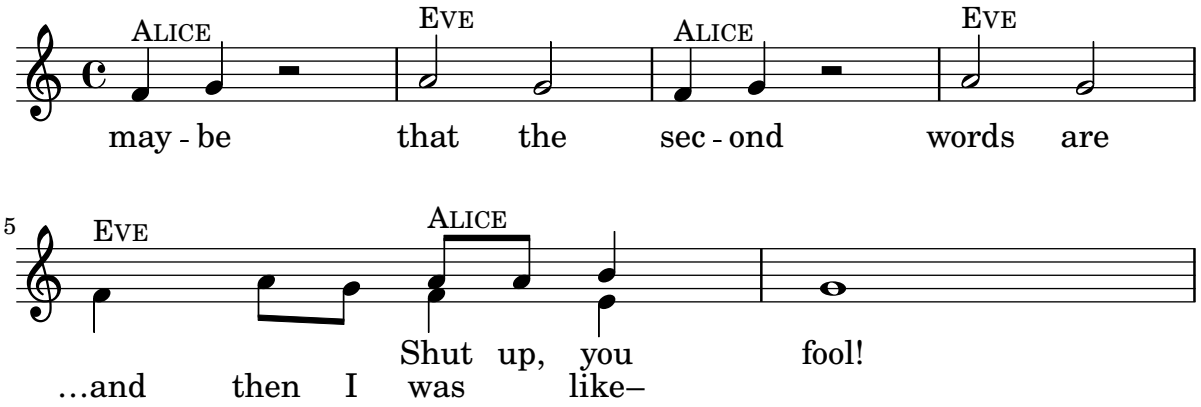
aliceSings = \markup { \smallCaps "Alice" }
eveSings = \markup { \smallCaps "Eve" }

<<
  \new Staff <<
    \new Voice = "alice" {
      f'4^\aliceSings g' r2 |
      s1 |
      f'4^\aliceSings g' r2 |
      s1 | \break
      % ...

      \voiceOne
```

```
      s2 a'8^\aliceSings a' b'4 |
      \oneVoice
      g'1
    }
    \new Voice = "eve" {
      s1 |
      a'2^\eveSings g' |
      s1 |
      a'2^\eveSings g'
      % ...

      \voiceTwo
      f'4^\eveSings a'8 g' f'4 e' |
      \oneVoice
      s1
    }
  >>
  \new Lyrics \lyricsto "alice" {
    may -- be
    sec -- ond
    % ...
    Shut up, you fool!
  }
  \new Lyrics \lyricsto "eve" {
    that the
    words are
    % ...
    ...and then I was like--
  }
>>
```



Book parts

`\bookpart` can be used to split a book into several parts. Each part last page can be affected by `ragged-last-bottom`. Header and footer markups can detect a part last page, and make the difference with the book last page.

```
#(set-default-paper-size "a6")

\book {
  %% book paper, which is inherited by all children bookparts
```

```
  \paper {
    ragged-last-bottom = ##t
    %% Page footer: add a different part-tagline at part last page
    oddFooterMarkup = \markup {
      \column {
        \fill-line {
          %% Copyright header field only on book first page.
          \if \on-first-page \fromproperty #'header:copyright
        }
        \fill-line {
          %% Part tagline header field only on each part last page.
          \if \on-last-page-of-part \fromproperty #'header:parttagline
        }
        \fill-line {
          %% Tagline header field only on book last page.
          \if \on-last-page \fromproperty #'header:tagline
        }
      }
    }
  }

  %% book header, which is inherited by the first bookpart
  \header {
    title = "Book title"
    copyright = "Copyright line on book first page"
    parttagline = "Part tagline"
    tagline = "Book tagline"
  }

  \bookpart {
    %% a different page breaking function may be used on each part
    \paper { page-breaking = #ly:minimal-breaking }
    \header { subtitle = "First part" }
    \markup { The first book part }
    \markup { a page break }
    \pageBreak
    \markup { first part last page }
    \markup \wordwrap { with ragged-last-bottom (see the space below this text) }
  }

  \bookpart {
    \header { subtitle = "Second part" }
    { c'4 }
  }

}
```

Book title

First part

The first book part

a page break

Copyright line on book first page
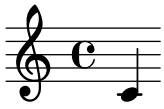
2
first part last page
with ragged-last-bottom (see the space below this text)

Part tagline

3

Book title

Second part



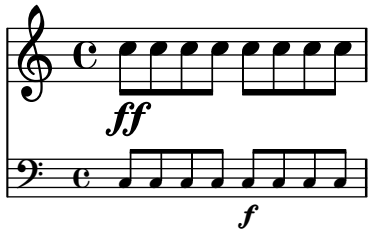
Part tagline

Book tagline

Changing the staff size

Though the simplest way to resize staves is to use `#(set-global-staff-size xx)`, an individual staff's size can be changed by scaling the properties `'staff-space` and `fontSize`.

```
<<
  \new Staff {
    \relative c'' {
      \dynamicDown
      c8\ff c c c c c c c
    }
  }
  \new Staff \with {
    fontSize = #-3
    \override StaffSymbol.staff-space = #(magstep -3)
  } {
    \clef bass
    c8 c c c c\f c c c
  }
>>
```



Clip systems

This code shows how to clip (extract) snippets from a full score.

This file needs to be run separately with `-dclip-systems`; the snippets page may not adequately show the results.

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

If system starts and ends are included, they include extents of the System grob, e.g., 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.

```
#(ly:set-option 'clip-systems)
#(define output-suffix "1")

origScore = \score {
  \relative c' {
    \new Staff \with { instrumentName = "Instrument" }
    c1
    d1
    \grace c16 e1
    \key d \major
    f1 \break
    \clef bass
    g,1
    fis1
  }
}

\book {
  \score {
    \origScore
    \layout {
      % Each clip-region is a (START . END) pair
      % where both are rhythmic-locations.

      % (make-rhythmic-locations BAR-NUMBER NUM DEN)
      % means NUM/DEN whole-notes into bar numbered BAR-NUMBER

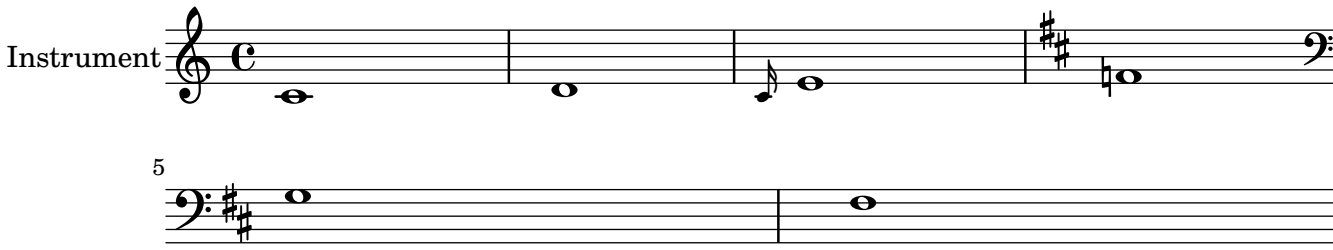
      clip-regions = #(list
      (cons
       (make-rhythmic-location 2 0 1)
       (make-rhythmic-location 4 0 1))

      (cons
       (make-rhythmic-location 0 0 1)
       (make-rhythmic-location 4 0 1))
```
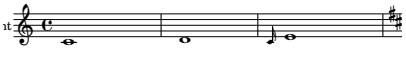
```
      (cons
       (make-rhythmic-location 0 0 1)
       (make-rhythmic-location 6 0 1))
      )
    }
  }
}

#(ly:set-option 'clip-systems #f)
#(define output-suffix #f)

\book {
  \score { \origScore }
  \markup { \bold \fontsize #6 clips }
  \score {
    \lyrics {
      \markup { from-2.0.1-to-4.0.1-clip.eps }
      \markup {
        \epsfile #X #30.0 #(format #f "~a-1-from-2.0.1-to-4.0.1-clip.eps"
                           (ly:parser-output-name)) }
    }
  }
}
```



clips

from-2.0.1-to-4.0.1-clip.eps 

Creating blank staves

To create blank staves, generate empty measures then remove the `Bar_number_engraver` from the `Score` context, and the `Time_signature_engraver`, `Clef_engraver` and `Bar_engraver` from the `Staff` context.

```
#(set-global-staff-size 20)

\score {
  {
    \repeat unfold 12 { s1 \break }
  }
  \layout {
    indent = 0\in
    \context {
      \Staff
      \remove "Time_signature_engraver"
      \remove "Clef_engraver"
      \remove "Bar_engraver"
    }
    \context {
      \Score
      \remove "Bar_number_engraver"
    }
  }
}

% uncomment these lines for "letter" size
%{
\paper {
  #(set-paper-size "letter")
  ragged-last-bottom = ##f
  line-width = 7.5\in
  left-margin = 0.5\in
  bottom-margin = 0.25\in
  top-margin = 0.25\in
}
%}

% uncomment these lines for "A4" size
%{
\paper {
  #(set-paper-size "a4")
  ragged-last-bottom = ##f
  line-width = 180
  left-margin = 15
  bottom-margin = 10
  top-margin = 10
}
%}
```



Demonstrating all headers

All header fields with special meanings.

```
\header {
  copyright = "copyright"
  title = "title"
  subtitle = "subtitle"
  composer = "composer"
  arranger = "arranger"
  instrument = "instrument"
  meter = "meter"
  opus = "opus"
  piece = "piece"
  poet = "poet"
  texidoc = "All header fields with special meanings."
  copyright = "public domain"
  enteredby = "jcn"
  source = "urtext"
}
```

```
\layout {
  ragged-right = ##f
}

\score {
  \relative c'' { c1 | c | c | c }
}

\score {
   \relative c'' { c1 | c | c | c }
   \header {
     title = "localtitle"
     subtitle = "localsubtitle"
     composer = "localcomposer"
     arranger = "localarranger"
     instrument = "localinstrument"
     metre = "localmetre"
     opus = "localopus"
     piece = "localpiece"
     poet = "localpoet"
     copyright = "localcopyright"
   }
}
```

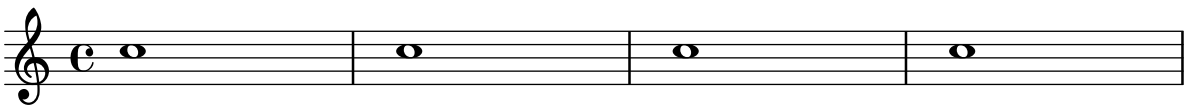
title

subtitle
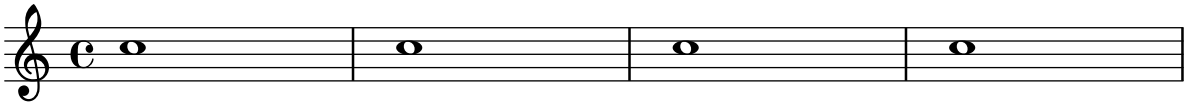
poet **instrument** composer

meter arranger

piece opus



localpiece localopus



Setting system separators

System separators can be inserted between systems. Any markup can be used, but `\slashSeparator` has been provided as a sensible default.

```
\paper {
  system-separator-markup = \slashSeparator
  line-width = 120
}
```

```
notes = \relative c' {
  c1 | c \break
  c1 | c \break
  c1 | c
}

\book {
  \score {
    \new GrandStaff <<
      \new Staff \notes
      \new Staff \notes
    >>
  }
}
```

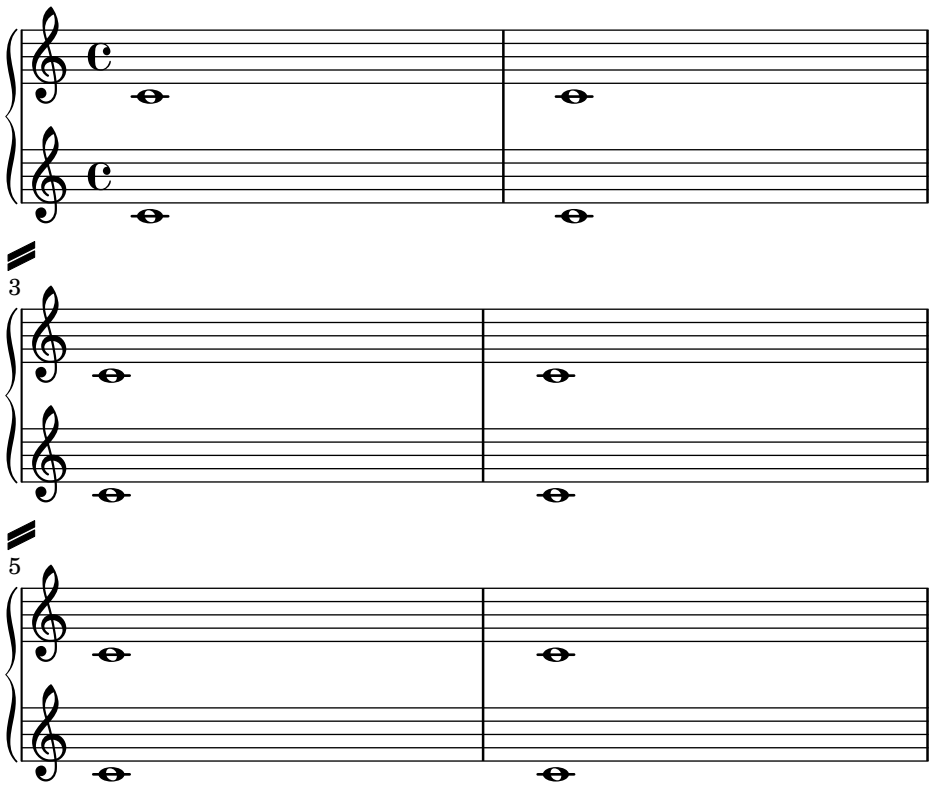

3
5

Table of contents

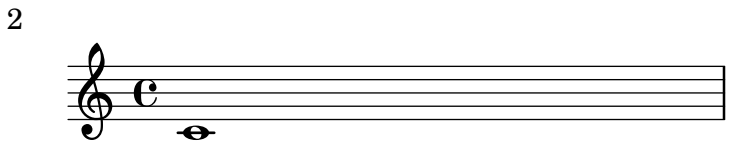
A table of contents is included using `\markuplist \table-of-contents`. The TOC items are added with the `\tocItem` command.

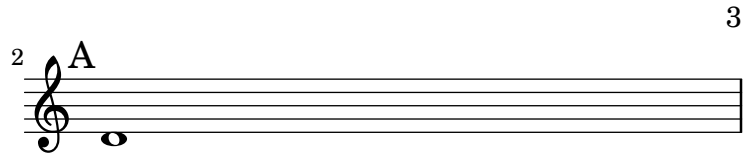
```
#(set-default-paper-size "a6")

\book {
  \markuplist \table-of-contents
  \pageBreak
  \tocItem \markup { The first score }
  \score {
    {
      c'1 \pageBreak
      \mark "A" \tocItem \markup { Mark A }
      d'1
    }
  }
  \pageBreak
  \tocItem \markup { The second score }
  \score {
    { e'1 }
    \header { piece = "Second score" }
  }
}
```

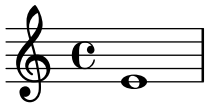
Table of Contents

The first score **2**
Mark A **3**
The second score **4**





4
Second score



Music engraving by LilyPond 2.23.5—www.lilypond.org

Vertical aligned StaffGroups without connecting SystemStartBar

This snippet shows how to achieve vertically aligned StaffGroups with a SystemStartBar for each StaffGroup, but without connecting them.

```
% by Thomas Morley

#(set-global-staff-size 18)

\paper {
  indent = 0
  ragged-right = ##f
  print-all-headers = ##t
}

\layout {
  \context {
    \Staff
    \consists "Mark_engraver"
    \override RehearsalMark.self-alignment-X = #LEFT
  }
  \context {
```

```
    \StaffGroup
    systemStartDelimiterHierarchy =
      #'(SystemStartBrace (SystemStartBracket a b))
  }
  \context {
    \Score
    \override SystemStartBrace.style = #'bar-line
    \omit SystemStartBar
    \override SystemStartBrace.padding = #-0.1
    \override SystemStartBrace.thickness = #1.6
    \remove "Mark_engraver"
    \override StaffGrouper.staffgroup-staff-spacing.basic-distance = #15
  }
}

%%%% EXAMPLE

txt =
\lyricmode {
  Wer4 nur den lie -- ben Gott läßt wal2 -- ten4
  und4 hof -- fet auf ihn al -- le Zeit2.
}

% First StaffGroup "exercise"

eI =
\relative c' {
        \mark \markup {
                \bold Teacher:
                This is a simple setting of the choral. Please improve it.
                }
        \key a \minor
        \time 4/4
        \voiceOne

        \partial 4
        e4
        a b c b
        a b gis2
        e4\fermata g! g f
        e a a gis
        a2.\fermata
        \bar ":|."
}

eII =
\relative c' {
        \key a \minor
        \time 4/4
        \voiceTwo
        \partial 4
        c4
```

```
        e e e gis
        a f e2
        b4 b d d
        c c d d
        c2.
        \bar ":|."
}

eIII =
\relative c' {
        \key a \minor
        \time 4/4
        \clef bass
        \voiceOne

        \partial 4
        a4
        c b a b
        c d b2
        gis4 g g b
        c a f e
        e2.
}

eIV =
\relative c' {
        \key a \minor
        \time 4/4
        \clef bass
        \voiceTwo

        \partial 4
        a,4
        a' gis a e
        a, d e2
        e,4\fermata e' b g
        c f d e
        a,2.\fermata
        \bar ":|."
}

exercise =
\new StaffGroup = "exercise"
<<

  \new Staff
    <<
      \new Voice \eI
      \new Voice \eII
    >>

  \new Lyrics \txt
```

```
  \new Staff
    <<
      \new Voice \eIII
      \new Voice \eIV
    >>
>>

% Second StaffGroup "simple Bach"

sbI =
\relative c' {
        \mark \markup { \bold" Pupil:" Here's my version! }
        \key a \minor
        \time 4/4
        \voiceOne

        \partial 4
        e4
        a b c b
        a b gis2
        e4\fermata g! g f
        e a a gis
        a2.\fermata
        \bar ":|."
}

sbII =
\relative c' {
        \key a \minor
        \time 4/4
        \voiceTwo
        \partial 4
        c8 d
        e4 e e8 f g4
        f f e2
        b4 b8 c d4 d
        e8 d c4 b8 c d4
        c2.
        \bar ":|."
}

sbIII =
\relative c' {
        \key a \minor
        \time 4/4
        \clef bass
        \voiceOne

        \partial 4
        a8 b
        c4 b a b8 c
```

```
        d4 d8 c b2
        gis4 g g8 a b4
        b a8 g f4 e
        e2.
}

sbIV =
\relative c' {
        \key a \minor
        \time 4/4
        \clef bass
        \voiceTwo

        \partial 4
        a,4
        a' gis a e
        f8 e d4 e2
        e,4\fermata e' b a8 g
        c4 f8 e d4 e
        a,2.\fermata
        \bar ":|."
}

simpleBach =
\new StaffGroup = "simple Bach"
<<

  \new Staff
    <<
      \new Voice \sbI
      \new Voice \sbII
    >>

  \new Lyrics \txt

  \new Staff
    <<
      \new Voice \sbIII
      \new Voice \sbIV
    >>
>>

% Third StaffGroup "chromatic Bach"

cbI =
\relative c' {
        \mark \markup {
          \bold "Teacher:"
          \column {
            "Well, you simply copied and transposed a version of J.S.Bach."
            "Do you know this one?"
          }
```

```
        }
        \key a \minor
        \time 4/4
        \voiceOne

        \partial 4
        e4
        a b c b
        a b gis4. fis8
        e4\fermata g! g f
        e a a8 b gis4
        a2.\fermata
        \bar ":|."
}

cbII =
\relative c' {
        \key a \minor
        \time 4/4
        \voiceTwo
        \partial 4
        c8 d
        e4 e e8 fis gis4
        a8 g! f!4 e2
        b4 e e d
        d8[ cis] d dis e fis e4
        e2.
        \bar ":|."
}

cbIII =
\relative c' {
        \key a \minor
        \time 4/4
        \clef bass
        \voiceOne

        \partial 4
        a8 b
        c[ b] a gis8 a4 d,
        e8[ e'] d c b4. a8
        gis4 b c d8 c
        b[ a] a b c b b c16 d
        c2.
}

cbIV =
\relative c' {
        \key a \minor
        \time 4/4
        \clef bass
        \voiceTwo
```

```
        \partial 4
        a4
        c, e a, b
        c d e2
        e4\fermata e a b8 c
        gis[ g] fis f e dis e4
        a,2.\fermata
        \bar ":|."
}

chromaticBach =
\new StaffGroup = "chromatic Bach"
<<

  \new Staff
    <<
      \new Voice \cbI
      \new Voice \cbII
    >>

  \new Lyrics \txt
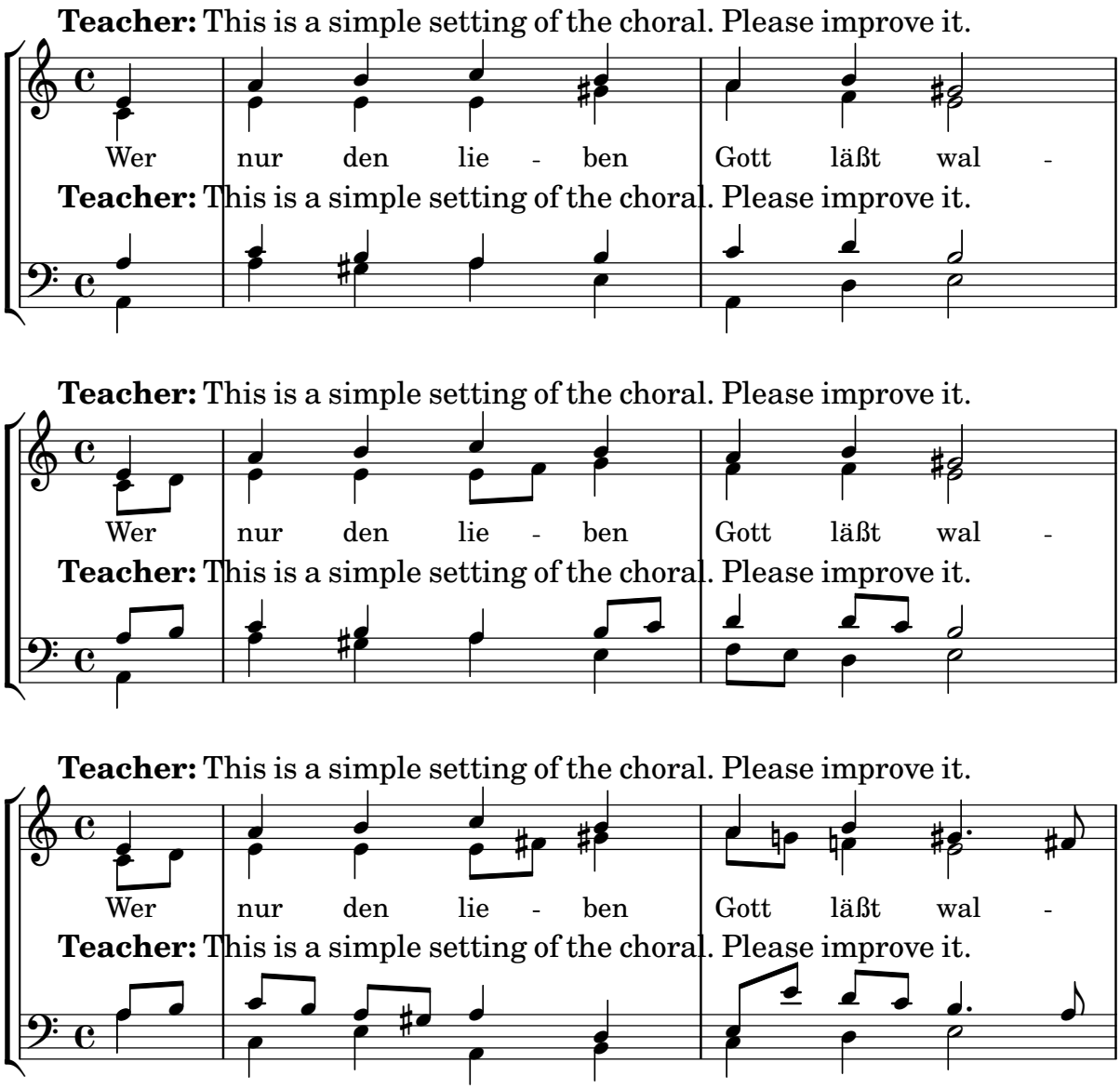
  \new Staff
    <<
      \new Voice \cbIII
      \new Voice \cbIV
    >>
>>
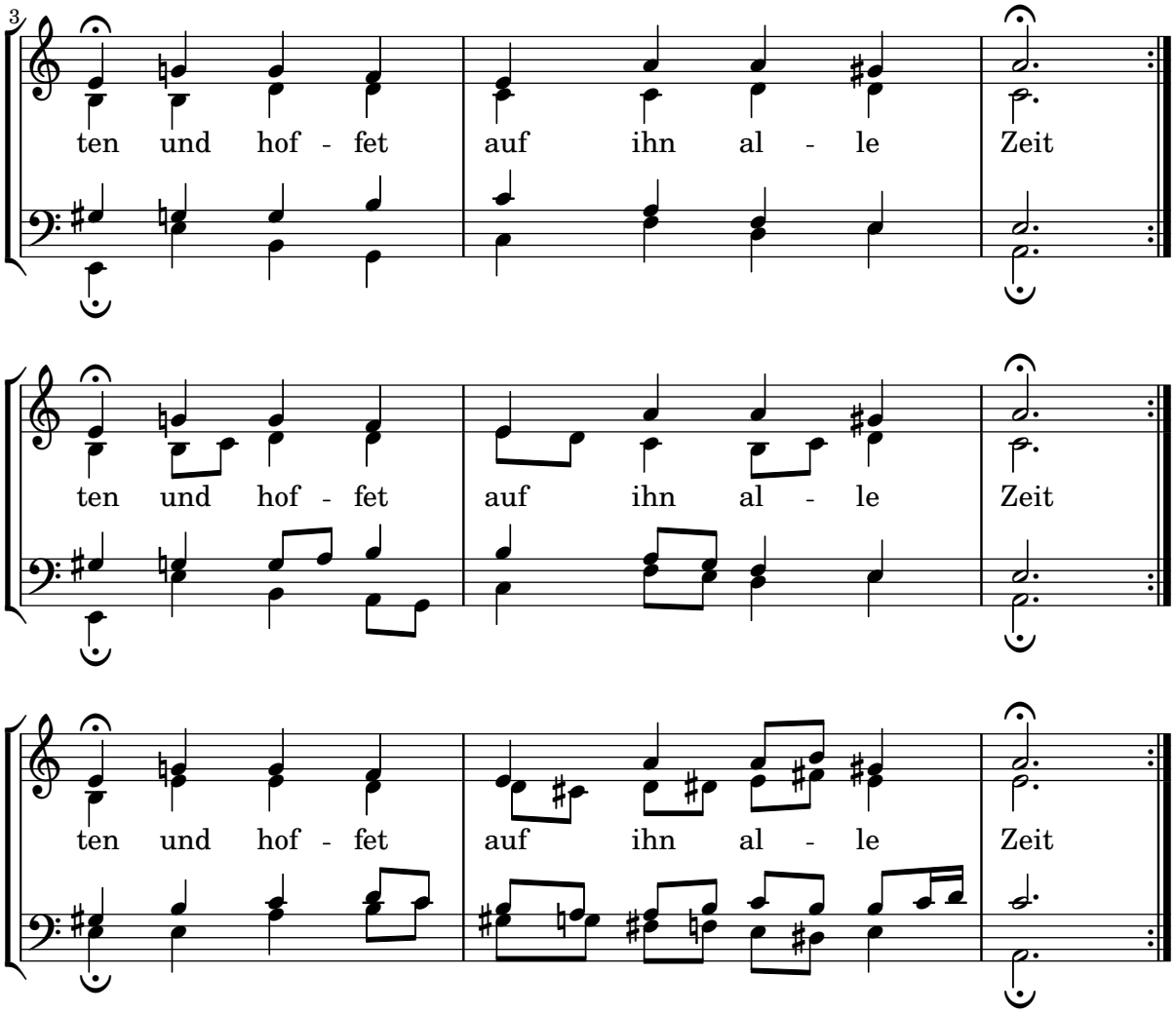

% Score

\score {
        <<
        \exercise
        \simpleBach
        \chromaticBach
        >>
        \header {
                title = \markup
                           \column {
                             \combine \null \vspace #1
                             "Exercise: Improve the given choral"
                             " "
                            }
        }
        \layout {
                \context {
                        \Lyrics
                        \override LyricText.X-offset = #-1
                }
```

```
        }
}
```

Exercise: Improve the given choral




3
ten und hof - fet auf ihn al - le Zeit
ten und hof - fet auf ihn al - le Zeit
ten und hof - fet auf ihn al - le Zeit

Titles

Sezione “Titles and headers” in *Guida alla Notazione*

Adding the current date to a score

With a little Scheme code, the current date can easily be added to a score.
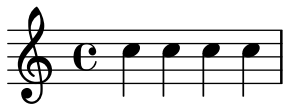
```
% first, define a variable to hold the formatted date:
date = #(strftime "%d-%m-%Y" (localtime (current-time)))

% use it in the title block:
\header {
  title = "Including the date!"
  subtitle = \date
}

\score {
  \relative c'' {
    c4 c c c
  }
}
% and use it in a \markup block:
\markup {
  \date
}
```

Including the date!

28-11-2021



28-11-2021

Aligning and centering instrument names

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

```
\paper { left-margin = 3\cm }

\score {
  \new StaffGroup <<

    \new Staff \with {
      \override InstrumentName.self-alignment-X = #LEFT
      instrumentName = \markup \left-column {
        "Left aligned"
        "instrument name"
```

```
        }
        shortInstrumentName = "Left"
      }

      {  c''1 \break c''1 }

    \new Staff \with {
      \override InstrumentName.self-alignment-X = #CENTER
      instrumentName = \markup \center-column {
        Centered
        "instrument name"
        }
      shortInstrumentName = "Centered"
    }

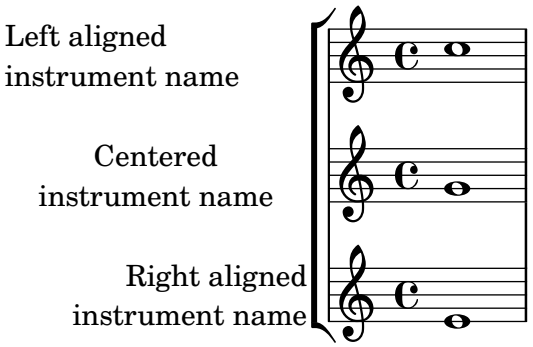
    { g'1 g'1}

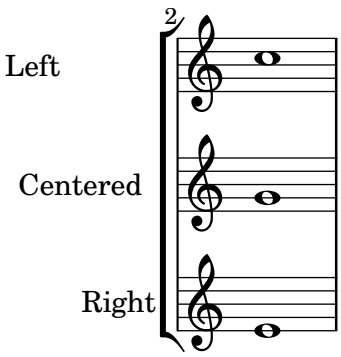
    \new Staff \with {
      \override InstrumentName.self-alignment-X = #RIGHT
      instrumentName = \markup \right-column {
        "Right aligned"
        "instrument name"
      }
      shortInstrumentName = "Right"
    }

    { e'1 e'1 }

  >>

  \layout {
    ragged-right = ##t
    indent = 4\cm
    short-indent = 2\cm
  }
}
```





Demonstrating all headers

All header fields with special meanings.

```
\header {
  copyright = "copyright"
  title = "title"
  subtitle = "subtitle"
  composer = "composer"
  arranger = "arranger"
  instrument = "instrument"
  meter = "meter"
  opus = "opus"
  piece = "piece"
  poet = "poet"
  texidoc = "All header fields with special meanings."
  copyright = "public domain"
  enteredby = "jcn"
  source = "urtext"
}

\layout {
  ragged-right = ##f
}

\score {
  \relative c'' { c1 | c | c | c }
}

\score {
   \relative c'' { c1 | c | c | c }
   \header {
     title = "localtitle"
     subtitle = "localsubtitle"
     composer = "localcomposer"
     arranger = "localarranger"
     instrument = "localinstrument"
     metre = "localmetre"
     opus = "localopus"
     piece = "localpiece"
     poet = "localpoet"
     copyright = "localcopyright"
   }
}
```

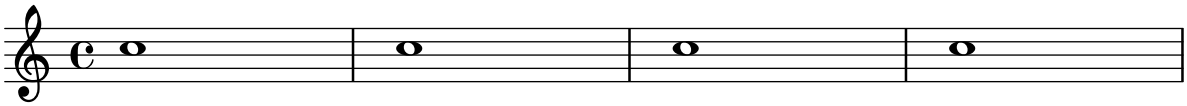
title

subtitle
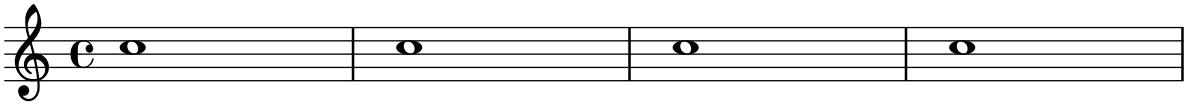
poet **instrument** composer

meter arranger

piece opus



localpiece localopus



Outputting the version number

By putting the output of `lilypond-version` into a lyric, it is possible to print the version number of LilyPond in a score, or in a document generated with `lilypond-book`. Another possibility is to append the version number to the doc-string, in this manner:

```
\score {
  \new Lyrics {
    \override Score.RehearsalMark.self-alignment-X = #LEFT
    \mark #(string-append "Processed with LilyPond version " (lilypond-version))
    s2
  }
}
```

Processed with LilyPond version 2.23.5

Spacing
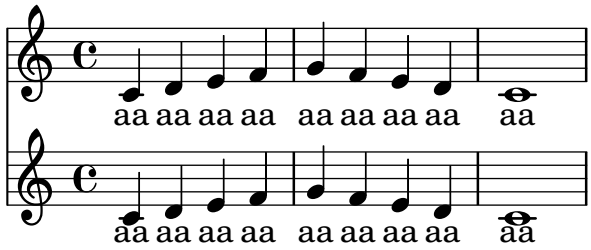
Sezione “Spacing issues” in *Guida alla Notazione*

Adjusting lyrics vertical spacing

This snippet shows how to bring the lyrics line closer to the staff.

```
% Default layout:
<<
  \new Staff \new Voice = melody \relative c' {
    c4 d e f
    g4 f e d
    c1
  }
  \new Lyrics \lyricsto melody { aa aa aa aa aa aa aa aa aa }

  \new Staff {
    \new Voice = melody \relative c' {
      c4 d e f
      g4 f e d
      c1
    }
  }
  % Reducing the minimum space below the staff and above the lyrics:
  \new Lyrics \with {
    \override VerticalAxisGroup.nonstaff-relatedstaff-spacing =
      #'((basic-distance . 1))
  }
  \lyricsto melody { aa aa aa aa aa aa aa aa aa }
>>
```
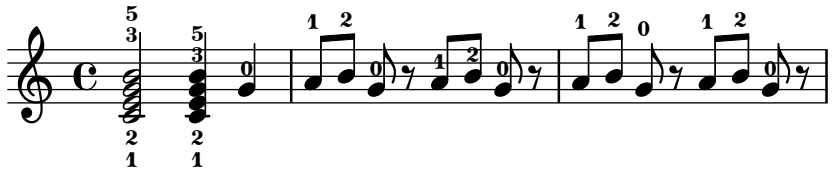


Far sì che la diteggiatura appaia dentro il rigo

Per impostazione predefinita, le diteggiature orientate verticalmente sono poste fuori dal rigo; questo comportamento tuttavia può essere disabilitato. Occorre fare attenzione alle situazioni in cui le diteggiature e i gambi sono rivolti nella stessa direzione: normalmente le diteggiature evitano soltanto i gambi con travature. Questa impostazione predefinita può essere cambiata in modo da evitare tutti i gambi oppure nessuno. L’esempio seguente mostra queste due opzioni, così come tornare al comportamento predefinito.

```
\relative c' {
  <c-1 e-2 g-3 b-5>2
  \override Fingering.staff-padding = #'()
  <c-1 e-2 g-3 b-5>4 g'-0
  a8[-1 b]-2 g-0 r
```

```
  \override Fingering.add-stem-support = ##f
  a[-1 b]-2 g-0 r
  \override Fingering.add-stem-support = ##t
  a[-1 b]-2 g-0 r
  \override Fingering.add-stem-support = #only-if-beamed
  a[-1 b]-2 g-0 r
}
```



Page label

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

```
#(set-default-paper-size "a6")

#(define-markup-command (toc-line layout props label text)
  (symbol? markup?)
  (interpret-markup layout props
   (markup #:fill-line (text #:page-ref label "8" "?"))))

\book {
  \markup \huge \fill-line { \null Title Page \null }

  \pageBreak

  \label #'toc
  \markup \column {
    \large \fill-line { \null Table of contents \null }
    \toc-line #'toc "Table of contents"
    \toc-line #'firstScore "First Score"
    \toc-line #'markA "Mark A"
    \toc-line #'markB "Mark B"
    \toc-line #'markC "Mark C"
    \toc-line #'unknown "Unknown label"
  }

  \pageBreak

  \label #'firstScore
  \score {
    \new Staff \relative c' {
      c2 c
      \mark \markup {
        A (page \concat { \page-ref #'markA "0" "?" ) }
      } \label #'markA
      c2 c
      \pageBreak
      \mark "B" \label #'markB
```

```
      d2 d
      d2 d
      \once \override Score.RehearsalMark.break-visibility =
        #begin-of-line-invisible
      \mark "C" \label #'markC
    }
    \header { piece = "First score" }
  }
}
```

Title Page

2

Table of contents

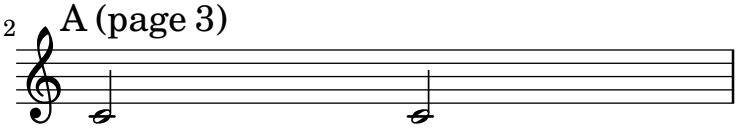
Table of contents 2
First Score 3
Mark A 3
Mark B 4
Mark C 4
Unknown label ?
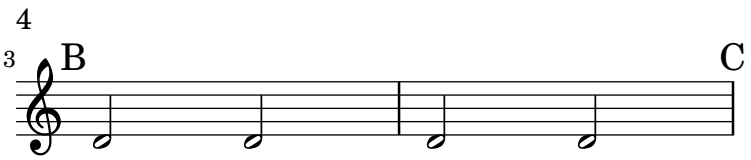
3

First score



2 A (page 3)
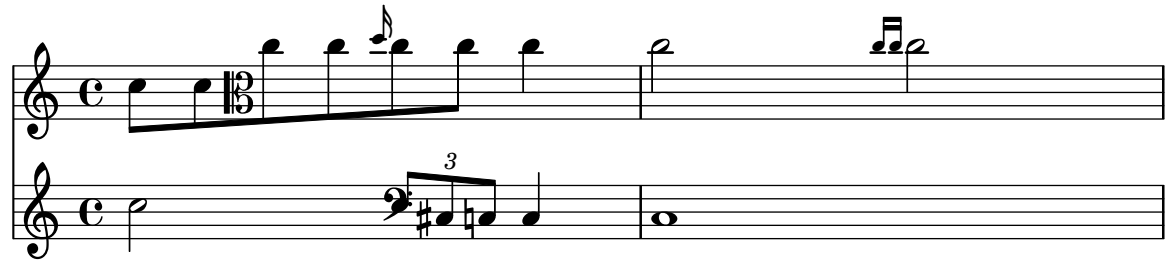




Music engraving by LilyPond 2.23.5—www.lilypond.org

Proportional strict notespacing

If `strict-note-spacing` is set spacing of notes is not influenced by bars or clefs within a system. Rather, they are placed just before the note that occurs at the same time. This may cause collisions.

```
\relative c'' <<
  \override Score.SpacingSpanner.strict-note-spacing = ##t
  \set Score.proportionalNotationDuration = #(ly:make-moment 1/16)
  \new Staff {
    c8[ c \clef alto c c \grace { d16 } c8 c] c4
    c2 \grace { c16[ c16] } c2
  }
  \new Staff {
    c2 \tuplet 3/2 { c8 \clef bass cis,, c } c4
    c1
  }
>>
```

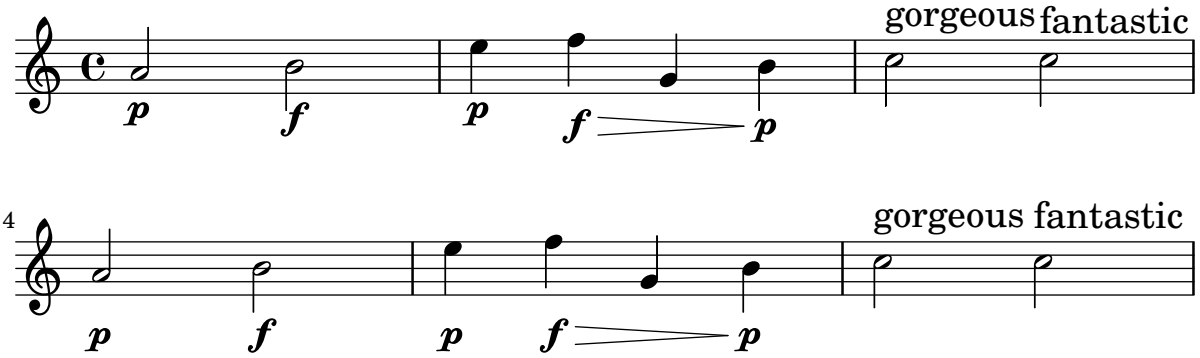


Dinamiche e segni testuali allineati verticalmente

Tutti gli oggetti `DynamicLineSpanner` (forcelle e testi di dinamica) sono posti a una distanza minima dal rigo determinata da `'staff-padding`. Se si imposta `'staff-padding` su un valore abbastanza grande, le dinamiche saranno allineate.

```
music = \relative c' {
  a'2\p b\f
  e4\p f\f\> g, b\p
  c2^\markup { \huge gorgeous } c^\markup { \huge fantastic }
}

{
  \music
  \break
  \override DynamicLineSpanner.staff-padding = #3
  \textLengthOn
  \override TextScript.staff-padding = #1
  \music
}
```



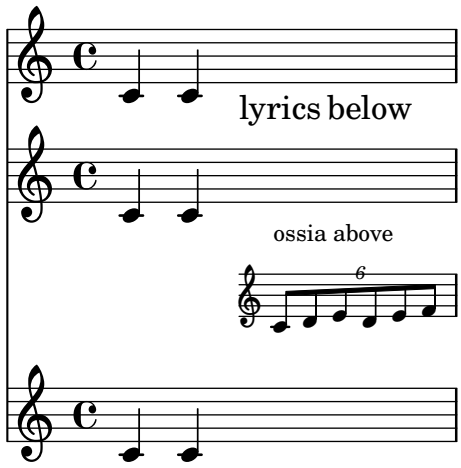
Allineare verticalmente gli ossia e il testo vocale

Questo frammento mostra come usare le proprietà di contesto `alignBelowContext` e `alignAboveContext` per controllare il posizionamento del testo vocale e degli ossia.

```
\paper {
  ragged-right = ##t
}

\relative c' <<
  \new Staff = "1" { c4 c s2 }
  \new Staff = "2" { c4 c s2 }
  \new Staff = "3" { c4 c s2 }
  { \skip 2
    <<
      \lyrics {
```

```
        \set alignBelowContext = #"1"
        lyrics4 below
      }
      \new Staff \with {
        alignAboveContext = #"3"
        fontSize = #-2
        \override StaffSymbol.staff-space = #(magstep -2)
        \remove "Time_signature_engraver"
      } {
        \tuplet 6/4 {
          \override TextScript.padding = #3
          c8[^"ossia above" d e d e f]
        }
      }
    >>
  }
>>
```



MIDI
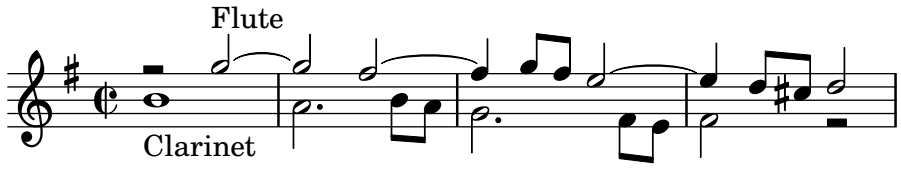
Sezione “Creating MIDI output” in *Guida alla Notazione*

Impostare l’output MIDI su un canale per voce

Nella creazione del file di output MIDI, il comportamento predefinito prevede che ogni rigo sia assegnato a un canale MIDI, con tutte le voci del rigo amalgamate in un canale. Ciò diminuisce il rischio di esaurire i canali MIDI disponibili, dato che ce ne sono solo 16 per traccia.

Tuttavia, spostando `Staff_performer` nel contesto `Voice`, ogni voce in un rigo può avere il proprio canale MIDI, come è illustrato nell’esempio seguente: sebbene le voci siano sullo stesso rigo, vengono creati due canali MIDI, ciascuno con un diverso strumento MIDI (`midiInstrument`).
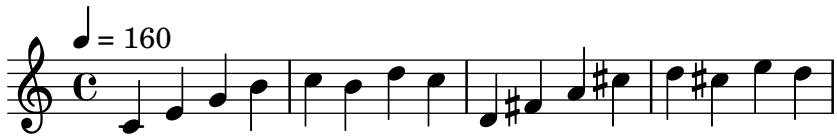
```
\score {
  \new Staff <<
    \new Voice \relative c''' {
      \set midiInstrument = #"flute"
      \voiceOne
      \key g \major
      \time 2/2
      r2 g-"Flute" ~
      g fis ~
      fis4 g8 fis e2 ~
      e4 d8 cis d2
    }
    \new Voice \relative c'' {
      \set midiInstrument = #"clarinet"
      \voiceTwo
      b1-"Clarinet"
      a2. b8 a
      g2. fis8 e
      fis2 r
    }
  >>
  \layout { }
  \midi {
    \context {
      \Staff
      \remove "Staff_performer"
    }
    \context {
      \Voice
      \consists "Staff_performer"
    }
    \tempo 2 = 72
  }
}
```



Modificare il tempo senza mostrare l'indicazione metronomica

Per cambiare il tempo del file MIDI senza che appaia l'indicazione metronomica, basta renderla invisibile.

```
\score {
  \new Staff \relative c' {
    \tempo 4 = 160
    c4 e g b
    c4 b d c
    \set Score.tempoHideNote = ##t
    \tempo 4 = 96
    d,4 fis a cis
    d4 cis e d
  }
  \layout { }
  \midi { }
}
```



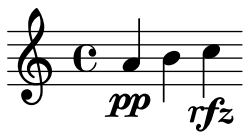
Creare dinamiche personalizzate nell'output MIDI

L'esempio seguente mostra come creare un segno di dinamica, non incluso nell'elenco predefinito, e assegnargli un valore specifico così che possa essere usato per cambiare l'output MIDI.

Al segno di dinamica `\rfz` viene assegnato il valore `0.9`.

```
#(define (myDynamics dynamic)
    (if (equal? dynamic "rfz")
      0.9
      (default-dynamic-absolute-volume dynamic)))

\score {
  \new Staff {
    \set Staff.midiInstrument = #"cello"
    \set Score.dynamicAbsoluteVolumeFunction = #myDynamics
    \new Voice {
      \relative {
        a'4\pp b c-\rfz
      }
    }
  }
  \layout {}
  \midi {}
}
```



Customized drum notation in printed and MIDI output

Customized drum "pitch" names (suitable for a custom drum style, for example) may be used both in printed and MIDI output by defining such variables as `drumPitchNames`, `drumStyleTable` and `midiDrumPitches`, as demonstrated here. In short, this snippet:

- defines some "pitch" names
- defines how they will be rendered
- tell LilyPond to use them for layout
- assigns pitches to the names
- tell LilyPond to use them for MIDI output

```
%% This snippet tries to amend
%% NR 2.5.1 Common notation for percussion - Custom percussion staves
%% http://lilypond.org/doc/v2.18/Documentation/notation/common-notation-for-percussion#custo

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%%
%% To use custom drum-pitch-names for your score and midi you need to follow
%% this route:
%%
%%%%%%%%%%%%
%% LAYOUT:
%%%%%%%%%%%%
%%
%% (1) Define a name and put it in `drumPitchNames'
%%     This can be done at toplevel with
%%         drumPitchNames.my-name  = #'my-name
%%     It's possible to add an alias as well.
%% (2) Define how it should be printed
%%     Therefore put them into a toplevel-list, where each entry should look:
%%         (my-name
%%           note-head-style-or-default
%%             articulation-string-or-#f
%%               staff-position)
%%     Example:
%%         #(define my-style
%%           '(
%%             (my-name default "tenuto" -1)
%%             ; ...
%%             ))
%% (3) Tell LilyPond to use this custom-definitions, with
%%         drumStyleTable = #(alist->hash-table my-style)
%%     in a \layout or \with
%%
%%     Now we're done for layout, here a short, but complete example:
%%         \new DrumStaff
%%           \with { drumStyleTable = #(alist->hash-table my-style) }
%%           \drummode { my-name }
%%
%%%%%%%%%%%%
%% MIDI:
%%%%%%%%%%%%
```
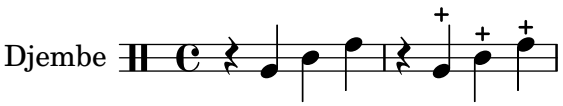
```
%%
%% (1) Again at toplvel, assign a pitch to your custom-note-name
%%         midiDrumPitches.my-name = ges
%%     Note that you have to use the name, which is in drumPitchNames, no alias
%% (2) Tell LilyPond to use this pitch(es), with
%%         drumPitchTable = #(alist->hash-table midiDrumPitches)
%%
%%     Example:
%%         \score {
%%            \new DrumStaff
%%             \with {
%%               drumStyleTable = #(alist->hash-table my-style)
%%               drumPitchTable = #(alist->hash-table midiDrumPitches)
%%             }
%%             \drummode { my-name4 }
%%           \layout {}
%%           \midi {}
%%         }
%%
%%%%%%%%%%%%
%% TESTING
%%%%%%%%%%%%
%%
%% To test whether all is fine, run the following sequence in terminal:
%%         lilypond my-file.ly
%%         midi2ly my-file.midi
%%         gedit my-file-midi.ly
%%
%% Which will do:
%% 1. create pdf and midi
%% 2. transform the midi back to a .ly-file
%%    (note: midi2ly is not always good in correctly identifying enharmonic pitches)
%% 3. open this file in gedit (or use another editor)
%% Now watch what you've got.
%%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%% FULL EXAMPLE
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

drumPitchNames.dbass      = #'dbass
drumPitchNames.dba        = #'dbass  % 'db is in use already
drumPitchNames.dbassmute  = #'dbassmute
drumPitchNames.dbm        = #'dbassmute
drumPitchNames.do         = #'dopen
drumPitchNames.dopenmute  = #'dopenmute
drumPitchNames.dom        = #'dopenmute
drumPitchNames.dslap      = #'dslap
drumPitchNames.ds         = #'dslap
drumPitchNames.dslapmute  = #'dslapmute
drumPitchNames.dsm        = #'dslapmute
```

```
#(define djembe
  '((dbass      default  #f         -2)
    (dbassmute  default  "stopped"  -2)
    (dopen      default  #f          0)
    (dopenmute  default  "stopped"   0)
    (dslap      default  #f          2)
    (dslapmute  default  "stopped"   2)))

midiDrumPitches.dbass = g
midiDrumPitches.dbassmute = fis
midiDrumPitches.dopen =  a
midiDrumPitches.dopenmute = gis
midiDrumPitches.dslap =  b
midiDrumPitches.dslapmute = ais

one = \drummode { r4 dba4 do ds r dbm dom dsm }

\score {
   \new DrumStaff
    \with {
      \override StaffSymbol.line-count =  #3
      instrumentName = #"Djembe "
      drumStyleTable = #(alist->hash-table djembe)
      drumPitchTable = #(alist->hash-table midiDrumPitches)
    }
    \one
  \layout {}
  \midi {}
}
```



Demo MidiInstruments

Problem: How to know which `midiInstrument` would be best for your composition?

Solution: A LilyPond demo file.

```
\header {
  title = "Demo of all midi sounds"
  arranger = "Myself "
}

baseMelody = \relative c' {
  c4.\mf g c16 b' c d
  e16 d e f g4 g'4 r
  R1
}
melody = {
  \tempo 4 = 150
  \baseMelody
```

```
}

\score {
  \new Staff <<
    \new Voice \melody
  >>
  \layout { }
}

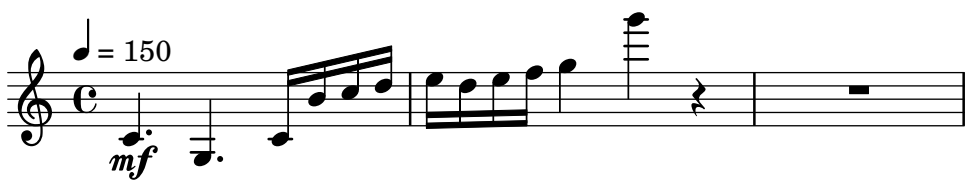
\score {
  \new Staff <<
    \new Voice {
      r\mf
      \set Staff.midiInstrument = #"acoustic grand" \melody
      \set Staff.midiInstrument = #"bright acoustic" \melody
      \set Staff.midiInstrument = #"electric grand" \melody
      \set Staff.midiInstrument = #"honky-tonk" \melody
      \set Staff.midiInstrument = #"electric piano 1" \melody
      \set Staff.midiInstrument = #"electric piano 2" \melody
      \set Staff.midiInstrument = #"harpsichord" \melody
      \set Staff.midiInstrument = #"clav" \melody
      \set Staff.midiInstrument = #"celesta" \melody
      \set Staff.midiInstrument = #"glockenspiel" \melody
      \set Staff.midiInstrument = #"music box" \melody
      \set Staff.midiInstrument = #"vibraphone" \melody
      \set Staff.midiInstrument = #"marimba" \melody
      \set Staff.midiInstrument = #"xylophone" \melody
      \set Staff.midiInstrument = #"tubular bells" \melody
      \set Staff.midiInstrument = #"dulcimer" \melody
      \set Staff.midiInstrument = #"drawbar organ" \melody
      \set Staff.midiInstrument = #"percussive organ" \melody
      \set Staff.midiInstrument = #"rock organ" \melody
      \set Staff.midiInstrument = #"church organ" \melody
      \set Staff.midiInstrument = #"reed organ" \melody
      \set Staff.midiInstrument = #"accordion" \melody
      \set Staff.midiInstrument = #"harmonica" \melody
      \set Staff.midiInstrument = #"concertina" \melody
      \set Staff.midiInstrument = #"acoustic guitar (nylon)" \melody
      \set Staff.midiInstrument = #"acoustic guitar (steel)" \melody
      \set Staff.midiInstrument = #"electric guitar (jazz)" \melody
      \set Staff.midiInstrument = #"electric guitar (clean)" \melody
      \set Staff.midiInstrument = #"electric guitar (muted)" \melody
      \set Staff.midiInstrument = #"overdriven guitar" \melody
      \set Staff.midiInstrument = #"distorted guitar" \melody
      \set Staff.midiInstrument = #"acoustic bass" \melody
      \set Staff.midiInstrument = #"electric bass (finger)" \melody
      \set Staff.midiInstrument = #"electric bass (pick)" \melody
      \set Staff.midiInstrument = #"fretless bass" \melody
      \set Staff.midiInstrument = #"slap bass 1" \melody
      \set Staff.midiInstrument = #"slap bass 2" \melody
      \set Staff.midiInstrument = #"synth bass 1" \melody
      \set Staff.midiInstrument = #"synth bass 2" \melody
```

```
\set Staff.midiInstrument = #"violin" \melody
\set Staff.midiInstrument = #"viola" \melody
\set Staff.midiInstrument = #"cello" \melody
\set Staff.midiInstrument = #"contrabass" \melody
\set Staff.midiInstrument = #"tremolo strings" \melody
\set Staff.midiInstrument = #"pizzicato strings" \melody
\set Staff.midiInstrument = #"orchestral harp" \melody
\set Staff.midiInstrument = #"timpani" \melody
\set Staff.midiInstrument = #"string ensemble 1" \melody
\set Staff.midiInstrument = #"string ensemble 2" \melody
\set Staff.midiInstrument = #"synthstrings 1" \melody
\set Staff.midiInstrument = #"synthstrings 2" \melody
\set Staff.midiInstrument = #"choir aahs" \melody
\set Staff.midiInstrument = #"voice oohs" \melody
\set Staff.midiInstrument = #"synth voice" \melody
\set Staff.midiInstrument = #"orchestra hit" \melody
\set Staff.midiInstrument = #"trumpet" \melody
\set Staff.midiInstrument = #"trombone" \melody
\set Staff.midiInstrument = #"tuba" \melody
\set Staff.midiInstrument = #"muted trumpet" \melody
\set Staff.midiInstrument = #"french horn" \melody
\set Staff.midiInstrument = #"brass section" \melody
\set Staff.midiInstrument = #"synthbrass 1" \melody
\set Staff.midiInstrument = #"synthbrass 2" \melody
\set Staff.midiInstrument = #"soprano sax" \melody
\set Staff.midiInstrument = #"alto sax" \melody
\set Staff.midiInstrument = #"tenor sax" \melody
\set Staff.midiInstrument = #"baritone sax" \melody
\set Staff.midiInstrument = #"oboe" \melody
\set Staff.midiInstrument = #"english horn" \melody
\set Staff.midiInstrument = #"bassoon" \melody
\set Staff.midiInstrument = #"clarinet" \melody
\set Staff.midiInstrument = #"piccolo" \melody
\set Staff.midiInstrument = #"flute" \melody
\set Staff.midiInstrument = #"recorder" \melody
\set Staff.midiInstrument = #"pan flute" \melody
\set Staff.midiInstrument = #"blown bottle" \melody
\set Staff.midiInstrument = #"shakuhachi" \melody
\set Staff.midiInstrument = #"whistle" \melody
\set Staff.midiInstrument = #"ocarina" \melody
\set Staff.midiInstrument = #"lead 1 (square)" \melody
\set Staff.midiInstrument = #"lead 2 (sawtooth)" \melody
\set Staff.midiInstrument = #"lead 3 (calliope)" \melody
\set Staff.midiInstrument = #"lead 4 (chiff)" \melody
\set Staff.midiInstrument = #"lead 5 (charang)" \melody
\set Staff.midiInstrument = #"lead 6 (voice)" \melody
\set Staff.midiInstrument = #"lead 7 (fifths)" \melody
\set Staff.midiInstrument = #"lead 8 (bass+lead)" \melody
\set Staff.midiInstrument = #"pad 1 (new age)" \melody
\set Staff.midiInstrument = #"pad 2 (warm)" \melody
\set Staff.midiInstrument = #"pad 3 (polysynth)" \melody
\set Staff.midiInstrument = #"pad 4 (choir)" \melody
```

```
      \set Staff.midiInstrument = #"pad 5 (bowed)" \melody
      \set Staff.midiInstrument = #"pad 6 (metallic)" \melody
      \set Staff.midiInstrument = #"pad 7 (halo)" \melody
      \set Staff.midiInstrument = #"pad 8 (sweep)" \melody
      \set Staff.midiInstrument = #"fx 1 (rain)" \melody
      \set Staff.midiInstrument = #"fx 2 (soundtrack)" \melody
      \set Staff.midiInstrument = #"fx 3 (crystal)" \melody
      \set Staff.midiInstrument = #"fx 4 (atmosphere)" \melody
      \set Staff.midiInstrument = #"fx 5 (brightness)" \melody
      \set Staff.midiInstrument = #"fx 6 (goblins)" \melody
      \set Staff.midiInstrument = #"fx 7 (echoes)" \melody
      \set Staff.midiInstrument = #"fx 8 (sci-fi)" \melody
      \set Staff.midiInstrument = #"sitar" \melody
      \set Staff.midiInstrument = #"banjo" \melody
      \set Staff.midiInstrument = #"shamisen" \melody
      \set Staff.midiInstrument = #"koto" \melody
      \set Staff.midiInstrument = #"kalimba" \melody
      \set Staff.midiInstrument = #"bagpipe" \melody
      \set Staff.midiInstrument = #"fiddle" \melody
      \set Staff.midiInstrument = #"shanai" \melody
      \set Staff.midiInstrument = #"tinkle bell" \melody
      \set Staff.midiInstrument = #"agogo" \melody
      \set Staff.midiInstrument = #"steel drums" \melody
      \set Staff.midiInstrument = #"woodblock" \melody
      \set Staff.midiInstrument = #"taiko drum" \melody
      \set Staff.midiInstrument = #"melodic tom" \melody
      \set Staff.midiInstrument = #"synth drum" \melody
      \set Staff.midiInstrument = #"reverse cymbal" \melody
      \set Staff.midiInstrument = #"guitar fret noise" \melody
      \set Staff.midiInstrument = #"breath noise" \melody
      \set Staff.midiInstrument = #"seashore" \melody
      \set Staff.midiInstrument = #"bird tweet" \melody
      \set Staff.midiInstrument = #"telephone ring" \melody
      \set Staff.midiInstrument = #"helicopter" \melody
      \set Staff.midiInstrument = #"applause" \melody
      \set Staff.midiInstrument = #"gunshot" \melody
    }
  >>
  \midi { }
}
```

Demo of all midi sounds

Myself



Modificare l'equalizzazione predefinita degli strumenti MIDI

L'equalizzatore predefinito degli strumenti MIDI può essere modificato impostando la proprietà `instrumentEqualizer` nel contesto `Score` come una procedura Scheme definita dall'utente che usi il nome dello strumento MIDI come argomento insieme a una coppia di frazioni indicanti i volumi minimi e massimi da applicare a quello specifico strumento.
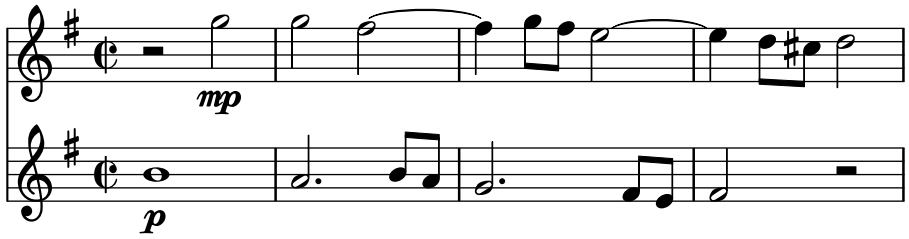
L'esempio seguente imposta i volumi massimo e minimo per il flauto e per il clarintetto.

```
#(define my-instrument-equalizer-alist '())

#(set! my-instrument-equalizer-alist
  (append
    '(
      ("flute" . (0.7 . 0.9))
      ("clarinet" . (0.3 . 0.6)))
    my-instrument-equalizer-alist))

#(define (my-instrument-equalizer s)
  (let ((entry (assoc s my-instrument-equalizer-alist)))
    (if entry
      (cdr entry))))

\score {
  <<
    \new Staff {
      \key g \major
      \time 2/2
      \set Score.instrumentEqualizer = #my-instrument-equalizer
      \set Staff.midiInstrument = "flute"
      \new Voice \relative {
        r2 g''\mp g fis~
        4 g8 fis e2~
        4 d8 cis d2
      }
    }
    \new Staff {
      \key g \major
      \set Staff.midiInstrument = "clarinet"
      \new Voice \relative {
        b'1\p a2. b8 a
        g2. fis8 e
        fis2 r
      }
    }
  >>
  \layout { }
  \midi {  }
}
```


mp
p

Templates

Modello per notazione antica – trascrizione moderna di musica gregoriana
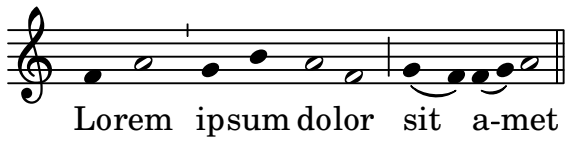
Questo esempio mostra come realizzare una trascrizione moderna di musica gregoriana. La musica gregoriana non presenta la suddivisione in misure né gambi; impiega soltanto le teste della minima e della semiminima, e dei segni appositi che indicano pause di diversa lunghezza.

```
\include "gregorian.ly"

chant = \relative c' {
  \set Score.timing = ##f
  f4 a2 \divisioMinima
  g4 b a2 f2 \divisioMaior
  g4( f) f( g) a2 \finalis
}

verba = \lyricmode {
  Lo -- rem ip -- sum do -- lor sit a -- met
}

\score {
  \new Staff <<
    \new Voice = "melody" \chant
    \new Lyrics = "one" \lyricsto melody \verba
  >>
  \layout {
    \context {
      \Staff
      \remove "Time_signature_engraver"
      \remove "Bar_engraver"
      \hide Stem
    }
    \context {
      \Voice
      \override Stem.length = #0
    }
    \context {
      \Score
      barAlways = ##t
    }
  }
}
```



Modello per salmo anglicano

Questo modello presenta un modo per impostare un salmo anglicano. Mostra anche come le strofe possano essere aggiunte come testo separato al di sotto della musica. Le due strofe sono scritte con stili diversi per illustrare le varie possibilità.

```
SopranoMusic = \relative g' {
  g1 | c2 b | a1 | \bar "||"
  a1 | d2 c | c b | c1 | \bar "||"
}

AltoMusic = \relative c' {
  e1 | g2 g | f1 |
  f1 | f2 e | d d | e1 |
}

TenorMusic = \relative a {
  c1 | c2 c | c1 |
  d1 | g,2 g | g g | g1 |
}

BassMusic =  \relative c {
  c1 | e2 e | f1 |
  d1 | b2 c | g' g | c,1 |
}

global = {
  \time 2/2
}

dot = \markup {
  \raise #0.7 \musicglyph "dots.dot"
}

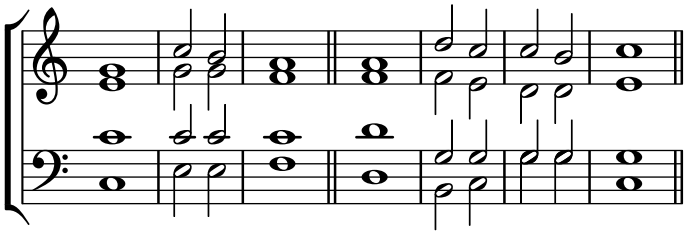
tick = \markup {
  \raise #1 \fontsize #-5 \musicglyph "scripts.rvarcomma"
}

% Use markup to center the chant on the page
\markup {
  \fill-line {
    \score {  % centered
      <<
        \new ChoirStaff <<
          \new Staff <<
            \global
            \clef "treble"
            \new Voice = "Soprano" <<
              \voiceOne
              \SopranoMusic
            >>
            \new Voice = "Alto" <<
              \voiceTwo
```

```
            \AltoMusic
          >>
        >>
        \new Staff <<
          \clef "bass"
          \global
          \new Voice = "Tenor" <<
            \voiceOne
            \TenorMusic
          >>
          \new Voice = "Bass" <<
            \voiceTwo
            \BassMusic
          >>
        >>
      >>
      \layout {
        \context {
          \Score
          \override SpacingSpanner.base-shortest-duration = #(ly:make-moment 1/2)
        }
        \context {
          \Staff
          \remove "Time_signature_engraver"
        }
      }
    }  % End score
  }
}  % End markup

\markup {
  \fill-line {
    \column {
      \left-align {
        \null \null \null
        \line {
          \fontsize #5 O
          \fontsize #3 come
          let us \bold sing | unto \dot the | Lord : let
        }
        \line {
          us heartily
          \concat { re \bold joice }
          in the | strength of | our
        }
        \line {
          sal | vation.
        }
        \null
        \line {
          \hspace #2.5 8. Today if ye will hear his voice *
```

```
        }
        \line {
          \concat { \bold hard en }
          \tick not your \tick hearts : as in the pro-
        }
        \line {
          vocation * and as in the \bold day of tempt- \tick
        }
        \line {
          -ation \tick in the \tick wilderness.
        }
      }
    }
  }
}
```



O come let us **sing** | unto • the | Lord : let us heartily re**joice** in the | strength of | our sal | vation.

8. Today if ye will hear his voice * **hard**en ' not your ' hearts : as in the provocation * and as in the **day** of tempt- ' -ation ' in the ' wilderness.

Modello per inno

Il codice seguente presenta un modo di impostare un inno in cui ogni verso inizia e finisce con una misura parziale. Mostra anche come aggiungere delle strofe come testo separato sotto la musica.

```
Timeline = {
  \time 4/4
  \tempo 4=96
  \partial 2
  s2 | s1 | s2 \breathe s2 | s1 | s2 \bar "||" \break
  s2 | s1 | s2 \breathe s2 | s1 | s2 \bar "||"
}

SopranoMusic = \relative g' {
  g4 g | g g g g | g g g g | g g g g | g2
  g4 g | g g g g | g g g g | g g g g | g2
```

```
}

AltoMusic = \relative c' {
  d4 d | d d d d | d d d d | d d d d | d2
  d4 d | d d d d | d d d d | d d d d | d2
}

TenorMusic = \relative a {
  b4 b | b b b b | b b b b | b b b b | b2
  b4 b | b b b b | b b b b | b b b b | b2
}

BassMusic =  \relative g {
  g4 g | g g g g | g g g g | g g g g | g2
  g4 g | g g g g | g g g g | g g g g | g2
}
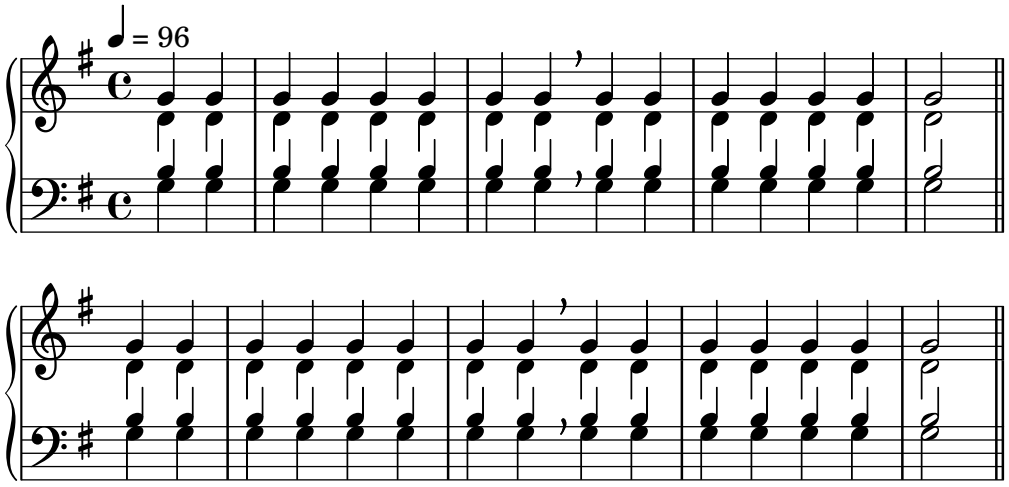
global = {
 \key g \major
}

\score {  % Start score
  <<
    \new PianoStaff <<  % Start pianostaff
      \new Staff <<  % Start Staff = RH
        \global
        \clef "treble"
        \new Voice = "Soprano" <<  % Start Voice = "Soprano"
          \Timeline
          \voiceOne
          \SopranoMusic
        >>  % End Voice = "Soprano"
        \new Voice = "Alto" <<  % Start Voice = "Alto"
          \Timeline
          \voiceTwo
          \AltoMusic
        >>  % End Voice = "Alto"
      >>  % End Staff = RH
      \new Staff <<  % Start Staff = LH
        \global
        \clef "bass"
        \new Voice = "Tenor" <<  % Start Voice = "Tenor"
          \Timeline
          \voiceOne
          \TenorMusic
        >>  % End Voice = "Tenor"
        \new Voice = "Bass" <<  % Start Voice = "Bass"
          \Timeline
          \voiceTwo
          \BassMusic
        >>  % End Voice = "Bass"
      >>  % End Staff = LH
```

```
    >>  % End pianostaff
  >>
}  % End score

\markup {
  \fill-line {
    ""
    {
      \column {
        \left-align {
          "This is line one of the first verse"
          "This is line two of the same"
          "And here's line three of the first verse"
          "And the last line of the same"
        }
      }
    }
    ""
  }
}

\paper {  % Start paper block
  indent = 0     % don't indent first system
  line-width = 130   % shorten line length to suit music
}  % End paper block
```



This is line one of the first verse
This is line two of the same
And here's line three of the first verse
And the last line of the same

Modello per combo jazz

Ecco un modello piuttosto complesso, per un gruppo jazz. Si noti che tutti gli strumenti sono in `\key c \major`. Si tratta della tonalità reale; sarà trasposta automaticamente includendo la musica all'interno di una sezione `\transpose`.

```
\header {
```

```
  title = "Song"
  subtitle = "(tune)"
  composer = "Me"
  meter = "moderato"
  piece = "Swing"
  tagline = \markup {
    \column {
      "LilyPond example file by Amelie Zapf,"
      "Berlin 07/07/2003"
    }
  }
}
% To make the example display in the documentation
\paper {
  paper-width = 130
}
%#(set-global-staff-size 16)
\include "english.ly"

%%%%%%%%%%% Some macros %%%%%%%%%%%%%%%%%%

sl = {
  \override NoteHead.style = #'slash
  \hide Stem
}
nsl = {
  \revert NoteHead.style
  \undo \hide Stem
}
crOn = \override NoteHead.style = #'cross
crOff = \revert NoteHead.style

%% insert chord name style stuff here.

jazzChords = { }

%%%%%%%%%%% Keys'n'thangs %%%%%%%%%%%%%%%%

global = { \time 4/4 }

Key = { \key c \major }

% ############ Horns ############

% ------ Trumpet ------
trpt = \transpose c d \relative c'' {
  \Key
  c1 | c | c |
}
trpHarmony = \transpose c' d {
  \jazzChords
}
```

```
trumpet = {
  \global
  \clef treble
  <<
    \trpt
  >>
}

% ------ Alto Saxophone ------
alto = \transpose c a \relative c' {
  \Key
  c1 | c | c |
}
altoHarmony = \transpose c' a {
  \jazzChords
}
altoSax = {
  \global
  \clef treble
  <<
    \alto
  >>
}

% ------ Baritone Saxophone ------
bari = \transpose c a' \relative c {
  \Key
  c1
  c1
  \sl
  d4^"Solo" d d d
  \nsl
}
bariHarmony = \transpose c' a \chordmode {
  \jazzChords s1 s d2:maj e:m7
}
bariSax = {
  \global
  \clef treble
  <<
    \bari
  >>
}

% ------ Trombone ------
tbone = \relative c {
  \Key
  c1 | c | c
}
tboneHarmony = \chordmode {
  \jazzChords
}
```

```
trombone = {
  \global
  \clef bass
  <<
    \tbone
  >>
}

% ############ Rhythm Section #############

% ------ Guitar ------
gtr = \relative c'' {
  \Key
  c1
  \sl
  b4 b b b
  \nsl
  c1
}
gtrHarmony = \chordmode {
  \jazzChords
  s1 c2:min7+ d2:maj9
}
guitar = {
  \global
  \clef treble
  <<
    \gtr
  >>
}

%% ------ Piano ------
rhUpper = \relative c'' {
  \voiceOne
  \Key
  c1 | c | c
}
rhLower = \relative c' {
  \voiceTwo
  \Key
  e1 | e | e
}

lhUpper = \relative c' {
  \voiceOne
  \Key
  g1 | g | g
}
lhLower = \relative c {
  \voiceTwo
  \Key
  c1 | c | c
```

```
}

PianoRH = {
  \clef treble
  \global
  <<
    \new Voice = "one" \rhUpper
    \new Voice = "two" \rhLower
  >>
}
PianoLH = {
  \clef bass
  \global
  <<
    \new Voice = "one" \lhUpper
    \new Voice = "two" \lhLower
  >>
}

piano = {
  <<
    \new Staff = "upper" \PianoRH
    \new Staff = "lower" \PianoLH
  >>
}

% ------ Bass Guitar ------
Bass = \relative c {
  \Key
  c1 | c | c
}
bass = {
  \global
  \clef bass
  <<
    \Bass
  >>
}

% ------ Drums ------
up = \drummode {
  \voiceOne
  hh4 <hh sn> hh <hh sn>
  hh4 <hh sn> hh <hh sn>
  hh4 <hh sn> hh <hh sn>
}
down = \drummode {
  \voiceTwo
  bd4 s bd s
  bd4 s bd s
  bd4 s bd s
}
```

```
drumContents = {
  \global
  <<
    \new DrumVoice \up
    \new DrumVoice \down
  >>
}

%%%%%%%% It All Goes Together Here %%%%%%%%%%%%%%%%%%%%

\score {
  <<
    \new StaffGroup = "horns" <<
      \new Staff = "trumpet" \with { instrumentName = "Trumpet" }
      \trumpet
      \new Staff = "altosax" \with { instrumentName = "Alto Sax" }
      \altoSax
      \new ChordNames = "barichords" \with { instrumentName = "Trumpet" }
      \bariHarmony
      \new Staff = "barisax" \with { instrumentName = "Bari Sax" }
      \bariSax
      \new Staff = "trombone" \with { instrumentName = "Trombone" }
      \trombone
    >>

    \new StaffGroup = "rhythm" <<
      \new ChordNames = "chords" \gtrHarmony
      \new Staff = "guitar" \with { instrumentName = "Guitar" }
      \guitar
      \new PianoStaff = "piano" \with {
        instrumentName = "Piano"
        midiInstrument = "acoustic grand"
      }
      \piano
      \new Staff = "bass" \with { instrumentName = "Bass" }
      \bass
      \new DrumStaff \with { instrumentName = "Drums" }
      \drumContents
    >>
  >>
  \layout {
    \context { \Staff \RemoveEmptyStaves }
    \context {
      \Score
      \override BarNumber.padding = #3
      \override RehearsalMark.padding = #2
      skipBars = ##t
    }
  }
  \midi { }
}
```
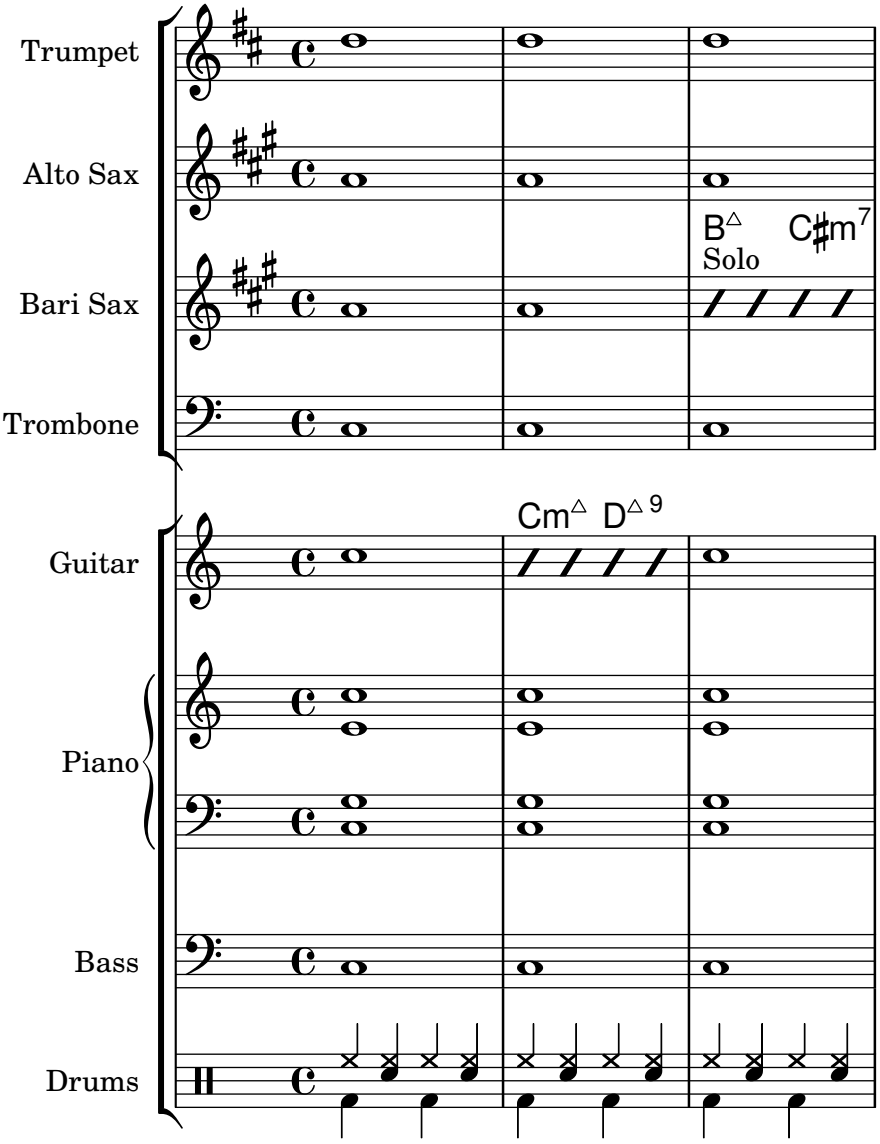
Song

(tune)

Me

moderato

Swing



Modello per orchestra, coro e pianoforte

Questo modello mostra come usare i contesti annidati `StaffGroup` e `GrandStaff` per creare sottogruppi degli strumenti dello stesso tipo. Mostra anche come usare `\transpose` in modo che le variabili mantengano la musica per gli strumenti traspositori nell'intonazione reale.

```
#(set-global-staff-size 17)
\paper {
  indent = 3.0\cm  % add space for instrumentName
  short-indent = 1.5\cm  % add less space for shortInstrumentName
}

fluteMusic = \relative c' { \key g \major g'1 b }
```

```
% Pitches as written on a manuscript for Clarinet in A
% are transposed to concert pitch.

clarinetMusic = \transpose c' a
  \relative c'' { \key bes \major bes1 d }

trumpetMusic = \relative c { \key g \major g''1 b }

% Key signature is often omitted for horns

hornMusic = \transpose c' f
  \relative c { d'1 fis }

percussionMusic = \relative c { \key g \major g1 b }

sopranoMusic = \relative c'' { \key g \major g'1 b }

sopranoLyrics = \lyricmode { Lyr -- ics }

altoIMusic = \relative c' { \key g \major g'1 b }

altoIIMusic = \relative c' { \key g \major g'1 b }

altoILyrics =  \sopranoLyrics

altoIILyrics = \lyricmode { Ah -- ah }

tenorMusic = \relative c' { \clef "treble_8" \key g \major g1 b }

tenorLyrics = \sopranoLyrics

pianoRHMusic = \relative c { \key g \major g''1 b }

pianoLHMusic = \relative c { \clef bass \key g \major g1 b }

violinIMusic = \relative c' { \key g \major g'1 b }

violinIIMusic = \relative c' { \key g \major g'1 b }

violaMusic = \relative c { \clef alto \key g \major g'1 b }

celloMusic = \relative c { \clef bass \key g \major g1 b }

bassMusic = \relative c { \clef "bass_8" \key g \major g,1 b }

\score {
  <<
    \new StaffGroup = "StaffGroup_woodwinds" <<
      \new Staff = "Staff_flute" \with { instrumentName = "Flute" }
      \fluteMusic
```

```
  \new Staff = "Staff_clarinet" \with {
    instrumentName = \markup { \concat { "Clarinet in B" \flat } }
  }

  % Declare that written Middle C in the music
  % to follow sounds a concert B flat, for
  % output using sounded pitches such as MIDI.
  %\transposition bes

  % Print music for a B-flat clarinet
  \transpose bes c' \clarinetMusic
>>

\new StaffGroup = "StaffGroup_brass" <<
  \new Staff = "Staff_hornI" \with { instrumentName = "Horn in F" }
   % \transposition f
    \transpose f c' \hornMusic

  \new Staff = "Staff_trumpet" \with { instrumentName = "Trumpet in  C" }
  \trumpetMusic

>>
\new RhythmicStaff = "RhythmicStaff_percussion"
\with { instrumentName = "Percussion" }
<<
  \percussionMusic
>>
\new PianoStaff \with { instrumentName = "Piano" }
<<
  \new Staff { \pianoRHMusic }
  \new Staff { \pianoLHMusic }
>>
\new ChoirStaff = "ChoirStaff_choir" <<
  \new Staff = "Staff_soprano" \with { instrumentName = "Soprano" }
  \new Voice = "soprano"
  \sopranoMusic

  \new Lyrics \lyricsto "soprano" { \sopranoLyrics }
  \new GrandStaff = "GrandStaff_altos"
  \with { \accepts Lyrics } <<
    \new Staff = "Staff_altoI"  \with { instrumentName = "Alto I" }
    \new Voice = "altoI"
    \altoIMusic

    \new Lyrics \lyricsto "altoI" { \altoILyrics }
    \new Staff = "Staff_altoII" \with { instrumentName = "Alto II" }
    \new Voice = "altoII"
    \altoIIMusic

    \new Lyrics \lyricsto "altoII" { \altoIILyrics }
  >>
```

```
      \new Staff = "Staff_tenor" \with { instrumentName = "Tenor" }
        \new Voice = "tenor"
        \tenorMusic

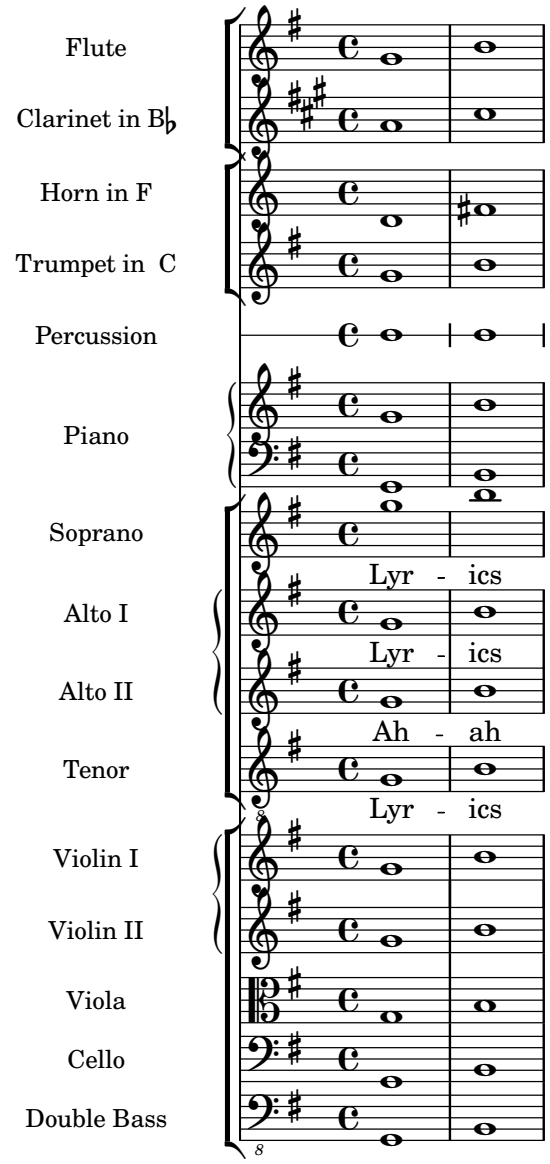
      \new Lyrics \lyricsto "tenor" { \tenorLyrics }
    >>
    \new StaffGroup = "StaffGroup_strings" <<
      \new GrandStaff = "GrandStaff_violins" <<
        \new Staff = "Staff_violinI" \with { instrumentName = "Violin I" }
        \violinIMusic

        \new Staff = "Staff_violinII" \with { instrumentName = "Violin II" }
        \violinIIMusic
      >>

      \new Staff = "Staff_viola" \with { instrumentName = "Viola" }
      \violaMusic

      \new Staff = "Staff_cello" \with { instrumentName = "Cello" }
      \celloMusic

      \new Staff = "Staff_bass" \with { instrumentName = "Double Bass" }
      \bassMusic
    >>
  >>
  \layout { }
}
```



Modello per pianoforte (semplice)

Ecco un comune doppio pentagramma per pianoforte con un po' di note.

```
upper = \relative c'' {
  \clef treble
  \key c \major
  \time 4/4
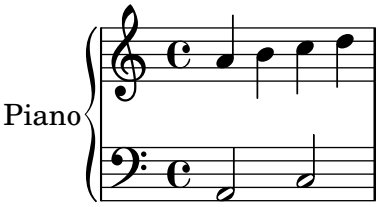
  a4 b c d
}

lower = \relative c {
  \clef bass
  \key c \major
  \time 4/4

  a2 c
}

\score {
```

```
  \new PianoStaff \with { instrumentName = "Piano" }
  <<
    \new Staff = "upper" \upper
    \new Staff = "lower" \lower
  >>
  \layout { }
  \midi { }
}
```



Modello per pianoforte con testo al centro

Invece di destinare un rigo a parte alla linea melodica e al suo testo, è possibile collocare il testo al centro di un doppio pentagramma per pianoforte.

```
upper = \relative c'' {
  \clef treble
  \key c \major
  \time 4/4

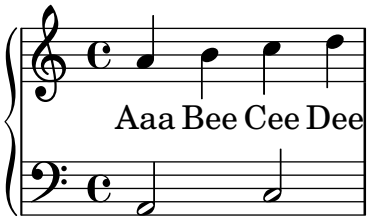
  a4 b c d
}

lower = \relative c {
  \clef bass
  \key c \major
  \time 4/4

  a2 c
}

text = \lyricmode {
  Aaa Bee Cee Dee
}

\score {
  \new PianoStaff <<
    \new Staff = upper { \new Voice = "singer" \upper }
    \new Lyrics \lyricsto "singer" \text
    \new Staff = lower { \lower }
  >>
  \layout { }
  \midi { }
}
```



Modello per pianoforte con melodia e testo

Ecco un tipico formato per canzoni: un rigo con linea melodica e testo, e sotto l'accompagnamento per pianoforte.

```
melody = \relative c'' {
  \clef treble
  \key c \major
  \time 4/4

  a b c d
}

text = \lyricmode {
  Aaa Bee Cee Dee
}

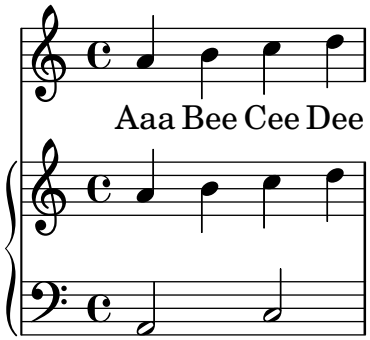
upper = \relative c'' {
  \clef treble
  \key c \major
  \time 4/4

  a4 b c d
}

lower = \relative c {
  \clef bass
  \key c \major
  \time 4/4

  a2 c
}

\score {
  <<
    \new Voice = "mel" { \autoBeamOff \melody }
    \new Lyrics \lyricsto mel \text
    \new PianoStaff <<
      \new Staff = "upper" \upper
      \new Staff = "lower" \lower
    >>
  >>
  \layout {
    \context { \Staff \RemoveEmptyStaves }
  }
  \midi { }
}
```
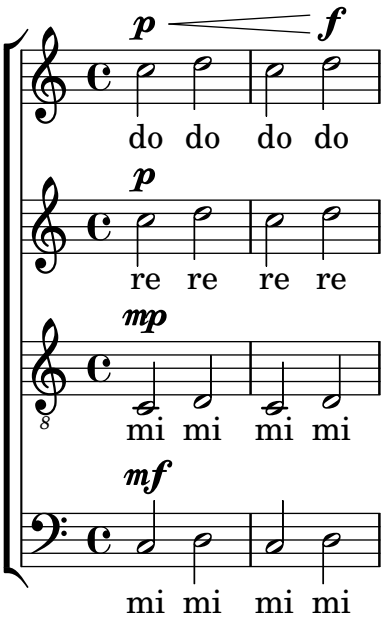


Modello per coro SATB - quattro righi

Modello per coro SATB (quattro righi)

```
global = {
  \key c \major
  \time 4/4
  \dynamicUp
}
sopranonotes = \relative c'' {
  c2 \p \< d c d \f
}
sopranowords = \lyricmode { do do do do }
altonotes = \relative c'' {
  c2\p d c d
}
altowords = \lyricmode { re re re re }
tenornotes = {
  \clef "G_8"
  c2\mp d c d
}
tenorwords = \lyricmode { mi mi mi mi }
bassnotes = {
  \clef bass
  c2\mf d c d
}
basswords = \lyricmode { mi mi mi mi }

\score {
  \new ChoirStaff <<
    \new Staff <<
      \new Voice = "soprano" <<
        \global
        \sopranonotes
      >>
      \new Lyrics \lyricsto "soprano" \sopranowords
    >>
    \new Staff <<
      \new Voice = "alto" <<
        \global
        \altonotes
      >>
      \new Lyrics \lyricsto "alto" \altowords
    >>
    \new Staff <<
```

```
      \new Voice = "tenor" <<
        \global
        \tenornotes
      >>
      \new Lyrics \lyricsto "tenor" \tenorwords
    >>
    \new Staff <<
      \new Voice = "bass" <<
        \global
        \bassnotes
      >>
      \new Lyrics \lyricsto "bass" \basswords
    >>
  >>
}
```



Score for diatonic accordion

A template to write a score for a diatonic accordion.

- There is a horizontal staff indicating if the accordion must be pushed (thick line) or pulled (thin line)

- There is a small rhythmic staff with lyrics that describes the bass buttons to press. The bar lines are made from gridlines

- The tabulator staff for diatonic accordions shows the geographic position of the buttons and not (as for every other instrument) the pitch of the notes; the keys on the melody-side of the accordion are placed in three columns and about 12 rows

In the tabulator staff notation the outermost column is described with notes between lines, the innermost column is described with notes between lines and a cross as accidental, and the middle column is described with notes on a line, whereby the row in the middle is represented on the middle line in the staff.

Some words to transpose piano notes to the diatonic accordion:

1. Every diatonic accordion is built for some keys only (for example, for the keys of C major and F major), so it is important to transpose a piano melody to match one of these keys.

Transpose the source code, not only the output because this code is required later on to translate it once more to the tabulator staff. This can be done with the command `displayLilyMusic`.

2. You have to alternate the push- and pull-direction of the accordion regularly. If the player has a too long part to pull the accordion gets broken. On the other hand, some harmonies are only available in one direction. Considering this, decide which parts of the melody are the push-parts and which the pull-parts.

3. For each pull- or push-part translate the piano notes to the according tabulature representation.

```
verse = \lyricmode { Wie gross bist du! Wie gross bist du! }

harmonies = \new ChordNames \chordmode {
  \germanChords
  \set chordChanges = ##t
  bes8 bes8 bes8
  es2 f
  bes1
}

NoStem = { \hide Stem }
NoNoteHead = \hide NoteHead
ZeroBeam = \override Beam.positions = #'(0 . 0)

staffTabLine = \new Staff \with {
  \remove "Time_signature_engraver"
  \remove "Clef_engraver"
} {
  \override Staff.StaffSymbol.line-positions = #'(0)
  % Shows one horizontal line. The vertical line
  %  (simulating a bar-line) is simulated with a gridline
  \set Staff.midiInstrument = #"choir aahs"
  \key c \major
  \relative c''
  {
    % disable the following line to see the noteheads while writing the song
    \NoNoteHead
    \override NoteHead.no-ledgers = ##t

    % The beam between 8th-notes is used to draw the push-line
    %How to fast write the push-lines:
    %  1. write repeatedly 'c c c c c c c c |' for the whole length of the song
    %  2. uncomment the line \NoNoteHead
    %  3. compile
    %  4. Mark the positions on which push/pull changes.
    %     In the score-picture click on the position
    %        the push- or pull-part starts
    %           (on the noteHead, the cursor will change to a hand-icon).
    %     The cursor in the source code will jump just at this position.
    %   a) If a push-part starts there, replace the 'c' by an 'e['
    %   b) If a pull-part starts there, replace the 'c' by an 's'
    %  5. Switch into 'overwrite-mode' by pressing the 'ins' key.
    %  6. For the pull-parts overwrite the 'c' with 's'
```

```
    %  7. For every push-part replace the last 'c' with 'e]'
    %        8. Switch into 'insert-mode' again
    %  9. At last it should look like e.g.
    %        (s s e[ c | c c c c c c c c | c c c c c c e] s s)
    % 10. re-enable the line \NoNoteHead
    \autoBeamOff
    \ZeroBeam
    s8 s s e[ c c c c c c e] | s s s s s
  }
}

% Accordion melody in tabulator score
% 1. Place a copy of the piano melody below
% 2. Separate piano melody into pull- and push-parts
%      according to the staffTabLine you've already made
% 3. For each line: Double the line. Remark the 1st one
%      (Keeps unchanged as reference) and then change the second
%      line using the transformation paper
%    or the macros 'conv2diaton push.bsh' and 'conv2diaton pull.bsh'
% Tips:
% - In jEdit Search & Replace mark the Option 'Keep Dialog'

AccordionTabTwoCBesDur = {
  % pull 1
  %<f' bes'>8 <f' a'>8 <d' bes'>8 |
  <g'' a''>8 <g'' b''>8 <e'' a''>8 |
  % push 2
  %<g' c''>4 <f' d''> <g' ees''> <f' a'> |
  <g'' a''>4 <d'' eisis''> <g'' bisis''> <d'' f''> |
  % pull 3
  % <f' bes'>2 r8 }
  <g'' a''>2 r8 }

AccordionTab= { \dynamicUp
  % 1. Place a copy of the piano melody above
  % 2. Separate piano melody into pull- and push-parts
  %      according to the staffTabLine you've already made
  % 3. For each line: Double the line. Remark the 1st one
  %      (Keeps unchanged as reference) and then
  %      change the second line using the transformation paper
  % Tips:
  % - In jEdit Search & Replace mark the Option 'Keep Dialog'
  % -
  \AccordionTabTwoCBesDur
}



\layout {
  \context {
    \Score
    % The vertical line (simulating a bar-line) in
```

```
    % the staffBassRhythm is a gridline
    \consists "Grid_line_span_engraver"
  }
  \context {
    \Staff
    \consists "Grid_point_engraver"
    gridInterval = #(ly:make-moment 4/4) % 4/4 - tact. How many beats per bar
    % The following line has to be adjusted O-F-T-E-N.
    \override GridPoint.Y-extent = #'(-2 . -21)
  }
  \context {
    \ChoirStaff
    \remove "System_start_delimiter_engraver"
  }
}

staffVoice = \new Staff = astaffvoice  {
  \time 4/4
  \set Staff.instrumentName = "Voice"
  \set Staff.midiInstrument = "voice oohs"
  \key bes \major
  \partial 8*3
  \clef treble
  {
    \context Voice = "melodyVoi"
    {
      <f' bes'>8 <f' a'>8 <d' bes'>8 |
      <g' c''>4 <f' d''> <g' es''> <f' a'> |
      <f' bes'>2 r8
    }
    \bar "|."
  }
}

staffAccordionMel =
\new Staff  \with { \remove "Clef_engraver" } {
  \accidentalStyle forget %Set the accidentals (Vorzeichen) for each note,
  %do not remember them for the rest of the measure.
  \time 4/4
  \set Staff.instrumentName="Accordion"
  \set Staff.midiInstrument="voice oohs"
  \key c \major
  \clef treble
  { \AccordionTab \bar "|." }
}

AltOn =
#(define-music-function (mag) (number?)
  #{ \override Stem.length = #(* 7.0 mag)
      \override NoteHead.font-size =
#(inexact->exact (* (/ 6.0 (log 2.0)) (log mag))) #})
```
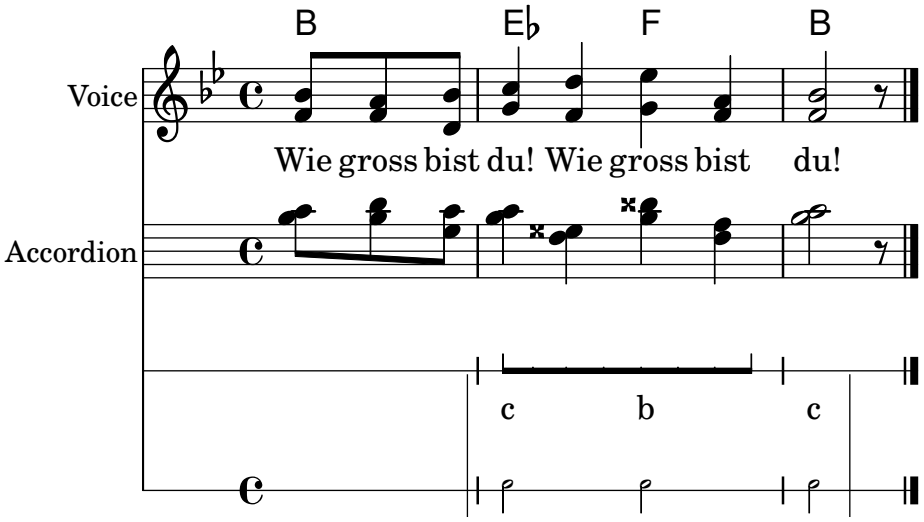
```
AltOff = {
  \revert Stem.length
  \revert NoteHead.font-size
}

BassRhythm = {s4 s8 | c2 c2 | c2 s8 }
LyricBassRhythmI=  \lyricmode { c b | c }

staffBassRhythm =
\new Staff = staffbass \with { \remove "Clef_engraver" } {
  % This is not a RhythmicStaff  because it must be possible to append lyrics.

  \override Score.GridLine.extra-offset = #'( 13.0 . 0.0 ) % x.y
  \override Staff.StaffSymbol.line-positions = #'( 0 )
  % Shows one horizontal line. The vertical line
  %  (simulating a bar-line) is simulated by a grid
  % Search for 'grid' in this page to find all related functions
  \time 4/4
  {
    \context Voice = "VoiceBassRhythm"
    \stemDown \AltOn #0.6
    \relative c''
    {
      \BassRhythm
    }
    \AltOff
    \bar "|."
  }
}

\score {
  \new ChoirStaff <<
    \harmonies
    \staffVoice
    \context Lyrics = "lmelodyVoi"
      \with { alignBelowContext = astaffvoice }
      \lyricsto melodyVoi \verse
    \staffAccordionMel
    \staffTabLine
    \staffBassRhythm
    \context Lyrics = "lBassRhythmAboveI"
      \with { alignAboveContext = staffbass }
      \lyricsto VoiceBassRhythm \LyricBassRhythmI
  >>
}
```



Modello di rigo singolo con note, testo e accordi

Ecco il modello di un comune spartito semplificato (lead sheet): include linea melodica, testo vocale e sigle degli accordi.

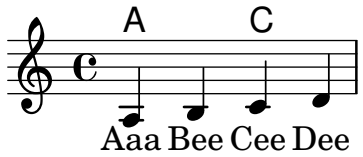
```
melody = \relative c' {
  \clef treble
  \key c \major
  \time 4/4

  a4 b c d
}

text = \lyricmode {
  Aaa Bee Cee Dee
}

harmonies = \chordmode {
  a2 c
}

\score {
  <<
    \new ChordNames {
      \set chordChanges = ##t
      \harmonies
    }
    \new Voice = "one" { \autoBeamOff \melody }
    \new Lyrics \lyricsto "one" \text
  >>
  \layout { }
  \midi { }
}
```



Single staff template with notes, lyrics, chords and frets

Here is a simple lead sheet template with melody, lyrics, chords and fret diagrams.

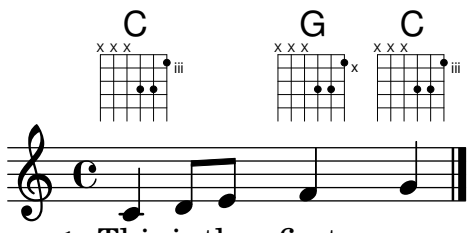
```
verseI = \lyricmode {
  \set stanza = #"1."
  This is the first verse
}

verseII = \lyricmode {
  \set stanza = #"2."
  This is the second verse.
}

theChords = \chordmode {
  % insert chords for chordnames and fretboards here
  c2 g4 c
}

staffMelody = \relative c' {
   \key c \major
   \clef treble
   % Type notes for melody here
   c4 d8 e f4 g
   \bar "|."
}

\score {
  <<
    \context ChordNames { \theChords }
    \context FretBoards { \theChords }
    \new Staff {
      \context Voice = "voiceMelody" { \staffMelody }
    }
    \new Lyrics = "lyricsI" {
      \lyricsto "voiceMelody" \verseI
    }
    \new Lyrics = "lyricsII" {
      \lyricsto "voiceMelody" \verseII
    }
  >>
  \layout { }
  \midi { }
}
```



1. This is the first verse
2. This is the second verse.

Modello di rigo singolo con note e accordi
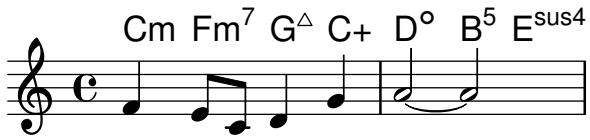
Vuoi preparare uno spartito semplificato (lead sheet) con melodia e accordi? La tua ricerca è finita!

```
melody = \relative c' {
  \clef treble
  \key c \major
  \time 4/4

  f4 e8[ c] d4 g
  a2 ~ a
}

harmonies = \chordmode {
  c4:m f:min7 g:maj c:aug
  d2:dim b4:5 e:sus
}

\score {
  <<
    \new ChordNames {
      \set chordChanges = ##t
      \harmonies
    }
    \new Staff \melody
  >>
  \layout{ }
  \midi { }
}
```



Modello di rigo singolo con note e testo

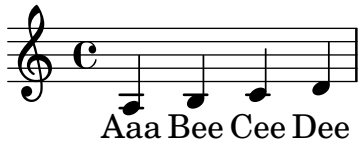
Questo piccolo modello presenta una semplice linea melodica con un testo. Copialo e incollalo, aggiungi le note e le parole. Questo esempio disabilita la disposizione automatica delle travature, come è consuetudine per le parti vocali. Per usare la disposizione automatica delle travature, cambia o commenta la relativa linea di codice.

```
melody = \relative c' {
  \clef treble
  \key c \major
  \time 4/4

  a4 b c d
}

text = \lyricmode {
  Aaa Bee Cee Dee
}
```

```
\score{
  <<
    \new Voice = "one" {
      \autoBeamOff
      \melody
    }
    \new Lyrics \lyricsto "one" \text
  >>
  \layout { }
  \midi { }
}
```



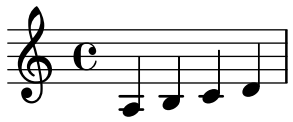
Modello di rigo singolo con solo note

Questo modello molto semplice mette a disposizione un rigo con delle note ed è quindi adatto per uno strumento non accompagnato o per un frammento melodico. Copialo e incollalo in un file, aggiungi le note e hai finito!

```
melody = \relative c' {
  \clef treble
  \key c \major
  \time 4/4

  a4 b c d
}

\score {
  \new Staff \melody
  \layout { }
  \midi { }
}
```



Modello per quartetto d'archi (semplice)

Questo modello presenta un semplice quartetto d'archi. Impiega anche una sezione `\global` per definire il tempo e l'armatura di chiave.

```
global= {
  \time 4/4
  \key c \major
}

violinOne = \new Voice \relative c'' {
  c2 d
  e1
```

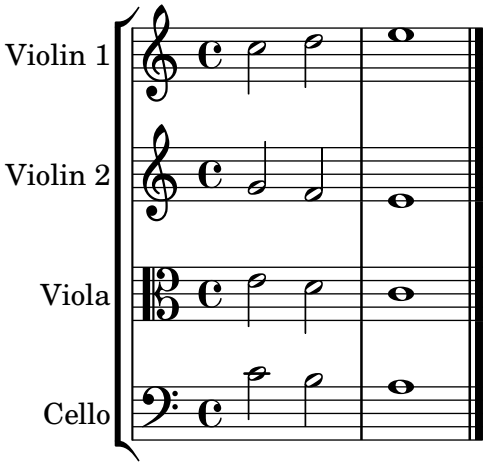
```
  \bar "|."
}

violinTwo = \new Voice \relative c'' {
  g2 f
  e1
  \bar "|."
}

viola = \new Voice \relative c' {
  \clef alto
  e2 d
  c1
  \bar "|."
}

cello = \new Voice \relative c' {
  \clef bass
  c2 b
  a1
  \bar "|."
}

\score {
  \new StaffGroup <<
    \new Staff \with { instrumentName = "Violin 1" }
    << \global \violinOne >>
    \new Staff \with { instrumentName = "Violin 2" }
    << \global \violinTwo >>
    \new Staff \with { instrumentName = "Viola" }
    << \global \viola >>
    \new Staff \with { instrumentName = "Cello" }
    << \global \cello >>
  >>
  \layout { }
  \midi { }
}
```



Modello per quartetto d'archi con parti separate

Il frammento di codice del "Modello per quartetto d'archi" crea un bel quartetto, ma cosa fare se si ha bisogno di creare le singole parti? Questo nuovo modello mostra come usare la funzionalità `\tag` per dividere facilmente un pezzo in parti staccate.

Occorre dividere questo modello in file separati; i nomi dei file sono indicati nei commenti all'inizio di ogni file. `piece.ly` contiene tutte le definizioni musicali. Gli altri file – `score.ly`, `vn1.ly`, `vn2.ly`, `vla.ly` e `vlc.ly` – creano ciascuna parte.

Non dimenticare di togliere i commenti quando usi i file separati!

```
%%%%% piece.ly
%%%%% (This is the global definitions file)

global= {
  \time 4/4
  \key c \major
}


Violinone = \new Voice {
  \relative c'' {
    c2 d e1
    \bar "|."
  }
}


Violintwo = \new Voice {
  \relative c'' {
    g2 f e1
    \bar "|."
  }
}


Viola = \new Voice {
  \relative c' {
    \clef alto
    e2 d c1
    \bar "|."
  }
}


Cello = \new Voice {
  \relative c' {
    \clef bass
    c2 b a1
    \bar "|."
  }
}
```

```
music = {
  <<
    \tag #'score \tag #'vn1
    \new Staff \with { instrumentName = "Violin 1" }
    << \global \Violinone >>

    \tag #'score \tag #'vn2
    \new Staff \with { instrumentName = "Violin 2" }
    << \global \Violintwo>>

    \tag #'score \tag #'vla
    \new Staff \with { instrumentName = "Viola" }
    << \global \Viola>>

    \tag #'score \tag #'vlc
    \new Staff \with { instrumentName = "Cello" }
    << \global \Cello >>
  >>
}

% These are the other files you need to save on your computer

% score.ly
% (This is the main file)

% uncomment the line below when using a separate file
%\include "piece.ly"

#(set-global-staff-size 14)

\score {
  \new StaffGroup \keepWithTag #'score \music
  \layout { }
  \midi { }
}


%{ Uncomment this block when using separate files

% vn1.ly
% (This is the Violin 1 part file)

\include "piece.ly"
\score {
  \keepWithTag #'vn1 \music
  \layout { }
}


% vn2.ly
% (This is the Violin 2 part file)
```

```
\include "piece.ly"
\score {
  \keepWithTag #'vn2 \music
  \layout { }
}

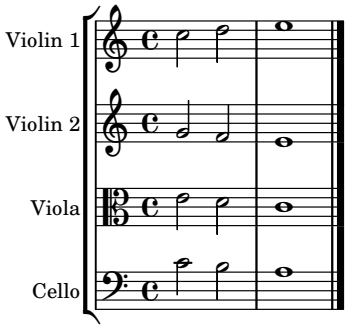

% vla.ly
% (This is the Viola part file)

\include "piece.ly"
\score {
  \keepWithTag #'vla \music
  \layout { }
}


% vlc.ly
% (This is the Cello part file)

\include "piece.ly"
\score {
  \keepWithTag #'vlc \music
  \layout { }
}

%}
```



Modello per gruppo vocale con riduzione per pianoforte automatica

Questo modello aggiunge una riduzione automatica per pianoforte alla tipica partitura vocale SATB illustrata in “Modello per complesso vocale”. Si dimostra così uno dei punti di forza di LilyPond – è possibile usare una definizione musicale più di una volta. Qualsiasi modifica venga fatta alle note delle voci (ad esempio, `tenorMusic`) verrà applicata anche alla riduzione per pianoforte.

```
\paper {
  top-system-spacing.basic-distance = #10
  score-system-spacing.basic-distance = #20
  system-system-spacing.basic-distance = #20
  last-bottom-spacing.basic-distance = #10
}
```

```
global = {
  \key c \major
  \time 4/4
}

sopMusic = \relative {
  c''4 c c8[( b)] c4
}
sopWords = \lyricmode {
  hi hi hi hi
}

altoMusic = \relative {
  e'4 f d e
}
altoWords =\lyricmode {
  ha ha ha ha
}

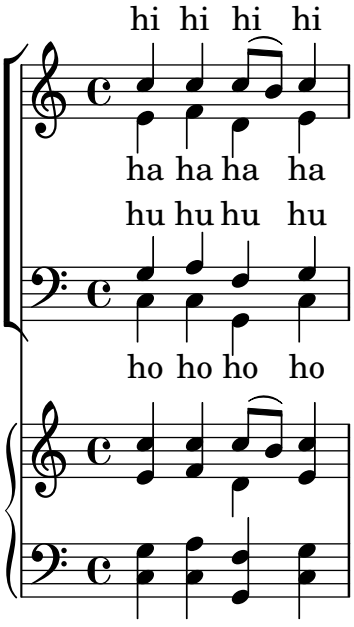
tenorMusic = \relative {
  g4 a f g
}
tenorWords = \lyricmode {
  hu hu hu hu
}

bassMusic = \relative {
  c4 c g c
}
bassWords = \lyricmode {
  ho ho ho ho
}

\score {
  <<
    \new ChoirStaff <<
      \new Lyrics = "sopranos" \with {
        % This is needed for lyrics above a staff
        \override VerticalAxisGroup.staff-affinity = #DOWN
      }
      \new Staff = "women" <<
        \new Voice = "sopranos" { \voiceOne << \global \sopMusic >> }
        \new Voice = "altos" { \voiceTwo << \global \altoMusic >> }
      >>
      \new Lyrics = "altos"
      \new Lyrics = "tenors" \with {
        % This is needed for lyrics above a staff
        \override VerticalAxisGroup.staff-affinity = #DOWN
      }

      \new Staff = "men" <<
```

```
        \clef bass
        \new Voice = "tenors" { \voiceOne << \global \tenorMusic >> }
        \new Voice = "basses" { \voiceTwo << \global \bassMusic >> }
      >>
      \new Lyrics = "basses"
      \context Lyrics = "sopranos" \lyricsto "sopranos" \sopWords
      \context Lyrics = "altos" \lyricsto "altos" \altoWords
      \context Lyrics = "tenors" \lyricsto "tenors" \tenorWords
      \context Lyrics = "basses" \lyricsto "basses" \bassWords
    >>
    \new PianoStaff <<
      \new Staff <<
        \set Staff.printPartCombineTexts = ##f
        \partCombine
        << \global \sopMusic >>
        << \global \altoMusic >>
      >>
      \new Staff <<
        \clef bass
        \set Staff.printPartCombineTexts = ##f
        \partCombine
        << \global \tenorMusic >>
        << \global \bassMusic >>
      >>
    >>
  >>
}
```



Modello per gruppo vocale con testo allineato sotto e sopra i righi

Questo modello è fondamentalmente analogo al semplice modello “Complesso vocale”, con l’unica differenza che qui tutti i versi del testo sono posizionati usando `alignAboveContext` e `alignBelowContext`.

```
global = {
  \key c \major
  \time 4/4
}

sopMusic = \relative c'' {
  c4 c c8[( b)] c4
}
sopWords = \lyricmode {
  hi hi hi hi
}

altoMusic = \relative c' {
  e4 f d e
}
altoWords = \lyricmode {
  ha ha ha ha
}
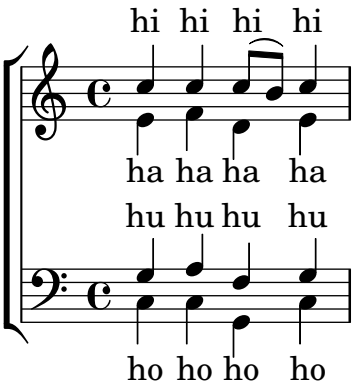
tenorMusic = \relative c' {
  g4 a f g
}
tenorWords = \lyricmode {
  hu hu hu hu
}

bassMusic = \relative c {
  c4 c g c
}
bassWords = \lyricmode {
  ho ho ho ho
}

\score {
  \new ChoirStaff <<
    \new Staff = "women" <<
      \new Voice = "sopranos" { \voiceOne << \global \sopMusic >> }
      \new Voice = "altos" { \voiceTwo << \global \altoMusic >> }
    >>
    \new Lyrics \with { alignAboveContext = #"women" }
      \lyricsto "sopranos" \sopWords
    \new Lyrics \with { alignBelowContext = #"women" }
      \lyricsto "altos" \altoWords
    % we could remove the line about this with the line below, since
    % we want the alto lyrics to be below the alto Voice anyway.
    % \new Lyrics \lyricsto "altos" \altoWords

    \new Staff = "men" <<
      \clef bass
      \new Voice = "tenors" { \voiceOne << \global \tenorMusic >> }
      \new Voice = "basses" { \voiceTwo << \global \bassMusic >> }
    >>
```

```
    \new Lyrics \with { alignAboveContext = #"men" }
      \lyricsto "tenors" \tenorWords
    \new Lyrics \with { alignBelowContext = #"men" }
      \lyricsto "basses" \bassWords
    % again, we could replace the line above this with the line below.
    % \new Lyrics \lyricsto "basses" \bassWords
  >>
}
```



Modello per gruppo vocale con strofa e ritornello

Questo modello crea una partitura che inizia con una sezione solistica e prosegue in un ritornello a due voci. Illustra anche l'uso delle pause spaziatrici all'interno della variabile `\global` per definire i cambi di tempo (e altri elementi comuni a tutte le parti) nel corso di tutta la partitura.

```
global = {
  \key g \major

  % verse
  \time 3/4
  s2.*2
  \break

  % refrain
  \time 2/4
  s2*2
  \bar "|."
}

SoloNotes = \relative g' {
  \clef "treble"

  % verse
  g4 g g |
  b4 b b |

  % refrain
  R2*2 |
}

SoloLyrics = \lyricmode {
```

```
  One two three |
  four five six |
}

SopranoNotes = \relative c'' {
  \clef "treble"

  % verse
  R2.*2 |

  % refrain
  c4 c |
  g4 g |
}

SopranoLyrics = \lyricmode {
  la la |
  la la |
}

BassNotes = \relative c {
  \clef "bass"

  % verse
  R2.*2 |

  % refrain
  c4 e |
  d4 d |
}

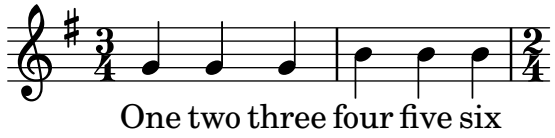
BassLyrics = \lyricmode {
  dum dum |
  dum dum |
}
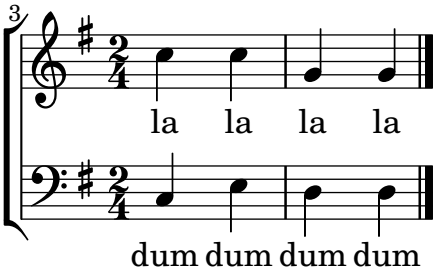
\score {
  <<
    \new Voice = "SoloVoice" << \global \SoloNotes >>
    \new Lyrics \lyricsto "SoloVoice" \SoloLyrics

    \new ChoirStaff <<
      \new Voice = "SopranoVoice" << \global \SopranoNotes >>
      \new Lyrics \lyricsto "SopranoVoice" \SopranoLyrics

      \new Voice = "BassVoice" << \global \BassNotes >>
      \new Lyrics \lyricsto "BassVoice" \BassLyrics
    >>
  >>
  \layout {
    ragged-right = ##t
    \context { \Staff
```

```
      % these lines prevent empty staves from being printed
      \RemoveEmptyStaves
      \override VerticalAxisGroup.remove-first = ##t
    }
  }
}
```





Modello per complesso vocale

Ecco una tipica partitura corale a quattro parti, SATB. Se il complesso è più ampio, è spesso comodo scrivere gli elementi comuni in un'unica sezione, che verrà poi inclusa in tutte le parti. Ad esempio, l'indicazione di tempo e l'armatura di chiave sono quasi sempre le stesse per tutte le parti. Come nel modello dell'"Inno", le quattro voci sono ripartite in due soli righi.

```
\paper {
  top-system-spacing.basic-distance = #10
  score-system-spacing.basic-distance = #20
  system-system-spacing.basic-distance = #20
  last-bottom-spacing.basic-distance = #10
}

global = {
  \key c \major
  \time 4/4
}

sopMusic = \relative {
  c''4 c c8[( b)] c4
}
sopWords = \lyricmode {
  hi hi hi hi
}
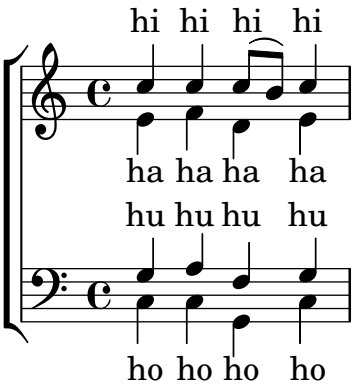
altoMusic = \relative {
  e'4 f d e
}
altoWords = \lyricmode {
  ha ha ha ha
}
```

```
tenorMusic = \relative {
  g4 a f g
}
tenorWords = \lyricmode {
  hu hu hu hu
}

bassMusic = \relative {
  c4 c g c
}
bassWords = \lyricmode {
  ho ho ho ho
}

\score {
  \new ChoirStaff <<
    \new Lyrics = "sopranos" \with {
      % this is needed for lyrics above a staff
      \override VerticalAxisGroup.staff-affinity = #DOWN
    }
    \new Staff = "women" <<
      \new Voice = "sopranos" {
        \voiceOne
        << \global \sopMusic >>
      }
      \new Voice = "altos" {
        \voiceTwo
        << \global \altoMusic >>
      }
    >>
    \new Lyrics = "altos"
    \new Lyrics = "tenors" \with {
      % this is needed for lyrics above a staff
      \override VerticalAxisGroup.staff-affinity = #DOWN
    }
    \new Staff = "men" <<
      \clef bass
      \new Voice = "tenors" {
        \voiceOne
        << \global \tenorMusic >>
      }
      \new Voice = "basses" {
        \voiceTwo << \global \bassMusic >>
      }
    >>
    \new Lyrics = "basses"
    \context Lyrics = "sopranos" \lyricsto "sopranos" \sopWords
    \context Lyrics = "altos" \lyricsto "altos" \altoWords
    \context Lyrics = "tenors" \lyricsto "tenors" \tenorWords
    \context Lyrics = "basses" \lyricsto "basses" \bassWords
  >>
```

```
}
```


hi hi hi hi
ha ha ha ha
hu hu hu hu
ho ho ho ho