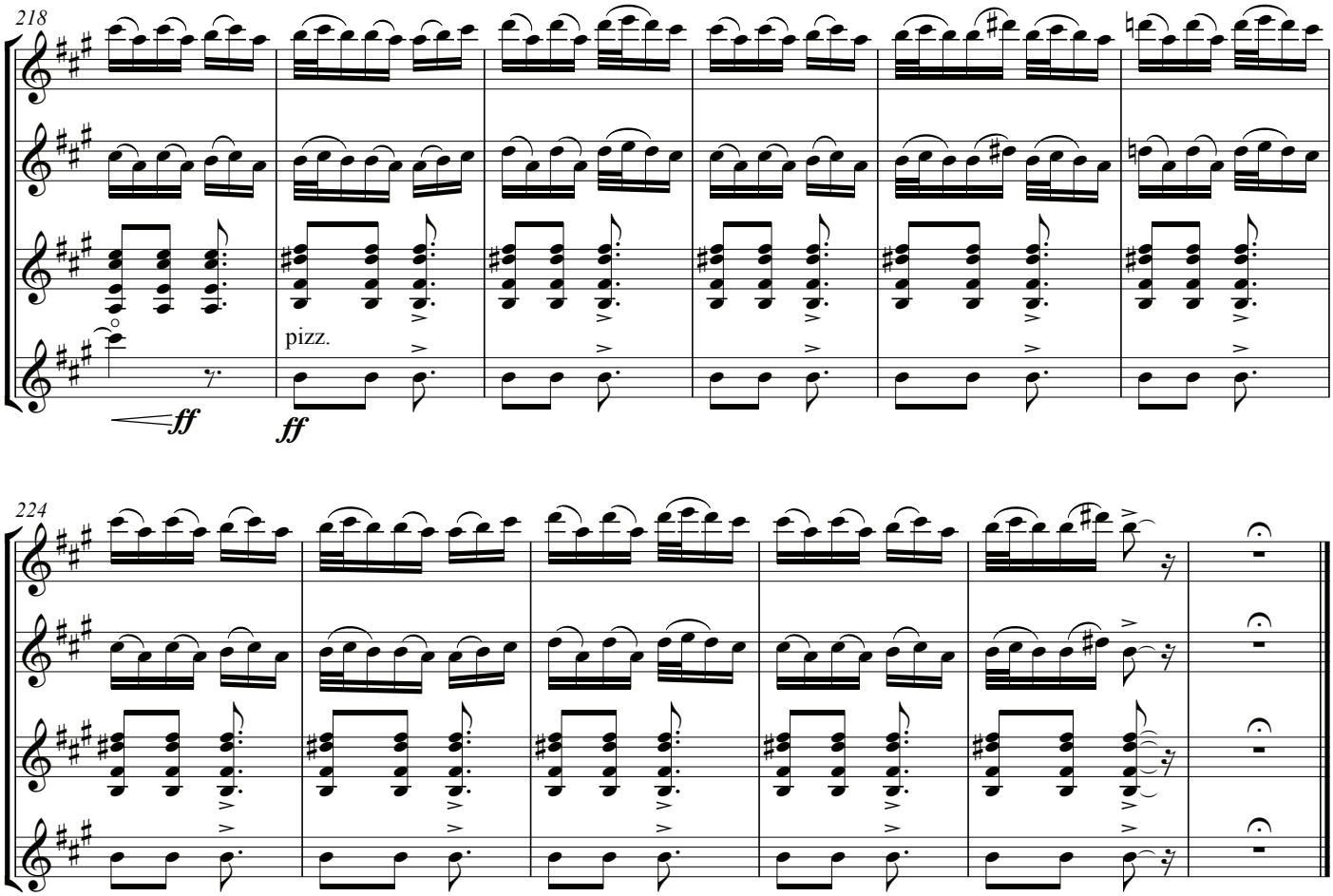
TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI
VICTORIA
UNIVERSITY OF WELLINGTON

NEW ZEALAND SCHOOL OF MUSIC | TE KŌKĪ

GUIDE TO MUSIC NOTATION 2019



Extract from Jack Body's *Three Transcriptions* for string quartet. © 2015 Wai-te-ata Music Press, reproduced by permission.

NZSM GUIDE TO MUSIC NOTATION 2018

Updated 21 February 2018, Michael Norris

INTRODUCTION: WHY THIS GUIDE?

Imagine that you're at the first rehearsal of a new orchestral work you've just spent the last five months writing. Your new creation is about to come to life for the first time. But just before the conductor gives the downbeat, a hand goes up in the flutes: "Um, there are too many notes in bar 7!". Then another hand in the violins: "When am I supposed to move to *arco* playing?". Soon, half a dozen hands have gone up, all querying ambiguities and errors in their parts. Pretty soon, instead of rehearsing your piece, 20 minutes has been spent correcting the errors and fixing the ambiguities. In fact, the conductor stops the rehearsal and tells you to go and fix your score. **I cannot stress enough how much you want to avoid this scenario.**

In a recent survey of a NZ community orchestra, **90% of players said that having a well-notated part is an important factor in their willingness to play a new work**, compared with only 10% who said knowing the composer was important, 50% who said being asked to make 'sounds they liked' was important, and 70% who said having the work written with the available rehearsal time in mind was important. To make matters worse, music notation software such as Sibelius or Finale will rarely correct notation errors, and will play back poorly notated music without complaint, **giving you a completely false sense of security**.

The advice contained in this guide is a distillation of the fundamentals of professional notational practice. It will, if followed, make your first rehearsal a joy rather than a nightmare. It sets out notational advice gleaned from more than 20 years' experience in composing, performing, sitting through rehearsals, and grading hundreds of compositions. I wrote this guide for anyone who wants to reach a professional level of composing for performers. Whether for concert hall or film scoring stage, you need to know how to notate music in the most efficient and practical way possible.

If you're serious about composing, start collecting model scores. I recommend any scores by Faber Music, or any of the new Wai-te-ata Music Press editions. For more information on typesetting, you should read Elaine Gould's *Behind Bars*, a 'bible' for those who want to go beyond the basic information here. — MN

PRESENTATION BASICS

HANDWRITING vs TYPESETTING

- Scores must be either **neatly handwritten and photocopied** or **computer typeset**.
- Do not mix handwriting and computer typesetting on the same score.
- **Handwritten scores will only be accepted as a photocopy**. Do NOT submit originals: NO PENCIL OR BIRO on your submitted assignment — these will NOT be marked.
- For handwritten scores, it's best to use a **thin, black, felt-nibbed pen**.
- For computer-set scores, use **dedicated professional typesetting software** such as Sibelius, Dorico or Finale; programs such as Cubase, Logic, Noteflight, ScoreCloud, Crescendo etc, often look amateurish and/or cannot achieve more advanced notational standards.
- For printing, use a **good-quality laser printer**, not an inkjet. Good-quality, double-siding laser printers can be had for under $100 these days — check pricespy.co.nz

REQUIRED ELEMENTS

- **Title** in large type, top centre (a real title, not just 'CMPO 101 Minor Assignment 1')
- **Your name**, top right (if an arrangement, write 'Claude Debussy arr. Joe Bloggs')
- For coursework, you must state the **course title** and **assignment name** (e.g. CMPO 101 Minor Assignment 1 — this can be at the bottom of the page, or on a separate title page)
- **Date** of composition/orchestration, which can be part of a © notice if appropriate
- **Tempo/Time indication**: All works must indicate some kind of 'time scale', normally by using a metronome mark (♩=80) with optional descriptor (*Moderato*). **Never** use: '84 BPM', 𝐂 or 𝐂
  - Ensure **the metronome mark matches the time signature**: i.e. in 2/4, 3/4, 4/4, etc, the metronome mark will be ♩=, but in compound time (e.g. 6/8) the mark will be ♩.=
  - If using **proportional/time-space notation**, the duration of sections must be clearly marked. Use **notehead extenders** or **beam extensions** to differentiate sustained from short notes.

Title and instrumentation

Three Canzonettas

for Violin and Viola

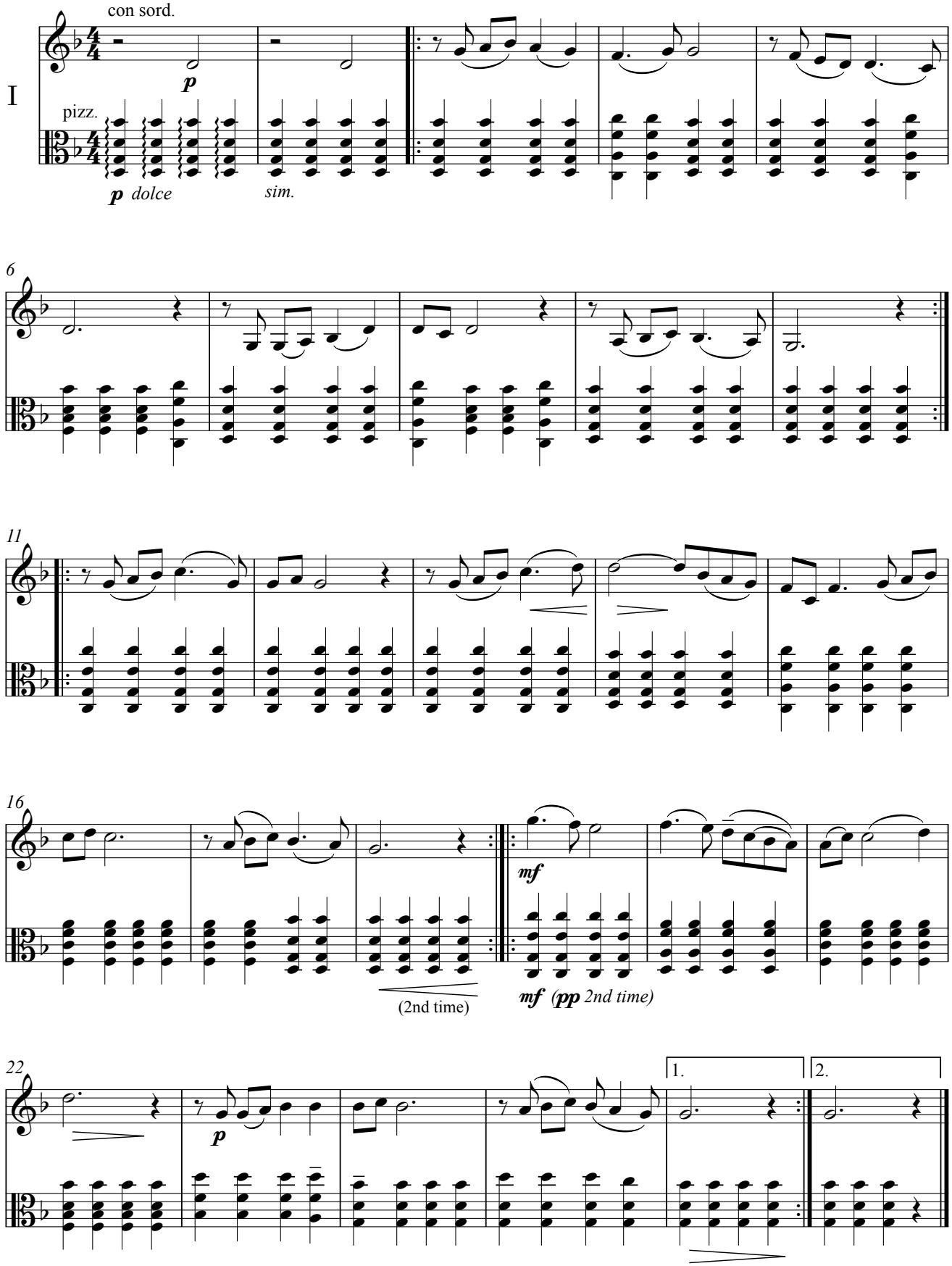
Composer's name

DOUGLAS LILBURN

Tempo marking and MM

Semplice (♩ = c.66)

con sord.



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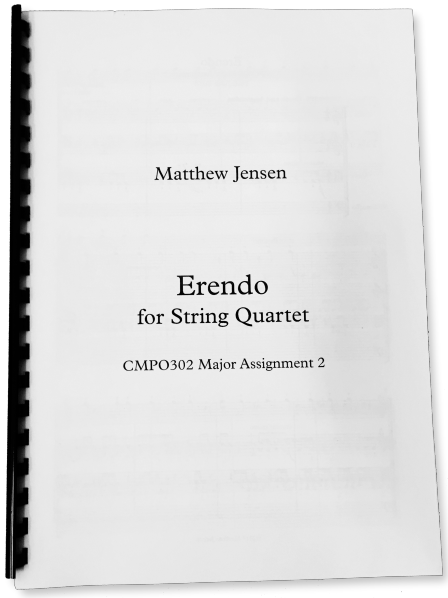
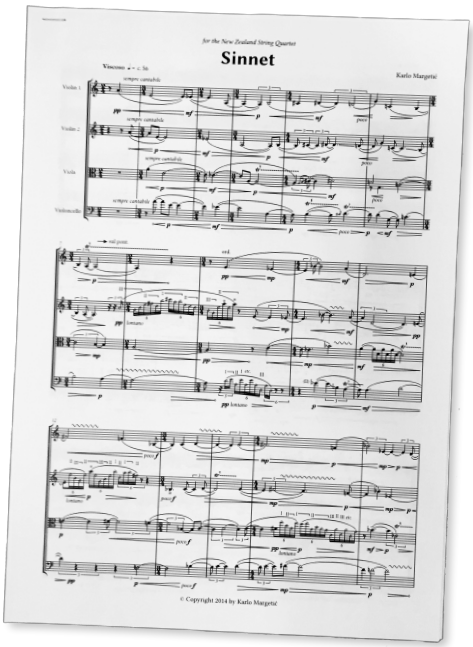
SUBMISSION FORMAT FOR SCORES



MAJOR ASSIGNMENTS

- **Double-sided, A4 portrait, spiral-bound**.
- Include a **title page** with title, instrumentation, your name and course code on it.
- Works for large orchestras may require larger paper (e.g. A3) to be legible.
- Ensure you choose a large enough binding coil, so that page turns will be easy and quiet. (There's nothing worse than a squeaky score!)



MINOR ASSIGNMENTS

- **Double-sided, A4 portrait**, **stapled** in the top left-hand corner.
- A title page is not required.
- For some courses, a different submission format may be required.

PREFACE PAGES

You may also need to include a **preface page**(s) before the music, if any of the following apply:

- Your piece is a **major assignment**: please include a short **programme note**.
- Your piece is for **orchestra or non-standard ensemble**: provide a full list of instruments (including a full list of any percussion used, and a list of all instrument doublings).
- You have written for any **transposing instruments**: indicate whether the score is transposed or at concert pitch on the preface page(s) (NB: **it really should be transposed**).
- You have non-standard/unusual techniques, unusual notation, instrumental 'preparations', or special lighting/sound/staging requirements: include a page of **performance notes**.
    - If practical, however, it's better to put short performance notes **on the score and parts** rather than in a preface, as performers tend not to read prefaces. E.g. you could write 'sempre senza vib.' on the score/parts, rather than 'This piece should be played without vibrato' in the preface. Having said that, avoid long paragraphs of text on the score as well.
    - If you are using unusual noteheads to indicate an extended technique, it's always good to write the instruction above the noteheads as well (e.g. 'breath only', 'key clicks', etc.).
    - **Most extended techniques have a relatively standardised notation**. Don't invent new notation just for the sake of it. Look at the scores of composers such as Lachenmann, Ferneyhough, Pesson, Adámek, Sciarrino, Crumb, Saariaho for examples of fairly standard notational practice.
    - The litmus test of clear and unambiguous notation is: **can the performer reproduce the desired effect from the score without you needing to be there to explain it?**

SUBMISSION FORMAT FOR PARTS

Unless specifically instructed, **you do not need to submit parts**. If you are required to submit parts, however, please submit as paper-clipped, single-sided A4 sheets.

TRANSPOSING INSTRUMENTS

If you have written for any **transposing instrument** (e.g. piccolo, alto/bass flute, cor anglais, clarinet, bass clarinet, saxophone, horn, trumpet, double bass), the following applies:

— **Scores should be written transposed** (i.e. with transposing instruments appearing the same in the score as in their parts). In Sibelius, choose *Notes → Transposing Score* (shift-cmd-T).

— If your piece is not in a clear major/minor key, use the **Atonal Key Signature** setting in Sibelius, which uses accidentals instead of key signatures to do the transposition.

— Horns should always be transposed using accidentals rather than key signatures.

STAFF NAMES

For **solo pieces**, no staff names should appear. Instead, the instrument should be marked as part of the title text (e.g. *Monologue for solo clarinet*). See the Appendix for an example.

For **orchestral parts** (except multi-instrument percussion parts) the staff name should appear at the top-left of the first page, and thereafter in the top-middle. Percussion parts with multiple instruments should have staff names. See the Appendix for an example.

For **duos, trios and standard quartets**, staff names appear only on the first system. See the Appendix for an example.

For **larger ensembles** and **orchestral scores**, staff names should always appear with the full name on the first system and abbreviations thereafter.

SCORE LAYOUT

Staves and bars should be **evenly laid out and evenly distributed**. As a general rule, you should have between 3–7 bars per system, and bar widths shouldn't vary wildly. Systems should also be distributed evenly on the page, without any large gaps between them. There should be a sense of balance in the page — you may need to manually change the spacing to achieve this.

For solo pieces, you should aim for 6–8 systems per page. For small chamber ensembles, aim for 3–4 systems per page. For large ensemble pieces, 1–2 systems per page. Orchestral scores are usually 1 system per page.

Don't leave mysterious empty bars at the end of the piece.

Avoid **collisions** — e.g. dynamics under one staff colliding with notes on top of another.

STAFF ORDER

Most ensembles have a 'correct order' of instruments from top to bottom. If the score is incorrectly ordered, the conductor/performers can get quite confused and may ask you to rewrite it. *NB: if you use the 'ensemble presets' in Sibelius/Finale, the staff order should be correct, but if you add instruments in manually, these can appear in the wrong order.*

Orchestral staff order

— (from top to bottom) piccolo, flutes, oboe, cor anglais, clarinets, saxophones, bassoons, contrabassoon, horns, trumpets, trombones, bass trombone, tuba, timpani, percussion, harp, piano, violins, violas, cellos, double basses

All other ensembles follow orchestral staff order, **except the following**:

— For **small ensembles with piano** (i.e. sextet or smaller): piano always appears on the bottom

— For **brass quintet**, **brass band** or **concert band**: trumpets/cornets appear above horn

— For **concert band**: clarinets and saxophones appear below the bassoons, and percussion appears at the bottom

— For **wind quintet**: flute, oboe, clarinet, horn, bassoon

— For **small ensemble with voice**: voice goes on top if no piano, or above the piano if there is.

HANDWRITTEN SCORES

Don't use pencil or biro for your final copy.

Rule all barlines and beams. Beams should be thicker than stems.

Don't make your noteheads too big (or too small). Compare with other good examples.

Don't use those horrible manuscript notepads for ringbinders. I recommend you use a custom-made computer-set blank score as your manuscript paper.

FONTS

Use the standard music font of your notation software (Opus or Engraver), unless you're composing jazz charts, in which case the 'handwriting' font is fairly standard.

Use a standard 'body-text' serif font for all text (titles, staff names, expressions) such as Times, Times New Roman, Plantin, Century Schoolbook, Garamond, Palatino, or Caslon. Some sans-serif fonts are OK, although non-standard. **NEVER use an ugly ornamental font like Comic Sans, even if you think it looks cool!**

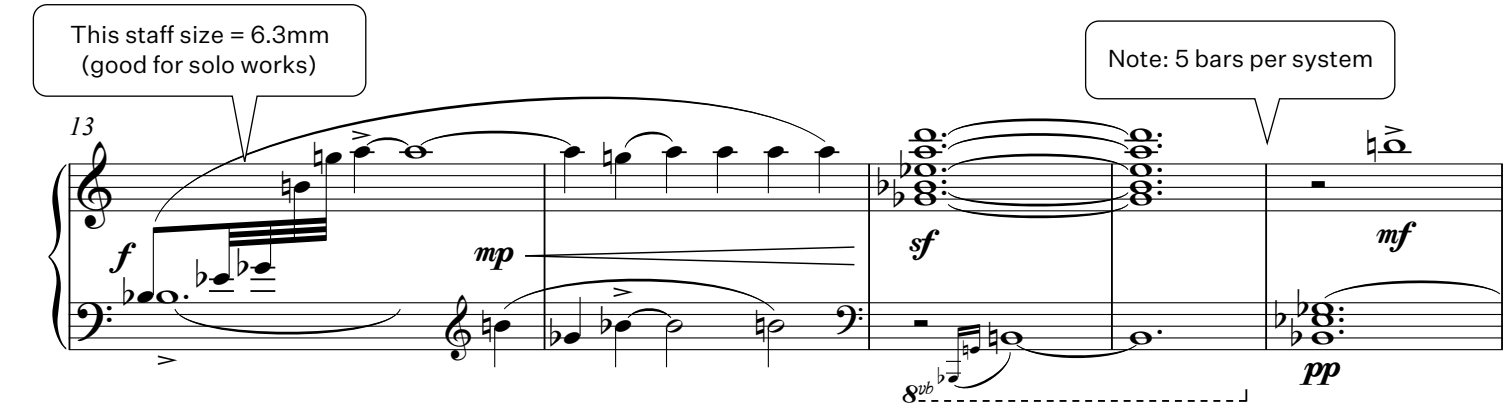
STAFF SIZE

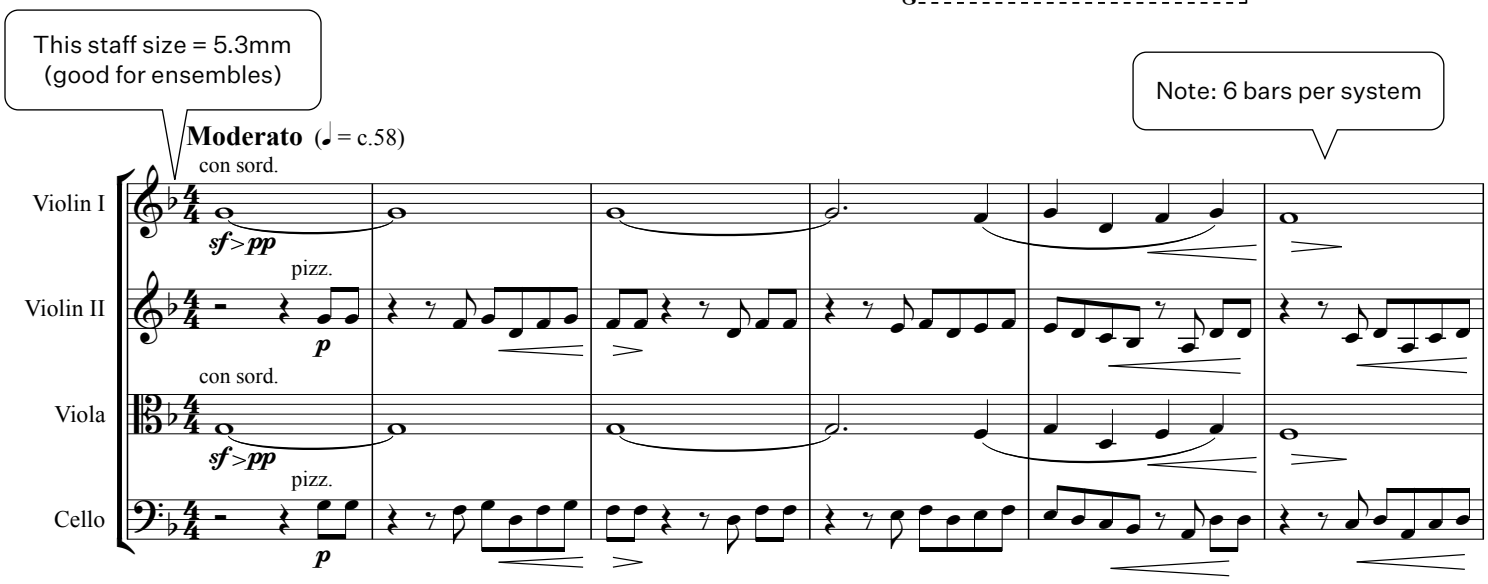
Solo/duo works or ensemble/orchestral parts should have a staff size of 6–7 mm (6.3–6.6 mm is excellent, though I find 7mm too large). Parts should be comfortably readable at arm's length.

Quartets & quintets are often best with a 5.3–5.8mm staff size, so you can fit 3–4 systems per page.

Orchestral or large ensemble scores are best with a staff size of 4.5–5.0mm.

If you can only fit one or two bars per system, usually that means the staff sizes are too large. You ought to be able to fit 3–7 bars per system, depending on the complexity of the music.





Extracts from Douglas Lilburn *Nine Short Pieces* and Douglas Lilburn *Phantasy*, © Wai-te-ata Music Press. Used with

SETTING DEFAULTS IN SIBELIUS

Sibelius's default settings do not always confirm NZSM's preferred typesetting practices. You can set it to meet the guidelines, however, by making the following changes to the settings:

Layout

Click the disclosure arrow under 'Document Setup' to edit the Document layout.

Staff size

Try the following starting sizes, then reduce or enlarge as necessary:

— 6.3mm for solo work

— 5.8mm for quartet

— 5.6mm for quintet

— 4.6mm for orchestra

Page margins

Same, Left pages: 15 (top), 12 (left), 12 (right), 15 (bottom). For orchestral scores, top and bottom margins can be reduced.

Staff margins: 35 (top), 8 (bottom). After first page, 8 (top), 8 (bottom) — NB: the 35 may need to be tweaked so that the gap between systems on the first page matches those on subsequent pages.

Full names: 15 (may need to be increased for long instrument names)

Short names: 5 (may need to be increased)

No names: 2

Spaces Between

Change to: Staves: 7 / Systems: 15

Press: *Reset Space Above, Reset Space Below*

Tweak these sizes so that you get a nice even spread of systems across the pages, with the gaps between systems being noticeably larger than the gaps between staves.

Text

Click the disclosure arrow under 'Styles' to edit the following text styles:

Main Text Font: Times New Roman

Tuplets: Font: Times New Roman, Style: italic

Title Text

Vertical Posn: Snap to top margin, 5mm

Then select and press *Reset Position*

Composer

Font: Times New Roman 10pt/9pt

Vertical Posn: Snap to top margin, 20mm

Appearance

Engraving Rules

Accidentals and dots

(CHECK) *Prefer top accidental at right*

(UNCHECK) *Restate accidental when note is tied across a system break*

Articulation

Position of articulations when near the stem: Center all on stem

Vertical Position: Allow 'always above' articulations to be flipped below

Beams and stems

(CHECK) *Beam over rests*

(CHECK) *Break secondary beams*

Clefs

(CHECK) *Reset accidentals to current key signature on clef change*

Instruments

(UNCHECK) *Draw left separator*

Lines

Small aperture: 1 spaces

Large aperture: 1.5 spaces

Staves

Staff line width: 0.13

(CHECK) *Justify both staves of grand staff instruments*

Time signatures:

Gap before time signatures: 0.41 spaces

(NB: if you already have music entered, you will need to Reset Note Spacing after changing this)

Notations

Click the disclosure arrow under 'Lines'

Glissando (straight)

Width: 0.2 spaces

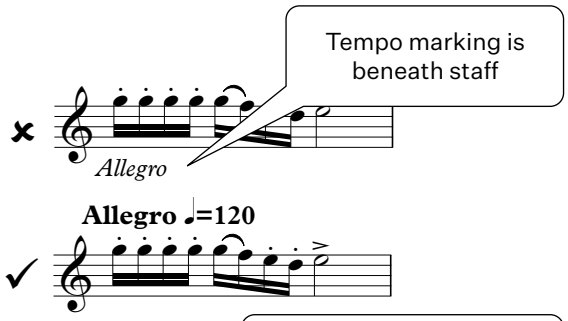
Centred Text: delete

LOCATION OF MUSICAL ELEMENTS

Tempo markings and rehearsal marks

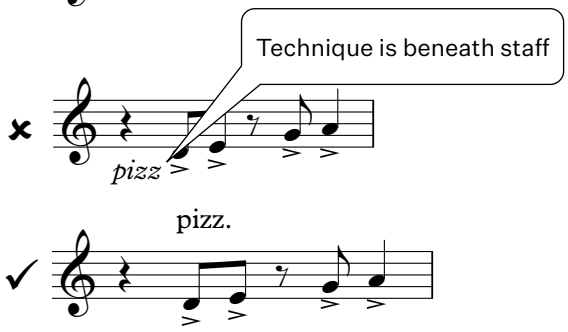
Tempo markings (including **rits and accels**) always go **above** the staff (for grand staff instruments, above the top staff only). In Sibelius, use Tempo Text for tempo markings (opt-cmd-T), which should be bold and with a metronome marking.

For full scores, tempo markings and rehearsal marks only need to go above the woodwinds and strings.



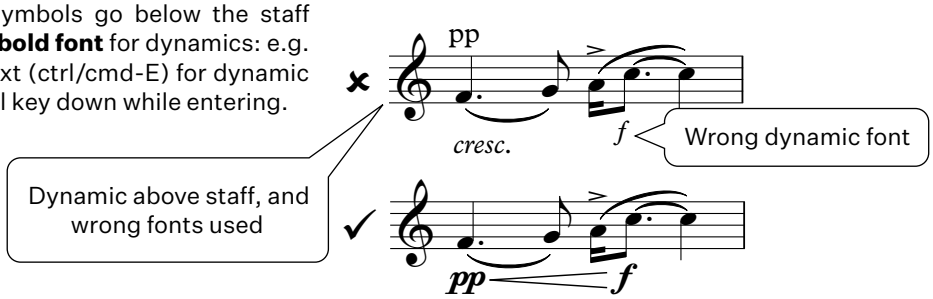
Techniques

Techniques, such as arco, pizz, sul pont and *8va* symbols, go **above** the staff they refer to. In Sibelius, use Technique Text (ctrl/cmd-T) for techniques and choose 8va/8vb from Lines (L). These markings should **not** be italicized.

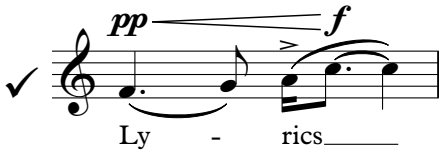


Expressions

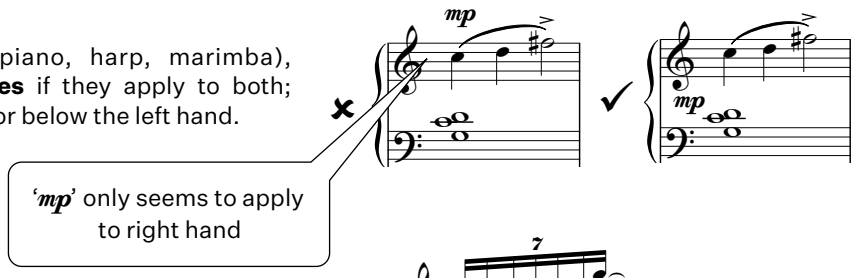
Dynamic markings, hairpins and *8vb* symbols go below the staff they refer to. You must **use the correct bold font** for dynamics: e.g. ***p mf f***. In Sibelius, use Expression Text (ctrl/cmd-E) for dynamic markings, and hold the Command or Ctrl key down while entering.



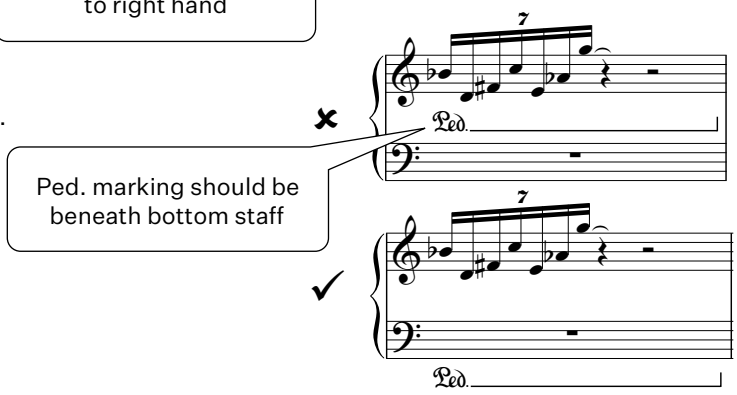
For vocal parts, however, expressions should go **above** the staff to avoid colliding with the lyrics.



For 'grand staff' instruments (e.g. piano, harp, marimba), expressions go **between the two staves** if they apply to both; otherwise put them above the right hand or below the left hand.



Pedal markings go below the bottom staff.

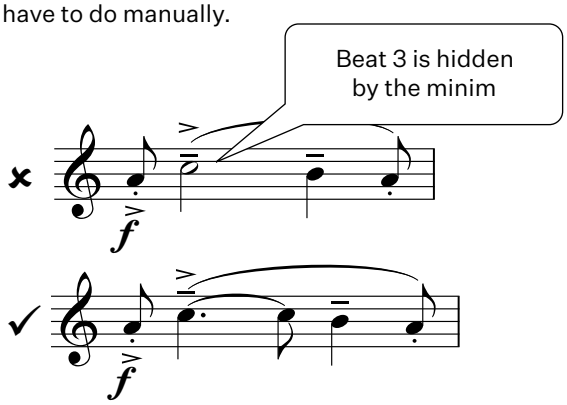


BEAMING & RHYTHMIC NOTATION

Beaming is the general term given to notating rhythms in a way that is easy to read, and the locations of the beats are visually obvious. Performers rightly expect good beaming and get **very grumpy** if you do not notate it correctly. **Music notation packages do not check your beaming for you**: it's very easy to get it wrong, and the default is often incorrect. This is simply something you have to do manually.

There are three main elements to good beaming practice:

a) **Don't hide beats**: notes and rests that cross over a beat should be divided up using ties so that the locations of the primary beats of a bar are immediately visible.



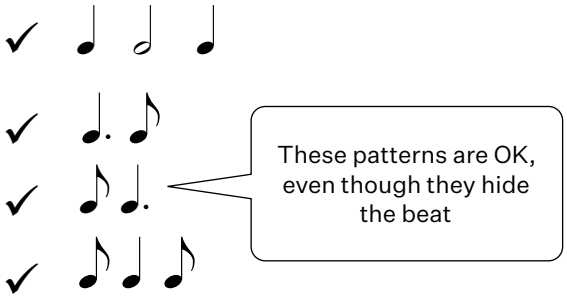
There are exceptions to this: semibreves on beat 1; minims on beats 1 or 3; dotted minims on beats 1 or 2; and:

a) a minim on beat 2 (as long as it's not tied)

b) a dotted crotchet on beat 1 or 3

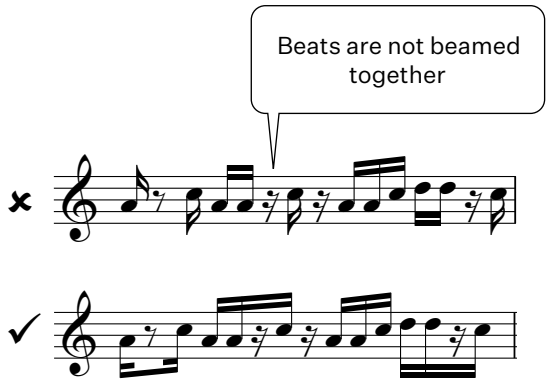
c) a dotted crotchet on the offbeat of beat 1 or 3

d) a crotchet on the offbeat of beat 1 or 3.

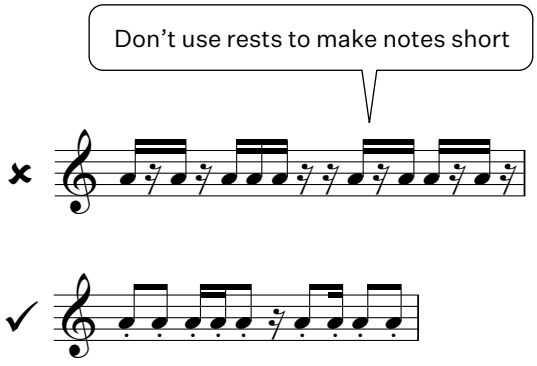


b) **Beam notes within a beat together**: beams should connect notes that fall within the same beat, even if there is a rest between them.

NB: **Sibelius incorrectly breaks beams** if a rest occurs between notes. Use the beam group tools to make it look like the bottom example.

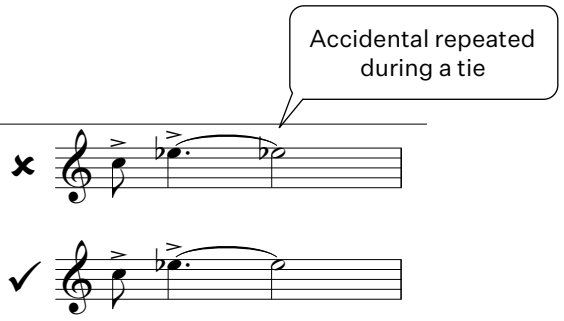


c) **Use staccato dots instead of rests**: short notes can be made easier to read by using a staccato dot instead of a rest.

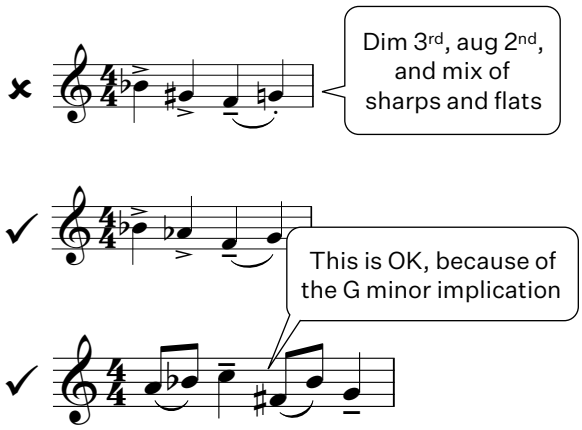


ACCIDENTALS

Accidentals **should not be repeated during a tied note**. The only exception is if a tie goes over a system break, when you may repeat the accidental on the new system.

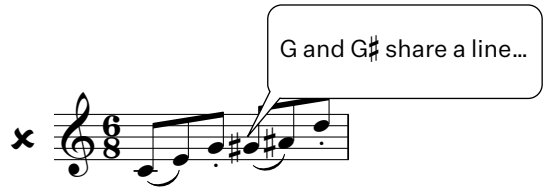


Respell accidentals to **avoid diminished and augmented intervals** — this often occurs if you mix sharps and flats.

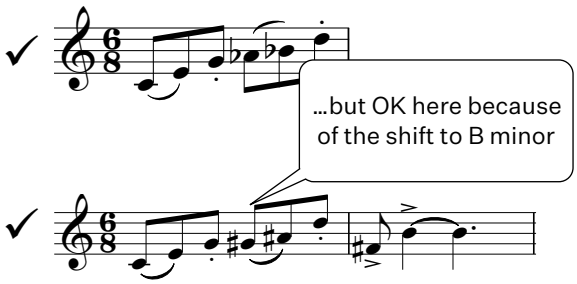


In some cases you can mix sharps and flats — e.g. when using the raised leading note of a minor key has a different accidental from other scale degrees, e.g. F♯–B♭ in G minor.

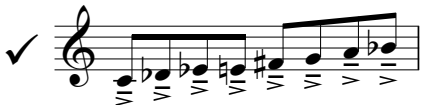
If a passage implies **some sort of tonality** by outlining a triad or part of a scale, spell accidentals to comply with standard tonal spellings. This means that, where possible, different notes should be on different lines/spaces.



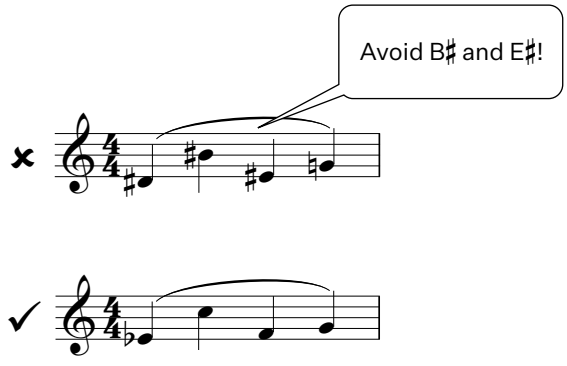
But this often depends on context: for instance, in this passage the following bar confirms a shift to a ‘sharp key’ (B minor), so the original spelling is OK.



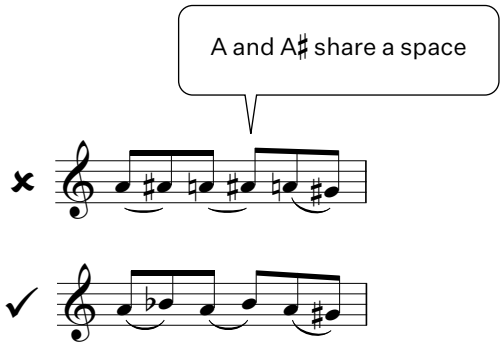
In some more scales with more than seven degrees, such as the **octatonic scale**, it may be best to mix sharps and flats.



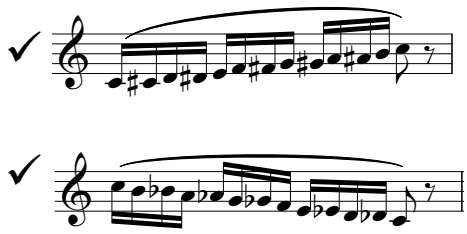
If you have any C♭s, E♯s, F♭s or B♯s, **you are probably wrong**, unless you are clearly working within a ‘sharp key’. The same goes for **double-sharps** and **double-flats**.



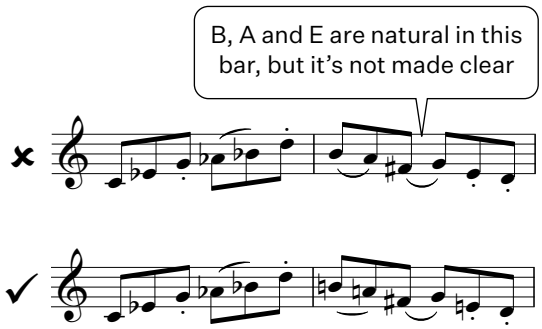
Where possible, spell **semitone oscillations** so that notes appear on different lines/spaces.



In **chromatic scales**, generally use **sharps on the way up** and **flats on the way down**.



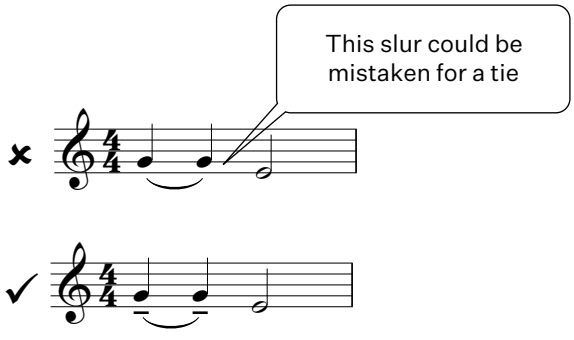
Use a **courtesy accidental** when an altered pitch reverts to unaltered in subsequent bars.



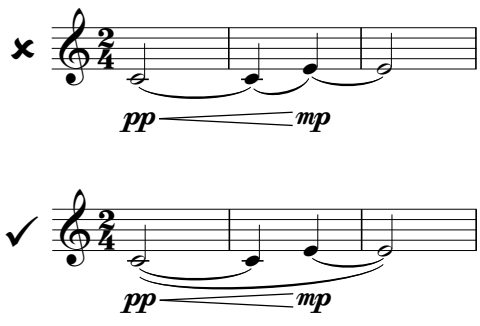
TIES & SLURS

Phrase marks (that indicate the phraseology of the music) are generally discouraged these days, because they are easily mistaken for slurs (which specifically indicate bow changes or tonguing).

Make sure your slurs can't be mistaken for ties. This can happen if you have a repeated note under a slur. Tenuto marks clarify that the player should separate them with a small gap.

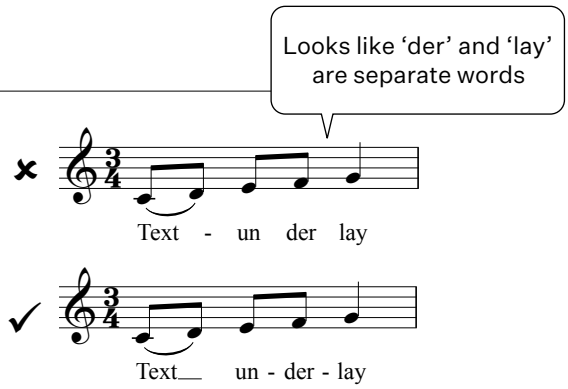


If any note under a slur is tied, **the slur should extend to encompass the full duration of the tied notes**. The only exception is if the last note is tied for a number of bars, in which case, you may slur just to its start.

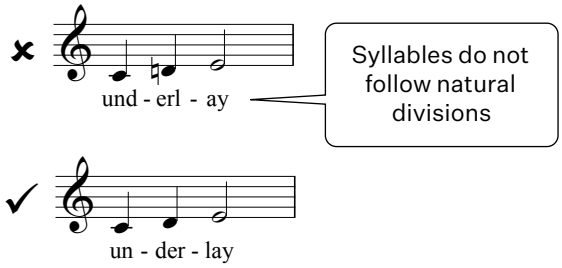


TEXT SETTING

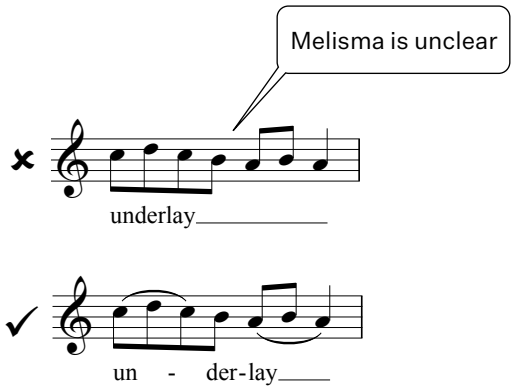
Indicate the syllabic division of words by putting hyphens between their syllables.



Divide syllables so that the **meaning and pronunciation is immediately clear** (e.g. ‘think-ing’ rather than ‘thin-king’). Where you have a choice, it often makes sense to begin each syllable with a consonant (e.g. ‘un-der-lay’ rather than ‘und-erl-ay’) as long as this does not make the meaning of the word ambiguous. Split words with doubled consonants thus: ‘im-mor-tal’. If you’re uncertain about the correct hyphenation, there is a good website that will work it out for you: http://juiciobrennan.com/hyphenator/



Melismata (multiple notes sung to one syllable) are written with a slur over all the notes of the syllable. If the last syllable is a melisma, an extender line can be used.

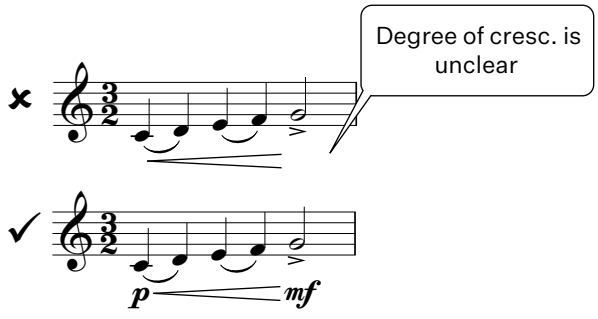


HAIRPINS & DYNAMICS

Dynamics always appear **below the staff**, with the following exceptions:

- for vocal parts, hairpins go **above the staff**
- for instruments that use a grand staff, dynamics go **between the staves**

Generally speaking, **use hairpins** rather than *cresc.* or *decresc.*, unless the dynamic change spans more than a couple of bars.

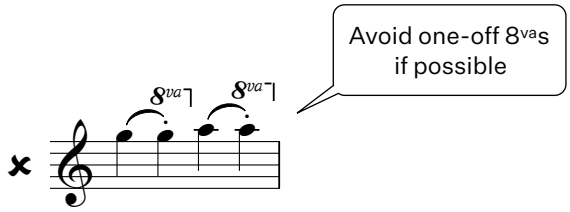


It’s a good idea to indicate the dynamic levels that start and end your hairpins, unless it’s a short expressive swell that only lasts a few notes.

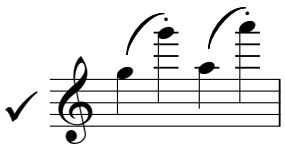
8va/8ba SIGNS

Generally, the only times you need to use *8va* or *8vb* are:

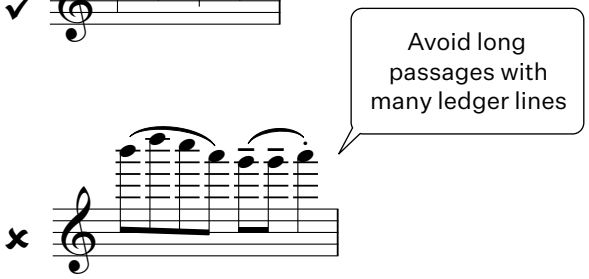
- **high flute** or **high violin**
- the extreme registers of **harp**, **piano**, **keyboards** or **pitched percussion**.



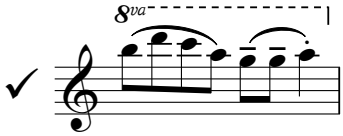
Generally speaking, avoid 'one-off' *8va*/*8vb*. signs, unless they would require more than 6 ledger lines to write out at pitch.



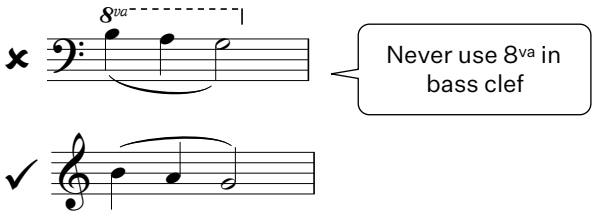
For short passages of less than 6 ledger lines, write out at pitch.



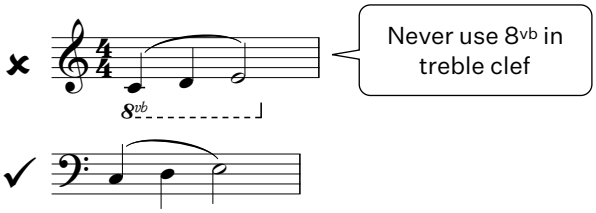
For longer passages of **more than 4 ledger lines,** use *8va*/*8vb*.



Never use ***8va* above bass clef** — change to treble clef.



Never use ***8vb* below the treble clef** — change to bass clef.



CLEFS

Most instruments **only read treble clef**, with the following common exceptions:

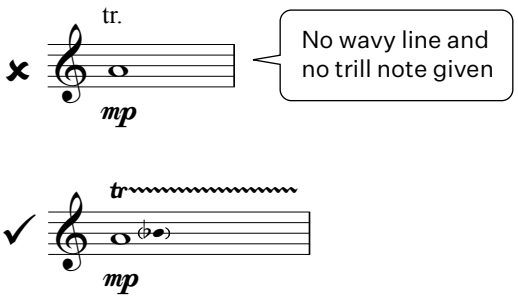
Bassoon & contrabassoon	***bass & tenor clef***
Horn	***treble clef (OK to have 4 ledger lines); bass clef very rarely***
Trombone & tuba	***bass & tenor clef; trombone treble clef very rarely***
Viola	***alto & treble clef***
Cello & double bass	***bass, tenor & treble clef (tenor preferred to treble)***
Piano, keybd, hp, marimba	***treble & bass clef (piano can use 8va clef very rarely)***
Timpani	***bass clef***
Unpitched perc	***percussion clef***

[NB: bass clarinet reads treble clef only, as per normal clarinet]

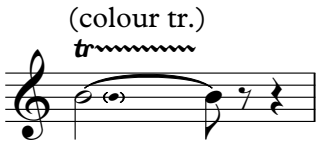
Only change clef if you have a sustained passage of 3 or more ledger lines for a reasonable period of time, or a one-off note of 5 or more ledger lines.

TRILLS & TREMOLOS

A trill is a rapid alteration between a note and another note a tone or semitone above. Trills should always be written with three components: 'tr.', a wavy line and a trill note in brackets. To create a trill in Sibelius, select the 'trill' line from the Lines dialog (*Create→Line…*). Unfortunately, creating a trill note is not so easy — you can either create a grace-note before the following note and manually move it, or you can create a stemless, cue-sized, bracketed note in an unused voice at the same spot as the main note and manually shift it to the right.

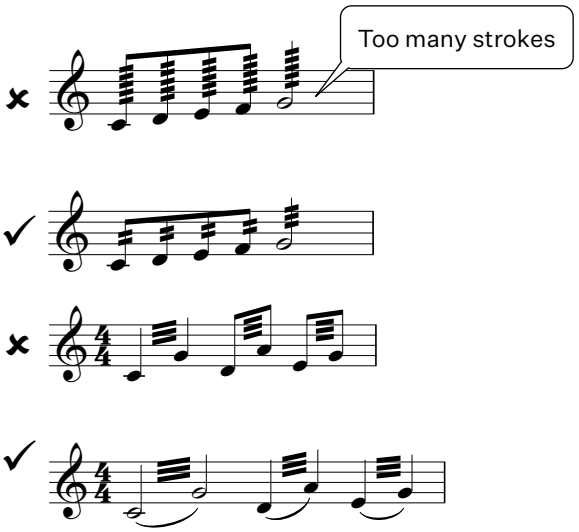


Colour trills, in which the player trills to an alternative fingering on the same pitch, are possible on all wind instruments, but only on some pitches. Always check with your player first.



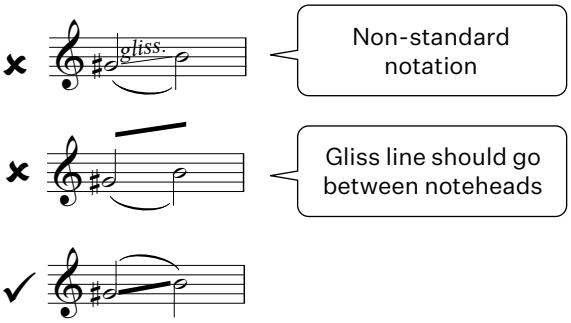
Unmeasured single-note tremolos ('bowed tremolos' on strings, 'fluttertongue' on winds & brass) are notated using **three-stroke tremolo marks**, or fewer strokes if a beam already exists (so they add up to three). You can use fewer strokes for a 'measured tremolo', but these can sometimes be confusing, and it may be best to write them out 'in full'. You should never use four- or five-stroke tremolos, even though these are readily available in Sibelius.

Multiple-note tremolos (called 'fingered tremolos' on strings) are essentially trills larger than a second, and are written with a three-stroke tremolo mark between two notes of the same duration, which is the total duration of the tremolo: i.e. a tremolo between two crotchets lasts for a crotchet; a tremolo between two minims lasts for a minim. It's also a good idea to slur tremolos to show that the notes are under one bow or breath.



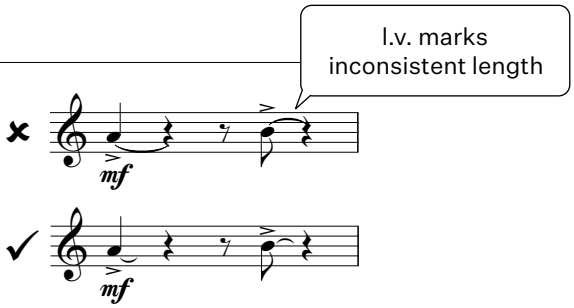
GLISSANDI

Glissandi should be indicated with a solid black line between the noteheads (but not quite touching). NB: **do not use the default 'gliss.' line from Sibelius** — this is actually non-standard. To correct this, edit the Line Definition and delete the 'Centred Text'. You can optionally add the word 'gl.', but it's often implied.



LAISSEZ VIBRER

Laissez vibrer (l.v.) marks, used to indicate that notes 'ring on', should be short and uniformly sized. Rather than using a tie, which varies in length depending on the distance to the next rest, you should use a special *laissez vibrer* symbol (In Sibelius, *Create → Symbol… → Notes and Flags*).



PRESENTATION OF ENSEMBLE/ORCHESTRAL SCORES

BINDING & TITLE PAGE

Orchestral/ensemble scores must be presented **bound** and **double-sided**. If you are required to submit parts as well, place score & parts in a single manilla folder with your name on it.

Orchestral scores should include a **title page** and a preface page that lists the **instruments used**. Doubling instruments should be indicated thus: 'Oboe II (dbl. cor anglais)'

INSTRUMENT PAIRS SHARING STAVES

For orchestral scores, all woodwind and brass pairs **should share a single staff on the score**, unless they are consistently rhythmically independent. **But the parts must be separate**: so Fl. 1's part does not contain any of Fl. 2's notes. The only time players playing different notes share the same part is when strings are in divisi.

If the shared instruments are rhythmically identical, the two noteheads should share the same stem. If rhythmically independent, stems must be in opposing directions.

For shared staves, both full and abbreviated staff names on the score must have 'I, II' or 'I & II' on them. E.g. 'Flutes I, II' on first page and 'Fl. I, II' thereafter.

When a **single melodic line** appears on a shared staff, you must indicate which of the instruments is to play this line, in the following way:

For **wind** and **brass**, use the following indications **only on the score, NEVER on the part.**

1. *or* Solo	*player one only*
2.	*player two only*
a 2	*both players (this only ever needs to appear above a single line to be played by both players in unison, otherwise it will be ambiguous to the conductor)*

For **strings**, use the following abbreviations, **on both score AND part**.

div.	*section divides in 2*
div. a 3	*section divides into 3 (or more) parts*
unis.	*section plays together after a period of divisi playing*
1 desk	*front desk only (1 desk = a pair of players)*
Solo	*section principal only*

In the parts, it makes life easier for the players to have divisi split out onto separate staves (see Appendix). Only combine parts on one stave if there's a compelling reason to do so.

FIRST PAGE

On the first page of the score, show all staves. Any doubling instruments that are picked up later in the piece do not need to be shown on the first page, but should be listed in the instrument list page

TEMPO CHANGES, PICKUP BARS AND FERMATAS

The rule-of-thumb is: *all players, even if not playing, must know how the beat changes and what the conductor will be beating*. This means:

tempo markings **must** appear on all parts (use Tempo Text)

every player **must** know how long a **pick-up bar** lasts: if it lasts one beat, make sure players have a crotchet rest in their parts, not a bar rest

if one or more parts have a **fermata** in it, then every player must be given that fermata for the same duration and at the same location. If they have a rest or sustained note in that bar, you should break up the rest or notes as necessary so that the fermata's duration and beat is clear.

REHEARSAL LETTERS

Adding rehearsal letters (A, B, C, etc...) every 15–20 bars aids the rehearsal process. Rehearsal letters and tempo indications must break multimeasure rests. Use the automatic rehearsal letter feature of your notation software.

PRESENTATION OF PARTS

MANDATORY ELEMENTS

Parts are only required to be submitted if your lecturer will be marking them and passing them on to the players for in-class readings.

Parts MUST be identified with the **composer**, **title**, and **instrument** (including doublings where appropriate). Hand in with the score in a single manilla folder with your name on it.

Parts must be presented single-sided A4 portrait, paper-clipped together.

Standard music notation practice should be observed. Any unconventional notation must be clearly explained on a preface page. Explanations of one-off effects can also go directly onto the part, as they're more likely to be observed there — however, explanations should be kept to a minimum to avoid cluttering the parts with writing.

ORCHESTRAL PARTS

For **winds, brass, keyboards, timpani & harp**, each player MUST have one, and only one, separate, exclusive part. There should not be any other player's music on that part, except for cues (see below).

— For **doubling instruments**, when the player finishes playing one instrument and moves to another, you should indicate which instrument they should change to (e.g. 'TO COR ANGLAIS') immediately following their final notes. **In the score only**: the staff name should change to reflect the new instrument. **In the part only:** the name of the new instrument should appear over the top of its first note (e.g. 'COR ANGLAIS').

Strings share one part between two players. In extensive or complex divisi passages, the individual parts should be split onto separate staves. In string parts with consistent divisi of three or more throughout the piece, it may be advisable to prepare separate parts for each divisi line in order to reduce the frequency of page turns.

Percussion parts should be divided into 'stations'. Each station should include one 'large' instrument (e.g. vibraphone, marimba, bass drum, tam-tam) and any number of smaller instruments.

PAGE TURNS, BAR NUMBERS, REHEARSAL LETTERS & CUES

Consideration in layout should be given for comfortable page turns.

Bar numbers must appear at the beginning of the first bar of each line for each part.

In longer works, **rehearsal letters** are helpful every 15–20 bars, especially at tempo changes.

Logical **cues** are expected during long period of rest, the cues being transposed to the reading key of the instrument. Cues must be audible to the musician reading the part.

STAFF SIZES

As mentioned earlier, instrumental parts should be 6–7 mm. As a rule-of-thumb, parts should be easily readable when held at arm's length.

HARP PEDALLING

While most harpists prefer to work out their own pedal changes, you should ensure that you don't have any conflicting pedal indications (e.g. having an F♮ and an F♯ in the same chord).

Indicate the pedal settings before a glissando by writing out the first seven notes, or providing the pedal settings (in the correct order). See *Glissandi* below.

STRING WRITING

Slurs indicate which notes are to be included under one bow-stroke. Only provide up-bow (V) and down-bow (⊓) symbols if they are not obvious to the player.

String indications: you can indicate a note or passage is to be played on a specific string in two ways: 1) using 'sul' notation (e.g. 'sul G'); or 2) Roman numeral indications (I, II, III, IV from highest to lowest). Make sure it's clear how long the string indication lasts for. Only use string indications when:

— you're using a diamond-headed natural harmonic (see below)

— you have a downward glissando that 'crosses over' the pitch of an open string

— you want to specify a string for colouristic reasons (e.g. playing in high positions)

— the desired string is not immediately obvious (e.g. to indicate a tremolo between two strings)

Multiple stops can be difficult to write well. A general rule is: any double stop that includes an open string is easy. Otherwise, intervals from a semitone to an octave are possible, but fifths can be awkward. Sixths are the most comfortable. Avoid fast changes between multiple-stops.

STRING HARMONICS

There are two main methods of producing harmonics on string instruments: **natural harmonics** and **false/artificial harmonics**. Natural harmonics are played with one finger, false harmonics with two.

NATURAL HARMONICS are created by lightly touching the string with one finger of the left hand at a 'node', which will produce a member of the harmonic series of the open string.

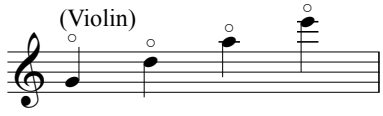
There are two ways to notate natural harmonics, depending on the chosen harmonic:

— **If the sounding pitch is the same as the fingered pitch** (which is always true for the second harmonic), then write the note as usual, but with a harmonic circle (°) above it.

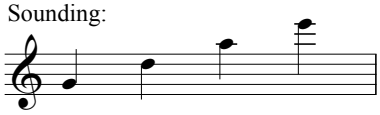
— **If the sounding pitch is different from the fingered pitch** (which is often true for any other harmonic), write the fingered pitch with a hollow diamond notehead and provide a string indication. If the duration is unclear, you can include the open string in brackets underneath.

Natural harmonics are usually created at one of the following positions (examples given for violin)

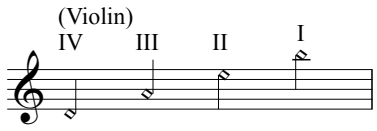
a) **touch** 8ve above open string



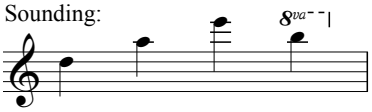
sounds 8ve above open string (= 2nd harmonic)



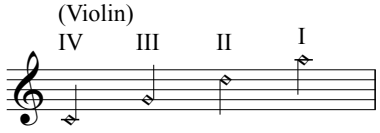
b) **touch** perfect 5th above open string



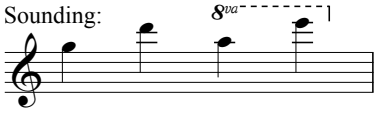
sounds 8ve + 5th above open string (= 3rd harm.)



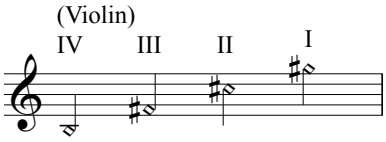
c) **touch** perfect 4th above open string



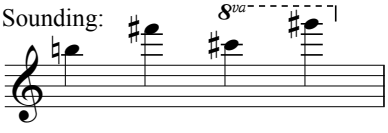
sounds 2 8ves above open string (= 4th harm.)



d) **touch** maj 3rd above open string

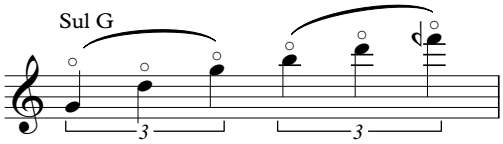


sounds 2 8ves+maj 3rd above open string (= 5th)



NB: the fifth harmonic is also available by touching a major 6th above open string. The 5th harmonic is also a little flat and quiet; if possible, use a false harmonic to get the sounding pitch instead.

There are higher natural harmonics available, but these can be tricky to find, and often don't sound at all. Note that all natural harmonics are also available by touching at the sounding pitch: in other words, **in a high position on the string**. These high-position, touch-at-the-sounding-pitch natural harmonics are notated with circle notation rather than diamond noteheads. If you are unsure about whether to use lower or higher positions, check with a performer.



FALSE HARMONICS (aka 'artificial harmonics') are created by fingering any pitch normally, while lightly touching the same string a perfect 4th higher. This creates the fourth harmonic, which sounds two octaves higher than the stopped note. (Other intervals are possible, but less common).

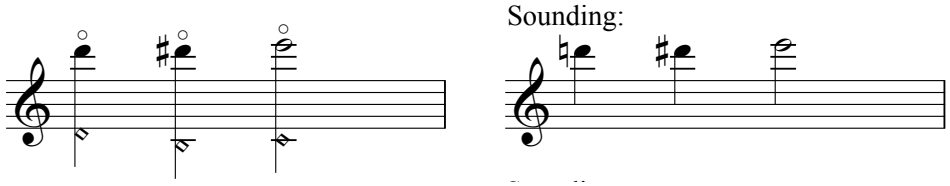
— False harmonics sound clearest if the stopped note is less than a 5th above an open string.

— You can't play false harmonics in the middle of a fast run, but you can gliss them smoothly.

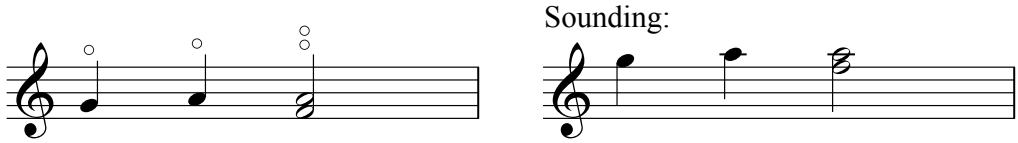
Write false harmonics as follows: **one normal notehead** (the stopped pitch) and **one diamond notehead** (the lightly touched pitch, a perfect 4th higher). You don't need to give the sounding pitch.

HARMONICS ON OTHER INSTRUMENTS

Flute harmonics are possible by overblowing a harmonic (usually the 3rd–6th) off a fingered pitch in the lowest fifth of the range. Notate as follows: fingered pitch with diamond notehead, sounding pitch with harmonic circle above. Harmonics are breathy and slightly less stable pitch than conventional fingering.



Harp harmonics are notated using a harmonic circle, but unlike string harmonics, this does not signify the sounding pitch — they always sound an 8ve higher. They are played by touching the string at the midpoint with the heel of the palm, while plucking with a finger of the same hand. The left hand can play two harmonics at once, but no wider than a fifth. Harp harmonics sound best in the middle octaves (G3–G5).



Piano harmonics are available, but can be awkward to produce (it requires one hand inside the piano, the other on the keys). It works best in the bottom two octaves: a harmonic circle above the note indicates an indeterminate harmonic. If you want an exact harmonic to be sounded, you can also indicate the sounding pitch as well as the played pitch (with the played pitch as diamond notehead, similar to flute harmonics) — but this requires the pianist to put Twink on the string at the node, which may not be allowed. Furthermore, the big iron struts of the piano's frame can vary from piano to piano, meaning that exact harmonics may not always be accessible.

PIANO WRITING

Piano scores are written on a '**grand staff**' (two staves bracketed together). Occasionally a third or even fourth staff is seen in more advanced scores — but usually this is unnecessary.

The upper staff generally indicates notes played by the **right hand**; the lower staff notes played by the **left hand**. It is important to show how the hands of the player move, even if this may make the notation more complex (e.g. cross-staff beaming). Use **clef changes** (treble or bass) to indicate a hand going out of its usual register.

Dynamics that apply to both hands are centred **between** the staves. Individual dynamics for each hand may be placed between the staves, but close to the part. If that is not clear enough, dynamics may be placed on the outside of the system.

Piano pedals

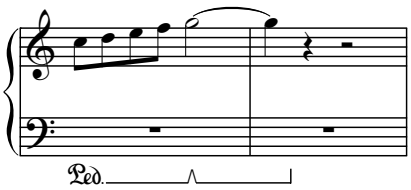
A full grand piano has three pedals, from left to right:

1. una corda (aka 'soft pedal'): this pedal shifts the entire hammer action to the right so that **the hammer only strikes one or two of the strings**, instead of the normal three. The difference is subtle, but gives the sound a slightly duller, less resonant sound. Notate with 'una corda' underneath the bottom staff.

2. sostenuto pedal (aka 'third pedal'). If any notes are held down, depressing the sostenuto pedal will **keep those dampers raised** even after the pianist has let go of the keys. This allows the composer to control the specific strings that can resonate, or allows a particular string to continue sounding while others are staccato around it. Notate with 'Sost. Ped.' or '3rd Ped'.

3. sustain pedal: the 'default' pedal, which **raises all of the dampers** when depressed. Every string therefore continues to resonate when played, and also resonates with other notes being played. Indicate using Ped. under the bottom staff. Other indications might indicate special pedalling: 'poco Ped.' (a little, subtle pedalling), 'sempre con Ped.' (hold the sustain pedal down continuously), 'senza Ped.' (absolutely no pedal).

Pedal changes are best indicated with 'sustain/retake' lines:



HARP WRITING

The harp is one of the most technical instruments to write for (except, perhaps, guitar). Read any decent orchestration textbook before attempting to write for the harp. Carolyn Mills of the NZSO has prepared a little manual, which she is happy to share with composers. This is available from the Programme Leader, Composition.

MALLET PERCUSSION WRITING

One way to tell whether a particular passage is possible on the vibraphone or marimba is to hold out the thumbs and pinkies of each hand, and use only these fingers to play a passage on the piano. This roughly simulates using two mallets in each hand for a percussionist.

CONTEMPORARY INSTRUMENTATION GUIDELINES

These guidelines cover some of the issues that arise when writing more 'contemporary' playing techniques. Always be sure you understand exactly how a technique is created physically, as it is quite common to see extended techniques that are unplayable. If in doubt, always check with a performer.

MUTES

GENERAL

To indicate an instrument should be muted with the default mute, write 'con sord.' above the staff.

To indicate that a passage is unmuted after a muted passage, write 'senza sord.' above the staff.

To specify a mute other than the default, write, for instance, 'con sord. (harmon)'.

If you want to specify just a change of mute, then just write the new mute's name (e.g. 'straight mute').

Normally a player will work out the best time to take off their mute. On rare occasions, you might want to specify exactly when they need to take the mute off. In this case, use 'via sord'.

WOODWIND MUTES

There is only one common example of muting woodwind: muting the bassoon, which can be seen in some Ligeti scores. A rag or a horn mute in the bell can be used for this. Attempting to mute any other woodwind instrument in this manner is largely ineffective.

BRASS MUTES

Horn

The horn normally uses only **one mute**, indicated using 'con sord'. Allow 4–5 seconds for inserting or removing. The horn can also be stopped with the hand by pushing it further into the bell — this is marked '*bouché'* and it has a distinctive 'biting' sound. (In low registers, the horn player often uses a 'stopping mute' instead of the hand.)

Trumpet

The default mute is **straight**, but also available are **cup**, **harmon**, **plunger**, **bucket** and **whispa**. Allow at least 4 seconds to mute/unmute, or 7–8 seconds to change between different mutes. Bucket mute requires considerably longer, as it has a rather awkward setup.

Harmon mute has a stem with three positions: **stem in**, **stem half-in** or **stem removed**. '*Harmon, stem removed*' is a tight, nasal sound, like Miles Davis.

For harmon and plunger mutes, you can also indicate whether the mute is open (o) or closed (+).

Trombone

The trombone's default mute is the **straight** mute, with **harmon** and **plunger** also available. Apart from plunger, allow at least 7 seconds to change, as they need to be 'screwed in'

Tuba

The tuba only has one mute, which requires a lot of time to fit and unfit. Allow at least 15 seconds per change. Tuba players have very mixed feelings towards its use.

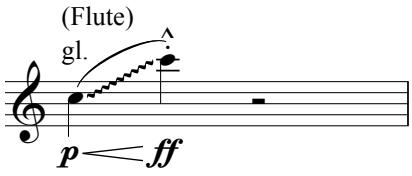
STRING MUTES

The normal string mute is indicated by 'con sord.'

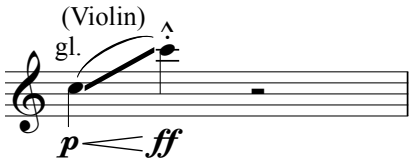
A 'practice mute' is also available which has a much softer, more metallic sound. Indicate using 'con sord. (practice mute)'

GLISSANDI

Fingered glissandi are available **on winds and brass**, by using a wavy line between noteheads. These are usually executed as fast chromatic runs.



Continuous glissandi ('pitchbend' on winds/brass, 'portamento' on strings) uses a straight line. This implies a smooth glissando, which may not be possible on some instruments.



WOODWIND GLISSANDI

All woodwind have **fingered glissandi** possible, usually executed as a fast chromatic or diatonic run. For **pitch bends**, instruments use a combination of embouchure and key sliding.

— **Flute**: *Lip gliss*: down about a semitone (sometimes further) or up about a quartertone.

— **Oboe/bassoon**: Wider pitch bends possible higher up the instrument.

— **Clarinet/saxophone**: Downwards lip gliss. depends on register: from about G4 up, downward glissandi can be up to a third; elsewhere about a semitone or so (check with performer for wider intervals). Difficult around the throat region and just over the break, because of use of keys. A combination of 'gliss embouchure' with finger sliding can create smooth glissandi over wide ranges — the canonic example is Gershwin's *Rhapsody in Blue*.

BRASS GLISSANDI

Fingered glissandi are slower than winds because of more sluggish valve mechanisms and fingering. Trombone 'fingered' gliss is impossible, of course.

For **continuous glissandi**:

— **Horn**: most common is the 'rip', which goes up the harmonic series (you can write using a continuous gliss line, or writing out the harmonics). Narrow glisses by a semitone are possible, usually by hand-stopping or half-valving.

— **Trumpet**: narrow glisses are available by half-valving. Rips are also possible.

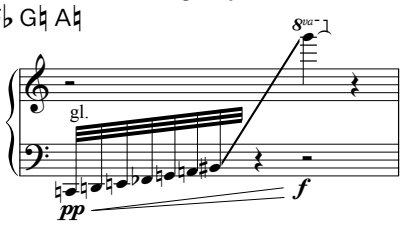
— **Trombone**: glisses created by slide, but slide can only move 6 semitones, and then only between harmonic series of E1 (slide out) and B♭1 (slide in), so you have to work out whether they are possible or not. A gliss on harmonics is called a 'rip'.

HARP GLISSANDI

Harpists can cover a great range very quickly, given that an octave covers about 10cm. **When writing loud glissandi, always allow a large range** (at least 4 octaves) to allow the player to pluck the strings with greater velocity.

A harp glissando must always cover all seven strings in an octave — you can't leave out any, although using enharmonics, you can reduce the total number of pitch classes — e.g. if you wanted a gliss on C-D-E-G-A, you would need to tune the harp: D♮ C♮ B♯ | E♮ F♭ G♮ A♮

Notate a gliss by showing the first 7 pitches with accidentals followed by a gliss line, or you can give the pedal settings and write a gliss from the bottom note to top note.



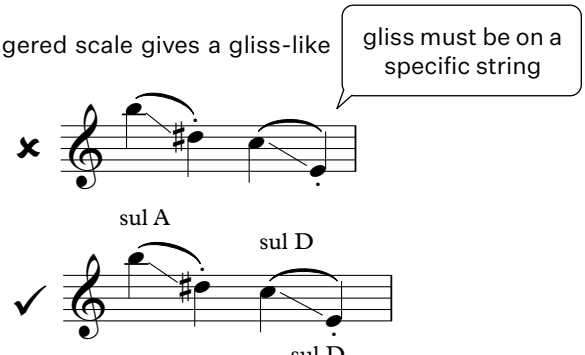
A 'tuning key gliss' is available, though it requires practice. Indicate the sounding pitch only — it will actually be performed on a larger (i.e. lower) string. It has a range of about an octave or so.

A 'pedal gliss' is possible, when a pedal is raised/lowered to change the tuning of the string. This is not smooth, however, and has a range of 2 semitones. It can also buzz a bit.

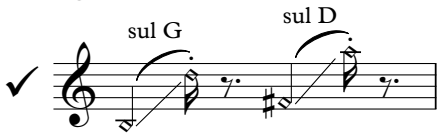
STRING GLISSANDI

Glissandi on strings are **continuous** only, although a rapid fingered scale gives a gliss-like sonority (especially when written for massed strings).

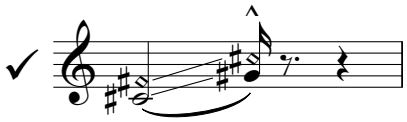
When the gliss is downwards, and crosses over one of the open strings' pitch, you must indicate which string the gliss should be played on — i.e. the string the lowest note has to be played on.



Glissandi up or down the natural harmonic series are possible: notate this either with a diamond notehead or by writing out the sounding pitches with a harmonic circle above them.



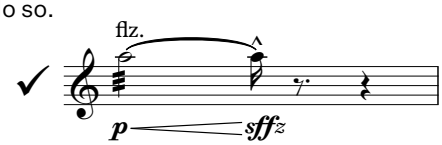
False harmonic glissandi are possible, though this can create the so-called 'seagull' effect if it is large.



FLUTTER-TONGUING

This effect requires the performer to 'flutter' their tongue, as in a sustained, rolled 'rrrrr'. **Not all performers can do this!** Check first before requiring them to do so.

Notation: put *fl.* or *flz.* above note, and add a 3-pronged tremolo marking through stem.



WOODWIND FLUTTER-TONGUING

Flute/piccolo: Possible at all dynamic ranges for the note (though usually softest dynamic is a shade above softest dynamic with normal playing).

Oboe: may be possible, extremely performer-dependent.

Clarinet/Bass clt: Requires ***mf-fff*** dynamic range. Some clarinetists can't do it, so check with your performer. 'Dirties' the tone much more than flute's fluttertongue. 'Growling' may be an appropriate substitution if flutter-tonguing not possible.

Bassoon: apparently this is possible, but check with your performer.

Saxophone: possible at ***mf-fff*** dynamic range. Some performers find it difficult.

BRASS FLUTTER-TONGUING

Possible at most dynamics. 'Buzzes' the tone in an interesting way.

MICROTONES

The standard microtonal notations are as follows (for equal-tempered quarter-tones):

Quartertone flat: 𝄳

Quartertone sharp: 𝄲

Microtones on woodwind can be created either through **alternative fingerings** or by bending the pitch with the **embouchure**. If the microtone is indicated as a pitch bend, then embouchure is best, but if the note is intended as a *stable microtonal pitch* then using an alternative fingering is best, if available. **Most performers never learn microtonal fingerings** and find them very challenging to play, especially at speed. The more accommodating performers are happy to play them and to work out the fingerings themselves, as long as they are not used in great abundance or in rapid figures. Nearly all performers will get stressed out if you give them too many, however. **Only the most advanced international contemporary performers can play microtones with great fluency and at speed: this takes a lot of practice, however**.

WIND MICROTONES

Flute/piccolo: possible on most notes, except lowest 5 or 6 semitones, and one or two others. Fingered or bent.

Oboe/cor anglais: possible on most notes, except lowest 5 or so semitones. Fingered or bent.

Clarinet/bass clarinet: possible on most notes, except lowest 5 semitones, and the 5 or so semitones near the break (fingered B♭, B, C, C♯, D). There are some auxiliary key possibilities for these, but check with your performer first.

Bassoon/contrabassoon: possible on most notes, except lowest few semitones.

Saxophone: possible on most notes, except lowest 6 semitones. Fingered or bent.

BRASS MICROTONES

Horn: possible on all notes with bending. Also has some naturally occurring quartertones as part of the harmonic series. A chart of fingerings and pitches is here: bit.ly/1jRAvJ5

Trumpet: Possible, though 'faked' through half-valving, so avoid fast runs with microtones.

Trombone: Slide allows for continuous microtonal detuning. Difficult to incorporate microtones in fast runs because of 'approximation' effect.

Tuba: Possible through half-valving and harmonic series, but avoid fast runs.

HARP MICROTONES

Possible by flattening a string a quartertone lower. Note that the detuned string must remain detuned for the entire piece. Do not detune too many strings on the harp, if that harp is to be used for other works in the same concert.

Microtonal 'tuning key glisses' are possible — see 'glissandi'.

PIANO MICROTONES

Not possible without detuning the piano, which is unlikely to be allowed in most situations. The easiest solution is to use a sampled piano.

PERCUSSION MICROTONES

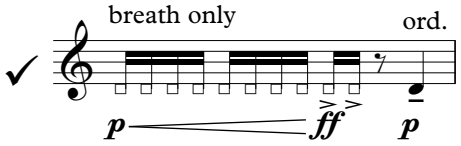
Difficult on most instruments, unless they can be flexed or dipped in water for indeterminate pitch changes. If you want true microtonal percussion, you'll need custom-built instruments.

STRING MICROTONES

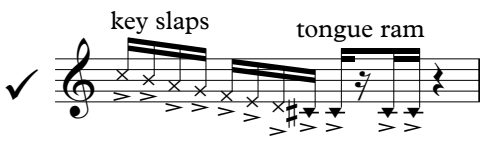
Possible for non-amateurs, and best for solo strings — getting an entire string section to play a microtone in tune is really difficult, even for professional orchestras (believe me, I've tried). Solo strings, however, like a string quartet or chamber ensemble, seem much more successful. Always check your performers are OK with it first. Fast changes of microtones are very difficult for performers who have not trained in microtonal performance (i.e. who have not practiced microtonal scales and arpeggios).

NOISE EFFECTS

Breath sounds can be indicated in a number of ways. Many composers replace the notehead with a hollow square and an indication 'breath only'. You can also put a large hollow circle at the start of the breathy section, and a filled-in circle at the end.



Percussive noise effects (slap-tongue on single-reeds, key-clicks on winds, damped piano strings, tapping on body of string instrument, etc) are indicated with either a cross notehead or a cross through the stem, and a note either on the score or in an explanatory preface to explain the desired effect. **Tongue rams** on flute have been standardized as down-pointing triangle noteheads



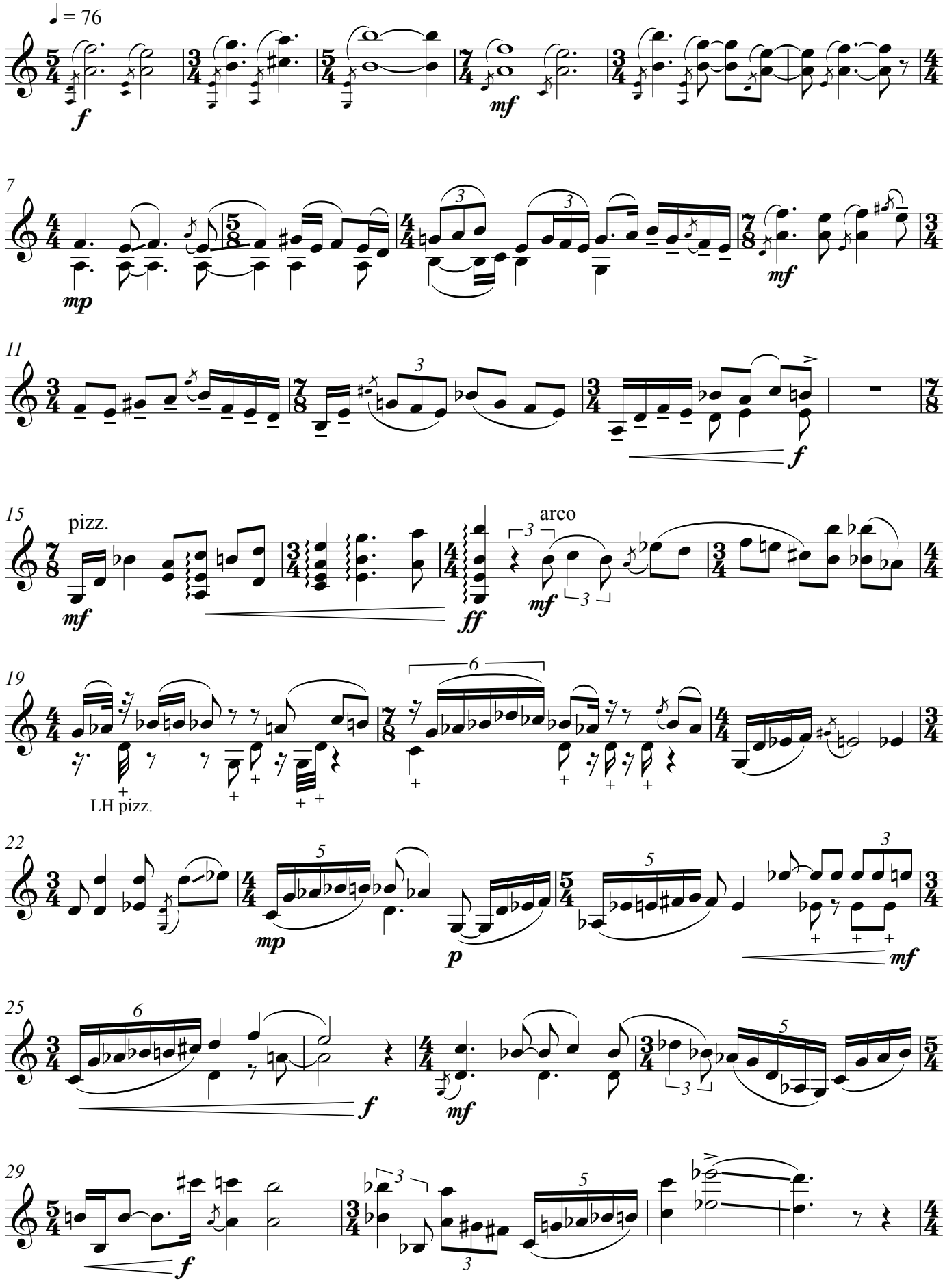
APPENDIX

MUSICAL EXAMPLES

Atsinganos

for solo violin

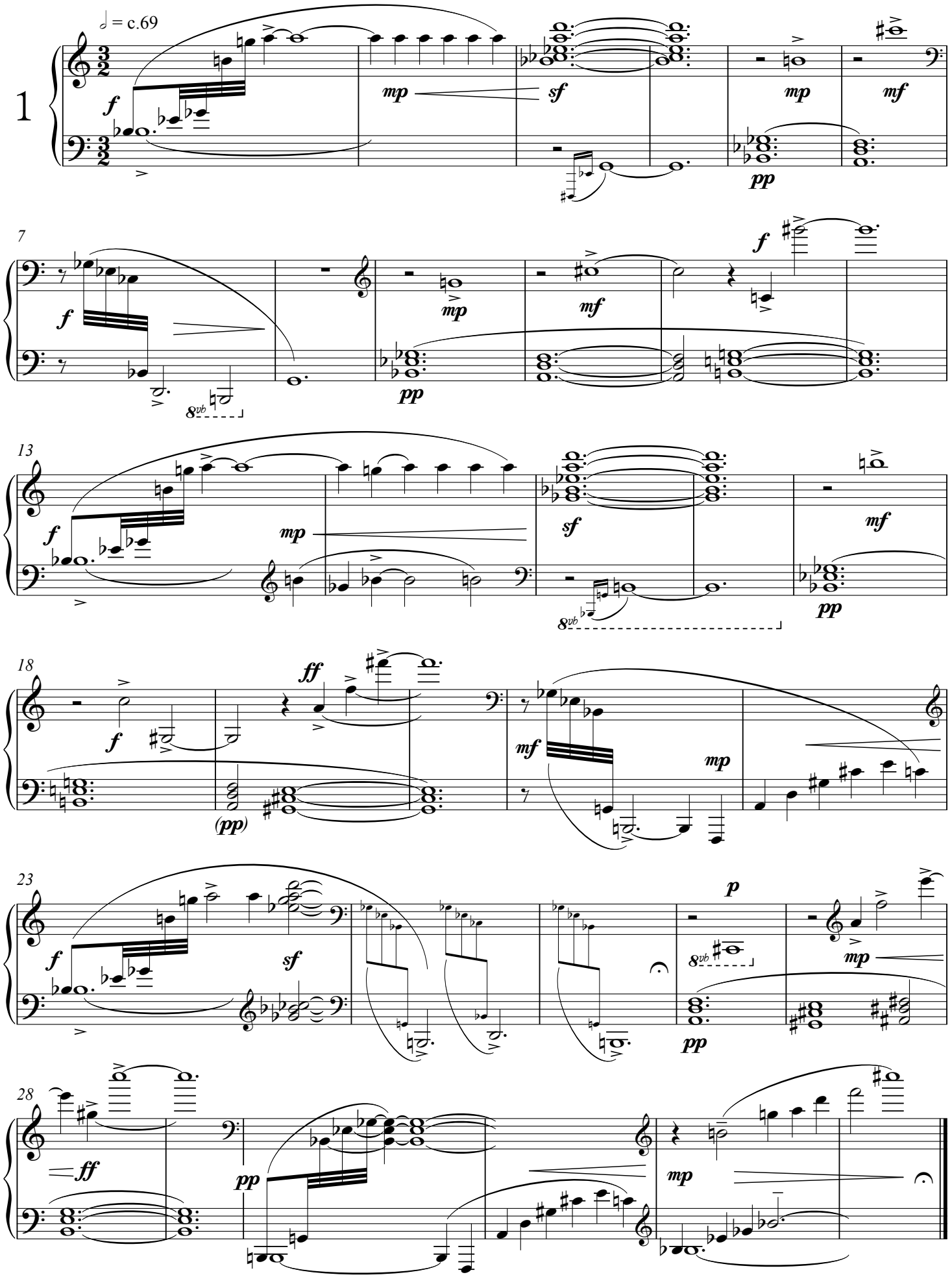
HELEN BOWATER



Nine Short Pieces

for piano

DOUGLAS LILBURN

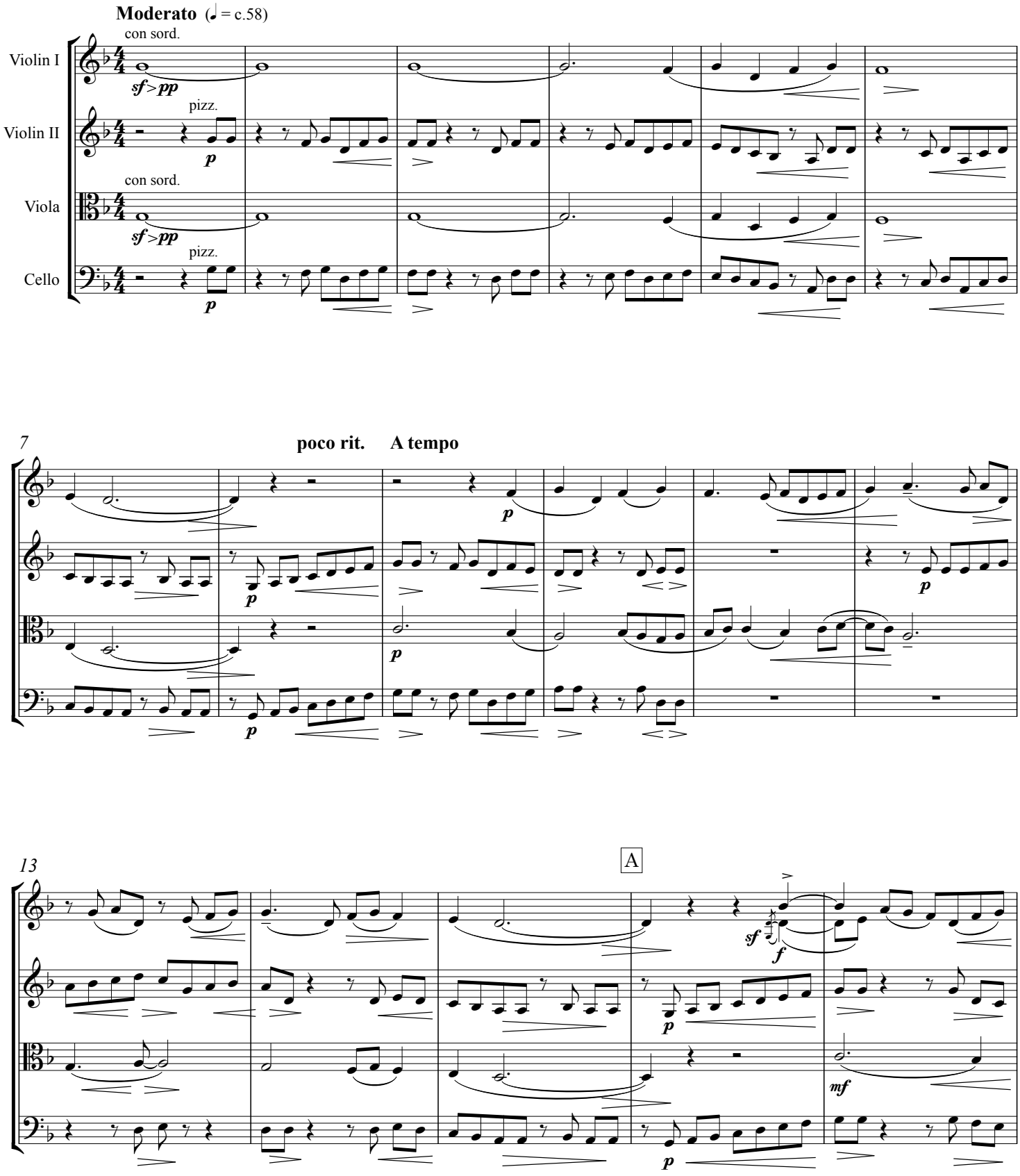


Phantasy for String Quartet

Based on the air "Westron Wynde" (c.1500)

Westron Wynde when wilt thou blow?
The small rain down doth rain.
Christ, that my love were in my arms
And I in my bed again.

DOUGLAS LILBURN

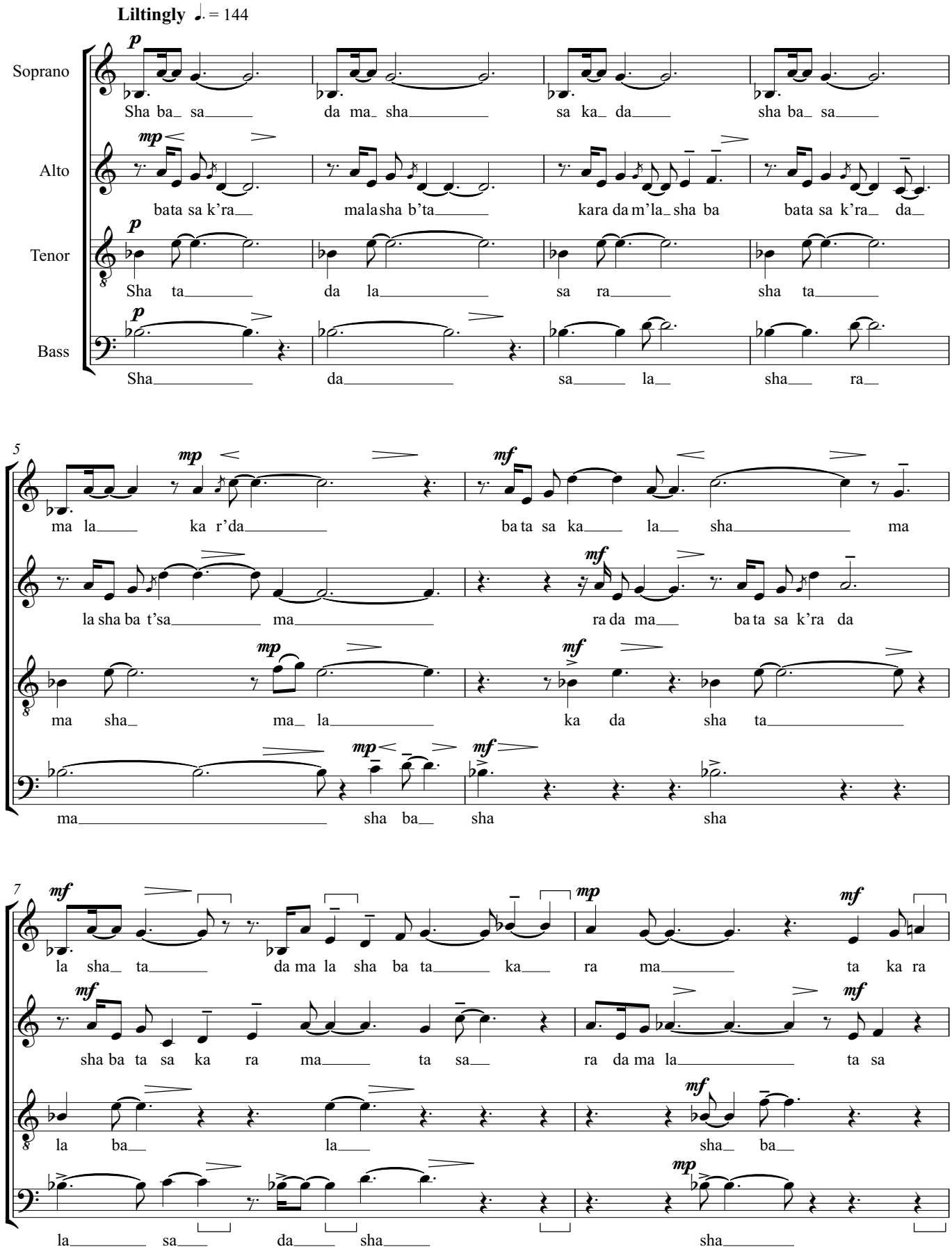


FIVE LULLABIES

for choir

JACK BODY

I

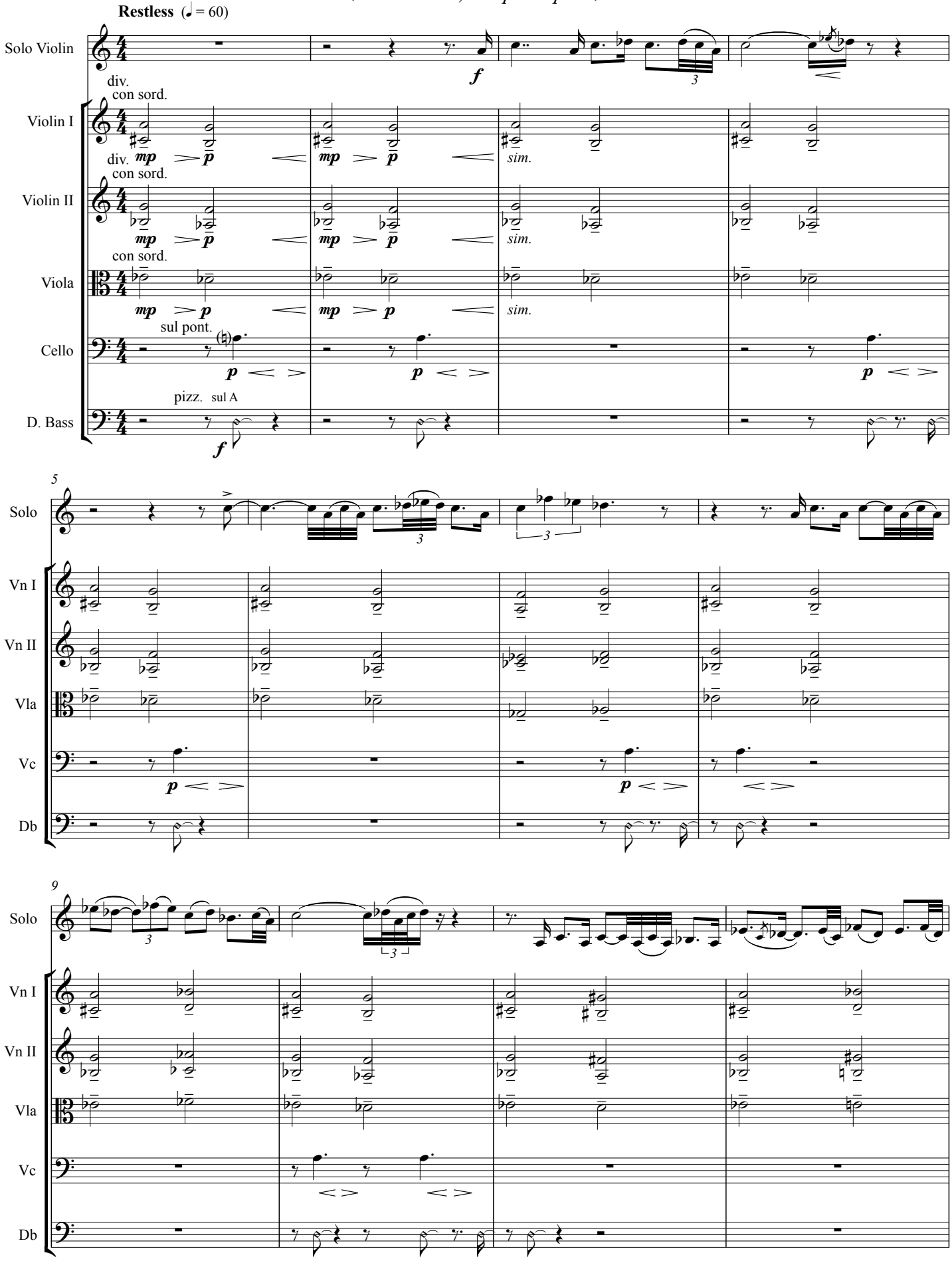


Meditations on Michelangelo

I

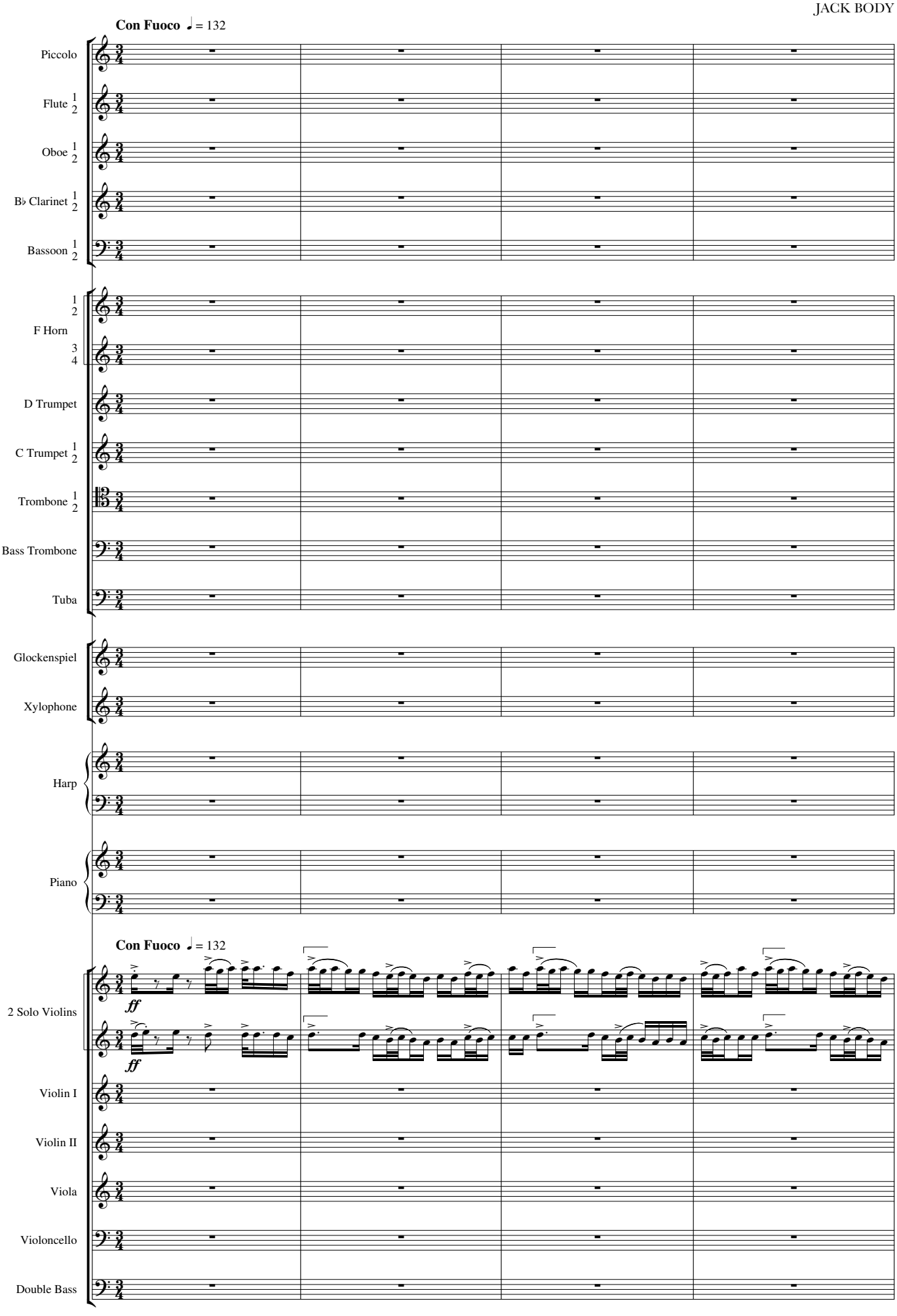
JACK BODY

(S'un casto amor, s'una pietà superna)



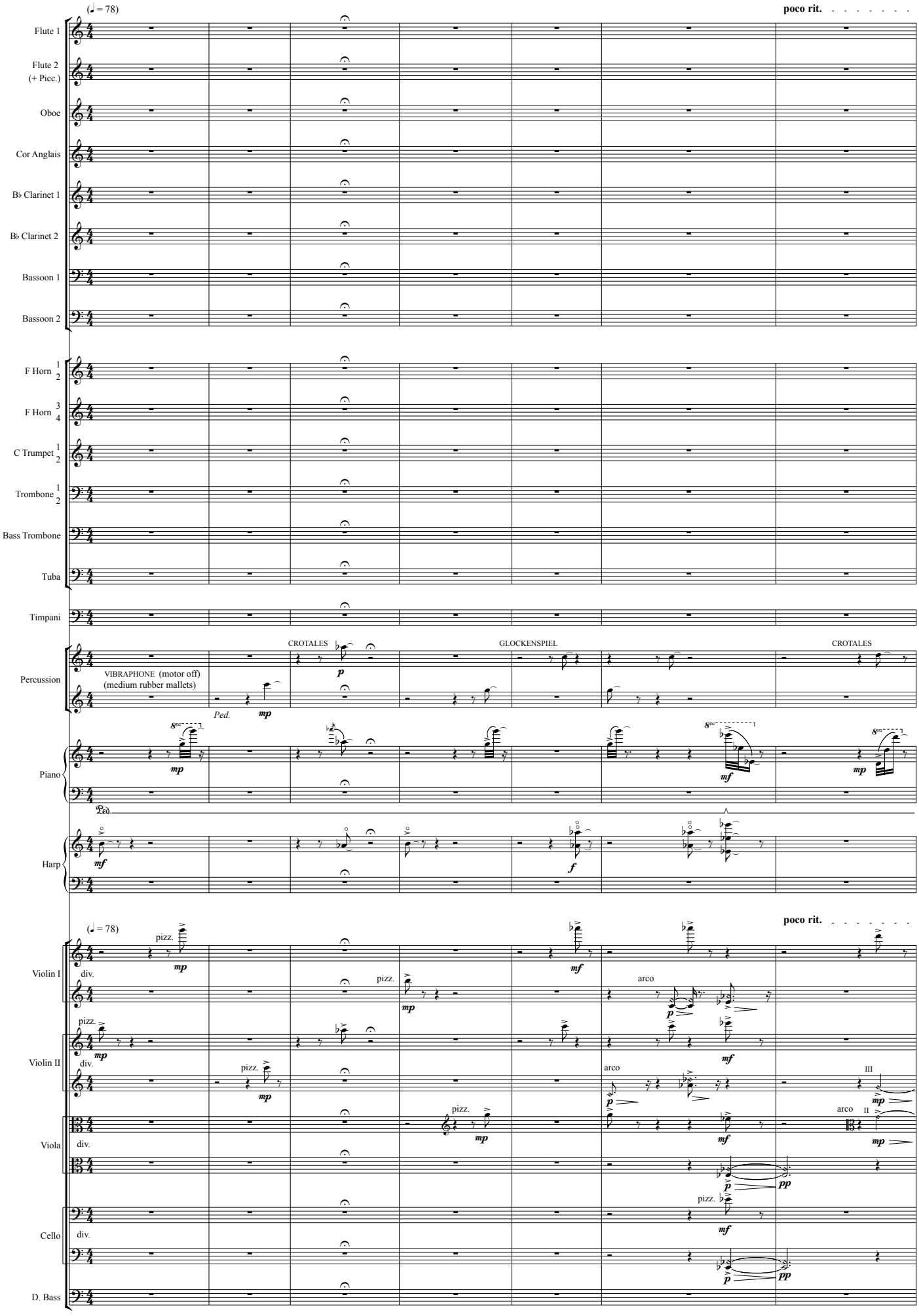
MELODIES FOR ORCHESTRA

JACK BODY



CLARO

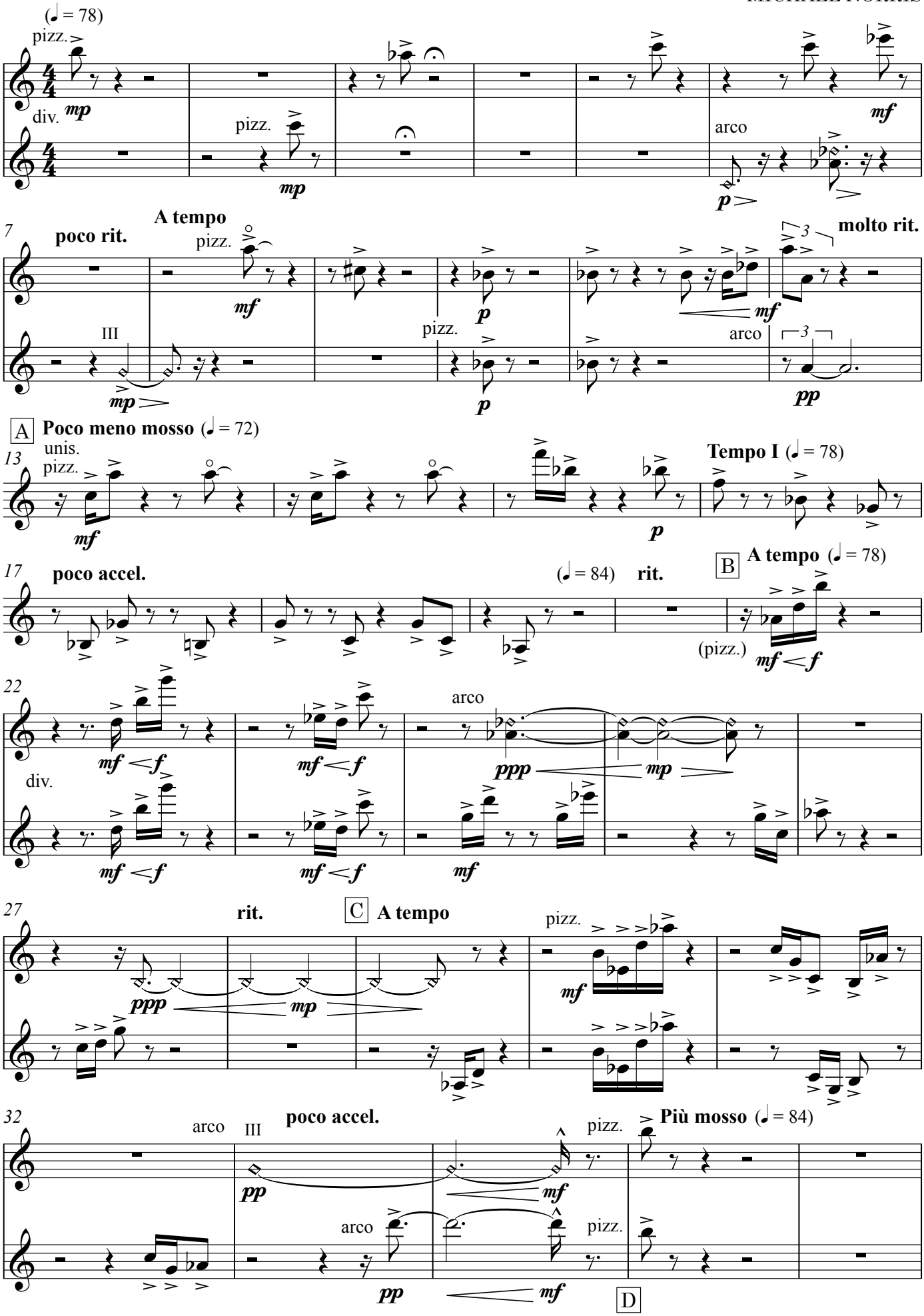
MICHAEL NORRIS



VIOLIN II

CLARO

MICHAEL NORRIS



CMPO Major Assignment checklist — for your personal use

SCORE

- ☐ Score is neatly handwritten and photocopied or printed using good quality laser printer
- ☐ Score has: a title page, a list of instruments used (for ensemble/orchestra), explanation of non-standard techniques, title, name, course code, date, © notice, tempo
- ☐ All instruments appear on first system, even if not playing [except doubling instruments]
- ☐ If using transposing instruments, score is transposed
- ☐ Both full and abbreviated staff names have instrument numbers where appropriate (e.g. Flute I, II / Fl. I, II). If solo piece, the instrument name is included as part of the title (e.g. "Monologue for solo clarinet"), not next to the staves.
- ☐ Score presented double-sided and bound
- ☐ Standard music font & text font used

PARTS (IF REQUESTED)

- ☐ On first page of each part: Instrument name at top-left, name of piece at top-centre, composer and arranger at top-right
- ☐ Cues given after periods of long, unbroken rests (e.g. 15 or more bars) in parts
- ☐ Parts printed using high quality laser printer
- ☐ Parts presented single-sided, unbound, paper-clipped together

Orchestral parts:

- ☐ Exactly one exclusive part per player for each wind, brass, keyboard, timpani and harp. [NB: doubling instruments still only get one part, with both instruments incorporated into the part.]
- ☐ One part per section for strings & percussion (excluding timpani).

GENERAL PRESENTATION

- ☐ Rehearsal letters given, c. every 10-20 bars, at important points in the music
- ☐ Bar numbers at beginning of each system (except first) in both score and parts

GENERAL MUSICAL CORRECTNESS

- ☐ Accidentals spelled intelligently
- ☐ Beaming checked
- ☐ Ample time [at least 6 seconds] given for instrument changes & mute changes
- ☐ Automatic transposition facility used. 'Atonal' key signature used, where appropriate.
- ☐ Appropriate phrasing (slurring/bowing), dynamics and articulation added where necessary
- ☐ Correct clefs used:

Bassoon/cbn [bass & tenor only]
Tbn & tuba [bass & tenor only; treble very rarely]
Cello & bass [bass, tenor & treble only]
Timpani [bass only] • **Unpitched perc** [percussion clef]
Horn [treble almost always; bass very rarely]
Viola [alto & treble only]
Keyboards/harp/pitched perc [treble & bass only]
All others [treble only]