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# NZSM COMPOSITION & ORCHESTRATION STYLE GUIDE 2008

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NEW ZEALAND  
SCHOOL  MUSIC

# NZSM COMPOSITION & ORCHESTRATION STYLE GUIDE

UPDATED February 2008, Michael Norris

This document is a growing list of professional knowledge that all composers & orchestrators should read and follow while studying at the NZSM. "Doing the right thing" from the outset will stand you in good stead, not only with your lecturer, but also with your performers, who will appreciate the effort you put in.

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## 1. PRESENTATION FUNDAMENTALS

- 1.1 Neatly **handwritten** or computer **typeset**
- 1.2 **ABSOLUTELY NO PENCIL and NO BIRO ON YOUR SUBMITTED ASSIGNMENT. ASSIGNMENTS SUBMITTED IN PENCIL OR BIRO WILL NOT BE MARKED.**
- 1.3 For handwritten scores, it's best to use a **thin, black, felt-nibbed pen** (such as the Stabilo 188, Artline 0.5mm or the Sharpie Extra Fine Point all available from Warehouse Stationery).
- 1.4 Handwritten scores will only be accepted as a photocopy. **Do NOT submit originals.**
- 1.5 For computer-set scores, use a good-quality laser printer for your assignments
- 1.6 Every assignment, both minor and major, should have:
  - 1.6.1 **Title**
  - 1.6.2 **Your name** [if an arrangement, use "Composer's Name arr. Your Name"]
  - 1.6.3 **Course Title** (e.g. CMPO 101)
  - 1.6.4 **Date** of composition/orchestration
  - 1.6.5 © notice if appropriate
  - 1.6.6 **Tempo**: it's best to write in a metronome marking (e.g. ♩ = 84) rather than just "Moderato". If using time-space notation, ensure that the duration of sections is clear.
- 1.7 **Full scores** for major assignments must be presented double-sided A4 and spiral-bound. Larger ensembles & orchestras may require larger paper (such as A3). Tip: use a bigger binding coil than you think necessary: page turns are easier and quieter with larger coils.
- 1.8 **Parts** should be presented as single-sided A4 loose sheets kept together with paper clips
- 1.9 Scores should always be written **transposed** (i.e. with transposing instruments written the same as in their parts), unless you indicate clearly that it is a 'Score in C'
- 1.10 Pieces should have clear and well-placed **expressive detail**: e.g. articulation and dynamics
- 1.11 **Staff names**
  - 1.11.1 For **solo pieces**, the instrument should be clearly marked as part of the title text (e.g. "Monologue for solo clarinet"). The staves should not be named.
  - 1.11.2 For **individual parts** (except percussion) the staff name should appear at the top-left of the first page, and thereafter in the top-middle.
  - 1.11.3 For **duos, trios and standard quartets**, staff names appear only on the first system
  - 1.11.4 For **larger ensembles** and **orchestral scores**, staff names should always appear with the full name on the first system and abbreviations thereafter.

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## 2. HANDWRITING GUIDELINES

- 2.1 Again: **Don't use pencil or biro** for your final copy. Please!
- 2.2 **Rule** all barlines and beams. Beams should be thicker than stems.
- 2.3 Don't make your noteheads too big (or too small). Compare with other good examples.
- 2.4 Using a custom-made computer-set blank score as your manuscript paper can often be more attractive and easier to use than generic blank manuscript paper, and also makes great sketching paper. You can print these out and then photocopy to A3.

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### 3. COMPUTER NOTATION SOFTWARE GUIDELINES

#### 3.1 Fonts

- 3.1.1 Use the standard music font. Don't choose the 'handwritten' look, except for big band scores or jazz charts
- 3.1.2 Make sure you use the correct font for dynamics (the bold font). In Sibelius, you have to hold down the 'control' or 'alt' key while typing
- 3.1.3 Use a standard serif font (Times, Times New Roman, Plantin, Adobe Garamond, Palatino or Bembo) or a standard sans-serif font (Frutiger, Arial, Helvetica, Gill Sans or Futura) for all text. Don't use a fancy ornamental font that's hard to read!

#### 3.2 Defaults

- 3.2.1 Don't just settle for the default tempo of ♩ = 100, unless you're absolutely sure that's what you want
- 3.2.2 Suggested staff sizes: score 3–5mm; parts 6–7 mm

#### 3.3 Readability of score

- 3.3.1 **Beaming** is a way of making music easy to read. It means presenting your music in such a way that the locations of the beats are immediately clear to the performer by ensuring that off-beat notes don't "spill across" into another beat. Performers expect good beaming and get very GRUMPY if you don't do it right. To make matters worse, Sibelius, DOESN'T check your beaming for you: in fact, it's very easy to get it wrong in Sibelius. The rule-of-thumb is: can you immediately 'see' where the beats are located? If not, you probably need to subdivide and use ties. There are only a few exceptions to this rule.
- 3.3.2 **Ties vs Slurs:** Make sure your ties and slurs can't be mistaken. This can happen if you are orchestrating two slurred piano chords, and one part ends up with two notes the same, slurred. The player might be confused as to whether these are slurs or ties.
- 3.3.3 **Empty bars:** Don't leave mysterious empty bars at the end of the piece
- 3.3.4 **Collisions:** Avoid collisions of musical notation: e.g. noteheads and dynamics. You can easily catch this during the proof-reading stage if you make a print-out of the score
- 3.3.5 **Accidentals:** Try to keep your spelling consistent. Again, Sibelius is stupid about this. The rule-of-thumb is to try where possible to spell any chromatic notes within a passage as either all flats or all sharps. If you're working in a tonal or quasi-tonal setting, make sure that your choice of accidentals fits in with standard tonal expectations. (e.g. if you're in C major, you would be likely to use a B $\flat$  rather than an A $\sharp$ ). If you have any C $\flat$ s, E $\sharp$ s, F $\flat$ s or B $\sharp$ s, **they are almost always wrong**. And don't use double-sharps or double-flats unless you're Chopin.

#### 3.4 Sibelius tips

- 3.4.1 **Strange gaps:** If you're getting strange gaps in your score, particularly at the beginning or ends of bars, select the bar in question (or the whole score) and choose "Reset Note Spacing". This usually fixes any weirdness.
- 3.4.2 **Uncontrollable system spacing.** Sometimes you find your systems jumping erratically around when you drag them, due to Sibelius's in-built Page Justification. You can fix this by selecting House Style→Engraving Rules→Staves and entering 100% for the "Justify staves when page is at least" box.

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### 4. PRESENTATION OF ORCHESTRAL SCORES

- 4.1 As mentioned before, orchestral scores must be presented **bound** and **double-sided**.
- 4.2 Orchestral scores should include a **title page** and a page that lists the **instruments used**.
- 4.3 **Instrument pairs on score & parts:** For a full orchestral score, pairs of woodwind and brass should share a single staff on the score, unless parts are consistently rhythmically independent. When it comes to creating the parts, however, the rule-of-thumb for woodwind and brass players is: each player must have their own, separate, exclusive part. So Fl. 1 **must** have their own part, which does not contain any of Fl. 2's notes, and Fl. 2 must have their own part, which does not contain any of Fl. 1's notes. Only strings playing divisi have to work out separate notes from a single part.
- 4.4 **Stems on shared staves:** If rhythmically identical, the two noteheads should share the same stem. If rhythmically independent, stems should be in opposing directions.

- 4.5 Staff names: For shared parts, both full and abbreviated staff names must have "I, II" or "I & II" on them. E.g. "Flutes I, II" on first page and "Fl. I, II" thereafter
- 4.5.1 **Abbreviations:** When a single melodic line appears on a shared staff, you need to indicate which of the instruments is to play this line. Use the following abbreviations for wind and brass instruments. Note that they **ONLY** appear on the score, **NEVER** on the part (except, perhaps, the word "Solo", if you want to draw attention to a meaningful solo line)
- |            |                                                                                                                                                                            |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. or Solo | player one only                                                                                                                                                            |
| 2.         | player two only                                                                                                                                                            |
| a 2        | both players (this only ever needs to appear above a single line that is intended to be played by both players in unison, otherwise it will be ambiguous to the conductor) |
- For strings, use the following (NB: these appear on both the score AND part)
- |              |                                                                             |
|--------------|-----------------------------------------------------------------------------|
| div.         | each section divides in 2 (most common)                                     |
| div. a 3 etc | each section divides into more than 2 parts (not so common)                 |
| unis.        | section plays together after a period of divisi playing                     |
| 1 desk       | one "desk" only plays (1 desk = a pair of players, starting from the front) |
| Solo         | the section principal only                                                  |
- 4.6 You do not need to split div. string parts out into separate staves, unless a) the strings are div. throughout the entire piece or b) the parts are rhythmically complex and too tricky to put onto one staff.
- 4.7 **Doubling instruments:** In versions of Sibelius prior to v. 5, you have to create a separate staff in the score for each doubling instrument (e.g. if oboe 2 changes to cor anglais during the piece, you need to create a cor anglais staff, although it should remain hidden until the change occurs.) However, a single part must be made which combines the two. **DO NOT GIVE A SINGLE PLAYER TWO PARTS!** In both score and parts, when the player finishes playing one instrument, you should indicate which instrument they should change to ("to cor anglais") immediately following their final notes. Then, in the part only, over the top of the entrance of the new instrument, you should clearly indicate its name ("cor anglais"). In Sibelius 5, and in Finale, this is much easier now!
- 4.8 **First page:** All instrument staves, including all percussion, should be visible on the first page of the score. The only exception to this is if you had to create extra staves for doubling instruments (see previous note), which should not be visible until they are used (otherwise it appears to the conductor as if two separate players are required).
- 4.9 **Pickup bars and pauses:** All players must be able to know how long each bar lasts and whether there are pauses in it. If a pickup bar only lasts one beat, make sure each player, even if they are not playing, can see that the bar has only one beat in it. If one instrument has a pause in it, you have to ensure that all players know that the conductor is going to pause there, even if they have a rest in that bar. (For instance, if there is a pause on beat 3 of a 4/4 bar, then in instruments that are not playing, you should see a minim rest, a crotchet rest with a pause, and a final crotchet rest.)
- 4.10 **Tempo markings and rehearsal letters:** As with pickup bars and pauses, all players should know if the tempo is changing, so tempo markings must appear on all parts. Adding rehearsal letters (A, B, C, etc...) every 12-20 bars aids the rehearsal process. Rehearsal letters and tempo indications must break multimeasure rests.

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## 5. PRESENTATION OF PARTS

- 5.1 **Parts** MUST be clearly identified with the **composer, title** of the work, and **instrument** (including doublings where appropriate).
- 5.2 Parts must be presented single-sided A4 portrait
- 5.3 **Orchestral parts**
- 5.3.1 For **winds, brass, keyboards, timpani & harp**, each player MUST have one, and one only, separate, exclusive part.
- 5.3.2 **Strings** share one part between two. 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.
- 5.3.3 **Percussionists** read off a single percussion part, which includes all the music for percussion instruments, **EXCEPT** the timpani. The players then determine amongst

themselves who will play what (they PREFER to do it this way!) Percussion parts should include a list of the instruments required and should have mallets clearly indicated.

- 5.4 **Page turns:** consideration in layout should be given for comfortable page turns. [For parts of only 2–4 pages, this is not so important]
- 5.5 **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 arms-length.
- 5.6 **Bar numbers** should appear at the beginning of the first bar of each line for each part. Numbering each bar gets in the way and becomes confusing in the parts. Not numbering any bars makes for a long and grumpy rehearsal.
- 5.7 In hand-copied parts it is recommended that all stems, beams, and bar lines be ruled with a straight edge, especially multiple-staff harp and keyboard parts.
- 5.8 In longer works, **rehearsal letters** (A,B,C) are helpful. These should be at regular places in the score where some obvious event happens. [Sibelius: Command/Control-R creates automatic rehearsal letters.]
- 5.9 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. [Sibelius 5 has a new Paste as Cue function.]
- 5.10 **Standard music notation practice** should be observed and any deviation from the standard should be clearly explained prior to the first page of music. [An “explanation of symbols” section is useful if you’re using non-standard notation. However, often people use non-standard notation when there is already a well-accepted standard notation, so be wary of over-using non-standard symbols. There are many books in the library to help you with this. A good one is “Music notation: a manual of modern practice” by Gardner Read — MT35 R282 M 1974. Explanations of one-off effects or occasional performance instructions can go directly onto the score—however, these should be kept to a minimum to avoid clutter.
- 5.11 **Harp pedalling:** most harpists prefer to work out their own pedal changes, though you should, of course, ensure that all their parts are actually possible.
- 5.12 **Clefs:** please ensure you use the correct clef for each instrument’s range: ask a performer if you’re not sure. Most instruments only read one clef, with the following common exceptions:

<b>Bassoon</b>	bass & tenor clef
<b>Horn</b>	can read bass if absolutely necessary (but rarely needed)
<b>Trombone</b>	bass, tenor & treble (and alto sometimes, apparently)
<b>Viola</b>	alto & treble clef
<b>Cello &amp; bass</b>	bass, tenor & treble clef

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

- 5.12.1 NB: for those instruments that can read different clefs, the rule-of-thumb is: if you’ve got more than 3 or 4 ledger lines, consider whether you could use a new clef. Most instruments have a “default” clef that they prefer to play in, and you should only go outside of that if the ledger lines start stacking up for a long period.

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## 6. SPECIFIC NOTATION TRAPS

[See examples on following page]

- 6.1 **Courtesy accidentals** help performers realise that you don’t intend the previous accidental to carry through.
- 6.2 A **trill** has three components: 1) tr sign; 2) wavy line following tr for duration of trill; 3) a stemless notehead in brackets following the note to indicate which note to trill to (the last may be omitted if you’re working in a strictly tonal setting, or if you use the tr<sup>#</sup>, tr<sup>b</sup> and tr<sup>b</sup> notations)
- 6.3 **Grace note stem direction** normally opposes main note direction. Sibelius doesn’t check. It’s also recommended you slur the grace note to the main note, and make sure there is a “slash” through the stem of the grace note(s).
- 6.4 **Fluttertongue:** standard notation is fl, flz, or flzg. Must be accompanied by tremolo mark on the stem.
- 6.5 **Tempo markings:** don’t use “BPM”

- 6.6 **Glissandi:** straight lines indicate embouchure/lip glissandi. Wavy lines indicate fingered glissandi. Also include *gl* above the first note of all glisses. Make sure the straight lines are thick enough to be seen at arm's length.
- 6.7 **Beaming:** I've talked about this at length before, but it is one of the most common mistakes. Look at the last example below, and make sure you understand why the first bar is awful and why the second bar is better. (The example is based on an actual student piece I received).

## Notation traps

### Cautionary accidentals

### Trills

### Grace notes

### Fluttertongue

### Tempo markings


### Glissandi

### Beaming

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## 7. Other notes

### 7.1 Placement of symbols

- 7.1.1 **Techniques** (e.g. arco, pizz), 8va symbols and tempo markings go **above** the staff (except 8ba, which goes below)
- 7.1.2 **Tempo markings and rehearsal marks**, in orchestral scores, only need to go above the major groupings (i.e. at the top of the winds, then the brass, then percussion/pf, then strings).
- 7.1.3 **Expressions** (e.g. dynamics, hairpins) and 8ba symbols go **below** the staff
- 7.1.4 **Piano/keyboards/harp/mallet insts.**
  - 7.1.4.1 For "grand staff" instruments, expressions go between the two staves if you want them to apply to both; otherwise put them above the right hand or below the left hand
  - 7.1.4.2 Pedal markings (  / \* ) go below the bottom staff
- 7.2 When putting in **crescendi** and **decrescendi**, make sure it's clear what dynamic level they begin and end at. This is especially true of orchestrations, for which you will need to add more dynamic markings in parts than were present in the original source.
- 7.3 **8va/8ba**
  - 7.3.1.1 99.9% of the time, wind & brass instruments don't read 8va or 8ba signs. The only places you should use these are in some high violin writing, or in the extreme registers of the harp, piano, other keyboard instruments or some mallet percussion.
  - 7.3.1.2 You should NEVER use 8va with bass clef (use a higher clef instead), nor should you use 8ba with the treble clef (use bass clef instead).

### 7.4 Harmonics

- 7.4.1 **String harmonics** are written in two ways:
  - 7.4.1.1 **Natural harmonics**: the string indication (e.g. III) and a diamond notehead for the fingered note. The sounding pitch does not have to be given, unless you feel it is important for the player to know. In that case the sounding pitch should be given in brackets above the diamond note. The alternative way is to just write the sounding pitch with a circle (°) above it. Which method is preferred is a matter of some debate.
  - 7.4.1.2 **False harmonics**: two noteheads: one normal notation notehead indicating the stopped pitch, and one diamond notehead indicating the pitch to be lightly touched (usually a perfect 4th above the stopped pitch, in which case the sounding note will be two octaves higher). Normally the sounding pitch is not indicated, unless you are using an interval other than perfect 4th.
  - 7.4.1.3 Harmonics can also be achieved on some other instruments, notably the flute and harp. **Flute harmonics** are only possible as high harmonics off the lowest tones (usually an 8ve or 8ve+5th). **Harp harmonics** always sound one octave higher than written. Check with performers for the best method of notation.

## CONTEMPORARY ORCHESTRATION GUIDELINES

The notes below will help you out if you feel unsure about certain aspects of writing for specific instruments. For any questions not answered below, check with a standard orchestrational textbook, or ask a performer. The library also has a good selection of textbooks dealing with more advanced contemporary notation.

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### 8. MUTES

To indicate an instrument should be muted, use the expression 'con sord'. To indicate that a passage is unmuted after a muted passage, use 'senza sord.'. To specify a particular sort of mute, 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'.

#### 8.1 Woodwind

- 8.1.1 Only common example is muting the bassoon, which can be seen in some Ligeti scores. A rag or a horn mute may be used for this.

#### 8.2 Brass

- 8.2.1 **Horn:** generally only one mute used, a fibreboard mute. Bouché (hand-stopping) is an alternative for a more nasal, 'biting' sound. Allow 4-5 seconds for change of mute. Both bouché and standard mutes actually transpose the entire instrument by a semitone, but the players take care of the transposition at sight. Some players also use a brass non-transposing mute, which has a similar sound to bouché, but these are not standard and should not be assumed.

- 8.2.2 **Trumpet:** has the most variety of mutes. Straight is the 'normal' mute (what you get when you write con sord), but also available are cup mute, harmon mute, plunger, derby. Allow at least 3 seconds to change. Harmon mute has a stem that can be in or out. You should always specify whether the harmon is stem in, half-in or removed. ("Harmon stem removed" = much tighter, more nasal sound, the sound that Miles Davis produces. "Harmon stem in" = "Wah-wah". Also possible to have "stem half in". Avoid saying "stem out", as this is ambiguous) A louder, more "open" wah-wah effect can be achieved with the plunger mute. Allow 4-5 seconds for a change of mute.

- 8.2.3 **Trombone:** Straight is most common, with harmon & plunger also available. Allow at least 7 seconds to change as the mutes are reasonably large and need to be "screwed in"

- 8.2.4 **Tuba:** Only one mute, which requires a lot of time to fit and unfit. Allow at least 15 seconds per change. As a rule, tuba players dislike using it, so only use in extreme circumstances!

#### 8.3 Strings

- 8.3.1 Normal mute is indicated by con sord. A "practice mute" is also available which has a much softer, more metallic sound.
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### 9. GLISSANDI

#### 9.1 Woodwind [All woodwind have fingered glissandi possible.]

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

- 9.1.2 **Oboe:** Wider glissandi possible higher up the instrument.

- 9.1.3 **Clarinet:** 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. Again, a combination of 'gliss embouchure' with finger sliding can create smooth glissandi over wide ranges (takes a bit of practice). See Rhapsody in Blue.

- 9.1.4 **Bassoon:** as per oboe.

- 9.1.5 **Saxophone:** as per clarinet.

#### 9.2 Brass [fingered glissandi less successful because of more sluggish valve mechanisms. Trombone "fingered" gliss impossible, of course, but then it has the slide to make up for it!]

- 9.2.1 **Horn:** most common is the 'rip', going up the harmonic series. Narrow glisses by a semitone are possible, usually by hand movement or half-valving.
- 9.2.2 **Trumpet:** narrow glisses are available by half-valving. Rips are also possible
- 9.2.3 **Trombone:** glisses created by slide, but slide can only move 6 semitones, and then only between harmonics of Bb (most extended) and E (least extended), so you have to work out whether they are possible or not. A gliss on harmonics is called a 'rip'
- 9.3 **Harp:** harpists can cover a great range very quickly, given that an octave covers about 10cm. When writing loud glissandi, always allow a big range (at least 4 octaves) to allow the player to pluck the strings with greater velocity. A "tuning key gliss" is available, though it requires practice from the player. Indicate the sounding pitch, as it will actually be performed on a larger (and therefore lower) string. It also has a narrow-ish range (about an octave or so, though talk to your performer first if you want to do this). A "pedal gliss" is also possible, where a pedal is raised or lowered to change the tuning of the string. This is not very smooth, however, and of course only has a maximum range of 2 semitones. It can also buzz a little bit.
- 9.4 **Strings:** All easy, but when going downwards, make sure you indicate which string it should be played on. (You can tell by working out what string the lowest note has to be played on). Harmonic glissandi are possible on a string: you can either notate this by touching indication or by sounding pitch. False harmonic glissandi are possible, though often create the "seagull" effect.

## 10. FLUTTERTONGUING

- 10.1 **General:** 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.
- 10.2 **Notation:** put fl. or flz. above note, and add a 3-pronged tremolo marking through stem
  - 10.2.1 **Woodwind**
    - 10.2.1.1 **Flute/piccolo:** Possible at all dynamic ranges for the note (though usually softest dynamic is a shade above softest dynamic with normal playing)
    - 10.2.1.2 **Oboe:** may be possible, extremely performer-dependent
    - 10.2.1.3 **Clarinet/Bass ctt:** Requires mf-fff dynamic range. Some clarinetists can't do it, so check with your performer. "Dirties" the tone a lot more than flute. "Growling" may be an appropriate substitution if fluttertonguing not possible.
    - 10.2.1.4 **Bassoon:** apparently this is possible, but check with your performer.
    - 10.2.1.5 **Saxophone:** possible at mf-fff dynamic range. Similar to clarinet, in that some performers find it very difficult.
    - 10.2.1.6 **Brass:** Possible at most dynamics. "Buzzes" the tone in an interesting way.

## 11. MICROTONES

- 11.1 Microtones on woodwind can be created either through alternative fingerings or through embouchure. If the microtone is just meant as an "inflection", using glissandi, then embouchure is fine. If note is intended as a stable microtonal pitch (as part of a broader melodic or harmonic gesture) then using an alternative fingering, if available, is preferable. Unfortunately, 99% of performers never learn these alternative fingerings and find them very challenging to play. So, always check with your performer before you begin writing microtones. 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. Most players are happy to do them occasionally, as long as you tell them the right fingering. 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 years of specific practice, however.
- 11.2 **Woodwinds**
  - 11.2.1 **Flute/Picc:** possible on most notes, except lowest 5 or 6 notes. Fingered or bent.
  - 11.2.2 **Oboe/Cor Angl:** possible on most notes, except lowest 5 or so notes. Fingered or bent.
  - 11.2.3 **Clarinet/BClt:** possible on most notes, except bottom 5 notes, and the 5 or so notes near the break. (fingered B $\flat$ , B, C, C $\sharp$ , D)
  - 11.2.4 **Bassoon/Cbn:** possible on most notes, but do check

- 11.2.5 **Saxophone:** possible on most notes, except bottom 6 notes. Fingered or bent.
- 11.3 **Brass**
- 11.3.1 **Horn:** possible on most notes with bending. Has some naturally occurring quartertones as part of the harmonic series. These are to be preferred, but requires composer to make a little chart of the possibilities (or to be very familiar with the horn).
- 11.3.2 **Trumpet:** Possible, though has to be fudged through half-valving, so avoid fast runs with microtones
- 11.3.3 **Trombone:** Slide allows for microtonal detuning. Difficult to incorporate microtones in fast runs because of "approximation" effect
- 11.3.4 **Tuba:** Possible through half-valving and harmonic series (see horn).
- 11.4 **Harp:** Possible through detuning a string. Bear in mind that that string must stay detuned for the entire piece, however
- 11.5 **Piano:** not really possible without detuning the piano, which is unlikely to be allowed. Solutions include using a computer sound module that allows for microtonal detuning, or using prepared piano, though this changes the timbre as well.
- 11.6 **Strings:** Possible, though getting an entire string section to play a microtone is just asking for bad intonation. (Believe me, I've tried.) Even for advanced orchestras, like the NZSO, intonation is a big difficulty. Solo strings, however, like a string quartet or chamber ensemble, seem much more successful.
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## 12. NOISE EFFECTS

- 12.1 Breath sounds can be indicated in a number of ways, depending on the amount of breath wanted
- 12.2 Many noise effects (slap-tongue, key-clicks, damped piano strings, 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
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## 13. INSTRUMENT-SPECIFIC NOTATION

### 13.1 Woodwind & Brass

- 13.1.1 Slurs are used to indicate tonguing.

### 13.2 Harp

- 13.2.1 A lot has been written about the specific difficulties with writing for harp. 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.

### 13.3 Vibraphone/Marimba

- 13.3.1 One way to tell whether a particular passage is possible on the vibraphone or marimba is to hold out the first and fourth fingers 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.

### 13.4 Strings

- 13.4.1 **String indications:** IV refers to the lowest string on an instrument. Thus IV on a violin is the G-string. On a cello it would be the C-string. I is the highest (violin: E string; cello: A string)
- 13.4.1.1 If a whole passage is to be played on a specific string that it wouldn't normally be played on (e.g. for a specific colouristic effect) this should be notated using the string indication and a dotted bracket covering the length of the passage.
- 13.4.2 **Multiple stops** are difficult to work out if you're not a string player. A general rule is: any double stops that involve open strings are easy. Otherwise, intervals from a semitone to an octave are possible, but fifths can be awkward. Avoid doing fast movements between multiple-stops. And always run them past your performer.
- 13.4.3 Slurs are used to indicate bowing.



# Sample Orchestral Score

Joe Zawinul, arr. M Norris

Groovy (♩=85)

**A**

Musical score for Groovy (♩=85). The score includes parts for Flutes I, II; Oboe I, II; Clarinet in B♭ I, II; Bassoon I, II; Horns in F I, II, III, IV; Trumpets in B♭ I, II, III; Trombones I, II, III, IV; Tuba; Timpani; Harp; Tenor Sax. in B♭; Guitar; Piano; Bass; and Drum Kit. The score is in 4/4 time and features a variety of dynamics and articulations. A section marked 'A' begins at the end of the score.

Groovy (♩=85)

**A**

It seems... life has played a game on me

Musical score for Violin I, Violin II, Viola, Cello, and Double Bass. The score is in 4/4 time and features a variety of dynamics and articulations. A section marked 'A' begins at the end of the score.

# Sample part

Joe Zawinul, arr. M Norris

## Flute I

Groovy (♩=85)

The musical score for Flute I is written in 4/4 time with a tempo of 85 beats per minute. The key signature has three flats (B-flat, E-flat, A-flat). The score is divided into measures 1 through 73, with various dynamics and articulations. The piece features several marked sections: A (measures 5-8), B (measures 13-16), C (measures 17-20), D (measures 25-28), E (measures 32-35), F (measures 41-44), G (measures 45-48), H (measures 53-56), I (measures 57-60), J (measures 63-66), and K (measures 73-76). Dynamics range from *ff* (fortissimo) to *mp* (mezzo-piano). Articulations include accents, slurs, and breath marks. A 'SAX SOLO' section is indicated in measures 45-48. The score includes various rhythmic patterns, including eighth notes, quarter notes, and sixteenth notes, as well as rests and ties.