Introduction to OMN The Language

Introduction

OMN is designed as a scripting language for musical events. It's not about sounds themselves, it is about their control and organisation in a musical composition. As a linear script rather than a graphic stave, musical events can be transformed, extended, reorganised by powerful computer algorithms. Some sequencers and score writers provide basic algorithms, but they do not represent the way composers now think about the process of music composition. Composing has become such a multi-faceted process and takes ideas about structure and content from many disciplines: mathematics, astronomy, literature, the visual arts. As such it requires extensive mental resources and experience from the composer. Much of this is still done by hand and eye and brain because although computer systems do exist to help the process along they don't provide what has become known as the composing continuum. This means that a single workspace and workflow environment has not been generally available that can take in the whole process of composing a piece - from first thoughts to a printed score and reference recording. Wouldn't it be good to be able to do everything in one place?

Most composers acquire a bag full of musical tools to act on musical ideas. These still include those tools Bach used for repetition, inversion, retrograde, transposition, but with computer help musical material can be copied, cut, pasted and generally structured and orchestrated. Since the 1950s composers have been experimenting with tools and processes that take musical transformation into wholly new areas; of random numbers, fractals, statistical distribution, graphical plotting to name just a few. To use such experimental things it is composing with a script that is acknowledged as the most efficient and practical way forward. And to work with a script means working with a language: OMN.

OMN and Musical Notation

The truly original aspect of OMN is that it has been designed to speak directly to traditional musical notation. Everything written in OMN script can be rendered instantly to notation and to a performance simulation. For most composers staff notation remains the common currency they have to work in and with. You couldn't expect performers to read from a MIDI event display or indeed from OMN script. As the OMN language is laid out and explored we'll see just how fully the language of music staff notation is mirrored. This is not just in the standard elements of rhythms, pitch and dynamics but in the vast library of musical attributes that cover the way pitches and rhythms are performed by different instruments and voices. So musical notation is always there. Whatever you write there can be an instant 'snippet' rendered to view alongside your script.

OMN: the concept

Most languages have developed orderings for parts of speech. Romance languages place the verb after the subject, and in the middle of the sentence. Germanic languages tend to conclude sentences with a verb. In music we're used to the single intersection of pitch position on a stave line with a rhythmic symbol with or without a stem.

In developing a right concept for the OMN language much thought was given to choosing the most effective ordering of elements. Culturally our music is one governed by our past experiences, elements of musical tradition gathered through informal and formal musical education, and what is active in the memory. Descartes adage "Cogito ergo sum" ("I think, therefore I am") remains an important cornerstone of an individual's relationship with composing music. It is something known. It is a made thing; it possess architecture. We can say with confidence that we experience music in a hierarchical sequence of time, existence, dynamics and expression. So it is right that the linear ordering of OMN reflects this. In architecture this might be translated as dimension, materials, volume of space, decoration. These are established architectural parametrics able to form the basis for CAD rendering in the new parametric systems architects are now using to allow the conditions surrounding to influence design. OMN is a language wholly sympathetic to parametric composition in music.

OMN: The Four Elements

<length>

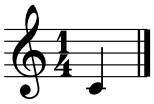
OMN was created to think about the element of TIME first. After all we can be musical without a pitched note being present. If we are going to use the OMN script we need a reference guide to help us whilst we learn the language. What accompanies this introduction is a special dictionary of language terms arranged in the four elements that make up the concept. However, there are some necessary redefinitions required. TIME is a very general element that subdivides in music to rhythm and length. When we describe what makes up a rhythm in notation it is usually a mixture of symbols that have different lengths. So the OMN vocabulary uses the term LENGTH as its general title.

```
(q)
```

<pitch>

The second element of the OMN language is PITCH. Although each piece of music is defined by the length of time, it only starts to EXIST as a proper musical entity when pitch is added.

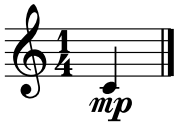
```
(q c4)
```



<velocity>

The third element of the OMN language is VELOCITY. Staff notation has a set of common symbols that are formed from the first letter of Italian words for degrees of intensity we want to attach to a note or a phrase. In OMN there are 12 such terms ranging from *ppppp* to *fffff*. OMN includes many symbols that can only be classed as Dynamics because they are not identified directly with a data value.

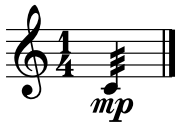
```
(q c4 mp)
```



<articulation>

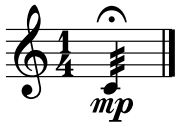
The fourth element of the OMN language is ARTICULATION. The number of general symbols and words used to describe expression in music is vast: *tenuto*, *staccato*, *legato*, *trill*, *fermata* etc... Many instruments, particularly those of the string family have their own vocabulary of technical expressive terms: *pizzicato*, *sul ponticello*, *flautando*. Remarkably these can be included in an OMN script and, if your sampler has a string effects library, these expressive instructions can be realised directly.

```
(q c4 mp trem)
```



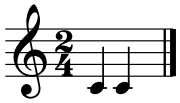
Finally, there is SIMULTANEITY possible in the layering of attributes. This is achieved by the '+' symbol.

```
(q c4 mp trem+fermata)
```



An important fifth element of REPETITION is also present in the OMN language structure.

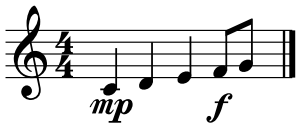
```
(q c4 =)
```



Assemble and Disassemble

It is valuable to remember that the composer may need to create material one parameter at a time. OMN allows for discrete parameters to be brought together to make a composite list in OMN. By the same token it may also be necessary to focus on just a single parameter to develop further the argument of a composition. An OMN list can easily be disassembled into its component parts for such work to take place and then made back into an OMN list.

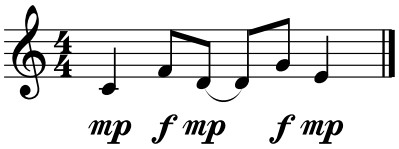
```
(disassemble-omn '(q c4 mp d4 e4 e f4 f g4))
=> (:length (1/4 1/4 1/4 1/8 1/8)
    :pitch (c4 d4 e4 f4 g4)
    :velocity (mp mp mp f f)
    :articulation (- - - - -))

(make-omn :length '(q q q e e)
          :pitch '(c4 d4 e4 f4 g4)
          :velocity '(mp mp mp f f))
=> (q c4 mp d4 e4 e f4 f g4)
```



Functions

OMN script responds directly to the Opusmodus library of algorithmic functions, and with keywords particular elements can be selected to be processed or not.

```
(rnd-order '(q c4 mp d4 e4 e f4 f g4))
```



OMN: the way forward

This introduction should set you on your way. With what has been covered here, the Stages Tutorial files will demonstrate how closely the OMN language can be integrated with algorithmic composing. In fact, when composing in this way you'll often only write material in one parameter at a time. Although every function will read an OMN list, it's often better to keep parameters apart to begin with. You'll see this clearly in the Tutorial files.

There will be some music projects where writing directly in OMN is really necessary. Composing for voice is certainly one medium. There are examples in the How To section to demonstrate word setting with full attention given to syllabic splitting.

For more experimental approaches to composing OMN can be integrated with the conversion of integers and intervals into the parameter of pitch. The Stages Tutorials show how this can be achieved with examples that use pitch-class sets to create tone rows.

OMN is a way of scripting the whole language of traditional staff notation and modes of experimental and conceptual composition using the tools of parametric modelling. It is a language that responds to the future of music presentation, as notation moves inextricably from the printed page to the backlit digital display.

New music technology has focused largely on production and presentation, whereas the conceptualisation and origination of new music requires a very different paradigm. Sequencer and Scorewriters continue to provide valuable ways into composition. Opusmodus provides the 3rd way forward, and one driven by its own notation script: OMN.

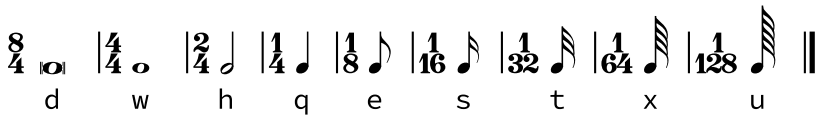
OMN is perfect for those 'on the fly' experiments that all composers make when they are starting out on a project. It is like having a piano close by to try out this or that, but one that always plays what's written quite flawlessly. What is wonderful about scripting is that those experiments if successful can remain part of the score for the whole progress of the composition. With OMN a composing continuum can be achieved.

OMN may look a little hard to decipher at first, but once the logic is understood, be assured, OMN can be read with ease. OMN is the first notation that has been designed from the outset to communicate with MusicXML the de facto standard for communication of notated scores between different software applications. Opusmodus scripts can be converted seamlessly into both Midi and MusicXML.

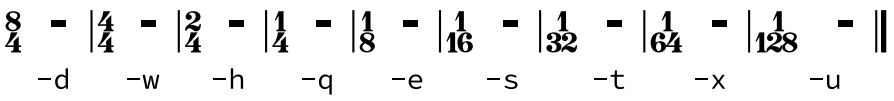
The Four Elements in Detail

1. Lengths

The OMN language provides for a textual equivalent to the many symbols used in traditional staff notation. In the parameter of LENGTH these symbols represent exact durations of virtual time.



Here are the standard values of note-lengths. The most commonly-used are represented in the OMN language by the first letter of their American arithmetic name, so ‘`w`’ is a whole-note, ‘`h`’ is a half-note, ‘`q`’ is a quarter note and so on.



Here are the standard values of rest-lengths.The most commonly-used are represented in the OMN language by the first letter of their American arithmetic name but with the prefix of a ‘`-`’ (minus) sign, so ‘`-w`’ is a whole-note rest, ‘`-h`’ is a half-note rest, ‘`-q`’ is a quarter note rest and so on. To assist with multiple rests `-12` will produce 12 bars of whole-note rests.

```
'(q q q)
```

Here is a list of three quarter-notes. The list has to begin with a `'`(a quote) and be enclosed by parentheses `( )`.

```
'(q -e e q)
```

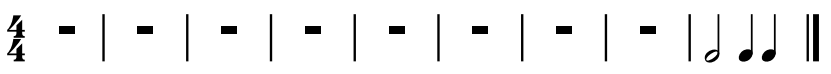
The example above shows note-lengths and rest-lengths in combination.

Length 8 will produce 8 bars of whole-notes lengths.

```
'(8 h q q)
```

Length -8 will produce 8 bars of whole-notes rests.

```
'(-8 h q q)
```

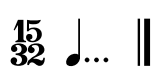


Dotted length

Symbol . .. ...

OMN dots are used the same way as in the standard notation. The maximum dots in OMN length is 3:

```
(q...)
```



Tuplet

The OMN system of rhythmical notation is initially constructed on the principle of duple divisions. Here the individual note-lengths stand for their face value:

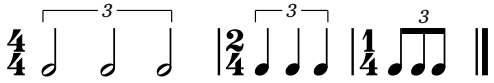
```
w = (h h)
h = (q q)
q = (e e)
```

and so on.

The other divisional types must make do by borrowing from this binary series: duplet (2), triplet (3), quadruplet (4), quintuplet (5), sextuplet (6), septuplet (7), octuplet (8), nontuplet (9) etc…

When we write these values we use the same note-values as the immediately preceding binary division.

```
'((3w 3w 3w) (3h 3h 3h) (3q 3q 3q))
```



This means for example that a triplet division of the quarter note uses eighth notes.

```
'((5w = = = =) (5h = = = =) (5q = = = =))
```

This means for example that a quintuplet division of the quarter note uses sixteenth notes.

Repeat

Note: =
Pause: -

```
'((e. s q =) (e. s q =))
```

The use of repeat symbols for note-lengths and rest-lengths is fundamental to OMN. Its use can give score scripts a very particular style and appearance. Composers will soon discover different approaches will suit particular situations when writing for percussion or in the notation of repetitive textures.

```
'((q -e = q) (q - e. t =))
```

If a note-length repeat symbol follows a rest-length a note-length is given:

```
'(s e - s - e. -s e s -e)
```

The use of the rest-length repeat can bring clarity to the visual layout of a phrase.

Compound length

Length composed of two or more separate length elements:

```
'(qs s e h)
```

```
'(hqs -s qe)
```

Tie

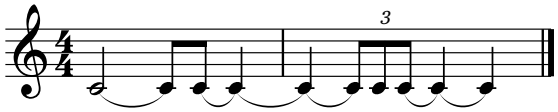
Symbol: `_` (underscore)
Attribute: `tie` (omn form)

OMN has two types of ties. The first one is a tie length symbol '_' and the second one is the attribute `tie`.

```
'((h_e e q) (q_3q 3q 3q -h))
```

The `tie` symbol is used when a `tie` is necessary in the middle of a list:

```
'((h_e c4 e_q tie) (q_3q c4 3q 3q_h))
```



The tie as an attribute is necessary when a tie goes across one list to join a length symbol in an adjacent list.

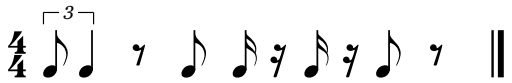
Extended length

Note: ==
Rest: --

```
'(s == -- = - === - == = —)
```

Both note-lengths and rest-lengths can be extended simply by bringing the symbols together in the same way pitches come together to produce chords. In percussion writing this can provide further clarity because only one length value needs to be set at the beginning of the list.

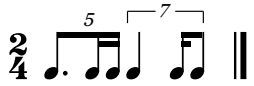
```
'(3q == -e = s - = - == —)
```



Extended periodic lengths

```
'(s== = = = = =)
```

```
'(5q== = = 7q=== = ==)
```



```
'(5q== - = 7q=== = - =)
```

Ratios

OMN notation allows the use of ratio values if more convenient:

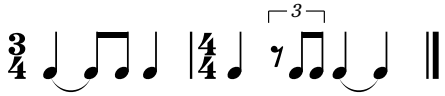
```
'((q = e = h) (q - e. t =))
```

same as:

```
'((1/4 1/4 1/8 1/8 1/2) (1/4 -1/4 3/16 1/32 1/32))
```

Many functions automatically output ratios as a default rather than OMN symbols. This can usually be changed by setting a keyword within the function such as `:omn T`. The `tie` mechanism in both its forms works with ratios.

```
'((q_e e q) (q -3q = = h))
```



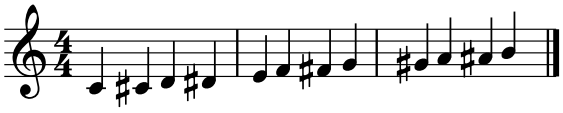
same as:

```
'((1/4_1/8 1/8 1/4) (1/4 -1/12 1/12 1/12 1/2))
```

2. Pitches

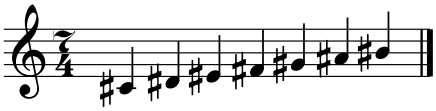
In OMN a pitch is written as a text symbol that combines a note's lower-case letter name with its octave number. OMN uses the convention that `c4` is 'middle c' , so numbered because of the note's position as the fourth C key on a standard 88-key piano keyboard. In fact the composer can go a little beyond the standard keyboard range because OMN takes in the MIDI range of 0 - 127 pitches.

```
'(c4 cs4 d4 ds4 e4 f4 fs4 g4 gs4 a4 as4 b4)
```



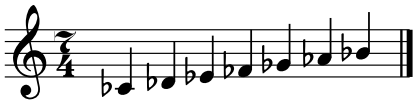
In an ascending chromatic scale the convention is to notate the chromatic pitches in sharps.

```
'(cs4 ds4 es4 fs4 gs4 as4 bs4)
```



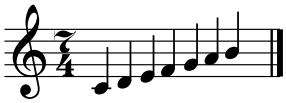
The sharp is written as an '`s`' symbol preceded by the letter of the diatonic pitch and then the octave number, thus `cs4`.

```
'(cb4 db4 eb4 fb4 gb4 ab4 bb4)
```



The flat is written as an '`b`' symbol preceded by the letter of the diatonic pitch and then the octave number, thus `db4`.

```
'(c4 d4 e4 f4 g4 a4 b4)
```

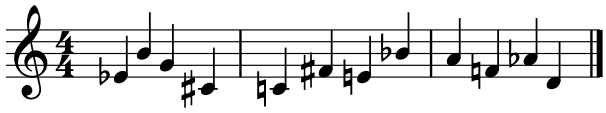


In a diatonic C major scale where no chromatic notes exist the letter name and the octave number suffice. When transpositions are made using an algorithmic function the note spelling will often mix sharps and flats to seek the best compromise.

12 Tone Row

A. Berg, Wozzeck, Akt 1, Szene 4

```
'(eb4 b4 g4 cs4 c4 fs4 e4 bb4 a4 f4 ab4 d4)
```

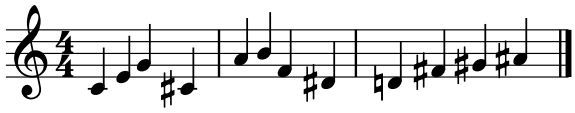


In a 12 Tone Row sharp and flat spellings are common. In OMN they can be freely mixed to enable intervallic analysis to be undertaken. Opusmodus can make conversions to and from interval sets.

```
(pitch-to-interval '(eb4 b4 g4 cs4 c4 fs4 e4 bb4 a4 f4 ab4 d4))
=> (8 -4 -6 -1 6 -2 6 -1 -4 3 -6)
```

A. Schönberg, Opus 28, Nummer 1

```
'(c4 e4 g4 cs4 a4 b4 f4 ds4 d4 fs4 gs4 as4)
```

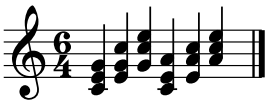


This row is taken from Schoenberg's "Three Satires" for mixed chorus. The song is directed at those exploiting tonal and atonal principles alike without being aware of origins or consequences. The text of the song "Am Scheideweg" corresponds to a C-major triad which is worked into this twelve-tone row and the row's chromatic spelling is chosen to make the vocal pitching of intervals easier.

Chords

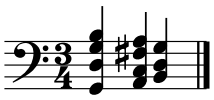
To create a chord, individual pitches are brought together as a single entity.

```
'(q c4e4g4 e4g4c5 g4c5e5 c4e4a4 e4a4c5 a4c5e5)
```



The ordering of pitches within a chord grouping does not have to reflect ascending or descending patterns to be displayed correctly in notation. This means algorithmic constructions of chords can be freely undertaken.

```
'(q g2d3g3b3 a2c3fs3a3 b2d3g3)
```



As with individual pitches, chords adopt sharp or flat spellings as they occur in a list.

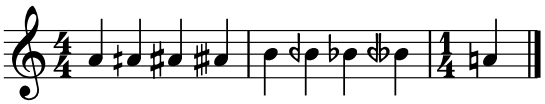
Microtonality

Microtone pitch symbols and values:

```
+                        1/4
-                       -1/4
.   with sharp           1/8
..  with sharp           3/8
.   with flat           -1/8
..  with flat           -3/8
+.  with flat or sharp   1/8
+.. with flat or sharp   3/8
-.  with flat or sharp  -1/8
-.. with flat or sharp  -3/8
```

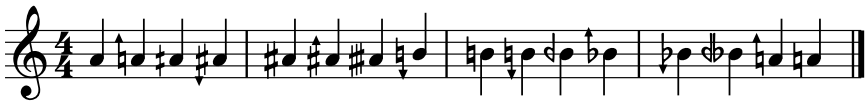
Quarter tones

```
'(q a4 a4+ as4 as4+ b4 b4- bb4 bb4- a4)
```



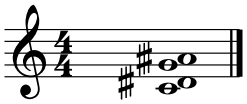
Eight tones

```
'(q a4 a4. a4+ a4.. as4 as4. as4+ b4-. b4
    b4-. b4- b4-.. bb4. bb4- a4. a4)
```



Chords

```
'(w c4ds4+g4as4+)
```

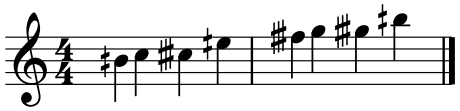


Integer, interval and midi microtone values:

```
0.5  = 1/4 tone
0.25 = 1/8 tone
```

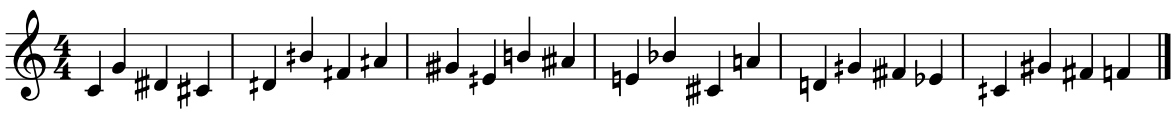
Transposition

```
(pitch-transpose 2.5 '((a4 a4+ b4 d5) (e5 e5+ fs5 a5)))
=> ((b4+ c5 cs5+ e5+) (fs5+ g5 gs5+ b5+))
```



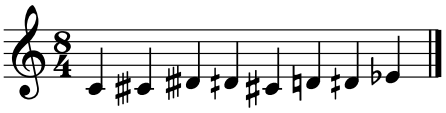
In the next example we generate a row of quarter tones using **RND-ROW** function with optional `:quantize 1/4`. If `:quantize` is set to `1/8` value, the function will return 8th tone row with 48 values.

```
(setf mat (rnd-row :quantize 1/4 :type :pitch :seed 34))
=> (c4 g4 ds4+ cs4 d4+ b4+ f4+ a4+ gs4+ e4+ b4 as4+
    e4 bb4 cs4+ a4 d4 g4+ fs4+ eb4 c4+ gs4 fs4 f4)
```



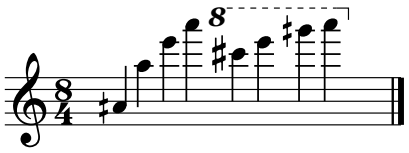
Intervals

```
(pitch-to-interval mat)
=> (7 -3.5 -2.5 1.5 9 -6 4 -1 -4 6.5 0.5 -6.5
    6 -8.5 7.5 -7 5.5 -1 -3.5 -2.5 7.5 -2 -1)

(interval-to-pitch '(1.5 2 -1 -1.5 1 .5 .5))
=> (c4 cs4+ ds4+ d4+ cs4 d4 d4+ eb4)
```



Quantize

```
(setf hertz '(448 880 1320 1760 2200 2640 3212 3520))
(hertz-to-pitch hertz :quantize 1/4)
=> (a4+ a5 e6 a6 cs7 e7 g7+ a7)
```



3. Velocities

Traditional staff notation has a collection of common symbols that are formed from the first letter of Italian words for degrees of intensity we want to attach to a note or a phrase. In OMN there are 12 such terms ranging from `ppppp` to `fffff`. The items in this collection have specific pre-set data values attached and as such produce in MIDI play back differences of attack on the notes they accompany.

```
ppppp     (q a4 ppppp)
pppp      (q a4 pppp)
ppp       (q a4 ppp)
pp        (q a4 pp)
p         (q a4 p)
mp        (q a4 mp)
mf        (q a4 mf)
f         (q a4 f)
ff        (q a4 ff)
fff       (q a4 fff)
ffff      (q a4 ffff)
fffff     (q a4 fffff)
```

Dynamic

The symbols classed as being Dynamic have a relative MIDI velocity value attached to them. The objective within OMN is to primarily to provide the notation for such symbols.

```
cresc     (q a4 cresc)
dim       (q a4 dim)
<         (q a4 <)
>         (q a4 >)
0<        (q a4 0<)
>0        (q a4 >0)
pfp       (q a4 pfp)
pf        (q a4 pf)
fp        (q a4 fp)
sfp       (q a4 sfp)
sf        (q a4 sf)
sff       (q a4 sff)
sfff      (q a4 sfff)
sfz       (q a4 sfz)
sffz      (q a4 sffz)
sfffz     (q a4 sfffz)
rf        (q a4 rf)
rfz       (q a4 rfz)
fz        (q a4 fz)
ffz       (q a4 ffz)
fffz      (q a4 fffz)
```

Crescendo

The collection titled Crescendo takes the Italian abbreviations for the common dynamic descriptions and places a '<' directly following the abbreviation.

```
ppppp<     (q a4 ppppp<)
pppp<      (q a4 pppp<)
ppp<       (q a4 ppp<)
pp<        (q a4 pp<)
p<         (q a4 p<)
mp<        (q a4 mp<)
mf<        (q a4 mf<)
f<         (q a4 f<)
ff<        (q a4 ff<)
fff<       (q a4 fff<)
ffff<      (q a4 ffff<)
```

Diminuendo

The collection titled Diminuendo takes the Italian abbreviations for the common dynamic descriptions and places a '>' directly following the abbreviation.

```
pppp>      (q a4 pppp>)
ppp>       (q a4 ppp>)
pp>        (q a4 pp>)
p>         (q a4 p>)
mp>        (q a4 mp>)
mf>        (q a4 mf>)
f>         (q a4 f>)
ff>        (q a4 ff>)
fff>       (q a4 fff>)
ffff>      (q a4 ffff>)
fffff>     (q a4 fffff>)
```

Velocity symbols

```
ppppp pppp ppp pp p mp mf f ff fff fff ffff fffff
ppppp< pppp< ppp< pp< p< mp< mf< f< ff< fff< ffff< fffff<
ppppp> pppp> ppp> pp> p> mp> mf> f> ff> fff> ffff> fffff>
0< < > >0 cresc dim
```

Sforzando symbols

```
pfp fpf pf fp ffp fffp sfp sfpp sfppp sffp sfffp
sf sfff sfff sffff sfz sffz sfffz fz ffz fffz rf rfz
```

One note dynamic symbols

This notation is used in wind, brass and string performance to suggest a precise dynamic changes to take place on a single pitch. The symbols are particularly associated with the use of hand-held mutes in writing for trumpets and trombones.

```
0<ppppp … 0<fffff
ppppp>0 … fffff>0
0<ppppp> … 0<fffff>
<ppppp>0 … <fffff>0
0<ppppp>0 … 0<fffff>0
<ppppp> … <fffff>
>ppppp< … >fffff<
ppppp<> … fffff<>
ppppp>< … fffff><
ppppp<pppp … ffff<fffff
pppp>ppppp … fffff>ffff
ppppp<>ppppp … ffff<>ffff
pppp><pppp … fffff><fffff
ppppp<pppp>ppppp … ffff<fffff>ffff
pppp>ppppp<pppp … fffff>ffff<fffff
>0<
0<>0
<>0
0<>
<>
><
```

4. Attribute

The largest element of the OMN language is ATTRIBUTE (articulation). This term covers the many hundreds of symbols and words that describe musical expression.

These terms are divided up very broadly within the OMN Glossary into two groupings: *Articulations*, *Ornaments* and *Marks* affecting all instrumental and vocal performance; *Strings*, *Woodwind* and *Brass* performance indicators being specific only to those instruments.

Articulations cover *Accents*, *Cesura*, *Fermata*, *Legato*, *Ties* and *Pedal*. In musical performance these words, signs and symbols indicate a specific way of controlling the dynamic, intensity or duration of a musical event. This may be a single instance or covering a group of events.

Ornaments are closely linked to articulation but usually include the addition of further pitches and subsequent changes in duration. Ornaments in OMN include *Acciaccatura*, *Appoggiatura*, *Arpeggio*, *Glissando*, *Mordent*, *Trill*, *Tremolo*, *Turn* and *Two-note Tremolo*. Ornamentation was once a required art for the musician to master with an expectation in the 17C and 18C that performers would freely embellish notated music as a matter of course, often going way beyond what was indicated in a score. In contemporary music ornamentation, whilst still using the symbols of Baroque performance practice, is most usually a precise and obligatory requirement seeking to give a special intensity to individual pitched events.

Marks cover the many general performance indications found on a notated score that govern all instruments and voices. These include *Repeat Signs* and *Rehearsal Marks*.

In OMN the performance instructions for woodwind and brass include the now common terms found in contemporary scores first collected together in Bruno Bartolozzi's New Sounds for Woodwind. These may be linked through **`DEF-SOUND-SET`** to available sample sets of woodwind and brass attack transients.

For strings, performance instructions in OMN are comprehensively cited and in conjunction with a sample library can be used to trigger complex mixtures and layers of timbre type. Included within OMN are *Arco*, *Pizz*, *Col Legno*, *Harmonics*, *Pizzicato*, *String*, *Sul Ponticello*, *Sul Tasto*, *Bowing Techniques* and *Vibrato*.

The Complete Attributes Listing

Accents
det
marc
mart
stacc
stacs
ten

Grace Note
-acc
-acc-e
-acc-h
-acc-q
-acc-s
-acc-t
-acc-x
-acc.
-app
-app-e
-app-h
-app-q
-app-s
-app-t
-app-x
-app.
acc
acc-e
acc-h
acc-q
acc-s
acc-t
acc-x
acc.
app
app-e
app-h
app-q
app-s
app-t
app-x
app.

Bow
dbow
ubow

Strings Articulations
alto-ponte
alto-tasto
arco
arco-lento
arco-ord
arco-ponte
arco-tasto
arm
batt
con-vib
crini
da-ponte
div
espr
extr-ponte
extr-tasto
flaut
gettato
jete
knock
legno
legno-batt
legno-tratto
lh-pizz
lh-slap
molto-ponte
molto-tasto
molto-vib
non-arm
non-vib
pizz
pizz-chit
pizz-nail
pizz-ord
pizz-trem
poco-ponte
poco-vib
ponte
ponte-tasto
ponte-tasto-ponte
punta
ric
secco
senza-vib
slap
snap
soli

solo
spicc
sulla-corda
tallone
tap
tasto
tasto-ponte
tasto-ponte-tasto
tutti
tutto-arco
unis
vib
vib-norm
vib-ord

Harmonic
harm
harm2

Harp
bisb
clang
close-to-table
dampened
fingernail
hand-on-the-corpus
hand-on-the-strings
hit
knuckle-on-the-corpus
pedal-noise
semitone-downwards
semitone-upwards
thin-pick
tuning-wrench
wholetone-downwards
wholetone-upwards
xylophone-tone

Arpeggio
arp
arp-adlib
arp-down
arp-up

Caesura
caesura

Open String
sul
sul1
sul2
sul3
sul4
sul5
sula
sulc
suld
sule
sulg

Fermata
bl-fermata
bl-fermata-l
bl-fermata-s
bl-fermata-vl
bl-fermata-vs
fermata
fermata-l
fermata-s
fermata-vl
fermata-vs

Finger
dig1
dig2
dig3
dig4
dig5

Tongue
frull
tong-blocked
tong-hard
tong-soft
tong1
tong2
tong3

Ending
end1
end2
end3
end4
end5
end6
end7
end8

end9
end10

General Pause
gp
lp

Glissando
gliss
gliss2
gliss3
gliss4
kgliss
kgliss-ch

Legato
leg

Tie
tie

Brass and Wind
air-noise-f
air-noise-h
air-noise-k
air-noise-p
air-noise-s
air-noise-sh
air-noise-t
finger-damp
flutter-tongue
half-depressed-valves
harsh-blow
high-noise-blow
hit-on-mouthpiece
hum breathy
insert-straight-mute-into-bell
kiss
low-noise-blow
mouthpiece-backwards
mouthpiece-only
multiph
over-blow
play-and-sing
silent-brass
snap-with-a-finger-on-the-bell
stop-mute-closed
stop-mute-open
stop-mute-wahwah-effect
under-blow
without-air
without-mouthpiece
without-tubings

Barlines
bl-da
bl-do
bl-h
bl-hh
bl-hl
bl-lh
bl-ll
bl-none
bl-norm
bl-s

Hand
lh
md
ms
rh

Mordent Lower Double
ldmordent1
ldmordent1-t
ldmordent1-x
ldmordent2
ldmordent2-t
ldmordent2-x

Mordent Lower
lmordent1
lmordent1-t
lmordent1-x
lmordent2
lmordent2-t
lmordent2-x

Mordent Upper Double
dmordent1
dmordent1-t
dmordent1-x
dmordent2
dmordent2-t
dmordent2-x

Mordent Upper
mordent1
mordent1-t
mordent1-x

mordent2
mordent2-t
mordent2-x

Cue Notes
cue

Number
num0
num1
num2
num3
num4
num5
num6
num7
num8
num9
num10
num11

Pedals
half-ped
half-ped1
ped
ped1
sost-ped
sost-ped1
una-corda
una-corda1

Rehearsal Marks
reh
reha
reha-<a-z>
rehn
rehn-<1-1000>

Comma
comma

Repeat
repeat

Octave Shifts
15ma
15mb
8va
8vb

Muting
con-sord
mute
open
senza-sord
unmute
via-sord

Reset
adlib
nat
non-trem
norm
ord
sim

Notehead
nh-bsld
nh-cx
nh-d
nh-none
nh-norm
nh-sld
nh-x

Two-Note-Tremolo
ttrem
ttrem-3e
ttrem-3s
ttrem-5e
ttrem-5q
ttrem-7e
ttrem-7q
ttrem-e
ttrem-s
ttrem-t
ttrem-x

Tremolo
trem
trem-3h
trem-3q
trem-3e
trem-3s
trem-5h
trem-5q
trem-5e
trem-5s
trem-7h
trem-7q

trem-7e
trem-7s
trem-e
trem-s
trem-t
trem-x

Trill
ltr1
ltr1-3e
ltr1-3s
ltr1-5e
ltr1-5q
ltr1-7e
ltr1-7q
ltr1-s
ltr1-t
ltr1-x
ltr2
ltr2-3e
ltr2-3s
ltr2-5e
ltr2-5q
ltr2-7e
ltr2-7q
ltr2-s
ltr2-t
ltr2-x
tr1
tr1-3e
tr1-3s
tr1-5e
tr1-5q
tr1-7e
tr1-7q
tr1-s
tr1-t
tr1-x
tr2
tr2-3e
tr2-3s
tr2-5e
tr2-5q
tr2-7e
tr2-7q
tr2-s
tr2-t
tr2-x

Turn Lower Classic
lcturn11
lcturn11-5e
lcturn12
lcturn12-5e
lcturn21
lcturn21-5e
lcturn22
lcturn22-5e

Turn Lower
lturn11
lturn11-s
lturn11-x
lturn12
lturn12-s
lturn12-x
lturn21
lturn21-s
lturn21-x
lturn22
lturn22-s
lturn22-x

Turn Upper Classic
cturn11
cturn11-5e
cturn12
cturn12-5e
cturn21
cturn21-5e
cturn22
cturn22-5e

Turn Upper
turn11
turn11-s
turn11-x
turn12
turn12-s
turn12-x
turn21
turn21-s
turn21-x
turn22
turn22-s
turn22-x