

Musicol Language¹

Notes are represented by their inverse length followed by the note or note number. A quarter note is a 4, an eighth note is an 8 and so forth. An extended note has a period after the length. Multiple notes can be play at the same time (a chord) by putting them in parenthesis. The notes can be followed by a “b” for flat or “#” for sharp.

Examples

8C4	eighth note middle C
4(A4, C5)	quarter note chord with A and C
2.F3b	three beat half note F flat
8(A4#, G4#)	eighth note chord with A sharp and G sharp

Patterns can be defined and labeled. Defining a pattern does not play the notes. Following the keyword “pattern” is the name of the pattern being defined.

pattern dog {note note pattern}

Patterns can contain notes or other patterns. The beginning of a pattern can also contain an optional key and an optional time signature. The key is a single letter (A to G) that appears after the keyword “key”. The time signature is two integers with a divide slash between them. If a key or time signature is not specified, the current key and time continue to be used.

pattern cat {key G time 3/4 ... }

When a pattern is played, it can be transposed using the trans statement. Following the “trans” keyword is the name of a previously defined pattern and a list of changes to the pattern. When played, the notes of the pattern are increased by the indicated number of notes (or decreased if the number is negative). Note that all numbers are signed except zero.

trans dog {+2, +4, 0, -2}

The music is played using the play keyword followed by an integer number then the keyword “times”. Inside the brackets of a play can be patterns, notes or trans.

play 6 times[dog trans dog {+2, +4, 0, -2} note]

¹ Designed with help from Lynn Hedegard

BNF or Musicol

song	→ patternList playlist
patternList	→ pattern pattern patternList
pattern	→ pattern name { notepat }
notepat	→ note name
note	→ number freq number (freqList) number . freq number . (freqList)
freq	→ letter number letter number b letter number #
freqList	→ freq freq freqList
trans	→ trans name { signednumList }
signednumList	→ signednum signednum signednumList
signednum	→ +number -number 0
playlist	→ play play playlist
play	→ play number times [stuff]
stuff	→ name trans note

Comments in Musical are the same format as C++ and Java (both /* */ and //). Musical is free format and whitespace may be inserted between names, keywords and punctuation.

An example of “Mary had a little lamb” written in Musicol.

```
pattern mary {time 4/4 4.C4 8B3 4G3 4B3}
pattern lamb {4C4 4C4 2C4}
pattern snow {4C4 4C4 4C4 4C4}
play 1 times[ mary trans lamb{0 -1 0} mary]
play 2 times[snow]
play 1 times[2G3]
```