

# Usages of CompositeMix in $\mu\text{O}$

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## Abstract

The `CompositeMix` musical element is the generic representation of an arbitrary mix of musical data. It is automatically used whenever the actual mixing is impossible because the elements are incompatible or because there are not entirely defined; it can be deliberately used to keep explicit the relationship between them; it can also act as a wrapper around a specific piece of musical data and give it some context, such as a meter.

## Notation

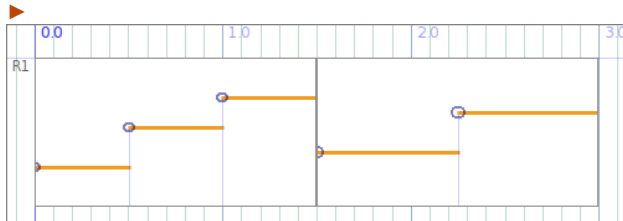
In the following, the printed evaluation of a Smalltalk expression is represented following a  $\blacktriangleright$  symbol. When a graphic representation is available (a screenshot of a  $\mu\text{O}$  editor in most cases), it is displayed after a  $\blacktriangleright$ . All code is written in Consolas font.

## 1. Structure of a `MCompositeMix`

### 2.5. Beat concatenation

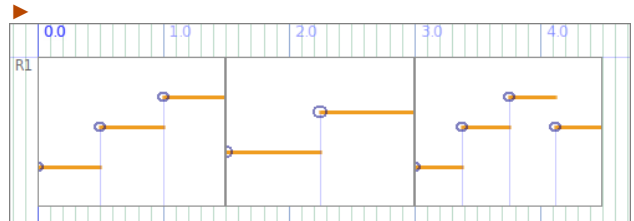
The beat concatenation operator `,,` first scales its second argument to the length of the first one, before concatenating the two.

`'c,e,g' kphrase ,, 'e,g' kphrase`



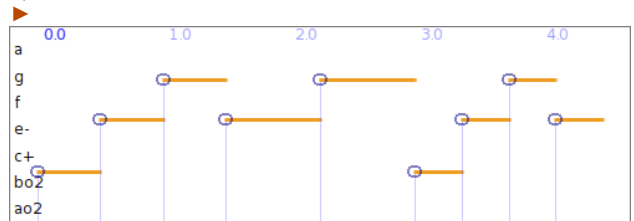
The returned result is a `CompositeMix`; this allows for further beat concatenation.

`'c,e,g' kphrase ,, 'e,g' kphrase ,, 'c,e,g,e' kphrase`



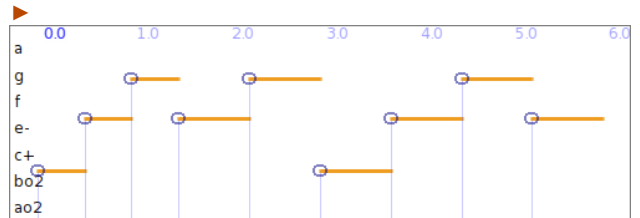
The `,,,` operator does beat concatenation and reduce the result:

`'c,e,g' kphrase ,, 'e,g' kphrase ,, 'c,e,g,e' kphrase`



We can see what happens if we chain `,,,` operators:

`'c,e,g' kphrase ,, 'e,g' kphrase ,, 'c,e,g,e' kphrase`



In that case, the third argument is not scaled to the length of the first one, but to the length of the beat concatenation of the first and second arguments, that is twice the length of the first argument.