REPRESENTATION

****cents** — absolute pitch representation in hundredths of semitones

DESCRIPTION

The ****cents** representation is used to represent absolute pitch in units of hundredths of semitones with respect to middle C. Each equally tempered semitone spans a distance of 100 cents. Middle C is designated zero cents. All other pitches are represented with respect to this reference, hence A4 is 900 cents and A3 is -300 cents. Cents may be specified as either integer or real values.

Pitch tokens may be modified by the presence of additional signifiers. The open brace '{' denotes the beginning of a phrase. The closed brace '}' denotes the end of a phrase. The open parenthesis '(' denotes the beginning of a slur. The closed parenthesis ')' denotes the end of a slur. The semicolon ';' denotes a pause.

Rests tokens are denoted by the lower-case letter 'r'.

Barlines are represented using the "common system" for barlines — see **barlines (2).**

FILE TYPE

It is recommended that files containing predominantly `**cents` spines should be given names with the distinguishing '.cnt' extension.

SIGNIFIERS

The following table summarizes the ****cents** mappings of signifiers and signifieds.

0-9	decimal values
.	decimal point; or null token
–	minus sign
+	plus sign (optional)
r	rest
=	barline; == double barline
(	slur start
)	slur end
{	phrase mark (start)
}	phrase mark (end)
;	pause sign

Summary of ****cents** *Signifiers*

EXAMPLES

A sample document is given below:

```
**cents     **cents
!tempered   !untempered
=1          =1
{1200       {1209.
700         720.4
700         698
=2          =2
(800        (804.1
700)}       722)}
=3          =3
r           r
500 1100    492 1131.2
=4          =4
400 1200    397 1202
==          ==
*-          *-
```

PERTINENT COMMANDS

The following Humdrum commands accept ****cents** encoded data as inputs:

cents	change numerical precision of **cents values
freq	translates ****cents** to ****freq**
kern	translates ****cents** to ****kern**
pc	translates ****cents** to ****pc**
pitch	translate ****cents** pitch to numerical ****pitch**
semits	translates ****cents** to ****semits**
solfg	translates ****cents** to ****solfg**
tonh	translates ****cents** to ****Tonh**
vox	determine active and inactive voices in a Humdrum file

The following Humdrum command produces ****cents** data as output:

cents	translates ****cents**, ****freq**, ****fret**, ****kern**, ****MIDI**, ****pitch**, ****semits**, ****solfg**, ****specC**, and ****Tonh** to ****cents**

TANDEM INTERPRETATIONS

The following tandem interpretations can be used in conjunction with ****cents:**

MIDI channel	`*Ch1`
meter signatures	`*M6/8`
key signatures	`*k[f#c#]`
key	`*c#:`
tempo	`*MM96.3`

Tandem interpretations for ****cents**

SEE ALSO

barlines (2), **cents** (4), ****freq** (2), **freq** (4), ****fret** (2), ****kern** (2), **kern** (4), ****MIDI** (2), **midi** (4), ****pitch** (2), **pitch** (4), ****semits** (2), **semits** (4), ****solfg** (2), **solfg** (4), ****specC** (2) **specC** (4), ****Tonh** (2), **tonh** (4)