
REPRESENTATION

barlines — “common system” for representing barlines

DESCRIPTION

Several Humdrum representations employ a common system for representing barlines. This common system is described below. (N.B. This common system is not intended to preclude other ways of representing barlines in Humdrum.)

In the common system, barlines are represented as logical entities, with optional signifiers for specifying the precise visual appearance of the barlines. Barlines are logically signified by the presence of an equals-sign (=) in the first column of a spine. Immediately after the equals sign there may follow an optional integer value indicating the measure number (e.g. =107 — for measure 107). In addition, a lower-case alphabetic character may be appended to the measure number — as in: =14b. This convention permits the user to distinguish measure numbers for first and second endings, etc. Measure numbers refer to the measure immediately following the barline, thus the token =23 occurs just prior to the encoded data for measure 23.

Double barlines are indicated by a minimum of two successive equals signs (==) . Several consecutive equals signs may be encoded in order to enhance readability (e.g. =====) .

An additional attribute for barlines is the *pause* — which is represented by the semicolon (;). Thus the token =4; means that the barline starting measure number 4 has a pause written above or below it, while the token =====; means that a double barline contains a pause indication.

Barlines can be visually rendered in a variety of ways. Where appropriate, users can specify more precisely the notational appearance of the barline by *appending* additional signifiers to the basic signifiers identified above. Barlines may be normal or heavy in width. Barlines of normal width are represented by the addition of the vertical bar (|). Heavy barlines are signified by the exclamation mark (!). Dotted barlines are signified by the double quote character ("). Partial barlines (extending between the second and fourth lines) are signified by the single quote character ('). Partial barlines (rendered as a short vertical stroke across the top of the staff) are signified by the single grave character (`). “Invisible” barlines are signified by the minus sign (-). In addition, barlines may be associated with repetition marks — pointing left, right, or in both directions. The repeat sign is denoted by the colon character (:). (Note that this repeat sign is a *visual* signifier, rather than a logical signifier of repetition; see **section labels (3)** and **thru (4)** for information concerning repetition.) All of these visual signifiers may be combined to form complex visual representations, such as a triple barline consisting of a normal line, followed by a heavy line, followed by a normal line, followed by a repeat indicator. See EXAMPLES below.

SIGNIFIERS

The following table summarizes the mappings of signifiers and signifieds for “common system” barlines.

0-9	measure numbers
a-z	alternate measures
;	pause
=	barline
==	double barline
	normal width visual rendering
!	heavy width visual rendering
'	partial barline (from second to fourth line)
`	partial barline (short stroke at top of staff)
—	invisible barline
:	repeat sign

Summary of **kern-like Barline Signifiers

EXAMPLES

Several examples of “common system” barlines are given below:

=	unnumbered barline
=29	the beginning of measure 29
=29;	the beginning of measure 29 with pause
=29a	first occurrence of measure 29
=29c	third occurrence of measure 29
=29c;	third occurrence of measure 29 with pause
==	double barline
==;	double barline with pause
===;	double barline with pause
=	unnumbered barline, normal line width
=!	unnumbered barline, heavy line width
== !	double barline, normal line followed by heavy line
=29	beginning of measure 29, normal line width
=: :	barline with left and right repeats, normal line width
=: :	barline with left and right repeats, two normal-width lines
='	unnumbered barline, rendered with partial barline (mid)
=29`	beginning of measure 29, rendered with partial barline (top)
=29—	beginning of measure 29, no barline drawn
==: !	double barline with repeat, normal/heavy lines
==	logical double barline, visually rendered as single normal line
	not a barline
29	not a barline

PERTINENT REPRESENTATIONS

The following Humdrum representations employ “common system” barline signifiers:

**cents	absolute pitch representation in hundredths of semitones
**deg	relative scale degree representation
**degree	absolute scale degree representation
**diss	sensory dissonance representation
**dur	event duration (in seconds)
**embel	representation for embellishment tones
**freq	frequency representation
**fret	generalized fretted tablature representation
**harm	representation for Western functional harmony
**kern	core pitch/duration of common practice music notation
**melac	melodic accent representation
**MIDI	Musical Instrument Digital Interface notation
**mint	melodic interval representation
**pc	pitch-class representation
**pcset	Fortean pitch-class set representation
**pitch	American National Standards Institute pitch notation
**recip	beat-proportion representation
**semit	semitone absolute pitch representation
**solfg	French solfège (pitch) representation
**specC	spectral centroid representation
**spect	discrete frequency spectrum representation
**synco	represent degree of metric syncopation
**takt	beat-position representation
**text	vocal text representation
**time	relative elapsed time (in seconds)
**Tonh	German Tonhöhe (pitch) representation
**URrhythm	represent Johnson-Laird beat prototypes for a passage
**vox#	representation of number of concurrently active voices

SEE ALSO

humsed (4), **num** (4)