

Humdrum Representation Reference

Documentation Style

This section of the *Reference Manual* describes various pre-defined representations conforming to the Humdrum syntax. Each representation defines a scheme by which the numbers, letters, and other characters of the ASCII character-set are mapped to musically pertinent signs or “signifieds.” Each representation is designated by a different Humdrum *exclusive interpretation*. Exclusive interpretations are denoted by two leading asterisk characters (beginning in the first column of a line or record) followed immediately by an interpretation *keyword*. For any given spine (column of data), only one exclusive interpretation can be active at a given moment, and an interpretation must precede the first data record.

Each documented representation includes a description of the scope of the representation, a complete tabulation of all pre-defined signifiers, and examples of syntactically-correct representations. For many representations, a number of *tandem interpretations* are also pre-defined. Tandem interpretations provide additional contextual information concerning the represented data. In addition, each entry lists all of the existing Humdrum commands that are able to process the representation. Descriptions of the various commands may be found in Section 4 of this *Reference Manual*.

All Humdrum representations can be processed by the general-purpose tools list in the following table.

assemble	paste together Humdrum files
census	determine general properties of a Humdrum file
cleave	join tokens from two or more spines into a single spine
context	congeal data records to form a contextual frame
correl	measure the numerical similarity between two spines
encode	interactive Humdrum encoding from MIDI input
extract	select input spines for output
fields	trace changes in spine structure
fill	replace null tokens with previous non-null data token
humdrum	test conformance to Humdrum syntax
humsed	stream editor for Humdrum files
info	calculate information flow
num	number selected records according to user-defined criteria
patt	locate and output user-defined patterns in a Humdrum input
pattern	exhaustively locate user-defined patterns in a Humdrum input
recode	recode numeric tokens in selected Humdrum spines
rend	split tokens in a single spine into two or more spines
rid	eliminate specified record types from the input
scramble	randomize order of either Humdrum data records or data tokens
simil	measure the similarity between two Humdrum spines

strophe	selectively extract strophic data
thru	expand repeats to through-composed form
xdelta	calculate numeric differences for successive tokens within a spine
yank	extract passages from a Humdrum input
ydelta	calculate numeric differences for concurrent spines

Each reference entry contains information identifying the name and purpose of the representation, a summary description of mappings between signifiers and signifieds, the designated file-type, and a list of Humdrum commands that accept or produce the given representation as input or output. The standard order of documentation sections is as follows: (1) representation, (2) description, (3) file type designation, (4) signifiers used, (5) examples, (6) pertinent commands, (7) tandem interpretations, (8) see also, (9) warnings, (10) limits, (11) note, (12) reference, (13) proposed modifications, and (14) author(s).