

NAME

iv — determine interval vectors for successive vertical sonorities

SYNOPSIS

iv [*inputfile ...*] [> *outputfile.iv*]

DESCRIPTION

The **iv** command is used to determine the *interval vector* for any of five set-theory related inputs: *pitch* (****semit**s), *pitch-class* (****pc**), *normal form* (****nf**), *prime form* (****pf**), or *Fortean set name* (****pcset**). An interval vector is a six-element numerical list that indicates the abundance of various interval-classes (from 1 semitone to 6 semitones) for some pitch-class set. See REFERENCES below.

When provided with ****semit**s or ****pc** inputs, **iv** treats each input record as a set of pitches. Unisons and other pitch-class duplications have no effect on the output. Rests within a set of pitches are ignored; where an input record consists solely of one or more rests, a null-token is output.

The **iv** command is able to translate any of the representations listed below. For descriptions of the various input representations (including ****iv**) refer to Section 2 (*Representation Reference*) of this reference manual.

It is recommended that output files produced using the **iv** command should be given names with the distinguishing '.iv' extension.

**iv	interval vector representation
**nf	normal form representation
**pc	pitch-class representation
**pcset	Fortean pitch-class set name
**pf	prime form representation
**semit s	equal-tempered semitones with respect to middle C=0 (e.g. 12 = C5)

Input representations processed by iv.

OPTIONS

The **iv** command provides only a help option:

-h displays a help screen summarizing the command syntax

Options are specified in the command line.

EXAMPLES

The following command outputs the interval vectors for successive sonorities in the input file `opus24`. The input may be pitches, pitch-classes, normal forms, Fortean set names, etc.

```
iv opus24 > opus24.iv
```

PORTABILITY

DOS 2.0 and up, with the MKS Toolkit. OS/2 with the MKS Toolkit. UNIX systems supporting the *Korn* shell or *Bourne* shell command interpreters, and revised *awk* (1985).

SEE ALSO

context (4), ****iv** (2), ****nf** (2), **nf** (4), ****pc** (2), **pc** (4), ****pcset** (2), **pcset** (4), ****pf** (2), **pf** (4), ****semits** (2), **semits** (4)

NOTE

The `iv` command is a shell script that invokes `pcset -v`.

REFERENCES

Allen Forte, *The Structure of Atonal Music*. New Haven: Yale University Press, 1973.

John Rahn, *Basic Atonal Theory*. New York: Longman Inc., 1980.

Straus, J. *Introduction to Post-Tonal Theory*. Englewood Cliffs, N.J.: Prentice Hall, 1990.