

riff-wave API Documentation

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1 riff-wave.read

Functions to read WAVE files.

1.1 read-sample (Function)

Syntax:

— Function: **read-sample** *stream sample-size*

→ *sample*

Arguments and Values:

stream—a binary input stream.

sample-size—the sample size of the WAVE *stream*.

sample—either an (unsigned-byte 8) or an (unsigned-byte 16) depending on *sample-size*.

Description:

`read-sample` reads and returns a sample of *sample-size* from *stream*.

1.2 read-wave-header (Function)

Syntax:

— Function: **read-wave-header** *stream*

→ *sample-rate, sample-size, n-channels, length*

Arguments and Values:

stream—a binary input stream.

sample-rate—the sample rate in Hertz specified by the WAVE header. Represented as a positive *integer*.

sample-size—the sample size specified by the WAVE header. May be 1 or 2 indicating 8-bit or 16-bit samples respectively.

n-channels—the number of channels specified by the WAVE header. Represented as a positive *integer*.

length—the contained number of samples per channel specified by the WAVE header. Represented as an unsigned *integer*.

Description:

`read-wave-header` reads a PCM WAVE header at *stream* and returns the *sample-rate*, *sample-size*, *n-channels*, and *length* of the WAVE stream specified by the header. *Stream* is advanced to the beginning of the first sample and `read-sample` may be used to read *length* times *n-samples* of *sample-size* from *stream*.

E.g. if a WAVE stream contains two channels and has a length of four, then there should be eight samples in the stream, with each even sample belonging to the first channel and each odd sample belonging to the second channel of the stream.

Exceptional Situations:

Signals an error of *type error* if *stream* does not contain a RIFF/WAVE header using the PCM audio format.

2 riff-wave.write

Functions to write WAVE files.

2.1 write-sample (Function)

Syntax:

— Function: **write-sample** *sample sample-size stream*

Arguments and Values:

sample—the sample value represented as a (real -1 1).

sample-size—one to write an 8-bit sample; Two to write a 16-bit sample.

stream—a *binary output stream*.

`write-sample` writes *sample* encoded in *sample-size* bytes to *stream*.

2.2 write-wave-header (Function)

Syntax:

— Function: **write-wave-header** *sample-rate sample-size n-channels length stream*

Arguments and Values:

sample-rate—an (unsigned-byte 32) denoting the sample rate in Hertz.

sample-size—one for 8-bit samples; Two for 16-bit samples.

n-channels—a positive *integer* denoting the number of channels.

length—an unsigned *integer* denoting the number of samples per channel following the WAVE header.

stream—a *binary output stream*.

Description:

`write-wave-header` writes the PCM WAVE header specified by *sample-rate*, *sample-size*, *n-channels* and *length* to *stream*. `write-sample` should be used to write *n-channels* times *length* samples of *sample-size* to *stream*.