| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/AudioInputStream.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/javax/sound/sampled/AudioFormat.Encoding.html)   [**NEXT CLASS**](http://docs.google.com/javax/sound/sampled/AudioPermission.html) | [**FRAMES**](http://docs.google.com/index.html?javax/sound/sampled/AudioInputStream.html)    [**NO FRAMES**](http://docs.google.com/AudioInputStream.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#2et92p0) | [METHOD](#tyjcwt) | DETAIL: [FIELD](#1t3h5sf) | [CONSTR](#26in1rg) | [METHOD](#1ksv4uv) |

## **javax.sound.sampled**

Class AudioInputStream

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 [java.io.InputStream](http://docs.google.com/java/io/InputStream.html)  
 **javax.sound.sampled.AudioInputStream**

**All Implemented Interfaces:** [Closeable](http://docs.google.com/java/io/Closeable.html)

public class **AudioInputStream**extends [InputStream](http://docs.google.com/java/io/InputStream.html)

An audio input stream is an input stream with a specified audio format and length. The length is expressed in sample frames, not bytes. Several methods are provided for reading a certain number of bytes from the stream, or an unspecified number of bytes. The audio input stream keeps track of the last byte that was read. You can skip over an arbitrary number of bytes to get to a later position for reading. An audio input stream may support marks. When you set a mark, the current position is remembered so that you can return to it later.

The AudioSystem class includes many methods that manipulate AudioInputStream objects. For example, the methods let you:

* obtain an audio input stream from an external audio file, stream, or URL
* write an external file from an audio input stream
* convert an audio input stream to a different audio format

**Since:** 1.3 **See Also:**[AudioSystem](http://docs.google.com/javax/sound/sampled/AudioSystem.html), [Clip.open(AudioInputStream)](http://docs.google.com/javax/sound/sampled/Clip.html#open(javax.sound.sampled.AudioInputStream))

| **Field Summary** | |
| --- | --- |
| protected  [AudioFormat](http://docs.google.com/javax/sound/sampled/AudioFormat.html) | [**format**](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#format)            The format of the audio data contained in the stream. |
| protected  long | [**frameLength**](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#frameLength)            This stream's length, in sample frames. |
| protected  long | [**framePos**](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#framePos)            The current position in this stream, in sample frames (zero-based). |
| protected  int | [**frameSize**](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#frameSize)            The size of each frame, in bytes. |

| **Constructor Summary** | |
| --- | --- |
| [**AudioInputStream**](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#AudioInputStream(java.io.InputStream,%20javax.sound.sampled.AudioFormat,%20long))([InputStream](http://docs.google.com/java/io/InputStream.html) stream, [AudioFormat](http://docs.google.com/javax/sound/sampled/AudioFormat.html) format, long length)            Constructs an audio input stream that has the requested format and length in sample frames, using audio data from the specified input stream. |
| [**AudioInputStream**](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#AudioInputStream(javax.sound.sampled.TargetDataLine))([TargetDataLine](http://docs.google.com/javax/sound/sampled/TargetDataLine.html) line)            Constructs an audio input stream that reads its data from the target data line indicated. |

| **Method Summary** | |
| --- | --- |
| int | [**available**](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#available())()            Returns the maximum number of bytes that can be read (or skipped over) from this audio input stream without blocking. |
| void | [**close**](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#close())()            Closes this audio input stream and releases any system resources associated with the stream. |
| [AudioFormat](http://docs.google.com/javax/sound/sampled/AudioFormat.html) | [**getFormat**](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#getFormat())()            Obtains the audio format of the sound data in this audio input stream. |
| long | [**getFrameLength**](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#getFrameLength())()            Obtains the length of the stream, expressed in sample frames rather than bytes. |
| void | [**mark**](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#mark(int))(int readlimit)            Marks the current position in this audio input stream. |
| boolean | [**markSupported**](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#markSupported())()            Tests whether this audio input stream supports the mark and reset methods. |
| int | [**read**](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#read())()            Reads the next byte of data from the audio input stream. |
| int | [**read**](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#read(byte%5B%5D))(byte[] b)            Reads some number of bytes from the audio input stream and stores them into the buffer array b. |
| int | [**read**](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#read(byte%5B%5D,%20int,%20int))(byte[] b, int off, int len)            Reads up to a specified maximum number of bytes of data from the audio stream, putting them into the given byte array. |
| void | [**reset**](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#reset())()            Repositions this audio input stream to the position it had at the time its mark method was last invoked. |
| long | [**skip**](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#skip(long))(long n)            Skips over and discards a specified number of bytes from this audio input stream. |

| **Methods inherited from class java.lang.**[**Object**](http://docs.google.com/java/lang/Object.html) |
| --- |
| [clone](http://docs.google.com/java/lang/Object.html#clone()), [equals](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)), [finalize](http://docs.google.com/java/lang/Object.html#finalize()), [getClass](http://docs.google.com/java/lang/Object.html#getClass()), [hashCode](http://docs.google.com/java/lang/Object.html#hashCode()), [notify](http://docs.google.com/java/lang/Object.html#notify()), [notifyAll](http://docs.google.com/java/lang/Object.html#notifyAll()), [toString](http://docs.google.com/java/lang/Object.html#toString()), [wait](http://docs.google.com/java/lang/Object.html#wait()), [wait](http://docs.google.com/java/lang/Object.html#wait(long)), [wait](http://docs.google.com/java/lang/Object.html#wait(long,%20int)) |

| **Field Detail** |
| --- |

### format

protected [AudioFormat](http://docs.google.com/javax/sound/sampled/AudioFormat.html) **format**

The format of the audio data contained in the stream.

### frameLength

protected long **frameLength**

This stream's length, in sample frames.

### frameSize

protected int **frameSize**

The size of each frame, in bytes.

### framePos

protected long **framePos**

The current position in this stream, in sample frames (zero-based).

| **Constructor Detail** |
| --- |

### AudioInputStream

public **AudioInputStream**([InputStream](http://docs.google.com/java/io/InputStream.html) stream,  
 [AudioFormat](http://docs.google.com/javax/sound/sampled/AudioFormat.html) format,  
 long length)

Constructs an audio input stream that has the requested format and length in sample frames, using audio data from the specified input stream.

**Parameters:**stream - the stream on which this AudioInputStream object is basedformat - the format of this stream's audio datalength - the length in sample frames of the data in this stream

### AudioInputStream

public **AudioInputStream**([TargetDataLine](http://docs.google.com/javax/sound/sampled/TargetDataLine.html) line)

Constructs an audio input stream that reads its data from the target data line indicated. The format of the stream is the same as that of the target data line, and the length is AudioSystem#NOT\_SPECIFIED.

**Parameters:**line - the target data line from which this stream obtains its data.**See Also:**[AudioSystem.NOT\_SPECIFIED](http://docs.google.com/javax/sound/sampled/AudioSystem.html#NOT_SPECIFIED)

| **Method Detail** |
| --- |

### getFormat

public [AudioFormat](http://docs.google.com/javax/sound/sampled/AudioFormat.html) **getFormat**()

Obtains the audio format of the sound data in this audio input stream.

**Returns:**an audio format object describing this stream's format

### getFrameLength

public long **getFrameLength**()

Obtains the length of the stream, expressed in sample frames rather than bytes.

**Returns:**the length in sample frames

### read

public int **read**()  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Reads the next byte of data from the audio input stream. The audio input stream's frame size must be one byte, or an IOException will be thrown.

**Specified by:**[read](http://docs.google.com/java/io/InputStream.html#read()) in class [InputStream](http://docs.google.com/java/io/InputStream.html) **Returns:**the next byte of data, or -1 if the end of the stream is reached **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an input or output error occurs**See Also:**[read(byte[], int, int)](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#read(byte%5B%5D,%20int,%20int)), [read(byte[])](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#read(byte%5B%5D)),

### read

public int **read**(byte[] b)  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Reads some number of bytes from the audio input stream and stores them into the buffer array b. The number of bytes actually read is returned as an integer. This method blocks until input data is available, the end of the stream is detected, or an exception is thrown.

This method will always read an integral number of frames. If the length of the array is not an integral number of frames, a maximum of b.length - (b.length % frameSize) bytes will be read.

**Overrides:**[read](http://docs.google.com/java/io/InputStream.html#read(byte%5B%5D)) in class [InputStream](http://docs.google.com/java/io/InputStream.html) **Parameters:**b - the buffer into which the data is read **Returns:**the total number of bytes read into the buffer, or -1 if there is no more data because the end of the stream has been reached **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an input or output error occurs**See Also:**[read(byte[], int, int)](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#read(byte%5B%5D,%20int,%20int)), [read()](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#read()), [available()](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#available())

### read

public int **read**(byte[] b,  
 int off,  
 int len)  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Reads up to a specified maximum number of bytes of data from the audio stream, putting them into the given byte array.

This method will always read an integral number of frames. If len does not specify an integral number of frames, a maximum of len - (len % frameSize) bytes will be read.

**Overrides:**[read](http://docs.google.com/java/io/InputStream.html#read(byte%5B%5D,%20int,%20int)) in class [InputStream](http://docs.google.com/java/io/InputStream.html) **Parameters:**b - the buffer into which the data is readoff - the offset, from the beginning of array b, at which the data will be writtenlen - the maximum number of bytes to read **Returns:**the total number of bytes read into the buffer, or -1 if there is no more data because the end of the stream has been reached **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an input or output error occurs**See Also:**[read(byte[])](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#read(byte%5B%5D)), [read()](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#read()), [skip(long)](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#skip(long)), [available()](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#available())

### skip

public long **skip**(long n)  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Skips over and discards a specified number of bytes from this audio input stream.

**Overrides:**[skip](http://docs.google.com/java/io/InputStream.html#skip(long)) in class [InputStream](http://docs.google.com/java/io/InputStream.html) **Parameters:**n - the requested number of bytes to be skipped **Returns:**the actual number of bytes skipped **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an input or output error occurs**See Also:**[read()](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#read()), [available()](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#available())

### available

public int **available**()  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Returns the maximum number of bytes that can be read (or skipped over) from this audio input stream without blocking. This limit applies only to the next invocation of a read or skip method for this audio input stream; the limit can vary each time these methods are invoked. Depending on the underlying stream,an IOException may be thrown if this stream is closed.

**Overrides:**[available](http://docs.google.com/java/io/InputStream.html#available()) in class [InputStream](http://docs.google.com/java/io/InputStream.html) **Returns:**the number of bytes that can be read from this audio input stream without blocking **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an input or output error occurs**See Also:**[read(byte[], int, int)](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#read(byte%5B%5D,%20int,%20int)), [read(byte[])](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#read(byte%5B%5D)), [read()](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#read()), [skip(long)](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#skip(long))

### close

public void **close**()  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Closes this audio input stream and releases any system resources associated with the stream.

**Specified by:**[close](http://docs.google.com/java/io/Closeable.html#close()) in interface [Closeable](http://docs.google.com/java/io/Closeable.html)**Overrides:**[close](http://docs.google.com/java/io/InputStream.html#close()) in class [InputStream](http://docs.google.com/java/io/InputStream.html) **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an input or output error occurs

### mark

public void **mark**(int readlimit)

Marks the current position in this audio input stream.

**Overrides:**[mark](http://docs.google.com/java/io/InputStream.html#mark(int)) in class [InputStream](http://docs.google.com/java/io/InputStream.html) **Parameters:**readlimit - the maximum number of bytes that can be read before the mark position becomes invalid.**See Also:**[reset()](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#reset()), [markSupported()](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#markSupported())

### reset

public void **reset**()  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Repositions this audio input stream to the position it had at the time its mark method was last invoked.

**Overrides:**[reset](http://docs.google.com/java/io/InputStream.html#reset()) in class [InputStream](http://docs.google.com/java/io/InputStream.html) **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an input or output error occurs.**See Also:**[mark(int)](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#mark(int)), [markSupported()](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#markSupported())

### markSupported

public boolean **markSupported**()

Tests whether this audio input stream supports the mark and reset methods.

**Overrides:**[markSupported](http://docs.google.com/java/io/InputStream.html#markSupported()) in class [InputStream](http://docs.google.com/java/io/InputStream.html) **Returns:**true if this stream supports the mark and reset methods; false otherwise**See Also:**[mark(int)](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#mark(int)), [reset()](http://docs.google.com/javax/sound/sampled/AudioInputStream.html#reset())

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/AudioInputStream.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/javax/sound/sampled/AudioFormat.Encoding.html)   [**NEXT CLASS**](http://docs.google.com/javax/sound/sampled/AudioPermission.html) | [**FRAMES**](http://docs.google.com/index.html?javax/sound/sampled/AudioInputStream.html)    [**NO FRAMES**](http://docs.google.com/AudioInputStream.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#2et92p0) | [METHOD](#tyjcwt) | DETAIL: [FIELD](#1t3h5sf) | [CONSTR](#26in1rg) | [METHOD](#1ksv4uv) |

[Submit a bug or feature](http://bugs.sun.com/services/bugreport/index.jsp)

For further API reference and developer documentation, see [Java SE Developer Documentation](http://docs.google.com/webnotes/devdocs-vs-specs.html). That documentation contains more detailed, developer-targeted descriptions, with conceptual overviews, definitions of terms, workarounds, and working code examples.

Copyright 2006 Sun Microsystems, Inc. All rights reserved. Use is subject to [license terms](http://docs.google.com/legal/license.html). Also see the [documentation redistribution policy](http://java.sun.com/docs/redist.html).