| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/MidiFileFormat.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/midi/MidiEvent.html)   [**NEXT CLASS**](http://docs.google.com/javax/sound/midi/MidiMessage.html) | [**FRAMES**](http://docs.google.com/index.html?javax/sound/midi/MidiFileFormat.html)    [**NO FRAMES**](http://docs.google.com/MidiFileFormat.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#2et92p0) | [METHOD](#tyjcwt) | DETAIL: [FIELD](#1t3h5sf) | [CONSTR](#35nkun2) | [METHOD](#2jxsxqh) |

## **javax.sound.midi**

Class MidiFileFormat

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 **javax.sound.midi.MidiFileFormat**

public class **MidiFileFormat**extends [Object](http://docs.google.com/java/lang/Object.html)

A MidiFileFormat object encapsulates a MIDI file's type, as well as its length and timing information.

A MidiFileFormat object can include a set of properties. A property is a pair of key and value: the key is of type String, the associated property value is an arbitrary object. Properties specify additional informational meta data (like a author, or copyright). Properties are optional information, and file reader and file writer implementations are not required to provide or recognize properties.

The following table lists some common properties that should be used in implementations:

| Property key | Value type | Description |
| --- | --- | --- |
| "author" | [String](http://docs.google.com/java/lang/String.html) | name of the author of this file |
| "title" | [String](http://docs.google.com/java/lang/String.html) | title of this file |
| "copyright" | [String](http://docs.google.com/java/lang/String.html) | copyright message |
| "date" | [Date](http://docs.google.com/java/util/Date.html) | date of the recording or release |
| "comment" | [String](http://docs.google.com/java/lang/String.html) | an arbitrary text |

**See Also:**[MidiSystem.getMidiFileFormat(java.io.File)](http://docs.google.com/javax/sound/midi/MidiSystem.html#getMidiFileFormat(java.io.File)), [Sequencer.setSequence(java.io.InputStream stream)](http://docs.google.com/javax/sound/midi/Sequencer.html#setSequence(java.io.InputStream))

| **Field Summary** | |
| --- | --- |
| protected  int | [**byteLength**](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#byteLength)            The length of the MIDI file in bytes. |
| protected  float | [**divisionType**](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#divisionType)            The division type of the MIDI file. |
| protected  long | [**microsecondLength**](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#microsecondLength)            The duration of the MIDI file in microseconds. |
| protected  int | [**resolution**](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#resolution)            The timing resolution of the MIDI file. |
| protected  int | [**type**](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#type)            The type of MIDI file. |
| static int | [**UNKNOWN\_LENGTH**](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#UNKNOWN_LENGTH)            Represents unknown length. |

| **Constructor Summary** | |
| --- | --- |
| [**MidiFileFormat**](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#MidiFileFormat(int,%20float,%20int,%20int,%20long))(int type, float divisionType, int resolution, int bytes, long microseconds)            Constructs a MidiFileFormat. |
| [**MidiFileFormat**](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#MidiFileFormat(int,%20float,%20int,%20int,%20long,%20java.util.Map))(int type, float divisionType, int resolution, int bytes, long microseconds, [Map](http://docs.google.com/java/util/Map.html)<[String](http://docs.google.com/java/lang/String.html),[Object](http://docs.google.com/java/lang/Object.html)> properties)            Construct a MidiFileFormat with a set of properties. |

| **Method Summary** | |
| --- | --- |
| int | [**getByteLength**](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#getByteLength())()            Obtains the length of the MIDI file, expressed in 8-bit bytes. |
| float | [**getDivisionType**](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#getDivisionType())()            Obtains the timing division type for the MIDI file. |
| long | [**getMicrosecondLength**](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#getMicrosecondLength())()            Obtains the length of the MIDI file, expressed in microseconds. |
| [Object](http://docs.google.com/java/lang/Object.html) | [**getProperty**](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#getProperty(java.lang.String))([String](http://docs.google.com/java/lang/String.html) key)            Obtain the property value specified by the key. |
| int | [**getResolution**](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#getResolution())()            Obtains the timing resolution for the MIDI file. |
| int | [**getType**](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#getType())()            Obtains the MIDI file type. |
| [Map](http://docs.google.com/java/util/Map.html)<[String](http://docs.google.com/java/lang/String.html),[Object](http://docs.google.com/java/lang/Object.html)> | [**properties**](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#properties())()            Obtain an unmodifiable map of properties. |

| **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** |
| --- |

### UNKNOWN\_LENGTH

public static final int **UNKNOWN\_LENGTH**

Represents unknown length.

**See Also:**[getByteLength()](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#getByteLength()), [getMicrosecondLength()](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#getMicrosecondLength()), [Constant Field Values](http://docs.google.com/constant-values.html#javax.sound.midi.MidiFileFormat.UNKNOWN_LENGTH)

### type

protected int **type**

The type of MIDI file.

### divisionType

protected float **divisionType**

The division type of the MIDI file.

**See Also:**[Sequence.PPQ](http://docs.google.com/javax/sound/midi/Sequence.html#PPQ), [Sequence.SMPTE\_24](http://docs.google.com/javax/sound/midi/Sequence.html#SMPTE_24), [Sequence.SMPTE\_25](http://docs.google.com/javax/sound/midi/Sequence.html#SMPTE_25), [Sequence.SMPTE\_30DROP](http://docs.google.com/javax/sound/midi/Sequence.html#SMPTE_30DROP), [Sequence.SMPTE\_30](http://docs.google.com/javax/sound/midi/Sequence.html#SMPTE_30)

### resolution

protected int **resolution**

The timing resolution of the MIDI file.

### byteLength

protected int **byteLength**

The length of the MIDI file in bytes.

### microsecondLength

protected long **microsecondLength**

The duration of the MIDI file in microseconds.

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

### MidiFileFormat

public **MidiFileFormat**(int type,  
 float divisionType,  
 int resolution,  
 int bytes,  
 long microseconds)

Constructs a MidiFileFormat.

**Parameters:**type - the MIDI file type (0, 1, or 2)divisionType - the timing division type (PPQ or one of the SMPTE types)resolution - the timing resolutionbytes - the length of the MIDI file in bytes, or UNKNOWN\_LENGTH if not knownmicroseconds - the duration of the file in microseconds, or UNKNOWN\_LENGTH if not known**See Also:**[UNKNOWN\_LENGTH](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#UNKNOWN_LENGTH), [Sequence.PPQ](http://docs.google.com/javax/sound/midi/Sequence.html#PPQ), [Sequence.SMPTE\_24](http://docs.google.com/javax/sound/midi/Sequence.html#SMPTE_24), [Sequence.SMPTE\_25](http://docs.google.com/javax/sound/midi/Sequence.html#SMPTE_25), [Sequence.SMPTE\_30DROP](http://docs.google.com/javax/sound/midi/Sequence.html#SMPTE_30DROP), [Sequence.SMPTE\_30](http://docs.google.com/javax/sound/midi/Sequence.html#SMPTE_30)

### MidiFileFormat

public **MidiFileFormat**(int type,  
 float divisionType,  
 int resolution,  
 int bytes,  
 long microseconds,  
 [Map](http://docs.google.com/java/util/Map.html)<[String](http://docs.google.com/java/lang/String.html),[Object](http://docs.google.com/java/lang/Object.html)> properties)

Construct a MidiFileFormat with a set of properties.

**Parameters:**type - the MIDI file type (0, 1, or 2)divisionType - the timing division type (PPQ or one of the SMPTE types)resolution - the timing resolutionbytes - the length of the MIDI file in bytes, or UNKNOWN\_LENGTH if not knownmicroseconds - the duration of the file in microseconds, or UNKNOWN\_LENGTH if not knownproperties - a Map<String,Object> object with properties**Since:** 1.5 **See Also:**[UNKNOWN\_LENGTH](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#UNKNOWN_LENGTH), [Sequence.PPQ](http://docs.google.com/javax/sound/midi/Sequence.html#PPQ), [Sequence.SMPTE\_24](http://docs.google.com/javax/sound/midi/Sequence.html#SMPTE_24), [Sequence.SMPTE\_25](http://docs.google.com/javax/sound/midi/Sequence.html#SMPTE_25), [Sequence.SMPTE\_30DROP](http://docs.google.com/javax/sound/midi/Sequence.html#SMPTE_30DROP), [Sequence.SMPTE\_30](http://docs.google.com/javax/sound/midi/Sequence.html#SMPTE_30)

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

### getType

public int **getType**()

Obtains the MIDI file type.

**Returns:**the file's type (0, 1, or 2)

### getDivisionType

public float **getDivisionType**()

Obtains the timing division type for the MIDI file.

**Returns:**the division type (PPQ or one of the SMPTE types)**See Also:**[Sequence.Sequence(float, int)](http://docs.google.com/javax/sound/midi/Sequence.html#Sequence(float,%20int)), [Sequence.PPQ](http://docs.google.com/javax/sound/midi/Sequence.html#PPQ), [Sequence.SMPTE\_24](http://docs.google.com/javax/sound/midi/Sequence.html#SMPTE_24), [Sequence.SMPTE\_25](http://docs.google.com/javax/sound/midi/Sequence.html#SMPTE_25), [Sequence.SMPTE\_30DROP](http://docs.google.com/javax/sound/midi/Sequence.html#SMPTE_30DROP), [Sequence.SMPTE\_30](http://docs.google.com/javax/sound/midi/Sequence.html#SMPTE_30), [Sequence.getDivisionType()](http://docs.google.com/javax/sound/midi/Sequence.html#getDivisionType())

### getResolution

public int **getResolution**()

Obtains the timing resolution for the MIDI file. If the division type is PPQ, the resolution is specified in ticks per beat. For SMTPE timing, the resolution is specified in ticks per frame.

**Returns:**the number of ticks per beat (PPQ) or per frame (SMPTE)**See Also:**[getDivisionType()](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#getDivisionType()), [Sequence.getResolution()](http://docs.google.com/javax/sound/midi/Sequence.html#getResolution())

### getByteLength

public int **getByteLength**()

Obtains the length of the MIDI file, expressed in 8-bit bytes.

**Returns:**the number of bytes in the file, or UNKNOWN\_LENGTH if not known**See Also:**[UNKNOWN\_LENGTH](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#UNKNOWN_LENGTH)

### getMicrosecondLength

public long **getMicrosecondLength**()

Obtains the length of the MIDI file, expressed in microseconds.

**Returns:**the file's duration in microseconds, or UNKNOWN\_LENGTH if not known**See Also:**[Sequence.getMicrosecondLength()](http://docs.google.com/javax/sound/midi/Sequence.html#getMicrosecondLength()), [getByteLength()](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#getByteLength()), [UNKNOWN\_LENGTH](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#UNKNOWN_LENGTH)

### properties

public [Map](http://docs.google.com/java/util/Map.html)<[String](http://docs.google.com/java/lang/String.html),[Object](http://docs.google.com/java/lang/Object.html)> **properties**()

Obtain an unmodifiable map of properties. The concept of properties is further explained in the [class description](http://docs.google.com/javax/sound/midi/MidiFileFormat.html).

**Returns:**a Map<String,Object> object containing all properties. If no properties are recognized, an empty map is returned.**Since:** 1.5 **See Also:**[getProperty(String)](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#getProperty(java.lang.String))

### getProperty

public [Object](http://docs.google.com/java/lang/Object.html) **getProperty**([String](http://docs.google.com/java/lang/String.html) key)

Obtain the property value specified by the key. The concept of properties is further explained in the [class description](http://docs.google.com/javax/sound/midi/MidiFileFormat.html).

If the specified property is not defined for a particular file format, this method returns null.

**Parameters:**key - the key of the desired property **Returns:**the value of the property with the specified key, or null if the property does not exist.**Since:** 1.5 **See Also:**[properties](http://docs.google.com/javax/sound/midi/MidiFileFormat.html#properties)

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/MidiFileFormat.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/midi/MidiEvent.html)   [**NEXT CLASS**](http://docs.google.com/javax/sound/midi/MidiMessage.html) | [**FRAMES**](http://docs.google.com/index.html?javax/sound/midi/MidiFileFormat.html)    [**NO FRAMES**](http://docs.google.com/MidiFileFormat.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#2et92p0) | [METHOD](#tyjcwt) | DETAIL: [FIELD](#1t3h5sf) | [CONSTR](#35nkun2) | [METHOD](#2jxsxqh) |

[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).