| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/SysexMessage.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/Synthesizer.html)   [**NEXT CLASS**](http://docs.google.com/javax/sound/midi/Track.html) | [**FRAMES**](http://docs.google.com/index.html?javax/sound/midi/SysexMessage.html)    [**NO FRAMES**](http://docs.google.com/SysexMessage.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#tyjcwt) | [METHOD](#3dy6vkm) | DETAIL: [FIELD](#2s8eyo1) | [CONSTR](#26in1rg) | [METHOD](#1ksv4uv) |

## **javax.sound.midi**

Class SysexMessage

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

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

public class **SysexMessage**extends [MidiMessage](http://docs.google.com/javax/sound/midi/MidiMessage.html)

A SysexMessage object represents a MIDI system exclusive message.

When a system exclusive message is read from a MIDI file, it always has a defined length. Data from a system exclusive message from a MIDI file should be stored in the data array of a SysexMessage as follows: the system exclusive message status byte (0xF0 or 0xF7), all message data bytes, and finally the end-of-exclusive flag (0xF7). The length reported by the SysexMessage object is therefore the length of the system exclusive data plus two: one byte for the status byte and one for the end-of-exclusive flag.

As dictated by the Standard MIDI Files specification, two status byte values are legal for a SysexMessage read from a MIDI file:

* 0xF0: System Exclusive message (same as in MIDI wire protocol)
* 0xF7: Special System Exclusive message

When Java Sound is used to handle system exclusive data that is being received using MIDI wire protocol, it should place the data in one or more SysexMessages. In this case, the length of the system exclusive data is not known in advance; the end of the system exclusive data is marked by an end-of-exclusive flag (0xF7) in the MIDI wire byte stream.

* 0xF0: System Exclusive message (same as in MIDI wire protocol)
* 0xF7: End of Exclusive (EOX)

The first SysexMessage object containing data for a particular system exclusive message should have the status value 0xF0. If this message contains all the system exclusive data for the message, it should end with the status byte 0xF7 (EOX). Otherwise, additional system exclusive data should be sent in one or more SysexMessages with a status value of 0xF7. The SysexMessage containing the last of the data for the system exclusive message should end with the value 0xF7 (EOX) to mark the end of the system exclusive message.

If system exclusive data from SysexMessages objects is being transmitted using MIDI wire protocol, only the initial 0xF0 status byte, the system exclusive data itself, and the final 0xF7 (EOX) byte should be propagated; any 0xF7 status bytes used to indicate that a SysexMessage contains continuing system exclusive data should not be propagated via MIDI wire protocol.

| **Field Summary** | |
| --- | --- |
| static int | [**SPECIAL\_SYSTEM\_EXCLUSIVE**](http://docs.google.com/javax/sound/midi/SysexMessage.html#SPECIAL_SYSTEM_EXCLUSIVE)            Status byte for Special System Exclusive message (0xF7, or 247), which is used in MIDI files. |
| static int | [**SYSTEM\_EXCLUSIVE**](http://docs.google.com/javax/sound/midi/SysexMessage.html#SYSTEM_EXCLUSIVE)            Status byte for System Exclusive message (0xF0, or 240). |

| **Fields inherited from class javax.sound.midi.**[**MidiMessage**](http://docs.google.com/javax/sound/midi/MidiMessage.html) |
| --- |
| [data](http://docs.google.com/javax/sound/midi/MidiMessage.html#data), [length](http://docs.google.com/javax/sound/midi/MidiMessage.html#length) |

| **Constructor Summary** | |
| --- | --- |
|  | [**SysexMessage**](http://docs.google.com/javax/sound/midi/SysexMessage.html#SysexMessage())()            Constructs a new SysexMessage. |
| protected | [**SysexMessage**](http://docs.google.com/javax/sound/midi/SysexMessage.html#SysexMessage(byte%5B%5D))(byte[] data)            Constructs a new SysexMessage. |

| **Method Summary** | |
| --- | --- |
| [Object](http://docs.google.com/java/lang/Object.html) | [**clone**](http://docs.google.com/javax/sound/midi/SysexMessage.html#clone())()            Creates a new object of the same class and with the same contents as this object. |
| byte[] | [**getData**](http://docs.google.com/javax/sound/midi/SysexMessage.html#getData())()            Obtains a copy of the data for the system exclusive message. |
| void | [**setMessage**](http://docs.google.com/javax/sound/midi/SysexMessage.html#setMessage(byte%5B%5D,%20int))(byte[] data, int length)            Sets the data for the system exclusive message. |
| void | [**setMessage**](http://docs.google.com/javax/sound/midi/SysexMessage.html#setMessage(int,%20byte%5B%5D,%20int))(int status, byte[] data, int length)            Sets the data for the system exclusive message. |

| **Methods inherited from class javax.sound.midi.**[**MidiMessage**](http://docs.google.com/javax/sound/midi/MidiMessage.html) |
| --- |
| [getLength](http://docs.google.com/javax/sound/midi/MidiMessage.html#getLength()), [getMessage](http://docs.google.com/javax/sound/midi/MidiMessage.html#getMessage()), [getStatus](http://docs.google.com/javax/sound/midi/MidiMessage.html#getStatus()) |

| **Methods inherited from class java.lang.**[**Object**](http://docs.google.com/java/lang/Object.html) |
| --- |
| [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** |
| --- |

### SYSTEM\_EXCLUSIVE

public static final int **SYSTEM\_EXCLUSIVE**

Status byte for System Exclusive message (0xF0, or 240).

**See Also:**[MidiMessage.getStatus()](http://docs.google.com/javax/sound/midi/MidiMessage.html#getStatus()), [Constant Field Values](http://docs.google.com/constant-values.html#javax.sound.midi.SysexMessage.SYSTEM_EXCLUSIVE)

### SPECIAL\_SYSTEM\_EXCLUSIVE

public static final int **SPECIAL\_SYSTEM\_EXCLUSIVE**

Status byte for Special System Exclusive message (0xF7, or 247), which is used in MIDI files. It has the same value as END\_OF\_EXCLUSIVE, which is used in the real-time "MIDI wire" protocol.

**See Also:**[MidiMessage.getStatus()](http://docs.google.com/javax/sound/midi/MidiMessage.html#getStatus()), [Constant Field Values](http://docs.google.com/constant-values.html#javax.sound.midi.SysexMessage.SPECIAL_SYSTEM_EXCLUSIVE)

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

### SysexMessage

public **SysexMessage**()

Constructs a new SysexMessage. The contents of the new message are guaranteed to specify a valid MIDI message. Subsequently, you may set the contents of the message using one of the setMessage methods.

**See Also:**[setMessage(byte[], int)](http://docs.google.com/javax/sound/midi/SysexMessage.html#setMessage(byte%5B%5D,%20int))

### SysexMessage

protected **SysexMessage**(byte[] data)

Constructs a new SysexMessage.

**Parameters:**data - an array of bytes containing the complete message. The message data may be changed using the setMessage method.**See Also:**[setMessage(byte[], int)](http://docs.google.com/javax/sound/midi/SysexMessage.html#setMessage(byte%5B%5D,%20int))

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

### setMessage

public void **setMessage**(byte[] data,  
 int length)  
 throws [InvalidMidiDataException](http://docs.google.com/javax/sound/midi/InvalidMidiDataException.html)

Sets the data for the system exclusive message. The first byte of the data array must be a valid system exclusive status byte (0xF0 or 0xF7).

**Overrides:**[setMessage](http://docs.google.com/javax/sound/midi/MidiMessage.html#setMessage(byte%5B%5D,%20int)) in class [MidiMessage](http://docs.google.com/javax/sound/midi/MidiMessage.html) **Parameters:**data - the system exclusive message datalength - the length of the valid message data in the array, including the status byte. **Throws:** [InvalidMidiDataException](http://docs.google.com/javax/sound/midi/InvalidMidiDataException.html)

### setMessage

public void **setMessage**(int status,  
 byte[] data,  
 int length)  
 throws [InvalidMidiDataException](http://docs.google.com/javax/sound/midi/InvalidMidiDataException.html)

Sets the data for the system exclusive message.

**Parameters:**status - the status byte for the message (0xF0 or 0xF7)data - the system exclusive message datalength - the length of the valid message data in the array **Throws:** [InvalidMidiDataException](http://docs.google.com/javax/sound/midi/InvalidMidiDataException.html)

### getData

public byte[] **getData**()

Obtains a copy of the data for the system exclusive message. The returned array of bytes does not include the status byte.

**Returns:**array containing the system exclusive message data.

### clone

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

Creates a new object of the same class and with the same contents as this object.

**Specified by:**[clone](http://docs.google.com/javax/sound/midi/MidiMessage.html#clone()) in class [MidiMessage](http://docs.google.com/javax/sound/midi/MidiMessage.html) **Returns:**a clone of this instance**See Also:**[Cloneable](http://docs.google.com/java/lang/Cloneable.html)

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/SysexMessage.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*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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[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.

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