| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/ShortMessage.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/Sequencer.SyncMode.html)   [**NEXT CLASS**](http://docs.google.com/javax/sound/midi/Soundbank.html) | [**FRAMES**](http://docs.google.com/index.html?javax/sound/midi/ShortMessage.html)    [**NO FRAMES**](http://docs.google.com/ShortMessage.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#tyjcwt) | [METHOD](#3dy6vkm) | DETAIL: [FIELD](#2s8eyo1) | [CONSTR](#1pxezwc) | [METHOD](#147n2zr) |

## **javax.sound.midi**

Class ShortMessage

[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.ShortMessage**

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

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

A ShortMessage contains a MIDI message that has at most two data bytes following its status byte. The types of MIDI message that satisfy this criterion are channel voice, channel mode, system common, and system real-time--in other words, everything except system exclusive and meta-events. The ShortMessage class provides methods for getting and setting the contents of the MIDI message.

A number of ShortMessage methods have integer parameters by which you specify a MIDI status or data byte. If you know the numeric value, you can express it directly. For system common and system real-time messages, you can often use the corresponding fields of ShortMessage, such as [SYSTEM\_RESET](http://docs.google.com/javax/sound/midi/ShortMessage.html#SYSTEM_RESET). For channel messages, the upper four bits of the status byte are specified by a command value and the lower four bits are specified by a MIDI channel number. To convert incoming MIDI data bytes that are in the form of Java's signed bytes, you can use the [conversion code](http://docs.google.com/MidiMessage.html#integersVsBytes) given in the [MidiMessage](http://docs.google.com/javax/sound/midi/MidiMessage.html) class description.

**See Also:**[SysexMessage](http://docs.google.com/javax/sound/midi/SysexMessage.html), [MetaMessage](http://docs.google.com/javax/sound/midi/MetaMessage.html)

| **Field Summary** | |
| --- | --- |
| static int | [**ACTIVE\_SENSING**](http://docs.google.com/javax/sound/midi/ShortMessage.html#ACTIVE_SENSING)            Status byte for Active Sensing message (0xFE, or 254). |
| static int | [**CHANNEL\_PRESSURE**](http://docs.google.com/javax/sound/midi/ShortMessage.html#CHANNEL_PRESSURE)            Command value for Channel Pressure (Aftertouch) message (0xD0, or 208) |
| static int | [**CONTINUE**](http://docs.google.com/javax/sound/midi/ShortMessage.html#CONTINUE)            Status byte for Continue message (0xFB, or 251). |
| static int | [**CONTROL\_CHANGE**](http://docs.google.com/javax/sound/midi/ShortMessage.html#CONTROL_CHANGE)            Command value for Control Change message (0xB0, or 176) |
| static int | [**END\_OF\_EXCLUSIVE**](http://docs.google.com/javax/sound/midi/ShortMessage.html#END_OF_EXCLUSIVE)            Status byte for End of System Exclusive message (0xF7, or 247). |
| static int | [**MIDI\_TIME\_CODE**](http://docs.google.com/javax/sound/midi/ShortMessage.html#MIDI_TIME_CODE)            Status byte for MIDI Time Code Quarter Frame message (0xF1, or 241). |
| static int | [**NOTE\_OFF**](http://docs.google.com/javax/sound/midi/ShortMessage.html#NOTE_OFF)            Command value for Note Off message (0x80, or 128) |
| static int | [**NOTE\_ON**](http://docs.google.com/javax/sound/midi/ShortMessage.html#NOTE_ON)            Command value for Note On message (0x90, or 144) |
| static int | [**PITCH\_BEND**](http://docs.google.com/javax/sound/midi/ShortMessage.html#PITCH_BEND)            Command value for Pitch Bend message (0xE0, or 224) |
| static int | [**POLY\_PRESSURE**](http://docs.google.com/javax/sound/midi/ShortMessage.html#POLY_PRESSURE)            Command value for Polyphonic Key Pressure (Aftertouch) message (0xA0, or 160) |
| static int | [**PROGRAM\_CHANGE**](http://docs.google.com/javax/sound/midi/ShortMessage.html#PROGRAM_CHANGE)            Command value for Program Change message (0xC0, or 192) |
| static int | [**SONG\_POSITION\_POINTER**](http://docs.google.com/javax/sound/midi/ShortMessage.html#SONG_POSITION_POINTER)            Status byte for Song Position Pointer message (0xF2, or 242). |
| static int | [**SONG\_SELECT**](http://docs.google.com/javax/sound/midi/ShortMessage.html#SONG_SELECT)            Status byte for MIDI Song Select message (0xF3, or 243). |
| static int | [**START**](http://docs.google.com/javax/sound/midi/ShortMessage.html#START)            Status byte for Start message (0xFA, or 250). |
| static int | [**STOP**](http://docs.google.com/javax/sound/midi/ShortMessage.html#STOP)            Status byte for Stop message (0xFC, or 252). |
| static int | [**SYSTEM\_RESET**](http://docs.google.com/javax/sound/midi/ShortMessage.html#SYSTEM_RESET)            Status byte for System Reset message (0xFF, or 255). |
| static int | [**TIMING\_CLOCK**](http://docs.google.com/javax/sound/midi/ShortMessage.html#TIMING_CLOCK)            Status byte for Timing Clock messagem (0xF8, or 248). |
| static int | [**TUNE\_REQUEST**](http://docs.google.com/javax/sound/midi/ShortMessage.html#TUNE_REQUEST)            Status byte for Tune Request message (0xF6, or 246). |

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

| **Method Summary** | |
| --- | --- |
| [Object](http://docs.google.com/java/lang/Object.html) | [**clone**](http://docs.google.com/javax/sound/midi/ShortMessage.html#clone())()            Creates a new object of the same class and with the same contents as this object. |
| int | [**getChannel**](http://docs.google.com/javax/sound/midi/ShortMessage.html#getChannel())()            Obtains the MIDI channel associated with this event. |
| int | [**getCommand**](http://docs.google.com/javax/sound/midi/ShortMessage.html#getCommand())()            Obtains the MIDI command associated with this event. |
| int | [**getData1**](http://docs.google.com/javax/sound/midi/ShortMessage.html#getData1())()            Obtains the first data byte in the message. |
| int | [**getData2**](http://docs.google.com/javax/sound/midi/ShortMessage.html#getData2())()            Obtains the second data byte in the message. |
| protected  int | [**getDataLength**](http://docs.google.com/javax/sound/midi/ShortMessage.html#getDataLength(int))(int status)            Retrieves the number of data bytes associated with a particular status byte value. |
| void | [**setMessage**](http://docs.google.com/javax/sound/midi/ShortMessage.html#setMessage(int))(int status)            Sets the parameters for a MIDI message that takes no data bytes. |
| void | [**setMessage**](http://docs.google.com/javax/sound/midi/ShortMessage.html#setMessage(int,%20int,%20int))(int status, int data1, int data2)            Sets the parameters for a MIDI message that takes one or two data bytes. |
| void | [**setMessage**](http://docs.google.com/javax/sound/midi/ShortMessage.html#setMessage(int,%20int,%20int,%20int))(int command, int channel, int data1, int data2)            Sets the short message parameters for a channel message which takes up to two data bytes. |

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

| **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** |
| --- |

### MIDI\_TIME\_CODE

public static final int **MIDI\_TIME\_CODE**

Status byte for MIDI Time Code Quarter Frame message (0xF1, or 241).

**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.ShortMessage.MIDI_TIME_CODE)

### SONG\_POSITION\_POINTER

public static final int **SONG\_POSITION\_POINTER**

Status byte for Song Position Pointer message (0xF2, or 242).

**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.ShortMessage.SONG_POSITION_POINTER)

### SONG\_SELECT

public static final int **SONG\_SELECT**

Status byte for MIDI Song Select message (0xF3, or 243).

**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.ShortMessage.SONG_SELECT)

### TUNE\_REQUEST

public static final int **TUNE\_REQUEST**

Status byte for Tune Request message (0xF6, or 246).

**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.ShortMessage.TUNE_REQUEST)

### END\_OF\_EXCLUSIVE

public static final int **END\_OF\_EXCLUSIVE**

Status byte for End of System Exclusive message (0xF7, or 247).

**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.ShortMessage.END_OF_EXCLUSIVE)

### TIMING\_CLOCK

public static final int **TIMING\_CLOCK**

Status byte for Timing Clock messagem (0xF8, or 248).

**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.ShortMessage.TIMING_CLOCK)

### START

public static final int **START**

Status byte for Start message (0xFA, or 250).

**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.ShortMessage.START)

### CONTINUE

public static final int **CONTINUE**

Status byte for Continue message (0xFB, or 251).

**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.ShortMessage.CONTINUE)

### STOP

public static final int **STOP**

Status byte for Stop message (0xFC, or 252).

**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.ShortMessage.STOP)

### ACTIVE\_SENSING

public static final int **ACTIVE\_SENSING**

Status byte for Active Sensing message (0xFE, or 254).

**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.ShortMessage.ACTIVE_SENSING)

### SYSTEM\_RESET

public static final int **SYSTEM\_RESET**

Status byte for System Reset message (0xFF, or 255).

**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.ShortMessage.SYSTEM_RESET)

### NOTE\_OFF

public static final int **NOTE\_OFF**

Command value for Note Off message (0x80, or 128)

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.sound.midi.ShortMessage.NOTE_OFF)

### NOTE\_ON

public static final int **NOTE\_ON**

Command value for Note On message (0x90, or 144)

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.sound.midi.ShortMessage.NOTE_ON)

### POLY\_PRESSURE

public static final int **POLY\_PRESSURE**

Command value for Polyphonic Key Pressure (Aftertouch) message (0xA0, or 160)

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.sound.midi.ShortMessage.POLY_PRESSURE)

### CONTROL\_CHANGE

public static final int **CONTROL\_CHANGE**

Command value for Control Change message (0xB0, or 176)

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.sound.midi.ShortMessage.CONTROL_CHANGE)

### PROGRAM\_CHANGE

public static final int **PROGRAM\_CHANGE**

Command value for Program Change message (0xC0, or 192)

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.sound.midi.ShortMessage.PROGRAM_CHANGE)

### CHANNEL\_PRESSURE

public static final int **CHANNEL\_PRESSURE**

Command value for Channel Pressure (Aftertouch) message (0xD0, or 208)

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.sound.midi.ShortMessage.CHANNEL_PRESSURE)

### PITCH\_BEND

public static final int **PITCH\_BEND**

Command value for Pitch Bend message (0xE0, or 224)

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.sound.midi.ShortMessage.PITCH_BEND)

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

### ShortMessage

public **ShortMessage**()

Constructs a new ShortMessage. 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(int)](http://docs.google.com/javax/sound/midi/ShortMessage.html#setMessage(int))

### ShortMessage

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

Constructs a new ShortMessage.

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

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

### setMessage

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

Sets the parameters for a MIDI message that takes no data bytes.

**Parameters:**status - the MIDI status byte **Throws:** InvalidMidiDataException - if status does not specify a valid MIDI status byte for a message that requires no data bytes. [InvalidMidiDataException](http://docs.google.com/javax/sound/midi/InvalidMidiDataException.html)**See Also:**[setMessage(int, int, int)](http://docs.google.com/javax/sound/midi/ShortMessage.html#setMessage(int,%20int,%20int)), [setMessage(int, int, int, int)](http://docs.google.com/javax/sound/midi/ShortMessage.html#setMessage(int,%20int,%20int,%20int))

### setMessage

public void **setMessage**(int status,  
 int data1,  
 int data2)  
 throws [InvalidMidiDataException](http://docs.google.com/javax/sound/midi/InvalidMidiDataException.html)

Sets the parameters for a MIDI message that takes one or two data bytes. If the message takes only one data byte, the second data byte is ignored; if the message does not take any data bytes, both data bytes are ignored.

**Parameters:**status - the MIDI status bytedata1 - the first data bytedata2 - the second data byte **Throws:** InvalidMidiDataException - if the the status byte, or all data bytes belonging to the message, do not specify a valid MIDI message. [InvalidMidiDataException](http://docs.google.com/javax/sound/midi/InvalidMidiDataException.html)**See Also:**[setMessage(int, int, int, int)](http://docs.google.com/javax/sound/midi/ShortMessage.html#setMessage(int,%20int,%20int,%20int)), [setMessage(int)](http://docs.google.com/javax/sound/midi/ShortMessage.html#setMessage(int))

### setMessage

public void **setMessage**(int command,  
 int channel,  
 int data1,  
 int data2)  
 throws [InvalidMidiDataException](http://docs.google.com/javax/sound/midi/InvalidMidiDataException.html)

Sets the short message parameters for a channel message which takes up to two data bytes. If the message only takes one data byte, the second data byte is ignored; if the message does not take any data bytes, both data bytes are ignored.

**Parameters:**command - the MIDI command represented by this messagechannel - the channel associated with the messagedata1 - the first data bytedata2 - the second data byte **Throws:** InvalidMidiDataException - if the status byte or all data bytes belonging to the message, do not specify a valid MIDI message [InvalidMidiDataException](http://docs.google.com/javax/sound/midi/InvalidMidiDataException.html)**See Also:**[setMessage(int, int, int)](http://docs.google.com/javax/sound/midi/ShortMessage.html#setMessage(int,%20int,%20int)), [setMessage(int)](http://docs.google.com/javax/sound/midi/ShortMessage.html#setMessage(int)), [getCommand()](http://docs.google.com/javax/sound/midi/ShortMessage.html#getCommand()), [getChannel()](http://docs.google.com/javax/sound/midi/ShortMessage.html#getChannel()), [getData1()](http://docs.google.com/javax/sound/midi/ShortMessage.html#getData1()), [getData2()](http://docs.google.com/javax/sound/midi/ShortMessage.html#getData2())

### getChannel

public int **getChannel**()

Obtains the MIDI channel associated with this event. This method assumes that the event is a MIDI channel message; if not, the return value will not be meaningful.

**Returns:**MIDI channel associated with the message.**See Also:**[setMessage(int, int, int, int)](http://docs.google.com/javax/sound/midi/ShortMessage.html#setMessage(int,%20int,%20int,%20int))

### getCommand

public int **getCommand**()

Obtains the MIDI command associated with this event. This method assumes that the event is a MIDI channel message; if not, the return value will not be meaningful.

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

### getData1

public int **getData1**()

Obtains the first data byte in the message.

**Returns:**the value of the data1 field**See Also:**[setMessage(int, int, int)](http://docs.google.com/javax/sound/midi/ShortMessage.html#setMessage(int,%20int,%20int))

### getData2

public int **getData2**()

Obtains the second data byte in the message.

**Returns:**the value of the data2 field**See Also:**[setMessage(int, int, int)](http://docs.google.com/javax/sound/midi/ShortMessage.html#setMessage(int,%20int,%20int))

### 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)

### getDataLength

protected final int **getDataLength**(int status)  
 throws [InvalidMidiDataException](http://docs.google.com/javax/sound/midi/InvalidMidiDataException.html)

Retrieves the number of data bytes associated with a particular status byte value.

**Parameters:**status - status byte value, which must represent a short MIDI message **Returns:**data length in bytes (0, 1, or 2) **Throws:** InvalidMidiDataException - if the status argument does not represent the status byte for any short message [InvalidMidiDataException](http://docs.google.com/javax/sound/midi/InvalidMidiDataException.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/ShortMessage.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/Sequencer.SyncMode.html)   [**NEXT CLASS**](http://docs.google.com/javax/sound/midi/Soundbank.html) | [**FRAMES**](http://docs.google.com/index.html?javax/sound/midi/ShortMessage.html)    [**NO FRAMES**](http://docs.google.com/ShortMessage.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#tyjcwt) | [METHOD](#3dy6vkm) | DETAIL: [FIELD](#2s8eyo1) | [CONSTR](#1pxezwc) | [METHOD](#147n2zr) |

[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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