MIDI MANUFACTURERS ASSOCIATION — AMEI Association of Musical Electronics Industry

MIDI IMPLEMENTATION CHART V2 INSTRUCTIONS

1. Introduction

IMPORTANT: MMA recommends manufacturers of MIDI devices and software ship a MIDI Implementation chart with the device, or make the chart available online. The Version 2 format described in this RP has 3 pages and is the preferred format. Manufacturers who prefer a 1-page chart may continue to use the original format described in the MIDI 1.0 Specification.

This revised version of the standard MIDI Implementation Chart is designed as a quick reference guide that allows users to identify at a glance which MIDI messages and functions are implemented by the device. In this document, the term 'device' is defined as a hardware device or software program that (a) transmits and/or receives MIDI messages, and/or (b) reads and/or writes MMA-defined file formats. Use of the V2 MIDI Implementation Chart is optional. The standardization of this chart enables a user to judge the compatibility between two devices to be connected, simply by comparing the "Transmit/Export" column of one device with the "Recognize/Import" column of the other. For this reason, each chart should be the same size and should have the same number of lines if at all possible. This chart has been designed to fit both standard A4 and 8 1/2" x 11" paper. If a smaller page size is required for a particular product, page breaks may be inserted as necessary, but it is strongly recommended to maintain the row height of the original chart, in order to facilitate comparisons.

IMPORTANT: The MMA Technical Standard Board will review the MIDI Implementation Chart annually, and will update the chart template and these instructions as necessary to reflect newly standardized MIDI features.

2. All Pages

- Use the header at the top of each page of the chart to enter the manufacturer's name, model name/number of the device, version number, and date of chart preparation.
- On all pages, if the manufacturer wishes to present additional information that will not physically fit in the "Remarks" column, this must be done by inserting a reference to the appropriate page or section number in the user manual where the information can be found. If the number of banks the device supports does not fit in the "Comments" section, the manufacturer should continue the list on a separate sheet of paper.

3. Page 1: Basic Information, MIDI Timing & Synchronization, and Extensions Compatibility

3.1. General

The body of page 1 of the chart is divided into four columns. The first column lists the specific function or item, the next two columns give information about whether the specified function is transmitted or exported and/or received or imported (and, if so, may contain information about the range of data)/. The fourth column is used for remarks about anything unique to this implementation. For functions involving files, the 2nd and 3rd columns give information on whether the files can be saved (exported) or opened (imported), and, if so, what degree of compatibility is provided.

3.2. Functions Description

3.2.1. Basic Information

MIDI channels   The range of MIDI channels that the device transmits, exports, responds to, and/or imports. Devices using extended channel systems via multiple cables or input/output ports should list the total number of channels in the appropriate "Transmitted" or "Recognized" columns and should use the "Remarks" column to indicate the terminology used by the device to identify the extra channels (i.e., "A1 - A16, B1 - B-16").

Note numbers   The total range of transmitted or recognized notes.

Program Change   Indicate the range of Program Change numbers which are transmitted and/or recognized. If not implemented, enter a "No" in the appropriate column.

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<u>Bank Select response</u>	Use a "Yes" or "No" to indicate whether or not the device correctly responds to Bank Select messages as per the MIDI 1.0 Specification. Devices that respond only to Bank Select MSB (cc #0) but not to the LSB (cc #32) should place a "No" in the "Recognized" column and should indicate this in the "Remarks" column. If the device does correctly respond to Bank Select messages, use the "Remarks" column to indicate what banks or ranges of banks are available in the device. If certain banks are accessible only by MIDI (and not by front panel user control), these should be listed in the "Remarks" column.
<u>Modes supported</u>	Use a "Yes" or "No" to indicate whether or not the device supports each of the five listed modes of reception.
<u>Note-On Velocity</u>	Use a "Yes" or "No" to indicate whether or not the device transmits, exports, responds to, and/or imports Note-On Velocity.
<u>Note-Off Velocity</u>	Use a "Yes" or "No" to indicate whether or not the device transmits, exports, responds to, and/or imports Note-Off Velocity.
<u>Channel Aftertouch</u>	Use a "Yes" or "No" to indicate whether or not the device transmits, exports, responds to, and/or imports Channel Aftertouch.
<u>Poly (Key) Aftertouch</u>	Use a "Yes" or "No" to indicate whether or not the device transmits, exports, responds to, and/or imports Poly (Key) Aftertouch.
<u>Pitch Bend</u>	Use a "Yes" or "No" to indicate whether or not the device transmits, exports, responds to, and/or imports Pitch Bend.
<u>Active Sensing</u>	Use a "Yes" or "No" to indicate whether or not the device transmits, exports, responds to, and/or imports Active Sensing.
<u>System Reset</u>	Use a "Yes" or "No" to indicate whether or not the device transmits, exports, responds to, and/or imports System Reset.
<u>Tune Request</u>	Use a "Yes" or "No" to indicate whether or not the device transmits, exports, responds to, and/or imports Tune Request.
<u>Universal System Exclusive</u>	Use a "Yes" or "No" to indicate whether or not the device transmits, exports, responds to, and/or imports the various Universal System Exclusive messages described. If the device supports additional Universal System Exclusive messages that are not listed, for example the SP-MIDI MIP message or Global Parameter Control, use the "Other" category and, in the Remarks column, enter the name(s) of the message(s) supported.
<u>Manufacturer or Non-Commercial System Exclusive</u>	Use a "Yes" or "No" to indicate whether or not the device transmits, exports, responds to, and/or imports any Manufacturer System Exclusive messages or Non-Commercial System Exclusive messages. In the Remarks column, enter the name(s) of the message(s) supported, and either the words "Non-Commercial" or the manufacturer name(s) and MMA Manufacturer ID(s) for the message(s) supported.
<u>NRPNs</u>	Use a "Yes" or "No" to indicate whether or not the device transmits, exports, responds to, and/or imports NRPNs. Manufacturers may wish to list the NRPNs the device uses in the "Remarks" column (if this information will not physically fit in the "Remarks" column, provide a reference to the page or section number in the user manual where the information can be found).
<u>RPNs</u>	Use a "Yes" or "No" to indicate whether or not the device transmits, exports, responds to, and/or imports each of the specified RPNs.

3.2.2. MIDI Timing And Synchronization

MIDI Clock | Use a "Yes" or "No" to indicate whether or not the device transmits, exports, responds to, and/or imports MIDI Clock.

Song Position Pointer | Use a "Yes" or "No" to indicate whether or not the device transmits, exports, responds to, and/or imports Song Position Pointer.

Song Select | Use a "Yes" or "No" to indicate whether or not the device transmits, exports, responds to, and/or imports Song Select.

Start/Continue/Stop | Use a "Yes" or "No" to indicate whether or not the device transmits, exports, responds to, and/or imports Start, Continue, or Stop messages.

MIDI Time Code | Use a "Yes" or "No" to indicate whether or not the device transmits, exports, responds to, and/or imports MIDI Time Code (MTC).

MIDI Machine Control | Use a "Yes" or "No" to indicate whether or not the device transmits, exports, responds to, and/or imports MIDI Machine Control (MMC). If yes, indicate in the Remarks column whether the device transmits and/or responds in Open or Closed Loop mode. Manufacturers of devices utilizing MIDI Machine Control may wish to attach a separate chart indicating the specific MMC messages transmitted and/or recognized by the device. If so, indicate the presence of this "sub-chart" in the Remarks column.

MIDI Show Control | Indicate whether or not the device transmits, exports, responds to, and/or imports MIDI Show Control (MSC). If not, indicate "No". If yes, indicate the Level of MIDI Show Control supported. Manufacturers of devices utilizing MIDI Show Control may wish to attach a separate chart indicating the specific MSC messages transmitted and/or recognized by the device. If so, indicate the presence of this "sub-chart" in the Remarks column.

3.2.3. Extensions Compatibility

General MIDI | Indicate whether or not the device has a mode of operation which complies with any of the General MIDI specifications: General MIDI System Level 1 (GM), General MIDI System Level 2 (GM2) and/or General MIDI Lite (GM Lite). If not, indicate "No". If yes, indicate the GM Level(s) supported. Also, if GM is the default power-up mode, indicate GM Lite, GM Level 1 or GM Level 2. If not, indicate "No".

DLS | Indicate whether or not the device has a mode of operation that complies with any of the Downloadable Sounds specifications: DLS Level 1 (DLS) , DLS Level 2 (DLS2, including DLS 2.1 and DLS 2.2), and/or Mobile DLS. If not, indicate "No". If yes, indicate the DLS Level(s) supported. Also, indicate whether or not the device can import and/or export DLS files. If not, indicate "No". If yes, indicate what types. It is recommended that manufacturers indicate in the Remarks column the means of receiving DLS data (i.e., specific physical format, device interface, or transport protocol, etc.) and, if a file system media is used, indicate in the Remarks column the exact format(s) supported (i.e., Windows, Mac OS, or Linux file system version, etc.).

Standard MIDI Files | Use a "Yes" or "No" to indicate whether or not the device has a mode of operation that can play, import, and/or export any of the Standard MIDI File formats, and, if so, the formats(s) supported: format 0 (single track), format 1 (multitrack), and/or format 2 (multiple independent single-track patterns). If yes, it is also recommended that manufacturers indicate in the Remarks column the means of receiving SMF data (i.e., specific physical format, device interface, or transport protocol, etc.) and, if a file system media is used, indicate in the Remarks column the exact format(s) supported (i.e. Windows, Mac OS, or Linux file system version, etc.).

XMF   Indicate whether or not the device has a mode of operation that can play, import, and/or export any of the officially defined XMF File Types: XMF Type 0, XMF Type 1, or Mobile XMF (XMF Type 2). If the device uses the XMF Meta File Format in a manner that does not conform to any of the XMF File Type specifications, indicate this in the Remarks column.

SP-MIDI   Indicate whether or not the device has a mode of operation that can play, import, and/or export Scalable Polyphony MIDI (SP-MIDI) data. If yes, indicate which SP-MIDI profile specification(s) that the device conforms to, for example SP-MIDI 5-24 Voice Profile for 3GPP.

4. Pages 2 & 3: Control Number Information

4.1. General

Pages 2 and 3 of the chart are used to describe how the device implements the 128 MIDI Control Change messages (including those reserved for Channel Mode messages). IMPORTANT: The use of pages 2 and 3 is optional for devices that do not transmit, export, respond to, and/or import any Control Change messages. The first 120 Control Change messages are controller numbers, and the last 8 (cc# 120 - 127) reserved for Channel Mode messages. These pages are divided into five columns, with the first column listing the control number in decimal. The second column lists the defined function from the MIDI 1.0 Specification for that control number if one exists, or is blank if undefined in the MIDI 1.0 Specification. Manufacturers using these undefined controller numbers should enter in the title of the assigned function in this column and should make an entry in the fifth, "Remarks" column noting this proprietary usage. The third and fourth columns are used to indicate whether the specified controller number is transmitted, exported, responded to, and/or imported.

4.2. Functions Description

The inclusion of these two pages in a MIDI device's owner's manual is optional. Use a "Yes" or "No" to indicate whether or not the device transmits and/or responds to each of the listed control numbers. Use the "Remarks" column to indicate whether a particular controller number is assignable or if the controller is being used in a non-standard way (i.e., if the device is capable of receiving the controller message but routes it in an unusual way). If using any undefined controller number, enter the title of the assigned function in the second, "Function" column and make an entry in the fifth, "Remarks" column noting this proprietary usage.

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MIDI Implementation Chart v. 2.0 (Page 1 of 3)			
Manufacturer: Model: Version: Date:			
	Transmit/Export	**Recognize/Import**	**Remarks**
1. Basic Information			
MIDI channels			
Note numbers			
Program change			
Bank Select response? (Yes/No) If yes, list banks utilized in remarks column			
Modes supported : Mode 1: Omni-On, Poly (Yes/No) Mode 2: Omni-On, Mono (Yes/No) Mode 3: Omni-Off, Poly (Yes/No) Mode 4: Omni-Off, Mono (Yes/No) Multi Mode (Yes/No)			
Note-On Velocity (Yes/No)			
Note-Off Velocity (Yes/No)			
Channel Aftertouch (Yes/No)			
Poly (Key) Aftertouch (Yes/No)			
Pitch Bend (Yes/No)			
Active Sensing (Yes/No)			
System Reset (Yes/No)			
Tune Request (Yes/No)			
Universal System Exclusive: Sample Dump Standard (Yes/No) Device Inquiry (Yes/No) File Dump (Yes/No) MIDI Tuning (Yes/No) Master Volume (Yes/No) Master Balance (Yes/No) Notation Information (Yes/No) Turn GM1 System On (Yes/No) Turn GM2 System On (Yes/No) Turn GM System Off (Yes/No) DLS-1 (Yes/No) File Reference (Yes/No) Controller Destination (Yes/No) Key-based Instrument Ctrl (Yes/No) Master Fine/Coarse Tune (Yes/No) Other Universal System Exclusive			
Manufacturer or Non-Commercial System Exclusive			
NRPNs (Yes/No)			
RPN 00 (Pitch Bend Sensitivity) (Yes/No) RPN 01 (Channel Fine Tune) (Yes/No) RPN 02 (Channel Coarse Tune) (Yes/No) RPN 03 (Tuning Program Select) (Yes/No) RPN 04 (Tuning Bank Select) (Yes/No) RPN 05 (Modulation Depth Range) (Yes/No)			
2. MIDI Timing and Synchronization			
MIDI Clock (Yes/No)			
Song Position Pointer (Yes/No)			
Song Select (Yes/No)			
Start (Yes/No) Continue (Yes/No) Stop (Yes/No)			
MIDI Time Code (Yes/No)			
MIDI Machine Control (Yes/No)			
MIDI Show Control (Yes/No) If yes, MSC Level supported			
3. Extensions Compatibility			
General MIDI compatible? (Level(s)/No) Is GM default power-up mode? (Level/No)			
DLS compatible? (Levels(s)/No) (DLS File Type(s)/No)			
Standard MIDI Files (Type(s)/No)			
XMF Files (Type(s)/No)			
SP-MIDI compatible? (Yes/No)			

MIDI Implementation Chart v 2.0 Control Number Information (Page 2 of 3)				
Manufacturer:	Model:	Version:	Date:	
Control #	Function	Transmitted (Y/N)	Recognized (Y/N)	Remarks
0	Bank Select (MSB)			
1	Modulation Wheel (MSB)			
2	Breath Controller (MSB)			
3				
4	Foot Controller (MSB)			
5	Portamento Time (MSB)			
6	Data Entry (MSB)			
7	Channel Volume (MSB)			
8	Balance (MSB)			
9				
10	Pan (MSB)			
11	Expression (MSB)			
12	Effect Control 1 (MSB)			
13	Effect Control 2 (MSB)			
14				
15				
16	General Purpose Controller 1 (MSB)			
17	General Purpose Controller 2 (MSB)			
18	General Purpose Controller 3 (MSB)			
19	General Purpose Controller 4 (MSB)			
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32	Bank Select (LSB)			
33	Modulation Wheel (LSB)			
34	Breath Controller (LSB)			
35				
36	Foot Controller (LSB)			
37	Portamento Time (LSB)			
38	Data Entry (LSB)			
39	Channel Volume (LSB)			
40	Balance (LSB)			
41				
42	Pan (LSB)			
43	Expression (LSB)			
44	Effect Control 1 (LSB)			
45	Effect Control 2 (LSB)			
46				
47				
48	General Purpose Controller 1 (LSB)			
49	General Purpose Controller 2 (LSB)			
50	General Purpose Controller 3 (LSB)			
51	General Purpose Controller 4 (LSB)			
52				
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MIDI Implementation Chart v 2.0 Control Number Information (Page 3 of 3)

Manufacturer: Model: Version: Date:

Control #	Function	Transmitted (Y/N)	Recognized (Y/N)	Remarks
64	Sustain Pedal			
65	Portamento On/Off			
66	Sostenuto			
67	Soft Pedal			
68	Legato Footswitch			
69	Hold 2			
70	Sound Controller 1 (default: Sound Variation)			
71	Sound Controller 2 (default: Timbre / Harmonic Quality)			
72	Sound Controller 3 (default: Release Time)			
73	Sound Controller 4 (default: Attack Time)			
74	Sound Controller 5 (default: Brightness)			
75	Sound Controller 6 (GM2 default: Decay Time)			
76	Sound Controller 7 (GM2 default: Vibrato Rate)			
77	Sound Controller 8 (GM2 default: Vibrato Depth)			
78	Sound Controller 9 (GM2 default: Vibrato Delay)			
79	Sound Controller 10 (GM2 default: Undefined)			
80	General Purpose Controller 5			
81	General Purpose Controller 6			
82	General Purpose Controller 7			
83	General Purpose Controller 8			
84	Portamento Control			
85				
86				
87				
88				
89				
90				
91	Effects 1 Depth (default: Reverb Send)			
92	Effects 2 Depth (default: Tremolo Depth)			
93	Effects 3 Depth (default: Chorus Send)			
94	Effects 4 Depth (default: Celeste [Detune] Depth)			
95	Effects 5 Depth (default: Phaser Depth)			
96	Data Increment			
97	Data Decrement			
98	Non-Registered Parameter Number (LSB)			
99	Non-Registered Parameter Number(MSB)			
100	Registered Parameter Number (LSB)			
101	Registered Parameter Number(MSB)			
102				
103				
104				
105				
106				
107				
108				
109				
110				
111				
112				
113				
114				
115				
116				
117				
118				
119				
120	All Sound Off			
121	Reset All Controllers			
122	Local Control On/Off			
123	All Notes Off			
124	Omni Mode Off			
125	Omni Mode On			
126	Poly Mode Off			
127	Poly Mode On			