

Table 1 - MIDI Implementation Chart

CC #	MIDIbit Setting	Values*	Comments
20	Output 1 MIDI Channel	0...15	Set MIDI channel 1-16
21	Output 1 function	0...119	Set function: (Table 2 for full list) 0 = Note; 1 = Mod Whl; 3 = Velocity.
22	Output 2 MIDI Channel	0...15	Set MIDI channel 1-16
23	Output 2 function	0...119	Set function: (Table 2 for full list) 0 = Note; 1 = Mod Whl; 3 = Velocity.
24	Output 3 MIDI Channel	0...15	Set MIDI channel 1-16
25	Output 3 function	0...119	Set function: (Table 2 for full list) 0 = Note; 1 = Mod Whl; 3 = Velocity.
26	Gate output MIDI Channel	0...15	Set Gate out channel 1-16
27	Output Clock Resolution	0...17	0 = 1/64, 1 = 1/48, 2 = 1/32, 3 = 1/24, 4 = 1/16, 5 = 1/12, 6 = 1/8, 7 = 1/6, 8 = 3/16, 9 = ¼, 10 = 5/16, 11 = 1/3, 12 = 3/8, 13 = ½, 14 = ¾, 15 = 1, 16 = 1.5, 17 = 2
28	Output Clock Shuffle (work in progress)	0...15	Set amount of shuffle, from 1 - 16

*Note: Out of range values will be ignored

Table 2 - Channel Functions

Value	Channel Output Function
0	Note (Only for setting parameters, can not be used as CC)
1	Modulation Wheel or Lever
2	Breath Controller
3	Velocity (Only for setting parameters, can not be used as CC)
4	Foot Controller
5	Portamento Time
6	Data Entry MSB
7	Channel Volume (formerly Main Volume)
8	Balance
9	Undefined
10	Pan
11	Expression Controller
12	Effect Control 1
13	Effect Control 2
14	Undefined
15	Undefined
16	General Purpose Controller 1
17	General Purpose Controller 2
18	General Purpose Controller 3
19	General Purpose Controller 4
20	Output 1 – MIDI Channel (Only for setting parameters, can not be used as CC)
21	Output 1 – Function (Only for setting parameters, can not be used as CC)
22	Output 2 – MIDI Channel (Only for setting parameters, can not be used as CC)
23	Output 2 – Function (Only for setting parameters, can not be used as CC)
24	Output 3 – MIDI Channel (Only for setting parameters, can not be used as CC)
25	Output 3 – Function (Only for setting parameters, can not be used as CC)
26	Gate Out – MIDI Channel (Only for setting parameters, can not be used as CC)
27	Clock Out – Resolution (Only for setting parameters, can not be used as CC)
28	Clock Out – Shuffle Amount (Only for setting parameters, can not be used as CC)
29	Undefined
30	Undefined
31	Undefined
32	LSB for Control 0 (Bank Select)
33	LSB for Control 1 (Modulation Wheel or Lever)
34	LSB for Control 2 (Breath Controller)
35	LSB for Control 3 (Undefined)

36	LSB for Control 4 (Foot Controller)
37	LSB for Control 5 (Portamento Time)
38	LSB for Control 6 (Data Entry)
39	LSB for Control 7 (Channel Volume, formerly Main Volume)
40	LSB for Control 8 (Balance)
41	LSB for Control 9 (Undefined)
42	LSB for Control 10 (Pan)
43	LSB for Control 11 (Expression Controller)
44	LSB for Control 12 (Effect control 1)
45	LSB for Control 13 (Effect control 2)
46	LSB for Control 14 (Undefined)
47	LSB for Control 15 (Undefined)
48	LSB for Control 16 (General Purpose Controller 1)
49	LSB for Control 17 (General Purpose Controller 2)
50	LSB for Control 18 (General Purpose Controller 3)
51	LSB for Control 19 (General Purpose Controller 4)
52	LSB for Control 20 (Undefined)
53	LSB for Control 21 (Undefined)
54	LSB for Control 22 (Undefined)
55	LSB for Control 23 (Undefined)
56	LSB for Control 24 (Undefined)
57	LSB for Control 25 (Undefined)
58	LSB for Control 26 (Undefined)
59	LSB for Control 27 (Undefined)
60	LSB for Control 28 (Undefined)
61	LSB for Control 29 (Undefined)
62	LSB for Control 30 (Undefined)
63	LSB for Control 31 (Undefined)
64	Damper Pedal on/off (Sustain)
65	Portamento On/Off
66	Sostenuto On/Off
67	Soft Pedal On/Off
68	Legato Footswitch
69	Hold 2
70	Sound Controller 1 (default: Sound Variation)
71	Sound Controller 2 (default: Timbre/Harmonic Intens.)
72	Sound Controller 3 (default: Release Time)
73	Sound Controller 4 (default: Attack Time)

74	Sound Controller 5 (default: Brightness)
75	Sound Controller 6 (default: Decay Time - see MMA RP-021)
76	Sound Controller 7 (default: Vibrato Rate - see MMA RP-021)
77	Sound Controller 8 (default: Vibrato Depth - see MMA RP-021)
78	Sound Controller 9 (default: Vibrato Delay - see MMA RP-021)
79	Sound Controller 10 (default undefined - see MMA RP-021)
80	General Purpose Controller 5
81	General Purpose Controller 6
82	General Purpose Controller 7
83	General Purpose Controller 8
84	Portamento Control
85	Undefined
86	Undefined
87	Undefined
88	High Resolution Velocity Prefix
89	Undefined
90	Undefined
91	Effects 1 Depth
92	Effects 2 Depth (formerly Tremolo Depth)
93	Effects 3 Depth
94	Effects 4 Depth (formerly Celeste [Detune] Depth)
95	Effects 5 Depth (formerly Phaser Depth)
96	Data Increment (Data Entry +1) (see MMA RP-018)
97	Data Decrement (Data Entry -1) (see MMA RP-018)
98	Non-Registered Parameter Number (NRPN) - LSB
99	Non-Registered Parameter Number (NRPN) - MSB
100	Registered Parameter Number (RPN) - LSB*
101	Registered Parameter Number (RPN) - MSB*
102	Undefined
103	Undefined
104	Undefined
105	Undefined
106	Undefined
107	Undefined
108	Undefined
109	Undefined
110	Undefined
111	Undefined

112	Undefined
113	Undefined
114	Undefined
115	Undefined
116	Undefined
117	Undefined
118	Undefined
119	Undefined