A Byte is a number between 0 and 255. The table below gives all possible values for a byte (which is an 8 bit value -- or an 8-digit number in base 2). The first column gives the byte values from 0 to 255 in decimal (base-10) notation. The next column gives the bytes values from 00 to FF in hexadecimal (base-16) notation. The third column gives the byte values from 0000,0000 to 1111,1111 in binary (base-2) notation.

Other possibly meaningful interpretations for the bytes are given in the other columns, such as the ASCII character representation, The MIDI key number's corresponding pitch name, the approximate dynamic value, and if the byte represents a MIDI command, then a description of the command meaning for that byte.

Note that MIDI data is in the range from 0-127, and MIDI commands are in the range from 128-255.

DATA BYTES (0-127):

DEC	HEX	BIN	ASCII	PITCH	DYNAMIC
0	00	0000,0000			
1	01	0000,0001			
2	02	0000,0010			
3	03	0000,0011			
4	04	0000,0100			
5	05	0000,0101			
6	06	0000,0110			
7	07	0000,0111			
8	08	0000,1000			
9	09	0000,1001			
10	0a	0000,1010			pppp
11	0b	0000,1011			
12	0c	0000,1100			
13	0d	0000,1101			
14	0e	0000,1110			
15	0f	0000,1111			
16	10	0001,0000			
17	11	0001,0001			
18	12	0001,0010			
19	13	0001,0011			
20	14	0001,0100		...	
21	15	0001,0101		A0	
22	16	0001,0110		A#0	
23	17	0001,0111		B0	ppp
24	18	0001,1000		C1	
25	19	0001,1001		C#1	
26	1a	0001,1010		D1	
27	1b	0001,1011		D#1	
28	1c	0001,1100		E1	
29	1d	0001,1101		F1	
30	1e	0001,1110		F#1	
31	1f	0001,1111		G1	
32	20	0010,0000	' '	G#1	
33	21	0010,0001	'!'	A1	
34	22	0010,0010	'"'	A#1	
35	23	0010,0011	'#'	B1	
36	24	0010,0100	'$'	C2	pp
37	25	0010,0101	'%'	C#2	
38	26	0010,0110	'&'	D2	
39	27	0010,0111	'''	D#2	
40	28	0010,1000	'('	E2	
41	29	0010,1001	')'	F2	
42	2a	0010,1010	'*'	F#2	
43	2b	0010,1011	'+'	G2	
44	2c	0010,1100	','	G#2	
45	2d	0010,1101	'-'	A2	
46	2e	0010,1110	'.'	A#2	
47	2f	0010,1111	'/'	B2	
48	30	0011,0000	'0'	C3	
49	31	0011,0001	'1'	C#3	piano
50	32	0011,0010	'2'	D3	
51	33	0011,0011	'3'	D#3	
52	34	0011,0100	'4'	E3	
53	35	0011,0101	'5'	F3	
54	36	0011,0110	'6'	F#3	
55	37	0011,0111	'7'	G3	
56	38	0011,1000	'8'	G#3	
57	39	0011,1001	'9'	A3	
58	3a	0011,1010	':'	A#3	
59	3b	0011,1011	';'	B3	
60	3c	0011,1100	'<'	C4	
61	3d	0011,1101	'='	C#4	
62	3e	0011,1110	'>'	D4	mp
63	3f	0011,1111	'?'	D#4	
64	40	0100,0000	'@'	E4	
65	41	0100,0001	'A'	F4	
66	42	0100,0010	'B'	F#4	
67	43	0100,0011	'C'	G4	
68	44	0100,0100	'D'	G#4	
69	45	0100,0101	'E'	A4	
70	46	0100,0110	'F'	A#4	
71	47	0100,0111	'G'	B4	
72	48	0100,1000	'H'	C5	
73	49	0100,1001	'I'	C#5	
74	4a	0100,1010	'J'	D5	
75	4b	0100,1011	'K'	D#5	mf
76	4c	0100,1100	'L'	E5	
77	4d	0100,1101	'M'	F5	
78	4e	0100,1110	'N'	F#5	
79	4f	0100,1111	'O'	G5	
80	50	0101,0000	'P'	G#5	
81	51	0101,0001	'Q'	A5	
82	52	0101,0010	'R'	A#5	
83	53	0101,0011	'S'	B5	
84	54	0101,0100	'T'	C6	
85	55	0101,0101	'U'	C#6	
86	56	0101,0110	'V'	D6	
87	57	0101,0111	'W'	D#6	
88	58	0101,1000	'X'	E6	forte
89	59	0101,1001	'Y'	F6	
90	5a	0101,1010	'Z'	F#6	
91	5b	0101,1011	'['	G6	
92	5c	0101,1100	'\'	G#6	
93	5d	0101,1101	']'	A6	
94	5e	0101,1110	'^'	A#6	
95	5f	0101,1111	'_'	B6	
96	60	0110,0000	'`'	C7	
97	61	0110,0001	'a'	C#7	
98	62	0110,0010	'b'	D7	
99	63	0110,0011	'c'	D#7	
100	64	0110,0100	'd'	E7	
101	65	0110,0101	'e'	F7	ff
102	66	0110,0110	'f'	F#7	
103	67	0110,0111	'g'	G7	
104	68	0110,1000	'h'	G#7	
105	69	0110,1001	'i'	A7	
106	6a	0110,1010	'j'	A#7	
107	6b	0110,1011	'k'	B7	
108	6c	0110,1100	'l'	C8	
109	6d	0110,1101	'm'	...	
110	6e	0110,1110	'n'		
111	6f	0110,1111	'o'		
112	70	0111,0000	'p'		
113	71	0111,0001	'q'		
114	72	0111,0010	'r'		fff
115	73	0111,0011	's'		
116	74	0111,0100	't'		
117	75	0111,0101	'u'		
118	76	0111,0110	'v'		
119	77	0111,0111	'w'		
120	78	0111,1000	'x'		
121	79	0111,1001	'y'		
122	7a	0111,1010	'z'		
123	7b	0111,1011	'{'		
124	7c	0111,1100	'|'		
125	7d	0111,1101	'}'		
126	7e	0111,1110	'~'		
127	7f	0111,1111	ffff		

NOTE OFF COMMAND BYTES:

128	80	1000,0000	CH_1: Note Off (2 data bytes: key, vel)
129	81	1000,0001	CH_2: Note Off (2 data bytes: key, vel)
130	82	1000,0010	CH_3: Note Off (2 data bytes: key, vel)
131	83	1000,0011	CH_4: Note Off (2 data bytes: key, vel)
132	84	1000,0100	CH_5: Note Off (2 data bytes: key, vel)
133	85	1000,0101	CH_6: Note Off (2 data bytes: key, vel)
134	86	1000,0110	CH_7: Note Off (2 data bytes: key, vel)
135	87	1000,0111	CH_8: Note Off (2 data bytes: key, vel)
136	88	1000,1000	CH_9: Note Off (2 data bytes: key, vel)
137	89	1000,1001	CH_10: Note Off (2 data bytes: key, vel)
138	8a	1000,1010	CH_11: Note Off (2 data bytes: key, vel)
139	8b	1000,1011	CH_12: Note Off (2 data bytes: key, vel)
140	8c	1000,1100	CH_13: Note Off (2 data bytes: key, vel)
141	8d	1000,1101	CH_14: Note Off (2 data bytes: key, vel)
142	8e	1000,1110	CH_15: Note Off (2 data bytes: key, vel)
143	8f	1000,1111	CH_16: Note Off (2 data bytes: key, vel)

NOTE ON COMMAND BYTES:

144	90	1001,0000	CH_1: Note On (2 data bytes: key, vel)
145	91	1001,0001	CH_2: Note On (2 data bytes: key, vel)
146	92	1001,0010	CH_3: Note On (2 data bytes: key, vel)
147	93	1001,0011	CH_4: Note On (2 data bytes: key, vel)
148	94	1001,0100	CH_5: Note On (2 data bytes: key, vel)
149	95	1001,0101	CH_6: Note On (2 data bytes: key, vel)
150	96	1001,0110	CH_7: Note On (2 data bytes: key, vel)
151	97	1001,0111	CH_8: Note On (2 data bytes: key, vel)
152	98	1001,1000	CH_9: Note On (2 data bytes: key, vel)
153	99	1001,1001	CH_10: Note On (2 data bytes: key, vel)
154	9a	1001,1010	CH_11: Note On (2 data bytes: key, vel)
155	9b	1001,1011	CH_12: Note On (2 data bytes: key, vel)
156	9c	1001,1100	CH_13: Note On (2 data bytes: key, vel)
157	9d	1001,1101	CH_14: Note On (2 data bytes: key, vel)
158	9e	1001,1110	CH_15: Note On (2 data bytes: key, vel)
159	9f	1001,1111	CH_16: Note On (2 data bytes: key, vel)

AFTERTOUCH COMMAND BYTES:

160	a0	1010,0000	CH_1: Aftertouch (2 data bytes: key, amt)
161	a1	1010,0001	CH_2: Aftertouch (2 data bytes: key, amt)
162	a2	1010,0010	CH_3: Aftertouch (2 data bytes: key, amt)
163	a3	1010,0011	CH_4: Aftertouch (2 data bytes: key, amt)
164	a4	1010,0100	CH_5: Aftertouch (2 data bytes: key, amt)
165	a5	1010,0101	CH_6: Aftertouch (2 data bytes: key, amt)
166	a6	1010,0110	CH_7: Aftertouch (2 data bytes: key, amt)
167	a7	1010,0111	CH_8: Aftertouch (2 data bytes: key, amt)
168	a8	1010,1000	CH_9: Aftertouch (2 data bytes: key, amt)
169	a9	1010,1001	CH_10: Aftertouch (2 data bytes: key, amt)
170	aa	1010,1010	CH_11: Aftertouch (2 data bytes: key, amt)
171	ab	1010,1011	CH_12: Aftertouch (2 data bytes: key, amt)
172	ac	1010,1100	CH_13: Aftertouch (2 data bytes: key, amt)
173	ad	1010,1101	CH_14: Aftertouch (2 data bytes: key, amt)
174	ae	1010,1110	CH_15: Aftertouch (2 data bytes: key, amt)
175	af	1010,1111	CH_16: Aftertouch (2 data bytes: key, amt)

CONTINUOUS CONTROLLER COMMAND BYTES:

176	b0	1011,0000	CH_1: Controller (2 data bytes: cnt#, data)
177	b1	1011,0001	CH_2: Controller (2 data bytes: cnt#, data)
178	b2	1011,0010	CH_3: Controller (2 data bytes: cnt#, data)
179	b3	1011,0011	CH_4: Controller (2 data bytes: cnt#, data)
180	b4	1011,0100	CH_5: Controller (2 data bytes: cnt#, data)
181	b5	1011,0101	CH_6: Controller (2 data bytes: cnt#, data)
182	b6	1011,0110	CH_7: Controller (2 data bytes: cnt#, data)
183	b7	1011,0111	CH_8: Controller (2 data bytes: cnt#, data)
184	b8	1011,1000	CH_9: Controller (2 data bytes: cnt#, data)
185	b9	1011,1001	CH_10: Controller (2 data bytes: cnt#, data)
186	ba	1011,1010	CH_11: Controller (2 data bytes: cnt#, data)
187	bb	1011,1011	CH_12: Controller (2 data bytes: cnt#, data)
188	bc	1011,1100	CH_13: Controller (2 data bytes: cnt#, data)
189	bd	1011,1101	CH_14: Controller (2 data bytes: cnt#, data)
190	be	1011,1110	CH_15: Controller (2 data bytes: cnt#, data)
191	bf	1011,1111	CH_16: Controller (2 data bytes: cnt#, data)

PATCH CHANGE COMMAND BYTES:

192	c0	1100,0000	CH_1: Patch Chage (1 data byte: inst.#)
193	c1	1100,0001	CH_2: Patch Chage (1 data byte: inst.#)
194	c2	1100,0010	CH_3: Patch Chage (1 data byte: inst.#)
195	c3	1100,0011	CH_4: Patch Chage (1 data byte: inst.#)
196	c4	1100,0100	CH_5: Patch Chage (1 data byte: inst.#)
197	c5	1100,0101	CH_6: Patch Chage (1 data byte: inst.#)
198	c6	1100,0110	CH_7: Patch Chage (1 data byte: inst.#)
199	c7	1100,0111	CH_8: Patch Chage (1 data byte: inst.#)
200	c8	1100,1000	CH_9: Patch Chage (1 data byte: inst.#)
201	c9	1100,1001	CH_10: Patch Chage (1 data byte: inst.#)
202	ca	1100,1010	CH_11: Patch Chage (1 data byte: inst.#)
203	cb	1100,1011	CH_12: Patch Chage (1 data byte: inst.#)
204	cc	1100,1100	CH_13: Patch Chage (1 data byte: inst.#)
205	cd	1100,1101	CH_14: Patch Chage (1 data byte: inst.#)
206	ce	1100,1110	CH_15: Patch Chage (1 data byte: inst.#)
207	cf	1100,1111	CH_16: Patch Chage (1 data byte: inst.#)

CHANNEL PRESSURE COMMAND BYTES:

208	d0	1101,0000	CH_1: Chan. Pres. (1 data byte: amt)
209	d1	1101,0001	CH_2: Chan. Pres. (1 data byte: amt)
210	d2	1101,0010	CH_3: Chan. Pres. (1 data byte: amt)
211	d3	1101,0011	CH_4: Chan. Pres. (1 data byte: amt)
212	d4	1101,0100	CH_5: Chan. Pres. (1 data byte: amt)
213	d5	1101,0101	CH_6: Chan. Pres. (1 data byte: amt)
214	d6	1101,0110	CH_7: Chan. Pres. (1 data byte: amt)
215	d7	1101,0111	CH_8: Chan. Pres. (1 data byte: amt)
216	d8	1101,1000	CH_9: Chan. Pres. (1 data byte: amt)
217	d9	1101,1001	CH_10: Chan. Pres. (1 data byte: amt)
218	da	1101,1010	CH_11: Chan. Pres. (1 data byte: amt)
219	db	1101,1011	CH_12: Chan. Pres. (1 data byte: amt)
220	dc	1101,1100	CH_13: Chan. Pres. (1 data byte: amt)
221	dd	1101,1101	CH_14: Chan. Pres. (1 data byte: amt)
222	de	1101,1110	CH_15: Chan. Pres. (1 data byte: amt)
223	df	1101,1111	CH_16: Chan. Pres. (1 data byte: amt)

PITCH BEND COMMAND BYTES:

224	e0	1110,0000	CH_1: Pitch Bend (2 data bytes: LS7B, MS7B)
225	e1	1110,0001	CH_2: Pitch Bend (2 data bytes: LS7B, MS7B)
226	e2	1110,0010	CH_3: Pitch Bend (2 data bytes: LS7B, MS7B)
227	e3	1110,0011	CH_4: Pitch Bend (2 data bytes: LS7B, MS7B)
228	e4	1110,0100	CH_5: Pitch Bend (2 data bytes: LS7B, MS7B)
229	e5	1110,0101	CH_6: Pitch Bend (2 data bytes: LS7B, MS7B)
230	e6	1110,0110	CH_7: Pitch Bend (2 data bytes: LS7B, MS7B)
231	e7	1110,0111	CH_8: Pitch Bend (2 data bytes: LS7B, MS7B)
232	e8	1110,1000	CH_9: Pitch Bend (2 data bytes: LS7B, MS7B)
233	e9	1110,1001	CH_10: Pitch Bend (2 data bytes: LS7B, MS7B)
234	ea	1110,1010	CH_11: Pitch Bend (2 data bytes: LS7B, MS7B)
235	eb	1110,1011	CH_12: Pitch Bend (2 data bytes: LS7B, MS7B)
236	ec	1110,1100	CH_13: Pitch Bend (2 data bytes: LS7B, MS7B)
237	ed	1110,1101	CH_14: Pitch Bend (2 data bytes: LS7B, MS7B)
238	ee	1110,1110	CH_15: Pitch Bend (2 data bytes: LS7B, MS7B)
239	ef	1110,1111	CH_16: Pitch Bend (2 data bytes: LS7B, MS7B)

SYSTEM MAINTENANCE COMMAND BYTES:

240	f0	1111,0000	System Exclusive Message (any # of data bytes)
241	f1	1111,0001	MIDI Time Code Quarter Frame
242	f2	1111,0010	Song Position Pointer
243	f3	1111,0011	Song Select
244	f4	1111,0100	Undefined
245	f5	1111,0101	Undefined
246	f6	1111,0110	Tune Request
247	f7	1111,0111	EOX (End of System Exclusive marker)
248	f8	1111,1000	Timing Clock
249	f9	1111,1001	Undefined
250	fa	1111,1010	Timing Clock Continue
251	fb	1111,1011	Timing Clock Stop
252	fc	1111,1100	Timing Clock Stop
253	fd	1111,1101	Undefined
254	fe	1111,1110	Active Sensing
255	ff	1111,1111	System Request (or Meta Message in MIDI files)