

DIGITAL PIANO

P-515

MIDI Reference

MIDI-Referenz

Référence MIDI

Referencia MIDI

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Effect Type List / Liste der Effekttypen / Liste des types d'effets / Lista de tipos de efectos

Reverb Block

Reverb types that can be selected by Voice Menu.

Effect Name	MSB	LSB
Off	0	0
Recital Hall	1	24
Concert Hall	1	4
Chamber	2	24
Cathedral	1	5
Club	3	24
Plate	4	24

Chorus Block

Chorus types that can be selected by Voice Menu.

Effect Name	MSB	LSB
Off	0	0
Chorus	65	8
Celeste	66	8
Flanger	67	1

DSP Block

Effect type that can be selected by Voice Menu.

Effect Name	MSB	LSB
Off	64	0
DelayLCR	5	16
DelayLR	6	0
Echo	7	0
CrossDelay	8	0
Symphonic	68	16
Rotary	69	32
Tremolo	70	18
VibeRotor	119	0
AutoPan	71	21
Phaser	72	16
AutoWah	78	16
Distortion	97	33

Effect Parameter List / Liste der Effektparameter / Liste des paramètres d'effets / Lista de parámetros de efectos

Parameters marked with a ● in the "Control" column can be controlled from an AC1 (assignable controller 1) etc.

REVERB

Recital Hall, Concert Hall, Chamber, Cathedral, Club, Plate

No.	Parameter	Display	Value	See Table	Control
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

DSP

DelayLCR

No.	Parameter	Display	Value	See Table	Control
1	Lch Delay Time	0.1ms – 1.6383s	1 – 16383		
2	Rch Delay Time	0.1ms – 1.6383s	1 – 16383		
3	Cch Delay Time	0.1ms – 1.6383s	1 – 16383		
4	Feedback Delay Time	0.1ms – 1.6383s	1 – 16383		
5	Feedback Level	-63 – 0 – +63	1 – 127		
6	Cch Level	0 – 127	0 – 127		
7	Feedback High Damp	0.1 – 1.0	1 – 10		
8					
9					
10	Dry/Wet	D63>W – D=W – D<W63	1 – 127		●
11					
12					
13	EQ Low Frequency	32Hz – 2.0kHz	4 – 40	Table #3	
14	EQ Low Gain	-12dB – 0dB – +12dB	52 – 76		
15	EQ High Frequency	500Hz – 16kHz	28 – 58	Table #3	
16	EQ High Gain	-12dB – 0dB – +12dB	52 – 76		

CHORUS

Chorus, Celeste

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0 – 127	Table #1	
2	LFO Depth	0 – 127	0 – 127		
3	Feedback Level	-63 – 0 – +63	1 – 127		
4	Delay Offset	0.0ms – 50.0ms	0 – 127	Table #2	
5					
6	EQ Low Frequency	32Hz – 2.0kHz	4 – 40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52 – 76		
8	EQ High Frequency	500Hz – 16kHz	28 – 58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52 – 76		
10	Dry/Wet	D63>W – D=W – D<W63	1 – 127		●
11	EQ Mid Frequency	100Hz – 10kHz	14 – 54	Table #3	
12	EQ Mid Gain	-12dB – 0dB – +12dB	52 – 76		
13	EQ Mid Width	0.1 – 12.0	1 – 120		
14					
15	Input Mode	Mono, Stereo	0 – 1		
16					

DelayLR

No.	Parameter	Display	Value	See Table	Control
1	Lch Delay Time	0.1ms – 1.6383s	1 – 16383		
2	Rch Delay Time	0.1ms – 1.6383s	1 – 16383		
3	Feedback Delay 1 Time	0.1ms – 1.6383s	1 – 16383		
4	Feedback Delay 2 Time	0.1ms – 1.6383s	1 – 16383		
5	Feedback Level	-63 – 0 – +63	1 – 127		
6	Feedback High Damp	0.1 – 1.0	1 – 10		
7					
8					
9					
10	Dry/Wet	D63>W – D=W – D<W63	1 – 127		●
11					
12					
13	EQ Low Frequency	32Hz – 2.0kHz	4 – 40	Table #3	
14	EQ Low Gain	-12dB – 0dB – +12dB	52 – 76		
15	EQ High Frequency	500Hz – 16kHz	28 – 58	Table #3	
16	EQ High Gain	-12dB – 0dB – +12dB	52 – 76		

Flanger

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0 – 127	Table #1	
2	LFO Depth	0 – 127	0 – 127		
3	Feedback Level	-63 – 0 – +63	1 – 127		
4	Delay Offset	0.0ms – 50.0ms	0 – 127	Table #2	
5					
6	EQ Low Frequency	32Hz – 2.0kHz	4 – 40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52 – 76		
8	EQ High Frequency	500Hz – 16kHz	28 – 58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52 – 76		
10	Dry/Wet	D63>W – D=W – D<W63	1 – 127		●
11	EQ Mid Frequency	100Hz – 10kHz	14 – 54	Table #3	
12	EQ Mid Gain	-12dB – 0dB – +12dB	52 – 76		
13	EQ Mid Width	0.1 – 12.0	1 – 120		
14	LFO Phase Difference	-180deg – 0deg – +180deg (resolution=3deg.)	4 – 124		
15					
16					

Echo

No.	Parameter	Display	Value	See Table	Control
1	Lch Delay 1 Time	0.1ms – 1.4860s	1 – 14860		
2	Lch Feedback Level	-63 – 0 – +63	1 – 127		
3	Rch Delay 1 Time	0.1ms – 1.4860s	1 – 14860		
4	Rch Feedback Level	-63 – 0 – +63	1 – 127		
5	Feedback High Damp	0.1 – 1.0	1 – 10		
6	Lch Delay 2 Time	0.1ms – 1.4860s	1 – 14860		
7	Rch Delay 2 Time	0.1ms – 1.4860s	1 – 14860		
8	Delay 2 Level	0 – 127	0 – 127		
9					
10	Dry/Wet	D63>W – D=W – D<W63	1 – 127		●
11					
12					
13	EQ Low Frequency	32Hz – 2.0kHz	4 – 40	Table #3	
14	EQ Low Gain	-12dB – 0dB – +12dB	52 – 76		
15	EQ High Frequency	500Hz – 16kHz	28 – 58	Table #3	
16	EQ High Gain	-12dB – 0dB – +12dB	52 – 76		

CrossDelay

No.	Parameter	Display	Value	See Table	Control
1	L->R Delay Time	0.1ms – 1.4860s	1 – 14860		
2	R->L Delay Time	0.1ms – 1.4860s	1 – 14860		
3	Feedback Level	-63 – 0 – +63	1 – 127		
4	Input Select	L, R, L&R	0 – 2		
5	Feedback High Damp	0.1 – 1.0	1 – 10		
6					
7					
8					
9					
10	Dry/Wet	D63>W – D=W – D<W63	1 – 127		●
11					
12					
13	EQ Low Frequency	32Hz – 2.0kHz	4 – 40	Table #3	
14	EQ Low Gain	-12dB – 0dB – +12dB	52 – 76		
15	EQ High Frequency	500Hz – 16kHz	28 – 58	Table #3	
16	EQ High Gain	-12dB – 0dB – +12dB	52 – 76		

Tremolo

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0 – 127	Table #1	
2	LFO Depth	0 – 127	0 – 127		
3	Cutoff Frequency Offset	0 – 127	0 – 127		●
4	Resonance	1.0 – 12.0	10 – 120		
5					
6	EQ Low Frequency	32Hz – 2.0kHz	4 – 40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52 – 76		
8	EQ High Frequency	500Hz – 16kHz	28 – 58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52 – 76		
10	Dry/Wet	D63>W – D=W – D<W63	1 – 127		
11	Drive	0 – 127	0 – 127		
12	Dist EQ Low Gain	-12dB – 0dB – +12dB	52 – 76		
13	Dist EQ Mid Gain	-12dB – 0dB – +12dB	52 – 76		
14	LPF Cutoff Frequency	1.0kHz – 18kHz, Thru	34 – 60	Table #3	
15	Output Level	0 – 127	0 – 127		
16					

Symphonic

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0 – 127	Table #1	
2	LFO Depth	0 – 127	0 – 127		
3	Delay Offset	0.0ms – 50.0ms	0 – 127	Table #2	
4					
5					
6	EQ Low Frequency	32Hz – 2.0kHz	4 – 40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52 – 76		
8	EQ High Frequency	500Hz – 16kHz	28 – 58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52 – 76		
10	Dry/Wet	D63>W – D=W – D<W63	1 – 127		●
11	EQ Mid Frequency	100Hz – 10kHz	14 – 54	Table #3	
12	EQ Mid Gain	-12dB – 0dB – +12dB	52 – 76		
13	EQ Mid Width	0.1 – 12.0	1 – 120		
14					
15					
16					

VibeRotor

No.	Parameter	Display	Value	See Table	Control
1	Rotor Speed	0.00Hz – 39.7Hz	0 – 127	Table #1	
2	AM Depth	0 – 127	0 – 127		
3	PM Depth	0 – 127	0 – 127		
4					
5					
6	EQ Low Frequency	32Hz – 2.0kHz	4 – 40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52 – 76		
8	EQ High Frequency	500Hz – 16kHz	28 – 58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52 – 76		
10	Dry/Wet	D63>W – D=W – D<W63	1 – 127		
11	EQ Mid Frequency	100Hz – 10kHz	14 – 54	Table #3	
12	EQ Mid Gain	-12dB – 0dB – +12dB	52 – 76		
13	EQ Mid Width	0.1 – 12.0	1 – 120		
14	LFO Phase Difference (resolution=3deg.)	-180deg – 0deg – +180deg	4 – 124		
15	Input Mode	Mono, Stereo	0 – 1		
16	Rotor SW	Off, On	0 – 1		●

Rotary

No.	Parameter	Display	Value	See Table	Control
1	Speed Control	Slow, Fast	0 – 1		●
2	Drive	0.0 – 10.0	0 – 100		
3	Tone	0.0 – 10.0	0 – 100		
4	Low/High Balance	L63>H – L=H – L<H63	1 – 127		
5	Output Level	0 – 127	0 – 127		
6	Mic L-R Angle	0deg, 90deg, 120deg, 180deg	0 – 3		
7	Input Level	-6.0dB – 0.0dB – +6.0dB	52 – 76		
8	Modulation Intensity	0 – 63	0 – 63		
9					
10					
11	Slow-Fast Time of Horn	x0.21 – x1.00 – x2.00	14 – 127	Table #4	
12	Fast-Slow Time of Horn	x0.21 – x1.00 – x2.00	14 – 127	Table #4	
13	Woofer Speed Slow	0.0rpm – 88.3rpm	0 – 127	Table #5	
14	Horn Speed Slow	0.0rpm – 89.6rpm	0 – 127	Table #6	
15	Woofer Speed Fast	189.3rpm – 736.8rpm	1 – 127	Table #7	
16	Horn Speed Fast	209.4rpm – 817.6rpm	1 – 127	Table #8	

AutoPan

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0 – 127	Table #1	●
2	L/R Depth	0 – 127	0 – 127		
3	F/R Depth	0 – 127	0 – 127		
4	Pan Direction	L<->R, L->R, L<-R, Lturn, Rturn, L/R	0 – 5		
5					
6	EQ Low Frequency	32Hz – 2.0kHz	4 – 40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52 – 76		
8	EQ High Frequency	500Hz – 16kHz	28 – 58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52 – 76		
10					
11	EQ Mid Frequency	100Hz – 10kHz	14 – 54	Table #3	
12	EQ Mid Gain	-12dB – 0dB – +12dB	52 – 76		
13	EQ Mid Width	0.1 – 12.0	1 – 120		
14					
15					
16					

Phaser

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0 – 127	Table #1	●
2	LFO Depth	0 – 127	0 – 127		
3	Phase Shift Offset	0 – 127	0 – 127		
4	Feedback Level	-63 – 0 – +63	1 – 127		
5					
6	EQ Low Frequency	32Hz – 2.0kHz	4 – 40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52 – 76		
8	EQ High Frequency	500Hz – 16kHz	28 – 58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52 – 76		
10	Dry/Wet	D63>W – D=W – D<W63	1 – 127		
11	Stage	4 – 22	4 – 22		
12	Diffusion	Mono, Stereo	0 – 1		
13					
14					
15					
16					

AutoWah

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz – 39.7Hz	0 – 127	Table #1	●
2	LFO Depth	0 – 127	0 – 127		
3	Cutoff Frequency Offset	0 – 127	0 – 127		
4	Resonance	1.0 – 12.0	10 – 120		
5					
6	EQ Low Frequency	32Hz – 2.0kHz	4 – 40	Table #3	
7	EQ Low Gain	-12dB – 0dB – +12dB	52 – 76		
8	EQ High Frequency	500Hz – 16kHz	28 – 58	Table #3	
9	EQ High Gain	-12dB – 0dB – +12dB	52 – 76		
10	Dry/Wet	D63>W – D=W – D<W63	1 – 127		
11	Drive	0 – 127	0 – 127		
12					
13					
14					
15					
16					

Distortion

No.	Parameter	Display	Value	See Table	Control
1	Mode	Bright, Top Boost	0 – 1		●
2	Normal	0.0 – 10.0	0 – 100		
3	Brilliant	0.0 – 10.0	0 – 100		
4	Bass	0.0 – 10.0	0 – 100		
5					
6	Treble	0.0 – 10.0	0 – 100		
7	Cut	0.0 – 10.0	0 – 100		
8					
9	Output	0 – 127	0 – 127		
10					
11	Speaker Type	Off, BS 4x12, AC 2x12, AC 1x12, AC 4x10, BC 2x12, AM 4x12, YC 4x12, JC 2x12, OC 2x12, OC 1x8	0 – 10		
12	Speaker Air	0 – 2	0 – 2		
13	Mic Position	Center, Edge	0 – 1		
14					
15					
16					

Effect Data Assign Table / Effektdaten-Zuordnungstabelle / Tableau d'assignation des données d'effets / Tabla de asignación de datos para efectos

Table #1
LFO Frequency [Hz]

Data	Value	Data	Value
0	0.00	64	2.69
1	0.04	65	2.78
2	0.08	66	2.86
3	0.13	67	2.94
4	0.17	68	3.03
5	0.21	69	3.11
6	0.25	70	3.20
7	0.29	71	3.28
8	0.34	72	3.37
9	0.38	73	3.45
10	0.42	74	3.53
11	0.46	75	3.62
12	0.51	76	3.70
13	0.55	77	3.87
14	0.59	78	4.04
15	0.63	79	4.21
16	0.67	80	4.37
17	0.72	81	4.54
18	0.76	82	4.71
19	0.80	83	4.88
20	0.84	84	5.05
21	0.88	85	5.22
22	0.93	86	5.38
23	0.97	87	5.55
24	1.01	88	5.72
25	1.05	89	6.06
26	1.09	90	6.39
27	1.14	91	6.73
28	1.18	92	7.07
29	1.22	93	7.40
30	1.26	94	7.74
31	1.30	95	8.08
32	1.35	96	8.41
33	1.39	97	8.75
34	1.43	98	9.08
35	1.47	99	9.42
36	1.51	100	9.76
37	1.56	101	10.1
38	1.60	102	10.8
39	1.64	103	11.4
40	1.68	104	12.1
41	1.72	105	12.8
42	1.77	106	13.5
43	1.81	107	14.1
44	1.85	108	14.8
45	1.89	109	15.5
46	1.94	110	16.2
47	1.98	111	16.8
48	2.02	112	17.5
49	2.06	113	18.2
50	2.10	114	19.5
51	2.15	115	20.9
52	2.19	116	22.2
53	2.23	117	23.6
54	2.27	118	24.9
55	2.31	119	26.2
56	2.36	120	27.6
57	2.40	121	28.9
58	2.44	122	30.3
59	2.48	123	31.6
60	2.52	124	33.0
61	2.57	125	34.3
62	2.61	126	37.0
63	2.65	127	39.7

Table #2
Modulation Delay Offset [ms]

Data	Value	Data	Value
0	0.0	64	6.4
1	0.1	65	6.5
2	0.2	66	6.6
3	0.3	67	6.7
4	0.4	68	6.8
5	0.5	69	6.9
6	0.6	70	7.0
7	0.7	71	7.1
8	0.8	72	7.2
9	0.9	73	7.3
10	1.0	74	7.4
11	1.1	75	7.5
12	1.2	76	7.6
13	1.3	77	7.7
14	1.4	78	7.8
15	1.5	79	7.9
16	1.6	80	8.0
17	1.7	81	8.1
18	1.8	82	8.2
19	1.9	83	8.3
20	2.0	84	8.4
21	2.1	85	8.5
22	2.2	86	8.6
23	2.3	87	8.7
24	2.4	88	8.8
25	2.5	89	8.9
26	2.6	90	9.0
27	2.7	91	9.1
28	2.8	92	9.2
29	2.9	93	9.3
30	3.0	94	9.4
31	3.1	95	9.5
32	3.2	96	9.6
33	3.3	97	9.7
34	3.4	98	9.8
35	3.5	99	9.9
36	3.6	100	10.0
37	3.7	101	11.1
38	3.8	102	12.2
39	3.9	103	13.3
40	4.0	104	14.4
41	4.1	105	15.5
42	4.2	106	17.1
43	4.3	107	18.6
44	4.4	108	20.2
45	4.5	109	21.8
46	4.6	110	23.3
47	4.7	111	24.9
48	4.8	112	26.5
49	4.9	113	28.0
50	5.0	114	29.6
51	5.1	115	31.2
52	5.2	116	32.8
53	5.3	117	34.3
54	5.4	118	35.9
55	5.5	119	37.5
56	5.6	120	39.0
57	5.7	121	40.6
58	5.8	122	42.2
59	5.9	123	43.7
60	6.0	124	45.3
61	6.1	125	46.9
62	6.2	126	48.4
63	6.3	127	50.0

Table #3
EQ Frequency [Hz]

Data	Value	Data	Value
0	THRU (20)	31	700
		32	800
1	22	33	900
2	25	34	1.0k
3	28	35	1.1k
4	32	36	1.2k
5	36	37	1.4k
6	40	38	1.6k
7	45	39	1.8k
8	50	40	2.0k
9	56	41	2.2k
10	63	42	2.5k
11	70	43	2.8k
12	80	44	3.2k
13	90	45	3.6k
14	100	46	4.0k
15	110	47	4.5k
16	125	48	5.0k
17	140	49	5.6k
18	160	50	6.3k
19	180	51	7.0k
20	200	52	8.0k
21	225	53	9.0k
22	250	54	10k
23	280	55	11k
24	315	56	12k
25	355	57	14k
26	400	58	16k
27	450	59	18k
28	500	60	THRU (20k)
29	560		
30	630		

Table #4
Real Rotary Windup/down Accel

Data	Value	Data	Value
14	0.21	71	1.11
15	0.22	72	1.13
16	0.24	73	1.14
17	0.25	74	1.16
18	0.27	75	1.17
19	0.29	76	1.19
20	0.30	77	1.21
21	0.32	78	1.22
22	0.33	79	1.24
23	0.35	80	1.25
24	0.37	81	1.27
25	0.38	82	1.29
26	0.40	83	1.30
27	0.41	84	1.32
28	0.43	85	1.33
29	0.44	86	1.35
30	0.46	87	1.37
31	0.48	88	1.38
32	0.49	89	1.40
33	0.51	90	1.41
34	0.52	91	1.43
35	0.54	92	1.44
36	0.56	93	1.46
37	0.57	94	1.48
38	0.59	95	1.49
39	0.60	96	1.51
40	0.62	97	1.52
41	0.63	98	1.54
42	0.65	99	1.56
43	0.67	100	1.57
44	0.68	101	1.59
45	0.70	102	1.60
46	0.71	103	1.62
47	0.73	104	1.63
48	0.75	105	1.65
49	0.76	106	1.67
50	0.78	107	1.68
51	0.79	108	1.70
52	0.81	109	1.71
53	0.83	110	1.73
54	0.84	111	1.75
55	0.86	112	1.76
56	0.87	113	1.78
57	0.89	114	1.79
58	0.90	115	1.81
59	0.92	116	1.83
60	0.94	117	1.84
61	0.95	118	1.86
62	0.97	119	1.87
63	0.98	120	1.89
64	1.00	121	1.90
65	1.02	122	1.92
66	1.03	123	1.94
67	1.05	124	1.95
68	1.06	125	1.97
69	1.08	126	1.98
70	1.10	127	2.00

Table #5
Real Rotary Woofer Speed
Slow [rpm]

Data	Value	Data	Value
0	0.0	64	44.8
1	22.7	65	45.4
2	23.0	66	46.1
3	23.3	67	46.7
4	23.7	68	47.3
5	24.0	69	47.9
6	24.3	70	48.6
7	24.6	71	49.2
8	24.9	72	49.8
9	25.2	73	50.5
10	25.5	74	51.1
11	25.9	75	51.7
12	26.2	76	52.4
13	26.5	77	53.0
14	26.8	78	53.6
15	27.1	79	54.3
16	27.4	80	54.9
17	27.8	81	55.5
18	28.1	82	56.1
19	28.4	83	56.8
20	28.7	84	57.4
21	29.0	85	58.0
22	29.3	86	58.7
23	29.7	87	59.3
24	30.0	88	59.9
25	30.3	89	60.6
26	30.6	90	61.2
27	30.9	91	61.8
28	31.2	92	62.5
29	31.5	93	63.1
30	31.9	94	63.7
31	32.2	95	64.3
32	32.5	96	65.0
33	32.8	97	65.6
34	33.1	98	66.2
35	33.4	99	66.9
36	33.8	100	67.5
37	34.1	101	68.1
38	34.4	102	68.8
39	34.7	103	69.4
40	35.0	104	70.0
41	35.3	105	70.7
42	35.6	106	71.3
43	36.0	107	71.9
44	36.3	108	72.5
45	36.6	109	73.2
46	36.9	110	73.8
47	37.2	111	74.4
48	37.5	112	75.1
49	37.9	113	75.7
50	38.2	114	76.3
51	38.5	115	77.0
52	38.8	116	77.6
53	39.1	117	78.2
54	39.4	118	78.9
55	39.7	119	79.5
56	40.1	120	80.1
57	40.4	121	80.7
58	41.0	122	82.0
59	41.6	123	83.3
60	42.3	124	84.5
61	42.9	125	85.8
62	43.5	126	87.1
63	44.2	127	88.3

Table #6
Real Rotary Horn Speed
Slow [rpm]

Data	Value	Data	Value
0	0.0	64	45.4
1	23.0	65	46.1
2	23.3	66	46.7
3	23.7	67	47.3
4	24.0	68	47.9
5	24.3	69	48.6
6	24.6	70	49.2
7	24.9	71	49.8
8	25.2	72	50.5
9	25.5	73	51.1
10	25.9	74	51.7
11	26.2	75	52.4
12	26.5	76	53.0
13	26.8	77	53.6
14	27.1	78	54.3
15	27.4	79	54.9
16	27.8	80	55.5
17	28.1	81	56.1
18	28.4	82	56.8
19	28.7	83	57.4
20	29.0	84	58.0
21	29.3	85	58.7
22	29.7	86	59.3
23	30.0	87	59.9
24	30.3	88	60.6
25	30.6	89	61.2
26	30.9	90	61.8
27	31.2	91	62.5
28	31.5	92	63.1
29	31.9	93	63.7
30	32.2	94	64.3
31	32.5	95	65.0
32	32.8	96	65.6
33	33.1	97	66.2
34	33.4	98	66.9
35	33.8	99	67.5
36	34.1	100	68.1
37	34.4	101	68.8
38	34.7	102	69.4
39	35.0	103	70.0
40	35.3	104	70.7
41	35.6	105	71.3
42	36.0	106	71.9
43	36.3	107	72.5
44	36.6	108	73.2
45	36.9	109	73.8
46	37.2	110	74.4
47	37.5	111	75.1
48	37.9	112	75.7
49	38.2	113	76.3
50	38.5	114	77.0
51	38.8	115	77.6
52	39.1	116	78.2
53	39.4	117	78.9
54	39.7	118	79.5
55	40.1	119	80.1
56	40.4	120	80.7
57	41.0	121	82.0
58	41.6	122	83.3
59	42.3	123	84.5
60	42.9	124	85.8
61	43.5	125	87.1
62	44.2	126	88.3
63	44.8	127	89.6

Table #7
Real Rotary Woofer Speed
Fast [rpm]

Data	Value	Data	Value
1	189.3	65	378.5
2	191.8	66	383.6
3	194.3	67	388.6
4	196.8	68	393.7
5	199.4	69	398.7
6	201.9	70	403.7
7	204.4	71	408.8
8	206.9	72	413.8
9	209.4	73	418.9
10	212.0	74	423.9
11	214.5	75	429.0
12	217.0	76	434.0
13	219.5	77	439.1
14	222.1	78	444.1
15	224.6	79	449.2
16	227.1	80	454.2
17	229.6	81	459.3
18	232.2	82	464.3
19	234.7	83	469.4
20	237.2	84	474.4
21	239.7	85	479.5
22	242.2	86	484.5
23	244.8	87	489.5
24	247.3	88	494.6
25	249.8	89	499.6
26	252.3	90	504.7
27	254.9	91	509.7
28	257.4	92	514.8
29	259.9	93	519.8
30	262.4	94	524.9
31	265.0	95	529.9
32	267.5	96	535.0
33	270.0	97	540.0
34	272.5	98	545.1
35	275.1	99	550.1
36	277.6	100	555.2
37	280.1	101	560.2
38	282.6	102	565.2
39	285.1	103	570.3
40	287.7	104	575.3
41	290.2	105	580.4
42	292.7	106	585.4
43	295.2	107	590.5
44	297.8	108	595.5
45	300.3	109	600.6
46	302.8	110	605.6
47	305.3	111	610.7
48	307.9	112	615.7
49	310.4	113	620.8
50	312.9	114	625.8
51	315.4	115	630.9
52	318.0	116	635.9
53	320.5	117	640.9
54	323.0	118	646.0
55	328.0	119	656.1
56	333.1	120	666.2
57	338.1	121	676.3
58	343.2	122	686.4
59	348.2	123	696.5
60	353.3	124	706.6
61	358.3	125	716.7
62	363.4	126	726.7
63	368.4	127	736.8
64	373.5		

Table #8
Real Rotary Horn Speed Fast
[rpm]

Data	Value	Data	Value
1	209.4	65	418.9
2	212.0	66	423.9
3	214.5	67	429.0
4	217.0	68	434.0
5	219.5	69	439.1
6	222.1	70	444.1
7	224.6	71	449.2
8	227.1	72	454.2
9	229.6	73	459.3
10	232.2	74	464.3
11	234.7	75	469.4
12	237.2	76	474.4
13	239.7	77	479.5
14	242.2	78	484.5
15	244.8	79	489.5
16	247.3	80	494.6
17	249.8	81	499.6
18	252.3	82	504.7
19	254.9	83	509.7
20	257.4	84	514.8
21	259.9	85	519.8
22	262.4	86	524.9
23	265.0	87	529.9
24	267.5	88	535.0
25	270.0	89	540.0
26	272.5	90	545.1
27	275.1	91	550.1
28	277.6	92	555.2
29	280.1	93	560.2
30	282.6	94	565.2
31	285.1	95	570.3
32	287.7	96	575.3
33	290.2	97	580.4
34	292.7	98	585.4
35	295.2	99	590.5
36	297.8	100	595.5
37	300.3	101	600.6
38	302.8	102	605.6
39	305.3	103	610.7
40	307.9	104	615.7
41	310.4	105	620.8
42	312.9	106	625.8
43	315.4	107	630.9
44	318.0	108	635.9
45	320.5	109	640.9
46	323.0	110	646.0
47	328.0	111	656.1
48	333.1	112	666.2
49	338.1	113	676.3
50	343.2	114	686.4
51	348.2	115	696.5
52	353.3	116	706.6
53	358.3	117	716.7
54	363.4	118	726.7
55	368.4	119	736.8
56	373.5	120	746.9
57	378.5	121	757.0
58	383.6	122	767.1
59	388.6	123	777.2
60	393.7	124	787.3
61	398.7	125	797.4
62	403.7	126	807.5
63	408.8	127	817.6
64	413.8		

MIDI Data Format / MIDI-Datenformat / Format des données MIDI / Formato de datos MIDI

Many MIDI messages listed in the MIDI Data Format are expressed in decimal numbers, binary numbers and hexadecimal numbers. Hexadecimal numbers may include the letter "H" as a suffix. Also, "n" can freely be defined as any whole number. To enter data/values, refer to the table below.

Decimal	Hexadecimal	Binary	Decimal	Hexadecimal	Binary	Decimal	Hexadecimal	Binary	Decimal	Hexadecimal	Binary
0	00	0000 0000	32	20	0010 0000	64	40	0100 0000	96	60	0110 0000
1	01	0000 0001	33	21	0010 0001	65	41	0100 0001	97	61	0110 0001
2	02	0000 0010	34	22	0010 0010	66	42	0100 0010	98	62	0110 0010
3	03	0000 0011	35	23	0010 0011	67	43	0100 0011	99	63	0110 0011
4	04	0000 0100	36	24	0010 0100	68	44	0100 0100	100	64	0110 0100
5	05	0000 0101	37	25	0010 0101	69	45	0100 0101	101	65	0110 0101
6	06	0000 0110	38	26	0010 0110	70	46	0100 0110	102	66	0110 0110
7	07	0000 0111	39	27	0010 0111	71	47	0100 0111	103	67	0110 0111
8	08	0000 1000	40	28	0010 1000	72	48	0100 1000	104	68	0110 1000
9	09	0000 1001	41	29	0010 1001	73	49	0100 1001	105	69	0110 1001
10	0A	0000 1010	42	2A	0010 1010	74	4A	0100 1010	106	6A	0110 1010
11	0B	0000 1011	43	2B	0010 1011	75	4B	0100 1011	107	6B	0110 1011
12	0C	0000 1100	44	2C	0010 1100	76	4C	0100 1100	108	6C	0110 1100
13	0D	0000 1101	45	2D	0010 1101	77	4D	0100 1101	109	6D	0110 1101
14	0E	0000 1110	46	2E	0010 1110	78	4E	0100 1110	110	6E	0110 1110
15	0F	0000 1111	47	2F	0010 1111	79	4F	0100 1111	111	6F	0110 1111
16	10	0001 0000	48	30	0011 0000	80	50	0101 0000	112	70	0111 0000
17	11	0001 0001	49	31	0011 0001	81	51	0101 0001	113	71	0111 0001
18	12	0001 0010	50	32	0011 0010	82	52	0101 0010	114	72	0111 0010
19	13	0001 0011	51	33	0011 0011	83	53	0101 0011	115	73	0111 0011
20	14	0001 0100	52	34	0011 0100	84	54	0101 0100	116	74	0111 0100
21	15	0001 0101	53	35	0011 0101	85	55	0101 0101	117	75	0111 0101
22	16	0001 0110	54	36	0011 0110	86	56	0101 0110	118	76	0111 0110
23	17	0001 0111	55	37	0011 0111	87	57	0101 0111	119	77	0111 0111
24	18	0001 1000	56	38	0011 1000	88	58	0101 1000	120	78	0111 1000
25	19	0001 1001	57	39	0011 1001	89	59	0101 1001	121	79	0111 1001
26	1A	0001 1010	58	3A	0011 1010	90	5A	0101 1010	122	7A	0111 1010
27	1B	0001 1011	59	3B	0011 1011	91	5B	0101 1011	123	7B	0111 1011
28	1C	0001 1100	60	3C	0011 1100	92	5C	0101 1100	124	7C	0111 1100
29	1D	0001 1101	61	3D	0011 1101	93	5D	0101 1101	125	7D	0111 1101
30	1E	0001 1110	62	3E	0011 1110	94	5E	0101 1110	126	7E	0111 1110
31	1F	0001 1111	63	3F	0011 1111	95	5F	0101 1111	127	7F	0111 1111

- Except the table above, for example 144-159 (decimal)/9nH/1001 0000-1001 1111 (binary) denotes the Note On Message for each channel (1-16). 176-191/BnH/1011 0000-1011 1111 denotes the Control Change Message for each channel (1-16). 192-207/CnH/1100 0000-1100 1111 denotes the Program Change Message for each channel (1-16). 240/FOH/1111 0000 denotes the start of a System Exclusive Message. 247/F7H/1111 0111 denotes the end of a System Exclusive Message.
- aaH (hexadecimal)/0aaaaaaa (binary) denotes the data address. The address contains High, Mid, and Low.
- bbH/0bbbbbbb denotes the byte count.
- ccH/0ccccccc denotes the check sum.
- ddH/0ddddddd denotes the data/value.

■ Preset Voice List

Program change numbers are often specified as numbers "0 – 127." Since this list uses a "1 – 128" numbering system, in such cases it is necessary to subtract 1 from the transmitted program change numbers to select the appropriate sound: e.g. to select No. 2 in the list below, transmit program change number 1.

Voice Group	Voice Name	Bank MSB	Bank LSB	Program Change (1-128)
Piano	CFX Grand	108	0	1
	Binaural CFX Grand	108	100	1
	Bösendorfer	108	6	1
	Studio Grand	108	1	3
	Bright Grand	108	0	2
	Ballad Grand	108	1	1
	Warm Grand	108	7	1
	Pop Grand	108	1	2
	Jazz Grand	108	6	2
	Rock Grand	108	0	3
	HonkyTonk Pf	108	5	4
Electric Piano	Stage E.Piano	108	0	5
	DX E.Piano	108	0	6
	Vintage EP	108	1	5
	Soft EP	108	2	5
	Phaser EP	108	3	5
	DX Bright	108	1	6
	Tremolo Vintage	108	4	5
Organ	Jazz Organ Slow	108	0	17
	Jazz Organ Fast	108	1	17
	Rock Organ	108	0	19
	Jazz Organ	108	2	17
	Organ Principal	108	1	20
	Organ Tutti	108	0	20

Voice Group	Voice Name	Bank MSB	Bank LSB	Program Change (1-128)
Clavichord/ Vibraphone	Harpsichord 8'	108	0	7
	Harpsi.8'+4'	108	1	7
	E.Clavichord	108	0	8
	Vibraphone	108	0	12
Strings	Strings	108	0	49
	Slow Strings	108	0	50
	Choir	108	0	53
	Slow Choir	108	1	53
	Dark Pad	108	120	90
	Lite Pad	108	122	90
	Bell Pad	108	12	89
Others	Acoustic Bass	108	0	33
	Electric Bass	108	0	34
	Bass & Cymbal	108	1	33
	Fretless Bass	108	0	36
	Nylon Guitar	108	0	25
	Steel Guitar	108	0	26
XG	XG	-	-	-

* For details on XG Voices, refer to the "XG Voice List" in the "Data List" on the website.

MIDI CHANNEL MESSAGE (1)

Application Range	MIDI, Internal Sequencer
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MIDI Events	Status byte	1st Data byte		2nd Data byte		MIDI Formats	MIDI Reception			MIDI Transmission	
	Status	Data (Hex)	Parameter	Data (Hex)	Parameter		Song	R1 R2 L	Keyboard (All manually played parts)	Panel (main generation method)	Song
Key Off	8nH (n: Channel Number)	kk	Key no. (0-127)	vv	Velocity (0-127)	[GM1] [GM2]	○	○	○	○ (Keyboard)	○
Key On	9nH (n: Channel Number)	kk	Key no. (0-127)	vv	Key On: vv=1-127 Key Off: vv=0	[GM1] [GM2]	○	○	○	○ (Keyboard)	○
Control Change	BnH	0 (00H)	Bank Select MSB	0 (00H) 64 (40H) 118 (76H) 119 (77H) 120 (78H) 121 (79H) 126 (7EH) 127 (7FH)	Normal SFX Voice GS Rhythm GS Normal GM2 Rhythm GM2 Normal SFX kit Drum kit	[GM2]	○	○	× (*1)	○ (Voice)	○
		1 (01H)	Modulation	0-127 (00H...7FH)	Data	[GM1] [GM2]	○	○	○	×	○
		5 (05H)	Portamento Time	0-127 (00H...7FH)	Data	[GM2]	○	○	○	×	○
		6 (06H)	Data Entry MSB	0-127 (00H...7FH)	Data	[GM2]	○	○	○	○ (Function)	○
		7 (07H)	Main Volume	0-127 (00H...7FH)	Data	[GM1] [GM2]	○	○	○	○ (Function)	○
		10 (0AH)	Panpot	0-127 (00H...7FH)	L64...C...R63	[GM1] [GM2]	○	○	○	○ (Function)	○
		11 (0BH)	Expression	0-127 (00H...7FH)	Data	[GM1] [GM2]	○	○	○	×	○
		32 (20H)	Bank Select LSB	0-127 (00H...7FH)	Data	[GM2]	○	○	× (*1)	○ (Voice)	○
		38 (26H)	Data Entry LSB	0-127 (00H...7FH)	Data	[GM2]	○	○	○	○ (Function)	○
		64 (40H)	Sustain (Damper)	0-127 (00H...7FH)	Data	[GM1] [GM2]	○	○	○	○ (Pedal)	○
		65 (41H)	Portamento	0-127 (00H...7FH)	0...63, 64...127 (OFF, ON)	[GM2]	○	○	○	×	○
		66 (42H)	Sostenuto	0-127 (00H...7FH)	0...63, 64...127 (OFF, ON)	[GM2]	○	○	○	○ (Pedal)	○
		67 (43H)	Soft Pedal	0-127 (00H...7FH)	0...63, 64...127 (OFF, ON)	[GM2]	○	○	○	○ (Pedal)	○
		71 (47H)	Harmonic Content	0-127 (00H...7FH)	-64...0...+63	[GM2]	○	○	○	○ (Function)	○
		72 (48H)	Release Time	0-127 (00H...7FH)	-64...0...+63	[GM2]	○	○	○	×	○
		73 (49H)	Attack Time	0-127 (00H...7FH)	-64...0...+63	[GM2]	○	○	○	×	○
		74 (4AH)	Brightness	0-127 (00H...7FH)	-64...0...+63	[GM2]	○	○	○	○ (Function)	○
		75 (4BH)	Decay Time	0-127 (00H...7FH)	-64...0...+63	[GM2]	○	○	○	×	○
		76 (4CH)	Vibrate Rate	0-127 (00H...7FH)	-64...0...+63	[GM2]	○	○	○	×	○
		77 (4DH)	Vibrate Depth	0-127 (00H...7FH)	-64...0...+63	[GM2]	○	○	○	×	○
		78 (4EH)	Vibrate Delay	0-127 (00H...7FH)	-64...0...+63	[GM2]	○	○	○	×	○
		84 (54H)	Portamento Control	0-127 (00H...7FH)	Key no. (0-127)		○	○	×	×	○
		91 (5BH)	Effect1 Depth (Reverb Send Level)	0-127 (00H...7FH)	Data	[GM2]	○	○	○	○ (Function)	○
		93 (5DH)	Effect3 Depth (Chorus Send Level)	0-127 (00H...7FH)	Data	[GM2]	○	○	○	○ (Function)	○
		94 (5EH)	Effect4 Depth (Variation Send Level)	0-127 (00H...7FH)	Data		○	○	○	×	○
		96 (60H)	RPN Increment	– –	The data byte is ignored.		○	○	×	×	○
		97 (61H)	RPN Decrement	– –	The data byte is ignored.		○	○	×	×	○
		98 (62H)	NRPN LSB	0-127 (00H...7FH)	Data		○	×	×	×	○
		99 (63H)	NRPN MSB	0-127 (00H...7FH)	Data		○	×	×	×	○
		100 (64H)	RPN LSB	0-127 (00H...7FH)	Data	[GM2]	○	○	○	○ (Function)	○
		101 (65H)	RPN MSB	0-127 (00H...7FH)	Data	[GM2]	○	○	○	○ (Function)	○
Mode Message	BnH (n: Channel Number)	120 (78H)	All Sound Off	0 (00H)	Data	[GM2]	○	○	○	×	○
		121 (79H)	Reset All Controllers	0 (00H)	Data	[GM1] [GM2]	○	×	×	×	○
		122 (7AH)	Local Control	0 (00H) 127 (7FH)	OFF ON		○			×	×
		123 (7BH)	All Note Off	0 (00H)	Data	[GM1] [GM2]	○	○	○	×	○
		124 (7CH)	Omni Off	0 (00H)	Data	[GM2]	○	×	×	×	○
		125 (7DH)	Omni On	0 (00H)	Data	[GM2]	○	×	×	×	○
		126 (7EH)	Mono	0-16 (00H...10H)	Data	[GM2]	○	×	×	×	○
Program Change	CnH (n: Channel Number)	pp (00H...7FH)	Voice number (0-127)	– –	–	[GM1] [GM2]	○	○	×	○ (*1)	○
Channel After Touch	DnH (n: Channel Number)	vv (00H...7FH)	Data	– –	–	[GM1] [GM2]	○	○	○	×	○
Polyphonic After Touch	AnH (n: Channel Number)	kk (00H...7FH)	Key no. (0-127)	vv (00H...7FH)	Data		○	×	×	×	○
Pitch Bend Change	EnH (n: Channel Number)	cc (00H...7FH)	LSB	dd (00H...7FH)	MSB	[GM1] [GM2]	○	○	○	○ (Pedal)	○
Realtime Message	F8H MIDI Clock	–	–	–	–			×			○
	FAH Start	–	–	–	–			○			○
	FBH Continue	–	–	–	–			×			×
	FCH Stop	–	–	–	–			○			○
	FEH Active Sens	–	–	–	–	[GM2]		○			○
	FFH System Reset	–	–	–	–			×			×

*1 Ignored when Bank Select MSB/LSB/Program Change are received in Keyboard mode.

MIDI CHANNEL MESSAGE (2)

Application Range MIDI, Internal Sequencer

Parameters controlled by NRPN (Non-Registered Parameter Numbers)

NRPN		Data Entry		Parameter	Data Range	MIDI Formats	MIDI Reception			MIDI Transmission	
MSB	LSB	MSB	LSB				Song	R1 R2 L	Keyboard (All manually played parts)	Panel (main generation method)	Song
01H	08H	mmH	–	Vibrato Rate	mm: 00H-40H-7FH (-64...0...+63)		○	×	×	×	○
01H	09H	mmH	–	Vibrato Depth	mm: 00H-40H-7FH (-64...0...+63)		○	×	×	×	○
01H	0AH	mmH	–	Vibrato Delay	mm: 00H-40H-7FH (-64...0...+63)		○	×	×	×	○
01H	20H	mmH	–	Low Pass Filter Cutoff Frequency	mm: 00H-40H-7FH (-64...0...+63)		○	×	×	×	○
01H	21H	mmH	–	Low Pass Filter Resonance	mm: 00H-40H-7FH (-64...0...+63)		○	×	×	×	○
01H	30H	mmH	–	EQ BASS	mm: 00H-40H-7FH (-64...0...+63)		○	×	×	×	○
01H	31H	mmH	–	EQ TREBLE	mm: 00H-40H-7FH (-64...0...+63)		○	×	×	×	○
01H	34H	mmH	–	EQ BASS Frequency	mm: 04H-28H (32...2.0k [Hz])		○	×	×	×	○
01H	35H	mmH	–	EQ TREBLE Frequency	mm: 1CH-3AH (500...16.0k [Hz])		○	×	×	×	○
01H	63H	mmH	–	EG Attack Time	mm: 00H-40H-7FH (-64...0...+63)		○	×	×	×	○
01H	64H	mmH	–	EG Decay Time	mm: 00H-40H-7FH (-64...0...+63)		○	×	×	×	○
01H	66H	mmH	–	EG Release	mm: 00H-40H-7FH (-64...0...+63)		○	×	×	×	○
14H	rrH	mmH	–	Drum Low Pass Filter Cutoff Frequency	rr: drum instrument note number mm: 00H-40H-7FH (-64...0...+63)		○	×	×	×	○
15H	rrH	mmH	–	Drum Low Pass Filter Resonance	rr: drum instrument note number mm: 00H-40H-7FH (-64...0...+63)		○	×	×	×	○
16H	rrH	mmH	–	Drum EG Attack Rate	rr: drum instrument note number mm: 00H-40H-7FH (-64...0...+63)		○	×	×	×	○
17H	rrH	mmH	–	Drum EG Decay Rate	rr: drum instrument note number mm: 00H-40H-7FH (-64...0...+63)		○	×	×	×	○
18H	rrH	mmH	–	Drum Pitch Coarse	rr: drum instrument note number mm: 00H-40H-7FH (-64...0...+63)		○	×	×	×	○
19H	rrH	mmH	–	Drum Pitch Fine	rr: drum instrument note number mm: 00H-40H-7FH (-64...0...+63)		○	×	×	×	○
1AH	rrH	mmH	–	Drum Level	rr: drum instrument note number mm: 00H-7FH (0...127)		○	×	×	×	○
1CH	rrH	mmH	–	Drum Pan	rr: drum instrument note number mm: 00H, 01H-40H-7FH (RND, L63...C...R63)		○	×	×	×	○
1DH	rrH	mmH	–	Drum Reverb Send Level	rr: drum instrument note number mm: 00H-7FH (0...127)		○	×	×	×	○
1EH	rrH	mmH	–	Drum Chorus Send Level	rr: drum instrument note number mm: 00H-7FH (0...127)		○	×	×	×	○
1FH	rrH	mmH	–	Drum Variation Send Level	rr: drum instrument note number mm: 00H-7FH (0...127)		○	×	×	×	○
24H	rrH	mmH	–	Drum HPF Cutoff Frequency	rr: drum instrument note number mm: 00H-40H-7FH (-64...0...+63)		○	×	×	×	○
30H	rrH	mmH	–	Drum EQ Bass Gain	rr: drum instrument note number mm: 00H-7FH (0...127)		×	×	×	×	○
31H	rrH	mmH	–	Drum EQ Treble Gain	rr: drum instrument note number mm: 00H-7FH (0...127)		×	×	×	×	○
34H	rrH	mmH	–	Drum EQ Bass Frequency	rr: drum instrument note number mm: 04H-28H (32...2.0k [Hz])		×	×	×	×	○
35H	rrH	mmH	–	Drum EQ Treble Frequency	rr: drum instrument note number mm: 1CH-3AH (500...16.0k [Hz])		×	×	×	×	○
40H	rrH	mmH	–	Drum VELOCITY PITCH SENS.	rr: drum instrument note number mm: 00H-0FH (0...15)		×	×	×	×	○
41H	rrH	mmH	–	Drum VELOCITY LPF CUTOFF SENS.	rr: drum instrument note number mm: 00H-0FH (0...15)		×	×	×	×	○

NRPN MSB: 14H-1FH (for drums) message is accepted as long as the channel is set with a drum voice.
Data Entry LSB: Ignored.

Parameters controlled by RPN (Registered Parameter Numbers)

NRPN		Data Entry		Parameter	Data Range	MIDI Formats	MIDI Reception (respond/ignored)			MIDI Transmission (generated data)	
MSB	LSB	MSB	LSB				Song	R1 R2 L	Keyboard (All manually played parts)	Panel (main generation method)	Song
00H	00H	mmH	–	Pitch Bend Sensitivity	mm: 00H-18H (0...+24 [semitones])	[GM1] [GM2]	○	○	○	○ (Function)	○
00H	01H	mmH	IIH	Fine Tune	mm II: 00H 00H -100 [cent] ... mm II: 40H 00H 0 [cent] ... mm II: 7FH 7FH 100 [cent]	[GM1] [GM2]	○	○	○	○ (Function)	○
00H	02H	mmH	–	Coarse Tune	mm: 28H-40H-58H (-24...0...+24 [semitones])	[GM1] [GM2]	○	○	○	×	○
00H	05H	mmH	IIH	Modulation Sensitivity	mm: Specified in semitone steps II: Specified in 100/128 cent steps	[GM2]	○	○	○	×	○
7FH	7FH	–	–	Null	–	[GM2]	○	○	○	×	○

MIDI PARAMETER CHANGE TABLE

Application Range	MIDI, Internal Sequencer
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* Not Received when Receive Parameter SysEx is set to off.
 * Not transmitted when Transmit Parameter SysEx is set to off.

MIDI Parameter Change Table (XG SYSTEM)

Address (H)			Size (H)	Data (H)	Parameter	Description	XG Default (H)	MIDI Reception			MIDI Transmission	
								Song	R1 R2 L	Keyboard	Panel (main generation method)	Song
00	00	00	4	00-0F 00-0F 00-0F 00-0F	MASTER TUNE	-102.4...0...+102.3 [cent] 1st bit3-0→bit15-12 2nd bit3-0→bit11-8 3rd bit3-0→bit7-4 4th bit3-0→bit3-0	*Panel setting value	○			×	○
		04	1	00-7F	MASTER VOLUME	0...127	7F	○	×	×	×	○
		05	1	00-7F	MASTER ATTENUATOR	0...127	00	×	×	×	×	×
		06	1	28-5B	TRANPOSE	-24...0...+24 [semitones]	40	○	×	×	×	○
		7D	1	N	DRUM SETUP RESET	N: Drum setup number	—	○	×	×	×	○
		7E	1	00	XG SYSTEM ON	00=XG system ON	—	○	×	×	×	○
		7F	1	00	ALL PARAMETER RESET	00=ON	—	○	×	×	×	×

TOTAL SIZE 07

MIDI Parameter Change Table (SYSTEM INFORMATION)

Address (H)			Size (H)	Data (H)	Parameter	Description	MIDI Reception			MIDI Transmission	
							Song	R1 R2 L	Keyboard	Panel (main generation method)	Song
01	00	00 ... 0D	E	20-7F ... 20-7F	Model Name 1 ... Model Name 14	32...127 (ASCII CHARACTER) ... 32...127 (ASCII CHARACTER)	—	—	—	×	×
		0E	1		NOT USED						
		0F	1		NOT USED						

TOTAL SIZE 10
 Transmitted in response to Dump Request. Not received.

MIDI Parameter Change Table (EFFECT1)

Address (H)			Size (H)	Data (H)	Parameter	Description	XG Default (H)	MIDI Reception			MIDI Transmission	
								Song	R1 R2 L	Keyboard	Panel (main generation method)	Song
02	01	00	2	00-7F	REVERB TYPE MSB REVERB TYPE LSB	Refer to Effect Parameter List	01 (=HALL1) 00	○			○ (Function)	○
		02	1	00-7F	REVERB PARAMETER 1	*	Depends on Reverb Type	○ (Depends on Reverb Type)			×	○
		03	1	00-7F	REVERB PARAMETER 2	*	Depends on Reverb Type	○ (Depends on Reverb Type)			×	○
		04	1	00-7F	REVERB PARAMETER 3	*	Depends on Reverb Type	○ (Depends on Reverb Type)			×	○
		05	1	00-7F	REVERB PARAMETER 4	*	Depends on Reverb Type	○ (Depends on Reverb Type)			×	○
		06	1	00-7F	REVERB PARAMETER 5	*	Depends on Reverb Type	○ (Depends on Reverb Type)			×	○
		07	1	00-7F	REVERB PARAMETER 6	*	Depends on Reverb Type	○ (Depends on Reverb Type)			×	○
		08	1	00-7F	REVERB PARAMETER 7	*	Depends on Reverb Type	○ (Depends on Reverb Type)			×	○
		09	1	00-7F	REVERB PARAMETER 8	*	Depends on Reverb Type	○ (Depends on Reverb Type)			×	○
		0A	1	00-7F	REVERB PARAMETER 9	*	Depends on Reverb Type	○ (Depends on Reverb Type)			×	○
		0B	1	00-7F	REVERB PARAMETER 10	*	Depends on Reverb Type	○ (Depends on Reverb Type)			×	○
		0C	1	00-7F	REVERB RETURN	→dB...0dB...+6dB (0...64...127)	40	○			×	○
		0D	1	01-7F	REVERB PAN	L63...C...R63	40	○			×	○

TOTAL SIZE 0E

02	01	10	1	00-7F	REVERB PARAMETER 11	Refer to Effect Parameter List	Depends on Reverb Type	○ (Depends on Reverb Type)			×	○
		11	1	00-7F	REVERB PARAMETER 12	*	Depends on Reverb Type	○ (Depends on Reverb Type)			×	○
		12	1	00-7F	REVERB PARAMETER 13	*	Depends on Reverb Type	○ (Depends on Reverb Type)			×	○
		13	1	00-7F	REVERB PARAMETER 14	*	Depends on Reverb Type	○ (Depends on Reverb Type)			×	○
		14	1	00-7F	REVERB PARAMETER 15	*	Depends on Reverb Type	○ (Depends on Reverb Type)			×	○
		15	1	00-7F	REVERB PARAMETER 16	*	Depends on Reverb Type	○ (Depends on Reverb Type)			×	○

TOTAL SIZE 06

Address (H)			Size (H)	Data (H)	Parameter	Description	XG Default (H)	MIDI Reception			MIDI Transmission	
								Song	R1 R2 L	Keyboard	Panel (main generation method)	Song
02	01	20	2	00-7F	CHORUS TYPE MSB CHORUS TYPE LSB	Refer to Effect Parameter List	41 (=CHORUS1) 00	○			○ (Function)	○
		22	1	00-7F	CHORUS PARAMETER 1	*	Depends on Chorus Type	○ (Depends on Chorus Type)			×	○
		23	1	00-7F	CHORUS PARAMETER 2	*	Depends on Chorus Type	○ (Depends on Chorus Type)			×	○
		24	1	00-7F	CHORUS PARAMETER 3	*	Depends on Chorus Type	○ (Depends on Chorus Type)			×	○

Address (H)			Size (H)	Data (H)	Parameter	Description	XG Default (H)	MIDI Reception			MIDI Transmission	
								Song	R1 R2 L	Keyboard	Panel (main generation method)	Song
		25	1	00-7F	CHORUS PARAMETER 4	Refer to Effect Parameter List	Depends on Chorus Type		0 (Depends on Chorus Type)		×	0
		26	1	00-7F	CHORUS PARAMETER 5	*	Depends on Chorus Type		0 (Depends on Chorus Type)		×	0
		27	1	00-7F	CHORUS PARAMETER 6	*	Depends on Chorus Type		0 (Depends on Chorus Type)		×	0
		28	1	00-7F	CHORUS PARAMETER 7	*	Depends on Chorus Type		0 (Depends on Chorus Type)		×	0
		29	1	00-7F	CHORUS PARAMETER 8	*	Depends on Chorus Type		0 (Depends on Chorus Type)		×	0
		2A	1	00-7F	CHORUS PARAMETER 9	*	Depends on Chorus Type		0 (Depends on Chorus Type)		×	0
		2B	1	00-7F	CHORUS PARAMETER 10	*	Depends on Chorus Type		0 (Depends on Chorus Type)		×	0
		2C	1	00-7F	CHORUS RETURN	--0dB...0dB...+6dB (0...64...127)	40		0		×	0
		2D	1	01-7F	CHORUS PAN	L63...C...R63	40		0		×	0
		2E	1	00-7F	SEND CHORUS TO REVERB	--0dB...0dB...+6dB (0...64...127)	00		0		×	0
TOTAL SIZE			0F									

02	01	30	1	00-7F	CHORUS PARAMETER 11	Refer to Effect Parameter List	Depends on Chorus Type		0 (Depends on Chorus Type)		×	0
		31	1	00-7F	CHORUS PARAMETER 12	*	Depends on Chorus Type		0 (Depends on Chorus Type)		×	0
		32	1	00-7F	CHORUS PARAMETER 13	*	Depends on Chorus Type		0 (Depends on Chorus Type)		×	0
		33	1	00-7F	CHORUS PARAMETER 14	*	Depends on Chorus Type		0 (Depends on Chorus Type)		×	0
		34	1	00-7F	CHORUS PARAMETER 15	*	Depends on Chorus Type		0 (Depends on Chorus Type)		×	0
		35	1	00-7F	CHORUS PARAMETER 16	*	Depends on Chorus Type		0 (Depends on Chorus Type)		×	0
TOTAL SIZE			06									

Address (H)			Size (H)	Data (H)	Parameter	Description	XG Default (H)	MIDI Reception			MIDI Transmission	
								Song	R1 R2 L	Keyboard	Panel (main generation method)	Song
02	01	40	2	00-7F 00-7F	VARIATION TYPE MSB VARIATION TYPE LSB	Refer to Effect Parameter List	05 (=DELAY L, C, R) 00		0		×	0
		42	2	00-7F 00-7F	VARIATION PARAMETER 1 MSB VARIATION PARAMETER 1 LSB	*	Depends on Variation Type		0 (Depends on Variation Type)		×	0
		44	2	00-7F 00-7F	VARIATION PARAMETER 2 MSB VARIATION PARAMETER 2 LSB	*	Depends on Variation Type		0 (Depends on Variation Type)		×	0
		46	2	00-7F 00-7F	VARIATION PARAMETER 3 MSB VARIATION PARAMETER 3 LSB	*	Depends on Variation Type		0 (Depends on Variation Type)		×	0
		48	2	00-7F 00-7F	VARIATION PARAMETER 4 MSB VARIATION PARAMETER 4 LSB	*	Depends on Variation Type		0 (Depends on Variation Type)		×	0
		4A	2	00-7F 00-7F	VARIATION PARAMETER 5 MSB VARIATION PARAMETER 5 LSB	*	Depends on Variation Type		0 (Depends on Variation Type)		×	0
		4C	2	00-7F 00-7F	VARIATION PARAMETER 6 MSB VARIATION PARAMETER 6 LSB	*	Depends on Variation Type		0 (Depends on Variation Type)		×	0
		4E	2	00-7F 00-7F	VARIATION PARAMETER 7 MSB VARIATION PARAMETER 7 LSB	*	Depends on Variation Type		0 (Depends on Variation Type)		×	0
		50	2	00-7F 00-7F	VARIATION PARAMETER 8 MSB VARIATION PARAMETER 8 LSB	*	Depends on Variation Type		0 (Depends on Variation Type)		×	0
		52	2	00-7F 00-7F	VARIATION PARAMETER 9 MSB VARIATION PARAMETER 9 LSB	*	Depends on Variation Type		0 (Depends on Variation Type)		×	0
		54	2	00-7F 00-7F	VARIATION PARAMETER 10 MSB VARIATION PARAMETER 10 LSB	*	Depends on Variation Type		0 (Depends on Variation Type)		×	0
		56	1	00-7F	VARIATION RETURN	--0dB...0dB...+6dB (0...64...127)	40		0		×	0
		57	1	01-7F	VARIATION PAN	L63...C...R63	40		0		×	0
		58	1	00-7F	SEND VARIATION TO REVERB	--0dB...0dB...+6dB (0...64...127)	00		0		×	0
		59	1	00-7F	SEND VARIATION TO CHORUS	--0dB...0dB...+6dB (0...64...127)	00		0		×	0
		5A	1	00-01	VARIATION CONNECTION	INSERTION, SYSTEM	00		0		×	0
		5B	1	00-7F	VARIATION PART NUMBER	Reception: Part1...16 (0...15) Transmission: Part1...16 (0...15) AD (64) OFF (127)	7F		0		×	0
		5C	1	00-7F	MW VARIATION CONTROL DEPTH	-64...0...+63	40		0		×	0
		5D	1	00-7F	BEND VARIATION CONTROL DEPTH	-64...0...+63	40		0		×	0
		5E	1	00-7F	CAT VARIATION CONTROL DEPTH	-64...0...+63	40		0		×	0
		5F	1	00-7F	AC1 VARIATION CONTROL DEPTH	-64...0...+63	40		0		×	0
		60	1	00-7F	AC2 VARIATION CONTROL DEPTH	-64...0...+63	40		0		×	0
TOTAL SIZE			21									

02	01	70	1	00-7F	VARIATION PARAMETER 11	Refer to Effect Parameter List	Depends on Variation Type		0 (Depends on Variation Type)		×	0
		71	1	00-7F	VARIATION PARAMETER 12	*	Depends on Variation Type		0 (Depends on Variation Type)		×	0
		72	1	00-7F	VARIATION PARAMETER 13	*	Depends on Variation Type		0 (Depends on Variation Type)		×	0
		73	1	00-7F	VARIATION PARAMETER 14	*	Depends on Variation Type		0 (Depends on Variation Type)		×	0
		74	1	00-7F	VARIATION PARAMETER 15	*	Depends on Variation Type		0 (Depends on Variation Type)		×	0
		75	1	00-7F	VARIATION PARAMETER 16	*	Depends on Variation Type		0 (Depends on Variation Type)		×	0
TOTAL SIZE			06									

MIDI Parameter Change Table (MULTI EQ)

*The MULTI EQ Parameter cannot be reset to its factory setting with XG SYSTEM ON.

Address (H)		Size (H)	Data (H)	Parameter	Description	MIDI Reception			MIDI Transmission	
						Song	R1 R2 L	Keyboard	Panel (main generation method)	Song
02	40	00	1	00-04	EQ TYPE			×	×	×
		01	1	34-4C	EQ GAIN1			×	×	×
		02	1	04-28	EQ FREQUENCY1			×	×	×
		03	1	01-78	EQ Q1			×	×	×
		04	1	00-01	EQ SHAPE1			×	×	×
		05	1	34-4C	EQ GAIN2			×	×	×
		06	1	0E-36	EQ FREQUENCY2			×	×	×
		07	1	01-78	EQ Q2			×	×	×
		08	1		NOT USED			—	—	—
		09	1	34-4C	EQ GAIN3			×	×	×
		0A	1	0E-36	EQ FREQUENCY3			×	×	×
		0B	1	01-78	EQ Q3			×	×	×
		0C	1		NOT USED			—	—	—
		0D	1	34-4C	EQ GAIN4			×	×	×
		0E	1	0E-36	EQ FREQUENCY4			×	×	×
		0F	1	01-78	EQ Q4			×	×	×
		10	1		NOT USED			—	—	—
		11	1	34-4C	EQ GAIN5			×	×	×
		12	1	1C-3A	EQ FREQUENCY5			×	×	×
		13	1	01-78	EQ Q5			×	×	×
		14	1	00-01	EQ SHAPE5			×	×	×

TOTAL SIZE

15

MIDI Parameter Change Table (EFFECT2)

*The EFFECT2 Parameter cannot be reset to its factory setting with XG SYSTEM ON.

Address (H)		Size (H)	Data (H)	Parameter	Description	MIDI Reception			MIDI Transmission	
						Song	R1 R2 L	Keyboard	Panel (main generation method)	Song
03	n	00	2	00-7F 00-7F	INSERTION EFFECT TYPE MSB INSERTION EFFECT TYPE LSB			○	○ (Function)	○
		02	1	00-7F	INSERTION EFFECT PARAMETER 1			○ (Depends on Insertion Type)	○ (Function)	○
		03	1	00-7F	INSERTION EFFECT PARAMETER 2			○ (Depends on Insertion Type)	○ (Function)	○
		04	1	00-7F	INSERTION EFFECT PARAMETER 3			○ (Depends on Insertion Type)	○ (Function)	○
		05	1	00-7F	INSERTION EFFECT PARAMETER 4			○ (Depends on Insertion Type)	○ (Function)	○
		06	1	00-7F	INSERTION EFFECT PARAMETER 5			○ (Depends on Insertion Type)	○ (Function)	○
		07	1	00-7F	INSERTION EFFECT PARAMETER 6			○ (Depends on Insertion Type)	○ (Function)	○
		08	1	00-7F	INSERTION EFFECT PARAMETER 7			○ (Depends on Insertion Type)	○ (Function)	○
		09	1	00-7F	INSERTION EFFECT PARAMETER 8			○ (Depends on Insertion Type)	○ (Function)	○
		0A	1	00-7F	INSERTION EFFECT PARAMETER 9			○ (Depends on Insertion Type)	○ (Function)	○
		0B	1	00-7F	INSERTION EFFECT PARAMETER 10			○ (Depends on Insertion Type)	○ (Function)	○
		0C	1	00-7F	INSERTION EFFECT PART NUMBER			○	○ (Voice)	○
		0D	1	00-7F	MW INSERTION CONTROL DEPTH			○	×	○
		0E	1	00-7F	BEND INSERTION CONTROL DEPTH			○	×	○
		0F	1	00-7F	CAT INSERTION CONTROL DEPTH			○	×	○
		10	1	00-7F	AC1 INSERTION CONTROL DEPTH			○	○	○
		11	1	00-7F	AC2 INSERTION CONTROL DEPTH			○	×	○

TOTAL SIZE

12

		20	1	00-7F	INSERTION EFFECT PARAMETER 11	Refer to Effect Parameter List		○ (Depends on Insertion Type)	○ (Function)	○
		21	1	00-7F	INSERTION EFFECT PARAMETER 12	*		○ (Depends on Insertion Type)	○ (Function)	○
		22	1	00-7F	INSERTION EFFECT PARAMETER 13	*		○ (Depends on Insertion Type)	○ (Function)	○
		23	1	00-7F	INSERTION EFFECT PARAMETER 14	*		○ (Depends on Insertion Type)	○ (Function)	○
		24	1	00-7F	INSERTION EFFECT PARAMETER 15	*		○ (Depends on Insertion Type)	○ (Function)	○
		25	1	00-7F	INSERTION EFFECT PARAMETER 16	*		○ (Depends on Insertion Type)	○ (Function)	○

TOTAL SIZE

6

		30	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 1 MSB INSERTION EFFECT PARAMETER 1 LSB	Refer to Effect Parameter List		○ (Depends on Insertion Type)	×	○
		32	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 2 MSB INSERTION EFFECT PARAMETER 2 LSB	*		○ (Depends on Insertion Type)	×	○
		34	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 3 MSB INSERTION EFFECT PARAMETER 3 LSB	*		○ (Depends on Insertion Type)	×	○
		36	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 4 MSB INSERTION EFFECT PARAMETER 4 LSB	*		○ (Depends on Insertion Type)	×	○
		38	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 5 MSB INSERTION EFFECT PARAMETER 5 LSB	*		○ (Depends on Insertion Type)	×	○
		3A	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 6 MSB INSERTION EFFECT PARAMETER 6 LSB	*		○ (Depends on Insertion Type)	×	○
		3C	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 7 MSB INSERTION EFFECT PARAMETER 7 LSB	*		○ (Depends on Insertion Type)	×	○
		3E	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 8 MSB INSERTION EFFECT PARAMETER 8 LSB	*		○ (Depends on Insertion Type)	×	○

		40	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 9 MSB INSERTION EFFECT PARAMETER 9 LSB	Refer to Effect Parameter List	○ (Depends on Insertion Type)	×	○
		42	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 10 MSB INSERTION EFFECT PARAMETER 10 LSB	*	○ (Depends on Insertion Type)	○ (Function)	○

TOTAL SIZE 14

The second byte of the address is considered as an Insertion effect number.

n: insertion effect number

The Insertion Effect No. range is from 0 to 1. Values outside the range are handled as unknown and ignored.

For effect types that do not require MSB, the Parameters for Address 02-0B will be received and the Parameters for Address 30-42 will not be received.

For effect types that require MSB, the Parameters for Address 30-42 will be received and the Parameters for Address 02-0B will not be received.

When Bulk Dumps that include Effect Type data are transmitted, the Parameters for Address 02-0B will always be transmitted. But, effects that require MSB, when the bulk dump is received the Parameters for Address 02-0B will not be received.

MIDI Parameter Change Table (MULTI PART)

Address (H)		Size (H)	Data (H)	Parameter	Description	XG Default (H)	MIDI Reception			MIDI Transmission	
							Song	R1 R2 L	Keyboard	Panel (main generation method)	Song
08	nn	00	1	00-20	NOT USED		×	×	×	×	×
		01	1	00-7F	BANK SELECT MSB	0...127	part 10=7F, other parts=00	○	○	×	○
		02	1	00-7F	BANK SELECT LSB	0...127	00	○	○	×	○
		03	1	00-7F	PROGRAM NUMBER	1...128	00	○	○	×	○
		04	1	00-0F, 7F	Rcv CHANNEL	1...16, OFF	Part No.	○	×	×	○
		05	1	00-01	MONO/POLY MODE	MONO, POLY	01	○	×	×	○
		06	1	00-02	SAME NOTE NUMBER KEY ON ASSIGN	SINGLE, MULTI, INST (for Drum)	01	○	×	×	○
		07	1	00-03	PART MODE	NORMAL, DRUM, DRUMS1...2	part 10=02, other parts=00	○	×	×	○
		08	1	28-58	NOTE SHIFT	-24...0...+24 [semitones]	40	○	○	×	○
		09	2	00-0F 00-0F	DETUNE	-12 B...0...+12.7 [Hz] 1st bit3-0 → bit7-4 2nd bit3-0 → bit3-0	08 00	○	○	×	○
		0B	1	00-7F	VOLUME	0...127	64	○	○	×	○
		0C	1	00-7F	VELOCITY SENSE DEPTH	0...127	40	○	○	○ (Function)	○
		0D	1	00-7F	VELOCITY SENSE OFFSET	0...127	40	○	○	○ (Function)	○
		0E	1	00-7F	PAN	RND, L63...C...R63	40	○	○	×	○
		0F	1	00-7F	NOTE LIMIT LOW	C-2...G8	00	○	○	×	○
		10	1	00-7F	NOTE LIMIT HIGH	C-2...G8	7F	○	○	×	○
		11	1	00-7F	DRY LEVEL	0...127	7F	○	○	×	○
		12	1	00-7F	CHORUS SEND	0...127	00	○	○	×	○
		13	1	00-7F	REVERB SEND	0...127	28	○	○	×	○
		14	1	00-7F	VARIATION SEND	0...127	00	○	○	×	○
		15	1	00-7F	VIBRATO RATE	-64...0...+63	40	○	○	×	○
		16	1	00-7F	VIBRATO DEPTH	-64...0...+63	40	○	○	×	○
		17	1	00-7F	VIBRATO DELAY	-64...0...+63	40	○	○	×	○
		18	1	00-7F	FILTER CUTOFF FREQUENCY	-64...0...+63	40	○	○	×	○
		19	1	00-7F	FILTER RESONANCE	-64...0...+63	40	○	○	×	○
		1A	1	00-7F	EG ATTACK TIME	-64...0...+63	40	○	○	×	○
		1B	1	00-7F	EG DECAY TIME	-64...0...+63	40	○	○	×	○
		1C	1	00-7F	EG RELEASE TIME	-64...0...+63	40	○	○	×	○
		1D	1	28-58	MW PITCH CONTROL	-24...0...+24 [semitones]	40	○	○	×	○
		1E	1	00-7F	MW LOW PASS FILTER CONTROL	-9600...0...+9450 [cent]	40	○	○	×	○
		1F	1	00-7F	MW AMPLITUDE CONTROL	-100...0...+100 [%]	40	○	○	×	○
		20	1	00-7F	MW LFO PMOD DEPTH	0...127	0A	○	○	×	○
		21	1	00-7F	MW LFO FMOD DEPTH	0...127	00	○	○	×	○
		22	1	00-7F	MW LFO AMOD DEPTH	0...127	00	○	○	×	○
		23	1	28-58	BEND PITCH CONTROL	-24...0...+24 [semitones]	42	○	○	×	○
		24	1	00-7F	BEND LOW PASS FILTER CONTROL	-9600...0...+9450 [cent]	40	○	○	×	○
		25	1	00-7F	BEND AMPLITUDE CONTROL	-100...0...+100 [%]	40	○	○	×	○
		26	1	00-7F	BEND LFO PMOD DEPTH	0...127	00	○	○	×	○
		27	1	00-7F	BEND LFO FMOD DEPTH	0...127	00	○	○	×	○
		28	1	00-7F	BEND LFO AMOD DEPTH	0...127	00	○	○	×	○

TOTAL SIZE 29

		30	1	00-01	Rcv PITCH BEND	OFF, ON	01	○	×	×	×	○
		31	1	00-01	Rcv CH AFTER TOUCH (CAT)	OFF, ON	01	○	×	×	×	○
		32	1	00-01	Rcv PROGRAM CHANGE	OFF, ON	01	○	×	×	×	○
		33	1	00-01	Rcv CONTROL CHANGE	OFF, ON	01	○	×	×	×	○
		34	1	00-01	Rcv POLY AFTER TOUCH (PAT)	OFF, ON	01	○	×	×	×	○
		35	1	00-01	Rcv NOTE MESSAGE	OFF, ON	01	○	×	×	×	○
		36	1	00-01	Rcv RPN	OFF, ON	01	○	×	×	×	○
		37	1	00-01	Rcv NRPN	OFF, ON	XG mode=01, GM mode=00	○	×	×	×	○
		38	1	00-01	Rcv MODULATION	OFF, ON	01	○	×	×	×	○
		39	1	00-01	Rcv VOLUME	OFF, ON	01	○	×	×	×	○
		3A	1	00-01	Rcv PAN	OFF, ON	01	○	×	×	×	○
		3B	1	00-01	Rcv EXPRESSION	OFF, ON	01	○	×	×	×	○
		3C	1	00-01	Rcv HOLD1	OFF, ON	01	○	×	×	×	○
		3D	1	00-01	Rcv PORTAMENTO	OFF, ON	01	○	×	×	×	○
		3E	1	00-01	Rcv SOSTENUTO	OFF, ON	01	○	×	×	×	○
		3F	1	00-01	Rcv SOFT PEDAL	OFF, ON	01	○	×	×	×	○
		40	1	00-01	Rcv BANK SELECT	OFF, ON	01	○	×	×	×	○
		41	1	00-7F	SCALE TUNING C	-63...0...+63 [cent]	40	○	○	×	○ (Function)	○
		42	1	00-7F	SCALE TUNING C#	-63...0...+63 [cent]	40	○	○	×	○ (Function)	○
		43	1	00-7F	SCALE TUNING D	-63...0...+63 [cent]	40	○	○	×	○ (Function)	○
		44	1	00-7F	SCALE TUNING D#	-63...0...+63 [cent]	40	○	○	×	○ (Function)	○
		45	1	00-7F	SCALE TUNING E	-63...0...+63 [cent]	40	○	○	×	○ (Function)	○
		46	1	00-7F	SCALE TUNING F	-63...0...+63 [cent]	40	○	○	×	○ (Function)	○
		47	1	00-7F	SCALE TUNING F#	-63...0...+63 [cent]	40	○	○	×	○ (Function)	○

		48	1	00-7F	SCALE TUNING G	-63...0...+63 [cent]	40	○	○	×	○ (Function)	○
		49	1	00-7F	SCALE TUNING G#	-63...0...+63 [cent]	40	○	○	×	○ (Function)	○
		4A	1	00-7F	SCALE TUNING A	-63...0...+63 [cent]	40	○	○	×	○ (Function)	○
		4B	1	00-7F	SCALE TUNING A#	-63...0...+63 [cent]	40	○	○	×	○ (Function)	○
		4C	1	00-7F	SCALE TUNING B	-63...0...+63 [cent]	40	○	○	×	○ (Function)	○
		4D	1	28-58	CAT PITCH CONTROL	-24...0...+24 [semitones]	40	○	×	×	×	○
		4E	1	00-7F	CAT LOW PASS FILTER CONTROL	-9600...0...+9450 [cent]	40	○	×	×	×	○
		4F	1	00-7F	CAT AMPLITUDE CONTROL	-100...0...+100 [%]	40	○	×	×	×	○
		50	1	00-7F	CAT LFO PMOD DEPTH	0...127	00	○	×	×	×	○
		51	1	00-7F	CAT LFO FMOD DEPTH	0...127	00	○	×	×	×	○
		52	1	00-7F	CAT LFO AMOD DEPTH	0...127	00	○	×	×	×	○
		53	1	28-58	PAT PITCH CONTROL	-24...0...+24 [semitones]	40	○	×	×	×	○
		54	1	00-7F	PAT LOW PASS FILTER CONTROL	-9600...0...+9450 [cent]	40	○	×	×	×	○
		55	1	00-7F	PAT AMPLITUDE CONTROL	-100...0...+100 [%]	40	○	×	×	×	○
		56	1	00-7F	PAT LFO PMOD DEPTH	0...127	00	○	×	×	×	○
		57	1	00-7F	PAT LFO FMOD DEPTH	0...127	00	○	×	×	×	○
		58	1	00-7F	PAT LFO AMOD DEPTH	0...127	00	○	×	×	×	○
		59	1	00-5F	AC1 CONTROLLER NUMBER	0...95	10	○	○	×	○	○
		5A	1	28-58	AC1 PITCH CONTROL	-24...0...+24 [semitones]	40	○	×	×	×	○
		5B	1	00-7F	AC1 LOW PASS FILTER CONTROL	-9600...0...+9450 [cent]	40	○	×	×	×	○
		5C	1	00-7F	AC1 AMPLITUDE CONTROL	-100...0...+100 [%]	40	○	×	×	×	○
		5D	1	00-7F	AC1 LFO PMOD DEPTH	0...127	00	○	×	×	×	○
		5E	1	00-7F	AC1 LFO FMOD DEPTH	0...127	00	○	×	×	×	○
		5F	1	00-7F	AC1 LFO AMOD DEPTH	0...127	00	○	×	×	×	○
		60	1	00-5F	AC2 CONTROLLER NUMBER	0...95	11	○	×	×	×	○
		61	2	28-58	AC2 PITCH CONTROL	-24...0...+24 [semitones]	40	○	×	×	×	○
		62	1	00-7F	AC2 LOW PASS FILTER CONTROL	-9600...0...+9450 [cent]	40	○	×	×	×	○
		63	1	00-7F	AC2 AMPLITUDE CONTROL	-100...0...+100 [%]	40	○	×	×	×	○
		64	1	00-7F	AC2 LFO PMOD DEPTH	0...127	00	○	×	×	×	○
		65	1	00-7F	AC2 LFO FMOD DEPTH	0...127	00	○	×	×	×	○
		66	1	00-7F	AC2 LFO AMOD DEPTH	0...127	00	○	×	×	×	○
		67	1	00-01	PORTAMENTO SWITCH	OFF, ON	00	○	○	×	×	○
		68	1	00-7F	PORTAMENTO TIME	0...127	00	○	○	×	×	○
		69	1	00-7F	PITCH EG INITIAL LEVEL	-64...0...+63	40	○	×	×	×	○
		6A	1	00-7F	PITCH EG ATTACK TIME	-64...0...+63	40	○	×	×	×	○
		6B	1	00-7F	PITCH EG RELEASE LEVEL	-64...0...+63	40	○	×	×	×	○
		6C	1	00-7F	PITCH EG RELEASE TIME	-64...0...+63	40	○	×	×	×	○
		6D	1	01-7F	VELOCITY LIMIT LOW	1...127	01	○	×	×	×	○
		6E	1	01-7F	VELOCITY LIMIT HIGH	1...127	7F	○	×	×	×	○

TOTAL SIZE 3F

		70	1		NOT USED		-	-	-	-	-	-
		71	1		NOT USED		-	-	-	-	-	-
		72	1	00-7F	EQ BASS GAIN	-12dB...+12dB	40	○	×	×	×	○
		73	1	00-7F	EQ TREBLE GAIN	-12dB...+12dB	40	○	×	×	×	○

TOTAL SIZE 04

		74	1		NOT USED		-	-	-	-	-	-
		75	1		NOT USED		-	-	-	-	-	-
		76	1	04-28	EQ BASS FREQUENCY	32...2.0k [Hz]	0C	○	×	×	×	○
		77	1	1C-3A	EQ TREBLE FREQUENCY	500...16.0k [Hz]	36	○	×	×	×	○
		78	1		NOT USED		-	-	-	-	-	-
		78	1		NOT USED		-	-	-	-	-	-
		7A	1		NOT USED		-	-	-	-	-	-
		7B	1		NOT USED		-	-	-	-	-	-
		7C	1		NOT USED		-	-	-	-	-	-
		7D	1		NOT USED		-	-	-	-	-	-
		7E	1		NOT USED		-	-	-	-	-	-
		7F	1		NOT USED		-	-	-	-	-	-

TOTAL SIZE 0C

0A	nn	40	1	00-7F	MW OFFSET LEVEL CONTROL	-100 - 100 [%]	40	○	×	×	×	○
		41	1	00-7F	BEND OFFSET LEVEL CONTROL	-100 - 100 [%]	40	○	×	×	×	○
		42	1	00-7F	CAT OFFSET LEVEL CONTROL	-100 - 100 [%]	40	○	×	×	×	○
		43	1	00-7F	PAT OFFSET LEVEL CONTROL	-100 - 100 [%]	40	○	×	×	×	○
		44	1	00-7F	AC1 OFFSET LEVEL CONTROL	-100 - 100 [%]	40	○	×	×	×	○
		45	1	00-7F	AC2 OFFSET LEVEL CONTROL	-100 - 100 [%]	40	○	×	×	×	○

TOTAL SIZE 06

nn = PART NUMBER

If there is a Drum Voice assigned to the part, the following parameters are ineffective.

- BANK SELECT LSB
- PORTAMENTO
- MONO/POLY
- SCALE TUNING
- POLY AFTER TOUCH
- PITCH EG

MIDI Parameter Change Table (DRUM SETUP)

Address (H)			Size (H)	Data (H)	Parameter	Description	XG Default (H)	MIDI Reception			MIDI Transmission	
								Song	R1 R2 L	Keyboard	Panel (main generation method)	Song
3n	rr	00	1	00-7F	PITCH COARSE	-64...0...+63	40	○	×	×	×	○
		01	1	00-7F	PITCH FINE	-64...0...+63 [cent]	40	○	×	×	×	○
		02	1	00-7F	LEVEL	0...127	Depends on the note	○	×	×	×	○
		03	1	00-7F	ALTERNATE GROUP	OFF; 1...127	Depends on the note	○	×	×	×	○
		04	1	00-7F	PAN	RND, L63...C...R63	Depends on the note	○	×	×	×	○
		05	1	00-7F	REVERB SEND	0...127	Depends on the note	○	×	×	×	○
		06	1	00-7F	CHORUS SEND	0...127	Depends on the note	○	×	×	×	○
		07	1	00-7F	VARIATION SEND	0...127	7F	○	×	×	×	○
		08	1	00-01	KEY ASSIGN	SINGLE, MULTI	00	○	×	×	×	○
		09	1	00-01	Rcv NOTE OFF	OFF; ON	Depends on the note	○	×	×	×	○
		0A	1	00-01	Rcv NOTE ON	OFF; ON	01	○	×	×	×	○
		0B	1	00-7F	LOW PASS FILTER CUTOFF FREQUENCY	-64...0...+63	40	○	×	×	×	○
		0C	1	00-7F	LOW PASS FILTER RESONANCE	-64...0...+63	40	○	×	×	×	○
		0D	1	00-7F	EG ATTACK RATE	-64...0...+63	40	○	×	×	×	○
		0E	1	00-7F	EG DECAY1 RATE	-64...0...+63	40	○	×	×	×	○
		0F	1	00-7F	EG DECAY2 RATE	-64...0...+63	40	○	×	×	×	○

TOTAL SIZE 10

		20	1	00-7F	EQ BASS GAIN	-12dB...+12dB	40	×	×	×	×	×
		21	1	00-7F	EQ TREBLE GAIN	-12dB...+12dB	40	×	×	×	×	×
		22	1		NOT USED		—	—	—	—	—	—
		23	1		NOT USED		—	—	—	—	—	—
		24	1	04-28	EQ BASS FREQUENCY	32...2.0k [Hz]	0C	×	×	×	×	×
		25	1	1C-3A	EQ TREBLE FREQUENCY	500...16.0k [Hz]	36	×	×	×	×	×
		26	1		NOT USED		—	—	—	—	—	—
		27	1		NOT USED		—	—	—	—	—	—
		28	1		NOT USED		—	—	—	—	—	—
		29	1		NOT USED		—	—	—	—	—	—
		2A	1		NOT USED		—	—	—	—	—	—
		2B	1		NOT USED		—	—	—	—	—	—
		2C	1		NOT USED		—	—	—	—	—	—
		2D	1		NOT USED		—	—	—	—	—	—

TOTAL SIZE 0E

n: Drum Setup Number (0-1)
rr: note number (0D-5B)

In the following cases, the Clavinova will initialize all Drum Setups.
XG SYSTEM ON received
GM SYSTEM ON received
GM LEVEL 2 SYSTEM ON received
GS RESET received
DRUM SETUP RESET received (only when in XG mode)

NOTICE

When a part to which a Drum Setup is assigned receives a program change, the assigned Drum Setup will be initialized.
If the same Drum Setup is assigned to two or more parts, changes in Drum Setup parameters (including program changes) will apply to all parts to which it is assigned.

System Exclusive Messages (1)

Application Range	MIDI, Internal Sequencer
--------------------------	--------------------------

* Not Received when Receive Parameter System Exclusive is set to off.

* Not transmitted when Transmit Parameter System Exclusive is set to off.

System Exclusive Messages (Universal Realtime Messages)

MIDI Event	Data Format	MIDI Formats	MIDI Reception			MIDI Transmission	
			Song	R1 R2 L	Keyboard	Panel (main generation method)	Song
Master Volume	F0 7F XN 04 01 SS TT F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00000100 04 = Sub-ID #1 = Device Control Message 00000001 01 = Sub-ID #2 = Master Volume 0sssssss SS = Volume LSB 0ttttttt TT = Volume MSB 11110111 F7 = End of Exclusive	[GM2]	O	×	×	×	△ (Changed to XG, and output)
Master Fine Tuning	F0 7F XN 04 03 SS TT F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00000100 04 = Sub-ID #1 = Device Control Message 00000011 03 = Sub-ID #2 = Master Fine Tuning 0sssssss SS = Fine Tuning LSB 0ttttttt TT = Fine Tuning MSB 11110111 F7 = End of Exclusive	[GM2]	O	×	×	×	△ (Changed to XG, and output)
Master Coarse Tuning	F0 7F XN 04 04 00 TT F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00000100 04 = Sub-ID #1 = Device Control Message 00000100 04 = Sub-ID #2 = Master Fine Tuning 00000000 00 0ttttttt TT = Coarse Tuning MSB 11110111 F7 = End of Exclusive	[GM2]	O	×	×	×	△ (Changed to XG, and output)
Reverb Parameter	F0 7F XN 04 05 01 01 01 01 01 PP VV ... F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00000100 04 = Sub-ID #1 = Device Control Message 00000101 05 = Sub-ID #2 = Global Parameter Control 00000001 01 = Slot path length = 1 00000001 01 = Parameter ID width = 1 00000001 01 = Value width = 1 00000001 01 = Slot path MSB = 1 (Reverb) 00000001 01 = Slot path LSB = 1 0pppppppp PP = Parameter to be controlled. 0vvvvvvvv VV = Value for the Parameter. ... 11110111 F7 = End of Exclusive Parameter (pp) Value (vv) Display ----- pp=0 Reverb Type 0...8 0: RoomS 1: RoomM 2: RoomL 3: HallM 4: HallL (default) 8: GM Plate pp=1 Reverb Time 0...127 0...11.0s	[GM2]	O			×	△ (Changed to XG, and output)
Chorus Parameter	F0 7F XN 04 05 01 01 01 01 02 PP VV ... F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00000100 04 = Sub-ID #1 = Device Control Message 00000101 05 = Sub-ID #2 = Global Parameter Control 00000001 01 = Slot path length = 1 00000001 01 = Parameter ID width = 1 00000001 01 = Value width = 1 00000001 01 = Slot path MSB = 1 (Chorus) 00000010 02 = Slot path LSB = 2 0pppppppp PP = Parameter to be controlled. 0vvvvvvvv VV = Value for the Parameter. ... 11110111 F7 = End of Exclusive Parameter (pp) Value (vv) Display ----- pp=0 Chorus Type 0...5 0: GM Chorus1 1: GM Chorus2 2: GM Chorus3 (default) 3: GM Chorus4 4: FB Chorus 5: GM Flanger pp=1 Mod Rate 0...127 pp=2 Mod Depth 0...127 pp=3 Feedback 0...127 pp=4 Send to Reverb 0...127	[GM2]	O			×	△ (Changed to XG, and output)

MIDI Event	Data Format	MIDI Formats	MIDI Reception			MIDI Transmission																													
			Song	R1 R2 L	Keyboard	Panel (main generation method)	Song																												
Channel Pressure (Aftertouch)	F0 7F XN 09 01 0M PP RR ... F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001001 09 = Sub-ID #1 = Controller Destination Setting 00000001 01 = Sub-ID #2 = Controller Type: 01 (Channel Pressure) 0000mmmm 0M = MIDI Channel (00-0F) 0ppppppp PP = Controlled Parameter 0rrrrrrr RR = Data ... 11110111 F7 = End of Exclusive Make sure to set both the controlled parameter and the range. Parameters not set will be restored to their default values. <table><thead><tr><th>Control Parameter (pp)</th><th>Data (RR)</th><th>Description</th><th>Default value</th></tr></thead><tbody><tr><td>pp=00 Pitch Control</td><td>28H-58H</td><td>-24...0...+24 semitones</td><td>40H</td></tr><tr><td>pp=01 Filter Cutoff Control</td><td>00H-7FH</td><td>-9600...0...+9450 cents</td><td>40H</td></tr><tr><td>pp=02 Amplitude Control</td><td>00H-7FH</td><td>-100...0...+100%</td><td>40H</td></tr><tr><td>pp=03 LFO Pitch Depth</td><td>00H-7FH</td><td>0...127</td><td>00H</td></tr><tr><td>pp=04 LFO Filter Depth</td><td>00H-7FH</td><td>0...127</td><td>00H</td></tr><tr><td>pp=05 LFO Amplitude Depth</td><td>00H-7FH</td><td>0...127</td><td>00H</td></tr></tbody></table>	Control Parameter (pp)	Data (RR)	Description	Default value	pp=00 Pitch Control	28H-58H	-24...0...+24 semitones	40H	pp=01 Filter Cutoff Control	00H-7FH	-9600...0...+9450 cents	40H	pp=02 Amplitude Control	00H-7FH	-100...0...+100%	40H	pp=03 LFO Pitch Depth	00H-7FH	0...127	00H	pp=04 LFO Filter Depth	00H-7FH	0...127	00H	pp=05 LFO Amplitude Depth	00H-7FH	0...127	00H	[GM2]	O	×	×	×	△ (Changed to XG, and output)
Control Parameter (pp)	Data (RR)	Description	Default value																																
pp=00 Pitch Control	28H-58H	-24...0...+24 semitones	40H																																
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pp=04 LFO Filter Depth	00H-7FH	0...127	00H																																
pp=05 LFO Amplitude Depth	00H-7FH	0...127	00H																																
Controller (Control Change)	F0 7F XN 09 03 0M CC PP RR ... F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001001 09 = Sub-ID #1 = Controller Destination Setting 00000011 03 = Sub-ID #2 = Controller Type: 03 (Control Change) 0000mmmm 0M = MIDI Channel (00-0F) 0ccccc CC = Controller Number (01H-1FH, 40H-5FH) 0ppppppp PP = Controlled Parameter 0rrrrrrr RR = Range ... 11110111 F7 = End of Exclusive Make sure to set both the controlled parameter and the range. Parameters not set will be restored to their default values. <table><thead><tr><th>Control Parameter (pp)</th><th>Data (RR)</th><th>Description</th><th>Default value</th></tr></thead><tbody><tr><td>pp=00 Pitch Control</td><td>28H-58H</td><td>-24...0...+24 semitones</td><td>40H</td></tr><tr><td>pp=01 Filter Cutoff Control</td><td>00H-7FH</td><td>-9600...0...+9450 cents</td><td>40H</td></tr><tr><td>pp=02 Amplitude Control</td><td>00H-7FH</td><td>-100...0...+100%</td><td>40H</td></tr><tr><td>pp=03 LFO Pitch Depth</td><td>00H-7FH</td><td>0...127</td><td>00H</td></tr><tr><td>pp=04 LFO Filter Depth</td><td>00H-7FH</td><td>0...127</td><td>00H</td></tr><tr><td>pp=05 LFO Amplitude Depth</td><td>00H-7FH</td><td>0...127</td><td>00H</td></tr></tbody></table>	Control Parameter (pp)	Data (RR)	Description	Default value	pp=00 Pitch Control	28H-58H	-24...0...+24 semitones	40H	pp=01 Filter Cutoff Control	00H-7FH	-9600...0...+9450 cents	40H	pp=02 Amplitude Control	00H-7FH	-100...0...+100%	40H	pp=03 LFO Pitch Depth	00H-7FH	0...127	00H	pp=04 LFO Filter Depth	00H-7FH	0...127	00H	pp=05 LFO Amplitude Depth	00H-7FH	0...127	00H	[GM2]	O	×	×	×	△ (Changed to XG, and output)
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pp=05 LFO Amplitude Depth	00H-7FH	0...127	00H																																
Key-Based Instrument Control	F0 7F XN 0A 01 0M KK CC VV ... F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001010 0A = Sub-ID #1 = Key-Based Instrument Control 00000011 01 = Sub-ID #2 = Controller 0000mmmm 0M = MIDI Channel (00-0F) 0kkkkkkk KK = Key Number 0ccccc CC = Controller Number 0vvvvvvv VV = Value ... 11110111 F7 = End of Exclusive Make sure to set both the controlled number and the value. <table><thead><tr><th>Control Number (CC)</th><th>Value (VV)</th><th>Description</th><th>Default value</th></tr></thead><tbody><tr><td>CC=07H Volume</td><td>00H-7FH</td><td>-100...0...+100%</td><td>40H</td></tr><tr><td>CC=0AH Pan</td><td>00H-7FH</td><td>L63...C...R63 (absolute)</td><td>(Preset value)</td></tr><tr><td>CC=5BH Reverb Send Level</td><td>00H-7FH</td><td>0...Max (absolute)</td><td>(Preset value)</td></tr><tr><td>CC=5DH Chorus Send Level</td><td>00H-7FH</td><td>0...Max (absolute)</td><td>(Preset value)</td></tr></tbody></table>	Control Number (CC)	Value (VV)	Description	Default value	CC=07H Volume	00H-7FH	-100...0...+100%	40H	CC=0AH Pan	00H-7FH	L63...C...R63 (absolute)	(Preset value)	CC=5BH Reverb Send Level	00H-7FH	0...Max (absolute)	(Preset value)	CC=5DH Chorus Send Level	00H-7FH	0...Max (absolute)	(Preset value)	[GM2]	O	×	×	×	△ (Changed to XG, and output)								
Control Number (CC)	Value (VV)	Description	Default value																																
CC=07H Volume	00H-7FH	-100...0...+100%	40H																																
CC=0AH Pan	00H-7FH	L63...C...R63 (absolute)	(Preset value)																																
CC=5BH Reverb Send Level	00H-7FH	0...Max (absolute)	(Preset value)																																
CC=5DH Chorus Send Level	00H-7FH	0...Max (absolute)	(Preset value)																																

System Exclusive Messages (Universal Non Realtime Messages)

MIDI Event	Data Format	MIDI Formats	MIDI Reception			MIDI Transmission	
			Song	R1 R2 L	Keyboard	Panel (main generation method)	Song
GM1 System On	F0 7E XN 09 01 F7 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001001 09 = Sub-ID #1 = General MIDI Message 00000001 01 = Sub-ID #2 = General MIDI On 11110111 F7 = End of Exclusive	[GM1] [GM2]	O	×	×	×	△ (Changed to XG, and output)
GM2 System On	F0 7E XN 09 03 F7 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001001 09 = Sub-ID #1 = General MIDI Message 00000011 03 = Sub-ID #2 = General MIDI2 On 11110111 F7 = End of Exclusive	[GM2]	O	×	×	×	△ (Changed to XG, and output)
General MIDI System Off	F0 7E XN 09 02 F7 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001001 09 = Sub-ID #1 = General MIDI Message 00000010 02 = Sub-ID #2 = General MIDI Off 11110111 F7 = End of Exclusive	[GM1] [GM2]	O	×	×	×	△ (Changed to XG, and output)

MIDI Event	Data Format	MIDI Formats	MIDI Reception			MIDI Transmission	
			Song	R1 R2 L	Keyboard	Panel (main generation method)	Song
Scale/Octave Tuning	F0 7E XN 08 08 JJ GG MM SS ... F7 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxxnnnn XN = When N is received N=0-F, whichever is received. X=ignored 00001000 08 = Sub-ID #1 = MIDI Tuning Standard 00001000 08 = Sub-ID #2 = scale/octave tuning 1byte form 0jjjjjjjj JJ = Channel/option byte1 bits 0 to 1 = channel 15 to 16 bits 2 to 6 = reserved 0gggggggg GG = Channel byte 2 - bits 0 to 6 = channel 8 to 14 0mmmmmmmm MM = Channel byte 2 - bits 0 to 6 = channel 1 to 7 0ssssssss SS = 12 byte tuning offset of 12 semitones from C to B 00H means -64cent 40H means 0cent 7FH means +63cent ... 11110111 ... F7 = End of Exclusive	[GM2]	O	×	×	×	△ (Changed to XG, and output)

System Exclusive Messages (2)

Application Range	MIDI, Internal Sequencer
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* Not Received when Receive Parameter System Exclusive is set to off.

* Not transmitted when Transmit Parameter System Exclusive is set to off.

System Exclusive Messages (XG)

MIDI Event	Data Format	MIDI Reception			MIDI Transmission	
		Song	R1 R2 L	Keyboard	Panel (main generation method)	Song
XG Parameter Change	F0 43 1n 4C hh mm ll dd ... F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 0001nnnn 1n = Device Number n=always 0 (when transmit), n=0-F (when receive) 01001100 4C = Model ID 0hhhhhhh hh = Address High 0mmmmmmm mm = Address Mid 01111111 ll = Address Low 0ddddd dd = Data ... 11110111 ... F7 = End of Exclusive	O *Refer to Parameter Change Table			O *Refer to Parameter Change Table	
XG Bulk Dump	F0 43 0n 4C aa bb hh mm ll dd ... dd cc F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 0000nnnn 0n = Device Number n=always 0 (when transmit), n=0-F (when receive) 01001100 4C = Model ID 0aaaaaaa aa = Byte Count MSB 0bbbbbbb bb = Byte Count LSB 0hhhhhhh hh = Address High 0mmmmmmm mm = Address Mid 01111111 ll = Address Low 0ddddd dd = Data : 0ddddd dd = Data 0ccccc cc = Checksum 11110111 ... F7 = End of Exclusive	O *Refer to Parameter Change Table			O *Refer to Parameter Change Table	
XG Parameter Request	F0 43 3n 4C hh mm ll F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 0011nnnn 3n = Device Number n=always 0 (when transmit), n=0-F (when receive) 01001100 4C = Model ID 0hhhhhhh hh = Address High 0mmmmmmm mm = Address Mid 01111111 ll = Address Low 11110111 ... F7 = End of Exclusive	O *Refer to Parameter Change Table. (However, the request for address "0A nn 4v" will be ignored.)	×	×	×	
XG Dump Request	F0 43 2n 4C hh mm ll F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 0010nnnn 2n = Device Number n=always 0 (when transmit), n=0-F (when receive) 01001100 4C = Model ID 0hhhhhhh hh = Address High 0mmmmmmm mm = Address Mid 01111111 ll = Address Low 11110111 ... F7 = End of Exclusive	O *Refer to Parameter Change Table. (However, the request for address "0A nn 40" will be ignored.)	×	×	×	

System Exclusive Messages (Others)

MIDI Event	Data Format	MIDI Reception (effective or not for each part)			MIDI Transmission (generated data)	
		Song	R1 R2 L	Keyboard	Panel (main generation method)	Song
MIDI Master Tuning	F0 43 1n 27 30 00 00 0m 0l cc F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 0001nnnn 1n = always 0 (when transmit), n=0-F (when receive) 00100111 27 = Model ID of TG100 00110000 30 = Address High 00000000 00 = Address Mid 00000000 00 = Address Low 0000mmmm 0m = Master Tune MSB 00001111 0l = Master Tune LSB 0ccccc cc = don't care 11110111 ... F7 = End of Exclusive	O			×	×

System Exclusive Messages (Preset Voice)

MIDI Event	Data Format	MIDI Reception (effective or not for each part)			MIDI Transmission (generated data)	
		Song	R1 R2 L	Keyboard	Panel (main generation method)	Song
String Resonance Depth	F0 43 73 01 50 11 0n 02 dd F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01110011 73 = Clavinova ID 00000001 01 = Model ID (Clavinova common ID) 01010000 50 = Sub-ID 00010001 11 = Sub-ID 0000nnnn 0n = Channel (00-0F) 00000010 02 = Sub-ID (String Resonance Depth) 0ddddd 00-48 11110111 F7 = End of Exclusive	x	x	x	x	○
Sustain Sample Depth	F0 43 73 01 50 11 0n 03 dd F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01110011 73 = Clavinova ID 00000001 01 = Model ID (Clavinova common ID) 01010000 50 = Sub-ID 00010001 11 = Sub-ID 0000nnnn 0n = Channel (00-0F) 00000011 03 = Sub-ID (Sustain Sample Depth) 0ddddd 00-48 11110111 F7 = End of Exclusive	x	x	x	x	○
Key Off Sampling Depth	F0 43 73 01 50 11 0n 04 dd F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01110011 73 = Clavinova ID 00000001 01 = Model ID (Clavinova common ID) 01010000 50 = Sub-ID 00010001 11 = Sub-ID 0000nnnn 0n = Channel (00-0F) 00000100 04 = Sub-ID (Key Off Sampling Depth) 0ddddd 00-50 11110111 F7 = End of Exclusive	○	○	x	○ (Function)	○
Soft Pedal Depth	F0 43 73 01 50 11 0n 05 dd F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 01110011 73 = Clavinova ID 00000001 01 = Model ID (Clavinova common ID) 01010000 50 = Sub-ID 00010001 11 = Sub-ID 0000nnnn 0n = Channel (00-0F) 00000101 05 = Sub-ID (Soft Pedal Depth) 0ddddd 00-7F 11110111 F7 = End of Exclusive	○	○	x	○ (Function)	○

*For each Depth value, the reset value is 40H = voice parameter.

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1 - 16 O	1 - 16 O	
Mode	Default Messages Altered	3 × *****	3 × ×	
Note Number	: True voice	0 - 127 *****	0 - 127 0 - 127	
Velocity	Note ON Note OFF	O 9nH,v=1-127 O 8nH,v=1-127	O 9nH,v=1-127 O 9nH,v=0 or 8nH	
After Touch	Key's Ch's	× ×	O O	
Pitch Bend		O	O 0 - 24 semi	*1
Control Change	0,32 1,5,11 7,10 6,38 64,66,67 65 71,74 72,73 84,94 91,93 96-97 98-99 100-101	O ×*2 O O O ×*2 O ×*2 ×*2 O ×*2 ×*2 O	O O O O O O O O O O O O O	Bank Select Data Entry Pedal Portamento Control Sound Controller Sound Controller Effect Depth RPN Inc,Dec NRPN LSB,MSB RPN LSB,MSB
Prog Change	: True #	O 0 - 127 *****	O 0 - 127	
System Exclusive		O	O	
Common	: Song Pos. : Song Sel. : Tune	× × ×	× × ×	
System	: Clock Real Time : Commands	O O	× O	
Aux Mes-	: All Sound Off : Reset All Cntrls : Local ON/OFF : All Notes OFF sages: Active Sense : Reset	× × × × O ×	O (120,126,127) O (121) O (122) O (123-125) O ×	
Notes: *1 For some Voices, the pitch may not be changed according to the pitch bend setting range. *2 These Control Change messages cannot be transmitted by panel operations, but can be transmitted by song playback data.				

Mode 1 : OMNI ON , POLY
Mode 3 : OMNI OFF, POLY

Mode 2 : OMNI ON , MONO
Mode 4 : OMNI OFF, MONO

O : Yes
× : No