



DIGITAL KEYBOARD

PSR-S650

MIDIリファレンス

# MIDIデータフォーマット

## CHANNEL MESSAGE/REALTIME MESSAGE

○：送信または受信する。  
 △：Song(Styleを含む)データ中に含まれていれば送信する。  
 ×：送信または受信しない。

MIDI Events	Status byte		1st Data byte		2nd Data byte		送信	受信
	Status	(n: channel no.)	Data (HEX)	Parameter	Data (HEX)	Parameter		
Key Off	8nH	(n: channel no.)	kk	Key no. (0~127)	vv	Velocity (0~127)	△	○
Key On	9nH		kk	Key no. (0~127)	vv	Key On: vv=1~127 Key Off: vv=0	○	○
Control Change	BnH		0 (00H)	Bank Select MSB	0 (00H) 8 (08H) 62 (3EH) 63 (3FH) 64 (40H) 104 (68H) 120 (78H) 121 (79H) 126 (7EH) 127 (7FH)	Normal Mega Voices ExpansionPack (Drums/Percussion Kit) ExpansionPack (Normal) SFX Voices Normal GM2 Rhythm GM2 Normal SFX Kit Drum Kit	○	○
			32 (20H)	Bank Select LSB	0~127		○	○
			1 (01H)	Modulation	0~127 (00H...7FH)		△	○
			5 (05H)	Portamento Time	0~127 (00H...7FH)		△	○
			6 (06H)	Data Entry MSB	0~127 (00H...7FH)		○	○
			38 (26H)	Data Entry LSB	0~127 (00H...7FH)		△	○
			7 (07H)	Main Volume	0~127 (00H...7FH)		○	○
			10 (0AH)	Panpot	0~127 (00H...7FH)		○	○
			11 (0BH)	Expression	0~127 (00H...7FH)		△	○
			64 (40H)	Damper (Sustain)	0~127 (00H...7FH)		○	○
			65 (41H)	Portamento Switch	0~127 (00H...7FH)		△	○
			66 (42H)	Sostenuto	0~127 (00H...7FH)		△	○
			67 (43H)	Soft Pedal	0~127 (00H...7FH)		△	○
			71 (47H)	Harmonic Content	0~127 (00H...7FH)		△	○
			72 (48H)	Release Time	0~127 (00H...7FH)		○	○
			73 (49H)	Attack Time	0~127 (00H...7FH)		△	○
			74 (4AH)	Brightness	0~127 (00H...7FH)		△	○
			75 (4BH)	Decay Time	0~127 (00H...7FH)		△	○
			76 (4CH)	Vibrato Rate	0~127 (00H...7FH)		△	○
			77 (4DH)	Vibrato Depth	0~127 (00H...7FH)		△	○
			78 (4EH)	Vibrato Delay	0~127 (00H...7FH)		△	○
			84 (54H)	Portamento Control	0~127 (00H...7FH)		△	○
			91 (5BH)	Effect1 Depth (Reverb Send Level)	0~127 (00H...7FH)		○	○
			93 (5DH)	Effect3 Depth (Chorus Send Level)	0~127 (00H...7FH)		○	○
			94 (5EH)	Effect4 Depth (Variation Send Level)	0~127 (00H...7FH)		○	○
			96 (60H)	Increment	0~127 (00H...7FH)		△	○
			97 (61H)	Decrement	0~127 (00H...7FH)		△	○
98 (62H)	NRPN LSB	0~127 (00H...7FH)		△	○			
99 (63H)	NRPN MSB	0~127 (00H...7FH)						
100 (64H)	RPN LSB	0~127 (00H...7FH)		○	○			
101 (65H)	RPN MSB	0~127 (00H...7FH)						
Mode Message	BnH		120 (78H)	All sound off	0		△	○
			121 (79H)	Reset all controller	0		△	○
			122 (7AH)	Local control	0~3F: OFF 40~7F: ON		×	○
			123 (7BH)	All note off	0		△	○
			124 (7CH)	OMNI OFF (*1)	0		△	○
			125 (7DH)	OMNI ON	0		△	○
			126 (7EH)	MONO (*2)	0~16 (00H...10H)		△	○
			127 (7FH)	POLY (*3)	0		△	○
● 補足 本機は常に Multi timber Mode, Poly Mode であり、Omni on/Omni off モードを受信してもモードはかわらない。 *1 オール・ノート・オフを受信した時と同じ処理を行なう。 *2 オール・サウンド・オフを受信した時と同じ処理を行なう。 *3 オール・サウンド・オフを受信した時と同じ処理を行なう。								
Program Change	CnH		pp	MIDIプログラムチェンジNo.	-		○	○
Channel After Touch	DnH		vv		-		△	○
Polyphonic After Tch	AnH		kk		vv		△	×
Pitch Bend Change	EnH		cc	LSB	dd	MSB	○	○
RealTime Message	F8H	MIDI Clock	-		-		○	○
	FAH	Start	-		-		○	○
	FCH	Stop	-		-		○	○
	FEH	Active Sens	-		-		○	○

## MIDI PARAMETER CHANGE TABLE

## MIDI PARAMETER CHANGE TABLE (SYSTEM)

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)	送信	受信
0 0 0 1 2 3	4	0000 - 07FF	MASTER TUNE	-102.4 - +102.3[cent] 1st bit3-0→bit15-12 2nd bit3-0→bit11-8 3rd bit3-0→bit7-4 4th bit3-0→bit3-0	00 04 00 00	○	○
4	1	00 - 7F	MASTER VOLUME	0 - 127	7F	△	○
6	1	28 - 58	TRANPOSE	-24 - +24[semitones] (MIDI値=28H~58H)	40	△	○
7D	n		DRUM SETUP RESET	n=Drum setup number		△	○
7E	0		XG SYSTEM ON	00=XG system ON		△	○
7F	0		ALL PARAMETER RESET	00=ON		×	○

TOTAL SIZE 7

## MIDI PARAMETER CHANGE TABLE (EFFECT 1)

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)	送信	受信
2 1 0	2	00-7F	REVERB TYPE MSB	EFFECT Type List 参照		○	○
		00-7F	REVERB TYPE LSB				
2	1	00-7F	REVERB PARAMETER 1		Reverb Type に依存	△	○
3	1	00-7F	REVERB PARAMETER 2		Reverb Type に依存	△	○
4	1	00-7F	REVERB PARAMETER 3		Reverb Type に依存	△	○
5	1	00-7F	REVERB PARAMETER 4		Reverb Type に依存	△	○
6	1	00-7F	REVERB PARAMETER 5		Reverb Type に依存	△	○
7	1	00-7F	REVERB PARAMETER 6		Reverb Type に依存	△	○
8	1	00-7F	REVERB PARAMETER 7		Reverb Type に依存	△	○
9	1	00-7F	REVERB PARAMETER 8		Reverb Type に依存	△	○
0A	1	00-7F	REVERB PARAMETER 9		Reverb Type に依存	△	○
0B	1	00-7F	REVERB PARAMETER 10		Reverb Type に依存	△	○
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

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)	送信	受信
2 1 10	1	00-7F	REVERB PARAMETER 11		Reverb Type に依存	△	○
11	1	00-7F	REVERB PARAMETER 12		Reverb Type に依存	△	○
12	1	00-7F	REVERB PARAMETER 13		Reverb Type に依存	△	○
13	1	00-7F	REVERB PARAMETER 14		Reverb Type に依存	△	○
14	1	00-7F	REVERB PARAMETER 15		Reverb Type に依存	△	○
15	1	00-7F	REVERB PARAMETER 16		Reverb Type に依存	△	○

TOTAL SIZE 06

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)	送信	受信
2 1 20	2	00-7F	CHORUS TYPE MSB	EFFECT Type List 参照		○	○
		00-7F	CHORUS TYPE LSB				
22	1	00-7F	CHORUS PARAMETER 1		Chorus Type に依存	△	○
23	1	00-7F	CHORUS PARAMETER 2		Chorus Type に依存	△	○
24	1	00-7F	CHORUS PARAMETER 3		Chorus Type に依存	△	○
25	1	00-7F	CHORUS PARAMETER 4		Chorus Type に依存	△	○
26	1	00-7F	CHORUS PARAMETER 5		Chorus Type に依存	△	○
27	1	00-7F	CHORUS PARAMETER 6		Chorus Type に依存	△	○
28	1	00-7F	CHORUS PARAMETER 7		Chorus Type に依存	△	○
29	1	00-7F	CHORUS PARAMETER 8		Chorus Type に依存	△	○
2A	1	00-7F	CHORUS PARAMETER 9		Chorus Type に依存	△	○
2B	1	00-7F	CHORUS PARAMETER 10		Chorus Type に依存	△	○
2C	1	00-7F	CHORUS RETURN	-∞dB...0dB...+6dB (0...64...127)	40	△	○
2D	1	01-7F	CHORUS PAN	L63...C...R63	40	△	○
2E	1	00-7F	SEND CHORUS TO REVERB	-∞dB...0dB...+6dB (0...64...127)	00	△	○

TOTAL SIZE 0F

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)	送信	受信
2 1 30	1	00-7F	CHORUS PARAMETER 11		Chorus Type に依存	△	○
	31	00-7F	CHORUS PARAMETER 12		Chorus Type に依存	△	○
	32	00-7F	CHORUS PARAMETER 13		Chorus Type に依存	△	○
	33	00-7F	CHORUS PARAMETER 14		Chorus Type に依存	△	○
	34	00-7F	CHORUS PARAMETER 15		Chorus Type に依存	△	○
	35	00-7F	CHORUS PARAMETER 16		Chorus Type に依存	△	○

TOTAL SIZE 06

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)	送信	受信
2 1 40	2	00-7F	VARIATION TYPE MSB	EFFECT Type List 参照		○	○
		00-7F	VARIATION TYPE LSB				
	42	00-7F	VARIATION PARAMETER 1 MSB		Variation Type に依存	△	○
		00-7F	VARIATION PARAMETER 1 LSB				
	44	00-7F	VARIATION PARAMETER 2 MSB		Variation Type に依存	△	○
		00-7F	VARIATION PARAMETER 2 LSB				
	46	00-7F	VARIATION PARAMETER 3 MSB		Variation Type に依存	△	○
		00-7F	VARIATION PARAMETER 3 LSB				
	48	00-7F	VARIATION PARAMETER 4 MSB		Variation Type に依存	△	○
		00-7F	VARIATION PARAMETER 4 LSB				
	4A	00-7F	VARIATION PARAMETER 5 MSB		Variation Type に依存	△	○
		00-7F	VARIATION PARAMETER 5 LSB				
	4C	00-7F	VARIATION PARAMETER 6 MSB		Variation Type に依存	△	○
		00-7F	VARIATION PARAMETER 6 LSB				
	4E	00-7F	VARIATION PARAMETER 7 MSB		Variation Type に依存	△	○
		00-7F	VARIATION PARAMETER 7 LSB				
	50	00-7F	VARIATION PARAMETER 8 MSB		Variation Type に依存	△	○
		00-7F	VARIATION PARAMETER 8 LSB				
	52	00-7F	VARIATION PARAMETER 9 MSB		Variation Type に依存	△	○
		00-7F	VARIATION PARAMETER 9 LSB				
	54	00-7F	VARIATION PARAMETER 10 MSB		Variation Type に依存	△	○
		00-7F	VARIATION PARAMETER 10 LSB				
	56	00-7F	VARIATION RETURN	-∞dB…0dB…+6dB (0…64…127)	40	△	○
	57	01-7F	VARIATION PAN	L63…C…R63	40	△	○
	58	00-7F	SEND VARIATION TO REVERB	-∞dB…0dB…+6dB (0…64…127)	00	○	○
	59	00-7F	SEND VARIATION TO CHORUS	-∞dB…0dB…+6dB (0…64…127)	00	○	○
	5A	00-01	VARIATION CONNECTION	INSERTION, SYSTEM	00	○	○
	5B	00-7F	VARIATION PART	受信 : Part1…16 (0…15) 送信 : Part1…16 (0…15) AD (64) OFF (127)	7F	△	○

TOTAL SIZE 21

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)	送信	受信
2 1 70	1	00-7F	VARIATION PARAMETER 11		Variation Type に依存	△	○
	71	00-7F	VARIATION PARAMETER 12		Variation Type に依存	△	○
	72	00-7F	VARIATION PARAMETER 13		Variation Type に依存	△	○
	73	00-7F	VARIATION PARAMETER 14		Variation Type に依存	△	○
	74	00-7F	VARIATION PARAMETER 15		Variation Type に依存	△	○
	75	00-7F	VARIATION PARAMETER 16		Variation Type に依存	△	○

TOTAL SIZE 06

## MIDI PARAMETER CHANGE TABLE (MULTI PART)

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)	送信	受信
1	1	00-7F	BANK SELECT MSB	0...127	part10=7F, other parts=00	△	○
2	1	00-7F	BANK SELECT LSB	0...127	00	△	○
3	1	00-7F	PROGRAM NUMBER	1...128	00	△	○
4	1	00-0F, 7F	Rcv CHANNEL	1...16, OFF	Part No.	△	○
5	1	00-01	MONO/POLY MODE	MONO, POLY	01	△	○
6	1	00-02	SAME NOTE NUMBER KEY ON ASSIGN	SINGLE, MULTI, INST (for Drum)	01	△	○
7	1	00-03	PART MODE	NORMAL, DRUM, DRUMS1...2	part10=02, other parts=00	△	○
8	1	28-58	NOTE SHIFT	-24...0...+24[semitones]	40	△	○
9	2	00-FF	DETUNE	-12.8...0...+12.7[Hz] 1st bit3-0→bit7-4 2nd bit3-0→bit3-0	08 00	△	○
B	1	00-7F	VOLUME	0...127	64	△	○
C	1	00-7F	VELOCITY SENSE DEPTH	0...127	40	○	○
D	1	00-7F	VELOCITY SENSE OFFSET	0...127	40	○	○
E	1	00-7F	PAN	RND, L63...C...R63	40	△	○
F	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	00-7F	MW PITCH CONTROL	-24...0...+24[semitones]	40	△	○
1E	1	00-7F	MW 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	△	○
23	1	00-7F	BEND PITCH CONTROL	-24...0...+24[semitones]	42	△	○
24	1	00-7F	BEND 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	△	○

TOTAL SIZE 29

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)	送信	受信
8 nn	30	1 00-01	Rcv Pitch Bend Off/On	OFF, ON	01	△	○
31	1	00-01	Rcv ch after touch Off/On	OFF, ON	01	△	○
32	1	00-01	Rcv program change Off/On	OFF, ON	01	△	○
33	1	00-01	Rcv control change Off/On	OFF, ON	01	△	○
34	1	00-01	Rcv polyphonic after touch Off/On	OFF, ON	01	△	○
35	1	00-01	Rcv note message Off/On	OFF, ON	01	△	○
36	1	00-01	Rcv RPN Off/On	OFF, ON	01	△	○
37	1	00-01	Rcv NRPN Off/On	OFF, ON	XGmode=01, GMmode=00	△	○
38	1	00-01	Rcv modulation Off/On	OFF, ON	01	△	○
39	1	00-01	Rcv volume Off/On	OFF, ON	01	△	○
3A	1	00-01	Rcv panpot Off/On	OFF, ON	01	△	○
3B	1	00-01	Rcv expression Off/On	OFF, ON	01	△	○
3C	1	00-01	Rcv sustain Off/On	OFF, ON	01	△	○
3D	1	00-01	Rcv portamento Off/On	OFF, ON	01	△	○
3E	1	00-01	Rcv sostenuto Off/On	OFF, ON	01	△	○
3F	1	00-01	Rcv soft Off/On	OFF, ON	01	△	○
40	1	00-01	Rcv bank select Off/On	OFF, ON	01	△	○
41	1	00-7F	Scale tuning C	-64...0...+63[cent]	40	○	○

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)	送信	受信
42	1	00-7F	Scale tuning C#	-64...0...+63[cent]	40	○	○
43	1	00-7F	Scale tuning D	-64...0...+63[cent]	40	○	○
44	1	00-7F	Scale tuning D#	-64...0...+63[cent]	40	○	○
45	1	00-7F	Scale tuning E	-64...0...+63[cent]	40	○	○
46	1	00-7F	Scale tuning F	-64...0...+63[cent]	40	○	○
47	1	00-7F	Scale tuning F#	-64...0...+63[cent]	40	○	○
48	1	00-7F	Scale tuning G	-64...0...+63[cent]	40	○	○
49	1	00-7F	Scale tuning G#	-64...0...+63[cent]	40	○	○
4A	1	00-7F	Scale tuning A	-64...0...+63[cent]	40	○	○
4B	1	00-7F	Scale tuning A#	-64...0...+63[cent]	40	○	○
4C	1	00-7F	Scale tuning B	-64...0...+63[cent]	40	○	○
4D	1	28-58	Ch aft tch pitch control	-24...0...+24[semitones]	40	△	○
4E	1	00-7F	Ch aft tch filter control	-9600...0...+9450[cent]	40	△	○
4F	1	00-7F	Ch aft tch amplitude control	-100...0...+100[%]	40	△	○
50	1	00-7F	Ch aft tch LFO pitch mod depth	0...127	00	△	○
51	1	00-7F	Ch aft tch LFO frequency mod 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

## MIDI PARAMETER CHANGE TABLE (DRUM SETUP)

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)	送信	受信
3n rr 0	1	00-7F	PITCH COARSE	-64...0...+63	40	△	○
1	1	00-7F	PITCH FINE	-64...0...+63[cent]	40	△	○
2	1	00-7F	LEVEL	0...127	ノートに依存します	△	○
3	1	00-7F	ALTERNATE GROUP	OFF, 1...127	ノートに依存します	△	○
4	1	00-7F	PAN	RND, L63...C...R63	ノートに依存します	△	○
5	1	00-7F	REVERB SEND	0...127	ノートに依存します	△	○
6	1	00-7F	CHORUS SEND	0...127	ノートに依存します	△	○
7	1	00-7F	VARIATION SEND	0...127	7F	△	○
8	1	00-01	KEY ASSIGN	SINGLE, MULTI	00	△	○
9	1	00-01	Rcv NOTE OFF	OFF, ON	ノートに依存します	△	○
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

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

## SYSTEM EXCLUSIVE MESSAGE

項番	データフォーマット	送信	受信
システムエクスクルーシブメッセージ(ユニバーサル)			
MIDI Master Volume	FOH 7FH 7FH 04H 01H ll mm F7H Volume (mm = MSB, ll = LSB) または FOH 7FH XN 04H 01H ll mm F7H XN When N is received N=0-F, whichever is received. X = Don't Care Volume (mm = MSB, ll = LSB)	△	○
GM System On	FOH 7EH 7FH 09H 01H F7H または FOH 7EH XN 09H 01H F7H 0xxxxnnn XN When N is received N=0-F, whichever is received. X=don't care.	○	○
Master Fine Tuning [GM2]	FO 7F XN 04 03 SS TT F7 11110000 FO = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnn 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	△	○
Master Coarse Tuning [GM2]	FO 7F XN 04 04 00 TT F7 11110000 FO = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnn XN = When N is received N=0-F, whichever is received. X=ignored 00000100 04 = Sub-ID #1=Device Control Message 00000000 04 = Sub-ID #2=Master Coarse Tuning 00000000 00 0ttttttt TT = Coarse Tuning MSB 11110111 F7 = End of Exclusive	△	○
Reverb Parameter [GM2]	FO 7F XN 04 05 01 01 01 01 01 PP VV ... F7 11110000 FO = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnn 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 00000001 01 = Slot path LSB = 1 (Reverb) 0ppppppp PP = Parameter to be controlled. 0vvvvvvv VV = Value for the Parameter. ... 11110111 F7 = End of Exclusive	△	○
Chorus Parameter [GM2]	FO 7F XN 04 05 01 01 01 01 02 PP VV ... F7 11110000 FO = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnn 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 00000010 02 = Slot path LSB = 2 (Chorus) 0ppppppp PP = Parameter to be controlled. 0vvvvvvv VV = Value for the Parameter. ... 11110111 F7 = End of Exclusive	△	○
Channel Pressure (Aftertouch) [GM2]	FO 7F XN 09 01 0M PP RR ... F7 11110000 FO = Exclusive status 01111111 7F = Universal Real Time 0xxxxnnn 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 OM = MIDI Channel (00-0F) 0ppppppp PP = Controlled Parameter 0rrrrrrr RR = Data ... 11110111 F7 = End of Exclusive  Controlled Parameter と Range をペアで設定。 設定しなかったパラメータは初期化される。  Control Parameter (pp)      Data (RR)      Description      初期値 ----- pp=00 Pitch Control      28H~58H      -24...0...+24semitones      40H pp=01 Filter Cutoff Control      00H~7FH      -9600...0...+9450cents      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	△	○

項番	データフォーマット	送信	受信																												
Controller (Control Change) 【GM2】	<p>FO 7F XN 09 03 0M CC PP RR ... F7</p> <p>11110000 FO = 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 OM = MIDI Channel (00-0F) 0ccccccc CC = Controller Number (01H-1FH, 40H-5FH) 0ppppppp PP = Controlled Parameter 0rrrrrrr RR = Range ... 11110111 F7 = End of Exclusive</p> <p>Controlled Parameter と Range をペアで設定。 設定しなかったパラメータは初期化される。</p> <table border="1"> <thead> <tr> <th>Control Parameter (pp)</th> <th>Data (RR)</th> <th>Description</th> <th>初期値</th> </tr> </thead> <tbody> <tr> <td>pp=00 Pitch Control</td> <td>28H~58H</td> <td>-24...0...+24semitones</td> <td>40H</td> </tr> <tr> <td>pp=01 Filter Cutoff Control</td> <td>00H~7FH</td> <td>-9600...0...+9450cents</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	初期値	pp=00 Pitch Control	28H~58H	-24...0...+24semitones	40H	pp=01 Filter Cutoff Control	00H~7FH	-9600...0...+9450cents	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	△	○
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pp=05 LFO Amplitude Depth	00H~7FH	0...127	00H																												
Key-Based Instrument Control 【GM2】	<p>FO 7F XN 0A 01 0M KK CC VV ... F7</p> <p>11110000 FO = 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 00000001 01 = Sub-ID #2=Controller 0000mmmm OM = MIDI Channel (00-0F) 0kkkkkkk KK = Key Number 0ccccccc CC = Controller Number 0vvvvvvv VV = Value ... 11110111 F7 = End of Exclusive</p> <p>Controlled Number と Value をペアで設定</p> <table border="1"> <thead> <tr> <th>Control Number (CC)</th> <th>Value (VV)</th> <th>Description</th> <th>初期値</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	初期値	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)	△	○								
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GM2 System On 【GM2】	<p>FO 7E XN 09 03 F7</p> <p>11110000 FO = 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</p>	△	○																												
General MIDI System Off 【GM1】 【GM2】	<p>FO 7E XN 09 02 F7</p> <p>11110000 FO = 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</p>	×	○																												
Scale/Octave Tuning 【GM2】	<p>FO 7E XN 08 08 JJ GG MM SS ... F7</p> <p>11110000 FO = 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 1 byte form 0jjjjjjj JJ = Channel/option byte1 bits 0 to 1 = channel 15 to 16 bits 2 to 6 = reserved 0ggggggg GG = Channel byte2 - bits0 to 6 = channel 8 to 14 0mmmmmmm MM = Channel byte2 - bits0 to 6 = channel 1 to 7 0sssssss SS = 12byte tuning offset of 12 semitones from C to B 00H means -64cent 40H means 0cent 7FH means +63cent ... 11110111 F7 = End of Exclusive</p>	△	○																												
システムエクスクルーシブメッセージ(XG)																															
XGパラメータチェンジ	<p>FOH 43H 1nH 4CH hh mm ll dd ... F7H</p> <p>hh mm ll Address dd Data</p>	○	○																												
バルクダンプ	<p>FOH 43H 0nH 4CH aa bb hh mm ll dd ... dd cc F7H</p> <p>On Device Number n=0 (send), 0 - f (receive) aa bb Byte Count (aa &lt;&lt; 7) + bb hh mm ll Address dd Data cc Check SUM</p>	×	○																												
システムエクスクルーシブメッセージ(その他)																															
Master Tune	<p>FOH 43H 1n 27H 30H 00H 00H mm ll cc F7H</p> <p>1n Channel (0 (Send), 0 - f (receive)) mm ll cc (mm &lt;&lt; 4) + ll (1 step/1cent), cc = Don't Care</p>	×	○																												



# MIDIインプリメンテーション・チャート

YAMAHA [Digital Keyboard]  
Model PSR-S650

MIDIインプリメンテーション・チャート

Date : 13-SEP-2010  
Version : 1.0

ファンクション		送信	受信	備考
ベーシック チャンネル	電源ON時 設定可能	1~16チャンネル 1~16チャンネル	1~16チャンネル 1~16チャンネル	
モード	電源ON時 メッセージ 代用	3 × *****	3 × ×	
ノートナンバー	音域	0~127 *****	0~127 0~127	
ベロシティ	ノート・オン ノート・オフ	○ 9nH, v=1~127 × 9nH, v=0	○ 9nH, v=1~127 ×	
アフタータッチ	キー別 チャンネル別	× ×	× ○	
ピッチ・ベンド		○ 0~24 semi	○ 0~24 semi	
コントロール チェンジ	0, 32	○	○	バンクセレクト
	1, 5, 7, 10, 11	○	○	
	6, 38	○	○	データエントリー
	64~67	○	○	サウンドコントローラー ポルタメントコントロール エフェクトデプス RPNデータインクリメント、デクリメント NRPN LSB、MSB RPN LSB、MSB
	71~74	○	○	
	84	○	○	
	91, 93, 94	○	○	
	96, 97	×	○	
98, 99	○	○		
100, 101	○	○		
プログラムチェンジ	設定可能	○ 0~127 *****	○ 0~127	
システム・エクスクルーシブ		○	○	
コモン	ソング・ポジション ソング・セレクト チューン	× × ×	× × ×	
リアルタイム	クロック コマンド	○ ○	○ ○	
その他	オール・サウンド・オフ リセットオールコントロール ローカルON/OFF オール・ノート・オフ アクティブ・センシング リセット	× × × × ○ ×	○ (120, 126, 127) ○ (121) ○ (122) ○ (123~125) ○ ×	
備考				

モード1 : オムニ・オン、ポリ      モード2 : オムニ・オン、モノ  
モード3 : オムニ・オフ、ポリ      モード4 : オムニ・オフ、モノ

○ : あり  
× : なし