

MODUS

F02

MIDI Reference

MIDI Channel Message

○: Can be transmitted and recognized.
 △: Cannot be transmitted by the panel operations, but can be transmitted by song playback data.
 ×: Cannot be transmitted or received.

MIDI Events	Status byte		1st Data byte		2nd Data byte		Transmitted	Recognized
	Status		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 – 127 (...7FH)	Normal	○	○
			32 (20H)	Bank Select LSB	0 – 127 (...7FH)		○	○
			1 (01H)	Modulation	0 – 127 (...7FH)		△	○
			5 (05H)	Portamento Time	0 – 127 (...7FH)		△	×
			6 (06H)	Data Entry MSB	0 – 127 (...7FH)		○	○
			38 (26H)	Data Entry LSB	0 – 127 (...7FH)		○	○
			7 (07H)	Main Volume	0 – 127 (...7FH)		○	○
			10 (0AH)	Panpot	0 – 127 (...7FH)		△	○
			11 (0BH)	Expression	0 – 127 (...7FH)		△	○
			16 (10H)	General Purpose Controller 1	0 – 127 (...7FH)		△	○
			17 (11H)	General Purpose Controller 2	0 – 127 (...7FH)		△	×
			18 (12H)	General Purpose Controller 3	0 – 127 (...7FH)		△	×
			19 (13H)	General Purpose Controller 4	0 – 127 (...7FH)		△	×
			64 (40H)	Damper (Sustain)	0 – 127 (...7FH)		○	○
			65 (41H)	Portamento Switch	0 – 127 (...7FH)		△	×
			66 (42H)	Sostenuto	0 – 127 (...7FH)		○	○
			67 (43H)	Soft Pedal	0 – 127 (...7FH)		○	○
			71 (47H)	Harmonic Content	0 – 127 (...7FH)		△	○
			72 (48H)	Release Time	0 – 127 (...7FH)		△	○
			73 (49H)	Attack Time	0 – 127 (...7FH)		△	○
			74 (4AH)	Brightness	0 – 127 (...7FH)		△	○
			75 (4BH)	Decay Time	0 – 127 (...7FH)		△	×
			76 (4CH)	Vibrato Rate	0 – 127 (...7FH)		△	×
			77 (4DH)	Vibrato Depth	0 – 127 (...7FH)		△	×
			78 (4EH)	Vibrato Delay	0 – 127 (...7FH)		△	×
			79 (4FH)	Sound Controller 10	0 – 127 (...7FH)		△	×
			80 (50H)	General Purpose Controller 5	0 – 127 (...7FH)		△	×
			81 (51H)	General Purpose Controller 6	0 – 127 (...7FH)		△	×
			82 (52H)	General Purpose Controller 7	0 – 127 (...7FH)		△	×
			83 (53H)	General Purpose Controller 8	0 – 127 (...7FH)		△	×
			84 (54H)	Portamento Control	0 – 127 (...7FH)		△	○
			91 (5BH)	Effect1 Depth (Reverb Send Level)	0 – 127 (...7FH)		○	○
	92 (5CH)	Effect2 Depth (Tremolo Depth)	0 – 127 (...7FH)		△	×		
	93 (5DH)	Effect3 Depth (Chorus Send Level)	0 – 127 (...7FH)		○	○		
	94 (5EH)	Effect4 Depth (Variation Send Level)	0 – 127 (...7FH)		△	×		
	96 (60H)	Increment	0 – 127 (...7FH)		△	○		
	97 (61H)	Decrement	0 – 127 (...7FH)		△	○		
	98 (62H)	NRPN LSB	0 – 127 (...7FH)		△	×		
	99 (63H)	NRPN MSB	0 – 127 (...7FH)		△	×		
	100 (64H)	RPN LSB	0 – 127 (...7FH)		○	○		
	101 (65H)	RPN MSB	0 – 127 (...7FH)		○	○		
Mode Message	BnH		120 (78H)	All Sound Off	0		△	○
			121 (79H)	Reset All Controller	0		△	○
			122 (7AH)	Local Control	0: OFF (00H) 0 – 126: don't care 7F: ON (7FH)		×	○
			123 (7BH)	All Note Off	0		△	○
			124 (7CH)	OMNI OFF	0		×	○
			125 (7DH)	OMNI ON	0		×	○
			126 (7EH)	MONO	0 – 16 (...10H)		×	○
	127 (7FH)	POLY	0		×	○		

MIDI Events	Status byte		1st Data byte		2nd Data byte		Transmitted	Recognized
	Status	Data	(HEX)	Parameter	Data	(HEX)		
Program Change	CnH	pp		0 – 127	–		○	○
Channel After Touch	DnH	vv			–		×	×
Polyphonic After Touch	AnH	kk			vv		△	×
Pitch Bend Change	EnH	cc		LSB	dd	MSB	△	○
Realtime Message	F8H	MIDI Clock	–		–		○	×
	FAH	Start	–		–		○	○
	FBH	Continue	–		–		×	×
	FCH	Stop	–		–		○	○
	FEH	Active Sens	–		–		○	○
	FFH	System Reset	–		–		×	×
Note When an Overrun or Framing error occurs, the Damper, Sostenuto and Soft are set to off in all channels, and All Notes Off is executed.								

Program Change

P.C.# =Program Change Number

Voice Name	MSB	LSB	P.C.# (0 – 127)
G.PIANO 1	108	0	0
VARIATION	108	2	0
G.PIANO 2	108	2	1
VARIATION	108	0	1
E.PIANO 1	108	0	5
VARIATION	108	0	88
E.PIANO 2	108	0	4
VARIATION	108	1	4
HARPSICHORD	108	0	6
VARIATION	108	1	6
ORGAN 1	108	1	19
VARIATION	108	0	19
ORGAN 2	108	0	16
VARIATION	108	1	16
STRINGS	108	0	48
VARIATION	108	0	49
VIB./GTR.	108	0	11
VARIATION	108	0	24
BASS	108	0	32
VARIATION	108	0	33

Parameters controlled by RPN (Registered Parameter Numbers)

RPN		Data Entry		Parameter	Data Range
MSB	LSB	MSB	LSB		
00H	01H	mmH	llH	Fine Tune	mm ll: 00H 00H -100[cent] ... mm ll: 40H 00H 0[cent] ... mm ll: 7FH 7FH 100[cent]
00H	02H	mmH	–	Coarse Tune	mm: 28H-40H-58H (-24...0...+24[semitones])
7FH	7FH	–	–	Null	–

MIDI Parameter Change Table

MIDI PARAMETER CHANGE TABLE (XG SYSTEM)

Address (H)			Size (H)	Data (H)	Parameter	Transmitted	Recognized	Description	Default value (H)
00	00	00 01 02 03	4	0000 – 07FF	MASTER TUNE	△	○	-102.4 – +102.3[cent] 1st bit 3 – 0 → bit 15 – 12 2nd bit 3 – 0 → bit 11 – 8 3rd bit 3 – 0 → bit 7 – 4 4th bit 3 – 0 → bit 3 – 0	00 04 00 00
		04	1	00 – 7F	MASTER VOLUME	×	○	0 – 127	7F
		05	1	00 – 7F	(MASTER ATTENUATOR)	×	×		
		06	1	28 – 58	TRANPOSE	×	×	-12 – +12 [semitones] (MIDI value = 34H – 4CH)	40
		7D		n	DRUM SETUP RESET	×	×	n = Drum setup number	
		7E		00	XG SYSTEM ON	△	○	00 = XG system ON	
		7F		00	ALL PARAMETER RESET	×	○ (*1)	00 = ON	

TOTAL SIZE 7

(*1) When "XG ALL PARAMETER RESET" message is received, generates "XG SYSTEM ON" on the tone generator and generates reinitialization of the tuning value on the panel.

MIDI PARAMETER CHANGE TABLE (EFFECT 1)

Address (H)			Size (H)	Data (H)	Parameter	Transmitted	Recognized	Description	Default
02	01	00	2	00 – 7F 00 – 7F	REVERB TYPE MSB REVERB TYPE LSB	○	○	Refer to Effect MIDI Map (page 5) 00: basic type	01 (= HALL1) 00
02	01	20	2	00 – 7F 00 – 7F	CHORUS TYPE MSB CHORUS TYPE LSB	○	○	Refer to Effect MIDI Map (page 5) 00: basic type	41 (= CHORUS1) 00
		22	1	00 – 7F	CHORUS PARAMETER 1	○	○		
		24	1	00 – 7F	CHORUS PARAMETER 3	○	○		

MIDI PARAMETER CHANGE TABLE (EFFECT 2)

Address (H)			Size (H)	Data (H)	Parameter	Transmitted	Recognized	Description	Default
03	n	00	2	00 – 7F 00 – 7F	INSERTION EFFECT TYPE MSB INSERTION EFFECT TYPE LSB	○	○	00: basic type	05 (=DELAY L,C,R) 00
		0B	1	00 – 7F	INSERTION EFFECT PARAMETER 10	○	○		
		0C	1	00 – 7F	INSERTION EFFECT PART NUMBER	○	○		
		10	1	00 – 7F	AC1 INSERTION CONTROL DEPTH	○	○		

MIDI PARAMETER CHANGE TABLE (MULTI PART)

Address (H)			Size (H)	Data (H)	Parameter	Transmitted	Recognized	Description	Default value (H)
8	nn	07	1	00 – 05	PART MODE	○	○		
00	00	0C	1	00 – 7F	VELOCITY SENSE DEPTH	○	○	0 – 127	
		0D	1	00 – 7F	VELOCITY SENSE OFFSET	○	○	0 – 127	
		11	1	00 – 7F	DRY LEVEL	○	○	0 – 127	7F
		41	1	00 – 7F	SCALE TUNING C	△	○		
		42	1	00 – 7F	SCALE TUNING C #	△	○		
		43	1	00 – 7F	SCALE TUNING D	△	○		
		44	1	00 – 7F	SCALE TUNING D #	△	○		
		45	1	00 – 7F	SCALE TUNING E	△	○		
		46	1	00 – 7F	SCALE TUNING F	△	○		
		47	1	00 – 7F	SCALE TUNING F #	△	○		
		48	1	00 – 7F	SCALE TUNING G	△	○		
		49	1	00 – 7F	SCALE TUNING G #	△	○		
		4A	1	00 – 7F	SCALE TUNING A	△	○		
		4B	1	00 – 7F	SCALE TUNING A #	△	○		
		4C	1	00 – 7F	SCALE TUNING B	△	○		
		59	1	00 – 5F	AC1 CONTROLLER NUMBER	○	○	0...95	

System Exclusive Messages

MIDI Event		Data Format	Transmitted	Recognized
Universal System Exclusive	MIDI Master Volume	F0H 7FH 7FH 04H 01H 11 mm F7H ll mm Volume (mm = MSB, ll = LSB) or F0H 7FH XN 04H 01H 11 mm F7H XN When N is received N = 0 – F, whichever is received. X = Ignored ll mm Volume (mm = MSB, ll = LSB)	×	○
	GM System On	F0H 7EH 7FH 09H 01H F7H or F0H 7EH XN 09H 01H F7H Oxxxxnnn XN When N is received N = 0 – F, whichever is received. X = Ignored.	×	○
XG	XG Parameter Change	F0H 43H 1nH 4CH hh mm ll dd ... F7H hh mm ll dd Address Data	○	○
	XG Bulk Dump	F0H 43H 0nH 4CH aa bb hh mm ll dd ... dd cc F7H On Device Number n = 0 (send), 0 – f (receive) aa bb Byte Count (aa << 7) + bb hh mm ll Address dd Data cc Check SUM	×	○
Clavinova compliance	Internal Clock	F0H 43H 73H 01H 02H F7H	×	×
	External Clock	F0H 43H 73H 01H 03H F7H	×	×
	String Resonance Depth	F0H 43H 73H 01H 50H 11H 0nH 02H dd F7 On = Channel 00H – 0FH dd = Depth 00H – 48H	○	○
	Sustain Sample Depth	F0H 43H 73H 01H 50H 11H 0nH 03H dd F7 On = Channel 00H – 0FH dd = Depth 00H – 48H	△	○
	Key Off Sampling Depth	F0H 43H 73H 01H 50H 11H 0nH 04H dd F7 On = Channel 00H – 0FH dd = Depth 00H – 50H	△	○
Others	Master Tune	F0H 43H 1n 27H 30H 00H 00H mm ll cc F7H 1n Channel (0 (Send), 0 – f (receive)) mm ll cc (mm << 4) + ll (1step/1cent), cc = Ignored	×	○

Effect MIDI Map (Reverb)

	MSB	LSB
ROOM	02H	10H
HALL1	01H	10H
HALL2	01H	11H
STAGE	03H	10H
OFF	00H	00H

Effect MIDI Map (Effect)

	MSB	LSB
CHORUS	41H	08H
PHASER	48H	11H
TREMOLO	77H	00H
ROTARY SP	42H	12H
OFF	00H	00H

Function...	Transmitted	Recognized	Remarks
Basic Channel Default Changed	1 - 16 O	1 - 16 O	
Mode Default Messages Altered	3 X *****	3 X X	
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	X X	O X	
Pitch Bend	X *1	O -2 - 2 semitones	*2
Control Change	0,32 O 1 X *1 7 O 10 X *1 11 O 6,38 X *1 64,66,67 O 71-74 X *1 84 X *1 91,93 O 96-97 X *1 100-101 O	O O O O O O O O O O O O	Bank Select Modulation Main Volume Panpot Expression Data Entry Pedal Portamento Control Effect Depth RPN Inc,Dec RPN LSB,MSB
Prog Change : True #	O 0 - 127 *****	O 0 - 127	
System Exclusive	O	O	
Common : Song Pos. : Song Sel. : Tune	X X X	X X X	
System : Clock Real Time : Commands	O O	X O	
Aux : All Sound Off : Reset All Cntrls : Local ON/OFF Mes- : All Notes OFF sages: Active Sense : Reset	X X X X O X	O (120,126,127) O (121) O (122) O (123-125) O X	
Notes:	*1 These Control Change messages cannot be transmitted by panel operations, but can be transmitted by song playback data. *2 For some Piano and Harpsichord Voices, the pitch may not be changed according to the pitch bend setting range.		

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

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

O : Yes
 X : No

