

# P-255

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DIGITAL PIANO

## **MIDI Reference**

# MIDI Channel Message

O: Can be transmitted and recognized.  
 △: Cannot be transmitted by the panel operations, but can be transmitted by song playback data.  
 X: 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)	O	O
Key On	9nH		kk	Key no. (0 - 127)	vv	Key On: vv = 1 - 127 Key Off: vv = 0	O	O
Control Change	BnH		0 (00H)	Bank Select MSB	0 (00H)	Normal	O	O
			32 (20H)	Bank Select LSB	0 - 127		O	O
			1 (01H)	Modulation	0 - 127 (...7FH)		△	O
			6 (06H)	Data Entry MSB	0 - 127 (...7FH)		O	O
			38 (26H)	Data Entry LSB	0 - 127 (...7FH)			
			7 (07H)	Main Volume	0 - 127 (...7FH)		O	O
			10 (0AH)	Panpot	0 - 127 (...7FH)		△	O
			11 (0BH)	Expression	0 - 127 (...7FH)		O	O
			64 (40H)	Damper (Sustain)	0 - 127 (...7FH)		O	O
			66 (42H)	Sostenuto	0 - 127 (...7FH)		O	O
			67 (43H)	Soft Pedal	0 - 127 (...7FH)		O	O
			71 (47H)	Harmonic Content	0 - 127 (...7FH)		△	O
			72 (48H)	Release Time	0 - 127 (...7FH)		△	O
			73 (49H)	Attack Time	0 - 127 (...7FH)		△	O
			74 (4AH)	Brightness	0 - 127 (...7FH)		△	O
			84 (54H)	Portamento Control	0 - 127 (...7FH)		△	O
			91 (5BH)	Effect1 Depth (Reverb Send Level)	0 - 127 (...7FH)		O	O
93 (5DH)	Effect3 Depth (Chorus Send Level)	0 - 127 (...7FH)		O	O			
96 (60H)	Increment	0 - 127 (...7FH)		△	O			
97 (61H)	Decrement	0 - 127 (...7FH)						
100 (64H)	RPN LSB	0 - 127 (...7FH)		O	O			
101 (65H)	RPN MSB	0 - 127 (...7FH)						
Mode Message	BnH		120 (78H)	All Sound Off	0		△	O
			121 (79H)	Reset All Controller	0		△	O
			122 (7AH)	Local Control	0: OFF 7F: ON		X	O
			123 (7BH)	All Note Off	0		△	O
			124 (7CH)	OMNI OFF	0		X	O
			125 (7DH)	OMNI ON	0		X	O
			126 (7EH)	MONO	0 - 16 (...10H)		X	O
			127 (7FH)	POLY	0		X	O
Note This instrument is fixed to Multi-timbral Mode and Poly Mode, since these modes do not change even when Omni on/ omni off/ Mono/Poly Mode messages are received.								
Program Change	CnH		pp	0 - 127	-	-	O	O
Channel After Touch	DnH		vv		-		X	O
Polyphonic After Touch	AnH		kk		vv		X	X
Pitch Bend Change	EnH		cc	LSB	dd	MSB	△	X
Realtime Message	F8H	MIDI Clock	-		-		O	X
	FAH	Start	-		-		O	O
	FBH	Continue	-		-		X	X
	FCH	Stop	-		-		O	O
	FEH	Active Sens	-		-		O	O
	FFH	System Reset	-		-		X	X
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 button	Voice name	MSB	LSB	P.C.# (1 - 128)*
[PIANO]	Grand Piano	108	0	1
	Live Grand	108	2	2
	Ballad Grand	108	3	1
	Bright Grand	108	0	2
[E.PIANO]	Stage E.Piano	108	0	5
	DX E.Piano	108	0	6
	Vintage E.Piano	108	1	5
	Synth Piano	108	0	89
[ORGAN]	Jazz Organ 1	108	0	17
	Jazz Organ 2	108	1	17
	Pipe Organ Principal	108	1	20
	Pipe Organ Tutti	108	0	20
[CLV./VIB.]	Harpsichord 8'	108	0	7
	Harpsichord 8'+4'	108	1	7
	Clavi	108	0	8
	Vibraphone	108	0	12
[OTHERS]	Strings	108	0	49
	Slow Strings	108	0	50
	Choir	108	0	53
	Slow Choir	108	1	53
	Synth Pad	108	0	90
	Wood Bass	108	0	33
	Bass & Cymbal	108	1	33
	E.Bass	108	0	34

\* When you specify a program change as a number in the range of 0-127, specify a number that is one less than the program change number listed above. For example, to specify program change number 1, you would specify a value of 0.

## Parameters controlled by RPN (Registered Parameter Numbers)

RPN		Data Entry		Parameter	Data Range
MSB	LSB	MSB	LSB		
00H	00H	mmH	-	Pitch Bend Sensitivity*	mm: 00H-18H (0...+24[semitones])
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	-

\* For some Piano and Harpsichord Voices, the pitch may not be changed according to the pitch bend setting range.

# 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	x	○	-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
		04	1	00 - 7F	MASTER VOLUME	x	○	0 - 127	7F
		05	1	00 - 7F	(MASTER ATTENUATOR)	x	x		
		06	1	28 - 58	TRANSPOSE	x	x	-12 - +12[semitones] (MIDI value = 34H - 4CH)	40
		7D		n	DRUM SETUP RESET	x	x	n = Drum setup number	
		7E		00	XG SYSTEM ON	x	○	00 = XG sytem ON	
		7F		00	ALL PARAMETER RESET	x	○ (*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)	x	o
	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.	o	o
XG	XG Parameter Change	F0H 43H 1nH 4CH hh mm ll dd ... F7H hh mm ll Address dd Data	o	o
	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	x	o
Clavinova compliance	Internal Clock	F0H 43H 73H 01H 02H F7H	x	x
	External Clock	F0H 43H 73H 01H 03H F7H	x	x
	String Resonance Depth	F0H 43H 73H 01H 50H 11H 0nH 02H dd F7 On = Channel 00H ~ 0FH dd = Depth 00H ~ 48H	o	o
	Sustain Sample Depth	F0H 43H 73H 01H 50H 11H 0nH 03H dd F7 On = Channel 00H ~ 0FH dd = Depth 00H ~ 48H	o	o
	Key Off Sampling Depth	F0H 43H 73H 01H 50H 11H 0nH 04H dd F7 On = Channel 00H ~ 0FH dd = Depth 00H ~ 50H	o	o
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	x	o

## 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 X 90H	O 9nH, v=1-127 X	
After Touch      Key's Ch's	X X	X X	
Pitch Bend	X *1	O 0 - 24 semitones	
Control Change      0, 32 1 7 10 11 6, 38 64, 66, 67 71-74 84 91, 93 96-97 100-101	O X *1 O X *1 O X *1 O X *1 X *1 X *1 O O 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.		

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

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

O : Yes  
X : No