

ARIUS

YDP-164

YDP-144

YDP-S54

MIDI Reference

Table of Contents

MIDI Functions	2
MIDI Transmit/Receive Channel Selection	2
Local Control ON/OFF	2
Program Change ON/OFF	3
Control Change ON/OFF	3
Changing Song Playback Channels.....	3
MIDI Data Format	4
MIDI Implementation Chart	14

MIDI Functions

When this instrument and a computer are connected with a USB cable, MIDI communication can be performed. The explanations here cover the settings necessary for performing MIDI communication between both devices.

NOTE

For instructions on how to connect this instrument to the computer, refer to the “Computer-related Operations” downloadable from the Yamaha Downloads website.

MIDI Transmit/Receive Channel Selection

In order to perform MIDI communication between this instrument and a computer, it is necessary to match the corresponding MIDI transmit and receive channels. By setting the MIDI transmit channels on this instrument, the setting of the keyboard or pedal performance or the program change can be transmitted over the channel number corresponding to a specified channel on the computer. By properly setting the MIDI receive channels on this instrument, only data of the specified channel will be played back in the MIDI data received from the computer.

Setting the MIDI Transmit Channel

While holding down [DEMO/SONG] and [PIANO/VOICE], press the C4 – D#4 keys.

Default setting: Ch 1

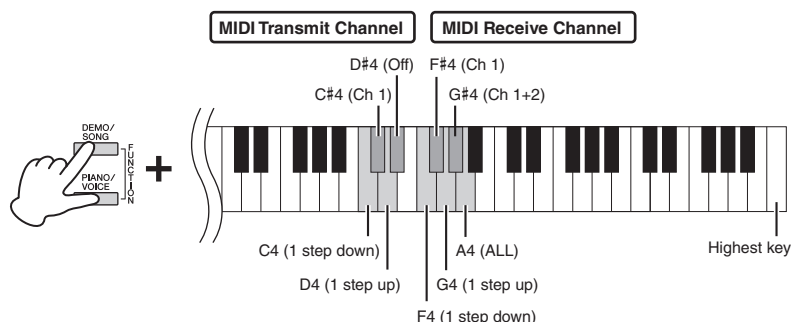
Setting range: Ch 1 – 16, off

Setting the MIDI Receive Channel

While holding down [DEMO/SONG] and [PIANO/VOICE], press the F4 – A4 keys.

Default setting: ALL

Setting range: Ch 1 – 16, 1+2, ALL



MIDI transmission channels in Dual

Voice 1 data is transmitted on the channel set up here.

Voice 2 data is transmitted on the next greater channel number relative to the specified channel.

MIDI receive channel = ALL:

This allows simultaneous reception of different parts on all 16 MIDI channels. When SMF Song data is played back on a computer with the Voice of this instrument, this setting is selected. However, when a Voice not available on the instrument is specified, the playback sound may not be suitable.

MIDI receive channel = 1+2:

This allows simultaneous reception on channels 1 and 2 only. When SMF Song data is played back on a computer, this setting is selected for playing back only data of channels 1 – 2 on this instrument.

NOTE

Panel settings (Voices, etc.) of this instrument will not be affected by MIDI messages received from a computer.

NOTE

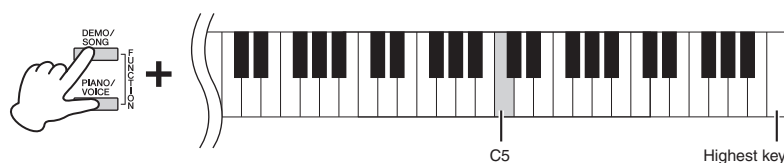
Data for the Demo Songs and Preset Songs cannot be transmitted via MIDI.

Local Control ON/OFF

“Local Control” refers to the fact that, normally, the keyboard of the instrument controls its internal tone generator, allowing the internal voices to be played directly from the keyboard. This situation is “Local Control On,” since the internal tone generator is controlled locally by its own keyboard. Local Control can be turned off as desired, so that the keyboard of the instrument does not play the internal voices.

While holding down [DEMO/SONG] and [PIANO/VOICE], press the C5 key. Pressing the C5 key repeatedly toggles between Local Control On and Off.

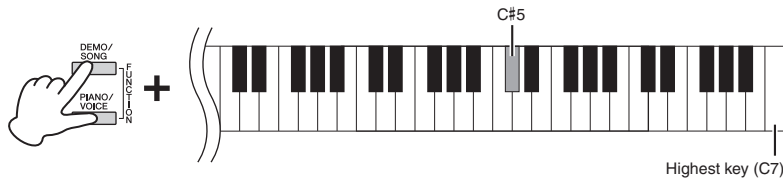
Default setting: ON



Program Change ON/OFF

The information related to Voice changes is called “program change” in MIDI. Sending and receiving program change messages can be enabled or disabled as desired on this instrument. For example, if the relevant transmit and receive parameters are set to ON, Voice change information in this instrument can be transmitted to or received from a computer. (However, the Voice as played from the keyboard is maintained and does not change.)

While holding down [DEMO/SONG] and [PIANO/VOICE], press the C#5 key. Pressing the C#5 key repeatedly toggles between Local Control On and Off.



NOTE

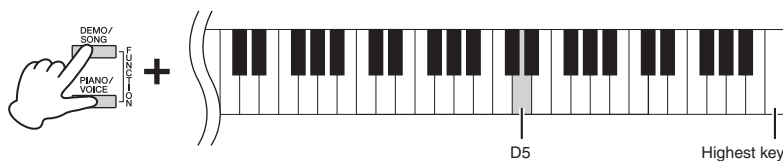
For information on program change numbers for each of the Voices of the instrument, refer to page 4.

Default setting: ON

Control Change ON/OFF

Information related to non-note expressive changes, such as the use of a sustain pedal, is called “control change” in MIDI. Sending and receiving control change messages can be enabled or disabled as desired on this instrument. For example, if the relevant transmit and receive parameters are set to ON, pedal performance information on this instrument can be transmitted to or received from a computer. (However, the performance of pedals and other controls as played from the instrument is maintained and does not change.)

While holding down [DEMO/SONG] and [PIANO/VOICE], press the D5 key. Pressing the D5 key repeatedly toggles between Local Control On and Off.



NOTE

For information on control changes that can be used with the instrument, refer to page 5.

Default setting: ON

Changing Song Playback Channels

Try this operation when playback of Songs loaded from the computer produces an unexpected or unnatural sound.

To set Song Playback Channels to “1+2”:

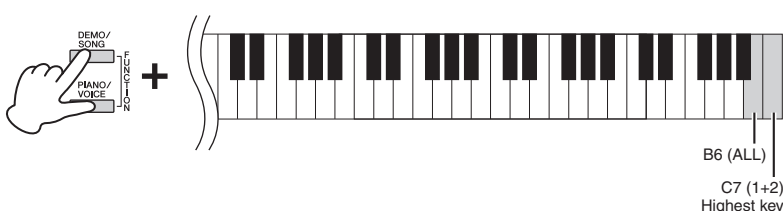
While holding down [DEMO/SONG] and [PIANO/VOICE] simultaneously, press the C7 key.

With this operation, the Song data of only channels 1 and 2 will be played back. When Voices incompatible with this instrument are assigned to channels 3 – 16 and the Piano parts are assigned to the channels 1 and 2, this operation results in the proper or expected sound.

To set Song Playback Channels to “ALL”:

While holding down [DEMO/SONG] and the [PIANO/VOICE] simultaneously, press the B6 key.

With this operation, the Song data of all channels will be played back.



MIDI Data Format

Preset Voice List

Voice Name	MSB (0-127)	LSB (0-127)	Program Change # (1-128)
CFX Grand	108	0	1
Mellow Grand	108	1	1
Pop Grand	108	1	2
Stage E. Piano	108	0	5
DX E. Piano	108	0	6
Harpsichord	108	0	7
Vibraphone	108	0	12
Pipe Organ	108	1	20
Jazz Organ	108	0	17
Strings	108	0	49

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	Main Layer Left	Panel	Song*	
Key Off	8nH (n: Channel Number)	kk	Key no. (0-127)	vv	Velocity (0-127)	[GM1] [GM2]	○	×	○	○	
Key On	9nH (n: Channel Number)	kk	Key no. (0-127)	vv	Key On: vv=1-127 Key Off: vv=0	[GM1] [GM2]	○	×	○	○	
Control Change	BnH	0 (00H)	Bank Select MSB	0-127 (00H...7FH)	(00) Normal	[GM2]	○	×	○	○	
		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]	○	×	×	○	
		7 (07H)	Main Volume	0-127 (00H...7FH)	Data	[GM1] [GM2]	○	×	○	○	
		10 (0AH)	Panpot	0-127 (00H...7FH)	L64...C...R63	[GM1] [GM2]	○	×	○	○	
		11 (0BH)	Expression	0-127 (00H...7FH)	Data	[GM1] [GM2]	○	×	×	○	
		32 (20H)	Bank Select LSB	0-127 (00H...7FH)	Data	[GM2]	○	×	○	○	
		38 (26H)	Data Entry LSB	0-127 (00H...7FH)	Data	[GM2]	○	×	×	○	
		64 (40H)	Sustain (Damper)	0-127 (00H...7FH)	Data	[GM1] [GM2]	○	×	○	○	
		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]	○	×	○	○	
		67 (43H)	Soft Pedal	0-127 (00H...7FH)	0...63, 64...127 (OFF, ON)	[GM2]	○	×	○	○	
		71 (47H)	Harmonic Content	0-127 (00H...7FH)	-64...0...+63	[GM2]	○	×	×	○	
		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]	○	×	×	○	
		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]	○	×	○	○	
		93 (5DH)	Effect3 Depth (Chorus Send Level)	0-127 (00H...7FH)	Data	[GM2]	○	×	○	○	
		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]	○	×	×	○	
101 (65H)	RPN MSB	0-127 (00H...7FH)	Data	[GM2]	○	×	×	○			
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]	○	×	×	○	
127 (7FH)	Poly	0 (00H)	Data	[GM2]	○	×	×	○			
Program Change	CnH (n: Channel Number)	pp (00H...7FH)	Voice number (0-127)	-	-	[GM1] [GM2]	○	×	○	○	
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]	○	×	×	○	
Realtime Message	F8H MIDI Clock	-	-	-	-			×		○	
	FAH Start	-	-	-	-			○		○	
	FBH Continue	-	-	-	-			×		×	
	FCH Stop	-	-	-	-			○		○	
	FEH Active Sens	-	-	-	-	[GM2]		○		○	
	FFH System Reset	-	-	-	-			×		×	

*MIDI Transmission of Song Channels from 3 to 16 will be transmitted only when Song Playback Channels (page 3) is set to "1+2."

MIDI CHANNEL MESSAGE (2)

Application Range	MIDI, Internal Sequencer
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NRPN (Non Registered Parameter Number)

NRPN		Data Entry		Parameter	Data Range	MIDI Formats	MIDI Reception		MIDI Transmission	
MSB	LSB	MSB	LSB				Song	Main Layer Left	Panel	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.

RPN (Registered Parameter Number)

NRPN		Data Entry		Parameter	Data Range	MIDI Formats	MIDI Reception (respond/ignored)		MIDI Transmission (generated data)	
MSB	LSB	MSB	LSB				Song	Main Layer Left	Panel	Song*
00H	00H	mmH	-	Pitch Bend Sensitivity	mm: 00H-18H (0...+24 [semitones])	[GM1] [GM2]	○	×	×	○
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]	○	×	×	○
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 Transmission of Song
Channels from 3 to 16 will be transmitted only when Song Playback Channels (page 3) is set to "1+2."

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	Main Layer Left	Panel	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	28-58	TRANSPOSE	-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	Main Layer Left	Panel	Song
01	00	00	E	20-7F ... 0D 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	Main Layer Left	Panel	Song
02	01	00	2	00-7F 00-7F	REVERB TYPE MSB REVERB TYPE LSB	Refer to Effect MIDI Map below.	01 (=HALL1) 00	○		○	○
		02	1	00-7F	REVERB PARAMETER 1	//	*1	○*1		×	○
		03	1	00-7F	REVERB PARAMETER 2	//	*1	○*1		×	○
		04	1	00-7F	REVERB PARAMETER 3	//	*1	○*1		×	○
		05	1	00-7F	REVERB PARAMETER 4	//	*1	○*1		×	○
		06	1	00-7F	REVERB PARAMETER 5	//	*1	○*1		×	○
		07	1	00-7F	REVERB PARAMETER 6	//	*1	○*1		×	○
		08	1	00-7F	REVERB PARAMETER 7	//	*1	○*1		×	○
		09	1	00-7F	REVERB PARAMETER 8	//	*1	○*1		×	○
		0A	1	00-7F	REVERB PARAMETER 9	//	*1	○*1		×	○
		0B	1	00-7F	REVERB PARAMETER 10	//	*1	○*1		×	○
		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 MIDI Map below.	*1	○*1		×	○
		11	1	00-7F	REVERB PARAMETER 12	//	*1	○*1		×	○
		12	1	00-7F	REVERB PARAMETER 13	//	*1	○*1		×	○
		13	1	00-7F	REVERB PARAMETER 14	//	*1	○*1		×	○
		14	1	00-7F	REVERB PARAMETER 15	//	*1	○*1		×	○
		15	1	00-7F	REVERB PARAMETER 16	//	*1	○*1		×	○

TOTAL SIZE 06

Depends on Reverb Type.

Effect MIDI Map (Reverb)

	MSB	LSB
RECITAL HALL	01H	18H
CONCERT HALL	01H	04H
CHAMBER	02H	18H
CLUB	03H	18H
OFF	00H	00H

Address (H)			Size (H)	Data (H)	Parameter	Description	XG Default (H)	MIDI Reception		MIDI Transmission	
								Song	Main Layer Left	Panel	Song
02	01	20	2	00-7F 00-7F	CHORUS TYPE MSB CHORUS TYPE LSB		41 (=CHORUS1) 00	○		○	○
		22	1	00-7F	CHORUS PARAMETER 1		*2	○*2		×	○
		23	1	00-7F	CHORUS PARAMETER 2		*2	○*2		×	○
		24	1	00-7F	CHORUS PARAMETER 3		*2	○*2		×	○
		25	1	00-7F	CHORUS PARAMETER 4		*2	○*2		×	○
		26	1	00-7F	CHORUS PARAMETER 5		*2	○*2		×	○
		27	1	00-7F	CHORUS PARAMETER 6		*2	○*2		×	○
		28	1	00-7F	CHORUS PARAMETER 7		*2	○*2		×	○

Address (H)	Size (H)	Data (H)	Parameter	Description	XG Default (H)	MIDI Reception		MIDI Transmission	
						Song	Main Layer Left	Panel	Song
		29	1	00-7F	CHORUS PARAMETER 8		0*2	x	0
		2A	1	00-7F	CHORUS PARAMETER 9	*2	0*2	x	0
		2B	1	00-7F	CHORUS PARAMETER 10	*2	0*2	x	0
		2C	1	00-7F	CHORUS RETURN	--dB...0dB...+6dB (0...64...127)	0	x	0
		2D	1	01-7F	CHORUS PAN	L63...C...R63	0	x	0
		2E	1	00-7F	SEND CHORUS TO REVERB	--dB...0dB...+6dB (0...64...127)	0	x	0

TOTAL SIZE 0F

02	01	30	1	00-7F	CHORUS PARAMETER 11	*2	0*2	x	0
		31	1	00-7F	CHORUS PARAMETER 12	*2	0*2	x	0
		32	1	00-7F	CHORUS PARAMETER 13	*2	0*2	x	0
		33	1	00-7F	CHORUS PARAMETER 14	*2	0*2	x	0
		34	1	00-7F	CHORUS PARAMETER 15	*2	0*2	x	0
		35	1	00-7F	CHORUS PARAMETER 16	*2	0*2	x	0

TOTAL SIZE 06

*2 Depends on Chorus Type.

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

TOTAL SIZE 21

02	01	70	1	00-7F	VARIATION PARAMETER 11	*3	0*3	x	0
		71	1	00-7F	VARIATION PARAMETER 12	*3	0*3	x	0
		72	1	00-7F	VARIATION PARAMETER 13	*3	0*3	x	0
		73	1	00-7F	VARIATION PARAMETER 14	*3	0*3	x	0
		74	1	00-7F	VARIATION PARAMETER 15	*3	0*3	x	0
		75	1	00-7F	VARIATION PARAMETER 16	*3	0*3	x	0

TOTAL SIZE 06

*3 Depends on Variation Type.

MIDI Parameter Change Table (MULTI EQ)

Address (H)	Size (H)	Data (H)	Parameter	Description	*The MULTI EQ Parameter cannot be reset to its factory setting with XG SYSTEM ON.	MIDI Reception		MIDI Transmission	
						Song	Main Layer Left	Panel	Song
02	40	00	1	00-04	EQ TYPE	flat, jazz, pops, rock, classic	x	x	x
		01	1	34-4C	EQ GAIN1	-12...0...+12 [dB]	x	x	x
		02	1	04-28	EQ FREQUENCY1	32...2.0k [Hz]	x	x	x
		03	1	01-78	EQ Q1	0.1...12.0	x	x	x
		04	1	00-01	EQ SHAPE1	shelving, peaking	x	x	x
		05	1	34-4C	EQ GAIN2	-12...0...+12 [dB]	x	x	x
		06	1	0E-36	EQ FREQUENCY2	100...10.0k [Hz]	x	x	x
		07	1	01-78	EQ Q2	0.1...12.0	x	x	x
		08	1		NOT USED		-	-	-
		09	1	34-4C	EQ GAIN3	-12...0...+12 [dB]	x	x	x
		0A	1	0E-36	EQ FREQUENCY3	100...10.0k [Hz]	x	x	x
		0B	1	01-78	EQ Q3	0.1...12.0	x	x	x
		0C	1		NOT USED		-	-	-
		0D	1	34-4C	EQ GAIN4	-12...0...+12 [dB]	x	x	x
		0E	1	0E-36	EQ FREQUENCY4	100...10.0k [Hz]	x	x	x
		0F	1	01-78	EQ Q4	0.1...12.0	x	x	x

Address (H)			Size (H)	Data (H)	Parameter	Description	*The MULTI EQ Parameter cannot be reset to its factory setting with XG SYSTEM ON.	MIDI Reception		MIDI Transmission	
								Song	Main Layer Left	Panel	Song
		10	1		NOT USED			-	-	-	
		11	1	34-4C	EQ GAIN5	-12...0...+12 [dB]		x	x	x	
		12	1	1C-3A	EQ FREQUENCY5	0.5k...16.0k [Hz]		x	x	x	
		13	1	01-78	EQ Q5	0.1...12.0		x	x	x	
		14	1	00-01	EQ SHAPE5	shelving, peaking		x	x	x	

TOTAL SIZE 15

MIDI Parameter Change Table (EFFECT2)

Address (H)			Size (H)	Data (H)	Parameter	Description	*The EFFECT 2 Parameter cannot be reset to its factory setting with XG SYSTEM ON.	MIDI Reception		MIDI Transmission	
								Song	Main Layer Left	Panel	Song
03	n	00	2	00-7F 00-7F	INSERTION EFFECT TYPE MSB INSERTION EFFECT TYPE LSB			0	0	0	
		02	1	00-7F	INSERTION EFFECT PARAMETER 1			0*4	0	0	
		03	1	00-7F	INSERTION EFFECT PARAMETER 2			0*4	0	0	
		04	1	00-7F	INSERTION EFFECT PARAMETER 3			0*4	0	0	
		05	1	00-7F	INSERTION EFFECT PARAMETER 4			0*4	0	0	
		06	1	00-7F	INSERTION EFFECT PARAMETER 5			0*4	0	0	
		07	1	00-7F	INSERTION EFFECT PARAMETER 6			0*4	0	0	
		08	1	00-7F	INSERTION EFFECT PARAMETER 7			0*4	0	0	
		09	1	00-7F	INSERTION EFFECT PARAMETER 8			0*4	0	0	
		0A	1	00-7F	INSERTION EFFECT PARAMETER 9			0*4	0	0	
		0B	1	00-7F	INSERTION EFFECT PARAMETER 10			0*4	0	0	
		0C	1	00-7F	INSERTION EFFECT PART NUMBER	Reception: Part1...16 (0...15) Transmission: Part1...16 (0...15) AD (64) OFF (127)		0	0	0	
		0D	1	00-7F	MW INSERTION CONTROL DEPTH	-64...0...+63		0	x	0	
		0E	1	00-7F	BEND INSERTION CONTROL DEPTH	-64...0...+63		0	x	0	
		0F	1	00-7F	CAT INSERTION CONTROL DEPTH	-64...0...+63		0	x	0	
		10	1	00-7F	AC1 INSERTION CONTROL DEPTH	-64...0...+63		0	0	0	
		11	1	00-7F	AC2 INSERTION CONTROL DEPTH	-64...0...+63		0	x	0	

TOTAL SIZE 12

		20	1	00-7F	INSERTION EFFECT PARAMETER 11			0*4	0	0
		21	1	00-7F	INSERTION EFFECT PARAMETER 12			0*4	0	0
		22	1	00-7F	INSERTION EFFECT PARAMETER 13			0*4	0	0
		23	1	00-7F	INSERTION EFFECT PARAMETER 14			0*4	0	0
		24	1	00-7F	INSERTION EFFECT PARAMETER 15			0*4	0	0
		25	1	00-7F	INSERTION EFFECT PARAMETER 16			0*4	0	0

TOTAL SIZE 6

		30	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 1 MSB INSERTION EFFECT PARAMETER 1 LSB			0*4	x	0
		32	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 2 MSB INSERTION EFFECT PARAMETER 2 LSB			0*4	x	0
		34	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 3 MSB INSERTION EFFECT PARAMETER 3 LSB			0*4	x	0
		36	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 4 MSB INSERTION EFFECT PARAMETER 4 LSB			0*4	x	0
		38	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 5 MSB INSERTION EFFECT PARAMETER 5 LSB			0*4	x	0
		3A	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 6 MSB INSERTION EFFECT PARAMETER 6 LSB			0*4	x	0
		3C	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 7 MSB INSERTION EFFECT PARAMETER 7 LSB			0*4	x	0
		3E	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 8 MSB INSERTION EFFECT PARAMETER 8 LSB			0*4	x	0
		40	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 9 MSB INSERTION EFFECT PARAMETER 9 LSB			0*4	x	0
		42	2	00-7F 00-7F	INSERTION EFFECT PARAMETER 10 MSB INSERTION EFFECT PARAMETER 10 LSB			0*4	0	0

TOTAL SIZE 14

*4 Depends on Insertion Type.

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 addresses 02-0B will always be transmitted.
 For effects that require MSB however, when a bulk dump is received, the parameters for addresses 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	Main Layer Left	Panel	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	-12.8...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	○	×	○	○
		0D	1	00-7F	VELOCITY SENSE OFFSET	0...127	40	○	×	○	○
		0E	1	00-7F	PAN	RND, L63...C...R63	40	○	×	×	○
		0F	1	00-7F	NOTE LIMIT LOW	C-2...GB	00	○	×	×	○
		10	1	00-7F	NOTE LIMIT HIGH	C-2...GB	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	○	×	×	○
		42	1	00-7F	SCALE TUNING C#	-63...0...+63 [cent]	40	○	×	×	○
		43	1	00-7F	SCALE TUNING D	-63...0...+63 [cent]	40	○	×	×	○
		44	1	00-7F	SCALE TUNING D#	-63...0...+63 [cent]	40	○	×	×	○
		45	1	00-7F	SCALE TUNING E	-63...0...+63 [cent]	40	○	×	×	○
		46	1	00-7F	SCALE TUNING F	-63...0...+63 [cent]	40	○	×	×	○
		47	1	00-7F	SCALE TUNING F#	-63...0...+63 [cent]	40	○	×	×	○
		48	1	00-7F	SCALE TUNING G	-63...0...+63 [cent]	40	○	×	×	○
		49	1	00-7F	SCALE TUNING G#	-63...0...+63 [cent]	40	○	×	×	○
		4A	1	00-7F	SCALE TUNING A	-63...0...+63 [cent]	40	○	×	×	○
		4B	1	00-7F	SCALE TUNING A#	-63...0...+63 [cent]	40	○	×	×	○
		4C	1	00-7F	SCALE TUNING B	-63...0...+63 [cent]	40	○	×	×	○
		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		-	-	-	-	-	
		79	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	Main Layer Left	Panel	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	*5	○	×	×	○
		03	1	00-7F	ALTERNATE GROUP	OFF, 1...127	*5	○	×	×	○
		04	1	00-7F	PAN	RND, L63...C...R63	*5	○	×	×	○
		05	1	00-7F	REVERB SEND	0...127	*5	○	×	×	○
		06	1	00-7F	CHORUS SEND	0...127	*5	○	×	×	○
		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	*5	○	×	×	○
		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

*5 Depends on the note.

		20	1	00-7F	EQ BASS GAIN	-12...+12 [dB]	40		×	×	×	×
		21	1	00-7F	EQ TREBLE GAIN	-12...+12 [dB]	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)
r: note number (0D-5B)

In the following cases, the instrument will initialize all Drum Setups.

- XG SYSTEM ON received
- GM SYSTEM ON received
- GM LEVEL2 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 SysEx is set to off.
Not transmitted when Transmit Parameter SysEx is set to off.

■ System Exclusive Messages (Universal Non-Real Time Messages)

MIDI Event	Data Format	MIDI Formats	MIDI Reception		MIDI Transmission	
			Song	Main Layer Left	Panel	Song
GM1 System On	F0 7E XN 09 01 F7 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxxnnn 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]	○	×	×	△ (*1)
General MIDI System Off	F0 7E XN 09 02 F7 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxxnnn 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]	○	×	×	△ (*1)

*1 Changed to XG, and output.

System Exclusive Messages (2)

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

Not Received when Receive Parameter SysEx is set to off.
Not transmitted when Transmit Parameter SysEx is set to off.

■ System Exclusive Messages (XG)

MIDI Event	Data Format	MIDI Reception		MIDI Transmission	
		Song	Main Layer Left	Panel	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	○ *Refer to Parameter Change Table.	×	○ *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	○ *Refer to Parameter Change Table.	×	○ *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	○ *Refer to Parameter Change Table. (However, the request for address "0A nn 4v" will be ignored.)	×	×	

MIDI Event	Data Format	MIDI Reception		MIDI Transmission	
		Song	Main Layer Left	Panel	Song
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 0llllllll ll = Address Low 11110111 F7 = End of Exclusive	○ *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	Main Layer Left	Panel	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	○		×	×

■ System Exclusive Messages (Preset Voice)

MIDI Event	Data Format	MIDI Reception (effective or not for each part)		MIDI Transmission (generated data)	
		Song	Main Layer Left	Panel	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) 0000010 02 = Sub-ID (String Resonance Depth) 0ddddd dd = Depth (00-48) 11110111 F7 = End of Exclusive	×	×	×	○
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) 0000011 03 = Sub-ID (Sustain Sample Depth) 0ddddd dd = Depth (00-48) 11110111 F7 = End of Exclusive	×	×	×	○
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 dd = Depth (00-50) 11110111 F7 = End of Exclusive	○	×	×	○
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 dd = Depth (00-7F) 11110111 F7 = End of Exclusive	○	×	×	○

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

Function...	Transmitted	Recognized	Remarks
Basic Channel Default Changed	1 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	× *2	O 0 - 24 semi	*1
Control Change	0,32 O 1,5 × *2 7,10 O 11 × *2 6,38 × *2 64,66,67 O 65 × *2 71-74 × *2 84 × *2 91,93 O 96-97 × *2 98-99 × *2 100-101 × *2	O O O O O O O O O O O O O	Bank Select Expression Data Entry Pedal Portamento Sound Controller Portamento Control Effect Depth RPN Inc,Dec NRPN LSB,MSB RPN LSB,MSB
Prog Change : True #	O 0 - 127 *****	O 0 - 127 0,1,4,5,6,11,16,19,48	
System Exclusive	O	O	
Common : Song Pos. : Song Sel. : Tune	× × ×	× × ×	
System : Clock Real Time : Commands	O O	× O	
Aux : All Sound Off : Reset All Cntrls : Local ON/OFF Mes- : 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 (such as Piano or Harpsichord 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

Function...	Transmitted	Recognized	Remarks
Basic Channel Default Changed	1 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=64	O 9nH,v=1-127 O 9nH,v=0 or 8nH	
After Touch Key's Ch's	× ×	O O	
Pitch Bend	× *2	O 0 - 24 semi	*1
Control Change 0,32 1,5 7,10 11 6,38 64,66,67 65 71-74 84 91,93 96-97 98-99 100-101	O × *2 O × *2 × *2 O × *2 × *2 × *2 O × *2 × *2 × *2 ×	O O O O O O O O O O O O O O	Bank Select Expression Data Entry Pedal Portamento Sound Controller Portamento Control Effect Depth RPN Inc,Dec NRPN LSB,MSB RPN LSB,MSB
Prog Change : True #	O 0 - 127 *****	O 0 - 127 0,1,4,5,6,11,16,19,48	
System Exclusive	O	O	
Common : Song Pos. : Song Sel. : Tune	× × ×	× × ×	
System : Clock Real Time : Commands	O O	× O	
Aux : All Sound Off : Reset All Cntrls : Local ON/OFF Mes- : 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 (such as Piano or Harpsichord 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