NOTE

change: Setting change due to operation
clear: Returns to initial default
recall: Returns to setting prior to mode change

Prec: Stores previous panel info in song header
Hcall: Song and accomp data header data reflected in piano settings

* Recall Items
When you exit the Sequencer, Disk, or Music Library Mode, settings ofitems marked with a O in this column are restored to the settings that were in effect when you entered one of the above modes.

Adjustable Digital Piano Parameters		Setting Range		Initial Default	Pressing [+]+[–]	Power Off Back Up Items		* recall	Sequencer Recorded Item			Otp Call	Regist Call
	Settings	MIN.	MAX.			(BuckUp off)	(BuckUp on)		Song No. Change	Operation During Sys Tr. Rec	Operation During Group B Tr. Rec		
Key Light	On/Off	Off	On	On	–	clear	recall (before power off)	○					
Transpose		-12	+12	0	0	clear	recall (before power off)	○	Hcall	rec			
Tempo		30	255	120	Recommended tempo for selected rhythm	clear	recall (before power off)	○	Hcall	rec		change	change
Metronome	On/Off	Off	On	Off	–	clear	clear		clear (off)				
	Beat	0	12/8	4/4	4/4	clear	recall (before power off)	○	Hcall				
Accomp/Song Volume						–	–						
Effect	Reverb Type	Off	Pan Delay	Hall 1	Hall 1	clear	recall (before power off)	○	Hcall	rec		change	change
	Chorus Type	Off	Short Delay FB	Chorus 3	Chorus 3	clear	recall (before power off)	○	Hcall	rec		change	change
	DSP Type	Off	Lo-Fi	Reflection	Ensemble	clear	recall (before power off)	○	Hcall	rec		change	change
Tone	Layer On/Off	Off	On	Off	–	clear	recall (before power off)	○	Hcall	rec		change	change
	Split On/Off	Off	On	Off	–	clear	recall (before power off)	○	Hcall	rec		change	change
	Display Part	U1	L2	U1	–	clear	recall (before power off)			rec		clear	clear
Auto Harmonize	On/Off	Off	On	Off	–	clear	recall (before power off)	○	Hcall	rec		change	change
	Type	Duet 1	Big Band	Duet 1	Duet 1	clear	recall (before power off)	○	Hcall			change	change
Rhythm	Group Select	POPS	FOR PIANO	POPS	–	clear	recall (before power off)	○	Hcall	rec			
	Rhythm Group Rhythm Select (X 6 Groups)	First rhythm in each group	Last rhythm in each group	First rhythm in each group	First rhythm in each group	clear	recall (before power off)	○	Hcall	rec			
	Variation Select	VARIATION 1	VARIATION 2	VARIATION 1	–	clear	recall (before power off)	○	Hcall	rec			
Split Point	(Common for melody and accompaniment)	A_0	C_8	$F\sharp_3$	$F\sharp_3$	clear	recall (before power off)	○	Hcall				
Mode	(Normal, CC, Fin, FullRange)	Normal	Full Range Chord	Normal	–	clear	recall (before power off)	○	Hcall	rec			

Adjustable Digital Piano Parameters		Setting Range		Initial Default	Pressing [+]+[–]	Power Off Back Up Items		* recall	Sequencer Recorded Item			Otp Call	Regist Call
	Settings	MIN.	MAX.			(BuckUp off)	(BuckUp on)		Song No. Change	Operation During Sys Tr. Rec	Operation During Group B Tr. Rec		
Song Sequencer	Mode On/Off	Off	On	Off	–	clear	clear						
	Song No.	1	10	1	–	clear	recall (before power off)		change				
	Group B Current Track Select	Track 1	Track 16	Track 1	–	clear	clear						
	Quantize Resolution	Quarter note	32nd note triplet	Quarter note	Quarter note	clear	recall (before power off)						
Music Library	Mode on/off	Off	On	Off	–	clear	clear						
	Song No.	First STANDARD song	Last VARIOUS song	First STANDARD song	First STANDARD song	clear	recall (before power off)						
Repeat	Repeat Mode (Off, Phrase, Section)	Off	Section	Off	–	recall (before power off)	recall (before power off)						
	Repeat Phrase No.	1	Final Song Phrase	1	–	clear	recall (before power off)						
	Section Repeat Start Point	Beginning of Song	Start of Final Song Section	Beginning of Song	–	clear	recall (before power off)						
	Section Repeat End Point	End of First Song Section	End of Song	End of Song	–	clear	recall (before power off)						
Advanced Lesson System	Arrangement Level (1, 2, 3)	1	3	3	–	clear	recall (before power off)						
	Part Select (Left, Right, Both)	Left	L+R(Both)	L+R(Both)	–	clear	recall (before power off)						
	3-Step Lesson Step No.	1	3	–	–	clear	–						
Function													
Tune	Master Tune	415.3	466.2	440	440	–	recall (before power off)	○	Hcall				
	Baroque Pitch	Off	On	Off	Off	clear	recall (before power off)	○	Hcall				
	Stretch Tune	Off	On	On	On	clear	recall (before power off)	○	Hcall				
	Scale Type (Mean, JustMaj, JustMin, Pythago, Mean, Werck, Kirnber)	Equal	Kirnberger	Equal	Equal	clear	recall (before power off)	○	Hcall				
	Scale Root (C to B)	C	B	C	C	clear	recall (before power off)	○	Hcall				
Sound	Brilliance	-12	12	0	0	clear	recall (before power off)						
	Equalizer:Speaker	1	3	2	2	recall (before power off)	recall (before power off)						
Lesson	Speak (Off, English, Japanese)	Off	Japanese	English	English	recall (before power off)	recall (before power off)						
	Repeat	Off	On	On	On	recall (before power off)	recall (before power off)						
	Pre Count	Off	On	On	On	clear	recall (before power off)		Hcall				
General	Touch (Off, Light, Normal, Heavy)	Off	Heavy	Norm.	Norm.	clear	recall (before power off)	○					
	Metronome Volume	0	127	100	100	clear	recall (before power off)						

Adjustable Digital Piano Parameters		Setting Range		Initial Default	Pressing [+]+[−]	Power Off Back Up Items		* recall	Sequencer Recorded Item			Otp Call	Regist Call
Settings		MIN.	MAX.			(BuckUp off)	(BuckUp on)		Song No. Change	Operation During Sys Tr. Rec	Operation During Group B Tr. Rec		
	Memory BuckUp	Off	On	Off	Off	–	-						
	Demo2	Off	On	On	On	clear	recall (before power off)						
Display	Contrast	0	127	25	25	recall (before power off)	recall (before power off)						
	Display Hold	Off	On	Off	Off	clear	recall (before power off)						
	Language	English	Japanese	English	English	recall (before power off)	recall (before power off)						
Pedal	Left	Soft	DSP	Soft	Soft	clear	recall (before power off)	○	Hcall				
	Sus Length	1	Hold	Hold	Hold	clear	recall (before power off)	○	Hcall				
Accomp	Chord Hold	Off	On	On	On	clear	recall (before power off)	○	Hcall				
	Lower Hold	Off	On	Off	Off	clear	recall (before power off)	○	Hcall				
	Mixer Hold	Off	On	Off	Off	clear	recall (before power off)	○	Hcall				
	On Bass Chord	Off	On	Off	Off	clear	recall (before power off)	○	Hcall				
	Tension Chord	Off	On	Off	Off	clear	recall (before power off)	○	Hcall				
	6th Chord	Off	On	On	On	clear	recall (before power off)	○	Hcall				
MIDI	Navi. Ch.(R Part)	Off	16	4	4	clear	recall (before power off)						
	Navi. Ch.(L Part)	Off	16	3	3	clear	recall (before power off)						
	Accomp MIDI Out	Off	On	Off	Off	clear	recall (before power off)						
	MIDI In Chord Judge	Off	On	Off	Off	clear	recall (before power off)						
	Realtime Message MIDI Out	Off	On	Off	Off	clear	recall (before power off)						
	Device ID	1	32	17	17	clear	recall (before power off)						
	Local Control	Off	On	On	On	clear	clear	○					
MIDI Tx ch	Group(Off, A、B)	Off	B	A	A	clear	recall (before power off)						
	A(U1～C5)	Ch.1	Ch.16	Depends on part.	Ch.1	clear	recall (before power off)						
	B(Part 1 ～16)	Ch.1	Ch.16	Depends on part.	Ch.1	clear	recall (before power off)						
MIDI Rx ch	B(Part 1 ～16)	Off	Ch.16	Depends on part.	Ch.1	clear	recall (before power off)						
System	DSP Volume	0	127	127	127	clear	recall (before power off)						
	DSP Pan	-64	63	0	0	clear	recall (before power off)						

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Adjustable Digital Piano Parameters		Setting Range		Initial Default	Pressing [+]+[–]	Power Off Back Up Items		* recall	Sequencer Recorded Item			Otp Call	Regist Call
Settings		MIN.	MAX.			(BuckUp off)	(BuckUp on)		Song No. Change	Operation During Sys Tr. Rec	Operation During Group B Tr. Rec		
	DSP Reverb Send	0	127	40	40	clear	recall (before power off)						
	DSP Chorus Send	0	127	0	0	clear	recall (before power off)						
	Master Volume	0	127	127	127	clear	recall (before power off)						
	Master Pan	-64	63	0	0	clear	recall (before power off)						
Initialize	Ext.Part, Parameter All, All	–	–	–	–								
MIXER	Group A Current Part Select	1	16	1	–	clear	clear						
	Group B Current Part Select	1	16	1	–	clear	clear						
	Group A/B Select	A	B	A	–	clear	clear		clear				
U1 to L2	Tone Group Select	PIANO Group	Last Group	Depends on part.	(Pressing [+] + [–] in Mixer: PIANO Group)	clear	recall (before power off)	○	Hcall	rec		change	change
	Tone Group Tone Select (X 6 Groups)	First Tone in Each Group	Last Tone in Each Group	Depends on part.	First Tone in Each Group	clear	recall (before power off)	○	Hcall	rec		change	change
	Part On/Off	Off	On	On	On	clear	clear	○	Hcall			change	change
	Volume	0	127	127	100	clear	recall (before power off)	○	Hcall			change	change
	Pan	-64	63	0	0	clear	recall (before power off)	○	Hcall			change	change
	Reverb Depth	0	127	40	40	clear	recall (before power off)	○	Hcall			change	change
	Chorus Depth	0	127	0	0	clear	recall (before power off)	○	Hcall			change	change
	DSP On/Off	Off	On	Off (U2:On)	Off	clear	recall (before power off)	○	Hcall			change	change
	Coarse Tune	-24	24	0	0	clear	recall (before power off)	○	Hcall			change	change
	Fine Tune	-64	63	0	0	clear	recall (before power off)	○	Hcall			change	change
Harmo1/2	Tone Group Select	PIANO Group	Last Group	Depends on part.	(Pressing [+] + [–] in Mixer: PIANO Group)	clear	recall (before power off)	○	Hcall	rec (Same as U1/2)		change	change
	Tone Group Tone Select (X 6 Groups)	First Tone in Each Group	Last Tone in Each Group	Depends on part.	First Tone in Each Group	clear	recall (before power off)	○	Hcall	rec (Same as U1/2)		change	change
	Part On/Off	Off	On	On	On	clear	clear	○	Hcall			change	change
	Volume	0	127	95	100	clear	recall (before power off)	○	Hcall			change	change
	Pan	-64	63	0	0	clear	recall (before power off)	○	Hcall			change	change
	Reverb Depth	0	127	40	40	clear	recall (before power off)	○	Hcall			change	change
	Chorus Depth	0	127	0	0	clear	recall (before power off)	○	Hcall			change	change
	DSP On/Off	Off	On	H1:Off, H2:On	Off	clear	recall (before power off)	○	Hcall			change	change
	Coarse Tune	-24	24	0	0	clear	recall (before power off)	○	Hcall			change	change

Adjustable Digital Piano Parameters		Setting Range		Initial Default	Pressing [+]+[–]	Power Off Back Up Items		* recall	Sequencer Recorded Item			Otp Call	Regist Call
	Settings	MIN.	MAX.			(BuckUp off)	(BuckUp on)		Song No. Change	Operation During Sys Tr. Rec	Operation During Group B Tr. Rec		
	Fine Tune	-64	63	0	0	clear	recall (before power off)	○	Hcall			change	change
Accomp	Tone Group Select (Bass, Chord 1 to 5) (Drum, Perc parts in Drum group)	PIANO Group	Last Group	Depends on accomp data.	(Pressing [+] + [–] in Mixer: PIANO Group)	clear	recall (before power off)	○	Hcall				
	Tone Group Tone Select (X6 Groups. Drum group for Drum, Perc.)	First Tone in Each Group	Last Tone in Each Group	Depends on accomp data.	First Tone in Each Group	clear	recall (before power off)	○	Hcall				
	Part On/Off	Off	On	On	On	clear	clear		Hcall				
	Volume	0	127	Depends on accomp data.	100	clear	recall (before power off)		Hcall				
	Pan	-64	63	Depends on accomp data.	0	clear	recall (before power off)	○	Hcall				
	Reverb Depth	0	127	Depends on accomp data.	40	clear	recall (before power off)	○	Hcall				
	Chorus Depth	0	127	Depends on accomp data.	0	clear	recall (before power off)	○	Hcall				
	DSP On/Off	Off	On	Off	Off	clear	recall (before power off)	○	Hcall				
	Coarse Tune	-24	24	0	0	clear	recall (before power off)	○	Hcall				
	Fine Tune	-64	63	0	0	clear	recall (before power off)	○	Hcall				
Group B (1 to 16)	Tone Group Select	PIANO Group	Last Group	PIANO Group (Part10 is Drum)	(Pressing [+] + [–] in Mixer: PIANO Group)	clear	recall (before power off)	○	Hcall				
	Tone Group Tone Select	First Tone in Each Group	Last Tone in Each Group	First Tone in Each Group	First Tone in Each Group	clear	recall (before power off)	○	Hcall				
	Part On/Off	Off	On	On	On	clear	clear	○	Hcall				
	Volume	0	127	100	100	clear	recall (before power off)	○	Hcall				
	Pan	-64	63	0	0	clear	recall (before power off)	○	Hcall				
	Reverb Depth	0	127	40	40	clear	recall (before power off)	○	Hcall				
	Chorus Depth	0	127	0	0	clear	recall (before power off)	○	Hcall				
	DSP On/Off	Off	On	Off	Off	clear	recall (before power off)	○	Hcall				
	Coarse Tune	-24	24	0	0	clear	recall (before power off)	○	Hcall				
	Fine Tune	-64	63	0	0	clear	recall (before power off)	○	Hcall				

NOTE

Following can also be stored:

- Accomp controller (including Synchro switch) operation
- Registration memory recall operation
- One touch preset recall operation
- Pedal operations
- Keyboard operations

MIDI Data Format

Channel Messages

- The channel numbers used for channel messages received for each part are in accordance with the receive channel settings for each part made using the instrument's "MIDI Rx Ch" parameter. Channel messages are not received for parts that are turned off using "MIDI Rx Ch".
- When the instrument's "MIDI In-chord Judge" setting is turned on, the instrument's auto accompaniment chord can be specified by a note message in the accompaniment keyboard range received over the channel specified by the receive channel setting for Part 1.

Note Messages

Note Off

Recognition Format

Byte 1	Byte 2	Byte 3
8nH	kkH	vvH
9nH	kkH	00H

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
kk.....Note Number = 00H to 7FH
vv.....Note Off Velocity = 00H to 7FH

Remarks
Note Off Velocity value is ignored.

Send Format

Byte 1	Byte 2	Byte 3
8nH	kkH	vvH

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
kk.....Note Number = 15H to 6CH
vv.....Note Off Velocity = 40H

Note On

Recognition Format

Byte 1	Byte 2	Byte 3
9nH	kkH	vvH

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
kk.....Note Number = 00H to 7FH
vv.....Note On Velocity = 00H to 7FH

Remarks
Normally, the range of the Note Number is 00H to 7FH.

Send Format

Byte 1	Byte 2	Byte 3
9nH	kkH	vvH

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
kk.....Note Number = 15H to 6CH
vv.....Note On Velocity = 01 to 7FH

Polyphonic Key Pressure

Format

Byte 1	Byte 2	Byte 3
AnH	kkH	vvH

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
kk.....Note Number = 00H to 7FH
vv.....Pressure Value = 00H to 7FH

Recognition
The effect is configured in accordance with a received system exclusive message.

Send
Polyphonic Key Pressure messages cannot be sent.

Control Change

Bank Select

Format

Byte 1	Byte 2	Byte 3
BnH	00H	mmH (Bank Select MSB)
BnH	20H	llH (Bank Select LSB)

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
mm .....Bank Number MSB = 00H to 7FH
ll.....Bank Number LSB = 00H to 7FH

Recognition
The ll value is ignored.

Send
A Bank Select message is sent at the same time when you select a tone on the instrument.

Modulation Wheel

Format

Byte 1	Byte 2	Byte 3
BnH	01H	vvH

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
vv.....Modulation Depth = 00H to 7FH

Recognition
Use System Exclusive messages to select a type of modulation.

Send
This message cannot be sent.

Portamento Time

Format

Byte 1	Byte 2	Byte 3
BnH	05H	vvH

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
vv.....Portament Time = 00H to 7FH

Data Entry

Format

Byte 1	Byte 2	Byte 3
BnH	06H	mmH (Data Entry MSB)
BnH	26H	llH (Data Entry LSB)

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
mm .....Data entry MSB value for the parameter that is selected by RPN and NRPN
ll.....Data entry LSB value for the parameter that is selected by RPN and NRPN

Channel Volume

Format

Byte 1	Byte 2	Byte 3
BnH	07H	vvH

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
vv.....Volume = 00H to 7FH

Send
Channel Volume messages are sent when you change mixer volume.

Pan

Format

Byte 1	Byte 2	Byte 3
BnH	0AH	vvH

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
vv.....Pan = 00H (left) to 40H (center) to 7FH (right)

Recognition
When a Pan message is received on the drum part, the Pan setting changes relatively to the Pan setting of each drum sound on the drum part.

Send
Pan messages are sent when you change the pan setting using the mixer.

MIDI Data Format

Expression Controller

Format

Byte 1	Byte 2	Byte 3
BnH	0BH	vvH

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
vv.....Expression = 00H to 7FH

Send
This message cannot be sent.

Hold 1 (Damper Pedal)

Format

Byte 1	Byte 2	Byte 3
BnH	40H	vvH

Recognition
n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
vv.....Hold 1 = 00H to 7FH (00H to 3FH : OFF, 40H to 7FH : ON)

Send
n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
vv.....Hold 1 = 00H, 7FH (00H : OFF, 7FH : ON)
Hold 1 messages are sent when you operate the damper pedal on the instrument.

Portamento

Format

Byte 1	Byte 2	Byte 3
BnH	41H	vvH

Recognition
n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
vv.....Portamento = 00H to 7FH (00H to 7EH : OFF, 7FH : ON)

Send
This message cannot be sent.

Sostenuto

Format

Byte 1	Byte 2	Byte 3
BnH	42H	vvH

Recognition
n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
vv.....Sostenuto = 00H to 7FH (00H to 3FH : OFF, 40H to 7FH : ON)

Send
n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
vv.....Sostenuto = 00H, 7FH (00H : OFF, 7FH : ON)
Sostenuto messages are sent when you operate the sostenuto pedal on the instrument.

Soft

Format

Byte 1	Byte 2	Byte 3
BnH	43H	vvH

Recognition
n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
vv.....Soft = 00H to 7FH (00H to 3FH : OFF, 40H to 7FH : ON)

Send
n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
vv.....Soft = 00H, 7FH (00H : OFF, 7FH : ON)
Soft messages are sent when you operate the soft pedal on the instrument.

Sound Controller 2 (Resonance)

Format

Byte 1	Byte 2	Byte 3
BnH	47H	vvH

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
vv.....Filter Resonance = 00H to 7FH

Send
This message cannot be sent.

Sound Controller 3 (Release Time)

Format

Byte 1	Byte 2	Byte 3
BnH	48H	vvH

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
vv.....AMP Release Time = 00H to 7FH

Send
This message cannot be sent.

Sound Controller 4 (Attack Time)

Format

Byte 1	Byte 2	Byte 3
BnH	49H	vvH

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
vv.....AMP Attack Time = 00H to 7FH

Send
This message cannot be sent.

Sound Controller 5 (Brightness)

Format

Byte 1	Byte 2	Byte 3
BnH	4AH	vvH

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
vv.....Filter Cutoff Frequency = 00H to 7FH

Send
This message cannot be sent.

Portamento Control

Format

Byte 1	Byte 2	Byte 3
BnH	54H	kkH

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
kk.....Source Note Number = 00H to 7FH

Send
This message cannot be sent.

Effect 1 (Reverb Send Level)

Format

Byte 1	Byte 2	Byte 3
BnH	5BH	vvH

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
vv.....Reverb Send Level = 00H to 7FH

Send
Effect 1 messages are sent when you change mixer reverb send.

Effect 3 (Chorus Send Level)

Format

Byte 1	Byte 2	Byte 3
BnH	5DH	vvH

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
vv.....Chorus Send Level = 00H to 7FH

Send
Effect 3 messages are sent when you change mixer chorus send.

MIDI Data Format

NRPN (Non-Registered Parameter Numbers)

With the instrument, NRPN are defined as tone editing parameters. The MSB and LSB of an NRPN specify the parameter being controlled, while the specified parameter's value is set in accordance with the subsequent data entry. The following table shows the relationship between parameters and NRPN as defined by the instrument.

NRPN MSB	NRPN LSB	Parameter
01H	08H	Vibrato Rate
01H	09H	Vibrato Depth
01H	0AH	Vibrato Delay
01H	20H	Filter Cut Off Frequency
01H	21H	Filter Resonance
01H	63H	Filter/AMP Envelope Attack Time
01H	64H	Filter/AMP Envelope Decay Time
01H	66H	Filter/AMP Envelope Release Time

See "Vibrato Rate" through "Filter/AMP Envelope Release Time" for the data entry MSB value range and other details.

Format

Byte 1	Byte 2	Byte 3
BnH	63H	pmH (MSB)
BnH	62H	plH (LSB)

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
pm .....MSB of NRPN
pl .....LSB of NRPN

Recognition

- NRPN messages not defined by the instrument can also be received, but subsequent data entry values after undefined NRPN messages are ignored.
- After the NRPN MSB and LSB are received and the applicable control parameters settings are made, the value is set by receipt of the MSB of the subsequent data entry. The data entry LSB is ignored.

Send
An NRPN and data entry are sent whenever an operation that changes the parameter assigned to the NRPN (such as Vibrato Rate).

Vibrato Rate

NRPN MSB = 01H
NRPN LSB = 08H
Data Entry MSB = mmH
mm .....Vibrato Rate = 00H to 40H to 7FH (–64 to 0 to +63)

Recognition
When the instrument receives this message, the preset Vibrato Rate value for the tone is changed to the Vibrato Rate value that corresponds to the data entry MSB of the received message. There is no change when the value of the data entry MSB is 40H(0).

Send
This message cannot be sent.

Vibrato Depth

NRPN MSB = 01H
NRPN LSB = 09H
Data Entry MSB = mmH
mm .....Vibrato Depth = 00H to 40H to 7FH (–64 to 0 to +63)

Recognition
When the instrument receives this message, the preset Vibrato Depth value for the tone is changed to the value that corresponds to the data entry MSB of the received message. There is no change when the value of the data entry MSB is 40H(0).

Send
This message cannot be sent.

Vibrato Delay

NRPN MSB = 01H
NRPN LSB = 0AH
Data Entry MSB = mmH
mm .....Vibrato Delay = 00H to 40H to 7FH (–64 to 0 to +63)

Recognition
When the instrument receives this message, the preset Vibrato Delay value for the tone is changed to the value that corresponds to the data entry MSB of the received message. There is no change when the value of the data entry MSB is 40H(0).

Send
This message cannot be sent.

Filter Cut Off Frequency

NRPN MSB = 01H
NRPN LSB = 20H
Data Entry MSB = mmH

mm .....Cut Off Frequency = 00H to 40H to 7FH (–64 to 0 to +63)

Recognition

When the instrument receives this message, the preset Filter Cut off Frequency value for the tone is changed to the value that corresponds to the data entry MSB of the received message. There is no change when the value of the data entry MSB is 40H(0).

Send

This message cannot be sent.

Filter Resonance

NRPN MSB = 01H
NRPN LSB = 21H
Data Entry MSB = mmH

mm .....Filter Resonance = 00H to 40H to 7FH (–64 to 0 to +63)

Recognition

When the instrument receives this message, the preset Filter Resonance value for the tone is changed to the value that corresponds to the data entry MSB of the received message. There is no change when the value of the data entry MSB is 40H(0).

Send

This message cannot be sent.

Filter/AMP Envelope Attack Time

NRPN MSB = 01H
NRPN LSB = 63H
Data Entry MSB = mmH

mm .....Filter/AMP Envelope Attack Time = 00H to 40H to 7FH (–64 to 0 to +63)

Recognition

When the instrument receives this message, the preset Filter/AMP Envelope Attack Time value for the tone is changed to the value that corresponds to the data entry MSB of the received message. There is no change when the value of the data entry MSB is 40H(0).

Send

This message cannot be sent.

Filter/AMP Envelope Decay Time

NRPN MSB = 01H
NRPN LSB = 64H
Data Entry MSB = mmH

mm .....Filter/AMP Envelope Decay Time = 00H to 40H to 7FH (–64 to 0 to +63)

Recognition

When the instrument receives this message, the preset Filter/AMP Envelope Decay Time value for the tone is changed to the value that corresponds to the data entry MSB of the received message. There is no change when the value of the data entry MSB is 40H(0).

Send

This message cannot be sent.

Filter/AMP Envelope Release Time

NRPN MSB = 01H
NRPN LSB = 66H
Data Entry MSB = mmH

mm .....Filter/AMP Envelope Release Time = 00H to 40H to 7FH (–64 to 0 to +63)

Recognition

When the instrument receives this message, the preset Filter/AMP Envelope Release Time value for the tone is changed to the value that corresponds to the data entry MSB of the received message. There is no change when the value of the data entry MSB is 40H(0).

Send

This message cannot be sent.

MIDI Data Format

RPN (Registered Parameter Numbers)

On the instrument, RPNs are defined as settings for the following parameters.

NRPN MSB	NRPN LSB	Parameter
00H	00H	Pitch Bend Sensitivity
00H	01H	Master Fine Tuning
00H	02H	Master Coarse Tuning
7FH	7FH	RPN Null

The MSB and LSB of an RPN specify the parameter being controlled, while the specified parameter's value is set in accordance with the MSB of the subsequent data entry. See "Pitch Bend Sensitivity" through "RPN Null" for the data entry MSB value range and other details.

Format

Byte 1	Byte 2	Byte 3
BnH	65H	qmH (MSB)
BnH	64H	qlH (LSB)

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
qm .....MSB of RPN
ql.....LSB of RPN

Recognition

- RPN messages not defined by the instrument can also be received, but subsequent data entry values after undefined RPN messages are ignored.
- After the MSB and LSB of an RPN are received and the applicable control parameters settings are made, the value is set by receipt of the MSB of the subsequent data entry. The data entry LSB is ignored.

Send

An RPN is sent whenever an operation that changes the parameter assigned to the RPN is performed.

Pitch Bend Sensitivity

RPN MSB = 00H
RPN LSB = 00H
Data Entry MSB = mmH
mm .....Pitch Bend Sensitivity = 00H to 18H (0 to 24 semitones)

Recognition

The data entry LSB is always ignored.

Send

When accompaniment data MIDI OUT is turned on, the Pitch Bend Sensitivity value is sent when accompaniment starts.

Master Fine Tuning

RPN MSB = 00H
RPN LSB = 01H
Data Entry MSB = mmH
Data Entry LSB = llH
mm, ll... Master Fine Tuning = 00 00H to 40H 00H to 7FH 7FH (–100 to 0 to +99.99 cents)

Send

The RPN message for Master Fine Tuning is sent when you change the Fine Tune parameter in the mixer Mode.

Master Coarse Tuning

RPN MSB = 00H
RPN LSB = 02H
Data Entry MSB = mmH
mm .....Master Coarse Tuning = 28H to 40H to 58H (–24 to 0 to +24 semitones)

Recognition

The data entry LSB is always ignored.

Send

The RPN message for Master Coarse Tuning is sent when you change the Coarse Tune parameter in the mixer Mode.

RPN Null

RPN MSB = 7FH
RPN LSB = 7FH

Recognition

Once an RPN Null is sent, all received data entry MSBs and LSBs are ignored until another RPN message other than RPN Null or an NRPN message is received.

Send

This message cannot be sent.

Program Change

Format

Byte 1	Byte 2
CnH	ppH

pp .....Program Number = 00H to 7FH

Recognition
When a Bank Select MSB value other than 00H is received by the drum part at the same time as the program change message, that value is ignored and program change is performed as if the value were 00H.

Send
Program Change messages are sent when you select a tone on the instrument.

Channel Pressure

Format

Byte 1	Byte 2
DnH	vvH

vv.....Pressure Value = 00H to 7FH

Recognition
Use System Exclusive messages to select a type of channel pressure.

Send
This message cannot be sent.

Pitch Bend Change

Format

Byte 1	Byte 2	Byte 3
EnH	llH	mmH

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
ll.....Pitch Bend Change LSB = 00H to 7FH
mm .....Pitch Bend Change MSB = 00H to 7FH

Recognition

- The value llH mmH is 00H 00H at the lowest pitch, 00H 40H at mid-pitch, and 7FH 7FH at the highest pitch.
- You have to set both the LSB and MSB together to form a 14-bit value and make a Pitch Bend Change message recognized by the instrument.

Send
This message cannot be sent.

Channel Mode Message

All Sound Off

Format

Byte 1	Byte 2	Byte 3
BnH	78H	00H

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)

Recognition
Receipt of this message immediately mutes all tones playing over the MIDI channels.

Send
This message cannot be sent.

MIDI Data Format

Reset All Controller

Format

Byte 1	Byte 2	Byte 3
BnH	79H	00H

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)

Recognition

Receipt of the Reset All Controller message causes the following controllers to be reset.

Controller Name	Reset Value
Polyphonic Key Pressure	vvH = 00H
Modulation Wheel	vvH = 00H
Expression Controller	vvH = 7FH
Hold 1	vvH = 00H
Portamento	vvH = 00H
Sostenuto	vvH = 00H
Soft	vvH = 00H
NRPN	msb = 7FH, lsb = 7FH
RPN	msb = 7FH, lsb = 7FH
Channel Pressure	vvH = 00H
Pitch Bend Change	llH mmH = 00H 40H

Send

The Reset All Controller message is sent whenever you change modes on the instrument (such as switching from the Combination Mode to the mixer Mode).

All Note Off

Format

Byte 1	Byte 2	Byte 3
BnH	7BH	00H

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)

Recognition

Receipt of the All Note Off message mutes all tones being played by data received over the MIDI channels (note off). If Hold 1 or Sostenuto is turned on when the All Note Off message is received, notes are sustained in accordance with the corresponding pedal operation.

Send

This message cannot be sent.

Omni Mode Off

Format

Byte 1	Byte 2	Byte 3
BnH	7CH	00H

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)

Recognition

Receipt of an Omni Mode Off message does not turn off the instrument Omni Mode. Receipt of an Omni Mode Off message is treated as an All Note Off message.

Send

This message cannot be sent.

Omni Mode On

Format

Byte 1	Byte 2	Byte 3
BnH	7DH	00H

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)

Recognition

Receipt of an Omni Mode On message does not turn on the instrument Omni Mode. Receipt of an Omni Mode On message is treated as an All Note Off message.

Send

This message cannot be sent.

Mono Mode On

Format

Byte 1	Byte 2	Byte 3
BnH	7EH	vvH

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)
vv.....Number of Mono Mode Channels = 00H to 10H

Recognition
Receipt of a Mono Mode On message does not turn on the instrument Mono Mode. Receipt of a Mono Mode On message is treated as an All Sound Off message.

Send
This message cannot be sent.

Poly Mode On

Format

Byte 1	Byte 2	Byte 3
BnH	7FH	00H

n.....Voice Channel Number = 0H to FH (Ch1 to Ch16)

Receive
Receipt of a Poly Mode On message by the instrument sets Channel n to Mode 3 and is processed as if an All Sound Off message and All Note Off message were received.

Send
This message cannot be sent.

System Messages

System Real Time Message

Active Sensing

Format

Byte 1
FEH

Receive
If no message is received within 400msec after the Active Sensing message is received, the All Sound Off, All Note Off, and Reset Controller procedures are performed.

Send
This message cannot be sent.

Timing Clock

Format

Byte 1
F8H

Recognition
This message cannot be received.

Send
This message is sent during auto accompaniment and song playback while the instrument's "Real Time Message Out" is turned on.

Start

Format

Byte 1
FAH

Recognition
This message cannot be received.

Send
This message is sent when auto accompaniment and song playback starts while the instrument's "Real Time Message Out" is turned on.

Stop

Format

Byte 1
FCH

Recognition
This message cannot be received.

Send
This message is sent when auto accompaniment and song playback ends while the instrument's "Real Time Message Out" is turned on.

System Common Message

The instrument does not sends/recognizes System Common messages.

Universal System Exclusive Message

GM System On

Format
F0H 7EH 7FH 09H 01H F7H

Send
This message cannot be sent.

Reverb Parameters (Reverb Type Setting)

Format
F0 7F 7F 04 05 01 01 01 01 01 pp vv F7

Reverb Type :
pp = 0 ;
vv = 0 : Room1
= 1 : Room2
= 2 : Room3
= 3 : Hall1
= 4 : Hall2
= 6 : Delay
= 7 : Pan Delay
= 8 : Stage

Send
This message is sent when a reverb switch operation or other reverb type setting operation is performed.

Receive
Receipt of this message sets the reverb type.

Chorus Parameters (Chorus Type Setting)

Format
F0 7F 7F 04 05 01 01 01 01 02 pp vv F7

Reverb Type :
pp = 0 ;
vv = 0 : Chorus1
= 1 : Chorus2
= 2 : Chorus3
= 3 : Chorus4
= 4 : F-backChorus
= 6 : Flanger
= 7 : Short Delay
= 8 : ShortDelayFB

Send
This message is sent when a chorus switch operation or other chorus type setting operation is performed.

Receive
Receipt of this message sets the chorus type.

Other

The following shows MIDI send/receive conditions for each part.

Mode	IN	OUT
Initial screen	○	○
Music Library	×	×
Sequencer	○*1	○
Disk	○*2	○
Demo	×	×
Demo 2	×	×

*1. Cannot be recorded.
*2. Sounds only (cannot be saved, loaded, etc.)

Master Volume

Format
F0H 7FH 7FH 04H 01H llH mmH F7H

ll.....Master Volume LSB
mm.....Master Volume MSB

Recognition
The instrument always receives this message.

Send
This message cannot be sent.

System Exclusive Message

F0 44 7E 02 00 [SysExDevID] 40 20 05 0D 00 00 2F 00 00 00 00 il ih 04 00 pp 07 vl vh F7

[SysExDevID] : System Exclusive Device ID : 00H to 1FH, 7FH

The system exclusive device ID is used to identify devices. A message is ignored if the device ID being sent does not match the ID of the receiving device. 7FH is a universal device ID, and messages with this ID are accepted unconditionally by all devices.

* The explanations for this device are all presented using the default system exclusive device ID of 10H or the universal device ID of 7FH.

il : Parameter ID Low
ih : Parameter ID High
pp : Parameters required for part settings
vl : 7bit Low Data :
vh : 7bit High Data : Data lengths up to 14 bits are supported.

DSP Type

F0 44 7E 02 00 10 40 20 05 0D 00 00 2F 00 00 00 00 01 00 04 00 00 07 vl 00 F7

vl = 00 : Reflection
vl = 01 : Gate Reverb
vl = 02 : Chorus
vl = 03 : Ensemble
vl = 04 : Delay
vl = 05 : Cross Delay
vl = 06 : Phaser
vl = 07 : Flanger
vl = 08 : Loudness
vl = 09 : Tremolo
vl = 0A : AutoPan
vl = 0B : Rotary
vl = 0C : Distortion
vl = 0D : Auto Wah
vl = 0E : Ring Mod.
vl = 0F : Lo-Fi

Send
This message is sent when a DSP switch operation or other DSP type switching operation is performed.

Receive
Receipt of this message switches the DSP type.

DSP On/Off

F0 44 7E 02 00 10 40 20 05 0D 00 00 2F 00 00 00 00 02 00 04 00 00 07 vl 00 F7

vl = 0 : Off
vl = 1 : On

Send
This message is sent when a DSP switch operation or other DSP function on/off operation is performed.

Receive
Receipt of this message turns DSP on or off.

DSP Volume

F0 44 7E 02 00 10 40 20 05 0D 00 00 2F 00 00 00 00 03 00 04 00 00 07 vl 00 F7

vl = 0 to 7F :

Send
This message is sent when a function switch operation or other DSP volume setting operation is performed.

Receive
Receipt of this message changes the DSP volume setting.

DSP Pan

F0 44 7E 02 00 10 40 20 05 0D 00 00 2F 00 00 00 00 04 00 04 00 00 07 vl 00 F7

Insertion Pan Right Level : Insertion effect pan-pot

vl = 0 to 7F : Value is offset by 40.

Send
This message is sent when a function switch operation or other DSP pan setting operation is performed.

Receive
Receipt of this message changes the DSP pan setting.

DSP Chorus Send Level

F0 44 7E 02 00 10 40 20 05 0D 00 00 2F 00 00 00 00 05 00 04 00 00 07 vl 00 F7

vl = 0 to 7F :

Send
This message is sent when a function switch operation or other DSP chorus send level setting operation is performed.

Receive
Receipt of this message changes the DSP chorus send level setting.

DSP Reverb Send Level

F0 44 7E 02 00 10 40 20 05 0D 00 00 2F 00 00 00 00 06 00 04 00 00 07 vl 00 F7

vl = 0 to 7F :

Send
This message is sent when a function switch operation or other DSP reverb send level setting operation is performed.

Receive
Receipt of this message changes the DSP reverb send level setting.

Keyboard/Song Volume

F0 44 7E 02 00 10 40 20 05 0D 00 00 2F 00 00 00 00 0D 00 04 00 00 07 vl 00 F7

vl = 0 to 7F :

Send
This message is sent when a keyboard/song volume knob operation or other keyboard/song volume setting operation is performed.

Receive
Receipt of this message changes the keyboard/song volume setting.

Part DSP On/Off

F0 44 7E 02 00 10 40 20 05 0D 00 00 2F 00 00 00 00 10 00 04 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H to 0FH , Group B : 10H to 1FH)
vl = 0 : Off
vl = 1 : On

Send
This message is sent when a mixer or other part DSP on/off operation is performed.

Receive
Receipt of this message changes the part DSP on/off setting.

Master Tune

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 10 00 08 00 00 00 0F vl vh 00 F7

Range
0018H : –100.0[cent] : Lower Limit : Reference Setting Values vl = 18H, vh = 00H : A_4 = 415.3Hz
0400H : 0.0[cent] : Center Value : Reference Setting Values vl = 00H, vh = 08H : A_4 = 440Hz
07E8H : +100.0[cent] : Upper Limit : Reference Setting Values vl = 68H, vh = 0FH : A_4 = 466.2Hz

Send
This message is sent when a function switch operation or other master tune setting operation is performed.

Receive
Receipt of this message changes the master tune setting.

Master Key Shift (Transpose)

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 11 00 08 00 00 00 07 vl 00 F7

Range
28H : –24 [semitones] : Lower limit
40H : 0 [semitones] : Center value
58H : +24 [semitones] : Upper limit

Send
This message is sent when a transpose operation or other master key shift setting operation is performed. The value is offset by –1 when baroque pitch is turned on.

Receive
Receipt of this message sets the master key shift.

* A transpose switch operation on this device sends a value in the range of 34H to 4CH.

Master Pan

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 13 00 08 00 00 00 07 vl 00 F7

Range
00H : –64 (left)
40H : 0 (center)
7FH : +64 (right)

Send
This message is sent when a function switch operation or other master pan setting operation is performed.

Receive
Receipt of this message sets the master pan.

* Note that 00H = 01H.

Stretch Tune (Tune Function)

F0 44 7E 02 00 10 40 20 05 0D 00 00 2F 00 00 00 00 00 00 04 00 00 07 vl 00 F7

vl = 00H : Off
vl = 01H : On

Send
This message is sent when a function switch operation or other stretch tune setting operation is performed.

Receive
Receipt of this message changes the stretch tune setting.

Scale Tune

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 77 00 48 00 00 pp 00 00 0C 07

\ 00V00 00 V01V01 00 V02V02 00 V03V03 00 V04V04 00 V05V05 00 V06V06 00 V07V07 00 V08V08 00 V09V09 00 V10V10 00 V11V11 00 F7

pp = Part : 0 to 1F (Group A : 00H to 0FH , Group B : 10H to 1FH)

Range

V00V00 - V11V11 = 0000 : −64 (cents)
V00V00 - V11V11 = 4000 : 0 (cents)
V00V00 - V11V11 = 7F00 : +63 (cents)

This message performs fine-tuning of each of the 12 notes making up the scale.
This function can be used for tuning of equal temperament and just major intonation.

key	C	C♯	D	D♯	E	F	F♯	G	G♯	A	B♭	B
ScaleNum	0	1	2	3	4	5	6	7	8	9	10	11

Tuning settings can be performed using scale number 00 through 11.
The center value is 40H.

Send
This message is sent when a scale setting operation or other scale tune operation is performed.

Receive
Receipt of this message changes the scale tune setting.

* The following are the messages sent by this device for each temperament.

Example, Ground note: C, Tuning: A, ± 0 (center value)

Equal
F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 77 00 48 00 00 10 00 00 0C 07
40 00 40 00 40 00 40 00 40 00 40 00 40 00 40 00 40 00 40 00 40 00 40 00 F7

JustMaj
F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 77 00 48 00 00 10 00 00 0C 07
50 00 33 00 54 00 60 00 42 00 4E 00 31 00 52 00 35 00 40 00 62 00 44 00 F7

JustMin
F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 77 00 48 00 00 10 00 00 0C 07
50 00 71 00 54 00 60 00 42 00 4E 00 6F 00 52 00 5E 00 40 00 62 00 44 00 F7

Pythago
F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 77 00 48 00 00 10 00 00 0C 07
3A 00 48 00 3E 00 34 00 42 00 38 00 46 00 3C 00 4A 00 40 00 36 00 44 00 F7

Mean
F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 77 00 48 00 00 10 00 00 0C 07
4A 00 32 00 43 00 54 00 3C 00 4D 00 35 00 47 00 2F 00 40 00 51 00 39 00 F7

Werck
F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 77 00 48 00 00 10 00 00 0C 07
4C 00 42 00 44 00 46 00 42 00 4A 00 40 00 48 00 44 00 40 00 48 00 44 00 F7

Kirnber
F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 77 00 48 00 00 10 00 00 0C 07
4A 00 40 00 43 00 44 00 3C 00 48 00 40 00 47 00 42 00 40 00 46 00 3E 00 F7

Reverb Level

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 03 00 08 00 00 00 07 vl 00 F7

This message sets the reverb tone return (output) level.

value	level
00H	0 (%)
40H	100 (%)
7FH	200 (%)

Send
This message is sent when a reverb switch or other reverb level setting operation is performed.

Receive
Receipt of this message changes the reverb level setting.

* The following are messages sent by this device for reverb switch operations.

vl = 00H : Off
vl = 40H : On

Chorus Level

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 09 00 08 00 00 00 07 vl 00 F7

This message sets the chorus tone return (output) level.

value	level
00H	0 (%)
40H	100 (%)
7FH	200 (%)

Send
This message is sent when a chorus switch or other chorus level setting operation is performed.

Receive
Receipt of this message changes the chorus level setting.

* The following are messages sent by this device for chorus switch operations.

vl = 00H : Off
vl = 40H : On

Part On/Off (Note Message Receive On/Off Setting)

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 20 00 08 00 00 pp 00 vl F7

0H : OFF
1H : ON

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)
vl = 00H : Off
vl = 01H : On

Send
This message is sent when a mixer operation or other part on/off setting operation is performed.

Receive
This message makes part on/off settings.

* When a mixer operation is performed on this device, only the PartB : 10H – 1FH message is sent, regardless of the A/B Group selection.

Channel, Polyphonic After Touch Receive Operation

* This message is not sent by this device. This device is capable of receiving this message only.

NOTE

- Rx.Caf and Tx.Paf are turned on by default the first time you turn on device power after initializing it. This means that Tx.Caf and Rx.Paf can be turned off only by receipt of the prescribed messages.

Channel After Touch Receive On/Off

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 1C 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)
vl = 00H : Off
vl = 01H : On

Polyphonic After Touch Receive On/Off

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 1F 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)
vl = 00H : Off
vl = 01H : On

Channel After Touch Effect

Channel After Touch Dependent Pitch Variation Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 47 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 28H : –24 (semitones)
vl = 40H : 0 (semitones)
vl = 58H : +24 (semitones)

Channel After Touch Dependent Filter Cutoff Variation Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 48 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 00H : –9600 (cents)
vl = 40H : 0 (cents)
vl = 7FH : +9600 (cents)

Channel After Touch Dependent Amp Variation Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 49 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 00H : –100.0 (%)
vl = 40H : 0.0 (%)
vl = 7FH : +100.0 (%)

Channel After Touch Dependent Lfo1 Frequency Variation Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 4A 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 00H : –10.0 (Hz)
vl = 40H : 0.0 (Hz)
vl = 7FH : +10.0 (Hz)

Channel After Touch Dependent Lfo1 Pitch Modulation Depth Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 4B 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 00H : 0 (cents)
vl = 7FH : 600 (cents)

Channel After Touch Dependent Lfo1 Filter Cutoff Modulation Depth Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 4C 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 00H : 0 (cents)
vl = 7FH : 2400 (cents)

Channel After Touch Dependent Lfo1 Amplifier Amplitude Modulation Depth Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 4D 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 00H : 0 (%)
vl = 7FH : 100 (%)

Channel After Touch Dependent Lfo2 Frequency Variation Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 4E 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 00H : –10.0 (Hz)
vl = 40H : 0.0 (Hz)
vl = 7FH : +10.0 (Hz)

Channel After Touch Dependent Lfo2 Pitch Modulation Depth Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 4F 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 00H : 0 (cents)
vl = 7FH : 600 (cents)

Channel After Touch Dependent Lfo2 Filter Cutoff Modulation Depth Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 50 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 00H : 0 (cents)
vl = 7FH : 2400 (cents)

Channel After Touch Dependent Lfo2 Amp Amplitude Modulation Depth Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 51 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 00H : 0 (%)
vl = 7FH : 100 (%)

Polyphonic After Touch Effect

Polyphonic After Touch Dependent Pitch Variation Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 53 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 28H : –24 (semitones)
vl = 40H : 0 (semitones)
vl = 58H : +24 (semitones)

Polyphonic After Touch Dependent Filter Cutoff Variation Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 54 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 00H : –9600 (cents)
vl = 40H : 0 (cents)
vl = 7FH : +9600 (cents)

Polyphonic After Touch Dependent Amp Variation Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 55 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 00H : –100.0 (%)
vl = 40H : 0.0 (%)
vl = 7FH : +100.0 (%)

Polyphonic After Touch Dependent Lfo1 Frequency Variation Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 56 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 00H : –10.0 (Hz)
vl = 40H : 0.0 (Hz)
vl = 7FH : +10.0 (Hz)

Polyphonic After Touch Dependent Lfo1 Pitch Modulation Depth Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 57 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 00H : 0 (cents)
vl = 7FH : 600 (cents)

Polyphonic After Touch Dependent Lfo1 Filter Cutoff Modulation Depth Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 58 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 00H : 0 (cents)
vl = 7FH : 2400 (cents)

Polyphonic After Touch Dependent Lfo1 Amp Amplitude Modulation Differential Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 59 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 00H : 0 (%)
vl = 7FH : 100 (%)

Polyphonic After Touch Dependent Lfo2 Frequency Variation Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 5A 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 00H : –10.0 (Hz)
vl = 40H : 0.0 (Hz)
vl = 7FH : +10.0 (Hz)

Polyphonic After Touch Dependent Lfo2 Pitch Modulation Depth Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 5B 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 00H : 0 (cents)
vl = 7FH : 600 (cents)

Polyphonic After Touch Dependent Lfo2 Filter Cutoff Modulation Depth Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 5C 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 00H : 0 (cents)
vl = 7FH : 2400 (cents)

Polyphonic After Touch Dependent Lfo2 Amp Amplitude Modulation Depth Setting

F0 44 7E 02 00 10 40 20 01 00 00 00 2F 00 00 00 00 5D 00 08 00 00 pp 07 vl 00 F7

pp = Part : 0 to 1F (Group A : 00H – 0FH , Group B : 10H – 1FH)

Range
vl = 00H : 0 (%)
vl = 7FH : 100 (%)

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Model **PL-40R**

MIDI Implementation Chart

Version: 1.0

Function		Transmitted	Recognized	Remarks
Basic	**Default**	1 - 16	1 - 16	
Channel	**Changed**	1 - 16	1 - 16	
Mode	**Default**	Mode 3	Mode 3	
	Messages	X	X	
	Altered	* * * * * * * *	* * * * * * * *	
Note		21 - 108	0 - 127	Keyboard
Number:	**True voice**	* * * * * * * *	0 - 127*1	*1 See Note Table.
Velocity	**Note ON**	O 9nH v = 1 - 127	O 9nH v = 1 - 127	
	Note OFF	X 8nH v = 64	X 9nH v = 0, 8nH v = XX	XX = no relation
After	**Key's**	X	O	
Touch	**Ch's**	X	O	
Pitch Bender		X	O	
	0, 32	O	O	Bank select
	1	X	O	Modulation
	5	X	O	Portament time
	6, 38	O	O	Data entry
	7	O	O	Volume
	10	O	O	Pan
Control	**11**	X	O	Expression
Change	**64**	O	O	Hold1
	65	X	O	Portamento
	66	O*2	O	Sostenuto
	67	O*2	O	Soft pedal

71	X	O	Resonance
72	X	O	Release Time
73	X	O	Attack Time
74	X	O	Brightness
84	X	O	Portament Control
91	O	O	Reverb send
93	O	O	Chorus send
98, 99	O	O	NRPN LSB, MSB
100, 101	O	O	RPN LSB, MSB
120	X	O	All sound off
121	O	O	Reset all controller
Program Change : True #	O 0 - 127 ＊ ＊ ＊ ＊ ＊ ＊ ＊	O 0 - 127 ＊ ＊ ＊ ＊ ＊ ＊ ＊	
System Exclusive	O	O	
System Common : Song Pos	X	X	
: Song Sel	X	X	
: Tune	X	X	
System Real Time : Clock	O	X	
: Commands	O	X	
Aux : Local ON/OFF	X	X	
: All notes OFF	X	O	
Messages : Active Sense	X	O	
: Reset	X	X	
Remarks	*2 **In accordance with pedal**		

Mode 1 : OMNI ON, POLY
Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY
Mode 4 : OMNI OFF, MONO

O : Yes
X : No

This recycle mark indicates that the packaging conforms to the environmental protection legislation in Germany.

CASIO

CASIO COMPUTER CO.,LTD.
6-2, Hon-machi 1-chome
Shibuya-ku, Tokyo 151-8543, Japan

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