YAMAHA

DIGITAL PIANO

P-95B / P-95S

Data List
Daten-Liste
Liste des données
Lista de datos

EN
DE
FR
ES

MIDI Data Format / MIDI-Datenformat / Format des données MIDI / Formato de datos MIDI

1. NOTE ON/OFF

Data format: [9nH] -> [kk] -> [vv]

9nH = Note ON/OFF event (n = channel number)
kk = Note number (Transmit: 09H–78H = A-2–C8 / Receive: 00H–7FH = C-2–G8)
vv = Velocity (Key ON = 01H–7FH, Key OFF = 00H)

Data format: [8nH] -> [kk] -> [vv] (reception only)

8nH = Note OFF event (n = channel number)
kk = Note number: 00H–7FH = C-2–G8)
vv = Velocity

2. CONTROL CHANGE

Data format: [BnH] -> [cc] -> [vv]

BnH = Control change (n = channel number)
cc = Control number
vv = Data Range

(1) Bank Select

ccH	Parameter	Data Range (vvH)
00H	Bank Select MSB	00H:Normal
20H	Bank Select LSB	00H...7FH

Bank selection processing does not occur until receipt of next Program Change message.

(2) Main Volume

ccH	Parameter	Data Range (vvH)
07H	Volume MSB	00H...7FH

(3) Expression (reception only)

ccH	Parameter	Data Range (vvH)
0BH	Expression MSB	00H...7FH

(4) Sustain

ccH	Parameter	Data Range (vvH)
40H	Sustain MSB	00H...7FH

(5) Sostenuto

ccH	Parameter	Data Range (vvH)
42H	Sostenuto	00H...3FH:off, 40H...7FH:on

(6) Soft Pedal

ccH	Parameter	Data Range (vvH)
43H	Soft Pedal	00H...3FH:off, 40H...7FH:on

(7) Effect1 Depth (Reverb Send Level)

ccH	Parameter	Data Range (vvH)
5BH	Effect1 Depth	00H...7FH

Adjusts the reverb send level.

(8) Effect4 Depth (Variation Effect Send Level)

ccH	Parameter	Data Range (vvH)
5EH	Effect4 Depth	00H...7FH

(9) RPN

65H	RPN	MSB
64H	RPN	LSB
06H	Data Entry	MSB
26H	Data Entry	LSB
60H	Data	Increment
61H	Data	Decrement

* Parameters that are controllable with RPN:
- Coarse Tune
- Fine Tune
- Pitch Bend Range

3. MODE MESSAGES

Data format: [BnH] -> [cc] -> [vv]

BnH = Control event (n = channel number)
cc = Control number
vv = Data Range

(1) All Sound Off

ccH	Parameter	Data Range (vvH)
78H	All Sound Off	00H

(2) Reset All Controllers

ccH	Parameter	Data Range (vvH)
79H	Reset All Controllers	00H

Resets controllers as follows.

Controller	Value
Expression	127 (max)
Sustain Pedal	0 (off)
Sostenuto	0 (off)
Soft Pedal	0 (off)

(3) Local Control (reception only)

ccH	Parameter	Data Range (vvH)
7AH	Local Control	00H (off), 7FH (on)

(4) All Notes Off

ccH	Parameter	Data Range (vvH)
7BH	All Notes Off	00H

Switches OFF all the notes that are currently ON on the specified channel. Any notes being held by the sustain or sostenuto pedal will continue to sound until the pedal is released.

(5) Omni Off (reception only)

ccH	Parameter	Data Range (vvH)
7CH	Omni Off	00H

Same processing as for All Notes Off.

(6) Omni On (reception only)

ccH	Parameter	Data Range (vvH)
7DH	Omni On	00H

Same processing as for All Notes Off.

(7) Mono (reception only)

ccH	Parameter	Data Range (vvH)
7EH	Mono	00H

Same processing as for All Sound Off.

(8) Poly (reception only)

ccH	Parameter	Data Range (vvH)
7FH	Poly	00H

Same processing as for All Sound Off.

- When Control Change is turned OFF, Control Change messages will not be transmitted or received.
- Local on/off, OMNI on/off are not transmitted. (The appropriate note off number is supplied with “All Note Off” transmission).
- When a voice bank MSB/LSB is received, the number is stored in the internal buffer regardless of the received order, then the stored value is used to select the appropriate voice when a program change message is received.
- Poly mode is always active. This mode will not change when the instrument receives a MONO/POLY mode message.

4. PROGRAM CHANGE

Data format: [CnH] -> [ppH]

CnH = Program event (n = channel number)
ppH = Program change number
P.C.#=Program Change number

Voice Name	MSB	LSB	P.C.#
Grand Piano 1	0	122	1
Grand Piano 2	0	112	1
E. Piano 1	0	122	6
E. Piano 2	0	122	5
Jazz Organ	0	122	17
Pipe Organ	0	123	20
Strings	0	122	49
Choir	0	122	53
Harpsichord	0	122	7
Vibraphone	0	122	12

- When program change reception is turned OFF, no program change data is transmitted or received.
- When you specify a program change as a number in the range of 0–127, specify a number that is one less than the program change number listed above. For example, to specify program change number 1, you would specify a value of 0.

5. Pitch Bend Change (reception only)

[EnH] -> [ccH] -> [ddH]
ccH = LSB
ddH = MSB

6. SYSTEM REALTIME MESSAGES

[rrH]
F8H: Timing clock
FAH: Start
FCH: Stop
FEH: Active sensing

Data	Transmission	Reception
F8H	Transmitted every 96 clocks	Received as 96-clock tempo timing when MIDI clock is set to External.
FAH	Song start	Song start Not received when the MIDI clock is set to Internal.
FCH	Song stop	Song stop Not received when the MIDI clock is set to Internal.
FEH	Transmitted every 200 milliseconds	If a signal is not received via MIDI for more than 400 milliseconds, the same processing will take place for All Sound Off, All Notes Off and Reset All Controllers as when those signals are received.

- If an error occurs during MIDI reception, the Sustain, Sostenuto, and Soft effects for all channels are turned off and an All Note Off occurs.

7. SYSTEM EXCLUSIVE MESSAGES (Universal System Exclusive)

(1) Universal Realtime Message

Data format: [F0H] -> [7FH] -> [XnH] -> [04H] -> [01H] -> [llH] -> [mmH] -> [F7H]

MIDI Master Volume

- Simultaneously changes the volume of all channels.
- When a MIDI master volume message is received, the volume only has affect on the MIDI receive channel, not the panel master volume.

F0H = Exclusive status
7FH = Universal Realtime
7FH = ID of target device
04H = Sub-ID #1=Device Control Message
01H = Sub-ID #2=Master Volume
//H = Volume LSB
mmH = Volume MSB
F7H = End of Exclusive

or

F0H = Exclusive status
7FH = Universal Realtime
XnH = When received, n=0–F.
X = irrelevant
04H = Sub-ID #1=Device Control Message
01H = Sub-ID #2=Master Volume
//H = Volume LSB
mmH = Volume MSB
F7H = End of Exclusive

(2) Universal Non-Realtime Message (GM On)

General MIDI Mode On

Data format: [F0H] -> [7EH] -> [XnH] -> [09H] -> [01H] -> [F7H]

F0H = Exclusive status
7EH = Universal Non-Realtime
7FH = ID of target device
09H = Sub-ID #1=General MIDI Message
01H = Sub-ID #2=General MIDI On
F7H = End of Exclusive

or

F0H = Exclusive status
7EH = Universal Non-Realtime
XnH = When received, n=0–F.
X = irrelevant
09H = Sub-ID #1=General MIDI Message
01H = Sub-ID #2=General MIDI On
F7H = End of Exclusive

When the General MIDI mode ON message is received, the MIDI system will be reset to its default settings.
This message requires approximately 50ms to execute, so sufficient time should be allowed before the next message is sent.

8. SYSTEM EXCLUSIVE MESSAGES (XG Standard)

(1) XG Native Parameter Change

Data format: [F0H] -> [43H] -> [1nH] -> [4CH] -> [hhH] -> [mmH] -> [*ll*H] -> [ddH] -> [F7H]

F0H = Exclusive status
43H = YAMAHA ID
1nH = When received, n=0–F.
When transmitted, n=0.
4CH = Model ID of XG
hhH = Address High
mmH = Address Mid
*ll*H = Address Low
ddH = Data
|
F7H = End of Exclusive

Data size must match parameter size (2 or 4 bytes).
When the XG System On message is received, the MIDI system will be reset to its default settings.
The message requires approximately 50ms to execute, so sufficient time should be allowed before the next message is sent.

(2) XG Native Bulk Data (reception only)

Data format: [F0H] -> [43H] -> [0nH] -> [4CH] -> [aaH] -> [bbH] -> [hhH] -> [mmH] -> [*ll*H] ->[ddH] ->...-> [ccH] -> [F7H]

F0H = Exclusive status
43H = YAMAHA ID
0nH = When received, n=0–F.
When transmitted, n=0.
4CH = Model ID of XG
aaH = ByteCount
bbH = ByteCount
hhH = Address High
mmH = Address Mid
*ll*H = Address Low
ddH = Data
| |
| |
ccH = Check sum
F7H = End of Exclusive

- Receipt of the XG SYSTEM ON message causes reinitialization of relevant parameters and Control Change values. Allow sufficient time for processing to execute (about 50 msec) before sending the NP-30/YNP-25 another message.
- XG Native Parameter Change message may contain two or four bytes of parameter data (depending on the parameter size).
- For information about the Address and Byte Count values, refer to Table 1 below. Note that the table's Total Size value gives the size of a bulk block. Only the top address of the block (00H, 00H, 00H) is valid as a bulk data address.

9. SYSTEM EXCLUSIVE MESSAGES (Digital Piano MIDI Format)

Data format: [F0H] -> [43H] -> [73H] -> [xxH] -> [nnH] -> [F7H]

F0H = Exclusive status
43H = Yamaha ID
73H = Digital Piano ID
01H = Product ID (digital piano common)
xxH = Substatus
nn control
02H Internal MIDI clock
03H External MIDI clock
06H Bulk Data (the bulk data follows 06H)
F7H = End of Exclusive

10. SYSTEM EXCLUSIVE MESSAGES (Special Control)

Data format: [F0H] -> [43H] -> [73H] -> [7FH] -> [4BH] -> [11H] -> [0nH] -> [ccH] -> [vvH] -> [F7H]

F0H = Exclusive status
43H = Yamaha ID
73H = Digital Piano ID
7FH = Extended Product ID
4BH = Product ID
11H = Special control
0nH = Control MIDI change (n=channel number)
cc = Control number
vv = Value
F7H = End of Exclusive

Control	Channel	ccH	vvH
Channel Detune	ch: 00H–0FH	43H	(Sets the Detune value for each channel) 00H–7FH
Voice Reserve	ch: 00H–0FH	45H	00H : Reserve off 7FH : on*

* When Volume, Expression is received for Reserve On, they will be effective from the next Key On. Reserve Off is normal.

11. SYSTEM EXCLUSIVE MESSAGES (Others)

Data format: [F0H] -> [43H] -> [1nH] -> [27H] -> [30H] -> [00H] -> [00H] -> [mmH] -> [*ll*H] -> [ccH] -> [F7H]

Master Tuning (XG and last message priority) simultaneously changes the pitch of all channels.

F0H = Exclusive Status
43H = Yamaha ID
1nH = When received, n=0–F.
When transmitted, n=0.
27H = Model ID of TG100
30H = Sub ID
00H =
00H =
mmH = Master Tune MSB
*ll*H = Master Tune LSB
ccH = irrelevant (under 7FH)
F7H = End of Exclusive

<Table 1>

MIDI Parameter Change table (SYSTEM)

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)
00 00 00	4	020C–05F4(*1)	MASTER TUNE	-50–+50[cent]	00 04 00 00
01				1st bit 3–0 → bit 15–12	400
02				2nd bit 3–0 → bit 11–8	
03				3rd bit 3–0 → bit 7–4	
				4th bit 3–0 → bit 3–0	
04	1	00–7F	MASTER VOLUME	0–127	7F
7E		00	XG SYSTEM ON	00=XG sytem ON	
7F		00	RESET ALL PARAMETERS	00=ON (receive only)	

TOTAL SIZE 07

*1: Values lower than 020CH select -50 cents. Values higher than 05F4H select +50 cents.

<Table 2>

MIDI Parameter Change table (EFFECT 1)

Refer to the “Effect MIDI Map” for a complete list of Reverb, Chorus and Variation type numbers.

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)
02 01 00	2	00–7F	REVERB TYPE MSB	Refer to Effect MIDI Map	01 (=HALL1)
		00–7F	REVERB TYPE LSB	00 : basic type	00
02 01 40	2	00–7F	VARIATION TYPE MSB	Refer to Effect MIDI Map	00 (=Effect off)
		00–7F	VARIATION TYPE LSB	00 : basic type	00

• “VARIATION” refers to the EFFECT on the panel.

<Table 3>

MIDI Parameter Change table (MULTI PART)

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value (H)
08 nn 11	1	00–7F	DRY LEVEL	0–127	7F

nn = Part Number

• Effect MIDI Map

REVERB

	MSB	LSB
ROOM	02H	10H
HALL 1	01H	10H
HALL 2	01H	11H
STAGE	03H	10H
OFF	00H	00H

EFFECT

	MSB	LSB
CHORUS	42H	10H
PHASER	48H	10H
TREMOLO	46H	10H
ROTARY SP	47H	10H
OFF	00H	00H

MIDI Implementation Chart / MIDI-Implementationstabelle / MIDI Implementation Chart / Gráfico de implementación MIDI

YAMAHA [Digital Piano] Date :30-APR-2009
Model P-95 MIDI Implementation Chart Version : 1.0

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default	1 - 16	1 - 16	
	Changed	o	o	
Mode	Default	3	3	
	Messages	x	x	
	Altered	**********	x	
Note Number : True voice		0 - 127 **********	0 - 127 0 - 127	
Velocity	Note ON	o 9nH,v=1-127	o 9nH,v=1-127	
	Note OFF	x 9nH,v=0	x	
After Touch	Key's	x	x	
	Ch's	x	x	
Pitch Bend		x	o 0 - 24 semi	
Control Change	0,32	o	o	Bank Select
	1	x	o	Modulation
	7	o	o	Main Volume
	10	x	o	Panpot
	11	o	o	Expression
	6,38	x	o	Data Entry
	64,66,67	o	o	Pedal
	84	x	o	Portamento Control
	91,94	o	o	Effect Depth
	96-97	x	o	RPN Inc,Dec
	100-101	x	o	RPN LSB,MSB
Prog Change : True #		o 0 - 127 **********	o 0 - 127	
System Exclusive		o	o	
Common : Song Pos.		x	x	
: Song Sel.		x	x	
: Tune		x	x	
System : Clock		o	o	
Real Time : Commands		o	o	
: All Sound Off		o	o (120,126,127)	
Aux : Reset All Cntrls		o	o (121)	
: Local ON/OFF		x	o (122)	
Mes- : All Notes OFF		o	o (123-125)	
sages: Active Sense		o	o	
: Reset		x	x	
Notes:				

Mode 1 : OMNI ON , POLY Mode 2 : OMNI ON ,MONO o : Yes
Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF,MONO x : No

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