



# *ARIUS*

**YDP-135**

**MIDI Reference  
MIDI-Referenz  
Référence MIDI  
Referencia MIDI**

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

If you're already very familiar with MIDI, or are using a computer to control your music hardware with computer-generated MIDI messages, the data provided in this section can help you to control this instrument.

Falls Sie bereits mit MIDI vertraut sind oder einen Computer zur Erzeugung von MIDI-Steuermeldungen für die Instrumente verwenden, können Sie sich zur Steuerung des YDP-135 nach den im folgenden Abschnitt aufgeführten Spezifikationen richten.

Si vous êtes très familier avec l'interface MIDI ou si vous utilisez un ordinateur pour commander votre matériel de musique au moyen de messages MIDI générés par ordinateur, les données suivantes vous seront utiles et vous aideront à commander le YDP-135.

Si usted está ya familiarizado con MIDI, o si emplea una computadora para controlar sus aparatos musicales con mensajes MIDI generados por computadora, los datos proporcionados en esta sección le ayudarán a controlar la YDP-135.

## 1. NOTE ON/OFF

Data format: [9nH] → [kkH] → [vvH]

9nH = Note ON/OFF event (n = channel number)

kkH = Note number (Transmit: 09H ~ 78H = A-2 ~ C8 /  
Receive: 00H ~ 7FH = C-2 ~ G8)

vvH = Velocity (Key ON = 01H ~ 7FH, Key OFF = 00H)

Data format: [8nH] → [kkH] → [vvH] (reception only)

8nH = Note OFF event (n = channel number)

kkH = Note number: 00H ~ 7FH = C-2 ~ G8)

vvH = Velocity

## 2. CONTROL CHANGE

Data format: [BnH] → [ccH] → [vvH]

BnH = Control change (n = channel number)

ccH = Control number

vvH = 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) Damper

ccH	Parameter	Data Range (vvH)
-----	-----------	------------------

40H	Damper 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] → [ccH] → [vvH]

BnH = Control event (n = channel number)

ccH = Control number

vvH = 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)
------------	-----------

Damper 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 damper 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 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	0	122	6
Harpichord	0	122	7
Church Organ	0	123	20
Strings	0	122	49

- 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 program change 0.

#### 5. Pitch Bend Change

[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 Damper, Sostenu, 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] → [lIH] → [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

lIH = Volume LSB

mmH = Volume MSB

F7H = End of Exclusive

or

F0H = Exclusive status

7FH = Universal Realtime

XnH = When n is received n=0~F, whichever is received.

X = don't care

04H = Sub-ID #1=Device Control Message

01H = Sub-ID #2=Master Volume

lIH = 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 = don't care

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] → [//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  
 //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] → [//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  
 //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 this instrument 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] → [66H] → [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
Metronome	Always 00H	1BH	00H : off
			01H : –
			02H : 2/4
			03H : 3/4
			04H : 4/4
			05H : 5/4
			06H : 6/4
			7FH : No accent
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] → [lIH] → [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  
 lIH = Master Tune LSB  
 ccH = don't care (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	
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

Function...	Transmitted	Recognized	Remarks
Basic Channel Default Changed	1 1-16	1-16 1-16	
Mode Default Messages Altered	3 x *****	3 x x	
Note Number : True voice	0-127 *****	0-127 0-127	
Velocity Note ON Note OFF	o 9nH,v=1-127 x	o 9nH,v=1-127 x	
After Touch Key's Ch's	x *1 x	x x	
Pitch Bend	x *1	o 0-24 semi	
Control Change 0,32 1 7 10 11 6, 38 64,66,67 84 91,94 96-97 100-101	o x *1 o x *1 x *1 x *1 o o x *1 o o x *1 x *1	o o o o o o o o o o o	Bank Select Modulation Main Volume Panpot Expression Data Entry  Portament Control Effect Depth RPN Inc, Dec RPN LSB, MSB
Prog Change : True #	o 0 - 127 *****	o 0 - 127	
System Exclusive	o	o	
Common : Song Pos. : Song Sel. : Tune	x x x	x x x	
System : Clock Real Time : Commands	o o	o o	
Aux Messages : All Sound Off : Reset All Controllers : Local ON/OFF : All Notes OFF : Active Sense : Reset	o o x o o x	o (120,126,127) o (121) o (122) o (123-125) o x	
Notes:	*1 These Control Change messages are not transmitted via panel operation, but may be transmitted during song playback.		

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

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

o : Yes  
 x : No