

# VIVO SX7 MIDI IMPLEMENTATION

## 1. Received data

### ■ Channel Voice Messages

#### ● Note off

Status	2nd byte	3rd byte
--------	----------	----------

8nH	kkH	ccH
-----	-----	-----

*n*= MIDI channel number: 0H~FH (Ch.1~16)

*kk*= note number: 00H~7FH (0~127)

*cc*= note off velocity: 00H~7FH (0~127)

#### ● Note on

Status	2nd byte	3rd byte
--------	----------	----------

9nH	kkH	vvH
-----	-----	-----

*n*= MIDI channel number: 0H~FH (Ch.1~16)

*kk*= note number: 00H~7FH (0~127)

*vv*= note off velocity: 00H~7FH (0~127)

• Not received when Rx.STATUS= OFF. (Initial value is ON)

### ■ Control Change

#### ● Bank Sound Select (Controller number 0, 32)

Status	2nd byte	3rd byte
--------	----------	----------

BnH	00H	mmH
-----	-----	-----

*n*= MIDI channel number: 0H~FH (Ch.1~16)

*mm*= Bank number MSB: 00H~7FH (Initial value= 00H)

#### ● Modulation (Controller number 1)

Status	2nd byte	3rd byte
--------	----------	----------

BnH	01H	vvH
-----	-----	-----

*n*= MIDI channel number: 0H~FH (Ch.1~16)

*vv*= Modulation depth: 00H~7FH (0~127)

• Not received when Rx.MODULATION= OFF (Initial value is ON).

#### ● Volume (Controller number 7)

Status	2nd byte	3rd byte
--------	----------	----------

BnH	07H	vvH
-----	-----	-----

*n*= MIDI channel number 0H~FH (Ch.1~16)

*vv*= Volume: 00H~7FH (0~127),

• Not received when Rx.VOLUME= OFF (Initial value is ON).

#### ● Panpot (Controller number 10)

Status	2nd byte	3rd byte
--------	----------	----------

BnH	0AH	vvH
-----	-----	-----

*n*= MIDI channel number: 0H~FH (Ch.1~16)

*vv*= pan: 00H~40H~7FH (Left~Center~Right). Initial value= 40H (Center)

• Not received when "Panpot" RX is Off

#### ● Expression (Controller number 11)

Status	2nd byte	3rd byte
--------	----------	----------

BnH	0BH	vvH
-----	-----	-----

*n*= MIDI channel number: 0H~FH (Ch.1~16)

*vv*= Expression: 00H~7FH (0~127), Initial value= 7FH (127)

• Not received when "Expression" RX is Off.

#### ● Hold (Controller number 64)

Status	2nd byte	3rd byte
--------	----------	----------

BnH	40H	vvH
-----	-----	-----

*n*= MIDI channel number: 0H~FH (Ch.1~16)

*vv*= Control value: 00H~7FH (0~127)

• Not received when "Hold" RX is Off.

#### ● Sostenuto (Controller number 66)

Status	2nd byte	3rd byte
--------	----------	----------

BnH	42H	vvH
-----	-----	-----

*n*= MIDI channel number: 0H~FH (Ch.1~16)

*vv*= Control value: 00H~7FH (0~127) 0~63= OFF, 64~127= ON

• Not received when "Sostenuto" RX is Off.

#### ● Soft (Controller number 67)

Status	2nd byte	3rd byte
--------	----------	----------

BnH	43H	vvH
-----	-----	-----

*n*= MIDI channel number: 0H~FH (Ch.1~16)

*vv*= Control value: 00H~7FH (0~127) 0~63= OFF, 64~127= ON

• Not received when "Soft" RX is Off.

#### ● Reverb Send Level (Controller number 91)

Status	2nd byte	3rd byte
--------	----------	----------

BnH	5BH	vvH
-----	-----	-----

*n*= MIDI channel number: 0H~FH (Ch.1~16)

*vv*= Reverb Send Level: 00H~7FH (0~127)

• This message adjusts the Reverb Send Level of each Part.

• Not received when "Reverb" RX is Off.

#### ● Program Change

Status	2nd byte
--------	----------

CnH	ppH
-----	-----

*n*= MIDI channel number: 0H~FH (Ch.1~16)

*pp*= Program number: 00H~7FH (prog.1~prog.128)

• Not received when "PG" RX is Off.

### ● Pitch Bend Change

Status            2nd byte            3rd byte

EnH                lIH                    mmH

*n= MIDI channel number: 0H~FH (Ch.1~16)*

*mm, ll= Pitch Bend value: 00 00H~40 00H~7F 7FH (-8192~0~+8191)*

- Not received when "PB" RX is Off.

### ● AFTERTOUC (Channel Pressure)

Status            2nd byte

DnH                vvH

*n= MIDI channel number: 0H~FH (Ch.1~16)*

*vv= value: 00H~7FH (0~127)*

- Not received when "Aftertouch" RX is Off.
- The Aftertouch will affect to all notes received in that channel.

### ■ Memory RX

Midi Message	Value	Memory
PG	0 ~ 79	NUMBER: 1 ~ 80

- Default MIDI channel is 15

Example:

- to receive Memory 1 send PG=0
- to receive Memory 43 send PG= 42
- Not received when "Memory RX Status" is Off.

### ■ Channel Mode Messages

#### ● All Sounds Off (Controller number 120)

Status            2nd byte            3rd byte

BnH                78H                    00H

*n= MIDI channel number: 0H~FH (Ch.1~16)*

*When the message is received, all notes currently sounding on the corresponding channel will be turned Off.*

#### ● Reset All Controllers (Controller number 121)

Status            2nd byte            3rd byte

BnH                79H                    00H

*n= MIDI channel number: 0H~FH (Ch.1~16)*

- When this message is received, the following controllers will be set to their reset values.

*Controller Reset value:*

*Pitch Bend Change +/-0 (center)*

*Modulation 0 (off)*

*Expression 127 (max)*

*Hold 1 0 (off)*

*Sostenuto 0 (off)*

*Soft 0 (off)*

#### ● All Notes Off (Controller number 123)

Status            2nd byte            3rd byte

BnH                7BH                    00H

*n= MIDI channel number: 0H~FH (Ch.1~16)*

*When All Notes Off is received, all notes on the corresponding channel will be turned off. However, if Hold 1 or Sostenuto is ON, the sound will be continued until these are turned off.*

## 2. Transmitted data

### ■ Control Change

#### ● Bank Select (Controller number 0, 32)

Status	2nd byte	3rd byte
BnH	00H	mmH
BnH	20H	llH

*n* = MIDI channel number: 0H~FH (Ch.1~16)

*mm* = Bank number MSB: 00H~7FH

*ll* = Bank number LSB: 00H~7FH

- Not transmitted when "PG" Tx is Off.

#### ● Modulation (Controller number 1)

Status	2nd byte	3rd byte
BnH	01H	vvH

*n* = MIDI channel number: 0H~FH (Ch.1~16)

*vv* = Modulation depth: 00H~7FH (0~127)

- Not transmitted when "Modulation" TX is OFF.

#### ● Volume (Controller number 7)

Status	2nd byte	3rd byte
BnH	07H	vvH

*n* = MIDI channel number 0H~FH (Ch.1~16)

*vv* = Volume: 00H~7FH (0~127), Initial value= 64H (100)

- Not transmitted when "Volume" TX is off.

#### ● Pan (Controller number 10)

Status	2nd byte	3rd byte
BnH	0AH	vvH

*n* = MIDI channel number: 0H~FH (Ch.1~16)

*vv* = pan: 00H~40H~7FH (Left~Center~Right),

- Not transmitted when "PanPot" RX is Off

#### ● Expression (Controller number 11)

Status	2nd byte	3rd byte
BnH	0BH	vvH

*n* = MIDI channel number: 0H~FH (Ch.1~16)

*vv* = Expression: 00H~7FH (0~127), Initial value= 7FH (127)

- This adjusts the volume of a Part. It can be used independently from volume messages. Expression messages are used for musical expression within a performance, e.g., expression pedal movements, crescendo and decrescendo.

- Not transmitted when "Expression" TX is Off.

#### ● Hold (Controller number 64)

Status	2nd byte	3rd byte
BnH	40H	vvH

*n* = MIDI channel number: 0H~FH (Ch.1~16)

*vv* = Control value: 00H~7FH (0~127)

- Not transmitted when "Hold" TX is Off.

#### ● Sostenuto (Controller number 66)

Status	2nd byte	3rd byte
BnH	42H	vvH

*n* = MIDI channel number: 0H~FH (Ch.1~16)

*vv* = Control value: 00H~7FH (0~127) 0~63= OFF, 64~127= ON

- Not transmitted when "Sostenuto" TX is Off.

#### ● Soft (Controller number 67)

Status	2nd byte	3rd byte
BnH	43H	vvH

*n* = MIDI channel number: 0H~FH (Ch.1~16)

*vv* = Control value: 00H~7FH (0~127) 0~63= OFF, 64~127= ON

- Not transmitted when "Soft" TX is Off.

#### ● Reverb Send Level (Controller number 91)

Status	2nd byte	3rd byte
BnH	5BH	vvH

*n* = MIDI channel number: 0H~FH (Ch.1~16)

*vv* = Reverb Send Level: 00H~7FH (0~127)

- This message adjusts the Reverb Send Level of each Part.
- Not transmitted when "Reverb" TX is Off.

#### ● Program Change

Status	2nd byte
CnH	ppH

*n* = MIDI channel number: 0H~FH (Ch.1~16)

*pp* = Program number: 00H~7FH (prog.1~prog.128)

- Not transmitted when "PG" TX is Off.

### ■ Memory TX

Midi Message	Value	Memory
PG	0 ~ 79	NUMBER: 1 ~ 80

- Default MIDI channel is 15

- Not transmitted when "Memory TX Status" is Off.

