

BR-80 MIDI Implementation

Model: BR-80
 Date: May 17, 2011
 Version: 1.00

1. Data Reception

■ Channel Voice Messages

● Note Off

Status	2nd byte	3rd byte
8nH	kkH	vvH

n = MIDI channel number: 9H (ch. 10)
 kk = note number: 00H - 7FH (0 - 127)
 vv = note off velocity: 00H - 7FH (0 - 127)

● Note On

Status	2nd byte	3rd byte
9nH	kkH	vvH

n = MIDI channel number: 9H (ch. 10)
 kk = note number: 00H - 7FH (0 - 127)
 vv = note on velocity: 01H - 7FH (1 - 127)

* The correspondence between drum sounds and note numbers is as follows.

Drum Sound	Note Number
Metronome (Click)	A 1 (33)
Metronome (Bell)	A#1 (34)
Kick	B 1 (35)
Kick	C 2 (36)
Stick	C#2 (37)
Snare	D 2 (38)
Snare	E 2 (40)
Floor Tom	F 2 (41)
Closed Hi Hat	F#2 (42)
Low Tom	A 2 (45)
Open Hi Hat	A#2 (46)
Mid Tom	C 3 (48)
Crash Cymbal	C#3 (49)
High Tom	D 3 (50)
Ride Cymbal	D#3 (51)
Cowbell	G#3 (56)

■ System Exclusive Message

Status	Data byte	Status
F0H	iiH, ddH,, eeH	F7H

F0H: System Exclusive Message status
 ii = ID number: an ID number (manufacturer ID) to indicate the manufacturer whose Exclusive message this is. Roland's manufacturer ID is 41H.
 ID numbers 7EH and 7FH are extensions of the MIDI standard; Universal Non-realtime Messages (7EH) and Universal Realtime Messages (7FH).
 dd,....,ee = data: 00H - 7FH (0 - 127)
 F7H: EOX (End Of Exclusive)

Of the System Exclusive messages received by this device, the Universal Non-realtime messages and the Universal Realtime messages and the Data Request (RQ1) messages and the Data Set (DT1) messages will be set automatically.

○ Universal Non-realtime System Exclusive Message

○ Identity Request Message

Status	Data byte	Status
F0H	7EH, 10H, 06H, 01H	F7H

Byte	Explanation
F0H	Exclusive status
7EH	ID number (Universal Non-realtime Message)
10H	Device ID (dev: 10H)
06H	Sub ID#1 (General Information)
01H	Sub ID#2 (Identity Request)
F7H	EOX (End Of Exclusive)

2. Data Transmission

■ System Exclusive Message

● Universal Non-Realtime System Exclusive Message

○ Identity Reply Message (BR-80)

Receiving Identity Request Message, the BR-80 send this message.

Status	Data byte	Status
F0H	7EH, 10H, 06H, 02H, 41H 59H, 02H, 00H, 00H, 00H, 00H, 00H, 00H	F7H

Byte	Explanation
F0H	Exclusive status
7EH	ID number (Universal Non-realtime Message)
10H	Device ID (dev: 10H)
06H	Sub ID#1 (General Information)
02H	Sub ID#2 (Identity Reply)
41H	ID number (Roland)
59H 02H	Device family code
00H 00H	Device family number code
00H 00H 00H 00H	Software revision level
F7H	EOX (End Of Exclusive)

MIDI Implementation Chart

Function...	Transmitted	Recognized	Remarks
Basic Channel Default Changed	X X	10 X	
Mode Default Messages Altered	X X *****	X X X	
Note Number : True Voice	X *****	0-127 33-56	
Velocity Note On Note Off	X X	1-127 X	
After Touch Key's Channel's	X X	X X	
Pitch Bend	X	X	
Control Change 0-127	X	X	
Program Change : True Number	X *****	X X	
System Exclusive	O *1	O *2	
System Common : Quarter Frame : Song Position : Song Select : Tune Request	X X X X	X X X X	
System Real Time : Clock : Commands	X X	X X	
Aux Messages	X	X	
Notes	*1 Only the Identity Reply Message will be transmitted *2 Only the Identity Request Message will be received		