Roland Exclusive Messages

1. Data Format for Exclusive Messages

Roland's MIDI implementation uses the following data format for all exclusive messages (type IV) :

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
CMD	Command ID
[BODY]	Main data
F7H	End of exclusive

MIDI status : F0H, F7H

An exclusive message must be flanked by a pair of status codes, starting with a Manufacturer-ID immediately after F0H (MIDI version1.0).

Manufacturer-ID : 41H

The Manufacturer-ID identifies the manufacturer of a MIDI instrument that triggers an exclusive message. Value 41H represents Roland's Manufacturer-ID.

Device-ID : DEV

The Device-ID contains a unique value that identifies the individual device in the multiple implementation of MIDI instruments. It is usually set to 00H – 0FH, a value smaller by one than that of a basic channel, but value 00H – 1FH may be used for a device with multiple basic channels.

Model-ID : MDL

The Model-ID contains a value that uniquely identifies one model from another. Different models, however, may share an identical Model-ID if they handle similar data.

The Model-ID format may contain 00H in one or more places to provide an extended data field. The following are examples of valid Model-IDs, each representing a unique model :

01H
02H
03H
00H, 01H
00H, 02H
00H, 00H, 01H

Command-ID : CMD

The Command-ID indicates the function of an exclusive message. The Command-ID format may contain 00H in one or more places to provide an extended data field. The following are examples of valid Command-IDs, each representing a unique function :

01H
02H
03H
00H, 01H
00H, 02H
00H, 00H, 01H

Main data : BODY

This field contains a message to be exchanged across an interface. The exact data size and contents will vary with the Model-ID and Command-ID.

2. Address-mapped Data Transfer

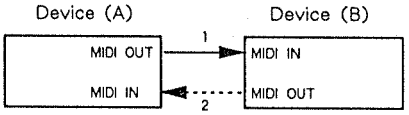
Address mapping is a technique for transferring messages conforming to the data format given in Section 1. It assigns a series of memory-resident records-waveform and tone data, switch status, and parameters, for example-to specific locations in a machine-dependent address space, thereby allowing access to data residing at the address a message specifies.

Address-mapped data transfer is therefore independent of models and data categories. This technique allows use of two different transfer procedures: one-way transfer and handshake transfer.

One-way transfer procedure (See Section 3 for details.)

This procedure is suited for the transfer of a small amount of data. It sends out an exclusive message completely independent of a receiving device status.

Connection Diagram

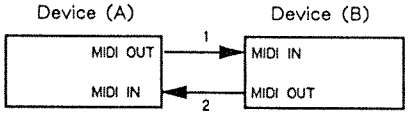


Connection at point 2 is essential for "Request data" procedures. (See Section 3.)

Handshake-transfer procedure (This device does not cover this procedure)

This procedure initiates a predetermined transfer sequence (handshaking) across the interface before data transfer takes place. Handshaking ensures that reliability and transfer speed are high enough to handle a large amount of data.

Connection Diagram



Connection at points 1 and 2 is essential.

Notes on the above two procedures

* There are separate Command-IDs for different transfer procedures.
* Devices A and B cannot exchange data unless they use the same transfer procedure, share identical Device-ID and Model ID, and are ready for communication.

3. One-way Transfer Procedure

This procedure sends out data all the way until it stops and is used when the messages are so short that answerbacks need not be checked.
For long messages, however, the receiving device must acquire each message in time with the transfer sequence, which inserts intervals of at least 20 milliseconds in between.

Types of Messages

Message	Command ID
Request data 1	RQ1 (11H)
Data set 1	DT1 (12H)

Request data # 1 : RQ1 (11H)

This message is sent out when there is a need to acquire data from a device at the other end of the interface. It contains data for the address and size that specify designation and length, respectively, of data required.
On receiving an RQ1 message, the remote device checks its memory for the data address and size that satisfy the request.

If it finds them and is ready for communication, the device will transmit a "Data set 1 (DT1)" message, which contains the requested data. Otherwise, the device will send out nothing.

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
11H	Command ID
aaH	Address MSB
⋮	⋮
	LSB
ssH	Size MSB
⋮	⋮
	LSB
sum	Check sum
F7H	End of exclusive

* The size of the requested data does not indicate the number of bytes that will make up a DT1 message, but represents the address fields where the requested data resides.
* Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.

* The same number of bytes comprises address and size data, which, however, vary with the Model-ID.
* The error checking process uses a checksum that provides a bit pattern where the least significant 7 bits are zero when values for an address, size, and that checksum are summed.

Data set 1 : DT1 (12H)

This message corresponds to the actual data transfer process. Because every byte in the data is assigned a unique address, a DT1 message can convey the starting address of one or more data as well as a series of data formatted in an address-dependent order.

The MIDI standards inhibit non-real time messages from interrupting an exclusive one. This fact is inconvenient for the devices that support a "soft-through" mechanism. To maintain compatibility with such devices, Roland has limited the DT1 to 256 bytes so that an excessively long message is sent out in separate segments.

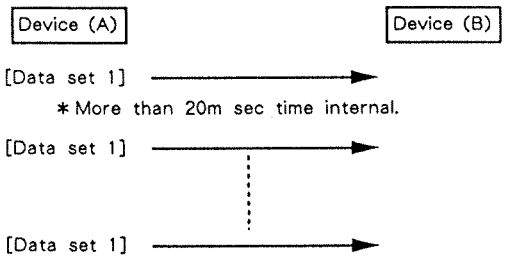
Byte	Description
F0H	Exclusive
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
12H	Command ID
aaH	Address MSB
⋮	⋮
	LSB
ddH	Data
⋮	⋮
sum	Check sum
F7H	End of exclusive

* A DT1 message is capable of providing only the valid data among those specified by an RQ1 message.
* Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.

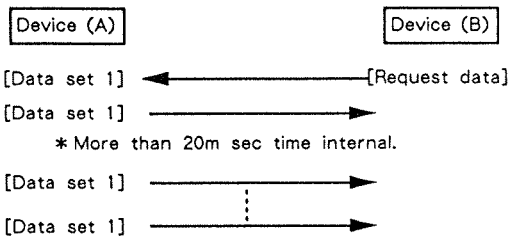
* The number of bytes comprising address data varies from one Model-ID to another.
* The error checking process uses a checksum that provides a bit pattern where the least significant 7 bits are zero when values for an address, size, and that checksum are summed.

Example of Message Transactions

● Device A sending data to Device B
Transfer of a DT1 message is all that takes place.



● Device B requesting data from Device A
Device B sends an RQ1 message to Device A. Checking the message, Device A sends a DT1 message back to Device B.



1. RECOGNIZED RECIEVE DATA

■Channel voice messages

●Note off

Status	Second	Third
8nH	kkH	vvH
9nH	kkH	00H

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
kk=Note No. :00H - 7FH (0 - 127)•••SINGLE, MULTI PART 1-5
24H - 60H (36 - 96)•••MULTI SPECIAL PART
vv=Velocity :00H - 7FH (0 - 127)

*Velocity is used as on-velocity for retriggering in the solo mode. It is effective in the SINGLE mode and for PART 1 to 5 in the MULTI mode.
This is not effective for SPECIAL PART and modes other than solo mode.

●Note on

Status	Second	Third
9nH	kkH	vvH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
kk=Note No. :SINGLE, MULTI PART1 - 5 00H - 7FH (0 - 127)
MULTI SPECIAL PART 24H - 60H (36 - 96)
vv=Velocity :01H - 7FH (1 - 127)

●Control change

○Modulation

Status	Second	Third
BnH	01H	vvH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
vv=Modulation :00H - 7FH (0 - 127)

*When receiving this message, the JD-800 activates bivrataion effect amount of which is directly proportional to the lever sens settings in tone parameters.

○Breath

Status	Second	Third
BnH	02H	vvH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
vv=Breath :00H - 7FH (0 - 127)

*When receiving this message, the JD-800 converts it to modulation, aftertouch or volume message according to the settings of Rx breath, one of MIDI functions.

○Portamento time

Status	Second	Third
BnH	05H	vvH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
vv=Portamento time :00H - 7FH (0 - 127)

*Upon receiving this message, JD-800 changes Portamento time in patch parameter accordingly.

○Volume

Status	Second	Third
BnH	07H	vvH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
vv=Volume :00H - 7FH (0 - 127)

*When this message is received with Rx volume of MIDI function being set at on, it will chnage:
In MULTI mode - volume of a part (part level); in SINGLE mode - MIDI volume.
In SINGLE mode, volume cannot be adjusted from the panel but can be adjusted from volume pedal by setting ext control to VOL.

*The value of volume in the SINGLE mode are reset to a maximum value (100) in the following cases:
1. On power-up. 2. Mode change from MULTI to SINGLE.

○Pan

Status	Second	Third
BnH	0AH	vvH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
vv=Pan :00H - 7FH (0 - 127)

*This message is used to localize tone sources in multi mode: "0" represents left end, "127" represent right end with each increment represents one of 61 steps.
In SINGLE mode, this message is ignored.

○Hold 1

Status	Second	Third
BnH	40H	vvH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
vv=Hold :00H - 7FH (0 - 127) 0-63=OFF 64-127=ON

*JD-800 turns on or off tone hold according to setting of the Hold control in respective tone parameters.

○Portamento

Status	Second	Third
BnH	41H	vvH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
vv=Portamento :00H - 7FH (0 - 127) 0-63=OFF 64-127=ON

*When this message is recieved, toggles between portamento on/off. Being made functionable only in solo mode, changes the Portamento Switch in respective patch parameters.

○RPN LSB

Status	Second	Third
BnH	64H	llH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
ll=RPN LSB :00H(0) Pitch Bend Sensitivity
:01H(1) Fine Tune

*Represents the lower byte of either Pitch Bend Sensitivity or Fine Tune among parameter numbers designated by RPN.

○RPN MSB

Status	Second	Third
BnH	65H	00H

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16

*Represents the upper byte of either Fine Tune or Pitch Bend Sensitivity among parameter numbers designated by RPN.

***** RPN description *****

Among control changes, there are messages called RPN (registered parameter number) whose function is registered in MIDI standard. Parameters of a MIDI device can be changed using RPN.
To effect PRN, first designate the parameter to be controlled using PRN MSB and RPN LSB, and then specify the value of designated parameter
by Data Entry.

The JD-800 can recognize two RPNs: Pitch Bend Sensitivity (RPN#0) and Fine Tune (RPN#1).

RPN #0:Pitch Bend Sensitivity

BnH 64H 00H	BnH 65H 00H	BnH 06H mmH
(RPN LSB)	(RPN MSB)	(Data Entry MSB)

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
mm=MSB data :00H - 7FH (0 - 127)

*JD-800 does not recognize the lower byte of Data Entry. It uses the upper byte to change a pitch in steps of semitone.
Upper limit of the setting is 0CH (12), and any value exceeding the limit is recognized as 0CH (12).

RPN #1:Fine Tune

BnH 64H 01H	BnH 65H 00H	BnH 26H llH	BnH 06H mmH
(RPN LSB)	(RPN MSB)	(Data Entry LSB)	(Data Entry MSB)

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
ll=LSB data :00H - 7FH (0 - 127)
mm=MSB data :00H - 7FH (0 - 127)

mm, ll=20H, 00H - 40H, 00H - 60H, 00H (-50cent - 0cent - +50cent)
↑
A=440.0Hz

*With JD-800, this message can be received through receive channel of any parts and recognized as a master tune. That is, if this message is received on a particular part channel, it affects all parts as the master tune.
Setting values are limited to 60H, 00H (96, 00) and 20H, 00H (32, 00) with values exceeding the range being recognized as the upper (or lower) limit.

○Data entry LSB

Status	Second	Third
BnH	26H	llH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
ll=LSB data :0H - 7FH (0 - 127)

*Lower byte of the data for the parameter specified by the RPN.
JD-800 changes Fine Tune to this value.

○Data entry MSB

Status	Second	Third
BnH	06H	mmH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
mm=MSB data :00H - 7FH (0 - 127)

*Upper byte of the data for the parameter specified by the RPN.
JD-800 changes Fine Tune or Pitch Bend Sensitivity to this value.

***** Data Entry description *****

Data Entry sets a value into the parameter specified by RPN (registered parameter number).

JD-800 can recognize two RPNs: pitch bend sensitivity (RPN#0) and fine tune (RPN#1).

RPN #0:Pitch Bend Sensitivity

Data Entry MSB BnH 06H mmH	Pitch Bend Sensitivity
00H	0 cent
01H	100 cent (semitone)
|	|
|	|
0CH	1200 cent (1 octave)
:	:
:	:
7FH	1200 cent (1 octave)

*JD-800 changes the same value to up and down for Bender range in patch parameters, by an octave in steps of semitone according to the received data.
It ignores the LSB in the Data Entry.

RPN #1:Fine Tune

Data Entry MSB BnH 06H mmH	Data Entry LSB BnH 26H llH	Fine Tune
00H	00H	-50 cent
:	:	:
20H	00H	-50 cent
|	|	|
20H	52H	-49 cent
|	|	|
|	|	|
40H	00H	0 cent (A4=440.0Hz)
|	|	|
|	|	|
5FH	2EH	+49 cent
|	|	|
60H	00H	+50 cent
:	:	:
7FH	7FH	+50 cent

*JD-800 raises or lowers the master tune up to 50 cents in steps of cent according to the received data.

● Program change

Status	Second
CnH	ppH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
pp=Program change No. :00H - 7FH (0 - 127)

*When the JD-800 receives this message with Rx program change of MIDI function being on, it shifts to the patch specified by the program number.
JD-800 ignores this message if in patch edit mode (Common or Effect).

CnH ppH	Patch No.
00H	I-11
01H	I-12
|	|
08H	I-21
|	|
40H	C-11
|	|
7FH	C-88

*When the patch specified by the Patch No. is a card (between C-11 and C-88) and the card is not inserted or wrong one, JD-800 ignores the message and displays error message.

*When the JD-800 recieves this message with Rx program change of MIDI function being on and it has Special Part in multi mode, it interprets the message as follows:

CnH ppH	Setup
00H	INT
01H	CARD

● Channel aftertouch

Status	Second
DnH	vvH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
vv=Aftertouch :00H - 7FH (0 - 127)

*When JD-800 receives this message with Rx aftertouch of MIDI function being on, it activates the following effects to the degrees of the received Aftertouch and individual settings: Pitch A-touch Bend Sens in Patch parameter, Pitch A-touch Bend Sw, Pitch A-touch Mod Sens, TVF A-touch Sens and TVA A-touch Sens in Tone parameters.

● Pitch bend change

Status	Second	Third
EnH	llH	mmH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
mm=MSB data :00H - 7FH (0 - 127)
ll=LSB data :00H - 7FH (0 - 127)
mm, ll=00H, 00H - 40H, 00H - 7FH, 7FH (-8192 - 0 - +8191)

*When the JD-800 receives this message with Bender switch of a tone being on, it raises or lowers the pitch to the degrees set by Bender Range Up or Bender Range Down.

■ Channel mode messages

● Reset all controllers

Status	Second	Third
BnH	79H	00H

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16

*This message forces the JD-800 to reset the controller value to the preset value.

Controller	Preset value
Pitch bend change	0 (center)
Hold 1	0 (off)
Modulation	0 (min)
Aftertouch	0 (min)
RPN address	unrecognized

● Local control

Status	Second	Third
BnH	7AH	vvH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
vv=Local control:00H, 7FH (0, 127) 0=OFF 127=ON

*This is not a parameter for a particular Part but for all Parts. This message is received commonly on the receiving channel of any part and changeovers localcontrol of MIDI functions; such as note on /off, prgoram change, and enable/disable of remote controllers such as bender and aftertouch.

● All note off

Status	Second	Third
BnH	7BH	00H

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16

*When the JD-800 recieves this message, turns off all MIDI-on notes.

● OMNI OFF

Status	Second	Third
BnH	7CH	00H

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16

*With JD-800, this messages acts like All note off.

● OMNI ON

Status	Second	Third
BnH	7DH	00H

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16

* With JD-800, this messages acts like All note off.

● MONO

Status	Second	Third
BnH	7EH	mmH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
mm=M :ignore

* With JD-800, this messages acts like All note off.

● POLY

Status	Second	Third
BnH	7FH	00H

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16

* With JD-800, this messages acts like All note off.

■System real time messages

● Active sensing

Status
FEH

*When JD-800 receives Active sensing, it measures time intervals between incoming messages. If the subsequent message will not come within 400 ms after the previous one, JD-800 turns off all MIDI-on notes as if it receives Reset All Controller message, and stops measuring message intervals.

■System exclusive messages

Status	Data bytes
F0H	iiH,ddH,.....,eeH
F7H	

F0H :System exclusive
ii=ID No. :41H (65)
dd,...,ee=data :00H-7FH (0-127)
F7H :EOX (End of Exclusive/System common)

*For details, refer to "Roland Exclusive Messages" and Sections 3.

2. TRANSMITTED DATA

*Transmit Channel

JD-800 transmits on one of the channels according to the setting of TX CHANNEL, MIDI function.

TX CHANNEL	SINGLE Mode	MULTI Mode
1 - 16	Transmits on set channel.	
Rx ch	Transmits on RX CHANNEL.	Transmits on RX CHANNEL of part sounded by keyboard.
Patch (Part)	Transmits on channels set at Patch MIDI parameters.	PART1- 5 : same as in SINGLE mode. PART8 : acts as Rx ch.
OFF	No transmission	

■Channel voice messages

● Note off

Status	Second	Third
8nH	kkH	vvH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
kk=Note No. :18H - 6CH (24 - 108)
vv=Velocity :01H - 7FH (1 - 127)

● Note on

Status	Second	Third
9nH	kkH	vvH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
kk=Note No. :18H - 6CH (24 - 108)
vv=Velocity :01H - 7FH (1 - 127)

● Control change

○ Modulation

Status	Second	Third
BnH	01H	vvH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
vv=Modulation :00H - 7FH (0 - 127)

*JD-800 transmits this message when the modulation lever is operated or when the pedal is operated with Ext control set as MOD.

○ Volume

Status	Second	Third
BnH	07H	vvH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
vv=Volume :00H - 7FH (0 - 127)

*JD-800 transmits this message when the pedal is operated with Ext control set as VOL.

○ Pan

Status	Second	Third
BnH	0AH	vvH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
vv=Pan :00H - 7FH (0 - 127)

*JD-800 transmits this message when the pedal is operated with Ext control set as PAN.

○ Hold 1

Status	Second	Third
BnH	40H	vvH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
vv=Hold :00H, 7FH (0, 127) 0=OFF, 127=ON

*JD-800 transmits the message when the hold pedal is operated.
If TX CHANNEL is set as PATCH, transimits according to settings of Tx hold mode in patch parameter.

● Program change

Status	Second
CnH	ppH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
pp=Program change No. :00H - 7FH (0 - 127)

*When patch change is made with Tx program cahnge of MIDI function set as NORMAL, transmits as follows:

CnH ppH	Patch No.
00H	I-11
01H	I-12
|	|
08H	I-21
|	|
40H	C-11
|	|
7FH	C-88

*With Special part in multi mode: when INT/CARD button is pressed with Txprogram change set at NORMAL or PATCH, transmits the following program number.

CnH ppH	Setup
00H	INT
01H	CARD

*When patch change is made with Tx program change of MIDI function set as PATCH, transmits contents specified by the setting of Tx mode, Tx upper program number and Tx lower program number of Patch MIDI parameters.

● Channel aftertouch

Status	Second
DnH	vvH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
vv=Aftertouch :00H - 7FH (0 - 127)

*JD-800 transmits this message when the key is depressed strongly on the keyboard with Tx aftertouch of MIDI function set as on, or when the pedal is operated with Ext control set as AFT.

● Pitch bend change

Status	Second	Third
EnH	llH	mmH

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16
mm=MSB data :00H - 7FH (0 - 127)
ll=LSB data :00H - 7FH (0 - 127)
mm, ll=00H, 00H - 40H, 00H - 7FH, 7FH (-8192 - 0 - +8191)

*JD-800 transmits this message when the bender lever is operated in right/left direction. The resolution is 9 bits including direction.

■ Channel mode messages

● Reset all controllers

Status	Second	Third
BnH	79H	00H

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16

*Transmits when mode is changed from MULTI to SINGLE or vice versa. The message is transmitted over the channel that has been used.

● OMNI OFF

Status	Second	Third
BnH	7CH	00H

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16

*Transmits when power-up or mode change (from MULTI to SINGLE, or vice versa). The message is transmitted over the channel to be used for transimission.

● POLY

Status	Second	Third
BnH	7FH	00H

n=MIDI channel No. :0H - FH (0 - 15) 0=ch.1 15=ch.16

*Transmits when power-up or mode change (from MULTI to SINGLE, or vice versa).
The message is transmitted over the channel to be used for transimission.

■ System real time messages

● Active sensing

Status
FEH

*Transmits at approx. every 250 ms to external MIDI device to allow the device connected to its MIDI OUT to check for fault in MIDI connection line.

■ System exclusive messages

Status	Data bytes
F0H	iiH, ddH, ..., eeH
F7H	

F0H :System exclusive
ii=ID No. :41H (65)
dd, ..., ee=data :00H-7FH (0-127)
F7H :EOX (End of Exclusive/System common)

For details, refer to "Roland Exclusive Messages" and Sections 3.

3. EXCLUSIVE COMMUNICATIONS

The JD-800 can transmit/receive patch parameters, etc. using exclusive messages.
The model ID code of JD-800 is 3DH. The device ID codes are to be determined by the unit number setting of MIDI function.

■One-way communication

●Request data RQ1 (11H)

Byte	Comments	
F0H	Exclusive status	
41H	Manufactures ID	(Roland)
Dev	Device ID	(UNIT#-1)
3DH	Model ID	(JD-800)
11H	Command ID	(RQ1)
aaH	Address MSB	
aaH	Address	
aaH	Address LSB	
ssH	Size MSB	
ssH	Size	
ssH	Size LSB	
sum	Check sum	
F7H	EOX	(End Of eXclusive)

○Recieving RQ1

JD-800 recieves this message when the data exist in specified address, and moreover the data size is above 1.
And then transmitts the data specified address and size by DT1 format. However, the address and size of data must be specified in one block (refer to *4-1, *4-2 etc.).

JD-800 never transmitts this message.

●Data set DT1 (12H)

Byte	Comments	
F0H	Exclusive status	
41H	Manufactures ID	(Roland)
Dev	Device ID	(UNIT#-1)
3DH	Model ID(JD-800)	
12H	Command ID	(DT1)
aaH	Address MSB	
aaH	Address	
aaH	Address LSB	
ddH	Data	
:	:	
ddH	Data	
sum	Check sum	
F7H	EOX	(End Of eXclusive)

○Recieving DT1

JD-800 recieves this message when the data exist in specified address. And then stores the recieved data into the specified address area. However, if make intervals at less 25msec during DT1 messages, JD-800 cannot manage the recieved data normally.

○Transmission DT1

JD-800 transmitts this message as follows; and when the data size is over 256 bytes, it is sent out in separate segments.

1) Patch dump

Transmitts the following data when patch dump is executed.

- In SINGLE mode ..... All the data of Patch Temporary Area (*4-1-1).
- In MULTI mode ..... All the data of Patch Temporary Area (*4-1-2) or Special Setup Temporary Area (*4-2) at current part.

2) Bulk dump

Transmitts the following data when bulk dump is executed.

- Selected "All" block ..... The data of System Area(*4-3) Special Setup Memory Area(*4-2), Patch Memory Area(*4-5)
- Selected "Patch" block ..... The data of Patch Memory Area(*4-5).
- Selected "Setup" block ..... The data of Special Setup Memory Area (*4-2).

3) Editting tone parameters

*When the slider or switch of tone parameters is moved with Tx edit data of MIDI function set as ON, JD-800 transmits the data according at tone parameter of Patch Temporary Area(*4-1-1 or *4-1-2).
When the slider or switch of tone parameter is moved in the Key SetupEdit, JD-800 transmits the data corresponding to the tone parameters of Special Setup Temporary Area (*4-2).

4. PARAMETER ADDRESS MAP (Model ID=3DH)

Address is configured in 7 bits, and expressed in hexadecimal.

Address	MSB		LSB
Binary	0aaa aaaa	0bbb bbbb	0ccc cccc
7-bit hex	AA	BB	CC

■Parameter Address Block

Description is made on each block (*4-1, *4-2, etc.).

Start address	Contents and remarks		Command RQ1	Command DT1
00 00 00	Patch Temporary Area	*4-1	o	o
01 00 00	Special Setup Temporary Area	*4-2	o	o
02 00 00	System Area	*4-3	o	o
03 00 00	Part Area	*4-4	o	o
04 00 00	Special Setup Memory Area	*4-2	o	o
05 00 00	Patch Memory Area	*4-5	o	o
07 00 00	Display Area	*4-6	x	o

o:available x:unavailable

Actual address value is the sum of a start address listed in the parameter address block and an offset address.
In the application examples of RQ1 and DT1 below, Device ID uses 10H (UNIT# = 17).

*4-1 Patch Temporary Area

The patch parameters for the part used for sound generation are set in this area.

Offset address	Contents and remarks	
00 00 00	(Single)Patch Temporary	*4-1-1
00 10 00	(Multi)Part 1 Patch Temporary	*4-1-2
00 12 52	(Multi)Part 2 Patch Temporary	:
00 15 24	(Multi)Part 3 Patch Temporary	:
00 17 76	(Multi)Part 4 Patch Temporary	:
00 1A 48	(Multi)Part 5 Patch Temporary	:
Total Size	(Single) 00 03 00 (384bytes)	
	(Multi)Part 1 - 5 00 0D 1A (1690bytes)	

*4-1-1 Single Patch Temporary

Disabled during MULTI mode.

Offset address	Contents and remarks	
00 00 00	Patch Common	*4-5-1-1
00 00 32	Patch Effect	*4-5-1-2
00 00 60	Patch Tone-A	*4-5-1-3
00 01 28	Patch Tone-B	:
00 01 70	Patch Tone-C	:
00 02 38	Patch Tone-D	:
Total Size	00 03 00 (384bytes)	

*4-1-2 Multi Patch Temporary

Disabled during SINGLE mode.

Offset address	Contents and remarks	
00 00 00	Patch Common	*4-5-1-1
00 00 32	Patch Tone-A	*4-5-1-3
00 00 7A	Patch Tone-B	:
00 01 42	Patch Tone-C	:
00 02 0A	Patch Tone-D	:
Total Size	00 02 52 (338bytes)	

*4-2 Special Setup Memory Area / Temporary Area

This area holds parameters for each key of special part used for sound generation. This Temporary Area is disabled during SINGLE mode.

Offset address	Contents and remarks	
00 00 00	Special Setup Common / EQ	*4-2-1
00 00 0A	Special Setup Key C2 (Note# 36)	*4-2-2
00 00 62	Special Setup Key C#2(Note# 37)	:
00 01 3A	Special Setup Key D2 (Note# 38)	:
00 02 12	Special Setup Key D#2(Note# 39)	:
00 02 6A	Special Setup Key E2 (Note# 40)	:
00 03 42	Special Setup Key F2 (Note# 41)	:
00 04 1A	Special Setup Key F#2(Note# 42)	:
00 04 72	Special Setup Key G2 (Note# 43)	:
00 05 4A	Special Setup Key G#2(Note# 44)	:
00 06 22	Special Setup Key A2 (Note# 45)	:
00 06 7A	Special Setup Key A#2(Note# 46)	:
00 07 52	Special Setup Key B2 (Note# 47)	:
00 08 2A	Special Setup Key C3 (Note# 48)	:
00 09 02	Special Setup Key C#3(Note# 49)	:
00 09 5A	Special Setup Key D3 (Note# 50)	:
00 0A 32	Special Setup Key D#3(Note# 51)	:
00 0B 0A	Special Setup Key E3 (Note# 52)	:
00 0B 62	Special Setup Key F3 (Note# 53)	:
00 0C 3A	Special Setup Key F#3(Note# 54)	:
00 0D 12	Special Setup Key G3 (Note# 55)	:
00 0D 6A	Special Setup Key G#3(Note# 56)	:
00 0E 42	Special Setup Key A3 (Note# 57)	:
00 0F 1A	Special Setup Key A#3(Note# 58)	:
00 0F 72	Special Setup Key B3 (Note# 59)	:
00 10 4A	Special Setup Key C4 (Note# 60)	:
00 11 22	Special Setup Key C#4(Note# 61)	:
00 11 7A	Special Setup Key D4 (Note# 62)	:
00 12 52	Special Setup Key D#4(Note# 63)	:
00 13 2A	Special Setup Key E4 (Note# 64)	:
00 14 02	Special Setup Key F4 (Note# 65)	:
00 14 5A	Special Setup Key F#4(Note# 66)	:
00 15 32	Special Setup Key G4 (Note# 67)	:
00 16 0A	Special Setup Key G#4(Note# 68)	:
00 16 62	Special Setup Key A4 (Note# 69)	:
00 17 3A	Special Setup Key A#4(Note# 70)	:
00 18 12	Special Setup Key B4 (Note# 71)	:
00 18 6A	Special Setup Key C5 (Note# 72)	:
00 19 42	Special Setup Key C#5(Note# 73)	:
00 1A 1A	Special Setup Key D5 (Note# 74)	:
00 1A 72	Special Setup Key D#5(Note# 75)	:
00 1B 4A	Special Setup Key E5 (Note# 76)	:
00 1C 22	Special Setup Key F5 (Note# 77)	:
00 1C 7A	Special Setup Key F#5(Note# 78)	:
00 1D 52	Special Setup Key G5 (Note# 79)	:
00 1E 2A	Special Setup Key G#5(Note# 80)	:
00 1F 02	Special Setup Key A5 (Note# 81)	:
00 1F 5A	Special Setup Key A#5(Note# 82)	:
00 20 32	Special Setup Key B5 (Note# 83)	:
00 21 0A	Special Setup Key C6 (Note# 84)	:
00 21 62	Special Setup Key C#6(Note# 85)	:
00 22 3A	Special Setup Key D6 (Note# 86)	:
00 23 12	Special Setup Key D#6(Note# 87)	:
00 23 6A	Special Setup Key E6 (Note# 88)	:
00 24 42	Special Setup Key F6 (Note# 89)	:
00 25 1A	Special Setup Key F#6(Note# 90)	:
00 25 72	Special Setup Key G6 (Note# 91)	:
00 26 4A	Special Setup Key G#6(Note# 92)	:
00 27 22	Special Setup Key A6 (Note# 93)	:
00 27 7A	Special Setup Key A#6(Note# 94)	:
00 28 52	Special Setup Key B6 (Note# 95)	:
00 29 2A	Special Setup Key C6 (Note# 96)	:
Total Size	00 2A 02 (5378bytes)	

*4-2-1 Special Setup Common / EQ

Offset address	Data	Contents and remarks	
< EQ >			
00 00 00	00 - 01	Low freq	200, 400Hz
00 00 01	00 - 1E	Low gain	-15.0 - +15.0dB (1dB step)
00 00 02	00 - 10	Mid freq	200 - 8kHz [*1]
00 00 03	00 - 04	Mid Q	0.5, 1.0, 2.0, 4.0, 9.0
00 00 04	00 - 1E	Mid gain	-15.0 - +15.0dB (1dB step)
00 00 05	00 - 01	High freq	4k, 8kHz
00 00 06	00 - 1E	High gain	-15.0 - +15.0dB (1dB step)
< COMMON >			
00 00 07	00 - 30	Bender range down	0 - 48 semi
00 00 08	00 - 0C	Bender range up	0 - 12 semi
00 00 09	00 - 1A	A-touch bend sens	-36,-24,-12 - +12 semi
Total Size	00 00 0A (10bytes)		

[*1]:200, 250, 315, 400, 500, 630, 800, 1k, 1.25k, 1.6k,
2k, 2.5k, 3.15k, 4k, 5k, 6.3k, 8kHz

*4-2-2 Special Setup Key

Offset address	Contents and remarks	
00 00 00	Setup Key	*4-2-2-1
00 00 10	Key Tone	*4-5-1-3
Total Size	00 00 58 (88bytes)	

*4-2-2-1 Setup Key

Offset address	Data	Contents and remarks	
00 00 00	20 - 7F	Name 1	(ASCII)
:	:	:	:
00 00 09	20 - 7F	Name 10	(ASCII)
00 00 0A	00 - 08	Mute group	OFF, A - H
00 00 0B	00 - 01	ENV mode	SUSTAIN, NO SUSTAIN
00 00 0C	00 - 3C	Pan	L30 - 00 - 30R
00 00 0D	00 - 03	Effect mode	DRY, REV, CHO+REV, DLY+REV
00 00 0E	00 - 64	Effect level	0 - 100
00 00 0F	00 - 00	<Dummy>	
Total Size	00 00 10 (16bytes)		

/Application example of RQ1/
To derive all names within the setup memory key data of note #60, transmit the following data to the JD-800.
F0 41 10 3D 11 04 10 4A 00 00 0A 18 F7

/Application example of DT1/
To set the effect mode within the setup temporary key data of note #50 as REV, transmit the following data to the JD-800.
F0 41 10 3D 12 04 09 67 01 0B F7

*4-3 System Area

This area holds parameters for system used for sound generation.

Offset address	Data	Contents and remarks	
00 00 00	00 - 64	Master tune	427.5 - 452.9Hz (+/-50cent, 1cent step)
< Mix out filter >			
00 00 01	00 - 0A	Treble	-5 - +5
00 00 02	00 - 0A	Mid	-5 - +5
00 00 03	00 - 0A	Bass	-5 - +5
< Effect B master switch >			
00 00 04	00 - 01	Chorus switch	OFF, ON
00 00 05	00 - 01	Delay switch	OFF, ON
00 00 06	00 - 01	Reverb switch	OFF, ON
< Delay >			
00 00 07	00 - 7D	Center tap	0.1 - 600ms [*1]
00 00 08	00 - 64	Center level	0 - 100
00 00 09	00 - 7D	Left tap	0.1 - 600ms [*1]
00 00 0A	00 - 64	Left level	0 - 100
00 00 0B	00 - 7D	Right tap	0.1 - 600ms [*1]
00 00 0C	00 - 64	Right level	0 - 100
00 00 0D	00 - 62	Feedback	-98 - 0 - +98% (2% step)
< Chorus >			
00 00 0E	00 - 63	Rate	0.1 - 10Hz (0.1Hz step)
00 00 0F	00 - 64	Depth	0 - 100
00 00 10	00 - 63	Delay time	0.1 - 50ms [*2]
00 00 11	00 - 62	Feedback	-98 - 0 - +98% (2% step)
00 00 12	00 - 64	Level	0 - 100
< Reverb >			
00 00 13	00 - 09	Type	[*3]
00 00 14	00 - 79	Pre delay	0 - 120ms (1ms step)
00 00 15	00 - 64	Early ref level	0 - 100
00 00 16	00 - 10	HF damp	500Hz - BYPASS [*4]
00 00 17	00 - 64	Time	0.1 - 20s [*5]
00 00 18	00 - 64	Level	0 - 100
Total Size	00 00 19 (25bytes)		

[*1]:0.1-5ms(0.1ms step), 5.5-10ms(0.5ms step), 11-40ms(1ms step),
50-200ms(10ms step), 220-600ms(20ms step)
[*2]:0.1-5ms(0.1ms step), 5.5-10ms(0.5ms step), 11-50ms(1ms step)
[*3]:ROOM1, ROOM2, HALL1, HALL2, HALL3, HALL4,
GATE, REVERSE, FLYING1, FLYING2
[*4]:500, 630, 800, 1k, 1.25k, 1.6k, 2k, 2.5k, 3.15k, 4k,
5k, 6.3k, 8k, 10k, 12.5k, 16kHz, BYPASS
[*5]:0.1-10s(0.1s step), 10-20s(0.5s step);(ROOM1/2, HALL1/2/3/4)
5-500ms(5ms step);(GATE, REVERSE, FLYING1/2)

/Application example of RQ1/
To derive all the system data during MULTI mode, transmit the following data to the JD-800.
F0 41 10 3D 11 02 00 00 00 00 19 65 F7

/Application example of DT1/
To set the chorus level of effect to 100 during MULTI mode, transmit the following data to the JD-800.
F0 41 10 3D 12 02 00 12 64 08 F7

*4-4 Part Area

This area contains parameters for part used for sound generation.
Disabled during SINGLE mode.

Offset address	Contents and remarks	
00 00 00	Part 1	*4-4-1
00 00 06	Part 2	:
00 00 0C	Part 3	:
00 00 12	Part 4	:
00 00 18	Part 5	:
00 00 1E	Special Part	*4-4-2
Total Size	00 00 22 (34bytes)	

*4-4-1 Part 1 - Part 5

Disabled during SINGLE mode.

Offset address	Data	Contents and remarks	
00 00 00	00 - 64	Level	0 - 100
00 00 01	00 - 3C	Pan	L30 - 00 - 30R
00 00 02	00 - 10	MIDI Rx Ch.	1 - 16, OFF
00 00 03	00 - 01	Output assign	MIX, DIR
00 00 04	00 - 03	Effect mode	DRY, REV, CHO+REV, DLY+REV
00 00 05	00 - 64	Effect level	0 - 100
Total Size	00 00 06 (6bytes)		

/Application example of RQ1/
To derive all the data within part 3, transmit the following data to the JD-800.

F0 41 10 3D 11 03 00 0C 00 00 06 6B F7

/Application example of DT1/
To set the effect level of part 5 to 50, transmit the following data to the JD-800.

F0 41 10 3D 12 03 00 1D 32 2E F7

*4-4-2 Special Part

Disabled during SINGLE mode.

Offset address	Data	Contents and remarks	
00 00 00	00 - 64	Level	0 - 100
00 00 01	00 - 10	MIDI Rx Ch.	1 - 16, OFF
00 00 02	00 - 01	Output assign	MIX, DIR
00 00 03	00 - 00	<dummy>	
Total Size	00 00 04 (4bytes)		

/Application example of RQ1/
To derive all the data within special part, transmit the following data to the JD-800.

F0 41 10 3D 11 03 00 1E 00 00 04 5B F7

/Application example of DT1/
To set the level to 80, transmit the following data to the JD-800.

F0 41 10 3D 12 03 00 1E 50 0F F7

==========

*4-5 Patch Memory Area

Offset address	Contents and remarks		Offset address	Contents and remarks	
00 00 00	Patch I-11	*4-5-1	00 60 00	Patch I-51	*4-5-1
00 03 00	Patch I-12	:	00 63 00	Patch I-52	:
00 06 00	Patch I-13	:	00 66 00	Patch I-53	:
00 09 00	Patch I-14	:	00 69 00	Patch I-54	:
00 0C 00	Patch I-15	:	00 6C 00	Patch I-55	:
00 0F 00	Patch I-16	:	00 6F 00	Patch I-56	:
00 12 00	Patch I-17	:	00 72 00	Patch I-57	:
00 15 00	Patch I-18	:	00 75 00	Patch I-58	:
00 18 00	Patch I-21	:	00 78 00	Patch I-61	:
00 1B 00	Patch I-22	:	00 7B 00	Patch I-62	:
00 1E 00	Patch I-23	:	00 7E 00	Patch I-63	:
00 21 00	Patch I-24	:	01 01 00	Patch I-64	:
00 24 00	Patch I-25	:	01 04 00	Patch I-65	:
00 27 00	Patch I-26	:	01 07 00	Patch I-66	:
00 2A 00	Patch I-27	:	01 0A 00	Patch I-67	:
00 2D 00	Patch I-28	:	01 0D 00	Patch I-68	:
00 30 00	Patch I-31	:	01 10 00	Patch I-71	:
00 33 00	Patch I-32	:	01 13 00	Patch I-72	:
00 36 00	Patch I-33	:	01 16 00	Patch I-73	:
00 39 00	Patch I-34	:	01 19 00	Patch I-74	:
00 3C 00	Patch I-35	:	01 1C 00	Patch I-75	:
00 3F 00	Patch I-36	:	01 1F 00	Patch I-76	:
00 42 00	Patch I-37	:	01 22 00	Patch I-77	:
00 45 00	Patch I-38	:	01 25 00	Patch I-78	:
00 48 00	Patch I-41	:	01 28 00	Patch I-81	:
00 4B 00	Patch I-42	:	01 2B 00	Patch I-82	:
00 4E 00	Patch I-43	:	01 2E 00	Patch I-83	:
00 51 00	Patch I-44	:	01 31 00	Patch I-84	:
00 54 00	Patch I-45	:	01 34 00	Patch I-85	:
00 57 00	Patch I-46	:	01 37 00	Patch I-86	:
00 5A 00	Patch I-47	:	01 3A 00	Patch I-87	:
00 5D 00	Patch I-48	:	01 3D 00	Patch I-88	:
			Total Size	01 40 00(24576bytes)	

*4-5-1 Patch Memory

Offset address	Contents and remarks	
00 00 00	Patch Common	*4-5-1-1
00 00 32	Patch Effect	*4-5-1-2
00 00 60	Patch Tone-A	*4-5-1-3
00 01 28	Patch Tone-B	:
00 01 70	Patch Tone-C	:
00 02 38	Patch Tone-D	:
Total Size	00 03 00 (384bytes)	

*4-5-1-1 Patch Memory Common / Patch Temporary Common

Offset address	Data	Contents and remarks	
00 00 00	20 - 7F	Patch name1	(ASCII)
: :	:	:	:
00 00 0F	20 - 7F	Patch name16	(ASCII)
00 00 10	00 - 64	Patch level	0 - 100
00 00 11	00 - 7F	Key range L (Tone A)	C-1 - G9
00 00 12	00 - 7F	Key range H (Tone A)	C-1 - G9
00 00 13	00 - 7F	Key range L (Tone B)	C-1 - G9
00 00 14	00 - 7F	Key range H (Tone B)	C-1 - G9
00 00 15	00 - 7F	Key range L (Tone C)	C-1 - G9
00 00 16	00 - 7F	Key range H (Tone C)	C-1 - G9

00 00 17	00 - 7F	Key range L (Tone D)	C-1 - G9
00 00 18	00 - 7F	Key range H (Tone D)	C-1 - G9
00 00 19	00 - 30	Bender range down	0 - 48
00 00 1A	00 - 0C	Bender range up	0 - 12
00 00 1B	00 - 1A	A-touch bend	-36, -24, -12 - +12(semi)
00 00 1C	00 - 01	Solo SW	OFF, ON
00 00 1D	00 - 01	Solo Legato	OFF, ON
00 00 1E	00 - 01	Portamento SW	OFF, ON
00 00 1F	00 - 01	Portamento mode	NORMAL, LEGATO
00 00 20	00 - 64	Portamento time	0 - 100
00 00 21	00 - 0F	Layer tone	none - ABCD [*1]
00 00 22	00 - 0F	Active tone	none - ABCD [*1]
		< EQ >	
00 00 23	00 - 01	Low freq	200, 400Hz
00 00 24	00 - 1E	Low gain	-15.0 - +15.0dB (1dB step)
00 00 25	00 - 10	Mid freq	200 - 8kHz [*2]
00 00 26	00 - 04	Mid Q	0.5, 1.0, 2.0, 4.0, 9.0
00 00 27	00 - 1E	Mid gain	-15.0 - +15.0dB (1dB step)
00 00 28	00 - 01	High freq	4k, 8kHz
00 00 29	00 - 1E	High gain	-15.0 - +15.0dB (1dB step)
		< MIDI TX >	
00 00 2A	00 - 02	Key mode	WHOLE, SPLIT, DUAL
00 00 2B	00 - 55	Split point	C1 - C#8
00 00 2C	00 - 0F	Lower channel	1 - 16
00 00 2D	00 - 0F	Upper channel	1 - 16
00 00 2E	00 - 7F	Lower program change	1 - 128
00 00 2F	00 - 7F	Upper program change	1 - 128
00 00 30	00 - 02	Hold mode	UPPER, LOWER, BOTH
00 00 31	00 - 00	<dummy>	
Total Size	00 00 32	(50bytes)	

[*1]:none, A, B, AB, C, AC, BC, ABC, D, AD, BD, ABD, CD, ACD, BCD, ABCD

[*2]:200, 250, 315, 400, 500, 630, 800, 1k, 1.25k, 1.6k, 2k, 2.5k, 3.15k, 4k, 5k, 6.3k, 8kHz

/Application example of RQ1/

To derive all the equalizer data within patch I-51, transmit the following data to the JD-800.

F0 41 10 3D 11 05 60 23 00 00 07 71 F7

/Application example of DT1/

To set the patch level of patch I-21 to 100, transmit the following data to the JD-800.

F0 41 10 3D 12 05 18 10 64 6F F7

*4-5-1-2 Patch Memory Effect / Patch Temporary Effect

Not available for patch temporary during MULTI mode.

Offset address	Data	Contents and remarks	
		< Effect Chain >	
00 00 00	00 - 17	Group-A sequence	[*1]
00 00 01	00 - 05	Group-B sequence	[*2]
00 00 02	00 - 01	Group-A block-1 sw	OFF, ON
00 00 03	00 - 01	Group-A block-2 sw	OFF, ON
00 00 04	00 - 01	Group-A block-3 sw	OFF, ON
00 00 05	00 - 01	Group-A block-4 sw	OFF, ON
00 00 06	00 - 01	Group-B block-1 sw	OFF, ON
00 00 07	00 - 01	Group-B block-2 sw	OFF, ON
00 00 08	00 - 01	Group-B block-3 sw	OFF, ON
00 00 09	00 - 64	Group-B effect balance	100:0 - 0:100
		< Distortion >	
00 00 0A	00 - 06	Type	[*3]
00 00 0B	00 - 64	Drive	0 - 100
00 00 0C	00 - 64	Level	0 - 100
		< Phaser >	
00 00 0D	00 - 63	Manual	50 - 15KHz [*4]
00 00 0E	00 - 63	Rate	0.1 - 10Hz(0.1Hz step)
00 00 0F	00 - 64	Depth	0 - 100
00 00 10	00 - 64	Resonance	0 - 100
00 00 11	00 - 64	Mix	0 - 100
		< Spectrum >	
00 00 12	00 - 1E	Band 1	-15 - +15
00 00 13	00 - 1E	Band 2	-15 - +15
00 00 14	00 - 1E	Band 3	-15 - +15
00 00 15	00 - 1E	Band 4	-15 - +15
00 00 16	00 - 1E	Band 5	-15 - +15
00 00 17	00 - 1E	Band 6	-15 - +15
00 00 18	00 - 04	Band width	1 - 5
		< Enhancer >	
00 00 19	00 - 64	Sens	0 - 100
00 00 1A	00 - 64	Mix	0 - 100
		< Delay >	
00 00 1B	00 - 7D	Center tap	0.1 - 600ms [*5]
00 00 1C	00 - 64	Center level	0 - 100
00 00 1D	00 - 7D	Left tap	0.1 - 600ms [*5]
00 00 1E	00 - 64	Left level	0 - 100
00 00 1F	00 - 7D	Right tap	0.1 - 600ms [*5]
00 00 20	00 - 64	Right level	0 - 100
00 00 21	00 - 62	Feedback	-98 - 0 - +98%(2% step)
		< Chorus >	
00 00 22	00 - 63	Rate	0.1 - 10Hz(0.1Hz step)
00 00 23	00 - 64	Depth	0 - 100
00 00 24	00 - 63	Delay time	0.1 - 50ms [*6]
00 00 25	00 - 62	Feedback	-98 - 0 - +98%(2% step)
00 00 26	00 - 64	Level	0 - 100
		< Reverb >	
00 00 27	00 -	Type	[*7]
00 00 28	00 - 79	Pre delay	0 - 120ms(1ms step)
00 00 29	00 - 64	Early ref level	0 - 100
00 00 2A	00 - 10	HF dump	500Hz - BYPASS [*8]
00 00 2B	00 - 64	Time	0.1 - 20s [*9]
00 00 2C	00 - 64	Level	0 - 100
00 00 2D	00 - 00	<dummy>	
Total Size	00 00 2E	(46bytes)	

[*1]:DS-PH-SP-EN, DS-PH-EN-SP, DS-SP-EN-PH, DS-SP-PH-EN, DS-EN-PH-SP, DS-EN-SP-PH, PH-DS-SP-EN, PH-DS-EN-SP, PH-SP-EN-DS, PH-SP-DS-EN, PH-EN-DS-SP, PH-EN-SP-DS, SP-PH-DS-EN, SP-PH-EN-DS, SP-DS-EN-PH, SP-DS-PH-EN, SP-EN-PH-DS, SP-EN-DS-PH, EN-PH-SP-DS, EN-PH-DS-SP, EN-SP-DS-PH, EN-SP-PH-DS, EN-DS-PH-SP, EN-DS-SP-PH

[*2]:CHO-DLY-REV, CHO-REV-DLY, DLY-CHO-REV, DLY-REV-CHO, REV-CHO-DLY, REV-DLY-CHO

[*3]:MELLOW DRIVE, OVERDRIVE, CRY DRIVE, MELLOW DIST, LIGHT DIST, FAT DIST, FUZZ DIST

[*4]:50-300Hz(10Hz step), 320Hz, 350-1010Hz(30Hz step), 1.1k-8.1kHz(0.2kHz step), 8.5k-15kHz(0.5kHz step)

[*5]:0.1-5ms(0.1ms step), 5.5-10ms(0.5ms step), 11-40ms(1ms step),
50-200ms(10ms step), 220-600ms(20ms step)
[*6]:0.1-5ms(0.1ms step), 5.5-10ms(0.5ms step), 11-50ms(1ms step)
[*7]:ROOM1, ROOM2, HALL1, HALL2, HALL3, HALL4,
GATE, REVERSE, FLYING1, FLYING2
[*8]:500, 630, 800, 1k, 1.25k, 1.6k, 2k, 2.5k, 3.15k, 4k,
5k, 6.3k, 8k, 10k, 12.5k, 16kHz, BYPASS
[*9]:0.1-10s(0.1s step), 10-20s(0.5s step);(ROOM1/2,HALL1/2/3/4)
5-500ms(5ms step);(GATE,REVERSE,FLYING1/2)

/Application example of RQ1/
To derive all the effect data within patch I-41, transmit the following data to the JD-800.
F0 41 10 3D 11 05 48 32 00 00 2E 53 F7

/Application example of DT1/
To set the phaser mix of patch I-71 to 100, transmit the following data to the JD-800.
F0 41 10 3D 12 06 10 43 64 43 F7

*4-5-1-3 Patch Memory Tone / Patch Temporary Tone / Setup Key Tone

Offset address	Data	Contents and remarks	
< COMMON >			
00 00 00	00 - 03	Velocity curve	1, 2, 3, 4
00 00 01	00 - 01	Hold control	OFF, ON
< LFO 1 >			
00 00 02	00 - 64	Rate	0 - 100
00 00 03	00 - 65	Delay	0 - 100, REL
00 00 04	00 - 64	Fade	-50 - +50
00 00 05	00 - 04	Waveform	TRI, SAW, SQU, S/H, RND
00 00 06	00 - 02	Offset	+, 0, -
00 00 07	00 - 01	Key trigger	OFF, ON
< LFO 2 >			
00 00 08	00 - 64	Rate	0 - 100
00 00 09	00 - 65	Delay	0 - 100, REL
00 00 0A	00 - 64	Fade	-50 - +50
00 00 0B	00 - 04	Waveform	TRI, SAW, SQU, S/H, RND
00 00 0C	00 - 02	Offset	+, 0, -
00 00 0D	00 - 01	Key trigger	OFF, ON
< WG >			
00 00 0E	00 - 01	Wave source	INT, CARD
00 00 0F	00 - 01	Waveform MSB	
00 00 10	00 - 7F	Waveform LSB	0 - 255 [*1]
00 00 11	00 - 60	Pitch coarse	-48 - +48
00 00 12	00 - 64	Pitch fine	-50 - +50
00 00 13	00 - 64	Pitch random	0 - 100
00 00 14	00 - 10	Key follow	-100 - 0 - +200(%) [*2]
00 00 15	00 - 01	Bender	OFF, ON
00 00 16	00 - 01	A-touch bend	OFF, ON
00 00 17	00 - 64	LFO1 sens	-50 - +50
00 00 18	00 - 64	LFO2 sens	-50 - +50
00 00 19	00 - 64	Lever sens	LFO2(50) - 0 - LFO1(50)
00 00 1A	00 - 64	A-touch mod sens	LFO2(50) - 0 - LFO1(50)
< PITCH ENV >			
00 00 1B	00 - 64	Velo	-50 - +50
00 00 1C	00 - 64	Time velo	-50 - +50
00 00 1D	00 - 14	Time KF	-10 - +10
00 00 1E	00 - 64	Level 0	-50 - +50
00 00 1F	00 - 64	Time 1	0 - 100
00 00 20	00 - 64	Level 1	-50 - +50
00 00 21	00 - 64	Time 2	0 - 100
00 00 22	00 - 64	Time 3	0 - 100
00 00 23	00 - 64	Level 2	-50 - +50
< TVF >			
00 00 24	00 - 02	Filter mode	HPF, BPF, LPF
00 00 25	00 - 64	Cutoff freq	0 - 100
00 00 26	00 - 64	Resonance	0 - 100
00 00 27	00 - 28	Key follow	-100 - 0 - +150(%) [*3]
00 00 28	00 - 64	A-touch sens	-50 - +50
00 00 29	00 - 01	LFO select	LFO 1, LFO 2
00 00 2A	00 - 64	LFO depth	-50 - +50
00 00 2B	00 - 64	TVF ENV depth	-50 - +50
< TVF ENV >			
00 00 2C	00 - 64	Velo	-50 - +50
00 00 2D	00 - 64	Time velo	-50 - +50
00 00 2E	00 - 14	Time KF	-10 - +10
00 00 2F	00 - 64	Time 1	0 - 100
00 00 30	00 - 64	Level 1	0 - 100
00 00 31	00 - 64	Time 2	0 - 100
00 00 32	00 - 64	Level 2	0 - 100
00 00 33	00 - 64	Time 3	0 - 100
00 00 34	00 - 64	Sustain level	0 - 100
00 00 35	00 - 64	Time 4	0 - 100
00 00 36	00 - 64	Level 4	0 - 100
< TVA >			
00 00 37	00 - 02	Bias direction	UP, LOW, U&L
00 00 38	00 - 7F	Bias point	C-1 - G9
00 00 39	00 - 14	Bias level	-10 - +10
00 00 3A	00 - 64	Level	0 - 100
00 00 3B	00 - 64	A-touch sens	-50 - +50
00 00 3C	00 - 01	LFO select	LFO 1, LFO 2
00 00 3D	00 - 64	LFO depth	-50 - +50
< TVA ENV >			
00 00 3E	00 - 64	Velo	-50 - +50
00 00 3F	00 - 64	Time velo	-50 - +50
00 00 40	00 - 14	Time KF	-10 - +10
00 00 41	00 - 64	Time 1	0 - 100
00 00 42	00 - 64	Level 1	0 - 100
00 00 43	00 - 64	Time 2	0 - 100
00 00 44	00 - 64	Level 2	0 - 100
00 00 45	00 - 64	Time 3	0 - 100
00 00 46	00 - 64	Sustain level	0 - 100
00 00 47	00 - 64	Time 4	0 - 100
Total size	00 00 48 (72bytes)		

[*1]:Only setting values within range 00H 00H (0) and 00H 6BH (107) can be used to generate sound of internal waveform.
When using a waveform card, the number of settings is limited up to the number of waveforms registered in the card minus 1.
Otherwise, the tone is not sounded.
[*2]:-100, -50, -20, -10, -5, 0, +5, +10, +20, +50,
+98, +99, +100, +101, +102, +150, +200(%)
[*3]:-100 - 0%(10% step), 0 - +150%(5% step)

/Application example of RQ1/
To derive all the tone B data within patch I-12, transmit the following data to the JD-800.

F0 41 10 3D 11 05 04 08 00 00 48 27 F7

/Application example of DT1/
To set the cutoff frequancy of part 2 patch temporary tone C to 100 during MULTI mode, transmit the following data to the JD-800.

F0 41 10 3D 12 00 14 39 64 4F F7

---

*4-6 Display Area

The data delivered to this area are interpreded as character string of ASCII code and placed on the left-hand LCD. The data request (RQ1) cannot be used to read the characters stored in this area.
Character string cannot be displayed in the right-hand LCD.

Offset address	Data	Contents and remarks
00 00 00	20 - 7F	Display Letter(1) (ASCII)
:	:	:
00 00 2B	20 - 7F	Display Letter(44) (ASCII)
Total size	00 00 2C (44bytes)	

/Application example of DT1/
To have the JD-800 display show "Hello!", transmit the following data to the JD-800.

F0 41 10 3D 12 07 00 00 48 65 6C 6C 6F 21 64 F7

Address Map

Address Block	Sub Block		Reference
00 00 00			
Single Patch Temp. Area		Patch Common	4-5-1-1
		Patch Effect	4-5-1-2
		Patch Tone-A	4-5-1-3
		Patch Tone-B	4-5-1-3
		Patch Tone-C	4-5-1-3
		Patch Tone-D	4-5-1-3
00 10 00			
Multi Patch Temp. Area	Part 1	Patch Common	4-5-1-1
	Part 2	Patch Tone-A	4-5-1-3
	Part 3	Patch Tone-B	4-5-1-3
	Part 4	Patch Tone-C	4-5-1-3
	Part 5	Patch Tone-D	4-5-1-3
01 00 00			
Special Setup Temp. Area	Setup Common/EQ		4-2-1
	C2 (#36)	Setup Key	4-2-2-1
	:	Key Tone	4-5-1-3
	C7 (#96)		
02 00 00			
System Area			4-3
03 00 00			
Part Area	Part 1		4-4-1
	Part 2		4-4-1
	Part 3		4-4-1
	Part 4		4-4-1
	Part 5		4-4-1
	Special Part		4-4-2
04 00 00			
Special Setup Memory Area	Setup Common/EQ		4-2-1
	C2 (#36)	Setup Key	4-2-2-1
	:	Key Tone	4-5-1-3
	C7 (#96)		
05 00 00			
Patch Memory Area	I-11	Patch Common	4-5-1-1
	I-12	Patch Effect	4-5-1-2
	:	Patch Tone-A	4-5-1-3
	:	Patch Tone-B	4-5-1-3
	:	Patch Tone-C	4-5-1-3
	I-88	Patch Tone-D	4-5-1-3
07 00 00			
Display Area			4-6

PROGRAMABBLE SYNTHESIZER (Multi mode special part) Date : Feb. 1. 1991

Model JD-800

MIDI Implementation Chart

Version : 1.00

Function ...		Transmitted	Recognized	Remarks
Basic	Default	1 – 16 each	1 – 16 each	
Channel	Changed	1 – 16 each	1 – 16 each	Memorized
Mode	Default	Mode 3	Mode 3	
	Messages	OMNI OFF, POLY		
	Altered	*********		
Note Number		24 – 108	36 – 96	
	True Voice	*********	36 – 96	
Velocity	Note ON	○ v = 1 – 127	○ v = 1 – 127	
	Note OFF	○ v = 1 – 127	×	
After Touch	Key's	×	×	
	Ch's	*1	*1	
Pitch Bender		○	○	9 bit resolution
Control Change	1	○	○	Modulation
	2	×	*1	Breath
	7			Portamento time
	10	×	○	Data Entry LSB, MSB
		*1	*1	Volume
	64	*1	×	Pan
		○	○	Hold 1
				Portamento
	100, 101	×	*2	PRN LSB, MSB
	38, 6			
	121	○	○	Reset All Controllers
Prog Change		*1	*1	
	True #	*********	0 – 1	
System Exclusive		○	*1	
System Common	Song Pos	×	×	
	Song Sel	×	×	
	Tune	×	×	
System Real Time	Clock	×	×	
	Commands	×	×	
Aux Messages	Local ON/OFF	×	○	
	All Notes OFF	×	○ (123 – 127)	
	Active Sense	○	○	
	Reset	×	×	
Notes		*1 Changed to ○ or × manually, and memorized. *2 RPN # 0 : Pitch Bend Sensitivity RPN # 1 : Fine Tune		

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO ○ : Yes

Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO × : No

PROGRAMABBLE SYNTHESIZER (Single mode) Date : Feb. 1. 1991

Model JD-800

MIDI Implementation Chart

Version : 1.00

Function ...		Transmitted	Recognized	Remarks
Basic Channel	Default	1 – 16 each	1 – 16 each	
	Changed	1 – 16 each	1 – 16 each	Memorized
Mode	Default	Mode 3	Mode 3, 4	
	Messages	×	×	
	Altered	*********		
Note Number	True Voice	24 – 108	0 – 127	
		*********	0 – 127	
Velocity	Note ON	○ v = 1 – 127	○ v = 1 – 127	
	Note OFF	○ v = 1 – 127	*3 v = 0 – 127	
After Touch	Key's	×	×	
	Ch's	*1	*1	
Pitch Bender		○	○	9 bit resolution
Control Change	1	○	○	Modulation
	2	×	*1	Breath
	5	×	○	Portamento time
	38, 6	×	○	Data Entry LSB, MSB
	7	*1	*1	Volume
	10	*1	×	Pan
	64	○	*1	Hold 1
	65	×	○	Portamento
	100, 101	×	*2	PRN LSB, MSB
	121	○	○	Reset All Controllers
Prog Change	True #	*1	*1	
		*********	0 – 127	
System Exclusive		○	*1	
System Common	Song Pos	×	×	
	Song Sel	×	×	
	Tune	×	×	
System Real Time	Clock	×	×	
	Commands	×	×	
Aux Messages	Local ON/OFF	×	○	
	All Notes OFF	×	○ (123 – 127)	
	Active Sense	○	○	
	Reset	×	×	
Notes		*1 Changed to ○ or × manually, and memorized. *2 RPN # 0 : Pitch Bend Sensitivity RPN # 1 : Fine Tune *3 Used for retriger velocity in solo (Mode4).		

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO ○ : Yes

Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO × : No

PROGRAMABBLE SYNTHESIZER (Multi mode Part 1 – 5) Date : Feb. 1. 1991

Model JD-800

MIDI Implementation Chart

Version : 1.00

Function •••		Transmitted	Recognized	Remarks
Basic	Default	1 – 16 each	1 – 16 each	
Channel	Changed	1 – 16 each	1 – 16 each	Memorized
Mode	Default	Mode 3	Mode 3, 4	
	Messages	×	×	
	Altered	*********		
Note Number	True Voice	24 – 108	0 – 127	
		*********	0 – 127	
Velocity	Note ON	○ v = 1 – 127	○ v = 1 – 127	
	Note OFF	○ v = 1 – 127	*3 v = 0 – 127	
After Touch	Key's	×	×	
	Ch's	*1	*1	
Pitch Bender		○	○	9 bit resolution
Control Change	1	○	○	Modulation
	2	×	*1	Breath
	5	×	○	Portamento time
	38, 6	×	○	Data Entry LSB, MSB
	7	*1	*1	Volume
	10	*1	○	Pan
	64	○	*1	Hold 1
	65	×	○	Portamento
	100, 101	×	*2	PRN LSB, MSB
	121	○	○	Reset All Controllers
Prog Change	True #	*1	*1	
		*********	0 – 127	
System Exclusive		○	*1	
System Common	Song Pos	×	×	
	Song Sel	×	×	
	Tune	×	×	
System Real Time	Clock	×	×	
	Commands	×	×	
Aux Messages	Local ON/OFF	×	○	
	All Notes OFF	×	○ (123 – 127)	
	Active Sense	○	○	
	Reset	×	×	
Notes		*1 Changed to ○ or × manually, and memorized. *2 RPN # 0 : Pitch Bend Sensitivity RPN # 1 : Fine Tune *3 Used for retriger velocity in solo (Mode4).		

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO ○ : Yes

Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO × : No

Technische Daten

JD-800: PROGRAMMIERBARER SYNTHESIZER

○ **Keyboard**
Gewichtete Tastatur mit 61 Tasten (mit Anschlagdynamik und Channel Aftertouch)

○ **Maximale Polyphonie**
24 Stimmen

○ **Parts**
Part 1 bis 5, Special Part

○ **Effekte**
Single Mode:
3-Band EQ, Distortion, Phaser, Spectrum, Enhancer, Chorus, Delay, Reverb, Mix Out Filter
Multi Mode:
3-Band EQ, Reverb, Chorus + Reverb, Delay + Reverb, Mix Out Filter

○ **Speicher**
Intern (INT):
System Setup 1
Patch 64
Special Setup 1

DATA Card (CARD):
System Setup 1
Patch 64
Special Setup 1

○ **Display**
LCD-Typ:
22 Zeichen, 2zeilig (rückseitenbeleuchtet) 1
16 Zeichen, 2zeilig (rückseitenbeleuchtet) 1
LED-Typ:
8 Segmente, 2 Zeichen 1

○ **Anschlüsse**
MIX OUT Buchsen (L, R)
DIRECT OUT Buchsen (L, R)
Kopfhörerbuchse (Stereo)
MIDI Buchsen (IN, OUT, THRU)
External Control Buchse
Hold Pedal Buchse

○ **Netzteil**
AC 120 V, 230 V, AC 240 V

○ **Leistungsbedarf**
25 W (AC 120 V), 30 W (AC 230 V), 30 W (AC 240 V)

○ **Abmessungen (B x H x T)**
1040 mm x 108 mm x 420 mm

○ **Gewicht**
15,0 kg

○ **Zubehör**
Bedienungsanleitung ..... Bedienungs-Handbuch, Referenz-Handbuch
Verbindungskabel (PJ-1M) 1

○ **Sonderzubehör**
DATA Card M-256E
WAVEFORM Card ..... SO-JD80 Series

*** Änderungen der technischen Daten und der Designs bleiben vorbehalten und bedürfen keiner besonderen Ankündigung.**

Thematisches Sachwortregister

Die vielfältigen Parameter des JD-800 sind in verschiedene Gruppen eingeteilt. Es ist aber nicht immer ganz leicht, sich daran zu erinnern, was genau jeder Parameter tut.
Dieses thematische Sachwortregister soll Ihnen dabei helfen, die entsprechenden Parameter zu finden, für das, was Sie gerade tun wollen. Schauen Sie also hier nach, wenn Sie bei der Gestaltung Ihrer eigenen Sounds Hilfe brauchen.

● Änderung des Sounds

● Änderung der Lautstärke

● Änderung der Tonhöhe

● Verdicken des Sounds

● Jeden Effekt ein-/ausschalten

● Durchführung von Effekt-Einstellungen

● Verlängern des Sounds (Sustain)

● Monophone Spielweise

● Transpose

● Änderung des Panoramas (Stereo-Position)

● Stimmen auf andere Instrumente

● Übertragung externer Speicher-Daten

● Steuerung externer Sound-Quellen

● Spielen der internen Sound-Quelle von einem externen Gerät aus

● Senden von Exclusiv-Daten

● Empfang von Exclusiv-Daten

JD-800 — Patch List —

Roland

Patch Number
Patch Name
Layer settings

* Werksvoreinstellungen (Patch-Namen und Layer-Einstellungen)

Electronic Music	Analog Synthesizer	Keyboard	Bass & Solo	Guitar & Clavi	Layered Sound	Pad	Ethnic Pipe, Bell, etc.
I - 11	**I - 12**	**I - 13**	**I - 14**	**I - 15**	**I - 16**	**I - 17**	**I - 18**
Millennium ABCD	Massive Pad ABCD	Crystal Rhodes —BCD	Synthadelic Bass ABCD	Wailing Guitar ABC–	Fantasia 90's ABCD	Spun Glass ABCD	Mother Afrika! ABCD
I - 21	**I - 22**	**I - 23**	**I - 24**	**I - 25**	**I - 26**	**I - 27**	**I - 28**
Swimotion ABCD	Classic Sweeper ABCD	LA MIDI'ed Piano AB––	Meaty Bass ABCD	Stratomaster ABCD	Perc - Vox Stack A*CD	Killer Pad ABCD	Waveblower ABC–
I - 31	**I - 32**	**I - 33**	**I - 34**	**I - 35**	**I - 36**	**I - 37**	**I - 38**
Sci - Fi Groove ABCD	Mr. Brass! ABCD	Bruiser Tines ABC*	Wet Bass ABC*	Throaty Clav A*CD	Rockin' Wire ABC*.	Iceman ABCD	Ming Dynasty A*CD
I - 41	**I - 42**	**I - 43**	**I - 44**	**I - 45**	**I - 46**	**I - 47**	**I - 48**
Planetarium ABCD	Pulse Pad ABC–	All Stops Out ABCD	Fusion Solo ABCD	MIDI Guitar ABCD	Pain&Injury Keyz ABCD	Deep Breath Pad ABCD	Harlequin ABCD
I - 51	**I - 52**	**I - 53**	**I - 54**	**I - 55**	**I - 56**	**I - 57**	**I - 58**
Hearts of Space ABC*	Analog Brass *BC*	Ac. Piano 1 A*C*	Modular Bass ABC–	Clavinut A*CD	Vocostrat ABCD	Invocation ABCD	Ethnic Logs AB*D
I - 61	**I - 62**	**I - 63**	**I - 64**	**I - 65**	**I - 66**	**I - 67**	**I - 68**
2 - way Slide ABC*	Macho Swell ABCD	Sunday Best ABCD	Synth Pipe Solo AB*D	Nylon Choir A**D	Scrapeing Bone ABCD	Hybrid Strings *BCD	JD - bells 1 ABCD
I - 71	**I - 72**	**I - 73**	**I - 74**	**I - 75**	**I - 76**	**I - 77**	**I - 78**
1974! A*CD	Polysynth AB**	Metallic Rhodes ABC*	Face Bass A*CD	Velo - Crunch ABC–	Stack Attack! ABCD	Girlish Vox ABC*	Shakuflute ABCD
I - 81	**I - 82**	**I - 83**	**I - 84**	**I - 85**	**I - 86**	**I - 87**	**I - 88**
Aurora Borealis ABCD	Pulsation A*C*	Waveola Keys ABC–	Tekno Funk Bass ABC–	Backwards *60's A*C–	Chinkvox/Bass ABCD	Bottle It AB––	Doo Pipes ABC–

* Tones die durch ein „*“ markiert sind, ändern die Klangfarbe, wenn sie eingeschaltet werden.
* „-“ bezeichnet Tones, die ausgeschaltet sind.
* „▼“ bezeichnet Tones, die aktiviert sind (Active).

JD-800 — Setup List —

	Note number	Tone name	Mute group	ENV mode	Pan	EFF mode	EFF level
C2	36	Kick A	OFF	NO SUS	00	DRY	50
	37	Kick B	OFF	NO SUS	00	DRY	50
	38	Snare A	OFF	NO SUS	01R	REV	100
	39	Block	OFF	NO SUS	00	REV	100
	40	Snare B	OFF	NO SUS	00	REV	100
	41	Tom 1	OFF	NO SUS	L25	CHO + REV	80
	42	Closed HH	A	NO SUS	20R	REV	50
	43	Tom 2	OFF	NO SUS	L10	CHO + REV	80
	44	1/2 Closed	A	NO SUS	20R	REV	40
	45	Tom 3	OFF	NO SUS	10R	CHO + REV	80
	46	Open HH	A	NO SUS	20R	REV	40
	47	Tom 4	OFF	NO SUS	20R	CHO + REV	80
C3	48	Switch	OFF	NO SUS	L19	REV	100
	49	Resoklang	OFF	NO SUS	03R	REV	100
	50	Cowbell	OFF	NO SUS	03R	REV	100
	51	Small Bell	OFF	NO SUS	L30	CHO + REV	100
	52	Log Drum	OFF	NO SUS	L19	REV	100
	53	Syndrum 1	B	NO SUS	L20	CHO + REV	50
	54	Hi Agogo	OFF	NO SUS	L19	REV	100
	55	Syndrum 2	C	NO SUS	00	CHO + REV	50
	56	Lo Agogo	OFF	NO SUS	19R	REV	100
	57	Syndrum 3	D	NO SUS	20R	CHO + REV	50
	58	Rando 1	OFF	NO SUS	L08	REV	65
	59	Cymbal A	E	NO SUS	L30	CHO + REV	100
C4	60	Cymbal B	F	NO SUS	L30	CHO + REV	100
	61	Cymbal C	G	NO SUS	L30	CHO + REV	100
	62	Syn Clap	OFF	NO SUS	12R	REV	100
	63	Wood Crack	OFF	NO SUS	L20	DLY + REV	100
	64	Long Guiro	OFF	NO SUS	L06	REV	100
	65	Shrt Guiro	OFF	NO SUS	L06	REV	100
	66	Tambourin	OFF	NO SUS	L20	REV	100
	67	Wind Chime	OFF	NO SUS	L12	DLY + REV	100
	68	Anklungs	OFF	NO SUS	15R	DLY + REV	100
	69	Gong	OFF	NO SUS	00	CHO + REV	100
	70	Pole	OFF	NO SUS	00	CHO + REV	100
	71	Shaker	OFF	NO SUS	L25	REV	55
C5	72	Ooops	OFF	NO SUS	L25	CHO + REV	55
	73	Bottle Hit	OFF	NO SUS	20R	DLY + REV	100
	74	Laser II	OFF	NO SUS	L15	CHO + REV	100
	75	Typewriter	OFF	NO SUS	12R	REV	100
	76	Dropper	OFF	NO SUS	02R	DLY + REV	100
	77	Conga Mute	OFF	NO SUS	00	REV	80
	78	Conga Hi	OFF	NO SUS	10R	REV	80
	79	Conga Low	OFF	NO SUS	L10	REV	80
	80	Tom 5	OFF	NO SUS	L25	CHO + REV	100
	81	Rattler	OFF	NO SUS	15R	CHO + REV	100
	82	Rando 2	OFF	NO SUS	08R	CHO + REV	100
	83	Kick C	OFF	NO SUS	00	DRY	100
C6	84	Vari – Vox	OFF	SUS	L20	DLY + REV	100
	85	Vari – Vox	OFF	SUS	20R	DLY + REV	100
	86	Vari – Vox	OFF	SUS	L10	DLY + REV	100
	87	Vari – Vox	OFF	SUS	10R	DLY + REV	100
	88	Vari – Vox	OFF	SUS	L30	DLY + REV	100
	89	Vari – Vox	OFF	SUS	30R	DLY + REV	100
	90	Vari – Vox	OFF	SUS	L05	DLY + REV	100
	91	Vari – Vox	OFF	SUS	05R	DLY + REV	100
	92	Vari – Vox	OFF	SUS	L15	DLY + REV	100
	93	Vari – Vox	OFF	SUS	15R	DLY + REV	100
	94	Vari – Vox	OFF	SUS	L20	DLY + REV	100
	95	Vari – Vox	OFF	SUS	20R	DLY + REV	100
C7	96	Vari – Vox	OFF	SUS	00	DLY + REV	100

Roland