

DM1000 MIDI SPECIFICATIONS

Ver 1.00

Revision History

Version	Date	Description
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1. CHANNEL MESSAGE

Command	rx/tx	function
8n NOTE OFF	rx	Control the internal effects
9n NOTE ON	rx	Control the internal effects
Bn CONTROL CHANGE	rx/tx	Control parameters
Cn PROGRAM CHANGE	rx/tx	Switch scene memories

2. SYSTEM COMMON MESSAGE

Command	rx/tx	function
F1 MIDI TIME CODE QUARTER FRAME	rx	Used when TIME REFERENCE is MTC
F2 SONG POSITION POINTER	rx	Used when TIME REFERENCE is MIDI CLOCK

3. SYSTEM REALTIME MESSAGE

Command	rx/tx	function
F8 TIMING CLOCK	rx	MIDI clock
FA START	rx*	Start automix (from the beginning)
FB CONTINUE	rx*	Start automix (from the middle)
FC STOP	rx*	Stop automix
FE ACTIVE SENSING	rx	Check MIDI cable connections
FF RESET	rx	Clear running status

*Received only when the Automix TIME REFERENCE setting is MIDI CLOCK.

4. EXCLUSIVE MESSAGE

4.1 Real Time System Exclusive

Command	rx/tx	function
F0 7F dd 06 ... F7 MMC COMMAND	tx	MMC command (refer to MMC specification)
F0 7F dd 07 ... F7 MMC RESPONSE	rx	MMC response (refer to MMC specification)
F0 7F dd 01 ... F7 MIDI TIME CODE	rx	Used when TIME REFERENCE is MTC

4.2 System Exclusive Message

4.2.1 Bulk Dump

Command	rx/tx	function
F0 43 0n 7E ... F7 BULK DUMP DATA	rx/tx	BULK DUMP DATA
F0 43 2n 7E ... F7 BULK DUMP REQUEST	rx/tx	BULK DUMP REQUEST

The following data types of bulk dump are used on the DM1000.

Data name	tx/rx	function
'm'	tx/rx	Scene Memory & Request (compressed data)
'S'	tx/rx	Setup Memory & Request
'a'	tx/rx	Automix data & Request (compressed data)
'R'	tx/rx	Input patch library & Request
'O'	tx/rx	Output patch library & Request
'H'	tx/rx	Channel library & Request
'G'	tx/rx	Gate library & Request
'Y'	tx/rx	Compressor library & Request
'Q'	tx/rx	Equalizer library & Request
'E'	tx/rx	Effect library & Request
'J'	tx/rx	Bus to Stereo library & Request
'K'	tx/rx	Surround Monitor library & Request
'P'	tx/rx	Program change table & Request
'C'	tx/rx	Control change table & Request
'L'	tx/rx	User define layer & Request
'V'	tx/rx	User define key & Request
'U'	tx/rx	User assignable layer & Request
'N'	tx/rx	Plug-in Effect Card Data & Request

4.2.2 PARAMETER CHANGE

Command	rx/tx	function
F0 43 1n 3E 0C ... F7 PARAMETER CHANGE	rx/tx	DM1000-specific parameter change
F0 43 3n 3E 0C ... F7 PARAMETER REQUEST	rx/tx	DM1000-specific parameter request
F0 43 1n 3E 7F ... F7 PARAMETER CHANGE	rx/tx	General purpose digital mixer parameter change
F0 43 3n 3E 7F ... F7 PARAMETER REQUEST	rx/tx	General purpose digital mixer parameter request

The following data types of parameter change are used by the DM1000.

Type (HEX)	tx/rx	function
1 (01)	tx/rx	Edit buffer
2 (02)	tx/rx	Patch data
3 (03)	tx/rx	Setup data
4 (04)	tx/rx	Backup data
15 (0F)	tx/rx	Cascade data
16 (10)	tx/rx	Function (recall, store, title, clear)
17 (11)	rx	Function (pair, copy)
18 (12)	rx	Function (effect)
19 (13)	tx/rx	Sort table
20 (14)	tx/rx	Function (attribute, link)
31 (1F)	tx/rx	Function (cascade event)
32 (20)	rx	Key remote
33 (21)	tx/rx	Remote meter
34 (22)	tx/rx	Remote time counter
35 (23)	tx/rx	Automix status
127 (7F)	tx	Active sense

**tx means that the data can be transmitted from the DM1000. rx means that the data can be received by the DM1000.

5. Format Details

5.1 NOTE OFF (8n)

<< Reception >>

If [OTHER ECHO] is ON, these messages are echoed from MIDI OUT.

If the [Rx CH] matches, these messages are received and used to control effects.

STATUS	1000nnnn	8n	Note off message
DATA	0nnnnnnn	nn	Note number
	0vvvvvvv	vv	Velocity (ignored)

5.2 NOTE ON (9n)

<< Reception >>

If [OTHER ECHO] is ON, these message are echoed from MIDI OUT.

If the [Rx CH] matches, these messages are received and used to control effects.

STATUS	1001nnnn	9n	Note on message
DATA	0nnnnnnn	nn	Note number
	0vvvvvvv	vv	Velocity (1-127:on, 0:off)

5.3 CONTROL CHANGE (Bn)

<< Reception >>

If [Control Change ECHO] is ON, these messages are echoed from MIDI OUT.

If [TABLE] is selected, these messages are received if [Control Change Rx] is ON, and will control parameters according to the [Control assign table] settings.

The parameters that can be set are defined in the Control Change Assign Parameter List.

If [NRPN] is selected, these messages are received if [Control Change Rx] is ON and the [Rx CH] matches, and will control the parameter that is specified by the four messages NRPN control number (62h, 63h) and Data Entry control number (06h, 26h). Parameter settings are defined in the Control Change Assign Parameter List.

<< Transmission >>

If [TABLE] is selected, operating a parameter specified in the [Control assign table] will cause these messages to be transmitted if [Control Change Tx] is ON.

The parameters that can be specified are defined in the Control Change Assign Parameter List.

If [NRPN] is selected, operating a specified parameter will cause data to be transmitted on the [Tx CH] if [Control Change Tx] is ON, using the four messages NRPN control number (62h, 63h) and Data Entry control number (06h, 26h). Parameter settings are defined in the Control Change Assign Parameter List.

This data cannot be transmitted via control change to Studio Manager since there is no guarantee that the contents of the tables will match. (Parameter Change messages will always be used.)

If [TABLE] is selected

STATUS	1011nnnn	Bn	Control change
DATA	0nnnnnnn	nn	Control number (0-95, 102-119)
	0vvvvvvv	vv	Control Value (0-127)

If [NRPN] is selected

STATUS	1011nnnn	Bn	Control change	
DATA	01100010	62	NRPN LSB	
	0vvvvvvv	vv	LSB of parameter number	
STATUS	1011nnnn	Bn	Control change	*1
DATA	01100011	63	NRPN MSB	
	0vvvvvvv	vv	MSB of parameter number	
STATUS	1011nnnn	Bn	Control change	*1
DATA	00000110	06	MSB of data entry	
	0vvvvvvv	vv	MSB of parameter data	
STATUS	1011nnnn	Bn	Control change	*1
DATA	00100110	26	LSB of data entry	
	0vvvvvvv	vv	LSB of parameter data	

*1) The second and subsequent STATUS need not be added during transmission. Reception must be implemented so that reception occurs whether or not STATUS is present.

5.4 PROGRAM CHANGE (Cn)

<< Reception >>

If [Program Change ECHO] is ON, these messages are echoed from MIDI OUT.

If [Program Change RX] is ON and the [Rx CH] matches, these messages will be received. However if [OMNI] is ON, they will be received regardless of the channel. When a message is received, a Scene Memory will be recalled according to the settings of the [Program Change Table].

<< Transmission >>

If [Program Change TX] is ON, this message is transmitted according to the settings of the [Program Change Table] on the [Tx CH] channel when a scene memory is recalled.

If the recalled scene has been assigned to more than one program number, the lowest-numbered program number will be transmitted. Transmission to Studio Manager using Program Change messages will not be performed since there is no guarantee that the contents of the tables will match. (Parameter Changes will always be used.)

STATUS	1100nnnn	Cn	Program change
DATA	0nnnnnnn	nn	Program number (0-127)

5.5 SONG POSITION POINTER (F2)

<< Reception >>

If this is received when the automix TIME REFERENCE setting is MIDI CLOCK, the automix will move to the song position that was received.

STATUS	11110010	F2	Song position pointer
DATA	0vvvvvvv	vv	Song position LSB
	0vvvvvvv	vv	Song position MSB

5.6 TIMING CLOCK (F8)**<< Reception >>**

If the automix TIME REFERENCE setting is MIDI CLOCK, this message is used to synchronize automix. It is also used to control effects. This message is transmitted 24 times per quarter note.

STATUS	11111000	F8	Timing clock
--------	----------	----	--------------

5.7 START (FA)**<< Reception >>**

This message is received if the automix TIME REFERENCE setting is MIDI CLOCK, and will start the automix. In actuality, automix will start when the next TIMING CLOCK is received after receiving the START message.

STATUS	11111010	FA	Start
--------	----------	----	-------

5.8 CONTINUE (FB)**<< Reception >>**

This message is received if the automix TIME REFERENCE setting is MIDI CLOCK, and will cause automix to start from the current song position. In actuality, automix will start when the next TIMING CLOCK is received after receiving the CONTINUE message.

STATUS	11111011	FB	Continue
--------	----------	----	----------

5.9 STOP (FC)**<< Reception >>**

This message is received if the automix TIME REFERENCE setting is MIDI CLOCK, and will cause automix to stop.

STATUS	11111100	FC	Stop
--------	----------	----	------

5.10 ACTIVE SENSING (FE)**<< Reception >>**

Once this message has been received, the failure to receive any message for an interval of 400 ms or longer will cause MIDI transmission to be initialized, such as by clearing the Running Status.

STATUS	11111110	FE	Active sensing
--------	----------	----	----------------

5.11 SYSTEM RESET (FF)**<< Reception >>**

When this message is received, MIDI communications will be cleared, e.g., by clearing the Running Status.

STATUS	11111111	FF	System reset
--------	----------	----	--------------

5.12 SYSTEM EXCLUSIVE MESSAGE (F0)

5.12.1 MIDI MACHINE CONTROL (MMC)

These messages are transmitted when the Machine Control section of the DM1000 is operated.

5.12.2 BULK DUMP

This message sends or receives the contents of various memories stored within the DM1000.

The basic format is as follows.

for DUMP DATA

```
F0 43 0n 7E cc cc <Model ID> tt mm mm [Data ...] cs F7
```

for DUMP REQUEST

```
F0 43 2n 7E <Model ID> tt mm mm F7
```

n	Device Number
cc cc	DATA COUNT(the number of bytes that follow this, ending before the checksum)
<Model ID>	Model ID (for the DM1000, this is 4C 4D 20 20 38 43 39 31)
tt	DATA TYPE
mm mm	DATA NUMBER
cs	CHECK SUM

A unique header (Model ID) is used to determine whether the device is a DM1000.

CHECK SUM is obtained by adding the bytes that follow BYTE COUNT (LOW) and end before CHECK SUM, taking the binary compliment of this sum, and then setting bit 7 to 0.

```
CHECK SUM = (-sum) & 0x7F
```

<< Reception >>

This message is received if [Bulk RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

When a bulk dump is received, it is immediately written into the specified memory.

When a bulk dump request is received, a bulk dump is immediately transmitted.

<< Transmission >>

This message is transmitted on the [Tx CH] by key operations in the [MI-DI]-[BULK DUMP] screen.

A bulk dump is transmitted on the [Rx CH] in response to a bulk dump request.

The data area is handled by converting seven words of 8-bit data into eight words of 7-bit data.

Conversion from actual data into bulk data

d[0~6]: actual data

b[0~7]: bulk data

b[0] = 0;

```
for( I=0; I<7; I++){
    if( d[I]&0x80){
        b[0] |= 1<<(6-I);
    }
    b[I+1] = d[I]&0x7F;
}
```

Restoration from bulk data into actual data

d[0~6]: actual data

b[0~7]: bulk data

```
for( I=0; I<7; I++){
    b[0] <= 1;
    d[I] = b[I+1] + (0x80 & b[0]);
}
```

5.12.2.1 Scene memory bulk dump format (compress)

The DM1000 can transmit and receive scene memories in compressed form.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01101101	6D	'm'
	0mmmmmmm	mh	m=0-99, 256, 8192 (Scene0-99, EDIT BUFFER, UNDO)
	0mmmmmmm	ml	Receive is effective 1-99, 256, 8192
BLOCK INFO.	0ttttttt	tt	total block number (minimum number is 0)
	0bbbbbbb	bb	current block number (0-total block number)
DATA	0ddddddd	ds	Scene data of block [bb]
	:	:	
	0ddddddd	de	
CHECK SUM	0eeeeeee	ee	ee=(Invert('L'+...+de)+1)&0x7F
EOX	11110111	F7	End of exclusive

5.12.2.2 Scene memory bulk dump request format (compress)

The second and third bytes of the DATA NAME indicate the scene number that is being requested. If this is 256, the data of the Edit Buffer will be bulk-dumped. If this is 8192, the data of the Undo Buffer will be bulk-dumped.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0010nnnn	2n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01101101	6D	'm'
	0mmmmmmm	mh	m=0-99, 256, 8192 (Scene0-99, EDIT BUFFER, UNDO)
	0mmmmmmm	ml	
EOX	11110111	F7	End of exclusive

5.12.2.3 Setup memory bulk dump format

Of the setup memory of the DM1000, this bulk-dumps data other than the User define layer, User define plug-in, User define keys, Control change table, and Program change table.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01010011	53	'S'
	00000010	02	
	00000000	00	No.256 = Current
BLOCK INFO.	0ttttttt	tt	total block number (minimum number is 0)
	0bbbbbbb	bb	current block number (0-total block number)
DATA	0ddddd	ds	Setup data of block[bb]
	:	:	
	0ddddd	de	
CHECK SUM	0eeeeeee	ee	ee=(Invert('L'+...+de)+1)&0x7F
EOX	11110111	F7	End of exclusive

5.12.2.4 Setup memory bulk dump request format

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0010nnnn	2n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01010011	53	'S'
	00000010	02	
	00000000	00	No.256 = Current
EOX	11110111	F7	End of exclusive

5.12.2.5 User Defined MIDI Remote bulk dump format

The second and third bytes of the DATA NAME indicate the bank number.

Be aware that the state of the transmission destination will (in some cases) change if the same bank is being used.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01001100	4C	'L'
	00000000	00	
	0bbbbbbb	bb	b=0-3 (bank no.1-4)
BLOCK INFO.	0ttttttt	tt	total block number (minimum number is 0)
	0bbbbbbb	bb	current block number (0-total block number)
DATA	0ddddddd	ds	User define layer data of block[bb]
	:	:	
	0ddddddd	de	
CHECK SUM	0eeeeeee	ee	ee= (Invert ('L'+...+de)+1) & 0xF
EOX	11110111	F7	End of exclusive

5.12.2.6 User Defined MIDI Remote bulk dump request format

The second and third bytes of the DATA NAME indicate the bank number.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0010nnnn	2n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01001100	4C	'L'
	00000000	00	
	0bbbbbbb	bb	b=0-3 (bank no.1-4)
EOX	11110111	F7	End of exclusive

5.12.2.7 User Defined Keys bulk dump format

The second and third bytes of the DATA NAME indicate the bank number.

Be aware that the state of the transmission destination will (in some cases) change if the same bank is being used.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01010110	56	'V'
	00000000	00	
	0bbbbbbb	bb	b=0-7(bank no.A-H)
BLOCK INFO.	0ttttttt	tt	total block number(minimum number is 0)
	0bbbbbbb	bb	current block number(0-total block number)
DATA	0ddddddd	ds	User define key data of block[bb]
	:	:	
	0ddddddd	de	
CHECK SUM	0eeeeeee	ee	ee=(Invert('L'+...+de)+1)&0xF
EOX	11110111	F7	End of exclusive

5.12.2.8 User Defined Keys bulk dump request format

The second and third bytes of the DATA NAME indicate the bank number.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0010nnnn	2n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01010110	56	'V'
	00000000	00	
	0bbbbbbb	bb	b=0-7(bank no.A-H)
EOX	11110111	F7	End of exclusive

5.12.2.9 User Assignable Layer bulk dump format

The second and third bytes of the DATA NAME indicate the bank number.

Be aware that the state of the transmission destination will (in some cases) change if the same bank is being used.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01010101	55	'U'
	00000000	00	
	0bbbbbbb	bb	b=0-3 (bank no.1-4)
BLOCK INFO.	0ttttttt	tt	total block number (minimum number is 0)
	0bbbbbbb	bb	current block number (0-total block number)
DATA	0ddddddd	ds	User assignable layer data of block[bb]
	:	:	
	0ddddddd	de	
CHECK SUM	0eeeeeee	ee	ee= (Invert ('L'+...+de)+1) & 0x7F
EOX	11110111	F7	End of exclusive

5.12.2.10 User Assignable Layer bulk dump request format

The second and third bytes of the DATA NAME indicate the bank number.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0010nnnn	2n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01010101	55	'U'
	00000000	00	
	0bbbbbbb	bb	b=0-3 (bank no.1-4)
EOX	11110111	F7	End of exclusive

5.12.2.11 Control change table bulk dump format

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01000011	43	'C'
	00000010	02	
	00000000	00	No.256 = Current
BLOCK INFO.	0ttttttt	tt	total block number(minimum number is 0)
	0bbbbbbb	bb	current block number(0-total block number)
DATA	0ddddd	ds	Control change table data of block[bb]
	:	:	
	0ddddd	de	
CHECK SUM	0eeeeeee	ee	ee=(Invert('L'+...+de)+1)&0x7F
EOX	11110111	F7	End of exclusive

5.12.2.12 Control change table bulk dump request format

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0010nnnn	2n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01000011	43	'C'
	00000010	02	
	00000000	00	No.256 = Current
EOX	11110111	F7	End of exclusive

5.12.2.13 Program change table bulk dump format

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01010000	50	'P'
	00000010	02	
	00000000	00	No.256 = Current
BLOCK INFO.	0ttttttt	tt	total block number(minimum number is 0)
	0bbbbbbb	bb	current block number(0-total block number)
DATA	0ddddd	ds	Program change table data of block[bb]
	:	:	
	0ddddd	de	
CHECK SUM	0eeeeeee	ee	ee=(Invert('L'+...+de)+1)&0x7F
EOX	11110111	F7	End of exclusive

5.12.2.14 Program change table bulk dump request format

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0010nnnn	2n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01010000	50	'P'
	00000010	02	
	00000000	00	No.256 = Current
EOX	11110111	F7	End of exclusive

5.12.2.15 Equalizer library bulk dump format

The second and third bytes of the DATA NAME indicate the bank number.

0:Library no.1 – 199:Library no.200, 256:CH1 – 303:CH48, 384:BUS1 – 391:BUS8, 512:AUX1 – 519:AUX8, 768:STEREO, 8192:UNDO

256 and following are data for the corresponding channel of the edit buffer.

For reception by the DM1000, only the user area is valid. (40-199, 256-)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01010001	51	'Q'
	0mmmmmmmm	mh	0-199 (EQ Library no.1-200),
	0mmmmmmmm	ml	256- (Channel current data)
BLOCK INFO.	0tttttttt	tt	total block number (minimum number is 0)
	0bbbbbbb	bb	current block number (0-total block number)
DATA	0ddddddd	ds	EQ Library data of block [bb]
	:	:	
	0ddddddd	de	
CHECK SUM	0eeeeeee	ee	ee = (Invert ('L' + ... + de) + 1) & 0x7F
EOX	11110111	F7	End of exclusive

5.12.2.16 Equalizer library bulk dump request format

The second and third bytes of the DATA NAME indicate the bank number. (See above)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0010nnnn	2n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01010001	51	'Q'
	0mmmmmmmm	mh	0-199 (EQ Library no.1-200),
	0mmmmmmmm	ml	256- (Channel current data)
EOX	11110111	F7	End of exclusive

5.12.2.17 Compressor library bulk dump format

The second and third bytes of the DATA NAME indicate the library number.

0:Library no.1 – 127:Library no.128, 256:CH1 – 303:CH48, 384:BUS1 – 391:BUS8, 512:AUX1 – 519:AUX8, 768:STEREO, 8192:UNDO

256 and following are data for the corresponding channel of the edit buffer.

For reception by the DM1000, only the user area is valid. (36-127, 256-)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01011001	59	'Y'
	0mmmmmmmm	mh	0-127 (COMP Library no.1-128),
	0mmmmmmmm	ml	256- (Channel current data)
BLOCK INFO.	0tttttttt	tt	total block number (minimum number is 0)
	0bbbbbbb	bb	current block number (0-total block number)
DATA	0ddddddd	ds	COMP Library data of block [bb]
	:	:	
	0ddddddd	de	
CHECK SUM	0eeeeeee	ee	ee = (Invert ('L' + ... + de) + 1) & 0x7F
EOX	11110111	F7	End of exclusive

5.12.2.18 Compressor library bulk dump request format

The second and third bytes of the DATA NAME indicate the library number. (See above)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0010nnnn	2n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01011001	59	'Y'
	0mmmmmmmm	mh	0-127 (COMP Library no.1-128),
	0mmmmmmmm	ml	256- (Channel current data)
EOX	11110111	F7	End of exclusive

5.12.2.19 Gate library bulk dump format

The second and third bytes of the DATA NAME indicate the library number.

0:Library no.1 – 127:Library no.128, 256:CH1 – 303:CH48, 8192:UNDO

256 and following are data for the corresponding channel of the edit buffer.

For reception by the DM1000, only the user area is valid. (4-127, 256-)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01000111	47	'G'
	0mmmmmmmm	mh	0-127 (GATE Library no.1-128),
	0mmmmmmmm	ml	256-351 (Channel current data)
BLOCK INFO.	0tttttttt	tt	total block number (minimum number is 0)
	0bbbbbbb	bb	current block number (0-total block number)
DATA	0ddddddd	ds	GATE Library data of block [bb]
	:	:	
	0ddddddd	de	
CHECK SUM	0eeeeeee	ee	ee = (Invert ('L' + ... + de) + 1) & 0x7F
EOX	11110111	F7	End of exclusive

5.12.2.20 Gate library bulk dump request format

The second and third bytes of the DATA NAME indicate the library number. (See above)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0010nnnn	2n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01000111	47	'G'
	0mmmmmmmm	mh	0-127 (GATE Library no.1-128),
	0mmmmmmmm	ml	256-351 (Channel current data)
EOX	11110111	F7	End of exclusive

5.12.2.21 Effect library bulk dump format

The second and third bytes of the DATA NAME indicate the library number.

0:Library no.1 – 127:Library no.128, 256:EFFECT1 – 259:EFFECT4, 8192:UNDO

256-263 are the data for the corresponding area of the edit buffer.

For reception by the DM1000, only the user area is valid. (52-127, 256-259, 8192)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01000101	45	'E'
	0mmmmmm	mh	0-127 (Effect Library no.1-128),
	0mmmmmm	ml	256-259 (Effect1-4 current)
BLOCK INFO.	0ttttttt	tt	total block number (minimum number is 0)
	0bbbbbbb	bb	current block number (0-total block number)
DATA	0ddddddd	ds	Effect Library data of block[bb]
	:	:	
	0ddddddd	de	
CHECK SUM	0eeeeeee	ee	ee = (Invert ('L'+...+de)+1) & 0x7F
EOX	11110111	F7	End of exclusive

5.12.2.22 Effect library bulk dump request format

The second and third bytes of the DATA NAME indicate the library number. (See above)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0010nnnn	2n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01000101	45	'E'
	0mmmmmm	mh	0-127 (Effect Library no.1-128),
	0mmmmmm	ml	256-259 (Effect1-4 current)
EOX	11110111	F7	End of exclusive

5.12.2.23 Channel library bulk dump format

The second and third bytes of the DATA NAME indicate the library number.

0:Library no.0 – 128:Library no.128, 256:CH1 – 303:CH48, 384:BUS1 – 391:BUS8, 512:AUX1 – 519:AUX8, 768:STEREO, 8192:UNDO

256 and following are the data for the corresponding channel of the edit buffer.

For reception by the DM1000, only the user area is valid. (2-128, 256-)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01001000	48	'H'
	0mmmmmmmm	mh	0-128 (Channel Library no.0-128),
	0mmmmmmmm	ml	256- (Current data)
BLOCK INFO.	0tttttttt	tt	total block number (minimum number is 0)
	0bbbbbbb	bb	current block number (0-total block number)
DATA	0ddddddd	ds	Channel Library data of block [bb]
	:	:	
	0ddddddd	de	
CHECK SUM	0eeeeeee	ee	ee= (Invert ('L'+...+de)+1) &0x7F
EOX	11110111	F7	End of exclusive

5.12.2.24 Channel library bulk dump request format

The second and third bytes of the DATA NAME indicate the library number. (See above)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0010nnnn	2n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01001000	48	'H'
	0mmmmmmmm	mh	0-128 (Channel Library no.0-128),
	0mmmmmmmm	ml	256- (Current data)
EOX	11110111	F7	End of exclusive

5.12.2.25 Input patch library bulk dump format

The second and third bytes of the DATA NAME indicate the library number.

0:Library no.0 – 32:Library no.32, 256:current input patch data, 8192:UNDO

For reception by the DM1000, only the user area is valid. (1-32, 256, 8192)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01010010	52	'R'
	0mmmmmmm	mh	0-32 (Input patch Library no.0-32), 256 (Current data)
	0mmmmmmm	ml	
BLOCK INFO.	0ttttttt	tt	total block number (minimum number is 0)
	0bbbbbbb	bb	current block number (0-total block number)
DATA	0ddddddd	ds	Input patch Library data of block[bb]
	:	:	
	0ddddddd	de	
CHECK SUM	0eeeeeee	ee	ee= (Invert ('L'+...+de)+1) &0x7F
EOX	11110111	F7	End of exclusive

5.12.2.26 Input patch library bulk dump request format

The second and third bytes of the DATA NAME indicate the library number. (See above)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0010nnnn	2n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01010010	52	'R'
	0mmmmmmm	mh	0-32 (Input patch Library no.0-32), 256 (Current data)
	0mmmmmmm	ml	
EOX	11110111	F7	End of exclusive

5.12.2.27 Output patch library bulk dump format

The second and third bytes of the DATA NAME indicate the library number.

0:Library no.0 – 32:Library no.32, 256:current output patch data, 8192:UNDO

For reception by the DM1000, only the user area is valid. (1-32, 256)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01001111	4F	'O'
	0mmmmmm	mh	0-32 (Output patch Library no.0-32),
	0mmmmmm	ml	256 (Current data)
BLOCK INFO.	0ttttttt	tt	total block number (minimum number is 0)
	0bbbbbbb	bb	current block number (0-total block number)
DATA	0ddddddd	ds	Output patch Library data of block[bb]
	:	:	
	0ddddddd	de	
CHECK SUM	0eeeeeee	ee	ee= (Invert ('L'+...+de)+1) &0x7F
EOX	11110111	F7	End of exclusive

5.12.2.28 Output patch library bulk dump request format

The second and third bytes of the DATA NAME indicate the library number. (See above)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0010nnnn	2n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01001111	4F	'O'
	0mmmmmm	mh	0-32 (Output patch Library no.0-32),
	0mmmmmm	ml	256 (Current data)
EOX	11110111	F7	End of exclusive

5.12.2.29 Bus to Stereo library bulk dump format

The second and third bytes of the DATA NAME indicate the library number.

0:Library no.0 – 32:Library no.32, 256:current data, 8192:UNDO

For reception by the DM1000, only the user area is valid. (1-32, 256, 8192)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01001010	4A	'J'
	0mmmmmmm	mh	0-32(Bus to stereo Library no.0-32), 256(Current data)
	0mmmmmmm	ml	
BLOCK INFO.	0ttttttt	tt	total block number(minimum number is 0)
	0bbbbbbb	bb	current block number(0-total block number)
DATA	0ddddddd	ds	Bus to stereo Library data of block[bb]
	:	:	
	0ddddddd	de	
CHECK SUM	0eeeeeee	ee	ee=(Invert('L'+...+de)+1)&0x7F
EOX	11110111	F7	End of exclusive

5.12.2.30 Bus to Stereo library bulk dump request format

The second and third bytes of the DATA NAME indicate the library number. (See above)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0010nnnn	2n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01001010	4A	'J'
	0mmmmmmm	mh	0-32(Bus to stereo Library no.0-32), 256(Current data)
	0mmmmmmm	ml	
EOX	11110111	F7	End of exclusive

5.12.2.31 Surround Monitor library bulk dump format

The second and third bytes of the DATA NAME indicate the library number.

0:Library no.0 – 32:Library no.32, 256:current data, 8192:UNDO

For reception by the DM1000, only the user area is valid. (1-32, 256, 8192)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01001011	4B	'K'
	0mmmmmmm	mh	0-32 (Surround Monitor Library no.0-32), 256 (Current data)
	0mmmmmmm	ml	
BLOCK INFO.	0ttttttt	tt	total block number (minimum number is 0)
	0bbbbbbb	bb	current block number (0-total block number)
DATA	0ddddddd	ds	Surround Monitor Library data of block[bb]
	:	:	
	0ddddddd	de	
CHECK SUM	0eeeeeee	ee	ee= (Invert ('L'+...+de)+1) & 0x7F
EOX	11110111	F7	End of exclusive

5.12.2.32 Surround Monitor library bulk dump request format

The second and third bytes of the DATA NAME indicate the library number. (See above)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0010nnnn	2n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01001011	4B	'K'
	0mmmmmmm	mh	0-32 (Surround Monitor Library no.0-32), 256 (Current data)
	0mmmmmmm	ml	
EOX	11110111	F7	End of exclusive

5.12.2.33 Automix bulk dump format

The second byte of the DATA NAME indicates the library number.

0:Library no.1 – 15:Library no.16, 256:current automix data

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01100001	61	'a'
	0mmmmmmm	mh	0-15(Automix no.1-16), 256(Current data)
	0mmmmmmm	ml	
BLOCK INFO.	0bbbbbbb	bh	current block number(0-total block number)
	0bbbbbbb	bl	
	0ttttttt	th	total block number(minimum number is 0)
	0ttttttt	tl	
DATA	0ddddd	ds	Automix memory data of block[bb]
	:	:	
	0ddddd	de	
CHECK SUM	0eeeeeee	ee	ee=(Invert('L'+...+de)+1)&0x7F
EOX	11110111	F7	End of exclusive

5.12.2.34 Automix bulk dump request format

The second and third bytes of the DATA NAME indicate the library number. (See above)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0010nnnn	2n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01100001	61	'a'
	0mmmmmmm	mh	0-15(Automix no.1-16), 256(Current data)
	0mmmmmmm	ml	
EOX	11110111	F7	End of exclusive

5.12.2.35 Plug-in effect card bulk dump format

The second byte of the DATA NAME indicates the slot number.

0:SLOT 1 – 1:SLOT 2

The data is not received if the Developer ID and Product ID are different than the card that is installed in the slot.

The data is not transmitted if a valid plug-in effect card is not installed.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0000nnnn	0n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
COUNT HIGH	0ccccccc	ch	data count = ch * 128 + cl
COUNT LOW	0ccccccc	cl	
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01001110	4E	'N'
	0mmmmmmmm	mh	m=0-1 (SLOT 1-2)
	0mmmmmmmm	ml	
BLOCK INFO.	0bbbbbbb	bh	current block number(0-total block number)
	0bbbbbbb	bl	
	0ttttttt	th	total block number(minimum number is 0)
	0ttttttt	tl	
	0000iiii	0i	Developer id (High)
	0000iiii	0i	Developer id (Low)
	0000jjjj	0j	Product id (High)
	0000jjjj	0j	Product id (Low)
DATA	0ddddd	ds	Plug-in Effect card memory data of block[bb]
	:	:	
	0ddddd	de	
CHECK SUM	0eeeeeee	ee	ee=(Invert('L'+...+de)+1)&0x7F
EOX	11110111	F7	End of exclusive

5.12.2.36 Plug-in effect card bulk dump request format

The second and third bytes of the DATA NAME indicate the slot number. (See above)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0010nnnn	2n	n=0-15 (Device number=MIDI Channel)
FORMAT No.	01111110	7E	Universal bulk dump
	01001100	4C	'L'
	01001101	4D	'M'
	00100000	20	' '
	00100000	20	' '
	00111000	38	'8'
	01000011	43	'C'
	00111001	39	'9'
	00110001	31	'1'
DATA NAME	01001110	4E	'N'
	0mmmmmmmm	mh	m=0-1 (SLOT 1-2)
	0mmmmmmmm	ml	
EOX	11110111	F7	End of exclusive

5.12.3 PARAMETER CHANGE

5.12.3.1 Basic behavior

<< Reception >>

If [Parameter change ECHO] is ON, these messages are echoed.

If [Parameter change RX] is ON and the [Rx CH] matches the Device Number included in the SUB STATUS, these messages are received. A specific parameter is controlled when a Parameter Change is received. When a Parameter Request is received, the current value of the specified parameter will be transmitted as a Parameter Change with the Device Number set to [Rx CH].

<< Transmission >>

If [Parameter change TX] is ON and you operate a parameter for which Control Change transmission is not enabled, a parameter change will be transmitted with [Tx CH] as the Device Number.

As a response to a Parameter Request, a parameter change will be transmitted with [Rx CH] as the Device Number.

5.12.3.1.1 Parameter change basic format (DM1000 only)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001100	0C	DM1000
ADDRESS	0ttttttt	tt	Data type
	0eeeeeee	ee	Element no. (if 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter no.
	0ccccccc	cc	Channel no.
DATA *)	0ddddddd	dd	data
	:	:	
EOX	11110111	F7	End of exclusive

*) For parameters with a data size of 2 or more, data for that size will be transmitted.

5.12.3.1.2 Parameter Change basic format (Universal format)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	01111111	7F	Universal
ADDRESS	0ttttttt	tt	Data type
	0eeeeeee	ee	Element no. (if 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter no.
	0ccccccc	cc	Channel no.
DATA *)	0ddddddd	dd	data
	:	:	
EOX	11110111	F7	End of exclusive

*) For parameters with a data size of 2 or more, data for that size will be transmitted.

5.12.3.1.3 Parameter request basic format (DM1000 only)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0011nnnn	3n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001100	0C	DM1000
ADDRESS	0ttttttt	tt	Data type
	0eeeeeee	ee	Element no.(if 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter no.
	0ccccccc	cc	Channel no.
EOX	11110111	F7	End of exclusive

5.12.3.1.4 Parameter request basic format (Universal format)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0011nnnn	3n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	01111111	7F	Universal
ADDRESS	0ttttttt	tt	Data type
	0eeeeeee	ee	Element no.(if 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter no.
	0ccccccc	cc	Channel no.
EOX	11110111	F7	End of exclusive

5.12.3.1.5 Parameter Address

Consult your dealer for parameter address details.

5.12.3.2 Parameter change (Edit buffer)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	01111111	7F	Universal
ADDRESS	00000001	01	Edit Buffer
	0eeeeeee	ee	Element no.(if 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter no.
	0ccccccc	cc	Channel no.
DATA	0ddddd	dd	data
	:	:	
EOX	11110111	F7	End of exclusive

5.12.3.3 Parameter request (Edit buffer)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0011nnnn	3n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	01111111	7F	Universal
ADDRESS	00000001	01	Edit Buffer
	0eeeeeee	ee	Element no.(if 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter no.
	0ccccccc	cc	Channel no.
EOX	11110111	F7	End of exclusive

5.12.3.4 Parameter change (Patch data)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001100	0C	DM1000
ADDRESS	00000010	02	Patch data
	0eeeeeee	ee	Element no.(if 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter no.
	0ccccccc	cc	Channel no.
DATA	0ddddddd	dd	data
	:	:	
EOX	11110111	F7	End of exclusive

5.12.3.5 Parameter request (Patch data)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0011nnnn	3n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001100	0C	DM1000
ADDRESS	00000010	02	Patch data
	0eeeeeee	ee	Element no.(if 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter no.
	0ccccccc	cc	Channel no.
EOX	11110111	F7	End of exclusive

5.12.3.6 Parameter change (Setup memory)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001100	0C	DM1000
ADDRESS	00000011	03	Setup data
	0eeeeeee	ee	Element no.(if 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter no.
	0ccccccc	cc	Channel no.
DATA	0ddddddd	dd	data
	:	:	
EOX	11110111	F7	End of exclusive

5.12.3.7 Parameter request (Setup memory)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0011nnnn	3n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001100	0C	DM1000
ADDRESS	00000011	03	Setup data
	0eeeeeee	ee	Element no.(if 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter no.
	0ccccccc	cc	Channel no.
EOX	11110111	F7	End of exclusive

5.12.3.8 Parameter change (Backup memory)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001100	0C	DM1000
ADDRESS	00000100	04	Backup data
	0eeeeeee	ee	Element no.(if 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter no.
	0ccccccc	cc	Channel no.
DATA	0ddddddd	dd	data
	:	:	
EOX	11110111	F7	End of exclusive

5.12.3.9 Parameter request (Backup memory)

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0011nnnn	3n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001100	0C	DM1000
ADDRESS	00000100	04	Backup data
	0eeeeeee	ee	Element no.(if 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter no.
	0ccccccc	cc	Channel no.
EOX	11110111	F7	End of exclusive

5.12.3.10 Parameter change (Cascade data)**<< Reception >>**

This message is echoed if [Parameter change ECHO] is ON.

Data received from a port that is assigned to [Cascade Link] and whose Device Number included in the SUB STATUS matches the [Rx CH] will be received for processing.

When this is received, the specified parameter will be controlled.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	01111111	7F	Universal
ADDRESS	00001111	0F	Cascade data
	0sssssss	ss	Set:0, Response:1
	0eeeeeee	ee	Element no.(if 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter no.
	0ccccccc	cc	Channel no.
DATA	0ddddddd	dd	data
	:	:	
EOX	11110111	F7	End of exclusive

5.12.3.11 Parameter request (Cascade data)**<< Reception >>**

This message is echoed if [Parameter change ECHO] is ON.

Data received from a port that is assigned to [Cascade Link] and whose Device Number included in the SUB STATUS matches the [Rx CH] will be received for processing.

When this is received, the value of the specified parameter will be transmitted as a Parameter response.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0011nnnn	3n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	01111111	7F	Universal
ADDRESS	00001111	0F	Cascade data
	0eeeeeee	ee	Element no.(if 'ee' is 0, 'ee' is expanded to two bytes)
	0ppppppp	pp	Parameter no.
	0ccccccc	cc	Channel no.
EOX	11110111	F7	End of exclusive

5.12.3.12 Parameter change (Function call: Library store / recall)

<< Reception >>

When this is received, the specified memory/library will be stored/recalled. If this is received from Studio Manager, the operation will be executed, and then the result of execution will be transmitted as a Parameter Response.

<< Transmission >>

If [Parameter change Tx] is ON, and you store or recall a memory/library for which Program Change transmission is not valid, this message will be transmitted with the Device Number set to the [Tx CH].

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	01111111	7F	Universal
ADDRESS	00010000	10	Function call
	00ffffff	ff	function
	0mmmmmmm	mh	number High
	0mmmmmmm	ml	number Low
DATA	0ccccccc	ch	channel High
	0ccccccc	cl	channel Low
EOX	11110111	F7	End of exclusive

function		number	channel*1)	tx/rx
SCENE RECALL	0x00	0-99, 8192	256	tx/rx
EQ LIB RECALL	0x01	1-200, 8192	0-513	tx/rx
GATE LIB RECALL	0x02	1-128, 8192	0-47	tx/rx
COMP LIB RECALL	0x03	1-128, 8192	0-513	tx/rx
EFF LIB RECALL	0x04	1-128, 8192	0-3	tx/rx
CHANNEL LIB RECALL	0x06	0-128, 8192	0-513	tx/rx
INPATCH LIB RECALL	0x07	0-32, 8192	256	tx/rx
OUTPATCH LIB RECALL	0x08	0-32, 8192	256	tx/rx
Bus to Stereo LIB RECALL	0x09	0-32, 8192	256	tx/rx
Surround Monitor LIB RECALL	0x0A	0-32, 8192	256	tx/rx
AUTOMIX LIB RECALL	0x0B	1-16	256	tx/rx
SCENE STORE	0x20	1-99	256, 16383	tx/rx
EQ LIB STORE	0x21	41-200	0-513, 16383	tx/rx
GATE LIB STORE	0x22	5-128	0-47, 16383	tx/rx
COMP LIB STORE	0x23	37-128	0-513, 16383	tx/rx
EFF LIB STORE	0x24	53-128	0-3, 16383	tx/rx
CHANNEL LIB STORE	0x26	2-128	0-513, 16383	tx/rx
INPATCH LIB STORE	0x27	1-32	256, 16383	tx/rx
OUTPATCH LIB STORE	0x28	1-32	256, 16383	tx/rx
Bus to Stereo LIB STORE	0x29	1-32	256, 16383	tx/rx
Surround Monitor LIB STORE	0x2A	1-32	256, 16383	tx/rx
AUTOMIX LIB STORE	0x2B	1-16	256, 16383	tx/rx

*1) 0:CH1 - 47:CH48, 128:BUS1 - 135:BUS8, 256:AUX1 - 263:AUX8, 512:STEREO

Use 256 if the recall destination or store source is a single data item.

Effect is 0:Effect 1-3:Effect 4

If the store destination is 16383 (0x3FFF), this indicates that the library data has been changed by a external cause (such as bulk reception)
(only transmitted by the DM1000)

5.12.3.13 Parameter change (Function call: title)**<< Reception >>**

When this is received, the title of the specified memory/library will be changed.

If this is received from Studio Manager, the operation will be executed, and then the result of execution will be transmitted as a parameter response.

<< Transmission >>

In response to a request, this is transmitted with the device number set to the [Tx CH].

When the title is changed on the DM1000, this message will be transmitted with the device number set to [Tx CH].

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	01111111	7F	Universal
ADDRESS	00010000	10	Function call
	0100ffff	4f	title
	0mmmmmmmm	mh	number High
	0mmmmmmmm	ml	number Low
DATA	0ddddd	dd	title 1
	:	:	:
	0ddddd	dd	title x(depend on the library)
EOX	11110111	F7	End of exclusive

function		number	size
SCENE LIB TITLE	0x40	0-99,256(0:response only)	16
EQ LIB TITLE	0x41	1-200(1-40:response only)	16
GATE LIB TITLE	0x42	1-128(1-4:response only)	16
COMP LIB TITLE	0x43	1-128(1-36:response only)	16
EFF LIB TITLE	0x44	1-128(1-52:response only)	16
CHANNEL LIB TITLE	0x46	0-128(0-1:response only)	16
INPATCH LIB TITLE	0x47	0-32(0:response only)	16
OUTPATCH LIB TITLE	0x48	0-32(0:response only)	16
Bus to Stereo LIB TITLE	0x49	0-32(0:response only)	16
Surround Monitor LIB TITLE	0x4A	0-32(0:response only)	16
AUTOMIX LIB TITLE	0x4B	1-16	16

5.12.3.14 Parameter request (Function call: title)**<< Reception >>**

When this is received, a parameter change will be transmitted with the device number set to [Rx CH].

Refer to the above table for the Functions and Numbers.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0011nnnn	3n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	01111111	7F	Universal
ADDRESS	00010000	10	Function call
	0100ffff	4f	title
	0mmmmmmmm	mh	number High
	0mmmmmmmm	ml	number Low
EOX	11110111	F7	End of exclusive

5.12.3.15 Parameter change (Function call: Scene/Library Clear)**<< Reception >>**

When this is received, the specified memory/library will be cleared. If this is received from Studio Manager, the operation will be executed, and then the result of execution will be transmitted as a parameter response.

<< Transmission >>

When a memory or library is cleared on the DM1000, this message will be transmitted with the device number set to [Tx CH].

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	01111111	7F	Universal
ADDRESS	00010000	10	Function call
	0110ffff	6f	clear function
	0mmmmmmm	mh	number High
	0mmmmmmm	ml	number Low
EOX	11110111	F7	End of exclusive

function		number
SCENE LIB CLEAR	0x60	1-99
EQ LIB CLEAR	0x61	41-200
GATE LIB CLEAR	0x62	5-128
COMP LIB CLEAR	0x63	37-128
EFF LIB CLEAR	0x64	53-128
CHANNEL LIB CLEAR	0x66	2-128
INPATCH LIB CLEAR	0x67	1-32
OUTPATCH LIB CLEAR	0x68	1-32
Bus to Stereo LIB CLEAR	0x69	1-32
Surround Monitor LIB CLEAR	0x6A	1-32
AUTOMIX LIB CLEAR	0x6B	1-16

5.12.3.16 Parameter change (Function call: attribute)**<< Reception >>**

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS. This is echoed if [Parameter change ECHO] is ON.

When this is received, the attribute of the specified memory/library will be changed.

<< Transmission >>

In response to a request, a Parameter Change message will be transmitted on the [Rx CH].

If [Parameter change ECHO] is ON, this message will be retransmitted without change.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	01111111	7F	Universal
ADDRESS	00010100	14	Function call
	0000ffff	0f	attribute
	0mmmmmmm	mh	number High
	0mmmmmmm	ml	number Low
DATA	0ttttttt	th	attribute(protect:0x0001, normal:0x0000)
	0ttttttt	tl	
EOX	11110111	F7	End of exclusive

function	number
SCENE LIB ATTRIBUTE	0x00 0-99(0:response only)
EQ LIB ATTRIBUTE	0x01 1-200(1-40:response only)
GATE LIB ATTRIBUTE	0x02 1-128(1-4:response only)
COMP LIB ATTRIBUTE	0x03 1-128(1-36:response only)
EFF LIB ATTRIBUTE	0x04 1-128(1-52:response only)
CHANNEL LIB ATTRIBUTE	0x06 0-128(0-1:response only)
INPATCH LIB ATTRIBUTE	0x07 0-32(0:response only)
OUTPATCH LIB ATTRIBUTE	0x08 0-32(0:response only)
Bus to Stereo LIB ATTRIBUTE	0x09 0-32(0:response only)
Surround Monitor LIB ATTRIBUTE	0x0A 0-32(0:response only)
AUTOMIX LIB ATTRIBUTE	0x0B 1-16

Notes: In the present condition, only SCENE corresponds to this.

5.12.3.17 Parameter request (Function call: attribute)**<< Reception >>**

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS. This is echoed if [Parameter change ECHO] is ON.

When this is received, a Parameter Change message will be transmitted on the [Rx CH].

Refer to the above table for the Functions and Numbers.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0011nnnn	3n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	01111111	7F	Universal
ADDRESS	00010100	14	Function call
	0000ffff	0f	attribute
	0mmmmmmm	mh	number High
	0mmmmmmm	ml	number Low
EOX	11110111	F7	End of exclusive

5.12.3.18 Parameter change (Function call: link)**<< Reception >>**

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS. This is echoed if [Parameter change ECHO] is ON.

When this is received, the patch link data of the specified scene will be modified.

<< Transmission >>

In response to a request, a Parameter Change message will be transmitted on the [Rx CH].

If [Parameter change ECHO] is ON, this message will be retransmitted without change.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	01111111	7F	Universal
ADDRESS	00010100	14	Function call
	0010ffff	2f	link
	0mmmmmmm	mh	number High
	0mmmmmmm	ml	number Low
DATA	0iiiiiii	ih	inpatch
	0iiiiiii	il	
	0ooooooo	oh	outpatch
	0ooooooo	ol	
EOX	11110111	F7	End of exclusive

function	number
SCENE LIB LINK	0x20 0-99 (0:response only)

5.12.3.19 Parameter request (Function call: link)**<< Reception >>**

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS. This is echoed if [Parameter change ECHO] is ON.

When this is received, a Parameter Change message will be transmitted on the [Rx CH].

Refer to the above table for the Functions and Numbers.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	3n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	01111111	7F	Universal
ADDRESS	00010100	14	Function call
	0010ffff	2f	link
	0mmmmmmm	mh	number High
	0mmmmmmm	ml	number Low
EOX	11110111	F7	End of exclusive

5.12.3.20 Parameter change (Function call: pair, copy)**<< Reception >>**

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS. This is echoed if [Parameter change ECHO] is ON.

When this is received, pairing will be enabled/disabled for the specified channel.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	01111111	7F	Universal
ADDRESS	00010001	11	Function call Pair
	0000ffff	0f	function
	0sssssss	sh	Source channel H
	0sssssss	sl	Source channel L
DATA	0ddddddd	dh	Destination channel H
	0ddddddd	dl	Destination channel L
EOX	11110111	F7	End of exclusive

function		channel
PAIR ON with COPY	0x00	*1)
PAIR ON with RESET BOTH	0x01	*1)
PAIR OFF	0x02	*1)

*1) 0:CH1 - 47:CH48, 128:BUS1 - 135:BUS8, 256:AUX1 - 263:AUX8

- In the case of PAIR, you must specify channels for which pairing is possible.
- In the case of PAIR ON with COPY, you must specify Source Channel as the copy source, and Destination Channel as the copy destination.

5.12.3.21 Parameter change (Function call Event: Effect)

<< Reception >>

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

This is echoed if [Parameter change ECHO] is ON.

When this is received, the corresponding effect's function activates (depending on the effect type).

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	01111111	7F	Universal
ADDRESS	00010010	12	Function call Effect Event
	0000ffff	0f	function
	00000000	00	
	0ppppppp	pp	Release:0, Press:1
DATA	00000000	00	
	0eeeeeee	ee	Effect number (0:Effect1 - 3:Effect4)
EOX	11110111	F7	End of exclusive

function		channel
Freeze Play button	0x00	0:Effect1-3:Effect4
Freeze Record button	0x01	0:Effect1-3:Effect4
Auto Pan 5.1 Trigger Button	0x02	0:Effect1-3:Effect4
Auto Pan 5.1 Reset Button	0x03	0:Effect1-3:Effect4

- This does not activate when the effect type is different.

5.12.3.22 Parameter change (Sort Table)

When scene memory sort is executed on the DM1000, the memory sort table will be transmitted to Studio Manager.

Studio Manager will sort the memories according to this data.

If Studio Manager performs a scene memory sort, it will transmit this data to the DM1000.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001100	0C	DM1000
ADDRESS	00010011	13	Library sort table
	0000ffff	0f	Library type
DATA	0ddddddd	ds	Data
	:	:	
	0ddddddd	de	Data
EOX	11110111	F7	End of exclusive

8-7 conversion is performed on the data area in the same way as for bulk.

5.12.3.23 Parameter request (Sort Table)

When the DM1000 receives this data, it will transmit Sort Table Data.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0011nnnn	3n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001100	0C	DM1000
ADDRESS	00010011	13	Library sort table
	0000ffff	0f	Library type
EOX	11110111	F7	End of exclusive

5.12.3.24 Parameter change (Key remote)

<< Reception >>

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

This is echoed if [Parameter change ECHO] is ON.

When this is received, the same processing that is executed when the key specified by Address is pressed (released).

<< Transmission >>

If [Parameter Change ECHO] is ON, this message is retransmitted without change.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001100	0C	DM1000
ADDRESS	00100000	20	Key remote
	0kkkkkkk	kk	Key address H
	0kkkkkkk	kk	Key address M
	0kkkkkkk	kk	Key address L
DATA	0ppppppp	pp	Release:0, Press:1
EOX	11110111	F7	End of exclusive

5.12.3.25 Parameter change (Remote Meter)

When transmission is enabled by receiving a Request of Remote meter, the specified meter information is transmitted every 50 msec for 10 seconds.

When you want to transmit meter information continuously, a Request must be transmitted continuously within every 10 seconds.

<< Reception >>

This is echoed if [Parameter change ECHO] is ON.

<< Transmission >>

When transmission has been enabled by a Request, the parameter specified by Address will be transmitted on the [Rx CH] channel at 50 msec intervals for a duration of 10 seconds.

Transmission will be disabled if the power is turned off and on again, or if the PORT setting is changed.

If [Parameter Change ECHO] is ON, this message is retransmitted without change.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001100	0C	DM1000
ADDRESS	00100001	21	Remote meter
	0mmmmmmmm	mm	ADDRESS UL
	0mmmmmmmm	mm	ADDRESS LU
	0mmmmmmmm	mm	ADDRESS LL
DATA	0ddddd	dd	Data1 H
	0ddddd	dd	Data1 L
	:	:	
EOX	11110111	F7	End of exclusive

The meter data can be either the unadjusted DECAY value of the DSP, or the table-converted value. The interpretation of the data will depend on the parameter.

5.12.3.26 Parameter request (Remote Meter)

<< Reception >>

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS. This is echoed if [Parameter change ECHO] is ON.

When this is received, data of the specified address is transmitted on the [Rx CH] at intervals of 50 msec as a rule (although this may not be the case if the port is being used by other communication), for a period of 10 seconds.

If Address UL= 0x7F is received, transmission of all meter data will be halted immediately (disable).

<< Transmission >>

If [Parameter Change ECHO] is ON, this message is retransmitted without change.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0011nnnn	3n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001100	0C	DM1000
ADDRESS	00100001	21	Remote meter
	0mmmmmmmm	mm	ADDRESS UL
	0mmmmmmmm	mm	ADDRESS LU
	0mmmmmmmm	mm	ADDRESS LL
	0ccccccc	ch	Count H
	0ccccccc	cl	Count L
EOX	11110111	F7	End of exclusive

5.12.3.27 Parameter change (Remote Time Counter)

When transmission is enabled by receiving a Request of Remote Time Counter, the Time Counter data is transmitted every 50 msec for 10 seconds.

When you want to transmit Counter information continuously, a Request must be transmitted within every 10 seconds.

<< Reception >>

This is echoed if [Parameter change ECHO] is ON.

<< Transmission >>

When transmission is enabled by receiving a Request, the Time Counter information is transmitted on [Rx CH] channel every 50 msec for 10 seconds.

Transmission will be disabled if the power is turned off and on again, or if the PORT setting is changed.

If [Parameter Change ECHO] is ON, this message is retransmitted without change.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001100	0C	DM1000
ADDRESS	00100010	22	Remote Time counter
	0000tttt	0t	0:Time code, 1:Measure.Beat.Clock
	0ddddd	dd	Hour / Measure H
	0ddddd	dd	Minute / Measure L
DATA	0ddddd	dd	Second / Beat
	0ddddd	dd	Frame / Clock
EOX	11110111	F7	End of exclusive

5.12.3.28 Parameter request (Remote Time Counter)

<< Reception >>

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS. This is echoed if [Parameter change ECHO] is ON.

When this is received, the Time Counter information is transmitted on the [Rx CH] channel every 50 msec for 10 seconds.

When the second byte of Address is received on 0x7F, data transmission will be halted immediately (disable).

<< Transmission >>

If [Parameter Change ECHO] is ON, this message is retransmitted without change.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0011nnnn	3n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001100	0C	DM1000
ADDRESS	00100010	22	Remote Time counter
	0ddddd	dd	0:Transmission request, 0x7F:Transmission stop request
EOX	11110111	F7	End of exclusive

5.12.3.29 Parameter change (Automix Status)

When transmission is enabled by receiving a Request of Automix status, the Automix Status data is transmitted every second for 10 seconds. When you want to transmit the Automix Status information continuously, the Request must be transmitted continuously minimum within 10 seconds interval. The data is transmitted continuously while the transmission is enabled, even when the Automix Status on the DM1000 has been changed.

<< Reception >>

This is echoed if [Parameter change ECHO] is ON.

<< Transmission >>

When the transmission is set to enable by receiving a Request. The Automix Status data is transmitted on the [Rx CH] channel every second for 10 seconds. The data is transmitted continuously while the transmission is enabled, even when the Automix Status on the DM1000 has been changed.

Transmission will be disabled if the power is turned off and on again, or if the PORT setting is changed.

If [Parameter Change ECHO] is ON, this message is retransmitted without change.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0001nnnn	1n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001100	0C	DM1000
ADDRESS	00100011	23	Automix status
	00000000	00	
	0000dddd	0d	Automix status H
	0000dddd	0d	Automix status L
EOX	11110111	F7	End of exclusive

5.12.3.30 Parameter request (Automix Status)

<< Reception >>

This is received if [Parameter change RX] is ON and the [Rx CH] matches the device number included in the SUB STATUS.

This is echoed if [Parameter change ECHO] is ON.

When the data is received, the Automix Status data is transmitted on the [Rx CH] every second for 10 seconds.

When the second byte of Address is received on 0x7F, data transmission will be halted immediately (disable).

<< Transmission >>

If [Parameter Change ECHO] is ON, this message is retransmitted without change.

STATUS	11110000	F0	System exclusive message
ID No.	01000011	43	Manufacture's ID number (YAMAHA)
SUB STATUS	0011nnnn	3n	n=0-15 (Device number=MIDI Channel)
GROUP ID	00111110	3E	MODEL ID (digital mixer)
MODEL ID	00001100	0C	DM1000
ADDRESS	00100011	23	Automix status
	0ddddd	dd	0:Transmission request, 0x7F:Transmission stop request
EOX	11110111	F7	End of exclusive