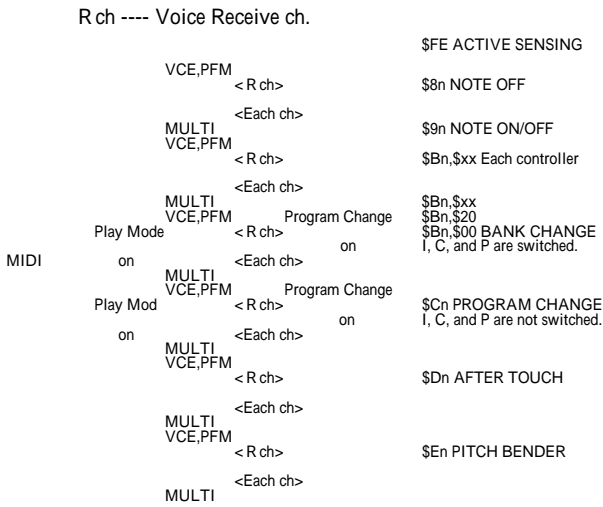


SY85 MIDI Data Format

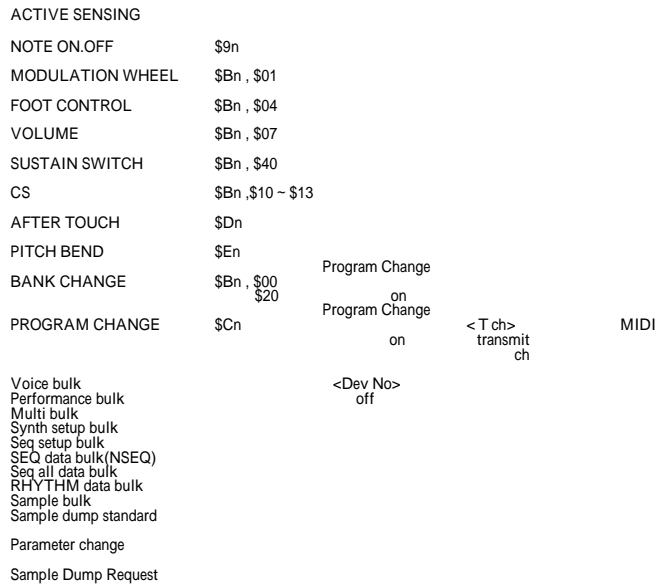
1. Synthesizer mode

1.1 MIDI reception/transmission block diagram

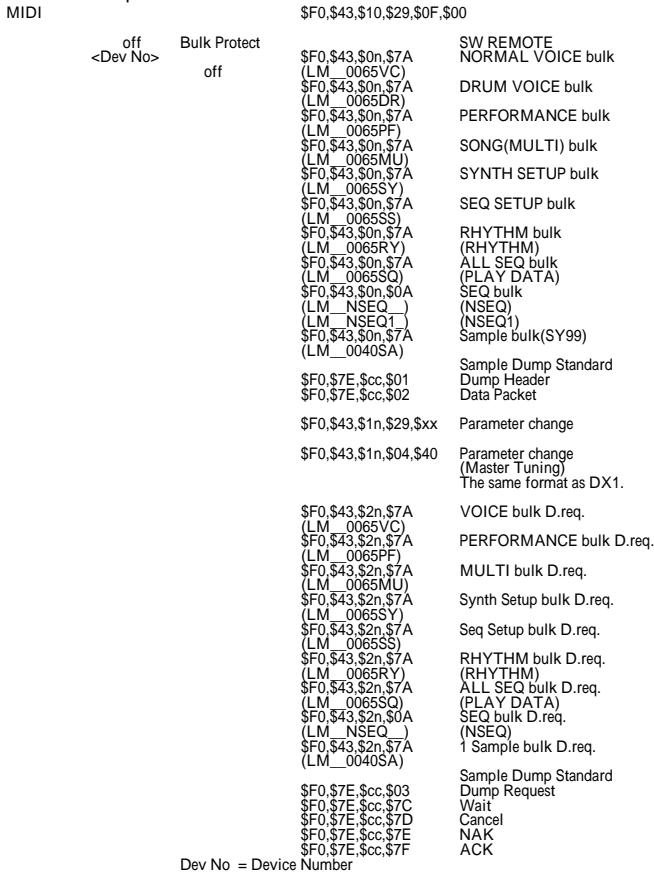
<MIDI reception condition> 1/2



<MIDI Transmission condition>



<MIDI reception condition> 2/2



1.2 Channel message

1.2.1 Transmission

1.2.1.1 Note Off

Transmission note range = C1(36)..C6(96)

Velocity range = 1...127

1.2.1.2 Note On

Transmission note range = C1(36)..C6(96)

Velocity range = 1...127

1.2.1.3 Control change

Control change is output to MIDI when the following controllers are operated.

| ctrl# | parameter | data rng |
|---------|------------------|----------|
| 1 | Modulation wheel | 0 ~ 127 |
| 4 | Foot control | 0 ~ 127 |
| 7 | Volume pedal | 0 ~ 127 |
| 64 | Sustain switch | 0 ~ 127 |
| 16 ~ 19 | CS | 0 ~ 127 |

1.2.1.4 Program bank change

Program bank change is transmitted, when a voice is selected in voice mode, when a performance is selected in performance mode.

Program bank change No. is assigned as shown below in accordance with the mode.

| Bn 00 xx 20 xx | Data |
|------------------------|-------|
| Internal1 Voice | 00,00 |
| Internal2 Voice | 00,03 |
| Internal3 Voice | 00,06 |
| Internal4 Voice | 00,09 |
| Card1 Voice | 00,01 |
| Card2 Voice | 00,04 |
| Card3 Voice | 00,07 |
| Card4 Voice | 00,10 |
| Internal1 Performance | 00,64 |
| Internal2 Performance | 00,67 |
| Card1 Performance | 00,65 |
| Card2 Performance | 00,68 |
| Internal1 Voice(multi) | 00,32 |
| Internal2 Voice(multi) | 00,35 |
| Internal3 Voice(multi) | 00,38 |
| Internal4 Voice(multi) | 00,41 |
| Card1 Voice(multi) | 00,33 |

| Bn 00 xx 20 xx | Data |
|-----------------------|-------|
| Card2 Voice(multi) | 00,36 |
| Card3 Voice(multi) | 00,39 |
| Card4 Voice(multi) | 00,42 |
| Internal1 Perf(multi) | 00,80 |
| Internal2 Perf(multi) | 00,83 |
| Card1 Perf(multi) | 00,81 |
| Card2 Perf(multi) | 00,84 |

When the mode is set to off the program change is not transmitted.

When the mode is set to table, the conversion format contained in the program transmission table is applied and transmitted.

1.2.1.5 Program change

Program change is transmitted, when a voice is selected in voice mode, when a performance is selected in performance mode.

Program change No. is assigned as shown below in accordance with the mode.

| | | | Data |
|-------------|-----------|--------|---------|
| Voice | Internal1 | 0 ~ 63 | 00 ~ 63 |
| | Internal2 | 0 ~ 63 | 00 ~ 63 |
| | Internal3 | 0 ~ 63 | 00 ~ 63 |
| | Internal4 | 0 ~ 63 | 00 ~ 63 |
| | Card1 | 0 ~ 63 | 00 ~ 63 |
| | Card2 | 0 ~ 63 | 00 ~ 63 |
| | Card3 | 0 ~ 63 | 00 ~ 63 |
| | Card4 | 0 ~ 63 | 00 ~ 63 |
| Performance | Internal1 | 0 ~ 63 | 00 ~ 63 |
| | Internal2 | 0 ~ 63 | 00 ~ 63 |
| | Card1 | 0 ~ 63 | 00 ~ 63 |
| | Card2 | 0 ~ 63 | 00 ~ 63 |
| | Card3 | 0 ~ 63 | 00 ~ 63 |

When the mode is set to off the program change is not transmitted.

When the mode is set to table, the conversion format contained in the program transmission table is applied and transmitted.

1.2.1.6 Pitch bend

Pitch bend is transmitted with a resolution of 7 bits.

1.2.1.7 After touch

After touch is output when it is operated.

1.2.1.8 Channel mode message

Channel mode message is not transmitted.

1.2.2 Reception

1.2.2.1 Note Off

Reception note range = C-2 ~ G8
Velocity range = not received.

1.2.2.1 Note On/Off

Reception note range = C-2 ~ G8
Velocity range = 0 ~ 127

1.2.2.2 Control change

The parameters in the table below can be controlled by MIDI.

| cntrl# | parameter | data rng |
|---------|------------------|----------|
| 1 | Modulation wheel | 0 ~ 127 |
| 4 | Foot control | 0 ~ 127 |
| 7 | Foot Volume | 0 ~ 127 |
| 10 | Pan | 0 ~ 127 |
| 0 ~ 119 | Volume | 0 ~ 127 |
| 1 ~ 120 | Effect Param1 | 0 ~ 127 |
| 1 ~ 120 | Effect Param2 | 0 ~ 127 |
| 16 ~ 19 | CS Param | 0 ~ 127 |
| 64 | Sustain Switch | 0, 127 |

Pan is received only when MULTI is generated.

1.2.2.3 Program change

When a program change message is received, the SY85 performs the following operations.

Three types of reception modes can be set with the system setup.

1) off:

Program change is not received.

2) normal:

In each play mode, the program No. changes in accordance with 00 ~ 63 of the current mode.

The program bank change is not received.

3) direct:

In voice mode, voice A1 ~ H8 correspond to the program change data 00 ~ 63. INT1, INT2 and CARD change in accordance with the program bank change.

Program change data 64 ~ 127 is not received. In performance mode, performance A1 ~ H8 correspond to program change data 00 ~ 63. Int1, Int2, and CARD change in accordance with the program bank change.

Program change data 64 ~ 127 are not received.

In Multi mode, each INST program changes in accordance with the above.

Refer to during transmission for the bank change.

4) table:

Reception applies to 3) direct.

Transmission is carried out in accordance with the PROGRAM CHANGE TABLE.

1.2.2.4 Pitch bend

Pitch bend is received only on the MSB side.

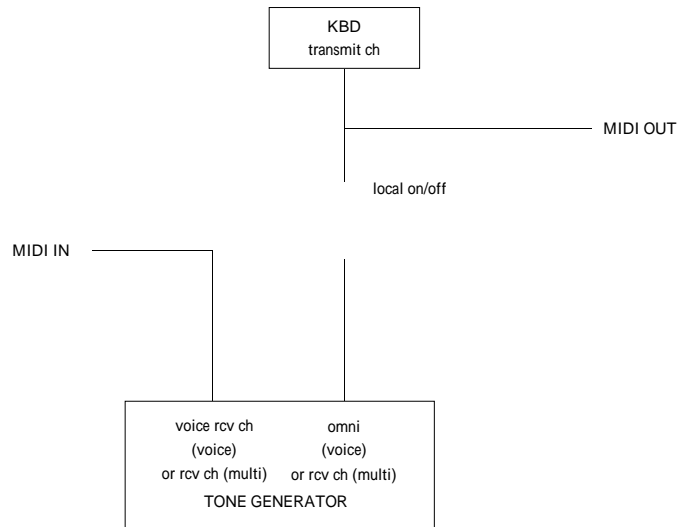
1.2.2.5 After touch

After touch is received in accordance with the reception channel of each mode.

1.2.2.6 Channel mode message

| cntrl# | parameter | data rng |
|--------|----------------------|----------|
| 120 | All Sound Off | 0 |
| 121 | Reset All Controller | 0 |
| 123 | All Notes Off | 0 |

1.2.3 Configuration of keyboard section and tone generator



Note 1) In voice mode, sound is generated even if the Voice receive channel and the Keyboard Trans. channel do not match.

Note 2) Note On from the keyboard and Note On from MIDI are distinguished. Controller information from the keyboard and controller information from the MIDI (control change, after touch, pitch bend, etc.) are not distinguished except for sustain switch.

2. System exclusive message

2.1 Parameter change

The SY85 transmits and receives the following eight parameter change types.

(7) Remote switch is received only.) 7) Remote switch will be the same as the screen when the switch is pressed.

- 1). Multi Data
- 2). Performance Data
- 3). Normal Voice Data
- 4). Drum Voice Data
- 5). Setup Data
- 6). Program Change Table
- 7). Switch Remote
- 8). Master Tuning

The parameter change reception cannot be turned off with each MIDI switch, except for Device Number off.

2.1.1 SY85 Data parameter change

(1)Format

```

11110000  F0
01000011  43
0001nnnn  nnnn  = Device Number
00101001  29
0000gggg  gggg  = Parameter Group Number
0sssssss  ssssss = Parameter Sub Group Number
0ppppppp  pppppp = Parameter Number MS7bit
0ppppppp  pppppp = Parameter Number LS7bit
0vvvvvvv  vvvvvv = Data Value MS7bit
0vvvvvvv  vvvvvv = Data Value LS7bit
11110111  F7
    
```

(2)Parameter Group Number,Sub Group Number

| Parameter Group Name | gggg | ssssss | |
|----------------------|------|----------|----|
| Multi Data | 0 | 0, 1..16 | *1 |
| Performance Data | 1 | 0, 1..4 | *2 |
| Normal Voice Data | 2 | 0, 1..4 | *3 |
| Drum Voice Data | 3 | 0,36..84 | *4 |
| Setup Data | 4 | 0..2 | *5 |
| Program Change Table | 5 | 0..63 | *6 |
| Switch Remote | 6 | 0 | |

*1:1..16; Inst Number, 0;common data

*2:1..4; Layer Number, 0;common data

*3:1..4 = Layer Number (Layer Voice Edit), 0 = Voice

*4:36..84 = Key Number,0;common data

*5:0=syn, 1 = seq, 2 = ry

*6:Program Number

(3) Parameter Number, Data Value

See the appended table 1.

(4) Operation

(Transmission)

When data is edited with the panel switch, the parameter change is transmitted in accordance with the above transmission conditions.

(Reception)

1) ~ 4)

The SY85 has four sound generation modes: Voice, Performance, Multi, Wave. Only when the sound generation mode of the transmitting side and receiving side match, it is received. The mode on the receiving side does not change and the page does not move. However, the data display will be updated.

5) ~ 6)

All modes: Modes are received as they are. (no page change)

7)

This parameter change is only for reception. Remote controlling is possible with all the panel switches. This message has the same effect as pressing the switch.

2.1.2 Master Tuning parameter change

(1)Format

```

11110000  F0
01000011  43
0001nnnn  nnnn  = Device Number
00101001  04
01000000  40
0vvvvvvv  vvvvvv = Data Value
11110111  F7
    
```

(2) Operation

(Transmission)

When the master tune data is edited with the panel switch, the parameter change is transmitted in accordance with the above transmission conditions.

(Reception)

All modes: Modes are received as they are. (no page change)

3. Bulk dump

The SY85 transmits and receives the following ten bulk dump types.

Reception is not possible during performance and recording.

Transmission is performed when MIDI UTILITY \$bulk dump\$ is executed, or when a dump request is received.

- 1). Normal Voice bulk dump
- 2). Drum Voice bulk dump
- 3). Performance bulk dump
- 4). Multi(Song) bulk dump
- 5). Synthesizer Setup bulk dump
- 6). Seq Setup bulk dump
- 7). Sample bulk dump
- 8). Rhythm bulk dump
- 9). All Seq bulk dump
- 10). Nseq bulk dump

3.1.1 Bulk Dump 1) ~ 7)

(1)Format

```

0  11110000  F0
1  01000011  43
2  0000nnnn  nnnn  = Device Number
3  01111010  7A
4  0bbbbbbb  ] No. of bytes
5  0bbbbbbb
6  01001100  4C(asci i "L")
7  01001101  4D(asci i "M")
8  00100000  H 20(asci i " ")
9  00100000  E 20(asci i " ")
10 0ddddddd  C dddddd = Data Format Name(asci i)
11 0ddddddd  K dddddd = Data Format Name(asci i)
12 0ddddddd  dddddd = Data Format Name(asci i)
13 0ddddddd  S dddddd = Data Format Name(asci i)
14 0ddddddd  U dddddd = Data Format Name(asci i)
15 0ddddddd  M dddddd = Data Format Name(asci i)
16 00000000  00

29 00000000  00
30 0ttttttt  tttttt = Memory_type
31 00mmmmmm  mmmmmm = Memory Number
32 0vvvvvvv  vvvvvv = data value

0sssssss  ssssss = check_sum
11110111  F7
    
```

4 and 5 are not available during a Dump Request and 32 becomes F7.

(2)Data Format Name

| Bulk Dump Type | dddddd | tttttt | mmmmmm |
|-------------------|--------|--------|--------|
| Normal Voice | 0065VC | *1 | 0.62 |
| Drum Voice | 0065DR | *2 | 63 |
| Performance | 0065PF | *3 | 0.63 |
| Multi(Song) | 0065MU | 0 | 0..9 |
| Synthesizer Setup | 0065SY | 0 | 0 |
| Seq Setup | 0065SS | 0 | 0 |
| Sample | 0040SA | 0 | 0..63 |

- *1:0=int1,3=int2,6=int3,9=int4,127=edit_buffer
- *2:0=int1,3=int2,6=int3,9=int4,127=edit_buffer
- *3:0=int1,3=int2,127=edit_buffer
- *4: When memory number exceeds the upper limit, it is handled as the upper limit value during the bulk reception, and it is ignored during the dump request reception.
- *5: When the memory type is not defined during bulk dump reception;

with 4) ~ 8), it is ignored and handled as int.
 with 1) ~ 2),
 = 127 edit_buffer
 = 0 ~ 2 int1
 = 3 ~ 5 int2
 = 6 ~ 8 int3
 = 9 ~ 15 int4
 = other bit 4 ~ bit 7 are ignored and the above process is performed.
 with 3)
 = 127 edit_buffer
 = 0 ~ 2 int1
 = 3 ~ 7 int2
 = other bit 3 ~ bit 7 are ignored and the above process is performed.

When the memory type is not defined during dump request reception, it is ignored.

(3) Data Format

See the appended table 1.

(4) Operation

(Transmission)

While being transmitted with the BULK UTILITY using 1) ~ 4),during

All Voices Bulk transmission

- Memory_type = 00 (INT1)
- Memory Number = Transmission is carried out up to 63 starting from 0 sequentially.
- Memory_type = 03 (INT2)
- Memory Number = Transmission is carried out up to 63 starting from 0 sequentially.during
- = 06 (INT3)
- = 09 (INT4)

All Performance Bulk transmission

- Memory_type = 00 (INT1)
- Memory Number = Transmission is carried out up to 63 starting from 0 sequentially.during
- = 03 (INT2)

All SONG Bulk transmission

- Memory_type = 00 (INT)
- Memory Number = Transmission is carried out up to 9 starting from 0 sequentially.during

3.1.2 SY85 Format Bulk Dump 8), 9)

(1)Format

| | | | |
|----|----------|----------------------|-------|
| 0 | 11110000 | F0 | |
| 1 | 01000011 | 43 | |
| 2 | 0000nnnn | nnnn = Device Number | |
| 3 | 00001010 | 7A | |
| 4 | 0bbbbbbb | No. of bytes | } |
| 5 | 0bbbbbbb | max.538 | |
| 6 | 01001100 | 4C(ascii"L") | } |
| 7 | 01001101 | 4D(ascii"M") | |
| 8 | 00100000 | 20(ascii" ") | b |
| 9 | 00100000 | 20(ascii" ") | y |
| 10 | 0ddddddd | d(ascii)= Data | t |
| 11 | 0ddddddd | d(ascii) Format | e |
| 12 | 0ddddddd | d(ascii) Name | |
| 13 | 0ddddddd | d(ascii) | |
| 14 | 0ddddddd | d(ascii) | |
| 15 | 0ddddddd | d(ascii) | |
| 16 | 00000000 | 00 | |
| 31 | 00000000 | 00 | |
| 32 | 0vvvvvvv | vvvvvv = data | value |
| | 0sssssss | sssssss = check_sum | |
| | 11110111 | F7 | |

When the number of bytes is less than 538, the number will become the number of bytes. When the number of bytes exceeds 538, the number is divided by 538 from the upper number, and number of bytes ~ check_sum is repeated.

4 and 5 are not available during a Dump Request and 32 becomes F7.

(2)Data Format Name

| Bulk Dump Type | dddddd |
|----------------|--------|
| Rhythm | 0065RY |
| All Seq | 0065SQ |

(3) Operation

Rhythm transmits and receives Rhythm track data and Pattern data.

All Seq transmits and receives Normal track data and Song 1 ~ 10 sequentially.

3.1.3 NSEQ Format Bulk Dump 10)

(1)Format

| | | | |
|----|----------|----------------------|-------|
| 0 | 11110000 | F0 | |
| 1 | 01000011 | 43 | |
| 2 | 0000nnnn | nnnn = Device Number | |
| 3 | 00001010 | 0A | |
| 4 | 0bbbbbbb | No. of bytes | } |
| 5 | 0bbbbbbb | max.4096 | |
| 6 | 01001100 | 4C(ascii"L") | } |
| 7 | 01001101 | 4D(ascii"M") | |
| 8 | 00100000 | 20(ascii" ") | b |
| 9 | 00100000 | 20(ascii" ") | y |
| 10 | 0ddddddd | d(ascii) = Data | t |
| 11 | 0ddddddd | d(ascii) Format | e |
| 12 | 0ddddddd | d(ascii) Name | |
| 13 | 0ddddddd | d(ascii) | |
| 14 | 0ddddddd | d(ascii) | |
| 15 | 0ddddddd | d(ascii) | |
| 16 | 0vvvvvvv | vvvvvv = data | value |
| | 0sssssss | sssssss = check_sum | |
| | 11110111 | F7 | |

When the number of bytes is less than 4096, the number will become the number of bytes. When the number of bytes exceeds 4096, the number is divided by 4096 from the upper number, and number of bytes ~ check_sum is repeated.

4 and 5 are not available during a Dump Request and 32 becomes F7.

(2)Data Format Name

| Bulk Dump Type | dddddd |
|----------------|--------|
| NSEQ | NSEQ |
| NSEQ1 | NSEQ1 |

Receive only

(3) Data Format

See the appended table 2

(4) Operation

Normal track data of the current song is transmitted and received.

4. Sample Dump

For the sample dump the SY85 uses the Sample Dump Standard and SY99 Sample Bulk Dump. Both of them can be received.

For transmission, the above two data types are transmitted successively when XSample Dump of the Sample Utility is executed. When receiving Sample Dump Standard Dump Request, and SY99 Sample Bulk Dump Request, each data type is transmitted.

With Sample Dump Standard and SY99 Sample Bulk Dump, \$1f is the upper limit of the Sample (memory) Number and the number exceeding this is handled as \$1f.

Sample Dump Standard

| | |
|-------------|-------------------------------------------------------------|
| DUMP REQ | F0,7E,cc,03,ss,ss,F7 |
| ACK | F0,7E,cc,7F,pp,F7 |
| NAK | F0,7E,cc,7E,pp,F7 |
| CANCEL | F0,7E,cc,7D,pp,F7 |
| WAIT | F0,7E,cc,7C,pp,F7 |
| DATA PACKET | F0,7E,cc,02,kk,<120 byte>,II,F7 |
| DUMP HEADER | F0,7E,cc,01,ss,ss,ee,ff,ff,gg,gg,gg,hh,hh,hh,ii,ii,ii,jj,F7 |

| | |
|----------|----------------------------------------------------------------|
| pp | : packet number |
| cc | : channel number |
| ss ss | : sample number (LSB first) |
| ee | : sample format (SY99 handles 8 16bits.) |
| ff ff ff | : sample period (LSB first) |
| gg gg gg | : sample length (LSB first) |
| hh hh hh | : loop start (LSB first) |
| ii ii ii | : loop end (LSB first) |
| jj | : loop type (00=normal Loop,01=alternate Loop, 7F=Loop off) |
| kk | : running packet count(0-127)(sequential packet No.) |
| II | : checksum(XOR of 7E cc 02 kk <120 bytes>) |

5.2 Channel message

Reception is carried out only during recording. Transmission is performed only when playing and overdubbing.

Refer to the Receive flow chart and Transmit flow chart for the transmission and reception conditions.

5.3 Mode message

Transmission and reception are not carried out.

5.4 System common message

Only \$F2 is received and the others are not transmitted or received.

5.5 System real time message

5.5.1 Status F8, FA, FB, FC are received.

5.5.2 Nothing is carried out with Status F9, FD, and FF after being read.

6. Status FE (active sensing)

a) Transmission

FE is transmitted approximately every 170 msec.

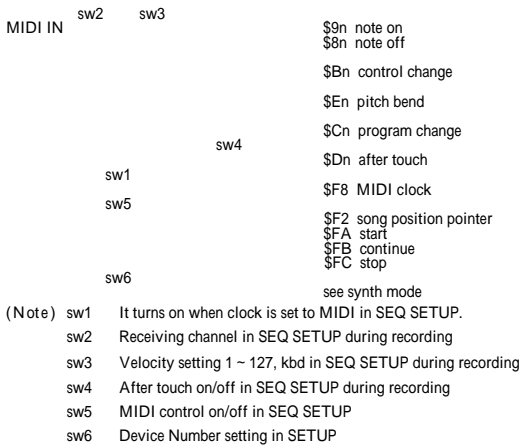
b) Reception

If a signal is not output from MIDI for longer than approximately 300msec after receiving FE, the MIDI reception buffer is cleared, and if key on remains it is turned off.

5. Sequencer mode

5.1 MIDI reception/transmission block diagram

(Receive flow chart)



(Transmit flow chart)



(Note) sw1 MIDI control on/off in SEQ SETUP
sw2 It turns on when the clock is set to internal in SEQ SETUP
sw3 Device Number setting in SETUP

<Appended table 1>

(1)MIDI Parameter Change table (Multi)

\$F0,\$43,\$1n,\$29,\$00,sub_group,p_msb,p_lsb,v_msb,v_lsb,\$F7

Note) n ; Device Number
s ; parameter sub_group number
p ; parameter number
v ; parameter value

[SONG_MULTI PARAMETERS]

1.COMMON s=0
1.COMMON s=0

| PARAMETER | BULK NUMBER | PARAM NUMBER | DATA RANGE | DISP | NOTES |
|------------|--------------|--------------|------------|---------------|------------------------|
| EF\$RSV | 0 | | 0 | | reserved |
| EF\$MODE | 1 | 1 | 0..2 | off,seri,para | effect mode |
| EF\$1TYPE | 2 | 2 | 0..90 | 0..90 | effect1 type |
| EF\$2TYPE | 3 | 3 | 0..90 | 0..90 | effect2 type |
| EF\$C1PRM | 4 | 4 | 0..31 | off..InsLvl2b | effect cont1 parameter |
| EF\$C1NUM | 5 | 5 | 0..124 | 0..124 | effect cont1 add con |
| EF\$C2PRM | 6 | 6 | 0..31 | off..InsLvl2b | effect cont2 parameter |
| EF\$C2NUM | 7 | 7 | 0..124 | 0..124 | effect cont2 add con |
| EF\$C2MIN | 8 | 8 | 0..100 | 0..100 | effect cont2 min limit |
| EF\$C2MAX | 9 | 9 | 0..100 | 0..100 | effect cont2 max limit |
| EF\$1PRM1 | 10 | 10 | 0..??? | ??? | effect1 param1 |
| EF\$1PRM2 | Not in order | 11 | 0..??? | ??? | effect1 param2 |
| EF\$1PRM3 | Not in order | 12 | 0..??? | ??? | effect1 param3 |
| EF\$1PRM4 | Not in order | 13 | 0..??? | ??? | effect1 param4 |
| EF\$1PRM5 | Not in order | 14 | 0..??? | ??? | effect1 param5 |
| EF\$1PRM6 | Not in order | 15 | 0..??? | ??? | effect1 param6 |
| EF\$1PRM7 | Not in order | 16 | 0..??? | ??? | effect1 param7 |
| EF\$1PRM8 | 33 | 17 | 0..??? | ??? | effect1 param8 |
| EF\$1LVL1 | 34 | 18 | 0..100 | 0..100 | effect1 levela |
| EF\$1LVL2 | 35 | 19 | 0..100 | 0..100 | effect1 levelb |
| EF\$2PRM1 | 36 | 20 | 0..??? | ??? | effect2 param1 |
| EF\$2PRM2 | Not in order | 21 | 0..??? | ??? | effect2 param2 |
| EF\$2PRM3 | Not in order | 22 | 0..??? | ??? | effect2 param3 |
| EF\$2PRM4 | Not in order | 23 | 0..??? | ??? | effect2 param4 |
| EF\$2PRM5 | Not in order | 24 | 0..??? | ??? | effect2 param5 |
| EF\$2PRM6 | Not in order | 25 | 0..??? | ??? | effect2 param6 |
| EF\$2PRM7 | Not in order | 26 | 0..??? | ??? | effect2 param7 |
| EF\$2PRM8 | 59 | 27 | 0..??? | ??? | effect2 param8 |
| EF\$2LVL1 | 60 | 28 | 0..100 | 0..100 | effect2 levela |
| EF\$2LVL2 | 61 | 29 | 0..100 | 0..100 | effect2 levelb |
| EF\$MXLVL | 62 | 30 | 0..100 | 0..100 | effect mix level |
| EF\$BAL1 | 63 | 31 | 0..100 | 0..100 | effect balance out1 |
| EF\$BAL2 | 64 | 32 | 0..100 | 0..100 | effect balance out2 |
| EF\$C1MIN | 65 | 33 | 0..100 | 0..100 | effect cont1 min limit |
| EF\$C1MAX | 66 | 34 | 0..100 | 0..100 | effect cont1 max limit |
| EF\$LFWAVE | 67 | 35 | 0..6 | tri..1tm | effect lfo wave |
| EF\$LFSPD | 68 | 36 | 0..99 | 0..99 | effect lfo speed |
| EF\$LFDLY | 69 | 37 | 0..99 | 0..99 | effect lfo delay time |
| EF\$MXSND2 | 70 | 38 | 0..100 | 0..100 | effect insert1b |
| EF\$MXSND3 | 71 | 39 | 0..100 | 0..100 | effect insert2a |
| EF\$MXSND4 | 72 | 40 | 0..100 | 0..100 | effect insert2b |
| MUL\$NAME1 | 73 | 49 | 32..127 | ASCII | song name top |
| MUL\$NAME2 | 74 | 50 | 32..127 | ASCII | song name |
| MUL\$NAME3 | 75 | 51 | 32..127 | ASCII | song name |
| MUL\$NAME4 | 76 | 52 | 32..127 | ASCII | song name |
| MUL\$NAME5 | 77 | 53 | 32..127 | ASCII | song name |
| MUL\$NAME6 | 78 | 54 | 32..127 | ASCII | song name |
| MUL\$NAME7 | 79 | 55 | 32..127 | ASCII | song name |
| MUL\$NAME8 | 80 | 56 | 32..127 | ASCII | song name bottom |
| MUL\$TCH1 | 81 | 57 | 0..15 | 0..15 | track1 transmit ch |
| MUL\$TCH2 | 82 | 58 | 0..15 | 0..15 | track2 transmit ch |
| MUL\$TCH3 | 83 | 59 | 0..15 | 0..15 | track3 transmit ch |
| MUL\$TCH4 | 84 | 60 | 0..15 | 0..15 | track4 transmit ch |
| MUL\$TCH5 | 85 | 61 | 0..15 | 0..15 | track5 transmit ch |
| MUL\$TCH6 | 86 | 62 | 0..15 | 0..15 | track6 transmit ch |
| MUL\$TCH7 | 87 | 63 | 0..15 | 0..15 | track7 transmit ch |

| PARAMETER | BULK NUMBER | PARAM NUMBER | DATA RANGE | DISP | NOTES |
|-----------------|-------------|--------------|------------|---------|------------------------------|
| MUL\$TCH8 | 88 | 64 | 0..15 | 0..15 | track8 transmit ch |
| MUL\$TCH9 | 89 | 65 | 0..15 | 0..15 | rhythm track transmit ch |
| MUL\$SONG_BEAT | 90 | | 0..15 | 1..16 | time signature1(Numerator) |
| MUL\$SONG_TIME | 91 | | 2..4 | 4,8,16 | time signature2(Denominator) |
| MUL\$SONG_TEMPO | 92,93 | | 30..240 | 30..240 | tempo |

2.INST s=1..16(inst number)

| PARAMETER | BULK NUMBER | PARAM NUMBER | DATA RANGE | DISP | NOTES |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------------------------|-------------------------------|-----------------------------------------------------------------|
| MUL\$CH\$BNK | 94,95 | 0 | b0,1 b2,3 b4..b7 | 1..4 int/crd/(pre) 0..1 | inst mem bank inst mem off/on for ind1..4 |
| MUL\$CH\$VNUM | 96,97 | 1 | b0..5 b6 b7 | 0..63 pfm/vce off,on | inst voice number inst v,p select inst switch |
| MUL\$CH\$VOL | 98 | 2 | 0..127 | 0..127 | inst volume |
| MUL\$CH\$TUN | 99 | 3 | 1..127 | + -63 | inst tune |
| MUL\$CH\$NSFT | 100 | 4 | 1..127 | + -63 | inst note shift |
| MUL\$CH\$PAN | 101 | 5 | b0..b5 b6=0,1 | + -31 multi,vce/pfm | inst pan inst pan source |
| MUL\$CH\$EFSNDSW | 102 | 6 | b0..3 b4..5 b6 | 0..1 0..1 0..1 | off/on for send1..4 off/on for out1,2 off/on for vce send |
| MUL\$CH\$EFSNDLVL | 103 104..113 114..123 124..133 134..143 144..153 154..163 164..173 174..183 184..193 194..203 204..213 214..223 224..233 234..243 244..253 | 7 | 0..127 | 0..127 | inst effect send |

(2)MIDI Parameter Change table (Performance)

\$F0,\$43,\$1n,\$29,\$01,sub_group,p_msb,p_lsb,v_msb,v_lsb,\$F7

Note) n ; Device Number
s ; parameter sub_group number
p ; parameter number
v ; parameter value

1.COMMON s=0

1.COMMON s=0

| PARAMETER | BULK NUMBER | PARAM NUMBER | DATA RANGE | DISP | NOTES |
|------------|--------------|--------------|------------|---------------|-------------------------|
| EF\$RSV | 0 | | 0 | | reserved |
| EF\$MODE | 1 | 1 | 0..2 | off,seri,para | effect mode |
| EF\$1TYPE | 2 | 2 | 0..90 | 0..90 | effect1 type |
| EF\$2TYPE | 3 | 3 | 0..90 | 0..90 | effect2 type |
| EF\$C1PRM | 4 | 4 | 0..31 | off..InsLvl2b | effect cont1 parameter |
| EF\$C1NUM | 5 | 5 | 0..124 | 0..124 | effect cont1 add con |
| EF\$C2PRM | 6 | 6 | 0..31 | off..InsLvl2b | effect cont2 parameter |
| EF\$C2NUM | 7 | 7 | 0..124 | 0..124 | effect cont2 add con |
| EF\$C2MIN | 8 | 8 | 0..100 | 0..100 | effect cont2 min limit |
| EF\$C2MAX | 9 | 9 | 0..100 | 0..100 | effect cont2 max limit |
| EF\$1PRM1 | 10 | 10 | 0..??? | ??? | effect1 param1 |
| EF\$1PRM2 | Not in order | 11 | 0..??? | ??? | effect1 param2 |
| EF\$1PRM3 | Not in order | 12 | 0..??? | ??? | effect1 param3 |
| EF\$1PRM4 | Not in order | 13 | 0..??? | ??? | effect1 param4 |
| EF\$1PRM5 | Not in order | 14 | 0..??? | ??? | effect1 param5 |
| EF\$1PRM6 | Not in order | 15 | 0..??? | ??? | effect1 param6 |
| EF\$1PRM7 | Not in order | 16 | 0..??? | ??? | effect1 param7 |
| EF\$1PRM8 | 33 | 17 | 0..??? | ??? | effect1 param8 |
| EF\$1LVL1 | 34 | 18 | 0..100 | 0..100 | effect1 levela |
| EF\$1LVL2 | 35 | 19 | 0..100 | 0..100 | effect1 levelb |
| EF\$2PRM1 | 36 | 20 | 0..??? | ??? | effect2 param1 |
| EF\$2PRM2 | Not in order | 21 | 0..??? | ??? | effect2 param2 |
| EF\$2PRM3 | Not in order | 22 | 0..??? | ??? | effect2 param3 |
| EF\$2PRM4 | Not in order | 23 | 0..??? | ??? | effect2 param4 |
| EF\$2PRM5 | Not in order | 24 | 0..??? | ??? | effect2 param5 |
| EF\$2PRM6 | Not in order | 25 | 0..??? | ??? | effect2 param6 |
| EF\$2PRM7 | Not in order | 26 | 0..??? | ??? | effect2 param7 |
| EF\$2PRM8 | 59 | 27 | 0..??? | ??? | effect2 param8 |
| EF\$2LVL1 | 60 | 28 | 0..100 | 0..100 | effect2 levela |
| EF\$2LVL2 | 61 | 29 | 0..100 | 0..100 | effect2 levelb |
| EF\$MXLVL | 62 | 30 | 0..100 | 0..100 | effect mix level |
| EF\$BAL1 | 63 | 31 | 0..100 | 0..100 | effect balance out1 |
| EF\$BAL2 | 64 | 32 | 0..100 | 0..100 | effect balance out2 |
| EF\$C1MIN | 65 | 33 | 0..100 | 0..100 | effect cont1 min limit |
| EF\$C1MAX | 66 | 34 | 0..100 | 0..100 | effect cont1 max limit |
| EF\$LFWAVE | 67 | 35 | 0..6 | tri..1tm | effect lfo wave |
| EF\$LFSPD | 68 | 36 | 0..99 | 0..99 | effect lfo speed |
| EF\$LFDLY | 69 | 37 | 0..99 | 0..99 | effect lfo delay time |
| EF\$MXSND2 | 70 | 38 | 0..100 | 0..100 | effect insert1b |
| EF\$MXSND3 | 71 | 39 | 0..100 | 0..100 | effect insert2a |
| EF\$MXSND4 | 72 | 40 | 0..100 | 0..100 | effect insert2b |
| PFM\$NAME1 | 73 | 49 | 32..127 | ASCII | performance name top |
| PFM\$NAME2 | 74 | 50 | 32..127 | ASCII | performance name |
| PFM\$NAME3 | 75 | 51 | 32..127 | ASCII | performance name |
| PFM\$NAME4 | 76 | 52 | 32..127 | ASCII | performance name |
| PFM\$NAME5 | 77 | 53 | 32..127 | ASCII | performance name |
| PFM\$NAME6 | 78 | 54 | 32..127 | ASCII | performance name |
| PFM\$NAME7 | 79 | 55 | 32..127 | ASCII | performance name |
| PFM\$NAME8 | 80 | 56 | 32..127 | ASCII | performance name bottom |
| PFM\$RSV | 81 | | 0 | | reserved |
| PFM\$RSV | 82 | | 0 | | reserved |
| PFM\$VOL | 83 | 59 | 0..127 | 0..127 | perform total level |

2.LAYER s=1..4(layer number)

| PARAMETER | BULK NUMBER | PARAM NUMBER | DATA RANGE | DISP | NOTES |
|-------------------|-----------------------------------------|--------------|------------------------------|--------------------------------------------------------|----------------------------------------------------------------------------|
| PFM\$LY\$VBNK | 84,85 | 0 | b0,b1 b2 b3 b4..b7 | 1..4 0 int(card)/(pre) 0 | layer mem bank reserved layer mem reserved |
| PFM\$LY\$VNUM | 86,87 | 1 | 0..62 b7 | 0..62 off,on | layer voice number layer switch |
| PFM\$LY\$VOL | 88 | 2 | 0..127 | 0..127 | layer volume |
| PFM\$LY\$DEET | 89 | 3 | b0..b3 b4,5 | -7..+7 off/on | layer detune cs enable prm1,2 |
| PFM\$LY\$NSFT | 90 | 4 | 1..127 | -63..+63 | layer note shift |
| PFM\$LY\$SPAN | 91 | 5 | 0..63 | -31..+31 | layer pan |
| PFM\$LY\$EFSNDSW | 92 | 6 | b0..3 b4..5 | off/on off/on | off/on for send1..4 off/on for out1,2 |
| PFM\$LY\$EFSNDLVL | 93 | 7 | 0..127 | 0..127 | layer effect send |
| PFM\$LY\$EFSNDVEL | 94,95 | 8 | b0..b3 b4..b7 | -7..+7 -7..+7 | layer effect send vel sns. layer effect send scaling |
| PFM\$LY\$NLIML | 96 | 9 | 0..127 | C-2..G8 | layer note limit lo |
| PFM\$LY\$NLIMH | 97 | 10 | 0..127 | C-2..G8 | layer note limit hi |
| PFM\$LY\$VLIML | 98 | 11 | 1..127 | 1..127 | layer vel limit lo |
| PFM\$LY\$VLIMH | 99 | 12 | 1..127 | 1..127 | layer vel limit hi |
| PFM\$LY\$VAEGR1 | 100,101 | 13 | 0..255 | -63..+63 | layer AEG R1 |
| PFM\$LY\$VAEGD1R | 102,103 | 14 | 0..255 | -63..+63 | layer AEG D1R |
| PFM\$LY\$VAEGD2R | 104,105 | 15 | 0..255 | -63..+63 | layer AEG D2R |
| PFM\$LY\$VAEGRR | 106,107 | 16 | 0..255 | -63..+63 | layer AEG RR |
| PFM\$LY\$VAEGVEL | 108,109 | 17 | 0..255 | -14..+14 | layer AEG vel sens. |
| PFM\$LY\$VFC | 110,111 | 18 | 0..255 | -127..+127 | layer filter Fc |
| PFM\$LY\$VFVEL | 112,113 | 19 | 0..255 | -127..+127 | layer filter vel sens. |
| PFM\$LY\$VFRES | 114,115 | 20 | 0..255 | -99..+99 | layer filter resonance |
| PFM\$LY\$VLFSPD | 116,117 | 21 | 0..255 | -99..+99 | layer LFO speed |
| PFM\$LY\$VLFDP | 118,119 | 22 | 0..255 | -99..+99 | layer LFO depth |
| PFM\$LY\$VCTRL | 120,121 | 23 | b0,1,2 b3 b4,5,6 b7 | off,use a,b,c,d off/on off,use a,b,c,d off/on | layer AT use layer AT->MW switch layer MW use layer MW->AT switch |
| PFM\$LY\$VSW | 122,123 | 24 | b0,1,2 b3 b4 b5 | off,use a,b,c,d 0 off/on off/on | layer FC use reserved layer peg switch layer sustain switch |
| PFM\$LY\$FFIX | 124,125 | 25 | 0..127 b7 | C-2..G8 normal/fix | fixed mode note# freq. fix switch |
| PFM\$RSV | 126 127..169 170..212 213..255 | | 0 | | reserved |

(3)MIDI Parameter Change table (Normal Voice)

\$F0,\$43,\$1n,\$29,\$02,\$00,p_msb,p_lsb,v_msb,v_lsb,\$F7

Note) n ; Device Number
 p ; parameter number
 v ; parameter value

| PARAMETER | BULK NUMBER | PARAM NUMBER | DATA RANGE | DISP | NOTES |
|----------------|--------------|--------------|------------|---------------|------------------------|
| EF\$RSV | 0 | | 0 | 0 | reserved |
| EF\$MODE | 1 | 1 | 0..2 | off,seri,para | effect mode |
| EF\$1TYPE | 2 | 2 | 0..90 | 0..90 | effect1 type |
| EF\$2TYPE | 3 | 3 | 0..90 | 0..90 | effect2 type |
| EF\$C1PRM | 4 | 4 | 0..28 | off..LFO dly | effect cont1 parameter |
| EF\$C1NUM | 5 | 5 | 0..124 | 0..124 | effect cont1 add con |
| EF\$C2PRM | 6 | 6 | 0..28 | off..LFO dly | effect cont2 parameter |
| EF\$C2NUM | 7 | 7 | 0..124 | 0..124 | effect cont2 add con |
| EF\$C2MIN | 8 | 8 | 0..100 | 0..100 | effect cont2 min limit |
| EF\$C2MAX | 9 | 9 | 0..100 | 0..100 | effect cont2 max limit |
| EF\$1PRM1 | 10 | 10 | 0..??? | ??? | effect1 param1 |
| EF\$1PRM2 | Not in order | 11 | 0..??? | ??? | effect1 param2 |
| EF\$1PRM3 | Not in order | 12 | 0..??? | ??? | effect1 param3 |
| EF\$1PRM4 | Not in order | 13 | 0..??? | ??? | effect1 param4 |
| EF\$1PRM5 | Not in order | 14 | 0..??? | ??? | effect1 param5 |
| EF\$1PRM6 | Not in order | 15 | 0..??? | ??? | effect1 param6 |
| EF\$1PRM7 | Not in order | 16 | 0..??? | ??? | effect1 param7 |
| EF\$1PRM8 | 33 | 17 | 0..??? | ??? | effect1 param8 |
| EF\$1LVL1 | 34 | 18 | 0..100 | 0..100 | effect1 levela |
| EF\$1LVL2 | 35 | 19 | 0..100 | 0..100 | effect1 levelb |
| EF\$2PRM1 | 36 | 20 | 0..??? | ??? | effect2 param1 |
| EF\$2PRM2 | Not in order | 21 | 0..??? | ??? | effect2 param2 |
| EF\$2PRM3 | Not in order | 22 | 0..??? | ??? | effect2 param3 |
| EF\$2PRM4 | Not in order | 23 | 0..??? | ??? | effect2 param4 |
| EF\$2PRM5 | Not in order | 24 | 0..??? | ??? | effect2 param5 |
| EF\$2PRM6 | Not in order | 25 | 0..??? | ??? | effect2 param6 |
| EF\$2PRM7 | Not in order | 26 | 0..??? | ??? | effect2 param7 |
| EF\$2PRM8 | 59 | 27 | 0..??? | ??? | effect2 param8 |
| EF\$2LVL1 | 60 | 28 | 0..100 | 0..100 | effect2 levela |
| EF\$2LVL2 | 61 | 29 | 0..100 | 0..100 | effect2 levelb |
| EF\$MXLVL | 62 | 30 | 0..100 | 0..100 | effect mix level |
| EF\$BAL1 | 63 | 31 | 0..100 | 0..100 | effect balance out1 |
| EF\$RSV | 64 | | 0 | 0 | effect balance out2 |
| EF\$C1MIN | 65 | 33 | 0..100 | 0..100 | effect cont1 min limit |
| EF\$C1MAX | 66 | 34 | 0..100 | 0..100 | effect cont1 max limit |
| EF\$LFWAVE | 67 | 35 | 0..6 | tri..1tm | effect lfo wave |
| EF\$LFSPD | 68 | 36 | 0..99 | 0..99 | effect lfo speed |
| EF\$LFDLY | 69 | 37 | 0..99 | 0..99 | effect lfo delay time |
| EF\$RSV | 70..72 | | 0 | | reserved |
| VCE\$NAME1 | 73 | 49 | 32..127 | ASCII | voice name top |
| VCE\$NAME2 | 74 | 50 | 32..127 | ASCII | voice name |
| VCE\$NAME3 | 75 | 51 | 32..127 | ASCII | voice name |
| VCE\$NAME4 | 76 | 52 | 32..127 | ASCII | voice name |
| VCE\$NAME5 | 77 | 53 | 32..127 | ASCII | voice name |
| VCE\$NAME6 | 78 | 54 | 32..127 | ASCII | voice name |
| VCE\$NAME7 | 79 | 55 | 32..127 | ASCII | voice name |
| VCE\$NAME8 | 80 | 56 | 32..127 | ASCII | voice name bottom |
| VCE\$RSV | 81 | | 0 | 0 | reserved |
| VCE\$CARDID | 82,83 | 58 | 0..16383 | | AWM_CARD ID# |
| VCE\$MW_PMDRNG | 84 | 60 | 0..127 | 0..127 | mw pmod range |
| VCE\$MW_AMDRNG | 85 | 61 | 0..127 | 0..127 | mw amod range |
| VCE\$MW_FMDRNG | 86 | 62 | 0..127 | 0..127 | mw fmod range |
| VCE\$MW_COFRNG | 87,88 | 63 | 0..255 | -127..+127 | mw cutoff range |
| VCE\$MW_EBSRNG | 89,90 | 64 | 0..255 | -127..+127 | mw egbias range |
| VCE\$FC_PMDRNG | 91 | 65 | 0..127 | 0..127 | fc pmod range |
| VCE\$FC_AMDRNG | 92 | 66 | 0..127 | 0..127 | fc amod range |
| VCE\$FC_FMDRNG | 93 | 67 | 0..127 | 0..127 | fc fmod range |
| VCE\$FC_COFRNG | 94,95 | 68 | 0..255 | -127..+127 | fc cutoff range |
| VCE\$FC_EBSRNG | 96,97 | 69 | 0..255 | -127..+127 | fc egbias range |
| VCE\$AT_PMDRNG | 98 | 70 | 0..127 | 0..127 | at pmod range |
| VCE\$AT_AMDRNG | 99 | 71 | 0..127 | 0..127 | at amod range |

| PARAMETER | BULK NUMBER | PARAM NUMBER | DATA RANGE | DISP | NOTES |
|------------------|-------------|--------------|------------------------|-----------------------------------|-------------------------------------------------|
| VCE\$AT_FMDRNG | 100 | 72 | 0..127 | 0..127 | at fmod range |
| VCE\$AT_COFRNG | 101,102 | 73 | 0..255 | -127..+127 | at cutoff range |
| VCE\$AT_EBSRNG | 103,104 | 74 | 0..255 | -127..+127 | at egbias range |
| VCE\$AT_PBSRNG | 105,106 | 75 | b0..b4 | -12..+12 | at pitch bend range |
| VCE\$RSV | 107,108 | | 0 | | reserved |
| VCE\$PB_RNG | 109 | 77 | b0..b3 b4,5 b6 | 0..12 off/on | pitch bend range reserved sustain enable |
| VCE\$VOL_RNG | 110 | 78 | 0..127 | 0..127 | volume low limit |
| VCE\$CS3_PRM | 111 | 79 | 0..75 | 0..75 | cs parameter1 |
| VCE\$CS3_PRM MIN | 112 | 80 | 0..100 | 0..100 | cs parameter1 min limit |
| VCE\$CS3_PRM MAX | 113 | 81 | 0..100 | 0..100 | cs parameter1 max limit |
| VCE\$CS4_PRM | 114 | 82 | 0..75 | 0..75 | cs parameter2 |
| VCE\$CS4_PRM MIN | 115 | 83 | 0..100 | 0..100 | cs parameter2 min limit |
| VCE\$CS4_PRM MAX | 116 | 84 | 0..100 | 0..100 | cs parameter2 max limit |
| VCE\$VOL | 117 | 85 | 0..127 | 0..127 | voice total level |
| VCE\$EFSNDLVL | 118 | 86 | 0..127 | 0..127 | effect send level |
| VCE\$WAVEBANK | 119 | 87 | b0,b1 b2 | pre1,pre2,crd,int off/on | wave data bank reverse switch |
| VCE\$WAVE | 120,121 | 88 | 0..244 | 0..244 | wave number |
| VCE\$FFIX | 122,123 | 89 | 0..127 b7 | C-2..G8 or -64..+63 normal/fix | fixed mode note#/note shift freq. fix switch |
| VCE\$FFINE | 124 | 90 | 0..127 | -63..+63 | fine tune |
| VCE\$PSENS | 125 | 91 | b0..b2 b3 b4..b6 | 0 0 0..7 | reserved reserved random pitch depth |
| VCE\$PEGR1 | 126 | 92 | 0..63 | 0..63 | rate1 |
| VCE\$PEGR2 | 127 | 93 | 0..63 | 0..63 | rate2 |
| VCE\$PEGR3 | 128 | 94 | 0..63 | 0..63 | rate3 |
| VCE\$PEGRR1 | 129 | 95 | 0..63 | 0..63 | release rate1 |
| VCE\$PEGL0 | 130 | 96 | 1..127 | -63..+63 | level0 |
| VCE\$PEGL1 | 131 | 97 | 1..127 | -63..+63 | level1 |
| VCE\$PEGL2 | 132 | 98 | 1..127 | -63..+63 | level2 |
| VCE\$PEGL3 | 133 | 99 | 1..127 | -63..+63 | level3 |
| VCE\$PEGRL1 | 134 | 100 | 1..127 | -63..+63 | release level1 |
| VCE\$PEGRANGE | 135 | 101 | b0..3 b4,b5 b6 | -7..+7 1/12,1/2,1,2 off/on | rate scaling range loop switch |
| VCE\$PEGVELSNS | 136,137 | 102 | b0..b3 b4..b7 | -7..+7 -7..+7 | velocity sens. rate vel sens. |
| VCE\$LFSHAPE | 138 | | 0..3 | user,vb,tr,wow | type for qed |
| VCE\$LFSPD | 139 | 104 | 0..99 | 0..99 | speed |
| VCE\$LFDLY | 140 | 105 | 0..99 | 0..99 | delay time |
| VCE\$LFPMOD | 141 | 106 | 0..127 | 0..127 | pmod depth |
| VCE\$LFAMOD | 142 | 107 | 0..127 | 0..127 | amod depth |
| VCE\$LFFMOD | 143 | 108 | 0..127 | 0..127 | fmod depth |
| VCE\$LFWAVE | 144 | 109 | b0..2 | tr..S/H | wave |
| VCE\$LFPHS | 145 | 110 | 0..180 | 0..180 | phase |
| VCE\$LFSSENS | 146 | 111 | b0..b3 -7..+7 | | lfo speed velocity sens. |
| VCE\$LFSSCL | 147 | 112 | b0..b3 | b4..b6 0..7 -7..+7 | lfo speed random sens. lfo speed key scaling |
| VCE\$AEGSHAPE | 148 | | 0..21 | | type for quick edit |
| VCE\$AEGMODE | 149 | 114 | b0..b3 b4 b6 | -7..+7 0 attack,hold | rate scaling reserved mode |
| VCE\$AEGR1 | 150 | 115 | 0..63 | 0..63 | rate1 or hold time |
| VCE\$AEGR2 | 151 | 116 | 0..63 | 0..63 | rate2 |
| VCE\$AEGR3 | 152 | 117 | 0..63 | 0..63 | rate3 |
| VCE\$AEGR4 | 153 | 118 | 0..63 | 0..63 | rate4 |
| VCE\$AEGRR | 154 | 119 | 0..63 | 0..63 | release rate |
| VCE\$AEGL2 | 155 | 120 | 0..63 | 0..63 | level2 |
| VCE\$AEGL3 | 156 | 121 | 0..63 | 0..63 | level3 |
| VCE\$ASBP1 | 157 | 122 | 0..124 | C-2..G8 | level scaling break point1 |
| VCE\$ASBP2 | 158 | 123 | 1..125 | C-2..G8 | level scaling break point2 |
| VCE\$ASBP3 | 159 | 124 | 2..126 | C-2..G8 | level scaling break point3 |
| VCE\$ASBP4 | 160 | 125 | 3..127 | C-2..G8 | level scaling break point4 |

| PARAMETER | BULK NUMBER | PARAM NUMBER | DATA RANGE | DISP | NOTES |
|------------------|-------------|--------------|--------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------|
| VCE\$ASLVL1 | 161,162 | 126 | 1..255 | -127..+127 | level scaling level1 |
| VCE\$ASLVL2 | 163,164 | 127 | 1..255 | -127..+127 | level scaling level2 |
| VCE\$ASLVL3 | 165,166 | 128 | 1..255 | -127..+127 | level scaling level3 |
| VCE\$ASLVL4 | 167,168 | 129 | 1..255 | -127..+127 | level scaling level4 |
| VCE\$AEGVELSNS | 169,170 | 130 | b0..b3 b4..b7 | -7..+7 -7..+7 | velocity sens. rate velocity sens. |
| VCE\$FSHAPE | 171 | 132 | 0..16 | 0..16 | filter type for quick edit |
| VCE\$FTYPE12 | 172 | | b0..b2 b3 b4 b5 b6 | THRU..LPF12 attack,shift 0 0eg,1lfo 0 | filter type velocity sens type reserved filter control source reserved |
| VCE\$FRES | 173 | | 0..99 | 0..99 | resonance(2lpf only) |
| VCE\$FVSENS | 174 | | 0..127 | -63..+63 | on vel sens |
| VCE\$RSV | 175 | | 0 | 0 | reserved |
| VCE\$FVSENS_RATE | 176 | | 0..127 | -63..+63 | attack rate vel sens |
| VCE\$RSV | 177 | | 0 | 0 | reserved |
| VCE\$FBAND | 178 | | 138 | 0..127 | 0..127 |
| VCE\$F1C | 179 | 139 | 0..127 | 0..127 | cutoff freq. |
| VCE\$F1EGR1 | 180 | 140 | 0..63 | 0..63 | rate1 |
| VCE\$F1EGR2 | 181 | 141 | 0..63 | 0..63 | rate2 |
| VCE\$F1EGR3 | 182 | 142 | 0..63 | 0..63 | rate3 |
| VCE\$F1EGR4 | 183 | 143 | 0..63 | 0..63 | rate4 |
| VCE\$F1EGRR1 | 184 | 144 | 0..63 | 0..63 | release rate1 |
| VCE\$F1EGRR2 | 185 | 145 | 0..63 | 0..63 | release rate2 |
| VCE\$F1EGL0 | 186 | 146 | 1..127 | -63..+63 | level0 |
| VCE\$F1EGL1 | 187 | 147 | 1..127 | -63..+63 | level1 |
| VCE\$F1EGL2 | 188 | 148 | 1..127 | -63..+63 | level2 |
| VCE\$F1EGL3 | 189 | 149 | 1..127 | -63..+63 | level3 |
| VCE\$F1EGL4 | 190 | 150 | 1..127 | -63..+63 | level4 |
| VCE\$F1EGL1 | 191 | 151 | 1..127 | -63..+63 | release level1 |
| VCE\$F1EGL2 | 192 | 152 | 1..127 | -63..+63 | release level2 |
| VCE\$F1EGRS | 193 | 153 | b0..b3 | -7..+7 | rate scaling |
| VCE\$F1SBP1 | 194 | 154 | 0..124 | C-2..G8 | coff scale break point1 |
| VCE\$F1SBP2 | 195 | 155 | 1..125 | C-2..G8 | coff scale break point2 |
| VCE\$F1SBP3 | 196 | 156 | 2..126 | C-2..G8 | coff scale break point3 |
| VCE\$F1SBP4 | 197 | 157 | 3..127 | C-2..G8 | coff scale break point4 |
| VCE\$F1SFC1 | 198,199 | 158 | 1..255 | -127..+127 | cutoff scaling freq1 |
| VCE\$F1SFC2 | 200,201 | 159 | 1..255 | -127..+127 | cutoff scaling freq2 |
| VCE\$F1SFC3 | 202,203 | 160 | 1..255 | -127..+127 | cutoff scaling freq3 |
| VCE\$F1SFC4 | 204,205 | 161 | 1..255 | -127..+127 | cutoff scaling freq4 |

(4)MIDI Parameter Change table (Drum Voice)

\$F0,\$43,\$1n,\$29,\$03,sub_group,p_msb,p_lsb,v_msb,v_lsb,\$F7

Note) n ; Device Number
s ; parameter sub_group number
p ; parameter number
v ; parameter value

1.COMMON s=0

1.COMMON s=0

| PARAMETER | BULK NUMBER | PARAM NUMBER | DATA RANGE | DISP | NOTES |
|-----------|--------------|--------------|------------|---------------|------------------------|
| EF\$RSV | 0 | | 0 | 0 | reserved |
| EF\$MODE | 1 | 1 | 0..2 | off,seri,para | effect mode |
| EF\$1TYPE | 2 | 2 | 0..90 | 0..90 | effect1 type |
| EF\$2TYPE | 3 | 3 | 0..90 | 0..90 | effect2 type |
| EF\$C1PRM | 4 | 4 | 0..31 | off..InsLv12b | effect cont1 parameter |
| EF\$C1NUM | 5 | 5 | 0..124 | 0..124 | effect cont1 add con |
| EF\$C2PRM | 6 | 6 | 0..31 | off..InsLv12b | effect cont2 parameter |
| EF\$C2NUM | 7 | 7 | 0..124 | 0..124 | effect cont2 add con |
| EF\$C2MIN | 8 | 8 | 0..100 | 0..100 | effect cont2 min limit |
| EF\$C2MAX | 9 | 9 | 0..100 | 0..100 | effect cont2 max limit |
| EF\$1PRM1 | 10 | 10 | 0..??? | ??? | effect1 param1 |
| EF\$1PRM2 | Not in order | 11 | 0..??? | ??? | effect1 param2 |

| PARAMETER | BULK NUMBER | PARAM NUMBER | DATA RANGE | DISP | NOTES |
|-------------|--------------|--------------|------------|----------|------------------------|
| EF\$1PRM3 | Not in order | 12 | 0..??? | ??? | effect1 param3 |
| EF\$1PRM4 | Not in order | 13 | 0..??? | ??? | effect1 param4 |
| EF\$1PRM5 | Not in order | 14 | 0..??? | ??? | effect1 param5 |
| EF\$1PRM6 | Not in order | 15 | 0..??? | ??? | effect1 param6 |
| EF\$1PRM7 | Not in order | 16 | 0..??? | ??? | effect1 param7 |
| EF\$1PRM8 | 33 | 17 | 0..??? | ??? | effect1 param8 |
| EF\$1LVL1 | 34 | 18 | 0..100 | 0..100 | effect1 levela |
| EF\$1LVL2 | 35 | 19 | 0..100 | 0..100 | effect1 levelb |
| EF\$2PRM1 | 36 | 20 | 0..??? | ??? | effect2 param1 |
| EF\$2PRM2 | Not in order | 21 | 0..??? | ??? | effect2 param2 |
| EF\$2PRM3 | Not in order | 22 | 0..??? | ??? | effect2 param3 |
| EF\$2PRM4 | Not in order | 23 | 0..??? | ??? | effect2 param4 |
| EF\$2PRM5 | Not in order | 24 | 0..??? | ??? | effect2 param5 |
| EF\$2PRM6 | Not in order | 25 | 0..??? | ??? | effect2 param6 |
| EF\$2PRM7 | Not in order | 26 | 0..??? | ??? | effect2 param7 |
| EF\$2PRM8 | 59 | 27 | 0..??? | ??? | effect2 param8 |
| EF\$2LVL1 | 60 | 28 | 0..100 | 0..100 | effect2 levela |
| EF\$2LVL2 | 61 | 29 | 0..100 | 0..100 | effect2 levelb |
| EF\$MXLVL | 62 | 30 | 0..100 | 0..100 | effect mix level |
| EF\$BAL1 | 63 | 31 | 0..100 | 0..100 | effect balance out1 |
| EF\$BAL2 | 64 | 32 | 0..100 | 0..100 | effect balance out2 |
| EF\$C1MIN | 65 | 33 | 0..100 | 0..100 | effect cont1 min limit |
| EF\$C1MAX | 66 | 34 | 0..100 | 0..100 | effect cont1 max limit |
| EF\$LFWAVE | 67 | 35 | 0.6 | tri..1tm | effect lfo wave |
| EF\$LFSPD | 68 | 36 | 0.99 | 0..99 | effect lfo speed |
| EF\$LFDLY | 69 | 37 | 0.99 | 0..99 | effect lfo delay time |
| EF\$MXSND2 | 70 | 38 | 0..100 | 0..100 | effect insert1b |
| EF\$MXSND3 | 71 | 39 | 0..100 | 0..100 | effect insert2a |
| EF\$MXSND4 | 72 | 40 | 0..100 | 0..100 | effect insert2b |
| DRM\$NAME1 | 73 | 49 | 32..127 | ASCII | drum name top |
| DRM\$NAME2 | 74 | 50 | 32..127 | ASCII | drum name |
| DRM\$NAME3 | 75 | 51 | 32..127 | ASCII | drum name |
| DRM\$NAME4 | 76 | 52 | 32..127 | ASCII | drum name |
| DRM\$NAME5 | 77 | 53 | 32..127 | ASCII | drum name |
| DRM\$NAME6 | 78 | 54 | 32..127 | ASCII | drum name |
| DRM\$NAME7 | 79 | 55 | 32..127 | ASCII | drum name |
| DRM\$NAME8 | 80 | 56 | 32..127 | ASCII | drum name bottom |
| DRM\$RSV | 81 | | 0.1 | | reserved |
| DRM\$CARDID | 82,83 | 58 | 0..16383 | | AWM_CARD ID# |
| DRM\$VOLRNG | 84 | 60 | 0..127 | 0..127 | volume low limit |
| DRM\$VOL | 85 | 61 | 0..127 | 0..127 | drum voice total level |

2.KEY s=36..84(key number)

| PARAMETER | BULK NUMBER | PARAM NUMBER | DATA RANGE | DISP | NOTES |
|-------------------|-------------|--------------|------------------------------|----------------------------------|---------------------------------------------------------|
| DRM\$KEY\$WAVEBNK | 86 | 0 | bit0,1 b2 b3 b4..b7 | pre1,pre2,crd,int off,on 0 | wave mem bank reverse switch reserved reserved |
| DRM\$KEY\$WAVE | 87,88 | 1 | 0..244 | 0..244 | wave number |
| DRM\$KEY\$VOL | 89,90 | 2 | 0..127 | 0..127 | volume |
| DRM\$KEY\$TUN | 91 | 3 | 0..127 | -63..+63 | tune |
| DRM\$KEY\$NSFT | 92 | 4 | 16..100 | -48..+36 | note shift |
| DRM\$KEY\$PAN | 93 | 5 | 0..63 | -31..+31 | pan |
| DRM\$KEY\$EFSNDSW | 94 | 6 | b0..b3 b4..b5 | off/on off/on | send1..4 out1,2 |
| DRM\$KEY\$EFSSEND | 95 | 7 | 0..127 | 0..127 | effect send |
| DRM\$KEY\$EFSNDVL | 96 | 8 | 0..15 | -7..+7 | effect send vel |
| DRM\$KEY\$ALTGRP | 97 | 9 | b0..b4 b5..b6 | grp1..5 sh,nrm,lng,vlng | alternate group gatetime group |
| | 98..109 | | | | |

| PARAMETER | BULK NUMBER | PARAM NUMBER | DATA RANGE | DISP | NOTES |
|-----------|----------------------------------|--------------|------------|------|----------|
| DRM\$RSV | 110..121 662..673 674 | -- | 0 | 0 | reserved |

(5)MIDI Parameter Change table (Setup)

\$F0,\$43,\$1n,\$29,\$04,sub_group,p_msb,p_lsb,v_msb,v_lsb,\$F7

Note) n ; Device Number
s ; parameter sub_group number
p ; parameter number
v ; parameter value

1.SYSTEM s=0

| PARAMETER | BULK NUMBER | PARAM NUMBER | DATA RANGE | DISP | NOTES |
|---------------|-------------|--------------|------------|----------------|-----------------------------------|
| SY\$MNSFT | 0 | 0 | 1..127 | -63..+63 | master note shift |
| SY\$MTUNE | 1 | 1 | 1..127 | -63..+63 | master fine tune |
| SY\$TXCH | 2 | 2 | 0..15 | 1..16 | keyboard transmit ch |
| SY\$BCH | 3 | 3 | 0..16 | 1..16,omni | voice receive ch |
| SY\$LOCAL | 4 | 4 | 0..1 | off/on | local switch |
| SY\$DEVNO | 5 | 5 | 0..17 | off,1..16,all | device number |
| SY\$PROT | 6 | 6 | 0..1 | off/on | bulk protect switch |
| SY\$PGMSW | 7 | 7 | 0..3 | off,nrm,dr,tbl | program change switch |
| SY\$VL_CTRL | 8 | 8 | 0..121 | 0..120,at | volume ctrl dev. No. |
| SY\$CTRL_RST | 9 | 9 | 0..1 | off/on | controller reset |
| SY\$RSV | 10 | | 0 | | reserved |
| SY\$RSV | 11 | | 0 | | reserved |
| SY\$EFCT_BYPS | 12 | 12 | 0..1 | off/on | effect switch |
| SY\$MDR_INT | 13 | | 1..10 | 1..10 | MDR interval time |
| SY\$RSV | 14 | | 0 | | reserved |
| SY\$RSV | 15 | | 1 | | reserved |
| SY\$RSV | 16 | | 0 | | reserved |
| SY\$RSV | 17 | | 0 | | reserved |
| SY\$RSV | 18 | | 0 | | reserved |
| SY\$RSV | 19 | | 0 | | reserved |
| SY\$RSV | 20 | | 0 | | reserved |
| SY\$FIX_VEL | 21 | 21 | 0..127 | off,1..127 | play fix velocity |
| SY\$VELCRV_ON | 22 | 22 | 0..7 | 0..7 | keyon velocity curve |
| SY\$RSV | 23 | | 0 | | reserved |
| SY\$WF_SRAM | 24 | | 0..64 | 0..64 | sram waveform&sample start number |
| SY\$RSV | 25 | | 0 | | reserved |
| SY\$WMEM_SEL | 26 | | 0..1 | vol,non_vol | wave ram default select |
| SY\$RSV | 27..31 | | 0 | | reserved |

2.SEQ s=1

| PARAMETER | BULK NUMBER | PARAM NUMBER | DATA RANGE | DISP | NOTES |
|---------------|-------------|--------------|------------|----------------|--------------------|
| SEQ\$CLICK | 0 | | 0..1 | off,rec | click condition |
| SEQ\$SYNC | 1 | | 0..1 | int,midi | clock source |
| SEQ\$REC_CH | 2 | | 0..17 | 1..16,omni,kbd | seq rec channel |
| SEQ\$REC_AT | 3 | | 0..1 | off,on | after touch rec sw |
| SEQ\$REC_VEL | 4 | | 0 | | reserved |
| SEQ\$SONG_NUM | 5 | | 0..9 | 1..10 | song number |
| SEQ\$REC_TYPE | 6 | | 0..3 | over,repl,step | rec type |
| SEQ\$MIDI | 7 | | 0..1 | punch | midi control |
| SEQ\$LOOP | 8 | | 0..1 | off,on | song loop |
| SEQ\$CHAIN | 9 | | 0..1 | off,on | song chain |
| SEQ\$RSV | 10..15 | | 0 | off,on | reserved |

3.RHYTHM s=2

| PARAMETER | BULK NUMBER | PARAM NUMBER | DATA RANGE | DISP | NOTES |
|----------------|-------------|--------------|------------|--------------|--------------------|
| RY\$PTN_SONG | 16 | | 0..1 | song,pattern | rhythm mode |
| RY\$REC_FLAG | 17 | | 0..1 | real,step | rhythm rec type |
| RY\$PTN_NUM | 18,19 | | 0..99 | 10..99 | pattern number |
| RY\$CLICK_VL | 20 | | 0..6 | 0..6 | ptn rec click beat |
| RY\$QUANTIZE | 21 | | 0..7 | 0..7 | ptn rec quantize |
| RY\$ACCENT_1 | 22 | | 1..127 | 1..127 | ptn rec acc1 |
| RY\$ACCENT_2 | 23 | | 1..127 | 1..127 | ptn rec acc2 |
| RY\$ACCENT_3 | 24 | | 1..127 | 1..127 | ptn rec acc3 |
| RY\$ACCENT_VEL | 25,26 | | 1..128 | 1..127,kbd | ptn rec fix vel |
| RY\$RSV | 27..32 | | 0 | | reserved |

(6)MIDI Parameter Change table (Program Change Table)

\$F0,\$43,\$1n,\$29,\$05,sub_group,p_msb,p_lsb,v_msb,v_lsb,\$F7

Note) n ; Device Number

s ; parameter sub_group number s=0..63(program number)

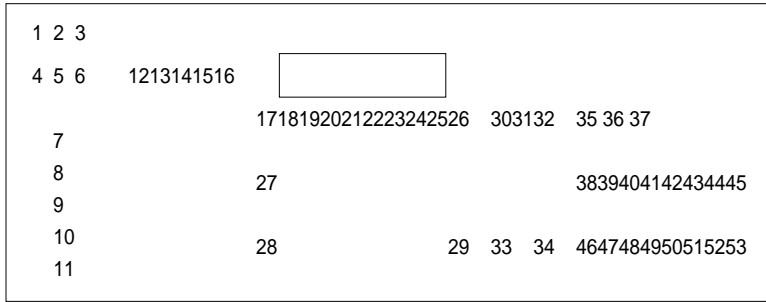
p ; parameter number

v ; parameter value

| PARAMETER | BULK NUMBER | PARAM NUMBER | DATA RANGE | DISP | NOTES |
|-----------|-------------|--------------|------------|--------|----------|
| PGM\$BNKM | 32 | 0 | 0..127 | 0..127 | bank(00) |
| PGM\$BNKL | 33 | 1 | 0..127 | 0..127 | bank(20) |
| PGM\$NUM | 34 | 2 | 0..127 | 0..127 | number |
| | | 35..37 | | | |
| | | 38..40 | | | |
| | | ⋮ | | | |
| | | 221..223 | | | |

Bulk dump is output successively after Synth Setup.

(7)MIDI Parameter Change table (Switch Remote)
 \$F0,\$43,\$10,\$29,\$06,\$00,p_msb,p_lsb,v_msb,v_lsb,\$F7
 Note) s ; parameter sub_group number
 v ; parameter value
 data range : off(\$00 ~ \$3F),on(\$40 ~ \$7F)



| ppppppp | Sw Num | NOTES | ppppppp | Sw Num | NOTES |
|---------|--------|---------------|---------|--------|-----------------|
| 0 | SW1 | [i<] | 27 | SW28 | [EFFECT BYPASS] |
| 1 | SW2 | [<<] | 28 | SW29 | [ENTER] |
| 2 | SW3 | [>>] | 29 | SW30 | [<] |
| 3 | SW4 | [REC] | 30 | SW31 | [>] |
| 4 | SW5 | [STOP] | 31 | SW32 | [MENU] |
| 5 | SW6 | [RUN] | 32 | SW33 | [DEC] |
| 6 | SW7 | [SUB1] | 33 | SW34 | [INC] |
| 7 | 8 | [SUB2] | 34 | SW35 | [INT1] |
| 8 | SW9 | [SUB3] | 35 | SW36 | [INT2] |
| 9 | SW10 | [SUB4] | 36 | SW37 | [CARD] |
| 10 | SW11 | [SUB5] | 37 | SW38 | [GRPA] |
| 11 | SW12 | [PERFORMANCE] | 38 | SW39 | [GRPB] |
| 12 | SW13 | [VOICE] | 39 | SW40 | [GRPC] |
| 13 | SW14 | [SONG] | 40 | SW41 | [GRPD] |
| 14 | SW15 | [PATTERN] | 41 | SW42 | [GRPE] |
| 15 | SW16 | [UTILITY] | 42 | SW43 | [GRPF] |
| 16 | SW17 | [SHIFT] | 43 | SW44 | [GRPG] |
| 17 | SW18 | [PF1] | 44 | SW45 | [GRPH] |
| 18 | SW19 | [PF2] | 45 | SW46 | [PGM1] |
| 19 | SW20 | [PF3] | 46 | SW47 | [PGM2] |
| 20 | SW21 | [PF4] | 47 | SW48 | [PGM3] |
| 21 | SW22 | [PF5] | 48 | SW49 | [PGM4] |
| 22 | SW23 | [PF6] | 49 | SW50 | [PGM5] |
| 23 | SW24 | [PF7] | 50 | SW51 | [PGM6] |
| 24 | SW25 | [PF8] | 51 | SW52 | [PGM7] |
| 25 | SW26 | [EXIT] | 52 | SW53 | [PGM8] |
| 26 | SW27 | [STORE] | 127 | SWRST | RESET |

<Appended table 2>

NSEQ Bulk Dump

NSEQ data is output after 1 byte data is converted to 2-byte ASCII data.

Data for one song consists of multiple track data which starts with F0 On (n=track number) and ends with F2. If a track is empty the track is not included.

| hex | description |
|-----|-------------------------|
| F0 | top of record track #1 |
| 00 | |
| -- | |
| -- | time/event/control data |
| -- | |
| F2 | end of record track #1 |
| -- | |
| -- | track #2 ~ #15 data |
| -- | |
| F0 | top of record track #16 |
| 0F | |
| -- | |
| -- | time/event/control data |
| -- | |
| F2 | end of record track #16 |

| Function ... | Transmitted | Recognized | Remarks |
|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Basic Default Channel Changed | 1 - 16 1 - 16 | 1 - 16 1 - 16 | memorized |
| Mode Default Messages Altered | 3 x ***** | 1,3 x x | memorized |
| Note Number : True voice | 28 - 103 ***** | 0 - 127 1 - 127 | |
| Velocity Note ON Note OFF | o 9nH,v=1-127 x 9nH,v=0 | o v=1-127 x | |
| After Touch Key's Ch's | x o | x o | |
| Pitch Bender | o | o 0-12 semi | 7 bit resolution |
| Control Change | 0,32 1 4 7 10 64 16 - 19 1 - 120 120 121 | o o M.Wheel o Foot cont. o Foot volume x o Sustain sw. o CS x x x | o o o o o o o o o o *1 Pan Sustain Assignable All Sounds off Reset All Cont. |
| Prog Change : True # | o 0-63 ***** | o 0-63 | |
| System Exclusive | o *2 | o *2 | voice etc. |
| : Song Pos Common : Song Sel : Tune | See the sequencer part. | | |
| System Real Time :Clock :Commands | | | |
| Aux :Local ON/OFF :All Notes OFF Mes- :Active Sense sages:Reset | x x o x | x o o x | |
| Note *1 ; effect to next key on notes *2 ; transmit/receive if device No is not off. | | | |

| Function ... | Transmitted | Recognized | Remarks |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------|-----------------|
| Basic Default Channel Changed | 1 - 16 1 - 16 | 1 - 16 1 - 16 | memorized |
| Mode Default Messages Altered | x x ***** | x x x | |
| Note Number : True voice | 0 - 111 ***** | 0 - 111 | |
| Velocity Note ON Note OFF | o 9nH,v=1-127 x 9nH,v=0 | o v=1-127 *1 x | |
| After Key's Touch Ch's | x o | x o | *2 |
| Pitch Bender | o | o | |
| Control Change 0 - 120 | o | o | |
| Prog Change : True # | o 0 - 127 ***** | o 0 - 127 | |
| System Exclusive | o *3 | o *3 | Song data etc. |
| System : Song Pos : Song Sel Common : Tune | x x x | o x x | except REC mode |
| System :Clock Real Time :Commands | o *5 o *5 | o *4 o *5 | |
| Aux :Local ON/OFF :All Notes OFF Mes- :Active Sense sages:Reset | x x o x | x x x x | |
| Notes: *1 = receive if velocity switch is kbd. *2 = receive if after touch switch is on. *3 = transmit/receive if device No is not off. *4 = receive in MIDI sync mode. *5 = transmit/receive if MIDI control is not off. | | | |

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO o : Yes
 Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO x : No

| Function ... | Transmitted | Recognized | Remarks |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------|-----------------|
| Basic Default Channel Changed | 1 - 16 1 - 16 | 1 - 16 1 - 16 | memorized |
| Mode Default Messages Altered | x x ***** | x x x | |
| Note Number : True voice | 36 - 96 ***** | 36 - 96 | |
| Velocity Note ON Note OFF | o 9nH,v=1-127 x 9nH,v=0 | o v=1-127 *1 x | |
| After Key's Touch Ch's | x x | x x | |
| Pitch Bender | x | x | |
| Control Change | x | x | |
| Prog Change : True # | x ***** | x | |
| System Exclusive | o *2 | o *2 | Song data etc. |
| System : Song Pos : Song Sel Common : Tune | x x x | o x x | except REC mode |
| System :Clock Real Time :Commands | o *4 o *4 | o *3 o *4 | |
| Aux :Local ON/OFF :All Notes OFF Mes- :Active Sense sages:Reset | x x o x | x x x x | |
| Notes: *1 = receive if accent velocity is kbd. *2 = transmit/receive if device No is not off. *3 = receive in MIDI sync mode. *4 = transmit/receive if MIDI control is not off. | | | |

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO o : Yes
 Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO x : No