YAMAHA®

XG Format Specifications

ver. 1.26

Yamaha introduces a new tone-generator control format designed to meet the requirements of the coming multimedia environment. The new XG format — an extension of the existing GM format — provides broader capabilities suited to the demands of an increasingly sophisticated and diversified computerized environment. The new format enables a significantly higher level of musical expressiveness while at the same time ensuring the continued compatibility of existing sound data.

Yamaha shall use the XG format as the basis for forthcoming electronic instruments, music software, and tone-generating LSI circuitry, while working to maintain compatibility and scalability among Yamaha models.

Development Background

Tone generators are utilized in a wide range of devices, from musical instruments to communications devices and computer games. The first international MIDI standard arose from the need to enable consistent external control of tone generators on all device types, regardless of manufacturer or model. Because tone generator voice arrangements tended to vary considerably among manufacturers and models, however, different MIDI devices often produced different types of sound in response to identical MIDI instructions.

In 1991 the MIDI standard committee enacted additional specifications, referred to as the GM (General MIDI) standard, for the purpose of standardizing voice arrangements and improving MIDI uniformity. The GM standard significantly enhanced acoustics compatibility among complying devices, leading in turn to an expanding base of GM software applications. But the GM standard also has its limitations. It provides support for only 128 voices, whereas many users now perceive the need for a greater number of voices suited to a wider range of musical genres. Users have also indicated a desire for greater control over voice modifications and effects so as to enable a higher level of expressiveness.

The advent of the computer-based multimedia age has added yet a different perspective, bringing increased attention to both image and sound technologies. Developments in multimedia-related sound and music processing parallel recent advances in the area of image compression, and are pointing the way to the future of multimedia.

At present there are two fundamentally different approaches to the handling of sound and control data. One method is to digitally store sound data at the software side together with the control data, then send all of the data together to generate the playback. The second method is to have the software supply just control data to a tone generator on a computer or other such device. The tone generator processes the incoming data and generates the sound locally.

The first method offers highly realistic sound, but requires immense quantities of data and locks in a specific set of performance characteristics and voices. The second method requires far less data while allowing for entirely free variations in voices, tempos, and virtually all other performance characteristics. The second method is therefore ideal for interactive multimedia applications such as karaoke and repetitive computer-game sounds. MIDI-based applications are typical of this second type of approach. As multimedia technology advances, we face a pressing need to expand this approach to accomodate a larger number of voices and greater degree of expressive control. This is why Yamaha is pleased to propose the new XG format — the tone generator format for the 21st century.

Basic Concepts

The XG format maintains the universality and compatibility of the MIDI and GM standards while significantly increasing the range of expressiveness. It is designed to ensure data continuity, and to provide equipment manufacturers with considerable flexibility in designing machines that satisfy its requirements.

Specifically, the XG format does the following.
- Enables production of extremely expressive sound data
- Significantly expands available voice types and variations
- Supports future compatibility of sound data among musical instruments, computers, and other devices
- Ensures that data will remain fully usable well into the future
- Supports standardized handling of new types of effects-inclusive data (such as karaoke data)

The XG format is founded on the following three principles:
- Compatibility
- Scalability
- Expandability

1. Compatibility
Any XG machine, regardless of model or manufacturer, will provide faithful reproduction of any XG sound data. Because the XG format maintains upward compatibility with the GM format, XG machines will also provide correct reproduction of GM sound data.

2. Scalability
Although the XG format provides detailed and extensive specification of voice sets and voice changes, it does not require XG machines to support the full range of functions. Designers are free to develop a wide range of products to meet various cost and performance objectives. Each XG machine will replay XG data in accordance with the machine’s level of sophistication. If a model does not support a variation voice, it will automatically play the corresponding basic voice instead. If a model includes a graphic equalizer, it can take full advantage of graphic equalizer functions so as to control frequency characteristics to best suit the musical genre being played — from lively rock to soothing classical.

3. Expandability
The XG format remains open to enhancements and extensions that will allow it to remain in step with future product developments.

Additions to the GM format

The XG offers the following extensions to the GM format.

• Voices
The GM format supports 128 voices. The XG format provides for Bank Select messages that significantly expand the number of voices supported.

1. Voice Extension by Bank-Select LSB
Variations of basic GM voices are stored in banks. To select a variation, specify the desired bank by sending the appropriate Bank-Select LSB value. Each bank is associated with a specific type of variation, so that voices are easy to locate.

2. Bank-Select MSB adds an SFX bank
The Bank-Select LSB method is not useful for extension of distinctive SFX voices that have no meaningful variation. For this reason the XG format supports a full SFX bank of extension effects, which you can select by sending a Bank-Select MSB value of 40H. Bank-Select MSB 7Eh or 7Fh, in contrast, can be used to set any channel to rhythm-part play.

• Voice Modification
The XG format allows creation of extremely expressive control data that can darken or lighten voices, delay or accelerate sound start-up, or implement many other types of control. Most controls are issued by Control Change commands, although System Exclusive messages are also used.

• Effects
The XG format offers high-level effects support, enabling control of effects types, circuit operation, and internal parameter settings for both basic and elaborate effects. Devices equipped with graphic equalizers will be able to modify ambience and sound to suit the specific type of music being played.

• External Input
Whereas existing tone generators create sound in response to internal data only, the XG format provides for real-time participation by adding support for input of external audio signals. External signals can be processed by the mixer in the same way as internal tone-generator data. A model that supports this function would allow you, for example, to create karaoke data that can automatically set the microphone echo used for playback.

New MIDI messages not available under GM format

1. Control Change

    Bank Select
    Portamento Time
    Portamento
    Sostenuto
    Soft Pedal
    Harmonic Content
    Release Time
    Attack Time
    Brightness
    Portamento Control
    Effects Send Level 1 (Reverb)
    Effects Send Level 2 (Chorus)
    Effects Send Level 3 (Variation)
    NRPN Part Parameter Control
    All Sound Off

2. Channel Mode Messages

3. Polyphonic Aftertouch

4. System Exclusive Message

    Parameter Change
        System Parameters
        Effect Parameters
            Three categories of system effects are supported. One of these categories can be switched with insertion effects.
        Graphic EQ and multiple insertion effects are supported as options.
        Part Parameters
            Filter cutoff and AEG value can be controlled by offset.
        Display Parameters
        External Input Control Parameters
        Drum Setup Parameters
    Bulk Dump
    Parameter Request
    Dump Request

1. Key On / Key Off

```
Status:     9nH/8nH
```

If multipart parameter “Rcv NOTE MESSAGE” is OFF, the part ignores these messages.

2. Program Change

```
Status:     CnH
Default:    00H
```

If multipart parameter “Rcv PROGRAM CHANGE” is OFF, the part ignores this message.

Melody Voice
As indicated in XG Voice List. Voices can be added through use of Bank Select LSB. (Refer to description of Bank Select, below.)

Rhythm Voice
As indicated in XG Drum Map. Program Change message can be used to change the voice (drum kit). If the tone generator does not have a drum kit corresponding to the specified program number, it will ignore the message and continue to use the current drum kit.

Bank Select MSB/LSB should be set whenever this message is used, even when there's no need of changing the Bank.

3. Pitchbend

```
Status:     EnH
Default:    40H 00H
```

If multipart parameter “Rcv PITCH BEND” is OFF, the part ignores this message.

4. Control Change

```
Status:     BnH
```

If multipart parameter “Rcv CONTROL CHANGE” is OFF, the part will continue to accept Channel Mode messages but will ignore all other Control Change messages.

Bank Select MSB/LSB: 00H/20H

Cntrl#	Parameter	Data Range
0	Bank Select MSB	0:Normal 64:SFX voice 126:SFX kit 127:Drum
32	Bank Select LSB	0 to 127
		Default: 00 00H

If multipart parameter “Rcv BANK SELECT” is OFF, the part ignores this message.

The new bank selection does not become effective until receipt of the next Program Change message.

The Bank Select MSB selects melody voice, SFX voice, or rhythm kit. The MSB allows any channel to be designated for rhythm play.

Bank Select MSB values are as follows.

```
00H:         Melody voice
01H to 3FH:  not used
40H:         SFX voice
41H to 7DH:  not used
7EH:         SFX kit (SFX voices arranged over keyboard)
7FH:         Rhythm kit (Rhythm voices arranged over keyboard)
```

The Bank Select LSB selects from the extended melody voice set. (SFX kit and rhythm kit voices do not currently support Bank Select LSB extension sets.) Each bank is set for a specific type of variation, simplifying retrieval of the desired voice. Names of extensional voices, like basic voices, are defined (see Table 1). Other banks and voices may be added in the future.

Some models do not support all of the LSB-selectable extensional voices listed in Table 1. If support is included for one or more voices in an extensional bank, however, all the other program change numbers in that bank are filled with the corresponding voices of the Bank #0 (basic voices).

Note 1: Under default selection, Channel 10 plays rhythm voices, while other channels take Bank #0 melody voices. (Same as GM system - Level 1)

Note 2: Receipt of Bank Select MSB/LSB does not immediately change the voice. The channel stores the received Bank-Select MSB/LSB setting, but does not apply it until receipt of the next Program Change message.

Note 3: If the new Bank Select MSB is 00H (melody voice) but the tone generator does not support the melody voice corresponding to the last received Bank Select LSB, the channel reverts to the Bank Select LSB corresponding to its most recently played melody voice.

Note 4: If the new Bank Select MSB is 7FH (rhythm voice), the tone generator unconditionally uses LSB 00H. If the tone generator does not support a drum kit corresponding to the channel's most recently received Program Change, the channel will revert to the Program Change corresponding to its most recently played rhythm kit.

Note 5: If a Bank Select MSB value of 01H ~ 7EH (SFX voice, or unused MSB) is received and the tone generator does not have a voice corresponding to the last received LSB and Program Change, the tone generator will produce no sound for that channel regardless of subsequent key on messages.

(Commentary) Users employing the XG Format to generate music data should note the following general points.

• The discussion and examples provided above are intended to clarify operating specifications relevant to tone-generator manufacture. During general operation the MSB, LSB and Program Change should always be sent together, keeping intervals of at least 1/480 between them.

• For melody voice play : If the channel cannot play from the bank selected by the last LSB specification, it will revert to the most recent playable LSB specifications.

• For rhythm voice play : If the channel cannot play the kit selected by the last received Program Number, it will revert to the most recent playable Program Number.

Modulation: 01H

Cntrl#	Parameter	Data Range
1	Modulation	0 to 127 Default: 00H

If multipart parameter "Rcv MODULATION" is OFF, the part ignores this message.

Upon initialization this message applies to vibrato depth, but content can be changed by use of System Exclusive message.

Portamento Time: 05H

Cntrl#	Parameter	Data Range
5	Portamento Time	0 to 127 Default: 00H

Sets the pitch change speed used when Portamento is ON. Has no affect on portamento control. A value of 0 produces the shortest portamento time; value 127 selects the longest time.

Data Entry MSB/LSB: 06H/26H

Cntrl#	Parameter	Data Range
6	Data Entry MSB	0 to 127
38	Data Entry LSB	0 to 127

Main Volume: 07H

Cntrl#	Parameter	Data Range
7	Volume	0 to 127 Default: 64H

If multipart parameter “Rcv VOLUME” is OFF, the part ignores this message.

Use this message to balance the volume among the different parts.

Panpot: 0AH

Cntrl#	Parameter	Data Range
10	Panpot	0 to 127 Default: 40H

If multipart parameter “Rcv PAN” is OFF, the part ignores this message.

Produces relative variations in pan among different installments of the rhythm part.

Expression: 0BH

Cntrl#	Parameter	Data Range
11	Expression	0 to 127 Default: 7FH

If multipart parameter “Rcv EXPRESSION” is OFF, the part ignores this message.

This message is used to control intonation expression (diminuendo and crescendo) during play.

Sustain: 40H

Cntrl#	Parameter	Data Range
64	Sustain	0 to 127 (0-63:Off 64-127:On) Default: 00H

This message should be effective in a release portion of voices after Note Off. (After Dumper Effect)

If multipart parameter “Rcv SUSTAIN” is OFF, the part ignores this message.

Portamento: 41H

Cntrl#	Parameter	Data Range
65	Portamento	0 to 127 (0-63:Off 64-127:On) Default: 00H

If multipart parameter “Rcv PORTAMENTO” is OFF, the part ignores this message.

Sostenuto: 42H

Cntrl#	Parameter	Data Range
66	Sostenuto	0 to 127 (0-63:Off 64-127:On) Default: 00H

If multipart parameter “Rcv SOSTENUTO” is OFF, the part ignores this message.

Soft Pedal: 43H

Cntrl#	Parameter	Data Range
67	Soft Pedal	0 to 127 (0-63:Off 64-127:On) Default: 00H

If multipart parameter “Rcv SOFT PEDAL” is OFF, the part ignores this message.

Harmonic Content: 47H

Cntrl#	Parameter	Data Range
71	Harmonic Content	0 to 127 (0:-64 64:+0 127:+63) Default: 40H

Applies adjustment to the resonance value set by the voice. This parameter specifies relative change, with value 64 producing zero adjustment. As values get higher the sound becomes increasingly eccentric. Note that for some voices the effective parameter range is narrower than the legal parameter range.

Release Time: 48H

Cntrl#	Parameter	Data Range
72	Release Time	0 to 127 (0:-64 64:+0 127:+63) Default: 40H

Applies adjustment to the envelope release time set by the voice. This parameter specifies relative change, with value 64 producing zero adjustment. For some voices the effective parameter range is narrower than the legal parameter range.

Attack Time: 49H

Cntrl#	Parameter	Data Range
73	Attack Time	0 to 127 (0:-64 64:+0 127:+63) Default: 40H

Applies adjustment to the envelope attack time set by the voice. This parameter specifies relative change, with value 64 producing zero adjustment. For some voices the effective parameter range is narrower than the legal parameter range.

Brightness: 4AH

Cntrl#	Parameter	Data Range
74	Brightness	0 to 127 (0:-64 64:+0 127:+63) Default: 40H

Applies adjustment to the filter cutoff frequency set by the voice. This parameter specifies relative change, with value 64 producing zero adjustment. For some voices the effective parameter range is narrower than the legal parameter range.

Portamento Control: 54H

Cntrl#	Parameter	Data Range
84	Portamento Control	0 to 127

Portamento Time is always 0.

Effect Send Level 1 (reverb): 5BH

Cntrl#	Parameter	Data Range
91	Effect 1 Depth	0 to 127 Default: 28H

Adjusts the reverb send level.

Effect Send Level 3 (chorus): 5DH

Cntrl#	Parameter	Data Range
93	Effect 3 Depth	0 to 127 Default: 00H

Adjusts the chorus send level.

Effect Send Level 4 (variation): 5EH

Cntrl#	Parameter	Data Range
94	Effect-4 Depth	0 to 127 Default: 00H

Adjusts the variation effect send level. Effective only if “Variation Connection = System”.

Data Increment/Decrement: 60H/61H

Cntrl#	Parameter	Data Range
96	Increment	0 to 127
97	Decrement	0 to 127

The data byte would be ignored.

NRPN (Non-registered parameter number) LSB/MSB: 62H/63H

Cntrl#	Parameter	Data Range
98	NRPN LSB	0 to 127
99	NRPN MSB	0 to 127

If multipart parameter “Rcv NRPN” is OFF, the part ignores this message.

First send the NPRN MSB and LSB to select the control parameter, then set the value by Data Entry.

Once you have selected an NRPN on a given channel, the channel will apply subsequent Data Entry to the selected parameter. After making the necessary settings you should set RPN to Null to reduce the risk of operational errors.

The following NRPN values are supported.

NRPN MSB	NRPN LSB	Data Entry MSB	Parameter	Data Range
01H	08H	mmH	Vibrato Rate	mm:00H-40H-7FH(-64-0-+63)
01H	09H	mmH	Vibrato Depth	mm:00H-40H-7FH(-64-0-+63)
01H	0AH	mmH	Vibrato Delay	mm:00H-40H-7FH(-64-0-+63)
01H	20H	mmH	Filter Cutoff Frequency	mm:00H-40H-7FH(-64-0-+63)
01H	21H	mmH	Filter Resonance	mm:00H-40H-7FH(-64-0-+63)
01H	63H	mmH	EG Attack Time	mm:00H-40H-7FH(-64-0-+63)
01H	64H	mmH	EG Decay Time	mm:00H-40H-7FH(-64-0-+63)
01H	66H	mmH	EG Release	mm:00H-40H-7FH(-64-0-+63)
14H	rrH	mmH	Drum Filter Cutoff Frequency	mm:00H-40H-7FH(-64-0-+63) rr:drum instrument note number
15H	rrH	mmH	Drum Filter Resonance	mm:00H-40H-7FH(-64-0-+63) rr:drum instrument note number
16H	rrH	mmH	Drum EG Attack Rate	mm:00H-40H-7FH(-64-0-+63) rr:drum instrument note number
17H	rrH	mmH	Drum EG Decay Rate	mm:00H-40H-7FH(-64-0-+63) rr:drum instrument note number
18H	rrH	mmH	Drum Pitch Coarse	mm:00H-40H-7FH(-64-0-+63) rr:drum instrument note number
19H	rrH	mmH	Drum Pitch Fine	mm:00H-40H-7FH(-64-0-+63) rr:drum instrument note number
1AH	rrH	mmH	Drum Level	mm:00H-7FH(0-Max) rr:drum instrument note number
1CH	rrH	mmH	Drum Pan	mm:00H-40H-7FH(Random,L-Center-R) rr:drum instrument note number
1DH	rrH	mmH	Drum Reverb Send Level	mm:00H-7FH(0-Max) rr:drum instrument note number
1EH	rrH	mmH	Drum Chorus Send Level	mm:00H-7FH(0-Max) rr:drum instrument note number
1FH	rrH	mmH	Drum Variation Send Level	mm:00H-7FH(0-Max) rr:drum instrument note number

If multipart parameter “Rcv NRPN” is OFF, the part ignores this message.
Note that MSB values 14H through 1FH (drum parameters) are effective only for rhythm parts.

RPN (Registered parameter number) LSB/MSB: 64H/65H

Cntrl#	Parameter	Data Range
100	RPN LSB	0 to 127
101	RPN MSB	0 to 127 Default: 7F 7FH

If multipart parameter “Rcv RPN” is OFF, the part ignores this message.

The following parameters are supported.

RPN MSB	RPN LSB	Data Entry MSB	Parameter	Data Range
00H	00H	mmH	Pitchbend Sensitivity	mm: 00H-7FH (0-+127) Default: 02H

LSB value is ignored.

Minimum operational range is 00H00H-0CH00H (± octave).

RPN MSB	RPN LSB	Data Entry MSB	Parameter	Data Range
00H	01H	mmH	Fine Tune	mm: 00H-40H-7FH (-64-0-+63) Default: 40 00H
00H	02H	mmH	Coarse Tune	mm: 00H-40H-7FH (-64-0-+63) Default: 40 00H
7FH	7FH	Null		—-

5. Channel Mode Messages

All Sound Off: 78H

Cntrl#	Parameter	Data Range
120	--	0

Switches off sound from all parts.
Does not reset the settings established by Channel Messages.

Reset All Controllers: 79H

Cntrl#	Parameter	Data Range
121	--	0

Resets the following values to the default:
Pitchbend, Modulation, Expression, Sustain, Portamento, Sostenuto, Registered Parameter Number

Resets Portamento Control. setting. Specifically, clears condition in which source (Portamento Control Message) has been received but target (new Key On) has not.

All Notes Off: 7BH

Cntrl#	Parameter	Data Range
123	--	0

Switches off all currently “on” notes in all parts. Any notes being held by sustain or sostenuto continue to sound until sustain/sostenuto goes off.

OMNI Off: 7CH

Cntrl#	Parameter	Data Range
124	--	0

Same processing as for All Notes Off.

OMNI On: 7DH

Cntrl#	Parameter	Data Range
125	--	0

Same processing as for All Notes Off. (“OMNI ON” operation not supported.)

MONO: 7EH

Cntrl#	Parameter	Data Range
126	Mono	0 to 16

Generates “All Sound Off” operation. If the value of the third byte (mono number) is 0~16, the channel changes to Mode 4 (m=1).

POLY: 7FH

Cntrl#	Parameter	Data Range
127	--	0

Generates “All Sound Off” operation, and sets the channel to Mode 3.

6. Channel Aftertouch

```
Status:  DnH
```

The message is not effective under initial settings.

If multipart parameter “Rcv CHANNEL AFTERTOUCH” is Off, the part ignores this message.

7. Polyphonic Aftertouch

```
Status:  AnH
```

If multipart parameter “Rcv POLYPHONIC AFTERTOUCH” is Off, the part ignores this message.

It is not necessary for the effect to apply to all note numbers (0~127).

8. Exclusive Messages

XG System On

```
F0H,43H,1nH,4CH,00H,00H,7EH,00H,F7H

   11110000   F0 Exclusive status
   01000011   43 YAMAHA ID
   0001nnnn   1n Device Number
   01001100   4C Model ID
   00000000   00 Address High
   00000000   00 Address Mid
   01111110   7E Address Low
   00000000   00 Data
   11110111   F7 End of Exclusive
```

This message switches SOUND MODULE MODE to XG and initializes all the parameters to the XG default settings, with the exception of Master Tune value.

Master Tune can be modified either with System Exclusive messages or on the front panel of a tone generator. Two System Exclusive messages are available i.e. MIDI Master Tuning (F0, 43, 1n, 27, 30, 00, 00, mm, ll, cc, F7) and XG Parameter Change Master Tune (F0, 43, 1n, 4C, 00, 00, 00, dd, dd, dd, dd, F7). If the parameter is modified with F0, 43, 1n, 4C, 00, 00, 00, ... and then the XG System On comes, it will be reset to the value which has previously been modified with F0, 43, 1n, 27, ... or on the front panel e.g. :

Master Tune value	±0	Default
	+2	Modified either with F0, 43, 1n, 27, ... or on the front panel
	-4	Changed with F0, 43, 1n, 4C, 00, 00, 00 ...
	+2	Reset with XG System On, rather than to be initialized to ±0

On the other hand, the value set with F0, 43, 1n, 27, ... or on the front panel would not be reset to any earlier one with a reception of XG System On :

Master Tune value	±0	Default
	+2	Modified either with F0, 43, 1n, 27, ... , on the front panel, or with F0, 43, 1n, 4C, 00, 00, 00 ...
	-4	Changed either with F0, 43, 1n, 27, ... , or on the front panel
	-4	The value remains still with XG System On, rather than to be reset/initialized

With regard to the relation between the modification with F0, 43, 1n, 27, ... and the one on the front panel, the last executed one will take the priority.

The message requires approximately 50msec to execute, so sufficient time should be allowed before the next message is sent.

GM System On

```
F0H,7EH,7FH,09H,01H,F7H

   11110000   F0 Exclusive status
   01111110   7E Universal Non-realtime ID
   01111111   7F Device ID
   00001001   09 Sub ID1
   00000001   01 Sub ID2
   11110111   F7 End of Exclusive
```

Initializes all the parameters to the XG default settings, with the exception of Master Tune value.

As for the Master Tune, reception of this message should be implemented in the same way as the case with XG System On.

MIDI Master Volume

```
F0H,7FH,7FH,04H,01H,llH,mmH,F7H

   11110000   F0 Exclusive status
   01111111   7F Universal Realtime ID
   01111111   7F Device ID
   00000100   04 Sub ID1
   00000001   01 Sub ID2
   0lllllll   ll Master Volume LSB
   0mmmmmmm   mm Master Volume MSB
   11110111   F7 End of Exclusive
```

Changes volume of all channels. (“Universal System Exclusive”)

MIDI Master Tuning

```
F0H,43H,1nH,27H,30H,00H,00H,mmH,llH,ccH,F7H

   11110000   F0 Exclusive status
   01000011   43 YAMAHA ID
   0001nnnn   1n Device Number
   00100111   27 Model ID
   00110000   30 Sub ID2
   00000000   00
   00000000   00
   0mmmmmmm   mm Master Tune MSB
   0lllllll   ll Master Tune LSB
   0ccccccc   cc Don’t care
   11110111   F7 End of Exclusive
```

Changes tuning of all channels.

Parameter Change

```
11110000   F0 Exclusive status
01000011   43 YAMAHA ID
0001nnnn   1n Device Number
01001100   4C Model ID
0aaaaaaa   aa Address High
0aaaaaaa   aa Address Mid
0aaaaaaa   aa Address Low
0ddddddd   dd Data
   |  |
0ddddddd   dd Data
11110111   F7 End of Exclusive
```

Includes 2 or 4 bytes of data, depending on parameter size.

The following eight types of parameter change are provided.

1) System Data parameter change
2) Multi Effect Data parameter change
3) Multi EQ Data parameter change
4) Multi Part Data parameter change
5) Drums Setup Data parameter change
6) System Information
7) Display Data parameter change
8) AD Part Data parameter change

*6) System Information is sent in response to dump requests. Received parameter changes are ignored.

System Exclusive messages are not accepted if “Rcv System Exclusive” is OFF.

Bulk Dump

```
11110000   F0 Exclusive status
01000011   43 YAMAHA ID
0000nnnn   0n Device Number
01001100   4C Model ID
0bbbbbbb   bb Byte Count MSB
0bbbbbbb   bb Byte Count LSB
0aaaaaaa   aa Address High
0aaaaaaa   aa Address Mid
0aaaaaaa   aa Address Low
0ddddddd   dd Data
   |  |
0ddddddd   dd Data
0ccccccc   cc Checksum
11110111   F7 End of Exclusive
```

For information about “Address” and “Byte Count” fields, refer to Table 3.

Here the "Byte Count" refers to "Total Size" of Data shown on Table 3-n.
The "Address" in Bulk Dump / Dump Request refers to the address at the beginning of each block.
The "block" refers to a unit of data stream which is enclosed by "Total Size" on Table 3-n.

Checksum value is set such that the sum of Byte Count, Address, Data and Checksum has value zero in its seven least significant bits.

Parameter Request

```
11110000   F0 Exclusive status
01000011   43 YAMAHA ID
0011nnnn   3n Device Number
01001100   4C Model ID
0aaaaaaa   aa Address High
0aaaaaaa   aa Address Mid
0aaaaaaa   aa Address Low
11110111   F7 End of Exclusive
```

Dump Request

```
11110000   F0 Exclusive status
01000011   43 YAMAHA ID
0010nnnn   2n Device Number
01001100   4C Model ID
0aaaaaaa   aa Address High
0aaaaaaa   aa Address Mid
0aaaaaaa   aa Address Low
11110111   F7 End of Exclusive
```

Sending or receiving of dump request cannot be switched off except by setting “Exclusive” to OFF.

XG EFFECT MAP

XG EFFECT TYPE is defined as following tables :

REVERB TYPE

TYPE MSB		TYPE LSB				
DEC	HEX	00	01	02	...	08
000	0	NO EFFECT				
001	1	HALL1	HALL2			
002	2	ROOM1	ROOM2	ROOM3		
003	3	STAGE1	STAGE2			
004	4	PLATE				
005	5	NO EFFECT				
:	:	:				
015	F	NO EFFECT				
016	10	WHITE ROOM				
017	11	TUNNEL				
018	12	CANYON				
019	13	BASEMENT				
020	14	NO EFFECT				
:	:	:				
127	7F	NO EFFECT				

ESSENTIAL EFFECT (XG minimum)
OPTION EFFECT
NO EFFECT
same as BASIC EFFECT (LSB=0)

CHORUS TYPE

TYPE MSB		TYPE LSB				
DEC	HEX	00	01	02	...	08
000	0	NO EFFECT				
001	1	NO EFFECT				
:	:	:				
064	40	NO EFFECT				
065	41	CHORUS1	CHORUS2	CHORUS3		CHORUS4
066	42	CELESTE1	CELESTE2	CELESTE3		CELESTE4
067	43	FLANGER1	FLANGER2			FLANGER3
068	44	SYMPHONIC				
069	45	NO EFFECT				
:	:	:				
071	47	NO EFFECT				
072	48	PHASER				
073	49	NO EFFECT				
:	:	:				
127	7F	NO EFFECT				

ESSENTIAL EFFECT (XG minimum)
OPTION EFFECT
NO EFFECT
same as BASIC EFFECT (LSB=0)

VARIATION TYPE (0 ~ 63)

TYPE MSB		TYPE LSB				
DEC	HEX	00	01	02	...	08
000	0	NO EFFECT				
001	1	HALL1	HALL2			
002	2	ROOM1	ROOM2	ROOM3		
003	3	STAGE1	STAGE2			
004	4	PLATE				
005	5	DELAY L,C,R				
006	6	DELAY L,R				
007	7	ECHO				
008	8	CROSS DELAY				
009	9	ER1	ER2			
010	A	GATE REVERB				
011	B	REVERSE GATE				
012	C	NO EFFECT or THRU				
:	:	:				
019	13	NO EFFECT or THRU				
020	14	KARAOKE1	KARAOKE2	KARAOKE3		
021	15	NO EFFECT or THRU				
:	:	:				
063	3F	NO EFFECT or THRU				

ESSENTIAL EFFECT (XG minimum)
OPTION EFFECT
NO EFFECT(SYSTEM),THRU(INSERTION
same as BASIC EFFECT (LSB=0)

VARIATION TYPE (64 ~ 127)

TYPE MSB		TYPE LSB				
DEC	HEX	00	01	02	...	08
064	40	THRU				
065	41	CHORUS1	CHORUS2	CHORUS3		CHORUS4
066	42	CELESTE1	CELESTE2	CELESTE3		CELESTE4
067	43	FLANGER1	FLANGER2			FLANGER3
068	44	SYMPHONIC				
069	45	ROTARY SPEAKER				
070	46	TREMOLO				
071	47	AUTO PAN				
072	48	PHASER1				PHASER2
073	49	DISTORTION				
074	4A	OVER DRIVE				
075	4B	AMP SIMULATOR				
076	4C	3-BAND EQ				
077	4D	2-BAND EQ				
078	4E	AUTO WAH(LFO)				
079	4F	THRU				
080	50	PITCH CHANGE				
081	51	AURAL EXCITER®				
082	52	TOUCH WAH	TOUCH WAH+DIST			
083	53	COMPRESSOR				
084	54	NOISE GATE				
085	55	VOICE CANCEL				
086	56	THRU				
:	:	:				
127	7F	THRU				

ESSENTIAL EFFECT (XG minimum)
OPTION EFFECT
THRU
same as BASIC EFFECT (LSB=0)

DISTORTION(INSERTION EFFECT 1) TYPE

TYPE MSB		TYPE LSB				
DEC	HEX	00	01	02	...	08
000	0	THRU				
:	:	:				
063	3F	THRU				
064	40	THRU				
065	41	THRU				
:	:	:				
072	48	THRU				
073	49	DISTORTION				
074	4A	OVER DRIVE				
076	4C	3BAND EQ				
077	4D	THRU				
:	:	:				
127	7F	THRU				

THRU
same as BASIC EFFECT (LSB=0)

XG EFFECT PARAMETER LIST

BASIC EFFECT TYPE

No.	Parameter	Display	Value	See Table	Control
CHORUS1,2,3					
CELESTE1,2,3					
1	LFO Frequency	0.00 ~ 39.7Hz	0-127	table#1	
2	LFO PM Depth	0 ~ 127	0-127		
3	Feedback Level	-63 ~ +63	1-127		
4	Delay Offset	0 ~ 127	0-127	table#2	
5					
6	EQ Low Frequency	32Hz ~ 2.0kHz	4-40	table#3	
7	EQ Low Gain	-12 ~ +12dB	52-76		
8	EQ High Frequency	500Hz ~ 16.0kHz	28-58	table#3	
9	EQ High Gain	-12 ~ +12dB	52-76		
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127		√
11	EQ Mid Frequency	100Hz ~ 10.0kHz	14-54	table#3	
12	EQ Mid Gain	-12 ~ +12dB	52-76		
13	EQ Mid Width	1.0 ~ 12.0	10-120		
14	LFO AM Depth	0 ~ 127	0-127		
15	Input Mode	mono/stereo	0-1		
16					
FLANGER1,FLANGER2					
1	LFO Frequency	0.00 ~ 39.7Hz	0-127	table#1	
2	LFO Depth	0 ~ 127	0-127		
3	Feedback Level	-63 ~ +63	1-127		
4	Delay Offset	0 ~ 63	0-63	table#2	
5					
6	EQ Low Frequency	32Hz ~ 2.0kHz	4-40	table#3	
7	EQ Low Gain	-12 ~ +12dB	52-76		
8	EQ High Frequency	500Hz ~ 16.0kHz	28-58	table#3	
9	EQ High Gain	-12 ~ +12dB	52-76		
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127		√
11	EQ Mid Frequency	100Hz ~ 10.0kHz	14-54	table#3	
12	EQ Mid Gain	-12 ~ +12dB	52-76		
13	EQ Mid Width	1.0 ~ 12.0	10-120		
14	LFO Phase Difference	-180 ~ +180deg	4-124		
15	Input Mode	mono/stereo	0-1		
16					
SYMPHONIC					
1	LFO Frequency	0.00 ~ 39.7Hz	0-127	table#1	
2	LFO Depth	0 ~ 127	0-127		
3	Delay Offset	0 ~ 127	0-127	table#2	
4					
5					
6	EQ Low Frequency	32Hz ~ 2.0kHz	4-40	table#3	
7	EQ Low Gain	-12 ~ +12dB	52-76		
8	EQ High Frequency	500Hz ~ 16.0kHz	28-58	table#3	
9	EQ High Gain	-12 ~ +12dB	52-76		
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127		√
11	EQ Mid Frequency	100Hz ~ 10.0kHz	14-54	table#3	
12	EQ Mid Gain	-12 ~ +12dB	52-76		
13	EQ Mid Width	1.0 ~ 12.0	10-120		
14					
15					
16					
ROTARY SPEAKER					
1	LFO Frequency	0.00 ~ 39.7Hz	0-127	table#1	√
2	LFO Depth	0 ~ 127	0-127		
3					
4					
5					
6	EQ Low Frequency	32Hz ~ 2.0kHz	4-40	table#3	
7	EQ Low Gain	-12 ~ +12dB	52-76		
8	EQ High Frequency	500Hz ~ 16.0kHz	28-58	table#3	
9	EQ High Gain	-12 ~ +12dB	52-76		
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127		
11	EQ Mid Frequency	100Hz ~ 10.0kHz	14-54	table#3	
12	EQ Mid Gain	-12 ~ +12dB	52-76		
13	EQ Mid Width	1.0 ~ 12.0	10-120		
14					
15					
16					

No.	Parameter	Display	Value	See Table	Control
TREMOLO					
1	LFO Frequency	0.00 ~ 39.7Hz	0-127	table#1	√
2	AM Depth	0 ~ 127	0-127		
3	PM Depth	0 ~ 127	0-127		
4					
5					
6	EQ Low Frequency	32Hz ~ 2.0kHz	4-40	table#3	
7	EQ Low Gain	-12 ~ +12dB	52-76		
8	EQ High Frequency	500Hz ~ 16.0kHz	28-58	table#3	
9	EQ High Gain	-12 ~ +12dB	52-76		
10					
11	EQ Mid Frequency	100Hz ~ 10.0kHz	14-54	table#3	
12	EQ Mid Gain	-12 ~ +12dB	52-76		
13	EQ Mid Width	1.0 ~ 12.0	10-120		
14	LFO Phase Difference	-180 ~ +180deg	4-124		
15	Input Mode	mono/stereo	0-1		
16					
AUTO PAN					
1	LFO Frequency	0.00 ~ 39.7Hz	0-127	table#1	√
2	L/R Depth	0 ~ 127	0-127		
3	F/R Depth	0 ~ 127	0-127		
4	PAN Direction	L<->R,L->R,L<-R,Lturn,Rturn,L/R	0-5		
5					
6	EQ Low Frequency	32Hz ~ 2.0kHz	4-40	table#3	
7	EQ Low Gain	-12 ~ +12dB	52-76		
8	EQ High Frequency	500Hz ~ 16.0kHz	28-58	table#3	
9	EQ High Gain	-12 ~ +12dB	52-76		
10					
11	EQ Mid Frequency	100Hz ~ 10.0kHz	14-54	table#3	
12	EQ Mid Gain	-12 ~ +12dB	52-76		
13	EQ Mid Width	1.0 ~ 12.0	10-120		
14					
15					
16					
PHASER1(íPëä)					
1	LFO Frequency	0.00 ~ 39.7Hz	0-127	table#1	
2	LFO Depth	0 ~ 127	0-127		
3	Phase Shift Offset	0 ~ 127	0-127		
4	Feedback Level	-63 ~ +63	1-127		
5					
6	EQ Low Frequency	32Hz ~ 2.0kHz	4-40	table#3	
7	EQ Low Gain	-12 ~ +12dB	52-76		
8	EQ High Frequency	500Hz ~ 16.0kHz	28-58	table#3	
9	EQ High Gain	-12 ~ +12dB	52-76		
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127		√
11	Stage	1 ~ 10	1-10		
12	Diffusion	Mono/Stereo	0-1		
13	LFO Phase Difference	-180 ~ +180deg	4-124		
14					
15					
16					
DISTORTION					
OVERDRIVE					
1	Drive	0 ~ 127	0-127		√
2	EQ Low Frequency	32Hz ~ 2.0kHz	4-40	table#3	
3	EQ Low Gain	-12 ~ +12dB	52-76		
4	LPF Cutoff	1.0k ~ Thru	34-60	table#3	
5	Output Level	0 ~ 127	0-127		
6					
7	EQ Mid Frequency	100Hz ~ 10.0kHz	14-54	table#3	
8	EQ Mid Gain	-12 ~ +12dB	52-76		
9	EQ Mid Width	1.0 ~ 12.0	10-120		
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127		
11	Edge(Clip Curve)	0 ~ 127	0-127		
12					
13					
14					
15					
16					
GUITAR AMP SIMULATOR					
1	Drive	0 ~ 127	0-127		√
2	AMP Type	Off,Stack,Combo,Tube	0-3		

No.	Parameter	Display	Value	See Table	Control
3	LPF Cutoff	1.0k ~ Thru	34-60	table#3	
4	Output Level	0 ~ 127	0-127		
5					
6					
7					
8					
9					
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127		
11	Edge(Clip Curve)	0 ~ 127	0-127		
12					
13					
14					
15					
16					

MONO EQ(3BAND)

1	EQ Low Gain	-12 ~ +12dB	52-76		
2	EQ Mid Frequency	100Hz ~ 10.0kHz	14-54	table#3	
3	EQ Mid Gain	-12 ~ +12dB	52-76		
4	EQ Mid Width	1.0 ~ 12.0	10-120		
5	EQ High Gain	-12 ~ +12dB	52-76		
6	EQ Low Frequency	32Hz ~ 2.0kHz	4-40	table#3	
7	EQ High Frequency	500Hz ~ 16.0kHz	28-58	table#3	
8					
9					
10					
11					
12					
13					
14					
15					
16					

STEREO EQ(2BAND)

1	EQ Low Frequency	32Hz ~ 2.0kHz	4-40	table#3	
2	EQ Low Gain	-12 ~ +12dB	52-76		
3	EQ High Frequency	500Hz ~ 16.0kHz	28-58	table#3	
4	EQ High Gain	-12 ~ +12dB	52-76		
5					
6					
7					
8					
9					
10					
11	EQ Mid Frequency	100Hz ~ 10.0kHz	14-54	table#3	
12	EQ Mid Gain	-12 ~ +12dB	52-76		
13	EQ Mid Width	1.0 ~ 12.0	10-120		
14					
15					
16					

AUTO WAH

1	LFO Frequency	0.00 ~ 39.7Hz	0-127	table#1	
2	LFO Depth	0 ~ 127	0-127		
3	Cutoff Frequency Offset	0 ~ 127	0-127		√
4	Resonance	1.0 ~ 12.0	10-120		
5					
6	EQ Low Frequency	32Hz ~ 2.0kHz	4-40	table#3	
7	EQ Low Gain	-12 ~ +12dB	52-76		
8	EQ High Frequency	500Hz ~ 16.0kHz	28-58	table#3	
9	EQ High Gain	-12 ~ +12dB	52-76		
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127		
11	Drive	0 ~ 127	0-127		
12					
13					
14					
15					
16					

HALL1,HALL2
ROOM1,ROOM2,ROOM3
STAGE1,STAGE2
PLATE

1	Reverb Time	0.3 ~ 30.0s	0-69	table#4	
2	Diffusion	0 ~ 10	0-10		
3	Initial Delay	0 ~ 63	0-63	table#5	
4	HPF Cutoff	Thru ~ 8.0kHz	0-52	table#3	

No.	Parameter	Display	Value	See Table	Control
5	LPF Cutoff	1.0k ~ Thru	34-60	table#3	
6					
7					
8					
9					
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127		√
11	Rev Delay	0 ~ 63	0-63	table#5	
12	Density	0 ~ 4	0-4		
13	Rev/Er Balance	R<E63 ~ R=E ~ R63>E	1-127		
14	High Damp	0.1 ~ 1.0	1-10		
15	Feedback Level	-63 ~ +63	1-127		
16					

DELAY L,C,R

1	Lch Delay	0.1 ~ 715.0ms	1-7150		
2	Rch Delay	0.1 ~ 715.0ms	1-7150		
3	Cch Delay	0.1 ~ 715.0ms	1-7150		
4	Feedback Delay	0.1 ~ 715.0ms	1-7150		
5	Feedback Level	-63 ~ +63	1-127		
6	Cch Level	0 ~ 127	0-127		
7	High Damp	0.1 ~ 1.0	1-10		
8					
9					
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127		√
11	HPF Cutoff	Thru ~ 8.0kHz	0-52	table#3	
12	LPF Cutoff	1.0k ~ Thru	34-60	table#3	
13	EQ Low Frequency	50Hz ~ 2.0kHz	8-40	table#3	
14	EQ Low Gain	-12 ~ +12dB	52-76		
15	EQ High Frequency	500Hz ~ 16.0kHz	28-58	table#3	
16	EQ High Gain	-12 ~+12dB	52-76		

DELAY L,R

1	Lch Delay	0.1 ~ 715.0ms	1-7150		
2	Rch Delay	0.1 ~ 715.0ms	1-7150		
3	Feedback Delay 1	0.1 ~ 715.0ms	1-7150		
4	Feedback Delay 2	0.1 ~ 715.0ms	1-7150		
5	Feedback Level	-63 ~ +63	1-127		
6	High Damp	0.1 ~ 1.0	1-10		
7					
8					
9					
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127		√
11	HPF Cutoff	Thru ~ 8.0kHz	0-52	table#3	
12	LPF Cutoff	1.0k ~ Thru	34-60	table#3	
13	EQ Low Frequency	50Hz ~ 2.0kHz	8-40	table#3	
14	EQ Low Gain	-12 ~ +12dB	52-76		
15	EQ High Frequency	500Hz ~ 16.0kHz	28-58	table#3	
16	EQ High Gain	-12 ~ +12dB	52-76		

ECHO

1	Lch Delay1	0.1 ~ 355.0ms	1-3550		
2	Lch Feedback Level	-63 ~ +63	1-127		
3	Rch Delay1	0.1 ~ 355.0ms	1-3550		
4	Rch Feedback Level	-63 ~+63	1-127		
5	High Damp	0.1 ~ 1.0	1-10		
6	Lch Delay2	0.1 ~355.0ms	1-3550		
7	Rch Delay2	0.1 ~ 355.0ms	1-3550		
8	Delay2 Level	0 ~ 127	0-127		
9					
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127		√
11	HPF Cutoff	Thru ~ 8.0kHz	0-52	table#3	
12	LPF Cutoff	1.0k ~ Thru	34-60	table#3	
13	EQ Low Frequency	50Hz ~ 2.0kHz	8-40	table#3	
14	EQ Low Gain	-12 ~ +12dB	52-76		
15	EQ High Frequency	500Hz ~ 16.0kHz	28-58	table#3	
16	EQ High Gain	-12 ~ +12dB	52-76		

CROSS DELAY

1	L->R Delay	0.1 ~ 355.0ms	1-3550		
2	R->L Delay	0.1 ~ 355.0ms	1-3550		
3	Feedback Level	-63 ~ +63	1-127		
4	Input Select	L,R,L&R	0-2		
5	High Damp	0.1 ~ 1.0	1-10		
6					
7					
8					
9					

No.	Parameter	Display	Value	See Table	Control
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127		√
11	HPF Cutoff	Thru ~ 8.0kHz	0-52	table#3	
12	LPF Cutoff	1.0k ~ Thru	34-60	table#3	
13	EQ Low Frequency	50Hz ~ 2.0kHz	8-40	table#3	
14	EQ Low Gain	-12 ~ +12dB	52-76		
15	EQ High Frequency	500Hz ~ 16.0kHz	28-58	table#3	
16	EQ High Gain	-12 ~ +12dB	52-76		
EARLY REF1,EARLY REF2					
1	Type	S-H, L-H, Rdm, Rvs, Plt, Spr	0-5		
2	Room Size	0.1 ~ 7.0	0-44	table#6	
3	Diffusion	0 ~ 10	0-10		
4	Initial Delay	0 ~ 63	0-63	table#5	
5	Feedback Level	-63 ~ +63	1-127		
6	HPF Cutoff	Thru ~ 8.0kHz	0-52		
7	LPF Cutoff	1.0k ~ Thru	34-60		
8					
9					
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127		√
11	Liveness	0 ~ 10	0-10		
12	Density	0 ~ 3	0-3		
13	High Damp	0.1 ~ 1.0	1-10		
14					
15					
16					
GATE REVERB REVERSE GATE					
1	Type	TypeA,TypeB	0-1		
2	Room Size	0.1 ~ 7.0	0-44	table#6	
3	Diffusion	0 ~ 10	0-10		
4	Initial Delay	0 ~ 63	0-63	table#5	
5	Feedback Level	-63 ~ +63	1-127		
6	HPF Cutoff	Thru ~ 8.0kHz	0-52	table#3	
7	LPF Cutoff	1.0k ~ Thru	34-60	table#3	
8					
9					
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127		√
11	Liveness	0 ~ 10	0-10		
12	Density	0 ~ 3	0-3		
13	High Damp	0.1 ~ 1.0	1-10		
14					
15					
16					

OPTION EFFECT TYPE

PITCH CHANGE					
1	Pitch	-24 ~ +24	40-88		
2	Initial Delay	0 ~ 127	0-127	table#7	
3	Fine 1	-50 ~ +50	14-114		
4	Fine 2	-50 ~ +50	14-114		
5	Feedback Gain	-63 ~ +63%	1-127		
6					
7					
8					
9					
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127		√
11	Pan 1	L63 ~ R63	1-127		
12	Output Level 1	0 ~ 127	0-127		
13	Pan 2	L63 ~ R63	1-127		
14	Output Level 2	0 ~ 127	0-127		
15					
16					
AURAL EXICETER®					
1	HPF cutoff	500Hz ~ 16.0kHz	28-58		
2	Drive	0 ~ 127	0-127		
3	Mix Level	0 ~ 127	0-127		
4					
5					
6					
7					
8					
9					

No.	Parameter	Display	Value	See Table	Control
10					
11					
12					
13					
14					
15					
16					
TOUCH WAH,WAH+DIST					
1	Sensitivity	0 ~ 127	0-127		
2	Cutoff Frequency Offset	0 ~ 127	0-127		√
3	Resonance	1.0 ~ 12.0	10-120		
4					
5					
6	EQ Low Frequency	32Hz ~ 2.0kHz	4-40	table#3	
7	EQ Low Gain	-12 ~ +12dB	52-76		
8	EQ High Frequency	500Hz ~ 16.0kHz	28-58	table#3	
9	EQ High Gain	-12 ~ +12dB	52-76		
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127		
11	Drive	0 ~ 127	0-127		
12					
13					
14					
15					
16					
COMPRESSOR					
1	Attack	1 ~ 40ms	0-19	table#8	
2	Release	10 ~ 680ms	0-15	table#9	
3	Threshold	-48 ~ -6dB	79-121		
4	Ratio	1.0 ~ 20.0	0-7	table#10	
5	Output Level	0 ~ 127	0-127		
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
NOISE GATE					
1	Attack	1 ~ 40ms	0-19	table#8	
2	Release	10 ~ 680ms	0-15	table#9	
3	Threshold	-72 ~ -30dB	55-97		
4	Output Level	0 ~ 127	0-127		
5					
6					
7					
8					
9					
10					√
11	Ratio	1.0 ~ 20.0	0-7	table#10	
12					
13					
14					
15					
16					
WHITE ROOM					
TUNNEL					
CANYON					
BASEMENT					
1	Reverb Time	0.3 ~ 30.0s	0-69	table#4	
2	Diffusion	0 ~ 10	0-10		
3	Initial Delay	0 ~ 63	0-63	table#5	
4	HPF Cutoff	Thru ~ 8.0kHz	0-52	table#3	
5	LPF Cutoff	1.0k ~ Thru	34-60	table#3	
6	Width	0.5 ~ 10.2m	0-37	table#11	
7	Heigt	0.5 ~ 20.2m	0-73	table#11	
8	Depth	0.5 ~ 30.2m	0-104	table#11	
9	Wall Vary	0 ~ 30	0-30		
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127		√

No.	Parameter	Display	Value	See Table	Control
11	Rev Delay	0 ~ 63	0-63	table#5	
12	Density	0 ~ 4	0-4		
13	Rev/Er Balance	R<E63 ~ R=E ~ R63>E	1-127		
14	High Damp	0.1 ~ 1.0	1-10		
15	Feedback Level	-63 ~ +63	1-127		
16					

KARAOKE1,2,3

1	Delay Time	0 ~ 127	0-127	table#7	
2	Feedback Level	-63 ~ +63	1-127		
3	HPF Cutoff	Thru ~ 8.0kHz	0-52		
4	LPF Cutoff	1.0k ~ Thru	34-60		
5					
6					
7					
8					
9					
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127		√
11					
12					
13					
14					
15					
16					

VOICE CANCEL

1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11	Low Adjust	0 ~ 26	0-26		
12	High Adjust	0 ~ 26	0-26		
13					
14					
15					
16					

[note]

1. DRY/WET receipt
   - When Variation Connection is set to SYS
     The tone generator receives DRY/WET and data value is over written, but it does not affect sound and remains WET = 100% inside the effect block.
   - When Variation Connection is set to INS
     The tone generator receives DRY/WET and it affects sound.

2. Variation Connection switching
   - INS >> SYS
     Sound from Variation block is set WET 100% but DRY/WET value is kept unchanged i.e. won't be set as DRY/WET = D < W63 = 127.
   - SYS >> INS
     DRY/WET value remains unchanged - not initialized - and sound from Variation block reflects current DRY/WET balance

3.AURAL EXCITER ®

Aural Exciter ® is registered trademark of APHEX SYSTEM, LTD.
Lisencing from APHEX SYSTEM, LTD. is needed in an application of this effect program.

XG EFFECT PARAMETER TABLE

table#1

LFO Frequency

Data	Value	Data	Value
0	0.00	64	2.69
1	0.08	65	2.77
2	0.08	66	2.86
3	0.16	67	2.94
4	0.16	68	3.02
5	0.25	69	3.11
6	0.25	70	3.19
7	0.33	71	3.28
8	0.33	72	3.36
9	0.42	73	3.44
10	0.42	74	3.53
11	0.50	75	3.61
12	0.50	76	3.70
13	0.58	77	3.86
14	0.58	78	4.03
15	0.67	79	4.20
16	0.67	80	4.37
17	0.75	81	4.54
18	0.75	82	4.71
19	0.84	83	4.87
20	0.84	84	5.04
21	0.92	85	5.21
22	0.92	86	5.38
23	1.00	87	5.55
24	1.00	88	5.72
25	1.09	89	6.05
26	1.09	90	6.39
27	1.17	91	6.72
28	1.17	92	7.06
29	1.26	93	7.40
30	1.26	94	7.73
31	1.34	95	8.07
32	1.34	96	8.41
33	1.43	97	8.74
34	1.43	98	9.08
35	1.51	99	9.42
36	1.51	100	9.75
37	1.59	101	10.0
38	1.59	102	10.7
39	1.68	103	11.4
40	1.68	104	12.1
41	1.76	105	12.7
42	1.76	106	13.4
43	1.85	107	14.1
44	1.85	108	14.8
45	1.93	109	15.4
46	1.93	110	16.1
47	2.01	111	16.8
48	2.01	112	17.4
49	2.10	113	18.1
50	2.10	114	19.5
51	2.18	115	20.8
52	2.18	116	22.2
53	2.27	117	23.5
54	2.27	118	24.8
55	2.35	119	26.2
56	2.35	120	27.5
57	2.43	121	28.9
58	2.43	122	30.2
59	2.52	123	31.6
60	2.52	124	32.9
61	2.60	125	34.3
62	2.60	126	37.0
63	2.69	127	39.7

table#2

Modulation Delay Offset

Data	Value	Data	Value
0	0.0	64	6.4
1	0.1	65	6.5
2	0.2	66	6.6
3	0.3	67	6.7
4	0.4	68	6.8
5	0.5	69	6.9
6	0.6	70	7.0
7	0.7	71	7.1
8	0.8	72	7.2
9	0.9	73	7.3
10	1.0	74	7.4
11	1.1	75	7.5
12	1.2	76	7.6
13	1.3	77	7.7
14	1.4	78	7.8
15	1.5	79	7.9
16	1.6	80	8.0
17	1.7	81	8.1
18	1.8	82	8.2
19	1.9	83	8.3
20	2.0	84	8.4
21	2.1	85	8.5
22	2.2	86	8.6
23	2.3	87	8.7
24	2.4	88	8.8
25	2.5	89	8.9
26	2.6	90	9.0
27	2.7	91	9.1
28	2.8	92	9.2
29	2.9	93	9.3
30	3.0	94	9.4
31	3.1	95	9.5
32	3.2	96	9.6
33	3.3	97	9.7
34	3.4	98	9.8
35	3.5	99	9.9
36	3.6	100	10.0
37	3.7	101	11.1
38	3.8	102	12.2
39	3.9	103	13.3
40	4.0	104	14.4
41	4.1	105	15.5
42	4.2	106	17.1
43	4.3	107	18.6
44	4.4	108	20.2
45	4.5	109	21.8
46	4.6	110	23.3
47	4.7	111	24.9
48	4.8	112	26.5
49	4.9	113	28.0
50	5.0	114	29.6
51	5.1	115	31.2
52	5.2	116	32.8
53	5.3	117	34.3
54	5.4	118	35.9
55	5.5	119	37.5
56	5.6	120	39.0
57	5.7	121	40.6
58	5.8	122	42.2
59	5.9	123	43.7
60	6.0	124	45.3
61	6.1	125	46.9
62	6.2	126	48.4
63	6.3	127	50.0

table#3

EQ Frequency

Data	Value
0	THRU(20)
1	22
2	25
3	28
4	32
5	36
6	40
7	45
8	50
9	56
10	63
11	70
12	80
13	90
14	100
15	110
16	125
17	140
18	160
19	180
20	200
21	225
22	250
23	280
24	315
25	355
26	400
27	450
28	500
29	560
30	630
31	700
32	800
33	900
34	1.0k
35	1.1k
36	1.2k
37	1.4k
38	1.6k
39	1.8k
40	2.0k
41	2.2k
42	2.5k
43	2.8k
44	3.2k
45	3.6k
46	4.0k
47	4.5k
48	5.0k
49	5.6k
50	6.3k
51	7.0k
52	8.0k
53	9.0k
54	10.0k
55	11.0k
56	12.0k
57	14.0k
58	16.0k
59	18.0k
60	THRU(20.0k)

table#4

Reverb time

Data	Value	Data	Value
0	0.3	64	17.0
1	0.4	65	18.0
2	0.5	66	19.0
3	0.6	67	20.0
4	0.7	68	25.0
5	0.8	69	30.0
6	0.9		
7	1.0		
8	1.1		
9	1.2		
10	1.3		
11	1.4		
12	1.5		
13	1.6		
14	1.7		
15	1.8		
16	1.9		
17	2.0		
18	2.1		
19	2.2		
20	2.3		
21	2.4		
22	2.5		
23	2.6		
24	2.7		
25	2.8		
26	2.9		
27	3.0		
28	3.1		
29	3.2		
30	3.3		
31	3.4		
32	3.5		
33	3.6		
34	3.7		
35	3.8		
36	3.9		
37	4.0		
38	4.1		
39	4.2		
40	4.3		
41	4.4		
42	4.5		
43	4.6		
44	4.7		
45	4.8		
46	4.9		
47	5.0		
48	5.5		
49	6.0		
50	6.5		
51	7.0		
52	7.5		
53	8.0		
54	8.5		
55	9.0		
56	9.5		
57	10.0		
58	11.0		
59	12.0		
60	13.0		
61	14.0		
62	15.0		
63	16.0		

table#5

Delay Time(200.0ms)

Data	Value	Data	Value
0	0.1	64	100.8
1	1.7	65	102.4
2	3.2	66	104.0
3	4.8	67	105.6
4	6.4	68	107.1
5	8.0	69	108.7
6	9.5	70	110.3
7	11.1	71	111.9
8	12.7	72	113.4
9	14.3	73	115.0
10	15.8	74	116.6
11	17.4	75	118.2
12	19.0	76	119.7
13	20.6	77	121.3
14	22.1	78	122.9
15	23.7	79	124.4
16	25.3	80	126.0
17	26.9	81	127.6
18	28.4	82	129.2
19	30.0	83	130.7
20	31.6	84	132.3
21	33.2	85	133.9
22	34.7	86	135.5
23	36.3	87	137.0
24	37.9	88	138.6
25	39.5	89	140.2
26	41.0	90	141.8
27	42.6	91	143.3
28	44.2	92	144.9
29	45.7	93	146.5
30	47.3	94	148.1
31	48.9	95	149.6
32	50.5	96	151.2
33	52.0	97	152.8
34	53.6	98	154.4
35	55.2	99	155.9
36	56.8	100	157.5
37	58.3	101	159.1
38	59.9	102	160.6
39	61.5	103	162.2
40	63.1	104	163.8
41	64.6	105	165.4
42	66.2	106	166.9
43	67.8	107	168.5
44	69.4	108	170.1
45	70.9	109	171.7
46	72.5	110	173.2
47	74.1	111	174.8
48	75.7	112	176.4
49	77.2	113	178.0
50	78.8	114	179.5
51	80.4	115	181.1
52	81.9	116	182.7
53	83.5	117	184.3
54	85.1	118	185.8
55	86.7	119	187.4
56	88.2	120	189.0
57	89.8	121	190.6
58	91.4	122	192.1
59	93.0	123	193.7
60	94.5	124	195.3
61	96.1	125	196.9
62	97.7	126	198.4
63	99.3	127	200.0

table#6

Room Size

Data	Value
0	0.1
1	0.3
2	0.4
3	0.6
4	0.7
5	0.9
6	1.0
7	1.2
8	1.4
9	1.5
10	1.7
11	1.8
12	2.0
13	2.1
14	2.3
15	2.5
16	2.6
17	2.8
18	2.9
19	3.1
20	3.2
21	3.4
22	3.5
23	3.7
24	3.9
25	4.0
26	4.2
27	4.3
28	4.5
29	4.6
30	4.8
31	5.0
32	5.1
33	5.3
34	5.4
35	5.6
36	5.7
37	5.9
38	6.1
39	6.2
40	6.4
41	6.5
42	6.7
43	6.8
44	7.0

table#7

Delay Time(400.0ms)

Data	Value	Data	Value
0	0.1	64	201.6
1	3.2	65	204.8
2	6.4	66	207.9
3	9.5	67	211.1
4	12.7	68	214.2
5	15.8	69	217.4
6	19.0	70	220.5
7	22.1	71	223.7
8	25.3	72	226.8
9	28.4	73	230.0
10	31.6	74	233.1
11	34.7	75	236.3
12	37.9	76	239.4
13	41.0	77	242.6
14	44.2	78	245.7
15	47.3	79	248.9
16	50.5	80	252.0
17	53.6	81	255.2
18	56.8	82	258.3
19	59.9	83	261.5
20	63.1	84	264.6
21	66.2	85	267.7
22	69.4	86	270.9
23	72.5	87	274.0
24	75.7	88	277.2
25	78.8	89	280.3
26	82.0	90	283.5
27	85.1	91	286.6
28	88.3	92	289.8
29	91.4	93	292.9
30	94.6	94	296.1
31	97.7	95	299.2
32	100.9	96	302.4
33	104.0	97	305.5
34	107.2	98	308.7
35	110.3	99	311.8
36	113.5	100	315.0
37	116.6	101	318.1
38	119.8	102	321.3
39	122.9	103	324.4
40	126.1	104	327.6
41	129.2	105	330.7
42	132.4	106	333.9
43	135.5	107	337.0
44	138.6	108	340.2
45	141.8	109	343.3
46	144.9	110	346.5
47	148.1	111	349.6
48	151.2	112	352.8
49	154.4	113	355.9
50	157.5	114	359.1
51	160.7	115	362.2
52	163.8	116	365.4
53	167.0	117	368.5
54	170.1	118	371.7
55	173.3	119	374.8
56	176.4	120	378.0
57	179.6	121	381.1
58	182.7	122	384.3
59	185.9	123	387.4
60	189.0	124	390.6
61	192.2	125	393.7
62	195.3	126	396.9
63	198.5	127	400.0

table#8

Compressor Attack Time

Data	Value
0	1
1	2
2	3
3	4
4	5
5	6
6	7
7	8
8	9
9	10
10	12
11	14
12	16
13	18
14	20
15	23
16	26
17	30
18	35
19	40

table#9

Compressor Release Time

Data	Value
0	10
1	15
2	25
3	35
4	45
5	55
6	65
7	75
8	85
9	100
10	115
11	140
12	170
13	230
14	340
15	680

table#10

Compressor Ratio

Data	Value
0	1.0
1	1.5
2	2.0
3	3.0
4	5.0
5	7.0
6	10.0
7	20.0

table#11

Reverb Width;Depth;Height

Data	Value	Data	Value
0	0.5	64	17.6
1	0.8	65	17.9
2	1.0	66	18.2
3	1.3	67	18.5
4	1.5	68	18.8
5	1.8	69	19.1
6	2.0	70	19.4
7	2.3	71	19.7
8	2.6	72	20.0
9	2.8	73	20.2
10	3.1	74	20.5
11	3.3	75	20.8
12	3.6	76	21.1
13	3.9	77	21.4
14	4.1	78	21.7
15	4.4	79	22.0
16	4.6	80	22.4
17	4.9	81	22.7
18	5.2	82	23.0
19	5.4	83	23.3
20	5.7	84	23.6
21	5.9	85	23.9
22	6.2	86	24.2
23	6.5	87	24.5
24	6.7	88	24.9
25	7.0	89	25.2
26	7.2	90	25.5
27	7.5	91	25.8
28	7.8	92	26.1
29	8.0	93	26.5
30	8.3	94	26.8
31	8.6	95	27.1
32	8.8	96	27.5
33	9.1	97	27.8
34	9.4	98	28.1
35	9.6	99	28.5
36	9.9	100	28.8
37	10.2	101	29.2
38	10.4	102	29.5
39	10.7	103	29.9
40	11.0	104	30.2
41	11.2		
42	11.5		
43	11.8		
44	12.1		
45	12.3		
46	12.6		
47	12.9		
48	13.1		
49	13.4		
50	13.7		
51	14.0		
52	14.2		
53	14.5		
54	14.8		
55	15.1		
56	15.4		
57	15.6		
58	15.9		
59	16.2		
60	16.5		
61	16.8		
62	17.1		
63	17.3		

XG EFFECT DEFAULT DATA

XG RESET(XG on) DEFAULT DATA

BLOCK	TYPE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIST	DISTORTION	40	20	72	53	64	0	43	74	10	127	0	0	0	0	0	0

REVERB BLOCK

TYPE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NOEFFECT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HALL1	18	10	8	13	49	0	0	0	0	40	0	4	50	8	64	0
HALL2	25	10	28	6	46	0	0	0	0	40	13	3	74	7	64	0
ROOM1	5	10	16	4	49	0	0	0	0	40	5	3	64	8	64	0
ROOM2	12	10	5	4	38	0	0	0	0	40	0	4	50	8	64	0
ROOM3	9	10	47	5	36	0	0	0	0	40	0	4	60	8	64	0
STAGE1	19	10	16	7	54	0	0	0	0	40	0	3	64	6	64	0
STAGE2	11	10	16	7	51	0	0	0	0	40	2	2	64	6	64	0
PLATE	25	10	6	8	49	0	0	0	0	40	2	3	64	5	64	0
WHITEROOM	9	5	11	0	46	30	50	70	7	40	34	4	64	7	64	0
TUNNEL	48	6	19	0	44	33	52	70	16	40	20	4	64	7	64	0
CANYON	59	6	63	0	45	34	62	91	13	40	25	4	64	4	64	0
BASEMENT	3	6	3	0	34	26	29	59	15	40	32	4	64	8	64	0

CHORUS BLOCK

TYPE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NOEFFECT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CHORUS1	6	54	77	106	0	28	64	46	64	64	46	64	10	0	0	0
CHORUS2	8	63	64	30	0	28	62	42	58	64	46	64	10	0	0	0
CHORUS3	4	44	64	110	0	28	64	46	66	64	46	64	10	0	0	0
CHORUS4	9	32	69	104	0	28	64	46	64	64	46	64	10	0	1	0
CELESTE1	12	32	64	0	0	28	64	46	64	127	40	68	10	0	0	0
CELESTE2	28	18	90	2	0	28	62	42	60	84	40	68	10	0	0	0
CELESTE3	4	63	44	2	0	28	64	46	68	127	40	68	10	0	0	0
CELESTE4	8	29	64	0	0	28	64	51	66	127	40	68	10	0	1	0
FLANGER1	14	14	104	2	0	28	64	46	64	96	40	64	10	4	0	0
FLANGER2	32	17	26	2	0	28	64	46	60	96	40	64	10	4	0	0
FLANGER3	4	109	109	2	0	28	64	46	64	127	40	64	10	4	0	0

used only by the system

VARIATION BLOCK

TYPE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NOEFFECT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HALL1	18	10	8	13	49	0	0	0	0	40	0	4	50	8	64	0
HALL2	25	10	28	6	46	0	0	0	0	40	13	3	74	7	64	0
ROOM1	5	10	16	4	49	0	0	0	0	40	5	3	64	8	64	0
ROOM2	12	10	5	4	38	0	0	0	0	40	0	4	50	8	64	0
ROOM3	9	10	47	5	36	0	0	0	0	40	0	4	60	8	64	0
STAGE1	19	10	16	7	54	0	0	0	0	40	0	3	64	6	64	0
STAGE2	11	10	16	7	51	0	0	0	0	40	2	2	64	6	64	0
PLATE	25	10	6	8	49	0	0	0	0	40	2	3	64	5	64	0
DELAYL,C,R	3333	1667	5000	5000	74	100	10	0	0	32	0	60	28	64	46	64
DELAYL,R	2500	3750	3752	3750	87	10	0	0	0	32	0	60	28	64	46	64
ECHO	1700	80	1780	80	10	1700	1780	0	0	40	0	60	28	64	46	64
CROSSDELAY	1700	1750	111	1	10	0	0	0	0	32	0	60	28	64	46	64
ER1	0	19	5	16	64	0	46	0	0	32	5	0	10	0	0	0
ER2	2	7	10	16	64	3	46	0	0	32	5	2	10	0	0	0
GATE REVERB	0	15	6	2	64	0	44	0	0	32	4	3	10	0	0	0
REVERSE GATE	1	19	8	3	64	0	47	0	0	32	6	3	10	0	0	0
KARAOKE1	63	97	0	48	0	0	0	0	0	64	2	0	0	0	0	0
KARAOKE2	55	105	0	50	0	0	0	0	0	64	1	0	0	0	0	0
KARAOKE3	43	110	14	53	0	0	0	0	0	64	0	0	0	0	0	0
CHORUS1	6	54	77	106	0	28	64	46	64	64	46	64	10	0	0	0
CHORUS2	8	63	64	30	0	28	62	42	58	64	46	64	10	0	0	0
CHORUS3	4	44	64	110	0	28	64	46	66	64	46	64	10	0	0	0
CHORUS4	9	32	69	104	0	28	64	46	64	64	46	64	10	0	1	0
CELESTE1	12	32	64	0	0	28	64	46	64	127	40	68	10	0	0	0
CELESTE2	28	18	90	2	0	28	62	42	60	84	40	68	10	0	0	0
CELESTE3	4	63	44	2	0	28	64	46	68	127	40	68	10	0	0	0
CELESTE4	8	29	64	0	0	28	64	51	66	127	40	68	10	0	1	0
FLANGER1	14	14	104	2	0	28	64	46	64	96	40	64	10	4	0	0
FLANGER2	32	17	26	2	0	28	64	46	60	96	40	64	10	4	0	0
FLANGER3	4	109	109	2	0	28	64	46	64	127	40	64	10	4	0	0
SYMPHONIC	12	25	16	0	0	28	64	46	64	127	46	64	10	0	0	0
ROTARYSPEAKER	81	35	0	0	0	24	60	45	54	127	33	52	30	0	0	0
TREMOLO	83	56	0	0	0	28	64	46	64	127	40	64	10	64	0	0
AUTOPAN	76	80	32	5	0	28	64	46	64	127	40	64	10	0	0	0
PHASER1	8	111	74	104	0	28	64	46	64	64	6	1	64	0	0	0
PHASER2	8	111	74	108	0	28	64	46	64	64	5	1	4	0	0	0
DISTORTION	40	20	72	53	48	0	43	74	10	127	120	0	0	0	0	0
OVERDRIVE	29	24	68	45	55	0	41	72	10	127	104	0	0	0	0	0
AMP SIM.	39	1	48	55	0	0	0	0	0	127	112	0	0	0	0	0
3-BAND EQ	70	34	60	10	70	28	46	0	0	127	0	0	0	0	0	0
2-BAND EQ	28	70	46	70	0	0	0	0	0	127	34	64	10	0	0	0
AUTOWAH(LFO)	70	56	39	25	0	28	66	46	64	127	0	0	0	0	0	0
PITCHCHANGE	64	0	74	54	64	0	0	0	0	64	1	127	127	127	0	0
AURAL EXCITER®	44	30	48	0	0	0	0	0	0	127	0	0	0	0	0	0
TOUCH WAH	36	0	30	0	0	28	66	46	64	127	0	0	0	0	0	0
TOUCH WAH + DIST.	36	0	30	0	0	28	66	46	64	127	30	0	0	0	0	0
COMPRESSOR	6	2	100	4	96	0	0	0	0	127	0	0	0	0	0	0
NOISE GATE	0	11	82	50	0	0	0	0	0	127	3	0	0	0	0	0
VOICE CANCEL	0	0	0	0	0	0	0	0	0	64	8	25	0	0	0	0
THRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DISTORTION BLOCK

TYPE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DISTORTION	40	20	72	53	48	0	43	74	10	127	120	0	0	0	0	0
OVERDRIVE	29	24	68	45	55	0	41	72	10	127	104	0	0	0	0	0
3-BAND EQ	70	34	60	10	70	28	46	0	0	127	0	0	0	0	0	0

[Table 3-1]

XG PARAMETER CHANGE TABLE (SYSTEM)

Address (H)			Size (H)	Data (H)	Parameter	Extension	Description	Default value(H)
0	0	0	4	0000 - 07FF	MASTER TUNE		-102.4 - +102.3[cent]	00 04 00 00
		1					1st bit3-0 >> bit15-12	
		2					2nd bit3-0 >> bit11-8	
		3					3rd bit3-0 >> bit7-4	
							4th bit3-0 >> bit3-0	
		4	1	00 - 7F	MASTER VOLUME		0 - 127	7F
		5	1	00 - 7F	MASTER ATTENUATOR	[Ext.]	0 - 127	0
		6	1	28 - 58	TRANSPOSE		-24 - +24[semitones]	40
		7D		n	DRUM SETUP RESET		n=Drum setup number	
		7E			0 XG SYSTEM ON		00=XG sytem ON	
		7F			0 ALL PARAMETER RESET		00=ON	

TOTAL SIZE 7

[Table 3-2]

XG PARAMETER CHANGE TABLE (System information)

Address (H)			Size (H)	Data (H)	Parameter	Description	
1	0	0	E	20 - 7F	Model Name	32-127(ASCII)	
		:					
		0D		20 - 7F			
		0E	1		0		0
		0F	1		0		0

TOTAL SIZE 10

Transmitted in responce to Dump Request. Receipt is not available.

[Table 3-3]

XG PARAMETER CHANGE TABLE (EFFECT 1)

Address (H)			Size (H)	Data (H)	Parameter		Description	Default
2	1	0	2	00-7F	REVERB TYPE MSB		XG EFFECT MAP éQèΔ	01(=HALL1)
				00-7F	REVERB TYPE LSB		00 : basic type	00
		2	1	00-7F	REVERB PARAMETER 1		Refer to XG EFFECT PARAMETER LIST	depends on reverb type
		3	1	00-7F	REVERB PARAMETER 2		do.	do.
		4	1	00-7F	REVERB PARAMETER 3		do.	do.
		5	1	00-7F	REVERB PARAMETER 4		do.	do.
		6	1	00-7F	REVERB PARAMETER 5		do.	do.
		7	1	00-7F	REVERB PARAMETER 6		do.	do.
		8	1	00-7F	REVERB PARAMETER 7		do.	do.
		9	1	00-7F	REVERB PARAMETER 8		do.	do.
		0A	1	00-7F	REVERB PARAMETER 9		do.	do.
		0B	1	00-7F	REVERB PARAMETER 10		do.	do.
		0C	1	00-7F	REVERB RETURN		-∞dB...0dB...+6dB(0...64...127)	40
		0D	1	01-7F	REVERB PAN		L63...C...R63(1...64...127)	40
TOTAL SIZE 0E								
2	1	10	1	00-7F	REVERB PARAMETER 11	[Ext.]	Refer to XG EFFECT PARAMETER LIST	depends on reverb type
		11	1	00-7F	REVERB PARAMETER 12	[Ext.]	do.	do.
		12	1	00-7F	REVERB PARAMETER 13	[Ext.]	do.	do.
		13	1	00-7F	REVERB PARAMETER 14	[Ext.]	do.	do.
		14	1	00-7F	REVERB PARAMETER 15	[Ext.]	do.	do.
		15	1	00-7F	REVERB PARAMETER 16	[Ext.]	do.	do.
TOTAL SIZE 6								
2	1	20	2	00-7F	CHORUS TYPE MSB		Refer to XG EFFECT MAP	41(=CHORUS1)
				00-7F	CHORUS TYPE LSB		00 : basic type	00
		22	1	00-7F	CHORUS PARAMETER 1		Refer to XG EFFECT PARAMETER LIST	depends on chorus Type
		23	1	00-7F	CHORUS PARAMETER 2		do.	do.
		24	1	00-7F	CHORUS PARAMETER 3		do.	do.
		25	1	00-7F	CHORUS PARAMETER 4		do.	do.
		26	1	00-7F	CHORUS PARAMETER 5		do.	do.
		27	1	00-7F	CHORUS PARAMETER 6		do.	do.
		28	1	00-7F	CHORUS PARAMETER 7		do.	do.
		29	1	00-7F	CHORUS PARAMETER 8		do.	do.
		2A	1	00-7F	CHORUS PARAMETER 9		do.	do.
		2B	1	00-7F	CHORUS PARAMETER 10		do.	do.
		2C	1	00-7F	CHORUS RETURN		-∞dB...0dB...+6dB(0...64...127)	40
		2D	1	01-7F	CHORUS PAN		L63...C...R63(1...64...127)	40
		2E	1	00-7F	SEND CHORUS TO REVERB		-∞dB...0dB...+6dB(0...64...127)	00
TOTAL SIZE 0F								
2	1	30	1	00-7F	CHORUS PARAMETER 11	[Ext.]	Refer to XG EFFECT PARAMETER LIST	depends on chorus Type
		31	1	00-7F	CHORUS PARAMETER 12	[Ext.]	do.	do.
		32	1	00-7F	CHORUS PARAMETER 13	[Ext.]	do.	do.
		33	1	00-7F	CHORUS PARAMETER 14	[Ext.]	do.	do.
		34	1	00-7F	CHORUS PARAMETER 15	[Ext.]	do.	do.
		35	1	00-7F	CHORUS PARAMETER 16	[Ext.]	do.	do.
TOTAL SIZE 6								
2	1	40	2	00-7F	VARIATION TYPE MSB		Refer to XG EFFECT MAP	05(=DELAY L,C,R)
				00-7F	VARIATION TYPE LSB		00 : basic type	00
		42	2	00-7F	VARIATION PARAMETER 1 MSB		Refer to XG EFFECT PARAMETER LIST	depends on variation type
				00-7F	VARIATION PARAMETER 1 LSB		do.	do.
		44	2	00-7F	VARIATION PARAMETER 2 MSB		do.	do.
				00-7F	VARIATION PARAMETER 2 LSB		do.	do.
		46	2	00-7F	VARIATION PARAMETER 3 MSB		do.	do.

			00-7F	VARIATION PARAMETER 3 LSB		do.	do.
		48	2 00-7F	VARIATION PARAMETER 4 MSB		do.	do.
			00-7F	VARIATION PARAMETER 4 LSB		do.	do.
		4A	2 00-7F	VARIATION PARAMETER 5 MSB		do.	do.
			00-7F	VARIATION PARAMETER 5 LSB		do.	do.
		4C	2 00-7F	VARIATION PARAMETER 6 MSB		do.	do.
			00-7F	VARIATION PARAMETER 6 LSB		do.	do.
		4E	2 00-7F	VARIATION PARAMETER 7 MSB		do.	do.
			00-7F	VARIATION PARAMETER 7 LSB		do.	do.
		50	2 00-7F	VARIATION PARAMETER 8 MSB		do.	do.
			00-7F	VARIATION PARAMETER 8 LSB		do.	do.
		52	2 00-7F	VARIATION PARAMETER 9 MSB		do.	do.
			00-7F	VARIATION PARAMETER 9 LSB		do.	do.
		54	2 00-7F	VARIATION PARAMETER 10 MSB		do.	do.
			00-7F	VARIATION PARAMETER 10 LSB		do.	do.
		56	1 00-7F	VARIATION RETURN		-∞dB...0dB...+6dB(0...64...127)	40
		57	1 01-7F	VARIATION PAN		L63...C...R63(1...64...127)	40
		58	1 00-7F	SEND VARIATION TO REVERB		-∞dB...0dB...+6dB(0...64...127)	00
		59	1 00-7F	SEND VARIATION TO CHORUS		-∞dB...0dB...+6dB(0...64...127)	00
		5A	1 00-01	VARIATION CONNECTION		0:INSERTION,1:SYSTEM	00
		5B	1 00-7F	VARIATION PART		Part1...64(0...63) AD1...AD63(64...126) OFF(127)	7F
		5C	1 00-7F	MW VARIATION CONTROL DEPTH	[Ext.]	-64 - +63	40
		5D	1 00-7F	BEND VARIATION CONTROL DEPTH	[Ext.]	-64 - +63	40
		5E	1 00-7F	CAT VARIATION CONTROL DEPTH	[Ext.]	-64 - +63	40
		5F	1 00-7F	AC1 VARIATION CONTROL DEPTH	[Ext.]	-64 - +63	40
		60	1 00-7F	AC2 VARIATION CONTROL DEPTH	[Ext.]	-64 - +63	40
TOTAL SIZE 21								
	2	1	70	1 00-7F	VARIATION PARAMETER 11	[Ext.]	Refer to XG EFFECT PARAMETER LIST	depends on variation type
			71	1 00-7F	VARIATION PARAMETER 12	[Ext.]	do.	do.
			72	1 00-7F	VARIATION PARAMETER 13	[Ext.]	do.	do.
			73	1 00-7F	VARIATION PARAMETER 14	[Ext.]	do.	do.
			74	1 00-7F	VARIATION PARAMETER 15	[Ext.]	do.	do.
			75	1 00-7F	VARIATION PARAMETER 16	[Ext.]	do.	do.
TOTAL SIZE 6								

[Table 3-4]

XG PARAMETER CHANGE TABLE (MULTI EQ) [Ext.]

Address (H)			Size (H)	Data (H)	Parameter		Description	Default value(H)
2	40	0	1	00 - 04	EQ type	[Ext.]	0:FLAT 1:JAZZ 2:POPS 3:ROCK 4:CLASSIC	0
		1	1	34 -4C	EQ gain1	[Ext.]	-12 - +12[dB]	40
		2	1	04-28	EQ frequency1	[Ext.]	32-2000[Hz]	0C
		3	1	01-78	EQ Q1	[Ext.]	0.1-12.0	7
		4	1	00-01	EQ shape1	[Ext.]	00:shelving, 01:peaking	0
		5	1	34 -4C	EQ gain2	[Ext.]	-12 - +12[dB]	40
		6	1	0E-36	EQ frequency2	[Ext.]	100-10.0[kHz]	1C
		7	1	01-78	EQ Q2	[Ext.]	0.1-12.0	7
		8	1		not used	[Ext.]		
		9	1	34 -4C	EQ gain3	[Ext.]	-12 - +12[dB]	40
		0A	1	0E-36	EQ frequency3	[Ext.]	100-10.0[kHz]	22
		0B	1	01-78	EQ Q3	[Ext.]	0.1-12.0	7
		0C	1		not used	[Ext.]		
		0D	1	34 -4C	EQ gain4	[Ext.]	-12 - +12[dB]	40
		0E	1	0E-36	EQ frequency4	[Ext.]	100-10.0[kHz]	2E
		0F	1	01-78	EQ Q4	[Ext.]	0.1-12.0	7
		10	1		not used	[Ext.]		
		11	1	34 -4C	EQ gain5	[Ext.]	-12 - +12[dB]	40
		12	1	1C-3A	EQ frequency5	[Ext.]	0.5-16.0[kHz]	3C
		13	1	01-78	EQ Q5	[Ext.]	0.1-12.0	7
		14	1	00-01	EQ shape5	[Ext.]	00:shelving, 01:peaking	0

TOTAL SIZE 15

[Table 3-5]

XG PARAMETER CHANGE TABLE (EFFECT 2) [Ext.]

Address (H)			Size (H)	Data (H)	Parameter		Description	Default
3	0	0	2	00-7F	INSERTION EFFECT 1 TYPE MSB	[Ext.]	Refer to XG EFFECT MAP	49(=DISTORTION)
				00-7F	INSERTION EFFECT 1 TYPE LSB	[Ext.]	00 : basic type	00
		2	1	00-7F	INSERTION EFFECT 1 PARAMETER1	[Ext.]	Refer to XG EFFECT PARAMETER LIST	depends on insertion 1 type
		3	1	00-7F	INSERTION EFFECT 1 PARAMETER2	[Ext.]	do.	do.
		4	1	00-7F	INSERTION EFFECT 1 PARAMETER3	[Ext.]	do.	do.
		5	1	00-7F	INSERTION EFFECT 1 PARAMETER4	[Ext.]	do.	do.
		6	1	00-7F	INSERTION EFFECT 1 PARAMETER5	[Ext.]	do.	do.
		7	1	00-7F	INSERTION EFFECT 1 PARAMETER6	[Ext.]	do.	do.
		8	1	00-7F	INSERTION EFFECT 1 PARAMETER7	[Ext.]	do.	do.
		9	1	00-7F	INSERTION EFFECT 1 PARAMETER8	[Ext.]	do.	do.
		0A	1	00-7F	INSERTION EFFECT 1 PARAMETER9	[Ext.]	do.	do.
		0B	1	00-7F	INSERTION EFFECT 1 PARAMETER10	[Ext.]	do.	do.
		0C	1	00-7F	INSERTION EFFECT 1 PART	[Ext.]	Part1...64(0...63) AD1...AD63(64...126) OFF(127)	7F
		0D	1	00-7F	MW INSERTION CONTROL DEPTH	[Ext.]	-64 - 63	40
		0E	1	00-7F	BEND INSERTION CONTROL DEPTH	[Ext.]	-64 - 63	40
		0F	1	00-7F	CAT INSERTION CONTROL DEPTH	[Ext.]	-64 - 63	40
		10	1	00-7F	AC1 INSERTION CONTROL DEPTH	[Ext.]	-64 - 63	40
		11	1	00-7F	AC2 INSERTION CONTROL DEPTH	[Ext.]	-64 - 63	40

TOTAL SIZE	12						
	20	1	00-7F	INSERTION EFFECT 1 PARAMETER11	[Ext.]	Refer to XG EFFECT PARAMETER LIST	depends on insertion 1 type
	21	1	00-7F	INSERTION EFFECT 1 PARAMETER12	[Ext.]	do.	do.
	22	1	00-7F	INSERTION EFFECT 1 PARAMETER13	[Ext.]	do.	do.
	23	1	00-7F	INSERTION EFFECT 1 PARAMETER14	[Ext.]	do.	do.
	24	1	00-7F	INSERTION EFFECT 1 PARAMETER15	[Ext.]	do.	do.
	25	1	00-7F	INSERTION EFFECT 1 PARAMETER16	[Ext.]	do.	do.
TOTAL SIZE	6						

*Data Range differs according to Effect Type.

[Table 3-6]

XG PARAMETER CHANGE TABLE (DISPLAY DATA) [Ext.]

Address			Size (H)	Data (H)	Parameter (H)		Description	Default
6	0	0	20	20 - 7F	DISPLAY LETTER	[Ext.]	32-127(ASCII)	
		:						
		1F						
TOTAL SIZE			20					
7	vh	0	30	00 - 7F	DISPLAY BITMAP Data0	[Ext.]	0 - 127	
		:			:			
		2F			Data47			
TOTAL SIZE			30					

v : Vertical extension (0 ~ 7)
h : Horizontal extension (0 ~ F)

Single display is 16 x 16 dots, so maximum display is 256 dots (h) by 128 dots (v).

Relation of data and display :
Each data byte defines seven contiguous pixels in the horizontal direction.
A bitvalue of “1” sets the pixel ON, “0” sets it off.
Alignment of data on the screen is as follows :

	b6 b5 b4 b3 b2 b1 b0		b6 b5 b4 b3 b2 b1 b0		b6 b5 b4 b3 b2 b1 b0 ("b" stands for "bit")
Data0	* * * * * * *	Data16	* * * * * * *	Data32	* * - - - - -
Data1		Data17		Data33	
Data2		Data18		Data34	
Data3		Data19		Data35	
Data4		Data20		Data36	
Data5		Data21		Data37	
Data6		Data22		Data38	
Data7		Data23		Data39	
Data8		Data24		Data40	
Data9		Data25		Data41	
Data10		Data26		Data42	
Data11		Data27		Data43	
Data12		Data28		Data44	
Data13		Data29		Data45	
Data14		Data30		Data46	
Data15		Data31		Data47	

For Data32~Data 47, only b6 and b5 are effective.

It is possible to limit reception of bitmap data to selected pixels only, while leaving unselected pixels in their existing display state.
It is also possible to start transmission of Display Data parameter-change data from any arbitrary point.

[Table 3-7]

XG PARAMETER CHANGE TABLE (MULTI PART)

Address (H)			Size (H)	Data (H)	Parameter	Description	Default value(H)
8	nn	0	1	00 - 20	ELEMENT RESERVE	0 - 32	part10=0, other =2
	nn	1	1	00 - 7F	BANK SELECT MSB	0 - 127	part10=7F, other=0
	nn	2	1	00 - 7F	BANK SELECT LSB	0 - 127	0
	nn	3	1	00 - 7F	PROGRAM NUMBER	1 - 128	0
	nn	4	1	00 - 0F, 7F	Rcv CHANNEL	1 - 16,OFF	Part No.
	nn	5	1	00 - 01	MONO/POLY MODE	0:MONO 1:POLY	1
	nn	6	1	00 - 02	SAME NOTE NUMBER KEY ON ASSIGN	0:SINGLE 1:MULTI 2:INST (for DRUM)	1
	nn	7	1	00 - 05	PART MODE	0:NORMAL 1:DRUM 2 - 5:DRUMS1 - 4	00 (Part10à»äO) 02 (Part10) 04,05 = [L3-80]
	nn	8	1	28 - 58	NOTE SHIFT	-24 - +24[semitones]	40
	nn	9	2	00 - FF	DETUNE	-12.8 - +12.7[Hz]	08 00
	nn	0A				1st bit3-0 >> bit7-4 2nd bit3-0 >> bit3-0	(80)
	nn	0B	1	00 - 7F	VOLUME	0 - 127	64
	nn	0C	1	00 - 7F	VELOCITY SENSE DEPTH	0 - 127	40
	nn	0D	1	00 - 7F	VELOCITY SENSE OFFSET	0 - 127	40
	nn	0E	1	00 - 7F	PAN	0:random L63...C...R63(1...64...127)	40
	nn	0F	1	00 - 7F	NOTE LIMIT LOW	C-2 - G8	0
	nn	10	1	00 - 7F	NOTE LIMIT HIGH	C-2 - G8	7F
	nn	11	1	00 - 7F	DRY LEVEL	0 - 127	7F
	nn	12	1	00 - 7F	CHORUS SEND	0 - 127	0
	nn	13	1	00 - 7F	REVERB SEND	0 - 127	28
	nn	14	1	00 - 7F	VARIATION SEND	0 - 127	0
	nn	15	1	00 - 7F	VIBRATO RATE	-64 - +63	40
	nn	16	1	00 - 7F	VIBRATO DEPTH	-64 - +63	40

nn	17	1	00 - 7F	VIBRATO DELAY		-64 - +63	40
nn	18	1	00 - 7F	FILTER CUTOFF FREQUENCY		-64 - +63	40
nn	19	1	00 - 7F	FILTER RESONANCE		-64 - +63	40
nn	1A	1	00 - 7F	EG ATTACK TIME		-64 - +63	40
nn	1B	1	00 - 7F	EG DECAY TIME		-64 - +63	40
nn	1C	1	00 - 7F	EG RELEASE TIME		-64 - +63	40
nn	1D	1	28 - 58	MW PITCH CONTROL		-24 - +24[semitones]	40
nn	1E	1	00 - 7F	MW FILTER CONTROL		-9600 - +9450[cent]	40
nn	1F	1	00 - 7F	MW AMPLITUDE CONTROL		-100 - +100[%]	40
nn	20	1	00 - 7F	MW LFO PMOD DEPTH		0 - 127	0A
nn	21	1	00 - 7F	MW LFO FMOD DEPTH		0 - 127	0
nn	22	1	00 - 7F	MW LFO AMOD DEPTH	[Ext.]	0 - 127	0
nn	23	1	28 - 58	BEND PITCH CONTROL		-24 - +24[semitones]	42
nn	24	1	00 - 7F	BEND FILTER CONTROL		-9600 - +9450[cent]	40
nn	25	1	00 - 7F	BEND AMPLITUDE CONTROL		-100 - +100[%]	40
nn	26	1	00 - 7F	BEND LFO PMOD DEPTH		0 - 127	0
nn	27	1	00 - 7F	BEND LFO FMOD DEPTH		0 - 127	0
nn	28	1	00 - 7F	BEND LFO AMOD DEPTH	[Ext.]	0 - 127	0
TOTAL SIZE		29					
nn	30	1	00 - 01	Rcv PITCH BEND	[Ext.]	OFF/ON	1
nn	31	1	00 - 01	Rcv CH AFTER TOUCH(CAT)	[Ext.]	OFF/ON	1
nn	32	1	00 - 01	Rcv PROGRAM CHANGE	[Ext.]	OFF/ON	1
nn	33	1	00 - 01	Rcv CONTROL CHANGE	[Ext.]	OFF/ON	1
nn	34	1	00 - 01	Rcv POLY AFTER TOUCH(PAT)	[Ext.]	OFF/ON	1
nn	35	1	00 - 01	Rcv NOTE MESSAGE	[Ext.]	OFF/ON	1
nn	36	1	00 - 01	Rcv RPN	[Ext.]	OFF/ON	1
nn	37	1	00 - 01	Rcv NRPN	[Ext.]	OFF/ON	1
nn	38	1	00 - 01	Rcv MODULATION	[Ext.]	OFF/ON	1
nn	39	1	00 - 01	Rcv VOLUME	[Ext.]	OFF/ON	1
nn	3A	1	00 - 01	Rcv PAN	[Ext.]	OFF/ON	1
nn	3B	1	00 - 01	Rcv EXPRESSION	[Ext.]	OFF/ON	1
nn	3C	1	00 - 01	Rcv HOLD1	[Ext.]	OFF/ON	1
nn	3D	1	00 - 01	Rcv PORTAMENTO	[Ext.]	OFF/ON	1
nn	3E	1	00 - 01	Rcv SOSTENUTO	[Ext.]	OFF/ON	1
nn	3F	1	00 - 01	Rcv SOFT PEDAL	[Ext.]	OFF/ON	1
nn	40	1	00 - 01	Rcv BANK SELECT	[Ext.]	OFF/ON	1
nn	41	1	00 - 7F	SCALE TUNING C	[Ext.]	-64 - +63[cent]	40
nn	42	1	00 - 7F	SCALE TUNING C#	[Ext.]	-64 - +63[cent]	40
nn	43	1	00 - 7F	SCALE TUNING D	[Ext.]	-64 - +63[cent]	40
nn	44	1	00 - 7F	SCALE TUNING D#	[Ext.]	-64 - +63[cent]	40
nn	45	1	00 - 7F	SCALE TUNING E	[Ext.]	-64 - +63[cent]	40
nn	46	1	00 - 7F	SCALE TUNING F	[Ext.]	-64 - +63[cent]	40
nn	47	1	00 - 7F	SCALE TUNING F#	[Ext.]	-64 - +63[cent]	40
nn	48	1	00 - 7F	SCALE TUNING G	[Ext.]	-64 - +63[cent]	40
nn	49	1	00 - 7F	SCALE TUNING G#	[Ext.]	-64 - +63[cent]	40
nn	4A	1	00 - 7F	SCALE TUNING A	[Ext.]	-64 - +63[cent]	40
nn	4B	1	00 - 7F	SCALE TUNING A#	[Ext.]	-64 - +63[cent]	40
nn	4C	1	00 - 7F	SCALE TUNING B	[Ext.]	-64 - +63[cent]	40
nn	4D	1	28 - 58	CAT PITCH CONTROL	[Ext.]	-24 - +24[semitones]	40
nn	4E	1	00 - 7F	CAT FILTER CONTROL	[Ext.]	-9600 - +9450[cent]	40
nn	4F	1	00 - 7F	CAT AMPLITUDE CONTROL	[Ext.]	-100 - +100[%]	40
nn	50	1	00 - 7F	CAT LFO PMOD DEPTH	[Ext.]	0 - 127	0
nn	51	1	00 - 7F	CAT LFO FMOD DEPTH	[Ext.]	0 - 127	0
nn	52	1	00 - 7F	CAT LFO AMOD DEPTH	[Ext.]	0 - 127	0
nn	53	1	28 - 58	PAT PITCH CONTROL	[Ext.]	-24 - +24[semitones]	40
nn	54	1	00 - 7F	PAT FILTER CONTROL	[Ext.]	-9600 - +9450[cent]	40
nn	55	1	00 - 7F	PAT AMPLITUDE CONTROL	[Ext.]	-100 - +100[%]	40
nn	56	1	00 - 7F	PAT LFO PMOD DEPTH	[Ext.]	0 - 127	0
nn	57	1	00 - 7F	PAT LFO FMOD DEPTH	[Ext.]	0 - 127	0
nn	58	1	00 - 7F	PAT LFO AMOD DEPTH	[Ext.]	0 - 127	0
nn	59	1	00 - 5F	AC1 CONTROLLER NUMBER	[Ext.]	0 - 95	10
nn	5A	1	28 - 58	AC1 PITCH CONTROL	[Ext.]	-24 - +24[semitones]	40
nn	5B	1	00 - 7F	AC1 FILTER CONTROL	[Ext.]	-9600 - +9450[cent]	40
nn	5C	1	00 - 7F	AC1 AMPLITUDE CONTROL	[Ext.]	-100 - +100[%]	40
nn	5D	1	00 - 7F	AC1 LFO PMOD DEPTH	[Ext.]	0 - 127	0
nn	5E	1	00 - 7F	AC1 LFO FMOD DEPTH	[Ext.]	0 - 127	0
nn	5F	1	00 - 7F	AC1 LFO AMOD DEPTH	[Ext.]	0 - 127	0
nn	60	1	00 - 5F	AC2 CONTROLLER NUMBER	[Ext.]	0 - 95	11
nn	61	1	28 - 58	AC2 PITCH CONTROL	[Ext.]	-24 - +24[semitones]	40
nn	62	1	00 - 7F	AC2 FILTER CONTROL	[Ext.]	-9600 - +9450[cent]	40
nn	63	1	00 - 7F	AC2 AMPLITUDE CONTROL	[Ext.]	-100 - +100[%]	40
nn	64	1	00 - 7F	AC2 LFO PMOD DEPTH	[Ext.]	0 - 127	0
nn	65	1	00 - 7F	AC2 LFO FMOD DEPTH	[Ext.]	0 - 127	0
nn	66	1	00 - 7F	AC2 LFO AMOD DEPTH	[Ext.]	0 - 127	0
nn	67	1	00 - 01	PORTAMENTO SWITCH	[Ext.]	OFF/ON	0
nn	68	1	00 - 7F	PORTAMENTO TIME	[Ext.]	0 - 127	0
nn	69	1	00 - 7F	PITCH EG INITIAL LEVEL	[Ext.]	-64 - +63	40
nn	6A	1	00 - 7F	PITCH EG ATTACK TIME	[Ext.]	-64 - +63	40
nn	6B	1	00 - 7F	PITCH EG RELEASE LEVEL	[Ext.]	-64 - +63	40
nn	6C	1	00 - 7F	PITCH EG RELEASE TIME	[Ext.]	-64 - +63	40
nn	6D	1	01 - 7F	VELOCITY LIMIT LOW	[Ext.]	1 - 127	0
nn	6E	1	01 - 7F	VELOCITY LIMIT HIGH	[Ext.]	1 - 127	7F
TOTAL SIZE		3F					

nn = PartNumber
For DRUM PART, the following parameters are ineffective.

- BANK SELECT LSB
- PORTAMENTO

• SOFT PEDAL
• MONO/POLY
• SCALE TUNING
• POLY AFTER TOUCH
• PITCH EG

[Table 3-8]

XG PARAMETER CHANGE TABLE (A/D PART) [Ext.]

Address (H)		Size (H)	Data (H)	Parameter		Description	Default value(H)
10 nn	0	1	00 - 01	INPUT GAIN	[Ext.]	0:MIC,1:LINE	0
	1	1	00 - 7F	BANK SELECT MSB	[Ext.]	0 - 127	0
	2	1	00 - 7F	BANK SELECT LSB	[Ext.]	0 - 127	0
	3	1	00 - 7F	PROGRAM NUMBER	[Ext.]	1 - 128	0
	4	1	00 - 1F, 7F	Rcv CHANNEL	[Ext.]	A1 - A16,B1 - B16,OFF	7F
	5	1		NOT USED	[Ext.]		
	6	1		NOT USED	[Ext.]		
	7	1		NOT USED	[Ext.]		
	8	1		NOT USED	[Ext.]		
	9	1		NOT USED	[Ext.]		
	0A	1		NOT USED	[Ext.]		
	0B	1	00 - 7F	VOLUME	[Ext.]	0 - 127	0
	0C	1		NOT USED	[Ext.]		
	0D	1		NOT USED	[Ext.]		
	0E	1	01 - 7F	PAN	[Ext.]	L63...C...R63(1...64...127)	40
	0F	1		NOT USED	[Ext.]		
	10	1		NOT USED	[Ext.]		
	11	1	00 - 7F	DRY LEVEL	[Ext.]	0 - 127	7F
	12	1	00 - 7F	CHORUS SEND	[Ext.]	0 - 127	0
	13	1	00 - 7F	REVERB SEND	[Ext.]	0 - 127	0
	14	1	00 - 7F	VARIATION SEND	[Ext.]	0 - 127	0
TOTAL SIZE		15					
10 nn	30	1		NOT USED	[Ext.]		
	31	1		NOT USED	[Ext.]		
	32	1	00 - 01	Rcv PROGRAM CHANGE	[Ext.]	OFF/ON	1
	33	1	00 - 01	Rcv CONTROL CHANGE	[Ext.]	OFF/ON	1
	34	1		NOT USED	[Ext.]		
	35	1		NOT USED	[Ext.]		
	36	1		NOT USED	[Ext.]		
	37	1		NOT USED	[Ext.]		
	38	1		NOT USED	[Ext.]		
	39	1	00 - 01	Rcv VOLUME	[Ext.]	OFF/ON	1
	3A	1	00 - 01	Rcv PAN	[Ext.]	OFF/ON	1
	3B	1	00 - 01	Rcv EXPRESSION	[Ext.]	OFF/ON	1
	3C	1		NOT USED	[Ext.]		
	3D	1		NOT USED	[Ext.]		
	3E	1		NOT USED	[Ext.]		
	3F	1		NOT USED	[Ext.]		
	40	1	00 - 01	Rcv BANK SELECT	[Ext.]	OFF/ON	1
	41	1		NOT USED	[Ext.]		
	42	1		NOT USED	[Ext.]		
	43	1		NOT USED	[Ext.]		
	44	1		NOT USED	[Ext.]		
	45	1		NOT USED	[Ext.]		
	46	1		NOT USED	[Ext.]		
	47	1		NOT USED	[Ext.]		
	48	1		NOT USED	[Ext.]		
	49	1		NOT USED	[Ext.]		
	4A	1		NOT USED	[Ext.]		
	4B	1		NOT USED	[Ext.]		
	4C	1		NOT USED	[Ext.]		
	4D	1		NOT USED	[Ext.]		
	4E	1		NOT USED	[Ext.]		
	4F	1		NOT USED	[Ext.]		
	50	1		NOT USED	[Ext.]		
	51	1		NOT USED	[Ext.]		
	52	1		NOT USED	[Ext.]		
	53	1		NOT USED	[Ext.]		
	54	1		NOT USED	[Ext.]		
	55	1		NOT USED	[Ext.]		
	56	1		NOT USED	[Ext.]		
	57	1		NOT USED	[Ext.]		
	58	1		NOT USED	[Ext.]		
	59	1	00 - 5F	AC1 CONTROLLER NUMBER	[Ext.]	0 - 95	10
	5A	1		NOT USED	[Ext.]		
	5B	1		NOT USED	[Ext.]		
	5C	1		NOT USED	[Ext.]		
	5D	1		NOT USED	[Ext.]		
	5E	1		NOT USED	[Ext.]		
	5F	1		NOT USED	[Ext.]		
	60	1	00 - 5F	AC2 CONTROLLER NUMBER	[Ext.]	0 - 95	11
TOTAL SIZE		31					
11 00	nn	64	00-01	A/D SETUP	[Ext.]	0:Mono x2 1:Stereo	
TOTAL SIZE		64					

nn:A/D Part number(0 - 63)

[Table 3-9]

XG PARAMETER CHANGE TABLE (DRUM SETUP)

Address (H)			Size (H)	Data (H)	Parameter	Description	Default
3n	rr	0	1	00 - 7F	PITCH COARSE	-64 - +63	40
3n	rr	1	1	00 - 7F	PITCH FINE	-64 - +63[cent]	40
3n	rr	2	1	00 - 7F	LEVEL	0 - 127	depend on the note
3n	rr	3	1	00 - 7F	ALTERNATE GROUP	0:OFF 1 - 127	depend on the note
3n	rr	4	1	00 - 7F	PAN	0:random 1:L63 : 64:C(center) : 127:R63	depend on the note
3n	rr	5	1	00 - 7F	REVERB SEND	0 - 127	depend on the note
3n	rr	6	1	00 - 7F	CHORUS SEND	0 - 127	depend on the note
3n	rr	7	1	00 - 7F	VARIATION SEND	0 - 127	7F
3n	rr	8	1	00 - 01	KEY ASSIGN	0:SINGLE 1:MULTI	0
3n	rr	9	1	00 - 01	Rcv NOTE OFF	OFF/ON	depend on the note
3n	rr	0A	1	00 - 01	Rcv NOTE ON	OFF/ON	1
3n	rr	0B	1	00 - 7F	FILTER CUTOFF FREQUENCY	-64 - +63	40
3n	rr	0C	1	00 - 7F	FILTER RESONANCE	-64 - +63	40
3n	rr	0D	1	00 - 7F	EG ATTACK	-64 - +63	40
3n	rr	0E	1	00 - 7F	EG DECAY1	-64 - +63	40
3n	rr	0F	1	00 - 7F	EG DECAY2	-64 - +63	40
TOTAL SIZE			10				

[notes]
n: Drum setup number (A minimum of two setups is required.) n=2,3 : [Ext.]
rr:note number(0D - 54)
Receipt of “XG System On” or “GM System On” message generates reinitialization of all DRUM SETUP parameters.
“Drum Setup Reset” message can be used to reinitialize drum setup parameters.
Program Changes for the drum kit will reset the contents of the drum setup.
VARIATION TYPE "KARAOKE1, KARAOKE2, KARAOKE3" should be supported when A/D PART is implemented.

<Extension Table notation>

vacant	XG minimum requirement
[Ext.]	Optional parameter

[Table 1]

XG VOICE MAP

Bank Select MSB=00

			KSP	Stereo	Single	Slow	Fast Decay	Double Attack	Bright		Dark		Rsonant	Attack	Release	Rezo Sweep
Instrument Group	Pch#	Bank 0	Bank 1	Bank 3	Bank 6	Bank 8	Bank 12	Bank 14	Bank 16	Bank 17	Bank 18	Bank 19	Bank 20	Bank 24	Bank 25	Bank 27
Piano	1	GrandPno	GrndPnoK								MelloGrP					
	2	BritePno	BritPnoK													
	3	E.Grand	ElGrPnoK													
	4	HnkyTonk	HnkyTnkK													
	5	E.Piano1	El.Pno1K								MelloEP1					
	6	E.Piano2	El.Pno2K													
	7	Harpsi.	Harpsi.K												Harpsi.2	
	8	Clavi.	Clavi. K													ClaviWah
Chromatic	9	Celesta														
Percussion	10	Glocken														
	11	MusicBox														
	12	Vibes	VibesK													
	13	Marimba	MarimbaK													
	14	Xylophon														
	15	TubulBel														
	16	Dulcimer														
Organ	17	DrawOrgn														
	18	PercOrgn												70sPcOr1		
	19	RockOrgn														
	20	ChrchOrg														
	21	ReedOrgn														
	22	Acordion														
	23	Harmnica														
	24	TangoAcd														
Guitar	25	NylonGtr							NylonGt2						NylonGt3	
	26	SteelGtr							SteelGt2							
	27	Jazz Gtr									MelloGtr					
	28	CleanGtr														
	29	Mute.Gtr														
	30	Ovrdrive														
	31	Dist.Gtr					DstRthmG **							DistGtr2 **		
	32	GtrHarmo														
Bass	33	Aco.Bass														
	34	FngrBass									FingrDrk					FlangeBa
	35	PickBass														
	36	Fretless														
	37	SlapBas1														ResoSlap
	38	SlapBas2														
	39	SynBass1									SynBa1Dk		FastResB	AcidBass		
	40	SynBass2			MelloSB1		Seq Bass				ClkSynBa	SynBa2Dk				
Strings	41	Violin				SlowVln										
	42	Viola														
	43	Cello														
	44	Contrabs														
	45	Trem.Str				SlowTrStr										
	46	Pizz.Str														
	47	Harp														
	48	Timpani														
Ensemble	49	Strings1		S.Strngs		SlowStr								ArcoStr		
	50	Strings2		S.SlwStr		LegatoSt										
	51	Syn.Str1														ResoStr
	52	Syn.Str2														
	53	ChoirAah		S.Choir					Ch.Aahs2							
	54	VoiceOoh														
	55	SynVoice														
	56	Orch.Hit														
Brass	57	Trumpet							Trumpet2	BriteTrp						
	58	Trombone									Trmbone2					
	59	Tuba							Tuba 2							
	60	Mute.Trp														
	61	Fr.Horn			FrHrSolo											
	62	BrasSect						SfrzndBr **								
	63	SynBras1					QuackBr						RezSynBr	PolyBrss		SynBras3
	64	SynBras2									Soft Brs					
Reed	65	SprnoSax														
	66	Alto Sax														
	67	TenorSax														
	68	Bari.Sax														
	69	Oboe														
	70	Eng.Horn														
	71	Bassoon														
	72	Clarinet														
Pipe	73	Piccolo														
	74	Flute														
	75	Recorder														
	76	PanFlute														
	77	Bottle														
	78	Shakhchi														
	79	Whistle														
	80	Ocarina														
Synth Lead	81	SquareLd			Square 2	LMSquare					Hollow	Shmoog				
	82	Saw.Lead			Saw 2	ThickSaw					DynaSaw	DigiSaw	Big Lead	HeavySyn	WaspySyn	
	83	CaliopLd														
	84	Chiff Ld														
	85	CharanLd														
	86	Voice Ld												SynthAah		
	87	Fifth Ld														
	88	Bass &Ld							Big&Low							
Synth Pad	89	NewAgePd														
	90	Warm Pad							ThickPad	Soft Pad	SinePad					
	91	PolySyPd														
	92	ChoirPad														
	93	BowedPad														
	94	MetalPad														
	95	Halo Pad														
	96	SweepPad											Shwimmer			Converge
Synth Effects	97	Rain														
	98	SoundTrk														Prologue
	99	Crystal					SynDrCmp	Popcorn			TinyBell					
	100	Atmosphr									WarmAtms	HollwRls				
	101	Bright														
	102	Goblins														
	103	Echoes				EchoPad2		Echo Pan								
	104	Sci-Fi														
Ethnic	105	Sitar														
	106	Banjo														
	107	Shamisen														
	108	Koto														
	109	Kalimba														
	110	Bagpipe														
	111	Fiddle														
	112	Shanai														
Percussive	113	TnklBell														
	114	Agogo														
	115	SteelDrm														
	116	WoodBlok														
	117	TaikoDrm														
	118	MelodTom														
	119	Syn.Drum														
	120	RevCymbl														
Sound Effects	121	FretNoiz														
	122	BrthNoiz														
	123	Seashore														
	124	Tweet														
	125	Telphone														
	126	Helicptr														
	127	Applause														
	128	Gunshot														

:Same as Bank0

** : [Ext.]

		Muted	Detune 1	Detune 2	Detune 3	Octave 1	Octave 2	5th 1	5th 2	Bend	Tutti			Velo-Switch	Velo-Xfade	other wave
Instrument Group	Pch#	Bank 28	Bank 32	Bank 33	Bank 34	Bank 35	Bank 36	Bank 37	Bank 38	Bank 39	Bank 40	Bank 41	Bank 42	Bank 43	Bank 45	Bank 64
Piano	1										PianoStr	Dream				
	2															
	3		Det.CP80								ElGrPno1	ElGrPno2				
	4															
	5		Chor.EP1								HardEl.P				VX El.P1	60sEl.P
	6		Chor.EP2	DX Hard	DXLegend						DX Phase	DX+Analg	DXKotoEP		VX El.P2	
	7					Harpsi.3										
	8															PulseClv
Chromatic	9															
Percussion	10															
	11															Orgel
	12														HardVibe	
	13															SineMrmb
	14															
	15															
	16					Dulcimr2										
Organ	17		DetDrwOr	60sDrOr1	60sDrOr2	70sDrOr1	DrawOrg2	60sDrOr3	EvenBar		16+2"2/3					Organ Ba
	18		DetPrcOr	LiteOrg				PercOrg2								
	19															RotaryOr
	20		ChurOrg3			ChurOrg2					NotreDam					OrgFlute
	21										Puff Org					
	22		AccordIt													
	23		Harmo 2													
	24															TngoAcd2
Guitar	25													VelGtHrm		
	26					12StrGtr					Nyln&Stl	Stl&Body				
	27		JazzAmp													
	28		ChorusGt													CleanGt2 **
	29										FunkGtr1	MuteStlG		FunkGtr2	Jazz Man	
	30													Gt.Pinch		
	31					DistGtr3 **	PowerGt2 **	PowerGt1 **	Dst.5ths **		FeedbkGt	FeedbGt2		RkRythm2 **	RockRthm **	
	32															AcoHarmo **
Bass	33										JazzRthm				VXUprght	
	34										Ba&DstEG			FngrSlap	FngBass2	JazzBass **
	35	MutePkBa														
	36		Fretles2	Fretles3	Fretles4											
	37		PunchThm													
	38													VeloSlap		
	39					Clv Bass					TeknoBa					Oscar
	40		SmthBa 2								ModulrBa	DX Bass				X WireBa
Strings	41															
	42															
	43															
	44															
	45										Susp Str					
	46															
	47										YangChin					
	48															
Ensemble	49					60sStrng					Orchestr	Orchstr2	TremOrch		VeloStr	
	50										Warm Str	Kingdom				70s Str
	51					Syn Str 3 **										Syn Str4
	52															
	53		MelChoir								ChoirStr					StrngAah **
	54															VoiceDoo **
	55										SynVox2	Choral				AnaVoice
	56					OrchHit2										Impact
Brass	57		WarmTrp													
	58															
	59															
	60															MuteTrp2 **
	61		FrHorn2					HornOrch								
	62					Tp&TbSec				BrssFall **	BrssSec2	HiBrass	MelloBrs			
	63		JumpBrss												AnaVelBr	AnaBrss1
	64										SynBrss4	ChoirBrs			VelBrss2	AnaBrss2
Reed	65															
	66										Sax Sect			HyprAlto		
	67										BrthTnSx	SoftTenr				TnrSax 2
	68															
	69															
	70															
	71															
	72															
Pipe	73															
	74															
	75															
	76															PanFlut2 **
	77															
	78															
	79															
	80															
Synth Lead	81															Mellow
	82										PulseSaw	Dr. Lead			VeloLead	
	83															Vent Syn **
	84															Rubby
	85															DistLead
	86															VoxLead
	87					Big Five										
	88															Fat&Prky
Synth Pad	89															Fantasy2
	90															Horn Pad
	91															PolyPd80
	92															Heaven2
	93															Glacier
	94															Tine Pad
	95															
	96															PolarPad
Synth Effects	97														ClaviPad	HrmoKain
	98															Ancestrl
	99					RndGlock					GlockChi	ClearBel	ChorBell			SynMalet
	100										NylonEP					NylnHarp
	101															FantaBel
	102															GobSyn
	103															EchoBell
	104															Starz
Ethnic	105		DetSitar			Sitar 2										
	106	MuteBnjo														
	107															
	108															
	109															BigKalim **
	110															
	111															
	112															Shanai2
Percussive	113															
	114															
	115															
	116															
	117															
	118															Mel Tom2
	119															Ana Tom
	120															Rev Cym2 **
Sound Effects	121															
	122															
	123															
	124															
	125															
	126															
	127															
	128															

:Same as Bank0

** : [Ext.]

Instrument Group	Pch#	Bank 65	Bank 66	Bank 67	Bank 68	Bank 69	Bank 70	Bank 71	Bank 72	Bank 96	Bank 97	Bank 98	Bank 99	Bank 100	Bank 101
Piano	1														
	2														
	3														
	4														
	5														
	6														
	7														
	8	PierceCl													
Chromatic	9														
Percussion	10														
	11														
	12														
	13									Balafon **	Balafon2	Log Drum			
	14														
	15									ChrchBel	Carillon				
	16									Cimbalom	Santur				
Organ	17	70sDrOr2	CheezOrg	DrawOrg3											
	18														
	19	SloRotar	FstRotar												
	20	TrmOrgFl													
	21														
	22														
	23														
	24														
Guitar	25									Ukulele					
	26									Mandolin					
	27									PdlSteel **					
	28														
	29									Mu.DstGt **					
	30														
	31														
	32	GtFeedbk	GtrHrmo2												
Bass	33														
	34	ModAlem													
	35														
	36									SynFretl	Smooth				
	37														
	38														
	39	SqrBass	RubberBa							Hammer					
	40														
Strings	41														
	42														
	43														
	44														
	45														
	46														
	47														
	48														
Ensemble	49														
	50	Str Ens3													
	51	SS Str													
	52														
	53	Male Aah **													
	54									VoiceHmn **					
	55														
	56	BrssStab **	DoublHit **	BrStab80 **											
Brass	57									FluglHrn					
	58														
	59														
	60														
	61														
	62														
	63														
	64														
Reed	65														
	66														
	67														
	68														
	69														
	70														
	71														
	72									BassClar **					
Pipe	73														
	74														
	75														
	76									Kawala **					
	77														
	78														
	79														
	80														
Synth Lead	81	SoloSine	SineLead												
	82									Seq Ana					
	83	Pure Pad													
	84														
	85	WireLead													
	86														
	87														
	88	SoftWurl													
Synth Pad	89														
	90	RotarStr													
	91	ClickPad	Ana Pad	SquarPad											
	92	Lite Pad **	Itopia	CC Pad											
	93	GlassPad													
	94	Pan Pad													
	95														
	96	Sweepy**	Celstial												
Synth Effects	97	AfrcnWnd	Caribean												
	98	Rave													
	99	SftCryst	LoudGlok	XmasBell	VibeBell	DigiBell	AirBells	BellHarp	Gamelmba						
	100	Harp Vox	AtmosPad	Planet											
	101									Smokey					
	102	50sSciFi	Ring Pad	Ritual	ToHeaven	MilkyWay**	Night	Glisten	Puffy **	BelChoir					
	103	Big Pan	SynPiano	Creation	Stardust	Reso Pan									
	104	Odyssey**													
Ethnic	105									Tambra	Tamboura				
	106									Rabab	Gopichnt	Oud			
	107									Tsugaru **					
	108									T. Koto	Kanoon				
	109														
	110														
	111														
	112									Pungi	Hichriki				
Percussive	113									Bonang	Gender	Gamelan	S.Gamlan	Rama Cym	AsianBel
	114									Atrigane **					
	115									Tablas **	GlasPerc	ThaiBell			
	116									Castanet					
	117									Gr.Cassa					
	118	Real Tom	Rock Tom												
	119	ElecPerc													
	120									RevSnar1 **	RevSnar2 **	RevKick1 **	RevConBD **	Rev Tom1 **	Rev Tom2 **
Sound Effects	121														
	122														
	123														
	124														
	125														
	126														
	127														
	128														

:Same as Bank0

** : [Ext.]

Bank Select MSB=64

SFX

Instrument Group	Pch#	Bank 0
Piano	1	CuttngNz
	2	CttngNz2
	3	OutCutNz **
	4	Str Slap
	5	B.Slide **
	6	P.Scrape **
	7	
	8	
Chromatic	9	
Percussion	10	
	11	
	12	
	13	
	14	
	15	
	16	
Organ	17	Fl.KClik
	18	
	19	
	20	
	21	
	22	
	23	
	24	
Guitar	25	
	26	
	27	
	28	
	29	
	30	
	31	
	32	
Bass	33	Rain
	34	Thunder
	35	Wind
	36	Stream
	37	Bubble
	38	Feed**
	39	
	40	
Strings	41	
	42	
	43	
	44	
	45	
	46	
	47	
	48	
Ensemble	49	Dog
	50	Horse
	51	Bird 2
	52	Kitty **
	53	Growl **
	54	Haunted **
	55	Ghost
	56	Maou
Brass	57	
	58	
	59	
	60	
	61	
	62	
	63	
	64	
Reed	65	Tel.Dial**
	66	DoorSqek
	67	Door Slam
	68	Scratch
	69	Scratch 2**
	70	WindChm
	71	Telphon2
	72	
Pipe	73	
	74	
	75	
	76	
	77	
	78	
	79	
	80	
Synth Lead	81	CarEngin
	82	Car Stop
	83	Car Pass
	84	CarCrash
	85	Siren
	86	Train
	87	Jetplane
	88	Starship
Synth Pad	89	Burst
	90	Coaster
	91	SbMarine
	92	
	93	
	94	
	95	
	96	
Synth Effects	97	Laughing
	98	Scream
	99	Punch
	100	Heart
	101	FootStep
	102	Applaus2**
	103	
	104	
Ethnic	105	
	106	
	107	
	108	
	109	
	110	
	111	
	112	
Percussive	113	MchinGun
	114	LaserGun
	115	Xplosion
	116	FireWork
	117	
	118	
	119	
	120	
Sound Effects	121	
	122	
	123	
	124	
	125	
	126	
	127	
	128	

: NO Sound

** : [Ext.]

[Table 2]

XG DRUM MAP

Bank MSB#					127	127	127	127	127	127	127	127	127	126	126
Program #					1	2	9	17	25	26	33	41	49	1	2
Note#	Note		Key off	Alternate assign	Standard Kit	Standard2 Kit	Room Kit	Rock Kit	Electro Kit	Analog Kit	Jazz Kit	Brush Kit	Classic Kit	SFX 1	SFX 2
13	C#	-1		3	Surdo Mute										
14	D	-1		3	Surdo Open										
15	D#	-1			Hi Q										
16	E	-1			Whip Slap										
17	F	-1		4	Scratch Push										
18	F#	-1		4	Scratch Pull										
19	G	-1			Finger Snap										
20	G#	-1			Click Noise										
21	A	-1			Metronome Click										
22	A#	-1			Metronome Bell										
23	B	-1			Seq Click L										
24	C	0			Seq Click H										
25	C#	0			Brush Tap										
26	D	0	O		Brush Swirl L										
27	D#	0			Brush Slap										
28	E	0	O		Brush Swirl H				Reverse Cymbal	Reverse Cymbal					
29	F	0	O		Snare Roll	Snare Roll 2									
30	F#	0			Castanet				Hi Q	Hi Q					
31	G	0			Snare L	Snare L 2		SD Rock M	Snare M	SD Rock H		Brush Slap L			
32	G#	0			Sticks										
33	A	0			Bass Drum L			Bass Drum M	Bass Drum H 4	Bass Drum M			Bass Drum L2		
34	A#	0			Open Rim Shot	Open Rim Shot 2									
35	B	0			Bass Drum M	Bass Drum M 2		Bass Drum H 3	BD Rock	BD Analog L			Gran Cassa		
36	C	1			Bass Drum H	Bass Drum H 2	BD Room**	BD Rock	BD Gate	BD Analog H	BD Jazz	BD Soft	Gran Cassa Mute	Guitar Cutting Noise	Dial Tone
37	C#	1			Side Stick					Analog Side Stick				Guitar Cutting Noise 2	Door Creaking
38	D	1			Snare M	Snare M 2	SD Room L	SD Rock	SD Rock L	Analog Snare L		Brush Slap	Marching Sn M	Dist. Cut Noise **	Door Slam
39	D#	1			Hand Clap									String Slap	Scratch
40	E	1			Snare H	Snare H 2	SD Room H	SD Rock Rim	SD Rock H	Analog Snare H		Brush Tap	Marching Sn H	Bass Slide **	Scratch 2
41	F	1			Floor Tom L		Room Tom 1	Rock Tom 1	E Tom 1	Analog Tom 1	Jazz Tom 1	Brush Tom 1	Jazz Tom 1	Pick Scrape **	Windchime
42	F#	1		1	Hi-Hat Closed					Analog HH Closed 1					Telephone Ring2
43	G	1			Floor Tom H		Room Tom 2	Rock Tom 2	E Tom 2	Analog Tom 2	Jazz Tom 2	Brush Tom 2	Jazz Tom 2		
44	G#	1		1	Hi-Hat Pedal					Analog HH Closed 2					
45	A	1			Low Tom		Room Tom 3	Rock Tom 3	E Tom 3	Analog Tom 3	Jazz Tom 3	Brush Tom 3	Jazz Tom 3		
46	A#	1		1	Hi-Hat Open					Analog HH Open					
47	B	1			Mid Tom L		Room Tom 4	Rock Tom 4	E Tom 4	Analog Tom 4	Jazz Tom 4	Brush Tom 4	Jazz Tom 4		
48	C	2			Mid Tom H		Room Tom 5	Rock Tom 5	E Tom 5	Analog Tom 5	Jazz Tom 5	Brush Tom 5	Jazz Tom 5		
49	C#	2			Crash Cymbal 1					Analog Cymbal			Hand Cym.Open L		
50	D	2			High Tom		Room Tom 6	Rock Tom 6	E Tom 6	Analog Tom 6	Jazz Tom 6	Brush Tom 6	Jazz Tom 6		
51	D#	2			Ride Cymbal 1								Hand Cym.Closed L		
52	E	2			Chinese Cymbal									FL.Key Click	Engine Start
53	F	2			Ride Cymbal Cup										Tire Screech
54	F#	2			Tambourine										Car Passing
55	G	2			Splash Cymbal										Crash
56	G#	2			Cowbell					Analog Cowbell					Siren
57	A	2			Crash Cymbal 2								Hand Cym.Open H		Train
58	A#	2			Vibraslap										Jetplane
59	B	2			Ride Cymbal 2								Hand Cym.Closed H		Starship
60	C	3			Bongo H										Burst Noise
61	C#	3			Bongo L										Coaster
62	D	3			Conga H Mute					Analog Conga H					SbMarine
63	D#	3			Conga H Open					Analog Conga M					
64	E	3			Conga L					Analog Conga L					
65	F	3			Timbale H										
66	F#	3			Timbale L										
67	G	3			Agogo H										
68	G#	3			Agogo L									Rain	Laughing
69	A	3			Cabasa									Thunder	Screaming
70	A#	3			Maracas					Analog Maracas				Wind	Punch
71	B	3	O		Samba Whistle H									Stream	Heartbeat
72	C	4	O		Samba Whistle L									Bubble	Footsteps
73	C#	4			Guiro Short									Feed	Applaus2 **
74	D	4	O		Guiro Long										
75	D#	4			Claves					Analog Claves					
76	E	4			Wood Block H										
77	F	4			Wood Block L										
78	F#	4			Cuica Mute				Scratch Push	Scratch Push					
79	G	4			Cuica Open				Scratch Pull	Scratch Pull					
80	G#	4		2	Triangle Mute										
81	A	4		2	Triangle Open										
82	A#	4			Shaker										
83	B	4			Jingle Bell										
84	C	5			Bell Tree									Dog	Machine Gun
85	C#	5												Horse Gallop	Laser Gun
86	D	5												Bird 2	Explosion
87	D#	5												Kitty **	FireWork
88	E	5												Growl **	
89	F	5												Haunted **	
90	F#	5												Ghost	
91	G	5												Maou	

: Same as Standard Kit

: No Sound

** : [Ext.]

XG DRUM DEFAULT DATA

STANDARD

Note		Pitch		Level	Alt	Pan	Rev	Cho	Var	Key	Off	On	Coff	Q	Att	D1	D2
		C	F														
C#-1	Surdo Mute	64	64	102	3	51	95	95	127	0	0	1	64	64	64	64	64
D -1	Surdo Open	64	64	121	3	51	95	95	127	0	0	1	64	64	64	64	64
D#-1	Hi Q	64	64	63	0	51	127	127	127	0	0	1	64	64	64	64	64
E -1	Whip Slap	64	64	127	0	51	127	127	127	0	0	1	64	64	64	64	64
F -1	Scratch Push	64	64	93	4	52	63	63	127	0	0	1	64	64	64	64	64
F#-1	Scratch Pull	64	64	116	4	52	63	63	127	0	0	1	64	64	64	64	64
G -1	Finger Snap	64	64	127	0	64	75	0	127	0	0	1	64	64	64	64	64
G#-1	Click Noise	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A -1	Metronome Click	64	64	94	0	64	63	63	127	0	0	1	64	64	64	64	64
Bb-1	Metronome Bell	64	64	98	0	64	63	63	127	0	0	1	64	64	64	64	64
B -1	Seq Click L	64	64	87	0	64	127	127	127	0	0	1	64	64	64	64	64
C 0	Seq Click H	64	64	96	0	64	127	127	127	0	0	1	64	64	64	64	64
C#0	Brush Tap	64	64	49	0	64	127	127	127	0	0	1	64	64	64	64	64
D 0	Brush Swirl L	64	64	47	0	64	127	127	127	0	1	1	64	64	64	64	64
D#0	Brush Slap	64	64	52	0	64	127	127	127	0	0	1	64	64	64	64	64
E 0	Brush Swirl H	64	64	45	0	64	127	127	127	0	1	1	64	64	64	64	64
F 0	Snare Roll	64	64	79	0	64	127	127	127	0	1	1	64	64	64	64	64
F#0	Castanet	64	64	127	0	64	63	63	127	0	0	1	64	64	64	64	64
G 0	Snare L	64	64	75	0	64	127	127	127	0	0	1	64	64	64	64	64
G#0	Sticks	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A 0	Bass Drum L	64	64	116	0	64	32	32	127	0	0	1	64	64	64	64	64
Bb0	Open Rim Shot	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
B 0	Bass Drum M	64	64	102	0	64	32	32	127	0	0	1	64	64	64	64	64
C 1	Bass Drum H	64	64	127	0	64	32	32	127	0	0	1	64	64	64	64	64
C#1	Side Stick	64	64	93	0	64	127	127	127	0	0	1	64	64	64	64	64
D 1	Snare M	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
D#1	Hand Clap	64	64	110	0	64	127	127	127	0	0	1	64	64	64	64	64
E 1	Snare H	64	64	123	0	64	127	127	127	0	0	1	64	64	64	64	64
F 1	Floor Tom L	64	64	111	0	24	127	127	127	0	0	1	64	64	64	64	64
F#1	Hi-Hat Closed	64	64	91	1	77	32	32	127	0	0	1	64	64	64	64	64
G 1	Floor Tom H	64	64	113	0	39	127	127	127	0	0	1	64	64	64	64	64
G#1	Hi-Hat Pedal	64	64	97	1	77	32	32	127	0	0	1	64	64	64	64	64
A 1	Low Tom	64	64	104	0	52	127	127	127	0	0	1	64	64	64	64	64
Bb1	Hi-Hat Open	64	64	96	1	77	32	32	127	0	0	1	64	64	64	64	64
B 1	Mid Tom L	64	64	87	0	64	127	127	127	0	0	1	64	64	64	64	64
C 2	Mid Tom H	64	64	103	0	83	127	127	127	0	0	1	64	64	64	64	64
C#2	Crash Cymbal 1	64	64	127	0	69	127	127	127	0	0	1	64	64	64	64	64
D 2	High Tom	64	64	116	0	104	127	127	127	0	0	1	64	64	64	64	64
D#2	Ride Cymbal 1	64	64	105	0	34	127	127	127	0	0	1	64	64	64	64	64
E 2	Chinese Cymbal	64	64	120	0	34	127	127	127	0	0	1	64	64	64	64	64
F 2	Ride Cymbal Cup	64	64	107	0	46	127	127	127	0	0	1	64	64	64	64	64
F#2	Tambourine	64	64	120	0	64	63	63	127	0	0	1	64	64	64	64	64
G 2	Splash Cymbal	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G#2	Cowbell	64	64	118	0	77	63	63	127	0	0	1	64	64	64	64	64
A 2	Crash Cymbal 2	64	64	127	0	51	127	127	127	0	0	1	64	64	64	64	64
Bb2	Vibraslap	64	64	106	0	25	127	127	127	0	0	1	64	64	64	64	64
B 2	Ride Cymbal 2	64	64	110	0	46	127	127	127	0	0	1	64	64	64	64	64
C 3	Bongo H	64	64	110	0	110	95	95	127	0	0	1	64	64	64	64	64
C#3	Bongo L	64	64	87	0	110	95	95	127	0	0	1	64	64	64	64	64
D 3	Conga H Mute	64	64	73	0	39	127	127	127	0	0	1	64	64	64	64	64
D#3	Conga H Open	64	64	89	0	25	127	127	127	0	0	1	64	64	64	64	64
E 3	Conga L	64	64	111	0	64	95	95	127	0	0	1	64	64	64	64	64
F 3	Timbale H	64	64	91	0	64	127	127	127	0	0	1	64	64	64	64	64
F#3	Timbale L	64	64	95	0	64	127	127	127	0	0	1	64	64	64	64	64
G 3	Agogo H	64	64	108	0	34	100	100	127	0	0	1	64	64	64	64	64
G#3	Agogo L	64	64	108	0	34	100	100	127	0	0	1	64	64	64	64	64
A 3	Cabasa	64	64	90	0	28	63	63	127	0	0	1	64	64	64	64	64
Bb3	Maracas	64	64	103	0	21	63	63	127	0	0	1	64	64	64	64	64
B 3	Samba Whistle H	64	64	103	0	101	127	127	127	0	1	1	64	64	64	64	64
C 4	Samba Whistle L	64	64	110	0	101	127	127	127	0	1	1	64	64	64	64	64
C#4	Guiro Short	64	64	124	0	95	63	63	127	0	0	1	64	64	64	64	64
D 4	Guiro Long	64	64	106	0	110	63	63	127	0	1	1	64	64	64	64	64
D#4	Claves	64	64	88	0	64	95	95	127	0	0	1	64	64	64	64	64
E 4	Wood Block H	64	64	107	0	104	95	95	127	0	0	1	64	64	64	64	64
F 4	Wood Block L	64	64	96	0	104	95	95	127	0	0	1	64	64	64	64	64
F#4	Cuica Mute	64	64	97	0	21	127	127	127	0	0	1	64	64	64	64	64
G 4	Cuica Open	64	64	107	0	34	127	127	127	0	0	1	64	64	64	64	64
G#4	Triangle Mute	64	64	127	2	25	95	95	127	0	0	1	64	64	64	64	64
A 4	Triangle Open	64	64	127	2	25	127	127	127	0	0	1	64	64	64	64	64
Bb4	Shaker	64	64	106	0	83	63	63	127	0	0	1	64	64	64	64	64
B 4	Jingle Bell	64	64	123	0	105	127	127	127	0	0	1	64	64	64	64	64
C 5	Bell Tree	64	64	68	0	64	127	127	127	0	0	1	64	64	64	64	64

Note		Pitch		Level	Alt	Pan	Rev	Cho	Var	Key	Off	On	Coff	Q	Att	D1	D2
		C	F														
C#-1	Surdo Mute	64	64	102	3	51	95	95	127	0	0	1	64	64	64	64	64
D -1	Surdo Open	64	64	121	3	51	95	95	127	0	0	1	64	64	64	64	64
D#-1	Hi Q	64	64	63	0	51	127	127	127	0	0	1	64	64	64	64	64
E -1	Whip Slap	64	64	127	0	51	127	127	127	0	0	1	64	64	64	64	64
F -1	Scratch Push	64	64	93	4	52	63	63	127	0	0	1	64	64	64	64	64
F#-1	Scratch Pull	64	64	116	4	52	63	63	127	0	0	1	64	64	64	64	64
G -1	Finger Snap	64	64	127	0	64	75	0	127	0	0	1	64	64	64	64	64
G#-1	Click Noise	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A -1	Metronome Click	64	64	94	0	64	63	63	127	0	0	1	64	64	64	64	64
Bb-1	Metronome Bell	64	64	98	0	64	63	63	127	0	0	1	64	64	64	64	64
B -1	Seq Click L	64	64	87	0	64	127	127	127	0	0	1	64	64	64	64	64
C 0	Seq Click H	64	64	96	0	64	127	127	127	0	0	1	64	64	64	64	64
C#0	Brush Tap	64	64	49	0	64	127	127	127	0	0	1	64	64	64	64	64
D 0	Brush Swirl L	64	64	47	0	64	127	127	127	0	1	1	64	64	64	64	64
D#0	Brush Slap	64	64	52	0	64	127	127	127	0	0	1	64	64	64	64	64
E 0	Brush Swirl H	64	64	45	0	64	127	127	127	0	1	1	64	64	64	64	64
F 0	Snare Roll 2	64	64	79	0	64	127	127	0	0	1	1	64	64	64	64	64
F#0	Castanet	64	64	127	0	64	63	63	127	0	0	1	64	64	64	64	64
G 0	Snare L 2	64	64	75	0	64	127	127	0	0	0	1	64	64	64	64	64
G#0	Sticks	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A 0	Bass Drum L	64	64	116	0	64	32	32	127	0	0	1	64	64	64	64	64
Bb0	Open Rim Shot 2	64	64	127	0	64	127	127	0	0	0	1	64	64	64	64	64
B 0	Bass Drum M 2	64	64	102	0	64	32	32	0	0	0	1	64	64	64	64	64
C 1	Bass Drum H 2	64	64	127	0	64	32	32	0	0	0	1	64	64	64	64	64
C#1	Side Stick	64	64	93	0	64	127	127	127	0	0	1	64	64	64	64	64
D 1	Snare M 2	64	64	127	0	64	127	127	0	0	0	1	64	64	64	64	64
D#1	Hand Clap	64	64	110	0	64	127	127	127	0	0	1	64	64	64	64	64
E 1	Snare H 2	64	64	123	0	64	127	127	0	0	0	1	64	64	64	64	64
F 1	Floor Tom L	64	64	111	0	24	127	127	127	0	0	1	64	64	64	64	64
F#1	Hi-Hat Closed	64	64	91	1	77	32	32	127	0	0	1	64	64	64	64	64
G 1	Floor Tom H	64	64	113	0	39	127	127	127	0	0	1	64	64	64	64	64
G#1	Hi-Hat Pedal	64	64	97	1	77	32	32	127	0	0	1	64	64	64	64	64
A 1	Low Tom	64	64	104	0	52	127	127	127	0	0	1	64	64	64	64	64
Bb1	Hi-Hat Open	64	64	96	1	77	32	32	127	0	0	1	64	64	64	64	64
B 1	Mid Tom L	64	64	87	0	64	127	127	127	0	0	1	64	64	64	64	64
C 2	Mid Tom H	64	64	103	0	83	127	127	127	0	0	1	64	64	64	64	64
C#2	Crash Cymbal 1	64	64	127	0	69	127	127	127	0	0	1	64	64	64	64	64
D 2	High Tom	64	64	116	0	104	127	127	127	0	0	1	64	64	64	64	64
D#2	Ride Cymbal 1	64	64	105	0	34	127	127	127	0	0	1	64	64	64	64	64
E 2	Chinese Cymbal	64	64	120	0	34	127	127	127	0	0	1	64	64	64	64	64
F 2	Ride Cymbal Cup	64	64	107	0	46	127	127	127	0	0	1	64	64	64	64	64
F#2	Tambourine	64	64	120	0	64	63	63	127	0	0	1	64	64	64	64	64
G 2	Splash Cymbal	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G#2	Cowbell	64	64	118	0	77	63	63	127	0	0	1	64	64	64	64	64
A 2	Crash Cymbal 2	64	64	127	0	51	127	127	127	0	0	1	64	64	64	64	64
Bb2	Vibraslap	64	64	106	0	25	127	127	127	0	0	1	64	64	64	64	64
B 2	Ride Cymbal 2	64	64	110	0	46	127	127	127	0	0	1	64	64	64	64	64
C 3	Bongo H	64	64	110	0	110	95	95	127	0	0	1	64	64	64	64	64
C#3	Bongo L	64	64	87	0	110	95	95	127	0	0	1	64	64	64	64	64
D 3	Conga H Mute	64	64	73	0	39	127	127	127	0	0	1	64	64	64	64	64
D#3	Conga H Open	64	64	89	0	25	127	127	127	0	0	1	64	64	64	64	64
E 3	Conga L	64	64	111	0	64	95	95	127	0	0	1	64	64	64	64	64
F 3	Timbale H	64	64	91	0	64	127	127	127	0	0	1	64	64	64	64	64
F#3	Timbale L	64	64	95	0	64	127	127	127	0	0	1	64	64	64	64	64
G 3	Agogo H	64	64	108	0	34	100	100	127	0	0	1	64	64	64	64	64
G#3	Agogo L	64	64	108	0	34	100	100	127	0	0	1	64	64	64	64	64
A 3	Cabasa	64	64	90	0	28	63	63	127	0	0	1	64	64	64	64	64
Bb3	Maracas	64	64	103	0	21	63	63	127	0	0	1	64	64	64	64	64
B 3	Samba Whistle H	64	64	103	0	101	127	127	127	0	1	1	64	64	64	64	64
C 4	Samba Whistle L	64	64	110	0	101	127	127	127	0	1	1	64	64	64	64	64
C#4	Guiro Short	64	64	124	0	95	63	63	127	0	0	1	64	64	64	64	64
D 4	Guiro Long	64	64	106	0	110	63	63	127	0	1	1	64	64	64	64	64
D#4	Claves	64	64	88	0	64	95	95	127	0	0	1	64	64	64	64	64
E 4	Wood Block H	64	64	107	0	104	95	95	127	0	0	1	64	64	64	64	64
F 4	Wood Block L	64	64	96	0	104	95	95	127	0	0	1	64	64	64	64	64
F#4	Cuica Mute	64	64	97	0	21	127	127	127	0	0	1	64	64	64	64	64
G 4	Cuica Open	64	64	107	0	34	127	127	127	0	0	1	64	64	64	64	64
G#4	Triangle Mute	64	64	127	2	25	95	95	127	0	0	1	64	64	64	64	64
A 4	Triangle Open	64	64	127	2	25	127	127	127	0	0	1	64	64	64	64	64
Bb4	Shaker	64	64	106	0	83	63	63	127	0	0	1	64	64	64	64	64
B 4	Jingle Bell	64	64	123	0	105	127	127	127	0	0	1	64	64	64	64	64
C 5	Bell Tree	64	64	68	0	64	127	127	127	0	0	1	64	64	64	64	64

Note		Pitch		Level	Alt	Pan	Rev	Cho	Var	Key	Off	On	Coff	Q	Att	D1	D2
		C	F														
C#-1	Surdo Mute	64	64	102	3	51	95	95	127	0	0	1	64	64	64	64	64
D -1	Surdo Open	64	64	121	3	51	95	95	127	0	0	1	64	64	64	64	64
D#-1	Hi Q	64	64	63	0	51	127	127	127	0	0	1	64	64	64	64	64
E -1	Whip Slap	64	64	127	0	51	127	127	127	0	0	1	64	64	64	64	64
F -1	Scratch Push	64	64	93	4	52	63	63	127	0	0	1	64	64	64	64	64
F#-1	Scratch Pull	64	64	116	4	52	63	63	127	0	0	1	64	64	64	64	64
G -1	Finger Snap	64	64	127	0	64	75	0	127	0	0	1	64	64	64	64	64
G#-1	Click Noise	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A -1	Metronome Click	64	64	94	0	64	63	63	127	0	0	1	64	64	64	64	64
Bb-1	Metronome Bell	64	64	98	0	64	63	63	127	0	0	1	64	64	64	64	64
B -1	Seq Click L	64	64	87	0	64	127	127	127	0	0	1	64	64	64	64	64
C 0	Seq Click H	64	64	96	0	64	127	127	127	0	0	1	64	64	64	64	64
C#0	Brush Tap	64	64	49	0	64	127	127	127	0	0	1	64	64	64	64	64
D 0	Brush Swirl L	64	64	47	0	64	127	127	127	0	1	1	64	64	64	64	64
D#0	Brush Slap	64	64	52	0	64	127	127	127	0	0	1	64	64	64	64	64
E 0	Brush Swirl H	64	64	45	0	64	127	127	127	0	1	1	64	64	64	64	64
F 0	Snare Roll	64	64	79	0	64	127	127	127	0	1	1	64	64	64	64	64
F#0	Castanet	64	64	127	0	64	63	63	127	0	0	1	64	64	64	64	64
G 0	Snare L	64	64	75	0	64	127	127	127	0	0	1	64	64	64	64	64
G#0	Sticks	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A 0	Bass Drum L	64	64	116	0	64	32	32	127	0	0	1	64	64	64	64	64
Bb0	Open Rim Shot	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
B 0	Bass Drum M	64	64	102	0	64	32	32	127	0	0	1	64	64	64	64	64
C 1	BD Room	64	64	127	0	64	32	32	127	0	0	1	64	64	64	64	64
C#1	Side Stick	64	64	93	0	64	127	127	127	0	0	1	64	64	64	64	64
D 1	SD Room L	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
D#1	Hand Clap	64	64	110	0	64	127	127	127	0	0	1	64	64	64	64	64
E 1	SD Room H	64	64	123	0	64	127	127	127	0	0	1	64	64	64	64	64
F 1	Room Tom 1	64	64	123	0	24	127	127	127	0	0	1	64	64	64	64	64
F#1	Hi-Hat Closed	64	64	91	1	77	32	32	127	0	0	1	64	64	64	64	64
G 1	Room Tom 2	64	64	127	0	39	127	127	127	0	0	1	64	64	64	64	64
G#1	Hi-Hat Pedal	64	64	97	1	77	32	32	127	0	0	1	64	64	64	64	64
A 1	Room Tom 3	64	64	117	0	52	127	127	127	0	0	1	64	64	64	64	64
Bb1	Hi-Hat Open	64	64	96	1	77	32	32	127	0	0	1	64	64	64	64	64
B 1	Room Tom 4	64	64	121	0	64	127	127	127	0	0	1	64	64	64	64	64
C 2	Room Tom 5	64	64	126	0	83	127	127	127	0	0	1	64	64	64	64	64
C#2	Crash Cymbal 1	64	64	127	0	69	127	127	127	0	0	1	64	64	64	64	64
D 2	Room Tom 6	64	64	124	0	95	127	127	127	0	0	1	64	64	64	64	64
D#2	Ride Cymbal 1	64	64	105	0	34	127	127	127	0	0	1	64	64	64	64	64
E 2	Chinese Cymbal	64	64	120	0	34	127	127	127	0	0	1	64	64	64	64	64
F 2	Ride Cymbal Cup	64	64	107	0	46	127	127	127	0	0	1	64	64	64	64	64
F#2	Tambourine	64	64	120	0	64	63	63	127	0	0	1	64	64	64	64	64
G 2	Splash Cymbal	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G#2	Cowbell	64	64	118	0	77	63	63	127	0	0	1	64	64	64	64	64
A 2	Crash Cymbal 2	64	64	127	0	51	127	127	127	0	0	1	64	64	64	64	64
Bb2	Vibraslap	64	64	106	0	25	127	127	127	0	0	1	64	64	64	64	64
B 2	Ride Cymbal 2	64	64	110	0	46	127	127	127	0	0	1	64	64	64	64	64
C 3	Bongo H	64	64	110	0	110	95	95	127	0	0	1	64	64	64	64	64
C#3	Bongo L	64	64	87	0	110	95	95	127	0	0	1	64	64	64	64	64
D 3	Conga H Mute	64	64	73	0	39	127	127	127	0	0	1	64	64	64	64	64
D#3	Conga H Open	64	64	89	0	25	127	127	127	0	0	1	64	64	64	64	64
E 3	Conga L	64	64	111	0	64	95	95	127	0	0	1	64	64	64	64	64
F 3	Timbale H	64	64	91	0	64	127	127	127	0	0	1	64	64	64	64	64
F#3	Timbale L	64	64	95	0	64	127	127	127	0	0	1	64	64	64	64	64
G 3	Agogo H	64	64	108	0	34	100	100	127	0	0	1	64	64	64	64	64
G#3	Agogo L	64	64	108	0	34	100	100	127	0	0	1	64	64	64	64	64
A 3	Cabasa	64	64	90	0	28	63	63	127	0	0	1	64	64	64	64	64
Bb3	Maracas	64	64	103	0	21	63	63	127	0	0	1	64	64	64	64	64
B 3	Samba Whistle H	64	64	103	0	101	127	127	127	0	1	1	64	64	64	64	64
C 4	Samba Whistle L	64	64	110	0	101	127	127	127	0	1	1	64	64	64	64	64
C#4	Guiro Short	64	64	124	0	95	63	63	127	0	0	1	64	64	64	64	64
D 4	Guiro Long	64	64	106	0	110	63	63	127	0	1	1	64	64	64	64	64
D#4	Claves	64	64	88	0	64	95	95	127	0	0	1	64	64	64	64	64
E 4	Wood Block H	64	64	107	0	104	95	95	127	0	0	1	64	64	64	64	64
F 4	Wood Block L	64	64	96	0	104	95	95	127	0	0	1	64	64	64	64	64
F#4	Cuica Mute	64	64	97	0	21	127	127	127	0	0	1	64	64	64	64	64
G 4	Cuica Open	64	64	107	0	34	127	127	127	0	0	1	64	64	64	64	64
G#4	Triangle Mute	64	64	127	2	25	95	95	127	0	0	1	64	64	64	64	64
A 4	Triangle Open	64	64	127	2	25	127	127	127	0	0	1	64	64	64	64	64
Bb4	Shaker	64	64	106	0	83	63	63	127	0	0	1	64	64	64	64	64
B 4	Jingle Bell	64	64	123	0	105	127	127	127	0	0	1	64	64	64	64	64
C 5	Bell Tree	64	64	68	0	64	127	127	127	0	0	1	64	64	64	64	64

Note		Pitch		Level	Alt	Pan	Rev	Cho	Var	Key	Off	On	Coff	Q	Att	D1	D2
		C	F														
C#-1	Surdo Mute	64	64	102	3	51	95	95	127	0	0	1	64	64	64	64	64
D -1	Surdo Open	64	64	121	3	51	95	95	127	0	0	1	64	64	64	64	64
D#-1	Hi Q	64	64	63	0	51	127	127	127	0	0	1	64	64	64	64	64
E -1	Whip Slap	64	64	127	0	51	127	127	127	0	0	1	64	64	64	64	64
F -1	Scratch Push	64	64	93	4	52	63	63	127	0	0	1	64	64	64	64	64
F#-1	Scratch Pull	64	64	116	4	52	63	63	127	0	0	1	64	64	64	64	64
G -1	Finger Snap	64	64	127	0	64	75	0	127	0	0	1	64	64	64	64	64
G#-1	Click Noise	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A -1	Metronome Click	64	64	94	0	64	63	63	127	0	0	1	64	64	64	64	64
Bb-1	Metronome Bell	64	64	98	0	64	63	63	127	0	0	1	64	64	64	64	64
B -1	Seq Click L	64	64	87	0	64	127	127	127	0	0	1	64	64	64	64	64
C 0	Seq Click H	64	64	96	0	64	127	127	127	0	0	1	64	64	64	64	64
C#0	Brush Tap	64	64	49	0	64	127	127	127	0	0	1	64	64	64	64	64
D 0	Brush Swirl L	64	64	47	0	64	127	127	127	0	1	1	64	64	64	64	64
D#0	Brush Slap	64	64	52	0	64	127	127	127	0	0	1	64	64	64	64	64
E 0	Brush Swirl H	64	64	45	0	64	127	127	127	0	1	1	64	64	64	64	64
F 0	Snare Roll	64	64	79	0	64	127	127	127	0	1	1	64	64	64	64	64
F#0	Castanet	64	64	127	0	64	63	63	127	0	0	1	64	64	64	64	64
G 0	SD Rock M	64	64	121	0	64	127	127	127	0	0	1	64	64	64	64	64
G#0	Sticks	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A 0	Bass Drum M	64	64	111	0	64	32	32	127	0	0	1	64	64	64	64	64
Bb0	Open Rim Shot	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
B 0	Bass Drum H 3	64	64	127	0	64	32	32	127	0	0	1	64	64	64	64	64
C 1	BD Rock	64	64	119	0	64	32	32	127	0	0	1	64	64	64	64	64
C#1	Side Stick	64	64	93	0	64	127	127	127	0	0	1	64	64	64	64	64
D 1	SD Rock	64	64	110	0	64	127	127	127	0	0	1	64	64	64	64	64
D#1	Hand Clap	64	64	110	0	64	127	127	127	0	0	1	64	64	64	64	64
E 1	SD Rock Rim	64	64	119	0	64	127	127	127	0	0	1	64	64	64	64	64
F 1	Rock Tom 1	64	64	123	0	24	127	127	127	0	0	1	64	64	64	64	64
F#1	Hi-Hat Closed	64	64	91	1	77	32	32	127	0	0	1	64	64	64	64	64
G 1	Rock Tom 2	64	64	127	0	39	127	127	127	0	0	1	64	64	64	64	64
G#1	Hi-Hat Pedal	64	64	97	1	77	32	32	127	0	0	1	64	64	64	64	64
A 1	Rock Tom 3	64	64	117	0	52	127	127	127	0	0	1	64	64	64	64	64
Bb1	Hi-Hat Open	64	64	96	1	77	32	32	127	0	0	1	64	64	64	64	64
B 1	Rock Tom 4	64	64	121	0	64	127	127	127	0	0	1	64	64	64	64	64
C 2	Rock Tom 5	64	64	123	0	83	127	127	127	0	0	1	64	64	64	64	64
C#2	Crash Cymbal 1	64	64	127	0	69	127	127	127	0	0	1	64	64	64	64	64
D 2	Rock Tom 6	64	64	124	0	95	127	127	127	0	0	1	64	64	64	64	64
D#2	Ride Cymbal 1	64	64	105	0	34	127	127	127	0	0	1	64	64	64	64	64
E 2	Chinese Cymbal	64	64	120	0	34	127	127	127	0	0	1	64	64	64	64	64
F 2	Ride Cymbal Cup	64	64	107	0	46	127	127	127	0	0	1	64	64	64	64	64
F#2	Tambourine	64	64	120	0	64	63	63	127	0	0	1	64	64	64	64	64
G 2	Splash Cymbal	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G#2	Cowbell	64	64	118	0	77	63	63	127	0	0	1	64	64	64	64	64
A 2	Crash Cymbal 2	64	64	127	0	51	127	127	127	0	0	1	64	64	64	64	64
Bb2	Vibraslap	64	64	106	0	25	127	127	127	0	0	1	64	64	64	64	64
B 2	Ride Cymbal 2	64	64	110	0	46	127	127	127	0	0	1	64	64	64	64	64
C 3	Bongo H	64	64	110	0	110	95	95	127	0	0	1	64	64	64	64	64
C#3	Bongo L	64	64	87	0	110	95	95	127	0	0	1	64	64	64	64	64
D 3	Conga H Mute	64	64	73	0	39	127	127	127	0	0	1	64	64	64	64	64
D#3	Conga H Open	64	64	89	0	25	127	127	127	0	0	1	64	64	64	64	64
E 3	Conga L	64	64	111	0	64	95	95	127	0	0	1	64	64	64	64	64
F 3	Timbale H	64	64	91	0	64	127	127	127	0	0	1	64	64	64	64	64
F#3	Timbale L	64	64	95	0	64	127	127	127	0	0	1	64	64	64	64	64
G 3	Agogo H	64	64	108	0	34	100	100	127	0	0	1	64	64	64	64	64
G#3	Agogo L	64	64	108	0	34	100	100	127	0	0	1	64	64	64	64	64
A 3	Cabasa	64	64	90	0	28	63	63	127	0	0	1	64	64	64	64	64
Bb3	Maracas	64	64	103	0	21	63	63	127	0	0	1	64	64	64	64	64
B 3	Samba Whistle H	64	64	103	0	101	127	127	127	0	1	1	64	64	64	64	64
C 4	Samba Whistle L	64	64	110	0	101	127	127	127	0	1	1	64	64	64	64	64
C#4	Guiro Short	64	64	124	0	95	63	63	127	0	0	1	64	64	64	64	64
D 4	Guiro Long	64	64	106	0	110	63	63	127	0	1	1	64	64	64	64	64
D#4	Claves	64	64	88	0	64	95	95	127	0	0	1	64	64	64	64	64
E 4	Wood Block H	64	64	107	0	104	95	95	127	0	0	1	64	64	64	64	64
F 4	Wood Block L	64	64	96	0	104	95	95	127	0	0	1	64	64	64	64	64
F#4	Cuica Mute	64	64	97	0	21	127	127	127	0	0	1	64	64	64	64	64
G 4	Cuica Open	64	64	107	0	34	127	127	127	0	0	1	64	64	64	64	64
G#4	Triangle Mute	64	64	127	2	25	95	95	127	0	0	1	64	64	64	64	64
A 4	Triangle Open	64	64	127	2	25	127	127	127	0	0	1	64	64	64	64	64
Bb4	Shaker	64	64	106	0	83	63	63	127	0	0	1	64	64	64	64	64
B 4	Jingle Bell	64	64	123	0	105	127	127	127	0	0	1	64	64	64	64	64
C 5	Bell Tree	64	64	68	0	64	127	127	127	0	0	1	64	64	64	64	64

Note		Pitch		Level	Alt	Pan	Rev	Cho	Var	Key	Off	On	Coff	Q	Att	D1	D2
		C	F														
C#-1	Surdo Mute	64	64	102	3	51	95	95	127	0	0	1	64	64	64	64	64
D -1	Surdo Open	64	64	121	3	51	95	95	127	0	0	1	64	64	64	64	64
D#-1	Hi Q	64	64	63	0	51	127	127	127	0	0	1	64	64	64	64	64
E -1	Whip Slap	64	64	127	0	51	127	127	127	0	0	1	64	64	64	64	64
F -1	Scratch Push	64	64	93	4	52	63	63	127	0	0	1	64	64	64	64	64
F#-1	Scratch Pull	64	64	116	4	52	63	63	127	0	0	1	64	64	64	64	64
G -1	Finger Snap	64	64	127	0	64	75	0	127	0	0	1	64	64	64	64	64
G#-1	Click Noise	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A -1	Metronome Click	64	64	94	0	64	63	63	127	0	0	1	64	64	64	64	64
Bb-1	Metronome Bell	64	64	98	0	64	63	63	127	0	0	1	64	64	64	64	64
B -1	Seq Click L	64	64	87	0	64	127	127	127	0	0	1	64	64	64	64	64
C 0	Seq Click H	64	64	96	0	64	127	127	127	0	0	1	64	64	64	64	64
C#0	Brush Tap	64	64	49	0	64	127	127	127	0	0	1	64	64	64	64	64
D 0	Brush Swirl L	64	64	47	0	64	127	127	127	0	1	1	64	64	64	64	64
D#0	Brush Slap	64	64	52	0	64	127	127	127	0	0	1	64	64	64	64	64
E 0	Reverse Cymbal	64	64	100	0	64	127	127	127	0	1	1	64	64	64	64	64
F 0	Snare Roll	64	64	79	0	64	127	127	127	0	1	1	64	64	64	64	64
F#0	Hi Q	64	64	127	0	64	63	63	127	0	0	1	64	64	64	64	64
G 0	Snare M	64	64	114	0	64	127	127	127	0	0	1	64	64	64	64	64
G#0	Sticks	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A 0	Bass Drum H 4	64	64	123	0	64	32	32	127	0	0	1	64	64	64	64	64
Bb0	Open Rim Shot	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
B 0	BD Rock	64	64	127	0	64	32	32	127	0	0	1	64	64	64	64	64
C 1	BD Gate	64	64	122	0	64	32	32	127	0	0	1	64	64	64	64	64
C#1	Side Stick	64	64	93	0	64	127	127	127	0	0	1	64	64	64	64	64
D 1	SD Rock L	64	64	107	0	64	127	127	127	0	0	1	64	64	64	64	64
D#1	Hand Clap	64	64	110	0	64	127	127	127	0	0	1	64	64	64	64	64
E 1	SD Rock H	64	64	102	0	64	127	127	127	0	0	1	64	64	64	64	64
F 1	E Tom 1	64	64	92	0	24	127	127	127	0	0	1	64	64	64	64	64
F#1	Hi-Hat Closed	64	64	91	1	77	32	32	127	0	0	1	64	64	64	64	64
G 1	E Tom 2	64	64	94	0	39	127	127	127	0	0	1	64	64	64	64	64
G#1	Hi-Hat Pedal	64	64	97	1	77	32	32	127	0	0	1	64	64	64	64	64
A 1	E Tom 3	64	64	97	0	52	127	127	127	0	0	1	64	64	64	64	64
Bb1	Hi-Hat Open	64	64	96	1	77	32	32	127	0	0	1	64	64	64	64	64
B 1	E Tom 4	64	64	93	0	64	127	127	127	0	0	1	64	64	64	64	64
C 2	E Tom 5	64	64	102	0	83	127	127	127	0	0	1	64	64	64	64	64
C#2	Crash Cymbal 1	64	64	127	0	69	127	127	127	0	0	1	64	64	64	64	64
D 2	E Tom 6	64	64	97	0	101	127	127	127	0	0	1	64	64	64	64	64
D#2	Ride Cymbal 1	64	64	105	0	34	127	127	127	0	0	1	64	64	64	64	64
E 2	Chinese Cymbal	64	64	120	0	34	127	127	127	0	0	1	64	64	64	64	64
F 2	Ride Cymbal Cup	64	64	107	0	46	127	127	127	0	0	1	64	64	64	64	64
F#2	Tambourine	64	64	120	0	64	63	63	127	0	0	1	64	64	64	64	64
G 2	Splash Cymbal	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G#2	Cowbell	64	64	118	0	77	63	63	127	0	0	1	64	64	64	64	64
A 2	Crash Cymbal 2	64	64	127	0	51	127	127	127	0	0	1	64	64	64	64	64
Bb2	Vibraslap	64	64	106	0	25	127	127	127	0	0	1	64	64	64	64	64
B 2	Ride Cymbal 2	64	64	110	0	46	127	127	127	0	0	1	64	64	64	64	64
C 3	Bongo H	64	64	110	0	110	95	95	127	0	0	1	64	64	64	64	64
C#3	Bongo L	64	64	87	0	110	95	95	127	0	0	1	64	64	64	64	64
D 3	Conga H Mute	64	64	73	0	39	127	127	127	0	0	1	64	64	64	64	64
D#3	Conga H Open	64	64	89	0	25	127	127	127	0	0	1	64	64	64	64	64
E 3	Conga L	64	64	111	0	64	95	95	127	0	0	1	64	64	64	64	64
F 3	Timbale H	64	64	91	0	64	127	127	127	0	0	1	64	64	64	64	64
F#3	Timbale L	64	64	95	0	64	127	127	127	0	0	1	64	64	64	64	64
G 3	Agogo H	64	64	108	0	34	100	100	127	0	0	1	64	64	64	64	64
G#3	Agogo L	64	64	108	0	34	100	100	127	0	0	1	64	64	64	64	64
A 3	Cabasa	64	64	90	0	28	63	63	127	0	0	1	64	64	64	64	64
Bb3	Maracas	64	64	103	0	21	63	63	127	0	0	1	64	64	64	64	64
B 3	Samba Whistle H	64	64	103	0	101	127	127	127	0	1	1	64	64	64	64	64
C 4	Samba Whistle L	64	64	110	0	101	127	127	127	0	1	1	64	64	64	64	64
C#4	Guiro Short	64	64	124	0	95	63	63	127	0	0	1	64	64	64	64	64
D 4	Guiro Long	64	64	106	0	110	63	63	127	0	1	1	64	64	64	64	64
D#4	Claves	64	64	88	0	64	95	95	127	0	0	1	64	64	64	64	64
E 4	Wood Block H	64	64	107	0	104	95	95	127	0	0	1	64	64	64	64	64
F 4	Wood Block L	64	64	96	0	104	95	95	127	0	0	1	64	64	64	64	64
F#4	Scratch Push	64	64	89	4	21	127	127	127	0	0	1	64	64	64	64	64
G 4	Scratch Pull	64	64	94	4	34	127	127	127	0	0	1	64	64	64	64	64
G#4	Triangle Mute	64	64	127	2	25	95	95	127	0	0	1	64	64	64	64	64
A 4	Triangle Open	64	64	127	2	25	127	127	127	0	0	1	64	64	64	64	64
Bb4	Shaker	64	64	106	0	83	63	63	127	0	0	1	64	64	64	64	64
B 4	Jingle Bell	64	64	123	0	105	127	127	127	0	0	1	64	64	64	64	64
C 5	Bell Tree	64	64	68	0	64	127	127	127	0	0	1	64	64	64	64	64

Note		Pitch		Level	Alt	Pan	Rev	Cho	Var	Key	Off	On	Coff	Q	Att	D1	D2
		C	F														
C#-1	Surdo Mute	64	64	102	3	51	95	95	127	0	0	1	64	64	64	64	64
D -1	Surdo Open	64	64	121	3	51	95	95	127	0	0	1	64	64	64	64	64
D#-1	Hi Q	64	64	63	0	51	127	127	127	0	0	1	64	64	64	64	64
E -1	Whip Slap	64	64	127	0	51	127	127	127	0	0	1	64	64	64	64	64
F -1	Scratch Push	64	64	93	4	52	63	63	127	0	0	1	64	64	64	64	64
F#-1	Scratch Pull	64	64	116	4	52	63	63	127	0	0	1	64	64	64	64	64
G -1	Finger Snap	64	64	127	0	64	75	0	127	0	0	1	64	64	64	64	64
G#-1	Click Noise	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A -1	Metronome Click	64	64	94	0	64	63	63	127	0	0	1	64	64	64	64	64
Bb-1	Metronome Bell	64	64	98	0	64	63	63	127	0	0	1	64	64	64	64	64
B -1	Seq Click L	64	64	87	0	64	127	127	127	0	0	1	64	64	64	64	64
C 0	Seq Click H	64	64	96	0	64	127	127	127	0	0	1	64	64	64	64	64
C#0	Brush Tap	64	64	49	0	64	127	127	127	0	0	1	64	64	64	64	64
D 0	Brush Swirl L	64	64	47	0	64	127	127	127	0	1	1	64	64	64	64	64
D#0	Brush Slap	64	64	52	0	64	127	127	127	0	0	1	64	64	64	64	64
E 0	Reverse Cymbal	64	64	100	0	64	127	127	127	0	1	1	64	64	64	64	64
F 0	Snare Roll	64	64	79	0	64	127	127	127	0	1	1	64	64	64	64	64
F#0	Hi Q	64	64	127	0	64	63	63	127	0	0	1	64	64	64	64	64
G 0	SD Rock H	64	64	120	0	64	127	127	127	0	0	1	64	64	64	64	64
G#0	Sticks	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A 0	Bass Drum M	64	64	111	0	64	32	32	127	0	0	1	64	64	64	64	64
Bb0	Open Rim Shot	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
B 0	BD Analog L	64	64	123	0	64	32	32	127	0	0	1	64	64	64	64	64
C 1	BD Analog H	64	64	127	0	64	32	32	127	0	0	1	64	64	64	64	64
C#1	Analog Side Stick	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
D 1	Analog Snare L	64	64	107	0	64	127	127	127	0	0	1	64	64	64	64	64
D#1	Hand Clap	64	64	110	0	64	127	127	127	0	0	1	64	64	64	64	64
E 1	Analog Snare H	64	64	102	0	64	127	127	127	0	0	1	64	64	64	64	64
F 1	Analog Tom 1	64	64	127	0	24	127	127	127	0	0	1	64	64	64	64	64
F#1	Analog HH Closed 1	64	64	108	1	77	32	32	127	0	0	1	64	64	64	64	64
G 1	Analog Tom 2	64	64	112	0	39	127	127	127	0	0	1	64	64	64	64	64
G#1	Analog HH Closed 2	64	64	91	1	77	32	32	127	0	0	1	64	64	64	64	64
A 1	Analog Tom 3	64	64	108	0	52	127	127	127	0	0	1	64	64	64	64	64
Bb1	Analog HH Open	64	64	96	1	77	32	32	127	0	0	1	64	64	64	64	64
B 1	Analog Tom 4	64	64	112	0	64	127	127	127	0	0	1	64	64	64	64	64
C 2	Analog Tom 5	64	64	109	0	83	127	127	127	0	0	1	64	64	64	64	64
C#2	Analog Cymbal	64	64	109	0	69	127	127	127	0	0	1	64	64	64	64	64
D 2	Analog Tom 6	64	64	109	0	101	127	127	127	0	0	1	64	64	64	64	64
D#2	Ride Cymbal 1	64	64	105	0	34	127	127	127	0	0	1	64	64	64	64	64
E 2	Chinese Cymbal	64	64	120	0	34	127	127	127	0	0	1	64	64	64	64	64
F 2	Ride Cymbal Cup	64	64	107	0	46	127	127	127	0	0	1	64	64	64	64	64
F#2	Tambourine	64	64	120	0	64	63	63	127	0	0	1	64	64	64	64	64
G 2	Splash Cymbal	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G#2	Analog Cowbell	64	64	118	0	77	63	63	127	0	0	1	64	64	64	64	64
A 2	Crash Cymbal 2	64	64	127	0	51	127	127	127	0	0	1	64	64	64	64	64
Bb2	Vibraslap	64	64	106	0	25	127	127	127	0	0	1	64	64	64	64	64
B 2	Ride Cymbal 2	64	64	110	0	46	127	127	127	0	0	1	64	64	64	64	64
C 3	Bongo H	64	64	110	0	110	95	95	127	0	0	1	64	64	64	64	64
C#3	Bongo L	64	64	87	0	110	95	95	127	0	0	1	64	64	64	64	64
D 3	Analog Conga H	64	64	89	0	39	127	127	127	0	0	1	64	64	64	64	64
D#3	Analog Conga M	64	64	89	0	25	127	127	127	0	0	1	64	64	64	64	64
E 3	Analog Conga L	64	64	115	0	64	95	95	127	0	0	1	64	64	64	64	64
F 3	Timbale H	64	64	91	0	64	127	127	127	0	0	1	64	64	64	64	64
F#3	Timbale L	64	64	95	0	64	127	127	127	0	0	1	64	64	64	64	64
G 3	Agogo H	64	64	108	0	34	100	100	127	0	0	1	64	64	64	64	64
G#3	Agogo L	64	64	108	0	34	100	100	127	0	0	1	64	64	64	64	64
A 3	Cabasa	64	64	90	0	28	63	63	127	0	0	1	64	64	64	64	64
Bb3	Analog Maracas	64	64	96	0	21	63	63	127	0	0	1	64	64	64	64	64
B 3	Samba Whistle H	64	64	103	0	101	127	127	127	0	1	1	64	64	64	64	64
C 4	Samba Whistle L	64	64	110	0	101	127	127	127	0	1	1	64	64	64	64	64
C#4	Guiro Short	64	64	124	0	95	63	63	127	0	0	1	64	64	64	64	64
D 4	Guiro Long	64	64	106	0	110	63	63	127	0	1	1	64	64	64	64	64
D#4	Analog Claves	64	64	88	0	64	95	95	127	0	0	1	64	64	64	64	64
E 4	Wood Block H	64	64	107	0	104	95	95	127	0	0	1	64	64	64	64	64
F 4	Wood Block L	64	64	96	0	104	95	95	127	0	0	1	64	64	64	64	64
F#4	Scratch Push	64	64	89	4	21	127	127	127	0	0	1	64	64	64	64	64
G 4	Scratch Pull	64	64	94	4	34	127	127	127	0	0	1	64	64	64	64	64
G#4	Triangle Mute	64	64	127	2	25	95	95	127	0	0	1	64	64	64	64	64
A 4	Triangle Open	64	64	127	2	25	127	127	127	0	0	1	64	64	64	64	64
Bb4	Shaker	64	64	106	0	83	63	63	127	0	0	1	64	64	64	64	64
B 4	Jingle Bell	64	64	123	0	105	127	127	127	0	0	1	64	64	64	64	64
C 5	Bell Tree	64	64	68	0	64	127	127	127	0	0	1	64	64	64	64	64

Note		Pitch		Level	Alt	Pan	Rev	Cho	Var	Key	Off	On	Coff	Q	Att	D1	D2
		C	F														
C#-1	Surdo Mute	64	64	102	3	51	95	95	127	0	0	1	64	64	64	64	64
D -1	Surdo Open	64	64	121	3	51	95	95	127	0	0	1	64	64	64	64	64
D#-1	Hi Q	64	64	63	0	51	127	127	127	0	0	1	64	64	64	64	64
E -1	Whip Slap	64	64	127	0	51	127	127	127	0	0	1	64	64	64	64	64
F -1	Scratch Push	64	64	93	4	52	63	63	127	0	0	1	64	64	64	64	64
F#-1	Scratch Pull	64	64	116	4	52	63	63	127	0	0	1	64	64	64	64	64
G -1	Finger Snap	64	64	127	0	64	75	0	127	0	0	1	64	64	64	64	64
G#-1	Click Noise	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A -1	Metronome Click	64	64	94	0	64	63	63	127	0	0	1	64	64	64	64	64
Bb-1	Metronome Bell	64	64	98	0	64	63	63	127	0	0	1	64	64	64	64	64
B -1	Seq Click L	64	64	87	0	64	127	127	127	0	0	1	64	64	64	64	64
C 0	Seq Click H	64	64	96	0	64	127	127	127	0	0	1	64	64	64	64	64
C#0	Brush Tap	64	64	49	0	64	127	127	127	0	0	1	64	64	64	64	64
D 0	Brush Swirl L	64	64	47	0	64	127	127	127	0	1	1	64	64	64	64	64
D#0	Brush Slap	64	64	52	0	64	127	127	127	0	0	1	64	64	64	64	64
E 0	Brush Swirl H	64	64	45	0	64	127	127	127	0	1	1	64	64	64	64	64
F 0	Snare Roll	64	64	79	0	64	127	127	127	0	1	1	64	64	64	64	64
F#0	Castanet	64	64	127	0	64	63	63	127	0	0	1	64	64	64	64	64
G 0	Snare L	64	64	75	0	64	127	127	127	0	0	1	64	64	64	64	64
G#0	Sticks	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A 0	Bass Drum L	64	64	116	0	64	32	32	127	0	0	1	64	64	64	64	64
Bb0	Open Rim Shot	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
B 0	Bass Drum M	64	64	102	0	64	32	32	127	0	0	1	64	64	64	64	64
C 1	BD Jazz	64	64	120	0	64	32	32	127	0	0	1	64	64	64	64	64
C#1	Side Stick	64	64	93	0	64	127	127	127	0	0	1	64	64	64	64	64
D 1	Snare M	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
D#1	Hand Clap	64	64	110	0	64	127	127	127	0	0	1	64	64	64	64	64
E 1	Snare H	64	64	123	0	64	127	127	127	0	0	1	64	64	64	64	64
F 1	Jazz Tom 1	64	64	113	0	24	127	127	127	0	0	1	64	64	64	64	64
F#1	Hi-Hat Closed	64	64	91	1	77	32	32	127	0	0	1	64	64	64	64	64
G 1	Jazz Tom 2	64	64	122	0	39	127	127	127	0	0	1	64	64	64	64	64
G#1	Hi-Hat Pedal	64	64	97	1	77	32	32	127	0	0	1	64	64	64	64	64
A 1	Jazz Tom 3	64	64	112	0	52	127	127	127	0	0	1	64	64	64	64	64
Bb1	Hi-Hat Open	64	64	96	1	77	32	32	127	0	0	1	64	64	64	64	64
B 1	Jazz Tom 4	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
C 2	Jazz Tom 5	64	64	110	0	83	127	127	127	0	0	1	64	64	64	64	64
C#2	Crash Cymbal 1	64	64	127	0	69	127	127	127	0	0	1	64	64	64	64	64
D 2	Jazz Tom 6	64	64	116	0	104	127	127	127	0	0	1	64	64	64	64	64
D#2	Ride Cymbal 1	64	64	105	0	34	127	127	127	0	0	1	64	64	64	64	64
E 2	Chinese Cymbal	64	64	120	0	34	127	127	127	0	0	1	64	64	64	64	64
F 2	Ride Cymbal Cup	64	64	107	0	46	127	127	127	0	0	1	64	64	64	64	64
F#2	Tambourine	64	64	120	0	64	63	63	127	0	0	1	64	64	64	64	64
G 2	Splash Cymbal	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G#2	Cowbell	64	64	118	0	77	63	63	127	0	0	1	64	64	64	64	64
A 2	Crash Cymbal 2	64	64	127	0	51	127	127	127	0	0	1	64	64	64	64	64
Bb2	Vibraslap	64	64	106	0	25	127	127	127	0	0	1	64	64	64	64	64
B 2	Ride Cymbal 2	64	64	110	0	46	127	127	127	0	0	1	64	64	64	64	64
C 3	Bongo H	64	64	110	0	110	95	95	127	0	0	1	64	64	64	64	64
C#3	Bongo L	64	64	87	0	110	95	95	127	0	0	1	64	64	64	64	64
D 3	Conga H Mute	64	64	73	0	39	127	127	127	0	0	1	64	64	64	64	64
D#3	Conga H Open	64	64	89	0	25	127	127	127	0	0	1	64	64	64	64	64
E 3	Conga L	64	64	111	0	64	95	95	127	0	0	1	64	64	64	64	64
F 3	Timbale H	64	64	91	0	64	127	127	127	0	0	1	64	64	64	64	64
F#3	Timbale L	64	64	95	0	64	127	127	127	0	0	1	64	64	64	64	64
G 3	Agogo H	64	64	108	0	34	100	100	127	0	0	1	64	64	64	64	64
G#3	Agogo L	64	64	108	0	34	100	100	127	0	0	1	64	64	64	64	64
A 3	Cabasa	64	64	90	0	28	63	63	127	0	0	1	64	64	64	64	64
Bb3	Maracas	64	64	103	0	21	63	63	127	0	0	1	64	64	64	64	64
B 3	Samba Whistle H	64	64	103	0	101	127	127	127	0	1	1	64	64	64	64	64
C 4	Samba Whistle L	64	64	110	0	101	127	127	127	0	1	1	64	64	64	64	64
C#4	Guiro Short	64	64	124	0	95	63	63	127	0	0	1	64	64	64	64	64
D 4	Guiro Long	64	64	106	0	110	63	63	127	0	1	1	64	64	64	64	64
D#4	Claves	64	64	88	0	64	95	95	127	0	0	1	64	64	64	64	64
E 4	Wood Block H	64	64	107	0	104	95	95	127	0	0	1	64	64	64	64	64
F 4	Wood Block L	64	64	96	0	104	95	95	127	0	0	1	64	64	64	64	64
F#4	Cuica Mute	64	64	97	0	21	127	127	127	0	0	1	64	64	64	64	64
G 4	Cuica Open	64	64	107	0	34	127	127	127	0	0	1	64	64	64	64	64
G#4	Triangle Mute	64	64	127	2	25	95	95	127	0	0	1	64	64	64	64	64
A 4	Triangle Open	64	64	127	2	25	127	127	127	0	0	1	64	64	64	64	64
Bb4	Shaker	64	64	106	0	83	63	63	127	0	0	1	64	64	64	64	64
B 4	Jingle Bell	64	64	123	0	105	127	127	127	0	0	1	64	64	64	64	64
C 5	Bell Tree	64	64	68	0	64	127	127	127	0	0	1	64	64	64	64	64

Note		Pitch		Level	Alt	Pan	Rev	Cho	Var	Key	Off	On	Coff	Q	Att	D1	D2
		C	F														
C#-1	Surdo Mute	64	64	102	3	51	95	95	127	0	0	1	64	64	64	64	64
D -1	Surdo Open	64	64	121	3	51	95	95	127	0	0	1	64	64	64	64	64
D#-1	Hi Q	64	64	63	0	51	127	127	127	0	0	1	64	64	64	64	64
E -1	Whip Slap	64	64	127	0	51	127	127	127	0	0	1	64	64	64	64	64
F -1	Scratch Push	64	64	93	4	52	63	63	127	0	0	1	64	64	64	64	64
F#-1	Scratch Pull	64	64	116	4	52	63	63	127	0	0	1	64	64	64	64	64
G -1	Finger Snap	64	64	127	0	64	75	0	127	0	0	1	64	64	64	64	64
G#-1	Click Noise	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A -1	Metronome Click	64	64	94	0	64	63	63	127	0	0	1	64	64	64	64	64
Bb-1	Metronome Bell	64	64	98	0	64	63	63	127	0	0	1	64	64	64	64	64
B -1	Seq Click L	64	64	87	0	64	127	127	127	0	0	1	64	64	64	64	64
C 0	Seq Click H	64	64	96	0	64	127	127	127	0	0	1	64	64	64	64	64
C#0	Brush Tap	64	64	49	0	64	127	127	127	0	0	1	64	64	64	64	64
D 0	Brush Swirl L	64	64	47	0	64	127	127	127	0	1	1	64	64	64	64	64
D#0	Brush Slap	64	64	52	0	64	127	127	127	0	0	1	64	64	64	64	64
E 0	Brush Swirl H	64	64	45	0	64	127	127	127	0	1	1	64	64	64	64	64
F 0	Snare Roll	64	64	79	0	64	127	127	127	0	1	1	64	64	64	64	64
F#0	Castanet	64	64	127	0	64	63	63	127	0	0	1	64	64	64	64	64
G 0	Brush Slap L	64	64	85	0	64	127	127	127	0	0	1	64	64	64	64	64
G#0	Sticks	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A 0	Bass Drum L	64	64	116	0	64	32	32	127	0	0	1	64	64	64	64	64
Bb0	Open Rim Shot	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
B 0	Bass Drum M	64	64	102	0	64	32	32	127	0	0	1	64	64	64	64	64
C 1	BD Soft	64	64	117	0	64	32	32	127	0	0	1	64	64	64	64	64
C#1	Side Stick	64	64	93	0	64	127	127	127	0	0	1	64	64	64	64	64
D 1	Brush Slap	64	64	84	0	64	127	127	127	0	0	1	64	64	64	64	64
D#1	Hand Clap	64	64	110	0	64	127	127	127	0	0	1	64	64	64	64	64
E 1	Brush Tap	64	64	74	0	64	127	127	127	0	0	1	64	64	64	64	64
F 1	Brush Tom 1	64	64	127	0	24	127	127	127	0	0	1	64	64	64	64	64
F#1	Hi-Hat Closed	64	64	91	1	77	32	32	127	0	0	1	64	64	64	64	64
G 1	Brush Tom 2	64	64	127	0	39	127	127	127	0	0	1	64	64	64	64	64
G#1	Hi-Hat Pedal	64	64	97	1	77	32	32	127	0	0	1	64	64	64	64	64
A 1	Brush Tom 3	64	64	127	0	52	127	127	127	0	0	1	64	64	64	64	64
Bb1	Hi-Hat Open	64	64	96	1	77	32	32	127	0	0	1	64	64	64	64	64
B 1	Brush Tom 4	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
C 2	Brush Tom 5	64	64	120	0	83	127	127	127	0	0	1	64	64	64	64	64
C#2	Crash Cymbal 1	64	64	127	0	69	127	127	127	0	0	1	64	64	64	64	64
D 2	Brush Tom 6	64	64	122	0	104	127	127	127	0	0	1	64	64	64	64	64
D#2	Ride Cymbal 1	64	64	105	0	34	127	127	127	0	0	1	64	64	64	64	64
E 2	Chinese Cymbal	64	64	120	0	34	127	127	127	0	0	1	64	64	64	64	64
F 2	Ride Cymbal Cup	64	64	107	0	46	127	127	127	0	0	1	64	64	64	64	64
F#2	Tambourine	64	64	120	0	64	63	63	127	0	0	1	64	64	64	64	64
G 2	Splash Cymbal	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G#2	Cowbell	64	64	118	0	77	63	63	127	0	0	1	64	64	64	64	64
A 2	Crash Cymbal 2	64	64	127	0	51	127	127	127	0	0	1	64	64	64	64	64
Bb2	Vibraslap	64	64	106	0	25	127	127	127	0	0	1	64	64	64	64	64
B 2	Ride Cymbal 2	64	64	110	0	46	127	127	127	0	0	1	64	64	64	64	64
C 3	Bongo H	64	64	110	0	110	95	95	127	0	0	1	64	64	64	64	64
C#3	Bongo L	64	64	87	0	110	95	95	127	0	0	1	64	64	64	64	64
D 3	Conga H Mute	64	64	73	0	39	127	127	127	0	0	1	64	64	64	64	64
D#3	Conga H Open	64	64	89	0	25	127	127	127	0	0	1	64	64	64	64	64
E 3	Conga L	64	64	111	0	64	95	95	127	0	0	1	64	64	64	64	64
F 3	Timbale H	64	64	91	0	64	127	127	127	0	0	1	64	64	64	64	64
F#3	Timbale L	64	64	95	0	64	127	127	127	0	0	1	64	64	64	64	64
G 3	Agogo H	64	64	108	0	34	100	100	127	0	0	1	64	64	64	64	64
G#3	Agogo L	64	64	108	0	34	100	100	127	0	0	1	64	64	64	64	64
A 3	Cabasa	64	64	90	0	28	63	63	127	0	0	1	64	64	64	64	64
Bb3	Maracas	64	64	103	0	21	63	63	127	0	0	1	64	64	64	64	64
B 3	Samba Whistle H	64	64	103	0	101	127	127	127	0	1	1	64	64	64	64	64
C 4	Samba Whistle L	64	64	110	0	101	127	127	127	0	1	1	64	64	64	64	64
C#4	Guiro Short	64	64	124	0	95	63	63	127	0	0	1	64	64	64	64	64
D 4	Guiro Long	64	64	106	0	110	63	63	127	0	1	1	64	64	64	64	64
D#4	Claves	64	64	88	0	64	95	95	127	0	0	1	64	64	64	64	64
E 4	Wood Block H	64	64	107	0	104	95	95	127	0	0	1	64	64	64	64	64
F 4	Wood Block L	64	64	96	0	104	95	95	127	0	0	1	64	64	64	64	64
F#4	Cuica Mute	64	64	97	0	21	127	127	127	0	0	1	64	64	64	64	64
G 4	Cuica Open	64	64	107	0	34	127	127	127	0	0	1	64	64	64	64	64
G#4	Triangle Mute	64	64	127	2	25	95	95	127	0	0	1	64	64	64	64	64
A 4	Triangle Open	64	64	127	2	25	127	127	127	0	0	1	64	64	64	64	64
Bb4	Shaker	64	64	106	0	83	63	63	127	0	0	1	64	64	64	64	64
B 4	Jingle Bell	64	64	123	0	105	127	127	127	0	0	1	64	64	64	64	64
C 5	Bell Tree	64	64	68	0	64	127	127	127	0	0	1	64	64	64	64	64

Note		Pitch		Level	Alt	Pan	Rev	Cho	Var	Key	Off	On	Coff	Q	Att	D1	D2
		C	F														
C#-1	Surdo Mute	64	64	102	3	51	95	95	127	0	0	1	64	64	64	64	64
D -1	Surdo Open	64	64	121	3	51	95	95	127	0	0	1	64	64	64	64	64
D#-1	Hi Q	64	64	63	0	51	127	127	127	0	0	1	64	64	64	64	64
E -1	Whip Slap	64	64	127	0	51	127	127	127	0	0	1	64	64	64	64	64
F -1	Scratch Push	64	64	93	4	52	63	63	127	0	0	1	64	64	64	64	64
F#-1	Scratch Pull	64	64	116	4	52	63	63	127	0	0	1	64	64	64	64	64
G -1	Finger Snap	64	64	127	0	64	75	0	127	0	0	1	64	64	64	64	64
G#-1	Click Noise	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A -1	Metronome Click	64	64	94	0	64	63	63	127	0	0	1	64	64	64	64	64
Bb-1	Metronome Bell	64	64	98	0	64	63	63	127	0	0	1	64	64	64	64	64
B -1	Seq Click L	64	64	87	0	64	127	127	127	0	0	1	64	64	64	64	64
C 0	Seq Click H	64	64	96	0	64	127	127	127	0	0	1	64	64	64	64	64
C#0	Brush Tap	64	64	49	0	64	127	127	127	0	0	1	64	64	64	64	64
D 0	Brush Swirl L	64	64	47	0	64	127	127	127	0	1	1	64	64	64	64	64
D#0	Brush Slap	64	64	52	0	64	127	127	127	0	0	1	64	64	64	64	64
E 0	Brush Swirl H	64	64	45	0	64	127	127	127	0	1	1	64	64	64	64	64
F 0	Snare Roll	64	64	79	0	64	127	127	127	0	1	1	64	64	64	64	64
F#0	Castanet	64	64	127	0	64	63	63	127	0	0	1	64	64	64	64	64
G 0	Snare L	64	64	75	0	64	127	127	127	0	0	1	64	64	64	64	64
G#0	Sticks	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A 0	Bass Drum L2	64	64	116	0	64	32	32	127	0	0	1	64	64	64	64	64
Bb0	Open Rim Shot	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
B 0	Gran Cassa	64	64	127	0	64	32	32	127	0	0	1	64	64	64	64	64
C 1	Gran Cassa Mute	64	64	127	0	64	32	32	127	0	0	1	64	64	64	64	64
C#1	Side Stick	64	64	93	0	64	127	127	127	0	0	1	64	64	64	64	64
D 1	Marching Sn M	64	64	79	0	64	127	127	127	0	0	1	64	64	64	64	64
D#1	Hand Clap	64	64	110	0	64	127	127	127	0	0	1	64	64	64	64	64
E 1	Marching Sn H	64	64	79	0	64	127	127	127	0	0	1	64	64	64	64	64
F 1	Jazz Tom 1	64	64	111	0	24	127	127	127	0	0	1	64	64	64	64	64
F#1	Hi-Hat Closed	64	64	91	1	77	32	32	127	0	0	1	64	64	64	64	64
G 1	Jazz Tom 2	64	64	113	0	39	127	127	127	0	0	1	64	64	64	64	64
G#1	Hi-Hat Pedal	64	64	97	1	77	32	32	127	0	0	1	64	64	64	64	64
A 1	Jazz Tom 3	64	64	104	0	52	127	127	127	0	0	1	64	64	64	64	64
Bb1	Hi-Hat Open	64	64	96	1	77	32	32	127	0	0	1	64	64	64	64	64
B 1	Jazz Tom 4	64	64	87	0	64	127	127	127	0	0	1	64	64	64	64	64
C 2	Jazz Tom 5	64	64	103	0	83	127	127	127	0	0	1	64	64	64	64	64
C#2	Hand Cym.Open L	64	64	123	0	64	127	127	127	0	0	1	64	64	64	64	64
D 2	Jazz Tom 6	64	64	116	0	104	127	127	127	0	0	1	64	64	64	64	64
D#2	Hand Cym.Closed L	64	64	124	0	34	127	127	127	0	0	1	64	64	64	64	64
E 2	Chinese Cymbal	64	64	120	0	34	127	127	127	0	0	1	64	64	64	64	64
F 2	Ride Cymbal Cup	64	64	107	0	46	127	127	127	0	0	1	64	64	64	64	64
F#2	Tambourine	64	64	120	0	64	63	63	127	0	0	1	64	64	64	64	64
G 2	Splash Cymbal	64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G#2	Cowbell	64	64	118	0	77	63	63	127	0	0	1	64	64	64	64	64
A 2	Hand Cym.Open H	64	64	127	0	51	127	127	127	0	0	1	64	64	64	64	64
Bb2	Vibraslap	64	64	106	0	25	127	127	127	0	0	1	64	64	64	64	64
B 2	Hand Cym.Closed H	64	64	106	0	46	127	127	127	0	0	1	64	64	64	64	64
C 3	Bongo H	64	64	110	0	110	95	95	127	0	0	1	64	64	64	64	64
C#3	Bongo L	64	64	87	0	110	95	95	127	0	0	1	64	64	64	64	64
D 3	Conga H Mute	64	64	73	0	39	127	127	127	0	0	1	64	64	64	64	64
D#3	Conga H Open	64	64	89	0	25	127	127	127	0	0	1	64	64	64	64	64
E 3	Conga L	64	64	111	0	64	95	95	127	0	0	1	64	64	64	64	64
F 3	Timbale H	64	64	91	0	64	127	127	127	0	0	1	64	64	64	64	64
F#3	Timbale L	64	64	95	0	64	127	127	127	0	0	1	64	64	64	64	64
G 3	Agogo H	64	64	108	0	34	100	100	127	0	0	1	64	64	64	64	64
G#3	Agogo L	64	64	108	0	34	100	100	127	0	0	1	64	64	64	64	64
A 3	Cabasa	64	64	90	0	28	63	63	127	0	0	1	64	64	64	64	64
Bb3	Maracas	64	64	103	0	21	63	63	127	0	0	1	64	64	64	64	64
B 3	Samba Whistle H	64	64	103	0	101	127	127	127	0	1	1	64	64	64	64	64
C 4	Samba Whistle L	64	64	110	0	101	127	127	127	0	1	1	64	64	64	64	64
C#4	Guiro Short	64	64	124	0	95	63	63	127	0	0	1	64	64	64	64	64
D 4	Guiro Long	64	64	106	0	110	63	63	127	0	1	1	64	64	64	64	64
D#4	Claves	64	64	88	0	64	95	95	127	0	0	1	64	64	64	64	64
E 4	Wood Block H	64	64	107	0	104	95	95	127	0	0	1	64	64	64	64	64
F 4	Wood Block L	64	64	96	0	104	95	95	127	0	0	1	64	64	64	64	64
F#4	Cuica Mute	64	64	97	0	21	127	127	127	0	0	1	64	64	64	64	64
G 4	Cuica Open	64	64	107	0	34	127	127	127	0	0	1	64	64	64	64	64
G#4	Triangle Mute	64	64	127	2	25	95	95	127	0	0	1	64	64	64	64	64
A 4	Triangle Open	64	64	127	2	25	127	127	127	0	0	1	64	64	64	64	64
Bb4	Shaker	64	64	106	0	83	63	63	127	0	0	1	64	64	64	64	64
B 4	Jingle Bell	64	64	123	0	105	127	127	127	0	0	1	64	64	64	64	64
C 5	Bell Tree	64	64	68	0	64	127	127	127	0	0	1	64	64	64	64	64

Note		Pitch		Level	Alt	Pan	Rev	Cho	Var	Key	Off	On	Coff	Q	Att	D1	D2
		C	F														
C#-1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
D -1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
D#-1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
E -1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
F -1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
F#-1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G -1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G#-1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A -1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
Bb-1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
B -1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
C 0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
C#0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
D 0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
D#0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
E 0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
F 0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
F#0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G 0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G#0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A 0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
Bb0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
B 0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
C 1	Guitar Cutting Noise	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
C#1	Guitar Cutting Noise 2	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
D 1	Dist. Cut Noise **	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
D#1	String Slap	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
E 1	Bass Slide **	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
F 1	Pick Scrape **	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
F#1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G 1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G#1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A 1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
Bb1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
B 1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
C 2		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
C#2		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
D 2		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
D#2		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
E 2	FL.Key Click	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
F 2		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
F#2		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G 2		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G#2		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A 2		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
Bb2		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
B 2		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
C 3		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
C#3		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
D 3		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
D#3		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
E 3		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
F 3		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
F#3		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G 3		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G#3	Rain	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
A 3	Thunder	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
Bb3	Wind	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
B 3	Stream	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
C 4	Bubble	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
C#4	Feed	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
D 4		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
D#4		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
E 4		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
F 4		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
F#4		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G 4		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G#4		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A 4		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
Bb4		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
B 4		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
C 5	Dog	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
C#5	Horse Gallop	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
D 5	Bird 2	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
D#5	Kitty **	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
E 5	Growl **	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
F 5	Haunted **	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
F#5	Ghost	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
G 5	Maou	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64

** : [Ext.]
With MU50, value for Rcv. Note Off is "0".

Note		Pitch		Level	Alt	Pan	Rev	Cho	Var	Key	Off	On	Coff	Q	Att	D1	D2
		C	F														
C#-1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
D -1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
D#-1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
E -1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
F -1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
F#-1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G -1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G#-1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A -1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
Bb-1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
B -1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
C 0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
C#0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
D 0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
D#0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
E 0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
F 0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
F#0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G 0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G#0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A 0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
Bb0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
B 0		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
C 1	Dial Tone	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
C#1	Door Creaking	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
D 1	Door Slam	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
D#1	Scratch	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
E 1	Scratch 2	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
F 1	Windchime	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
F#1	Telephone Ring2	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
G 1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G#1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A 1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
Bb1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
B 1		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
C 2		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
C#2		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
D 2		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
D#2		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
E 2	Engine Start	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
F 2	Tire Screech	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
F#2	Car Passing	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
G 2	Crash	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
G#2	Siren	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
A 2	Train	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
Bb2	Jetplane	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
B 2	Starship	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
C 3	Burst Noise	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
C#3	Coaster	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
D 3	SbMarine	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
D#3		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
E 3		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
F 3		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
F#3		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G 3		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G#3	Laughing	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
A 3	Screaming	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
Bb3	Punch	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
B 3	Heartbeat	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
C 4	Footsteps	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
C#4	Applaus2 **	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
D 4		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
D#4		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
E 4		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
F 4		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
F#4		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G 4		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G#4		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
A 4		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
Bb4		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
B 4		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
C 5	Machine Gun	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
C#5	Laser Gun	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
D 5	Explosion	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
D#5	FireWork	64	64	127	0	64	127	127	127	0	1	1	64	64	64	64	64
E 5		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
F 5		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
F#5		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64
G 5		64	64	127	0	64	127	127	127	0	0	1	64	64	64	64	64

** : [Ext.]
With MU50, value for Rcv. Note Off is "0".

XG BANK EXPANSION DEFINITION -tentative-

Bank No. 1-63: Voices that can be created by modifying voice parameters

Bank No.	Discription	Note (example)	Bank No.	Discription	Note (example)
0	Capitol Tone Voice	GM Basic tone	32		Detune with same wave
1		Key Scaled Panning (L to R)	33		do.
2		Key Scaled Panning (R to L)	34		do.
3	Voices that can be added without changing	Stereo	35	Voices which can be added by modifying the pitch	Octave Layered
4		With LFO	36	inclding expansion by means of 1 element <>	do.
5		Without LFO	37	2 elements changing of the same sound character	5th Layered
6		Single Element	38		do.
7			39		Bend UP/Down
8		Slow Attack	40		Tutti
9		Fast Attack	41	Voices which can be added by layering	do.
10		Long Release	42	with an entirely different type of wave	do.
11	Voices that can be added mainly by	Short Release	43		Velosity Switch
12	AEG changes (or by equivalent operations)	Fast Decay	44		do.
13		Slow Decay	45		Velosity X-fade
14		Double Attack	46		do.
15			47		Breathy WW
16		Bright	48		
17		do.	49		
18		Dark	50		
19	Voices which can be added mainly by	do.	51		
20	Cutoff changes (or equivalent operations) or	Resonant	52		
21	changes in Q (or equivalent operations).		53		
22			54		
23			55		
24		Attack Transient	56		
25		Release Transient	57		
26		Sweep	58		
27	Voices which can be added mainly by	Rezo Sweep	59		
28	FEG changes (or equivalent operations)	Muted	60		
29			61		
30			62		
31			63		

Bank No.64-127: Voices that can be created by changing the wave.

Bank No.	Discription	Note (example)	Bank No.	Discription	Note (example)
64			96		Dulcimer->Cimbalom
65			97		Nylon Gt.->Ukulele
66	Identical instrumental sounds which can be		98	Voices which are not unacceptably incompatible	
67	created with entirely different types of wave.		99	with capital tones, even though from a perspective	
68			100	of category and instrumental family they are	
69			101	entirely different instruments.	
70			102		
71			103		
72			104		
73			105		
74			106		
75			107		
76			108		
77			109		
78			110		
79			111		
80			112		
81			113		
82			114	User voices which are not unacceptably	
83			115	incompatible with capital tones.	
84			116		
85			117		
86			118		
87			119		
88			120		
89			121		
90			122		
91			123		
92			124		
93			125		
94			126		
95			127		