MIDI Implementation

Model:　FANTOM EX 6/7/8
Date:　Nov 1, 2023
Version: 1.00

1. Data Reception (Sound Source Section)

■Channel Voice Messages
* Not received when the Zone Receive Switch parameter (ZONE EDIT:LEVEL/PAN) is OFF.

●Note off

Status	2nd byte	3rd byte
8nH	kkH	vvH
9nH	kkH	00H

n = MIDI channel number:　0H - FH (ch.1 - 16)
kk = note number:　00H - 7FH (0 - 127)
vv = note off velocity:　00H - 7FH (0 - 127)

* Not received when the Tone Env Mode parameter (PATCH EDIT:CTRL:Env Mode or DRUM KIT EDIT:COMMON:Tone Env Mode) is NO-SUS.

●Note on

Status	2nd byte	3rd byte
9nH	kkH	vvH

n = MIDI channel number:　0H - FH (ch.1 - 16)
kk = note number:　00H - 7FH (0 - 127)
vv = note on velocity:　01H - 7FH (1 - 127)

●Polyphonic Key Pressure

Status	2nd byte	3rd byte
AnH	kkH	vvH

n = MIDI channel number:　0H - FH (ch.1 - 16)
kk = note number:　00H - 7FH (0 - 127)
vv = Polyphonic Key Pressure:　00H - 7FH (0 - 127)

* Not received when the Receive Poly Key Pressure(PA) parameter (ZONE EDIT:MIDIRxFILTER) is OFF.

●Control Change
* If the corresponding Controller number is selected for the MFX Control Source1, 2, 3 or 4 parameter (TONE EDIT:MFX CTRL) or the Tone Matrix Control1, 2, 3 or 4 Source parameter (TONE EDIT:MATRIX CTRL1-4), the corresponding effect will occur.
* When the Control Source Select parameter (SYSTEM:CONTROL) is set to SYS, if a controller number that corresponds to the System Control Source1, 2, 3 or 4 parameter (SYSTEM:CONTROL) is selected, the specified effect will apply if the MFX Control Source1, 2, 3 or 4 parameter (TONE EDIT:MFX CTRL) or the Tone Matrix Control1, 2, 3 or 4 Source parameter (TONE EDIT:MATRIX CTRL1-4) is set to SYS-CTRL1, SYS-CTRL2, SYS-CTRL3 or SYS-CTRL4.
* When the Control Source Select parameter (SYSTEM:CONTROL) is set to SCENE, if a controller number that corresponds to the Tone Control Source1, 2, 3 or 4 parameter (SCENE EDIT:CONTROL) is selected, the specified effect will apply if the MFX Control Source1, 2, 3 or 4 parameter (TONE EDIT:MFX CTRL) or the Tone Matrix Control1, 2, 3 or 4 Source parameter (TONE EDIT:MATRIX CTRL1-4) is set to SYS-CTRL1, SYS-CTRL2, SYS-CTRL3 or SYS-CTRL4.

○Bank Select (Controller number 0, 32)

Status	2nd byte	3rd byte
BnH	00H	mmH
BnH	20H	llH

n = MIDI channel number:　0H - FH (ch.1 - 16)
mm, ll = Bank number:　00 00H - 7F 7FH (bank.1 - bank.16384)

* Not received when the Receive Bank Select parameter (SYSTEM:MIDI) is OFF.
* Not received when the Receive Bank Select(BS) parameter (ZONE EDIT:MIDIRxFILTER) is OFF.

The Scenes corresponding to each Bank Select are as follows.

BANK SELECT MSB	LSB	PROGRAM NUMBER	GROUP	NUMBER
085	000	001 - 128	Scene	A001 - A128
	001	001 - 128	Scene	B001 - B128
	:		:	:

The Tones corresponding to each Bank Select are as follows.

BANK SELECT MSB	LSB	PROGRAM NUMBER	GROUP	NUMBER
087	000	001 - 128	User Tone	0001 - 0128
	:		:	:
	064	001 - 128	Preset Tone (B)	0001 - 0128
	:		:	:
	068	001 - 128	Preset Tone (C)	0001 - 0128
	069	001 - 128	Preset Tone (D)	0001 - 0128
	:		:	:
	078	001 - 128	Preset Tone (E)	0001 - 0128
	:		:	:
	085	001 - 128	Preset Tone (CMN)	0001 - 0128

	:		:	:
	092	001 - 128	Preset Tone (A)	0001 - 0128
	:		:	:
089	000	001 -	User SN-A Tone	0001 -
	065	001 -	Preset SN-A Tone	0001 -
090	000	001 -	User V-Piano Tone	0001 -
	064	001 -	Preset V-Piano Tone	0001 -
091	000	001 -	User VTW Tone	0001 -
	065	001 -	Preset VTW Tone	0001 -
093		001 -	EXZ Tone	0001 -
097		001 -	Model Tone	0001 -
101		001 -	EXZ Tone	0001 -
103		001 -	Exp V-Piano Tone	0001 -
105		001 -	EXSN Tone	0001 -
107		001 -	ACB Tone	0001 -

The Drum Kits corresponding to each Bank Select are as follows.

BANK SELECT MSB	LSB	PROGRAM NUMBER	GROUP	NUMBER
086	000	001 - 128	User Drum Kit	0001 - 0128
	064	001 -	Preset Drum Kit (A)	0001 -
	065	001 -	Preset Drum Kit (CMN)	0001 -
092		001 -	EXZ Drum Kit	0001 -
100		001 -	EXZ Drum Kit	0001 -

○Modulation (Controller number 1)

Status	2nd byte	3rd byte
BnH	01H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Modulation depth: 00H - 7FH (0 - 127)

* Not received when the Receive Modulation(MD) parameter (ZONE EDIT:MIDIRxFILTER) is OFF.

○Breath type (Controller number 2)

Status	2nd byte	3rd byte
BnH	02H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○Foot type (Controller number 4)

Status	2nd byte	3rd byte
BnH	04H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○Portamento Time (Controller number 5)

Status	2nd byte	3rd byte
BnH	05H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Portamento Time: 00H - 7FH (0 - 127)

* The Zone Portamento Time parameter (ZONE EDIT:PITCH) will change.

○Data Entry (Controller number 6, 38)

Status	2nd byte	3rd byte
BnH	06H	mmH
BnH	26H	llH

n = MIDI channel number: 0H - FH (ch.1 - 16)
mm, ll = the value of the parameter specified by RPN/NRPN
mm = MSB, ll = LSB

○Volume (Controller number 7)

Status	2nd byte	3rd byte
BnH	07H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Volume: 00H - 7FH (0 - 127)

* Not received when the Receive Volume(VO) parameter (ZONE EDIT:MIDIRxFILTER) is OFF.
* The Zone Level parameter (ZONE EDIT:LEVEL/PAN) will change.

○Panpot (Controller number 10)

Status	2nd byte	3rd byte
BnH	0AH	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Panpot: 00H - 40H - 7FH (Left - Center - Right)

* Not received when the Receive Pan(PN) parameter (ZONE EDIT:MIDIRxFILTER) is OFF.
* The Zone Pan parameter (ZONE EDIT:LEVEL/PAN) will change.

○Expression (Controller number 11)

Status	2nd byte	3rd byte
BnH	0BH	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Expression: 00H - 7FH (0 - 127)

* Not received when the Receive Expression(EX) parameter (ZONE EDIT:MIDIRxFILTER) is OFF.
* Not received when the Receive Expression parameter (TONE EDIT:CONTROL) is OFF.

○General Purpose Controller 1 (Controller number 16)

Status	2nd byte	3rd byte
BnH	10H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○General Purpose Controller 2 (Controller number 17)

Status	2nd byte	3rd byte
BnH	11H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○General Purpose Controller 3 (Controller number 18)

Status	2nd byte	3rd byte
BnH	12H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○General Purpose Controller 4 (Controller number 19)

Status	2nd byte	3rd byte
BnH	13H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○Hold 1 (Controller number 64)

Status	2nd byte	3rd byte
BnH	40H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127) 0-63 = OFF, 64-127 = ON

* Not received when the Receive Hold-1(HD) parameter (ZONE EDIT:MIDIRxFILTER) is OFF.
* Not received when the Receive Hold-1 parameter (TONE EDIT:CONTROL) is OFF.

○Portamento (Controller number 65)

Status	2nd byte	3rd byte
BnH	41H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127) 0 - 63 = OFF, 64 - 127 = ON

* The Zone Portamento Switch parameter (ZONE EDIT:PITCH) will change.

○Sostenuto (Controller number 66)

Status	2nd byte	3rd byte
BnH	42H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127) 0 - 63 = OFF, 64 - 127 = ON

○Soft (Controller number 67)

Status	2nd byte	3rd byte
BnH	43H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127) 0 - 63 = OFF, 64 - 127 = ON

○Legato Foot Switch (Controller number 68)

Status	2nd byte	3rd byte
BnH	44H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127) 0 - 63 = OFF, 64 - 127 = ON

○Resonance (Controller number 71)

Status	2nd byte	3rd byte
BnH	47H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv= Resonance value (relative change): 00H - 40H - 7FH (-64 - 0 - +63)

* The Zone Resonance Offset parameter (ZONE EDIT:OFFSET) will change.

○Release Time (Controller number 72)

Status	2nd byte	3rd byte
BnH	48H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Release Time value (relative change): 00H - 40H - 7FH (-64 - 0 - +63)

* The Zone Release Time Offset parameter (ZONE EDIT:OFFSET) will change.

○Attack time (Controller number 73)

Status	2nd byte	3rd byte
BnH	49H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Attack time value (relative change): 00H - 40H - 7FH (-64 - 0 - +63)

* The Zone Attack Time Offset parameter (ZONE EDIT:OFFSET) will change.

○Cutoff (Controller number 74)

Status 2nd byte 3rd byte
BnH 4AH vvH
n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Cutoff value (relative change): 00H - 40H - 7FH (-64 - 0 - +63)

* The Zone Cutoff Offset parameter (ZONE EDIT:OFFSET) will change.

○Decay Time (Controller number 75)
Status 2nd byte 3rd byte
BnH 4BH vvH
n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Decay Time value (relative change): 00H - 40H - 7FH (-64 - 0 - +63)

* The Zone Decay Time Offset parameter (ZONE EDIT:OFFSET) will change.

○Vibrato Rate (Controller number 76)
Status 2nd byte 3rd byte
BnH 4CH vvH
n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Vibrato Rate value (relative change): 00H - 40H - 7FH (-64 - 0 - +63)

* The Zone Vibrato Rate parameter (ZONE EDIT:VIBRATO) will change.

○Vibrato Depth (Controller number 77)
Status 2nd byte 3rd byte
BnH 4DH vvH
n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Vibrato Depth Value (relative change): 00H - 40H - 7FH (-64 - 0 - +63)

* The Zone Vibrato Depth parameter (ZONE EDIT:VIBRATO) will change.

○Vibrato Delay (Controller number 78)
Status 2nd byte 3rd byte
BnH 4EH vvH
n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Vibrato Delay value (relative change): 00H - 40H - 7FH (-64 - 0 - +63)

* The Zone Vibrato Delay parameter (ZONE EDIT:VIBRATO) will change.

○General Purpose Controller 5 (Controller number 80)
Status 2nd byte 3rd byte
BnH 50H vvH
n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○General Purpose Controller 6 (Controller number 81)
Status 2nd byte 3rd byte
BnH 51H vvH
n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○General Purpose Controller 7 (Controller number 82)
Status 2nd byte 3rd byte
BnH 52H vvH
n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○General Purpose Controller 8 (Controller number 83)
Status 2nd byte 3rd byte
BnH 53H vvH
n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○Portamento control (Controller number 84)
Status 2nd byte 3rd byte
BnH 54H kkH
n = MIDI channel number: 0H - FH (ch.1 - 16)
kk = source note number: 00H - 7FH (0 - 127)

* A Note-on received immediately after a Portamento Control message will change continuously in pitch, starting from the pitch of the Source Note Number.
* If a voice is already sounding for a note number identical to the Source Note Number, this voice will continue sounding (i.e., legato) and will, when the next Note-on is received, smoothly change to the pitch of that Note-on.
* The rate of the pitch change caused by Portamento Control is determined by the Portamento Time value.

○High Resolution Velocity Prefix (Controller number 88)
Status 2nd byte 3rd byte
BnH 58H vvH
n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = High Resolution Velocity Prefix: 00H - 7FH (0 - 127)

* V-Piano Tone will receive it.

○General Purpose Effect 1 (Reverb Send Level) (Controller number 91)
Status 2nd byte 3rd byte
BnH 5BH vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Reverb Send Level: 00H - 7FH (0 - 127)

* The Zone Reverb Send Level parameter (ZONE EDIT:LEVEL/PAN) will change.

○General Purpose Effect 3 (Chorus Send Level) (Controller number 93)

Status	2nd byte	3rd byte
BnH	5DH	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Chorus Send Level: 00H - 7FH (0 - 127)

* The Zone Chorus Send Level parameter (ZONE EDIT:LEVEL/PAN) will change.

○RPN MSB/LSB (Controller number 100, 101)

Status	2nd byte	3rd byte
BnH	65H	mmH
BnH	64H	llH

n = MIDI channel number: 0H - FH (ch.1 - 16)
mm = upper byte (MSB) of parameter number specified by RPN
ll = lower byte (LSB) of parameter number specified by RPN

<<< RPN >>>
Control Changes include RPN (Registered Parameter Numbers), which are extended.
When using RPNs, first RPN (Controller numbers 100 and 101; they can be sent in any order) should be sent in order to select the parameter, then Data Entry (Controller numbers 6 and 38) should be sent to set the value. Once RPN messages are received, Data Entry messages that is received at the same MIDI channel after that are recognized as changing toward the value of the RPN messages. In order not to make any mistakes, transmitting RPN Null is recommended after setting parameters you need.

This device receives the following RPNs.

RPN MSB, LSB	Data entry MSB, LSB	Notes
00H, 00H	mmH, llH	Pitch Bend Sensitivity mm: 00H - 18H (0 - 24 semitones) ll: ignored (processed as 00H) Up to 2 octave can be specified in semitone steps. * The Zone Bend Range parameter (ZONE EDIT:PITCH) will change.
00H, 01H	mmH, llH	Channel Fine Tuning mm, ll: 20 00H - 40 00H - 60 00H (-4096 x 100 / 8192 - 0 - +4096 x 100 / 8192 cent) * The Zone Fine Tune parameter (ZONE EDIT:PITCH) will change.
00H, 02H	mmH, llH	Channel Coarse Tuning mm: 10H - 40H - 70H (-48 - 0 - +48 semitones) ll: ignored (processed as 00H) * The Zone Coarse Tune parameter (ZONE EDIT:PITCH) will change.
7FH, 7FH	---, ---	RPN null RPN and NRPN will be set as "unspecified." Once this setting has been made, subsequent Parameter values that were previously set will not change. mm, ll: ignored

●Program Change

Status	2nd byte
CnH	ppH

n = MIDI channel number: 0H - FH (ch.1 - 16)
pp = Program number: 00H - 7FH (prog.1 - prog.128)

* Not received when the Receive Program Change parameter (SYSTEM:MIDI) is OFF.
* Not received when the Receive Program Change(PC) parameter (ZONE EDIT:MIDIRxFILTER) is OFF.

●Channel Pressure

Status	2nd byte
DnH	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Channel Pressure: 00H - 7FH (0 - 127)

* Not received when the Receive Channel Pressure(CA) parameter (ZONE EDIT:MIDIRxFILTER) is OFF.

●Pitch Bend Change

Status	2nd byte	3rd byte
EnH	llH	mmH

n = MIDI channel number: 0H - FH (ch.1 - 16)
mm, ll = Pitch Bend value: 00 00H - 40 00H - 7F 7FH (-8192 - 0 - +8191)

* Not received when the Receive Bender(PB) parameter (ZONE EDIT:MIDIRxFILTER) is OFF.
* Not received when the Receive Bender parameter (TONE EDIT:CONTROL) is OFF.

■Channel Mode Messages
* Not received when the Zone Receive Switch parameter (ZONE EDIT:LEVEL/PAN) is OFF.

●All Sounds Off (Controller number 120)

Status	2nd byte	3rd byte
BnH	78H	00H

n = MIDI channel number: 0H - FH (ch.1 - 16)

* When this message is received, all notes currently sounding on the corresponding channel will be turned off.

●Reset All Controllers (Controller number 121)

Status	2nd byte	3rd byte
BnH	79H	00H

n = MIDI channel number: 0H - FH (ch.1 - 16)

* When this message is received, the following controllers will be set to their reset values.

Controller	Reset value
Pitch Bend Change	+/-0 (center)
Polyphonic Key Pressure	0 (off)
Channel Pressure	0 (off)
Modulation	0 (off)
Breath Type	0 (min)
Foot Type	0 (min)
Expression	127 (max) However the controller will be at minimum.
Hold 1	0 (off)
Sostenuto	0 (off)
Soft	0 (off)
RPN	unset; previously set data will not change
NRPN	unset; previously set data will not change

●All Notes Off (Controller number 123)

Status	2nd byte	3rd byte
BnH	7BH	00H

n = MIDI channel number: 0H - FH (ch.1 - 16)

* When All Notes Off is received, all notes on the corresponding channel will be turned off. However, if Hold 1 or Sostenuto is ON, the sound will be continued until these are turned off.

●OMNI OFF (Controller number 124)

Status	2nd byte	3rd byte
BnH	7CH	00H

n = MIDI channel number: 0H - FH (ch.1 - 16)

* The same processing will be carried out as when All Notes Off is received.

●OMNI ON (Controller number 125)

Status	2nd byte	3rd byte
BnH	7DH	00H

n = MIDI channel number: 0H - FH (ch.1 - 16)

* The same processing will be carried out as when All Notes Off is received. OMNI ON will not be turned on.

●MONO (Controller number 126)

Status	2nd byte	3rd byte
BnH	7EH	mmH

n = MIDI channel number: 0H - FH (ch.1 - 16)
mm = mono number: 00H - 10H (0 - 16)

* The same processing will be carried out as when All Notes Off is received.
* The Zone Mono/Poly parameter (ZONE EDIT:MONO/POLY) will change.

●POLY (Controller number 127)

Status	2nd byte	3rd byte
BnH	7FH	00H

n = MIDI channel number: 0H - FH (ch.1 - 16)

* The same processing will be carried out as when All Notes Off is received.
* The Zone Mono/Poly parameter (ZONE EDIT:MONO/POLY) will change.

■System Realtime Messages

●Timing Clock
Status
F8H

* Received when Sync Mode parameter (SYSTEM:SYNC/TEMPO) is set to EXTERNAL.

●Active Sensing
Status
FEH

* When Active Sensing is received, the unit will begin monitoring the intervals of all further messages. While monitoring, if the interval between messages exceeds 500 ms, the same processing will be carried out as when All Sounds Off, All Notes Off and Reset All Controllers are received, and message interval monitoring will be halted.

■System Exclusive Message

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

F0H: System Exclusive Message status
ii = ID number: an ID number (manufacturer ID) to indicate the manufacturer whose Exclusive message this

is. Roland' s manufacturer ID is 41H. ID numbers 7EH and 7FH are extensions of the MIDI standard; Universal Non-realtime Messages (7EH) and Universal Realtime Messages (7FH).
dd,...,ee = data: 00H - 7FH (0 - 127)
F7H: EOX (End Of Exclusive)

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

●Universal Non-realtime System Exclusive Messages

○Identity Request Message

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

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

* When this message is received, Identity Reply message will be transmitted.

●Universal Realtime System Exclusive Messages

○Master Volume

Status	Data byte	Status
F0H	7FH, 7FH, 04H, 01H, llH, mmH	F7H

Byte	Explanation
F0H	Exclusive status
7FH	ID number (universal realtime message)
7FH	Device ID (Broadcast)
04H	Sub ID#1 (Device Control)
01H	Sub ID#2 (Master Volume)
llH	Master Volume lower byte
mmH	Master Volume upper byte
F7H	EOX (End Of Exclusive)

* The lower byte (llH) of Master Volume will be handled as 00H.
* The Master Level parameter (SYSTEM:SOUND) will change.

○Master Fine Tuning

Status	Data byte	Status
F0H	7FH, 7FH, 04H, 03H, llH, mmH	F7H

Byte	Explanation
F0H	Exclusive status
7FH	ID number (universal realtime message)
7FH	Device ID (Broadcast)
04H	Sub ID#1 (Device Control)
03H	Sub ID#2 (Master Fine Tuning)
llH	Master Fine Tuning LSB
mmH	Master Fine Tuning MSB
F7H	EOX (End Of Exclusive)

mm, ll: 00 00H - 40 00H - 7F 7FH (-100 - 0 - +99.9 [cents])

* The Master Tune parameter (SYSTEM:SOUND) will change.

○Master Coarse Tuning

Status	Data byte	Status
F0H	7FH, 7FH, 04H, 04H, llH, mmH	F7

Byte	Explanation
F0H	Exclusive status
7FH	ID number (universal realtime message)
7FH	Device ID (Broadcast)
04H	Sub ID#1 (Device Control)
04H	Sub ID#2 (Master Coarse Tuning)
llH	Master Coarse Tuning LSB
mmH	Master Coarse Tuning MSB
F7H	EOX (End Of Exclusive)

mmH: 28H - 40H - 58H (-24 - 0 - +24 [semitones])
llH: ignored (processed as 00H)

* The Master Key Shift parameter (SYSTEM:SOUND) will change.

●Global Parameter Control

○Scale/Octave Tuning Adjust

Status	Data byte	Status
F0H	7EH, 7FH, 08H, 08H, ffH, ggH, hhH, ssH...	F7

Byte	Explanation
F0H	Exclusive status
7EH	ID number (Universal Non-realtime Message)
7FH	Device ID (Broadcast)
08H	Sub ID#1 (MIDI Tuning Standard)
08H	Sub ID#2 (scale/octave tuning 1-byte form)
ffH	Channel/Option byte 1 bits 0 to 1 = channel 15 to 16 bit 2 to 6 = Undefined
ggH	Channel byte 2 bits 0 to 6 = channel 8 to 14
hhH	Channel byte 3 bits 0 to 6 = channel 1 to 7
ssH	12 byte tuning offset of 12 semitones from C to B 00H = -64 [cents] 40H = 0 [cents] (equal temperament) 7FH = +63 [cents]
F7H	EOX (End Of Exclusive)

●Data Transmission
This instrument can use exclusive messages to exchange many varieties of internal settings with other devices. The model ID of the exclusive messages used by this instrument is 00H 00H 00H 5BH.

○Data Request 1 (RQ1)
This message requests the other device to transmit data. The address and size indicate the type and amount of data that is requested.
When a Data Request message is received, if the device is in a state in which it is able to transmit data, and if the address and size are appropriate, the requested data is transmitted as a Data Set 1 (DT1) message. If the conditions are not met, nothing is transmitted.

Status	Data byte	Status
F0H	41H, dev, 00H, 00H, 00H, 5BH, 11H, aaH, bbH, ccH, ddH, ssH, ttH, uuH, vvH, sum	F7H

Byte	Remarks
F0H	Exclusive status
41H	ID number (Roland)
dev	device ID (dev: 10H - 1FH, 7FH)
00H	model ID #1 (FANTOM EX 6/7/8)
00H	model ID #2 (FANTOM EX 6/7/8)
00H	model ID #3 (FANTOM EX 6/7/8)
5BH	model ID #4 (FANTOM EX 6/7/8)
11H	command ID (RQ1)
aaH	address MSB
bbH	address
ccH	address
ddH	address LSB
ssH	size MSB
ttH	size
uuH	size
vvH	size LSB
sum	checksum
F7H	EOX (End Of Exclusive)

* The size of data that can be transmitted at one time is fixed for each type of data. And data requests must be made with a fixed starting address and size. Refer to the address and size given in "Parameter Address Map".
* For the checksum, refer to "How to calculate the checksum".
* Not received when the Receive Exclusive parameter (SYSTEM:MIDI) is OFF.

○Data set 1 (DT1)
This is the message that actually performs data transmission, and is used when you wish to transmit the data.

Status	Data byte	Status
F0H	41H, dev, 00H, 00H, 00H, 5BH, 12H, aaH, bbH, ccH, ddH, eeH, ... ffH, sum	F7H

Byte	Explanation
F0H	Exclusive status
41H	ID number (Roland)
dev	Device ID (dev: 10H - 1FH, 7FH)
00H	Model ID #1 (FANTOM EX 6/7/8)
00H	Model ID #2 (FANTOM EX 6/7/8)
00H	model ID #3 (FANTOM EX 6/7/8)
5BH	model ID #4 (FANTOM EX 6/7/8)
12H	Command ID (DT1)
aaH	Address MSB: upper byte of the starting address of the data to be sent
bbH	Address: upper middle byte of the starting address of the data to be sent
ccH	Address: lower middle byte of the starting address of the data to be sent
ddH	Address LSB: lower byte of the starting address of the data to be sent.
eeH	Data: the actual data to be sent. Multiple bytes of data are transmitted in order starting from the address.
:	
ffH	Data
sum	Checksum
F7H	EOX (End Of Exclusive)

* The amount of data that can be transmitted at one time depends on the type of data, and data will be transmitted from the specified starting address and size. Refer to the address and size given in "Parameter Address Map".
* Data larger than 256 bytes will be divided into packets of 256 bytes or less, and each packet will be sent at an interval of about 20 ms.
* Regarding the checksum, please refer to "How to calculate the checksum".
* Not received when the Receive Exclusive parameter (SYSTEM:MIDI) is OFF.

2. Data Transmission (Sound Source Section)

■Channel Voice Messages

●Note off

Status	2nd byte	3rd byte	
8nH	kkH	vvH	
n = MIDI channel number:			0H - FH (ch.1 - 16)
kk = note number:			00H - 7FH (0 - 127)
vv = note off velocity:			00H - 7FH (0 - 127)

●Note on

Status	2nd byte	3rd byte	
9nH	kkH	vvH	
n = MIDI channel number:			0H - FH (ch.1 - 16)
kk = note number:			00H - 7FH (0 - 127)
vv = note on velocity:			01H - 7FH (1 - 127)

●Control Change
* By selecting a controller number that corresponds to the setting of parameters of controllers, the FANTOM EX 6/7/8 can transmit any control change message.

○Bank Select (Controller number 0, 32)

Status	2nd byte	3rd byte	
BnH	00H	mmH	
BnH	20H	llH	
n = MIDI channel number:			0H - FH (ch.1 - 16)
mm, ll = Bank number:			00 00H - 7F 7FH (bank.1 - bank.16384)

* These messages are transmitted when Scene or Tone is selected. But not transmitted when Transmit Program Change (SYSTEM:MIDI) or Transmit Bank Select parameter (SYSTEM:MIDI) is OFF.

○Modulation (Controller number 1)

Status	2nd byte	3rd byte	
BnH	01H	vvH	
n = MIDI channel number:			0H - FH (ch.1 - 16)
vv = Modulation depth:			00H - 7FH (0 - 127)

○Breath type (Controller number 2)

Status	2nd byte	3rd byte	
BnH	02H	vvH	
n = MIDI channel number:			0H - FH (ch.1 - 16)
vv = Control value:			00H - 7FH (0 - 127)

○Portamento Time (Controller number 5)

Status	2nd byte	3rd byte	
BnH	05H	vvH	
n = MIDI channel number:			0H - FH (ch.1 - 16)
vv = Portamento Time:			00H - 7FH (0 - 127)

○Data Entry (Controller number 6, 38)

Status	2nd byte	3rd byte	
BnH	06H	mmH	
BnH	26H	llH	
n = MIDI channel number:			0H - FH (ch.1 - 16)
mm, ll = the value of the parameter specified by RPN/NRPN			
mm = MSB, ll = LSB			

○Volume (Controller number 7)

Status	2nd byte	3rd byte	
BnH	07H	vvH	
n = MIDI channel number:			0H - FH (ch.1 - 16)
vv = Volume:			00H - 7FH (0 - 127)

○Panpot (Controller number 10)

Status	2nd byte	3rd byte	
BnH	0AH	vvH	
n = MIDI channel number:			0H - FH (ch.1 - 16)
vv = Panpot:			00H - 40H - 7FH (Left - Center - Right)

○Expression (Controller number 11)

Status	2nd byte	3rd byte	
BnH	0BH	vvH	
n = MIDI channel number:			0H - FH (ch.1 - 16)
vv = Expression:			00H - 7FH (0 - 127)

○General Purpose Controller 1 (Controller number 16)

Status	2nd byte	3rd byte
BnH	10H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○General Purpose Controller 2 (Controller number 17)

Status	2nd byte	3rd byte
BnH	11H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○General Purpose Controller 3 (Controller number 18)

Status	2nd byte	3rd byte
BnH	12H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○General Purpose Controller 4 (Controller number 19)

Status	2nd byte	3rd byte
BnH	13H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○Hold 1 (Controller number 64)

Status	2nd byte	3rd byte
BnH	40H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127) 0-63 = OFF, 64-127 = ON

* If the Continuous Hold Pedal parameter (SYSTEM:PEDAL) is set to OFF, only 00H (OFF) or 7FH (ON) can be transmitted as the value of the control.

○Portamento (Controller number 65)

Status	2nd byte	3rd byte
BnH	41H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○Sostenuto (Controller number 66)

Status	2nd byte	3rd byte
BnH	42H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○Soft (Controller number 67)

Status	2nd byte	3rd byte
BnH	43H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○Legato Foot Switch (Controller number 68)

Status	2nd byte	3rd byte
BnH	44H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○Resonance (Controller number 71)

Status	2nd byte	3rd byte
BnH	47H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv= Resonance value (relative change): 00H - 40H - 7FH (-64 - 0 - +63)

○Release Time (Controller number 72)

Status	2nd byte	3rd byte
BnH	48H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Release Time value (relative change): 00H - 40H - 7FH (-64 - 0 - +63)

○Attack time (Controller number 73)

Status	2nd byte	3rd byte
BnH	49H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Attack time value (relative change): 00H - 40H - 7FH (-64 - 0 - +63)

○Cutoff (Controller number 74)

Status	2nd byte	3rd byte
BnH	4AH	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Cutoff value (relative change): 00H - 40H - 7FH (-64 - 0 - +63)

○General Purpose Controller 5 (Controller number 80)

Status	2nd byte	3rd byte
BnH	50H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○General Purpose Controller 6 (Controller number 81)

Status	2nd byte	3rd byte
BnH	51H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○General Purpose Controller 7 (Controller number 82)

Status	2nd byte	3rd byte
BnH	52H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○General Purpose Controller 8 (Controller number 83)

Status	2nd byte	3rd byte
BnH	53H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Control value: 00H - 7FH (0 - 127)

○Portamento control (Controller number 84)

Status	2nd byte	3rd byte
BnH	54H	kkH

n = MIDI channel number: 0H - FH (ch.1 - 16)
kk = source note number: 00H - 7FH (0 - 127)

○High Resolution Velocity Prefix (Controller number 88)

Status	2nd byte	3rd byte
BnH	58H	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = High Resolution Velocity Prefix: 00H - 7FH (0 - 127)

○General Purpose Effect 1 (Reverb Send Level) (Controller number 91)

Status	2nd byte	3rd byte
BnH	5BH	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Reverb Send Level: 00H - 7FH (0 - 127)

○General Purpose Effect 3 (Chorus Send Level) (Controller number 93)

Status	2nd byte	3rd byte
BnH	5DH	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Chorus Send Level: 00H - 7FH (0 - 127)

○General Controller

Status	2nd byte	3rd byte
BnH	kkH	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
kk = Controller number: 00H - 77H (0 - 31, 33 - 95)
vv = Control value: 00H - 7FH (0 - 127)

●Program Change

Status	2nd byte
CnH	ppH

n = MIDI channel number: 0H - FH (ch.1 - 16)
pp = Program number: 00H - 7FH (prog.1 - prog.128)

* These messages are transmitted when Scene or Tone is selected. But not transmitted when Transmit Program Change parameter (SYSTEM:MIDI) is OFF.

●Channel Pressure

Status	2nd byte
DnH	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Channel Pressure: 00H - 7FH (0 - 127)

●Pitch Bend Change

Status	2nd byte	3rd byte
EnH	llH	mmH

n = MIDI channel number: 0H - FH (ch.1 - 16)
mm, ll = Pitch Bend value: 00 00H - 40 00H - 7F 7FH (-8192 - 0 - +8191)

■Channel Mode Messages

●MONO (Controller number 126)

Status	2nd byte	3rd byte
BnH	7EH	mmH

n = MIDI channel number: 0H - FH (ch.1 - 16)
mm = mono number: 00H - 10H (0 - 16)

●POLY (Controller number 127)

Status	2nd byte	3rd byte
BnH	7FH	00H

n = MIDI channel number: 0H - FH (ch.1 - 16)

■System Realtime Messages

●Active Sensing
Status
FEH

* This message is transmitted at intervals of approximately 250 msec.

■System Exclusive Messages
Universal Non-realtime System Exclusive Message and Data Set 1 (DT1) are the only System Exclusive messages transmitted by the FANTOM EX 6/7/8

●Universal Non-realtime System Exclusive Message

○Identity Reply Message (FANTOM EX 6)
Receiving Identity Request Message, the FANTOM EX 6 send this message.

Status	Data byte	Status
F0H	7EH, dev, 06H, 02H, 41H, 5BH, 03H, 00H, 00H, 00H, 03H, 00H, 01H	F7H

Byte	Explanation
F0H	Exclusive status
7EH	ID number (Universal Non-realtime Message)
10H	Device ID (dev: 10H - 1FH)
06H	Sub ID#1 (General Information)
02H	Sub ID#2 (Identity Reply)
41H	ID number (Roland)
5BH 03H	Device family code
00H 00H	Device family number code
00H 03H 00H 01H	Software revision level
F7H	EOX (End of Exclusive)

○Identity Reply Message (FANTOM EX 7)
Receiving Identity Request Message, the FANTOM EX 7 send this message.

Status	Data byte	Status
F0H	7EH, dev, 06H, 02H, 41H, 5BH, 03H, 00H, 00H, 01H, 03H, 00H, 01H	F7H

Byte	Explanation
F0H	Exclusive status
7EH	ID number (Universal Non-realtime Message)
10H	Device ID (dev: 10H - 1FH)
06H	Sub ID#1 (General Information)
02H	Sub ID#2 (Identity Reply)
41H	ID number (Roland)
5BH 03H	Device family code
00H 00H	Device family number code
01H 03H 00H 01H	Software revision level
F7H	EOX (End of Exclusive)

○Identity Reply Message (FANTOM EX 8)
Receiving Identity Request Message, the FANTOM EX 8 send this message.

Status	Data byte	Status
F0H	7EH, dev, 06H, 02H, 41H, 5BH, 03H, 00H, 00H, 02H, 03H, 00H, 01H	F7H

Byte	Explanation
F0H	Exclusive status
7EH	ID number (Universal Non-realtime Message)
10H	Device ID (dev: 10H - 1FH)
06H	Sub ID#1 (General Information)
02H	Sub ID#2 (Identity Reply)
41H	ID number (Roland)
5BH 03H	Device family code
00H 00H	Device family number code
02H 03H 00H 01H	Software revision level
F7H	EOX (End of Exclusive)

●Data Transmission

○Data set 1 (DT1)

Status	Data byte	Status
F0H	41H, dev, 00H, 00H, 00H, 5BH, 12H, aaH, bbH, ccH, ddH, eeH, ... ffH, sum	F7H

Byte	Explanation
F0H	Exclusive status
41H	ID number (Roland)
dev	Device ID (dev: 10H - 1FH, 7FH)
00H	Model ID #1 (FANTOM EX 6/7/8)
00H	Model ID #2 (FANTOM EX 6/7/8)
00H	model ID #3 (FANTOM EX 6/7/8)
5BH	model ID #4 (FANTOM EX 6/7/8)
12H	Command ID (DT1)
aaH	Address MSB: upper byte of the starting address of the data to be sent
bbH	Address: upper middle byte of the starting address of the data to be sent
ccH	Address: lower middle byte of the starting address of the data to be sent
ddH	Address LSB: lower byte of the starting address of the data to be sent.
eeH	Data: the actual data to be sent. Multiple bytes of data are transmitted in order starting from the address.
:	:

ffH Data
sum Checksum
F7H EOX (End Of Exclusive)

* The amount of data that can be transmitted at one time depends on the type of data, and data will be transmitted from the specified starting address and size. Refer to the address and size given in "Parameter Address Map".
* Data larger than 256 bytes will be divided into packets of 256 bytes or less, and each packet will be sent at an interval of about 20 ms.

3. Data Reception (Sequencer Section)

3.1 Messages recorded during recording

■Channel Voice Messages

●Note off

Status	2nd byte	3rd byte
8nH	kkH	vvH
9nH	kkH	00H

n = MIDI channel number: 0H - FH (ch.1 - 16)
kk = note number: 00H - 7FH (0 - 127)
vv = note off velocity: 00H - 7FH (0 - 127)

* Not recorded when the NOTE parameter (REC EVENT window) is OFF.

●Note on

Status	2nd byte	3rd byte
9nH	kkH	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
kk = note number: 00H - 7FH (0 - 127)
vv = note on velocity: 01H - 7FH (1 - 127)

* Not recorded when the NOTE parameter (REC EVENT window) is OFF.

●Polyphonic Aftertouch

Status	2nd byte	3rd byte
AnH	kkH	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
kk = note number: 00H - 7FH (0 - 127)
vv = Polyphonic Aftertouch: 00H - 7FH (0 - 127)

* Not recorded when the POLY AFTER parameter (REC EVENT window) is OFF.

●Control Change

Status	2nd byte	3rd byte
BnH	kkH	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
kk = Control number: 00H - 78H (0 - 120)
vv = value: 00H - 7FH (0 - 127)

* Not recorded when the CONTROL CHANGE parameter (REC EVENT window) is OFF.
* kk = 00H and kk = 20H are not recorded.

●Channel Aftertouch

Status	2nd byte
DnH	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = Channel Aftertouch: 00H - 7FH (0 - 127)

* Not recorded when the CHANNEL AFTER parameter (REC EVENT window) is OFF.

●Pitch Bend Change

Status	2nd byte	3rd byte
EnH	llH	mmH

n = MIDI channel number: 0H - FH (ch.1 - 16)
mm, ll = Pitch Bend value: 00 00H - 40 00H - 7F 7FH (-8192 - 0 - +8191)

* Not recorded when the PITCH BEND parameter (REC EVENT window) is OFF.

■Channel Mode Messages

●All Sounds Off (Controller number 120)

Status	2nd byte	3rd byte
BnH	78H	00H

n = MIDI channel number: 0H - FH (ch.1 - 16)

* The same processing will be done as when an All Note Off message is received.
  Not recorded when the CONTROL CHANGE parameter (REC EVENT window) is OFF.

●Reset All Controllers (Controller number 121)

Status	2nd byte	3rd byte
BnH	79H	00H

n = MIDI channel number: 0H - FH (ch.1 - 16)

* Not recorded when the CONTROL CHANGE parameter (REC EVENT window) is OFF.

●Omni Off (Controller number 124)

Status	2nd byte	3rd byte
BnH	7CH	00H

n = MIDI channel number: 0H - FH (ch.1 - 16)

* The same processing will be done as when an All Note Off message is received.
  Not recorded when the CONTROL CHANGE parameter (REC EVENT window) is OFF.

●Omni On (Controller number 125)

Status	2nd byte	3rd byte
BnH	7DH	00H

n = MIDI channel number: 0H - FH (ch.1 - 16)

* The same processing will be done as when an All Note Off message is received.
  Not recorded when the CONTROL CHANGE parameter (REC EVENT window) is OFF.

●Mono (Controller number 126)

Status	2nd byte	3rd byte
BnH	7EH	mmH

n = MIDI channel number: 0H - FH (ch.1 - 16)
mm = mono number: 00H - 10H (0 - 16)

* The same processing will be done as when an All Note Off message is received.
  Not recorded when the CONTROL CHANGE parameter (REC EVENT window) is OFF.

●Poly (Controller number 127)

Status	2nd byte	3rd byte
BnH	7FH	00H

n = MIDI channel number: 0H - FH (ch.1 - 16)

* The same processing will be done as when an All Note Off message is received.
  Not recorded when the CONTROL CHANGE parameter (REC EVENT window) is OFF.

3.2 Messages not recorded during recording

■Channel Voice Messages

●Program Change

Status	2nd byte
CnH	ppH

n = MIDI channel number: 0H - FH (ch.1 - 16)
pp = Program number: 00H - 7FH (prog.1 - prog.128)

■System Exclusive Messages

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

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

■Channel Mode Messages

●Local On/Off (Controller number 122)

Status	2nd byte	3rd byte
BnH	7AH	vvH

n = MIDI channel number: 0H - FH (ch.1 - 16)
vv = value: 00H, 7FH (Local Off, Local On)

●All Notes Off (Controller number 123)

Status	2nd byte	3rd byte
BnH	7BH	00H

n = MIDI channel number: 0H - FH (ch.1 - 16)

3.3 Messages acknowledged for synchronization

■System Realtime Messages

●Timing Clock
Status
F8H

* Received when Sync Mode parameter (SYSTEM:SYNC/TEMPO) is set to EXTERNAL.

●Start
Status
FAH

* Received when Sync Mode parameter (SYSTEM:SYNC/TEMPO) is set to EXTERNAL or REMOTE.

●Continue
Status

FBH

* Received when Sync Mode parameter (SYSTEM:SYNC/TEMPO) is set to EXTERNAL or REMOTE.

●Stop
Status
FCH

* Received when Sync Mode parameter (SYSTEM:SYNC/TEMPO) is set to EXTERNAL or REMOTE.

4. Data transmission (Sequencer Section)

4.1 Messages transmitted during playing
Recorded messages are transmitted during playback.

4.2 Messages that are generated and transmitted
Messages are generated and transmitted to synchronize with other devices.

■System Realtime Messages
* Sent when Sync Output parameter (SYSTEM:SYNC/TEMPO) is set to ON.

●Timing Clock
Status
F8H

●Start
Status
FAH

●Stop
Status
FCH

5. Parameter Address Map

* Transmission of "#" marked address is divided to some packets. For example, ABH in hexadecimal notation will be divided to 0AH and 0BH, and is sent/received in this order.

FANTOM EX 6/7/8 (ModelID = 00H 00H 00H 5BH)

Start Address	Description		
00 00 00 00	System	[System]	
01 00 00 00	Setup	[Setup]	
01 00 02 00	Vocoder	[Vocoder]	
02 00 00 00	Temporary Scene	[Scene]	
02 10 00 00	Temporary Z-Core Tone (zone 1)	[Z-Core Tone]	
02 11 00 00	Temporary Z-Core Tone (zone 2)	[Z-Core Tone]	
:			
02 1F 00 00	Temporary Z-Core Tone (zone 16)	[Z-Core Tone]	
02 30 00 00	Temporary Drum Kit (zone 1)	[Drum Kit]	
02 32 00 00	Temporary Drum Kit (zone 2)	[Drum Kit]	
:			
02 4E 00 00	Temporary Drum Kit (zone 16)	[Drum Kit]	
03 00 00 00	Temporary Drum Kit Inst Set (zone 1)	[Drum Kit Inst Set]	
03 04 00 00	Temporary Drum Kit Inst Set (zone 2)	[Drum Kit Inst Set]	
:			
03 3C 00 00	Temporary Drum Kit Inst Set (zone 16)	[Drum Kit Inst Set]	
04 00 00 00	Temporary SN-A Tone (zone 1)	[SN-A Tone]	
04 01 00 00	Temporary SN-A Tone (zone 2)	[SN-A Tone]	
:			
04 0F 00 00	Temporary SN-A Tone (zone 16)	[SN-A Tone]	
04 20 00 00	Temporary V-Piano Tone	[V-Piano Tone]	
04 40 00 00	Temporary VTW Tone	[VTW Tone]	
05 00 00 00	Temporary EXSN Tone (zone 1)	[EXSN Tone]	*1
05 01 00 00	Temporary EXSN Tone (zone 2)	[EXSN Tone]	
:			
05 0F 00 00	Temporary EXSN Tone (zone 16)	[EXSN Tone]	
05 20 00 00	Temporary Model Tone (zone 1)	[Model Tone]	*2
05 21 00 00	Temporary Model Tone (zone 2)	[Model Tone]	
:			
05 2F 00 00	Temporary Model Tone (zone 16)	[Model Tone]	
05 40 00 00	Temporary n/zyme Tone (zone 1)	[n/zyme Tone]	*3
05 41 00 00	Temporary n/zyme Tone (zone 2)	[n/zyme Tone]	

	:		
05 4F 00 00	Temporary n/zyme Tone (zone 16)	[n/zyme Tone]	
05 60 00 00	Temporary JD-800 Tone (zone 1)	[JD-800 Tone]	*4
05 61 00 00	Temporary JD-800 Tone (zone 2)	[JD-800 Tone]	
	:		
05 6F 00 00	Temporary JD-800 Tone (zone 16)	[JD-800 Tone]	

*1 EXSN01-
*2 EXM001-
*3 EXM007
*4 EXM005

* [System]

Offset Address	Description	
00 00 00 00	System Common	[System Common]
00 00 02 00	System Controller	[System Controller]
00 00 04 00	Master Comp	[Master Comp]
00 00 06 00	Master EQ	[Master EQ]
00 00 09 00	Input EQ 1	[Input EQ]
00 00 0A 00	Input EQ 2	[Input EQ]
00 00 0B 00	Input Reverb	[Reverb]
00 00 10 00	TFX	[MFX]
00 00 12 00	Input MFX 1	[MFX]
00 00 14 00	Input MFX 2	[MFX]

* [Scene]

Offset Address	Description	
00 00 00	Scene Common	[Scene Common]
00 02 00	Scene Chorus	[Chorus]
00 03 00	Scene Reverb	[Reverb]
00 04 00	Scene IFX 1	[MFX]
00 06 00	Scene IFX 2	[MFX]
00 10 00	Scene Zone (Zone 1)	[Scene Zone]
00 11 00	Scene Zone (Zone 2)	[Scene Zone]
:		
00 1F 00	Scene Zone (Zone 16)	[Scene Zone]
00 20 00	Scene Zone EQ (Zone 1)	[Zone EQ]
00 21 00	Scene Zone EQ (Zone 2)	[Zone EQ]
:		
00 2F 00	Scene Zone EQ (Zone 16)	[Zone EQ]
00 30 00	Scene Zone Control (Zone 1)	[Zone Control]
00 31 00	Scene Zone Control (Zone 2)	[Zone Control]
:		
00 3F 00	Scene Zone Control (Zone 16)	[Zone Control]
00 40 00	Scene Controller	[Scene Controller]
00 43 00	Scene Analog Filter	[Analog Filter]

* [Z-Core Tone]

Offset Address	Description	
00 00 00	Tone Common	[Tone Common]
00 01 00	Tone MFX	[MFX]
00 10 00	Tone PMT	[Tone PMT]
00 20 00	Tone Partial 1	[Tone Partial]
00 21 00	Tone Partial 2	[Tone Partial]
:		
00 23 00	Tone Partial 4	[Tone Partial]

00 24 00	Partial Pitch Env 1	[Partial Pitch Env]
00 25 00	Partial Pitch Env 2	[Partial Pitch Env]
:		
00 27 00	Partial Pitch Env 4	[Partial Pitch Env]
00 28 00	Partial Filter Env 1	[Partial Filter Env]
00 29 00	Partial Filter Env 2	[Partial Filter Env]
:		
00 2B 00	Partial Filter Env 4	[Partial Filter Env]
00 2C 00	Partial Amp Env 1	[Partial Amp Env]
00 2D 00	Partial Amp Env 2	[Partial Amp Env]
:		
00 2F 00	Partial Amp Env 4	[Partial Amp Env]
00 30 00	Partial LFO 1	[Partial LFO]
00 32 00	Partial LFO 2	[Partial LFO]
:		
00 36 00	Partial LFO 4	[Partial LFO]
00 38 00	Partial EQ 1	[Partial EQ]
00 39 00	Partial EQ 2	[Partial EQ]
:		
00 3B 00	Partial EQ 4	[Partial EQ]
00 3C 00	Synth Common	[Tone Synth Common]
00 3D 00	Synth PMT	[Tone Synth PMT]
00 3E 00	Synth Partial 1	[Tone Synth Partial]
00 3F 00	Synth Partial 2	[Tone Synth Partial]
:		
00 41 00	Synth Partial 4	[Tone Synth Partial]

* [SN-A Tone]

Offset Address	Description	
00 00 00	SN-A Tone Common	[SN-A Tone Common]
00 01 00	SN-A Tone MFX	[MFX]

* [V-Piano Tone]

Offset Address	Description	
00 00 00	V-Piano Tone Common	[V-Piano Tone Common]
00 01 00	V-Piano Tone MFX	[MFX]
00 03 00	Piano Designer Basic	[Piano Designer Basic]
00 04 00	Piano Designer Tuning	[Piano Designer Tuning]
00 08 00	Piano Designer Level	[Piano Designer Level]
00 09 00	Piano Designer Character	[Piano Designer Character]

* [VTW Tone]

Offset Address	Description	
00 00 00	VTW Tone Common	[VTW Tone Common]
00 01 00	VTW Tone Modify	[VTW Tone Modify]
00 02 00	VTW Tone Overdrive	[VTW Overdrive]
00 04 00	VTW Tone Rotary	[VTW Rotary]
00 06 00	VTW Tone MFX	[MFX]

* [EXSN Tone]

Offset Address	Description	
00 00 00	EXSN Tone Common	[EXSN Tone Common]
00 01 00	EXSN Tone MFX	[MFX]

* [Model Tone]

Offset Address	Description	
00 00 00	Model Tone Parameter	[Model Tone Prm]
00 02 00	Model Tone MFX	[MFX]
00 04 00	Model Tone Common	[Model Tone Com]

* [n/zyme Tone]

Offset Address	Description	
00 00 00	n/zyme Tone OSC	[n/zyme Tone OSC]
00 02 00	n/zyme Tone Step Modulator	[n/zyme Tone Step Mod]
00 04 00	n/zyme Tone Parameter	[n/zyme Tone Prm]
00 06 00	n/zyme Tone EQ	[n/zyme Tone EQ]
00 07 00	n/zyme Tone Control	[n/zyme Tone Control]
00 08 00	n/zyme Tone MFX	[MFX]
00 0A 00	Model Tone Common	[Model Tone Com]

* [JD-800 Tone]

Offset Address	Description	
00 00 00	JD-800 Tone Parameter	[JD-800 Tone Com]
00 01 00	JD-800 Tone Parameter Partial 1	[JD-800 Tone Partial]
00 02 00	JD-800 Tone Parameter Partial 2	[JD-800 Tone Partial]
:		
00 04 00	JD-800 Tone Parameter Partial 4	[JD-800 Tone Partial]
00 05 00	JD-800 Tone Group A Effect	[MFX]
00 07 00	JD-800 Tone Group B Effect	[JD-800 Tone FxB]
00 08 00	Model Tone Common	[Model Tone Com]

* [Drum Kit]

Offset Address	Description	
00 00 00	Drum Kit Common	[Drum Kit Common]
00 01 00	Drum Kit MFX	[MFX]
00 10 00	Drum Kit Comp 1	[Drum Kit Comp]
00 11 00	Drum Kit Comp 2	[Drum Kit Comp]
:		
00 15 00	Drum Kit Comp 6	[Drum Kit Comp]
00 16 00	Drum Kit Partial (Key# 21)	[Drum Kit Partial]
00 17 00	Drum Kit Partial (Key# 22)	[Drum Kit Partial]
:		
00 6D 00	Drum Kit Partial (Key# 108)	[Drum Kit Partial]
00 6E 00	Drum Kit Partial EQ (Key# 21)	[Partial EQ]
00 6F 00	Drum Kit Partial EQ (Key# 22)	[Partial EQ]
:		
01 45 00	Drum Kit Partial EQ (Key# 108)	[Partial EQ]

* [Drum Kit Inst Set]

Offset Address	Description	
00 00 00	Drum Kit Inst (Key# 21)	[Inst]
00 05 00	Drum Kit Inst (Key# 22)	[Inst]
:		
03 33 00	Drum Kit Inst (Key# 108)	[Inst]

* [Inst]

Offset Address	Description	
00 00 00	Inst Common	[Inst Common]
00 02 00	Inst Pitch Env	[Inst Pitch Env]
00 03 00	Inst Filter Env	[Inst Filter Env]
00 04 00	Inst Amp Env	[Inst Amp Env]

* [Setup]

Offset Address		Description	
00 00	0aaa aaaa	Scene BS MSB (CC# 0)	(0 - 127)
00 01	0aaa aaaa	Scene BS LSB (CC# 32)	(0 - 127)
00 02	0aaa aaaa	Scene PC (PC)	(0 - 127)
00 03	0aaa aaaa	Transpose Value	(59 - 70) -5 - 6
00 04	0aaa aaaa	Octave Shift	(61 - 67) -3 - 3
00 00 00 05	Total Size		

* [System Common]

Offset Address		Description	
# 00 00	0000 aaaa		
00 01	0000 bbbb		
00 02	0000 cccc		
00 03	0000 dddd	Master Tune	(24 - 2024) -1000 - 1000
00 04	0aaa aaaa	Master Key Shift	(40 - 88) -24 - 24
00 05	0aaa aaaa	Master Level	(0 - 127)
00 06	000a aaaa	Scene Control Channel	(0 - 16) 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,OFF
00 07	0000 000a	ScaleTune Sw	(0 - 1) OFF, ON
00 08	0aaa aaaa	Reserved	
00 09	0000 000a	Control Source Select	(0 - 1) SYS, SCENE
00 0A	0aaa aaaa	System Control Source 1	(0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 0B	0aaa aaaa	System Control Source 2	(0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 0C	0aaa aaaa	System Control Source 3	(0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 0D	0aaa aaaa	System Control Source 4	(0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06,

		CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 0E	0aaa aaaa	Reserved
:	:	:
00 11	0000 000a	Receive Program Change (0 - 1) OFF, ON
00 12	0000 000a	Receive Bank Select (0 - 1) OFF, ON
00 13	0aaa aaaa	Reserved
:	:	:
00 15	0aaa aaaa	Master FX Input Gain (40 - 88) -24 - +24 [dB]
00 00 00 16	Total Size	

* [System Control]

Offset Address		Description
00 00	0000 000a	Transmit Program Change (0 - 1) OFF, ON
00 01	0000 000a	Transmit Bank Select (0 - 1) OFF, ON
00 02	0aaa aaaa	Keyboard Velocity (0 - 127) REAL, 1 - 127
00 03	0000 00aa	Keyboard Velocity Curve (0 - 2) LIGHT,MEDIUM,HEAVY
00 04	0aaa aaaa	Keyboard Velocity Curve Offset (54 - 73) -10 - 9
00 05	0aaa aaaa	Reserved
00 06	0000 000a	Hold Pedal Polarity (0 - 1) STANDARD, REVERSE
00 07	0000 000a	Continuous Hold Pedal (0 - 1) OFF, ON
00 08	0000 000a	Pedal 1 Polarity (0 - 1) STANDARD, REVERSE
00 09	0000 000a	Pedal 2 Polarity (0 - 1) STANDARD, REVERSE
00 0A	0000 000a	Pedal 3 Polarity (0 - 1) STANDARD, REVERSE
00 0B	0aaa aaaa	Reserved
00 0C	0aaa aaaa	Pedal 1 Assign (0 - 114) OFF, CC01,CC02,CC03,CC04,CC05,CC06,CC07,CC08, CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16,CC17,CC18, CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26,CC27,CC28, CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37,CC38,CC39, CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47,CC48,CC49, CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57,CC58,CC59, CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67,CC68,CC69, CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77,CC78,CC79, CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87,CC88,CC89, CC90,CC91,CC92,CC93,CC94,CC95,BEND DOWN,BEND UP, AFT,START/STOP,TAP TEMPO,SCENE DOWN,SCENE UP, OCT DOWN,OCT UP,ARPEGGIO SW,CHORD MEM SW,DEC,INC, VOCODER SW,VTW ROTARY SPEED,VTW ROTARY BRAKE, VTW ROTARY SW,VTW OVERDRIVE SW,VTW WHEEL BRAKE, VTW VIB/CHO SW
00 0D	0aaa aaaa	Pedal 1 Range Min (0 - 127)
00 0E	0aaa aaaa	Pedal 1 Range Max (0 - 127)
00 0F	0aaa aaaa	Pedal 2 Assign (0 - 114) OFF, CC01,CC02,CC03,CC04,CC05,CC06,CC07,CC08, CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16,CC17,CC18, CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26,CC27,CC28, CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37,CC38,CC39, CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47,CC48,CC49, CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57,CC58,CC59, CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67,CC68,CC69, CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77,CC78,CC79, CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87,CC88,CC89, CC90,CC91,CC92,CC93,CC94,CC95,BEND DOWN,BEND UP, AFT,START/STOP,TAP TEMPO,SCENE DOWN,SCENE UP, OCT DOWN,OCT UP,ARPEGGIO SW,CHORD MEM SW,DEC,INC, VOCODER SW,VTW ROTARY SPEED,VTW ROTARY BRAKE, VTW ROTARY SW,VTW OVERDRIVE SW,VTW WHEEL BRAKE, VTW VIB/CHO SW
00 10	0aaa aaaa	Pedal 2 Range Min (0 - 127)
00 11	0aaa aaaa	Pedal 2 Range Max (0 - 127)
00 12	0aaa aaaa	Pedal 3 Assign (0 - 114)

		OFF, CC01,CC02,CC03,CC04,CC05,CC06,CC07,CC08, CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16,CC17,CC18, CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26,CC27,CC28, CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37,CC38,CC39, CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47,CC48,CC49, CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57,CC58,CC59, CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67,CC68,CC69, CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77,CC78,CC79, CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87,CC88,CC89, CC90,CC91,CC92,CC93,CC94,CC95,BEND DOWN,BEND UP, AFT,START/STOP,TAP TEMPO,SCENE DOWN,SCENE UP, OCT DOWN,OCT UP,ARPEGGIO SW,CHORD MEM SW,DEC,INC, VOCODER SW,VTW ROTARY SPEED,VTW ROTARY BRAKE, VTW ROTARY SW,VTW OVERDRIVE SW,VTW WHEEL BRAKE, VTW VIB/CHO SW
00 13	0aaa aaaa	Pedal 3 Range Min (0 - 127)
00 14	0aaa aaaa	Pedal 3 Range Max (0 - 127)
00 15	0aaa aaaa	Reserved
:	:	:
00 18	0aaa aaaa	Knob 1 Assign (0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 19	0aaa aaaa	Knob 1 Range Min (0 - 127)
00 1A	0aaa aaaa	Knob 1 Range Max (0 - 127)
00 1B	0aaa aaaa	Knob 2 Assign (0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 1C	0aaa aaaa	Knob 2 Range Min (0 - 127)
00 1D	0aaa aaaa	Knob 2 Range Max (0 - 127)
00 1E	0aaa aaaa	Knob 3 Assign (0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 1F	0aaa aaaa	Knob 3 Range Min (0 - 127)
00 20	0aaa aaaa	Knob 3 Range Max (0 - 127)
00 21	0aaa aaaa	Knob 4 Assign (0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 22	0aaa aaaa	Knob 4 Range Min (0 - 127)
00 23	0aaa aaaa	Knob 4 Range Max (0 - 127)
00 24	0aaa aaaa	Knob 5 Assign (0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 25	0aaa aaaa	Knob 5 Range Min (0 - 127)
00 26	0aaa aaaa	Knob 5 Range Max (0 - 127)
00 27	0aaa aaaa	Knob 6 Assign (0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16,

		CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26,
		CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37,
		CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47,
		CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57,
		CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67,
		CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77,
		CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87,
		CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT
00 28	0aaa aaaa	Knob 6 Range Min (0 - 127)
00 29	0aaa aaaa	Knob 6 Range Max (0 - 127)
00 2A	0aaa aaaa	Knob 7 Assign (0 - 96)
		OFF, CC01, CC02, CC03, CC04, CC05, CC06,
		CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16,
		CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26,
		CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37,
		CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47,
		CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57,
		CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67,
		CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77,
		CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87,
		CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT
00 2B	0aaa aaaa	Knob 7 Range Min (0 - 127)
00 2C	0aaa aaaa	Knob 7 Range Max (0 - 127)
00 2D	0aaa aaaa	Knob 8 Assign (0 - 96)
		OFF, CC01, CC02, CC03, CC04, CC05, CC06,
		CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16,
		CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26,
		CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37,
		CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47,
		CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57,
		CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67,
		CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77,
		CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87,
		CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT
00 2E	0aaa aaaa	Knob 8 Range Min (0 - 127)
00 2F	0aaa aaaa	Knob 8 Range Max (0 - 127)
00 30	0aaa aaaa	Slider 1 Assign (0 - 96)
		OFF, CC01, CC02, CC03, CC04, CC05, CC06,
		CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16,
		CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26,
		CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37,
		CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47,
		CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57,
		CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67,
		CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77,
		CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87,
		CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT
00 31	0aaa aaaa	Slider 1 Range Min (0 - 127)
00 32	0aaa aaaa	Slider 1 Range Max (0 - 127)
00 33	0aaa aaaa	Slider 2 Assign (0 - 96)
		OFF, CC01, CC02, CC03, CC04, CC05, CC06,
		CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16,
		CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26,
		CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37,
		CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47,
		CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57,
		CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67,
		CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77,
		CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87,
		CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT
00 34	0aaa aaaa	Slider 2 Range Min (0 - 127)
00 35	0aaa aaaa	Slider 2 Range Max (0 - 127)
00 36	0aaa aaaa	Slider 3 Assign (0 - 96)
		OFF, CC01, CC02, CC03, CC04, CC05, CC06,
		CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16,
		CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26,
		CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37,
		CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47,
		CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57,
		CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67,
		CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77,
		CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87,
		CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT
00 37	0aaa aaaa	Slider 3 Range Min (0 - 127)
00 38	0aaa aaaa	Slider 3 Range Max (0 - 127)
00 39	0aaa aaaa	Slider 4 Assign (0 - 96)
		OFF, CC01, CC02, CC03, CC04, CC05, CC06,
		CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16,
		CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26,
		CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37,
		CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47,
		CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57,
		CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67,
		CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77,
		CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87,
		CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT
00 3A	0aaa aaaa	Slider 4 Range Min (0 - 127)

00 3B	0aaa aaaa	Slider 4 Range Max (0 - 127)
00 3C	0aaa aaaa	Slider 5 Assign (0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 3D	0aaa aaaa	Slider 5 Range Min (0 - 127)
00 3E	0aaa aaaa	Slider 5 Range Max (0 - 127)
00 3F	0aaa aaaa	Slider 6 Assign (0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 40	0aaa aaaa	Slider 6 Range Min (0 - 127)
00 41	0aaa aaaa	Slider 6 Range Max (0 - 127)
00 42	0aaa aaaa	Slider 7 Assign (0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 43	0aaa aaaa	Slider 7 Range Min (0 - 127)
00 44	0aaa aaaa	Slider 7 Range Max (0 - 127)
00 45	0aaa aaaa	Slider 8 Assign (0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 46	0aaa aaaa	Slider 8 Range Min (0 - 127)
00 47	0aaa aaaa	Slider 8 Range Max (0 - 127)
00 48	0aaa aaaa	Reserved
:	:	:
00 66	0aaa aaaa	S1 Sw Assign (0 - 127) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND DOWN, BEND UP,AFT,MONO/POLY,MFX SW,EQ SW,IFX1 SW,IFX2 SW, CHORUS SW,REVERB SW,MASTER COMP SW,MASTER EQ SW, VOCODER SW,SCENE DOWN,SCENE UP,DEC,INC, SEQ START/STOP,GROUP PLAY DOWN,GROUP PLAY UP, SONG LOOP SW,TFX SW,MASTER KEY DOWN,MASTER KEY UP, SCALE TUNE SW,ANALOG DRV,VTW ROTARY SPEED, VTW ROTARY BRAKE,VTW ROTARY SW,VTW OVERDRIVE SW, VTW WHEEL BRAKE,VTW VIB/CHO SW,VTW HARMONIC BAR
00 67	0000 000a	S1 Sw Mode (0 - 1) MOMENTARY, LATCH
00 68	0aaa aaaa	S2 Sw Assign (0 - 127) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND DOWN,

		BEND UP,AFT,MONO/POLY,MFX SW,EQ SW,IFX1 SW,IFX2 SW, CHORUS SW,REVERB SW,MASTER COMP SW,MASTER EQ SW, VOCODER SW,SCENE DOWN,SCENE UP,DEC,INC, SEQ START/STOP,GROUP PLAY DOWN,GROUP PLAY UP, SONG LOOP SW,TFX SW,MASTER KEY DOWN,MASTER KEY UP, SCALE TUNE SW,ANALOG DRV,VTW ROTARY SPEED, VTW ROTARY BRAKE,VTW ROTARY SW,VTW OVERDRIVE SW, VTW WHEEL BRAKE,VTW VIB/CHO SW,VTW HARMONIC BAR
00 69	0000 000a	S2 Sw Mode (0 - 1) MOMENTARY, LATCH
00 6A	0aaa aaaa	Wheel 1 Assign (0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 6B	0aaa aaaa	Wheel 1 Range Min (0 - 127)
00 6C	0aaa aaaa	Wheel 1 Range Max (0 - 127)
00 6D	0aaa aaaa	Wheel 2 Assign (0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 6E	0aaa aaaa	Wheel 2 Range Min (0 - 127)
00 6F	0aaa aaaa	Wheel 2 Range Max (0 - 127)
00 70	0aaa aaaa	S3 Sw Assign (0 - 127) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND DOWN, BEND UP,AFT,MONO/POLY,MFX SW,EQ SW,IFX1 SW,IFX2 SW, CHORUS SW,REVERB SW,MASTER COMP SW,MASTER EQ SW, VOCODER SW,SCENE DOWN,SCENE UP,DEC,INC, SEQ START/STOP,GROUP PLAY DOWN,GROUP PLAY UP, SONG LOOP SW,TFX SW,MASTER KEY DOWN,MASTER KEY UP, SCALE TUNE SW,ANALOG DRV,VTW ROTARY SPEED, VTW ROTARY BRAKE,VTW ROTARY SW,VTW OVERDRIVE SW, VTW WHEEL BRAKE,VTW VIB/CHO SW,VTW HARMONIC BAR
00 71	0000 000a	S3 Sw Mode (0 - 1) MOMENTARY, LATCH
00 72	0aaa aaaa	Reserved
00 73	0aaa aaaa	Reserved
00 74	0000 000a	Pedal Assign Source (0 - 1) SYS, SCENE
00 75	0aaa aaaa	Reserved
00 76	0aaa aaaa	Reserved
00 77	0aaa aaaa	Reserved
00 78	0000 000a	S1-S3 Assign Source (0 - 1) SYS, SCENE
00 79	0000 000a	Wheel Assign Source (0 - 1) SYS, SCENE
00 7A	0aaa aaaa	Reserved
00 7B	0aaa aaaa	Reserved
00 7C	0000 000a	Slider Mode (0 - 1) DIRECT, CATCH
00 7D	0aaa aaaa	Reserved
00 7E	0000 000a	Hi-Res Velocity Out (0 - 1) OFF, ON
00 7F	0aaa aaaa	Aftertouch Sens (0 - 127)
01 00	0000 000a	Pad Note Switch (0 - 1) OFF, ON
01 01	0000 aaaa	Pad1 Zone (0 - 15)
01 02	0000 aaaa	Pad2 Zone (0 - 15)
01 03	0000 aaaa	Pad3 Zone (0 - 15)
01 04	0000 aaaa	Pad4 Zone (0 - 15)
01 05	0000 aaaa	Pad5 Zone (0 - 15)
01 06	0000 aaaa	Pad6 Zone (0 - 15)
01 07	0000 aaaa	Pad7 Zone (0 - 15)
01 08	0000 aaaa	Pad8 Zone (0 - 15)
01 09	0000 aaaa	Pad9 Zone (0 - 15)

01 0A	0000 aaaa	Pad10 Zone	(0 - 15)
01 0B	0000 aaaa	Pad11 Zone	(0 - 15)
01 0C	0000 aaaa	Pad12 Zone	(0 - 15)
01 0D	0000 aaaa	Pad13 Zone	(0 - 15)
01 0E	0000 aaaa	Pad14 Zone	(0 - 15)
01 0F	0000 aaaa	Pad15 Zone	(0 - 15)
01 10	0000 aaaa	Pad16 Zone	(0 - 15)
01 11	0aaa aaaa	Pad1 Note Number	(0 - 127)
01 12	0aaa aaaa	Pad2 Note Number	(0 - 127)
01 13	0aaa aaaa	Pad3 Note Number	(0 - 127)
01 14	0aaa aaaa	Pad4 Note Number	(0 - 127)
01 15	0aaa aaaa	Pad5 Note Number	(0 - 127)
01 16	0aaa aaaa	Pad6 Note Number	(0 - 127)
01 17	0aaa aaaa	Pad7 Note Number	(0 - 127)
01 18	0aaa aaaa	Pad8 Note Number	(0 - 127)
01 19	0aaa aaaa	Pad9 Note Number	(0 - 127)
01 1A	0aaa aaaa	Pad10 Note Number	(0 - 127)
01 1B	0aaa aaaa	Pad11 Note Number	(0 - 127)
01 1C	0aaa aaaa	Pad12 Note Number	(0 - 127)
01 1D	0aaa aaaa	Pad13 Note Number	(0 - 127)
01 1E	0aaa aaaa	Pad14 Note Number	(0 - 127)
01 1F	0aaa aaaa	Pad15 Note Number	(0 - 127)
01 20	0aaa aaaa	Pad16 Note Number	(0 - 127)
01 21	0aaa aaaa	Pad1 Velocity	(0 - 127) OFF, 1 - 127
01 22	0aaa aaaa	Pad2 Velocity	(0 - 127) OFF, 1 - 127
01 23	0aaa aaaa	Pad3 Velocity	(0 - 127) OFF, 1 - 127
01 24	0aaa aaaa	Pad4 Velocity	(0 - 127) OFF, 1 - 127
01 25	0aaa aaaa	Pad5 Velocity	(0 - 127) OFF, 1 - 127
01 26	0aaa aaaa	Pad6 Velocity	(0 - 127) OFF, 1 - 127
01 27	0aaa aaaa	Pad7 Velocity	(0 - 127) OFF, 1 - 127
01 28	0aaa aaaa	Pad8 Velocity	(0 - 127) OFF, 1 - 127
01 29	0aaa aaaa	Pad9 Velocity	(0 - 127) OFF, 1 - 127
01 2A	0aaa aaaa	Pad10 Velocity	(0 - 127) OFF, 1 - 127
01 2B	0aaa aaaa	Pad11 Velocity	(0 - 127) OFF, 1 - 127
01 2C	0aaa aaaa	Pad12 Velocity	(0 - 127) OFF, 1 - 127
01 2D	0aaa aaaa	Pad13 Velocity	(0 - 127) OFF, 1 - 127
01 2E	0aaa aaaa	Pad14 Velocity	(0 - 127) OFF, 1 - 127
01 2F	0aaa aaaa	Pad15 Velocity	(0 - 127) OFF, 1 - 127
01 30	0aaa aaaa	Pad16 Velocity	(0 - 127) OFF, 1 - 127
01 31	0000 000a	CV/Gate 1 Assign Source	(0 - 1) SYS, SCENE
01 32	000a aaaa	CV/Gate 1 Control Zone	(0 - 16) 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,OFF
01 33	0aaa aaaa	CV 1 Assign NOTE, CC01,CC02,CC03,CC04,CC05,CC06,CC07, CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16,CC17, CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26,CC27, CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37,CC38, CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47,CC48, CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57,CC58, CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67,CC68, CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77,CC78, CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87,CC88, CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT,VELO	(0 - 97)
01 34	0000 0aaa	CV 1 Reference Note	(0 - 4) C0, C1, C2, C3, C4
01 35	0aaa aaaa	CV 1 Scale	(1 - 127) -63 - 63
01 36	0aaa aaaa	CV 1 Fine Tune for 0V	(14 - 114) -50 - 50
01 37	0aaa aaaa	Reserved	
01 38	0000 000a	CV/Gate 2 Assign Source	(0 - 1) SYS, SCENE
01 39	000a aaaa	CV/Gate 2 Control Zone	(0 - 16) 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,OFF
01 3A	0aaa aaaa	CV 2 Assign NOTE, CC01,CC02,CC03,CC04,CC05,CC06,CC07, CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16,CC17, CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26,CC27, CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37,CC38, CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47,CC48,	(0 - 97)

		CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57,CC58, CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67,CC68, CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77,CC78, CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87,CC88, CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT,VELO
01 3B	0000 0aaa	CV 2 Reference Note (0 - 4) C0, C1, C2, C3, C4
01 3C	0aaa aaaa	CV 2 Scale (1 - 127) -63 - 63
01 3D	0aaa aaaa	CV 2 Fine Tune for 0V (14 - 114) -50 - 50
01 3E	0aaa aaaa	Reserved
01 3F	0000 000a	Gate 2 Port Mode (0 - 1) GATE2, CV3
01 40	0aaa aaaa	CV 3 Assign (0 - 97) NOTE, CC01,CC02,CC03,CC04,CC05,CC06,CC07, CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16,CC17, CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26,CC27, CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37,CC38, CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47,CC48, CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57,CC58, CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67,CC68, CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77,CC78, CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87,CC88, CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT,VELO
01 41	0000 aaaa	Aftertouch Pressure Range (0 - 10)
00 00 01 42	Total Size	

* [Master Comp]

Offset Address		Description
00 00	0000 000a	Switch (0 - 1) OFF, ON
00 01	0aaa aaaa	Low Attack Time (0 - 100) 0.1,1,2,3,4,5,6, 7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23, 24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39, 40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55, 56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71, 72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87, 88,89,90,91,92,93,94,95,96,97,98,99,100[ms]
00 02	0aaa aaaa	Low Release Time (0 - 99) 10 - 1000[ms]
00 03	0aaa aaaa	Low Threshold (4 - 64) -60 - 0[dB]
00 04	0000 0aaa	Low Ratio (0 - 7) 1:1, 2:1, 3:1, 4:1, 8:1, 16:1, 32:1, INF:1
00 05	000a aaaa	Low Knee (0 - 30) 0 - 30 [dB]
00 06	0aaa aaaa	Low Output Gain (16 - 112) -24.0 - +24.0 [dB]
00 07	0aaa aaaa	Mid Attack Time (0 - 100) 0.1,1,2,3,4,5,6, 7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23, 24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39, 40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55, 56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71, 72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87, 88,89,90,91,92,93,94,95,96,97,98,99,100[ms]
00 08	0aaa aaaa	Mid Release Time (0 - 99) 10 - 1000[ms]
00 09	0aaa aaaa	Mid Threshold (4 - 64) -60 - 0[dB]
00 0A	0000 0aaa	Mid Ratio (0 - 7) 1:1, 2:1, 3:1, 4:1, 8:1, 16:1, 32:1, INF:1
00 0B	000a aaaa	Mid Knee (0 - 30) 0 - 30 [dB]
00 0C	0aaa aaaa	Mid Output Gain (16 - 112) -24.0 - +24.0 [dB]
00 0D	0aaa aaaa	High Attack Time (0 - 100) 0.1,1,2,3,4,5,6, 7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23, 24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39, 40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55, 56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71, 72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87, 88,89,90,91,92,93,94,95,96,97,98,99,100[ms]
00 0E	0aaa aaaa	High Release Time (0 - 99) 10 - 1000[ms]
00 0F	0aaa aaaa	High Threshold (4 - 64) -60 - 0[dB]
00 10	0000 0aaa	High Ratio (0 - 7) 1:1, 2:1, 3:1, 4:1, 8:1, 16:1, 32:1, INF:1

00 11	000a aaaa	High Knee (0 - 30) 0 - 30 [dB]
00 12	0aaa aaaa	High Output Gain (16 - 112) -24.0 - +24.0 [dB]
00 13	000a aaaa	Split Freq Low (0 - 30) 16, 20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12500, 16000 [Hz]
00 14	000a aaaa	Split Freq Hi (0 - 30) 16, 20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12500, 16000 [Hz]
00 00 00 15	Total Size	

* [Master EQ]

Offset Address	Description	
00 00	0aaa aaaa	EQ Input Gain (40 - 88) -24 - +24 [dB]
00 01	0aaa aaaa	EQ Low Gain (40 - 88) -24 - +24 [dB]
00 02	0aaa aaaa	EQ Mid1 Gain (40 - 88) -24 - +24 [dB]
00 03	0aaa aaaa	EQ Mid2 Gain (40 - 88) -24 - +24 [dB]
00 04	0aaa aaaa	EQ Mid3 Gain (40 - 88) -24 - +24 [dB]
00 05	0aaa aaaa	EQ High Gain (40 - 88) -24 - +24 [dB]
00 06	000a aaaa	EQ Low Frequency (0 - 29) 20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12600, 16000 [Hz]
00 07	000a aaaa	EQ Mid1 Frequency (0 - 29) 20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12600, 16000 [Hz]
00 08	000a aaaa	EQ Mid2 Frequency (0 - 29) 20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12600, 16000 [Hz]
00 09	000a aaaa	EQ Mid3 Frequency (0 - 29) 20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12600, 16000 [Hz]
00 0A	000a aaaa	EQ High Frequency (0 - 29) 20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12600, 16000 [Hz]
00 0B	0000 0aaa	EQ Mid1 Q (0 - 5) 0.5, 1.0, 2.0, 4.0, 8.0, 16.0
00 0C	0000 0aaa	EQ Mid2 Q (0 - 5) 0.5, 1.0, 2.0, 4.0, 8.0, 16.0
00 0D	0000 0aaa	EQ Mid3 Q (0 - 5) 0.5, 1.0, 2.0, 4.0, 8.0, 16.0
00 0E	0000 000a	EQ Switch (0 - 1) OFF, ON
00 00 00 0F	Total Size	

* [Input EQ]

Offset Address	Description	
00 00	0aaa aaaa	EQ Input Gain (40 - 88) -24 - +24 [dB]
00 01	0aaa aaaa	EQ Low Gain (40 - 88) -24 - +24 [dB]
00 02	0aaa aaaa	EQ Mid1 Gain (40 - 88) -24 - +24 [dB]
00 03	0aaa aaaa	EQ Mid2 Gain (40 - 88) -24 - +24 [dB]
00 04	0aaa aaaa	EQ Mid3 Gain (40 - 88) -24 - +24 [dB]
00 05	0aaa aaaa	EQ High Gain (40 - 88) -24 - +24 [dB]
00 06	000a aaaa	EQ Low Frequency (0 - 29) 20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12600, 16000 [Hz]
00 07	000a aaaa	EQ Mid1 Frequency (0 - 29)

		20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12600, 16000 [Hz]
00 08	000a aaaa	EQ Mid2 Frequency (0 - 29) 20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12600, 16000 [Hz]
00 09	000a aaaa	EQ Mid3 Frequency (0 - 29) 20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12600, 16000 [Hz]
00 0A	000a aaaa	EQ High Frequency (0 - 29) 20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12600, 16000 [Hz]
00 0B	0000 0aaa	EQ Mid1 Q (0 - 5) 0.5, 1.0, 2.0, 4.0, 8.0, 16.0
00 0C	0000 0aaa	EQ Mid2 Q (0 - 5) 0.5, 1.0, 2.0, 4.0, 8.0, 16.0
00 0D	0000 0aaa	EQ Mid3 Q (0 - 5) 0.5, 1.0, 2.0, 4.0, 8.0, 16.0
00 0E	0000 000a	EQ Switch (0 - 1) OFF, ON
00 00 00 0F	Total Size	

* [Vocoder]

Offset Address		Description
00 00	0aaa aaaa	Vocoder Setting Name (32 - 127)
00 01	0aaa aaaa	Vocoder Setting Name (32 - 127)
00 02	0aaa aaaa	Vocoder Setting Name (32 - 127)
00 03	0aaa aaaa	Vocoder Setting Name (32 - 127)
00 04	0aaa aaaa	Vocoder Setting Name (32 - 127)
00 05	0aaa aaaa	Vocoder Setting Name (32 - 127)
00 06	0aaa aaaa	Vocoder Setting Name (32 - 127)
00 07	0aaa aaaa	Vocoder Setting Name (32 - 127)
00 08	0aaa aaaa	Vocoder Setting Name (32 - 127)
00 09	0aaa aaaa	Vocoder Setting Name (32 - 127)
00 0A	0aaa aaaa	Vocoder Setting Name (32 - 127)
00 0B	0aaa aaaa	Vocoder Setting Name (32 - 127)
00 0C	0aaa aaaa	Vocoder Setting Name (32 - 127)
00 0D	0aaa aaaa	Vocoder Setting Name (32 - 127)
00 0E	0aaa aaaa	Vocoder Setting Name (32 - 127)
00 0F	0aaa aaaa	Vocoder Setting Name (32 - 127)
00 10	0aaa aaaa	Recommended Tone Bank Select MSB (CC#0) (0 - 127)
00 11	0aaa aaaa	Recommended Tone Bank Select LSB (CC#32) (0 - 127)
00 12	0aaa aaaa	Recommended Tone Program Number (PC) (0 - 127)
00 13	0000 000a	Carrier Input2 (0 - 1) OFF, ON
00 14	0aaa aaaa	Carrier Level (0 - 127)
00 15	0000 00aa	Envelope (0 - 2) SHARP, SOFT, LONG
00 16	0aaa aaaa	Mic Sens (0 - 127)
00 17	00aa aaaa	Mic HPF (0 - 33) BYPASS, 200, 224, 250, 280, 315, 355, 400, 450, 500, 560, 630, 710, 800, 900, 1000, 1100, 1300, 1400, 1600, 1800, 2000, 2200, 2500, 2800, 3200, 3600, 4000, 4500, 5000, 5600, 6300, 7100, 8000 [Hz]
00 18	0aaa aaaa	Mic Mix Level (0 - 127)
00 19	0aaa aaaa	Level (0 - 127)
00 1A	0000 000a	Stereo Switch (0 - 1) MONO, STEREO
00 1B	0000 00aa	Vocoder Type (0 - 2) 13Band, 20Band, 32Band
00 1C	0aaa aaaa	Band 1 (0 - 127)
00 1D	0aaa aaaa	Band 2 (0 - 127)
00 1E	0aaa aaaa	Band 3 (0 - 127)
00 1F	0aaa aaaa	Band 4 (0 - 127)
00 20	0aaa aaaa	Band 5 (0 - 127)
00 21	0aaa aaaa	Band 6 (0 - 127)
00 22	0aaa aaaa	Band 7 (0 - 127)
00 23	0aaa aaaa	Band 8 (0 - 127)
00 24	0aaa aaaa	Band 9 (0 - 127)
00 25	0aaa aaaa	Band 10 (0 - 127)
00 26	0aaa aaaa	Band 11 (0 - 127)
00 27	0aaa aaaa	Band 12 (0 - 127)
00 28	0aaa aaaa	Band 13 (0 - 127)
00 29	0aaa aaaa	Band 14 (0 - 127)
00 2A	0aaa aaaa	Band 15 (0 - 127)
00 2B	0aaa aaaa	Band 16 (0 - 127)
00 2C	0aaa aaaa	Band 17 (0 - 127)
00 2D	0aaa aaaa	Band 18 (0 - 127)

00 2E	0aaa aaaa	Band 19	(0 - 127)
00 2F	0aaa aaaa	Band 20	(0 - 127)
00 30	0aaa aaaa	Band 21	(0 - 127)
00 31	0aaa aaaa	Band 22	(0 - 127)
00 32	0aaa aaaa	Band 23	(0 - 127)
00 33	0aaa aaaa	Band 24	(0 - 127)
00 34	0aaa aaaa	Band 25	(0 - 127)
00 35	0aaa aaaa	Band 26	(0 - 127)
00 36	0aaa aaaa	Band 27	(0 - 127)
00 37	0aaa aaaa	Band 28	(0 - 127)
00 38	0aaa aaaa	Band 29	(0 - 127)
00 39	0aaa aaaa	Band 30	(0 - 127)
00 3A	0aaa aaaa	Band 31	(0 - 127)
00 3B	0aaa aaaa	Band 32	(0 - 127)
00 00 00 3C	Total Size		

* [Drum Kit Comp]

Offset Address		Description	
00 00	0000 000a	Comp Switch	(0 - 1) OFF, ON
00 01	0aaa aaaa	Comp Attack Time	(0 - 100) 0.1,1,2,3,4,5,6, 7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23, 24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39, 40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55, 56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71, 72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87, 88,89,90,91,92,93,94,95,96,97,98,99,100[ms]
00 02	0aaa aaaa	Comp Release Time	(0 - 99) 10 - 1000[ms]
00 03	0aaa aaaa	Comp Threshold	(4 - 64) -60 - 0[dB]
00 04	0000 0aaa	Comp Ratio	(0 - 7) 1:1, 2:1, 3:1, 4:1, 8:1, 16:1, 32:1, INF:1
00 05	000a aaaa	Comp Knee	(0 - 30) 0 - 30 [dB]
00 06	0aaa aaaa	Comp Output Gain	(16 - 112) -24.0 - +24.0 [dB]
00 07	0000 0aaa	Comp Output Assign	(0 - 5) DRY, MFX, MAIN, SUB1, SUB2, AFX
00 00 00 08	Total Size		

* [Analog Filter]

	Offset Address		Description	
	00 00	0aaa aaaa	Reserved	
	00 01	0000 000a	Analog Filter Amp Sw	(0 - 1) OFF, ON
	00 02	0000 000a	Analog Filter Drive Sw	(0 - 1) OFF, ON
	00 03	0000 0aaa	Analog Filter Type	(0 - 5) OFF, LPF1, LPF2, LPF3, HPF, BPF
#	00 04	0000 aaaa		
	00 05	0000 bbbb		
	00 06	0000 cccc		
	00 07	0000 dddd	Analog Filter Cutoff 1	(0 - 1023)
#	00 08	0000 aaaa		
	00 09	0000 bbbb		
	00 0A	0000 cccc		
	00 0B	0000 dddd	Analog Filter Cutoff 2	(0 - 1023)
#	00 0C	0000 aaaa		
	00 0D	0000 bbbb		
	00 0E	0000 cccc		
	00 0F	0000 dddd	Analog Filter Resonance 1	(0 - 1023)
#	00 10	0000 aaaa		
	00 11	0000 bbbb		
	00 12	0000 cccc		
	00 13	0000 dddd	Analog Filter Resonance 2	(0 - 1023)
	00 14	0aaa aaaa	Analog Filter Drive Depth 1	(0 - 127)
	00 15	0aaa aaaa	Analog Filter Drive Depth 2	(0 - 127)
	00 16	0aaa aaaa	Analog Filter Level 1	(0 - 127)
	00 17	0aaa aaaa	Analog Filter Level 2	(0 - 127)
	00 18	0aaa aaaa	Analog Filter Pan 1	(0 - 127) L64 - 63R
	00 19	0aaa aaaa	Analog Filter Pan 2	(0 - 127) L64 - 63R
	00 1A	0aaa aaaa	Analog Filter Send Level 1	(0 - 127)
	00 1B	0aaa aaaa	Analog Filter Send Level 2	(0 - 127)

00 1C	0aaa aaaa	Analog Filter Chorus Send 1	(0 - 127)
00 1D	0aaa aaaa	Analog Filter Chorus Send 2	(0 - 127)
00 1E	0aaa aaaa	Analog Filter Reverb Send 1	(0 - 127)
00 1F	0aaa aaaa	Analog Filter Reverb Send 2	(0 - 127)
00 20	0000 000a	Analog Filter Return Sw 1	(0 - 1) OFF, ON
00 21	0000 000a	Analog Filter Return Sw 2	(0 - 1) OFF, ON
00 22	0000 000a	Analog Filter Noise Suppressor Sw	(0 - 1) OFF, ON
00 23	0aaa aaaa	Reserved	
:	:	:	:
00 00 00 28	Total Size		

* [Scene Common]

Offset Address		Description	
00 00	0aaa aaaa	Scene Name 1	(32 - 127) 32 - 127 [ASCII]
00 01	0aaa aaaa	Scene Name 2	(32 - 127) 32 - 127 [ASCII]
00 02	0aaa aaaa	Scene Name 3	(32 - 127) 32 - 127 [ASCII]
00 03	0aaa aaaa	Scene Name 4	(32 - 127) 32 - 127 [ASCII]
00 04	0aaa aaaa	Scene Name 5	(32 - 127) 32 - 127 [ASCII]
00 05	0aaa aaaa	Scene Name 6	(32 - 127) 32 - 127 [ASCII]
00 06	0aaa aaaa	Scene Name 7	(32 - 127) 32 - 127 [ASCII]
00 07	0aaa aaaa	Scene Name 8	(32 - 127) 32 - 127 [ASCII]
00 08	0aaa aaaa	Scene Name 9	(32 - 127) 32 - 127 [ASCII]
00 09	0aaa aaaa	Scene Name 10	(32 - 127) 32 - 127 [ASCII]
00 0A	0aaa aaaa	Scene Name 11	(32 - 127) 32 - 127 [ASCII]
00 0B	0aaa aaaa	Scene Name 12	(32 - 127) 32 - 127 [ASCII]
00 0C	0aaa aaaa	Scene Name 13	(32 - 127) 32 - 127 [ASCII]
00 0D	0aaa aaaa	Scene Name 14	(32 - 127) 32 - 127 [ASCII]
00 0E	0aaa aaaa	Scene Name 15	(32 - 127) 32 - 127 [ASCII]
00 0F	0aaa aaaa	Scene Name 16	(32 - 127) 32 - 127 [ASCII]
00 10	0aaa aaaa	Scene Level	(0 - 127)
00 11	0aaa aaaa	Reserved	
00 12	0000 aaaa	Current Zone	(0 - 15) 1 - 16
00 13	000a aaaa	Solo Zone	(0 - 16) OFF, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16
00 14	0aaa aaaa	Tone Control Source 1	(0 - 96) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT
00 15	0aaa aaaa	Tone Control Source 2	(0 - 96) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT
00 16	0aaa aaaa	Tone Control Source 3	(0 - 96) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47,

			CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
	00 17	0aaa aaaa	Tone Control Source 4 (0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
	00 18	0aaa aaaa	Voice Reserve 1 (0 - 64)
	00 19	0aaa aaaa	Voice Reserve 2 (0 - 64)
	00 1A	0aaa aaaa	Voice Reserve 3 (0 - 64)
	00 1B	0aaa aaaa	Voice Reserve 4 (0 - 64)
	00 1C	0aaa aaaa	Voice Reserve 5 (0 - 64)
	00 1D	0aaa aaaa	Voice Reserve 6 (0 - 64)
	00 1E	0aaa aaaa	Voice Reserve 7 (0 - 64)
	00 1F	0aaa aaaa	Voice Reserve 8 (0 - 64)
	00 20	0aaa aaaa	Voice Reserve 9 (0 - 64)
	00 21	0aaa aaaa	Voice Reserve 10 (0 - 64)
	00 22	0aaa aaaa	Voice Reserve 11 (0 - 64)
	00 23	0aaa aaaa	Voice Reserve 12 (0 - 64)
	00 24	0aaa aaaa	Voice Reserve 13 (0 - 64)
	00 25	0aaa aaaa	Voice Reserve 14 (0 - 64)
	00 26	0aaa aaaa	Voice Reserve 15 (0 - 64)
	00 27	0aaa aaaa	Voice Reserve 16 (0 - 64)
	00 28	0000 000a	Rhythm Comp Sw (0 - 1) OFF, ON
	00 29	0000 aaaa	Rhythm Comp Zone (0 - 15) 1 - 16
	00 2A	0aaa aaaa	Reserved
⋮	⋮	⋮	⋮
	00 30	0000 00aa	IFX1 Output Assign (0 - 3) MAIN, SUB1, SUB2, AFX
	00 31	0aaa aaaa	Reserved
	00 32	0000 00aa	IFX2 Output Assign (0 - 3) MAIN, SUB1, SUB2, AFX
	00 33	0aaa aaaa	Reserved
	00 34	0000 000a	IFX Structure (0 - 1) SERIAL, PARALLEL
	00 35	0000 00aa	Chorus Output Assign (0 - 2) MAIN, SUB1, SUB2
	00 36	0000 00aa	Reverb Output Assign (0 - 2) MAIN, SUB1, SUB2
	00 37	0aaa aaaa	Reserved
#	00 38	0000 aaaa	
	00 39	0000 bbbb	
	00 3A	0000 cccc	
	00 3B	0000 dddd	Scene Tempo (500 - 30000) 5.00 - 300.00
	00 3C	0aaa aaaa	Reserved
⋮	⋮	⋮	⋮
	00 42	0aaa aaaa	Scene Memo 1 (32 - 127) 32 - 127 [ASCII]
	00 43	0aaa aaaa	Scene Memo 2 (32 - 127) 32 - 127 [ASCII]
	00 44	0aaa aaaa	Scene Memo 3 (32 - 127) 32 - 127 [ASCII]
	00 45	0aaa aaaa	Scene Memo 4 (32 - 127) 32 - 127 [ASCII]
	00 46	0aaa aaaa	Scene Memo 5 (32 - 127) 32 - 127 [ASCII]
	00 47	0aaa aaaa	Scene Memo 6 (32 - 127) 32 - 127 [ASCII]
	00 48	0aaa aaaa	Scene Memo 7 (32 - 127) 32 - 127 [ASCII]
	00 49	0aaa aaaa	Scene Memo 8 (32 - 127) 32 - 127 [ASCII]
	00 4A	0aaa aaaa	Scene Memo 9 (32 - 127) 32 - 127 [ASCII]
	00 4B	0aaa aaaa	Scene Memo 10 (32 - 127) 32 - 127 [ASCII]
	00 4C	0aaa aaaa	Scene Memo 11 (32 - 127) 32 - 127 [ASCII]
	00 4D	0aaa aaaa	Scene Memo 12 (32 - 127) 32 - 127 [ASCII]
	00 4E	0aaa aaaa	Scene Memo 13 (32 - 127) 32 - 127 [ASCII]
	00 4F	0aaa aaaa	Scene Memo 14 (32 - 127) 32 - 127 [ASCII]
	00 50	0aaa aaaa	Scene Memo 15 (32 - 127)

00 51	0aaa aaaa	Scene Memo 16	32 - 127 [ASCII] (32 - 127)
00 52	0aaa aaaa	Scene Memo 17	32 - 127 [ASCII] (32 - 127)
00 53	0aaa aaaa	Scene Memo 18	32 - 127 [ASCII] (32 - 127)
00 54	0aaa aaaa	Scene Memo 19	32 - 127 [ASCII] (32 - 127)
00 55	0aaa aaaa	Scene Memo 20	32 - 127 [ASCII] (32 - 127)
00 56	0aaa aaaa	Scene Memo 21	32 - 127 [ASCII] (32 - 127)
00 57	0aaa aaaa	Scene Memo 22	32 - 127 [ASCII] (32 - 127)
00 58	0aaa aaaa	Scene Memo 23	32 - 127 [ASCII] (32 - 127)
00 59	0aaa aaaa	Scene Memo 24	32 - 127 [ASCII] (32 - 127)
00 5A	0aaa aaaa	Scene Memo 25	32 - 127 [ASCII] (32 - 127)
00 5B	0aaa aaaa	Scene Memo 26	32 - 127 [ASCII] (32 - 127)
00 5C	0aaa aaaa	Scene Memo 27	32 - 127 [ASCII] (32 - 127)
00 5D	0aaa aaaa	Scene Memo 28	32 - 127 [ASCII] (32 - 127)
00 5E	0aaa aaaa	Scene Memo 29	32 - 127 [ASCII] (32 - 127)
00 5F	0aaa aaaa	Scene Memo 30	32 - 127 [ASCII] (32 - 127)
00 60	0aaa aaaa	Scene Memo 31	32 - 127 [ASCII] (32 - 127)
00 61	0aaa aaaa	Scene Memo 32	32 - 127 [ASCII] (32 - 127)
00 62	0aaa aaaa	Scene Memo 33	32 - 127 [ASCII] (32 - 127)
00 63	0aaa aaaa	Scene Memo 34	32 - 127 [ASCII] (32 - 127)
00 64	0aaa aaaa	Scene Memo 35	32 - 127 [ASCII] (32 - 127)
00 65	0aaa aaaa	Scene Memo 36	32 - 127 [ASCII] (32 - 127)
00 66	0aaa aaaa	Scene Memo 37	32 - 127 [ASCII] (32 - 127)
00 67	0aaa aaaa	Scene Memo 38	32 - 127 [ASCII] (32 - 127)
00 68	0aaa aaaa	Scene Memo 39	32 - 127 [ASCII] (32 - 127)
00 69	0aaa aaaa	Scene Memo 40	32 - 127 [ASCII] (32 - 127)
00 6A	0aaa aaaa	Scene Memo 41	32 - 127 [ASCII] (32 - 127)
00 6B	0aaa aaaa	Scene Memo 42	32 - 127 [ASCII] (32 - 127)
00 6C	0aaa aaaa	Scene Memo 43	32 - 127 [ASCII] (32 - 127)
00 6D	0aaa aaaa	Scene Memo 44	32 - 127 [ASCII] (32 - 127)
00 6E	0aaa aaaa	Scene Memo 45	32 - 127 [ASCII] (32 - 127)
00 6F	0aaa aaaa	Scene Memo 46	32 - 127 [ASCII] (32 - 127)
00 70	0aaa aaaa	Scene Memo 47	32 - 127 [ASCII] (32 - 127)
00 71	0aaa aaaa	Scene Memo 48	32 - 127 [ASCII] (32 - 127)
00 72	0aaa aaaa	Scene Memo 49	32 - 127 [ASCII] (32 - 127)
00 73	0aaa aaaa	Scene Memo 50	32 - 127 [ASCII] (32 - 127)
00 74	0aaa aaaa	Scene Memo 51	32 - 127 [ASCII] (32 - 127)
00 75	0aaa aaaa	Scene Memo 52	32 - 127 [ASCII] (32 - 127)
00 76	0aaa aaaa	Scene Memo 53	32 - 127 [ASCII] (32 - 127)
00 77	0aaa aaaa	Scene Memo 54	32 - 127 [ASCII] (32 - 127)
00 78	0aaa aaaa	Scene Memo 55	32 - 127 [ASCII] (32 - 127)
00 79	0aaa aaaa	Scene Memo 56	32 - 127 [ASCII] (32 - 127)
00 7A	0aaa aaaa	Scene Memo 57	32 - 127 [ASCII] (32 - 127)
00 7B	0aaa aaaa	Scene Memo 58	32 - 127 [ASCII] (32 - 127)

	Offset Address		Description	
	00 7C	0aaa aaaa	Scene Memo 59	(32 - 127) 32 - 127 [ASCII]
	00 7D	0aaa aaaa	Scene Memo 60	(32 - 127) 32 - 127 [ASCII]
	00 7E	0aaa aaaa	Scene Memo 61	(32 - 127) 32 - 127 [ASCII]
	00 7F	0aaa aaaa	Scene Memo 62	(32 - 127) 32 - 127 [ASCII]
	01 00	0aaa aaaa	Scene Memo 63	(32 - 127) 32 - 127 [ASCII]
	01 01	0aaa aaaa	Scene Memo 64	(32 - 127) 32 - 127 [ASCII]
#	01 02	0000 aaaa		
	01 03	0000 bbbb		
	01 04	0000 cccc		
	01 05	0000 dddd	Reserved	
	01 06	0000 aaaa	Scene Color	(0 - 15) 0 - 15
	01 07	0000 00aa	Scene Rating	(0 - 3) 0 - 3
	01 08	0000 aaaa	Pad Mode	(0 - 11) SYSTEM, SAMPLE PAD, NOTE PAD, PARTIAL SW/SEL, DAW CONTROL, ZONE MUTE, ZONE SOLO, KBD SW GROUP, RHYTHM PATTERN, PATTERN, VARIATION PLAY, GROUP PLAY
	01 09	0aaa aaaa	Reserved	
	01 0A	0aaa aaaa	Reserved	
	01 0B	0000 000a	Vocoder Switch	(0 - 1) OFF, ON
	01 0C	0000 000a	Vocoder Setting Bank	(0 - 1) PRESET, USER
	01 0D	0aaa aaaa	Vocoder Setting Number	(0 - 127)
#	01 0E	0000 aaaa		
	01 0F	0000 bbbb		
	01 10	0000 cccc		
	01 11	0000 dddd	Vocoder Zone Select	(0 - 65535)
	01 12	0aaa aaaa	Reserved	
	⋮	⋮	⋮	⋮
	00 00 01 16	Total Size		

* [Scene Zone]

	Offset Address		Description	
	00 00	0aaa aaaa	Tone Bank Select MSB (CC#0)	(0 - 127)
	00 01	0aaa aaaa	Tone Bank Select LSB (CC#32)	(0 - 127)
	00 02	0aaa aaaa	Tone Program Change (PC)	(0 - 127)
	00 03	0000 aaaa	Receive Channel	(0 - 15) 1 - 16
	00 04	0000 000a	Zone Receive Switch	(0 - 1) OFF, ON
	00 05	0000 000a	Mute Switch	(0 - 1) OFF, MUTE
	00 06	0aaa aaaa	Reserved	
	00 07	0aaa aaaa	Zone Level (CC#7)	(0 - 127)
	00 08	0aaa aaaa	Zone Pan (CC#10)	(0 - 127) L64 - 63R
	00 09	0aaa aaaa	Zone Coarse Tune (RPN#2)	(16 - 112) -48 - 48
	00 0A	0aaa aaaa	Zone Fine Tune (RPN#1)	(14 - 114) -50 - 50
	00 0B	0000 00aa	Zone Mono/Poly	(0 - 2) MONO, POLY, TONE
	00 0C	0000 00aa	Zone Legato Switch	(0 - 2) OFF, ON, TONE
	00 0D	000a aaaa	Zone Bend Range (RPN#0)	(0 - 25) 0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,TONE
	00 0E	0000 00aa	Zone Portamento Switch (CC#65)	(0 - 2) OFF, ON, TONE
#	00 0F	0000 aaaa		
	00 10	0000 bbbb	Zone Portamento Time (CC#5)	(0 - 128) 0 - 127, TONE
	00 11	0aaa aaaa	Zone Cutoff Offset (CC#74)	(0 - 127) -64 - 63
	00 12	0aaa aaaa	Zone Resonance Offset (CC#71)	(0 - 127) -64 - 63
	00 13	0aaa aaaa	Zone Attack Time Offset (CC#73)	(0 - 127) -64 - 63
	00 14	0aaa aaaa	Zone Decay Time Offset (CC#75)	(0 - 127) -64 - 63
	00 15	0aaa aaaa	Zone Release Time Offset (CC#72)	(0 - 127) -64 - 63
	00 16	0aaa aaaa	Zone Vibrato Rate (CC#76)	(0 - 127)

			-64 - 63
00 17	0aaa aaaa	Zone Vibrato Depth (CC#77)	(0 - 127)
			-64 - 63
00 18	0aaa aaaa	Zone Vibrato Delay (CC#78)	(0 - 127)
			-64 - 63
00 19	0aaa aaaa	Zone Octave Shift	(61 - 67)
			-3 - 3
00 1A	0aaa aaaa	Zone Velocity Sens Offset	(1 - 127)
			-63 - 63
00 1B	0aaa aaaa	Reserved	
:	:	:	:
00 23	0aaa aaaa	Zone Chorus Send Level (CC#93)	(0 - 127)
00 24	0aaa aaaa	Zone Reverb Send Level (CC#91)	(0 - 127)
00 25	0000 0aaa	Zone Output Assign	(0 - 5)
		MAIN, IFX1, IFX2, SUB1, SUB2, AFX	
00 26	0aaa aaaa	Reserved	
00 27	0000 00aa	Voice Assign Mode	(0 - 2)
		SINGLE, LIMIT, FULL	
00 28	0000 00aa	Bend Mode	(0 - 2)
		NORMAL, C+L, TONE	
00 29	0000 aaaa	Zone Scale Tune Type	(0 - 8)
		CUSTOM, EQUAL, JUST-MAJ, JUST-MIN, PYTHAGORE,	
		KIRNBERGE, MEANTONE, WERCKMEIS, ARABIC	
00 2A	0000 aaaa	Zone Scale Tune Key	(0 - 11)
		C, C#, D, D#, E, F, F#, G, G#, A, A#, B	
00 2B	0aaa aaaa	Zone Scale Tune for C	(0 - 127)
			-64 - 63
00 2C	0aaa aaaa	Zone Scale Tune for C#	(0 - 127)
			-64 - 63
00 2D	0aaa aaaa	Zone Scale Tune for D	(0 - 127)
			-64 - 63
00 2E	0aaa aaaa	Zone Scale Tune for D#	(0 - 127)
			-64 - 63
00 2F	0aaa aaaa	Zone Scale Tune for E	(0 - 127)
			-64 - 63
00 30	0aaa aaaa	Zone Scale Tune for F	(0 - 127)
			-64 - 63
00 31	0aaa aaaa	Zone Scale Tune for F#	(0 - 127)
			-64 - 63
00 32	0aaa aaaa	Zone Scale Tune for G	(0 - 127)
			-64 - 63
00 33	0aaa aaaa	Zone Scale Tune for G#	(0 - 127)
			-64 - 63
00 34	0aaa aaaa	Zone Scale Tune for A	(0 - 127)
			-64 - 63
00 35	0aaa aaaa	Zone Scale Tune for A#	(0 - 127)
			-64 - 63
00 36	0aaa aaaa	Zone Scale Tune for B	(0 - 127)
			-64 - 63
00 37	0000 000a	Receive Program Change	(0 - 1)
			OFF, ON
00 38	0000 000a	Receive Bank Select	(0 - 1)
			OFF, ON
00 39	0000 000a	Receive Pitch Bend	(0 - 1)
			OFF, ON
00 3A	0000 000a	Receive Poly Key Pressure	(0 - 1)
			OFF, ON
00 3B	0000 000a	Receive Channel Pressure	(0 - 1)
			OFF, ON
00 3C	0000 000a	Receive Modulation	(0 - 1)
			OFF, ON
00 3D	0000 000a	Receive Volume	(0 - 1)
			OFF, ON
00 3E	0000 000a	Receive Pan	(0 - 1)
			OFF, ON
00 3F	0000 000a	Receive Expression	(0 - 1)
			OFF, ON
00 40	0000 000a	Receive Hold-1	(0 - 1)
			OFF, ON
00 41	0000 0aaa	Velocity Curve Type	(0 - 4)
		OFF, 1, 2, 3, 4	
00 42	0000 000a	Hold Type	(0 - 1)
		STACK, LEGATO	
00 43	0000 000a	Bend Hold Notes Sw	(0 - 1)
			OFF, ON
00 44	0aaa aaaa	Reserved	
:	:	:	:
00 00 00 49	Total Size		

* [Zone EQ]

Offset Address	Description		
00 00	0aaa aaaa	EQ Input Gain	(40 - 88)

			-24 - +24 [dB]
00 01	0aaa aaaa	EQ Low Gain	(40 - 88)
			-24 - +24 [dB]
00 02	0aaa aaaa	EQ Mid Gain	(40 - 88)
			-24 - +24 [dB]
00 03	0aaa aaaa	EQ High Gain	(40 - 88)
			-24 - +24 [dB]
00 04	000a aaaa	EQ Low Frequency	(0 - 29)
		20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12600, 16000 [Hz]	
00 05	000a aaaa	EQ Mid Frequency	(0 - 29)
		20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12600, 16000 [Hz]	
00 06	000a aaaa	EQ High Frequency	(0 - 29)
		20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12600, 16000 [Hz]	
00 07	0000 0aaa	EQ Mid Q	(0 - 5)
		0.5, 1.0, 2.0, 4.0, 8.0, 16.0	
00 08	0000 000a	EQ Switch	(0 - 1)
			OFF, ON
00 00 00 09	Total Size		

* [Zone Control]

Offset Address		Description	
00 00	0000 000a	Keyboard Switch	(0 - 1)
			OFF, ON
00 01	0000 000a	Arpeggio Switch	(0 - 1)
			OFF, ON
00 02	0000 00aa	Internal/External	(0 - 2)
			INT, EXT, BOTH
00 03	0aaa aaaa	Reserved	
00 04	0aaa aaaa	Keyboard Control Range Lower	(0 - 127)
00 05	0aaa aaaa	Keyboard Control Range Upper	(0 - 127)
00 06	0aaa aaaa	Velocity Control Range Lower	(1 - 127)
00 07	0aaa aaaa	Velocity Control Range Upper	(1 - 127)
00 08	0aaa aaaa	Zone Transpose	(16 - 112)
			-48 - 48
00 09	0aaa aaaa	Velocity Max	(1 - 127)
00 0A	0aaa aaaa	Reserved	
00 0B	0aaa aaaa	Reserved	
00 0C	0000 000a	Control Bender	(0 - 1)
			OFF, ON
00 0D	0000 000a	Control Aftertouch	(0 - 1)
			OFF, ON
00 0E	0000 000a	Control Modulation	(0 - 1)
			OFF, ON
00 0F	0000 000a	Control Hold Pedal	(0 - 1)
			OFF, ON
00 10	0000 000a	Control Pedal 1	(0 - 1)
			OFF, ON
00 11	0000 000a	Control Pedal 2	(0 - 1)
			OFF, ON
00 12	0000 000a	Control Pedal 3	(0 - 1)
			OFF, ON
00 13	0aaa aaaa	Reserved	
00 14	0000 000a	Control Knob 1	(0 - 1)
			OFF, ON
00 15	0000 000a	Control Knob 2	(0 - 1)
			OFF, ON
00 16	0000 000a	Control Knob 3	(0 - 1)
			OFF, ON
00 17	0000 000a	Control Knob 4	(0 - 1)
			OFF, ON
00 18	0000 000a	Control Knob 5	(0 - 1)
			OFF, ON
00 19	0000 000a	Control Knob 6	(0 - 1)
			OFF, ON
00 1A	0000 000a	Control Knob 7	(0 - 1)
			OFF, ON
00 1B	0000 000a	Control Knob 8	(0 - 1)
			OFF, ON
00 1C	0000 000a	Control Slider 1	(0 - 1)
			OFF, ON
00 1D	0000 000a	Control Slider 2	(0 - 1)
			OFF, ON
00 1E	0000 000a	Control Slider 3	(0 - 1)
			OFF, ON
00 1F	0000 000a	Control Slider 4	(0 - 1)
			OFF, ON

	00 20	0000 000a	Control Slider 5	(0 - 1) OFF, ON
	00 21	0000 000a	Control Slider 6	(0 - 1) OFF, ON
	00 22	0000 000a	Control Slider 7	(0 - 1) OFF, ON
	00 23	0000 000a	Control Slider 8	(0 - 1) OFF, ON
	00 24	0aaa aaaa	Reserved	
:	:	:	:	:
	00 2C	0000 000a	Control S1	(0 - 1) OFF, ON
	00 2D	0000 000a	Control S2	(0 - 1) OFF, ON
	00 2E	0000 000a	Control Wheel 1	(0 - 1) OFF, ON
	00 2F	0000 000a	Control Wheel 2	(0 - 1) OFF, ON
	00 30	0000 000a	Control S3	(0 - 1) OFF, ON
	00 31	0aaa aaaa	Reserved	
	00 32	0aaa aaaa	Reserved	
	00 33	0000 00aa	External MIDI Port	(0 - 3) ALL, OUT1, OUT2, USB
	00 34	0000 aaaa	External Zone Tx Channel	(0 - 15) 1 - 16
#	00 35	0000 aaaa		
	00 36	0000 bbbb	External Bank MSB (CC#0)	(0 - 128) ---, 0 - 127
#	00 37	0000 aaaa		
	00 38	0000 bbbb	External Bank LSB (CC#32)	(0 - 128) ---, 0 - 127
#	00 39	0000 aaaa		
	00 3A	0000 bbbb	External Program Change (PC)	(0 - 128) ---, 1 - 128
#	00 3B	0000 aaaa		
	00 3C	0000 bbbb	External Volume (CC#7)	(0 - 128) ---, 0 - 127
#	00 3D	0000 aaaa		
	00 3E	0000 bbbb	External Pan (CC#10)	(0 - 128) ---, L64 - L01, 0, 01R - 63R
	00 3F	0aaa aaaa	External Coarse Tune (RPN#2)	(15 - 112) ---, -48 - +48
	00 40	0aaa aaaa	External Fine Tune (RPN#1)	(13 - 114) ---, -50 - +50
	00 41	0000 00aa	External Mono/Poly (CC#126/127)	(0 - 2) ---, MONO, POLY
	00 42	0000 00aa	External Portamento Sw (CC#65)	(0 - 2) ---, OFF, ON
#	00 43	0000 aaaa		
	00 44	0000 bbbb	External Portamento Time (CC#5)	(0 - 128) ---, 0 - 127
#	00 45	0000 aaaa		
	00 46	0000 bbbb	External Cutoff Offset (CC#74)	(0 - 128) ---, 0 - 127
#	00 47	0000 aaaa		
	00 48	0000 bbbb	External Resonance Offset (CC#71)	(0 - 128) ---, 0 - 127
#	00 49	0000 aaaa		
	00 4A	0000 bbbb	External Attack Time Offset (CC#73)	(0 - 128) ---, 0 - 127
#	00 4B	0000 aaaa		
	00 4C	0000 bbbb	External Decay Time Offset (CC#75)	(0 - 128) ---, 0 - 127
#	00 4D	0000 aaaa		
	00 4E	0000 bbbb	External Release Time Offset (CC#72)	(0 - 128) ---, 0 - 127
	00 4F	00aa aaaa	External Bend Range (RPN#0)	(0 - 49) ---, 0 - 127
#	00 50	0000 aaaa		
	00 51	0000 bbbb	External Modulation Depth (RPN#5)	(0 - 128) ---, 0 - 127
#	00 52	0000 aaaa		
	00 53	0000 bbbb	External Chorus Send (CC#93)	(0 - 128) ---, 0 - 127
#	00 54	0000 aaaa		
	00 55	0000 bbbb	External Reverb Send (CC#91)	(0 - 128) ---, 0 - 127
	00 56	0aaa aaaa	Reserved	
:	:	:	:	:
	00 5C	0aaa aaaa	External Name 1	(32 - 127) 32 - 127 [ASCII]
	00 5D	0aaa aaaa	External Name 2	(32 - 127) 32 - 127 [ASCII]
	00 5E	0aaa aaaa	External Name 3	(32 - 127) 32 - 127 [ASCII]
	00 5F	0aaa aaaa	External Name 4	(32 - 127)

			32 - 127 [ASCII]
00 60	0aaa aaaa	External Name 5	(32 - 127)
			32 - 127 [ASCII]
00 61	0aaa aaaa	External Name 6	(32 - 127)
			32 - 127 [ASCII]
00 62	0aaa aaaa	External Name 7	(32 - 127)
			32 - 127 [ASCII]
00 63	0aaa aaaa	External Name 8	(32 - 127)
			32 - 127 [ASCII]
00 64	0aaa aaaa	External Name 9	(32 - 127)
			32 - 127 [ASCII]
00 65	0aaa aaaa	External Name 10	(32 - 127)
			32 - 127 [ASCII]
00 66	0aaa aaaa	External Name 11	(32 - 127)
			32 - 127 [ASCII]
00 67	0aaa aaaa	External Name 12	(32 - 127)
			32 - 127 [ASCII]
00 68	0aaa aaaa	External Name 13	(32 - 127)
			32 - 127 [ASCII]
00 69	0aaa aaaa	External Name 14	(32 - 127)
			32 - 127 [ASCII]
00 6A	0aaa aaaa	External Name 15	(32 - 127)
			32 - 127 [ASCII]
00 6B	0aaa aaaa	External Name 16	(32 - 127)
			32 - 127 [ASCII]
00 6C	0aaa aaaa	Reserved	
:	:	:	:
00 00 00 70	Total Size		

* [Scene Controller]

Offset Address		Description
00 00	0000 000a	Reserved
00 01	0000 00aa	Function Select (0 - 3) PAN/LEVEL, ASSIGN1, ASSIGN2, DAW CTRL
00 02	0aaa aaaa	Reserved
00 03	0aaa aaaa	Reserved
00 04	0aaa aaaa	Pedal 1 Assign (0 - 114) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND DOWN, BEND UP, AFT, START/STOP, TAP TEMPO, SCENE DOWN, SCENE UP, OCT DOWN, OCT UP, ARPEGGIO SW, CHORD MEM SW, DEC, INC, VOCODER SW, VTW ROTARY SPEED, VTW ROTARY BRAKE, VTW ROTARY SW, VTW OVERDRIVE SW, VTW WHEEL BRAKE, VTW VIB/CHO SW
00 05	0aaa aaaa	Pedal 1 Range Min (0 - 127)
00 06	0aaa aaaa	Pedal 1 Range Max (0 - 127)
00 07	0aaa aaaa	Pedal 2 Assign (0 - 114) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND DOWN, BEND UP, AFT, START/STOP, TAP TEMPO, SCENE DOWN, SCENE UP, OCT DOWN, OCT UP, ARPEGGIO SW, CHORD MEM SW, DEC, INC, VOCODER SW, VTW ROTARY SPEED, VTW ROTARY BRAKE, VTW ROTARY SW, VTW OVERDRIVE SW, VTW WHEEL BRAKE, VTW VIB/CHO SW
00 08	0aaa aaaa	Pedal 2 Range Min (0 - 127)
00 09	0aaa aaaa	Pedal 2 Range Max (0 - 127)
00 0A	0aaa aaaa	Pedal 3 Assign (0 - 114) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89,

		CC90,CC91,CC92,CC93,CC94,CC95,BEND DOWN,BEND UP, AFT,START/STOP,TAP TEMPO,SCENE DOWN,SCENE UP, OCT DOWN,OCT UP,ARPEGGIO SW,CHORD MEM SW,DEC,INC, VOCODER SW,VTW ROTARY SPEED,VTW ROTARY BRAKE, VTW ROTARY SW,VTW OVERDRIVE SW,VTW WHEEL BRAKE, VTW VIB/CHO SW
00 0B	0aaa aaaa	Pedal 3 Range Min (0 - 127)
00 0C	0aaa aaaa	Pedal 3 Range Max (0 - 127)
00 0D	0aaa aaaa	Reserved
:	:	:
00 10	0aaa aaaa	Knob 1 Assign (0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 11	0aaa aaaa	Knob 1 Range Min (0 - 127)
00 12	0aaa aaaa	Knob 1 Range Max (0 - 127)
00 13	0aaa aaaa	Knob 2 Assign (0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 14	0aaa aaaa	Knob 2 Range Min (0 - 127)
00 15	0aaa aaaa	Knob 2 Range Max (0 - 127)
00 16	0aaa aaaa	Knob 3 Assign (0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 17	0aaa aaaa	Knob 3 Range Min (0 - 127)
00 18	0aaa aaaa	Knob 3 Range Max (0 - 127)
00 19	0aaa aaaa	Knob 4 Assign (0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 1A	0aaa aaaa	Knob 4 Range Min (0 - 127)
00 1B	0aaa aaaa	Knob 4 Range Max (0 - 127)
00 1C	0aaa aaaa	Knob 5 Assign (0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 1D	0aaa aaaa	Knob 5 Range Min (0 - 127)
00 1E	0aaa aaaa	Knob 5 Range Max (0 - 127)
00 1F	0aaa aaaa	Knob 6 Assign (0 - 96) OFF, CC01,CC02,CC03,CC04,CC05,CC06, CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16, CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26, CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37, CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47, CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57, CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67, CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77, CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87, CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 20	0aaa aaaa	Knob 6 Range Min (0 - 127)

00 21	0aaa aaaa	Knob 6 Range Max (0 - 127)
00 22	0aaa aaaa	Knob 7 Assign (0 - 96) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT
00 23	0aaa aaaa	Knob 7 Range Min (0 - 127)
00 24	0aaa aaaa	Knob 7 Range Max (0 - 127)
00 25	0aaa aaaa	Knob 8 Assign (0 - 96) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT
00 26	0aaa aaaa	Knob 8 Range Min (0 - 127)
00 27	0aaa aaaa	Knob 8 Range Max (0 - 127)
00 28	0aaa aaaa	Slider 1 Assign (0 - 96) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT
00 29	0aaa aaaa	Slider 1 Range Min (0 - 127)
00 2A	0aaa aaaa	Slider 1 Range Max (0 - 127)
00 2B	0aaa aaaa	Slider 2 Assign (0 - 96) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT
00 2C	0aaa aaaa	Slider 2 Range Min (0 - 127)
00 2D	0aaa aaaa	Slider 2 Range Max (0 - 127)
00 2E	0aaa aaaa	Slider 3 Assign (0 - 96) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT
00 2F	0aaa aaaa	Slider 3 Range Min (0 - 127)
00 30	0aaa aaaa	Slider 3 Range Max (0 - 127)
00 31	0aaa aaaa	Slider 4 Assign (0 - 96) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT
00 32	0aaa aaaa	Slider 4 Range Min (0 - 127)
00 33	0aaa aaaa	Slider 4 Range Max (0 - 127)
00 34	0aaa aaaa	Slider 5 Assign (0 - 96) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67,

		CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT
00 35	0aaa aaaa	Slider 5 Range Min (0 - 127)
00 36	0aaa aaaa	Slider 5 Range Max (0 - 127)
00 37	0aaa aaaa	Slider 6 Assign (0 - 96) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT
00 38	0aaa aaaa	Slider 6 Range Min (0 - 127)
00 39	0aaa aaaa	Slider 6 Range Max (0 - 127)
00 3A	0aaa aaaa	Slider 7 Assign (0 - 96) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT
00 3B	0aaa aaaa	Slider 7 Range Min (0 - 127)
00 3C	0aaa aaaa	Slider 7 Range Max (0 - 127)
00 3D	0aaa aaaa	Slider 8 Assign (0 - 96) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT
00 3E	0aaa aaaa	Slider 8 Range Min (0 - 127)
00 3F	0aaa aaaa	Slider 8 Range Max (0 - 127)
00 40	0aaa aaaa	Reserved
⋮	⋮	⋮
00 5E	0aaa aaaa	S1 Sw Assign (0 - 127) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND DOWN, BEND UP, AFT, MONO/POLY, MFX SW, EQ SW, IFX1 SW, IFX2 SW, CHORUS SW, REVERB SW, MASTER COMP SW, MASTER EQ SW, VOCODER SW, SCENE DOWN, SCENE UP, DEC, INC, SEQ START/STOP, GROUP PLAY DOWN, GROUP PLAY UP, SONG LOOP SW, TFX SW, MASTER KEY DOWN, MASTER KEY UP, SCALE TUNE SW, ANALOG DRV, VTW ROTARY SPEED, VTW ROTARY BRAKE, VTW ROTARY SW, VTW OVERDRIVE SW, VTW WHEEL BRAKE, VTW VIB/CHO SW, VTW HARMONIC BAR
00 5F	0000 000a	S1 Sw Mode (0 - 1) MOMENTARY, LATCH
00 60	0aaa aaaa	S2 Sw Assign (0 - 127) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND DOWN, BEND UP, AFT, MONO/POLY, MFX SW, EQ SW, IFX1 SW, IFX2 SW, CHORUS SW, REVERB SW, MASTER COMP SW, MASTER EQ SW, VOCODER SW, SCENE DOWN, SCENE UP, DEC, INC, SEQ START/STOP, GROUP PLAY DOWN, GROUP PLAY UP, SONG LOOP SW, TFX SW, MASTER KEY DOWN, MASTER KEY UP, SCALE TUNE SW, ANALOG DRV, VTW ROTARY SPEED, VTW ROTARY BRAKE, VTW ROTARY SW, VTW OVERDRIVE SW, VTW WHEEL BRAKE, VTW VIB/CHO SW, VTW HARMONIC BAR
00 61	0000 000a	S2 Sw Mode (0 - 1)

		MOMENTARY, LATCH
00 62	0aaa aaaa	Wheel 1 Assign (0 - 96)
		OFF, CC01,CC02,CC03,CC04,CC05,CC06,
		CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16,
		CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26,
		CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37,
		CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47,
		CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57,
		CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67,
		CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77,
		CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87,
		CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 63	0aaa aaaa	Wheel 1 Range Min (0 - 127)
00 64	0aaa aaaa	Wheel 1 Range Max (0 - 127)
00 65	0aaa aaaa	Wheel 2 Assign (0 - 96)
		OFF, CC01,CC02,CC03,CC04,CC05,CC06,
		CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16,
		CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26,
		CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37,
		CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47,
		CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57,
		CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67,
		CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77,
		CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87,
		CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT
00 66	0aaa aaaa	Wheel 2 Range Min (0 - 127)
00 67	0aaa aaaa	Wheel 2 Range Max (0 - 127)
00 68	0aaa aaaa	S3 Sw Assign (0 - 127)
		OFF, CC01,CC02,CC03,CC04,CC05,CC06,
		CC07,CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16,
		CC17,CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26,
		CC27,CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37,
		CC38,CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47,
		CC48,CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57,
		CC58,CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67,
		CC68,CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77,
		CC78,CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87,
		CC88,CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND DOWN,
		BEND UP,AFT,MONO/POLY,MFX SW,EQ SW,IFX1 SW,IFX2 SW,
		CHORUS SW,REVERB SW,MASTER COMP SW,MASTER EQ SW,
		VOCODER SW,SCENE DOWN,SCENE UP,DEC,INC,
		SEQ START/STOP,GROUP PLAY DOWN,GROUP PLAY UP,
		SONG LOOP SW,TFX SW,MASTER KEY DOWN,MASTER KEY UP,
		SCALE TUNE SW,ANALOG DRV,VTW ROTARY SPEED,
		VTW ROTARY BRAKE,VTW ROTARY SW,VTW OVERDRIVE SW,
		VTW WHEEL BRAKE,VTW VIB/CHO SW,VTW HARMONIC BAR
00 69	0000 000a	S3 Sw Mode (0 - 1)
		MOMENTARY, LATCH
00 6A	0aaa aaaa	Reserved
00 6B	0aaa aaaa	Reserved
00 6C	0000 000a	Arpeggio Switch (0 - 1)
		OFF, ON
00 6D	0000 000a	Arpeggio Hold (0 - 1)
		OFF, ON
00 6E	0aaa aaaa	Reserved
00 6F	0aaa aaaa	Arpeggio Style (0 - 127)
00 70	0aaa aaaa	Arpeggio Variation (0 - 127)
00 71	0000 aaaa	Arpeggio Motif (0 - 9)
		UP, DOWN, UP&DOWN, RANDOM, NOTE ORDER,
		GLISSANDO, CHORD, AUTO1, AUTO2, PHRASE
00 72	0aaa aaaa	Arpeggio Accent Rate (0 - 100)
00 73	0aaa aaaa	Arpeggio Shuffle Rate (0 - 100)
00 74	0000 000a	Arpeggio Shuffle Resolution (0 - 1)
		16TH, 8TH
00 75	0aaa aaaa	Arpeggio Keyboard Velocity (0 - 127)
		REAL, 1 - 127
00 76	0aaa aaaa	Arpeggio Octave Range (61 - 67)
		-3 - 3
00 77	0000 000a	Arpeggio Key Trigger (0 - 1)
		OFF, ON
00 78	0000 000a	Chord Memory Switch (0 - 1)
		OFF, ON
00 79	000a aaaa	Chord Memory Form (0 - 16)
		1 - 17
00 7A	0aaa aaaa	Chord Memory Key (59 - 70)
		-5 - 6
00 7B	0000 000a	Rolled Chord Sw (0 - 1)
		OFF, ON
00 7C	0000 00aa	Rolled Chord Type (0 - 2)
		UP, DOWN, ALTERNATE
00 7D	0aaa aaaa	Reserved
00 7E	0aaa aaaa	Rhythm Pattern Variation (0 - 127)
00 7F	0aaa aaaa	Rhythm Pattern Number (0 - 127)
01 00	0000 000a	Rhythm Pattern Key Trigger (0 - 1)
		OFF, ON
01 01	0000 aaaa	Rhythm Pattern Zone (0 - 15)
01 02	000a aaaa	Pad Zone Select (0 - 16)

			1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,OFF	
	01 03	0aaa aaaa	Reserved	
#	01 04	0000 aaaa		
	01 05	0000 bbbb		
	01 06	0000 cccc		
	01 07	0000 dddd	Keyboard Switch Group1	(0 - 65535)
#	01 08	0000 aaaa		
	01 09	0000 bbbb		
	01 0A	0000 cccc		
	01 0B	0000 dddd	Keyboard Switch Group2	(0 - 65535)
#	01 0C	0000 aaaa		
	01 0D	0000 bbbb		
	01 0E	0000 cccc		
	01 0F	0000 dddd	Keyboard Switch Group3	(0 - 65535)
#	01 10	0000 aaaa		
	01 11	0000 bbbb		
	01 12	0000 cccc		
	01 13	0000 dddd	Keyboard Switch Group4	(0 - 65535)
#	01 14	0000 aaaa		
	01 15	0000 bbbb		
	01 16	0000 cccc		
	01 17	0000 dddd	Keyboard Switch Group5	(0 - 65535)
#	01 18	0000 aaaa		
	01 19	0000 bbbb		
	01 1A	0000 cccc		
	01 1B	0000 dddd	Keyboard Switch Group6	(0 - 65535)
#	01 1C	0000 aaaa		
	01 1D	0000 bbbb		
	01 1E	0000 cccc		
	01 1F	0000 dddd	Keyboard Switch Group7	(0 - 65535)
#	01 20	0000 aaaa		
	01 21	0000 bbbb		
	01 22	0000 cccc		
	01 23	0000 dddd	Keyboard Switch Group8	(0 - 65535)
#	01 24	0000 aaaa		
	01 25	0000 bbbb		
	01 26	0000 cccc		
	01 27	0000 dddd	Keyboard Switch Group9	(0 - 65535)
#	01 28	0000 aaaa		
	01 29	0000 bbbb		
	01 2A	0000 cccc		
	01 2B	0000 dddd	Keyboard Switch Group10	(0 - 65535)
#	01 2C	0000 aaaa		
	01 2D	0000 bbbb		
	01 2E	0000 cccc		
	01 2F	0000 dddd	Keyboard Switch Group11	(0 - 65535)
#	01 30	0000 aaaa		
	01 31	0000 bbbb		
	01 32	0000 cccc		
	01 33	0000 dddd	Keyboard Switch Group12	(0 - 65535)
#	01 34	0000 aaaa		
	01 35	0000 bbbb		
	01 36	0000 cccc		
	01 37	0000 dddd	Keyboard Switch Group13	(0 - 65535)
#	01 38	0000 aaaa		
	01 39	0000 bbbb		
	01 3A	0000 cccc		
	01 3B	0000 dddd	Keyboard Switch Group14	(0 - 65535)
#	01 3C	0000 aaaa		
	01 3D	0000 bbbb		
	01 3E	0000 cccc		
	01 3F	0000 dddd	Keyboard Switch Group15	(0 - 65535)
#	01 40	0000 aaaa		
	01 41	0000 bbbb		
	01 42	0000 cccc		
	01 43	0000 dddd	Keyboard Switch Group16	(0 - 65535)
	01 44	0000 000a	Motional Pad Switch	(0 - 1) OFF, ON
	01 45	0000 aaaa	Motional Pad Area1 Zone	(0 - 15) 1 - 16
	01 46	0000 aaaa	Motional Pad Area2 Zone	(0 - 15) 1 - 16
	01 47	0000 aaaa	Motional Pad Area3 Zone	(0 - 15) 1 - 16
	01 48	0000 aaaa	Motional Pad Area4 Zone	(0 - 15) 1 - 16
	01 49	0aaa aaaa	Motional Pad Area1 Min	(0 - 127)
	01 4A	0aaa aaaa	Motional Pad Area2 Min	(0 - 127)
	01 4B	0aaa aaaa	Motional Pad Area3 Min	(0 - 127)
	01 4C	0aaa aaaa	Motional Pad Area4 Min	(0 - 127)
	01 4D	0aaa aaaa	Motional Pad Area1 Max	(0 - 127)
	01 4E	0aaa aaaa	Motional Pad Area2 Max	(0 - 127)
	01 4F	0aaa aaaa	Motional Pad Area3 Max	(0 - 127)
	01 50	0aaa aaaa	Motional Pad Area4 Max	(0 - 127)
	01 51	0000 000a	Motional Pad Hold	(0 - 1) OFF, ON
	01 52	0aaa aaaa	Motional Pad Cross Fade Range	(0 - 127)

	01 53	0000 000a	Motional Pad Auto (0 - 1) OFF, ON
	01 54	0aaa aaaa	Reserved
:	:	:	:
	01 5C	0aaa aaaa	Motional Pad X (0 - 127)
	01 5D	0aaa aaaa	Motional Pad Y (0 - 127)
	01 5E	0aaa aaaa	Motional Pad Area1 Val (0 - 127)
	01 5F	0aaa aaaa	Motional Pad Area2 Val (0 - 127)
	01 60	0aaa aaaa	Motional Pad Area3 Val (0 - 127)
	01 61	0aaa aaaa	Motional Pad Area4 Val (0 - 127)
	01 62	0aaa aaaa	Reserved
	01 63	0aaa aaaa	Reserved
	01 64	000a aaaa	CV/Gate 1 Control Zone (0 - 16) 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,OFF
	01 65	0aaa aaaa	CV 1 Assign (0 - 97) NOTE, CC01,CC02,CC03,CC04,CC05,CC06,CC07, CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16,CC17, CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26,CC27, CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37,CC38, CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47,CC48, CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57,CC58, CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67,CC68, CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77,CC78, CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87,CC88, CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT,VELO
	01 66	000a aaaa	CV/Gate 2 Control Zone (0 - 16) 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,OFF
	01 67	0aaa aaaa	CV 2 Assign (0 - 97) NOTE, CC01,CC02,CC03,CC04,CC05,CC06,CC07, CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16,CC17, CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26,CC27, CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37,CC38, CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47,CC48, CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57,CC58, CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67,CC68, CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77,CC78, CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87,CC88, CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT,VELO
	01 68	0aaa aaaa	CV 3 Assign (0 - 97) NOTE, CC01,CC02,CC03,CC04,CC05,CC06,CC07, CC08,CC09,CC10,CC11,CC12,CC13,CC14,CC15,CC16,CC17, CC18,CC19,CC20,CC21,CC22,CC23,CC24,CC25,CC26,CC27, CC28,CC29,CC30,CC31,CC33,CC34,CC35,CC36,CC37,CC38, CC39,CC40,CC41,CC42,CC43,CC44,CC45,CC46,CC47,CC48, CC49,CC50,CC51,CC52,CC53,CC54,CC55,CC56,CC57,CC58, CC59,CC60,CC61,CC62,CC63,CC64,CC65,CC66,CC67,CC68, CC69,CC70,CC71,CC72,CC73,CC74,CC75,CC76,CC77,CC78, CC79,CC80,CC81,CC82,CC83,CC84,CC85,CC86,CC87,CC88, CC89,CC90,CC91,CC92,CC93,CC94,CC95,BEND,AFT,VELO
	01 69	0aaa aaaa	Reserved
:	:	:	:
00 00 02 00	Total Size		

* [Partial EQ]

Offset Address		Description
# 00 00	0000 aaaa	
00 01	0000 bbbb	
00 02	0000 cccc	
00 03	0000 dddd	EQ Low Gain (784 - 1264) -24.0 - +24.0 [EQGAIN]
# 00 04	0000 aaaa	
00 05	0000 bbbb	
00 06	0000 cccc	
00 07	0000 dddd	EQ Mid Gain (784 - 1264) -24.0 - +24.0 [EQGAIN]
# 00 08	0000 aaaa	
00 09	0000 bbbb	
00 0A	0000 cccc	
00 0B	0000 dddd	EQ High Gain (784 - 1264) -24.0 - +24.0 [EQGAIN]
# 00 0C	0000 aaaa	
00 0D	0000 bbbb	
00 0E	0000 cccc	
00 0F	0000 dddd	EQ Low Frequency (20 - 16000) 20 - 16000 [EQFREQ]
# 00 10	0000 aaaa	
00 11	0000 bbbb	
00 12	0000 cccc	
00 13	0000 dddd	EQ Mid Frequency (20 - 16000) 20 - 16000 [EQFREQ]
# 00 14	0000 aaaa	
00 15	0000 bbbb	

	00 16	0000 cccc	
	00 17	0000 dddd	EQ High Frequency (20 - 16000) 20 - 16000 [EQFREQ]
#	00 18	0000 aaaa	
	00 19	0000 bbbb	EQ Mid Q (5 - 160) 0.5 - 16.0 [EQQ]
	00 1A	0000 000a	EQ Switch (0 - 1) OFF, ON
	00 00 00 1B	Total Size	

* [Partial LFO]

	Offset Address		Description
	00 00	0000 aaaa	Waveform (0 - 10) SIN,TRI,SAW-UP,SAW-DW,SQR,RND,TRP,S&H,CHS,VSIN,STEP
	00 01	0000 000a	Rate Sync (0 - 1) OFF, ON
	00 02	000a aaaa	Rate (note) (0 - 22) 1/64T,1/64, 1/32T,1/32,1/16T,1/32.,1/16,1/8T,1/16.,1/8, 1/4T,1/8.,1/4,1/2T,1/4.,1/2,1T,1/2.,1,2T,1.,2,4
	00 03	0000 aaaa	Step Size (0 - 15) 1 - 16
#	00 04	0000 aaaa	
	00 05	0000 bbbb	
	00 06	0000 cccc	
	00 07	0000 dddd	Rate (0 - 1023) 0 - 1023
#	00 08	0000 aaaa	
	00 09	0000 bbbb	Offset (28 - 228) -100 - +100
	00 0A	0aaa aaaa	Rate Detune (0 - 127) 0 - 127
#	00 0B	0000 aaaa	
	00 0C	0000 bbbb	
	00 0D	0000 cccc	
	00 0E	0000 dddd	Delay Time (0 - 1023) 0 - 1023
#	00 0F	0000 aaaa	
	00 10	0000 bbbb	Delay Time Keyfolow (28 - 228) -100 - +100
	00 11	0000 00aa	Fade Mode (0 - 3) ON-IN, ON-OUT, OFF-IN, OFF-OUT
#	00 12	0000 aaaa	
	00 13	0000 bbbb	
	00 14	0000 cccc	
	00 15	0000 dddd	Fade Time (0 - 1023) 0 - 1023
	00 16	0000 000a	Key Trigger (0 - 1) OFF, ON
#	00 17	0000 aaaa	
	00 18	0000 bbbb	Pitch Depth (28 - 228) -100 - +100
#	00 19	0000 aaaa	
	00 1A	0000 bbbb	TVF Depth (28 - 228) -100 - +100
#	00 1B	0000 aaaa	
	00 1C	0000 bbbb	TVA Depth (28 - 228) -100 - +100
	00 1D	0aaa aaaa	PAN Depth (1 - 127) -63 - +63
	00 1E	0000 00aa	Phase Position (0 - 3) 0 - 3
#	00 1F	0000 aaaa	
	00 20	0000 bbbb	Step (56 - 200) -72 - +72
#	00 21	0000 aaaa	
	00 22	0000 bbbb	Step (56 - 200) -72 - +72
#	00 23	0000 aaaa	
	00 24	0000 bbbb	Step (56 - 200) -72 - +72
#	00 25	0000 aaaa	
	00 26	0000 bbbb	Step (56 - 200) -72 - +72
#	00 27	0000 aaaa	
	00 28	0000 bbbb	Step (56 - 200) -72 - +72
#	00 29	0000 aaaa	
	00 2A	0000 bbbb	Step (56 - 200) -72 - +72
#	00 2B	0000 aaaa	
	00 2C	0000 bbbb	Step (56 - 200)

				-72 - +72
#	00 2D	0000 aaaa		
	00 2E	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	00 2F	0000 aaaa		
	00 30	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	00 31	0000 aaaa		
	00 32	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	00 33	0000 aaaa		
	00 34	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	00 35	0000 aaaa		
	00 36	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	00 37	0000 aaaa		
	00 38	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	00 39	0000 aaaa		
	00 3A	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	00 3B	0000 aaaa		
	00 3C	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	00 3D	0000 aaaa		
	00 3E	0000 bbbb	Step	(56 - 200)
				-72 - +72
	00 3F	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	00 40	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	00 41	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	00 42	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	00 43	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	00 44	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	00 45	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	00 46	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	00 47	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	00 48	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	00 49	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	00 4A	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	00 4B	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	00 4C	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	00 4D	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	00 4E	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	00 4F	0000 aaaa	Waveform	(0 - 10)
			SIN,TRI,SAW-UP,SAW-DW,SQR,RND,TRP,S&H,CHS,VSIN,STEP	
	00 50	0000 000a	Rate Sync	(0 - 1)
				OFF, ON
	00 51	000a aaaa	Rate (note)	(0 - 22)
				1/64T,1/64,
			1/32T,1/32,1/16T,1/32.,1/16,1/8T,1/16.,1/8,	
			1/4T,1/8.,1/4,1/2T,1/4.,1/2,1T,1/2.,1,2T,1.,2,4	
	00 52	0000 aaaa	Step Size	(0 - 15)
				1 - 16
#	00 53	0000 aaaa		
	00 54	0000 bbbb		
	00 55	0000 cccc		
	00 56	0000 dddd	Rate	(0 - 1023)
				0 - 1023
#	00 57	0000 aaaa		
	00 58	0000 bbbb	Offset	(28 - 228)
				-100 - +100
	00 59	0aaa aaaa	Rate Detune	(0 - 127)
				0 - 127
#	00 5A	0000 aaaa		
	00 5B	0000 bbbb		
	00 5C	0000 cccc		
	00 5D	0000 dddd	Delay Time	(0 - 1023)
				0 - 1023
#	00 5E	0000 aaaa		
	00 5F	0000 bbbb	Delay Time Keyfolow	(28 - 228)

				-100 - +100
	00 60	0000 00aa	Fade Mode	(0 - 3)
				ON-IN, ON-OUT, OFF-IN, OFF-OUT
#	00 61	0000 aaaa		
	00 62	0000 bbbb		
	00 63	0000 cccc		
	00 64	0000 dddd	Fade Time	(0 - 1023)
				0 - 1023
	00 65	0000 000a	Key Trigger	(0 - 1)
				OFF, ON
#	00 66	0000 aaaa		
	00 67	0000 bbbb	Pitch Depth	(28 - 228)
				-100 - +100
#	00 68	0000 aaaa		
	00 69	0000 bbbb	TVF Depth	(28 - 228)
				-100 - +100
#	00 6A	0000 aaaa		
	00 6B	0000 bbbb	TVA Depth	(28 - 228)
				-100 - +100
	00 6C	0aaa aaaa	PAN Depth	(1 - 127)
				-63 - +63
	00 6D	0000 00aa	Phase Position	(0 - 3)
				0 - 3
#	00 6E	0000 aaaa		
	00 6F	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	00 70	0000 aaaa		
	00 71	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	00 72	0000 aaaa		
	00 73	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	00 74	0000 aaaa		
	00 75	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	00 76	0000 aaaa		
	00 77	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	00 78	0000 aaaa		
	00 79	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	00 7A	0000 aaaa		
	00 7B	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	00 7C	0000 aaaa		
	00 7D	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	00 7E	0000 aaaa		
	00 7F	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	01 00	0000 aaaa		
	01 01	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	01 02	0000 aaaa		
	01 03	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	01 04	0000 aaaa		
	01 05	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	01 06	0000 aaaa		
	01 07	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	01 08	0000 aaaa		
	01 09	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	01 0A	0000 aaaa		
	01 0B	0000 bbbb	Step	(56 - 200)
				-72 - +72
#	01 0C	0000 aaaa		
	01 0D	0000 bbbb	Step	(56 - 200)
				-72 - +72
	01 0E	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	01 0F	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	01 10	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	01 11	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	01 12	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	01 13	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	01 14	00aa aaaa	Step Curve	(0 - 36)
				0 - 36
	01 15	00aa aaaa	Step Curve	(0 - 36)
				0 - 36

01 16	00aa aaaa	Step Curve	(0 - 36) 0 - 36
01 17	00aa aaaa	Step Curve	(0 - 36) 0 - 36
01 18	00aa aaaa	Step Curve	(0 - 36) 0 - 36
01 19	00aa aaaa	Step Curve	(0 - 36) 0 - 36
01 1A	00aa aaaa	Step Curve	(0 - 36) 0 - 36
01 1B	00aa aaaa	Step Curve	(0 - 36) 0 - 36
01 1C	00aa aaaa	Step Curve	(0 - 36) 0 - 36
01 1D	00aa aaaa	Step Curve	(0 - 36) 0 - 36
00 00 01 1E	Total Size		

* [Partial Pitch Env] / [Inst Pitch Env]

Offset Address		Description	
# 00 00	0000 aaaa		
00 01	0000 bbbb	Pitch Env Depth	(28 - 228) -100 - +100
# 00 02	0000 aaaa		
00 03	0000 bbbb	Pitch Env Velocity Sens	(28 - 228) -100 - +100
# 00 04	0000 aaaa		
00 05	0000 bbbb	Pitch Env T1 Velocity Sens	(28 - 228) -100 - +100
# 00 06	0000 aaaa		
00 07	0000 bbbb	Pitch Env T4 Velocity Sens	(28 - 228) -100 - +100
# 00 08	0000 aaaa		
00 09	0000 bbbb		
00 0A	0000 cccc		
00 0B	0000 dddd	Pitch Env Time1	(0 - 1023) 0 - 1023
# 00 0C	0000 aaaa		
00 0D	0000 bbbb		
00 0E	0000 cccc		
00 0F	0000 dddd	Pitch Env Time2	(0 - 1023) 0 - 1023
# 00 10	0000 aaaa		
00 11	0000 bbbb		
00 12	0000 cccc		
00 13	0000 dddd	Pitch Env Time3	(0 - 1023) 0 - 1023
# 00 14	0000 aaaa		
00 15	0000 bbbb		
00 16	0000 cccc		
00 17	0000 dddd	Pitch Env Time4	(0 - 1023) 0 - 1023
# 00 18	0000 aaaa		
00 19	0000 bbbb		
00 1A	0000 cccc		
00 1B	0000 dddd	Pitch Env Level0	(513 - 1535) -511 - +511
# 00 1C	0000 aaaa		
00 1D	0000 bbbb		
00 1E	0000 cccc		
00 1F	0000 dddd	Pitch Env Level1	(513 - 1535) -511 - +511
# 00 20	0000 aaaa		
00 21	0000 bbbb		
00 22	0000 cccc		
00 23	0000 dddd	Pitch Env Level2	(513 - 1535) -511 - +511
# 00 24	0000 aaaa		
00 25	0000 bbbb		
00 26	0000 cccc		
00 27	0000 dddd	Pitch Env Level3	(513 - 1535) -511 - +511
# 00 28	0000 aaaa		
00 29	0000 bbbb		
00 2A	0000 cccc		
00 2B	0000 dddd	Pitch Env Level4	(513 - 1535) -511 - +511
00 2C	0000 0aaa	Pitch Env Velocity Curve	(0 - 7) 0 - 7
00 00 00 2D	Total Size		

* [Partial Filter Env] / [Inst Filter Env]

Offset Address		Description	
00 00	0aaa aaaa	TVF Env Depth	(1 - 127) -63 - +63
00 01	0000 0aaa	TVF Env Velocity Curve	(0 - 7) 0 - 7
# 00 02	0000 aaaa		
00 03	0000 bbbb	TVF Env Velocity Sens	(28 - 228) -100 - +100
# 00 04	0000 aaaa		
00 05	0000 bbbb	TVF Env T1 Velocity Sens	(28 - 228) -100 - +100
# 00 06	0000 aaaa		
00 07	0000 bbbb	TVF Env T4 Velocity Sens	(28 - 228) -100 - +100
# 00 08	0000 aaaa		
00 09	0000 bbbb		
00 0A	0000 cccc		
00 0B	0000 dddd	TVF Env Time1	(0 - 1023) 0 - 1023
# 00 0C	0000 aaaa		
00 0D	0000 bbbb		
00 0E	0000 cccc		
00 0F	0000 dddd	TVF Env Time2	(0 - 1023) 0 - 1023
# 00 10	0000 aaaa		
00 11	0000 bbbb		
00 12	0000 cccc		
00 13	0000 dddd	TVF Env Time3	(0 - 1023) 0 - 1023
# 00 14	0000 aaaa		
00 15	0000 bbbb		
00 16	0000 cccc		
00 17	0000 dddd	TVF Env Time4	(0 - 1023) 0 - 1023
# 00 18	0000 aaaa		
00 19	0000 bbbb		
00 1A	0000 cccc		
00 1B	0000 dddd	TVF Env Level0	(0 - 1023) 0 - 1023
# 00 1C	0000 aaaa		
00 1D	0000 bbbb		
00 1E	0000 cccc		
00 1F	0000 dddd	TVF Env Level1	(0 - 1023) 0 - 1023
# 00 20	0000 aaaa		
00 21	0000 bbbb		
00 22	0000 cccc		
00 23	0000 dddd	TVF Env Level2	(0 - 1023) 0 - 1023
# 00 24	0000 aaaa		
00 25	0000 bbbb		
00 26	0000 cccc		
00 27	0000 dddd	TVF Env Level3	(0 - 1023) 0 - 1023
# 00 28	0000 aaaa		
00 29	0000 bbbb		
00 2A	0000 cccc		
00 2B	0000 dddd	TVF Env Level4	(0 - 1023) 0 - 1023
00 00 00 2C	Total Size		

* [Partial Amp Env] / [Inst Amp Env]

Offset Address		Description	
# 00 00	0000 aaaa		
00 01	0000 bbbb	TVA Env Time1 Velocity Sens	(28 - 228) -100 - +100
# 00 02	0000 aaaa		
00 03	0000 bbbb	TVA Env Time4 Velocity Sens	(28 - 228) -100 - +100
# 00 04	0000 aaaa		
00 05	0000 bbbb		
00 06	0000 cccc		
00 07	0000 dddd	TVA Env Time1	(0 - 1023) 0 - 1023
# 00 08	0000 aaaa		
00 09	0000 bbbb		
00 0A	0000 cccc		

	00 0B	0000 dddd	TVA Env Time2 (0 - 1023) 0 - 1023
#	00 0C	0000 aaaa	
	00 0D	0000 bbbb	
	00 0E	0000 cccc	
	00 0F	0000 dddd	TVA Env Time3 (0 - 1023) 0 - 1023
#	00 10	0000 aaaa	
	00 11	0000 bbbb	
	00 12	0000 cccc	
	00 13	0000 dddd	TVA Env Time4 (0 - 1023) 0 - 1023
#	00 14	0000 aaaa	
	00 15	0000 bbbb	
	00 16	0000 cccc	
	00 17	0000 dddd	TVA Env Level1 (0 - 1023) 0 - 1023
#	00 18	0000 aaaa	
	00 19	0000 bbbb	
	00 1A	0000 cccc	
	00 1B	0000 dddd	TVA Env Level2 (0 - 1023) 0 - 1023
#	00 1C	0000 aaaa	
	00 1D	0000 bbbb	
	00 1E	0000 cccc	
	00 1F	0000 dddd	TVA Env Level3 (0 - 1023) 0 - 1023
	00 00 00 20	Total Size	

* [Tone Common]

	Offset Address		Description
	00 00	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 01	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 02	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 03	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 04	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 05	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 06	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 07	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 08	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 09	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 0A	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 0B	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 0C	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 0D	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 0E	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 0F	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 10	00aa aaaa	Category (0 - 49) 0 - 49
	00 11	0aaa aaaa	Reserved
:	:	:	:
	00 15	0aaa aaaa	Level (0 - 127) 0 - 127
	00 16	0aaa aaaa	Pan (0 - 127) L64 - 63R
	00 17	0000 000a	Priority (0 - 1) LAST, LOUDEST
	00 18	0aaa aaaa	Tone Coarse Tune (16 - 112) -48 - +48 [semitone]
	00 19	0aaa aaaa	Tone Fine Tune (14 - 114) -50 - +50 [cent]
	00 1A	0aaa aaaa	Octave Shift (61 - 67) -3 - +3
	00 1B	0000 00aa	Stretch Tune Depth (0 - 3) OFF, 1, 2, 3
	00 1C	0aaa aaaa	Analog Feel (0 - 127)

			0 - 127
00 1D	0000 000a	Mono/Poly	(0 - 1) MONO, POLY
00 1E	0000 000a	Legato Switch	(0 - 1) OFF, ON
00 1F	0000 aaaa	Legato Retrigger Interval	(0 - 13) 0,1,2,3,4,5,6,7,8,9,10,11,12,OFF
00 20	0000 000a	Portamento Switch	(0 - 1) OFF, ON
00 21	0000 000a	Portamento Mode	(0 - 1) NORMAL, LEGATO
00 22	0000 000a	Portamento Type	(0 - 1) RATE, TIME
00 23	0000 000a	Portamento Start	(0 - 1) PITCH, NOTE
# 00 24	0000 aaaa		
00 25	0000 bbbb		
00 26	0000 cccc		
00 27	0000 dddd	Portamento Time	(0 - 1023) 0 - 1023
00 28	00aa aaaa	Bend Range Up	(0 - 48) 0 - 48
00 29	00aa aaaa	Bend Range Down	(0 - 48) 0 - 48
00 2A	0000 000a	Bend Mode	(0 - 1) NORMAL, CATCH+LAST
00 2B	0aaa aaaa	Soft Level Sens	(0 - 100) 0 - 100
00 2C	0aaa aaaa	Reserved	
:	:	:	:
00 34	0000 00aa	Portamento Curve Type	(0 - 2) 1 - 3
00 35	0aaa aaaa	Reserved	
00 00 00 36	Total Size		

* [Tone PMT(Partial Mix Table)]

Offset Address		Description	
00 00	0000 00aa	Velocity Control	(0 - 3) OFF, ON, RANDOM, CYCLE
00 01	0000 000a	PMT Level Curve	(0 - 1) EXP, LINEAR
00 02	0000 000a	Partial Switch	(0 - 1) OFF, ON
00 03	0aaa aaaa	KeyRange Lower	(0 - 127) 0 - 127
00 04	0aaa aaaa	KeyRange Upper	(0 - 127) 0 - 127
00 05	0aaa aaaa	KeyFade Lower	(0 - 127) 0 - 127
00 06	0aaa aaaa	KeyFade Upper	(0 - 127) 0 - 127
00 07	0aaa aaaa	VeloRange Lower	(1 - 127) 1 - 127
00 08	0aaa aaaa	VeloRange Upper	(1 - 127) 1 - 127
00 09	0aaa aaaa	VeloFade Lower	(0 - 127) 0 - 127
00 0A	0aaa aaaa	VeloFade Upper	(0 - 127) 0 - 127
00 0B	0000 000a	Partial Switch	(0 - 1) OFF, ON
00 0C	0aaa aaaa	KeyRange Lower	(0 - 127) 0 - 127
00 0D	0aaa aaaa	KeyRange Upper	(0 - 127) 0 - 127
00 0E	0aaa aaaa	KeyFade Lower	(0 - 127) 0 - 127
00 0F	0aaa aaaa	KeyFade Upper	(0 - 127) 0 - 127
00 10	0aaa aaaa	VeloRange Lower	(1 - 127) 1 - 127
00 11	0aaa aaaa	VeloRange Upper	(1 - 127) 1 - 127
00 12	0aaa aaaa	VeloFade Lower	(0 - 127) 0 - 127
00 13	0aaa aaaa	VeloFade Upper	(0 - 127) 0 - 127
00 14	0000 000a	Partial Switch	(0 - 1) OFF, ON
00 15	0aaa aaaa	KeyRange Lower	(0 - 127) 0 - 127
00 16	0aaa aaaa	KeyRange Upper	(0 - 127)

			0 - 127
00 17	0aaa aaaa	KeyFade Lower	(0 - 127)
			0 - 127
00 18	0aaa aaaa	KeyFade Upper	(0 - 127)
			0 - 127
00 19	0aaa aaaa	VeloRange Lower	(1 - 127)
			1 - 127
00 1A	0aaa aaaa	VeloRange Upper	(1 - 127)
			1 - 127
00 1B	0aaa aaaa	VeloFade Lower	(0 - 127)
			0 - 127
00 1C	0aaa aaaa	VeloFade Upper	(0 - 127)
			0 - 127
00 1D	0000 000a	Partial Switch	(0 - 1)
			OFF, ON
00 1E	0aaa aaaa	KeyRange Lower	(0 - 127)
			0 - 127
00 1F	0aaa aaaa	KeyRange Upper	(0 - 127)
			0 - 127
00 20	0aaa aaaa	KeyFade Lower	(0 - 127)
			0 - 127
00 21	0aaa aaaa	KeyFade Upper	(0 - 127)
			0 - 127
00 22	0aaa aaaa	VeloRange Lower	(1 - 127)
			1 - 127
00 23	0aaa aaaa	VeloRange Upper	(1 - 127)
			1 - 127
00 24	0aaa aaaa	VeloFade Lower	(0 - 127)
			0 - 127
00 25	0aaa aaaa	VeloFade Upper	(0 - 127)
			0 - 127
00 00 00 26	Total Size		

* [Tone Partial]

Offset Address		Description	
00 00	0aaa aaaa	Level	(0 - 127)
			0 - 127
00 01	0aaa aaaa	Coarse Tune	(16 - 112)
			-48 - 48
00 02	0aaa aaaa	Fine Tune	(14 - 114)
			-50 - 50 [cent]
# 00 03	0000 aaaa		
00 04	0000 bbbb		
00 05	0000 cccc		
00 06	0000 dddd	Random Pitch Depth	(0 - 1200)
			0 - 1200 [cent]
00 07	0aaa aaaa	Pan	(0 - 127)
			L64 - 63R
# 00 08	0000 aaaa		
00 09	0000 bbbb	Pan Keyfollow	(28 - 228)
			-100 - +100
00 0A	00aa aaaa	Random Pan Depth	(0 - 63)
			0 - 63
00 0B	0aaa aaaa	Alternate Pan Depth	(0 - 127)
			L64 - 63R
00 0C	0000 000a	Envelope Mode	(0 - 1)
			NO-SUS, SUSTAIN
00 0D	0000 00aa	Delay Mode	(0 - 3)
			NORMAL, HOLD, KEYOFF-NORMAL, KEYOFF-DECAY
00 0E	0000 000a	DelayTime Sync	(0 - 1)
			OFF, ON
00 0F	000a aaaa	DelayTime (note)	(0 - 21)
			1/64T,1/64,
			1/32T,1/32,1/16T,1/32.,1/16,1/8T,1/16.,1/8,
			1/4T,1/8.,1/4,1/2T,1/4.,1/2,1T,1/2.,1,2T,1.,2
# 00 10	0000 aaaa		
00 11	0000 bbbb		
00 12	0000 cccc		
00 13	0000 dddd	DelayTime	(0 - 1023)
			0 - 1023
00 14	0aaa aaaa	Chorus Send Level	(0 - 127)
			0 - 127
00 15	0aaa aaaa	Reverb Send Level	(0 - 127)
			0 - 127
00 16	0000 000a	Receive Bender	(0 - 1)
			OFF, ON
00 17	0000 000a	Receive Expression	(0 - 1)
			OFF, ON
00 18	0000 000a	Receive Hold-1	(0 - 1)
			OFF, ON
00 19	0000 000a	Redamper Switch	(0 - 1)
			OFF, ON

	00 1A	0000 000a	Output Assign (0 - 1) DRY, MFX
	00 1B	0000 00aa	Wave Group Type (0 - 3) INT, EXP, SAMP, MSAMP
#	00 1C	0000 aaaa	
	00 1D	0000 bbbb	
	00 1E	0000 cccc	
	00 1F	0000 dddd	Wave Group ID (0 - 16383) 0 - 16383
#	00 20	0000 aaaa	
	00 21	0000 bbbb	
	00 22	0000 cccc	
	00 23	0000 dddd	Wave Number L (0 - 16383) 0 - 16383
#	00 24	0000 aaaa	
	00 25	0000 bbbb	
	00 26	0000 cccc	
	00 27	0000 dddd	Wave Number R (0 - 16383) 0 - 16383
	00 28	0000 0aaa	Gain (0 - 5) -18, -12, -6, 0, +6, +12[dB]
	00 29	0000 000a	FXM Switch (0 - 1) OFF, ON
	00 2A	0000 0aaa	FXM Color (1 - 4) 1 - 4
	00 2B	000a aaaa	FXM Depth (0 - 16) 0 - 16
#	00 2C	0000 aaaa	
	00 2D	0000 bbbb	
	00 2E	0000 cccc	
	00 2F	0000 dddd	Pitch Keyfollow (824 - 1224) -200 - +200
	00 30	0aaa aaaa	Soft EQ Sens (0 - 100) 0 - 100
	00 31	0000 0aaa	TVF Filter Type (0 - 6) OFF, LPF, BPF, HPF, PKG, LPF2, LPF3
#	00 32	0000 aaaa	
	00 33	0000 bbbb	
	00 34	0000 cccc	
	00 35	0000 dddd	TVF Cutoff Frequency (0 - 1023) 0 - 1023
#	00 36	0000 aaaa	
	00 37	0000 bbbb	
	00 38	0000 cccc	
	00 39	0000 dddd	TVF Cutoff Keyfollow (824 - 1224) -200 - +200
	00 3A	0000 0aaa	TVF Cutoff Velocity Curve (0 - 7) 0 - 7
#	00 3B	0000 aaaa	
	00 3C	0000 bbbb	TVF Cutoff Velocity Sens (28 - 228) -100 - +100
#	00 3D	0000 aaaa	
	00 3E	0000 bbbb	
	00 3F	0000 cccc	
	00 40	0000 dddd	TVF Resonance (0 - 1023) 0 - 1023
#	00 41	0000 aaaa	
	00 42	0000 bbbb	TVF Resonance Velocity Sens (28 - 228) -100 - +100
#	00 43	0000 aaaa	
	00 44	0000 bbbb	Bias Level (28 - 228) -100 - +100
	00 45	0aaa aaaa	Bias Position (0 - 127) 0 - 127
	00 46	0000 00aa	Bias Direction (0 - 3) LOWER, UPPER, LOWER&UPPER, ALL
	00 47	0000 0aaa	TVA Level Velocity Curve (0 - 7) 0 - 7
#	00 48	0000 aaaa	
	00 49	0000 bbbb	TVA Level Velocity Sens (28 - 228) -100 - +100
#	00 4A	0000 aaaa	
	00 4B	0000 bbbb	Pitch Env Time Keyfollow (28 - 228) -100 - +100
#	00 4C	0000 aaaa	
	00 4D	0000 bbbb	TVF Env Time Keyfollow (28 - 228) -100 - +100
#	00 4E	0000 aaaa	
	00 4F	0000 bbbb	TVA Env Time Keyfollow (28 - 228) -100 - +100
#	00 50	0000 aaaa	
	00 51	0000 bbbb	Vibrato Pitch Sens (28 - 228) -100 - +100
#	00 52	0000 aaaa	
	00 53	0000 bbbb	Vibrato Cutoff Sens (28 - 228) -100 - +100
#	00 54	0000 aaaa	

00 55	0000 bbbb	Vibrato Level Sens (28 - 228) -100 - +100
00 56	0aaa aaaa	Source (0 - 108) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT, SYS-CTRL1, SYS-CTRL2, SYS-CTRL3, SYS-CTRL4, VELOCITY, KEYFOLLOW, TEMPO, LFO1, LFO2, PIT-ENV, TVF-ENV, TVA-ENV
00 57	00aa aaaa	Destination 1 (0 - 48) OFF, PCH, CUT, RES, LEV, PAN, CHO, REV, PIT-LFO1, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2, PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, PMT, FXM, MFX-CTRL1, MFX-CTRL2, MFX-CTRL3, MFX-CTRL4, PW, PWM, FAT, XMOD, LFO1_STEP, LFO2_STEP, SSAW-DETN, PIT_DEPTH, TVF-DEPTH, TVA-DEPTH, XMOD2, ATT, RING-OSC1-LEV, RING-OSC2-LEV, XMOD-OSC1-LEV, XMOD-OSC2-LEV
00 58	0aaa aaaa	Sens 1 (1 - 127) -63 - +63
00 59	00aa aaaa	Destination 2 (0 - 48) OFF, PCH, CUT, RES, LEV, PAN, CHO, REV, PIT-LFO1, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2, PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, PMT, FXM, MFX-CTRL1, MFX-CTRL2, MFX-CTRL3, MFX-CTRL4, PW, PWM, FAT, XMOD, LFO1_STEP, LFO2_STEP, SSAW-DETN, PIT_DEPTH, TVF-DEPTH, TVA-DEPTH, XMOD2, ATT, RING-OSC1-LEV, RING-OSC2-LEV, XMOD-OSC1-LEV, XMOD-OSC2-LEV
00 5A	0aaa aaaa	Sens 2 (1 - 127) -63 - +63
00 5B	00aa aaaa	Destination 3 (0 - 48) OFF, PCH, CUT, RES, LEV, PAN, CHO, REV, PIT-LFO1, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2, PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, PMT, FXM, MFX-CTRL1, MFX-CTRL2, MFX-CTRL3, MFX-CTRL4, PW, PWM, FAT, XMOD, LFO1_STEP, LFO2_STEP, SSAW-DETN, PIT_DEPTH, TVF-DEPTH, TVA-DEPTH, XMOD2, ATT, RING-OSC1-LEV, RING-OSC2-LEV, XMOD-OSC1-LEV, XMOD-OSC2-LEV
00 5C	0aaa aaaa	Sens 3 (1 - 127) -63 - +63
00 5D	00aa aaaa	Destination 4 (0 - 48) OFF, PCH, CUT, RES, LEV, PAN, CHO, REV, PIT-LFO1, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2, PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, PMT, FXM, MFX-CTRL1, MFX-CTRL2, MFX-CTRL3, MFX-CTRL4, PW, PWM, FAT, XMOD, LFO1_STEP, LFO2_STEP, SSAW-DETN, PIT_DEPTH, TVF-DEPTH, TVA-DEPTH, XMOD2, ATT, RING-OSC1-LEV, RING-OSC2-LEV, XMOD-OSC1-LEV, XMOD-OSC2-LEV
00 5E	0aaa aaaa	Sens 4 (1 - 127) -63 - +63
00 5F	0aaa aaaa	Source (0 - 108) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT, SYS-CTRL1, SYS-CTRL2, SYS-CTRL3, SYS-CTRL4, VELOCITY, KEYFOLLOW, TEMPO, LFO1, LFO2, PIT-ENV, TVF-ENV, TVA-ENV
00 60	00aa aaaa	Destination 1 (0 - 48) OFF, PCH, CUT, RES, LEV, PAN, CHO, REV, PIT-LFO1, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2, PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, PMT, FXM, MFX-CTRL1, MFX-CTRL2, MFX-CTRL3, MFX-CTRL4, PW, PWM,

		FAT, XMOD, LFO1_STEP, LFO2_STEP, SSAW-DETN, PIT_DEPTH, TVF-DEPTH, TVA-DEPTH, XMOD2, ATT, RING-OSC1-LEV, RING-OSC2-LEV, XMOD-OSC1-LEV, XMOD-OSC2-LEV
00 61	0aaa aaaa	Sens 1 (1 - 127) -63 - +63
00 62	00aa aaaa	Destination 2 (0 - 48) OFF, PCH, CUT, RES, LEV, PAN, CHO, REV, PIT-LFO1, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2, PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, PMT, FXM, MFX-CTRL1, MFX-CTRL2, MFX-CTRL3, MFX-CTRL4, PW, PWM, FAT, XMOD, LFO1_STEP, LFO2_STEP, SSAW-DETN, PIT_DEPTH, TVF-DEPTH, TVA-DEPTH, XMOD2, ATT, RING-OSC1-LEV, RING-OSC2-LEV, XMOD-OSC1-LEV, XMOD-OSC2-LEV
00 63	0aaa aaaa	Sens 2 (1 - 127) -63 - +63
00 64	00aa aaaa	Destination 3 (0 - 48) OFF, PCH, CUT, RES, LEV, PAN, CHO, REV, PIT-LFO1, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2, PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, PMT, FXM, MFX-CTRL1, MFX-CTRL2, MFX-CTRL3, MFX-CTRL4, PW, PWM, FAT, XMOD, LFO1_STEP, LFO2_STEP, SSAW-DETN, PIT_DEPTH, TVF-DEPTH, TVA-DEPTH, XMOD2, ATT, RING-OSC1-LEV, RING-OSC2-LEV, XMOD-OSC1-LEV, XMOD-OSC2-LEV
00 65	0aaa aaaa	Sens 3 (1 - 127) -63 - +63
00 66	00aa aaaa	Destination 4 (0 - 48) OFF, PCH, CUT, RES, LEV, PAN, CHO, REV, PIT-LFO1, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2, PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, PMT, FXM, MFX-CTRL1, MFX-CTRL2, MFX-CTRL3, MFX-CTRL4, PW, PWM, FAT, XMOD, LFO1_STEP, LFO2_STEP, SSAW-DETN, PIT_DEPTH, TVF-DEPTH, TVA-DEPTH, XMOD2, ATT, RING-OSC1-LEV, RING-OSC2-LEV, XMOD-OSC1-LEV, XMOD-OSC2-LEV
00 67	0aaa aaaa	Sens 4 (1 - 127) -63 - +63
00 68	0aaa aaaa	Source (0 - 108) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT, SYS-CTRL1, SYS-CTRL2, SYS-CTRL3, SYS-CTRL4, VELOCITY, KEYFOLLOW, TEMPO, LFO1, LFO2, PIT-ENV, TVF-ENV, TVA-ENV
00 69	00aa aaaa	Destination 1 (0 - 48) OFF, PCH, CUT, RES, LEV, PAN, CHO, REV, PIT-LFO1, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2, PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, PMT, FXM, MFX-CTRL1, MFX-CTRL2, MFX-CTRL3, MFX-CTRL4, PW, PWM, FAT, XMOD, LFO1_STEP, LFO2_STEP, SSAW-DETN, PIT_DEPTH, TVF-DEPTH, TVA-DEPTH, XMOD2, ATT, RING-OSC1-LEV, RING-OSC2-LEV, XMOD-OSC1-LEV, XMOD-OSC2-LEV
00 6A	0aaa aaaa	Sens 1 (1 - 127) -63 - +63
00 6B	00aa aaaa	Destination 2 (0 - 48) OFF, PCH, CUT, RES, LEV, PAN, CHO, REV, PIT-LFO1, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2, PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, PMT, FXM, MFX-CTRL1, MFX-CTRL2, MFX-CTRL3, MFX-CTRL4, PW, PWM, FAT, XMOD, LFO1_STEP, LFO2_STEP, SSAW-DETN, PIT_DEPTH, TVF-DEPTH, TVA-DEPTH, XMOD2, ATT, RING-OSC1-LEV, RING-OSC2-LEV, XMOD-OSC1-LEV, XMOD-OSC2-LEV
00 6C	0aaa aaaa	Sens 2 (1 - 127) -63 - +63
00 6D	00aa aaaa	Destination 3 (0 - 48) OFF, PCH, CUT, RES, LEV, PAN, CHO, REV, PIT-LFO1, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2,

		PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, PMT, FXM, MFX-CTRL1, MFX-CTRL2, MFX-CTRL3, MFX-CTRL4, PW, PWM, FAT, XMOD, LFO1_STEP, LFO2_STEP, SSAW-DETN, PIT_DEPTH, TVF-DEPTH, TVA-DEPTH, XMOD2, ATT, RING-OSC1-LEV, RING-OSC2-LEV, XMOD-OSC1-LEV, XMOD-OSC2-LEV
00 6E	0aaa aaaa	Sens 3 (1 - 127) -63 - +63
00 6F	00aa aaaa	Destination 4 (0 - 48) OFF, PCH, CUT, RES, LEV, PAN, CHO, REV, PIT-LFO1, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2, PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, PMT, FXM, MFX-CTRL1, MFX-CTRL2, MFX-CTRL3, MFX-CTRL4, PW, PWM, FAT, XMOD, LFO1_STEP, LFO2_STEP, SSAW-DETN, PIT_DEPTH, TVF-DEPTH, TVA-DEPTH, XMOD2, ATT, RING-OSC1-LEV, RING-OSC2-LEV, XMOD-OSC1-LEV, XMOD-OSC2-LEV
00 70	0aaa aaaa	Sens 4 (1 - 127) -63 - +63
00 71	0aaa aaaa	Source (0 - 108) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT, SYS-CTRL1, SYS-CTRL2, SYS-CTRL3, SYS-CTRL4, VELOCITY, KEYFOLLOW, TEMPO, LFO1, LFO2, PIT-ENV, TVF-ENV, TVA-ENV
00 72	00aa aaaa	Destination 1 (0 - 48) OFF, PCH, CUT, RES, LEV, PAN, CHO, REV, PIT-LFO1, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2, PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, PMT, FXM, MFX-CTRL1, MFX-CTRL2, MFX-CTRL3, MFX-CTRL4, PW, PWM, FAT, XMOD, LFO1_STEP, LFO2_STEP, SSAW-DETN, PIT_DEPTH, TVF-DEPTH, TVA-DEPTH, XMOD2, ATT, RING-OSC1-LEV, RING-OSC2-LEV, XMOD-OSC1-LEV, XMOD-OSC2-LEV
00 73	0aaa aaaa	Sens 1 (1 - 127) -63 - +63
00 74	00aa aaaa	Destination 2 (0 - 48) OFF, PCH, CUT, RES, LEV, PAN, CHO, REV, PIT-LFO1, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2, PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, PMT, FXM, MFX-CTRL1, MFX-CTRL2, MFX-CTRL3, MFX-CTRL4, PW, PWM, FAT, XMOD, LFO1_STEP, LFO2_STEP, SSAW-DETN, PIT_DEPTH, TVF-DEPTH, TVA-DEPTH, XMOD2, ATT, RING-OSC1-LEV, RING-OSC2-LEV, XMOD-OSC1-LEV, XMOD-OSC2-LEV
00 75	0aaa aaaa	Sens 2 (1 - 127) -63 - +63
00 76	00aa aaaa	Destination 3 (0 - 48) OFF, PCH, CUT, RES, LEV, PAN, CHO, REV, PIT-LFO1, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2, PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, PMT, FXM, MFX-CTRL1, MFX-CTRL2, MFX-CTRL3, MFX-CTRL4, PW, PWM, FAT, XMOD, LFO1_STEP, LFO2_STEP, SSAW-DETN, PIT_DEPTH, TVF-DEPTH, TVA-DEPTH, XMOD2, ATT, RING-OSC1-LEV, RING-OSC2-LEV, XMOD-OSC1-LEV, XMOD-OSC2-LEV
00 77	0aaa aaaa	Sens 3 (1 - 127) -63 - +63
00 78	00aa aaaa	Destination 4 (0 - 48) OFF, PCH, CUT, RES, LEV, PAN, CHO, REV, PIT-LFO1, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2, PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, PMT, FXM, MFX-CTRL1, MFX-CTRL2, MFX-CTRL3, MFX-CTRL4, PW, PWM, FAT, XMOD, LFO1_STEP, LFO2_STEP, SSAW-DETN, PIT_DEPTH, TVF-DEPTH, TVA-DEPTH, XMOD2, ATT, RING-OSC1-LEV, RING-OSC2-LEV, XMOD-OSC1-LEV, XMOD-OSC2-LEV
00 79	0aaa aaaa	Sens 4 (1 - 127)

			-63 - +63
	00 7A	0aaa aaaa	Damper Free Note (0 - 127) OFF,1,2,3,4,5,6,7,8, 9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24, 25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40, 41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56, 57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72, 73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88, 89,90,91,92,93,94,95,96,97,98,99,100,101,102,103, 104,105,106,107,108,109,110,111,112,113,114,115, 116,117,118,119,120,121,122,123,124,125,126,127
	00 7B	0aaa aaaa	Stereo Width (0 - 100) 0 - 100
	00 7C	0aaa aaaa	Stereo Detune (14 - 114) -50 - +50 [cent]
#	00 7D	0000 aaaa	
	00 7E	0000 bbbb	Damper Free Decay Offset (28 - 228) -100 - +100
	00 7F	0000 000a	Wave Tempo Sync (0 - 1) OFF, ON
00 00 01 00	Total Size		

* [Tone Synth Common]

Offset Address		Description
00 00	0000 000a	Unison Switch (0 - 1) OFF, ON
00 01	0000 aaaa	Unison Size (2 - 8) 2 - 8
00 02	0aaa aaaa	Unison Detune (0 - 100) 0 - 100
00 03	0aaa aaaa	Bend Range Fine Up (0 - 100) 0 - 100
00 04	0aaa aaaa	Bend Range Fine Down (0 - 100) 0 - 100
00 05	0aaa aaaa	Reserved
:	:	:
00 00 00 09	Total Size	

* [Tone Synth PMT]

Offset Address		Description
00 00	0000 0aaa	Structure1-2 (0 - 4) OFF, SYNC, RING, XMOD, XMOD2
00 01	0000 0aaa	Structure3-4 (0 - 4) OFF, SYNC, RING, XMOD, XMOD2
00 02	0aaa aaaa	RING1-2 Level (0 - 127) 0 - 127
00 03	0aaa aaaa	RING3-4 Level (0 - 127) 0 - 127
00 04	0aaa aaaa	RING OSC1 Level (0 - 127) 0 - 127
00 05	0aaa aaaa	RING OSC2 Level (0 - 127) 0 - 127
00 06	0aaa aaaa	RING OSC3 Level (0 - 127) 0 - 127
00 07	0aaa aaaa	RING OSC4 Level (0 - 127) 0 - 127
# 00 08	0000 aaaa	
00 09	0000 bbbb	
00 0A	0000 cccc	
00 0B	0000 dddd	CrossMod1-2 Depth (0 - 10800) 0 - 10800 [cent]
# 00 0C	0000 aaaa	
00 0D	0000 bbbb	
00 0E	0000 cccc	
00 0F	0000 dddd	CrossMod3-4 Depth (0 - 10800) 0 - 10800 [cent]
00 10	0aaa aaaa	CrossMod OSC1 Level (0 - 127) 0 - 127
00 11	0aaa aaaa	CrossMod OSC2 Level (0 - 127) 0 - 127
00 12	0aaa aaaa	CrossMod OSC3 Level (0 - 127) 0 - 127
00 13	0aaa aaaa	CrossMod OSC4 Level (0 - 127) 0 - 127
00 14	0000 000a	Partial Phase Lock (0 - 1) OFF, ON
00 15	0aaa aaaa	CrossMod2 1-2 Depth (0 - 127)

			0 - 127
00 16	0aaa aaaa	CrossMod2 3-4 Depth	(0 - 127)
			0 - 127
00 00 00 17	Total Size		

* [Tone Synth Partial]

Offset Address		Description	
00 00	0000 0aaa	OSC Type	(0 - 4)
			PCM, VA, PCM-Sync, SuperSAW, Noise
00 01	0000 aaaa	VA Waveform	(0 - 8)
			SAW, SQR, TRI, SIN, RAMP, JUNO, TRI2, TRI3, SIN2
# 00 02	0000 aaaa		
00 03	0000 bbbb		
00 04	0000 cccc		
00 05	0000 dddd	PCM-Sync Wave Number	(0 - 16383)
			0 - 16383
00 06	0aaa aaaa	Pulse Width	(0 - 127)
			0 - 127
00 07	0aaa aaaa	PWM Depth	(1 - 127)
			-63 - +63
00 08	0aaa aaaa	SuperSAW Detune	(0 - 127)
			0 - 127
00 09	0000 00aa	Click Type	(0 - 3)
			SOFT, HARD, NATURAL, OFF
# 00 0A	0000 aaaa		
00 0B	0000 bbbb		
00 0C	0000 cccc		
00 0D	0000 dddd	HPF Cutoff	(0 - 1023)
			0 - 1023
00 0E	0000 000a	Filter Type	(0 - 1)
			TVF, VCF
00 0F	0000 00aa	Filter Slope	(0 - 2)
			-12, -18, -24 [dB/Oct]
00 10	0000 000a	ADSREnv Switch	(0 - 1)
			OFF, ON
00 11	0aaa aaaa	Fat	(0 - 127)
			0 - 127
00 12	0000 00aa	VCF Type	(0 - 3)
			1, 2, 3, 4
# 00 13	0000 aaaa		
00 14	0000 bbbb	OSC Attenuator	(0 - 255)
			0 - 255
00 15	0aaa aaaa	Cutoff Keyfollow Base Point	(0 - 127)
			0 - 127
00 16	0000 000a	VA Waveform Invert Switch	(0 - 1)
			OFF, ON
00 17	0aaa aaaa	TVF Env Fine Depth	(1 - 127)
			-63 - +63
00 18	0000 000a	PENV LFO Trigger Switch	(0 - 1)
			OFF, ON
00 19	0000 000a	FENV LFO Trigger Switch	(0 - 1)
			OFF, ON
00 1A	0000 000a	AENV LFO Trigger Switch	(0 - 1)
			OFF, ON
00 1B	0aaa aaaa	Reserved	
:	:	:	:
00 00 00 1D	Total Size		

* [SN-A Tone Common]

Offset Address		Description	
00 00	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 01	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 02	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 03	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 04	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 05	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 06	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 07	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 08	0aaa aaaa	Name	(32 - 127)

			32 - 127 [ASCII]
00 09	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 0A	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 0B	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 0C	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 0D	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 0E	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 0F	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 10	0aaa aaaa	Category	(0 - 127)
			0 - 127
00 11	0aaa aaaa	Reserved	
00 12	0aaa aaaa	Reserved	
00 13	0aaa aaaa	Level	(0 - 127)
			0 - 127
00 14	0aaa aaaa	Pan	(0 - 127)
			L64 - 63R
00 15	0aaa aaaa	Coarse Tune	(16 - 112)
			-48 - +48
00 16	0aaa aaaa	Fine Tune	(14 - 114)
			-50 - +50 [cent]
00 17	0aaa aaaa	Octave Shift	(61 - 67)
			-3 - +3
00 18	0aaa aaaa	Reserved	
00 19	0000 000a	Mono/Poly	(0 - 1)
			MONO, POLY
00 1A	0aaa aaaa	Portamento Time Offset	(0 - 127)
			-64 - +63
00 1B	0aaa aaaa	Cutoff Offset	(0 - 127)
			-64 - +63
00 1C	0aaa aaaa	Resonance Offset	(0 - 127)
			-64 - +63
00 1D	0aaa aaaa	Attack Time Offset	(0 - 127)
			-64 - +63
00 1E	0aaa aaaa	Release Time Offset	(0 - 127)
			-64 - +63
00 1F	0aaa aaaa	Vib Rate Offset	(0 - 127)
			-64 - +63
00 20	0aaa aaaa	Vib Depth Offset	(0 - 127)
			-64 - +63
00 21	0aaa aaaa	Vib Delay Time Offset	(0 - 127)
			-64 - +63
00 22	0000 000a	Inst Group Type	(0 - 1)
			INT, EXP
# 00 23	0000 aaaa		
00 24	0000 bbbb		
00 25	0000 cccc		
00 26	0000 dddd	Inst Group ID	(0 - 16384)
			0 - 16384
# 00 27	0000 aaaa		
00 28	0000 bbbb	Inst Number	(0 - 255)
			0 - 255
00 29	0aaa aaaa	Noise Level	(0 - 127)
			-64 - +63
00 2A	0aaa aaaa	Reserved	
00 2B	0aaa aaaa	Growl Sens	(0 - 127)
			0 - 127
00 2C	0000 000a	Mode Switch	(0 - 1)
			OFF, ON
00 2D	0aaa aaaa	Drone Level	(0 - 127)
			0 - 127
00 2E	0aaa aaaa	Drone Pitch	(52 - 76)
			-12 - +12
00 2F	0000 0aaa	Play Scale	(0 - 6)
			0 - 6
00 30	0000 aaaa	Scale Key	(0 - 11)
			C, Db, D, Eb, E, F, Gb, G, Ab, A, Bb, B
00 31	0000 000a	Glide	(0 - 1)
			PORTA, GLISS
00 32	0000 0aaa	Variation	(0 - 4)
			OFF, VARI1, VARI2, VARI3, VARI4
00 33	0aaa aaaa	Reserved	
:	:	:	:
00 00 00 39	Total Size		

* [V-Piano Tone Common]

Offset Address	Description

Offset Address		Description	
00 00	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 01	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 02	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 03	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 04	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 05	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 06	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 07	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 08	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 09	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 0A	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 0B	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 0C	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 0D	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 0E	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 0F	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 10	0aaa aaaa	Level	(0 - 127) 0 - 127
00 11	0aaa aaaa	Reserved	
:	:	:	:
00 13	0aaa aaaa	Original Preset ID	(0 - 127)
00 14	0aaa aaaa	Original Preset Number	(0 - 127)
00 15	0000 00aa	Tuning Type	(0 - 2) OFF, PRESET, USER
00 16	0000 00aa	Level Type	(0 - 2) OFF, PRESET, USER
00 17	0000 00aa	Character Type	(0 - 2) OFF, PRESET, USER
00 00 00 18	Total Size		

* [Piano Designer Basic]

Offset Address		Description	
00 00	000a aaaa	Instruments Number	(0 - 18)
00 01	0000 0aaa	Lid	(0 - 6)
00 02	0000 aaaa	String Resonance	(0 - 10)
00 03	0000 aaaa	Damper Resonance	(0 - 10)
00 04	0aaa aaaa	Hammer Noise	(62 - 66) -2 - 2
00 05	0000 aaaa	Duplex Scale	(0 - 10)
00 06	0000 aaaa	Key Off Resonance	(0 - 10)
00 07	0000 aaaa	Cabinet Resonance	(0 - 10)
00 08	0000 0aaa	Sound Board Resonator	(0 - 4)
00 09	0000 aaaa	Damper Noise	(0 - 10)
00 0A	0000 aaaa	Key Off Noise	(0 - 10) OFF, 1,2,3,4,5,6,7,8,9,10
00 0B	0aaa aaaa	Reserved	
:	:	:	:
00 0D	0aaa aaaa	Instruments Bank	(0 - 127)
00 00 00 0E	Total Size		

* [Piano Designer Tuning]

Offset Address		Description	
# 00 00	0000 aaaa		
00 01	0000 bbbb		
00 02	0000 cccc		
00 03	0000 dddd	tuning 1	(12 - 1012) -50.0 - 0 - +50.0
:	:	:	:
# 03 7C	0000 aaaa		
03 7D	0000 bbbb		

03 7E	0000 cccc		
03 7F	0000 dddd	tuning 128	(12 - 1012) -50.0 - 0 - +50.0
00 00 04 00	Total Size		

* [Piano Designer Level]

Offset Address		Description	
00 00	0aaa aaaa	volume 1	(14 - 64) -50 - 0
:	:	:	:
00 7F	0aaa aaaa	volume 128	(14 - 64) -50 - 0
00 00 01 00	Total Size		

* [Piano Designer Character]

Offset Address		Description	
00 00	0aaa aaaa	character 1	(59 - 69) -5 - 5
:	:	:	:
00 7F	0aaa aaaa	character 128	(59 - 69) -5 - 5
00 00 01 00	Total Size		

* [VTW Tone Common]

Offset Address		Description	
00 00	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 01	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 02	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 03	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 04	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 05	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 06	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 07	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 08	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 09	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 0A	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 0B	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 0C	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 0D	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 0E	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 0F	0aaa aaaa	Name	(32 - 127) 32 - 127 [ASCII]
00 10	00aa aaaa	Category	(0 - 49) 0 - 49
00 11	0aaa aaaa	Tone Level	(0 - 127) 0 - 127
00 12	00aa aaaa	Key On Click Level	(0 - 63) 0 - 63
00 13	00aa aaaa	Key Off Click Level	(0 - 63) 0 - 63
00 14	0000 aaaa	Percussion Soft Level	(0 - 15) 0 - 15
00 15	0000 aaaa	Percussion Norm Level	(0 - 15) 0 - 15
00 16	0aaa aaaa	Percussion Slow Time	(0 - 127) 0 - 127
00 17	0aaa aaaa	Percussion Fast Time	(0 - 127)

			0 - 127
00 18	0000 aaaa	Percussion Recharge Time	(0 - 10)
			0 - 10
00 19	0aaa aaaa	Percussion H.Bar Level	(0 - 127)
			0 - 127
00 1A	00aa aaaa	Leakage Level	(0 - 63)
			0 - 63
00 1B	0000 00aa	Tone Wheel Type	(0 - 3)
			VINTAGE-1, VINTAGE-2, SOLID, CLEAN
00 1C	0000 000a	Vibrato Chorus Switch	(0 - 1)
			OFF,ON
00 1D	0000 0aaa	Vibrato Chorus Type	(0 - 5)
			V-1, C-1, V-2, C-2, V-3, C-3
00 1E	0000 000a	Organ Expression Curve	(0 - 1)
			NORMAL,SOFT
00 1F	0000 000a	Wheel Brake	(0 - 1)
			SPIN, STOP
00 20	0000 000a	Tone Wheel Speed Up	(0 - 1)
			OFF, ON
00 21	0aaa aaaa	Reserved	
:	:	:	:
00 00 00 30	Total Size		

* [VTW Tone Modify]

Offset Address		Description	
00 00	0000 aaaa	Upper Harmonic Bar 16'	(0 - 8)
			0 - 8
00 01	0000 aaaa	Upper Harmonic Bar 5-1/3'	(0 - 8)
			0 - 8
00 02	0000 aaaa	Upper Harmonic Bar 8'	(0 - 8)
			0 - 8
00 03	0000 aaaa	Upper Harmonic Bar 4'	(0 - 8)
			0 - 8
00 04	0000 aaaa	Upper Harmonic Bar 2-2/3'	(0 - 8)
			0 - 8
00 05	0000 aaaa	Upper Harmonic Bar 2'	(0 - 8)
			0 - 8
00 06	0000 aaaa	Upper Harmonic Bar 1-3/5'	(0 - 8)
			0 - 8
00 07	0000 aaaa	Upper Harmonic Bar 1-1/3'	(0 - 8)
			0 - 8
00 08	0000 aaaa	Upper Harmonic Bar 1'	(0 - 8)
			0 - 8
00 09	0000 aaaa	Reserved	
:	:	:	:
00 14	0000 000a	Percussion Switch	(0 - 1)
			OFF, ON
00 15	0000 000a	Percussion Harmonic	(0 - 1)
			2ND, 3RD
00 16	0000 000a	Percussion Decay	(0 - 1)
			SLOW, FAST
00 17	0000 000a	Percussion Soft	(0 - 1)
			NORM, SOFT
00 18	0aaa aaaa	Reserved	
:	:	:	:
00 00 00 20	Total Size		

* [EXSN Tone Common]

Offset Address		Description	
00 00	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 01	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 02	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 03	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 04	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 05	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 06	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 07	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]
00 08	0aaa aaaa	Name	(32 - 127)
			32 - 127 [ASCII]

	00 09	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 0A	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 0B	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 0C	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 0D	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 0E	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 0F	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
	00 10	0aaa aaaa	Category (0 - 127) 0 - 127
#	00 11	0000 aaaa	
	00 12	0000 bbbb	Reserved (0 - 255) 0 - 255
	00 13	0aaa aaaa	Level (0 - 127) 0 - 127
	00 14	0aaa aaaa	Pan (0 - 127) L64 - 63R
	00 15	0aaa aaaa	Coarse Tune (16 - 112) -48 - +48
	00 16	0aaa aaaa	Fine Tune (14 - 114) -50 - +50 [cent]
	00 17	0aaa aaaa	Octave Shift (61 - 67) -3 - +3
	00 18	0aaa aaaa	Reserved (61 - 67) -3 - +3
	00 19	0000 000a	Mono/Poly (0 - 1) MONO, POLY
	00 1A	0aaa aaaa	Reserved (0 - 127)
⋮	⋮	⋮	⋮
	00 29	0aaa aaaa	Noise Level (0 - 127) 0 - 127
	00 2A	0aaa aaaa	Stereo Width (0 - 100) 0 - 100
	00 2B	0aaa aaaa	Reserved (0 - 127)
⋮	⋮	⋮	⋮
	00 36	0000 000a	Bend Mode (0 - 1) NORMAL, CATCH+LAST
	00 37	0aaa aaaa	Chorus Send Level (0 - 127) 0 - 127
	00 38	0aaa aaaa	Reverb Send Level (0 - 127) 0 - 127
	00 39	0aaa aaaa	Reserved (0 - 127)
	00 00 00 3A	Total Size	

* [Model Tone Prm]

	Offset Address		Description
#	00 00	0000 aaaa	
	00 01	0000 bbbb	Model (0 - 4) ---, JP8, JX8P, JUNO106, SH101
	00 02	0000 aaaa	LFO WAVE FORM (0 - 10) SIN, TRI, SAW-UP, SAW-DW, SQR, RND, TRP, S&H, CHS, VSIN, STEP
#	00 03	0000 aaaa	
	00 04	0000 bbbb	
	00 05	0000 cccc	
	00 06	0000 dddd	LFO RATE (0 - 1023)
#	00 07	0000 aaaa	
	00 08	0000 bbbb	
	00 09	0000 cccc	
	00 0A	0000 dddd	LFO DELAY TIME (0 - 1023)
#	00 0B	0000 aaaa	
	00 0C	0000 bbbb	OSC1 MOD (28 - 228) -100 - 100
#	00 0D	0000 aaaa	
	00 0E	0000 bbbb	OSC1 PITCH ENV DEPTH (28 - 228) -100 - 100
	00 0F	0000 00aa	OSC1 DEST SELECT (0 - 2) OSC1, BOTH, OSC2
	00 10	0000 000a	OSC1 ENVT SELECT (0 - 1) 1, 2
#	00 11	0000 aaaa	
	00 12	0000 bbbb	
	00 13	0000 cccc	
	00 14	0000 dddd	OSC1 WAVE FORM (0 - 27) PW, SAW, SUB1OCT1, SUB2OCT1, SUB2OCT2, NOISE, PW, SAW, SUB1OCT1, NOISE, SIN, TRI, SAW, PW,

			SQR, NOISE, SAW, PULSE, SQR, NOISE, TRI, SAW+TRI, SAW, SQR, SQR2, SQR3, WHITE NOISE, PINK NOISE
	00 15	0000 0aaa	OSC1 FEET (0 - 4) 32', 16', 8', 4', 2'
	00 16	0aaa aaaa	OSC1 COARSE TUNE (16 - 112) -48 - 48
	00 17	0aaa aaaa	OSC1 FINE TUNE (14 - 114) -50 - 50
	00 18	0aaa aaaa	OSC1 LOW FREQ PITCH (0 - 127)
	00 19	0000 000a	OSC1 MODE (0 - 1) NORMAL, LOW FREQ
	00 1A	0aaa aaaa	OSC1 PWM DEPTH (1 - 127) -63 - 63
	00 1B	0aaa aaaa	OSC1 PULSE WIDTH (0 - 127)
	00 1C	0000 00aa	OSC1 PULSE WIDTH MODE (0 - 2) LFO, MANUAL, ENV
#	00 1D	0000 aaaa	
	00 1E	0000 bbbb	OSC2 MOD (28 - 228) -100 - 100
#	00 1F	0000 aaaa	
	00 20	0000 bbbb	OSC2 PITCH ENV DEPTH (28 - 228) -100 - 100
#	00 21	0000 aaaa	
	00 22	0000 bbbb	
	00 23	0000 cccc	
	00 24	0000 dddd	OSC2 WAVE FORM (0 - 27) PW, SAW, SUB1OCT1, SUB2OCT1, SUB2OCT2, NOISE, PW, SAW, SUB1OCT1, NOISE, SIN, TRI, SAW, PW, SQR, NOISE, SAW, PULSE, SQR, NOISE, TRI, SAW+TRI, SAW, SQR, SQR2, SQR3, WHITE NOISE, PINK NOISE
	00 25	0000 0aaa	OSC2 FEET (0 - 4) 32', 16', 8', 4', 2'
	00 26	0aaa aaaa	OSC2 COARSE TUNE (16 - 112) -48 - 48
	00 27	0aaa aaaa	OSC2 FINE TUNE (14 - 114) -50 - 50
	00 28	0aaa aaaa	OSC2 LOW FREQ PITCH (0 - 127)
	00 29	0000 000a	OSC2 MODE (0 - 1) NORMAL, LO FREQ
	00 2A	0aaa aaaa	OSC2 PULSE WIDTH (0 - 127)
#	00 2B	0000 aaaa	
	00 2C	0000 bbbb	OSC3 MOD (28 - 228) -100 - 100
#	00 2D	0000 aaaa	
	00 2E	0000 bbbb	OSC3 PITCH ENV DEPTH (28 - 228) -100 - 100
#	00 2F	0000 aaaa	
	00 30	0000 bbbb	
	00 31	0000 cccc	
	00 32	0000 dddd	OSC3 WAVE FORM (0 - 27) PW, SAW, SQR 1OCT, SQR 2OCT, SH SubOSC, NOISE, PW, SAW, SQR 1OCT, NOISE, SIN, TRI, SAW, PW, SQR, NOISE, SAW, PULSE, SQR, NOISE, TRI, SAW+TRI, SAW, SQR, SQR2, SQR3, WHITE NOISE, PINK NOISE
	00 33	0000 0aaa	OSC3 FEET (0 - 4) 32', 16', 8', 4', 2'
	00 34	0aaa aaaa	OSC3 COARSE TUNE (16 - 112) -48 - 48
	00 35	0aaa aaaa	OSC3 FINE TUNE (14 - 114) -50 - 50
	00 36	0aaa aaaa	OSC3 LOW FREQ PITCH (0 - 127)
	00 37	0000 000a	OSC3 MODE (0 - 1) NORMAL, LO FREQ
	00 38	0000 000a	NOISE (0 - 1) WHITE, PINK
#	00 39	0000 aaaa	
	00 3A	0000 bbbb	
	00 3B	0000 cccc	
	00 3C	0000 dddd	MOD DEPTH (0 - 10800)
	00 3D	0000 00aa	MOD MODE (0 - 3) OFF, SYNC, RING, X-MOD
#	00 3E	0000 aaaa	
	00 3F	0000 bbbb	OSC1 LEVEL (0 - 255)
#	00 40	0000 aaaa	
	00 41	0000 bbbb	OSC2 LEVEL (0 - 255)
#	00 42	0000 aaaa	
	00 43	0000 bbbb	OSC3 LEVEL (0 - 255)
#	00 44	0000 aaaa	
	00 45	0000 bbbb	NOISE LEVEL (0 - 255)
	00 46	0aaa aaaa	MIXER ENV DEPTH (1 - 127) -63 - 63
	00 47	0000 000a	MIXER ENV SELECT (0 - 1) 1, 2
	00 48	0000 00aa	MIXER DYNAMICS (0 - 3)
	00 49	0000 00aa	FILTER TYPE (0 - 3)
	00 4A	0000 00aa	FILTER HPF STEP (0 - 3)
#	00 4B	0000 aaaa	

	00 4C	0000 bbbb		
	00 4D	0000 cccc		
	00 4E	0000 dddd	FILTER HPF	(0 - 1023)
#	00 4F	0000 aaaa		
	00 50	0000 bbbb		
	00 51	0000 cccc		
	00 52	0000 dddd	FILTER FREQ	(0 - 1023)
#	00 53	0000 aaaa		
	00 54	0000 bbbb		
	00 55	0000 cccc		
	00 56	0000 dddd	FILTER RESO	(0 - 1023)
#	00 57	0000 aaaa		
	00 58	0000 bbbb		
	00 59	0000 cccc		
	00 5A	0000 dddd	FILTER ENV DEPTH	(1 - 2047)
				-1023 - 1023
	00 5B	0000 000a	FILTER ENV SELECT	(0 - 1)
				1, 2
	00 5C	0000 00aa	FILTER SLOPE	(0 - 2)
				-12dB, -18db, -24dB
#	00 5D	0000 aaaa		
	00 5E	0000 bbbb		
	00 5F	0000 cccc		
	00 60	0000 dddd	FILTER KEY FOLLOW	(824 - 1224)
				-200 - 200
#	00 61	0000 aaaa		
	00 62	0000 bbbb	FILTER MOD	(28 - 228)
				-100 - 100
	00 63	0aaa aaaa	AMP LEVEL	(0 - 127)
#	00 64	0000 aaaa		
	00 65	0000 bbbb	AMP MOD	(-100 - 100)
	00 66	0000 00aa	AMP MOD STEP	(0 - 3)
	00 67	0000 00aa	AMP ENV SELECT	(0 - 3)
				ENV F&A, ENV2, G-AMP, G-ENV2
#	00 68	0000 aaaa		
	00 69	0000 bbbb		
	00 6A	0000 cccc		
	00 6B	0000 dddd	ENV1 ATTACK	(0 - 1023)
#	00 6C	0000 aaaa		
	00 6D	0000 bbbb		
	00 6E	0000 cccc		
	00 6F	0000 dddd	ENV1 DECAY	(0 - 1023)
#	00 70	0000 aaaa		
	00 71	0000 bbbb		
	00 72	0000 cccc		
	00 73	0000 dddd	ENV1 SUSTAIN	(0 - 1023)
#	00 74	0000 aaaa		
	00 75	0000 bbbb		
	00 76	0000 cccc		
	00 77	0000 dddd	ENV1 RELEASE	(0 - 1023)
#	00 78	0000 aaaa		
	00 79	0000 bbbb	ENV1 KEY FOLLOW	(28 - 228)
				-100 - 100
	00 7A	0000 0aaa	ENV1 KEY FOLLOW STEP	(0 - 6)
#	00 7B	0000 aaaa		
	00 7C	0000 bbbb		
	00 7D	0000 cccc		
	00 7E	0000 dddd	ENV2 ATTACK	(0 - 1023)
#	00 7F	0000 aaaa		
	01 00	0000 bbbb		
	01 01	0000 cccc		
	01 02	0000 dddd	ENV2 DECAY	(0 - 1023)
#	01 03	0000 aaaa		
	01 04	0000 bbbb		
	01 05	0000 cccc		
	01 06	0000 dddd	ENV2 SUSTAIN	(0 - 1023)
#	01 07	0000 aaaa		
	01 08	0000 bbbb		
	01 09	0000 cccc		
	01 0A	0000 dddd	ENV2 RELEASE	(0 - 1023)
	01 0B	0000 00aa	ENV2 MODE	(0 - 2)
				GATE+TRIG, GATE, LFO
#	01 0C	0000 aaaa		
	01 0D	0000 bbbb	ENV2 KEY FOLLOW	(28 - 228)
				-100 - 100
	01 0E	0000 00aa	ENV2 KEY FOLLOW STEP	(0 - 3)
	01 0F	0000 00aa	DYNAMICS PITCH	(0 - 3)
	01 10	0000 00aa	DYNAMICS FILTER	(0 - 3)
	01 11	0000 00aa	DYNAMICS AMP	(0 - 3)
#	01 12	0000 aaaa		
	01 13	0000 bbbb	PITCH DRIFT	(0 - 255)
	01 14	0000 00aa	BENDER PITCH DEPTH STEP	(0 - 3)
				2, 3, 4, 7
	01 15	0aaa aaaa	BENDER FILTER DEPTH	(1 - 127)
				-63 - 63
	01 16	0aaa aaaa	MODULATION LFO DEPTH	(1 - 127)
				-63 - 63

#	01 17	0000 aaaa	
	01 18	0000 bbbb	
	01 19	0000 cccc	
	01 1A	0000 dddd	BENDER PITCH DEPTH (0 - 4800)
#	01 1B	0000 aaaa	
	01 1C	0000 bbbb	
	01 1D	0000 cccc	
	01 1E	0000 dddd	PORTAMENT TIME (0 - 1023)
	01 1F	0000 00aa	PORTAMENT MODE (0 - 2) OFF, ON, AUTO
	01 20	0000 00aa	KEY MODE (0 - 3) POLY, SOLO, UNISON, SL-UNISON
	01 21	0000 000a	PARAMETER EXPANSION SWITCH (0 - 1) OFF, ON
	01 22	0aaa aaaa	CONDITION (0 - 100) 0 - 100
	01 23	0000 00aa	PORTAMENT CURVE TYPE (0 - 3) ORIGINAL, LINER, EXP1, EXP2
	01 24	0aaa aaaa	AFTER TOUCH SENS LFO (1 - 127) -63 - 63
	01 25	0aaa aaaa	AFTER TOUCH SENS FREQ (1 - 127) -63 - 63
	01 26	0aaa aaaa	AFTER TOUCH SENS LEVEL (1 - 127) -63 - 63
00 00 01 27	Total Size		

* [Model Tone Com]

Offset Address		Description
00 00	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 01	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 02	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 03	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 04	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 05	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 06	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 07	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 08	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 09	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 0A	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 0B	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 0C	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 0D	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 0E	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 0F	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 10	00aa aaaa	Category (0 - 49) 0 - 49
# 00 11	0000 aaaa	
00 12	0000 bbbb	Reserved
# 00 13	0000 aaaa	
00 14	0000 bbbb	
00 15	0000 cccc	
00 16	0000 dddd	Reserved
00 00 00 17	Total Size	

* [n/zyme Tone OSC]

Offset Address		Description
00 00	0000 000a	Waveform Type (0 - 1) DRAWING, WAVETABLE
00 01	0aaa aaaa	Morph Rough (0 - 127)
# 00 02	0000 aaaa	
00 03	0000 bbbb	Wave Data (56 - 200)

				-72 - 72
#	00 04	0000 aaaa		
	00 05	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 06	0000 aaaa		
	00 07	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 08	0000 aaaa		
	00 09	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 0A	0000 aaaa		
	00 0B	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 0C	0000 aaaa		
	00 0D	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 0E	0000 aaaa		
	00 0F	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 10	0000 aaaa		
	00 11	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 12	0000 aaaa		
	00 13	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 14	0000 aaaa		
	00 15	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 16	0000 aaaa		
	00 17	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 18	0000 aaaa		
	00 19	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 1A	0000 aaaa		
	00 1B	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 1C	0000 aaaa		
	00 1D	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 1E	0000 aaaa		
	00 1F	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 20	0000 aaaa		
	00 21	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 22	0000 aaaa		
	00 23	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 24	0000 aaaa		
	00 25	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 26	0000 aaaa		
	00 27	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 28	0000 aaaa		
	00 29	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 2A	0000 aaaa		
	00 2B	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 2C	0000 aaaa		
	00 2D	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 2E	0000 aaaa		
	00 2F	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 30	0000 aaaa		
	00 31	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 32	0000 aaaa		
	00 33	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 34	0000 aaaa		
	00 35	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 36	0000 aaaa		
	00 37	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 38	0000 aaaa		
	00 39	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 3A	0000 aaaa		
	00 3B	0000 bbbb	Wave Data	(56 - 200) -72 - 72
#	00 3C	0000 aaaa		
	00 3D	0000 bbbb	Wave Data	(56 - 200)

				-72 - 72
#	00 3E	0000 aaaa		
	00 3F	0000 bbbb	Wave Data	(56 - 200)
				-72 - 72
#	00 40	0000 aaaa		
	00 41	0000 bbbb	Wave Data	(56 - 200)
				-72 - 72
	00 42	0000 000a	Reserved	
	00 43	0aaa aaaa	Position	(0 - 127)
	00 44	0aaa aaaa	Layer Mix	(0 - 127)
	00 45	0000 000a	Layer Mix Curve	(0 - 1)
#	00 46	0000 aaaa		
	00 47	0000 bbbb		
	00 48	0000 cccc		
	00 49	0000 dddd	Wave Layer1 Group ID	(0 - 16383)
#	00 4A	0000 aaaa		
	00 4B	0000 bbbb		
	00 4C	0000 cccc		
	00 4D	0000 dddd	Wave Layer1 Number	(0 - 16383)
#	00 4E	0000 aaaa		
	00 4F	0000 bbbb		
	00 50	0000 cccc		
	00 51	0000 dddd	Wave Layer2 Group ID	(0 - 16383)
#	00 52	0000 aaaa		
	00 53	0000 bbbb		
	00 54	0000 cccc		
	00 55	0000 dddd	Wave Layer2 Number	(0 - 16383)
	00 56	0aaa aaaa	Position LFO Depth	(1 - 127)
				-63 - 63
	00 57	0aaa aaaa	Position Env Depth	(1 - 127)
				-63 - 63
	00 58	0aaa aaaa	Layer Mix LFO Depth	(1 - 127)
				-63 - 63
	00 59	0aaa aaaa	Layer Mix Env Depth	(1 - 127)
				-63 - 63
	00 5A	00aa aaaa	Position Random Sens	(0 - 63)
	00 5B	00aa aaaa	Layer Mix Random Sens	(0 - 63)
	00 5C	0000 00aa	Layer2 Octave Down	(0 - 2)
	00 5D	0000 aaaa	S-MOD Table Number	(0 - 14)
	00 5E	0000 0000	Reserved	
	00 5F	0000 000a	P-MOD Limiter	(0 - 1)
				OFF, ON
	00 60	0aaa aaaa	P-MOD-X	(1 - 127)
				-63 - 63
	00 61	0aaa aaaa	S-MOD Shaping Depth	(0 - 127)
	00 62	0aaa aaaa	P-MOD-Y	(1 - 127)
				-63 - 63
	00 63	0aaa aaaa	S-MOD Drive	(0 - 127)
	00 64	0aaa aaaa	P-MOD LFO Depth	(1 - 127)
				-63 - 63
	00 65	0aaa aaaa	P-MOD Env Depth	(1 - 127)
				-63 - 63
	00 66	00aa aaaa	P-MOD-X Random Sens	(0 - 63)
	00 67	00aa aaaa	P-MOD-Y Random Sens	(0 - 63)
	00 68	0aaa aaaa	S-MOD LFO Depth	(1 - 127)
				-63 - 63
	00 69	0aaa aaaa	S-MOD Env Depth	(1 - 127)
				-63 - 63
	00 6A	00aa aaaa	S-MOD Shaping Depth Random Sens	(0 - 63)
	00 6B	00aa aaaa	S-MOD Drive Random Sens	(0 - 63)
#	00 6C	0000 aaaa		
	00 6D	0000 bbbb		
	00 6E	0000 cccc		
	00 6F	0000 dddd	CTRL Env Attack Time	(0 - 1023)
#	00 70	0000 aaaa		
	00 71	0000 bbbb		
	00 72	0000 cccc		
	00 73	0000 dddd	CTRL Env Decay Time	(0 - 1023)
	00 74	0000 000a	Spread Switch	(0 - 1)
				OFF, ON
	00 75	000a aaaa	Spread Depth	(0 - 20)
	00 76	0000 000a	Spread Timing Tempo Sync	(0 - 1)
				OFF, ON
	00 77	000a aaaa	DelayTime (note)	(0 - 21)
				1/64T, 1/64, 1/32T, 1/32, 1/16T, 1/32., 1/16, 1/8T, 1/16., 1/8, 1/4T, 1/8., 1/4, 1/2T, 1/4., 1/2, 1T, 1/2., 1, 2T, 1., 2
#	00 78	0000 aaaa		
	00 79	0000 bbbb		
	00 7A	0000 cccc		
	00 7B	0000 dddd	DelayTime	(0 - 1023)
	00 7C	0aaa aaaa	LFO Pitch Depth	(1 - 127)
				-63 - 63
#	00 7D	0000 aaaa		
	00 7E	0000 bbbb	P-MOD-X Velocity Sens	(28 - 228)
				-100 - +100
#	00 7F	0000 aaaa		

	01 00	0000 bbbb	P-MOD-Y Velocity Sens	(28 - 228) -100 - +100
#	01 01	0000 aaaa		
	01 02	0000 bbbb	S-MOD Shaping Depth Velocity Sens	(28 - 228) -100 - +100
#	01 03	0000 aaaa		
	01 04	0000 bbbb	S-MOD Drive Velocity Sens	(28 - 228) -100 - +100
#	01 05	0000 aaaa		
	01 06	0000 bbbb	Position Velocity Sens	(28 - 228) -100 - +100
#	01 07	0000 aaaa		
	01 08	0000 bbbb	Layer Mix Velocity Sens	(28 - 228) -100 - +100
	01 09	0aaa aaaa	Drawing Tool Form 1	(0 - 127)
	01 0A	0aaa aaaa	Drawing Tool Form 2	(0 - 127)
	01 0B	0aaa aaaa	Drawing Tool Sync	(0 - 127)
	01 0C	0aaa aaaa	Drawing Tool Width	(0 - 127)
	01 0D	0aaa aaaa	Drawing Tool AM Depth	(0 - 127)
	01 0E	0aaa aaaa	Reserved	(0 - 127)
	01 0F	0aaa aaaa	Reserved	(0 - 127)
	01 10	0000 000a	Drawing Tool Exec	(0 - 1)
	00 00 01 11	Total Size		

* [n/zyme Tone Step Mod]

	Offset Address		Description	
	00 00	0000 000a	Step Mod Pitch Switch	(0 - 1) OFF, ON
	00 01	0000 000a	Step Mod P-MOD Switch	(0 - 1) OFF, ON
	00 02	0000 000a	Step Mod S-MOD Switch	(0 - 1) OFF, ON
	00 03	0000 000a	Step Mod Position Switch	(0 - 1) OFF, ON
#	00 04	0000 aaaa		
	00 05	0000 bbbb	OSC Step Depth	(56 - 200) -72 - 72
#	00 06	0000 aaaa		
	00 07	0000 bbbb	OSC Step Depth	(56 - 200) -72 - 72
#	00 08	0000 aaaa		
	00 09	0000 bbbb	OSC Step Depth	(56 - 200) -72 - 72
#	00 0A	0000 aaaa		
	00 0B	0000 bbbb	OSC Step Depth	(56 - 200) -72 - 72
#	00 0C	0000 aaaa		
	00 0D	0000 bbbb	OSC Step Depth	(56 - 200) -72 - 72
#	00 0E	0000 aaaa		
	00 0F	0000 bbbb	OSC Step Depth	(56 - 200) -72 - 72
#	00 10	0000 aaaa		
	00 11	0000 bbbb	OSC Step Depth	(56 - 200) -72 - 72
#	00 12	0000 aaaa		
	00 13	0000 bbbb	OSC Step Depth	(56 - 200) -72 - 72
#	00 14	0000 aaaa		
	00 15	0000 bbbb	OSC Step Depth	(56 - 200) -72 - 72
#	00 16	0000 aaaa		
	00 17	0000 bbbb	OSC Step Depth	(56 - 200) -72 - 72
#	00 18	0000 aaaa		
	00 19	0000 bbbb	OSC Step Depth	(56 - 200) -72 - 72
#	00 1A	0000 aaaa		
	00 1B	0000 bbbb	OSC Step Depth	(56 - 200) -72 - 72
#	00 1C	0000 aaaa		
	00 1D	0000 bbbb	OSC Step Depth	(56 - 200) -72 - 72
#	00 1E	0000 aaaa		
	00 1F	0000 bbbb	OSC Step Depth	(56 - 200) -72 - 72
#	00 20	0000 aaaa		
	00 21	0000 bbbb	OSC Step Depth	(56 - 200) -72 - 72
#	00 22	0000 aaaa		
	00 23	0000 bbbb	OSC Step Depth	(56 - 200) -72 - 72

	00 24	00aa aaaa	OSC Step Curve	(0 - 36)
	00 25	00aa aaaa	OSC Step Curve	(0 - 36)
	00 26	00aa aaaa	OSC Step Curve	(0 - 36)
	00 27	00aa aaaa	OSC Step Curve	(0 - 36)
	00 28	00aa aaaa	OSC Step Curve	(0 - 36)
	00 29	00aa aaaa	OSC Step Curve	(0 - 36)
	00 2A	00aa aaaa	OSC Step Curve	(0 - 36)
	00 2B	00aa aaaa	OSC Step Curve	(0 - 36)
	00 2C	00aa aaaa	OSC Step Curve	(0 - 36)
	00 2D	00aa aaaa	OSC Step Curve	(0 - 36)
	00 2E	00aa aaaa	OSC Step Curve	(0 - 36)
	00 2F	00aa aaaa	OSC Step Curve	(0 - 36)
	00 30	00aa aaaa	OSC Step Curve	(0 - 36)
	00 31	00aa aaaa	OSC Step Curve	(0 - 36)
	00 32	00aa aaaa	OSC Step Curve	(0 - 36)
	00 33	00aa aaaa	OSC Step Curve	(0 - 36)
	00 34	0000 000a	Scale Switch	(0 - 1) OFF, ON
	00 35	000a aaaa	Scale Table	(0 - 18)
	00 36	0000 000a	Step Mod Filter Switch	(0 - 1) OFF, ON
	00 37	0000 000a	Step Mod Amp Switch	(0 - 1) OFF, ON
#	00 38	0000 aaaa		
	00 39	0000 bbbb	Filter-Amp Step Depth	(56 - 200) -72 - 72
#	00 3A	0000 aaaa		
	00 3B	0000 bbbb	Filter-Amp Step Depth	(56 - 200) -72 - 72
#	00 3C	0000 aaaa		
	00 3D	0000 bbbb	Filter-Amp Step Depth	(56 - 200) -72 - 72
#	00 3E	0000 aaaa		
	00 3F	0000 bbbb	Filter-Amp Step Depth	(56 - 200) -72 - 72
#	00 40	0000 aaaa		
	00 41	0000 bbbb	Filter-Amp Step Depth	(56 - 200) -72 - 72
#	00 42	0000 aaaa		
	00 43	0000 bbbb	Filter-Amp Step Depth	(56 - 200) -72 - 72
#	00 44	0000 aaaa		
	00 45	0000 bbbb	Filter-Amp Step Depth	(56 - 200) -72 - 72
#	00 46	0000 aaaa		
	00 47	0000 bbbb	Filter-Amp Step Depth	(56 - 200) -72 - 72
#	00 48	0000 aaaa		
	00 49	0000 bbbb	Filter-Amp Step Depth	(56 - 200) -72 - 72
#	00 4A	0000 aaaa		
	00 4B	0000 bbbb	Filter-Amp Step Depth	(56 - 200) -72 - 72
#	00 4C	0000 aaaa		
	00 4D	0000 bbbb	Filter-Amp Step Depth	(56 - 200) -72 - 72
#	00 4E	0000 aaaa		
	00 4F	0000 bbbb	Filter-Amp Step Depth	(56 - 200) -72 - 72
#	00 50	0000 aaaa		
	00 51	0000 bbbb	Filter-Amp Step Depth	(56 - 200) -72 - 72
#	00 52	0000 aaaa		
	00 53	0000 bbbb	Filter-Amp Step Depth	(56 - 200) -72 - 72
#	00 54	0000 aaaa		
	00 55	0000 bbbb	Filter-Amp Step Depth	(56 - 200) -72 - 72
#	00 56	0000 aaaa		
	00 57	0000 bbbb	Filter-Amp Step Depth	(56 - 200) -72 - 72
	00 58	00aa aaaa	Filter-Amp Step Curve	(0 - 36)
	00 59	00aa aaaa	Filter-Amp Step Curve	(0 - 36)
	00 5A	00aa aaaa	Filter-Amp Step Curve	(0 - 36)
	00 5B	00aa aaaa	Filter-Amp Step Curve	(0 - 36)
	00 5C	00aa aaaa	Filter-Amp Step Curve	(0 - 36)
	00 5D	00aa aaaa	Filter-Amp Step Curve	(0 - 36)
	00 5E	00aa aaaa	Filter-Amp Step Curve	(0 - 36)
	00 5F	00aa aaaa	Filter-Amp Step Curve	(0 - 36)
	00 60	00aa aaaa	Filter-Amp Step Curve	(0 - 36)
	00 61	00aa aaaa	Filter-Amp Step Curve	(0 - 36)
	00 62	00aa aaaa	Filter-Amp Step Curve	(0 - 36)
	00 63	00aa aaaa	Filter-Amp Step Curve	(0 - 36)
	00 64	00aa aaaa	Filter-Amp Step Curve	(0 - 36)
	00 65	00aa aaaa	Filter-Amp Step Curve	(0 - 36)
	00 66	00aa aaaa	Filter-Amp Step Curve	(0 - 36)
	00 67	00aa aaaa	Filter-Amp Step Curve	(0 - 36)

	00 68	0000 000a	Step Switch	(0 - 1) OFF, ON
	00 69	0000 000a	Step Switch	(0 - 1) OFF, ON
	00 6A	0000 000a	Step Switch	(0 - 1) OFF, ON
	00 6B	0000 000a	Step Switch	(0 - 1) OFF, ON
	00 6C	0000 000a	Step Switch	(0 - 1) OFF, ON
	00 6D	0000 000a	Step Switch	(0 - 1) OFF, ON
	00 6E	0000 000a	Step Switch	(0 - 1) OFF, ON
	00 6F	0000 000a	Step Switch	(0 - 1) OFF, ON
	00 70	0000 000a	Step Switch	(0 - 1) OFF, ON
	00 71	0000 000a	Step Switch	(0 - 1) OFF, ON
	00 72	0000 000a	Step Switch	(0 - 1) OFF, ON
	00 73	0000 000a	Step Switch	(0 - 1) OFF, ON
	00 74	0000 000a	Step Switch	(0 - 1) OFF, ON
	00 75	0000 000a	Step Switch	(0 - 1) OFF, ON
	00 76	0000 000a	Step Switch	(0 - 1) OFF, ON
	00 77	0000 000a	Step Switch	(0 - 1) OFF, ON
	00 78	0000 000a	Step Kick Switch	(0 - 1) OFF, ON
	00 79	0000 000a	Step Kick Switch	(0 - 1) OFF, ON
	00 7A	0000 000a	Step Kick Switch	(0 - 1) OFF, ON
	00 7B	0000 000a	Step Kick Switch	(0 - 1) OFF, ON
	00 7C	0000 000a	Step Kick Switch	(0 - 1) OFF, ON
	00 7D	0000 000a	Step Kick Switch	(0 - 1) OFF, ON
	00 7E	0000 000a	Step Kick Switch	(0 - 1) OFF, ON
	00 7F	0000 000a	Step Kick Switch	(0 - 1) OFF, ON
	01 00	0000 000a	Step Kick Switch	(0 - 1) OFF, ON
	01 01	0000 000a	Step Kick Switch	(0 - 1) OFF, ON
	01 02	0000 000a	Step Kick Switch	(0 - 1) OFF, ON
	01 03	0000 000a	Step Kick Switch	(0 - 1) OFF, ON
	01 04	0000 000a	Step Kick Switch	(0 - 1) OFF, ON
	01 05	0000 000a	Step Kick Switch	(0 - 1) OFF, ON
	01 06	0000 000a	Step Kick Switch	(0 - 1) OFF, ON
	01 07	0000 000a	Step Kick Switch	(0 - 1) OFF, ON
	01 08	0000 aaaa	Step Size	(0 - 15) 1 - 16
	01 09	0000 000a	Envelope Trigger	(0 - 1) OFF, ON
	01 0A	000a aaaa	Rate (note)	(0 - 22) 1/64T, 1/64, 1/32T, 1/32, 1/16T, 1/32., 1/16, 1/8T, 1/16., 1/8, 1/4T, 1/8., 1/4, 1/2T, 1/4., 1/2, 1T, 1/2., 1, 2T, 1., 2, 4
	01 0B	0aaa aaaa	Step Mod P-MOD Depth	(1 - 127) -63 - +63
	01 0C	0aaa aaaa	Step Mod S-MOD Depth	(1 - 127) -63 - +63
	01 0D	0aaa aaaa	Step Mod Position Depth	(1 - 127) -63 - +63
#	01 0E	0000 aaaa		
	01 0F	0000 bbbb	Step Mod Filter Depth	(28 - 228) -100 - +100
	00 00 01 10	Total Size		

* [n/zyme Tone Prm]

	Offset Address		Description	
	00 00	0000 000a	Mono/Poly	(0 - 1) MONO, POLY
	00 01	0aaa aaaa	Octave Shift	(61 - 67) -3 - +3
	00 02	00aa aaaa	Bend Range Up	(0 - 48) 0 - 48
	00 03	00aa aaaa	Bend Range Down	(0 - 48) 0 - 48
	00 04	0000 0000	Reserved	
	00 05	0000 000a	Portamento Switch	(0 - 1) OFF, ON
	00 06	0000 000a	Portamento Curve Type	(0 - 1) LINEAR, EXP
	00 07	0000 000a	Portamento Mode	(0 - 1) NORMAL, LEGATO
#	00 08	0000 aaaa		
	00 09	0000 bbbb		
	00 0A	0000 cccc		
	00 0B	0000 dddd	Portamento Time	(0 - 1023) 0 - 1023
	00 0C	0000 000a	Filter Type	(0 - 1) TVF, VCF
	00 0D	0000 000a	Filter Slope	(0 - 1) -12, -24 [dB/Oct]
#	00 0E	0000 aaaa		
	00 0F	0000 bbbb		
	00 10	0000 cccc		
	00 11	0000 dddd	HPF Cutoff	(0 - 1023) 0 - 1023
	00 12	0000 00aa	TVF Filter Type	(0 - 3) LPF, BPF, HPF, PKG
	00 13	0000 00aa	VCF Type	(0 - 3) VCF1, JP, MG, P5
#	00 14	0000 aaaa		
	00 15	0000 bbbb		
	00 16	0000 cccc		
	00 17	0000 dddd	Cutoff Frequency	(0 - 1023) 0 - 1023
#	00 18	0000 aaaa		
	00 19	0000 bbbb		
	00 1A	0000 cccc		
	00 1B	0000 dddd	Resonance	(0 - 1023) 0 - 1023
#	00 1C	0000 aaaa		
	00 1D	0000 bbbb		
	00 1E	0000 cccc		
	00 1F	0000 dddd	Cutoff Keyfollow	(824 - 1224) -200 - +200
	00 20	0aaa aaaa	Filter Env Depth	(1 - 127) -63 - +63
#	00 21	0000 aaaa		
	00 22	0000 bbbb	LFO Filter Depth	(28 - 228) -100 - +100
	00 23	0aaa aaaa	Amp Level	(0 - 127) 0 - 127
#	00 24	0000 aaaa		
	00 25	0000 bbbb	LFO Amp Depth	(28 - 228) -100 - +100
#	00 26	0000 aaaa		
	00 27	0000 bbbb		
	00 28	0000 cccc		
	00 29	0000 dddd	Filter Env Attack Time	(0 - 1023) 0 - 1023
#	00 2A	0000 aaaa		
	00 2B	0000 bbbb		
	00 2C	0000 cccc		
	00 2D	0000 dddd	Filter Env Decay Time	(0 - 1023) 0 - 1023
#	00 2E	0000 aaaa		
	00 2F	0000 bbbb		
	00 30	0000 cccc		
	00 31	0000 dddd	Filter Env Sustain Level	(0 - 1023) 0 - 1023
#	00 32	0000 aaaa		
	00 33	0000 bbbb		
	00 34	0000 cccc		
	00 35	0000 dddd	Filter Env Release Time	(0 - 1023) 0 - 1023
#	00 36	0000 aaaa		
	00 37	0000 bbbb		
	00 38	0000 cccc		
	00 39	0000 dddd	Amp Env Attack Time	(0 - 1023) 0 - 1023
#	00 3A	0000 aaaa		

	00 3B	0000 bbbb	
	00 3C	0000 cccc	
	00 3D	0000 dddd	Amp Env Decay Time (0 - 1023) 0 - 1023
#	00 3E	0000 aaaa	
	00 3F	0000 bbbb	
	00 40	0000 cccc	
	00 41	0000 dddd	Amp Env Sustain Level (0 - 1023) 0 - 1023
#	00 42	0000 aaaa	
	00 43	0000 bbbb	
	00 44	0000 cccc	
	00 45	0000 dddd	Amp Env Release Time (0 - 1023) 0 - 1023
	00 46	0000 0aaa	LFO Waveform (0 - 5) SIN, TRI, SAW-UP, SAW-DW, SQR, RND
	00 47	0000 000a	LFO Rate Sync (0 - 1) OFF, ON
	00 48	000a aaaa	LFO Rate (note) (0 - 22) 1/64T, 1/64, 1/32T, 1/32, 1/16T, 1/32., 1/16, 1/8T, 1/16., 1/8, 1/4T, 1/8., 1/4, 1/2T, 1/4., 1/2, 1T, 1/2., 1, 2T, 1., 2, 4
#	00 49	0000 aaaa	
	00 4A	0000 bbbb	
	00 4B	0000 cccc	
	00 4C	0000 dddd	LFO Rate (0 - 1023) 0 - 1023
#	00 4D	0000 aaaa	
	00 4E	0000 bbbb	
	00 4F	0000 cccc	
	00 50	0000 dddd	LFO Delay Time (0 - 1023) 0 - 1023
	00 51	0000 aaaa	Mod Destination (0 - 8) PIT-LFO, FILTER-LFO, AMP-LFO, P-MOD, S-MOD, P&S-MOD, WT-POS, MIX/ROUGH, WT-POS&MIX
	00 52	0aaa aaaa	Mod Pitch LFO Depth (1 - 127) -63 - +63
	00 53	0aaa aaaa	Mod Filter LFO Depth (1 - 127) -63 - +63
	00 54	0aaa aaaa	Mod Amp LFO Depth (1 - 127) -63 - +63
	00 55	0aaa aaaa	Mod P-MOD Depth (1 - 127) -63 - +63
	00 56	0aaa aaaa	Mod S-MOD Depth (1 - 127) -63 - +63
	00 57	0aaa aaaa	Mod P&S-MOD Depth (1 - 127) -63 - +63
	00 58	0aaa aaaa	Mod WT Pos Depth (1 - 127) -63 - +63
	00 59	0aaa aaaa	Mod Mix/Rough Depth (1 - 127) -63 - +63
	00 5A	0aaa aaaa	Mod WT Pos&Mix Depth (1 - 127) -63 - +63
	00 5B	0aaa aaaa	Velocity Curve (64 - 71) FIXED,1,2,3,4,5,6,7
#	00 5C	0000 aaaa	
	00 5D	0000 bbbb	Amp Level Velocity Sens (28 - 228) -100 - +100
#	00 5E	0000 aaaa	
	00 5F	0000 bbbb	Cutoff Velocity Sens (28 - 228) -100 - +100
#	00 60	0000 aaaa	
	00 61	0000 bbbb	Resonance Velocity Sens (28 - 228) -100 - +100
#	00 62	0000 aaaa	
	00 63	0000 bbbb	Filter Env Velocity Sens (28 - 228) -100 - +100
#	00 64	0000 aaaa	
	00 65	0000 bbbb	Filter Env Attack Time Velocity Sens (28 - 228) -100 - +100
#	00 66	0000 aaaa	
	00 67	0000 bbbb	Filter Env Release Time Velocity Sens (28 - 228) -100 - +100
#	00 68	0000 aaaa	
	00 69	0000 bbbb	Amp Env Attack Time Velocity Sens (28 - 228) -100 - +100
#	00 6A	0000 aaaa	
	00 6B	0000 bbbb	Amp Env Release Time Velocity Sens (28 - 228) -100 - +100
	00 6C	0000 000a	LFO Key Trigger (0 - 1) OFF, ON
	00 00 00 6D	Total Size	

* [n/zyme Tone EQ]

Offset Address		Description	
# 00 00	0000 aaaa		
00 01	0000 bbbb		
00 02	0000 cccc		
00 03	0000 dddd	EQ Low Gain	(784 - 1264) -24.0 - +24.0 [dB]
# 00 04	0000 aaaa		
00 05	0000 bbbb		
00 06	0000 cccc		
00 07	0000 dddd	EQ Mid Gain	(784 - 1264) -24.0 - +24.0 [dB]
# 00 08	0000 aaaa		
00 09	0000 bbbb		
00 0A	0000 cccc		
00 0B	0000 dddd	EQ High Gain	(784 - 1264) -24.0 - +24.0 [dB]
# 00 0C	0000 aaaa		
00 0D	0000 bbbb		
00 0E	0000 cccc		
00 0F	0000 dddd	EQ Low Frequency	(20 - 16000) 20 - 16000 [Hz]
# 00 10	0000 aaaa		
00 11	0000 bbbb		
00 12	0000 cccc		
00 13	0000 dddd	EQ Mid Frequency	(20 - 16000) 20 - 16000 [Hz]
# 00 14	0000 aaaa		
00 15	0000 bbbb		
00 16	0000 cccc		
00 17	0000 dddd	EQ High Frequency	(20 - 16000) 20 - 16000 [Hz]
# 00 18	0000 aaaa		
00 19	0000 bbbb	EQ Mid Q	(5 - 160) 0.5 - 16.0
00 1A	0000 000a	EQ Switch	(0 - 1) OFF, ON
00 00 00 1B	Total Size		

* [n/zyme Tone Control]

Offset Address		Description	
00 00	0000 000a	P-MOD Shape Switch	(0 - 1) OFF, ON
00 01	0000 0000	Reserved	
# 00 02	0000 aaaa		
00 03	0000 bbbb		
00 04	0000 cccc		
00 05	0000 dddd	P-MOD Shape Number	(1 - 128)
00 06	0000 000a	P-MOD Direction	(0 - 1) BWD, FWD
00 07	0aaa aaaa	P-MOD Size	(1 - 127)
00 08	0aaa aaaa	P-MOD Speed	(50 - 80) 1/16, 1/15, 1/14, 1/13, 1/12, 1/11, 1/10, 1/9, 1/8, 1/7, 1/6, 1/5, 1/4, 1/3, 1/2, x1, x2, x3, x4, x5, x6, x7, x8, x9, x10, x11, x12, x13, x14, x15, x16
00 09	0000 000a	P-MOD Tempo Sync Sw	(0 - 1) OFF, ON
# 00 0A	0000 aaaa		
00 0B	0000 bbbb		
00 0C	0000 cccc		
00 0D	0000 dddd	P-MOD Rate	(0 - 1023)
00 0E	0aaa aaaa	Reserved	
:	:	:	:
00 18	0000 000a	S-MOD Shape Switch	(0 - 1) OFF, ON
00 19	0000 0000	Reserved	
# 00 1A	0000 aaaa		
00 1B	0000 bbbb		
00 1C	0000 cccc		
00 1D	0000 dddd	S-MOD Shape Number	(1 - 128)
00 1E	0000 000a	S-MOD Direction	(0 - 1) BWD, FWD
00 1F	0aaa aaaa	S-MOD Size	(1 - 127)
00 20	0aaa aaaa	S-MOD Speed	(50 - 80) 1/16, 1/15, 1/14, 1/13, 1/12, 1/11, 1/10, 1/9, 1/8, 1/7, 1/6, 1/5, 1/4, 1/3, 1/2, x1, x2, x3, x4, x5, x6, x7, x8, x9, x10, x11, x12, x13, x14, x15, x16
00 21	0000 000a	S-MOD Tempo Sync Sw	(0 - 1) OFF, ON
# 00 22	0000 aaaa		
00 23	0000 bbbb		

	00 24	0000 cccc	
	00 25	0000 dddd	S-MOD Rate (0 - 1023)
	00 26	0aaa aaaa	Reserved
:	:	:	:
	00 00 00 30	Total Size	

* [JD-800 Tone Com]

	Offset Address		Description
	00 00	0aaa aaaa	Level (0 - 100)
	00 01	0aaa aaaa	Key Range A Low (0 - 127)
	00 02	0aaa aaaa	Key Range A High (0 - 127)
	00 03	0aaa aaaa	Key Range B Low (0 - 127)
	00 04	0aaa aaaa	Key Range B High (0 - 127)
	00 05	0aaa aaaa	Key Range C Low (0 - 127)
	00 06	0aaa aaaa	Key Range C High (0 - 127)
	00 07	0aaa aaaa	Key Range D Low (0 - 127)
	00 08	0aaa aaaa	Key Range D High (0 - 127)
	00 09	00aa aaaa	Bender Range Down (0 - 48)
	00 0A	0000 aaaa	Bender Range Up (0 - 12)
	00 0B	000a aaaa	Aftertouch Bend Sens (0 - 26) -36, -24, -12, -11, -10, -9, -8, -7, -6, -5, -4, -3, -2, -1, 0, +1, +2, +3, +4, +5, +6, +7, +8, +9, +10, +11, +12
	00 0C	0000 000a	Solo Switch (0 - 1) OFF, ON
	00 0D	0000 000a	Solo Legato Switch (0 - 1) OFF, ON
	00 0E	0000 000a	Portamento Switch (0 - 1) OFF, ON
	00 0F	0000 000a	Portamento Mode (0 - 1) NORMAL, LEGATO
	00 10	0aaa aaaa	Portamento Time (0 - 100)
#	00 11	0000 aaaa	
	00 12	0000 bbbb	EQ Mid Q (5 - 160) 0.5 - 16.0 [EQQ]
#	00 13	0000 aaaa	
	00 14	0000 bbbb	
	00 15	0000 cccc	
	00 16	0000 dddd	EQ Low Frequency (20 - 16000) 20 - 16000 [EQFREQ]
#	00 17	0000 aaaa	
	00 18	0000 bbbb	
	00 19	0000 cccc	
	00 1A	0000 dddd	EQ Mid Frequency (20 - 16000) 20 - 16000 [EQFREQ]
#	00 1B	0000 aaaa	
	00 1C	0000 bbbb	
	00 1D	0000 cccc	
	00 1E	0000 dddd	EQ High Frequency (20 - 16000) 20 - 16000 [EQFREQ]
#	00 1F	0000 aaaa	
	00 20	0000 bbbb	
	00 21	0000 cccc	
	00 22	0000 dddd	EQ Low Gain (784 - 1264) -24.0 - +24.0 [EQGAIN]
#	00 23	0000 aaaa	
	00 24	0000 bbbb	
	00 25	0000 cccc	
	00 26	0000 dddd	EQ Mid Gain (784 - 1264) -24.0 - +24.0 [EQGAIN]
#	00 27	0000 aaaa	
	00 28	0000 bbbb	
	00 29	0000 cccc	
	00 2A	0000 dddd	EQ High Gain (784 - 1264) -24.0 - +24.0 [EQGAIN]
	00 2B	0000 000a	EQ Switch (0 - 1) OFF, ON
	00 2C	0000 000a	Unison Switch (0 - 1) OFF, ON
	00 00 00 2D	Total Size	

* [JD-800 Tone Partial]

	Offset Address		Description
	00 00	0000 000a	Layer Partial Switch (0 - 1) OFF, ON
	00 01	0000 000a	Active Partial Switch (0 - 1) OFF, ON
	00 02	0000 00aa	Velocity Curve (0 - 3)

			1 - 4
	00 03	0000 000a	Hold Control Switch (0 - 1)
			OFF, ON
	00 04	0000 0aaa	LFO1:Waveform (0 - 4)
			TRI, SAW, SQU, S&H, RND
	00 05	0000 000a	LFO1:Rate Sync (0 - 1)
			OFF, ON
	00 06	0aaa aaaa	LFO1:Rate (0 - 100)
	00 07	000a aaaa	LFO1:Rate (note) (0 - 22)
			1/64T, 1/64, 1/32T, 1/32, 1/16T, 1/32., 1/16,
			1/8T, 1/16., 1/8, 1/4T, 1/8., 1/4, 1/2T, 1/4.,
			1/2, 1T, 1/2., 1, 2T, 1., 2, 4
	00 08	0aaa aaaa	LFO1:Delay Time (0 - 101)
	00 09	0aaa aaaa	LFO1:Fade Time (14 - 114)
			-50 - 50
	00 0A	0000 00aa	LFO1:Offset (0 - 2)
			-, 0, +
	00 0B	0000 000a	LFO1:Key Trigger (0 - 1)
			OFF, ON
	00 0C	0000 0aaa	LFO2:Waveform (0 - 4)
			TRI, SAW, SQU, S&H, RND
	00 0D	0000 000a	LFO2:Rate Sync (0 - 1)
			OFF, ON
	00 0E	0aaa aaaa	LFO2:Rate (0 - 100)
	00 0F	000a aaaa	LFO2:Rate (note) (0 - 22)
			1/64T, 1/64, 1/32T, 1/32, 1/16T, 1/32., 1/16,
			1/8T, 1/16., 1/8, 1/4T, 1/8., 1/4, 1/2T, 1/4.,
			1/2, 1T, 1/2., 1, 2T, 1., 2, 4
	00 10	0aaa aaaa	LFO2:Delay Time (0 - 101)
	00 11	0aaa aaaa	LFO2:Fade Time (14 - 114)
			-50 - 50
	00 12	0000 00aa	LFO2:Offset (0 - 2)
			-, 0, +
	00 13	0000 000a	LFO2:Key Trigger (0 - 1)
			OFF, ON
#	00 14	0000 aaaa	
	00 15	0000 bbbb	
	00 16	0000 cccc	
	00 17	0000 dddd	WG:Waveform (0 - 16383)
	00 18	00aa aaaa	WG:Wave Source (0 - 49)
	00 19	0000 0aaa	WG:Wave Gain (0 - 5)
			-18, -12, -6, 0, +6, +12[dB]
	00 1A	0aaa aaaa	WG:Pitch Coarse (16 - 112)
			-48 - 48
	00 1B	0aaa aaaa	WG:Pitch Fine (14 - 114)
			-50 - 50
	00 1C	0aaa aaaa	WG:Pitch Random (0 - 100)
	00 1D	000a aaaa	WG:Pitch Keyfollow (0 - 16)
			-100, -50, -20, -10, -5, 0, +5, +10, +20, +50,
			+98, +99, +100, +101, +102, +150, +200[%]
	00 1E	0000 000a	WG:Bender Sw (0 - 1)
			OFF, ON
	00 1F	0000 000a	WG:Aftertouch Bend Sw (0 - 1)
			OFF, ON
	00 20	0aaa aaaa	WG:LFO1 Depth (14 - 114)
			-50 - 50
	00 21	0aaa aaaa	WG:LFO2 Depth (14 - 114)
			-50 - 50
	00 22	0aaa aaaa	WG:Lever Sens (14 - 114)
			-50 - 50
	00 23	0aaa aaaa	WG:Aftertouch Mod Sens (14 - 114)
			-50 - 50
	00 24	0aaa aaaa	PITCH ENV:Velocity Sens (14 - 114)
			-50 - 50
	00 25	0aaa aaaa	PITCH ENV:Time Velocity Sens (14 - 114)
			-50 - 50
	00 26	0aaa aaaa	PITCH ENV:Time Keyfollow (54 - 74)
			-10 - 10
	00 27	0aaa aaaa	PITCH ENV:L0 (14 - 114)
			-50 - 50
	00 28	0aaa aaaa	PITCH ENV:L1 (14 - 114)
			-50 - 50
	00 29	0aaa aaaa	PITCH ENV:L2 (14 - 114)
			-50 - 50
	00 2A	0aaa aaaa	PITCH ENV:T1 (0 - 100)
	00 2B	0aaa aaaa	PITCH ENV:T2 (0 - 100)
	00 2C	0aaa aaaa	PITCH ENV:T3 (0 - 100)
	00 2D	0000 00aa	TVF:Filter Mode (0 - 2)
			LPF, BPF, HPF
	00 2E	0aaa aaaa	TVF:Cutoff Freq (0 - 100)
	00 2F	0aaa aaaa	TVF:Resonance (0 - 100)
	00 30	00aa aaaa	TVF:Cutoff Keyfollow (0 - 40)
			-100, -90, -80, -70, -60, -50, -40, -30, -20, -10,
			0, +5, +10, +15, +20, +25, +30, +35, +40, +45, +50,
			+55, +60, +65, +70, +75, +80, +85, +90, +95, +100,
			+105, +110, +115, +120, +125, +130, +135, +140,
			+145, +150[%]

00 31	0aaa aaaa	TVF:Aftertouch Sens	(14 - 114) -50 - 50
00 32	0000 000a	TVF:LFO Select	(0 - 1) LFO1 ,LFO2
00 33	0aaa aaaa	TVF:LFO Depth	(14 - 114) -50 - 50
00 34	0aaa aaaa	TVF:ENV Depth	(14 - 114) -50 - 50
00 35	0aaa aaaa	TVF ENV:Velocity Sens	(14 - 114) -50 - 50
00 36	0aaa aaaa	TVF ENV:Time Velocity Sens	(14 - 114) -50 - 50
00 37	0aaa aaaa	TVF ENV:Time Keyfollow	(54 - 74) -10 - 10
00 38	0aaa aaaa	TVF ENV:L1	(0 - 100)
00 39	0aaa aaaa	TVF ENV:L2	(0 - 100)
00 3A	0aaa aaaa	TVF ENV:Sustain Level	(0 - 100)
00 3B	0aaa aaaa	TVF ENV:L4	(0 - 100)
00 3C	0aaa aaaa	TVF ENV:T1	(0 - 100)
00 3D	0aaa aaaa	TVF ENV:T2	(0 - 100)
00 3E	0aaa aaaa	TVF ENV:T3	(0 - 100)
00 3F	0aaa aaaa	TVF ENV:T4	(0 - 100)
00 40	0000 00aa	TVA:Bias Direction	(0 - 2) UP ,LOW, U&L
00 41	0aaa aaaa	TVA:Bias Point	(0 - 127)
00 42	0aaa aaaa	TVA:Bias Level	(54 - 74) -10 - 10
00 43	0aaa aaaa	TVA:Level	(0 - 100)
00 44	0aaa aaaa	TVA:Aftertouch Sens	(14 - 114) -50 - 50
00 45	0000 000a	TVA:LFO Select	(0 - 1) LFO1 ,LFO2
00 46	0aaa aaaa	TVA:LFO Depth	(14 - 114) -50 - 50
00 47	0aaa aaaa	TVA ENV:Velocity Sens	(14 - 114) -50 - 50
00 48	0aaa aaaa	TVA ENV:Time Velocity Sens	(14 - 114) -50 - 50
00 49	0aaa aaaa	TVA ENV:Time Keyfollow	(54 - 74) -10 - 10
00 4A	0aaa aaaa	TVA ENV:L1	(0 - 100)
00 4B	0aaa aaaa	TVA ENV:L2	(0 - 100)
00 4C	0aaa aaaa	TVA ENV:Sustain Level	(0 - 100)
00 4D	0aaa aaaa	TVA ENV:T1	(0 - 100)
00 4E	0aaa aaaa	TVA ENV:T2	(0 - 100)
00 4F	0aaa aaaa	TVA ENV:T3	(0 - 100)
00 50	0aaa aaaa	TVA ENV:T4	(0 - 100)
00 00 00 51	Total Size		

* [JD-800 Tone FxB]

Offset Address		Description	
00 00	0000 0aaa	Sequence	(0 - 5) CHO-DLY-REV, CHO-REV-DLY, DLY-CHO-REV, DLY-REV-CHO, REV-CHO-DLY, REV-DLY-CHO
00 01	0000 000a	Delay Switch	(0 - 1) OFF,ON
00 02	0000 000a	Delay Center (sync sw)	(0 - 1) OFF, ON
00 03	0aaa aaaa	Delay Center (time)	(0 - 125) 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 2.0, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 3.0, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 4.0, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 9.5, 10.0, 11.0, 12.0, 13.0, 14.0, 15.0, 16.0, 17.0, 18.0, 19.0, 20.0, 21.0, 22.0, 23.0, 24.0, 25.0, 26.0, 27.0, 28.0, 29.0, 30.0, 31.0, 32.0, 33.0, 34.0, 35.0, 36.0, 37.0, 38.0, 39.0, 40.0, 50.0, 60.0, 70.0, 80.0, 90.0, 100.0, 110.0, 120.0, 130.0, 140.0, 150.0, 160.0, 170.0, 180.0, 190.0, 200.0, 220.0, 240.0, 260.0, 280.0, 300.0, 320.0, 340.0, 360.0, 380.0, 400.0, 420.0, 440.0, 460.0, 480.0, 500.0, 520.0, 540.0, 560.0, 580.0, 600.0 [msec]
00 04	000a aaaa	Delay Center (note)	(0 - 21) MUSICAL-NOTES
00 05	0000 000a	Delay Left (sync sw)	(0 - 1) OFF, ON
00 06	0aaa aaaa	Delay Left (time)	(0 - 125) 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 2.0, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 3.0,

		3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 4.0, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 9.5, 10.0, 11.0, 12.0, 13.0, 14.0, 15.0, 16.0, 17.0, 18.0, 19.0, 20.0, 21.0, 22.0, 23.0, 24.0, 25.0, 26.0, 27.0, 28.0, 29.0, 30.0, 31.0, 32.0, 33.0, 34.0, 35.0, 36.0, 37.0, 38.0, 39.0, 40.0, 50.0, 60.0, 70.0, 80.0, 90.0, 100.0, 110.0, 120.0, 130.0, 140.0, 150.0, 160.0, 170.0, 180.0, 190.0, 200.0, 220.0, 240.0, 260.0, 280.0, 300.0, 320.0, 340.0, 360.0, 380.0, 400.0, 420.0, 440.0, 460.0, 480.0, 500.0, 520.0, 540.0, 560.0, 580.0, 600.0 [msec]
00 07	000a aaaa	Delay Left (note) (0 - 21) MUSICAL-NOTES
00 08	0000 000a	Delay Right (sync sw) (0 - 1) OFF, ON
00 09	0aaa aaaa	Delay Right (time) (0 - 125) 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 2.0, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 3.0, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 4.0, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 9.5, 10.0, 11.0, 12.0, 13.0, 14.0, 15.0, 16.0, 17.0, 18.0, 19.0, 20.0, 21.0, 22.0, 23.0, 24.0, 25.0, 26.0, 27.0, 28.0, 29.0, 30.0, 31.0, 32.0, 33.0, 34.0, 35.0, 36.0, 37.0, 38.0, 39.0, 40.0, 50.0, 60.0, 70.0, 80.0, 90.0, 100.0, 110.0, 120.0, 130.0, 140.0, 150.0, 160.0, 170.0, 180.0, 190.0, 200.0, 220.0, 240.0, 260.0, 280.0, 300.0, 320.0, 340.0, 360.0, 380.0, 400.0, 420.0, 440.0, 460.0, 480.0, 500.0, 520.0, 540.0, 560.0, 580.0, 600.0 [msec]
00 0A	000a aaaa	Delay Right (note) (0 - 21) MUSICAL-NOTES
00 0B	0aaa aaaa	Center Level (0 - 100) 0 - 100
00 0C	0aaa aaaa	Left Level (0 - 100) 0 - 100
00 0D	0aaa aaaa	Right Level (0 - 100) 0 - 100
00 0E	0aaa aaaa	Delay Feedback (0 - 98) -98 - +98 [%]
00 0F	0000 000a	Chorus Switch (0 - 1) OFF,ON
00 10	0aaa aaaa	Chorus Rate (0 - 99) 0.1 - 10.0 [Hz]
00 11	0aaa aaaa	Chorus Depth (0 - 100) 0 - 100
00 12	0aaa aaaa	Chorus Delay (0 - 99) 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 2.0, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 3.0, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 4.0, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 9.5, 10.0, 11.0, 12.0, 13.0, 14.0, 15.0, 16.0, 17.0, 18.0, 19.0, 20.0, 21.0, 22.0, 23.0, 24.0, 25.0, 26.0, 27.0, 28.0, 29.0, 30.0, 31.0, 32.0, 33.0, 34.0, 35.0, 36.0, 37.0, 38.0, 39.0, 40.0, 41.0, 42.0, 43.0, 44.0, 45.0, 46.0, 47.0, 48.0, 49.0, 50.0 [msec]
00 13	0aaa aaaa	Chorus Feedback (0 - 98) -98 - +98 [%]
00 14	0aaa aaaa	Chorus Level (0 - 100) 0 - 100
00 15	0000 000a	Reverb Switch (0 - 1) OFF,ON
00 16	0000 aaaa	Reverb Type (0 - 9) ROOM1, ROOM2, HALL1, HALL2, HALL3, HALL4, GATE, REVERSE, FLYING1, FLYING2
00 17	0aaa aaaa	Reverb Pre Delay (0 - 120) 0 - 120 [msec]
00 18	0aaa aaaa	Reverb ER Lev (0 - 100) 0 - 100
00 19	000a aaaa	Reverb HF Damp (0 - 16) 500Hz, 630Hz, 800Hz, 1kHz, 1.25kHz, 1.6kHz, 2kHz, 2.5kHz, 3.15kHz, 4kHz, 5kHz, 6.3kHz, 8kHz, 10kHz, 12.5kHz, 16kHz, BYPASS
00 1A	0aaa aaaa	Reverb Time (0 - 99) 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 2.0, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 3.0, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 4.0, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 5.0, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 6.0, 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 7.0, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 8.0,

		8.5, 9.0, 9.5, 10.0, 10.5, 11.0, 11.5, 12.0, 12.5, 13.0, 13.5, 14.0, 14.5, 15.0, 15.5, 16.0, 17.0, 18.0, 19.0, 20.0 [sec]
00 1B	0aaa aaaa	Reverb Level (0 - 100) 0 - 100
00 1C	0aaa aaaa	Balance (0 - 100) D100:0W - D0:100W
00 1D	0aaa aaaa	Level (0 - 127) 0 - 127
00 00 00 1E	Total Size	

* [Drum Kit Common]

Offset Address		Description
00 00	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 01	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 02	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 03	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 04	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 05	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 06	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 07	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 08	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 09	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 0A	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 0B	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 0C	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 0D	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 0E	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 0F	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 10	0aaa aaaa	Reserved
:	:	:
00 14	0aaa aaaa	Level (0 - 127) 0 - 127
00 15	0aaa aaaa	Reserved
:	:	:
00 00 00 19	Total Size	

* [Drum Kit Partial]

Offset Address		Description
# 00 00	0000 aaaa	
00 01	0000 bbbb	
00 02	0000 cccc	
00 03	0000 dddd	Inst Number (0 - 32768) 0 - 32768
00 04	0000 00aa	Inst Bank (0 - 2) PRESET, ---, EXP
# 00 05	0000 aaaa	
00 06	0000 bbbb	
00 07	0000 cccc	
00 08	0000 dddd	Inst Group ID (0 - 16383) 0 - 16383
00 09	0aaa aaaa	Level (0 - 127) 0 - 127
00 0A	0aaa aaaa	Pan (0 - 127) L64 - 63R
00 0B	0aaa aaaa	Chorus Send Level (0 - 127) 0 - 127
00 0C	0aaa aaaa	Reverb Send Level (0 - 127) 0 - 127
00 0D	000a aaaa	Mute Group (0 - 31) OFF, 1,2,3,4,5,6,7,8,9,10,11,12,13,14,

			15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31
	00 0E	0000 0aaa	Output Assign (0 - 7) DRY, MFX, COMP1, COMP2, COMP3, COMP4, COMP5, COMP6
	00 0F	0aaa aaaa	Key Offset (40 - 88) -24 - +24
	00 10	0aaa aaaa	Fine Tune Offset (14 - 114) -50 - 50 [cent]
#	00 11	0000 aaaa	
	00 12	0000 bbbb	TVF Cutoff Offset (28 - 228) -100 - +100
#	00 13	0000 aaaa	
	00 14	0000 bbbb	TVF Resonance Offset (28 - 228) -100 - +100
#	00 15	0000 aaaa	
	00 16	0000 bbbb	TVA Attack Time Offset (28 - 228) -100 - +100
#	00 17	0000 aaaa	
	00 18	0000 bbbb	TVA Decay Time Offset (28 - 228) -100 - +100
#	00 19	0000 aaaa	
	00 1A	0000 bbbb	TVA Release Time Offset (28 - 228) -100 - +100
	00 00 00 1B	Total Size	

* [Inst Common]

Offset Address		Description
00 00	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 01	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 02	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 03	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 04	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 05	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 06	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 07	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 08	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 09	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 0A	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 0B	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 0C	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 0D	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 0E	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 0F	0aaa aaaa	Name (32 - 127) 32 - 127 [ASCII]
00 10	000a aaaa	Category (0 - 21) 0 - 21
00 11	0aaa aaaa	Level (0 - 127) 0 - 127
00 12	0aaa aaaa	Source Key (0 - 127) 0 - 127
00 13	0aaa aaaa	Fine Tune (14 - 114) -50 - 50 [cent]
# 00 14	0000 aaaa	
00 15	0000 bbbb	
00 16	0000 cccc	
00 17	0000 dddd	Random Pitch Depth (0 - 1200) 0 - 1200 [cent]
00 18	00aa aaaa	Random Pan Depth (0 - 63) 0 - 63
00 19	0aaa aaaa	Alternate Pan Depth (0 - 127) L64 - 63R
00 1A	0000 000a	Assign Type (0 - 1) MULTI, SINGLE
00 1B	0000 000a	Envelope Mode (0 - 1) NO-SUS, SUSTAIN
00 1C	0000 00aa	WMT Velocity Control (0 - 2) OFF, ON, RANDOM
00 1D	0000 000a	Wave Switch (0 - 1)

			OFF, ON
	00 1E	0000 00aa	Wave Group Type (0 - 2)
			INT, EXP, SAMP
#	00 1F	0000 aaaa	
	00 20	0000 bbbb	
	00 21	0000 cccc	
	00 22	0000 dddd	Wave Group ID (0 - 16383)
			0 - 16383
#	00 23	0000 aaaa	
	00 24	0000 bbbb	
	00 25	0000 cccc	
	00 26	0000 dddd	Wave Number L (0 - 16383)
			0 - 16383
#	00 27	0000 aaaa	
	00 28	0000 bbbb	
	00 29	0000 cccc	
	00 2A	0000 dddd	Wave Number R (0 - 16383)
			0 - 16383
	00 2B	0000 0aaa	Wave Gain (0 - 5)
			-18, -12, -6, 0, +6, +12[dB]
	00 2C	0000 000a	Wave FXM Switch (0 - 1)
			OFF, ON
	00 2D	0000 0aaa	Wave FXM Color (1 - 4)
			1 - 4
	00 2E	000a aaaa	Wave FXM Depth (0 - 16)
			0 - 16
	00 2F	0aaa aaaa	Wave Coarse Tune (16 - 112)
			-48 - +48
	00 30	0aaa aaaa	Wave Fine Tune (14 - 114)
			-50 - +50
	00 31	0aaa aaaa	Wave Pan (0 - 127)
			L64 - 63R
	00 32	0000 000a	Wave Random Pan Sw (0 - 1)
			OFF, ON
	00 33	0000 00aa	Wave Alternate Pan Sw (0 - 2)
			OFF, ON, REVERSE
	00 34	0aaa aaaa	Wave Level (0 - 127)
			0 - 127
	00 35	0000 00aa	Delay Mode (0 - 3)
			NORMAL, HOLD, KEYOFF-NORMAL, KEYOFF-DECAY
	00 36	0000 000a	DelayTime Sync (0 - 1)
			OFF, ON
	00 37	000a aaaa	DelayTime (note) (0 - 21)
			1/64T,1/64,
			1/32T,1/32,1/16T,1/32.,1/16,1/8T,1/16.,1/8,
			1/4T,1/8.,1/4,1/2T,1/4.,1/2,1T,1/2.,1,2T,1.,2
#	00 38	0000 aaaa	
	00 39	0000 bbbb	
	00 3A	0000 cccc	
	00 3B	0000 dddd	DelayTime (0 - 1023)
			0 - 1023
	00 3C	0aaa aaaa	VeloRange Lower (1 - 127)
			1 - 127
	00 3D	0aaa aaaa	VeloRange Upper (1 - 127)
			1 - 127
	00 3E	0aaa aaaa	VeloFade Lower (0 - 127)
			0 - 127
	00 3F	0aaa aaaa	VeloFade Upper (0 - 127)
			0 - 127
	00 40	0000 000a	Wave Switch (0 - 1)
			OFF, ON
	00 41	0000 00aa	Wave Group Type (0 - 2)
			INT, EXP, SAMP
#	00 42	0000 aaaa	
	00 43	0000 bbbb	
	00 44	0000 cccc	
	00 45	0000 dddd	Wave Group ID (0 - 16383)
			0 - 16383
#	00 46	0000 aaaa	
	00 47	0000 bbbb	
	00 48	0000 cccc	
	00 49	0000 dddd	Wave Number L (0 - 16383)
			0 - 16383
#	00 4A	0000 aaaa	
	00 4B	0000 bbbb	
	00 4C	0000 cccc	
	00 4D	0000 dddd	Wave Number R (0 - 16383)
			0 - 16383
	00 4E	0000 0aaa	Wave Gain (0 - 5)
			-18, -12, -6, 0, +6, +12[dB]
	00 4F	0000 000a	Wave FXM Switch (0 - 1)
			OFF, ON
	00 50	0000 0aaa	Wave FXM Color (1 - 4)
			1 - 4
	00 51	000a aaaa	Wave FXM Depth (0 - 16)
			0 - 16
	00 52	0aaa aaaa	Wave Coarse Tune (16 - 112)

			-48 - +48
	00 53	0aaa aaaa	Wave Fine Tune (14 - 114)
			-50 - +50
	00 54	0aaa aaaa	Wave Pan (0 - 127)
			L64 - 63R
	00 55	0000 000a	Wave Random Pan Sw (0 - 1)
			OFF, ON
	00 56	0000 00aa	Wave Alternate Pan Sw (0 - 2)
			OFF, ON, REVERSE
	00 57	0aaa aaaa	Wave Level (0 - 127)
			0 - 127
	00 58	0000 00aa	Delay Mode (0 - 3)
			NORMAL, HOLD, KEYOFF-NORMAL, KEYOFF-DECAY
	00 59	0000 000a	DelayTime Sync (0 - 1)
			OFF, ON
	00 5A	000a aaaa	DelayTime (note) (0 - 21)
			1/64T,1/64,
			1/32T,1/32,1/16T,1/32.,1/16,1/8T,1/16.,1/8,
			1/4T,1/8.,1/4,1/2T,1/4.,1/2,1T,1/2.,1,2T,1.,2
#	00 5B	0000 aaaa	
	00 5C	0000 bbbb	
	00 5D	0000 cccc	
	00 5E	0000 dddd	DelayTime (0 - 1023)
			0 - 1023
	00 5F	0aaa aaaa	VeloRange Lower (1 - 127)
			1 - 127
	00 60	0aaa aaaa	VeloRange Upper (1 - 127)
			1 - 127
	00 61	0aaa aaaa	VeloFade Lower (0 - 127)
			0 - 127
	00 62	0aaa aaaa	VeloFade Upper (0 - 127)
			0 - 127
	00 63	0000 000a	Wave Switch (0 - 1)
			OFF, ON
	00 64	0000 00aa	Wave Group Type (0 - 2)
			INT, EXP, SAMP
#	00 65	0000 aaaa	
	00 66	0000 bbbb	
	00 67	0000 cccc	
	00 68	0000 dddd	Wave Group ID (0 - 16383)
			0 - 16383
#	00 69	0000 aaaa	
	00 6A	0000 bbbb	
	00 6B	0000 cccc	
	00 6C	0000 dddd	Wave Number L (0 - 16383)
			0 - 16383
#	00 6D	0000 aaaa	
	00 6E	0000 bbbb	
	00 6F	0000 cccc	
	00 70	0000 dddd	Wave Number R (0 - 16383)
			0 - 16383
	00 71	0000 0aaa	Wave Gain (0 - 5)
			-18, -12, -6, 0, +6, +12[dB]
	00 72	0000 000a	Wave FXM Switch (0 - 1)
			OFF, ON
	00 73	0000 0aaa	Wave FXM Color (1 - 4)
			1 - 4
	00 74	000a aaaa	Wave FXM Depth (0 - 16)
			0 - 16
	00 75	0aaa aaaa	Wave Coarse Tune (16 - 112)
			-48 - +48
	00 76	0aaa aaaa	Wave Fine Tune (14 - 114)
			-50 - +50
	00 77	0aaa aaaa	Wave Pan (0 - 127)
			L64 - 63R
	00 78	0000 000a	Wave Random Pan Sw (0 - 1)
			OFF, ON
	00 79	0000 00aa	Wave Alternate Pan Sw (0 - 2)
			OFF, ON, REVERSE
	00 7A	0aaa aaaa	Wave Level (0 - 127)
			0 - 127
	00 7B	0000 00aa	Delay Mode (0 - 3)
			NORMAL, HOLD, KEYOFF-NORMAL, KEYOFF-DECAY
	00 7C	0000 000a	DelayTime Sync (0 - 1)
			OFF, ON
	00 7D	000a aaaa	DelayTime (note) (0 - 21)
			1/64T,1/64,
			1/32T,1/32,1/16T,1/32.,1/16,1/8T,1/16.,1/8,
			1/4T,1/8.,1/4,1/2T,1/4.,1/2,1T,1/2.,1,2T,1.,2
#	00 7E	0000 aaaa	
	00 7F	0000 bbbb	
	01 00	0000 cccc	
	01 01	0000 dddd	DelayTime (0 - 1023)
			0 - 1023
	01 02	0aaa aaaa	VeloRange Lower (1 - 127)
			1 - 127
	01 03	0aaa aaaa	VeloRange Upper (1 - 127)

				1 - 127
	01 04	0aaa aaaa	VeloFade Lower	(0 - 127)
				0 - 127
	01 05	0aaa aaaa	VeloFade Upper	(0 - 127)
				0 - 127
	01 06	0000 000a	Wave Switch	(0 - 1)
				OFF, ON
	01 07	0000 00aa	Wave Group Type	(0 - 2)
				INT, EXP, SAMP
#	01 08	0000 aaaa		
	01 09	0000 bbbb		
	01 0A	0000 cccc		
	01 0B	0000 dddd	Wave Group ID	(0 - 16383)
				0 - 16383
#	01 0C	0000 aaaa		
	01 0D	0000 bbbb		
	01 0E	0000 cccc		
	01 0F	0000 dddd	Wave Number L	(0 - 16383)
				0 - 16383
#	01 10	0000 aaaa		
	01 11	0000 bbbb		
	01 12	0000 cccc		
	01 13	0000 dddd	Wave Number R	(0 - 16383)
				0 - 16383
	01 14	0000 0aaa	Wave Gain	(0 - 5)
				-18, -12, -6, 0, +6, +12[dB]
	01 15	0000 000a	Wave FXM Switch	(0 - 1)
				OFF, ON
	01 16	0000 0aaa	Wave FXM Color	(1 - 4)
				1 - 4
	01 17	000a aaaa	Wave FXM Depth	(0 - 16)
				0 - 16
	01 18	0aaa aaaa	Wave Coarse Tune	(16 - 112)
				-48 - +48
	01 19	0aaa aaaa	Wave Fine Tune	(14 - 114)
				-50 - +50
	01 1A	0aaa aaaa	Wave Pan	(0 - 127)
				L64 - 63R
	01 1B	0000 000a	Wave Random Pan Sw	(0 - 1)
				OFF, ON
	01 1C	0000 00aa	Wave Alternate Pan Sw	(0 - 2)
				OFF, ON, REVERSE
	01 1D	0aaa aaaa	Wave Level	(0 - 127)
				0 - 127
	01 1E	0000 00aa	Delay Mode	(0 - 3)
				NORMAL, HOLD, KEYOFF-NORMAL, KEYOFF-DECAY
	01 1F	0000 000a	DelayTime Sync	(0 - 1)
				OFF, ON
	01 20	000a aaaa	DelayTime (note)	(0 - 21)
				1/64T, 1/64,
				1/32T, 1/32, 1/16T, 1/32., 1/16, 1/8T, 1/16., 1/8,
				1/4T, 1/8., 1/4, 1/2T, 1/4., 1/2, 1T, 1/2., 1, 2T, 1., 2
#	01 21	0000 aaaa		
	01 22	0000 bbbb		
	01 23	0000 cccc		
	01 24	0000 dddd	DelayTime	(0 - 1023)
				0 - 1023
	01 25	0aaa aaaa	VeloRange Lower	(1 - 127)
				1 - 127
	01 26	0aaa aaaa	VeloRange Upper	(1 - 127)
				1 - 127
	01 27	0aaa aaaa	VeloFade Lower	(0 - 127)
				0 - 127
	01 28	0aaa aaaa	VeloFade Upper	(0 - 127)
				0 - 127
	01 29	0000 0aaa	TVF Filter Type	(0 - 6)
				OFF, LPF, BPF, HPF, PKG, LPF2, LPF3
#	01 2A	0000 aaaa		
	01 2B	0000 bbbb		
	01 2C	0000 cccc		
	01 2D	0000 dddd	TVF Cutoff Frequency	(0 - 1023)
				0 - 1023
	01 2E	0000 0aaa	TVF Cutoff Velocity Curve	(0 - 7)
				0 - 7
#	01 2F	0000 aaaa		
	01 30	0000 bbbb	TVF Cutoff Velocity Sens	(28 - 228)
				-100 - +100
#	01 31	0000 aaaa		
	01 32	0000 bbbb		
	01 33	0000 cccc		
	01 34	0000 dddd	TVF Resonance	(0 - 1023)
				0 - 1023
#	01 35	0000 aaaa		
	01 36	0000 bbbb	TVF Resonance Velocity Sens	(28 - 228)
				-100 - +100
	01 37	0000 0aaa	TVA Level Velocity Curve	(0 - 7)
				0 - 7

	Offset Address		Description	
#	01 38	0000 aaaa		
	01 39	0000 bbbb	TVA Level Velocity Sens	(28 - 228) -100 - +100
	01 3A	0000 000a	Wave Tempo Sync	(0 - 1) OFF, ON
	00 00 01 3B	Total Size		

* [MFX]

	Offset Address		Description	
	00 00	0aaa aaaa	MFX Type	(0 - 94)
	00 01	0000 000a	MFX Switch	(0 - 1) OFF, ON
	00 02	0aaa aaaa	MFX Chorus Send Level	(0 - 127) 0 - 127
	00 03	0aaa aaaa	MFX Reverb Send Level	(0 - 127) 0 - 127
	00 04	0aaa aaaa	MFX CtrlSrc 1	(0 - 100) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT, SYS-CTRL1, SYS-CTRL2, SYS-CTRL3, SYS-CTRL4
	00 05	0aaa aaaa	MFX CtrlSens 1	(1 - 127) -63 - +63
	00 06	0aaa aaaa	MFX CtrlSrc 2	(0 - 100) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT, SYS-CTRL1, SYS-CTRL2, SYS-CTRL3, SYS-CTRL4
	00 07	0aaa aaaa	MFX CtrlSens 2	(1 - 127) -63 - +63
	00 08	0aaa aaaa	MFX CtrlSrc 3	(0 - 100) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT, SYS-CTRL1, SYS-CTRL2, SYS-CTRL3, SYS-CTRL4
	00 09	0aaa aaaa	MFX CtrlSens 3	(1 - 127) -63 - +63
	00 0A	0aaa aaaa	MFX CtrlSrc 4	(0 - 100) OFF, CC01, CC02, CC03, CC04, CC05, CC06, CC07, CC08, CC09, CC10, CC11, CC12, CC13, CC14, CC15, CC16, CC17, CC18, CC19, CC20, CC21, CC22, CC23, CC24, CC25, CC26, CC27, CC28, CC29, CC30, CC31, CC33, CC34, CC35, CC36, CC37, CC38, CC39, CC40, CC41, CC42, CC43, CC44, CC45, CC46, CC47, CC48, CC49, CC50, CC51, CC52, CC53, CC54, CC55, CC56, CC57, CC58, CC59, CC60, CC61, CC62, CC63, CC64, CC65, CC66, CC67, CC68, CC69, CC70, CC71, CC72, CC73, CC74, CC75, CC76, CC77, CC78, CC79, CC80, CC81, CC82, CC83, CC84, CC85, CC86, CC87, CC88, CC89, CC90, CC91, CC92, CC93, CC94, CC95, BEND, AFT, SYS-CTRL1, SYS-CTRL2, SYS-CTRL3, SYS-CTRL4
	00 0B	0aaa aaaa	MFX CtrlSens 4	(1 - 127) -63 - +63
	00 0C	0000 aaaa	MFX CtrlAsgn	(0 - 11)
	00 0D	0000 aaaa	MFX CtrlAsgn	(0 - 11)
	00 0E	0000 aaaa	MFX CtrlAsgn	(0 - 11)
	00 0F	0000 aaaa	MFX CtrlAsgn	(0 - 11)
#	00 10	0000 aaaa		
	00 11	0000 bbbb		
	00 12	0000 cccc		
	00 13	0000 dddd	MFX Parameter 1	(12768 - 52768) -20000 - 20000
#	00 14	0000 aaaa		

	00 15	0000 bbbb		
	00 16	0000 cccc		
	00 17	0000 dddd	MFX Parameter 2	(12768 - 52768) -20000 - 20000
#	00 18	0000 aaaa		
	00 19	0000 bbbb		
	00 1A	0000 cccc		
	00 1B	0000 dddd	MFX Parameter 3	(12768 - 52768) -20000 - 20000
#	00 1C	0000 aaaa		
	00 1D	0000 bbbb		
	00 1E	0000 cccc		
	00 1F	0000 dddd	MFX Parameter 4	(12768 - 52768) -20000 - 20000
#	00 20	0000 aaaa		
	00 21	0000 bbbb		
	00 22	0000 cccc		
	00 23	0000 dddd	MFX Parameter 5	(12768 - 52768) -20000 - 20000
#	00 24	0000 aaaa		
	00 25	0000 bbbb		
	00 26	0000 cccc		
	00 27	0000 dddd	MFX Parameter 6	(12768 - 52768) -20000 - 20000
#	00 28	0000 aaaa		
	00 29	0000 bbbb		
	00 2A	0000 cccc		
	00 2B	0000 dddd	MFX Parameter 7	(12768 - 52768) -20000 - 20000
#	00 2C	0000 aaaa		
	00 2D	0000 bbbb		
	00 2E	0000 cccc		
	00 2F	0000 dddd	MFX Parameter 8	(12768 - 52768) -20000 - 20000
#	00 30	0000 aaaa		
	00 31	0000 bbbb		
	00 32	0000 cccc		
	00 33	0000 dddd	MFX Parameter 9	(12768 - 52768) -20000 - 20000
#	00 34	0000 aaaa		
	00 35	0000 bbbb		
	00 36	0000 cccc		
	00 37	0000 dddd	MFX Parameter 10	(12768 - 52768) -20000 - 20000
#	00 38	0000 aaaa		
	00 39	0000 bbbb		
	00 3A	0000 cccc		
	00 3B	0000 dddd	MFX Parameter 11	(12768 - 52768) -20000 - 20000
#	00 3C	0000 aaaa		
	00 3D	0000 bbbb		
	00 3E	0000 cccc		
	00 3F	0000 dddd	MFX Parameter 12	(12768 - 52768) -20000 - 20000
#	00 40	0000 aaaa		
	00 41	0000 bbbb		
	00 42	0000 cccc		
	00 43	0000 dddd	MFX Parameter 13	(12768 - 52768) -20000 - 20000
#	00 44	0000 aaaa		
	00 45	0000 bbbb		
	00 46	0000 cccc		
	00 47	0000 dddd	MFX Parameter 14	(12768 - 52768) -20000 - 20000
#	00 48	0000 aaaa		
	00 49	0000 bbbb		
	00 4A	0000 cccc		
	00 4B	0000 dddd	MFX Parameter 15	(12768 - 52768) -20000 - 20000
#	00 4C	0000 aaaa		
	00 4D	0000 bbbb		
	00 4E	0000 cccc		
	00 4F	0000 dddd	MFX Parameter 16	(12768 - 52768) -20000 - 20000
#	00 50	0000 aaaa		
	00 51	0000 bbbb		
	00 52	0000 cccc		
	00 53	0000 dddd	MFX Parameter 17	(12768 - 52768) -20000 - 20000
#	00 54	0000 aaaa		
	00 55	0000 bbbb		
	00 56	0000 cccc		
	00 57	0000 dddd	MFX Parameter 18	(12768 - 52768) -20000 - 20000
#	00 58	0000 aaaa		
	00 59	0000 bbbb		
	00 5A	0000 cccc		

	00 5B	0000 dddd	MFX Parameter 19	(12768 - 52768) -20000 - 20000
#	00 5C	0000 aaaa		
	00 5D	0000 bbbb		
	00 5E	0000 cccc		
	00 5F	0000 dddd	MFX Parameter 20	(12768 - 52768) -20000 - 20000
#	00 60	0000 aaaa		
	00 61	0000 bbbb		
	00 62	0000 cccc		
	00 63	0000 dddd	MFX Parameter 21	(12768 - 52768) -20000 - 20000
#	00 64	0000 aaaa		
	00 65	0000 bbbb		
	00 66	0000 cccc		
	00 67	0000 dddd	MFX Parameter 22	(12768 - 52768) -20000 - 20000
#	00 68	0000 aaaa		
	00 69	0000 bbbb		
	00 6A	0000 cccc		
	00 6B	0000 dddd	MFX Parameter 23	(12768 - 52768) -20000 - 20000
#	00 6C	0000 aaaa		
	00 6D	0000 bbbb		
	00 6E	0000 cccc		
	00 6F	0000 dddd	MFX Parameter 24	(12768 - 52768) -20000 - 20000
#	00 70	0000 aaaa		
	00 71	0000 bbbb		
	00 72	0000 cccc		
	00 73	0000 dddd	MFX Parameter 25	(12768 - 52768) -20000 - 20000
#	00 74	0000 aaaa		
	00 75	0000 bbbb		
	00 76	0000 cccc		
	00 77	0000 dddd	MFX Parameter 26	(12768 - 52768) -20000 - 20000
#	00 78	0000 aaaa		
	00 79	0000 bbbb		
	00 7A	0000 cccc		
	00 7B	0000 dddd	MFX Parameter 27	(12768 - 52768) -20000 - 20000
#	00 7C	0000 aaaa		
	00 7D	0000 bbbb		
	00 7E	0000 cccc		
	00 7F	0000 dddd	MFX Parameter 28	(12768 - 52768) -20000 - 20000
#	01 00	0000 aaaa		
	01 01	0000 bbbb		
	01 02	0000 cccc		
	01 03	0000 dddd	MFX Parameter 29	(12768 - 52768) -20000 - 20000
#	01 04	0000 aaaa		
	01 05	0000 bbbb		
	01 06	0000 cccc		
	01 07	0000 dddd	MFX Parameter 30	(12768 - 52768) -20000 - 20000
#	01 08	0000 aaaa		
	01 09	0000 bbbb		
	01 0A	0000 cccc		
	01 0B	0000 dddd	MFX Parameter 31	(12768 - 52768) -20000 - 20000
#	01 0C	0000 aaaa		
	01 0D	0000 bbbb		
	01 0E	0000 cccc		
	01 0F	0000 dddd	MFX Parameter 32	(12768 - 52768) -20000 - 20000
	00 00 01 10	Total Size		

* [Reverb]

	Offset Address		Description	
	00 00	0000 000a	Switch	(0 - 1) OFF, ON
	00 01	0000 aaaa	Reverb Type	(0 - 9)
	00 02	0aaa aaaa	Reverb Level	(0 - 127)
#	00 03	0000 aaaa		
	00 04	0000 bbbb		
	00 05	0000 cccc		
	00 06	0000 dddd	Reverb Parameter 1	(12768 - 52768) -20000 - 20000
#	00 07	0000 aaaa		
	00 08	0000 bbbb		

	00 09	0000 cccc		
	00 0A	0000 dddd	Reverb Parameter 2	(12768 - 52768) -20000 - 20000
#	00 0B	0000 aaaa		
	00 0C	0000 bbbb		
	00 0D	0000 cccc		
	00 0E	0000 dddd	Reverb Parameter 3	(12768 - 52768) -20000 - 20000
#	00 0F	0000 aaaa		
	00 10	0000 bbbb		
	00 11	0000 cccc		
	00 12	0000 dddd	Reverb Parameter 4	(12768 - 52768) -20000 - 20000
#	00 13	0000 aaaa		
	00 14	0000 bbbb		
	00 15	0000 cccc		
	00 16	0000 dddd	Reverb Parameter 5	(12768 - 52768) -20000 - 20000
#	00 17	0000 aaaa		
	00 18	0000 bbbb		
	00 19	0000 cccc		
	00 1A	0000 dddd	Reverb Parameter 6	(12768 - 52768) -20000 - 20000
#	00 1B	0000 aaaa		
	00 1C	0000 bbbb		
	00 1D	0000 cccc		
	00 1E	0000 dddd	Reverb Parameter 7	(12768 - 52768) -20000 - 20000
#	00 1F	0000 aaaa		
	00 20	0000 bbbb		
	00 21	0000 cccc		
	00 22	0000 dddd	Reverb Parameter 8	(12768 - 52768) -20000 - 20000
#	00 23	0000 aaaa		
	00 24	0000 bbbb		
	00 25	0000 cccc		
	00 26	0000 dddd	Reverb Parameter 9	(12768 - 52768) -20000 - 20000
#	00 27	0000 aaaa		
	00 28	0000 bbbb		
	00 29	0000 cccc		
	00 2A	0000 dddd	Reverb Parameter 10	(12768 - 52768) -20000 - 20000
#	00 2B	0000 aaaa		
	00 2C	0000 bbbb		
	00 2D	0000 cccc		
	00 2E	0000 dddd	Reverb Parameter 11	(12768 - 52768) -20000 - 20000
#	00 2F	0000 aaaa		
	00 30	0000 bbbb		
	00 31	0000 cccc		
	00 32	0000 dddd	Reverb Parameter 12	(12768 - 52768) -20000 - 20000
#	00 33	0000 aaaa		
	00 34	0000 bbbb		
	00 35	0000 cccc		
	00 36	0000 dddd	Reverb Parameter 13	(12768 - 52768) -20000 - 20000
#	00 37	0000 aaaa		
	00 38	0000 bbbb		
	00 39	0000 cccc		
	00 3A	0000 dddd	Reverb Parameter 14	(12768 - 52768) -20000 - 20000
#	00 3B	0000 aaaa		
	00 3C	0000 bbbb		
	00 3D	0000 cccc		
	00 3E	0000 dddd	Reverb Parameter 15	(12768 - 52768) -20000 - 20000
#	00 3F	0000 aaaa		
	00 40	0000 bbbb		
	00 41	0000 cccc		
	00 42	0000 dddd	Reverb Parameter 16	(12768 - 52768) -20000 - 20000
#	00 43	0000 aaaa		
	00 44	0000 bbbb		
	00 45	0000 cccc		
	00 46	0000 dddd	Reverb Parameter 17	(12768 - 52768) -20000 - 20000
#	00 47	0000 aaaa		
	00 48	0000 bbbb		
	00 49	0000 cccc		
	00 4A	0000 dddd	Reverb Parameter 18	(12768 - 52768) -20000 - 20000
#	00 4B	0000 aaaa		
	00 4C	0000 bbbb		
	00 4D	0000 cccc		
	00 4E	0000 dddd	Reverb Parameter 19	(12768 - 52768)

				-20000 - 20000
#	00 4F	0000 aaaa		
	00 50	0000 bbbb		
	00 51	0000 cccc		
	00 52	0000 dddd	Reverb Parameter 20	(12768 - 52768)
				-20000 - 20000
	00 00 00 53	Total Size		

* [Chorus]

	Offset Address		Description	
	00 00	0000 000a	Switch	(0 - 1)
				OFF, ON
	00 01	0000 aaaa	Chorus Type	(0 - 9)
	00 02	0aaa aaaa	Chorus Level	(0 - 127)
	00 03	0aaa aaaa	Reverb Send Level	(0 - 127)
#	00 04	0000 aaaa		
	00 05	0000 bbbb		
	00 06	0000 cccc		
	00 07	0000 dddd	Chorus Parameter 1	(12768 - 52768)
				-20000 - 20000
#	00 08	0000 aaaa		
	00 09	0000 bbbb		
	00 0A	0000 cccc		
	00 0B	0000 dddd	Chorus Parameter 2	(12768 - 52768)
				-20000 - 20000
#	00 0C	0000 aaaa		
	00 0D	0000 bbbb		
	00 0E	0000 cccc		
	00 0F	0000 dddd	Chorus Parameter 3	(12768 - 52768)
				-20000 - 20000
#	00 10	0000 aaaa		
	00 11	0000 bbbb		
	00 12	0000 cccc		
	00 13	0000 dddd	Chorus Parameter 4	(12768 - 52768)
				-20000 - 20000
#	00 14	0000 aaaa		
	00 15	0000 bbbb		
	00 16	0000 cccc		
	00 17	0000 dddd	Chorus Parameter 5	(12768 - 52768)
				-20000 - 20000
#	00 18	0000 aaaa		
	00 19	0000 bbbb		
	00 1A	0000 cccc		
	00 1B	0000 dddd	Chorus Parameter 6	(12768 - 52768)
				-20000 - 20000
#	00 1C	0000 aaaa		
	00 1D	0000 bbbb		
	00 1E	0000 cccc		
	00 1F	0000 dddd	Chorus Parameter 7	(12768 - 52768)
				-20000 - 20000
#	00 20	0000 aaaa		
	00 21	0000 bbbb		
	00 22	0000 cccc		
	00 23	0000 dddd	Chorus Parameter 8	(12768 - 52768)
				-20000 - 20000
#	00 24	0000 aaaa		
	00 25	0000 bbbb		
	00 26	0000 cccc		
	00 27	0000 dddd	Chorus Parameter 9	(12768 - 52768)
				-20000 - 20000
#	00 28	0000 aaaa		
	00 29	0000 bbbb		
	00 2A	0000 cccc		
	00 2B	0000 dddd	Chorus Parameter 10	(12768 - 52768)
				-20000 - 20000
#	00 2C	0000 aaaa		
	00 2D	0000 bbbb		
	00 2E	0000 cccc		
	00 2F	0000 dddd	Chorus Parameter 11	(12768 - 52768)
				-20000 - 20000
#	00 30	0000 aaaa		
	00 31	0000 bbbb		
	00 32	0000 cccc		
	00 33	0000 dddd	Chorus Parameter 12	(12768 - 52768)
				-20000 - 20000
#	00 34	0000 aaaa		
	00 35	0000 bbbb		
	00 36	0000 cccc		
	00 37	0000 dddd	Chorus Parameter 13	(12768 - 52768)
				-20000 - 20000
#	00 38	0000 aaaa		
	00 39	0000 bbbb		

	00 3A	0000 cccc		
	00 3B	0000 dddd	Chorus Parameter 14	(12768 - 52768) -20000 - 20000
#	00 3C	0000 aaaa		
	00 3D	0000 bbbb		
	00 3E	0000 cccc		
	00 3F	0000 dddd	Chorus Parameter 15	(12768 - 52768) -20000 - 20000
#	00 40	0000 aaaa		
	00 41	0000 bbbb		
	00 42	0000 cccc		
	00 43	0000 dddd	Chorus Parameter 16	(12768 - 52768) -20000 - 20000
#	00 44	0000 aaaa		
	00 45	0000 bbbb		
	00 46	0000 cccc		
	00 47	0000 dddd	Chorus Parameter 17	(12768 - 52768) -20000 - 20000
#	00 48	0000 aaaa		
	00 49	0000 bbbb		
	00 4A	0000 cccc		
	00 4B	0000 dddd	Chorus Parameter 18	(12768 - 52768) -20000 - 20000
#	00 4C	0000 aaaa		
	00 4D	0000 bbbb		
	00 4E	0000 cccc		
	00 4F	0000 dddd	Chorus Parameter 19	(12768 - 52768) -20000 - 20000
#	00 50	0000 aaaa		
	00 51	0000 bbbb		
	00 52	0000 cccc		
	00 53	0000 dddd	Chorus Parameter 20	(12768 - 52768) -20000 - 20000
	00 00 00 54	Total Size		

* [VTW Overdrive]

	Offset Address		Description	
	00 00	0000 00aa	Overdrive Type	(1 - 3)
	00 01	0000 000a	Overdrive Switch	(0 - 1)
	00 02	0aaa aaaa	Dry Mix Level	(0 - 127)
#	00 03	0000 aaaa		
	00 04	0000 bbbb		
	00 05	0000 cccc		
	00 06	0000 dddd	Overdrive parameter 1	(12768 - 52768) -20000 - 20000
#	00 07	0000 aaaa		
	00 08	0000 bbbb		
	00 09	0000 cccc		
	00 0A	0000 dddd	Overdrive parameter 2	(12768 - 52768) -20000 - 20000
#	00 0B	0000 aaaa		
	00 0C	0000 bbbb		
	00 0D	0000 cccc		
	00 0E	0000 dddd	Overdrive parameter 3	(12768 - 52768) -20000 - 20000
#	00 0F	0000 aaaa		
	00 10	0000 bbbb		
	00 11	0000 cccc		
	00 12	0000 dddd	Overdrive parameter 4	(12768 - 52768) -20000 - 20000
#	00 13	0000 aaaa		
	00 14	0000 bbbb		
	00 15	0000 cccc		
	00 16	0000 dddd	Overdrive parameter 5	(12768 - 52768) -20000 - 20000
#	00 17	0000 aaaa		
	00 18	0000 bbbb		
	00 19	0000 cccc		
	00 1A	0000 dddd	Overdrive parameter 6	(12768 - 52768) -20000 - 20000
#	00 1B	0000 aaaa		
	00 1C	0000 bbbb		
	00 1D	0000 cccc		
	00 1E	0000 dddd	Overdrive parameter 7	(12768 - 52768) -20000 - 20000
#	00 1F	0000 aaaa		
	00 20	0000 bbbb		
	00 21	0000 cccc		
	00 22	0000 dddd	Overdrive parameter 8	(12768 - 52768) -20000 - 20000
#	00 23	0000 aaaa		
	00 24	0000 bbbb		

	00 25	0000 cccc		
	00 26	0000 dddd	Overdrive parameter 9	(12768 - 52768) -20000 - 20000
#	00 27	0000 aaaa		
	00 28	0000 bbbb		
	00 29	0000 cccc		
	00 2A	0000 dddd	Overdrive parameter 10	(12768 - 52768) -20000 - 20000
#	00 2B	0000 aaaa		
	00 2C	0000 bbbb		
	00 2D	0000 cccc		
	00 2E	0000 dddd	Overdrive parameter 11	(12768 - 52768) -20000 - 20000
#	00 2F	0000 aaaa		
	00 30	0000 bbbb		
	00 31	0000 cccc		
	00 32	0000 dddd	Overdrive parameter 12	(12768 - 52768) -20000 - 20000
#	00 33	0000 aaaa		
	00 34	0000 bbbb		
	00 35	0000 cccc		
	00 36	0000 dddd	Overdrive parameter 13	(12768 - 52768) -20000 - 20000
#	00 37	0000 aaaa		
	00 38	0000 bbbb		
	00 39	0000 cccc		
	00 3A	0000 dddd	Overdrive parameter 14	(12768 - 52768) -20000 - 20000
#	00 3B	0000 aaaa		
	00 3C	0000 bbbb		
	00 3D	0000 cccc		
	00 3E	0000 dddd	Overdrive parameter 15	(12768 - 52768) -20000 - 20000
#	00 3F	0000 aaaa		
	00 40	0000 bbbb		
	00 41	0000 cccc		
	00 42	0000 dddd	Overdrive parameter 16	(12768 - 52768) -20000 - 20000
#	00 43	0000 aaaa		
	00 44	0000 bbbb		
	00 45	0000 cccc		
	00 46	0000 dddd	Overdrive parameter 17	(12768 - 52768) -20000 - 20000
#	00 47	0000 aaaa		
	00 48	0000 bbbb		
	00 49	0000 cccc		
	00 4A	0000 dddd	Overdrive parameter 18	(12768 - 52768) -20000 - 20000
#	00 4B	0000 aaaa		
	00 4C	0000 bbbb		
	00 4D	0000 cccc		
	00 4E	0000 dddd	Overdrive parameter 19	(12768 - 52768) -20000 - 20000
#	00 4F	0000 aaaa		
	00 50	0000 bbbb		
	00 51	0000 cccc		
	00 52	0000 dddd	Overdrive parameter 20	(12768 - 52768) -20000 - 20000
#	00 53	0000 aaaa		
	00 54	0000 bbbb		
	00 55	0000 cccc		
	00 56	0000 dddd	Overdrive parameter 21	(12768 - 52768) -20000 - 20000
#	00 57	0000 aaaa		
	00 58	0000 bbbb		
	00 59	0000 cccc		
	00 5A	0000 dddd	Overdrive parameter 22	(12768 - 52768) -20000 - 20000
#	00 5B	0000 aaaa		
	00 5C	0000 bbbb		
	00 5D	0000 cccc		
	00 5E	0000 dddd	Overdrive parameter 23	(12768 - 52768) -20000 - 20000
#	00 5F	0000 aaaa		
	00 60	0000 bbbb		
	00 61	0000 cccc		
	00 62	0000 dddd	Overdrive parameter 24	(12768 - 52768) -20000 - 20000
#	00 63	0000 aaaa		
	00 64	0000 bbbb		
	00 65	0000 cccc		
	00 66	0000 dddd	Overdrive parameter 25	(12768 - 52768) -20000 - 20000
#	00 67	0000 aaaa		
	00 68	0000 bbbb		
	00 69	0000 cccc		
	00 6A	0000 dddd	Overdrive parameter 26	(12768 - 52768)

			-20000 - 20000
# 00 6B	0000 aaaa		
00 6C	0000 bbbb		
00 6D	0000 cccc		
00 6E	0000 dddd	Overdrive parameter 27	(12768 - 52768)
			-20000 - 20000
# 00 6F	0000 aaaa		
00 70	0000 bbbb		
00 71	0000 cccc		
00 72	0000 dddd	Overdrive parameter 28	(12768 - 52768)
			-20000 - 20000
# 00 73	0000 aaaa		
00 74	0000 bbbb		
00 75	0000 cccc		
00 76	0000 dddd	Overdrive parameter 29	(12768 - 52768)
			-20000 - 20000
# 00 77	0000 aaaa		
00 78	0000 bbbb		
00 79	0000 cccc		
00 7A	0000 dddd	Overdrive parameter 30	(12768 - 52768)
			-20000 - 20000
# 00 7B	0000 aaaa		
00 7C	0000 bbbb		
00 7D	0000 cccc		
00 7E	0000 dddd	Overdrive parameter 31	(12768 - 52768)
			-20000 - 20000
# 00 7F	0000 aaaa		
01 00	0000 bbbb		
01 01	0000 cccc		
01 02	0000 dddd	Overdrive parameter 32	(12768 - 52768)
			-20000 - 20000
00 00 01 03	Total Size		

* [VTW Rotary]

Offset Address		Description	
00 00	0000 000a	Rotary Type	(1 - 1)
00 01	0000 000a	Rotary Switch	(0 - 1)
# 00 02	0000 aaaa		
00 03	0000 bbbb		
00 04	0000 cccc		
00 05	0000 dddd	Rotary parameter 1	(12768 - 52768)
			-20000 - 20000
# 00 06	0000 aaaa		
00 07	0000 bbbb		
00 08	0000 cccc		
00 09	0000 dddd	Rotary parameter 2	(12768 - 52768)
			-20000 - 20000
# 00 0A	0000 aaaa		
00 0B	0000 bbbb		
00 0C	0000 cccc		
00 0D	0000 dddd	Rotary parameter 3	(12768 - 52768)
			-20000 - 20000
# 00 0E	0000 aaaa		
00 0F	0000 bbbb		
00 10	0000 cccc		
00 11	0000 dddd	Rotary parameter 4	(12768 - 52768)
			-20000 - 20000
# 00 12	0000 aaaa		
00 13	0000 bbbb		
00 14	0000 cccc		
00 15	0000 dddd	Rotary parameter 5	(12768 - 52768)
			-20000 - 20000
# 00 16	0000 aaaa		
00 17	0000 bbbb		
00 18	0000 cccc		
00 19	0000 dddd	Rotary parameter 6	(12768 - 52768)
			-20000 - 20000
# 00 1A	0000 aaaa		
00 1B	0000 bbbb		
00 1C	0000 cccc		
00 1D	0000 dddd	Rotary parameter 7	(12768 - 52768)
			-20000 - 20000
# 00 1E	0000 aaaa		
00 1F	0000 bbbb		
00 20	0000 cccc		
00 21	0000 dddd	Rotary parameter 8	(12768 - 52768)
			-20000 - 20000
# 00 22	0000 aaaa		
00 23	0000 bbbb		
00 24	0000 cccc		
00 25	0000 dddd	Rotary parameter 9	(12768 - 52768)
			-20000 - 20000

#	00 26	0000 aaaa		
	00 27	0000 bbbb		
	00 28	0000 cccc		
	00 29	0000 dddd	Rotary parameter 10	(12768 - 52768) -20000 - 20000
#	00 2A	0000 aaaa		
	00 2B	0000 bbbb		
	00 2C	0000 cccc		
	00 2D	0000 dddd	Rotary parameter 11	(12768 - 52768) -20000 - 20000
#	00 2E	0000 aaaa		
	00 2F	0000 bbbb		
	00 30	0000 cccc		
	00 31	0000 dddd	Rotary parameter 12	(12768 - 52768) -20000 - 20000
#	00 32	0000 aaaa		
	00 33	0000 bbbb		
	00 34	0000 cccc		
	00 35	0000 dddd	Rotary parameter 13	(12768 - 52768) -20000 - 20000
#	00 36	0000 aaaa		
	00 37	0000 bbbb		
	00 38	0000 cccc		
	00 39	0000 dddd	Rotary parameter 14	(12768 - 52768) -20000 - 20000
#	00 3A	0000 aaaa		
	00 3B	0000 bbbb		
	00 3C	0000 cccc		
	00 3D	0000 dddd	Rotary parameter 15	(12768 - 52768) -20000 - 20000
#	00 3E	0000 aaaa		
	00 3F	0000 bbbb		
	00 40	0000 cccc		
	00 41	0000 dddd	Rotary parameter 16	(12768 - 52768) -20000 - 20000
#	00 42	0000 aaaa		
	00 43	0000 bbbb		
	00 44	0000 cccc		
	00 45	0000 dddd	Rotary parameter 17	(12768 - 52768) -20000 - 20000
#	00 46	0000 aaaa		
	00 47	0000 bbbb		
	00 48	0000 cccc		
	00 49	0000 dddd	Rotary parameter 18	(12768 - 52768) -20000 - 20000
#	00 4A	0000 aaaa		
	00 4B	0000 bbbb		
	00 4C	0000 cccc		
	00 4D	0000 dddd	Rotary parameter 19	(12768 - 52768) -20000 - 20000
#	00 4E	0000 aaaa		
	00 4F	0000 bbbb		
	00 50	0000 cccc		
	00 51	0000 dddd	Rotary parameter 20	(12768 - 52768) -20000 - 20000
#	00 52	0000 aaaa		
	00 53	0000 bbbb		
	00 54	0000 cccc		
	00 55	0000 dddd	Rotary parameter 21	(12768 - 52768) -20000 - 20000
#	00 56	0000 aaaa		
	00 57	0000 bbbb		
	00 58	0000 cccc		
	00 59	0000 dddd	Rotary parameter 22	(12768 - 52768) -20000 - 20000
#	00 5A	0000 aaaa		
	00 5B	0000 bbbb		
	00 5C	0000 cccc		
	00 5D	0000 dddd	Rotary parameter 23	(12768 - 52768) -20000 - 20000
#	00 5E	0000 aaaa		
	00 5F	0000 bbbb		
	00 60	0000 cccc		
	00 61	0000 dddd	Rotary parameter 24	(12768 - 52768) -20000 - 20000
#	00 62	0000 aaaa		
	00 63	0000 bbbb		
	00 64	0000 cccc		
	00 65	0000 dddd	Rotary parameter 25	(12768 - 52768) -20000 - 20000
#	00 66	0000 aaaa		
	00 67	0000 bbbb		
	00 68	0000 cccc		
	00 69	0000 dddd	Rotary parameter 26	(12768 - 52768) -20000 - 20000
#	00 6A	0000 aaaa		
	00 6B	0000 bbbb		

	00 6C	0000 cccc		
	00 6D	0000 dddd	Rotary parameter 27	(12768 - 52768) -20000 - 20000
#	00 6E	0000 aaaa		
	00 6F	0000 bbbb		
	00 70	0000 cccc		
	00 71	0000 dddd	Rotary parameter 28	(12768 - 52768) -20000 - 20000
#	00 72	0000 aaaa		
	00 73	0000 bbbb		
	00 74	0000 cccc		
	00 75	0000 dddd	Rotary parameter 29	(12768 - 52768) -20000 - 20000
#	00 76	0000 aaaa		
	00 77	0000 bbbb		
	00 78	0000 cccc		
	00 79	0000 dddd	Rotary parameter 30	(12768 - 52768) -20000 - 20000
#	00 7A	0000 aaaa		
	00 7B	0000 bbbb		
	00 7C	0000 cccc		
	00 7D	0000 dddd	Rotary parameter 31	(12768 - 52768) -20000 - 20000
#	00 7E	0000 aaaa		
	00 7F	0000 bbbb		
	01 00	0000 cccc		
	01 01	0000 dddd	Rotary parameter 32	(12768 - 52768) -20000 - 20000
00 00 01 02	Total Size			

6. Supplementary Material

■Decimal and Hexadecimal Table
(An "H" is appended to the end of numbers in hexadecimal notation.)
In MIDI documentation, data values and addresses/sizes of Exclusive messages, etc. are expressed as hexadecimal values for each 7 bits. The following table shows how these correspond to decimal numbers.

D	H	D	H	D	H	D	H
0	00H	32	20H	64	40H	96	60H
1	01H	33	21H	65	41H	97	61H
2	02H	34	22H	66	42H	98	62H
3	03H	35	23H	67	43H	99	63H
4	04H	36	24H	68	44H	100	64H
5	05H	37	25H	69	45H	101	65H
6	06H	38	26H	70	46H	102	66H
7	07H	39	27H	71	47H	103	67H
8	08H	40	28H	72	48H	104	68H
9	09H	41	29H	73	49H	105	69H
10	0AH	42	2AH	74	4AH	106	6AH
11	0BH	43	2BH	75	4BH	107	6BH
12	0CH	44	2CH	76	4CH	108	6CH
13	0DH	45	2DH	77	4DH	109	6DH
14	0EH	46	2EH	78	4EH	110	6EH
15	0FH	47	2FH	79	4FH	111	6FH
16	10H	48	30H	80	50H	112	70H
17	11H	49	31H	81	51H	113	71H
18	12H	50	32H	82	52H	114	72H
19	13H	51	33H	83	53H	115	73H
20	14H	52	34H	84	54H	116	74H
21	15H	53	35H	85	55H	117	75H
22	16H	54	36H	86	56H	118	76H
23	17H	55	37H	87	57H	119	77H
24	18H	56	38H	88	58H	120	78H
25	19H	57	39H	89	59H	121	79H
26	1AH	58	3AH	90	5AH	122	7AH
27	1BH	59	3BH	91	5BH	123	7BH
28	1CH	60	3CH	92	5CH	124	7CH
29	1DH	61	3DH	93	5DH	125	7DH
30	1EH	62	3EH	94	5EH	126	7EH
31	1FH	63	3FH	95	5FH	127	7FH

D: decimal
H: hexadecimal

* Decimal values such as MIDI channel, bank select, and program change are listed as one greater than the values given in the above table.
* A 7-bit byte can express data in the range of 128 steps. For data where greater precision is required, we must use two or more bytes. For example, two hexadecimal numbers aa bbH expressing two 7-bit bytes would indicate a value of aa x 128+bb.
* In the case of values which have a +/- sign, 00H = -64, 40H = +/-0, and 7FH = +63, so that the decimal expression would be 64 less than the value given in the above chart. In the case of two types, 00 00H = -8192, 40 00H = +/-0, and 7F 7FH = +8191. For example, if aa bbH were expressed as decimal, this would be aa bbH - 40 00H = aa x 128+bb - 64 x 128.

* Data marked "Use nibbled data" is expressed in hexadecimal in 4-bit units. A value expressed as a 2-byte nibble 0a 0bH has the value of a x 16+b.

<Example1> What is the decimal expression of 5AH?
From the preceding table, 5AH = 90

<Example2> What is the decimal expression of the value 12 34H given as hexadecimal for each 7 bits?
From the preceding table, since 12H = 18 and 34H = 52
18 x 128+52 = 2356

<Example3> What is the decimal expression of the nibbled value 0A 03 09 0D?
From the preceding table, since 0AH = 10, 03H = 3, 09H = 9, 0DH = 13
((10 x 16+3) x 16+9) x 16+13 = 41885

<Example4> What is the nibbled expression of the decimal value 1258?

```
16 ) 1258
16 )   78 ...10
16 )    4 ...14
---------------
        0 ...  4
```

Since from the preceding table, 0 = 00H, 4 = 04H, 14 = 0EH, 10 = 0AH, the result is: 00 04 0E 0AH.

■Examples of Actual MIDI Messages

<Example1> 92 3E 5F
9n is the Note-on status, and n is the MIDI channel number. Since 2H = 2, 3EH = 62, and 5FH = 95, this is a Note-on message with MIDI CH = 3, note number 62 (note name is D4), and velocity 95.

<Example2> CE 49
CnH is the Program Change status, and n is the MIDI channel number. Since EH = 14 and 49H = 73, this is a Program Change message with MIDI CH = 15, program number 74.

<Example3> EA 00 28
EnH is the Pitch Bend Change status, and n is the MIDI channel number. The 2nd byte (00H = 0) is the LSB and the 3rd byte (28H = 40) is the MSB, but Pitch Bend Value is a signed number in which 40 00H (= 64 x 12+80 = 8192) is 0, so this Pitch Bend Value is 28 00H - 40 00H = 40 x 12+80 - (64 x 12+80) = 5120 - 8192 = -3072

If the Pitch Bend Sensitivity is set to 2 semitones, -8192 (00 00H) will cause the pitch to change 200 cents, so in this case -200 x (-3072) / (-8192) = -75 cents of Pitch Bend is being applied to MIDI channel 11.

<Example4> B3 64 00 65 00 06 0C 26 00 64 7F 65 7F
BnH is the Control Change status, and n is the MIDI channel number. For Control Changes, the 2nd byte is the control number, and the 3rd byte is the value. In a case in which two or more messages consecutive messages have the same status, MIDI has a provision called "running status" which allows the status byte of the second and following messages to be omitted. Thus, the above messages have the following meaning.

```
 B3  64 00       MIDI ch.4, lower byte of RPN parameter number: 00H
(B3) 65 00      (MIDI ch.4) upper byte of RPN parameter number: 00H
(B3) 06 0C      (MIDI ch.4) upper byte of parameter value: 0CH
(B3) 26 00      (MIDI ch.4) lower byte of parameter value: 00H
(B3) 64 7F      (MIDI ch.4) lower byte of RPN parameter number: 7FH
(B3) 65 7F      (MIDI ch.4) upper byte of RPN parameter number: 7FH
```

In other words, the above messages specify a value of 0C 00H for RPN parameter number 00 00H on MIDI channel 4, and then set the RPN parameter number to 7F 7FH.

RPN parameter number 00 00H is Pitch Bend Sensitivity, and the MSB of the value indicates semitone units, so a value of 0CH = 12 sets the maximum pitch bend range to +/-12 semitones (1 octave). (On GS sound generators the LSB of Pitch Bend Sensitivity is ignored, but the LSB should be transmitted anyway (with a value of 0) so that operation will be correct on any device.)

Once the parameter number has been specified for RPN or NRPN, all Data Entry messages transmitted on that same channel will be valid, so after the desired value has been transmitted, it is a good idea to set the parameter number to 7F 7FH to prevent accidents. This is the reason for the (B3) 64 7F (B3) 65 7F at the end.

It is not desirable for performance data (such as Standard MIDI File data) to contain many events with running status as given in <Example 4>. This is because if playback is halted during the song and then rewound or fast-forwarded, the sequencer may not be able to transmit the correct status, and the sound generator will then misinterpret the data. Take care to give each event its own status.

It is also necessary that the RPN or NRPN parameter number setting and the value setting be done in the proper order. On some sequencers, events occurring in the same (or consecutive) clock may be transmitted in an order different than the order in which they were received. For this reason it is a good idea to slightly skew the time of each event (about 1 tick for TPQN = 96, and about 5 ticks for TPQN = 480).

* TPQN: Ticks Per Quarter Note

■Example of an Exclusive Message and Calculating a Checksum
Roland Exclusive messages (RQ1, DT1) are transmitted with a checksum at the end (before F7) to make sure that the message was correctly received. The value of the checksum is determined by the address and data (or size) of the transmitted Exclusive message.

●How to calculate the checksum
(hexadecimal numbers are indicated by "H")
The checksum is a value derived by adding the address, size, and checksum itself and inverting the lower 7

bits.
Here' s an example of how the checksum is calculated. We will assume that in the Exclusive message we are transmitting, the address is aabbccddH and the data or size is eeffH.

aa + bb + cc + dd + ee + ff = sum
sum / 128 = quotient ... remainder
128 - remainder = checksum

<Example> Setting scene level to 74 (DT1)
According to the "Parameter Address Map", the start address of Temporary Scene is 02 00 00 00H, the offset address of Scene Common is 00 00 00H, and the address of Scene Level is 00 10H. Therefore the address is;

```
   02 00 00 00H
      00 00 00H
+)       00 10H
--------------
   02 00 00 10H
```

Level 74 of the Scene has the value of 4AH. So the system exclusive message should be sent is;

F0	41	10	00 00 00 5B	12	02 00 00 10	4A	??	F7
(1)	(2)	(3)	(4)	(5)	address	data	checksum	(6)

(1) Exclusive Status (2) ID (Roland) (3) Device ID (17)
(4) Model ID (FANTOM EX 6/7/8) (5) Command ID (DT1) (6) End of Exclusive

Then calculate the checksum.

02H + 00H + 00H + 10H + 4AH = 2 + 0 + 0 + 16 + 74 = 92 (sum)
92 (sum) / 128 = 0 (quotient) ... 92 (remainder)
checksum = 128 - 92 (remainder) = 36 = 24H

This means that F0 41 10 00 00 00 5B 12 02 00 00 10 4A 24 F7 is the message should be sent.

■ASCII Code Table
Scene Name and Tone Name, etc., of MIDI data are described the ASCII code in the table below.

D	H	Char	D	H	Char	D	H	Char
32	20H	SP	64	40H	@	96	60H	`
33	21H	!	65	41H	A	97	61H	a
34	22H	"	66	42H	B	98	62H	b
35	23H	#	67	43H	C	99	63H	c
36	24H	$	68	44H	D	100	64H	d
37	25H	%	69	45H	E	101	65H	e
38	26H	&	70	46H	F	102	66H	f
39	27H	'	71	47H	G	103	67H	g
40	28H	(	72	48H	H	104	68H	h
41	29H	)	73	49H	I	105	69H	i
42	2AH	*	74	4AH	J	106	6AH	j
43	2BH	+	75	4BH	K	107	6BH	k
44	2CH	,	76	4CH	L	108	6CH	l
45	2DH	-	77	4DH	M	109	6DH	m
46	2EH	.	78	4EH	N	110	6EH	n
47	2FH	/	79	4FH	O	111	6FH	o
48	30H	0	80	50H	P	112	70H	p
49	31H	1	81	51H	Q	113	71H	q
50	32H	2	82	52H	R	114	72H	r
51	33H	3	83	53H	S	115	73H	s
52	34H	4	84	54H	T	116	74H	t
53	35H	5	85	55H	U	117	75H	u
54	36H	6	86	56H	V	118	76H	v
55	37H	7	87	57H	W	119	77H	w
56	38H	8	88	58H	X	120	78H	x
57	39H	9	89	59H	Y	121	79H	y
58	3AH	:	90	5AH	Z	122	7AH	z
59	3BH	;	91	5BH	[	123	7BH	{
60	3CH	<	92	5CH	¥	124	7CH	|
61	3DH	=	93	5DH	]	125	7DH	}
62	3EH	>	94	5EH	^			
63	3FH	?	95	5FH	_			

D: decimal
H: hexadecimal

* "SP" is space.