YAMAHA

MUSIC SYNTHESIZER

S08

DATA LIST
DATEN-LISTE
LISTE DE DONNÉES

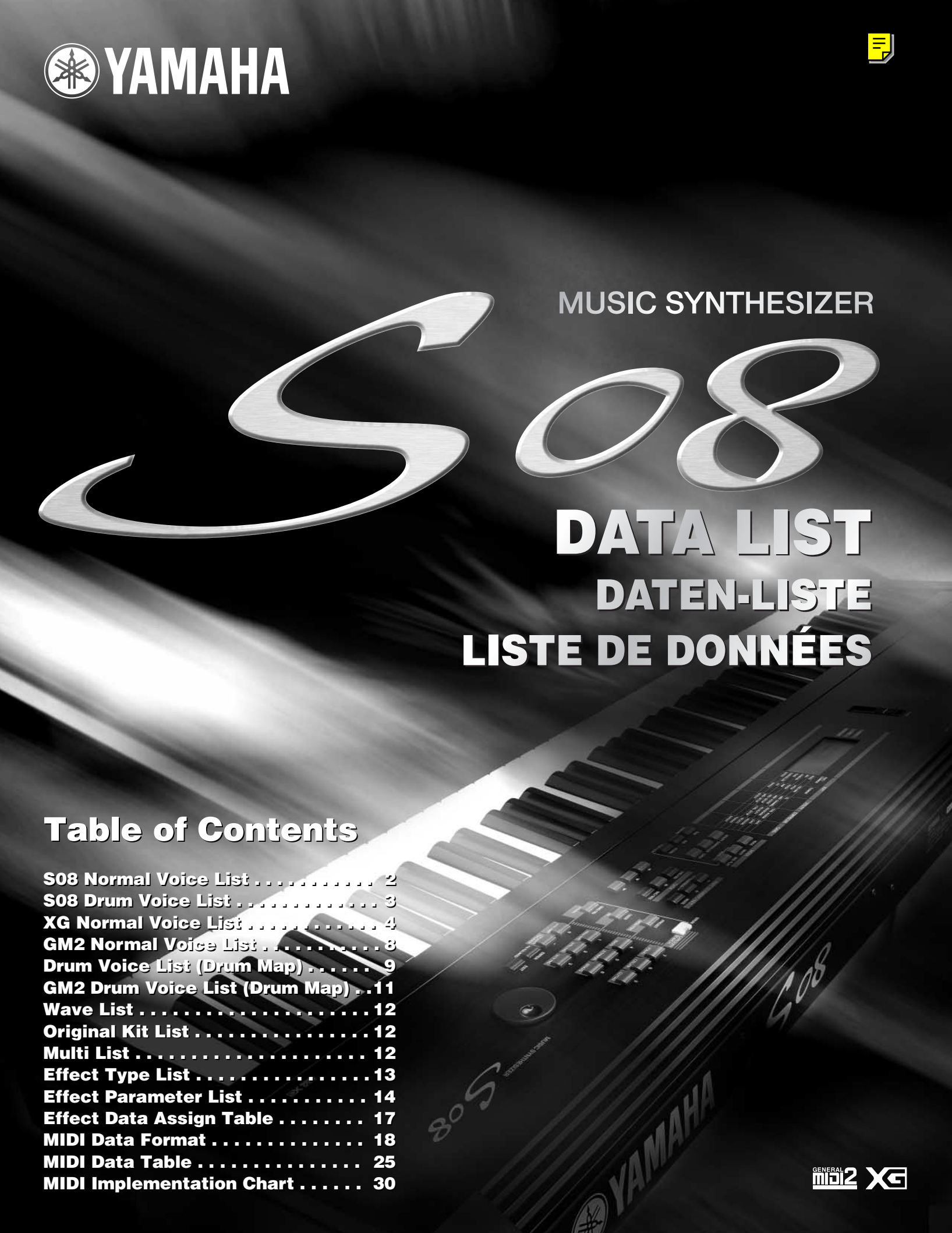

Table of Contents

S08 Normal Voice List 2
S08 Drum Voice List 3
XG Normal Voice List 4
GM2 Normal Voice List 8
Drum Voice List (Drum Map) 9
GM2 Drum Voice List (Drum Map) . . 11
Wave List 12
Original Kit List 12
Multi List 12
Effect Type List 13
Effect Parameter List 14
Effect Data Assign Table 17
MIDI Data Format 18
MIDI Data Table 25
MIDI Implementation Chart 30

GENERAL midi2 XG

S08 Normal Voice List

PRESET

Bank Select MSB=63, LSB=0

No.	Category	Voice Name	Variation Type	Element Switch			
				1	2	3	4
1	Pf	StPiano1	2Band EQ	on	on	on	on
2	Pf	StPiano2	2Band EQ	on	on	on	on
3	Pf	WarmStPf	Early Ref1	on	on	on	on
4	Pf	Dark Pf	3Band EQ	on	on		
5	Pf	Mono Pf	3Band EQ	on	on		
6	Pf	Dance Pf	2Band EQ	on	on	on	on
7	Pf	Pf+Road	Celeste1	on	on	on	
8	Pf	Pf+DxEp	Chorus1	on	on	on	
9	Pf	StPf+Str	2Band EQ	on	on	on	on
10	Pf	StPf+Pad	2Band EQ	on	on	on	on
11	Pf	Honky Pf	3Band EQ	on	on	on	on
12	Pf	Montuno	Gate Reverb	on	on	on	
13	Pf	Brite Pf	3Band EQ	on	on		
14	Pf	CP80	3Band EQ	on			
15	Pf	FlangeCP	Flanger1	on			
16	Pf	CP80+DX	Celeste1	on	on		
17	Pf	NtrlRoad	3Band EQ	on	on	on	
18	Pf	SoftRoad	3Band EQ	on			
19	Pf	Mid Road	3Band EQ	on	on	on	
20	Pf	CrstRoad	2Band EQ	on	on		
21	Pf	StereoEP	2Band EQ	on	on		
22	Pf	Pan EP	Auto Pan	on	on	on	
23	Pf	PhaserEP	Phaser1	on	on	on	
24	Pf	Wurli	2Band EQ	on			
25	Pf	AmpWurli	Amp Simulator	on			
26	Pf	AtkWurli	Celeste4	on	on		
27	Pf	Fulltine	3Band EQ	on	on		
28	Pf	TX816	Chorus1	on	on	on	on
29	Pf	ToneBars	3Band EQ	on	on		
30	Pf	Urban DX	3Band EQ	on			
31	Pf	Dream EP	Auto Pan	on	on		
32	Pf	DXEP+Pad	2Band EQ	on	on	on	
33	Pf	Dx+Road	3Band EQ	on	on	on	on
34	Pf	CP30	Phaser2	on	on		
35	Pf	Wah EP	Auto Wah	on	on	on	
36	Pf	GranHrps	Early Ref1	on	on		
37	Pf	PhazClav	Phaser2	on			
38	Pf	Wah Clav	Auto Wah	on			
39	Cp	CrystBel	Symphonic	on	on		
40	Cp	PetitBel	Chorus2	on	on	on	
41	Cp	ST Bell	Delay L.C.R	on	on	on	
42	Cp	MeloVibe	Tremolo	on			
43	Cp	EurpTubl	Echo	on			
44	Cp	Kalimba	Early Ref2	on	on		
45	Or	Rock	Rotary Speaker	on	on	on	
46	Or	Full 4	Rotary Speaker	on	on	on	on
47	Or	Feet	Rotary Speaker	on	on	on	on
48	Or	FastOrgn	Rotary Speaker	on	on	on	on
49	Or	Drive	2Band EQ	on	on		
50	Or	Warm	Celeste1	on	on	on	
51	Or	Swish	2Band EQ	on	on		
52	Or	Ballad	Celeste1	on	on	on	
53	Or	Gospel	Rotary Speaker	on	on	on	on
54	Or	Soul	Phaser2	on	on		
55	Or	TopBotom	Celeste4	on	on	on	
56	Or	Slow	Rotary Speaker	on	on	on	on
57	Or	Cool !	Room2	on			
58	Or	4 Bars	Rotary Speaker	on	on	on	on
59	Or	4Bar+Prc	Rotary Speaker	on	on	on	on
60	Or	RockPerc	Celeste4	on	on	on	on
61	Or	JazzPerc	No Effect	on	on	on	
62	Or	Dist	OverDrive	on	on	on	on
63	Or	BassWalk	Rotary Speaker	on	on	on	
64	Or	Falf	Amp Simulator	on			

No.	Category	Voice Name	Variation Type	Element Switch			
				1	2	3	4
65	Or	FuzFalf	Amp Simulator	on			
66	Or	VxOrgan	2Band EQ	on			
67	Or	Dance	2Band EQ	on	on	on	
68	Or	Pipes	2Band EQ	on	on	on	on
69	Or	Church	2Band EQ	on	on		
70	Or	Cathedrl	Hall1	on	on	on	
71	Gt	Nylon	3Band EQ	on			
72	Gt	Steel	3Band EQ	on			
73	Gt	12 Strng	2Band EQ	on	on		
74	Gt	AttackAG	Early Ref1	on	on		
75	Gt	Clean	Echo	on	on		
76	Gt	Dist	Amp Simulator	on	on	on	
77	Gt	AltPower	OverDrive	on	on	on	on
78	Gt	DistSolo	Amp Simulator	on			
79	Gt	Pwr Dist	Amp Simulator	on	on		
80	Gt	Cry-Wow	Auto Wah	on	on		
81	Ba	VelFingr	2Band EQ	on	on		
82	Ba	Amped RW	Amp Simulator	on	on		
83	Ba	FuzzPick	Amp Simulator	on			
84	Ba	VelSlap	2Band EQ	on	on		
85	Ba	SoftSlap	OverDrive	on	on		
86	Ba	HardSlap	Distortion	on	on		
87	Ba	MeloFrls	Flanger1	on	on		
88	Co	PadFrtls	Chorus3	on	on	on	
89	Co	G&B Unsn	Flanger1	on	on	on	on
90	Co	Frls&ClG	Celeste1	on	on		
91	St	Rich St	2Band EQ	on	on	on	
92	St	Stereo 1	2Band EQ	on	on		
93	St	Stereo 2	2Band EQ	on	on		
94	St	Presto	2Band EQ	on	on		
95	St	Overture	2Band EQ	on	on		
96	St	Small	2Band EQ	on	on	on	
97	St	Quartet	Early Ref2	on	on	on	on
98	St	CelloSol	Early Ref2	on			
99	St	Solo Bow	2Band EQ	on	on	on	
100	St	Pizz Oct	2Band EQ	on	on		
101	St	OrchHarp	3Band EQ	on			
102	St	Symphony	2Band EQ	on	on	on	on
103	St	Filharmo	2Band EQ	on	on	on	on
104	St	Tape Str	2Band EQ	on			
105	Pd	Oooo	2Band EQ	on	on		
106	Pd	OooAah	Chorus4	on	on	on	
107	Pd	OohLR	Flanger3	on	on		
108	Pd	OooWarm	Flanger3	on	on		
109	Pd	Mixed	No Effect	on	on		
110	Pd	5thVoice	Chorus4	on	on		
111	Pd	SwellChr	Phaser1	on	on	on	on
112	Pd	CmpChoir	2Band EQ	on			
113	Pd	Itopia	Chorus4	on			
114	Pd	Padpia	Chorus4	on			
115	Br	BriteSec	2Band EQ	on	on		
116	Br	Warm Sec	2Band EQ	on	on		
117	Br	Big Sect	2Band EQ	on	on	on	on
118	Br	SmallSec	Gate Reverb	on	on	on	on
119	Br	7th 11th	Gate Reverb	on	on	on	on
120	Br	FrenchHr	Room2	on	on	on	
121	Br	Real&Syn	2Band EQ	on	on	on	on
122	Br	Solo Tp	Early Ref1	on			
123	Br	SoloMute	Reverse Gate	on			
124	Rp	MeloSop	Delay L.R	on			
125	Rp	Alto	3Band EQ	on			
126	Rp	SoftTnr	OverDrive	on			
127	Rp	NtrHarmo	Delay L.R	on			
128	Rp	AndesPan	Delay L.R	on	on		

USER

Bank Select MSB=63, LSB=8

No.	Category	Voice Name	Variation Type	Element Switch			
				1	2	3	4
1	St	Synth St	2Band EQ	on	on		
2	St	Pro-Ana	Phaser2	on	on		
3	St	AnaStrg1	2Band EQ	on	on		
4	St	AnaStrg2	2Band EQ	on	on	on	
5	St	SynCh&St	Flanger3	on	on	on	
6	St	Rich Oct	2Band EQ	on	on	on	on
7	St	SynSymph	Gate Reverb	on	on	on	on
8	St	Solings	Symphonic	on	on		
9	Pd	Over Pad	Chorus4	on	on		
10	Pd	Soft Syn	2Band EQ	on	on		
11	Pd	Pulse	Phaser1	on	on		
12	Pd	JunePad	2Band EQ	on			
13	Pd	SoftSaw	Chorus1	on	on		
14	Pd	CSBrssPd	Delay L.R	on	on		
15	Pd	Warmer	Chorus2	on	on		
16	Pd	Unstable	Chorus4	on	on		
17	Pd	Sine Pad	Chorus4	on	on		
18	Pd	Tri Pad	Delay L.R	on	on		
19	Pd	Silent	Phaser2	on	on	on	on
20	Pd	4D-Space	Phaser2	on	on		
21	Pd	Sunbeams	Chorus3	on	on	on	
22	Pd	Expand	Chorus1	on	on	on	
23	Pd	SoliPhaz	Phaser1	on			
24	Pd	Bright	Celeste2	on	on		
25	Pd	Fantasia	3Band EQ	on	on	on	on
26	Pd	FingOrgn	Flanger1	on	on	on	on
27	Pd	OuterSpc	Chorus1	on	on	on	
28	Pd	Whisper	Flanger2	on	on	on	
29	Pd	DigiAna	Symphonic	on	on	on	
30	Pd	ObrDrone	2Band EQ	on	on	on	
31	Pd	GrandP&M	3Band EQ	on			
32	Pd	Crystal	2Band EQ	on	on		
33	Br	CS80	Symphonic	on			
34	Br	VntgAna1	Early Ref1	on	on		
35	Br	VntgAna2	Gate Reverb	on	on		
36	Br	SquSaw	2Band EQ	on	on		
37	Br	WarmSyn	2Band EQ	on	on		
38	Br	Reso Syn	Echo	on			
39	Br	Dark Syn	3Band EQ	on	on		
40	Br	Over Hrn	2Band EQ	on	on		
41	Br	J Stabs	2Band EQ	on	on		
42	Br	Pure Syn	Delay L.R	on	on	on	on
43	Br	NewRoman	Symphonic	on	on		
44	Br	Oct Syn	Echo	on	on		
45	Br	Syn Tp	Delay L.R	on			
46	Ba	EleSynBs	Phaser1	on	on		
47	Ba	CS Unisn	2Band EQ	on	on		
48	Ba	DX Hard	Flanger1	on	on		
49	Ba	Mg Funk	2Band EQ	on	on		
50	Ba	J Square	2Band EQ	on	on		
51	Ba	Min Ana	2Band EQ	on	on		
52	Ba	Min Fat	2Band EQ	on	on		
53	Ba	Wound	Chorus1	on	on		
54	Ba	Smooth	3Band EQ	on			
55	Ba	PhatRamp	3Band EQ	on	on		
56	Ba	Happy	3Band EQ	on	on		
57	Ba	Travel	Phaser2	on	on		
58	Ba	Phat50%	3Band EQ	on	on		
59	Ba	HipOct1	2Band EQ	on	on		
60	Ba	HipOct2	2Band EQ	on	on		
61	Ba	DarkHip	2Band EQ	on	on		
62	Ba	Maximum	Distortion	on	on		
63	Ba	FunkVox	2Band EQ	on	on	on	
64	Ba	BottomUp	2Band EQ	on	on		

No.	Category	Voice Name	Variation Type	Element Switch			
				1	2	3	4
65	Ld	Saw	Delay L.C.R	on			
66	Ld	DarkSync	Phaser1	on			
67	Ld	BritSync	Echo	on	on		
68	Ld	SP Sync	3Band EQ	on			
69	Ld	Porta Ld	Delay L.R	on	on		
70	Ld	Squ-Mono	Delay L.R	on	on		
71	Ld	Pulse	Phaser1	on			
72	Ld	Reminis	Echo	on			
73	Ld	Magical	Echo	on	on	on	on
74	Ld	BritReso	Chorus4	on	on		
75	Ld	LandMoon	Flanger1	on	on		
76	Ld	DigiVox	3Band EQ	on	on		
77	Ld	LowCut!	3Band EQ	on			
78	Ld	Dgtalian	3Band EQ	on	on		
79	Ld	SynHarmo	Delay L.R	on	on		
80	Ld	WarmSolo	Delay L.R	on	on		
81	Ld	DistReso	Distortion	on			
82	Me	GranBlue	Delay L.R	on	on	on	on
83	Me	Spiral	Flanger	on	on	on	on
84	Me	Phantom	Flanger3	on	on	on	on
85	Me	Emperor	Chorus4	on	on	on	on
86	Me	TimeTrvl	Flanger2	on	on	on	
87	Me	EastWind	Celeste4	on	on	on	
88	Me	Ripple	Phaser2	on	on	on	
89	Me	Maya	2Band EQ	on	on	on	
90	Me	GlassChr	Chorus4	on	on	on	on
91	Me	Electro	Phaser1	on	on		
92	Me	Jet	Phaser2	on	on		
93	Me	Aqua	Celeste4	on	on	on	on
94	Me	TinMellw	Delay L.R	on	on	on	
95	Me	Ancient	Cross Delay	on	on	on	
96	Me	Cloudy	Chorus2	on	on		
97	Sc	SynPfCmp	Delay L.R	on			
98	Sc	SynBrCmp	Early Ref1	on	on		
99	Sc	SynVcCmp	Dealy L.R	on	on		
100	Sc	SynMalet	Echo	on	on		
101	Sc	SynMrmba	Echo	on	on	on	
102	Sc	SynCrstl	Celeste1	on	on		
103	Sc	UrbnGard	Reverse Gate	on	on	on	
104	Sc	SynVox	Echo	on	on		
105	Sc	Oriental	Echo	on	on		
106	Sc	WoodyCmp	Delay L.C.R	on	on		
107	Sc	PulseSeq	Delay L.R	on	on		
108	Sc	HappyVox	Cross Delay	on	on	on	
109	Sc	FMClkOrg	2Band EQ	on	on		
110	Sc	FM Compy	Early Ref1	on	on		
111	Sc	Pianet	Flanger3	on	on		
112	Se	Big Hit	Gate Reverb	on	on	on	on
113	Se	Industry	Phaser2	on	on	on	
114	Se	Scream	Distortion	on	on		
115	Se	Spring	Flanger3	on	on	on	
116	Se	Haunted	Delay L.R	on	on	on	on
117	Se	SpceShip	Phaser1	on	on		
118	Se	Increase	Distortion	on	on		
119	Se	a Blow	Distortion	on	on		
120	Se	Fire	Distortion	on	on		
121	Dr	BassPerc	2Band EQ	on			
122	Co	PianoCmb	Gate Reverb	on	on	on	on
123	Co	EG Combo	Early Ref1	on	on	on	on
124	Co	IndiaSet	Early Ref2	on	on	on	on
125	Co	AsianSet	Early Ref2	on	on	on	on
126	Co	JamicSet	Early Ref2	on	on		
127	Co	AfrcaSet	Early Ref1	on	on	on	
128	Co	MdEstSet	Gate Reverb	on	on	on	on

S08 Drum Voice List

USER

Bank Select MSB=63, LSB=40

No.	Category	Voice Name
1	Dr	NwStndKt
2	Dr	TightKit

XG Normal Voice List

Bank Select MSB=00, LSB=Bank Number

					KSP		Stereo		Single		Slow		Fast Decay		Double Attack		Bright				Dark				Rsonant		Attack	
Instrument Group	**Pgm#**	**Bank 0 Bank Select LSB=00**	**Bank 0**	**E**	**Bank 1**	**E**	**Bank 3**	**E**	**Bank 6**	**E**	**Bank 8**	**E**	**Bank 12**	**E**	**Bank 14**	**E**	**Bank 16**	**E**	**Bank 17**	**E**	**Bank 18**	**E**	**Bank 19**	**E**	**Bank 20**	**E**	**Bank 24**	**E**
Piano	1	Acoustic Grand Piano	GrandPno	1	GrndPnoK	1															MelloGrP	1						
	2	Bright Acoustic Piano	BritePno	1	BritPnoK	1																						
	3	Electric Grand Piano	El.Grand	2	ElGrPnoK	2																						
	4	Honky-tonk Piano	HnkyTonk	2	HnkyTnkK	2																						
	5	Electric Piano 1	E.Piano1	2	El.Pno1K	1															MelloEP1	2						
	6	Electric Piano 2	E.Piano2	2	El.Pno2K	1																						
	7	Harpsichord	Harpsi.	1	Harpsi.K	1																						
	8	Clavi	Clavi	2	Clav K	1																						
Chromatic Percussion	9	Celesta	Celesta	1																								
	10	Glockenspiel	Glocken	1																								
	11	Music Box	MusicBox	2																								
	12	Vibraphone	Vibes	1	Vibes K	1																						
	13	Marimba	Marimba	1	MarimbaK	1																						
	14	Xylophone	Xylophon	1																								
	15	Tubular Bells	TubulBel	1																								
	16	Dulcimer	Dulcimer	1																								
Organ	17	Drawbar Organ 1	DrawOrgn	1																								
	18	Percussive Organ	PercOrgn	1																							70sPcOr1	2
	19	Rock Organ	RockOrgn	2																								
	20	Church Organ 1	ChrchOrg	2																								
	21	Reed Organ	ReedOrgn	1																								
	22	Accordion	Acordion	2																								
	23	Hamonica	Harmnica	1																								
	24	Tango Accordion	TangoAcd	2																								
Guitar	25	Acoustic Guitar (nylon) 1	NylonGtr	1													NylonGt2	1										
	26	Acoustic Guitar (steel)	SteelGtr	1													SteelGt2	1										
	27	Electric Guitar (jazz)	Jazz Gtr	1																	MelloGtr	1						
	28	Electric Guitar (clean)	CleanGtr	1																								
	29	Electric Guitar (muted)	Mute Gtr	1																								
	30	Overdriven Guitar	Ovrdrive	1																								
	31	Distortion Guitar	Dist.Gtr	1									DstRthmG	2														
	32	Guitar Harmonics	GtrHarmo	1																								
Bass	33	Acoustic Bass	Aco.Bass	1																								
	34	Electric Bass (finger)	FngrBass	1																	FingrDrk	2						
	35	Electric Bass (pick)	PickBass	1																								
	36	Fretless Bass	Fretless	1																								
	37	Slap Bass 1	SlapBas1	1																								
	38	Slap Bass 2	SlapBas2	1																								
	39	Synth Bass 1	SynBass1	1																	SynBa1Dk	1			FastResB	1	AcidBass	1
	40	Synth Bass 2	SynBass2	2					MelloSBa	1			Seq Bass	2							ClkSynBa	2	SynBa2Dk	1				
Strings	41	Violin	Violin	1							Slow Vln	1																
	42	Viola	Viola	1																								
	43	Cello	Cello	1																								
	44	Contrabass	Contrabs	1																								
	45	Tremolo Strings	Trem.Str	1							SlwTrStr	1																
	46	Pizzicato Strings	Pizz.Str	1																								
	47	Orchestral Harp	Harp	1																								
	48	Timpani	Timpani	1																								
Ensemble	49	String Ensemble 1	Strings1	1			S.Strngs	2			Slow Str	1															Arco Str	2
	50	String Ensemble 2	Strings2	1			S.SlwStr	2			LegatoSt	2																
	51	Synth Strings 1	Syn Str1	2																								
	52	Synth Strings 2	Syn Str2	2																								
	53	Choir Aahs	ChoirAah	1			S.Choir	2									Ch.Aahs2	2										
	54	Voice Oohs	VoiceOoh	1																								
	55	Synth Voice	SynVoice	1																								
	56	Orchestra Hit	Orch.Hit	2																								
Brass	57	Trumpet	Trumpet	1													Trumpet2	1	BriteTrp	2								
	58	Trombone	Trombone	1																	Trmbone2	2						
	59	Tuba	Tuba	1													Tuba 2	1										
	60	Muted Trumpet	Mute Trp	1																								
	61	French Horn	Fr. Horn	2					FrHrSolo	1																		
	62	Brass Section 1	BrssSect	1																								
	63	Synth Brass 1	SynBrss1	2									Quack Br	2											RezSynBr	2	PolyBrss	2
	64	Synth Brass 2	SynBrss2	1																	Soft Brs	2						
Reed	65	Soprano Sax	SprnoSax	1																								
	66	Alto Sax	Alto Sax	1																								
	67	Tenor Sax	TenorSax	1																								
	68	Baritone Sax	Bari.Sax	1																								
	69	Oboe	Oboe	2																								
	70	English Horn	Eng.Horn	1																								
	71	Bassoon	Bassoon	1																								
	72	Clarinet	Clarinet	1																								
Pipe	73	Piccolo	Piccolo	1																								
	74	Flute	Flute	1																								
	75	Recorder	Recorder	1																								
	76	Pan Flute	PanFlute	1																								
	77	Blown Bottle	Bottle	2																								
	78	Shakuhachi	Shakhchi	2																								
	79	Whistle	Whistle	1																								
	80	Ocarina	Ocarina	1																								
Synth Lead	81	Lead 1 (square)	SquareLd	2					SquarLd2	1	LMSquare	2									Hollow	1	Shroud	2				
	82	Lead 2 (sawtooth)	Saw Ld	2					Saw Ld 2	1	ThickSaw	2									Dyna Saw	1	Digi Saw	2	Big Lead	2	HeavySyn	2
	83	Lead 3 (calliope)	CaliopLd	2																								
	84	Lead 4 (chiff)	Chiff Ld	2																								
	85	Lead 5 (charang)	CharanLd	2																								
	86	Lead 6 (voice)	Voice Ld	2																							SynthAah	2
	87	Lead 7 (fifths)	Fifth Ld	2																								
	88	Lead 8 (bass+lead)	Bass&Ld	2													Big&Low	2										
Synth Pad	89	Pad 1 (new age)	NewAgePd	2																								
	90	Pad 2 (warm)	Warm Pad	2													ThickPad	2	Soft Pad	2	Sine Pad	2						
	91	Pad 3 (polysynth)	PolySyPd	2																								
	92	Pad 4 (choir)	ChoirPad	2																								
	93	Pad 5 (bowed)	BowedPad	2																								
	94	Pad 6 (metallic)	MetalPad	2																								
	95	Pad 7 (halo)	Halo Pad	2																								
	96	Pad 8 (sweep)	SweepPad	2																					Shwimmer	2		
Synth Effects	97	FX 1 (rain)	Rain	2																								
	98	FX 2 (soundtrack)	SoundTrk	2																								
	99	FX 3 (crystal)	Crystal	2									SynDrCmp	2	Popcorn	2					TinyBell	2						
	100	FX 4 (atmosphere)	Atmosphr	2																	WarmAtms	2	HollwRls	2				
	101	FX 5 (brightness)	Bright	2																								
	102	FX 6 (goblins)	Goblins	2																								
	103	FX 7 (echoes)	Echoes	2							Echoes 2	2			Echo Pan	2												
	104	FX 8 (sci-fi)	Sci-Fi	2																								
Ethnic	105	Sitar	Sitar	1																								
	106	Banjo	Banjo	1																								
	107	Shamisen	Shamisen	1																								
	108	Koto	Koto	1																								
	109	Kalimba	Kalimba	1																								
	110	Bagpipe	Bagpipe	2																								
	111	Fiddle	Fiddle	1																								
	112	Shanai	Shanai	1																								
Percussive	113	Tinkle Bell	TnklBell	2																								
	114	Agogo	Agogo	2																								
	115	Steel Drums	SteelDrm	2																								
	116	Woodblock	Woodblok	1																								
	117	Taiko Drum	TaikoDrm	1																								
	118	Melodic Tom 1	MelodTom	2																								
	119	Synth Drum	Syn Drum	1																								
	120	Reverse Cymbal	RevCymbl	1																								
Sound Effects	121	Guitar Fret Noise	FretNoiz	2																								
	122	Breath Noise	BrthNoiz	2																								
	123	Seashore	Seashore	2																								
	124	Bird Tweet	Tweet	2																								
	125	Telephone Ring	Telphone	1																								
	126	Helicopter	Helicptr	1																								
	127	Applause	Applause	1																								
	128	Gunshot	Gunshot	1																								

: Same as Bank 0 : No sound E : Element number

					Release		Rezo Sweep		Muted		Detune 1		Detune 2		Detune 3		Octave 1		Octave 2		5th 1		5th 2		Bend		Tutti	
Instrument Group	**Pgm#**	**Bank 0 Bank Select LSB=00**	**Bank 0**	**E**	**Bank 25**	**E**	**Bank 27**	**E**	**Bank 28**	**E**	**Bank 32**	**E**	**Bank 33**	**E**	**Bank 34**	**E**	**Bank 35**	**E**	**Bank 36**	**E**	**Bank 37**	**E**	**Bank 38**	**E**	**Bank 39**	**E**	**Bank 40**	**E**
Piano	1	Acoustic Grand Piano	GrandPno	1																							PianoStr	2
	2	Bright Acoustic Piano	BritePno	1																								
	3	Electric Grand Piano	El.Grand	2							Det.CP80	2															LayerCP1	2
	4	Honky-tonk Piano	HnkyTonk	2																								
	5	Electric Piano 1	E.Piano1	2							Chor.EP1	2															HardEl.P	2
	6	Electric Piano 2	E.Piano2	2							Chor.EP2	2	DX Hard	2	DXLegend	2											DX Phase	2
	7	Harpsichord	Harpsi.	1	Harpsi.2	2											Harpsi.3	2										
	8	Clavi	Clavi.	2			ClaviWah	2																				
Chromatic Percussion	9	Celesta	Celesta	1																								
	10	Glockenspiel	Glocken	1																								
	11	Music Box	MusicBox	2																								
	12	Vibraphone	Vibes	1																								
	13	Marimba	Marimba	1																								
	14	Xylophone	Xylophon	1																								
	15	Tubular Bells	TubulBel	1																								
	16	Dulcimer	Dulcimer	1													Dulcimr2	2										
Organ	17	Drawbar Organ 1	DrawOrgn	1							DetDrwOr	2	60sDrOr1	2	60sDrOr2	2	70sDrOr1	2	DrawOrg2	2	60sDrOr3	2	Even Bar	2			16+2"2/3	2
	18	Percussive Organ	PercOrgn	1							DetPrcOr	2	Lite Org	2							PercOrg2	2						
	19	Rock Organ	RockOrgn	2																								
	20	Church Organ 1	ChrchOrg	2							ChurOrg3	2					ChurOrg2	2									NotreDam	2
	21	Reed Organ	ReedOrgn	1																							Puff Org	2
	22	Accordion	Acordion	2							AccordIt	2																
	23	Hamonica	Harmnica	1							Harmo. 2	2																
	24	Tango Accordion	TangoAcd	2																								
Guitar	25	Acoustic Guitar (nylon) 1	NylonGtr	1	NylonGt3	2																						
	26	Acoustic Guitar (steel)	SteelGtr	1													12StrGtr	2									Nyln&Stl	2
	27	Electric Guitar (jazz)	Jazz Gtr	1							Jazz Amp	2																
	28	Electric Guitar (clean)	CleanGtr	1							ChorusGt	2																
	29	Electric Guitar (muted)	Mute.Gtr	1																							FunkGtr1	2
	30	Overdriven Guitar	Ovrdrive	1																								
	31	Distortion Guitar	Dist.Gtr	1																							FeedbkGt	2
	32	Guitar Harmonics	GtrHarmo	1																								
Bass	33	Acoustic Bass	Aco.Bass	1																							JazzRthm	2
	34	Electric Bass (finger)	FngrBass	1			FlangeBa	2																			Ba&DstEG	2
	35	Electric Bass (pick)	PickBass	1					MutePkBa	1																		
	36	Fretless Bass	Fretless	1							Fretles2	2	Fretles3	2	Fretles4	2												
	37	Slap Bass 1	SlapBas1	1			ResoSlap	1			PunchThm	2																
	38	Slap Bass 2	SlapBas2	1																								
	39	Synth Bass 1	SynBass1	1													Clv Bass	2									TechnoBa	2
	40	Synth Bass 2	SynBass2	2							SmthSynB	2															ModulrBa	2
Strings	41	Violin	Violin	1																								
	42	Viola	Viola	1																								
	43	Cello	Cello	1																								
	44	Contrabass	Contrabs	1																								
	45	Tremolo Strings	Trem.Str	1																							Susp.Str	2
	46	Pizzicato Strings	Pizz.Str	1																								
	47	Orchestral Harp	Harp	1																							YangChin	2
	48	Timpani	Timpani	1																								
Ensemble	49	String Ensemble 1	Strings1	1													60sStrng	2									Orchestr	2
	50	String Ensemble 2	Strings2	1																							Warm Str	2
	51	Synth Strings 1	Syn.Str1	2			Reso Str	2									Syn Str3	2										
	52	Synth Strings 2	Syn.Str2	2																								
	53	Choir Aahs	ChoirAah	1							MelChoir	2															ChoirStr	2
	54	Voice Oohs	VoiceOoh	1																								
	55	Synth Voice	SynVoice	1																							SyVoice2	2
	56	Orchestra Hit	Orch.Hit	2													OrchHit2	2										
Brass	57	Trumpet	Trumpet	1							Warm Trp	2																
	58	Trombone	Trombone	1																								
	59	Tuba	Tuba	1																								
	60	Muted Trumpet	Mute.Trp	1																								
	61	French Horn	Fr. Horn	2							FrHorn 2	1									HornOrch	2						
	62	Brass Section 1	BrasSect	1													Tp&TbSec	2									BrssSec2	2
	63	Synth Brass 1	SynBrss1	2			SynBrss3	2			JumpBrss	2																
	64	Synth Brass 2	SynBrss2	1																							SynBrss4	2
Reed	65	Soprano Sax	SprnoSax	1																								
	66	Alto Sax	Alto Sax	1																							Sax Sect	2
	67	Tenor Sax	TenorSax	1																							BrthTnSx	2
	68	Baritone Sax	Bari.Sax	1																								
	69	Oboe	Oboe	2																								
	70	English Horn	Eng.Horn	1																								
	71	Bassoon	Bassoon	1																								
	72	Clarinet	Clarinet	1																								
Pipe	73	Piccolo	Piccolo	1																								
	74	Flute	Flute	1																								
	75	Recorder	Recorder	1																								
	76	Pan Flute	PanFlute	1																								
	77	Blown Bottle	Bottle	2																								
	78	Shakuhachi	Shakhchi	2																								
	79	Whistle	Whistle	1																								
	80	Ocarina	Ocarina	1																								
Synth Lead	81	Lead 1 (square)	SquareLd	2																								
	82	Lead 2 (sawtooth)	Saw Ld	2	WaspySyn	2					DoublSaw	2															PulseSaw	2
	83	Lead 3 (calliope)	CaliopLd	2																								
	84	Lead 4 (chiff)	Chiff Ld	2																								
	85	Lead 5 (charang)	CharanLd	2																								
	86	Lead 6 (voice)	Voice Ld	2																								
	87	Lead 7 (fifths)	Fifth Ld	2													Big Five	2										
	88	Lead 8 (bass+lead)	Bass&Ld	2																								
Synth Pad	89	Pad 1 (new age)	NewAgePd	2																								
	90	Pad 2 (warm)	Warm Pad	2																								
	91	Pad 3 (polysynth)	PolySyPd	2																								
	92	Pad 4 (choir)	ChoirPad	2																								
	93	Pad 5 (bowed)	BowedPad	2																								
	94	Pad 6 (metallic)	MetalPad	2																								
	95	Pad 7 (halo)	Halo Pad	2																								
	96	Pad 8 (sweep)	SweepPad	2			Converge	2																				
Synth Effects	97	FX 1 (rain)	Rain	2																								
	98	FX 2 (soundtrack)	SoundTrk	2			Prologue	2																				
	99	FX 3 (crystal)	Crystal	2													RndGlock	2									GlockChi	2
	100	FX 4 (atmosphere)	Atmosphr	2																							Nylon EP	2
	101	FX 5 (brightness)	Bright	2																								
	102	FX 6 (goblins)	Goblins	2																								
	103	FX 7 (echoes)	Echoes	2																								
	104	FX 8 (sci-fi)	Sci-Fi	2																								
Ethnic	105	Sitar	Sitar	1							DetSitar	2					Sitar 2	2										
	106	Banjo	Banjo	1					MuteBnjo	1																		
	107	Shamisen	Shamisen	1																								
	108	Koto	Koto	1																								
	109	Kalimba	Kalimba	1																								
	110	Bagpipe	Bagpipe	2																								
	111	Fiddle	Fiddle	1																								
	112	Shanai	Shanai	1																								
Percussive	113	Tinkle Bell	TnklBell	2																								
	114	Agogo	Agogo	2																								
	115	Steel Drums	SteelDrm	2																								
	116	Woodblock	Woodblok	1																								
	117	Taiko Drum	TaikoDrm	1																								
	118	Melodic Tom 1	MelodTom	2																								
	119	Synth Drum	Syn Drum	1																								
	120	Reverse Cymbal	RevCymbl	1																								
Sound Effects	121	Guitar Fret Noise	FretNoiz	2																								
	122	Breath Noise	BrthNoiz	2																								
	123	Seashore	Seashore	2																								
	124	Bird Tweet	Tweet	2																								
	125	Telephone Ring	Telphone	1																								
	126	Helicopter	Helicptr	1																								
	127	Applause	Applause	1																								
	128	Gunshot	Gunshot	1																								

: Same as Bank 0 : No sound E : Element number

											Velo-Switch		Velo-Xfade		other wave																			
Instrument Group	**Pgm#**	**Bank 0 Bank Select LSB=00**	**Bank 0**	**E**	**Bank 41**	**E**	**Bank 42**	**E**	**Bank 43**	**E**	**Bank 45**	**E**	**Bank 64**	**E**	**Bank 65**	**E**	**Bank 66**	**E**	**Bank 67**	**E**	**Bank 68**	**E**	**Bank 69**	**E**	**Bank 70**	**E**	**Bank 71**	**E**
Piano	1	Acoustic Grand Piano	GrandPno	1	Dream	2																						
	2	Bright Acoustic Piano	BritePno	1																								
	3	Electric Grand Piano	El.Grand	2	LayerCP2	2																						
	4	Honky-tonk Piano	HnkyTonk	2																								
	5	Electric Piano 1	E.Piano1	2							VX El.P1	2	60sEl.P1	1														
	6	Electric Piano 2	E.Piano2	2	DX+Analg	2	DXKotoEP	2			VX El.P2	2																
	7	Harpsichord	Harpsi.	1																								
	8	Clavi	Clavi.	2									PulseClv	1	PierceCl	2												
Chromatic Percussion	9	Celesta	Celesta	1																								
	10	Glockenspiel	Glocken	1																								
	11	Music Box	MusicBox	2									Orgel	2														
	12	Vibraphone	Vibes	1							HardVibe	2																
	13	Marimba	Marimba	1									SineMrmb	2														
	14	Xylophone	Xylophon	1																								
	15	Tubular Bells	TubulBel	1																								
	16	Dulcimer	Dulcimer	1																								
Organ	17	Drawbar Organ 1	DrawOrgn	1									Organ Ba	1	70sDrOr2	2	CheezOrg	2	DrawOrg3	2								
	18	Percussive Organ	PercOrgn	1																								
	19	Rock Organ	RockOrgn	2									RotaryOr	2	SloRotar	2	FstRotar	2										
	20	Church Organ 1	ChrchOrg	2									OrgFlute	2	TrmOrgFl	2												
	21	Reed Organ	ReedOrgn	1																								
	22	Accordion	Acordion	2																								
	23	Hamonica	Harmnica	1																								
	24	Tango Accordion	TangoAcd	2									TngoAcd2	2														
Guitar	25	Acoustic Guitar (nylon) 1	NylonGtr	1					VelGtHrm	2																		
	26	Acoustic Guitar (steel)	SteelGtr	1	Stl&Body	2																						
	27	Electric Guitar (jazz)	Jazz Gtr	1																								
	28	Electric Guitar (clean)	CleanGtr	1											MidT.Gtr	1												
	29	Electric Guitar (muted)	Mute.Gtr	1	MuteStlG	2			FunkGtr2	2	Jazz Man	1																
	30	Overdriven Guitar	Ovrdrive	1					Gt.Pinch	2																		
	31	Distortion Guitar	Dist.Gtr	1	FeedbkG2	2																						
	32	Guitar Harmonics	GtrHarmo	1											GtFeedbk	1	GtrHrmo2	1										
Bass	33	Acoustic Bass	Aco.Bass	1							VXUprght	2																
	34	Electric Bass (finger)	FngrBass	1					FngrSlap	2	FngBass2	2			Mod.Bass	2												
	35	Electric Bass (pick)	PickBass	1																								
	36	Fretless Bass	Fretless	1																								
	37	Slap Bass 1	SlapBas1	1																								
	38	Slap Bass 2	SlapBas2	1					VeloSlap	2																		
	39	Synth Bass 1	SynBass1	1									Orbiter	2	Sqr.Bass	1	RubberBa	2										
	40	Synth Bass 2	SynBass2	2	DX Bass	2							X WireBa	2	AtkPulse	1												
Strings	41	Violin	Violin	1																								
	42	Viola	Viola	1																								
	43	Cello	Cello	1																								
	44	Contrabass	Contrabs	1																								
	45	Tremolo Strings	Trem.Str	1																								
	46	Pizzicato Strings	Pizz.Str	1																								
	47	Orchestral Harp	Harp	1																								
	48	Timpani	Timpani	1																								
Ensemble	49	String Ensemble 1	Strings1	1	Orchstr2	2	TremOrch	2			Velo.Str	2																
	50	String Ensemble 2	Strings2	1	Kingdom	2							70s Str	1	Strings3	1												
	51	Synth Strings 1	Syn.Str1	2									Syn Str4	2	Syn Str5	2												
	52	Synth Strings 2	Syn.Str2	2																								
	53	Choir Aahs	ChoirAah	1																								
	54	Voice Oohs	VoiceOoh	1																								
	55	Synth Voice	SynVoice	1	Choral	2							AnaVoice	1														
	56	Orchestra Hit	Orch.Hit	2									Impact	2									BassHit+	4	6th Hit	1		
Brass	57	Trumpet	Trumpet	1											DrkTpSft	1												
	58	Trombone	Trombone	1									BrhgtTrb	1														
	59	Tuba	Tuba	1																								
	60	Muted Trumpet	Mute.Trp	1									MuteTrp2	1														
	61	French Horn	Fr. Horn	2																								
	62	Brass Section 1	BrasSect	1	Hi Brass	2	MelloBrs	2																				
	63	Synth Brass 1	SynBrss1	2							AnVelBr1	2	AnaBrss1	2														
	64	Synth Brass 2	SynBrss2	1	ChoirBrs	2					AnVelBr2	2	AnaBrss2	2														
Reed	65	Soprano Sax	SprnoSax	1																								
	66	Alto Sax	Alto Sax	1					HyprAlto	2																		
	67	Tenor Sax	TenorSax	1	SoftTenr	2							TnrSax 2	1														
	68	Baritone Sax	Bari.Sax	1																								
	69	Oboe	Oboe	2																								
	70	English Horn	Eng.Horn	1																								
	71	Bassoon	Bassoon	1																								
	72	Clarinet	Clarinet	1																								
Pipe	73	Piccolo	Piccolo	1																								
	74	Flute	Flute	1																								
	75	Recorder	Recorder	1																								
	76	Pan Flute	PanFlute	1																								
	77	Blown Bottle	Bottle	2																								
	78	Shakuhachi	Shakhchi	2																								
	79	Whistle	Whistle	1																								
	80	Ocarina	Ocarina	1																								
Synth Lead	81	Lead 1 (square)	SquareLd	2									Mellow	2	SoloSine	2	SineLead	1										
	82	Lead 2 (sawtooth)	Saw Ld	2	Dr. Lead	2					VeloLead	2																
	83	Lead 3 (calliope)	CaliopLd	2											PureLead	2												
	84	Lead 4 (chiff)	Chiff Ld	2									Rubby	2														
	85	Lead 5 (charang)	CharanLd	2									DistLead	2	WireLead	2												
	86	Lead 6 (voice)	Voice Ld	2									Vox Lead	2														
	87	Lead 7 (fifths)	Fifth Ld	2																								
	88	Lead 8 (bass+lead)	Bass&Ld	2									Fat&Prky	2	Soft Wrl	2												
Synth Pad	89	Pad 1 (new age)	NewAgePd	2									Fantasy	2														
	90	Pad 2 (warm)	Warm Pad	2									Horn Pad	2	RotarStr	2												
	91	Pad 3 (polysynth)	PolySyPd	2									PolyPd80	2	ClickPad	2	Ana. Pad	2	SquarPad	2								
	92	Pad 4 (choir)	ChoirPad	2									Heaven	2			Itopia	2	CC Pad	2								
	93	Pad 5 (bowed)	BowedPad	2									Glacier	2	GlassPad	2												
	94	Pad 6 (metallic)	MetalPad	2									Tine Pad	2	Pan Pad	2												
	95	Pad 7 (halo)	Halo Pad	2																								
	96	Pad 8 (sweep)	SweepPad	2									PolarPad	2			Celstial	2										
Synth Effects	97	FX 1 (rain)	Rain	2							ClaviPad	2	HrmoRain	2	AfrcnWnd	2	Carib	2										
	98	FX 2 (soundtrack)	SoundTrk	2									Ancestrl	2														
	99	FX 3 (crystal)	Crystal	2	ClearBel	2	ChorBell	2					SynMalet	1	SftCryst	2	LoudGlok	2	ChrstBel	2	VibeBell	2	DigiBell	2	AirBells	2	BellHarp	2
	100	FX 4 (atmosphere)	Atmosphr	2									NylnHarp	2	Harp Vox	2	AtmosPad	2	Planet	2								
	101	FX 5 (brightness)	Bright	2									FantaBel	2														
	102	FX 6 (goblins)	Goblins	2									GobSynth	2	Creeper	2	Ring Pad	2	Ritual	2	ToHeaven	2			Night	2	Glisten	2
	103	FX 7 (echoes)	Echoes	2									EchoBell	2	Big Pan	2	SynPiano	2	Creation	2	StarDust	2	Reso&Pan	2				
	104	FX 8 (sci-fi)	Sci-Fi	2									Starz	2														
Ethnic	105	Sitar	Sitar	1																								
	106	Banjo	Banjo	1																								
	107	Shamisen	Shamisen	1																								
	108	Koto	Koto	1																								
	109	Kalimba	Kalimba	1																								
	110	Bagpipe	Bagpipe	2																								
	111	Fiddle	Fiddle	1																								
	112	Shanai	Shanai	1									Shanai 2	1														
Percussive	113	Tinkle Bell	TnklBell	2																								
	114	Agogo	Agogo	2																								
	115	Steel Drums	SteelDrm	2																								
	116	Woodblock	Woodblok	1																								
	117	Taiko Drum	TaikoDrm	1																								
	118	Melodic Tom 1	MelodTom	2									Mel Tom2	1	Real Tom	2	Rock Tom	2										
	119	Synth Drum	Syn Drum	1									Ana Tom	1	ElecPerc	2												
	120	Reverse Cymbal	RevCymbl	1																								
Sound Effects	121	Guitar Fret Noise	FretNoiz	2																								
	122	Breath Noise	BrthNoiz	2																								
	123	Seashore	Seashore	2																								
	124	Bird Tweet	Tweet	2																								
	125	Telephone Ring	Telphone	1																								
	126	Helicopter	Helicptr	1																								
	127	Applause	Applause	1																								
	128	Gunshot	Gunshot	1																								

: Same as Bank 0 : No sound E : Element number

Bank Select MSB=64

Instrument Group	Pgm#	Bank 0 Bank Select LSB=00	Bank 0	E	Bank 72	E	Bank 96	E	Bank 97	E	Bank 98	E	Bank 99	E	Bank 100	E	Bank 101	E
Piano	1	Acoustic Grand Piano	GrandPno	1														
	2	Bright Acoustic Piano	BritePno	1														
	3	Electric Grand Piano	El.Grand	2														
	4	Honky-tonk Piano	HnkyTonk	2														
	5	Electric Piano 1	E.Piano1	2														
	6	Electric Piano 2	E.Piano2	2														
	7	Harpsichord	Harpsi.	1														
	8	Clavi	Clavi.	2														
Chromatic Percussion	9	Celesta	Celesta	1														
	10	Glockenspiel	Glocken	1														
	11	Music Box	MusicBox	2														
	12	Vibraphone	Vibes	1														
	13	Marimba	Marimba	1					Balimba	2	Log Drum	2						
	14	Xylophone	Xylophon	1														
	15	Tubular Bells	TubulBel	1			ChrchBel	2	Carillon	2								
	16	Dulcimer	Dulcimer	1			Cimbalom	2	Santur	2								
Organ	17	Drawbar Organ 1	DrawOrgn	1														
	18	Percussive Organ	PercOrgn	1														
	19	Rock Organ	RockOrgn	2														
	20	Church Organ 1	ChrchOrg	2														
	21	Reed Organ	ReedOrgn	1														
	22	Accordion	Acordion	2														
	23	Hamonica	Harmnica	1														
	24	Tango Accordion	TangoAcd	2														
Guitar	25	Acoustic Guitar (nylon) 1	NylonGtr	1			Ukulele	1										
	26	Acoustic Guitar (steel)	SteelGtr	1			Mandolin	2										
	27	Electric Guitar (jazz)	Jazz Gtr	1			PdlSteel	1										
	28	Electric Guitar (clean)	CleanGtr	1														
	29	Electric Guitar (muted)	Mute.Gtr	1														
	30	Overdriven Guitar	Ovrdrive	1														
	31	Distortion Guitar	Dist.Gtr	1														
	32	Guitar Harmonics	GtrHarmo	1														
Bass	33	Acoustic Bass	Aco.Bass	1														
	34	Electric Bass (finger)	FngrBass	1														
	35	Electric Bass (pick)	PickBass	1														
	36	Fretless Bass	Fretless	1			SynFretl	2	SmthFrtl	2								
	37	Slap Bass 1	SlapBas1	1														
	38	Slap Bass 2	SlapBas2	1														
	39	Synth Bass 1	SynBass1	1			Hammer	2										
	40	Synth Bass 2	SynBass2	2														
Strings	41	Violin	Violin	1														
	42	Viola	Viola	1														
	43	Cello	Cello	1														
	44	Contrabass	Contrabs	1														
	45	Tremolo Strings	Trem.Str	1														
	46	Pizzicato Strings	Pizz.Str	1														
	47	Orchestral Harp	Harp	1														
	48	Timpani	Timpani	1														
Ensemble	49	String Ensemble 1	Strings1	1														
	50	String Ensemble 2	Strings2	1														
	51	Synth Strings 1	Syn.Str1	2														
	52	Synth Strings 2	Syn.Str2	2														
	53	Choir Aahs	ChoirAah	1														
	54	Voice Oohs	VoiceOoh	1			VoiceHmn	1										
	55	Synth Voice	SynVoice	1														
	56	Orchestra Hit	Orch.Hit	2	Euro Hit	3												
Brass	57	Trumpet	Trumpet	1														
	58	Trombone	Trombone	1														
	59	Tuba	Tuba	1														
	60	Muted Trumpet	Mute.Trp	1														
	61	French Horn	Fr. Horn	2														
	62	Brass Section 1	BrasSect	1														
	63	Synth Brass 1	SynBrss1	2														
	64	Synth Brass 2	SynBrss2	1														
Reed	65	Soprano Sax	SprnoSax	1														
	66	Alto Sax	Alto Sax	1														
	67	Tenor Sax	TenorSax	1														
	68	Baritone Sax	Bari.Sax	1														
	69	Oboe	Oboe	2														
	70	English Horn	Eng.Horn	1														
	71	Bassoon	Bassoon	1														
	72	Clarinet	Clarinet	1														
Pipe	73	Piccolo	Piccolo	1														
	74	Flute	Flute	1														
	75	Recorder	Recorder	1														
	76	Pan Flute	PanFlute	1														
	77	Blown Bottle	Bottle	2														
	78	Shakuhachi	Shakhchi	2														
	79	Whistle	Whistle	1														
	80	Ocarina	Ocarina	1														
Synth Lead	81	Lead 1 (square)	SquareLd	2														
	82	Lead 2 (sawtooth)	Saw Ld	2			Seq Ana.	2										
	83	Lead 3 (calliope)	CaliopLd	2														
	84	Lead 4 (chiff)	Chiff Ld	2														
	85	Lead 5 (charang)	CharanLd	2														
	86	Lead 6 (voice)	Voice Ld	2														
	87	Lead 7 (fifths)	Fifth Ld	2														
	88	Lead 8 (bass+lead)	Bass&Ld	2														
Synth Pad	89	Pad 1 (new age)	NewAgePd	2														
	90	Pad 2 (warm)	Warm Pad	2														
	91	Pad 3 (polysynth)	PolySyPd	2														
	92	Pad 4 (choir)	ChoirPad	2														
	93	Pad 5 (bowed)	BowedPad	2														
	94	Pad 6 (metallic)	MetalPad	2														
	95	Pad 7 (halo)	Halo Pad	2														
	96	Pad 8 (sweep)	SweepPad	2														
Synth Effects	97	FX 1 (rain)	Rain	2														
	98	FX 2 (soundtrack)	SoundTrk	2														
	99	FX 3 (crystal)	Crystal	2	GameImba	2												
	100	FX 4 (atmosphere)	Atmosphr	2														
	101	FX 5 (brightness)	Bright	2			Smokey	2										
	102	FX 6 (goblins)	Goblins	2			BelChoir	2										
	103	FX 7 (echoes)	Echoes	2														
	104	FX 8 (sci-fi)	Sci-Fi	2														
Ethnic	105	Sitar	Sitar	1			Tambra	2	Tamboura	2								
	106	Banjo	Banjo	1			Rabab	2	Gopichnt	2	Oud	2						
	107	Shamisen	Shamisen	1														
	108	Koto	Koto	1			Taisho-k	2	Kanoon	2								
	109	Kalimba	Kalimba	1														
	110	Bagpipe	Bagpipe	2														
	111	Fiddle	Fiddle	1														
	112	Shanai	Shanai	1			Pungi	1	Hichriki	2								
Percussive	113	Tinkle Bell	TnklBell	2			Bonang	2	Altair	2	Gamelan	2	S.Gamlan	2	Rama Cym	2	AsianBel	2
	114	Agogo	Agogo	2														
	115	Steel Drums	SteelDrm	2					GlasPerc	2	ThaiBell	2						
	116	Woodblock	Woodblok	1			Castanet	1										
	117	Taiko Drum	TaikoDrm	1			Gr.Cassa	1										
	118	Melodic Tom 1	MelodTom	2														
	119	Synth Drum	Syn Drum	1														
	120	Reverse Cymbal	RevCymbl	1														
Sound Effects	121	Guitar Fret Noise	FretNoiz	2														
	122	Breath Noise	BrthNoiz	2														
	123	Seashore	Seashore	2														
	124	Bird Tweet	Tweet	2														
	125	Telephone Ring	Telphone	1														
	126	Helicopter	Helicptr	1														
	127	Applause	Applause	1														
	128	Gunshot	Gunshot	1														

SFX

Pgm#	Bank 0	E
1	CuttngNz	1
2	CttngNz2	2
3		
4	Str Slap	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17	Fl.KClik	1
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33	Shower	1
34	Thunder	1
35	Wind	1
36	Stream	2
37	Bubble	2
38	Feed	2
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49	Dog	1
50	Horse	1
51	Tweet 2	1
52		
53		
54		
55	Ghost	2
56	Maou	2
57		
58		
59		
60		
61		
62		
63		
64		
65	PhonCall	1
66	DoorSqek	1
67	Door Slam	1
68	ScratchC	1
69	ScratchS	2
70	WindChim	1
71	Telphon2	1
72		
73		
74		
75		
76		
77		
78		
79		
80		
81	CarEIgnt	1
82	CarTSqel	1
83	Car Pass	1
84	CarCrash	1
85	Siren	2
86	Train	1
87	JetPlane	2
88	Starship	2
89	Burst	2
90	Coaster	2
91	Submarin	2
92		
93		
94		
95		
96		
97	Laugh	1
98	Scream	1
99	Punch	1
100	Heart	1
101	Footstep	1
102		
103		
104		
105		
106		
107		
108		
109		
110		
111		
112		
113	MchinGun	1
114	LaserGun	2
115	Xplosion	2
116	Firework	2
117		
118		
119		
120		
121		
122		
123		
124		
125		
126		
127		
128		

: Same as Bank 0 : No sound E : Element number

GM2 Normal Voice List

MSB	121		121		121		121		121		121		121		121		121		121	
LSB	0		1		2		3		4		5		6		7		8		9	
Pgm#																				
1	GrandPno	1	GrndPnoK	1	MelloGrP	1														
2	BritePno	1	BritPnoK	1																
3	El.Grand	2	ElGrPnoK	2																
4	HnkyTonk	2	HnkyTnkK	2																
5	E.Piano1	2	Chor.EP1	2	VX El.P1	2	60sEl.P1	1												
6	E.Piano2	2	Chor.EP2	2	VX El.P2	2	DXLegend	2	DX Phase	2										
7	Harpsi.	1	Harpsi.3	2	Harpsi.K	1	Harpsi.2	2												
8	Clavi	2	PulseClv	1																
9	Celesta	1																		
10	Glocken	1																		
11	MusicBox	2																		
12	Vibes	1	Vibes K	1																
13	Marimba	1	MarimbaK	1																
14	Xylophon	1																		
15	TubulBel	1	ChrchBel	2	Carillon	2														
16	Dulcimer	1																		
17	DrawOrgn	1	DetDrwOr	2	60sDrOr1	2	DrawOrg2	2												
18	PercOrgn	1	DetPrcOr	2	PercOrg2	2														
19	RockOrgn	2																		
20	ChrchOrg	2	ChurOrg2	2	ChurOrg3	2														
21	ReedOrgn	1	Puff Org	2																
22	Acordion	2	AccordIt	2																
23	Harmnica	1																		
24	TangoAcd	2																		
25	NylonGtr	1	Ukulele	1	NylonGt3	2	NylonGt2	1												
26	SteelGtr	1	12StrGtr	2	Mandolin	2	Stl&Body	2												
27	Jazz Gtr	1	PdlSteel	1																
28	CleanGtr	1	ChorusGt	2	MidT.Gtr	1														
29	Mute Gtr	1	FunkGtr1	2	FunkGtr2	2	Jazz Man	2												
30	Ovrdrive	1	Gt.Pinch	2																
31	Dist.Gtr	1	FeedbkGt	2	DstRthmG	2														
32	GtrHarmo	1	GtFeedbk	1																
33	Aco.Bass	1																		
34	FngrBass	1	FngrSlap	2																
35	PickBass	1																		
36	Fretless	1																		
37	SlapBas1	1																		
38	SlapBas2	1																		
39	SynBass1	1	SynBa1Dk	1	AcidBass	1	Clv Bass	2	Hammer	2										
40	SynBass2	2	DX Bass	2	RubberBa	2	AtkPulse	1												
41	Violin	1	Slow Vln	1																
42	Viola	1																		
43	Cello	1																		
44	Contrabs	1																		
45	Trem.Str	1																		
46	Pizz.Str	1																		
47	Harp	1	YangChin	2																
48	Timpani	1																		
49	Strings1	1	Orchestr	2	60sStrng	2														
50	Strings2	1																		
51	Syn Str1	2	Syn Str3	2																
52	Syn Str2	2																		
53	ChoirAah	1	Ch.Aahs2	2																
54	VoiceOoh	1	VoiceHmn	1																
55	SynVoice	1	AnaVoice	1																
56	Orch.Hit	2	BassHit+	2	6th Hit	1	Euro Hit	1												
57	Trumpet	1	DrkTpSft	1																
58	Trombone	1	Trmbone2	2	BrghtTrb	1														
59	Tuba	1																		
60	Mute Trp	1	MuteTrp2	2																
61	Fr. Horn	2	FrHorn 2	2																
62	BrssSect	1	BrssSec2	2																
63	SynBrss1	2	SynBrss3	2	AnaBrss1	2	JumpBrss	2												
64	SynBrss2	1	SynBrss4	2	AnaBrss2	2														
65	SprnoSax	1																		
66	Alto Sax	1																		
67	TenorSax	1																		
68	Bari.Sax	1																		
69	Oboe	2																		
70	Eng.Horn	1																		
71	Bassoon	1																		
72	Clarinet	1																		
73	Piccolo	1																		
74	Flute	1																		
75	Recorder	1																		
76	PanFlute	1																		
77	Bottle	2																		
78	Shakhchi	2																		
79	Whistle	1																		
80	Ocarina	1																		
81	SquareLd	2	SquarLd2	1	SineLead	1														
82	Saw Ld	2	Saw Ld 2	1	Dr.Lead	2	DoublSaw	2	Seq Ana.	2										
83	CaliopLd	2																		
84	Chiff Ld	2																		
85	CharanLd	2	WireLead	2																
86	Voice Ld	2																		
87	Fifth Ld	2																		
88	Bass&Ld	2	Soft Wrl	2																
89	NewAgePd	2																		
90	Warm Pad	2	Sine Pad	2																
91	PolySyPd	2																		
92	ChoirPad	2	Itopia	2																
93	BowedPad	2																		
94	MetalPad	2																		
95	Halo Pad	2																		
96	SweepPad	2																		
97	Rain	2																		
98	SoundTrk	2																		
99	Crystal	2	SynMalet	1																
100	Atmosphr	2																		
101	Bright	2																		
102	Goblins	2																		
103	Echoes	2	EchoBell	2	Echo Pan	2														
104	Sci-Fi	2																		
105	Sitar	1	Sitar 2	2																
106	Banjo	1																		
107	Shamisen	1																		
108	Koto	1	Taisho-k	2																
109	Kalimba	1																		
110	Bagpipe	2																		
111	Fiddle	1																		
112	Shanai	1																		
113	TnklBell	2																		
114	Agogo	2																		
115	SteelDrm	2																		
116	Woodblok	1	Castanet	1																
117	TaikoDrm	1	Gr.Cassa	1																
118	MelodTom	2	Mel Tom2	1																
119	Syn Drum	1	Ana Tom	1	ElecPerc	2														
120	RevCymbl	1																		
121	FretNoiz	2	CuttngNz	1	Str Slap	1														
122	BrthNoiz	2	Fl.KClik	1																
123	Seashore	2	Shower	1	Thunder	1	Wind	1	Stream	2	Bubble	2								
124	Tweet	2	Dog	1	Horse	1	Tweet 2	1												
125	Telphone	1	PhonCall	1	DoorSqek	1	DoorSlam	1	ScratchC	1	WindChim	1								
126	Helicptr	1	CarEfgnt	1	Car'TSqel	1	Car Pass	1	CarCrash	1	Siren	2	Train	1	JetPlane	2	Starship	2	Burst	2
127	Applause	1	Laugh	1	Scream	1	Punch	1	Heart	1	Footstep	1								
128	Gunshot	1	MchinGun	1	LaserGun	2	Xplosion	2												

: Same as Bank LSB 0

Drum Voice List (Drum Map)

Bank Slelect LSB=0

Bank MSB#				127	127	127	127	127	127	127	127	127	127
Program #				1	2	9	17	25	26	28	33	41	49
Note#	Note	Key off	Alternate assign	StndKit1 (Standard Kit)	StndKit2 (Standard2 Kit)	Room Kit	Rock Kit	ElctrKit (Electro Kit)	AnalgKit (Analog Kit)	Dance Kit	Jazz Kit	Brush Kit	SymphKit (Symphony Kit)
13	C#-1		3	Surdo Mute									
14	D-1		3	Surdo Open									
15	D-1#			Hi Q									
16	E-1			Whip Slap									
17	F-1		4	Scratch H									
18	F#-1		4	Scratch L									
19	G-1			Finger Snap									
20	G#-1			Click Noise									
21	A-1			Mtrnm Click									
22	A#-1			Mtrnm Bell									
23	B-1			Seq Click L									
24	C0			Seq Click H									
25	C#0			Brush Tap									
26	D0	O		Brush Swirl									
27	D#0			Brush Slap									
28	E0	O		BrushTapSwrl				ReversCymbal	ReversCymbal	ReversCymbal			
29	F0	O		Snare Roll									
30	F#0			Castanet				Hi Q 2	Hi Q 2	Hi Q 2			
31	G0			Snare Soft	Snare Soft 2		Snare Noisy	SnrSnpyElctr	SnareNoisy 4	Snare Techno	Snare Jazz H	Brush Slap 2	
32	G#0			Sticks									
33	A0			Kick Soft				Kick 3	Kick 3	KickTechno Q			Kick Soft 2
34	A#0			OpenRimShot	RimShotHShrt					Rim Gate		RimShotLight	
35	B0			Kick Tight			Kick 2	Kick Gate	KickAnlgShrt	KickTechno L			Gran Cassa
36	C1			Kick	Kick Short		Kick Gate	KckGateHeavy	Kick Analog	KickTechno 2	Kick Jazz	Kick Jazz	GranCassa Mu
37	C#1			Side Stick	Stick Light				SideStickAn	SideStickAn	Stick Light	Stick Light	
38	D1			Snare	Snare Short	Snare Snappy	Snare Rock	SnareNoisy 2	SnareAnalog	Snare Clap	Snare Jazz L	Brush Slap 3	Band Snare
39	D#1			Hand Clap									
40	E1			Snare Tight	SnareTight H	SnrTightSnpy	SnrRockTight	SnareNoisy 3	SnareAnalog2	Snare Dry	Snare Jazz M	Brush Tap 2	Band Snare 2
41	F1			Floor Tom L		Tom Room 1	Tom Rock 1	TomElectro 1	Tom Analog 1	Tom Analog 1		Tom Brush 1	
42	F#1		1	Hi-HatClosed					HatCloseAnlg	Hi-HatCls 3			
43	G1			Floor Tom H		Tom Room 2	Tom Rock 2	TomElectro 2	Tom Analog 2	Tom Analog 2		Tom Brush 2	
44	G#1		1	Hi-Hat Pedal					HatCloseAn 2	HatCloseAn 3			
45	A1			Low Tom		Tom Room 3	Tom Rock 3	TomElectro 3	Tom Analog 3	Tom Analog 3		Tom Brush 3	
46	A#1		1	Hi-Hat Open					HatOpen Anlg	Hi-HatOpn 3			
47	B1			Mid Tom L		Tom Room 4	Tom Rock 4	TomElectro 4	Tom Analog 4	Tom Analog 4		Tom Brush 4	
48	C2			Mid Tom H		Tom Room 5	Tom Rock 5	TomElectro 5	Tom Analog 5	Tom Analog 5		Tom Brush 5	
49	C#2			CrashCymbal1					Crash Analog	Crash Analog			Hand Cymbal
50	D2			High Tom		Tom Room 6	Tom Rock 6	TomElectro 6	Tom Analog 6	Tom Analog 6		Tom Brush 6	
51	D#2			RideCymbal 1									HandCymShort
52	E2			Chinese Cym									
53	F2			Ride Cym Cup									
54	F#2			Tambourine									
55	G2			SplashCymbal									
56	G#2			Cowbell					Cowbell Anlg	Cowbell Anlg			
57	A2			CrashCymbal2									HandCymbal 2
58	A#2			Vibraslap									
59	B2			RideCymbal 2									HandCym2Shrt
60	C3			Bongo H									
61	C#3			Bongo L									
62	D3			Conga H Mute					Conga Anlg H	Conga Anlg H			
63	D#3			Conga H Open					Conga Anlg M	Conga Anlg M			
64	E3			Conga L					Conga Anlg L	Conga Anlg L			
65	F3			Timbale H									
66	F#3			Timbale L									
67	G3			Agogo H									
68	G#3			Agogo L									
69	A3			Cabasa									
70	A#3			Maracas					Maracas 2	Maracas 2			
71	B3	O		SambaWhistlH									
72	C4	O		SambaWhistlL									
73	C#4			Guiro Short									
74	D4	O		Guiro Long									
75	D#4			Claves					Claves 2	Claves 2			
76	E4			Wood Block H									
77	F4			Wood Block L									
78	F#4			Cuica Mute				Scratch H 2	Scratch H 2	Scratch H 2			
79	G4			Cuica Open				Scratch L 2	Scratch L 2	Scratch L 2			
80	G#4		2	TriangleMute									
81	A4		2	TriangleOpen									
82	A#4			Shaker									
83	B4			Jingle Bells									
84	C5			Bell Tree									
85	C#5												
86	D5												
87	D#5												
88	E5												
89	F5												
90	F#5												
91	G5												

: Same as Standard Kit : No sound

Bank MSB#				127	127	127	127	127	127	127	127	126	126
Program #				121	122	123	124	125	126	127	128	1	2
Note#	Note	Key off	Alternate assign	NwStndKt (New Standard Kit)	TightKit	StudioKt (Studio Kit)	ElPopKit (Electro Pop Kit)	Funk Kit	R&B Kit	TimberKt (Timber Kit)	HvyHipKt (Heavy Hip Kit)	SFX Kit 1	SFX Kit 2
13	C#-1		3										
14	D-1		3										
15	D-1#												
16	E-1												
17	F-1		4										
18	F#-1		4										
19	G-1												
20	G#-1												
21	A-1												
22	A#-1												
23	B-1												
24	C0												
25	C#0												
26	D0	O							Noise Dark 1	Noise Dark 1	Noise Dark 2		
27	D#0												
28	E0	O					ReversCymBal		ReversCymBal	ReversCymBal	ReversCymBal		
29	F0	O											
30	F#0						Hi Q 2		Hi Q 2	Hi Q 2	Castanet 2		
31	G0					Snare Studio	SnareSnpyElctr		Snare Techno	Snare Tmbr 1	Snare Hip 1		
32	G#0								Stick Dark	Stick Dark	Stick Dark		
33	A0						Kick 3		Kick Bass	Kick Bass	Kick Bass		
34	A#0			Rim Hard	Rim Tight			Snare Funk 1	OpenRimVari1	Rim Timber	OpenRimVari2		
35	B0			Kick Hard	Kick Tight 2	Kick Stuidio1	Kick ElNoiz	Kick Funk 1	KickTechno L	Kick Timber	KickTechno 2		
36	C1			Kick Attack	Kick Tight 3	Kick Studio2	Kick ElPop	Kick Funk 2	Kick Noise	Kick Noise	Kick Hip	CuttingNoiz	Phone Call
37	C#1						ElSideStick		SideStickR&B	SideStkTmber	SideStickHip	CuttingNoiz	Door Squeak
38	D1			Snare High	Snare Tight2	Rim Studio 1	Snare ElPop	Snare Funk 2	Snare R&B	Snare Tmbr 2	Snare Hip 2		Door Slam
39	D#1						Clap ElPop					String Slap	Scratch Cut
40	E1			Snare Snap	Snare Tight3	Rim Studio 2	Snare ElPop	SnareRimFunk	SnareClapR&B	Snare Tmbr 3	Snare Hip 3		Scratch H 3
41	F1					Tom Studio 1	TomElectro 1		Tom Vari 1	Tom Vari 1	Tom Vari 1		Wind Chime
42	F#1		1					HatCloseFunk	HatClose R&B	HatCloseTmbr	HatCloseHip		Telephone 2
43	G1					Tom Studio 2	TomElectro 2		Tom Vari 2	Tom Vari 2	Tom Vari 2		
44	G#1		1	HatPedal Hard	HatPedalTght			HatPedalFunk	HatCloseAn 2	HatPedalTmbr	HatPedalHip		
45	A1					Tom Studio 3	TomElectro 3		Tom Vari 3	Tom Vari 3	Tom Vari 3		
46	A#1		1	HatOpen Low	HatOpenTight			HatOpenFunk	HatOpen R&B	HatOpenTmbr	HatOpenHip		
47	B1					Tom Studio 4	TomElectro 4		Tom Vari 4	Tom Vari 4	Tom Vari 4		
48	C2					Tom Studio 5	TomElectro 5		Tom Vari 5	Tom Vari 5	Tom Vari 5		
49	C#2								Crash Analog	Crash Analog	Crash Hip 1		
50	D2					Tom Studio 6	TomElectro 6		Tom Vari 6	Tom Vari 6	Tom Vari 6		
51	D#2								RideCymbal 3	RideCymbal 3	Ride Hip 1		
52	E2											Fl.Key Click	CarEngnIgnit
53	F2								Ride Cup Vari	Ride Cup Vari			CarTireSqeal
54	F#2								Tambourine 2	Tambourine 3	Tambourine 2		Car Passing
55	G2												Car Crash
56	G#2								Cowbell Anlg	Cowbell Anlg	Cowbell		Siren
57	A2										Crash Hip 2		Train
58	A#2												Jet Plane
59	B2								RideCym Vari	RideCym Vari	Ride Hip 2		Starship
60	C3												Burst
61	C#3												Coaster
62	D3								Conga Anlg H	Conga Anlg H	Conga Anlg H		Submarine
63	D#3								Conga Anlg M	Conga Anlg M	Conga Anlg M		
64	E3								Conga Anlg L	Conga Anlg L	Conga Anlg L		
65	F3												
66	F#3												
67	G3												
68	G#3											Shower	Laugh
69	A3								Cabasa 2	Cabasa 2	Cabasa 2	Thunder	Scream
70	A#3								Maracas 3	Maracas 3	Maracas 3	Wind	Punch
71	B3	O								Telphone 1		Stream	Heartbeat
72	C4	O								Telphone 2		Bubble	Footsteps
73	C#4											Feed	
74	D4	O											
75	D#4								Claves 2	Claves 2	Claves 2		
76	E4												
77	F4												
78	F#4								Scratch H 2	Scratch H 2	Scratch H 2		
79	G4								Scratch L 2	Scratch L 2	Scratch L 2		
80	G#4		2										
81	A4		2										
82	A#4												
83	B4								JingleBells2	JingleBells2	JingleBells2		
84	C5											Dog	Machine Gun
85	C#5											Horse	Laser Gun
86	D5											Bird Tweet 2	Explosion
87	D#5												FireWork
88	E5												
89	F5												
90	F#5											Gorst	
91	G5											Maou	

: Same as Standard Kit : No sound

GM2 Drum Voice List (Drum Map)

MSB	120		120		120		120		120		120		120		120		120	
LSB	0		0		0		0		0		0		0		0		0	
Pgm#	1		9		17		25		26		33		41		49		57	
Note#	GM Stand	E	GM Room	E	GM Power	E	GM Elctr	E	GM Analg	E	GM Jazz	E	GM Brush	E	GM Orche	E	GM SFX	E
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		
25																		
26																		
27	Hi Q	1													HatCloseOrch	1		
28	Whip Slap	1													HatPedalOrch	1		
29	Scratch Push	1													HatOpen Orch	1		
30	Scratch Pull	1													RideCym1Orch	1		
31	Sticks	1																
32	Click Noise	1																
33	Mtrnm Click	1																
34	Mtrnm Bell	1																
35	Kick Tight	1									KickTJazz	1	KickTJazz	1	Kick Orch	1		
36	Kick	1			Kick Power	1	Kick El	1	Kick Analog	1	Kick Jazz	1	Kick Jazz	1	GranCassa Or	1		
37	Side Stick	1							SideStickAn	1								
38	Snare	1			Snare Power	1	Snare El	1	SnareAnalog	1			Brush Tap GM	1	Band Snare	1		
39	Hand Clap	1											BrushSlap GM	1	Castanet 2	1	Hi Q	1
40	Snare Tight	1					Snare EL 2	1					BrushSwirlGM	1	Band Snare	1	Whip Slap	1
41	Floor Tom L	1	Tom Room 1	1	Tom Rock 1	1	TomElectro 1	1	Tom Analog 1	1					Timpani F	1	Scratch Push	1
42	Hi-HatClosed	1							HatCloseAnlg	1					Timpani F#	1	Scratch Pull	1
43	Floor Tom H	1	Tom Room 2	1	Tom Rock 2	1	TomElectro 2	1	Tom Analog 2	1					Timpani G	1	Sticks	1
44	Hi-Hat Pedal	1							HatCloseAn 2	1					Timpani G#	1	Click Noise	1
45	Low Tom	1	Tom Room 3	1	Tom Rock 3	1	TomElectro 3	1	Tom Analog 3	1					Timpani A	1	Mtrnm Click	1
46	Hi-Hat Open	1							HatOpen Anlg	1					Timpani A#	1	Mtrnm Bell	1
47	Mid Tom L	1	Tom Room 4	1	Tom Rock 4	1	TomElectro 4	1	Tom Analog 4	1					Timpani B	1	Fret Noise	2
48	Mid Tom H	1	Tom Room 5	1	Tom Rock 5	1	TomElectro 5	1	Tom Analog 5	1					Timpani C	1	CuttingNoizH	1
49	CrashCymbal1	1							Crash Analog	1					Timpani C#	1	CuttingNoizL	1
50	High Tom	1	Tom Room 6	1	Tom Rock 6	1	TomElectro 6	1	Tom Analog 6	1					Timpani D	1	String Slap	1
51	RideCymbal 1	1													Timpani D#	1	Fl.Key Click	1
52	Chinese Cym	1					ReversCymbal	1							Timpani E	1	Laugh	1
53	Ride Cym Cup	1													Timpani F'	1	Scream	1
54	Tambourine	1															Punch	1
55	SplashCymbal	1															Heartbeat	1
56	Cowbell	1							Cowbell Anlg	1							Footsteps 1	1
57	CrashCymbal2	1													ConcertCym 2	1	Footsteps 2	1
58	Vibraslap	1															Applause	1
59	RideCymbal 2	1													ConcertCym 1	1	Door Squeak	1
60	Bongo H	1															Door Slam	1
61	Bongo L	1															Scratch Cut	1
62	Conga H Mute	1							Conga Anlg H	1							Wind Chime	1
63	Conga H Open	1							Conga Anlg M	1							Ignition	1
64	Conga L	1							Conga Anlg L	1							Squeal	1
65	Timbale H	1															Exhaust	1
66	Timbale L	1															Crash	1
67	Agogo H	1															Siren	2
68	Agogo L	1															Train	1
69	Cabasa	1															Jet Plane	2
70	Maracas	1							Maracas 2	1							Helicopter	1
71	SambaWhstlSh	1															Starship	2
72	SambaWhstlLg	1															Gunshot	1
73	Guiro Short	1															Machine Gun	1
74	Guiro Long	1															Laser Gun	2
75	Claves	1							Claves 2	1							Explosion	2
76	Wood Block H	1															Dog	1
77	Wood Block L	1															Horse	1
78	Cuica Mute	1															Bird Tweet	2
79	Cuica Open	1															Shower	1
80	TriangleMute	1															Thunder	1
81	TriangleOpen	1															Wind	1
82	Shaker	1															Seashore	2
83	Jingle Bells	1															Stream	2
84	Bell Tree	1															Bubble	2
85	Castanet	1																
86	Surdo Mute	1																
87	Surdo Open	1																
88															Applause	1		
89																		
90																		
91																		

: No sound : Same as GM stand E : Element Number

Wave List

Normal Voice Element Edit PAGE 2

No.	Category/WaveName	No.	Category/WaveName	No.	Category/WaveName	No.	CategoRy/WaveName	No.	Category/WaveName	No.	Category/WaveName
1	Pf:PianoL@	101	Or:1 1/3	201	Pd:SynVoice	301	Dr:Stick	401	Wv:Bel2Wv	501	Se:Scr2Stp
2	Pf:PianoL@2	102	Or:1	202	Cp:Celesta	302	Dr:SdQ	402	Wv:Ep1	502	Se:Scr2Spn
3	Pf:Hrpscd@	103	Or:Rotar	203	Cp:Glocken	303	Dr:T8SdA	403	Wv:Ep2	503	Se:FxMetal
4	Or:Reed@	104	Or:Clack	204	Cp:NewAge	304	Dr:T8SdB	404	Wv:Ep3	504	Se:Sword
5	Gt:Jazz@	105	Or:RotNz	205	Cp:Vibra	305	Dr:T9Snapy	405	Wv:Ep4	505	Se:Zap1
6	Gt:Harm@	106	Or:SftTmp	206	Cp:Marimba	306	Dr:SdTekk	406	Wv:Ep5	506	Se:Zap2
7	Gt:Harm@2	107	Or:Perc	207	Cp:Xylophon	307	Dr:TomF	407	Wv:Ep6	507	Se:MetalNz
8	St:Vln@	108	Or:Perc+	208	Cp:TublrBl	308	Dr:TomL	408	Wv:VoxE3	508	Se:SynVibra
9	St:TrStr@	109	Or:Perc-	209	Cp:Dulcimer	309	Dr:TomM	409	Wv:VoxG2	509	Se:FxGun1
10	St:Strngs1@	110	Or:Cool!	210	Cp:Bowed	310	Dr:TomH	410	Wv:Org1Wv	510	Se:FxGun2
11	St:Strngs2@	111	Gt:Nylon1	211	Cp:Kalimba	311	Dr:TomLp	411	Wv:Org2Wv	511	Se:Zoom
12	St:Strngs4@	112	Gt:Nylon2	212	Cp:XyloLoop	312	Dr:TomRmA	412	Wv:Org3Wv	512	Se:RevLow
13	Br:Trmbn@	113	Gt:NylnHi	213	Cp:TnklBel1	313	Dr:TomRmB	413	Wv:Mallet	513	Se:RevBurst
14	Br:Tuba@	114	Gt:Nylhrm	214	Cp:TnklBel2	314	Dr:TomRmC	414	Se:CutngNz	514	Se:RevRoll
15	Br:Fr.Horn@	115	Gt:Steel	215	Pc:Agogo1	315	Dr:TomRmD	415	Se:StrSlap	515	Se:Ripper
16	Rp:Alto@	116	Gt:MtlStl	216	Pc:Agogo2	316	Dr:TomJzL	416	Se:Fl.Kclik	516	Se:Bomb
17	Rp:Shkhaci@	117	Gt:12StrGt	217	Pc:StlDrm	317	Dr:TomJzH	417	Se:Shower	517	Se:Alarm
18	Rp:Ocarna@	118	Gt:Jazz	218	Pc:Wdblck	318	Dr:AnaTomA	418	Se:Thunder	518	Se:Police
19	Or:TngAcc@	119	Gt:Clean1	219	Pc:Wdblck2	319	Dr:AnaTomB	419	Se:Wind	519	--:FX Kit
20	Rp:Bagpip1@	120	Gt:Clean2	220	Pc:Taiko	320	Dr:AnaTomC	420	Se:Stream	520	--:RhythmKt
21	Rp:Bagpip2@	121	Gt:Mute	221	Pc:BongoL	321	Dr:AnaTomD	421	Se:Bubble	521	Br:Trmbn@2
22	Cp:Glocken@	122	Gt:OverDriv	222	Pc:BongoH	322	Dr:T8TomA	422	Se:Dog		
23	Cp:NewAge@	123	Gt:Dist1	223	Pc:CongaL	323	Dr:T8TomB	423	Se:Horse		
24	Cp:Vibra@2	124	Gt:Dist2	224	Pc:CongaH	324	Dr:T8TomC	424	Se:Tweet		
25	Cp:Xylophn@	125	Gt:DistCl	225	Pc:CongaT	325	Dr:HHCl1	425	Se:Tweet2		
26	Cp:Dulcmer@	126	Gt:DistMt	226	Pc:Cowbel	326	Dr:HHCl2	426	Se:PhonCall		
27	Pc:StlDrm@	127	Gt:Harm	227	Pc:GuiroS	327	Dr:HHCl3	427	Se:DorSqwk		
28	En:OrcHit@	128	Gt:Sitar	228	Pc:GuiroL	328	Dr:HHCl4	428	Se:DorSlam		
29	En:OrcHit@2	129	Gt:Banjo	229	Pc:Tmbls	329	Dr:T8HHCl	429	Se:Scratch		
30	Pf:PianoL	130	Gt:Shamisen	230	Pc:CuicaL	330	Dr:T9HHCl	430	Se:WndChim		
31	Pf:PianoR	131	Gt:Koto	231	Pc:CuicaH	331	Dr:HHPdl1	431	Se:Telphone		
32	Pf:GrandL	132	Gt:Harp	232	Pc:Cabasa	332	Dr:HHPdl2	432	Se:Telphon2		
33	Pf:GrandR	133	Ba:Acstic	233	Pc:ClavesL	333	Dr:HHPdl3	433	Se:CarElgnt		
34	Pf:GrandMn	134	Ba:Fing	234	Pc:ClavesH	334	Dr:HHOpn1	434	Se:CarTSqel		
35	Pf:HonkyL	135	Ba:Pick	235	Pc:Castnt1	335	Dr:HHOpn2	435	Se:CarPass		
36	Pf:Brite	136	Ba:Frtles	236	Pc:Castnt2	336	Dr:HHOpn3	436	Se:CarCrsh		
37	Pf:CP80	137	Ba:Slap1	237	Pc:Maracs	337	Dr:T8HHOpn	437	Se:Train		
38	Pf:Rds1	138	Ba:Slap2	238	Pc:Maracs2	338	Dr:T9HHOpn	438	Se:Laugh		
39	Pf:Rds2S	139	Ba:Slap3	239	Pc:Shaker	339	Dr:HHTip	439	Se:Scream		
40	Pf:Rds2H	140	Ba:SynBa1	240	Pc:Tmborn	340	Dr:DncTip	440	Se:Punch		
41	Pf:RdsRanS	141	Ba:SynBa2	241	Pc:TriOpn	341	Dr:Ride1	441	Se:Heart		
42	Pf:RdsRanS+	142	St:Vln	242	Pc:VbSlp	342	Dr:Ride2	442	Se:FootStp		
43	Pf:RdsRanS-	143	St:Viola	243	Pc:JnglBl	343	Dr:Cup	443	Se:MchinGun		
44	Pf:RdsRanM	144	St:Cello	244	Pc:Clap	344	Dr:Crash1	444	Se:FretNoiz		
45	Pf:RdsRanM+	145	St:Cello2	245	Pc:Whistl	345	Dr:Crash2	445	Se:BrthNoiz		
46	Pf:RdsRanM-	146	St:Cntrabs	246	Pc:Bltree	346	Dr:T8Crsh	446	Se:Seashore		
47	Pf:RdsRanH	147	St:TrStr	247	Pc:FngSnap	347	Dr:HndCym	447	Se:Helicptr		
48	Pf:RdsRanH+	148	St:Pizz	248	Pc:Mtrnm1	348	Dr:DncCrshA	448	Se:Aplause		
49	Pf:RdsRanH-	149	St:Strings1	249	Pc:Mtrnm2	349	Dr:DncCrshB	449	Se:Gunshot		
50	Pf:RdsTeaS	150	St:Strings2	250	Pc:Scrch	350	Dr:RevCym	450	Se:Noise		
51	Pf:RdsTeaM	151	St:Strings3	251	Pc:WhipSlp	351	Dr:China	451	Se:Melow		
52	Pf:RdsTeaH	152	St:Strings4	252	Dr:Bd1	352	Dr:T8Cwbl	452	Se:BigSyn		
53	Pf:60sEp	153	St:StrL	253	Dr:Bd2	353	Dr:Timpni1	453	Se:VxAlk		
54	Pf:Wurli	154	St:StrLA	254	Dr:Bd3	354	Dr:Timpni2	454	Pf:FMPiano		
55	Pf:Wurli+	155	St:StrR	255	Dr:Bd4	355	Dr:CncrtBd	455	Gt:PwrChd1		
56	Pf:Wurli-	156	St:StrRA	256	Dr:Bd5	356	Dr:OrchHit	456	Gt:PwrChd2		
57	Pf:DX1	157	St:SmlEns	257	Dr:BdSoft	357	Wv:ObStr	457	Gt:PcHarmo		
58	Pf:DX2	158	St:SmlEns+	258	Dr:BdKlick	358	Wv:SyzStr	458	Gt:GtScrape		
59	Pf:FulTineS	159	St:SmlEns-	259	Dr:BdPop	359	Wv:Padd	459	Ba:NoizBass		
60	Pf:FulTineH	160	Br:Trmpt	260	Dr:BdHby	360	Wv:SyncLd	460	Rp:Didgerd1		
61	Pf:Clav	161	Br:Trmbn	261	Dr:BdToni	361	Wv:CS80Br	461	Rp:Didgerd2		
62	Pf:Hrpscd	162	Br:Tuba	262	Dr:BdAna	362	Wv:MgBs1	462	Rp:Didgerd3		
63	Pf:MltPno	163	Br:MuteTp	263	Dr:BdAna2	363	Wv:MgBs2	463	Pc:ClapLarg		
64	Or:Jazz1	164	Br:Fr.Horn	264	Dr:BdHiQ	364	Wv:MgBs3	464	Dr:BdJng1		
65	Or:Jazz2	165	Br:BrssSect	265	Dr:BdHip	365	Wv:FMBs1	465	Dr:BdJng2		
66	Or:PercOrgn	166	Br:SectnL	266	Dr:T8Bd	366	Wv:FMBs2	466	Dr:BdJng3		
67	Or:Rock1	167	Br:SectnR	267	Dr:Surdo	367	Wv:FMBs3	467	Dr:BdBreak1		
68	Or:Rock2	168	Br:SctnL-	268	Dr:SdMx1	368	Wv:Pulse10	468	Dr:BdBreak2		
69	Or:Rock2+	169	Br:SctnR-	269	Dr:SdMx2	369	Wv:P50-1	469	Dr:SdBrek1		
70	Or:Rock2-	170	Rp:Soprn	270	Dr:SdSoft	370	Wv:P50-2	470	Dr:SdBrek2		
71	Or:Church1	171	Rp:Alto	271	Dr:SdSft2	371	Wv:P50-3	471	Dr:SdBrek3		
72	Or:Church2	172	Rp:Tenor	272	Dr:SdRoomA	372	Wv:P50Low	472	Wv:FatSaw		
73	Or:Reed	173	Rp:Baritone	273	Dr:SdRoomB	373	Wv:Square	473	Se:HitUhh		
74	Or:Puff	174	Rp:Oboe	274	Dr:SdRoomC	374	Wv:Saw	474	Se:VocdAah		
75	Or:Warm	175	Rp:EngHorn	275	Dr:SdLw	375	Wv:SawMod	475	Se:Go		
76	Or:Elctrnc	176	Rp:Basoon	276	Dr:SdMl	376	Wv:MtrxSaw	476	Se:Hoh		
77	Or:Elctrnc-	177	Rp:Clari	277	Dr:SdMx	377	Wv:Tri	477	Se:Joo		
78	Or:VoxOrg	178	Rp:Piccolo	278	Dr:SdOpnRm	378	Wv:Oscar	478	Se:Ohh		
79	Or:VxOrg-	179	Rp:Flute	279	Dr:SdLight	379	Wv:Sine	479	Se:Hah		
80	Or:Swith	180	Rp:SprnRcrd	280	Dr:SdMidum	380	Wv:Digi01	480	Se:HitBrs1		
81	Or:Swith-	181	Rp:PanFlute	281	Dr:SdRim	381	Wv:Digi02	481	Se:HitBrs2		
82	Or:1+3	182	Rp:Bottle	282	Dr:SdAkstk	382	Wv:Digi03	482	Se:HitBrs3		
83	Or:1+3+	183	Rp:Shakhaci	283	Dr:SdFsnH	383	Wv:Digi04	483	Se:HitGtr		
84	Or:1+3-	184	Rp:Whistle	284	Dr:SdLdwH	384	Wv:Digi05	484	Se:HitEp		
85	Or:2+4	185	Rp:Ocarina	285	Dr:SdSonA	385	Wv:Digi06	485	Se:HitJaz		
86	Or:2+4+	186	Rp:Calliope	286	Dr:SdSonB	386	Wv:Digi07	486	Se:DstChrs		
87	Or:2+4-	187	Rp:Acrdn	287	Dr:SdPclH	387	Wv:Digi08	487	Se:HitHH		
88	Or:Even	188	Rp:BlsHarp1	288	Dr:SdPcBH	388	Wv:Digi09	488	Se:HitOrch1		
89	Or:Even+	189	Rp:BlsHarp2	289	Dr:SdRim1	389	Wv:Digi10	489	Se:HitOrch2		
90	Or:Even-	190	Rp:TngAcc	290	Dr:SdRim2	390	Wv:Digi11	490	Se:VxDcnd		
91	Or:Odd	191	Rp:Bagpipe1	291	Dr:SdDry	391	Wv:Digi12	491	Se:Fairway		
92	Or:Odd+	192	Rp:Bagpipe2	292	Dr:SdRoll	392	Wv:DgVox1	492	Se:Sonr		
93	Or:Odd-	193	Rp:Shanai	293	Dr:SdRol2	393	Wv:DgVox2	493	Se:StabOrch		
94	Or:16	194	Pd:SynStrg1	294	Dr:SdBrs	394	Wv:DgVox3	494	Se:StabGian		
95	Or:5 1/3	195	Pd:SynStrg2	295	Dr:BrHard	395	Wv:DgVox4	495	Se:StabHard		
96	Or:8	196	Pd:Aah	296	Dr:BrSoft	396	Wv:DgVox5	496	Se:StabOrgn		
97	Or:4	197	Pd:Ooh	297	Dr:C.Rim1	397	Wv:MgRamp	497	Se:TurnTabl		
98	Or:2 2/3	198	Pd:Oooo	298	Dr:C.Rim2A	398	Wv:SawSqu	498	Se:ScrchH		
99	Or:2	199	Pd:Oooo+	299	Dr:C.Rim2B	399	Wv:SquSaw	499	Se:ScrchL		
100	Or:1 3/5	200	Pd:Oooo-	300	Dr:T8Side	400	Wv:Bel1Wv	500	Se:ScrchDwn		

Original Kit List

Drum Voice Common Edit PAGE 2

No.	Original Kit Name
1	StndKit1 (Standard1 Kit)
2	StndKit2 (Standard2 Kit)
3	Room Kit
4	Rock Kit
5	ElctrKit (Electro Kit)
6	AnalgKit (Analog Kit)
7	Dance Kit
8	Jazz Kit
9	Brush Kit
10	SymphKit(Symphony Kit)
11	NwStndKt (New Standard Kit)
12	TightKit (Tight Kit)
13	StudioKt (Studio Kit)
14	ElPopKit (Electro Pop Kit)
15	Funk Kit
16	R&B Kit
17	TimberKt (Timber Kit)
18	HvyHipKt (Heavy Hip Kit)
19	SFX Kit 1
20	SFX Kit 2
21	GM Stand (GM2 Standard Kit)
22	GM Room (GM2 Room Kit)
23	GM Power (GM2 Power Kit)
24	GM Elctr (GM2 Electronic Kit)
25	GM Analg (GM2 Analog Kit)
26	GM Jazz (GM2 Jazz Kit)
27	GM Brush (GM2 Brush Kit)
28	GM Orche (GM2 Orchestra Kit)
29	GM SFX (GM2 SFX Kit)

Multi List

Bank Select MSB=63, LSB=64

No.	Category	Name
1	Pf	MIDIGrnd
2	Pf	BaladChr
3	Pf	DigiRich
4	Pf	PetitEP
5	Pf	RosePad
6	Pf	SuperClv
7	Or	Minister
8	Gt	Gtr+Pad
9	St	Str+Bell
10	St	SmalOrch
11	St	VelOrch
12	Pd	SuperPad
13	Br	FatBrass
14	Br	AnalogMW
15	Rp	PipePad
16	Ld	SawFat
17	Sc	AtkComp
18	Co	SynBa_Ep
19	Co	Gt_SynLd
20	Co	Pizz_Str
21	Co	Pad_Dist
22	Co	FBass_Or
23	Co	Ep_Trpt
24	Co	Org_Lead
25	--	Pops
26	--	Ballad
27	--	R&B
28	--	HipHop
29	--	FunkRock
30	--	Blues
31	--	Big Band
32	--	Salsa

Effect Type List

REVERB

Multi Common Edit PAGE 4

No.	MSB	LSB	Effect Type	Features	GM2
0	00H	00H	No Effect	Effect turned off.	
1	01H	00H	Hall 1	Reverb simulating the resonance of a hall.	
2	01H	01H	Hall 2		
3	01H	06H	Hall M		●
4	01H	07H	Hall L		●
5	02H	00H	Room 1	Reverb simulating the resonance of a room.	
6	02H	01H	Room 2		
7	02H	02H	Room 3		
8	02H	05H	Room S		●
9	02H	06H	Room M		●
10	02H	07H	Room L		●
11	03H	00H	Stage 1	Reverb appropriate for a solo instrument.	
12	03H	01H	Stage 2		
13	04H	00H	Plate	Reverb simulating a metal plate reverb unit.	
14	04H	07H	GM Plate		●
15	10H	00H	White Room	A unique short reverb with a bit of initial delay.	
16	11H	00H	Tunnel	Simulation of a tunnel space expanding to left and right.	
17	13H	00H	Basement	A bit of initial delay followed by reverb with a unique resonance.	

CHORUS

Multi Common Edit PAGE 7

No.	MSB	LSB	Effect Type	Features	GM2
0	00H	00H	No Effect	Effect turned off.	
1	41H	00H	Chorus 1	Conventional chorus program that adds natural spaciousness.	
2	41H	01H	Chorus 2		
3	41H	02H	Chorus 3		
4	41H	08H	Chorus 4	Chorus with stereo input. The pan setting specified for the Part will also apply to the effect sound.	
5	41H	03H	GM Chorus 1	Conventional chorus program that adds natural spaciousness.	●
6	41H	04H	GM Chorus 2		●
7	41H	05H	GM Chorus 3		●
8	41H	06H	GM Chorus 4		●
9	41H	07H	FB Chorus	Chorus with feedback.	●
10	42H	00H	Celeste 1	A 3-phase LFO adds modulation and spaciousness to the sound.	
11	42H	01H	Celeste 2		
12	42H	02H	Celeste 3		
13	42H	08H	Celeste 4	CELESTE with stereo input. The pan setting specified for the Part will apply to the effect sound.	
14	43H	00H	Flanger 1	Adds a jet-airplane effect to the sound.	
15	43H	01H	Flanger 2		
16	43H	08H	Flanger 3		
17	43H	07H	GM Flanger		●

VARIATION

Normal Voice Common Edit PAGE 14, Multi Common Edit PAGE 4

NOTE When the effect type is set to “No Effect” while the Insertion effect is used, no sound is output. If you don’t want to use the Variation effect, select “Thru” to pass the signal through the Variation effect without applying any effect.

No.	MSB	LSB	Effect Type	Features	GM2
0	00H	00H	No Effect	Effect turned off.	
1	01H	00H	Hall 1	Reverb simulating the resonance of a hall.	
2	01H	01H	Hall 2		
3	01H	06H	Hall M		●
4	01H	07H	Hall L		●
5	02H	00H	Room 1	Reverb simulating the resonance of a room.	
6	02H	01H	Room 2		
7	02H	02H	Room 3		
8	02H	05H	Room S		●
9	02H	06H	Room M		●
10	02H	07H	Room L		●
11	03H	00H	Stage 1	Reverb approproate for a solo instrument.	
12	03H	01H	Stage 2		
13	04H	00H	Plate	Reverb simulating a metal plate reverb unit.	
14	04H	07H	GM Plate		●
15	05H	00H	Delay L, C, R	A program that creates three delay sounds; L, R, and C (center).	
16	06H	00H	Delay L, R	A program that creates two delay sounds; L and R. Two feedback delays are provided.	
17	07H	00H	Echo	Two delays (L and R) and independent feedback delays for L and R.	
18	08H	00H	Cross Delay	A program that crosses the feedback of two delays.	
19	09H	00H	EarlyRef 1	An effect that produces only the early reflection component of reverb.	
20	09H	01H	EarlyRef 2		
21	0AH	00H	Gate Reverb	A simulation of gated reverb.	
22	0BH	00H	Reverse Gate	A program that simulates gated reverb played backwords.	
23	14H	00H	Karaoke 1	A delay with feedback of the same type as used for karaoke reverb.	
24	14H	01H	Karaoke 2		
25	14H	02H	Karaoke 3		
26	41H	00H	Chorus 1	A conventional chorus program, providing natural spaciousness.	
27	41H	01H	Chorus 2		
28	41H	02H	Chorus 3		
29	41H	08H	Chorus 4	Chorus with stereo input.	
30	41H	03H	GM Chorus1	A conventional chorus program, providing natural spaciousness.	●
31	41H	04H	GM Chorus2		●
32	41H	05H	GM Chorus3		●
33	41H	06H	GM Chorus4		●
34	41H	07H	FB Chorus	Chorus with feedback.	●
35	42H	00H	Celeste 1	A 3-phase LFO adds modulation and spaciousness to the sound.	
36	42H	01H	Celeste 2		
37	42H	02H	Celeste 3		
38	42H	08H	Celeste 4		
39	43H	00H	Flanger 1	Adds a jet-airplane effect to the sound.	
40	43H	01H	Flanger 2		
41	43H	08H	Flanger 3		
42	43H	07H	GM Flanger		●
43	44H	00H	Symphonic	A multi-phase version of CELESTE.	
44	45H	00H	Rotary Speaker	A simulation of a rotary speaker. You can use an AC1 (assignable controller) etc. to controll the speed of rotation.	
45	46H	00H	Tremolo	An effect that cyclically modulates the volume.	
46	47H	00H	Auto Pan	A program that cyclically moves the sound image to left and right, front and back.	
47	48H	00H	Phaser 1	Cyclically changes the phase to add modulation to the sound.	
48	48H	08H	Phaser 2	Phaser with stereo input.	
49	49H	00H	Distortion	Adds a sharp-edged distortion to the sound.	
50	4AH	00H	Overdriver	Adds mild distortion to the sound.	
51	4BH	00H	Amp Simulator	A simulation of a guitar amp.	
52	4CH	00H	3Band EQ (Mono)	A mono EQ with adjustable LOW, MID, and HIGH equalizing.	
53	4DH	00H	2Band EQ (Stereo)	A stereo EQ with adjustable LOW and HIGH. Ideal for drum Parts.	
54	4EH	00H	Auto Wah (LFO)	Cyclically modulates the center frequency of a wah filter. With an AC1 etc. this can function as a pedal wah.	
55	40H	00H	Thru	Bypass without applying an effect.	

●=GM2-compatible

Effect Parameter List

NOTE Parameters marked with a ● in the "Control" column can be controlled from an AC1 (assignable controller 1) etc. However, this is valid only for a Variation effect (when selected for Insertion).

HALL 1, 2, M, L
ROOM 1, 2, 3, S, M, L
STAGE 1, 2
PLATE, GM PLATE (reverb, variation block)

No.	Parameter	Display	Value	See Table	Control
1	Reverb Time	0.3 - 30.0s	0 - 69	table#4	
2	Diffusion	0 - 10	0 - 10		
3	Initial Delay	0.1 - 99.3ms	0 - 63	table#5	
4	HPF Cutoff	Thru - 8.0kHz	0 - 52	table#3	
5	LPF Cutoff	1.0k - Thru	34 - 60	table#3	
6					
7					
8					
9					
10	Dry/Wet	D63>W - D=W - D<W63	1 - 127		●
11	Rev Delay	0.1 - 99.3ms	0 - 63	table#5	
12	Density	0 - 4	0 - 4		
13	Er/Rev Balance	E63>R - E=R - E<R63	1 - 127		
14					
15	Feedback Level	-63 - +63	1 - 127		
16					

WHITE ROOM
TUNNEL
BASEMENT (reverb block)

No.	Parameter	Display	Value	See Table	Control
1	Reverb Time	0.3 - 30.0s	0 - 69	table#4	
2	Diffusion	0 - 10	0 - 10		
3	Initial Delay	0.1 - 99.3ms	0 - 63	table#5	
4	HPF Cutoff	Thru - 8.0kHz	0 - 52	table#3	
5	LPF Cutoff	1.0k - Thru	34 - 60	table#3	
6	Width	0.5 - 10.2m	0 - 37	table#8	
7	Heigt	0.5 - 20.2m	0 - 73	table#8	
8	Depth	0.5 - 30.2m	0 - 104	table#8	
9	Wall Vary	0 - 30	0 - 30		
10					
11	Rev Delay	0.1 - 99.3ms	0 - 63	table#5	
12	Density	0 - 4	0 - 4		
13	Er/Rev Balance	E63>R - E=R - E<R63	1 - 127		
14					
15	Feedback Level	-63 - +63	1 - 127		
16					

DELAY L, C, R (variation block)

No.	Parameter	Display	Value	See Table	Control
1	Lch Delay	0.1 - 715.0ms (variation block)	1 - 7150		
2	Rch Delay	0.1 - 715.0ms (variation block)	1 - 7150		
3	Cch Delay	0.1 - 715.0ms (variation block)	1 - 7150		
4	Feedback Delay	0.1 - 715.0ms (variation block)	1 - 7150		
5	Feedback Level	-63 - +63	1 - 127		
6	Cch Level	0 - 127	0 - 127		
7	High Damp	0.1 - 1.0	1 - 10		
8					
9					
10	Dry/Wet	D63>W - D=W - D<W63	1 - 127		●
11					
12					
13	EQ Low Frequency	50Hz - 2.0kHz	8 - 40	table#3	
14	EQ Low Gain	-12 - +12dB	52 - 76		
15	EQ High Frequency	500Hz - 16.0kHz	28 - 58	table#3	
16	EQ High Gain	-12 - +12dB	52 - 76		

DELAY L, R (variation block)

No.	Parameter	Display	Value	See Table	Control
1	Lch Delay	0.1 - 715.0ms (variation block)	1 - 7150		
2	Rch Delay	0.1 - 715.0ms (variation block)	1 - 7150		
3	Feedback Delay 1	0.1 - 715.0ms (variation block)	1 - 7150		
4	Feedback Delay 2	0.1 - 715.0ms (variation block)	1 - 7150		
5	Feedback Level	-63 - +63	1 - 127		
6	High Damp	0.1 - 1.0	1 - 10		
7					
8					
9					
10	Dry/Wet	D63>W - D=W - D<W63	1 - 127		●
11					
12					
13	EQ Low Frequency	50Hz - 2.0kHz	8 - 40	table#3	
14	EQ Low Gain	-12 - +12dB	52 - 76		
15	EQ High Frequency	500Hz - 16.0kHz	28 - 58	table#3	
16	EQ High Gain	-12 - +12dB	52 - 76		

ECHO (variation block)

No.	Parameter	Display	Value	See Table	Control
1	Lch Delay1	0.1 - 355.0ms (variation block)	1 - 3550		
2	Lch Feedback Level	-63 - +63	1 - 127		
3	Rch Delay1	0.1 - 355.0ms (variation block)	1 - 3550		
4	Rch Feedback Level	-63 - +63	1 - 127		
5	High Damp	0.1 - 1.0	1 - 10		
6	Lch Delay2	0.1 - 355.0ms (variation block)	1 - 3550		
7	Rch Delay2	0.1 - 355.0ms (variation block)	1 - 3550		
8	Delay2 Level	0 - 127	0 - 127		
9					
10	Dry/Wet	D63>W - D=W - D<W63	1 - 127		●
11					
12					
13	EQ Low Frequency	50Hz - 2.0kHz	8 - 40	table#3	
14	EQ Low Gain	-12 - +12dB	52 - 76		
15	EQ High Frequency	500Hz - 16.0kHz	28 - 58	table#3	
16	EQ High Gain	-12 - +12dB	52 - 76		

CROSS DELAY (variation block)

No.	Parameter	Display	Value	See Table	Control
1	L->R Delay	0.1 - 355.0ms (variation block)	1 - 3550		
2	R->L Delay	0.1 - 355.0ms (variation block)	1 - 3550		
3	Feedback Level	-63 - +63	1 - 127		
4	Input Select	L, R, L&R	0 - 2		
5	High Damp	0.1 - 1.0	1 - 10		
6					
7					
8					
9					
10	Dry/Wet	D63>W - D=W - D<W63	1 - 127		●
11					
12					
13	EQ Low Frequency	50Hz - 2.0kHz	8 - 40	table#3	
14	EQ Low Gain	-12 - +12dB	52 - 76		
15	EQ High Frequency	500Hz - 16.0kHz	28 - 58	table#3	
16	EQ High Gain	-12 - +12dB	52 - 76		

EARLY REF 1, 2 (variation block)

No.	Parameter	Display	Value	See Table	Control
1	Type	S-H, L-H, Rdm, Rvs, Plt, Spr	0 - 5		
2	Room Size	0.1 - 7.0	0 - 44	table#6	
3	Diffusion	0 - 10	0 - 10		
4	Initial Delay	0.1 - 99.3ms	0 - 63	table#5	
5	Feedback Level	-63 - +63	1 - 127		
6	HPF Cutoff	Thru - 8.0kHz	0 - 52	table#3	
7	LPF Cutoff	1.0k - Thru	34 - 60	table#3	
8					
9					
10	Dry/Wet	D63>W - D=W - D<W63	1 - 127		●
11	Liveness	0 - 10	0 - 10		
12	Density	0 - 3	0 - 3		
13	High Damp	0.1 - 1.0	1 - 10		
14					
15					
16					

GATE REVERB
REVERSE GATE (variation block)

No.	Parameter	Display	Value	See Table	Control
1	Type	TypeA,TypeB	0 - 1		
2	Room Size	0.1 - 7.0	0 - 44	table#6	
3	Diffusion	0 - 10	0 - 10		
4	Initial Delay	0.1 - 99.3ms	0 - 63	table#5	
5	Feedback Level	-63 - +63	1 - 127		
6	HPF Cutoff	Thru - 8.0kHz	0 - 52	table#3	
7	LPF Cutoff	1.0k - Thru	34 - 60	table#3	
8					
9					
10	Dry/Wet	D63>W - D=W - D<W63	1 - 127		●
11	Liveness	0 - 10	0 - 10		
12	Density	0 - 3	0 - 3		
13	High Damp	0.1 - 1.0	1 - 10		
14					
15					
16					

KARAOKE 1, 2, 3 (variation block)

No.	Parameter	Display	Value	See Table	Control
1	Delay Time	0.1 - 400ms	0 - 127	table#7	
2	Feedback Level	-63 - +63	1 - 127		
3	HPF Cutoff	Thru - 8.0kHz	0 - 52	table#3	
4	LPF Cutoff	1.0k - Thru	34 - 60	table#3	
5					
6					
7					
8					
9					
10	Dry/Wet	D63>W - D=W - D<W63	1 - 127		●
11					
12					
13					
14					
15					
16					

CHORUS 1, 2, 3, 4
GM CHORUS 1, 2, 3, 4
FB CHORUS
CELESTE 1, 2, 3, 4 (chorus, variation block)

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz - 39.7Hz	0 - 127	table#1	
2	LFO Depth	0 - 127	0 - 127		
3	Feedback Level	-63 - +63	1 - 127		
4	Delay Offset	0.0 - 50	0 - 127	table#2	
5					
6	EQ Low Frequency	50Hz - 2.0kHz	8 - 40	table#3	
7	EQ Low Gain	-12 - +12dB	52 - 76		
8	EQ High Frequency	500Hz - 16.0kHz	28 - 58	table#3	
9	EQ High Gain	-12 - +12dB	52 - 76		
10	Dry/Wet	D63>W - D=W - D<W63	1 - 127		●
11					
12					
13					
14					
15	Input Mode	mono/stereo	0 - 1		
16					

FLANGER 1, 2, 3
GM FLANGER (chorus, variation block)

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz - 39.7Hz	0 - 127	table#1	
2	LFO Depth	0 - 127	0 - 127		
3	Feedback Level	-63 - +63	1 - 127		
4	Delay Offset	0.0 - 6.3	0 - 63	table#2	
5					
6	EQ Low Frequency	50Hz - 2.0kHz	8 - 40	table#3	
7	EQ Low Gain	-12 - +12dB	52 - 76		
8	EQ High Frequency	500Hz - 16.0kHz	28 - 58	table#3	
9	EQ High Gain	-12 - +12dB	52 - 76		
10	Dry/Wet	D63>W - D=W - D<W63	1 - 127		●
11					
12					
13					
14	LFO Phase Difference	-180 - +180deg	4 - 124	resolution=3deg.	
15					
16					

SYMPHONIC (variation block)

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz - 39.7Hz	0 - 127	table#1	
2	LFO Depth	0 - 127	0 - 127		
3	Delay Offset	0.0 - 50	0 - 127	table#2	
4					
5					
6	EQ Low Frequency	50Hz - 2.0kHz	8 - 40	table#3	
7	EQ Low Gain	-12 - +12dB	52 - 76		
8	EQ High Frequency	500Hz - 16.0kHz	28 - 58	table#3	
9	EQ High Gain	-12 - +12dB	52 - 76		
10	Dry/Wet	D63>W - D=W - D<W63	1 - 127		●
11					
12					
13					
14					
15					
16					

ROTARY SPEAKER (variation block)

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz - 39.7Hz	0 - 127	table#1	●
2	LFO Depth	0 - 127	0 - 127		
3					
4					
5					
6	EQ Low Frequency	50Hz - 2.0kHz	8 - 40	table#3	
7	EQ Low Gain	-12 - +12dB	52 - 76		
8	EQ High Frequency	500Hz - 16.0kHz	28 - 58	table#3	
9	EQ High Gain	-12 - +12dB	52 - 76		
10	Dry/Wet	D63>W - D=W - D<W63	1 - 127		
11					
12					
13					
14					
15					
16					

TREMOLO (variation block)

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz - 39.7Hz	0 - 127	table#1	●
2	AM Depth	0 - 127	0 - 127		
3	PM Depth	0 - 127	0 - 127		
4					
5					
6	EQ Low Frequency	50Hz - 2.0kHz	8 - 40	table#3	
7	EQ Low Gain	-12 - +12dB	52 - 76		
8	EQ High Frequency	500Hz - 16.0kHz	28 - 58	table#3	
9	EQ High Gain	-12 - +12dB	52 - 76		
10					
11					
12					
13					
14	LFO Phase Difference	-180 - +180deg	4 - 124	resolution=3deg.	
15	Input Mode	mono/stereo	0 - 1		
16					

AUTO PAN (variation block)

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz - 39.7Hz	0 - 127	table#1	●
2	L/R Depth	0 - 127	0 - 127		
3	F/R Depth	0 - 127	0 - 127		
4	PAN Direction	L<->R, L->R, L<-R, Lturn, Rturn, L/R	0 - 5		
5					
6	EQ Low Frequency	50Hz - 2.0kHz	8 - 40	table#3	
7	EQ Low Gain	-12 - +12dB	52 - 76		
8	EQ High Frequency	500Hz - 16.0kHz	28 - 58	table#3	
9	EQ High Gain	-12 - +12dB	52 - 76		
10					
11					
12					
13					
14					
15					
16					

PHASER 1 (variation block)

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz - 39.7Hz	0 - 127	table#1	
2	LFO Depth	0 - 127	0 - 127		
3	Phase Shift Offset	0 - 127	0 - 127		
4	Feedback Level	-63 - +63	1 - 127		
5					
6	EQ Low Frequency	50Hz - 2.0kHz	8 - 40	table#3	
7	EQ Low Gain	-12 - +12dB	52 - 76		
8	EQ High Frequency	500Hz - 16.0kHz	28 - 58	table#3	
9	EQ High Gain	-12 - +12dB	52 - 76		
10	Dry/Wet	D63>W - D=W - D<W63	1 - 127		●
11	Stage	6 - 10	6 - 10		
12					
13					
14					
15					
16					

PHASER 2 (variation block)

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz - 39.7Hz	0 - 127	table#1	
2	LFO Depth	0 - 127	0 - 127		
3	Phase Shift Offset	0 - 127	0 - 127		
4	Feedback Level	-63 - +63	1 - 127		
5					
6	EQ Low Frequency	50Hz - 2.0kHz	8 - 40	table#3	
7	EQ Low Gain	-12 - +12dB	52 - 76		
8	EQ High Frequency	500Hz - 16.0kHz	28 - 58	table#3	
9	EQ High Gain	-12 - +12dB	52 - 76		
10	Dry/Wet	D63>W - D=W - D<W63	1 - 127		●
11	Stage	3 - 5	3 - 5		
12					
13	LFO Phase Difference	-180deg - +180deg	4 - 124	resolution=3deg.	
14					
15					
16					

DISTORTION
OVERDRIVE (variation block)

No.	Parameter	Display	Value	See Table	Control
1	Drive	0 - 127	0 - 127		●
2	EQ Low Frequency	50Hz - 2.0kHz	8 - 40	table#3	
3	EQ Low Gain	-12 - +12dB	52 - 76		
4	LPF Cutoff	1.0k - Thru	34 - 60	table#3	
5	Output Level	0 - 127	0 - 127		
6					
7	EQ Mid Frequency	500Hz - 10.0kHz	28 - 54	table#3	
8	EQ Mid Gain	-12 - +12dB	52 - 76		
9	EQ Mid Width	1.0 - 12.0	10 - 120		
10	Dry/Wet	D63>W - D=W - D<W63	1 - 127		
11	Edge(Clip Curve)	0 - 127	0 - 127	mild - sharp	
12					
13					
14					
15					
16					

AMP SIMULATOR (variation block)

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

3BAND EQ(MONO) (variation block)

No.	Parameter	Display	Value	See Table	Control
1	EQ Low Gain	-12 - +12dB	52 - 76		
2	EQ Mid Frequency	500Hz - 10.0kHz	28 - 54	table#3	
3	EQ Mid Gain	-12 - +12dB	52 - 76		
4	EQ Mid Width	1.0 - 12.0	10 - 120		
5	EQ High Gain	-12 - +12dB	52 - 76		
6	EQ Low Frequency	50Hz - 2.0kHz	8 - 40	table#3	
7	EQ High Frequency	500Hz - 16.0kHz	28 - 58	table#3	
8					
9					
10					
11					
12					
13					
14					
15					
16					

2BAND EQ(STEREO) (variation block)

No.	Parameter	Display	Value	See Table	Control
1	EQ Low Frequency	50Hz - 2.0kHz	8 - 40	table#3	
2	EQ Low Gain	-12 - +12dB	52 - 76		
3	EQ High Frequency	500Hz - 16.0kHz	28 - 58	table#3	
4	EQ High Gain	-12 - +12dB	52 - 76		
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

AUTO WAH (variation block)

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz - 39.7Hz	0 - 127	table#1	
2	LFO Depth	0 - 127	0 - 127		
3	Cutoff Frequency Offset	0 - 127	0 - 127		●
4	Resonance	1.0 - 12.0	10 - 120		
5					
6	EQ Low Frequency	50Hz - 2.0kHz	8 - 40	table#3	
7	EQ Low Gain	-12 - +12dB	52 - 76		
8	EQ High Frequency	500Hz - 16.0kHz	28 - 58	table#3	
9	EQ High Gain	-12 - +12dB	52 - 76		
10	Dry/Wet	D63>W - D=W - D<W63	1 - 127		
11					
12					
13					
14					
15					
16					

Effect Data Assign Table

table#1
LFO Frequency

Data	Value	Data	Value	Data	Value	Data	Value
0	0.00	32	1.35	64	2.69	96	8.41
1	0.04	33	1.39	65	2.78	97	8.75
2	0.08	34	1.43	66	2.86	98	9.08
3	0.13	35	1.47	67	2.94	99	9.42
4	0.17	36	1.51	68	3.03	100	9.76
5	0.21	37	1.56	69	3.11	101	10.1
6	0.25	38	1.60	70	3.20	102	10.8
7	0.29	39	1.64	71	3.28	103	11.4
8	0.34	40	1.68	72	3.37	104	12.1
9	0.38	41	1.72	73	3.45	105	12.8
10	0.42	42	1.77	74	3.53	106	13.5
11	0.46	43	1.81	75	3.62	107	14.1
12	0.51	44	1.85	76	3.70	108	14.8
13	0.55	45	1.89	77	3.87	109	15.5
14	0.59	46	1.94	78	4.04	110	16.2
15	0.63	47	1.98	79	4.21	111	16.8
16	0.67	48	2.02	80	4.37	112	17.5
17	0.72	49	2.06	81	4.54	113	18.2
18	0.76	50	2.10	82	4.71	114	19.5
19	0.80	51	2.15	83	4.88	115	20.9
20	0.84	52	2.19	84	5.05	116	22.2
21	0.88	53	2.23	85	5.22	117	23.6
22	0.93	54	2.27	86	5.38	118	24.9
23	0.97	55	2.31	87	5.55	119	26.2
24	1.01	56	2.36	88	5.72	120	27.6
25	1.05	57	2.40	89	6.06	121	28.9
26	1.09	58	2.44	90	6.39	122	30.3
27	1.14	59	2.48	91	6.73	123	31.6
28	1.18	60	2.52	92	7.07	124	33.0
29	1.22	61	2.57	93	7.40	125	34.3
30	1.26	62	2.61	94	7.74	126	37.0
31	1.30	63	2.65	95	8.08	127	39.7

table#2
Modulation Delay Offset

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

table#3
EQ Frequency

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

table#4
Reverb time

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

table#5
Delay Time(200.0ms)

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

table#6
Room Size

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

table#7
Delay Time(400.0ms)

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

table#8
Reverb Width;Depth;Height

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

table#9*
Reverb Parameter (Reverb Time)

Data	Time[s]	Data	Time[s]	Data	Time[s]	Data	Time[s]
0	0.6	32	1.1	64	2.1	96	4.4
1	0.7	33	1.1	65	2.2	97	4.5
2	0.7	34	1.2	66	2.2	98	4.6
3	0.7	35	1.2	67	2.3	99	4.7
4	0.7	36	1.2	68	2.3	100	4.8
5	0.7	37	1.2	69	2.4	101	4.9
6	0.7	38	1.3	70	2.4	102	5.0
7	0.7	39	1.3	71	2.5	103	5.5
8	0.8	40	1.3	72	2.5	104	6.5
9	0.8	41	1.3	73	2.6	105	6.5
10	0.8	42	1.4	74	2.6	106	6.5
11	0.8	43	1.4	75	2.7	107	7.0
12	0.8	44	1.4	76	2.8	108	7.0
13	0.8	45	1.4	77	2.8	109	7.0
14	0.8	46	1.5	78	2.9	110	7.5
15	0.8	47	1.5	79	3.0	111	7.5
16	0.9	48	1.5	80	3.0	112	7.5
17	0.9	49	1.6	81	3.1	113	7.5
18	0.9	50	1.6	82	3.2	114	8.0
19	0.9	51	1.6	83	3.2	115	8.0
20	0.9	52	1.7	84	3.3	116	8.0
21	0.9	53	1.7	85	3.4	117	8.5
22	0.9	54	1.7	86	3.5	118	8.5
23	1.0	55	1.8	87	3.5	119	8.5
24	1.0	56	1.8	88	3.6	120	9.0
25	1.0	57	1.8	89	3.7	121	9.0
26	1.0	58	1.9	90	3.8	122	9.5
27	1.0	59	1.9	91	3.9	123	9.5
28	1.0	60	2.0	92	4.0	124	9.5
29	1.1	61	2.0	93	4.1	125	10.0
30	1.1	62	2.0	94	4.2	126	10.0
31	1.1	63	2.1	95	4.3	127	11.0

table#10*
Chorus Parameter (LFO Frequency)

Data	frequency[Hz]	Data	frequency[Hz]
0	0.00	64	7.74
1	0.13	65	8.08
2	0.25	66	8.08
3	0.38	67	8.08
4	0.51	68	8.41
5	0.59	69	8.41
6	0.72	70	8.41
7	0.84	71	8.75
8	0.97	72	8.75
9	1.09	73	8.75
10	1.22	74	9.08
11	1.35	75	9.08
12	1.47	76	9.42
13	1.60	77	9.42
14	1.72	78	9.42
15	1.85	79	9.76
16	1.94	80	9.76
17	2.06	81	9.76
18	2.19	82	10.1
19	2.31	83	10.1
20	2.44	84	10.1
21	2.57	85	10.1
22	2.69	86	10.8
23	2.78	87	10.8
24	2.94	88	10.8
25	3.03	89	10.8
26	3.20	90	10.8
27	3.28	91	10.8
28	3.45	92	11.4
29	3.53	93	11.4
30	3.70	94	11.4
31	3.70	95	11.4
32	3.87	96	11.4
33	4.04	97	12.1
34	4.21	98	12.1
35	4.21	99	12.1
36	4.37	100	12.1
37	4.54	101	12.1
38	4.71	102	12.1
39	4.71	103	12.8
40	4.88	104	12.8
41	5.05	105	12.8
42	5.05	106	12.8
43	5.22	107	12.8
44	5.38	108	13.5
45	5.55	109	13.5
46	5.55	110	13.5
47	5.72	111	13.5
48	5.72	112	13.5
49	6.06	113	13.5
50	6.06	114	14.1
51	6.06	115	14.1
52	6.39	116	14.1
53	6.39	117	14.1
54	6.73	118	14.1
55	6.73	119	14.8
56	6.73	120	14.8
57	70.7	121	14.8
58	70.7	122	14.8
59	70.7	123	14.8
60	7.40	124	14.8
61	7.40	125	15.5
62	7.40	126	15.5
63	7.74	127	15.5

*For Global Parameter Control (page 21)

MIDI Data Format

1. Channel messages

1.1 Note on/note off

These messages convey keyboard performance data.

Range of note numbers received = 0 (C-2)...60 (C3)...127 (G8)
Velocity range = 1...127 (Velocity is received only for note-on)

When the Multi Part parameter "RECEIVE NOTE MESSAGE" = OFF, that part will not receive these messages.
For a drum part*, key-off is not received if the DrumSetup parameter RECEIVE NOTE OFF = OFF.
For a drum part, key-on is not received if the DrumSetup parameter RECEIVE NOTE ON = OFF.

* Drum Part indicates that the Multi Part parameter PART MODE is "set to DRUM, DRUMS1, DRUMS2."

1.2 Control changes

These messages control volume or pan etc.

Their functions are differentiated by the control number (Ctrl#).
If the Multi Part parameter RECEIVE CONTROL CHANGE = OFF, that part will not receive control changes.

1.2.1 Bank Select

This message selects the voice bank.

Control#	Parameter	Data Range
0	Bank Select MSB	0, 63, 64, 126, 127 (Normal voice, Native voice, SFX voice, SFX kit, Drum kit)
32	Bank Select LSB	0...127

The Bank Select data will be processed only after a Program Change is received, and then voice bank will change at that time.
If you wish to change the voice bank as well as the voice, you must transmit Bank Select and Program Change messages as a set, in the order of Bank Select MSB, LSB, and Program Change.

Not received when Receive Bank Select in Native System Parameters is set to off.

1.2.2 Modulation

This message is used primarily to control the depth of vibrato, but the depth of the following 7 types of effect can be controlled.

The effect of this message can be changed by the following parameters.
• Multi Part Parameter
1. MW PITCH CONTROL
2. MW FILTER CONTROL
3. MW AMPLITUDE CONTROL
4. MW LFO PMOD DEPTH
5. MW LFO FMOD DEPTH
6. MW LFO AMOD DEPTH

• Effect1 Parameter
7. MW VARIATION CONTROL DEPTH
(Valid when Variation Effect is assigned to a part as Insertion)

Control#	Parameter	Data Range
1	Modulation	0...127

If the Multi Part parameter RECEIVE MODULATION = OFF, that part will not receive Modulation.

1.2.3 Portamento Time

This message controls the degree of Portamento (refer to 1.2.9).

Control#	Parameter	Data Range
5	Portamento Time	0...127

When Portamento (control number 065) is ON, this regulates the speed of the pitch change.
If the receive channel is a drum part, Portamento Time is not received.

1.2.4 Data Entry

This message sets the value of the parameter which was specified by RPN MSB/LSB (see 1.2.26) and NRPN MSB/LSB (see 1.2.25).

Control#	Parameter	Data Range
6	Data Entry MSB	0...127
38	Data Entry LSB	0...127

1.2.5 Main Volume

This message controls the volume of each part.
This is used to adjust the volume balance between parts.

Control#	Parameter	Data Range
7	Main Volume	0...127 (no sound...max.)

When the Multi Part parameter RECEIVE VOLUME = OFF, that part will not receive Main Volume.

1.2.6 Panpot

This message control the panning (stereo location) of each part.

Control#	Parameter	Data Range
10	Pan	0...64...127 (left...center...right)

When the Multi Part parameter RECEIVE PAN = OFF, that part will not receive Panpot.

1.2.7 Expression

This message controls expression (dynamics within a musical line) for each part.
It is used to create volume changes during a song.

Control#	Parameter	Data Range
11	Expression	0...127 (no sound...max.)

If the Multi Part parameter RECEIVE EXPRESSION = OFF, that part will not receive Expression.

1.2.8 Hold1

This message controls sustain pedal on/off.

Control#	Parameter	Data Range
64	Hold1	0...63,64...127 (OFF, ON)

When this is ON, currently-sounding notes will continue to sound even if note-off messages are received.
If the Multi Part parameter RECEIVE HOLD1 = OFF, that part will not receive Hold1.

1.2.9 Portamento

This message controls portamento on/off.

Control#	Parameter	Data Range
65	Portamento	0...63,64...127 (OFF, ON)

When this is ON, the pitch will change smoothly between notes. The time over which the pitch changes is adjusted by Portamento Time (see 1.2.3). Also, when the Multi Part parameter MONO/POLY MODE = MONO, the tone will also change smoothly (legato) if Portamento = ON.
If any of the following Multi Part parameter settings apply, that part will not receive Portamento.
- RECEIVE PORTAMENTO = OFF
- PART MODE=DRUM, DRUMS1, 2

1.2.10 Sostenuto

This message controls sostenuto pedal on/off.

Control#	Parameter	Data Range
66	Sostenuto	0...63,64...127 (OFF, ON)

If sostenuto is turned on while a note is sounding, that note will be sustained until sostenuto is turned OFF.
Sostenuto for the specified part is not received when RECEIVE SOSTENUTO of the part in Multi Part Parameters is set to off.

1.2.11 Soft Pedal

This message controls soft pedal on/off.

Control#	Parameter	Data Range
67	Soft Pedal	0...63,64...127 (OFF, ON)

The sound will become mellower when Soft Pedal is ON.
If any of the following Multi Part parameter settings apply, that part will not receive the Soft Pedal.
- RECEIVERECEIVE SOFT PEDAL=OFF
- PART MODE=DRUM, DRUMS1/2

1.2.12 Harmonic Content

This message adjusts the resonance of the filter that is specified for the sound.

Control#	Parameter	Data Range
71	Harmonic Content	0...64...127 (-64...0...+63)

Higher values will produce a more distinctive sound.
For some sounds, the effective range may be less than the possible range of settings.

1.2.13 Release Time

This message adjusts the EG release time that was specified by the sound data.

Control#	Parameter	Data Range
72	Release Time	0...64...127 (-64...0...+63)

Increasing this value will lengthen the release that follows a note-off.

1.2.14 Attack Time

This message adjusts the EG attack time that was specified by the sound data.

Control#	Parameter	Data Range
73	Attack Time	0...64...127 (-64...0...+63)

Increasing this value will make the attack more gradual, and decreasing this value will make the attack sharper.

1.2.15 Brightness

This message adjusts the cutoff frequency of the low pass filter specified by the sound data.

Control#	Parameter	Data Range
74	Brightness	0...64...127 (-64...0...+63)

Lower values will produce a more mellow sound.
For some sounds, the effective range may be less than the possible range of settings.

1.2.16 Decay Time

This messages adjusts the EG Decay Time that was specified by the sound data.

Control#	Parameter	Data Range
75	Decay Time	0...64...127 (-64...0...+63)

Increasing this value will lengthen the decay that follows an attack.

1.2.17 Vibrato Rate

This messages adjusts the vibrato rate (speed) that was specified by the sound data.

Control#	Parameter	Data Range
76	Vibrato Rate	0...64...127 (-64...0...+63)

The higher the value the greater the vibrato speed.

1.2.18 Vibrato Depth

This messages adjusts the vibrato depth that was specified by the sound data.

Control#	Parameter	Data Range
77	Vibrato Depth	0...64...127 (-64...0...+63)

Increasing this value will make the vibrato depth greater.

1.2.19 Vibrato Delay

This message adjusts the vibrato delay time before the vibrato (as specified by the sound data) comes into effect.

Control#	Parameter	Data Range
78	Vibrato Delay	0...64...127 (-64...0...+63)

The higher the value the longer the delay.

1.2.20 Portamento Control

This message specifies the portamento source key number (the key number at which portamento will begin).
Data of 0...127 specifies the portamento source key.
When Portamento Control is received, the currently-sounding pitch will change at a Portamento Time of 0 to the key of the next-received note-on of the same channel.

Control#	Parameter	Data Range
84	Portamento Control	0...127 (C-2...G8)

This is received even if RECEIVE PORTAMENTO = OFF.

1.2.21 Effect1 Depth (Reverb Send Level)

This message specifies the send level for the reverb effect.

Control#	Parameter	Data Range
91	Effect1 Depth	0...127

Increasing this value will produce a richer reverb. The effect of the value will depend on the state of the reverb effect.

1.2.22 Effect3 Depth (Chorus Send Level)

This message specifies the send level for the chorus effect.

Control#	Parameter	Data Range
93	Effect3 Depth	0...127

Raising this value will increase the modulation or spaciousness. The effect of the value will depend on the state of the chorus effect.

1.2.23 Effect4 Depth (Variation Effect Send Level)

This message specifies the send level for the variation effect.

Control#	Parameter	Data Range
94	Effect4 Depth	0...127

However, this is not received if the Variation Effect parameter Variation Connection = 0 (Insertion).

1.2.24 Data Increment/Decrement (for RPN)

This message increases or decreases the parameter value specified for RPN (see 1.2.22), by increments of 1.

Control#	Parameter	Data Range
96	RPN Increment	--
97	RPN Decrement	--

The data byte is ignored.

1.2.25 NRPN (Non-registered parameter number)

This message is used to specify a sound parameter (such as vibrato, filter, EG, drum setup etc.) as an offset value.
Use NRPN MSB and NRPN LSB to specify the parameter that you wish to modify, and then use Data Entry (see 1.2.4) to set the value for the specified parameter.

Control#	Parameter	Data Range
98	NRPN LSB	0...127
99	NRPN MSB	0...127

If the Multi Part parameter RECEIVE NRPN = OFF, that part will not receive NRPN.

The following NRPN messages can be received.

NRPN MSB	NRPN LSB	Data Entry*1 MSB	Data Entry*1 LSB	Parameter name and value range
01H	08H	mm	--*2	Vibrato rate mm : 00H - 40H - 7FH (-64...0...+63)
01H	09H	mm	--	Vibrato depth mm : 00H - 40H - 7FH (-64...0...+63)
01H	0AH	mm	--*3	Vibrato delay mm : 00H - 40H - 7FH (-64...0...+63)
01H	20H	mm	--	Low pass filter cutoff frequency mm : 00H - 40H - 7FH (-64...0...+63)
01H	21H	mm	--	Low pass filter resonance mm : 00H - 40H - 7FH (-64...0...+63)
01H	63H	mm	--	EG attack time mm : 00H - 40H - 7FH (-64...0...+63)
01H	64H	mm	--	EG decay time mm : 00H - 40H - 7FH (-64...0...+63)
01H	66H	mm	--	EG release time mm : 00H - 40H - 7FH (-64...0...+63)
14H	rr	mm	--	Drum low pass filter cutoff frequency rr : drum instrument note number mm : 00H - 40H - 7FH (-64...0...+63)
15H	rr	mm	--	Drum low pass filter resonance rr : drum instrument note number mm : 00H - 40H - 7FH (-64...0...+63)
16H	rr	mm	--	Drum EG attack rate rr : drum instrument note number mm : 00H - 40H - 7FH (-64...0...+63)
17H	rr	mm	--	Drum EG decay rate rr : drum instrument note number mm : 00H - 40H - 7FH (-64...0...+63) The effect will apply both to Decay 1 and 2.
18H	rr	mm	--	Drum instrument pitch coarse rr : drum instrument note number mm : 00H - 40H - 7FH (-64...0...+63)
19H	rr	mm	--	Drum instrument pitch fine rr : drum instrument note number mm : 00H - 40H - 7FH (-64...0...+63)
1AH	rr	mm	--	Drum instrument level rr : drum instrument note number mm : 00H - 7FH (0...maximum)
1CH	rr	mm	--	Drum instrument panpot rr : drum instrument note number mm : 00H, 01H-40H-7FH (RND, L63...C...R63)
1DH	rr	mm	--	Drum instrument reverb send level rr : drum instrument note number mm : 00H - 7FH (0...maximum)
1EH	rr	mm	--	Drum instrument chorus send level rr : drum instrument note number mm : 00H - 7FH (0...maximum)
1FH	rr	mm	--	Drum instrument variation send level rr : drum instrument note number mm : 00H - 7FH (0...maximum) (when Variation Connection = SYSTEM) mm : 00H, 01H-7FH (OFF, ON) (when Variation Connection = INSERTION)

MSB 14H - 1FH (for drums) is received when Multi Part parameter PART MODE = DRUMS1, 2.

*1 Refer to 1.2.4
*2 '--' indicates that the setting value is ignored.
*3 Adjusts the time after the note is played until vibrato begins to take effect. The effect will begin more quickly for higher values, and more slowly for higher values.

1.2.26 RPN (Registered parameter number)

This message is used to specify part parameters such as Pitch Bend Sensitivity or Tuning etc. as an offset value.
Use RPN MSB and RPN LSB to specify the parameter that you wish to modify, and then use Data Entry (see 1.2.4) to set the value of the specified parameter.

Control#	Parameter	Data Range
100	RPN LSB	0...127
101	RPN MSB	0...127

If the Multi Part parameter RECEIVE RPN = OFF, that part will not receive this message.

The following RPN messages can be received.

NRPN MSB LSB	Data Entry*1 MSB LSB	Parameter name and value range
00H 00H	mm -- *2	Pitch bend sensitivity mm:00-18H (0...+24 semitones) Specify up to 2 octaves in semitone steps
00H 01H	mm ll	Fine tuning mm ll: 00H 00H -100 cents : : mm ll: 40H 00H 0 cents : : mm ll: 7FH 7FH +100 cents [Note] mm ll: 00H 7FH (= -87.5) cents is followed by 01H 00H (= -87.4) cents.
00H 05H	mm ll	Modulation Sensitivity mm Specify in semitone steps ll Specify in 100/128 cent steps ex. mm ll: 01H 00H ±1 semitone mm ll: 00H 08H ±6.25 cents
00H 02H	mm --	Coarse tuning mm:28H - 40H - 58H (-24...0...+24 semitones)
7FH 7FH	-- --	RPN Null This sets RPN and NRPN numbers to an unset state. Internal data is not affected.

*1 Refer to 1.2.4
*2 '--' indicates that the setting value is ignored.

1.2.27 Assignable controller

By assigning a control change number of 0...95 to a part, the specified effect can be controlled.
This device allows two control change numbers (AC1 and AC2) to be specified for each part.
The following parameters specify the effect of AC1 and AC2.
• Multi Part Parameter
1. AC1, AC2 PITCH CONTROL
2. AC1, AC2 FILTER CONTROL
3. AC1, AC2 AMPLITUDE CONTROL
4. AC1, AC2 LFO PMOD DEPTH
5. AC1, AC2 LFO FMOD DEPTH
6. AC1, AC2 LFO AMOD DEPTH

• Effect1 Parameter
7. AC1, AC2 VARIATION CONTROL DEPTH
(Valid if Variation Effect is assigned to a part as Insertion)

The AC1 control change number is specified by the Multi Part parameter AC1 CONTROLLER NUMBER, and the AC2 control change number is specified by the Multi Part parameter AC2 CONTROLLER NUMBER.

1.3 Channel mode messages

These messages specify the basic operation of a part.

1.3.1 All Sound Off

This message silences all currently-sounding notes on the corresponding channel. However, the settings of channel messages such as Hold will be maintained.

```
Control#    Parameter           Data Range
120         All Sound Off       0
```

1.3.2 Reset All Controllers

This message resets the following controllers to their default values.

Controller	Value
Pitch bend change	±0 (center)
Channel Aftertouch	0 (off)
Polyphonic Aftertouch	0 (off)
Modulation	0 (off)
Expression	127 (maximum)
Hold	0 (off)
Portamento	0 (off)
Sostenuto	0 (off)
Soft pedal	0 (off)
Portamento control	Reset the portamento source note number that was received.
RPN	Number unset, internal data is not affected.
NRPN	Number unset, internal data is not affected.

The following data is not changed.
Parameter values specified by program change, bank select MSB/LSB, volume, pan, effect send levels 1, 3, 4, RPN and NRPN.

```
Control#    Parameter           Data Range
121         Reset All Controllers  0
```

1.3.3 All Note Off

This message turns off all notes which are currently on for the corresponding part. However, if Hold 1 or Sostenuto are on, notes will continue to sound until these are turned off.

```
Control#    Parameter           Data Range
123         All Note Off        0
```

1.3.4 Omni Off

Perform the same processing as when All Note Off is received.

```
Control#    Parameter           Data Range
124         Omni Off            0
```

1.3.5 Omni On

Perform the same processing as when All Note Off is received.

```
Control#    Parameter           Data Range
125         Omni On             0
```

1.3.6 Mono

Perform the same processing as when All Sound Off is received, and if the value (mono number) is in the range of 0...16, set the corresponding channel to Mode4* (m = 1).

```
Control#    Parameter           Data Range
126         Mono                0...16
```

*Mode4 is a state in which only channel messages on the specified channel will be received, and notes will be sounded individually (monophonically).

1.3.7 Poly

Perform the same processing as when All Sound Off is received, and set the corresponding channel to Mode3*.

```
Control#    Parameter           Data Range
127         Poly                0
```

*Mode3 is when channel messages will be received only on the specified channel, and will be sounded polyphonically.

1.4 Program change

This message reports sound selection changes and changes the program number of the receiving channel.

In order to include changes to the voice bank, Program Change and Bank Select messages must be sent as a set (see 1.2.1).
When RevPROGRAM CHANGE = OFF for Multi Part Parameter, the program change for that part is not received.
Not received when Receive Program Change in Native System Parameters is set to off.

1.5 Pitch bend

This message conveys movements of the pitch bender.

This message is generally used to modify the pitch of a part, but the depth of the following seven effects can be controlled.
The effect of this message can be modified by the following parameters.
• Multi Part Parameter
1. BEND PITCH CONTROL
2. BEND FILTER CONTROL
3. BEND AMPLITUDE CONTROL
4. BEND LFO PMOD DEPTH
5. BEND LFO FMOD DEPTH
6. BEND LFO AMOD DEPTH

• Effect1 Parameter
7. BEND VARIATION CONTROL DEPTH
(Valid when Variation Effect is assigned to a part as Insertion)

By default, the Pitch Control effect is applied.

If the Multi Part parameter RECEIVE PITCH BEND CHANGE = OFF, that part will not receive pitch bend messages.

1.6 Channel aftertouch (Receive only)

This message conveys the pressure which is applied to the keyboard after playing a note in order to create tonal changes (for an entire MIDI channel).

The pressure can be controlled for each part. This message will affect the currently-sounding notes.
The effect of this message will be determined by the settings of the following parameters.
• EMulti Part Parameter
1. CAT PITCH CONTROL
2. CAT FILTER CONTROL
3. CAT AMPLITUDE CONTROL
4. CAT LFO PMOD DEPTH
5. CAT LFO FMOD DEPTH
6. CAT LFO AMOD DEPTH

• Effect1 Parameter
7. CAT VARIATION CONTROL DEPTH
(Valid when the Variation Effect is assigned to a part as Insertion)

By default, there will be no effect.

If the Multi Part parameter RECEIVE CHANNEL AFTER TOUCH = OFF, that part will not receive Channel Aftertouch.

1.7 Polyphonic aftertouch (Receive only)

This message conveys the pressure that is applied to the keyboard after playing a note (for individual note numbers).

The pressure can be controlled independently for each note. This message will affect currently-sounding notes.
The effect of this message is determined by the following Multi Part parameters.

1. PAT PITCH CONTROL
2. PAT FILTER CONTROL
3. PAT AMPLITUDE CONTROL
4. PAT LFO PMOD DEPTH
5. PAT LFO FMOD DEPTH
6. PAT LFO AMOD DEPTH

By default, there will be no effect.
The effect will apply to note numbers 36...97.
In the case of either of the following Multi Part parameter settings, that part will not receive Polyphonic Aftertouch.

- RECEIVE CHANNEL AFTER TOUCH = OFF
- PART MODE = DRUM, DRUMS1, 2

2. System exclusive messages

2.1 Parameter changes

This devices uses the following parameter changes.

[UNIVERSAL REALTIME MESSAGE]

1) Master Volume
2) Master Fine Tuning
3) Master Coarse Tuning
4) Global Parameter Control
   1) Reverb Parameter
   2) Chorus Parameter
5) Controller Destination Setting
   1) Channel Pressure (After Touch)
   2) Control Change
6) Key-Based Instrument Controllers

[UNIVERSAL NON REALTIME MESSAGE]

1) General MIDI System On
2) General MIDI 2 System On
3) General MIDI Off
4) Scale/Octave Tuning
5) Identity Request (INQUIRY MESSAGE)
6) Identity Reply (INQUIRY MESSAGE)

[XG PARAMETER CHANGE]

1) XG System on
2) XG System parameter change
3) Multi Effect1 parameter change
4) Multi Part parameter change
5) Drums Setup parameter change

[NATIVE PARAMETER CHANGE]

1) Native System parameter change
2) Remote Switch parameter change
3) Normal Voice parameter change
4) Drum Voice parameter change

[Others]

1) Master tuning

2.1.1 Universal realtime messages

2.1.1.1 Master Volume

11110000	F0H	= Exclusive status
01111111	7FH	= Universal Real Time
01111111	7FH	= ID of target device
00000100	04H	= Sub-ID #1=Device Control Message
00000001	01H	= Sub-ID #2=Master Volume
*0ssssss	SSH	= Volume LSB
0ttttttt	TTH	= Volume MSB
11110111	F7H	= End of Exclusive

or,

11110000	F0H	= Exclusive status
01111111	7FH	= Universal Real Time
0xxxnnnn	XNH	= n:Device Number, x=ignored
00000100	04H	= Sub-ID #1=Device Control Message
00000001	01H	= Sub-ID #2=Master Volume
0ssssss	SSH	= Volume LSB
0ttttttt	TTH	= Volume MSB
11110111	F7H	= End of Exclusive

When this is received, the Volume MSB will be reflected by the System parameter MASTER VOLUME.

*The binary expression 0ssssss is expressed in hexadecimal as SSH. The same applies elsewhere.

2.1.1.2 Master Fine Tuning (Global tuning)

11110000	F0H	= Exclusive status
01111111	7FH	= Universal Real Time
0xxxnnnn	XNH	= ID of target device
00000100	04H	= Sub-ID #1=Device Control Message
00000011	03H	= Sub-ID #2=Master Fine Tuning
0ssssss	SSH	= Fine Tuning LSB
0ttttttt	TTH	= Fine Tuning MSB
11110111	F7H	= End of Exclusive

The value set here is relative to 440Hz and will be added to or subtracted from RPN Fine Tuning.
When the Multi number or the tone generetor mode is changed , Fine Tuning set here will be restored to the default value.

Fine Tuning value		
LSB(SS)	MSB(TT)	
00H	00H	100 ÷ 8192 x (-8192) cents
00H	40H	100 ÷ 8192 x 0 cents
7FH	7FH	100 ÷ 8192 x (+8191) cents

2.1.1.3 Master Coarse Tuning (Global tuining in semitone steps)

11110000	F0H	= Exclusive status
01111111	7FH	= Universal Real Time
0xxxnnnn	XNH	= ID of target device
00000100	04H	= Sub-ID #1=Device Control Message
00000100	04H	= Sub-ID #2=Master Coarse Tuning
00000000	00H	= Coarse Tuning LSB
0ttttttt	TTH	= Coarse Tuning MSB
11110111	F7H	= End of Exclusive

The value set here is relative to 440Hz and will be added to or subtracted from RPN Coarse Tuning.
When the Multi nunber or the tone generetor mode is changed, Fine Tuning set here will be restored to the default value.

Coarse Tuning Value		
LSB	MSB(TT)	
00H	00H	100 x (-64) cents
00H	40H	100 x 0 cents
00H	7FH	100 x (+63) cents

2.1.1.4 Global Parameter Control

2.1.1.4.1 Reverb Parameter

11110000	F0H	= Exclusive status
01111111	7FH	= Universal Real Time
0xxxnnnn	XNH	= ID of target device
00000100	04H	= Sub-ID #1=Device Control Message
00000101	05H	= Sub-ID #2=Global Parameter Control
00000001	01H	= Slot path length = 1
00000001	01H	= Parameter ID width = 1
00000001	01H	= Value width = 1
00000001	01H	= Slot path LSB = 1 (Effect 0101: Reverb)
00000001	01H	= Slot path MSB = 1
0ppppppp	PPH	= Parameter to be controlled.
0vvvvvvv	VVH	= Value for the Parameter.
11110111	F7H	= End of Exclusive

Parameter(pp)	Value(vv)	Display
pp=0 Reverb Type	0...8	0:Room S 1:Room M 2:Room L 3:Hall M 4:Hall L (default) 8:GM Plate
pp=1 Reverb Time	0...127	0.6...11.0s Refer to Table#9

2.1.1.4.2 Chorus Parameter

11110000	F0H	= Exclusive status
01111111	7FH	= Universal Real Time
0xxxnnnn	XNH	= ID of target device
00000100	04H	= Sub-ID #1=Device Control Message
00000101	05H	= Sub-ID #2=Global Parameter Control
00000001	01H	= Slot path length = 1
00000001	01H	= Parameter ID width = 1
00000001	01H	= Value width = 1
00000001	01H	= Slot path LSB = 1 (Effect 0102: Chorus)
00000010	02H	= Slot path MSB = 2
0ppppppp	PPH	= Parameter to be controlled.
0vvvvvvv	VVH	= Value for the Parameter.
11110111	F7H	= End of Exclusive

Parameter(pp)	Value(vv)	Display
pp=0 Chorus Type	0...5	0:GM Chorus1 1:GM Chorus2 2:GM Chorus3 (default) 3:GM Chorus4 4:FB Chorus 5:GM Flanger
pp=1 Mod Rate (Modulation Rate)	0...127	0...15.5 Hz Refer to Table#10
pp=2 Mod Depth (Modulation Depth)	0...127	2...127
pp=3 Feedback (Feedback Level)	0...127	0...63
pp=4 Send to Reverb (Send Level from Chorus to Reverb)	0...127	0...127

2.1.1.5 Controller Destination Setting

2.1.1.5.1 Channel Pressure (Aftertouch)

```
11110000        F0H         = Exclusive status
01111111        7FH         = Universal Real Time
0xxxnnnn        XNH         = ID of target device
00001001        09H         = Sub-ID #1=Controller Destination Setting
00000001        01H         = Sub-ID #2=Controller Type: 01 (Channel Pressure)
0000mmmm        0MH         = MIDI Channel (00 - 0F)
0ppppppp        PPH         = Controlled Parameter
0rrrrrrr        RRH         = Data
:               :
11110111        F7H         = End of Exclusive
```

Make sure to set both the controlled parameter and the respective value.
Parameters not set will be restored to their default values.

Controlled Parameter(pp)	Data(RR)	Description	Default value
pp=00 Pitch Control	28H - 58H	-24...0...+24 semitones	40H
pp=01 Filter Cutoff Control	00H - 7FH	-9600...0...+9450 cents	40H
pp=02 Amplitude Control	00H - 7FH	-100...0...+100 %	40H
pp=03 LFO Pitch Depth	00H - 7FH	0...127	00H
pp=04 LFO Filter Depth	00H - 7FH	0...127	00H
pp=05 LFO Amplitude Depth	00H - 7FH	0...127	00H

2.1.1.5.2 Controller (Control Change) (applied to each part)

```
11110000        F0H         = Exclusive status
01111111        7FH         = Universal Real Time
0xxxnnnn        XNH         = ID of target device
00001001        09H         = Sub-ID #1=Controller Destination Setting
00000011        03H         = Sub-ID #2=Controller Type: 03 (Control Change)
0000mmmm        0MH         = MIDI Channel (00 - 0F)
0ccccccc        CCH         = Controller Number (01 - 1F, 40 - 5F)
0ppppppp        PPH         = Controlled Parameter
0rrrrrrr        RRH         = Range
:               :
11110111        F7H         = End of Exclusive
```

Make sure to set both the controlled parameter and the respective value.
Parameters not set will be restored to their default values.

Controlled Parameter(pp)	Data(RR)	Description	Default value
pp=00 Pitch Control	28H - 58H	-24...0...+24 semitones	40H
pp=01 Filter Cutoff Control	00H - 7FH	-9600...0...+9450 cents	40H
pp=02 Amplitude Control	00H - 7FH	-100...0...+100 %	40H
pp=03 LFO Pitch Depth	00H - 7FH	0...127	00H
pp=04 LFO Filter Depth	00H - 7FH	0...127	00H
pp=05 LFO Amplitude Depth	00H - 7FH	0...127	00H

2.1.1.6 Key-based Instrument Control (such as volume or pan settings)

```
11110000        F0H         = Exclusive status
01111111        7FH         = Universal Real Time
0xxxnnnn        XNH         = ID of target device
00001010        0AH         = Sub-ID #1=Key-Based Instrument Control
00000001        01H         = Sub-ID #2=Controller
0000mmmm        0MH         = MIDI Channel (00 - 0F)
0kkkkkkk        KKH         = Key number
0ccccccc        CCH         = Controller Number
0vvvvvvv        VVH         = Value
:               :
11110111        F7H         = End of Exclusive
```

Make sure to set both the controlled parameter and the respective value.

Control Number(CC)	Value(VV)	Description	Default value
CC=07H Volume	00H - 7FH	-100...0...+100 %	40H
CC=0AH Pan	00H - 7FH(absolute)	L63...C...R63	(Preset value)
CC=5BH Reverb Send Level	00H - 7FH(absolute)	0...Max	(Preset value)
CC=5DH Chorus Send Leve	l00H - 7FH(absolute)	0...Max	(Preset value)

These messages are effective only for parts to which drum voices (part mode is set to drumS1/2) are assigned (effective only when in the Multi mode).

2.1.2 Universal non-realtime messages

2.1.2.1 General MIDI System On

```
11110000        F0H         = Exclusive status
01111110        7EH         = Universal Non-Real Time
01111111        7FH         = ID of target device
00001001        09H         = Sub-ID #1=General MIDI Message
00000001        01H         = Sub-ID #2=General MIDI On
11110111        F7H         = End of Exclusive
```

or,

```
11110000        F0H         = Exclusive status
01111110        7EH         = Universal Non-Real Time
0xxxnnnn        XNH         = n:Device Number, x:ignored
00001001        09H         = Sub-ID #1=General MIDI Message
00000001        01H         = Sub-ID #2=General MIDI On
11110111        F7H         = End of Exclusive
```

All data except for MIDI Master Tuning will be restored to the GM default value.

2.1.2.2 GM2 System On

```
11110000        F0H         = Exclusive status
01111110        7EH         = Universal Non-Real Time
0xxxnnnn        XNH         = ID of target device
00001001        09H         = Sub-ID #1=General MIDI Message
00000011        03H         = Sub-ID #2=General MIDI 2 On
11110111        F7H         = End of Exclusive
```

All data except for MIDI Master Tuning will be restored to the GM2 default value.

2.1.2.3 GM System Off

```
11110000        F0H         = Exclusive status
01111110        7EH         = Universal Non-Real Time
0xxxnnnn        XNH         = ID of target device
00001001        09H         = Sub-ID #1=General MIDI Message
00000010        02H         = Sub-ID #2=General MIDI Off
11110111        F7H         = End of Exclusive
```

All data except for MIDI Master Tuning will be restored to the XG default value.

2.1.2.4 Scale/Octave Tuning

```
11110000        F0H         = Exclusive status
01111110        7EH         = Universal Non-Real Time
0xxxnnnn        XNH         = ID of target device
00001000        08H         = Sub-ID #1=MIDI Tuning Standard
00001000        08H         = Sub-ID #2=scale/octave tuning 1-byte form
0jjjjjjj        JJH         = Channel/option byte 1
                                  bits 0 to 1 = channel 15 to 16
                                  bit 2 to 6 = reserved
0ggggggg        GGH         = Channel byte 2 - bits 0 to 6 = channel 8 to 14
0mmmmmmm        MMH         = Channel byte 3 - bits 0 to 6 = channel 1 to 7
0sssssss        SSH         = 12 byte tunning offset of 12 semitones from C to B
                                  00H means -64 cents
                                  40H means   0 cents
                                  7FH means +63 cents
:               :
11110111        F7H         = End of Exclusive
```

2.1.2.5 Identity Request

```
11110000        F0H         = Exclusive status
01111110        7EH         = Universal Non-Real Time
0mmmmmmm        MMH         = Device Number
00000110        06H         = Sub-ID #1=General Information
00000001        01H         = Sub-ID #2=Identity Request
11110111        F7H         = End of Exclusive
```

When this message is received, this device will transmit an Identity Reply message as described in the following section2.1.2.3.

2.1.2.6 Identity Reply

```
11110000        F0H         = Exclusive status
01111110        7EH         = Universal Non-Real Time
0mmmmmmm        MMH         = Device Number
00000110        06H         = Sub-ID #1=General Information
00000010        02H         = Sub-ID #2=Identity Reply
01000011        43H         = YAMAHA ID
00000000        00H         = Device Family Code LSB S08 ID #1
01000001        41H         = Device Family Code MSB S08 ID #2
01111001        2BH         = Device Number Code LSB S08 ID #3
00000100        05H         = Device Number Code MSB S08 ID #4
00000000        00H
00000000        00H
00000000        00H
00000001        01H         = Tone Generator Code=XG
11110111        F7H         = End of Exclusive
```

This device will transmit this message when it receives the Identity Request message of 2.1.2.2.

2.1.3 XG parameter change

This message sets XG-related parameters. Each message can set a single parameter. The message format is as follows.

```
11110000        F0H         Exclusive status
01000011        43H         YAMAHA ID
0001nnnn        1NH         N:Device Number
01001100        4CH         Model ID
0ggggggg        GGH         Address High
0mmmmmmm        MMH         Address Mid
0lllllll        LLH         Address Low
0sssssss        SSH         Data
    :            :
11110111        F7H         End of Exclusive
```

For parameters whose Data Size is 2 or 4, the appropriate amount of data will be transmitted as indicated by Size

2.1.3.1 XG System On

11110000	F0H	Exclusive status
01000011	43H	YAMAHA ID
0001nnnn	1NH	N:Device Number
01001100	4CH	Model ID
00000000	00H	Address High
00000000	00H	Address Mid
01111110	7EH	Address Low
00000000	00H	Data
11110111	F7H	End of Exclusive

2.1.3.2 XG System parameter change

This message sets the XG SYSTEM block (refer to tables <1-1>, <1-2>).

2.1.3.3 Multi Effect1 parameter change

This message sets the MULTI EFFECT1 block (refer to tables <1-1>, <1-4>).
The S08 responds to this message only when it is set to the Multi mode.

2.1.3.4 Multi Part parameter change

This message sets the MULTI PART block (refer to tables <1-1>, <1-5>).
The S08 responds to this message only when it is set to the Multi mode.

2.1.3.5 Drums Setup parameter change

This message sets the DRUMS SETUP block (refer to tables <1-1>, <1-6>).
The S08 responds to this message only when it is set to the Multi mode.

2.1.4 S08 native parameter change

This message sets parameters unique to the S08. Each message sets a single parameter.
Each message modifies a single parameter.
The message format is as follows.

11110000	F0H	Exclusive status
01000011	43H	YAMAHA ID
0001nnnn	1NH	N:Device Number
01101100	6CH	Model ID
0ggggggg	GGH	Address High
0mmmmmmm	MMH	Address Mid
0lllllll	LLH	Address Low
0sssssss	SSH	Data
:	:	
11110111	F7H	End of Exclusive

For parameters whose Data Size is 2 or 4, the number of data bytes indicated by Size are transmitted.

2.1.4.1 Native System parameter change

This message sets the NATIVE SYSTEM block (refer to tables <2-1>, <2-3>).

2.1.4.2 Remote Switch parameter change

This message sets the REMOTE SWITCH block (refer to tables <2-1>, <2-5>).

2.1.4.3 Normal Voice parameter change

This message sets the NORMAL VOICE (Edit Buffer) block (refer to tables <2-1>, <2-9>, <2-10>).
The S08 responds to this message only when it is set to the Voice mode.

2.1.4.4 Drum Voice parameter change

This message sets the DRUM VOICE (Edit Buffer) block (refer to tables <2-1>, <2-11>, <2-12>).
The S08 responds to this message only when it is set to the Voice mode.

2.1.5 Other parameter changes

2.1.5.1 Master tuning

This message simultaneously modifies the tuning of all channels.

11110000	F0H	Exclusive status
01000011	43H	YAMAHA ID
0001nnnn	1NH	N:Device Number
00100111	27H	Model ID
00110000	30H	Address High
00000000	00H	Address Mid
00000000	00H	Address Low
0000mmmm	0MH	Master Tune MSB
0000llll	0LH	Master Tune LSB
0xxxxxxx	XXH	ignored
11110111	F7H	End of Exclusive

Normally, the XG SYSTEM message MASTER TUNE should be used (refer to table <1-2>).

2.2 Bulk dump

This device uses the following bulk dump messages.

[XG BULK DUMP]
1) XG System bulk dump
2) System Information bulk dump
3) Multi Effect1 bulk dump
4) Multi Part bulk dump
5) Drums Setup bulk dump

[NATIVE BULK DUMP]
1) Native System bulk dump
2) Bulk Control bulk dump
3) Native Multi bulk dump
4) Normal Voice bulk dump
5) Drum Voice bulk dump

2.2.1 XG bulk dump

This message sets XG-related parameters. Unlike parameter change messages, a single message can modify multiple parameters. The message format is as follows.

11110000	F0H	Exclusive status
01000011	43H	YAMAHA ID
0000nnnn	0NH	N:Device Number
01001100	4CH	Model ID
0sssssss	SSH	ByteCountMSB
0ttttttt	TTH	ByteCountLSB
0ggggggg	GGH	Address High
0mmmmmmm	MMH	Address Mid
0lllllll	LLH	Address Low
0vvvvvvv	VVH	Data
:	:	
0kkkkkkk	KKH	Check-sum
11110111	F7H	End of Exclusive

Address and Byte Count are given in tables 1-n. Byte Count is indicated by the total size of the Data in tables 1-n.
Bulk dump and dump request messages are received when the beginning of the block is specified as the 'Address'.
'Block' indicates the unit of the data string that is indicated in tables 1-n as 'Total size'.
Check sum is the value that produces a lower 7 bits of 0 when the Start Address, Byte Count, Data, and the Check-sum itself are added.

2.2.1.1 XG System bulk dump

This message sets the XG SYSTEM block (refer to tables <1-1>, <1-2>).

2.2.1.2 System Information bulk dump

This message indicates the contents of the SYSTEM INFORMATION block (refer to tables <1-1>, <1-3>).
This message is transmitted in response to a Dump Request, but this message will be ignored if it is received.

2.2.1.3 Multi Effect1 bulk dump

This message sets the MULTI EFFECT1 block (refer to tables <1-1>, <1-4>).

2.2.1.4 Multi Part bulk dump

This message sets the MULTI PART block (refer to tables <1-1>, <1-5>).

2.2.1.5 Drums Setup bulk dump

This message sets the DRUMS SETUP block (refer to tables <1-1>, <1-6>).

2.2.2 S08 native bulk dump

This message modifies parameters unique to the S08. Unlike parameter change messages, a single message will modify multiple parameters.
The message format is as follows.

11110000	F0H	Exclusive status
01000011	43H	YAMAHA ID
0000nnnn	0NH	N:Device Number
01101100	6CH	Model ID
0sssssss	SSH	Byte Count MSB
0ttttttt	TTH	Byte Count LSB
0ggggggg	GGH	Address High
0mmmmmmm	MMH	Address Mid
0lllllll	LLH	Address Low
0vvvvvvv	VVH	Data
:	:	
0kkkkkkk	KKH	Check-sum
11110111	F7H	End of Exclusive

Address and Byte Count are given in tables x-n. Byte Count is indicated by the total size of the Data in tables x-n.
Bulk dump and dump request messages are received when the beginning of the block is specified as the 'Address'.
Block indicates the unit of the data string that is indicated in tables x-n as 'Total size'.
Check sum is the value that produces a lower 7 bits of 0 when the Start Address, Byte Count, Data, and the Check-sum itself are added.

2.2.2.1 Native System bulk dump

This message sets the NATIVE SYSTEM block (refer to tables <2-1>, <2-2>, <2-3>).

2.2.2.2 Bulk Control bulk dump

Bulk Control bulk dump This message sets the parameters such as Multi Number, Memory Bank and Voice Number when the Native Multi bulk dump, Normal Voice bulk dump or Drum Voice Bulk dump is received (refer to tables <2-1>, <2-2>, <2-4>).

2.2.2.3 Native Multi bulk dump

This message sets the NATIVE MULTI block (refer to tables <2-1>, <2-2>, <2-6>, <2-7>, <2-8>).
To receive this message, the Bulk Header and Bulk Footer of Bulk Control must be received before and after reception, respectively.
The Bulk Header determines the Multi number to which the data is stored.

2.2.2.4 Normal Voice bulk dump

This message sets the NORMAL VOICE block (refer to tables <2-1>, <2-2>, <2-9>, <2-10>).
To receive this message, the Bulk Header and Bulk Footer of Bulk Control must be received before and after reception, respectively.
The Bulk Header determines the Memory Bank/Voice number to which the data is stored.

2.2.2.5 Drum Voice bulk dump

This message sets the NORMAL VOICE block (refer to tables <2-1>, <2-2>, <2-11>, <2-12>).
To receive this message, the Bulk Header and Bulk Footer of Bulk Control must be received before and after reception, respectively.
The Bulk Header determines the Memory Bank/Voice number to which the data is stored.

2.3 Parameter request

This message requests transmission of a parameter value.
The output is transmitted in the Parameter Change message format (refer to 2.1.x).

2.3.1 XG parameter request

This message requests transmission of XG parameter settings.
Settings are transmitted in the format of an XG parameter change (refer to 2.1.3).

```
11110000        F0H         Exclusive status
01000011        43H         YAMAHA ID
0001nnnn        3NH         N:Device Number
01001100        4CH         Model ID
0ggggggg        GGH         Address High
0mmmmmmm        MMH         Address Mid
0lllllll        LLH         Address Low
11110111        F7H         End of Exclusive
```

2.3.2 S08 native parameter request

This message requests transmission of a parameter value unique to the S08.
The output is transmitted in the format of a S08 native parameter change (refer to 2.1.4).

```
11110000        F0H         Exclusive status
01000011        43H         YAMAHA ID
0001nnnn        3NH         N:Device Number
01101100        6CH         Model ID
0ggggggg        GGH         Address High
0mmmmmmm        MMH         Address Mid
0lllllll        LLH         Address Low
11110111        F7H         End of Exclusive
```

2.4 Dump request

This message requests transmission of a specific block of parameter values.
The output is the same as the bulk dump format.

2.4.1 XG dump request

This message requests transmission of all parameters of the specified block of XG parameters.
The output is the same as the format of XG bulk dump (refer to 2.2.1).

```
11110000        F0H         Exclusive status
01000011        43H         YAMAHA ID
0001nnnn        2NH         N:Device Number
01001100        4CH         Model ID
0ggggggg        GGH         Address High
0mmmmmmm        MMH         Address Mid
0lllllll        LLH         Address Low
11110111        F7H         End of Exclusive
```

Address is valid only when the beginning of the block has been specified.

2.4.2 S08 native dump request

This message requests transmission of all parameters of the specified block of S08 native parameters.
The output is in the same format as an S08 native bulk dump (refer to 2.2.2).

```
11110000        F0H         Exclusive status
01000011        43H         YAMAHA ID
0001nnnn        2NH         N:Device Number
01101100        6CH         Model ID
0ggggggg        GGH         Address High
0mmmmmmm        MMH         Address Mid
0lllllll        LLH         Address Low
11110111        F7H         End of Exclusive
```

Address is valid only when the beginning of the block has been specified.

No System Exclusive Message is received when the Compare function is active.

3. Realtime messages

3.1 Active sensing

a) Transmission
Transmitted at every 270 msec.

b) Receive
Once FE has been received, failure to receive any MIDI message for an interval longer than approximately 300 msec will cause processing to be performed as if ALL SOUND OFF, ALL NOTE OFF, and RESET ALL CONTROLLERS messages were received, and the unit will reset to a condition in which FE was never received.

3.2 Timing Clock

Status: F8H

3.3 Start

Status: FAH

3.4 Continue

Status: FBH

3.5 Stop

Status: FCH

MIDI Data Table

Bank Select

Available Bank Select/Program Change

MSB	(HEX)	LSB	(HEX)	Program No.	Type	Memory	Remarks
0	00	*1		0 - 127	Normal Voice	GM2/XG	
64	40	0	00	*1			
120	78	0	00	*1	GM2 Drum Voice		
121	79	0-9	00-09	0 - 127	GM2 Nomal Voice		
126	7E	0	00	0 - 1	Drum Voice		
127	7F	0	00	*1			
63	3F	0	00	0 - 127	Normal Voice	Preset	
63	3F	8	08	0 - 127		User	
63	3F	40	28	0 - 1	Drum Voice	User	
63	3F	64	40	0 - 31	Multi	User	Effective only when in the Multi mode

*1 Refer to the Voice List

<Table 1 - 1>

XG Parameter Base Address

MODEL ID = 4C

Parameter	Address (H)	Address (M)	Address (L)	Description	Remarks
XG SYSTEM	00	00	00	XG System	
	00	00	7D	Drum Setup Reset	Receives parameter change only
	00	00	7E	XG System On	Receives parameter change only
	00	00	7F	All Parameter Reset	Receives parameter change only
INFORMATION	01	00	00	System Information	Receives dump request only
EFFECT 1	02	01	00	Effect1 (Reverb, Chorus, Variation)	
MULTI PART	08	00	00	Multi Part 1	
	:	:	:	:	
	08	0F	00	Multi Part 16	
DRUM	30	0D	00	Drum Setup 1	
	31	0D	00	Drum Setup 2	

The S08 responds to the message “MODEL ID = 4C” only when in the Multi mode.

Address			Parameter
3n	0D	00	note number 13
3n	0E	00	note number 14
	:		:
3n	5B	00	note number 91

<Table 1 - 2>

MIDI Parameter Change table (XG SYSTEM)

Address (H)			Size (H)	Data (H)	Parameter	Description	Default value (H)
00	00	00	4	00 - 0F	MASTER TUNE	-102.4...0...+102.3[cent]	00 04 00 00
		01		00 - 0F		1st bit3-0→bit15-12	
		02		00 - 0F		2nd bit3-0→bit11-8	
		03		00 - 0F		3rd bit3-0→bit7-4	
						4th bit3-0→bit3-0	
		04	1	00 - 7F	MASTER VOLUME	0...127	7F
		05	1		not used		
		06	1	28 - 58	TRANSPOSE	-24...0...+24 [semitones]	40
		7D	1	N	DRUM SETUP RESET	N: Drum setup number (0,1)	--
		7E	1	00	XG SYSTEM ON	00=XG system ON (receive only)	--
		7F	1	00	ALL PARAMETER RESET	00=ON (receive only)	--

TOTAL SIZE 07

<Table 1 - 3>

MIDI Parameter Change table (SYSTEM INFORMATION)

Address (H)			Size (H)	Data (H)	Parameter	Description
01	00	00	E	20 - 7F	Model Name 1	32...127(ASCII CHARACTER)
		:			:	:
		0D		20 - 7F	Model Name 14	32...127 (ASCII CHARACTER)
		0E	1	00 - 7F	XG Level 1	
		0F	1	00 - 7F	XG Level 2	

TOTAL SIZE 10

Transmitted in response to Dump Request. Not received.

<Table 1 - 4>

MIDI Parameter Change table (EFFECT)

Address (H)			Size (H)	Data (H)	Parameter	Description	Default value (H)
02	01	00	2	00 - 7F	REVERB TYPE MSB	Refer to the Effect Type List	01(=HALL1)
				00 - 7F	REVERB TYPE LSB		00
		02	1	00 - 7F	REVERB PARAMETER 1	"	12(depends on reverb type)
		03	1	00 - 7F	REVERB PARAMETER 2	"	0A(")
		04	1	00 - 7F	REVERB PARAMETER 3	"	08(")
		05	1	00 - 7F	REVERB PARAMETER 4	"	0D(")
		06	1	00 - 7F	REVERB PARAMETER 5	"	31(")
		07	1	00 - 7F	REVERB PARAMETER 6	"	00(")
		08	1	00 - 7F	REVERB PARAMETER 7	"	00(")
		09	1	00 - 7F	REVERB PARAMETER 8	"	00(")
		0A	1	00 - 7F	REVERB PARAMETER 9	"	00(")
		0B	1	00 - 7F	REVERB PARAMETER 10	"	00(")
		0C	1	00 - 7F	REVERB RETURN	-∞dB...0dB...+6dB(0...96...127)	40
		0D	1	01 - 7F	REVERB PAN	L63...C...R63	40

TOTAL SIZE 0E

02	01	10	1	00 - 7F	REVERB PARAMETER 11	Refer to the Effect Parameter List	00(depends on reverb type)
		11	1	00 - 7F	REVERB PARAMETER 12	"	04(")
		12	1	00 - 7F	REVERB PARAMETER 13	"	32(")
		13	1	00 - 7F	REVERB PARAMETER 14	"	08(")
		14	1	00 - 7F	REVERB PARAMETER 15	"	40(")
		15	1	00 - 7F	REVERB PARAMETER 16	"	00(")

TOTAL SIZE 6

02	01	20	2	00 - 7F	CHORUS TYPE MSB	Refer to the Effect Type List	41(=CHORUS1)
				00 - 7F	CHORUS TYPE LSB	"	00
		22	1	00 - 7F	CHORUS PARAMETER 1	"	06(depends on chorus type)
		23	1	00 - 7F	CHORUS PARAMETER 2	"	36(")
		24	1	00 - 7F	CHORUS PARAMETER 3	"	4D(")
		25	1	00 - 7F	CHORUS PARAMETER 4	"	6A(")
		26	1	00 - 7F	CHORUS PARAMETER 5	"	00(")
		27	1	00 - 7F	CHORUS PARAMETER 6	"	1C(")
		28	1	00 - 7F	CHORUS PARAMETER 7	"	40(")
		29	1	00 - 7F	CHORUS PARAMETER 8	"	2E(")
		2A	1	00 - 7F	CHORUS PARAMETER 9	"	40(")
		2B	1	00 - 7F	CHORUS PARAMETER 10	"	40(")
		2C	1	00 - 7F	CHORUS RETURN	-∞dB...0dB...+6dB(0...96...127)	40
		2D	1	01 - 7F	CHORUS PAN	L63...C...R63(1...64...127)	40
		2E	1	00 - 7F	SEND CHORUS TO REVERB	-∞dB...0dB...+6dB(0...96...127)	00

TOTAL SIZE 0F

02	01	30	1	00 - 7F	CHORUS PARAMETER 11	Refer to the Effect Type List	2E(depends on chorus type)
		31	1	00 - 7F	CHORUS PARAMETER 12	"	40(")
		32	1	00 - 7F	CHORUS PARAMETER 13	"	0A(")
		33	1	00 - 7F	CHORUS PARAMETER 14	"	00(")
		34	1	00 - 7F	CHORUS PARAMETER 15	"	00(")
		35	1	00 - 7F	CHORUS PARAMETER 16	"	00(")

TOTAL SIZE 6

02	01	40	2	00 - 7F	VARIATION TYPE MSB	Refer to the Effect Type List	05(=DELAY L, C, R)
				00 - 7F	VARIATION TYPE LSB	"	00
		42	2	00 - 7F	VARIATION PARAMETER 1 MSB	"	1A(depends on variation type)
				00 - 7F	VARIATION PARAMETER 1 LSB	"	05(")
		44	2	00 - 7F	VARIATION PARAMETER 2 MSB	"	0D(")
				00 - 7F	VARIATION PARAMETER 2 LSB	"	03(")
		46	2	00 - 7F	VARIATION PARAMETER 3 MSB	"	27(")
				00 - 7F	VARIATION PARAMETER 3 LSB	"	08(")
		48	2	00 - 7F	VARIATION PARAMETER 4 MSB	"	27(")
				00 - 7F	VARIATION PARAMETER 4 LSB	"	08(")
		4A	2	00 - 7F	VARIATION PARAMETER 5 MSB	"	00(")
				00 - 7F	VARIATION PARAMETER 5 LSB	"	4A(")
		4C	2	00 - 7F	VARIATION PARAMETER 6 MSB	"	00(")
				00 - 7F	VARIATION PARAMETER 6 LSB	"	64(")
		4E	2	00 - 7F	VARIATION PARAMETER 7 MSB	"	00(")
				00 - 7F	VARIATION PARAMETER 7 LSB	"	0A(")
		50	2	00 - 7F	VARIATION PARAMETER 8 MSB	"	00(")
				00 - 7F	VARIATION PARAMETER 8 LSB	"	00(")
		52	2	00 - 7F	VARIATION PARAMETER 9 MSB	"	00(")
				00 - 7F	VARIATION PARAMETER 9 LSB	"	00(")
		54	2	00 - 7F	VARIATION PARAMETER 10 MSB	"	00(")
				00 - 7F	VARIATION PARAMETER 10 LSB	"	20(")
		56	1	00 - 7F	VARIATION RETURN	-∞dB...0dB...+6dB(0...96...127)	40
		57	1	01 - 7F	VARIATION PAN	L63...C...R63(1...64...127)	40
		58	1	00 - 7F	SEND VARIATION TO REVERB	-∞dB...0dB...+6dB(0...96...127)	00
		59	1	00 - 7F	SEND VARIATION TO CHORUS	-∞dB...0dB...+6dB(0...96...127)	00
		5A	1	00 - 01	VARIATION CONNECTION	INSERTION, SYSTEM	00
		5B	1	00 - 7F	VARIATION PART NUMBER	Part1	7F
						OFF(127)	
		5C	1	00 - 7F	MW VARIATION CONTROL DEPTH	-64...0...+63	40
		5D	1	00 - 7F	BEND VARIATION CONTROL DEPTH	-64...0...+63	40
		5E	1	00 - 7F	CAT VARIATION CONTROL DEPTH	-64...0...+63	40
		5F	1	00 - 7F	AC1 VARIATION CONTROL DEPTH	-64...0...+63	40
		60	1	00 - 7F	AC2 VARIATION CONTROL DEPTH	-64...0...+63	40

TOTAL SIZE 21

02	01	70	1	00 - 7F	VARIATION PARAMETER 11	Refer to the Effect Parameter List	00(depends on variation type)
		71	1	00 - 7F	VARIATION PARAMETER 12	"	3C(")
		72	1	00 - 7F	VARIATION PARAMETER 13	"	1C(")
		73	1	00 - 7F	VARIATION PARAMETER 14	"	40(")
		74	1	00 - 7F	VARIATION PARAMETER 15	"	2E(")
		75	1	00 - 7F	VARIATION PARAMETER 16	"	40(")

TOTAL SIZE 6

<Table 1 - 5>

MIDI Parameter Change table (MULTI PART)

Address (H)			Size (H)	Data (H)	Parameter	Description	Default value (H)
08	nn	00	1	00 - 20	ELEMENT RESERVE	0...64	part10 = 0
							other parts =2
		01	1	00 - 7F	BANK SELECT MSB	0...127	part10 = 7F
							other parts=0
		02	1	00 - 7F	BANK SELECT LSB	0...127	00
		03	1	00 - 7F	PROGRAM NUMBER	1...128	00
		04	1	00-0F, 7F	RECEIVE CHANNEL	A1...A16, OFF	Part No.
		05	1	00 - 01	MONO/POLY MODE	MONO, POLY	01
		06	1	00 - 02	SAME NOTE NUMBER KEY ON ASSIGN	SINGLE, MULTI, INST (for DRUM)	01
		07	1	00 - 03	PART MODE	NORMAL, DRUM, DRUMS1	Part10=2
							other parts=0

Address (H)			Size (H)	Data (H)	Parameter	Description	Default value (H)
		08	1	28 - 58	NOTE SHIFT	-24...0...+24[semitones]	40
		09	2	00 - 0F	DETUNE	-12.8...0...+12.7[Hz]	08 00
		0A		00 - 0F		1st bit3-0→bit7-4 2nd bit3-0→bit3-0	
		0B	1	00 - 7F	VOLUME	0...127	64
		0C	1	00 - 7F	VELOCITY SENSE DEPTH	0...127	40
		0D	1	00 - 7F	VELOCITY SENSE OFFSET	0...127	40
		0E	1	00 - 7F	PAN	RND, L63...C...R63	40
		0F	1	00 - 7F	NOTE LIMIT LOW	C-2...G8	00
		10	1	00 - 7F	NOTE LIMIT HIGH	C-2...G8	7F
		11	1	00 - 7F	DRY LEVEL	0...127	7F
		12	1	00 - 7F	CHORUS SEND	0...127	00
		13	1	00 - 7F	REVERB SEND	0...127	28
		14	1	00 - 7F	VARIATION SEND	0...127	00
		15	1	00 - 7F	VIBRATO RATE	-64...0...+63	40
		16	1	00 - 7F	VIBRATO DEPTH	-64...0...+63	40(drum part ignores)
		17	1	00 - 7F	VIBRATO DELAY	-64...0...+63	40(drum part ignores)
		18	1	00 - 7F	LOW PASS FILTER CUTOFF FREQUENCY	-64...0...+63	40
		19	1	00 - 7F	LOW PASS FILTER RESONANCE	-64...0...+63	40
		1A	1	00 - 7F	EG ATTACK TIME	-64...0...+63	40
		1B	1	00 - 7F	EG DECAY TIME	-64...0...+63	40
		1C	1	00 - 7F	EG RELEASE TIME	-64...0...+63	40
		1D	1	28 - 58	MW PITCH CONTROL	-24...0...+24[semitones]	40
		1E	1	00 - 7F	MW LOW PASS FILTER CONTROL	-9600...0...+9450[cent]	40
		1F	1	00 - 7F	MW AMPLITUDE CONTROL	-100...0...+100[%]	40
		20	1	00 - 7F	MW LFO PMOD DEPTH	0...127	0A
		21	1	00 - 7F	MW LFO FMOD DEPTH	0...127	00
		22	1	00 - 7F	MW LFO AMOD DEPTH	0...127	00
		23	1	28 - 58	BEND PITCH CONTROL	-24...0...+24[semitones]	42
		24	1	00 - 7F	BEND LOWPASS FILTER CONTROL	-9600...0...+9450[cent]	40
		25	1	00 - 7F	BEND AMPLITUDE CONTROL	-100...0...+100[%]	40
		26	1	00 - 7F	BEND LFO PMOD DEPTH	0...127	00
		27	1	00 - 7F	BEND LFO FMOD DEPTH	0...127	00
		28	1	00 - 7F	BEND LFO AMOD DEPTH	0...127	00

TOTAL SIZE 29

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

TOTAL SIZE 3F

nn = PART NUMBER(00 - 0F)

In the case of DRUM PART, the following parameters will have no effect.

- BANK SELECT LSB
- MONO/POLY MODE
- SCALE TUNING
- PORTAMENTO

<Table 1 - 6>

MIDI Parameter Change table (DRUM SETUP)

Address (H)			Size (H)	Data (H)	Parameter	Description	Default value (H)
3n	rr	00	1	00 - 7F	PITCH COARSE	-64...0...+63	40
		01	1	00 - 7F	PITCH FINE	-64...0...+63[cent]	40
		02	1	00 - 7F	LEVEL	0...127	depend on the note
		03	1	00 - 7F	ALTERNATE GROUP	OFF, 1...127	"
		04	1	00 - 7F	PAN	RND, L63...C...R63	"
		05	1	00 - 7F	REVERB SEND	0...127	"
		06	1	00 - 7F	CHORUS SEND	0...127	"
		07	1	00 - 7F	VARIATION SEND	0...127	7F
		08	1	00 - 01	KEY ASSIGN	SINGLE, MULTI	00
		09	1	00 - 01	RECEIVE NOTE OFF	OFF, ON	depend on the note
		0A	1	00 - 01	RECEIVE NOTE ON	OFF, ON	01
		0B	1	00 - 7F	LOW PASS FILTER CUTOFF FREQUENCY	-64...0...63	40
		0C	1	00 - 7F	LOW PASS FILTER RESONANCE	-64...0...63	40
		0D	1	00 - 7F	EG ATTACK RATE	-64...0...63	40
		0E	1	00 - 7F	EG DECAY1 RATE	-64...0...63	40
		0F	1	00 - 7F	EG DECAY2 RATE	-64...0...63	40

TOTAL SIZE 10

n = DRUM SETUP NUMBER(0 - 1)
rr = NOTE NUMBER(0D - 5B)

In the following cases, the S08 will initialize all Drum Setups.
XG SYSTEM ON received
GM/GM2 SYSTEM ON received
GM SYSTEM OFF received
DRUM SETUP RESET received (the designated Drum Setup only when in XG mode)

[Note]
When a part to which a Drum Setup is assigned receives a program change, the assigned Drum Setup will be initialized.

If the same Drum Setup is assigned to two or more parts, changes in Drum Setup parameters (including program changes) will apply to all parts to which it is assigned.

<Table 2 - 1>

Native Parameter Base Address

MODEL ID = 6C

Parameter	Address (H)	(M)	(L)	Description	Remarks
NATIVE SYSTEM	01	00	00	Native System	
REMOTE SWITCH	0A	00	00	Remote Switch	Receives parameter change only
BULK CONTROL	1E	00	00	Header	Bulk dump only
	1F	00	00	Footer	
MULTI COMMON	50	00	00	Multi Common	
MULTI EFFECT	50	01	00	Multi Effect	Bulk dump only
MULTI PART	51	00	00	Multi Part 1	Bulk dump only
	:			:	
	51	0F	00	Multi Part 16	
NORMAL VOICE COMMON	60	00	00	Normal Voice Common	
NORMAL VOICE ELEMENT	61	00	00	Normal Voice Element 1	
	:			:	
	61	03	00	Normal Voice Element 4	
NORMAL VOICE ELEMENT (Option)	62	00	00	Normal Voice Element 1	
	:			:	
	62	03	00	Normal Voice Element 4	
DRUM VOICE COMMON	66	00	00	Drum Voice Common	
DRUM VOICE KEY	67	0D	00	Drum Voice Key	

Address			Parameter
67	0D	00	note number 13
67	0E	00	note number 14
	:		:
67	5B	00	note number 91

In the same manner as the table above, the S08 responds to the following address messages.

*Parameter Change Request and Bulk Dump Request messages are ignored. Not transmitted.

Parameter	Address (H)	(M)	(L)	Description	Remarks
NATIVE SYSTEM	00	00	00	Native System	Not transmitted.
BULK CONTROL	0E	00	00	Header	Bulk dump only
	0F	00	00	Footer	
MULTI COMMON	30	00	00	Multi Common	
MULTI EFFECT	30	01	00	Multi Effect	Bulk dump only
MULTI PART	31	00	00	Multi Part 1	Bulk dump only
	:			:	
	31	0F	00	Multi Part 16	
NORMAL VOICE COMMON	40	00	00	Normal Voice Common	Not transmitted
NORMAL VOICE ELEMENT	41	00	00	Normal Voice Element 1	Not transmitted
	:			:	
	41	03	00	Normal Voice Element 4	

Parameter	Address (H)	Address (M)	Address (L)	Description	Remarks
NORMAL VOICE ELEMENT (Option)	42	00	00	Normal Voice Element 1	Not transmitted
	:			:	
	42	03	00	Normal Voice Element 4	
DRUM VOICE COMMON	46	00	00	Drum Voice Common	Not transmitted
DRUM VOICE KEY	47	0D	00	Drum Voice Key	Not transmitted

Address			Parameter
47	0D	00	note number 13
47	0E	00	note number 14
	:		:
47	5B	00	note number 91

<Table 2 - 2>

Bulk Dump Block

Parameter Block	Description	Byte Count Dec	Byte Count Hex	Top Address H	Top Address M	Top Address L
NATIVE SYSTEM	Native System	22	16	01	00	00
NATIVE MULTI	Bulk Header	0	00	1E	mm	nn
COMMON	Common	13	0B	50	00	00
EFFECT	Reverb Parameter	20	14	50	01	00
	Chorus Parameter	53	35	50	01	20
	Variation Parameter	103	67	50	01	40
PART	Multi Part1	43	2B	51	00	00
	:	16 Blocks	:	:	:	:
	Multi Part16	43	2B	51	0F	00
	Bulk Footer	0	00	1F	mm	nn
NATIVE NORMAL VOICE	Bulk Header	0	00	1E	mm	nn
COMMON	Common1	12	0C	60	00	00
	Common2	33	21	60	00	10
ELEMENT	Element1	106	6A	61	00	00
	Element2	106	6A	61	01	00
	Element3	106	6A	61	02	00
	Element4	106	6A	61	03	00
ELEMENT OPTION	Element Option1	52	34	62	00	00
	Element Option2	52	34	62	01	00
	Element Option3	52	34	62	02	00
	Element Option4	52	34	62	03	00
	Bulk Footer	0	00	1F	mm	nn
NATIVE DRUM VOICE	Bulk Header	0	00	1E	mm	nn
COMMON	Common	10	0A	66	00	00
KEY	Key C#-1	16	10	67	0D	00
	:	79 Blocks	:	:	:	:
	Key G5	16	10	67	5B	00
	Bulk Footer	0	00	1F	mm	nn

<Table 2 - 3>

MIDI Parameter Change table (NATIVE SYSTEM)

Address (H)			Size (H)	Data (H)	Parameter	Description	Default value (H)
01	00	00	1	00 - 60	MW Transmit Control Number	0...95(0,32=off), AT(96)	01
		01	1	00 - 60	FC Transmit Control Number	0...95(0,32=off), AT(96)	0B
		02	1	00 - 62	FS Transmit Control Number	0...95(0,32=off), PC INC(96), PC DEC(97), Play/Stop (98)	40
		03	1	00 - 01	Voice Mode Controller Reset	Hold, Reset	01
		04	1	00 - 01	Local Switch	off, on	01
		05	1	00 - 10	Receive Channel	1...16, omni	10
		06	1	00 - 0F	Transmit Channel	1...16	00
		07	1	00 - 01	Receive Program Change	off, on	01
		08	1	00 - 01	Receive Bank Select	off, on	01
		09	1	00 - 01	Transmit Program Change	off, on	01
		0A	1	00 - 01	Transmit Bank Select	off, on	01
		-	-	-	not used	-	-
		0C	1	35 - 4B	Keyboard Transpose	-11... +11	40
		0D	1	00 - 05	Velocity Curve	normal, soft1, soft2, easy, wide, hard	00
		0E	1	00 - 7F	Fixed Velocity	off,1...127	00
		0F	1	00 - 01	Voice Effect Bypass	off, on	00
		10	1	00 - 5F	Voice Mode AC1 Control Number	0...95	10
		11	1	00 - 01	Thru Port	1, 2	00
		12	4	00	MASTER TUNE	-102.4...0...+102.3[cent]	00 04 00 00
		13		00 - 07		1st bit3-0→bit15-12	
		14		00 - 0F		2nd bit3-0→bit11-8	
		15		00 - 0F		3rd bit3-0→bit7-4	
						4th bit3-0→bit3-0	

TOTAL SIZE 16

<Table 2 - 4>

MIDI Parameter Change table (BULK CONTROL)

Address (H)			Size (H)	Data (H)	Parameter	Description
1E	00	nn	0	-	Bulk Header	Normal Voice PRESET (nn = 0 - 127)
	08	nn	0	-		Normal Voice USER (nn = 0 - 127)
	0F	nn	0	-		Normal Voice Edit Buffer (nn = 0)
	28	nn	0	-		Drum Voice USER (nn = 0 - 1)
	2F	nn	0	-		Drum Voice Edit Buffer (nn = 0)
	40	nn	0	-		Multi USER (nn = 0 - 31)
	41	nn	0	-		Multi Edit Buffer (nn=0)
	7F	nn	0	-		Drum Voice S08 Kit (nn = 120 - 127)
1F	00	nn	0	-	Bulk Footer	Normal Voice PRESET (nn = 0 - 127)
	08	nn	0	-		Normal Voice USER (nn = 0 - 127)
	0F	nn	0	-		Normal Voice Edit Buffer (nn = 0)
	28	nn	0	-		Drum Voice USER (nn = 0 - 1)
	2F	nn	0	-		Drum Voice Edit Buffer (nn = 0)
	40	nn	0	-		Multi USER (nn = 0 - 31)
	41	nn	0	-		Multi Edit Buffer (nn=0)
	7F	nn	0	-		Drum Voice S08 Kit (nn = 120 - 127)

<Table 2 - 5>

MIDI Parameter Change table (REMOTE SWITCH)

Address (H)			Size (H)	Data (H)	Parameter	Description
0A	00	00	1	01	MULTI	on
		01	1	01	VOICE	on
		02	1	01	SEQ PLAY	on
		03	1	01	UTILITY	on
		04	1	01	CARD	on
		05	1	01	EDIT	on
		06	1	01	JOB	on
		07	1	01	STORE	on
		08	1	01	PART PLUS	on
		09	1	01	PART MINUS	on
		0A	1	01	PART PLUS + MINUS	on
		0B	1	01	INC/YES	on
		0C	1	01	DEC/NO	on
		0D	1	01	PAGE UP	on
		0E	1	01	PAGE DOWN	on
		0F	1	01	LEFT	on
		10	1	01	RIGHT	on
		11	1	-	not used	-
		12	1	-	not used	-
		13	1	-	not used	-
		14	1	01	ENTER	on
		15	1	01	EXIT	on
		16	1	01	CATEGORY SEARCH	on
		17	1	01	PRESET	on
		18	1	01	USER	on
		19	1	01	GM2/XG	on
		1A	1	01	DRUM + USER	on
		1B	1	01	DRUM + GM2/XG	on
		1C	1	01	0	on
		1D	1	01	1	on
		1E	1	01	2	on
		1F	1	01	3	on
		20	1	01	4	on
		21	1	01	5	on
		22	1	01	6	on
		23	1	01	7	on
		24	1	01	8	on
		25	1	01	9	on
		26	1	01	MINUS	on
		27	1	01	MUTE	on
		28	1	01	MULTI + SEQ PLAY	on
		29	1	01	CONTROLLER	on

<Table 2 - 6>

MIDI Parameter Change table (NATIVE MULTI COMMON)

Address (H)			Size (H)	Data (H)	Parameter	Description	Default value (H)
50	00	00	1	20 - 7F	Multi Name 1	32...127(ASCII)	49 ('I')
		01	1	20 - 7F	Multi Name 2	32...127(ASCII)	6E ('n')
		02	1	20 - 7F	Multi Name 3	32...127(ASCII)	69 ('i')
		03	1	20 - 7F	Multi Name 4	32...127(ASCII)	74 ('t')
		04	1	20 - 7F	Multi Name 5	32...127(ASCII)	20 (' ')
		05	1	20 - 7F	Multi Name 6	32...127(ASCII)	4D ('M')
		06	1	20 - 7F	Multi Name 7	32...127(ASCII)	6C ('l')
		07	1	20 - 7F	Multi Name 8	32...127(ASCII)	74 ('t')
		08	1	00 - 10	Multi Category	0, 2...16(--, PF, OR, GT, BA, ST, BR, RP, LD, PD, SC, CP, DR, SE, ME, CO)	00 ('--')
		09	1	00 - 7F	Multi Volume	0...127	7F
		0A	1	28 - 58	Multi Transpose	-24...+24	40

TOTAL SIZE 0B

<Table 2 - 7>

MIDI Parameter Change table (NATIVE MULTI EFFECT)

Address (H)			Size (H)	Data (H)	Parameter	Description	Default value (H)
50	01	00	2	00 - 7F	REVERB TYPE MSB	Refer to the Effect Type List	01(=HALL1)
				00 - 7F	REVERB TYPE LSB	"	00
		02	1	00 - 7F	REVERB PARAMETER 1	"	12(depends on reverb type)
		03	1	00 - 7F	REVERB PARAMETER 2	"	0A(")
		04	1	00 - 7F	REVERB PARAMETER 3	"	08(")
		05	1	00 - 7F	REVERB PARAMETER 4	"	0D(")
		06	1	00 - 7F	REVERB PARAMETER 5	"	31(")
		07	1	00 - 7F	REVERB PARAMETER 6	"	00(")
		08	1	00 - 7F	REVERB PARAMETER 7	"	00(")
		09	1	00 - 7F	REVERB PARAMETER 8	"	00(")
		0A	1	00 - 7F	REVERB PARAMETER 9	"	00(")
		0B	1	00 - 7F	REVERB PARAMETER 10	"	00(")
		0C	1	00 - 7F	REVERB RETURN	-∞dB...0dB...+6dB(0...96...127)	40
		0D	1	01 - 7F	REVERB PAN	L63...C...R63	40
		0E	1	00 - 7F	REVERB PARAMETER 11	Refer to the Effect Parameter List	00(depends on reverb type)
		0F	1	00 - 7F	REVERB PARAMETER 12	"	04(")
		10	1	00 - 7F	REVERB PARAMETER 13	"	32(")
		11	1	00 - 7F	REVERB PARAMETER 14	"	08(")

Address (H)			Size (H)	Data (H)	Parameter	Description	Default value (H)
		12	1	00 - 7F	REVERB PARAMETER 15	Refer to the Effect Parameter List	40(")
		13	1	00 - 7F	REVERB PARAMETER 16	"	00(")

TOTAL SIZE 14

50	01	20	2	00 - 7F	CHORUS TYPE MSB	Refer to the Effect Type List	41(=CHORUS1)
				00 - 7F	CHORUS TYPE LSB	"	00
		22	1	00 - 7F	CHORUS PARAMETER 1	"	06(depends on chorus type)
		23	1	00 - 7F	CHORUS PARAMETER 2	"	36(")
		24	1	00 - 7F	CHORUS PARAMETER 3	"	4D(")
		25	1	00 - 7F	CHORUS PARAMETER 4	"	6A(")
		26	1	00 - 7F	CHORUS PARAMETER 5	"	00(")
		27	1	00 - 7F	CHORUS PARAMETER 6	"	1C(")
		28	1	00 - 7F	CHORUS PARAMETER 7	"	40(")
		29	1	00 - 7F	CHORUS PARAMETER 8	"	2E(")
		2A	1	00 - 7F	CHORUS PARAMETER 9	"	40(")
		2B	1	00 - 7F	CHORUS PARAMETER 10	"	40(")
		2C	1	00 - 7F	CHORUS RETURN	-∞dB...0dB...+6dB(0...96...127)	40
		2D	1	01 - 7F	CHORUS PAN	L63...C...R63(1...64...127)	40
		2E	1	00 - 7F	SEND CHORUS TO REVERB	-∞dB...0dB...+6dB(0...96...127)	00
		2F	1	00 - 7F	CHORUS PARAMETER 11	Refer to the Effect Parameter List	2E(depends on chorus type)
		30	1	00 - 7F	CHORUS PARAMETER 12	"	40(")
		31	1	00 - 7F	CHORUS PARAMETER 13	"	0A(")
		32	1	00 - 7F	CHORUS PARAMETER 14	"	00(")
		33	1	00 - 7F	CHORUS PARAMETER 15	"	00(")
		34	1	00 - 7F	CHORUS PARAMETER 16	"	00(")

TOTAL SIZE 35

50	01	40	2	00 - 7F	VARIATION TYPE MSB	Refer to the Effect Type List	05(=DELAY L, C, R)
				00 - 7F	VARIATION TYPE LSB	"	00
		42	2	00 - 7F	VARIATION PARAMETER 1 MSB	"	1A(depends on variation type)
				00 - 7F	VARIATION PARAMETER 1 LSB	"	05(")
		44	2	00 - 7F	VARIATION PARAMETER 2 MSB	"	0D(")
				00 - 7F	VARIATION PARAMETER 2 LSB	"	03(")
		46	2	00 - 7F	VARIATION PARAMETER 3 MSB	"	27(")
				00 - 7F	VARIATION PARAMETER 3 LSB	"	08(")
		48	2	00 - 7F	VARIATION PARAMETER 4 MSB	"	27(")
				00 - 7F	VARIATION PARAMETER 4 LSB	"	08(")
		4A	2	00 - 7F	VARIATION PARAMETER 5 MSB	"	00(")
				00 - 7F	VARIATION PARAMETER 5 LSB	"	4A(")
		4C	2	00 - 7F	VARIATION PARAMETER 6 MSB	"	00(")
				00 - 7F	VARIATION PARAMETER 6 LSB	"	64(")
		4E	2	00 - 7F	VARIATION PARAMETER 7 MSB	"	00(")
				00 - 7F	VARIATION PARAMETER 7 LSB	"	0A(")
		50	2	00 - 7F	VARIATION PARAMETER 8 MSB	"	00(")
				00 - 7F	VARIATION PARAMETER 8 LSB	"	00(")
		52	2	00 - 7F	VARIATION PARAMETER 9 MSB	"	00(")
				00 - 7F	VARIATION PARAMETER 9 LSB	"	00(")
		54	2	00 - 7F	VARIATION PARAMETER 10 MSB	"	00(")
				00 - 7F	VARIATION PARAMETER 10 LSB	"	20(")
		56	1	00 - 7F	VARIATION RETURN	-∞dB...0dB...+6dB(0...96...127)	40
		57	1	01 - 7F	VARIATION PAN	L63...C...R63(1...64...127)	40
		58	1	00 - 7F	SEND VARIATION TO REVERB	-∞dB...0dB...+6dB(0...96...127)	00
		59	1	00 - 7F	SEND VARIATION TO CHORUS	-∞dB...0dB...+6dB(0...96...127)	00
		5A	1	00 - 01	VARIATION CONNECTION	INSERTION, SYSTEM	00
		5B	1	00 - 7F	VARIATION PART NUMBER	Part1...16(0...15) OFF(127)	7F
		5C	1	00 - 7F	MW VARIATION CONTROL DEPTH	-64...0...+63	40
		5D	1	40	not used		40
		5E	1	40	not used		40
		5F	1	00 - 7F	AC1 VARIATION CONTROL DEPTH	-64...0...+63	40
		60	1	40	not used		40
		61	1	00 - 7F	VARIATION PARAMETER 11	Refer to the Effect Parameter List	00(depends on variation type)
		62	1	00 - 7F	VARIATION PARAMETER 12	"	3C(")
		63	1	00 - 7F	VARIATION PARAMETER 13	"	1C(")
		64	1	00 - 7F	VARIATION PARAMETER 14	"	40(")
		65	1	00 - 7F	VARIATION PARAMETER 15	"	2E(")
		66	1	00 - 7F	VARIATION PARAMETER 16	"	40(")

TOTAL SIZE 67

<Table 2 - 8>

MIDI Parameter Change table (NATIVE MULTI PART)

Address (H)			Size (H)	Data (H)	Parameter	Description	Default value (H)
51	nn	00	1	00 - 7F	BANK SELECT MSB	0...127	part10 = 7F other parts=0
		01	1	00 - 7F	BANK SELECT LSB	0...127	00
		02	1	00 - 7F	PROGRAM NUMBER	1...128	00
		03	1	00-0F, 7F	Rcv CHANNEL	A1...A16, OFF	Part No.
		04	1	00 - 01	MONO/POLY MODE	MONO , POLY	01
		05	1	00 - 03	PART MODE	NORMAL, DRUM, DRUMS1...2	Part10=2 other parts=0
		06	1	28 - 58	NOTE SHIFT	-24...0...+24[semitones]	40
		07 08	2	00 - 0F 00 - 0F	DETUNE	-12.8...0...+12.7[Hz] 1st bit3-0→bit7-4 2nd bit3-0→bit3-0	08 00
		09	1	00 - 7F	VOLUME	0...127	64
		0A	1	00 - 7F	VELOCITY SENSITIVITY DEPTH	0...127	40
		0B	1	00 - 7F	VELOCITY SENSITIVITY OFFSET	0...127	40
		0C	1	00 - 7F	PAN	RND, L63...C...R63	40
		0D	1	00 - 7F	NOTE LIMIT LOW	C-2...G8	00
		0E	1	00 - 7F	NOTE LIMIT HIGH	C-2...G8	7F
		0F	1	00 - 7F	CHORUS SEND	0...127	00
		10	1	00 - 7F	REVERB SEND	0...127	28
		11	1	00 - 7F	VARIATION SEND	0...127	00
		12	1	00 - 7F	VIBRATO RATE	-64...0...+63	40
		13	1	00 - 7F	VIBRATO DEPTH	-64...0...+63	40 (ignored for drum parts)
		14	1	00 - 7F	VIBRATO DELAY	-64...0...+63	40 (ignored for drum parts)
		15	1	00 - 7F	LOW PASS FILTER CUTOFF FREQUENCY	-64...0...+63	40
		16	1	00 - 7F	LOW PASS FILTER RESONANCE	-64...0...+63	40
		17	1	00 - 7F	EG ATTACK TIME	-64...0...+63	40
		18	1	00 - 7F	EG DECAY TIME	-64...0...+63	40
		19	1	00 - 7F	EG RELEASE TIME	-64...0...+63	40
		1A	1	00 - 7F	MW LOW PASS FILTER CONTROL	-9600...0...+9450[cent]	40
		1B	1	00 - 7F	MW LFO PMOD DEPTH	0...127	0A
		1C	1	00 - 7F	MW LFO FMOD DEPTH	0...127	00
		1D	1	00 - 7F	MW LFO AMOD DEPTH	0...127	00
		1E	1	28 - 58	PITCH BEND RANGE	-24...0...+24[semitones]	42
		1F	1	00 - 5F	AC1 CONTROLLER NUMBER	0...95	10
		20	1	00 - 7F	AC1 LOW PASS FILTER CONTROL	-9600...0...+9450[cent]	40
		21	1	00 - 7F	AC1 LFO FMOD DEPTH	0...127	00
		22	1	00 - 7F	AC1 LFO AMOD DEPTH	0...127	00
		23	1	00 - 01	PORTAMENTO SWITCH	OFF, ON	00
		24	1	00 - 7F	PORTAMENTO TIME	0...127	00
		25	1	00 - 7F	PITCH EG INITIAL LEVEL	-64...0...+63	40
		26	1	00 - 7F	PITCH EG ATTACK TIME	-64...0...+63	40
		27	1	00 - 7F	PITCH EG RELEASE LEVEL	-64...0...+63	40
		28	1	00 - 7F	PITCH EG RELEASE TIME	-64...0...+63	40
		29	1	01 - 7F	VELOCITY LIMIT LOW	1...127	01
		2A	1	01 - 7F	VELOCITY LIMIT HIGH	1...127	7F

TOTAL SIZE 2B

nn = PART NUMBER(00 - 0F)

<Table 2 - 9>

MIDI Parameter Change table (NATIVE NORMAL VOICE COMMON)

Address (H)			Size (H)	Data (H)	Parameter	Description	Default value (H)
60	00	00 01	2	00 - 01 00 - 7F	Total Level	01 7F(0:Min)...00 00(127:Max)	00 00
		02	1	00 - 0F	Element Switch	bit0: element1... bit3: element4 (0:off, 1:on)	01
		03	1	20 - 7F	Voice Name 1	32...127(ASCII)	49 ('I')
		04	1	20 - 7F	Voice Name 2	32...127(ASCII)	6E ('n')
		05	1	20 - 7F	Voice Name 3	32...127(ASCII)	69 ('i')
		06	1	20 - 7F	Voice Name 4	32...127(ASCII)	74 ('t')
		07	1	20 - 7F	Voice Name 5	32...127(ASCII)	20 (' ')
		08	1	20 - 7F	Voice Name 6	32...127(ASCII)	56 ('V')
		09	1	20 - 7F	Voice Name 7	32...127(ASCII)	63 ('c')
		0A	1	20 - 7F	Voice Name 8	32...127(ASCII)	65 ('e')
		0B	1	00 - 10	Voice Category	0, 2...16(--, PF, OR, GT, BA, ST, BR, RP, LD, PD, SC, CP, DR, SE, ME, CO)	00 ('--')

TOTAL SIZE 0C

60	00	10	2	00 - 7F	Variation Type MSB	Refer to the Effect Type List	4D(=2BAND EQ)
				00 - 7F	Variation Type LSB	"	00
		12	2	00 - 7F	Variation Parameter 1 MSB	"	00(depends on variation type)
				00 - 7F	Variation Parameter 1 LSB	"	1C(")
		14	2	00 - 7F	Variation Parameter 2 MSB	"	00(")
				00 - 7F	Variation Parameter 2 LSB	"	40(")
		16	2	00 - 7F	Variation Parameter 3 MSB	"	00(")
				00 - 7F	Variation Parameter 3 LSB	"	2E(")
		18	2	00 - 7F	Variation Parameter 4 MSB	"	00(")
				00 - 7F	Variation Parameter 4 LSB	"	40(")
		1a	2	00 - 7F	Variation Parameter 5 MSB	"	00(")
				00 - 7F	Variation Parameter 5 LSB	"	00(")
		1c	2	00 - 7F	Variation Parameter 10 MSB	"	00(")
				00 - 7F	Variation Parameter 10 LSB	"	7F(")
		1e	1	00 - 7F	MW Variation Control	-64...0...+63	40
		1f	1	00 - 7F	AC1 Variation Control	-64...0...+63	40
		20	1	00 - 7F	Send Chorus To Reverb	0...127	00
		21	1	00 - 01	Mono/Poly Mode	MONO, POLY	01
		22	1	00 - 7F	Total Volume	0...127	7F
		23	1	00 - 7F	Velocity Sense Depth	0...127	40
		24	1	00 - 7F	Velocity Sense Offset	0...127	40
		25	1	00 - 7F	Chorus Send	0...127	00
		26	1	00 - 7F	Reverb Send	0...127	28
		27	1	00 - 7F	MW Filter Control	-64...0...+63	40
		28	1	00 - 7F	MW LFO PMod Depth	0...127	0A
		29	1	00 - 7F	MW LFO FMod Depth	0...127	00
		2a	1	00 - 7F	MW LFO AMod Depth	0...127	00
		2b	1	28 - 58	Pitch Bend Range	-24...0...+24	42
		2c	1	00 - 7F	AC1 Filter Control	-64...0...+63	40
		2d	1	00 - 7F	AC1 LFO FMod Depth	0...127	00
		2e	1	00 - 7F	AC1 LFO AMod Depth	0...127	00
		2f	1	00 - 01	Portament Switch	OFF, ON	00
		30	1	00 - 7F	Portamento Time	0...127	00

TOTAL SIZE 21

<Table 2 - 10>

MIDI Parameter Change table (NATIVE NORMAL VOICE ELEMENT)

Address (H)			Size (H)	Data (H)	Parameter	Description	Default value (H)
61	ee	00 01	2	00 - 01 00 - 7F	Element Level	0...255	00 7F
		02 03	2	00 - 04 00 - 7F	Wave Number	1...521	00 1D

Address (H)			Size (H)	Data (H)	Parameter	Description	Default value (H)
		04	1	00 - 7F	Pan	Scale, L63...C...R63	40
		05	1	00 - 01	Level Scaling Flag	Brk.p, Table	00
		06	1	00 - 7F	Level Scaling BP1	C-2...G8	18
		07	1	00 - 7F	Level Scaling BP2	C-2...G8	30
		08	1	00 - 7F	Level Scaling BP3	C-2...G8	60
		09	1	00 - 7F	Level Scaling BP4	C-2...G8	6C
		0A	2	00 - 01	Level Scaling Offset1	-128...+0...+127	00
		0B		00 - 7F			00
		0C	2	00 - 01	Level Scaling Offset2	-128...+0...+127	00
		0D		00 - 7F			00
		0E	2	00 - 01	Level Scaling Offset3	-128...+0...+127	00
		0F		00 - 7F			00
		10	2	00 - 01	Level Scaling Offset4	-128...+0...+127	00
		11		00 - 7F			00
		12	1	00 - 7F	Note Limit Low	C-2...G8	00
		13	1	00 - 7F	Note Limit High	C-2...G8	7F
		14	1	01 - 7F	Velocity Limit Low	1...127	01
		15	1	01 - 7F	Velocity Limit High	1...127	7F
		16	1	01 - 7F	Note Shift	-63...0...+63	40
		17	1	01 - 7F	Detune	-63...0...+63	40
		18	1	00 - 05	Pitch Scaling Sensitivity	100%, 50%, 20%, 10%, 5%, 0%	00
		19	1	00 - 7F	Pitch Scaling Center Note	C-2...G8	3C
		1A	1	00 - 02	LFO Wave	Saw, Tri, S&H	01
		1B	1	00 - 01	LFO Phase Initialize	OFF, ON	01
		1C	1	00 - 3F	LFO Speed	0...63	1F
		1D	1	00 - 7F	PLFO Delay	0...127	00
		1E	1	00 - 7F	PLFO Fade Time	0...127	00
		1F	1	00 - 7F	LFO Pmod Depth	0...127	00
		20	1	00 - 7F	LFO Fmod Depth	0...127	00
		21	1	00 - 7F	LFO Amod Depth	0...127	00
		22	1	39 - 47	PEG Level Velocity Sensitivity	-7...+0...+7	40
		23	1	39 - 47	PEG Rate Velocity Sensitivity	-7...+0...+7	40
		24	1	39 - 47	PEG Rate Scaling Sensitivity	-7...+0...+7	40
		25	1	00 - 7F	PEG Rate Scaling Center Note	C-2...G8	3C
		26	1	00 - 3F	PEG Attack Rate	0...63	00
		27	1	00 - 3F	PEG Decay1 Rate	0...63	00
		28	1	00 - 3F	PEG Decay2 Rate	0...63	00
		29	1	00 - 3F	PEG Release Rate	0...63	00
		2A	2	2D - 52	PEG Initial Level	-2400...+0...+2400	40
		2B		00 - 7F			00
		2C	2	2D - 52	PEG Attack Level	-2400...+0...+2400	40
		2D		00 - 7F			00
		2E	2	2D - 52	PEG Decay1 Level	-2400...+0...+2400	40
		2F		00 - 7F			00
		30	2	2D - 52	PEG Sustain Level	-2400...+0...+2400	40
		31		00 - 7F			00
		32	2	2D - 52	PEG Release Level	-2400...+0...+2400	40
		33		00 - 7F			00
		34	2	00 - 0F	Filter Cutoff Frequency	0...2047	0F
		35		00 - 7F			7F
		36	1	00 - 3F	Filter Resonance	0...63	06
		37	1	00 - 01	Filter Cutoff Scaling Flag	Brk.p, Table	00
		38	1	00 - 7F	Filter Cutoff Scaling BP1	C-2...G8	18
		39	1	00 - 7F	Filter Cutoff Scaling BP2	C-2...G8	30
		3A	1	00 - 7F	Filter Cutoff Scaling BP3	C-2...G8	60
		3B	1	00 - 7F	Filter Cutoff Scaling BP4	C-2...G8	6C
		3C	2	00 - 01	Filter Cutoff Scaling Offset1	-128...+0...+127	00
		3D		00 - 7F			00
		3E	2	00 - 01	Filter Cutoff Scaling Offset2	-128...+0...+127	00
		3F		00 - 7F			00
		40	2	00 - 01	Filter Cutoff Scaling Offset3	-128...+0...+127	00
		41		00 - 7F			00
		42	2	00 - 01	Filter Cutoff Scaling Offset4	-128...+0...+127	00
		43		00 - 7F			00
		44	1	00 - 0f	Filter Cutoff Scaling Sensitivity	0...15	00
		45	1	00 - 0f	Cutoff Velocity Sensitivity	0...15	00
		46	1	00 - 7F	FEG Hold Rate	0...127	00
		47	1	00 - 7F	FEG Attack Rate	0...127	00
		48	1	00 - 7F	FEG Decay1 Rate	0...127	00
		49	1	00 - 7F	FEG Decay2 Rate	0...127	00
		4A	1	00 - 7F	FEG Release Rate	0...127	00
		4B	2	30 - 4F	FEG Initial Level	-2047...+0...+2047	40
		4C		00 - 7F			00
		4D	2	30 - 4F	FEG Attack Level	-2047...+0...+2047	40
		4E		00 - 7F			00
		4F	2	30 - 4F	FEG Decay1 Level	-2047...+0...+2047	40
		50		00 - 7F			00
		51	2	30 - 4F	FEG Decay2 Level	-2047...+0...+2047	40
		52		00 - 7F			00
		53	2	30 - 4F	FEG Release Level	-2047...+0...+2047	40
		54		00 - 7F			00
		55	1	00 - 0F	FEG Rate Scaling Sensitivity	0...15	00
		56	1	00 - 0F	Filter Velocity Curve Sensitivity	0...15	00
		57	1	00 - 0F	Resonance Velocity Sensitivity	0...15	00
		58	1	39 - 47	FEG Attack Rate Velocity Sensitivity	-7...+0...+7	40
		59	1	39 - 47	FEG Other Rate Velocity Sensitivity	-7...+0...+7	40
		5A	1	00 - 0f	Keyon Delay	0...15	00
		5B	1	00 - 7F	AEG Attack Rate	0...127	7F
		5C	1	00 - 7F	AEG Decay1 Rate	0...127	00
		5D	1	00 - 7F	AEG Decay2 Rate	0...127	00
		5E	1	-	not used	-	-
		5F	1	00 - 7F	AEG Release Rate	0...127	50
		60	2	00 - 01	AEG Initial Level	01 7F(0:Min)...00 00(255:Max)	00
		61		00 - 7F			00
		62	2	00 - 01	AEG Decay Level	01 7F(0:Min)...00 00(255:Max)	00
		63		00 - 7F			00
		64	2	00 - 01	AEG Sustain Level	01 7F(0:Min)...00 00(255:Max)	00
		65		00 - 7F			00
		66	1	00 - 0F	Level Scaling Sensitivity	0...15	00
		67	1	00 - 0F	AEG Rate Scaling Sensitivity	0...15	00
		68	1	00 - 0F	AEG Level Velocity Sensitivity	0...15	00
		69	1	00 - 0F	AEG Attack Rate Velocity Sensitivity	0...15	00

TOTAL SIZE 6A

62	ee	00	4	00 - 0F	Level Scaling Table Number	0...65535, 1st bit3-0→bit15-12	00
		01		00 - 0F		2nd bit3-0→bit11-8	00
		02		00 - 0F		3rd bit3-0→bit7-4	06
		03		00 - 0F		4th bit3-0→bit3-0	00
		04	4	00 - 0F	Scaling Pan Table Number	0...65535, 1st bit3-0→bit15-12	00
		05		00 - 0F		2nd bit3-0→bit11-8	00
		06		00 - 0F		3rd bit3-0→bit7-4	00
		07		00 - 0F		4th bit3-0→bit3-0	05
		08	4	00 - 0F	Tuning Curve Table Number	0...65535, 1st bit3-0→bit15-12	0f
		09		00 - 0F		2nd bit3-0→bit11-8	0f
		0A		00 - 0F		3rd bit3-0→bit7-4	0f
		0B		00 - 0F		4th bit3-0→bit3-0	0f
		0C	4	00 - 0F	Cutoff Scaling Table Number	0...65535, 1st bit3-0→bit15-12	0f
		0D		00 - 0F		2nd bit3-0→bit11-8	0f
		0E		00 - 0F		3rd bit3-0→bit7-4	0f
		0F		00 - 0F		4th bit3-0→bit3-0	0f
		10	4	00 - 0F	Cutoff Velocity Curve Table Number	0...65535, 1st bit3-0→bit15-12	00
		11		00 - 0F		2nd bit3-0→bit11-8	00
		12		00 - 0F		3rd bit3-0→bit7-4	00
		13		00 - 0F		4th bit3-0→bit3-0	01
		14	4	00 - 0F	FEG Rate Scaling Table Number	0...65535, 1st bit3-0→bit15-12	00
		15		00 - 0F		2nd bit3-0→bit11-8	00
		16		00 - 0F		3rd bit3-0→bit7-4	00
		17		00 - 0F		4th bit3-0→bit3-0	07
		18	4	00 - 0F	FEG Depth Velocity Curve Table Number	0...65535, 1st bit3-0→bit15-12	00
		19		00 - 0F		2nd bit3-0→bit11-8	00
		1A		00 - 0F		3rd bit3-0→bit7-4	00
		1B		00 - 0F		4th bit3-0→bit3-0	01
		1C	4	00 - 0F	Resonance Velocity Curve Table Number	0...65535, 1st bit3-0→bit15-12	00
		1D		00 - 0F		2nd bit3-0→bit11-8	00
		1E		00 - 0F		3rd bit3-0→bit7-4	00
		1F		00 - 0F		4th bit3-0→bit3-0	02
		20	4	00 - 0F	FEG Rate Velocity Table Number	0...65535, 1st bit3-0→bit15-12	00
		21		00 - 0F		2nd bit3-0→bit11-8	00
		22		00 - 0F		3rd bit3-0→bit7-4	00
		23		00 - 0F		4th bit3-0→bit3-0	03
		24	4	00 - 0F	AEG Level Scaling Table Number	0...65535, 1st bit3-0→bit15-12	00
		25		00 - 0F		2nd bit3-0→bit11-8	00
		26		00 - 0F		3rd bit3-0→bit7-4	06
		27		00 - 0F		4th bit3-0→bit3-0	00
		28	4	00 - 0F	AEG Rate Scaling Table Number	0...65535, 1st bit3-0→bit15-12	00
		29		00 - 0F		2nd bit3-0→bit11-8	00
		2A		00 - 0F		3rd bit3-0→bit7-4	00
		2B		00 - 0F		4th bit3-0→bit3-0	07
		2C	4	00 - 0F	AEG Level Velocity Table Number	0...65535, 1st bit3-0→bit15-12	00
		2D		00 - 0F		2nd bit3-0→bit11-8	00
		2E		00 - 0F		3rd bit3-0→bit7-4	00
		2F		00 - 0F		4th bit3-0→bit3-0	01
		30	4	00 - 0F	AEG Rate Velocity Table Number	0...65535, 1st bit3-0→bit15-12	00
		31		00 - 0F		2nd bit3-0→bit11-8	00
		32		00 - 0F		3rd bit3-0→bit7-4	00
		33		00 - 0F		4th bit3-0→bit3-0	01

TOTAL SIZE 34

ee = ELEMENT NUMBER(00 - 03)

<Table 2 - 11>

MIDI Parameter Change table (NATIVE DRUM VOICE COMMON)

Address (H)			Size (H)	Data (H)	Parameter	Description	Default value (H)
66	00	00	1	20 - 7F	Voice Name 1	32...127(ASCII)	49 ('I')
		01	1	20 - 7F	Voice Name 2	32...127(ASCII)	6E ('n')
		02	1	20 - 7F	Voice Name 3	32...127(ASCII)	69 ('i')
		03	1	20 - 7F	Voice Name 4	32...127(ASCII)	74 ('t')
		04	1	20 - 7F	Voice Name 5	32...127(ASCII)	20 (' ')
		05	1	20 - 7F	Voice Name 6	32...127(ASCII)	4B ('K')
		06	1	20 - 7F	Voice Name 7	32...127(ASCII)	69 ('i')
		07	1	20 - 7F	Voice Name 8	32...127(ASCII)	74 ('t')
		08	1	00 - 10	Voice Category	0, 2...16(--, PF, OR, GT, BA, ST, BR, RP, LD, PD, SC, CP, DR, SE, ME, CO)	00 ('--')
		09	1	00 - 13	Original Kit	01(StandKit) ...29(GM SFX)	00

TOTAL SIZE 0A

<Table 2 - 12>

MIDI Parameter Change table (NATIVE DRUM VOICE KEY)

Address (H)			Size (H)	Data (H)	Parameter	Description	Default value (H)
67	rr	00	1	00 - 7F	Pitch Coarse	-64...0...+63(semitones)	40
		01	1	00 - 7F	Pitch Fine	-64...0...+63(cent)	40
		02	1	00 - 7F	Level	0...127	depend on the note
		03	1	00 - 7F	Alternate Group	0ff, 1..127	depend on the note
		04	1	00 - 7F	Pan	Random, L63..C..R63	depend on the note
		05	1	00 - 7F	Reverb Send	0...127	depend on the note
		06	1	00 - 7F	Chorus Send	0...127	depend on the note
		07	1	-	not used	-	--
		08	1	00 - 01	Key Assign	Single, Multi	00
		09	1	00 - 01	Receve Note Off	OFF, ON	depend on the note
		0a	1	00 - 01	Receive Note On	OFF, ON	01
		0b	1	00 - 7F	Filter Cutoff Frequency	0...127	7F
		0c	1	00 - 7F	Filter Resonance	0...63	10
		0d	1	00 - 7F	EG Attack Rate	0...127	7F
		0e	1	00 - 7F	EG Decay1 Rate	0...127	40
		0f	1	00 - 7F	EG Decay2 Rate	0...127	40

TOTAL SIZE 10

rr = NOTE NUMBER(0D - 5B)

YAMAHA [Music Synthesizer --- synth part] Date :20-NOV-2001
Model S08 MIDI Implementation Chart Version : 1.0

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default	1 - 16	1 - 16	Memorized
	Changed	1 - 16	1 - 16	
Mode	Default	3	3	Memorized
	Messages	×	1 - 4(m=1) *2	
	Altered	**********	×	
Note Number : True voice		0 - 127 **********	0 - 127 0 - 127	
Velocity	Note ON	○ 9nH,v=1-127	○ 9nH,v=1-127	
	Note OFF	× 9nH,v=0	×	
After Touch	Key's	×	○ *1	
	Ch's	○ *3	○ *1	
Pitch Bend		○	○ 0-24 semi *1	
Control Change	0,32	○	○ *1	Bank Select
	1,5,7,10,11	×	○ *1	
	6,38	×	○ *1	Data Entry
	64-67	×	○ *1	
	71-74	×	○ *1	Sound Controller
	84	×	○ *1	Portamento Cntrl
	91,93,94	×	○ *1	Effect Depth
	96-97	×	○ *1	RPN Inc,Dec
	98-99	×	○ *1	NRPN LSB,MSB
	100-101	×	○ *1	RPN LSB,MSB
	1-31,33-95	○	○ *1	Assignable Cntrl
Prog Change : True #		○ 0 - 127 **********	○ 0 - 127 0 - 127	
System Exclusive		○	○	
Common : Song Pos.		×	×	
: Song Sel.		×	×	
: Tune		×	×	
System : Clock		×	×	
Real Time : Commands		×	×	
: All Sound Off		×	○(120,126,127)	
Aux : Reset All Cntrls		×	○(121)	
: Local ON/OFF		×	×	
Mes- : All Notes OFF		×	○(123-125)	
sages: Active Sense		○	○	
: Reset		×	×	

Notes:
*1 receive if switch is on.
*2 m is always treated as "1" regardless of its value.
*3 though the keyboard itself has no after touch, after touch data can be transmitted from MW and FC when after touch is assigned to the controllers.

Mode 1 : OMNI ON , POLY Mode 2 : OMNI ON ,MONO ○ : Yes
Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF,MONO × : No

YAMAHA [Music Synthesizer --- seq part] Date :20-NOV-2001
Model S08 MIDI Implementation Chart Version : 1.0

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default	1 - 16	×	Memorized
	Changed	1 - 16	×	
Mode	Default	×	×	
	Messages	×	×	
	Altered	**********	×	
Note Number : True voice		0 - 127 **********	× ×	
Velocity	Note ON	○ 9nH,v=1-127	×	
	Note OFF	○ 8nH,v=1-127	×	
After Touch	Key's	○	×	
	Ch's	○	×	
Pitch Bend		○	×	
Control Change	0-121	○	×	
Prog Change : True #		○ 0 - 127 **********	× ×	
System Exclusive		○	×	
Common : Song Pos.		×	×	
: Song Sel.		×	×	
: Tune		×	×	
System : Clock		○ *2	× *1*2	
Real Time : Commands		○ *2	× *2	
Aux : All Sound Off		○	×	
: Reset All Cntrls		○	×	
: Local ON/OFF		○	×	
Mes- : All Notes OFF		○	×	
sages: Active Sense		○	×	
: Reset		×	×	

Notes: *1 receive if sync is MIDI.
*2 if sequencer control is on.

Mode 1 : OMNI ON , POLY Mode 2 : OMNI ON ,MONO ○ : Yes
Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF,MONO × : No

M.D.G., Pro Audio & Digital Musical Instrument Division, Yamaha Corporation

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