

KORG ES-1 MIDI IMPLEMENTATION

1. TRANSMITTED DATA

1-1 CHANNEL MESSAGES [H]:Hex, [D]:Decimal

Status [H]	Second [H] [D]	Third [H]	Description
8n	kk (kk)	vv	Note Off vv=0~127
9n	kk (kk)	vv	Note On vv=1~127
Bn	06 (06)	dd	Data Entry(MSB) [TABLE1]
Bn	62 (98)	nl	NRPN LSB [TABLE1]
Bn	63 (99)	nm	NRPN MSB [TABLE1]
Cn	pp (pp)	--	Program Change [NOTE1]

n : MIDI Channel (0~15)

1-2 SYSTEM COMMON MESSAGES

Status [H]	Second [H]	Third [H]	Description
F2	pp	pp	Song Position Pointer *1
F3	ss	--	Song Select ss : Song No. = 0~15 *2

*1 This message is transmitted when in Song mode and the "Clock" is set to "INT".

*2 This message is transmitted when is Song mode.

1-3 SYSTEM REALTIME MESSAGES

Status[H]	Description
F8	Timing Clock *
FA	Start *
FB	Continue *
FC	Stop *
FE	Active Sensing

* :This message is transmitted when the "Clock" is set to "INT".

1-4 UNIVERSAL SYSTEM EXCLUSIVE MESSAGES

(1) DEVICE INQUIRY REPLY

Byte[H]	Description
F0	Exclusive Status
7E	Non Realtime Message
0c	MIDI Channel (Device ID)
06	Inquiry Message
02	Identity reply
42	KORG ID (Manufacturers ID)
57	ES-1 ID (Family ID (LSB))
00	(Family ID (MSB))
00	(Member ID (LSB))
00	(Member ID (MSB))
xx	(Minor Ver. (LSB))
xx	(Minor Ver. (MSB))
xx	(Major Ver. (LSB))
xx	(Major Ver. (MSB))
F7	End of Exclusive

This message is transmitted whenever a INQUIRY MESSAGE REQUEST is received.

1-5 SYSTEM EXCLUSIVE MESSAGES

Function ID [Hex]		R	E
40	CURRENT PATTERN DATA DUMP	o	
58	CURRENT SONG DATA DUMP	o	
4C	ALL PATTERN DATA DUMP	o	
57	ALL SONG DATA DUMP	o	
51	GLOBAL DATA DUMP	o	
26	DATA FORMAT ERROR		o
23	DATA LOAD COMPLETED		o
24	DATA LOAD ERROR		o
21	WRITE COMPLETED		o
22	WRITE ERROR		o

Transmitted when

- R : Request message is received
- E : Exclusive message is received

2.RECOGNIZED RECEIVE DATA

2-1 CHANNEL MESSAGES

Status [Hex]	Second [H] [D]	Third [H]	Description	
8n	kk (kk)	vv	Note Off	vv=0~127
9n	kk (kk)	00	Note Off	
9n	kk (kk)	vv	Note On	vv=1~127
Bn	06 (06)	dd	Data Entry(MSB)	[TABLE1]
Bn	62 (98)	nl	NRPN LSB	[TABLE1]
Bn	63 (99)	nm	NRPN MSB	[TABLE1]
Bn	79(121)	00	Reset All Controllers	
Bn	7B(123)	00	All Note Off	*
Cn	pp (pp)	--	Program Change	[NOTE1]

n : MIDI Channel No.(0~15)

* : This message force Note Off to Audio In Part only.
Do not work P1-P7B,Slice part.

2-2 SYSTEM REALTIME MESSAGES

Status[H]	Description	
F8	Timing Clock	*
FA	Start	*
FB	Continue	*
FC	Stop	*
FE	Active Sensing	

* :This message is recognized when the "Clock" is set to "EXT".

2-3 UNIVERSAL SYSTEM EXCLUSIVE MESSAGE (NON REALTIME)

(1) DEVICE INQUIRY MESSAGE REQUEST

Byte[H]	Description
F0	Exclusive Status
7E	Non Realtime Message
0c	MIDI Channel
06	Inquiry Message
01	Inquiry Request
F7	End of Exclusive

(2) MASTER VOLUME

Byte[H]	Description
F0	Exclusive Status
7F	Realtime Message
0c	MIDI Channel (Device ID)
04	Device Control ID
01	Master Volume ID
11	Volume Data (LSB)
mm	Volume Data (MSB)
F7	End of Exclusive

2-4 SYSTEM EXCLUSIVE MESSAGE

Function ID [Hex]	Function
10	CURRENT PATTERN DATA DUMP REQUEST
1C	ALL PATTERN DATA DUMP REQUEST
0A	CURRENT SONG DATA DUMP REQUEST
0B	ALL SONG DATA DUMP REQUEST
0E	GLOBAL DATA DUMP REQUEST
11	PATTERN WRITE REQUEST
1A	SONG WRITE REQUEST
40	CURRENT PATTERN DATA DUMP
4C	ALL PATTERN DATA DUMP
51	GLOBAL DATA DUMP
58	CURRENT SONG DATA DUMP
57	ALL SONG DATA DUMP

All messages received when Sequencer is not running.

MIDI EXCLUSIVE FORMAT (R:Receive, T:Transmit)

(1) CURRENT PATTERN DATA DUMP REQUEST R

Byte	Description
F0,42,3c,57	EXCLUSIVE HEADER
0001 0000 (10)	CURRENT PATTERN DATA DUMP REQUEST 10H
1111 0111 (F7)	EOX

When this message is received, the CURRENT PATTERN DATA DUMP(Function:40h) message will be transmitted.

(2) ALL PATTERN DATA DUMP REQUEST R

Byte	Description
F0,42,3c,57	EXCLUSIVE HEADER
0001 1100 (1C)	ALL PATTERN DATA DUMP REQUEST 1CH
1111 0111 (F7)	EOX

When this message is received, the ALL PATTERN DATA DUMP(Function:4Ch) message will be transmitted.

(3) CURRENT SONG DATA DUMP REQUEST R

Byte	Description
F0,42,3c,57	EXCLUSIVE HEADER
0000 1010 (0A)	CURRENT SONG DATA DUMP REQUEST 0AH
1111 0111 (F7)	EOX

When this message is received, the CURRENT SONG DATA DUMP (Function:58h) message will be transmitted.

(4) ALL SONG DATA DUMP REQUEST R

Byte	Description
F0,42,3c,57	EXCLUSIVE HEADER
0000 1011 (0B)	ALL SONG DATA DUMP REQUEST 0BH
1111 0111 (F7)	EOX

When this message is received, the ALL SONG DATA DUMP(Function:57h) message will be transmitted.

(5) GLOBAL DATA DUMP REQUEST R

Byte	Description
F0,42,3c,57	EXCLUSIVE HEADER
0000 1111 (0E)	ALL DATA DUMP REQUEST 0EH
1111 0111 (F7)	EOX

When this message is received, the GLOBAL DATA DUMP(Function:51h) message will be transmitted.

(6) PATTERN WRITE REQUEST R

Byte	Description
F0,42,3c,57	EXCLUSIVE HEADER
0001 0001 (11)	PATTERN WRITE REQUEST 11H
0000 0000 (00)	
0ppp pppp (pp)	Destination Program Number
1111 0111 (F7)	EOX

When this message is received, a WRITE COMPLETED(Function:21h) message or a WRITE ERROR(Function:22h) message will be transmitted.

(7) SONG WRITE REQUEST R

Byte	Description
F0,42,3c,57	EXCLUSIVE HEADER
0001 1010 (1A)	SONG WRITE REQUEST 1AH
0000 ssss (0s)	Destination Song No(0~15)
1111 0111 (F7)	EOX

When this message is received, a WRITE COMPLETED(Function:21h) message or a WRITE ERROR(Function:22h) message will be transmitted.

(8) CURRENT PATTERN DATA DUMP R/T

Byte	Description
F0,42,3c,57	EXCLUSIVE HEADER
0100 0000 (40)	CURRENT PATTERN DATA DUMP 40H
0ddd dddd (dd)	Data [NOTE2][TABLE2]
:	:
1111 0111 (F7)	EOX

When this message is received, a DATA LOAD COMPLETED(Function:23h) message or a DATA LOAD ERROR(Function:24h) message will be transmitted.

(9) ALL PATTERN DATA DUMP T

Byte	Description
F0,42,3c,57	EXCLUSIVE HEADER

0100 1100 (4C)	ALL PATTERN DATA DUMP	4CH
0ddd dddd (dd)	Data	[NOTE2][TABLE2]
:	:	
1111 0111 (F7)	EOX	

When this message is received, a DATA LOAD COMPLETED(Function:23h) message or a DATA LOAD ERROR(Function:24h) message will be transmitted.

(10) GLOBAL DATA DUMP R/T

Byte	Description	
F0,42,3c,57	EXCLUSIVE HEADER	
0101 0001 (51)	ALL PATTERN DATA DUMP	51H
0ddd dddd (dd)	Data	[NOTE2][TABLE15]
:	:	
1111 0111 (F7)	EOX	

When this message is received, a DATA LOAD COMPLETED(Function:23h) message or a DATA LOAD ERROR(Function:24h) message will be transmitted.

(11) CURRENT SONG DATA DUMP R/T

Byte	Description	
F0,42,3c,57	EXCLUSIVE HEADER	
0101 1000 (58)	CURRENT SONG DATA DUMP	58H
0ddd dddd (dd)	Data	[NOTE2][TABLE11]
:	:	
1111 0111 (F7)	EOX	

When this message is received, a DATA LOAD COMPLETED(Function:23h) message or a DATA LOAD ERROR(Function:24h) message will be transmitted.

(12) ALL SONG DATA DUMP R/T

Byte	Description	
F0,42,3c,57	EXCLUSIVE HEADER	
0101 0111 (57)	ALL SONG DATA DUMP	57H
0ddd dddd (dd)	Data	[NOTE2][TABLE12]
:	:	
1111 0111 (F7)	EOX	

When this message is received, a DATA LOAD COMPLETED(Function:23h) message or a DATA LOAD ERROR(Function:24h) message will be transmitted.

(13) DATA FORMAT ERROR T

Byte	Description	
F0,42,3c,57	EXCLUSIVE HEADER	
0010 0110 (26)	DATA FORMAT ERROR	26H
1111 0111 (F7)	EOX	

(14) DATA LOAD COMPLETED T

Byte	Description	
F0,42,3c,57	EXCLUSIVE HEADER	
0010 0011 (23)	DATA LOAD COMPLETED	23H
1111 0111 (F7)	EOX	

(15) DATA LOAD ERROR T

05	11	Part3 Level	0~127	11
05	12	Part3 Filter	0~127	12
05	13	Part3 Pan	0~127	13
05	14	Part3 Effect Send	0~1	14
05	15	Part3 Roll	0~1	15
05	16	Part3 Reverse	0~1	16
05	17	Part3 Motion Seq Type	0~2 : Off/Smooth/TrigHold	--
05	18	Part4 Pitch	0~127	18
05	19	Part4 Level	0~127	19
05	1A	Part4 Filter	0~127	1A
05	1B	Part4 Pan	0~127	1B
05	1C	Part4 Effect Send	0~1	1C
05	1D	Part4 Roll	0~1	1D
05	1E	Part4 Reverse	0~1	1E
05	1F	Part4 Motion Seq Type	0~2 : Off/Smooth/TrigHold	--
05	20	Part5 Pitch	0~127	20
05	21	Part5 Level	0~127	21
05	22	Part5 Filter	0~127	22
05	23	Part5 Pan	0~127	23
05	24	Part5 Effect Send	0~1	24
05	25	Part5 Roll	0~1	25
05	26	Part5 Reverse	0~1	26
05	27	Part5 Motion Seq Type	0~2 : Off/Smooth/TrigHold	--
05	28	Part6A Pitch	0~127	28
05	29	Part6A Level	0~127	29
05	2A	Part6A Filter	0~127	2A
05	2B	Part6A Pan	0~127	2B
05	2C	Part6A Effect Send	0~1	2C
05	2D	Part6A Roll	0~1	2D
05	2E	Part6A Reverse	0~1	2E
05	2F	Part6A Motion Seq Type	0~2 : Off/Smooth/TrigHold	--
05	30	Part6B Pitch	0~127	30
05	31	Part6B Level	0~127	31
05	32	Part6B Filter	0~127	32
05	33	Part6B Pan	0~127	33
05	34	Part6B Effect Send	0~1	34
05	35	Part6B Roll	0~1	35
05	36	Part6B Reverse	0~1	36
05	37	Part6B Motion Seq Type	0~2 : Off/Smooth/TrigHold	--
05	38	Part7A Pitch	0~127	38
05	39	Part7A Level	0~127	39
05	3A	Part7A Filter	0~127	3A
05	3B	Part7A Pan	0~127	3B
05	3C	Part7A Effect Send	0~1	3C
05	3D	Part7A Roll	0~1	3D
05	3E	Part7A Reverse	0~1	3E
05	3F	Part7A Motion Seq Type	0~2 : Off/Smooth/TrigHold	--
05	40	Part7B Pitch	0~127	40
05	41	Part7B Level	0~127	41
05	42	Part7B Filter	0~127	42
05	43	Part7B Pan	0~127	43
05	44	Part7B Effect Send	0~1	44
05	45	Part7B Roll	0~1	45
05	46	Part7B Reverse	0~1	46
05	47	Part7B Motion Seq Type	0~2 : Off/Smooth/TrigHold	--
05	48	Slice Pitch	0~127	48
05	49	Slice Level	0~127	49
05	4A	Slice Filter	0~127	4A
05	4B	Slice Pan	0~127	4B
05	4C	Slice Effect Send	0~1	4C
05	4D	Slice Roll	0~1	4D
05	4E	Slice Reverse	0~1	4E
05	4F	Slice Motion Seq Type	0~2 : Off/Smooth/TrigHold	--
05	50	Audio In Speed	0~63	50
05	51	Audio In Level	0~127	51
05	52	Audio In Filter	0~127	52
05	53	Audio In Pan	0~127	53
05	54	Audio In Effect Send	0~1	54

05	55	Audio In Roll	0~1	55
05	57	Audio In Motion Seq Type	0~2 : Off/Smooth/TrigHold	--
05	60	Delay Depth	0~127	60
05	61	Delay Time	0~127	61
05	62	Effect Type	0~10	62
05	63	Effect Param 1	0~127	63
05	64	Effect Param 2	0~127	64
05	65	BPM Delay Sync	0~1 : Off/TempoDelay	65
05	66	Delay Motion Seq SW	0~1	66
05	67	Effect Motion Seq SW	0~1	67
05	68	Accent Level	0~127	68
		Tempo MSB	(song event only)	--
		Tempo LSB	(song event only)	--
05	6B	Mute 1	Bit6 : 0/1=Mute/Solo	6B
			Bit4~0(AudioIn,P4~P1)=1 : Mute	
05	6C	Mute 2	Bit6 : 0/1=Mute/Solo	6C
			Bit5~0(Slice,P7B~P5)=1 : Mute	

TABLE2 : PATTERN PARAMETERS (1732 bytes)

0	Tempo (MSB)	20.0~300.0	iiiiiii 20~300
1	Tempo (LSB)	iiiiiii00ffff	ffff 0~9
b7,6	Roll Type	0~2 : 2~4	
2 b5,4	Scale/Beat	0~2 : 16th, 32nd, tri, tr2	
b1,0	Pattern Length	0~3 : 1~4	
3	Swing	0~25 : 50~75%	
4	Effect Type	0~10	[TABLE16]
5	Effect Edit 1	0~127	
6	Effect Edit 2	0~127	
7	Effect MotionSEQ Stat	0~1 : off/on	
8	Delay Depth	0~127	
9	Delay Time	0~127	
b1	Delay BPM Sync Stat	0~1 : off/on	
10 b0	Delay MotionSEQ Stat	0~1 : off/on	
b0~6	Accent Level	0~127	
11 b7	Accent Motion SEQ Stat	0~1 : off/on	
12~75	Fx Edit 1 MotionSEQ Data	(64bytes) 0~127 (MSB="1" : Off)	
76~139	Fx Edit 2 MotionSEQ Data	(64bytes) 0~127 (MSB="1" : Off)	
140~203	Delay Depth MotionSEQ Data	(64bytes) 0~127 (MSB="1" : Off)	
204~267	Delay Depth MotionSEQ Data	(64bytes) 0~127 (MSB="1" : Off)	
Part Parameters			
268~273	Part 1 Parameters	(6bytes)	[TABLE3]
274~281	Part 1 StepSequence Data	(8bytes)	[TABLE6]
282~395	Part 1 MotionSequence Data	(114bytes)	[TABLE7]
396~401	Part 2 Parameters	(6bytes)	[TABLE3]
402~409	Part 2 StepSequence Data	(8bytes)	[TABLE6]
410~523	Part 2 MotionSequence Data	(114bytes)	[TABLE7]
524~529	Part 3 Parameters	(6bytes)	[TABLE3]

530~537	Part 3 StepSequence Data	(8bytes)	[TABLE6]
538~651	Part 3 MotionSequence Data	(114bytes)	[TABLE7]
652~657	Part 4 Parameters	(6bytes)	[TABLE3]
658~665	Part 4 StepSequence Data	(8bytes)	[TABLE6]
666~779	Part 4 MotionSequence Data	(114bytes)	[TABLE7]
780~785	Part 5 Parameters	(6bytes)	[TABLE3]
786~793	Part 5 StepSequence Data	(8bytes)	[TABLE6]
794~907	Part 5 MotionSequence Data	(114bytes)	[TABLE7]
908~913	Part 6A Parameters	(6bytes)	[TABLE3]
914~921	Part 6A StepSequence Data	(8bytes)	[TABLE6]
922~1035	Part 6A MotionSequence Data	(114bytes)	[TABLE7]
1036~1041	Part 6B Parameters	(6bytes)	[TABLE3]
1042~1049	Part 6B StepSequence Data	(8bytes)	[TABLE6]
1050~1163	Part 6B MotionSequence Data	(114bytes)	[TABLE7]
1164~1169	Part 7A Parameters	(6bytes)	[TABLE3]
1170~1177	Part 7A StepSequence Data	(8bytes)	[TABLE6]
1178~1291	Part 7A MotionSequence Data	(114bytes)	[TABLE7]
1292~1297	Part 7B Parameters	(6bytes)	[TABLE3]
1298~1305	Part 7B StepSequence Data	(8bytes)	[TABLE6]
1306~1419	Part 7B MotionSequence Data	(114bytes)	[TABLE7]
1420~1425	Slice Parameters	(6bytes)	[TABLE4]
1426~1433	Slice StepSequence Data	(8bytes)	[TABLE6]
1434~1547	Slice MotionSequence Data	(114bytes)	[TABLE7]
1548	Reserved	(1bytes)	
1549~1553	Audio In Parameters	(5bytes)	[TABLE5]
1554~1561	Audio In StepSequence Data	(8bytes)	[TABLE6]
1562~1657	Audio In MotionSequence Data	(96bytes)	[TABLE8]
1660~1667	Accent StepSequence	(8bytes)	[TABLE6]
1668~1731	Accent MotionSequence Data	(64bytes)	[TABLE9]

TABLE3 : SAMPLE PART PARARMETERS

b7	Sample Mono/Stereo	0/1 : Mono/Stereo (P1/P3) 0 (fixed) (another part)
0	b0~b6	Sample No. 0~99(Mono), 0~49(Stereo)(P1/P3) 0~99(Mono) (another part)
1	Filter	0~127
2	Level	0~127
3	Panpot	0~127(64=center)
4	Pitch	0~127(64=equal pitch)

	b7	Sample Use	0/1 : use/off
	b6	(Reserved)	
	b2	Reverse	0/1 : off/on
5	b1	Roll	0/1 : off/on
	b0	Effect	0/1 : off/on

TABLE4 : SLICE PART PARAMMETERS

	0	Sample No	0~99
	1	Filter	0~127
	2	Level	0~127
	3	Panpot	0~127(64=center)
	4	Pitch	0~127(64=equal pitch)
	b7	Sample Use	0/1 : use/off
	b6	(Reserved)	
	b2	Reverse	0/1 : off/on
5	b1	Roll	0/1 : off/on
	b0	Effect	0/1 : off/on

TABLE5 : AUDIO IN PARAMETERS

	0	Filter	0~127
	1	Level	0~127
	2	Panpot	0~127 (64=center)
	3	Gate	0~63
4	b1	Roll	0~1 : off/on
	b0	Effect	0~1 : off/on

TABLE6 : STEP SEQUENCE DATA/ACCENT STEP DATA

offset	bit position	value (on Accent Part)
0	Bit0~7 (Step1 ~8)	0/1 =Off(Soft)/On(Hard)
1	Bit0~7 (Step9 ~16)	0/1 =Off(Soft)/On(Hard)
2	Bit0~7 (Step17 ~24)	0/1 =Off(Soft)/On(Hard)
3	Bit0~7 (Step25 ~32)	0/1 =Off(Soft)/On(Hard)
4	Bit0~7 (Step33 ~40)	0/1 =Off(Soft)/On(Hard)
5	Bit0~7 (Step41 ~48)	0/1 =Off(Soft)/On(Hard)
6	Bit0~7 (Step49 ~56)	0/1 =Off(Soft)/On(Hard)
7	Bit0~7 (Step57 ~64)	0/1 =Off(Soft)/On(Hard)

TABLE7 : SAMPLE PART MOTION SEQUENCE DATA

	0	Type	0~2 : Off/Smooth/TrigHold
	1	Destination	0~3 : Pitch/Level/Filter/Pan

2 : 65	Knob value (step1) : Knob value (step64)	0~127 (MSB="1" : Off)	
66~81	Reverse SW value (step64)		[TABLE10]
82~97	Effect SW value (step64)		[TABLE10]
98~113	Roll SW value (step64)		[TABLE10]

TABLE8: AUDIOIN PART MOTION SEQUENCE DATA

0	Type	0~2 : Off/Smooth/TrigHold	
1	Destination	0~3 : Speed/Level/Filter/Pan	
2 : 65	Knob value (step1) : Knob value (step64)	0~127 (MSB="1" : Off)	
66~81	Effect SW value (step64)		[TABLE10]
82~97	Roll SW value (step64)		[TABLE10]

TABLE9: ACCENT PART MOTION SEQUENCE DATA

0 : 63	Accent Level value (step1) : Accent Level value (step64)	0~127 (MSB="1" : Off)	
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TABLE10 : MOTION SEQUENCE DATA(SWITCH TYPE)

offset	bit position	type	value
0	Bit0~7 (Step1~8)	Motion SW	0/1 =Off/On
1	Bit0~7 (Step9~16)	Motion SW	0/1 =Off/On
2	Bit0~7 (Step17~24)	Motion SW	0/1 =Off/On
3	Bit0~7 (Step25~32)	Motion SW	0/1 =Off/On
4	Bit0~7 (Step33~40)	Motion SW	0/1 =Off/On
5	Bit0~7 (Step41~48)	Motion SW	0/1 =Off/On
6	Bit0~7 (Step49~56)	Motion SW	0/1 =Off/On
7	Bit0~7 (Step57~64)	Motion SW	0/1 =Off/On
8	Bit0~7 (Step1~8)	Motion Value	0/1 =Off/On
9	Bit0~7 (Step9~16)	Motion Value	0/1 =Off/On
10	Bit0~7 (Step17~24)	Motion Value	0/1 =Off/On
11	Bit0~7 (Step25~32)	Motion Value	0/1 =Off/On
12	Bit0~7 (Step33~40)	Motion Value	0/1 =Off/On
13	Bit0~7 (Step41~48)	Motion Value	0/1 =Off/On
14	Bit0~7 (Step49~56)	Motion Value	0/1 =Off/On
15	Bit0~7 (Step57~64)	Motion Value	0/1 =Off/On

TABLE11 : CURRENT SONG PARAMETER

0~517	Song Parameters	(518bytes)	[TABLE13]
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Song Event Data		
518~521	event data (1st)	[TABLE14]
522~525	event data (2nd)	
:		
143314	event data (35700th(max))	
~143317		
(max)		

TABLE12 : ALL SONG DATA

0~ 517	Song 1 parameter	(518bytes)	[TABLE13]
518~1035	Song 2 parameter	(518bytes)	[TABLE13]
1036~1553	Song 3 parameter	(518bytes)	[TABLE13]
1554~2071	Song 4 parameter	(518bytes)	[TABLE13]
2072~2589	Song 5 parameter	(518bytes)	[TABLE13]
2590~3107	Song 6 parameter	(518bytes)	[TABLE13]
3108~3625	Song 7 parameter	(518bytes)	[TABLE13]
3626~4143	Song 8 parameter	(518bytes)	[TABLE13]
4144~4661	Song 9 parameter	(518bytes)	[TABLE13]
4662~5179	Song 10 parameter	(518bytes)	[TABLE13]
5180~5697	Song 11 parameter	(518bytes)	[TABLE13]
5698~6215	Song 12 parameter	(518bytes)	[TABLE13]
6216~6733	Song 13 parameter	(518bytes)	[TABLE13]
6734~7251	Song 14 parameter	(518bytes)	[TABLE13]
7252~7769	Song 15 parameter	(518bytes)	[TABLE13]
7770~8287	Song 16 parameter	(518bytes)	[TABLE13]

Song Event Data (Event Size is total number of event of All Songs.)		
8288~8291	event data (1st)	[TABLE14]
8292~8295	event data (2nd)	
:		
151084	event data (35700th(max))	
~151087		
(max)		

TABLE13 : SONG PARAMETERS

0	Tempo (MSB)	20.0~300.0	iiiiiiiiii 20~300
1	Tempo (LSB)	iiiiiiiiii00ffff	ffff .0~.9
2	step end data	0~255=1stPosition~256thPosition	
3	(dummy)		
4	number of event (MSB)	0~35700	
5	number of event (LSB)		
Position Data			
6	Pattern Number (1st)		
:	:		
261	Pattern Number (256th)	0~127 = A01 ~ B64	

262	dummy	
:	:	
516	dummy	

TABLE14 : SONG EVENT DATA

0	Position Number	0~255
b7	Enable Data	0/1 : Enable/Disable
1	b5,4 Measure Number	0~3 : 1~4
b3~0	Step Number	0~15 : 1~16
b6	if "Control/Note" is Control	
	if "Destination" is TempoMSB	
	Tempo value (b15)	*2
	if "Destination" is not TempoMSB,TempoLSB	
	not use	
	if "Control/Note" is Note	
	not use	
2	b7 Control/Note	0/1 : Control / Note
	if "Control/Note" is Control	
b6~0	Destination (ds)	[TABLE1]
	if "Control/Note" is Note	
b6~4	not used	
b3~0	Part Number	0~11 *1
3	if "Control/Note" is Control	
	if "Destination" is TempoMSB	
	Tempo Value (b14~7)	
	if "Destination" is TempoLSB	
	Tempo Value (b6~0)	b7->0
	if "Destination" is not Tempo	
	Value	0~127
	if "Control/Note" is Note	
	not used	

*1 0~4 : Part1~Part5
5 : Part6A
6 : Part6B
7 : Part7A
8 : Part7B
9 : Slice
10 : Audio In

TABLE15 : GLOBAL PARAMETERS

0	Midi CH	0~15(1CH~16CH)
1	Metronome	0~4 : Off/r-0/r-1/r-2/On

2	Write Protect	0/1 : off/on
3	Part 1 Note Number	0~127 : C-1~G9
4	Part 2 Note Number	0~127 : C-1~G9
5	Part 3 Note Number	0~127 : C-1~G9
6	Part 4 Note Number	0~127 : C-1~G9
7	Part 5 Note Number	0~127 : C-1~G9
8	Part 6A Note Number	0~127 : C-1~G9
9	Part 6B Note Number	0~127 : C-1~G9
10	Part 7A Note Number	0~127 : C-1~G9
11	Part 7B Note Number	0~127 : C-1~G9
12	Slice Note Number	0~127 : C-1~G9
13	Audio In Note Number	0~127 : C-1~G9
14	Clock	0/1 : Int/Ext
15	Audio In Mode	0/1 : Mono/Stereo
16~63	dummy	
64~127	Pattern Set Parameters	0~127 : A01~B64

TABLE 16: EFFECT Type

0:Reverb
1:Flanger/Chorus
2:Phaser
3:Ring Modulation
4:Pitch Shifter
5:Compressor
6:Distortion
7:Decimator
8:Isolator
9:Resonance Filter
10:Wah