16 bit DIGITAL SYNTHESIZER

K4 MIDI IMPLEMENTATION

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1. TRANSMITTED DATA

1st	2nd	3rd	Description	
1000nnnn	Okkkkkkk	01vvvvv	Note off	kkkkkk = 24 ~ 108
1001nnnn	0kkkkkkk	0vvvvvv	Note on	kkkkkk = 24 ~ 108 vvvvvv = 1 ~ 127
1011nnnn	00000001	0 v v v v v v v	Modulation	vvvvvv = 0 ~ 127
1011nnnn	00000110	0vvvvvv	Data Entry	vvvvvv = 0 ~ 127
1011nnnn	01000000	0vvvvvv	Hold 1 sw	vvvvvvv = 0 off vvvvvvv = 127 on
1011nnnn	01100100	0vvvvvv	RPC LSB	vvvvvvv = 0 Bender Range vvvvvvv = 1 Fine Tuning
1011nnnn	01100101	0vvvvvv	RPC MSB	vvvvvv = 0
1100nnnn	Оррррррр		Program Change	ppppppp = 0 ~ 63 Single I/E A-1 ~ D-16 ppppppp = 64 ~ 127 Multi ppppppp = I/E A-1 ~ D-16
1101nnnn	0vvvvvv		Ch. Pressure	vvvvvv = 0 ~ 127
1110nnnn	0Ь000000	0vvvvvv	Pitch Bender	vvvvvvb = 0 ~ 255
1011nnnn	01111011	00000000	All Notes off	
11111110			Active Sensing	

nnnn = Channel no. RPC Regitered Parameter Control

2. RECOGNIZED RECEIVED DATA

1st	2nd	3rd	Description	
1000nnnn	Okkkkkkk	0vvvvvv	Note off	$kkkkkk = 0 \sim 120$ $vvvvvv = 0 \sim 127$
1001nnnn	Okkkkkkk	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Note on/off	kkkkkkk = 0 ~ 120 vvvvvvv = 1 ~ 127 Note on vvvvvvv = 0 off
1011nnnn	00000001	0vvvvvv	Modulation	vvvvvv = 0 ~ 127
1011nnnn	00000111	Ονννννν	Main Volume	vvvvvv = 0 ~ 127
1011nnnn	00000110	0 0 0 0 0 0 0 0 0 0	Data Entry	vvvvvvv = 0 ~ 127
1011nnnn	01000000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Hold 1 sw	vvvvvvv = 0 ~ 63 off vvvvvvv = 64 ~ 127 on
1011nnnn	01100100	0vvvvvv	RPC LSB	vvvvvvv = 0 Bender Range vvvvvvv = 1 Fine Tuning
1011nnnn	01100101	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RPC MSB	vvvvvv = 0
1100nnnn	Оррррррр		Program Change	ppppppp = 0 ~ 63 Single I/E A-1 ~ D-16 ppppppp = 64 ~ 127 Multi I/E A-1 ~ D-16
1101nnnn	0000000		Ch. Pressure	vvvvvv = 0 ~ 127
1110nnnn	06000000	0 v v v v v v v	Pitch Bender	vvvvvvb = 0 ~ 255
1011nnnn	01111010	Ovvvvvv	Local on/off	vvvvvvv = 0 ~ 63 off 64 ~ 127 on
1011nnnn 1011nnnn 1011nnnn	01111011 01111100 01111101	00000000 00000000 00000000	All Notes off Omni off Omni on	
11111110			Active Sensing	

nnnn = Channel no. RPC Regitered Parameter Control

3. EXCLUSIVE DATA FORMAT

3-1. KAWAI FORMAT

Followings is the exclusive data format of the K4/K4r , and is based on the "KAWAI MIDI EXCLUSIVE FORMAT".

K4/K4r MIDI EXCLUSIVE FORMAT

01-1	44440000	COLI	Occasional analysis	
Status	11110000	FOH	System exclusive	
Kawai ID no.	01000000	40H		
Channel no.	0000nnnn	ОвН		
Function no.	0fffffff			
		0014	Or make and make a make an	
Group no.	00000000	H00	Synthesizer group	
Machine ID no.	00000100	04H	K4/K4r ID. no.	
Sub1	Osssssss		Sub command1	
Sub2	Osssssss		Sub command2	
data	Oxxxxxxx			
data	Oxxxxxxx			
•				
*				
•				
data	Oxxxxxxx			
data	Oxxxxxxx			
		F7H		
EOX	11110111	F/H		

The Exclusive data is received only when The system RCV EXCL = ON, except ID request and program change (int/ext). Function no., Sub1 and Sub2 are listed in FUNCTION TABLE.

3-2. UNIVERSAL SYSTEM EXCLUSIVE FORMAT

K4/K4r uses non-real time format for ID request. The following is the standard of the nonreal time system exclusive messages.

Status id no. Channel no. Sub id #1 Sub id #2 data data	11110000 FOH 01111110 7EH 0nnnnnn 0xxxxxxx 0xxxxxxx 0xxxxxx 0xxxxxx 0xxxxxx	System exclusiv Non-real time
data data EOX	0xxxxxxx 0xxxxxxx 11110111 F7H	
	id no. Channel no. Sub id #1 Sub id #2 data data data	Id no.

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4. EXCLUSIVE TRANSMITTED DATA

4-1. ONE SINGLE/MULTI DATA DUMP

This message is transmitted by the next 2 ways.
First, transmits the patch data which is selected on the panel, according to the MIDI DUMP SELECT parameter (TONE).
Second, after receving the ONE BLOCK DATA REQ, the k4/k4r transmits the one block data which is decided by it.
See SINGLE DATA LIST regarding the data.

Status Kawai ID no.	11110000 01000000	FOH 40H	System exclusive
Channel no.	0000nnnn	0nH	
Function no.	00100000	20H	One patch data dump
Group no.	00000000	00H.	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID. no.
Sub status 1	0000000x	00H	Internal
		02H	External
Sub status 2	0xxxxxxx		0 ~ 63 SINGLE A-1 ~ D-16
			64 ~ 127 MULTI A-1 ~ D-16
data	Oxxxxxxx		patch data s0/m0
data	Oxxxxxxx		patch data s1/m1
data	Oxxxxxxx		patch data s2/m2
*			
•			
•			
data	0xxxxxxx		patch data s128/m74
data	0xxxxxxx		patch data s129/m75
data	0xxxxxxx		patch data s130/m76
EOX	11110111	F7H	

4-2. ONE DRUM/EFFECT DATA DUMP

This message is transmitted by the next 2 ways.
First, transmits the patch data which is selected on the panel, according to the MIDI DUMP SELECT parameter (= DRUM/EFCT).
Second, after receiving the ONE PATCH DATA REQ, the k4/k4r transmits the one drum/effect data which is decided by it.
See DRUM, EFFECT DATA LIST regarding the data.

			• ••••
Status	11110000	F0H	System exclusive
Kawai ID no.	01000000	40H	
Channel no.	0000nnnn	0nH	
Function no. Group no. Machine ID no. Sub status 1	00100000	20H	One patch data dump
	00000000	00H	Synthesizer group
	00000100	04H	K4/K4r ID. no.
	0000000x1	01H	Internal
Sub status 2	00xxxxxx	03H	External 0 ~ 31 effect 1 ~ 32 32 drum
data	0xxxxxx		patch data e0/d0
data	0xxxxxx		patch data e1/d1
data	0xxxxxx		patch data e2/d2
* data	0xxxxxxx		patch data e32/d679
data	0xxxxxxx		patch data e33/d680
data	0xxxxxxx		patch data e34/d681
EOX	11110111	F7H	

4-3. BLOCK SINGLE/MULTI DATA DUMP

This message is transmitted when MIDI DUMP SELECT=*SGL or *MLT, or when "BLOCK PATCH REQUEST" is received.

If there is the check sum error patch , K4/K4r aborts the data dump.

See SINGLE/MULTI DATA LIST regarding the data,

		_	_	
Status		11110000	F0H	System exclusive
Kawai	ID no.	01000000	40H	aysion oxolasite
Chann		0000nnnn	0nH	
Function		00100001	21H	block data dump
Group		00000000	00H	Symthesian annua
	ne ID no.			Synthesizer group
		00000100	04H	K4/K4r ID no.
Sub sta	atus 1	000000x0	00H	int
-			02H	ext
Sub sta	atus 2	00×00000	00H	ali singles
			40H	all multis
data		0xxxxxxx		A-1 s0/m0 data
data		Oxxxxxxx		A-1 s1/m1 data
data		Oxxxxxxx		A-1 s2/m2 data
data		0xxxxxxx		A-1 s3/m3 data
Quiu	•	VAAAAAA		A-1 55/11/5 Gala
	•			
-		`a		
data		0xxxxxxx		A-1 s127/m73 data
data		0xxxxxxx		A-1 s128/m74 data
data		Oxxxxxxx		A-1 s129/m75 data
data		0xxxxxxx		A-1 s130/m76 data
		4		
data		0xxxxxxx		A-2 s0/m0 data
data		Oxxxxxxx		A-2 s1/m1 data
data		Oxxxxxxx		A-2 s2/m2 data
data		0xxxxxxx		
uata		UXXXXXX		A-2 s3/m3 data
data		0xxxxxxx		A-2 s1/m127/m73 data
data		Oxxxxxxx		A-2 s1/m128/m74 data
data		Oxxxxxxx		A-2 s1/m129/m75 data
data		Oxxxxxxx		A-2 s1/m130/m76 data
	A-3 patch d	lata		
	A-4 patch d	lata		
	A-5 patch d			
	*			
	•			
	•			
	D-13 patch	data		
	D-13 patch			•
	D-14 patch	data		
	D-15 patch	data		
data		A		
data		0xxxxxxx		D-16 s0/m0 data
data		0xxxxxxx		D-16 s1/m1 data
data		0xxxxxxx		D-16 s2/m2 data
data		0xxxxxxx		D-16 s3/m3 data
	*			
	*			
	•			•
data		0xxxxxxx		D-16 S127/m73 data
data		Oxxxxxxx		D-16 s128/m74 data
data		0xxxxxxx		D-16 s129/m75 data
data		0xxxxxxx		D-16 s129/11/5 data
Jala		VAAAAAA		D-10 S130/III/D GATA
EOX		11110111	E7U	
LOX		11110111	F7H	

4-4. BLOCK EFFECT DATA DUMP

This message is transmitted when MIDI DUMP SELECT=*EFF, or when "BLOCK PATCH REQUEST" is received.

If there is the check sum error patch , K4/K4r aborts the data dump.

See EFFECT DATA LIST regarding the data.

Status Kawai ID no. Channel no. Frunction no. Group no. Machine ID no. Sub status 1 Sub status 2	11110000 01000000 0000nnnn 00100001 00000000	FOH 40H 0nH 21H 00H 04H 01H 03H	System exclusive block data dump Synthesizer group K4/K4r ID no. int ext all effect
data data data data	0xxxxxx 0xxxxxx 0xxxxxx 0xxxxxx		EFF-1 e0 data EFF-1 e1 data EFF-1 e2 data EFF-1 e3 data
0ata * *	UXXXXXXX		EFF-1 60 Cala
data data data data	0xxxxxx 0xxxxxx 0xxxxxx 0xxxxxx		EFF-1 e31 data EFF-1 s32 data EFF-1 s33 data EFF-1 s34 data
data data data data	0xxxxxx 0xxxxxx 0xxxxxx 0xxxxxx		EFF-2 e0 data EFF-2 e1 data EFF-2 e2 data EFF-2 e3 data
*	•		
data data data data	0xxxxxx 0xxxxxx 0xxxxxx 0xxxxxx		EFF-2 e31 data EFF-2 e32 data EFF-2 e33 data EFF-2 e34 data
EFF-3 patch EFF-4 patch EFF-5 patch	ı data		
* *			
EFF-13 pato EFF-14 pato EFF-15 pato	:h data		
data data data data	0xxxxxx 0xxxxxx 0xxxxxx 0xxxxxx		EFF-16 e0 data EFF-16 e1 data EFF-16 e2 data EFF-16 e3 data
data data data data data	0xxxxxx 0xxxxxx 0xxxxxx 0xxxxxx		EFF-16 e31 data EFF-16 e32 data EFF-16 e33 data EFF-16 e34 data
EOX	11110111	F7H	-

4-5. ALL PATCH DATA DUMP

This message is transmitted when MIDI DUMP SELECT=ALL, or when "ALL PATCH DATA REQUEST" is received.

K4/K4r transmits all singles at first and all multi, drum and all effects.

The K4/K4r aborts the data dump.

See MULTI DATA LIST regarding the data.

GCC MOETI BATTACE	-ioi iogaiamg me		
Status Kawai ID no.	11110000 01000000	F0H 40H	System exclusive
Channel no.	0000nnnn	0nH	
Function no.	00100010	22H	All block data dump
Group no.	00000000 00000100	00H 04H	Synthesizer group K4/K4r ID no.
Machine ID no. Sub status 1	00000000	00H	int
Sub status i	0000000	02H	ext
Sub status 2	00000000	00H	· ·
data	0xxxxxxx		A-1 s0 data
data	Oxxxxxxx		A-1 s1 data
data	0xxxxxxx		A-1 s2 data
data	0xxxxxxx		A-1 s3 data
data	0xxxxxxx		D-16 s127 data
data	Oxxxxxxx		D-16 s128 data
data	0xxxxxxx		D-16 s129 data
data	0xxxxxxx		D-16 s130 data
data	0xxxxxxx		A-1 MD data
data	Oxxxxxxx		A-1 M1 data
data	Oxxxxxxx		A-1 M2 data A-1 M3 data
data *	0xxxxxxx		A-1 M3 data
*			
*			
data	Oxxxxxxx		D-16 M83 data
data	Oxxxxxxx		D-16 M84 data
data	Oxxxxxxx		D-16 M85 data
data	Oxxxxxxx		D-16 M86 data
			DEL 164 40 4-4-
data	0xxxxxxx		DRUM d0 data DRUM d1 data
data data	0xxxxxxx 0xxxxxxx		DRUM d2 data
data	Oxxxxxxx		DRUM d3 data
*			Di ioni do data
*			
*			
data	Oxxxxxxx		DRUM d678 data
data	.0xxxxxxx		DRUM d679 data
data	Oxxxxxxx		DRUM d680 data
data	Oxxxxxxx		DRUM d681 data
data	0xxxxxxx		EFF-1 e0 data
data	Oxxxxxxx		EFF-1 e1 data
data	0xxxxxxx		EFF-1 e2 data
data	Oxxxxxxx		EFF-1 e3 data
•			
*			EEE 00 -04 -441-
data	0xxxxxxx		EFF-32 e31 data
data	0xxxxxxx		EFF-32 e32 data EFF-32 e33 data
data data	0xxxxxxx 0xxxxxxx		EFF-32 e33 data EFF-32 e34 data
uaid	VXXXXXXX		LI I TUE GUY UEIR
EOX	11110111	F7H	

4-6. PROGRAM CHANGE (INT/EXT)

This is for changing internal or external patches. K4/K4r transmits this message when changed internal to external or ext to int.

Status Kawai ID no.	11110000 01000000	F0H 40H	System exclusive
Channel no.	0000nnnn	0nH	
Function no.	00110000	30H	Program change (int/ext)
Group no.	00000000	00H	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID no.
Sub status 1	000000a0	00H	int
		02H	ext
EOX	11110111	F7H	

4-7. WRITE COMPLETE

When the received dump data has been completely written, the K4/K4r transmits this

Status	11110000	F0H	System exclusive
Kawai ID no.	01000000	40H	Ť
Channel no.	nnan0000	OnH	
Function no.	01000000	40H	Write complete
Group no.	00000000	00H	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID. no.
EOX	11110111	F7H	

4-8. WRITE ERROR

If illegal data is found in the received dump data, the K4/K4r transmits this message.

Status Kawai ID no.	11110000 01000000	F0H 40H	System exclusive
Channel no.	0000nnnn	0nH	
Function no.	010000xx	41H	write error
		42H	write error (protect)
		43H	write error (no card)
Group no.	00000000	00H	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID. no.
EOX	11110111	F7H	

4-9. IDENTITY REPLY

Receiving the ID request, the K4/K4r transmits this message.

Status	11110000	F0H	System exclusive
id no.	01111110	7EH	Non-real time
Channel no.	Onnnnnn		
Sub id #1	00000110	06H	General information
Sub id #2	00000010	02H	Device identity reply
Kawai id	01000000	40H	Manufacturers id
device family	00000000	00H	synth group isb
device family	00000000	00H	synth goup msb
device no.	00000100	04H	k4/k4r id lsb
device no.	00000000	00H ·	k4/k4r id msb
format spec.	00000000	00H	format no 00
format spec.	00000000	00H	format no.00
format spec.	00000000	00H	format no.00
format spec.	00000000	00H	format no.00
EOX	11110111	F7H	

5. EXCLUSIVE RECOGNIZED RECEIVED DATA

5-1. ONE SINGLE/MULTI DATA REQUEST

Status	11110000	FOM	System exclusive
Kawai ID no.	01000000	40H	•
Channel no.	0000nnnn	OnH	
Function no.	00000000	00H	One patch data request
Group no.	00000000	- 00H	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID. no.
Sub status 1	000000a0	00H	int
		02H	ext
Sub status 2	Obbbbbbb		single or multi patch no.
EOX	11110111	F7H	,

5-2. ONE DRUM/EFFECT DATA REQUEST

11110000	F0H	System exclusive
01000000	40H	
0000nnnn	0nH	
00000000	00H	One patch data request
00000000	00H	Synthesizer group
00000100	04H	K4/K4r ID. no.
000000a1	01H	int
	03H	ext
00bbbbbb	0~1FH	effect patch no.
	20H	drum
11110111	F7H	
	0100000 0000nnn 0000000 0000000 00000100 000000a1	01000000 40H 0000nnnn 0nH 00000000 00H 00000000 00H 00000100 04H 00000001 01H 03H 00bbbbbb 0~1FH 20H

5-3. BLOCK SINGLE/MULTI DATA REQUEST

Status	11110000	FOH	System exclusive
Kawai ID no.	01000000	40H	•
Channel no.	0000nnnn	0nH	
Function no.	00000001	01H	block patch data request
Group no.	00000000	D0H	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID. no.
Sub status 1	000000a0	00H	int
	4	02H	ext
Sub status 2	0×000000	00H	single
		40H	multi
EOX	11110111	F7H	

5-4. BLOCK EFFECT DATA REQUEST

Status	11110000	FOH	System exclusive
Kawai ID no.	01000000	40H	-,
Channel no.	0000nnnn	ОлН	200
Function no.	00000001	01H	block patch data request
Group no.	00000000	00H	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID. no.
Sub status 1	000000a1	01H	int
		03H	ext
Sub status 2	00000000	00H	
EOX	11110111	F7H	

5-5. ALL DATA REQUEST

Status	11110000	FOH	System exclusive
Kawai ID no.	01000000	40H	•
Channel no.	0000nnnn	OnH	
Function no.	00000010	02H	all patch data request
Group no.	00000000	H00	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID. no.
Sub status 1	08000000	00H	int
		02H	ext
Sub status 2	0x000000	ODH	
EOX	11110111	F7H	

5-6. PARAMETER SEND

(SINGLE)

Status Kawai ID no. Channet no. Channet no. Group no. Machine ID no. Sub status 1 Sub status 2 data EOX	11110000 01000000 0000nnn 00010000 00000000	F0H 40H 0nH 10H 00H 04H	System exclusive Parameter send Synthesizer group K4/K4r ID. no. 0~69 parameter no. so 0/51, 1/52, 2/53, 3/54, d=Value's MSB Value dxxxxxxx
(DRUM)			
Status Kawai ID no. Channel no. Function no. Group no. Machine ID no. Sub status 1 Sub status 2 data EOX	11110000 01000000 0000nnn 00010000 00000000	F0H 40H 0nH 10H 00H 04H	System exclusive Parameter send Synthesizer group K4/K4r ID. no. 70-81 parameter no. ssssss 0~60 key no., d=Value's MSB Value dxxxxxxx
(EFFECT)			
Status Kawai ID no. Channel no. Function no. Group no. Machine ID no. Sub status 1 Sub status 2	1111000 0100000 0000nnn 00010000 0000000 00000100 0pppppp 0000sssd	FOH 40H 0nH 10H 00H 04H	System exclusive Parameter send Synthesizer group K4/K4r ID. no. 82—88 parmeter no. sss 07 submix/output ch, d=Value's MSB
data EOX	0xxxxxxx 11110111	F7H	Value dxxxxxxx

5-7. ONE SINGLE/MULTI DATA DUMP

After receiving this message, the K4/K4r transmits "WRITE COMPLETE" if it is okay, or "WRITE ERROR" if it is not.

Status Kawai ID no. Channel no. Function no. Group no. Machine ID no. Sub status 1 Sub status 2 data data data * *	11110000 01000000 0000nnnn 00100000 00000000	FOH 40H 0nH 20H 00H 04H 02H	One block data dump Synthesizer group K4/K4r ID. no. int extended to the control of the O-63 single 64~127 multi patch data s0/m0 patch data s1/m1 patch data s1/m1
data data data	Oxxxxxxx Oxxxxxxx Oxxxxxx		patch data s1/m128/m74 patch data s1/m129/m75 patch data s1/m130/m76
EOX	11110111	F7H	

5-8. ONE DRUM/EFFECT DATA DUMP

After receiving this message, the K4/K4r transmits "WRITE COMPLETE" if it is okay, or "WRITE ERROR" if it is not.

Status Kawai ID no. Channel no. Function no. Group no. Machine ID no. Sub status 1	11110000 01000000 0000nnnn 00100000 00000000	F0H 40H 0nH 20H 00H 04H 01H 03H	System exclusive One patch data dump Synthesizer group K4/K4r ID. no. Internal External
Sub status 2	00xxxxxx		0~31 effect 1~32 32 drum
			32 UIUIII
data	0xxxxxxx		patch data e0/d0
data	0xxxxxxx		patch data e1/d1
data	0xxxxxxx		patch data e2/d2
•			
*			
	_		
data	Oxxxxxxx		patch data e32/d679
data	0xxxxxxx		patch data e33/d680
data	0xxxxxxx		patch data e34/d681
EOX	11110111	F7H	

5-9. BLOCK SINGLE/MULTI DATA DUMP

After receiving this message, the K4/K4r transmits "WRITE COMPLETE" if it is okey, or "WRITE ERROR" if it is not.

Status		11110000	F0H	System exclusive
Kawai	ID no.	01000000	40H	0,010111 0710100110
Chann		0000nnnn	OnH	•
Function		00100001	21H	block data dump
Group		00000000	H00	Synthesizer group
	ne ID no.	00000100	04H	K4/K4r ID no.
Sub sta	atus 1	0x000000	00H	int
Cab St	atus i	00000000	02H	ext
Sub sta	atue 2	00×00000	02H	all singles
Sub su	atus 2	0070000	40H	all multis
			4011	an muius
data		0xxxxxxx		A-1 s0/m0 data
data				A-1 st/mt data
data		0xxxxxxx		A-1 s2/m1 data A-1 s2/m2 data
		0xxxxxxx		
data		0xxxxxxx		A-1 s3/m3 data
	-			4 4 4074 80 11-1-
data		0xxxxxxx		A-1 s127/m73 data
data		0xxxxxxx		A-1 s128/m74 data
data		0xxxxxxx		A-1 s129/m75 data
data		0xxxxxxx		A-1 s130/m76 data
data		0xxxxxxx		A-2 s0/m0 data
data		0xxxxxxx		A-2 s1/m1 data
data		0xxxxxxx		A-2 s2/m2 data
data		Oxxxxxxx		A-2 s3/m3 data
	*			
	•			
	•			
data		0xxxxxxx		A-2 s1/m127/m73 data
data		0xxxxxxx		A-2 s1/m128/m74 data
data		0xxxxxxx		A-2 s1/m129/m75 data
data		0xxxxxxx		A-2 s1/m130/m76 data
	A-3 patch of	lata		
	A-4 patch of	lata		
	A-5 patch of	lata		
	*			
	*			
	*			
	D-13 patch	data		
	D-14 patch			
	D-15 patch			
	,			
data		0xxxxxxx		D-16 s0/m0 data
data		0xxxxxxx		D-16 s1/m1 data
data		Oxxxxxxx		D-16 s2/m2 data
data		Oxxxxxxx		D-16 s3/m3 data
	*	VAAAAAAA		D 10 be/mo data
	*			
	*			
data		0xxxxxxx		D-16 S127/m73 data
data		0xxxxxxx		D-16 s128/m 74 data
data		0xxxxxxx		D-16 s129/m 75 data
data		0xxxxxxx		D-16 s130/m76 data
Jala		044444¥		p-10 \$100/m roudld
EOX		11110111	F7H	
COX		11110111	F/17	

5-10. BLOCK EFFECT DATA DUMP

After receiving this message, the K4/K4r transmits "WRITE COMPLETE" if it is okay, or "WRITE ERROR" if it is not.

Status Kawai II Channe		11110000 01000000 0000nnn	F0H 40H 0nH	System exclusive
Function		00100001	21H	block data dump
Group r		00000000	00H	Synthesizer group
Machine		00000100	04H	K4/K4r ID no.
Sub stat		000000x1	01H 03H	int
Sub stat	tus 2	00100000	40H	all effect
data		Oxxxxxx		EFF-1 e0 data
data		Oxxxxxxx		EFF-1 e1 data
data		Oxxxxxxx		EFF-1 e2 data
data		Oxxxxxxx		EFF-1 e3 data
	•			
	*			
data		Oxxxxxxx		EFF-1 e31 data
data		0xxxxxxx		EFF-1 s32 data
data	100	Oxxxxxxx		EFF-1 s33 data
data		0xxxxxxx		EFF-1 s34 data
	•			
data		0xxxxxxx		EFF-2 e0 data
data		0xxxxxxx		EFF-2 e1 data
data		0xxxxxxx		EFF-2 e2 data
data		0xxxxxxx		EFF-2 e3 data
	*			
	•			
data		Oxxxxxxx		EFF-2 e31 data
data		0xxxxxxx		EFF-2 e32 data
data	* -	0xxxxxxx		EFF-2 e33 data
data		0xxxxxxx		EFF-2 e34 data
	EFF-3 patch EFF-4 patch	data		
	EFF-5 patch	data		
	•			
	EFF-13 pato			
	EFF-14 pato EFF-15 pato	n data h data		
data		0xxxxxxx		EFF-16 e0 data
data		0xxxxxxx		EFF-16 e1 data
data		0xxxxxxx		EFF-16 e2 data
data		0xxxxxxx		EFF-16 e3 data
data		0xxxxxxx		EFF-16 e31 data
data		0xxxxxxx		EFF-16 e32 data
data		0xxxxxxx		EFF-16 e33 data
data		0xxxxxxx		EFF-16 e34 data
EOX		11110111	F7H	

5-11. ALL PATCH DATA DUMP

After receiving this message, the K4/K4r transmits "WRITE COMPLETE" if it is okay, or "WRITE ERROR" if it is not.

Status	11110000	F0H	System exclusive
Kawai ID no.	01000000	40H	•
Channel no.	0000nnnn	0nH	*****
Function no.	00100010 00000000	22H 00H	All block data dump
Group no. Machine ID no.	00000000	00H 04H	Synthesizer group K4/K4r ID no.
Sub status 1	00000100	00H	int
Odb olulos i	00000000	20H	ext
Sub status 2	00000000	00H	5 710
data	Oxxxxxxx		A-1 s0 data
data	0xxxxxxx		A-1 st data
data	Oxxxxxxx		A-1 s2 data
data	Oxxxxxxx		A-1 s3 data
•			
•			
-	0		0.40.407.11
data data	0xxxxxxx 0xxxxxxx		D-16 s127 data D-16 s128 data
data	OXXXXXXX		D-16 \$126 data
data	Oxxxxxxx		D-16 s130 data
0010	OAAAAAA		D 10 3100 0010
data	0xxxxxxx		A-1 M0 data
data	Oxxxxxxx		A-1 M1 data
data	Oxxxxxxx		A-1 M2 data
data	Oxxxxxxx		A-1 M3 data
•			
•			
data	0xxxxxxx		D-16 M83 data
data	0xxxxxxx		D-16 M84 data
data	Oxxxxxxx		D-16 M85 data
data	0xxxxxxx		D-16 M86 data
data	0xxxxxxx		DRUM d0 data
data	0xxxxxxx		DRUM d1 data
data	Oxxxxxxx		DRUM d2 data
data	0xxxxxxx		DRUM d3 data
•			
data	Oxxxxxxx		DRUM d678 data
data	Oxxxxxxx		DRUM d679 data
data	0xxxxxxx		DRUM d680 data
data	0xxxxxxx		DRUM d681 data
4.	_		
data	0xxxxxxx		EFF-1 e0 data
data data	0xxxxxxx 0xxxxxxx		EFF-1 e1 data EFF-1 e2 data
data	Oxxxxxxx		EFF-1 e3 data
*	0444444		Li 1-1 65 Gala
•			
	_		
data	0xxxxxxx		EFF-32 e31 data
data data	0xxxxxx 0xxxxxxx		EFF-32 e32 data
data	Oxxxxxxx Oxxxxxxx		EFF-32 e33 data EFF-32 e34 data
word	~^^^^		Li 1 702 604 Uald
EOX	11110111	F7H	

5-12. EDIT BUFFER DUMP

Receiving this dump data, K4/K4r does not store to int/ext memory but only treats as the temporally patch data.

(SINGLE	MULT!
---------	-------

(SINGLE/MULTI)			
Status Kawai ID no. Channel no. Function no. Group no. Machine ID no. Sub status 1 Sub status 2	11110000 01000000 0000nnnn 00100011 00000000	FOH 40H 0nH 23H 00H 04H	System exclusive edit buffer dump Synthesizer group K4/K4r ID no. single/multi single multi
data data data data	0xxxxxx 0xxxxxx 0xxxxxx 0xxxxxx		s0/m0 data s1/m1 data s2/m2 data s3/m3 data
data data data data EOX	0xxxxxx 0xxxxxx 0xxxxxx 0xxxxxx 11110111	F7H	s127/m73 data s128/m74 data s129/m75 data s130/m76 data
(DRUM/EFFECT)			
Status Kawai ID no. Channel no. Function no. Group no. Machine ID no. Sub status 1 Sub status 2	11110000 01000000 0000nnnn 00100011 00000000	FOH 40H 0nH 23H 00H 04H 01H 00H 20H	Edit buffer dump Synthesizer group KA/K4r ID. no. drum/efect effect drum
data data data	0xxxxxx 0xxxxxx 0xxxxxx		data e0/d0 data e1/d1 data e2/d2
data data data data	Oxxxxxx Oxxxxxx Oxxxxxx		data e32/d679 data e33/d680 data e34/d681
EOX	11110111	F7H	•
5-13. PROGRAM	# CHANGE (int	/ext)	
Status Kawai ID no. Channel no. Function no. Group no. Machine ID no. Sub status 1	11110000 01000000 0000nnnn 00110000 00000000	FOH 40H 0nH 30H 00H 04H 00H 02H F7H	System exclusive Program change (int/ext) Synthesizer group K4/K4r ID no. int ext
5-14. WRITE CO	MPLETE		
Status Kawai ID no. Channel no. Function no. Group no. Machine ID no. EOX	11110000 01000000 0000nnnn 01000000 00000000	F0H 40H 0nH 40H 00H 04H F7H	System exclusive Write complete Synthesizer group K4/K4r ID. no.
5-15. WRITE ER	ROR	٠	
Status Kawai ID no. Channel no. Function no.	11110000 01000000 0000nnnn 010000xx	F0H 40H 0nH 41H 42H 43H	System exclusive write error write error(protect) write error(no card)
Group no. Machine ID no. EOX	00000000 00000100 11110111	00H 04H F7H	Synthesizer group K4/K4r ID. no.
S-16 IDENTITY	DECLIERT		

5-16. IDENTITY REQUEST

Receiving this message, the K4/K4r transmits idenity reply.

Status	11110000	F0H	System exclusive
id no.	01111110	7EH	Non-real time
Channel no.	Onnnnnn		
Sub id #1	00000110	06H	General information
Sub id #2	00000001	01H	Identity request
EOX	11110111	F7H	

6. SINGLE DATA LIST

NO.	BYTE	PAR.	AMETER NAME	DESCRIPTION
140.	BITE	140.	IVANIL	DEGOTAL FIGH
	IMON>		4	
s00 s01	Onnanna Onnanna	00 01	name1 name2	ascii
s02	Onnnnnnn	02	name3	-
s03	Onnanana	03	name4	· ·
s04	Onnnnnnn	04 05	name5	-
s05 s06	Onnnnnnn Onnnnnnn	05 06	name6 name7	
s07	Onnnnnnn	07	name8	
s08	Onnnnnnn	08	name9	<u></u>
s09	Onnnnnn	09	name10	0. 400
s10 s11	Ovvvvvvv OOOeeeee	10 11	volume effect	0 ~ 100 0 ~ 31/1 ~ 32
s12	00000sss	12	out select	0~7/A~H
s13	8.8	13	source mode	0/NORM,1/TWIN,2/DBL
	pp	14	poly mode	0/PL1,1/PL2,2/SOLO1,3/SOLO2
	00c	15 16	am S1>S2 am S3>S4	0/off, 1/on 0/off, 1/on
s14	a	10	S1 mute	0/mute, 1/not mute
	b		S2 mute	0/mute, 1/not mute
	c		S3 mute	0/mute, 1/not mute
	d 00ss	17	S4 mute vib shape	0/mute, 1/not mute 0/TRI,1/SAW,2/SQR,3/RND
s15	рррр	18	pitch bend	0~12
	00ww	19	wheel assign	0/VIB,1/LFO,2/DCF
s16	01111111	20	vib speed	0~100
s17 s18	Owwwwww Otttttt	21 22	wheel dep auto bend time	0 ~ 100 (+-50) 0 ~ 100
s19	Oaaaaaaa	23	auto bend depth	0~100 (+-50)
s20	Okkkkkkk	24	auto bend ks>time	0 ~~ 100 (+-50)
s21	0vvvvvv	25	auto bend vel>dep	0 ~ 100 (+-50)
s22 s23	0aaaaaaa 0ddddddd	26 27	vib prs>vib vibrato dep	0 ~ 100 (+-50) 0 ~ 100 (+-50)
s23 s24	000000ss	28	Ifo shape	0 ~ 100 (≁-50) 0/TRI,1/SAW,2/SQR,3/RND
s25	01111111	29	Ifo speed	0 ~ 100
s26	Oddddddd	30	Ifo delay	0~100
s27 s28	0ddddddd	31 32	lfo dep Ifo prs>dep	0 ~ 100 (+-50) 0 ~ 100 (+-50)
s29	Оааааааа Оррррррр		pres>freq	0 ~ 100 (+-50)
			r	
<0.011	D050>			
<sou \$30</sou 	RCES> 0ddddddd	34	S1 delay	0~100
s31	_	_	S2 —	_
s32		_	S3 —	-
s33		_	S4 —	
s34	000x 0ccc	- 36 35	S1 wave select h	msb xwwwwww 0 ~ 255/1 ~ 256 0 ~ 7/1 ~ 8
s35		_	S1 ks curve S2 —	<u>-</u>
s36	_		S6	_
s37	_		\$4	
s38 s39	0wwwwwww	36	S1 wave select I S2 —	0~127
s40	_	=	S3 —	-
s41	_	_	S4 —	_
s42	ccccc	37	S1 coarse	coarse 00 ~ 48/+-24
s43	0 t	38	S1 key track S2 —	0/off, 1/on
544	_	_	S3 —	_
s45	_	_	S4 —	-
s46	0000000	39	S1 fix	fix 0 ~ 115/C-1 ~ G8
s47 s48	_	_	S2 — S3 —	=
s49	_	_	S4 —	_
s50	Offfffff	40	S1 fine	0 ~ 100 (+-50)
s51	_	_	S2 —	_
s52 s53	_	_	S3 — S4	_
s54	p	41	S1 prs>frq sw	0/off, 1/on
	v v	42	S1 vib/a.bend sw	0/off, 1/on
oF E	000vvv	43	S1 vel curve	0~7/1~8
s55 s56	_	_	S2 — S3 —	Ξ
s57	_	_	S4 —	_
<dca< td=""><td></td><td>4.4</td><td>Q1 emissions local</td><td>0~100</td></dca<>		4.4	Q1 emissions local	0~100
s58 s59	0eeeeee —	44	S1 envelope level S2 —	- 100 -
s60	_		S3 —	_
s61	_	_	S4 —	_
s62	Geeeeee	45	S1 envelope attack	0 ~~ 100
s63 s64	_	_	S2 — S3 —	=
s65	_		S4 —	_
s66	0eeeeee	46	S1 envelope decay	0 ~ 100
s67 s68	_	_	\$2 — \$3 —	_
s69	_	_	\$3 \$4	_
s70	Occcecce	47	S1 envelope sustain	0 ~ 100
s71	_	_	S2 —	_
\$72 \$73	_	_	S3	_
s73 s74	_ Oeeeeee	— 48	S4 — S1 envelope release	
s75			S4 —	
s76	_	_	S3 —	
s77		40	S4 — S1 lovel med vel	— 0 100 (+ 50)
s78 s79	0ddddddd —	4 9 —	S1 level mod vel S2 —	0 ~ 100 (+-50) —
s80		_	S3 —	_
s81	_	_	S4 —	-
s82	0eeeeee	50	S1 level mod prs	0 ~ 100 (+-50)

s83	_	_	S2 —	— · , .
s84	_	_	S3 —	_
s85	_	_	S4 —	_
s86	0eeeeee	51	S1 level mod ks	$0 \sim 100 (+-50)$
s87	_		S2 —	— .
s88	_	_	S3 —	
s89	_	_	\$4	_
s90	Oeeeeeee	52	\$1 time mod on vel	$0 \sim 100 (+-50)$
s91	_		S2 —	
s92	_	_	S3 —	
s93	_		S4 —	
\$ 9 4	0eeeeeee	53	S1 time mod off vel	$0 \sim 100 (+-50)$
ຮ95			S2 —	_
s93		_	S3	_
s97			S4 —	
s98	0eeeeee	54	S1 time mod ks	$0 \sim 100 (+-50)$
s99	← ′		S2 —	_
s100			S3 —	_
s101	_	_	S4	_
<dcf></dcf>				
s102	Occcccc	55	F1 cutoff	0~100
s103	_	_	F2 —	
s103	_ rrr	 56	F1 resonance	0~7/1~8
3104	0000k	57	F1 Ifo sw	0/off, 1/on
s105		<u>-</u>	F2	- 170H
s106	0ddddddd	58		0 ~ 100 (+-50)
s107	_	_	F2 —	_ 100 (1 00)
s108	Oeeeeeee	59	F1 cutoff mod prs	0 ~ 100 (+-50)
s109	_		F2 —	
s110	Oeeeeeee	60	F1 cutoff mod ks	0 ~ 100 (+-50)
s111	_		F2 —	-
s112	Oeeeeeee	61	F1 dcf env dep	$0 \sim 100 (+-50)$
s113	_	_	F2	_
s114	0eeeeee	62	F1 dcf env vel dep	0 ~ 100 (+-50)
s115	_	_	F2 — `	· · · ·
s11 6	0eeeeee	63	F1 dcf env attack	0~100
s117	_	_	F2	_
s118	Oeeeeee	64	F1 dcf env decay	0~100
s119	_	_	F2	-
s120	0eeeeee	65	F1 dcf env sustain	0~100
s121	-	_	F2 —	_
s122	Oeeeeee	66	F1 dcf env release	0 ~ 100
s123	-	_	F2 —	
s124	0eeeeee	67	F1 dcf time mod on vel	D ~ 100 (+-50)
s125	_	_	F2 —	
s126	Oeeeeeee	68	F1 dcf time mod off vel	u ~ 100 (+-50)
s127		_	F2 —	
s128	0eeeeee	69	F1 dcf time mod ks	0 ~ 100 (+-50)
s129	U 4444444	_	F2 —	0 407
s130	0ddddddd		check sum	0 ~ 127

Notes Check sum value (s130) is the sum of the A5H and s0 \sim s129.

7. MULTI DATA LIST

NO.	BYTE	PARAMETER	DESCRIPTION
<mul< td=""><td>TI COMMON></td><td></td><td></td></mul<>	TI COMMON>		
M0	กกกภกกก	กลme1	ascii
M1	nnnnnnn	name2	
			
M2	מחחמחחח	name3	
M3	որոռորո	name4	
M4	กากสกกก	name5	_
M5			
	กกกกกกก	name <u>6</u>	_
M6	nnnnnn -	лате7	_
M7	nnnnnnn	лате8	_
M8	nnnnnnn	пате9	_
M9			
	nnnnnn	name10	
M10	0 v v v v v v	volume	0~99
M11	000eeeee	effect	0~31/1~32
<sec< td=""><td>TION 1></td><td></td><td></td></sec<>	TION 1>		
		Cinale no	0 - 60/A 1 - D 16
M12	00aaaaaa	Single no.	0 ~ 63/A—1 ~ D—16
M13	Ozzzzzzz	zone low	0 ~ 127/C-2 ~ G8
M14	Ohhhhhhh	zone high	0 ~ 127/C-2 ~ G8
M15	rrr	rcv ch	0~15/1~16
IVI IO			
	VV	velo sw	0/all, 1/soft, 2/foud
	Om	section mute	
MAG			0 7/4 📙
M16	SSS	out select	0~7/A~H
	000mm	mode	0/kybd, 1/midi, 2/mix (K
M17	0eeeeeee	level	0~100
M18			0~48/0~+-24
	00111111	transpose	
M19	0นนนนนนน	tune	$0 \sim 100(0 \sim +-50)$
<sec< td=""><td>TION 2></td><td></td><td></td></sec<>	TION 2>		
M20	00aaaaaa	Single no.	0~63/A—1~D—16
M21	Ozzzzzzz	zone low	0 ~ 127/C—2 ~ G8
M22	Ohhhhhhh	zone high	0 ~ 127/C-2 ~ G8
M23	rrrr	rev ch	0 ~ 15/1 ~ 16
IVIZO			
	VV	velo sw	0/all, 1/soft, 2/loud
	Qm	section mute	
M24	888	out select	0 ~ 7/A ~ H
	000mm	mode	0/kybd, 1/midi, 2/mix (K4
			orkybu, iziliku, zzinik (Ka
M25	0eeeeee	level	0~100
M26	00111111	transpose	0 ~ 48/0 ~ +-24
M27	Ouuuuuuu	tune	0 ~ 100 (0 ~ +-50)
<sec M28 ~</sec 	TION 3> M35		
<sec* M36 ~</sec* 	TION 4> · M43		
~e∈c.	TION 5>		•
M44 ~			
<sect< td=""><td>TION 6></td><td></td><td></td></sect<>	TION 6>		
	TION 7>		
MIGU ~	· IVIO7		
<sec*< td=""><td>TION 8></td><td></td><td></td></sec*<>	TION 8>		
M68	00aaaaaa	Single no	0 ~ 63/A-1 ~ D-16
		Single no.	
M69	Ozzzzzzz	zone low	0 ~ 127/C-2 ~ G8
M70	Ohhhhhhh	zone high	0 ~ 127/C-2 ~ G8
M71	rrrr	rev ch	0~15/1~16
1417 1			
	VV	velo sw	0/all, 1/soft, 2/loud
	Om	section mute	
M72	555	out select	0 ~ 7/A ~ H
	000mm		
		mode	0/kybd, 1/midi, 2/mix (K
M73	0eeeeee	level	0 ~ 100
M74	00111111	transpose	0~48/0~+-24
M75	0นนนนนนน	tune	0 ~ 100 (0 ~ +-50)
M76	0000000	check sum	0~127
0	200000	SHOOK GULLI	0 121

Notes The check sum value (M76) is the sum of A5H and M00 \sim M75.

8. DRUM DATA LIST

NO.	BYTE	PARA NO.	METER NAME	DESCRIPTION
<comm d00 d01 d02 d03 d04 d05 d06 d07</comm 		70 71 72	drm rev ch. drm vol drm vel depth dummy dummy dummy dummy dummy	0 ~ 15/1 ~ 16 0 ~ 100 0 ~ 100 - 100
d08	Onnnnnn		dummy	_
d09 d10	Onnnnnn Onnnnnn		dummy common check sum	 0 ~ 127

Note Check sum value (d10) is the sum of the A5H and d0 \sim d09.

<not< th=""><th>E C1></th><th></th><th></th><th></th></not<>	E C1>			
D11	0sss	73	out select	0~7/A~H
	000X	74	s1 wave select msb	xwwwwwww 0~ 255/1~ 256
d12	0000000X	75	s2 wave select msb	xwwwwwww 0~255/1~256
d13	Owwwwww	74	s1 wave select low	0~127
d14	Owwwwww	75	s2 wave select low	0 ~ 127
d15	Dddddddd	76	s1 decay	0~100
d16	0ddddddd	77	s2 decay	0 ~ 100
d17	Otttttt	78	st tune	0 ~ 100/0 ~ +-50
d18	Otttttt	79	s2 tune	0 ~ 100/0 ~ +-50
d19	Oeeeeee	80	s1 level	0~99
d20	Occeece	81	s2 level	0~99
d21	0000000		check sum	0~127

Note Check sum value (d21) is the sum of the A5H and d11 \sim d20.

<note< th=""><th>E C#1></th><th></th><th></th><th></th></note<>	E C#1>			
D22	Osss	73	out select	0 ~ 7/A ~ H
	000X	74	s1 wave select msb	xwwwwwww 0 ~ 255/1 ~ 256
d23	0000000X	75	s2 wave select msb	xwwwwwww 0 ~ 255/1 ~ 256
d24	Owwwwww	74	s1 wave select low	0 ~ 127
d25	Owwwwww	75	s2 wave select low	0 ~ 127
d26	0ddddddd	76	s1 decay	0~100
d27	0ddddddd	77	s2 decay	0 ~ 100
d28	0111111	78	s1 tune	0 ~ 100/0 ~ +-50
d29	0111111	79	s2 tune	0 ~ 100/0 ~ +-50
d30	Occecec	80	s1 level	0 ~ 99
d31	0eeeeeee	81	s2 level	0~99
d32	0000000		check sum	0~127

Note Check sum value (d32) is the sum of the A5H and d22 \sim d31.

```
<D1 ~ B5>
d33 ~ d670
<C5>
D671
                                                                                                                                              0~7/A~H
xwwwwww 0~255/1~256
xwwwwww 0~255/1~256
0~127
0~127
0~100
0~100
0~100/0~+-50
0~100/0~99
0~99
0~127
                      0sss
000X
0000000X
                                                                                   out select
                                                                  73
74
75
74
75
76
77
78
79
80
81
                                                                                 out select
s1 wave select msb
s2 wave select msb
s1 wave select low
s2 wave select low
s1 decay
s2 decay
s1 tune
s2 tune
s2 tevel
s2 level
check sum
d672
d673
d674
d675
d676
d677
                       Oddddddd
Otttttt
Otttttt
d678
d679
                       Oeeeeee
d680
d681
                       Occcccc
```

Check sum value (d681) is the sum of the A5H and d671 ~ d680.

9. EFFECT DATA LIST

NO.	ВҮТЕ		AMETER NAME	DESCRIPTION	
<com e00 e01 e02 e03 e04 e05 e06 e07 e08 e09</com 	IMON> 0000tttt 00000pp 00000aaa 000nnnnn 0nnnnnn 0nnnnnn 0nnnnnn 0nnnnnn	82 83 84 85	effect type para 1 para 2 para 3 dummy dummy dummy dummy dummy dummy	0 ~ 15/1 ~ 16 0 ~ 7 0 ~ 7 0 ~ 31 	
<a> e10 e11 e12	000ppppp 0vvvvvv 0vvvvvv	86 87 88	pan send 1 send 2	0~15/0~+-7 (k4) 0~15/0~+-7, 16~21//1~1 0~99 0~99	[6 (K4r)
 e13 e14 e15	000ppppp 0vvvvvv 0vvvvvv	86 87 88	pan send 1 send 2	0 ~ 15/0 ~ +-7 (k4) 0 ~ 15/0 ~ +-7, 16 ~ 21/I1 ~ 0 ~ 99 0 ~ 99	I6 (K4r)
<c> e16 ~ ·</c>					
e19 ~ (<e> e22 ~ (</e>					
<f> e25 ~ e25 ~ e28 ~ e2</f>					
<h>> e31 ~ ·</h>			check sum	0 ~ 127	
604	Jugadada		CHECK SUIT	U~ 121	

Note Check sum value (e34) is the sum of the A5H and e0 \sim e33.

10. EXCLUSIVE FUNCTION TABLE

FUNCTION	FUNCTION NO.	SUB ÇMND 1	SUB CMND 2	DESCRIPTION	TRS	RCV
One Patch Dump Request	o (00H)	0 0 1 1 2 2 2 3 3	0 ~ 63 64 ~ 127 0 ~ 31 32 0 ~ 63 64 ~ 127 0 ~ 31 32	ONE INT SINGLE DATA REQUEST ONE INT MULTI DATA REQUEST ONE INT EFFECT DATA REQUEST ONE INT DRUM DATA REQUEST ONE EXT SINGLE DATA REQUEST ONE EXT MULTI DATA REQUEST ONE EXT EFFECT DATA REQUEST ONE EXT DRUM DATA REQUEST	× × × × × ×	00000000
Block Patch Dump Request	1 (01H)	0 0 1 2 2 3	0 64 0 0 64 0	ALL INT SINGLE DATA REQUEST ALL INT MULTI DATA REQUEST ALL INT EFFECT DATA REQUEST ALL EXT SINGLE DATA REQUEST ALL EXT MULTI DATA REQUEST ALL EXT EFFECT DATA REQUEST	× × × ×	000000
All Patch Dump Request	2 (02H)	0 2	0 0	ALL INT DATA REQUEST ALL EXT DATA REQUEST	×	00
Parameter send	16 (10H)	Орроророр	Osssssd	SINGLE PARAMETER ppppppp 0 ~ 88 parameter no. ssssss 0 ~ 60 d MSB of data	×	0
One Patch Data Dump	32 (20H)	0 0 1 1 2 2 3 3	0 ~ 63 64 ~ 127 0 ~ 31 32 0 ~ 63 64 ~ 127 0 ~ 31 32	ONE INT SINGLE DATA DUMP ONE INT MULTI DATA DUMP ONE INT EFFECT DATA DUMP ONE INT DRUM DATA DUMP ONE EXT SINGLE DATA DUMP ONE EXT MULTI DATA DUMP ONE EXT EFFECT DATA DUMP ONE EXT DRUM DATA DUMP ONE EXT DRUM DATA DUMP	00000000	00000000
Block Patch Data Dump	33 (21H)	0 0 1 2 2	0 64 0 0 64 0	ALL INT SINGLE DATA DUMP ALL INT MULTI DATA DUMP ALL INT EFFECT DATA DUMP ALL EXT SINGLE DATA DUMP ALL EXT MULTI DATA DUMP ALL EXT EFFECT DATA DUMP	000000	000000
All Patch Data Dump	34 (22H)	0 2	0 0	ALL INT DATA DUMP ALL EXT DATA DUMP	00	00
Edit Buffer Dump	35 (23H)	0 0 1 1	0 64 0 32	SINGLE MULTI EFFECT DRUM	× × ×	0000
Program Change	48 (30H)	0 2	_	INT EXT	00	0
Write Complete Write Error Write Error (Protect) Write Error (No Card)	64 (40H) 65 (41H) 66 (42H) 67 (43H)	_ _ _	= = = = = = = = = = = = = = = = = = = =		0000	0000

11, PROGRAM NO. CONVERT TABLE

SINGLE

	INT/EXT								
		A		В		С		D	
1 2 3 4 5 6 7 8 9 10 11 12	0 1 2 3 4 5 6 7 8 9	00H 01H 02H 03H 04H 05H 06H 07H 08H	16 17 18 19 20 21 22 23 24 25 26 27	10H 11H 12H 13H 14H 15H 16H 17H 18H 19H 1AH	32 33 34 35 36 37 38 39 40 41 42 43	20H 21H 22H 23H 24H 25H 26H 27H 28H 29H 28H	48 49 50 51 52 53 54 55 56 57 58 59	30H 31H 32H 33H 34H 35H 36H 37H 38H 39H 3AH 3BH	
13 14 15 16	12 13 14 15	OCH ODH OEH OFH	28 29 30 31	1CH 1DH 1EH 1FH	44 45 46 47	2CH 2DH 2EH 2FH	50 51 52 53	3CH 3DH 3EH 3FH	

MULTI

INT/EXT								
	Α		В		С		Đ	
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	64 65 66 67 68 69 70 71 72 73 74 75 76 77	40H 41H 42H 43H 44H 45H 46H 47H 48H 49H 4BH 4CH 4DH 4EH	80 81 82 83 84 85 86 87 88 89 90 91 92 93	50H 51H 52H 53H 54H 55H 56H 57H 58H 58H 5AH 5CH 5EH	96 97 98 99 100 101 102 103 104 105 106 107 108	60H 61H 62H 63H 64H 65H 66H 67H 68H 69H 6CH 6DH 6EH	112 113 114 115 116 117 118 119 120 121 122 123 124 125 126	70H 71H 72H 73H 74H 75H 76H 77H 78H 79H 7BH 7GH 7DH 7EH
16	79	4FH	95	5FH	111	6FH	127	7FH

CORRECTION SHEET FOR K4 MIDI IMPLEMENTATION

Title	Error	Correction			
1.TRANSMITTED DATA	3rd Description 01 01 01 01 01 01 01 01 01 0	3rd Description Ownunum Note off number = 0~127			
4-1 ONE SINGLE/MULTI DATA DUMP	Sub status 1 0000000 <u>0×</u> 00H	Sub status 1 000000 <u>×0</u> 00H			
4-3. BLOCK SINGLE/MULTI DATA DUMP	Sub status 2 0 <u>0×</u> 00000 00H	Sub status 2 0 <u>×0</u> 00000 00H			
5-9. BLOCK SINGLE/MULTI DATA DUMP	Sub status 2 0 <u>0×</u> 00000 00H	Sub status 2 0 <u>×0</u> 00000 00H			
5-10.BLOCK EFFECT DRTA DUMP	Sub status 2 00 <u>1</u> 00000 <u>4</u> 0H	Sub status 2 00 <u>0</u> 000000 <u>0</u> 0H			
5-11. ALL PATCH DATA DUMP	Substatus 1 000000a0 00H 20H	Sub status 1 000000a0 00H 02H			
5-12.0NE SINGLE/MULTI DATA DUMP	Sub status 2 0 <u>00×</u> 0000 00H	Sub status 2 0 <u>×00</u> 0000 00H			
7.MULTI DRTA LIST	<wulti common=""> M10 Ouvunuun volume 0~99</wulti>	M10 0uuuuuu volume <u>0~100</u>			
8.DRUM DATA LIST	<common> drm vel depth 0-100 <note c1~5="">out_select</note></common>	<pre><common> drm vel depth 0-100/ <note c1~5=""></note></common></pre>			
	s1 level 0- <u>99</u> s2 level 0- <u>99</u>	st level 0-100 s2 level 0-100			
9.EFFECT DATA LIST	<8~H> send 1	<a~h> send 1 0-100 send 2 0-100</a~h>			
11.PROGRAM NO. CONVERT TABLE	<0-13~16> <u>50,51,52,53</u>	<d-13~16> <u>60,61,62,63</u></d-13~16>			