16 bit DIGITAL SYNTHESIZER

K4 MIDI IMPLEMENTATION

CONTENTS

1. TRANSMITTED DATA

1st	2nd	3rd	Description	
1000nnnn	Okkkkkkk	Ovvvvvvv	Note off	kkkkkkk = 24 - 108 vvvvvvv = 0 -127
1001nnnn	Okkkkkkk	Ovvvvvvv	Note on	kkkkkkk = 24 - 108 vvvvvvv =1-127
1011nnnn	00000001	Ovvvvvvv	Modulation	vvvvvvv = 0 -127
1011nnnn	00000110	Ovvvvvvv	Data Entry	vvvvvvv = 0 -127
1011nnnn	01000000	Ovvvvvvv	Hold 1 sw	vvvvvvv = 0 off vvvvvvv =127 on
1011nnnn	01100100	Ovvvvvvv	RPC LSB	vvvvvvv = 0 Bender Range vvvvvvv =1 Fine Tuning
1011nnnn	01100101	Ovvvvvvv	RPC MSB	vvvvvvv = 0
1100nnnn	Opppppppp	----------	Program Change	ppppppp = 0 - 63 Single I/E I/E A-1 - D-16 ppppppp = 64 - 127 Multi ppppppp = I/E A-1 - D-16
1101nnnn	Ovvvvvvv	----------	Ch. Pressure	vvvvvvv =0-127
1110nnnn	Ob000000	Ovvvvvvv	Pitch Bender	vvvvvvvb=0-255
1011 nnnn	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	Ovvvvvvv	Note off	kkkkkkk=0-120 vvvvvvv = 0-127
1001nnnn	Okkkkkkk	Ovvvvvvv	Note on/off	kkkkkkk=0-120 vvvvvvv = 1-127 Note on vvvvvvv = 0 off
1011nnnn	00000001	Ovvvvvvv	Modulation	vvvvvvv=0-127
1011nnnn	00000111	Ovvvvvvv	Main Volume	vvvvvvv=0-127
1011nnnn	00000110	Ovvvvvvv	Data Entry	vvvvvvv =0-127
1011nnnn	01000000	Ovvvvvvv	Hold 1 sw	vvvvvvv =0-63 off vvvvvvv = 64 - 127 on
1011nnnn	01100100	Ovvvvvvv	RPC LSB	vvvvvvv =O Bender Range vvvvvvv =1 Fine Tuning
1011nnnn	01100101	Ovvvvvvv	RPC MSB	vvvvvvv =0
1100nnnn	OPPPPPPP	----------	Program Change	ppppppp = 0-63 Single I/E A-1 - D-16 ppppppp = 64 - 127 Multi I/E A-1 - D-16
1101nnnn	Ovvvvvvv	----------	Ch. Pressure	vvvvvvv = 0 -127
1110nnnn	0b000000	Ovvvvvvv	Pitch Bender	vvvvvvvb = 0 - 255
1011nnnn	01111010	Ovvvvvvv	Local on/off	vvvvvvv =0- 63 off 64- 127 on
1011nnnn	01111011	00000000	All Notes off	
1011nnnn	01111100	00000000	Omni off	
1011nnnn	01111101	00000000	Omni on	
11111110	----------	----------	Active Sensing	

RPC Regitered Parameter Control nnnn = Channel no.

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

Status	11110000	FOH	Svstem exclusive
Kawai ID no.	01000000	40H	
Channel no,	0000nnnn	OnH	
Function no.	O f f f f f f f		
Group no.	00000000	OOH	Synthesizer
Machine ID no.	00000100	04H	K4/K4r ID. no.
Sub1	Osssssss		Subcommand 1
Sub2	Osssssss		Sub command 2
data	Oxxxxxxx		
data	Oxxxxxxx		
data	Oxxxxxxx		
data	Oxxxxxxx		
EOX	11110111	F7H	

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

Non-real time system exclusive messages.

Status	1111 0000	FOH	System exclusive
id no.	01111110	7EH	Non-real time
Channel no.	Onnnnnnn		
Sub id #1	Oxxxxxxx		
Sub id #2	Oxxxxxxx		
data	Oxxxxxxx		
data	Oxxxx xx		
data	Oxxxxxxx		
data	Oxxxxxxx		
EOX	11110111	F7H	

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	11110000	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channel no.	0000nnnn	OnH	
Function no.	001 00000	20H	One patch data dump
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	00000100	04H	K41K4r ID. no.
Sub status 1	000000x0	OOH	Internal
		02H	External
Sub status 2	Oxxxxxxx		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	Oxxxxxxx		patch data s128/m74
data	Oxxxxxxx		patch data s129/m75
data	Oxxxxxxx		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 receving 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	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channelno.	0000nnnn	OnH	
Function no.	00100000	20H	One patch data dump
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID. no.
Sub status 1	000000x1	O1 H	Internal
		03H	External
Sub status 2	OOxxxxxx		0 - 31 effect 1 - 32
			32 drum
data	Oxxxxxxx		patch data eO/d0
data	Oxxxxxxx		patch data e1/d1
data	Oxxxxxxx		patch data e2/d2
,			
data	Oxxxxxxx		patch data e32/d679
data	Oxxxxxxx		patch data e33/d680
data	Oxxxxxxx		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	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channel no.	0000nnnn	OnH	
Function no.	00100001	21H	block data dump
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	00000100	04H	K41K4r ID no.
Sub status 1	000000x0	OOH	int
		02H	ext
Sub status 2	0x000000	OOH	all singles
		40H	all muftis
data	Oxxxxxxx		A-1 sO/mO data
data	Oxxxxxxx		A-1 s1/m1 data
data	Oxxxxxxx		A-1 s2/m2 data
data	Oxxxxxxx		A-1 s3/m3 data
.			
data	Oxxxxxxx		A-1 s127/m73data
data	Oxxxxxxx		A-1 s128/m74 data
data	Oxxxxxxx		A-1 s129/m75 data
data	Oxxxxxxx		A-1 s13O/m76 data
data	Oxxxxxxx		A-2 sO/mO data
data	Oxxxxxxx		A-2 s1/m1 data
data	Oxxxxxxx		A-2 s21m2 data
data	Oxxxxxxx		A-2 s3/m3 data
data	Oxxxxxxx		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 data			
A-4 patch data			
A-5 patch data			
,			
D-13 patch data			
D-14 patch data			
D-15 patch data			
data	Oxxxxxxx		D-16 sO/mO data
data	Oxxxxxxx		D-16 s1/m1 data
data	Oxxxxxxx		D-16 s2/m2 data
data	Oxxxxxxx		D-16 s3/m3 data
,			
data	Oxxxxxxx		D-16 S127/m73 data
data	Oxxxxxxx		D-16 s128/m74 data
data	Oxxxxxxx		D-16 s129/m75data
data	Oxxxxxxx		D-16 s130/m 76 data
EOX	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	1111 0000	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channel no.	0000nnnn	OnH	
Function no.	001 00001	21H	block data dump
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	000001 00	04H	K4/K4r ID no.
Sub status 1	000000x1	01H	int
		03H	ext
Sub status 2	00000000	OOH	all effect
data	Oxxxxxxx		EFF-1 e0data
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	Oxxxxxxx		EFF-1 s32 data
data	Oxxxxxxx		EFF-1 s33 data
data	Oxxxxxxx		EFF-1 s34 data
data	Oxxxxxxx		EFF-2 e0 data
data	Oxxxxxxx		EFF-2 e1 data
data	Oxxxxxxx		EFF-2 e2 data
data	Oxxxxxxx		EFF-2 e3 data
data	Oxxxxxxx		EFF-2 e31 data
data	Oxxxxxxx		EFF-2 e32 data
data	Oxxxxxxx		EFF-2 e33 data
data	Oxxxxxxx		EFF-2 e34 data

EFF-3 patch data
EFF-4 patch data
EFF-5 patch data

EFF-13 patch data
EFF-14 patch data
EFF-15 patch data

data	Oxxxxxxx		EFF-16 eO data
data	Oxxxxxxx		EFF-16e1 data
data	Oxxxxxxx		EFF-16 e2 data
data	Oxxxxxxx		EFF-16e3data
data	Oxxxxxxx		EFF-16 e31 data
data	Oxxxxxxx		EFF-16 e32 data
data	Oxxxxxxx		EFF-16 e33 data
data	Oxxxxxxx		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.

Status	1111 0000	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channel no,	0000nnnn	OnH	
Function no.	00100010	22H.	All block data dump
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	000001 00	04H	K4/K4r ID no.
Sub status 1	000000aO	OOH	int
		02H	ext
Sub status 2	00000000	OOH	
data	Oxxxxxxx		A-1 sO data
data	Oxxxxxxx		A-1 s1 data
data	Oxxxxxxx		A-1 s2 data
data	Oxxxxxxx		A-1 s3 data
data	Oxxxxxxx		D-16 s127 data
data	Oxxxxxxx		D-16 s128 data
data	Oxxxxxxx		D-16 s129 data
data	Oxxxxxxx		D-16 s130 data
data	Oxxxxxxx		A-1 MO data
data	Oxxxxxxx		A-1 M1 data
data	Oxxxxxxx		A-1 M2 data
data	Oxxxxxxx		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
data	Oxxxxxxx		DRUM dO data
data	Oxxxxxxx		DRUM d1 data
data	Oxxxxxxx		DRUM d2 data
data	Oxxxxxxx		DRUM d3 data
data	Oxxxxxxx		DRUM d678 data
data	Oxxxxxxx		DRUM d679 data
data	Oxxxxxxx		DRUM d680 data
data	Oxxxxxxx		DRUM d681 data
data	Oxxxxxxx		EFF-1 eO data
data	Oxxxxxxx		EFF-1 e1 data
data	Oxxxxxxx		EFF-1 e2data
data	Oxxxxxxx		EFF-1 e3 data
data	Oxxxxxxx		EFF-32e31 data
data	Oxxxxxxx		EFF-32 e32 data
data	O x x x x x x x		EFF-32 e33 data
data	O x x x x x x x		EFF-32 e34 data
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	11110000	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channel no.	0000nnnn	OnH	
Function no.	0011 0000	30H	Program change (int/ext)
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	000001 00	04H	K4/K4r ID no.
Sub status 1	000000aO	OOH	int
		02H	ext
EOX	11110111	F7H	

4-7. WRITE COMPLETE
When the received dump data has been completely written, the K4/K4r transmits this message.

Status	11110000	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channel no.	0000nnnn	OnH	
Function no.	01 000000	40H	Write complete
Group no.	00000000	OO	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	11110000	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channel no.	0000nnnn	OnH	
Function no.	010000xx	41H	write error
		42H	write error (protect)
		43H	write error (no card)
Group no.	00000000	OO	Synthesizergroup
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	FOH	System exclusive
id no.	01111110	7EH	Non-real time
Channel no.	Onnnnnnn		
Sub id #1	00000110	06H	General information
Sub id #2	00000010	02H	Device identity reply
Kawai id	01 000000	40H	Manufacturers id
device family	00000000	OOH	synth group lsb
device family	00000000	OOH	synth goup msb
device no.	00000100	04H	k4/k4r id lsb
device no.	00000000	OOH	k4/k4r id msb
format spec.	00000000	OOH	format no.00
format spec.	00000000	OOH	format no.00
format spec.	00000000	OOH	format no.00
format spec.	00000000	OOH	format no.00
EOX	11110111	F7H	

5. EXCLUSIVE RECOGNIZED RECEIVED DATA

5-1. ONE SINGLE/MULTI DATA REQUEST

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

5-2. ONE DRUM/EFFECT DATA REQUEST

Status	11110000	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channel no.	0000nnnn	OnH	
Function no.	00000000	OOH	One patch data request
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID. no.
Sub status 1	000000a1	0tH	Int
		03H	Ext
Sub status 2	OObbbbbb	0-1FH	effect patch no.
		20H	drum
EOX	11110111	F7H	

5-3. BLOCK SINGLE/MULTI DATA REQUEST

Status	11110000	FOH	System exclusive
KawaiIDno.	01000000	40H	
Channelno.	0000nnnn	OnH	
Function no.	00000001	01H	block patch data request
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID. no.
Sub status 1	000000a0	OOH	Int
		02H	Ext
Sub status 2	0x000000	OOH	Single
		40H	multi
EOX	11110111	F7H	

5-4. BLOCK EFFECT DATA REQUEST

Status	11110000	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channelno.	0000nnnn	OnH	
Function no.	00000001	01H	block patch datarequest
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID.no.
Sub status 1	000000a1	O1 H	Int
		03H	ext
Sub status 2	00000000	OOH	
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	OOH	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID. no.
Sub status 1	000000aO	OOH	Int
		02H	ext
Sub status 2	0x000000	OOH	
EOX	11110111	F7H	

5-6. PARAMETER SEND

(SINGLE)

Status	1111 0000	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channel no.	0000nnnn	OnH	
Function no.	00010000	10H	Parameter send
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID. no.
Sub status 1	Opppppppp		0-69 parameter no.
Sub status 2	00000ssd		ss 0/s1,1/s2, 2/s3, 3/s4, d=Value's MSB
data	Oxxxxxxx		Value dxxxxxxx
EOX	11110111	F7H	

(DRUM)

Status	1111 0000	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channel no.	0000nnnn	OnH	
Function no.	00010000	10H	Parameter send
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID. no.
Sub status 1	Opppppppp		70-81 parameter no.
Sub status 2	Osssssssd		ssssss 0-60 key no., d=Value's MSB
data	Oxxxxxxx		Value dxxxxxxx
EOX	11110111	F7H	

(EFFECT)

Status	1111 0000	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channel no.	0000nnnn	OnH	
Function no.	00010000	10H	Parameter send
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID. no.
Sub status 1	Opppppppp		82-88 pameter no.
Sub status 2	0000sssd		sss 0-7 submix/output ch, d=Value's MSB
data	Oxxxxxxx		Value dxxxxxxx
EOX	11110111	F7H	

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	1111 0000	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channel no.	0000nnnn	OnH	
Function no.	00100000	20H	One block data dump
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	00000100	04H	K41K4r ID. no.
Sub status 1	000000a0	OOH	int
		02H	ext
Sub status 2	Obbbbbbb		0 - 63 single 64 -127 multi
data	Oxxxxxxx		patch data s0/m0
data	Oxxxxxxx		patch data s1/m1
data	Oxxxxxxx		patch data s2/m2
data	Oxxxxxxx		patch data s1/m128/m74
data	Oxxxxxxx		patch data s1/m129/m75
data	Oxxxxxxx		patch data s1/m130/m76
EOX	11110111	F7H	

5-8. ONE DRUM/EFFECT DATA DUMP

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

Status	1111 0000	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channel no.	0000nnnn	OnH	
Function no.	001 00000	20H	One patch data dump
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	000001 00	04H	K4/K4r ID. no.
Sub status 1	000000x1	01H	Internal
		03H	External
Sub status 2	OOxxxxxx		0 - 31 effect 1-32 32 drum
data	Oxxxxxxx		patch data eO/d0
data	Oxxxxxxx		patch data e1/d1
data	Oxxxxxxx		patch data e2/d2
,			
data	Oxxxxxxx		patch data e32/d679
data	Oxxxxxxx		patch data e33/d680
data	Oxxxxxxx		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 okay, or "WRITE ERROR" if it is not.

Status	1111 0000	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channel no.	0000nnnn	OnH	
Function no.	00100001	21H	block data dump
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID no.
Sub status 1	000000x0	OOH	int
		02H	ext
Sub status 2	0x000000	OOH	all singles
		40H	all multis
data	Oxxxxxxx		A-1 s0/m0 data
data	Oxxxxxxx		A-1 s1/m1 data
data	Oxxxxxxx		A-1 s2/m2 data
data	Oxxxxxxx		A-1 s3/m3 data
,			
data	Oxxxxxxx		A-1 s127/m73data
data	Oxxxxxxx		A-1 s128/m74data
data	Oxxxxxxx		A-1 s129/m75 data
data	Oxxxxxxx		A-1 s130/m76 data
data	Oxxxxxxx		A-2 s0/m0 data
data	Oxxxxxxx		A-2 s1/m1 data
data	Oxxxxxxx		A-2 s2/m2 data
data	Oxxxxxxx		A-2 s3/m3 data
,			
data	Oxxxxxxx		A-2 s1/m127/m73 data
data	Oxxxxxxx		A-2 s1/m128/m74 data
Data	Oxxxxxxx		A-2 s1/m129/m75data
data	Oxxxxxxx		A-2 s1/m130/m76 data
	A-3 patch data		
	A-4 patch data		
	A-5 patch data		
	0		
	D-13 patch data		
	D-14 patch data		
	D-15 patch data		
data	Oxxxxxxx		D-16 s0/m0 data
data	Oxxxxxxx		D-16 s1/m1 data
data	Oxxxxxxx		D-16 s2/m2 data
data	Oxxxxxxx		D-16 s3/m3 data
data	Oxxxxxxx		D-16 5127/m73 data
data	Oxxxxxxx		D-16 s128/m 74 data
data	Oxxxxxxx		D-16 s129/m 75 data
data	Oxxxxxxx		D-16 s130/m 76 data
EOX	11110111	F7H	

5-10. BLOCK EFFECT DATA DUMP

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

Status	11110000	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channel no.	0000nnnn	OnH	
Function no.	00100001	21H	block data dump
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID no.
Sub status 1	000000x1	O1H	int
		03H	ext
Sub status 2	00000000	40H	all effect
data	Oxxxxxxx		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	Oxxxxxxx		EFF-1 s32 data
data	Oxxxxxxx		EFF-1 s33 data
data	Oxxxxxxx		EFF-1 s34 data
data	Oxxxxxxx		EFF-2 e0 data
data	Oxxxxxxx		EFF-2 e1 data
data	Oxxxxxxx		EFF-2 e2 data
data	Oxxxxxxx		EFF-2 e3 data
data	Oxxxxxxx		EFF-2 e31 data
data	Oxxxxxxx		EFF-2 e32 data
data	Oxxxxxxx		EFF-2 e33 data
data	Oxxxxxxx		EFF-2 e34 data

EFF-3 patch data
EFF-4 patch data
EFF-5 patch data

EFF-13 patch data
EFF-14 patch data
EFF-15 patch data

data	Oxxxxxxx	EFF-16 e0 data
data	Oxxxxxxx	EFF-16e1 data
data	Oxxxxxxx	EFF-16 e2 data
data	Oxxxxxxx	EFF-16 e3 data
data	Oxxxxxxx	EFF-16 e31data
data	Oxxxxxxx	EFF-16 e32 data
data	Oxxxxxxx	EFF-16 e33 data
data	Oxxxxxxx	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	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channel no.	0000nnnn	OnH	
Function no.	00100010	22H	All block data dump
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID no.
Sub status 1	000000aO	OOH	int
		02H	ext
Sub status 2	00000000	OOH	
data	Oxxxxxxx		A-1 s0 data
data	Oxxxxxxx		A-1 s1 data
data	Oxxxxxxx		A-1 s2data
data	Oxxxxxxx		A-1 s3data
data	Oxxxxxxx		D-16 s127 data
data	Oxxxxxxx		D-16 s128 data
data	Oxxxxxxx		D-16 s129 data
data	Oxxxxxxx		D-16 s130 data
data	Oxxxxxxx		A-1 M0 data
data	Oxxxxxxx		A-1 M1 data
data	Oxxxxxxx		A-1 M2data
data	Oxxxxxxx		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
data	Oxxxxxxx		DRUM d0 data
data	Oxxxxxxx		DRUM d1 data
data	Oxxxxxxx		DRUM d2 data
data	Oxxxxxxx		DRUM d3 data
data	Oxxxxxxx		DRUM d678 data
data	Oxxxxxxx		DRUM d679 data
data	Oxxxxxxx		DRUM d680 data
data	Oxxxxxxx		DRUM d681 data
data	Oxxxxxxx		EFF-1 e0data
data	Oxxxxxxx		EFF-1 e1 data
data	Oxxxxxxx		EFF-1 e2data
data	Oxxxxxxx		EFF-1 e3 data
data	Oxxxxxxx		EFF-32 e31 data
data	Oxxxxxxx		EFF-32 e32 data
data	Oxxxxxxx		EFF-32 e33 data
data	Oxxxxxxx		EFF-32 e34 data
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/MULTI)

Status	11110000	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channel no,	0000nnnn	OnH	
Function no.	00100011	23H	edit buffer dump
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID no.
Sub status 1	00000000		single/multi
Sub status 2	0x000000	OOH	single
		40H	multi
data	Oxxxxxxx		s0/m0 data
data	Oxxxxxxx		s1/m1 data
data	Oxxxxxxx		s2/m2 data
data	Oxxxxxxx		s3/m3 data
data	Oxxxxxxx		s127/m73 data
data	Oxxxxxxx		s128/m74 data
data	Oxxxxxxx		s129/m75 data
data	Oxxxxxxx		s130/m76 data
EOX	11110111	F7H	

(DRUM/EFFECT)

Status	11110000	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channel no.	0000nnnn	OnH	
Function no.	00100011	23H	Edit buffer dump
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID. no.
Sub status 1	00000001	01H	drum/effect
Sub status 2	00x00000	OOH	effect
		20H	drum
data	Oxxxxxxx		data e0/d0
data	Oxxxxxxx		data e1/d1
data	Oxxxxxxx		data e2/d2
data	Oxxxxxxx		data e32/d679
data	Oxxxxxxx		data e33/d680
data	Oxxxxxxx		data e34/d681
EOX	11110111	F7H	

5-13. PROGRAM CHANGE (int/ext)

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

5-14. WRITE COMPLETE

Status	11110000	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channel no.	0000nnnn	OnH	
Function no.	01 000000	40H	Write complete
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID. no.
EOX	11110111	F7H	

5-15. WRITE ERROR

Status	11110000	FOH	System exclusive
Kawai ID no.	01000000	40H	
Channel no.	0000nnnn	OnH	
Function no.	010000xx	41H	write error
		42H	write error(protect)
		43H	write error(no card)
Group no.	00000000	OOH	Synthesizer group
Machine ID no.	00000100	04H	K4/K4r ID. no.
EOX	111101'11	F7H	

5-16. IDENTITY REQUEST

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

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

6. SINGLE DATA LIST

NO.	BYTE	PARAMETER NO.	NAME	DESCRIPTION
<COMMON>				
s00	Onnnnnnn	00	name1	Ascii
s01	Onnnnnnn	01	name2	
s02	Onnnnnnn	02	name3	
s03	Onnnnnnn	03	name4	
s04	Onnnnnnn	04	name5	
s05	Onnnnnnn	05	name6	
s06	Onnnnnnn	06	name7	
s07	Onnnnnnn	07	name8	
s08	Onnnnnnn	08	name9	
s09	Onnnnnnn	09	namel0	
s10	Ovvvvvvv	10	volume	0 - 100
s11	000eeeee	11	effect	0 - 31/1 -32
s12	00000sss	12	out select	0 - 7/A - H
s13	ss	13	source mode	0/NORM,1/TWIN,2/DBL
	pp	14	poly mode	0/PL1,1/PL2,2/SOLO1,3/SOLO2
	c	15	am S1>S2	0/off, 1/on
	OOc	16	am S3>S4	0/oft, 1/on
s14	a		S1 mute	0/mute, 1/not mute
	b		S2 mute	0/mute, 1/not mute
	c		S3 mute	0/mute, 1/not mute
	d		S4 mute	0/mute, 1/not mute
	OOss	17	vib shape	0/TRI,1/SAW,2/SQR,3/RND
s15	pppp	18	pitch bend	0 - 12
	OOww	19	wheel assign	0/VIB,1/LFO,2/DCF
s16	0 lllllll	20	vib speed	0 - 100
s11	Owwwwwww	21	wheel depth	0 - 100 (+-50)
s18	Ottttttt	22	auto bend time	0 - 100
s19	Oaaaaaaa	23	auto bend depth	0 - 100 (+-50)
s20	0kkkkkkk	24	auto bend ks>time	0 - 100 (+-50)
s21	Ovvvvvvv	25	auto bend vel>dep	0 - 100 (+-50)
s22	Oaaaaaaa	26	vib prs>vib	0 - 100 (+-50)
s23	Odddddddd	27	vibrato dep	0 - 100 (+-50)
s24	000000ss	28	Ifo shape	0/TRI,1/SAW,2/SQR,3/RND
s25	0lllllll	29	Ifo speed	0 - 100
s26	Odddddddd	30	Ifo delay	0 - 100
s27	Odddddddd	31	Ifo dep	0 - 100 (+-50)
s28	Oaaaaaaa	32	Ifo prs>dep	0 - 100 (+-50)
s29	Opppppppp	33	pres>freq	0 - 100 (+-50)
<:SOURCES>				
s30	Odddddddd	34	s1 delay	0 - 100
s31			s2	
s32			s3 -	
s33		-	s4 -	
s34	000x	36	s1 wave select h	msb xwwwwww 0 –255/1 - 256
	Occc	35	s1 ks curve	0 – 7/1 - 8
s35			s2 -	
s36			s6	
s37			s4	
s38	Owwwwwww	36	s1 wave select l	0 - 127
s39			s2	
s40			s3 -	
s41		-	s4	
s42	ccccc	37	s1 coarse	coarse 00 – 48/+-24
	Ot	38	s1 key track	0/off, 1/on
s43			s2 -	
s44			s3 -	
s45			s4	
s46	Occccccc	39	s1 fix	fix 0 --115/C1 -G8
s47			s2	
s48			s3 -	
s49			s4	
s50	Offffffff	40	s1 fine	0 - 100 (+-50)
s51			s2	
s52			s3 -	
s53		-	s4	
s54	p	41	s1 prs>frq sw	0/off, 1/on
	v	42	s1 vib/a.bend sw	0/off, 1/on
	000vvv	43	s1 vel curve	0-7/1-8
s55			s2 -	
s56			s3 -	
s57			s4-	
<DCA>				
s58	Oeeeeeee	44	s1 envelope level	0 - 100
s59			s2 -	
s60			s3 -	
s61			s4 -	
s62	Oeeeeeee	45	s1 envelope attack	0 - 100
s63			s2 -	
s64			s3 -	
s65			s4 -	
s66	Oeeeeeee	46	s1 envelope decay	0 - 100
s67			s2 -	
s68			s3 -	
s69			s4 -	
s70	Oeeeeeee	47	s1 envelope sustain	0 - 100
s71			s2 -	
s72			s3 -	
s73			s4 -	
s74	Oeeeeeee	48	s1 envelope release	0 - 100
s75			s4 -	
s76			s3 -	
S77			s4 -	
s78	Odddddddd	49	s1 level mod vel	0 - 100 (+-50)
S79			s2 -	
s80			s3 -	
s81			s4	
s82	Oeeeeeee	50	s1 level mod prs	0 - 100 (+-50)

s83			s2 -	
s84			s3 -	
s85			s4 -	
s86	Oeeeeeee	51	s1 level mod ks	0 -100 (+-50)
s87			s2 -	
s88			s3 -	
s89			s4 -	
s90	Oeeeeeee	52	s1 time mod on vel	0 - 100 (+-50)
s91			s2 -	
s92			s3 -	
s93			s4 -	
s94	Oeeeeeee	53	s1 time mod off vel	0 - 100 (+-50)
s95			s2 -	
s93			s3 -	
s97			s4 -	
s98	Oeeeeeee	54	s1 time mod ks	0 - 100 (+-50)
s99			s2 -	
s100			s3 -	
s101			s4 -	
<DCF>				
s102	Occccccc	55	F1 cutoff	0 - 100
s103	-	-	F2 -	
s104	rrr	56	F1 resonance	0 - 7/1 - 8
	0000k	57	F1 lfo sw	0/off, 1/on
s105			F2 -	
s106	Odddddddd	58	F1 cutoff mod vel	0 - 100 (+-50)
s107			F2 -	
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	0 100 (+-50)
s113			F2 -	
s114	Oeeeeeee	62	F1 dcf env vel depth	0 100 (+-50)
s115			F2 -	
s116	Oeeeeeee	63	F1 dcf env attack	0 - 100
s117			F2-	-
s118	Oeeeeeee	64	F1 dcf env decay	0 - 100
s119			F2-	-
s120	Oeeeeeee	65	F1 dcf env sustain	0 - 100
sI21			F2-	-
s122	Oeeeeeee	66	F1 dcf env release	0 - 100
sI23			F2 -	
sI24	Oeeeeeee	67	F1 dcf time mod on vel	0 -100 (+-50)
sI25			F2 -	
s126	Oeeeeeee	68	F1 dcf time mod off vel	0 - 100 (+-50)
s127			F2 -	
s128	Oeeeeeee	69	F1 dcf time mod ks	0 -100 (+-50)
sI29			F2 -	
s130	Odddddddd		check sum	0 - 127

Notes :
Check sum value (s130) is the sum of the A5H and sO – s129.

7. MULTI DATA LIST

NO.	BYTE	PARAMETER	DESCRIPTION
<MULTI COMMON>			
M0	nnnnnnn	name1	ascii
M1	nnnnnnn	name2	
M2	nnnnnnn	name3	
M3	nnnnnnn	name4	
M4	nnnnnnn	names	
M5	nnnnnnn	name6	
M6	nnnnnnn	name7	
M7	nnnnnnn	name8	
M8	nnnnnnn	name9	
M9	nnnnnnn	name10	
M10	Ovvvvvvv	volume	0-100
M11	000eeeee	effect	0-31/1 -32
<SECTION 1>			
M12	OOaaaaaa	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	rrrr	rcv ch	0 -15/1 -16
	vv	velo sw	0/all, 1/soft, 2/loud
	Om	section mute	
M16	sss	out select	0-7/A-H
	000mm	mode	0/kybd, 1/midi, 2/mix (K4)
M17	Oeeeeeee	level	0 - 100
M18	OOttttttt	transpose	0 - 48/0--+-24
M19	Ouuuuuuu	tune	0 - 100(0 - +-50)
<SECTION 2>			
M20	OOaaaaaa	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	rcv ch	0-15/1-16
	vv	velo sw	0/all, 1/soft, 2/loud
	Om	section mute	
M24	sss	out select	0-7/A-H
	000mm	mode	0/kybd,1/midi, 2/mix (K4)
M25	Oeeeeeee	level	0 - 100
M26	OOttttttt	transpose	0 - 48/0 - +-24
M27	Ouuuuuuu	tune	0 - 100(0-+-50)
<SECTION 3>			
M28 – M35			
<SECTION 4>			
M36 - M43			
<SECTION 5>			
M44 - M51			
<SECTION 6>			
M52 - M59			
<SECTION 7>			
M60 - M67			
<SECTION 8>			
M68	OCaaaaaa	Single no.	0 - 63/A-1 - D-16
M69	Ozzzzzzz	zone low	0 - 127/C-2 - G8
M70	Ohhhhhhh	zone high	0 - 127/C-2-G8
M71	rrrr	rcv ch	0-15/1-16
	vv	veto sw	0/all, 1/soft, 2/loud
	Om	section mute	
M72	sss	out select	0-7/A-H
	000mm	mode	0/kybd, 1/midi, 2/mix (K4)
M73	Oeeeeeee	level	0 - 100
M74	OOttttttt	transpose	0 - 48/0 +-24
M75	Ouuuuuuu	tune	0 - 100(0 - +-5O)
M76	Occccccc	check sum	0 - 127

Notes : The check sum value (M76) is the sum of A5H and M00 – M75

8. DRUM DATA LIST

NO.	BYTE	PARAMETER NO.	NAME	DESCRIPTION
<COMMON>				
d00	0000cccc	70	drm rcv ch.	0 -15/1-16
d01	Ovvvvvvv	71	drm vol	0 - 100
d02	Ovvvvvvv	72	drm vel depth	0 - 100
d03	Onnnnnnn		dummy	
d04	Onnnnnnn		dummy	
d05	Onnnnnnn		dummy	
d06	Onnnnnnn		dummy	
d07	Onnnnnnn		dummy	
d08	Onnnnnnn		dummy	
d09	Onnnnnnn		dummy	
d10	Onnnnnnn		common check sum	0-127

-50 – 0 - +50

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

<NOTE C1>			
D11 Osss 000x	73	Submix ch	O - 7/A - H
d12 0000000x	74	s1wave select msb	xwwwwwww 0 – 255/1 - 256
d13 Owwwwwww	75	s2 wave select msb	xwwwwwww 0 - 255/1 - 256
d14 Owwwwwww	74	s1 wave select low	0 - 127
d15 Odddddddd	15	s2 wave select low	0 -127
d16 Odddddddd	76	s1 decay	0 - 100
d17 Otttttttt	77	s2 decay	0 - 100
d18 Otttttttt	78	s1 tune	0 - 100/0 - +-50
d19 Oeeeeeeee	79	s2 tune	0 - 100/0-+-50
d20 Oeeeeeeee	80	s1 level	0 - 100
d21 Occccccc	81	s2 level	0 - 100
		check sum	0 -127

Note
Check sum value (d21) is the sum of the A5H and d11-d20

<NOTE C#1>			
D22 Osss 000x	73	Submix ch	0-7/A - H
d23 0000000x	74	s1 wave select msb	xwwwwwww 0 -255/1-256
d24 0wwwwwww	75	s2 wave select msb	xwwwwwww 0 - 255/1 -256
d25 0wwwwwww	74	s1 wave select low	0 - 127
d26 0ddddddd	75	s2 wave select low	0 - 127
d27 0ddddddd	76	s1 decay	0 –100
d28 0ttttttt	77	s2 decay	0 –100
d29 0ttttttt	78	s1 tune	0 –100/0-+-50
d30 0eeeeeee	79	s2 tune	0 - 100/0-+-50
d31 0eeeeeee	80	s1level	0 - 100
d32 0ccccccc	81	s2 level	0 - 100
		check sum	0 - 127

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

<D1 – B5>			
d33 - d670			
<C5>			
D671 Osss OOOX	73	Submix ch	0 -7/A – H
d672 0000000X	74	s1wave select msb	xwwwwwww 0 - 255/1 - 256
d673 Owwwwwww	75	s2 wave select msb	xwwwwwww 0 - 255/1 - 256
d674 Owwwwwww	74	s1 wave select low	0 -127
d675 Odddddddd	75	s2 wave select low	0 - 127
d676 Odddddddd	76	s1 decay	0 - 100
d677 Otttttttt	77	s2 decay	0 - 100
d678 Otttttttt	78	s1 tune	0 - 100/0 - +-50
d679 Oeeeeeee	79	s2 tune	0 - 100/0 - +-50
d680 Oeeeeeee	80	s1 level	0 - 100
d681 Occccccc	81	s2 level	0 - 100
		check sum	0 - 127

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

9. EFFECT DATA LIST

NO.	BYTE	PARAMETER NO.	NAME	DESCRIPTION
<COMMON>				
e00	0000 t t t t	82	effect type	0 -15/1 -16
e01	00000ppp	83	para 1	0 - 7
e02	00000aaa	84	para 2	0 - 7
e03	000nnnnn	85	para 3	0 - 31
e04	Onnnnnnn		dummy	
e05	Onnnnnnn		dummy	
e06	Onnnnnnn		dummy	
e07	Onnnnnnn		dummy	
e08	Onnnnnnn		dummy	
e09	Onnnnnnn		dummy	
<A>				
e10	000ppppp	86	pan	0-15/0 - +-7 (k4) 0 -15/0 - +-7 16 -21/I1 - I6 (K4r)
e11	Ovvvvvvv	87	send 1	0 - 100
e12	Ovvvvvvv	88	send 2	0 - 100
<B>				
e13	000ppppp	86	pan	0 -15/0 - +-7(k4) 0 -15/0 - +-7.16 - 21/I1 -I6(K4r)
e14	Ovvvvvvv	87	send 1	0 - 100
e15	Ovvvvvvv	88	send 2	0 - 100
<C>				
e16 - e18				
<D>				
e19 - e21				
<E>				
e22 - e24				
<F>				
e25 - e27				
<G>				
e28 - e30				
<H>				
e31-e33				
e34	Odddddddd		checksum	0 - 127

Note
Check sum value (e34) is the sum of the A5H and eO - e33.

10. EXCLUSIVE FUNCTION TABLE

FUNCTION	FUNCTION NO.	SUB CMND 1	SUB CMND 2	DESCRIPTION	TRS	RCV
One Patch Dump Request	0 (OOH)	0	0 - 63	ONE INT SINGLE DATA REQUEST	X	0
		0	64 - 127	ONE INT MULTI DATA REQUEST	X	0
		1	0 - 31	ONE INT EFFECT DATA REQUEST	X	0
		1	32	ONE INT DRUM DATA REQUEST	X	0
		2	0 - 63	ONE EXT SINGLE DATA REQUEST	X	0
		2	64 - 127	ONE EXT MULTI DATA REQUEST	X	0
		3	0 - 31	ONE EXT EFFECT DATA REQUEST	X	0
		3	32	ONE EXT DRUM DATA REQUEST	X	0
Block Patch Dump Request	1 (01H)	0	0	ALL INT SINGLE DATA REQUEST	X	0
		0	64	ALL INT MULTI DATA REQUEST	X	0
		1	0	ALL INT EFFECT DATA REQUEST	X	0
		2	0	ALL EXT SINGLE DATA REQUEST	X	0
		2	64	ALL EXT MULTI DATA REQUEST	X	0
		3	0	ALL EXT EFFECT DATA REQUEST	X	0
All Patch Dump Request	2 (02H)	0	0	ALL INT DATA REQUEST	X	0
		2	0	ALL EXT DATA REQUEST	X	0
Parameter send	16 (1OH)	Opppppppp	Osssssssd	SINGLE PARAMETER ppppppp 0 - 88 parameter no. ssssss 0 - 60 d MSB of data	X	0
One Patch Data Dump	32 (20H)	0	0 - 63	ONE INT SINGLE DATA DUMP	0	0
		0	64 - 127	ONE INT MULTI DATA DUMP	0	0
		1	0 - 31	ONE INT EFFECT DATA DUMP	0	0
		1	32	ONE INT DRUM DATA DUMP	0	0
		2	0 - 63	ONE EXT SINGLE DATA DUMP	0	0
		2	64 - 121	ONE EXT MULTI DATA DUMP	0	0
		3	0 - 31	ONE EXT EFFECT DATA DUMP	0	0
		3	32	ONE EXT DRUM DATA DUMP	0	0
Block Patch Data Dump	33 (21H)	0	0	ALL INT SINGLE DATA DUMP	0	0
		0	64	ALL INT MULTI DATA DUMP	0	0
		1	0	ALL INT EFFECT DATA DUMP	0	0
		2	0	ALL EXT SINGLE DATA DUMP	0	0
		2	64	ALL EXT MULTI DATA DUMP	0	0
		3	0	ALL EXT EFFECT DATA DUMP	0	0
All Patch Data Dump	34 (22H)	0	0	ALL INT DATA DUMP	0	0
		2	0	ALL EXT DATA DUMP	0	0
Edit Buffer Dump	35 (23H)	0	0	SINGLE	X	0
		0	64	MULTI	X	0
		1	0	EFFECT	X	0
		1	32	DRUM	X	0
Program Change	48 (30H)	0	-	INT	0	0
		2	-	EXT	0	0
Write Complete	64 (40H)	-	-		0	0
Write Error	65 (41H)	-	-		0	0
Write Error (Protect)	66 (42H)	-	-		0	0
Write Error (No Card)	67 (43H)	-	-		0	0

11. PROGRAM NO. CONVERT TABLE

SINGLE

	INT/EXT			
	A	B	C	D
1	0 OOH	16 1OH	32 20H	48 30H
2	1 01H	17 11H	33 21H	49 31H
3	2 02H	18 12H	34 22H	50 32H
4	3 03H	19 13H	35 23H	51 33H
5	4 04H	20 14H	36 24H	52 34H
6	5 05H	21 15H	37 25H	53 35H
7	6 06H	22 16H	38 26H	54 36H
8	7 07H	23 17H	39 27H	55 37H
9	8 08H	24 18H	40 28H	56 38H
10	9 09H	25 19H	41 29H	57 39H
11	10 OAH	26 1AH	42 2AH	58 3AH
12	11 OBH	27 1BH	43 2BH	59 3BH
13	12 OCH	28 1CH	44 2CH	60 3CH
14	13 ODH	29 1DH	45 2DH	61 3DH
15	14 OEH	30 1EH	46 2EH	62 3EH
16	15 OFH	31 1FH	47 2FH	63 3FH

MULTI

	INT/EXT			
	A	B	C	D
1	64 40H	80 50H	96 60H	112 70H
2	65 41H	81 51H	91 61H	113 71H
3	66 42H	82 52H	98 62H	114 72H
4	67 43H	83 53H	99 63H	115 73H
5	68 44H	84 54H	100 64H	116 74H
6	69 45H	85 55H	101 65H	117 75H
7	70 46H	86 56H	102 66H	118 76H
8	71 47H	87 57H	103 67H	119 77H
9	72 48H	88 58H	104 68H	120 78H
10	73 49H	89 59H	105 69H	121 79H
11	74 4AH	90 5AH	106 6AH	122 7AH
12	75 4BH	91 5BH	107 6BH	123 7BH
13	76 4CH	92 5CH	108 6CH	124 7CH
14	77 4DH	93 5DH	109 6DH	125 7DH
15	78 4EH	94 5EH	110 6EH	126 7EH
16	79 4FH	95 5FH	111 6FH	127 7FH

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