

KAWAI

K5000W/S/R MIDI Implementation

(Version 2.0)

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This document is mailly written for the synthesizer part.

MIDI implementation

1. Recognized Data

1.1 CHANNEL VOICE MESSAGE

Note off

| Status | 2nd Byte | 3rd Byte |
|--------|----------|----------|
| 8nH | kkH | vvH |
| 9nH | kkH | 00H |

n=MIDI channel number :0H-fH(ch.1 - ch.16)
 kk=Note Number :00H - 7fH(0 - 127)
 vv=Velocity :00H - 7fH(0 - 127)

Note on

| Status | 2nd Byte | 3rd Byte |
|--------|----------|----------|
| 9nH | kkH | vvH |

n=MIDI channel number :0H-fH(ch.1 - ch.16)
 kk=Note Number :00H - 7fH(0 - 127)
 vv=Velocity :00H - 7fH(0 - 127)

Control Change

Bank Select

| Status | 2nd Byte | 3rd Byte |
|--------|----------|----------|
| BnH | 00H | mmH |
| BnH | 20H | llH |

n=MIDI channel number :0H-fH(ch.1 - ch.16)
 mm=Bank Number MSB Default = 00H
 ll=Bank Number LSB Default = 00H

Bank# K5000W

| MSB LSB | Program# | function |
|---------|----------|------------|
| 00H 00H | 0-127 | G1 - 128 |
| 63H 00H | 0-13 | B103 - 116 |
| 64H 00H | 0-127 | A1 - 128 |
| 65H 00H | 0-63 | C1 - 64 |
| 67H 00H | 0-127 | E1 - 128 |
| 68H 00H | 0-127 | F1 - 128 |

(See B bank program no. table)

(Only when ME-1 is installed)

(Only when ME-1 is installed)

Note: ME-1 is an optional Memory Expansion Kit

Bank# K5000S/R

| MSB LSB | Program# | function |
|---------|----------|----------|
| 64H 00H | 0-127 | A1 - 128 |
| 65H 00H | 0-63 | M1 - 64 |
| 66H 00H | 0-127 | D1 - 128 |
| 67H 00H | 0-127 | E1 - 128 |
| 68H 00H | 0-127 | F1 - 128 |

(Only when ME-1 is installed)

(Only when ME-1 is installed)

Modulation

| Status | 2nd Byte | 3rd Byte |
|--------|----------|----------|
| BnH | 01H | vvH |

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

Portamento Time

| Status | 2nd Byte | 3rd Byte |
|--------|----------|----------|
| BnH | 05H | vvH |

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

Data Entry

| Status | 2nd Byte | 3rd Byte |
|--------|----------|----------|
| BnH | 06H | mmH |
| BnH | 26H | llH |

n=MIDI channel number :0H-fH(ch.1 - ch.16)
mm,ll=Value indicated in RPN/NRPN, see RPN/NRPN chapter :00H - 7fH(0 - 127)

Volume

| Status | 2nd Byte | 3rd Byte |
|--------|----------|----------|
| BnH | 07H | vvH |

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

Panpot

| Status | 2nd Byte | 3rd Byte |
|--------|----------|----------|
| BnH | 0aH | vvH |

n=MIDI channel number :0H-fH(ch.1 - ch.16)
vv = Panpot :00H - 40H - 7fH(left - Center - right) Default = 40H(center)

Expression

| Status | 2nd Byte | 3rd Byte |
|--------|----------|----------|
| BnH | 0bH | vvH |

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

General Purpose Controllers1-4

| Status | 2nd Byte | 3rd Byte | |
|--------|----------|----------|---------------------------------------|
| BnH | 10H | vvH | GPC#1, and macro controller(Harm Lo) |
| BnH | 11H | vvH | GPC#2, and macro controller(Harm Hi) |
| BnH | 12H | vvH | GPC#3, and macro controller(FF bias) |
| BnH | 13H | vvH | GPC#4, and macro controller(FF speed) |

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

Hold1

| Status | 2nd Byte | 3rd Byte |
|--------|----------|----------|
| BnH | 40H | vvH |

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

Portament On/Off

| Status | 2nd Byte | 3rd Byte |
|--------|----------|----------|
| BnH | 41H | vvH |

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

Hold2

| Status | 2nd Byte | 3rd Byte |
|--------|----------|----------|
| BnH | 45H | vvH |

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

Sound controllers #2-9

| Status | 2nd Byte | 3rd Byte | | |
|--------|----------|----------|----------------------------|-----------------------|
| BnH | 47H | vvH | macro controller Even/Odd | (Sound controller #2) |
| BnH | 48H | vvH | macro controller Release | (Sound controller #3) |
| BnH | 49H | vvH | macro controller Attack | (Sound controller #4) |
| BnH | 4aH | vvH | macro controller Cutoff | (Sound controller #5) |
| BnH | 4bH | vvH | macro controller FF depth | (Sound controller #6) |
| BnH | 4cH | vvH | macro controller Velocity | (Sound controller #7) |
| BnH | 4dH | vvH | macro controller Resonance | (Sound controller #8) |
| BnH | 4eH | vvH | macro controller Decay | (Sound controller #9) |

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

General Purpose Controllers5-8

(Only for K5000S/R)

| Status | 2nd Byte | 3rd Byte | |
|--------|----------|----------|------------------------------------|
| BnH | 50H | vvH | GPC#5, and macro controller(User1) |
| BnH | 51H | vvH | GPC#6, and macro controller(User2) |
| BnH | 52H | vvH | GPC#7, and macro controller(User3) |
| BnH | 53H | vvH | GPC#8, and macro controller(User4) |

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

Portamento Control

| Status | 2nd Byte | 3rd Byte |
|--------|----------|----------|
| BnH | 54H | kkH |

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

Common Effect1-5

(Only K5000W compose mode)

Only when Effect Algorithm is set to 2, these data are recognized and change the Effect path, seeing the following table.

| Status | 2nd Byte | 3rd Byte | |
|--------|----------|----------|---------------|
| BnH | 5bH | vvH | Reverb depth |
| BnH | 5dH | vvH | Effect2 depth |

n=MIDI channel number :0H-fH(ch.1 - ch.16)
 vv = Control Value :00H - 27H(0 - 39)LO, 28H - 7fH(40-127)HI

| path select | Chorus | Reverb |
|-------------|--------|--------|
| 1 | hi | hi |
| 2 | lo | hi |
| 3 | hi | lo |
| 4 | lo | lo |

NRPN MSB/LSB

| Status | 2nd Byte | 3rd Byte |
|--------|----------|----------|
| BnH | 63H | mmH |
| BnH | 62H | llH |

n=MIDI channel number :0H-fH(ch.1 - ch.16)
 mm=MSB of the NRPN parameter number
 ll=LSB of the NRPN parameter number

NRPN numbers implemented in K5000 series are as follows

| NRPN # | Data | Function & Range |
|---------|------|------------------|
| MSB LSB | MSB | Cutoff offset |
| 01H 20H | mmH | |

mm:0eH - 40H - 72H(-50 - 0 +50)

| | | | |
|---------|-----|--|---|
| 01H 63H | mmH | Attack time offset for DCA & DCF mm:0eH - 40H - 72H(-50 - 0 +50) | |
| 01H 64H | mmH | Decay1 time offset for DCA & DCF mm:0eH - 40H - 72H(-50 - 0 +50) | |
| 01H 65H | mmH | Release time offset for DCA & DCF mm:0eH - 40H - 72H(-50 - 0 +50) | |
| 20H 40H | vvH | SW1 on panel | vv:0 - 63 =OFF, 64 - 127=ON (Only for K5000S/R) |
| 20H 41H | vvH | SW2 on panel | vv:0 - 63 =OFF, 64 - 127=ON (Only for K5000S/R) |
| 20H 42H | vvH | F.SW1(foot sw) | vv:0 - 63 =OFF, 64 - 127=ON (Only for K5000S/R) |
| 20H 43H | vvH | F.SW2(foot sw) | vv:0 - 63 =OFF, 64 - 127=ON (Only for K5000S/R) |

* Ignoring the LSB of data Entry

* It is not affected in case of modifying cutoff if tone does not use the dcf.

RPN MSB/LSB

| | | |
|--------|----------|----------|
| Status | 2nd Byte | 3rd Byte |
| BnH | 65H | mmH |
| BnH | 64H | llH |

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

mm=MSB of the RPN parameter number

ll=LSB of the RPN parameter number

RPN number implemented in K5000 series are the followings

| RPN # | Data | Function & Range | |
|---------|------|--|---------------|
| 00H 00H | mmH | Pitch bend sensitivity | |
| | | mm:00H - 18H(0 - 24 half tone) | Default = 02H |
| | | ll:Ignored(as 00H) | |
| 00H 01H | mmH | Master fine tuning | |
| | | mm,ll:00 00H - 40 00H - 7f 7f (-8192x100/8192 - 0 +8192x100/8192 cent) | |
| 00H 02H | mmH | Master coarse tuning | |
| | | mm:28H - 40H - 58H(-24 - 0 - +24 half tone) | |
| | | ll:Ignored(as 00H) | |
| 7fH 7fH | - | RPN NULL | |

Program Change

| | |
|--------|----------|
| Status | 2nd Byte |
| CnH | ppH |

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

pp=Program number :00H - 7fH(Prog#1 - prog#128)

Default = 00H

Channel Pressure

| | |
|--------|----------|
| Status | 2nd Byte |
| DnH | vvH |

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

vv=Channel Pressure :00H - 7fH(0 - 127)

Default = 00H

Pitch Bend Change

| | | |
|--------|----------|----------|
| Status | 2nd Byte | 3rd Byte |
| EnH | lIH | mmH |

n=MIDI channel number :0H-fH(ch.1 - ch.16)
mm,l=Pitch bend value :00 00 - 7f 7fH(-8192 - 0 - +8192) Default = 40 00H(center)

1.2 CHANNEL MODE MESSAGE

All Sound OFF

| | | |
|--------|----------|----------|
| Status | 2nd Byte | 3rd Byte |
| BnH | 78H | 00H |

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

Reset All Controller

| | | |
|--------|----------|----------|
| Status | 2nd Byte | 3rd Byte |
| BnH | 79H | 00H |

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

*Change the following value when this message received

| | |
|-------------------------|--|
| Contorollers | setting value |
| Pitch Bend change | +0(center) |
| Polyphonic key pressure | 0(off) |
| Channel pressure | 0(off) |
| Modulation | 0(off) |
| Expression | 127(max) |
| Hold1 | 0(off) |
| RPN | Disable parameter number, no change internal value |
| NRPN | Disable parameter number, no change internal value |

Program change,Bank select, Volume, Panpot, Reverb level, and Effect1-4 level will not be affected.

Local On/Off

| | | |
|--------|----------|-----------------------------|
| Status | 2nd Byte | (Except K5000R) 3rd Byte |
| BnH | 7aH | vvH |

n=MIDI channel number :0H-fH(ch.1 - ch.16)
vv=0(Off), 127(On)

All Note Off

| | | |
|--------|----------|----------|
| Status | 2nd Byte | 3rd Byte |
| BnH | 7bH-7fH | 00H |

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

1.3 SYSTEM REALTIME MESSAGE

Timing Clock

| |
|--------|
| Status |
| f8H |

Start(Only K5000W)

| |
|--------|
| Status |
| faH |

Continue(Only K5000W)

| |
|--------|
| status |
| fbH |

Stop(Only K5000W)

| |
|--------|
| status |
| fcH |

Active sensing

| |
|--------|
| Status |
| feH |

2. Transmitted Data

2.1 CHANNEL VOICE MESSAGE

Note off

| | | | |
|-----------------------|----------|----------|----------------------|
| Status | 2nd Byte | 3rd Byte | |
| 9nH | kkH | 00H | |
| n=MIDI channel number | | | :0H-fH(ch.1 - ch.16) |
| kk=Note Number | | | :00H - 7fH(0 - 127) |
| vv=Velocity | | | :00H - 7fH(0 - 127) |

Note on

| | | | |
|-----------------------|----------|----------|----------------------|
| Status | 2nd Byte | 3rd Byte | |
| 9nH | kkH | vvH | |
| n=MIDI channel number | | | :0H-fH(ch.1 - ch.16) |
| kk=Note Number | | | :00H - 7fH(0 - 127) |
| vv=Velocity | | | :00H - 7fH(0 - 127) |

Control Change

Bank Select

| | | | |
|-----------------------|----------|----------|----------------------|
| Status | 2nd Byte | 3rd Byte | |
| BnH | 00H | mmH | |
| BnH | 20H | llH | |
| n=MIDI channel number | | | :0H-fH(ch.1 - ch.16) |
| mm=Bank Number MSB | | | |
| ll=Bank Number LSB | | | |

Bank# K5000W

| | | | |
|---------|----------|------------|--------------------------------|
| MSB LSB | Program# | function | |
| 00H 00H | 0-127 | G1 - 128 | |
| 63H 00H | 0-13 | B103 - 116 | (See B bank program no. table) |
| 64H 00H | 0-127 | A1 - 128 | |
| 65H 00H | 0-63 | C1 - 64 | |
| 67H 00H | 0-127 | E1 - 128 | (Only when ME-1 is installed) |
| 68H 00H | 0-127 | F1 - 128 | (Only when ME-1 is installed) |

Bank# K5000S/R

| | | | |
|---------|----------|----------|-------------------------------|
| MSB LSB | Program# | function | |
| 64H 00H | 0-127 | A1 - 128 | |
| 65H 00H | 0-63 | M1 - 64 | |
| 66H 00H | 0-127 | D1 - 128 | |
| 67H 00H | 0-127 | E1 - 128 | (Only when ME-1 is installed) |
| 68H 00H | 0-127 | F1 - 128 | (Only when ME-1 is installed) |

Modulation

| | | | |
|-----------------------|----------|----------|----------------------|
| (Except K5000R) | | | |
| Status | 2nd Byte | 3rd Byte | |
| BnH | 01H | vvH | |
| n=MIDI channel number | | | :0H-fH(ch.1 - ch.16) |
| vv = Modulation depth | | | :00H - 7fH(0 - 127) |

Portamento Time

| | | | |
|-----------------------|----------|----------|--|
| Status | 2nd Byte | 3rd Byte | |
| BnH | 05H | vvH | |
| n=MIDI channel number | | | :0H-fH(ch.1 - ch.16) |
| vv = Portamento time | | | :00H - 7fH(0 - 127) Default = 00H |

Data Entry

| | | | |
|--|----------|----------|----------------------|
| Status | 2nd Byte | 3rd Byte | |
| BnH | 06H | mmH | |
| BnH | 26H | llH | |
| n=MIDI channel number | | | :0H-fH(ch.1 - ch.16) |
| mm, ll=value indicated in RPN/NRPN, see RPN/NRPN chapter | | | :00H - 7fH(0 - 127) |
| Only for Quick MIDI function | | | |

| | | | | |
|--------------------------------|----------|----------|---|----------------------|
| Expression | | | (Except K5000R) | |
| Status | 2nd Byte | 3rd Byte | | |
| BnH | 0bH | vvH | | |
| n=MIDI channel number | | | :0H-fH(ch.1 - ch.16) | |
| vv = Expression | | | :00H - 7fH(0 - 127) | Default = 7fH |
| Hold1 | | | (Except K5000R) | |
| Status | 2nd Byte | 3rd Byte | | |
| BnH | 40H | vvH | | |
| n=MIDI channel number | | | :0H-fH(ch.1 - ch.16) | |
| vv = Control Value | | | :00H - 7fH(0 - 127) 0 - 63 =OFF, 64 - 127=ON | Default = 00H |
| Portamento On/Off | | | | |
| Status | 2nd Byte | 3rd Byte | | |
| BnH | 41H | vvH | | |
| n=MIDI channel number | | | :0H-fH(ch.1 - ch.16) | |
| vv = Control Value | | | :00H - 7fH(0 - 127) 0 - 63 =OFF, 64 - 127=ON | Default = 00H |
| General Purpose Controllers1-4 | | | | |
| Status | 2nd Byte | 3rd Byte | | |
| BnH | 10H | vvH | macro contoroller(Harm Lo) | GPC#1 |
| BnH | 11H | vvH | macro contoroller(Harm Hi) | GPC#2 |
| BnH | 12H | vvH | macro contoroller(FF bias) | GPC#3 |
| BnH | 13H | vvH | macro contoroller(FF speed) | GPC#4 |
| n=MIDI channel number | | | :0H-fH(ch.1 - ch.16) | |
| vv = Control Value | | | :00H - 7fH(0 - 127) | Default = 7fH |
| Sound controllers #2-9 | | | | |
| Status | 2nd Byte | 3rd Byte | | |
| BnH | 47H | vvH | macro controller Even/Odd | (Sound controler #2) |
| BnH | 48H | vvH | macro controller Release | (Sound controler #3) |
| BnH | 49H | vvH | macro controller Attack | (Sound controler #4) |
| BnH | 4aH | vvH | macro controller Cutoff | (Sound controler #5) |
| BnH | 4bH | vvH | macro controller FF depth | (Sound controler #6) |
| BnH | 4cH | vvH | macro controller Velocity | (Sound controler #7) |
| BnH | 4dH | vvH | macro controller Resonanse | (Sound controler #8) |
| BnH | 4eH | vvH | macro controller Decay | (Sound controler #9) |
| n=MIDI channel number | | | :0H-fH(ch.1 - ch.16) | |
| vv = Control Value | | | :00H - 7fH(0 - 127) | Default = 00H |
| General Purpose Controllers5-8 | | | (Only for K5000S/R) | |
| Status | 2nd Byte | 3rd Byte | | |
| BnH | 50H | vvH | macro contoroller(User1) | GPC#5 |
| BnH | 51H | vvH | macro contoroller(User2) | GPC#6 |
| BnH | 52H | vvH | macro contoroller(User3) | GPC#7 |
| BnH | 53H | vvH | macro contoroller(User4) | GPC#8 |
| n=MIDI channel number | | | :0H-fH(ch.1 - ch.16) | |
| vv = Control Value | | | :00H - 7fH(0 - 127) | Default = 00H |

NRPN MSB/LSB(Only K5000S)

| | | |
|--------|----------|----------|
| Status | 2nd Byte | 3rd Byte |
| BnH | 63H | mmH |
| BnH | 62H | llH |

n=MIDI channel number :0H-fH(ch.1 - ch.16)
 mm=MSB of the NRPN parameter number
 ll=LSB of the NRPN parameter number

NRPN numbers implemented in K5000S are as follows

| NRPN # | Data | Function & Range |
|---------|------|------------------|
| MSB LSB | MSB | |
| 20H 40H | mmH | SW1 on panel |
| 20H 41H | mmH | SW2 on panel |
| 20H 42H | mmH | FSW1 (foot sw) |
| 20H 43H | mmH | FSW2(foot sw) |

mm:00H(Off) 7fH(On)

Program Change

| | |
|--------|----------|
| Status | 2nd Byte |
| CnH | ppH |

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

Channel Pressure

| | | |
|--------|----------|-----------------|
| Status | 2nd Byte | (Except K5000R) |
| DnH | vvH | |

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

Pitch Bend Change

| | | | |
|--------|----------|----------|-----------------|
| Status | 2nd Byte | 3rd Byte | (Except K5000R) |
| EnH | llH | mmH | |

n=MIDI channel number :0H-fH(ch.1 - ch.16)
 mm,ll=Pitch bend value :00 00 - 7f 7fH(-8192 - 0 - +8192)

2.2 CHANNEL MODE MESSAGE

2.3 SYETEM REALTIME MESSAGE

Timing Clock
 Status
 f8H

Start(Only K5000W)
 Status
 faH

Stop(Only K5000W)
 status
 fcH

Active sensing
 Status
 feH

3. Exclusive data

3.1 K5000 DATA DUMP

The K5000 series can receive these dump data, and also can transmit one by panel operation in System-Dump.

3.1.1 DATA DUMP FORMAT

a:BLOCK SINGLE DUMP(ADD, All of enable patch in A1 - 128)

Format: F0 40 <ch> 21 00 0A 00 00 <sub1> <sub2> <sub18> <sub19> <DATA> F7

<ch>:MIDI ch (00~0F)

<sub1>~<sub19>:Tone MAP

<sub1>: bit0 = 1(Tone No.A01 Data include)
bit1 = 1(Tone No.A02 Data include)
:
bit6 = 1(Tone No.A07 Data include)
<sub2>: bit0 = 1(Tone No.A08 Data include)
bit1 = 1(Tone No.A09 Data include)
:
bit6 = 1(Tone No.A14 Data include)
:
<sub18>: bit0 = 1(Tone No.A120 Data include)
bit1 = 1(Tone No.A121 Data include)
:
bit6 = 1(Tone No.A126 Data include)
<sub19>: bit0 = 1(Tone No.A127 Data include)
bit1 = 1(Tone No.A128 Data include)

<DATA>: ADD Tone data which specified by <sub1>~<sub19>

b:ONE SINGLE DUMP(ADD, A1 - 128)

Format: F0 40 <ch> 20 00 0A 00 00 <sub1> <DATA> F7

<ch>:MIDI ch (00~0F)

<sub1>:Tone No.(00~7F)

<DATA>: One ADD tone data

The Structure of ADD tone data

(Single Tone DATA) + (ADD Wave KIT DATA)*No.of src(included muted src)

The structure of the Single Tone DATA

(check sum) + (effect DATA) + (common DATA) + (source DATA)*No. of used sources

The structure of ADD Wave KIT DATA

(check sum) + (HC KIT DATA) + (HC code1 DATA) + (HC code2 DATA)
+ (Formant Filter DATA) + (Harmonic Envelope data) + (Loudness sense select)

Caution: ADD Wave KIT DATA should be ordered by number

c:BLOCK SINGLE DUMP(PCM, All of B70 - 116)

(Only for K5000W)

Format: F0 40 <ch> 21 00 0A 00 01 <DATA> F7

<ch>:MIDI ch (00~0F)

<DATA>: all PCM tone data of user area

d:ONE SINGLE DUMP(PCM, B70 - 116)

(Only for K5000W)

Format: F0 40 <ch> 20 00 0A 00 01 <sub1> <DATA> F7

<ch>:MIDI ch (00~0F)

<sub1>:Tone No.(45~73)

<DATA>: one PCM tone data

The Structure of the PCM tone

(Single Tone DATA)

The structure of the Single Tone DATA

(check sum) + (effect DATA) + (common DATA) + (source DATA)*used source no.

e:DRUM KIT DUMP(B117) (Only for K5000W)

Format: FO 40 <ch> 20 00 0A 10 <DATA> F7
<ch>:MIDI ch (00~0F)
<DATA>: User Drum kit data

The structure of drum kit data

(check sum) + (effect DATA) + (common DATA) + (NOTE DATA)

f:BLOCK DRUM INST DUMP(All of Inst User1 - 32) (Only for K5000W)

Format: FO 40 <ch> 21 00 0A 11 <DATA> F7
<ch>:MIDI ch (00~0F)
<DATA>: all drum inst data of user area

g:ONE DRUM INST DUMP(User Inst U1 - 32) (Only for K5000W)

Format: FO 40 <ch> 20 00 0A 11 <sub1> <DATA> F7
<ch>:MIDI ch (00~0F)
<sub1>:INST No.(0~1F)
<DATA>: One drum inst data

The structure of the drum inst data

(check sum) + (common DATA) + (SRC1 DATA)

h:BLOCK COMBI DUMP(All of C1 - 64) (Combi is changed to Multi on K5000S/R)

Format: FO 40 <ch> 21 00 0A 20 <DATA> F7
<ch>:MIDI ch (00~0F)
<DATA>: all Combi data

i:ONE COMBI DUMP(C1 - 64) (Combi is changed to Multi on K5000S/R)

Format: FO 40 <ch> 20 00 0A 20 <sub1> <DATA> F7
<ch>:MIDI ch (00~0F)
<sub1>:INST No.(0~3F)
<DATA>: One combi data

The structure of the combi patch

(check sum) + (effect DATA) + (common DATA) + (Section DATA)*4

Section DATA should be ordered as Section1,2,3,4

j:BLOCK SINGLE DUMP(ADD, All of enable patch in D1 - 128) (Only for K5000S/R)

Format: FO 40 <ch> 21 00 0A 00 02 <sub1> <sub2>.... <sub18> <sub19> <DATA> F7
<ch>:MIDI ch (00~0F)
<sub1>~<sub19>:Tone MAP

<sub1>: bit0 = 1(Tone No.D01 Data include)
bit1 = 1(Tone No.D02 Data include)
:
bit6 = 1(Tone No.D07 Data include)
<sub2>: bit0 = 1(Tone No.D08 Data include)
bit1 = 1(Tone No.D09 Data include)
:
bit6 = 1(Tone No.D14 Data include)
:
:

<sub18>: bit0 = 1(Tone No.D120 Data include)
 bit1 = 1(Tone No.D121 Data include)
 :
 bit6 = 1(Tone No.D126 Data include)
 <sub19>: bit0 = 1(Tone No.D127 Data include)
 bit1 = 1(Tone No.D128 Data include)

<DATA>: ADD Tone data which specified by <sub1>~<sub19>

k:ONE SINGLE DUMP(ADD, D1 - 128) (Only for K5000S/R)

Format: FO 40 <ch> 20 00 0A 00 02 <sub1> <DATA> F7
 <ch>:MIDI ch (00~0F)
 <sub1>:Tone No.(00~7F)
 <DATA>: One ADD tone data

The Structure of ADD tone data

(Single Tone DATA) + (ADD Wave KIT DATA)*No.of src(included muted src)

The structure of the Single Tone DATA

(check sum) + (effect DATA) + (common DATA) + (source DATA)*No. of used sources

The structure of ADD Wave KIT DATA

(check sum) + (HC KIT DATA) + (HC code1 DATA) + (HC code2 DATA)
 + (Formant Filter DATA) + (Harmonic Envelope data) + (Loudness sense select)

Caution: ADD Wave KIT DATA should be ordered by number

l:BLOCK SINGLE DUMP(ADD, All of enable patch in E1 - 128) (Only when ME-1 is installed)

Format: FO 40 <ch> 21 00 0A 00 03 <sub1> <sub2> <sub18> <sub19> <DATA> F7
 <ch>:MIDI ch (00~0F)
 <sub1>~<sub19>:Tone MAP

<sub1>: bit0 = 1(Tone No.E01 Data include)
 bit1 = 1(Tone No.E02 Data include)
 :
 bit6 = 1(Tone No.E07 Data include)
 <sub2>: bit0 = 1(Tone No.E08 Data include)
 bit1 = 1(Tone No.E09 Data include)
 :
 bit6 = 1(Tone No.E14 Data include)
 :
 <sub18>: bit0 = 1(Tone No.E120 Data include)
 bit1 = 1(Tone No.E121 Data include)
 :
 bit6 = 1(Tone No.E126 Data include)
 <sub19>: bit0 = 1(Tone No.E127 Data include)
 bit1 = 1(Tone No.E128 Data include)

<DATA>: ADD Tone data which specified by <sub1>~<sub19>

m:ONE SINGLE DUMP(ADD, E1 - 128) (Only when ME-1 is installed)

Format: FO 40 <ch> 20 00 0A 00 03 <sub1> <DATA> F7
 <ch>:MIDI ch (00~0F)
 <sub1>:Tone No.(00~7F)
 <DATA>: One ADD tone data

The Structure of ADD tone data

(Single Tone DATA) + (ADD Wave KIT DATA)*No.of src(included muted src)

The structure of the Single Tone DATA

(check sum) + (effect DATA) + (common DATA) + (source DATA)*No. of used sources

The structure of ADD Wave KIT DATA

(check sum) + (HC KIT DATA) + (HC code1 DATA) + (HC code2 DATA)
+ (Formant Filter DATA) + (Harmonic Envelope data) + (Loudness sense select)

Caution: ADD Wave KIT DATA should be ordered by number

n:BLOCK SINGLE DUMP(ADD, All of enable patch in F1 - 128)

(Only when ME-1 is installed)

Format: F0 40 <ch> 21 00 0A 00 04 <sub1> <sub2> <sub18> <sub19> <DATA> F7

<ch>:MIDI ch (00~0F)

<sub1>~<sub19>:Tone MAP

<sub1>: bit0 = 1(Tone No.F01 Data include)
bit1 = 1(Tone No.F02 Data include)

:

<sub2>: bit6 = 1(Tone No.F07 Data include)
bit0 = 1(Tone No.F08 Data include)
bit1 = 1(Tone No.F09 Data include)

:

bit6 = 1(Tone No.F14 Data include)

:

<sub18>: bit0 = 1(Tone No.F120 Data include)
bit1 = 1(Tone No.F121 Data include)

:

bit6 = 1(Tone No.F126 Data include)

<sub19>: bit0 = 1(Tone No.F127 Data include)
bit1 = 1(Tone No.F128 Data include)

<DATA>: ADD Tone data which specified by <sub1>~<sub19>

o:ONE SINGLE DUMP(ADD, F1 - 128)

(Only when ME-1 is installed)

Format: F0 40 <ch> 20 00 0A 00 04 <sub1> <DATA> F7

<ch>:MIDI ch (00~0F)

<sub1>:Tone No.(00~7F)

<DATA>: One ADD tone data

The Structure of ADD tone data

(Single Tone DATA) + (ADD Wave KIT DATA)*No.of src(included muted src)

The structure of the Single Tone DATA

(check sum) + (effect DATA) + (common DATA) + (source DATA)*No. of used sources

The structure of ADD Wave KIT DATA

(check sum) + (HC KIT DATA) + (HC code1 DATA) + (HC code2 DATA)
+ (Formant Filter DATA) + (Harmonic Envelope data) + (Loudness sense select)

Caution: ADD Wave KIT DATA should be ordered by number

3.1.2 SINGLE TONE DATA

The Structure of the 1Single Patch

BANK B[B70-116]:(check sum)+(COMMON)+(SOURCE)*2 (Only for K5000W)

BANK A,D,E,F:(check sum)+(COMMON)+(SOURCE)*(2~8)

(check sum:1BYTE)

BANK B: check sum = {(common sum) + (source1 sum) [+ (source2 sum)] + 0xa5} & 0x7f (Only for K5000W)

BANK A,D,E,F: check sum = {(common sum) + (source1 sum) [+ (source2-8 sum)] + 0xa5} & 0x7f

3.1.2.1 COMMONDATA

| No. | PARAMETER | | | BIT MAP | VALUE | |
|-----|-----------|-----------|-----------------|-------------------------|-------------------------|-------|
| 1 | Effect | Algorithm | | - - - - - v v | 0~3 | |
| 2 | | Reverb | Type | - - - - v v v v | 0~10 | |
| 3 | | | dry/wet1 | - v v v v v v v | 0~100 | |
| 4 | | | dry/wet2(para1) | - v v v v v v v | 0~100 | |
| 5 | | | para2 | - v v v v v v v | 0~127 (depends on type) | |
| 6 | | | para3 | - v v v v v v v | 0~127 (depends on type) | |
| 7 | | | para4 | - v v v v v v v | 0~127 (depends on type) | |
| 8 | | | Effect1 | Type | - - v v v v v v | 11~47 |
| 9 | | | Depth | - v v v v v v v | 0~100 | |
| 10 | | | para1 | - v v v v v v v | 0~127 (depends on type) | |
| 11 | | | para2 | - v v v v v v v | 0~127 (depends on type) | |
| 12 | | | para3 | - v v v v v v v | 0~127 (depends on type) | |
| 13 | | | para4 | - v v v v v v v | 0~127 (depends on type) | |
| 14 | | | Effect2 | Type | - - v v v v v v | 11~47 |
| 15 | | | Depth | - v v v v v v v | 0~100 | |
| 16 | | | para1 | - v v v v v v v | 0~127 (depends on type) | |
| 17 | | | para2 | - v v v v v v v | 0~127 (depends on type) | |
| 18 | | | para3 | - v v v v v v v | 0~127 (depends on type) | |
| 19 | | | para4 | - v v v v v v v | 0~127 (depends on type) | |
| 20 | | | Effect3 | Type | - - v v v v v v | 11~47 |
| 21 | | Depth | - v v v v v v v | 0~100 | | |
| 22 | | para1 | - v v v v v v v | 0~127 (depends on type) | | |
| 23 | | para2 | - v v v v v v v | 0~127 (depends on type) | | |
| 24 | | para3 | - v v v v v v v | 0~127 (depends on type) | | |
| 25 | | para4 | - v v v v v v v | 0~127 (depends on type) | | |
| 26 | | Effect4 | Type | - - v v v v v v | 11~47 | |
| 27 | | Depth | - v v v v v v v | 0~100 | | |
| 28 | | para1 | - v v v v v v v | 0~127 (depends on type) | | |
| 29 | | para2 | - v v v v v v v | 0~127 (depends on type) | | |
| 30 | | para3 | - v v v v v v v | 0~127 (depends on type) | | |
| 31 | | para4 | - v v v v v v v | 0~127 (depends on type) | | |
| 32 | GEQ | | freq 1 | - v v v v v v v | 58(-6)~70(+6) | |
| 33 | | | freq 2 | - v v v v v v v | 58(-6)~70(+6) | |
| 34 | | | freq 3 | - v v v v v v v | 58(-6)~70(+6) | |
| 35 | | | freq 4 | - v v v v v v v | 58(-6)~70(+6) | |
| 36 | | | freq 5 | - v v v v v v v | 58(-6)~70(+6) | |
| 37 | | | freq 6 | - v v v v v v v | 58(-6)~70(+6) | |
| 38 | | | freq 7 | - v v v v v v v | 58(-6)~70(+6) | |
| 39 | Common | drum_mark | | - - - - - 0 | 0=normal(not drum) | |
| 40 | | Name 1st | | - v v v v v v v | ASCII | |
| 41 | | Name 2nd | | - v v v v v v v | ASCII | |

| No. | PARAMETER | | | BIT MAP | VALUE |
|-----|--------------|--------------------|------------------|-------------------|---|
| 42 | | Name 3rd | | - v v v v v v v v | ASCII |
| 43 | | Name 4th | | - v v v v v v v v | ASCII |
| 44 | | Name 5th | | - v v v v v v v v | ASCII |
| 45 | | Name 6th | | - v v v v v v v v | ASCII |
| 46 | | Name 7th | | - v v v v v v v v | ASCII |
| 47 | | Name 8th | | - v v v v v v v v | ASCII |
| 48 | | Volume | | - v v v v v v v v | 0~127 |
| 49 | | Poly | | - - - - - v v | 0=POLY,1=SOLO1,2=SOLO2 |
| 50 | | no use | | - - - - - - - | no use |
| 51 | | src_type | | - - - - - v v v | No. of sources:2~6 |
| 52 | | src_mute_1 | | - - - - v v v v | v=0:mute,bit0~5=source1~6 |
| 53 | | AM | | - - - - - v v v | v=0:off,v=1~5(src2~6) |
| 54 | | Effect control | control source1 | - - - - v v v v | 0~13 see "control source1&2" |
| 55 | | | destination | - - - - - v v v | 0~9 see "Effect destination list" |
| 56 | | | depth | - v v v v v v v v | (-31)33~(+31)95 |
| 57 | | | control source2 | - - - - v v v v | 0~13 see "control source1&2" |
| 58 | | | destination | - - - - - v v v | 0~9 see "Effect destination list" |
| 59 | | | depth | - v v v v v v v v | (-31)33~(+31)95 |
| 60 | | portamento on/off | | - - - - - - - | v=0:off,1=on |
| 61 | | portamento speed | | - v v v v v v v v | 0~127 |
| 62 | for K5000S/R | macro controller 1 | parameter1 | - - - - v v v v | 0~19 see "macro controller list" (K5000W=0) |
| 63 | for K5000S/R | | parameter2 | - - - - v v v v | 0~19 see "macro controller list" (K5000W=0) |
| 64 | for K5000S/R | macro controller 2 | parameter1 | - - - - v v v v | 0~19 see "macro controller list" (K5000W=0) |
| 65 | for K5000S/R | | parameter2 | - - - - v v v v | 0~19 see "macro controller list" (K5000W=0) |
| 66 | for K5000S/R | macro controller 3 | parameter1 | - - - - v v v v | 0~19 see "macro controller list" (K5000W=0) |
| 67 | for K5000S/R | | parameter2 | - - - - v v v v | 0~19 see "macro controller list" (K5000W=0) |
| 68 | for K5000S/R | macro controller 4 | parameter1 | - - - - v v v v | 0~19 see "macro controller list" (K5000W=0) |
| 69 | for K5000S/R | | parameter2 | - - - - v v v v | 0~19 see "macro controller list" (K5000W=0) |
| 70 | for K5000S/R | macro controller 1 | parameter1 depth | - v v v v v v v v | (-31)33~(+31)95 (K5000W=64) |
| 71 | for K5000S/R | | parameter2 depth | - v v v v v v v v | (-31)33~(+31)95 (K5000W=64) |
| 72 | for K5000S/R | macro controller 2 | parameter1 depth | - v v v v v v v v | (-31)33~(+31)95 (K5000W=64) |
| 73 | for K5000S/R | | parameter2 depth | - v v v v v v v v | (-31)33~(+31)95 (K5000W=64) |
| 74 | for K5000S/R | macro controller 3 | parameter1 depth | - v v v v v v v v | (-31)33~(+31)95 (K5000W=64) |
| 75 | for K5000S/R | | parameter2 depth | - v v v v v v v v | (-31)33~(+31)95 (K5000W=64) |
| 76 | for K5000S/R | macro controller 4 | parameter1 depth | - v v v v v v v v | (-31)33~(+31)95 (K5000W=64) |
| 77 | for K5000S/R | | parameter2 depth | - v v v v v v v v | (-31)33~(+31)95 (K5000W=64) |
| 78 | for K5000S/R | SW1 | parameter | - - - - v v v v | 0~16 see "SW,FSW list" (K5000W=0) |
| 79 | for K5000S/R | SW2 | parameter | - - - - v v v v | 0~16 see "SW,FSW list" (K5000W=0) |
| 80 | for K5000S/R | F.SW1 | parameter | - - - - v v v v | 0~16 see "SW,FSW list" (K5000W=0) |
| 81 | for K5000S/R | F.SW2 | parameter | - - - - v v v v | 0~16 see "SW,FSW list" (K5000W=0) |

EFFECT DESTINATION LIST

| No. | DESTINATION |
|-----|-----------------|
| 0 | effect1 dry/wet |
| 1 | effect1 para |
| 2 | effect2 dry/wet |
| 3 | effect2 para |
| 4 | effect3 dry/wet |
| 5 | effect3 para |
| 6 | effect4 dry/wet |
| 7 | effect4 para |
| 8 | reverb dry/wet1 |
| 9 | reverb dry/wet2 |

CONTROL SOURCE 1&2

| No. | SOURCE |
|-----|----------------------|
| 0 | bender |
| 1 | ch pressure |
| 2 | wheel |
| 3 | expression |
| 4 | MIDI volume |
| 5 | Panpot |
| 6 | General controller 1 |
| 7 | General controller 2 |
| 8 | General controller 3 |
| 9 | General controller 4 |
| 10 | General controller 5 |
| 11 | General controller 6 |
| 12 | General controller 7 |
| 13 | General controller 8 |

MACRO CONTROLLER LIST (Only for K5000S/R)

| No. | DESTINATION |
|-----|-------------------------|
| 0 | pitch offset |
| 1 | cutoff offset |
| 2 | level |
| 3 | vibrato depth offset |
| 4 | growl depth offset |
| 5 | tremolo depth offset |
| 6 | lfo speed offset |
| 7 | attack time offset |
| 8 | decay1 time offset |
| 9 | release time offset |
| 10 | velocity offset |
| 11 | resonance offset |
| 12 | panpot offset |
| 13 | FF bias offset |
| 14 | FF ENV/LFO depth offset |
| 15 | FF ENV/LFO speed offset |
| 16 | Harmonic lo offset |
| 17 | Harmonic hi offset |
| 18 | Harmonic even offset |
| 19 | Harmonic odd offset |

SW/FSW LIST (Only for K5000S/R)

| No. | DESTINATION |
|-----|-------------|
| 0 | OFF |
| 1 | Harm Max |
| 2 | Harm Bright |
| 3 | Harm Dark |
| 4 | Harm Saw |
| 5 | Select Loud |
| 6 | Add Loud |
| 7 | Add 5th |
| 8 | Add Odd |
| 9 | Add Even |
| 10 | HE #1 |
| 11 | HE #2 |
| 12 | HE Loop |
| 13 | FF max |
| 14 | FF Comb |
| 15 | FF hicut |
| 16 | FF Comb2 |

3.1.2.2 SOURCE DATA

| No. | PARAMETER | | | BIT MAP | VALUE |
|-----|-----------|---------|-------------------|-------------------|--|
| 1 | Source | Control | zone_lo | - v v v v v v v v | 0~127 |
| 2 | | | zone_hi | - v v v v v v v v | 0~127 |
| 3 | | | velo sw | - t t v v v v v v | t:(0=off,1=loud,2=soft)v:(velo:0=4 ~ 31=127) |
| 4 | | | effect path | - - - - - v v v | 0~3 |
| 5 | | | Volume | - v v v v v v v v | 0~127 |
| 6 | | | Bender | | |
| 7 | | | Pitch | - - - v v v v v v | 0~24 |
| 8 | | | Cutoff | - - - v v v v v v | 0~31 |
| 9 | | | Press | | |
| 10 | | | destination 1 | - - - v v v v v v | 0~19 |
| 11 | | | depth | - v v v v v v v v | (-31)33~(+31)95 |
| 12 | | | destination 2 | - - - v v v v v v | 0~19 |
| 13 | | | depth | - v v v v v v v v | (-31)33~(+31)95 |
| 14 | | | destination 1 | - - - v v v v v v | 0~19 |
| 15 | | | depth | - v v v v v v v v | (-31)33~(+31)95 |
| 16 | | | destination 2 | - - - v v v v v v | 0~19 |
| 17 | | | depth | - v v v v v v v v | (-31)33~(+31)95 |
| 18 | | | destination 1 | - - - v v v v v v | 0~19 |
| 19 | | | depth | - v v v v v v v v | (-31)33~(+31)95 |
| 20 | | | assignable | - - - - v v v v v | 0~13 see "control source1&2" |
| 21 | | | control | - - - v v v v v v | 0~19 see "destination list" |
| 22 | | | depth | - v v v v v v v v | (-31)33~(+31)95 |
| 23 | | | control source2 | - - - - v v v v v | 0~13 see "control source1&2" |
| 24 | | | destination | - - - v v v v v v | 0~19 see "destination list" |
| 25 | | | depth | - v v v v v v v v | (-31)33~(+31)95 |
| 26 | | | Key On Delay | - v v v v v v v v | 0~127 |
| 27 | | | Pan | - - - - - v v v | 0=normal,1=KS,2=ks,3=Random |
| 28 | | | normal value | - v v v v v v v v | (63L)1~(63R)127 |
| 29 | | DCO | Wave Kit MSB | - - - - - v v v | 0~340(1-341) PCM for B bank(Only K5000W) |
| 30 | | | LSB | - v v v v v v v v | 341-463(342-464) PCM for A, 512=ADD |
| 31 | | | Coarse | - v v v v v v v v | (-24)40~(+24)88 |
| 32 | | | Fine | - v v v v v v v v | (-63)1~(+63)127 |
| 33 | | | Fixed Key | - v v v v v v v v | 0=OFF, 21~108=ON(A-1 - C7) |
| 34 | | | KS Pitch | - - - - - v v v | 0=0cent,1=25cent,2=33cent,3=50cent |
| 35 | | | Pitch Env | | |
| 36 | | | Start Level | - v v v v v v v v | (-63)1~(+63)127 |
| 37 | | | Attack Time | - v v v v v v v v | 0~127 |
| 38 | | | Attack Level | - v v v v v v v v | (-63)1~(+63)127 |
| 39 | | | Decay Time | - v v v v v v v v | 0~127 |
| 40 | | | Time Velo Sense | - v v v v v v v v | (-63)1~(+63)127 |
| 41 | | | Level Velo Sense | - v v v v v v v v | (-63)1~(+63)127 |
| 42 | | DCF | DCF | - - - - - v v v | 0=Active,1=Bypass |
| 43 | | | Mode | - - - - - v v v | 0=lo pass,1=hi pass |
| 44 | | | Velo Curve | - - - - - v v v | 0~11(1-12) |
| 45 | | | Resonance | - - - - - v v v | 0~7 |
| 46 | | | DCF level | - - - - - v v v | 0~7(7~0) |
| 47 | | | Cutoff | - v v v v v v v v | 0~127 |
| 48 | | | Cutoff KS Depth | - v v v v v v v v | (-63)1~(+63)127 |
| 49 | | | Cutoff Velo Depth | - v v v v v v v v | (-63)1~(+63)127 |
| 50 | | | DCF Env depth | - v v v v v v v v | (-63)1~(+63)127 |
| 51 | | | DCF Env | | |
| 52 | | | Attack Time | - v v v v v v v v | 0~127 |
| 53 | | | Decay1 Time | - v v v v v v v v | 0~127 |
| 54 | | | Decay1 Level | - v v v v v v v v | (-63)1~(+63)127 |
| 55 | | | Decay2 Time | - v v v v v v v v | 0~127 |
| 56 | | | Decay2 Level | - v v v v v v v v | (-63)1~(+63)127 |
| 57 | | | Release Time | - v v v v v v v v | 0~127 |
| 58 | | | DCF KS to Env | | |
| 59 | | | Attack Time | - v v v v v v v v | (-63)1~(+63)127 |
| 60 | | | Decay1 Time | - v v v v v v v v | (-63)1~(+63)127 |
| 61 | | DCA | Velo Curve | - - - - - v v v | 0~11 |

| No. | PARAMETER | | | BIT MAP | VALUE |
|-----|-----------|-----------------|--------------|---------------------|--------------------------------|
| 62 | | DCA Env | Attack Time | - v v v v v v v v | 0~127 |
| 63 | | | Decay1 Time | - v v v v v v v v | 0~127 |
| 64 | | | Decay1 Level | - v v v v v v v v | 0~127 |
| 65 | | | Decay2 Time | - v v v v v v v v | 0~127 |
| 66 | | | Decay2 Level | - v v v v v v v v | 0~127 |
| 67 | | | Release Time | - v v v v v v v v | 0~127 |
| 68 | | DCA KS to Env | Level | - v v v v v v v v | (-63)1~(+63)127 |
| 69 | | | Attack Time | - v v v v v v v v | (-63)1~(+63)127 |
| 70 | | | Decay1 Time | - v v v v v v v v | (-63)1~(+63)127 |
| 71 | | | Release Time | - v v v v v v v v | (-63)1~(+63)127 |
| 72 | | DCA Velo Sense | Level | - - v v v v v v v v | 0~63 |
| 73 | | | Attack Time | - v v v v v v v v | (-63)1~(+63)127 |
| 74 | | | Decay1 Time | - v v v v v v v v | (-63)1~(+63)127 |
| 75 | | | Release Time | - v v v v v v v v | (-63)1~(+63)127 |
| 76 | LFO | Waveform | | - - - - - v v v | 0=Tri,1=Sqr,2=Saw,3=Sin,4=Rndm |
| 77 | | Speed | | - v v v v v v v v | 0~127 |
| 78 | | Delay On Set | | - v v v v v v v v | 0~127 |
| 79 | | Fade In | time | - v v v v v v v v | 0~127 |
| 80 | | | to speed | - - v v v v v v v v | 0~63 |
| 81 | | Pitch (Vibrato) | Depth | - - v v v v v v v v | 0~63 |
| 82 | | | KS | - v v v v v v v v | (-63)1~(+63)127 |
| 83 | | DCF (Growl) | Depth | - - v v v v v v v v | 0~63 |
| 84 | | | KS | - v v v v v v v v | (-63)1~(+63)127 |
| 85 | | DCA (Tremolo) | Depth | - - v v v v v v v v | 0~63 |
| 86 | | | KS | - v v v v v v v v | (-63)1~(+63)127 |

(DESTINATION LIST)

| No. | DESTINATION |
|-----|-------------------------|
| 0 | pitch offset |
| 1 | cutoff offset |
| 2 | level |
| 3 | vibrato depth offset |
| 4 | growl depth offset |
| 5 | tremolo depth offset |
| 6 | lfo speed offset |
| 7 | attack time offset |
| 8 | decay1 time offset |
| 9 | release time offset |
| 10 | velocity offset |
| 11 | resonance offset |
| 12 | panpot offset |
| 13 | FF bias offset |
| 14 | FF ENV/LFO depth offset |
| 15 | FF ENV/LFO speed offset |
| 16 | Harmonic lo offset |
| 17 | Harmonic hi offset |
| 18 | Harmonic even offset |
| 19 | Harmonic odd offset |

(CONTROL SOURCE 1&2)

| No. | SOURCE |
|-----|----------------------|
| 0 | bender |
| 1 | ch pressure |
| 2 | wheel |
| 3 | expression |
| 4 | MIDI volume |
| 5 | PANPOT |
| 6 | General controller 1 |
| 7 | General controller 2 |
| 8 | General controller 3 |
| 9 | General controller 4 |
| 10 | General controller 5 |
| 11 | General controller 6 |
| 12 | General controller 7 |
| 13 | General controller 8 |

3.1.3 ADD WAVE KIT

The structure of 1ADD Wave kit

(check sum)+(HC KIT)+(HC code1)+(HC code2)+(Formant)+(HC env)+(LS select):806 Byte

(check sum)

chek sum = {(HCKIT sum) + (HCcode1 sum) + (HCcode2 sum) + (FF sum) + (HCenv sum) + (loud sence select) + 0xa5} & 0x7f

| No. | PARAMETER | | | | BIT MAP | VALUE |
|-----|-----------|--|--|--|-------------------|-------|
| 1 | check sum | | | | - v v v v v v v v | |

(HC KIT)

| No. | PARAMETER | | | | BIT MAP | VALUE |
|-----|-----------|-------------|------------|---------------|-------------------|---------------------------------|
| 2 | MORF FLAG | | | | - - - - - v | 0=MORF OFF,1=MORF ON |
| 3 | Harmonics | Common | Total Gain | | - - v v v v v v | 1~63 |
| 4 | | NON-MORF | Harm Group | 1~64/ 65~128 | - - - - - v | 0=LO(1~64harm),1=HI(65~128harm) |
| 5 | | | KS to Gain | | - v v v v v v v v | (-63)1~(+63)127 |
| 6 | | | Balance | Velo curve | - - - - v v v v | 0~11 |
| 7 | | | | Velo depth | - v v v v v v v v | 0~127 |
| 8 | | MORF | HC | HC1 patch No. | - v v v v v v v v | 0~127 |
| 9 | | | | source No. | - - - - v v v v | 0~11(0~5:soft,6~11:loud) |
| 10 | | | | HC2 patch No. | - v v v v v v v v | 0~127 |
| 11 | | | | source No. | - - - - v v v v | 0~11(0~5:soft,6~11:loud) |
| 12 | | | | HC3 patch No. | - v v v v v v v v | 0~127 |
| 13 | | | | source No. | - - - - v v v v | 0~11(0~5:soft,6~11:loud) |
| 14 | | | | HC4 patch No. | - v v v v v v v v | 0~127 |
| 15 | | | | source No. | - - - - v v v v | 0~11(0~5:soft,6~11:loud) |
| 16 | | | HE | Time1 | - v v v v v v v v | 0~127 |
| 17 | | | | Time2 | - v v v v v v v v | 0~127 |
| 18 | | | | Time3 | - v v v v v v v v | 0~127 |
| 19 | | | | Time4 | - v v v v v v v v | 0~127 |
| 20 | | | | Loop | - - - - - v v | 0(OFF),1(LP1),2(LP2) |
| 21 | Formant | Bias | | | - v v v v v v v v | (-63)1~(+63)127 |
| 22 | | Env/LFO sel | | | - - - - - v | 0=ENV,1=LFO |
| 23 | | Env | Env Depth | | - v v v v v v v v | (-63)1~(+63)127 |
| 24 | | | Attack | Rate | - v v v v v v v v | 0~127 |
| 25 | | | | Level | - v v v v v v v v | (-63)1~(+63)127 |
| 26 | | | Decay1 | Rate | - v v v v v v v v | 0~127 |
| 27 | | | | Level | - v v v v v v v v | (-63)1~(+63)127 |
| 28 | | | Decay2 | Rate | - v v v v v v v v | 0~127 |
| 29 | | | | Level | - v v v v v v v v | (-63)1~(+63)127 |
| 30 | | | Release | Rate | - v v v v v v v v | 0~127 |
| 31 | | | | Level | - v v v v v v v v | (-63)1~(+63)127 |
| 32 | | | LOOP | | - - - - - v v | 0(OFF),1(LP1),2(LP2) |
| 33 | | | Velo Sence | Env Depth | - v v v v v v v v | (-63)1~(+63)127 |
| 34 | | | KS | Env Depth | - v v v v v v v v | (-63)1~(+63)127 |
| 35 | | LFO | Speed | | - v v v v v v v v | 0~127 |
| 36 | | | shape | | - - - - - v v | 0=TRI,1=SAW,2=RNDM |
| 37 | | | Depth | | - - v v v v v v v | 0~63 |

(HC code1:soft)

| No. | PARAMETER | | | | BIT MAP | VALUE |
|-----|-----------|------|--|--|-------------------|-------|
| 38 | HC | 1st | | | - v v v v v v v v | 0~127 |
| 39 | | 2nd | | | - v v v v v v v v | 0~127 |
| 100 | | 63rd | | | - v v v v v v v v | 0~127 |
| 101 | | 64th | | | - v v v v v v v v | 0~127 |

(HC code2:loud)

| No. | PARAMETER | | | | BIT MAP | VALUE |
|-----|-----------|------|--|--|-------------------|-------|
| 102 | HC | 1st | | | - v v v v v v v v | 0~127 |
| 103 | | 2nd | | | - v v v v v v v v | 0~127 |
| | | | | | | |
| 164 | | 63rd | | | - v v v v v v v v | 0~127 |
| 165 | | 64th | | | - v v v v v v v v | 0~127 |

(Formant Filter data)

| No. | PARAMETER | | | | BIT MAP | VALUE |
|-----|-----------|-------|--|--|-------------------|-------|
| 166 | Formant | 1st | | | - v v v v v v v v | 0~127 |
| 167 | | 2nd | | | - v v v v v v v v | 0~127 |
| | | | | | | |
| 292 | | 127th | | | - v v v v v v v v | 0~127 |
| 293 | | 128th | | | - v v v v v v v v | 0~127 |

(Harmonic Envelope data)

| No. | PARAMETER | | | | BIT MAP | VALUE |
|-----|-----------|------|--------|--|-------------------|--|
| 294 | HC env | 1st | rate0 | | - v v v v v v v v | 0~127 |
| 295 | | | level0 | | - - v v v v v v v | 0~63 |
| 296 | | | rate1 | | - v v v v v v v v | 0~127 |
| 297 | | | level1 | | - S v v v v v v v | 0~63 ,S:RS flag(=0:LP1, =1:Loop off/LP2) |
| 298 | | | rate2 | | - v v v v v v v v | 0~127 |
| 299 | | | level2 | | - T v v v v v v v | 0~63 ,T:RT flag(=0:Loop off, =1 LP1/LP2) |
| 300 | | | rate3 | | - v v v v v v v v | 0~127 |
| 301 | | | level3 | | - - v v v v v v v | 0~63 |
| 302 | HC env | 2nd | rate0 | | - v v v v v v v v | 0~127 |
| 303 | | | level0 | | - - v v v v v v v | 0~63 |
| 304 | | | rate1 | | - v v v v v v v v | 0~127 |
| 305 | | | level1 | | - S v v v v v v v | 0~63 ,S:RS flag(=0:LP1, =1:Loop off/LP2) |
| 306 | | | rate2 | | - v v v v v v v v | 0~127 |
| 307 | | | level2 | | - T v v v v v v v | 0~63 ,T:RT flag(=0:Loop off, =1 LP1/LP2) |
| 308 | | | rate3 | | - v v v v v v v v | 0~127 |
| 309 | | | level3 | | - - v v v v v v v | 0~63 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 798 | HC env | 64th | rate0 | | - v v v v v v v v | 0~127 |
| 799 | | | level0 | | - - v v v v v v v | 0~63 |
| 800 | | | rate1 | | - v v v v v v v v | 0~127 |
| 801 | | | level1 | | - S v v v v v v v | 0~63 ,S:RS flag(=0:LP1, =1:Loop off/LP2) |
| 802 | | | rate2 | | - v v v v v v v v | 0~127 |
| 803 | | | level2 | | - T v v v v v v v | 0~63 ,T:RT flag(=0:Loop off, =1 LP1/LP2) |
| 804 | | | rate3 | | - v v v v v v v v | 0~127 |
| 805 | | | level3 | | - - v v v v v v v | 0~63 |
| 806 | dummy | | | | - - - - - - - - | 0 |

3.1.4 DRUM KIT PARAMETER (Only for K5000W)

The structure of 1Drum kit Patch (check sum) + (COMMON)+(NOTE DATA)

(check sum):1BYTE)

check sum = {(common sum) + (note data sum) + 0xa5} & 0x7f

3.1.4.1 COMMON DATA (Only for K5000W)

| No. | PARAMETER | | | BIT MAP | VALUE |
|-----|-----------|-----------|-----------------|-----------------|-----------------------------------|
| 1 | Effect | Algorithm | | - - - - - v v | 0~3 |
| 2 | | Reverb | Type | - - - - v v v v | 0~10 |
| 3 | | | dry/wet1 | - v v v v v v v | 0~100 |
| 4 | | | dry/wet2 | - v v v v v v v | 0~100 |
| 5 | | | para2 | - v v v v v v v | 0~127 depends on Type |
| 6 | | | para3 | - v v v v v v v | 0~127 depends on Type |
| 7 | | | para4 | - v v v v v v v | 0~127 depends on Type |
| 8 | | Effect1 | Type | - - v v v v v v | 0~36 |
| 9 | | | dry/wet | - v v v v v v v | 0~100 |
| 10 | | | para1 | - v v v v v v v | 0~127 depends on Type |
| 11 | | | para2 | - v v v v v v v | 0~127 depends on Type |
| 12 | | | para3 | - v v v v v v v | 0~127 depends on Type |
| 13 | | | para4 | - v v v v v v v | 0~127 depends on Type |
| 14 | | Effect2 | Type | - - v v v v v v | 0~36 |
| 15 | | | dry/wet | - v v v v v v v | 0~100 |
| 16 | | | para1 | - v v v v v v v | 0~127 depends on Type |
| 17 | | | para2 | - v v v v v v v | 0~127 depends on Type |
| 18 | | | para3 | - v v v v v v v | 0~127 depends on Type |
| 19 | | | para4 | - v v v v v v v | 0~127 depends on Type |
| 20 | | Effect3 | Type | - - v v v v v v | 0~36 |
| 21 | | | dry/wet | - v v v v v v v | 0~100 |
| 22 | | | para1 | - v v v v v v v | 0~127 depends on Type |
| 23 | | | para2 | - v v v v v v v | 0~127 depends on Type |
| 24 | | | para3 | - v v v v v v v | 0~127 depends on Type |
| 25 | | | para4 | - v v v v v v v | 0~127 depends on Type |
| 26 | | Effect4 | Type | - - v v v v v v | 0~36 |
| 27 | | | dry/wet | - v v v v v v v | 0~100 |
| 28 | | | para1 | - v v v v v v v | 0~127 depends on Type |
| 29 | | | para2 | - v v v v v v v | 0~127 depends on Type |
| 30 | | | para3 | - v v v v v v v | 0~127 depends on Type |
| 31 | | | para4 | - v v v v v v v | 0~127 depends on Type |
| 32 | GEQ | | freq 1 | - v v v v v v v | 0~127 |
| 33 | | | freq 2 | - v v v v v v v | 0~127 |
| 34 | | | freq 3 | - v v v v v v v | 0~127 |
| 35 | | | freq 4 | - v v v v v v v | 0~127 |
| 36 | | | freq 5 | - v v v v v v v | 0~127 |
| 37 | | | freq 6 | - v v v v v v v | 0~127 |
| 38 | | | freq 7 | - v v v v v v v | 0~127 |
| 39 | Common | drum_mark | | - - - - - 1 | 1=drum kit |
| 40 | | Name 1st | | - v v v v v v v | ASCII |
| 41 | | Name 2nd | | - v v v v v v v | ASCII |
| 42 | | Name 3rd | | - v v v v v v v | ASCII |
| 43 | | Name 4th | | - v v v v v v v | ASCII |
| 44 | | Name 5th | | - v v v v v v v | ASCII |
| 45 | | Name 6th | | - v v v v v v v | ASCII |
| 46 | | Name 7th | | - v v v v v v v | ASCII |
| 47 | | Name 8th | | - v v v v v v v | ASCII |
| 48 | | Volume | | - v v v v v v v | 0~127 |
| 49 | | contol | control source1 | - - - - v v v v | 0~13 see "control source1&2" |
| 50 | | | destination | - - - - v v v v | 0~9 see "Effect destination list" |
| 51 | | | depth | - v v v v v v v | (-31)33~(+31)95 |
| 52 | | | control source2 | - - - - v v v v | 0~13 see "control source1&2" |
| 53 | | | destination | - - - - v v v v | 0~9 see "Effect destination list" |
| 54 | | | depth | - v v v v v v v | (-31)33~(+31)95 |

3.1.4.2 NOTEDATA

note No.19h~ (Only for K5000W)

| STU | PARAMETER | | | BIT MAP | VALUE |
|-----|-----------|----------|-----|-----------------|------------------------------|
| 1 | NOTE 0 | INST No. | MSB | - - - - - v v | 0=MUTE,1~253,254~285=USR1~32 |
| 2 | | | LSB | - v v v v v v v | |
| 3 | NOTE 1 | INST No. | MSB | - - - - - v v | 0=MUTE,1~253,254~285=USR1~32 |
| 4 | | | LSB | - v v v v v v v | |
| 5 | NOTE 2 | INST No. | MSB | - - - - - v v | 0=MUTE,1~253,254~285=USR1~32 |
| 6 | | | LSB | - v v v v v v v | |
| 121 | NOTE 60 | INST No. | MSB | - - - - - v v | 0=MUTE,1~253,254~285=USR1~32 |
| 122 | | | LSB | - v v v v v v v | |
| 123 | NOTE 61 | INST No. | MSB | - - - - - v v | 0=MUTE,1~253,254~285=USR1~32 |
| 124 | | | LSB | - v v v v v v v | |
| 125 | NOTE 62 | INST No. | MSB | - - - - - v v | 0=MUTE,1~253,254~285=USR1~32 |
| 126 | | | LSB | - v v v v v v v | |
| 127 | NOTE 63 | INST No. | MSB | - - - - - v v | 0=MUTE,1~253,254~285=USR1~32 |
| 128 | | | LSB | - v v v v v v v | |

3.1.5 DRUM INST DATA

(Only for K5000W)

The structure of 1 DRUM TONE
(chek sum) + (COMMON)+(1SRC):

(check sum:1BYTE)

$$\text{check sum} = \{(\text{common sum}) + (\text{1src sum}) + 0\text{xa5}\} \& \text{0x7f}$$

3.1.5.1 COMMONDATA

(Only for K5000W)

| No. | PARAMETER | | | BIT MAP | VALUE |
|-----|-----------|--|-------------|-----------------|---------------------------|
| 1 | Common | | dummy | - - - - - v | =0(fix) |
| 2 | | | Volume | - v v v v v v v | 0~127 |
| 3 | | | Gate | - - v v v v v v | 0=OFF recognize,1~32=GATE |
| 4 | | | Excl group | - - - - v v v v | 0=OFF,1~8=group1~8 |
| 5 | | | effect_path | - - - - - v v | 0~3(1-4) |
| 6 | | | src_mute | - - - - - v v | =01(fix) |

3.1.5.2 SOURCE DATA

(Only for K5000W)

| No. | PARAMETER | | | | BIT MAP | VALUE |
|-----|-----------|---------|-------------------|------------------|-----------------|-----------------|
| 1 | Source | Control | Volume | | - v v v v v v v | 0~127 |
| 2 | | | PAN | | - v v v v v v v | (63L)1~(63R)127 |
| 3 | | DCO | Wave No. MSB | | - - - - - v v | 0~224 |
| 4 | | | LSB | | - v v v v v v v | |
| 5 | | | Coarse | | - v v v v v v v | (-24)40~(+24)88 |
| 6 | | | Fine | | - v v v v v v v | (-63)1~(+63)127 |
| 7 | | | Pitch Env | Start Level | - v v v v v v v | (-63)1~(+63)127 |
| 8 | | | | Attack Time | - v v v v v v v | 0~127 |
| 9 | | | | Level Velo Sense | - v v v v v v v | (-63)1~(+63)127 |
| 10 | | DCF | Cutoff | | - v v v v v v v | 0~127 |
| 11 | | | Cutoff Velo Depth | | - v v v v v v v | (-63)1~(+63)127 |
| 12 | | DCA | DCA Env | Attack Time | - v v v v v v v | 0~127 |
| 13 | | | | Decay1 Time | - v v v v v v v | 0~127 |
| 14 | | | | Decay1 Level | - v v v v v v v | 0~127 |
| 15 | | | | Release Time | - v v v v v v v | 0~127 |
| 16 | | | DCA Velo Sense | Level | - - v v v v v v | 0~63 |
| 17 | | | | Attack Time | - v v v v v v v | (-63)1~(+63)127 |
| 18 | | | | Decay1 Time | - v v v v v v v | (-63)1~(+63)127 |

3.1.6 COMBI PARAMETER (Combi is changed to Multi on K5000S/R)

The structure of 1 COMBI Patch (check sum) + (COMMON)+(SECTION DATA)

(check sum):1BYTE)

check sum = {(common sum) + (section data sum) + 0xa5} & 0x7f

3.1.6.1 COMMON DATA

| No. | PARAMETER | | BIT MAP | VALUE |
|-----|-----------|-----------------|-----------------|-----------------------------------|
| 1 | Effect | Algorithm | - - - - - v v | 0~3 |
| 2 | | Reverb | - - - - v v v v | 0~10 |
| 3 | | dry/wet1 | - v v v v v v v | 0~100 |
| 4 | | dry/wet2 | - v v v v v v v | 0~100 |
| 5 | | para2 | - v v v v v v v | 0~127 depends on Type |
| 6 | | para3 | - v v v v v v v | 0~127 depends on Type |
| 7 | | para4 | - v v v v v v v | 0~127 depends on Type |
| 8 | | Effect1 | - - v v v v v v | 0~36 |
| 9 | | dry/wet | - v v v v v v v | 0~100 |
| 10 | | para1 | - v v v v v v v | 0~127 depends on Type |
| 11 | | para2 | - v v v v v v v | 0~127 depends on Type |
| 12 | | para3 | - v v v v v v v | 0~127 depends on Type |
| 13 | | para4 | - v v v v v v v | 0~127 depends on Type |
| 14 | | Effect2 | - - v v v v v v | 0~36 |
| 15 | | dry/wet | - v v v v v v v | 0~100 |
| 16 | | para1 | - v v v v v v v | 0~127 depends on Type |
| 17 | | para2 | - v v v v v v v | 0~127 depends on Type |
| 18 | | para3 | - v v v v v v v | 0~127 depends on Type |
| 19 | | para4 | - v v v v v v v | 0~127 depends on Type |
| 20 | | Effect3 | - - v v v v v v | 0~36 |
| 21 | | dry/wet | - v v v v v v v | 0~100 |
| 22 | | para1 | - v v v v v v v | 0~127 depends on Type |
| 23 | | para2 | - v v v v v v v | 0~127 depends on Type |
| 24 | | para3 | - v v v v v v v | 0~127 depends on Type |
| 25 | | para4 | - v v v v v v v | 0~127 depends on Type |
| 26 | | Effect4 | - - v v v v v v | 0~36 |
| 27 | | dry/wet | - v v v v v v v | 0~100 |
| 28 | | para1 | - v v v v v v v | 0~127 depends on Type |
| 29 | | para2 | - v v v v v v v | 0~127 depends on Type |
| 30 | | para3 | - v v v v v v v | 0~127 depends on Type |
| 31 | | para4 | - v v v v v v v | 0~127 depends on Type |
| 32 | GEQ | freq 1 | - v v v v v v v | 0~127 |
| 33 | | freq 2 | - v v v v v v v | 0~127 |
| 34 | | freq 3 | - v v v v v v v | 0~127 |
| 35 | | freq 4 | - v v v v v v v | 0~127 |
| 36 | | freq 5 | - v v v v v v v | 0~127 |
| 37 | | freq 6 | - v v v v v v v | 0~127 |
| 38 | | freq 7 | - v v v v v v v | 0~127 |
| 39 | COMMON | Name 1st | - v v v v v v v | ASCII |
| 40 | | Name 2nd | - v v v v v v v | ASCII |
| 41 | | Name 3rd | - v v v v v v v | ASCII |
| 42 | | Name 4th | - v v v v v v v | ASCII |
| 43 | | Name 5th | - v v v v v v v | ASCII |
| 44 | | Name 6th | - v v v v v v v | ASCII |
| 45 | | Name 7th | - v v v v v v v | ASCII |
| 46 | | Name 8th | - v v v v v v v | ASCII |
| 47 | | volume | - v v v v v v v | 0~127 |
| 48 | | Mute | - - - - v v v v | v=0:Mute,bit0~3:section1~4 |
| 49 | | contol | - - - - v v v v | 0~13 see "control source1&2" |
| 50 | | destination | - - - - v v v v | 0~9 see "Effect destination list" |
| 51 | | depth | - v v v v v v v | (-31)33~(+31)95 |
| 52 | | control source2 | - - - - v v v v | 0~13 see "control source1&2" |
| 53 | | destination | - - - - v v v v | 0~9 see "Effect destination list" |
| 54 | | depth | - v v v v v v v | (-31)33~(+31)95 |

g:ONE DRUM INST DUMP REQUEST(User Inst U1 - 32) (Only for K5000W)
 Format: F0 40 <ch> 00 00 0A 11 00 <DATA> F7
 <ch>:MIDI ch (00~0F)
 <DATA>: inst no.:00H - 1fH

h:BLOCK COMBI DUMP REQUEST(All of C1 - 64) (Combi is changed to Multi on K5000S/R)
 Format: F0 40 <ch> 01 00 0A 20 00 00 F7
 <ch>:MIDI ch (00~0F)

i:ONE COMBI DUMP REQUEST(C1 - 64) (Combi is changed to Multi on K5000S/R)
 Format: F0 40 <ch> 00 00 0A 20 00 <DATA> F7
 <ch>:MIDI ch (00~0F)
 <DATA>: Combi no.:00H - 3fH

j:BLOCK SINGLE DUMP REQUEST(ADD, All of enable patch in D1 - 128) (Only for K5000S/R)
 Format: F0 40 <ch> 01 00 0A 00 02 00 F7
 <ch>:MIDI ch (00~0F)

k:ONE SINGLE DUMP REQUEST(ADD, D1 - 128) (Only for K5000S/R)
 Format: F0 40 <ch> 00 00 0A 00 02 <data> F7
 <ch>:MIDI ch (00~0F)
 <DATA>: patch no.: 0 - 7f

l:BLOCK SINGLE DUMP REQUEST(ADD, All of enable patch in E1 - 128) (Only when ME-1 is installed)
 Format: F0 40 <ch> 01 00 0A 00 03 00 F7
 <ch>:MIDI ch (00~0F)

m:ONE SINGLE DUMP REQUEST(ADD, E1 - 128) (Only when ME-1 is installed)
 Format: F0 40 <ch> 00 00 0A 00 03 <data> F7
 <ch>:MIDI ch (00~0F)
 <DATA>: patch no.: 0 - 7f

n:BLOCK SINGLE DUMP REQUEST(ADD, All of enable patch in F1 - 128) (Only when ME-1 is installed)
 Format: F0 40 <ch> 01 00 0A 00 04 00 F7
 <ch>:MIDI ch (00~0F)

o:ONE SINGLE DUMP REQUEST(ADD, F1 - 128) (Only when ME-1 is installed)
 Format: F0 40 <ch> 00 00 0A 00 04 <data> F7
 <ch>:MIDI ch (00~0F)
 <DATA>: patch no.: 0 - 7f

3.2 K5000W/S Parameter change

K5000 series do not transmit these parameter change data except 3.2.7 Arpeggio parameter.

3.2.1 Exclusive Data Format

| | | |
|-------|------|------------------|
| 1st. | F0h: | Exclusive |
| 2nd. | 40h: | Kawai ID |
| 3rd. | 00h: | Channel No. |
| 4th. | 10h: | Function No. |
| 5th. | 00h: | Group No. |
| 6th. | 0Ah: | Machine No. |
| 7th. | xxh: | sub1 |
| 8th. | xxh: | sub2 |
| 9th. | xxh: | sub3 |
| 10th. | xxh: | sub4 |
| 11th. | xxh: | sub5 |
| 12th. | vvh: | data Hi |
| 13th. | vvh: | data Lo |
| 14th. | F7h: | End of Exclusive |

3.2.2.2 Single Tone Source Parameter

sub1: 01h :single
sub2: 01h :source
sub3: xxh :source No.(00h~05h)
sub4: 00h :dummy

| sub5 | PARAMETER | | data Hi(bit) | data Lo(bit) | VALUE | |
|------|---------------|-------------------|-----------------|-------------------|--|------|
| 00h | Control | zone_lo | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 | |
| 01h | | zone_hi | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 | |
| 02h | | velo sw | 0 0 0 0 0 0 0 0 | 0 t t v v v v v v | t:(0=off,1=loud,2=soft),v:(velo:0(1)~31(127)) | |
| 03h | | effect path | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 0 v v | 0~3 | |
| 04h | | Volume | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 | |
| 05h | | Bender | Pitch | 0 0 0 0 0 0 0 0 | 0 0 0 v v v v v | 0~24 |
| 06h | | Cutoff | 0 0 0 0 0 0 0 0 | 0 0 0 v v v v v | 0~31 | |
| 07h | Press | parameter 1 | 0 0 0 0 0 0 0 0 | 0 0 0 v v v v v | 0~19 | |
| 08h | | depth | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-31)33~(+31)95 | |
| 09h | | parameter 2 | 0 0 0 0 0 0 0 0 | 0 0 0 v v v v v | 0~19 | |
| 0ah | | depth | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-31)33~(+31)95 | |
| 0bh | Wheel | parameter 1 | 0 0 0 0 0 0 0 0 | 0 0 0 v v v v v | 0~19 | |
| 0ch | | depth | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-31)33~(+31)95 | |
| 0dh | | parameter 2 | 0 0 0 0 0 0 0 0 | 0 0 0 v v v v v | 0~19 | |
| 0eh | | depth | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-31)33~(+31)95 | |
| 0fh | Express | parameter 1 | 0 0 0 0 0 0 0 0 | 0 0 0 v v v v v | 0~19 | |
| 10h | | depth | 0 0 0 0 0 0 0 0 | 0 0 0 v v v v v | (-31)33~(+31)95 | |
| 11h | | parameter 2 | 0 0 0 0 0 0 0 0 | 0 0 0 v v v v v | 0~19 | |
| 12h | | depth | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-31)33~(+31)95 | |
| 13h | control | control source1 | 0 0 0 0 0 0 0 0 | 0 0 0 0 v v v v | 0~13 see "control source1&2" | |
| 14h | | destination | 0 0 0 0 0 0 0 0 | 0 0 0 v v v v v | 0~19 see "destination list" | |
| 15h | | depth | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-31)33~(+31)95 | |
| 16h | | control source2 | 0 0 0 0 0 0 0 0 | 0 0 0 0 v v v v | 0~13 see "control source1&2" | |
| 17h | | destination | 0 0 0 0 0 0 0 0 | 0 0 0 v v v v v | 0~19 see "destination list" | |
| 18h | | depth | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-31)33~(+31)95 | |
| 19h | Key On Delay | | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 | |
| 1ah | Pan | type | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 0 v v | 0=normal,1=KS,2=-KS,3=Random | |
| 1bh | | normal value | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (63L)1~(63R)127 | |
| 1ch | DCO | Wave Kit | 0 0 0 0 0 v v v | 0 v v v v v v v v | 0-340:PCM for B(K500W),341-463:PCM for A,512:ADD | |
| 1eh | | Coarse | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-24)40~(+24)88 | |
| 1fh | | Fine | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 | |
| 20h | Fixed Key | | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0=ON,21~108=OFF | |
| 21h | KS Pitch | | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 0 v v | 0=0cent,1=25cent,2=33cent,3=50cent | |
| 22h | Pitch Env | Start Level | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 | |
| 23h | | Attack Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 | |
| 24h | | Attack Level | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 | |
| 25h | | Decay Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 | |
| 26h | | Time Velo Sense | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 | |
| 27h | | Level Velo Sense | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 | |
| 28h | DCF | DCF | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 0 v v | 0=Active,1=Bypass | |
| 29h | | Mode | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 0 v v | 0=lo pass,1=hi pass | |
| 2ah | | Velo Curve | 0 0 0 0 0 0 0 0 | 0 0 0 0 v v v v | 0~11(1-12) | |
| 2bh | | Resonance | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 v v v | 0~7 | |
| 2ch | | DCF level | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 v v v | 0~7(7-0) | |
| 2dh | | Cutoff | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 | |
| 2eh | | Cutoff KS Depth | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 | |
| 2fh | | Cutoff Velo Depth | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 | |
| 30h | | DCF Env depth | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 | |
| 31h | DCF Env | Attack Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 | |
| 32h | | Decay1 Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 | |
| 33h | | Decay1 Level | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 | |
| 34h | | Decay2 Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 | |
| 35h | | Decay2 Level | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 | |
| 36h | | Release Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 | |
| 37h | DCF KS to Env | Attack Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 | |

| sub5 | PARAMETER | | data Hi(bit) | data Lo(bit) | VALUE | |
|------|-----------------|-----------------|-----------------|-------------------|--------------------------------|-----------------|
| 38h | | Decay1 Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 | |
| 39h | DCF Velo to Env | Env Depth | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 | |
| 3ah | | Attack Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 | |
| 3bh | | Decay1 Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 | |
| 3ch | DCA | Velo Curve | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 v v v | 0~11 | |
| 3dh | | DCA Env | Attack Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 |
| 3eh | | | Decay1 Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 |
| 3fh | | | Decay1 Level | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 |
| 40h | | | Decay2 Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 |
| 41h | | | Decay2 Level | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 |
| 42h | | | Release Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 |
| 43h | | DCA KS to Env | Level | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 |
| 44h | | | Attack Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 |
| 45h | | | Decay1 Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 |
| 46h | | | Release Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 |
| 47h | | DCA Velo Sense | Level | 0 0 0 0 0 0 0 0 | 0 0 v v v v v v | 0~63 |
| 48h | | | Attack Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 |
| 49h | | | Decay1 Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 |
| 4ah | | | Release Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 |
| 4bh | LFO | Waveform | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 v v v | 0=Tri,1=Sqr,2=Saw,3=Sin,4=Rndm | |
| 4ch | | Speed | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 | |
| 4dh | | Delay On Set | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 | |
| 4eh | | Fade in | time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 |
| 4fh | | | to speed | 0 0 0 0 0 0 0 0 | 0 0 v v v v v v | 0~63 |
| 50h | | Pitch (Vibrato) | Depth | 0 0 0 0 0 0 0 0 | 0 0 v v v v v v | 0~63 |
| 51h | | | KS | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 |
| 52h | | DCF (Growl) | Depth | 0 0 0 0 0 0 0 0 | 0 0 v v v v v v | 0~63 |
| 53h | | | KS | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 |
| 54h | | DCA (Tremolo) | Depth | 0 0 0 0 0 0 0 0 | 0 0 v v v v v v | 0~63 |
| 55h | | | KS | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 |

3.2.3 Single Tone ADD Wave Parameter

3.2.3.1 ADD Wave HC Kit Parameter

sub1: 02h :Single Tone ADD Wave Parameter
 sub2: 40h :HC Kit Parameter
 sub3: xxh :Source No.(00h~05h)
 sub4: 00h :dummy

| sub5 | PARAMETER | | | | data Hi(bit) | data Lo(bit) | VALUE |
|------|-----------|-------------|------------|---------------|-------------------|---------------------|---|
| 00h | MORF FLAG | | | | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 0 0 0 v | 0=MORF OFF,1=MORF ON |
| 01h | Harmonics | Common | Total Gain | | 0 0 0 0 0 0 0 0 | 0 0 v v v v v v v v | 1~63 |
| 02h | | NON-MORF | Harm Group | 1~64 / 65~128 | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 0 0 0 v | 0=LO(1~64harm),1=HI(65~128harm) |
| 03h | | | KS to Gain | | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v v | (-63)1~(+63)127 |
| 04h | | | Balance | | 0 0 0 0 0 0 0 0 | 0 0 0 0 v v v v v v | 0~11 |
| 05h | | | Velo curve | | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v v | 0~127 |
| 06h | | MORF | HC | HC1 select | 0 v v v v v v v v | 0 v v v v v v v v v | data Hi:patch No.(0~127) data Lo:source No.(0~5=soft,6~11=loud,127=editer) |
| 08h | | | | HC2 select | 0 v v v v v v v v | 0 v v v v v v v v v | data Hi:patch No.(0~127) data Lo:source No.(0~5=soft,6~11=loud,127=editer) |
| 0Ah | | | | HC3 select | 0 v v v v v v v v | 0 v v v v v v v v v | data Hi:patch No.(0~127) data Lo:source No.(0~5=soft,6~11=loud,127=editer) |
| 0Ch | | | | HC4 select | 0 v v v v v v v v | 0 v v v v v v v v v | data Hi:patch No.(0~127) data Lo:source No.(0~5=soft,6~11=loud,127=editer) |
| 0Eh | | | HE | Time1 | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v v | 0~127 |
| 0Fh | | | | Time2 | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v v | 0~127 |
| 10h | | | | Time3 | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v v | 0~127 |
| 11h | | | | Time4 | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v v | 0~127 |
| 12h | | | | Loop | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 0 0 v v | 0(OFF),1(LP1),2(LP2) |
| 13h | Formant | Bias | | | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v v | (-63)1~(+63)127 |
| 14h | | Env/LFO sel | | | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 0 0 v v | 0=ENV,1=LFO |
| 15h | | Env | Env Depth | | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v v | (-63)1~(+63)127 |
| 16h | | | Attack | Rate | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v v | 0~127 |
| 17h | | | | Level | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v v | (-63)1~(+63)127 |
| 18h | | | Decay1 | Rate | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v v | 0~127 |
| 19h | | | | Level | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v v | (-63)1~(+63)127 |
| 1Ah | | | Decay2 | Rate | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v v | 0~127 |
| 1Bh | | | | Level | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v v | (-63)1~(+63)127 |
| 1Ch | | | Release | Rate | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v v | 0~127 |
| 1Dh | | | | Level | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v v | (-63)1~(+63)127 |
| 1Eh | | | LOOP | | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 0 0 v v | 0(OFF),1(LP1),2(LP2) |
| 1Fh | | | Velo Sence | Env Depth | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v v | (-63)1~(+63)127 |
| 20h | | | KS | Env Depth | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v v | (-63)1~(+63)127 |
| 21h | | LFO | Speed | | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v v | 0~127 |
| 22h | | | Shape | | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 0 0 v v | 0=TRI,1=SAW,2=RNDM |
| 23h | | | Depth | | 0 0 0 0 0 0 0 0 | 0 0 v v v v v v v v | 0~63 |

3.2.3.2 ADD Wave HC code1 Parameter

sub1: 02h :Single Tone ADD Wave Parameter
 sub2: 41h :HC code1 Parameter
 sub3: xxh :Source No.(00h~05h)
 sub4: yyh :Harmonic No (00h~3Fh)
 sub5: 00h :dummy
 data l 00h :dummy
 data l zzh :value(0~7Fh)

3.2.3.3 ADD Wave HC code2 Parameter

sub1: 02h :Single Tone ADD Wave Parameter
 sub2: 42h :HC code2 Parameter
 sub3: xxh :Source No.(00h~05h)
 sub4: yyh :Harmonic No (00h~3Fh)
 sub5: 00h :dummy
 data l00h :dummy
 data lzzh :value(0~7Fh)

3.2.3.4 ADD Wave Formant Filter Parameter

sub1: 02h :Single Tone ADD Wave Parameter
 sub2: 43h :Formant Filter Parameter
 sub3: xxh :Source No.(00h~05h)
 sub4: yyh :Formant No. (00h~7Fh)
 sub5: 00h :dummy
 data l00h :dummy
 data lzzh :value(0~7Fh)

3.2.3.5 ADD Wave Harmonic Envelope Parameter

sub1: 02h :Single Tone ADD Wave Parameter
 sub2: 44h :Harmonic Envelope Parameter
 sub3: xxh :Source No.(00h~05h)
 sub4: yyh :Harmonic No (00h~3Fh)

| sub5 | PARAMETER | | | data Hi(bit) | data Lo(bit) | VALUE |
|------|-------------|-------|---------|-----------------|---------------------|----------------------|
| 00h | HC Envelope | time | attack | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 |
| 01h | | level | attack | 0 0 0 0 0 0 0 0 | 0 0 v v v v v v v v | 0~63 |
| 02h | | Rate | decay1 | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 |
| 03h | | Level | decay1 | 0 0 0 0 0 0 0 0 | 0 0 v v v v v v v v | 0~63 |
| 04h | | Rate | decay2 | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 |
| 05h | | Level | decay2 | 0 0 0 0 0 0 0 0 | 0 0 v v v v v v v v | 0~63 |
| 06h | | Rate | release | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 |
| 07h | | Level | release | 0 0 0 0 0 0 0 0 | 0 0 v v v v v v v v | 0~63 |
| 08h | | loop | | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 0 v v | 0(OFF),1(LP1),2(LP2) |

3.2.3.6 ADD Wave HC code Parameter for MORF

sub1: 02h :Single Tone ADD Wave Parameter
 sub2: 45h :HC code Parameter for MORF
 sub3: xxh :Phase No.(00h~03h)
 sub4: yyh :Harmonic No (00h~3Fh)
 sub5: 00h :dummy
 data l00h :dummy
 data lzzh :value(0~7Fh)

3.2.3.7 ADD MORF execute

sub1: 02h :Single Tone ADD Wave Parameter
 sub2: 46h :ADD MORF execute
 sub3: 0xh :Source No.(0~5)
 sub4: 00h :dummy
 sub5: 00h :dummy
 data l00h :dummy
 data l01h :execute

3.2.4 Drum KIT Parameter (Only for K5000W)

3.2.4.1 Drum KIT Common Parameter (Only for K5000W)

sub1: 00h :Drum KIT
 sub2: 00h :common
 sub3: 00h :dummy
 sub4: 00h :dummy

| sub5 | PARAMETER | data Hi (bit) | data Lo (bit) | VALUE |
|------|-----------------|-----------------|-----------------|-----------------------------------|
| 00h | Name 1st | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | ASCII |
| 01h | Name 2nd | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | ASCII |
| 02h | Name 3rd | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | ASCII |
| 03h | Name 4th | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | ASCII |
| 04h | Name 5th | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | ASCII |
| 05h | Name 6th | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | ASCII |
| 06h | Name 7th | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | ASCII |
| 07h | Name 8th | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | ASCII |
| 08h | Volume | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 0~127 |
| 0ah | control source1 | 0 0 0 0 0 0 0 0 | 0 0 0 0 v v v v | 0~13 see "control source1&2" |
| 0bh | destination | 0 0 0 0 0 0 0 0 | 0 0 0 0 v v v v | 0~9 see "Effect destination list" |
| 0ch | depth | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | (-31)33~(+31)95 |
| 0dh | control source2 | 0 0 0 0 0 0 0 0 | 0 0 0 0 v v v v | 0~13 see "control source1&2" |
| 0eh | destination | 0 0 0 0 0 0 0 0 | 0 0 0 0 v v v v | 0~9 see "Effect destination list" |
| 0fh | depth | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | (-31)33~(+31)95 |

3.2.4.2 Drum KIT tone select Parameter (Only for K5000W)

sub1: 00h :Drum KIT
 sub2: 01h :tone select
 sub3: **h :Note select(0~63)
 sub4: 00h :dummy

| sub5 | PARAMETER | data Hi (bit) | data Lo (bit) | VALUE |
|------|-----------|-----------------|-----------------|------------------------------|
| 00h | Tone No. | 0 0 0 0 0 0 v v | 0 v v v v v v v | 0=MUTE,1~253,254~285=USR1~32 |

3.2.4.3 DRUM Inst Common Parameter (Only for K5000W)

sub1: 10h :DRUM Tone
 sub2: 00h :common
 sub3: 00h :dummy
 sub4: 00h :dummy

| sub5 | PARAMETER | data Hi (bit) | data Lo (bit) | VALUE |
|------|-------------|-----------------|-----------------|---------------------------|
| 00h | Volume | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 0~127 |
| 01h | Gate | 0 0 0 0 0 0 0 0 | 0 0 v v v v v v | 0=OFF recognize,1~32=GATE |
| 02h | Excl group | 0 0 0 0 0 0 0 0 | 0 0 0 0 v v v v | 0=OFF,1~8=group1~8 |
| 03h | effect_path | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 0 v v | 0~3(1-4) |
| 04h | src_mute | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 0 v v | =01(fix) |

3.2.4.4 DRUM Inst Source Parameter
(Only for K5000W)

sub1: 10h :DRUM Tone
sub2: 01h :Source
sub3: 00h :dummy
sub4: 00h :dummy

| sub5 | PARAMETER | | data Hi(bit) | data Lo(bit) | VALUE |
|------|-----------|-------------------|-----------------|---------------------|-----------------|
| 00h | Control | Volume | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 |
| 01h | | PAN | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (63L)1~(63R)127 |
| 02h | DCO | Wave No. | 0 0 0 0 0 v v v | 0 v v v v v v v v | 0~224 |
| 03h | | Coarse | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-24)40~(+24)88 |
| 05h | | Fine | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 |
| 06h | | Pitch Env | | | |
| | | Start Level | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 |
| 07h | | Attack Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 |
| 08h | | Level Velo Sense | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 |
| 09h | DCF | Cutoff | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 |
| 0ah | | Cutoff velo depth | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 |
| 0eh | DCA | DCA Env | | | |
| | | Attack Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 |
| 0fh | | Decay1 Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 |
| 10h | | Decay1 Level | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 |
| 11h | | Release Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | 0~127 |
| 12h | | DCA Velo Sens | | | |
| | | Level | 0 0 0 0 0 0 0 0 | 0 0 v v v v v v v v | 0~63 |
| 13h | | Attack Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 |
| 14h | | Decay1 Time | 0 0 0 0 0 0 0 0 | 0 v v v v v v v v | (-63)1~(+63)127 |

3.2.5 COMBI Parameter (Combi is changed to Multi on K5000S/R)

3.2.5.1 COMBI Common Parameter

sub1: 04h :COMBI
 sub2: 00h :common
 sub3: 00h :dummy
 sub4: 00h :dummy

| sub5 | PARAMETER | data Hi (bit) | data Lo (bit) | VALUE |
|------|-----------------|-----------------|-----------------|-----------------------------------|
| 00h | Name 1st | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | ASCII |
| 01h | Name 2nd | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | ASCII |
| 02h | Name 3rd | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | ASCII |
| 03h | Name 4th | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | ASCII |
| 04h | Name 5th | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | ASCII |
| 05h | Name 6th | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | ASCII |
| 06h | Name 7th | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | ASCII |
| 07h | Name 8th | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | ASCII |
| 08h | Volume | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 0~127 |
| 0ah | Mute | 0 0 0 0 0 0 0 0 | 0 0 0 0 v v v v | v=0:Mute,bit0~3:section1~4 |
| 0bh | control source1 | 0 0 0 0 0 0 0 0 | 0 0 0 0 v v v v | 0~13 see "control source1&2" |
| 0ch | destination | 0 0 0 0 0 0 0 0 | 0 0 0 0 v v v v | 0~9 see "Effect destination list" |
| 0dh | depth | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | (-31)33~(+31)95 |
| 0eh | control source2 | 0 0 0 0 0 0 0 0 | 0 0 0 0 v v v v | 0~13 see "control source1&2" |
| 0fh | destination | 0 0 0 0 0 0 0 0 | 0 0 0 0 v v v v | 0~9 see "Effect destination list" |
| 10h | depth | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | (-31)33~(+31)95 |

3.2.5.2 COMBI section Parameter

sub1: 04h :COMBI
 sub2: 01h :section
 sub3: **h :section No.(0~3)
 sub4: 00h :dummy

| sub5 | PARAMETER | data Hi (bit) | data Lo (bit) | VALUE |
|------|--------------|-------------------|-----------------|--------------------------------------|
| 00h | Tone No. | 0 0 0 0 0 0 0 v v | 0 v v v v v v v | *1 |
| 01h | VOLUME | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 0~127 |
| 02h | PAN | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 0~127 |
| 03h | EFF PATH | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 0 v v | 0~3 |
| 04h | TRANSPOSE | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 40(-24)~88(+24) |
| 05h | TUNE | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 1(-63)~127(+63) |
| 06h | ZONE LO | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 0~127 |
| 07h | HI | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 0~127 |
| 08h | VELO SW TYPE | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 0 v v | 0=OFF,1=LOUD,2=SOFT |
| 09h | VALUE | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 1~127 |
| 0ah | RCV CH | 0 0 0 0 0 0 0 0 | 0 0 0 0 v v v v | 0~15(1ch~16ch)K5000S/R =0(fix)K5000W |

sub5=0ah Only for K5000S/R

*1 0~127:G, 128~255:B, 256~383:A(K5000W)
 256~383:A, 384~511:D(K5000S/R)
 512~639:E, 640~767:F (when ME-1 inserted)

3.2.6 Effect/EQ Parameter

3.2.6.1 Effect Algorithm

sub1: 03h :Effect/EQ
 sub2: 00h :Effect
 sub3: 00h :Algorithm
 sub4: 00h :dummy

| sub5 | PARAMETER | | data Hi(bit) | data Lo(bit) | VALUE |
|------|-----------|-----------|-----------------|-----------------|-------|
| 00h | Effect | Algorithm | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 0 v v | 0~3 |

3.2.6.2 Effect Parameter

sub1: 03h :Effect/EQ
 sub2: 00h :Effect
 sub3: **h :1=Reverb,2~5=Effect1~4
 sub4: 00h :dummy

| sub5 | PARAMETER | | data Hi(bit) | data Lo(bit) | VALUE |
|------|-----------|--|-----------------|-----------------|--------------------------|
| 00h | Type | | 0 0 0 0 0 0 0 0 | 0 0 v v v v v v | Reverb:0~10,Effect:11~47 |
| 01h | dry/wet | | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 0~100 |
| 02h | para1 | | 0 0 0 0 0 0 0 0 | 0 * * * * * * * | varies depending on Type |
| 03h | para2 | | 0 0 0 0 0 0 0 0 | 0 * * * * * * * | varies depending on Type |
| 04h | para3 | | 0 0 0 0 0 0 0 0 | 0 * * * * * * * | varies depending on Type |
| 05h | para3 | | 0 0 0 0 0 0 0 0 | 0 * * * * * * * | varies depending on Type |

3.2.6.3 EQ Parameter

sub1: 03h :Effect/EQ
 sub2: 01h :EQ
 sub3: 00h :dummy
 sub4: 00h :dummy

| sub5 | PARAMETER | | data Hi(bit) | data Lo(bit) | VALUE |
|------|-----------|--|-----------------|-----------------|-----------------|
| 00h | freq1 | | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 58(-6) ~ 70(+6) |
| 01h | freq2 | | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 58(-6) ~ 70(+6) |
| 02h | freq3 | | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 58(-6) ~ 70(+6) |
| 03h | freq4 | | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 58(-6) ~ 70(+6) |
| 04h | freq5 | | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 58(-6) ~ 70(+6) |
| 05h | freq6 | | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 58(-6) ~ 70(+6) |
| 06h | freq7 | | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 58(-6) ~ 70(+6) |

3.2.6.4 Instant Edit

(Only for K5000W single mode)

sub1: 03h :Effect/EQ
 sub2: 00h :Effect
 sub3: 06h :Instant Edit
 sub4: 00h :dummy

| sub5 | PARAMETER | | data Hi(bit) | data Lo(bit) | VALUE |
|------|------------|--|-----------------|-----------------|-------------------|
| 00h | EFX offset | | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 1(-63) ~ 127(+63) |
| 01h | REV offset | | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 1(-63) ~ 127(+63) |

3.2.7 Arpeggio Parameter (Only for K5000S/R)

Arpeggio parameters are transmitted and received except 3.2.7.2).

3.2.7.1 Arpeggio On/Off

sub1: 60h :Arpeggio
 sub2: 00h :Arpeggio On/Off
 sub3: 00h :dummy
 sub4: 00h :dummy

| sub5 | PARAMETER | | data Hi(bit) | data Lo(bit) | VALUE |
|------|-----------|--------|-----------------|-----------------|--------------|
| 00h | Arpeggio | On/Off | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 0:Off, 7f On |

3.2.7.2 Arpeggio Speed(Only receive)

sub1: 60h :Arpeggio
 sub2: 10h :Arpeggio speed
 sub3: 00h :dummy
 sub4: 00h :dummy

| sub5 | PARAMETER | | data Hi(bit) | data Lo(bit) | VALUE |
|------|-----------|-------|-----------------|-----------------|-------|
| 00h | Arpeggio | speed | 0 0 0 0 0 0 0 0 | 0 v v v v v v v | 0~127 |

3.2.7.3 Arpeggio Mode

sub1: 60h :Arpeggio
 sub2: 20h :Arpeggio Mode
 sub3: 00h :dummy
 sub4: 00h :dummy

| sub5 | PARAMETER | | data Hi(bit) | data Lo(bit) | VALUE |
|------|-----------|------|-----------------|-----------------|--------------------------------------|
| 00h | Arpeggio | Mode | 0 0 0 0 0 0 0 0 | 0 0 0 0 v v v v | 0~10:mode (see "Arpeggio Mode list") |

3.2.7.4 Arpeggio Pattern and Variation

sub1: 60h :Arpeggio
 sub2: 30h :Arpeggio Pattern
 sub3: 00h :dummy
 sub4: 00h :dummy

| sub5 | PARAMETER | | data Hi(bit) | data Lo(bit) | VALUE |
|------|-----------|---------|-----------------|-----------------|---|
| 00h | Arpeggio | pattern | 0 0 0 0 v v v v | 0 0 0 0 c c c c | vvv=0~10:pattern (see "Arpeggio Pattern list") ccc=0~7:variation 1~8 |

3.2.7.5 Arpeggio Tempo

sub1: 60h :Arpeggio
 sub2: 11h :Arpeggio Tempo
 sub3: 00h :dummy
 sub4: 00h :dummy

| sub5 | PARAMETER | | data Hi(bit) | data Lo(bit) | VALUE |
|------|-----------|-------|-----------------|-----------------|--------------------|
| 00h | Arpeggio | tempo | 0 0 0 0 0 0 v v | 0 v v v v v v v | vvvvvvv = 10 ~ 300 |

Arpeggio Mode list

| | |
|----|--------------------|
| 0 | 1-Oct |
| 1 | 2-Oct |
| 2 | 3-Oct |
| 3 | Hold 1 Oct |
| 4 | Hold 2 Oct |
| 5 | Hold 3 Oct |
| 6 | Hold Random |
| 7 | Hold & Trig 1 Oct |
| 8 | Hold & Trig 2 Oct |
| 9 | Hold & Trig 3 Oct |
| 10 | Hold & Trig Random |

Arpeggio Pattern list

| | |
|----|---------------|
| 0 | Up |
| 1 | U/D 1 |
| 2 | U/D 2 |
| 3 | Down |
| 4 | Key Order |
| 5 | Random |
| 6 | Chord Trigger |
| 7 | Chord Gate |
| 8 | Seq pattern1 |
| 9 | Seq pattern2 |
| 10 | User |

3.3 Others

3.3.1 Track Control(Effect path Change) (Only for K5000W)

K5000W does not transmit these data but receive only.

| Status | Data byte | Status |
|--------|------------------------------|--------|
| foH | 40H,cc,11H,00H,0aH,00H,mm,vv | f7H |

cc:Global ch(7fH), or Unit ch(00H-0fH)

mm:Destination MIDI Ch:0-fH

vv:Effect path value:(0-3)1-4

3.3.2 Acknowledge Format

K5000W/S/R transmit these data after receiving the dump data.

| Status | Data byte | Status |
|--------|-------------------|--------|
| foH | 40H,cc,aa,00H,0aH | f7H |

cc: Unit channel number :0H-fH(ch.1 - ch.16)

aa: Function No.

- 40h: Write Complete
- 41h: Write Error
- 42h: Write Error by protect
- 44h: Write Error by memory full
- 45h: Write Error by no expansion board

3.3.3 Back Up/Reset

K5000W/S/R do not transmit these data but receive only.

| Status | Data byte | Status |
|--------|-----------------------|--------|
| foH | 40H,cc,32H,00H,0aH,rr | f7H |

cc: Unit channel number :0H-fH(ch.1 - ch.16)

rr: Remote function number

- 01H: Back up
- 02H: Reset

3.3.4 To Single Mode

K5000W/S/R do not transmit these data but receive only.

Jump to Single mode when receiving this command.

| Status | Data byte | Status |
|--------|-----------------------|--------|
| foH | 40H,cc,31H,00H,0aH,mm | f7H |

cc: Unit channel number :0H-fH(ch.1 - ch.16)

mm: Mode change number

- 01H: Jump to single mode

3.3.5 ID Request(KAWAI)

K5000W/S/R do not transmit these data but receive only.

| Status | Data byte | Status |
|--------|------------|--------|
| foH | 40H,cc,60H | f7H |

cc: Unit channel number :0H-fH(ch.1 - ch.16)

3.3.6 ID Acknowledge(KAWAI)

K5000 transmit these data after receiving the KAWAI ID request.

| Status | Data byte | Status |
|--------|-----------------------|--------|
| foH | 40H,cc,61H,00H,0aH,ii | f7H |

cc: Unit channel number :0H-fH(ch.1 - ch.16)

ii: Sub ID number 01H: K5000W

02H: K5000S

03H: K5000R

3.4 General Exclusive message

The K5000W/S/R receive these data.

| | | | |
|--------------|-----------------|-------------------|--|
| GM System On | | (Only for K5000W) | |
| Status | Data byte | Status | |
| foH | 7eH,7fH,09H,01H | f7H | |

| | | | |
|----------|-------------------------------------|-------------------|--|
| GS Reset | | (Only for K5000W) | |
| Status | Data byte | Status | |
| foH | 41H,dev,42H,12H,40H,00H,7fH,00H,41H | f7H | |

| | | | |
|---------------|-------------------------|--------|--|
| Master Volume | | | |
| Status | Data byte | Status | |
| foH | 7fH,7fH,04H,01H,liH,mmH | f7H | |

li=LSB of volume(00H)
mm= MSB of volume

| | | | |
|---------------|-----------------------------------|--------|--|
| Master Volume | | | |
| Status | Data byte | Status | |
| foH | 41H,10H,42H,12H,40H,00H,04H,mm,cc | f7H | |

mm= volume
cc=check sum =80H-(LO 7bit of(44H + mm))

| | | | |
|--|-------------------------------------|-------------------|--|
| Use for Rhythm or Normal part | | (Only for K5000W) | |
| Status | Data byte | Status | |
| foH | 41H,1xH,42H,12H,40H,11H,15H,mmH,ccH | f7H | |
| x=0(10ch),1(1ch),2(2ch),,,,,,9(9ch),10(11ch),11(12ch),12(13ch),,,,15(16ch) | | | |
| li=00 ; Normal part 01:Drum part | | | |
| cc=check sum cc=1aH at li=00H, cc=19H at li=01H | | | |

| | | | |
|-----------------------|----------------|--------|--|
| ID request(Universal) | | | |
| Status | Data byte | Status | |
| foH | 7eH,cc,06H,01H | f7H | |

cc: Unit channel number :0H-fH(ch.1 - ch.16)

| | | | |
|---|--|--------|--|
| ID Acknowledge (Universal) | | | |
| K5000 transmit these data after receiving the KAWAI ID request (Universal). | | | |
| Status | Data byte | Status | |
| foH | 7eH,cc,06H,02H,40h,00H,00H,0aH,iiH,vvH,rrH,ssH,eeH | f7H | |

cc: Unit channel number :0H-fH(ch.1 - ch.16)

ii: Sub ID number
01H: K5000W
02H: K5000S
03H: K5000R

vv,rr,ss:version no. ver. vv.rr ss
ee:aux
ee=0 : no expansion
ee=1 : expansion inserted

4. MIDI implementation Chart

4.1 K5000W

[Advanced Additive workstation]

Model KAWAI K5000W

MIDI Implementation Chart

Date: JAN, 20, 1997

Version: 2.0

| Function | | Transmitted | | Recognized | | Remarks |
|---|------------------|---------------|---------------|---------------|-------------|---------------------|
| | | MIDI A | MIDI B | MIDI A | MIDI B | |
| Basic | Default | X | X | 1-16 | 1-16 | |
| Channel | Changed | X | X | 1-16 | 1-16 | |
| Mode | Default | X | X | Mode 3 | Mode 3 | |
| | Messages | X | X | X | X | |
| | Altered | ***** | ***** | | | |
| Note | | 0-127 | 0-127 | 0-127 | 0-127 | |
| Number: | True voice | ***** | ***** | 0-127 | 0-127 | |
| Velocity | Note ON | 1-127 | 1-127 | 1-127 | 1-127 | |
| | Note OFF | X | X | X | X | |
| After | Key's | X | X | X | X | |
| Touch | Ch's | 0-127 | 0-127 | 0-127 | 0-127 | |
| Pitch Bend | | 0 | 0 | 0 | 0 | |
| Control Change | 0,32 | 0 | 0 | 0 | 0 | Bank Select |
| | 1 | 0 | 0 | 0 | 0 | Modulation |
| | 5 | X | X | 0 | 0 | Portamento time |
| | 6,38 | 0 | 0 | 0 | 0 | Data Entry |
| | 7 | X | X | 0 | 0 | Volume |
| | 10 | X | X | 0 | 0 | Panpot |
| | 11 | 0 | 0 | 0 | 0 | Expression |
| | 16-19 | 0 | 0 | 0 | 0 | GPC1-4* |
| | 64 | 0 | 0 | 0 | 0 | Hold1 |
| | 65 | X | X | 0 | 0 | Portamento On/off |
| | 69 | X | X | 0 | 0 | Hold2 |
| | 70-79 | 0 | 0 | 0 | 0 | Sound Controller2-9 |
| | 80-83 | X | X | 0 | 0 | GPC5-8* |
| | 84 | X | X | 0 | 0 | Portamento Control |
| | 91 | X | X | 0 | 0 | *1 |
| | 93 | X | X | 0 | 0 | *2 |
| | 98,99 | X | X | 0 | 0 | NRPN LSB,MSB |
| 100,101 | X | X | 0 | 0 | RPN LSB,MSB | |
| | 0-127 | O(quick MIDI) | O(quick MIDI) | X | X | |
| Prog | | 0 | 0 | 0 | 0 | |
| Change: | True # | **** | **** | 0-127 | 0-127 | |
| System Exclusive | | 0 | X | 0 | 0*3 | |
| | :Song pos | X | X | X | X | |
| Common | :Song sel | X | X | X | X | |
| | :Tune | X | X | X | X | |
| System | :Clock | 0 | X | 0 | 0 | |
| Real time | :Commands | O(250,252) | X | O(250,251,25) | X | |
| | All Sound OFF | X | X | 0 | X | |
| | Reset All Cntrlr | X | X | 0 | 0 | |
| Aux | :Locall ON/OFF | X | X | 0 | 0 | |
| | :All Note OFF | X | X | O(123-127) | O(123-127) | |
| Mes- | :Active Sense | 0 | 0 | 0 | 0 | |
| sages | :Reset | X | X | X | X | |
| Notes | | | | | | |
| *1 For selecting a path of Reverb Lo/Hi only when Algo is set to 2. | | | | | | |
| *2 For selecting a path of Chorus Lo/Hi only when Algo is set to 2. | | | | | | |
| *3 Except K5000W exclusive | | | | | | |
| *GPC: General Purpose Controllers | | | | | | |

4.2 K5000S

[Advanced Additive synthesizer]
Model KAWAI K5000S

Date:JAN,20,1997
Version:2.0

MIDI Implementation Chart

| Function | | Transmitted | Recognized | Remarks |
|-----------------------------------|------------------|---------------|--------------|---------------------|
| Basic | Default | X | 1-16 | |
| Channel | Changed | X | 1-16 | |
| Mode | Default | X | Mode 3 | |
| | Messages | X | X | |
| | Altered | ***** | | |
| Note | | 0-127 | 0-127 | |
| Number: | True voice | ***** | 0-127 | |
| Velocity | Note ON | 1-127 | 1-127 | |
| | Note OFF | X | X | |
| After | Key's | X | X | |
| Touch | Ch's | 0-127 | 0-127 | |
| Pitch Bend | | 0 | 0 | |
| Control Change | 0,32 | 0 | 0 | Bank Select |
| | 1 | 0 | 0 | Modulation |
| | 6,38 | 0 | 0 | Data Entry |
| | 5 | 0 | 0 | Portamento time |
| | 7 | X | 0 | Volume |
| | 10 | X | 0 | Panpot |
| | 11 | 0 | 0 | Expression |
| | 16-19 | 0 | 0 | GPC1-4* |
| | 64 | 0 | 0 | Hold1 |
| | 65 | 0 | 0 | Portamento On/off |
| | 69 | X | 0 | Hold2 |
| | 70-79 | 0 | 0 | Sound Controller2-9 |
| | 80-83 | 0 | 0 | GPC5-8* |
| | 84 | X | 0 | Portamento Control |
| 98,99 | 0 | 0 | NRPN LSB,MSB | |
| 100,101 | X | 0 | RPN LSB,MSB | |
| | 0-127 | 0(quick MIDI) | X | |
| Prog | | 0 | 0 | |
| Change: | True # | **** | 0-127 | |
| System Exclusive | | 0 | 0 | |
| | :Song pos | X | X | |
| Common | :Song sel | X | X | |
| | :Tune | X | X | |
| System | :Clock | 0 | 0 | |
| Real time | :Commands | X | X | |
| | All Sound OFF | X | 0 | |
| | Reset All Cntrlr | X | 0 | |
| Aux | :Locall ON/OFF | X | 0 | |
| | :All Note OFF | X | 0(123-127) | |
| Mes- | :Active Sense | 0 | 0 | |
| sages | :Reset | X | X | |
| Notes | | | | |
| *GPC: General Purpose Controllers | | | | |

4.3 K5000R

[Advanced Additive synthesizer Module]
 Model KAWAI K5000R

Date: JAN, 20, 1997
 Version: 2.0

MIDI Implementation Chart

| Function | | Transmitted | Recognized | Remarks |
|-----------------------------------|------------------|-------------|--------------------|----------------------|
| Basic | Default | X | 1-16 | |
| Channel | Changed | X | 1-16 | |
| Mode | Default | X | Mode 3 | |
| | Messages | X | X | |
| | Altered | ***** | | |
| Note | | 0-127 *1 | 0-127 | |
| Number: | True voice | ***** | 0-127 | |
| Velocity | Note ON | 1-127 *1 | 1-127 | |
| | Note OFF | X | X | |
| After | Key's | X | X | |
| Touch | Ch's | X | 0-127 | |
| Pitch Bend | | X | 0 | |
| Control Change | 0,32 | 0 | 0 | Bank Select |
| | 1 | X | 0 | Modulation |
| | 6,38 | 0 | 0 | Data Entry |
| | 5 | X | 0 | Portamento time |
| | 7 | X | 0 | Volume |
| | 10 | X | 0 | Panpot |
| | 11 | X | 0 | Expression |
| | 16-19 | 0 | 0 | GPC1-4* |
| | 64 | X | 0 | Hold1 |
| | 65 | 0 | 0 | Portamento On/off |
| | 69 | X | 0 | Hold2 |
| | 70-79 | 0 | 0 | Sound Controller 2-9 |
| | 80-83 | 0 | 0 | GPC5-8* |
| 84 | X | 0 | Portamento Control | |
| 98,99 | 0 | 0 | NRPN LSB,MSB | |
| 100,101 | X | 0 | RPN LSB,MSB | |
| Prog | | 0 | 0 | |
| Change: | True # | **** | 0-127 | |
| System Exclusive | | 0 | 0 | |
| | :Song pos | X | X | |
| Common | :Song sel | X | X | |
| | :Tune | X | X | |
| System | :Clock | 0 | 0 | |
| Real time | :Commands | X | X | |
| | All Sound OFF | X | 0 | |
| | Reset All Cntrlr | X | 0 | |
| Aux | :Local ON/OFF | X | X | |
| | :All Note OFF | X | 0(123-127) | |
| Mes- | :Active Sense | 0 | 0 | |
| sages | :Reset | X | X | |
| Notes | | | | |
| *1: Only when arpeggio On | | | | |
| *GPC: General Purpose Controllers | | | | |

5. Table

5.1 K5000W B BANK SOUNDS

5.1.1 Preset B1 - 69

(Only for K5000W)

| No. | NAME | PGM | Bank | |
|------|-----------|-----|------|-----|
| | | | MSB | LSB |
| B001 | WidPiano | 000 | 008 | 000 |
| B002 | E.Grand2 | 002 | 096 | 000 |
| B003 | OldUpBrit | 003 | 096 | 000 |
| B004 | E.Piano3 | 004 | 016 | 000 |
| B005 | 60's EP | 004 | 024 | 000 |
| B006 | E.Piano4 | 005 | 096 | 000 |
| B007 | DistClav | 007 | 096 | 000 |
| B008 | ChrchBel | 014 | 008 | 000 |
| B009 | DetunOr1 | 016 | 008 | 000 |
| B010 | 60's Org | 016 | 016 | 000 |
| B011 | CheseOrg | 016 | 024 | 000 |
| B012 | Drawbar2 | 016 | 032 | 000 |
| B013 | PercOrg2 | 017 | 032 | 000 |
| B014 | DetunOr2 | 018 | 096 | 000 |
| B015 | ChrcOrg2 | 019 | 008 | 000 |
| B016 | Accord.2 | 021 | 008 | 000 |
| B017 | Ukulele | 024 | 008 | 000 |
| B018 | NylonGt2 | 024 | 032 | 000 |
| B019 | 12strGtr | 025 | 008 | 000 |
| B020 | Nyln+Stl | 025 | 009 | 000 |
| B021 | Mandolin | 025 | 016 | 000 |
| B022 | SteelGt2 | 025 | 096 | 000 |
| B023 | Hawaiian | 026 | 008 | 000 |
| B024 | MellowGt | 026 | 096 | 000 |
| B025 | ChorusGt | 027 | 008 | 000 |
| B026 | Hi.E.Gtr | 027 | 096 | 000 |
| B027 | FunkGtr | 028 | 008 | 000 |
| B028 | Res.O.D | 029 | 096 | 000 |
| B029 | FeedBkGt | 030 | 008 | 000 |
| B030 | PowerGtr | 030 | 016 | 000 |
| B031 | Res.Dist | 030 | 096 | 000 |
| B032 | Ac.Bass2 | 032 | 096 | 000 |
| B033 | FngBass2 | 033 | 096 | 000 |
| B034 | TubeBass | 033 | 097 | 000 |
| B035 | MutePick | 034 | 008 | 000 |
| B036 | SynBass3 | 038 | 001 | 000 |
| B037 | SynBass4 | 038 | 008 | 000 |
| B038 | SynBass5 | 039 | 008 | 000 |
| B039 | SynBass6 | 039 | 016 | 000 |
| B040 | SlwVioln | 040 | 008 | 000 |
| B041 | Orchestra | 048 | 008 | 000 |
| B042 | Strings3 | 048 | 096 | 000 |
| B043 | ChorAah2 | 052 | 032 | 000 |
| B044 | Voi_Ooh2 | 053 | 096 | 000 |
| B045 | WarmTrmp | 056 | 096 | 000 |

| | | | | |
|------|----------|-----|-----|-----|
| B046 | DublBone | 057 | 001 | 000 |
| B047 | Brass2 | 061 | 008 | 000 |
| B048 | Oct.Bras | 062 | 096 | 000 |
| B049 | SynBras3 | 063 | 008 | 000 |
| B050 | AltoSax2 | 065 | 008 | 000 |
| B051 | BrthTenr | 066 | 008 | 000 |
| B052 | Flute2 | 073 | 096 | 000 |
| B053 | Winds1 | 073 | 097 | 000 |
| B054 | Winds2 | 073 | 098 | 000 |
| B055 | Sine | 080 | 008 | 000 |
| B056 | SquarLd2 | 080 | 096 | 000 |
| B057 | Dist.Sqr | 080 | 097 | 000 |
| B058 | Dr.Solo | 081 | 008 | 000 |
| B059 | SawLead2 | 081 | 096 | 000 |
| B060 | DstSawLd | 081 | 097 | 000 |
| B061 | Sweep2 | 095 | 096 | 000 |
| B062 | TaishoKT | 107 | 008 | 000 |
| B063 | E.TOM | 118 | 008 | 000 |
| B064 | E.Percus | 118 | 009 | 000 |
| B065 | GtCutN1 | 120 | 001 | 000 |
| B066 | StrgSlap | 120 | 002 | 000 |
| B067 | GtCutN2 | 120 | 003 | 000 |
| B068 | Scratch | 124 | 004 | 000 |
| B069 | WndChime | 124 | 005 | 000 |

5.1.2 User B70 - 116

(Only for K5000W)

| No. | NAME | Bank | | |
|------|----------|------|-----|-----|
| | | PGM | MSB | LSB |
| B070 | F1Brass | 031 | 008 | 000 |
| B071 | RezzoPad | 102 | 002 | 000 |
| B072 | HipLead | 115 | 008 | 000 |
| B073 | WoodMoon | 116 | 008 | 000 |
| B074 | SmlRadio | 121 | 001 | 000 |
| B075 | Soppad | 122 | 001 | 000 |
| B076 | MiniRizm | 122 | 002 | 000 |
| B077 | RubbersQ | 122 | 003 | 000 |
| B078 | SkyPiano | 122 | 004 | 000 |
| B079 | DarkBass | 122 | 005 | 000 |
| B080 | BeBright | 123 | 001 | 000 |
| B081 | VLead | 123 | 002 | 000 |
| B082 | EatEast | 123 | 003 | 000 |
| B083 | PatSynth | 124 | 001 | 000 |
| B084 | ManuGate | 124 | 002 | 000 |
| B085 | VeloBend | 124 | 003 | 000 |
| B086 | Filtrist | 125 | 001 | 000 |
| B087 | Vochord | 125 | 002 | 000 |
| B088 | SaxyBony | 125 | 003 | 000 |
| B089 | WheelBar | 125 | 004 | 000 |
| B090 | OutaTune | 125 | 005 | 000 |
| B091 | MelonOrg | 125 | 006 | 000 |
| B092 | 5000Vega | 125 | 007 | 000 |
| B093 | BagVoice | 125 | 008 | 000 |
| B094 | FeedPizz | 125 | 009 | 000 |
| B095 | DearMuse | 126 | 001 | 000 |
| B096 | Victory | 126 | 002 | 000 |
| B097 | MetroPol | 126 | 003 | 000 |
| B098 | PilotPad | 126 | 004 | 000 |
| B099 | AquaPol | 126 | 005 | 000 |
| B100 | Meadow | 127 | 001 | 000 |
| B101 | SpaceAge | 127 | 002 | 000 |
| B102 | BreezPad | 127 | 003 | 000 |
| B103 | PeckaBas | 000 | 099 | 000 |
| B104 | SlappyBs | 001 | 099 | 000 |
| B105 | DownBass | 002 | 099 | 000 |
| B106 | DigiTalk | 003 | 099 | 000 |

| | | | | |
|------|----------|-----|-----|-----|
| B107 | WhiPluck | 004 | 099 | 000 |
| B108 | RezoRizm | 005 | 099 | 000 |
| B109 | PaddyEP | 006 | 099 | 000 |
| B110 | NitePluk | 007 | 099 | 000 |
| B111 | Windaful | 008 | 099 | 000 |
| B112 | PIntDust | 009 | 099 | 000 |
| B113 | Yellomo | 010 | 099 | 000 |
| B114 | BitHard | 011 | 099 | 000 |
| B115 | WatrWalk | 012 | 099 | 000 |
| B116 | Reflecta | 013 | 099 | 000 |

5.1.3 Drum Kit B117(user), B118 - 128(preset)
(Only for K5000W)

| No. | NAME | Bank | | |
|------|----------|------|-----|-----|
| | | PGM | MSB | LSB |
| B117 | TECHNO | 095 | | |
| B118 | ORCHESTR | 048 | | |
| B119 | SFX | 056 | | |
| B120 | STANDRD1 | 000 | | |
| B121 | STANDRD2 | 001 | | |
| B122 | ROOM | 008 | | |
| B123 | POWER | 016 | | |
| B124 | ELECTRIC | 024 | | |
| B125 | BOB | 025 | | |
| B126 | DANCE | 026 | | |
| B127 | JAZZ | 032 | | |
| B128 | BRUSH | 040 | | |

5.1.4 Extra Patches B70 - 116(user)
(Only for K5000W)

| No. | NAME | Bank | | |
|------|----------|------|-----|-----|
| | | PGM | MSB | LSB |
| B070 | GtFeedbk | 031 | 008 | 000 |
| B071 | EchoPan | 102 | 002 | 000 |
| B072 | Castanet | 115 | 008 | 000 |
| B073 | CncertBD | 116 | 008 | 000 |
| B074 | Fl.KeyC | 121 | 001 | 000 |
| B075 | Rain | 122 | 001 | 000 |
| B076 | Thunder | 122 | 002 | 000 |
| B077 | Wind | 122 | 003 | 000 |
| B078 | Stream | 122 | 004 | 000 |
| B079 | Bubble | 122 | 005 | 000 |
| B080 | Dog | 123 | 001 | 000 |
| B081 | HorseGal | 123 | 002 | 000 |
| B082 | Bird2 | 123 | 003 | 000 |
| B083 | Telephn2 | 124 | 001 | 000 |
| B084 | DoorCrek | 124 | 002 | 000 |
| B085 | Door | 124 | 003 | 000 |
| B086 | CarEngin | 125 | 001 | 000 |
| B087 | CarStop | 125 | 002 | 000 |
| B088 | CarPass | 125 | 003 | 000 |
| B089 | CarCrash | 125 | 004 | 000 |
| B090 | Siren | 125 | 005 | 000 |
| B091 | Train | 125 | 006 | 000 |
| B092 | Jetplane | 125 | 007 | 000 |
| B093 | Starship | 125 | 008 | 000 |
| B094 | BurstNiz | 125 | 009 | 000 |
| B095 | Laughnig | 126 | 001 | 000 |
| B096 | Screming | 126 | 002 | 000 |
| B097 | Punch | 126 | 003 | 000 |
| B098 | HertBeat | 126 | 004 | 000 |
| B099 | FootStep | 126 | 005 | 000 |
| B100 | MashnGun | 127 | 001 | 000 |
| B101 | Lasergun | 127 | 002 | 000 |
| B102 | Explosin | 127 | 003 | 000 |
| B103 | Untitled | 000 | 099 | 000 |
| B104 | Untitled | 001 | 099 | 000 |
| B105 | Untitled | 002 | 099 | 000 |
| B106 | Untitled | 003 | 099 | 000 |
| B107 | Untitled | 004 | 099 | 000 |
| B108 | Untitled | 005 | 099 | 000 |
| B109 | Untitled | 006 | 099 | 000 |
| B110 | Untitled | 007 | 099 | 000 |
| B111 | Untitled | 008 | 099 | 000 |
| B112 | Untitled | 009 | 099 | 000 |
| B113 | Untitled | 010 | 099 | 000 |
| B114 | Untitled | 011 | 099 | 000 |
| B115 | Untitled | 012 | 099 | 000 |
| B116 | Untitled | 013 | 099 | 000 |
| B117 | TECHNO | 095 | | |

5.2 Exclusive Command Table

| Command | No. | Destination | Trans | Receive |
|---------------------------------|-----|-----------------------------|-------|---------|
| One Block Dump Request | 00H | A,B,D,E,F,Kit,dr inst,Combi | No | Yes |
| All Block Dump Request | 01H | A,B,D,E,F,dr inst,Combi | No | Yes |
| Parameter send | 10H | Single,Combi,Effect | No | Yes |
| Track Control | 11H | Effect path | No | Yes |
| One Block Dump | 20H | A,B,D,E,F,Kit,dr inst,Combi | Yes | Yes |
| All Block Dump | 21H | A,B,D,E,F,dr inst,Combi | Yes | Yes |
| Mode change | 31H | | No | Yes |
| Remote | 32H | | No | Yes |
| Write complete | 40H | | Yes | No |
| Write Error | 41H | | Yes | No |
| Write Error by protect | 42H | | Yes | No |
| Write Error by memory full | 44H | | Yes | No |
| Write Error by no expand memory | 45H | | Yes | No |

B,Kit,Dr inst are only for K5000W

(Combi is changed to Multi on K5000S)

D is only for K5000S/R

E,F are only when ME-1 inserted

5.3 Dump command table

K5000W

| | | 1st,2nd,3rd | 4th | 5th | 6th | 7th | 8th | 9th | 10th |
|-------|------------|-------------|-----|-----|-----|-----|------|------|------|
| One | ADD Bank A | f0H,40H,ch | 20H | 00H | 0aH | 00H | 00H | sub1 | dt |
| | PCM Bank B | f0H,40H,ch | 20H | 00H | 0aH | 00H | 01H | sub1 | dt |
| | exp Bank E | f0H,40H,ch | 20H | 00H | 0aH | 00H | 03H | sub1 | dt |
| | exp Bank F | f0H,40H,ch | 20H | 00H | 0aH | 00H | 04H | sub1 | dt |
| | dr kit | f0H,40H,ch | 20H | 00H | 0aH | 10H | dt | | |
| | dr inst | f0H,40H,ch | 20H | 00H | 0aH | 11H | dt | | |
| | combi | f0H,40H,ch | 20H | 00H | 0aH | 20H | sub1 | dt | |
| Block | ADD Bank A | f0H,40H,ch | 21H | 00H | 0aH | 00H | 00H | sub1 | sub2 |
| | PCM Bank B | f0H,40H,ch | 21H | 00H | 0aH | 00H | 01H | dt | dt |
| | exp Bank E | f0H,40H,ch | 21H | 00H | 0aH | 00H | 03H | sub1 | sub2 |
| | exp Bank F | f0H,40H,ch | 21H | 00H | 0aH | 00H | 04H | sub1 | sub2 |
| | dr inst | f0H,40H,ch | 21H | 00H | 0aH | 11H | dt | | |
| | combi | f0H,40H,ch | 21H | 00H | 0aH | 20H | dt | | |

K5000S/R

| | | 1st,2nd,3rd | 4th | 5th | 6th | 7th | 8th | 9th | 10th |
|-------|------------|-------------|-----|-----|-----|-----|------|------|------|
| One | ADD Bank A | f0H,40H,ch | 20H | 00H | 0aH | 00H | 00H | sub1 | dt |
| | ADD Bank D | f0H,40H,ch | 20H | 00H | 0aH | 00H | 02H | sub1 | dt |
| | exp Bank E | f0H,40H,ch | 20H | 00H | 0aH | 00H | 03H | sub1 | dt |
| | exp Bank F | f0H,40H,ch | 20H | 00H | 0aH | 00H | 04H | sub1 | dt |
| | Multi | f0H,40H,ch | 20H | 00H | 0aH | 20H | sub1 | dt | |
| Block | ADD Bank A | f0H,40H,ch | 21H | 00H | 0aH | 00H | 00H | sub1 | sub2 |
| | ADD Bank D | f0H,40H,ch | 21H | 00H | 0aH | 00H | 02H | sub1 | sub2 |
| | exp Bank E | f0H,40H,ch | 21H | 00H | 0aH | 00H | 03H | sub1 | sub2 |
| | exp Bank F | f0H,40H,ch | 21H | 00H | 0aH | 00H | 04H | sub1 | sub2 |
| | Multi | f0H,40H,ch | 21H | 00H | 0aH | 20H | dt | | |

ch:channel no.(0-0fH)
sub1:Sub1 command
sub2:Sub2 command
dt:data

5.4 parameter change comand table

K5000W

| | | 1st - 6th | 7th | 8th | 9th | 10th | 11th | 12th | 13th | 14th |
|---------|----------------|------------------------|------|------|------|------|-------|------|------|------|
| | | f0H,40H,ch,10H,00H,0aH | sub1 | sub2 | sub3 | sub4 | sub5 | dt | dt | f7 |
| single | cmn | | 01H | 00H | 00H | 00H | 0-29H | dtH | dtL | |
| | src | | 01H | 01H | xx | 00H | 0-55H | dtH | dtL | |
| add | hckit | | 02H | 40H | xx | 00H | 0-23H | dtH | dtL | |
| | HC code1 | | 02H | 41H | xx | yy | 00H | 00H | dtL | |
| | HC code2 | | 02H | 42H | xx | yy | 00H | 00H | dtL | |
| | FF | | 02H | 43H | xx | yy | 00H | 00H | dtL | |
| | HE | | 02H | 44H | xx | yy | 0-8H | dtH | dtL | |
| | HC Morf | | 02H | 45H | xx | yy | 00H | 00H | dtL | |
| | Morf exec | | 02H | 46H | xx | 00H | 00H | 00H | 01H | |
| Dr kit | Kit common | | 00H | 00H | 00H | 00H | 0-0fH | dtH | dtL | |
| | Kit inst selct | | 00H | 01H | tt | 00H | 00H | dtH | dtL | |
| Dr inst | Dr inst cmn | | 10H | 00H | 00H | 00H | 0-04H | dtH | dtL | |
| | Dr inst src | | 10H | 01H | 00H | 00H | 0-14H | dtH | dtL | |
| Combi | Combi cmn | | 04H | 00H | 00H | 00H | 0-10H | dtH | dtL | |
| | Combi sect | | 04H | 01H | ss | 00H | 0-0aH | dtH | dtL | |
| Effect | Effect Algo | | 03H | 00H | 00H | 00H | 00H | dtH | dtL | |
| | Effect para | | 03H | 00H | ee | 00H | 0-05H | dtH | dtL | |
| | Eq para | | 03H | 01H | 00H | 00H | 0-06H | dtH | dtL | |

K5000S/R

| | | 1st - 6th | 7th | 8th | 9th | 10th | 11th | 12th | 13th | 14th |
|----------|-------------|------------------------|------|-------|------|------|-------|------|------|------|
| | | f0H,40H,ch,10H,00H,0aH | sub1 | sub2 | sub3 | sub4 | sub5 | dt | dt | f7 |
| single | cmn | | 01H | 00H | 00H | 00H | 0-29H | dtH | dtL | |
| | src | | 01H | 01H | xx | 00H | 0-55H | dtH | dtL | |
| add | hckit | | 02H | 40H | xx | 00H | 0-23H | dtH | dtL | |
| | HC code1 | | 02H | 41H | xx | yy | 00H | 00H | dtL | |
| | HC code2 | | 02H | 42H | xx | yy | 00H | 00H | dtL | |
| | FF | | 02H | 43H | xx | yy | 00H | 00H | dtL | |
| | HE | | 02H | 44H | xx | yy | 0-8H | dtH | dtL | |
| | HC Morf | | 02H | 45H | xx | yy | 00H | 00H | dtL | |
| | Morf exec | | 02H | 46H | xx | 00H | 00H | 00H | 01H | |
| Multi | Multi cmn | | 04H | 00H | 00H | 00H | 0-10H | dtH | dtL | |
| | Multi sect | | 04H | 01H | ss | 00H | 0-0aH | dtH | dtL | |
| Effect | Effect Algo | | 03H | 00H | 00H | 00H | 00H | dtH | dtL | |
| | Effect para | | 03H | 00H | ee | 00H | 0-05H | dtH | dtL | |
| | Eq para | | 03H | 01H | 00H | 00H | 0-06H | dtH | dtL | |
| Arpeggio | control | | 60H | 0-30H | 00H | 00H | 00H | dtH | dtL | |

xx:src no.(0-05H)
 yy:harm no.(0-3fH)
 tt:note select(0-40H)
 ss:section No.(0-03H)
 ee:01H=Reverb,02H-05H=Effect1-4
 dtL:data low
 dtH:data High

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