

MIDI Implementation

Model : MD-500
Date : July 01, 2017
Version : 1.00

1. Recognized data

Received messages are transmitted without change according to the "MIDI: MIDI IN->OUT" and "MIDI: USB IN->OUT" settings.

■Channel Voice Messages

These messages are received if the "MIDI: Rx CHANNEL" setting matches the MIDI channel number of the incoming message.

●Control Change

○Bank Select

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

n = MIDI Channel Number : 0H - FH (0 - 15) 0 = ch.1, 15 = ch.16
mm = Bank Number (MSB) : 00H - 02H (0 - 2)

* After this unit starts up, it operates with 00H as the bank number until a bank select message is received.

○Control Change Number #1 - #31, #64 - #95

Status	2nd Byte	3rd Byte
-----	-----	-----
BnH	ccH	vvH

n = MIDI Channel Number : 0H - FH (0 - 15) 0 = ch.1, 15 = ch.16
cc = Control Change Number : 01H - 1FH (MSB), 20H - 3FH (LSB), 40H - 5FH (1 - 31, 32 - 63, 64 - 95)
vv = Value : 00H - 7FH (0 - 127)

* Recognized if "MIDI CC IN" setting is ON.

* Recognized if "Assign: SRC" setting is "CC#1- #31, CC#64 - #95."
target value = (parameter min) + (((cc value) - (act range low)) * (parameter range)) / ((act range High) - (act range Low))

* When a CC# specified for "MIDI: EFFECT CC," "MIDI: EFFECT A CC," "MIDI: EFFECT B CC," "MIDI: RATE/VALUE CC," "MIDI: DEPTH CC," "MIDI: E.LEVEL CC," "MIDI: PARAM 1 CC," "MIDI: PARAM 2 CC," "MIDI:CTL1 CC," "MIDI:CTL2 CC" or "MIDI: EXP CC" is received, the operation of the specified controller is performed

* If RATE/VALUE CC setting is CC #1 - #31, then LSB (#33 - #63) is also received.

MODE

CHORUS, FLANGER, PHASER, C-VIBE, VIBRATO, TREMOLO, FILTER, SLICER

In case of CC #64 - #95

parameter value = (((cc MSB+LSB value) * (parameter range)) / 16383)
cc MSB+LSB value = (msb value) * 128 + (lsb value)

In case of CC #64 - #95

parameter value = (((cc value) * (parameter range)) / 127)

DIMENSION, RING MOD, ROTARY, OVERTONE

parameter value = (((cc value) * (parameter range)) / 127)

* DEPTH CC, PARAM 1 CC, PARAM 2 CC

parameter value = (((cc value) * (parameter range)) / 127)

parameter range = (parameter max) - (parameter min)

●Program Change

○Status

CnH ppH

n = MIDI Channel Number : 0H - FH (0 - 15) 0 = ch.1, 15 = ch.16
pp = Program Number : 00H - 7FH (0 - 127) 0 = PC#:1, 127 = PC#:128

* This message switches to the patch that is specified by "MIDI PC MAP."

■System Realtime Messages

●Timing Clock

○Status

F8H

* Recognized if the "MIDI: SYNC" setting is other than INTERNAL.

●Active Sensing

○Status

FEH

* When an Active Sensing message is received, the interval of all subsequent messages will begin to be monitored.

* When the message interval is being monitored, and the interval exceeds 400 ms, the display indicates "MIDI OFFLINE" and the unit returns to a state in which message interval is not monitored.

■System Exclusive Messages

Status	Data Byte	Status
-----	-----	-----
FOH,	iiH, dev, ddH, ..., eeH,	F7H

○Byte

○Explanation

FOH System Exclusive Message status
iiH an ID number
41H : Roland's manufacturer ID
7EH : Universal Non-realtime messages
dev Device ID (dev: 00H - 1FH, 7FH) * 7FH = Broadcast
dd, ..., ee = data 00H - 7FH (0 - 127)
F7H EOX (End Of Exclusive)

●Universal Non-Realtime System Exclusive Messages

○Identity Request Message (Device Inquiry)

Status	Data Byte	Status
-----	-----	-----
FOH,	7EH, dev, 06H, 01H,	F7H

Byte	Explanation
F0H	System Exclusive Message status
7EH	Universal Non-realtime Message
dev	Device ID (dev: 00H - 1FH, 7FH) * 7FH = Broadcast
06H	Sub ID # 1 (General Information)
01H	Sub ID # 2 (Identity Request)
F7H	EOX (End Of Exclusive)

When this message is received, this unit transmits the prescribed identity reply message (see transmitted data).

●ONE WAY COMMUNICATION

oRequest Data 1 RQ1 (11H)

Status	Data Byte	Status
F0H,	41H, dev, 00H, 00H, 00H, 43H, 11H, aaH, bbH, ccH, ddH, ssH, ttH, uuH, vvH, sum,	F7H

Byte	Explanation
F0H	System Exclusive Message status
41H	Manufacturer ID (Roland)
dev	Device ID (dev: 00H - 1FH, 7FH) * 7FH = Broadcast
00H	Model ID # 1 (MD-500)
00H	Model ID # 2 (MD-500)
00H	Model ID # 3 (MD-500)
43H	Model ID # 4 (MD-500)
11H	Command ID (RQ1)
aaH	Address MSB
bbH	Address
ccH	Address
ddH	Address LSB
ssH	Size MSB
ttH	Size
uuH	Size
vvH	Size LSB
sum	Checksum
F7H	EOX (End Of Exclusive)

oData Set 1 DT1 (12H)

Status	Data Byte	Status
F0H,	41H, dev, 00H, 00H, 00H, 43H, 12H, aaH, bbH, ccH, ddH, eeH, ... hhH, sum,	F7H

Byte	Explanation
F0H	System Exclusive Message status
41H	Manufacturer ID (Roland)
dev	Device ID (dev: 00H - 1FH, 7FH) * 7FH = Broadcast
00H	Model ID # 1 (MD-500)
00H	Model ID # 2 (MD-500)
00H	Model ID # 3 (MD-500)
43H	Model ID # 4 (MD-500)
12H	Model ID (DT1)
aaH	Address MSB
bbH	Address
ccH	Address
ddH	Address LSB
eeH	Data
:	
ffH	Data
sum	Checksum
F7H	EOX (End Of Exclusive)

2. Transmitted data

■Channel Voice Messages

* Set the channel voice message transmit MIDI channel number to "MIDI: Tx CHANNEL."

●Control Change

oBank Select

Status	2nd Byte	3rd Byte
BnH	00H	mmH
BnH	20H	00H

n = MIDI Channel Number : 0H - FH (0 - 15) 0 = ch.1, 15 = ch.16
mm = Bank number (MSB) : 00H - 02H (0 - 2)

* If the "MIDI: PC OUT" setting is ON, this message is transmitted when you switch patches.
If the "BANK SEL OUT" setting is MSB, only BnH 00H mmH (MSB) is transmitted.

oControl Change Number #1 - #31, #64 - #95

Status	2nd Byte	3rd Byte
BnH	ccH	vvH

n = MIDI Channel Number : 0H - FH (0 - 15) 0 = ch.1, 15 = ch.16
cc = Control Change Number : 01H - 1FH (MSB), 20H - 3FH (LSB), 40H - 5FH (1 - 31, 32 - 63, 64 - 95)
vv = Value : 00H - 7FH (0 - 127)

* Transmitted if "MIDI CC OUT" = ON.

* When you operate a controller, the CC# specified by "MIDI: EFFECT CC," "MIDI: EFFECT A SW CC," "MIDI: EFFECT B SW CC," "MIDI: RATE/VALUE CC," "MIDI: DEPTH CC," "MIDI: E.LEVEL CC," "MIDI: PARAM 1 CC," "MIDI: PARAM 2 CC," "MIDI: CTL1 CC," "MIDI: CTL2 CC" or "MIDI: EXP CC" is transmitted.

* "MIDI: RATE/VALUE CC" : If set to CC #1 - #31, it transmitted LSB(#33 - #63).
MODE : CHORUS, FLANGER, PHASER, C-VIBE, VIBRATO, TREMOLO, FILTER, SLICER
In case of CC #1 - #31
vv (MSB) = (((parameter value) * 16383) / (rate range)) / 128
vv (LSB) = (((parameter value) * 16383) / (rate range)) - (vv (MSB) * 128)

In case of CC #64 - #95
vv = (((parameter value) * 127) / (rate range))

MODE : DIMENSION, RING MOD, ROTARY, OVERTONE
vv = (((parameter value) * 127) / (rate range))

* "MIDI: DEPTH CC," "MIDI: PARAM 1 CC," "MIDI: PARAM 2 CC"
vv = (((parameter value) * 127) / (parameter range))

parameter range = (parameter max) - (parameter min)

●Program Change

Status	2nd Byte
CnH	ppH

n = MIDI Channel Number : 0H - FH (0 - 15) 0 = ch.1, 15 = ch.16
 pp = Program Number : 00H - 7FH (0 - 127) 0 = PC#:1, 127 = PC#:128

* If the "MIDI: PC OUT" setting is ON, this message is transmitted when you switch patches.
 * Patch numbers correspond to program numbers as follows.

BANK SEL.			
PATCH#	MSB	LSB	PROG#
01A	00H	00H	00H
:	:	:	:
43B	00H	00H	7FH
43C	01H	00H	00H
:	:	:	:
86A	01H	00H	7FH
86B	02H	00H	00H
:	:	:	:
99C	02H	00H	28H

■System Realtime Message

●Timing Clock

Status
F8H

* If both "MIDI: SYNC" = INTERNAL and "MIDI: REALTIME SRC" = INT, this message is transmitted at intervals corresponding to the tempo.
 * If the "MIDI: REALTIME SRC" setting is other than INT, this message is transmitted when timing clock messages corresponding to the setting are received.

●Active Sensing

Status
FEH

* This message is always transmitted at intervals of approximately 250 ms.

■System Exclusive Message

Status	Data Byte	Status
FOH,	iiH, dev, ddH, ..., eeH,	F7H

Byte	Explanation
FOH	System Exclusive Message status
iiH	an ID number 41H : Roland's manufacturer ID 7EH : Universal Non-realtime messages
dev	Device ID (dev: 00H - 1FH, 7FH) * 7FH = Broadcast
dd,...,ee = data	00H - 7FH (0 - 127)
F7H	EOX (End Of Exclusive)

●Universal Non-Realtime System Exclusive Messages

○Identity Reply Message (Device Inquiry)

Status	Data Byte	Status
FOH,	7EH, dev, 06H, 02H, 41H, 43H, 03H, 00H, 00H, 00H, 00H, 01H,	F7

Byte	Explanation
FOH	System Exclusive Message status
7EH	Universal Non-Realtime Message
dev	Device ID (dev: 00H - 1FH)
06H	Sub ID # 1 (General Information)
02H	Sub ID # 2 (Identity Reply)
41H	Manufacturer ID (Roland)
43H 03H	Device family code # 1 (MD-500)
00H 00H	Device family code # 2 (MD-500)
00H	Software revision level # 1
00H	Software revision level # 2
00H	Software revision level # 3
01H	Software revision level # 4
F7H	EOX (End Of Exclusive)

* This message is transmitted when an identity request message is received.

●ONE WAY COMMUNICATION

○Data Set1 DT1 (12H)

Status	Data Byte	Status
FOH,	41H, dev, 00H, 00H, 00H, 43H, 12H, aaH, bbH, ccH, ddH, eeH, ... hhH, sum,	F7H

Byte	Explanation
FOH	System Exclusive Message status
41H	Manufacturer ID (Roland)
dev	Device ID (dev: 00H - 1FH)
00H	Model ID # 1 (MD-500)
00H	Model ID # 2 (MD-500)
00H	Model ID # 3 (MD-500)
43H	Model ID # 4 (MD-500)
12H	Command ID (DT1)
aaH	Address MSB
bbH	Address
ccH	Address
ddH	Address LSB
eeH	Data
:	:
ffH	Data
sum	Checksum
F7H	EOX (End Of Exclusive)

3. System Exclusive Address Map

MD-500 (Model ID : 00H 00H 00H 43H)

 |Start |

Address	Description	
00 00 00 00	Setup	*1-1
10 00 00 00	System	*1-2
20 00 00 00	Program change map	*1-3
30 00 00 00	BANK (Temporary : BANK parameter + patch A/B/C)	*1-4
30 04 00 00	BANK 01 (BANK 01 parameter + patch 01A/01B/01C)	*1-4
:	:	
33 0C 00 00	BANK 99 (BANK 99 parameter + patch 99A/99B/99C)	*1-4

*1-1 Setup

Offset	Address	Description	
	00 00 00	Setup Common	*2-1

*1-2 System

Offset	Address	Description	
	00 00 00	System Common	*2-2
	00 10 00	System Control	*2-3

*1-3 Program change map

Offset	Address	Description	
	00 00 00	MIDI Program Change map	*2-4

*1-4 BANK

Offset	Address	Description	
	00 00 00	BANK parameters for SIMUL	*2-5
	00 10 00	PATCH A	*2-6
	00 20 00	PATCH B	*2-6
	00 30 00	PATCH C	*2-6

*2-1 Setup Common Parameters Offset Address

Offset	Address	Description	
	00 00	0000 000a Current Patch Number	(0 - 296)
		0000 bbbb	01A - 99C
		0000 cccc	

*2-2 System Common Parameters Offset Address

Offset	Address	Description	
	00 00	0000 000d Insert loop sw	(0 - 1)
	00 01	0000 000d Bank wait mode	OFF, ON
	00 02	00dd dddd Bank Extent Begin	(0 - 1)
	00 03	00dd dddd Bank Extent End	WAIT, IMMEDIATE
	00 04	0000 000d Knob Lock Switch	(0 - 98)
	00 05	0000 000d Knob Mode	01 - 99
	00 06	0000 000d Bypass Mode	(0 - 98)
	00 07	0000 000d Pedal Action	01 - 99
	00 08	0000 00dd Foot Switch Mode	(0 - 1)
	00 09	0000 00dd Display Type	OFF, ON
	00 0A	000d dddd MIDI Rx Channel	(0 - 1)
	00 0B	000d dddd MIDI Tx Channel	IMMEDIATE, HOOK
	00 0C	0000 000d MIDI Program Change IN	(0 - 1)
	00 0D	0000 000d MIDI Program Change OUT	BUFFERED, TRUE
	00 0E	0000 000d MIDI Bank Select OUT	(0 - 1)
	00 0F	0000 000d MIDI Control Change IN	PUSH, RELEASE
	00 10	0000 000d MIDI Control Change OUT	(0 - 3)
	00 11	00dd dddd MIDI RATE Control Change#	NORMAL, A/B/C, A/B SIMUL, SW DN/UP
	00 12	00dd dddd MIDI DEPTH Control Change#	(0 - 3)
	00 13	00dd dddd MIDI EFFECT LEVEL Control Change#	DISP_TIME, DISP_BPM, DISP_PATCH, DISP_PARAM
	00 14	00dd dddd MIDI PARAM1 Control Change#	(0 - 16)

00 12	0000 cccc	BANK#:1 PC#:007	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 15	0000 cccc	BANK#:1 PC#:008	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 18	0000 cccc	BANK#:1 PC#:009	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 1B	0000 cccc	BANK#:1 PC#:010	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 1E	0000 cccc	BANK#:1 PC#:011	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 21	0000 cccc	BANK#:1 PC#:012	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 24	0000 cccc	BANK#:1 PC#:013	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 27	0000 cccc	BANK#:1 PC#:014	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 2A	0000 cccc	BANK#:1 PC#:015	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 2D	0000 cccc	BANK#:1 PC#:016	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 30	0000 cccc	BANK#:1 PC#:017	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 33	0000 cccc	BANK#:1 PC#:018	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 36	0000 cccc	BANK#:1 PC#:019	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 39	0000 cccc	BANK#:1 PC#:020	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 3C	0000 cccc	BANK#:1 PC#:021	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 3F	0000 cccc	BANK#:1 PC#:022	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 42	0000 cccc	BANK#:1 PC#:023	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 45	0000 cccc	BANK#:1 PC#:024	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 48	0000 cccc	BANK#:1 PC#:025	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 4B	0000 cccc	BANK#:1 PC#:026	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 4E	0000 cccc	BANK#:1 PC#:027	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 51	0000 cccc	BANK#:1 PC#:028	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 54	0000 cccc	BANK#:1 PC#:029	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 57	0000 cccc	BANK#:1 PC#:030	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 5A	0000 cccc	BANK#:1 PC#:031	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 5D	0000 cccc	BANK#:1 PC#:032	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 60	0000 cccc	BANK#:1 PC#:033	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 63	0000 cccc	BANK#:1 PC#:034	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 66	0000 cccc	BANK#:1 PC#:035	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 69	0000 cccc	BANK#:1 PC#:036	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 6C	0000 cccc	BANK#:1 PC#:037	(0 - 296)
	0000 000a		01A - 99C
	0000 bbbb		
00 6F	0000 cccc	BANK#:1 PC#:038	(0 - 296)
	0000 000a		01A - 99C

00 72	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:039	(0 - 296) 01A - 99C
00 75	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:040	(0 - 296) 01A - 99C
00 78	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:041	(0 - 296) 01A - 99C
00 7B	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:042	(0 - 296) 01A - 99C
00 7E	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:043	(0 - 296) 01A - 99C
01 01	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:044	(0 - 296) 01A - 99C
01 04	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:045	(0 - 296) 01A - 99C
01 07	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:046	(0 - 296) 01A - 99C
01 0A	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:047	(0 - 296) 01A - 99C
01 0D	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:048	(0 - 296) 01A - 99C
01 10	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:049	(0 - 296) 01A - 99C
01 13	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:050	(0 - 296) 01A - 99C
01 16	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:051	(0 - 296) 01A - 99C
01 19	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:052	(0 - 296) 01A - 99C
01 1C	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:053	(0 - 296) 01A - 99C
01 1F	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:054	(0 - 296) 01A - 99C
01 22	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:055	(0 - 296) 01A - 99C
01 25	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:056	(0 - 296) 01A - 99C
01 28	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:057	(0 - 296) 01A - 99C
01 2B	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:058	(0 - 296) 01A - 99C
01 2E	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:059	(0 - 296) 01A - 99C
01 31	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:060	(0 - 296) 01A - 99C
01 34	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:061	(0 - 296) 01A - 99C
01 37	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:062	(0 - 296) 01A - 99C
01 3A	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:063	(0 - 296) 01A - 99C
01 3D	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:064	(0 - 296) 01A - 99C
01 40	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:065	(0 - 296) 01A - 99C
01 43	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:066	(0 - 296) 01A - 99C
01 46	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:067	(0 - 296) 01A - 99C
01 49	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:068	(0 - 296) 01A - 99C
01 4C	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:069	(0 - 296) 01A - 99C
01 4F	0000 bbbb 0000 cccc 0000 000a	BANK#:1 PC#:070	(0 - 296)

		0000 bbbb 0000 cccc		01A - 99C
01 52		0000 000a	BANK#:1 PC#:071	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
01 55		0000 000a	BANK#:1 PC#:072	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
01 58		0000 000a	BANK#:1 PC#:073	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
01 5B		0000 000a	BANK#:1 PC#:074	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
01 5E		0000 000a	BANK#:1 PC#:075	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
01 61		0000 000a	BANK#:1 PC#:076	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
01 64		0000 000a	BANK#:1 PC#:077	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
01 67		0000 000a	BANK#:1 PC#:078	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
01 6A		0000 000a	BANK#:1 PC#:079	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
01 6D		0000 000a	BANK#:1 PC#:080	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
01 70		0000 000a	BANK#:1 PC#:081	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
01 73		0000 000a	BANK#:1 PC#:082	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
01 76		0000 000a	BANK#:1 PC#:083	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
01 79		0000 000a	BANK#:1 PC#:084	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
01 7C		0000 000a	BANK#:1 PC#:085	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
01 7F		0000 000a	BANK#:1 PC#:086	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
02 02		0000 000a	BANK#:1 PC#:087	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
02 05		0000 000a	BANK#:1 PC#:088	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
02 08		0000 000a	BANK#:1 PC#:089	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
02 0B		0000 000a	BANK#:1 PC#:090	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
02 0E		0000 000a	BANK#:1 PC#:091	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
02 11		0000 000a	BANK#:1 PC#:092	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
02 14		0000 000a	BANK#:1 PC#:093	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
02 17		0000 000a	BANK#:1 PC#:094	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
02 1A		0000 000a	BANK#:1 PC#:095	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
02 1D		0000 000a	BANK#:1 PC#:096	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
02 20		0000 000a	BANK#:1 PC#:097	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
02 23		0000 000a	BANK#:1 PC#:098	(0 - 296) 01A - 99C
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		0000 bbbb 0000 cccc		
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		0000 bbbb 0000 cccc		

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	0000 cccc		
02 32	0000 000a	BANK#:1 PC#:103	(0 - 296) 01A - 99C
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	0000 cccc		
02 35	0000 000a	BANK#:1 PC#:104	(0 - 296) 01A - 99C
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	0000 cccc		
02 38	0000 000a	BANK#:1 PC#:105	(0 - 296) 01A - 99C
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	0000 cccc		
02 3B	0000 000a	BANK#:1 PC#:106	(0 - 296) 01A - 99C
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	0000 cccc		
02 3E	0000 000a	BANK#:1 PC#:107	(0 - 296) 01A - 99C
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	0000 cccc		
02 41	0000 000a	BANK#:1 PC#:108	(0 - 296) 01A - 99C
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	0000 cccc		
02 44	0000 000a	BANK#:1 PC#:109	(0 - 296) 01A - 99C
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	0000 cccc		
02 47	0000 000a	BANK#:1 PC#:110	(0 - 296) 01A - 99C
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	0000 cccc		
02 4A	0000 000a	BANK#:1 PC#:111	(0 - 296) 01A - 99C
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	0000 cccc		
02 4D	0000 000a	BANK#:1 PC#:112	(0 - 296) 01A - 99C
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	0000 cccc		
02 50	0000 000a	BANK#:1 PC#:113	(0 - 296) 01A - 99C
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	0000 cccc		
02 53	0000 000a	BANK#:1 PC#:114	(0 - 296) 01A - 99C
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02 59	0000 000a	BANK#:1 PC#:116	(0 - 296) 01A - 99C
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02 5C	0000 000a	BANK#:1 PC#:117	(0 - 296) 01A - 99C
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02 5F	0000 000a	BANK#:1 PC#:118	(0 - 296) 01A - 99C
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02 65	0000 000a	BANK#:1 PC#:120	(0 - 296) 01A - 99C
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02 68	0000 000a	BANK#:1 PC#:121	(0 - 296) 01A - 99C
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02 6B	0000 000a	BANK#:1 PC#:122	(0 - 296) 01A - 99C
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02 6E	0000 000a	BANK#:1 PC#:123	(0 - 296) 01A - 99C
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02 71	0000 000a	BANK#:1 PC#:124	(0 - 296) 01A - 99C
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02 74	0000 000a	BANK#:1 PC#:125	(0 - 296) 01A - 99C
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02 77	0000 000a	BANK#:1 PC#:126	(0 - 296) 01A - 99C
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	0000 cccc		
02 7A	0000 000a	BANK#:1 PC#:127	(0 - 296) 01A - 99C
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	0000 cccc		
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	0000 cccc		
03 03	0000 000a	BANK#:2 PC#:002	(0 - 296) 01A - 99C
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03 06	0000 000a	BANK#:2 PC#:003	(0 - 296) 01A - 99C
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03 09	0000 000a	BANK#:2 PC#:004	(0 - 296) 01A - 99C
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	0000 cccc		
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03 15	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:008	(0 - 296) 01A - 99C
03 18	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:009	(0 - 296) 01A - 99C
03 1B	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:010	(0 - 296) 01A - 99C
03 1E	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:011	(0 - 296) 01A - 99C
03 21	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:012	(0 - 296) 01A - 99C
03 24	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:013	(0 - 296) 01A - 99C
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03 2D	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:016	(0 - 296) 01A - 99C
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03 33	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:018	(0 - 296) 01A - 99C
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03 3F	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:022	(0 - 296) 01A - 99C
03 42	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:023	(0 - 296) 01A - 99C
03 45	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:024	(0 - 296) 01A - 99C
03 48	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:025	(0 - 296) 01A - 99C
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03 72	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:039	(0 - 296) 01A - 99C
03 75	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:040	(0 - 296) 01A - 99C
03 78	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:041	(0 - 296) 01A - 99C
03 7B	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:042	(0 - 296) 01A - 99C
03 7E	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:043	(0 - 296) 01A - 99C
04 01	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:044	(0 - 296) 01A - 99C
04 04	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:045	(0 - 296) 01A - 99C
04 07	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:046	(0 - 296) 01A - 99C
04 0A	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:047	(0 - 296) 01A - 99C
04 0D	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:048	(0 - 296) 01A - 99C
04 10	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:049	(0 - 296) 01A - 99C
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04 16	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:051	(0 - 296) 01A - 99C
04 19	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:052	(0 - 296) 01A - 99C
04 1C	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:053	(0 - 296) 01A - 99C
04 1F	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:054	(0 - 296) 01A - 99C
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04 3A	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:063	(0 - 296) 01A - 99C
04 3D	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:064	(0 - 296) 01A - 99C
04 40	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:065	(0 - 296) 01A - 99C
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04 46	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:067	(0 - 296) 01A - 99C
04 49	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:068	(0 - 296) 01A - 99C
04 4C	0000 bbbb 0000 cccc 0000 000a	BANK#:2 PC#:069	(0 - 296)

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		0000 cccc			
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04 70		0000 000a	BANK#:2 PC#:081	(0 - 296)	01A - 99C
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04 73		0000 000a	BANK#:2 PC#:082	(0 - 296)	01A - 99C
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04 76		0000 000a	BANK#:2 PC#:083	(0 - 296)	01A - 99C
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04 79		0000 000a	BANK#:2 PC#:084	(0 - 296)	01A - 99C
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04 7C		0000 000a	BANK#:2 PC#:085	(0 - 296)	01A - 99C
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04 7F		0000 000a	BANK#:2 PC#:086	(0 - 296)	01A - 99C
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		0000 cccc			

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		0000 cccc		
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		0000 cccc		
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		0000 cccc		
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		0000 cccc		
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		0000 cccc		
06	7B	0000 000a	BANK#:3 PC#:042	(0 - 296) 01A - 99C
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		0000 cccc		
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		0000 cccc		
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		0000 bbbb		
		0000 cccc		
07	0D	0000 000a	BANK#:3 PC#:048	(0 - 296) 01A - 99C
		0000 bbbb		
		0000 cccc		
07	10	0000 000a	BANK#:3 PC#:049	(0 - 296) 01A - 99C
		0000 bbbb		
		0000 cccc		
07	13	0000 000a	BANK#:3 PC#:050	(0 - 296) 01A - 99C
		0000 bbbb		
		0000 cccc		
07	16	0000 000a	BANK#:3 PC#:051	(0 - 296) 01A - 99C
		0000 bbbb		
		0000 cccc		
07	19	0000 000a	BANK#:3 PC#:052	(0 - 296) 01A - 99C
		0000 bbbb		
		0000 cccc		
07	1C	0000 000a	BANK#:3 PC#:053	(0 - 296) 01A - 99C
		0000 bbbb		
		0000 cccc		
07	1F	0000 000a	BANK#:3 PC#:054	(0 - 296) 01A - 99C
		0000 bbbb		
		0000 cccc		
07	22	0000 000a	BANK#:3 PC#:055	(0 - 296) 01A - 99C
		0000 bbbb		
		0000 cccc		
07	25	0000 000a	BANK#:3 PC#:056	(0 - 296) 01A - 99C
		0000 bbbb		
		0000 cccc		
07	28	0000 000a	BANK#:3 PC#:057	(0 - 296) 01A - 99C
		0000 bbbb		
		0000 cccc		
07	2B	0000 000a	BANK#:3 PC#:058	(0 - 296) 01A - 99C
		0000 bbbb		
		0000 cccc		
07	2E	0000 000a	BANK#:3 PC#:059	(0 - 296) 01A - 99C
		0000 bbbb		
		0000 cccc		
07	31	0000 000a	BANK#:3 PC#:060	(0 - 296) 01A - 99C
		0000 bbbb		
		0000 cccc		
07	34	0000 000a	BANK#:3 PC#:061	(0 - 296) 01A - 99C
		0000 bbbb		
		0000 cccc		
07	37	0000 000a	BANK#:3 PC#:062	(0 - 296) 01A - 99C
		0000 bbbb		
		0000 cccc		
07	3A	0000 000a	BANK#:3 PC#:063	(0 - 296) 01A - 99C
		0000 bbbb		
		0000 cccc		
07	3D	0000 000a	BANK#:3 PC#:064	(0 - 296) 01A - 99C
		0000 bbbb		
		0000 cccc		
07	40	0000 000a	BANK#:3 PC#:065	(0 - 296) 01A - 99C
		0000 bbbb		
		0000 cccc		
07	43	0000 000a	BANK#:3 PC#:066	(0 - 296) 01A - 99C
		0000 bbbb		
		0000 cccc		
07	46	0000 000a	BANK#:3 PC#:067	(0 - 296) 01A - 99C
		0000 bbbb		
		0000 cccc		
07	49	0000 000a	BANK#:3 PC#:068	(0 - 296)

		0000 bbbb 0000 cccc		01A - 99C
07 4C		0000 000a	BANK#:3 PC#:069	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
07 4F		0000 000a	BANK#:3 PC#:070	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
07 52		0000 000a	BANK#:3 PC#:071	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
07 55		0000 000a	BANK#:3 PC#:072	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
07 58		0000 000a	BANK#:3 PC#:073	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
07 5B		0000 000a	BANK#:3 PC#:074	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
07 5E		0000 000a	BANK#:3 PC#:075	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
07 61		0000 000a	BANK#:3 PC#:076	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
07 64		0000 000a	BANK#:3 PC#:077	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
07 67		0000 000a	BANK#:3 PC#:078	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
07 6A		0000 000a	BANK#:3 PC#:079	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
07 6D		0000 000a	BANK#:3 PC#:080	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
07 70		0000 000a	BANK#:3 PC#:081	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
07 73		0000 000a	BANK#:3 PC#:082	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
07 76		0000 000a	BANK#:3 PC#:083	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
07 79		0000 000a	BANK#:3 PC#:084	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
07 7C		0000 000a	BANK#:3 PC#:085	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
07 7F		0000 000a	BANK#:3 PC#:086	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
08 02		0000 000a	BANK#:3 PC#:087	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
08 05		0000 000a	BANK#:3 PC#:088	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
08 08		0000 000a	BANK#:3 PC#:089	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
08 0B		0000 000a	BANK#:3 PC#:090	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
08 0E		0000 000a	BANK#:3 PC#:091	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
08 11		0000 000a	BANK#:3 PC#:092	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
08 14		0000 000a	BANK#:3 PC#:093	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
08 17		0000 000a	BANK#:3 PC#:094	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
08 1A		0000 000a	BANK#:3 PC#:095	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
08 1D		0000 000a	BANK#:3 PC#:096	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
08 20		0000 000a	BANK#:3 PC#:097	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
08 23		0000 000a	BANK#:3 PC#:098	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		
08 26		0000 000a	BANK#:3 PC#:099	(0 - 296) 01A - 99C
		0000 bbbb 0000 cccc		

08 29	0000 000a	BANK#:3 PC#:100	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 2C	0000 000a	BANK#:3 PC#:101	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 2F	0000 000a	BANK#:3 PC#:102	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 32	0000 000a	BANK#:3 PC#:103	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 35	0000 000a	BANK#:3 PC#:104	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 38	0000 000a	BANK#:3 PC#:105	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 3B	0000 000a	BANK#:3 PC#:106	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 3E	0000 000a	BANK#:3 PC#:107	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 41	0000 000a	BANK#:3 PC#:108	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 44	0000 000a	BANK#:3 PC#:109	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 47	0000 000a	BANK#:3 PC#:110	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 4A	0000 000a	BANK#:3 PC#:111	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 4D	0000 000a	BANK#:3 PC#:112	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 50	0000 000a	BANK#:3 PC#:113	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 53	0000 000a	BANK#:3 PC#:114	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 56	0000 000a	BANK#:3 PC#:115	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 59	0000 000a	BANK#:3 PC#:116	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 5C	0000 000a	BANK#:3 PC#:117	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 5F	0000 000a	BANK#:3 PC#:118	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 62	0000 000a	BANK#:3 PC#:119	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 65	0000 000a	BANK#:3 PC#:120	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 68	0000 000a	BANK#:3 PC#:121	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 6B	0000 000a	BANK#:3 PC#:122	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 6E	0000 000a	BANK#:3 PC#:123	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 71	0000 000a	BANK#:3 PC#:124	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 74	0000 000a	BANK#:3 PC#:125	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 77	0000 000a	BANK#:3 PC#:126	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 7A	0000 000a	BANK#:3 PC#:127	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		
08 7D	0000 000a	BANK#:3 PC#:128	(0 - 296) 01A - 99C
	0000 bbbb		
	0000 cccc		

*2-5 BANK Parameters Offset Address

* These parameters are effective when Foot sw mode = SIMUL.

Offset		Description	
Address			
00 00	0000 000d	Structure	(0 - 1)
			SERIES, PARALLEL
00 01	0000 00dd	Insert Position	(0 - 3)

			OFF, PRE, POST, MIDDLE
00 02	0000 000d	Output Mode	(0 - 1)
00 03	0000 000d	A/B Sync Sw	MIX, A/B
			(0 - 1)
			OFF, ON

*2-6 PATCH Parameters Offset Address

Offset Address		Description	
00 00	0ddd dddd	Patch Name1	(32 - 126)
00 01	0ddd dddd	Patch Name2	32 - 126 [ASCII]
00 02	0ddd dddd	Patch Name3	(32 - 126)
00 03	0ddd dddd	Patch Name4	32 - 126 [ASCII]
00 04	0ddd dddd	Patch Name5	(32 - 126)
00 05	0ddd dddd	Patch Name6	32 - 126 [ASCII]
00 06	0ddd dddd	Patch Name7	(32 - 126)
00 07	0ddd dddd	Patch Name8	32 - 126 [ASCII]
00 08	0ddd dddd	Patch Name9	(32 - 126)
00 09	0ddd dddd	Patch Name10	32 - 126 [ASCII]
00 0A	0ddd dddd	Patch Name11	(32 - 126)
00 0B	0ddd dddd	Patch Name12	32 - 126 [ASCII]
00 0C	0ddd dddd	Patch Name13	(32 - 126)
00 0D	0ddd dddd	Patch Name14	32 - 126 [ASCII]
00 0E	0ddd dddd	Patch Name15	(32 - 126)
00 0F	0ddd dddd	Patch Name16	32 - 126 [ASCII]
00 10	0000 dddd	Modulation MODE	(32 - 126)
00 11	0000 0aaa	Rate	(0 - 11)
	0000 bbbb		CHORUS, FLANGER, PHASER, C-VIBE, VIBRATO, TREMOLO, DIMENSION, RING MOD,
	0000 cccc		ROTARY, FILTER, SLICER, OVERTONE
00 14	0000 000a	BPM	(1 - 2000)
	0000 bbbb		0.01Hz - 20.00Hz
	0000 cccc		
	0000 dddd		
	0000 eeee		
00 19	000d dddd	Initial Phase	(0 - 23)
00 1A	0ddd dddd	Effect Level	0deg, 15deg, 30deg, 45deg, 60deg, 75deg, 90deg, 105deg, 120deg, 135deg,
00 1B	0ddd dddd	Low Level	150deg, 165deg, 180deg, 195deg, 210deg, 225deg, 240deg, 255deg, 270deg,
00 1C	000d dddd	Low freq.	285deg, 300deg, 315deg, 330deg, 345deg
00 1D	0ddd dddd	High Level	(0 - 100)
00 1E	0000 dddd	High freq.	0 - 100
00 1F	0000 000d	Tempo hold	(0 - 100)
00 20	0000 00dd	Insert sw	-50 - +50
00 21	0000 000d	Output mode	(0 - 16)
00 22	0000 dddd	Output gain	20.0Hz, 25.0Hz, 31.5Hz, 40.0Hz, 50.0Hz, 63.0Hz, 80.0Hz, 100Hz, 125Hz, 160Hz,
00 23	0000 00dd	CHORUS Type	200Hz, 250Hz, 315Hz, 400Hz, 500Hz, 630Hz, 800Hz
00 24	000d dddd	CHORUS Note	(0 - 100)
00 25	0ddd dddd	CHORUS Direct Level	-50 - +50
00 26	0ddd dddd	CHORUS PRIME Modulation Depth	(0 - 14)
00 27	0000 000a	CHORUS PRIME Pre delay time	630Hz, 800Hz, 1.00kHz, 1.25kHz, 1.60kHz, 2.00kHz, 2.50kHz, 3.15kHz, 4.00kHz,
00 2A	0000 dddd	CHORUS PRIME Waveform	5.00kHz, 6.30kHz, 8.00kHz, 10.0kHz, 12.5kHz, 16.0kHz
00 2B	0ddd dddd	CHORUS PRIME Sweetness	(0 - 1)
00 2C	0ddd dddd	CHORUS PRIME Bell	OFF, ON
00 2D	000d dddd	CHORUS PRIME Low cut	(0 - 2)
00 2E	0000 dddd	CHORUS PRIME High cut	OFF, PRE, POST
00 2F	0ddd dddd	CHORUS CE-1 Chorus Modulation Depth	(0 - 1)
00 30	0000 000d	CHORUS CE-1 Chorus Preamp sw	MONO, STEREO
00 31	0ddd dddd	CHORUS CE-1 Chorus Preamp gain	(0 - 12)
00 32	0ddd dddd	CHORUS CE-1 Chorus Preamp level	-6dB - +6dB
00 33	0000 00dd	CHORUS TRI-CHO LFO mode	(0 - 3)
00 34	0ddd dddd	CHORUS TRI-CHO Intensity 1	PRIME, CE-1 CHORUS, CE-1 VIBRATO, TRI-CHO
00 35	0ddd dddd	CHORUS TRI-CHO Intensity 2	(0 - 17)
00 36	0ddd dddd	CHORUS TRI-CHO Intensity 3	32th, 16th triplet, dotted 32nd, 16th, 8th triplet, dotted 32nd, 8th,
00 37	0000 000d	CHORUS TRI-CHO Bright	quarter triplet, dotted 8th, quarter, half triplet, dotted quarter, half,
00 38	0000 000d	FLANGER Type	whole triplet, dotted half, whole, dotted whole, double whole

00 39	000d dddd	FLANGER Note	(0 - 17) 32th, 16th triplet, dotted 32nd, 16th, 8th triplet, dotted 32nd, 8th, quarter triplet, dotted 8th, quarter, half triplet, dotted quarter, half, whole triplet, dotted half, whole, dotted whole, double whole
00 3A	0ddd dddd	FLANGER Direct Level	(0 - 100) 0 - 100
00 3B	0ddd dddd	FLANGER PRIME G Modulation Depth	(0 - 100) 0 - 100
00 3C	0ddd dddd	FLANGER PRIME G Resonance	(0 - 100) 0 - 100
00 3D	0ddd dddd	FLANGER PRIME G Manual	(0 - 100) 0 - 100
00 3E	0000 000d	FLANGER PRIME G Turbo Sw	(0 - 1) OFF, ON
00 3F	0ddd dddd	FLANGER PRIME G Low damp	(0 - 100) -100 - +0
00 40	0ddd dddd	FLANGER PRIME G High damp	(0 - 100) -100 - +0
00 41	000d dddd	FLANGER PRIME G Low cut	(0 - 17) FLAT, 20.0Hz, 25.0Hz, 31.5Hz, 40.0Hz, 50.0Hz, 63.0Hz, 80.0Hz, 100Hz, 125Hz, 160Hz, 200Hz, 250Hz, 315Hz, 400Hz, 500Hz, 630Hz, 800Hz
00 42	0000 dddd	FLANGER PRIME G High cut	(0 - 15) 630Hz, 800Hz, 1.00kHz, 1.25kHz, 1.60kHz, 2.00kHz, 2.50kHz, 3.15kHz, 4.00kHz, 5.00kHz, 6.30kHz, 8.00kHz, 10.0kHz, 12.5kHz, 16.0kHz, FLAT
00 43	0000 dddd	FLANGER PRIME G Separation	(0 - 12) 0deg, 15deg, 30deg, 45deg, 60deg, 75deg, 90deg, 105deg, 120deg, 135deg, 150deg, 165deg, 180deg
00 44	000d dddd	FLANGER PRIME G Step rate	(0 - 16) OFF, whole, dotted half, whole triplet, half, dotted quarter, half triplet, quarter, dotted 8th, quarter triplet, 8th, dotted 16th, 8th triplet, 16th, dotted 32nd, 16th triplet, 32nd
00 45	0000 dddd	FLANGER PRIME G Waveform	(0 - 9) 1 - 10
00 46	0ddd dddd	FLANGER PRIME G Input sens	(0 - 100) 0 - 100
00 47	0000 000d	FLANGER PRIME G Polarity	(0 - 1) DOWN, UP
00 48	0ddd dddd	FLANGER PRIME B Modulation Depth	(0 - 100) 0 - 100
00 49	0ddd dddd	FLANGER PRIME B Resonance	(0 - 100) 0 - 100
00 4A	0ddd dddd	FLANGER PRIME B Manual	(0 - 100) 0 - 100
00 4B	0000 000d	FLANGER PRIME B Turbo Sw	(0 - 1) OFF, ON
00 4C	0ddd dddd	FLANGER PRIME B Low damp	(0 - 100) -100 - +0
00 4D	0ddd dddd	FLANGER PRIME B High damp	(0 - 100) -100 - +0
00 4E	000d dddd	FLANGER PRIME B Low cut	(0 - 17) FLAT, 20.0Hz, 25.0Hz, 31.5Hz, 40.0Hz, 50.0Hz, 63.0Hz, 80.0Hz, 100Hz, 125Hz, 160Hz, 200Hz, 250Hz, 315Hz, 400Hz, 500Hz, 630Hz, 800Hz
00 4F	0000 dddd	FLANGER PRIME B High cut	(0 - 15) 630Hz, 800Hz, 1.00kHz, 1.25kHz, 1.60kHz, 2.00kHz, 2.50kHz, 3.15kHz, 4.00kHz, 5.00kHz, 6.30kHz, 8.00kHz, 10.0kHz, 12.5kHz, 16.0kHz, FLAT
00 50	0000 dddd	FLANGER PRIME B Separation	(0 - 12) 0deg, 15deg, 30deg, 45deg, 60deg, 75deg, 90deg, 105deg, 120deg, 135deg, 150deg, 165deg, 180deg
00 51	000d dddd	FLANGER PRIME B Step rate	(0 - 16) OFF, whole, dotted half, whole triplet, half, dotted quarter, half triplet, quarter, dotted 8th, quarter triplet, 8th, dotted 16th, 8th triplet, 16th, dotted 32nd, 16th triplet, 32nd
00 52	0000 dddd	FLANGER PRIME B Waveform	(0 - 9) 1 - 10
00 53	0ddd dddd	FLANGER PRIME B Input sens	(0 - 100) 0 - 100
00 54	0000 000d	FLANGER PRIME B Polarity	(0 - 1) DOWN, UP
00 55	0000 00dd	PHASER Type	(0 - 2) PRIME G, PRIME B, SCRIPT
00 56	000d dddd	PHASER Note	(0 - 17) 32th, 16th triplet, dotted 32nd, 16th, 8th triplet, dotted 32nd, 8th, quarter triplet, dotted 8th, quarter, half triplet, dotted quarter, half, whole triplet, dotted half, whole, dotted whole, double whole
00 57	0ddd dddd	PHASER Direct Level	(0 - 100) 0 - 100
00 58	0ddd dddd	PHASER PRIME G Modulation Depth	(0 - 100) 0 - 100
00 59	0ddd dddd	PHASER PRIME G Resonance	(0 - 100) 0 - 100
00 5A	0ddd dddd	PHASER PRIME G Manual	(0 - 100) 0 - 100
00 5B	0ddd dddd	PHASER PRIME G Low damp	(0 - 100) -100 - 0
00 5C	0ddd dddd	PHASER PRIME G High damp	(0 - 100) -100 - 0
00 5D	000d dddd	PHASER PRIME G Low cut	(0 - 17) FLAT, 20.0Hz, 25.0Hz, 31.5Hz, 40.0Hz, 50.0Hz, 63.0Hz, 80.0Hz, 100Hz, 125Hz, 160Hz, 200Hz, 250Hz, 315Hz, 400Hz, 500Hz, 630Hz, 800Hz
00 5E	0000 dddd	PHASER PRIME G High cut	(0 - 15) 630Hz, 800Hz, 1.00kHz, 1.25kHz, 1.60kHz, 2.00kHz, 2.50kHz, 3.15kHz, 4.00kHz, 5.00kHz, 6.30kHz, 8.00kHz, 10.0kHz, 12.5kHz, 16.0kHz, FLAT
00 5F	0000 dddd	PHASER PRIME G Separation	(0 - 12) 0deg, 15deg, 30deg, 45deg, 60deg, 75deg, 90deg, 105deg, 120deg, 135deg, 150deg, 165deg, 180deg
00 60	0000 dddd	PHASER PRIME G Waveform	(0 - 9) 1 - 10
00 61	0ddd dddd	PHASER PRIME G Input sens	(0 - 100) 0 - 100
00 62	0000 000d	PHASER PRIME G Polarity	(0 - 1) DOWN, UP
00 63	0000 0ddd	PHASER PRIME G Stage	(0 - 4) 2, 4, 8, 16, 24
00 64	000d dddd	PHASER PRIME G Phaser step rate	(0 - 16) OFF, whole, dotted half, whole triplet, half, dotted quarter, half triplet, quarter, dotted 8th, quarter triplet, 8th, dotted 16th, 8th triplet, 16th, dotted 32nd, 16th triplet, 32nd
00 65	0000 000d	PHASER PRIME G Bi-phase	(0 - 1) OFF, ON
00 66	0ddd dddd	PHASER PRIME B Modulation Depth	(0 - 100) 0 - 100
00 67	0ddd dddd	PHASER PRIME B Resonance	(0 - 100) 0 - 100
00 68	0ddd dddd	PHASER PRIME B Manual	(0 - 100) 0 - 100
00 69	0ddd dddd	PHASER PRIME B Low damp	(0 - 100) -100 - 0
00 6A	0ddd dddd	PHASER PRIME B High damp	(0 - 100) -100 - 0
00 6B	000d dddd	PHASER PRIME B Low cut	(0 - 17) FLAT, 20.0Hz, 25.0Hz, 31.5Hz, 40.0Hz, 50.0Hz, 63.0Hz, 80.0Hz, 100Hz, 125Hz, 160Hz, 200Hz, 250Hz, 315Hz, 400Hz, 500Hz, 630Hz, 800Hz
00 6C	0000 dddd	PHASER PRIME B High cut	(0 - 15) 630Hz, 800Hz, 1.00kHz, 1.25kHz, 1.60kHz, 2.00kHz, 2.50kHz, 3.15kHz, 4.00kHz, 5.00kHz, 6.30kHz, 8.00kHz, 10.0kHz, 12.5kHz, 16.0kHz, FLAT
00 6D	0000 dddd	PHASER PRIME B Separation	(0 - 12) 0deg, 15deg, 30deg, 45deg, 60deg, 75deg, 90deg, 105deg, 120deg, 135deg,

00 6E	0000 dddd	PHASER PRIME B Waveform	150deg, 165deg, 180deg (0 - 9) 1 - 10
00 6F	0ddd dddd	PHASER PRIME B Input sens	(0 - 100) 0 - 100
00 70	0000 000d	PHASER PRIME B Polarity	(0 - 1) DOWN, UP
00 71	0000 0ddd	PHASER PRIME B Phaser stage	(0 - 4) 2, 4, 8, 16, 24
00 72	000d dddd	PHASER PRIME B Phaser step rate	(0 - 16) OFF, whole, dotted half, whole triplet, half, dotted quarter, half triplet, quarter, dotted 8th, quarter triplet, 8th, dotted 16th, 8th triplet, 16th, dotted 32nd, 16th triplet, 32nd
00 73	0000 000d	PHASER PRIME B Bi-phase	(0 - 1) OFF, ON
00 74	000d dddd	Dummy	
00 75	0ddd dddd	PHASER Script Modulation Depth	(0 - 100) 0 - 100
00 76	0000 000d	C-VIBE Type	(0 - 1) CHORUS, VIBRATO
00 77	000d dddd	C-VIBE Note	(0 - 17) 32th, 16th triplet, dotted 32nd, 16th, 8th triplet, dotted 32nd, 8th, quarter triplet, dotted 8th, quarter, half triplet, dotted quarter, half, whole triplet, dotted half, whole, dotted whole, double whole
00 78	0ddd dddd	C-VIBE Modulation Depth	(0 - 100) 0 - 100
00 79	0ddd dddd	C-VIBE Direct Level	(0 - 100) 0 - 100
00 7A	0000 000d	VIBRATO Type	(0 - 1) PRIME, SCANNER
00 7B	000d dddd	VIBRATO Note	(0 - 17) 32th, 16th triplet, dotted 32nd, 16th, 8th triplet, dotted 32nd, 8th, quarter triplet, dotted 8th, quarter, half triplet, dotted quarter, half, whole triplet, dotted half, whole, dotted whole, double whole
00 7C	0ddd dddd	VIBRATO Direct Level	(0 - 100) 0 - 100
00 7D	0ddd dddd	VIBRATO Prime Modulation Depth	(0 - 100) 0 - 100
00 7E	0ddd dddd	VIBRATO Prime VIBRATO Color	(0 - 100) 0 - 100
00 7F	0000 000d	Trigger	(0 - 1) OFF, ON
01 00	0ddd dddd	VIBRATO Prime Rise time	(0 - 100) 0 - 100
01 01	0ddd dddd	VIBRATO Prime Envelope sens	(0 - 100) 0 - 100
01 02	0000 dddd	VIBRATO Prime Waveform	(0 - 9) 1 - 10
01 03	0ddd dddd	VIBRATO Prime Input sens	(0 - 100) 0 - 100
01 04	0000 0ddd	SCANNER mode	(0 - 5) V1, V2, V3, C1, C2, C3
01 05	0000 00dd	TREMOLO Type	(0 - 3) PRIME T, PRIME P, TWIN, DELUXE
01 06	000d dddd	TREMOLO Note	(0 - 17) 32th, 16th triplet, dotted 32nd, 16th, 8th triplet, dotted 32nd, 8th, quarter triplet, dotted 8th, quarter, half triplet, dotted quarter, half, whole triplet, dotted half, whole, dotted whole, double whole
01 07	0ddd dddd	TREMOLO Direct Level	(0 - 100) 0 - 100
01 08	0ddd dddd	TREMOLO Prime T Modulation Depth	(0 - 100) 0 - 100
01 09	0000 000d	Dummy	
01 0A	0ddd dddd	TREMOLO Prime T Rise time	(0 - 100) 0 - 100
01 0B	0ddd dddd	TREMOLO Prime T Envelope sens	(0 - 100) 0 - 100
01 0C	0ddd dddd	TREMOLO Prime T Waveform	(0 - 99) 1 - 100
01 0D	0ddd dddd	TREMOLO Prime T Input Sens	(0 - 100) 0 - 100
01 0E	0ddd dddd	TREMOLO Prime P Modulation Depth	(0 - 100) 0 - 100
01 0F	0000 000d	Dummy	
01 10	0ddd dddd	TREMOLO Prime P Rise time	(0 - 100) 0 - 100
01 11	0ddd dddd	TREMOLO Prime P Envelope sens	(0 - 100) 0 - 100
01 12	0ddd dddd	TREMOLO Prime P Waveform	(0 - 99) 1 - 100
01 13	0ddd dddd	TREMOLO Prime P Input Sens	(0 - 100) 0 - 100
01 14	0ddd dddd	TREMOLO TWIN/DELUXE Intensity	(0 - 100) 0 - 100
01 15	0000 0ddd	DIMENSION mode	(0 - 4) 1, 2, 3, 4, USER
01 16	0000 000d	DIMENSION user mode1 sw	(0 - 1) OFF, ON
01 17	0000 000d	DIMENSION user mode2 sw	(0 - 1) OFF, ON
01 18	0000 000d	DIMENSION user mode3 sw	(0 - 1) OFF, ON
01 19	0000 000d	DIMENSION user mode4 sw	(0 - 1) OFF, ON
01 1A	0000 000d	DIMENSION user mode5 sw	(0 - 1) OFF, ON
01 1B	0ddd dddd	DIMENSION Direct Level	(0 - 100) 0 - 100
01 1C	0ddd dddd	RING MODULATION Frequency	(0 - 100) 82.4, 86.1, 90.0, 94.1, 98.3, 102.8, 107.4, 112.3, 117.3, 122.6, 128.2, 134.0, 140.0, 146.3, 152.9, 159.9, 167.1, 174.6, 182.5, 190.7, 199.4, 208.4, 217.8, 227.6, 237.9, 248.6, 259.9, 271.6, 283.9, 296.7, 310.1, 324.1, 338.7, 354.0, 370.0, 386.7, 404.2, 422.4, 441.5, 461.4, 482.3, 504.1, 526.8, 550.6, 575.5, 601.5, 628.6, 657.0, 686.7, 717.7, 750.1, 784.0, 806.5, 829.6, 853.4, 877.9, 903.1, 929.0, 955.7, 983.1, 1011.3, 1040.4, 1070.2, 1100.9, 1132.5, 1165.0, 1198.4, 1232.8, 1268.2, 1304.6, 1342.0, 1380.5, 1420.2, 1460.9, 1502.8, 1546.0, 1590.3, 1636.0, 1682.9, 1731.2, 1780.9, 1832.0, 1884.5, 1938.6, 1994.3, 2051.5, 2110.3, 2170.9, 2233.2, 2297.3, 2363.2, 2431.0, 2500.8, 2572.5, 2646.4, 2722.3, 2800.4, 2880.8, 2963.4, 3048.5, 3136.0
01 1D	0000 0aaa	RING MODULATION Frequency Modulation rate	(1 - 2000) 0.01Hz - 20.00Hz
	0000 bbbb		
	0000 cccc		
01 20	0ddd dddd	RING MODULATION Frequency Modulation depth	(0 - 100) 0 - 100
01 21	0000 00dd	RING MODULATION Intelligent	(0 - 2) OFF, GUITAR, BASS
01 22	0ddd dddd	RING MODULATION Direct Level	(0 - 100) 0 - 100
01 23	0000 000d	ROTARY Speed	(0 - 1) SLOW, FAST
01 24	0000 0aaa	ROTARY Slow Rate	(1 - 2000) 0.01Hz - 20.00Hz
	0000 bbbb		

01 27	0000 cccc 0000 0aaa	ROTARY Fast Rate	(1 - 2000) 0.01Hz - 20.00Hz
01 2A	0000 bbbb 0000 cccc 0ddd dddd	ROTARY Rise time	(1 - 100) 1 - 100
01 2B	0ddd dddd	ROTARY Fall time	(1 - 100) 1 - 100
01 2C	0ddd dddd	ROTARY Mic distance	(0 - 100) 0 - 100
01 2D	0000 aaaa	ROTARY Rotor/Horn balance	(0 - 200) 100:0, 100:1, 100:2, 100:3, 100:4, 100:5, 100:6, 100:7, 100:8, 100:9, 100:10, 100:11, 100:12, 100:13, 100:14, 100:15, 100:16, 100:17, 100:18, 100:19, 100:20, 100:21, 100:22, 100:23, 100:24, 100:25, 100:26, 100:27, 100:28, 100:29, 100:30, 100:31, 100:32, 100:33, 100:34, 100:35, 100:36, 100:37, 100:38, 100:39, 100:40, 100:41, 100:42, 100:43, 100:44, 100:45, 100:46, 100:47, 100:48, 100:49, 100:50, 100:51, 100:52, 100:53, 100:54, 100:55, 100:56, 100:57, 100:58, 100:59, 100:60, 100:61, 100:62, 100:63, 100:64, 100:65, 100:66, 100:67, 100:68, 100:69, 100:70, 100:71, 100:72, 100:73, 100:74, 100:75, 100:76, 100:77, 100:78, 100:79, 100:80, 100:81, 100:82, 100:83, 100:84, 100:85, 100:86, 100:87, 100:88, 100:89, 100:90, 100:91, 100:92, 100:93, 100:94, 100:95, 100:96, 100:97, 100:98, 100:99, 100:100, 99:100, 98:100, 97:100, 96:100, 95:100, 94:100, 93:100, 92:100, 91:100, 90:100, 89:100, 88:100, 87:100, 86:100, 85:100, 84:100, 83:100, 82:100, 81:100, 80:100, 79:100, 78:100, 77:100, 76:100, 75:100, 74:100, 73:100, 72:100, 71:100, 70:100, 69:100, 68:100, 67:100, 66:100, 65:100, 64:100, 63:100, 62:100, 61:100, 60:100, 59:100, 58:100, 57:100, 56:100, 55:100, 54:100, 53:100, 52:100, 51:100, 50:100, 49:100, 48:100, 47:100, 46:100, 45:100, 44:100, 43:100, 42:100, 41:100, 40:100, 39:100, 38:100, 37:100, 36:100, 35:100, 34:100, 33:100, 32:100, 31:100, 30:100, 29:100, 28:100, 27:100, 26:100, 25:100, 24:100, 23:100, 22:100, 21:100, 20:100, 19:100, 18:100, 17:100, 16:100, 15:100, 14:100, 13:100, 12:100, 11:100, 10:100, 9:100, 8:100, 7:100, 6:100, 5:100, 4:100, 3:100, 2:100, 1:100, 0:100
01 2F	0000 bbbb 0ddd dddd	ROTARY Drive	(0 - 100) 0 - 100
01 30	0ddd dddd	ROTARY Direct Level	(0 - 100) 0 - 100
01 31	0000 0ddd	FILTER Type	(0 - 4) A-WAH G, A-WAH B, T-WAH G, T-WAH B, PATTERN
01 32	000d dddd	FILTER Note	(0 - 17) 32th, 16th triplet, dotted 32nd, 16th, 8th triplet, dotted 32nd, 8th, quarter triplet, dotted 8th, quarter, half triplet, dotted quarter, half, whole triplet, dotted half, whole, dotted whole, double whole
01 33	0ddd dddd	FILTER Direct Level	(0 - 100) 0 - 100
01 34	0ddd dddd	FILTER AUTO WAH G Modulation Depth	(0 - 100) 0 - 100
01 35	0ddd dddd	FILTER AUTO WAH G Frequency	(0 - 100) 0 - 100
01 36	0ddd dddd	FILTER AUTO WAH G Resonance	(0 - 100) 0 - 100
01 37	0000 00dd	FILTER AUTO WAH G Filter mode	(0 - 2) LPF, HPF, BPF
01 38	0000 0ddd	FILTER AUTO WAH G Waveform	(0 - 5) SIN, TRI, SQR, SAW-UP, SAW-DOWN, RAMP
01 39	0ddd dddd	FILTER AUTO WAH B Modulation Depth	(0 - 100) 0 - 100
01 3A	0ddd dddd	FILTER AUTO WAH B Frequency	(0 - 100) 0 - 100
01 3B	0ddd dddd	FILTER AUTO WAH B Resonance	(0 - 100) 0 - 100
01 3C	0000 00dd	FILTER AUTO WAH B Filter mode	(0 - 2) LPF, HPF, BPF
01 3D	0000 0ddd	FILTER AUTO WAH B Waveform	(0 - 5) SIN, TRI, SQR, SAW-UP, SAW-DOWN, RAMP
01 3E	0000 00dd	FILTER TOUCH WAH G Filter mode	(0 - 2) LPF, HPF, BPF
01 3F	0000 000d	FILTER TOUCH WAH G Polarity	(0 - 1) DOWN, UP
01 40	0ddd dddd	FILTER TOUCH WAH G sens	(0 - 100) 0 - 100
01 41	0ddd dddd	FILTER TOUCH WAH G frequency	(0 - 100) 0 - 100
01 42	0ddd dddd	FILTER TOUCH WAH G Resonance	(0 - 100) 0 - 100
01 43	0ddd dddd	FILTER TOUCH WAH G Decay	(0 - 100) 0 - 100
01 44	0000 00dd	FILTER TOUCH WAH B Filter mode	(0 - 2) LPF, HPF, BPF
01 45	0000 000d	FILTER TOUCH WAH B Polarity	(0 - 1) DOWN, UP
01 46	0ddd dddd	FILTER TOUCH WAH B sens	(0 - 100) 0 - 100
01 47	0ddd dddd	FILTER TOUCH WAH B frequency	(0 - 100) 0 - 100
01 48	0ddd dddd	FILTER TOUCH WAH B Resonance	(0 - 100) 0 - 100
01 49	0ddd dddd	FILTER TOUCH WAH B Decay	(0 - 100) 0 - 100
01 4A	0000 00dd	FILTER PATTERN Filter mode	(0 - 2) LPF, HPF, BPF
01 4B	0000 dddd	FILTER PATTERN Filter pattern type	(0 - 10) PAT1, PAT2, PAT3, PAT4, PAT5, PAT6, PAT7, PAT8, PAT9, PAT10, USER
01 4C	0000 00dd	FILTER PATTERN Filter pattern Step number	(0 - 3) 8, 12, 16, 24
01 4D	0ddd dddd	FILTER PATTERN Resonance	(0 - 100) 0 - 100
01 4E	0ddd dddd	FILTER PATTERN Transition	(0 - 100) 0 - 100
01 4F	0ddd dddd	FILTER PATTERN FILTER1 Frequency	(0 - 100) *1 0 - 100
01 50	0ddd dddd	FILTER PATTERN FILTER2 Frequency	(0 - 100) *1 0 - 100
01 51	0ddd dddd	FILTER PATTERN FILTER3 Frequency	(0 - 100) *1 0 - 100
01 52	0ddd dddd	FILTER PATTERN FILTER4 Frequency	(0 - 100) *1 0 - 100
01 53	0ddd dddd	FILTER PATTERN FILTER5 Frequency	(0 - 100) *1 0 - 100
01 54	0ddd dddd	FILTER PATTERN FILTER6 Frequency	(0 - 100) *1 0 - 100
01 55	0ddd dddd	FILTER PATTERN FILTER7 Frequency	(0 - 100) *1 0 - 100
01 56	0ddd dddd	FILTER PATTERN FILTER8 Frequency	(0 - 100) *1 0 - 100
01 57	0ddd dddd	FILTER PATTERN FILTER9 Frequency	(0 - 100) *1 0 - 100
01 58	0ddd dddd	FILTER PATTERN FILTER10 Frequency	(0 - 100) *1 0 - 100
01 59	0ddd dddd	FILTER PATTERN FILTER11 Frequency	(0 - 100) *1 0 - 100
01 5A	0ddd dddd	FILTER PATTERN FILTER12 Frequency	(0 - 100) *1 0 - 100
01 5B	0ddd dddd	FILTER PATTERN FILTER13 Frequency	(0 - 100) *1 0 - 100

01 5C	0ddd dddd	FILTER PATTERN FILTER14 Frequency	(0 - 100) 0 - 100	*1
01 5D	0ddd dddd	FILTER PATTERN FILTER15 Frequency	(0 - 100) 0 - 100	*1
01 5E	0ddd dddd	FILTER PATTERN FILTER16 Frequency	(0 - 100) 0 - 100	*1
01 5F	0ddd dddd	FILTER PATTERN FILTER17 Frequency	(0 - 100) 0 - 100	*1
01 60	0ddd dddd	FILTER PATTERN FILTER18 Frequency	(0 - 100) 0 - 100	*1
01 61	0ddd dddd	FILTER PATTERN FILTER19 Frequency	(0 - 100) 0 - 100	*1
01 62	0ddd dddd	FILTER PATTERN FILTER20 Frequency	(0 - 100) 0 - 100	*1
01 63	0ddd dddd	FILTER PATTERN FILTER21 Frequency	(0 - 100) 0 - 100	*1
01 64	0ddd dddd	FILTER PATTERN FILTER22 Frequency	(0 - 100) 0 - 100	*1
01 65	0ddd dddd	FILTER PATTERN FILTER23 Frequency	(0 - 100) 0 - 100	*1
01 66	0ddd dddd	FILTER PATTERN FILTER24 Frequency	(0 - 100) 0 - 100	*1
01 67	000d dddd	SLICER Note	(0 - 17) 32th, 16th triplet, dotted 32nd, 16th, 8th triplet, dotted 32nd, 8th, quarter triplet, dotted 8th, quarter, half triplet, dotted quarter, half, whole triplet, dotted half, whole, dotted whole, double whole	
01 68	00dd dddd	SLICER Pattern	(0 - 50) P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12, P13, P14, P15, P16, P17, P18, P19, P20, P21, P22, P23, P24, P25, P26, P27, P28, P29, P30, H1, H2, H3, H4, H5, H6, H7, H8, H9, H10, H11, H12, H13, H14, H15, H16, H17, H18, H19, H20, USER	
01 69	0000 0ddd	SLICER FX Type	(0 - 6) OFF, PITCH, FLANGER, PHASER, SWEEP, FILTER, RING	*2
01 6A	0000 00dd	SLICER Step number	(0 - 3) 8, 12, 16, 24	*2
01 6B	0ddd dddd	SLICER USER Pattern STEP1 Length	(0 - 100) 0 - 100	*2
01 6C	0ddd dddd	SLICER USER Pattern STEP1 Level	(0 - 100) 0 - 100	*2
01 6D	0000 0ddd	SLICER USER Pattern STEP1 Band	(0 - 6) THRU, BAND1, BAND2, BAND3, BAND4, BAND5, BAND6	*2
01 6E	0ddd dddd	SLICER USER Pattern STEP1 Effect Level	(0 - 100) 0 - 100	*2
01 6F	000d dddd	SLICER USER Pattern STEP1 Effect pitch	(0 - 24) -12 - +12	*2
01 70	0ddd dddd	SLICER USER Pattern STEP2 Length	(0 - 100) 0 - 100	*2
01 71	0ddd dddd	SLICER USER Pattern STEP2 Level	(0 - 100) 0 - 100	*2
01 72	0000 0ddd	SLICER USER Pattern STEP2 Band	(0 - 6) THRU, BAND1, BAND2, BAND3, BAND4, BAND5, BAND6	*2
01 73	0ddd dddd	SLICER USER Pattern STEP2 Effect Level	(0 - 100) 0 - 100	*2
01 74	000d dddd	SLICER USER Pattern STEP2 Effect pitch	(0 - 24) -12 - +12	*2
01 75	0ddd dddd	SLICER USER Pattern STEP3 Length	(0 - 100) 0 - 100	*2
01 76	0ddd dddd	SLICER USER Pattern STEP3 Level	(0 - 100) 0 - 100	*2
01 77	0000 0ddd	SLICER USER Pattern STEP3 Band	(0 - 6) THRU, BAND1, BAND2, BAND3, BAND4, BAND5, BAND6	*2
01 78	0ddd dddd	SLICER USER Pattern STEP3 Effect Level	(0 - 100) 0 - 100	*2
01 79	000d dddd	SLICER USER Pattern STEP3 Effect pitch	(0 - 24) -12 - +12	*2
01 7A	0ddd dddd	SLICER USER Pattern STEP4 Length	(0 - 100) 0 - 100	*2
01 7B	0ddd dddd	SLICER USER Pattern STEP4 Level	(0 - 100) 0 - 100	*2
01 7C	0000 0ddd	SLICER USER Pattern STEP4 Band	(0 - 6) THRU, BAND1, BAND2, BAND3, BAND4, BAND5, BAND6	*2
01 7D	0ddd dddd	SLICER USER Pattern STEP4 Effect Level	(0 - 100) 0 - 100	*2
01 7E	000d dddd	SLICER USER Pattern STEP4 Effect pitch	(0 - 24) -12 - +12	*2
01 7F	0ddd dddd	SLICER USER Pattern STEP5 Length	(0 - 100) 0 - 100	*2
02 00	0ddd dddd	SLICER USER Pattern STEP5 Level	(0 - 100) 0 - 100	*2
02 01	0000 0ddd	SLICER USER Pattern STEP5 Band	(0 - 6) THRU, BAND1, BAND2, BAND3, BAND4, BAND5, BAND6	*2
02 02	0ddd dddd	SLICER USER Pattern STEP5 Effect Level	(0 - 100) 0 - 100	*2
02 03	000d dddd	SLICER USER Pattern STEP5 Effect pitch	(0 - 24) -12 - +12	*2
02 04	0ddd dddd	SLICER USER Pattern STEP6 Length	(0 - 100) 0 - 100	*2
02 05	0ddd dddd	SLICER USER Pattern STEP6 Level	(0 - 100) 0 - 100	*2
02 06	0000 0ddd	SLICER USER Pattern STEP6 Band	(0 - 6) THRU, BAND1, BAND2, BAND3, BAND4, BAND5, BAND6	*2
02 07	0ddd dddd	SLICER USER Pattern STEP6 Effect Level	(0 - 100) 0 - 100	*2
02 08	000d dddd	SLICER USER Pattern STEP6 Effect pitch	(0 - 24) -12 - +12	*2
02 09	0ddd dddd	SLICER USER Pattern STEP7 Length	(0 - 100) 0 - 100	*2
02 0A	0ddd dddd	SLICER USER Pattern STEP7 Level	(0 - 100) 0 - 100	*2
02 0B	0000 0ddd	SLICER USER Pattern STEP7 Band	(0 - 6) THRU, BAND1, BAND2, BAND3, BAND4, BAND5, BAND6	*2
02 0C	0ddd dddd	SLICER USER Pattern STEP7 Effect Level	(0 - 100) 0 - 100	*2
02 0D	000d dddd	SLICER USER Pattern STEP7 Effect pitch	(0 - 24) -12 - +12	*2
02 0E	0ddd dddd	SLICER USER Pattern STEP8 Length	(0 - 100) 0 - 100	*2
02 0F	0ddd dddd	SLICER USER Pattern STEP8 Level	(0 - 100) 0 - 100	*2
02 10	0000 0ddd	SLICER USER Pattern STEP8 Band	(0 - 6) THRU, BAND1, BAND2, BAND3, BAND4, BAND5, BAND6	*2
02 11	0ddd dddd	SLICER USER Pattern STEP8 Effect Level	(0 - 100) 0 - 100	*2
02 12	000d dddd	SLICER USER Pattern STEP8 Effect pitch	(0 - 24) -12 - +12	*2
02 13	0ddd dddd	SLICER USER Pattern STEP9 Length	(0 - 100) 0 - 100	*2
02 14	0ddd dddd	SLICER USER Pattern STEP9 Level	(0 - 100) 0 - 100	*2
02 15	0000 0ddd	SLICER USER Pattern STEP9 Band	(0 - 6) THRU, BAND1, BAND2, BAND3, BAND4, BAND5, BAND6	*2
02 16	0ddd dddd	SLICER USER Pattern STEP9 Effect Level	(0 - 100) 0 - 100	*2
02 17	000d dddd	SLICER USER Pattern STEP9 Effect pitch	(0 - 24) -12 - +12	*2
02 18	0ddd dddd	SLICER USER Pattern STEP10 Length	(0 - 100) 0 - 100	*2

02 19	0ddd dddd	SLICER USER Pattern STEP10 Level	(0 - 100)	*2
02 1A	0000 0ddd	SLICER USER Pattern STEP10 Band	0 - 100	
02 1B	0ddd dddd	SLICER USER Pattern STEP10 Effect Level	(0 - 6)	*2
02 1C	000d dddd	SLICER USER Pattern STEP10 Effect pitch	THRU, BAND1, BAND2, BAND3, BAND4, BAND5, BAND6	
02 1D	0ddd dddd	SLICER USER Pattern STEP11 Length	(0 - 100)	*2
02 1E	0ddd dddd	SLICER USER Pattern STEP11 Level	0 - 100	
02 1F	0000 0ddd	SLICER USER Pattern STEP11 Band	(0 - 24)	*2
02 20	0ddd dddd	SLICER USER Pattern STEP11 Effect Level	-12 - +12	
02 21	000d dddd	SLICER USER Pattern STEP11 Effect pitch	(0 - 100)	*2
02 22	0ddd dddd	SLICER USER Pattern STEP12 Length	0 - 100	
02 23	0ddd dddd	SLICER USER Pattern STEP12 Level	(0 - 100)	*2
02 24	0000 0ddd	SLICER USER Pattern STEP12 Band	0 - 100	
02 25	0ddd dddd	SLICER USER Pattern STEP12 Effect Level	(0 - 6)	*2
02 26	000d dddd	SLICER USER Pattern STEP12 Effect pitch	THRU, BAND1, BAND2, BAND3, BAND4, BAND5, BAND6	
02 27	0ddd dddd	SLICER USER Pattern STEP13 Length	(0 - 100)	*2
02 28	0ddd dddd	SLICER USER Pattern STEP13 Level	0 - 100	
02 29	0000 0ddd	SLICER USER Pattern STEP13 Band	(0 - 24)	*2
02 2A	0ddd dddd	SLICER USER Pattern STEP13 Effect Level	-12 - +12	
02 2B	000d dddd	SLICER USER Pattern STEP13 Effect pitch	(0 - 100)	*2
02 2C	0ddd dddd	SLICER USER Pattern STEP14 Length	0 - 100	
02 2D	0ddd dddd	SLICER USER Pattern STEP14 Level	(0 - 100)	*2
02 2E	0000 0ddd	SLICER USER Pattern STEP14 Band	0 - 100	
02 2F	0ddd dddd	SLICER USER Pattern STEP14 Effect Level	(0 - 6)	*2
02 30	000d dddd	SLICER USER Pattern STEP14 Effect pitch	THRU, BAND1, BAND2, BAND3, BAND4, BAND5, BAND6	
02 31	0ddd dddd	SLICER USER Pattern STEP15 Length	(0 - 100)	*2
02 32	0ddd dddd	SLICER USER Pattern STEP15 Level	0 - 100	
02 33	0000 0ddd	SLICER USER Pattern STEP15 Band	(0 - 24)	*2
02 34	0ddd dddd	SLICER USER Pattern STEP15 Effect Level	-12 - +12	
02 35	000d dddd	SLICER USER Pattern STEP15 Effect pitch	(0 - 100)	*2
02 36	0ddd dddd	SLICER USER Pattern STEP16 Length	0 - 100	
02 37	0ddd dddd	SLICER USER Pattern STEP16 Level	(0 - 100)	*2
02 38	0000 0ddd	SLICER USER Pattern STEP16 Band	0 - 100	
02 39	0ddd dddd	SLICER USER Pattern STEP16 Effect Level	(0 - 6)	*2
02 3A	000d dddd	SLICER USER Pattern STEP16 Effect pitch	THRU, BAND1, BAND2, BAND3, BAND4, BAND5, BAND6	
02 3B	0ddd dddd	SLICER USER Pattern STEP17 Length	(0 - 100)	*2
02 3C	0ddd dddd	SLICER USER Pattern STEP17 Level	0 - 100	
02 3D	0000 0ddd	SLICER USER Pattern STEP17 Band	(0 - 24)	*2
02 3E	0ddd dddd	SLICER USER Pattern STEP17 Effect Level	-12 - +12	
02 3F	000d dddd	SLICER USER Pattern STEP17 Effect pitch	(0 - 100)	*2
02 40	0ddd dddd	SLICER USER Pattern STEP18 Length	0 - 100	
02 41	0ddd dddd	SLICER USER Pattern STEP18 Level	(0 - 100)	*2
02 42	0000 0ddd	SLICER USER Pattern STEP18 Band	0 - 100	
02 43	0ddd dddd	SLICER USER Pattern STEP18 Effect Level	(0 - 6)	*2
02 44	000d dddd	SLICER USER Pattern STEP18 Effect pitch	THRU, BAND1, BAND2, BAND3, BAND4, BAND5, BAND6	
02 45	0ddd dddd	SLICER USER Pattern STEP19 Length	(0 - 100)	*2
02 46	0ddd dddd	SLICER USER Pattern STEP19 Level	0 - 100	
02 47	0000 0ddd	SLICER USER Pattern STEP19 Band	(0 - 24)	*2
02 48	0ddd dddd	SLICER USER Pattern STEP19 Effect Level	-12 - +12	
02 49	000d dddd	SLICER USER Pattern STEP19 Effect pitch	(0 - 100)	*2
02 4A	0ddd dddd	SLICER USER Pattern STEP20 Length	0 - 100	
02 4B	0ddd dddd	SLICER USER Pattern STEP20 Level	(0 - 100)	*2
02 4C	0000 0ddd	SLICER USER Pattern STEP20 Band	0 - 100	
02 4D	0ddd dddd	SLICER USER Pattern STEP20 Effect Level	(0 - 6)	*2
02 4E	000d dddd	SLICER USER Pattern STEP20 Effect pitch	THRU, BAND1, BAND2, BAND3, BAND4, BAND5, BAND6	
02 4F	0ddd dddd	SLICER USER Pattern STEP21 Length	(0 - 100)	*2
02 50	0ddd dddd	SLICER USER Pattern STEP21 Level	0 - 100	
02 51	0000 0ddd	SLICER USER Pattern STEP21 Band	(0 - 24)	*2
02 52	0ddd dddd	SLICER USER Pattern STEP21 Effect Level	-12 - +12	
02 53	000d dddd	SLICER USER Pattern STEP21 Effect pitch	(0 - 100)	*2
02 54	0ddd dddd	SLICER USER Pattern STEP22 Length	0 - 100	
02 55	0ddd dddd	SLICER USER Pattern STEP22 Level	(0 - 100)	*2
02 56	0000 0ddd	SLICER USER Pattern STEP22 Band	0 - 100	
02 57	0ddd dddd	SLICER USER Pattern STEP22 Effect Level	(0 - 6)	*2
02 58	000d dddd	SLICER USER Pattern STEP22 Effect pitch	THRU, BAND1, BAND2, BAND3, BAND4, BAND5, BAND6	

02 59	0ddd dddd	SLICER USER Pattern STEP23 Length	-12 - +12 (0 - 100) *2 0 - 100
02 5A	0ddd dddd	SLICER USER Pattern STEP23 Level	(0 - 100) *2 0 - 100
02 5B	0000 0ddd	SLICER USER Pattern STEP23 Band	(0 - 6) *2 THRU, BAND1, BAND2, BAND3, BAND4, BAND5, BAND6
02 5C	0ddd dddd	SLICER USER Pattern STEP23 Effect Level	(0 - 100) *2 0 - 100
02 5D	000d dddd	SLICER USER Pattern STEP23 Effect pitch	(0 - 24) *2 -12 - +12
02 5E	0ddd dddd	SLICER USER Pattern STEP24 Length	(0 - 100) *2 0 - 100
02 5F	0ddd dddd	SLICER USER Pattern STEP24 Level	(0 - 100) *2 0 - 100
02 60	0000 0ddd	SLICER USER Pattern STEP24 Band	(0 - 6) *2 THRU, BAND1, BAND2, BAND3, BAND4, BAND5, BAND6
02 61	0ddd dddd	SLICER USER Pattern STEP24 Effect Level	(0 - 100) *2 0 - 100
02 62	000d dddd	SLICER USER Pattern STEP24 Effect pitch	(0 - 24) *2 -12 - +12
02 63	0ddd dddd	SLICER Attack	(0 - 100) 0 - 100
02 64	0ddd dddd	SLICER Duty	(0 - 98) 1 - 99
02 65	0ddd dddd	SLICER Direct Level	(0 - 100) 0 - 100
02 66	0000 0ddd	SLICER Output mode	(0 - 4) MONO, FIXED, RANDOM, PngPong, AUTO
02 67	0000 000d	OVERTONE Type	(0 - 1) OVERTONE, DETUNE
02 68	0ddd dddd	OVERTONE Direct Level	(0 - 100) 0 - 100
02 69	0ddd dddd	OVERTONE Overtone Lower Level	(0 - 100) 0 - 100
02 6A	0ddd dddd	OVERTONE Overtone Upper Level	(0 - 100) 0 - 100
02 6B	0ddd dddd	OVERTONE Overtone Unison Level	(0 - 100) 0 - 100
02 6C	0ddd dddd	OVERTONE Overtone Detune	(0 - 100) 0 - 100
02 6D	0ddd dddd	OVERTONE Overtone Tone Low	(0 - 100) -50 - +50
02 6E	0ddd dddd	OVERTONE Overtone Tone High	(0 - 100) -50 - +50
02 6F	0ddd dddd	OVERTONE Detune 1 Pitch	(0 - 100) -50 - +50
02 70	0ddd dddd	OVERTONE Detune 1 Level	(0 - 100) 0 - 100
02 71	0ddd dddd	OVERTONE Detune 2 Pitch	(0 - 100) -50 - +50
02 72	0ddd dddd	OVERTONE Detune 2 Level	(0 - 100) 0 - 100
02 73	0000 0ddd	TAP/CTL Function	(0 - 5) OFF, TAP, RESET, MOMENT, BANK UP, BANK DOWN
02 74	0000 000d	Dummy	
02 75	0000 0ddd	CTL1 Function	(0 - 5) OFF, TAP, RESET, MOMENT, BANK UP, BANK DOWN
02 76	0000 0ddd	CTL2 Function	(0 - 5) OFF, TAP, RESET, MOMENT, BANK UP, BANK DOWN
02 77	0000 0ddd	Exp Pedal Function	(0 - 5) OFF, RATE, DEPTH, E.LEVEL, PARAM1, PARAM2
02 78	0000 00aa	Exp target Min	(0 - 10100) offset:100 -100 - 10000
	0000 bbbb		
	0000 cccc		
	0000 dddd		
02 7C	0000 00aa	Exp target Max	(0 - 10100) offset:100 -100 - 10000
	0000 bbbb		
	0000 cccc		
	0000 dddd		
03 00	0000 000d	ASSIGN1 sw	(0 - 1) OFF, ON
03 01	0ddd dddd	ASSIGN1 source	(0 - 69) TAP/CTL, EXP PDL, CTL1 PDL, CTL2 PDL, INT PDL, WAVE PDL, INPUT, CC#1, CC#2, CC#3, CC#4, CC#5, CC#6, CC#7, CC#8, CC#9, CC#10, CC#11, CC#12, CC#13, CC#14, CC#15, CC#16, CC#17, CC#18, CC#19, CC#20, CC#21, CC#22, CC#23, CC#24, CC#25, CC#26, CC#27, CC#28, CC#29, CC#30, CC#31, CC#64, CC#65, CC#66, CC#67, CC#68, CC#69, CC#70, CC#71, CC#72, CC#73, CC#74, CC#75, CC#76, CC#77, CC#78, CC#79, CC#80, CC#81, CC#82, CC#83, CC#84, CC#85, CC#86, CC#87, CC#88, CC#89, CC#90, CC#91, CC#92, CC#93, CC#94, CC#95
03 02	0000 000d	Assign1 source mode	(0 - 1) MOMENT, TOGGLE
03 03	0000 000a	ASSIGN1 target	(0 - 264) Effect Switch, Rate, BPM, Mode, Effect Level, Insert Switch, Output Gain, Output Mode, Trigger, Chorus Type, Chorus Note, Chorus Depth, Chorus PreDly, Chorus Wavefm, Chorus Sweet, Chorus Bell, Chorus ELevel, Chorus DLevel, Chorus LoLevel, Chorus LoFreq, Chorus HiLevel, Chorus HiFreq, Chorus LoCut, Chorus HiCut, CE1Cho Note, CE1Cho Depth, CE1Cho ELevel, CE1Cho DLevel, CE1Cho LoLevel, CE1Cho LoFreq, CE1Cho HiLevel, CE1Cho HiFreq, CE1Cho Preamp, CE1Cho PreampG, CE1Cho PreampL, CE1Vib Note, CE1Vib Depth, CE1Vib ELevel, CE1Vib DLevel, CE1Vib LoLevel, CE1Vib LoFreq, CE1Vib HiLevel, CE1Vib HiFreq, CE1Vib Preamp, CE1Vib PreampG, CE1Vib PreampL, TriCho Note, TriCho LFO, TriCho Intens1, TriCho Intens2, TriCho Intens3, TriCho Bright, TriCho LoLevel, TriCho LoFreq, TriCho HiLevel, TriCho HiFreq, TriCho ELevel, TriCho DLevel, Flanger Type, FlangG Note, FlangG Depth, FlangG Reso, FlangG Manual, FlangG Turbo, FlangG LoDamp, FlangG HiDamp, FlangG LoCut, FlangG HiCut, FlangG Separat, FlangG Step, FlangG Wavefm, FlangG InSens, FlangG Polarty, FlangG ELevel, FlangG DLevel, FlangB Note, FlangB Depth, FlangB Reso, FlangB Manual, FlangB Turbo, FlangB LoDamp, FlangB HiDamp, FlangB LoCut, FlangB HiCut, FlangB Separat, FlangB Step, FlangB Wavefm, FlangB InSens, FlangB Polarty, FlangB ELevel, FlangB DLevel, Phaser Type, PhaserG Note, PhaserG Depth, PhaserG Reso, PhaserG Manual, PhaserG LoDamp, PhaserG HiDamp, PhaserG LoCut, PhaserG HiCut, PhaserG Separat, PhaserG Wavefm, PhaserG InSens, PhaserG Polrty, PhaserG Stage, PhaserG Step, PhaserG BiPhas, PhaserG ELevel, PhaserG DLevel, PhaserB Note, PhaserB Depth, PhaserB Reso, PhaserB Manual, PhaserB LoDamp, PhaserB HiDamp, PhaserB LoCut, PhaserB HiCut, PhaserB Separat, PhaserB Wavefm, PhaserB InSens, PhaserB Polrty, PhaserB Stage, PhaserB Step, PhaserB BiPhas, PhaserB ELevel, PhaserB DLevel, Script Note, Script Depth, Script ELevel, Script DLevel, CVibe Type, CVibe Note, CVibe Depth, CVibe ELevel, CVibe DLevel, Vibrato Type, Vibrato Note, Vibrato Depth, Vibrato Color, Vibrato Trig, Vibrato Rise, Vibrato EnvSns, Vibrato Wavefm, Vibrato InSens, Vibrato ELevel, Vibrato DLevel, Scanner Speed, Scanner Note, Scanner Mode, Scanner ELevel, Scanner DLevel, Trml Type, Trml Note, Trml Depth, Trml Trigger, Trml RiseTime, Trml EnvSens, Trml Waveform, Trml InputSens, Trml ELevel, Trml DLevel, Pan Note, Pan Depth, Pan Trigger, Pan RiseTime, Pan EnvSens, Pan Waveform, Pan InputSens, Pan ELevel, Pan DLevel, Twin Speed, Twin Note, Twin Intensity, Twin ELevel, Twin DLevel, Deluxe Speed, Deluxe Note, Deluxe Intnsty, Deluxe ELevel, Deluxe DLevel, Dimension Mode, Dimension Md1, Dimension Md2, Dimension Md3, Dimension Md4, Dimension Md5, Dimension ELvl, Dimension DLvl, RingMod Freq, RingMod Depth, RingMod Rate, RingMod ELevel, RingMod DLevel, Rotary Speed, Rotary Slow, Rotary Fast, Rotary Rise, Rotary Fall, Rotary MicDist, Rotary R/H, Rotary Drive, Rotary ELevel, Rotary DLevel, Filter Type, AWahG Note, AWahG Filter, AWahG Depth, AWahG Freq, AWahG Reso, AWahG Waveform,

				AWahG ELevel, AWahG DLevel, AWahB Note, AWahB Filter, AWahB Depth, AWahB Freq, AWahB Reso, AWahB Waveform, AWahB ELevel, AWahB DLevel, TWahG Filter, TWahG Polarity, TWahG Sens, TWahG Freq, TWahG Reso, TWahG Decay, TWahG ELevel, TWahG DLevel, TWahB Filter, TWahB Polarity, TWahB Sens, TWahB Freq, TWahB Reso, TWahB Decay, TWahB ELevel, TWahB DLevel, PFilter Note, PFilter Ptn, PFilter Filter, PFilter Reso, PFilter Trans, PFilter ELevel, PFilter DLevel, Slicer Note, Slicer Pattern, Slicer FxType, Slicer Attack, Slicer Duty, Slicer ELevel, Slicer DLevel, Slicer OutMode, Overton Type, Overton Lower, Overton Upper, Overton Unison, Overton Detune, Overton Low, Overton High, Overton DLevel, Detune Pitch1, Detune ELevel1, Detune Pitch2, Detune ELevel2, Detune DLevel, LED
03 06	0000 bbbb 0000 cccc 0000 00aa	ASSIGN1 target min		(0 - 2400100) offset:100 -100 - 2400000
03 0C	0000 bbbb 0000 cccc 0000 dddd 0000 eeee 0000 ffff 0000 00aa	ASSIGN1 target max		(0 - 2400100) offset:100 -100 - 2400000
03 12	0000 bbbb 0000 cccc 0000 dddd 0000 eeee 0000 ffff 0ddd dddd	ASSIGN1 Active Range LO		(0 - 126) 0 - 126
03 13	0ddd dddd	ASSIGN1 Active Range HI		(1 - 127) 1 - 127
03 14	0ddd dddd	ASSIGN1 Wave Rate		(0 - 113) 0 - 100, WHL, 2THd, WHL3, 2TH, 4THd, 2TH3, 4TH, 8THd, 4TH3, 8TH, 16THd, 8TH3, 16TH
03 15	0000 00dd	ASSIGN1 Wave Form		(0 - 2) SAW, TRI, SIN
03 16	0ddd dddd	ASSIGN1 Internal Pedal Trigger		(0 - 68) PAT CNG, EXP LO, EXP MID, EXP HI, CTL1 PDL, CTL2 PDL, CC#1, CC#2, CC#3, CC#4, CC#5, CC#6, CC#7, CC#8, CC#9, CC#10, CC#11, CC#12, CC#13, CC#14, CC#15, CC#16, CC#17, CC#18, CC#19, CC#20, CC#21, CC#22, CC#23, CC#24, CC#25, CC#26, CC#27, CC#28, CC#29, CC#30, CC#31, CC#64, CC#65, CC#66, CC#67, CC#68, CC#69, CC#70, CC#71, CC#72, CC#73, CC#74, CC#75, CC#76, CC#77, CC#78, CC#79, CC#80, CC#81, CC#82, CC#83, CC#84, CC#85, CC#86, CC#87, CC#88, CC#89, CC#90, CC#91, CC#92, CC#93, CC#94, CC#95
03 17	0ddd dddd	ASSIGN1 Internal Pedal Time		(0 - 100) 0 - 100
03 18	0000 00dd	ASSIGN1 Internal Pedal Curve		(0 - 2) LINEAR, SLOW, FAST
03 19	0000 000d	ASSIGN2 sw		(0 - 1) OFF, ON
03 1A	0ddd dddd	ASSIGN2 source		(0 - 69) TAP/CTL, EXP PDL, CTL1 PDL, CTL2 PDL, INT PDL, WAVE PDL, INPUT, CC#1, CC#2, CC#3, CC#4, CC#5, CC#6, CC#7, CC#8, CC#9, CC#10, CC#11, CC#12, CC#13, CC#14, CC#15, CC#16, CC#17, CC#18, CC#19, CC#20, CC#21, CC#22, CC#23, CC#24, CC#25, CC#26, CC#27, CC#28, CC#29, CC#30, CC#31, CC#64, CC#65, CC#66, CC#67, CC#68, CC#69, CC#70, CC#71, CC#72, CC#73, CC#74, CC#75, CC#76, CC#77, CC#78, CC#79, CC#80, CC#81, CC#82, CC#83, CC#84, CC#85, CC#86, CC#87, CC#88, CC#89, CC#90, CC#91, CC#92, CC#93, CC#94, CC#95
03 1B	0000 000d	ASSIGN2 source mode		(0 - 1) MOMENT, TOGGLE
03 1C	0000 000a	ASSIGN2 target		(0 - 264) Effect Switch, Rate, BPM, Mode, Effect Level, Insert Switch, Output Gain, Output Mode, Trigger, Chorus Type, Chorus Note, Chorus Depth, Chorus Predly, Chorus Wavefm, Chorus Sweet, Chorus Bell, Chorus ELevel, Chorus DLevel, Chorus LoLevel, Chorus LoFreq, Chorus HiLevel, Chorus HiFreq, Chorus LoCut, Chorus HiCut, CE1Cho Note, CE1Cho Depth, CE1Cho ELevel, CE1Cho DLevel, CE1Cho LoLevel, CE1Cho LoFreq, CE1Cho HiLevel, CE1Cho HiFreq, CE1Cho Preamp, CE1Cho PreampG, CE1Cho PreampL, CE1Vib Note, CE1Vib Depth, CE1Vib ELevel, CE1Vib DLevel, CE1Vib LoLevel, CE1Vib LoFreq, CE1Vib HiLevel, CE1Vib HiFreq, CE1Vib Preamp, CE1Vib PreampG, CE1Vib PreampL, TriCho Note, TriCho LFO, TriCho Intens1, TriCho Intens2, TriCho Intens3, TriCho Bright, TriCho LoLevel, TriCho LoFreq, TriCho HiLevel, TriCho HiFreq, TriCho ELevel, TriCho DLevel, Flanger Type, FlangG Note, FlangG Depth, FlangG Reso, FlangG Manual, FlangG Turbo, FlangG LoDamp, FlangG HiDamp, FlangG LoCut, FlangG HiCut, FlangG Separat, FlangG Step, FlangG Wavefm, FlangG InSens, FlangG Polarty, FlangG ELevel, FlangG DLevel, FlangB Note, FlangB Depth, FlangB Reso, FlangB Manual, FlangB Turbo, FlangB LoDamp, FlangB HiDamp, FlangB LoCut, FlangB HiCut, FlangB Separat, FlangB Step, FlangB Wavefm, FlangB InSens, FlangB Polarty, FlangB ELevel, FlangB DLevel, Phaser Type, PhaserG Note, PhaserG Depth, PhaserG Reso, PhaserG Manual, PhaserG LoDamp, PhaserG HiDamp, PhaserG LoCut, PhaserG HiCut, PhaserG Separat, PhaserG Wavefm, PhaserG InSens, PhaserG Polrty, PhaserG Stage, PhaserG Step, PhaserG BiPhas, PhaserG ELevel, PhaserG DLevel, PhaserB Note, PhaserB Depth, PhaserB Reso, PhaserB Manual, PhaserB LoDamp, PhaserB HiDamp, PhaserB LoCut, PhaserB HiCut, PhaserB Separat, PhaserB Wavefm, PhaserB InSens, PhaserB Polrty, PhaserB Stage, PhaserB Step, PhaserB BiPhas, PhaserB ELevel, PhaserB DLevel, Script Note, Script Depth, Script ELevel, Script DLevel, CVibe Type, CVibe Note, CVibe Depth, CVibe ELevel, CVibe DLevel, Vibrato Type, Vibrato Note, Vibrato Depth, Vibrato Color, Vibrato Trig, Vibrato Rise, Vibrato EnvSns, Vibrato Wavefm, Vibrato InSens, Vibrato ELevel, Vibrato DLevel, Scanner Speed, Scanner Note, Scanner Mode, Scanner ELevel, Scanner DLevel, Trml Type, Trml Note, Trml Depth, Trml Trigger, Trml RiseTime, Trml EnvSens, Trml Waveform, Trml InputSens, Trml ELevel, Trml DLevel, Pan Note, Pan Depth, Pan Trigger, Pan RiseTime, Pan EnvSens, Pan Waveform, Pan InputSens, Pan ELevel, Pan DLevel, Twin Speed, Twin Note, Twin Intensity, Twin ELevel, Twin DLevel, Deluxe Speed, Deluxe Note, Deluxe Intnsty, Deluxe ELevel, Deluxe DLevel, Dimension Mode, Dimension Md1, Dimension Md2, Dimension Md3, Dimension Md4, Dimension Md5, Dimension ELvl, Dimension DLvl, RingMod Freq, RingMod Depth, RingMod Rate, RingMod ELevel, RingMod DLevel, Rotary Speed, Rotary Slow, Rotary Fast, Rotary Rise, Rotary Fall, Rotary MicDist, Rotary R/H, Rotary Drive, Rotary ELevel, Rotary DLevel, Filter Type, AWahG Note, AWahG Filter, AWahG Depth, AWahG Freq, AWahG Reso, AWahG Waveform, AWahG ELevel, AWahG DLevel, AWahB Note, AWahB Filter, AWahB Depth, AWahB Freq, AWahB Reso, AWahB Waveform, AWahB ELevel, AWahB DLevel, TWahG Filter, TWahG Polarity, TWahG Sens, TWahG Freq, TWahG Reso, TWahG Decay, TWahG ELevel, TWahG DLevel, TWahB Filter, TWahB Polarity, TWahB Sens, TWahB Freq, TWahB Reso, TWahB Decay, TWahB ELevel, TWahB DLevel, PFilter Note, PFilter Ptn, PFilter Filter, PFilter Reso, PFilter Trans, PFilter ELevel, PFilter DLevel, Slicer Note, Slicer Pattern, Slicer FxType, Slicer Attack, Slicer Duty, Slicer ELevel, Slicer DLevel, Slicer OutMode, Overton Type, Overton Lower, Overton Upper, Overton Unison, Overton Detune, Overton Low, Overton High, Overton DLevel, Detune Pitch1, Detune ELevel1, Detune Pitch2, Detune ELevel2, Detune DLevel, LED
03 1F	0000 bbbb 0000 cccc 0000 00aa	ASSIGN2 target min		(0 - 2400100) offset:100 -100 - 2400000
03 25	0000 bbbb 0000 cccc 0000 dddd 0000 eeee 0000 ffff 0000 00aa	ASSIGN2 target max		(0 - 2400100) offset:100 -100 - 2400000

		0000 eeee			
		0000 ffff			
03 2B	0ddd dddd	ASSIGN2 Active Range LO			(0 - 126) 0 - 126
03 2C	0ddd dddd	ASSIGN2 Active Range HI			(1 - 127) 1 - 127
03 2D	0ddd dddd	ASSIGN2 Wave Rate			(0 - 113) 0 - 100, WHL, 2THd, WHL3, 2TH, 4THd, 2TH3, 4TH, 8THd, 4TH3, 8TH, 16THd, 8TH3, 16TH
03 2E	0000 00dd	ASSIGN2 Wave Form			(0 - 2) SAW, TRI, SIN
03 2F	0ddd dddd	ASSIGN2 Internal Pedal Trigger			(0 - 68) PAT CNG, EXP LO, EXP MID, EXP HI, CTL1 PDL, CTL2 PDL, CC#1, CC#2, CC#3, CC#4, CC#5, CC#6, CC#7, CC#8, CC#9, CC#10, CC#11, CC#12, CC#13, CC#14, CC#15, CC#16, CC#17, CC#18, CC#19, CC#20, CC#21, CC#22, CC#23, CC#24, CC#25, CC#26, CC#27, CC#28, CC#29, CC#30, CC#31, CC#64, CC#65, CC#66, CC#67, CC#68, CC#69, CC#70, CC#71, CC#72, CC#73, CC#74, CC#75, CC#76, CC#77, CC#78, CC#79, CC#80, CC#81, CC#82, CC#83, CC#84, CC#85, CC#86, CC#87, CC#88, CC#89, CC#90, CC#91, CC#92, CC#93, CC#94, CC#95
03 30	0ddd dddd	ASSIGN2 Internal Pedal Time			(0 - 100) 0 - 100
03 31	0000 00dd	ASSIGN2 Internal Pedal Curve			(0 - 2) LINEAR, SLOW, FAST
03 32	0000 000d	ASSIGN3 sw			(0 - 1) OFF, ON
03 33	0ddd dddd	ASSIGN3 source			(0 - 69) TAP/CTL, EXP PDL, CTL1 PDL, CTL2 PDL, INT PDL, WAVE PDL, INPUT, CC#1, CC#2, CC#3, CC#4, CC#5, CC#6, CC#7, CC#8, CC#9, CC#10, CC#11, CC#12, CC#13, CC#14, CC#15, CC#16, CC#17, CC#18, CC#19, CC#20, CC#21, CC#22, CC#23, CC#24, CC#25, CC#26, CC#27, CC#28, CC#29, CC#30, CC#31, CC#64, CC#65, CC#66, CC#67, CC#68, CC#69, CC#70, CC#71, CC#72, CC#73, CC#74, CC#75, CC#76, CC#77, CC#78, CC#79, CC#80, CC#81, CC#82, CC#83, CC#84, CC#85, CC#86, CC#87, CC#88, CC#89, CC#90, CC#91, CC#92, CC#93, CC#94, CC#95
03 34	0000 000d	Assign3 source mode			(0 - 1) MOMENT, TOGGLE
03 35	0000 000a	ASSIGN3 target			(0 - 264) Effect Switch, Rate, BPM, Mode, Effect Level, Insert Switch, Output Gain, Output Mode, Trigger, Chorus Type, Chorus Note, Chorus Depth, Chorus PreDly, Chorus Wavefm, Chorus Sweet, Chorus Bell, Chorus ELevel, Chorus DLevel, Chorus LoLevel, Chorus LoFreq, Chorus HiLevel, Chorus HiFreq, Chorus LoCut, Chorus HiCut, CE1Cho Note, CE1Cho Depth, CE1Cho ELevel, CE1Cho DLevel, CE1Cho LoLevel, CE1Cho LoFreq, CE1Cho HiLevel, CE1Cho HiFreq, CE1Cho Preamp, CE1Cho PreampG, CE1Cho PreampL, CE1Vib Note, CE1Vib Depth, CE1Vib ELevel, CE1Vib DLevel, CE1Vib LoLevel, CE1Vib LoFreq, CE1Vib HiLevel, CE1Vib HiFreq, CE1Vib Preamp, CE1Vib PreampG, CE1Vib PreampL, TriCho Note, TriCho LFO, TriCho Intens1, TriCho Intens2, TriCho Intens3, TriCho Bright, TriCho LoLevel, TriCho LoFreq, TriCho HiLevel, TriCho HiFreq, TriCho ELevel, TriCho DLevel, Flanger Type, FlangG Note, FlangG Depth, FlangG Reso, FlangG Manual, FlangG Turbo, FlangG LoDamp, FlangG HiDamp, FlangG LoCut, FlangG HiCut, FlangG Separat, FlangG Step, FlangG Wavefm, FlangG InSens, FlangG Polarty, FlangG ELevel, FlangG DLevel, FlangB Note, FlangB Depth, FlangB Reso, FlangB Manual, FlangB Turbo, FlangB LoDamp, FlangB HiDamp, FlangB LoCut, FlangB HiCut, FlangB Separat, FlangB Step, FlangB Wavefm, FlangB InSens, FlangB Polarty, FlangB ELevel, FlangB DLevel, Phaser Type, PhaserG Note, PhaserG Depth, PhaserG Reso, PhaserG Manual, PhaserG LoDamp, PhaserG HiDamp, PhaserG LoCut, PhaserG HiCut, PhaserG Separat, PhaserG Wavefm, PhaserG InSens, PhaserG Polrty, PhaserG Stage, PhaserG Step, PhaserG BiPhas, PhaserG ELevel, PhaserG DLevel, PhaserB Note, PhaserB Depth, PhaserB Reso, PhaserB Manual, PhaserB LoDamp, PhaserB HiDamp, PhaserB LoCut, PhaserB HiCut, PhaserB Separat, PhaserB Wavefm, PhaserB InSens, PhaserB Polrty, PhaserB Stage, PhaserB Step, PhaserB BiPhas, PhaserB ELevel, PhaserB DLevel, Script Note, Script Depth, Script ELevel, Script DLevel, CVibe Type, CVibe Note, CVibe Depth, CVibe ELevel, CVibe DLevel, Vibrato Type, Vibrato Note, Vibrato Depth, Vibrato Color, Vibrato Trig, Vibrato Rise, Vibrato EnvSns, Vibrato Wavefm, Vibrato InSens, Vibrato ELevel, Vibrato DLevel, Scanner Speed, Scanner Note, Scanner Mode, Scanner ELevel, Scanner DLevel, Trml Type, Trml Note, Trml Depth, Trml Trigger, Trml RiseTime, Trml EnvSens, Trml Waveform, Trml InputSens, Trml ELevel, Trml DLevel, Pan Note, Pan Depth, Pan Trigger, Pan RiseTime, Pan EnvSens, Pan Waveform, Pan InputSens, Pan ELevel, Pan DLevel, Twin Speed, Twin Note, Twin Intensity, Twin ELevel, Twin DLevel, Deluxe Speed, Deluxe Note, Deluxe Intnsty, Deluxe ELevel, Deluxe DLevel, Dimension Mode, Dimension Md1, Dimension Md2, Dimension Md3, Dimension Md4, Dimension Md5, Dimension ELvl, Dimension DLvl, RingMod Freq, RingMod Depth, RingMod Rate, RingMod ELevel, RingMod DLevel, Rotary Speed, Rotary Slow, Rotary Fast, Rotary Rise, Rotary Fall, Rotary MicDist, Rotary R/H, Rotary Drive, Rotary ELevel, Rotary DLevel, Filter Type, AWahG Note, AWahG Filter, AWahG Depth, AWahG Freq, AWahG Reso, AWahG Waveform, AWahG ELevel, AWahG DLevel, AWahB Note, AWahB Filter, AWahB Depth, AWahB Freq, AWahB Reso, AWahB Waveform, AWahB ELevel, AWahB DLevel, TWahG Filter, TWahG Polarity, TWahG Sens, TWahG Freq, TWahG Reso, TWahG Decay, TWahG ELevel, TWahG DLevel, TWahB Filter, TWahB Polarity, TWahB Sens, TWahB Freq, TWahB Reso, TWahB Decay, TWahB ELevel, TWahB DLevel, PFilter Note, PFilter Ptn, PFilter Filter, PFilter Reso, PFilter Trans, PFilter ELevel, PFilter DLevel, Slicer Note, Slicer Pattern, Slicer FxType, Slicer Attack, Slicer Duty, Slicer ELevel, Slicer DLevel, Slicer OutMode, Overton Type, Overton Lower, Overton Upper, Overton Unison, Overton Detune, Overton Low, Overton High, Overton DLevel, Detune Pitch1, Detune ELevel1, Detune Pitch2, Detune ELevel2, Detune DLevel, LED
		0000 bbbb			
		0000 cccc			
03 38	0000 00aa	ASSIGN3 target min			(0 - 2400100) offset:100 -100 - 2400000
		0000 bbbb			
		0000 cccc			
		0000 dddd			
		0000 eeee			
		0000 ffff			
03 3E	0000 00aa	ASSIGN3 target max			(0 - 2400100) offset:100 -100 - 2400000
		0000 bbbb			
		0000 cccc			
		0000 dddd			
		0000 eeee			
		0000 ffff			
03 44	0ddd dddd	ASSIGN3 Active Range LO			(0 - 126) 0 - 126
03 45	0ddd dddd	ASSIGN3 Active Range HI			(1 - 127) 1 - 127
03 46	0ddd dddd	ASSIGN3 Wave Rate			(0 - 113) 0 - 100, WHL, 2THd, WHL3, 2TH, 4THd, 2TH3, 4TH, 8THd, 4TH3, 8TH, 16THd, 8TH3, 16TH
03 47	0000 00dd	ASSIGN3 Wave Form			(0 - 2) SAW, TRI, SIN
03 48	0ddd dddd	ASSIGN3 Internal Pedal Trigger			(0 - 68) PAT CNG, EXP LO, EXP MID, EXP HI, CTL1 PDL, CTL2 PDL, CC#1, CC#2, CC#3, CC#4, CC#5, CC#6, CC#7, CC#8, CC#9, CC#10, CC#11, CC#12, CC#13, CC#14, CC#15, CC#16, CC#17, CC#18, CC#19, CC#20, CC#21, CC#22, CC#23, CC#24, CC#25, CC#26, CC#27, CC#28, CC#29, CC#30, CC#31, CC#64, CC#65, CC#66, CC#67, CC#68, CC#69, CC#70, CC#71, CC#72, CC#73, CC#74, CC#75, CC#76, CC#77, CC#78, CC#79, CC#80, CC#81, CC#82, CC#83, CC#84, CC#85, CC#86, CC#87, CC#88, CC#89, CC#90, CC#91, CC#92, CC#93, CC#94, CC#95
03 49	0ddd dddd	ASSIGN3 Internal Pedal Time			(0 - 100) 0 - 100
03 4A	0000 00dd	ASSIGN3 Internal Pedal Curve			(0 - 2) LINEAR, SLOW, FAST
03 4B	0000 000d	ASSIGN4 sw			(0 - 1) OFF, ON

03 4C	0ddd dddd	ASSIGN4 source	(0 - 69) TAP/CTL, EXP PDL, CTL1 PDL, CTL2 PDL, INT PDL, WAVE PDL, INPUT, CC#1, CC#2, CC#3, CC#4, CC#5, CC#6, CC#7, CC#8, CC#9, CC#10, CC#11, CC#12, CC#13, CC#14, CC#15, CC#16, CC#17, CC#18, CC#19, CC#20, CC#21, CC#22, CC#23, CC#24, CC#25, CC#26, CC#27, CC#28, CC#29, CC#30, CC#31, CC#64, CC#65, CC#66, CC#67, CC#68, CC#69, CC#70, CC#71, CC#72, CC#73, CC#74, CC#75, CC#76, CC#77, CC#78, CC#79, CC#80, CC#81, CC#82, CC#83, CC#84, CC#85, CC#86, CC#87, CC#88, CC#89, CC#90, CC#91, CC#92, CC#93, CC#94, CC#95
03 4D	0000 000d	ASSIGN4 source mode	(0 - 1) MOMENT, TOGGLE
03 4E	0000 000a	ASSIGN4 target	(0 - 264) Effect Switch, Rate, BPM, Mode, Effect Level, Insert Switch, Output Gain, Output Mode, Trigger, Chorus Type, Chorus Note, Chorus Depth, Chorus PreDly, Chorus Wavefm, Chorus Sweet, Chorus Bell, Chorus ELevel, Chorus DLevel, Chorus LoLevel, Chorus LoFreq, Chorus HiLevel, Chorus HiFreq, Chorus LoCut, Chorus HiCut, CE1Cho Note, CE1Cho Depth, CE1Cho ELevel, CE1Cho DLevel, CE1Cho LoLevel, CE1Cho LoFreq, CE1Cho HiLevel, CE1Cho HiFreq, CE1Cho Preamp, CE1Cho PreampG, CE1Cho PreampL, CE1Vib Note, CE1Vib Depth, CE1Vib ELevel, CE1Vib DLevel, CE1Vib LoLevel, CE1Vib LoFreq, CE1Vib HiLevel, CE1Vib HiFreq, CE1Vib Preamp, CE1Vib PreampG, CE1Vib PreampL, TriCho Note, TriCho LFO, TriCho Intens1, TriCho Intens2, TriCho Intens3, TriCho Bright, TriCho LoLevel, TriCho LoFreq, TriCho HiLevel, TriCho HiFreq, TriCho ELevel, TriCho DLevel, Flanger Type, FlangG Note, FlangG Depth, FlangG Reso, FlangG Manual, FlangG Turbo, FlangG LoDamp, FlangG HiDamp, FlangG LoCut, FlangG HiCut, FlangG Separat, FlangG Step, FlangG Wavefm, FlangG InSens, FlangG Polarty, FlangG ELevel, FlangG DLevel, FlangB Note, FlangB Depth, FlangB Reso, FlangB Manual, FlangB Turbo, FlangB LoDamp, FlangB HiDamp, FlangB LoCut, FlangB HiCut, FlangB Separat, FlangB Step, FlangB Wavefm, FlangB InSens, FlangB Polarty, FlangB ELevel, FlangB DLevel, Phaser Type, PhaserG Note, PhaserG Depth, PhaserG Reso, PhaserG Manual, PhaserG LoDamp, PhaserG HiDamp, PhaserG LoCut, PhaserG HiCut, PhaserG Separat, PhaserG Wavefm, PhaserG InSens, PhaserG Polrty, PhaserG Stage, PhaserG Step, PhaserG BiPhas, PhaserG ELevel, PhaserG DLevel, PhaserB Note, PhaserB Depth, PhaserB Reso, PhaserB Manual, PhaserB LoDamp, PhaserB HiDamp, PhaserB LoCut, PhaserB HiCut, PhaserB Separat, PhaserB Wavefm, PhaserB InSens, PhaserB Polrty, PhaserB Stage, PhaserB Step, PhaserB BiPhas, PhaserB ELevel, PhaserB DLevel, Script Note, Script Depth, Script ELevel, Script DLevel, CVibe Type, CVibe Note, CVibe Depth, CVibe ELevel, CVibe DLevel, Vibrato Type, Vibrato Note, Vibrato Depth, Vibrato Color, Vibrato Trig, Vibrato Rise, Vibrato EnvSns, Vibrato Wavefm, Vibrato InSens, Vibrato ELevel, Vibrato DLevel, Scanner Speed, Scanner Note, Scanner Mode, Scanner ELevel, Scanner DLevel, Trml Type, Trml Note, Trml Depth, Trml Trigger, Trml RiseTime, Trml EnvSens, Trml Waveform, Trml InputSens, Trml ELevel, Trml DLevel, Pan Note, Pan Depth, Pan Trigger, Pan RiseTime, Pan EnvSens, Pan Waveform, Pan InputSens, Pan ELevel, Pan DLevel, Twin Speed, Twin Note, Twin Intensity, Twin ELevel, Twin DLevel, Deluxe Speed, Deluxe Note, Deluxe Intnsty, Deluxe ELevel, Deluxe DLevel, Dimension Mode, Dimension Md1, Dimension Md2, Dimension Md3, Dimension Md4, Dimension Md5, Dimension ELvl, Dimension DLvl, RingMod Freq, RingMod Depth, RingMod Rate, RingMod ELevel, RingMod DLevel, Rotary Speed, Rotary Slow, Rotary Fast, Rotary Rise, Rotary Fall, Rotary MicDist, Rotary R/H, Rotary Drive, Rotary ELevel, Rotary DLevel, Filter Type, AWahG Note, AWahG Filter, AWahG Depth, AWahG Freq, AWahG Reso, AWahG Waveform, AWahG ELevel, AWahG DLevel, AWahB Note, AWahB Filter, AWahB Depth, AWahB Freq, AWahB Reso, AWahB Waveform, AWahB ELevel, AWahB DLevel, TWahG Filter, TWahG Polarity, TWahG Sens, TWahG Freq, TWahG Reso, TWahG Decay, TWahG ELevel, TWahG DLevel, TWahB Filter, TWahB Polarity, TWahB Sens, TWahB Freq, TWahB Reso, TWahB Decay, TWahB ELevel, TWahB DLevel, PFilter Note, PFilter Ptn, PFilter Filter, PFilter Reso, PFilter Trans, PFilter ELevel, PFilter DLevel, Slicer Note, Slicer Pattern, Slicer FxType, Slicer Attack, Slicer Duty, Slicer ELevel, Slicer DLevel, Slicer OutMode, Overton Type, Overton Lower, Overton Upper, Overton Unison, Overton Detune, Overton Low, Overton High, Overton DLevel, Detune Pitch1, Detune ELevel1, Detune Pitch2, Detune ELevel2, Detune DLevel, LED
03 51	0000 bbbb 0000 cccc 0000 00aa	ASSIGN4 target min	(0 - 2400100) offset:100 -100 - 2400000
03 57	0000 bbbb 0000 cccc 0000 dddd 0000 eeee 0000 ffff 0000 00aa	ASSIGN4 target max	(0 - 2400100) offset:100 -100 - 2400000
03 5D	0ddd dddd	ASSIGN4 Active Range LO	(0 - 126) 0 - 126
03 5E	0ddd dddd	ASSIGN4 Active Range HI	(1 - 127) 1 - 127
03 5F	0ddd dddd	ASSIGN4 Wave Rate	(0 - 113) 0 - 100, WHL, 2THd, WHL3, 2TH, 4THd, 2TH3, 4TH, 8THd, 4TH3, 8TH, 16THd, 8TH3, 16TH
03 60	0000 00dd	ASSIGN4 Wave Form	(0 - 2) SAW, TRI, SIN
03 61	0ddd dddd	ASSIGN4 Internal Pedal Trigger	(0 - 68) PAT CNG, EXP LO, EXP MID, EXP HI, CTL1 PDL, CTL2 PDL, CC#1, CC#2, CC#3, CC#4, CC#5, CC#6, CC#7, CC#8, CC#9, CC#10, CC#11, CC#12, CC#13, CC#14, CC#15, CC#16, CC#17, CC#18, CC#19, CC#20, CC#21, CC#22, CC#23, CC#24, CC#25, CC#26, CC#27, CC#28, CC#29, CC#30, CC#31, CC#64, CC#65, CC#66, CC#67, CC#68, CC#69, CC#70, CC#71, CC#72, CC#73, CC#74, CC#75, CC#76, CC#77, CC#78, CC#79, CC#80, CC#81, CC#82, CC#83, CC#84, CC#85, CC#86, CC#87, CC#88, CC#89, CC#90, CC#91, CC#92, CC#93, CC#94, CC#95
03 62	0ddd dddd	ASSIGN4 Internal Pedal Time	(0 - 100) 0 - 100
03 63	0000 00dd	ASSIGN4 Internal Pedal Curve	(0 - 2) LINEAR, SLOW, FAST
03 64	0000 000d	ASSIGN5 sw	(0 - 1) OFF, ON
03 65	0ddd dddd	ASSIGN5 source	(0 - 69) TAP/CTL, EXP PDL, CTL1 PDL, CTL2 PDL, INT PDL, WAVE PDL, INPUT, CC#1, CC#2, CC#3, CC#4, CC#5, CC#6, CC#7, CC#8, CC#9, CC#10, CC#11, CC#12, CC#13, CC#14, CC#15, CC#16, CC#17, CC#18, CC#19, CC#20, CC#21, CC#22, CC#23, CC#24, CC#25, CC#26, CC#27, CC#28, CC#29, CC#30, CC#31, CC#64, CC#65, CC#66, CC#67, CC#68, CC#69, CC#70, CC#71, CC#72, CC#73, CC#74, CC#75, CC#76, CC#77, CC#78, CC#79, CC#80, CC#81, CC#82, CC#83, CC#84, CC#85, CC#86, CC#87, CC#88, CC#89, CC#90, CC#91, CC#92, CC#93, CC#94, CC#95
03 66	0000 000d	ASSIGN5 source mode	(0 - 1) MOMENT, TOGGLE
03 67	0000 000a	ASSIGN5 target	(0 - 264) Effect Switch, Rate, BPM, Mode, Effect Level, Insert Switch, Output Gain, Output Mode, Trigger, Chorus Type, Chorus Note, Chorus Depth, Chorus PreDly, Chorus Wavefm, Chorus Sweet, Chorus Bell, Chorus ELevel, Chorus DLevel, Chorus LoLevel, Chorus LoFreq, Chorus HiLevel, Chorus HiFreq, Chorus LoCut, Chorus HiCut, CE1Cho Note, CE1Cho Depth, CE1Cho ELevel, CE1Cho DLevel, CE1Cho LoLevel, CE1Cho LoFreq, CE1Cho HiLevel, CE1Cho HiFreq, CE1Cho Preamp, CE1Cho PreampG, CE1Cho PreampL, CE1Vib Note, CE1Vib Depth, CE1Vib ELevel, CE1Vib DLevel, CE1Vib LoLevel, CE1Vib LoFreq, CE1Vib HiLevel, CE1Vib HiFreq, CE1Vib Preamp, CE1Vib PreampG, CE1Vib PreampL, TriCho Note, TriCho LFO, TriCho Intens1, TriCho Intens2, TriCho Intens3, TriCho Bright, TriCho LoLevel, TriCho LoFreq, TriCho HiLevel, TriCho HiFreq, TriCho ELevel, TriCho DLevel, Flanger Type, FlangG Note, FlangG Depth, FlangG Reso, FlangG Manual, FlangG Turbo, FlangG LoDamp, FlangG HiDamp, FlangG LoCut, FlangG HiCut, FlangG Separat, FlangG Step, FlangG Wavefm, FlangG InSens, FlangG Polarty,

	0000 bbbb	
	0000 cccc	
03 6A	0000 00aa	ASSIGN5 target min
	0000 bbbb	
	0000 cccc	
	0000 dddd	
	0000 eeee	
	0000 ffff	
03 70	0000 00aa	ASSIGN5 target max
	0000 bbbb	
	0000 cccc	
	0000 dddd	
	0000 eeee	
	0000 ffff	
03 76	0ddd dddd	ASSIGN5 Active Range LO
03 77	0ddd dddd	ASSIGN5 Active Range HI
03 78	0ddd dddd	ASSIGN5 Wave Rate
03 79	0000 00dd	ASSIGN5 Wave Form
03 7A	0ddd dddd	ASSIGN5 Internal Pedal Trigger
03 7B	0ddd dddd	ASSIGN5 Internal Pedal Time
03 7C	0000 00dd	ASSIGN5 Internal Pedal Curve
03 7D	0000 000d	ASSIGN6 sw
03 7E	0ddd dddd	ASSIGN6 source
03 7F	0000 000d	ASSIGN6 source mode
04 00	0000 000a	ASSIGN6 target

FlangG ELevel, FlangG DLevel, FlangB Note, FlangB Depth, FlangB Reso, FlangB Manual, FlangB Turbo, FlangB LoDamp, FlangB HiDamp, FlangB LoCut, FlangB HiCut, FlangB Separat, FlangB Step, FlangB Wavefm, FlangB InSens, FlangB Polarty, FlangB ELevel, FlangB DLevel, Phaser Type, PhaserG Note, PhaserG Depth, PhaserG Reso, PhaserG Manual, PhaserG LoDamp, PhaserG HiDamp, PhaserG LoCut, PhaserG HiCut, PhaserG Separat, PhaserG Wavefm, PhaserG InSens, PhaserG Polrty, PhaserG Stage, PhaserG Step, PhaserG BiPhas, PhaserG ELevel, PhaserG DLevel, PhaserB Note, PhaserB Depth, PhaserB Reso, PhaserB Manual, PhaserB LoDamp, PhaserB HiDamp, PhaserB LoCut, PhaserB HiCut, PhaserB Separat, PhaserB Wavefm, PhaserB InSens, PhaserB Polrty, PhaserB Stage, PhaserB Step, PhaserB BiPhas, PhaserB ELevel, PhaserB DLevel, Script Note, Script Depth, Script ELevel, Script DLevel, CVibe Type, CVibe Note, CVibe Depth, CVibe ELevel, CVibe DLevel, Vibrato Type, Vibrato Note, Vibrato Depth, Vibrato Color, Vibrato Trig, Vibrato Rise, Vibrato EnvSns, Vibrato Wavefm, Vibrato InSens, Vibrato ELevel, Vibrato DLevel, Scanner Speed, Scanner Note, Scanner Mode, Scanner ELevel, Scanner DLevel, Trml Type, Trml Note, Trml Depth, Trml Trigger, Trml RiseTime, Trml EnvSens, Trml Waveform, Trml InputSens, Trml ELevel, Trml DLevel, Pan Note, Pan Depth, Pan Trigger, Pan RiseTime, Pan EnvSens, Pan Waveform, Pan InputSens, Pan ELevel, Pan DLevel, Twin Speed, Twin Note, Twin Intensity, Twin ELevel, Twin DLevel, Deluxe Speed, Deluxe Note, Deluxe Intnsty, Deluxe ELevel, Deluxe DLevel, Dimension Mode, Dimension Mdl, Dimension Md2, Dimension Md3, Dimension Md4, Dimension Md5, Dimension ELvl, Dimension DLvl, RingMod Freq, RingMod Depth, RingMod Rate, RingMod ELevel, RingMod DLevel, Rotary Speed, Rotary Slow, Rotary Fast, Rotary Rise, Rotary Fall, Rotary MicDist, Rotary R/H, Rotary Drive, Rotary ELevel, Rotary DLevel, Filter Type, AWahG Note, AWahG Filter, AWahG Depth, AWahG Freq, AWahG Reso, AWahG Waveform, AWahG ELevel, AWahG DLevel, AWahB Note, AWahB Filter, AWahB Depth, AWahB Freq, AWahB Reso, AWahB Waveform, AWahB ELevel, AWahB DLevel, TWahG Filter, TWahG Polarity, TWahG Sens, TWahG Freq, TWahG Reso, TWahG Decay, TWahG ELevel, TWahG DLevel, TWahB Filter, TWahB Polarity, TWahB Sens, TWahB Freq, TWahB Reso, TWahB Decay, TWahB ELevel, TWahB DLevel, PFilter Note, PFilter Ptn, PFilter Filter, PFilter Reso, PFilter Trans, PFilter ELevel, PFilter DLevel, Slicer Note, Slicer Pattern, Slicer FxType, Slicer Attack, Slicer Duty, Slicer ELevel, Slicer DLevel, Slicer OutMode, Overton Type, Overton Lower, Overton Upper, Overton Unison, Overton Detune, Overton Low, Overton High, Overton DLevel, Detune Pitch1, Detune ELevel1, Detune Pitch2, Detune ELevel2, Detune DLevel, LED

(0 - 2400100) offset:100
-100 - 2400000

(0 - 2400100) offset:100
-100 - 2400000

(0 - 126)
0 - 126
(1 - 127)
1 - 127
(0 - 113)
0 - 100, WHL, 2THd, WHL3, 2TH, 4THd, 2TH3, 4TH, 8THd, 4TH3, 8TH, 16THd, 8TH3, 16TH
(0 - 2)
SAW, TRI, SIN
(0 - 68)
PAT CNG, EXP LO, EXP MID, EXP HI, CTL1 PDL, CTL2 PDL, CC#1, CC#2, CC#3, CC#4, CC#5, CC#6, CC#7, CC#8, CC#9, CC#10, CC#11, CC#12, CC#13, CC#14, CC#15, CC#16, CC#17, CC#18, CC#19, CC#20, CC#21, CC#22, CC#23, CC#24, CC#25, CC#26, CC#27, CC#28, CC#29, CC#30, CC#31, CC#64, CC#65, CC#66, CC#67, CC#68, CC#69, CC#70, CC#71, CC#72, CC#73, CC#74, CC#75, CC#76, CC#77, CC#78, CC#79, CC#80, CC#81, CC#82, CC#83, CC#84, CC#85, CC#86, CC#87, CC#88, CC#89, CC#90, CC#91, CC#92, CC#93, CC#94, CC#95
(0 - 100)
0 - 100
(0 - 2)
LINEAR, SLOW, FAST
(0 - 1)
OFF, ON
(0 - 69)
TAP/CTL, EXP PDL, CTL1 PDL, CTL2 PDL, INT PDL, WAVE PDL, INPUT, CC#1, CC#2, CC#3, CC#4, CC#5, CC#6, CC#7, CC#8, CC#9, CC#10, CC#11, CC#12, CC#13, CC#14, CC#15, CC#16, CC#17, CC#18, CC#19, CC#20, CC#21, CC#22, CC#23, CC#24, CC#25, CC#26, CC#27, CC#28, CC#29, CC#30, CC#31, CC#64, CC#65, CC#66, CC#67, CC#68, CC#69, CC#70, CC#71, CC#72, CC#73, CC#74, CC#75, CC#76, CC#77, CC#78, CC#79, CC#80, CC#81, CC#82, CC#83, CC#84, CC#85, CC#86, CC#87, CC#88, CC#89, CC#90, CC#91, CC#92, CC#93, CC#94, CC#95
(0 - 1)
MOMENT, TOGGLE
(0 - 264)
Effect Switch, Rate, BPM, Mode, Effect Level, Insert Switch, Output Gain, Output Mode, Trigger, Chorus Type, Chorus Note, Chorus Depth, Chorus Predly, Chorus Wavefm, Chorus Sweet, Chorus Bell, Chorus ELevel, Chorus DLevel, Chorus LoLevel, Chorus LoFreq, Chorus HiLevel, Chorus HiFreq, Chorus LoCut, Chorus HiCut, CE1Cho Note, CE1Cho Depth, CE1Cho ELevel, CE1Cho DLevel, CE1Cho LoLevel, CE1Cho LoFreq, CE1Cho HiLevel, CE1Cho HiFreq, CE1Cho Preamp, CE1Cho PreampG, CE1Cho PreampL, CE1Vib Note, CE1Vib Depth, CE1Vib ELevel, CE1Vib DLevel, CE1Vib LoLevel, CE1Vib LoFreq, CE1Vib HiLevel, CE1Vib HiFreq, CE1Vib Preamp, CE1Vib PreampG, CE1Vib PreampL, TriCho Note, TriCho LFO, TriCho Intens1, TriCho Intens2, TriCho Intens3, TriCho Bright, TriCho LoLevel, TriCho LoFreq, TriCho HiLevel, TriCho HiFreq, TriCho ELevel, TriCho DLevel, Flanger Type, FlangG Note, FlangG Depth, FlangG Reso, FlangG Manual, FlangG Turbo, FlangG LoDamp, FlangG HiDamp, FlangG LoCut, FlangG HiCut, FlangG Separat, FlangG Step, FlangG Wavefm, FlangG InSens, FlangG Polarty, FlangG ELevel, FlangG DLevel, FlangB Note, FlangB Depth, FlangB Reso, FlangB Manual, FlangB Turbo, FlangB LoDamp, FlangB HiDamp, FlangB LoCut, FlangB HiCut, FlangB Separat, FlangB Step, FlangB Wavefm, FlangB InSens, FlangB Polarty, FlangB ELevel, FlangB DLevel, Phaser Type, PhaserG Note, PhaserG Depth, PhaserG Reso, PhaserG Manual, PhaserG LoDamp, PhaserG HiDamp, PhaserG LoCut, PhaserG HiCut, PhaserG Separat, PhaserG Wavefm, PhaserG InSens, PhaserG Polrty, PhaserG Stage, PhaserG Step, PhaserG BiPhas, PhaserG ELevel, PhaserG DLevel, PhaserB Note, PhaserB Depth, PhaserB Reso, PhaserB Manual, PhaserB LoDamp, PhaserB HiDamp, PhaserB LoCut, PhaserB HiCut, PhaserB Separat, PhaserB Wavefm, PhaserB InSens, PhaserB Polrty, PhaserB Stage, PhaserB Step, PhaserB BiPhas, PhaserB ELevel, PhaserB DLevel, Script Note, Script Depth, Script ELevel, Script DLevel, CVibe Type, CVibe Note, CVibe Depth, CVibe ELevel, CVibe DLevel, Vibrato Type, Vibrato Note, Vibrato Depth, Vibrato Color, Vibrato Trig, Vibrato Rise, Vibrato EnvSns, Vibrato Wavefm, Vibrato InSens, Vibrato ELevel, Vibrato DLevel, Scanner Speed, Scanner Note, Scanner Mode, Scanner ELevel, Scanner DLevel, Trml Type, Trml Note, Trml Depth, Trml Trigger, Trml RiseTime, Trml EnvSens, Trml Waveform, Trml InputSens, Trml ELevel, Trml DLevel, Pan Note, Pan Depth, Pan Trigger, Pan RiseTime, Pan EnvSens, Pan Waveform, Pan InputSens, Pan ELevel, Pan DLevel, Twin Speed, Twin Note, Twin Intensity, Twin ELevel, Twin DLevel, Deluxe Speed, Deluxe Note, Deluxe Intnsty, Deluxe ELevel, Deluxe DLevel, Dimension Mode, Dimension Mdl, Dimension Md2, Dimension Md3, Dimension Md4, Dimension Md5, Dimension ELvl, Dimension DLvl, RingMod Freq, RingMod Depth, RingMod Rate, RingMod ELevel, RingMod DLevel, Rotary Speed, Rotary Slow, Rotary Fast, Rotary Rise, Rotary Fall, Rotary MicDist, Rotary R/H,

				Rotary Drive, Rotary ELevel, Rotary DLevel, Filter Type, AWahG Note, AWahG Filter, AWahG Depth, AWahG Freq, AWahG Reso, AWahG Waveform, AWahG ELevel, AWahG DLevel, AWahB Note, AWahB Filter, AWahB Depth, AWahB Freq, AWahB Reso, AWahB Waveform, AWahB ELevel, AWahB DLevel, TWahG Filter, TWahG Polarity, TWahG Sens, TWahG Freq, TWahG Reso, TWahG Decay, TWahG ELevel, TWahG DLevel, TWahB Filter, TWahB Polarity, TWahB Sens, TWahB Freq, TWahB Reso, TWahB Decay, TWahB ELevel, TWahB DLevel, PFilter Note, PFilter Ptn, PFilter Filter, PFilter Reso, PFilter Trans, PFilter ELevel, PFilter DLevel, Slicer Note, Slicer Pattern, Slicer FxType, Slicer Attack, Slicer Duty, Slicer ELevel, Slicer DLevel, Slicer OutMode, Overton Type, Overton Lower, Overton Upper, Overton Unison, Overton Detune, Overton Low, Overton High, Overton DLevel, Detune Pitch1, Detune ELevel1, Detune Pitch2, Detune ELevel2, Detune DLevel, LED
04 03	0000 bbbb 0000 cccc 0000 00aa	ASSIGN6 target min	(0 - 2400100) offset:100 -100 - 2400000	
04 09	0000 bbbb 0000 cccc 0000 dddd 0000 eeee 0000 ffff 0000 00aa	ASSIGN6 target max	(0 - 2400100) offset:100 -100 - 2400000	
04 0F	0ddd dddd	ASSIGN6 Active Range LO	(0 - 126) 0 - 126	
04 10	0ddd dddd	ASSIGN6 Active Range HI	(1 - 127) 1 - 127	
04 11	0ddd dddd	ASSIGN6 Wave Rate	(0 - 113) 0 - 100, WHL, 2THd, WHL3, 2TH, 4THd, 2TH3, 4TH, 8THd, 4TH3, 8TH, 16THd, 8TH3, 16TH	
04 12	0000 00dd	ASSIGN6 Wave Form	(0 - 2) SAW, TRI, SIN	
04 13	0ddd dddd	ASSIGN6 Internal Pedal Trigger	(0 - 68) PAT CNG, EXP LO, EXP MID, EXP HI, CTL1 PDL, CTL2 PDL, CC#1, CC#2, CC#3, CC#4, CC#5, CC#6, CC#7, CC#8, CC#9, CC#10, CC#11, CC#12, CC#13, CC#14, CC#15, CC#16, CC#17, CC#18, CC#19, CC#20, CC#21, CC#22, CC#23, CC#24, CC#25, CC#26, CC#27, CC#28, CC#29, CC#30, CC#31, CC#64, CC#65, CC#66, CC#67, CC#68, CC#69, CC#70, CC#71, CC#72, CC#73, CC#74, CC#75, CC#76, CC#77, CC#78, CC#79, CC#80, CC#81, CC#82, CC#83, CC#84, CC#85, CC#86, CC#87, CC#88, CC#89, CC#90, CC#91, CC#92, CC#93, CC#94, CC#95	
04 14	0ddd dddd	ASSIGN6 Internal Pedal Time	(0 - 100) 0 - 100	
04 15	0000 00dd	ASSIGN6 Internal Pedal Curve	(0 - 2) LINEAR, SLOW, FAST	
04 16	0000 000d	ASSIGN7 sw	(0 - 1) OFF, ON	
04 17	0ddd dddd	ASSIGN7 source	(0 - 69) TAP/CTL, EXP PDL, CTL1 PDL, CTL2 PDL, INT PDL, WAVE PDL, INPUT, CC#1, CC#2, CC#3, CC#4, CC#5, CC#6, CC#7, CC#8, CC#9, CC#10, CC#11, CC#12, CC#13, CC#14, CC#15, CC#16, CC#17, CC#18, CC#19, CC#20, CC#21, CC#22, CC#23, CC#24, CC#25, CC#26, CC#27, CC#28, CC#29, CC#30, CC#31, CC#64, CC#65, CC#66, CC#67, CC#68, CC#69, CC#70, CC#71, CC#72, CC#73, CC#74, CC#75, CC#76, CC#77, CC#78, CC#79, CC#80, CC#81, CC#82, CC#83, CC#84, CC#85, CC#86, CC#87, CC#88, CC#89, CC#90, CC#91, CC#92, CC#93, CC#94, CC#95	
04 18	0000 000d	ASSIGN7 source mode	(0 - 1) MOMENT, TOGGLE	
04 19	0000 000a	ASSIGN7 target	(0 - 264) Effect Switch, Rate, BPM, Mode, Effect Level, Insert Switch, Output Gain, Output Mode, Trigger, Chorus Type, Chorus Note, Chorus Depth, Chorus Predly, Chorus Wavefm, Chorus Sweet, Chorus Bell, Chorus ELevel, Chorus DLevel, Chorus LoLevel, Chorus LoFreq, Chorus HiLevel, Chorus HiFreq, Chorus LoCut, Chorus HiCut, CE1Cho Note, CE1Cho Depth, CE1Cho ELevel, CE1Cho DLevel, CE1Cho LoLevel, CE1Cho LoFreq, CE1Cho HiLevel, CE1Cho HiFreq, CE1Cho Preamp, CE1Cho PreampG, CE1Cho PreampL, CE1Vib Note, CE1Vib Depth, CE1Vib ELevel, CE1Vib DLevel, CE1Vib LoLevel, CE1Vib LoFreq, CE1Vib HiLevel, CE1Vib HiFreq, CE1Vib Preamp, CE1Vib PreampG, CE1Vib PreampL, TriCho Note, TriCho LFO, TriCho Intens1, TriCho Intens2, TriCho Intens3, TriCho Bright, TriCho LoLevel, TriCho LoFreq, TriCho HiLevel, TriCho HiFreq, TriCho ELevel, TriCho DLevel, Flanger Type, FlangG Note, FlangG Depth, FlangG Reso, FlangG Manual, FlangG Turbo, FlangG LoDamp, FlangG HiDamp, FlangG LoCut, FlangG HiCut, FlangG Separat, FlangG Step, FlangG Wavefm, FlangG InSens, FlangG Polarty, FlangG ELevel, FlangG DLevel, FlangB Note, FlangB Depth, FlangB Reso, FlangB Manual, FlangB Turbo, FlangB LoDamp, FlangB HiDamp, FlangB LoCut, FlangB HiCut, FlangB Separat, FlangB Step, FlangB Wavefm, FlangB InSens, FlangB Polarty, FlangB ELevel, FlangB DLevel, Phaser Type, PhaserG Note, PhaserG Depth, PhaserG Reso, PhaserG Manual, PhaserG LoDamp, PhaserG HiDamp, PhaserG LoCut, PhaserG HiCut, PhaserG Separat, PhaserG Wavefm, PhaserG InSens, PhaserG Polrty, PhaserG Stage, PhaserG Step, PhaserG BiPhas, PhaserG ELevel, PhaserG DLevel, PhaserB Note, PhaserB Depth, PhaserB Reso, PhaserB Manual, PhaserB LoDamp, PhaserB HiDamp, PhaserB LoCut, PhaserB HiCut, PhaserB Separat, PhaserB Wavefm, PhaserB InSens, PhaserB Polrty, PhaserB Stage, PhaserB Step, PhaserB BiPhas, PhaserB ELevel, PhaserB DLevel, Script Note, Script Depth, Script ELevel, Script DLevel, CVibe Type, CVibe Note, CVibe Depth, CVibe ELevel, CVibe DLevel, Vibrato Type, Vibrato Note, Vibrato Depth, Vibrato Color, Vibrato Trig, Vibrato Rise, Vibrato EnvSns, Vibrato Wavefm, Vibrato InSens, Vibrato ELevel, Vibrato DLevel, Scanner Speed, Scanner Note, Scanner Mode, Scanner ELevel, Scanner DLevel, Trml Type, Trml Note, Trml Depth, Trml Trigger, Trml RiseTime, Trml EnvSens, Trml Waveform, Trml InputSens, Trml ELevel, Trml DLevel, Pan Note, Pan Depth, Pan Trigger, Pan RiseTime, Pan EnvSens, Pan Waveform, Pan InputSens, Pan ELevel, Pan DLevel, Twin Speed, Twin Note, Twin Intensity, Twin ELevel, Twin DLevel, Deluxe Speed, Deluxe Note, Deluxe Intnsty, Deluxe ELevel, Deluxe DLevel, Dimension Mode, Dimension Md1, Dimension Md2, Dimension Md3, Dimension Md4, Dimension Md5, Dimension ELvl, Dimension DLvl, RingMod Freq, RingMod Depth, RingMod Rate, RingMod ELevel, RingMod DLevel, Rotary Speed, Rotary Slow, Rotary Fast, Rotary Rise, Rotary Fall, Rotary MicDist, Rotary R/H, Rotary Drive, Rotary ELevel, Rotary DLevel, Filter Type, AWahG Note, AWahG Filter, AWahG Depth, AWahG Freq, AWahG Reso, AWahG Waveform, AWahG ELevel, AWahG DLevel, AWahB Note, AWahB Filter, AWahB Depth, AWahB Freq, AWahB Reso, AWahB Waveform, AWahB ELevel, AWahB DLevel, TWahG Filter, TWahG Polarity, TWahG Sens, TWahG Freq, TWahG Reso, TWahG Decay, TWahG ELevel, TWahG DLevel, TWahB Filter, TWahB Polarity, TWahB Sens, TWahB Freq, TWahB Reso, TWahB Decay, TWahB ELevel, TWahB DLevel, PFilter Note, PFilter Ptn, PFilter Filter, PFilter Reso, PFilter Trans, PFilter ELevel, PFilter DLevel, Slicer Note, Slicer Pattern, Slicer FxType, Slicer Attack, Slicer Duty, Slicer ELevel, Slicer DLevel, Slicer OutMode, Overton Type, Overton Lower, Overton Upper, Overton Unison, Overton Detune, Overton Low, Overton High, Overton DLevel, Detune Pitch1, Detune ELevel1, Detune Pitch2, Detune ELevel2, Detune DLevel, LED	
04 1C	0000 bbbb 0000 cccc 0000 00aa	ASSIGN7 target min	(0 - 2400100) offset:100 -100 - 2400000	
04 22	0000 bbbb 0000 cccc 0000 dddd 0000 eeee 0000 ffff 0000 00aa	ASSIGN7 target max	(0 - 2400100) offset:100 -100 - 2400000	

		0000 cccc		
		0000 dddd		
		0000 eeee		
		0000 ffff		
04 28	0ddd dddd	ASSIGN7 Active Range LO	(0 - 126)	
			0 - 126	
04 29	0ddd dddd	ASSIGN7 Active Range HI	(1 - 127)	
			1 - 127	
04 2A	0ddd dddd	ASSIGN7 Wave Rate	(0 - 113)	
			0 - 100, WHL, 2THd, WHL3, 2TH, 4THd, 2TH3, 4TH, 8THd, 4TH3, 8TH, 16THd, 8TH3, 16TH	
04 2B	0000 00dd	ASSIGN7 Wave Form	(0 - 2)	
			SAW, TRI, SIN	
04 2C	0ddd dddd	ASSIGN7 Internal Pedal Trigger	(0 - 68)	
			PAT CNG, EXP LO, EXP MID, EXP HI, CTL1 PDL, CTL2 PDL, CC#1, CC#2, CC#3, CC#4, CC#5, CC#6, CC#7, CC#8, CC#9, CC#10, CC#11, CC#12, CC#13, CC#14, CC#15, CC#16, CC#17, CC#18, CC#19, CC#20, CC#21, CC#22, CC#23, CC#24, CC#25, CC#26, CC#27, CC#28, CC#29, CC#30, CC#31, CC#64, CC#65, CC#66, CC#67, CC#68, CC#69, CC#70, CC#71, CC#72, CC#73, CC#74, CC#75, CC#76, CC#77, CC#78, CC#79, CC#80, CC#81, CC#82, CC#83, CC#84, CC#85, CC#86, CC#87, CC#88, CC#89, CC#90, CC#91, CC#92, CC#93, CC#94, CC#95	
04 2D	0ddd dddd	ASSIGN7 Internal Pedal Time	(0 - 100)	
			0 - 100	
04 2E	0000 00dd	ASSIGN7 Internal Pedal Curve	(0 - 2)	
			LINEAR, SLOW, FAST	
04 2F	0000 000d	ASSIGN8 sw	(0 - 1)	
			OFF, ON	
04 30	0ddd dddd	ASSIGN8 source	(0 - 69)	
			TAP/CTL, EXP PDL, CTL1 PDL, CTL2 PDL, INT PDL, WAVE PDL, INPUT, CC#1, CC#2, CC#3, CC#4, CC#5, CC#6, CC#7, CC#8, CC#9, CC#10, CC#11, CC#12, CC#13, CC#14, CC#15, CC#16, CC#17, CC#18, CC#19, CC#20, CC#21, CC#22, CC#23, CC#24, CC#25, CC#26, CC#27, CC#28, CC#29, CC#30, CC#31, CC#64, CC#65, CC#66, CC#67, CC#68, CC#69, CC#70, CC#71, CC#72, CC#73, CC#74, CC#75, CC#76, CC#77, CC#78, CC#79, CC#80, CC#81, CC#82, CC#83, CC#84, CC#85, CC#86, CC#87, CC#88, CC#89, CC#90, CC#91, CC#92, CC#93, CC#94, CC#95	
04 31	0000 000d	ASSIGN8 source mode	(0 - 1)	
			MOMENT, TOGGLE	
04 32	0000 000a	ASSIGN8 target	(0 - 264)	
			Effect Switch, Rate, BPM, Mode, Effect Level, Insert Switch, Output Gain, Output Mode, Trigger, Chorus Type, Chorus Note, Chorus Depth, Chorus PreDly, Chorus Wavefm, Chorus Sweet, Chorus Bell, Chorus ELevel, Chorus DLevel, Chorus LoLevel, Chorus LoFreq, Chorus HiLevel, Chorus HiFreq, Chorus LoCut, Chorus HiCut, CE1Cho Note, CE1Cho Depth, CE1Cho ELevel, CE1Cho DLevel, CE1Cho LoLevel, CE1Cho LoFreq, CE1Cho HiLevel, CE1Cho HiFreq, CE1Cho Preamp, CE1Cho PreampG, CE1Cho PreampL, CE1Vib Note, CE1Vib Depth, CE1Vib ELevel, CE1Vib DLevel, CE1Vib LoLevel, CE1Vib LoFreq, CE1Vib HiLevel, CE1Vib HiFreq, CE1Vib Preamp, CE1Vib PreampG, CE1Vib PreampL, TriCho Note, TriCho LFO, TriCho Intens1, TriCho Intens2, TriCho Intens3, TriCho Bright, TriCho LoLevel, TriCho LoFreq, TriCho HiLevel, TriCho HiFreq, TriCho ELevel, TriCho DLevel, Flanger Type, FlangG Note, FlangG Depth, FlangG Reso, FlangG Manual, FlangG Turbo, FlangG LoDamp, FlangG HiDamp, FlangG LoCut, FlangG HiCut, FlangG Separat, FlangG Step, FlangG Wavefm, FlangG InSens, FlangG Polarty, FlangG ELevel, FlangG DLevel, FlangB Note, FlangB Depth, FlangB Reso, FlangB Manual, FlangB Turbo, FlangB LoDamp, FlangB HiDamp, FlangB LoCut, FlangB HiCut, FlangB Separat, FlangB Step, FlangB Wavefm, FlangB InSens, FlangB Polarty, FlangB ELevel, FlangB DLevel, Phaser Type, PhaserG Note, PhaserG Depth, PhaserG Reso, PhaserG Manual, PhaserG LoDamp, PhaserG HiDamp, PhaserG LoCut, PhaserG HiCut, PhaserG Separat, PhaserG Wavefm, PhaserG InSens, PhaserG Polrty, PhaserG Stage, PhaserG Step, PhaserG BiPhas, PhaserG ELevel, PhaserG DLevel, PhaserB Note, PhaserB Depth, PhaserB Reso, PhaserB Manual, PhaserB LoDamp, PhaserB HiDamp, PhaserB LoCut, PhaserB HiCut, PhaserB Separat, PhaserB Wavefm, PhaserB InSens, PhaserB Polrty, PhaserB Stage, PhaserB Step, PhaserB BiPhas, PhaserB ELevel, PhaserB DLevel, Script Note, Script Depth, Script ELevel, Script DLevel, CVibe Type, CVibe Note, CVibe Depth, CVibe ELevel, CVibe DLevel, Vibrato Type, Vibrato Note, Vibrato Depth, Vibrato Color, Vibrato Trig, Vibrato Rise, Vibrato EnvSns, Vibrato Wavefm, Vibrato InSens, Vibrato ELevel, Vibrato DLevel, Scanner Speed, Scanner Note, Scanner Mode, Scanner ELevel, Scanner DLevel, Trml Type, Trml Note, Trml Depth, Trml Trigger, Trml RiseTime, Trml EnvSens, Trml Waveform, Trml InputSens, Trml ELevel, Trml DLevel, Pan Note, Pan Depth, Pan Trigger, Pan RiseTime, Pan EnvSens, Pan Waveform, Pan InputSens, Pan ELevel, Pan DLevel, Twin Speed, Twin Note, Twin Intensity, Twin ELevel, Twin DLevel, Deluxe Speed, Deluxe Note, Deluxe Intnsty, Deluxe ELevel, Deluxe DLevel, Dimension Mode, Dimension Md1, Dimension Md2, Dimension Md3, Dimension Md4, Dimension Md5, Dimension ELvl, Dimension DLvl, RingMod Freq, RingMod Depth, RingMod Rate, RingMod ELevel, RingMod DLevel, Rotary Speed, Rotary Slow, Rotary Fast, Rotary Rise, Rotary Fall, Rotary MicDist, Rotary R/H, Rotary Drive, Rotary ELevel, Rotary DLevel, Filter Type, AWahG Note, AWahG Filter, AWahG Depth, AWahG Freq, AWahG Reso, AWahG Waveform, AWahG ELevel, AWahG DLevel, AWahB Note, AWahB Filter, AWahB Depth, AWahB Freq, AWahB Reso, AWahB Waveform, AWahB ELevel, AWahB DLevel, TWahG Filter, TWahG Polarity, TWahG Sens, TWahG Freq, TWahG Reso, TWahG Decay, TWahG ELevel, TWahG DLevel, TWahB Filter, TWahB Polarity, TWahB Sens, TWahB Freq, TWahB Reso, TWahB Decay, TWahB ELevel, TWahB DLevel, PFilter Note, PFilter Ptn, PFilter Filter, PFilter Reso, PFilter Trans, PFilter ELevel, PFilter DLevel, Slicer Note, Slicer Pattern, Slicer FxType, Slicer Attack, Slicer Duty, Slicer ELevel, Slicer DLevel, Slicer OutMode, Overton Type, Overton Lower, Overton Upper, Overton Unison, Overton Detune, Overton Low, Overton High, Overton DLevel, Detune Pitch1, Detune ELevel1, Detune Pitch2, Detune ELevel2, Detune DLevel, LED	
		0000 bbbb		
		0000 cccc		
04 35	0000 00aa	ASSIGN8 target min	(0 - 2400100) offset:100	
			-100 - 2400000	
		0000 bbbb		
		0000 cccc		
		0000 dddd		
		0000 eeee		
		0000 ffff		
04 3B	0000 00aa	ASSIGN8 target max	(0 - 2400100) offset:100	
			-100 - 2400000	
		0000 bbbb		
		0000 cccc		
		0000 dddd		
		0000 eeee		
		0000 ffff		
04 41	0ddd dddd	ASSIGN8 Active Range LO	(0 - 126)	
			0 - 126	
04 42	0ddd dddd	ASSIGN8 Active Range HI	(1 - 127)	
			1 - 127	
04 43	0ddd dddd	ASSIGN8 Wave Rate	(0 - 113)	
			0 - 100, WHL, 2THd, WHL3, 2TH, 4THd, 2TH3, 4TH, 8THd, 4TH3, 8TH, 16THd, 8TH3, 16TH	
04 44	0000 00dd	ASSIGN8 Wave Form	(0 - 2)	
			SAW, TRI, SIN	
04 45	0ddd dddd	ASSIGN8 Internal Pedal Trigger	(0 - 68)	
			PAT CNG, EXP LO, EXP MID, EXP HI, CTL1 PDL, CTL2 PDL, CC#1, CC#2, CC#3, CC#4, CC#5, CC#6, CC#7, CC#8, CC#9, CC#10, CC#11, CC#12, CC#13, CC#14, CC#15, CC#16, CC#17, CC#18, CC#19, CC#20, CC#21, CC#22, CC#23, CC#24, CC#25, CC#26, CC#27, CC#28, CC#29, CC#30, CC#31, CC#64, CC#65, CC#66, CC#67, CC#68, CC#69, CC#70, CC#71, CC#72, CC#73, CC#74, CC#75, CC#76, CC#77, CC#78, CC#79, CC#80, CC#81, CC#82, CC#83, CC#84, CC#85, CC#86, CC#87, CC#88, CC#89, CC#90, CC#91, CC#92, CC#93, CC#94, CC#95	
04 46	0ddd dddd	ASSIGN8 Internal Pedal Time	(0 - 100)	
			0 - 100	
04 47	0000 00dd	ASSIGN8 Internal Pedal Curve	(0 - 2)	
			LINEAR, SLOW, FAST	

	04 48	0ddd dddd	Assign Input Sens	(0 - 100)	
				0 - 100	
	04 49	0000 000d	LED status	(0 - 1)	*3
				OFF, ON	

*1 : It is effective when FILTER TYPE = PATTERN, FILTER PATTERN = USER.					
*2 : It is effective when SLICER PATTERN = USER.					
*3 : If "ASSIGN TRG" set to LED, this parameter set status of the LED when patch is changed.					

Function ...		Transmitted	Recognized	Remarks
Basic Channel	Default	1-16, OFF	1-16, OFF	Memorized
	Changed	1-16, OFF	1-16, OFF	
Mode	Default	Mode 3	Mode 3	
	Messages	x	x	
	Altered	*****	x	
Note Number:		x	x	
	True Voice	*****	*****	
Velocity	Note ON	x	x	
	Note OFF	x	x	
After Touch	Key's	x	x	
	Ch's	x	x	
Pitch Bend		x	x	
Control Change	0	o (0 - 2)	o (0 - 2)	Bank Select (MSB)
	32	o (always 0)	*3 o	Bank Select (LSB)
	1 - 31	o	*1 o	*2
	64 - 95	o	*1 o	*2
Prog Change :True Number		o 0-127	o 0-127	Program Number 1-128
System Exclusive		o	o	
System Common	:Song Pos	x	x	
	:Song Sel	x	x	
	:Tune	x	x	
System Real Time	:Clock	o	o	
	:Start	x	x	
	:Continue	x	x	
	:Stop	x	x	
Aux Message	:All sound off	x	x	
	:Reset All Controller	x	x	
	:Local ON/OFF	x	x	
	:All Notes OFF	x	x	
Notes	:Active Sense	o	o	
	:Reset	x	x	
		*1 Transmitted with the CC# set by MIDI CC# parameter		
		*2 Recognized with the CC# set by MIDI CC# parameter# or ASSIGN SRC		
		*3 Transmitted when "MIDI: BANK SEL OUT"=M+L		

Mode 1 : OMNI ON, POLY
Mode 3 : OMNI OFF, POLY

Mode 2 : OMNI ON, MONO
Mode 4 : OMNI OFF, MONO

o : Yes
x : No