

MIDI Implementation

Model: GT-PRO
Date: Apr. 1, 2005
Version: 1.00

1. RECOGNIZED RECEIVE DATA

■ CHANNEL VOICE MESSAGE

● Control Change

Status	Second	Third
BnH	ccH	vvH

n = MIDI Channel Number: 0H - FH (ch.1 - ch.16)
cc = Controller Number: 00H, 20H (0, 32)
01H - 1FH (1 - 31)
40H - 5FH (64 - 95)
vv = Value: 00H - 7FH (0 - 127)

* Control numbers 00H and 20H are recognized as Bank Select messages.

00H: For values of 03H or lower, the Program Change Map will be switched according to the value. For values of 04H or higher, the received data will be ignored.
20H: The received data will be ignored, regardless of the value.

* By specifying this as a Source for "Assign" (owner's manual p. 66) you can use these messages to control a Target.

● Program Change

Status	Second
CnH	ppH

n = MIDI Channel Number: 0H - FH (ch.1 - ch.16)
pp = Program Number: 00H - 7FH (No.1 - No.128)

* Patches will be selected according to the program number that is received.
* There are four Program Change Maps which are referenced when selecting programs, and these are switched by Bank Select messages.

■ SYSTEM REALTIME MESSAGE

● Timing Clock

Status
F8H

● Active Sensing

Status
FEH

* When an Active Sensing message is received, the interval of all subsequent messages will begin to be monitored. If an interval greater than 400 msec. between messages, the display will indicate "MIDI Off Line!"

■ SYSTEM EXCLUSIVE MESSAGE

Status	Data Byte	Status
F0H	iiH ddH ... eeH	F7H

F0H = System Exclusive
ii = Manufacturer ID: 41H (Roland)
dd ... ee = Data: 00H - 7FH (0 - 127)
F7H = EOX (End of Exclusive/System common)

* For more details, please refer to "Roland Exclusive Messages."

2. TRANSMITTED DATA

■ CHANNEL VOICE MESSAGE

● Control Change

Status	Second	Third
BnH	ccH	vvH

n = MIDI Channel Number: 0H - FH (ch.1 - ch.16)
cc = Controller Number: 00H (0)
01H - 1FH (1 - 31)
21H - 5FH (33 - 95)
vv = Value: 00H - 7FH (0 - 127)

* If you set up a system parameter "MIDI PC OUT" for "On," Bank Select (00H: MSB) is transmitted when switching patch.

* If you set up a control change number at a system parameter "MIDI EXP1 OUT," "MIDI CTL1 OUT," "MIDI CTL2 OUT," "MIDI CTL3 OUT," and "MIDI CTL4 OUT" control change information is transmitted when operating the external EXP pedal/Foot switch.

● Program Change

Status	Second
CnH	ppH

n = MIDI Channel Number: 0H - FH (ch.1 - ch.16)
pp = Program Number: 00H - 63H (No.1 - No.100)

* If you set up a system parameter "MIDI PC Out" for "On," program change information is transmitted when switching patch.

■ SYSTEM REALTIME MESSAGE

● Start

Status
FAH

● Stop

Status
FCH

■ SYSTEM EXCLUSIVE MESSAGE

Status	Data Byte	Status
F0H	iiH ddH ... eeH	F7H

F0H = System Exclusive
ii = Manufacturer ID: 41H (Roland)
dd ... ee = Data: 00H - 7FH (0 - 127)
F7H = EOX (End of Exclusive/System common)

* For more details, please refer to "Roland Exclusive Messages."

●MIDI Machine Control (MMC)

F0H 7FH 7FH 06H com F7H

F0H = System Exclusive
 7FH = ID Number (Universal Realtime Message)
 7FH = Device ID (Broadcast)
 06H = Sub ID#1 (Machine Control Command)
 com = Sub ID#2 (MMC Command)
 F7H = EOX (End of Exclusive/System common)

* "com" (MMC Command) that I transmit with GT-PRO is following.

01H: Stop
 02H: Play

3. EXCLUSIVE COMMUNICATION

On the GT-PRO, exclusive messages can be used as follows. - Transmit/receive GT-PRO system/patch data.

The model ID for GT-PRO exclusive messages is 00H 00H 0BH, and you can set up the device ID at 00H-1FH.

■ONE WAY COMMUNICATION

●Request Data 1 RQ1(11H)

F0H 41H dev 00H 00H 0BH 11H aaH bbH ccH ddH ssH ttH uuH vvH sum F7H

F0H = Exclusive Status
 41H = Manufacturer ID (Roland)
 dev = Device ID (Dev=00H-1FH)
 00H = Model ID MSB (GT-PRO)
 00H = Model ID (GT-PRO)
 0BH = Model ID LSB (GT-PRO)
 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 System Exclusive)

- * This message can only be received, and is not transmitted from the GT-PRO.
- * When transmitting large Size values spanning fragmented addresses, the data can be transmitted only to those addresses that are contiguous.

●Data Set 1 DT1(12H)

F0H 41H dev 00H 00H 0BH 12H aaH bbH ccH ddH eeH ... ffH sum F7H

F0H = Exclusive Status
 41H = Manufacturer ID (Roland)
 dev = Device ID (dev = 00H-1FH)
 00H = Model ID MSB (GT-PRO)
 00H = Model ID (GT-PRO)
 0BH = Model ID LSB (GT-PRO)
 12H = Command ID (DT1)
 aaH = Address MSB
 bbH = Address :
 ccH = Address :
 ddH = Address LSB
 eeH = Data
 : = :
 ffH = Data
 sum = Checksum
 F7H = EOX (End of System Exclusive)

- * When transmitting large amounts of data spanning fragmented addresses, the data can be transmitted only to those addresses that are contiguous.

●Inquiry Message

○Identity Request

F0H 7EH 10H 06H 01H F7H

F0H = Exclusive Status
 7EH = ID Number
 dev = Device ID (Dev=00H-1FH)
 06H = Sub ID#1
 01H = Sub ID#2
 F7H = EOX (End of System Exclusive)

- * The 7FH (Broadcast) device ID is also supported.
- * When an Identity Request is received, the GT-PRO will transmitted the following Identity Reply.

○Identity Reply

F0H 7EH 10H 06H 02H 41H 0BH 02H 00H 00H 00H 00H 00H 00H F7H

F0H= Exclusive Status
 7EH= ID Number (Universal Non-realtime Message)
 dev = Device ID (Dev=00H-1FH)
 06H= Sub ID#1
 02H= Sub ID#2
 41H= ID Number (Roland)
 0BH 02H= Device Family Code
 00H 00H= Device Family Number Code
 00H 00H 00H 00H= Software Revision Level
 F7H= EOX (End of System Exclusive)

- * When an Identity Request is received, the GT-PRO will transmitted the following Identity Reply.

4. PARAMETER ADDRESS MAP

The address and size are displayed under 7-bit hexadecimal notation.

Address	MSB			LSB
Binary	0aaa aaaa	0bbb bbbb	0ccc cccc	0ddd dddd
7-bit Hexadecimal	AA	BB	CC	DD
Size	MSB			LSB
Binary	0sss ssss	0ttt tttt	0uuu uuuu	0vvv vvvv
7-bit Hexadecimal	SS	TT	UU	VV

Address Block Map

Address	Block	Sub Block	Note	
00 00 00 00	SYSTEM	TUNER/BYPASS	... *Refer to "Table TUNER/BYPASS"	
01 00 00 00		OUTPUT SELECT	... *Refer to "Table OUTPUT SELECT"	
01 02 00 00		SYSTEM	... *Refer to "Table SYSTEM"	
01 04 20 00		MIDI	... *Refer to "Table MIDI"	
01 04 30 00		MIDI Program Map	... *Refer to "Table MIDI Program Map"	
01 05 00 00		METER	... *Refer to "Table METER"	
01 10 00 00		System Preamp	... *Refer to "Table System Preamp"	
02 01 00 00		MANUAL	... *Refer to "Table MANUAL"	
03 00 00 00		HARMONIST SCALE	... *Refer to "Table HARMONIST SCALE"	
03 01 00 00		AUTO RIFF PHRASE	... *Refer to "Table AUTO RIFF PHRASE"	
03 02 00 00	AMP Customize	... *Refer to "Table AMP Customize"		
03 03 00 00	SPEAKER Customize	... *Refer to "Table SPEAKER Customize"		
03 04 00 00	OD/DS Customize	... *Refer to "Table OD/DS Customize"		
03 05 00 00	WAH Customize	... *Refer to "Table WAH Customize"		
04 00 00 00	Quick Fx	USER Area (Data)	... *Refer to "Table Quick Fx"	
05 00 00 00		ROM Area (Data)		
06 00 00 00	Quick Fx Name	USER Area (Name)	... *Refer to "Table Quick Fx Name"	
07 00 00 00		ROM Area (Name)		
08 00 00 00	User Patch	U 1- 1	... *Refer to "Table Patch"	
08 01 00 00		U 1- 2		
:		:		
:		:		
09 46 00 00		U20- 9		
09 47 00 00		U20-10		
0A 00 00 00		ROM Patch (Read Only)	P21- 1	... *Refer to "Table Patch"
0A 01 00 00			P21- 2	
:			:	
:			:	
0B 46 00 00	P40- 9			
0B 47 00 00	P40-10			
0C 00 00 00	Temporary Buffer (Bulk)		... *Refer to "Table Patch"	
0D 00 00 00	Temporary Buffer (Individual)		... *Refer to "Table Patch"	

- * The GT-PRO can use two methods of communication; Individual Parameter and Bulk Dump.
- * Bulk data can be received when the Bulk Load Ready function is accessed in "MIDI: Bulk Load" screen (System mode).
- * Although individual data can be received at any time, be sure to appropriately describe the value for one parameter in one packet [F0...F7].
- * Do not use an address appended with "#" as the first address.
- * Do not specify an odd-number address for Quick Fx Data, SYSTEM:MIDI Program Map.
- * Parameters for which Size is 2 or higher should not be separated; make sure these are sent in the same packet.
- * Parameters with Size of 2 or higher transmitted from the specified addresses in sequence, from MSB to LSB.
- * Output of Quick Fx Name is fixed as 12 bytes and Fx CHAIN is fixed as 14 bytes.

Table TUNER/BYPASS

Address (H)	Size (H)	Data (H)	Parameter	Description
00 00 00 00	00 00 00 01	00 - 0A	Tuner Pitch	00 : 435Hz 01 : 436Hz : 0A : 445Hz
00 00 00 01	00 00 00 01	00 - 02	Tuner Out	00 : Mute 01 : Bypass 02 : Current

Table OUTPUT SELECT

Address (H)	Size (H)	Data (H)	Parameter	Description
01 00 00 00	00 00 00 01	00 - 07	Output Select	00 : JC-120 01 : SMALL AMP 02 : COMBO AMP 03 : STACK AMP 04 : JC-120 Return 05 : COMBO Return 06 : STACK Return 07 : LINE/PHONES

Table Global

Address (H)	Size (H)	Data (H)	Parameter	Description
01 00 00 01	00 00 00 01	00 - 28	GLOBAL EQ LOW	00 : -20dB 01 : -19dB : : 28 : +20dB
01 00 00 02	00 00 00 01	00 - 28	GLOBAL EQ MID	-20dB - +20dB
01 00 00 03	00 00 00 01	00 - 1B	GLOBAL EQ MID Frequency	*Refer to "Table Middle Frequency"
01 00 00 04	00 00 00 01	00 - 28	GLOBAL EQ HIGH	-20dB - +20dB
01 00 00 05	00 00 00 01	00 - 28	TOTAL NS THRESHOLD	-20dB - +20dB
01 00 00 06	00 00 00 01	00 - 64	TOTAL REVERB LEVEL	00 : 0% 01 : 2% 02 : 4% : : 32 : 100% : : 64 : 200%
01 00 00 07	00 00 00 01	00 - 07	Sub Output Select	00 : JC-120 01 : SMALL AMP 02 : COMBO AMP 03 : STACK AMP 04 : JC-120 Return 05 : COMBO Return 06 : STACK Return 07 : LINE/PHONES
01 00 00 08	00 00 00 01	00 - 28	Sub GLOBAL EQ LOW	-20dB - +20dB
01 00 00 09	00 00 00 01	00 - 28	Sub GLOBAL EQ MID	-20dB - +20dB
01 00 00 0A	00 00 00 01	00 - 1B	Sub GLOBAL EQ MID Frequency	*Refer to "Table Middle Frequency"
01 00 00 0B	00 00 00 01	00 - 28	Sub GLOBAL EQ HIGH	-20dB - +20dB
01 00 00 0C	00 00 00 01	00 - 03	Output Channel	00 : PATCH 01 : MAIN 02 : SUB 03 : MAIN+SUB
01 00 00 0D	00 00 00 01	00 - 02	USB/DGT Output Channel	00 : MAIN 01 : SUB 02 : MAIN+SUB
01 00 00 0E	00 00 00 01	00 - 64	USB/DGT Out Level	00 : 0 01 : 2 : : 32 : 100 : : 64 : 200
01 00 00 0F	00 00 00 01	00 - 02	USB Mix Channel	00 : MAIN 01 : SUB 02 : MAIN+SUB
01 00 00 10	00 00 00 01	00 - 64	USB Mix Level	00 : 0 01 : 2 : : 32 : 100 : : 64 : 200

Table SYSTEM

Address (H)	Size (H)	Data (H)	Parameter	Description
01 02 00 00	00 00 00 01	00 - 0F	LCD Contrast	1 - 16
01 02 00 01	00 00 00 01	00 - 01	Input Select	Guitar In, USB In
01 02 00 02	00 00 00 01	00 - 28	Input Level	-20dB - +20dB
01 02 00 03	00 00 00 01	00 - 28	Input Presence	-20dB - +20dB
01 02 00 04	00 00 00 01	00 - 01	Patch Change Mode	00 : Fast 01 : Smooth
01 02 00 05	00 00 00 01	00 - 01	Preamp Mode	00 : Patch 01 : System
01 02 00 06	00 00 00 02	00 00 - 03 0F	Patch Extent	00 00 : U 1- 1 00 01 : U 1- 2 : : 00 7F : U13- 8 01 00 : U13- 9 : : 01 47 : U20-10 01 48 : P21- 1 : : 03 0F : P40-10
01 02 00 07#			Patch Extent (LSB)	
01 02 00 08	00 00 00 01	00 - 01	Assign Hold	00 : Off 01 : On
01 02 00 09	00 00 00 01	00 - 01	Knob Mode	00 : Immediate 01 : Current Setting
01 02 00 0A	00 00 00 01	00 - 05	EXP1 Func	00 : Auto 01 : Assignable 02 : Foot Volume 03 : Pedal Level 04 : Pedal Wah 05 : Patch Bend
01 02 00 0B	00 00 00 01	00 - 21	CTL1 Func	*Refer to "Table System CTL1 Function"
01 02 00 0C	00 00 00 01	00 - 21	CTL2 Func	*Refer to "Table System CTL1 Function"
01 02 00 0D	00 00 00 01	01 - 05	EXP2 Func	01 : Assignable 02 : Foot Volume 03 : Pedal Level 04 : Pedal Wah 05 : Patch Bend
01 02 00 0E	00 00 00 01	00 - 21	CTL3 Func	*Refer to "Table System CTL1 Function"
01 02 00 0F	00 00 00 01	00 - 21	CTL4 Func	*Refer to "Table System CTL1 Function"
01 02 00 10	00 00 00 01	00 - 05	CC#7 Func	*Refer to EXP1 Func
01 02 00 11	00 00 00 01	00 - 21	CC#80 Func	*Refer to "Table System CTL1 Function"
01 02 00 12	00 00 00 01	01 - 05	CC#1 Func	01 : Assignable 02 : Foot Volume 03 : Pedal Level 04 : Pedal Wah 05 : Patch Bend
01 02 00 13	00 00 00 01	00 - 01	MAIN OUT Level	00 : -10dBu 01 : +4dBu
01 02 00 14	00 00 00 01	00 - 01	SUB OUTPUT Level	00 : -10dBu 01 : +4dBu
01 02 00 15	00 00 00 01	00 - 01	LOOP1,2 SEND Level	00 : -10dBu 01 : +4dBu

01 02 00 16	00 00 00 01	00 - 01	LOOP1,2 RETURN Level	00 : -10dBu 01 : +4dBu
01 02 00 17	00 00 00 01	00 - 01	FC-200 CTL Mode	Off, On
01 02 00 18	00 00 00 01	00 - 01	FC-200 CTL Pedal	00 : Momentary 01 : Latch
01 02 00 19	00 00 00 01	00 - 27	FC-200 Bank Limit	0 - 39
01 02 00 1A	00 00 00 01	00 - 01	FC-200 PC Out	00 : Immediate 01 : Wait for a NUM.
01 02 00 1B	00 00 00 01	00 - 01	FC-200 BankChange	00 : Bank Pedal Only 01 : Use Number Pedal
01 02 00 1C	00 00 00 01	00 - 01	USB Monitor Command	00 : Disable 01 : Enable
01 02 00 1D	00 00 00 01	00 - 01	USB Direct Monitor	00 : Off 01 : On
01 02 00 1E	00 00 00 01	00 - 01	USB Driver Mode	00 : Standard 01 : Advanced

Table MIDI

Address (H)	Size (H)	Data (H)	Parameter	Description
01 04 20 00	00 00 00 01	00 - 0F	MIDI RX Channel	1 - 16
01 04 20 01	00 00 00 01	00 - 01	MIDI Omni Mode	00 : Omni Off 01 : Omni On
01 04 20 02	00 00 00 01	00 - 10	MIDI TX Channel	00 : 1 01 : 2 : : 0F : 16 10 : RX Channel
01 04 20 03	00 00 00 01	00 - 1F	MIDI Device ID	00 : 1 01 : 2 : : 1F : 32
01 04 20 04	00 00 00 01	00 - 01	MIDI Sync Clock	00 : Auto 01 : Internal
01 04 20 05	00 00 00 01	00 - 01	MIDI PC Out	00 : Off 01 : On
01 04 20 06	00 00 00 01	00 - 5E	MIDI EXP1 Out	00 : Off 01 : CC# 1 02 : CC# 2 : : 1F : CC#31 20 : CC#33 : : 5E : CC#95
01 04 20 07	00 00 00 01	00 - 5E	MIDI CTL1 Out	Off , CC#1 - CC#31, CC#33 - CC#95
01 04 20 08	00 00 00 01	00 - 5E	MIDI CTL2 Out	Off , CC#1 - CC#31, CC#33 - CC#95
01 04 20 09	00 00 00 01	00 - 5E	MIDI CTL3/EXP2 Out	Off , CC#1 - CC#31, CC#33 - CC#95
01 04 20 0A	00 00 00 01	00 - 5E	MIDI CTL4 Out	Off , CC#1 - CC#31, CC#33 - CC#95
01 04 20 0B	00 00 00 01	00 - 01	MIDI Map Select	00 : Fix 01 : Prog

Table MIDI Program Map

Address (H)	Size (H)	Data (H)	Parameter	Description
01 04 30 00	00 00 00 02	00 00 - 03 0F	MIDI Program Map CC#0=0, PC=1	MIDI Map Select = Prog 00 00 : # 1- 1(User) : : 00 09 : # 1-10(User) 00 0A : # 2- 1(User) : : 00 7F : #13- 8(User) 01 00 : #13- 9(User) : : 01 47 : #20-10(User) 01 48 : #21- 1(Preset) : : 01 7F : #26- 6(Preset) 02 00 : #26- 7(Preset) : : 03 0F : #40-10(Preset)
01 04 30 02	00 00 00 02	00 00 - 03 0F	MIDI Program Map CC#0=0, PC=2	
01 04 30 03#				
01 04 31 7E	00 00 00 02	00 00 - 03 0F	MIDI Program Map CC#0=0, PC=128	
01 04 31 7F#				
01 04 32 00	00 00 00 02	00 00 - 03 0F	MIDI Program Map CC#0=1, PC=1	
01 04 32 01#				
01 04 34 00	00 00 00 02	00 00 - 03 0F	MIDI Program Map CC#0=2, PC=1	
01 04 34 01#				
01 04 36 00	00 00 00 02	00 00 - 03 0F	MIDI Program Map CC#0=3, PC=1	
01 04 36 01#				
01 04 37 7E	00 00 00 02	00 00 - 03 0F	MIDI Program Map CC#0=3, PC=128	
01 04 37 7F#				

Table METER

Address (H)	Size (H)	Data (H)	Parameter	Description
01 05 00 00	00 00 00 01	00 - 10	Meter Point	00 : Input 01 : Effects (in chained order) : : 0F : Main Out 10 : Sub Out

Table System Preamp

Address (H)	Size (H)	Data (H)	Parameter	Description
01 10 00 00	00 00 00 01	00 - 01	On/Off	00 : Off 01 : On
01 10 00 01			(Reserved)	
01 10 00 02	00 00 00 01	00 - 03	Channel Mode	00 : Single 01 : Dual Mono 02 : Dual L/R 03 : Dynamic
01 10 00 03	00 00 00 01	00 - 01	Channel Select	00 : Ch A 01 : Ch B
01 10 00 04	00 00 00 01	00 - 64	Dynamic Sens	0-100
01 10 00 05	00 00 00 01	00 - 32	Channel Delay Time	0ms - 50ms
01 10 00 06	00 00 00 01	00 - 30	Ch.A Type	*Refer to "Table Preamp Type"
01 10 00 07	00 00 00 01	00 - 78	Ch.A Gain	0 - 120
01 10 00 08	00 00 00 01	00 - 64	Ch.A Bass	0 - 100
01 10 00 09	00 00 00 01	00 - 64	Ch.A Middle	0 - 100
01 10 00 0A	00 00 00 01	00 - 64	Ch.A Treble	0 - 100
01 10 00 0B	00 00 00 01	00 - 64	Ch.A Presence	0 - 100
01 10 00 0C	00 00 00 01	00 - 64	Ch.A Level	0 - 100
01 10 00 0D	00 00 00 01	00 - 01	Ch.A Bright	00 : Off 01 : On
01 10 00 0E	00 00 00 01	00 - 02	Ch.A Gain SW	00 : Low 01 : Middle 02 : High
01 10 00 0F	00 00 00 01	00 - 01	Ch.A Solo SW	00 : Off 01 : On
01 10 00 10	00 00 00 01	00 - 64	Ch.A Solo Level	0 - 100
01 10 00 11	00 00 00 01	00 - 0A	Ch.A SP Type	00 : Off 01 : Original 02 : 1x8" 03 : 1x10" 04 : 1x12" 05 : 2x12" 06 : 4x10" 07 : 4x12" 08 : 8x12" 09 : Custom1 0A : Custom2
01 10 00 12	00 00 00 01	00 - 04	Ch.A Mic Type	00 : DYN57 01 : DYN421 02 : CND451 03 : CND87 04 : FLAT
01 10 00 13	00 00 00 01	00 - 01	Ch.A Mic Dis.	00 : Off Mic 01 : On Mic
01 10 00 14	00 00 00 01	00 - 0A	Ch.A Mic Pos.	00 : Center 01 : 1 02 : 2 : 0A : 10
01 10 00 15	00 00 00 01	00 - 64	Ch.A Mic Level	0 - 100
01 10 00 16	00 00 00 01	00 - 64	Ch.A Direct Level	0 - 100
01 10 00 17	00 00 00 01	00 - 30	Ch.B Type	*Refer to "Table Preamp Type"
01 10 00 18	00 00 00 01	00 - 78	Ch.B Gain	0 - 120
01 10 00 19	00 00 00 01	00 - 64	Ch.B Bass	0 - 100
01 10 00 1A	00 00 00 01	00 - 64	Ch.B Middle	0 - 100
01 10 00 1B	00 00 00 01	00 - 64	Ch.B Treble	0 - 100
01 10 00 1C	00 00 00 01	00 - 64	Ch.B Presence	0 - 100
01 10 00 1D	00 00 00 01	00 - 64	Ch.B Level	0 - 100
01 10 00 1E	00 00 00 01	00 - 01	Ch.B Bright	00 : Off 01 : On
01 10 00 1F	00 00 00 01	00 - 02	Ch.B Gain SW	00 : Low 01 : Middle 02 : High
01 10 00 20	00 00 00 01	00 - 01	Ch.B Solo SW	00 : Off 01 : On
01 10 00 21	00 00 00 01	00 - 64	Ch.B Solo Level	0 - 100
01 10 00 22	00 00 00 01	00 - 0A	Ch.B SP Type	00 : Off 01 : Original 02 : 1x8" 03 : 1x10" 04 : 1x12" 05 : 2x12" 06 : 4x10" 07 : 4x12" 08 : 8x12" 09 : Custom1 0A : Custom2
01 10 00 23	00 00 00 01	00 - 04	Ch.B Mic Type	00 : DYN57 01 : DYN421 02 : CND451 03 : CND87 04 : FLAT
01 10 00 24	00 00 00 01	00 - 01	Ch.B Mic Dis.	00 : Off Mic 01 : On Mic
01 10 00 25	00 00 00 01	00 - 0A	Ch.B Mic Pos.	00 : Center 01 : 1 02 : 2 : 0A : 10
01 10 00 26	00 00 00 01	00 - 64	Ch.B Mic Level	0 - 100
01 10 00 27	00 00 00 01	00 - 64	Ch.B Direct Level	0 - 100

Table MANUAL

Address (H)	Size (H)	Data (H)	Parameter	Description
02 01 00 00	00 00 00 01	00 - 17	Pedal 1	*Refer to "Manual Pedal"
02 01 00 01	00 00 00 01	00 - 17	Pedal 2	*Refer to "Manual Pedal"
02 01 00 02	00 00 00 01	00 - 17	Pedal 3	*Refer to "Manual Pedal"
02 01 00 03	00 00 00 01	00 - 17	Pedal 4	*Refer to "Manual Pedal"
02 01 00 04	00 00 00 01	00 - 17	Pedal 5	*Refer to "Manual Pedal"
02 01 00 05	00 00 00 01	00 - 17	Pedal 6	*Refer to "Manual Pedal"
02 01 00 06	00 00 00 01	00 - 17	Pedal 7	*Refer to "Manual Pedal"
02 01 00 07	00 00 00 01	00 - 17	Pedal 8	*Refer to "Manual Pedal"
02 01 00 08	00 00 00 01	00 - 17	Pedal 9	*Refer to "Manual Pedal"
02 01 00 09	00 00 00 01	00 - 17	Pedal 10	*Refer to "Manual Pedal"
02 01 00 0A	00 00 00 01	00 - 17	Bank Down	*Refer to "Manual Pedal"
02 01 00 0B	00 00 00 01	00 - 17	Bank Up	*Refer to "Manual Pedal"

Table HARMONIST SCALE

Address (H)	Size (H)	Data (H)	Parameter	Description
03 00 00 00	00 00 00 01	00 - 30	Scale 1 C	*Refer to "Table HR Harmony Note"
03 00 00 01	00 00 00 01	00 - 30	Scale 1 Db	
03 00 00 02	00 00 00 01	00 - 30	Scale 1 D	
03 00 00 03	00 00 00 01	00 - 30	Scale 1 Eb	
03 00 00 04	00 00 00 01	00 - 30	Scale 1 E	
03 00 00 05	00 00 00 01	00 - 30	Scale 1 F	
03 00 00 06	00 00 00 01	00 - 30	Scale 1 F#	
03 00 00 07	00 00 00 01	00 - 30	Scale 1 G	
03 00 00 08	00 00 00 01	00 - 30	Scale 1 Ab	
03 00 00 09	00 00 00 01	00 - 30	Scale 1 A	
03 00 00 0A	00 00 00 01	00 - 30	Scale 1 Bb	
03 00 00 0B	00 00 00 01	00 - 30	Scale 1 B	
03 00 01 00	00 00 00 01	00 - 30	Scale 2 C	
03 00 01 01	00 00 00 01	00 - 30	Scale 2 Db	
03 00 01 02	00 00 00 01	00 - 30	Scale 2 D	
03 00 01 03	00 00 00 01	00 - 30	Scale 2 Eb	
03 00 01 04	00 00 00 01	00 - 30	Scale 2 E	
03 00 01 05	00 00 00 01	00 - 30	Scale 2 F	
03 00 01 06	00 00 00 01	00 - 30	Scale 2 F#	
03 00 01 07	00 00 00 01	00 - 30	Scale 2 G	
03 00 01 08	00 00 00 01	00 - 30	Scale 2 Ab	
03 00 01 09	00 00 00 01	00 - 30	Scale 2 A	
03 00 01 0A	00 00 00 01	00 - 30	Scale 2 Bb	
03 00 01 0B	00 00 00 01	00 - 30	Scale 2 B	
03 00 02 00	00 00 00 01	00 - 30	Scale 3 C	
03 00 02 01	00 00 00 01	00 - 30	Scale 3 Db	
03 00 02 02	00 00 00 01	00 - 30	Scale 3 D	
03 00 02 03	00 00 00 01	00 - 30	Scale 3 Eb	
03 00 02 04	00 00 00 01	00 - 30	Scale 3 E	
03 00 02 05	00 00 00 01	00 - 30	Scale 3 F	
03 00 02 06	00 00 00 01	00 - 30	Scale 3 F#	
03 00 02 07	00 00 00 01	00 - 30	Scale 3 G	
03 00 02 08	00 00 00 01	00 - 30	Scale 3 Ab	
03 00 02 09	00 00 00 01	00 - 30	Scale 3 A	
03 00 02 0A	00 00 00 01	00 - 30	Scale 3 Bb	
03 00 02 0B	00 00 00 01	00 - 30	Scale 3 B	
03 00 03 00	00 00 00 01	00 - 30	Scale 4 C	
03 00 03 01	00 00 00 01	00 - 30	Scale 4 Db	
03 00 03 02	00 00 00 01	00 - 30	Scale 4 D	
03 00 03 03	00 00 00 01	00 - 30	Scale 4 Eb	
03 00 03 04	00 00 00 01	00 - 30	Scale 4 E	
03 00 03 05	00 00 00 01	00 - 30	Scale 4 F	
03 00 03 06	00 00 00 01	00 - 30	Scale 4 F#	
03 00 03 07	00 00 00 01	00 - 30	Scale 4 G	
03 00 03 08	00 00 00 01	00 - 30	Scale 4 Ab	
03 00 03 09	00 00 00 01	00 - 30	Scale 4 A	
03 00 03 0A	00 00 00 01	00 - 30	Scale 4 Bb	
03 00 03 0B	00 00 00 01	00 - 30	Scale 4 B	
03 00 04 00	00 00 00 01	00 - 30	Scale 5 C	
03 00 04 01	00 00 00 01	00 - 30	Scale 5 Db	
03 00 04 02	00 00 00 01	00 - 30	Scale 5 D	
03 00 04 03	00 00 00 01	00 - 30	Scale 5 Eb	
03 00 04 04	00 00 00 01	00 - 30	Scale 5 E	
03 00 04 05	00 00 00 01	00 - 30	Scale 5 F	
03 00 04 06	00 00 00 01	00 - 30	Scale 5 F#	
03 00 04 07	00 00 00 01	00 - 30	Scale 5 G	
03 00 04 08	00 00 00 01	00 - 30	Scale 5 Ab	
03 00 04 09	00 00 00 01	00 - 30	Scale 5 A	
03 00 04 0A	00 00 00 01	00 - 30	Scale 5 Bb	
03 00 04 0B	00 00 00 01	00 - 30	Scale 5 B	
03 00 05 00	00 00 00 01	00 - 30	Scale 6 C	
03 00 05 01	00 00 00 01	00 - 30	Scale 6 Db	
03 00 05 02	00 00 00 01	00 - 30	Scale 6 D	
03 00 05 03	00 00 00 01	00 - 30	Scale 6 Eb	
03 00 05 04	00 00 00 01	00 - 30	Scale 6 E	
03 00 05 05	00 00 00 01	00 - 30	Scale 6 F	
03 00 05 06	00 00 00 01	00 - 30	Scale 6 F#	
03 00 05 07	00 00 00 01	00 - 30	Scale 6 G	
03 00 05 08	00 00 00 01	00 - 30	Scale 6 Ab	
03 00 05 09	00 00 00 01	00 - 30	Scale 6 A	
03 00 05 0A	00 00 00 01	00 - 30	Scale 6 Bb	
03 00 05 0B	00 00 00 01	00 - 30	Scale 6 B	
03 00 06 00	00 00 00 01	00 - 30	Scale 7 C	
03 00 06 01	00 00 00 01	00 - 30	Scale 7 Db	
03 00 06 02	00 00 00 01	00 - 30	Scale 7 D	
03 00 06 03	00 00 00 01	00 - 30	Scale 7 Eb	
03 00 06 04	00 00 00 01	00 - 30	Scale 7 E	
03 00 06 05	00 00 00 01	00 - 30	Scale 7 F	
03 00 06 06	00 00 00 01	00 - 30	Scale 7 F#	
03 00 06 07	00 00 00 01	00 - 30	Scale 7 G	
03 00 06 08	00 00 00 01	00 - 30	Scale 7 Ab	
03 00 06 09	00 00 00 01	00 - 30	Scale 7 A	
03 00 06 0A	00 00 00 01	00 - 30	Scale 7 Bb	
03 00 06 0B	00 00 00 01	00 - 30	Scale 7 B	
03 00 07 00	00 00 00 01	00 - 30	Scale 8 C	
03 00 07 01	00 00 00 01	00 - 30	Scale 8 Db	
03 00 07 02	00 00 00 01	00 - 30	Scale 8 D	
03 00 07 03	00 00 00 01	00 - 30	Scale 8 Eb	
03 00 07 04	00 00 00 01	00 - 30	Scale 8 E	
03 00 07 05	00 00 00 01	00 - 30	Scale 8 F	
03 00 07 06	00 00 00 01	00 - 30	Scale 8 F#	
03 00 07 07	00 00 00 01	00 - 30	Scale 8 G	
03 00 07 08	00 00 00 01	00 - 30	Scale 8 Ab	
03 00 07 09	00 00 00 01	00 - 30	Scale 8 A	
03 00 07 0A	00 00 00 01	00 - 30	Scale 8 Bb	
03 00 07 0B	00 00 00 01	00 - 30	Scale 8 B	
03 00 08 00	00 00 00 01	00 - 30	Scale 9 C	
03 00 08 01	00 00 00 01	00 - 30	Scale 9 Db	
03 00 08 02	00 00 00 01	00 - 30	Scale 9 D	
03 00 08 03	00 00 00 01	00 - 30	Scale 9 Eb	
03 00 08 04	00 00 00 01	00 - 30	Scale 9 E	
03 00 08 05	00 00 00 01	00 - 30	Scale 9 F	
03 00 08 06	00 00 00 01	00 - 30	Scale 9 F#	
03 00 08 07	00 00 00 01	00 - 30	Scale 9 G	
03 00 08 08	00 00 00 01	00 - 30	Scale 9 Ab	
03 00 08 09	00 00 00 01	00 - 30	Scale 9 A	
03 00 08 0A	00 00 00 01	00 - 30	Scale 9 Bb	
03 00 08 0B	00 00 00 01	00 - 30	Scale 9 B	
03 00 09 00	00 00 00 01	00 - 30	Scale 10 C	
03 00 09 01	00 00 00 01	00 - 30	Scale 10 Db	

```

03 00 1C 04      00 00 00 01      00 - 30      Scale 29 E
03 00 1C 05      00 00 00 01      00 - 30      Scale 29 F
03 00 1C 06      00 00 00 01      00 - 30      Scale 29 F#
03 00 1C 07      00 00 00 01      00 - 30      Scale 29 G
03 00 1C 08      00 00 00 01      00 - 30      Scale 29 Ab
03 00 1C 09      00 00 00 01      00 - 30      Scale 29 A
03 00 1C 0A      00 00 00 01      00 - 30      Scale 29 Bb
03 00 1C 0B      00 00 00 01      00 - 30      Scale 29 B

```

Table HR Harmony Note <HARMONIST User Scale>

```

-----
Data (H)          Description
-----

```

Below is an explanation of the Description value when IN is C.
 Replace each of the values when IN is something other than C.

```

00          Pitch = -C ↓↓
01          Pitch = -Db ↓
02          Pitch = -D ↓
03          Pitch = -Eb ↓
04          Pitch = -E ↓
05          Pitch = -F ↓
06          Pitch = -F# ↓
07          Pitch = -G ↓
08          Pitch = -Ab ↓
09          Pitch = -A ↓
0A          Pitch = -Bb ↓
0B          Pitch = -B ↓
0C          Pitch = -C ↓
0D          Pitch = -Db
0E          Pitch = -D
0F          Pitch = -Eb
10          Pitch = -E
11          Pitch = -F
12          Pitch = -F#
13          Pitch = -G
14          Pitch = -Ab
15          Pitch = -A
16          Pitch = -Bb
17          Pitch = -B
18          Pitch = C
19          Pitch = +Db
1A          Pitch = +D
1B          Pitch = +Eb
1C          Pitch = +E
1D          Pitch = +F
1E          Pitch = +F#
1F          Pitch = +G
20          Pitch = +Ab
21          Pitch = +A
22          Pitch = +Bb
23          Pitch = +B
24          Pitch = +C ↑
25          Pitch = +Db ↑
26          Pitch = +D ↑
27          Pitch = +Eb ↑
28          Pitch = +E ↑
29          Pitch = +F ↑
2A          Pitch = +F# ↑
2B          Pitch = +G ↑
2C          Pitch = +Ab ↑
2D          Pitch = +A ↑
2E          Pitch = +Bb ↑
2F          Pitch = +B ↑
30          Pitch = +C ↑↑

```


Table AR Step Note <AUTO RIFF User Phrase>

 Data (H) Description

 Below is an explanation of the Description value when IN is C.
 Replace each of the values when IN is something other than C.

00	Pitch = -C ↓↓
01	Pitch = -Db ↓
02	Pitch = -D ↓
03	Pitch = -Eb ↓
04	Pitch = -E ↓
05	Pitch = -F ↓
06	Pitch = -F# ↓
07	Pitch = -G ↓
08	Pitch = -Ab ↓
09	Pitch = -A ↓
0A	Pitch = -Bb ↓
0B	Pitch = -B ↓
0C	Pitch = -C ↓
0D	Pitch = -Db
0E	Pitch = -D
0F	Pitch = -Eb
10	Pitch = -E
11	Pitch = -F
12	Pitch = -F#
13	Pitch = -G
14	Pitch = -Ab
15	Pitch = -A
16	Pitch = -Bb
17	Pitch = -B
18	Pitch = C
19	Pitch = +Db
1A	Pitch = +D
1B	Pitch = +Eb
1C	Pitch = +E
1D	Pitch = +F
1E	Pitch = +F#
1F	Pitch = +G
20	Pitch = +Ab
21	Pitch = +A
22	Pitch = +Bb
23	Pitch = +B
24	Pitch = +C ↑
25	Pitch = +Db ↑
26	Pitch = +D ↑
27	Pitch = +Eb ↑
28	Pitch = +E ↑
29	Pitch = +F ↑
2A	Pitch = +F# ↑
2B	Pitch = +G ↑
2C	Pitch = +Ab ↑
2D	Pitch = +A ↑
2E	Pitch = +Bb ↑
2F	Pitch = +B ↑
30	Pitch = +C ↑↑
31	Pitch = -
32	Pitch = end

Table AMP Customize

Address (H)	Size (H)	Data (H)	Parameter	Description
03 02 00 00	00 00 00 01	00 - 06	Custom1 Type	00 : JC Clean 01 : TW Clean 02 : Crunch 03 : VO Drive 04 : BG Lead 05 : MS HiGain 06 : Modern Stk
03 02 00 01	00 00 00 01	00 - 0A	Custom1 Bottom	00 : -50 01 : -40 02 : -30 : 05 : 0 : 09 : +40 0A : +50
03 02 00 02	00 00 00 01	00 - 0A	Custom1 Edge	-50, -40, -30, -20, -10, 0, 10, 20, 30, 40, 50
03 02 00 03	00 00 00 01	00 - 0A	Custom1 Bass Frequency	-50, -40, -30, -20, -10, 0, 10, 20, 30, 40, 50
03 02 00 04	00 00 00 01	00 - 0A	Custom1 Treble Frequency	-50, -40, -30, -20, -10, 0, 10, 20, 30, 40, 50
03 02 00 05	00 00 00 01	00 - 0A	Custom1 Preamp Low	-50, -40, -30, -20, -10, 0, 10, 20, 30, 40, 50
03 02 00 06	00 00 00 01	00 - 0A	Custom1 Preamp High	-50, -40, -30, -20, -10, 0, 10, 20, 30, 40, 50
03 02 01 00	00 00 00 01	00 - 06	Custom2 Type	
03 02 01 01	00 00 00 01	00 - 0A	Custom2 Bottom	
03 02 01 02	00 00 00 01	00 - 0A	Custom2 Edge	
03 02 01 03	00 00 00 01	00 - 0A	Custom2 Bass Frequency	
03 02 01 04	00 00 00 01	00 - 0A	Custom2 Treble Frequency	
03 02 01 05	00 00 00 01	00 - 0A	Custom2 Preamp Low	
03 02 01 06	00 00 00 01	00 - 0A	Custom2 Preamp High	
03 02 02 00	00 00 00 01	00 - 06	Custom3 Type	
03 02 02 01	00 00 00 01	00 - 0A	Custom3 Bottom	
03 02 02 02	00 00 00 01	00 - 0A	Custom3 Edge	
03 02 02 03	00 00 00 01	00 - 0A	Custom3 Bass Frequency	
03 02 02 04	00 00 00 01	00 - 0A	Custom3 Treble Frequency	
03 02 02 05	00 00 00 01	00 - 0A	Custom3 Preamp Low	
03 02 02 06	00 00 00 01	00 - 0A	Custom3 Preamp High	

Table SPEAKER Customize

Address (H)	Size (H)	Data (H)	Parameter	Description
03 03 00 00	00 00 00 01	00 - 0A	Custom1 Speaker Type	00 : 5 01 : 6 02 : 7 : 09 : 14 0A : 15
03 03 00 01	00 00 00 01	00 - 14	Custom1 Color Low	00 : -10 01 : -9 02 : -8 : 0A : 0 : 13 : +9 14 : +10
03 03 00 02	00 00 00 01	00 - 14	Custom1 Color High	-10 - +10
03 03 00 03	00 00 00 01	00 - 03	Custom1 Number	00 : x1 01 : x2 02 : x4 03 : x8
03 03 00 04	00 00 00 01	00 - 01	Custom1 Cabinet Type	00 : Open 01 : Close
03 03 01 00	00 00 00 01	00 - 0A	Custom2 Speaker Type	
03 03 01 01	00 00 00 01	00 - 14	Custom2 Color Low	
03 03 01 02	00 00 00 01	00 - 14	Custom2 Color High	
03 03 01 03	00 00 00 01	00 - 03	Custom2 Number	
03 03 01 04	00 00 00 01	00 - 01	Custom2 Cabinet Type	

Table OD/DS Customize

Address (H)	Size (H)	Data (H)	Parameter	Description
03 04 00 00	00 00 00 01	00 - 07	Custom1 Type	00 : OD1 01 : OD2 02 : CRUNCH 03 : DS1 04 : DS2 05 : METAL1 06 : METAL2 07 : FUZZ
03 04 00 01	00 00 00 01	00 - 0A	Custom1 Bottom	00 : -50 01 : -40 02 : -30 : 05 : 0 : 09 : +40 0A : +50
03 04 00 02	00 00 00 01	00 - 0A	Custom1 Top	-50,-40,-30,-20,-10,0,10,20,30,40,50
03 04 00 03	00 00 00 01	00 - 0A	Custom1 Low	-50,-40,-30,-20,-10,0,10,20,30,40,50
03 04 00 04	00 00 00 01	00 - 0A	Custom1 High	-50,-40,-30,-20,-10,0,10,20,30,40,50
03 04 01 00	00 00 00 01	00 - 07	Custom2 Type	
03 04 01 01	00 00 00 01	00 - 0A	Custom2 Bottom	
03 04 01 02	00 00 00 01	00 - 0A	Custom2 Top	
03 04 01 03	00 00 00 01	00 - 0A	Custom2 Low	
03 04 01 04	00 00 00 01	00 - 0A	Custom2 High	
03 04 02 00	00 00 00 01	00 - 07	Custom3 Type	
03 04 02 01	00 00 00 01	00 - 0A	Custom3 Bottom	
03 04 02 02	00 00 00 01	00 - 0A	Custom3 Top	
03 04 02 03	00 00 00 01	00 - 0A	Custom3 Low	
03 04 02 04	00 00 00 01	00 - 0A	Custom3 High	

Table WAH Customize

Address (H)	Size (H)	Data (H)	Parameter	Description
03 05 00 00	00 00 00 01	00 - 04	Custom1 Type	00 : CRY WAH 01 : VO WAH 02 : Fat WAH 03 : Light WAH 04 : 7String WAH
03 05 00 01	00 00 00 01	00 - 0A	Custom1 Q	00 : -50 01 : -40 02 : -30 : 05 : 0 : 09 : +40 0A : +50
03 05 00 02	00 00 00 01	00 - 0A	Custom1 Range Low	-50,-40,-30,-20,-10,0,10,20,30,40,50
03 05 00 03	00 00 00 01	00 - 0A	Custom1 Range High	-50,-40,-30,-20,-10,0,10,20,30,40,50
03 05 00 04	00 00 00 01	00 - 0A	Custom1 Presence	-50,-40,-30,-20,-10,0,10,20,30,40,50
03 05 01 00	00 00 00 01	00 - 04	Custom2 Type	
03 05 01 01	00 00 00 01	00 - 0A	Custom2 Q	
03 05 01 02	00 00 00 01	00 - 0A	Custom2 Range Low	
03 05 01 03	00 00 00 01	00 - 0A	Custom2 Range High	
03 05 01 04	00 00 00 01	00 - 0A	Custom2 Presence	
03 05 02 00	00 00 00 01	00 - 04	Custom3 Type	
03 05 02 01	00 00 00 01	00 - 0A	Custom3 Q	
03 05 02 02	00 00 00 01	00 - 0A	Custom3 Range Low	
03 05 02 03	00 00 00 01	00 - 0A	Custom3 Range High	
03 05 02 04	00 00 00 01	00 - 0A	Custom3 Presence	


```

---FX SlowGear---
** ** 0D 00 00 00 00 02 00 - 64 SG :Sens
** ** 0D 02# 00 00 00 02 00 - 64 SG :Rise Time

---FX Defretter---
** ** 0E 00 00 00 00 02 00 - 64 DF :Tone
** ** 0E 02# 00 00 00 02 00 - 64 DF :Sens
** ** 0E 04# 00 00 00 02 00 - 64 DF :Attack
** ** 0E 06# 00 00 00 02 00 - 64 DF :Depth
** ** 0E 08# 00 00 00 02 00 - 64 DF :Resonance
** ** 0E 0A# 00 00 00 02 00 - 64 DF :Effect Level
** ** 0E 0C# 00 00 00 02 00 - 64 DF :Direct Level

---FX SitarSim.---
** ** 0F 00 00 00 00 02 00 - 64 STR:Tone
** ** 0F 02# 00 00 00 02 00 - 64 STR:Sens
** ** 0F 04# 00 00 00 02 00 - 64 STR:Depth
** ** 0F 06# 00 00 00 02 00 - 64 STR:Resonance
** ** 0F 08# 00 00 00 02 00 - 64 STR:Buzz
** ** 0F 0A# 00 00 00 02 00 - 64 STR:Effect Level
** ** 0F 0C# 00 00 00 02 00 - 64 STR:Direct Level

---FX Feedbacker---
** ** 10 00 00 00 00 02 00 - 01 FB :Mode
** ** 10 02# 00 00 00 02 00 - 64 FB :Rise Time
** ** 10 04# 00 00 00 02 00 - 64 FB :Rise Time(Åf)
** ** 10 06# 00 00 00 02 00 - 64 FB :F.B.Level
** ** 10 08# 00 00 00 02 00 - 64 FB :F.B.Level(Åf)
** ** 10 0A# 00 00 00 02 00 - 71 FB :Vibrato Rate
** ** 10 0C# 00 00 00 02 00 - 64 FB :Vibrato Depth

---FX AntiFeedbck---
** ** 11 00 00 00 00 02 00 - 64 AFB:FREQ 1
** ** 11 02# 00 00 00 02 00 - 64 AFB:DEPTH 1
** ** 11 04# 00 00 00 02 00 - 64 AFB:FREQ 2
** ** 11 06# 00 00 00 02 00 - 64 AFB:DEPTH 2
** ** 11 08# 00 00 00 02 00 - 64 AFB:FREQ 3
** ** 11 0A# 00 00 00 02 00 - 64 AFB:DEPTH 3

---FX Humanizer---
** ** 12 00 00 00 00 02 00 - 02 HU :Mode
** ** 12 02# 00 00 00 02 00 - 04 HU :Vowel1
** ** 12 04# 00 00 00 02 00 - 04 HU :Vowel2
** ** 12 06# 00 00 00 02 00 - 64 HU :Sens
** ** 12 08# 00 00 00 02 00 - 71 HU :Rate
** ** 12 0A# 00 00 00 02 00 - 64 HU :Depth
** ** 12 0C# 00 00 00 02 00 - 64 HU :Manual
** ** 12 0E# 00 00 00 02 00 - 64 HU :Level

---FX Slicer---
** ** 13 00 00 00 00 02 00 - 13 SL :Pattern
** ** 13 02# 00 00 00 02 00 - 71 SL :Rate
** ** 13 04# 00 00 00 02 00 - 64 SL :Triggr Sens

---FX WaveSynth---
** ** 14 00 00 00 00 02 00 - 01 WSY:Wave
** ** 14 02# 00 00 00 02 00 - 64 WSY:Cutoff Freq
** ** 14 04# 00 00 00 02 00 - 64 WSY:Resonance
** ** 14 06# 00 00 00 02 00 - 64 WSY:FLT.Sens
** ** 14 08# 00 00 00 02 00 - 64 WSY:FLT.Decay
** ** 14 0A# 00 00 00 02 00 - 64 WSY:FLT.Depth
** ** 14 0C# 00 00 00 02 00 - 64 WSY:Synth Level
** ** 14 0E# 00 00 00 02 00 - 64 WSY:Direct Level

---FX SubEQ---
** ** 15 00 00 00 00 02 00 - 0A SEQ:Low Cut
** ** 15 02# 00 00 00 02 00 - 28 SEQ:Low EQ
** ** 15 04# 00 00 00 02 00 - 1B SEQ:Low-Middle Frequency
** ** 15 06# 00 00 00 02 00 - 05 SEQ:Low-Middle Q
** ** 15 08# 00 00 00 02 00 - 28 SEQ:Low-Middle EQ
** ** 15 0A# 00 00 00 02 00 - 1B SEQ:High-Middle Frequency
** ** 15 0C# 00 00 00 02 00 - 05 SEQ:High-Middle Q
** ** 15 0E# 00 00 00 02 00 - 28 SEQ:High-Middle EQ
** ** 15 10# 00 00 00 02 00 - 28 SEQ:High EQ
** ** 15 12# 00 00 00 02 00 - 09 SEQ:High Cut
** ** 15 14# 00 00 00 02 00 - 28 SEQ:Level

---FX Harmonist---
** ** 16 00 00 00 00 02 00 - 02 HR :Voice
** ** 16 02# 00 00 00 02 00 - 39 HR :Voice1:Harmony
** ** 16 04# 00 00 00 04 0000 - 0133 HR :Voice1:Pre Delay
** ** 16 06# 00 00 00 02 00 - 64 HR :Voice1:Pre Delay (LSB)
** ** 16 08# 00 00 00 02 00 - 64 HR :Voice1:Feedback
** ** 16 0A# 00 00 00 02 00 - 64 HR :Voice1:Level
** ** 16 0C# 00 00 00 02 00 - 39 HR :Voice2:Harmony
** ** 16 0E# 00 00 00 04 0000 - 0133 HR :Voice2:Pre Delay
** ** 16 10# 00 00 00 02 00 - 64 HR :Voice2:Pre Delay (LSB)
** ** 16 12# 00 00 00 02 00 - 64 HR :Voice2:Level
** ** 16 14# 00 00 00 02 00 - 0B HR :Key
** ** 16 16# 00 00 00 02 00 - 64 HR :Direct Level

---FX PitchShift---
** ** 17 00 00 00 00 02 00 - 02 PS :Voice
** ** 17 02# 00 00 00 02 00 - 03 PS :Voice1:Mode
** ** 17 04# 00 00 00 02 00 - 30 PS :Voice1:Pitch
** ** 17 06# 00 00 00 02 00 - 64 PS :Voice1:Fine
** ** 17 08# 00 00 00 04 0000 - 0133 PS :Voice1:Pre Delay
** ** 17 0A# 00 00 00 02 00 - 64 PS :Voice1:Pre Delay (LSB)
** ** 17 0C# 00 00 00 02 00 - 64 PS :Voice1:Feedback
** ** 17 0E# 00 00 00 02 00 - 64 PS :Voice1:Level
** ** 17 10# 00 00 00 02 00 - 03 PS :Voice2:Mode
** ** 17 12# 00 00 00 02 00 - 30 PS :Voice2:Pitch
** ** 17 14# 00 00 00 02 00 - 64 PS :Voice2:Fine
** ** 17 16# 00 00 00 04 0000 - 0133 PS :Voice2:Pre Delay
** ** 17 18# 00 00 00 02 00 - 64 PS :Voice2:Pre Delay (LSB)
** ** 17 1A# 00 00 00 02 00 - 64 PS :Voice2:Level
** ** 17 1C# 00 00 00 02 00 - 64 PS :Direct Level

---FX PedalBend---
** ** 18 00 00 00 00 02 00 - 30 PB :Pitch Min
** ** 18 02# 00 00 00 02 00 - 30 PB :Pitch Max
** ** 18 04# 00 00 00 02 00 - 64 PB :Pdl Position
** ** 18 06# 00 00 00 02 00 - 64 PB :Effect Level
** ** 18 08# 00 00 00 02 00 - 64 PB :Direct Level

```



```

---FX Octave---
** ** 19 00 00 00 02 00 - 03 OC :Range
** ** 19 02# 00 00 00 02 00 - 64 OC :Octave Level
** ** 19 04# 00 00 00 02 00 - 64 OC :Direct Level

---FX Rotary---
** ** 1A 00 00 00 00 02 00 - 01 RT :Speed Select
** ** 1A 02# 00 00 00 02 00 - 71 RT :Rate(Slow)
** ** 1A 04# 00 00 00 02 00 - 71 RT :Rate(Fast)
** ** 1A 06# 00 00 00 02 00 - 64 RT :Rise Time
** ** 1A 08# 00 00 00 02 00 - 64 RT :Fall Time
** ** 1A 0A# 00 00 00 02 00 - 64 RT :Depth

---FX 2x2Chorus---
** ** 1B 00 00 00 00 02 00 - 10 2CE:Xover f
** ** 1B 02# 00 00 00 02 00 - 71 2CE:Low Rate
** ** 1B 04# 00 00 00 02 00 - 64 2CE:Low Depth
** ** 1B 06# 00 00 00 02 00 - 50 2CE:Low Pre Delay
** ** 1B 08# 00 00 00 02 00 - 64 2CE:Low Level
** ** 1B 0A# 00 00 00 02 00 - 71 2CE:High Rate
** ** 1B 0C# 00 00 00 02 00 - 64 2CE:High Depth
** ** 1B 0E# 00 00 00 02 00 - 50 2CE:High Pre Delay
** ** 1B 10# 00 00 00 02 00 - 64 2CE:High Level

---FX AutoRiff---
** ** 1C 00 00 00 00 02 00 - 27 AR :Phrase
** ** 1C 02# 00 00 00 02 00 - 01 AR :Loop
** ** 1C 04# 00 00 00 02 00 - 71 AR :Tempo
** ** 1C 06# 00 00 00 02 00 - 64 AR :Sens
** ** 1C 08# 00 00 00 02 00 - 0B AR :Key
** ** 1C 0A# 00 00 00 02 00 - 64 AR :Attack
** ** 1C 0C# 00 00 00 02 00 - 01 AR :Hold
** ** 1C 0E# 00 00 00 02 00 - 64 AR :Effect Level
** ** 1C 10# 00 00 00 02 00 - 64 AR :Direct Level

---FX GuitarSynth---
** ** 1D 00 00 00 00 02 00 - 64 SYN:Sens
** ** 1D 02# 00 00 00 02 00 - 03 SYN:Wave
** ** 1D 04# 00 00 00 02 00 - 01 SYN:Chromatic
** ** 1D 06# 00 00 00 02 00 - 02 SYN:Octave Shift
** ** 1D 08# 00 00 00 02 00 - 64 SYN:PWM Rate
** ** 1D 0A# 00 00 00 02 00 - 64 SYN:PWM Depth
** ** 1D 0C# 00 00 00 02 00 - 64 SYN:Cutoff Frequency
** ** 1D 0E# 00 00 00 02 00 - 64 SYN:Resonance
** ** 1D 10# 00 00 00 02 00 - 64 SYN:Filter Sens
** ** 1D 12# 00 00 00 02 00 - 64 SYN:Filter Decay
** ** 1D 14# 00 00 00 02 00 - 64 SYN:Filter Depth
** ** 1D 16# 00 00 00 02 00 - 65 SYN:Attack
** ** 1D 18# 00 00 00 02 00 - 64 SYN:Release
** ** 1D 1A# 00 00 00 02 00 - 64 SYN:Velocity
** ** 1D 1C# 00 00 00 02 00 - 01 SYN:Hold
** ** 1D 1E# 00 00 00 02 00 - 64 SYN:Synth Level
** ** 1D 20# 00 00 00 02 00 - 64 SYN:Direct Level

---FX Ac. Processor---
** ** 1E 00 00 00 00 02 00 - 03 AC :Type
** ** 1E 02# 00 00 00 02 00 - 64 AC :Bass
** ** 1E 04# 00 00 00 02 00 - 64 AC :Middle
** ** 1E 06# 00 00 00 02 00 - 1B AC :Middle Freq
** ** 1E 08# 00 00 00 02 00 - 64 AC :Treble
** ** 1E 0A# 00 00 00 02 00 - 64 AC :Presence
** ** 1E 0C# 00 00 00 02 00 - 64 AC :Level

---FX SoundHold---
** ** 1F 00 00 00 00 02 00 - 01 SH :Hold
** ** 1F 02# 00 00 00 02 00 - 64 SH :Rise Time
** ** 1F 04# 00 00 00 02 00 - 78 SH :Effect Level

---FX SubDelay---
** ** 20 00 00 00 00 04 0000 - 0197 SDD:Delay Time
** ** 20 02# 00 00 00 02 00 - 64 SDD:Delay Time(LSB)
** ** 20 04# 00 00 00 02 00 - 64 SDD:Feedback
** ** 20 06# 00 00 00 02 00 - 78 SDD:Effect Level

---Compressor---
** ** 40 00 00 00 00 02 00 - 01 CS :Type
** ** 40 02# 00 00 00 02 00 - 64 CS :Sustain
** ** 40 04# 00 00 00 02 00 - 64 CS :Attack
** ** 40 06# 00 00 00 02 00 - 64 CS :Threshold
** ** 40 08# 00 00 00 02 00 - 64 CS :Release
** ** 40 0A# 00 00 00 02 00 - 64 CS :Tone
** ** 40 0C# 00 00 00 02 00 - 64 CS :Level

---Wah---
** ** 42 00 00 00 00 02 00 - 08 WAH:Type
** ** 42 02# 00 00 00 02 00 - 64 WAH:Pdl Position
** ** 42 04# 00 00 00 02 00 - 64 WAH:Level

---Loop FX---
** ** 44 00 00 00 00 02 00 - 02 LP :Mode
** ** 44 02# 00 00 00 02 00 - 64 LP :Send Level
** ** 44 04# 00 00 00 02 00 - 64 LP :Return Level
** ** 44 06# 00 00 00 02 00 - 02 LP :Mode 2
** ** 44 08# 00 00 00 02 00 - 64 LP :Send Level 2
** ** 44 0A# 00 00 00 02 00 - 64 LP :Return Level 2
** ** 44 0C# 00 00 00 02 00 - 02 LP :Mode Stereo
** ** 44 0E# 00 00 00 02 00 - 64 LP :Send Level Stereo
** ** 44 10# 00 00 00 02 00 - 64 LP :Return Level Stereo
** ** 44 12# 00 00 00 02 00 - 03 LP :Type
** ** 44 14# 00 00 00 02 00 - 02 LP :Select

---Overdrive/Distortion---
** ** 46 00 00 00 00 02 00 - 20 OD :Type
** ** 46 02# 00 00 00 02 00 - 78 OD :Drive
** ** 46 04# 00 00 00 02 00 - 64 OD :Bottom
** ** 46 06# 00 00 00 02 00 - 64 OD :Tone
** ** 46 08# 00 00 00 02 00 - 64 OD :Level
** ** 46 0A# 00 00 00 02 00 - 64 OD :Direct Level

---Preamp Channel---
** ** 48 00 00 00 00 02 00 - 30 PRE:Type
** ** 48 02# 00 00 00 02 00 - 78 PRE:Gain
** ** 48 04# 00 00 00 02 00 - 64 PRE:Bass
** ** 48 06# 00 00 00 02 00 - 64 PRE:Middle
** ** 48 08# 00 00 00 02 00 - 64 PRE:Treble

```

```

** ** 48 0A# 00 00 00 02 00 - 64 PRE:Presence
** ** 48 0C# 00 00 00 02 00 - 64 PRE:Level
** ** 48 0E# 00 00 00 02 00 - 01 PRE:Bright
** ** 48 10# 00 00 00 02 00 - 02 PRE:Gain SW
** ** 48 12# 00 00 00 02 00 - 01 PRE:Solo SW
** ** 48 14# 00 00 00 02 00 - 64 PRE:Solo Level
** ** 48 16# 00 00 00 02 00 - 0A PRE:SP Type
** ** 48 18# 00 00 00 02 00 - 04 PRE:Mic Type
** ** 48 1A# 00 00 00 02 00 - 01 PRE:Mic Dis.
** ** 48 1C# 00 00 00 02 00 - 0A PRE:Mic Pos.
** ** 48 1E# 00 00 00 02 00 - 64 PRE:Mic Level

---Equalizer---
** ** 4A 00 00 00 00 02 00 - 0A EQ :Low Cut
** ** 4A 02# 00 00 00 02 00 - 28 EQ :Low EQ
** ** 4A 04# 00 00 00 02 00 - 1B EQ :Low-Middle Frequency
** ** 4A 06# 00 00 00 02 00 - 05 EQ :Low-Middle Q
** ** 4A 08# 00 00 00 02 00 - 28 EQ :Low-Middle EQ
** ** 4A 0A# 00 00 00 02 00 - 1B EQ :High-Middle Frequency
** ** 4A 0C# 00 00 00 02 00 - 05 EQ :High-Middle Q
** ** 4A 0E# 00 00 00 02 00 - 28 EQ :High-Middle EQ
** ** 4A 10# 00 00 00 02 00 - 28 EQ :High EQ
** ** 4A 12# 00 00 00 02 00 - 09 EQ :High Cut
** ** 4A 14# 00 00 00 02 00 - 28 EQ :Level

---Delay---
** ** 4C 00 00 00 00 02 00 - 0B DELAY :Type
** ** 4C 02# 00 00 00 02 0000 - 0715 DELAY :Delay Time
** ** 4C 04# 00 00 00 02 DELAY :Delay Time(LSB)
** ** 4C 06# 00 00 00 02 00 - 64 DELAY :Tap Time
** ** 4C 08# 00 00 00 02 00 - 64 DELAY :Feedback
** ** 4C 0A# 00 00 00 02 00 - 09 DELAY :High Cut
** ** 4C 0C# 00 00 00 02 0000 - 0391 DELAY :Delay1 Time
** ** 4C 0E# 00 00 00 02 DELAY :Delay1 Time(LSB)
** ** 4C 10# 00 00 00 02 00 - 64 DELAY :Delay1 Feedback
** ** 4C 12# 00 00 00 02 00 - 09 DELAY :Delay1 High Cut
** ** 4C 14# 00 00 00 02 00 - 78 DELAY :Delay1 Level
** ** 4C 16# 00 00 00 02 0000 - 0391 DELAY :Delay2 Time
** ** 4C 18# 00 00 00 02 DELAY :Delay2 Time(LSB)
** ** 4C 1A# 00 00 00 02 00 - 64 DELAY :Delay2 Feedback
** ** 4C 1C# 00 00 00 02 00 - 09 DELAY :Delay2 High Cut
** ** 4C 1E# 00 00 00 02 00 - 78 DELAY :Delay2 Level
** ** 4C 20# 00 00 00 02 00 - 64 DELAY :MOD Rate
** ** 4C 22# 00 00 00 02 00 - 64 DELAY :MOD Depth
** ** 4C 24# 00 00 00 02 00 - 01 DELAY :Warp Sw
** ** 4C 26# 00 00 00 02 00 - 64 DELAY :Warp Rise Time
** ** 4C 28# 00 00 00 02 00 - 64 DELAY :Warp Feedback Depth
** ** 4C 2A# 00 00 00 02 00 - 64 DELAY :Warp E.Level Depth
** ** 4C 2C# 00 00 00 02 00 - 78 DELAY :Effect Level
** ** 4C 2E# 00 00 00 02 00 - 64 DELAY :Direct Level

---Chorus---
** ** 4E 00 00 00 00 02 00 - 02 CHORUS :Mode
** ** 4E 02# 00 00 00 02 00 - 71 CHORUS :Rate
** ** 4E 04# 00 00 00 02 00 - 64 CHORUS :Depth
** ** 4E 06# 00 00 00 02 00 - 50 CHORUS :Pre Delay
** ** 4E 08# 00 00 00 02 00 - 0A CHORUS :Low Cut
** ** 4E 0A# 00 00 00 02 00 - 09 CHORUS :High Cut
** ** 4E 0C# 00 00 00 02 00 - 64 CHORUS :Effect Level

---Reverb---
** ** 50 00 00 00 00 02 00 - 06 REVERB :Type
** ** 50 02# 00 00 00 02 00 - 63 REVERB :Reverb Time
** ** 50 04# 00 00 00 02 00 - 64 REVERB :Pre Delay
** ** 50 06# 00 00 00 02 00 - 0A REVERB :Low Cut
** ** 50 08# 00 00 00 02 00 - 09 REVERB :High Cut
** ** 50 0A# 00 00 00 02 00 - 0A REVERB :Density
** ** 50 0C# 00 00 00 02 00 - 64 REVERB :Effect Level
** ** 50 0E# 00 00 00 02 00 - 64 REVERB :Direct Level

---Assign---
** ** 52 00 00 00 00 02 0000 - 01EC ASSIGN :Target *Refer to "Table Quick Assign Target"
** ** 52 02# 00 00 00 02 ASSIGN :Target(LSB)
** ** 52 04# 00 00 00 02 0000 - $$$ $ ASSIGN :Target Min
** ** 52 06# 00 00 00 02 ASSIGN :Target Min(LSB)
** ** 52 08# 00 00 00 02 0000 - $$$ $ ASSIGN :Target Max
** ** 52 0A# 00 00 00 02 ASSIGN :Target Max(LSB)
** ** 52 0C# 00 00 00 02 00 - 49 ASSIGN :Source
** ** 52 0E# 00 00 00 02 00 - 01 ASSIGN :Source Mode
** ** 52 10# 00 00 00 02 00 - 7E ASSIGN :Source Act.Range Lo
** ** 52 12# 00 00 00 02 01 - 7F ASSIGN :Source Act.Range Hi
** ** 52 14# 00 00 00 02 00 - 47 ASSIGN :Trigger
** ** 52 16# 00 00 00 02 00 - 64 ASSIGN :Time
** ** 52 18# 00 00 00 02 00 - 02 ASSIGN :Curve
** ** 52 1A# 00 00 00 02 00 - 64 ASSIGN :Rate
** ** 52 1C# 00 00 00 02 00 - 02 ASSIGN :Waveform

```

Table Quick Fx Name

Address (H)	Size (H)	Data (H)	Parameter	Description
04 ** ** *				Quick User
05 ** ** *				Quick ROM
↑				
↑ 00 ** **				P1
↑ 01 ** **				P2
↑ 02 ** **				P3
↑ 03 ** **				P4
↑ ** ** **				
↑ ↑				:
---FX Adv.Comp---				
** ** 00 00	00 00 00 01	20 - 7F	Name 1	*Refer to "Table Name"
** ** 00 01#	00 00 00 01	20 - 7F	Name 2	
** ** :	:	:	:	
** ** 00 0B#	00 00 00 01	20 - 7F	Name 12	
---FX Limiter---				
** ** 01 00	00 00 00 01	20 - 7F	Name 1	*Refer to "Table Name"
** ** 01 01#	00 00 00 01	20 - 7F	Name 2	
** ** :	:	:	:	
** ** 01 0B#	00 00 00 01	20 - 7F	Name 12	

```

---FX T.Wah---
** ** 02 00 00 00 00 01 20 - 7F Name 1
** ** 02 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 02 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX AutoWah---
** ** 03 00 00 00 00 01 20 - 7F Name 1
** ** 03 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 03 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX ToneModify---
** ** 04 00 00 00 00 01 20 - 7F Name 1
** ** 04 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 04 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX GuitarSim.---
** ** 05 00 00 00 00 01 20 - 7F Name 1
** ** 05 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 05 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX Tremolo---
** ** 06 00 00 00 00 01 20 - 7F Name 1
** ** 06 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 06 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX Phaser---
** ** 07 00 00 00 00 01 20 - 7F Name 1
** ** 07 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 07 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX Flanger---
** ** 08 00 00 00 00 01 20 - 7F Name 1
** ** 08 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 08 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX Pan---
** ** 09 00 00 00 00 01 20 - 7F Name 1
** ** 09 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 09 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX Vibrato---
** ** 0A 00 00 00 00 01 20 - 7F Name 1
** ** 0A 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 0A 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX Uni-V---
** ** 0B 00 00 00 00 01 20 - 7F Name 1
** ** 0B 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 0B 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX RingMod.---
** ** 0C 00 00 00 00 01 20 - 7F Name 1
** ** 0C 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 0C 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX SlowGear---
** ** 0D 00 00 00 00 01 20 - 7F Name 1
** ** 0D 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 0D 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX Defretter---
** ** 0E 00 00 00 00 01 20 - 7F Name 1
** ** 0E 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 0E 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX SitarSim.---
** ** 0F 00 00 00 00 01 20 - 7F Name 1
** ** 0F 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 0F 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX Feedbacker---
** ** 10 00 00 00 00 01 20 - 7F Name 1
** ** 10 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 10 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX AntiFeedbck---
** ** 11 00 00 00 00 01 20 - 7F Name 1
** ** 11 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 11 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX Humanizer---
** ** 12 00 00 00 00 01 20 - 7F Name 1
** ** 12 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 12 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX Slicer---
** ** 13 00 00 00 00 01 20 - 7F Name 1
** ** 13 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 13 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX WaveSynth---
** ** 14 00 00 00 00 01 20 - 7F Name 1
** ** 14 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 14 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

```

```

---FX SubEQ---
** ** 15 00 00 00 01 20 - 7F Name 1
** ** 15 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 15 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX Harmonist---
** ** 16 00 00 00 00 01 20 - 7F Name 1
** ** 16 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 16 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX PitchShift---
** ** 17 00 00 00 00 01 20 - 7F Name 1
** ** 17 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 17 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX PedalBend---
** ** 18 00 00 00 00 01 20 - 7F Name 1
** ** 18 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 18 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX Octave---
** ** 19 00 00 00 00 01 20 - 7F Name 1
** ** 19 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 19 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX Rotary---
** ** 1A 00 00 00 00 01 20 - 7F Name 1
** ** 1A 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 1A 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX 2x2Chorus---
** ** 1B 00 00 00 00 01 20 - 7F Name 1
** ** 1B 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 1B 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX AutoRiff---
** ** 1C 00 00 00 00 01 20 - 7F Name 1
** ** 1C 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 1C 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX GuitarSynth---
** ** 1D 00 00 00 00 01 20 - 7F Name 1
** ** 1D 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 1D 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX Ac.Processor---
** ** 1E 00 00 00 00 01 20 - 7F Name 1
** ** 1E 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 1E 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX SoundHold---
** ** 1F 00 00 00 00 01 20 - 7F Name 1
** ** 1F 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 1F 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---FX SubDelay---
** ** 20 00 00 00 00 01 20 - 7F Name 1
** ** 20 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 20 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---Compressor---
** ** 40 00 00 00 00 01 20 - 7F Name 1
** ** 40 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 40 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---Wah---
** ** 42 00 00 00 00 01 20 - 7F Name 1
** ** 42 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 42 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---Loop FX---
** ** 44 00 00 00 00 01 20 - 7F Name 1
** ** 44 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 44 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---Overdrive/Distortion---
** ** 46 00 00 00 00 01 20 - 7F Name 1
** ** 46 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 46 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---Preamp Channel---
** ** 48 00 00 00 00 01 20 - 7F Name 1
** ** 48 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 48 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---Equalizer---
** ** 4A 00 00 00 00 01 20 - 7F Name 1
** ** 4A 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 4A 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

---Delay---
** ** 4C 00 00 00 00 01 20 - 7F Name 1
** ** 4C 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 4C 0B# 00 00 00 01 20 - 7F Name 12
*Refer to "Table Name"

```

```

---Chorus---
** ** 4E 00 00 00 00 01 20 - 7F Name 1 *Refer to "Table Name"
** ** 4E 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 4E 0B# 00 00 00 01 20 - 7F Name 12

---Reverb---
** ** 50 00 00 00 00 01 20 - 7F Name 1 *Refer to "Table Name"
** ** 50 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 50 0B# 00 00 00 01 20 - 7F Name 12

---Assign Variable---
** ** 52 00 00 00 00 01 20 - 7F Name 1 *Refer to "Table Name"
** ** 52 01# 00 00 00 01 20 - 7F Name 2
** ** : : : : :
** ** 52 0B# 00 00 00 01 20 - 7F Name 12
    
```

Table PATCH

Address (H)	Size (H)	Data (H)	Parameter	Description
08 00 ** **				Patch U 1- 1
08 01 ** **				Patch U 2- 2
:				:
09 47 ** **				Patch U20-10
0A 00 ** **				Patch P21- 1
:				:
0B 47 ** **				Patch P40-10
0C ** ** **				Temporary Buffer (Bulk)
0D ** ** **				Temporary Buffer (Individual)
↑				↑
↑				↑
↑				↑
↑				↑
↑				↑
** ** 00 00	00 00 00 01	00 - 01	FX1:On/Off	00 : Off 01 : On
** ** 00 01			(Reserved)	
** ** 00 02	00 00 00 01	00 - 15	FX1:FX Select	00 : ACS 01 : LM 02 : TW 03 : AW 04 : TM 05 : GS 06 : TR 07 : PH 08 : FL 09 : PN 0A : VB 0B : UV 0C : RM 0D : SG 0E : DF 0F : STR 10 : FB 11 : AFB 12 : HU 13 : SL 14 : WSY 15 : SEQ
** ** 00 03	00 00 00 01	00 - 07	ACS:Type	00 : BOSS Comp 01 : Hi-BAND 02 : Light 03 : D-Comp 04 : Orange 05 : Fat 06 : Mild 07 : Stereo Comp
** ** 00 04	00 00 00 01	00 - 64	ACS:Sustain	0 - 100
** ** 00 05	00 00 00 01	00 - 64	ACS:Attack	0 - 100
** ** 00 06	00 00 00 01	00 - 64	ACS:Tone	-50 - +50
** ** 00 07	00 00 00 01	00 - 64	ACS:Level	0 - 100
** ** 00 08	00 00 00 01	00 - 02	LM :Type	00 : BOSS Limiter 01 : Rack 160D 02 : Vtg Rack U 0 - 100
** ** 00 09	00 00 00 01	00 - 64	LM :Attack	0 - 100
** ** 00 0A	00 00 00 01	00 - 64	LM :Threshold	0 - 100
** ** 00 0B	00 00 00 01	00 - 11	LM :Ratio	*Refer to "Table Ratio"
** ** 00 0C	00 00 00 01	00 - 64	LM :Release	0 - 100
** ** 00 0D	00 00 00 01	00 - 64	LM :Level	0 - 100
** ** 00 0E	00 00 00 01	00 - 01	TW :Mode	00 : LPF 01 : BPF
** ** 00 0F	00 00 00 01	00 - 01	TW :Polarity	00 : Down 01 : Up
** ** 00 10	00 00 00 01	00 - 64	TW :Sens	0 - 100
** ** 00 11	00 00 00 01	00 - 64	TW :Frequency	0 - 100
** ** 00 12	00 00 00 01	00 - 64	TW :Peak	0 - 100
** ** 00 13	00 00 00 01	00 - 64	TW :Direct Level	0 - 100
** ** 00 14	00 00 00 01	00 - 64	TW :Level	0 - 100
** ** 00 15	00 00 00 01	00 - 01	AW :Mode	00 : LPF 01 : BPF
** ** 00 16	00 00 00 01	00 - 64	AW :Frequency	0 - 100
** ** 00 17	00 00 00 01	00 - 64	AW :Peak	0 - 100
** ** 00 18	00 00 00 01	00 - 71	AW :Rate	*Refer to "Table Rate"
** ** 00 19	00 00 00 01	00 - 64	AW :Depth	0 - 100
** ** 00 1A	00 00 00 01	00 - 64	AW :Direct Level	0 - 100
** ** 00 1B	00 00 00 01	00 - 64	AW :Level	0 - 100
** ** 00 1C	00 00 00 01	00 - 07	TM :Type	00 : Fat 01 : Presence 02 : Mild 03 : Tight 04 : Enhance 05 : Resonator1 06 : Resonator2 07 : Resonator3

```

** ** 00 1D 00 00 00 01 00 - 64 TM :Low -50 - +50
** ** 00 1E 00 00 00 01 00 - 64 TM :High -50 - +50
** ** 00 1F 00 00 00 01 00 - 64 TM :Resonance 0 - 100
** ** 00 20 00 00 00 01 00 - 64 TM :Level 0 - 100
** ** 00 21 00 00 00 01 00 - 07 GS :Type 00 : 'S'->'H'
01 : 'H'->'S'
02 : 'H'->'HF'
03 : 'S'->'Hollow
04 : 'H'->'Hollow
05 : 'S'->'AC
06 : 'H'->'AC
07 : 'P'->'AC

** ** 00 22 00 00 00 01 00 - 64 GS :Low -50 - +50
** ** 00 23 00 00 00 01 00 - 64 GS :High -50 - +50
** ** 00 24 00 00 00 01 00 - 64 GS :Body 0 - 100
** ** 00 25 00 00 00 01 00 - 64 GS :Level 0 - 100
** ** 00 26 00 00 00 01 00 - 64 TR :Wave Shape 0 - 100
** ** 00 27 00 00 00 01 00 - 71 TR :Rate *Refer to "Table Rate"
** ** 00 28 00 00 00 01 00 - 64 TR :Depth 0 - 100
** ** 00 29 00 00 00 01 00 - 03 PH :Type 00 : 4 Stage
01 : 8 Stage
02 : 12 Stage
03 : Bi-Phase

** ** 00 2A 00 00 00 01 00 - 71 PH :Rate *Refer to "Table Rate"
** ** 00 2B 00 00 00 01 00 - 64 PH :Depth 0 - 100
** ** 00 2C 00 00 00 01 00 - 64 PH :Manual 0 - 100
** ** 00 2D 00 00 00 01 00 - 64 PH :Resonance 0 - 100
** ** 00 2E 00 00 00 01 00 - 72 PH :Step Rate *Refer to "Table Step Rate"
** ** 00 2F 00 00 00 01 00 - 64 PH :Effect Level 0 - 100
** ** 00 30 00 00 00 01 00 - 64 PH :Direct Level 0 - 100
** ** 00 31 00 00 00 01 00 - 71 FL :Rate *Refer to "Table Rate"
** ** 00 32 00 00 00 01 00 - 64 FL :Depth 0 - 100
** ** 00 33 00 00 00 01 00 - 64 FL :Manual 0 - 100
** ** 00 34 00 00 00 01 00 - 64 FL :Resonance 0 - 100
** ** 00 35 00 00 00 01 00 - 64 FL :Separation 0 - 100
** ** 00 36 00 00 00 01 00 - 0A FL :Low Cut *Refer to "Table Low Cut"
** ** 00 37 00 00 00 01 00 - 64 FL :Effect Level 0 - 100
** ** 00 38 00 00 00 01 00 - 64 FL :Direct Level 0 - 100
** ** 00 39 00 00 00 01 00 - 64 PAN:Wave Shape 0 - 100
** ** 00 3A 00 00 00 01 00 - 71 PAN:Rate *Refer to "Table Rate"
** ** 00 3B 00 00 00 01 00 - 64 PAN:Depth 0 - 100
** ** 00 3C 00 00 00 01 00 - 71 VB :Rate *Refer to "Table Rate"
** ** 00 3D 00 00 00 01 00 - 64 VB :Depth 0 - 100
** ** 00 3E 00 00 00 01 00 - 01 VB :Trigger 00 : Off
01 : On

** ** 00 3F 00 00 00 01 00 - 64 VB :Rise Time 0 - 100
** ** 00 40 00 00 00 01 00 - 71 UV :Rate *Refer to "Table Rate"
** ** 00 41 00 00 00 01 00 - 64 UV :Depth 0 - 100
** ** 00 42 00 00 00 01 00 - 64 UV :Level 0 - 100
** ** 00 43 00 00 00 01 00 - 01 RM :Mode 00 : Normal
01 : Intelligent

** ** 00 44 00 00 00 01 00 - 64 RM :Frequency 0 - 100
** ** 00 45 00 00 00 01 00 - 64 RM :Effect Level 0 - 100
** ** 00 46 00 00 00 01 00 - 64 RM :Direct Level 0 - 100
** ** 00 47 00 00 00 01 00 - 64 SG :Sens 0 - 100
** ** 00 48 00 00 00 01 00 - 64 SG :Rise Time 0 - 100
** ** 00 49 00 00 00 01 00 - 64 DF :Tone -50 - +50
** ** 00 4A 00 00 00 01 00 - 64 DF :Sens 0 - 100
** ** 00 4B 00 00 00 01 00 - 64 DF :Attack 0 - 100
** ** 00 4C 00 00 00 01 00 - 64 DF :Depth 0 - 100
** ** 00 4D 00 00 00 01 00 - 64 DF :Resonance 0 - 100
** ** 00 4E 00 00 00 01 00 - 64 DF :Effect Level 0 - 100
** ** 00 4F 00 00 00 01 00 - 64 DF :Direct Level 0 - 100
** ** 00 50 00 00 00 01 00 - 64 STR:Tone -50 - +50
** ** 00 51 00 00 00 01 00 - 64 STR:Sens 0 - 100
** ** 00 52 00 00 00 01 00 - 64 STR:Depth 0 - 100
** ** 00 53 00 00 00 01 00 - 64 STR:Resonance 0 - 100
** ** 00 54 00 00 00 01 00 - 64 STR:Buzz 0 - 100
** ** 00 55 00 00 00 01 00 - 64 STR:Effect Level 0 - 100
** ** 00 56 00 00 00 01 00 - 64 STR:Direct Level 0 - 100
** ** 00 57 00 00 00 01 00 - 01 FB :Mode 00 : OSC
01 : Natural

** ** 00 58 00 00 00 01 00 - 64 FB :Rise Time 0 - 100
** ** 00 59 00 00 00 01 00 - 64 FB :Rise Time(Åf) 0 - 100
** ** 00 5A 00 00 00 01 00 - 64 FB :F.B.Level 0 - 100
** ** 00 5B 00 00 00 01 00 - 64 FB :F.B.Level(Åf) 0 - 100
** ** 00 5C 00 00 00 01 00 - 71 FB :Vibrato Rate *Refer to "Table Rate"
** ** 00 5D 00 00 00 01 00 - 64 FB :Vibrato Depth 0 - 100
** ** 00 5E 00 00 00 01 00 - 64 AFB:FREQ 1 0 - 100
** ** 00 5F 00 00 00 01 00 - 64 AFB:DEPTH 1 0 - 100
** ** 00 60 00 00 00 01 00 - 64 AFB:FREQ 2 0 - 100
** ** 00 61 00 00 00 01 00 - 64 AFB:DEPTH 2 0 - 100
** ** 00 62 00 00 00 01 00 - 64 AFB:FREQ 3 0 - 100
** ** 00 63 00 00 00 01 00 - 64 AFB:DEPTH 3 0 - 100
** ** 00 64 00 00 00 01 00 - 02 HU :Mode 00 : Picking
01 : Auto
02 : Random

** ** 00 65 00 00 00 01 00 - 04 HU :Vowel1 00 : 'a'
01 : 'e'
02 : 'i'
03 : 'o'
04 : 'u'

** ** 00 66 00 00 00 01 00 - 04 HU :Vowel2 00 : 'a'
01 : 'e'
02 : 'i'
03 : 'o'
04 : 'u'

** ** 00 67 00 00 00 01 00 - 64 HU :Sens 0 - 100
** ** 00 68 00 00 00 01 00 - 71 HU :Rate *Refer to "Table Rate"
** ** 00 69 00 00 00 01 00 - 64 HU :Depth 0 - 100
** ** 00 6A 00 00 00 01 00 - 64 HU :Manual 0 - 100
** ** 00 6B 00 00 00 01 00 - 64 HU :Level 0 - 100
** ** 00 6C 00 00 00 01 00 - 13 SL :Pattern 00 : P1
01 : P2
:
13 : P20

** ** 00 6D 00 00 00 01 00 - 71 SL :Rate *Refer to "Table Rate"
** ** 00 6E 00 00 00 01 00 - 64 SL :Triggr Sens 0 - 100
** ** 00 6F 00 00 00 01 00 - 01 WSY:Wave 00 : Saw
01 : Square

** ** 00 70 00 00 00 01 00 - 64 WSY:Cutoff Freq 0 - 100
** ** 00 71 00 00 00 01 00 - 64 WSY:Resonance 0 - 100
** ** 00 72 00 00 00 01 00 - 64 WSY:FLT.Sens 0 - 100
** ** 00 73 00 00 00 01 00 - 64 WSY:FLT.Decay 0 - 100
** ** 00 74 00 00 00 01 00 - 64 WSY:FLT.Depth 0 - 100

```

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** ** 00 75 00 00 00 01 00 - 64 WSY:Synth Level 0 - 100
** ** 00 76 00 00 00 01 00 - 64 WSY:Direct Level 0 - 100
** ** 00 77 00 00 00 01 00 - 0A SEQ:Low Cut *Refer to "Table Low Cut"
** ** 00 78 00 00 00 01 00 - 28 SEQ:Low EQ 00 : -20dB
: 01 : -19dB
: 28 : +20dB
** ** 00 79 00 00 00 01 00 - 1B SEQ:Low-Middle Frequency *Refer to "Table Middle Frequency"
** ** 00 7A 00 00 00 01 00 - 05 SEQ:Low-Middle Q *Refer to "Table Middle Q"
** ** 00 7B 00 00 00 01 00 - 28 SEQ:Low-Middle EQ 00 : -20dB
: 01 : -19dB
: 28 : +20dB
** ** 00 7C 00 00 00 01 00 - 1B SEQ:High-Middle Frequency *Refer to "Table Middle Frequency"
** ** 00 7D 00 00 00 01 00 - 05 SEQ:High-Middle Q *Refer to "Table Middle Q"
** ** 00 7E 00 00 00 01 00 - 28 SEQ:High-Middle EQ 00 : -20dB
: 01 : -19dB
: 28 : +20dB
** ** 00 7F 00 00 00 01 00 - 28 SEQ:High EQ 00 : -20dB
: 01 : -19dB
: 28 : +20dB
** ** 01 00 00 00 00 01 00 - 09 SEQ:High Cut *Refer to "Table High Cut"
** ** 01 01 00 00 00 01 00 - 28 SEQ:Level 00 : -20dB
: 01 : -19dB
: 28 : +20dB

---COMPRESSOR---
** ** 02 00 00 00 00 01 00 - 01 On/Off 00 : Off
: 01 : On
** ** 02 01 (Reserved)
** ** 02 02 00 00 00 01 00 - 01 Type 00 : Compressor
: 01 : Limiter
** ** 02 03 00 00 00 01 00 - 64 Sustain 0 - 100
** ** 02 04 00 00 00 01 00 - 64 Attack 0 - 100
** ** 02 05 00 00 00 01 00 - 64 Threshold 0 - 100
** ** 02 06 00 00 00 01 00 - 64 Release 0 - 100
** ** 02 07 00 00 00 01 00 - 64 Tone -50 - +50
** ** 02 08 00 00 00 01 00 - 64 Level 0 - 100

---WAH---
** ** 03 00 00 00 00 01 00 - 01 On/Off 00 : Off
: 01 : On
** ** 03 01 (Reserved)
** ** 03 02 00 00 00 01 00 - 08 Type 00 : CRY WAH
: 01 : VO WAH
: 02 : Fat WAH
: 03 : Light WAH
: 04 : 7String WAH
: 05 : Resonance WAH
: 06 : Custom1
: 07 : Custom2
: 08 : Custom3
** ** 03 03 00 00 00 01 00 - 64 Pdl Position 0 - 100
** ** 03 04 00 00 00 01 00 - 64 Level 0 - 100

---LOOP FX---
** ** 04 00 00 00 00 01 00 - 01 On/Off 00 : Off
: 01 : On
** ** 04 01 (Reserved)
** ** 04 02 00 00 00 01 00 - 02 Mode 1 00 : Normal
: 01 : Direct Mix
: 02 : Branch Out
** ** 04 03 00 00 00 01 00 - 64 Send 1 Level 00 : 0
: 01 : 2
: 64 : 200
** ** 04 04 00 00 00 01 00 - 64 Return 1 Level 0 - 200
** ** 04 05 00 00 00 01 00 - 02 Mode 2 00 : Normal
: 01 : Direct Mix
: 02 : Branch Out
** ** 04 06 00 00 00 01 00 - 64 Send 2 Level 0 - 200
** ** 04 07 00 00 00 01 00 - 64 Return 2 Level 0 - 200
** ** 04 08 00 00 00 01 00 - 02 Mode Stereo 00 : Normal
: 01 : Direct Mix
: 02 : Branch Out
** ** 04 09 00 00 00 01 00 - 64 Send Stereo Level 0 - 200
** ** 04 0A 00 00 00 01 00 - 64 Return Stereo Level 0 - 200
** ** 04 0B 00 00 00 01 00 - 03 Type 00 : Stereo1
: 01 : Stereo2
: 02 : S/R1->S/R2
: 03 : S/R1&S/R2
** ** 04 0C 00 00 00 01 00 - 02 Select 00 : S/R1
: 01 : S/R2
: 02 : S/R1&S/R2

---PRE LOOP FX---
** ** 05 00 00 00 00 01 00 - 01 On/Off 00 : Off
: 01 : On

---OVERDRIVE/DISTORTION---
** ** 06 00 00 00 00 01 00 - 01 On/Off 00 : Off
: 01 : On
** ** 06 01 (Reserved)
** ** 06 02 00 00 00 01 00 - 20 Type *Refer to "Table OD/DS Type"
** ** 06 03 00 00 00 01 00 - 78 Drive 0 - 120
** ** 06 04 00 00 00 01 00 - 64 Bottom -50 - +50
** ** 06 05 00 00 00 01 00 - 64 Tone -50 - +50
** ** 06 06 00 00 00 01 00 - 64 Effect Level 0 - 100
** ** 06 07 00 00 00 01 00 - 64 Direct Level 0 - 100

---PREAMP/SPEAKER---
** ** 07 00 00 00 00 01 00 - 01 On/Off 00 : Off
: 01 : On
** ** 07 01 (Reserved)
** ** 07 02 00 00 00 01 00 - 03 Channel Mode 00 : Single
: 01 : Dual Mono
: 02 : Dual L/R
: 03 : Dynamic
** ** 07 03 00 00 00 01 00 - 01 Channel Select 00 : Ch A
: 01 : Ch B
** ** 07 04 00 00 00 01 00 - 64 Dynamic Sens 0 - 100
** ** 07 05 00 00 00 01 00 - 32 Channel Delay Time 0ms - 50ms

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** ** 07 06 00 00 00 01 00 - 30 Ch A Type *Refer to "Table Preamp Type"
** ** 07 07 00 00 00 01 00 - 78 Ch A Gain 0 - 120
** ** 07 08 00 00 00 01 00 - 64 Ch A Bass 0 - 100
** ** 07 09 00 00 00 01 00 - 64 Ch A Middle 0 - 100
** ** 07 0A 00 00 00 01 00 - 64 Ch A Treble 0 - 100
** ** 07 0B 00 00 00 01 00 - 64 Ch A Presence 0 - 100
** ** 07 0C 00 00 00 01 00 - 64 Ch A Level 0 - 100
** ** 07 0D 00 00 00 01 00 - 01 Ch A Bright 00 : Off
01 : On
** ** 07 0E 00 00 00 01 00 - 02 Ch A Gain SW 00 : Low
01 : Middle
02 : High
** ** 07 0F 00 00 00 01 00 - 01 Ch A Solo SW 00 : Off
01 : On
** ** 07 10 00 00 00 01 00 - 64 Ch A Solo Level 0 - 100
** ** 07 11 00 00 00 01 00 - 0A Ch A SP Type 00 : Off
01 : Original
02 : 1x8"
03 : 1x10"
04 : 1x12"
05 : 2x12"
06 : 4x10"
07 : 4x12"
08 : 8x12"
09 : Custom1
0A : Custom2
** ** 07 12 00 00 00 01 00 - 04 Ch A Mic Type 00 : DYN57
01 : DYN421
02 : CND451
03 : CND87
04 : FLAT
** ** 07 13 00 00 00 01 00 - 01 Ch A Mic Dis. 00 : Off Mic
01 : On Mic
** ** 07 14 00 00 00 01 00 - 0A Ch A Mic Pos. 00 : Center
01 : 1
02 : 2
:
0A : 10
** ** 07 15 00 00 00 01 00 - 64 Ch A Mic Level 0 - 100
** ** 07 16 00 00 00 01 00 - 64 Ch A Direct Level 0 - 100
** ** 07 17 00 00 00 01 00 - 30 Ch B Type *Refer to "Table Preamp Type"
** ** 07 18 00 00 00 01 00 - 78 Ch B Gain 0 - 120
** ** 07 19 00 00 00 01 00 - 64 Ch B Bass 0 - 100
** ** 07 1A 00 00 00 01 00 - 64 Ch B Middle 0 - 100
** ** 07 1B 00 00 00 01 00 - 64 Ch B Treble 0 - 100
** ** 07 1C 00 00 00 01 00 - 64 Ch B Presence 0 - 100
** ** 07 1D 00 00 00 01 00 - 64 Ch B Level 0 - 100
** ** 07 1E 00 00 00 01 00 - 01 Ch B Bright 00 : Off
01 : On
** ** 07 1F 00 00 00 01 00 - 02 Ch B Gain SW 00 : Low
01 : Middle
02 : High
** ** 07 20 00 00 00 01 00 - 01 Ch B Solo SW 00 : Off
01 : On
** ** 07 21 00 00 00 01 00 - 64 Ch B Solo Level 0 - 100
** ** 07 22 00 00 00 01 00 - 0A Ch B SP Type 00 : Off
01 : Original
02 : 1x8"
03 : 1x10"
04 : 1x12"
05 : 2x12"
06 : 4x10"
07 : 4x12"
08 : 8x12"
09 : Custom1
0A : Custom2
** ** 07 23 00 00 00 01 00 - 03 Ch B Mic Type 00 : DYN57
01 : DYN421
02 : CND451
03 : CND87
04 : FLAT
** ** 07 24 00 00 00 01 00 - 01 Ch B Mic Dis. 00 : Off Mic
01 : On Mic
** ** 07 25 00 00 00 01 00 - 0A Ch B Mic Pos. 00 : Center
01 : 1
02 : 2
:
0A : 10
** ** 07 26 00 00 00 01 00 - 64 Ch B Mic Level 0 - 100
** ** 07 27 00 00 00 01 00 - 64 Ch B Direct Level 0 - 100
---EQUALIZER---
** ** 08 00 00 00 00 01 00 - 01 On/Off 00 : Off
01 : On
** ** 08 01 (Reserved)
** ** 08 02 00 00 00 01 00 - 0A Low Cut *Refer to "Table Low Cut"
** ** 08 03 00 00 00 01 00 - 28 Low EQ 00 : -20dB
01 : -19dB
:
28 : +20dB
** ** 08 04 00 00 00 01 00 - 1B Low-Middle Frequency *Refer to "Table Middle Frequency"
** ** 08 05 00 00 00 01 00 - 05 Low-Middle Q *Refer to "Table Middle Q"
** ** 08 06 00 00 00 01 00 - 28 Low-Middle EQ 00 : -20dB
01 : -19dB
:
28 : +20dB
** ** 08 07 00 00 00 01 00 - 1B High-Middle Frequency *Refer to "Table Middle Frequency"
** ** 08 08 00 00 00 01 00 - 05 High-Middle Q *Refer to "Table Middle Q"
** ** 08 09 00 00 00 01 00 - 28 High-Middle EQ 00 : -20dB
01 : -19dB
:
28 : +20dB
** ** 08 0A 00 00 00 01 00 - 28 High EQ 00 : -20dB
01 : -19dB
:
28 : +20dB
** ** 08 0B 00 00 00 01 00 - 09 High Cut *Refer to "Table High Cut"
** ** 08 0C 00 00 00 01 00 - 28 Level 00 : -20dB
01 : -19dB
:
28 : +20dB

```



```

---FX-2---
** ** 09 00 00 00 01 00 - 01 FX2:On/Off 00 : Off
** ** 09 01 (Reserved) 01 : On
** ** 09 02 00 00 00 01 00 - 20 FX2:FX Select 00 : ACS
01 : LM
02 : TW
03 : AW
04 : TM
05 : GS
06 : TR
07 : PH
08 : FL
09 : PN
0A : VB
0B : UV
0C : RM
0D : SG
0E : DF
0F : STR
10 : FB
11 : AFB
12 : HU
13 : SL
14 : WSY
15 : SEQ
16 : HR
17 : PS
18 : PB
19 : OC
1A : RT
1B : 2CE
1C : AR
1D : SYN
1E : AC
1F : SH
20 : SDD
00 : BOSS Comp
01 : Hi-BAND
02 : Light
03 : D-Comp
04 : Orange
05 : Fat
06 : Mild
07 : Stereo Comp
0 - 100
** ** 09 04 00 00 00 01 00 - 64 ACS:Sustain 0 - 100
** ** 09 05 00 00 00 01 00 - 64 ACS:Attack 0 - 100
** ** 09 06 00 00 00 01 00 - 64 ACS:Tone -50 - +50
** ** 09 07 00 00 00 01 00 - 64 ACS:Level 0 - 100
** ** 09 08 00 00 00 01 00 - 02 LM :Type 00 : BOSS Limiter
01 : Rack 160D
02 : Vtg Rack U
0 - 100
** ** 09 09 00 00 00 01 00 - 64 LM :Attack 0 - 100
** ** 09 0A 00 00 00 01 00 - 64 LM :Threshold 0 - 100
** ** 09 0B 00 00 00 01 00 - 11 LM :Ratio *Refer to "Table Ratio"
** ** 09 0C 00 00 00 01 00 - 64 LM :Release 0 - 100
** ** 09 0D 00 00 00 01 00 - 64 LM :Level 0 - 100
** ** 09 0E 00 00 00 01 00 - 01 TW :Mode 00 : LPF
01 : BPF
** ** 09 0F 00 00 00 01 00 - 01 TW :Polarity 00 : Down
01 : Up
0 - 100
** ** 09 10 00 00 00 01 00 - 64 TW :Sens 0 - 100
** ** 09 11 00 00 00 01 00 - 64 TW :Frequency 0 - 100
** ** 09 12 00 00 00 01 00 - 64 TW :Peak 0 - 100
** ** 09 13 00 00 00 01 00 - 64 TW :Direct Level 0 - 100
** ** 09 14 00 00 00 01 00 - 64 TW :Level 0 - 100
** ** 09 15 00 00 00 01 00 - 01 AW :Mode 00 : LPF
01 : BPF
0 - 100
** ** 09 16 00 00 00 01 00 - 64 AW :Frequency 0 - 100
** ** 09 17 00 00 00 01 00 - 64 AW :Peak 0 - 100
** ** 09 18 00 00 00 01 00 - 71 AW :Rate *Refer to "Table Rate"
** ** 09 19 00 00 00 01 00 - 64 AW :Depth 0 - 100
** ** 09 1A 00 00 00 01 00 - 64 AW :Direct Level 0 - 100
** ** 09 1B 00 00 00 01 00 - 64 AW :Level 0 - 100
** ** 09 1C 00 00 00 01 00 - 07 TM :Type 00 : Fat
01 : Presence
02 : Mild
03 : Tight
04 : Enhance
05 : Resonator1
06 : Resonator2
07 : Resonator3
-50 - +50
** ** 09 1D 00 00 00 01 00 - 64 TM :Low -50 - +50
** ** 09 1E 00 00 00 01 00 - 64 TM :High -50 - +50
** ** 09 1F 00 00 00 01 00 - 64 TM :Resonance 0 - 100
** ** 09 20 00 00 00 01 00 - 64 TM :Level 0 - 100
** ** 09 21 00 00 00 01 00 - 07 GS :Type 00 : 'S'->'H'
01 : 'H'->'S'
02 : 'H'->'HF'
03 : 'S'->'Hollow'
04 : 'H'->'Hollow'
05 : 'S'->'AC'
06 : 'H'->'AC'
07 : 'P'->'AC'
-50 - +50
** ** 09 22 00 00 00 01 00 - 64 GS :Low -50 - +50
** ** 09 23 00 00 00 01 00 - 64 GS :High -50 - +50
** ** 09 24 00 00 00 01 00 - 64 GS :Body 0 - 100
** ** 09 25 00 00 00 01 00 - 64 GS :Level 0 - 100
** ** 09 26 00 00 00 01 00 - 64 TR :Wave Shape 0 - 100
** ** 09 27 00 00 00 01 00 - 71 TR :Rate *Refer to "Table Rate"
** ** 09 28 00 00 00 01 00 - 64 TR :Depth 0 - 100
** ** 09 29 00 00 00 01 00 - 03 PH :Type 00 : 4 Stage
01 : 8 Stage
02 : 12 Stage
03 : Bi-Phase
*Refer to "Table Rate"
** ** 09 2A 00 00 00 01 00 - 71 PH :Rate *Refer to "Table Rate"
** ** 09 2B 00 00 00 01 00 - 64 PH :Depth 0 - 100
** ** 09 2C 00 00 00 01 00 - 64 PH :Manual 0 - 100
** ** 09 2D 00 00 00 01 00 - 64 PH :Resonance 0 - 100
** ** 09 2E 00 00 00 01 00 - 72 PH :Step Rate *Refer to "Table Step Rate"
** ** 09 2F 00 00 00 01 00 - 64 PH :Effect Level 0 - 100
** ** 09 30 00 00 00 01 00 - 64 PH :Direct Level 0 - 100
** ** 09 31 00 00 00 01 00 - 71 FL :Rate *Refer to "Table Rate"
** ** 09 32 00 00 00 01 00 - 64 FL :Depth 0 - 100
** ** 09 33 00 00 00 01 00 - 64 FL :Manual 0 - 100

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** ** 09 34 00 00 00 01 00 - 64 FL :Resonance 0 - 100
** ** 09 35 00 00 00 01 00 - 64 FL :Separation 0 - 100
** ** 09 36 00 00 00 01 00 - 0A FL :Low Cut *Refer to "Table Low Cut"
** ** 09 37 00 00 00 01 00 - 64 FL :Effect Level 0 - 100
** ** 09 38 00 00 00 01 00 - 64 FL :Direct Level 0 - 100
** ** 09 39 00 00 00 01 00 - 64 PAN:Wave Shape 0 - 100
** ** 09 3A 00 00 00 01 00 - 71 PAN:Rate *Refer to "Table Rate"
** ** 09 3B 00 00 00 01 00 - 64 PAN:Depth 0 - 100
** ** 09 3C 00 00 00 01 00 - 71 VB :Rate *Refer to "Table Rate"
** ** 09 3D 00 00 00 01 00 - 64 VB :Depth 0 - 100
** ** 09 3E 00 00 00 01 00 - 01 VB :Trigger 00 : Off
01 : On
** ** 09 3F 00 00 00 01 00 - 64 VB :Rise Time 0 - 100
** ** 09 40 00 00 00 01 00 - 71 UV :Rate *Refer to "Table Rate"
** ** 09 41 00 00 00 01 00 - 64 UV :Depth 0 - 100
** ** 09 42 00 00 00 01 00 - 64 UV :Level 0 - 100
** ** 09 43 00 00 00 01 00 - 01 RM :Mode 00 : Normal
01 : Intelligent
** ** 09 44 00 00 00 01 00 - 64 RM :Frequency 0 - 100
** ** 09 45 00 00 00 01 00 - 64 RM :Effect Level 0 - 100
** ** 09 46 00 00 00 01 00 - 64 RM :Direct Level 0 - 100
** ** 09 47 00 00 00 01 00 - 64 SG :Sens 0 - 100
** ** 09 48 00 00 00 01 00 - 64 SG :Rise Time 0 - 100
** ** 09 49 00 00 00 01 00 - 64 DF :Tone -50 - +50
** ** 09 4A 00 00 00 01 00 - 64 DF :Sens 0 - 100
** ** 09 4B 00 00 00 01 00 - 64 DF :Attack 0 - 100
** ** 09 4C 00 00 00 01 00 - 64 DF :Depth 0 - 100
** ** 09 4D 00 00 00 01 00 - 64 DF :Resonance 0 - 100
** ** 09 4E 00 00 00 01 00 - 64 DF :Effect Level 0 - 100
** ** 09 4F 00 00 00 01 00 - 64 DF :Direct Level 0 - 100
** ** 09 50 00 00 00 01 00 - 64 STR:Tone -50 - +50
** ** 09 51 00 00 00 01 00 - 64 STR:Sens 0 - 100
** ** 09 52 00 00 00 01 00 - 64 STR:Depth 0 - 100
** ** 09 53 00 00 00 01 00 - 64 STR:Resonance 0 - 100
** ** 09 54 00 00 00 01 00 - 64 STR:Buzz 0 - 100
** ** 09 55 00 00 00 01 00 - 64 STR:Effect Level 0 - 100
** ** 09 56 00 00 00 01 00 - 64 STR:Direct Level 0 - 100
** ** 09 57 00 00 00 01 00 - 01 FB :Mode 00 : OSC
01 : Natural
** ** 09 58 00 00 00 01 00 - 64 FB :Rise Time 0 - 100
** ** 09 59 00 00 00 01 00 - 64 FB :Rise Time(Åf) 0 - 100
** ** 09 5A 00 00 00 01 00 - 64 FB :F.B.Level 0 - 100
** ** 09 5B 00 00 00 01 00 - 64 FB :F.B.Level(Åf) 0 - 100
** ** 09 5C 00 00 00 01 00 - 71 FB :Vibrato Rate *Refer to "Table Rate"
** ** 09 5D 00 00 00 01 00 - 64 FB :Vibrato Depth 0 - 100
** ** 09 5E 00 00 00 01 00 - 64 AFB:FREQ 1 0 - 100
** ** 09 5F 00 00 00 01 00 - 64 AFB:DEPTH 1 0 - 100
** ** 09 60 00 00 00 01 00 - 64 AFB:FREQ 2 0 - 100
** ** 09 61 00 00 00 01 00 - 64 AFB:DEPTH 2 0 - 100
** ** 09 62 00 00 00 01 00 - 64 AFB:FREQ 3 0 - 100
** ** 09 63 00 00 00 01 00 - 64 AFB:DEPTH 3 0 - 100
** ** 09 64 00 00 00 01 00 - 02 HU :Mode 00 : Picking
01 : Auto
02 : Random
** ** 09 65 00 00 00 01 00 - 04 HU :Vowel1 00 : 'a'
01 : 'e'
02 : 'i'
03 : 'o'
04 : 'u'
** ** 09 66 00 00 00 01 00 - 04 HU :Vowel2 00 : 'a'
01 : 'e'
02 : 'i'
03 : 'o'
04 : 'u'
** ** 09 67 00 00 00 01 00 - 64 HU :Sens 0 - 100
** ** 09 68 00 00 00 01 00 - 71 HU :Rate *Refer to "Table Rate"
** ** 09 69 00 00 00 01 00 - 64 HU :Depth 0 - 100
** ** 09 6A 00 00 00 01 00 - 64 HU :Manual 0 - 100
** ** 09 6B 00 00 00 01 00 - 64 HU :Level 0 - 100
** ** 09 6C 00 00 00 01 00 - 13 SL :Pattern 00 : P1
01 : P2
:
13 : P20
** ** 09 6D 00 00 00 01 00 - 71 SL :Rate *Refer to "Table Rate"
** ** 09 6E 00 00 00 01 00 - 64 SL :Triggr Sens 0 - 100
** ** 09 6F 00 00 00 01 00 - 01 WSY:Wave 00 : Saw
01 : Square
** ** 09 70 00 00 00 01 00 - 64 WSY:Cutoff Freq 0 - 100
** ** 09 71 00 00 00 01 00 - 64 WSY:Resonance 0 - 100
** ** 09 72 00 00 00 01 00 - 64 WSY:FLT.Sens 0 - 100
** ** 09 73 00 00 00 01 00 - 64 WSY:FLT.Decay 0 - 100
** ** 09 74 00 00 00 01 00 - 64 WSY:FLT.Depth 0 - 100
** ** 09 75 00 00 00 01 00 - 64 WSY:Synth Level 0 - 100
** ** 09 76 00 00 00 01 00 - 64 WSY:Direct Level 0 - 100
** ** 09 77 00 00 00 01 00 - 0A SEQ:Low Cut *Refer to "Table Low Cut"
** ** 09 78 00 00 00 01 00 - 28 SEQ:Low EQ 00 : -20dB
01 : -19dB
:
28 : +20dB
** ** 09 79 00 00 00 01 00 - 1B SEQ:Low-Middle Frequency *Refer to "Table Middle Frequency"
** ** 09 7A 00 00 00 01 00 - 05 SEQ:Low-Middle Q *Refer to "Table Middle Q"
** ** 09 7B 00 00 00 01 00 - 28 SEQ:Low-Middle EQ 00 : -20dB
01 : -19dB
:
28 : +20dB
** ** 09 7C 00 00 00 01 00 - 1B SEQ:High-Middle Frequency *Refer to "Table Middle Frequency"
** ** 09 7D 00 00 00 01 00 - 05 SEQ:High-Middle Q *Refer to "Table Middle Q"
** ** 09 7E 00 00 00 01 00 - 28 SEQ:High-Middle EQ 00 : -20dB
01 : -19dB
:
28 : +20dB
** ** 09 7F 00 00 00 01 00 - 28 SEQ:High EQ 00 : -20dB
01 : -19dB
:
28 : +20dB
** ** 0A 00 00 00 00 01 00 - 09 SEQ:High Cut *Refer to "Table High Cut"
** ** 0A 01 00 00 00 01 00 - 28 SEQ:Level 00 : -20dB
01 : -19dB
:
28 : +20dB
** ** 0A 02 00 00 00 01 00 - 02 HR :Voice 00 : 1-Voice
01 : 2-Mono
02 : 2-Stereo
** ** 0A 03 00 00 00 01 00 - 39 HR :Voice1:Harmony *Refer to "Table HR Harmony"
** ** 0A 04 00 00 00 02 00 00 - 02 33 HR :Voice1:Pre Delay *Refer to "Table Pre Delay"

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** ** 0A 05#
** ** 0A 06      00 00 00 01      00 - 64      HR :Voice1:Pre Delay (LSB)
** ** 0A 07      00 00 00 01      00 - 64      HR :Voice1:Feedback      0 - 100
** ** 0A 08      00 00 00 01      00 - 64      HR :Voice1:Level        0 - 100
** ** 0A 09      00 00 00 01      00 - 39      HR :Voice2:Harmony      *Refer to "Table HR Harmony"
** ** 0A 0A#     00 00 00 02      00 00 - 02 33 HR :Voice2:Pre Delay    *Refer to "Table Pre Delay"
** ** 0A 0B     00 00 00 01      00 - 64      HR :Voice2:Pre Delay (LSB)
** ** 0A 0C     00 00 00 01      00 - 0B      HR :Voice2:Level        0 - 100
                                00 : C (Am)
                                01 : C# (A#m)
                                :
                                0B : B (G#m)
** ** 0A 0D     00 00 00 01      00 - 64      HR :Direct Level        0 - 100
** ** 0A 0E     00 00 00 01      00 - 02      PS :Voice                00 : 1-Voice
                                01 : 2-Mono
                                02 : 2-Stereo
** ** 0A 0F     00 00 00 01      00 - 03      PS :Voice1:Mode         00 : Fast
                                01 : Medium
                                02 : Slow
                                03 : Mono
** ** 0A 10     00 00 00 01      00 - 30      PS :Voice1:Pitch        -24 - +24
** ** 0A 11     00 00 00 01      00 - 64      PS :Voice1:Fine         -50 - +50
** ** 0A 12     00 00 00 02      00 00 - 02 33 PS :Voice1:Pre Delay    *Refer to "Table Pre Delay"
** ** 0A 13#    00 00 00 01      00 - 64      PS :Voice1:Pre Delay (LSB)
** ** 0A 14     00 00 00 01      00 - 64      PS :Voice1:Feedback      0 - 100
** ** 0A 15     00 00 00 01      00 - 64      PS :Voice1:Level        0 - 100
** ** 0A 16     00 00 00 01      00 - 03      PS :Voice2:Mode         00 : Fast
                                01 : Medium
                                02 : Slow
                                03 : Mono
** ** 0A 17     00 00 00 01      00 - 30      PS :Voice2:Pitch        -24 - +24
** ** 0A 18     00 00 00 01      00 - 64      PS :Voice2:Fine         -50 - +50
** ** 0A 19     00 00 00 02      00 00 - 02 33 PS :Voice2:Pre Delay    *Refer to "Table Pre Delay"
** ** 0A 1A#    00 00 00 01      00 - 64      PS :Voice2:Pre Delay (LSB)
** ** 0A 1B     00 00 00 01      00 - 64      PS :Voice2:Level        0 - 100
** ** 0A 1C     00 00 00 01      00 - 64      PS :Direct Level        0 - 100
** ** 0A 1D     00 00 00 01      00 - 30      PB :Pitch Min           -24 - +24
** ** 0A 1E     00 00 00 01      00 - 30      PB :Pitch Max           -24 - +24
** ** 0A 1F     00 00 00 01      00 - 64      PB :Pdl Position        0 - 100
** ** 0A 20     00 00 00 01      00 - 64      PB :Effect Level        0 - 100
** ** 0A 21     00 00 00 01      00 - 64      PB :Direct Level        0 - 100
** ** 0A 22     00 00 00 01      00 - 03      OC :Range                Range 1 - Range 4
** ** 0A 23     00 00 00 01      00 - 64      OC :Octave Level        0 - 100
** ** 0A 24     00 00 00 01      00 - 64      OC :Direct Level        0 - 100
** ** 0A 25     00 00 00 01      00 - 01      RT :Speed Select        00 : Slow
                                01 : Fast
** ** 0A 26     00 00 00 01      00 - 71      RT :Rate(Slow)         *Refer to "Table Rate"
** ** 0A 27     00 00 00 01      00 - 71      RT :Rate(Fast)         *Refer to "Table Rate"
** ** 0A 28     00 00 00 01      00 - 64      RT :Rise Time           0 - 100
** ** 0A 29     00 00 00 01      00 - 64      RT :Fall Time           0 - 100
** ** 0A 2A     00 00 00 01      00 - 64      RT :Depth               0 - 100
** ** 0A 2B     00 00 00 01      00 - 10      2CE:Xover f            *Refer to "Table Xover Frequency"
** ** 0A 2C     00 00 00 01      00 - 71      2CE:Low Rate           *Refer to "Table Rate"
** ** 0A 2D     00 00 00 01      00 - 64      2CE:Low Depth          0 - 100
** ** 0A 2E     00 00 00 01      00 - 50      2CE:Low Pre Delay     *Refer to "Table CE Pre Delay"
** ** 0A 2F     00 00 00 01      00 - 64      2CE:Low Level          0 - 100
** ** 0A 30     00 00 00 01      00 - 71      2CE:High Rate          *Refer to "Table Rate"
** ** 0A 31     00 00 00 01      00 - 64      2CE:High Depth         0 - 100
** ** 0A 32     00 00 00 01      00 - 50      2CE:High Pre Delay    *Refer to "Table CE Pre Delay"
** ** 0A 33     00 00 00 01      00 - 64      2CE:High Level        0 - 100
** ** 0A 34     00 00 00 01      00 - 27      AR :Phrase              00 : Preset1
                                01 : Preset2
                                :
                                1D : Preset30
                                1E : User1
                                :
                                27 : User10
** ** 0A 35     00 00 00 01      00 - 01      AR :Loop                 00 : Off
                                01 : On
** ** 0A 36     00 00 00 01      00 - 71      AR :Tempo               *Refer to "Table Rate"
** ** 0A 37     00 00 00 01      00 - 64      AR :Sens                 0 - 100
** ** 0A 38     00 00 00 01      00 - 0B      AR :Key                  00 : C (Am)
                                01 : C# (A#m)
                                :
                                0B : B (G#m)
** ** 0A 39     00 00 00 01      00 - 64      AR :Attack               0 - 100
** ** 0A 3A     00 00 00 01      00 - 01      AR :Hold                 00 : Off
                                01 : On
** ** 0A 3B     00 00 00 01      00 - 64      AR :Effect Level        0 - 100
** ** 0A 3C     00 00 00 01      00 - 64      AR :Direct Level        0 - 100
** ** 0A 3D     00 00 00 01      00 - 64      SYN:Sens                 0 - 100
** ** 0A 3E     00 00 00 01      00 - 03      SYN:Wave                00 : Square
                                01 : Saw
                                02 : Brass
                                03 : Bow
** ** 0A 3F     00 00 00 01      00 - 01      SYN:Chromatic           00 : Off
                                01 : On
** ** 0A 40     00 00 00 01      00 - 02      SYN:Octave Shift        0, -1, -2
** ** 0A 41     00 00 00 01      00 - 64      SYN:PWM Rate            0 - 100
** ** 0A 42     00 00 00 01      00 - 64      SYN:PWM Depth           0 - 100
** ** 0A 43     00 00 00 01      00 - 64      SYN:Cutoff Frequency    0 - 100
** ** 0A 44     00 00 00 01      00 - 64      SYN:Resonance           0 - 100
** ** 0A 45     00 00 00 01      00 - 64      SYN:Filter Sens         0 - 100
** ** 0A 46     00 00 00 01      00 - 64      SYN:Filter Decay        0 - 100
** ** 0A 47     00 00 00 01      00 - 64      SYN:Filter Depth        00 : -100
                                01 : -98
                                :
                                32 : 0
                                :
                                64 : +100
** ** 0A 48     00 00 00 01      00 - 65      SYN:Attack              00 : Decay
                                01 : 0
                                02 : 1
                                :
                                65 : 100
** ** 0A 49     00 00 00 01      00 - 64      SYN:Release             0 - 100
** ** 0A 4A     00 00 00 01      00 - 64      SYN:Velocity            0 - 100
** ** 0A 4B     00 00 00 01      00 - 01      SYN:Hold                 00 : Off
                                01 : On
** ** 0A 4C     00 00 00 01      00 - 64      SYN:Synth Level        0 - 100
** ** 0A 4D     00 00 00 01      00 - 64      SYN:Direct Level        0 - 100
** ** 0A 4E     00 00 00 01      00 - 03      AC :Type                 00 : Small
                                01 : Medium
                                02 : Bright
                                03 : Power

```

```

** ** 0A 4F 00 00 00 01 00 - 64 AC :Bass -50 - +50
** ** 0A 50 00 00 00 01 00 - 64 AC :Middle -50 - +50
** ** 0A 51 00 00 00 01 00 - 1B AC :Middle Freq *Refer to "Table Middle Frequency"
** ** 0A 52 00 00 00 01 00 - 64 AC :Treble -50 - +50
** ** 0A 53 00 00 00 01 00 - 64 AC :Presence -50 - +50
** ** 0A 54 00 00 00 01 00 - 64 AC :Level 0 - 100
** ** 0A 55 00 00 00 01 00 - 01 SH :Hold 00 : Off
01 : On

** ** 0A 56 00 00 00 01 00 - 64 SH :Rise Time 0 - 100
** ** 0A 57 00 00 00 01 00 - 78 SH :Effect Level 0 - 120
** ** 0A 58 00 00 00 02 00 00 - 03 17 SDD:Delay Time *Refer to "Table SDD Delay Time"
** ** 0A 59# 00 00 00 01 00 - 64 SDD:Delay Time(LSB)
** ** 0A 5A 00 00 00 01 00 - 64 SDD:Feedback 0 - 100
** ** 0A 5B 00 00 00 01 00 - 78 SDD:Effect Level 0 - 120

---DELAY---
** ** 0B 00 00 00 00 01 00 - 01 On/Off 00 : Off
01 : On

** ** 0B 01 (Reserved)
** ** 0B 02 00 00 00 01 00 - 0B Type 00 : Single
01 : Pan
02 : Stereo
03 : Dual Series
04 : Dual Parallel
05 : Dual L/R
06 : Reverse
07 : Analog
08 : Tape
09 : Warp
0A : Modulate
0B : Hold

** ** 0B 03 00 00 00 02 00 00 - 0E 15 Delay Time *Refer to "Table DD Delay Time"
** ** 0B 04# 00 00 00 01 00 - 64 Delay Time(LSB)
** ** 0B 05 00 00 00 01 00 - 64 Tap Time 0% - 100%
** ** 0B 06 00 00 00 01 00 - 64 Feedback 0 - 100
** ** 0B 07 00 00 00 01 00 - 09 High Cut *Refer to "Table High Cut"
** ** 0B 08 00 00 00 02 00 00 - 07 11 Delay1 Time *Refer to "Table DD Dual Delay Time"
** ** 0B 09# 00 00 00 01 00 - 64 Delay1 Time(LSB)
** ** 0B 0A 00 00 00 01 00 - 64 Delay1 Feedback 0 - 100
** ** 0B 0B 00 00 00 01 00 - 09 Delay1 High Cut *Refer to "Table High Cut"
** ** 0B 0C 00 00 00 01 00 - 78 Delay1 Level 0 - 120
** ** 0B 0D 00 00 00 02 00 00 - 07 11 Delay2 Time *Refer to "Table DD Dual Delay Time"
** ** 0B 0E# 00 00 00 01 00 - 64 Delay2 Time(LSB)
** ** 0B 0F 00 00 00 01 00 - 64 Delay2 Feedback 0 - 100
** ** 0B 10 00 00 00 01 00 - 09 Delay2 High Cut *Refer to "Table High Cut"
** ** 0B 11 00 00 00 01 00 - 78 Delay2 Level 0 - 120
** ** 0B 12 00 00 00 01 00 - 64 MOD Rate 0 - 100
** ** 0B 13 00 00 00 01 00 - 64 MOD Depth 0 - 100
** ** 0B 14 00 00 00 01 00 - 01 Warp Sw 00 : Off
01 : On

** ** 0B 15 00 00 00 01 00 - 64 Warp Rise Time 0 - 100
** ** 0B 16 00 00 00 01 00 - 64 Warp Feedback Depth 0 - 100
** ** 0B 17 00 00 00 01 00 - 64 Warp E.Level Depth 0 - 100
** ** 0B 18 00 00 00 01 00 - 78 Effect Level 0 - 120
** ** 0B 19 00 00 00 01 00 - 64 Direct Level 0 - 100

---CHORUS---
** ** 0C 00 00 00 00 01 00 - 01 On/Off 00 : Off
01 : On

** ** 0C 01 (Reserved)
** ** 0C 02 00 00 00 01 00 - 02 Mode 00 : Mono
01 : Stereo1
02 : Stereo2

** ** 0C 03 00 00 00 01 00 - 71 Rate *Refer to "Table Rate"
** ** 0C 04 00 00 00 01 00 - 64 Depth 0 - 100
** ** 0C 05 00 00 00 01 00 - 50 Pre Delay *Refer to "Table CE Pre Delay"
** ** 0C 06 00 00 00 01 00 - 0A Low Cut *Refer to "Table Low Cut"
** ** 0C 07 00 00 00 01 00 - 09 High Cut *Refer to "Table High Cut"
** ** 0C 08 00 00 00 01 00 - 64 Effect Level 0 - 100

---REVERB---
** ** 0D 00 00 00 00 01 00 - 01 On/Off 00 : Off
01 : On

** ** 0D 01 (Reserved)
** ** 0D 02 00 00 00 01 00 - 06 Type 00 : Ambience
01 : Room
02 : Hall1
03 : Hall2
04 : Plate
05 : Spring
06 : Modulate

** ** 0D 03 00 00 00 01 00 - 63 Reverb Time 00 : 0.1s
01 : 0.2s
:
63 : 10.0s

** ** 0D 04 00 00 00 01 00 - 64 Pre Delay 0ms - 100ms
** ** 0D 05 00 00 00 01 00 - 0A Low Cut *Refer to "Table Low Cut"
** ** 0D 06 00 00 00 01 00 - 09 High Cut *Refer to "Table High Cut"
** ** 0D 07 00 00 00 01 00 - 0A Density 0 - 10
** ** 0D 08 00 00 00 01 00 - 64 Effect Level 0 - 100
** ** 0D 09 00 00 00 01 00 - 64 Direct Level 0 - 100

---MASTER---
** ** 0E 00 00 00 00 01 00 - 01 NS :Effect 00 : Off
01 : On

** ** 0E 01 00 00 00 01 00 - 64 NS :Threshold 0 - 100
** ** 0E 02 00 00 00 01 00 - 64 NS :Release 0 - 100
** ** 0E 03 00 00 00 01 00 - 02 NS :Detect 00 : Input
01 : Ns Input
02 : FV Out

** ** 0E 04 00 00 00 01 00 - 64 Patch Level 00 : 0
01 : 2
:
32 : 100
:
64 : 200

** ** 0E 05 00 00 00 02 00 00 - 01 52 Master BPM 00 00 : 40
00 01 : 41
:
01 52 : 250

** ** 0E 06# 00 00 00 01 00 - 64 Master BPM(LSB)
** ** 0E 07 00 00 00 01 00 - 64 FV :Level 0 - 100
** ** 0E 08 00 00 00 01 00 - 03 FV :Vol.Curve 00 : Slow1
01 : Slow2

```

```

02 : Normal
03 : Fast
** ** 0E 09    00 00 00 01    00 - 02    Output
00 : Main
01 : Sub
02 : Main+Sub

---AMP CTL SW---
** ** 0F 00    00 00 00 01    00 - 01    On/Off
00 : Off
01 : On

---AMP CTL SW 2---
** ** 10 00    00 00 00 01    00 - 01    On/Off
00 : Off
01 : On

---FX CHAIN---
** ** 11 00    00 00 00 01    00 - 0D    Chain1
00 : FX1
01 : CS
02 : WAH
03 : LP
04 : OD
05 : PRE
06 : EQ
07 : FX2
08 : DD
09 : CE
0A : RV
0B : NS
0C : FV
0D : DGT

** ** 11 01    00 00 00 01    00 - 0D    Chain2
** ** 11 02    00 00 00 01    00 - 0D    Chain3
** ** 11 03    00 00 00 01    00 - 0D    Chain4
** ** 11 04    00 00 00 01    00 - 0D    Chain5
** ** 11 05    00 00 00 01    00 - 0D    Chain6
** ** 11 06    00 00 00 01    00 - 0D    Chain7
** ** 11 07    00 00 00 01    00 - 0D    Chain8
** ** 11 08    00 00 00 01    00 - 0D    Chain9
** ** 11 09    00 00 00 01    00 - 0D    Chain10
** ** 11 0A    00 00 00 01    00 - 0D    Chain11
** ** 11 0B    00 00 00 01    00 - 0D    Chain12
** ** 11 0C    00 00 00 01    00 - 0D    Chain13
** ** 11 0D    00 00 00 01    00 - 0D    Chain14

```

* Rules for exchanging effect positions
The same effect cannot be used more than once.

```

---NAME---
** ** 12 00    00 00 00 01    20 - 7F    Name1
** ** 12 01    00 00 00 01    20 - 7F    Name2
** ** 12 02    00 00 00 01    20 - 7F    Name3
** ** 12 03    00 00 00 01    20 - 7F    Name4
** ** 12 04    00 00 00 01    20 - 7F    Name5
** ** 12 05    00 00 00 01    20 - 7F    Name6
** ** 12 06    00 00 00 01    20 - 7F    Name7
** ** 12 07    00 00 00 01    20 - 7F    Name8
** ** 12 08    00 00 00 01    20 - 7F    Name9
** ** 12 09    00 00 00 01    20 - 7F    Name10
** ** 12 0A    00 00 00 01    20 - 7F    Name11
** ** 12 0B    00 00 00 01    20 - 7F    Name12
** ** 12 0C    00 00 00 01    20 - 7F    Name13
** ** 12 0D    00 00 00 01    20 - 7F    Name14
** ** 12 0E    00 00 00 01    20 - 7F    Name15
** ** 12 0F    00 00 00 01    20 - 7F    Name16
*Refer to "Table Name"

---ASSIGN INPUT SENS---
** ** 1E 00    00 00 00 01    00 - 64    Assign Input Sens
0 - 100

---ASSIGN 1---
** ** 20 00    00 00 00 01    00 - 01    On/Off
00 : Off
01 : On
** ** 20 01    (Reserved)
** ** 20 02    00 00 00 02    00 00 - 03 6C Target
*Refer to "Table Assign Target"
** ** 20 03#
** ** 20 04    00 00 00 02    00 00 - $$ $$ Target Min
-
** ** 20 05#
** ** 20 06    00 00 00 02    00 00 - $$ $$ Target Max
-
** ** 20 07#
** ** 20 08    00 00 00 01    00 - 49 Source
*Refer to "Table Assign Source"
** ** 20 09    00 00 00 01    00 - 01 Source Mode
00 : Normal
01 : Toggle
0 - 127
** ** 20 0A    00 00 00 01    00 - 7E Source Act.Range Lo
0 - 127
** ** 20 0B    00 00 00 01    01 - 7F Source Act.Range Hi
*Refer to "Table Assign Trigger"
** ** 20 0C    00 00 00 01    00 - 47 Trigger
0 - 100
** ** 20 0D    00 00 00 01    00 - 64 Time
00 : Linear
** ** 20 0E    00 00 00 01    00 - 02 Curve
01 : Slow Rise
02 : Fast Rise
0 - 100
** ** 20 0F    00 00 00 01    00 - 64 Rate
00 : SAW
** ** 20 10    00 00 00 01    00 - 02 Waveform
01 : TRI
02 : SIN

---ASSIGN 2---
** ** 21 00    00 00 00 01    00 - 01 On/Off
** ** 21 01    (Reserved)
** ** 21 02    00 00 00 02    00 00 - 03 6C Target
** ** 21 03#
** ** 21 04    00 00 00 02    00 00 - $$ $$ Target Min
** ** 21 05#
** ** 21 06    00 00 00 02    00 00 - $$ $$ Target Max
** ** 21 07#
** ** 21 08    00 00 00 01    00 - 49 Source
** ** 21 09    00 00 00 01    00 - 01 Source Mode
** ** 21 0A    00 00 00 01    00 - 7E Source Act.Range Lo
** ** 21 0B    00 00 00 01    01 - 7F Source Act.Range Hi
** ** 21 0C    00 00 00 01    00 - 47 Trigger
** ** 21 0D    00 00 00 01    00 - 64 Time
** ** 21 0E    00 00 00 01    00 - 02 Curve
** ** 21 0F    00 00 00 01    00 - 64 Rate
** ** 21 10    00 00 00 01    00 - 02 Waveform

```

```

---ASSIGN 3---
** ** 22 00 00 00 01 00 - 01 On/Off
** ** 22 01 (Reserved)
** ** 22 02 00 00 00 02 00 00 - 03 6C Target
** ** 22 03#
** ** 22 04 00 00 00 02 00 00 - $$ $$ Target Min
** ** 22 05#
** ** 22 06 00 00 00 02 00 00 - $$ $$ Target Max
** ** 22 07#
** ** 22 08 00 00 00 01 00 - 49 Source
** ** 22 09 00 00 00 01 00 - 01 Source Mode
** ** 22 0A 00 00 00 01 00 - 7E Source Act.Range Lo
** ** 22 0B 00 00 00 01 01 - 7F Source Act.Range Hi
** ** 22 0C 00 00 00 01 00 - 47 Trigger
** ** 22 0D 00 00 00 01 00 - 64 Time
** ** 22 0E 00 00 00 01 00 - 02 Curve
** ** 22 0F 00 00 00 01 00 - 64 Rate
** ** 22 10 00 00 00 01 00 - 02 Waveform

---ASSIGN 4---
** ** 23 00 00 00 00 01 00 - 01 On/Off
** ** 23 01 (Reserved)
** ** 23 02 00 00 00 02 00 00 - 03 6C Target
** ** 23 03#
** ** 23 04 00 00 00 02 00 00 - $$ $$ Target Min
** ** 23 05#
** ** 23 06 00 00 00 02 00 00 - $$ $$ Target Max
** ** 23 07#
** ** 23 08 00 00 00 01 00 - 49 Source
** ** 23 09 00 00 00 01 00 - 01 Source Mode
** ** 23 0A 00 00 00 01 00 - 7E Source Act.Range Lo
** ** 23 0B 00 00 00 01 01 - 7F Source Act.Range Hi
** ** 23 0C 00 00 00 01 00 - 47 Trigger
** ** 23 0D 00 00 00 01 00 - 64 Time
** ** 23 0E 00 00 00 01 00 - 02 Curve
** ** 23 0F 00 00 00 01 00 - 64 Rate
** ** 23 10 00 00 00 01 00 - 02 Waveform

---ASSIGN 5---
** ** 24 00 00 00 00 01 00 - 01 On/Off
** ** 24 01 (Reserved)
** ** 24 02 00 00 00 02 00 00 - 03 6C Target
** ** 24 03#
** ** 24 04 00 00 00 02 00 00 - $$ $$ Target Min
** ** 24 05#
** ** 24 06 00 00 00 02 00 00 - $$ $$ Target Max
** ** 24 07#
** ** 24 08 00 00 00 01 00 - 49 Source
** ** 24 09 00 00 00 01 00 - 01 Source Mode
** ** 24 0A 00 00 00 01 00 - 7E Source Act.Range Lo
** ** 24 0B 00 00 00 01 01 - 7F Source Act.Range Hi
** ** 24 0C 00 00 00 01 00 - 47 Trigger
** ** 24 0D 00 00 00 01 00 - 64 Time
** ** 24 0E 00 00 00 01 00 - 02 Curve
** ** 24 0F 00 00 00 01 00 - 64 Rate
** ** 24 10 00 00 00 01 00 - 02 Waveform

---ASSIGN 6---
** ** 25 00 00 00 00 01 00 - 01 On/Off
** ** 25 01 (Reserved)
** ** 25 02 00 00 00 02 00 00 - 03 6C Target
** ** 25 03#
** ** 25 04 00 00 00 02 00 00 - $$ $$ Target Min
** ** 25 05#
** ** 25 06 00 00 00 02 00 00 - $$ $$ Target Max
** ** 25 07#
** ** 25 08 00 00 00 01 00 - 49 Source
** ** 25 09 00 00 00 01 00 - 01 Source Mode
** ** 25 0A 00 00 00 01 00 - 7E Source Act.Range Lo
** ** 25 0B 00 00 00 01 01 - 7F Source Act.Range Hi
** ** 25 0C 00 00 00 01 00 - 47 Trigger
** ** 25 0D 00 00 00 01 00 - 64 Time
** ** 25 0E 00 00 00 01 00 - 02 Curve
** ** 25 0F 00 00 00 01 00 - 64 Rate
** ** 25 10 00 00 00 01 00 - 02 Waveform

---ASSIGN 7---
** ** 26 00 00 00 00 01 00 - 01 On/Off
** ** 26 01 (Reserved)
** ** 26 02 00 00 00 02 00 00 - 03 6C Target
** ** 26 03#
** ** 26 04 00 00 00 02 00 00 - $$ $$ Target Min
** ** 26 05#
** ** 26 06 00 00 00 02 00 00 - $$ $$ Target Max
** ** 26 07#
** ** 26 08 00 00 00 01 00 - 49 Source
** ** 26 09 00 00 00 01 00 - 01 Source Mode
** ** 26 0A 00 00 00 01 00 - 7E Source Act.Range Lo
** ** 26 0B 00 00 00 01 01 - 7F Source Act.Range Hi
** ** 26 0C 00 00 00 01 00 - 47 Trigger
** ** 26 0D 00 00 00 01 00 - 64 Time
** ** 26 0E 00 00 00 01 00 - 02 Curve
** ** 26 0F 00 00 00 01 00 - 64 Rate
** ** 26 10 00 00 00 01 00 - 02 Waveform

---ASSIGN 8---
** ** 27 00 00 00 00 01 00 - 01 On/Off
** ** 27 01 (Reserved)
** ** 27 02 00 00 00 02 00 00 - 03 6C Target
** ** 27 03#
** ** 27 04 00 00 00 02 00 00 - $$ $$ Target Min
** ** 27 05#
** ** 27 06 00 00 00 02 00 00 - $$ $$ Target Max
** ** 27 07#
** ** 27 08 00 00 00 01 00 - 49 Source
** ** 27 09 00 00 00 01 00 - 01 Source Mode
** ** 27 0A 00 00 00 01 00 - 7E Source Act.Range Lo
** ** 27 0B 00 00 00 01 01 - 7F Source Act.Range Hi
** ** 27 0C 00 00 00 01 00 - 47 Trigger
** ** 27 0D 00 00 00 01 00 - 64 Time
** ** 27 0E 00 00 00 01 00 - 02 Curve
** ** 27 0F 00 00 00 01 00 - 64 Rate
** ** 27 10 00 00 00 01 00 - 02 Waveform

```

```

---ASSIGN 9---
** ** 28 00 00 00 01 00 - 01 On/Off
** ** 28 01 (Reserved)
** ** 28 02 00 00 00 02 00 00 - 03 6C Target
** ** 28 03#
** ** 28 04 00 00 00 02 00 00 - $$ $$ Target Min
** ** 28 05#
** ** 28 06 00 00 00 02 00 00 - $$ $$ Target Max
** ** 28 07#
** ** 28 08 00 00 00 01 00 - 49 Source
** ** 28 09 00 00 00 01 00 - 01 Source Mode
** ** 28 0A 00 00 00 01 00 - 7E Source Act.Range Lo
** ** 28 0B 00 00 00 01 01 - 7F Source Act.Range Hi
** ** 28 0C 00 00 00 01 00 - 47 Trigger
** ** 28 0D 00 00 00 01 00 - 64 Time
** ** 28 0E 00 00 00 01 00 - 02 Curve
** ** 28 0F 00 00 00 01 00 - 64 Rate
** ** 28 10 00 00 00 01 00 - 02 Waveform

---ASSIGN 10---
** ** 29 00 00 00 00 01 00 - 01 On/Off
** ** 29 01 (Reserved)
** ** 29 02 00 00 00 02 00 00 - 03 6C Target
** ** 29 03#
** ** 29 04 00 00 00 02 00 00 - $$ $$ Target Min
** ** 29 05#
** ** 29 06 00 00 00 02 00 00 - $$ $$ Target Max
** ** 29 07#
** ** 29 08 00 00 00 01 00 - 49 Source
** ** 29 09 00 00 00 01 00 - 01 Source Mode
** ** 29 0A 00 00 00 01 00 - 7E Source Act.Range Lo
** ** 29 0B 00 00 00 01 01 - 7F Source Act.Range Hi
** ** 29 0C 00 00 00 01 00 - 47 Trigger
** ** 29 0D 00 00 00 01 00 - 64 Time
** ** 29 0E 00 00 00 01 00 - 02 Curve
** ** 29 0F 00 00 00 01 00 - 64 Rate
** ** 29 10 00 00 00 01 00 - 02 Waveform

---ASSIGN 11---
** ** 2A 00 00 00 00 01 00 - 01 On/Off
** ** 2A 01 (Reserved)
** ** 2A 02 00 00 00 02 00 00 - 03 6C Target
** ** 2A 03#
** ** 2A 04 00 00 00 02 00 00 - $$ $$ Target Min
** ** 2A 05#
** ** 2A 06 00 00 00 02 00 00 - $$ $$ Target Max
** ** 2A 07#
** ** 2A 08 00 00 00 01 00 - 49 Source
** ** 2A 09 00 00 00 01 00 - 01 Source Mode
** ** 2A 0A 00 00 00 01 00 - 7E Source Act.Range Lo
** ** 2A 0B 00 00 00 01 01 - 7F Source Act.Range Hi
** ** 2A 0C 00 00 00 01 00 - 47 Trigger
** ** 2A 0D 00 00 00 01 00 - 64 Time
** ** 2A 0E 00 00 00 01 00 - 02 Curve
** ** 2A 0F 00 00 00 01 00 - 64 Rate
** ** 2A 10 00 00 00 01 00 - 02 Waveform

---ASSIGN 12---
** ** 2B 00 00 00 00 01 00 - 01 On/Off
** ** 2B 01 (Reserved)
** ** 2B 02 00 00 00 02 00 00 - 03 6C Target
** ** 2B 03#
** ** 2B 04 00 00 00 02 00 00 - $$ $$ Target Min
** ** 2B 05#
** ** 2B 06 00 00 00 02 00 00 - $$ $$ Target Max
** ** 2B 07#
** ** 2B 08 00 00 00 01 00 - 49 Source
** ** 2B 09 00 00 00 01 00 - 01 Source Mode
** ** 2B 0A 00 00 00 01 00 - 7E Source Act.Range Lo
** ** 2B 0B 00 00 00 01 01 - 7F Source Act.Range Hi
** ** 2B 0C 00 00 00 01 00 - 47 Trigger
** ** 2B 0D 00 00 00 01 00 - 64 Time
** ** 2B 0E 00 00 00 01 00 - 02 Curve
** ** 2B 0F 00 00 00 01 00 - 64 Rate
** ** 2B 10 00 00 00 01 00 - 02 Waveform

---ASSIGN EXP1---
** ** 2C 00 00 00 00 01 00 - 01 On/Off 00 : Off
** ** 2C 01 00 00 00 01 00 - 64 Foot Vol Min 01 : On
** ** 2C 02 00 00 00 01 00 - 64 Foot Vol Max 0 - 100
** ** 2C 02 00 00 00 01 00 - 64 Foot Vol Max 0 - 100

---ASSIGN CC#7---
** ** 2D 00 00 00 00 01 00 - 01 On/Off 00 : Off
** ** 2D 01 00 00 00 01 00 - 64 Foot Vol Min 01 : On
** ** 2D 02 00 00 00 01 00 - 64 Foot Vol Max 0 - 100
** ** 2D 02 00 00 00 01 00 - 64 Foot Vol Max 0 - 100

```

Table Quick Assign Target <Quick ASSIGN:Target>

Data (H)	Description		
00 00 00 00	FX1:On/Off	00 00 06 0E	FX1:WSY:Wave
00 00 00 01	FX1:FX1 Select	00 00 06 0F	FX1:WSY:Cutoff Freq
00 00 00 02	FX1:ACS:Type	00 00 07 00	FX1:WSY:Resonance
00 00 00 03	FX1:ACS:Sustain	00 00 07 01	FX1:WSY:FLT_Sens
00 00 00 04	FX1:ACS:Attack	00 00 07 02	FX1:WSY:FLT_Decay
00 00 00 05	FX1:ACS:Tone	00 00 07 03	FX1:WSY:FLT_Depth
00 00 00 06	FX1:ACS:Level	00 00 07 04	FX1:WSY:Synth Level
00 00 00 07	FX1:LM :Type	00 00 07 05	FX1:WSY:Direct Level
00 00 00 08	FX1:LM :Attack	00 00 07 06	FX1:SEQ:Low Cut
00 00 00 09	FX1:LM :Threshold	00 00 07 07	FX1:SEQ:Low EQ
00 00 00 0A	FX1:LM :Ratio	00 00 07 08	FX1:SEQ:Lo-Mid f
00 00 00 0B	FX1:LM :Release	00 00 07 09	FX1:SEQ:Lo-Mid Q
00 00 00 0C	FX1:LM :Level	00 00 07 0A	FX1:SEQ:Lo-Mid EQ
00 00 00 0D	FX1:TW :Mode	00 00 07 0B	FX1:SEQ:Hi-Mid f
00 00 00 0E	FX1:TW :Polarity	00 00 07 0C	FX1:SEQ:Hi-Mid Q
00 00 00 0F	FX1:TW :Sens	00 00 07 0D	FX1:SEQ:Hi-Mid EQ
00 00 01 00	FX1:TW :Frequency	00 00 07 0E	FX1:SEQ:High EQ
00 00 01 01	FX1:TW :Peak	00 00 07 0F	FX1:SEQ:High Cut
00 00 01 02	FX1:TW :Direct Level	00 00 08 00	FX1:SEQ:Level
00 00 01 03	FX1:TW :Level	00 00 08 01	CS :On/Off
00 00 01 04	FX1:AW :Mode	00 00 08 02	CS :Type
00 00 01 05	FX1:AW :Frequency	00 00 08 03	CS :Sustain
00 00 01 06	FX1:AW :Peak	00 00 08 04	CS :Attack
00 00 01 07	FX1:AW :Rate	00 00 08 05	CS :Threshold
00 00 01 08	FX1:AW :Depth	00 00 08 06	CS :Release
00 00 01 09	FX1:AW :Direct Level	00 00 08 07	CS :Tone
00 00 01 0A	FX1:AW :Level	00 00 08 08	CS :Level
00 00 01 0B	FX1:TM :Type	00 00 08 09	WAH:On/Off
00 00 01 0C	FX1:TM :Low	00 00 08 0A	WAH:Type
00 00 01 0D	FX1:TM :High	00 00 08 0B	WAH:Pdl Position
00 00 01 0E	FX1:TM :Resonance	00 00 08 0C	WAH:Level
00 00 01 0F	FX1:TM :Level	00 00 08 0D	LP :On/Off
00 00 02 00	FX1:GS :Type	00 00 08 0E	LP :Type
00 00 02 01	FX1:GS :Low	00 00 08 0F	LP :Select
00 00 02 02	FX1:GS :High	00 00 09 00	LP :Mode 1
00 00 02 03	FX1:GS :Body	00 00 09 01	LP :Send 1 Level
00 00 02 04	FX1:GS :Level	00 00 09 02	LP :Return 1 Level
00 00 02 05	FX1:TR :Wave Shape	00 00 09 03	LP :Mode 2
00 00 02 06	FX1:TR :Rate	00 00 09 04	LP :Send 2 Level
00 00 02 07	FX1:TR :Depth	00 00 09 05	LP :Return 2 Level
00 00 02 08	FX1:PH :Type	00 00 09 06	LP :Mode Stereo
00 00 02 09	FX1:PH :Rate	00 00 09 07	LP :Send Stereo Level
00 00 02 0A	FX1:PH :Depth	00 00 09 08	LP :Return Stereo Level
00 00 02 0B	FX1:PH :Manual	00 00 09 09	OD :On/Off
00 00 02 0C	FX1:PH :Resonance	00 00 09 0A	OD :Type
00 00 02 0D	FX1:PH :Step Rate	00 00 09 0B	OD :Drive
00 00 02 0E	FX1:PH :Effect Level	00 00 09 0C	OD :Bottom
00 00 02 0F	FX1:PH :Direct Level	00 00 09 0D	OD :Tone
00 00 03 00	FX1:FL :Rate	00 00 09 0E	OD :Effect Level
00 00 03 01	FX1:FL :Depth	00 00 09 0F	OD :Direct Level
00 00 03 02	FX1:FL :Manual	00 00 0A 00	PRE:On/Off
00 00 03 03	FX1:FL :Resonance	00 00 0A 01	PRE:Ch.Mode
00 00 03 04	FX1:FL :Separation	00 00 0A 02	PRE:Ch.Select
00 00 03 05	FX1:FL :Low Cut	00 00 0A 03	PRE:Dynamic Sens
00 00 03 06	FX1:FL :Effect Level	00 00 0A 04	PRE:Ch.DlyTime
00 00 03 07	FX1:FL :Direct Level	00 00 0A 05	PRE:Ch A Type
00 00 03 08	FX1:PAN:Wave Shape	00 00 0A 06	PRE:Ch A Gain
00 00 03 09	FX1:PAN:Rate	00 00 0A 07	PRE:Ch A Bass
00 00 03 0A	FX1:PAN:Depth	00 00 0A 08	PRE:Ch A Middle
00 00 03 0B	FX1:VB :Rate	00 00 0A 09	PRE:Ch A Treble
00 00 03 0C	FX1:VB :Depth	00 00 0A 0A	PRE:Ch A Presence
00 00 03 0D	FX1:VB :Trigger	00 00 0A 0B	PRE:Ch A Level
00 00 03 0E	FX1:VB :Rise Time	00 00 0A 0C	PRE:Ch A Bright
00 00 03 0F	FX1:UV :Rate	00 00 0A 0D	PRE:Ch A Gain SW
00 00 04 00	FX1:UV :Depth	00 00 0A 0E	PRE:Ch A Solo SW
00 00 04 01	FX1:UV :Level	00 00 0A 0F	PRE:Ch A Solo Level
00 00 04 02	FX1:RM :Mode	00 00 0B 00	PRE:Ch A SP Type
00 00 04 03	FX1:RM :Frequency	00 00 0B 01	PRE:Ch A Mic Type
00 00 04 04	FX1:RM :Effect Level	00 00 0B 02	PRE:Ch A Mic Dis.
00 00 04 05	FX1:RM :Direct Level	00 00 0B 03	PRE:Ch A Mic Pos.
00 00 04 06	FX1:SG :Sens	00 00 0B 04	PRE:Ch A Mic Level
00 00 04 07	FX1:SG :Rise Time	00 00 0B 05	PRE:Ch A Direct Level
00 00 04 08	FX1:DF :Tone	00 00 0B 06	PRE:Ch B Type
00 00 04 09	FX1:DF :Sens	00 00 0B 07	PRE:Ch B Gain
00 00 04 0A	FX1:DF :Attack	00 00 0B 08	PRE:Ch B Bass
00 00 04 0B	FX1:DF :Depth	00 00 0B 09	PRE:Ch B Middle
00 00 04 0C	FX1:DF :Resonance	00 00 0B 0A	PRE:Ch B Treble
00 00 04 0D	FX1:DF :Effect Level	00 00 0B 0B	PRE:Ch B Presence
00 00 04 0E	FX1:DF :Direct Level	00 00 0B 0C	PRE:Ch B Level
00 00 04 0F	FX1:STR:Tone	00 00 0B 0D	PRE:Ch B Bright
00 00 05 00	FX1:STR:Sens	00 00 0B 0E	PRE:Ch B Gain SW
00 00 05 01	FX1:STR:Depth	00 00 0B 0F	PRE:Ch B Solo SW
00 00 05 02	FX1:STR:Resonance	00 00 0C 00	PRE:Ch B Solo Level
00 00 05 03	FX1:STR:Buzz	00 00 0C 01	PRE:Ch B SP Type
00 00 05 04	FX1:STR:Effect Level	00 00 0C 02	PRE:Ch B Mic Type
00 00 05 05	FX1:STR:Direct Level	00 00 0C 03	PRE:Ch B Mic Dis.
00 00 05 06	FX1:FB :Mode	00 00 0C 04	PRE:Ch B Mic Pos.
00 00 05 07	FX1:FB :Rise Time	00 00 0C 05	PRE:Ch B Mic Level
00 00 05 08	FX1:FB :Rise Time(▲)	00 00 0C 06	PRE:Ch B Direct Level
00 00 05 09	FX1:FB :F.B.Level	00 00 0C 07	EQ :On/Off
00 00 05 0A	FX1:FB :F.B.Level(▲)	00 00 0C 08	EQ :Low Cut
00 00 05 0B	FX1:FB :Vib Rate	00 00 0C 09	EQ :Low EQ
00 00 05 0C	FX1:FB :Vib Depth	00 00 0C 0A	EQ :Low-Middle Frequency
00 00 05 0D	FX1:AFB:Freq 1	00 00 0C 0B	EQ :Low-Middle Q
00 00 05 0E	FX1:AFB:Depth 1	00 00 0C 0C	EQ :Low-Middle EQ
00 00 05 0F	FX1:AFB:Freq 2	00 00 0C 0D	EQ :High-Middle Frequency
00 00 06 00	FX1:AFB:Depth 2	00 00 0C 0E	EQ :High-Middle Q
00 00 06 01	FX1:AFB:Freq 3	00 00 0C 0F	EQ :High-Middle EQ
00 00 06 02	FX1:AFB:Depth 3	00 00 0D 00	EQ :High EQ
00 00 06 03	FX1:HU :Mode	00 00 0D 01	EQ :High Cut
00 00 06 04	FX1:HU :Vowel 1	00 00 0D 02	EQ :Level
00 00 06 05	FX1:HU :Vowel 2	00 00 0D 03	FX2:On/Off
00 00 06 06	FX1:HU :Sens	00 00 0D 04	FX2:FX2 Select
00 00 06 07	FX1:HU :Rate	00 00 0D 05	FX2:ACS:Type
00 00 06 08	FX1:HU :Depth	00 00 0D 06	FX2:ACS:Sustain
00 00 06 09	FX1:HU :Manual	00 00 0D 07	FX2:ACS:Attack
00 00 06 0A	FX1:HU :Level	00 00 0D 08	FX2:ACS:Tone
00 00 06 0B	FX1:SL :Pattern	00 00 0D 09	FX2:ACS:Level
00 00 06 0C	FX1:SL :Rate	00 00 0D 0A	FX2:LM :Type
00 00 06 0D	FX1:SL :Trigger Sens	00 00 0D 0B	FX2:LM :Attack
		00 00 0D 0C	FX2:LM :Threshold
		00 00 0D 0D	FX2:LM :Ratio
		00 00 0D 0E	FX2:LM :Release
		00 00 0D 0F	FX2:LM :Level
		00 00 0E 00	FX2:TW :Mode


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00 00 0E 01      FX2:TW :Polarity
00 00 0E 02      FX2:TW :Sens
00 00 0E 03      FX2:TW :Frequency
00 00 0E 04      FX2:TW :Peak
00 00 0E 05      FX2:TW :Direct Level
00 00 0E 06      FX2:TW :Level
00 00 0E 07      FX2:AW :Mode
00 00 0E 08      FX2:AW :Frequency
00 00 0E 09      FX2:AW :Peak
00 00 0E 0A      FX2:AW :Rate
00 00 0E 0B      FX2:AW :Depth
00 00 0E 0C      FX2:AW :Direct Level
00 00 0E 0D      FX2:AW :Level
00 00 0E 0E      FX2:TM :Type
00 00 0E 0F      FX2:TM :Low
00 00 0F 00      FX2:TM :High
00 00 0F 01      FX2:TM :Resonance
00 00 0F 02      FX2:TM :Level
00 00 0F 03      FX2:GS :Type
00 00 0F 04      FX2:GS :Low
00 00 0F 05      FX2:GS :High
00 00 0F 06      FX2:GS :Body
00 00 0F 07      FX2:GS :Level
00 00 0F 08      FX2:TR :Wave Shape
00 00 0F 09      FX2:TR :Rate
00 00 0F 0A      FX2:TR :Depth
00 00 0F 0B      FX2:PH :Type
00 00 0F 0C      FX2:PH :Rate
00 00 0F 0D      FX2:PH :Depth
00 00 0F 0E      FX2:PH :Manual
00 00 0F 0F      FX2:PH :Resonance
00 01 00 00      FX2:PH :Step Rate
00 01 00 01      FX2:PH :Effect Level
00 01 00 02      FX2:PH :Direct Level
00 01 00 03      FX2:FL :Rate
00 01 00 04      FX2:FL :Depth
00 01 00 05      FX2:FL :Manual
00 01 00 06      FX2:FL :Resonance
00 01 00 07      FX2:FL :Separation
00 01 00 08      FX2:FL :Low Cut
00 01 00 09      FX2:FL :Effect Level
00 01 00 0A      FX2:FL :Direct Level
00 01 00 0B      FX2:PAN:Wave Shape
00 01 00 0C      FX2:PAN:Rate
00 01 00 0D      FX2:PAN:Depth
00 01 00 0E      FX2:VB :Rate
00 01 00 0F      FX2:VB :Depth
00 01 01 00      FX2:VB :Trigger
00 01 01 01      FX2:VB :Rise Time
00 01 01 02      FX2:UV :Rate
00 01 01 03      FX2:UV :Depth
00 01 01 04      FX2:UV :Level
00 01 01 05      FX2:RM :Mode
00 01 01 06      FX2:RM :Frequency
00 01 01 07      FX2:RM :Effect Level
00 01 01 08      FX2:RM :Direct Level
00 01 01 09      FX2:SG :Sens
00 01 01 0A      FX2:SG :Rise Time
00 01 01 0B      FX2:DF :Tone
00 01 01 0C      FX2:DF :Sens
00 01 01 0D      FX2:DF :Attack
00 01 01 0E      FX2:DF :Depth
00 01 01 0F      FX2:DF :Resonance
00 01 02 00      FX2:DF :Effect Level
00 01 02 01      FX2:DF :Direct Level
00 01 02 02      FX2:STR:Tone
00 01 02 03      FX2:STR:Sens
00 01 02 04      FX2:STR:Depth
00 01 02 05      FX2:STR:Resonance
00 01 02 06      FX2:STR:Buzz
00 01 02 07      FX2:STR:Effect Level
00 01 02 08      FX2:STR:Direct Level
00 01 02 09      FX2:FB :Mode
00 01 02 0A      FX2:FB :Rise Time
00 01 02 0B      FX2:FB :Rise Time(▲)
00 01 02 0C      FX2:FB :F.B.Level
00 01 02 0D      FX2:FB :F.B.Level(▲)
00 01 02 0E      FX2:FB :Vib Rate
00 01 02 0F      FX2:FB :Vib Depth
00 01 03 00      FX2:AFB:Freq 1
00 01 03 01      FX2:AFB:Depth 1
00 01 03 02      FX2:AFB:Freq 2
00 01 03 03      FX2:AFB:Depth 2
00 01 03 04      FX2:AFB:Freq 3
00 01 03 05      FX2:AFB:Depth 3
00 01 03 06      FX2:HU :Mode
00 01 03 07      FX2:HU :Vowel 1
00 01 03 08      FX2:HU :Vowel 2
00 01 03 09      FX2:HU :Sens
00 01 03 0A      FX2:HU :Rate
00 01 03 0B      FX2:HU :Depth
00 01 03 0C      FX2:HU :Manual
00 01 03 0D      FX2:HU :Level
00 01 03 0E      FX2:SL :Pattern
00 01 03 0F      FX2:SL :Rate
00 01 04 00      FX2:SL :Trigger Sens
00 01 04 01      FX2:WSY:Wave
00 01 04 02      FX2:WSY:Cutoff Freq
00 01 04 03      FX2:WSY:Resonance
00 01 04 04      FX2:WSY:FLT.Sens
00 01 04 05      FX2:WSY:FLT.Decay
00 01 04 06      FX2:WSY:FLT.Depth
00 01 04 07      FX2:WSY:Synth Level
00 01 04 08      FX2:WSY:Direct Level
00 01 04 09      FX2:SEQ:Low Cut
00 01 04 0A      FX2:SEQ:Low EQ
00 01 04 0B      FX2:SEQ:Lo-Mid f
00 01 04 0C      FX2:SEQ:Lo-Mid Q
00 01 04 0D      FX2:SEQ:Lo-Mid EQ
00 01 04 0E      FX2:SEQ:Hi-Mid f
00 01 04 0F      FX2:SEQ:Hi-Mid Q
00 01 05 00      FX2:SEQ:Hi-Mid EQ
00 01 05 01      FX2:SEQ:High EQ
00 01 05 02      FX2:SEQ:High Cut
00 01 05 03      FX2:SEQ:Level
00 01 05 04      FX2:HR :Voice
00 01 05 05      FX2:HR :HR1 Harm
00 01 05 06      FX2:HR :HR1 PreDly
00 01 05 07      FX2:HR :HR1 Feedback
00 01 05 08      FX2:HR :HR1 Level
00 01 05 09      FX2:HR :HR2 Harm
00 01 05 0A      FX2:HR :HR2 PleDly
00 01 05 0B      FX2:HR :HR2 Level
00 01 05 0C      FX2:HR :Key
00 01 05 0D      FX2:HR :Direct Level
00 01 05 0E      FX2:PS :Voice
00 01 05 0F      FX2:PS :PS1 Mode
00 01 06 00      FX2:PS :PS1 Pitch
00 01 06 01      FX2:PS :PS1 Fine
00 01 06 02      FX2:PS :PS1 PreDly
00 01 06 03      FX2:PS :PS1 Feedback
00 01 06 04      FX2:PS :PS1 Level
00 01 06 05      FX2:PS :PS2 Mode
00 01 06 06      FX2:PS :PS2 Pitch
00 01 06 07      FX2:PS :PS2 Fine
00 01 06 08      FX2:PS :PS2 PreDly
00 01 06 09      FX2:PS :PS2 Level
00 01 06 0A      FX2:PS :Direct Level
00 01 06 0B      FX2:PB :Pitch Min
00 01 06 0C      FX2:PB :Pitch Max
00 01 06 0D      FX2:PB :Pdl Position
00 01 06 0E      FX2:PB :Effect Level
00 01 06 0F      FX2:PB :Direct Level
00 01 07 00      FX2:OC :Range
00 01 07 01      FX2:OC :Octave Level
00 01 07 02      FX2:OC :Direct Level
00 01 07 03      FX2:RT :Speed Sel
00 01 07 04      FX2:RT :Rate(Slow)
00 01 07 05      FX2:RT :Rate(Fast)
00 01 07 06      FX2:RT :Rise Time
00 01 07 07      FX2:RT :Fall Time
00 01 07 08      FX2:RT :Depth
00 01 07 09      FX2:2CE:Xover f
00 01 07 0A      FX2:2CE:Low Rate
00 01 07 0B      FX2:2CE:Low Depth
00 01 07 0C      FX2:2CE:Low Pre Delay
00 01 07 0D      FX2:2CE:Low Level
00 01 07 0E      FX2:2CE:High Rate
00 01 07 0F      FX2:2CE:High Depth
00 01 08 00      FX2:2CE:High Pre Delay
00 01 08 01      FX2:2CE:High Level
00 01 08 02      FX2:AR :Phrase
00 01 08 03      FX2:AR :Loop
00 01 08 04      FX2:AR :Tempo
00 01 08 05      FX2:AR :Sens
00 01 08 06      FX2:AR :Key
00 01 08 07      FX2:AR :Attack
00 01 08 08      FX2:AR :Hold
00 01 08 09      FX2:AR :Effect Level
00 01 08 0A      FX2:AR :Direct Level
00 01 08 0B      FX2:SYN:Sens
00 01 08 0C      FX2:SYN:Wave
00 01 08 0D      FX2:SYN:Chromatic
00 01 08 0E      FX2:SYN:Octave Shift
00 01 08 0F      FX2:SYN:PWM Rate
00 01 09 00      FX2:SYN:PWM Depth
00 01 09 01      FX2:SYN:Cutoff Freq
00 01 09 02      FX2:SYN:Resonance
00 01 09 03      FX2:SYN:Flt.Sens
00 01 09 04      FX2:SYN:Flt.Decay
00 01 09 05      FX2:SYN:Flt.Depth
00 01 09 06      FX2:SYN:Attack
00 01 09 07      FX2:SYN:Release
00 01 09 08      FX2:SYN:Velocity
00 01 09 09      FX2:SYN:Hold
00 01 09 0A      FX2:SYN:Synth Level
00 01 09 0B      FX2:SYN:Direct Level
00 01 09 0C      FX2:AC :Type
00 01 09 0D      FX2:AC :Bass
00 01 09 0E      FX2:AC :Middle
00 01 09 0F      FX2:AC :Middle f
00 01 0A 00      FX2:AC :Treble
00 01 0A 01      FX2:AC :Presence
00 01 0A 02      FX2:AC :Level
00 01 0A 03      FX2:SH :Hold
00 01 0A 04      FX2:SH :Rise Time
00 01 0A 05      FX2:SH :Effect Level
00 01 0A 06      FX2:SDD:DlyTime
00 01 0A 07      FX2:SDD:Feedback
00 01 0A 08      FX2:SDD:Effect Level
DD :On/Off
DD :Type
DD :Delay Time
DD :Tap Time
DD :Feedback
DD :High Cut
DD :D1:Time
DD :D1:Feedback
DD :D1:HiCut
DD :D1:Level
DD :D2:Time
DD :D2:Feedback
DD :D2:HiCut
DD :D2:Level
DD :MOD:Rate
DD :MOD:Depth
DD :Warp SW
DD :Rise Time
DD :F.B. Depth
DD :Level Depth
DD :Effect Level
DD :Direct Level
CE :On/Off
CE :Mode
CE :Rate
CE :Depth
CE :Pre Delay
CE :Low Cut
CE :High Cut
CE :Effect Level

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00 01 0C 07	RV:On/Off
00 01 0C 08	RV:Type
00 01 0C 09	RV:Rev Time
00 01 0C 0A	RV:Pre Delay
00 01 0C 0B	RV:Low Cut
00 01 0C 0C	RV:High Cut
00 01 0C 0D	RV:Density
00 01 0C 0E	RV:Effect Level
00 01 0C 0F	RV:Direct Level
00 01 0D 00	NS :On/Off
00 01 0D 01	NS :Threshold
00 01 0D 02	NS :Release
00 01 0D 03	NS :Detect
00 01 0D 04	MST:Patch Level
00 01 0D 05	MST:Output
00 01 0D 06	MST:Master BPM
00 01 0D 07	FV :Level
00 01 0D 08	FV :Vol.Curve
00 01 0D 09	PLP:On/Off
00 01 0D 0A	AC1:On/Off
00 01 0D 0B	AC2:On/Off
00 01 0D 0C	MANUAL On/Off
00 01 0D 0D	TUNER On/Off
00 01 0D 0E	Master BPM(Tap)
00 01 0D 0F	Delay Time(Tap)
00 01 0E 00	MIDI Start/Stop
00 01 0E 01	MMC Play/Stop
00 01 0E 02	Patch Level Inc1
00 01 0E 03	Patch Level Inc2
00 01 0E 04	Patch Level Dec1
00 01 0E 05	Patch Level Dec2
00 01 0E 06	Hold Dly Rec/Dub
00 01 0E 07	Hold Dly Stop
00 01 0E 08	Solo A&B On/Off
00 01 0E 09	Patch Num. Inc
00 01 0E 0A	Patch Num. Dec
00 01 0E 0B	Patch Bank Inc
00 01 0E 0C	Patch Bank Dec

Table Rate <Rate>

Data (H)	Description
00	0
:	:
64	100
65	whole note
66	doted half note
67	whole note triplet
68	half note
69	doted quarter note
6A	half note triplet
6B	quarter note
6C	doted eighth note
6D	quarter note triplet
6E	eighth note
6F	doted sixteenth note
70	eighth note triplet
71	sixteenth note

Table High Cut <High Cut>

Data (H)	Description
00	700Hz
01	1.00kHz
02	1.40kHz
03	2.00kHz
04	3.00kHz
05	4.00kHz
06	6.00kHz
07	8.00kHz
08	11.0kHz
09	Flat

Table Low Cut <Low Cut>

Data (H)	Description
00	FLAT
01	55.0Hz
02	110Hz
03	165Hz
04	200Hz
05	280Hz
06	340Hz
07	400Hz
08	500Hz
09	630Hz
0A	800Hz

Table Ratio <LM: Ratio>

Data (H)	Description
01	1.2:1
02	1.4:1
03	1.6:1
04	1.8:1
05	2:1
06	2.3:1
07	2.6:1
08	3:1
09	3.5:1
0A	4:1
0B	5:1

0C	6:1
0D	8:1
0E	10:1
0F	12:1
10	20:1
11	oo:1

Table OD/DS Type <OD:Type>

Data (H)	Description
00	Booster
01	Blues OD
02	Crunch
03	Natural OD
04	Turbo OD
05	Fat OD
06	OD-1
07	T-Scream
08	Warm OD
09	Distortion
0A	Mild DS
0B	Drive DS
0C	RAT
0D	GUV DS
0E	DST+
0F	Solid DS
10	Mid DS
11	Stack
12	Modern DS
13	Power DS
14	R-MAN
15	Metal Zone
16	Heavy Metal
17	Lead
18	Loud
19	Sharp
1A	Mechanical
1B	'60s FUZZ
1C	Oct FUZZ
1D	MUFF FUZZ
1E	Custom1
1F	Custom2
20	Custom3

Table Preamp Type <PRE: Ch A/Ch B Type>

Data (H)	Description
00	JC-120
01	Warm Clean
02	Jazz Combo
03	Full Range
04	BrightClean
05	Clean TWIN
06	Pro Crunch
07	Tweed
08	Warm Crunch
09	Crunch
0A	Blues
0B	Wild Crunch
0C	StackCrunch
0D	VO Drive
0E	VO Lead
0F	VO Clean
10	MATCH Drive
11	Fat MATCH
12	MATCH Lead
13	BG Lead
14	BG Drive
15	BG Rhythm
16	Smooth Drive
17	Mild Drive
18	MS1959 (I)
19	MS1959 (II)
1A	MS1959 (I+II)
1B	MS HiGain
1C	Power Stack
1D	R-FIER Cln
1E	R-FIER Raw
1F	R-FIER Vnt1
20	R-FIER Mdn1
21	R-FIER Vnt2
22	R-FIER Mdn2
23	T-AMP Clean
24	T-AMP Crunch
25	T-AMP Lead
26	Edge Lead
27	SLDN
28	Drive Stack
29	Lead Stack
2A	Heavy Lead
2B	5150 Drive
2C	Metal Stack
2D	Metal Lead
2E	Custom1
2F	Custom2
30	Custom3

Table Middle Frequency <EQ/SEQ: Mid f/AC: Middle f>

Data (H)	Description
00	20.0Hz
01	25.0Hz
02	31.5Hz
03	40.0Hz
04	50.0Hz
05	63.0Hz
06	80.0Hz
07	100Hz
08	125Hz
09	160Hz
0A	200Hz
0B	250Hz
0C	315Hz
0D	400Hz
0E	500Hz
0F	630Hz
10	800Hz
11	1.00kHz
12	1.25kHz
13	1.60kHz
14	2.00kHz
15	2.50kHz
16	3.15kHz
17	4.00kHz
18	5.00kHz
19	6.30kHz
1A	8.00kHz
1B	10.0kHz

Table Middle Q <EQ/SEQ: Mid Q>

Data (H)	Description
00	0.5
01	1
02	2
03	4
04	8
05	16

Table Pre Delay <HR/PS Pre Delay>

Data (H)	Description
00 00	0ms
00 01	1ms
:	:
00 7F	127ms
01 00	128ms
:	:
01 7F	255ms
02 00	256ms
:	:
02 2C	300ms
02 2D	sixteenth note
02 2E	eighth note triplet
02 2F	dotted sixteenth note
02 30	eighth note
02 31	quarter note triplet
02 32	dotted eighth note
02 33	quarter note

Table Step Rate <PH: Step Rate>

Data (H)	Description
00	OFF
01	0
:	:
65	100
66	whole note
67	dotted half note
68	whole note triplet
69	half note
6A	dotted quarter note
6B	half note triplet
6C	quarter note
6D	dotted eighth note
6E	quarter note triplet
6F	eighth note
70	dotted sixteenth note
71	eighth note triplet
72	sixteenth note

Table HR Harmony <HR: HR1(HR2) Harm>

Data (H)	Description
00	-2oct
01	-14th
02	-13th
03	-12th
04	-11th
05	-10th
06	-9th
07	-1oct
08	-7th
09	-6th
0A	-5th
0B	-4th
0C	-3rd
0D	-2nd
0E	Unison
0F	+2nd
10	+3rd
11	+4th
12	+5th
13	+6th
14	+7th
15	+1oct
16	+9th
17	+10th
18	+11th
19	+12th
1A	+13th
1B	+14th
1C	+2oct
1D	Scale 1
1E	Scale 2
1F	Scale 3
20	Scale 4
21	Scale 5
22	Scale 6
23	Scale 7
24	Scale 8
25	Scale 9
26	Scale 10
27	Scale 11
28	Scale 12
29	Scale 13
2A	Scale 14
2B	Scale 15
2C	Scale 16
2D	Scale 17
2E	Scale 18
2F	Scale 19
30	Scale 20
31	Scale 21
32	Scale 22
33	Scale 23
34	Scale 24
35	Scale 25
36	Scale 26
37	Scale 27
38	Scale 28
39	Scale 29

*Refer to "Table HR Scale"

Table HR Scale <Harmony Scale>

Harmony	Input note	harmony note(Default)											
		C	Db	D	Eb	E	F	F#	G	Ab	A	Bb	B
-2oct	Scale 1	-C ↓ ↓	-Db ↓ ↓	-D ↓ ↓	-Eb ↓ ↓	-E ↓ ↓	-F ↓ ↓	-F# ↓ ↓	-G ↓ ↓	-Ab ↓ ↓	-A ↓ ↓	-Bb ↓ ↓	-B ↓ ↓
-14th	Scale 2	-D ↓	-Eb ↓	-E ↓	-F ↓	-F ↓	-G ↓	-Ab ↓	-A ↓	-Bb ↓	-B ↓	-C ↓	-C ↓
-13th	Scale 3	-E ↓	-E ↓	-F ↓	-F# ↓	-G ↓	-A ↓	-Bb ↓	-B ↓	-C ↓	-D ↓	-Db ↓	-D ↓
-12th	Scale 4	-F ↓	-F# ↓	-G ↓	-Ab ↓	-A ↓	-B ↓	-C ↓	-C ↓	-D ↓	-D ↓	-E ↓	-E ↓
-11th	Scale 5	-G ↓	-G ↓	-A ↓	-A ↓	-B ↓	-C ↓	-C ↓	-D ↓	-D ↓	-E ↓	-E ↓	-F ↓
-10th	Scale 6	-A ↓	-Bb ↓	-B ↓	-B ↓	-C ↓	-D ↓	-D ↓	-E ↓	-E ↓	-F ↓	-F ↓	-G ↓
-9th	Scale 7	-B ↓	-B ↓	-C ↓	-C ↓	-D ↓	-E ↓	-E ↓	-F ↓	-F ↓	-G ↓	-G ↓	-A ↓
-10ct	Scale 8	-C ↓	-Db ↓	-D ↓	-Eb ↓	-E ↓	-F ↓	-F# ↓	-G ↓	-Ab ↓	-A ↓	-Bb ↓	-B ↓
-7th	Scale 9	-D	-Eb	-E	-F	-F	-G	-Ab	-A	-Bb	-B	-C	-C
-6th	Scale 10	-E	-E	-F	-F#	-G	-A	-A	-B	-B	-C	-Db	-D
-5th	Scale 11	-F	-F#	-G	-Ab	-A	-B	-B	-C	-C	-D	-Eb	-E
-4th	Scale 12	-G	-G	-A	-A	-B	-C	-C	-D	-D	-E	-E	-F
-3rd	Scale 13	-A	-Bb	-B	-B	-C	-D	-D	-E	-E	-F	-F#	-G
-2nd	Scale 14	-B	-B	-C	-C	-D	-E	-E	-F	-F	-G	-G	-A
Unison	Scale 15	C	Db	D	Eb	E	F	F#	G	Ab	A	Bb	B
+2nd	Scale 16	+D	+Eb	+E	+F	+F	+G	+Ab	+A	+Bb	+B	+C	+C
+3rd	Scale 17	+E	+E	+F	+F#	+G	+A	+A	+B	+B	+C	+Db	+D
+4th	Scale 18	+F	+F#	+G	+Ab	+A	+B	+B	+C	+C	+D	+Eb	+E
+5th	Scale 19	+G	+G	+A	+A	+B	+C	+C	+D	+D	+E	+E	+F
+6th	Scale 20	+A	+Bb	+B	+B	+C	+D	+D	+E	+E	+F	+F#	+G
+7th	Scale 21	+B	+B	+C	+C	+D	+E	+E	+F	+F	+G	+G	+A
+10ct	Scale 22	+C ↑	+Db ↑	+D ↑	+Eb ↑	+E ↑	+F ↑	+F# ↑	+G ↑	+Ab ↑	+A ↑	+Bb ↑	+B ↑
+9th	Scale 23	+D ↑	+Eb ↑	+E ↑	+F ↑	+F ↑	+G ↑	+Ab ↑	+A ↑	+Bb ↑	+B ↑	+C ↑	+C ↑
+10th	Scale 24	+E ↑	+E ↑	+F ↑	+F# ↑	+G ↑	+A ↑	+A ↑	+B ↑	+B ↑	+C ↑	+Db ↑	+D ↑
+11th	Scale 25	+F ↑	+F# ↑	+G ↑	+Ab ↑	+A ↑	+B ↑	+B ↑	+C ↑	+C ↑	+D ↑	+Eb ↑	+E ↑
+12th	Scale 26	+G ↑	+G ↑	+A ↑	+A ↑	+B ↑	+C ↑	+C ↑	+D ↑	+D ↑	+E ↑	+E ↑	+F ↑
+13th	Scale 27	+A ↑	+Bb ↑	+B ↑	+B ↑	+C ↑	+D ↑	+D ↑	+E ↑	+E ↑	+F ↑	+F# ↑	+G ↑
+14th	Scale 28	+B ↑	+B ↑	+C ↑	+C ↑	+D ↑	+E ↑	+E ↑	+F ↑	+F ↑	+G ↑	+G ↑	+A ↑
+2oct	Scale 29	+C ↑ ↑	+Db ↑ ↑	+D ↑ ↑	+Eb ↑ ↑	+E ↑ ↑	+F ↑ ↑	+F# ↑ ↑	+G ↑ ↑	+Ab ↑ ↑	+A ↑ ↑	+Bb ↑ ↑	+B ↑ ↑

Table OC Range <OC: Range>

Data (H)	Description
00	1 (7th string, open to 1st string, 24th fret)
01	2 (7th string, open to 1st string, 12th fret)
02	3 (7th string, open to 1st string, open)
03	4 (7th string, open to 4th string, 2nd fret)

Table Xover Frequency <2CE: Xover f>

Data (H)	Description
00	100Hz
01	125Hz
02	160Hz
03	200Hz
04	250Hz
05	315Hz
06	400Hz
07	500Hz
08	630Hz
09	800Hz
0A	1.00kHz
0B	1.25kHz
0C	1.60kHz
0D	2.00kHz
0E	2.50kHz
0F	3.15kHz
10	4.00kHz

Table SDD Delay Time <SDD: DlyTime>

Data (H)	Description
00 00	0ms
00 01	1ms
:	:
00 7F	127ms
01 00	128ms
:	:
01 7F	255ms
02 00	256ms
:	:
02 7F	383ms
03 00	384ms
:	:
03 10	400ms
03 11	sixteenth note
03 12	eighth note triplet
03 13	dotted sixteenth note
03 14	eighth note
03 15	quarter note triplet
03 16	dotted eighth note
03 17	quarter note

Table DD Delay Time <DD: Delay Time>

Data (H)	Description
00 00	0ms
00 01	1ms
:	:
00 7F	127ms
01 00	128ms
:	:
01 7F	255ms
02 00	256ms
:	:
0E 08	1800ms
0E 09	sixteenth note
0E 0A	eighth note triplet
0E 0B	dotted sixteenth note
0E 0C	eighth note
0E 0D	quarter note triplet
0E 0E	dotted eighth note
0E 0F	quarter note
0E 10	half note triplet
0E 11	dotted quarter note
0E 12	half note
0E 13	whole note triplet
0E 14	dotted half note
0E 15	whole note

Table Name	<Name Edit>	Table Assign Target	<Assign: Target>
Data (H)	Description	Data (H)	Description
20	(space)	00 00	FX1:On/Off
21	!	00 01	FX1:FX1 Select
22	"	00 02	FX1:ACS:Type
23	#	00 03	FX1:ACS:Sustain
24	\$	00 04	FX1:ACS:Attack
25	%	00 05	FX1:ACS:Tone
26	&	00 06	FX1:ACS:Level
27	'	00 07	FX1:LM :Type
28	(00 08	FX1:LM :Attack
29)	00 09	FX1:LM :Threshold
2A	*	00 0A	FX1:LM :Ratio
2B	+	00 0B	FX1:LM :Release
2C	,	00 0C	FX1:LM :Level
2D	-	00 0D	FX1:TW :Mode
2E	.	00 0E	FX1:TW :Polarity
2F	/	00 0F	FX1:TW :Sens
30	0	00 10	FX1:TW :Frequency
31	1	00 11	FX1:TW :Peak
32	2	00 12	FX1:TW :Direct Level
33	3	00 13	FX1:TW :Level
34	4	00 14	FX1:AW :Mode
35	5	00 15	FX1:AW :Frequency
36	6	00 16	FX1:AW :Peak
37	7	00 17	FX1:AW :Rate
38	8	00 18	FX1:AW :Depth
39	9	00 19	FX1:AW :Direct Level
3A	:	00 1A	FX1:AW :Level
3B	;	00 1B	FX1:TM :Type
3C	<	00 1C	FX1:TM :Low
3D	=	00 1D	FX1:TM :High
3E	>	00 1E	FX1:TM :Resonance
3F	?	00 1F	FX1:TM :Level
40	@	00 20	FX1:GS :Type
41	A	00 21	FX1:GS :Low
42	B	00 22	FX1:GS :High
43	C	00 23	FX1:GS :Body
44	D	00 24	FX1:GS :Level
45	E	00 25	FX1:TR :Wave Shape
46	F	00 26	FX1:TR :Rate
47	G	00 27	FX1:TR :Depth
48	H	00 28	FX1:PH :Type
49	I	00 29	FX1:PH :Rate
4A	J	00 2A	FX1:PH :Depth
4B	K	00 2B	FX1:PH :Manual
4C	L	00 2C	FX1:PH :Resonance
4D	M	00 2D	FX1:PH :Step Rate
4E	N	00 2E	FX1:PH :Effect Level
4F	O	00 2F	FX1:PH :Direct Level
50	P	00 30	FX1:FL :Rate
51	Q	00 31	FX1:FL :Depth
52	R	00 32	FX1:FL :Manual
53	S	00 33	FX1:FL :Resonance
54	T	00 34	FX1:FL :Separation
55	U	00 35	FX1:FL :Low Cut
56	V	00 36	FX1:FL :Effect Level
57	W	00 37	FX1:FL :Direct Level
58	X	00 38	FX1:PAN:Wave Shape
59	Y	00 39	FX1:PAN:Rate
5A	Z	00 3A	FX1:PAN:Depth
5B	[00 3B	FX1:VB :Rate
5C	\	00 3C	FX1:VB :Depth
5D]	00 3D	FX1:VB :Trigger
5E	^	00 3E	FX1:VB :Rise Time
5F	_	00 3F	FX1:UV :Rate
60	~	00 40	FX1:UV :Depth
61	a	00 41	FX1:UV :Level
62	b	00 42	FX1:RM :Mode
63	c	00 43	FX1:RM :Frequency
64	d	00 44	FX1:RM :Effect Level
65	e	00 45	FX1:RM :Direct Level
66	f	00 46	FX1:SG :Sens
67	g	00 47	FX1:SG :Rise Time
68	h	00 48	FX1:DF :Tone
69	i	00 49	FX1:DF :Sens
6A	j	00 4A	FX1:DF :Attack
6B	k	00 4B	FX1:DF :Depth
6C	l	00 4C	FX1:DF :Resonance
6D	m	00 4D	FX1:DF :Effect Level
6E	n	00 4E	FX1:DF :Direct Level
6F	o	00 4F	FX1:STR:Tone
70	p	00 50	FX1:STR:Sens
71	q	00 51	FX1:STR:Depth
72	r	00 52	FX1:STR:Resonance
73	s	00 53	FX1:STR:Buzz
74	t	00 54	FX1:STR:Effect Level
75	u	00 55	FX1:STR:Direct Level
76	v	00 56	FX1:FB :Mode
77	w	00 57	FX1:FB :Rise Time
78	x	00 58	FX1:FB :Rise Time(▲)
79	y	00 59	FX1:FB :F.B.Level
7A	z	00 5A	FX1:FB :F.B.Level(▲)
7B	(none)	00 5B	FX1:FB :Vib Rate
7C		00 5C	FX1:FB :Vib Depth
7D	(none)	00 5D	FX1:AFB:Freq 1
7E	→	00 5E	FX1:AFB:Depth 1
7F	←	00 5F	FX1:AFB:Freq 2
		00 60	FX1:AFB:Depth 2
		00 61	FX1:AFB:Freq 3
		00 62	FX1:AFB:Depth 3
		00 63	FX1:HU :Mode
		00 64	FX1:HU :Vowel 1
		00 65	FX1:HU :Vowel 2
		00 66	FX1:HU :Sens
		00 67	FX1:HU :Rate
		00 68	FX1:HU :Depth
		00 69	FX1:HU :Manual
		00 6A	FX1:HU :Level
		00 6B	FX1:SL :Pattern
		00 6C	FX1:SL :Rate
		00 6D	FX1:SL :Trigger Sens

* You can not use 0x7B and 0x7D.

00 6E	FX1:WSY:Wave	01 61	FX2:TW :Polarity
00 6F	FX1:WSY:Cutoff Freq	01 62	FX2:TW :Sens
00 70	FX1:WSY:Resonance	01 63	FX2:TW :Frequency
00 71	FX1:WSY:FLT.Sens	01 64	FX2:TW :Peak
00 72	FX1:WSY:FLT.Decay	01 65	FX2:TW :Direct Level
00 73	FX1:WSY:FLT.Depth	01 66	FX2:TW :Level
00 74	FX1:WSY:Synth Level	01 67	FX2:AW :Mode
00 75	FX1:WSY:Direct Level	01 68	FX2:AW :Frequency
00 76	FX1:SEQ:Low Cut	01 69	FX2:AW :Peak
00 77	FX1:SEQ:Low EQ	01 6A	FX2:AW :Rate
00 78	FX1:SEQ:Lo-Mid f	01 6B	FX2:AW :Depth
00 79	FX1:SEQ:Lo-Mid Q	01 6C	FX2:AW :Direct Level
00 7A	FX1:SEQ:Lo-Mid EQ	01 6D	FX2:AW :Level
00 7B	FX1:SEQ:Hi-Mid f	01 6E	FX2:AW :Type
00 7C	FX1:SEQ:Hi-Mid Q	01 6F	FX2:TM :Low
00 7D	FX1:SEQ:Hi-Mid EQ	01 70	FX2:TM :High
00 7E	FX1:SEQ:High EQ	01 71	FX2:TM :Resonance
00 7F	FX1:SEQ:High Cut	01 72	FX2:TM :Level
01 00	FX1:SEQ:Level	01 73	FX2:GS :Type
01 01	CS :On/Off	01 74	FX2:GS :Low
01 02	CS :Type	01 75	FX2:GS :High
01 03	CS :Sustain	01 76	FX2:GS :Body
01 04	CS :Attack	01 77	FX2:GS :Level
01 05	CS :Threshold	01 78	FX2:TR :Wave Shape
01 06	CS :Release	01 79	FX2:TR :Rate
01 07	CS :Tone	01 7A	FX2:TR :Depth
01 08	CS :Level	01 7B	FX2:PH :Type
01 09	WAH:On/Off	01 7C	FX2:PH :Rate
01 0A	WAH:Type	01 7D	FX2:PH :Depth
01 0B	WAH:Pgl Position	01 7E	FX2:PH :Manual
01 0C	WAH:Level	01 7F	FX2:PH :Resonance
01 0D	LP :On/Off	02 00	FX2:PH :Step Rate
01 0E	LP :Type	02 01	FX2:PH :Effect Level
01 0F	LP :Select	02 02	FX2:PH :Direct Level
01 10	LP :Mode 1	02 03	FX2:FL :Rate
01 11	LP :Send 1 Level	02 04	FX2:FL :Depth
01 12	LP :Return 1 Level	02 05	FX2:FL :Manual
01 13	LP :Mode 2	02 06	FX2:FL :Resonance
01 14	LP :Send 2 Level	02 07	FX2:FL :Separation
01 15	LP :Return 2 Level	02 08	FX2:FL :Low Cut
01 16	LP :Mode Stereo	02 09	FX2:FL :Effect Level
01 17	LP :Send Stereo Level	02 0A	FX2:FL :Direct Level
01 18	LP :Return Stereo Level	02 0B	FX2:PAN:Wave Shape
01 19	OD :On/Off	02 0C	FX2:PAN:Rate
01 1A	OD :Type	02 0D	FX2:PAN:Depth
01 1B	OD :Drive	02 0E	FX2:VB :Rate
01 1C	OD :Bottom	02 0F	FX2:VB :Depth
01 1D	OD :Tone	02 10	FX2:VB :Trigger
01 1E	OD :Effect Level	02 11	FX2:VB :Rise Time
01 1F	OD :Direct Level	02 12	FX2:UV :Rate
01 20	PRE:On/Off	02 13	FX2:UV :Depth
01 21	PRE:Ch.Mode	02 14	FX2:UV :Level
01 22	PRE:Ch.Select	02 15	FX2:RM :Mode
01 23	PRE:Dynamic Sens	02 16	FX2:RM :Frequency
01 24	PRE:Ch.DlyTime	02 17	FX2:RM :Effect Level
01 25	PRE:Ch A Type	02 18	FX2:RM :Direct Level
01 26	PRE:Ch A Gain	02 19	FX2:SG :Sens
01 27	PRE:Ch A Bass	02 1A	FX2:SG :Rise Time
01 28	PRE:Ch A Middle	02 1B	FX2:DF :Tone
01 29	PRE:Ch A Treble	02 1C	FX2:DF :Sens
01 2A	PRE:Ch A Presence	02 1D	FX2:DF :Attack
01 2B	PRE:Ch A Level	02 1E	FX2:DF :Depth
01 2C	PRE:Ch A Bright	02 1F	FX2:DF :Resonance
01 2D	PRE:Ch A Gain SW	02 20	FX2:DF :Effect Level
01 2E	PRE:Ch A Solo SW	02 21	FX2:DF :Direct Level
01 2F	PRE:Ch A Solo Level	02 22	FX2:STR:Tone
01 30	PRE:Ch A SP Type	02 23	FX2:STR:Sens
01 31	PRE:Ch A Mic Type	02 24	FX2:STR:Depth
01 32	PRE:Ch A Mic Dis.	02 25	FX2:STR:Resonance
01 33	PRE:Ch A Mic Pos.	02 26	FX2:STR:Buzz
01 34	PRE:Ch A Mic Level	02 27	FX2:STR:Effect Level
01 35	PRE:Ch A Direct Level	02 28	FX2:STR:Direct Level
01 36	PRE:Ch B Type	02 29	FX2:FB :Mode
01 37	PRE:Ch B Gain	02 2A	FX2:FB :Rise Time
01 38	PRE:Ch B Bass	02 2B	FX2:FB :Rise Time(▲)
01 39	PRE:Ch B Middle	02 2C	FX2:FB :F.B.Level
01 3A	PRE:Ch B Treble	02 2D	FX2:FB :F.B.Level(▲)
01 3B	PRE:Ch B Presence	02 2E	FX2:FB :Vib Rate
01 3C	PRE:Ch B Level	02 2F	FX2:FB :Vib Depth
01 3D	PRE:Ch B Bright	02 30	FX2:AFB:Freq 1
01 3E	PRE:Ch B Gain SW	02 31	FX2:AFB:Depth 1
01 3F	PRE:Ch B Solo SW	02 32	FX2:AFB:Freq 2
01 40	PRE:Ch B Solo Level	02 33	FX2:AFB:Depth 2
01 41	PRE:Ch B SP Type	02 34	FX2:AFB:Freq 3
01 42	PRE:Ch B Mic Type	02 35	FX2:AFB:Depth 3
01 43	PRE:Ch B Mic Dis.	02 36	FX2:HU :Mode
01 44	PRE:Ch B Mic Pos.	02 37	FX2:HU :Vowel 1
01 45	PRE:Ch B Mic Level	02 38	FX2:HU :Vowel 2
01 46	PRE:Ch B Direct Level	02 39	FX2:HU :Sens
01 47	EQ :On/Off	02 3A	FX2:HU :Rate
01 48	EQ :Low Cut	02 3B	FX2:HU :Depth
01 49	EQ :Low EQ	02 3C	FX2:HU :Manual
01 4A	EQ :Low-Middle Frequency	02 3D	FX2:HU :Level
01 4B	EQ :Low-Middle Q	02 3E	FX2:SL :Pattern
01 4C	EQ :Low-Middle EQ	02 3F	FX2:SL :Rate
01 4D	EQ :High-Middle Frequency	02 40	FX2:SL :Trigger Sens
01 4E	EQ :High-Middle Q	02 41	FX2:WSY:Wave
01 4F	EQ :High-Middle EQ	02 42	FX2:WSY:Cutoff Freq
01 50	EQ :High EQ	02 43	FX2:WSY:Resonance
01 51	EQ :High Cut	02 44	FX2:WSY:FLT.Sens
01 52	EQ :Level	02 45	FX2:WSY:FLT.Decay
01 53	FX2:On/Off	02 46	FX2:WSY:FLT.Depth
01 54	FX2:FX2 Select	02 47	FX2:WSY:Synth Level
01 55	FX2:ACS:Type	02 48	FX2:WSY:Direct Level
01 56	FX2:ACS:Sustain	02 49	FX2:SEQ:Low Cut
01 57	FX2:ACS:Attack	02 4A	FX2:SEQ:Low EQ
01 58	FX2:ACS:Tone	02 4B	FX2:SEQ:Lo-Mid f
01 59	FX2:ACS:Level	02 4C	FX2:SEQ:Lo-Mid Q
01 5A	FX2:LM :Type	02 4D	FX2:SEQ:Lo-Mid EQ
01 5B	FX2:LM :Attack	02 4E	FX2:SEQ:Hi-Mid f
01 5C	FX2:LM :Threshold	02 4F	FX2:SEQ:Hi-Mid Q
01 5D	FX2:LM :Ratio	02 50	FX2:SEQ:Hi-Mid EQ
01 5E	FX2:LM :Release	02 51	FX2:SEQ:High EQ
01 5F	FX2:LM :Level	02 52	FX2:SEQ:High Cut
01 60	FX2:TW :Mode	02 53	FX2:SEQ:Level

02 54	FX2:HR :Voice	03 47	RV :On/Off
02 55	FX2:HR :HR1 Harm	03 48	RV :Type
02 56	FX2:HR :HR1 PreDly	03 49	RV :Rev Time
02 57	FX2:HR :HR1 Feedback	03 4A	RV :Pre Delay
02 58	FX2:HR :HR1 Level	03 4B	RV :Low Cut
02 59	FX2:HR :HR2 Harm	03 4C	RV :High Cut
02 5A	FX2:HR :HR2 PleDly	03 4D	RV :Density
02 5B	FX2:HR :HR2 Level	03 4E	RV :Effect Level
02 5C	FX2:HR :Key	03 4F	RV :Direct Level
02 5D	FX2:HR :Direct Level	03 50	NS :On/Off
02 5E	FX2:PS :Voice	03 51	NS :Threshold
02 5F	FX2:PS :PS1 Mode	03 52	NS :Release
02 60	FX2:PS :PS1 Pitch	03 53	NS :Detect
02 61	FX2:PS :PS1 Fine	03 54	MST:Patch Level
02 62	FX2:PS :PS1 PreDly	03 55	MST:Output
02 63	FX2:PS :PS1 Feedback	03 56	MST:Master BPM
02 64	FX2:PS :PS1 Level	03 57	FV :Level
02 65	FX2:PS :PS2 Mode	03 58	FV :Vol.Curve
02 66	FX2:PS :PS2 Pitch	03 59	PLP:On/Off
02 67	FX2:PS :PS2 Fine	03 5A	AC1:On/Off
02 68	FX2:PS :PS2 PreDly	03 5B	AC2:On/Off
02 69	FX2:PS :PS2 Level	03 5C	MANUAL On/Off
02 6A	FX2:PS :Direct Level	03 5D	TUNER On/Off
02 6B	FX2:PB :Pitch Min	03 5E	Master BPM(Tap)
02 6C	FX2:PB :Pitch Max	03 5F	Delay Time(Tap)
02 6D	FX2:PB :Pdl Position	03 60	MIDI Start/Stop
02 6E	FX2:PB :Effect Level	03 61	MMC Play/Stop
02 6F	FX2:PB :Direct Level	03 62	Patch Level Inc1
02 70	FX2:OC :Range	03 63	Patch Level Inc2
02 71	FX2:OC :Octave Level	03 64	Patch Level Dec1
02 72	FX2:OC :Direct Level	03 65	Patch Level Dec2
02 73	FX2:RT :Speed Sel	03 66	Hold Dly Rec/Dub
02 74	FX2:RT :Rate(Slow)	03 67	Hold Dly Stop
02 75	FX2:RT :Rate(Past)	03 68	Solo A&B On/Off
02 76	FX2:RT :Rise Time	03 69	Patch Num. Inc
02 77	FX2:RT :Fall Time	03 6A	Patch Num. Dec
02 78	FX2:RT :Depth	03 6B	Patch Bank Inc
02 79	FX2:2CE:Xover f	03 6C	Patch Bank Dec
02 7A	FX2:2CE:Low Rate		
02 7B	FX2:2CE:Low Depth		
02 7C	FX2:2CE:Low Pre Delay		
02 7D	FX2:2CE:Low Level		
02 7E	FX2:2CE:High Rate		
02 7F	FX2:2CE:High Depth		
03 00	FX2:2CE:High Pre Delay		
03 01	FX2:2CE:High Level		
03 02	FX2:AR :Phrase		
03 03	FX2:AR :Loop		
03 04	FX2:AR :Tempo		
03 05	FX2:AR :Sens		
03 06	FX2:AR :Key		
03 07	FX2:AR :Attack		
03 08	FX2:AR :Hold		
03 09	FX2:AR :Effect Level		
03 0A	FX2:AR :Direct Level		
03 0B	FX2:SYN:Sens		
03 0C	FX2:SYN:Wave		
03 0D	FX2:SYN:Chromatic		
03 0E	FX2:SYN:Octave Shift		
03 0F	FX2:SYN:PWM Rate		
03 10	FX2:SYN:PWM Depth		
03 11	FX2:SYN:Cutoff Freq		
03 12	FX2:SYN:Resonance		
03 13	FX2:SYN:Flt.Sens		
03 14	FX2:SYN:Flt.Decay		
03 15	FX2:SYN:Flt.Depth		
03 16	FX2:SYN:Attack		
03 17	FX2:SYN:Release		
03 18	FX2:SYN:Velocity		
03 19	FX2:SYN:Hold		
03 1A	FX2:SYN:Synth Level		
03 1B	FX2:SYN:Direct Level		
03 1C	FX2:AC :Type		
03 1D	FX2:AC :Bass		
03 1E	FX2:AC :Middle		
03 1F	FX2:AC :Middle f		
03 20	FX2:AC :Treble		
03 21	FX2:AC :Presence		
03 22	FX2:AC :Level		
03 23	FX2:SH :Hold		
03 24	FX2:SH :Rise Time		
03 25	FX2:SH :Effect Level		
03 26	FX2:SDD:DlyTime		
03 27	FX2:SDD:Feedback		
03 28	FX2:SDD:Effect Level		
03 29	DD :On/Off		
03 2A	DD :Type		
03 2B	DD :Delay Time		
03 2C	DD :Tap Time		
03 2D	DD :Feedback		
03 2E	DD :High Cut		
03 2F	DD :D1:Time		
03 30	DD :D1:Feedback		
03 31	DD :D1:HiCut		
03 32	DD :D1:Level		
03 33	DD :D2:Time		
03 34	DD :D2:Feedback		
03 35	DD :D2:HiCut		
03 36	DD :D2:Level		
03 37	DD :MOD:Rate		
03 38	DD :MOD:Depth		
03 39	DD :Warp SW		
03 3A	DD :Rise Time		
03 3B	DD :F.B. Depth		
03 3C	DD :Level Depth		
03 3D	DD :Effect Level		
03 3E	DD :Direct Level		
03 3F	CE :On/Off		
03 40	CE :Mode		
03 41	CE :Rate		
03 42	CE :Depth		
03 43	CE :Pre Delay		
03 44	CE :Low Cut		
03 45	CE :High Cut		
03 46	CE :Effect Level		

Table Assign Source

<Assign: Source>

Data (H)	Description
00	EXP PEDAL 1
01	CTL PEDAL 1
02	CTL PEDAL 2
03	EXP PEDAL 2
04	CTL PEDAL 3
05	CTL PEDAL 4
06	FC-200 EXP
07	FC-200 CTL
08	INTERNAL PEDAL
09	WAVE PEDAL
0A	INPUT LEVEL
0B	MIDI CC#01
:	:
29	MIDI CC#31
2A	MIDI CC#64
:	:
49	MIDI CC#95

Table System CTL1 Function <SYSTEM: CTL1/2/3/4 Func>

Data (H)	Description
00	Assignable
01	Preamp Ch A/B
02	Solo On/Off
03	FX-1 On/Off
04	Comp On/Off
05	Wah On/Off
06	Loop On/Off
07	OD/DS On/Off
08	Preamp On/Off
09	EQ On/Off
0A	FX-2 On/Off
0B	Delay On/Off
0C	Chorus On/Off
0D	Reverb On/Off
0E	Pre Loop On/Off
0F	Amp Ctl1 On/Off
10	Amp Ctl2 On/Off
11	MANUAL On/Off
12	TUNER On/Off
13	Master BPM(Tap)
14	Delay Time(Tap)
15	MIDI Start/Stop
16	MMC Play/Stop
17	Patch Level Inc1
18	Patch Level Inc2
19	Patch Level Dec1
1A	Patch Level Dec2
1B	Hold Dly Rec/Dub
1C	Hold Dly Stop
1D	Solo A&B On/Off
1E	Patch Num. Inc
1F	Patch Num. Dec
20	Patch Bank Inc
21	Patch Bank Dec

Table Pre Delay

<HR/PS Pre Delay>

Data(H)	Description
00 00	0ms
00 01	1ms
:	:
00 7F	127ms
01 00	128ms
:	:
01 7F	255ms
02 00	256ms
:	:
02 2C	300ms
02 2D	sixteenth note
02 2E	eighth note triplet
02 2F	dotted sixteenth note
02 30	eighth note
02 31	quarter note triplet
02 32	dotted eighth note
02 33	quarter note

Table Assign Trigger <ASSIGN>

Data(H)	Description
00	PatchChange
01	EXP PEDAL1
02	CTL PEDAL1
03	CTL PEDAL2
04	EXP PEDAL2
05	CTL PEDAL3
06	CTL PEDAL4
07	FC-200 EXP PEDAL
08	FC-200 CTL PEDAL
09	MIDI CC# 1
0A	MIDI CC# 2
:	:
27	MIDI CC#31
28	MIDI CC#64
:	:
47	MIDI CC#95

Table CE Pre Delay

<2CE/CE: Pre Delay>

Data(H)	Description
00	0.0ms
01	0.5ms
:	:
50	40.0ms

Table Manual Pedal <Manual>

Data(H)	Description
00	Off
01	Preamp Ch A/B
02	Solo On/Off
03	FX-1 On/Off
04	Comp On/Off
05	Wah On/Off
06	Loop On/Off
07	OD/DS On/Off
08	Preamp On/Off
09	EQ On/Off
0A	FX-2 On/Off
0B	Delay On/Off
0C	Chorus On/Off
0D	Reverb On/Off
0E	Pre Loop On/Off
0F	Amp Ctl1 On/Off
10	Amp Ctl2 On/Off
11	TUNER On/Off
12	Hold Dly Rec/Dub
13	Hold Dly Stop
14	Patch Num. Inc
15	Patch Num. Dec
16	Patch Bank Inc
17	Patch Bank Dec

Table DD Dual Delay Time <DD: D1 Time/D2 Time>

Data(H)	Description
00 00	0ms
00 01	1ms
:	:
00 7F	127ms
01 00	128ms
:	:
01 7F	255ms
02 00	256ms
:	:
07 04	900ms
07 05	sixteenth note
07 06	eighth note triplet
07 07	dotted sixteenth note
07 08	eighth note
07 09	quarter note triplet
07 0A	dotted eighth note
07 0B	quarter note
07 0C	half note triplet
07 0D	dotted quarter note
07 0E	half note
07 0F	whole note triplet
07 10	dotted half note
07 11	whole note

Table Assign CTL Function <ASSIGN: CTL/EXP SW Function>

Data(H)	Description
00	Assignable
01	Preamp Ch A/B
02	Solo On/Off
03	FX-1 On/Off
04	Comp On/Off
05	Wah On/Off
06	Loop On/Off
07	OD/DS On/Off
08	Preamp On/Off
09	EQ On/Off
0A	FX-2 On/Off
0B	Delay On/Off
0C	Chorus On/Off
0D	Reverb On/Off
0E	Pre Loop On/Off
0F	Amp Ctl1 On/Off
10	Amp Ctl2 On/Off
11	MANUAL On/Off
12	TUNER On/Off
13	Master BPM(Tap)
14	Delay Time(Tap)
15	MIDI Start/Stop
16	MMC Play/Stop
17	Patch Level Inc1
18	Patch Level Inc2
19	Patch Level Dec1
1A	Patch Level Dec2
1B	Hold Dly Rec/Dub
1C	Hold Dly Stop
1D	Solo A&B On/Off
1E	Patch Num. Inc
1F	Patch Num. Dec
20	Patch Bank Inc
21	Patch Bank Dec

Roland Exclusive Messages

1. Data Format for Exclusive Messages

Roland's MIDI implementation uses the following data format for all Exclusive messages (type IV):

Byte	Description
F0H	Exclusive Status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
CMD	Command ID
[BODY]	Main data
F7H	End of exclusive

•MIDI status: F0H, F7H

An Exclusive message must be flanked by a pair of status codes, starting with a Manufacturer ID immediately after F0H (MIDI version 1.0).

•Manufacturer ID: 41H

The Manufacturer ID identifies the manufacturer of a MIDI instrument that sends an Exclusive message. Value 41H represents Roland's Manufacturer ID.

•Device ID: DEV

The Device ID contains a unique value that identifies individual devices in the implementation of several MIDI instruments. It is usually set to 00H–0FH, a value smaller by one than that of a basic channel, but value 00H–1FH may be used for a device with several basic channels.

•Model ID: MDL

The Model ID contains a value that identifies one model from another. Different models, however, may share an identical Model ID if they handle similar data.

The Model ID format may contain 00H in one or more places to provide an extended data field. The following are examples of valid Model IDs, each representing a unique model:

01H
02H
03H
00H, 01H
00H, 02H
00H, 00H, 01H

•Command ID: CMD

The Command ID indicates the function of an Exclusive message. The Command ID format may contain 00H in one or more places to provide an extended data field. The following are examples of valid Command IDs, each representing a unique function:

01H
02H
03H
00H, 01H
00H, 02H
00H, 00H, 01H

•Main data: BODY

This field contains a message to be exchanged across an interface. The exact data size and content will vary with the Model ID and Command ID.

2. Address-mapped Data Transfer

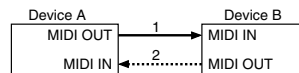
Address mapping is a technique for transferring messages conforming to the data format given in Section 1. It assigns a series of memory-resident records—waveform and tone data, switch status, and parameters, for example, to specific locations in a machine-dependent address space, thereby allowing access to data residing at the address a message specifies.

Address-mapped data transfer is therefore independent of models and data categories. This technique allows use of two different transfer procedures: one-way transfer and handshake transfer.

•One-way transfer procedure (See Section 3 for details.)

This procedure is suited to the transfer of a small amount of data. It sends out an Exclusive message completely independent of the receiving device's status.

Connection Diagram

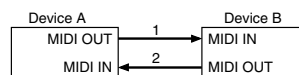


Connection at point 2 is essential for "Request data" procedures. (See Section 3.)

•Handshake-transfer procedure (This device does not use this procedure)

This procedure initiates a predetermined transfer sequence (handshaking) across the interface before data transfer takes place. Handshaking ensures that reliability and transfer speed are high enough to handle a large amount of data.

Connection Diagram



Connection at points 1 and 2 is essential.

Notes on the above procedures

* There are separate Command IDs for different transfer procedures.

* Devices A and B cannot exchange data unless they use the same transfer procedure, share identical Device ID and Model ID, and are ready for communication.

3. One-way Transfer Procedure

This procedure sends out data until it has all been sent and is used when the messages are so short that answerbacks need not be checked.

For longer messages, however, the receiving device must acquire each message in time with the transfer sequence, which inserts 20 milliseconds intervals.

Types of Messages

Message	Command ID
Request data 1	RQ1 (11H)
Data set 1	DT1 (12H)

•Request data #1: RQ1 (11H)

This message is sent out when there is a need to acquire data from a device at the other end of the interface. It contains data for the address and size that specify designation and length, respectively, of data required.

On receiving an RQ1 message, the remote device checks its memory for the data address and size that satisfy the request.

If it finds them and is ready for communication, the device will transmit a "Data set 1 (DT1)" message, which contains the requested data. Otherwise, the device won't send out anything.

Byte	Description
F0H	Exclusive Status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
11H	Command ID
aaH	Address MSB
	LSB
ssH	Size MSB
	LSB
sum	Check sum
F7H	End of exclusive

- * The size of the requested data does not indicate the number of bytes that will make up a DT1 message, but represents the address fields where the requested data resides.
- * Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.
- * The same number of bytes comprises address and size data, which, however, vary with the Model ID.
- * The error-checking process uses a checksum that provides a bit pattern where the last 7 bits are zero when values for an address, size, and that checksum are summed.

•Data set 1: DT1 (12H)

This message corresponds to the actual data transfer process. Because every byte in the data is assigned a unique address, a DT1 message can convey the starting address of one or more bits of data as well as a series of data formatted in an address-dependent order.

The MIDI standards inhibit non real-time messages from interrupting an Exclusive one. This fact is inconvenient for devices that support a “soft-thru” function. To maintain compatibility with such devices, Roland has limited the DT1 to 256 bytes so that an excessively long message is sent out in separate ‘segments’.

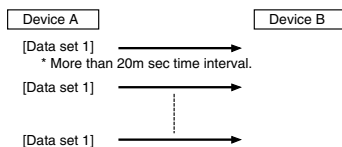
Byte	Description
F0H	Exclusive Status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
12H	Command ID
aaH	Address MSB
	LSB
ddH	Data MSB
	LSB
sum	Check sum
F7H	End of exclusive

- * A DT1 message is capable of providing only the valid data among those specified by an RQ1 message.
- * Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.
- * The number of bytes comprising address data varies from one Model ID to another.
- * The error-checking process uses a checksum that provides a bit pattern where the last 7 bits are zero when values for an address, size, and that checksum are summed.

•Example of Message Transactions

•Device A sending data to Device B

Transfer of a DT1 message is all that takes place.



•Device B requesting data from Device A

Device B sends an RQ1 message to Device A. Checking the message, Device A sends a DT1 message back to Device B.

