

1. TRANSMITTED DATA

1-1 CHANNEL MESSAGES [H]:Hex, [D]:Decimal

Status [Hex]	Second [H] [D]	Third [H] [D]	Description	(Transmitted by)	ENA
Bn	cc (cc)	vv (vv)	Control Change cc=00~5F(00~95)	(VC.C)	C
Cn	pp (pp)	-- --	Program Change pp=00~5F(00~95)	(Program Change)	P

n : MIDI Channel (0~F)

vv : Value

VC.C : VOX FOOT CONTROLLER Control

ENA = C : Enabled when "CCHG I/O" Global Parameter is "On".

P : Enabled when "PCHG OUT" Global Parameter is "On".

1-2 UNIVERSAL SYSTEM EXCLUSIVE MESSAGE

DEVICE INQUIRY REPLY

Byte [Hex]	Description
F0	Exclusive Status
7E	Non Realtime Message
0n	Device ID (MIDI Channel)
06	Inquiry Message
02	Identity reply
42	KORG ID (Manufacturers ID)
6D	VOX Digital Products ID (Family ID (LSB))
00	(Family ID (MSB))
00	ToneLab ID (Member ID (LSB))
00	(Member ID (MSB))
vv	00~ (Minor Ver. (LSB))
00	(Minor Ver. (MSB))
vv	01~ (Major Ver. (LSB))
00	(Major Ver. (MSB))
F7	End of Exclusive

This message is transmitted whenever a INQUIRY MESSAGE REQUEST is received.

1-3 KORG SYSTEM EXCLUSIVE MESSAGE

Byte [Hex]	Description
F0	Exclusive Status
42	KORG ID
3n	Format ID (n: MIDI Channel)
6D	VOX Digital Products ID
00	ToneLab ID
ff	Function Code
(dd)	Data
F7	End of Exclusive

See 3.KORG SYSTEM EXCLUSIVE MESSAGE FORMAT for more info.

2. RECOGNIZED RECEIVE DATA

2-1 CHANNEL MESSAGES [H]:Hex, [D]:Decimal

Status [Hex]	Second [H] [D]	Third [H] [D]	Description	(Use	ENA
Bn	cc (cc)	vv (vv)	Control Change cc=00~5F(00~95)	(for VC.C)	C
Cn	pp (pp)	-- --	Program Change pp=00~5F(00~95)	(for Prog Change)	P

n : MIDI Channel (0~F)

vv : Value

VC.C : Same as VOX FOOT CONTROLLER Control

ENA = C : Enabled when "CCHG I/O" Global Parameter is "On".

P : Enabled when Program Select Mode.

2-2 UNIVERSAL SYSTEM EXCLUSIVE MESSAGE

DEVICE INQUIRY MESSAGE REQUEST

Byte [Hex]	Description
F0	Exclusive Status
7E	Non Realtime Message
nn	Device ID
06	Inquiry Message
01	Inquiry Request
F7	End of Exclusive

nn = 00 ~ 0F :MIDI Channel
 = 7F :Any Channel

2-3 KORG SYSTEM EXCLUSIVE MESSAGE

Byte [Hex]	Description
F0	Exclusive Status
42	KORG ID
3n	Format ID (n: MIDI Channel)
6D	VOX Digital Products ID
00	ToneLab ID
ff	Function Code
(dd)	Data
F7	End of Exclusive

See 3.KORG SYSTEM EXCLUSIVE MESSAGE FORMAT for more info.

3.KORG SYSTEM EXCLUSIVE MESSAGE FORMAT

Function Code List (R:Receive, T:Transmit)

Func [Hex]	Description	R	T (*1) (*2)	
12	MODE REQUEST	o		
10	CURRENT PROGRAM PARAMETER DUMP REQUEST	o		
1C	PROGRAM PARAMETER DUMP REQUEST	o		
0E	GLOBAL DATA DUMP REQUEST	o		
0F	ALL DATA (PROGRAM,GLOBAL) DUMP REQUEST	o		
11	PROGRAM WRITE REQUEST	o		
40	CURRENT PROGRAM PARAMETER DUMP	o	r,D	
4C	PROGRAM PARAMETER DUMP	o	r	
51	GLOBAL DATA DUMP	o	r	
50	ALL DATA (PROGRAM,GLOBAL) DUMP	o	r,D	
4E	MODE CHANGE	o		M
41	PARAMETER CHANGE	o		C
42	MODE DATA		r	
26	DATA FORMAT ERROR		E	
23	DATA LOAD COMPLETED		E	
24	DATA LOAD ERROR		E	
21	WRITE COMPLETED		E	W
22	WRITE ERROR		E	

*1 : Transmitted when
 r : Request message is received.
 E : Exclusive message is received.
 D : DATA DUMP is executed by Switch.

*2 : Transmitted when "SYEX OUT" Global Parameter is "On" and
 M : Mode is changed by Switch.
 C : Parameter is changed by Switch or Knob.
 W : DATA WRITE by Switch is completed.

(1) MODE REQUEST

R

Byte	Description
F0,42,3n,6D,00	Exclusive Header
12	Function Code
F7	End of Exclusive

Receive this message, and transmits Func=42 message.

(2) CURRENT PROGRAM PARAMETER DUMP REQUEST R

Byte	Description
F0,42,3n,6D,00	Exclusive Header
10	Function Code
F7	End of Exclusive

Receives this message, and transmits Func=40 or Func=24 message.

(3) PROGRAM PARAMETER DUMP REQUEST R

Byte	Description
F0,42,3n,6D,00	Exclusive Header
1C	Function Code
0mk0 0000	Mode, Kind (NOTE 7)
0ppp pppp	Program No.
F7	End of Exclusive

Receives this message, and transmits Func=4C or Func=24 message.

(4) GLOBAL DATA DUMP REQUEST R

Byte	Description
F0,42,3n,6D,00	Exclusive Header
0E	Function Code
F7	End of Exclusive

Receives this message, and transmits Func=51 or Func=24 message.

(5) ALL DATA (PROGRAM,GLOBAL) DUMP REQUEST R

Byte	Description
F0,42,3n,6D,00	Exclusive Header
0F	Function Code
F7	End of Exclusive

Receives this message, and transmits Func=50 or Func=24 message.

(6) PROGRAM WRITE REQUEST R

Byte	Description
F0,42,3n,6D,00	Exclusive Header
11	Function Code
00	(Reserved)
0ppp pppp	Destination Program No.
F7	End of Exclusive

Receives this message, write the data and transmits Func=21 or Func=22 message.

(7) CURRENT PROGRAM PARAMETER DUMP R , T

Byte	Description
F0,42,3n,6D,00	Exclusive Header
40	Function Code
0ddd dddd	Data (NOTE 1)
:	:
F7	End of Exclusive

Receives this message & data, save them to Current Buffer and transmits Func=23 or Func=24 message.
Receives Func=10 message, and transmits this message & data.
Transmits this message & data when DATA DUMP is executed.

(8) PROGRAM PARAMETER DUMP R , T

Byte	Description
F0,42,3n,6D,00	Exclusive Header
4C	Function Code
0mk0 0000	Mode, Kind (NOTE 7)
0ppp pppp	Program No.
0ddd dddd	Data (NOTE 2,3)
:	:
F7	End of Exclusive

Receives this message & data, save them to Internal Memory and transmits Func=23 or Func=24 message.

Receives Func=1C message, and transmits this message & data.

(9) GLOBAL DATA DUMP R , T

Byte	Description
F0,42,3n,6D,00	Exclusive Header
51	Function Code
0ddd dddd	Data (NOTE 4)
:	:
F7	End of Exclusive

Receives this message & data, save them to Internal Memory and transmits Func=23 or Func=24 message.
Receives Func=0E message, and transmits this message & data.

(10) ALL DATA (PROGRAM,GLOBAL) DUMP R , T

Byte	Description
F0,42,3n,6D,00	Exclusive Header
50	Function Code
0ddd dddd	Data (NOTE 5)
:	:
F7	End of Exclusive

Receives this message & data, save them to Internal Memory and transmits Func=23 or Func=24 message.
Receives Func=0F message, and transmits this message & data.
Transmits this message & data when DATA DUMP is executed.

(11) MODE CHANGE R , T

Byte	Description
F0,42,3n,6D,00	Exclusive Header
4E	Function Code
0m00 0000	Mode (NOTE 6)
0ppp pppp	Program No.
F7	End of Exclusive

Receives this message & data, changes the Mode and transmits Func=23 or Func=24.
When the Mode or Program is changed by Switch, transmits this message & data.

(12) PARAMETER CHANGE R , T

Byte	Description
F0,42,3n,6D,00	Exclusive Header
41	Function Code
0ppp ppp	Parameter ID (TABLE 1)
0sss sss	Parameter SUB ID (TABLE 1)
0vvv vvv	Value (MSB bit13~7)
0vvv vvv	Value (LSB bit 6~0)
F7	End of Exclusive

Receives this message & data, change a Parameter and transmits Func=23 or Func=24 message.
When the Parameter is changed by Switch & Knob, transmit this message & data.

(13) MODE DATA T

Byte	Description
F0,42,3n,6D,00	Exclusive Header
42	Function Code
0m00 0000	Mode (NOTE 6)
0ppp pppp	Program No.
F7	End of Exclusive

Receive Func=12 message, and transmits this message & data.

(14) DATA FORMAT ERROR T

Byte	Description
F0,42,3n,6D,00	Exclusive Header
26	Function Code
F7	End of Exclusive

Transmits this message when there is an error in the MIDI IN message.

(15) DATA LOAD COMPLETED (ACK) T

Byte	Description
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F0,42,3n,6D,00	Exclusive Header
23	Function Code
F7	End of Exclusive

Transmits this message when DATA LOAD, PROCESSING have been completed.

(16) DATA LOAD ERROR (NAC) T

Byte	Description
F0,42,3n,6D,00	Exclusive Header
24	Function Code
F7	End of Exclusive

Transmits this message when DATA LOAD, PROCESSING have not been completed.

(17) WRITE COMPLETED T

Byte	Description
F0,42,3n,6D,00	Exclusive Header
21	Function Code
00	(Reserved)
0ppp pppp	Destination Program No.
F7	End of Exclusive

Transmits this message when DATA WRITE have been completed.

(18) WRITE ERROR T

Byte	Description
F0,42,3n,6D,00	Exclusive Header
22	Function Code
00	(Reserved)
0ppp pppp	Destination Program No.
F7	End of Exclusive

Transmits this message when DATA WRITE MIDI have not been completed.

NOTE 1: CURRENT PROGRAM PARAMETER (in Current Buffer) DUMP FORMAT
 92Bytes = 7*13+1 -> 8*13+(1+1) => 106Bytes
 (TABLE 1)

NOTE 2: PROGRAM PARAMETER (in Internal Memory) DUMP FORMAT (1 Program, Manual Mode Program)
 Same as CURRENT PROGRAM PARAMETER DUMP FORMAT.

NOTE 3: PROGRAM PARAMETER (in Internal Memory) DUMP FORMAT (All Program)
 [Prog 1-1(92Bytes)],..., [Prog 24-4(92Bytes)]
 92*96Bytes = 7*1261+5 -> 8*1261+(1+5) => 10094Bytes

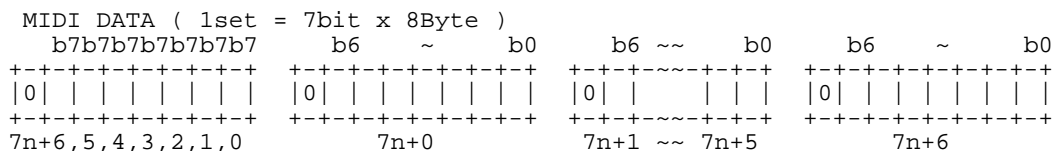
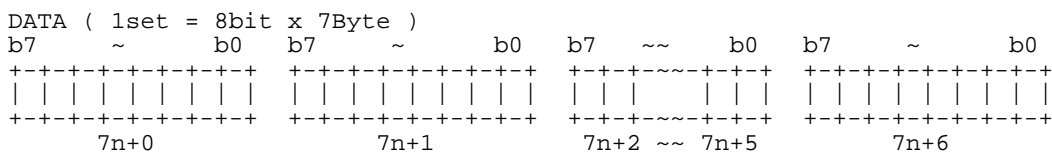
NOTE 4: GLOBAL DATA (in Internal Memory) DUMP FORMAT
 16Bytes = 7*2+2 -> 8*2+(1+2) => 19Bytes
 (TABLE 2)

NOTE 5: ALL DATA (in Internal Memory) DUMP FORMAT
 [Prog 1-1(92Bytes)],..., [Prog 24-4(92Bytes)], [Manual Mode Program], [Global Data].
 92*97+16Bytes = 7*1277+1 -> 8*1277+(1+1) => 10218Bytes

NOTE 6: m = 0 : Program Select Mode (Use p)
 1 : Manual Mode

NOTE 7: m = 0 : Program Select Mode Program (Use k)
 1 : Manual Mode Program
 k = 0 : All Program (Except for Manual Mode Program)
 1 : 1 Program (Use p)

NOTE 8: DUMP DATA CONVERSION



[TABLE 1] PROGRAM PARAMETERS

No. : Address in the PROGRAM DUMP DATA.
 PARA No. : Parameter ID, SUB ID for PARAMETER CHANGE.

No. [Dec]	PARAMETER	DATA [Hex]	VALUE	PARA No. [Hex]
00 : 07	PROGRAM NAME (1st) : PROGRAM NAME (8th)	20~5F	ASCII code ' ' ~ '_'	00,00 : 00,07
08	CH VOLUME	00~64	0.0~10.0	01,00
09	NR SENS	0,1~32	OFF,0.2~10.0	01,01
EFFECT STATUS				
10 : b0	PEDAL	00,01	Off,On	02,00
b1	MODULATION	00,01	Off,On	02,01
b2	DELAY	00,01	Off,On	02,02
b3	REVERB	00,01	Off,On	02,03
b4 : b7	(Reserved)			
11 : 12	(Reserved)			
PEDAL EFFECT PARAMETERS				
13	Effect Type	00~0A	OFF ~ FUZZ (TABLE 1-1)	03,00
14 : 21	Parameter Structure (TABLE 1-1)			04,?? : 04,??
MODULATION EFFECT PARAMETERS				
22	Effect Type	00~05	OFF ~ ROTARY (TABLE 1-2)	03,01
23 : 30	Parameter Structure (TABLE 1-2)			05,?? : 05,??
DELAY EFFECT PARAMETERS				
31	Effect Type	00~03	OFF ~ MULTI HEAD (TABLE 1-3)	03,02
32 : 39	Parameter Structure (TABLE 1-3)			06,?? : 06,??
REVERB EFFECT PARAMETERS				
40	Effect Type	00~03	OFF ~ PLATE (TABLE 1-4)	03,03
41 : 48	Parameter Structure (TABLE 1-4)			07,?? : 07,??
AMP PARAMETERS				
49	AMP Type	00~0F	AC15 ~ TWEED 4x10 (TABLE 1-5)	03,04
50	GAIN	00~64	0.0~10.0	08,00
51	VR GAIN	00~64	0.0~10.0	08,01
52	TREBLE	00~64	0.0~10.0	08,02
53	MIDDLE	00~64	0.0~10.0	08,03
54	BASS	00~64	0.0~10.0	08,04
55	PRESENCE	00~64	0.0~10.0	08,05
56 : 57	(Reserved)			
CABINET PARAMETERS				

58	CABINET Type	00~0A	TWEED 1x12 ~ OFF (TABLE 1-6)	03,05
59 : 62	(Reserved)			
63 : 76	(Reserved)			
EXPRESSION PEDAL				
77	b0~2	(Reserved)		
	b3~5	Target	0,1~4 (TABLE 1-7)	0C,00
	b6,7	(Reserved)		
78~79	Target Range (MIN)		(TABLE 1-7)	0C,01
80~81	Target Range (MAX)		(TABLE 1-7)	0C,02
82 : 91	(Reserved)			

[TABLE 1-1] PEDAL EFFECT Parameter Structure

Offset [Dec]	PARAMETER	DATA [Hex]	VALUE	SUB ID [Hex]
COMP Effect Type = 01				
00	SENS	00~5A	1.0~10.0	00
01	ATTACK	00~5A	1.0~10.0	01
02	LEVEL	00~64	0.0~10.0	02
ACOUSTIC Effect Type = 02				
00	BASS	00~64	0.0~10.0	00
01	BODY	00~5A	1.0~10.0	01
02	TREBLE	00~64	0.0~10.0	02
VOX WAH Effect Type = 03				
00	CLOSE	00~5A	1.0~10.0	00
01	PEDAL	00~64	0.0~10.0	01
02	OPEN	00~5A	1.0~10.0	02
AUTO WAH Effect Type = 04				
00	SENS	00~64	0.0~10.0	00
01	ATTACK	00~5A	1.0~10.0	01
02	POLARITY	00,01	UP,DOWN	02
U-VIBE Effect Type = 05				
00	SPEED	32~64	1.0~10.0 [Hz] (*3)	00
01	MIX	00~64	0.0~10.0	01
02	DEPTH	00~64	0.0~10.0	02
OCTAVE Effect Type = 06				
00	1 OCTAVE	00~64	0.0~10.0	00
01	DIRECT	00~64	0.0~10.0	01
02	2 OCTAVE	00~64	0.0~10.0	02
TREBLE BOOST Effect Type = 07				
TUBE OD Effect Type = 08				
FAT OD Effect Type = 09				
FUZZ Effect Type = 0A				
00	DRIVE	00~5A	1.0~10.0	00
01	TONE	00~5A	1.0~10.0	01
02	LEVEL	00~64	0.0~10.0	02

[TABLE 1-2] MODULATION EFFECT Parameter Structure

Offset [Dec]	PARAMETER	DATA [Hex]	VALUE	SUB ID [Hex]
CHORUS		Effect Type = 01		
00	SPEED	00~64	0.1~10.0 [Hz] (*3)	00
01	MIX	00~64	0.0~10.0	01
02	DEPTH	00~64	0.0~10.0	02
03	MANUAL	00~5A	1.0~10.0	03
FLANGER		Effect Type = 02		
00	SPEED	00~64	0.1~10.0 [Hz] (*3)	00
01	RESONANCE	00~64	0.0~10.0	01
02	DEPTH	00~64	0.0~10.0	02
03	MANUAL	00~5A	1.0~10.0	03
04	MIX	00~64	0.0~10.0	04
PHASER		Effect Type = 03		
00	SPEED	00~64	0.1~10.0 [Hz] (*3)	00
01	RESONANCE	00~64	0.0~10.0	01
02	DEPTH	00~64	0.0~10.0	02
03	MANUAL	00~5A	1.0~10.0	03
TREMLOLO		Effect Type = 04		
00	SPEED	32~64	1.0~10.0 [Hz] (*3)	00
01	SPREAD	00~64	0.0~10.0	01
02	DEPTH	00~64	0.0~10.0	02
ROTARY		Effect Type = 05		
00	SPEED	2D~64	0.8~10.0 [Hz] (*3)	00
01	TIME	00~5A	1.0~10.0	01
02	DEPTH	00~64	0.0~10.0	02

[TABLE 1-3] DELAY EFFECT Parameter Structure

Offset [Dec]	PARAMETER	DATA [Hex]	VALUE	SUB ID [Hex]
DELAY		Effect Type = 01		
00~01	TIME	00~7D0	0 ~ 2000 [ms]	00
02	MIX	00~64	0.0~10.0	01
03	FEEDBACK	00~64	0.0~10.0	02
TAPE ECHO		Effect Type = 02		
00~01	TIME	00~7D0	0 ~ 2000 [ms]	00
02	MIX	00~64	0.0~10.0	01
03	FEEDBACK	00~64	0.0~10.0	02
04	TONE	00~5A	1.0~10.0	03
MULTI HEAD		Effect Type = 03		
00~01	TIME	00~7D0	0 ~ 2000 [ms]	00
02	MIX	00~64	0.0~10.0	01
03	FEEDBACK	00~64	0.0~10.0	02
04	TONE	00~5A	1.0~10.0	03
05	MODE	00~04	1~5	04

[TABLE 1-4] REVERB EFFECT Parameter Structure

Offset [Dec]	PARAMETER	DATA [Hex]	VALUE	SUB ID [Hex]
SPRING		Effect Type = 01		
ROOM		Effect Type = 02		
PLATE		Effect Type = 03		
00	LO DAMP	00~64	0.0~10.0	00
01	MIX	00~64	0.0~10.0	01
02	HI DAMP	00~64	0.0~10.0	02

[TABLE 1-5] AMP Type List

DATA [Hex]	AMP Type
00	AC15
01	AC15TB
02	AC30
03	AC30TB
04	UK BLUES
05	UK 68P
06	UK '80S
07	UK '90S
08	UK MODERN
09	RECTO
0A	US HIGAIN
0B	BOUTIQUE OD
0C	BOUTIQUE CL
0D	BLACK 2x12
0E	TWEED 1x12
0F	TWEED 4x10

[TABLE 1-6] CABINET Type List

DATA [Hex]	CABINET Type
00	TWEED 1x12
01	TWEED 4x10
02	BLACK 2x10
03	BLACK 2x12
04	VOX AC15
05	VOX AC30
06	VOX AD412
07	UK H30 4x12
08	UK T75 4x12
09	US V30 4x12
0A	OFF

[TABLE 1-7] EXPRESSION PEDAL Target List

DATA [Hex]	Target Effect Type : Target Param	TARGET RANGE DATA[Hex] : VALUE
00	--- (No Target)	
01	PDL (PEDAL) VOX WAH : PEDAL U-VIBE : SPEED	Same as PEDAL EFFECT Parameter Same as PEDAL EFFECT Parameter
02	MOD (MODULATION) CHORUS : SPEED FLANGER : MANUAL PHASER : SPEED TREMOLO : SPEED ROTARY : SPEED	Same as MODULATION EFFECT Parameter Same as MODULATION EFFECT Parameter Same as MODULATION EFFECT Parameter Same as MODULATION EFFECT Parameter Same as MODULATION EFFECT Parameter
03	DLY (DELAY) any type : Input Level	00~64 : 0.0~10.0
04	REV (REVERB) any type : Input Level	00~64 : 0.0~10.0

*3 : DATA[Hex] VALUE[Hz]
 00~09 0.100 ~ 0.145 (0.005 step)
 0A~18 0.15 ~ 0.29 (0.01 step)
 19~27 0.30 ~ 0.58 (0.02 step)
 28~31 0.60 ~ 0.96 (0.04 step)
 32~3B 1.00 ~ 1.45 (0.05 step)
 3C~4A 1.5 ~ 2.9 (0.1 step)
 4B~59 3.0 ~ 5.8 (0.2 step)
 5A~63 6.0 ~ 9.6 (0.4 step)
 64 10.0

[TABLE 2] GLOBAL PARAMETERS

No. : Address in the GLOBAL DUMP DATA.
 PARA No. : Parameter ID, SUB ID for PARAMETER CHANGE.

No. [Dec]	PARAMETER	DATA [Hex]	VALUE	PARA No. [Hex]	
00	b0~3	MIDI Channel	0~F	1~16	40,00
	b4~7	(Reserved)			
01	b0	MIDI ProgChg Output	00,01	Off, On	41,00
	b1	MIDI CtrlChg In/Out	00,01	Off, On	41,01
	b2	MIDI SysEx Output	00,01	Off, On	41,02
	b3,4	(Reserved)			
	b5	EXP Pedal Ctrl Init	00,01	Off, On	41,05
	b6,7	(Reserved)			
02		CC# for EXP Pedal	00,1~60	Off, CC00~CC95	42,00
03		CC# for VOL Pedal	00,1~60	Off, CC00~CC95	42,01
04		CC# for TAP Switch	00,1~60	Off, CC00~CC95	42,02
05		CC# for PEDAL On/Off	00,1~60	Off, CC00~CC95	42,03
06		CC# for MOD On/Off	00,1~60	Off, CC00~CC95	42,04
07		CC# for DELAY On/Off	00,1~60	Off, CC00~CC95	42,05
08		CC# for REVERB On/Off	00,1~60	Off, CC00~CC95	42,06
09~13		(Reserved)			
14		Digital Output Level	00~04	-12,-6,0,6,12 [dB]	43,00
15		(Reserved)			