POD Midi / Sysex Specification and Notes

Born: 1/22/99

Revision history:

- 2/26/99 Modified by Kevin Duca to more accurately represent the current software V1.2
- 3/2/99 Modified by Kevin Duca to correct delay time 1 time

SYSTEM EXCLUSIVE FORMAT:

POD's System Exclusive message format is as follows:

```
F0                SysEx Status
00 01 0C          Line 6 (Fast Forward) Manufacturer ID
01                POD ID
xx                Opcode
yy                Data
F7                EOX
```

UNIVERSAL DEVICE INQUIRY:

POD will respond to the universal system inquiry command if the channel received is the same as POD's MIDI channel, the channel received is 7F (all channels), or POD is set to omni mode. The received message is in the following format:

F0 7E <chan> 06 01 F7 System inquiry message

If <chan> = 7F (Universal All Device Call) POD will respond with the channel also set to 7F.

POD's reply to Universal Device Inquiry

```
F0 7E <chan> 06 02        Universal Device Inquiry Response
00 01 0C                  Line 6 (Fast Forward) Manufacturer ID
00 00                     0x0000 = POD Product Family ID (LSB first)
00 01                     0x0100 = POD Product Family Member (LSB first)
xx xx xx xx               Software revision, ASCI (ex. 30 31 30 30  = '0100' = 1.00)
F7                        EOX
```

DATA DUMP FORMAT:

POD sends and receives Program and Global dump data in ***High-Low Nibbilized*** format. Data Locations in the dump are described later in this document with reference to ONE POD Byte.

```
ONE POD BYTE (8 bits):
0: A7 A6 A5 A4 A3 A2 A1 A0

TRANSMITTED and RECEIVED AS:
0: 00 00 00 00 A7 A6 A5 A4
1: 00 00 00 00 A3 A2 A1 A0
```

SYSTEM EXCLUSIVE OPCODES:

00 SYSEX DATA DUMP REQUEST:

Type:

00: Program Patch Dump Request
0xF0 0x00 0x01 0x0C 0x01 **0x00 0x00** <program #> 0xF7
<program #> = 0x00 ~ 0x23 (1A ~ 9D internal programs)
POD responds with Program Dump (01 00)

01: Program Edit Buffer Dump Request
0xF0 0x00 0x01 0x0C 0x01 **0x00 0x01** 0xF7
POD responds with Program Edit Buffer Dump (01 01)

02: All Programs Dump Request
0xF0 0x00 0x01 0x0C 0x01 **0x00 0x02** 0xF7
POD responds by sending an All Program Dump (01 02)

01 SYSEX DATA DUMP:

Type:

00: Program Patch Dump
0xF0 0x00 0x01 0x0C 0x01 **0x01 0x00** <program #> <version> <data> 0xF7
<program #> = 0x00 ~ 0x23 (1A ~ 9D internal programs)
<version> = 0x00 ~ 0x7F
<data> = 144 bytes nibbilized (71 actual data bytes)

01: Program Edit Buffer Dump
0xF0 0x00 0x01 0x0C 0x01 **0x01 0x01** <<version> data> 0xF7
<version> = 0x00 ~ 0x7F
<data> = 1 Program = 144 bytes nibbilized (71 actual data bytes)

02: All Programs Dump
0xF0 0x00 0x01 0x0C 0x01 **0x01 0x02** <version> <data> 0xF7
<version> = 0x00 ~ 0x7F
<data> = All Programs = 5184 bytes nibbilized (2556 actual data bytes)

VERSION DATA:

GROUP	PARAMETER	MIDI CONTROLLER EDITING				POD DATA DUMP					
		Special Notes	Edit CC#	CC Range Min	CC Range Max	Byte Addr.	Bits	Bit Field MSb	Bit Field LSb	Data Format Notes	Controlled By
VERSION	Dump Version						7	6	0	Range = 0~127 Current version = 0	Fixed value

Note: The data format version number of the data dump must match what the software of the Pod expects. If there is a mismatch the Pod will not update the patch. Also note that the dump version and the Pod software version are NOT the same things.

PROGRAM DATA:

GROUP	PARAMETER	MIDI CONTROLLER EDITING				POD DATA DUMP					
		Special Notes	Edit CC#	CC Range Min	CC Range Max	Byte Addr.	Bits	Bit Field MSb	Bit Field LSb	Data Format Notes	Controlled By
SWITCHES	Distortion Enable	0~63=Off ; 64~127=On	25	0	127	0	1	0	0	0=Off; 1=On (MIDI/64)	Floorboard/MIDI
	Drive Enable	0~63=Off ; 64~127=On	26	0	127	1	1	0	0	0=Off; 1=On (MIDI/64)	Floorboard/MIDI
	EQ Enable (Presence Bump)	0~63=Off ; 64~127=On	27	0	127	2	1	0	0	0=Off; 1=On (MIDI/64)	Floorboard/MIDI
	Delay Enable	0~63=Off ; 64~127=On	28	0	127	3	1	0	0	0=Off; 1=On (MIDI/64)	Floorboard/MIDI
	Tremolo/Rotary Speaker/Chorus/Flange Enable	0~63=Off ; 64~127=On	50	0	127	4	1	0	0	0=Off; 1=On (MIDI/64)	Floorboard/MIDI
	Reverb Enable	0~63=Off ; 64~127=On	36	0	127	5	1	0	0	0=Off; 1=On (MIDI/64)	Floorboard/MIDI
	Noise Gate Enable	0~63=Off ; 64~127=On	22	0	127	6	1	0	0	0=Off; 1=On (MIDI/64)	Front Panel Button/MIDI
	Bright Switch Enable	0~63=Off ; 64~127=On only for some amps (see Amp Model Type Table)	73	0	127	7	1	0	0	0=Off; 1=On (MIDI/64)	MIDI
PREAMP	Amp Model	(see Amp Model Type Table)	12	0	27	8	6	5	0	Range = 0~27	Front Panel Knob (only 16 available from knob)/MIDI
	Drive		13	0	127	9	6	5	0	Range = 0~63 (MIDI/2)	Front Panel Knob/MIDI

	Drive 2	(only used if Amp Type == POD Layer) (see Amp Model Type Table)	20	0	127	10	6	5	0	Range = 0~63 (MIDI/2)	Front Panel Knob/MIDI
	Bass		14	0	127	11	6	5	0	Range = 0~63 (MIDI/2)	Front Panel Knob/MIDI
	Mid		15	0	127	12	6	5	0	Range = 0~63 (MIDI/2)	Front Panel Knob/MIDI
	Treble		16	0	127	13	6	5	0	Range = 0~63 (MIDI/2)	Front Panel Knob/MIDI
	Presence	only for some amps (see Amp Model Type Table)	21	0	127	14	6	5	0	Range = 0~63 (MIDI/2)	MIDI
	Chan Vol		17	0	127	15	6	5	0	Range = 0~63 (MIDI/2)	Front Panel Knob/MIDI
NOISE GT	Threshold	0=-96dB; 127=0dB	23	0	127	16	6	5	0	Range = 0~96 ((127 - MIDI)*194/256)	MIDI
	Decay Time	0=8.1msecs; 127=159msecs	24	0	127	17	6	5	0	Range = 0~63 (MIDI/2)	MIDI
WAH WAH	Level		4	0	127	18	7	6	0	Range = 0~127	Floorboard/MIDI
	Bottom Frequency		44	0	127	19	7	6	0	Range = 0~127	MIDI
	Top Frequency		45	0	127	20	7	6	0	Range = 0~127	MIDI
	Delta					21	7	6	0	(TopFreq - BottomFreq) Don't care - Internal use only	
VOL.PEDAL	Level		7	0	127	22	7	6	0	Range = 0~127	Floorboard/MIDI
	Minimum	Min. Level of Pedal	46	0	127	23	7	6	0	Range = 0~127	MIDI
	Position	0~63 = Pre-Tube Drive 64~127 =Post-Tube Drive	47	0	127	24	1	0	0	0=Pre; 1=Post (MIDI/64)	MIDI
DELAY	Delay Type	Not Implemented				25	1	0	0	Don't care - Not used	
	Time 1 Coarse	See Data Format Note	30	0	127	26	8	7	0	Range = 0~98303	Front Panel Button/MIDI
	Time 1 Fine	See Data Format Note	62	0	127	27	8	7	0	samples@31.2KHz	
						28	1	0	0	(14bit MIDI Coarse/Fine value * 6)	
						29				LSB justified	
	Time 2 Coarse	Not Implemented				30	8	7	0	Don't care - Not used	
	Time 2 Fine	Not Implemented				31	8	7	0	Don't care - Not used	
						32	1	0	0	Don't care - Not used	
						33				Don't care - Not used	
	FeedBack 1		32	0	127	34	6	5	0	Range = 0~63 (MIDI/2)	Front Panel Knob/MIDI

	FeedBack 2	Not Implemented				35	6	5	0	Don't care - Not used	
	Level 1		34	0	127	36	6	5	0	Range = 0~63 (MIDI/2)	Front Panel Knob/MIDI
	Level 2	Not Implemented				37	6	5	0	Don't care - Not used	
REVERB	Reverb Type	0~63=Spring;64~127=Hall	37	0	127	38	1	0	0	0=Spring; 1=Hall (MIDI/64)	MIDI
	Decay		38	0	127	39	6	5	0	Range = 0~63 (MIDI/2)	MIDI
	Tone		39	0	127	40	6	5	0	Range = 0~63 (MIDI/2)	MIDI
	Diffusion		40	0	127	41	6	5	0	Range = 0~63 (MIDI/2)	MIDI
	Density		41	0	127	42	6	5	0	Range = 0~63 (MIDI/2)	MIDI
	Level		18	0	127	43	6	5	0	Range = 0~63 (MIDI/2)	Front Panel Knob/MIDI
CAB SIM.	Cabinet Type	see CabSim Type Table	71	0	15	44	4	3	0	Range = 0~15	MIDI
	Air		72	0	127	45	6	5	0	Range = 0~63 (MIDI/2)	MIDI
FX CONFIG	Effects Select	see Effects Type Table	19	0	15	46	4	3	0	Range = 0~15	Front Panel Knob/MIDI
	Effects Tweak	see Effects Tweak Note	1	0	127	47	6	5	0	Range = 0~63 (MIDI/2)	Front Panel Knob/MIDI
FX UNION	*The following FX parameters occupy common space, usage is dependent upon Effects Select. The UNION size is the size of the largest FX (CHORUS = 7 bytes). Unused bytes in the UNION are Don't Cares - always send a value.*										
SWELL	Attack Time		49	0	127	48	6	5	0	Range = 0~63 (MIDI/2)	Front Panel Knob(Tweak)/MIDI
COMP.	Compression Ratio	0-21=off 22-43=1.4:1 44-65=2:1 66-87=3:1 88-109=6:1 110-127= infinity:1	42	0	127	48	3	2	0	Range = 0~5 (MIDI/22)	Front Panel Knob(Tweak)/MIDI
CHORUS	Speed	See Data Format Note	51	0	127	48 49	8 5	7 4	0 0	Range = 200~65535 msec period (MIDI * 50)	Front Panel Button/MIDI
	Depth	See Data Format Note	52	0	127	50 51	8 1	7 0	0 0	Range = 0~312 samples@31.2KHz (MIDI * 256 / 104)	MIDI
	Feedback	See Data Format Note	53	0	127	52	7	6	0	Range = 0~127 0(max)~63(min)=Negative 64(min)~127(max)=Positive	Front Panel Knob(Tweak)/MIDI
	Pre Delay	See Data Format Note	54	0	127	53	8	7	0	Range = 1~780 samples@31.2KHz	MIDI

						54	2	1	0	(MIDI * 256 / 42)	
FLANGER	Speed	See Data Format Note	51	0	127	48	8	7	0	Range = 200~65535 msec period	Front Panel Button/MIDI
						49	5	4	0	(MIDI * 50)	
	Depth	See Data Format Note	52	0	127	50	8	7	0	Range = 0~312 samples@31.2KHz	MIDI
						51	1	0	0	(MIDI * 256 / 104)	
	Feedback	See Data Format Note	53	0	127	52	7	6	0	Range = 0~127 0(max)~63(min)=Negative 64(min)~127(max)=Positive	Front Panel Knob(Tweak)/MIDI
	Pre Delay	See Data Format Note	54	0	127	53	8	7	0	Range = 1~780 samples@31.2KHz	MIDI
						54	2	1	0	(MIDI * 256 / 42)	
ROTARY	Current Speed	0~63=Slow;64~127=Fast	55	0	127	48	1	0	0	0=Slow; 1=Fast (MIDI/64)	Front Panel Button/MIDI
	Fast Speed	See Data Format Note	56	0	127	49	8	7	0	Range = 100~65535 msec period	MIDI
						50	4	3	0	(MIDI * 22) + 100	
	Slow Speed	See Data Format Note	57	0	127	51	8	7	0	Range = 100~65535 msec period	MIDI
						52	4	3	0	(MIDI * 22) + 100	
TREMOLO	Speed	See Data Format Note	58	0	127	48	8	7	0	Range = 150~65535 msec period	Front Panel Button/MIDI
						49	4	3	0	(MIDI * 25)	
	Depth		59	0	127	50	7	6	0	Range = 0~127	Front Panel Knob(Tweak)/MIDI
END FX UNION	*end of FX parameter union*										
NAME	Program Name	character 1				55	7	6	0	ASCII	MIDI
		character 2				56	7	6	0	ASCII	MIDI
		character 3				57	7	6	0	ASCII	MIDI
		character 4				58	7	6	0	ASCII	MIDI
		character 5				59	7	6	0	ASCII	MIDI
		character 6				60	7	6	0	ASCII	MIDI
		character 7				61	7	6	0	ASCII	MIDI
		character 8				62	7	6	0	ASCII	MIDI
		character 9				63	7	6	0	ASCII	MIDI
		character 10				64	7	6	0	ASCII	MIDI
		character 11				65	7	6	0	ASCII	MIDI
		character 12				66	7	6	0	ASCII	MIDI

	character 13			67	7	6	0	ASCII	MIDI
	character 14			68	7	6	0	ASCII	MIDI
	character 15			69	7	6	0	ASCII	MIDI
	character 16			70	7	6	0	ASCII	MIDI

Note: Effect Tweak can affect different parameters depending on which effect is selected. Also, Effect Tweak may not reflect the actual value of the Effect Tweak controlled parameter. For example, if delay is the selected effect and the Effect Tweak knob is turned to zero the delay level and effect tweak parameters will be set to zero. If the delay level is then modified via MIDI to 127 the delay level will be 63 while the effect tweak parameter is still zero. Programs can be stored and recalled this way.

Note: Some of the internal values may be greater or smaller than what can be displayed via MIDI controllers. For example, the chorus speed internally is a word value capable of 65 a second period while via the MIDI controller the max value that can be display is 127 corresponding to a 6.3 second period.

Note: the Effect Tweak knob controls The Rotary effect level.

Note: All the data bytes MUST be written – even the Don't Cares. Total data byte count is: 71.

Amp Model Parameter Table:

AMP MODEL	POD Panel	CC Value (in/out)	Drive 2 ?	Bright Switch?	Presence ?
Tube Preamp	0	0			Y
POD Clean	1	1		Y	Y
POD Crunch	2	2		Y	Y
POD Drive	3	3		Y	Y
POD Layer	4	4	Y	Y	Y
Small Tweed	5	5			
Tweed Blues	6	6			Y
Black Panel	7	7			
Modern Class A	8	8			Y
Brit Class A	9	9			
Brit Blues	10	10		Y	Y
Brit Classic	11	11			Y
Brit Hi Gain	12	12			Y
Rectified	13	13			Y
Modern Hi Gain	14	14			
Fuzz Box	15	15			Y
Jazz Clean	n/a	16		Y	Y
Boutique 1	n/a	17			Y
Boutique 2	n/a	18			
Brit Class A 2	n/a	19			
Brit Class A 3	n/a	20			
Small Tweed 2	n/a	21			
Black Panel 2	n/a	22		Y	
Boutique 3	n/a	23			Y
California Crunch 1	n/a	24		Y	Y
California Crunch 2	n/a	25			Y
Rectified 2	n/a	26			Y
Modern Hi Gain 2	n/a	27			Y

Cabinet Type Parameter Table:

CABINET TYPE	Controller / Internal Value
1 x 8 '60 Fender Tweed Champ	0
1 x 12 '52 Fender Tweed Deluxe	1
1 x 12 '60 Vox AC15	2
1 x 12 '64 Fender Blackface Deluxe	3
1 x 12 '98 Line6 Flextone	4
2 x 12 '65 Fender Blackface Twin	5
2 x 12 '67 VOX AC30	6
2 x 12 '65 Matchless Chieftain	7
2 x 12 '98 POD Custom 2x12	8
4 x 10 '59 Fender Bassman	9
4 x 10 '98 POD Custom 4x10	10
4 x 12 '96 Marshall with V30s	11
4 x 12 '78 Marshall with stock 70	12
4 x 12 '97 Marshall off axis	13
4 x 12 '98 POD Custom 4x12	14
No Cabinet Emulation	15

Effects Select Type Parameter Table:

EFFECTS TYPE SELECT	Controller / Internal Value
Compressor	11
Tremolo	9
Chorus 1	8
Chorus 2	0
Flanger 1	1
Flanger 2	3
Rotary Speaker	2
Delay	6
Delay / Compressor	7
Delay / Chorus 1	4
Delay / Chorus 2	12
Delay / Flanger 1	13
Delay / Flanger 2	15
Delay / Tremolo	5
Delay / Swell	14
Bypass	10