MIDI PC & CC SPECIFICATION

BASIC INFORMATION	TRANSMITTED	RECOGNISED	REMARKS
MIDI Channels	Y (1)	Y (1-16)	Dedicated USB MIDI connection
Note Numbers	Y	N	Tuner mode outputs note data
Program Change	Y (0-99)	Y (0-99)	
Back Select Response	Y 9	N	
Modes Supported:			
Mode 1: Omni-On, Poly		N	
Mode 2: Omni-On, Mono		N	
Mode 3: Omni-Off, Poly		N	
Mode 4: Omni-Off, Mono		N	
Multi Mode		N	
Note-On Velocity	N	N	
Note-Off Velocity	N	N	
Universal System Exclusive	N	N	
Manufacturer System Exclusive	Y	Y	Preset store & recall

MIDI TIMING AND SYNC.	TRANSMITTED	RECOGNISED	REMARKS
MIDI Clock	N	N	

IMPLEMENTATION CHART

FUNCTION	#	TRANSMITTED	RECOGNISED	REMARKS
Control Change	71	Y (0-100)	Y (0-100)	Bass
	72	Y (0-100)	Y (0-100)	Middle
	74	Y (0-100)	Y (0-100)	Volume
	75	Y (0-1)	Y (0-1)	Pre Fx On/Off
	76	Y (0-3)	Y (0-3)	Pre Fx Type
	77	Y (0-100)	Y (0-100)	Pre Fx Parameter 1
	78	Y (0-100)	Y (0-100)	Pre Fx Parameter 2
	79	Y (0-100)	Y (0-100)	Pre Fx Parameter 3
	80	Y (0-100)	Y (0-100)	Pre Fx Parameter 4
	81	Y (0-1)	Y (0-1)	Amp On/Off
	82	Y (0-14)	Y (0-14)	Amp Type
	83	Y (0-100)	Y (0-100)	Gate Threshold
	85	Y (0-1)	Y (0-1)	Modulation On/Off
	86	Y (0-3)	Y (0-3)	Modulation Type
	87	Y (0-100)	Y (0-100)	Modulation Parameter 1
	89	Y (0-100)	Y (0-100)	Modulation Parameter 2
	90	Y (0-100)	Y (0-100)	Modulation Parameter 3
	102	Y (0-100)	Y (0-100)	Modulation Parameter 4
	103	Y (0-1)	Y (0-1)	Delay On/Off
	104	Y (0-3)	Y (0-3)	Delay Type
	31	Y (0-31)	Y (0-31)	Delay Time MSB*
	63	Y (0-127)	Y (0-127)	Delay Time LSB*
	105	Y (0-100)	Y (0-100)	Delay Parameter 2
	106	Y (0-100)	Y (0-100)	Delay Parameter 3
	107	Y (0-100)	Y (0-100)	Delay Parameter 4
	108	Y (0-1)	Y (0-1)	Reverb On/Off
	109	Y (0-3)	Y (0-3)	Reverb Type
	110	Y (0-100)	Y (0-100)	Reverb Parameter 1
	111	Y (0-100)	Y (0-100)	Reverb Parameter 2
	112	Y (0-100)	Y (0-100)	Reverb Parameter 3
	113	Y (0-100)	Y (0-100)	Reverb Parameter 4
	114	Y (0-1)	Y (0-1)	Power Amp On/Off
	115	Y (0-3)	Y (0-3)	Power Amp Type
	116	Y (0-1)	Y (0-1)	Cabinet On/Off
	117	Y (0-7)	Y (0-7)	Cabinet Type

*Delay time is calculated from the combination of the MSB and LSB controller values to form a 14-bit value providing 0-4000ms. [DelayTimeMs = (DelayTimeMSB<<7) + DelayTimeLSB].

The range of Pre FX, Modulation and Reverb effect parameters are dependent on the currently effected effect Type.

EXCLUSIVE MESSAGES

STATUS	DATA BYTES	DESCRIPTION
0xF0		**SET CURRENT SETTING**
	0x00	MMA ID
	0x21	
	0x15	
	0x7F	Mashall ID
	0x7F	
	0x7F	
	0x72	Access Current Settings
	0x02	Set
	0x00	
	.	Preset Data (62 bytes) described below
	.	
	.	
0xF7		EOX
0xF0		**SET PRESET**
	0x00	MMA ID
	0x21	
	0x15	
	0x7F	Mashall ID
	0x7F	
	0x7F	
	0x73	Access Preset
	0x02	Set
	0x00	
	.	Preset Data (62 bytes) described below
	.	
	.	
0xF7		EOX
0xF0		**RECALL CURRENT SETTINGS**
	0x00	MMA ID
	0x21	
	0x15	
	0x7F	Mashall ID
	0x7F	
	0x7F	
	0x72	Access Current Settings
	0x01	Recall
	0x00	
0xF7		EOX

STATUS	DATA BYTES	DESCRIPTION
0xF0		**RECALL PRESET**
	0x00	MMA ID
	0x21	
	0x15	
	0x7F	Mashall ID
	0x7F	
	0x7F	
	0x72	Access Preset
	0x01	Recall
	0xnn	Preset Number
0xF7		EOX
0xF0		**SET CURRENT SETTINGS**
	0x00	MMA ID
	0x21	
	0x15	
	0xnn	Mashall ID
	0xnn	
	0xnn	
	0xnn	Data location, 0x72 = Current settings 0x73 = Preset
	0x02	Set
	0xnn	Preset Number if applicable
		Preset Data (62 bytes) described below
0xF7		EOX

SYSEX PRESET & RECALL OVERVIEW

SENDING A COMMAND TO CODE
All following Sysex preset commands must follow the same format.
Start of Transmission > Header > Command > End of Transmission

START OF TRANSMISSION
SysEx start byte must be transmitted at the start of every message.

SYSEX BYTE NUMBER	VALUE	DESCRIPTION
0	0xF0	SysEx start byte

HEADER
The Header must be transmitted at the start of every message and contains 6 bytes.

1	0x00	Marshall MIDI Manufacturers Association ID1
2	0x21	Marshall MIDI Manufacturers Association ID2
3	0x15	Marshall MIDI Manufacturers Association ID3
4	0x7F	Marshall Global Family ID
5	0x7F	Marshall Global Model ID
6	0x7F	Marshall Global Device ID

Note: 0x7F is the Marshall ID global address value that allows all units in the CODE range to be addressed.

COMMAND
Command bytes vary in length and allow settings to be set and recalled from one of CODE's 100 presets or it's current settings.

SET CURRENT SETTINGS

7	0x72	Access Current Settings
8	0x02	Set
9	0x00	
PRESET DATA		See below for format of preset data bytes

SET PRESETS

7	0x73	Access Preset
8	0x02	Set
9	0xnn	Preset Number
PRESET DATA		See below for format of preset data bytes

RECALL CURRENT SETTINGS

7	0x72	Access Current Settings
8	0x01	Recall
9	0x00	

RECALL PRESETS

7	0x73	Access Preset
8	0x01	Recall
9	0xnn	Preset Number

END OF TRANSMISSION
SysEx end byte must be transmitted at the end of every message.

LAST	0xF7	SysEx End Byte

RECEIVING A COMMAND FROM CODE
When using the Recall commands specified above CODE will reply with the required preset data using the following format.

Start of Transmission > Header > Data > End of Transmission

START OF TRANSMISSION

SYSEX BYTE NUMBER	VALUE	DESCRIPTION
0	0xF0	SysEx start byte

HEADER
The Header must be transmitted at the start of every message and contains 6 bytes.

1	0x00	Marshall MIDI Manufacturers Association ID1
2	0x21	Marshall MIDI Manufacturers Association ID2
3	0x15	Marshall MIDI Manufacturers Association ID3
4	0x--	Units Marshall Family ID
5	0x--	Units Marshall Model ID
6	0x--	Units Marshall Device ID

DATA

7	0x72 / 0x73	Data location, 0x72 = Current settings 0x73 = Preset
8	0x03	Data is being returned
9	0xnn	Preset number if applicable
PRESET DATA		See below for format of preset data bytes

END OF TRANSMISSION

LAST	0xF7	SysEx End Byte

SYSEX PRESET & RECALL OVERVIEW

SYSEX BYTE NUMBER	DATA RANGE	PARAMETER
10	ASCII	Char_1
11	ASCII	Char_2
12	ASCII	Char_3
13	ASCII	Char_4
14	ASCII	Char_5
15	ASCII	Char_6
16	ASCII	Char_7
17	ASCII	Char_8
18	ASCII	Char_9
19	ASCII	Char_10
20	ASCII	Char_11
21	ASCII	Char_12
22	ASCII	Char_13
23	ASCII	Char_14
24	ASCII	Char_15
25	ASCII	Char_16
26	ASCII	Char_17
27	ASCII	Char_18
28	FIXED VALUE	0x00
29	0-100	Gain
30	0-100	Bass
31	0-100	Middle
32	0-100	Treble
33	0-100	Volume
34	0-1	Pedal_State
35	0-3	Pedal_Type
36		Pedal_P1
37	0-100	Pedal_P2
38	0-100	Pedal_P3
39	0-100	Pedal_P4
40	0-1	Amp_State
41	0-14	Amp_Type
42	0-100	Gate_Threshold
43	0-1	Modulation_State

SYSEX BYTE NUMBER	DATA RANGE	PARAMETER
44	0-3	Modulation_Type
45	0-1	Modulation_P1
46	0-100	Modulation_P2
47	0-100	Modulation_P3
48	0-100	Modulation_P4
49	0-1	Delay_State
50	0-3	Delay_Type
51	0-255	Delay_Time_MSB*
52	0-255	Delay_Time_LSB*
53	0-100	Delay_P2
54	0-100	Delay_P3
55	0-100	Delay_P4
56	0-1	Reverb_State
57	0-3	Reverb_Type
58	0-100	Reverb_P1
59	0-100	Reverb_P2
60	0-100	Reverb_P3
61	0-100	Reverb_P4
62	0-1	PowerAmp_State
63	0-3	PowerAmp_Type
64	0-1	Cabinet_State
65	0-7	Cabinet_Type
66	0-100	Resonance
67	0-100	Presence
68	FIXED VALUE	0x01
69	FIXED VALUE	0x02
70	FIXED VALUE	0x03
71	FIXED VALUE	0x04

*Delay time is calculated from the combination of the MSB and LSB controller values to form a 14-bit value providing 0-4000ms. [DelayTimeMs = (DelayTimeMSB<<7) + DelayTimeLSB].

The range of Pre FX, Modulation and Reverb effect parameters are dependent on the currently effected effect Type.

PEDAL TYPE	NAME	DATA RANGE / MODE NAMES
0	Distortion	0-3 (GUV / ODR / DIS)
1	Auto Wah	0-1 (ENV / LFO)
2	Pitch Shifter	0-24 (SEMITONE RANGE)
3	Compressor	0-100 (TONE)

AMP TYPE	NAME	
0	JTM45	
1	CL DSL	
2	CL American	
3	CL JVM	
4	Acoustic	
5	Bluesbreaker	
6	Plexi	
7	CR American	
8	JCM800	
9	50's British	
10	OD JVM	
11	OD DSL	
12	OD American	
13	OD Silver Jubilee	
14	Natural	

MODULATION TYPE	NAME	DATA RANGE / MODE NAMES
0	Chorus	0-1 (CLS / VIB)
1	Flanger	0-1 (JET / MET)
2	Phaser	0-1 (CLS / VBE)
3	Tremelo	0-1 (VLV / SQR)

DELAY TYPE	NAME	
0	Studio	
1	Vintage	
2	Multi	
3	Reverse	

REVERB TYPE	NAME	
0	Room	
1	Hall	
2	Spring	
3	Stadium	

POWERAMP TYPE	NAME	
0	Classic Marshall	
1	Vintage Marshall	
2	British Class A	
3	American Class A/B	

CABINET TYPE	NAME	
0	1936	
1	1936A	
2	1912	
3	1974CX	
4	1960	
5	1960V	
6	1960X	
7	1960AHW	