

## # ZOOM MS-50G/60B/70CDR MIDI Messages

This is a non-official document based on a personal and non-strict experiments.

### ## Short messages

#### ### Patch Select

> [0xc0,pp] : Program Change

Select a patch. pp=patch number (0-49)

#### ### Tuner Mode On/Off

> [0xb0,0x4a,mm] : Control Change CC#74

Tuner Mode On/Off. mm<64:off, mm>=64:on

### ## System Exclusives

#### ### Identity Request

> [0xf0,0x7e,0x00,0x06,0x01,0xf7] : Identity Request

This is a MIDI Universal System Exclusive message, 'Identity Request'.  
returns ID code and version number,  
Bytes 10-13 represents firmware version.

MS-50G : [0xf0,0x7e,0x00,0x06,0x02,0x52,0x58,0x00,0x00,0x00,0x33,0x2e,0x30,0x30,0xf7]  
productID = 0x58, version="3.00"

MS-60B : [0xf0,0x7e,0x00,0x06,0x02,0x52,0x5f,0x00,0x00,0x00,0x31,0x2e,0x30,0x30,0xf7]  
productID = 0x5f, version="1.00"

MS-70CDR : [0xf0,0x7e,0x00,0x06,0x02,0x52,0x61,0x00,0x00,0x00,0x31,0x2e,0x30,0x30,0xf7]  
productID = 0x61, version="1.00"

In following exclusive messages, 4th byte (0x58) is for MS-50G. it should be (0x61) or (0x5f) for MS-70CDR/MS-60B.

#### ### Send Patch

> [0xf0,0x52,0x00,0x58,0x28,effect1,effect2,...,(effect5),(effect6), patch-name,0xf7]  
(50G/70CDR:146bytes, 60B:105bytes)

Write 146bytes/105bytes patch-data to current program.

It consist of effect1-6 or effect1-4 parameters and patch-name. Details are described later.

#### ### Request Patch

> [0xf0,0x52,0x00,0x58,0x29,0xf7]

Request patch-data of current program. it returns 146/105 bytes patch-data (same as Send Patch command)

#### ### Parameter Edit

> [0xf0,0x52,0x00,0x58,0x31,nn,pp,vvLSB,vvMSB,0xf7]

Parameter value edit. nn=effect#(0-5) pp=param#(0-10) vv=value.

It seems effective only for effect1-3

value range is depends on each effect.

pp=0 : switch Effect/Bypass vv=0:off / vv=1:on.

pp=2 : page1-knob1

pp=3 : page1-knob2

.

pp=10: page3-knob3

### ### Store Patch

> [0xf0,0x52,0x00,0x58,0x32,0x01,0x00,0x00,pp,0x00,0x00,0x00,0x00,0xf7]

Force store to memory. pp is patch#(0-49). Message [Storing...] is displayed

### ### Request Current Program

> [0xf0,0x52,0x00,0x58,0x33,0xf7]

Request current bank & program.

The device returns bank select and program change :

[0xb0,0x00,0x00, 0xb0,0x20,0x00, 0xc0,pp]

here the pp=program#(0-49). This is MIDI bank select and program change messages (bank = always 0) .

### ### Parameter Edit Enable

> [0xf0,0x52,0x00,0x58,0x50,0xf7]

Parameter value edit enable. This is needed before Parameter Editing.

### ### Parameter Edit Disable

> [0xf0,0x52,0x00,0x58,0x51,0xf7]

Parameter value edit disable.

### ### ??? :

> [0xf0,0x52,0x00,0x58,0x60,0xf7]

Not yet sure

## ## Patch Data Format

Patch-data is MIDI system exclusive data.

It starts with F0 and ends with F7

146bytes MS-50G/MS-70CDR

105bytes MS-60B

consist of :

> F0 52 00 (devid) 28.. eff1 eff2,... (eff5 eff6) patchName F7

here the devid is:

0x58 MS-50G

0x5F MS-60B, (eff5,eff6) is not exist

0x61 MS-70CDR

eff1 to eff6 include the on/off state, type of each effect, parameter values. bit arrangement is scrambled rather than fixed format.

In the following table, the notation like '1p2b3' means :

`[Effect number(0-5)] p [Parameter number(0-8)] b [bit(0-7)]`.

0cab ... Seems a special byte used in AMP cabinet model

0x00 if "OFF"

0x50 v1 B-AMP (SVT - MarkB)

0x51 v2 B-AMP (SMR - Heaven)

0x40 G-AMP

(this is depends on CAB setting, not for effect type)

0v ... Also a special bit for B-AMP? it is ON if the effect is ver2 B-AMP

(this is for effect type, not for CAB setting)

Other notation means :

- 0t ... Effect1 Type Bits
- 0EfOn ... Effect1 On/Off
- c0 ... Current Effect Focus 6-n => 0-5
- n0 ... Max Effect Number
- df0 ... DSP full bits
- N0-N9 ... Patch Name (max 10char)
- tt0-7 ... Tap Tempo

Offset	Data								MS60B
0	0xF0								
1	0x52								
2	0x00								
3	0x58								0x5f (id byte)
4	0x28								
	b7	b6	b5	b4	b3	b2	b1	b0	
5	0	0t			0p0b2	0p0b10	0p1b5	0p2b0	
6	0	0t	0t	0t	0t	0t	0t	0EfOn	
7	0					0t	0t	0t	
8	0		0v						
9	0	0p0b1	0p0b0	0t	0t	0t	0t	0t	
10	0	0p0b9	0p0b8	0p0b7	0p0b6	0p0b5	0p0b4	0p0b3	
11	0	0p1b4	0p1b3	0p1b2	0p1b1	0p1b0		0p0b11	
12	0			0p1b10	0p1b9	0p1b8	0p1b7	0p1b6	
13	0	0p2b8	0p3b3	0p4b3	0p5b3	0p6b3	0p7b3		
14	0	0p2b7	0p2b6	0p2b5	0p2b4	0p2b3	0p2b2	0p2b1	
15	0	0p3b2	0p3b1	0p3b0			0p2b10	0p2b9	
16	0	0p4b2	0p4b1	0p4b0	0p3b7	0p3b6	0p3b5	0p3b4	
17	0	0p5b2	0p5b1	0p5b0	0p4b7	0p4b6	0p4b5	0p4b4	
18	0	0p6b2	0p6b1	0p6b0	0p5b7	0p5b6	0p5b5	0p5b4	
19	0	0p7b2	0p7b1	0p7b0	0p6b7	0p6b6	0p6b5	0p6b4	
20	0			0p7b8	0p7b7	0p7b6	0p7b5	0p7b4	
21	0			0p8b7		1t			
22	0								
23	0cab								
24	0	0p8b6	0p8b5	0p8b4	0p8b3	0p8b2	0p8b1	0p8b0	
25	0								
26	0	1t	1t	1t	1t	1t	1t	1EfOn	
27	0					1t	1t	1t	
28	0		1v						
29	0	1p0b2	1p0b10	1p1b5	1p2b0	1p2b8	1p3b3	1p4b3	
30	0	1p0b1	1p0b0	1t	1t	1t	1t	1t	
31	0	1p0b9	1p0b8	1p0b7	1p0b6	1p0b5	1p0b4	1p0b3	
32	0	1p1b4	1p1b3	1p1b2	1p1b1	1p1b0		1p0b11	
33	0			1p1b10	1p1b9	1p1b8	1p1b7	1p1b6	
34	0	1p2b7	1p2b6	1p2b5	1p2b4	1p2b3	1p2b2	1p2b1	
35	0	1p3b2	1p3b1	1p3b0			1p2b10	1p2b9	
36	0	1p4b2	1p4b1	1p4b0	1p3b7	1p3b6	1p3b5	1p3b4	
37	0	1p5b3	1p6b3	1p7b3				1p8b7	
38	0	1p5b2	1p5b1	1p5b0	1p4b7	1p4b6	1p4b5	1p4b4	
39	0	1p6b2	1p6b1	1p6b0		1p5b6	1p5b5	1p5b4	
40	0	1p7b2	1p7b1	1p7b0	1p6b7	1p6b6	1p6b5	1p6b4	
41	0			1p7b8	1p7b7	1p7b6	1p7b5	1p7b4	
42	0								
44	0	1p8b6	1p8b5	1p8b4	1p8b3	1p8b2	1p8b1	1p8b0	
43	1cab								
45	0		2t			2p0b2	2p010	2p1b5	
46	0								
47	0		2t	2t	2t	2t	2t	2EfOn	
48	0					2t	2t	2t	

49	0		2v						
50	0	2p0b1	2p0b0	2t	2t	2t	2t	2t	
51	0	2p0b9	2p0b8	2p0b7	2p0b6	2p0b5	2p0b4	2p0b3	
52	0	2p1b4	2p1b3	2p1b2	2p1b1	2p1b0		2p0b11	
54	0			2p1b10	2p1b9	2p1b8	2p1b7	2p1b6	
53	0	2p2b0	2p2b8	2p3b3	2p4b3	2p5b3	2p6b3	2p7b3	
55	0	2p2b7	2p2b6	2p2b5	2p2b4	2p2b3	2p2b2	2p2b1	
56	0	2p3b2	2p3b1	2p3b0			2p2b10	2p2b9	
57	0	2p4b2	2p4b1	2p4b0	2p3b7	2p3b6	2p3b5	2p3b4	
58	0	2p5b2	2p5b1	2p5b0	2p4b7	2p4b6	2p4b5	2p4b4	
59	0	2p6b2	2p6b1	2p6b0	2p5b7	2p5b6	2p5b5	2p5b4	
60	0	2p7b2	2p7b1	2p7b0	2p6b7	2p6b6	2p6b5	2p6b4	
61	0			3t	2p8b7				
62	0			2p7b8	2p7b7	2p7b6	2p7b5	2p7b4	
63	0								
64	2cab								
65	0	2p8b6	2p8b5	2p8b4	2p8b3	2p8b2	2p8b1	2p8b0	
67	0	3t	3t	3t	3t	3t	3t	3EFOn	
66	0								
68	0					3t	3t	3t	
69	0		3p0b2	3p0b10	3p1b5	3p2b0	3p2b8	3p3b3	
70	0		3v						
71	0	3p0b1	3p0b0	3t	3t	3t	3t	3t	
72	0	3p0b9	3p0b8	3p0b7	3p0b6	3p0b5	3p0b4	3p0b3	
73	0	3p1b4	3p1b3	3p1b2	3p1b1	3p1b0		3p0b11	
74	0			3p1b10	3p1b9	3p1b8	3p1b7	3p1b6	
75	0	3p2b7	3p2b6	3p2b5	3p2b4	3p2b3	3p2b2	3p2b1	
76	0	3p3b2	3p3b1	3p3b0			3p2b10	3p2b9	
77	0	3p4b3	3p5b3	3p6b3	3p7b3				
78	0	3p4b2	3p4b1	3p4b0	3p3b7	3p3b6	3p3b5	3p3b4	
79	0	3p5b2	3p5b1	3p5b0	3p4b7	3p4b6	3p4b5	3p4b4	
80	0	3p6b2	3p6b1	3p6b0	3p5b7	3p5b6	3p5b5	3p5b4	
81	0	3p7b2	3p7b1	3p7b0	3p6b7	3p6b6	3p6b5	3p6b4	
82	0			3p7b8	3p7b7	3p7b6	3p7b5	3p7b4	
83	0								
84	3cab								
85	0	3p8b7	4t				4p0b2	4p0b10	0,x,x,x,c1,x,x,x
86	0	3p8b6	3p8b5	3p8b4	3p8b3	3p8b2	3p8b1	3p8b0	
87	0								
88	0	4t	4t	4t	4t	4t	4t	4EFOn	0,c0,x,x,,df3,df2,df1,df0
89	0					4t	4t	4t	0,x,x,n2,n1,n0,x,x
90	0								
91	0	4p0b1	4p0b0	4t	4t	4t	4t	4t	N0
92	0	4p0b9	4p0b8	4p0b7	4p0b6	4p0b5	4p0b4	4p0b3	N1
93	0	4p1b5	4p2b0	4p2b8	4p3b3	4p4b3	4p5b3	4p6b3	0x00
94	0	4p1b4	4p1b3	4p1b2	4p1b1	4p1b0		4p0b11	N2
95	0			4p1b10	4p1b9	4p1b8	4p1b7	4p1b6	N3
96	0	4p2b7	4p2b6	4p2b5	4p2b4	4p2b3	4p2b2	4p2b1	N4
97	0	4p3b2	4p3b1	4p3b0			4p2b10	4p2b9	N5
98	0	4p4b2	4p4b1	4p4b0	4p3b7	4p3b6	4p3b5	4p3b4	N6
99	0	4p5b2	4p5b1	4p5b0	4p4b7	4p4b6	4p4b5	4p4b4	N7
100	0	4p6b2	4p6b1	4p6b0	4p5b7	4p5b6	4p5b5	4p5b4	N8
101	0	4p7b3				4p8b7		5t	0x00
102	0	4p7b2	4p7b1	4p7b0	4p6b7	4p6b6	4p6b5	4p6b4	N9
103	0			4p7b8	4p7b7	4p7b6	4p7b5	4p7b4	0x00
104	0								0xF7
105	4cab								
106	0	4p8b6	4p8b5	4p8b4	4p8b3	4p8b2	4p8b1	4p8b0	
107	0								
108	0	5t	5t	5t	5t	5t	5t	5EFOn	
109	0			5p0b2	5p0b10	5p1b5	5p2b0	5p2b8	
110	0					5t	5t	5t	

111	0							
112	0	5p0b1	5p0b0	5t	5t	5t	5t	5t
113	0	5p0b9	5p0b8	5p0b7	5p0b6	5p0b5	5p0b4	5p0b3
114	0	5p1p4	5p1b3	5p1b2	5p1b1	5p1b0		5p0b11
115	0			5p1b10	5p1b9	5p1b8	5p1b7	5p1b6
116	0	5p2b7	5p2b6	5p2b5	5p2b4	5p2b3	5p2b2	5p2b1
117	0	5p3b3	5p4b3	5p5b3	5p6b3	5p7b3		
118	0	5p3b2	5p3b1	5p3b0			5p2b10	5p2b9
119	0	5p4b2	5p4b1	5p4b0	5p3b7	5p3b6	5p3b5	5p3b4
120	0	5p5b2	5p5b1	5p5b0	5p4b7	5p4b6	5p4b5	5p4b4
121	0	5p6b2	5p6b1	5p6b0	5p5b7	5p5b6	5p5b5	5p5b4
122	0	5p7b2	5p7b1	5p7b0	5p6b7	5p6b6	5p6b5	5p6b4
123	0			5p7b8	5p7b7	5p7b6	5p7b5	5p7b4
124	0							
125	0		5p8b7		c1	tt0		
126	5cab							
127	0	5p8b6	5p8b5	5p8b4	5p8b3	5p8b2	5p8b1	5p8b0
128	0							
129	0	c2	df5	df4	df3	df2	df1	df0
130	0	tt2	tt1	n2	n1	n0		c0
131	0			tt7	tt6	tt5	tt4	tt3
132	N0							
133	0x00							
134	N1							
135	N2							
136	N3							
137	N4							
138	N5							
139	N6							
140	N7							
141	0x00							
142	N8							
143	N9							
144	0x00							
145	0xF7							