

iLive MIDI Control Specification Firmware V1.3

The iLive MIDI system has In, Out & Thru connections at both the Mix Rack and Surface. MIDI can be connected at either end to be transmitted from or received by the iLive. Non-iLive MIDI messages can be tunnelled via the network link so that 3rd party MIDI devices can communicate between the mix position and stage without the need for an additional MIDI link cable.

iLive MIDI Messages

For V1.3 the following MIDI functions are supported:

Input Fader level
 Input Mute
 Mix Fader level
 Mix Mute
 DCA Fader level
 DCA Mute
 Scene Recall
 MIDI Machine control (via TouchScreen page)

Mutes (Note on/off)

The Input Mutes are allocated to MIDI notes 0x20 to 0x5F.
 The Mix Mutes are allocated to MIDI notes 0x60 to 0x7F.
 The DCA Mutes are allocated to MIDI notes 0x10 to 0x1F.

In the following '0xnn' is the MIDI note number and 'm' is the MIDI device ID.

Transmitted.

A mute press will transmit a 'note on' message followed by a 'note off'.

Mute on.

0x9m 0xnn 0x7F ('Note on' with velocity greater than 0x40)
 0x9m 0xnn 0x00 ('Note off').

Mute off.

0x9m 0xnn 0x3F ('Note on' with velocity less than 0x40)
 0x9m 0xnn 0x00 ('Note off').

Received.

On reception of a 'note on' message the unit will respond according to the value of the velocity parameter as follows:

0x9m 0xnn 0xvv

Where 'm' is the unit MIDI device ID,
0xnn is in the range 0x10 to 0x7F
and 0xvv is:

0x00	Ignore.
0x01 to 0x3F	Mute off.
0x40 to 0x 7F	Mute on.

'Note on' messages with zero velocity and note off messages are ignored.
When MIDI activates a mute no MIDI note message is sent.

This conforms to current A&H practice.

Fader levels (NRPN)

Control of the mixer parameters is based on NRPN system with the MSB selecting the channel number, and the LSB selecting the parameter number in that channel (channel type specific). Thus channel selection is done via the following message:

0xBn, 0x63, <Channel>

Where <Channel> is 0x20 to 0x5F for Input channels 1-64,
0x60 to 0x7F for Mix channels and 0x10 to 0x1F for DCA channels

Parameter selection is done via the following message:

0xBn, 0x62, <Param ID>

Where <Param ID> is specified in the following sections:

Parameter values are set using Data Entry MSB

0xBn, 0x06, <Value>

All parameters are 'normalised' from 0x00-0x7F

Fader levels

Param ID = 0x17

Scene Change (Program Change)

To recall scenes:

0xCn, <Scene Number>

For Bank 1 <Scene Number> is in the range 0x00 to 0x7F (i.e. 0 to 127 decimal, referencing Scenes 1 to 128)

For Bank 2 <Scene Number> is in the range 0x00 to 0x78 (i.e. 0 to 120 decimal, referencing Scenes 129 to 250)

When a Scene is recalled via another method, such as Soft-Key or PL remote key, the following is transmitted via MIDI:

0xBn, 0x00, <Bank Number>
0xCn, <Scene Number>

Where <Bank Number> is in the range 0x00 to 0x01 (i.e. 0 to 1 decimal, referencing banks 1 and 2)

And where <Scene Number> is in the range 0x00 to 0x7F (i.e. 0 to 127 decimal, referencing Scenes 1 to 128) for Bank 1

And where <Scene Number> is in the range 0x00 to 0x79 (i.e. 0 to 121 decimal, referencing Scenes 129 to 250) for Bank 2.

Bank Selects (Extended Program Change)

To change bank:

0xBn, 0x00, <Bank Number>

Where <Bank Number> is in the range 0x00 to 0x01 (i.e. 0 to 1 decimal, referencing banks 1 and 2)

iLive MIDI Look up Table

Scene number

Bank	SS	Bank2	Bank1	Bank2
B00	Hex	B01	B00	Hex B01
1	00	129	65	40 193
2	01	130	66	41 194
3	02	131	67	42 195
4	03	132	68	43 196
5	04	133	69	44 197
6	05	134	70	45 198
7	06	135	71	46 199
8	07	136	72	47 200
9	08	137	73	48 201
10	09	138	74	49 202
11	0A	139	75	4A 203
12	0B	140	76	4B 204
13	0C	141	77	4C 205
14	0D	142	78	4D 206
15	0E	143	79	4E 207
16	0F	144	80	4F 208
17	10	145	81	50 209
18	11	146	82	51 210
19	12	147	83	52 211
20	13	148	84	53 212
21	14	149	85	54 213
22	15	150	86	55 214
23	16	151	87	56 215
24	17	152	88	57 216
25	18	153	89	58 217
26	19	154	90	59 218
27	1A	155	91	5A 219
28	1B	156	92	5B 220
29	1C	157	93	5C 221
30	1D	158	94	5D 222
31	1E	159	95	5E 223
32	1F	160	96	5F 224
33	20	161	97	60 225
34	21	162	98	61 226
35	22	163	99	62 227
36	23	164	100	63 228
37	24	165	101	64 229
38	25	166	102	65 230
39	26	167	103	66 231
40	27	168	104	67 232
41	28	169	105	68 233
42	29	170	106	69 234
43	2A	171	107	6A 235
44	2B	172	108	6B 236
45	2C	173	109	6C 237
46	2D	174	110	6D 238
47	2E	175	111	6E 239
48	2F	176	112	6F 240
49	30	177	113	70 241
50	31	178	114	71 242
51	32	179	115	72 243
52	33	180	116	73 244
53	34	181	117	74 245
54	35	182	118	75 246
55	36	183	119	76 247
56	37	184	120	77 248
57	38	185	121	78 249
58	39	186	122	79 250
59	3A	187	123	7A
60	3B	188	124	7B
61	3C	189	125	7C
62	3D	190	126	7D
63	3E	191	127	7E
64	3F	192	128	7F

Input Channel number

CC							
CH	Hex	CH	Hex	CH	Hex	CH	Hex
1	20	17	30	33	40	49	50
2	21	18	31	34	41	50	51
3	22	19	32	35	42	51	52
4	23	20	33	36	43	52	53
5	24	21	34	37	44	53	54
6	25	22	35	38	45	54	55
7	26	23	36	39	46	55	56
8	27	24	37	40	47	56	57
9	28	25	38	41	48	57	58
10	29	26	39	42	49	58	59
11	2A	27	3A	43	4A	59	5A
12	2B	28	3B	44	4B	60	5B
13	2C	29	3C	45	4C	61	5C
14	2D	30	3D	46	4D	62	5D
15	2E	31	3E	47	4E	63	5E
16	2F	32	3F	48	4F	64	5F

Mix Channel number

CC			
Mix	Hex	Mix	Hex
1	60	17	70
2	61	18	71
3	62	19	72
4	63	20	73
5	64	21	74
6	65	22	75
7	66	23	76
8	67	24	77
9	68	25	78
10	69	26	79
11	6A	27	7A
12	6B	28	7B
13	6C	29	7C
14	6D	30	7D
15	6E	31	7E
16	6F	32	7F

DCA number

CC	
DCA	Hex
1	10
2	11
3	12
4	13
5	14
6	15
7	16
8	17
9	18
10	19
11	1A
12	1B
13	1C
14	1D
15	1E
16	1F

MIDI channel

N	
Mix	Hex
1	00
2	01
3	02
4	03
5	04
6	05
7	06
8	07
9	08
10	09
11	0A
12	0B
13	0C
14	0D
15	0E
16	0F

Fader level

LV		
dBu	Hex	Dec
+10	7F	127
+5	74	117
0	6B	107
-5	61	97
-10	57	87
-15	4D	77
-20	43	67
-25	39	57
-30	2F	47
-35	25	37
-40	1B	27
-45	11	17
-inf	00	00

MIDI message string examples

MUTE on

NOTE ON with velocity > 40 followed by NOTE OFF
9N, CC, 7F, 9N, CC, 00

MUTE off

NOTE ON with velocity < 40 followed by NOTE OFF
9N, CC, 3F, 9N, CC, 00

Fader level

NRPN with parameter ID 17 Value **LV = 00 to 7F**
 Select fader Choose parameter Set fader value
BN, 63, CC, BN, 62, 17, BN, 06, LV

Scene recall

Change BANK followed by PROGRAM CHANGE
 Bank 1 (1-128) **BN, 00, 00, CN, SS**
 Bank 2 (129-250) **BN, 00, 01, CN, SS**