

This protocol is for use with iLive systems loaded with firmware version V1.90 and later.

iLive supports MIDI control.

The **Modular iLive** provides MIDI IN, OUT and THRU connections at both the MixRack and Surface.

The **Fixed Format iLive** provides MIDI IN and OUT connections at both the MixRack and Surface.

MIDI Link Function

MIDI is tunnelled over the iLive TCP/IP network link. This means that MIDI messages at IN on the Surface will appear at OUT on the MixRack, and MIDI messages at IN on the MixRack will appear at OUT on the Surface.

MIDI messages not intended for the iLive but to control other devices can be transported over the Surface to MixRack network link in this way. If you are using ACE™ to link your Surface and MixRack then this MIDI link is part of the single cable ACE connection.

Note – MIDI messages intended for other devices are tunnelled between the Surface and MixRack, but not between MixRacks linked between systems such as FOH/Monitor. However, if you are using the Dual-Rack function to expand the number of input channels under control of one Surface then those MIDI messages do appear at the OUT connection on both the Master and Slave MixRack.

iLive MIDI Messages supported

Firmware **V1.3** introduced the following MIDI functions:

Input Fader level	NRPN
Input Mute	Note On
Mix Fader level	NRPN
Mix Mute	Note On
DCA Fader level	NRPN
DCA Mute	Note On
Scene Recall	Program Change
MIDI Machine control (via TouchScreen)	

Firmware **V1.4** added the following MIDI functions:

FX send Fader level	NRPN
FX send Mute	Note On
FX return (IP FX) Fader level	NRPN
FX Return (IP FX) Mute	Note On
Channel Name and Colour	Sysex
DCA Assignment	NRPN

Firmware **V1.7** added the following MIDI functions:

Input to Main mix Assignment	NRPN
Preamp Gain	NRPN (by channel) or Pitchbend (by socket)
Preamp Pad	Sysex
Preamp 48V	Sysex

Firmware **V1.8** added the following functions related to MIDI:

Third party control of iLive via TCP/IP	Refer to separate protocol document
MIDI control of iLive Editor	Refer to Editor Help manual

Firmware **V1.9** added the following functions related to MIDI:

AUX/FX Send Level	NRPN
MIX Select	Polyphonic Key Pressure
Control of Editor MIX button	

All MIDI message **numbers** shown in this specification are hexadecimal.

Refer to the end of this specification for a table of MIDI values for the variable parameters listed here.

MIDI channel

N

MIDI channel 1 to 16 = **0** to **F**

For Dual-Rack the **Slave** rack MIDI channel = **Master** rack MIDI channel + 1

Channel numbers

CH

(refer to table)

FX Send 1 to 8 = **00** to **07**

FX Return 1 to 8 = **08** to **0F**

DCA 1 to 16 = **10** to **1F**

Input channel 1 to 64 = **20** to **5F**

Mix channel 1 to 32 = **60** to **7F**

Mix channels 1-32 follow the order of the current configuration:

- Mono Groups
- Stereo Groups
- Mono Auxes
- Stereo Auxes
- Main Mix (2 or 4 used)
- Mono Matrix
- Stereo Matrix

Example – 1_FOH-LRSub Template

60	1	Grp1	70	17	StAux1L
61	2	Grp2	71	18	StAux1R
62	3	Grp3	72	19	StAux2L
63	4	Grp4	73	20	StAux2R
64	5	StGrp1L	74	21	Main L
65	6	StGrp1R	75	22	Main R
66	7	StGrp2L	76	23	Main Sub
67	8	StGrp2R	77	24	-
68	9	Aux1	78	25	Mtx1
69	10	Aux2	79	26	Mtx2
6A	11	Aux3	7A	27	Mtx3
6B	12	Aux4	7B	28	Mtx4
6C	13	Aux5	7C	29	StMtx1L
6D	14	Aux6	7D	30	StMtx1R
6E	15	Aux7	7E	31	StMtx2L
6F	16	Aux8	7F	32	StMtx2R

Note The order depends on the current configuration and will change if the Mixer Config is changed.

Sysex Header

Sysex Header

This applies to all Sysex messages described in this document

F0, 00, 00, 1A, 50, 10, MV, mV, 0N

Where **MV** = **01** (Major version)

mV = **00** (Minor version)

Mute on

NOTE ON with velocity > **40** followed by NOTE OFF

9N, CH, 7F, 9N, CH, 00

Mute off

NOTE ON with velocity < **40** followed by NOTE OFF

9N, CH, 3F, 9N, CH, 00

Received Mute messages

Velocity **00** and NOTE OFF messages are ignored

Velocity **01** to **3F** = Mute off

Velocity **40** to **7F** = Mute on

Fader Level

NRPN with parameter ID **17**

Fader value **LV** -inf to +10dB = **00** to **7F**

Select channel	Parameter	Set fader value
BN, 63, CH,	BN, 62, 17,	BN, 06, LV

Channel Assignment to Main Mix ON

NRPN with parameter ID **18**

ON value = **40** to **7F**

Select channel	Parameter	Set ON
BN, 63, CH,	BN, 62, 18,	BN, 06, 7F

Channel Assignment to Main Mix OFF

NRPN with parameter ID **18**

OFF value = **00** to **3F**

Select channel	Parameter	Set OFF
BN, 63, CH,	BN, 62, 18,	BN, 06, 3F

AUX / FX Send Level

NRPN with parameter ID **Snd**

Where **Snd** for Mix 1 to 30 = parameter ID **20** to **3D**

Send value **LV** -inf to +10dB = **00** to **7F**

Select channel	Parameter	Set fader value
BN, 63, CH,	BN, 62, Snd,	BN, 06, LV

DCA Assignment ON

NRPN with parameter ID **40**

ON value **DB** for DCA 1 to 16 = **40** to **4F**

Select channel	Parameter	Set ON
BN, 63, CH,	BN, 62, 40,	BN, 06, DB

DCA Assignment OFF

NRPN with parameter ID **40**

OFF value **DA** for DCA 1 to 16 = **00** to **0F**

Select channel	Parameter	Set OFF
BN, 63, CH,	BN, 62, 40,	BN, 06, DA

Mix buses 1-30 follow the order of the current configuration:

- Mono Groups
- Stereo Groups
- Mono FX
- Mono Auxes
- Stereo FX
- Stereo Auxes
- Main Mix

Example – 1_FOH-LRSub Template

20	1	Grp1	30	17	Aux3
21	2	Grp2	31	18	Aux4
22	3	Grp3	32	19	Aux5
23	4	Grp4	33	20	Aux6
24	5	StGrp1L	34	21	Aux7
25	6	StGrp1R	35	22	Aux8
26	7	StGrp2L	36	23	StAux1L
27	8	StGrp2R	37	24	StAux1R
28	9	FX1	38	25	StAux2L
29	10	FX2	39	26	StAux2R
2A	11	FX3	3A	27	Main L
2B	12	FX4	3B	28	Main R
2C	13	FX5	3C	29	Main Sub
2D	14	FX6	3D	30	-
2E	15	Aux1			
2F	16	Aux2			

Groups and Main mix do not have send levels and these messages are ignored.

Note The order depends on the current configuration and will change if the Mixer Config is changed.

Channel Preamp Gain

NRPN with parameter ID **19**

This adjusts the Gain of the preamp mapped to the channel

To adjust the Gain of preamps by socket ID use the Pitchbend message below instead

GAIN value **GV** min to max = **00** to **7F** = $[(\text{Gain} - 10) / 55] * 7F$

Select channel	Parameter	Set GAIN value
BN, 63, CH,	BN, 62, 19,	BN, 06, GV

Socket Preamp Gain

Pitchbend message

This adjusts the Gain of the preamp at a socket

To adjust the Gain of preamps by channel number use the NRPN above message instead

MixRack preamp socket ID **MP** A1 to J8 = **00** to **4F**

Surface preamp socket ID **MP** A1 to D8 = **50** to **6F**

GAIN value **GV** min to max = **00** to **7F**

EN, MP, GV

Socket Preamp Pad

Sysex message

This turns Pad on or off for the preamp at a socket

MixRack preamp socket ID **MP** A1 to J8 = **00** to **4F**

Surface preamp socket ID **MP** A1 to D8 = **50** to **6F**

To get Pad status from iLive

Send... **Sysex Header, 07, MP, F7**

Reply... **Sysex Header, 08, MP, Pad, F7** where **Pad** OFF = **00**, ON = **7F**

To set Pad

Sysex Header, 09, MP, Pad, F7 where **Pad** OFF = **00** to **3F**, ON = **40** to **7F**

Socket Preamp 48V

Sysex message

This turns 48V (Phantom Power) on or off for the preamp at a socket

MixRack preamp socket ID **MP** A1 to J8 = **00** to **4F**

Surface preamp socket ID **MP** A1 to D8 = **50** to **6F**

To get 48V status from iLive

Send... **Sysex Header, 0A, MP, F7**

Reply... **Sysex Header, 0B, MP, 48V, F7** where **48V** OFF = **00**, ON = **7F**

To set 48V

Sysex Header, 0C, MP, 48V, F7 where **48V** OFF = **00** to **3F**, ON = **40** to **7F**

Channel Name

Sysex message

This gets or sets the Name with up to 8 characters (up to 5 can be displayed on the iLive strip LCD)

To get Name from iLive

Send... **Sysex Header**, 01, **CH**, F7

Reply... **Sysex Header**, 02, **CH**, **Name**, F7 where **Name** = string of hex ascii characters

To set Name

Sysex Header, 03, **CH**, **Name**, F7 where **Name** = string of hex ascii characters

Channel Colour

Sysex message

This gets or sets the Colour with a choice of off or one of 6 colours

To get Colour from iLive

Send... **Sysex Header**, 04, **CH**, F7

Reply... **Sysex Header**, 05, **CH**, **Col**, F7 where **Col** = 00 to 06 (refer to table)

To set Colour

Sysex Header, 06, **CH**, **Col**, F7 where **Col** = 00 to 06 (refer to table)

Scene Recall

Bank and **Program Change** message

To recall one of the 250 Scenes (2 banks)

Also transmits this message when a Scene is recalled by TouchScreen or another method

For Scene 1 to 128

Scene **SS** 1 to 128 = 00 to 7F

Select bank Recall Scene

BN, 00, 00, **CN**, **SS**

For Scene 129 to 250

Scene **SS** 129 to 250 = 00 to 78

Select bank Recall Scene

BN, 00, 01, **CN**, **SS**

MIX Select

Polyphonic Key Pressure message

Sel Bit 8 (least significant bit) to turn MIX on (selected) or off (unselected) 0 = MIX off, 1 = MIX on

Sel Bit 7 specifies if the channel is on Dual-Rack Master or Slave (inputs only) 0 = Master, 1 = Slave

AN, **CH**, **Sel**

where **Sel** 0 = MIX off

1 = MIX on (from Master MixRack if input)

3 = Mix on (from Slave MixRack if input)

Refer to MIDI table on next page...

