

Launchpad Pro [MK3]

Programmer's reference manual

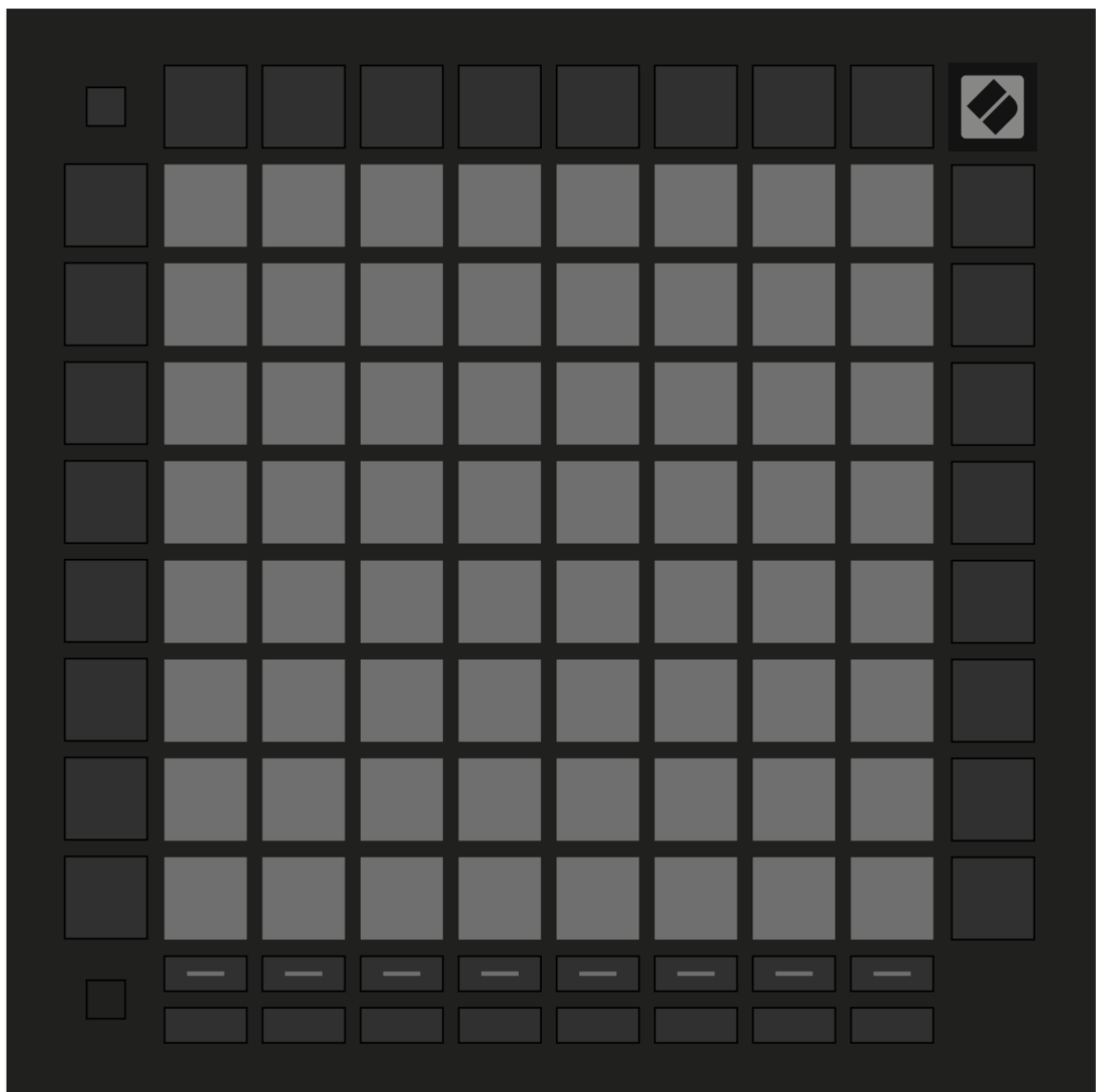


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About this Guide

This document provides all the information you need to be able to control Launchpad Pro [MK3].

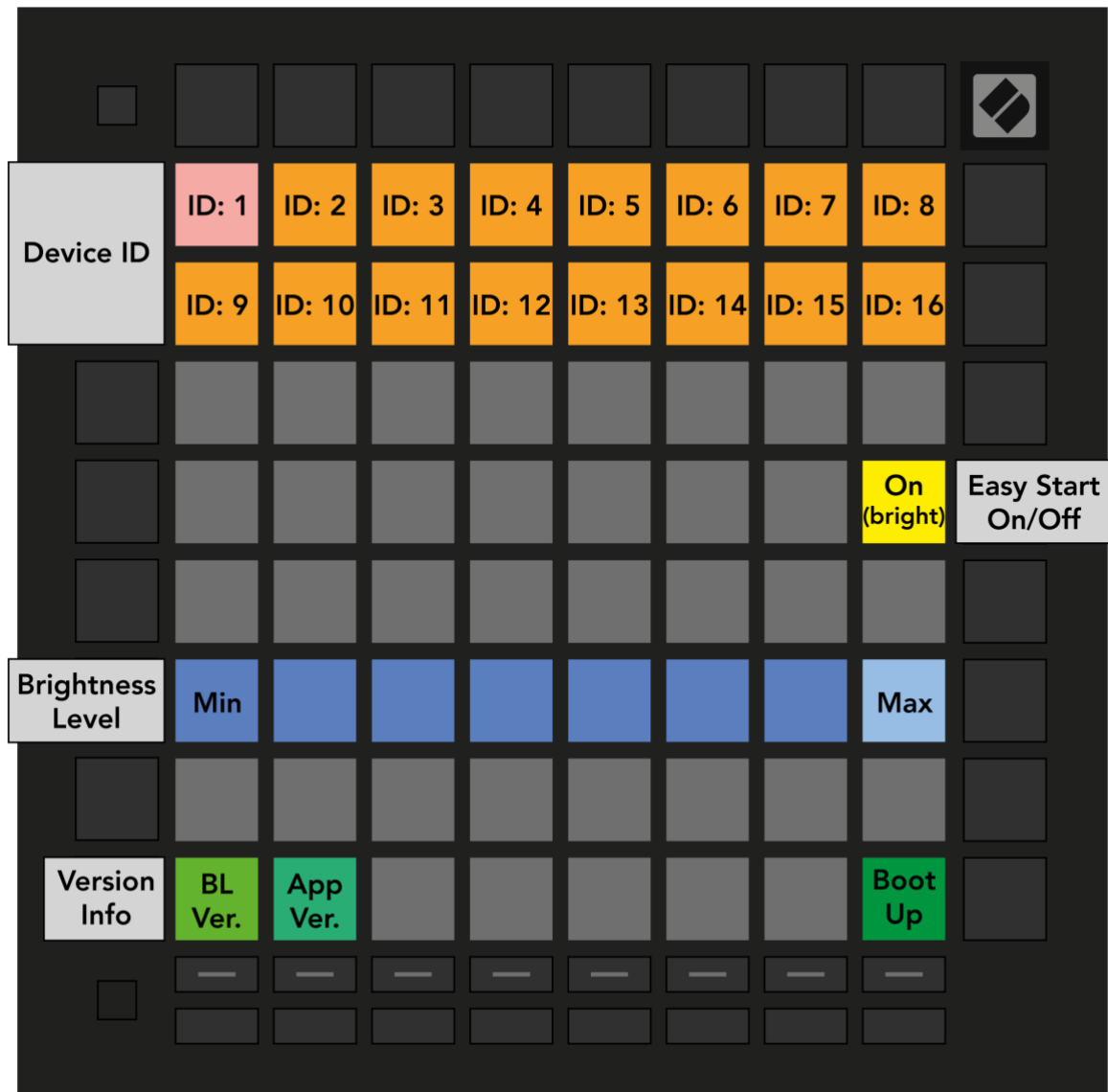
Launchpad Pro [MK3] communicates using MIDI over USB. This document describes the MIDI implementation for the device, which can be used to control LEDs and access Launchpad Pro [MK3]'s various features.

MIDI data is expressed in this manual in several different ways:

1. A plain English description of the message.
2. When we describe a musical note, middle C is deemed to be 'C3' or note 60. MIDI channel 1 is the lowest-numbered MIDI channel: channels range from 1 - 16.
3. MIDI messages are also expressed in plain data, with decimal and hexadecimal equivalents. The hexadecimal number will always be followed by an 'h' and the decimal equivalent given in brackets. For example, a note on message on channel 1 is signified by the status byte 90h (144).

Bootloader

Launchpad Pro [MK3] has a bootloader mode that allows the user to configure and save certain settings. The bootloader is accessed by holding the SETUP button whilst plugging the device in.



The top two rows of pads can be used to set the USB device ID of the Launchpad Pro [MK3]. The device ID ranges from 1 to 16, the selected ID is represented by a brightly lit pad. The default ID from factory is 1. If more than one Launchpad Pro [MK3] is used on the same USB, each should have a different device ID selected.

The single yellow pad on the middle right can be used to toggle Onboarding. When Onboarding is ON, the Launchpad Pro [MK3] shows up as a Mass Storage Device to provide a more convenient first-time experience. You can turn this off once you are familiar with the device to disable this Mass Storage Device.

The blue row of pads can be used to adjust the Launchpad Pro [MK3]'s brightness level to something comfortable for the environment the device is used in. This control is also available on the Setup display when starting the Launchpad Pro [MK3] normally.

The green pads on the bottom left can be used to display the version number of the Bootloader and the Application respectively.

The single green pad on the bottom right can be used to start the Application.

MIDI on Launchpad Pro [MK3]

The Launchpad Pro [MK3] has three MIDI interfaces:

LPProMK3 MIDI In / Out (or first interface on Windows)

This interface is used to receive MIDI from Note/Chord mode and Custom modes; and is used to provide external MIDI input or light LEDs in Custom Modes and Programmer Mode.

LPProMK3 DIN In / Out (or second interface on Windows)

This interface is used to receive MIDI sent/received via MIDI DIN.

LPProMK3 DAW In / Out (or third interface on Windows)

This interface is used by DAWs and similar software to interact with the Launchpad Pro [MK3]'s Session mode.

The Launchpad Pro [MK3] sends Note On (90h – 9Fh) with velocity zero for Note Offs. It accepts either Note Offs (80h – 8Fh) or Note Ons (90h – 9Fh) with velocity zero for Note Off.

Device Inquiry message

The Launchpad Pro [MK3] responds to the Universal Device Inquiry Sysex message, which can be used to identify the device. This exchange is as follows:

Host => Launchpad Pro [MK3]:

Hex: F0h 7Eh 7Fh 06h 01h F7h

Dec: 240 126 127 6 1 247

Launchpad Pro [MK3] => Host (Application):

Hex: F0h 7Eh 00h 06h 02h 00h 20h 29h 13h 01h 00h 00h <app_version> F7h

Dec: 240 126 0 6 2 0 32 41 19 1 0 0 <app_version> 247

Launchpad Pro [MK3] => Host (Bootloader):

Hex: F0h 7Eh 00h 06h 02h 00h 20h 29h 13h 11h 00h 00h <boot_version> F7h

Dec: 240 126 0 6 2 0 32 41 19 17 0 0 <boot_version> 247

The <app_version> or <boot_version> field is 4 bytes long, providing the Application or the Bootloader version respectively. The version is the same version which can be viewed using the lower left green pads on the Bootloader's surface, provided as four bytes, each byte corresponding to one digit, ranging from 0 – 9.

Sysex message format used by the device

All Sysex messages begin with the following header regardless of direction (Host => Launchpad Pro [MK3] or Launchpad Pro [MK3] => Host):

Hex Version: F0h 00h 20h 29h 02h 0Eh

Decimal Version: 240 0 32 41 2 14

After the header, a command byte follows, selecting the function to use.

Selecting layouts

The Launchpad Pro [MK3] has several layouts to choose from, which can be controlled by either the device's User Interface (see the User Guide for more details), or the following Sysex message:

Host => Launchpad Pro [MK3]:

Hex Version: F0h 00h 20h 29h 02h 0Eh 00h <layout> <page> 00h F7h

Decimal Version: 240 0 32 41 2 14 0 <layout> <page> 0 247

Where the available layouts are:

Hex: 00h / Decimal: 0 --- Session (only selectable in DAW mode)

Hex: 01h / Decimal: 1 --- Fader

Hex: 02h / Decimal: 2 --- Chord

Hex: 03h / Decimal: 3 --- Custom Mode

Hex: 04h / Decimal: 4 --- Note / Drum

Hex: 05h / Decimal: 5 --- Scale Settings

Hex: 06h / Decimal: 6 --- Sequencer Settings

Hex: 07h / Decimal: 7 --- Sequencer Steps

Hex: 08h / Decimal: 8 --- Sequencer Velocity

Hex: 09h / Decimal: 9 --- Sequencer Pattern Settings

Hex: 0Ah / Decimal: 10 --- Sequencer Probability

Hex: 0Bh / Decimal: 11 --- Sequencer Mutation

Hex: 0Ch / Decimal: 12 --- Sequencer Micro Step

Hex: 0Dh / Decimal: 13 --- Sequencer Projects

Hex: 0Eh / Decimal: 14 --- Sequencer Patterns

Hex: 0Fh / Decimal: 15 --- Sequencer Tempo

Hex: 10h / Decimal: 16 --- Sequencer Swing

Hex: 11h / Decimal: 17 --- Programmer Mode

Hex: 12h / Decimal: 18 --- Settings Menu

Hex: 13h / Decimal: 19 --- Custom mode Settings

Where the available pages are:

Hex: 00h-07h / Decimal: 0-7 --- for Custom Mode Views

Hex: 00h-03h / Decimal: 0-3 --- for any Sequencer View

Hex: 00h-03h / Decimal: 0-3 --- for Fader view

Hex: 00h-04h / Decimal: 0-4 --- for Settings Menu

Hex: 00h / Decimal: 0 --- for any other view

Request the current layout with the following SysEx message:

Host => Launchpad Pro [MK3]:

Hex Version: F0h 00h 20h 29h 02h 0Eh 00h F7h

Decimal Version: 240 0 32 41 2 14 0 247

The device will also send out a select layout message whenever the view changes.

Controlling the Surface

This chapter describes the wide range of possibilities for controlling and lighting Launchpad Pro [MK3].

There are three main options to light Launchpad Pro [MK3]'s pads:

Live Mode + Session (DAW Mode)

This is the typical place to start when writing a script to take control of Launchpad Pro [MK3]'s LEDs. In Session, MIDI messages may be sent to light up the 8x8 grid, all the buttons and the logo. Additional features may also be accessed within DAW Mode, including Drum Rack layout & faders.

In Live Mode, all Launchpad Pro [MK3] functionality is maintained, such as having access to Note Mode, Chord Mode and Custom Modes.

Live Mode + Custom

When a Custom Mode is set to have no On Colour (ie pads will not light when triggered from the hardware itself), pads may be lit via MIDI messages. The MIDI mapping of Custom Modes may be edited using Novation Components.

In Live Mode, all Launchpad Pro [MK3] functionality is maintained, such as having access to Note Mode and Custom Modes.

Programmer Mode

Programmer Mode provides an alternative to Session Mode for creating scripts. In Programmer Mode, every pad and button sends out a MIDI message and may be lit with the same message.

In Programmer Mode, access to all Launchpad Pro [MK3] functionality is disabled. Therefore, pressing the Mode buttons **will not** cause Launchpad Pro [MK3] to change modes when in Programmer Mode.

Lighting LEDs via MIDI

In **Session Mode**, Launchpad Pro [MK3] accepts colours through the **DAW interface**.

In **Custom Modes and Programmer Mode** Launchpad Pro [MK3] accepts colours through the **MIDI interface**.

Channels are used as follows:

Channel	Behaviour	Notes	CCs
1	Static Colour	Hex: 90h Decimal: 144	Hex: B0h Decimal: 176
2	Flashing Colour	Hex: 91h Decimal: 145	Hex: B1h Decimal: 177
3	Pulsing Colour	Hex: 92h Decimal: 146	Hex: B2h Decimal: 178

When a Note On message is used to light an LED, the Note Number determines the index of the pad lit, while the velocity determines the colour that the pad is lit.

When a CC message is used to light an LED, the CC number determines the index of the pad lit, while the CC value determines the colour that the pad is lit.

See the **Session Mode layout** below in Decimal (left) and Hex (right):

Numbers are notes except where stated as CCs.

CC 99								
CC 90	CC 91	CC 92	CC 93	CC 94	CC 95	CC 96	CC 97	CC 98
CC 80	81	82	83	84	85	86	87	88
CC 70	71	72	73	74	75	76	77	78
CC 60	61	62	63	64	65	66	67	68
CC 50	51	52	53	54	55	56	57	58
CC 40	41	42	43	44	45	46	47	48
CC 30	31	32	33	34	35	36	37	38
CC 20	21	22	23	24	25	26	27	28
CC 10	11	12	13	14	15	16	17	18
CC 101	CC 102	CC 103	CC 104	CC 105	CC 106	CC 107	CC 108	CC 109
1	2	3	4	5	6	7	8	

CC 63h								
CC 5Ah	CC 5Bh	CC 5Ch	CC 5Dh	CC 5Eh	CC 5Fh	CC 60h	CC 61h	CC 62h
CC 50h	51h	52h	53h	54h	55h	56h	57h	58h
CC 46h	47h	48h	49h	4Ah	4Bh	4Ch	4Dh	4Eh
CC 3Ch	3Dh	3Eh	3Fh	40h	41h	42h	43h	44h
CC 32h	33h	34h	35h	36h	37h	38h	39h	3Ah
CC 28h	29h	2Ah	2Bh	2Ch	2Dh	2Eh	2Fh	30h
CC 1Eh	1Fh	20h	21h	22h	23h	24h	25h	26h
CC 14h	15h	16h	17h	18h	19h	1Ah	1Bh	1Ch
CC 0Ah	0Bh	0Ch	0Dh	0Eh	0Fh	10h	11h	12h
CC 65h	CC 66h	CC 67h	CC 68h	CC 69h	CC 6Ah	CC 6Bh	CC 6Ch	CC 6Dh
01h	02h	03h	04h	05h	06h	07h	08h	

Colour palette

When providing colours by MIDI notes or control changes, the colours are chosen according to the following table, decimal:

0	1	2	3	4	5	6	7
8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23
24	25	26	27	28	29	30	31
32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47
48	49	50	51	52	53	54	55
56	57	58	59	60	61	62	63

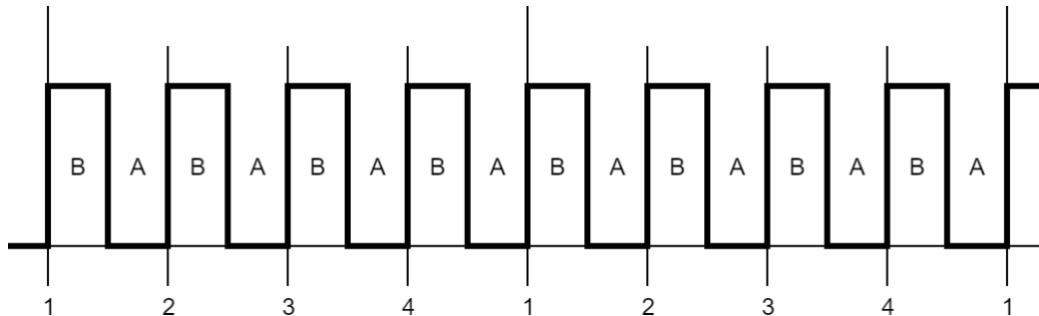
64	65	66	67	68	69	70	71
72	73	74	75	76	77	78	79
80	81	82	83	84	85	86	87
88	89	90	91	92	93	94	95
96	97	98	99	100	101	102	103
104	105	106	107	108	109	110	111
112	113	114	115	116	117	118	119
120	121	122	123	124	125	126	127

The same table with hexadecimal indexing:

00	01	02	03	04	05	06	07	40	41	42	43	44	45	46	47
08	09	0A	0B	0C	0D	0E	0F	48	49	4A	4B	4C	4D	4E	4F
10	11	12	13	14	15	16	17	50	51	52	53	54	55	56	57
18	19	1A	1B	1C	1D	1E	1F	58	59	5A	5B	5C	5D	5E	5F
20	21	22	23	24	25	26	27	60	61	62	63	64	65	66	67
28	29	2A	2B	2C	2D	2E	2F	68	69	6A	6B	6C	6D	6E	6F
30	31	32	33	34	35	36	37	70	71	72	73	74	75	76	77
38	39	3A	3B	3C	3D	3E	3F	78	79	7A	7B	7C	7D	7E	7F

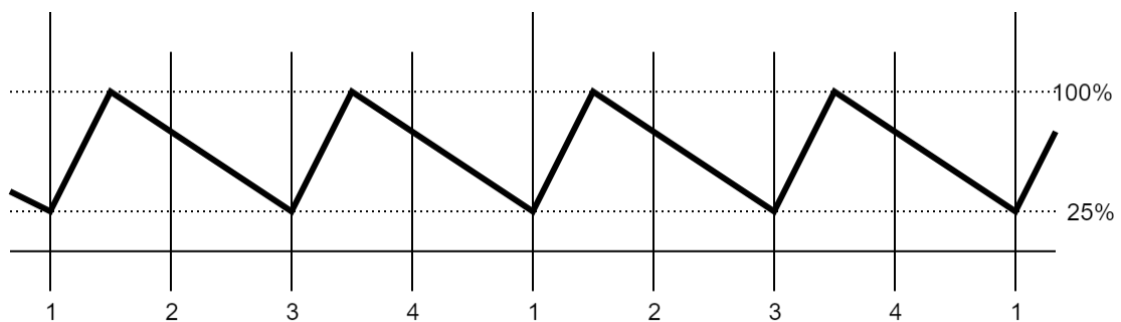
Flashing colour

When sending Flashing colour, the colour flashes between that set as Static or Pulsing colour (A), and that contained in the MIDI event setting flashing (B), at 50% duty cycle, synchronized to the MIDI beat clock (or 120bpm or the last clock if no clock is provided). One period is one beat long.



Pulsing colour

The colour pulses between dark and full intensity synchronized to the MIDI beat clock (or 120bpm or the last clock if no clock is provided). One period is two beats long, using the following waveform:



Examples

For these examples, switch the Launchpad into Programmer Mode.

1. Lighting the lower left pad static red:

Host => Launchpad Pro [MK3]:

Hex: 90h 0Bh 05h

Dec: 144 11 5

This is Note On, Channel 1, Note number 0Bh (11), with Velocity 05h (5). The Channel specifies the lighting mode (static), the Note number the pad to light (which is the lower left one in Programmer Mode), the Velocity the colour (which is Red, see Colour Palette).

2. Flashing the upper left pad green:

Host => Launchpad Pro [MK3]:

Hex: 91h 51h 13h

Dec: 145 81 19

This is Note On, Channel 2, Note number 51h (81), with Velocity 13h (19). The Channel specifies the lighting mode (flashing), the Note number the pad to light (which is the upper left one in Programmer mode), the Velocity the colour (which is Green, see Colour Palette).

3. Pulsing the lower right pad blue:

Host => Launchpad Pro [MK3]:
Hex: 92h 12h 2Dh
Dec: 146 18 45

This is Note On, Channel 3, Note number 12h (18), with Velocity 2Dh (45). The Channel specifies the Lighting mode (pulsing), the Note number the pad to light (which is the lower right one in Programmer mode), the Velocity the colour (which is Blue, see Colour Palette).

4. Turning a colour off:

Host => Launchpad Pro [MK3]:
Hex: 90h 12h 00h
Dec: 144 18 0

This is Note Off (Note On with Velocity of zero), Channel 1, Note number 12h (18), with Velocity 00h (0). The Channel specifies the lighting mode (static), the Note number the pad to light (which is the lower right one in Programmer mode), the Velocity the colour (which is blank, see Colour Palette). If the Pulsing colour was set up there with the previous message, this would turn it off. Alternatively, a Midi Note Off message can also be used for the same effect:

Host => Launchpad Pro [MK3]:
Hex: 80h 12h 00h
Dec: 128 18 0

LED lighting SysEx message

This message can be sent to Programmer Mode to light up LEDs. The LED indices used always correspond to those of Programmer mode, regardless of the layout selected:

Host => Launchpad Pro [MK3]:
Hex Version: F0h 00h 20h 29h 02h 0Eh 03h <Colour Spec> [<Colour Spec> [_]] F7h
Decimal Version: 240 0 32 41 2 14 3 <Colour Spec> [<Colour Spec> [_]] 247

The <Colour Spec> is structured as follows:

- Lighting type (1 byte)
- LED index (1 byte)
- Lighting data (1 – 3 bytes)

Lighting types:

Hex: 00h / Decimal: 0 --- Static colour from palette, Lighting data is 1 byte specifying palette entry.

Hex: 01h / Decimal: 1 --- Flashing colour, Lighting data is 2 bytes specifying Colour B and Colour A.

Hex: 02h / Decimal: 2 --- Pulsing colour, Lighting data is 1 byte specifying palette entry.

Hex: 03h / Decimal: 3 --- RGB colour, Lighting data is 3 bytes for Red, Green and Blue (127: Max, 0: Min).

The message may contain up to 106 <Colour Spec> entries to light up the entire Launchpad Pro [MK3] surface.

Example:

Host => Launchpad Pro [MK3]:

Hex: F0h 00h 20h 29h 02h 0Eh 03h 00h 0Bh 0Dh 01h 0Ch 15h 17h 02h 0Dh 25h F7h

Dec: 240 0 32 41 2 14 3 0 11 13 1 12 21 23 2 13 37 247

Sending this message to the Launchpad Pro [MK3] in Programmer layout sets up the bottom left pad to static yellow, the pad next to it to flashing green (between dim and bright green), and the pad next to that pulsing turquoise

Integrating Launchpad Pro [MK3] with Software

This chapter describes the means to interact with the Launchpad Pro [MK3] with a DAW (Digital Audio Workstation) or DAW like software/hardware. This mostly involves lighting and interacting with the Session layout to realize surfaces through which the DAW may provide its user interface, such as faders for track volumes.

Accessing Session Mode (Enabling / disabling DAW mode)

The device must be in DAW Mode before Session Mode can be selected. The following message enters Launchpad Pro [MK3] into DAW Mode. When DAW Mode is enabled, the Session Button will become lit.

Host => Launchpad Pro [MK3]:
Hex Version: F0h 00h 20h 29h 02h 0Eh 10h <Mode> F7h
Decimal Version: 240 0 32 41 2 14 16 <Mode> 247

Where <Mode> is 0 for Standalone, 1 for DAW (Session / DAW Fader layouts enabled).

The SysEx message is as follows:

Host => Launchpad Pro [MK3]:
Hex: F0h 00h 20h 29h 02h 0Eh 10h <mode> F7h
Dec: 240 0 32 41 2 14 16 <mode> 247

When the software exits, it should revert the device to Standalone mode. Doing this ensures that the state is cleared, and that Launchpad Pro [MK3] remains usable in Standalone Mode once the software is finished using the device.

The DAW In/Out interface

The DAW should interact with Launchpad Pro [MK3] through the USB DAW In/Out interface. MIDI events sent on this interface control the DAW state within the Launchpad Pro [MK3] as follows:

Channel	Behaviour	Notes	CCs
1	Static Colour in Session View	Hex: 90h Decimal: 144	Hex: B0h Decimal: 176
2	Flashing Colour in Session View	Hex: 91h Decimal: 145	Hex: B1h Decimal: 177
3	Pulsing Colour in Session View	Hex: 92h Decimal: 146	Hex: B2h Decimal: 178
5	Set DAW Fader Positions	N/A	Hex: B4h Decimal: 180
6	Set DAW Fader Colours	N/A	Hex: B5h Decimal: 181
9	Static Colour in Drum Rack	Hex: 98h Decimal: 152	N/A

10	Flashing Colour in Drum Rack	Hex: 99h Decimal: 153	N/A
11	Pulsing Colour in Drum Rack	Hex: 9Ah Decimal: 154	N/A
16	External Note injection on all External MIDI Channels	Hex: 9Fh Decimal: 154	N/A

The Launchpad Pro [MK3] sends button and pad events to the DAW as follows:

Channel	Behaviour	Notes	CCs
1	Session Layout activities	Hex: 90h Decimal: 144	Hex: B0h Decimal: 176
5	DAW Fader activities	N/A	Hex: B4h Decimal: 180
9	Drum Rack Layout activities	Hex: 98h Decimal: 152	N/A

Note that Aftertouch (either as polyphonic aftertouch or channel pressure depending on configuration) is also sent on the appropriate channels (Channel 1 for Session, Channel 9 for Drum Rack).

These interactions are all available regardless of which layout is selected on the Launchpad Pro [MK3], and the state set up by the MIDI events is preserved even when it is not visible (ie the Launchpad is not on the corresponding layout).

DAW Faders

The DAW can use the DAW Fader layout to set up banks of faders. There are up to 8 faders on a fader bank, which all share the same orientation (either horizontal or vertical), however each may be configured individually to be either unipolar or bipolar.

										CC 63h
CC 90	CC 5Bh	CC 5Ch	CC 5Dh	CC 5Eh	CC 5Fh	CC 60h	CC 61h	CC 62h		
CC 80	127	127	7Fh	7Fh	127	127	7Fh	7Fh	CC 89	
CC 70	108	108	6Ch	6Ch	106	106	6Ah	6Ah	CC 79	
CC 60	89	89	59h	59h	85	85	55h	55h	CC 69	
CC 50	70	70	46h	46h	64	64	40h	40h	CC 59	
CC 40	52	52	34h	34h	63	63	3Fh	3Fh	CC 49	
CC 30	34	34	22h	22h	42	42	2Ah	2Ah	CC 39	
CC 20	17	17	11h	11h	21	21	15h	15h	CC 29	
CC 10	0	0	00h	00h	0	0	00h	00h	CC 19	
CC 101	CC 102	CC 103	CC 104	CC 105	CC 106	CC 107	CC 108			
CC 1	CC 2	CC 3	CC 4	CC 5	CC 6	CC 7	CC 8			

										CC 63h
CC 5Ah	CC 5Bh	CC 5Ch	CC 5Dh	CC 5Eh	CC 5Fh	CC 60h	CC 61h	CC 62h		
CC 50h	0	17	34	52	70	89	108	127	CC 59h	
CC 46h	0	17	34	52	70	89	108	127	CC 4Fh	
CC 3Ch	00h	11h	22h	34h	46h	59h	6Ch	7Fh	CC 45h	
CC 32h	00h	11h	22h	34h	46h	59h	6Ch	7Fh	CC 3Bh	
CC 28h	0	21	42	63	85	106	127		CC 31h	
CC 1Eh	0	21	42	63	85	106	127		CC 27h	
CC 14h	00h	15h	2Ah	3Fh	40h	55h	6Ah	7Fh	CC 1Dh	
CC 0Ah	00h	15h	2Ah	3Fh	40h	55h	6Ah	7Fh	CC 13h	
CC 65h	CC 66h	CC 67h	CC 68h	CC 69h	CC 6Ah	CC 6Bh	CC 6Ch			
CC 01h	CC 02h	CC 03h	CC 04h	CC 05h	CC 06h	CC 07h	CC 08h			

DAW Fader bank set-up

The DAW Fader bank can be set up using the following SysEx message:

Host => Launchpad Pro [MK3]:

Hex Version: F0h 00h 20h 29h 02h 0Eh 01h <Bank> <Orientation> <Fader> [<Fader> [_]] F7h

Decimal Version: 240 0 32 41 2 14 1 <Bank> <Orientation> <Fader> [<Fader> [_]] 247

The <Bank> byte can be

Hex: 00h / Decimal: 0 --- Volumes

Hex: 01h / Decimal: 1 --- Pans

Hex: 02h / Decimal: 2 --- Sends

Hex: 03h / Decimal: 3 --- Devices

The <Orientation> byte can be 0 for Vertical faders or 1 for Horizontal faders.

The <Fader> entry specifies the configuration of one fader as follows:

Fader index (1 byte), 0 - 7, left to right (vertical) or top to bottom (horizontal).

Fader type (1 byte), 0: Unipolar, 1: Bipolar.

Control Change associated (1 byte).

Fader's colour (1 byte), a palette entry.

The fader's colour can be set to 0, this may be used to make the fader not visible (as it will not show on the surface then).

The message may contain up to 8 <fader> entries to set up the entire DAW Fader bank.

Example:

Host => Launchpad Pro [MK3]:

Hex: F0h 00h 20h 29h 02h 0Eh 01h 00h 00h 00h 00h 07h 25h 01h 01h 08h 15h F7h

Dec: 240 0 32 41 2 14 1 0 0 0 7 37 1 1 8 21 247

Host => Launchpad Pro [MK3]:

Hex: F0h 00h 20h 29h 02h 0Eh 00h 0Dh F7h

Dec: 240 0 32 41 2 14 0 13 247

The first message populates a DAW Fader bank with:

- Vertical orientation
- A turquoise unipolar fader on the leftmost column set to CC 7
- A green bipolar fader in the next column along set to CC 8

DAW Stop Fader for Bank

The following message can be used to stop the movement of any fader that is currently moving, for a specific fader bank.

Hex Version: F0h 00h 20h 29h 02h 0Eh 19h <Bank> F7h

Decimal Version: 240 0 32 41 2 14 25 <Bank> 247

With <Bank> being:

Hex: 00h / Decimal: 0 --- Volumes

Hex: 01h / Decimal: 1 --- Pans

Hex: 02h / Decimal: 2 --- Sends

Hex: 03h / Decimal: 3 --- Devices

DAW Drumrack

The DAW can request the Note mode to show a Drum Rack instead, which it could populate according to the available drum samples using the MIDI events described in the DAW In/Out interface chapter. The layout of this Drumrack is as follows:

									CC 99
CC 90	CC 91	CC 92	CC 93	CC 94	CC 95	CC 96	CC 97	CC 98	
CC 80	64	65	66	67	96	97	98	99	CC 89
CC 70	60	61	62	63	92	93	94	95	CC 79
CC 60	56	57	58	59	88	89	90	91	CC 69
CC 50	52	53	54	55	84	85	86	87	CC 59
CC 40	48	49	50	51	80	81	82	83	CC 49
CC 30	44	45	46	47	76	77	78	79	CC 39
CC 20	40	41	42	43	72	73	74	75	CC 29
CC 10	36	37	38	39	68	69	70	71	CC 19
	CC 101	CC 102	CC 103	CC 104	CC 105	CC 106	CC 107	CC 108	
	CC	CC	CC	CC	CC	CC	CC	CC	
	1	2	3	4	5	6	7	8	

									CC 63h
CC 5Ah	CC 5Bh	CC 5Ch	CC 5Dh	CC 5Eh	CC 5Fh	CC 60h	CC 61h	CC 62h	
CC 50h	40h	41h	42h	43h	60h	61h	62h	63h	CC 59h
CC 46h	3Ch	3Dh	3Eh	3Fh	5Ch	5Dh	5Eh	5Fh	CC 4Fh
CC 3Ch	38h	39h	3Ah	3Bh	58h	59h	5Ah	5Bh	CC 45h
CC 32h	34h	35h	36h	37h	54h	55h	56h	57h	CC 3Bh
CC 28h	30h	31h	32h	33h	50h	51h	52h	53h	CC 31h
CC 1Eh	2Ch	2Dh	2Eh	2Fh	4Ch	4Dh	4Eh	4Fh	CC 27h
CC 14h	28h	29h	2Ah	2Bh	48h	49h	4Ah	4Bh	CC 1Dh
CC 0Ah	24h	25h	26h	27h	44h	45h	46h	47h	CC 13h
	CC 65h	CC 66h	CC 67h	CC 68h	CC 69h	CC 6Ah	CC 6Bh	CC 6Ch	
	CC	CC	CC	CC	CC	CC	CC	CC	
	01h	02h	03h	04h	05h	06h	07h	08h	

DAW Note / Drumrack mode select

This message can be used to select the DAW Drumrack mode. It is only available in DAW mode. Changing the mode does not change layout on the Launchpad Pro [MK3], if Note mode is selected, the change is immediately visible, otherwise next time selecting Note mode will result in showing the selected Drumrack mode instead.

Host => Launchpad Pro [MK3]:
Hex Version: F0h 00h 20h 29h 02h 0Eh 0Fh <Mode> F7h
Decimal Version: 240 0 32 41 2 14 15 <Mode> 247

Where the **<Mode>** byte can be one of the followings:

- 0: Note mode.
- 1: Drumrack.

DAW Note mode Active colour set

This message can be used to change the active colour of Note mode (which is normally green):

Host => Launchpad Pro [MK3]:
Hex Version: F0h 00h 20h 29h 02h 0Eh 17h <Colour> F7h
Decimal Version: 240 0 32 41 2 14 23 <Colour> 247

The **<Colour>** is a palette entry. Setting it to zero reverts to the default (green) colour.

DAW Note/Chord mode Buttons

In Note mode, Drumrack mode and Chord Mode, the following buttons may be lit with their respective Session Mode CCs.

- Left hand buttons*, excluding the up and down buttons (CC 10, 20, ..., 60)
- Track select buttons (CC 101 – 108)
- Track control buttons (CC 1-8).
- Shift button (CC 90)
- Logo (CC 99)

**(Clear not accessible in Chord Mode)*

Programmer Mode

Programmer Mode provides an alternative to Session Mode for creating scripts. You can use the Programmer / Live mode switch message to achieve this:

Host => Launchpad Pro [MK3]:
Hex Version: F0h 00h 20h 29h 02h 0Eh 0Eh <Mode> F7h
Decimal Version: 240 0 32 41 2 14 14 <Mode> 247

Where **<Mode>** is 0 for Live mode, 1 for Programmer mode.

When selecting Live mode with this message, Launchpad Pro [MK3] switches to Session layout, or Note mode when not in DAW mode.

When selecting Programmer mode using this SysEx message, you may not access the Settings menu. (usually accessed by pressing the SETUP button). To return the Launchpad Pro [MK3] to normal operation, use this SysEx message to select any other layout than Programmer mode.

Alternatively, Programmer Mode may be selected manually from the device. Press and hold SETUP to enter the settings menu, then press the bottom Scene Launch button (lit orange). Now release the SETUP button to enter Programmer Mode. Note that Launchpad Pro [MK3] will always boot into Live Mode.

Programmer mode layout

CC 99								
CC 90	CC 91	CC 92	CC 93	CC 94	CC 95	CC 96	CC 97	CC 98
CC 80	81	82	83	84	85	86	87	CC 89
CC 70	71	72	73	74	75	76	77	CC 79
CC 60	61	62	63	64	65	66	67	CC 69
CC 50	51	52	53	54	55	56	57	CC 59
CC 40	41	42	43	44	45	46	47	CC 49
CC 30	31	32	33	34	35	36	37	CC 39
CC 20	21	22	23	24	25	26	27	CC 29
CC 10	11	12	13	14	15	16	17	CC 19
	CC 101	CC 102	CC 103	CC 104	CC 105	CC 106	CC 107	CC 108
	CC 1	CC 2	CC 3	CC 4	CC 5	CC 6	CC 7	CC 8

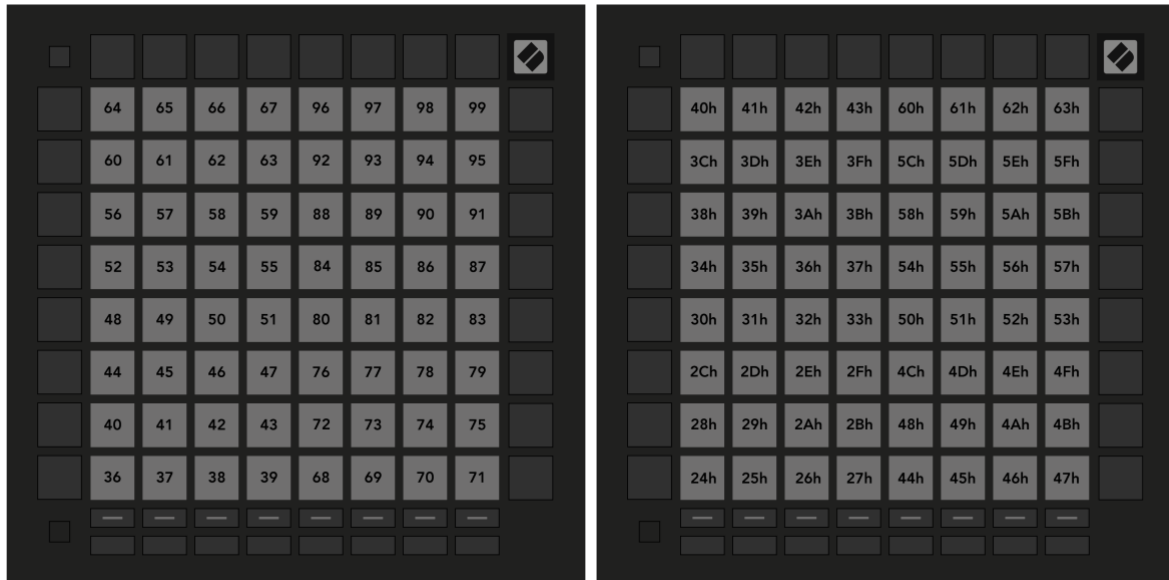
CC 63h								
CC 5Ah	CC 5Bh	CC 5Ch	CC 5Dh	CC 5Eh	CC 5Fh	CC 60h	CC 61h	CC 62h
CC 50h	51h	52h	53h	54h	55h	56h	57h	CC 59h
CC 46h	47h	48h	49h	4Ah	4Bh	4Ch	4Dh	CC 4Fh
CC 3Ch	3Dh	3Eh	3Fh	40h	41h	42h	43h	CC 45h
CC 32h	33h	34h	35h	36h	37h	38h	39h	CC 3Bh
CC 28h	29h	2Ah	2Bh	2Ch	2Dh	2Eh	2Fh	CC 31h
CC 1Eh	1Fh	20h	21h	22h	23h	24h	25h	CC 27h
CC 14h	15h	16h	17h	18h	19h	1Ah	1Bh	CC 1Dh
CC 0Ah	0Bh	0Ch	0Dh	0Eh	0Fh	10h	11h	CC 13h
	CC 65h	CC 66h	CC 67h	CC 68h	CC 69h	CC 6Ah	CC 6Bh	CC 6Ch
	CC 01h	CC 02h	CC 03h	CC 04h	CC 05h	CC 06h	CC 07h	CC 08h

Note that in Programmer mode, all buttons and pads accept either Note or Control Change messages. The indicated type is which is sent by the device on the MIDI interface when the corresponding button or pad is pressed.

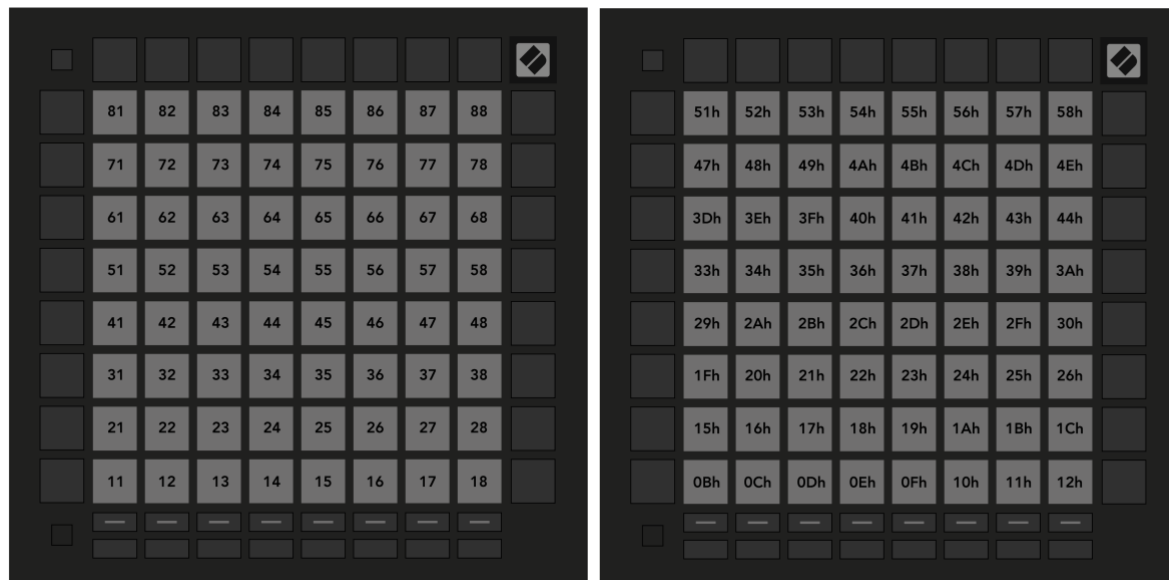
Factory default Custom Mode layouts (for lighting pads)

On a Launchpad Pro [MK3] in its factory default state, Custom Mode 7 and Custom Mode 8 are set up for lighting pads (each with different layouts). You can switch to either of these using the Launchpad Pro [MK3]'s User Interface.

Custom Mode 7:



Custom Mode 8:



SysEx command summary

Each of the following SysEx messages has the same header:

Hex Version: F0h 00h 20h 29h 02h 0Eh

Decimal Version: 240 0 32 41 2 14

Parameter Name	Command Code	Value 1	Value 2	Value 3	Repeatable?
Select Layout	00h (0)	<layout>	-	-	-
DAW Fader Setup	01h (1)	00h (0)	<orientation>	<fader>	<fader> only
LED Lighting	03h (3)	<colourspec>	-	-	<colourspec>
Live/Programmer Toggle	0Eh (14)	<mode>	-	-	-
DAW / Standalone	10h (16)	<mode>	-	-	-
Stop Faders for Bank	19h (25)	<bank index>	-	-	-

Mode Hierarchy Table

Live Mode		Programmer Mode
DAW Mode (DAW Mode message sent to enable Session Mode)	Standalone Mode (default when turned on)	Functionality available: Only the Programmer Layout
Functionality available: Session Mode, DAW Faders + all Standalone Mode functionality	Functionality available: Note Mode, Chord Mode, Custom Modes, Sequencer	