

IMPACT

LX25



User Guide

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- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



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Introduction

Thank you for buying our Impact LX controller keyboard from Nektar Technology.

The Impact LX controllers are available in 25, 49 and 61 note versions and come with setup software for many of the most popular DAWs. This means that for supported DAWs, the setup work has largely been done and you can focus on expanding your creative horizon with your new controller. The Nektar DAW support adds functionality that makes the user experience more transparent when you combine the power of your computer with Nektar Impact LX.

You also get a full version of Presonus Studio One Artist 2.6 software which of course feature Impact LX integration. In addition, the Impact LX range allow for complete user configurable MIDI control so if you prefer to create your own setups, you can do that too.

We hope you will enjoy playing, using and being creative with Impact LX as much as we have enjoyed creating it.

Box Content

Your Impact LX25 box contains the following items:

- The Impact LX25 Controller keyboard
- Printed Guide
- A standard USB cable
- DVD containing DAW installation files and full version of Presonus Studio One Artist.

If any of the items above are missing, please let us know via email: stuffmissing@nektartech.com

Impact LX Features

- 25-note full-sized velocity sensitive keybed
- 8 velocity sensitive MIDI pads
- 1 MIDI assignable fader
- 8 MIDI assignable controller pots
- 6 transport buttons
- Assignable Pitch Bend and Modulation Wheels
- Octave up/down buttons
- Transpose up/down buttons
- Mixer, Instrument and Preset selection buttons
- 5 Function buttons including Mute, Snapshot, Null, Pad Learn and Setup
- 5 User configurable presets
- 2 read-only presets (Mixer/Instrument)
- 4 pad map presets
- Shift functions for Nektar DAW integration
- 3 character, 7 segment LED display
- USB port (back) and USB bus powered
- Power on/off switch (back)
- 1/4" jack Foot Switch socket (Back)
- Nektar DAW support integration
- PreSonus Studio One Artist 2.6 included

Minimum System Requirements

As a USB class compliant device, Impact LX25 can be used from Windows XP or higher and any version of Mac OS X. The DAW integration files can be installed on Windows Vista/7/8 or higher and Mac OS X 10.7 or higher. The included Studio One Artist minimum system requirements are listed below.

Mac

Mac® OS X 10.7.2 or later
Intel® Core™ Duo processor (Intel Core 2 Duo or Core i3 or better recommended)
2 GB RAM (4 GB or more recommended)

Windows

Windows® 7 x64/x86 SP1, Windows 8 x64/x86
Intel Core Duo or AMD Athlon™ X2 processor (Intel Core 2 Duo or AMD Athlon X4 or better recommended)
2 GB RAM (4 GB or more recommended)

Mac and Windows systems

Internet connection (not required on machine where Studio One is installed but needed for activation)
DVD-ROM drive
Monitor with 1280x768 resolution
20 GB hard-drive space

Getting Started

Connection and Power

The Impact LX25 is USB Class compliant. This means there is no driver to install to get the keyboard set up with your computer. Impact LX25 uses the built-in USB MIDI driver which is already part of your operating system on Windows and OS X.

This makes the first steps simple:

- Locate the included USB cable and plug one end in to your computer and the other in to your Impact LX25
- If you want to connect a foot switch to control sustain, plug it in to the 1/4" jack socket on the back of the keyboard
- Set the power switch on the back of the unit to On

Your computer will now spend a few moments identifying the Impact LX25 and subsequently you will be able to set it up for your DAW.

Nektar DAW Integration

If your DAW is supported with Nektar DAW integration software, locate the "Impact LX DAW Integration" folder and run the installer you will find in that directory.

In the same directory there is a "Documentation" folder. Open it and locate the PDF file that's applicable to your DAW. Follow the instructions in the PDF for any additional setup as well as learn how the integration works.

If you are not able to find installation files for your DAW, you may want to check if it has been added later to the support list. You can check that here: www.nektartech.com/impact_lx_daw_support

Register for Updates

You do not need to register your Impact LX25 in order to get up and running, however there are several benefits to registering:

- Notification of new updates to your Impact LX25 DAW integration
- PDF download of this manual as well as the latest DAW integration files
- Access to our email technical support
- Warranty service

The first step is to create a user account with us, which you can do here:

www.nektartech.com/registration

Installing and Setting Up Studio One Artist

The included PreSonus Studio One Artist for OSX and Windows is a powerful and complete DAW that allows you to get started straight away with your Impact LX25 even if you don't have any other music software.

Installation

The Studio One Artist 2.6 installer can be located on the included DVD and the product key on the white DVD sleeve.

Your PreSonus Studio One Artist license is subject to PreSonus's standard End User License Agreement (EULA) which must be accepted upon installation. In addition, Studio One Artist requires a personal product registration through the internet and a computer matching the minimum requirements of the software.

Here are the steps you need to go through to set up Studio One Artist with the Impact LX25:

- Locate the Studio One Artist installer on the included DVD
- Follow the onscreen instructions to activate, create a user account and complete installation
- Locate the "Impact LX DAW Integration" folder on the included DVD or download it from "My Downloads" on www.nektartech.com after registering your product
- Run the "DAW Integration Installer" in that folder and follow the on-screen instructions, selecting Studio One as your DAW.
- Booting up Studio One Artist you will see an initial setup screen similar to image 1. Click on "Configure External Devices...", highlighted in the red box in image 1
- Next you will see the Options menu. Click on "External Devices". The options window should now look like image 2
- If your Studio One program already show 2 Impact LX25 devices, you may be ready to go. Use the following steps for troubleshooting. If only 1 Impact LX25 device shows up, you'll need to complete the following steps.
- Select the Nektar Impact LX25 device and click "Edit"
- In the resulting pop-up window make sure that all the MIDI channels 1-16 are highlighted in light blue. If they are not light blue, click the "All" button, just above the indicators. The window should now look like image 3
- Click "Ok" to close the window
- Back in the "Options" window, click "Add" to open the "Add Device" Window
- Locate the Nektar folder, click the expand arrow and the click on the Impact LX25 Control option.
- In the "Receive From" field select Port 2 or MIDIIN2. The window should now look like image 4
- Click "OK" to exit the "Add Device" menu and "OK" again to exit the "Options" menu

Studio One Artist is now set up to work with your Impact LX25.





Studio One Artist and Impact LX25 Working Together

Presonus Studio One Artist comes with its own documentation which cover all its functionality and powerful features. It's a good idea to read and reference the documentation regularly to get the most out of your Studio One Artist product. But before you dive in to the Studio One Artist documentation, lets go through a few basics here first and in particular cover how Studio One Artist and Impact LX 49 work together.

All Working Fine?

First make sure that everything is set up correctly.

- From the Studio One Artist Start-up window, click on "Create a new Song" on the right hand side
- You should now be looking at the main Studio One Artist arrange and browser window on your computer screen.
- Press a few keys on the Impact LX25 keyboard. As you press them, the orange arrow next to the MIDI icon in the bottom left corner of the window should light up. If it doesn't, you should go back and recheck your setup. 
- Next press the [Play] button on the Impact LX25 transport. Studio One Artist should start to play. Press [Stop] to stop playback 
- Create a few audio tracks in Studio One Artist via the Track menu.
- Press the [Mixer] button and with the audio tracks created, move the pots on Impact LX25 starting with number 1 and up. Each of the audio tracks volume indicators should change as you move their corresponding pots.
- Next press [Mixer] and hit any of the 8 pads while Shift is pressed. This should activate mute for each of the corresponding tracks.

If every thing at this point is working correctly, you are ready to learn more about how Impact LX25 works with Studio One Artist. If you are not getting the results described, please check your installation one more time as well as the Nektar support tab on our website www.nektartech.com

Transport

The transport buttons give access to activate or deactivate the following transport functions: Cycle (loop), Rewind (in 1 bar decrements), Forward (in 1 bar increments), Stop, Play, Record.



In addition the buttons double up with functionality that's accessed by holding down the [Shift] button. The chart below tells you what each button and button combination does and how they behave.

Key Combination	Description
[Cycle]	Switch the loop/cycle between the Left and Right locators on/off
[Rewind]	Rewinds in steps of 1 bar. Press and hold for fast rewind
[Forward]	Forward in steps of 1 bar. Press and hold for fast forward
[Stop]	Stop playback. Press twice to goto zero
[Play]	Activate play
[Record]	Activate record. Press again to deactivate record but continue play
[Shift]+[Cycle]	Goto Left locator
[Shift]+[Rewind]	Set Left locator at current song position
[Shift]+[Forward]	Set Right locator at current song position
[Shift]+[Stop]	Undo last changes. To undo while in record, press [Record] first to deactivate, then undo to remove your recording
[Shift]+[Play]	Switch the Click/metronome on/off
[Shift]+[Record] (Mode)	Quantize selected part or notes. To quantize while in record, press [Record] first to deactivate, then press Mode to quantize your recording

Studio One Mixer Control

To control the Studio One mixer, press the [Mixer] button to select the mixer preset. The display's left dot is illuminated while the preset is selected and the Studio One mixer is being controlled.

Open/Close the Studio One Mixer Window

If the Studio One mixer is not in view you can press [Shift]+[Mixer] to bring it in to view. Press the same button combination again to close the mixer window. While the Mixer preset is selected, your Impact LX25 continues to control the Studio One mixer, even if the mixer window is closed.

Channel Volume & Pan

With the mixer preset active, moving pots 1-8 will control the first 8 mixer channels in the Studio One Mixer. The 8 pots can also control pan for each or the corresponding channels by pressing the [Mixer] button while moving the pots.

The fader controls the channel corresponding to the currently selected track so as you change tracks, you can quickly change volume as you are working. If you have 15 tracks in your song and the currently selected track is 12, that would result in pots 1-8 controlling mixer channel volume 1-8 and the fader controlling channel volume 12.

Mute Channels Using the Pads

You can use the pads to control mute for tracks 1-8. Press and hold [Mixer] while hitting pads 1-8. This will toggle mute on or off for the corresponding channels. Release the [Mixer] button and the pads revert to trigger MIDI notes.

Banks Over (1-8), (9-16) etc

If your song contains more than 8 mixer channels you can bank over so the faders 1-8 control the next group of 8 channels. To do this, press [Shift]+[Octave+]. The faders, pots and fader buttons are now assigned to control channels 9-16. Push the same key combination again to control 17-24 etc.

To go back you press [Shift]+[<Octave-]

One disadvantage is that Studio One does not give you any visual indication which group of 8 channels you are currently controlling. The safest way to work with the Studio One mixer is to keep a group of 8 channels that you want regular mixer control over, as the first 8 tracks in your song and then use fader 9 as you navigate through tracks to adjust volume for all other channels.

Master Volume

You can control the Master Volume fader of the Studio One mixer by pressing [Mixer] and then move the fader while the button is pressed.

Upon release of the button, the fader will revert to control the current channel volume.

Studio One Instrument Control

Press the [Inst] button to select the Instrument preset. The display's center dot is illuminated while the preset is selected. To control an instrument you must however be on an instrument track. To create one, first click on "Instruments" in the Studio One browser home window. The click on Mojito and drag it in to the Studio One arrangement window.

An instrument track has now been created and the monophonic synth Mojito is visible on your computer display. You can create instrument tracks for any of the other Studio One instruments using the same method.

First-time Setup

If this is the first time you are using Impact LX25 with Studio One, please check that the control surface selected to control instruments is "Impact LX25 Control".

- On Mojito (or any other plugin) make sure the GUI button for the control is orange as shown in the image on the right
- Next click on the arrow to the left of the orange GUI button for a list of your control surface options
- Select "Impact LX25 Control" as show in the image on the right

Once done, you should not have to worry about this again unless your setup changes.



Open/close the Instrument Window

When you are on an instrument track, you can press [Shift]+[Inst.] to bring the instrument GUI window in to view. Press the same button combination again to close the instrument window.

Impact LX25's Instrument preset will control the parameters in the plug-in window that's in focus. You can read more about how this works in the Studio One Reference Manual, Chapter 11.5: Global and Focus Mapping. To find this document go to the "Help" menu.

Changing Patches and Controlling an Instrument

You can step through instrument patches and control essential instrument parameters from Impact LX25 which makes it easy to change and tweak sounds while you play. Here is how to do that:

- Create or select an instrument track in Studio One
- Make sure the instrument GUI window is in focus. If not, press [Shift]+[Inst.] on Impact LX25
- Change instrument patch by pressing [Shift]+[Patch>] to go to the next patch or [Shift]+[<Patch] to go to the previous patch

Each of Impact LX25's controls are pre-mapped to Studio One's built-in instruments with envelopes typically mapped on the faders and controls that have the biggest impact on sound are mapped to the pots such as Cutoff, Resonance, Filter Env etc. Happy tweaking.

Viewing Assigned Controls

The Studio One Focus window will show you what's assigned to each of instrument presets controls. If you have space on your computer screen this can be a good window to keep in view.

There are a few ways to open the Focus window. The below image shows 2 different ways:

- 1) After moving an Impact LX25 control you will see the control in the window to the left of the tool box. Double click on the "Impact LX25 Control" surface as indicated by the red box to open the Focus window
- 2) In any plug-in window, double click on the "Impact LX25 Control" surface as indicated by the second red box in the Mojito window. This will open the Focus window



The Focus window will show you the name of each parameter assigned to Impact LX25's Instrument preset controls at any one time and their current value.

Customizing Plug-in Mapping

If you want to make changes to plug-in mapping you can do that right within Studio One. Read the Studio One Reference Manual's chapter 11 for additional information and instructions about how to do this.

Studio One Impact Drum Instrument

The Studio One Impact (no relation, really) Drum instrument can be played from the Impact LX25 keyboard or 8 pads. Operating the drum instrument works the same way as any other instrument and using the Pad maps 1+2 you are able to play drum sounds straight away. However you will notice that that the first pad on Studio One Impact is assigned to the MIDI note B0. Pad map 1 starts at C1 so neither Pad map 1 or 2 will by default allow you to play this pad.

In addition, you may prefer to create a setup where the 8 pads play a specific selection of any of Studio One Impacts 16 pad sounds. Thankfully there is a learn function for that.



“Learning” Studio One Impact Sounds to the Pads

It’s easy to change a pad note assignments using the Pad Learn function. It works as follows:

1. Press the function button labeled [Pad Learn]. The display will now blink, showing P1 (pad 1) as the default selected pad.
2. Hit the pad you want to assign a new note value to. The display blinks and updates to show the number of the pad you selected.
3. Press the key on the keyboard that plays the Studio One Impact sound you want to assign to the pad. You can keep playing notes on the keyboard until you have found the note you want.
4. When you are done, press [Pad Learn] to exit and start playing your pads with the new assignment.

You can keep repeating steps 2. and 3. until you have created a complete Pad Map. The settings are stored over power cycling so you will not lose them as you power down your system. However it’s a good idea to save setups that you may want to have access to regularly in the future to one of the 4 pad map locations in Impact LX25. To learn how to do that, go to the “Setup Menu” section in this manual.

Mixing Studio One Impact Drum Sounds

Studio One Impact has a lot of controls but perhaps most important is the ability to create a good mix of the 16 drum sounds. To help make that process easier, the default parameters assigned to Impact LX25’s controls are volume. To mix the 16 sounds press [Inst.] and use pots 1-8 to control volume for pads 1-8 and release [Inst.] and use pots 1-8 to control volume for pads 9-16.

Keyboard, Octave and Transpose

The Impact LX25 features a 25-note keyboard. Each key is velocity sensitive so you can play expressively with the instrument. There are 5 different velocity curves for the keyboard so you can choose a less or more dynamic curve to suit your playing style. In addition, there are 3 fixed velocity settings.

We recommend you spend a little time playing with the default velocity curve and then determine if you need more or less sensitivity. You can learn more about velocity curves and how to select them on page 23.

Octave Shift

To the left of the keyboard you find the Octave and Transpose shift buttons.

- With each press the left Octave button will shift the keyboard down one octave.
- The right Octave button will similarly shift the keyboard up 1 octave at a time, when pressed.

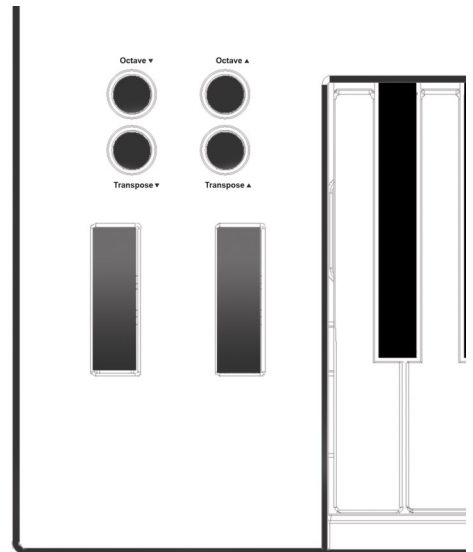
The maximum you can shift the keyboard is 4 octaves down and 5 octaves up, covering the entire MIDI keyboard range of 127 notes.

Program, MIDI Channel and Preset Control with the Octave Buttons

The Octave buttons can also be used to send out MIDI program messages, change the Global MIDI channel or select the Impact LX25's control presets. To change the buttons function:

- Press the two Octave buttons simultaneously.
- The display will now show the current assignment abbreviation for a little over 1 second.
- Press the Octave up or down button to step through the options.

Below is the list of the functions that the Octave buttons can be assigned to control. The Display column shows the text abbreviation for each function as they appear on the Impact LX display. The function remains assigned to the buttons until another function is selected. After power cycling the default function is selected.



Display	Function	Value range
Oct	Shift Octave up/down	-3 / +4
PrG	Sends out MIDI program change messages	0-127
GCh	Change the Global MIDI Channel	1 to 16
PrE	Select any of the 5 control presets	1 to 5

Transpose, Program, MIDI Channel and Preset Control with the Transpose Buttons

The Transpose buttons work in a similar way to the Octave buttons with the following function options:

Display	Function	Value range
trA	Transpose the keyboard up or down	-/+ 12 semi tones
PrG	Sends out MIDI program change messages	0-127
GCh	Change the Global MIDI Channel	1 to 16
PrE	Select any of the 5 control presets	1 to 5

Wheels and Foot Switch

Pitch bend and Modulation Wheels

The two wheels below the Octave and Transpose buttons are typically used for Pitch bend and Modulation.

The Pitch bend wheel is spring loaded and automatically reverts to its center position upon release. It's ideal to bend notes when you are playing phrases that require this kind of articulation. The bend range is determined by the receiving instrument.

The Modulation wheel can be freely positioned and is programmed to control modulation by default.

Both the Pitch bend and the Modulation wheel are MIDI assignable with settings stored over power cycling so you don't lose them when you switch the unit off. Pitch bend and Modulation assignments are not part of the Impact LX25 presets.

Foot Switch

You can connect a foot switch pedal (optional, not included) to the 1/4" jack socket on the back of the Impact LX keyboard. The correct polarity is automatically detected on boot-up, so if you plug in your foot switch after boot-up is complete, you may experience the foot switch working in reverse. To correct that, do the following

- Switch the Impact LX25 off
- Make sure your foot switch is connected
- Switch the Impact LX25 on

The polarity of the foot switch should now be automatically detected.

Controlling MIDI Software

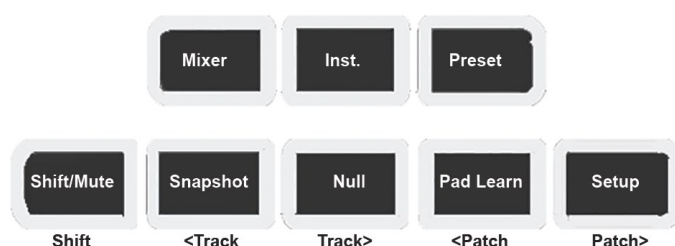
Impact LX25 has incredible flexibility when it comes to controlling a DAW or other MIDI software. There are typically 4 different ways to set up Impact LX25 many controls though it's not uncommon to use a combination of different approaches.

1. Install the included Preonus Studio One Artist software and control it from Impact LX (page 6)
2. Install the Impact DAW integration files for use with an existing DAW (must be on our supported list)
3. Set up a DAW with controller learn
4. Programming Impact LX25 controls for your software

1. and 2. are relatively easy to get started with so you can jump to the sections that cover each of these now if you are keen to get going. If you plan to use your DAWs learn function or Impact's presets at a later stage, we do recommend reading through this chapter in order to understand how Impact LX25 is structured. Lets start with an overview of what is stored in memory.

Mixer, Instrument and Presets

Impact LX has 5 user configurable presets though in reality, the total amount of useable presets is 7. That's because pressing the Mixer or Instrument button each recall a read-only preset.



A preset contains control settings for the fader, and 8 pots.

The Preset button recalls the currently selected user preset. Since any of the 5 user presets can quickly be selected using either the Octave or Transpose buttons, this gives tremendous flexibility. Below is a list of what each of the 5 presets are programmed to by default. Each can be programmed with your own MIDI settings which we will cover later.

Preset	Description
1	GM Instrument preset
2	GM Mixer ch 1-8
3	GM Mixer ch 9-16
4	Learn friendly 1 (Fader buttons Toggle)
5	Learn friendly 2 (Fader buttons Trigger)

Presets 1, 4 and 5 are set up to transmit on the global MIDI channel. When you change the global MIDI channel (as described earlier, you can use the Octave and Transpose buttons to do this at any time) you therefore change the MIDI channel that these presets transmit on. With 16 MIDI channels available it means you can create 16 unique setups and just change the MIDI channel to switch between them.

A list of controller assignments for each of the 5 presets is available on pages 26-30.

Controlling MIDI Software (cont)

Global Controls

Global controls are controls that are not stored in a preset and therefore Pitch bend/Modulation wheels plus the Foot Switch fall in this category.

The 6 transport buttons in addition, are also global controls and assignments are stored over power cycling.



As you change presets or adjust your preset controls, global controls remain unchanged. This makes sense since Transport and keyboard controls typically are set up to do one thing specifically.

Function Buttons

The second row of buttons below the display contains 5 function and menu buttons. Each work a little different so here is an overview of what they do.

Shift/Mute

When you press and hold this button, the MIDI output from real-time controls is muted. This allows you to reposition faders and pots without sending MIDI data.

In addition, pressing this button activates the secondary functions of buttons, screened below those buttons. So for example, press and hold [Shift/Mute]+[Pad 4] will load Pad Map 4. Press and hold [Shift/Mute]+[Pad 2] will load Pad Map 2.

The remaining functions screen printed below the buttons are mainly used for the Impact LX25 DAW integration so check the integration documentation for further information

Snapshot

Pressing [Snapshot] will send out current status of faders and pots. This can both be used as a status recall feature but also as a fun experimental feature to change parameters without knowing for sure what will happen.

Null

Impact's DAW integration files contain automatic catch-up or soft takeover functions that avoids parameter jumping by delaying parameter updates until a physical control position matches the value of the parameters.

The Null function works in a similar way but does not rely on feedback from your software to achieve it. It remembers your parameter settings when you change between presets so you catch-up parameter values or "null".

Example:

1. Select [Preset] and make sure [Null] is set to on.
2. Set the Transpose (or Octave) buttons to change presets (as described earlier) and select Preset 1.
3. Move Fader 1 to maximum (127).
4. Select Preset 2 using the Transpose buttons.
5. Move fader 1 to minimum (000).
6. Select Preset 1 using the Transpose buttons.
7. Move Fader 1 away from it's minimum position and notice the display reads "Up" until you reach 127.
8. Select Preset 2 and move the fader away from the maximum position. Notice the display reads "dn" until you reach 000.

While "up" or "dn" is displayed, no control update values are sent to your software.

The null setting is independent for each of Mixer, Inst. and Preset.

To switch the function on or off, first select [Preset] and then press [Null] until you see the status you want (on/off).

Press [Mixer] or [Inst] followed by pressing [Null] to set the setting for each of these options.

If you are using Nektar Integrated DAW support, please make sure to check the setup instructions for your DAW. Null is in some cases required to be off because Impact LX25 uses a different method to avoid parameter jumping.

Pad Learn

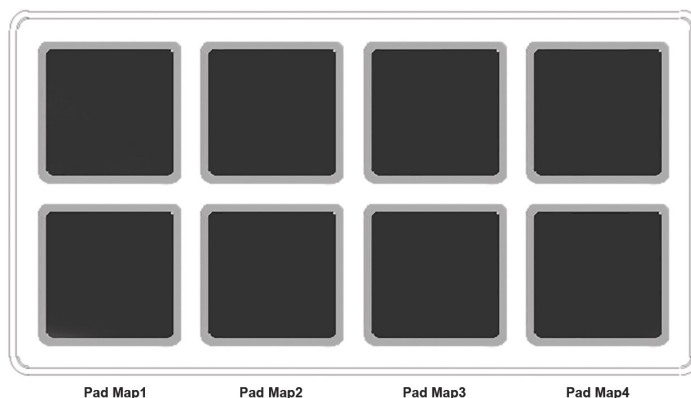
Pad learn allows you to quickly select a pad and learn a note assignment by pressing a key on the keyboard. This is explained in more detail in the next section about Pads.

Setup

Pressing the setup button will mute the keyboard output and instead activate the setup menus accessible via the keyboard. Go to page 19 for more information about the setup menus.

Pads

The 8 pads are velocity sensitive and programmable with either note or MIDI switch messages. This means you can use them as regular MIDI buttons as well as to punch out your drum beats and percussive melody parts. In addition, the pads have 5 velocity curve options and 3 fixed value options you can choose between depending on what you are doing and your playing style.



Pad Maps

You can load and save up to 4 different pad setups in 4 memory locations called Pad maps. Here is how you load pad maps:

- Press and hold the [Shift/Mute] button
- Press the pad that corresponds to the pad map you want to recall

The following page show the 4 pad maps default assignments. Map 1 is a chromatic scale which is continued in Map 2. If you have drum setup that's laid out this way (many are) you can access drums 1-8 using Map 1 and drums 9-16 using Map 2.

Pad Learn

It's easy to change a pad note assignments using the Pad Learn function. It works as follows:

1. Press the function button labeled [Pad Learn]. The display will now blink, showing P1 (pad 1) as the default selected pad.
2. Hit the pad you want to assign a new note value to. The display blinks and updates to show the number of the pad you selected.
3. Press the key on the keyboard that corresponds to the note you want to assign to the pad. You can keep playing notes on the keyboard until you have found the note you want.
4. When you are done, press [Pad Learn] to exit and start playing your pads with the new assignment.

You can keep repeating steps 2. and 3. until you have created a complete Pad Map.

Programming MIDI Messages to Pads

The pads can also be used as MIDI switch buttons. To learn more, please the Setup Menu pages.

Pad Velocity Curves

You can choose between 4 velocity curves and 3 fixed velocity value options. For more information about the velocity curves and how to choose them, read about the Setup Menu and go to page 24 for details about pad velocity curves.

Pads Maps Default Settings

Map 1

	Note	Note No.	Data 1	Data 2	Data 3	Chan
P1	C1	36	0	127	0	Global
P2	C#1	37	0	127	0	Global
P3	D1	38	0	127	0	Global
P4	D#1	39	0	127	0	Global
P5	E1	40	0	127	0	Global
P6	F1	41	0	127	0	Global
P7	F#1	42	0	127	0	Global
P8	G1	43	0	127	0	Global

Map 2

	Note	Note No.	Data 1	Data 2	Data 3	Chan
P1	G#1	44	0	127	0	Global
P2	A1	45	0	127	0	Global
P3	A#1	46	0	127	0	Global
P4	B1	47	0	127	0	Global
P5	C2	48	0	127	0	Global
P6	C#2	49	0	127	0	Global
P7	D2	50	0	127	0	Global
P8	D#2	51	0	127	0	Global

Map 3

	Note	Note No.	Data 1	Data 2	Data 3	Chan
P1	C3	60	0	127	0	Global
P2	D3	62	0	127	0	Global
P3	E3	64	0	127	0	Global
P4	F3	65	0	127	0	Global
P5	G3	67	0	127	0	Global
P6	A3	69	0	127	0	Global
P7	B3	71	0	127	0	Global
P8	C4	72	0	127	0	Global

Map 4

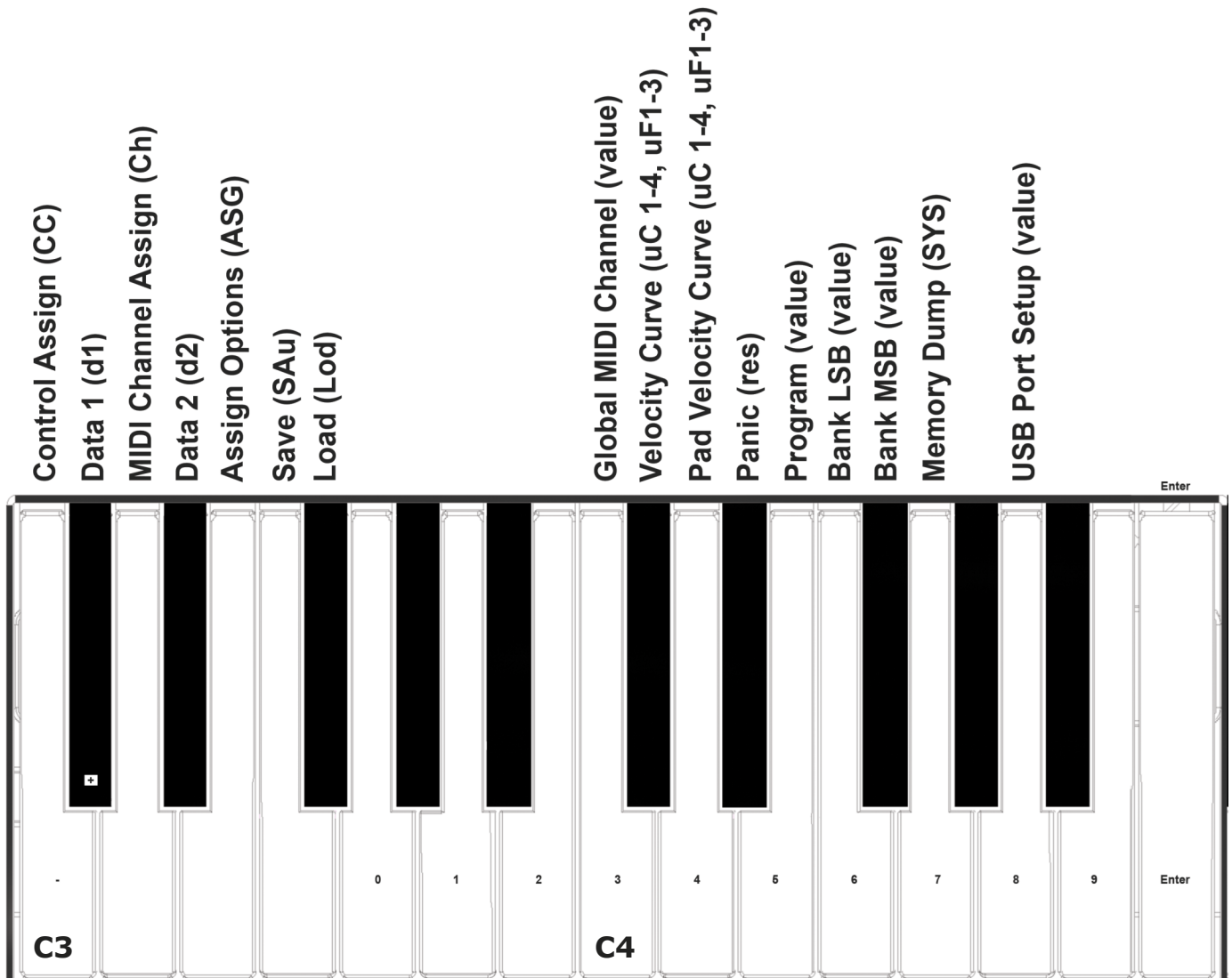
	Note	Note No.	Data 1	Data 2	Data 3	Chan
P1	C1	36	0	127	0	Global
P2	D1	38	0	127	0	Global
P3	F#1	42	0	127	0	Global
P4	A#1	46	0	127	0	Global
P5	G1	43	0	127	0	Global
P6	A1	45	0	127	0	Global
P7	C#1	37	0	127	0	Global
P8	C#2	49	0	127	0	Global

Setup Menu

The Setup menu gives access to additional functions such as control assign, load, save, selecting velocity curves and more. To enter the menu, press the [Setup] button. This will mute the MIDI output of the keyboard and instead the keyboard now is used to select menus.

When the Setup menu is active, the display will show {S.E.t.} with the 3 dots blinking for as long as the menu is active.

The chart below provides an overview of menus assigned to each key and what display abbreviations you see in the Impact LX25 display (in parentheses), when a key is pressed.



The functions are separated in to two groups. The first group spanning C1-F#3 covers control assignments and behavior, including Save and Load of the 5 presets and 4 pad maps. When you press the keys in this group you first see an abbreviation showing the function. This means you can press keys until you find exactly the menu you want without worrying about controls changing assignments. Since this group of functions are the ones you most likely will use more regularly this makes the menus easy to find.

The second group spanning C4-A4 covers global and setup functions. Most of the second group functions will show you their current status when you press a key.

On the following page we cover how each of these menus work. Note the documentation assumes you have an understanding of MIDI including how it works and behaves. If you are not familiar with MIDI, we recommend you study MIDI before making control assignment changes to your keyboard. A good place to start is the MIDI Manufacturers Association www.midi.org

Assigning Controls to MIDI messages

Since the Mixer and Instrument presets are read-only, the first 4 functions C1-E1 applies only to Presets and cannot be selected if either Mixer or the Instrument [Inst.] preset is selected. To enter the Setup menu's assign functions, please do the following:

- Press [Preset]
- Press [setup]
- The display now reads {S.E.t.} with the 3 display dots {...} blinking

The Setup menu is now active and the keyboard no longer send MIDI notes when you press the keys. To exit the Setup menu, press [Setup] again at any time.

Control Assign (C3)

This function allows you to change the MIDI CC number of a control. (if applicable. Assignment type has to be MIDI CC). Most of the controls by default are assigned to send MIDI CC message type. Here is how it works:

- Press the low C key on your keyboard to select Control Assign. The display reads {CC}
- Press [Enter] (last C key on your keyboard) to confirm menu selection.
- Move or press a control. The value you see in the display is the currently assigned value (000-127)
- Change the value in decrements/increments using the keys with the -/+ symbols screened above (C3/C#3). The value assignment is instant so if you exit the Setup menu after making changes, those changes remain active
- You can also enter a specific value using the white number keys spanning G3-B4 . Press Enter (C5) to accept the change.

MIDI Channel Assign (D3)

Each control within a preset can be assigned to send on a specific MIDI channel or follow the Global MIDI channel.

- Press D3. The display reads {Ch}
- Press [Enter] (last C key on your keyboard) to confirm menu selection.
- Move or press a control. The value you see in the display is the currently assigned MIDI channel (000-16). The MIDI specifications allow for 16 MIDI channels. In addition Impact LX give you the option to select 000 which is the selection for the Global MIDI channel. Most of the default presets assign controls to the Global MIDI channel so you may see this value when you move a control.
- Change the value in decrements/increments using the keys with the -/+ symbols screened above (C3/C#3). The value assignment is instant so if you exit the Setup menu after making changes, those changes remain active
- You can also enter a specific value using the white number keys spanning G3-B4 . Press Enter (C5) to accept the change.

Assignment Types (E3)

Most of the controls in the default presets are assigned to MIDI CC messages. But there are several other options and the below chart shows you which are available for the two types of controls.

Controller Type	Assignment Type	Display Abbreviations
Pitch bend, Modulation Wheel, Fader, Pots 1-8	MIDI CC	CC
	Pitch Bend	Pbd
Transport buttons, Foot Switch, Pads 1-8	MIDI CC Toggle	toG
	MIDI CC Trigger/Release	trG
	MIDI note	n
	MIDI note toggle	nt
	MIDI Machine Control	nnc

To change an assignment type, do the following:

- Press the E3 on your keyboard to select Control Assign. The display reads {ASG}
- Press [Enter] (last C key on your keyboard) to confirm menu selection
- Move or press a control. The type abbreviation you see in the display is the currently assigned type as per above chart
- Change the value in decrements/increments using the keys with the -/+ symbols screened above (C3/C#3). The type change is instant so if you exit the Setup menu after making changes, those changes remain active

Data 1 and Data 2 Values (C#3 & D#3)

The Data 1 and Data 2 functions are required for some controller assignments as per the chart below.

Controller Type	Assignment Type	Data 1	Data 2
Pitch bend, Modulation Wheel, Fader, Pots 1-8	MIDI CC	Max value	Min value
	Pitch Bend	Max value	Min value
Transport buttons, Foot Switch,	MIDI CC Toggle	CC value 1	CC vaue 2
	MIDI CC Trigger/Release	Trigger value	Release value
	MIDI note	Note on velocity	MIDI note #
	MIDI Machine Control	n/a	Sub-ID #2

To enter a Data 1 or Data 2 value, do the following:

- Press either C#3 or D#3 on your keyboard to select either Data 1 or Data 2. The display reads {d1} or {d2}
- Press [Enter] (last C key on your keyboard) to confirm menu selection.
- Move or press a control. The controls Data 1 or Data 2 value will be visible in the display
- Change the value in decrements/increments using the keys with the -/+ symbols screened above (C3/C#3). The value assignment is instant so if you exit the Setup menu after making changes, those changes remain active
- You can also enter a specific value using the white number keys spanning G3-B4. Press Enter (C5) to accept the change

Save Presets and Pad Maps (F3)

When you make assignment changes to a control or pad, the changes are stored in a current working memory area and the settings are also stored over power cycling.

However if you change preset or pad map your settings will be lost because the loaded data will overwrite your programmed changes. If you don't want to lose your work we recommend saving as soon as you have created your setup. Here is how to do that:

Save a Preset

- Press F3 to activate the Save menu. The display will read {SAu} (yeah, that's supposed to be a v)
- Press [Enter] (last C key on your keyboard) to confirm menu selection
- Select the Preset you want to save to, using the keys with the -/+ symbols screened above (C3/C#3)
- You can also enter a specific preset number (1-5) using the white number keys spanning G3-D4
- Press Enter (C5) to save to the selected Preset location (applicable for both selection methods)

Save a Pad Map

- Press F3 to activate the save menu. The display will read {SAu} (yeah, that's supposed to be a v)
- Press [Enter] (last C key on your keyboard) to confirm menu selection
- Press [Shift] and the pad corresponding to the pad map you want to save your pad settings to (1-4)
- Press Enter (C5) to save to the selected pad map location

Load a Preset (F#3)

We explained earlier how you can use the Octave and Transpose buttons to select presets. Here is an alternative option for loading presets so you don't have to change your button functions.

- Press F#3 to activate the Load menu. The display will read {Lod} (better than Loa, right?)
- Select the Preset you want to load using the keys with the -/+ symbols screened above (C3/C#3). Presets are loaded instantly as you step through them.
- You can also enter a specific preset number (1-5) using the white number keys spanning G3-D4. Press Enter (C5) to load the selected Preset location (only applicable when loading using the number entry option)

Global Functions and Options

Unlike the Control Assign functions, Global functions can be accessed regardless of what preset has been selected.

And just to recap:

Pressing the [Setup] button will activate the Setup menu and the display will show {S.E.t.} with the 3 dots blinking for as long as the menu is active. The following assumes the Setup menu is active.

Global MIDI Channel (C4)

The Impact LX25 keyboard always transmit on the Global MIDI Channel but this setting also affect any control or pad that is not assigned to a specific MIDI channel (i.e. 1-16). Earlier we learned how the Octave and Transpose buttons can be set up to change the Global MIDI Channel but here is another option:

- Press the C4 key on your keyboard to select Global MIDI Channel. The display show the current value {001-016}
- Press [Enter] (last C key on your keyboard) to confirm menu selection
- Change the value in decrements/increments using the keys with the -/+ symbols screened above (C3/C#3). The value assignment is instant so if you exit the Setup menu after making changes, those changes remain active
- You can also enter a specific value (1-16) using the white number keys spanning G3–B4. Press Enter (C5) to accept the change

Keyboard Velocity Curves (C#4)

There are 4 different keyboard velocity curves and 3 fixed velocity levels to choose between, depending on how sensitive and dynamic you want the Impact LX keyboard to play.

Name	Description	Display abbreviation
Normal	Focus on mid to high velocity levels	uC1
Soft	The most dynamic curve with a focus on the low to mid velocity levels	uC2
Hard	Focus on the higher velocity levels. If you don't like exercising your finger muscles, this may be the one for you	uC3
Linear	Approximates a linear experience from low to high	uC4
127 Fixed	Fixed velocity level at 127	uF1
100 Fixed	Fixed velocity level at 100	uF2
64 Fixed	Fixed velocity level at 64	uF3

Here is how you change a velocity curve:

- Press the C#4 key on your keyboard to select Velocity Curve. The display show the current selection
- Press [Enter] (last C key on your keyboard) to confirm menu selection
- Change the value in decrements/increments using the keys with the -/+ symbols screened above (C3/C#3). The value assignment is instant so if you exit the Setup menu after making changes, those changes remain active
- You can also enter a specific selection (1-7) using the white number keys spanning A3–G4. Press Enter (C5) to accept the change

Pads Velocity Curves (D4)

There are 4 different pad velocity curves and 3 fixed velocity levels to choose between, depending on how sensitive and dynamic you want the Impact LX pads to play.

Name	Description	Display abbreviation
Normal	Focus on mid to high velocity levels	PC1
Soft	The most dynamic curve with a focus on the low to mid velocity levels	PC2
Hard	Focus on the higher velocity levels. If you don't like exercising your finger muscles, this may be the one for you	PC3
Linear	Approximates a linear experience from low to high	PC4
127 Fixed	Fixed velocity level at 127	PF1
100 Fixed	Fixed velocity level at 100	PF2
64 Fixed	Fixed velocity level at 64	PF3

Here is how you change a velocity curve:

- Press the D4 key on your keyboard to select Velocity Curve. The display show the current selection
- Press [Enter] (last C key on your keyboard) to confirm menu selection
- Change the value in decrements/increments using the keys with the -/+ symbols screened above (C3/C#3). The value assignment is instant so if you exit the Setup menu after making changes, those changes remain active
- You can also enter a specific selection (1-7) using the white number keys spanning A3–G4. Press Enter (C5) to accept the change

Panic (D#4)

Panic sends out the all notes off and reset all controllers MIDI messages on all 16 MIDI channels. This happens the minute you press D#4 and the Setup menu will exit upon release of the key.

Program (E4)

Earlier in this guide we covered how you can send MIDI program change messages using the Octave and Transport buttons. However there may be times where you want to send out a specific MIDI program change message without having to inc/dec to get to it. This function helps you with that plus also provides an alternative option to step through program changes in increments/decrements.

- Press the E4 key on your keyboard to select Program. The display show the last sent program message or 000 by default
- Press [Enter] (last C key on your keyboard) to confirm menu selection
- Change the value in decrements/increments using the keys with the -/+ symbols screened above (C3/C#3). Press Enter (C5) to accept the change and send out the selected MIDI program message.
- You can also enter a specific selection (0-127) using the white number keys spanning G3–B4. Press Enter (C5) to accept the change

Bank LSB (F4)

This function will send a Bank LSB MIDI message from the keyboard. Note, most software products don't respond to Bank change messages but many MIDI hardware products do. Here is how you send out a Bank LSB message

- Press the F4 key on your keyboard to select Bank LSB. The display show the last sent Bank message or 000 by default
- Press [Enter] (last C key on your keyboard) to confirm menu selection
- Change the value in decrements/increments using the keys with the -/+ symbols screened above (C3/C#3). Press Enter (C5) to accept the change and send out the selected Bank LSB message.
- You can also enter a specific selection (0-127) using the white number keys spanning G3-B4 (G4-B5 on LX61). Press Enter (C5) to accept the change

Bank MSB (F#4)

This function will send a Bank MSB MIDI message from the keyboard. Note, most software products don't respond to Bank change messages but many MIDI hardware products do. Here is how you send out a Bank MSB message

- Press the F#4 key on your keyboard to select Bank MSB. The display show the last sent Bank message or 000 by default
- Press [Enter] (last C key on your keyboard) to confirm menu selection
- Change the value in decrements/increments using the keys with the -/+ symbols screened above (C3/C#3). Press Enter (C5) to accept the change and send out the selected Bank MSB message.
- You can also enter a specific selection (0-127) using the white number keys spanning G3-B4(G4-B5 on LX61). Press Enter (C5) to accept the change

Memory Dump (G4)

The Memory Dump function will back up your current controller assignment settings including the 5 user presets by sending out MIDI sysex data. The data can be recorded in your DAW or other application capable of recording sysex data and replayed/sent back to your Impact LX25 keyboard when you want to reload your settings.

Sending out a memory dump for backup:

- Make sure your MIDI software program is set up and capable of recording MIDI Sysex data
- Start recording
- Press the G2 key on your keyboard to activate the memory dump. The display reads {SYS} while the data is being sent.
- Stop recording when the display reads {000}. The content of your Impact LX memory should now be recorded in your MIDI software program

Restoring a backup:

A memory dump/backup MIDI sysex file can be sent to the Impact LX25 at any time, while the unit is powered on, in order to restore a backup. Make sure the Impact LX is the output destination of the MIDI track containing the backup data. The display will read {SyS} when data is received. Once the data has transmission has been completed, the backup has been restored.

USB Port Setup (A4)

Impact LX25 has one physical USB port however there are 2 virtual ports as you may have discovered during the MIDI setup of your music software. The additional port is used by the Impact DAW software to handle communication with your DAW. You only need to change the USB Port Setup setting if the Impact LX25 setup instructions for your DAW specifically advises that this should be done.

User Preset 1 GM Instrument

Pots						
Ctrl	Msg Type	CC	Data 1	Data 2	Chan	Param
P1	MIDI CC	74	127	0	Global	Brightness
P2	MIDI CC	71	127	0	Global	Harmonic Content
P3	MIDI CC	5	127	0	Global	Portamento Rate
P4	MIDI CC	84	127	0	Global	Portamento Depth
P5	MIDI CC	78	127	0	Global	Control Change (Vibrato Delay)
P6	MIDI CC	76	127	0	Global	Control Change (Vibrato Rate)
P7	MIDI CC	77	127	0	Global	Control Change (Vibrato Depth)
P8	MIDI CC	10	127	0	Global	Pan

Fader						
Ctrl	Msg Type	CC	Data 1	Data 2	Chan	Param
F1	MIDI CC	7	127	0	Global	CH Volume

User Preset 2 GM Mixer 1-8

Pots						
Ctrl	Msg Type	CC	Data 1	Data 2	Chan	Param
P1	MIDI CC	7	127	0	1	CH1 Volume
P2	MIDI CC	7	127	0	2	CH2 Volume
P3	MIDI CC	7	127	0	3	CH3 Volume
P4	MIDI CC	7	127	0	4	CH4 Volume
P5	MIDI CC	7	127	0	5	CH5 Volume
P6	MIDI CC	7	127	0	6	CH6 Volume
P7	MIDI CC	7	127	0	7	CH7 Volume
P8	MIDI CC	7	127	0	8	CH8 Volume

Fader						
Ctrl	Msg Type	CC	Data 1	Data 2	Chan	Param
F1	MIDI CC	7	127	0	Global	CH Volume

User Preset 3 GM Mixer 9-16

Pots						
Ctrl	Msg Type	CC	Data 1	Data 2	Chan	Param
P1	MIDI CC	7	127	0	9	CH1 Volume
P2	MIDI CC	7	127	0	10	CH2 Volume
P3	MIDI CC	7	127	0	11	CH3 Volume
P4	MIDI CC	7	127	0	12	CH4 Volume
P5	MIDI CC	7	127	0	13	CH5 Volume
P6	MIDI CC	7	127	0	14	CH6 Volume
P7	MIDI CC	7	127	0	15	CH7 Volume
P8	MIDI CC	7	127	0	16	CH8 Volume

Fader						
Ctrl	Msg Type	CC	Data 1	Data 2	Chan	Param
F1	MIDI CC	7	127	0	Global	CH Volume

User Preset 4 “Learn Friendly” 1

Pots

Ctrl	Msg Type	CC	Data 1	Data 2	Chan
P1	MIDI CC	89	127	0	Global
P2	MIDI CC	90	127	0	Global
P3	MIDI CC	96	127	0	Global
P4	MIDI CC	97	127	0	Global
P5	MIDI CC	116	127	0	Global
P6	MIDI CC	117	127	0	Global
P7	MIDI CC	118	127	0	Global
P8	MIDI CC	119	127	0	Global

Fader

Ctrl	Msg Type	CC	Data 1	Data 2	Chan
F1	MIDI CC	3	127	0	Global

User Preset 5 “Learn Friendly” 2

Pots

Ctrl	Msg Type	CC	Data 1	Data 2	Chan
P1	MIDI CC	80	127	0	Global
P2	MIDI CC	81	127	0	Global
P3	MIDI CC	82	127	0	Global
P4	MIDI CC	83	127	0	Global
P5	MIDI CC	85	127	0	Global
P6	MIDI CC	86	127	0	Global
P7	MIDI CC	87	127	0	Global
P8	MIDI CC	88	127	0	Global

Fader

Ctrl	Msg Type	CC	Data 1	Data 2	Chan
F1	MIDI CC	3	127	0	Global

MIDI Implementation Chart

Function	Transmitted	Recognized	Notes
Global Channel			
Default	1	No	
Changed	1-16		
Mode	3	No	
Note Number	0-120	No	Using Octave -/+
After Touch	No	No	
Pitch Bend	Yes	No	
Control Change	Yes	No	
Program Change	1-128	No	
System Exclusive	Yes	Yes	For backup only
System Real Time			
:Clock	No	No	
:Commands	No	No	
Aux Message			
:Local on/off	No	No	
:All Notes off	Yes	No	
:Active Sense	No	No	
:Reset	Yes	No	

Factory Restore

If you need to restore factory settings for example if you by mistake managed to change the assignments needed for DAW integration files, here is how you do that.

- Make sure your Impact LX25 is switched off
- Press the [Octave up]+[Octave down] buttons and hold them
- Switch your Impact LX25 on

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