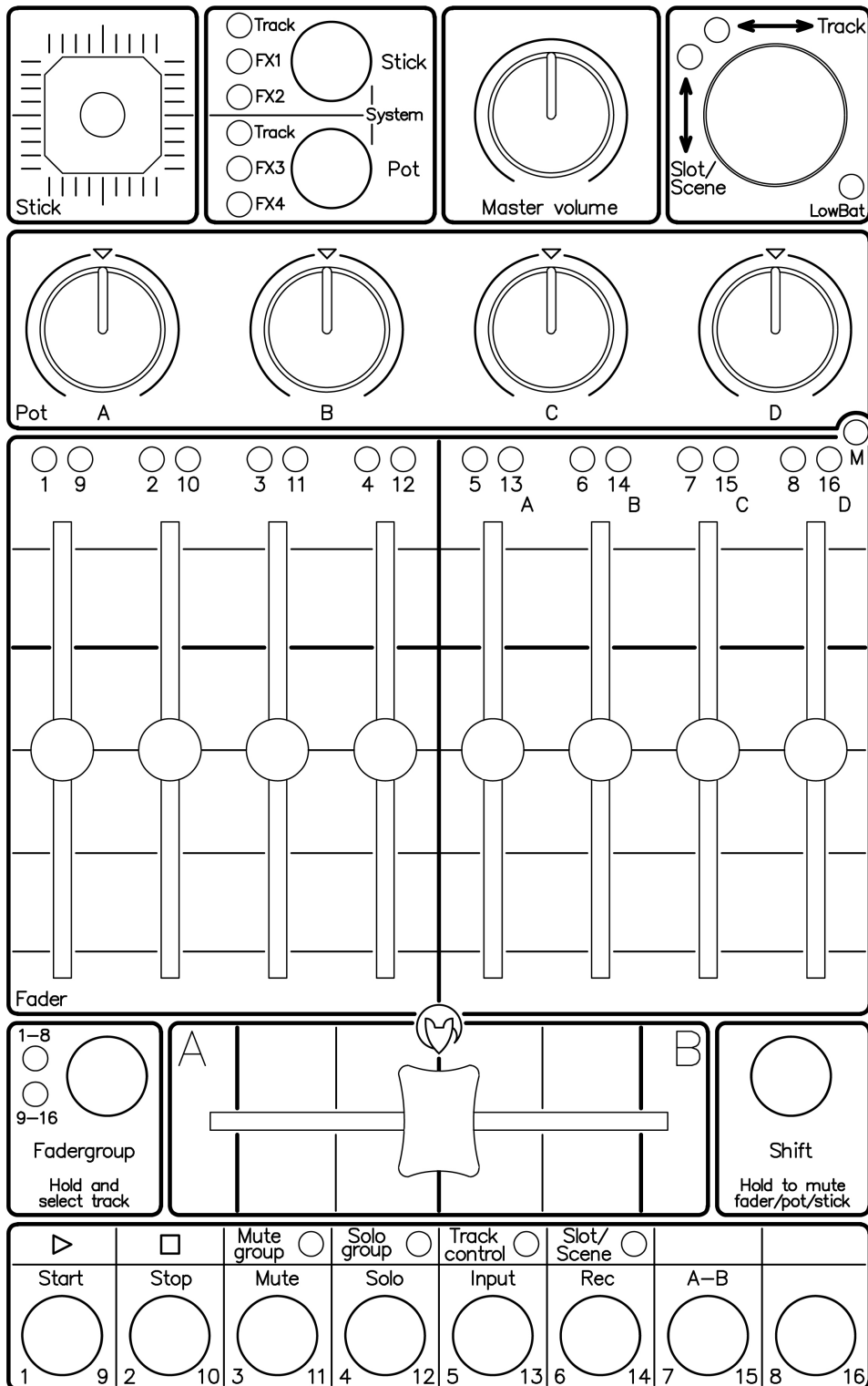


micromodul LV1



micromodul LV1

www.faderfox.de

User manual

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Provision of guarantee and product liability

The seller warrants for faultless material and proper manufacture for a period of 24 months from the date of sale to the end user.

Excluded from the stated guarantee are defects on parts as the result of normal wear-and-tear. These parts are mostly faders (sliding guides), potentiometers, encoders, buttons, switches, and joysticks.

Also excluded from the guarantee are damages that are the result of :
incorrect or inappropriate handling,
excessive force,
mechanical or chemical influences,
incorrectly connecting the instrument with other instruments,
incorrect or inappropriate use.

The warranty is void if the instrument is opened or changed. In addition, there is no warranty for individual parts and components (in particular, semiconductors) and disposables/consumables. The seller is not liable for consequential damages which are not the result of criminal intent or negligence on his part.

The following conditions must be met in order to claim the warranty services:

Instrument is either in its original packaging or similar packaging.

Copy of the invoice with the serial number clearly visible.

Meaningful error report or description of the error is attached.

The buyer assumes all costs and dangers of return shipments to the manufacturer. Since the user's manual which is included with each instrument also affects the warranty conditions (especially regarding safety issues), it is absolutely essential that you read through and follow all instructions.

Safety precautions and servicing

- The instrument's intended use is based on the functions and procedures contained in this manual
- Read all instructions for use as well as all accompanying literature before using the instrument
- Use only in closed rooms (not for outdoor use)
- Never use in a moist or humid environment (laundry rooms, swimming pools, etc, ...)
- Not for use in the vicinity of heat sources (radiators, ovens, etc, ...)
- Operational temperature is in the range of 0° - + 40° C
- Not for use in the vicinity of flammable material
- The instrument should not be in direct or prolonged contact with sunlight
- Dusty environmental conditions should be avoided
- Only for use with mains adapters which comply with the specifications in the chapter, "Power Supply"
- Only for use batteries which comply with the specifications in the chapter, "Power Supply".
- Pay attention that batteries do not leak while in the instrument (especially during extended storage)
- When connecting to other instruments, pay attention to the instructions in the chapter, "Connecting to the computer"
- No foreign objects are permitted inside the instrument casing
- No liquids should get inside the instrument casing
- Never let the instrument fall to the ground (casing and/or control elements may be damaged)

If the instrument must be opened (for example, to remove foreign objects from the casing or for other repairs), this may only be done by qualified personnel. The batteries must be removed and the mains cable must be disconnected before opening the instrument. Guarantee is void for defects that occur if the instrument was opened by an unauthorised or unqualified person.

Use a soft towel or brush to clean the instrument. Please do not use any cleaning liquids or water, so you avoid any damages to the instrument.

Introduction

It is 2004. Music is being made with electronic instruments that were originally intended to replace the typewriter. PC's and Mac's are replacing more and more synthesisers, pianos, CD players and LP turntables in the inventory of today's musician.

Musical arrangements are the largest creative aspect in many areas of modern music. Also, the creation of new sounds and loops using the processing power of computers allows a large amount of fun from the very start. We all know that really promotes creativity. You only need three tools in order to use the new possibilities in loop-based "computer music":

- A computer (a laptop/notebook would be best)
- Intuitive software such as **Live** from **Ableton**
- A hardware controller like the **micromodul LV1**, optimised for the software

Since computer music should also thrive from improvisation, we chose this combination – or even more correctly, we designed a controller – to support the playful use of loops. Without a doubt, Live from Ableton is a tool which, in itself, offers a huge potential when working with this sort of music. But, let's face it, who wants to drive a car with a computer keyboard or a mouse? Fact is, slide controls, knobs, joysticks, buttons, and LED's are as much a part of electronic music as steering wheel is to a car.

micromodul LV1 is a pocket-size, custom-made controller for **Ableton Live**, one of the most creative music programs in recent history. The **LV1** is very compact and easy to transport, and you do not even need the mains adapter, it works with standard and rechargeable batteries

Many different control elements are integrated into this controller. This combination is the real strength of the **LV1**. This inexpensive controller unifies track-fader, pots, buttons, joystick, encoder, and cross-fader in a very compact form.

As of **Live** version 2.0, you can use the **LV1** immediately by using the settings file which is shipped with the controller - without the lengthy process of programming each separate control element.

Start the fun with modern sequencing.

The **LV1** can also be used with other programs. It is suited well for software sequencers due to its architecture/layout.

Read this user's manual thoroughly. Even if the design is largely intuitive and the instrument is self-explanatory, this manual should be able to answer a question or two. If you should have any sort of other problem with your **micromodul**, just contact us via email using the email address on our homepage:

www.faderfox.de

Product description

- **Special controller** for sequencer software (optimised for **Ableton Live**)
- **Setup files** for **Ableton Live** as of version 2.0 are shipped with the controller
- **Independent of operating system and computer type** (PC or Mac) due to the midi interface
- **8 track faders** - switchable between 2 fader groups (1-8, 9-16)
- **4 pots** to control track-dependent and track-independent parameters (total of 152 parameters)
- **Multifunctional encoder** to select tracks and clips as well as a button-function for starting clips/scenes
- **Joystick** to control track-dependent and track-independent parameters (total of 76 parameters)
- **Cross-fader** and separate pot for the master level
- **8 track control buttons** with 4 different modes (mute group, solo group, track control, slot/scene) + double function which can be freely assigned . Double function accessible by holding the SHIFT button and pressing the appropriate control button
- **Fadermute** for all controls by holding down the instrument's SHIFT button
- **Standard or rechargeable batteries** (4 x micro cell (AAA) batteries are shipped with the **LV1**)
- **LED battery control**
- **Socket** for an external mains adapter (9-12V DC - min. 50 mA)
- **Midi-merge function**
- **Very compact design** in a black, plastic casing (desktop format 180x105x70 mm, 410 g)
- **Black aluminium front plate** with anodised coating (abrasion resistant) and inscriptions
- **32 LED's** to display various information (track select, fader group, key mode, etc,...)
- **High-quality** faders, pots, joystick, and encoder from ALPS
- **Expandable** system by other **micromodul** controllers or by another **LV1**

System requirements

- PC or Mac with a Midi-Interface (Midi-Input)
- Ableton Live or software which allows self-assignments of midi-controls for continuous parameters or key commands for switching parameters.
(Optimal with Ableton Live as of version 2.0 with the enclosed setup file)

Power supply

The **LV1** does not contain an internal mains unit. It was primarily designed for use with standard or rechargeable batteries (4 x micro cell AAA 1.2-1.5 V alkaline, NiCd, NiMH) which are inserted into a compartment on the bottom of the instrument. Please pay attention to the battery poles when changing batteries. This compartment has a safety screw which must be removed before batteries can be exchanged. Batteries usually last between 50 and 100 hours based on quality and brand. In order to increase the battery life-span, the instrument switches into its energy-saving-mode 10 minutes after the last movement was made on any controller. An LED running light displays the energy-save-mode. The instrument is still fully functional, only the LED's are switched off to save power. The instrument leaves the energy-saving-mode as soon as a control is moved (primarily **shift**). The battery control LED (**LowBat**) blinks when the batteries need to be replaced. Don't panic when this LED starts to blink. There is certainly enough reserve energy to finish your gig.

The **LV1** can also be used with an external mains adapter. The adapter (regulated or not) must have a DC voltage of 9-12 V and at least 50 mA. The adapter must also have a CE symbol.

The adapter plug (hollow plug: 2.1 mm inner / 5.5 mm outer) must be polarised according to the information on the connection plate: outer ring = minus, inner pin = plus.

Power supplied by an external mains adapter always has priority over batteries as long as the mains adapter delivers at least 9 V. This guarantees that the batteries are not unnecessarily used when the mains adapter is supplying the current. If an unexpected power shortage occurs (adapter plug is pulled out), the controller can then continue without any interruption. If the polarity for the mains adapter or batteries are switched, the instrument will not work. This would, however, cause no damage since the system uses protective diodes.

The **LV1** is turned on via the power switch at the rear of the instrument (LED's illuminate).

When the instrument is being powered by batteries, always try to remember to turn it off when it is not being used, as this will increase the life expectancy of the batteries.

Connecting to a computer

A midi cable is used to connect the **LV1** to a computer – and the software. This cable is the connected to the midi-out slot on the controller and the midi-in slot on the computer (sound card or midi interface). The midi-in slot on the **LV1** is used to connect additional controllers and keyboards to the same midi-port on the computer. The data is then merged in the **LV1** (merge function).

Of course, many users will now wonder why this controller does not have a USB interface. The **micromodul** system is a system of multiple controllers that is able to be cascaded via midi. If USB was used, special software would be required. In addition, many computers with sound cards and USB audio interfaces have a midi interface. This means you would not have to use one of your USB ports to use the whole **micromodul** system.

If your computer does not have a midi interface, or your sound card does not have one either, there is a small and inexpensive solution in the form of a USB midi interface that has both midi-in and midi-out.

Which software can be controlled

The **LV1** was designed primarily for use with **Live** from **Ableton** as of version 2.0. We believe this controller supports one of the leading sequencer programs on the market. A file with the matching controller settings can be found on the CD. **Live** versions before 2.0 can not be completely controlled (no clip selections, no cross fader).

The **LV1** can also be used with other sequencer programs or software instruments. The large parameter selection actually makes this controller useful for every type of music software. A total of 13 track-dependent (for each of the 17 tracks) and 26 track-independent control change parameters (from pots and faders) can be controlled by this instrument. In addition, the **LV1** has 16 track-dependent (for each of the 17 tracks) and 4 track-independent note-on/note-off parameters (switching functions).

You can switch the faders between two groups (2 x 8 tracks). The four pots can work together with the selected track (17 tracks) or switched to two fixed groups. The same applies to the joystick. Two controls (**master volume** and **cross fader**) are completely independent and assigned to two fixed targets. The 8 coloured track buttons on the bottom edge can control 16 switching functions dependent on the selected track. Two of these functions (mute and solo) are also available in groups, just like the faders.

If you would like to use this controller for other programs, you should first make sure it is possible to communicate with pots and faders via fixed midi control numbers. For keyboard functions, you need to be able to assign fixed midi note numbers. **LV1** sends fixed control change events for all controls and fixed note-on (when being pressed) and note-off (on release) for all track buttons.

You can not program the **LV1** or assign controller numbers or key numbers, but that is a function that is rarely needed with current programs.

The corresponding assignments are noted in the last chapter, "**Control numbers**".

You will find out how many parameters you can control and how you can switch modes in the following chapters.

Settings in the system mode

You can activate the controller's system mode if you press both the **stick** button and the **pot** button. The encoder LED blinks to signal this mode.

No midi signals are sent as long as the controller is in this mode. Only the incoming commands (via midi-in) are sent directly to midi-out.

In order to exit the system mode, just press these two buttons again. The controller will restart in the normal operational mode after about two seconds (during these two seconds, all LED's turn off, and the system is restarted).

During this restart procedure, all changes made in the system mode are stored. If you turn the instrument off while it is in the system mode, all changes will be lost.

You can make the following settings while in the system mode:

Standard settings for the encoder

The default settings for the encoder are switched when the encoder is pressed in the system mode.

- upper LED (**Track**) blinks = Track select is standard
- lower LED (**Slot/Scene**) blinks = Slot/Scene select is standard

This switching function is interesting when you are using two **LV1**'s at the same time. When you have two **LV1**'s, you do not have to use the shift button. You can select tracks with the encoder on one **LV1** and browse through **Live**'s slots/scenes with the encoder on the other **LV1**.

Alternate settings for the master volume and cross fader

The alternate function of the **master volume** and the **cross fader** are switched by pressing the **fadergroup** button while in system mode.

- upper LED (1-8) is on = alternate function of both controls (which you can assign yourself)
- lower LED (9-16) is on = master volume and cross fader function

This switching function is also rather interesting if you want to use two **LV1**'s together. It just does not make a lot of sense to control the same parameters with the same controls on both controllers. By using the alternate function on one of the controllers, you could control two other targets (such as tempo and monitor volume in **Live**).

Setup and joystick-vertical-inversion

Setup and joystick-vertical-inversion is selected via the green and grey buttons in the system mode.

- left green button = setup 1 (midi channels 10-12); joystick vertically upwards for larger values
- right green button = setup 1 (midi channels 10-12); joystick vertically upwards for smaller values
- left grey button = setup 2 (midi channels 13-15); joystick vertically upwards for larger values
- right grey button = setup 2 (midi channels 13-15); joystick vertically upwards for smaller values

The **LV1** works with different midi channels depending on the selected setup (see above).

This is how it is possible to control two programs with all controller functions more or less at the same time. You do, however, have to always make the switch in system mode. Controlling **Live** and **Cubase** or **Live** and **Reason** together without being forced to split up the controls is no problem.

The inverted joystick in the vertical direction (only works with track-dependent targets) is necessary for **Cubase**, for example, in order to properly use the surround function.

Preparations in Live

First of all, you need to copy the .ALS files from the CD (in the **micromodul\LV1** directory) to your computer. We have prepared the following **Live** sets:

micromodul LV1 V01 T8 Live20.als with 8 tracks

micromodul LV1 V01 T12 Live20.als with 12 tracks

micromodul LV1 V01 T16 Live20.als with 16 tracks (send-returns are controlled via pots)

micromodul LV1-DJ1 V01 T8 Live20.als with 8 tracks and send-control via the **DJ1** controller

micromodul LV1-DJ1 V01 T16 Live20.als with 16 Tracks and send-control via the **DJ1** controller

These sets include up to 240 control and button assignments. That will surely guarantee a comfortable start when using the **LV1**.

We do not have any configuration settings for Live versions before 2.0, since these versions are not able to be completely controlled. You can, however, create your own sets for the earlier versions. Refer to the next chapter to find out how.

After the midi connection between the **LV1** and the computer has been established, start Live. Next, select the midi port to which the **LV1** is connected. Open one of the Live sets listed above. All of the important control assignments to the individual control elements are then established. Play around a bit with the controls and knobs on the controller and check if you see the corresponding reaction on your monitor.

Controlling your Live-Sets

There is, of course, also the possibility of making adjustments between the software and the controller via LIVE's Learn function. You will need this function in order to control additional functions or make changes.

If you would like to control your existing LIVE-set using the LV1, you either need to input all adjustments with the Learn function in LIVE or copy all clips in one of our sets (copy all clips by holding down the <SHIFT> key on your pc-keyboard and then clicking the upper-left clip and the lower-right clip. Then copy the clips to the clip board by pressing <CTRL>+<C>. Open a new set and paste the clips you just copied by pressing <CTRL>+<V>). It is, however, only possible to copy clips from one set to another using this method. You will need to reinsert any of your effects, since effects are not copied with the sets. Maybe ABLETON has a solution to load controller templates in order to quickly adjust existing sets to various controllers.

Learning to use the controller in LIVE is actually quite simple, although you do need to pay attention to a few things when using it with the LV1.

Programming mode

You need to activate the LV1s programming mode before attempting to Learn. (Press <SHIFT> and FADERGROUP simultaneously on the LV1. You will see that the programming mode has been activated by the blinking of one of the FADERGROUP LEDs. Press again to deactivate the programming mode.)

Programming mode - characteristics:

The individual controllers and the joystick send nominal "zero" values when turned to their far left positions - or lowest position. This is done to suppress any values from being sent due to any controllers being inadvertently moved. The stress-free movement of the joystick is also made possible through this technique.

The track selection through the encoder is not sent to LIVE. You can simply switch the tracks on the controller without having the corresponding control commands wrongly interpreted or assigned. In order to assign the individual track selections, all you need to do is press the FADERGROUP and then press the desired track key (one of the eight coloured keys on the bottom edge). Of course, you need to pay attention which FADERGROUP is activated.

Assigning the controller in LIVE

First, activate the learn mode in LIVE by pressing the mini switch on the upper right. The actual learning process consists of selecting the control element or slot/scenes and then moving the desired controller to its "zero" value (turning the controller to the left). You assign switches by pressing the desired key or key combination (key + <SHIFT>). LIVE displays the midi channel and controller or note number plus the control mode (ABSOLUTE) in the bottom segment of your monitor if the assignment was successful. In order to change a track in the controller, simply turn the encoder (if the encoder LED is on). Otherwise, press <SHIFT> and turn the encoder simultaneously. The next chapter will explain how the various functions of the individual controllers and keys can be accessed.

As soon as all the keys and knobs have been assigned, exit the learn mode by pressing the midi switch in the program. Do not forget to also turn off the programming mode on the controller, or the knobs and switches will appear not to work (as they are only sending their nominal values).

Working with LIVE

The layout of LV1 is optimised to work with LIVE. One general function when the <SHIFT> key is pressed, is all controller movements (turning the knobs) are not registered in LIVE. By using this feature (also called "fadermute"), you can avoid large parameter changes if the controller settings assigned to the knob are different.

Fader

Next thing you see, are the 8 fader knobs. These are, of course, used to adjust the volume for tracks 1-8 and 9-16. Use the FADERGROUP key to switch between these two track groups. The corresponding LED next to this key shows you which group is selected. There is not a lot to say about the CROSSFADER. The crossfader steers the crossfader in LIVE, and if you do not need to use it, you can always assign a new function to it.

Track buttons

The coloured track buttons on the bottom edge of the instrument correspond to the group switch over the **fadergroup**. The 8 buttons can also be used in 4 different key modes. When holding down the shift button and then pressing one of the 4 buttons in the middle (green and grey buttons), one of the key modes is selected. The corresponding LED is then on.

The function of the 8 buttons for each of the key modes:

- **Mute group** = mute each of the 8 tracks individually in the selected group
- **Solo group** = individually switch solo or monitor for 8 tracks in the selected group
- **Track control** = total control of the active track
- **Slot/Scene** = start one of the 8 clips in the active track or start one of the 8 scenes

You can do any of the following (corresponding to the button labels) with the track control in the active track: start, stop, mute, switch to solo, activate input, activate record, and switch to the cross fader. The last button (to the far right) is not yet assigned. The master track also has 8 control functions that you can assign (for example, activate insert effect).

The LED's over the fader show which tracks are activated.

Always refer to these LED's when selecting tracks and not just rely on the monitor.

Both of these do not have to be identical. If the LED for the selected track is not constantly on, but blinking, then this is a sign that the fader is not controlling this track. It is set to the alternate group. You can, of course, change this immediately by pressing the **fadergroup** button to switch groups. The LED to the far right (**M** shows that the master track has been selected).

You need to pay attention to a couple of things when using the slot/scene function. Pressing the grey button to the right again (while holding down shift) switches the mode between slot and scene control. If the slot/scene LED is blinking, that means you can start a scene with the 8 buttons. So, you have quick access to 8 track-independent switching functions. If the LED is on constantly, that means you have 8 track-dependent functions assigned to the buttons. Normally, these switching functions are used to start clips in the slot of the active tracks or scenes. You would have to set the control assignments, but then you can use your own "architecture" or layout.

We would, however, like to give you a little tip: it is normally best to use the same colour for the clips as used for the assigned buttons. This makes the layout a lot clearer.

Of course, these 8 buttons can also be used for other switching functions within each track. Why shouldn't you use these functions to turn insert effects on and off or control other effect parameters? It is so easy. Simply assign the functions to the buttons, and you can control the entire effects process.

The 8 track buttons offer an alternative method to selecting tracks via the encoder. The corresponding track or send-track is selected if you hold down the **fadergroup** button in addition to pressing one of the track buttons. This is, of course, also dependent on which group is selected (1-8 or 9-16). The master-track can only be selected by using the encoder (see section below).

You can access two additional functions for the blue buttons by holding down the **shift** button and pressing one of these blue buttons. This sends a global **play** and **stop(reset)** command to **Live**. You can assign two functions to the white buttons in connection with the **shift** button (maybe turn on the coffee machine :-)

Pots

The 4 pots (**A, B, C, D**) above the faders are multifunctional. Use the **Pot** button just to the right of the joystick and switch these 4 pots to 3 different target groups. These groups are displayed with 3 LED's. The first target is a track-dependent group. That means when this LED is on, you control 4 of your own parameters for each selected track with these 4 pots. We assigned these with the 4 send controls for the corresponding tracks. Each of the other two target groups control four independent parameters that you can assign as needed. One idea might be to use them for some effect parameters that you would like to have quick access to.

The pot target groups also have an alternate function. When you hold down **shift** and then press the **pot** button, the corresponding LED blinks to show that the alternate parameter has been selected. So, by using these pots, you have control over 8 track-dependent parameters and 16 track-independent parameters.

The **master volume** control is assigned to the **Live** parameter with the same name. This means the volume level is always able to be changed immediately.

Joystick

In principle, the joystick has the same multi-functionality as the pots. You can also select 3 different targets for the joystick, whereas the first is track-dependent and the other two are track-independent. The joystick allows 2 parameters to be changed at the same time: one in horizontal direction and one in vertical direction. We assigned the panorama control to the track-dependent target (upper LED). The other two targets have not been assigned, but they are very useful for live effects that have X-Y-parameters

Just like the pots, the joystick targets have an alternate function. When you hold down **shift** and then press the **stick** button, the corresponding LED blinks to show that the alternate parameter has been selected. So, by using this method, you can control a total of 4 track-dependent parameters and 8 track-independent parameters.

Encoder

The encoder is located on the upper right of the instrument. This encoder is a continuous-stepped control to select tracks, slots and scenes. The 2 LED's to the upper left display the current function. In system mode, one of these two functions is set to be the standard setting. The other function can be accessed by holding down the **shift** button. The change in function can be easily seen by observing the LED's.

You can browse through the tracks, send-tracks, and master-tracks by turning the encoder back and forth. You can carry out a total of 17 different selections.

The current selection is re-sent when the encoder is pressed. This makes sense when you have selected a different track in the program and would like to go back to the "controller track" in order to view its insert effect.

The encoder's second function is the vertical selection of slots and scenes (when you are in "session view" in **Live**). If you press the encoder when using this function, the clip in the selected slot of the active track or the selected scene in the master track is started. Turn the selection to an open slot and press the encoder in order to stop the track.

Expanded sets

micromodul is a system of controllers: single controllers which are easily combinable and expandable to create a complete system. Just connect the instruments with their midi interfaces, and the system is ready for use.

The instruments are normally connected from right to left. That means the midi-out slot for the instrument to the right should go into the midi-in slot of the instrument on the left. Repeat this as often as required to connect all your midi-controllable instruments.

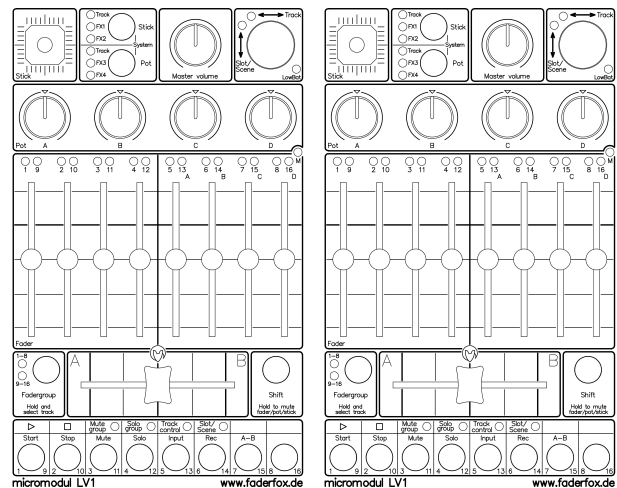
An important point when combining the **LV1** and **LX1** is the order in which they are connected. If you want to control these instruments in a useful manner, the **LV1** should be after the **LX1** in the midi chain – so, connect the **midi out** on the **LX1** to the **midi in** on the **LV1**.

Controllers that accept commands must always be after controllers which send commands through the midi chain.

A midi loop is not needed. That means the midi in on the first instrument is not connected to the computer. Other than this item, the connection order and placement order is totally up to you.

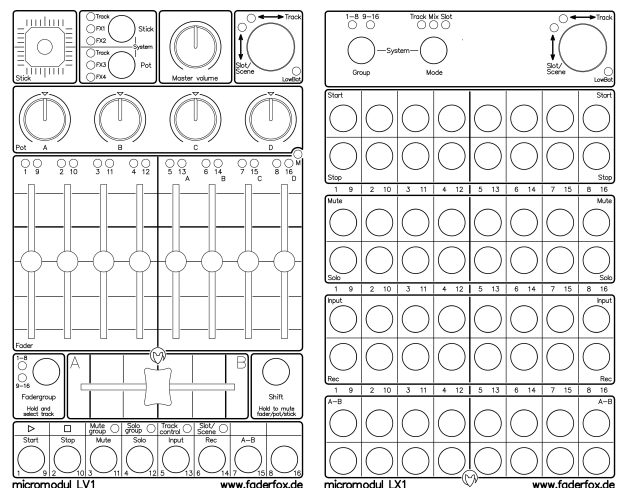
Working with two micromodul LV1's

Multiple controllers is an especially attractive solution for the **Ableton Live** sequencer. The **LV1** was designed in order to be expandable. In fact, with 2 **LV1**'s, you can control 16 tracks comfortable. You have two encoders, one to select the tracks and one to browse through the slots. Then there are 12 parameters per track which are quickly accessible via the 8 pots and 2 joysticks. Pay attention to the settings in the system mode (refer to the information above). The track selection by the encoder is transmitted between the controllers, so that after a switching tracks, both controllers are set to the same track. Selection of the mute group and solo group is also synchronised using this method.

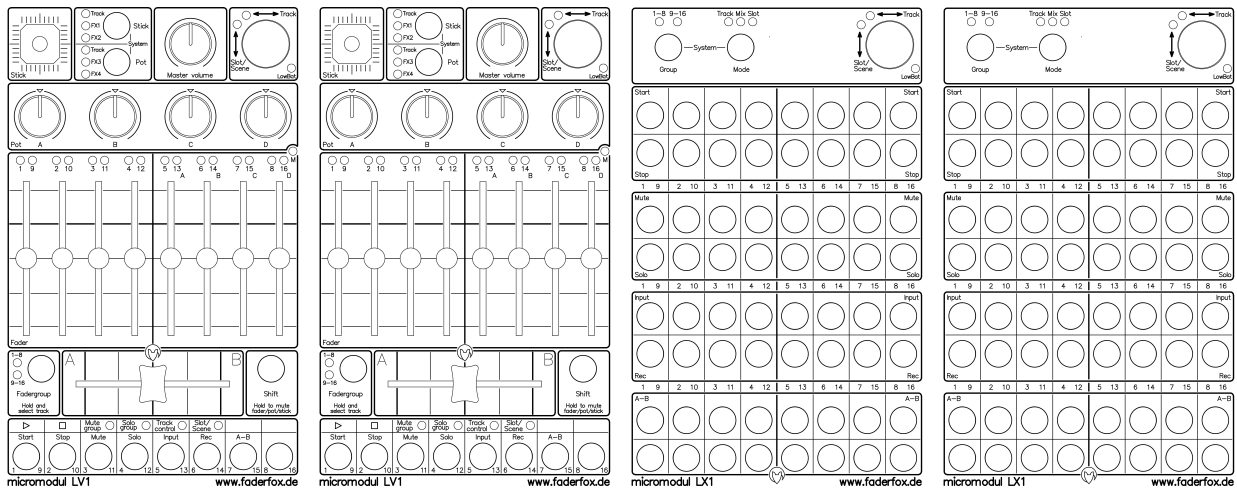


Additional keys with the micromodul LX1

Our **LX1** was also designed as an addition. A controller with 64 control buttons – all of which have the same colour scheme as the **LV1**. You can use this instrument to carry out all of the switching functions of the **LV1**, but you will not have to first switch the tracks anymore. All track control functions are accessible for 8 tracks. The **LX1** also has a group switch, just like the **LV1** (track 1-8 / 9-16). Another strength of the **LX1** is the possibility to start 64 slots/scenes (up to 128 are even possible by using the shift/switch function). Track control functions and slot start functions can also be mixed among the keys/buttons – configure it according to your personal needs. With the **LX1**'s encoder, you can control the track-select in the **LV1** and in Live. That means split selection of tracks and slots without first having to switch (exactly the same as with 2 **LV1**'s).



Of course, the real fun starts when you combine 2 LV1's and 2 LX1's. 16 tracks, all with corresponding switching functions and direct control – and this group of 4 instruments looks great as well.



Using the micromodul DJ1 to create an expanded DJ-Set

You can create your own custom DJ-set for Ableton Live by combining 1 or 2 LV1's with the DJ1. With the LV1, multiple tracks are mixed together to 2 send-paths. These 2 premixes are then processed by the DJ1 which does the final mix and applies the effects. Pot A is assigned the panorama for the tracks and Pot B is assigned the deck-dependent send-effects. The other 2 pots (C,D) could be used for equaliser functions. An EQ in every track is never a bad idea.

With its 64 buttons, the LX1 can also help control single tracks when premixing. It can also be used to individually start the clips in the track slots.

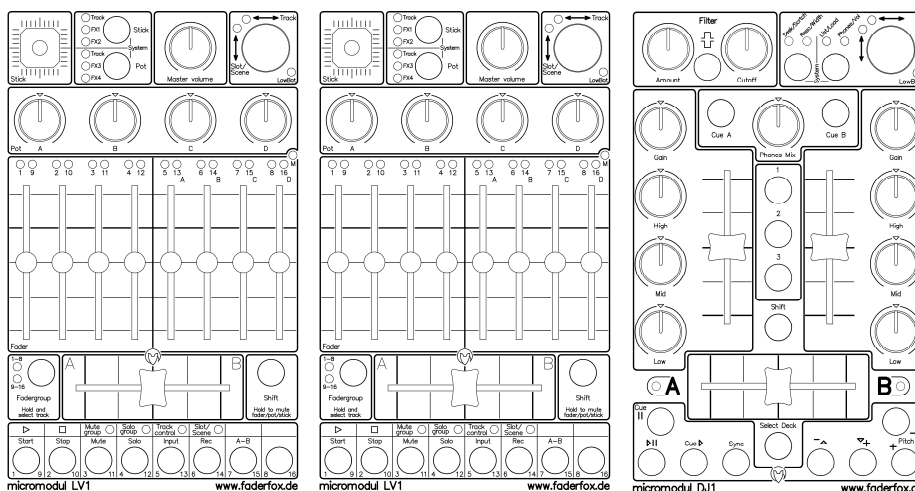
Of course, we supply you with two files for the configuration of the necessary presets:

- micromodul LV1-DJ1 V01 T8 Live20.als with 8 tracks and send controls with the DJ1 controller
- micromodul LV1-DJ1 V01 T16 Live20.als with 16 tracks and send controls with the DJ1 controller

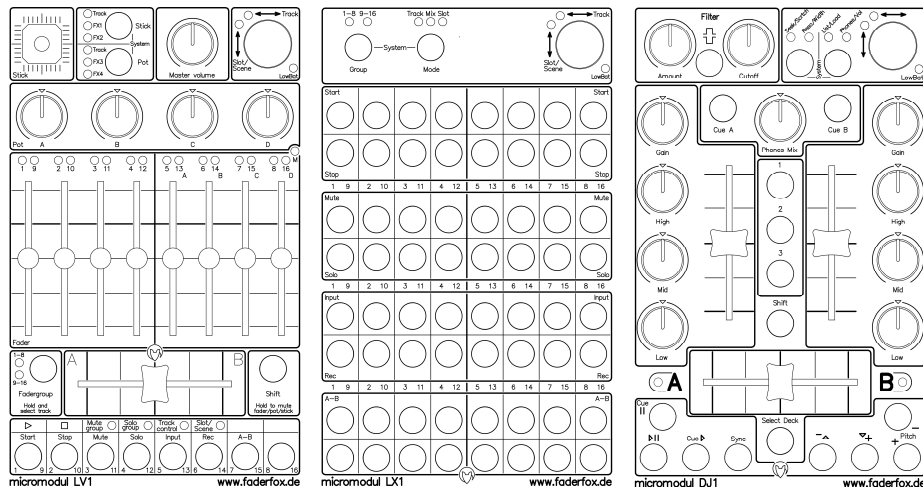
In both of these expanded sets, the control elements for the DJ1 are assigned exactly the same as in the standard DJ1 controller set.

Here are two possible combinations:

Two LV1's with one DJ1



LV1, LX1 and DJ1 as a trio



Controller numbers

Pot / Fader / Joystick Encoder / Key	CC-No Track 1-16	CC-No Master Track	CC-No fixed	Note-No Track 1-16	Note-No Master Track	Note-No fixed
P - A (Track)	40-55	56				
P - B (Track)	60-75	76				
P - C (Track)	80-95	96				
P - D (Track)	100-115	116				
J - X (Track)	20-35	36				
J - Y (Track)	0-15	16				
P - A (FX3)			57			
P - B (FX3)			77			
P - C (FX3)			97			
P - D (FX3)			117			
P - A (FX4)			58			
P - B (FX4)			78			
P - C (FX4)			98			
P - D (FX4)			118			
J - X (FX1)			37			
J - Y (FX1)			17			
J - X (FX2)			38			
J - Y (FX2)			18			
F - Track	0-15					
F - Crossfader			18 (*19)			
P - Master volume			16 (*17)			
E - Track-Select				16-31	32	
E - Slot/Scene-Select up						33
E - Slot/Scene-Select down						34

(*) secondary key assignments (fadergroup LED 9-16 is on in system mode)
CC-No means Control-Change-Number

Track button's note numbers for tracks 1-16 (for track control as well as slot start):

Track	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Key																
Start	0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
Stop	1	9	17	25	33	41	49	57	65	73	81	89	97	105	113	121
Mute	2	10	18	26	34	42	50	58	66	74	82	90	98	106	114	122
Solo	3	11	19	27	35	43	51	59	67	75	83	91	99	107	115	123
Input	4	12	20	28	36	44	52	60	68	76	84	92	100	108	116	124
Rec	5	13	21	29	37	45	53	61	69	77	85	93	101	109	117	125
A-B	6	14	22	30	38	46	54	62	70	78	86	94	102	110	118	126
Free	7	15	23	31	39	47	55	63	71	79	87	95	103	111	119	127

Track button's note numbers for Master-Track:

Key-Mode	Master Track control	Master Scene start
Key		
Start	0	8
Stop	1	9
Mute	2	10
Solo	3	11
Input	4	12
Rec	5	13
A-B	6	14
Free	32	15

Track button's note numbers for global control (with Shift)

Key	Shift
Start	35
Stop	36
Mute	
Solo	
Input	
Rec	
A-B	37
Free	38

The following midi channels are used:

Function	Midi Channel (Setup 1)	Midi Channel (Setup 2 for Live)
Joystick	10 (*11)	13 (*14)
Pot A,B,C,D	10 (*11)	13 (*14)
Track-Fader	12	15
Crossfader, Master volume	12	15
Track-Select	12	15
Slot/Scene-Select	12	15
Track control	10	13
Slot start (Track 1-16)	11	14
Scene start (Master-Track)	12	15
Global control (Play/Stop)	12	15

(*) Midi channel in alternative mode (LED's in Stick or Pot section blink)

All polyphonic-aftertouch-events on channel 16 are reserved for internal system communications. This channel should not be used with midi-in, since this could cause problems (spontaneous switching of track and key mode) with the **micromodul** system.

These "events" are only used by a few very expensive keyboards.

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Version 01

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