



User Guide

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## Introduction

Thank you for purchasing the Ohm control surface from Livid Instruments. This instrument is built with all the familiar controls of a standard MIDI controller, instrument, or mixer. The Ohm features blue LED back-lighting for low light conditions, custom designed rubber buttons, and versatile sliders and knobs. The control layout was not only designed as the most comprehensive controller for VJ software, but was inspired by some of the most innovative and popular audio software programs that have revolutionized the way music is created and performed. Ohm users will find it to be highly intuitive and adaptable to music generation with programs and makes an ideal companion for hardware such as analog synthesizers, video mixers, DJ software, lighting equipment, and other musical instruments.

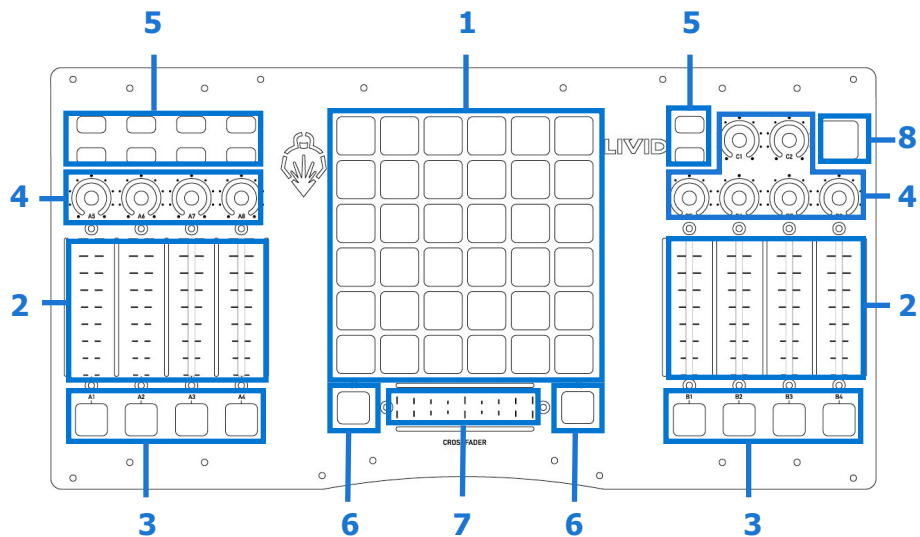
### What's in the box

Livid Ohm Controller  
USB Cable  
12V DC Power Adapter (use included adaptor only)  
Manual  
Livid installer CD with drivers, software, and a user manual

### Features

36 button clip bank  
8 Faders  
1 Crossfader  
10 Rotary knobs  
10 Function knobs  
8 Effects trigger / Mute buttons  
2 Transform buttons

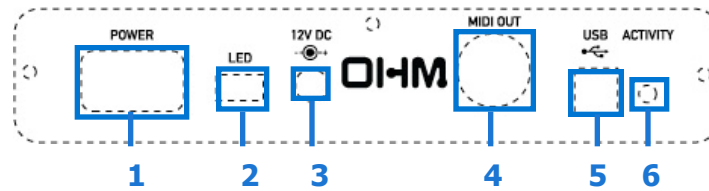
## Controls and Connections



Front View

While any of the controls on the Ohm can be used for a wide range of functionality, here are some basic terms and uses for the controls.

- 1. Clip Bank** – The Clip Bank sends out note data for activating files, triggering visuals or playing notes.
- 2. A/B Faders** – These vertical sliders can be used to adjust effects, mapped to pitch and volume, or used to manipulate data.
- 3. Trigger Buttons** – These buttons can be used to activate effects or mute channels.
- 4. Knobs** – These knobs can be used to adjust effects, EQ settings, and control playback.
- 5. Function Buttons** – These buttons can be used to activate various functions within the software such as; switching between channels or banks, activating camera feeds, or used to cue, play, pause, and re-wind your media.
- 6. Transform Buttons** – These buttons can be used to transform, mix, switch, or fade between channels.
- 7. Crossfader** – Use the crossfader to control the crossfade, mix, or transition between channels.
- 8. Tap** – This button is designed for tapping a beat to adjust the BPM.



**Back View**

**1. Power Switch** – Turns the Ohm on and off.

**2. LED Switch** – Turns the LED backlighting on and off.

**3. Power Connection** – Connect the power adapter to the Ohm. Use only the enclosed adapter. If your adapter does not have the correct male connector please contact Livid for the correct adapter.

**4. MIDI Out** – The MIDI Out port provides a standard MIDI out jack to connect the Ohm to other MIDI devices.

**5. USB Port** – The USB port provides connectivity and sends MIDI signals to the computer from your instrument. (drivers needed)

**6. USB Activity Light** – Indicates USB activity from the instrument and can be used to troubleshoot any problems you may have.

## Connecting

To make the Ohm controller compatible with industry standard sound and video equipment, the controller comes equipped with both a USB and MIDI out connection. The USB is designed to connect directly to a computer and the MIDI out can be used to connect to a MIDI interface, PC soundcard, external sound-card, or any of the hundreds of MIDI processors and synthesizers using a standard MIDI cable.

1. Connect the DC power adapter to the power jack of the Ohm controller
2. Turn the power switch to the "on" position

### For MIDI Connectivity

Using a standard MIDI cable, connect the Ohm MIDI out to the MIDI in of your sound-card or other MIDI interface.

### For Direct USB/MIDI Connectivity

1. Install the Ohm Drivers from the included driver CD.

2. To confirm the controller is working, pressing any of the controls and the activity light should flicker.
3. Power up your external device or start the software application you are using.

## Installing the USB Drivers

### MAC OSX

1. Insert the Livid Ohm Drivers Disc.
2. Locate the correct **OHMUSBDriver.pkg** installer for your computer.
3. Run the installer.
4. Restart your computer.
5. Once the driver is installed, **Livid ohm Controller** should be listed in your software applications device selection preferences. Select the Ohm as your MIDI device and begin using the Ohm.

### Windows

1. Insert the Livid Ohm Drivers Disc.
2. Locate the **Setup.exe** file in the Ohm Driver folder and double-click on it to install the driver.
3. Run the installer.
4. Restart your computer.
5. Once the driver is installed, **Livid OHM In: Port 1** should be listed in your software applications device selection preferences. Select the Ohm as your MIDI device and begin using the Ohm.

### Troubleshooting

Make sure you have the latest drivers installed. Please check the support section of [lividinstruments.com](http://lividinstruments.com) to download the latest drivers.

- Make sure your USB cable is properly connected. If you are using a USB hub, try connecting the Ohm USB cable directly to your computer.
- If you are using a Macintosh Computer running OSX, make sure you have Ohm selected as your device in the Audio MIDI setup. To access Audio MIDI go to Applications>Utilities>Audio MIDI Setup
- Check to make sure your software is configured to use the Ohm. Open your application's preferences to verify that the software is configured to receive the MIDI messages from the Ohm controller.

## MIDI assignments

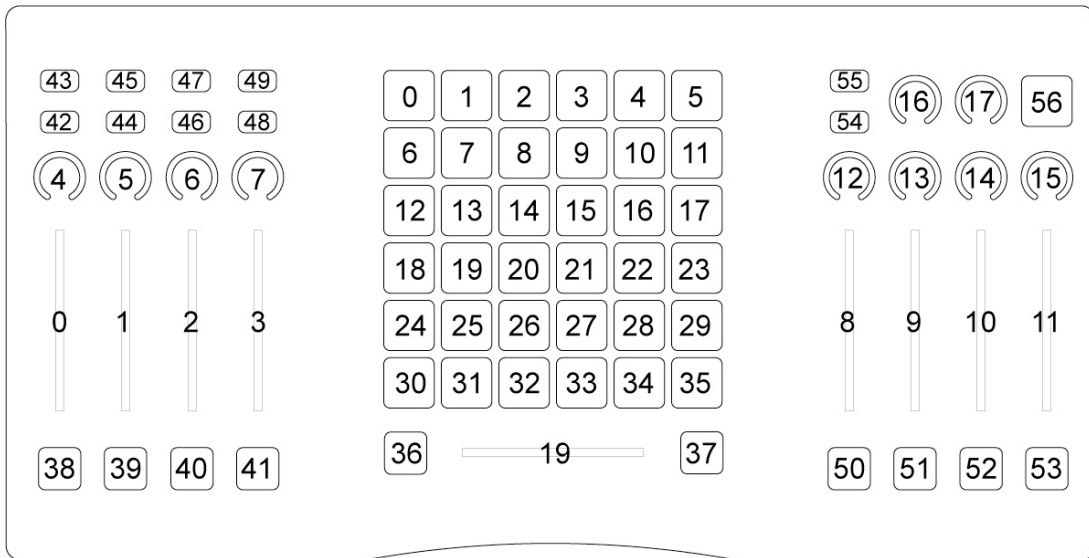
MIDI (Music Instrument Digital Interface) provides a means and a standard for hardware instruments to easily integrate into many softwares, musical instruments, and other MIDI compatible devices such as an Edirol V4 video mixer. Most VJ, DJ and audio applications such as Livid Union, FL Studio, Ableton Live, and Propellerheads Reason are completely MIDI ready and provide a MIDI learn functionality that allows you to quickly assign a MIDI function from Ohm to a function within the software. Consult the documentation that came with your software to learn more about MIDI.

**Ohm has a fixed MIDI map for all its controls. All Note and Control data is sent on Channel 1 and cannot be changed.**

### **MIDI Table**

Fader A1	CC0	Fader B1	CC8
Fader A2	CC1	Fader B2	CC9
Fader A3	CC2	Fader B3	CC10
Fader A4	CC3	Fader B4	CC11
Knob A5	CC4	Knob B5	CC12
Knob A6	CC5	Knob B6	CC13
Knob A7	CC6	Knob B7	CC14
Knob A8	CC7	Knob B8	CC15
Knob C1	CC16	Knob C2	CC17
Crossfader	CC19	Button TAP	Note 56
Button A1	Note 38	Button B1	Note 50
Button A2	Note 39	Button B2	Note 51
Button A3	Note 40	Button B3	Note 52
Button A4	Note 41	Button B4	Note 53
Button F1	Note 43	Button F6	Note 44
Button F2	Note 45	Button F7	Note 45
Button F3	Note 47	Button F8	Note 46
Button F4	Note 49	Button F9	Note 55
Button F5	Note 42	Button F10	Note 54
Button Transform A	Note 36	Button Transform B	Note 37
Buttons Bank 1-36	Notes 0-35		

### **MIDI MAP**



## System Requirements

### Ohm USB/MIDI Driver

Ohm uses a software driver to allow for MIDI messages to be sent over USB. In order for your computer to be able recognize the Ohm as a MIDI device, you must install the Ohm MIDI driver. Use the installation CD-ROM to install the USB/MIDI driver, or visit [lividinstruments.com](http://lividinstruments.com) to download the latest drivers.

### Livid Union VJ Software

Union is designed for real-time media playback and manipulation. In general the more video memory and processing speed you have the better. While we cannot support all computers and video cards, we have done our best to support a wide range of operating systems and dedicated video cards. Below is a list of the minimum requirements to run Union. While we specify "minimum", for best performance and recommended systems, please refer to the Livid Support Forums. <http://forums.lividinstruments.com>

### Minimum Requirements

#### Macintosh

- Macintosh G4 1.5GHZ+
- OS X 10.2 or above
- Video card that supports dual displays
- 1 GB of RAM

#### Windows

- 1.5GHz Processor (2GHz+ recommended)

Windows XP  
QuickTime 6+  
Video card that supports OpenGL, dual displays \*  
1 GB RAM

\* Windows computers that do not have dedicated video memory, also known as "Integrated Graphics" will likely not be able to properly run Union. Chipsets such as the Intel GMA950 and nVidia 6150 are common, but will likely not be able to support Union under Windows XP.

### **Preferred System**

Processor 2ghz or better  
2 GB RAM  
Dedicated video card with 512MB of video RAM  
Dedicated hard drives for media files

\* For live performance situations, we recommend you turn off all other applications and processes before running Union including networks, anti-virus programs, and system applications.

## **Controls Related to Livid Software**

Begin by installing the included software and drivers following the installation instructions on page 5. Ohm is designed to be a direct control interface of Livid software and can be used with any other MIDI software for video, DJ, audio, and music. After becoming familiar with the function of the software you will notice the similarities of the controls. Ohm's layout is designed for a 2-channel A/B environment. You will find Livid's Union software is based on a two channel system.

The center 36 button Clip Bank buttons are used to trigger clips and assign a clip to either channel A or Channel B. By sliding the crossfader you can mix between channel A or B.

The Effects control sections are grouped to give the user controls over their respective channel. The software allows you to assign a separate effect to each control. By moving a slider or rotary control, Ohm will modify the effect that is assigned to that video channel.

The onboard function buttons are set to control many software functions so that Ohm users will only use the computer's mouse to a limited extent. With proper practice and rehearsal, Ohm can control access the most common used functions needed in a live performance so that the performer plays the Ohm controller as a true instrument and the computer is only needed for running the software and storing content.

For full explanation of the use of controls in the software as well as software setup, install and troubleshooting, please refer to the user manual included with the software.

All Ohm instrument controls correspond directly to the Livid Union software interface. You will find that as you physically activate faders, rotaries, and buttons they will animate on screen in the software. The control layout is arranged to provide not only maximum performance and versatility, but are grouped to perform specific functions common to multimedia users.

**Function Buttons** - These are used to control many program functions such as changing banks, video in, waveform, layers, and a shift button that gives the controller more functions.

**A5-8, B5-8** Effects rotary knobs – Used to add and adjust effects to the video output on either channel A or B

**1-36 Clip Grid** – 36 buttons used to trigger video content clips

**A1-4, B1-4** - Effects faders – Used to add and adjust effects to the video output

**A1-4, B1-4** - Effects trigger buttons – Trigger effects on instantly to the value that the slider above it is set to.

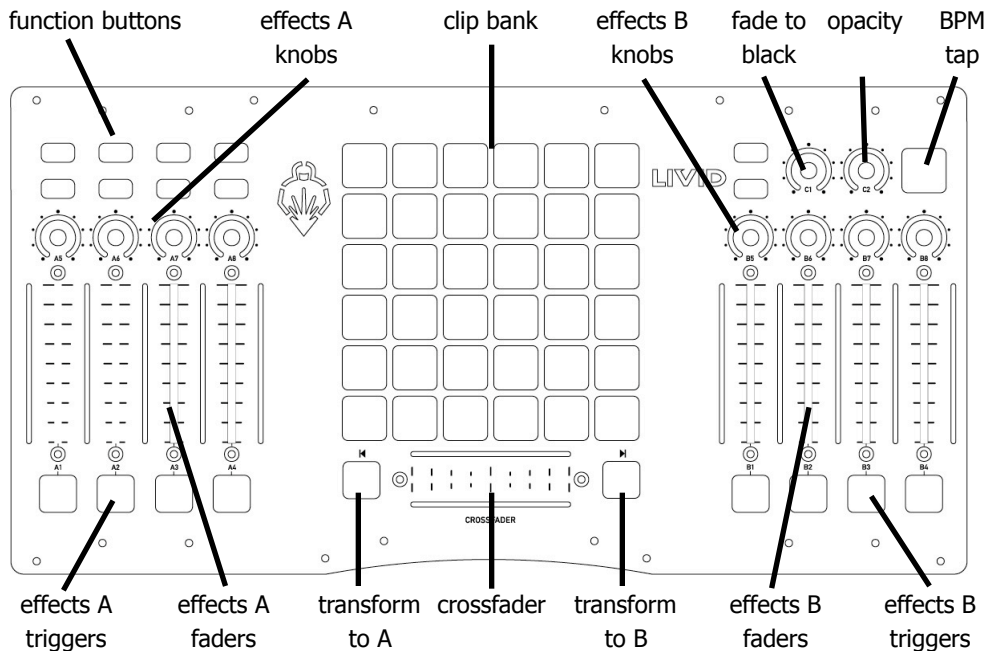
**Crossfader** - Mix between channel A and B

**Transform Buttons** - Switch directly back and forth between channels A and B

**C1 Fade to Black** - Transition output to black screen

**C2 Opacity** - Controls the opacity or visibility of the layer

**Tap Button** - Tap to set the BPM or tempo for use with setting loops, LFO's and a central tempo.



## Controls With Other Software and MIDI Gear

The Ohm controller can be used with any software that has MIDI learn functionality. In most cases, the controls are mapped to the software by activating MIDI learn button in the software then moving or pressing the Ohm control you wish to assign to that software function. In addition, the Ohm controller sends out standard MIDI notes and controller numbers that can be used with any other equipment that is MIDI compatible. Please refer to the MIDI Assignments for specific MIDI assignment for knobs, buttons, and faders.

### Backlighting

The Ohm controller features full LED illumination for low-lighting environments. For everyday use and to extend the life of the led illumination, Livid has included a LED on/off switch in the back panel.

## Troubleshooting

**WARNING do not press the buttons, sliders, or rotaries with excessive force as this will not make them work better and may seriously damage the unit.**

To troubleshoot any problems with your Ohm instrument, please start with the following sequence to determine where in the process the problem occurs.

**Getting Power** – Make sure the OHM is powered on

**Generating USB Data** – Make sure the controller activity light is working

**Computer Receiving Data** – Make sure you are properly connected and installed

**Software Receiving Data** – Make sure your software is configured properly

### Getting Power

#### **How do I know if my OHM is getting power?**

Make sure the power jack is solidly plugged in. The LED backlighting shares the same power source as the logic board inside the OHM and is a good indicator the OHM is getting power. Check the small switch in the back panel to make sure the LED back lighting is on. Another indicator that the OHM is getting power is the activity light in the back panel. It is normally off but should flicker whenever you press a button or move a switch. If both the activity light and backlighting do not work, the power adapter or wall supply is not functioning and needs to be checked and replaced.

#### **What if the USB activity light is working but the backlighting is not working?**

Slide the small switch in the back panel to make sure the lighting is not turned off. If the backlighting still does not work, the controller may have been damaged and shorted out. Please go to

<http://lividinstruments.com/support> and fill out the support form so that we can determine if there is a warranty issue.

## **Generating Data**

### **What if the backlighting is working but the USB activity light is not flickering?**

The activity light will only work when the USB cable is plugged into both the computer and controller. The Ohm driver must be installed on the computer and the computer must be turned on. If these check out and the activity light does not flicker when operating the controls but the backlighting is on, this indicates the power source is fine but there is a problem with the controls. If one of the buttons is stuck down because something is lodged in the controls or something heavy is set on the buttons, the activity light will be disabled. If the activity light still does not work, the logic board may have been damaged and is shorted out. Please go to <http://lividinstruments.com/support> and fill out the support form so that we can determine if there is a warranty issue.

### **What if the USB activity light sometimes works and sometimes does not work?**

Assuming your LED lighting stays on constantly, the user is probably inconsistently pressing the buttons. For best results press the buttons as close to the center and straight down as possible. As with most other buttons, the action may not be reliable if the corner or edge of the button is pressed and the button goes down at an angle. Also there may not be enough force used to press the button. Very light force may not be enough to register a signal. If the sliders do not always make the activity light flicker, they may be damaged. Do not excessively push them down or rock them from side to side or bend them as this will most likely damage them further. The sliders can be unreliable if excessive dirt, moisture, or material is allowed to get down in the lever slots. You may be able to carefully clean out the slots by using clean dry compressed air from a can. Sliders and rotaries can be damaged and unreliable if the unit is allowed to fall, something is dropped on the unit, or something heavy is placed on the instrument.

## **Computer Receiving Data**

### **What if the USB activity light is always working but the controller is not doing anything?**

First make sure the USB cable is solidly connected. Make sure you have properly installed the Ohm drivers from the included CD. Without opening any software, look at your computers control panel or system preferences wherever connected device info is displayed. You should see that the computer recognizes that the Ohm is connected. If not try unplugging and re-plugging in the USB cable. Also try leaving the USB cable plugged in and restarting the computer. If none of these works please contact us.

## **Software Receiving Data**

### **What if I have MIDI data coming in but my software is still not showing anything?**

First of all try restarting the computer and software with the Ohm connected. Livid Union has a built in MIDI spy that you can access by pressing the midi tab in the software. Your Ohm controller should generate different note numbers when buttons are pressed, different controller or cc numbers when sliders or rotaries are moved, and should show everything on channel 1. The Ohm controller is not velocity sensitive so that data should show a zero value. Your software should have menu to choose the input device you are using. Please make sure you have the Ohm selected. Also many programs have a learn function. This usually works by turning on the learn function, choosing the software control you want the Ohm control to map to then pressing or moving that Ohm control so that it is assigned. If this still does not work, you may have a software issue and need to refer to your software documentation.

To contact support visit [lividinstruments.com](http://lividinstruments.com)

## Warranty

### **OHM WARRANTY AND RETURN POLICY**

#### **Damage**

Your Instrument should be inspected immediately upon receiving it. If there are any damages they should be reported immediately. All of our instruments are fully tested just prior to leaving our plant.

#### **Return Policy**

All sales of Livid Instruments hardware are given a fifteen (15) day return policy. A controller may be returned within fifteen (15) days of purchase. We will refund the purchase price of the product, less shipping, immediately upon receipt of the returned item in as good of shape as it was shipped in. Any damage will be the responsibility of the customer. We will do our best to determine if damage happened during shipping and will help the customer by allowing carrier inspection of any damaged items. Software cannot be returned. Any open software packaging is not returnable or available for any refund.

#### **Warranty**

Livid Instruments warrants that this product is free of defects in materials and workmanship under normal conditions for six months, so long as the product is: owned by the original purchaser; the original purchaser has proof of purchase from Livid Instruments or an authorized dealer. Warranty does not include repairs needed due to misuse or abuse.

In the event that Livid Instruments receives written notice of defects in materials or workmanship from such an original purchaser, Livid Instruments will either replace the product, repair the product, or refund the purchase price at its option. In the event any repair is required, shipment to and from Livid Instruments and a nominal handling charge shall be born by the purchaser. In the event that repair is required, a Return Authorization (RMA) number must be obtained from Livid Instruments. After the RMA number is obtained, the unit should be shipped back to Livid Instruments in a protective package with a description of the problem and the Return Authorization (RMA) clearly written on the package.

In the event that Livid Instruments determines that the product requires repair because of user misuse or regular wear, it will assess a fair repair or replacement fee. The customer will have the option to pay this fee and have the unit repaired and returned, or not pay this fee and have the unit returned un-repaired.

THE REMEDY FOR BREACH OF THIS LIMITED WARRANTY SHALL NOT INCLUDE ANY OTHER DAMAGES. LIVID INSTRUMENTS WILL NOT BE LIABLE FOR CONSEQUENTIAL, SPECIAL, INDIRECT, OR SIMILAR DAMAGES OR CLAIMS INCLUDING LOSS OF PROFIT OR ANY OTHER COMMERCIAL DAMAGE, EVEN IF ITS AGENTS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, AND IN NO EVENT WILL LIVID INSTRUMENTS' LIABILITY FOR ANY DAMAGES TO THE PURCHASER OR ANY OTHER PERSON EXCEED THE PRICE PAID FOR THE PRODUCT, REGARDLESS OF ANY FORM OF THE CLAIM. LIVID INSTRUMENTS SPECIFICALLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. SPECIFICALLY, LIVID INSTRUMENTS MAKES NO WARRANTY THAT THE PRODUCT IS FIT FOR ANY PARTICULAR PURPOSE.

This warranty shall be construed, interpreted, and governed by the laws of the state of New Jersey. If any provision of this warranty is found void, invalid or unenforceable, it will not affect the validity of the balance of the warranty, which shall remain valid and enforceable according to its terms. In the event any remedy hereunder is determined to have failed of its essential purpose, all limitations of liability and exclusion of damages set forth herein shall remain in full force and effect.

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The Ohm is handcrafted and assembled in The United States of America.