

# **UMI3** Parametric USB MIDI Foot Controller

## **User's Manual**



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## **Document revisions**

10/28/2009: Version 1.0. Original draft

12/06/2009: Version 1.01. Included Setup Panel v 0.92 features

## **Introduction**

Thank you for looking into the UMI3. Many more thanks if you've actually purchased one. We hope it will turn out as helpful a tool as you imagined it would be when putting in your order. You will find in this document all the information you might need to get the best out of our product.

Information is organized in two sections. The first section covers the operation of the UMI3 hardware and its basic connectivity, while the second section shows the operation of the UMI3 Setup Panel application.

Lets' get started.

# 1. Hardware

## 1.1. USB Connection

Connecting the UMI3 to a computer is a very straightforward process. Just find any USB cable with USB 1.0 type plugs and plug it into the UMI3 and the computer. **No driver is required. No power supply is required.** At this point the LED should come on. If it doesn't, try a different cable or a different port on the computer. If no number of cables or ports or computers gets that LED to come on, you might have to contact our customer support service.

The LED comes on. It means that the UMI3 is getting powered by the host computer (we'll call it the host from now on) and is running. At this point the host is attempting to communicate with it and configure our newly attached USB device. This process is called enumeration. During enumeration depending on the type of host and its OS, pop-ups with our names (UMI3, Logidy) might appear on the screen. Let all this go away by itself. At the end of the enumeration the LED should go off. Your UMI3 has been properly discovered and configured. It is now ready to use.

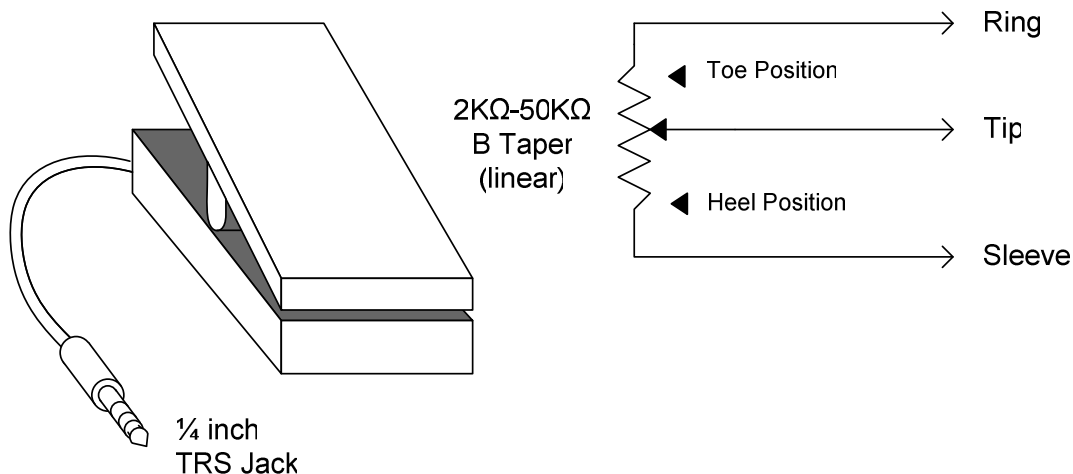
At this point the UMI3 is sending MIDI messages to the host when buttons are pushed/released or the expression pedal input sees some change.

By default the MIDI output is as follows:

Button 1 Pressed	Note On (C4, Ch1, Velocity 64)
Button 2 Pressed	Note On (D4, Ch1, Velocity 64)
Button 3 Pressed	Note On (E4, Ch1, Velocity 64)
Button 1 Released	Note Off (C4, Ch1)
Button 2 Released	Note Off (D4, Ch1)
Button 3 Released	Note Off (E4, Ch1)
Expression input change	Continuous Controller (11 - Expression, Ch1)

## 1.2. Connecting an expression pedal

Right next to the USB connector is a ¼ inch jack which can be used to connect an expression pedal. This connector is of the TRS type which stands for Tip-Ring-Sleeve, the name of the 3 points of electrical contact on the plug that should be plugged in this jack. Compatible pedals are simply a potentiometer which 3 pins should be wired as follows:



Third party expression pedals with a TRS connector come in two flavors. One where the wiper of the pot is connected to the Tip (this type will work with our controller), and the type where the wiper is connected to the Ring (this type unfortunately won't work).

UMI3 Compatible pedals include: M-Audio Ex-p (in "M-Audio" mode), Moog EP2, Alesis F2, Roland EV-5, EV-7, Boss FV-500L.

## 2. Software – Using the UMI3 Setup Panel

### 2.1. Launching

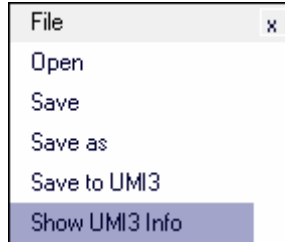
Once the UMI3 is connected you can start the Setup Panel application. If the UMI3 is currently active, the Setup Panel will find it and open its HID USB pipe for communication. It never accesses the MIDI pipe, so that no conflict can occur between itself and the audio application which uses the MIDI pipe at the same time. The Panel only checks for connection on launch. You need to re-launch it every time the UMI3 is re-connected to the host.

### 2.2. General layout

The layout panel is fairly simple. It shows three numbered columns each associated with the corresponding button on the UMI3. These columns are called button sequencers. An area on the top right corner shows the message configuration for the expression pedal.

## 2.3. Checking Communication

To check if the Panel is in contact with the UMI3 select “Show UMI3 Info” in the file menu.

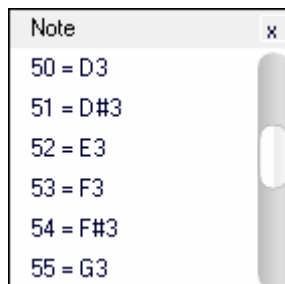


An info box will pop up and report connection status.

## 2.4. Configuring a Button/Pedal statically

To change the MIDI message sent by a given button or the expression pedal click on any field of any sequence step to invoke the editing scroll box. 4 fields can be altered:

- The event type: It can be any of the following:
  - Note On/Off
  - Continuous controller
  - Program Change
  - Pitch Wheel
  - Monophonic or Polyphonic Aftertouch
  - Start, Stop, Continue (real time messages)
- The MIDI channel: from 1 to 16
- Value one (V1): depending on the type of MIDI message (event) this value can be a note value, a controller number, a program number... The exact function of this field is given in the title bar of the edit scroll box when the field is clicked.



- Value two (V2): As with V1 the function of the field varies with the event type.

The only event type available for pedal messages is the continuous controller which number can be chosen and which value (V2) is filled with the value measure at the “Exp” connector.

## 2.5. Release Message Function

Each button sequencer has a Release Message button. When the Release Message Function is off the UMI3 only sends MIDI messages when a physical button is pushed (according to the content of the current sequence step). Turning on the Release Message Function activates the sending of MIDI messages when a UMI3 button is released as well as when it is pushed. The release message is the same as the “push down” message except for the value of the V2 field which is forced to 0. This can turn a UMI3 button into a keyboard key since a Note On message with a velocity of 0 is effectively a Note Off. It can also be used to create momentary continuous controllers.



## 2.6. Sequence Length

Each Button sequence can have as many as 8 steps. To set the length of the sequence, change the number in the “STEPS” field.



If the length is greater than 1, the active step is in light red, while the others are greyed out. A step can be forced to the active state at all time by clicking on its index field

EVENT	CH	VI	V2
> Note Off	1	F#4	127

This forces a new button configuration to be sent to the UMI3.

## 2.7. Auto Step



Auto step enables stepping incrementally through the steps of a button sequencer each time a button on the UMI3 is released (after being pushed). When all three auto step function buttons are switched off for a given button sequencer, the associated UMI3 button is configured statically with the data in the active step. Turning the Auto Step function *Destination* (1-3) on, on a given button sequencer (column) *Source* (1-3) will cause the sequence of the button sequencer *Destination* to step forward when the physical UMI3 button *Source* is released. When a sequence steps from its last step, it loops back to the top.

**Example1:** Turn off all 9 auto step functions. On the button sequencer 1, set a length greater than 1 (see 2.6) and turn on Auto Step 1 only. Now every time the first button on the UMI3 is released you will see the current step become inactive and the next one become active, causing the first button of the UMI3 to be reconfigured with the contents of the new sequence step. This is a straightforward one to one auto step sequence. (Try it with note messages to create step-able bass lines... Three different buttons can make three different phrases). A simple toggle button function can be setup with a sequence length of 2.

**Example2:** Turn off all 9 auto step functions. Set length (“STEPS”) 1 and 2 to “2” and length 3 to 1. On the 3<sup>rd</sup> button sequencer (the rightmost column) turn on Auto Step 1 and 2. Now every time the 3<sup>rd</sup> button on the UMI3 is released the first and the second sequence will advance at the same time causing button 1 and 2 to be reconfigured. We’ve just created a two page, two button scheme with a page toggle button. With this concept of page toggling (with auto step of 2) or page stepping (as many as eight), one can control many more parameters than 3 buttons can do statically.

## 2.8. File Operations

Entire snapshots of the state of the Setup Panel can be saved to disk and recalled. Click on the File button to see the standard file operation options.



### 2.8.1. Saving Defaults to UMI3

A static state can be saved in the UMI3 non volatile memory. To do this, select “Save to UMI3” in the File menu. Defaults for MIDI messages types and values



for the 3 foot switches as well as the expression pedal are now replaced with the value currently active in the Panel. The state of the Release Message buttons is saved as well. Next time the UMI3 is plugged to a host, the new defaults will be active.

Note1: Only the current MIDI state is saved, not the entire sequencer configuration. The sequencer is a function of the Setup Panel and will not run in the absence of it.

Note2: As soon as the Setup Panel is open, the UMI3 is reconfigured with the Panel defaults, but the saved defaults in the UMI3 are not overwritten. In the absence of the Setup Panel, the unit will start up with defaults last saved through “Save to UMI3”, regardless of whether Sequencer configurations were opened since then.

Note3: Default saving is only support in units with firmware version 1.10 and up. The version of the firmware can be checked through “Show UMI3 Info” in the file menu. The UMI3 is not field-upgradeable.

## Annex A: Technical Specifications

USB	<p>USB 2.0 compliant composite device:</p> <ul style="list-style-type: none"> <li>- MIDI: Class compliant (USB MIDI version 1.0)</li> <li>- HID: Class compliant (USB HID version 1.11)</li> </ul>
MIDI	<p>1 MIDI host "Input" device</p> <p>Messages sent:</p> <ul style="list-style-type: none"> <li>Note on, note off</li> <li>Continuous controller</li> <li>Program change</li> <li>Monophonic, polyphonic aftertouch</li> <li>Pitch wheel</li> <li>Start, stop, continue</li> </ul>
HID	<p>HID protocol: Vendor specific</p> <p>The HID pipe is used by the setup application to format the outgoing MIDI messages</p>
Connectors	<p>1 type B USB connector</p> <p>1 1/4 inch TRS jack for passive resistive expression pedals</p>
Dimensions	<p>5.9 x 2.9 x 2.0 inches</p> <p>15.0 x 7.5 x 5.0 cm</p>
Weight	<p>13.9 oz.</p> <p>390 g</p>