micro.ghost
USB MIDI INTERFACE

user manual
**INTRODUCTION**

Thank you for your interest in the micro.ghost USB MIDI Interface!

The micro.ghost was designed as a compliment to your existing MIDI controller solution, adding USB Host functionality to support MIDI devices that don’t have a 5-pin port. The micro.ghost converts the MIDI data to and from your controller, DAW, or pedal into the native USB protocol that some devices require, and vice-versa.

We’ve been making compact MIDI controllers for a while now, so we have a pretty good handle on the pitfalls and problem spots when dealing with MIDI on your pedalboard. We’ll do our best to guide you through the process step-by-step, but we can’t cover every special case. If you read through the whole manual and your question isn’t covered, please email us from the Contact page on our website and we’ll do our best to sort you out as quickly as we can.

**INS AND OUTS**

The micro.ghost is a pretty straightforward little box. It has a few inputs and outputs, which we’ll explain here:

On the upper side of the box, you’ll find a large USB Host port, a small USB device port, and a standard 9V DC barrel jack. You’ll also see a status LED, which indicates power, USB status, MIDI activity, and more.

![Port Diagram]

USB DEVICE  DC 9V  LED  USB HOST

On the bottom side of the micro.ghost there are two standard 5-pin MIDI ports for input and output / thru.

![MIDI Port Diagram]

MIDI IN  MIDI OUT

Turn the enclosure over to reveal the eight configuration switches. These allow you to configure the micro.ghost to respond on a particular MIDI channel, disable the MIDI thru function, and more.

We’ll cover the configuration switches later in the manual. The default setting is all switches OFF.
**Powering Your Devices**

The micro.ghost can provide up to 500mA of power to the USB HOST port, for use with devices that don’t have their own power input.

If your device does have a separate power input, we recommend you use it. This usually provides the most efficient power usage and lowest noise performance.

Please note that if you do power your device using the USB HOST port, you’ll need to supply the micro.ghost with enough power to run both the external device and its own circuitry. Check with your device manufacturer for power information, but a good rule of thumb is that you’ll need to supply double the external device’s rated current (mA.)

**Using the micro.ghost**

This part is pretty simple: Plug your USB-MIDI device into the port labeled USB HOST using a suitable USB cable. Connect your MIDI controller to the micro.ghost MIDI IN port.

Power the micro.ghost using a standard 9V pedalboard power supply. When the status LED turns green, the USB link is established and your devices should be able to communicate with each other.

Please consult with the manufacturer of your USB device for details on how to use its MIDI functionality.

Note that USB devices requiring a device driver, or that act as multiple devices such as Audio Input + MIDI are not supported by the micro.ghost.

The micro.ghost will pass all MIDI messages from its MIDI IN to its MIDI OUT ports unless you disable MIDI THRU, see the Configuration Switches section for more details.

The micro.ghost will also pass all MIDI messages generated from your USB device to the MIDI OUT port.
**Configuration Switches**

The micro.ghost is set up from the factory to handle the most common situation - USB MIDI device responding to MIDI channel 1, MIDI THRU enabled. But we know that every MIDI rig is a little different, so we’ve provided some switches on the back side of the micro.ghost to allow you to set it up the way you want.

**Factory Default: All Switches Down.**
Receive on MIDI Channel 1, Normal LED brightness, MIDI THRU enabled, USB HOST mode.

**Sw1-Sw4 MIDI Channel Assign**
These set the MIDI channel assignment of the micro.ghost. Your USB device should be set to receive on MIDI CHANNEL 1, and the micro.ghost should be set for your desired receive channel. For example, if you want your device to respond to messages sent on MIDI channel 3 from your master controller, set SW3 to ON and leave SW1, 2, and 4 OFF.

**Sw5 LED Brightness**
Set ON for bright LED, OFF for normal LED.

**Sw6 MIDI THRU**
Set ON for MIDI THRU disable, OFF for MIDI THRU enable. If MIDI THRU is disabled, messages will be passed from the input to the USB device but not to the MIDI THRU port.

**Sw7 USB Mode**
Set ON for USB MIDI, OFF for USB HOST. USB MIDI mode will cause the micro.ghost to function as a standard USB MIDI interface and the USB HOST port will be disabled.

**Sw8 Update**
Set ON for firmware update, OFF for normal operation. Please consult the Disaster Area website for more information regarding firmware updates.

**Specifications**

Dimensions: 1.93” x 3.93” x 1.03” (50mm x 100mm x 27mm)
Power: 9V DC center-negative, 2.1mm pin.
60mA for self-powered USB, 500mA+ for bus-powered USB
USB Modes: MIDI HOST (converts USB MIDI device to 5-pin MIDI)
USB MIDI (acts as MIDI interface for another host)
Only one USB port may be used at a time
Indicators: RGB LED - red = no USB connection, green = USB host link, blue = USB MIDI
MIDI THRU: Passes all incoming MIDI from IN to OUT port, may be disabled