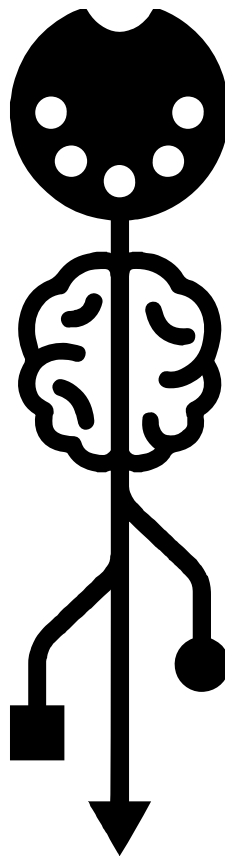


MODE®
MACHINES



CEREBELUSB
USB TO SERIAL CONVERTER

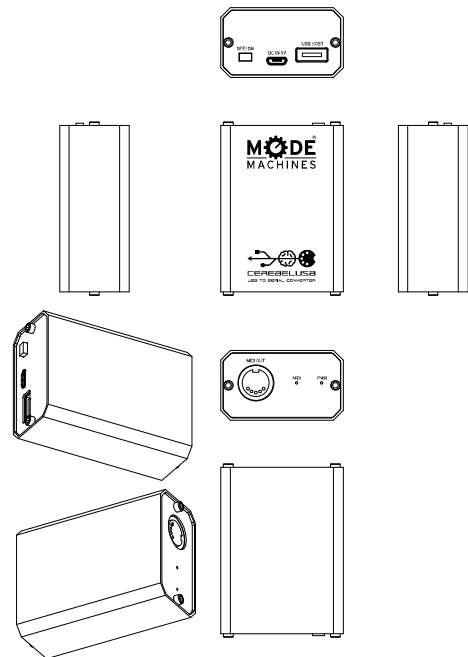
User manual 2015

CerebelUSB - USB MIDI HOST

MIDI Host for Class Compliant USB MIDI devices

Contents of this manual:

1. Overview.
2. Contents of the package.
3. Hardware description.
4. Connecting.
5. Power.
6. Compatibility.
7. Arduino Brain.
8. Specifications.
9. Warranty.
10. Final notes.



1. Overview

Congratulations on the purchase of your Mode Machines CerebelUSB. Please make sure you read this manual completely before making use of the device.

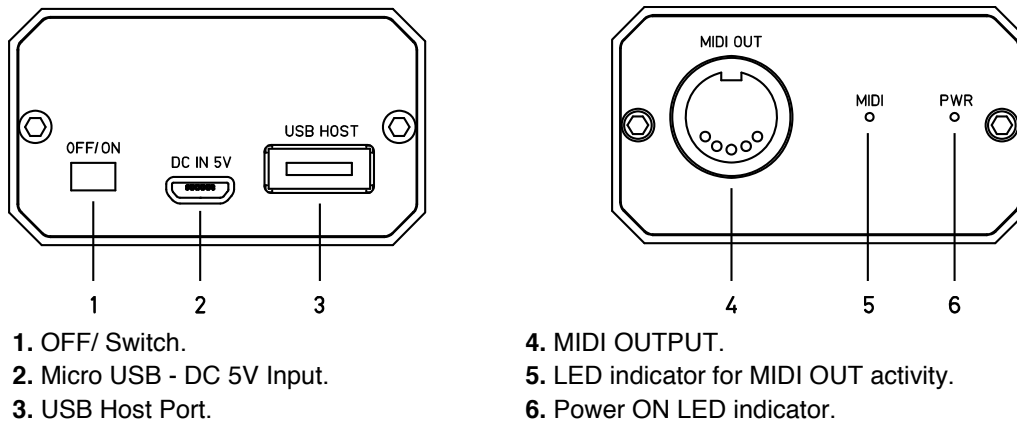
Main features and uses of CerebelUSB:

- Converts any USB MIDI Class compliant device in to Standard MIDI Out DIN.
- Perfect for any situation where a computer or Laptop is not desired.
- Small and portable, perfect for travelling light.
- Ideal way of bringing cheap controller solutions to the world of DIY, Audio-visual installations, performances and analogue or modular synthesis.
- Use an USB HUB for a tidy way of powering 5V devices like tablets, phones, cameras, etc.
- Arduino based and totally hackable.

2. Contents of the package.

- This manual.
- 5VDC Power Supply.
- Micro USB to USB A Cable.
- CerebelUSB.

3. Hardware description:



4. Connecting:

1. Connect the Micro-USB (2) in to the DC Power adapter using the provided USB cable. Make sure the unit is set to "OFF" (3).
 2. Plug your USB device in to the USB Host Port (3) before powering CerebelUSB "ON".
 3. Press the OFF/ON switch (1). The Power On LED indicator (6) will light up.
 4. Connect the MIDI OUT port (4) to the MIDI IN of your desired device.
 5. Play some notes or move some faders. When the USB-MIDI data is correctly transmitted to the MIDI OUT port (4), the MIDI LED Indicator (5) will blink.
- **NOTE: Disconnecting and connecting USB devices repeatedly can cause improper recognition, specially when using a HUB. If you experience issues turn CerebelUSB OFF and ON completely.**

5. Power:

Even if CerebelUSB shares a 5V connection compatible with a huge amount of devices already available, it is essential to use only our supplied 5V power adaptor.

Many USB devices are powered through their USB connection so any different voltage might cause damage to the devices attached in the USB Host port. There is a protection circuitry inside the CerebelUSB to protect against reverse polarity and over-voltage, but these are not guaranteed to prevent damage to any attached USB device.

When using a HUB, all the attached devices will share the Power of the Host port. If these devices have a high power consumption, you might experience a decrease in brightness or improper functioning.

Due to their differences and construction, there are other known issues regarding the use of a HUB. For example, power drops, failure of recognition of secondary devices, etc. If you experience any issue try changing to another USB HUB.

- **NOTE: For DIY applications where more than 5V are required, the unit can handle anything between 4 to 12 Volts. The onboard power regulator converts the Voltage input in to the 3.3 Volts necessary for powering the internal circuit. Care must be taken due to the fact that any Voltage applied to the DC Input will be transmitted automatically to the USB Host Port and MIDI OUT Port, some devices might be permanently damaged if the wrong Voltage is used.**

6. Compatibility:

CerebelUSB only works with USB devices which are MIDI Class Compliant. Even if announced as being so, many available products are non Class Compliant. Make sure you check the product manual of your device or contact the manufacturer to make sure your device is Class Compliant.

For a list of supported devices please visit our website "www.modemachines.com".

- **NOTE: The MIDI OUT LED (5) helps to recognize if the unit is communicating correctly.**

7. Arduino Brain:

CerebelUSB is based around Arduino for a very simple reason, allowing experienced users to upload their own firmware, upgrade the CPU easily or make use of the remaining pins for a huge amount of modifications and add-ons. This opens up a whole new world of possibilities for the user.

CerebelUSB uses a Max32 Chip for the host functionality. It shares a compatible Pinout with most Arduino USB Host Shields on the market. This makes easy to use new firmwares already available on the internet.

With the right firmware, It is possible to connect any USB device such as Joysticks, gamepads, wii-motes, Bluetooth devices, Webcams, DSLR cameras, Android devices and many others.

8. Specification:

Power Input: MICRO USB - Type B - 5V - 1000mA. (stable) – use only the supplied adaptor.

Power Out (USB Host Port): 5VDC – 1000mA.

MIDI DIN ports: 1x OUT.

Dimensions: 69 x 51 x 29 mm.

Weight: 90g

Leads: Micro USB to USB A.

Power supply: A 5V power supply appropriate to the destination country is supplied with the unit.

9. Warranty:

The CerebelUSB comes with a 24 month (from purchase date) back to base warranty, (i.e. customer must arrange and pay to the place of purchase). Opening the device will void the warranty immediately.

You know the typical stuff, don't eat it, don't drop it, don't put it under water, keep it away from fire, heat sources, wet sources, pets and cocktails.

10. Final Notes:

For more information please visit our website at www.modemachines.com. Alternative Firmware and Tutorials in how to Upgrade your Sketches will be added to our site and Facebook page.

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