

iConnectivity 

iConnect MIDI™

iConnectMIDI™ Owner's Manual
Revision 0.5



Owner's Manual

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Document Revision History

0.2	DRN	Base content, logos, port description table, team input
0.3	DRN	TM graphics, PC example graphic, port description additions, cover embellishment, team input, add revision history
0.4	DRN	Cleanup
0.5	DRN	MIDI chain correction in diagram

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Compatibility

iConnectMIDI™ is compatible with the following technologies:

Apple Compatibility



“Made for iPod,” “Made for iPhone,” and “Made for iPad” mean that an electronic accessory has been designed to connect specifically to iPod, iPhone, or iPad, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPod, iPhone, or iPad may affect wireless performance.



Mac and the Mac logo are trademarks of Apple Computer, Inc., registered in the U.S. and other countries.

Microsoft Compatibility

Compatible with Windows®

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Warranty

iConnectivity warrants to the original purchaser that this unit is free of defects in materials and workmanship under normal use and maintenance for a period of one (1) year from the date of original purchase. The warranty applies only to registered iConnectivity users who register their product at our website www.iConnectivity.com at time of purchase. If the unit fails within the one (1) year period, it will be repaired or replaced, at iConnectivity's option, at no charge, when returned prepaid to the iConnectivity Technical Service Center with proof of purchase. Installation labor is not covered under this warranty. The sales receipt may be used for this purpose.

All replacement parts, whether new or re-manufactured, assume as their warranty period for only the remaining time of this warranty. This warranty does not apply to damage caused by improper use, accident, abuse, improper voltage service, fire, flood, lightning, or other acts of God, or if the product was altered or repaired by anyone other than the iConnectivity Technical Service Center. Consequential and incidental damages are not recoverable under this warranty.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. No portion of this warranty may be copied or duplicated without the expressed written permission of iConnectivity. THIS WARRANTY IS NOT TRANSFERABLE.

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Precautions

Interference with other electrical devices

Radios and televisions placed nearby may experience reception interference. Operate this unit at a suitable distance from radios and televisions.

Indoor use only

To avoid the risk of electrocution and/or damage to other connected equipment, this equipment must not be used under wet or high moisture conditions. All interconnecting cabling must also be indoors. Should moisture suddenly increase, immediately disconnect power to the equipment.

Power sources

Ensure that correctly rated power outlets are used with the equipment power supply.

Heat

Keep this equipment away from all heat sources. Ensure that sufficient ventilation and/or heat dissipation is provided for the equipment and all connected devices.

Packaging

Keep all packaging materials away from children. Properly dispose of unwanted packaging.

Handling

To avoid breakage, do not apply excessive force to the switches or connectors. Do not apply excessive bending force to cables. Use the connector casings of cables to attach and detach cables from their receptacles to avoid damage to the cable and/or its receptacles.

Ingestion

Do not ingest the packaging, equipment, attachments, or accessories. Do not ingest paint or removed parts from the equipment or accessories. If this occurs, immediately seek medical attention.

Care

If the exterior becomes dirty, wipe with a clean, dry cloth. Do not use liquid cleaners such as benzene or thinner, or cleaning compounds or flammable polishes.

Keeping foreign matter out of your equipment

Never set any container with liquid in it near this equipment. If liquid gets into the equipment, it could cause electrical damage, breakdown, fire, or electrical shock. Be careful not to let metal objects get into the equipment.

Keep this manual

After reading this manual, please keep it for later reference.

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FCC REGULATION WARNING (USA and Canada)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Adjust the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Unauthorized changes or modification to this system can void the user's authority to operate this equipment

Notice regarding disposal (EU only)

Disposal of this product, package, or cables must be done in an approved manner. Do not discard this product, package, or cables along with ordinary household waste. Disposing in the correct manner will prevent harm to human health and potential damage to the environment. Since the correct method of disposal will depend on the applicable laws and regulations in your locality, please contact your local administrative body for details.

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IMPORTANT NOTICE TO CONSUMERS

This product has been manufactured according to strict specifications and voltage requirements that are applicable in the country in which it is intended that this product should be used. If you have purchased this product via the Internet, through mail order, and/or via a telephone sale, you must verify that this product is intended for use in the country in which you reside.

WARNING: Use of this product in any country other than that for which it is intended could be dangerous and could invalidate the manufacturer's or distributor's warranty. Please also retain your receipt as proof of purchase; otherwise, your product may be disqualified from the manufacturer's or distributor's warranty.

CAUTION

Always keep children and pets under constant adult supervision. The packaging, equipment, and included accessories are not toys and must be kept out of reach of children and pets. Use only under constant adult supervision.

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iConnectMIDI™

iConnectMIDI

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Introduction

Thank you for purchasing iConnectMIDI™, the professional high-speed MIDI interface with built-in compatibility with CoreMIDI applications. iConnectMIDI is designed to connect MIDI-enabled devices to each other, and to Apple iOS devices, and to personal computers.

Packing List

Your iConnectMIDI is shipped with the listed items below. If any of these items are not included, please immediately contact your dealer or iConnectivity.

- iConnectivity iConnectMIDI interface
- Power adaptor (5V DC, 1A)
- Interchangeable power adaptor blades for US, EU, and UK power receptacle compatibility
- iConnectMIDI cable with lockable 30-pin and mini-USB connectors

MIDI and USB Cables Not Included

To connect your MIDI devices to your iConnectivity iConnectMIDI interface, you will need MIDI and USB cables, purchased separately. Contact your dealer to determine how many you will need.

USB Hub Not Included

To connect multiple USB MIDI devices to your iConnectivity iConnectMIDI interface, you will need a powered USB hub. Contact your dealer or computer store to purchase a hub.

Features

- compliant to iOS 4.2 CoreMIDI framework
- handling of tens of thousands of MIDI events each second
- extremely low latency MIDI data routing and management
- fully configurable MIDI routing engine
- standalone operation, capable of bridging between MIDI devices with DIN and USB connections
- configurable MIDI data filtering on either IN or OUT ports



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- non-volatile configuration storage
- class compliant with Mac and Windows (no specialized driver required)

Compatible iOS Devices

iPod touch (4th generation)

iPod touch (3rd generation)

iPhone 4

iPhone 3GS

iPad

Visit [iConnectivity.com](http://www.iConnectivity.com) for Updates

Firmware updates are posted to our website as soon as they are available. Check our website for the latest versions, www.iConnectivity.com.

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Quick Start

Connecting MIDI DIN Instruments

Connect the MIDI OUT jack of your MIDI instrument to one of the MIDI IN jacks of iConnectMIDI using a MIDI cable (purchased separately). This will allow iConnectMIDI to receive MIDI messages from your MIDI instrument. Another MIDI instrument can be connected in the same way, but using the second MIDI IN jack of iConnectMIDI.

Connect one of the MIDI OUT jacks of iConnectMIDI to the MIDI IN jack of your MIDI instrument using a MIDI cable. This will allow iConnectMIDI to transmit MIDI messages to your MIDI instrument. Another MIDI instrument can be connected in the same way, but using the second MIDI OUT jack of iConnectMIDI.

See USB with MIDI instruments for more advanced MIDI instrument configurations.

Connecting USB MIDI Instruments

Connect the USB instrument to the USB-A jack on the front of iConnectMIDI using a USB cable with USB connectors (purchased separately). To connect multiple USB instruments, connect your USB instruments to a USB hub with USB cables, then connect the USB hub to iConnectMIDI.

Connecting iOS Devices

Connect an iOS device using the included iConnectMIDI cable, with the 30-pin lockable connector at the iOS device and the mini-USB end at iConnectMIDI. If a second iOS device is required, a second iConnectMIDI cable is required (purchased separately).

Connecting Computers

Connect a Mac or Windows computer to iConnectMIDI using a USB cable (purchased separately) with a USB-A connector on one end to the computer and mini-USB connector on the other end to iConnectMIDI. Up to two computers can be connected to iConnectMIDI in this way.

Connecting Power

Plug in the small round barrel jack of the power adaptor to the connector labeled 5V DC on the rear side of iConnectMIDI. Attached the appropriate blade adaptor (included for US, EU, and UK) to the wall unit by sliding the adaptor into place. Some force is required to properly detach and attach the blade adaptor. Plug the wall unit into the power outlet. It is recommended that power be connected only after all MIDI instruments are connected to iConnectMIDI and switched on.

Running Applications

If an iOS device is connected, start an installed iOS application with CoreMIDI capability on the device to allow interfacing with your MIDI instruments through iConnectMIDI. The LED indicator light for a USB device port will momentarily flash at the start of most applications. Begin playing.

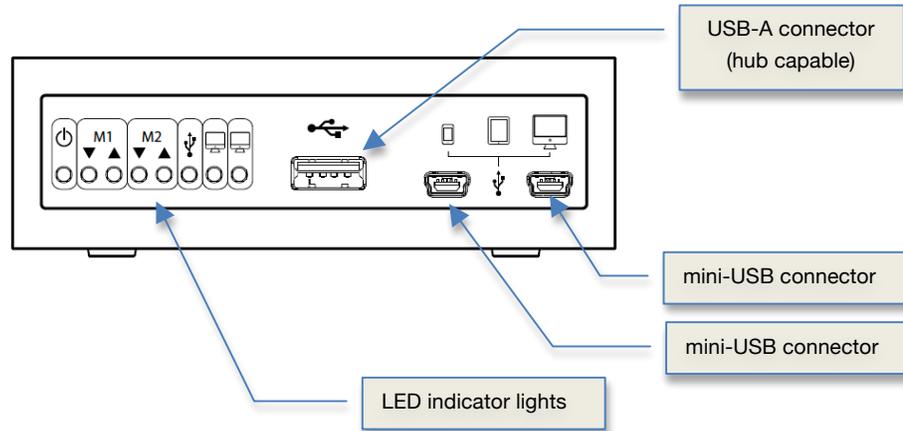
If a computer is connected, start the installed application that allows MIDI ports of iConnectMIDI to be accessible from the application. The LED indicator light for a USB device port will momentarily flash at the start of most applications. Begin playing.

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iConnectMIDI Tour

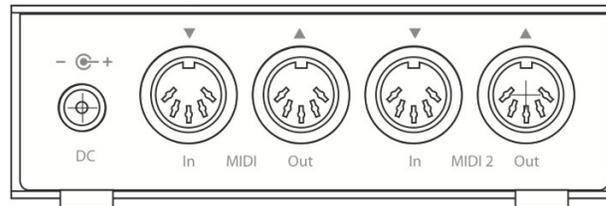
Front Panel

The front panel of iConnectMIDI is comprised of eight (8) indicator lights and three (3) USB connectors.



Rear Panel

The rear panel of iConnectMIDI is comprised of four (4) MIDI DIN connectors and a power supply jack.



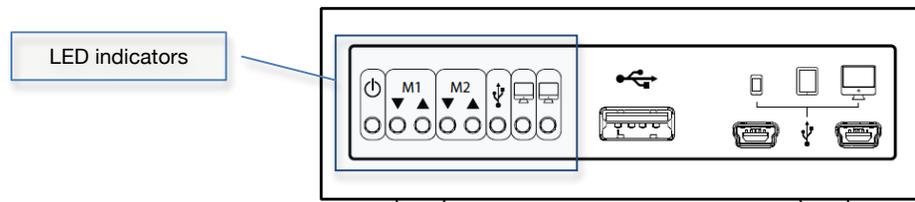
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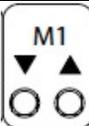
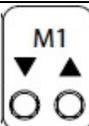
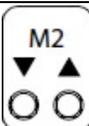
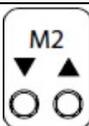
LED Indicator Lights

iConnectMIDI is equipped with eight (8) LED indicator lights on its front panel to indicate its status and of its ports. Each port is explained in detail in "MIDI Ports Explained".



Each light (from left to right) is explained:

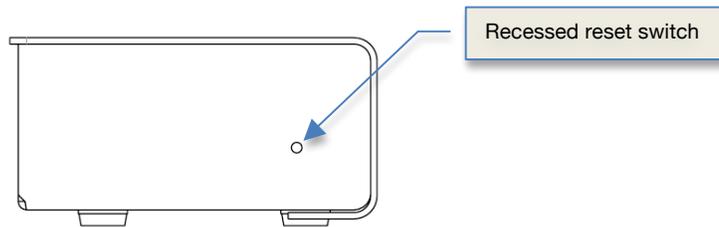
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	<p>Power/Status Green - power is ON, status OK Red - power is ON, error has occurred (reset is needed)</p>
	<p>MIDI DIN input 1 Green flashing - MIDI data being received at the IN connector Black - no data</p>
	<p>MIDI DIN output 1 Green flashing - MIDI data being transmitted at the OUT connector Black - no data</p>
	<p>MIDI DIN input 2 Green flashing - MIDI data being received at the IN connector Black - no data</p>
	<p>MIDI DIN output 2 Green flashing - MIDI data being transmitted at the OUT connector Black - no data</p>
	<p>USB devices Green flashing - MIDI data being sent or received from any of the USB device ports Black - no data</p>
	<p>USB device port 1 Green flashing - MIDI data being sent or received from iOS device or computer Black - no data</p>
	<p>USB device port 2 Green flashing - MIDI data being sent or received from iOS device or computer Black - no data</p>

Reset Switch

Located on the side of iConnectMIDI is the recessed RESET button. You will need a narrow, firm-tipped object to depress the button inside the recess (such as a paper clip or mechanical pencil). Press and hold the RESET button for one second and then release it to initialize a warm boot.

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Cable and Power Supply

iConnectMIDI is supplied with an AC power adapter and a USB-to-30-pin connector cable. The AC power adapter (the large end) plugs into a power receptacle and the barrel jack (the small end) plugs into iConnectMIDI rear panel jack labelled DC. Included with iConnectMIDI are additional blade adapters that allow for plugging into various power receptacles in other parts of the world.

A specialized cable (included) is needed to connect an iOS device to iConnectMIDI. Its two different connectors on either end are a mini-USB connector (for connecting to iConnectMIDI) and a 30-pin connector (for connecting to an iOS device such as an iPhone, iPod touch, iPad). The 30-pin connector is locking. Ensure that it clicks into place when pushed into the corresponding port on the iOS device. When removing the cable, press the side release buttons on the connector casing of the 30-pin connector before pulling out the cable from the iOS device. Do not attempt to remove the cable from the iOS device by pulling on the wire; doing so may permanently damage the cable.

The cable's USB connector plugs into one of the mini-USB host receptacles on the front panel of iConnectMIDI. Up to two iOS devices can be plugged into iConnectMIDI; a second iConnectMIDI cable (sold separately) is needed for this purpose.

Connecting a computer to iConnectMIDI requires a standard USB host cable (mini-USB male to USB-A male, sold separately) to connect between the computer USB-A receptacle and iConnectMIDI USB host connector receptacle.

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New to MIDI?

Let's start simple

MIDI is the way that MIDI-enabled devices and instruments communicate with each other, specifically allowing them to “play” each other. For example, a controller keyboard (that may not make any of its own sound) can communicate with a synthesizer (that can make its own sounds).

MIDI does not confine itself to simply instructing a sound generator to make a sound. MIDI can also tell an electronic instrument to alter its characteristics in very specific ways. For example, MIDI can remotely adjust the volume of a sound generator device, or tell a sound generator to play the sound with more brightness.

MIDI is extremely versatile in its ability to control electronic instruments remotely. In fact, the number of parameters that MIDI can control number in the hundreds. In general, however, only even proficient MIDI users use a small handful of these parameters regularly. At the very simplest, you will be “playing” notes from a keyboard or controller to a sound generator.

MIDI cannot produce sound by itself. MIDI is not the sound information. Rather, it is a set of commands that allow the remote triggering of a sound-generating instrument connected to your MIDI system to produce sound. Audio connections from your sound generator to an amplification and speaker system allow you to hear the sounds generated.

What Can I Connect?

USB, 5-pin DIN, or Computer?

As mentioned above, MIDI is the language that electronic music devices use to communicate with each other. These are sent to and from devices in the form of messages, which are a series of bytes organized in a specific way in which both the sender and receiver can understand.

But there are a few different ways that these messages can be sent between the devices, despite all being sent over some type of wired connection (we won't discuss the wireless methods for now since it is not inherent to iConnectMIDI; just know that MIDI can also be sent and received wirelessly). Although there are different types of connectors, such as USB and 5-pin DIN (the round 5-pin connector type found on old and new MIDI devices and instruments), it is important to understand that, regardless of connector type, these devices still move MIDI data around. But until now, the different types of connectors prohibited musicians from connecting up their disparate instruments to each other.

MIDI DIN to USB

iConnectMIDI solves this problem by allowing your devices with MIDI DIN connectors to communicate with devices with USB-MIDI connectors. Without iConnectMIDI, even if an instrument had both MIDI DIN connectors and USB-MIDI connectors, you could not plug in another USB-MIDI instrument and have it directly communicate with the first instrument without a computer, let alone have the first instrument pass MIDI data through to the MIDI DIN ports originating from a second USB-MIDI instrument. This is now possible with iConnectMIDI (see USB with MIDI instruments).

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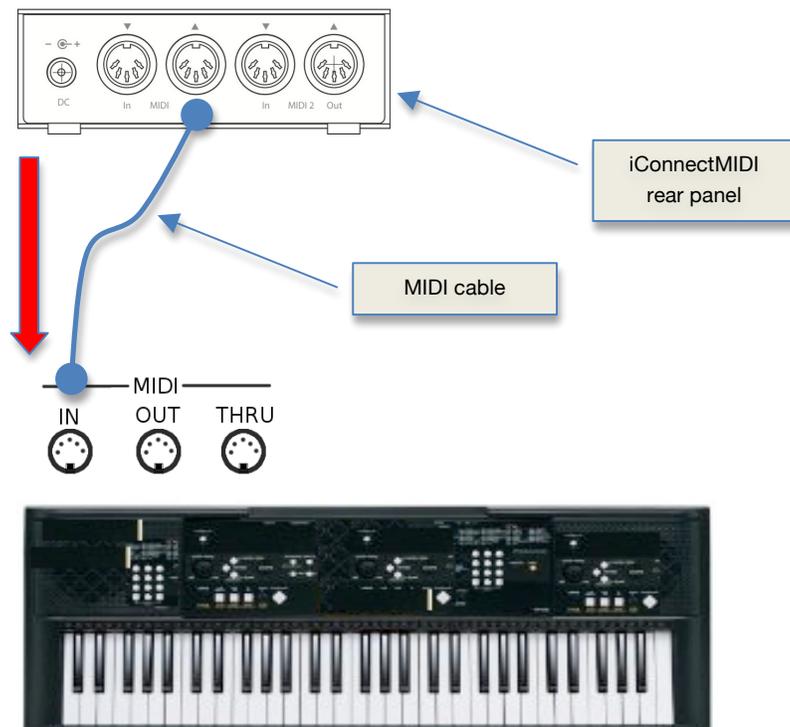
Using MIDI 5-pin DIN

New and Old Connector

5-pin MIDI DIN connectors can be found on both vintage electronic instruments and the latest synthesizers and controllers. Cables for these types of connectors are inexpensive and available at any music store, in lengths from 2-feet to 20-feet. Shorter lengths of cable are typically better, minimizing the potential for slight delays in data transmission.

iConnectMIDI contains two pairs of MIDI IN and OUT connectors. Each pair is addressable as a unique MIDI port from iOS, Mac OS, and Windows, as well as the port configuration software for iConnectMIDI.

For MIDI, each cable is unidirectional, allowing data to be transmitted in only one direction. The direction of data flow is determined by the ends at which the cable is connected. Below is the connection for a sound generator to be "played" from iConnectMIDI (i.e. MIDI data originates at iConnectMIDI and is sent to the sound generator or synthesizer). The red arrow indicates the direction of the MIDI data.



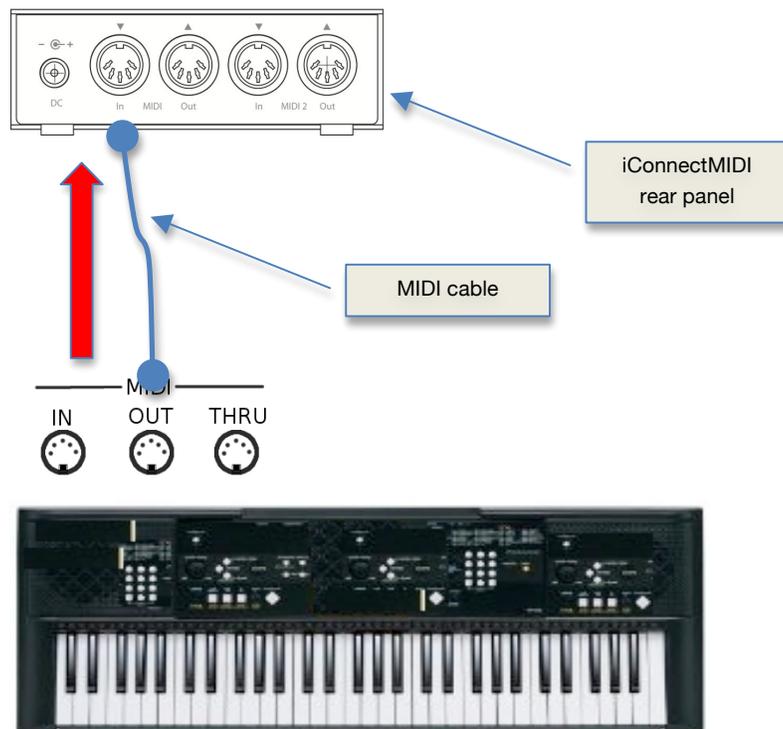
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Conversely, if iConnectMIDI is to receive MIDI data, then the connection path is as follows:

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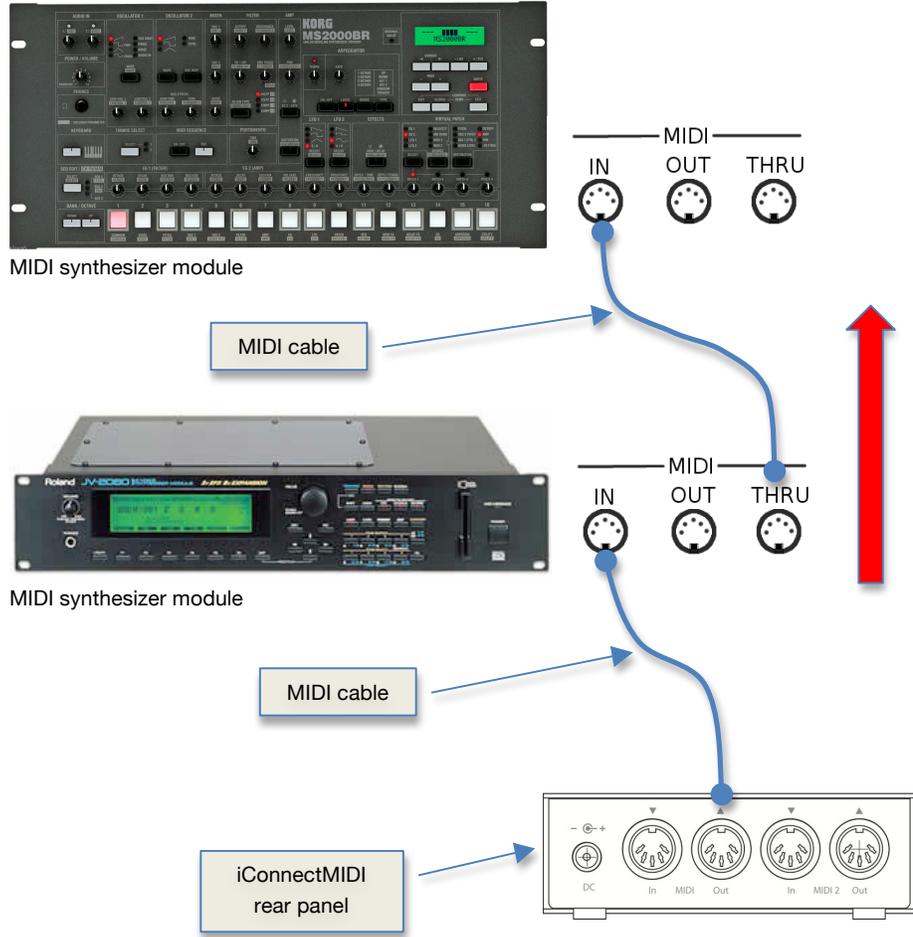
MIDI keyboard

The red arrow indicates the direction of MIDI data, which flows from the keyboard instrument to iConnectMIDI.

Daisy Chaining Instruments

Typically, one end is connected to a connector labeled OUT or THRU on one device and the other end is connected to IN on the other device. This allows data to be transmitted from the first to the second device. Connect to the OUT connector if the source device will be “played”, i.e. will be generating new MIDI events. Connect to the THRU connector if the device will not be generating new MIDI events but merely passing MIDI events along from a previous source; this device will generally have its IN connector attached to by another cable and is a form of daisy-chaining MIDI devices.

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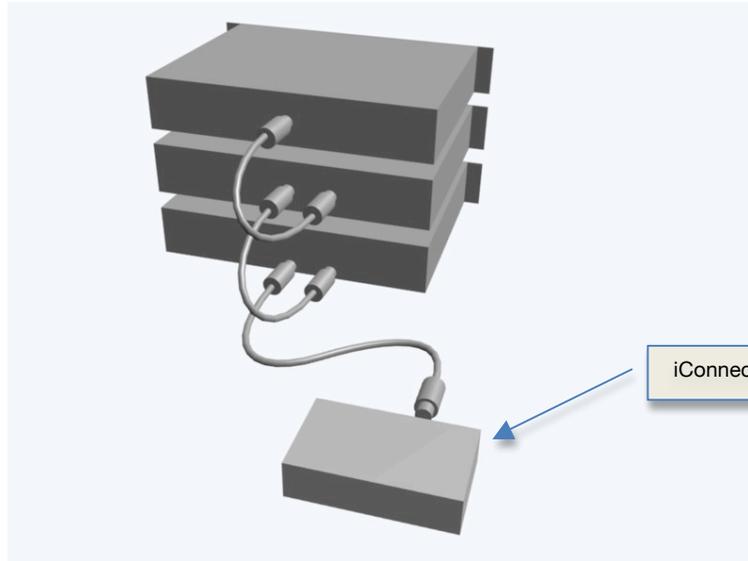
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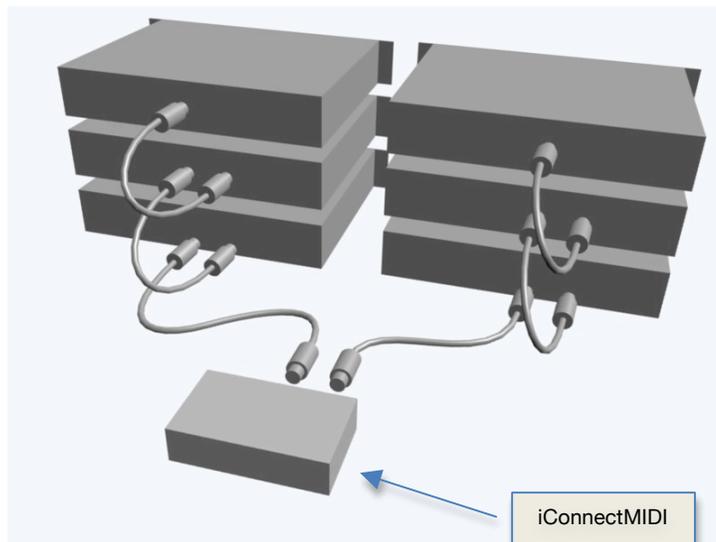
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The red arrow indicates the direction of MIDI data, originating at iConnectMIDI (from an attached source MIDI instrument) to the connected MIDI instruments.

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Several MIDI instruments can be daisy chained in two sets using iConnectMIDI's dual pairs of MIDI DIN OUT ports. This helps to organize the instruments connected to each port from the point of view of the application software that you are running. For example, all sampler instruments are connected to MIDI DIN OUT 1, while all the analog modeling synthesizers are connected to MIDI DIN OUT 2.

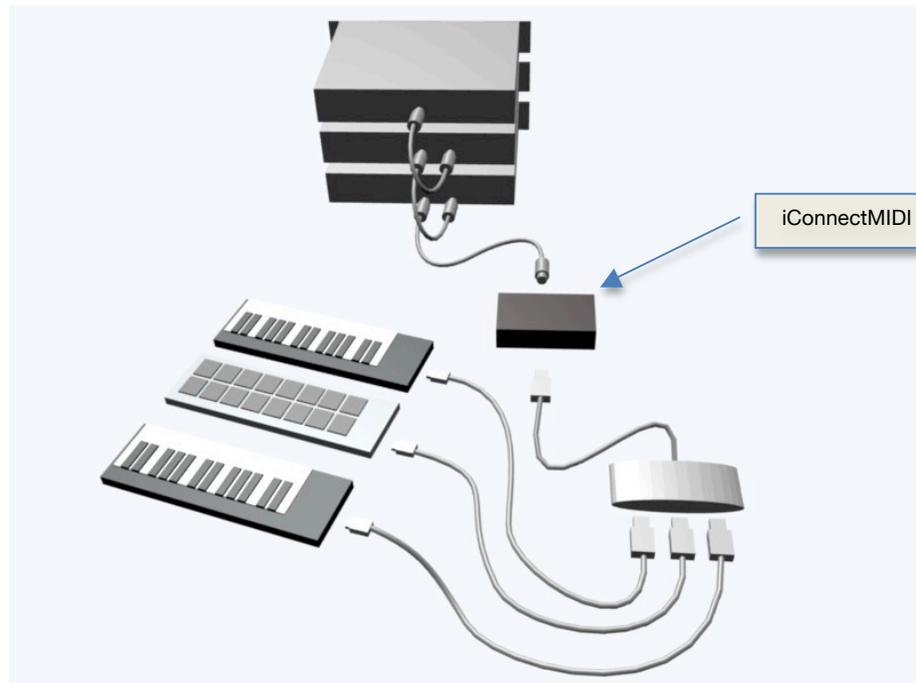


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Using USB

Multiple Devices

iConnectMIDI has one USB-A connector on its front panel for connecting to USB MIDI instruments and controllers. Only one device can be powered directly from the connector on iConnectMIDI. To connect more than one USB device, a powered USB hub is required (sold separately), which can be found at any computer store. USB hubs contain two or more USB receptacles to plug to either a USB device or another USB hub. iConnectMIDI will recognize a total of eight (8) USB devices attached.



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Using Computers

Mac OS and Windows

Your iConnectMIDI can be connected to up to two (2) computers running either Mac OS or Windows. Each computer will recognize all of the port connectors on iConnectMIDI (twelve ports in total when connected) and each is addressable by the particular music software running on the computer. Alternatively, one computer and one iOS device can be connected to iConnectMIDI simultaneously--the choice is yours, depending on your configuration needs.

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iOS Connectivity

iPad™, iPod touch®, and iPhone®

iConnectMIDI interfaces to iOS devices through a wired high-speed USB connection. The cable for the connection between iConnectMIDI and iOS is included and contains a mini-USB connector (which plugs into one of the mini-USB receptacles on iConnectMIDI) on one end and a 30-pin connector (which plugs into the iOS device) on the other.

The 30-pin connector locks to prevent accidental detachment of the cable from the iOS device. When disconnecting the cable from your iOS device, ensure that the side buttons on the connector casing are first depressed before trying to pull the connector out of its receptacle. When connecting the cable to the iOS device, push the connector into its receptacle until it clicks into place.

Power Considerations

iOS devices

iConnectMIDI will not power a connected iOS device from either of its two mini-USB connectors. The iOS device will draw on its own battery power; depending on its usage and the number of applications running, the iOS device will eventually need to be recharged.

USB devices

iConnectMIDI will power one USB device from its USB-A connector. To use more than one USB device, a powered USB hub is required for all USB devices to be connected to. Connect the USB hub to iConnectMIDI with a USB cable.

Software

What can I do with all of this?

The iOS platform requires applications to be CoreMIDI compatible to work with iConnectMIDI. The CoreMIDI framework is Apple's way of letting programmers get MIDI functionality to the applications more easily. For you, the MIDI user, this means that more music-related applications are available to you and with greater functionality, allowing you to find the right applications for your specific needs (and usually at very little cost). Because of the inherent simplicity of most applications (due to the limited screen real estate of iPhone and iPod touch devices), many applications are developed for specific tasks in mind, thus simplifying their interfaces. Applications for the iPad, with its larger touch screen, are capable of more user-interaction with the user and, as a result, have a larger feature set with greater complexity, approaching that of the computer platforms.

On the Mac and PC computer platforms, MIDI functionality is as it always has been, with each operating system providing its own form of MIDI capabilities for programmers and users. All of the MIDI ports on iConnectMIDI will appear as you would expect and are accessible using the standard methods of selecting MIDI ports.

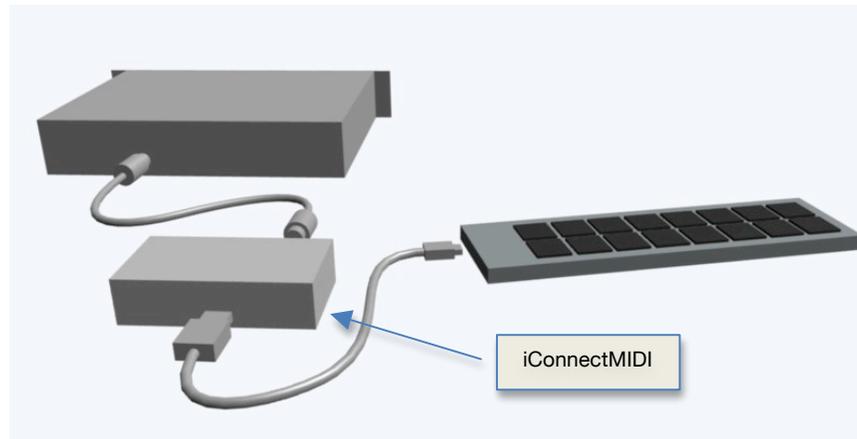
Owner's Manual

Example Setups

USB with MIDI instruments

iConnectMIDI enables the direct communication between USB controllers and legacy MIDI synthesizers without a computing device. In the past, the communication between MIDI devices simply required the presence of MIDI DIN connectors on each device and a cable to connect them. However, modern MIDI controllers (keyboards, control surfaces, drum pads, etc.) only have a USB connector and MIDI DIN connectors; direct connection is no longer possible with such devices. In addition, some modern instruments that have both USB and MIDI DIN connectors cannot directly communicate with to USB-only MIDI controllers through a USB cable.

iConnectMIDI solves this problem by providing the necessary translation between MIDI DIN and USB MIDI connectors, which previously required the intervention of a computer. In general, legacy MIDI instruments are sound generators and modern controllers are USB, so connection will be MIDI DIN cables between iConnectMIDI and legacy instruments and USB between iConnectMIDI and USB MIDI controllers.



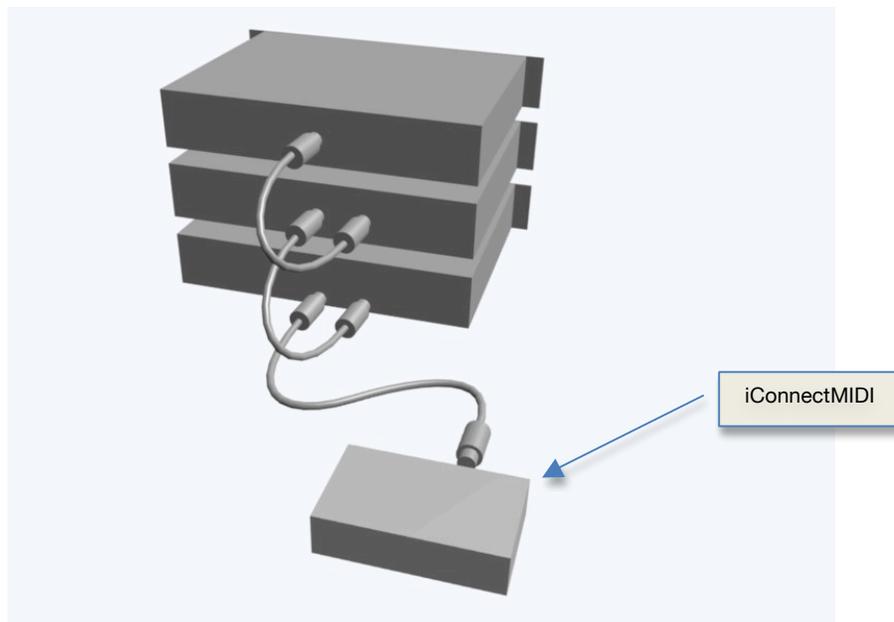
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Because MIDI DIN instruments typically have the full complement of MIDI DIN connectors (IN, OUT, THRU), these instruments can be daisy chained. This allows for multiple MIDI instruments to be connected together using a MIDI cable between each instrument.

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The above illustration shows three MIDI sound modules daisy chained using two extra MIDI cables. MIDI data originates from iConnectMIDI, from the MIDI OUT connector the MIDI IN connector of the first instrument. From the first instrument, a MIDI cable is connected to its MIDI THRU connector and into the second instrument's MIDI IN connector. A similar connection is made between subsequent MIDI instruments (MIDI THRU to MIDI IN).

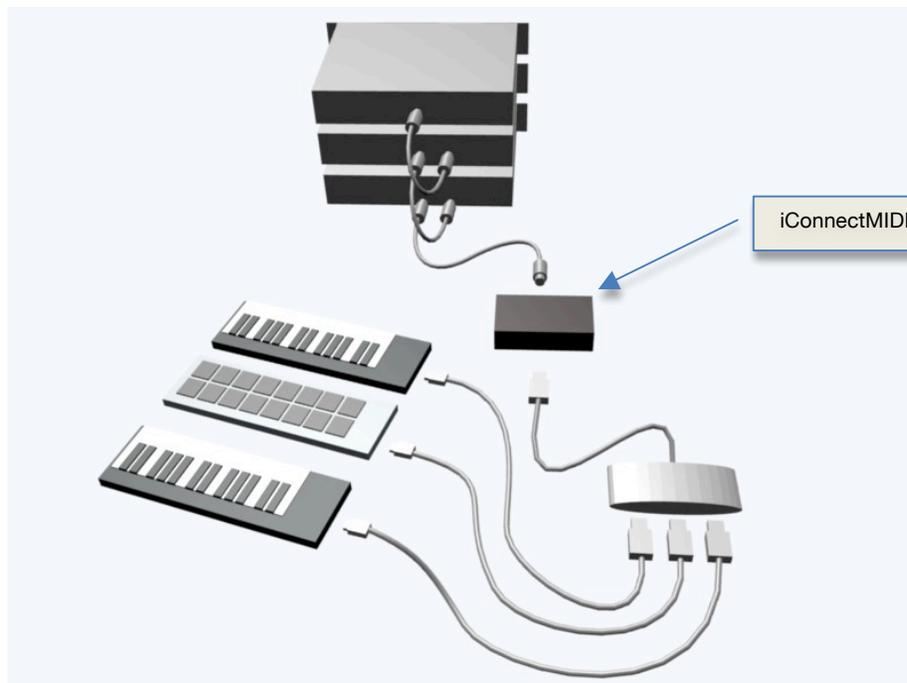
All MIDI instruments in the chain must be set to respond to one or more MIDI channels (1-16). Multitimbral instruments (or instruments that can be set to multitimbral mode) can respond to more than one MIDI channel at a time. If more than one instrument is set to respond to the same MIDI channel, then all instruments set to that MIDI channel will play simultaneously, creating a rich, multi-layered sound.

Multiple USB controllers

Several USB MIDI controllers can be connected into a system at one time by using a readily available and inexpensive USB hub, available at any computer supply store. USB hubs contain two or more USB-A ports, allowing for multiple USB devices to be connected. Their data is aggregated and carried over a single USB cable that connects the hub to iConnectMIDI.

iConnectMIDI

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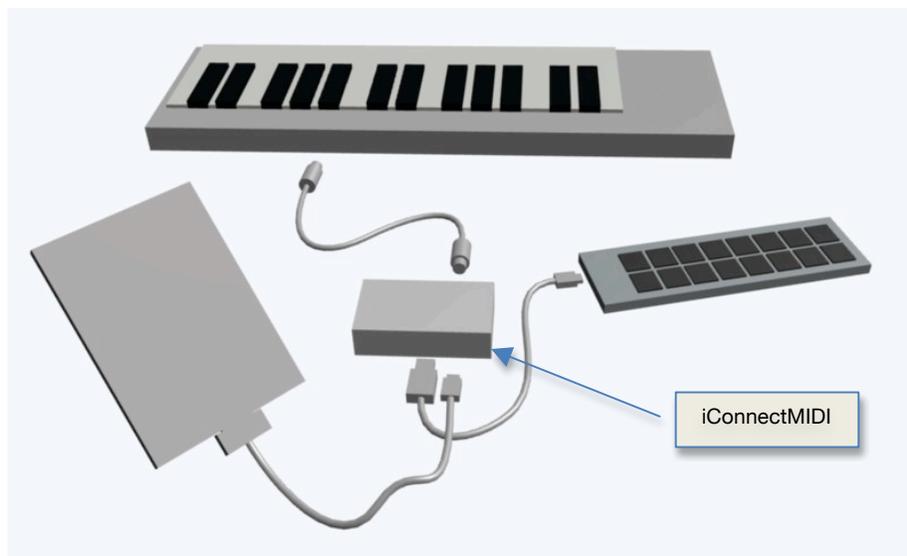
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iOS, USB controllers and Synthesizers

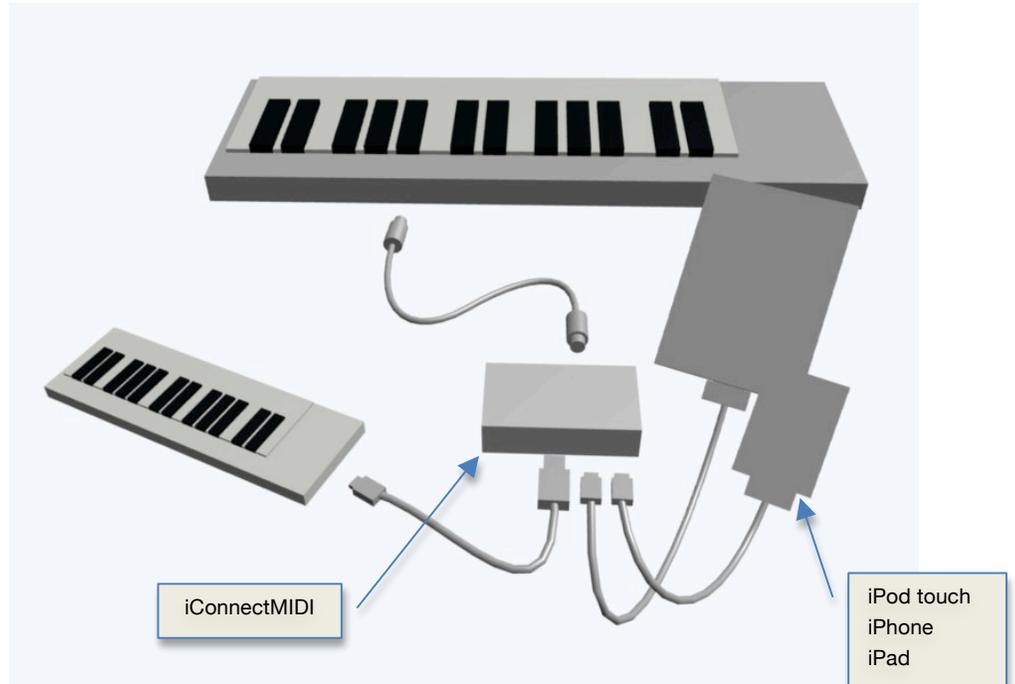
iConnectMIDI can connect MIDI DIN, USB controllers, and iOS devices, all at the same time. A USB hub is not needed if only one USB MIDI controller is connected.



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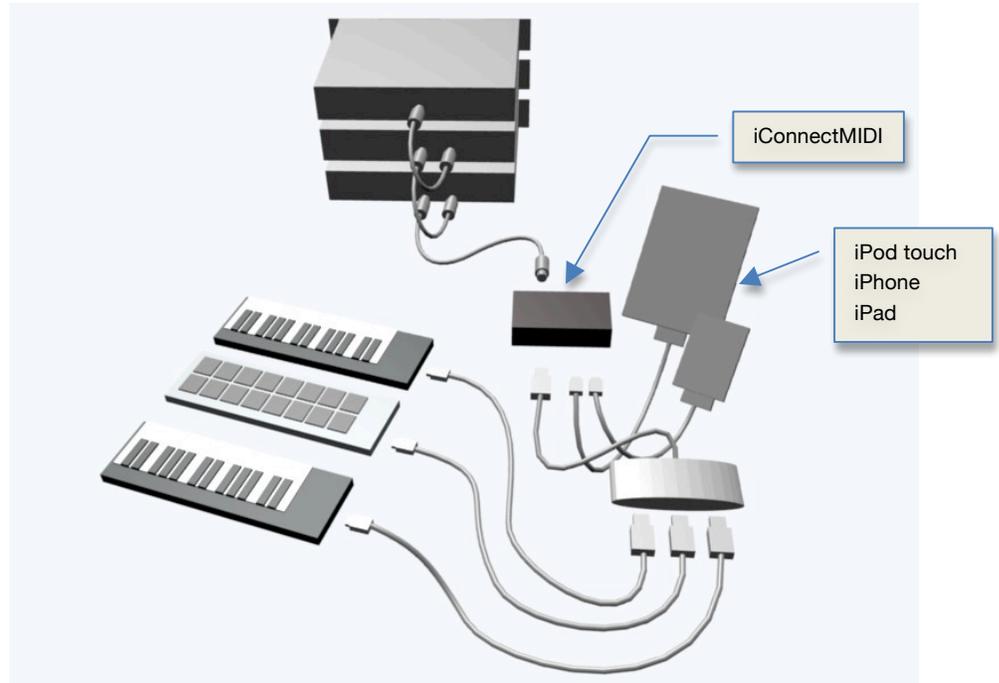
Multiple iOS devices, synthesizers, and USB MIDI

A complex setup (such as the one depicted below) uses multiple devices of each flavor, which can be accommodated by iConnectMIDI. Multiple iOS devices may be used, with each serving a different purpose within the setup; for example, one iOS device is the sound generator while the other is a controller.



If multiple USB MIDI controllers are required, then a powered USB hub is needed. Insert the hub between the USB MIDI controllers and iConnectMIDI.

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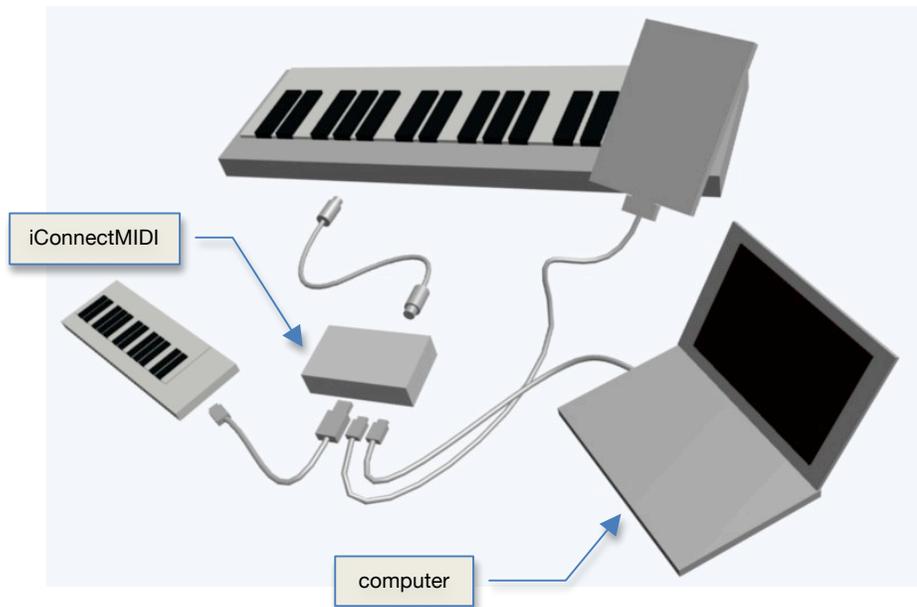
Mixed computing devices

With its two USB host receptacles, iConnectMIDI can connect to up to two computing devices, which can be iOS devices or computers. These devices need not be of the same type.

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Configuration Software

Directing MIDI traffic

MIDI data can be routed by iConnectMIDI between specific ports. This can be configured in the iOS application included with iConnectMIDI, and which can be downloaded from the Apple App Store. Once a configuration is set, it can then be saved in iConnectMIDI and will be active each time iConnectMIDI is powered up.

The default configuration

A default configuration exists for iConnectMIDI in the absence of a customized configuration using the port configuration software and in the absence of a computing device. By default, all USB ports send to all other ports except themselves, but MIDI DIN ports send to all other ports including themselves.

This routing still applies even when a host device (iOS or computer) is connected to iConnectMIDI. The host computing device, however, may be routing data from its software to specific ports available on iConnectMIDI. Data generated from the computing device will simply be added to the existing MIDI stream for the destination port.

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Troubleshooting

No MIDI

Check that all of your cable connections are properly seated in their receptacles. If a connector has unseated itself, reseal it and see if connection with the application is re-established. If not, then try cold booting iConnectMIDI (disconnect power from iConnectMIDI, then reconnecting).

On MIDI cables, ensure that the ends are inserted into the correct MIDI receptacles. For example, one end is inserted into the MIDI OUT receptacle and the other end is inserted into the MIDI IN receptacle. In all cases, one end of the cable will be connected to either a MIDI OUT or MIDI THRU receptacle, and the other end is connected to a MIDI IN receptacle.

No indicator lights

Typically, data flowing through iConnectMIDI will cause the respective indicator lights to flash. If, however, there are no lights flashing at the port where you expect a device to be active with MIDI data, then this is an indication of one or more of the following causes:

- detached cable
- non-responding application
- broken cable

Checking for any of these potential sources may resolve the issue.

Application not responding

An application (on iOS, Mac, or PC) may become unresponsive under heavy use, from unusual hardware configurations, or from frequent connection/disconnection of devices. Depending on the application's ability to recover from such scenarios, it may not be able to remain stable. If the application becomes unstable, try performing a complete shutdown of the application.

In iOS, application shutdown is achieved by **single-clicking** on the Home button, returning you to the application icons display. Then **double-click** on the Home button to bring up the running applications list. Touch and hold the application that you want to shut down until a delete symbol is superimposed on the application's icon; touch the delete button and the application will disappear, indicating full removal of the application from runtime memory. Restart the application. Ensure that the indicator light corresponding to the host port where the iOS device is connected shows a few short flashes, indicating that the application has properly initialized MIDI functionality, before trying to play your connected instruments.

Should an application need to be shutdown in Mac OS or Windows, use the usual application shutdown methods to terminate the application, then restart the application.

Red status light

The power indicator light is usually solid green, indicating correct operating status. If iConnectMIDI encounters an error condition and needs to be reset, then the light will display as red. Unplug iConnectMIDI from power then reconnect power. The iOS applications may also need to be restarted, after which you can resume use of iConnectMIDI.

Filtering

If iConnectMIDI has been configured to filter all MIDI events, then no amount of rebooting iConnectMIDI will correct the problem. To resolve, run the routing configuration application and remove all unnecessary filters.

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No power

If the power indicator light is not lit, then iConnectMIDI is not receiving power. Ensure that the power jack on the back of iConnectMIDI is properly seated and that the wall adapter is correctly plugged into the power source receptacle. Also, check to ensure that your power receptacle is delivering power. If the receptacle is delivering power, then your the AC power adapter for iConnectMIDI may need to be replaced (5V, 1A). If iConnectMIDI still does not have a lighted power indicator, then iConnectMIDI may need to be replaced.

A secondary check is to ensure that the correct power adapter is connected to iConnectMIDI. Use only the power adapter that was included with your iConnectMIDI.

Retrieving iConnectMIDI Info on iOS

To ensure that your iConnectMIDI is being recognized by your iOS device, find it in the Settings. Tap the following: Settings → General → About. Then scroll down to find iConnectMIDI in the list of iOS devices. If found, you will also find the serial number, firmware version, and hardware version of your iConnectMIDI.

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Specifications

General

- 2 x mini-USB Device Ports
- supports iPad, iPhone or iPod touch
- supports computers with Mac OS X or Windows XP or greater
- 2 x 2 MIDI DIN Ports

MIDI DIN

- Standard MIDI DIN at 31250 bits per second
- 2 In ports
- 2 Out ports
- 1 x USB Host Port

USB

- Standard Full Speed USB Type A Host port
- Hub capable - supports up to 8 devices
- Supports USB MIDI Class compliant devices

Power Connector

5 V DC, 1A

Dimensions

Width	11.0 cm (4.3 inches)
Depth	7.0 cm (2.75 inches)
Height	3.5 cm (1.4 inches)
Weight	320 grams (0.7 lbs)

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Body

- Durable Construction
- Rugged steel body
- Black powder coat finish

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Updating Firmware

iConnectivity provides updates to the firmware of iConnectMIDI for corrections and feature enhancements. Check www.iConnectivity.com for posted updates.

To update iConnectMIDI firmware you will need the following:

- A firmware update file from iConnectivity. This file is a standard MIDI file containing a sequence of system exclusive messages to update the iConnectMIDI firmware and some dummy note on/off messages.
- A Mac or PC with a program that can play standard MIDI files. Not all MIDI file players are equal; some do not properly handle the timing information in the MIDI file or they distort the data in some manner. The following shareware programs have been tested and work properly: Rondo (for Mac), MIDI-OX (for PC). Digital Performer does not work correctly. You cannot update the firmware using iPhone, iPod, or iPad even if you have a MIDI file player for those devices; you must use a Mac or PC.
- A mini USB cable to connect the Mac or PC to iConnectMIDI.

The upgrade procedure is fairly simple and takes approximately one minute to complete.

1. Unplug all cables from iConnectMIDI (including the power adapter).
2. Insert a straightened paper clip or similarly pointed object into the small hole on the left side of iConnectMIDI (near the front face). There is a tactile switch behind the small hole and you should feel it click once the switch is engaged.
3. While the switch is engaged, apply power to iConnectMIDI by connecting the power adapter.
4. Continue to engage the switch while iConnectMIDI starts up. Watch the LEDs on the front panel and release the switch when you see the USB D1 LED (second LED from the right) flashing on and off. The flashing LED pattern indicates that iConnectMIDI has started up in firmware update mode (as opposed to application mode). After a moment, the USB D1 LED will stop flashing and remain lit.
5. Connect a mini USB cable between your Mac or PC and the USB D1 port on iConnectMIDI (second mini USB connector from the right). The computer may indicate that you've connected a device named "iConnectMIDI Loader". "iConnectMIDI Loader" is a class-compliant MIDI device and does not need special drivers.
6. Start the program for playing standard MIDI files and open the iConnectMIDI firmware update file, select "iConnectMIDI Loader" as the destination device to receive the MIDI data.
7. Start playing the MIDI file from the very beginning and let it play through to the very end without stopping. The USB D1 LED will flash as data is received by iConnectMIDI. If this LED does not flash while the MIDI file is played, then there is likely a connection problem between the computer and iConnectMIDI that you will need to work out before updating the firmware. The LEDs on either side of the USB D1 LED may turn on and off during the firmware upgrade.
8. When the MIDI file has finished playing to the very end, the USB D1 LED will flash on and off indicating that the firmware update has successfully completed. If an error occurs at any time during the update, the USB D1 LED will go out. If an error occurs, replay the MIDI file from the very beginning to reapply the firmware update.
9. Once the firmware update has been successfully applied, remove all cables from iConnectMIDI and then re-insert the power adapter (do not press the tactile switch). iConnectMIDI will start up in application mode using the newly installed firmware.

Troubleshooting

iConnectMIDI

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1. The firmware update file must be played from beginning to end without stopping. If you start playing from any point other than the very beginning, or if you pause playing and restart, or pause and try to resume from another point in the file, the USB D1 LED will go out, indicating an error. Whenever the USB D1 LED is not lit, the MIDI file must be replayed from the very beginning and allowed to play all the way through. You do not have to restart iConnectMIDI by unplugging all cables and pressing the switch; simply replay the MIDI file from the very beginning.
2. The firmware update file contains timing information that is crucial to the update procedure. Not all MIDI file players properly handle this timing information. If errors persist, try playing the MIDI file at half the original tempo or try another program. Not all MIDI file players allow changing the tempo. Never play the file faster than 100% tempo (120 BPM).

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MIDI Ports Explained

Port	Description	Mac OS and Windows (Vista and later) Name
DIN 1	<ul style="list-style-type: none"> • MIDI 5-pin DIN connectors #1 on the rear panel • includes both IN and OUT connectors • transmission speeds at standard MIDI rates (31,250 bps) 	iCM DIN 1
DIN 2	<ul style="list-style-type: none"> • MIDI 5-pin DIN connectors #1 on the rear panel • includes both IN and OUT connectors • transmission speeds at standard MIDI rates (31,250 bps) 	iCM DIN 2
USB Device 1	<ul style="list-style-type: none"> • left mini-USB connector on the front panel • bidirectional transmission of MIDI data at full USB speed • connects to iOS devices using included iConnectMIDI cable • connects to computers (Mac or PC) using standard USB-A to mini-USB cables 	iCM USB D1
USB Device 2	<ul style="list-style-type: none"> • right mini-USB connector on the front panel • bidirectional transmission of MIDI data at full USB speed • connects to iOS devices using included iConnectMIDI cable • connects to computers (Mac or PC) using standard USB-A to mini-USB cables 	iCM USB D2
USB Host 1	<ul style="list-style-type: none"> • USB-A connector on the front panel • can power a single class compliant USB MIDI 	iCM USB H1

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	<p>instrument/controller; more devices will need a powered USB hub</p> <ul style="list-style-type: none"> • bidirectional transmission of MIDI data at full USB speed 	
<p>USB Host 2 USB Host 3 USB Host 4 USB Host 5 USB Host 6 USB Host 7 USB Host 8</p>	<ul style="list-style-type: none"> • ports accessible via a powered USB hub • ordering of USB ports in software is dependent on their connection order • access to class compliant USB MIDI instruments/controllers 	<p>iCM USB H2 iCM USB H3 iCM USB H4 iCM USB H5 iCM USB H6 iCM USB H7 iCM USB H8</p>

For Windows XP users: Windows XP does not accurately identify iConnectMIDI port names when iConnectMIDI is connected to your computer. Each port on iConnectMIDI will appear as:

- USB Audio Device
- USB Audio Device [2]
- USB Audio Device [3]
- USB Audio Device [4]
- USB Audio Device [5]
- USB Audio Device [6]
- USB Audio Device [7]
- USB Audio Device [8]
- USB Audio Device [9]
- USB Audio Device [10]
- USB Audio Device [11]
- USB Audio Device [12]

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To determine which USB Audio Device corresponds to a iConnectMIDI port requires connecting a sound module MIDI instrument to the desired MIDI output port on iConnectMIDI. If your Windows application has sequence playback capability, activate a sequence to play to the selected output MIDI port. Ensure the sequencer track and sound module are set to the same MIDI channel. Play the sequence, changing USB Audio Device port selection until sound is heard from your sound module. You may need to stop and restart the sequence between selecting a different USB MIDI output port.

If your application does not have a sequencer, then you will need to connect a MIDI instrument or controller (e.g. keyboard or drumpad) as your MIDI event source device. Determine which input port this is connected to by a visual indicator within your application that MIDI data is being received. Select the USB Audio Device from the list until the MIDI data indicator shows that MIDI data is being received. Once your MIDI input is established, you will need to determine the MIDI output. Select one of the USB Audio Device ports as the destination port. Listen for sound from your sound module MIDI instrument while playing on your MIDI instrument that produces MIDI events.