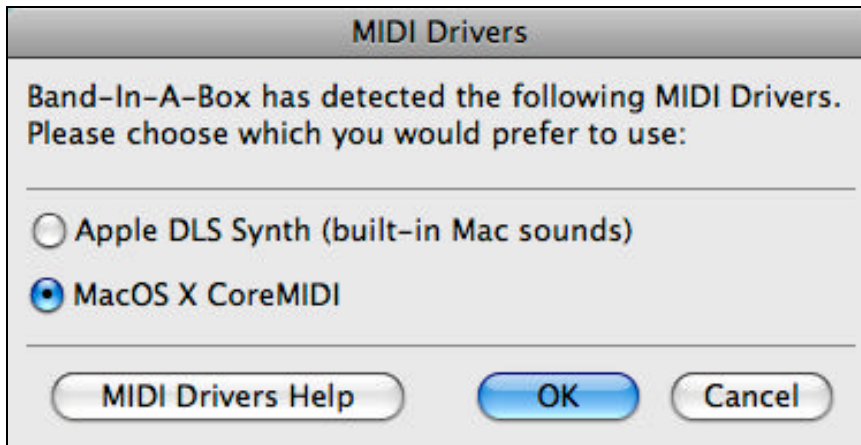
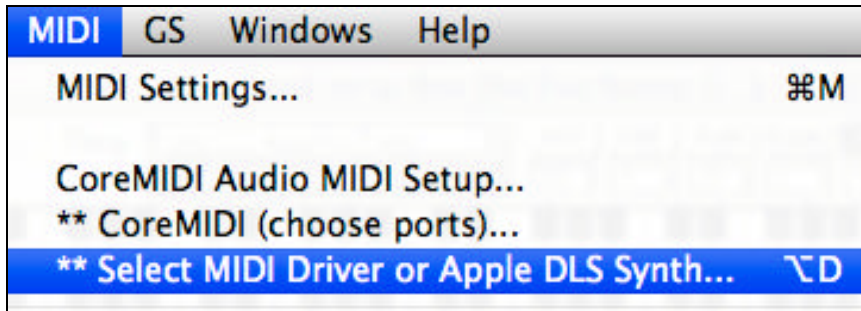


CoreMIDI and Apple DLS Synth Tutorial

Selecting a MIDI Driver

Band-in-a-Box offers two MIDI Output options - **Apple DLS Music Device** (Built-in Mac sounds) and **CoreMIDI**.



The **Apple DLS Music Device (Synth)** does not require a Mac MIDI Interface or external synthesizer, and is the simplest way to quickly make Music with Band-in-a-Box.

Hint: The Apple DLS Music Device is an Audio Unit softsynth which has properties very similar to the QuickTime Music Synthesizer.

CoreMIDI is the OS X standard MIDI driver method. CoreMIDI facilitates communication with external MIDI devices, and it also enables inter-application “piping” of MIDI data between MIDI applications. CoreMIDI requires some setup, but is not terribly complicated.

CoreMIDI with a MIDI Interface and External Synthesizers

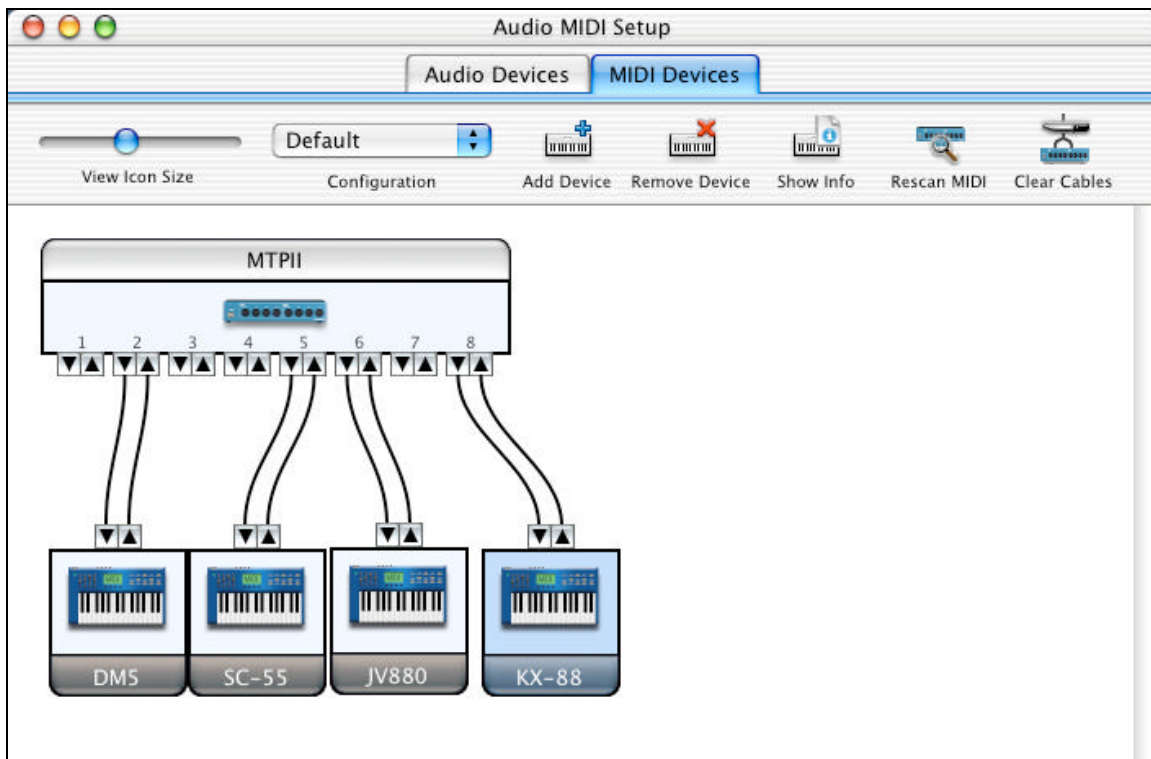
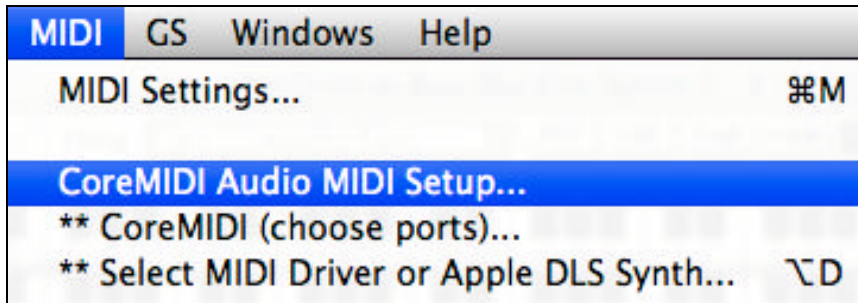
If you have not done so already, follow the manufacturer’s instructions to install your MIDI interface. Installation details may vary, depending on the manufacturer and the model of your MIDI Interface.

Hint: It is helpful to occasionally check your manufacturer’s web site and download/install MIDI Interface driver updates which might become available.

Apple “Audio MIDI Setup” Application

‘Audio MIDI Setup’ is usually found in your ‘Applications’ folder. It can be helpful to locate ‘Audio MIDI Setup’ in the Finder, then drag its icon to the Dock, so it will be easy to launch the program (from the Dock) when necessary.

Audio MIDI Setup can also be launched from Band-in-a-Box...



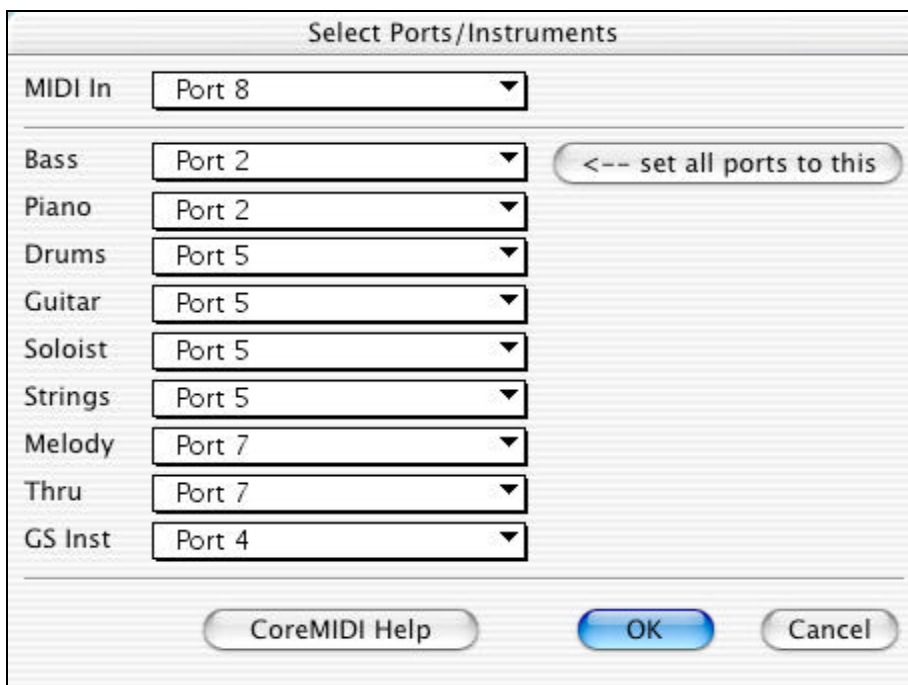
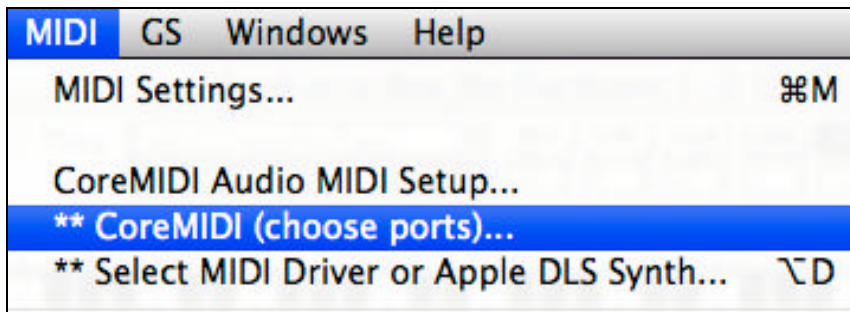
Specific details of your Audio MIDI Setup screen will differ from this example, depending on your MIDI interface and your connected external MIDI devices. This is a relatively complicated example, with an eight port MIDI interface and four different synthesizers.

If your MIDI Interface has been properly installed, the picture of your MIDI Interface will automatically appear in the Audio MIDI Setup window, showing input/output “pins” for each MIDI input and output socket on your MIDI Interface.

You need to inform Audio MIDI Setup about your external devices (keyboards, synthesizers, drum machines, mixers, etc.). Click the [Add Device] button for each of your external devices, and then double-click each new device to set Manufacturer, Model, number of Send/Receive MIDI channels, and other relevant information.

After your external devices have been created and configured, the last step is to “wire them up” to the picture of your MIDI interface. For instance, in the above illustration, the KX-88 keyboard controller is connected to MIDI input/output pair #8 on the MTPII MIDI Interface. Click on an input/output “pin” on the picture of your MIDI Interface, and drag to an output/input “pin” of the picture of an external device. After supplying this information, CoreMIDI will know what devices are “on the other side” of your MIDI interface(s).

Band-in-a-Box MIDI Port Selection for External Devices



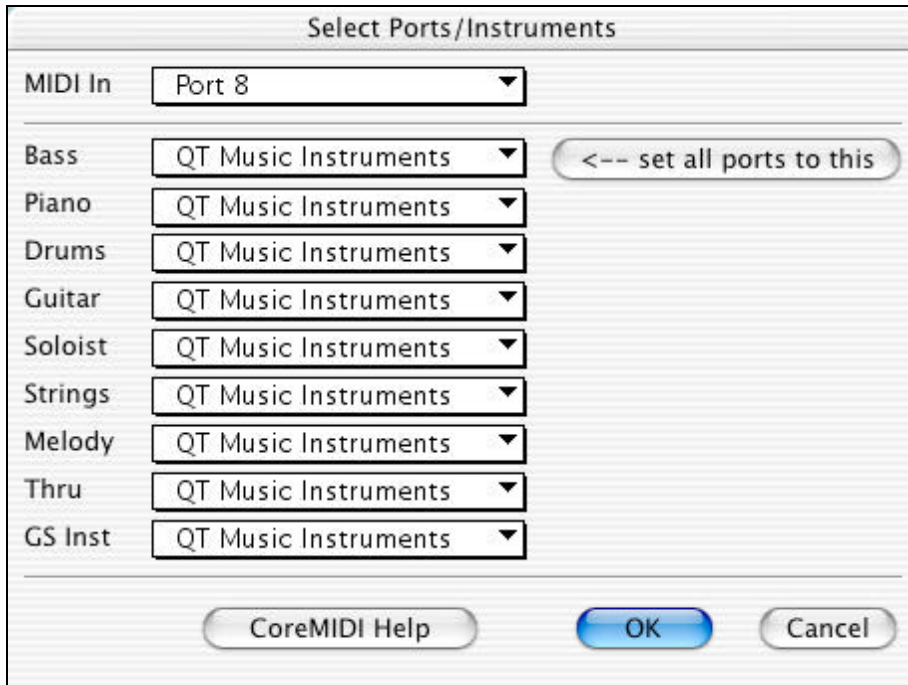
This example shows Band-in-a-Box configured to receive/record from a MIDI keyboard on MIDI Interface Port 8. Band-in-a-Box transmits tracks on an assortment of synthesizers, connected to various MIDI Interface ports. This scheme would be useful on a large MIDI setup, if your best Drum sounds are on a Port 5 synthesizer, best Piano is on a Port 2 synthesizer, etc.

Your setup does not have to be so complex. If you want all tracks to be played on a single synthesizer (the most common situation), set the desired destination in the Bass popup menu, and then click the ‘set all ports to this’ button, to quickly set the destination for all tracks. You can get excellent results with all instruments assigned to a General MIDI compatible device, such as a Roland Sound Canvas module.

Apple DLS Synth and a Controller Keyboard

If you have a small MIDI controller keyboard, but you do not have any external MIDI Synthesizers, Band-in-a-Box can easily support this.

Select the port that your controller is connected to as your MIDI Input, and then select QT Music Instruments for your output ports. Band-in-a-Box will receive/record from a keyboard connected to the MIDI interface, but playback and keyboard MIDI Thru will go to the built-in Mac synth.



Inter-Application Communication with IAC or Virtual Ports.

Virtual Ports can be used to “pipe” Band-in-a-Box MIDI playback into most CoreMIDI-compatible sequencers and other MIDI software. This means that when you play a song in Band-in-a-Box, the MIDI information will be sent to another application, rather than directly to a MIDI interface or Apple DLS softsynth.

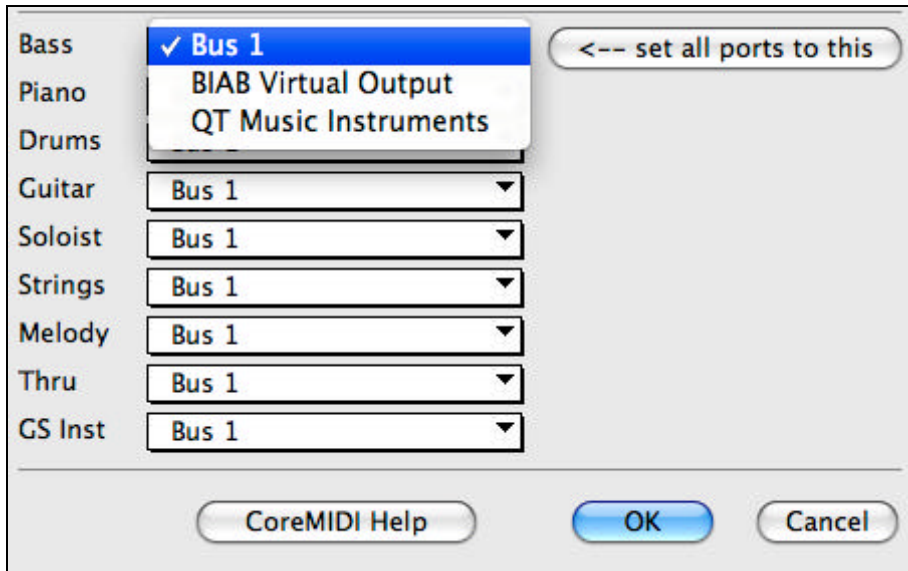
One reason to do this would be to use a third party application as an Audio Unit or VST plugin host. An example of such a program is "Rax" (<http://www.audiofile-engineering.com/rax/>).

With Band-in-a-Box, you can either use the BIAB Virtual Ports or the IAC (Inter-Application Communication) bus. These are just two different ways of accomplishing the same thing.

To use the IAC bus, you first need to enable the IAC driver in the Audio MIDI Setup window (MIDI Devices). Double-click on IAC Driver, make sure "Device is online" is checked, and add at least one port.

Hint: If Band-in-a-Box is running when you enable the IAC driver, you may need to quit and re-open the Band-in-a-Box application before it is recognized.

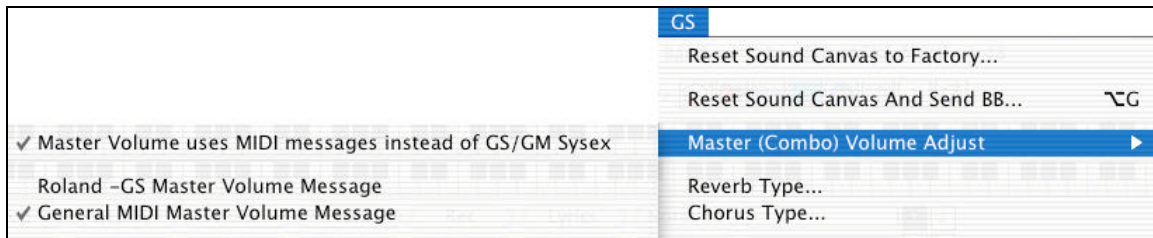
In Band-in-a-Box, go to the 'CoreMIDI Choose Ports' dialog, and select **IAC** on all output ports.



Next, launch your third party MIDI application, and select IAC as the input port. This is often done in the program's *Preferences / MIDI* window.

Hint: It can sometimes make a difference which MIDI application you open first. For example, you may need to launch the third party application before you launch Band-in-a-Box.

On Non-GS Synthesizers, Avoid GS Commands



GS is a Roland-authored set of SysEx commands. GS is recognized by many (but not all) Roland synthesizers. GS is also recognized by some non-Roland synthesizers.

In a perfect world, the worst that would happen to a non-GS synthesizer is that the synthesizer would simply ignore GS messages (and therefore GS parameters like Master Volume or Reverb would not work).

However, there are many synthesizers available, especially amateur-written softsynths-- It is possible that you may find occasional devices that can get confused and malfunction, if presented with GS messages.

In order to make sure you get the control response you expect, and avoid possible malfunctions on some synthesizers-- Unless you know that your synthesizer understands GS messages, make sure to specify MIDI control messages.