MIDI I/O™

Guide

contents

MIDI I/O Introduction

About MIDI I/O

Congratulations on purchasing the Digidesign MIDI I/O USB (Universal Serial Bus) MIDI interface for Windows and Macintosh.

MIDI I/O Capabilities

- Fully compatible with Pro Tools and other MIDI applications on Windows and Macintosh

- Provides ten MIDI input and ten MIDI output ports for a total of 160 MIDI channels per interface

- Up to four MIDI I/Os can be connected together for a total of 32 input ports and 40 output ports (Windows), and 40 input and output ports (Macintosh)

- Powered from USB with a direct connection to your computer or a powered USB hub

- Supports MIDI Time Stamping

- Supports programmable MIDI Thru mode when offline (not in use by a MIDI application) or not connected to a computer

- Supports custom MIDI routing assignments for use in MIDI Thru mode

System Requirements

MIDI I/O requires the following:

- Digidesign-qualified computer running Windows XP, Mac OS X, or Macintosh OS 9

  – and –

- Pro Tools, or other compatible MIDI applications

For complete system requirements, visit the Digidesign Web site (www.digidesign.com).

Compatibility Information

Digidesign can only assure compatibility and provide support for hardware and software it has tested and approved.

For a list of Digidesign-qualified computers, operating systems, hard drives, machine controllers and third-party devices, refer to the Digidesign Web site (www.digidesign.com).

Conventions Used in This Guide

All Digidesign guides use the following conventions to indicate menu choices and key commands:

Convention	Action
File > Save Session	Choose Save Session from the File menu
Control+N	Hold down the Control key and press the N key
Option-click	Hold down the Option key and click the mouse button
Right-click (Windows)	Click with the right mouse button

The following symbols are used to highlight important information:

User Tips are helpful hints for getting the most from your Pro Tools system.

Important Notices include information that could affect your Pro Tools session data or the performance of your Pro Tools system.

Shortcuts show you useful keyboard or mouse shortcuts.

Cross References point to related sections in the Pro Tools Guides.

About www.digidesign.com

The Digidesign Web site (www.digidesign.com) is your best online source for information to help you get the most out of your Pro Tools system. The following are just a few of the services and features available.

Support Contact Digidesign Technical Support or Customer Service; download software updates and the latest online manuals; browse the Compatibility documents for system requirements; search the online Answerbase or join the worldwide Pro Tools community on the Digidesign User Conference.

Training and Education Study on your own using courses available online or find out how you can learn in a classroom setting at a certified Pro Tools training center.

Products and Developers Learn about Digidesign products; download demo software or learn about our Development Partners and their plug-ins, applications, and hardware.

News and Events Get the latest news from Digidesign or sign up for a Pro Tools demo.

To learn more about these and other resources available from Digidesign, visit the Web site (www.digidesign.com).

MIDI I/O Overview

This chapter explains all of the connectors and indicators on the front and back panels of the Digidesign MIDI I/O.

MIDI I/O Front Panel

The MIDI I/O has the following front panel ports and indicators, moving from left to right (see Figure 1):

MIDI In Ports 9 and 10

Connect individual MIDI devices such as MIDI keyboard controllers or MIDI control surfaces to the front panel MIDI In ports 9 and 10. This provides easy access for connecting MIDI devices even when the MIDI I/O is mounted in a rack.

MIDI Out Ports 9 and 10

Connect individual MIDI devices such as MIDI synthesizers or samplers to the front panel MIDI Out ports. The front panel MIDI Out ports mirror the back panel MIDI Out ports 9 and 10. (A mirrored Out port simply means that it is a duplicated connector that transmits the same data as its front- or real-panel counterpart.) This provides easy access for connecting MIDI devices even when the MIDI I/O is mounted in a rack.

MIDI In Activity LED Indicators

The green MIDI In LED indicators display MIDI input activity by port (ports 1–10).

MIDI Out Activity LED Indicators

The yellow MIDI Out LED indicators display MIDI output activity by port (ports 1–10).
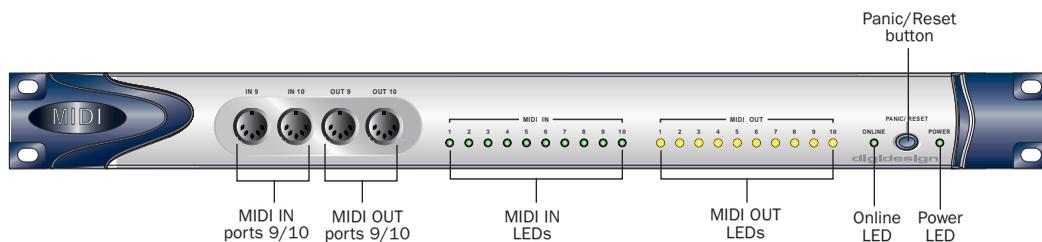
Figure 1. Front panel of MIDI I/O

Online LED Indicator

The Online LED indicator lights when a MIDI application has been launched and recognizes the MIDI I/O. Once the Online LED is lit, MIDI Thru mode (see "MIDI Thru Mode" on page 26) is disabled.

Panic/Reset Button

Press the Panic/Reset button to send MIDI note off messages across all ports to turn off any hung notes on connected external MIDI devices.

Press and hold the Panic/Reset button for at least three seconds (until the Power LED turns off) to reset the MIDI I/O. This causes the MIDI I/O's driver to reload the current firmware and re-initialize the MIDI I/O. It has the same effect as disconnecting and then reconnecting the USB cable or external power supply.

⚠ *Resetting the MIDI I/O when Pro Tools is running will cause it to go offline. You will need to restart Pro Tools to bring the MIDI I/O back online.*

Power LED Indicator

The Power LED indicator lights when the MIDI I/O is powered on. The MIDI I/O can be powered by USB or by an optional external power supply. There is no On/Off switch on the MIDI I/O. The MIDI I/O is always on when it is receiving power, either from your computer over USB or from an external power supply.

MIDI I/O Back Panel

The MIDI I/O has the following back panel ports and connectors, moving from left to right (see Figure 2):

MIDI Out Ports 1 through 10

Connect individual MIDI devices to the back panel MIDI Out ports. MIDI data is sent from your computer to connected external MIDI devices. Ports 9 and 10 are mirrored on the front panel of the MIDI I/O.

MIDI In Ports 1 through 8

Connect individual MIDI devices to the back panel MIDI In ports. MIDI data is sent from connected external MIDI devices to your computer.

USB Port

Your computer communicates with the MIDI I/O through a USB cable connected to the MIDI I/O's USB port and a USB port on your computer.
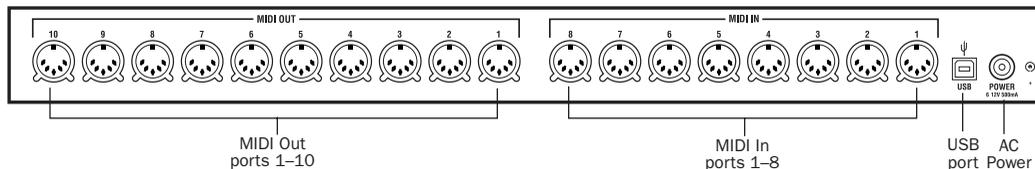
Figure 2. Back panel of MIDI I/O

Alternate Power

If you want to use the MIDI I/O without connecting it to your computer, you can use any 9–12 Volt DC power adapter, 500 mA (Tip +/Ring –) for power. When used in this way, the MIDI I/O will only function in MIDI Thru mode.

Typically, you will not need to use an external power supply when the MIDI I/O is connected to your computer, since the MIDI I/O is powered over USB from your computer. However, if you want to use the MIDI I/O in MIDI Thru mode without a computer, or if it is connected to an unpowered USB hub, you will need to use an external power supply.

⚠ *Do not attempt to use one or more unpowered MIDI I/O units on an unpowered USB hub.*

LED Startup Sequence

The MIDI I/O's internal firmware will load when the MIDI I/O is powered on (either from USB or an external power supply). You will see an LED startup sequence and the Power LED will light. This LED startup sequence indicates that the internal firmware has successfully loaded. When powered on, the MIDI I/O is in MIDI Thru mode.

chapter 3

Windows Configuration

This chapter contains information for Windows systems only. If you are using the MIDI I/O with a Macintosh computer, see Chapter 4, "Macintosh Configuration."

Installing the MIDI I/O Drivers

To use the MIDI I/O with Pro Tools or other compatible MIDI applications, you will need to install the Digidesign MIDI USB Driver and the Digidesign MIDI I/O driver.

You will only need to run the Digidesign MIDI I/O Setup application once. After that, use the Hardware Wizard to set up any additional MIDI I/Os that are added later.

To install the MIDI I/O drivers:

1 Connect your MIDI I/O to any available USB port on your computer. See "Connecting USB" on page 8.

2 Launch the Digidesign MIDI I/O Setup application from your Pro Tools Installer CD-ROM.

3 Follow the on-screen instructions.

4 Update the MIDI I/O Firmware. See "Updating MIDI I/O Firmware" on page 8.

Connecting USB

To connect the MIDI I/O to your computer:

1 Plug one end of the USB cable into the USB port on the MIDI I/O.

2 Plug the other end of the USB cable into any available USB port on your computer.

If you wish to use more than one MIDI I/O, each unit will need to be plugged into a separate USB port on your computer, or onto a powered USB hub.

⚠ *Do not attempt to use one or more unpowered MIDI I/O units on an unpowered USB hub.*

If your computer is powered on, MIDI I/O will receive power over the USB connection and you will see the LED startup sequence on the MIDI I/O's front panel LEDs.

Updating MIDI I/O Firmware

Each release of the Digidesign MIDI I/O Setup application software includes the most current MIDI I/O firmware.

To update the MIDI I/O firmware:

1 Choose Start > Control Panel.

2 Launch System.

3 Click the Hardware tab.

4 Under Device Manager, choose Device Manager.

5 In the Device Manager window, double-click Sound, video and game controllers, then double-click your Digidesign MIDI I/O Interface.

6 Click the Settings tab. The message "Firmware update necessary" is displayed underneath the Update Device Firmware button if the update is needed.

Firmware update necessary

Firmware update not necessary

7 Click the Update Device Firmware button, if needed.

8 When the firmware update has completed, power cycle the MIDI I/O by disconnecting and reconnecting the USB cable and the optional external power cable.

💡 *If you've updated your firmware, and you also plan to use your MIDI I/O with a Macintosh system as well as a Windows system, you will need to install the latest MIDI I/O driver for Macintosh OS X.*

Connecting MIDI

Use standard MIDI cables to connect the MIDI I/O to your external MIDI devices. Connect an Out port of the MIDI I/O to the In port of an external MIDI device; and connect an In port of the MIDI I/O to the Out port of an external MIDI device. Typically, you will want to connect a single external MIDI device's In and Out ports to the Out and In ports of the same number on the MIDI I/O. For example, you might connect the In and Out ports of your MIDI keyboard controller to Out port number 10 and In port number 10, the In and Out ports of your MIDI control surface to Out port number 9 and In port number 9, and the In and Out ports of your MIDI tone generators and effects devices to Out ports number 1–5 and In ports number 1–5 (see Figure 3 on page 9).
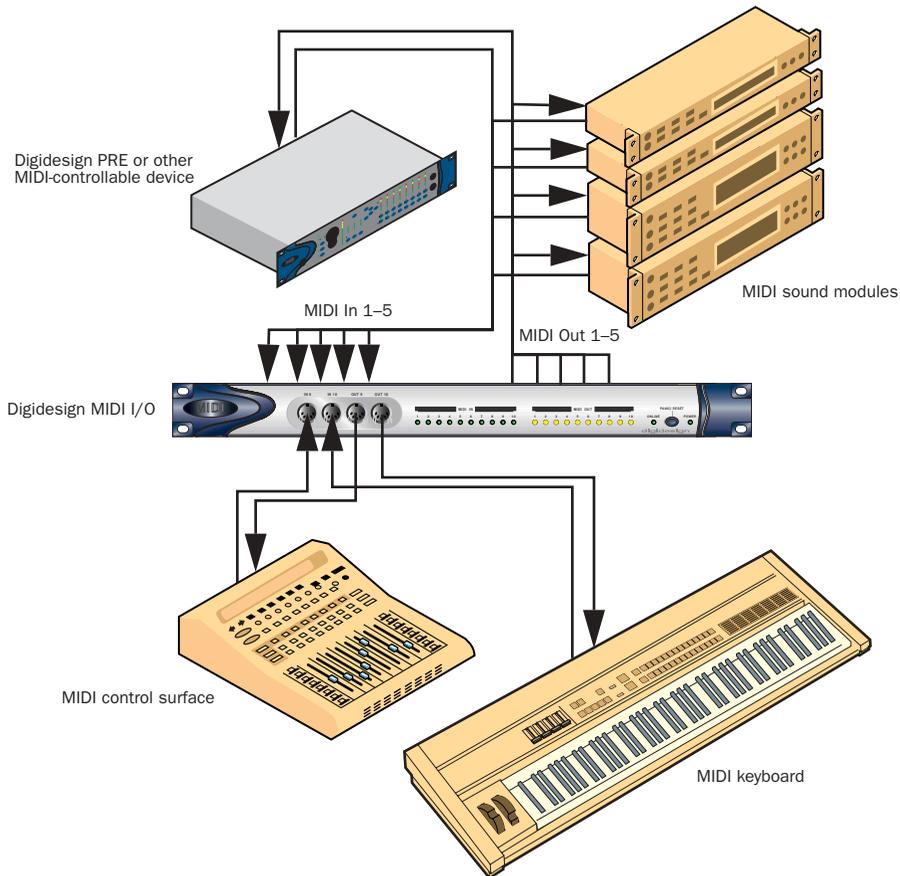

Figure 3. Connecting MIDI devices to MIDI I/O

Connecting Multiple MIDI I/Os

Up to four MIDI I/Os can be used together connected to a single computer through a powered USB hub. To use more than one MIDI I/O in this way, connect your powered USB hub to any available USB port on your computer. Then, connect each MIDI I/O to available USB ports on the USB hub. Their Power LED indicators should light, indicating that each MIDI I/O is receiving power from the powered USB hub.

⚠ *Due to Windows operating system limitations, only 32 MIDI input ports are available when using four MIDI I/Os together. On the fourth MIDI I/O, only input ports one and two will be usable.*

💡 *If you are using an unpowered USB hub, use an alternate power supply for each MIDI I/O (see "Insufficient USB Power" on page 27).*

Matrix Routing

Using matrix routing, you can route the MIDI signal from a specified MIDI Input port to any of the MIDI Output ports on the MIDI I/O. Matrix routing is useful for configuring and testing your MIDI setup, configuring routing assignments for MIDI I/O in MIDI Thru mode, and for playing any combination of your MIDI devices without launching Pro Tools.

To configure matrix routing:

1 Quit Pro Tools and any other MIDI applications.

2 Choose Start > Control Panel.

3 Launch System.

4 Click the Hardware tab.

5 Under Device Manager, choose Device Manager.

6 In the Device Manager window, double-click Sound, video and game controllers, then double-click your Digidesign MIDI I/O Interface.

7 Click the Settings tab.
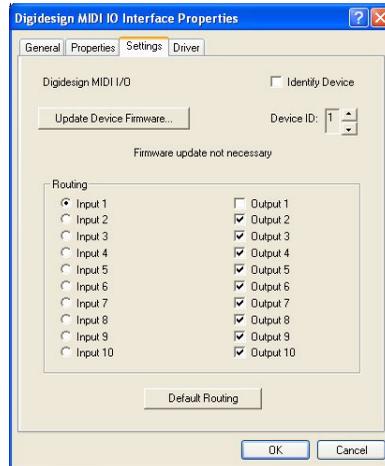
MIDI I/O Interface Properties dialog (Settings tab)

8 Select the MIDI Input (Ports 1–10) whose routing you want to configure. You only configure the routing for a single input at a time.

9 Select the MIDI Outputs (Ports 1–10) to which you want the selected MIDI Input port routed.

10 Repeat steps 8–9 for each input you wish to configure.

11 Click OK when finished to save the settings and close the MIDI I/O Interface Properties dialog.

The Matrix Routing settings are saved in the MIDI I/O, and will be recalled the next time you open the MIDI I/O Windows driver.

Identify Device

If you are using more than one MIDI I/O, enable the Identify Device option to light the LEDs on the currently selected MIDI I/O.

Update Device Firmware

Lets you update the driver firmware. For more information, see "Updating MIDI I/O Firmware" on page 8.

Device ID

The MIDI I/O driver software automatically assigns a Device ID number (from 1–4) to each interface, which is displayed in the Device ID field. This gives each MIDI I/O a unique name that is visible in Pro Tools or other MIDI applications.

You can change the Device ID to any ID number, however you cannot use two MIDI I/Os with the same Device ID on the same computer.

If you connect a MIDI I/O that has the same device ID as another currently connected MIDI I/O, the driver software will automatically change the Device ID of the newly connected MIDI I/O to the lowest available Device ID number.

Default Routing

Click the Default Routing button to return the MIDI routing to the default state. In the default routing state, MIDI information that is received in any input port is sent out to every output port except the output port with the same number.

MIDI Studio Setup

MSS (MIDI Studio Setup) lets you configure the MIDI controllers and sound modules that are connected to your system, and control the routing of MIDI data between your MIDI equipment and Pro Tools.

MSS automatically finds MIDI interfaces, and lets you specify a custom name for each of the MIDI ports within the MIDI studio setup document.

MSS also supports XML-based patch file names for storing and importing patch names for your external MIDI devices.

Internal MIDI ports, such as the Microsoft MIDI Mapper and built-in wavetable synthesizers are filtered from the list of available MIDI output ports. They are, however, accessible directly from a MIDI track's output popup.

Entire MIDI Studio Setup configurations created within MSS can be imported and exported.

MIDI Studio Setup Window

The MIDI Studio Setup window is organized into three sections. Interface controls are at the top of the window. All the currently defined instruments are displayed in the Instrument Name list on the left side of the window. A detailed view of MIDI parameters is shown in the Properties section on the right.
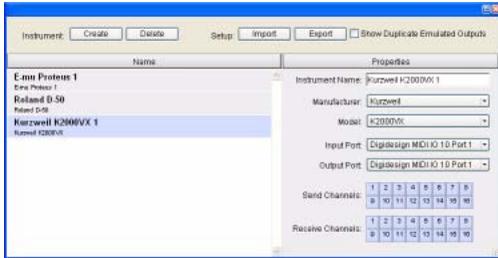
MIDI Studio Setup window

Create This button adds a new instrument to the Instrument Name list.

Delete This button deletes the instrument or instruments selected in the Instrument Name list.

Import This button lets you import existing MIDI studio setup files.

**Export** This button lets you export the current MIDI studio setup file.

Show Duplicate Emulated Outputs When the Show Duplicate Emulated Outputs option is selected, the MIDI Studio Setup window shows both the DirectMusic output ports, and duplicate emulated output ports.

Instrument List

The Instrument list contains all the currently defined instruments. Selecting an instrument in the list displays that instrument's properties in the properties section of the window.

Properties Section

The Properties section lets you edit information for new instruments, or instruments currently displayed in the Instrument Name list.
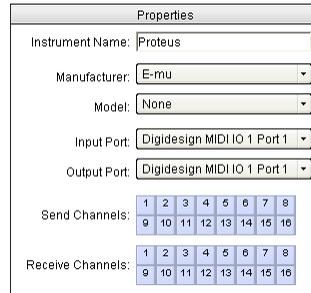
MIDI Studio Setup Properties section

When a previously defined instrument is selected in the Instrument Name list, the Properties section changes to reflect the properties of the selected instrument.

To define an instrument with MIDI Studio Setup:

1 In Pro Tools, choose Setup > MIDI > MIDI Studio. The MIDI Studio Setup window opens.

2 Click Create.

3 In the Instrument Name field, type the name of your instrument, and press enter.

If you do not enter an instrument name, the Instrument Name field will automatically inherit information from the Manufacturer and Model pop-up menu.

4 Set a manufacturer and model for the new device from the corresponding pop-up menus. If the Manufacturer and Model pop-up menus do not provide a name for your particular device, choose None.

5 From the Input pop-up menu, choose the input port on your MIDI interface that is connected to the MIDI Out of your instrument.

6 From the Output pop-up menu, choose the output port on your MIDI interface that is connected to the MIDI In of your instrument.

7 Enable the appropriate MIDI channels (1–16) for the Send Channels and Receive Channels options (These determine which channels send and receive MIDI.)

Instrument Name

The Instrument Name field shows the user-definable instrument name for the currently selected instrument.

Manufacturer

The Manufacturer pop-up menu provides a list of MIDI equipment manufacturers. This list is derived from the XML-based MIDI device files provided with your Pro Tools installation.

Model

The Model pop-up menu provides a list of MIDI devices, filtered by the manufacturer name. This list is derived from the XML-based MIDI device files provided with your Pro Tools installation.

Input Port

The Input Port pop-up menu displays a list of available MIDI interface input ports. The MIDI interface port that is set and displayed here is the port through which MIDI data is sent from the external MIDI device specified in the Instrument Name field into your MIDI interface.

Output Port

The Output Port pop-up menu displays a list of available MIDI interface output ports. The port set and displayed here is the port through which MIDI data is sent from your MIDI interface to the MIDI device specified in the Instrument Name field.

Send Channels

The Send Channels grid sets the send channels for the MIDI device specified in the Instrument Name field.

Receive Channels

The Receive Channels grid sets the receive channels for the MIDI device specified in the Instrument Name field.

Macintosh Configuration

This chapter explains how to install, connect, and configure the MIDI I/O for use with your Macintosh computer. If you are using the MIDI I/O with a Windows computer, see Chapter 3, "Windows Configuration."

Mac OS X Users

To configure and manage your MIDI setup on Mac OS X v10.2.3 or later, you will use the Audio MIDI Setup utility (AMS) installed with the system software (in /Applications/Utilities/).

Mac OS 9 Users

To configure and manage your MIDI setup on Mac OS 9, you will use Open Music System (OMS) 2.3.8, which is included on the MIDI I/O installer CD-ROM.

⚠ *Mac OS 9 users must install OMS before proceeding to the next section and installing the MIDI I/O Drivers. See "Installing OMS" on page 21 for instructions.*

Installing the MIDI I/O Drivers

To use the MIDI I/O with Pro Tools or other compatible MIDI applications, you will need to install the Digidesign MIDI USB Driver and the Digidesign MIDI driver.

⚠ *Do not connect the USB cable to the MIDI I/O until after you have installed the drivers for MIDI I/O. MIDI I/O will not initialize correctly if you connect the USB cable before installing the drivers.*

To install the MIDI I/O drivers:

1 Insert the MIDI I/O Installer CD-ROM into your CD-ROM drive and launch the Install application.

2 Follow the on-screen instructions.

When the installation is finished, restart your computer. Proceed by connecting the MIDI I/O to your computer with the provided USB cable.

⚠ *Before using the MIDI I/O with Mac OS X, launch the MIDI I/O Firmware Updater application (in Applications/Digidesign/ MIDI IO).*

Mac OS 9 Users

If you want to use the MIDI I/O with both Mac OS 9 and Mac OS X (for example, running Pro Tools 5.x with OS 9 and Pro Tools 6.x or later with OS X) you must use version 1.5 of the MIDI I/O driver.

This driver is installed when running the MIDI I/O Installer under Mac OS 9.

To confirm that version 1.5 of the MIDI I/O driver has been installed:

1 When booted into OS 9, open your System Extensions folder (System Folder/Extensions).

2 Locate the Digidesign MIDI USB Driver Extension and confirm that the version number is 1.5.

Connecting USB

To connect the MIDI I/O to your computer:

1 Plug one end of the USB cable into the USB port on the MIDI I/O.

2 Plug the other end of the USB cable into any available USB port on your computer.
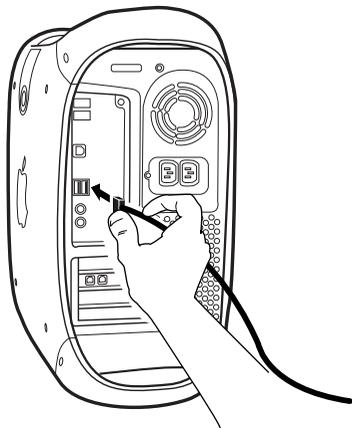
Connecting a USB cable to a Macintosh

If your computer is powered on, MIDI I/O will receive power over the USB connection and you will see the LED startup sequence on the MIDI I/O's front panel LEDs.

Connecting MIDI

Use standard MIDI cables to connect the MIDI I/O to your external MIDI devices. Connect an Out port of the MIDI I/O to the In port of an external MIDI device; and connect an In port of the MIDI I/O to the Out port of an external MIDI device. Typically, you will want to connect a single external MIDI device's In and Out ports to the Out and In ports of the same number on the MIDI I/O. For example, you might connect the In and Out ports of your MIDI keyboard controller to Out port number 10 and In port number 10, the In and Out ports of your MIDI control surface to Out port number 9 and In port number 9, and the In and Out ports of your MIDI tone generators and effects devices to Out ports number 1–5 and In ports number 1–5 (see Figure 4 on page 17).
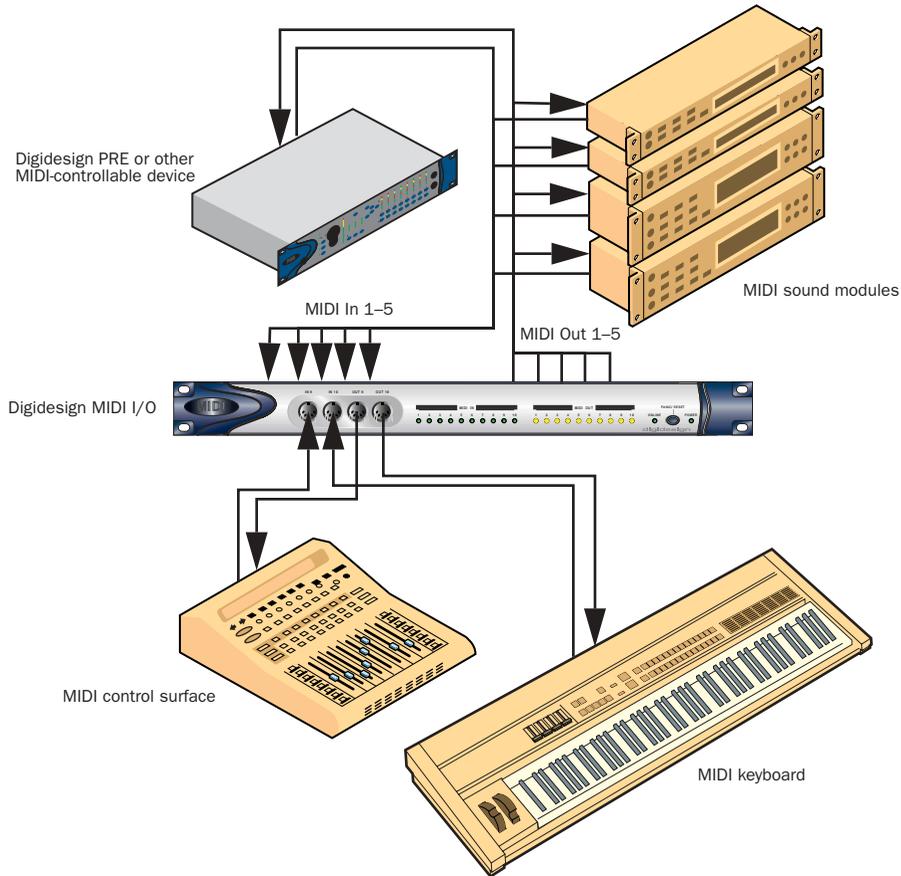
Figure 4. Connecting MIDI devices to MIDI I/O

Connecting Multiple MIDI I/Os

Up to four MIDI I/Os can be used together connected to a single computer through a powered USB hub. To use more than one MIDI I/O in this way, connect your powered USB hub to any available USB port on your computer. Then, connect each MIDI I/O to available USB ports on the USB hub. Their Power LED indicators should light, indicating that each MIDI I/O is receiving power from the powered USB hub.

If you are using an unpowered USB hub, use an alternate power supply for each MIDI I/O (see "Insufficient USB Power" on page 27).

The Audio MIDI Setup utility (Mac OS X users) or OMS Setup application (Mac OS 9 users) will need to be configured to use all connected MIDI I/Os. See "Configuring Audio MIDI Setup" on page 18 and "Configuring OMS" on page 21.

Configuring Audio MIDI Setup

(Mac OS X Only)

If your computer is running Mac OS X v10.2.3 or later, you will use the Audio MIDI Setup utility (in /Applications/Utilities/) to configure the MIDI I/O.
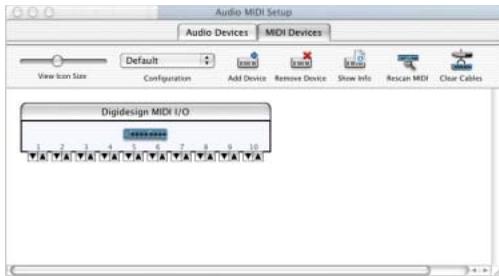
To configure the MIDI I/O in AMS:

1 Launch Audio MIDI Setup (in Applications/Utilities/).

– or –

In Pro Tools, choose Setup > MIDI > MIDI Setup.

2 Select the MIDI Devices tab. AMS will scan you system for connected MIDI interfaces. If your MIDI I/O is properly connected, it will appear in the window with each of its ports numbered.


Audio MIDI Setup (MIDI Devices tab)

3 For any MIDI devices connected to the MIDI I/O, click Add Device. A new external device icon with the default MIDI keyboard image will appear.

4 Drag the new device icon to a convenient location within the window.

5 Connect the MIDI device to the MIDI I/O by clicking the arrow for the appropriate output port of the device and dragging a cable to the input arrow of the corresponding port of the MIDI I/O.
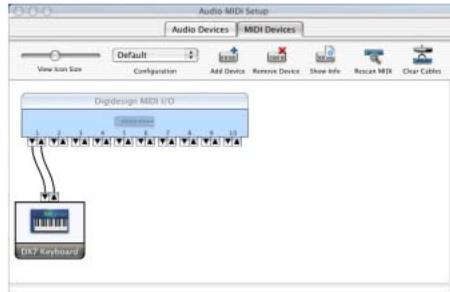
Making MIDI input and output connections

6 Click the arrow for the appropriate input port of the device and drag a cable to the output arrow of the corresponding port of the MIDI I/O.

☼ To *remove a connection, select the cable and press the Delete key. To delete all cables, click Clear Cables.*

7 Repeat steps 3–6 for each MIDI device in your MIDI setup.

The MIDI I/O supports up to 10 MIDI devices at the same time. If you use multiple MIDI devices, make sure that none of them are assigned to the same MIDI input port and channel.

To configure an external MIDI device:

1 Select the external device icon and click Show Info (or double-click the new device icon).


External Device Icon

2 Select a manufacturer and model for the new device from the pop-up menus. (If the Manufacturer and Model pop-up menus do not provide a name for your particular device, manually type its name.)

Naming a new MIDI device

3 Click the More Properties arrow to expand the dialog, then enable the appropriate MIDI channels (1-16) for the Transmits and Receives options. (These determine on which channels the device will send and receive MIDI.)
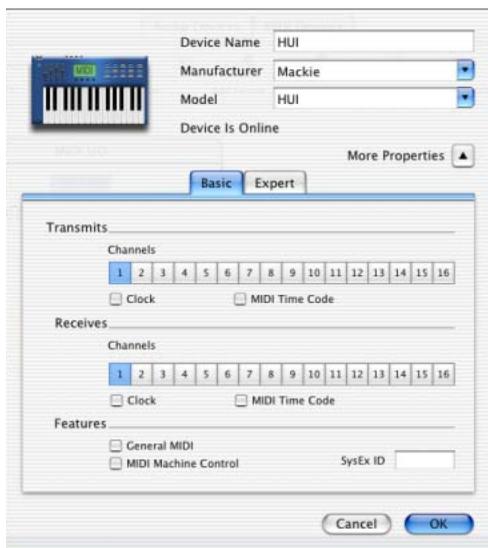
Enable Receive and Transmit MIDI Channels

4 To select an icon for the device, click the image (the window expands to show images for various MIDI devices such as keyboards, modules, interfaces, and mixers) and select the desired icon.

Selecting a device icon

💡 *To use your own custom icons, place tiff image files in /Library/Audio/MIDI Devices/ Generic/Images.*

**5** Click OK when you are done.

6 Quit Audio MIDI Setup when finished.

Matrix Routing

Using matrix routing, you can route the MIDI signal from a specified MIDI Input port to any of the MIDI Output ports on the MIDI I/O. Matrix routing is useful for configuring and testing your MIDI setup, configuring routing assignments for MIDI I/O in MIDI Thru mode, and for playing any combination of your MIDI devices without launching Pro Tools.

To configure matrix routing:

1 Launch the MIDI I/O Setup utility.
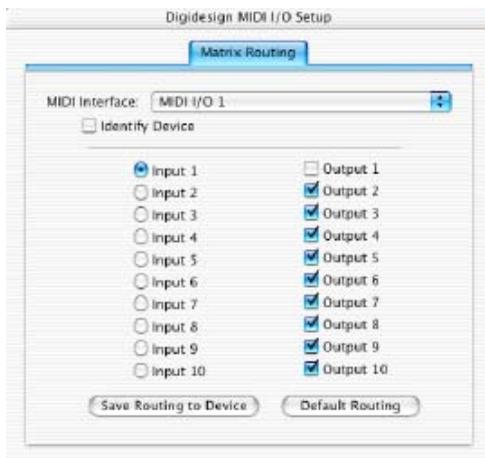
MIDI I/O Setup utility (Matrix Routing tab)

2 If you are using more than one MIDI I/O, select the correct MIDI I/O from the MIDI Interface pop-up menu.

⚠ *No matter how many MIDI I/Os are connected to your computer, the MIDI Interface pop-up menu will always list Device 1–4.*

3 Select the MIDI Input (Ports 1–10) whose routing you want to configure. You can only configure the routing for a single input at a time.

4 Select the MIDI Outputs (Ports 1–10) to which you want the selected MIDI Input port routed.

5 Click the Save Routing to Device button if you want to save the routing assignments for the currently selected MIDI Input port to the MIDI I/O for use in MIDI Thru mode.

6 Quit the MIDI I/O Setup utility when finished.

The Matrix Routing settings will be recalled the next time you open the MIDI I/O Setup utility

MIDI Interface Pop-Up Menu

If you are using more than one MIDI I/O, use the MIDI Interface pop-up menu to select the specific MIDI I/O whose routing assignments you want to configure.

Identify Device

If you are using more than one MIDI I/O, enable the Identify Device option to light the LEDs on the MIDI I/O currently selected in the MIDI Interface pop-up menu.

Save Routing To Device

Click the Save Routing to Device button to save the routing assignments for the currently selected MIDI Input port to the MIDI I/O for use in MIDI Thru mode. Each MIDI Input port's routing assignments will need to be saved to the MIDI I/O independently.

Default Routing

Click the Default Routing button to deselect all MIDI Outputs for the currently selected MIDI Input.

Installing OMS

(Mac OS 9 Only)

If your computer is running Mac OS 9.2.x or earlier, use Open Music System (OMS) 2.3.8 to configure the MIDI I/O.

If you have not already installed OMS, please do so now.

OMS, which is included on the MIDI I/O Installer CD-ROM, has the following capabilities:

- Keeps track of which MIDI devices you are using, how they are connected, and which patches they are using

- Enables MIDI hardware to communicate with your music applications

- Provides timing services and inter-application communication

OMS stores a description of your MIDI studio in *Studio Setup* documents, which are edited in the *OMS Setup* application. Once OMS is configured, your music applications know which MIDI devices you are using by referencing the current Studio Setup document.

The following section provides basic instructions for installing OMS. For OMS configuration steps, see "Configuring OMS" on page 21. For additional information, refer to the online *OMS Guide* installed with Pro Tools.

Installing OMS

The OMS Installer is located on your MIDI I/O Installer CD-ROM. If OMS is already installed on your system, skip to "Installing the MIDI I/O Drivers" on page 15.

To install OMS:

1 Insert the MIDI I/O Installer CD-ROM into your CD-ROM drive.

2 Open the OMS Installer folder and double-click the Installer.

3 At the Install window, select the Easy Install option, and set the Install Location to your startup hard drive. Click Install.

4 Follow the on-screen installation instructions.

5 When the installation is complete, restart your Macintosh.

You are now ready to install the USB and OMS drivers for the MIDI I/O.

Configuring OMS

To use the MIDI I/O with Pro Tools or other OMS-compatible MIDI applications, you will need to configure OMS after you have installed the Digidesign MIDI OMS Driver.

When launching Pro Tools or OMS Setup for the first time, the OMS software will prompt you to create a new studio setup if OMS was not previously configured. OMS can also be reconfigured by launching the OMS Setup application (from your OMS folder).

Before configuring OMS, make sure you have installed the MIDI I/O's USB and OMS drivers (see "Installing the MIDI I/O Drivers" on page 15) and that your MIDI I/O and devices are properly connected (see "Connecting MIDI" on page 16).

To configure a New Studio Setup in OMS:

1 When prompted to configure a New Studio Setup, click OK.

2 Since the MIDI I/O is a USB device, leave both ports unchecked and click Search.
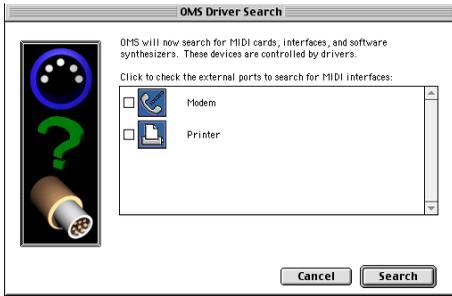
Ports for OMS Driver Search

OMS searches for and displays any detected MIDI interfaces, MIDI cards, and OMS drivers. If the MIDI I/O is not detected, click Trouble-shoot. Once your MIDI I/O *is* detected, you are prompted to search for MIDI instruments connected to your interface.

3 Click OK to search for MIDI devices connected to your MIDI I/O. To be detected, the device must be turned on and have both of its MIDI ports connected to your MIDI I/O.
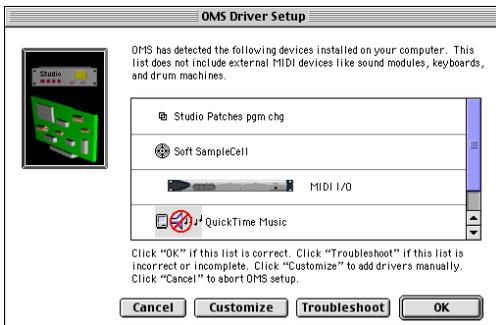

OMS Driver Setup

OMS searches for and displays any detected MIDI devices. Some older instruments, as well as some newer ones, may not be recognized by the OMS auto-detection routines.

Undefined OMS device

Devices not recognized by OMS appear with a red question mark and are named based on the interface or port to which they are connected. These devices can be defined as necessary within the OMS Setup application (see "Defining MIDI Devices in OMS" on page 23).

4 Click OK to save your Studio Setup document.
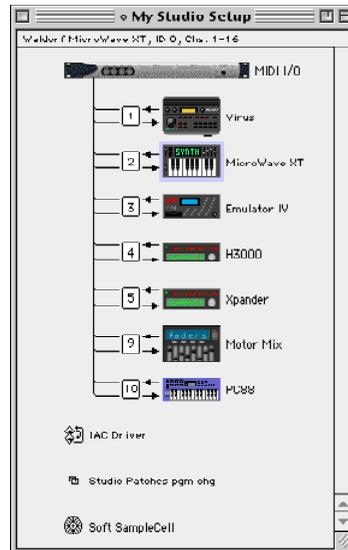
Studio Setup window

5 Quit OMS Setup.

Defining MIDI Devices in OMS

To define a MIDI device in OMS Setup:

1 Double-click the device's icon in the Studio Setup window.

2 In the MIDI Device Info dialog, select the Manufacturer and Model for the device from the pop-up menus. If the device is not listed, leave the Model set to "other" and enter a name for the device.
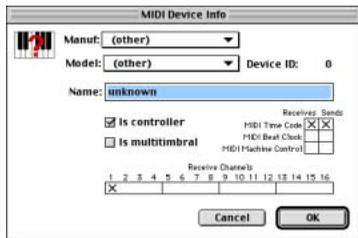
Defining a MIDI device

3 Select the receiving channel for the device. If receiving multiple channels, select the option for "Is Multitimbral."

4 If you will record from the device in Pro Tools, select the option for "Is Controller."

5 If the device will be a source or destination for MIDI Time Code, Beat Clock, or MMC, select the appropriate option.

6 Click OK.

Disabling SerialDMA in OMS

Pro Tools requires that you deselect the "Use Apple SerialDMA Driver When Available" option in OMS Setup. If you do not disable this option, problems will occur with MIDI and synchronization functions in Pro Tools.

To disable SerialDMA in OMS:

1 Double-click the OMS Setup application.

2 Choose Edit > Preferences.

3 Deselect "Use Apple SerialDMA Driver When Available," and click OK.

4 Quit OMS Setup.

5 Restart your computer.

MIDI I/O OMS Menu

Once you have installed the Digidesign MIDI USB Driver and the Digidesign MIDI OMS Driver, and you have configured your OMS Setup, the MIDI I/O menu will be available in OMS Setup. The MIDI I/O menu provides access to the MIDI I/O Matrix Mode and Test MIDI Cable dialogs.

⚠ *If the MIDI I/O menu does not appear in OMS Setup, quit and re-launch OMS Setup.*

Matrix Mode

Using Matrix mode, you can route the MIDI signal from a specified MIDI Input port to any of the MIDI Output ports on the MIDI I/O. Matrix mode is useful for configuring and testing your MIDI setup, configuring routing assignments for MIDI I/O in MIDI Thru mode, and for playing any combination of your MIDI devices without launching Pro Tools.

⚠ *Matrix mode is active only when the Matrix Mode dialog is open.*

To configure MIDI routing in Matrix mode:

1 In OMS Setup, choose Digi MIDI I/O > Matrix Mode to open the MIDI Routing Assignments dialog.
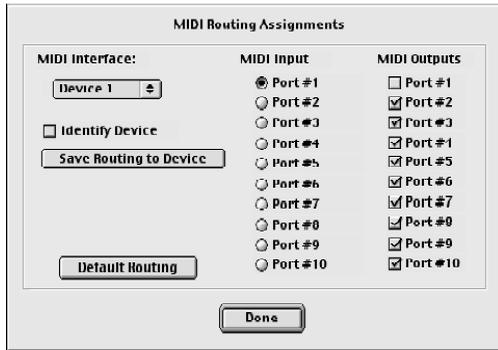
MIDI Routing Assignments dialog

2 If you are using more than one MIDI I/O, select the correct MIDI I/O from the MIDI Interface pop-up menu.

⚠ *No matter how many MIDI I/Os you have connected to your computer, the MIDI Interface pop-up menu will always list Device 1–4.*

3 Select the MIDI Input (Ports 1–10) whose routing you want to configure. You can only configure the routing for a single input at a time.

4 Select the MIDI Outputs (Ports 1–10) to which you want the selected MIDI Input port routed.

5 Click the Save Routing to Device button if you want to save the routing assignments for the currently selected MIDI Input port to the MIDI I/O for use in MIDI Thru mode.

6 Click Done to close the MIDI Routing Assignments dialog.

The settings for the MIDI Matrix dialog will be stored in the MIDI I/O Preferences file, so that the last settings will be recalled the next time you open the MIDI Matrix dialog

MIDI Interface Pop-Up Menu

If you are using more than one MIDI I/O, use the MIDI Interface pop-up menu to select the specific MIDI I/O whose routing assignments you want to configure.

Identify Device

If you are using more than one MIDI I/O, enable the Identify Device option to light the LEDs on the MIDI I/O currently selected in the MIDI Interface pop-up menu.

Save Routing To Device

Click the Save Routing to Device button to save the routing assignments for the currently selected MIDI Input port to the MIDI I/O for use in MIDI Thru mode. Each MIDI Input port's routing assignments will need to be saved to the MIDI I/O independently.

Default Routing

Click the Default Routing button to deselect all MIDI Outputs for the currently selected MIDI Input.

chapter 5

Basic Use

Using the MIDI I/O with Pro Tools

Once you have made all the connections between your computer, MIDI I/O, and all external MIDI devices, and you have installed the MIDI I/O's USB and MIDI drivers, and configured MSS, AMS, or OMS, you are ready to use the MIDI I/O with Pro Tools.

📄 *For more detailed information about using MIDI in Pro Tools, see the Pro Tools Reference Guide.*

MIDI Time Stamping

The MIDI I/O is equipped with MIDI Time Stamping capabilities. MIDI Time Stamping achieves MIDI playback timing with better than 1 millisecond accuracy. Every MIDI event is "time-stamped," meaning that every MIDI event is grouped with its time and then sent in packages ahead of time, rather than serially. MIDI Time Stamping provides unprecedented MIDI timing accuracy for better sounding results.

Using the MIDI I/O in MIDI Thru Mode

The MIDI I/O can be used in MIDI Thru mode as a stand-alone interface to control multiple MIDI devices from a single MIDI controller.

To use the MIDI I/O as a stand-alone MIDI interface, the MIDI I/O needs to be powered in one of the following ways:

- Connect MIDI I/O to a computer that is powered on.
- Connect MIDI I/O to a powered USB hub.
- Connect MIDI I/O to an external power supply (9–12 Volts DC, 500 mA; Polarity: Tip = Plus, Ring = Minus).

MIDI Thru Mode

The MIDI I/O supports MIDI Thru mode when it is offline—not engaged by a MIDI application on the computer to which it is connected. The Online LED indicator will not be lit when the MIDI I/O is offline.

To use the MIDI I/O in MIDI Thru mode:

1 Supply power to the MIDI I/O (from a computer, powered USB hub, or a qualified external power supply.

2 Connect the MIDI Out port of your MIDI controller device (such as a MIDI keyboard controller) to any MIDI In port on the MIDI I/O.

3 Connect the other MIDI Out ports of the MIDI I/O to the MIDI In ports of the MIDI devices you want to control.

The MIDI I/O will operate in MIDI Thru mode.

By default, MIDI Thru mode automatically routes all MIDI In ports to all MIDI Out ports, except the same port to prevent feedback loops. For example, MIDI In port 1 is routed to MIDI Out ports 2–10, MIDI In port 2 is routed to MIDI Out ports 1 and 3–10, and so on.

You can configure your own routing assignments using the Matrix Routing settings in the Windows MIDI I/O driver, the Matrix Routing settings in the MIDI I/O setup utility under Mac OS X, and Matrix mode under OMS in Mac OS 9.

For more information, see "Matrix Routing" on page 10, "Matrix Routing" on page 20, or "Matrix Mode" on page 23.

Troubleshooting

LEDs Do Not Light When Powered On

When the MIDI I/O is receiving power, the Power LED will be lit. If the Power LED is off, double check the USB cable (which is providing power from you computer) or power supply, and re-initialize the interface by disconnecting and reconnecting the USB cable or power supply. You can also use the Panic/Reset switch on the front panel of MIDI I/O (be sure to press and hold the switch for at least three seconds until the power LED turns off or MIDI I/O will not re-set itself). When re-attaching the USB cable or external power supply, you should see a short LED startup sequence and the Power LED turns on.

If you don't see this LED startup sequence, the MIDI I/O is either not receiving sufficient power or there may be a problem with your unit. Please re-check power requirements and if problems persist, contact Digidesign Technical Support.

Insufficient USB Power

If you are trying to use a MIDI I/O with another USB device on a single USB port, there will not be enough power and the operating system will warn you that you have insufficient power. In some cases, this can also cause an operating system crash.
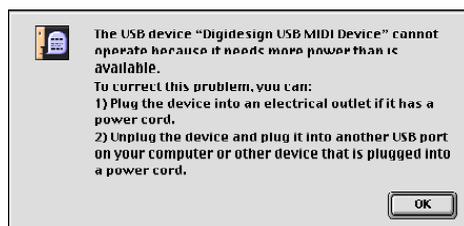
Insufficient USB Power dialog (Macintosh)
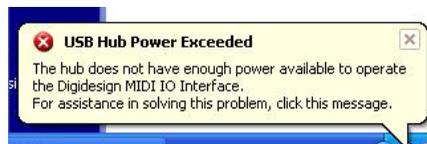
Insufficient USB Power dialog (Windows)

There are two solutions to this problem:

• Connect an external power supply to MIDI I/O. Be sure to check voltage and polarity on the back panel of MIDI I/O.

– or –

• Connect one or more MIDI I/O units to a powered USB hub; do *not* attempt to use a non-powered hub, it will not work without using an external power supply for each MIDI I/O. Powered USB hubs have their own power supply and provide 500 mA on all downstream USB connectors, providing ample power to each MIDI I/O.

⚠ *Do not attempt to use one or more unpowered MIDI I/O units on an unpowered USB hub.*

MIDI I/O OMS Menu Not Available

(Mac OS 9 Only)

When you launch the OMS Setup application, OMS builds the MIDI I/O menu only if it finds one or more MIDI I/Os connected and declared in the currently active OMS Studio Setup.

If you don't see the MIDI I/O menu, check the following:

• Make sure that MIDI I/O is connected to USB.

• Check that the Online LED turns on when launching OMS.

• If your currently active OMS setup document may not have MIDI I/O declared, please scan for connected MIDI interfaces by choosing Setup > MIDI Cards & Interfaces, or create a new setup document by choosing File > New Studio Setup.

You will have to quit and re-launch OMS Studio Setup for the changes to take effect.

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