

USB 2.0

0202

Audio Interface



Owner's Manual



Owner's Manual

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Revision: F

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INTRODUCTION



Thanks for your purchase of the E-MU 0202 USB 2.0 Audio/MIDI Interface. This interface brings an unparalleled level of USB audio quality to the Mac or PC, with pristine 24-bit/192kHz A/D and D/A converters, ultra-low jitter clock, and Class-A, ultra-low noise mic/line/hi-Z preamps. The signal-to-noise specs of the E-MU 0202 USB 2.0 are unmatched by any other USB interface on the market! From its plug-and-play functionality and hands-on ergonomic design, to professional features like zero-latency direct monitoring and balanced outputs, the USB will forever change your expectations of USB audio.

Some of the other key features are detailed below:

- Record and Playback support for a multitude of sample rates : 44.1k, 48k, 88.2k, 96k, 176.4k, 192k. *(176.4k & 192k available on PC version only)*
- Independent ground lift switches for both analog inputs help to solve potential ground loop problems
- Studio-Grade Headphone Amplifier with level control

NOTE

There are some limitations when operating at higher sample rates. See [page 15](#) for details.

PACKAGE INCLUDES

- E-MU 0202 USB 2.0 AudioPod
- USB Cable
- Quick Start Installation Guide

E-MU Software/Manual CD-ROM (OS X /Windows)

- Windows XP, Windows XP x64, Windows Vista, Windows Vista x64, Windows 7, Windows 7 x64 Drivers
- Mac OS X Drivers
- Owner's Manual

Acoustica Mixcraft LE 4 Install CD-ROM (Windows)

- Acoustica Mixcraft LE 4 (multitrack recording application)

COMPUTER REQUIREMENTS

The minimum computer system requirements for the E-MU 0202 USB 2.0 are listed below.

Windows

- Intel® or AMD® processor — 1.2 GHz or faster
- Intel, AMD, or 100% compatible motherboard & chipset
- Microsoft® Windows® XP (SP 2 or greater), Windows XP x64, Windows Vista, Windows Vista x64, Windows 7 x32, Windows 7 x64
- 1 available (Hi-Speed) USB 2.0 port *
- 1 GB System RAM
- 95 MB of free hard disk space for full installation
- CD-ROM/CD-RW or DVD-ROM drive required for software installation
- XGA Video (1024 x 768)

OS X

- Apple® Macintosh® with Intel processor — 1.2 GHz or faster
NOTE: For more information on Intel Mac support see the included ReadMe file, and/or www.emu.com for latest information.
- Apple Macintosh OS X, 10.5 or greater
- 1 Available (Hi-Speed) USB 2.0 port †
- 1 GB System RAM
- 500 MB of free hard disk space for full installation
- CD-ROM/CD-RW or DVD-ROM drive required for software installation
- XGA Video (1024 X 768)

* When using a USB 1.1 port, performance is limited to 16-bit and 44.1/48 kHz recording and playback.

† USB 1.1 is not supported on the Macintosh

SOFTWARE INSTALLATION

Windows XP, Windows Vista or Windows 7

Follow these instructions to install the 0202 USB 2.0 software on a Windows computer.

1. First connect the 0202 USB 2.0 to your computer using the supplied USB cable, and turn it on.
2. If Windows prompts you with an Add New Hardware Wizard, click **Cancel**.
3. Insert the E-MU software Installation CD into your CD-ROM drive. If Windows AutoPlay mode is enabled for your CD-ROM drive, the CD starts running automatically. If not, from your Windows desktop, click **Start->Run** and type **d:\setup.exe** (replace **d:** with the drive letter of your CD-ROM drive). You can also simply open the CD and double-click **Setup.exe**.
4. The installation splash screen appears. Follow the instructions on the screen to complete the installation. You will have the option to install 0202 USB 2.0, and Adobe Acrobat Reader.
5. Choose "Continue Anyway" when you encounter the "Windows Logo Testing" warning screen. See the note below.
6. When prompted, restart your computer.
7. Be sure to register your 0202 USB 2.0 so we can advise you of future software updates and special offers. You can register online at: www.emu.com/register
8. Your 0202 USB 2.0 is now ready to use.
9. Insert the **Acoustica Mixcraft LE 4 Install** CD-ROM into your CD-ROM drive.
10. The installation splash screen appears. Follow the instructions on the screen to complete the installation.

Note About Windows Logo Testing

When you install the 0202 USB 2.0 drivers, you will see a dialog box informing you either that the driver has not been certified by Windows Hardware Quality Labs (WHQL), or that the driver is signed by Creative Labs, Inc, and you will be asked if you would like to continue with the installation.

The 0202 USB 2.0 audio drivers are not certified by WHQL because the product does not support some of the features that the Microsoft Windows Logo Program requires, most notably Universal Audio Architecture (UAA) and Digital Rights Management (DRM).

Despite this, the 0202 USB 2.0 audio drivers have been rigorously tested using the same test procedures that a WHQL qualified driver requires, and it passes in all of the other important categories, including those that measure the relative stability of the driver. So, it is perfectly safe to install these drivers on your computer.

Uninstalling all Audio Drivers and Applications

At times you may need to uninstall or reinstall the 0202 USB 2.0 application and device drivers to correct problems, change configurations, or upgrade outdated drivers or applications. Before you begin, close the E-MU USB 2.0 Audio control application. Applications running during the uninstallation will not be removed.

1. Click **Start -> Control Panel**.
2. Double-click the **Add/Remove Programs** icon.
3. Click the **Install/Uninstall** tab (or **Change or Remove Programs** button).
4. Select the **E-MU 0202 USB 2.0** entry and then click the **Change/Remove** button.

5. In the **InstallShield Wizard** dialog box, select the **Remove ALL** option.
6. Click the **Yes** button.
7. Restart your computer when prompted.

You may now re-install existing or updated E-MU device drivers or applications.

Macintosh OS X

Follow these instructions to install the 0202 USB 2.0 drivers and software on a Macintosh OS X computer. First, connect the 0202 USB 2.0 to your computer as shown on [page 12](#).

Install the 0202 USB 2.0 Software

1. Insert the **E-MU Software/Manual CD-ROM** into your CD-ROM drive.
2. Double-click on the **E-MU** icon on the desktop.



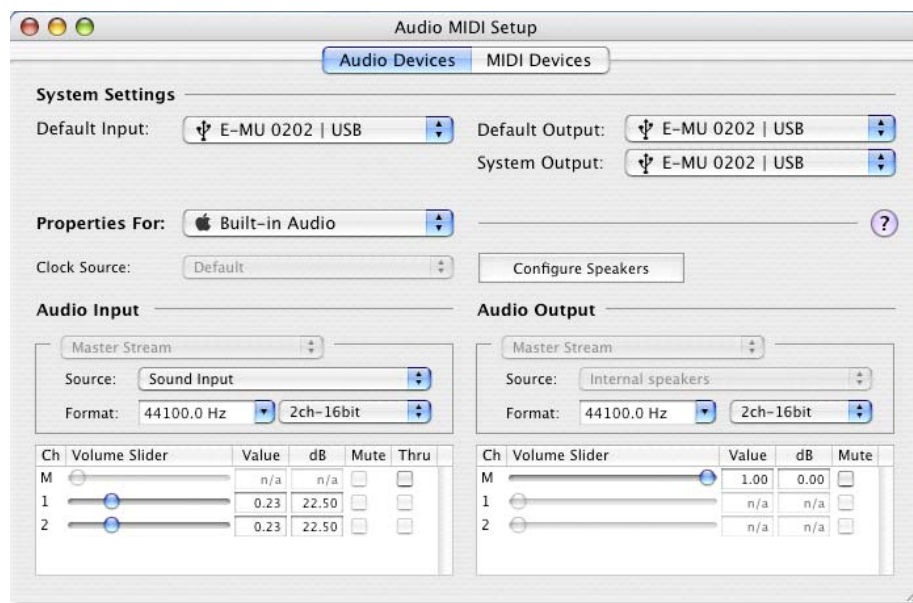
3. Double-click on the **Install** icon to start the installation.



4. The installation Welcome screen appears. Follow the instructions on the screen.
5. When the **Authenticate** dialog box appears, enter the administrator password you chose when you installed OS X.
6. Continue to follow the instructions on the screen to continue the installation. You will be given the option to install:
 - **Easy Install:** Installs the following applications and drivers.
E-MU 0202 USB 2.0: USB Drivers and Control Application
 - **Custom Install:** allows you to choose which components are installed.
7. **Easy Install** is recommended. The software will be quickly installed. When prompted, restart your computer.
8. Be sure to register your 0202 USB 2.0 so we can advise you of future software updates and special offers. You can register online at: www.emu.com/register

Set-up the 0202 USB 2.0 as your Default Audio Device

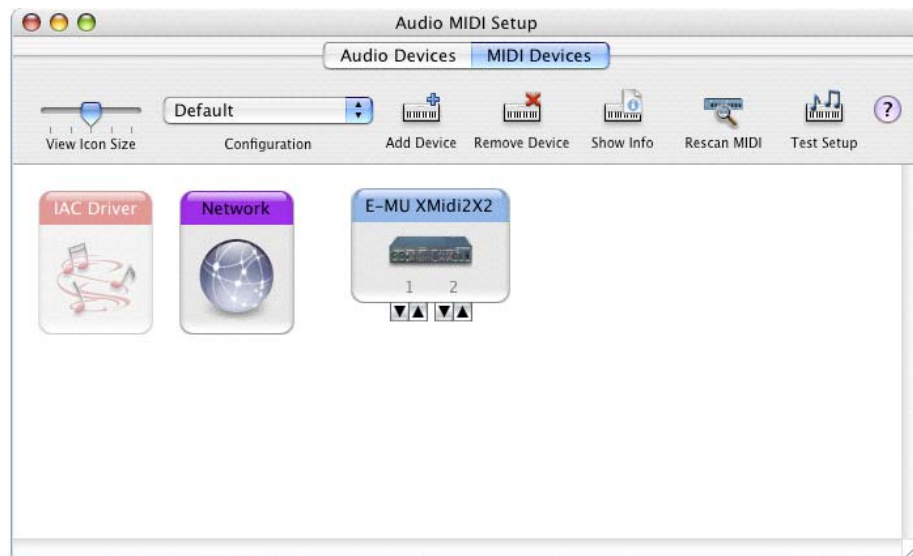
9. Click **Go -> Utilities** from the menu bar.
10. Double-click **Audio MIDI Setup**, then click the **Audio Devices** button if it's not already selected. The window shown on the following page appears.
11. Select the 0202 USB 2.0 for the following: **Default Input, Default Output, System Output, Properties For.**
12. Play a song on **iTunes** to verify that the 0202 USB 2.0 is the default device for audio playback.
13. Quit iTunes.




Setup the MIDI Devices

If you plan to use a MIDI keyboard, now would be a good time to set up your MIDI devices. Connecting a MIDI keyboard will allow you to use the virtual instruments provided in the software bundle and get the most out of your purchase. You'll also need a MIDI interface such as the E-MU Xmidi 2x2 or Xmidi 1x1.

14. Click the **MIDI Devices** button. The window shown below appears.

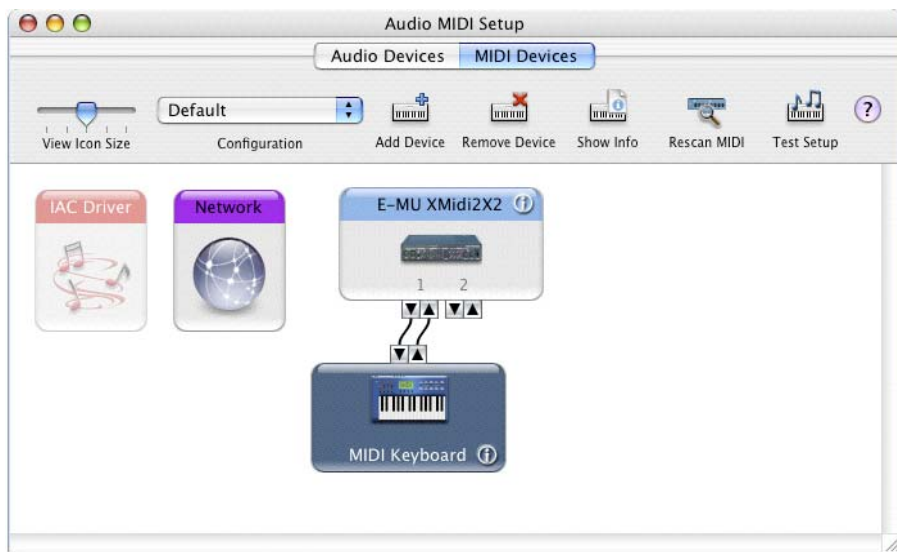



15. Click the **Add Device** button. A new external device icon like the one shown at left appears.

16. Double-click on the new external device if you want to set the MIDI Keyboard Properties. You have the option to name and change the icon for the device. Click **Apply**, then click the **Close** button  to close the Properties window.



17. Connect the new external device to the E-MU 0202 | USB by dragging between the input and output connectors.
18. The window below shows a properly connected MIDI device.



19. Press the close button  to close the Audio MIDI Setup window.

What audio software can I use with my 0202 USB?

The 0202 is compatible with most Macintosh audio applications. Garage Band is a good way to get started if you don't have a pro audio recording application.

Uninstalling the Audio Drivers and Applications

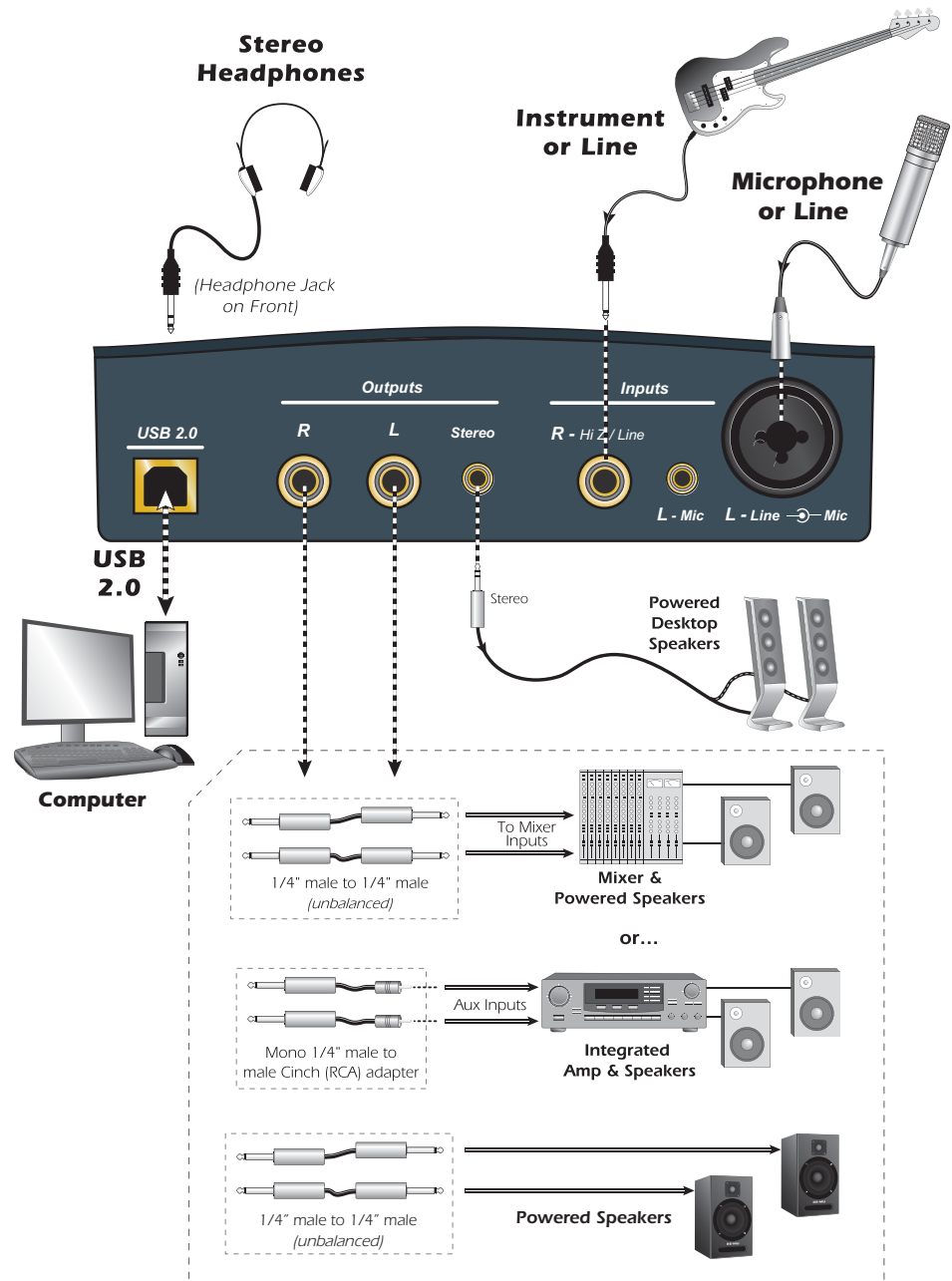
At times you may need to uninstall or reinstall the 0202 USB 2.0 application and device drivers to correct problems, change configurations, or upgrade outdated drivers or applications. Before you begin, close the E-MU USB 2.0 Audio control panel application. Applications running during the uninstallation will not be removed.

1. Open the **Applications** folder.
2. Open the **Creative Professional** folder.
3. Open the **E-MU USB Audio** folder.
4. Click the **E-MU USB Audio Uninstaller** and follow the instructions.

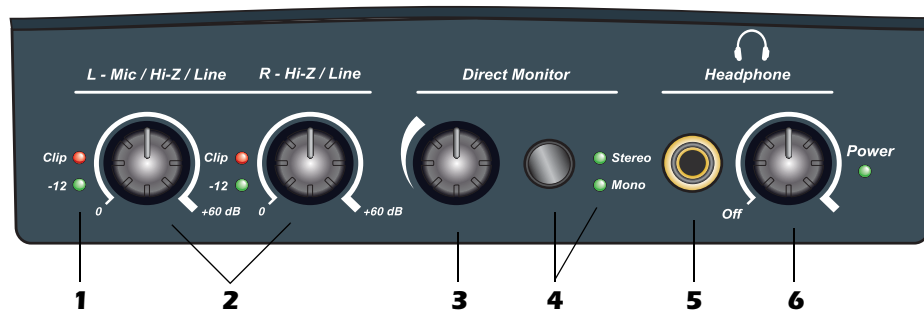
CONNECTION DIAGRAM

WARNING!

Use only a USB 2.0 certified Hi-Speed cable (like the one supplied) for the USB connection. Using a USB 1.1 cable may cause erratic behavior and degraded performance.



CONTROLS & HEADPHONE OUTPUT



1. Signal Level & Clip Indicators

The LED signal level indicators show that you are inputting a proper signal level. With a proper input level, the green signal LED should be flickering, but the red clip indicator should NOT ever be lit.

The clip indicators light and show that the input level has exceeded 0 dBFS.

2. Left/Right Gain Controls

These controls set the input gain from 0dB to +60dB for the two inputs.

3. Direct Monitor Level Control

This continuous encoder controls the amount of direct monitor signal mixed into the outputs. The level is adjustable from -24dB to off.

4. Direct Monitor On/Off & Mono-Stereo Switch

Press the button to turn Direct Monitoring on and off and to switch modes. The stereo LED illuminates. The left and right channels are passed through to their respective outputs at the level set by the Direct Monitor Level control. Press the button again to sum the left and right direct monitor channels to mono. Mono mode is useful when the two inputs are being used for separate instruments. See [“Direct Monitoring” on page 16](#).

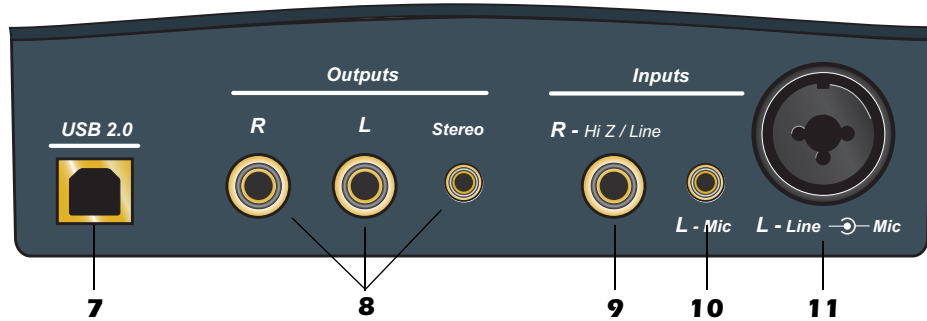
5. Headphone Jack

Connect your stereo headphones here.

6. Headphone Level Control

This knob controls the volume of the headphone output. This switch also turns the 0202 USB 2.0 on or off.

INPUT/OUTPUT



NOTE to PC Users:

When using a USB 1.1 port, performance is limited to 16-bit and 44.1/48 kHz recording and playback.

System Volume Control

Mac

PC

7. USB

Connects the 0202 USB 2.0 to your computer via the supplied USB cable. The USB connection provides two-way communication when connected to the computer.

The 0202 USB 2.0 receives its power from the USB. Always connect to the USB jack on the computer itself and NOT to a low-power USB connection that may be present on your computer keyboard or other USB peripheral.

8. Main Outputs

The balanced outputs are normally connected to your monitoring system. The signal is duplicated on a stereo 1/8" jack for easy connection to desktop stereo speakers. The outputs have been designed using a special noise-cancelling circuit which reduces problems relating to ground loops. The main output volume can be controlled using the System Volume Control on your Mac or PC.

9. R - Hi Z / Line Input

This 1/4" input can be used as a Hi-Z instrument input (guitar/bass, etc.) or a line level input. The input is balanced, but accepts either balanced or unbalanced signals.

10. L - 1/8" Mic Input

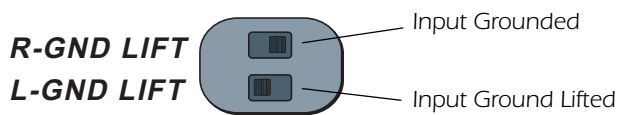
Connect microphones with 1/8" plugs to this jack.

11. L - Hi-Z / Line / Mic Input

Use the XLR connector for microphones or balanced line level signals. Use the 1/4" in the center of the XLR jack as a Hi-Z input for guitar/bass, or as a line level input. The input is balanced, but accepts either balanced or unbalanced signals.

• Ground Lift Switches


There are "ground lift" switches for both analog inputs located on the bottom of the unit. These switches can be used to safely stop the hum if a ground loop occurs in your setup. See [page 18](#) for more information.

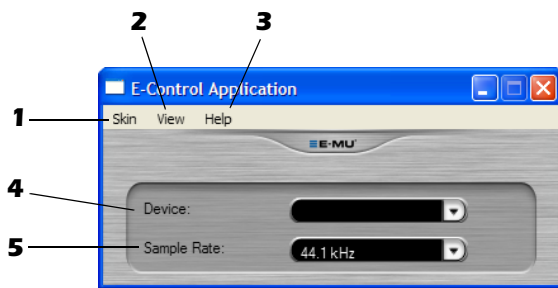


The input ground is lifted when the A or B slide switch is closest to the GND LIFT label.

E-MU USB AUDIO CONTROL PANEL

After you have successfully installed the audio drivers, launch the E-MU USB Audio control panel. The E-MU USB Audio control panel is shown below.


- **Windows:** The E-MU USB Audio control icon will be visible in the Taskbar, which is normally located in the bottom right of the screen. It can also be launched from the Start Menu (*All Programs, Creative Professional, E-MU USB Audio Application*).
- **OS X** The E-MU USB Audio control application is located in the **Applications** folder . You can also open the E-Control Application using the icon on the desktop.



1. Skin

Choose between different appearances for the E-MU USB Audio control panel.

2. View

Hide the application (Ctrl+H, Windows) You can restore the application by clicking the E-MU icon  in the System Tray (Windows), or by clicking the E-MU icon in the Dock (OS X).

3. Help

About E-MU 0202 USB 2.0, Audio control, Launch Manual, Check Updates

4. Device

If you are using more than one E-MU USB Audio device, you can choose which unit is currently being controlled.

5. Sample Rate

Allows you to set the system sample rate: 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz or 192kHz.

NOTE

There are some limitations when operating at 176.4/192k sample rates.

PC - No Direct Monitor

Mac - Disabled

DIRECT MONITORING

Direct monitoring allows you to monitor inputs without having any software open. It can also be used as an alternative to software monitoring if you desire the lowest latency monitoring possible.

When using a computer for digital recording, an audible time delay occurs while the audio signal is being input to the computer, processed by the software and then returned to the output for monitoring. This time delay is called *Latency*.

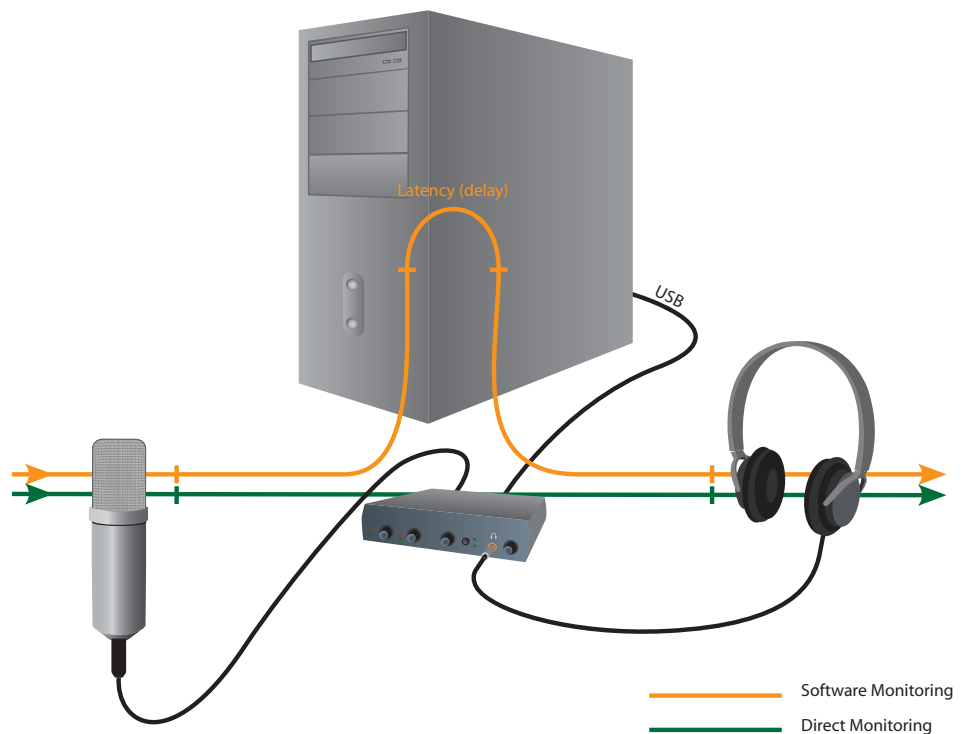
Latency becomes a problem when you have to use high buffer settings to conserve CPU resources. Because the 0202 USB 2.0 has hardware direct monitoring, you can enjoy zero latency regardless of your buffer setting.

NOTE

Direct monitoring is not available at 176.4 or 192 kHz.

The Direct Monitor feature connects the input signals to the output when recording so that you can hear your performance without delay. The Direct Monitor level control lets you adjust the volume of the input signal in relation to the recorded tracks.

Direct monitoring is controlled manually from the Direct Monitor switch on the 0202 USB 2.0. It's not necessary to turn it on in your recording application.



Direct Monitoring allows you to listen to the **direct** sound of your instrument during recording, without the delay incurred by going to the computer and back.

Direct Monitoring vs. Software Monitoring

Direct monitoring is lower latency and can also be used without software running (or even without a computer!).

Software monitoring has the advantage of allowing audio effects or EQ added in the host software to be heard on the output. Its roundtrip latency depends on what latency is chosen in the ASIO configuration. If you choose to software monitor, make sure to disable direct monitoring. If both are enabled, you will experience a 'comb filter' or doubling effect.

AUDIO RECORDING SOFTWARE

Now that you've installed the 0202 USB 2.0, you probably want to start using it! The 0202 USB 2.0 is only one half of the equation—the hardware interface that translates audio signals into the digital language of your computer. The second half of the equation is the software recording application, which records and allows you to edit the audio on your computer.

Acoustica Mixcraft LE 4™

We have included Acoustica Mixcraft LE 4 for PC users. Acoustica Mixcraft LE 4 is a full-featured multitrack recording application with effects, virtual instruments, VST™ and DirectX™ support and much more.

Tutorials and Videos: <http://www.acoustica.com/mixcraft/support.htm>

Macintosh Users

Unfortunately we were not able to include a Macintosh recording application with the 0202 USB 2.0, however you can use Garage Band, a very cool music application that probably came bundled with your Mac. This application works well with the 0202 USB 2.0 and will get you started with audio recording.

NEED MORE HELP?

If you need additional help, please see:

- **Windows:** Program Files\Creative Professional\E-MU 0202 USB\Documents\3rdParty.htm.
- **OS X:** Applications Drive\Library\Documentation\E-MU 0202 USB\3rdParty.htm

Before you Begin...

- You should have already installed the E-MU software on your computer
- You should hear the computer sounds coming out of the E-MU 0202 USB 2.0 and your speakers when you play a CD or an MP3 using Windows Media Player or iTunes. If not, make sure your E-MU 0202 USB 2.0 is properly connected according to the diagram on [page 12](#).
- A source of audio should be connected to the inputs (a microphone, musical instrument, or CD/MP3 player).

WARNING!

Windows Users - After checking your audio, be sure to quit Windows Media Player.

TROUBLESHOOTING

Can't hear Windows Media Player in Windows

If you have, or ever have had, another audio device installed in your PC, you may have to set the E-MU 0202 USB 2.0 as the "Default Audio Device".

1. Open the **Control Panel**, then select **Sounds and Audio Devices**.
2. Click the **Audio** tab and select the **E-MU 0202 USB 2.0** as the Default device under **Sound Playback**.
3. Click the **Volume** button under Sound Playback and turn up **Wave volume**.

You cannot record or monitor ASIO and WAVE at the same time. The first audio application you open controls the E-MU 0202 USB 2.0.

Lost Communication

Should you lose communication between your E-MU 0202 and an audio application (Ableton Live, Cubase, Sonar, etc.), the E-MU 0202 USB 2.0 drivers may need to be re-selected in your application.

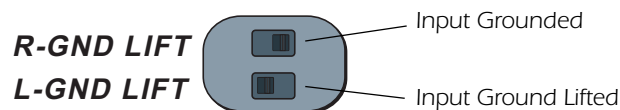
1. Go to your application's I/O settings, de-select the **E-MU 0202 USB 2.0** for both input and output.
2. Apply these changes and exit the dialog.
3. Re-enter the application's preference settings and re-select the **E-MU 0202 USB 2.0** drivers. If this doesn't work, the application may need to be restarted.

Ground Loops

In digital audio devices and computers, audio ground loops may appear as pitched tones, digital hash in the background, as well as the familiar 60 cycle hum.

Ground loops are caused by a difference in ground potential between two pieces of equipment. Computer audio devices are particularly susceptible to ground loops because most computers were not designed with high quality audio in mind.

The E-MU 0202 USB 2.0 contains built-in "ground lift" switches for both analog inputs in order to safely break the loop if a ground loop occurs in your setup.



The ground-lift switches are located on the bottom of the unit, close to the rear panel. The input ground is lifted when the A or B slide switch is closest to the GND LIFT label.

Pops & Crackles

Pops and crackling noises in the audio are most often caused by having the *ASIO Buffer Size* set too low. Adding audio tracks and VST plug-ins increases the load on your computer's CPU. If your computer cannot keep up with all the tasks you are asking it to perform, pops and crackles may occur. In effect, increasing the ASIO buffer gives your computer "more time" to complete its assigned tasks. The hardware Direct Monitor feature of the 0202 USB 2.0 allows you to increase the ASIO Buffer setting without the associated latency problems during recording and overdubbing.

USB hubs can create problems with digital audio and should be avoided whenever possible.

Simultaneous WDM/ASIO Playback (PC only)

The 0202 USB 2.0 only supports playing back one stream format at a time on the PC. Each of the three mentioned stream types has an associated priority. If a higher priority stream type is opened while a lower priority stream is already playing, the lower priority stream will stop playing. The stream priorities, from highest to lowest, are ASIO, WDM.

USB 2.0 vs. USB 1.1 Operation (PC only)

The 0202 can operate in USB 2.0 or USB 1.1 mode on the PC. The 96 kHz and 192 kHz sample rates are only available while operating in USB 2.0. Always use a USB 2.0 port if available. The included E-MU USB Audio Control panel software includes an indicator to let you know in which mode the device is running.

0202 USB comes up in USB 1.1 mode (PC only)

Always turn the 0202 USB power off before connecting or disconnecting the USB cable. Hot-plugging the unit with the power on can cause the 0202 to power-up in USB 1.1 mode. If you see the Windows message, "This device could perform faster...", simply turn power off, wait a few seconds, then turn power on again.

INTERNET REFERENCES

The internet contains vast resources for the computer musician. A few useful sites are listed here, but there are plenty more. Check it out.

Software Updates, Tips & Tutorials.. <http://www.emu.com/support>

Setting up a PC for Digital Audio..... <http://www.musicxp.net>

MIDI Basics Search for "MIDI Basics" (many sites)

MIDI & Audio Recording <http://www.midiworld.com>

MIDI & Audio Recording <http://www.synthzone.com>

Mixcraft..... <http://www.acoustica.com/mixcraft/index.htm>

Forums

Unofficial E-MU Forum <http://www.productionforums.com/emu>

Sound-On-Sound Forum <http://www.soundonsound.com>

Computer Music Forum <http://www.computermusic.co.uk/main.asp>

Home Recording Forum <http://homerecording.com/bbs>

Studio Central Forum <http://www.tweakheadz.com>

KVR Forum..... <http://www.kvr-vst.com/forum/search.php>

MIDI Addict Forum <http://forum.midiaddict.com/search.php>

Sound Card Benchmarking..... <http://audio.rightmark.org>

Driver Heaven Forum..... <http://www.driverheaven.net>

TECHNICAL SPECIFICATIONS

General

Sample Rates: 44.1, 48, 88.2, 96, 176.4, 192kHz from internal crystal with no sample rate conversion
(Note: 176.4k & 192k sample rates not supported on Macintosh)

Bit Depth: 24-bit I/O, 32-bit processing

USB 2.0 Hi-Speed

Full 24-bit resolution at all sample rates
2 in/2 out channels

Zero-latency direct hardware monitoring (disabled at 176.4/192kHz)

ASIO2, WDM MME, Apple Core Audio and Core MIDI drivers

Anti-Pop speaker protection minimizes noise during power on/off

Ultra-low jitter clock subsystem: <100ps RMS

Combo Microphone Preamplifier/Hi-Z/Line Input (1)

Type: Balanced E-MU combo mic preamplifier and Hi-Z/line input

A/D converter: AK5385A

Input Impedance: 1.5 Kohms

Max Level: +6.5dBV (+8.7dBu)

EIN: (20Hz-20kHz, 150ohm, unweighted) -127dBu

Signal-to-Noise Ratio: (A-weighted, min gain) 113dB

THD+N: (1kHz at -1dBFS, min gain) -103dB (.0007%)

Gain Range: +60dB

Frequency Response: (min gain, 20Hz-20kHz) +0.0/-0.16dB

Stereo Crosstalk: (1kHz min gain, -1dBFS) < -110dB

Hi-Z/Line Input (1)

Input Impedance: 1 Mohm

Max Level: +12dBV (14.2dBu)

Dynamic Range: (A-weighted, 1kHz, min gain) 113dB

Signal-to-Noise Ratio: (A-weighted, min gain) 113dB

THD+N: (1kHz at -1dBFS, min gain) -101dB (.0009%)

Analog Line Outputs (2)

Type: balanced, AC-coupled, 2-pole low-pass differential filter

D/A converter: CS4392

Max Level: Consumer: +6.7dBV max (unbalanced)

Frequency Response: (20Hz - 20kHz) 0.00/-0.01dB

Dynamic Range: (1kHz, A-weighted) 111dB

Signal-to-Noise Ratio: (A-weighted) 112dB

THD+N: (1kHz at -1dBFS) -98dB (.0013%)

Stereo Crosstalk: (1kHz at -1dBFS) < -120 dB

Headphone Amplifier

Type: Class-A power amplifier

D/A converter: CS4392 (shared with Line Out)

Gain Range: 60dB

Maximum Output Power: 16mW

Output impedance: 22ohms

Frequency Response: (20Hz–20kHz) +0.02/-0.08dB

Dynamic Range: (A-weighted) 110dB

Signal-to-Noise Ratio: (A-weighted) 108dB

THD+N: (1kHz, max gain): 300ohm load -98dB (.0013%)

Stereo Crosstalk: (1kHz at -1dBFS, 300 ohm load) < -91dB

Dimensions / Weight

Weight: 0.94 lb / 0.43 kg

Dimensions:

W: 6.5" **H:** 2.0" **L:** 5.5"

W: 165 mm **H:** 50.8 mm **L:** 140 mm

DECLARATION OF CONFORMITY

Trade Name: E-MU Systems
Model No.: EM8740
Responsible Party: E-MU Systems
Address: 1500 Green Hills Road
Scotts Valley, CA 95066 U.S.A.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Note:

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 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:

- Reorient or relocate 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.

The supplied interface cables must be used with the equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

Compliance Information

United States Compliance Information

FCC Part 15 Subpart B Class B using:

CISPR 22 (1997) Class B

ANSI C63.4 (2003) method

FCC Site No. 958979

Canada Compliance Information

ICES-0003 Class B using:

CISPR 22 (1997) Class B

ANSI C63.4 (2003) method

Industry of Canada File No. IC 5933

European Union Compliance Information

EN55024 (1998 w/A1:01 & A2:03)

EN55022 (1998) Class B

Australia/New Zealand Compliance Information

AS/NZS CISPR 22 (2002) Class B using:

EN55022 (1998) Class B

Japan Compliance Information

VCCI (April 2005) Class B using:

CISPR 22 (1997) Class B

ANSI C63.4 (2003) method

VCCI Acceptance Nos. R-2160 & C-2332

Attention for the Customers in Europe

This product has been tested and found compliant with the limits set out in the EMC Directive for using connection cables shorter than 3 meters (9.8 feet).

Notice

If static electricity or electromagnetism causes data transfer to discontinue midway (fail), restart the application or disconnect and connect the USB cable again.

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