Multi-Purpose 24-bit USB Audio Interface

ESU22

User's Guide

ESI

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1. Introduction

Thank you for choosing the ESI ESU22.

ESU22 is not only stylish, it is a portable device that can go with you anywhere. Offering total flexibility of an external and fully bus-powered USB device with pure pristine digital audio quality, coupled with true high quality 24-bit support on the 2 analog input and 2 analog output channels provided via RCA inputs, a microphone preamplifier with XLR input, a Hi-Z instrument input for guitars, a high quality headphone output and TRS line outputs, ESU22 will easily qualify as one of the most useful devices in your studio, wherever that may be.
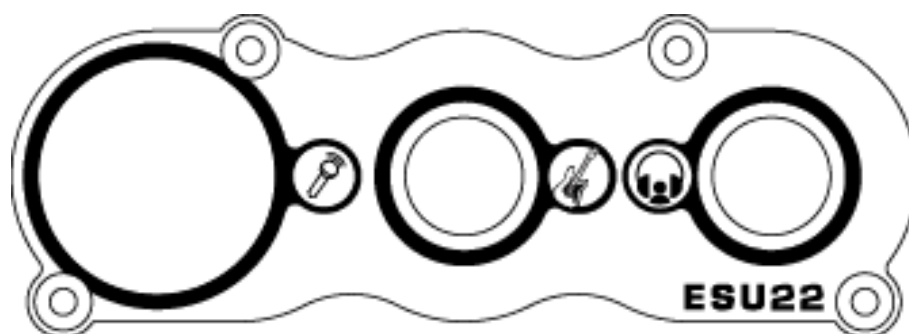
If you're looking for a really powerful USB audio device that is small and that gives you maximum performance under any current Windows system as well as under Mac OS X, then ESU22 is a device for you.

1.1 Key Features

- 2 simultaneous analog input and 2 simultaneous analog output channels
- XLR input for built-in microphone preamplifier
- Hi-Z guitar/instrument input
- stereo headphone output
- stereo line output with 1/4" TRS connectors
- stereo line input with RCA connectors
- 24 Bit AD/DA converter
- works with both Mac and PC

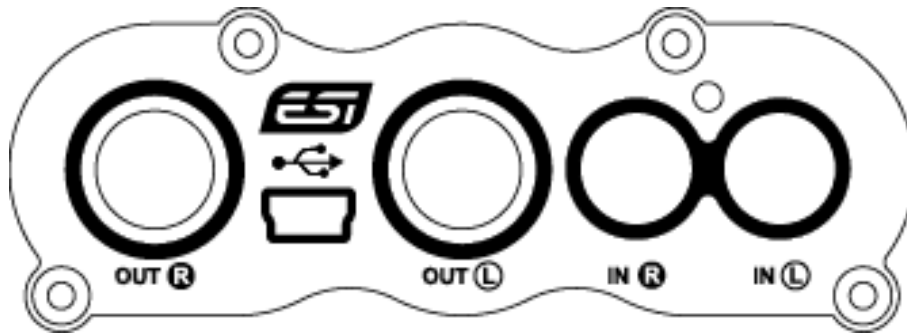# 2. Description of ESU22

2.1 Front Panel

The front panel has the following connectors from left to right:

Microphone Input: the input of the microphone preamplifier, optimized for dynamic microphones.

Hi-Z Instrument Input: the direct input for guitar / instrument signals.

Headphone Output: stereo headphone output for monitoring using studio headphones.

2.2 Rear Panel

The rear panel has the following connectors from left to right:

Right Line Output: the right channel of the line output with 1/4" TRS connector.

USB: the USB port for connection to your computer.

Left Line Output: the left channel of the line output with 1/4" TRS connector.

Right Line Input: the right channel of the line level input with RCA connector.

Left Line Input: the left channel of the line level input with RCA connector.

2.3 Minimum System Requirements

PC

- Intel Pentium III 600MHz CPU or equivalent AMD CPU
- 512 MB RAM
- Direct X 8.1 or higher
- one available USB port
- recent Version of Microsoft Windows XP or Windows Vista (32-bit)

Mac

- Power Macintosh G4 or higher
- one available USB port
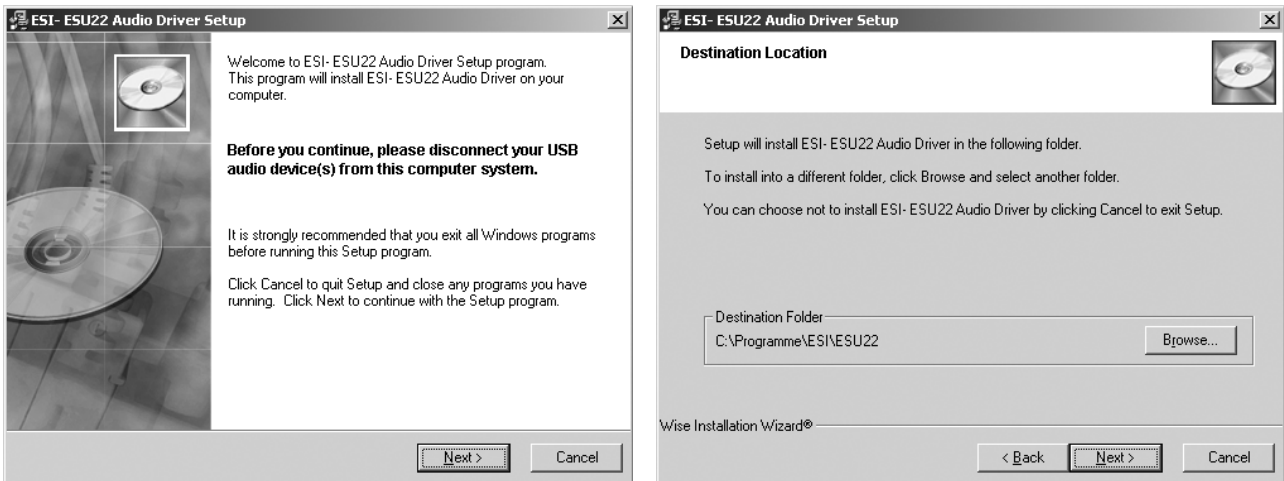- 512 MB RAM
- Mac OS X 10.4 or higher

3. Installation

Before installing the drivers of ESU22, we recommend to check on the download section of www.esi-audio.com for updated drivers.
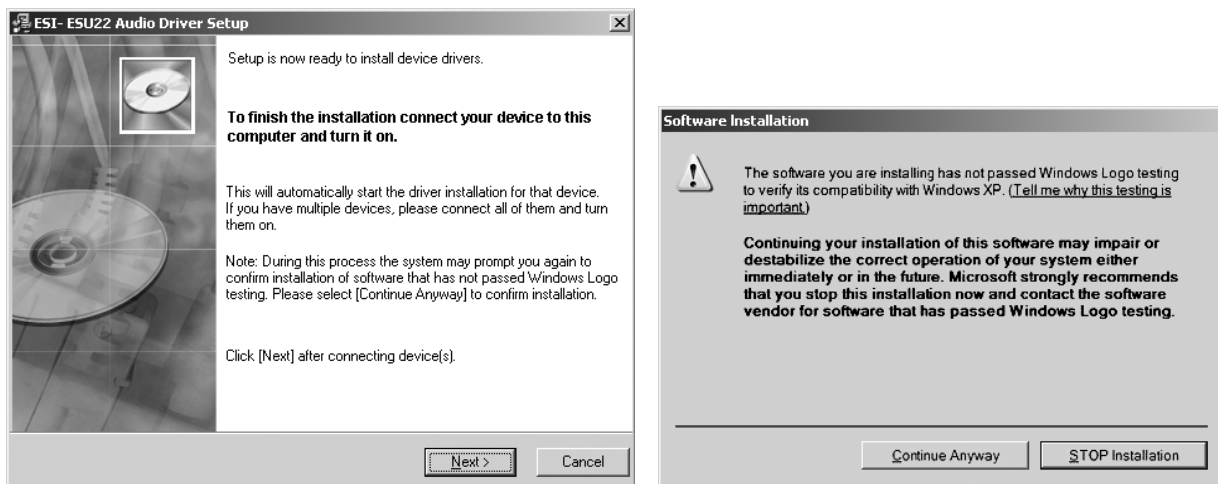
3.1 Windows XP

Disconnect ESU22 before you install the driver if it has been connected already. Then launch *setup.exe* from the *Windows* folder of the included driver CD or from a download of a recent driver from our website.
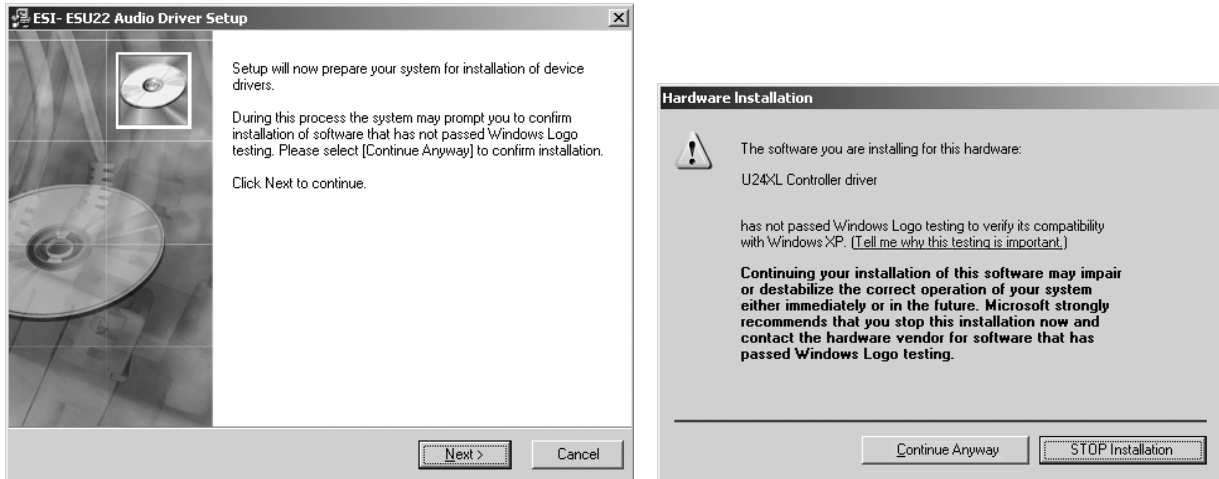
You will now see a dialog as shown on the left picture below. Click *Next*. You can define the target directory for the installation now. Confirm it with *Next*.

The installer now informs you that the driver installation will start as shown on the left picture below. Confirm this with *Next*. During the following process you will see a dialog box once or several times that informs you that the driver software has not passed Windows Logo testing. Please be assured that our drivers have been tested in various different ways and are OK to be used. Confirm any such dialog with *Continue Anyway*.

You will now be prompted to connect the hardware on the next dialog that is shown below on the left. Plug in ESU22. Do <u>not</u> click *Next* yet. During the driver installation, Windows might again prompt you to confirm the Windows Logo testing dialog once or several times with *Continue Anway* before the driver installation is finalized.

You can now finally click *Next* on the *ESI ESU22 Audio Driver Setup* dialog. The installation is now finished. To confirm this, please check if the ESI icon is displayed in the taskbar notification area as shown below.
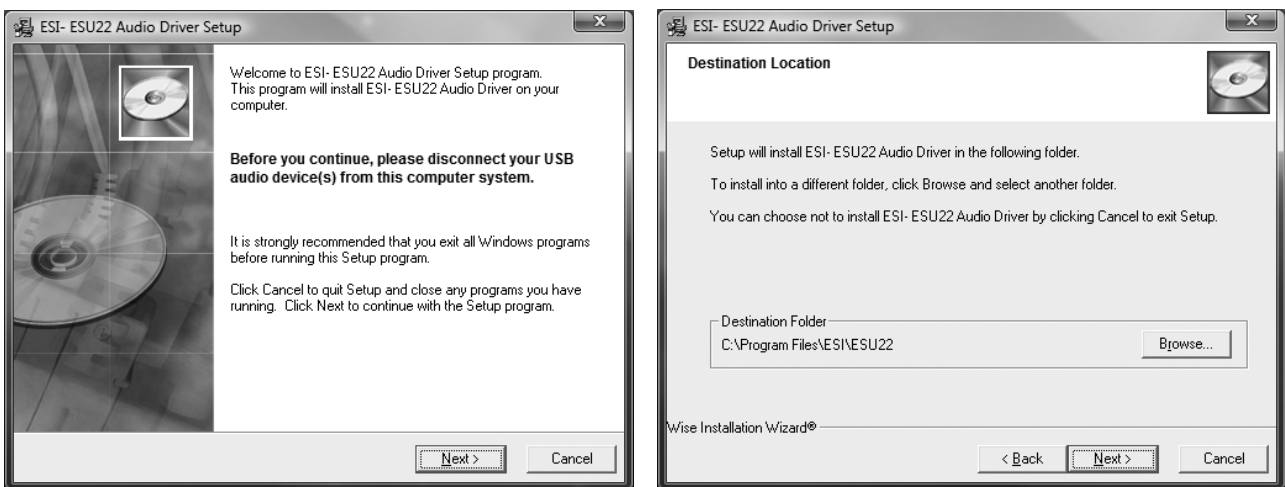

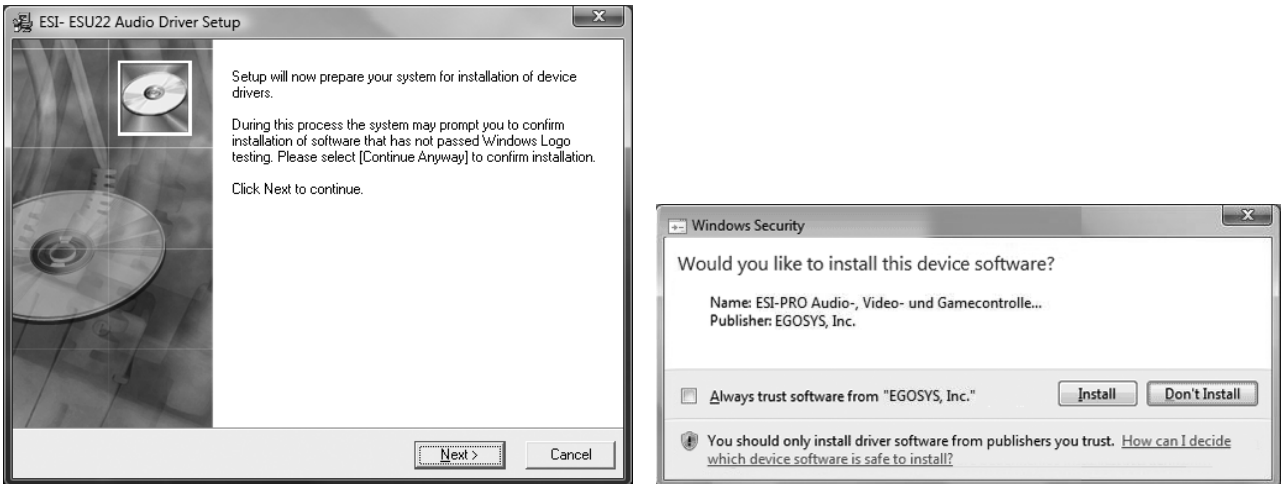If yes, the driver installation has been completed successfully.

3.2 Windows Vista

Disconnect ESU22 before you install the driver if it has been connected already. Then launch *setup.exe* from the *Windows* folder of the included driver CD or from a download of a recent driver from our website.

When launching the installation, Windows Vista might prompt a security message. Make sure to allow the installation. You will then see a dialog as shown on the left picture below. Click *Next*. You can define the target directory for the installation now. Confirm it with *Next*.

The installer now informs you that the driver installation will start as shown on the left picture below. Confirm this with *Next*. During the following process you will see a *Windows Security* dialog box once or several times that asks you for confirmation to install the driver software. Confirm any such dialog with *Install*.

You will now be prompted to connect the hardware on the next dialog that is shown below on the left. Plug in ESU22. Do <u>not</u> click *Next* yet. Instead, wait a few seconds for the automatic device driver installation. You can monitor this in the task notification area where Windows Vista informs that the driver is installed via a bubble message box.

You can now finally click *Next* on the *ESI ESU22 Audio Driver Setup* dialog. The installation is now finished. To confirm this, please check if the ESI icon is displayed in the taskbar notification area as shown below.

If yes, the driver installation has been completed successfully.

3.3 Mac OS X

Mac OS X already provides support for class compliant USB audio devices such as ESU22. This means that no software or driver needs to be installed to use ESU22 under Mac OS X. Simply connect the unit with the supplied USB cable to your Mac and you can start using it.
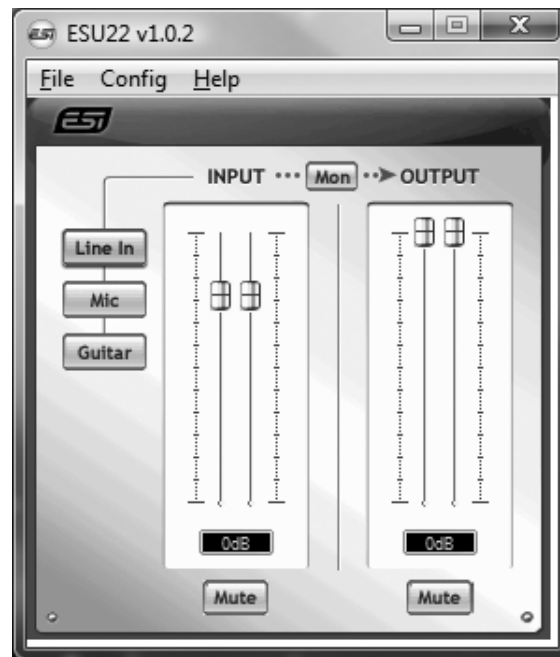
Controlling the basic options of ESU22 under Mac OS X is mainly done via the *Audio-MIDI-Setup* utility from Mac OS X described in section 5.3 of this manual.

4. ESU22 Control Panel

This chapter describes the ESU22 Control Panel under Windows. Under Mac OS X no special Control Panel is required for ESU22. If you are using ESU22 under Mac OS X, please check section 5.3 with more details.

To open the control panel double click on the ESI icon in the task notification area. The following dialog will appear:

The panel has the following functions and sections:

INPUT **section**: this section controls the input monitoring volume of the incoming signal from the hardware. A pair of mono faders can be controlled together or individually depending on your mouse position The *Mute* button at the bottom allows you to mute the signal. A red *Mute* button indicates that the mute function is enabled. When disabled, the button is gray.

OUTPUT **section**: this section controls the playback volume of the playback signal from your audio applications. The pair of mono faders can be controlled together or individually depending on your mouse position – perfect for stereo signals. The *Mute* button at the bottom allows you to mute playback. A red *Mute* button indicates that the mute function is enabled. When disabled, the button is gray.

Input selection: the buttons on the left side allow you to select between the RCA line inputs on the backside of the unit (*Line In*), the XLR microphone input on the front (*Mic*) and the Hi-Z instrument input on the front (*Guitar*).

Monitoring: the *Mon* button (located between *INPUT* and *OUTPUT*) allows you to enable realtime input monitoring. Once enabled all incoming signals are audible through the output.

SampleRate section: under *Config > Sample Rate* you can select the operating sample rate of ESU22.

5. Audio Applications

This chapter contains basic configuration examples for some popular software applications. Please also refer to the manual of the audio software you use for detailed information.

5.1 Windows Multimedia setup

The Windows Multimedia setup is required if you want to use your ESU22 as the main sound device for Windows multimedia applications. Go to *My Computer-> Control Panel -> Sounds and Audio Device Properties -> Audio*. Select the *ESU22* entry as your playback device to make sure that all standard signals are played via the ESU22 hardware.
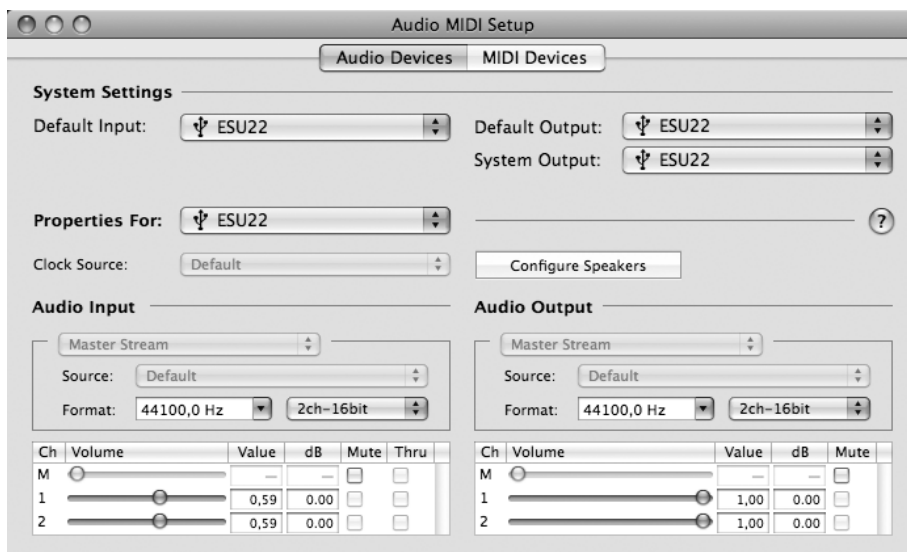
5.2 Latency setting and ASIO applications under Windows

Via *Config > Latency* in the Control Panel it is possible to change the latency setting (also called "buffer size") for the ASIO driver of ESU22. A smaller latency is the result of a smaller buffer size. Depending on the typical application (e.g. for playback of software synthesizers) a smaller latency is an advantage. At the same time, the best latency setting indirectly depends on the performance of your system. For recording applications, a typical latency buffer size between 128 and 288 samples is standard. The default value is 256.

The *Config > Buffer Number* setting in the Control Panel provides an important fine tuning setting that allows you to tweak system performance. Depending on your computer hardware, you might need to adjust this setting if you have problems with noise or drop-outs during playback or recording . Typically on a modern computer system a value of 4 or slightly more or less is perfect but you might need to check what is best for your computer as every PC is different.

Note that these values have to be setup before launching any audio application using ESU22.

5.3 Mac OS X Audio MIDI Setup

The main control center of ESU22 under Mac OS X is the *Audio MIDI Setup* application that you can find in your *Applications* folder. When you launch it, you can setup ESU22 as your *Default Input*, *Default Output* or *System Output* device – if required.

While audio production and editing applications usually provide an option inside their preferences to select ESU22 as recording and playback device, many general standard applications such as iTunes for example are usually accessing the *Default Output* device, selectable in the *Audio MIDI Setup* dialog.

If you want to change settings of ESU22, you need to select it under *Properties For* as shown in the picture above. You can change the default sample rate under *Audio Input -> Format* or *Audio Output -> Format* or you can change the main playback volume under *Audio Output -> Volume Slider -> M*.

6. General Information

Trademarks

ESI and ESU22 are trademarks of EGOSYS, Inc. and ESI Audiotechnik GmbH. Windows is a trademark of Microsoft Corporation. Other product and brand names are trademarks or registered trademarks of their respective companies.

The FCC and CE Regulation Warning

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 : Any changes or modifications in construction of this device with are not expressly approved by the party responsible for compliance, could void the user's authority to operate equipment.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. If necessary, consult an experienced radio/television technician for additional suggestions.

Correspondence

For technical support inquiries, contact ESI support online at www.esi-audio.com.

Disclaimer

All features and specifications subject to change without notice.

Parts of this manual are continually being updated. Please check our web site www.esi-audio.com occasionally for the most recent update information.