

USB MICROPHONE PACKAGE

ANL-929A-PC

USER'S MANUAL

DOC-089

Rev. 2.6

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notes

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CHAPTER 1 | INTRODUCTION

The ANL-929A-PC USB Microphone Package offers a level of stimulus verification and calibration unavailable with sound level meters or other startle reflex systems. The package consists of a microphone, microphone amplifier, analog-to-digital converter, USB interface and sound level meter software. The software display provides detailed measurements of either noise or pure tone signals. The package is a cost-effective and accurate approach to sound level measurement.

CHAPTER 2 | WIRING INSTRUCTIONS

NOTE: The inverter and USB cable must be connected in that order or the computer will not recognize the ANL-929A-PC device.

1. Using the +6 VDC inverter included with the system, connect the **+6 VDC** connector on the ANL-929A-PC to a standard wall outlet. The **PWR** LED on the front panel of the ANL-929A-PC will light up.

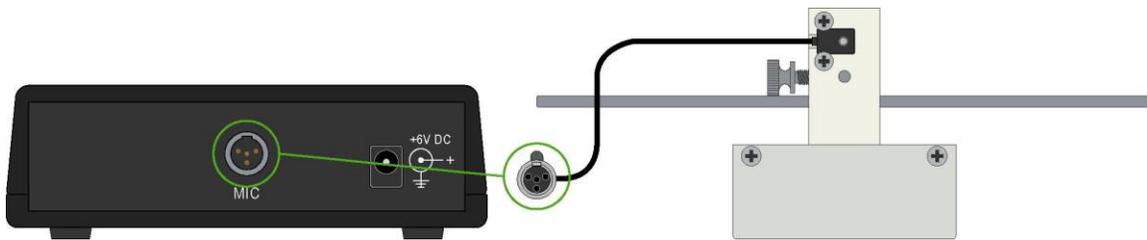
Figure 2.1 – Connect +6 VDC Connector to Wall Outlet



2. Next, connect the microphone cable to the **MIC** connector on the back of the ANL-929A-PC. This connector is keyed, so it is important to be sure that the port and cable are properly aligned prior to connecting.

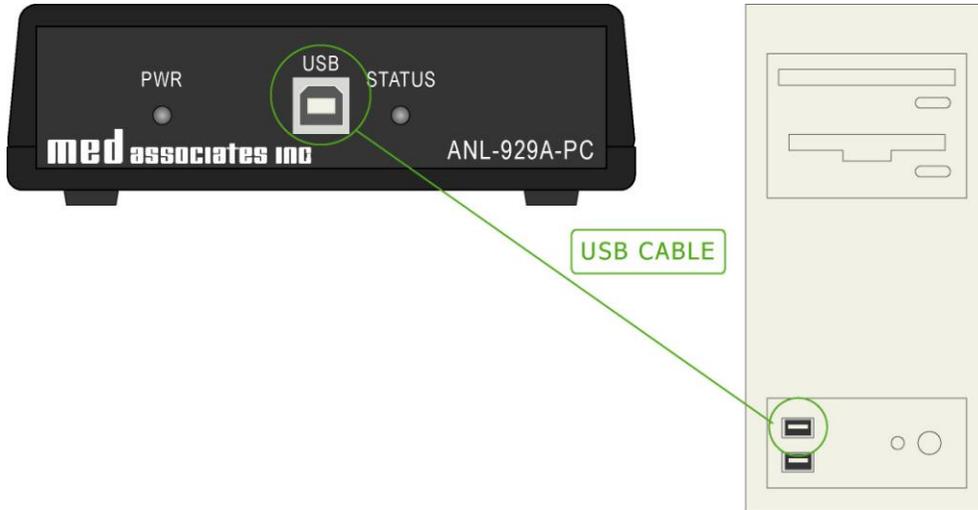
NOTE: The microphone assembly is delicate and should be handled with care.

Figure 2.2 - Connect the Microphone Cable to MIC Connector



3. Using the USB cable provided, connect any available USB port on the computer to the **USB** port on the ANL-929A-PC device.

Figure 2.3 – Connect USB Connector to Computer



CHAPTER 3 | USING THE HARDWARE

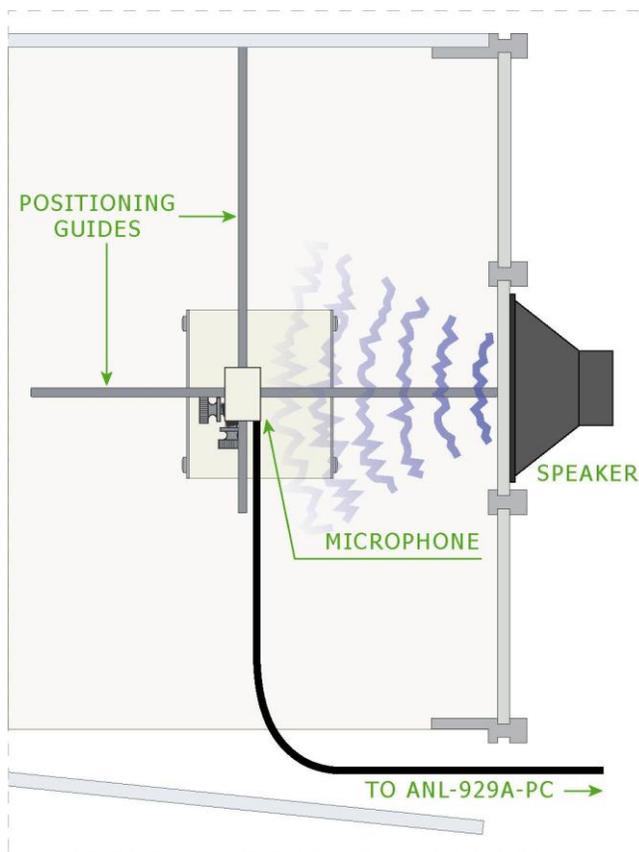
The ANL-929A-PC USB Microphone includes the ENV-269 Universal Microphone Holder. The ENV-269 is designed to provide consistent microphone placement from chamber to chamber, which helps to ensure that all speakers in a system are uniformly calibrated.

Using the Microphone in Standard Chambers

To use the ENV-269 Universal Microphone Holder in a standard chamber:

1. Loosen the thumbscrews so that the positioning guides may be adjusted.
2. Place the ENV-269 in the desired location in the chamber, with the microphone facing the speaker, as shown in Figure 3.1.
3. Adjust the positioning guides so that they are touching two walls of the chamber, as shown in Figure 3.1 and tighten the thumbscrews.
4. Complete the calibration procedure, as outlined in Chapter 4 of this manual.
5. Place the ENV-269 in the next chamber to be calibrated, using the positioning guides to orient it against guide walls used in the previous chamber.

Figure 3.1 – Top View of the ENV-269 Microphone Holder in a Chamber

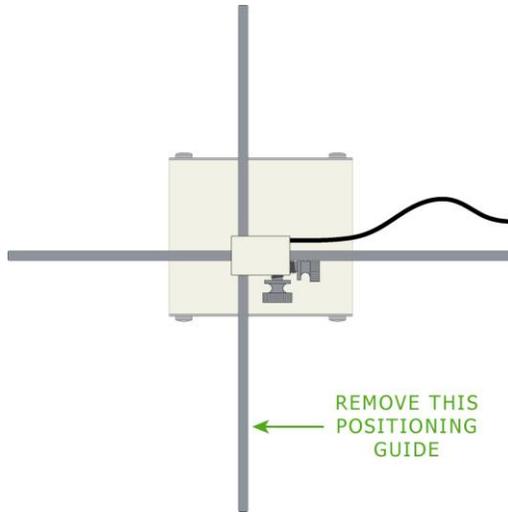


Using the Microphone in Startle Chambers

Large Animal Holder

To use the ENV-269 Universal Microphone Holder in ENV-264A and ENV-264B Steel Grid Rod Animal Holders or ENV-262B and ENV-262C Round Acrylic Animal Holders, remove the positioning guide indicated below.

Figure 3.2 - Remove Positioning Guide



Place the ENV-269 in the animal holder with the microphone facing the speaker (back of the holder), as shown below. The ENV-269 is designed to fit over the grid floor, allowing the grid rods to be used for consistent placement from chamber to chamber.

Figure 3.3 – ENV-269 in Large Animal Holder

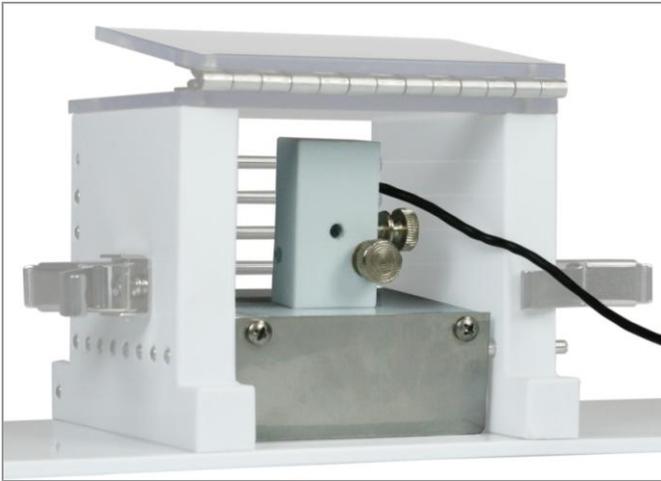


Small Animal Holder

To use the ENV-269 Universal Microphone Holder in ENV-264C Animal Holders, remove both of the positioning guides from the ENV-269. Place the ENV-269 in the animal holder with the microphone facing the speaker (back of the holder), as shown below.

The ENV-269 is designed to fit over the grid floor, allowing the grid rods to be used for consistent placement from chamber to chamber.

Figure 3.4 – ENV-269 in Small Animal Holder



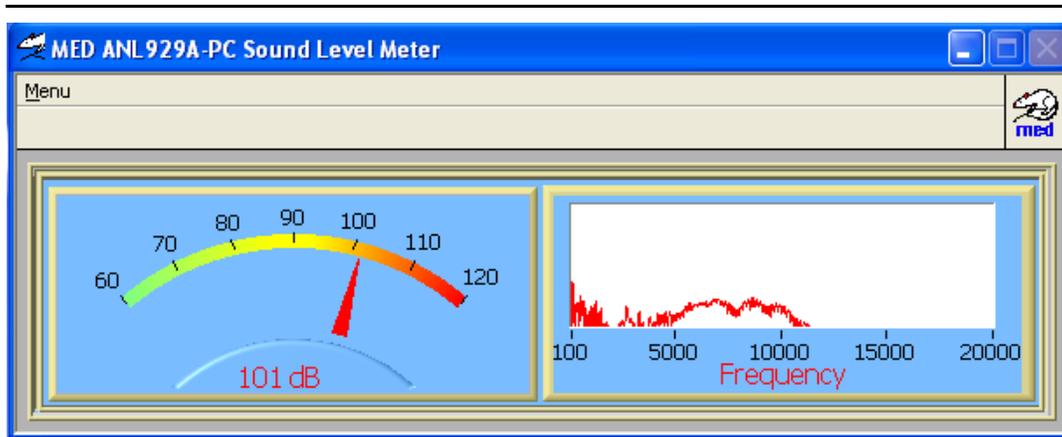
CHAPTER 4 | RUNNING THE SOFTWARE

Prior to opening and running the Sound Level Meter Software, be sure that the +6 VDC inverter, the microphone, and the USB cable are connected to the ANL-929A-PC USB device, see 0 of this manual for further information. Failure to connect any of these devices prior to opening the software will result in an error message.

Place the microphone assembly in the desired location. Open the software and the Sound Level Meter Software screen shown in Figure 4.1 will appear.

The sound level in dB is displayed on the left side of the screen and the frequency is displayed on the right. The Menu in the upper left corner has two options; **Quit** closes the Sound Level Meter Software and **About** displays the software version.

Figure 4.1 - Sound Level Meter Software



CHAPTER 5 | SHUTDOWN PROCEDURE

The software application should be closed prior to disconnecting the +6 VDC inverter, the USB cable, or the microphone. Failure to do so will result in an error message, like the one shown in Figure 5.1.

Just as it is important to connect the ANL-929A-PC in a certain sequence, it is also important to disconnect it in the proper sequence. The shutdown procedure is as follows:

1. Select **Menu | Quit** to close the software application.
2. Unplug the +6 VDC inverter.
3. Disconnect the USB cable.

Figure 5.1 - Error Message



APPENDIX A | DRIVER AND SOFTWARE INSTALLATION

NOTE: If the ANL-929A-PC was purchased as part of a system that includes a computer, the driver and software installation was completed at the factory and this chapter can be skipped.

The driver and software installation must be completed prior to using the ANL-929A-PC device. To begin driver and software installation, insert the ANL-929A-PC USB Microphone CD into the CD-ROM drive and the screen shown in Figure 5.2 will appear. Click **Install ANL-929A-PC USB Microphone** and the screen shown in Figure 5.3 will appear.

Figure 5.2 - ANL-929A-PC USB Microphone CD Main Screen



Click **Install** to begin installation and the screen shown in Figure 5.4 will appear.

Figure 5.3 - ANL-929A-PC Install Wizard



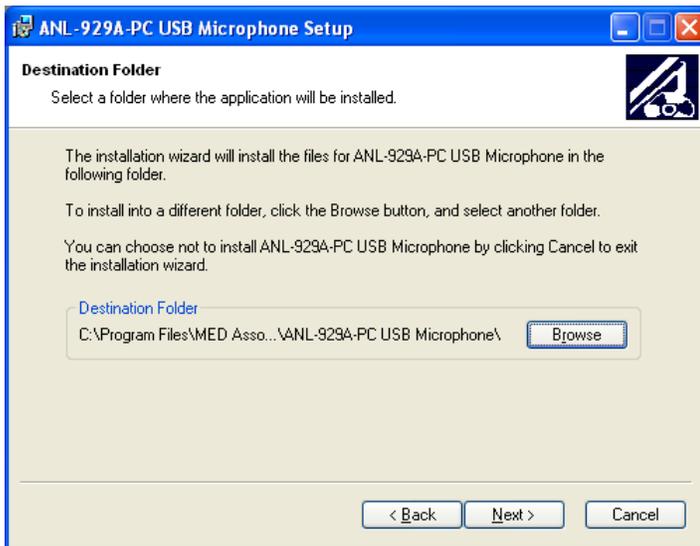
Once the screen shown in Figure 5.4 has appeared, close all other Windows programs and select **Next**. The screen shown in Figure 5.5 will appear.

Figure 5.4 - Microphone Installation Wizard



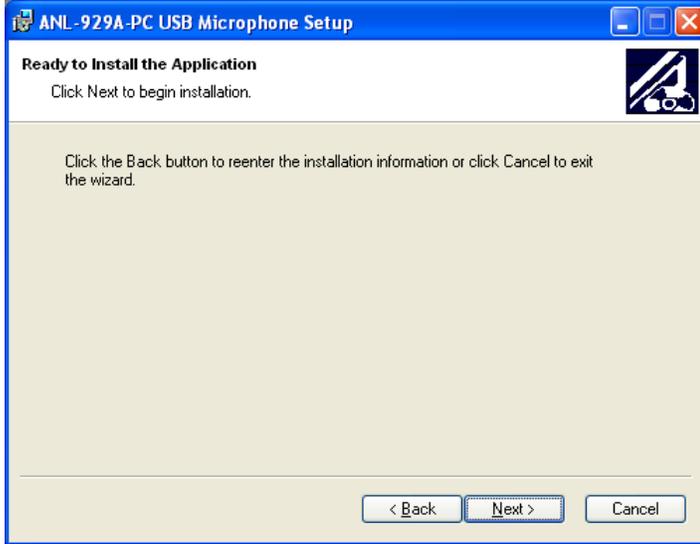
If the destination folder shown is correct, select **Next** and the screen shown in Figure 5.6 will appear. If the destination folder should be changed, select **Browse** and select the desired folder.

Figure 5.5 - Select Destination Folder



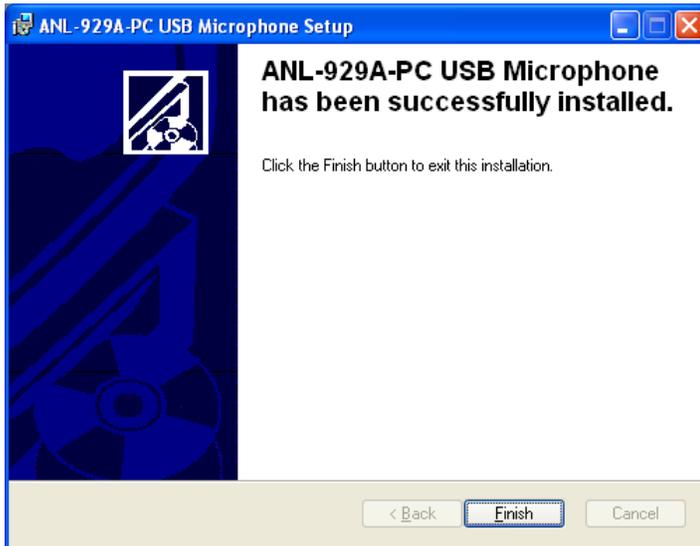
If ready to proceed with installation, select **Next**. If any installation information needs to be reentered, select **Back**.

Figure 5.6 - Ready to Install the Application



When the screen shown in Figure 5.7 appears, select **Finish** to close this window.

Figure 5.7 - Software Installation Complete



If the driver and software have been successfully installed, the screen shown in Figure 5.8 will appear. Successful installation is indicated by a green check mark and a red X indicates unsuccessful installation. Please contact MED Associates Software Technical Support if any portion of the installation is unsuccessful. Click **Finish** to close this screen.

Figure 5.8 - Driver and Software Installation Complete



Next connect the +6 VDC inverter, the microphone, and the USB cable to the ANL-929A-PC USB device, see 0 of this manual for further information. The screen shown in Figure 5.9 will appear. Select **Install the software automatically (Recommended)** and click **Next>** to install the MED generic USB driver.

Figure 5.9 - Install Generic USB Interface



The screen shown below will appear when the MED generic USB driver installation is complete. Click **Finish** to close this screen and the screen shown in Figure 5.11 will appear.

Figure 5.10 – Generic USB Board Driver Installation Complete



Select **Install the software automatically (Recommended)** and click **Next>** to install the MED USB Mic driver.

Figure 5.11 – Install MED Associates USB Mic Driver



The screen shown below will appear when the MED USB Mic driver installation is complete. Click **Finish** to close this screen. Driver installation is now complete.

Figure 5.12 - MED Associates USB Mic Driver Installation Complete



APPENDIX B | CONTACT INFORMATION

Please contact MED Associates, Inc. for information regarding any of our products.

Visit our website at www.med-associates.com for contact information.

For technical questions, email support@med-associates.com.