

Digidata 1550B Low-Noise Data Acquisition System plus HumSilencer Adaptive Noise Cancellation System Quick Start Guide

The Digidata® 1550B digitizer is a low-noise digitizer plus HumSilencer™ Adaptive Noise Cancellation System intended for electrophysiology experiments. It is a plug-and-play device that is automatically recognized by the Windows operating system, and supported by the included software, AxoScope software Version 11 (or newer), and by the optional pCLAMP Clampex software Version 11. There are three models of the Digidata 1550B digitizer, one of which excludes the HumSilencer Adaptive Noise Cancellation System. The other two models of the Digidata 1550B digitizer with adaptive noise cancellation (ANC) provide configuration through Analog Input Channels #0, or Analog Input Channels #0, #2, #4 and #6 to eliminate 50 Hz or 60 Hz line-frequency noise and associated high-frequency harmonics. This guide provides set up and configuration procedures only. Refer to the Digidata 1550B digitizer and pCLAMP software Version 11 user guides for more details.

Included Components

- Digidata 1550B digitizer
- Power cord
- USB 2.0 cable
- Software download instructions
- Printed Quick Start Guide

Recommended Computer System

- PC with a 2 GHz CPU (or faster)
- Windows 10, 11 (64-bit)
(Windows 7 (32-bit and 64-bit) is supported)
- 4 GB RAM (or more)
- 2 GB hard disk (or more)
- 1920 x 1080 (or higher) display system
- 3 USB 2 ports

Obtaining Support

Molecular Devices is a leading worldwide manufacturer and distributor of analytical instrumentation, software, and reagents. We are committed to the quality of our products and to fully supporting our customers with the highest level of technical service.

Our Support website—support.moleculardevices.com/—describes the support options offered by Molecular Devices, including service plans and professional services. It also has a link to the Molecular Devices Knowledge Base, which contains documentation, technical notes, software upgrades, safety data sheets, and other resources. If you still need assistance, you can submit a request to Molecular Devices Technical Support.

Please have your instrument serial number or Work Order number and your software version number available when you call.

Uninstalling Software

AxoScope software version 11 and the pCLAMP software version 11 only support Digidata 1440A Series digitizers and newer digitizers. The new software and drivers install without removing previously installed software and drivers, allowing you to continue to use any previously installed Digidata 1200, 132x, 1440A, or 1550 Series digitizers with earlier versions of AxoScope software or pCLAMP software. However, if you no longer use older installed digitizers and corresponding software, uninstall them using the Molecular Devices Uninstall utility before you begin the AxoScope software version 11 or the pCLAMP software version 11 installation procedure.

The uninstall procedure works similarly for previously installed AxoScope software and pCLAMP software. The file locations are similar, but the AxoScope software or pCLAMP software folders are identified by a different version number.

To uninstall the software:

1. Go to Windows **Start > All Programs > Molecular Devices** (or **Axon Laboratory**).
2. Open the folder for the software version to be uninstalled, such as pCLAMP **10.6**.
3. Select the version-appropriate Uninstall file, such as **Uninstall pCLAMP 10.6 Software**.
4. Follow the procedures on-screen to finish uninstalling the software.

Installing AxoScope Software or pCLAMP Software Suite

The following procedures install the new software for AxoScope software version 11 or the pCLAMP software version 11. The Digidata 1550B digitizer drivers are included in the installation. If you have purchased the pCLAMP software version 11 suite, install it instead of the AxoScope software.

To install the software:

1. Download the software installation files.



Tip: Contact Molecular Devices Technical Support for assistance.

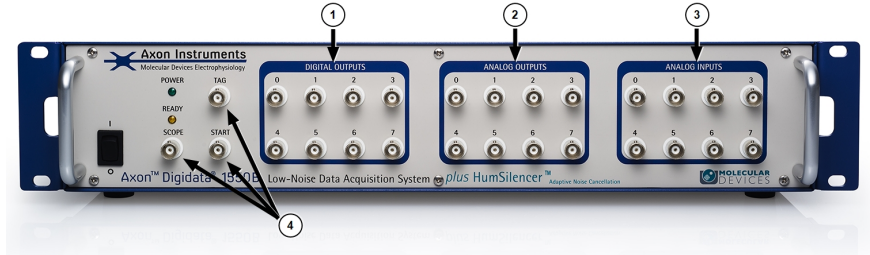
2. Double-click the **AxoScope_11_<n>.exe** or **pCLAMP_11_<n>.exe** file. The installation menu appears.
3. Follow the on-screen instruction to install the software.

(pCLAMP Only) Installing the Security Key

If you install the pCLAMP software version 11, insert the provided Clampex 11 USB dongle (black, part number 5060221) into any USB port on the computer connected to the digitizer. Depending on your software license, you might receive two dongles, one for data acquisition and one for data analysis. The black Clampex software dongle must be connected to a USB port on the computer connected to the digitizer for data acquisition. Dongles for any previous versions of the Clampex software are invalid.

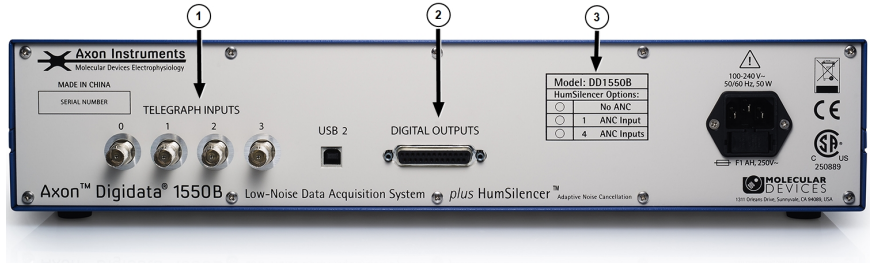
Hardware Overview

The following illustrates the main sections of your digitizer.



Front Panel

Item	Description
1	Digital Outputs
2	Analog Outputs
3	Analog Inputs
4	Digital Triggering



Rear Panel

Item	Description
1	Telegraphs
2	Digital Outputs
3	Number of Channel Inputs that the HumSilencer Adaptive Noise Cancellation System (ANC) can use DD1550B—no ANC Inputs DD1550B1—ANC on Input Channel #0 DD1550B4—ANC on Input Channel #0, #2, #4, #6

Installing the Digidata 1550B Digitizer

To install the Digidata 1550B digitizer:

1. Connect the power cord to the wall, and then to the Digidata 1550B digitizer rear panel **AC POWER** input connector.
2. Attach the USB 2.0 cable to a **USB 2** or **USB 3** port on the computer, and to the digitizer.
3. Switch on the power on the Digidata 1550B digitizer.
The green **POWER** light is continuously on only when the digitizer is powered on and the USB cable is connected to a running computer.
Windows automatically finds the new hardware, and installs the drivers.
4. Let the Digidata 1550B digitizer warm up for one hour before you perform experiments.
5. Configure AxoScope software version 11 or pCLAMP software version 11 for use with the Digidata 1550B digitizer.

Configuring Software for Digidata 1550B Digitizer Use



CAUTION! After the unit is powered on, the first time it is initialized by the software, the analog output channels send out a brief negative spike (~-10 V/25 ms and -5 V/270 ms). Make sure that the analog outputs are not connected to any equipment that can be damaged by such voltages during the startup period.

This configuration procedure applies to AxoScope software version 11 and Clampex software version 11. Demo configuration is active by default.

To configure the digitizer to work with AxoScope software or Clampex software:

1. Double-click the AxoScope software or Clampex software icon on the computer desktop.
2. Click **Configure** > **Digitizer** to open the **Digitizer** dialog, then click **Change**.
3. Select **Digidata 1550B Series** from the **Digitizer Type** list.
4. Click **Scan** to detect the digitizer. The first detected digitizer is assigned **0** and listed as **Available**. The **Configuration** information changes from **Not present** to reporting the selected digitizer model number, serial number, firmware version, HumSilencer channel availability (0, 1, or 4), and the **OK** button is enabled.
5. Click **OK**.
Updating the digitizer information can take up to one minute, after which the **Digitizer** dialog displays the active digitizer configuration details.
6. Click **OK**.

After warming up (allow one hour), the Digidata 1550B digitizer is ready for experiments.

Contact Us

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