



Electrophysiology

Automated

- [IonWorks Barracuda](#)
- [IonWorks Quattro](#)
- [PatchXpress 7000A](#)
- [OpusXpress 6000A](#)

Conventional

- [Amplifiers Intro](#)
- [Innovative Uses](#)
- [Data Acquisition Intro](#)

Microelectrode Amplifiers

- [Axoclamp 900A](#)
- [MultiClamp 700B](#)
- [Axopatch 200B](#)
- [Headstages & Holders](#)
- [Model cells, Odd bits](#)

Single-Cell Electroporator

- [Axoporation 800A](#)

Data Acquisition and Analysis

- [Digidata 1440A](#)

Axoclamp 900A



Microelectrode Amplifier Current Clamp And Voltage Clamp

Computer-Controlled High-Compliance Current Clamp and Voltage Clamp

The **Axoclamp 900A** is a complete microelectrode current-clamp and voltage-clamp amplifier, useful for a wide range of intracellular microelectrode recording techniques. Like its predecessor, the Axoclamp-2B, the Axoclamp 900A has a wide range of functionality and has many enhancements that improve amplifier recording capability, make the amplifier easier to use, and help your experiments last longer.



The Axoclamp 900A has several modes of operation:

- ⇒ I-Clamp: two independent bridge amplifiers for voltage measurements
- ⇒ DCC: discontinuous current clamp for accurate voltage measurements, even when electrode resistance changes
- ⇒ TEVC: high-compliance two-electrode voltage clamp for oocytes and mammalian cells
- ⇒ dSEVC: discontinuous single-electrode voltage clamp for small cells with large currents
- ⇒ HVIC: high-voltage current clamp for extracellular applications such as iontophoresis

Note that this amplifier does not have continuous single-electrode voltage clamp mode. However this mode **is** available in our patch-clamp amplifiers: the MultiClamp 700B and Axopatch 200B. Please see the [amplifier comparison chart](#) for more details on the features of our amplifiers.

Software Control

Instead of the usual front panel knobs and switches, the Axoclamp 900A is controlled by the **Axoclamp 900A Commander**, a program that runs on a Windows PC computer (see Requirements below) and communicates with the amplifier via a USB 2.0 interface. This control interface reports resistance, voltage, and current measurements and provides automation of Bridge Balance, Pipette Offset, and Pipette Capacitance Neutralization. In addition it has "smart" features that protect cells from potentially damaging signal oscillations and automate mode changes based on internal signal thresholds or externally-applied signals. Amplifier settings such as gain, filter frequency, recording mode and input/output scale factors are automatically telegraphed to the pCLAMP 10 data acquisition software via the USB connection.

Microelectrode Amps

- [Literature](#)
- [Amplifiers Support](#)
- [Axoclamp Commander Updates](#)
- [MultiClamp Commander Updates](#)

Comparison Charts

- [Microelectrode Amplifiers](#)

App Note Challenge

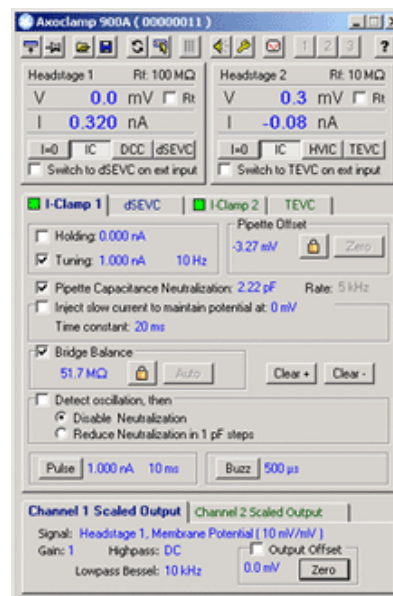
- [Molecular Devices Application Note Challenge](#)

Part #: AXOCLAMP 900A

Axoclamp 900A
Microelectrode 2-
electrode Voltage Clamp
(requires two HS-9A
headstages - purchase
separately)

[Login to Request a Quote](#) or see [pricing](#)

LOGIN



Optional SoftPanel

Although the Axoclamp 900A is a computer-controlled amplifier, the mouse and/or keyboard is not the only means of controlling the instrument. The optional SoftPanel was designed for those who prefer the more conventional feel to amplifier control of knobs and buttons. By way of a USB connection, the SoftPanel physically replicates all essential amplifier functions by acting as a hardware extension of the Axoclamp 900A Commander software. SoftPanel knobs replicate continuous mouse controls ("gliders"), while buttons replicate single-click mouse controls.



System Requirements

Computer Control

The Axoclamp 900A Commander program runs on Windows XP/2000 operating systems.

Two USB 2.0 ports are required to connect the computer to the Axoclamp 900A: one for amplifier control and one for Monitor signal display on the computer screen for discontinuous modes. An additional USB port is required if the optional SoftPanel is used to control the amplifier.

Experimental Control And Data Acquisition

Although the Axoclamp 900A is controlled by a software interface, it remains a conventional analog input/output amplifier. Thus, it requires a separate system for controlling stimulus protocols and recording the output, such as a digitizer and data acquisition software. The Digidata 1440A digitizer and pCLAMP 10 data acquisition and analysis software from Molecular Devices, work together to provide the most complete, integrated solution. **Note:** automatic telegraphing of the Axoclamp 900A amplifier requires pCLAMP 10 software and a Digidata 1440A or Digidata 1320 series digitizer.

Excellent Comprehensive Manual

We also provide a detailed User Guide that serves as a handbook of procedures for microelectrode users. Tutorials written by Axon Instruments staff and scientific consultants provide a useful guide to the operation of the instrument and are informative references for several electrophysiological techniques.

Ordering Information

Axoclamp 900A

The Axoclamp 900A* main unit comes standard with:

- ➔ One Remote BUZZ Box: works for both channels
- ➔ One Clamp-1U model cell
- ➔ Two HL-U electrode holders
- ➔ One Axoclamp 900A Commander software CD
- ➔ Two USB cables
- ➔ Two headstage baseplates
- ➔ Theory and Operation User Guide (printed)

*Two HS-9A headstages (e.g., HS-9A x0.1, HS-9A x1 or HS-9A x10) must be ordered with the Axoclamp 900A.

[↑ TOP](#)

For Research Use Only. Not for use in diagnostic procedures.
Unless otherwise indicated, all trademarks are the property of Molecular Devices, Inc. ©2010 Molecular Devices, Inc. Produced in the US.
[Privacy Policy](#) | [Terms and Conditions](#) | [Trademarks & Logos](#)