



Newsletter

AT A GLANCE

DIGITIZER SUPPORT

- OS X : ITC-18
- Win XP : ITC + Digidata
- More options soon

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Digitizers Supported by AxoGraph X

If you are planning to set up a new data acquisition rig using AxoGraph X for OS X, the only digitizers currently supported are from Instrutech (ITC-18 or ITC-1600). We recommend the ITC-18 with a USB interface. Instrutech digitizers can now be ordered from HEKA (sales@heka.com).

Why HEKA? On November 1st, HEKA announced that it had bought the assets of Instrutech, and will continue manufacturing, marketing and supporting their ITC-18 and ITC-1600 data acquisition interfaces.

If you are using AxoGraph X for Windows XP, there is an additional option. In addition to Instrutech digitizers, AxoGraph X supports the [Digidata 1440A](#) from Axon Instruments / MDS (info@moldev.com).

Digidata 1320 series digitizers are supported under OS X, but they are no longer sold or supported by Axon Instruments / MDS. AxoGraph X for Windows will supported these digitizers soon.

National Instruments digitizers

AxoGraph X 1.1 adds preliminary support for relatively cheap National Instruments (NI) [M-series](#) digitizers under both OS X and Windows. Our test platform uses an NI PCIe-6251 digitizer card in a Mac Pro.

Unfortunately, we have identified a technical problem in NI's OS X driver that limits the accuracy of the acquired data. We are working with senior NI engineers to address the problem. At present, only the analog input and output channels are supported - no digital inputs or outputs.

Support for more digitizers coming soon

- HEKA have recently announced a USB-based digitizer, the [LIH 8+8](#), and we will be supporting this product in AxoGraph X.
- Work has begun on writing an OS X driver for the [Digidata 1440A](#). We are disappointed that Axon Instruments / MDS has decided not to do this job themselves. It is a technically challenging project, but we hope that it will be complete early next year.



AT A GLANCE

VERSION 1.1

- Leopard compatible
- Dual electrode test pulse
- NI Digitizer support

AxoGraph X update available

Version 1.1 for Mac OS X and beta 7 for Windows XP

New features in version 1.1

Leopard: fully compatible with OS X 10.5

National Instruments Digitizers: preliminary support for PCIe-6251

Test Pulse: simpler and more flexible

- automatically switch from Test Seal to Test Cell mode
- deliver pulses to two electrodes simultaneously

Power Spectrum: new option to divide each trace into segments and calculate the average power spectrum of the segments

- improves performance when working with long data traces
- produces a cleaner power spectrum at higher frequencies

Histogram: three new 'confidence' options help visualize confidence intervals for histogram bin counts

- add positive and negative error bars to each histogram bin
- add two traces showing the 95% confidence limits (upper and lower)
- bootstrap resample from the amplitude data, and construct several alternative histograms. The resampled histograms can be used to test the reliability of the subsequent analysis

Bug fixes

Fixed problems with internal trigger mode / multi-channel acquisition

Event Detection package:

- fixed scaling problem with rise-time and half-width measurements
- fixed measurement of event onset times when processing in segments

Improved import of event markers (tags) from AxoGraph 4.9 Chart files and ABF files.

Fixed a crashing bug in All-In-One Window Mode.

[Click here](#) to download version 1.1 of AxoGraph X.



AT A GLANCE

TOUGH LAB TEST

AxoGraph X for Windows was used at an intensive neuroscience teaching course

Six rigs, three weeks, ten hours a day - robust performance

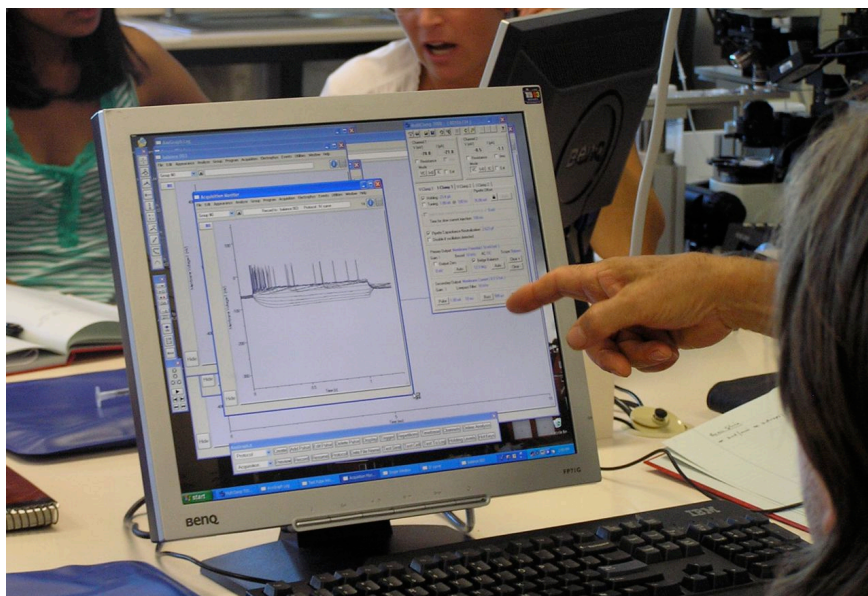
AxoGraph X for Windows at ACAN

The Australian Course in Advanced Neurosciences (ACAN) is Australia's answer to the legendary neuroscience training programs at Woods Hole and Cold Spring Harbor in the US. ACAN is held each April at the University of Queensland's marine biology research station on North Stradbroke Island. The course was established in 2004 by Alan Finkel, the founder of Axon Instruments.

A small group of neuroscientists take over a teaching lab and assemble six electrophysiology rigs in three days - a phenomenal effort! Then the students arrive and spend three intense weeks, with morning lectures, and afternoon and evening lab exercises.

This year, the teaching lab used AxoGraph X for Windows combined with a Digidata 1440A and a MultiClamp 700B. AxoGraph ran ten hours a day on six rigs for three weeks. Each day a new experiment paradigm meant new data acquisition protocols. The students were also encouraged to use AxoGraph X for their offline data analysis and figure preparation for their final reports. It performed reliably throughout this tough real-world lab test.

AxoGraph X for Windows will be available for sale in January 2008.



AxoGraph X in action at ACAN



AT A GLANCE

HOW TO UPGRADE

- Manually uninstall old version
- Install new version

How to upgrade to AxoGraph X for Windows beta 7

The latest Windows upgrade includes all the new and improved features found in version 1.1 for Mac OS X. Preliminary support for National Instruments M Series digitizers is present, but this has not been extensively tested. Currently only analog output channels are supported. We are exploring with National Instruments engineers whether digital outputs can be supported.

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AxoGraph X for Windows XP has yet to be commercially released, because it is missing several features expected in a professional-quality program. One of those missing features is a proper installer. The current beta installer does not automatically remove a previously installed version of AxoGraph X. You need to manually uninstall the previous version before running the new installer. Here are step-by-step instructions.

To remove a previous version...

- In Windows Explorer, click 'Start' and select 'Control Panel'
- Click 'Add or Remove Programs'
- Find 'AxoGraph X' in the list and click the 'Remove' button

To install the latest version...

- Download the installer from axographx.com
- It will unzip to a folder named 'AxoGraph_Installer'
- Open this folder and double-click 'Setup.exe'

If you want to perform data acquisition with AxoGraph X for Windows, you will need to separately download and install the appropriate digitizer driver. Either the...

- Digidata 1440 driver, or the
- Instrutech driver (supports full range of digitizers and interfaces)
- National Instruments NI-DAQmx driver

These drivers are available via the download page: axographx.com