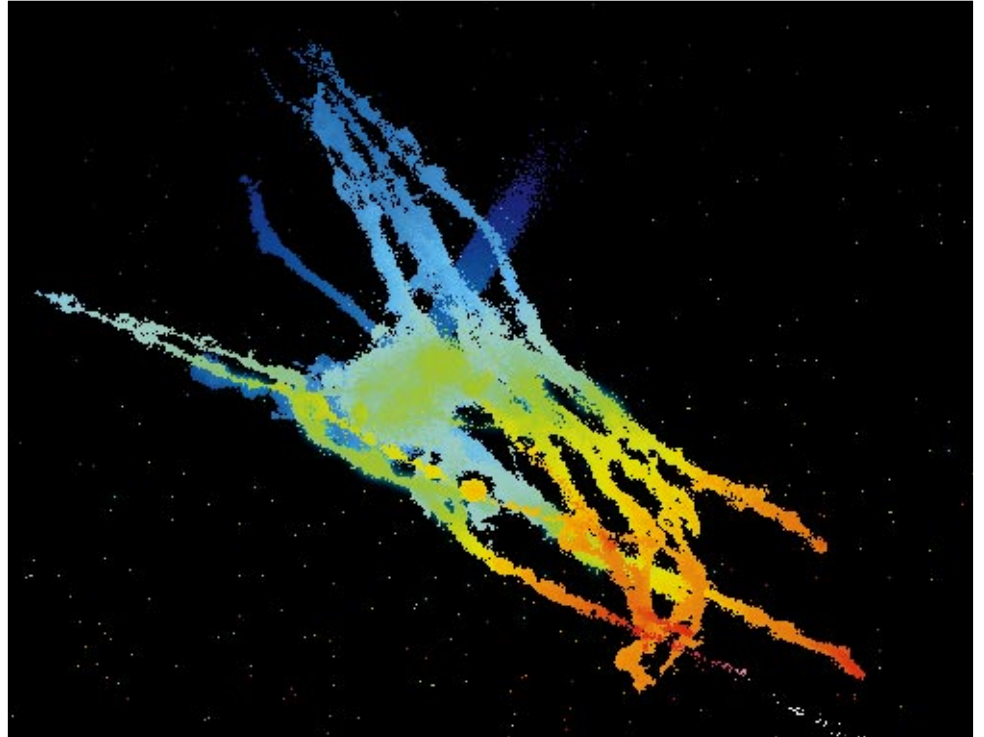


TIDA

Software for physiological data acquisition and analysis under MS-Windows '95/NT



Features

- Digital Oscilloscope
- EPC 9 Driver Software
- Macro Language for acquisition and complex stimulation
- Up to 8 channels data acquisition
- Data Fit
- Scatter Diagrams
- Event Detection and Counting
- Statistical Analysis



TIDA - a sophisticated program for electrophysiological experiments

TIDA offers the optimal tool for electrophysiological measurements. Patch-clamp recordings can be controlled with ease in combination with a digitally controlled EPC 9. Using the analog-digital interface ITC-16* the program can be used to record the data from any other patch-clamp amplifier (e.g. EPC 7), other voltage-clamp amplifiers or even from extracellular recording setups. Enhance, measure and classify the curves with precision and ease. Choose from our pool of processing and analyzing routines to evaluate your experimental data. Then easily output the processed results to commercial desktop publishing, spreadsheet, data analysis, or plotting programs.

TIDA is easily adaptable to any individual approach for performing electrophysiological experiments. Operating under the popular MS-Windows '95/NT, TIDA has a superior, ergonomic, graphical user interface. Engineered and improved in leading physiological labs, it is easy to use, intuitive and efficient. This eliminates days of training and human errors. Running within the MS-Windows '95/NT environment (overcoming current DOS limitations) also means access to megabytes of memory, multi-tasking, data exchange via clipboard and a migration path to future computer and software systems.

Oscilloscope

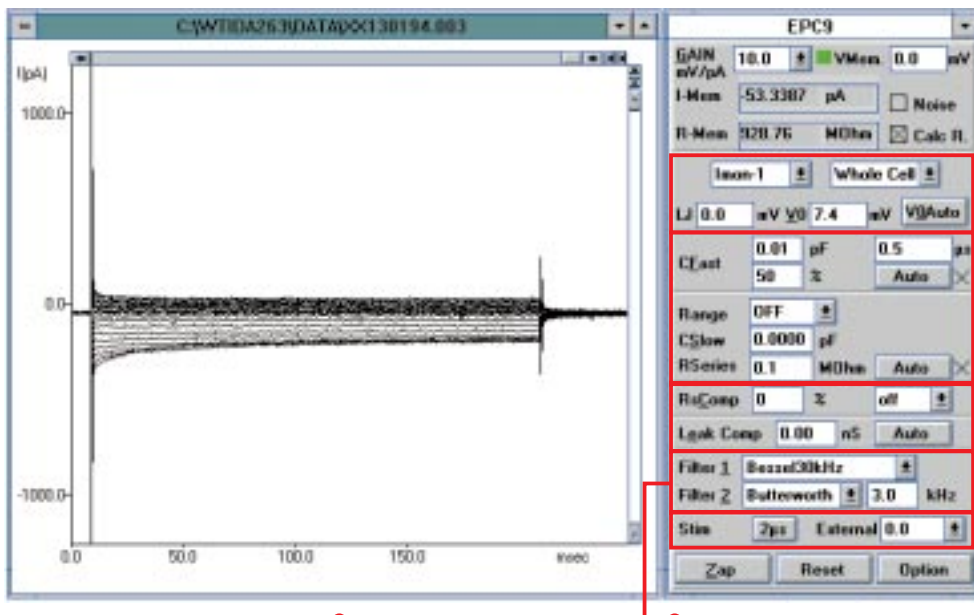
A fast oscilloscope-like display with "storage" capability and variable magnification is available for observing seal formation and recording of current or voltage.

Pulse Generator

A sophisticated programmable stimulator generates pulse patterns and thus provides support of pulsed and continuous recordings of up to 8 fast input channels.

EPC 9 Window

The interface of the direct linkage to the EPC 9 driver software is fully incorporated into TIDA.



Filters

Two built-in high quality hardware filters perform excellent signal conditioning and remove the expense of purchasing additional filter instruments.

Stimulus

The stimulus can be filtered with a defined time constant and an external pulse can be attenuated.

Controls

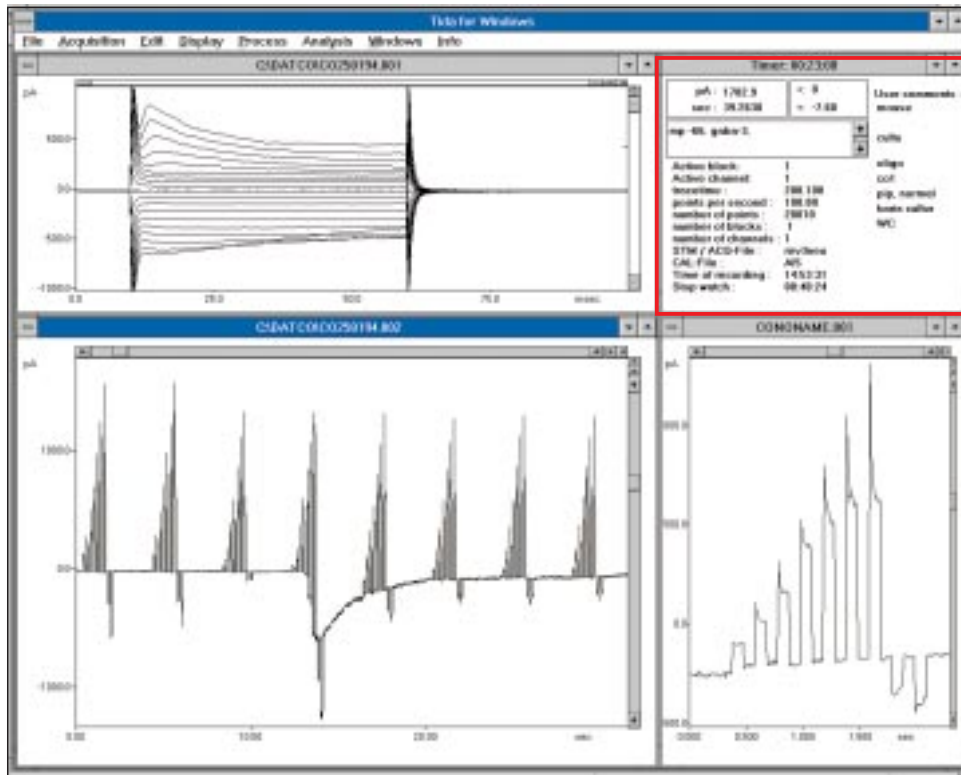
All bios can be adjusted either using mouse or keyboard while simultaneously stimulating and recording.

Automatic Compensations

Automatic routines for transient and artifact compensations perform these tasks faster and more accurately than even the most experienced experimenter.

Rs and Leak Compensation

The series resistance compensation corrects for membrane voltage errors under conditions of high access resistance between pipette and cell interior. The leak compensation depresses passive currents.

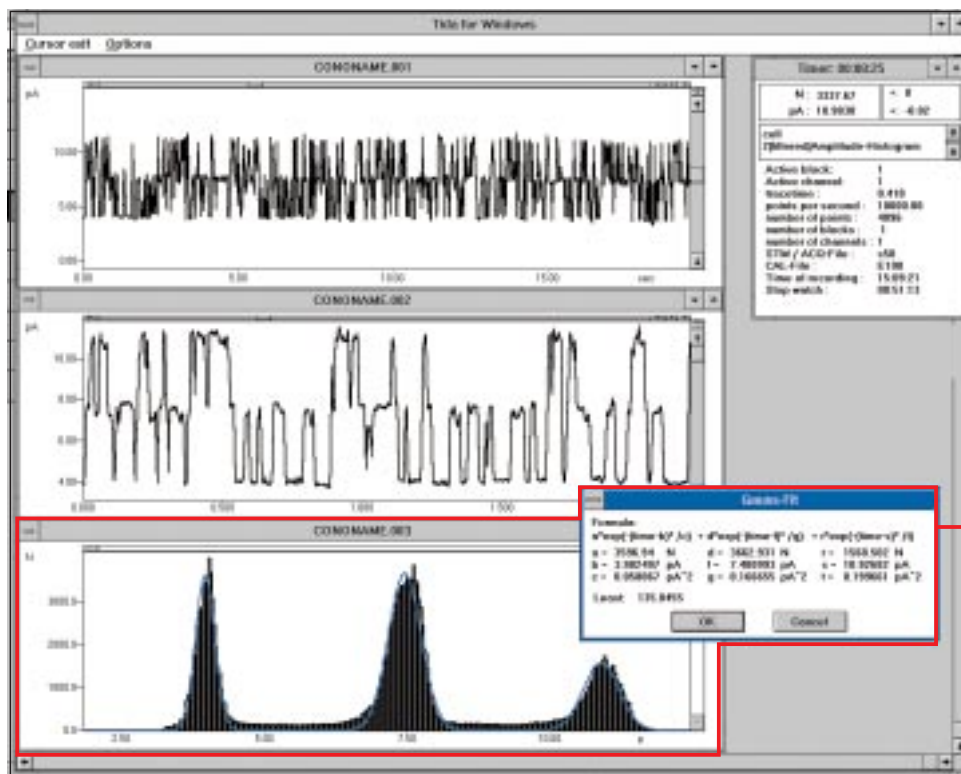


Display windows

TIDA shows different data-sets simultaneously as well as enlarging interesting details. The active window can be easily analysed and printed.

Infobox

The infobox always displays important experimental parameters and the user's comments.



Result window

Various analysis functions can be performed on data-sets resulting in histograms, graphs or tables. The given example shows a single channel recording together with its amplitude histogram and the corresponding Gaussian fit.

Acquisition

- Full support of the computer controlled amplifier EPC 9.
- Support of the EPC 8, EPC 7 and other amplifiers via the ITC-16/18* acquisition board.
- Function generator.
- Built in macro language for external stimulation recording.
- Complex stimulation commands e.g. sine waves.
- Oscilloscope mode.

In/Out & data management features

- Import of PClamp, ASCII.
- Export to ASCII-Format.
- Printouts on any MS-Windows '95/NT printer.
- Graphical data exchange via clipboard.
- Generation of report lists.
- Logging of results and performed operations in editable text files.
- Individual preferences for different users.

Graphical representation

- Access multiple data windows at the same time.
- Zoom by click and drag.
- Absolute and relative cursor measurement.
- Display of relevant parameters.

Processing

- Horizontal and vertical mirroring of data.
- Interactive drift and offset correction.
- Automated offset correction in voltage jump protocols.
- Digital filters for reducing noise (Bessel, Butterworth, Chebyshev and Median characteristics).
- Basic arithmetical operations (Add., Subt., Multipl. & Div. of different traces).
- Averaging.
- Leak subtraction.

Analysis & statistical features

- Derivation.
- Integration (Area measurement).
- Scatter diagrams (i.e. current vs. voltage).
- Amplitude histograms.
- Open/Close time distributions.
- Statistical analysis (mean, variability, standard deviation).
- Line, single and double exponential, and Gaussian (up to 3 peaks) fits

Hardware and software requirements:

- IBM-386, -486, Pentium or 100% compatible computer.
- 8 MB of RAM and 5MB minimum of free harddisk space.
- Microsoft-Windows '95/NT
- One free PCI- or ISA-compatible slot (3/4 length) for the acquisition interface card.
- EPC 9 patch clamp amplifier or ITC-16/18* interface board

For printouts:

- Any MS-Windows '95/NT compatible printer or plotter.

*Instrutech Corporation, N.Y.

Related Products

EPC 9

The fully computer controlled patch-clamp amplifier with built-in interface board.

EPC 8

The successor of the EPC 7. Manual or digital control selectable.

EPC 7

The classic patch-clamp amplifier for single channel and whole-cell measurements.

PIP 5

Temperature controlled micro pipette puller.

Service & Support

As the first manufacturer of patch clamp amplifiers in the world HEKA knows the needs of scientists. We provide exceptional pre and post sales customer support from our trained international sales representatives and our own technical support advisors. With thousands of high performance hardware and software products in daily use worldwide we understand all aspects of data acquisition systems not just the software. You can get everything from signal conditioning and acquisition to analyzing and data backup systems from one supplier, to avoid compatibility headaches.

We reserve the right to effect technical changes as development progresses. Special versions are available on request. Further technical data are provided by a detailed description, which is available on request. A guarantee of one year applies on all instruments.

HEKA Elektronik
Dr. Schulze GmbH
Wiesenstraße 71
D-67466 Lambrecht/Pfalz
Germany

Phone +49 (0) 63 25 / 80 36
Fax +49 (0) 63 25 / 80 39
Web Site <http://www.heka.com>
Email sales@heka.com
support@heka.com

Picture front page: Oligodendrocyte in the corpus callosum. T. Möller, MDC, Berlin