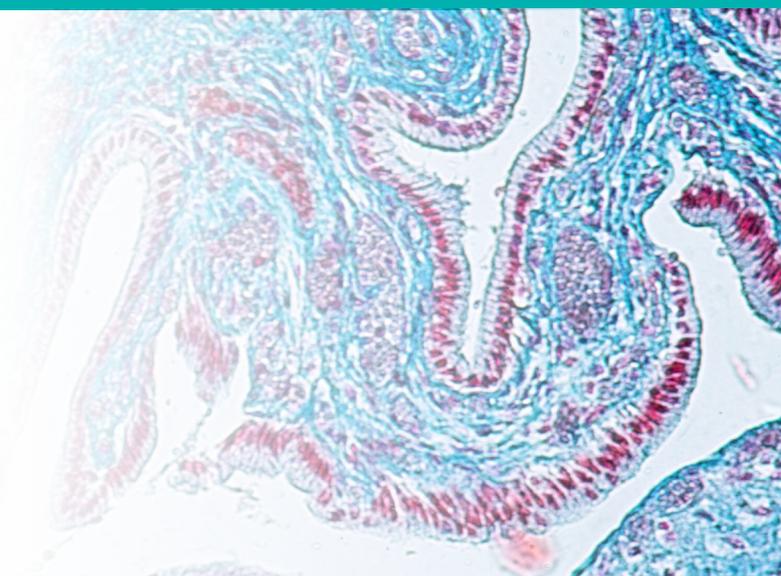
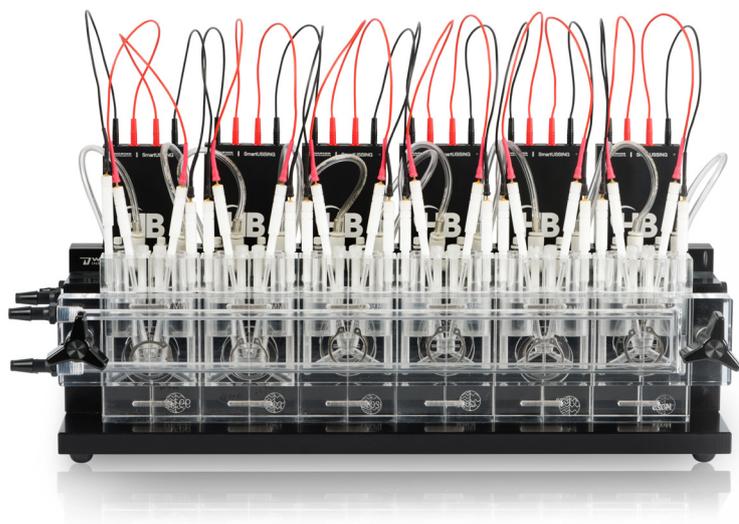


SmartUSSING

The easiest Ussing chamber system you'll ever use.



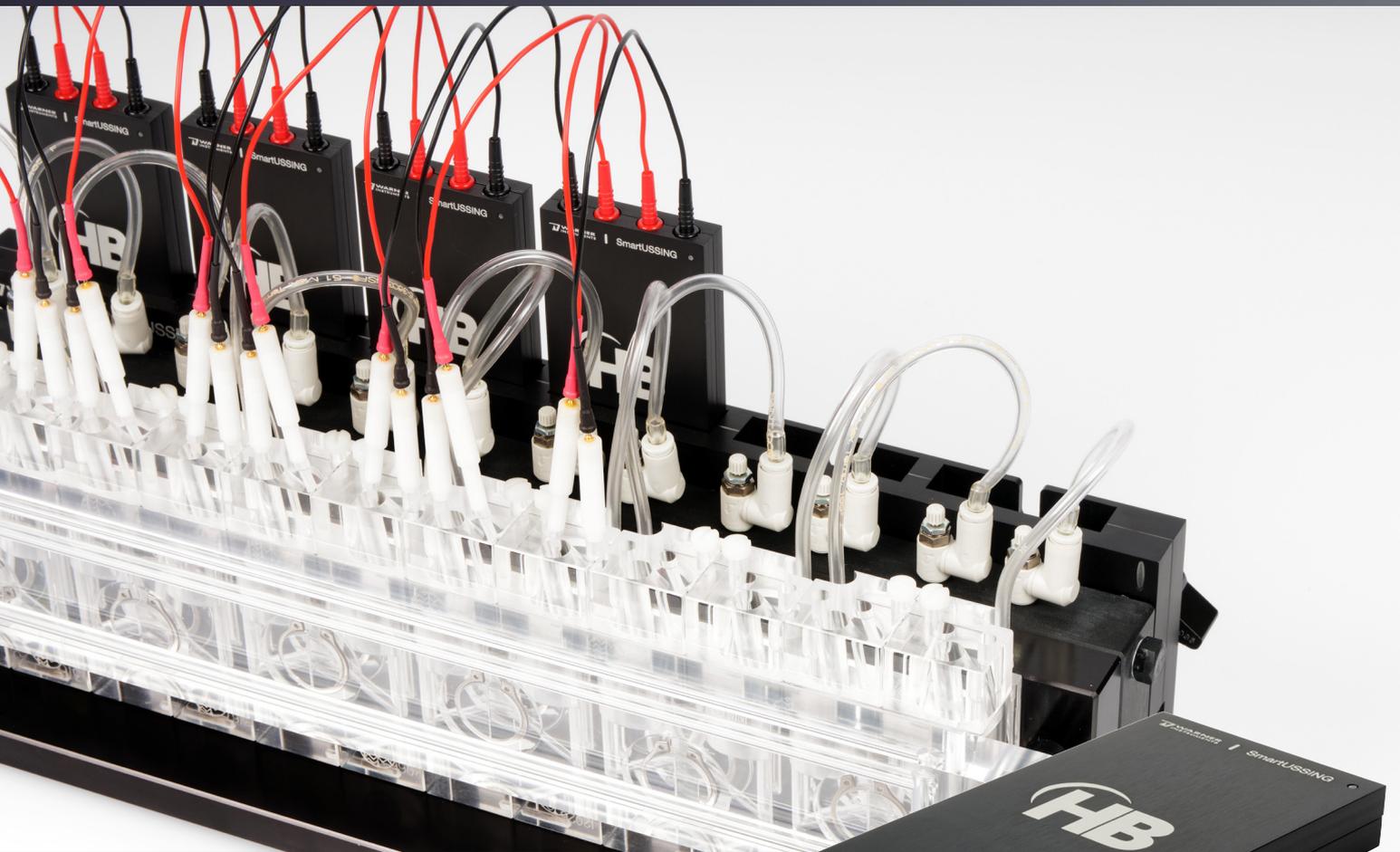
- **Automatically calibrate amplifiers** in seconds
- Modern, easy-to-use software
- Space-saving design



WARNER
INSTRUMENTS

An Affiliate of Harvard Bioscience, Inc.

We make electrophysiology easy.

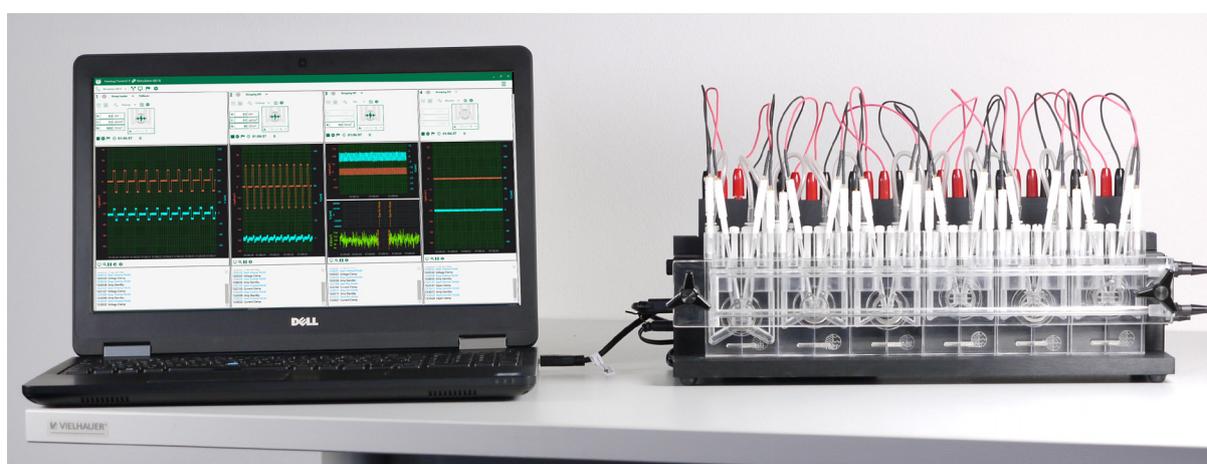


Electrophysiology doesn't need to be intimidating anymore. SmartUSSING is the first Ussing chamber system that's designed for biologists: it's easy to set up, easy-to-use, and makes recording and analyzing your data significantly easier than with traditional Ussing systems.



Want more space on the bench?

SmartUSSING's powerful, compact mini-amplifiers snap directly onto the back of the chamber holder, eliminating the need for bulky external amplifiers, preamplifiers, and long cables. The entire system requires half as much space as a traditional vertical Ussing system.



Calibrate your amplifiers automatically, in just a few seconds.

Most Ussing systems require each amplifier to be manually calibrated, which can be challenging and time-consuming. With SmartUSSING, there's zero manual calibration required – all amplifiers are calibrated automatically with just two clicks in the software. Just plug in the base, plug in the amplifiers, and let the software do the work for you.

Number of setup steps:

70+ 10

Traditional Ussing System

SmartUSSING

Time to calibrate amplifiers:



Traditional Ussing System



SmartUSSING

No more mistakes. No more wasted money.

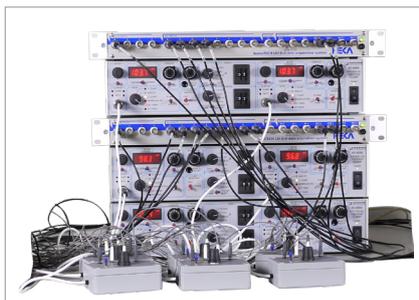
Manually calibrating amplifiers leaves room for errors in your data, which means repeated experiments and lost time and money. SmartUSSING's software-controlled amplifiers eliminate this risk – your calibrations are done automatically and saved with your data, so there's no more worrying about whether you can trust your results.

Reduced electrical interference = better quality data.

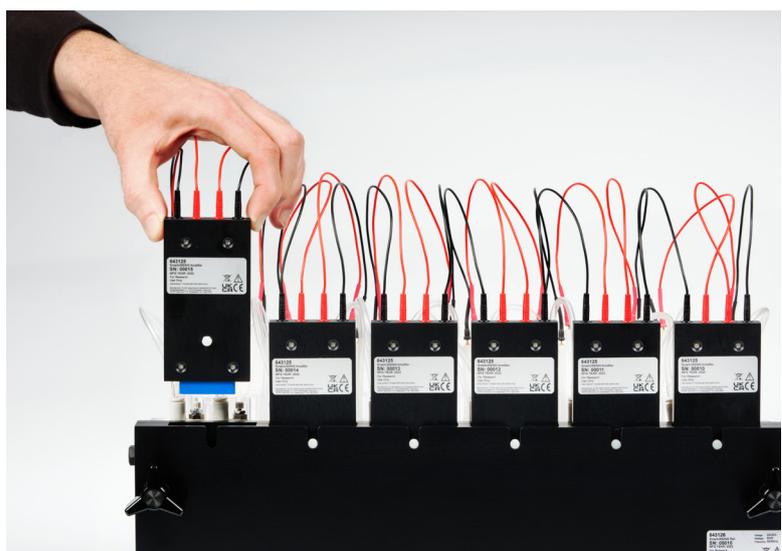
Long cables cause more than just clutter. Electrical interference on your recordings can contribute to artifacts in your data, making it both harder to interpret and less reliable.

SmartUSSING's electrode cables are only 20cm long, which reduces the amount of noise you'll pick up. SmartUSSING makes your experiment easier to run every step of the way.

Integrated Electronics for a Reduced Footprint



Legacy amplifier setup needed for Ussing experiment control



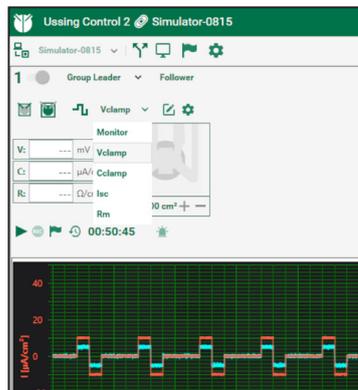
Software that's designed by biologists,
for biologists.



Key Features

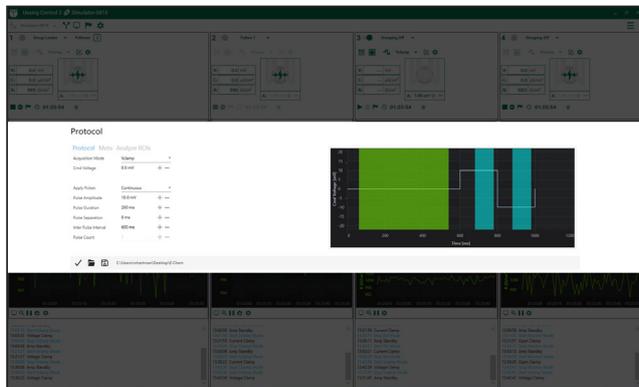
- Integrated Lab book allows real time documentation of experiments
- User can assign time stamps to the recordings
- Export results and log files to HDF5 and Excel files.

Our Ussing Control software is modern, easy-to-use, and has all the features a biology lab needs – and that's because it was designed by a biologist. Ussing Control allows you to see data from each amplifier individually, or run groups of parallel experiments and view data from each group. It's much simpler to use than your average data acquisition software.



Predefined protocols for all modes

- Voltage clamp
- Current clamp
- Isc
- TEER
- And more



Protocol editor

- Specify pulse attributes and timing
- Save protocols to re-use in the future



Flexible recording & view modes

- Choose a unique recording mode for each chamber, or set all chambers to the same mode
- Quickly switch view mode from analyzer to raw data

Train your team at light speed.

If your team is constantly rotating, the steep learning curve that comes with a traditional Ussing system can cut into productivity. SmartUSSING and Ussing Control **cut training time from days down to hours**, making your team more effective and freeing you up for more important work.



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