The Patchliner. Because quality does matter.
The Patchliner: Electrophysiology in the fast lane

- Premium data quality and GΩ seals
- Unprecedented flexibility and user control
- High success rates
- Voltage and current clamp recordings
- Fast solution exchange
- Whole cell and single channel recordings
- Voltage- and ligand-gated channels
- Primary cell and stem cell recordings
- Advanced temperature control
- Dynamic clamp

Press one button and walk away – 48 cells in one run

The Patchliner is a fully automated bench-top patch clamp platform, recording from up to eight cells simultaneously with GΩ seals. Short set-up times, stable whole cell recordings and sophisticated software allow efficient screening of compounds and ion channels.

The Patchliner supports:
- Full dose response curves from individual cells
- Up to 100 dose response curves per day (600 d.p.)
- Analysis of up to 300 compounds per day
- Built-in compound redundancy check
- Efficient data analysis – a couple of clicks and that’s it!

Unlimited experimental freedom

No other automated platform on the market combines the tremendous experimental flexibility, data quality and increased throughput the way the Patchliner does!

The Patchliner features:
- Excellent voltage clamp of the cellular membrane
- Primary cell recordings as reported in Nature*
- Heatable pipette – fast temperature jumps
- Fast solution exchange
- Automated current and dynamic clamp recordings
- Internal solution exchange

chip resistance: 2 MΩ (customized resistances available)
seal resistance: > 1 GΩ
series resistance: < 10 MΩ
liquid consumption: ~ 25 µl / compound
perfusion time constant: < 20 ms
minimum exposure time: 200 ms
whole cell stability: > 30 min
successful whole cell recording: 70 - 90 % (consistent between cell lines)
throughput: 250 - 600 data points / day

**Technical Specifications**

**The Patchliner platform includes:**
- Patchliner Quattro: 4 amplifier channels
- Patchliner Octo: 8 amplifier channels
- 1-2 EPC 10 Quadro amplifiers
- PatchControl HT and PatchMaster software
- Patchliner Data Analysis Package (incl. Igor Pro)
- On-site installation support

**Size and weight:**
Size (l x w x h): 62 x 56 x 53 cm
Weight: 20 kg

**Best of all worlds: throughput, performance, versatility**

With the Patchliner you can have it all. Efficient routine screening in voltage clamp mode or automated action potential recordings from stem cell-derived cardiomyocytes – it’s your choice!

Patchliner’s ability to perform automated current clamp recordings in combination with great compatibility with stem cell-derived cardiomyocytes allow cardiac safety testing in both recording modes. **Dynamic clamp** has also been successfully combined with the Patchliner.

So, why compromise? The Patchliner accelerates your drug discovery projects through excellent data quality, unique experimental features, smart software and inexpensive consumables. Ask us how!

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“Metrion is a company specializing in ion channel drug discovery and development, and we have invested in Patchliners because their flexibility and adaptability allow us to utilize this technology to meet the differing needs of our various screening projects. The targets we study require high quality electrophysiological recordings, and we have found that the Patchliner can deliver such output with a high success rate for a range of different ion channels and heterologous cell lines. Nanion has been extremely helpful in customizing the software to fit our screening requirements, and I would happily recommend the Patchliner to anyone who needs reliable patch clamp instrumentation for their ion channel screening purposes.”

Dr. Marc Rogers, CSO, Metrion Biosciences, Cambridge, UK

“To invest in the Patchliner was a straightforward choice for the Vanderbilt Screening Center. This instrument combines a set of features that was particularly important to us. (...) Unlike other planar patch clamp devices we considered, the Patchliner gave us full access to the electrophysiology modes we require for a broad range of experimental protocols including voltage clamp, current clamp, standard whole cell, cell attached, and perforated patch configurations combined with a facile ability to exchange the internal solution. (...) In a short time the Patchliner has already begun to expand Vanderbilt investigators’ horizons regarding what they can accomplish with electrophysiology.”

Dr. David Weaver, Research Associate Professor of Pharmacology, Director of the Chemical Biology’s High-Throughput Screening Facility, Vanderbilt University, Nashville, TN, USA

“We acquired the Patchliner because of its high data quality output combined with versatile and unique experimental features such as temperature control and internal solution exchange. In our TRP-channel initiative, we record from diverse ion channels and cells, and Patchliner quickly delivered accurate data with minimal assay development required. The data throughput is substantially increased by Patchliner’s innovative hardware and software, supporting short cycle times between experiments, minimal redundancy in compound screening and unlimited user control of the experiments. We are convinced that the Patchliner allows us to progress faster towards new discoveries, and at the same time it gives us a competitive edge because of its vast experimental flexibility.”

Dr. Chris Fanger, Director of Lead Discovery, Hydra Biosciences, Boston, MA, USA