

Sole source arguments in favor of the BLM-WS Planar Lipid Bilayer Workstation

System features

- The Planar Lipid Bilayer Workstation (BLM-WS) from Warner Instruments is the **only complete system** of its kind.
- The BLM-WS is sold as a **single unit**.
- The BLM-WS is comprised of several **unique components**. This includes a dedicated bilayer clamp amplifier, a tabletop Faraday cage (includes a specialized vibration isolation table), a unique dual-dipole stirring apparatus, a low noise, low temperature halogen lamp, and a custom perfusion system.
- Warner also provides **unique accessories**, most notably a planar lipid bilayer thermocycler and on-site setup and training.

Component specific features

- *Bilayer clamp amplifier*: The **BC-535** is an instrument specifically designed for bilayer work. As such, it has digital hold controls, an auto-zero function for junction potential correction, an audio output for monitoring membrane formation, and dedicated circuitry for measuring membrane capacitance. In addition, it can measure transmembrane currents up to 20 nA.
- *Faraday cage*: The **FC Series Faraday cage** is supplied with an integrated vibration isolation table and is uniquely designed for bilayer work. The cage/table assembly is compact and can be conveniently placed on a sturdy countertop. In addition to providing superior acoustic isolation of the cage contents, the solid wall construction helps control dust accumulation in the bilayer environment. The enclosed vibration isolation table is custom manufactured for Warner instruments by Kinetic Systems, Inc.
- *Dual-dipole stirplate*: The **SPIN-2** stirplate is the only apparatus worldwide to provide separate and adjustable rotating dipoles for both the cis and trans wells. The separation of the two dipoles virtually abolishes noise artifacts due to collisions between a stirbar and the membrane support. In addition, the phase angle between the rotating dipoles is digitally controlled to minimize induced currents in the headstage loop.
- *Halogen lamp*: The bright, **SUN-1** lamp is both noise-free and electrically isolated. It sports a dichroic reflector which allows >70% of the heat to escape from the back of the lamp. This results in significantly less warming of the sample which, in turn, dramatically reduced outgassing in the buffers surrounding the membrane.
- *Perfusion system*: The **BPS-2** perfusion system is a simple to use and necessary component to the Workstation. This unique apparatus allows the user to quickly exchange solutions in the cup or chamber while minimizing the probability of breaking the bilayer membrane. The unique design of the BPS-2 allows it to be quickly applied to the cis or trans wells without introducing a mechanical artifact.

Accessory specific features

- The **BLM-TC** Bilayer Thermocycler is a unique device providing tight thermal control of a bilayer membrane. It can reproducibly and stably range from 5-50 °C at a slew rate of 3 °C/min. Operating temperature is stable to 0.2 °C
- **On-site setup and training** is also available. Warner is the only company to offer this service for bilayer technology. We will visit your site, assemble the Workstation and provide instruct in how to use and maintain the equipment. If desired, we can also provide guidance and insight into the best way to use your acquisition and analysis software with bilayer data.