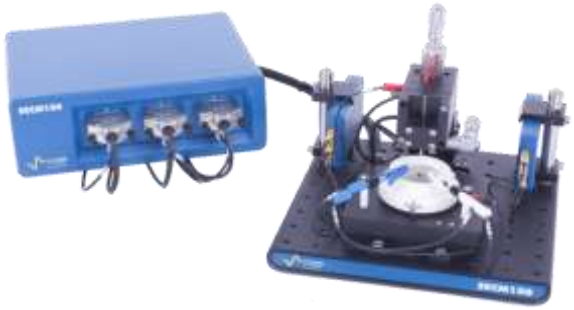
September 2016

Coming Soon: SECM-150



Scanning Electrochemical Microscopy at a whole new level!

- High resolution scanning (<10 nm) in a small footprint that is ideal for glove box work
- Proprietary piezo scanning axis featuring bearing-less flexure design
- Scan Range X&Y= 200 µm; Z= 100 µm
- Closed loop position control for high speed and precision scanning (200 µm/s)
- Integrated bi-potentiostat with ultra low current measurement (7.8 fA Resolution)
- Micrometer coarse positioning (± 6.5 mm)

See us at ECS PRIME 2016 in Hawaii!

Uninterruptible Power Supply

In This Issue

Upcoming Meetings/Exhibitions:

2016 ECS Fall Meeting: October 3-7 Honolulu, HI Booth #214

2016 AIChE: November 13-15 San Francisco, CA Booth #31

Tech Tip: Trouble-shooting technical issues: help us help you.

Fast and effective solutions to customer problems are a high priority for Bio-Logic. Trouble-shooting these problems is much easier with today's technology, as it is common place for customers to send not only their raw data files as attachments to emails, but also provide photos and videos of their electrochemical cell as well

(UPS) Selection Considerations

Careful consideration should be given to the selection of a local uninterruptible power supply (UPS) for interfacing with your computer and instrumentation, such as a Bio-Logic system used for long-term (days or weeks) experiments. Not all UPS are created equal, thus not all protect equally against outages and instabilities in the local power grid.

We recommend an UPS with an "online" mode. Some UPS on the market need a delay to be activated, and during this delay period the power supplies of the equipment connected are not protected. With an "online" mode the connected equipment will be better protected.

Also, some models of UPS put out a step approximated sine wave when on battery backup. We recommend selecting a UPS that offers a pure sine wave output, as some power supply manufacturers have indicated that an approximated sine wave may be harmful to their power supplies' AC input circuits.

Finally, selecting a UPS with the desired wattage for protection duration should be considered as well. The higher the wattage needed and the longer the desired protection duration, the larger and more expensive the UPS will be. If you do not know the maximum wattage for your equipment, check the manuals or contact the manufacturer. Most localized UPS are selected to only protect for a short duration (few minutes) due to significant cost and size of powerful UPS systems. Protection against longer duration power outages should use a more sensible and cost-effective generator backup on the facilities electrical supply.

Did you know...

The word "range" in current range can be confusing for some. Many mistakenly assume the magnitude associated with a given current range as either the (place on a YouTube channel or linked to a cloud drive). So do not be surprised if your request for assistance is countered with a request for the data and visual aids that allow us to make faster and more accurate recommendations to resolve your experimental issues.

HCV-3048

The Unmatched Combination of Power and *Speed*!

Energy storage and conversion research presents new and challenging technical demands each and every day. Developments in batteries, electrolyzers and fuel cells require leading edge and laboratory proven diagnostic tools for meaningful, real world test results.

The **HCV-3048 power booster** is designed for battery stack/pack characterizations. The continuous maximum current of **±30 A** for a single unit can be extended up to **±120 A** by connecting four units in parallel. The control voltage range is **0-48 V**.

Impedance spectroscopy (EIS) provides valuable information on energy storage and conversion products, helping to identify the kinetic properties of multiple processes within the device under

minimum sensitivity or accuracy for that setting. In fact, it's more accurate to assume the magnitude of the range as the maximum current sensitivity for that setting, with the accuracy being much lower (0.1% of the full scale range setting), and the resolution lower still (0.004% of FSR). Still unclear on this or other parameters? Just give us a call or send an email with your questions!

New Video Tutorials for SECM470

Bio-Logic is pleased to announce that three new video tutorials are available for SECM470:

- How to set up the Ultra Micro electrode and build the MicroTricell

- How to connect the potentiostats (3300 or SP-300) to the cell

We hope you'll find these tutorials very helpful!

New EC-Lab Application Note

Bio-Logic has an extensive list of both application notes and technical notes available on its web site. The latest technical notes issued are:

AN #58 - Cycling a battery with reference electrode by using the PAT-cell test cell

Until recently, to study both the positive and the negative electrode of the battery, researchers investigated half-cells. Now it is becoming much more common to study a battery with a reference electrode. With this configuration, researchers can get information simultaneously from both electrodes.

New SCAN-Lab Application Notes

AN#16 -Intermittent Contact (ic) SECM for relief of major topographic features

ic-SECM is a relatively recent technique developed at the University of Warwick which allows the topography of a sample to be tracked during an SECM measurement. Using ic-SECM the probe to sample distance can be maintained over large areas making it useful for not only removing the influence of sample tilt, but also for measuring

test. The HCV-3048 brings unmatched insight to high powered systems that has been unattainable until now with accurate impedance measurements up to **500 kHz**.

For more details, visit the web page, or contact your Bio-Logic representative.

BCS-8XX Battery Cyclers: The **Power** to do More!

Bio-Logic provides application-focused and technique specific tutorials available for download on our web site, as well as instructional videos.

Quick Link to Tutorials
Quick Link to Videos

Demo Unit Sale

Bio-Logic USA keeps a demonstration (demo) inventory of systems used for trade-shows, training, and of course demonstrations to prospective customers. We currently have the

samples with major topographic features.

We appreciate and rely on customer feedback for our continuous improvement process, so we would like to hear from you. Whether it be product improvement suggestions, application questions, or technical support issues, contact us via email or telephone at your convenience.

Sincerely,

Rob Roberts
Strategic Marketing and Sales Manager
Bio-Logic USA

following systems available at deep discounts:

- SP-240
- MPG-205
- MPG-210
- VSP
- 100A Booster
- Refurbished channels

The units are sold with the same warranty that we provide with our new systems. If you are interested in pricing on one of these systems, please contact your Bio-Logic USA Sales Engineer.

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