

# MAESTRO PRO

The premier bioelectronic assay system



# IMAGINE

## A simple assay...

Bioelectronic assays monitor *in vitro* cell health and behavior. Sensitive electrodes track cellular activity, while the culture remains undisturbed.



## Flexible

Noninvasively measure activity anytime, as often as needed, while cells remain in an optimally controlled environment.

## Easy

Use basic cell culture techniques to perform quantitative assays that deliver high-resolution, functional data – with no need for dyes, labels, or complicated steps.

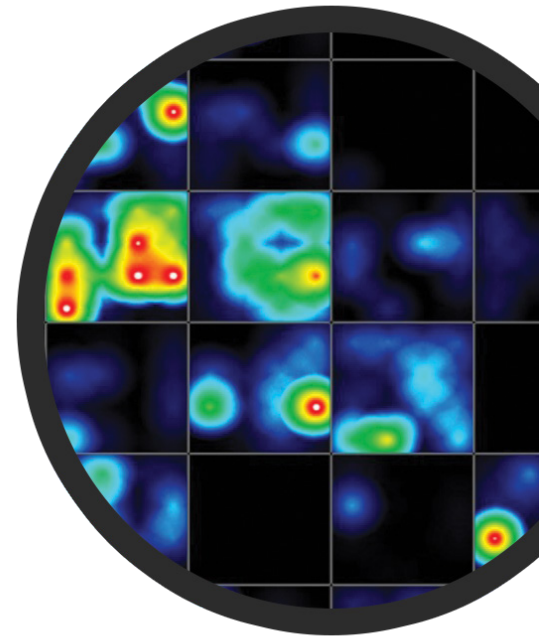
## Time-saving

Measure with the push of a button or schedule recordings ahead of time. No incubation steps or complex handling required with a mostly hands-free assay.

# EXPLORE

## Complex biology...

The versatility of the Maestro Pro makes it **ideal for any lab**. Monitor dynamic cellular activity and perform complex functional experiments with only basic cell culture.



### *Electrical Activity*

Create detailed functional profiles of electrically active cells using microelectrode array (MEA) technology. Repeatedly measure from the same culture and track network development and activity.

- Neurons
- Cardiomyocytes
- Skeletal muscles
- Retinal cells
- Primary or stem cells
- 2D or 3D cultures

### *Cellular Kinetics*

Monitor the health and behavior of any cell type using impedance-based technology. Bioelectrodes measure complex dynamic responses, capturing every minute to reveal detailed cellular kinetics.

- Immuno-oncology
- Cytotoxicity
- Cell proliferation
- Barrier function
- Migration/invasion
- Cell signaling

# DISCOVER

## The Maestro Pro

The latest technological advances to facilitate your research. **The Maestro Pro features:**

### Dynamic *responses*

Detect key parameters of neural activity, network dynamics, and cardiac functionality, measure cell growth and cytolysis, barrier function, and signaling – all label-free and in real time.

### Push-button *acquisition*

Simplify processes with Maestro's automatically adjusted temperature and CO<sub>2</sub> levels and integrated barcode scanner that conveniently tracks plate usage.

### Precise cellular *control*

Recreate specific patterns of cellular activity using electrical stimulation or light pulses (with the Lumos™ optical stimulation system).

### Integrated *environment*

Easily control temperature and CO<sub>2</sub> levels while suppressing electrical noise and mechanical vibrations with Maestro's smart environmental chamber. No need to take up incubator space.

### High-throughput *assay*

Record from 6 up to 96 wells of MEA data, or 96 up to 384 wells of impedance data. The Maestro Pro is designed for the workload of busy labs.

### On-the-go *connectivity*

Use the Impedance module to track changes in cell proliferation, viability, and cell death from any mobile device. No need to be in the lab.



# Customize your MAESTRO PRO



## Standard Equipment

- Environmental control
- Push-button start
- Computer
- Analysis software
- Warranty

## Software



Cardiac



Neural



MEA Viability



MEA Automation



Impedance



GxP Impedance



Impedance Automation

## Throughput

### MEA:

6-,24-,48-,96-well

### Impedance:

96- or 384-well

Lumos  
Optogenetic  
Stimulation

## Consumables



BioCircuit MEA



CytoView MEA



Lumos MEA



CytoView-Z

- 96-well, 2 LED colors
- 48-well, 4 LED colors
- 24-well, 4 LED colors

# SOFTWARE MODULES

## To expand your assay

The Maestro Pro platform is available with seven software modules.  
Select the software modules to **match your assay needs**:



**Neural** - Measure electrical network behavior of neurons, including: activity, synchrony, and network oscillations, label-free.



**Cardiac** - Record the four key measures of functional cardiac performance: action potential, field potential, propagation, and contractility.



**MEA Viability** - Measure cell viability and coverage on MEA plates for a complete structure-function assay.



**MEA Automation** - Automate Cardiac and Neural MEA assays with this API for interfacing with liquid handling platforms.



**Impedance** - Track cell proliferation, viability, barrier function, immune cell-mediated killing, viral cytopathic effects, and more.



**GxP Impedance** - Achieve FDA 21 CFR Part 11 compliance in GMP/GLP labs with this version of the Impedance Software Module.



**Impedance Automation** - Automate impedance assays with this API for interfacing with liquid handling platforms.

# MULTIWELL PLATES

In a range of formats

All of Axion's MEA and impedance assay multiwell plates can be used with the Maestro Pro system. Select the multiwell plates to **match your assay needs**:

Plate Technology	Assay Requirements							
	Field Potential	Action Potential (LEAP)	Contractility	Propagation	MEA Viability	Electrical Stimulation	Optical Stimulation	Impedance
<b>BIOCIRCUIT MEA</b> For lowest cost per well MEA assays	●	●		●		●		
<b>CYTOVIEW MEA</b> For MEA & cell imaging assays	●	●	●	●	●	●		
<b>CYTOVIEW-Z</b> For impedance assays								●
<b>LUMOS MEA</b> For optical stimulation MEA assays	●	●	●	●	●	●	●	



**BioCircuit MEA** - Maestro MEA plates with an opaque well bottom delivering high-quality results at the lowest cost per well. Available in 96-, 48-, and 24-well formats.



**CytoView MEA** - The premium Maestro MEA plate with a transparent well bottom for cell visualization and assay multiplexing. Available in 96-, 48-, 24-, and 6-well formats.



**Lumos MEA** - Maestro MEA plates designed for use with the Lumos system, featuring a transparent well bottom and light-focusing lid. Available in 96-, 48-, 24-well plate formats.



**CytoView-Z** - The Maestro impedance plate with a transparent well bottom for cell visualization and assay multiplexing. Available in 384- and 96-well plate formats.

**Learn more:**

*[axionbiosystems.com/maestro-pro](https://axionbiosystems.com/maestro-pro)*

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