VISUAL ELECTRODIAGNOSTIC SYSTEM

TRUSTED GLOBAL BRAND
LKC Technologies shipped the very first commercially available visual electrophysiology system in 1976. Since that time LKC has been known worldwide for delivering systems with world-class performance and legendary reliability. Hundreds of peer reviewed publications and regulatory submissions have been supported by LKC electrophysiology systems in human and animal research as well as clinical use.

PROFESSIONAL INSTALLATION AND TRAINING AVAILABLE
Make it easy with LKC’s expert staff, available to come to your office or institute to install the system, train staff, and make sure everything is in perfect working order for all testing scenarios.

SELECTED RESEARCH

RODENT
Hu Huang, et al. “Age-related macular degeneration phenotypes are associated with increased tumor necrosis-alpha and subretinal immune cells in aged C57BL/6J knockout mice.” PLOS ONE, March 2017.


HongweiMao, et al. “Inhibition of thyroid hormone receptor locally in the retina is a therapeutic strategy for retinal degeneration.” FASEB, April 2017.


PIG


PRIMATE


For more, visit www.lkc.com/research

The UTAS System with BigShot ganzfeld offers everything needed for any flash based electroretinogram (ERG) or visual evoked potential (VEP) test. With the addition of optional pattern based testing, the UTAS BigShot is suitable for any of your research needs now or in the future.

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ARE YOU GETTING THE FULL PICTURE?

The UTAS BigShot offers a seamless, integrated system optimized for animal testing. The system features a FDA cleared, large format ganzfeld calibrated to NIST standards, with a 5 color stimulator for multi-species testing. The amplifier has fiber optic technology to provide low noise interference, and the software offers easy storage, extraction, and submission of data. The UTAS with BigShot grows with your research from rodents to rabbits to primates and beyond.

Features:
- Custom protocols allow flexibility to create any tests your research demands
- Optional GLP (21CFR11) Compliance Pack to ensure control
- Easily capture, store, and export data
- Control of all amplifier functionality directly through the easy to use software
- Optional pattern based testing

Full Testing Capabilities
- Full Field ERG
- Optional Pattern ERG/VEP
- Double flash
- Photopic Negative Response (PhNR)
- Scotopic threshold response
- S-Cone

Flexible and Secure Software for Reliable Results
Reliable and customizable animal testing with LKC’s flexible software.

- Large format ganzfeld, optimal for multiple animal species
- 5 color stimulator (red, blue, green, amber, and UV) to match photoreceptors of multiple species
- Optional UV (265 nm) stimulator for species with UV-sensitive s-cones
- Optional real-time IR camera to aid in monitoring electrode placement
- Optional rodent stage with 2-channel animal manipulator and a DC-powered animal temperature controller
- LKC offers seven sizes of custom rodent electrodes to ensure accurate size fit as well as ERG Jets and DTL electrodes for larger animals

Multi-Species Testing for All Research Needs
The UTAS BigShot has the reliability and repeatability critical to your research. The system is capable of multi-species testing, to grow with you as your research progresses.

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Ultra Low Noise Digital Amplifier
Small, light, and quiet. Fully isolated fiber optic connection over a 2 meter cable. Cleaner signals and response with the following features.

- Minimize retesting with:
  - Low noise: 4 channel differential with > 10 MQ impedance
  - 24 bit A/D conversion
  - Minimal power line interference: CMMR > 110 dB at 50-60 Hz

- Visualize only the signal you care about:
  - Sampling rate: 500 Hz to 3750 Hz
  - Software filters: high cut and low cut filters implemented in application software

Ganzfeld – Lightest, Brightest, Most Capable
The BigShot is a large format ganzfeld that is suitable for multiple species. Combined with LKC’s digital biomedical amplifier, get a faithful reproduction of every nuanced recording.

- Xenon and LED flashes
- Flash stimuli from -50 dB to +4 dB in any color
- Total flash range from -75 dB (8×10^-8 cd.s/m^2) to +25 dB (790 cd.s/m^2) in 1 dB steps
- Background luminance 0.005 to 1000 cd/m^2 in any color
- Optional UV (265 nm) stimulator for species with UV-sensitive s-cones

Full Field ERG
- ISCEV standard stimuli
- Double flash
- Photopic Negative Response (PhNR)
- Scotopic threshold response
- S-Cone

Full Field VEP
- Optional Pattern ERG/VEP
- On/Off
- Pattern reversal
- Steady state and transient responses

THE UTAS WITH BIGSHOT OFFERS A SEAMLESS, INTEGRATED SYSTEM OPTIMIZED FOR ANIMAL TESTING. The system features an FDA cleared, large format ganzfeld calibrated to NIST standards, with a 5 color stimulator for multi-species testing. The amplifier has fiber optic technology to provide low noise interference, and the software offers easy storage, extraction, and submission of data. The UTAS with BigShot grows with your research from rodents to rabbits to primates and beyond.
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