



- ◆ Great for small- to medium-sized animals and humans
- ◆ ISCEV Standard ERG / EOG / VEP
- ◆ Double flash, On/Off, S-Cone, photopic negative response, scotopic threshold response ERGs
- ◆ BigShot™ Color LED Ganzfeld
 - Optional UV (365 nm) stimulus
- ◆ UBA-4204 Digital Biomedical Amplifier
 - Smallest, lightest, quietest
- ◆ Multifocal ERG - Multifocal VEP option
 - Now with long m-Sequence!
- ◆ Compatible with legacy LKC data. Migrate data from your previous LKC system.
- ◆ GLP (21CFR11) Compliance Pack option
 - Allows compliance with FDA electronic record-keeping requirements
 - Enables electronic data submission to FDA
- ◆ Color or white-only mini-ganzfeld option
- ◆ CE and MET (UL equivalent) certified

The New UTAS

This revolutionary product will provide you with everything you need for any type of electroretinography or visual evoked potential. The color LED ganzfeld – capable of over 15,000,000 different colors – will allow you to perform ERGs you never imagined possible including on-off, double flash, photopic negative response, scotopic threshold response, and s-cone ERGs. Amplification with our digital biomedical amplifiers allows faithful reproduction of every nuance of your recordings.

Design Features

- ◆ The world's most capable animal ganzfeld
- ◆ Ultra low-noise digital amplifiers
- ◆ Built-in ERG normative data, or use your own.

Key Specifications

- ◆ Flash stimuli from -50 dB to +10 dB in any color
- ◆ Total flash range from -75 dB to +25 dB in 1 dB steps
- ◆ Background luminance 0.005 to 1000 cd/m² in any color

BigShot™ Ganzfeld

Easy to Use

- Suitable for use with small- to medium- sized animals or humans. 14" (36 cm) diameter full-field globe. Ganzfeld measures 19.5" (50 cm) H x 15.5" (40 cm) W x 12.5" (32 cm) D and weighs 17 lb (7.7 kg).
- Cleanable interior
- Dim red illumination to assist during electrode placement.

High-Performance Capabilities

- BigShot™ can produce all ISCEV standard stimuli, PLUS Double Flash ERG; On/Off Response ERG; S-Cone ERG; Chromatic backgrounds and stimuli (e.g. photopic negative response); Scotopic Threshold Response ERG.
- Latencies and amplitudes of ISCEV standard ERGs match results from legacy LKC products. No need for new normative data.
- 3 red EOG fixation LEDs in $\pm 15^\circ$ horizontally. Brightness adjustable over 20 dB range in 256 steps.

And Beyond

- Uses Red (627 nm), Green (530 nm), Blue (470 nm), Amber (590 nm) and white LEDs and Xenon flash.
 - Flash luminance range of 100 dB (+25 dB to -75 dB) in 1 dB steps.
 - Xenon flash luminance of 2.5 - 800 cd-s/m² (0 dB to +25 dB).
 - LED flash luminance of $2.5 \cdot 10^{-5}$ - 25 cd-s/m² (-50 dB to +10 dB) in any arbitrary color. LED flash luminance of -75 dB to -50 dB in white.
 - Flash duration <5 ms.
 - Background light from 0.005 to 1000 cd/m² in 0.01 dB increments in any color; In white as low as 10^{-6} cd/m²
- Flicker stimuli to +10 dB; 1 Hz repetition rate for intensities > +10 dB
- Long duration flash (On/Off response) stimuli programmable to 6.5 seconds in 5 ms increments, adjustable intensity and chromaticity.
- Optional UV (365 nm) stimulator for species with UV-sensitive s-cones
- Arbitrary waveform capability using RGB stimuli to 2000 points (10 seconds) per cycle.
- Fully isolated Trigger In and Trigger Out signals for interfacing to other equipment

UBA-4204 Amplifier

Communication:	Fully Isolated Fiber Optic TOSLink connection over 2 meter cable
Input Type:	4 channel differential with > 10 M Ω impedance.
Connector Type:	1.5 mm Male DIN Safety electrode connections
Noise:	< 0.7 μ V p-p @ 100 Hz Sampling Rate, 10 K Ω Input < 1.8 μ V p-p @ 1000 Hz Sampling Rate, 10 K Ω Input
CMRR:	> 110 dB at 50-60 Hz
Frequency Range:	DC to > 1.0 MHz without aliasing. Cutoff is sample rate dependent.
Input Gain:	1, 2, 4, 8, 16, 32, 64 (user selectable)
Data Resolution:	3.7 nV / bit (Gain = 64) to 250 nV / bit (Gain = 1)
Input Range:	± 2 V (Gain = 1)
Stability:	< 250 nV / $^\circ$ C drift
Accuracy:	< 0.2% absolute, Nonlinearity < 0.0010%
Sampling Rate:	5 Hz to 3750 Hz
Filters:	High cut and low cut filters implemented in application software
Safety:	No wires (fiber optics only) means no leakage currents!
Power Source:	Rechargeable Li-Ion Battery provides up to 12 hours continuous use per charge
Recharge Time:	4 hours to 80% capacity, 8 hours to 100% - Charger included
Size:	5 $\frac{3}{4}$ " x 3 $\frac{1}{4}$ " x 1" (14.6 cm x 8.3 cm x 2.5 cm)
Weight:	8 oz. (225 g), including battery

All specifications subject to change.

LKC Technologies, Inc., established in 1975, is an ISO 13485:2003 certified, CE marked, and FDA-registered medical device manufacturer with quality products installed in over forty countries.

LKC Technologies, Inc.
2 Professional Drive, Suite 222
Gaithersburg, MD 20879 USA
t: 800.638.7055 (USA only)
301.840.1992
f: 301.330.2237
e: sales@lkc.com
www.lkc.com



LKC Technologies Europe
Ninaberlaan 83
7447 AC Hellendoorn
The Netherlands
t: +31 (0)548 659013
f: +31 (0)548 659010
e: europe@lkctechnologies.eu
www.lkctechnologies.eu