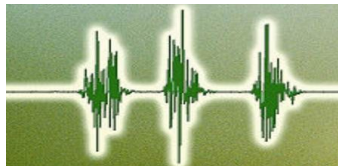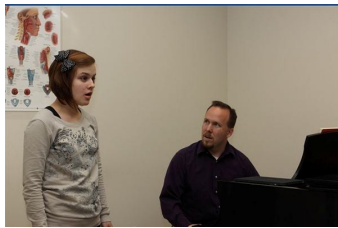# EMG BIOFEEDBACK FOR VOICE EDUCATION & RESEARCH

Dr. Adam KirkPatrick

Dr. Adam Kirkpatrick is an associate professor of music at Kennesaw State University, where he is head of the voice department. He has sung operatic roles and concerts professionally in many theaters throughout the United States, singing with the Cincinnati Opera, Atlanta Opera, Santa Fe Opera, Tri-Cities Opera (NY), Dayton Opera, Florida State Opera, Knoxville Symphony, Newton Symphony (MA), Tallahassee Symphony, LaGrange Symphony (GA), Cobb Symphony (GA), Northwest Florida Symphony, and more. Dr. Kirkpatrick is the inventor of a patented new method for teaching the lower laryngeal position in singing using electromyographic (EMG) biofeedback, and is the architect of the BioGraph Infiniti voice training software suite available through the BFE-LFB online shop.
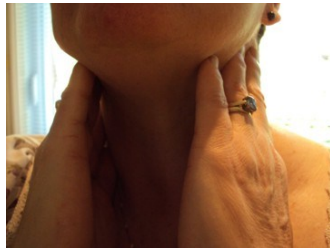
Limited Edition Software Suite

The Voice Limited Edition software suite published by the BFE and designed by Dr. Kirkpatrick records surface electromyography measures using Dr. Kirkpatrick`s techniques from the perspective of voice production and research. The software provides a convenient view of SEMG biofeedback and voice by a variety of display screens that show how SEMG can be used to measure/ monitor the muscles involved. The suite addresses the importance of posture and voice in action and voice pathology.

Grand Rounds: Voice Master Class

Up-to-date relevant summaries from practice and research are a convenient method that allows one to learn from real cases that present challenging data that focuses on Voice Training. Join other professionals and share new information on the use of the software. See live demonstrations of recorded data and other information in an interactive framework.

Online Cases: Coaching Clinics in Voice & SEMG Biofeedback

Educators and practitioners can receive continuing professional education and training over the internet. Learn live online how to interpret the electrophysiological SEMG sessions recorded with Dr. Kirkpatrick`s Voice software. Join other professionals and researchers online for live demonstrations of recorded data and get answers to your questions from Dr. Kirkpatrick. Other information prepared by the session participants and delivered in an interactive framework provides helpful training and instruction. Discuss case histories. This 3-week series of weekly 1-hour online tutorial/case sessions provides real-time supervision and mentoring by Dr. Kirkpatrick.

Live Webinars & Recordings

Attend a live webinar or download and view recordings of webinars and classes given by Dr. Adam Kirkpatrick and members of his international research and education team. The webinars provide an overview of Dr. Kirkpatrick`s research and teaching method and provide overviews of other research and studies on EMG biofeedback and voice by a variety of authors. The content is independently researched and shows how SEMG can be used to measure/ monitor the muscles involved, and addresses the importance of posture, voice in action and voice pathology.

www.bfe.org/buy   or   Email shop@bfe.org

More about Surface EMG Voice Training Technology

Dr. Kirkpatrick`s BFE Limited Edition Voice Suite was designed for the world-leading Infiniti biofeedback system manufactured in Canada. This specialized software complements Dr. Adam Kirkpatrick's experience and knowledge towards his established voice teaching method and exciting research. When asked about the suite, Harry Campbell, President of BRI, a US distributor for the Infiniti system. commented, "The Voice software is a really exciting product that opens the door for biofeedback practitioners across the country to help singers improve both performance and health. Recent tragedies in the lives of professional singers have made us all aware of the role of good health in maintaining a good voice".

BioGraph Infiniti Software T7900

BioGraph Infiniti Software is the core of all current and future Thought Technology Biofeedback and Psychophysiology products. It provides a multimedia rich graphical experience, while capturing and analyzing raw data. It includes all the features and functions required to run BFE Limited Edition Suites. **BioGraph Infiniti version 5.1.4** is designed to provide full compatibility with the latest Windows 7 operating system.

ProComp5 System T7525

ProComp5 Infiniti™ is housed in an ergonomically-designed case and requires only a USB port to connect to any IBM compatible PC. The first two sensor channels provide ultimate signal fidelity (2048 samples per second) for viewing raw EEG, SEMG, EKG and HR/BVP signals, while the remaining 3 channels sample data at 256 samples/second for slower signals such as respiration, temperature, etc. Not only can ProComp5 Infiniti™ capture data in real time by connecting directly to the PC via its fiber-optic cable, but it can also store data on a Compact Flash memory card for uploading later to the PC, or use optional long-range compact flash module telemetry anytime it is desirable.

Muscle Measurements from 3 positions

Three EMG MyoScan-Pro™ Sensor s T9401M-60 or T9401M-50 are required for the voice software. The EMG MyoScan-Pro is a pre-amplified surface electromyography sensor used with the ProComp5 for RMS sEMG. Features a range switch in the sensor head to change filter settings between 0 – 400 µV Narrow filter, 0 – 400 µV Wide filter, 0 – 1600 µV Wide filter with 0.1 µV sensitivity. Compatible with Triode electrodes or extender cables for wider placement of electrodes.

Disposable Triode Electrodes 100 to the box

(A) T3402M - Triode™ electrode, with standard 2cm spacing of silver silver chloride electrodes, backed with nickel plated brass snaps to prevent corrosion when connected to pre-amplifiers for extended periods.

(B) T3425 - UniGel electrodes, pre gelled single electrodes, for sensitive placements on dry skin.