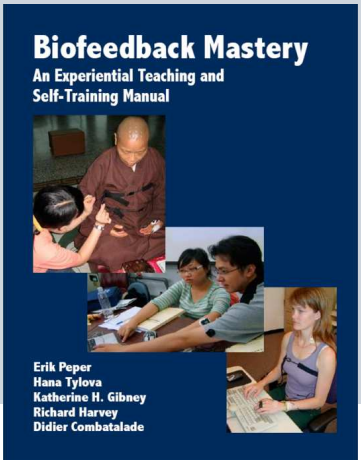
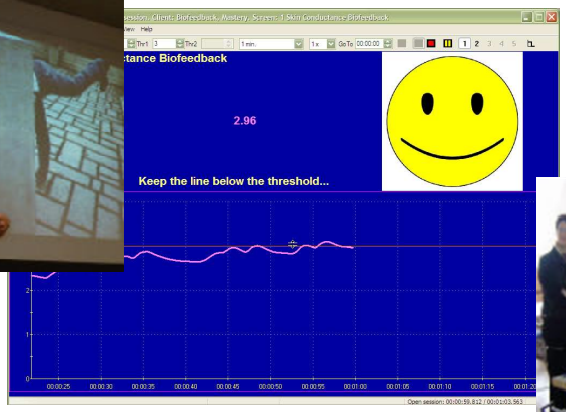
Biofeedback Basics

A Software Companion to the book *Biofeedback Mastery* by Erik Peper, Ph.D.

This book and screens together teach basic skills derived from more than 30 years of biofeedback training and teaching experience:

- Making sense of the data
- Translating a computer-based practice into home practice
- Monitoring and displaying biological signals of interest
- The underlying physiology of each signal
- Accurately recording the signal
- The basics of self-regulation
- Limitations of psychophysiological monitoring
- Techniques for connecting and attaching sensors
- Discriminating real feedback signals from artifact





LIMITED EDITION SOFTWARE SUITE

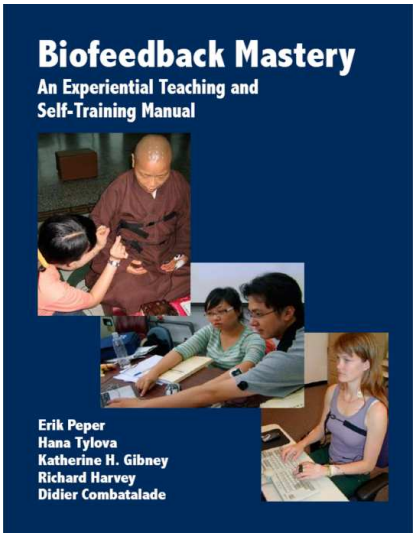
Biofeedback Foundation of Europe

Learn From the Best™

About The Author

Erik Peper, Ph.D., Dr. Peper led the development of the software in this suite. Erik Peper, Ph.D. is an international authority on Biofeedback and self-regulation. He is Professor at San Francisco State University in the Institute for Holistic Health Studies / Department of Health Education. He is President of the Biofeedback Foundation of Europe and past President of the Association for Applied Psychophysiology and Biofeedback. He holds Senior Fellow (Biofeedback) certification from the Biofeedback Certification Institute of America. He was the behavioral scientist (sport psychologist) for the United States Rhythmic Gymnastic team. He is an author of numerous scientific articles and books such as *Make Health Happen*. As part of The Ergonomic Safety Program Team at San Francisco State University, Dr. Peper is widely known for his book *Muscle Biofeedback at the Computer*, an exciting and indispensable guide for the prevention of Repetitive Strain Injury (RSI). This comprehensive text provides clinicians or the computer user with step-by-step instructions for implementing proven strategies to promote healthy computing.

Biofeedback Basics Ltd. Edition Software Suite



This software suite is based on the *Biofeedback Mastery* book published by the AAPB and is based upon the premise that competence and mastery comes from self-experience. How can we truly teach others about the possibility of voluntary control, if we do not master voluntary control ourselves or are not familiar with having developed self-experience and some mastery? As a result, the software has been designed to work with the laboratory practices presented in the book.

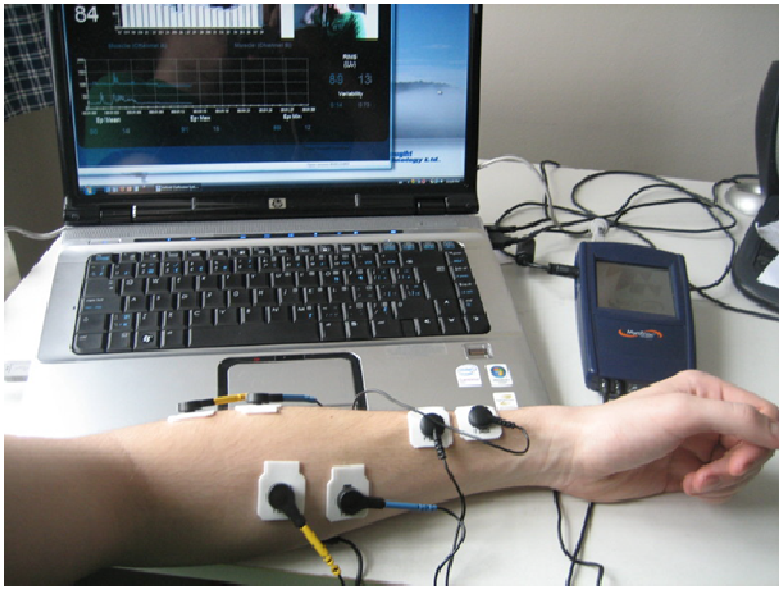
Documentation

The documentation for the suite is the *Biofeedback Mastery* book. The main purpose of this manual is to guide readers through sequential laboratory practices so that they will understand the limitations of psychophysiological signal recording, as well as the external and internal factors that affect the signal. This manual serves as a 'how to' guide for training and is designed to provide a foundation upon which the educator, researcher, and clinician can begin to build their educational and applied clinical skills and protocols. This foundation may also be used by those who want to use biofeedback for self-discovery and self-mastery.

Software Display Screens

The display screens are organized into specific units that correspond with chapters in the book *Biofeedback Mastery*. They provide the ideal feedback for laboratory practices help students learn how to: (1) attach, adjust, and calibrate the sensors/equipment; (2) adjust the software signal range and display screens; (3) explore artifacts and quantify/store the data and; (4) practice new skills for use during initial training procedures this measure that can help develop an awareness of learned stress responses and teach basic self-regulation skills. Screens in each unit allow the students to incorporate the knowledge of the other signals learnt in the previous units, helping the student to build on their skills and understanding as they go. Once the basic monitoring of biological signals is mastered, the laboratory exercises include multi-channel recording for assessment and training. These visual displays form the foundation for biofeedback practices, not only for professionals and their clients, but also for educators and individuals.

Unit 1—Surface Electromyography (SEMG). Screens show both 1 and 2 channels of electromyography, for learning relaxation and stress control, helping teach awareness of head, neck and low back muscle tension, or training voluntary relaxation of specific muscle groups.



Unit 2—Temperature Measurement & Biofeedback. Screens to train for increasing peripheral temperature and controlling unconscious stress responses.

Unit 3—Skin Conductance. In this unit, the display screens provide detailed instructions on how to use skin conductance or EDR biofeedback through practical skill training and discovery. The unit combines signals of the first three units; SEMG, temperature and skin conductance.

Unit 4—Respiration. Abdominal and (optionally) thoracic breathing training are covered in this unit. These screens help demonstrate how slow, deep abdominal breathing helps with relaxation and can be used for lowering the heart rate.

Unit 5—Heart Rate. The screens in this unit guide the use of the Infiniti system to measure and provide feedback on the cardiovascular system and respiration. Details include blood volume pulse, blood volume amplitude, waveform, heart rate variability (HRV).; EKG and BVP, measured from the HR/ BVP sensor is a blood volume pulse detection sensor (otherwise known as a PPG sensor) or from an ECG sensor.

Unit 6—EEG Neurofeedback. An introduction to the use of electroencephalography EEG also known as "Neurofeedback" covers the physiological Basis of EEG signal, applications and reasons and conclusions. There are 3 labs in this unit, Lab 1 introduction to EEG equipment, training with Alpha Frequency and training and home practice with Theta frequency.

Unit 7 demonstrates all of the signals, SEMG, temperature, skin conductance, respiration, heart rate and EEG also called modalities and a Stress Assessment. This unit puts it all together.

Unit 8 allows the user to start building their own screens from a template. They can then add to what they have learnt in the other 7 Units and practice some of the powerful features in the Biograph Infiniti Software Developer Tools.

COMPATIBLE WITH:

ProComp Infiniti™

ProComp2™

Hardware & Software Configurations (Encoders & Channel Sets)

AVAILABLE NOW! BioGraph INFINITI 5.0

This Limited Edition suite offers channel sets for both the ProComp Infiniti and the ProComp2 encoders. The powerful ProComp Infiniti encoder gives professionals the power to monitor up to 8 client signals at the same time, ideal for monitoring neurofeedback and biofeedback.

An indispensable resource for learning the fundamentals of biofeedback...

"Biofeedback Mastery is a superb laboratory manual for training students and staff in all the major biofeedback modalities. Each unit teaches instrumentation and clinical skill fundamentals through intuitive and well-illustrated exercies. This manual is an indispensable resource for educators, students, and clinicians."

Fred Shaffer, PhD, Professor of Psychology - Truman State University

"An invaluable resource for the novice, as well as as the experienced biofeedback practitioner. Among its exemplary features are its highly structured units on biofeedback modalities that facilitate the well-detailed 'how to' instructions. I strongly recommend Biofeedback Mastery - An Experiential Teaching and Self-Training Manual as an effective and effiecient means for promoting instrumentation mastery and clinical competency in the field of applied psychophysiology. Students' feedback consistently states that the manual greatly enhances comprehension and application of psychophysiological principles."

Maureen Haney, MS, Director of the Psychophysiology Lab - California State University, Fullerton

contributing to the advancement of research and education in this exciting field.

Ordering, Payment and Terms of Use

To purchase this software suite, simply visit the suites page of the BFE website and order online (www.bfe.org), or download the Software Suites order form from and complete and return as instructed. The Limited Edition Software Suite is priced at US$150.

Limited Edition Software Suites are sold at **HALF** of the commercial retail value with the understanding that the software and documents provided on the Limited Edition may contain errors. Customers are warned that the software and documents are provided in exchange for suggestions on what needs to be changed, clarified, or otherwise improved for the future commercial editions. Purchasers **MUST** understand and give permission for their name to be added to a unique group that will receive updates to the Limited Edition suite at **NO CHARGE** until a commercial edition is published by the Biofeedback Foundation of Europe. The Limited Edition suite may also contain warnings and recommendations from leading clinicians for the off-label use of biofeedback devices.

Purchasers agree not to copy or distribute the software without the written permission of the Biofeedback Foundation of Europe.

BCIA CERTIFICATION COURSES offered through Biofeedback Resources International

Aug 1-5, 2009 and Oct 24-28, 2009 - Hawthorne, NY (Instructed by Dr. Erik Peper)

Other course dates available:
Biofeedback: May 2-6, 2009 - Hawthorne, NY
Neurofeedback: Apr 17-20, 2009, Jul 17-20, 2009, Nov 13-16, 2009 - Hawthorne, NY

For registration info contact: http://www.bfe.org/workshop.html#5DAY

P.O. Box 555 3800 AN , Amersfoort The Netherlands
BFE-IREP
Carol Meyers, Education Manager education@bfe.org
Fax: +1 514 489 8251 Tel: +1 518 632-1018