

Customer Information Folder

HEG-System

Simple Neurofeedback-Training for ADD/ADHD



MedITECH – How did we start?

For the last 15 years Fred Warnke dedicates his ideas and inventions to those people who were not able to develop age-based language skills because of central hearing deficits. Further information about his patents can be found on page 60 of this catalogue.

In the beginning Fred Warnke had his devices manufactured and sold by various firms. But this system of distribution showed that customers wanted proficient service and advice from one partner. This was the reason why the Warnke Electronic Sales was founded by his son Ralph and his daughter in law Karen. As the number of users of the Warnke-Method grew rapidly, this company was extended to the company *MedITECH* Electronic Ltd. in 1996.

Since that time, *MedITECH* has been enlarging their program for testing and training devices by developing more and completely new ones. The semi-professional manufacturing we started with has been replaced by a high-quality production in a professional design.



MedITECH – Our position today?

Today the *MedITECH* Electronic GmbH is a well-running firm owned by Ralph and Karen Warnke. Fred Warnke holds no financial interests of the company - neither did he participate in the past nor does he today. He concentrates his ideas on new materials and inventions which he makes available to *MedITECH* only.

The main operational fields of *MedITECH* are:

- Development of systems for testing and training as well as try-outs together with international experts and institutions throughout Europe
- Planning and carrying out of seminars and workshops concerning the Warnke-Method, new ways of learning, sensor motor reflexes and Biofeedback/Neurofeedback
- Quick and efficient service and support for all goods delivered by *MedITECH*

Publishing house for materials for perception training: CDs and textbooks with identical wording and various kinds of training-software in order to help the numerous children who suffer from perception deficits and to supply them with suitable aids.

MedITECH – Which aims do we have?

- Efficient mediating of knowledge concerning the Warnke-Method by customer-support, internet-presentations, participating in fairs and congresses
- Setting-up of valid tests and efficient training-methods as a standard treatment for benefit of affected people
- Developing and support of networks and partnership organizations in this business field in Germany and worldwide. With the help of our Cooperation-Model *MedITECH* is in close contact with medical practitioners, therapists, teachers and other institutions. We use these connections to inform affected families about qualified help in their area.

MedITECH – Which principles do we follow?

- *MedITECH* has strong principles which regulate our open and fair relations to our customers, to the state and to our competitors which we expect vice-versa.
- We stand for good and correct cooperation with authorities and other public institutions to support the principle of liberal and social basic order.
- Strict compliance with the Code „Medical Products and Ways of Conduct on the Health Market“
- Besides this, all our customers, no matter which “size”, play an important role, too. It is one of our most important aims to support and to keep their interests.

MedITECH – What do we offer?

MedITECH's aim is to develop practical aids for children and adults to improve their perception and automation of central functions.

We offer

- A modular designed program of testing devices for perception and central automation deficits and their symptoms
- Training-devices to improve important functions of the brain
- i.e. time- and frequency-discrimination
- Devices for Lateral-Training (in accordance with the Warnke-Method) for home-use or professional application
- Special Training-CDs with corresponding textbooks to be used with Lateral-Training
- Computer-software for training at home or with a therapist
- Biofeedback und Neurofeedback systems
- Music-based treatment for tinnitus

MediTECH Staff - At your Service

For better reference and to provide you with additional friendly images of our company, please find below an overview of our key staff and their corresponding functions within MediTECH:

Company Management

Ralph Warnke (CEO)



- Founder
- With MediTECH since 1996
- Key product presentations
- Research project management
- Legal administration

Finance Department

Karen Warnke (CFO)



- Founder
- With MediTECH since 1996
- Finances
- Personnel management

Chief Technician

Thorsten Maeck



- With MediTECH since 1999
- 2nd-level customer support
- Product service management
- RTD and production management

Logistics

Klaus-Dieter Sommer



- With MediTECH since 2001
- Warehousing
- Quality control
- Product rentals

Development

Heiko Voß



- With MediTECH since 2009
- Software developer

Sebastian Bürgel



- With MediTECH since 2009
- Hardware developer

Robert Klockmann



- With MediTECH since 2009
- Firmware developer

Sales Division

Eve Warnke (Sr. Sales Manager)



- With MediTECH since 1996
- 2nd-level customer support
- Trade fair projects
- External seminar management

Kerstin Smith (Ass. Sr. Sales Manager)



- With MediTECH since 2001
- 2nd-level customer support
- In-house seminar management
- International key account management

Birgit Sommer



- With MediTECH since 2003
- Customer support
- Sales staff
- Office Management

Lena Zweiniger



- With MediTECH since 2005
- Customer support
- Leasing affairs

Purchase Department

Dirk Richter



- With MediTECH since 2004
- External Supplier management
- Component purchasing
- Mailing projects

Technical Editor / Quality Management

Hilke Wenkel



- With MediTECH since 1998
- Document management
- Manuals and product information
- Presentations design
- Quality management representative

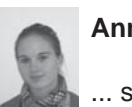
Trainees:



Patrick Troitzsch
(Logistics)
... since 2007

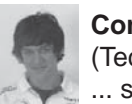


Partick Pieruschka
(IT-Systems)
... since 2009



Annica Wenske
(Sales Department)
... since 2008

Vanessa Seuß
(Sales Department)
... since 2010

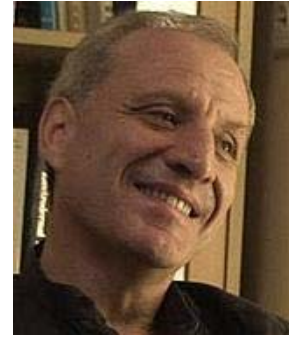


Constantin Soboll
(Technical Department)
... since 2010

Introduction to HEG-Biofeedback

By [Dr. Ernesto Korenman](#)

www.psycho-neuro-feedback.com



Introduction

HEG biofeedback is a new form of "brain training" modality that is showing great promise for dealing with various problems like ADD (attention deficit disorder), depression or autism. in conjunction with EEG biofeedback.

HEG stands for HEMO-ENCEPHALO-GRAPHY. As indicated by "HEMO", this new form of biofeedback relates to blood - in this case blood flow within the brain. It appears that blood flow is poor in certain brain areas of persons suffering from several types of "brain problems". These include ADD/ADHD, autism, epilepsy, brain injury, stroke, depression, and schizophrenia.

Researchers have found that this poor blood flow in a section of the brain can be increased with biofeedback training in much the same way as EEG biofeedback. Results on ADD/ADHD and Autism to date have been fair to good. Using HEG biofeedback initially, and finishing up with EEG biofeedback, may shorten the number of sessions dramatically, and also may improve the success rate. Hence, HEG by some is considered to be a new and particularly promising form of Neurofeedback.

HEG biofeedback is an effective and drugless treatment for many neuropsychological conditions which involves the self-regulation of cortical activation.

HEG devices measure and feed back changes correlated with blood flow dynamics and cellular metabolism in localized parts of the brain cortex. These measurements are closely linked with brain activation due to the phenomenon of "neurovascular coupling".

HEG biofeedback represents a simple and non-intrusive way for both: monitoring and training cerebral function without the inconvenience of electrode preparation which other [neurofeedback](#) methods generally require.

HEG has high compliance by clients and patients and the training can be delivered with a help of entertaining and attractive feedback suitable for children and adults.

Physiological Basis

HEG devices measure and feedback changes correlated with blood flow dynamics and cellular metabolism in localized parts of the brain cortex. These measurements are closely correlated with brain activation due to a phenomenon called "neurovascular coupling". Briefly, blood carries all the nutrients and oxygen needed to fuel neuronal activation and the localized delivery of blood supply to each part of the cortex is closely linked to the particular metabolic requirements and the level of neuronal activity in that region at every single moment.

The logic behind this biofeedback intervention is that repeatedly engaging in HEG biofeedback, "exercises" the brain in a unique way which confers very promising and long lasting neuro-behavioural benefits for the trainee. Special pre/post SPECT (Single Positron Emission Computerized Tomography) imaging techniques has been already used to verify that HEG biofeedback treatment promotes conspicuous blood flow increases, (activation), below the treated areas.

History

State of the art HEG methodology is originally based on brain monitoring technologies like nIR Spectrophotometry and Thermoscopy developed in the last 10-15 years.

In 1994 Dr. Hershel Toomim developed his own nIR Spectrophotometer methodology and subsequently was the first to show that that the monitored activity can be self-regulated by biofeedback means. His early work on the application of nIR HEG biofeedback in the treatment of ADD and ADHD and other neurobehavioral conditions followed soon after that.

Slightly afterwards, Dr. Jeff Carmen started experimenting to build and test a device to measure cerebrovascular activation using passive infrared technology in an attempt to both monitor migraine activity and to train control over the associated abnormal cerebrovascular behavior. In 1998 Dr Carmen formally reported success in the treatment of migraine through pIR HEG biofeedback.

In the last five years other researchers and clinicians have joined this exciting area of neurofeedback, (mainly in the USA). However, this technology is still considered to be the newest modality addition to the central biofeedback practice and a therapeutic tool with extremely promising future.

Methodology

There are two types of HEG measurement in current use:

1. nIR HEG: Active near infrared HEG measures changes in the relative absorption of red and infrared light passed into the tissue below the nIR sensor. The light traverses scalp and skull and reaches brain tissue and the ratio of red to infrared light received back by the sensor is dependent on localized blood perfusion and oxygenation in the underlying tissue. This method is used by Hershel Tommim in his instruments.
2. pIR HEG: Passive infrared HEG measures the heat (IR emission) radiated by the tissue below the pIR HEG sensor, which is dependent on the localized blood perfusion and metabolic activity in that region. This method is used by Jeff Carmen in his instruments.

HEG trains the subject to increase the blood flow to a targeted area of the brain. EEG biofeedback in comparison measures the electrical activity of the brain as a feedback signal to be controlled by the patient. With HEG, the EEG is substituted by blood oxygenation for the same purpose. Therefore, in HEG biofeedback a light is shone on your brain through the translucent scalp and skull.



Figure 1 Principle of light emission and detection in HEG biofeedback

In the HEG application, a spectrophotometer device is placed on the patient's forehead. Flashing red and infrared lights are represented in figure 1 as one optode. The light collection amplifier is another type of optode. Its main purpose is to respond to the returned light that is reflected and refracted by the encountered tissue. These optodes are spaced three centimetres apart so as to conduct most of the available light at the depth of cortical tissue.

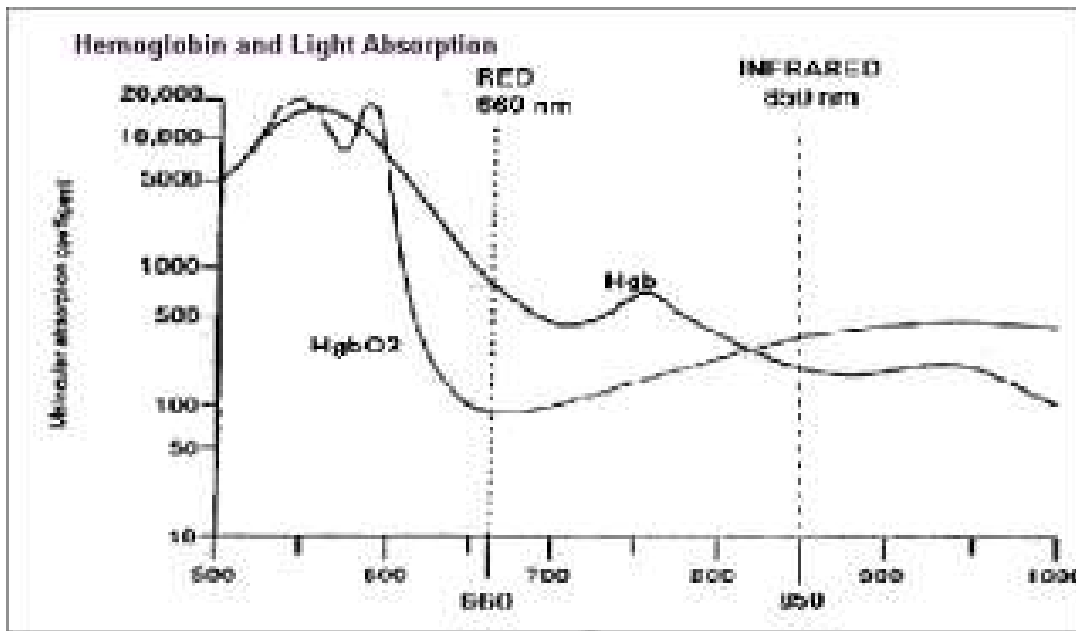


Figure 2 Red light attenuation in oxygen rich and oxygen starved hemoglobin (Elwell 1999)

Red, 660 nm, and infrared, 850 nm, lights are alternately shown on brain tissue. The graph above shows the large difference in red light attenuation between oxygen rich and oxygen starved hemoglobin whereas the infrared light is minimally changed.

With both modalities of HEG, there are no electrodes to be applied to the skin, no electrode gels to be used to improve skin contact and no impedance criteria to insure reliable recordings. HEG does not measure electrical activity; therefore, there are no big problems with eye blinking, eye movements, ECG cardiac signals or other muscle source of artifact.

Nevertheless, some care should be exercised when applying HEG biofeedback in order to avoid artifactual readings. Possible known sources of data contamination are:

- a) Positional changes of the subject. This changes cranial blood pressure and affects perfusion. It can be controlled by observing the subject.
- b) Direct flow of cold air from an air conditioner or extremely high temperatures in the clinic that lead to forehead sweating.
- c) Effects of small skin blemishes, inflammation or hair under the HEG sensors.

The actual details of the monitored display used to feedback HEG data can vary slightly depending on the instrument and software application used. However, HEG biofeedback practice is always straightforward for the trainee:

If the user maintains a relaxed but focused state of active concentration, the displayed graph keeps moving upwards, the digital display of data keeps increasing and, (when shown), a movie display keeps playing on. If there is a reduction in active focus by relaxing too much, trying too hard, or becoming tense, frustrated, excited or stressed, the graph reading and digital display drop and by reaching a pre-determined threshold value the movie goes into pause mode and returns to play mode only when the trainee regains active focus and raise the reading above the threshold value. Of course, the threshold difficulty variable is controlled by the neurofeedback therapist and can be made easier or more challenging, depending on the skill level of the trainee.



Figure 3 Sample Screen for HEG Biofeedback training

HEG and Frontal Lobe activation

HEG cannot be easily measured through human hair and is particularly suited to be applied over the forehead, (Fp1, Fpz and Fp2), in order to entrain the prefrontal cortex.

While the pre-frontal cortex represents only 29% of neocortex they mediate some of the most advanced forms of thinking and cognitive activity by human beings. The pre-frontal lobes host the "executive attention networks" and their engagement is required in order to sustain complex thinking, focused concentration, emotional tone and general arousal.

Frontal activation appears to be necessary to succeed in the treatment of many neurobehavioral conditions such as ADD and ADHD. QEEG topographic brain maps and functional MRI images of ADHD patients identify the prefrontal lobes as dysfunctional or even "disconnected" from the rest of the brain through the presence of excessive slow wave activity instead of desirable fast wave activity.

Since the prefrontal lobes mediate so many complex, auto-regulatory brain functions, they would seem to be the best choice of all brain lobes to be the target for HEG training.

Clinical applications

Although HEG instruments are relatively new devices, increases in brain blood flow via HEG neurofeedback have already shown significant clinical benefits, especially in the areas of migraine, depression and ADHD.

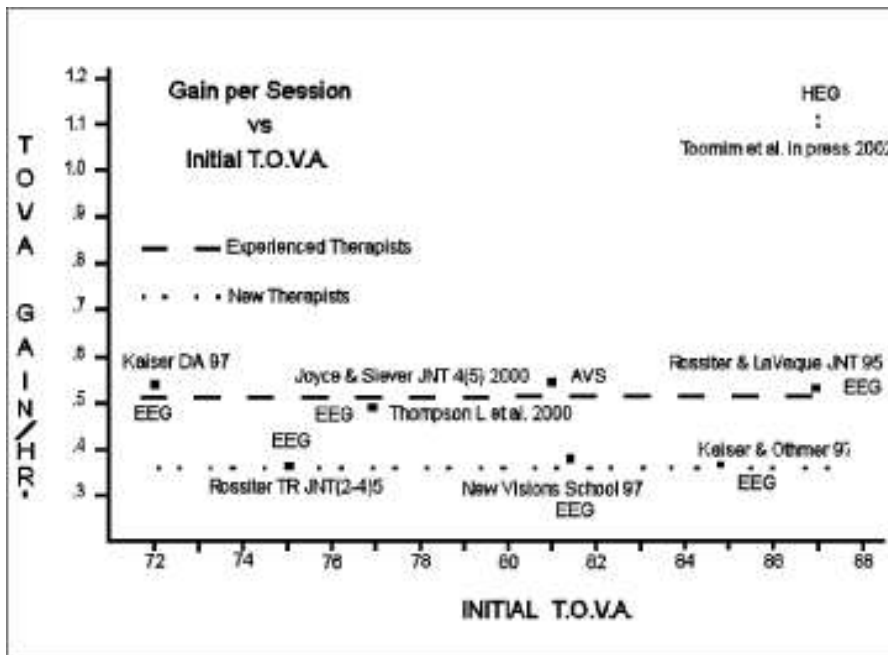


Figure 4 TOVA gains after EEG and HEG biofeedback treatment (with permission from Hershel Toomim et al. 2005)

In addition, HEG biofeedback has promising clinical potential for many types of learning, perceptual, cognitive, neurological and neurobehavioral disorders, such as ODD, OCD, Tourette's, Asperger's and mild Autism, as well as mild to severe head trauma, closed head injuries and seizure disorders. It is important to note that HEG does not replace EEG; some therapists claim they work best when both methods are used together. However, HEG appears to often be superior to EEG when the QEEG brain map and/or other clinical indicators suggest a need for prefrontal lobe training.

Example of temporary frontal activation through HEG biofeedback

A method for mapping forehead IR emissions by [Dr. Ernesto Korenman](#) shows the fast results achieved by HEG biofeedback. The technique is only in his early experimental stage and its clinical significance is currently under discussion. However, these maps may provide useful information about the topographical activation of frontal lobes in general and the effect of HEG training in particular.

Here follows a pre/post IR forehead mapping of a girl (12 years old) diagnosed with dyslexia + ADHD taken before and after 10 minutes over the centre of the forehead (Fpz).

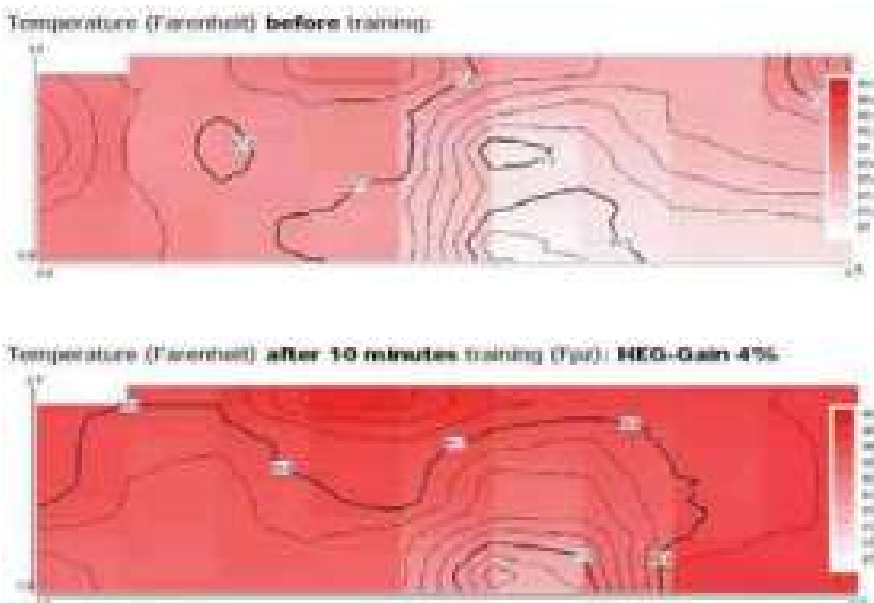


Figure 5 Forehead IR emission maps before and after 10 mins of nIR HEG on Fpz

When applying this methodology prior to consecutive HEG biofeedback training sessions, it proved quite suitable to monitor the long term effects of HEG training and even provide a trend report of forehead IR emission of the patient monitored by the method described prior to each training session over the duration of several months (E Korenman personal communication).

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HEG Biofeedback System

by Hershel Toomim, Dr. Sc. D.

HEG biofeedback (included by some in the new term "neurofeedback") is a new "brain training" modality that is showing great promise for solving the various problems of the ADD to Autism continuum in conjunction with EEG biofeedback. Particularly, the end closer to Autism. (Including the 15% that doesn't respond entirely with 60 sessions of the Stermann EEG biofeedback training.)

The full name is **HEMOENCEPHALOGRAPHY**. As the first part indicates, it has to do with blood - in this case blood flow in the brain. It seems that blood flow is poor in certain brain areas of persons suffering from several types of "brain problems". These include ADD/ADHD, autism, epilepsy, brain injury, stroke, depression, and schizophrenia.

Researchers have found that this poor blood flow in a section of the brain can be increased with biofeedback training in much the same way as EEG biofeedback. Results on ADD/ADHD and Autism to date have been fair to good. Using HEG biofeedback initially, and finishing up with EEG biofeedback, may shorten the number of sessions dramatically, and also may improve the success rate.

Dr. Hershel Toomim of BioComp, USA has developed an attachment unit that works in conjunction with **FlexComp, ProComp and ProComp-2** encoders.

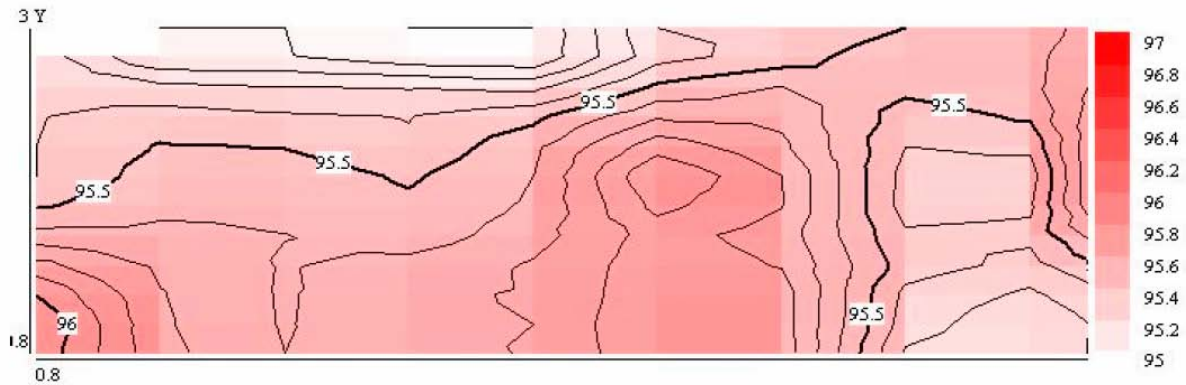
The operation is relative easy to understand. The unit is set over an area of poor blood flow, and two different frequency lights are flashed down into the brain. The bone and tissue is translucent, and light receivers (same frequencies) can measure the amount of "redness" in the area, showing the amount of blood flowing. This signal is fed back to a computer screen, and the trainee just concentrates on increasing it, much like EEG biofeedback. The research indicates that this training is much faster than EEG biofeedback using the Stermann method. In particular, it is very useful for autistic and actual brain damaged persons. Dr. Toomim has done most of his work on actual cases of autism with excellent results.

Dr. Toomim's paper (<http://www.biocompresearch.org/articles.htm>) gives much more information on this new and exciting advance.

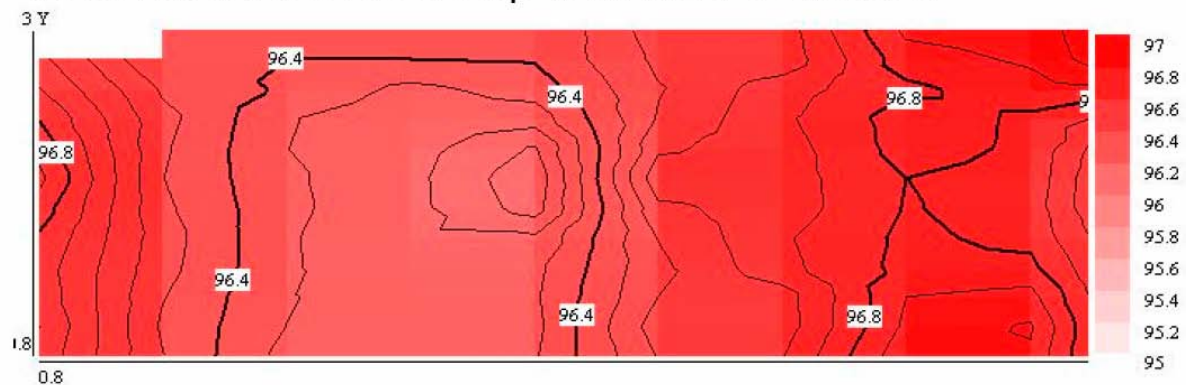
Case study (<http://www.adhd-biofeedback.com/HEG.html>) shows dramatic improvement in a girl who is not only dyslexic, but is on the ADD-Autism continuum as well. Tomm Friend has worked with both HEG and EEG biofeedback, and has researched the possibility of insurance payments for HEG at least. It seems that there is a standard medical procedure, "Near Infrared Spectroscopy", which has its own code number and insurance will pay. Check out "NIR Spectroscopy" on the web to read about it. Since Medicine uses NIRSpec for diagnosis, you can talk about how clever Hershel has been to apply it interactively and dynamically (viz. as biofeedback).



forehead IR emission map before HEG treatment



forehead IR emission map after HEG treatment



HEG System (hardware and software)

1999 Euro

Please contact us for packages with ProComp Infiniti and BioGraph Infiniti

For further information:



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Email: service@meditech.de

Internet: www.meditech.de

EC Declaration of Conformity

The designated product is in conformity with the European Directive:

93/42/EEC

***“Council Directive of 14 June 1993 on the approximation
of the laws of the Member States concerning medical devices“.***

Manufacturer's name and address:	<i>MedITECH Electronic GmbH Langer Acker 7 30900 Wedemark</i>
Product:	Therapy device
Type designation:	HEG-Hardware
Classification:	Class 1
Rule used for classification:	Annex IX

Wedemark, 01.11.2007
(Place, date)


(Legally binding signature of the issuer)

MedTECH® Electronic GmbH – General Terms and Conditions of Business

Valid since 02/2004

§ 1 General Provisions

(1) Contracting party in the sense of the following General Terms and Conditions shall be the party that establishes a business connection with us.

(2) The following General Terms and Conditions shall apply for us and our contracting party both for the case that we act as the principal and for the case that we act as the agent.

(3) For any contract conclusion, exclusively our General Terms and Conditions shall apply; other conditions shall not become subject of the contract even if we do not explicitly object to them.

(4) The contractual relationship of the parties shall exclusively be based on the law of the Federal Republic of Germany. The uniform Laws of Purchase of the Hague Convention of 1954 shall not apply.

(5) Our offers shall be non-binding and without obligation. If we send order acknowledgements or letters of confirmation these shall be decisive for the subject terms of the contract.

(6) Illustrations, drawings, size and weight specifications, descriptions etc. in offers, price lists and other documents are compiled or acquired at the best possible rate. If they are not explicitly specified as binding, we reserve the right to perform negligible modifications. Furthermore we reserve the right of ownership and copyright for cost estimates, drawings and other documents. They shall not be made accessible to third persons without our explicit permission.

(7) With publication of the latest version of one of our prints/documents or the publication of new offers respectively, all previous offers and prices shall become invalid.

(8) Orders through the internet shall primarily be subject to our online terms and conditions which are available in their current version on www.agb.meditech.de.

§ 2 Delivery Time

(1) Events of force majeure like a legal labour dispute in our or other companies on which we are dependent concerning the supply with material/goods, furthermore war etc. shall constitute our right to delay the fulfilment of the contract. In these cases, claims for damages shall be excluded.

(2) In the event of an illegal industrial action a liability shall only be considered in case of gross negligence.

§ 3 Terms of Payment

(1) If nothing else has been explicitly agreed upon in writing the value of deliveries executed by us shall be charged cash on delivery in Euro (•). For postage and packaging, a lump sum (incl. VAT) shall be charged, in addition to the respective fee for cash on delivery. From a goods value of 300.00 • the delivery within Germany shall be free of postage. For all shipments we shall charge a packing share of 0.85 % of the goods value, however limited to a maximum of 7 Euro.

(2) If we execute deliveries on open account, payments shall be due within 10 days after invoice date. Payments shall be made net without cash discount or other deductions.

(3) If a specific date of payment is determined in the letter of confirmation and/or the invoice and the date is not kept, the consequences of default shall take effect without the need of a prior reminder.

(4) In case of default we shall be entitled to claim default interest at the rate of 5% p.a. above the respective base interest rate, for legal transactions exclusively with entrepreneurs, 8% p.a. above the respective base interest rate.

§ 4 Reservation of Ownership

(1) The seller reserves ownership of the goods until full payment of all receivables of the business relationship between seller and buyer including future receivables arising from simultaneously or later concluded contracts. This shall even apply if individual or all receivables of the seller were added to a running account and the balance of this account has been accepted.

(2) The purchaser shall only be permitted to resell the reserved goods in the ordinary course of business if he/she at the same time assigns all receivables to the seller, which accrue to the purchaser against customers or third persons from reselling. If reserved goods – in raw form or after processing in connection with goods which are exclusively owned by the purchaser – will be sold, the purchaser shall already now assign the receivables in full which accrue to him/her from reselling. If reserved goods – after processing/connection – will be resold by the purchaser together with goods not owned by the seller, the buyer shall assign already now before the rest the receivables accruing to it from the reselling in the amount of the value of the reserved goods including all ancillary rights and RANG. The seller accepts the assignment. Following the assignment the purchaser shall be entitled to collect these receivables. The entitlement of the seller to collect the receivables on his own shall not be affected by this; yet/however the seller shall be obliged not to collect the receivables as long as the purchaser regularly meets his payment and other obligations. The seller shall be able to demand that the purchaser notifies to us of all assigned receivables and their debtors, makes all specifications required for the collection, hands over all corresponding documents and informs/notifies the debtors of the assignment.

(3) Without thereby imposing any obligations on it, the seller shall carry out/undertake possible processing or refashioning of the reserved goods. In case of inseparable

connection, mingling or processing of the reserved goods with other goods not belonging to the seller, the seller shall acquire co-ownership of the new thing in the ratio of the value of the reserved goods to the value of the other processed goods at the time of processing, connection or mingling. If the purchaser acquires the sole proprietorship of the new thing the contracting parties shall agree that the purchaser grants the seller co-ownership of the new thing in the ratio of the value of the processed, connected or mingled reserved goods (to the total value of the good) and guarantees storage for the seller free of charge.

(4) Without restriction we shall be entitled to demand delivery of the goods, revocation of the mandate as well as enforcement of the receivable of third persons in particular, if on the part of the contracting party

a) a protest on a cheque or bill on exchange will be notified,
b) an application for insolvency proceedings will be filed/made,
c) the agreed date of payment will be exceeded by 14 days,
d) other contractual provisions will not be observed.

(5) At any time independent of possible disputes we shall be entitled to demand information, inspect the business documents or create photocopies from the contracting party as far as this is required to establish the rights named above.

(6) In case of over security and on demand of the contacting party we shall abandon the agreed reservation of ownership in a reasonable/appropriate scope and declare the release of the goods/articles.

§ 5 Warranty

(1) Notifications of defects, which refer to obvious defects of the delivered item, have to be asserted in writing in the non-commercial trade within two weeks after receipt of the goods.

(2) Subject to the precedingly specified term for notification of obvious defects, the warranty term for construction manuals, kits and self-manufactured devices/devices of internal production shall be 24 months.

(3) In case of defects concerning component parts or devices, which we purchase from preliminary suppliers, we shall not be liable until the contracting party proves the out of court attempt to achieve settlement of its claims against the preliminary supplier. As far as required for this purpose we shall assign it/the contracting party our receivables.

(4) Our warranty claims are initially limited to the right of rectification of defects or compensation delivery. In case of failure of the rectification of defects or compensation delivery the contracting party shall be entitled to claim mitigation of payment or cancellation of the contract.

(5) For installations it is necessary to observe the security and VDE-regulations. We shall not assume warranty for failures which arise due to inappropriate treatment, incorrect use, faulty connection and insufficient or faulty installation of the periphery (e.g. antenna, monitor, printer, etc.).

§ 6 Liability

(1) Our liability shall be limited to intent and gross negligence.
(2) Our liability for default and impossibility and for consequential harm caused by defect shall be limited to the half of the respective net value or the half of the account amount.

(3) We shall only be liable for incorrect information as far as a consultation which has been expressly agreed upon preceded the conclusion of the contract.

(4) In case of purchasing send-only devices and receivers, oscillators, remote control devices, two-way radios etc. we assume the knowledge of postal authorisation regulations. We shall not be obliged to expressively inform in this regard.

§ 7 Rescission

(1) We shall be entitled to recede from the contract a) if, due to force majeure we are not able to execute the delivery of the purchased product.

b) if the contracting party exceeds the date of payment by more than 14 days and the set respite is not observed either/elapses the set respite.

c) if the contracting party has made incorrect statements concerning its creditworthiness.

(2) The contracting party shall be entitled to recede from the contract

a) if we make the execution of the delivery impossible by acting intently or grossly negligent.

b) if we do not keep the delivery time extended by a reasonable respite.

§ 8 Shipping

(1) The shipping will be executed in general by parcel service (UPS) or by post (foreign countries). Dependent on the size and weight of the good we reserve the right to use other ways of shipping like private parcel services, forwarding agencies, airfreight or rail freight. The suitable way of shipping shall be selected/chosen by us.

(2) Within the area of the Federal Republic of Germany we shall bear the complete risk for damages or loss of goods during transport. For this service we charge an amount of 0.85% of the invoice value.

(3) For the case that goods delivered by us subject to import or export restrictions our duty of care shall be limited to labelling the goods as embargo goods. Further necessary measures shall be incumbent on the contracting party. Up to a value of goods of • 500.00 no movement certificate EUR 1 or form EUR 2 for the preferential

movement of goods can be issued.

(4) Externally recognisable damages of the delivery have to be noted by the deliverer of the consignment (railway, post, forwarding agency) on the consignment note or have to be certified in writing in another appropriate way.

(5) In case of externally unrecognisable damages, defects or weight reduction of the content which first become apparent during unpacking, the unpacking has to be stopped immediately. The damage has to be reclaimed from the transport company which shall be asked/demanded to record the facts of the case and the estimation of the damage. Specifically

a) for the post (post office): at the date of delivery,
b) for the railway (delivery of goods, express service): within 7 days,
c) for forwarding agents and carters: within 4 days after delivery of good.

(6) In all cases the representative of the transport company shall leave the goods and packing in the condition in which it was at the time of discovering the damage. The culpable breach of this secondary obligation can lead to damage claims due to default in performance of contract.

§ 9 Repairs

(1) We shall provide written cost estimates for repair orders for the case that the repair costs exceed an amount of 50 Euro. If the estimated repair costs are below this amount we assume agreement and undertake the repairs immediately.

(2) We reserve the right to assume agreement to the repair within a term of four weeks upon entry of the repair order and undertake the repairs as well as rejection/turning-down of repair orders if, from our point of view, the undertaking would be economically and/or technically unjustifiable. A repair order acknowledgement consequentially shall not establish the legal claim for performance of the repair order.

§ 10 Return Consignments

(1) If the concerned article is in good order and condition and in the original packing, return consignments of private customers which do not include warranty claims can be carried out/undertook within 14 days after the receipt of the good. As far as possible the reason for the return shall be enclosed in the return consignment in writing.

(2) The exchange of specialists magazines, books, construction manuals, other literature, software, CDs, record player systems and needles, batteries, individual components as well as construction kits and parts which have been already processed or built in, as well as special orders shall be excluded.

(3) Return consignments of goods from commercial/industrial customers, companies or institutions shall exclusively be redeemed with our preceding written agreement. The credit for the redeemed goods subjects to a deduction for service costs/charge of at least 10% (of the value of goods) as far as nothing else has been explicitly agreed upon (in writing).

(4) In case of return consignments the contracting party shall bear the costs and risks of transport.

§ 11 Setting Off

The contracting party may only set off our claims from deliveries or advertisements which base on these General Terms and Conditions with counterclaims which are undisputed or have been upheld by a final and non-appealable court judgement.

§ 12 Data Protection

According to section 26 of the German Data Protection Act (Bundesdatenschutzgesetz) we point out that we save data communicated to us by our contracting party using EDP.

§ 13 Place of Jurisdiction

As far as the contracting party is registered merchant, legal person under public law, separate estate under public law or has its registered office or residence outside the Federal Republic of Germany, Hannover shall be the exclusive place of jurisdiction for all disputes concerning the contract or arising from the privities of contract/contractual relationship.

§ 15 Limited Inefficacy Clause/Concluding Provisions

Should individual agreements of the contract or of these General Terms and Conditions be or become partly or completely invalid or infeasible, this shall not affect the validity of the other contract provisions. The same shall apply if a loophole of these General Terms and Conditions becomes visible. Instead of the invalid or infeasible agreements or for filling the loophole the contracting parties shall commit themselves to find an appropriate provision which as far as legally possible approaches/comes nearest to what the contracting parties wanted or would have wanted according to the sense and purpose of this agreement, required that they did not know the invalidity or infeasibility of the concerned agreement while concluding the contract.