

AVS

Auditory / Visual Stimulation

Vol. 2, #3
Summer '02

Includes:

An Interview with Ray Wolfe
AVS Buyer's Guide: Conclusion
AV3X - The TV Mindmachine
& More!

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The AVS Journal / Summer '02 : Vol. 2, #3

The manufacturers have been busy. Photosonix, Comptronic, even the illustrious Mr. O, Christopher Oliver, have new products for the back-to-school and Christmas seasons. Learn all about these exciting new products, beginning on page 2.

For those of you who own or are thinking about purchasing a Photosonix system, be sure to check out this issue's e-interview section featuring Ray Wolfe, CEO of Microfirm, Inc., maker of Photosonix products.

ADD is still a hot topic. In Dave Siever's Attention & Learning, you will read how many families and teachers are dealing with children who display ADD symptoms. If you would like to subscribe to the AVS Journal please visit: www.avsjournal.com. If you would like to place an advertisement, please contact Michael Landgraf for pricing and deadlines. Everything in this journal is copyrighted. That means if you want to reproduce any part of this magazine, you must first ask our permission. And those of you who are epileptic or photoepileptic, whether knowingly or not, should not use a pulsed light device.

For upcoming seminars and workshops, please contact:

Dave Siever: info@comptronic.com

Vicki Gaves: info@thoughttechnology.com

Rob Kall: www.futurehealth.org

Stephen Stern / Stens Corp.: 800-257-8367

In his fourth and final chapter of the AVS Buyer's Guide, Jeff Labno provides a very valuable list of medical studies that utilize avs technology. In addition, there are two appendixes, the first to help you choose the correct color light glasses, and the second for maximizing your avs session experiences. Jeff's AVS Buyer's Guide is the first "current" avs guide to appear in the marketplace in eight years! (page 3).

The Client / Vendor Response Sector

Edward Courtney suggested we start a question and answer column featuring different dealers and their responses to questions posed by their customers. We thought this was an excellent idea and have named this column after Ed's suggestion. After all, it was his idea.

So let us begin by sharing a question from Kathleen that she wrote to Ed. It's a good one!

"Dear Edward: I am interested in your Nova Pro 100. Can this system be used too much? For example, if I use this system every other day would it be of any benefit to me or would my system be overloaded? Can this system be used in conjunction with allergens to reduce or eliminate allergies?"

To which Edward replies:

“Hi Kathleen: Thanks for stopping by our site. Like anything else, experimentation with L/S, and the effects thereof consist of many variables that combine to form one’s individual experience. Thus it is hard to say whose system can be overloaded via use frequency. Having said that, my usual consul is to treat L/S usage as a kind of techno-meditation. In meditation, the optimum use frequency is to meditate 3 times a day, and if possible, the same times everyday. Ditto with L/S technology. Cumulative long term benefits are best gained by such a schedule. Of course like any mental technique one gages benefits after each usage period. That is after each individual L/S session, and adjusts accordingly. This is so because it will take time to feel what (continued on page 15)

AV3X : THE TV MINDMACHINE

A few years back, Christopher Oliver designed the virtual515 CD for entraining listeners through sound (headphones or speakers). One person or a roomful, we proved the sessions were effective by simultaneously taking before/during/after brainwave frequency measurements from dozens of participants via eeg/neurofeedback.

Today, the virtual515 is known as one of the most cost- effective methods for achieving targeted brainwave states. It is used in the fields of law enforcement, medicine, education and by hundreds "just trying to make a good thing better". To read what some of the 515 listeners have to say, please visit the customer feedback area at www.mindaware.com.

Just as the virtual 515 CD negated the need for purchasing much higher-priced sound generating equipment, no longer do you have to (cont. on page 21).

New ABT Bioscan (Neurofeedback) by Comptronics

NEW ABT Bioscan (Neurofeedback) by Comptronics: This new biofeedback system is small enough to fit in the palm of your hand and very affordable at \$450. It runs off a 9 V battery, so you can use it in any room of your house, even in a park or at the beach. There are three brainwave settings allowing you to choose theta (creative visualization), alpha (learning/memory) or SMR (focus/concentration). You can either listen to a tone using headphones, or watch the front panel which has an illuminated display showing an increase in the brainwave pattern you have chosen. It is a bit tricky at first to learn how to get (cont. on page 24)

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AVS Buyer's Guide: Part Four

By Jeff Labno

Medical and Scientific Research

We have listed medical research papers concerning the effect of strobe light, strobe sound, and combining strobe light with strobe sound. Many more studies exist, this is just a sampling. Here are some search words you may find useful: photopic driving, scotopic, beat frequencies, clicks, M.A.S.S. (multiple afferent sensory stimulation), VER (visual evoked response), VEP (visual evoked potential), evoked potentials, acoustic stimulation, photic stimulation, brain wave synchronizer, and audio visual stimulation.

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APPENDIX A

Light Glasses: Choosing the Best Color For You

Once upon a time, when you bought an avs machine, you got whatever light glasses that came with the unit provided by the manufacturer. No choices were offered. Well things have changed. Now you can choose between a variety of styles and colors. What brought about this change was an improvement in light technology from Japan. New LED (light emitting diode) technology made it possible to manufacture bright light LEDs in a variety of colors. These new light colors were bright and created extremely rich colors and patterns with your eyes closed, not the 'flickering effect' of the previous much dimmer LEDs.

Many styles of glasses have also been used such as welding goggles, sunglasses, skiing masks, and even swim goggles. When you finished a session, you had indentation lines on your face we affectionately called 'goggle marks'. The most sophisticated glasses I've seen were from Japan. They used liquid-crystal 'television-style' glasses featuring green light. Quality glasses generally use four lights per eye.

The new light technology caused a revolution in light and sound technology because manufacturers began to offer more color choices. Not just that, but now styles of glasses have changed. The standard versions have been for use with eyes closed. Now you can get PV Stim which you see through for use with eyes open, and finally HemiStim where you control the flash speed on the left side of each eye separately from the flash speed of the lights on the right side of each eye for hemispheric specialization. The OmniScreen light glasses have been around a long time where a milk-white plastic filter diffuses the light spreading it out over the eye. The OmniScreens also have hemispheric specific capability.

So with many styles and colors to choose from, how do you decide which ones are best for you? Personally, I have all of them, however when budget and portability are an issue, there are ways to make better choices.

Color does not affect everyone the same way. The clothes people wear for example are a good insight. While most people wear white and blue the majority of the time, other colors are worn to make you feel special and different. Some people wear certain colors a lot such as blue, while others cannot stand this color. Individual psychology is the explanation for this.

So, how do you pick the correct color?

Here are a few pointers:

When offered a variety of color choices, the public overwhelmingly chooses white light; over 80%. White has no psychological color association, so it is the best overall choice for most. Also, you see lots of lucid colors and patterns using white light.

Barbara Brown in her book on biofeedback in 1974 pointed out that the use of strobe red light on 'extremely right brain people (artistic)' did not entrain them very well, but instead caused anxiety. Red light worked just fine on 'extremely left brain people (logical)'.

The warmer colors (red, orange, yellow) are stimulating (excitatory), whereas the cooler colors (green, blue, violet) are calming (inhibitory).

The color blue has been observed to be very effective to quickly induce sleep in most people.

Bi-color light combining red with blue LEDs enhances one's ability to visualize and see more clearly with their imagination. Jacob Liberman noted that this combination appears to 'reset' the biological clock.

Bi-color light combining red with green LEDs creates the most magical color combinations of any other choice. A great choice for artists.

When it comes down to the programs contained inside your machine, they are based on the four brainwave states such as delta (sleep/clearing), theta (dream/visualizing), alpha (memory/learning), and beta (energy/focusing). All machines contain programs to induce all four brainwave states, the program names merely reflect different styles of doing programs.

Using just about any color of light will deliver the benefits of the program. Specific colors however will get you there faster and deeper. For example using blue with sleep programs is very efficient. Using red for energy programs is another good example.

A simpler model to follow might be: for delta use blue; for theta use green; for alpha use yellow; and for beta use orange or red. For some, color choice comes down to why they purchased the machine in the first place. Maybe it is to help them sleep (blue), for others for focus (red),

others for learning (yellow), and others for meditation (green).

As far as style of glasses using PV Stim allows you to do programs with your eyes open. This enables you to use light and sound technology while engaging in activities such as reading, writing, editing copy, studying, creating project, doing art, playing music...in other words, light and sound technology is no longer limited to eyes closed meditative states or internal activities. Adjusting the machine frequencies manually instead of using preset programs works very well with the PV Stim glasses.

You can also use your PV Stim glasses with your eyes closed. Note however that the LEDs on these models are not facing your eyes, but instead they are facing each other. This means that they will not be as bright as the standard models.

Finally, the HemiStim or OmniScreen Field Independent glasses allows for hemispheric specificity. Special technology is required to use these glasses which currently exists only in the DAVID Paradise XL, Paradise XL+ and the Nova Pro 100.

This special technology allows you to tone-down the left brain to favor right brain activity. This would be useful for doing art, music, decorating or other creative things. Conversely, you can tone-down the right brain and favor the left brain. This is good for logical tasks such as writing checks, computer work, studying scientific manuals...

Last but not least, you can use these different color light glasses for color therapy. Instead of wearing the glasses, you can point them at your skin for healing, over a glass of water for 'photon water', or put them on a table and stare at the strobe light for emotional release.

Some good books on using color are: "Let There Be Light" by Darius Dinshah, "Light: Medicine of the Future" by Jacob Liberman, and "Light Years Ahead" by a compendium of healthcare practitioners.

Which ever colors and styles of glasses you choose, or however you choose to use them, have fun and enjoy a new world of technology with your avs machine.

APPENDIX B

Making a Buyer's Guide Decision . . . (by Michael Landgraf)

You have just finished reading Jeff Labno's AVS Buyer's Guide. Now its time to make the big decision. You have certain considerations to measure, and not only about which unit to purchase, but the promise to yourself to use your unit on a regular basis.

So how do you choose an avs instrument? It is a question many new customers ask me, and I have found the following considerations helpful in determining which unit best meets your individual needs:

Most light and sound machines are of excellent quality, irrespective of price. They all come

with a one year warranty. If all you are looking for in an avs instrument is achieving a calmer, more relaxed state or improving your ability to focus, then a small low-cost model is all you need.

If you are considering a low-end unit, then later, purchasing a more advanced model, spend a little more up front and save in the long run. Consider the Proteus, as this unit's software program is periodically updated and available off the Web, so your unit will always be current.

If you want the best avs instrument on the market, buy the Nova Pro 100. If price is a factor, buy the NP 100's little brother, the Muse#.

Whichever avs instrument you decide to purchase, at some point promise yourself you'll get Truwhite (white LEDs) glasses to go with it. If there is one accessory you should treat yourself to, Truwhites are it. When given a choice, over 80% of all customers choose Truwhites over all other colors.

Be careful of expensive machines which promise a lot on paper, but do not deliver in actual services; consult with an experienced dealer if you have any questions.

And remember:

Regardless of price, most avs instruments contain built-in sessions that already target all four general brainwave states. Don't bother with the fancy titles many sessions go by as you check the unit's session list, look for the frequencies targeted in the session. Session names can get confusing, knowing which frequency the session achieves alleviates that problem.

If your hearing is very good, way better than what is considered average, or the quality of sound delivery is an important consideration for you, give the Photosonix models special attention. The NP 100 in particular has two lower octaves of pitches, which are incredibly useful for beat frequencies.

Probably the biggest noticeable difference between high-end and low-end systems is the quality of headphones. If you purchase a low-end unit, consider using better headphones than what come with the unit. For audiophiles, consider buying high-end headphones.

By now you should know which avs instrument is best for you. So you buy it, and then ask yourself now what?

The very first thing you do . . .

Read the owner's manual that comes with your unit!

Chances are that you still 'won't get it' after finishing, but its important to complete step one before tackling step two: your personal review and walk-through. Spread out everything that came with your avs instrument in front of you. Have your owners manual turned to page one. Now repeat step one.

Read, install the batteries, hook up the components, test the light intensity while the glasses are on the table before you, volume control, play with the buttons. Do not fear, it is difficult to scramble, confuse or totally destroy the inner-workings of an avs instrument just by pressing the buttons. If you happen to be one of those adventurous souls that do achieve such a feat, I have personally found that taking the batteries out, waiting a couple of minutes, then replacing them oftentimes works. If it doesn't, then here's reason #1 for buying your system from an experienced dealer!

If all this appears foolish and repetitive for just wanting to run a simple avs session, please consider: How much do you actually know about avs? How much did you spend on your avs system? How serious are you about maximizing your avs session experiences? All things considered, spending just 30-60 minutes familiarizing yourself with your new system is minimum effort, little to expect, yet very rewarding: having the confidence in knowing you are 'doing it right'.

Or for those of you who have yet to purchase a system, this is how you do it:

Enjoy AVS in 5 Easy Steps!

Step 1: Install the batteries. This is not a difficult task (although sometimes the little plastic battery cover can be a royal pain to slide off). Some manufacturers are considerate and include batteries or an AC adapter, some aren't. Most avs instruments use AA batteries, so buy an 8-pack. Have some for your unit and your CD or tape player. When installing, just make sure the "+" end of the battery lines up with the "+" end of the battery compartment and you'll be set. Expect each set of batteries to last for several sessions. For those with an internal battery, they usually arrive fully charged. Internal batteries should last a good five hours before recharging, which can be done overnight with what should be included in your avs system: an AC adapter.

Step 2: Connect everything. The headphones and lightframes each have their own plugs. All you need to do is connect each component to their respective plug. You'll know right away if you have them backwards as you will hear a rather loud clicking noise with absolutely no audio frequency entrainment value whatsoever bellowing from the headphones when you turn on the power. Just switch them, and don't worry, you didn't 'harm' anything. And do not forget the stereo patch cord. This connects between the auxiliary plug of your unit to the headphone jack of your CD or tape player. Music, spoken word, classroom notes you've recorded onto tape, they all can be played in combination with an avs session. They all can be a factor in maximizing your session experiences.

Step 3: Turn on the power. You feel confident, determined to continue, because you are stressed and you really need a break. Press that button!

Step 4: Select a session. The big decision! In the beginning, keep it simple. What do you feel like? That's all you need to ask.

Are you stressed, need to relax? Do an alpha session. They are sessions with frequencies in

the 8-12Hz range and reflect a state that can be described as being relaxed, yet focused.

Are you really stressed? Need to relax big-time? Theta should help. Those are the sessions with frequencies in the 3-7Hz range. I do not advise first time avs users to select a theta session as attaining that state has been known to open doors on issues that could be of the variety the user is not prepared for. Try choosing a longer alpha session instead.

Sleep deprived? A delta session could be your answer. These are sessions in the 0.5-2Hz frequency range. If you plan on sleeping with your head at an odd angle, use the headphones and lightframes. But if you want comfort and a delta/sleep session, then buy yourself a pair of inexpensive computer speakers (\$15). Connect them to the headphone plug on your avs unit and set the volume at a low level (much like the volume of a ceiling fan or hum of a fluorescent light). Try this without the lightframes.

Do you feel just the opposite? Are you in need of being alert, energized? Go with beta. These sessions can range from 13-30Hz.

Please note that these descriptions are in 'generic' terms for the sake of first time users. Everyone is affected differently by auditory and visual stimulation. If a particular session targeting a state you wish to achieve is found to be lacking, try the next session listed under that brain-wave category. Find and use the sessions you enjoy. For an in-depth description of how others use their avs systems and for what purposes, download the ebook "Mind States / An Introduction to Light & Sound Technology" by Michael Landgraf. It is available for \$10 at: www.avsjournal.com.

Step 5: Press play. You have made your decision. You've set the audio and light intensity levels just right, at a comfortable setting. No need to blast the stimulation as 'loudest and brightest' does not make it 'best'. You have given yourself the gift of relaxation. You understand how to use your avs system. Now it is time to enjoy it.

(Optional) Keeping a journal. Subtle changes can occur when using avs on a routine basis. Oftentimes the user is unaware of them actually happening. It's more like Write down which session you played, the time of day, length of session, and ask yourself things you can assign numbers to. Examples would be: Stress level before session/stress level after; energy level, before and after; and before/after ability to focus. Have 1 = lousy and 10 = excellent. Ask yourself how you feel mentally, emotionally and physically after as compared to before the session. Were you focused or did you drift during a session? What colors did you see during the session? Do you feel more or less centered after the session? Make a list and take a few moments after each session to record your thoughts. By maintaining a daily record, you benefit by having the ability to review what you have previously written and are able to compare those feelings with what is happening to you now. Be aware of your personal growth, keep a journal.

There is a new and very powerful neuro-stimulation device called the BT-7 SS.

This unit represents the highest quality in bio-stimulation mechanics, known as CES (Cranial-Electric-Stimulation). Please note that the BT - 7 SS is intended for investigative study of the effects of the electrical pulse repetition rate and their harmonic frequency content. Use of this device is not intended for use in diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of any medical malformation. No medical claims are made or implied, whatsoever, by the use of this device.

About the BT -7 SS: The BT -7 SS features a 20 minute auto shut-off timer. The unit also features a green light power indicator that flashes congruently with the electrical pulse of the unit. The BT -7 SS waveform produces thousands of harmonic resonant frequencies based off the core carrier frequency of 111Hz. A key feature of the BT -7 SS is the utilization of Spectrum Sweep Technology. The BT -7 SS has an interior switch, accessed through the battery compartment that can access the SS mode. In SS mode the unit does a frequency sweep that rapidly cycles from 1000Hz to 500Hz in .05Hz increments. One cycle takes about 20 seconds. One can also use the spectrum sweep mode to attach large body electrodes for use as a body massage and muscle stimulation.

No harmful side effects have been reported in over 20 years and hundreds of human studies using essentially similar devices in foreign countries and the US. However, literature reports that about 2% of subjects may experience a mild headache at the time of first exposure. This normally disappears in a short time, and usually does not recur during subsequent sessions. Keeping the current intensity the proper comfort threshold is advised in order to minimize this possibility.

The BT -7 SS is \$200.

An “E-Interview” with Ray Wolfe, CEO of Microfirm, Inc. and Manufacturer of Photosonix Instruments

Q: When designing an avs instrument, what do you believe are the essential elements to be considered?

A: “The balance between cost and performance, and offering the user several different tradeoffs in that dimension. The performance factors to be considered include appearance, reliability, ease of use, and functionality. But so far I could have been talking about any product. Specifically for light/sound, high quality sound, the capability of getting bright lights if desired, and a feature set that is up to date as our knowledge of light/sound grows, are things we take into account.”

Q: As a manufacturer, what do you think the public is looking for in an avs instrument? Over the past ten years, you have undoubtedly received plenty of feedback

from Photosonix customers. What has been the main reason for them buying a unit? Why did they decide on Photosonix?

A: “The reasons for buying a unit are as varied as the capabilities of light/sound, from seeking help for many different kinds of problems, through relaxation, to just having fun. The ‘public’ includes new users who know almost nothing about light/sound as well as experienced users who have definite ideas of what they are looking for. The reason most often stated for choosing Photosonix is our reputation for quality.”

Q: Overseas customers have often asked as to the availability of owners manuals being in a language other than English. Have you ever considered translating your owners manuals?

A: “For various products in our product line there are many owners manuals in other languages. These are provided by the distributors in those countries because they also provide customer service in that language. Translating a manual to a different language is a significant project that requires a lot of sales in a particular country. It has been done by dealers who are making a project of promoting the product in a country. We do not have the resources to set up offices in other countries, it takes a distributor who has the capability of establishing a marketplace, and providing local customer service in the proper language. For such a company translating a manual is a worthwhile project.”

Q: Is it true Microfirm, Inc., is moving to larger facilities? Will there be any significant changes in your Photosonix product line?

A: “We do need more space and plan to move soon, staying in the same general area. Even during the move, our customer service line will remain the same (800/258-2566) and the email will not change. Any other contact information that may change will be posted on our website.

We will always continue to make improvements in our product line, but that is not related to our moving.”

Q: With all the different sounds, ie, tone, chord, binaural beats, why not also include environmental sounds like running water, birds chirping or crickets?

A: “We have generally tried to stay with the core purpose of light/sound, namely rhythmic stimulation that has a preconscious effect on brain rhythms. This means we mostly avoid such entertainment effects as blinking lights to music, nature sounds, etc. because they are not created with entrainment in mind. All of our systems have an external sound jack for those who like to listen to sounds that the conscious brain recognizes more easily. We have adopted the byline ‘Sensory Rhythms for Mental Fitness’ TM and are trying to stay with that philosophy.”

Q: What has been your favorite Photosonix model and why?

A: “The Nova Pro was the biggest increment in capability we have done at one time, and was a big advance at the time it was introduced. So it was a big satisfaction. But the real favorite at any time has to be the current high end system or the most recent product release, using all the knowledge and technology accumulated to date and incorporating the latest feature ideas. The about-to-be-introduced Innerpulse has a number of new features and will definitely take the ‘favorite’ award for some time.”

Q: What has been your biggest selling system?

A: “The Nova Pro was on the market the longest, and to date is the historical best seller. But it will soon be surpassed by newer models.”

Q: What would the perfect AVS system contain?

A: “The perfect AVS system is a moving target, just as is the ‘perfect PC’ that PC Magazine writes about from time to time. We have a growing list of features we would like to incorporate in products, but there is only so much time and money, and some the marketplace is probably not yet ready for. Needless to say, we are not in the practice of revealing feature lists until we are ready to produce the product. The Innerpulse incorporates several of them.”

Q: Can you give us a ballpark figure as to how many Photosonix systems have been sold over the years? Are more systems sold in the US than overseas? Is there one particular country besides the US that buys more systems than other countries?

A: “Total sales are in the tens of thousands, not yet hundreds of thousands, but we are working on it. About half of sales are overseas. The country distribution changes, depending on where the most active dealers are.”

Q: Except for a bigger variety of LEDs, lightframes have changed little. Why is that? Do you plan on making improvements to lightframes in the near future? Perhaps a frame that blocks out more outside light and distractions?

A: “Sunglasses are easily available and are designed most correctly as a base to hold LEDs for light stimulation. So they are very tempting for manufacturers, including us. We do regard pvStim and hemiStim glasses as being inherently different although they are still made on a sunglasses base. Making an injection mold for custom AVS glasses is an expensive proposition but will eventually happen as the market grows.”

Q: What do you see for the future of avs?

A: “I think the AVS industry is a bit like the story of the blind men and the elephant - there are a lot of ideas but no one has seen the big picture yet.

The technology has developed enough that it can have good and sometimes profoundly good effects, but it is still a bit hit and miss. I am quite sure there are some fundamental principles yet to be learned that will surprise everyone when they are discovered. I am convinced that we are on the trail of something that will have major significance in mental health, and also that we can do a lot of people a lot of good right now. We at Photosonix intend to play a major role in the future development of AVS.”

Q: Concerning your new system that is soon to be released, the Innerpulse, can you share with us some of the new features it will have?

A: “I thought you would never ask. The Innerpulse uses the same compact case as the Muse#, operates on 4 AA batteries or an AC adapter, and includes:

A sine wave light intensity option, a first in the industry. This is done with true analog control, not by a rapid full amplitude on/off duty cycle.

Independent analog control of the left and right light intensity. This allows brighter stimulation on one side than the other (including one side off) as suggested in the book ‘Of Two Minds’ (Schiffer). It also allows color control of dual color glasses.

Phaserase - AVS systems have historically provided entrainment or boosting at the stimulation frequency, but have not had a mechanism for disentrainment or reduction of an unwanted frequency. ‘Phaserase’ or random phase disentrainment is an attempt at accomplishing this. If it works well, it will be patented.

A significantly improved sound engine with higher volume capability.

8 tones, a first in a portable unit, including breath pacing.

10 breath pacing sessions from the Pranayama, Yoga and Tao teachings.

Audiostrobe, with a decoder that cannot be fooled by high amplitude signals at lower frequencies.

4 Improv (different every time) sessions in different frequency ranges, with user-selected variability settings.

The capability of setting a number of user preference options that are remembered from one usage to the next.

3 digit display.

50 light/sound sessions, organized in categories so sessions can be selected more easily.

Complete manual control mode including the capability of establishing ramped frequency and pitch manually.

Capacity for up to 25 downloaded sessions.

We are a bit later than we hoped to be with this one, because it is a complete redesign using new chip technology, and not because we sold out the first production to an unnamed investor.

Thank you for the opportunity of speaking to the AVS Journal audience.”

To contact Ray Wolfe email: ray@photosonix.com or visit their web site: www.photosonix.com.

The Client / Vendor Response Sector (Continued from page 2)

...session is the right one for the task at hand. Additionally, it takes time and experimentation to adjust basic session parameters to your comfort threshold. Basic adjustments such as light brightness and sound volume can play an important role in after-session mind states and any benefits perceived.

I would also ask you to consider getting Truwhite glasses with the NP 100. We consider Truwhite glasses, because of their full-spectrum photic signature, to produce the best overall audio-visual experience, with very powerful color intensities, evoking beautiful and seductive inner imagery.

As for your question of L/S technology utilized as a treatment for allergies, I think not. While L/S can reduce stress levels and guide one into profound states of tranquility, there is no information, anecdotal or otherwise, that shows that L/S can directly influence the physical systems linked to allergies. I would say however, that cumulative effects of L/S over time can have many attendant benefits, the sum total of which has never been studied or documented.

It has been shown that the alleviation of stress has much impact on physical systems within the human anatomy. Thus by inference, it is possible that L/S could interface indirectly and produce relief in this area.

Again, experimentation is the key here.

I see no reason why or how L/S could be detrimental to allergy relief.

Thanks again for your interest Kathleen. If you have any further questions, don't hesitate to ask.”

Sincerely,

Edward Courtney



mindaware

The place to shop for light and sound machines

www.MindAware.com

“For all of you who have children that enjoy coloring books, we have a free 49 page coloring book in pdf downloadable format. No personal information is needed to download. Just visit www.mindmachines.com and click on “Free Download” located on the entry page to our website. It is something we wanted to make available for kids. For those interested, we hope you find it enjoyable.” -Michael Landgraf

Light, Sound & Fun

The Original Light & Sound Coloring Book



Grab Your Crayons and Enjoy Light & Sound!

The Fossil Phil Way

Dear Editor:

In my article “Inventing Shakti” (AVS Journal, Spring ‘02 / Vol. 2, #2), I mentioned that one of the effects produced by repeated sessions using Shakti was a “reduction of depression”. It should be known that this is an effect, and that no medical claims should be construed from it. Shakti has not been tested in laboratory trials for depression, although it’s parent technology has. I am a researcher, not a clinician. The word depression has entered our common, vernacular speech, and it is in that sense that I use the word.

Shakti is not intended to diagnose or treat medical or psychiatric disorders.

Thank you for publishing this note,

Todd Murphy, Researching Behavioral Neuroscientist
Laurentian University Behavioral Neurosciences Program, Associate Researcher

Attention and Learning (Part One)

By Dave Siever

All mental functioning involves an element of arousal. That is, how awake or alert the brain really is. Where and to what degree the brain’s (cortical) arousal occurs, dramatically affects how well the mental function can be performed. For instance, it’s almost impossible to pay attention if the pre-frontal lobes are sleeping (making a lot of alpha). On the other hand, high levels of theta activity over the parietal region is critical in feeling mentally calm and in losing awareness of how our body is positioned and what is touching it, or “where-ness”, which is essential in the process towards sleep. High levels of delta activity throughout the brain is essential for deep sleep. Spindles of SMR over the motor strip during sleep is critical in reducing the likelihood of sleep-walking. A great deal of alpha suppression in temporal and frontal areas must occur when handling an audio/visual function such as playing a video game or intense learning. A good example of alpha/theta suppression would be the first time someone learns to drive a car. However, over suppression (leaving only beta activity) could cause a person to be over-reactive and anxious, interfering with memory and performance. An experienced driver, however, could drive with considerably more alpha production than a beginner. As a result, an experienced driver can drive for much longer periods before becoming fatigued, than a beginner could. As anyone develops a particular skill, alpha suppression becomes less as their skill level increases. In other words, as a person becomes unconsciously competent (able to perform a task automatically and without much conscious thought) he/she doesn’t need to suppress alpha to maintain the alertness, because he/she can do the task without much awareness at all. A good golfer stays very mentally calm (in the “zone”) for the entire game. A good soccer player has a different “zone” than the golfer. A good jet fighter pilot can shift into intense attention (alpha suppression) during a moment of battle, then quickly relax, taking a mental break during normal flying. There exists an optimal arousal for every kind of mental function and activity

that can be performed. The trick is to get into the “zone” during the task and exit the zone (to relax mentally) in between tasks.

People with attentional problems such as ADD/ADHD have particular difficulty shifting their pre-frontal lobes into gear during cognitive tasks. Much of the information they see and hear goes unnoticed, slipping right on by and the little information that they are aware of may not get processed or understood because they cannot pay attention to their own internal cognitive processes. Reading generally seems to be the task that causes the most trouble. Unless the story is exciting (pushing up arousal), the pre-frontal and frontal lobes lose their attentiveness quickly. Theta and/or alpha increases dramatically and the person “fogs” out. Those with autism are often the opposite, getting very focused on an activity or “stimming” (simple repetitive movements) and unable to shift to different tasks. The ADHD child shifts attention to many things very rapidly, barely able to attend to any one task (unless it’s fun or exciting) while the autistic child attends only to one thing and nothing else (unless the “one thing” is exceptionally boring).

Figure 1 shows the bell curve of arousal. During the course of a normal day our arousal fluctuates up and down between under-aroused (UA) and over-aroused (OA), due to circadian rhythms (time of day influences), eating patterns (thus influencing glucose supply to the brain and body), thoughts and events.

We have probably all heard stories of the “couch potato” who is basically thought of as quite useless and unreliable to help with anything. Then one day the house is on fire or there is a car accident and this person jumps to life while everyone else “freezes”. The sudden excitement has pushed his arousal to a “peak performance” state at the top of the curve. All too often we hear of the promising athlete who crumbles at the Olympics, his/her arousal being at the peak during training gets pushed over to the right (refer to figure 1) by the excitement of the competition, TV cameras, and thoughts of fame and fortune, which causes performance to degrade.

The difficulty for those with ADD/ADHD is that their attentional and cognitive arousal is rarely high enough for them to enter the “zone” of optimal functioning. The opposite holds true for those with anxiety disorders - their arousal rarely drops low enough to enter the zone of optimal functioning.

Figure 1 (Unavailable in downloadable format)

Of interest, is that most people with ADHD, anxiety disorders and depression are unstable, often operating from a point of under or over arousal but rarely in the zone of optimal arousal. Those who are under-aroused (including ADD/ADHD), may require many stimulating events to drive up their arousal and awareness, as shown in Figure 2. An electro-dermal response would be slowly increasing arousal, falling off quickly after the stimuli has ended. For those with anxiety, just one event, even one of no particular impact, can quickly make this type of person anxious. Typically, an electro-dermal response would show that of a sharp increase in arousal followed by a long refractory period of several minutes to hours before the arousal settles down again.

A good way to test arousal is playing a high-pressure, timed “game” like “ThinkFAST”. Under-aroused people don’t start “getting-going” until they face the more complex tasks later on in the game. Anxious people show sharp arousal increases very early in the game, even during the simple tasks. Under-aroused people don’t do well in the first few challenges but perform quite well later on in the game. Over-aroused people are “bang on” showing mastery in the first few exercises, then start failing as the game gets more challenging. On the “Test of Variables of Attention” (TOVA), over-aroused people make more commission errors (pressing the button when they shouldn’t), while under-aroused people make more omission errors (forgetting to press the button when they should). Adapted from Othmer are profiles of arousal (EEG Spectrum / Training Syllabus -Vol. 1, 1998; Quantitative EEG and Neurofeedback, 1999, Lubar & Lubar, pp. 103-143). I should mention these curves generally apply equally well to both cognitive/attentional and emotional arousal.

Figure 2 (Unavailable in downloadable format)
Figure 3

Types of ADD

Definition of ADD

Attention Deficit Disorder with/without Hyperactivity (ADD) is defined as a persistent group of behaviors characterized by excessive motor activity, the lack of ability to concentrate for a sustained length of time, and the lack of normal inhibitions required to follow directions for rules of conduct. In short, these children display:

hyperactivity
impulsiveness
distractibility/inattention

Research has shown that many of the instructional strategies that enhance the social and academic functioning of normal children can be extremely ineffective when dealing with an ADD child. Schools give these children tasks that are difficult for them to do well. They are expected to be thoughtful, quiet, calm, patient and emotionally stable enough to focus on their work, to ignore distractions, to sit for long periods of time and to delay gratification. Typically, a child with ADD has problems developing the skills necessary to sustain his/her attention to any given task. Some children with ADD are hyper-focused and cannot move away from the task to which they are attending. The child in the classroom most likely to display significant behavior problems is the child with ADD. These children experience a great deal of failure and correction.

Some typical behaviors teachers and parents see that may indicate a child should be tested for ADD are:

failure to complete tasks
easily distracted

frequently talks out loud in class and interrupts others
difficulty in staying seated
always moving
requires high stimulation to be motivated
difficulty processing information (learning disorders)
inappropriate responses to rewards and punishments
not listening when spoken to directly
has difficulty being organized
often loses things
forgetfulness

It is important, however, that caution be exercised when these symptoms are observed in a child. Just because a child displays hyperactivity, impulsiveness and/or distractibility, does not necessarily mean the child has ADD. Anxiety, depression and conduct disorders can create “ADD-like” symptoms. Poor diet, food additives and food allergies may also cause many of these same symptoms. Anxiety or depression may be due to family stress, unrealistic demands on the child or frustration as a result of difficulty in understanding the parent or teacher. Although parents cannot cause ADD in a child, some “poor” parenting skills can cause the child to display these behaviors. It is important to accurately determine the source of the symptoms. If a child is having problems with academic performance, it is very important to determine if these problems are actually a result of ADD and/or learning disabilities or if they are a result of family, emotional or social problems.

History

Over the decades, the nomenclature for identifying ADD has been tossed around like a hot potato. Although there has been a recent growing awareness of ADD, documentation of its existence dates back as early as 1902, with the English physician G.F. Still’s reference to children with “abnormal defects in moral control...and wanton mischievousness and destructiveness”. He was not aware of any physical reason for the behaviors displayed by these children.

After the severe influenza outbreak of 1918, it was noted that antisocial behavior, decreased attentiveness, impulsiveness and hyperactivity were present in some of the children who had influenza-related encephalitis (viral inflammation of the brain). In the 1930s, researchers concluded that there were a series of disorders which involved some type of slight brain dysfunction.

The concept of hyperactivity and distractibility was recorded in 1937, when Dr. Charles Bradley, a pediatrician, described these traits in children recovering from viral encephalitis. Dr. Bradley introduced the first pharmacological treatment by administering amphetamine sulphate to some of these children. He found that there was a dramatic improvement in school-related behaviors and increase in attentiveness. At the time, it was believed that stimulants increased arousal through brain stem reticular activators.

Prior to 1940, if a child had trouble learning, he was considered to be mentally retarded,

emotionally disturbed or socially or culturally disadvantaged. In 1947, Strauss and Lehtinen developed the concept of Minimal Brain Dysfunction (MBD), then referred to as “Strauss Syndrome”. During the 1940s and 1950s, psychological tests were being developed to help differentiate MBD from the normal population. It became clear in the 1970s that several disorders existed and these subgroups of MBD needed to be isolated. They needed to test for hyper kinetic (hyperactivity) disorder, various learning disabilities, conduct disorders and attention disorders.

In 1980, the American Psychiatric Association released its Diagnostic and Statistical Manual - 3rd Edition (DSM-III), where ADD, conduct disorders and learning disabilities were identified. Since this time, minor changes have been observed for the most current description for ADD. These have been updated in the recent release of the DSM-IV.

Recently, educators have shown increasing concern for students whose lack of academic success is related to their inappropriate behavior. Educational strategies designed for ADD children continue to be developed and tested in classrooms. It is essential that educators continue to develop and implement interventions to make it possible for ADD students to experience success at school.

The “ADD/ADHD” Concept

The term Attention Deficit Disorder can be misleading. While children with ADD tend to have a hard time concentrating, the fact is that many ADHD children do focus intently if the stimulus and rewards are high enough. ADD children can pay attention for hours when it comes to playing video games, building Lego, carefully constructing a model air plane or car, playing sports and so on. For many ADD children, attention isn’t the problem, but rather, what they select to pay attention to often creates difficulty. ADD children are easily distracted from doing the things they don’t see the point in doing. Their inability to respond to “normal” rewards when asked to do the things they don’t see the point in doing is also of primary concern. Their attention is as good as is as good as or better than most children in any setting than a boring classroom! (Just ask Einstein and Edison!) This is also why an ADD child may do well in school with one teacher who makes efforts to make the class exciting, building in workable rewards and friendly competitions and fails miserably soon as he gets a rigid, monotonous teacher more interested in controlling the kids than working with them.

ADD is often accompanied with other disorders. Conduct disorders such as oppositional defiant disorder (ODD) and obsessive/compulsive disorder (OCD) are frequently included in ADD behavior. ADD children are amazing by how they can drive their parents crazy! The difficulty in parenting is in setting up rewards, consequences (not punishments) and avoid constantly policing, screaming and yelling at the child. Knowing to reduce standards on cleanliness, punctuality and a host of other qualities is a tough lesson for parents to learn. It’s my belief that many ADD children grow up to be great achievers, politicians and CEOs of corporations, provided the parents can maintain a clear perspective and continue to provide love and support in the midst of the chaos. Yet so many ADD children end up in jail as adults. Again it’s my belief that these kids grow up being yelled at, punished and scorned. They learn violence,

anger and disrespect, not that the parents wish to teach their children this. They really want the best for their child, but do not understand the damage they inflict on their child in the interests in keeping their child “proper and in-line”.

Some ADD children also have movement disorders, spanning in range from mild tics to the severe tics and constant verbal utterances or Tourette’s Syndrome. Other children have deficits in auditory or visual processing. Figure 4 shows the relationship between ADD and other dysfunctions.

Figure 4 (Unavailable in downloadable format)

Brainwave Subtypes of ADD

The number of subtypes of ADD/ADHD has been bounced around endlessly. However, I believe that from an EEG point of view, much of the industry will agree on the subtypes as indicated by Robert Gurnee. Robert took quantitative EEGs or QEEGs, from 75 adults and categorized them into five basic categories based on brain activity:

Excess frontal alpha activity with right > left asymmetry	- spaced out type
Excess frontal theta activity with right > left asymmetry	- hyperactive type
Excess frontal alpha and theta with right > left asymmetry	- can be both as in 1 & 2
Excess beta only - increased alpha and theta during TOVA	- often “hot headed”
Within normal limits - increased alpha and theta during TOVA	- can be both as in 1 & 2

The right/left asymmetry usually increases during a spatial task such as reading. Joel Lubar believes there are brainwave trends in asymmetry that affect behavior in the following ways:

Brainwave Anomaly	Behavior
Frontal lobe deactivation	Typical ADD
Temporal lobe dysfunction	ADD and anger, moments of detachment
Widespread cortical suppression	ADD and depression
Increased beta activity in frontal lobes (cingulate)	ADD and aggression, OCD, ODD
Right pre-frontal (FP2) slower than the left (FP1)	Impulsive, poor socially, well organized
Left pre-frontal (FP1) slower than the right (FP2)	Quite fine socially, poorly organized
Right parietal (P4) slow	Lethargic, complain of boredom

What this means is that to treat ADD effectively with neurofeedback, it would be helpful to complete a QEEG before treatment to know which procedure will be most effective. Both expensive and specialized equipment and a lot of time are required to do QEEGs, which makes them costly. So most clinicians practicing neurofeedback (NF) primarily practice the following approaches or protocols.

SMR NF training at CZ (Lubar’s protocol), or;

Beta NF training at C3 and SMR NF training at C4 (the latest “trend” in NF). This approach can be hit and miss and quite costly.

Both approaches utilize inhibiting theta activity. Lubar’s approach was scientifically sound in that he carefully screened his clients and treated primarily the ADHD group, where SMR activity (over the motor strip) is typically low.

This concludes the first part of Attention and Learning. Part 2 will appear in our next issue, due out in December.

Dave Siever is CEO of Comptronic Devices Limited, manufacturer of the DAVID Paradise line of light/sound instruments. Dave can be contacted at: 800/661-MIND or visit his website: www.comptronic.com.

The TV Mindmachine (continued from page 2)

...purchase an avs instrument to enjoy avs sessions. The AV3X on DVD is a six session presentation of pulsed dual independent binaural beats, inlaid frame by frame with visuals of extraordinary depth, color and movement, combined with six original soundtracks, all in total synchrony. Thank you Mr. O. You have created a simple and effective way to help people relax and "unwind".

The AV3X is the first DVD to integrate auditory/visual stimulation for the purpose of entrainment. The visual and sound quality, being in DVD format, is obviously first-rate. And unlike avs instruments, there are no wires to untangle and hook up; no session parameters to dial in or light adjustments to make. You don't even need lightframes. All you have to do is place the disk in your DVD player, select which session you want, adjust the volume and press start. You can use headphones if you want, and you can run the sessions on your pc monitor if your computer accepts DVDs. But the AV3X is really made for television. It's a TV Mindmachine. It deserves to be an IMAX Mindmachine.

I find myself choosing the AV3X when wanting to do an alpha or alpha/theta session rather than using my personal avs unit. Its easier and takes less time. I’ve used the AV3X in three different manners: 1) Using a portable DVD player with tv glasses and headphones (which is also the method I use when utilizing the Brainmaster eeg/neurofeedback unit for simultaneously recording the participant's real-time brainwave frequency entrainment response to the AV3X); 2) Combining a DVD player with tv glasses and headphones to my IMS bed (for light, sound and tactile stimulation, 360 degree orbital motion, an incredible visual presentation and all synchronized with music); and 3) Kicking back in my favorite chair, choosing session three on the AV3X, and enjoying the presentation via a 600 watt Sony A/V home entertainment system. Its a downright decent way to relax.

How do you use the AV3X ?

You don't have to "stare" at the screen nor look at its center. Rather, I recommend you follow different parts of the screen, letting your eyes guide you. The darker the surroundings the better, but it is not a necessity. I see the AV3X as both a toy and a tool. A toy because it is entertaining and a tool because it gently guides my brain to a more relaxed state. Its a nice combination, and with a price tag in the \$29 range, an excellent addition to anyone's DVD library.

Just as avs / light and sound stimulation affects each individual differently, so too does the AV3X. The presentations on this DVD are designed to help you relax, to release the day's stressors, in an entertaining fashion. But there are degrees or levels of stress that most of us seem to possess, colors that affect us positively and colors that don't, and a daily schedule that inhibits 'free-time', when considering which session/presentation to watch. Each AV3X track is of a different length, blending different colors, different visuals, into a presentation suitable for a mid-day relax break, study break or "just got home and the rest of the day is mine" segue into your personal time. The AV3X is also perfect for use in seminars to teach about brain-waves et al, and great to use in the beginning of meditation/yoga classes to deepen the experience. Or in the words of Jeff Labno: "This is couch-potato meditation at its best!"

As you are watching the visuals and listening as the sounds happen in total synchrony with what you are seeing, let your thoughts drift and your eyes follow whatever visual movement they should fall upon. Experience each session, make note of how each affects you, and pick your favorites for specific tasks. These tasks can range from the aforementioned relax breaks or incorporating into breaks between study sessions, to enhancing visualization and imaging skills for improved performance in upcoming events, whether it be a test, job interview or athletic endeavor. Teachers can use the AV3X before presenting material their students need to memorize, or as a tool for reducing pre-test anxieties, or for helping their students relax and focus after recess or lunch. Therapists can use this DVD in their reception area, for relaxing their clients and helping them focus on why they are there before they meet with the therapist, and for helping clients calm down after driving across town to get to their scheduled appointment. The terminally ill can use the AV3X to relax and cope, as can overworked police officers and postal employees; just about anyone who is affected by stress at work or at school can use the AV3X and feel positive and refreshed.

Program Descriptions

The AV3X has six presentations and a total length of sixty-nine minutes. Here is a brief description of each presentation:

Track 1 - 10:00 minutes. Beginning with shades of blue and white that fade into blacks and grays, morphing into patterns best described as single cell images in constant motion and change, slowly becoming rich varieties of blue and white that redirect your eyes through bursting patterns that flow beyond the screen. The pulsed frequencies are all within the alpha brain-wave state, with the conclusion of this presentation being an 'uplifting' sensation.

Track 2 - 10:46 minutes. You will be seeing a rainbow of colors, even a mountain peak if you are observant. This alpha session should give you the sensation of being on an inner-journey; of looking outward but seeing within, ending with a sense of celebration.

Track 3 - 11:52 minutes. Hear water hitting the shoreline, directing shades of blue and green that appear as layer upon layer of patterns and swirls. There are circles, like a tunnel, that take you deep into the very center of this presentation. Along the way, look for the skyline from eastern Utah. Listen as the multitude of colors are constantly redirected by the music. This track combines alpha and theta frequencies for a meditative experience, yet is entertaining and capable of helping produce creative thoughts.

Track 4 - 15:01 minutes. The sounds of lapping water and birds prepare you for this ride. The screen is filled with slowly twisting shades of blue, white, red, purple and green. The sound is mixed with frequencies in the alpha and theta brainwave range. And they all collide, imploding and exploding in unison, creating visuals that are totally out of control, concluding in synchronous harmony.

Track 5 - 15:03 minutes. Strobing colors on a blue background, growing into layers like currents of sound. The music, combined with alpha and theta beat frequencies, redirect the colorful panorama of swirls and cloud-like formations, ever morphing, down to the smallest image. A gentle experience, concluding as softly as it began.

Track 6 - 6:18 minutes. This alpha session will guide you through inner-space just as if you are the pilot and the screen is your navigator. You see a variety of blues, greens and whites transform into shades of red, green and purple, and as you float along, you are treated to a dazzling, yet refreshing, display of colors.

The Research

How do I know these presentations are effective for learning relaxation? That they do indeed increase the alpha and/or theta brainwave production of a participant? The answer is simple: I measure the real-time response of a participant's brainwave production before, during and after an AV3X session using eeg/neurofeedback. Specifically the Brainmaster by Dr. Tom Collura. My goal is to get an eeg sampling from 250 participants for each AV3X session and I am admittedly far from it. But what I have observed when reviewing eeg responses so far has been an immediate increase in the desired brainwave state when placing the "active" eeg electrode at "CZ" or basically dead-center on the top of the skull. Under the supervision of Dr. L. Jerry Cunningham, I performed hundreds of hours of eeg/neurofeedback training and am confident that the "CZ" location is an excellent site for measuring the production of alpha and theta brainwaves.

From the time a presentation begins until alpha entrainment occurs and a frequency following effect is observable has been within 2-3 minutes. Theta increases appear to happen within 5-6 minutes. It is too early, the AV3X is too new, for me to say this DVD can and will relax you or can and will help you cope with stressors. But I can say it has helped me cope with daily stress, and that I enjoy watching the different presentations versus doing an avs session. The AV3X is an entertaining and cost-effective alternative to avs instruments. Could this DVD possibly be a turning point in how avs is delivered? Retail price: \$29.95.

Available through www.mindmachines.com or for more information please contact Michael at

the AVS Journal.

Couch Potato Meditation? / An AV3X Review by Jeff Labno

For more than two decades, I've been checking out the features of mind machines with the mindset of what is a good machine that the public like. I can remember days that I experienced "near migraines" comparing all the different machines out there attempting to help the public make better choices of which machine to buy. Reading the sales brochures, each machine sounds better than all the others.

Just the other day, Michael Landgraf showed up for dinner with his lovely wife Carol. He showed me a very new technology spearheaded by Christopher Oliver. I don't see something truly new and unique very often. I was very impressed, inspired, and deeply moved by this "breaking technology".

Michael first put the TV glasses over my eyes, then he started the DVD disc program with the "mind altering" programs on it. Fluid fractal images appeared amongst a background of color illumination which strobed at particular brainwave frequencies. The fractals were intensely vivid and moved as if alive, almost like looking into innerspace under a microscope at living organisms dancing to the pulse of life itself.

The sounds coming through the headphones emphasized the brain state by pulsing sounds adding to the drama of the fractal dance. The sounds were engaging, it seemed like a soundtrack to an outer space movie adventure.

In just ten minutes, I felt like I just came back from a vacation. The totally engaging visuals along with the soundtrack took me on a true innerspace adventure. It reminded me of the many lucid dreams I've had. The effect of this ten-minute vacation was it left me with a sense of deep healing. The images were quite inspiring.

Keep up the excellent work guys (Christopher and Michael). This new technological breakthrough in relaxation and meditation as a "delivery system" promises to open up accessing deep mind states to many more people. It is the perfect meditation for "couch potatoes".

New ABT Bioscan from Comptronic (continued from page 2)

... the electrodes to stay on. If you fidget, you will have to learn to sit still. You put the two ground electrodes on the bone behind the ear, and the EEG-trode on top of the head. A topographical-style chart in the manual helps you to select the correct location for a particular need, such as for sleep, or for ADD.

If you don't know much about EEG (electroencephalograph) biofeedback/neurofeedback, you may want to get additional support materials or books to help you understand the purpose of learning how to produce these brainwaves. Try looking on the web for guidance, or, check out the available books at the library, or major bookseller.

The benefit of using biofeedback is: "machines don't lie!" You might be very surprised to actually see the actual state of your brainwaves. Many people, for example, are surprised that they can not produce quality sustained beta waves. In other words, they don't know how to concentrate. Knowing that, you can do something about it. This machine is not for the clinician in collecting and gathering data; however it is perfect for clinicians to use with their patients so they can take their feedback lessons home to practice. It is also great for a "mind-spa," or for the consciousness voyeurs. - Jeff Labno

Dr. Robert C. Beck, D.Sc.

Bob Beck passed away last June 23rd, 2002 in Orange County, California.

Bob was a maverick in the field of consciousness technology and was widely regarded as a genius.

Bob was a good friend to many of us, and a good friend to humanity in doing revolutionary work in the realm of electro-medicine.

Some of his many achievements include: electronic flash for the camera, compact biofeedback technology, powerful yet simple magnetometer (frequency detection), Brain Tuner, blood zapper, and detox protocols.

Bob always made his inventions freely available to the public by publishing free schematics of his health devices.

Bob was a humanitarian and his legacy of electro-medicine will continue beyond him as a healing gift to the world.

We will miss you Bob. Thanks for your great work and contributions to bettering our health.

You will be fondly remembered by the hundreds who met you and personally knew you.

- Jeff Labno & Volker Risto

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- Michael Landgraf, author of "Mind States"

"The visuals are simply stunning!"
- Zoe Seven - author on shamanic mind states

"My TV just became a meditation device
and portal to complete relaxation."
- Skunk Magazine

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- Nicholas Soffron, Ph.D., A.M, Psychotherapist



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