# PHOTOSONIX

# **Warranty Duration**

Photosonix devices are warranted to the original consumer purchaser for a period of one year from the purchase date.

### Warranty

The Lumina is constructed with high quality components, high standards of workmanship, and thoroughly tested before shipment. Nontheless, failures are possible & warranty service may be required.

# Return Policy

Customer returns are subject to the seller's/retailer's terms and conditions. Please keep your receipt with the merchandise in original condition and contact the seller to arrange return to the original place of purchase.

# Service and Repair

For warranty service or repair request as well as the cost of non warranty repairs, please go to http://www.photosonix.com/support/repair-request/or contact us via email <repairs@photosonix.com>



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LIGHT + SOUND + MUSIC = E Q U A L S =

Effortless Stress Reduction
Ultimate Relaxation
Restful Sleep

50 Sessions/36 LightWeave™
10 DayDream™ sessions
RainbowSound™
RainbowBright™
RainbowSolo™
CD quality (16 bit) sound

Total accuracy, total control @ your fingertips
Volume control & setting 0-100% in 40 Accurate steps
Light Intensity control & setting 0-100% in 40 Accurate steps
Informative LCD display

AA Lithium Ion rechargeable 800mah capacity battery USB port for charging & software upgrade downloads Improved AudioStrobe capability

www.photosonix.com -

# Please read this first, It's important!

#### A Welcome from PHOTOSONIX

Thank you for selecting the PHOTOSONIX Lumina, a quality product with state of the art features, which will give many years of wellness exploration as you learn to use it to influence your mood, mental state, energy level, sleep and much more. Pulsating light and/or sound patterns have been used for thousands of years in almost all cultures to evoke emotional responses, from exciting a crowd to assisting in meditation to encouraging sleep. The techniques are part of folk knowledge, and science is now finding out why and how they work. So, as you begin to use light and sound stimulation you are embarking on a voyage of personal discovery.

Use of photosonic stimulation is completely safe for most people. no side effects are known, but they are not for everyone - please read the following:

# Caution and use

Use while seated or lying down. Be sure that you or anyone else who will use the Lumina are not subject to any form of epilepsy or visual photosensitivity, using a pacemaker, suffering heart disorders, currently taking stimulants, tranquilizers or psychotropic medications, alcohol or drugs. Even if you have never had a seizure, there is a small chance that you are photosensitive and this device, as many others, may cause one. For more seizure information, see our web site at www.photosonix.com and look up the Medical Disclaimer, Seizure links.

While using the machine, if you feel uncomfortable or bothered by the flashing lights, we strongly urge you to stop your session.

Your Photosonix unit is designed for avocational and entertainment use. No medical claims are made for Photosonix products, express or implied. The Photosonix products are *not* medical devices and should not be used for the relief of any medical condition.

Please consult with your practitioner prior to use for any other purpose as the machine is not intended as a replacement for medical or psychological treatment.

### **Battery** information

The Lumina comes with one AA Lithium Ion rechargeable battery with a capacity of 800mah, about 26 hours idle, six hours running sessions. The real time also depends on how bright you run the glasses (the glasses draw the most current).

A USB cord and wall plug (same as cell phone chargers) are included with the Lumina for recharging the battery. A low battery signal is built in the unit and alerts will display when the battery is nearing low power.

CHG SOON will show at 10 minute intervals.

CHG NOW! will show at lower voltage as 2nd warning after which the unit will shut down. The Lumina will also work with the USB plug alone, without a battery. For more battery function info please see our web site.

Batt Low shows battery power is too low to complete a session.

**CHARGING** - battery is now charging.

Low Batt Charsins to improve cahrging speed, the Lumina will shut

down in 10 seconds, to use it press the (1) switch.



CHG DONE- charged, unplug charger (no harm if left connected). ChaUnFin - charger unplugged before charging completed/done. This is OK, just a notification.

### **Battery** protection

The circuit protects against reverse battery placement - a reverse battery cannot damage the circuitry in the device. The charging system will not attempt to charge a reversed battery, so the circuitry will not damage the battery. The device will run however with the charger connected but without charging the battery. A 2Low2Chg alert will be given.

2Low2Ch = - charger is plugged in, battery very low, battery is missing or reversed, could be wrong battery chemistry. Device will not charge but will run on charger power.

### **Battery Replacement**

Use a Rechargeable Lithium Ion battery ONLY!

The battery springs inside the Lumina conform to diffferent climates, as most metal objects do. If constricted, please use a pen tip to lift the battery out. We advise the same for the battery door on the Lumina, if constricted, please use a dull knife or similar object to remove it, please avoid using sharp objects, you can

damage the case and the battery door. www.photosonix.com

# Sessions Choice, Energize:

5. Pre-Workout (LW) 18 min. dual binaural beats, 1-20 Hz Dual binaural beats with beta offsets centered on low pitched tones for an energizing effect. Great for "psyching up" before a workout or physical exercise.

21 min. dual binaural beats. 1-14 Hz 6. Morning Jumpstart (LW) Get a jumpstart on the day with this session. Phase ramp stimulation from Delta into Beta with light frequency peaking at 14Hz.

7. Beta SuperCharger (LW) 25 min. pulsed chords, 10-30 Hz Charge up and get moving with high Beta stimulation! Anytime you need a boost of energy.

### Sessions Choice, Create/Visualize:

1. Cre-8-ive Flow (LightWeave) 33 min, dual binaural beats, 6-24 Hz Get in touch with your creative conciousness and stimulate new ingenious ideas and ways of solving problems. Go with the creative flow.

### Sessions Choice, Entertain/Fun:

- 1. Mr. O's LightWeave Coaster(LW) 11 min, pulsed surf, .25-32 Hz Ride the LightWeave "Coaster"... and hold on!
- 2. Mind Spinner (LW) 14 min, dual binaural beats, .75-42 Hz Take a spin around the block inside your mind! Take a fun ride and feel the sensation of movement.

For more Entertainment/Fun features also see Rainbow Sound™, page 5.

# Sessions Choice, Improv

30 min. binaural beats with surf. 3.00-6.5 Hz 1. Theta Improv 2. Alpha Improv 30 min, binaural beats with surf. 7.00-11.00 Hz 30 min, pulsed frequency, 12-15 Hz 3. SMR Improv

4. Beta Improv 30 min, pulsed frequency, 16-26 Hz 30 min, pulsed frequency, 32-42 Hz 5. Gamma Improv

An Improv session has randomly selected segment times, with each segment having randomly selected start and end frequency (in the selected frequency range). Pitch and Phase are also randomly selected.

You can use the Improv sessions as ever-changing sources of stimulation in your choice of frequency ranges and parameter change speeds. A true endless Kaleidoscope of possibilities.

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| The use of the USB port to upgrade to future v  | versions? ENDLESS!  |

The use of the USB port to upgrade to future versions? ENDLESS!

### Lumina 1.4 Interface Features

Total accuracy
Total control

@

Your fingertips



Adjust/Set Light Intensity from 0-100% in 40 steps

Adjust/Set Sound Volume from 0-100% is 40 steps

# Sessions Choice, Sleep:

3. TKO (LightWeave) 45 min, mixed dbb/bbs, 2-10 Hz

This is "Technological Knock Out 2", a high tech sleep aid. Adapted from the original Nova Pro 100's "TKO".

4. You are Getting Very Sleepy (LW) 43 min, dBb, 0.25-10 Hz

Tick tock... follow the lights and drift off to sleep. The first sleep program to use the new "LightWeave" technology. Good night and sweet dreams.

# Sessions Choice, Learning:

1. Focus 5 min, dual binaural beats, 7.83-28 Hz

Prepare yourself for tasks that involve focused attention and concentration.

. Unstick 10 min. dual binaural beats. 1.5-34 Hz

Get unstuck from mental loops, emotional loops and circular thoughts with this session. Dual binaural beats, ramping pitches and smooth changes help get you focused, calm and ready to create. A "feel-good" session.

3. In the mood to learn(LW)

15 min, dual binaural beats, 4-14 Hz

The power of dual binaural beats allows this session to be short but focusing and calming. Use to get into the mood for learning or with educational or CDs.

4. Cat Focus (LightWeave)

20 min. dual binaural beats. 14 Hz

Cats can generate 14Hz automatically. Get ready to "pounce" on your daily duties with this Beta SMR (Sensory Motor Response) session using new "LightWeave" technology with ramping phase shifts.

5. Hypnogogia (LightWeave) 20 min, dual binaural beats, 6-10 Hz Enhance your intuitive, creative and visualization abilities by entering the hypnogogic state, a dreamy state of mind that lies between wakefullness and sleep.

6. Attention! (LightWeave)

21 min, pulsed chord, 10-18 Hz

The classic light/sound session for assistance in reducing distractions.

# Sessions Choice, Energize:

1. Wired 5 min, dual binaural beats, 9-42 Hz

Get wired with gamma waves, beta waves and stretching pitches. This session is designed to get your mind racing.

2. Revup 5 min, dual binaural beats, 7-42 Hz

Rev yourself up with energizing beta and gamma waves and low pitches to get your body charged.

3. Varoom 10 min, dual binaural beats, 1-42 Hz

This motivational session will get you up and running. Great for use as a body/mind tonic whenever you are feeling sluggish.

4. Gamma Zone (LW) 15 min, Pulsed Chord, 12-42 Hz

Explore the hyper-alert "Gamma" state of mind with pulsed chord sound and stimulation frequencies reaching 42hz.

### Sessions Choice, Meditate:

- 1. Delta Expanse (LightWeave) 21 min, pulsed surf, .25-10 Hz Begin in Alpha and take a 21 minute sojourn as you slide down phase shifted ramps deep into a Delta mind state. Aimed as Delta mind exploration and not a sleep trainer.
- 2. Shumann's Lo Meditation (LW) 23 min, dBb, 7.83-15 Hz Low pitches and the Shumann resonance frequency combine in this meditation session. Phase ramps are also featured.
- 3. Quasar U4EA eXtacy (LW) 24 min, dual monaural beats, 1-12 Hz Take a journey into Quasar and get a euphoric feeling! Session moves through alpha, theta and delta ending with a shift to the left brain.

Enhances feeling of ecstacy and euphoria.

- 4. Earth Grounding (LightWeave) 33 min, dual binaural beats, 4-24 Hz
  Uses the Schumann resonance and its harmonics with dual binaural beat tones set at chord intervals. The chord interval of a fifth is known in the Eastern cultures as the "Heaven and earth Interval" Powerful earth meditation.
- 5. "OM" Meditation (LW) 33 min, binaural beats with surf, 4-24 Hz Meditate with the soothing cosmic sound of surf combined with the Schumann resonance and its harmonics as offset frequencies.
- 6. Cosmic Consciousness (LW) 35 min, dual binaural beats, 3.5-20 Hz This session is designed to help recreate the mystical awakening into high consciousness associated with many eastern religions.

This Luma 10 version is improved with phase ramps.

- 7. Kundalini Meditation (LW) 40 min, dual binaural beats with surf, 7-14 Hz The Kundalini in Yoga tradition is a life force believed to reside at the base of the spine, which when aroused triggers intelligence and spiritual insight. This session assists in creating a deeply relaxed state while stimulating the crown chakra and is similar to sessions that have been used to encourage a "no time" state.
- 8. Super-Zen7 (LW)
  41 min, binaural beats with surf, 3.5-42 Hz
  Designed in conjunction with Zoe Seven, "Cyber-Shaman" and author of books on
  modern shamanism using mind machines and other mental techniques. This session
  can be used for mind exploration and shamanic experimentation.
- 9. Into the Void with Zoe Seven (LW) 44 min, dual binaural beats, .25-14 Hz. Designed in conjunction with Zoe Seven, "Cyber-Shaman" and author of "Into the Void" and other books on modern shamanism using mind machines and other mental techniques. This session can be used for mind exploration and shamanic experimentation.

### Sessions Choice, Sleep:

- 1. Quick Nap (LightWeave) 23 min, dual monaural beats, 2-15 Hz A 5 minute descent into a 16 minute nap, with a quick return to energized wakefulness. Improved with phase ramps for a light feeling.
- 2. Sleep Tranquilizer (LightWeave) 32 min, dual binaural beats, 0.25-12 Hertz A powerful sleep trainer utilizing ramping introduction and a drop into a deep Delta sleep pattern.

# General Session Content

The sessions in the Lumina combine the rhythm, pitch and musical effect of sound with kaleidoscopic effects from light stimulation in various frequency arrangements to stimulate relaxation and mood changes.

The effects can vary from energizing to meditative to sleep-inducing.

Personal experiences vary depending on the type of stimulation and frequency variations, just as music can produce many of those effects. Not everyone will react to certain frequency range stimulation arrangements the same. Do please give it time before deciding which works best for you. By far the most common response we receive is that this is a very pleasant discovery.

The session names and descriptions relate to the effect that was intended for the session - different individuals will experience different actual effects, and the effect may vary from day to day.

The titles give a general guide to the type of effect that can be expected. Some of the sessions use fast-changing microloop sequences to give special effects.

The sessions are grouped by different general objectives, and the running time and primary tone selection are given for each session.

In the study of mental states through the electroencephalogram, four different states or types of waveforms have been characterized by neurologists:

| Beta  | 13-40+Hertz | Awake and alert              |
|-------|-------------|------------------------------|
| Alpha | 8-12 Hertz  | Relaxed                      |
| Theta | 3-7 Hertz   | Reverie, Imagery, near sleep |
| Delta | 0.5-2 Hertz | Sleep                        |

A session's general aim is to help you reach one of those states. Although different frequency combinations in any one session will work differently for many individuals the above are the four general categories and the frequency range which they fall into.

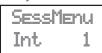
### **Quick Start**

Using the Lumina is very easy. It really is. We do however, strongly suggest the following preparation before you get to the "easy" part. Do, please take extra care to read about the warnings inside the front cover, the warnings are there as important information, seriously aimed at informing and protecting you and your loved ones.

#### To set up

Chose a comfortable, quiet, dark (or dimmed lights) sitting area. Connect the glasses and headphones to the Lumina.

Adjust the light intensity and sound volume level. While playing a session and moving the volume and intensity thumbwheels up and down you can accurately set both volume and intensity from 0-100% in 40 steps.





Do stop at the level best suited to your comfort, brighter & louder is not better.

To play a session





to cycle thru the session choices.

To play a session press PLAY ( ).

The Lumina will start a 10 second countdown before starting to play the session. Use this time to put the glasses and headphones on and get comfortable. Close your eyes, sit back and enjoy!

To pause a session Press PAUSE (II), to continue it press PLAY ( ).

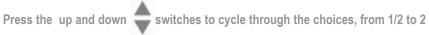


To end a session before completion press and hold ( ) for 2 sec.



### Adjusting session time

The duration of the sessions in the Lumina can be adjusted from 1/2 to 2 times the default time. A session may be run at 1/2 to 2 times its designed time. To change the time of a session press the back switch during the 10 second countdown. The default session time will be displayed.



times the default time. Press PLAY ( ) when done, the countdown will continue and the session will play according to your new setting. Or press do play at the original/default time.

# Sessions Choice, Special:

1. Reset 10 min. dual binaural beats. 1.5-20 Hz

Reset your mind, get focused and relieve boredom with RESET! Dual binaural beats, ramps and rapid changes make this session excellent for getting back on track.

2. Sensual Magic (LightWeave) 15 min, dual binaural beats, 7-40 Hz This session uses beta range stimulation in the four octave pitch tones of the chakra associated with sexuality. Be sure the right person is the first one you see after the session! Just kidding!

3. Alpha semi-non Regular flicker left eye (LightWeave)

15 min, dual binaural beats, 9-12 Hz

A "Semi-Non Regular flicker" effect from microloops of changing frequencies and a second binaural beat generator throughout the session.

Aimed at LEFT EYE - RIGHT BRAIN.

4. Alpha semi-non Regular flicker right eye (LightWeave)

15 min. dual binaural beats, 9-12 Hz

A "Semi-Non Regular flicker" effect from microloops of changing frequencies and a second binaural beat generator throughout the session.

Aimed at RIGHT EYE - LEFT BRAIN.

5. Alpha semi-non Regular flicker both eyes (LightWeave)

15 min, dual binaural beats, 9-12 Hz

A "Semi-Non Regular flicker" effect from microloops of changing frequencies and a second binaural bect generator throughout the session. For both eyes, whole brain.

6. Banish the Winter Blues

18 min, pulsed chords, 30-40 Hz

The lights come on slowly as the stimulation frequency reduces from 40 to 30 hertz, then 15 minutes of 30Hz light stimulation to combat winter blues.

7. Left Eve hemiStim (LW)

20 min, Pulsed Surf, 10 Hz

This session is useful for EEG training, 10 Hz stimulation for the

LEFT EYE-RIGHT BRAIN (For best resultsuse with hemiStim glasses)

8. Right Eye hemiStim (LW)

20 min. Pulsed Surf. 10 Hz

This session is useful for EEG training, 10Hz stimulation for the

RIGHT EYE-LEFT BRAIN (For best results use with hemiStim glasses)

9. Mind Awake Body Asleep (LW) 42 min, dual binaural beats, 2.5-15 Hz

This session creates a dynamic state in which the body is resting and the higher mind is awake. It is similar to sessions that have been used to promote OOBE (out of body experience) states. This is no way to say it will do so for you also, but if you are curious, try it and see.

10. Remote viewing (LightWeave) 42 min, dual binaural beats, 3-15 Hz Remote viewing has captured the imagination of milions. It has been used by the US military, archeologists and researchers. This session is designed to enhance the mindset required for remote viewing. This is no way to say it will do so for you also, but if you are curious, try it and see. Use with natural sounds such as ocean, brook or rain.

# Sessions Range Information:

Frequency Range The stimulation frequency range is from 1 hertz to 42 hertz. Frequencies go in steps of 1 hertz through through 10 hertz, 1 hertz through 20 hertz and 2 hertz through 42 hertz.

The Schumann resonance at 7.81 hertz is also included.

Pitch Range The Lumina pitch range is 16Hz to 960Hz, 6 octaves of the just scale, 12 notes/octave.

Tones Pulsed tone (also known as Isochronic tone) . Pulsed surf . Binaural beats . Binaural beats with surf . Dual binaural beats . Dual monaural beats .

Phases The traditional in&out of phase options have been expanded with our LightWeave technology, 30 degree phase shift options available in both Light and Sound plus the ability to phase shift light from sound in milliseconds. Yes.

Miliseconds! Please see About LightWeave ™ on page 7.

#### Optional session enjoyment

To listen to your favorite music motivational tapes and meditation material while enjoying the session connect the stereo patch cord from the Lumina to a music source, tape, CD player or mobile phone.

The choice of music is personal, chose any style you enjoy. Music with a strong beat however, may conflict with the beat from the Lumina. For more choices please see the 3 PHOTOSONIX Rainbow Sound<sup>TM</sup> features. Also a feature, improved AudioStrobe capability.

# Sessions Choice, Relax:

1. Calm Down 5 min, dual binaural beats, 7-11 Hz

Calm your nerves and reduce emotional strain with rolling alph/theta wave soak.

Use as a quick balancer after a stressful day or upsetting event.

2. Timeout 5 min, dual binaural beats, 3 -15 Hz

Take a "Timeout" and experience a relaxed mood in just five minutes with calming rhythms and soothing tones that ebb and flow.

3. Daily Escape 10 min, dual binaural beats, 6-12 Hz

Take a break, relax and escape from a stressful day. Great for a short breaktime.

4. Waves of Calm 10 min, dual binaural beats, 7.83-12 Hz

Experience waves of calmness with this peaceful, smooth and relaxing session.

As in all "Short Mood" session choices, use it whenever you need to relax quickly.

5. Power Relaxation (LightWeave) 15 min, dual binaural beats, 10-11 Hz

This is relaxation that feels it is for the physical body, that is a "Power Walk of the mind". Use after a workout or strenuous physical exercise.

6. HappyTime Alpha (LightWeave) 22 min, dual binaural beats, 9-12 Hz Spend some mood elevated 'happy Time" in Alpha! This session uses the PHOTOSONIX "LightWeave" TM technology. Microlooped Alpha stimulation with a second binaural beat experience weaved in. This is a light dance worth exploring. Try it, a "floating like" feeling was reported from the beta users!

### Quick Start, DayDream™ Sessions

Back by popular demand! The short DayDream Sessions are designed for those of us in need of some quality self time during a busy day. In total of 5 or 10 minutes you can aim to escape, relax, refocus and go on with your day. Enjoy!

| 5min     |           |          |           |  |
|----------|-----------|----------|-----------|--|
| DayDrm1  | Calm      | 7-18 Hz  | Dbb       | Rolling alpha/theta for jangled nerves |
| DayDrm2  | Focus     | 7.8-24Hz | Dbb       | Assists focused attention              |
| DayDrm3  | Rev-up    | 7-42 Hz  | Dbb       | A beta/gamma charge up                 |
| DayDrm4  | Timeout   | 4-14 Hz  | Dbb       | Calming rhythms and soothing tones     |
| DayDrm5  | Wired     | 9-42 Hz  | Dbb       | Get wired with racing beta/gamma       |
| 10min    |           |          |           |  |
| DayDrm6  | Daily Esc | cape     | 6-12 Hz   | Dbb Escape from a stressful day        |
| DayDrm7  | Reset     | 3-28 Hz  | Dbb       | With movement, to get back on track    |
| DayDrm8  | Unstick   | 3-34 Hz  | Dbb       | A "feel good" session                  |
| DayDrm9  | Varoom!   | 1-42 Hz  | Dbb       | A tonic for that sluggish feeling      |
| DayDrm10 | Waves of  | f Calm   | 7.8-12 Hz | Dbb Peaceful and relaxing              |
|          |           |          |           |  |

### Additional Main Menu options

In the Main Menu, besides SessMenu, by scrawling UP&DOWN the Main Menu Options and MainMenu the Download sections can be reached. For more information and use, please see our web site.

### Advanced Features, Tones

There are 6 sound tones, utilizing the two frequencies F1 and F2 and pitches P1 and P2.

Pulsed frequency - Also known as Isochronic pulses Pitch P1 is pulsed at frequency F1. The selected pitch is pulsed at the selected frequency. The pulsed tones provide a beep beep sound at the selected frequency F1 while the lights are blinking at the F1 rate.

Pulsed surf. A surf sound is pulsed at frequency F1.

#### Binaural beats

Binaural beats send different pitches to two ears (pitch P1 to the left ear, Pitch P1 plus frequency F1 to the right ear) and the sound source direction detection mechanism in your auditory system picks up the difference frequency F1, while the lights blink at the F1 rate.

Binaural beats with surf, a soothing surf sound in the background for binaural beats. Try it, relax with summer memories.

#### **Dual binaural beats**

In dual binaural beats, each ear hears a mixture of two tones.

Dual monaural beats See Features, Unique to PHOTOSONIX device page 7.

# Features, Unique to PHOTOSONIX devices

#### RainbowSound™ Features

We Designed the RainbowSound feature with 3 options, one for pure entertainment, one for Light&Sound + music entrainment and one for Light + music only entrainment. We believe in offering choices. Enjoy:-)

When it comes to beneficial entrainment, we would like to caution you about relying on using the entertainment option only for entrainment as music is not arranged with specific entrainment frequencies:-)

#### RainbowSound™

In the RS option the light amplitude driven by sound amplitude so the lights respond to the external sound, no session is running. This option is for entertainment only, the lights are simply following the music. We do not recommend it for entrainment as music is not arranged with entrainment frequencies in mind. With a WOW factor, it is fun for all:-)

### RainbowSound Bright™

In the RSB option the session is running the prearranged light and sound frequencies mixed with the external sound. This option allows the brightness of the light pulses to be controlled by the external sound giving the entrainment of the session added enjoyment of a pleasurable sound and light brightness in sync with the external sound.

Fun and useful for most:-)

### RainbowSound Solo™

In the RSS option the session is running the prearranged light frequencies mixed with the external sound as the only sound. In this option the light brightness is also controlled by the external sound. Allows for entrainment effect of the lights with the added pleasure of the external sound be the user's choice. Fun and useful for some:-)

# Features, Unique to PHOTOSONIX devices

Photosonix light/sound systems have many unique techniques built in, besides always provided sessions with isochronic tones, binaural beats and monaural beats. We strive to have sessions that are both effective and entertaining.

#### **About Dual Monaural Beats**

Dual Monaural Beats occur when two closely spaced pitches are mixed in the same ear, beats are heard at the difference of the pitches. The dual monaural beat tone, new and unique to the Nova Pro 100, sends P1 and P1+F1 to the left ear, creating monaural beats at F1, and P2 and P2+F2 to the right ear, creating monaural beats at F2. In addition, the left eye lights blink at the F1 rate, the right eye lights at the F2 rate, for a true dual stimulation frequency experience. With hemiStim glasses the brain hemispheres can be stimulated at different frequencies.

#### About LightWeave ™

Light/Sound systems have traditionally had the capability of shifting the phase of light and sound stimulation in 180 degree steps – in and out of phase. With LightWeave technology, introduced in the Luma 10, phase steps of any multiple of 30 degrees were allowed. This created some fascinating visual effects. In the Lumina, LightWeave has been extended to sound as well, and in addition delays of a few millliseconds can be specified. It is now possible to determine the proper phasing of light and sound to accommodate the different neural delays of the stimulation, and find the best timing for optimal stimulation.

Dual monaural beats and LightWeave ™ features we designed as complements to photic stimulation in order to enhance the entrainment process. They sound different, and this is good for eliminating boredom. To keep the mind engaged, sessions must provide some measure of entertainment as well as entrainment. Try them, you will not be disappointed.

#### About hemiStim™

The Lumina can present different stimulation frequencies to the left and right hemispheres of the brain. To send this stimulation to the left and right brain hemispheres, the left/right sides must be the left/right visual fields instead of the left/right eyes. HemiStim™ glasses do this.

The Lumina includes some sessions that create different left/right frequencies (so for example the left brain can be energized while the right brain is relaxed). Sessions that do this are marked as hemiStim. The sessions can be used with standard glasses, but will not accomplish the brain hemispheric training effect.

The hemiStim™ feature was implemented to help with research PHOTOSONIX supports.