

User Manual: **brainLight**®-Synchro PRO



brainLight®

LIFE IN BALANCE

◆◆◆ Est. 1988 ◆◆◆

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Preface

Dear customers!

Since 1988 our dedicated team has supported you on your search for a happy and harmonized life. We are convinced that a world in which everyone unlocks their inner potential and consciously develops their human strengths and consideration towards others would be a better world for everybody. Our long term aim is to encourage users to take responsibility of their body, mind and soul through the Synchro PRO and to eventually establish this throughout society as a whole. Admittedly, this is an ambitious goal, but it is one we strive for daily, by further developing our technology and product range, maintaining a brilliant relationship with our customers and reflecting this high level of cooperation internally within the **brainLight** team, and working on our own inner balance.

Operating the **brainLight**-Systems is straightforward. Make yourself comfortable, choose a program and put on visualization glasses and headphones. Especially in our fast-paced stressful lives, **brainLight** products are a valuable way to find inner balance and to fine-tune the rough edges of your own personality. We offer the **brainLight**-Synchro PRO with or without a synchro-

nized massage chair, which completes the well-being experience on the physical level.

In the first part of this user manual, the following operating instructions will give you an overview of the design and operation of your **brainLight**-Synchro PRO. In the second part, the use of our products, background and how they work are dealt with.

The **brainLight**-Synchro PRO is manufactured to the highest quality standards in Germany to guarantee good workmanship and a long service life.

If you still have problems with your system, you can contact our service team from Monday to Friday between 9 am and 5 pm (German timezone) by telephone at +49 (0) 6021 59070.

We are also happy to assist you with any queries and we are looking forward to receiving your feedback.

Your **brainLight** Team

Contraindications

The **brainLight** technology has been developed for relaxation, activation, mental training, for enhancing awareness, cognitive skills and wellbeing. Numerous scientific studies and feedback from our customers confirm the positive short and long term effects.

At this point, however, we clearly distance ourselves from the statement that the **brainLight**-Systems can be regarded as a substitute for a necessary medical treatment of any kind.

The **brainLight**-Systems can be used without hesitation, taking into account the exceptions listed here. If in doubt, please consult your doctor.

Please use the brainLight-Synchro PRO without visualization glasses if:

- you suffer from epilepsy and similar seizure disorders,
- are photosensitive,
- you wear a pacemaker,
- you are pregnant.

Thanks to the acoustic signals transmitted via the headphones, the audio-visual **brainLight**-System is still effective without using the visualization-glasses, however, the effect is less intense.

In the following cases you should not use the brainLight-Synchro PRO:

- under the influence of alcohol, drugs or psychotropic drugs,
- if you have suffered brain damage or had brain surgery,
- if you are in severe discomfort,
- if you have a temperature,
- only after consulting a doctor or physician, if you are undergoing psychological or psychiatric treatment.

If you have a brainLight-Synchro PRO with a Shiatsu-Massage-Chair, you must not use the massage functions of the massage chair if:

- you are pregnant,
- have acute back pain,
- suffer from osteoporosis,
- have thrombosis or similar venous disorders
- you weigh over 120 kg
- your doctor has advised you not to have massages.

In these cases, please only choose programs without massage. The massage chair then moves into the reclining position for the duration of use, but does not carry out any massage functions.

I. Basics

Parts:



- 1 **brainLight-Synchro PRO**
- 2 Visualization glasses with intensity control
- 3 Headphones with volume control
- 4 TÜV* approved power cable with GS mark
- 5 Connection cable (with 3.5 mm jack plugs at both ends)

* TÜV: German Association for Technical Inspections

Delivery content, Technical Specifications and Assembly Instructions

When unpacking your **brainLight-Synchro PRO**, make sure that all necessary parts are included:

Delivery content

1 **brainLight-Synchro PRO** with:

- 1 set of visualization glasses with intensity regulator
- 1 set of headphones with volume regulator
- 1 TÜV* approved cable with GS mark
- 1 connection cable (with 3.5 mm jack plugs at both ends)
- depending on the system, 1 or 2 SD program cards with instant programs and fixed / frequency-fixed programs
- 1 user manual
- 1 or more program overviews.

* TÜV: German Association for Technical Inspections

The **brainLight-Synchro PRO** can be set up quickly and easily:

1. Connect all cables into the bottom of your Synchro PRO, with the designated and correspondingly marked connections according to the installation diagrams on page 7 to 11.
2. Plug the power cable into a power outlet. Your system is now ready for use.

Technical Specifications

Dimensions:

Base plate: 23 cm x 23 cm; (approx. 9 x 9 inches)

Height: 16,5 cm; (approx. 9 x 9 inches)

Side lengths: 22,5 cm; (approx. 8.9 inches)

Weight: 1166 g +/- 20 g

Color: Black or White

Input voltage: 100 – 240 V; 50/60 Hz

Output voltage: 5 V

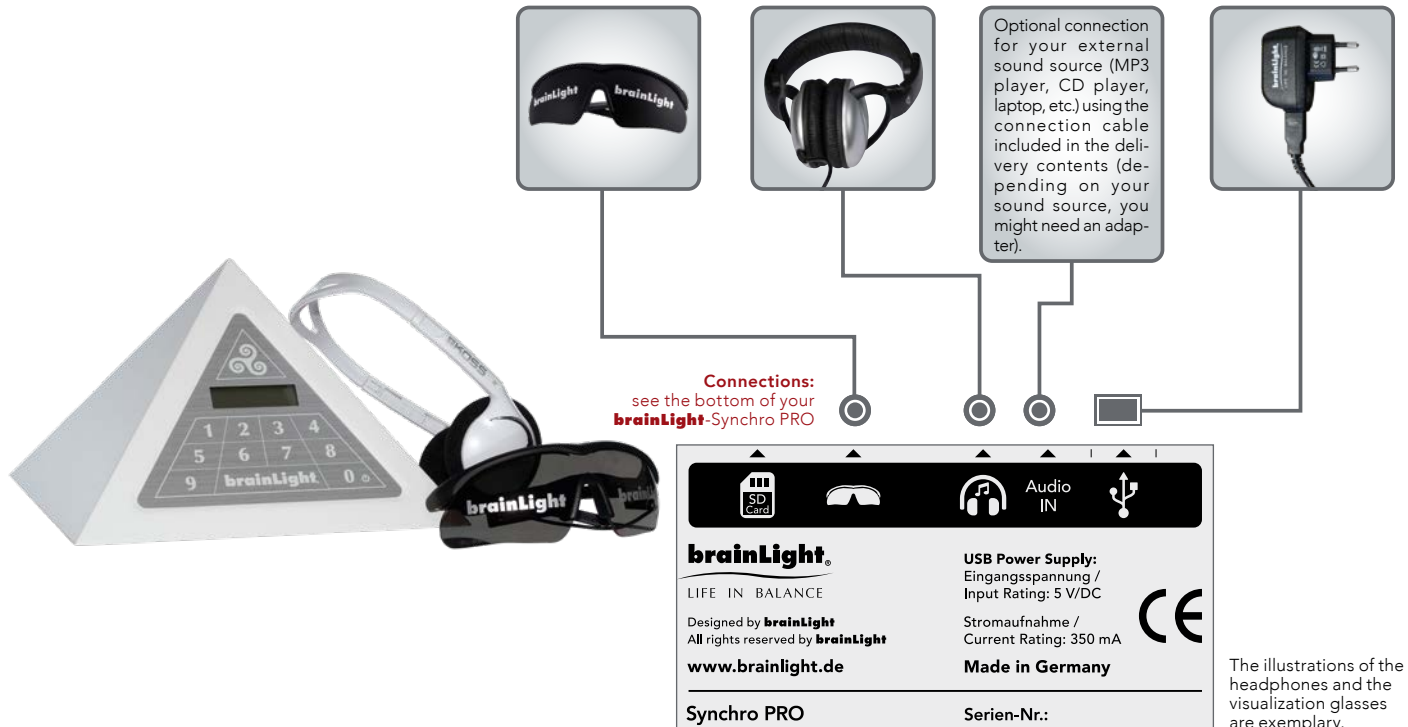
Wattage: 5 W



NOTE: Your Synchro PRO uses very little energy. If it is not used for about 30 minutes, it automatically goes into standby mode. Press any key to reactivate it.

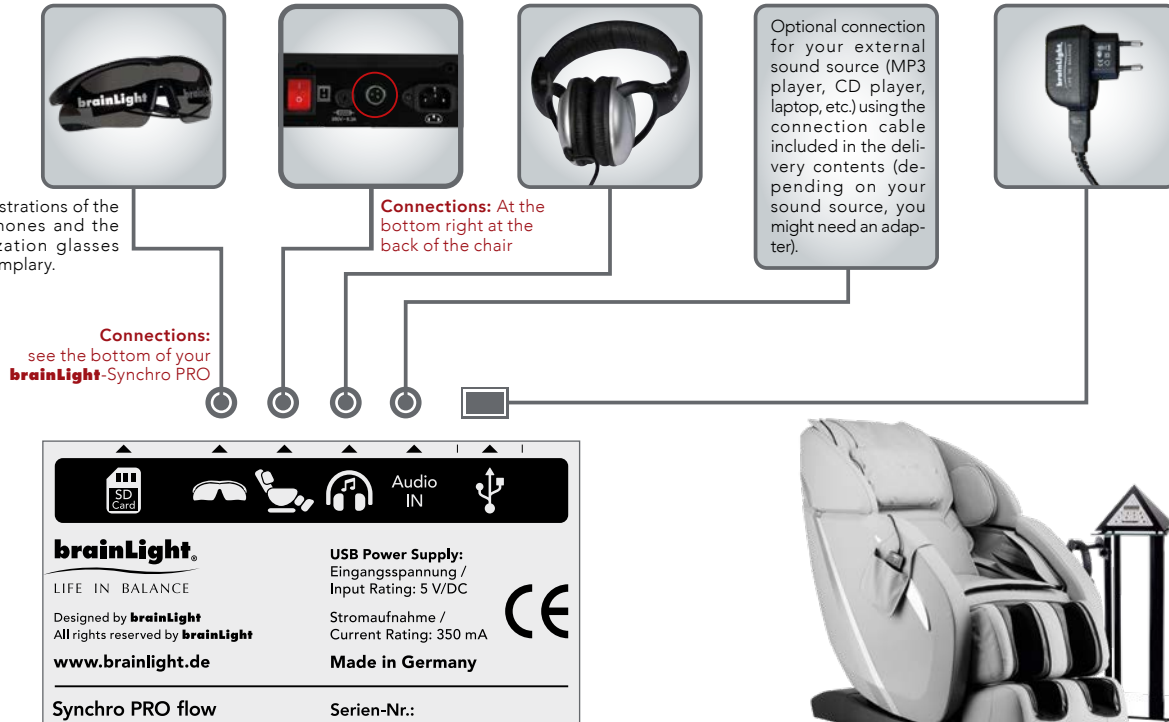
brainLight®-Synchro PRO without massage chair

Installation Diagram:



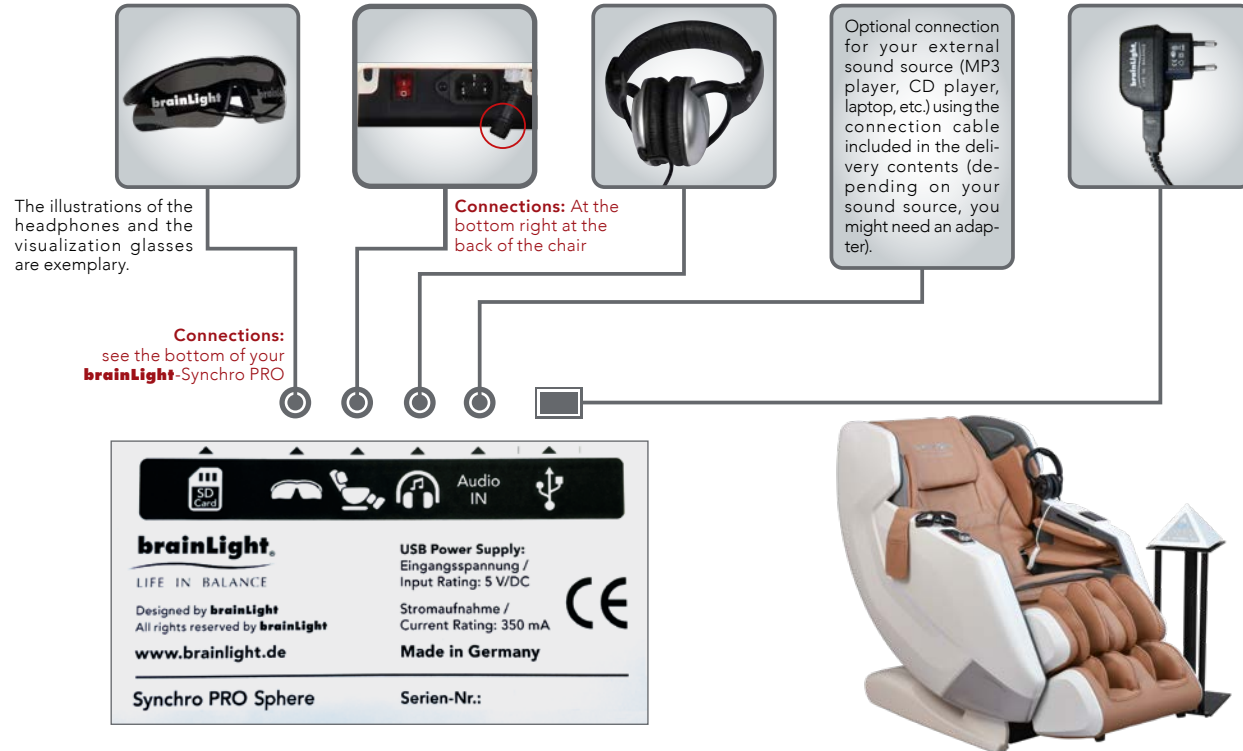
brainLight®-Synchro PRO flow

Installation Diagram:



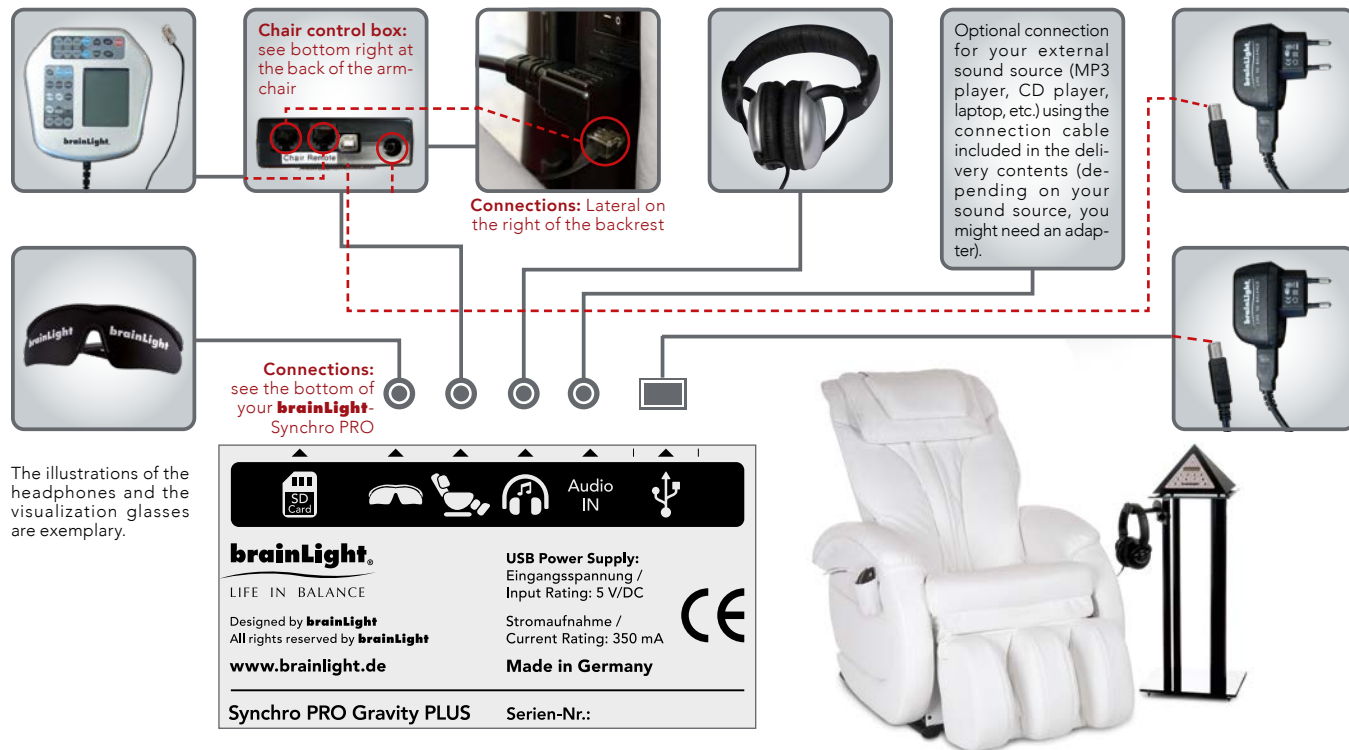
brainLight®-Synchro PRO 4D SPHERE

Installation Diagram:



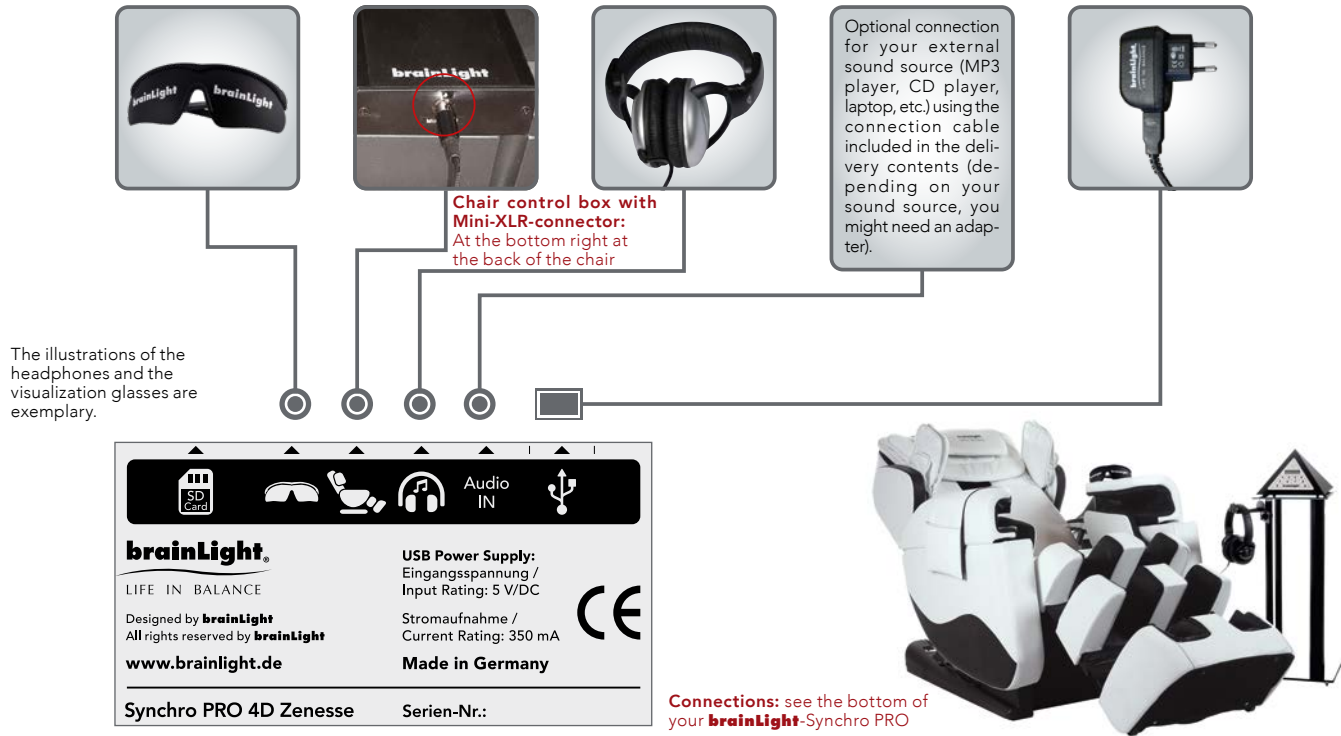
brainLight®-Synchro PRO Gravity PLUS

Installation Diagram:



brainLight®-Synchro PRO 4D Zenesse

Installation Diagram:



Changing the Program Card

1. Please unplug your **brainLight**-System from the power supply system.



2. Turn the bottom of the **brainLight**-Synchro PRO upwards.



3. Press your index finger on the SD program card in the card slot. Once the card has popped up, you can carefully remove it.



4. Insert the new program card into the card slot and let it click into place. Pay attention to the correct plug-in direction as in the illustration.

5. Now, please plug your **brainLight**-Synchro PRO into the power supply system. Your device is now ready for use..

WARNING: Do not use the **brainLight** SD program cards with your computer or a card reader as this may damage or erase the contents of the program! No other files can be saved on the **brainLight** SD program cards.

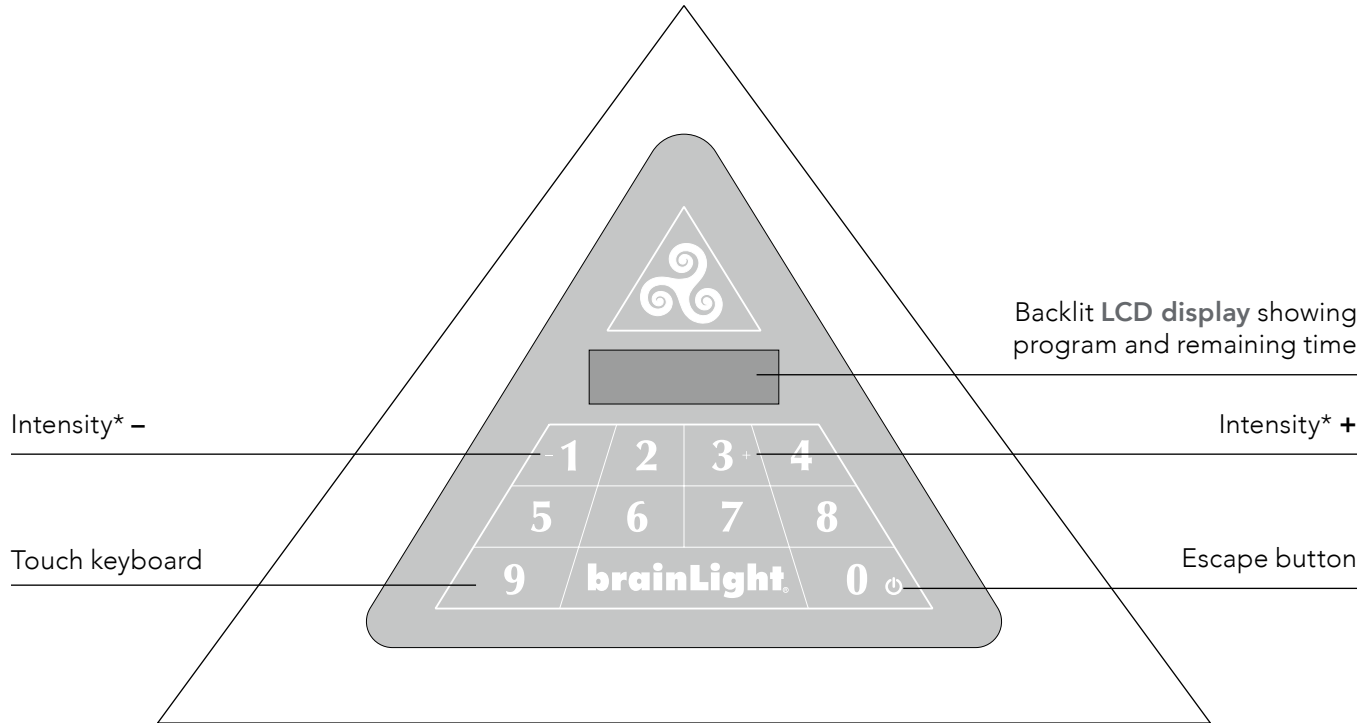
Additional Program-Sets (for older systems)

The range of programs for the **brainLight**-Systems is very versatile and is regularly expanded.

Additional Program-Sets (on SD cards) for your **brainLight**-Synchro can be found on our website at: www.brainlight.de/produkte/zusatzkarten.

There you will find a wide variety of topics in the language of your choice.

The **brainLight**[®]-Synchro PRO Control Panel



* Selection: Decrease (-) or increase (+) the intensity of the air pressure massage within 5 seconds after program selection (only with the **brainLight**-Synchro PRO with Shiatsu-Massage-Chair 4D Zenese or 4D SPHERE)

The **brainLight**[®]-Session

TIPS for optimizing your **brainLight**-Experience:

- Take off your normal glasses or, if necessary, remove your contact lenses for the duration of the **brainLight**-Session.
- Wear comfortable, loose clothing.
- Make sure that you are not disturbed during the session.

Your First Session

If you are enjoying the **brainLight** audio-visual deep relaxation experience for the first time, **please start with the Introductory-Program in your preferred language: Introduction + Session.**

1. Switch on your **brainLight**-Synchro PRO by plugging it into the power outlet or reactivating it by pressing any button on the touch keyboard.



2. Make yourself comfortable and select the Introductory Program 401 by tapping the digits one after the other on the touch-keyboard.



3. Put on the headphones and place the visualization glasses within reach. All relevant information for your **brainLight**-Session is given via the headphones. You can adjust the volume using the small regulator on the headset cable.



4. Put on the visualization glasses, when advised to do so. Always keep your eyes closed during a session. You can adjust the light intensity to your liking by using the regulator on the cable. Now, you can enjoy your **brainLight**-

Wellness-Experience. If your system is equipped with a massage chair, you will be massaged before and after the relaxation.

NOTE: With the **brainLight**-Synchro PRO 4D Zenesse or the **brainLight**-Synchro PRO 4D SPHERE you have 5 seconds after program selection to set the intensity of the air pressure massage for the entire program duration. Press **key 1** for "**weak**" and **key 3** for "**strong**". If you do not select anything, the program automatically starts with the setting of **button 2 "medium"**.

The **brainLight**[®]-Session

Before Every Further Session

Take a few moments at the beginning to breathe deeply and evenly. Close your eyes and let your thoughts flow. Decide which program you would now like to use: a relaxation program, a stimulation program or rather a mental training? Take your time with the selection. It is recommended to start with short programs and lower light intensities to slowly introduce your body to this new type of stimulation.

Program Selection

To start your desired program, select the appropriate numbers on the keyboard. A 5-second countdown begins during which you can correct the program selection by entering the digits of another program. To stop the program after the countdown, hold down the ZERO key until "Please wait" appears on the display. Then select a new program.

During Use

Please close your eyes during use. Behind your closed eyelids, the light impulses produce changing colors, shapes and patterns, which everyone experiences individually. Each person reacts with a different sensitivity to light.

The **brainLight**-Visualization-Glasses are equipped with a light intensity regulator on the cable. We recommend that you adjust the light intensity so that you feel comfortable. In addition to the standard version, we also offer other visualization-glasses with various LED colors and designs. Further information can be found starting on page 21.

Stopping the Program

Please note that the programs can be stopped at any time with the escape button. For this, press the center of the ZERO key for approx. two seconds until "Please wait" appears on the display.

The **brainLight**[®]-Session

After Use

To get back to the here and now, you should allow yourself a few minutes to consciously perceive how you feel compared to before. Are you more relaxed? Refreshed? Do you have new ideas? Stand up slowly.

Many users have noticed that after doing a **brainLight**-Session, they perform tasks much more calmly and carefully than usual. Please let such "small" observations be as important as the experiences during the audio-visual stimulation.

TIP: Support yourself by writing a personal **brainLight** diary. It is very enlightening to note down your own sensitivities, experiences and observations regularly and over a longer period of time. This allows you to easily recognize changes and to additionally motivate yourself through documented successes.

Cleaning & Care

Clean the **brainLight**-Synchro PRO, headphones and visualization glasses with a dry or slightly damp, soft cloth.

CAUTION: Do not use strong or chemical cleaning agents as they may damage the surfaces. Make sure that no liquid gets into the ports of the **brainLight**-Synchro PRO and the light and volume regulators of visualization glasses and headphones.

For example, wet this cloth with warm water that contains a little detergent and wring the cloth well before cleaning with it. Then dry immediately with a another dry, soft cloth.

If several people use the system, we recommend fleece headphone hygiene covers. Headphones, visualization glasses and the keyboard can be disinfected before and/or after use. You can purchase hygiene covers as well as cleaning and disinfection products for your **brainLight**-System through us (www.brainlight.de).

The **brainLight**®-Programs

Each **brainLight**-Synchro PRO includes two different types of programs:



brainLight-Synchro PRO with Shiatsu-Massage-Chair
4D SPHERE

1. Instant Programs

The main programs of the **brainLight**-Synchro PRO are instant programs that consist of harmonized light and sound frequencies, as well as music and, depending on the program, voice-guided.

To start your **brainLight**-Session, simply select the program number and put on the headphones and visualization glasses.

The **Synchro PRO** can be combined with one of the **brainLight** massage chairs – to the so-called **brainLight**-Complete-System. The massage then is an additional, fully automated part of the **brainLight** instant programs. You will be massaged before and after or during the audio-visual relaxation program. The program chart shows symbols indicating the program sequence.

2. Fixed and frequency-fixed programs

The **50 fixed and frequency-fixed programs** can be found on your Synchro PRO program chart. They contain only light and sound frequencies and are intended for use alone or together with your personal music.

Further information can be found on the next page.

The Fixed and Frequency-Fixed Programs

The 50 fixed and frequency-fixed programs found on your program chart contain only light and sound frequencies (no music and/or voice guidance) and can be used with your own personal music or without any music at all.

The program titles designate the objectives of the programs. Fixed programs contain specified sequences of different light and sound frequencies (sample program profiles for the fixed programs 900 to 909 can be found starting on page 38). Frequency-fixed programs contain a constant light and sound frequency (for detailed information on specific frequencies, see page 34).

On your **brainLight**-Synchro PRO, the fixed programs and frequency-fixed programs are integrated in the system.

To use the fixed and frequency-fixed programs on an older Synchro (be Synchro or Touch Synchro), please change the program card of your **brainLight**-Synchro first. You can find the instructions on page 12.

Using fixed and frequency-fixed programs with your own music:

1. Connect the supplied connection cable (with 3.5 mm jack plugs at both ends) to the LINE OUT output or the headphone output of your external sound source (CD player, MP3 player, laptop, etc.) and connect the other end to the Audio IN connector of the Synchro PRO. Depending on your source, you might need an adapter.
2. Type the program number of the fixed or frequency-fixed program into your **brainLight**-Synchro PRO, put the headphones on and adjust the volume on the headphone cable so that the sound frequencies are just audible.
3. Start your music, playlist, CD, etc. and adjust the volume on the external sound source so that it is comfortable for you.
4. Put the visualization glasses on, make yourself comfortable and enjoy the session.

The Fixed and Frequency-Fixed Programs

5. If you have a **brainLight**-Shiatsu-Massage-Chair, you can switch it on manually using the massage control panel. You will learn more about the individual functions and settings in the user manual for the massage chair.



NOTE on music selection:

You can combine any kind of music with the **brain-Light** products. It is advisable to select pieces of music that support the effect of the light and sound program. For example, for a relaxing program, choose music that has a relaxing effect on you, to prevent music and light/sound frequencies from having the opposite effect.

TIP for your own recordings:

Of course, you can also use your own voice recordings, such as personal affirmations or recorded learning content, following the same principle. For more information about learning with the **brain-Light**-Synchro PRO, see page 47.

Accessories and Upgrades

- You have the opportunity to purchase additional program sets for your **brainLight**-System. We regularly expand our range and invite you to browse our range of **additional programs** at www.brainlight.de.
- We offer **headphones** in various quality and price categories, as well as **visualization glasses** with LEDs in different colors and with transparent and opaque lenses. Please find further information on the next page.
- The **brainLight**-Synchro PRO can be used by two people at the same time. By using a **Y joint**, which you can buy directly from us or in any electrical store. Thereby you can connect **another pair of headphones and visualization glasses**.
- The **cable range** of visualization glasses and headphones **can be extended** with the aid of a **3.5 mm stereo extension cable** (maximum 10 m in length). Adapters and cables are available from us or from any electrical store.
- Your **brainLight**-Synchro PRO can also be equipped with a **brainLight** Massage Chair and the corre-

sponding programs including fully automatic massage programming. We call this an **upgrade**. This is possible with all our **brainLight**-Synchros.

Accessories and upgrades can be ordered through our website www.brainlight.de. We are also happy to assist you by phone: +49 (0)6021 59070.

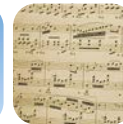
Available English Program-Sets:



Clever



Sport



Music
Pleasure



Magic
Sounds



Chillout
Lounge

Visualization Glasses: Our Selection

In our range of accessories, we have visualization glasses with light-emitting diodes (LEDs) in different colors and with two different types of lenses – for the curious, those who are eager to experiment and people with special needs. Which type of visualization glasses you prefer, depends on your personal preference. Please find more information below.

LEDs in different colors

White



The **brainLight**-Visualization-Glasses with white LEDs are our standard (except for our systems especially designed for children) and are included with the **brainLight**-Systems. The color white has the longest light wave and thus reaches most of the light receptors. With these visualization glasses, the best stimulation is achieved over a long period of time.

Red



People who initially do not see any colors with white or green LEDs usually experience beautiful, bright lighting effects with their red LEDs. The stimulation level lies between the white and the green visualization glasses.

Green



The visualization glasses with green LEDs are particularly suitable for people with sensitive or light-sensitive eyes. We also recommend these for educational use and for children. With our Synchro PRO one with the Clever-learning-Programs especially for children and adults, visualization glasses with green instead of white LEDs are therefore supplied as standard.

Blue



The visualization glasses with blue LEDs have a similar effect compared to those glasses with the white LEDs. In addition, it has a special, positive effect for some people.

Visualization Glasses: Our Selection

Lenses

- Transparent visualization glasses:



Our standard visualization glasses, available in all listed LED colors.

Due to the intensified light stimulation, our special visualization glasses are especially suitable for advanced users and only available with white LEDs. The lenses of the DARK Edition are completely opaque, so during the **brainLight**-Session you can be completely shielded from any disturbing outside light.

The **brainLight**-Visualization-Glasses, equipped with different colored LEDs and different lenses can be found on our website: www.brainlight.de. We are also happy to advise you over the phone on: +49 (0) 6021 59070.

- Opaque visualization glasses (DARK Edition):



Visualization Glasses: How to Improve your Comfort

You can improve your comfort of the **brainLight**-Visualization-Glasses with the following functions:

- The inclination angle of the frame of the visualization glasses is easily adjustable.



- Through this, the frame sits comfortably over the headphones.



- The length of the frames is individually adjustable.



- The light intensity of the visualization glasses can be easily adjusted via the controller on the connection cable.



Retrieving Statistical Data

Your **brainLight-Synchro PRO** is equipped with **statistical functions**. This information can be retrieved via the touch keyboard.

Please note: The statistical functions cannot be accessed while there is a program running.

Please follow these steps for all statistical queries:

1. Press the key: **ZERO**
2. After a 5 second countdown, "Session starts" will appear on the screen.
3. You will now be asked for a PIN:

To query the total number of uses:

- Enter PIN **01123** (older systems: **00112**).
- The total number of uses is displayed (e. g. Total: 103).
- The display then automatically returns back to the output mode.

Query the number of uses of individual programs:

- Enter PIN **45023**.
- "Enter Track No." appears on the display.
- Enter the appropriate three-digit program number (e.g. **007**).
- The number of uses for this program is displayed (e.g. Counter: 27).
- You can now read the number of sessions of other programs simply by entering the next program number.
- Press **ZERO** to stop reading. The display returns back to start mode.

Query of operating hours:

- Enter PIN **12345**.
- The number of operating hours is displayed (e.g. Runtime: 382 h).
- If you press **ZERO**, the display returns back to starting mode.

Quick help with Technical Difficulties

Problem: The device is behaving unusually.

Possible solution: Unplug the power cord and wait for five seconds before plugging it back in again. When plugging them into the power supply, both sides of the visualization glasses should light up briefly (please set a high light intensity for this).

Problem: The **brainLight**-Synchro PRO does not work.

Possible solution: Check that all connectors on both sides of the cables are secure: power supply, visualization glasses, headphones and, if necessary, the connection to the massage chair. See pages 7-11 for installation diagrams that illustrate how the components should be connected. When plugging the power adapter into the socket, both sides of the visualization glasses should light up briefly (please set a high light intensity for this).

If the **brainLight**-Synchro PRO is still not working properly, please make sure that the power outlet works by plugging in another electrical device. If the socket works properly, it is probable that the power supply of your

brainLight-Synchro PRO is broken. To prevent damage to your device, only use original **brainLight** power supplies. Please contact our customer service.

Problem: Visualization glasses or headphones do not work.

Possible solution: Check whether the cable of the headphones or visualization glasses is firmly connected to your Synchro PRO and whether the volume or light intensity is at maximum. You can adjust this by using the small regulator on the cable.

TIP: Quick check: If all connections of the **brainLight**-Synchros are correctly connected, both sides of the visualization glasses light up briefly when the power supply unit is plugged into the socket (only when the light intensity is set high).

If you are still unable to get it to work on your own, our customer service will be happy to help you by phone: +49 (0) 6021 59070.

II. Background and How the **brainLight**[®]-Systems Work

How the Audio-Visual Technology Works

Using a small, sophisticated computer – the heart of the **brainLight**-Synchro PRO – optical and acoustic signals are produced and transmitted via the visualization glasses and headphones. The brain spontaneously adapts to these frequencies and then naturally produces its own frequencies that mirror the given impulses.

This is possible through the so-called Frequency-Following Response (FFR). Stated in simple words: The human brain follows a sonic or visual stimulus to which it is exposed over a longer period. In time it begins to vibrate in the same electric wave pattern as the given stimulus. The former chairman of the US Hypno-Therapists Association Rob Robinson, used these findings in the 1980s and developed small devices to make this technique available to everyone.

Modern research into the effects of rhythmic light and sound began in the mid-1930s. Scientists discovered that the brainwaves adapt to the rhythm of flashing light stimulation – a process called linking. For example,

directing a stroboscope to the eye at a rate of 10 Hz indicates that the subject's brainwaves adapt to this frequency based on EEG recordings.

Looking back in human history, we can see that even in ancient times the process was used to achieve trance states through rhythmic drumming, rattling, clapping or singing, along with flickering light (produced by campfires, candles, torches, etc.). Think of the magic of flickering fire, the dancing sunlight on the waves of the sea, the monotonous hum during a train ride, or the interaction between light and shadow as you drive through a tree-lined avenue. Usually, mental images and ideas quickly appear before you, as if you were in a movie. Your mind seems to float. Exciting colors, shapes or patterns are created in front of your very eyes.

The programs of the **brainLight**-Synchro PRO contain a rich composition of tones, chords and frequencies. This supports the intensity of the experience as well as its effect. Depending on the choice of program, users are led into very different states, be it for meditation, relaxation or mental clarity.

The History of the Mental Systems

Approx. 150 AD:

The Greek scientist Claudius Ptolemy discovers that if one were to look at the flickering of the sunlight through the spokes of a wheel, both a sense of dizziness and euphoria would be created, as well as patterns and colors behind the closed eye.

At the turn of the 19th to the 20th century:

The French psychologist Pierre Janet explores that seizures can be soothed by this flickering light.

Mid-1930s:

Scientists find that brainwaves tune in to the rhythm of flashing light stimuli and name this process linking.

During the 2nd World War:

The radar technician Sidney Schneider is completely taken by the effect of rhythmic flashes of light on the radar screen. When staff looked directly at the radar screen for a long period of time, they felt altered states of consciousness. Schneider then develops the first commercial medical system for linking brainwaves. Production begins in the late 1940s. The device is called Brainwave Synchronizer and is still used today in hypnotherapy.

Mid-1940s:

Researchers, such as the British neuroscientist Gray Walter, use stroboscopes and EEGs to investigate the effect of flickering light on brainwave activity. Walter concludes that not only the area related to the visual cortex is affected, but also the activity of the entire cerebral cortex.

1960s and 1970s:

Many scientific studies prove a large number of positive effects of the use of flickering light in different frequencies. These include, among others, the increase of IQ, increased intellectual abilities and a better networking of the two hemispheres of the brain.

1980s:

The revolution in microelectronics makes it possible to develop small and surprisingly complex mental systems. A trend emerges in the US. In many cities so-called "Mind Machine Studios" are opening up.

In 1988, Ursula Sauer and Jochen Hufgard traveled through the USA to test the mental systems of various manufacturers. On October 31 that same year, they founded **brainLight** GmbH (Ltd.) and began distributing the systems of the American Rob Robinson in Germany.

The History of the Mental Systems

1990s:

Mental systems are establishing themselves in Europe and are initially being bought by private users. **brainLight** is gradually developing various systems for the commercial and public sector and is beginning to combine these sessions with the use of a massage chair.

2007:

brainLight GmbH (Ltd.) acquires the legacy of the late Rob Robinson and begins to manufacture their own systems in Germany. In addition to nearly 20 years of experience, the know-how of modern technology is incorporated, which leads to a new generation of mental systems.

At the touch of a button, light and sound pulses and, depending on the program, music and voice guidance are optimally matched to one another. In addition, full automatic control of a Shiatsu-Massage-Chair from the **brainLight-Synchro** becomes possible. The **brainLight**-technology is still unique worldwide.



The first **brainLight-Synchro** from 1988



The **brainLight-Synchro PRO** today

The Effect on the Mind and Body

Since every human being is a mosaic of personal experiences, preferences, different physical and mental conditions, states of mind and many other aspects, the **brainLight**-Sessions and their effects are perceived differently. However, we can make the following statements based on our experience and various studies:

I. Immediate Effects:

- immediate stress reduction
- deep relaxation after approx. 5 to 10 minutes
- substitute for approx. 2 hours of sleep (deep regeneration)
- therapy preparation and support
- access to the right brain hemisphere and thus to the subconscious
- connecting both brain hemispheres
- deepening of learning content and inclusion in the long-term memory

II. Short-Term Effects after approx. 5 Sessions:

- more peace and serenity in daily life
- increased resistance to stress
- heightened effectiveness
- increased mental clarity and decisiveness

- personal well-being for body and mind
- activation of self-healing powers

III. Long-Term Effects with Regular Use:

- increased concentration
- enhanced memory and learning performance
- heightened reaction capacity
- increased and lasting resistance to stress
- continued increase of performance in many areas of life
- positive approach to the daily challenges of life
- enhanced brain activity
- improved intuition
- meditation experiences
- shaping the future from a place of inner knowledge and inner strength
- increased sensory perception
- better cooperation of the two brain hemispheres through more intensive networking.

Current study results at: studien.brainlight.de.

Electrical Activity of the Brain

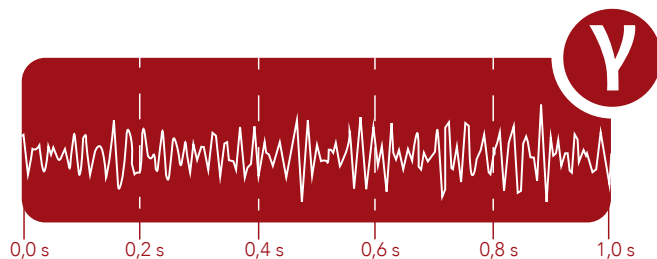
Our brainpower is based on electricity. Every single one of our billions of brain cells electrically discharges at a certain frequency. These electrical signals can be recorded with an electroencephalograph (EEG), like a seismograph records movements in the earth. The EEG does not measure the electrical signal of individual brain cells, but rather the cooperative electrical pattern of the networks of many millions of cells that discharge at the same time. These collective energy impulses are called brainwaves.

Since the first EEG was developed in the 1920s, scientists have found that the brain produces five different types of brainwaves called Gamma, Beta, Alpha, Theta, and Delta waves. Our brain works almost exclusively in the fast Beta rhythm throughout the day. In stressful situations, we consider this as overstimulation. The various light and sound programs of the **brainLight**-Synchro PRO aim to guide the brain into the Alpha, Theta, Delta or low Gamma range and to network the two hemispheres of the brain. This is a specific condition and does not mean that the entire brain produces a dominant wave of the same frequency, about 10 Hz in the Alpha range. You have to imagine the brainwaves as peaks and valleys. The degree of connectivity increases the "power"

of the brain and thus the amplitudes of the waves (when two waves hit each other, they produce a larger wave).

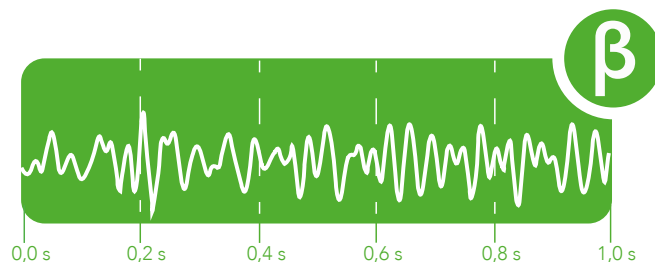
Simply put, a deep relaxation program works as follows: With fast-flashing light and sound frequencies (Beta), you are "picked up" in a very mentally active, possibly tense state, and you are guided into the Alpha range by slower frequencies. Your breathing calms down and becomes more even, your muscles relax. Calm and balanced brainwaves increase concentration and prepare the mind for learning. Alpha waves are a fundamental feature of mental and physical relaxation as well as receptiveness, memory, creativity, imagination and intuition. Healing and self-regeneration, on the other hand, are best done in the Delta state. An overview of the five brainwave areas and their range of indications can be found on the next pages.

The Five Brain Waves



Gamma Waves

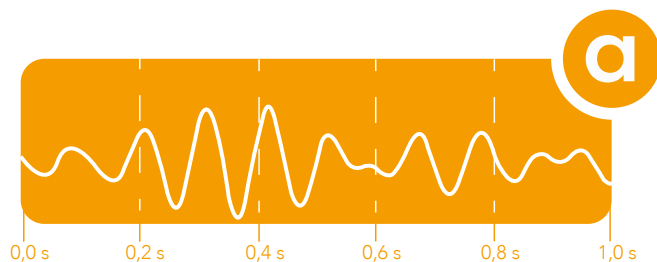
Gamma waves are the fastest brain waves. These include a **frequency range of 30 cycles per second (30 Hertz, abbreviated to Hz) to well over 100 Hz**. They occur in anxiety, hyperactivity, excitement or stress, but also in peak physical and mental performance. Since there is little research on Gamma waves, the **brain-Light-Synchro PRO** only uses frequencies up to a maximum of 40 Hz – an area in which adequate research has been carried out as it was previously attributed to Beta waves.



Beta Waves

Beta waves **range from 14 to 30 Hz in frequency**. When we are in a normal, awake state with our eyes open, focusing on the outside world or dealing with concrete problems, then Beta and low Gamma waves dominate the brain (usually between 14 and 40 Hz). Beta waves are associated with attention, alertness, concentration, cognition, and – in extreme states – anxiety and distress. Most Westerners have a Beta-dominated brain.

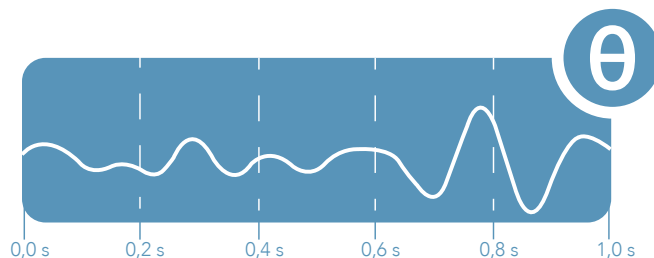
The Five Brain Waves



Alpha Waves

When we close our eyes and become more relaxed, passive or more unfocused, our brainwaves slow down and we produce so-called Alpha waves, which **range between 8 and 14 Hz**. As we continue to relax, the Alpha waves in the brain begin to dominate. They produce a calm and comfortable feeling: the Alpha state. The Alpha state seems to be a largely neutral condition of the brain. When people are healthy and unstressed, they produce a high level of this significant Alpha activity. If this is missing, this can be a first signal of concern, stress or illness. Alpha waves also promote the parasympathetic neural functions, the integration of the right and left sides of the brain and support the body's healing processes.

In the Alpha state, we are creative and optimally receptive to learning new information.



Theta Waves

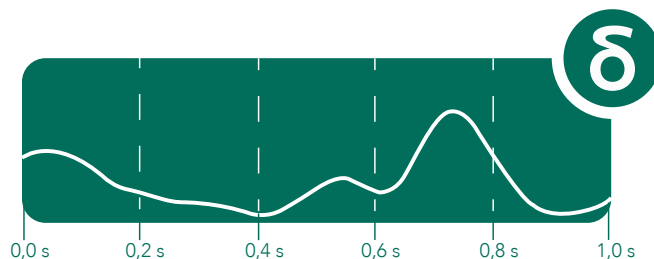
When rest and relaxation turns to drowsiness, the brain switches to the slower, more powerful Theta waves, which **range from 4 to 8 Hz**. This is the twilight state between waking and sleeping, and this is often accompanied by imprecise, dreamlike mental images that may be associated with vivid memories. Theta waves are measurable when you are in deep meditation, for example, in certain yoga exercises, autogenic training or other relaxation techniques.

The Five Brain Waves

Theta opens access to subconscious thought material, dreams, free associations, hidden knowledge and creative ideas. It is interesting to note that a dominant proportion of Theta waves is measured in children up to the age of 10, even when they are awake. Humans seem to lose alertness and awareness with age.

When Theta waves are regularly produced over a long period of time, the ideal balance between the parasympathetic and the sympathetic is established.

Above all, the Theta frequency of 7.83 Hz (Schumann wave) is an important frequency in our natural environment and supports the regeneration of our body.



Delta Waves

After falling asleep, the Delta waves dominate the human brain. They are even slower than Theta waves and are in the **frequency range of 0.1 to 4 Hz**. Delta activity is rarely experienced in the awake state. Delta frequencies are experienced in deep, dreamless sleep (non-REM sleep), trance and deep hypnosis. When people are in the Delta state, a large number of healing growth hormones are released and cellular regeneration is stimulated.

Specific Frequencies

Below you will find information about specific frequencies from the individual brainwave ranges that are used in the **brainLight**-Programs. The majority of them are also included in the fixed programs, so these can specifically be chosen.

Please note that our products are not medical devices. The following statements are not promises of healing, but based on empirical values from the field of frequency therapy.

Delta range (0 – 4 Hz):

0.1–4 Hz: Within deep Delta wave sleep, hormone growth and cellular regeneration of the body take place.

0.5 Hz: Has a calming effect and helps to induce sleep; stimulates and balances the neurons and has a compensating effect on the neurotransmitter balance; frequency for pain relief, especially for headaches.

1 Hz: Creates a sense of balance and harmony; stimulates the epiphysis (pineal gland) to produce melatonin, balancing time-dependent body rhythms. This frequency should also help to be able to clearly grasp relationships in which one finds oneself as well as their dynamics.

1.5 Hz: Stimulates the pituitary gland (hypophysis) which has a regulating effect on the metabolism. This frequency is used against chronic fatigue and was derived from 10.5 Hz, which corresponds to the harmonic overtone.

2.5 Hz: Helps against insomnia and relieves pain by releasing endorphins.

3.5 Hz: Supports foreign language memory; can create the feeling of being mystically connected with all that exists.

Specific Frequencies

Theta range (4 – 8 Hz):

4 Hz: Strengthens your own intuition and stimulates the production of endogenous opioids (enkephalins).

5.5 Hz: Gives clarity as to which steps support one's own development.

6 Hz: Particularly suitable for visualization exercises or to support the creation of vivid inner images.

6.4 Hz: Accelerates learning processes and increases the memory.

7.5 Hz: Particularly suitable for guided meditations; develops creative thought potential for solving problems and for areas such as art, sensations and music. Some people speak of extraordinary mental clarity, others report that this frequency strengthens contact with their "spiritual helpers".

7.8 Hz: Strengthens the sensing of subtle energies.

7.83 Hz: According to the German physicist and electrical engineer Winfried Otto Schumann (1888-1974), this is

called Schumann resonance and describes the natural, electromagnetic resonance of the ionosphere. Studies with healers and shamans indicate that their brainwave pattern has this frequency during altered states of consciousness (for more information on this frequency, see p. 37).

Specific Frequencies

Alpha Range (8 – 14 Hz):

10 Hz: Stabilizing and harmonizing effect on the whole organism; supports the ability to react, as it stimulates a relaxed yet very alert state. 10 Hz is pain-relieving in many people and promotes the release of the mood-enhancing neurotransmitter serotonin. If you are unsure about the many options, we recommend starting with this frequency.

10.5 Hz: Promotes the integration and communication of body, mind and soul; stimulates cellular regeneration, supporting physical healing. For example, the brain-wave pattern of someone walking over hot coals without getting burned often has a predominantly 10.5 Hz frequency.

12–14 Hz: The use of this frequency range is recommended for increasing cognitive abilities.

12 Hz: Helps to internally “center” and then act from this state.

Beta / Gamma range (14 – 100 Hz):

15 Hz: Helps fight chronic pain and promotes bone healing.

18 Hz: Increases motivation and commitment.

38 Hz: Relaxes muscles and improves the blood circulation.

40 Hz: Increases alertness and helps solve problems in fearful situations; can dissipate spasms and promote the increase of beta-endorphins that occur, for example, during the so-called “Runner’s High”. This frequency can also help with learning disabilities and support addiction withdrawal.

7,83 Hz - The Frequency of the Earth

The phenomenon of the so-called Schumann resonance – the natural, electromagnetic resonance of the earth's ionosphere at a **frequency of 7.83 Hz** – was discovered in 1952 by the German physicist and electrical engineer Winfried Otto Schumann (1888-1974). In extensive research from 1969 to 1988 conducted by nuclear physicist Dr. Robert Beck with numerous healers from various backgrounds, it was found that their brainwaves are synchronous with those of the earth during healing both in frequency and in their phases. Beck wrote: "I had the unique opportunity and the tools to perform electroencephalographic (EEG) measurements of the brainwave pattern of some notable contemporaries working as healers, shamans, water diviners, etc. in the United States and Hawaii. Since I have good contacts with both the scientific establishment and the 'occult underground', I have been able to model a cross section of measurements on 'sensitives' of all kinds – from charismatic Christian miracle healers to authentic Hawaiian Kahunas, from members of the Wicca and Santeria cults, water diviner, clairvoyants, and psychics.

An astonishingly high percentage of these authentic sensitives showed a nearly identical EEG pattern during their 'activity' ... an almost pure sine-shaped wave of up

to 25 microvolts and a frequency of 7.8 to 8.0 Hz ... As different as their views and belief systems are, they all seem to follow the tone of the same 'cosmic drummer' when they are in an altered state of consciousness."

Schumann waves (7.83 Hz with harmonics of 14, 20, 26, 33, 39 und 45 Hz) can be seen as an electromagnetic matrix for life on earth and can be found as resonance frequency in numerous body rhythms. Until a few decades ago, 7.83 Hz was the undisputed dominant electromagnetic frequency of the earth. Since then, there have been measurements indicating an increase, which has resulted from the dramatic increase in human electromagnetic activity and global warming. The effects that this has on the human organism and the earth will only become apparent in the course of time.

Bringing one's own brainwaves into the 7.83 Hz frequency range with the help of a **brainLight-Synchro PRO** can be seen as a way of **consciously "grounding" oneself**.

Sample Program Graphs of the Fixed Programs 900-909

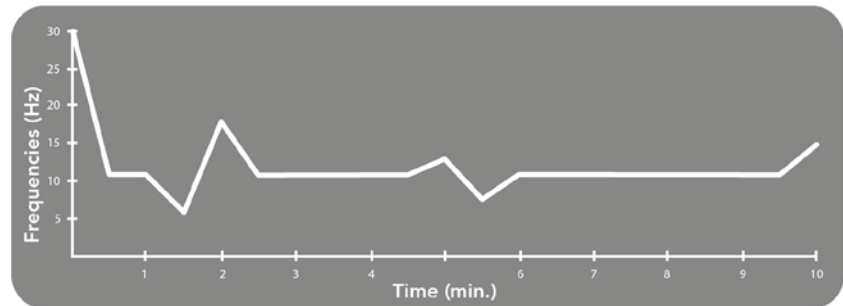
Here you will find graphs that illustrate the program progression of the fixed programs 900 to 909 (more on p. 17-19). They will contribute to a deeper understanding of the structure of the **brainLight-Programs** and perhaps arouse your curiosity to look at the possibilities of the **brainLight-Synchro PRO** in more detail.

TIP: The fixed programs are a great way to experience the nuances of the audio-visual effects. For example, our different programs, which are all aimed at relaxation, differ in their effect on you due to the frequency flow. It is equally interesting to observe how the effect of a program changes, depending on which music it is combined with (or when it is performed without music). That way, you can fit your relaxation program to your needs.

Fixed Program 900 – Program Graph A

- well suited for beginners to become more accustomed to relaxation
- target frequency in high Alpha range with brainwaves above and below this frequency
- only some changes in the vibration patterns (not shown in the graph).

Alpha relaxation I, 10 minutes

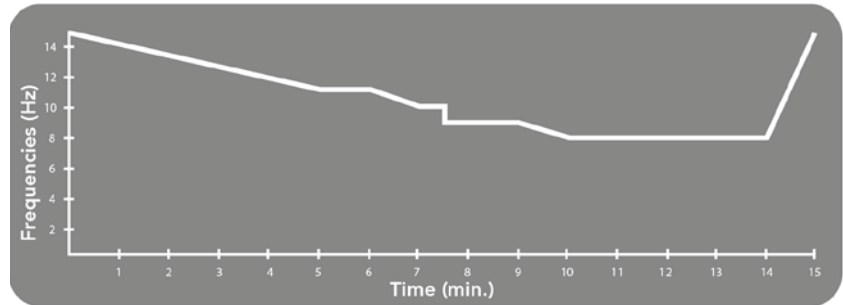


Sample Program Graphs of the Fixed Programs 900-909

Fixed Program 901 – Program Graph B

Alpha relaxation II, 15 minutes

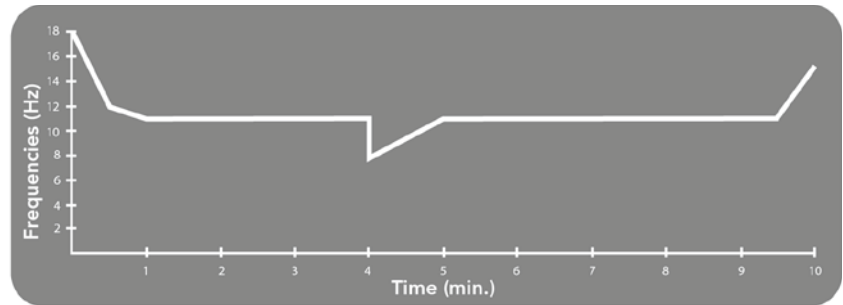
- also suitable to familiarize yourself with the audio-visual relaxation
- well suited for beginners
- softer frequency flow exclusively in the Alpha range
- many changes in the vibration patterns (not shown in the graph).



Fixed Program 902 – Program Graph C

Relaxation, 10 minutes

- easy program for beginners
- relaxation program predominantly in the Alpha range.

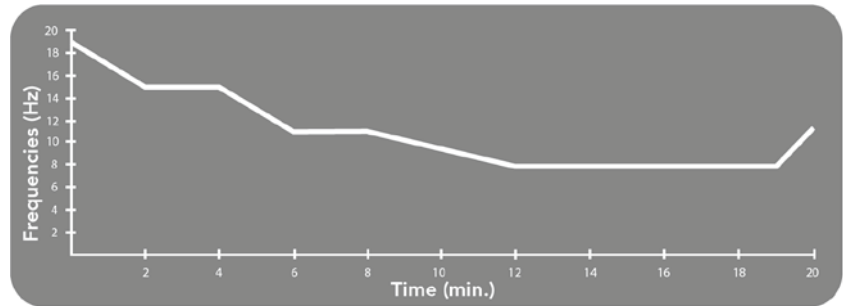


Sample Program Graphs of the Fixed Programs 900-909

Fixed Program 903 – Program Graph D

Relaxation with Schumann frequency, 20 minutes

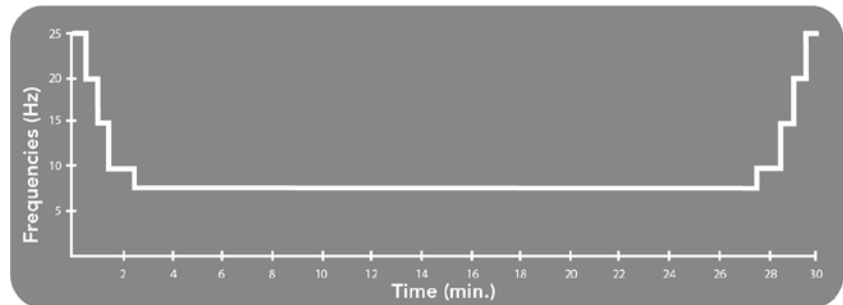
- well suited for beginners as well as advanced users
- gradual decrease of the frequencies from the low Beta range to the Schumann frequency (7.83 Hz)
- frequent light frequency changes (not shown in the graph).



Fixed Program 904 – Program Graph E

Relaxation, 30 minutes

- similar to program 903 (graph D) with faster approach to the Schumann frequency
- more suitable for advanced users.

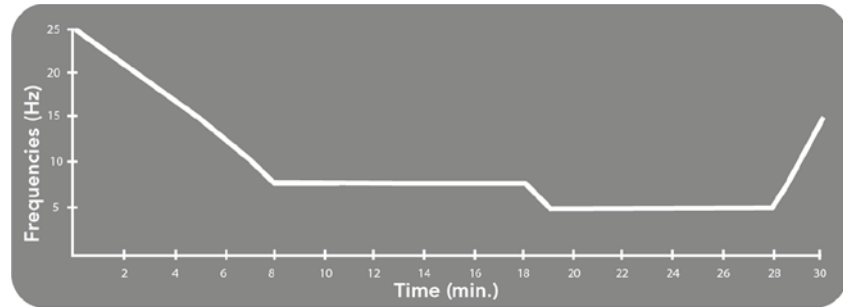


Sample Program Graphs of the Fixed Programs 900-909

Fixed Program 905 – Program Graph F

Anti-stress program – intense, 30 minutes

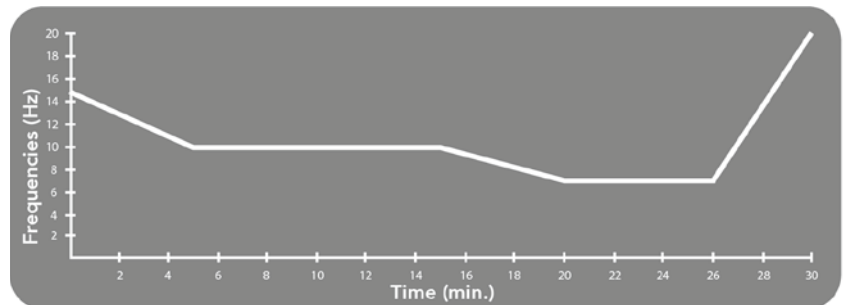
- first contact with the Theta range
- continuously decreasing the frequencies with longer periods of staying in the Schumann frequency 7.83 Hz and the ideal Theta frequency of 5 Hz
- first introduction to a very deep relaxation.



Fixed Program 906 – Program Graph G

Deep relaxation, 30 minutes

- similar progression as in program 905 (graph F)
- softer introduction to the Theta range.

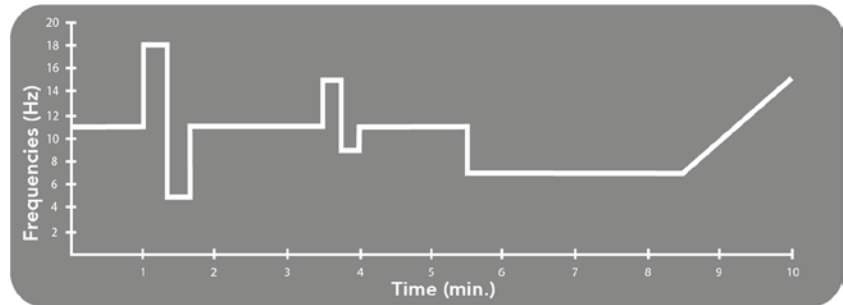


Sample Program Graphs of the Fixed Programs 900-909

Fixed Program 907 – Program Graph H

Relaxation in a high Alpha range, 10 minutes

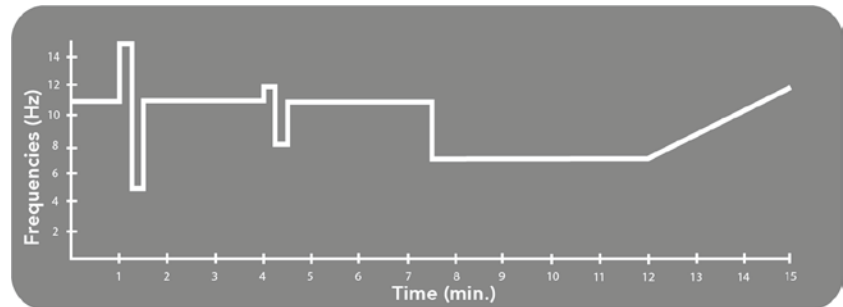
- similar to program 901 (graph B), also appropriate for beginners, but it starts differently: instead of the frequency decreasing from the Beta range, the program begins in the high Alpha range, with quick jumps into the Beta and Theta range.



Fixed Program 908 – Program Graph I

Relaxation in a high Alpha range, 15 minutes

- similar program as 907 (graph H), but 5 minutes longer.

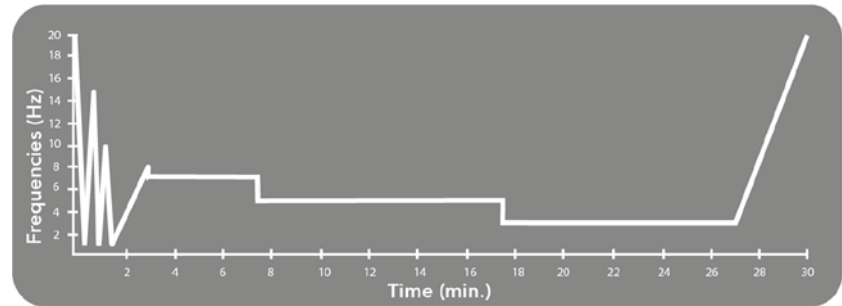


Sample Program Graphs of the Fixed Programs 900-909

Fixed Program 909 – Program Graph J

Meditation, 30 minutes

- appropriate for advanced users with a "Roller Coaster" or "Seesaw" start: the frequencies change in a seesaw fashion in the range of 1 to 20 Hz, and then reach plateaus at 7.5 and 3 Hz in the Theta range.
- this program starts off quite turbulent, but provides recovery phases in the low-frequency seesaw part.
- in contrast to the classical power entry point exclusively in the Beta range – this program starts gentler.



Mental Training with the **brainLight**®-Synchro PRO

It is clear that our bodies can be influenced by specific training. There are a wide range of aspects that can be exercised on a physical level: not only can we build muscle and develop strength, but we can also work on our flexibility and endurance, specific movements, perfect our coordination, train our balance and even learn to differentiate what we smell and improve our hearing. The list is endless as our body is complex. Our mind is no different.

However, far fewer people take care of their mental fitness. There are a multitude of very different competence potentials that can be positively influenced: we can train our memory and our ability to concentrate, work at the speed with which we grasp connections and increase our creativity. We can even work on our inner attitudes, uncover negative thought patterns that stand in our way and learn to think positively, so that we meet challenges optimistically.

Both our bodies and our minds are naturally designed to work as energy efficiently as possible. A physical example of this efficiency are our muscles. They recede when not in use or strengthen to adapt to the demands placed on them, so that in the future they will be able to

adapt to this state using as little energy as possible. On a mental level, this means that we best remember the things that we recall regularly as well as concentrate better, the more often we are in a mental state that is the prerequisite for a clear focus.

But this also means that we tend to think of standardized, instantly recallable thoughts which require little energy. The more automatic our thought patterns are, the faster we can recall them. Since thoughts and feelings occur in response to each other, these "thinking grooves" usually trigger standardized chains of feelings. If we just surrender to our innate "energy-saving mode", instead of utilizing it, we are quickly trapped in a loop of involuntary thoughts and feelings and even live physically far below our potential.

Through an active and conscious lifestyle, we can actualize our own potential by exercising both our mental and physical capabilities because this holds true for both kind of workouts: **regularity leads to success**. So! Work with your body/mind, not against it. Using the **brainLight**-Synchro PRO stimulates the brain to reach states that also occur naturally, so you can work "with the mind".

Conscious and subconscious mental processes

To get a better understanding of mental training, it helps to distinguish between conscious and subconscious mental processes. Everything you choose to do willingly belongs in the first category: your ability to concentrate, power of recall / memory, creativity, ability to absorb new information, etc. These you are able to execute and train more or less efficiently, depending on how well you "are trained". With the help of the **brainLight**-Synchro PRO you can specifically stimulate and thus train those states, in which your brain allows you to best concentrate and learn.

The subconscious processes include, above all, standardized thought patterns and possible emotional reactions associated with them, which occur inside of you quite unintentionally. These are not necessarily negative. The key to mental training in this area is, first of all, to become aware of the processes that run automatically and to examine if they are supporting you or putting obstacles in your way. The second step is to dissolve the thought patterns and attitudes that are perceived as negative and to replace them with new ones. For this,

different mental techniques are used that work within the subconscious. Since access to the subconscious can be more easily achieved through certain light and sound frequencies. These techniques in combination with the **brainLight**-Synchro PRO are particularly effective. Through mental training in the area of the subconscious you have the opportunity to take responsibility for your thoughts and feelings and also the way in which you cooperate with others and deal with life. Since conscious and subconscious mental processes are inter-linked, it is often helpful in practical implementation to tackle a mental goal from both sides.

A good example is the topic of learning: whether it's a new language or studying content for an exam or a lecture, it's a no brainer to do a "Learning Program" using the **brainLight**-Synchro PRO. But it can also be helpful to work on your self-esteem with a **brainLight** program, to prevent you from having negative thought patterns or experiences (such as "I never remembered anything at school"). Since stress is the trigger for many mental blocks (and physical ailments), the majority of **brainLight**-Programs aim to reduce stress. Because most things, if not everything, are easier when you're in a relaxed state. And with the **brainLight**-Synchro PRO you can learn to relax.

Mental Training with the **brainLight**®-Synchro PRO

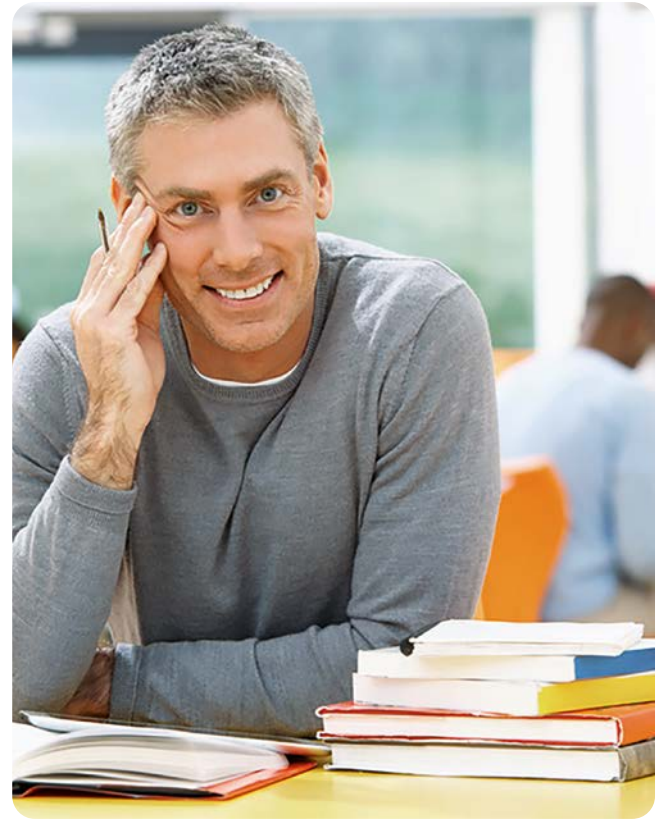
When and how often?

Training of conscious mental processes (increasing concentration, creativity, memory, relaxation, learning etc.):

The more regularly you put your brain into a focused and relaxed state, the easier the brain adjusts itself to reaching these states, even without doing a **brainLight**-Session. Try to take note to determine when a **brainLight**-Session is useful, and when it might not be needed.

Training subconscious mental processes (changing negative thought patterns, emotional strings and habits and building new positive attitudes, emotional strings and habits):

Here it is advisable to carry out the appropriate deep suggestion or mental training program 21 times in succession, preferably at the same time or day. This should either be done on 21 consecutive days or spread over the duration of 7 weeks with three sessions a week. In general: The program titles and descriptions indicate which session is best suited to the situation or the time of day. Try out different programs and observe which titles are right for you. Listen to your needs.



Example: Learning with the **brainLight**®-Synchro PRO

Learning and memorizing new information – a new language, a lecture, exam content – is particularly effective, as well as calming with the help of the **brainLight-Synchro PRO. We recommend the following approach:**

1. Relaxation

Relaxation is the optimal starting point for learning. If you are already relaxed, you can go straight to step 2. Otherwise you should start with a **brainLight** relaxation program of your choice.

2. Active learning phase

The active learning phase is about consciously reading the information that needs to be learned. For this reason, you will be working in this phase without visualization glasses and only with sound frequencies. Use the program guide to select a tutorial program from the fixed and frequency-fixed programs* and start it with a recording of the information you want to learn (see page 18 for more information). In the case of a language-

learning-course, begin with the unit you are currently working on; for most other types of information, you can record it yourself (which is easily possible with most mobile phones and computers thanks to modern technology). This is helpful, because the subconscious reacts very receptive to one's own voice. As already mentioned: read along while listening – preferably out loud.

3. Passive learning phase

After the active learning phase you will internalize what you just heard/read. Make yourself comfortable, put on visualization glasses and headphones and restart the learning program* together with the recording. During this phase it isn't important to be consciously focusing on what you hear. Instead, it's about anchoring the content in your subconscious.

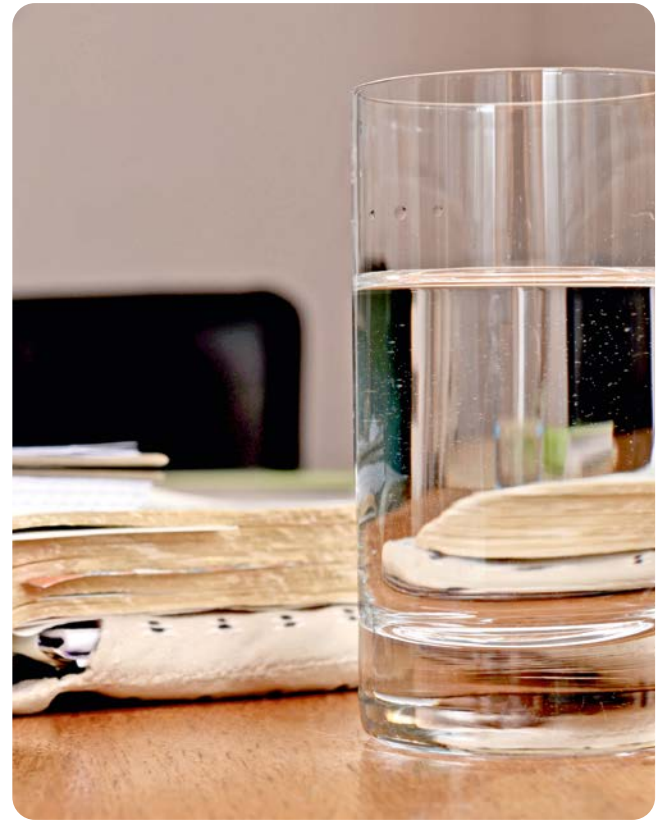
* Suitable are the fixed and frequency-fixed programs

- P 911 "Learning program"
- P 915/916 "Mental training, Superlearning I/II"
- P 926 "Energy, learning"
- P 936 "Learning languages" and
- P 940 "Memory increase".

Mental Training with the **brainLight**®-Synchro PRO

TIPS:

- The optimal studying time is a maximum of 30 minutes per learning program.
- After every learning phase you should drink a glass of water, which supports your brain to absorb information.
- Regular learning with this method leads quickly to success.
- Bonus: through using **brainLight**, you simultaneously reduce stress as well as increase quickly your energy, ability to concentrate and your general well-being.



FAQs – on Using Your **brainLight**-Synchro PRO

Can I combine **brainLight-Programs with my own music or my own recordings?**

Yes, you can do that.

For more information about using it with your own music or with your own recordings, see page 18.

When and how often should you use a **brainLight-Session?**

There are only set formulas for programs focused on your personality design, for example if there is a habit you would like to change. These can be concrete things, such as smoking or your eating behaviours, or emotional states like low self-esteem. For these it is advisable to do the deep suggestion technique or mental training program 21 times in a row, preferably at the same time or day. It can be done either on 21 consecutive days or spread over the duration of 7 weeks with three sessions per week.

For more information on mental training with the **brainLight**-Synchro PRO see page 44.

For all other sessions, you should follow your own needs. Program titles and descriptions show which ses-

sion is best for each situation or time of day. The more regularly you use a program, the longer the effects will last (see next question).

How long does the effect last after a session?

This differs for each individual and depends on how you feel overall that day. What our studies and experiences have shown, however, is that the immediate effect of a session can be increased through regular use. For example, the instant stress relief from a 20 minute deep relaxation program can develop from increased stress relief after the first use, to continuous stress resistance when used long-term. Furthermore, there are also effects which can evolve only over longer periods of time.

The **brainLight**-System is above all an impulse transmitter, which stimulates your body to get to specific states.

Once these are learned and practiced, they become easier to reach, even without a **brainLight**-Session.

For more information on the effect on the mind and body, see page 29.

FAQs – on using your **brainLight-Synchro PRO**

Do I have to do anything specific for the **brainLight-Systems to have an effect on me?**

Due to the scientific and well-founded approach of the frequency following response (FFR), the **brainLight-System's** audio-visual stimulation helps you to achieve your desired results whilst you sit and relax. Creating a comfortable exterior setting which you feel at home in to use the **brainLight-Systems** can also make it easier for you to "switch off" and to look deeper within yourself.

For more information on the background of audio-visual stimulation, see page 26. Tips for optimizing your **brainLight-Session** are available on page 14.

In which cases may I not use the **brainLight-Systems?**

The contraindications can be found on page 4.

Can the **brainLight-Synchro PRO also be used by children?**

Yes, children can also use the **brainLight-Synchro PRO**. It's best to use the Clever Learning and Relaxation

programs designed specifically for children. You can also use the fixed and frequency-fixed programs in conjunction with music that your child likes. For programs with voice guidance, you should first listen to them and decide if they are suitable for your child.

Our experience shows that children react very differently to the visualization glasses. Some love the play of colors behind their closed eyes, others like only very soft light or no glasses at all. Make sure the session is comfortable for your child. Thanks to the sound frequencies, the effect of the **brainLight-Synchro PRO** is also available without visualization glasses, although less intensively.

Information about our programs specifically for children can be found on our website at: www.brainlight.com/home-use/kids.html. For more information about the fixed and frequency-fixed programs, see page 18 + 19.

What differences are there between the different colored LEDs **brainLight-Visualization-Glasses?**

Information on the visualization glasses with LEDs in different colors can be found starting on page 21.

FAQs – on using your **brainLight-Synchro PRO**

Why do deep suggestion techniques have a more intense effect when combined with the **brainLight-Synchro PRO?**

Relaxation is the key to accessing your subconscious. This is necessary for the deep suggestion techniques to take effect. The **brainLight-Synchro PRO** guides you into a very deep relaxation with light and sound impulses, which create the ideal condition for using deep suggestion techniques.

NOTE: deep suggestions are similar to hypnosis, but rather than a more forceful approach you may get from hypnosis like "now listen to my voice!", deep suggestions take a more gentle approach e.g. "Now you are free to switch off and to become more and more relaxed".

For more information on training subconscious mental processes with the **brainLight-Synchro PRO**, see p. 44.

Why do the colors in the visualization glasses change and what is their significance?

Seeing the colors change behind your closed eyes while using the visualization glasses, is a reflection of your inner state. Furthermore, it is a sign that your subconscious is responding. The colors have an individual meaning for each person. During deep relaxation, blue and green can stand for the immersion into relaxation, purple for the state of light or medium relaxation and white for a very deep relaxation. Be alert and explore your own inner world.

Can I use the **brainLight-Synchro PRO with a hearing aid?**

Yes. Test whether doing a **brainLight**-Session while wearing a hearing aid is comfortable for you. If not, turn off your hearing aid and use the volume regulator on the cable to increase it. If your listening ability varies in each ear, we recommend using headphones that have separate regulators for the volume on each side.

Please contact our customer service at +49 (0) 6021 59070 regarding this.

FAQs – on the method of operation

How does the audio-visual stimulation work?

Due to the phenomenon of FFR (Frequency-Following Response), the human brain can follow a prolonged acoustic or optical stimulus and eventually begin to oscillate in the frequency's electrical wave pattern.

[For more information on the background of audio-visual stimulation, see page 26.](#)

How do brainwaves develop?

Our brainpower is based on electricity. Each of the billions of our brain cells electrically “fire” or discharge in a certain frequency. These electrical signals can be recorded by an EEG (electroencephalograph), similar to how a seismograph registers the earth's movements.

The EEG does not measure the electrical signal of a single brain cell, but instead measures the cooperative electric pattern of the network from millions of cells that discharge together. These collective energy impulses are called brainwaves, which are divided into five distinct areas: Gamma-, Beta-, Alpha-, Theta-, and Delta-waves.

[For more information about the electrical activity of the brain and brainwaves, see page 30.](#)

How are the audio-visual frequencies of the **brainLight-Synchro PRO** produced?

This is a valid question, as the systems deal with very low frequencies from around 0,5 Hz – 40 Hz, which even large speakers cannot reproduce. Therefore, another form of technology is applied in the **brainLight**-Systems: corresponding to the Hertz (Hz)-rate the equivalent light and sound impulses are emitted. A frequency of 10 Hz thus corresponds to 10 acoustic or visual stimuli per second.

[For more information on the frequencies used in the **brainLight-Synchro PRO**, see page 34.](#)

What proof is there supporting the effect of the **brainLight-Synchro PRO**?

Optical-acoustic systems have been scientifically studied for decades. The effectiveness was confirmed repeatedly by the EEG recordings, Heart-Rate-Variability(HRV)-measurements and by our surveys taken by test subjects. As the areas of application of the **brainLight**-Systems change and expand over time, we regularly carry out new studies, focusing on different areas.

FAQs – on the method of operation

Current study results can be found on our website at: studien.brainlight.de.

Can using the **brainLight-Synchro PRO** be harmful?

If you pay close attention to the contraindications, the **brainLight-Synchro PRO** is a safe tool that will only do you good. The brain is physically stimulated with sensory input through your eyes and ears, that is a naturally gentle way, to adapt to the given frequencies.

Unlike the influences of radio, television, the internet and our environment which we are permanently exposed to, with the **brainLight-Synchro PRO**'s choice of program you can decide for yourself the direction in which you want to stimulate your brain. Our systems work exclusively with frequencies that the brain usually produces itself (up to 40 Hz).

If you pause or stop doing **brainLight-Sessions**, you will not experience withdrawal symptoms.

If you are not allowed to use the **brainLight-Synchro PRO**, please refer to page 4.



Some Inspiration

To conclude, we would like to share with you the story of the five caterpillars by Timothy Leary:

Once upon a time, there lived five caterpillars that, for the first time in their lives, saw a butterfly just before their own metamorphosis.

The conservative caterpillar wrinkled its nose and said: "That's not only illegal, it's also immoral. They should arrest that irresponsible individual and detain them down here on earth, where he belongs."

The technical interested caterpillar sniffed and said: "They won't get me into that!"

The liberal-progressive caterpillar scorned: "How dare this frivolous creature roam free when caterpillars in Bangladesh can't even afford a color TV?"

The Hindu/Buddhist caterpillar hummed "Ommmm" and said: "Why should I make an effort and let such wings grow, if I can just stay in lotus position and fly with my astral body?"

And the Christian caterpillar murmured righteously: "If God had wanted us to fly, He would have given us wings."

With this in mind, we wish you positive surprises, transforming experiences and a lot of fun on your personal path to becoming a butterfly!

Your **brainLight** team



List of References and Imprint

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IMPRINT:

This information is based on our own decades of experience in the field of relaxation technologies and mental training as well as on the results of studies that have been carried out on our behalf. Current studies can be found at: studien.brainlight.de.

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