

The unit called "MONOLUX Pen" with color changing LED light pen is designed as an accessory to the MONOLUX therapy system. It is intended for use "on the road" as well as for self-treatment of patients during the treatment-free days. The MONOLUX Pen is equipped with a light emitting diode that emits monochromatic light, which changes the color from red to green, to blue, and different mixed colors back to red in cycles of about 20 seconds each. The light intensity is on average (differs from color to color) about 4000 mcd (mcd = Millicandela, physical measure of brightness). The light pulsates with physiologically favorable and rich harmonic frequencies. Directly behind the light-emitting diode is a permanent magnet, which generates a supporting magnetic field of about 50 micro Tesla (μT). At the same time, a small magnetic coil applies the frequency as an extremely "soft", modulated magnetic field ($20\mu\text{T}$).

Safety concerns

It is important to ensure that the therapy light (especially for treatment on the head) does not directly catch the eye, as this may cause damage to the retina. In order to keep the Pens ready at all times, it is necessary to check the batteries regularly. Leaking batteries usually cause irreparable damage. It is essential to ensure that the battery is properly put in the pen (push with the positive pole from the back of the pen). Incorrect poling leads to warming and destruction of the electronics.

It is not possible to unscrew the white tip of the MONOLUX Pen. Violent attempts to remove the top will lead to the destruction of the inner electronics.



MONOLUX Pen Version 2012 with color changer

Experiences and Knowledge

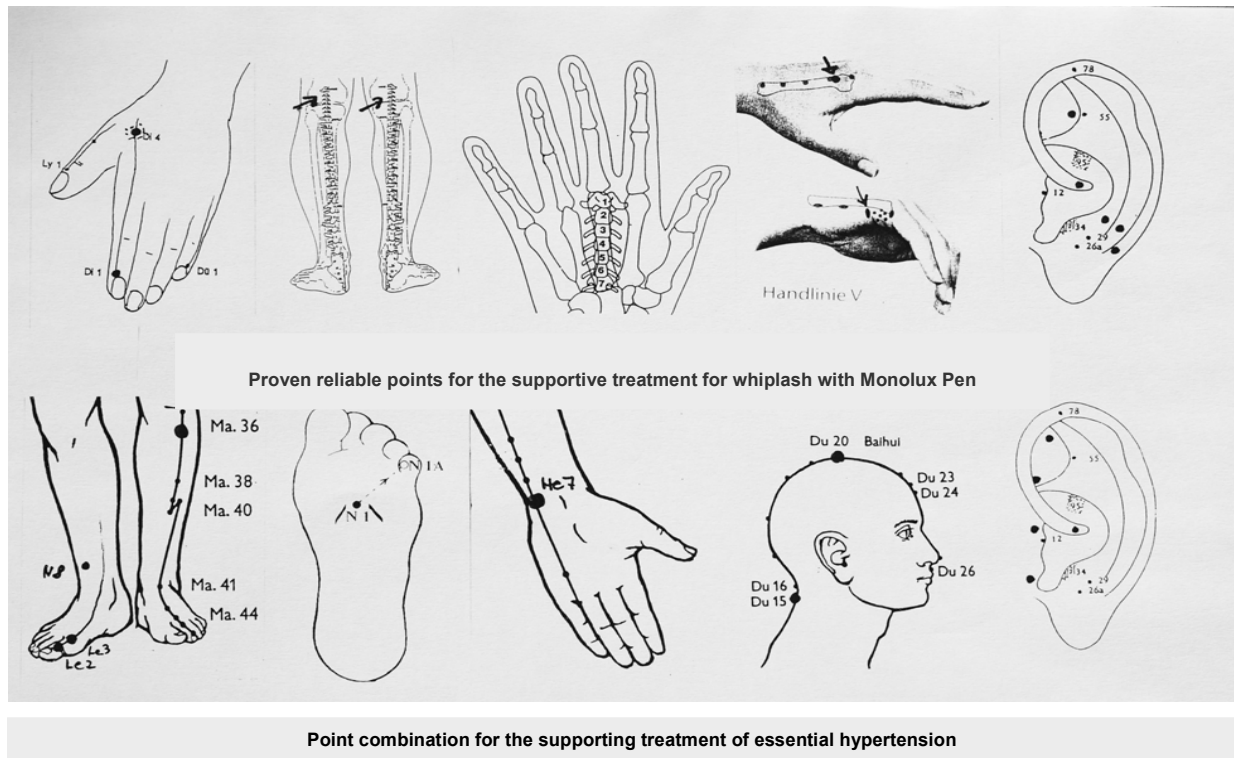
- Monochromatic luminescent light is capable of - especially when applied to acupuncture points, maximum energy points after Siener, points of the Auriculo therapy, as well as to scar tissue, etc. - achieving certain changes in the bio-system of humans and animals. It can relieve pain, relieve tension and blockages, promote blood circulation, stimulate cell metabolism and cell communication, activate the lymphatic system, regulate blood pressure and much more.
- Different colors also have different effects, very proven is the use of so-called complementary colors (eg. green - red) within a single treatment. Apparently because of the colour change an increase of the cell activity and the activation of energy occurs. Particularly proven has been the light emitting diodes, which automatically perform color changes as it was further outlined above.
- The modulation or pulsation of the therapy light with certain frequencies leads to a potentiation of the effect of light.
- The simultaneous application of modulated luminescence and pulsating or even permanent magnetic fields leads to a strengthening of the effect of the light in terms of a synergistic interaction.

Experience has shown that the effectiveness of the therapy (eg. in the field of NPSO) can be increased through the "active participation" of patients, when they give light treatment to indicated points or areas after specific instructions of their therapists, to themselves at home.

We basically distinguish two ways of effective application of the modulated luminescence light: the treatment of "remote locations" (acupuncture points, maximum energy points after Siener, foot reflexology, etc.) or the treating of the "locus dolendi", the location of the problem directly (eg. at an aching joint, a scar, a swelling, etc.). With some practice you will combine both methods. Therefore you will ideally apply, for e.g. a whiplash, the light on the one hand to the Maximum Energetic Points (MEPs) after Siener (on the feet, behind the knees and on the somatotope of the middle finger) as well as at the indicated points on the lines of the hand or finger acupuncture (on the index finger, 2 metacarpal), in the area of the Auriculo therapy and at certain reflex points (eg. the foot reflexology point big toe, first joint), on the other hand also treat the area of the pain in the neck / shoulder / and the arm area itself.

This treatment may also eg. affect high blood pressure, which in some cases - with regular therapy and consultation with the therapist- can lead to a reduction of drug dosages. Hypertension may be treated every other day at body acupuncture points and points of the Auriculo therapy. These are:

Le 2/3; Ma 36; Ni 1; He7, DU 15 and 20 (these points in combination, each 10 - 20 seconds), in addition the points outlined of the ear acupuncture (eg. # 19, 21, 51 and 59 after the nomenclature used by Wertsch / Schreke). It goes without saying that in the sense of a holistic therapy concept, other measures (relaxation and breathing exercises, physical exercise, diet recommendations, medication, etc.) need to be added. Furthermore searching the whole body for scars and suppressing those has been proven to be extremely helpful before starting a series of treatments, which works very well with the MONOLUX Pen. Even small and less noticeable scars may cause interference, causing discomfort and hinder therapeutic measures.



The treatment may – depending on the indication- take a few seconds up to several minutes. A risk of “overdose” has not yet been experienced, at best it may occasionally cause a headache or momentary discomfort. These phenomena can generally immediately be eliminated by drinking plenty of water, which should anyways be part of the context of each treatment.

Technical details:

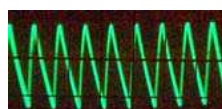
The power for the MONOLUX Pen comes from a single micro cell AAA battery (1.5 volt cell alkaline or rechargeable 1,2 volt battery). We strongly recommend for different reasons to use a rechargeable battery pack with charger for the MONOLUX Pen. The integrated electronics raise the voltage of the battery to the for the color changer operating required voltage of 3.5 volts. If the pen is not used for a long period of time, the battery should be removed - as previously mentioned - so that no damage through acid leakage might occur. Please dispose of used batteries in an environmentally friendly manner. Old devices do not belong in the trash, they can be returned to the manufacturer.



The light of the MONOLUX pen is modulated through an integrated color changing electronic in the LED and by the so-called "push-up electronics", with physiologically favorable vibrations in the low and high frequency range. The light is so to speak, the "carrier" of these frequencies. The low frequency vibrations "wobble" during the color change from 120 to 240 hertz back and forth, during the high-frequency sequences, there is a constant saw tooth wave of about 90 kilohertz and in the course of the color change there is also a series of oscillating frequencies in the kilohertz range. The low-frequency oscillations are similar to needle impulses, the high-frequency event is represented in the form of saw tooth waves.



Oscillogram of the low frequency vibration, which changes their appearance several times during the color change of $t = 100$ ms



Saw tooth wave of high frequency oscillation events $t = 100$ μ s