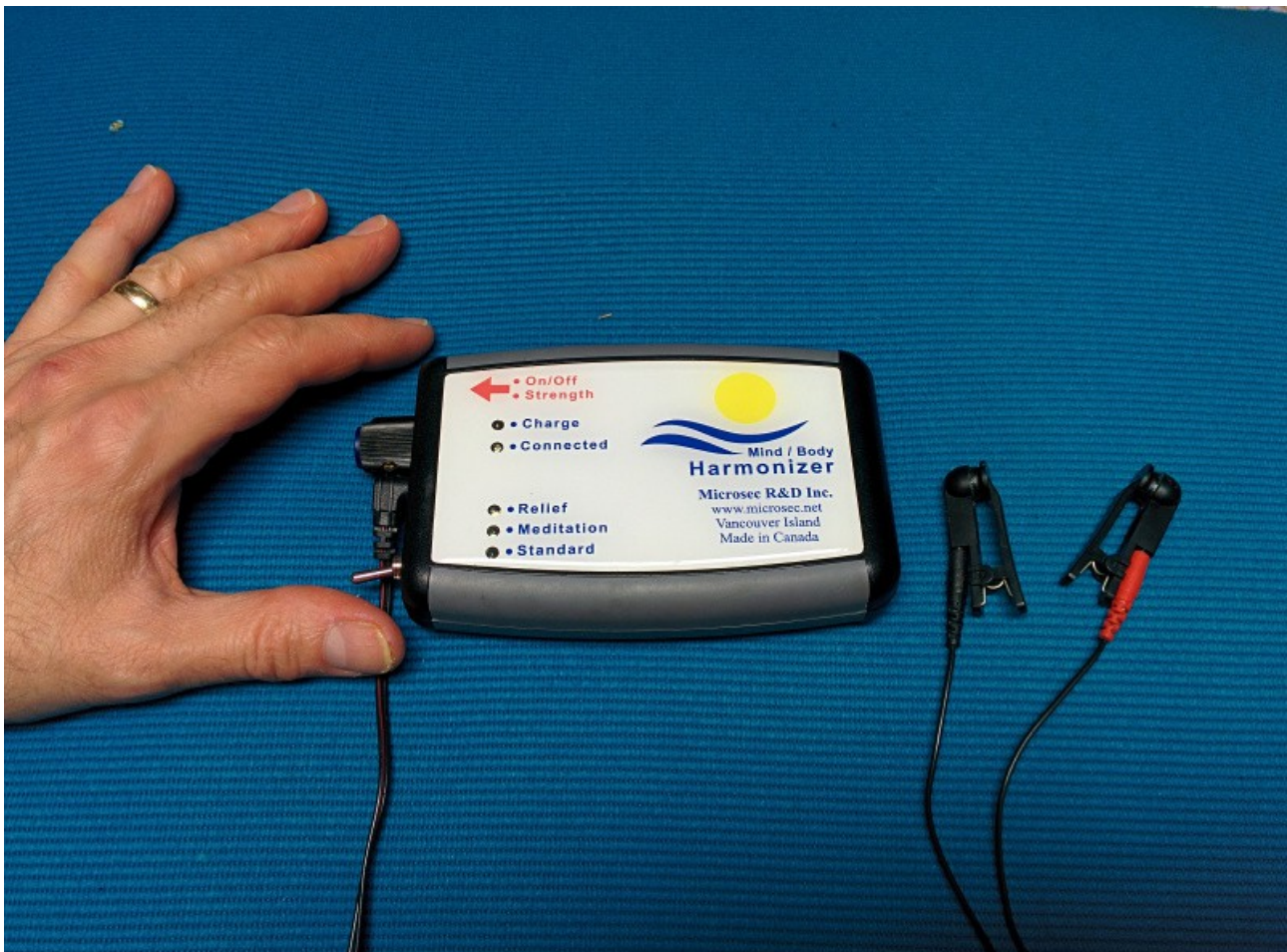


# Instruction Manual

## Mind Body Harmonizer

Three Mode Model, Blind Friendly Design

Mind Body Harmonizer V2 Shown Below



Picture shows operational Harmonizer with ear electrodes

# Mind Body Harmonizer Instruction Manual

## **Introduction: Mind Body Harmonizer**

Thanks for using our consumer/research oriented relaxation product. This device produces a number of stimulating electrical signals that can be applied to the earlobes for relaxation and stress relief.

### **Historical Perspective**

The technology has been in use since 1902 in France where it is called "ElectroSleep." Very low powered electrical signals (less than 1 milliamp) applied to the ears or behind the ears has been found to be harmless (used for a century without dangerous incidents). This stimulation in the USA is called Cranial Electrotherapy Stimulation or "CES" to substitute for psychiatric drugs in the treatment of depression, heroin addiction treatment and pain management. Our device is experimental and we make no such claims. It is carefully designed however from a safety standpoint based on historical designs used for a century.

### **Design Details of Mind Body Harmonizer**

We studied CES as used in the USA. It is typically used to treat depression, drug addiction withdrawal and pain relief. The most popular electrical stimulation patterns were combined into our machine. We added a 40 hz stimulation based on recent research published in May 2014 which showed it can stimulate lucid dreaming. The healthy brain resonates at 40 hertz, which is known as a Gamma Wave. This externally applied 40 hz signal may help to balance the left and right brain. This is experimental.

We make no claims for CES-like therapeutic effects. We encourage Canadian Psychologists, Clinical Counselors and Amateur researchers, to conduct tests to determine the therapeutic effects. Depression, drug addiction and other applications known historically can be investigated and there may be new discovered applications! This therapy is not known in Canada and development can proceed in Canada whereas in the USA CES manufacturers will not change their FDA approved designs.

In Canada we can look at brain stimulation applications that have just been discovered.

We encourage amateur researchers to try the effects and see for themselves. We want to encourage Canadian industries to help develop our own CES-like technologies. "CES" and "ElectroSleep"

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devices are not recognized by Health Canada as a therapy yet. We need Canadian recognition for this useful therapeutic approach.

This is a consumer oriented relaxation device and is not a certified CES device. It has been designed to have promising electrical characteristics. It is a starting point for both amateur and professional researchers to carry out experimentation. Microsec will supply custom waveforms on request if 10 or more units are purchased.

See our website at <http://harmonizer.ca/>

### Safety Issues

The Harmonizer puts out very little electricity, about one thousandth of an amp average power at 30 volts or less and it comes through a transformer so that for safety no DC power is applied to the head. This matches the required electrical specifications for "CES" devices in the USA and "ElectroSleep" devices in France. Our device is experimental and is not certified for health use. It is considered a consumer device for relaxation only until the research is complete.

The intensity knob is normally adjusted to the point where the signal can just be felt in the earlobes. It shuts off automatically after approximately 20 minutes. The Harmonizer is intrinsically safe. We are using the power levels typically used for CES devices during the last 50 years in which no injuries were ever reported worldwide. The principle has been in use for over a century yet strangely almost never used in Canada! The Mind Body Harmonizer was created to bring attention to the technology in Canada.

The ear clips are medical grade devices **which need to use conductive gel in contact with the ear.** Spectra 360 is a brand available in Canada and can be purchased in specialty drug stores which sell wheelchairs. A small container is included with the Harmonizer for initial use. Failure to use conductive gel can result in earlobe irritation. You can order the gel in large tubes from our Harmonizer site.

### Important Safety Issues

1/ We strongly recommend that the battery not be charged while in use.

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1/ The unit should probably not be used with modern brain shunts which are electrically adjusted. Consult with your physician if you have a brain shunt.

2/ Those with programmable brain shunts, cochlear implants or other cranially located electronic devices should consult with a physician before use.

3/ If you or your test subjects are on psychiatric drugs this kind of stimulation can interact and result in a need to lower the SSRI or other antidepressant dosage. You need to consult with your physician while using the device.

4/ Do not operate heavy equipment for one hour after use. The signal can cause minor dizziness in some people.

5/ Use on clients with MS is strongly discouraged. MS is thought to be the result of a lack of insulation causing cross talk of the nerves. Excess electricity can make this situation worse. Please do not attempt to use the Harmonizer for MS.

6/ People who are suffering from MS or Guillain-Barré syndrome should not use the harmonizer. These diseases are characterised by a loss electrical insulation around the nerves. Stimulation by a voltage waveform could make symptoms worse by encouraging further insulation breakdown.

### **Blind Friendly Options**

The Harmonizer has been designed to be easy to operate for everyone, including blind people. There is no keypad or display. There is a tactile 3 position toggle switch for the three modes. Intensity is adjusted with a volume type control.

### **How to Use Mind Body Harmonizer**

The device is intended for electrical stimulation of the earlobes with harmonious and comfortable feeling electrical signals.

### **Overview of Use**

There is a 3 position toggle switch which selects the stimulation waveform. There is an intensity/On/Off knob which can be rotated clockwise to turn on and to increase the signal strength. The machine will continue using the waveform first set by the toggle switch until the automatic termination of the stimulation after 20 minutes. Changing the toggle switch during operation will have no effect. LED lights show the modes of operation and the correctness of connection to the ears.



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### Follow these steps ...

1/ Charge the unit by plugging in for 15 hours. This will give 1 to 2 weeks of operation. Disconnect charger before use.

2/ Apply a glob of conductive gel about the size shown to the ear lobe using your finger.

While holding open the earclip attach it to the earlobe with the rubber side on the front of your ear as shown below.



### Proper Ear Attachment

Proper placement on ear is shown in the picture below:



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After use make sure to wipe the earclip with a piece of tissue and wash with warm water every few days of use.

**3/ Select one of the three waveforms: “Relief”, “Meditation” and “Standard” with toggle switch.** Just like with drugs, everyone responds differently to the waveforms. Researchers should experiment with all the waveforms and not assume a particular waveform for a particular use. In the picture below the Standard waveform is selected. See picture here ...



**Standard Mode Selected with Toggle Switch**

**4/ Turn the Harmonizer on using the “strength” knob.**



The waveform setting in place when it is turned on will be used for the entire 20 minute session. Changing the waveform knob once the unit is operational will have no effect. This is done for safety since each waveform has different characteristics and some are stronger than others. The 0.5 hz (Relief) is the strongest the 40 hz (Standard) is middle strength and the 14.3 hz (Meditation).

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## **On/Off Strength Knob Adjusted**

**5/ The Strength Knob** should be increased (by rotating clockwise) only after the ear clips are in place using conductive gel on the ear lobes. The intensity is increased until the pulsing signal on the ears can be gently felt. It can then be decreased until it is barely perceived or even slightly below perception. Research in the past century has shown that a small barely felt signal works very well but a strong signal is ineffective.

***The idea of "No Pain No Gain" is completely false with CES or ElectroSleep type devices. If you can feel it slightly ... this is the best signal strength to use.***

Each session turns itself off after 20 minutes.

When the session is finished you will no longer feel the signal and the lights will flash every 10 seconds for a few minutes. After a while the unit will go to sleep, not flash and use almost no power. It is best however to turn the unit off since this uses no power.

After use make sure to wipe the earclip with a piece of tissue and wash under the tap with warm water.

**6/ Battery Recharging:** The Harmonizer has a rechargeable battery to ensure that good waveforms are not compromised by bad batteries. The charger is plugged into the hole in the side of the Harmonizer. It is left to charge for 15 hours. This provides for one to two weeks of operation. Weekly charging is recommended. It should have a lifespan of about 5 years. Replacements are available.

**Do not use the device while it is charging!**

To replace the battery simply slide the battery compartment door open and remove the battery and disconnect battery terminal clip. Attach a fresh rechargeable battery to the terminal clip and close the door of the battery compartment.

## **Side Effects and Intensity Control**

In a century of use worldwide the "CES" or "Electrosleep" type technology rarely produces any side effects. Sometimes it can produce a headache in a small (< 0.1%) of users. This can often be eliminated by turning the stimulation intensity down. In rare cases some people may not be able to use the technology. *In general use the smallest signal that can still be felt will produce no side effects and yet be equally effective.*

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**Never operate the Harmonizer without using conductive paste on the rubber contact on the ear clips.** The Gel contains no salt and will never damage the ear clips. It will keep the device from causing irritation of the ear lobes. It is very important to increase conductivity of the earpads. A dry ear clip pad will irritate the earlobes. Saliva can be used in an emergency. Salt water should NEVER be used because it will cause the destruction of the clips.

### How Often to Use It

First time users will benefit the most by giving themselves two 20 minute sessions per day for the first 2-3 weeks. After that it may be used occasionally or daily as needed. A USA guide to using CES for Depression (from a USA Nursing Journal) is shown on the website to give guidance to researchers. Other applications can be found in the library of research papers on the website.

### Guarantee

The Harmonizer is guaranteed to be free from defects in workmanship. We will replace such units if they are returned within 90 days.

### Website Support

The website is at <http://harmonizer.ca/>

This site offers the purchasing of the Mind Body Harmonizer, instruction manuals, rechargeable batteries and electrodes. It also offers a library of CES literature from the USA to help Canadian researchers understand the therapeutic uses. A blog allows users and researchers to share experiences and successes.

### Replacement Parts

Replacement electrodes, large conductive gel tubes, rechargeable batteries, ear clips and cables are available from our online store.

### Shipping List

The product has the following components ...

- 1/ Mind Body Harmonizer box with built in rechargeable battery.
- 2/ 1 Cable for ear clips.
- 3/ 2 Ear Clips.
- 4/ Pill Bottle of conductive gel.
- 5/ Recharging power adaptor.
- 6/ Shipping/Storage box.



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## **Conclusions**

The Mind Body Harmonizer is based on brain stimulation techniques used worldwide for over 100 years. Two waveforms are offered in our machine that are similar to waveforms traditionally used. A third waveform offers 40 hz stimulation which was added based on research from Germany in 2014.

Ian Soutar

[isoutar@gmail.com](mailto:isoutar@gmail.com)

Vancouver Island

Canada.

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## Appendix:

### Technical Details for Amateur or Professional Researchers:

#### Waveforms Used

1/ Called "Standard" it is 40 hertz wave (similar to standard CES) It actually uses a 909 hz waveform turned on and off at 40 hz. 1000 hz is used as a "carrier" to move the wave through the transformer. This is similar to the waveform in CES used for depression. Researchers and consumers will have to determine if this works for depression.

909 hz Sine Wave Shown Below



909 Hz. Carrier Signal

40 hz waveform pattern is used in which the sets of 2 909 hz AC "carrier" pulses shown above occur 40 times per second. The waveform has a positive going wave followed by a negative going

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wave. Thus the electrical forces are balanced so that no DC offset is applied to the head. It is dangerous to apply a DC signal to the head! For safety we used a transformer so that it is impossible to pass a DC signal through to the head even if the electronics fails! This waveform pattern using 909 hz carrier is used in all three modes of operation.



The 909 hz Carrier Occuring @ 40 Hz

2/ Called "Meditation" it is 14.3 Hertz frequency delivery of four 1000 hz voltage pulses, each looking like the waveform pulses shown above. It quiets the mind for meditation for some people. Again it uses 2 waves of 909 hz carrier which is turned on/off 14.3 times per second. For fun, this is the third harmonic of the Schumann Resonant frequency of the earth. Any frequency from 12 to 15 hz could have been used. Researchers with EEG equipment will have to evaluate whether or not it triggers the Alpha rhythms associated with meditation? Consumers who meditate can experiment too. A calmness and quietness of thought is the usual symptom some of our users have noticed. We are interested in feedback on all our waveforms.

3/ 0.5 Hertz in CES is traditionally used for drug withdrawal and pain relief. The signal in waveform 1 (100 hz) is turned on and off. The 100 hz is made up of four 909 hz waves which occur at 100 hz intervals. This signal is turned 1 second on and then 1 second off.

Similar waveforms in CES are used to generate endorphins for drug addiction withdrawal assistance. We customized this wave and essentially have combined the standard CES depression relief waveform concept with the pain relief waveform concept since many people in pain are also depressed. This may be an improvement over the traditional CES waveforms. Only Research will determine whether or not this works for both conditions. We can supply any waveform requested in the form of custom units for researchers if they purchase 10 or more units. Please contact us for customization.

**Low Price Based on No Claims**

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We make no claims that our unit will be useful for the treatment of any such condition as addiction, depression or pain. This keeps the price low. It is a research tool. Because we make no medical claims, the Harmonizer can be available at a very low cost to both consumers and researchers.

Since CES-like technologies are not recognized by Health Canada as therapies ... we do not have to deal with medical approval process which lowers the selling price. The Harmonizer opens the way for scientific investigation of "CES"-like or "ElectroSleep"-like electric stimulation in Canada.

**Researchers are welcome to contact us:**

**Ian Soutar**  
**Microsec Research and Development Inc.**  
[isoutar@gmail.com](mailto:isoutar@gmail.com)  
**Vancouver Island**  
**Canada.**