

## EMF / RF Measurement and Mitigation Specialists Serving Canada and the USA







# How we started

- Starting a Family (2001)
- Wanted to keep family safe
- Mercury Amalgam removal (Sharon and I)
- Naturopathic Dentist the late Dr. Adirim
  - had a meter that measured 3 fields
- I was skeptical
- Tried it in my home
  - Lit up like a Christmas Tree
- Piqued technical curiosity
- Seeing is believing Began as a hobby
- Learned how to use it in my home
- Taught him how to use it

## What is safe?

International Radio Frequency "RF" Exposure Limits for 1800 MHz Range

(Cell Phone, WiFi, Smart Meters, etc)

| Location  | Reference  | μW/m2       |
|---|--|-------------|
| Most of<br>Western Europe                               | IEEE C95.1-1999<br>and ICNIRP                                    | 10,000,000  |
| USA   | (FCC) IEEE C95.1-1999<br>and ICNIRP                              | 10,000,000  |
| Canada  | Safety Code 6, Table 5 (2015)                                    | 4,393,278.4 |
| Russia  | Sanitary Norms and Regulations 2.2.4/2.1.8.055-96                | 100,000     |
| China   | UDC 614.898.5 GB 9175  | 100,000     |
| Italy   | Sanitary Norms and Regulations<br>2.2.4/2.1.8.055-96             | 100,000     |
| Most of Eastern Europe                                  | Sanitary Norms and Regulations<br>2.2.4/2.1.8.055-96             | 100,000     |
| Switzerland   | Ordinance on Protection from<br>Non-ionising Radiation (NISV)    | 100,000     |
| Toronto Board<br>of Health, Canada                      | Proposed 1999  | 100,000     |
| Bio-Initiative Report<br>recommendation                 | Bio-Initiative Report 2007                                       | 1,000       |
| Salzburg Resolution on<br>Mobile Telecommunication      | Preventive public health protection,<br>Salzburg, June 7-8, 2000 | 1,000       |
| European Parliament                                     | Resolution 1815, Strasburg, May 27, 2011                         | 106         |
| Building Biology Guidelines<br>Germany (Sleeping Areas) | SBM2008 - Level of No Biological Concern                         | 0.1         |
| Cell Phone Operational<br>Requirements                  |  | 0.001       |
| Natural Cosmic Radiation                                | MAES 2000  | 0.000,001   |
| Average Indoor Urban<br>Exposure Toronto, Canada        | Safe Living Technologies Inc. 2011                               | 200 - 5000  |

## What is safe? Nature Building Biology Guidelines

- Stringent Guidelines
- Based biological concern levels
- Nature is the design goal
- Based on 1000's of Assessments





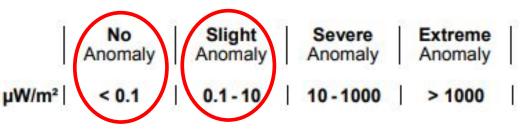
# How we started

## What is safe continued

- . . .
- Met Dr. Havas at a trade show in 2003
- She was questioning our guidelines (Too strict!)
- Made me question what we are doing
- We then primarily stated dealing with Electrically Sensitive People
- Over several years and after 100's of assessments and 1000's of phone calls we learned that Building Biology is on the right tack
- Most EHS Persons were comfortable below 10  $\mu$ W/m<sup>2</sup>
- Extremely Sensitive persons below  $1 \,\mu\text{W/m}^2$
- Design Goal of under 10 μW/m<sup>2</sup> Slight Concern

## **Building Biology Guidelines**

For Sleeping Areas (SBM-2015)







# What we do

#### Teach people how to measure EMR



Instructors / course developers at the Building Biology Institute USA Since 2008 – Get signed up for live seminars!

#### **Authorized North American Distributors**

## SAFE + SOUND By SAFE LIVING TECHNOLOGIES INC.







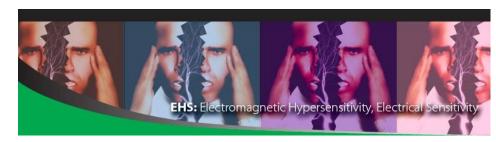


**Conduct Electromagnetic Radiation Inspections -**



Help people with Electromagnetic Hypersensitivity "EHS" -

2003



#### **Design & Supply Measuring Equipment and Mitigation**











# Who we are



Founder:

#### Rob Metzinger BBEC, EMRS President Safe Living Technologies Inc

Electronics Engineering Technologist Building Biology Environmental Consultant Electromagnetic Radiation Specialist

#### **History:**



Electronics Engineering Technologist, 1987 Electronics Field Service Engineer, Supervisor 1987-1994 President and Founder - Addressable Solutions Inc. 1994-2009 Professional EMR Site Inspector Residential and Commercial 2002-Present Factory Certified Gigahertz Solutions Test Equipment Instructor, 2005-Present President and Founder - Safe Living Technologies Inc., 2006 - Present Certified Electromagnetic Radiation Safety Advisor (CERSA) Consultant, 2008 EMR Mitigation Instructor for the Institute of Building Biology USA, 2008-Present EMR Safety Panelist IBE- 2008, 2011 Speaker – Total Health Expo. - Toronto Convention Centre, 2010 Certified Building Biologist, BBEC 2010, EMRS 2014 Speaker – American Medical Association for Anti-Aging 2011 Researcher and Design of RF Shielding Products and Techniques One of Canada's most experienced EMR Technologists



**Bryan and Zack** 

Our 2 in shop

- Electronic Engineering Technicians



# Who we are continued...

#### University of





CENTRE FOR INTELLIGENT ANTENNA AND RADIO SYSTEMS (100 MHz - 110 GHz test capability)



#### **Exclusive RF Engineering**

#### Partners









## We have an established Network of Certified Consultants

EMRS – Electromagnetic Radiation Specialists Dozens serving Canada and the US



# Our meter brand



3<sup>rd</sup> Party Certified Results – Meters tested at state of the Art Testing Facility CIARS

- University of Waterloo, Ontario Canada
- Results published on website

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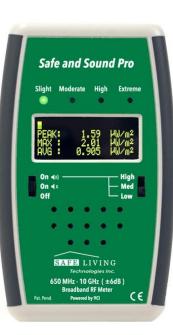
Ultrafast response – detects pulses faster than  $5\mu$  seconds

Easy to Use, Designed with EHS clients in mind

Design Goal is Best in Class 🔶











# Our meter brand



## Safe and Sound RF Detector:

**True response:** 650 MHz to 10 GHz +/- 6dB (effective 200 MHz to 12 GHz)



2018 Technology - Engineered in Canada - Manufactured in Canada and the USA Performance tested in 3rd party RF testing lab
 No technical experience required, easy to use and understand
 Sound signature analysis to assist with source identification

 Discrete low volume
 Uses current state of the art measurement technology and is sensitive below 1 μW/m<sup>2</sup>
 EHS Friendly to hold - no emissions from electronics inside when sound is disabled
 Small, durable and compact handheld design – fits in pocket

Color coded LED's identify exposure levels corresponding to Building Biology Guidelines

Red (Flashing) > 10,000 µW/m<sup>2</sup> Red > 1000 µW/m<sup>2</sup> Orange 100-1000 µW/m<sup>2</sup> Yellow 10-100 µW/m<sup>2</sup> Green 1-10 µW/m<sup>2</sup> Green (Flashing) < 1 µW/m<sup>2</sup>

Acceptable for most EHS persons Acceptable for Extremely Sensitive EHS persons



**5G** 

**Ready!** 

Below 12 GHz

# Our meter brand



## Safe and Sound Pro RF Meter:

**True response:** 650 MHz to 10 GHz +/- 6dB (effective 200 MHz to 12 GHz)



**2019! Engineered in Canada** - Manufactured in Canada and the USA Sound signature analysis to assist with source identification

- 3 selectable volume levels + Sound On/Off
- 2.5mm headphone jack

Low EMF emissions, designed for the Electrically Hypersensitive person in mind Premium OLED Display for a real time display that is easy to read in any type of light Uses state of the art measurement technology and is sensitive to less than 0.5  $\mu$ W/m<sup>2</sup> Measures power densities up to 2,000,000  $\mu$ W/m<sup>2</sup> Peak Hold

Bar graph of RF intensity USB Power Jack for continuous monitoring Battery life remaining display on power up Small, durable and compact handheld design





# **Other products designed**

## **Power Shut off Devices (Like turning off circuit breakers)**

- Sleeping areas of prime concern
- 2005-2015 Demand Switch
- NEFA-16 Plus 1P



#### 2005-2015 - Remote Cut Off Switch - NEFA-16 Plus F/1





## 2015-2019 - Remote Cut Off Switch: - RCS4





# Other products designed

## **Body Voltage Test Kit** (Building Biology Compliant)

## OFC1 Optical Pulsed Light Meter (Analysis of Flicker of all lights computer monitors/ TV's)







# **Other products designed**



## **Swiss Shield Bed Canopies**







# **Our network**

All of our Building Biology certified tester use Professional meters from Gigahertz Solutions – Germany

Gigahertz Solutions founded in 1997

SLT - Exclusive North American Importer since 2004 - We have factory trained technicians

Equipment Designed specifically for Building Biology in Germany

Continually working with Gigahertz Solutions for North American design requirements

Design Goal is Best Equipment in Class

 $\star \star \star \star \star$ 



Authorized Distributor for North America





Institute of Building Biology + Sustainability



# Mitigation

Determine your exposure levels with a Certified Professional or a Meter backed with 3<sup>rd</sup> party certified test results

Once the source found, the best option is always to Eliminate them! (Unplug, replace with safer technology, reduce exposure or Shield)

The ideal environment is Nature or to be as natural as possible

Shielding is not Natural but may be necessary

- Some products are more biologically friendly than others
- Do your homework

All shielding devices or materials cause secondary Effects!

- Need to be in stalled strategically

(It takes knowledge and experience to do it correctly)

Verify mitigation strategy – Always take follow up measurements









## **Solutions**

**Complete enclosure is best for RF protection (Certified Products)** 

**RF Shielding Fabrics – Bed canopies and curtains** Swiss Shield - No exposed metals

#### **Shielding Paint**

#### **Building materials**

- Mesh
- Foil

#### Window Film (Signal Protect)

#### **Giron Power Line Shielding**













## **RF meters + kits**

#### Need for Meters that are as sensitive as the body

- Difficult to achieve with 3 in 1 meters

Ideally practitioner's should have a loaner test kit/meter for patients

There are Doctors that wont begin treatment until EMR Eliminated first

Even if patients are not EHS, their treatment will be more effective with low EMF in the home

Look for a quality meters - You get what you pay for

#### Trust is earned !

We are building trust with certified meters and materials

100's of success stories

Scientific approach







# **Research and development**

SAFE + SOUND BY SAFE LIVING TECHNOLOGIES INC.

**Continual improvement on all products** 

**Safe and Sound Mini** – Winter 2019 Wearable Watch Future dosimeter with GPS data logging

AC Electric field and 3D AC Gaussmeter - Spring 2020

**Data logging SS Pro plus** 

Doctors are on the front lines

What are your patients asking for? What products are needed? Give us some feedback and lets work together



