

# Electromagnetic Radiation *Solutions*

IBE 221.8



*In a time of drastic change it is the learners who inherit the future. The learned usually find themselves equipped to live in a world that no longer exists. – Eric Hoffer*



**Building Biology Institute**  
The science of healthy buildings

## Electromagnetic Radiation: Solutions Fact Sheet

This is the third module of the prerequisite and fundamental course on electromagnetic radiation (EMR). This course discusses sources and causes, Building Biology testing methods, and mitigation—recommendations and remediation.

Common sources of electromagnetic radiation in our living environment are presented, specifying their general causes, distribution patterns and field characteristics.

General principles and procedures specific to EMR testing methods in Building Biology are outlined. Overview of EMR surveys performed in sleeping areas, on properties, at workplaces and for building materials (this is the subject for the IBE 212 Seminar).

Recommendations for how to reduce or eliminate one's exposure to harmful EMR in our living environment are introduced. The topic of mitigation is addressed in more detail in the IBE 312 seminar.

The Building Biology consulting approach is a simple formula; education (about sources and health effects), investigation (measuring and identifying) and mitigation.



This course provides information on each category of EMR; direct current and alternating current electric and magnetic fields including microsurge electric pollution, high-frequency fields (both radio wave and microwave frequencies), radioactivity and terrestrial radiation.

Common sources are identified, the equipment used and how to use them is explained, how to approach each investigation, the Building Biology guidelines are noted for each measurement technique, and practical mitigations are discussed.

This is a significant part of how Building Biology Principles (BBP) related to EMR are applied in the real world.

BBP #2 – Place dwellings so occupants are undisturbed by sources of man-made air, soil, water, noise and electro-pollution.

BBP #5 – Use natural and unadulterated building materials that preserve the natural and beneficial DC electric field (air ionization) and the DC magnetic field.

BBP #12 – Provide an abundance of well-balanced natural light and illumination while using color in accordance with nature.

BBP #19 – Minimize indoor interference with vital cosmic and terrestrial radiation.

BBP #20 – Minimize man-made power system and radio frequency radiation exposure generated from within the building and from outside sources.

BBP #21 – Avoid use of building materials that have elevated radioactivity levels.

BBP #22 – Construction materials production and building processes shall provide for health and social well-being in every phase of the building's life-cycle.