Create Healthy Homes

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Body Voltage Parts List for Measuring AC Electric Field Exposure

Updated September 12, 2013

You have two choices to measure what we call “Body Voltage” of Electric Field Exposure: one is to order a Body Voltage Home Test Kit from Safe Living Technologies for about $169 (Canadian) or order a Body Voltage Meter from Less EMF for $89.95, either of which will have all you need. The second is to purchase the individual parts listed below and put a kit together yourself for about $65.

If you want the ready-to-go kit, order the Body Voltage Home Test Kit from Safe Living Technologies in Guelph, Ontario at http://www.slt.co/Products/BodyVoltageKits/HomeTestKit.aspx , or call 519-240-8735. This kit comes with grounding connectors to the earth or a water pipe.

Or you can order the Body Voltage Meter from Less EMF in Albany, New York at http://www.lessemf.com/unique.html (scroll down to the third item, Catalogue # A183N—the catalogue number on their website, or E183N—the catalog11ue number in their latest printed catalogue), or call 888-537-7363. The LessEMF Body Voltage Meter comes with its own grounding connector that plugs into a grounded outlet, and you can separately order other grounding connectors to the earth outside or to a water pipe.

If you choose to put together your own kit for less than the cost of either ready-made kit mentioned above, here are the items you will need:

1. **Radio Shack Digital Multimeter**, part number 22-811. Obtain from your local Radio Shack store. Cost is around $50. The meter will come with two

test probes with sharp pointed ends. You need a volt meter that gets down into the milliVolt range, and this one (and the ones in the ready-made kits listed above) does that.

2. A 20-foot length of **speaker wire**. Obtain from Radio Shack.
3. Two small **alligator clips** for both ends of speaker wire. Also obtain from Radio Shack.
4. **Grounding cord** from Less EMF, Albany, New York (888-537-7363; www.lessemf.com), with alligator clip on end, Catalogue number D295-3, $6.
5. **Alligator clips** that slide over the sharp end of the test probes (that are provided with the digital multimeter.) Obtain from Radio Shack. Model #270-354. Cost $2.99 for package of 2. You need only one. Keep the other as a spare.
6. **Wire stripper**. Obtain from hardware store or Radio Shack.
7. **Smaller Phillips head screwdriver**. Obtain from hardware store or Radio Shack.
8. **Electrical tape**. Obtain from hardware store or Radio Shack.
9. **Utility knife**. Obtain from a hardware store.

(The parts list above enables you to ground the multi-meter to the ground hole of a wall outlet using the grounding cord in item # 4 above. An alternative way to ground the meter is to run your speaker wire directly out a window or door to a 10-12 inch nail pushed into the ground. This may actually give you the most accurate readings. If you choose this method, then instead of ordering the grounding cord from Less EMF in item #4 above, purchase the following items:

1. Heavy-duty insulated 2” claw clip, large enough to clip onto a 10- or 12-inch nail shaft. Obtain from Radio Shack. Part #270-349. Cost $2.99.
2. Smaller alligator clip for other end of speaker wire (to attach to alligator clip described in item #5, next item). Obtain from Radio Shack.
3. 10- or 12-inch nail. Obtain from hardware store.

Whichever method of grounding you choose, separate the speaker wire, which comes as a double wire, down the middle with a utility knife because you only need one wire, not two, and splice the two ends together. Use athe knife to separate the two wires at one end and then pull the wires apart with your two hands. This doubles the length of the wire by making the double 20-foot wire into a single 40-foot wire. To splice together, strip the insulation off one end of each wire. Take the two bare wire ends and twist them together and cover with electrical tape. This connection will be at the middle of your now 40-foot long wire.

Strip the insulation off the remaining ends of the 40-foot wire and screw the bare wire at each end onto the two smaller alligator clips (or one smaller and one large clip if you ground to the nail outside). One alligator clip will be used to connect to the alligator clip of the grounding cord (or nail outside), and the alligator clip at

the other end is to be clipped to the alligator clip that slides over the pointed end of one of the multimeter test probes.

The grounding cord from Less EMF has a plug at one end that consists of only a ground prong. The normal hot and neutral blades of the plug have been removed. Plug this ground prong into the ground hole of a working grounded outlet. Clip the alligator clamp of the long 40-foot wire to the alligator clamp on the other end of the green wire attached to the ground prong. (Alternately, clip the large alligator clamp of the wire to the nail if you ground directly to the earth outside.)

The other end of the 40-foot wire is connected to the alligator clip on the test probe connected to the multimeter. The 40-foot wire and voltmeter can now be taken into any room in the house in order to measure electric field exposure, and the long length of speaker wire allows you to move about and take measurements at various locations without having to change the position of your ground.

You will particularly want to take measurements in the sleeping areas and in rooms you occupy routinely during the day and evening time. You will also want to measure the electric field level around of (and touching) your refrigerator, to make sure it is properly grounded. Finally, you will want to measure the electric field exposure levels at your laptop, which will be extremely high if the cord is two-pronged (ungrounded) and you are not grounded through a USB cord to a printer that is properly grounded.

Sleeping in a bedroom with high electric fields robs you of a deep sleep and keeps melatonin release to a minimum. See Comments from Clients on my website (http://www.createhealthyhomes.com/comments_clients.php) and articles on Electric Fields on the Articles on EMFs page on my website (http://www.createhealthyhomes.com/articles.php) to see why you want to measure and reduce nighttime electric fields.

Likewise, you do not want to be around or touch, in the case of a laptop, ungrounded appliances, particularly your refrigerator and laptop computer. If these appliances are ungrounded, being around them or sitting at them for hours, as in the case of the laptop, saps your energy.

A separate handout describes step-by-step instructions on how to measure body voltage, which you can download from a link in the Electric Field section of my article called, EMF Meters and Instruments at http://www.createhealthyhomes.com/emf_meters.php .