

Create Healthy Homes

Environmental Design and Inspection Services

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Measuring Body Voltage

Written by client Emma Morton, edited by Oram Miller, BBEC

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See separate sheet with parts list at Electric Meters and Instruments on my website (http://www.createhealthyhomes.com/emf_meters.php) in the section on Electric Fields.

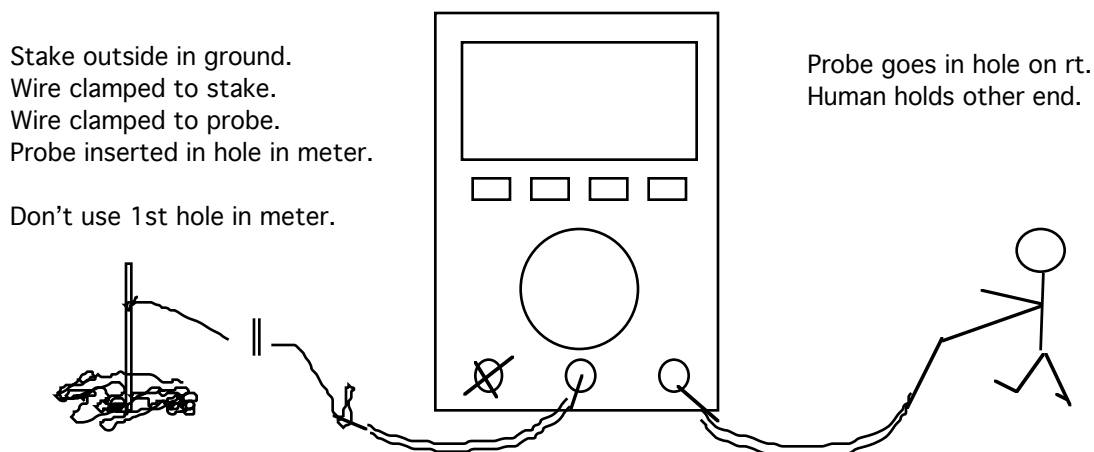
How to Use

1. Put in fresh 9V battery.

2. Set-up

See diagram. (**Note from Oram**, May 2010: Follow the instructions below for grounding your meter if you are using the ground stake outside your window or door. Otherwise, ground the meter to the grounding clamp that is plugged into a grounded outlet inside your house.)

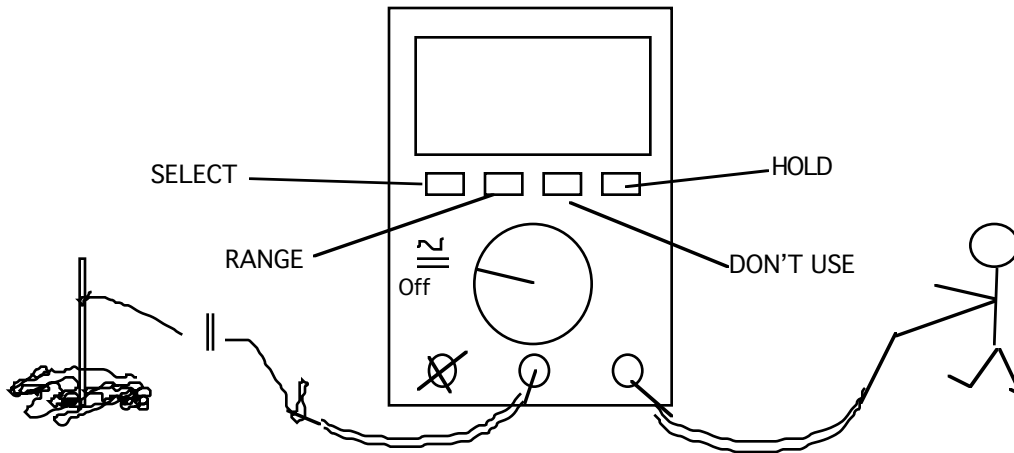
Also, the diagram below depicts the use of the Radio Shack Digital Multi-meter, recommended in the parts list I provide in a separate handout. If you purchase a ready-made kit from LessEMF or Safe Living Technologies, follow set-up directions provided by those retailers, then proceed to steps 3e and 3d below.)



Measuring Body Voltage

3. Ready to take readings of milliVolts (mV) going through body. Healthy = less than 50 mV. You'll not use any other setting around the dial except to where the dial indicator is pointing in the diagram (tilde (squiggly line) with 2 lines under it).

Note: The symbol “~” is AC and “-“ is DC to the left on the digital screen.



- a. Turn dial to the first position; others will not be used.
- b. Display shows - 000 etc. mV with AUTO above.
- c. Press SELECT button to change the - to a ~. This changes the meter readout from DC to AC. (The meter always starts by default in DC mode, but you always want to measure in AC mode, so get in the habit of pressing the SELECT button when first turning the meter on to volts.)
- d. Leave the meter in AUTO mode. That way a meaningful number will always appear on the screen. Be very careful to pay attention to the letter on the right, and note whether it displays a “V,” in which case you are measuring Volts, or an “mV,” in which case you are measuring in milliVolts. Remember, a safe nighttime reading is less than 50-100 mV (which is 0.050-0.100 Volts). It is ideal to get below 20 mV or so.
- e. Hold one probe's end and walk near walls, etc. with and without lamp and clock power cords plugged in. It takes (on the average) a distance of 10' to 15' to get down to an acceptable reading of 50mV or less. Even with power cords unplugged, you will still have high electric field levels (in the thousands of mV, or 1-2 V or higher) due to electric field exposure coming from plastic-coated wiring in the walls of houses built since 1945.
- f. The digits will fluctuate so you can press HOLD to have the meter retain a # you might want to record. Press HOLD again to let the measurement fluctuate again.
- g. To get down into a healthy nighttime range of less than 50 mV, you must turn off the circuit breaker for the bedroom. Retest your levels at the bed. The levels may still be high due to circuits in the walls and floor that are going to another part of the house, but still run within 10-15 feet of your bed.
- h. Therefore you may need to turn off breakers from several rooms to get readings down to a healthy level. I have to have 4 circuits off, my neighbor only three. Make sure you turn off the circuit breakers and not just the light switch to

get accurate final readings since even with the light switch off you will get voltage readings from wires in the walls. Electricity is in the wiring unless circuits are off. If you get readings with all circuits in your house off then you are getting voltage from a neighboring source (in duplexes) and can complicate the situation if your neighbor isn't willing to try lessening their voltage.

- i. If you have high readings even with the bedroom circuit off, have an EMF expert come to your home to help determine which other circuits are also involved (see below). It is not easy to do this on your own, as you run into problems keeping critical appliances on overnight (see next two items). Beyond this point the process can get rather complicated for a homeowner to do on their own.
- j. You must be careful not to turn off your bedroom circuit if that disables your smoke detectors. You will see the steady green or red light on the detector go off when you turn off your bedroom circuit. If that happens, see if your smoke detectors have battery back up and do not beep when the power is off (otherwise this will keep you awake at night). If you turn off the electricity to your bedroom at night and the smoke detectors no longer have power but use the battery back up, make sure you replace the battery every six months.
- k. If you end up also turning off other circuits, be sure other critical appliances are still on overnight, such as the furnace, refrigerator, deep freeze, water softener timer, security system, etc. If turning off these circuits cuts power to critical appliances, leave those circuits on until you can call in a professional EMF consultant to help you provide power to these appliances while turning off the circuits that raise your numbers when you measure at the bed (see below).

4. If you have a remote (also known as KILL or KILLER) switch installed which will turn off the circuit(s) that get the voltage down to less than 50 mV, have the switch installed away from your bed and make sure any new wiring done is enclosed in metal conduit to protect from any fields emitted from it/them. Consult an EMF specialist to obtain and install a remote switch (see below).

5. Further suggestion: Buy SHIELDED AC POWER CORDS at Radio Shack (Part Number 61-206) to replace computer, scanner, and printer AC power cords (unless the AC power cord you already have has the word "SHIELDED" embossed on the cord, in which case, you are already protected). These plug right into the back of the desktop computer tower and monitor and into the wall (as long as you have a grounded outlet. Do not use a "cheater" plug to go from three-pronged to two pronged. If you do not have a grounded outlet, the shielding, and the grounding, will not work. Have an electrician install a dedicated, grounded outlet in the room for your computer). Pull out the original AC power cord and plug in the SHIELDED AC power cord. If your original cords are molded into the appliance you won't be able to pull them out and replace them. These SHIELDED AC power cords will provide another safe space for your body by eliminating electric field exposure. Laptop cords are unfortunately not replaceable, but be sure to keep the transformer (the box in the middle of the cord) as far away from you as the cord to your laptop will allow. This keeps you safe from unhealthy magnetic field exposure from the transformer. Also, move the power strip away from your feet at least three feet or more, as the power strip also usually has transformers (the little black boxes) plugged into it.

6. You can purchase shielded cords from LessEMF (<http://www.lessemf.com/wiring.html>; 888-537-7363). Purchase either a ready-made “Shielded Appliance Cords” that has a grounded plug on one end and is open at the other end, Catalogue number F-297, or MuCord, which you purchase by the foot, Catalogue #F-223 for \$1.75/foot. MuCord is much thinner than the shielded appliance cord, and is much easier to thread up through the metal stem of a lamp. Have an electrician replace your existing lamp cords or take it to a lamp repair shop. See below for one such shop. That way you are protected from electric field exposure during the daytime when you sit next to a metal floor or table lamp. The metal in the lamp amplifies these fields, and replacing the AC power cord with a SHIELDED power cord eliminates these harmful electric fields. Grounded AC power cords, purchased at hardware stores, do help somewhat, but SHIELDED AC power cords protect you even more by completely eliminating the electric field exposure, not just reducing it. SHIELDED AC power cords can only be obtained from LessEMF, not from a hardware store. One such local shop in Southern California that rewires lamps is Newman's Vacuum and Appliance Repair, 1422 Santa Monica Blvd., Santa Monica, CA; 310-451-1736. Download a protocol for them to follow from the EMF Meters and Instruments page on my website at the end of the section on Electric Fields, at http://www.createhealthyhomes.com/emf_meters.php .

7. THERE IS NO DANGER in performing any of this procedure for use of body voltage meter since you aren't using the probes directly on or ever touching the probes to any wiring in your house.

8. For clarification or for more information, contact Oram Miller, BBEC, Certified Building Biologist and EMF expert at 310-720-7686, info@createhealthyhomes.com. Visit his website at www.createhealthyhomes.com.