

# Create Healthy Homes

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## Lamp Rewiring Protocol

The purpose of this protocol is to replace the existing unshielded AC lamp power cord with a shielded cord. This eliminates AC electric field exposure for clients who are trying to reduce their exposure to electromagnetic fields (EMFs) when sitting or sleeping within six to eight feet of this lamp.

An important step you must perform at home first to make sure this will work is to insure that you plug the new lamp cord into a properly grounded three-pronged outlet. To test that the ground in your outlet is functional, purchase a Circuit Tester from any hardware store for \$10 and plug it into the outlet. If *both* amber lights light up, then the outlet is properly grounded and the shielding provided by the MuCord will eliminate electric fields from the lamp and its cord. See below.

1. Purchase MuCord from Less EMF in upstate New York at whatever length you need. Usually this is 6-8 feet from the outlet to the base of the lamp, plus two more feet for the length of the lamp to the top (or four more feet if it is a floor lamp) (Catalogue # F223; \$1.75 per foot; 518-432-1550, 888-537-7363; [www.lessemf.com](http://www.lessemf.com) ).
2. This protocol will only work for lamps with on/off switches at the top of the lamp, in the bottom of the light bulb socket.
3. At the base of the lamp, cut or pull back the felt to expose the existing lamp cord.
4. Take the light bulb socket apart, pulling the socket up from its base at the top of the lamp.
5. Remove the old hot and neutral wires from their respective screws on the light bulb socket.
6. Pull the old lamp cord down through the lamp stem and out the hole on the side of the base and discard.
7. Slide the new MuCord through the hole in the lamp base and then up through the stem until it emerges out the top of the stem. Thread the MuCord through the base of the light bulb socket.
8. Strip the outer insulation of the MuCord and cut off the plastic thread(s).
9. If possible, solder the exposed single bare ground drain wire to the metal of the light bulb holder affixed to the lamp.
10. Strip the insulation from the ends of each of the two hot wires and the two neutral wires.
11. Twist the two bare hot wires together into one hot wire, and twist the two bare

## Lamp Re-Wiring Protocol to Reduce Electric Fields

- neutral wires together into one neutral wire.
12. Attach the combined twisted hot wires to the hot screw on the light bulb socket, and likewise attach the combined twisted neutral wires to the neutral screw.
  13. Slide the cardboard and metal sleeve down over the light bulb socket and secure.
  14. Attach a three-pronged plug to the other end of the MuCord.
  15. Cut back the outer insulation.
  16. Attach the bare ground drain wire to the ground prong of the plug.
  17. As you did at the light bulb socket, strip back the insulation on the two hot and two neutral wires and twist the two hot wires together and the two neutral wires together.
  18. Attach the combined twisted hot wires to the screw for the hot blade of the plug and do the same with the twisted neutral wires.
  19. Using a digital multi-meter, test that there is *no* continuity between the ground prong of the plug and either the hot or the neutral contacts within the light bulb socket of the lamp. (If the appliance repair shop does not have this equipment, I can test for this and the following step before you use the lamp for the first time.)
  20. Test for continuity of the hot blade of the plug with the hot tab in the bottom of the light bulb socket. Do the same for the neutral blade of the plug with the inner metal sleeve of the light bulb socket. Be sure there is no cross continuity between hot and neutral.
  21. We can also verify that there is no electric field exposure from the lamp or the new shielded AC power cord when plugged into an outlet by using a GB Circuit Alert or similar voltage tester when the lamp is plugged in. This voltage tester normally beeps when held against an unshielded cord that is plugged into an outlet, even if the light bulb is switched off.
  22. The MuCord, however, is shielded and the tester will not beep when you hold the tip of the tester against the cord or the lamp stem when the cord is plugged in.
  23. Make sure you plug your newly re-wired, shielded lamp into a properly grounded outlet, verified with a circuit tester.
  24. Determine that the ground is functional by purchasing a circuit tester that you plug into the outlet. Make sure both amber lights light up and that the outer (ground) amber light is as bright as the middle amber light. If so, you have verified that the outlet is properly grounded. Purchase a circuit tester from a local hardware store for about \$10.

A local Southern California resource who can rewire the lamp for you is Newman's Vacuum and Appliance Repair, 1422 Santa Monica Blvd., Santa Monica, California; 310-451-1736. Any lamp repair shop should be able to do this re-wiring.

If you have any questions, call Oram at 310-720-7686.

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**Disclaimer:** These are general guidelines only. These recommendations are designed to provide a re-wired lamp or appliance that does not emit AC electric field exposure. All efforts are made to provide instructions for a safe re-wiring job. Oram Miller assumes no liability for re-wiring done as a result of these instructions. That is the responsibility of the person doing the re-wiring. Have this re-wiring done by a competent professional. The owner of the lamp and the person doing the re-wiring understand that doing the re-wiring will take the appliance out of manufacturer's warranty.