Preface

Many people's eyes glaze over when someone attempts to explain something even mildly technical, and if an equation is utilized—well, that's the end of the matter!

But it needn't be.

For those who would like a grounding in the basics—historical and modern—of electricity and magnetism as we experience them today, this book intentionally uses "no math" (except in Appendix F, which may certainly be omitted). It *does* allow the occasional "shorthand" definition, plus the simplest of arithmetic.

The work should be of interest to at least any of the following:

(a) the armchair reader (such as, but not necessarily, a curious retiree).
(b) an experimenter.
(c) school students, including the home schooled.
(d) he/she who asks such questions as "what is an LED light?"
(e) people taking college physics that seems too abstract.
(f) anyone whose day-to-day work involves electricity.

The emphasis throughout is on experiment and history—experimentation that can very often be repeated just with things found at home. (Hence "kitchen" in the title.) Of course, the armchair reader is not obliged to do these experiments and sometimes it's okay just to visualize them!

It's clear that we use physics constantly, and (presumably) always will. While we don't need to know any science to live comfortable lives, electricity is something worthwhile knowing the elements of—and on top of that it's fun. From bulb to LED, radio to TV, microwave oven to transistor, cell phone to photovoltaics, and much more around us—all involve electricity plus its nondetachable partner, magnetism.

So, enjoy!

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