



Homemade Lightning: Creative Experiments in Electricity

By R. Ford, Richard Ford

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One of the best books on electrostatics for the hobbyists, inventor, or experimenter is updated and expanded to include newly uncovered information on electrostatic generators and complete instructions for building various types, including Wimshurst and Van de Graaff generators. Throughout the book, the author provides hard-to-find information on electrical anomalies, which represent the frontier of electrostatic research.

Covering theory and presenting electroscope and other construction projects and experiments, this handbook also includes experiments with electrohorticulture, gravitation and electricity, cold light, and electric tornadoes. Homemade Lightning is both an excellent first book for the building electrical experimenter and a superb book for accomplished experimenters who haven't spent much time with electrostatics.

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Editorial Review

Review

From January/February 2003 issue

Hands-on high-voltage experimentalists interested in electrostatic machines will love this book. Filled with design plans for building electrostatic generators and various high-voltage components, this book provides the necessary details to construct these devices. Like the first two editions, there are detailed plans describing the construction of a Wimhurst machine. This edition however, details a more simplified but larger and improved version than previously described. There is also now an entire chapter devoted to Van de Graff generators describing the principles of operation, construction, modifications for improvement, and making accessories. There are many illustrations and photos describing the construction of these generators as well as methods for making electroscopes, large capacitors, and an electrophorus. There are many tips and tricks revealed that show how to make various parts like high-voltage corona spheres, shorting rods, and terminals. Other topics include electrostatic motors, cold light, levitation, exploding wire experiments, and historical notes on unusual electric discharges. A revised bibliography and materials supplier list also made in this new edition.

Anyone with an interest in high-voltage electrostatics will find this book to be not only a "cookbook" for designing and building high-voltage generators but also an historical account of the Wimhurst and Van de Graff generators.

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From the Back Cover

*****RAVE ONLINE REVIEW!...

"Wimshurst Machine and other wonderful information. This is a must-buy book for the electrical experimenter and science/physics educator. Very well-written with unusual and unexpected material.

Beautifully illustrated. Great plans for Wimshurst machine to make 14 inch sparks! Kinetic gravity and countergravitation experiments/information and more!"

"Modern, detailed view of mysterious subject. This is an area of science that seems neglected, hidden in the back room of the 'mad scientist.' However, this book details both traditional and modern means of obtaining, using, measuring & studying aspects of static electricity... All in all, a very informative, even enjoyable read for anyone interested in high-voltage electrostatics."

"An indispensable guide to anyone interested in starting out in electrostatics. It gives a wonderful overview of the principles involved, and takes the reader on a thorough tour of how to go about building both sectorless-Wimshurst and Van de Graaff generators. A must-have for electrostatic enthusiasts."

Build a Wimshurst generator or modify your Van de Graaff for creative, hands-on experiments--explore the wide-open frontiers of electrostatics.

Enter the wide-open frontier of high-voltage electrostatics with this fascinating, experiment-filled guide. You'll discover how to make your own equipment, how electricity is used in healing, and the workings of many experiments in high potential physics! Starting with electrostatic basics, R.A. Ford's highly praised *Homemade Lightning* entertains, instructs, and challenges. It's the only comprehensive electrostatics book packed with useful projects for serious hobbyists, students, inventors, and experimenters!

LOADS OF FASCINATING EXPERIMENTS AND ILLUSTRATIONS

Perfect for beginning electrical experimentation or advancing an interest in electrostatics, *Homemade Lightning* takes you through electrostatic generator construction and operation to prepare you for a number of unusual projects. Inside, you'll find a complete description of several types of generators, including the Wimshurst and Van de Graaff, plus specific details for experiments with

- * Electroscopes
- * Electrohorticulture
- * Electroaerodynamics
- * High-voltage capacitors
- * Countergravitation
- * Cold light
- * Electric tornadoes
- * And more

FROM THE PAST TO THE FUTURE

Featuring beautiful illustrations from turn-of-the-century science journals of Victorian-era electrostatic generator designs, *Homemade Lightning* provides hard-to-find information on electrical anomalies--the key to the future of electrostatic research. This is a book that everyone interested in the mystery and power of lighting will treasure.

About the Author

R.A. Ford is an electrical experimenter and inventor specializing in turn-of-the-century electrostatic devices. An avid researcher, he developed his own electrostatic generator, which is detailed in the book. Ford also has served as a technical consultant to manufacturers of Wimshurst and Van de Graaff generators. For many years, he has devoted himself to introducing students of all ages to the science and history of electricity. For the past five years, he has worked to develop high voltage equipment for use in high school science fair projects as well as in physics labs and lectures.

Users Review

From reader reviews:

Ronald Brun:

Precisely why? Because this *Homemade Lightning: Creative Experiments in Electricity* is an unordinary book that the inside of the guide waiting for you to snap that but latter it will shock you with the secret the idea inside. Reading this book next to it was fantastic author who have write the book in such amazing way makes the content interior easier to understand, entertaining way but still convey the meaning fully. So , it is good for you for not hesitating having this any longer or you going to regret it. This book will give you a lot of rewards than the other book get such as help improving your skill and your critical thinking means. So , still want to hesitate having that book? If I have been you I will go to the reserve store hurriedly.

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Playing with family inside a park, coming to see the sea world or hanging out with pals is thing that usually you may have done when you have spare time, subsequently why you don't try matter that really opposite from that. 1 activity that make you not feeling tired but still relaxing, trilling like on roller coaster you are ride on and with addition of knowledge. Even you love *Homemade Lightning: Creative Experiments in Electricity*, you may enjoy both. It is great combination right, you still wish to miss it? What kind of hang-out type is it? Oh can occur its mind hangout men. What? Still don't understand it, oh come on its called reading friends.

John Rivera:

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John Montes:

What is your hobby? Have you heard that will question when you got pupils? We believe that that problem was given by teacher for their students. Many kinds of hobby, All people has different hobby. And you know that little person including reading or as studying become their hobby. You need to know that reading is very important in addition to book as to be the issue. Book is important thing to provide you knowledge, except your personal teacher or lecturer. You find good news or update in relation to something by book. A substantial number of sorts of books that can you choose to adopt be your object. One of them is this *Homemade Lightning: Creative Experiments in Electricity*.

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