

Using the Slide Rule in Electronic Technology. Charles Alvarez, 1963

This book is a well-organized approach to the use of the slide rule in the solution of commonly encountered problems in elementary DC and AC circuit theory. It would be an excellent self-study text and reference for electronics hobbyists, technicians, and amateur radio operators. It should be equally useful as a classroom text in introductory electronics courses in trade or high schools, or non-engineering college courses. The author's use of mathematics is very non-threatening, assuming a standard high school background in very basic algebra and trigonometry. He also includes review chapters specific to the notation of powers of ten, exponentiation, and the use of e , (2.718), the base of natural logarithms.

Alvarez's approach is on the use of the slide rule, not on its theory. Hence, there is essentially no discussion of 'why' the rule works, only on how to use it. The first chapter and part of the second show how to read and manipulate the rule, independent of any subject material. After that, the use of specific slide rule scales are generally incorporated into the presentation of specific types of circuit problems.

The book is strongly focused on the solution of practical problems. Little electrical or electronic theory is included, and the examples and end-of-chapter problems are almost always practical, except in Chapters 3, 4, and 16, which are very elementary and devoted to notation and mathematical review. By focusing on the problems, rather than the theory, the author even manages to discuss impedance, capacitive and inductive reactance, and the complex numbers that accompany those subjects without scaring off those students without much math background.

The text is not based on any particular slide rule or manufacturer, although most illustrations show K&E rules. There is one illustration of an AcuMath rule. Problem solving uses the C, D, A, B, CI, DI, L, S, T, CF, DF, and Log-Log scales.

The book contains no noteworthy addenda or appendices. The index (only one page and approximately 100 entries) is minimal and would constitute a problem if the Table of Contents were not so well presented and the book itself so well organized.