

## **The Complete Book of Slide Rule Use, Ritow, 1963**

From the Preface, “This book is designed to teach anyone with a knowledge of arithmetic to learn the how and why of slide rule use as quickly as possible,” The book seems designed most usefully for self-study but could also be used in a classroom setting, either for science, engineering, or finance students.

The theory necessary for slide rule construction and operation are covered well in the first chapter and the reader is pointed to Appendix B for instructions on how to build their own slide rule (actually four of them, depending on what kind of math you want to do!). The examples and exercises within chapters are purely numeric, not applied, so the reader is not distracted by problem details that are unfamiliar to his/her line of work or study. In describing how slide rule problems are to be solved, the author has adopted a short-hand symbology of dots and dashes to indicate the necessary cursor and slide movements and settings. These symbols, combined with the illustrations in the chapters (which also have the same dots and dashes overlain on the scales) are intended to help the student develop a better visual picture of what slide rule movements are required to solve the given problem. I understand what the author was trying to do, but I found this approach not only to be unhelpful, but to be an added impediment and distraction. It simply gave you something else to figure out, in addition to learning how to use the rule.

No specific rules or manufacturers are recommended. The reader is shown how to use all scales in common use, including P, Log-Log, hyperbolic trig, and the various types of square root scales. Although the Preface says the book is designed for “anyone with a knowledge of arithmetic”, it is clear that readers with a good math background will be more than welcome. Trig functions are initially defined by their specified infinite series rather than the more common and simpler method of ratios of sides of right triangles. Also included are chapters or chapter sections dealing with vector problems, and hyperbolic and complex functions.

As stated above, Appendix B provides instructions on how to build your own slide rule from cardboard, celluloid, or wood. Four different scale sets are provided; one for elementary operations; another for operations focusing on squares, cubes, and their roots; a third for working problems using Log-Log scales, and a last set for problems involving circular or hyperbolic trig functions. There is a 2 ½ page index.

The book is well-organized, generally uses easily understood language and diagrams, and covers a larger scale set than is sometimes the norm in slide rule texts. In addition, the author uses a very balanced writing style, neither providing unnecessarily tedious explanations of the material, nor cutting the explanations so short that the student is left confused. My personal opinion however, is that the 'dot and dash' symbology would be better left out.