field, which was dominated by American scientists and engineers only 10–15 years ago, has now been successfully invaded by British manufacturers. Thus substantial coverage is given to the three or four British firms where such instruments are produced as well as to the equal number of well known American firms.

The book is strictly modern in that it discusses theory and applications of interferometric spectrometers and also such recently introduced analytical methods as attenuated total reflection (ATR), often called frustrated total reflection (FTR) in this country. Persons not familiar with the use of either interferometer-spectrometers or these new reflection techniques will find excellent introductions to them herein.

There is a long chapter on accessories for infrared spectrometers and spectrophotometers and one on sample preparation that will be useful to laboratory scientists and technicians.

The book is well written and well printed and is illustrated with numerous well executed line drawings. It will provide the reader with a wealth of specific practical information as well as the needed theoretical backup.

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Static and understanding

NOISE AND ITS EFFECT ON COMMUNICATION. By Nelson M. Blachman. 205 pp. McGraw-Hill, New York, 1966. $13.50

by Sanford E. Gerber

In this book Blachman has attempted to bring together in a single volume a number of related topics that apparently had not been so collected previously. The book is divided into three parts as follows: part 1, Statistical Properties of Noise and Random Signals; part 2, Demodulation, Detection, and Other Non-Linearities and part 3, Information Theory.

In the preface of the book, Blachman suggests that it is a text for "a full year's course." He fails, however, to suggest what the subject matter of that course might be. He further fails to indicate who should take such a course. For example, I found part 1 extremely difficult to understand, while parts 2 and 3 much less so. One wonders if the combination of topics is such as to preclude any given individual from using this book as one text in one course. The author does suggest that parts of the book can serve as text material for parts of one course.

In general, it is a good book and one worth having as reference. It fails, in part, both as a reference and text in two ways: In far too many instances the author has failed to define symbols used in equations, and in many other instances he uses equations that are found elsewhere but changes their symbols. For example, although his discussion of signal detection is rather good, he has used symbols different from those conventionally used to express likelihood ratios.

This review gives me an opportunity I have long awaited to make a general complaint about books of this kind. I do not mean to be unfair to Blachman. He is neither more nor less guilty than other authors on related topics. My complaint has to do with the repeated and incorrect use of such phrases as "We suppose that . . .," "It is seen that . . ." and "It follows that . . . ." I am always bothered by gnawing questions, such as, "To whom is it obvious?" "Who is doing the supposing?" I find that I chronically fail to so suppose and that it frequently is not obvious, no matter how casual my observation. I must commend Blachman, however, for not using the phrase, "It is obvious even to the casual observer that . . . ." I consider this an enormously poor excuse for failing to explain what one is doing.

I would recommend this book for the sophisticated reader, but I question its value as a textbook for any but the most advanced and specialized student.

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