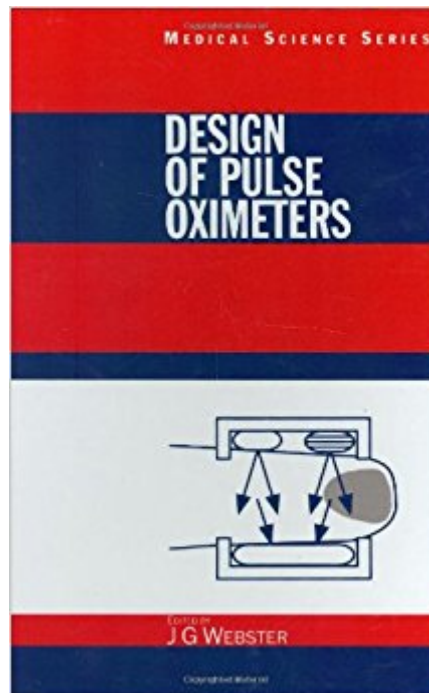




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# **Design Of Pulse Oximeters (Series In Medical Physics And Biomedical Engineering)**



## Synopsis

Design of Pulse Oximeters describes the hardware and software needed to make a pulse oximeter, and includes the equations, methods, and software required for them to function effectively. The book begins with a brief description of how oxygen is delivered to the tissue, historical methods for measuring oxygenation, and the invention of the pulse oximeter in the early 1980s. Subsequent chapters explain oxygen saturation display and how to use an LED, provide a survey of light sensors, and review probes and cables. The book closes with an assessment of techniques that may be used to analyze pulse oximeter performance and a brief overview of pulse oximetry applications. The book contains useful worked examples, several worked equations, flow charts, and examples of algorithms used to calculate oxygen saturation. It also includes a glossary of terms, instructional objectives by chapter, and references to further reading.

## Book Information

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..." a complete guide to understanding, using, and designing the PO ... for biomedical engineers and for all those who need to know the technical workings of this instrument ... provides complete coverage of the field - from basic principles and techniques to signal-processing algorithms and calibration ... with an abundance of figures, tables and equations, the book is easy to read and clear in understanding ... particularly useful for graduate students, biomedical technicians as the essential reference .. the best book to date ... ." Valentin Grimblatov, Columbia-Presbyterian Medical Center,

IEEE EMBS Magazine, May/June 1998 ..." an excellent overview ... a must for biomedical engineers and medical physicists ... valuable contribution to clinical instrumentation and physiological measurement ... reasonably priced and ... worth buying." John Allen, Freeman Hospital, IFMBE News, May 1998 complete guide to understanding, using, and designing the PO ... for biomedical engineers and for all those who need to know the technical workings of this instrument ... provides complete coverage of the field - from basic principles and techniques to signal-processing algorithms and calibration ... with an abundance of figures, tables and equations, the book is easy to read and clear in understanding ... particularly useful for graduate students, biomedical technicians as the essential reference .. the best book to date ... ." Valentin Grimblatov, Columbia-Presbyterian Medical Center, IEEE EMBS Magazine, May/June 1998 ..." an excellent overview ... a must for biomedical engineers and medical physicists ... valuable contribution to clinical instrumentation and physiological measurement ... reasonably priced and ... worth buying." John Allen, Freeman Hospital, IFMBE News, May 1998

It's a good book for students explaining the basic concepts. A modern pulse oximeter has complex signal processing algorithms implemented, which make it robust against motion artifacts. This is not covered in the book.

it sounds to be a good reference for students studying and researching about pulse oximeter. may be good reference for pulse oximeter designers! (it depends on how the level of complete contents or text would be)

This book gives details how pulse oximeters work. The thing that always is the black box for biomed. anyway after reading this book you can not design any oximeter device.

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