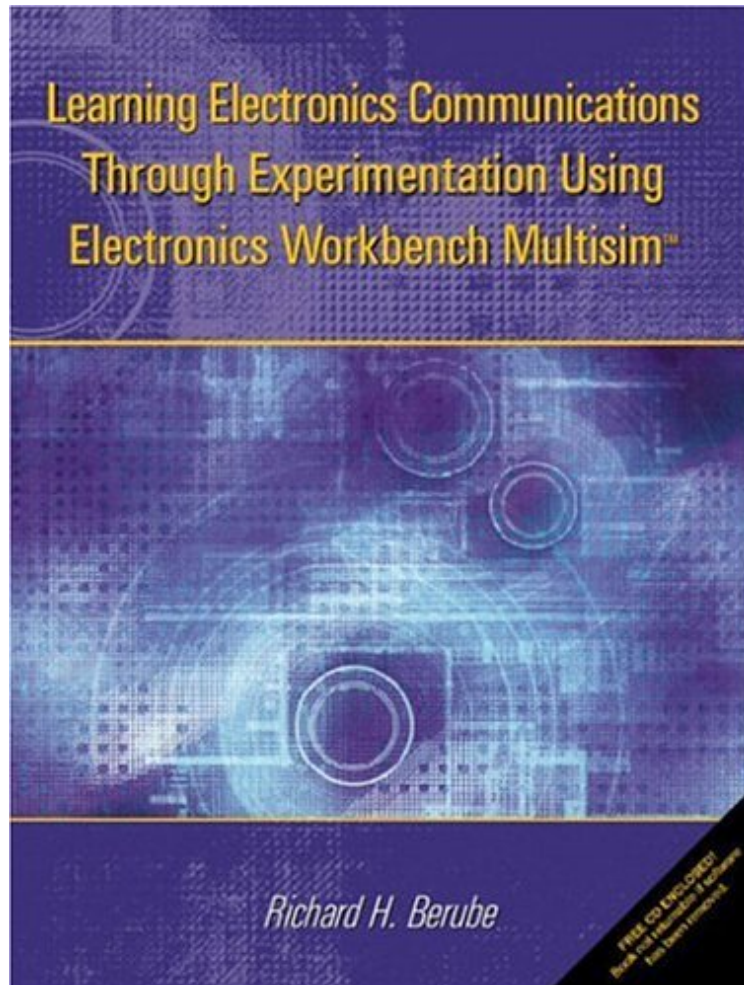


Learning Electronics Communications Through Experimentation Using Electronics Workbench Multisim

Richard H. Berube

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Richard H. Berube : Learning Electronics Communications Through Experimentation Using Electronics Workbench Multisim before purchasing it in order to gage whether or not it would be worth my time, and all praised Learning Electronics Communications Through Experimentation Using Electronics Workbench Multisim:

0 of 0 people found the following review helpful. Four StarsBy DKExcellent book. One of a series by R. H. Berube.

For Electronics Communications and Telecommunications courses. Using computer-simulated experiments, this text provides a means of reinforcing important concepts in electronics communications without the high cost of expensive electronics communication equipment. To help reinforce important concepts, the text requires students to do

calculations and answer a series of questions about the results.

From the Back Cover This unique and innovative manual reinforces the theories learned in electronic communications classes. By performing a series of interactive experiments simulated on the computer and by answering questions about the results of each experiment, students will develop a clearer understanding of the theories that they have learned in the classroom. The 23 computer-simulated experiments do not require extensive laboratory facilities, and circuits can be modified easily with on-screen editing. The analysis results provide faster and better feedback than a series of lab experiments using hardwired circuits. For those who desire a hardwired laboratory environment, circuit diagrams and parts lists are provided for each experiment. An extensive theory section and a series of troubleshooting problems are also included in each experiment. The CD-ROM packaged with the text contains the circuits needed to perform the experiments, the troubleshooting circuits, and a student version of Electronics Workbench Multisim.

Excerpt. Reprinted by permission. All rights reserved. Learning Electronics Communications Through Experimentation Using Electronics Workbench Multisim is a unique and innovative manual that provides a means of learning electronic communications, or reinforcing the theory learned in an electronic communications classroom, by performing a series of experiments simulated on the computer. By answering questions about the results of each experiment, students will develop a clearer understanding of the theory. This method of learning is very effective because it is interactive, which encourages student participation in the learning process and leads to a longer retention of the theoretical concepts. Computer-simulated experiments do not require extensive laboratory facilities, and a computer provides a safe and cost effective laboratory environment. Circuits can be modified easily with on-screen editing, and analysis results provide faster and better feedback than a series of lab experiments using hardwired circuits. Because circuit faults can be introduced without destroying or damaging actual components, more extensive troubleshooting experiments can be performed. Also, faulty components that are deliberately introduced in a circuit simulated on a computer can help make it easier to find the faulty component in an actual circuit. For those who desire a hardwired laboratory environment, circuit diagrams and a parts list have been provided for each experiment. After the circuit is wired and checked, turn on the power and record the data in the space provided. Also, computer-simulated results can be compared with hardwired laboratory results. If a closer correlation between the computer simulation results and the hardwired laboratory results is desired, the component values in the computer simulation can be changed to match the actual component values in the hardwired circuit. An extensive Theory section has been included with each experiment. This will provide the student with all of the theory and equations needed to complete the experimental procedure without referring to another communications textbook. A series of troubleshooting problems is included at the end of many of the experiments to help develop troubleshooting skills. Some of the problems have a fault in one of the components and some of the problems require the student to determine an unknown component value. In each troubleshooting problem, the parts bin has been removed to force the student to find a fault or component value by making a series of circuit measurements using only the instruments provided. A CD-ROM containing the circuits needed to perform the experiments, the troubleshooting circuits, and a student version of Electronics Workbench Multisim, has been provided with this manual. A solutions manual showing measured data, calculations, answers to the questions, and answers to the troubleshooting problems is available to instructors. Excerpt. Reprinted by permission. All rights reserved. Learning Electronics Communications Through Experimentation Using Electronics Workbench Multisim is a unique and innovative manual that provides a means of learning electronic communications, or reinforcing the theory learned in an electronic communications classroom, by performing a series of experiments simulated on the computer. By answering questions about the results of each experiment, students will develop a clearer understanding of the theory. This method of learning is very effective because it is interactive, which encourages student participation in the learning process and leads to a longer retention of the theoretical concepts. Computer-simulated experiments do not require extensive laboratory facilities, and a computer provides a safe and cost effective laboratory environment. Circuits can be modified easily with on-screen editing, and analysis results provide faster and better feedback than a series of lab experiments using hardwired circuits. Because circuit faults can be introduced without destroying or damaging actual components, more extensive troubleshooting experiments can be performed. Also, faulty components that are deliberately introduced in a circuit simulated on a computer can help make it easier to find the faulty component in an actual circuit. For those who desire a hardwired laboratory environment, circuit diagrams and a parts list have been provided for each experiment. After the circuit is wired and checked, turn on the power and record the data in the space provided. Also, computer-simulated results can be compared with hardwired laboratory results. If a closer correlation between the computer simulation results and the hardwired laboratory results is desired, the component values in the computer simulation can be changed to match the actual component values in the hardwired circuit. An extensive Theory section has been included with each experiment. This will provide the student with all of the theory and equations needed to complete the experimental procedure without referring to another communications textbook. A series of troubleshooting problems is included at the end of many of the experiments to help develop troubleshooting skills. Some of the problems have a fault in one of the components and some of the problems require the student to determine an

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