

Although the presentation in general reads easily and is aided by many illustrations, the author has a very unfortunate habit of mentioning briefly important concepts in the form of a single sentence or a paragraph, without ever trying to explain these remarks further—a habit which leaves the reader with many questions unanswered. Altogether, the text is certainly only a very elementary primer, which could serve at best as a first introduction to the field of programming. However, it may well find some appreciative readers among high-school students and others interested in learning something about computers and the problems of programming for them.

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**104[Z].**—CHARLOTTE FROESE, *Introduction to Programming the IBM 1620*, Addison-Wesley Publishing Company, Inc., Reading, Mass., 1964, vii + 72 pp., 28 cm. Price \$2.50.

This is a short and elegant programming manual for the IBM 1620 Model I with the automatic-division feature, indirect addressing, and either paper tape or card input-output. The last of the seven chapters in this book outlines the features of the discpack. The first six chapters cover the 1620 central processor, principles of programming, input/output, and the Symbolic Programming System (SPS). The author is to be commended for a clear and particularly well-organized presentation and for having managed to include so many basic programming concepts in a manual devoted to a particular machine. Her explanations of symbolic addressing, macros, monitor systems, subroutines, iterative procedures and recursive techniques, though elementary, are remarkably lucid and to the point. They make this soft-covered little book much more than its title suggests.

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**105[Z].**—GERALD A. MALEY & EDWARD J. SKIKO, *Modern Digital Computers*, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1964, xiv + 216 pp., 23 cm. Price \$10.00.

This book is intended as an introductory text to the field of digital computers. It is composed of ten chapters, whose contents range from a discussion of the binary number system to a discussion of various features of advanced computers such as "instruction look-ahead." The greater part of the book is devoted to engineering details of large digital system. Specific computers, the IBM 7090-94 and 7080 systems, are described and used as models of scientific and business computers, respectively.

Because the authors believe that "a complete comprehension of computers cannot be obtained without a basic understanding of programming," they have included two chapters on "Fundamentals of Programming" and the "Fortran System." The reviewer cannot agree that "these chapters are substantial and will enable the reader to write working programs." The latter chapter is abstracted from the IBM 7090 Fortran manual and does not add very much to the contents of that manual.