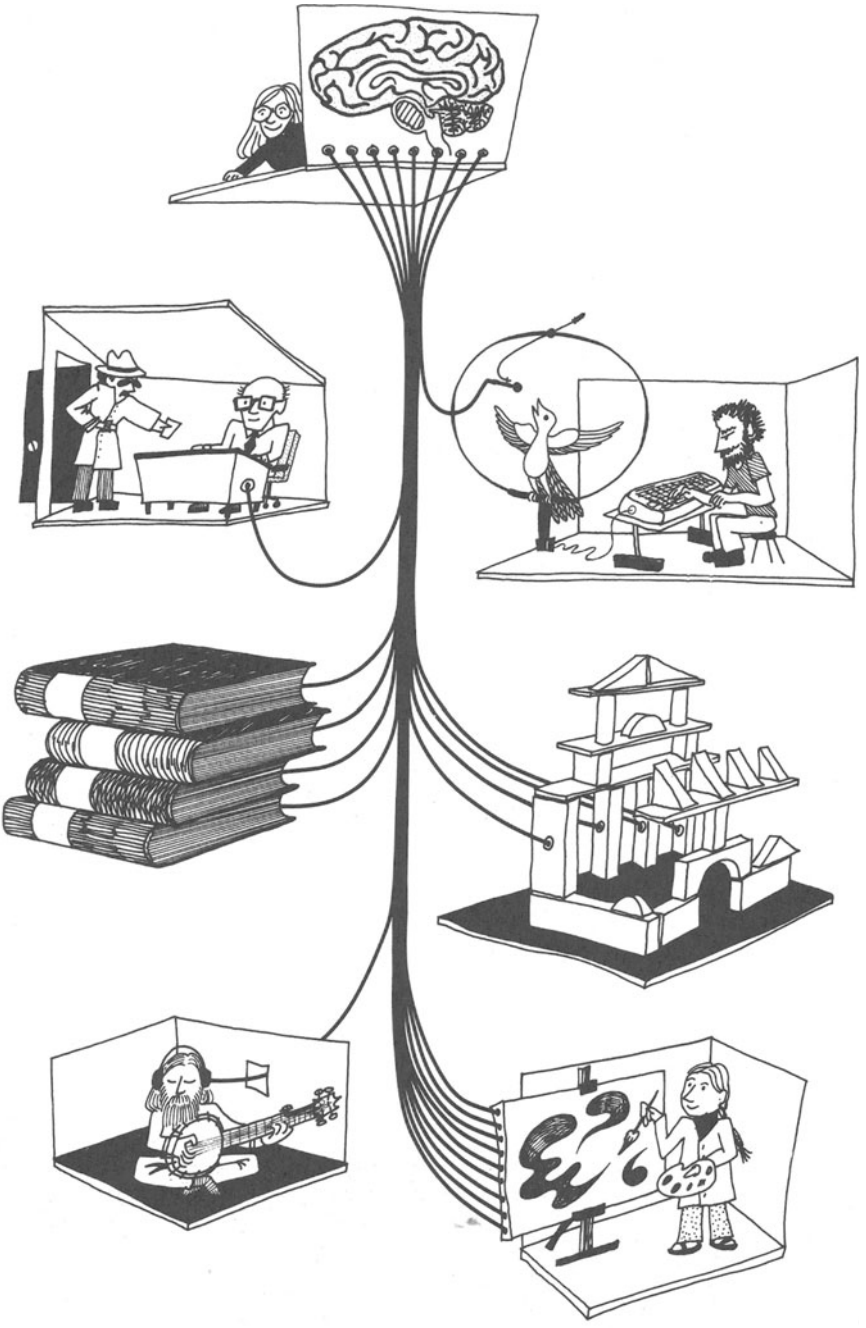
An Introduction to the Commodore 64

Adventures in Programming



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Preface

Your Commodore 64 is a powerful microcomputer whose memory, color graphics, and sound effects far exceed those of other computers in its class. At first, learning to control these features may seem difficult and complex, but don't be intimidated; there's nothing mysterious about your machine—it is, after all, only a machine. To communicate with it you simply need to use its language: Commodore 64 BASIC (Beginner's All-purpose Symbolic Instruction Code), a version of the most popular language used on today's microcomputers. This book will introduce you to Commodore 64 BASIC and to the fun you can have with your computer.

Learning a new language takes time, effort, and practice—especially practice. So when you first set up your Commodore 64, take time to read the first few chapters of the *User's Guide,* which this book supplements but does not replace. Then you'll be ready to practice your new language using the programs and skills developed in this book. In addition, there is a rather thick book put out by Commodore called the *Programmer's Reference Guide.* It contains enough information about your 64 to occupy a long New England winter.

The first three chapters introduce some fundamental principles of microcomputers, review the Commodore 64 and its quirks, and get you into the basics of BASIC. The next two chapters use music and a game to explore the 64's editing features and cursor controls. Chapter 6 demonstrates some numerical acrobatics, and Chapters 7 and 11 introduce graphics and the notion of binary arithmetic. In Chapter 8 we examine the planning behind writing long programs. Chapters 9 and 13 introduce some number theory in disguise, and Chapters 10 and 15 sample the full range of music-making with your Commodore. In Chapters 14 and

16 we pull the numbers, sound, and graphics together to create a screen full of sound and light. Our goal is to present some critical programming concepts while giving you a collection of programs to practice and play with.

One note: the programs in this book use the Commodore's full range of sound and color. If you don't have a color TV, you can still run the programs, but the results will be less spectacular. If you do have a color TV, you might want to turn off the color while are you keying or editing in programs to ease the eye strain sometimes associated with using video terminals. If you wish to use the programs as models for future efforts of your own, you will need an external storage device, either a disk drive or DATASSETTE™ recorder. Refer to Chapter 2 in the *User's Guide* for more information.

With all the talk of "computer illiteracy" it is easy to lose track of what you really want computers to do for you—expand your sense of life. This can't be done for you by some computer expert. You, at some point, must do it for yourself. When you get to the song called "Chariot" in Chapter 11, shut your eyes, lean back and listen: you'll hear one reward of having spent time learning about your computer.

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N. Scrantz Lersch did all of the illustrations for this book. She is a freelance illustrator living in Worcester, Massachusetts with her husband and two children. She also works as a photographer in the Anatomy Department at the University of Massachustets Medical School.

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