

Published July, 1980

**The Complete
Level II
BASIC Programming Companion
to the
Radio Shack TRS-80 Microcomputer**

Packs scores of practical programming applications and flow charts for graphics, subroutines, input/output, and more!

Dear Reader:

Streamline Level II BASIC programming for your Radio Shack TRS-80 microcomputer with scores of computer displays and flowcharts in this July 1980 guide!

Just a glance at the handy table of contents clearly illustrates the guide's wide range of applications. Illustrative examples and flowcharts provide step-by-step procedures for program writing, editing and debugging, looping, formatting output, transferring to subroutines, graphing, and so much more!

For instance, using the example of computing the annual interest and the end-of-year interest of a savings account, this guide shows you how to display numerical and character information on the computer. You'll see time- and effort-saving techniques such as:

- * How to use assignment to specify the value of a variable...
- * How to use the arithmetic functions: addition, subtraction, multiplication, division, and exponentiation...
- * How to store numerical values in integer, single-precision and double-precision modes...

--all involving no previous experience with a computer.

Then, building upon this example the guide shows you how to write an actual

program for your TRS-80. With this program you determine the balance on the savings account for different interest rates, different initial deposits, and different durations, without having to retype all line instructions for every computation.

You'll see:

- * How to use the LIST command to instruct the computer to display the lines of the program that are in memory...
- * How to use the DELETE command to erase program lines from memory...
- * How to use the AUTO command to automatically display the next line number.

Finally an example shows you how to write a program to computer and PRINT the hypotenuse of a right triangle.

There are even good planning techniques helping you write programs that are easily understood by the reader and proceed smoothly and logically from beginning to end.

Now that you've mastered techniques for specifying information prior to execution, the guide shows you a more convenient way of entering this information during the actual execution with the INPUT statement.

There's a full range of computer program editing techniques, and debugging techniques showing you how to isolate and correct language errors. A mortgage payment example illustrates the debugging process step-by-step.

You'll even see how to save a program on cassette for future use.

Here too are techniques allowing programs to deviate from the normal sequence of execution through branching made possible by transfer statements. As a result, you'll add considerable versatility to your programs since they'll proceed through different sequences of instructions depending on conditions encountered during execution.

Moreover, you'll see how to combine several expressions containing relational operations using logical operations. These are the AND, OR and NOT operators.

Next you'll see how to use the ON ERROR GO TO statement to set up an error-trapping routine which in the event of an error allows the program to continue without a break in the execution. A full example illustrates the steps required to trap errors during data entry.

For looping there's such practical, time-saving help as:

- * How the IF-THEN statement performs the test part of the loop...
- * How to use the FOR and NEXT statements together to provide a simpler way of looping...
- * How to use subscripted variables with an example showing you how to use nested loops to produce a multiplication table...
- * How to use multiple subscripts to identify individual numbers

in a list of numbers called an array...

- * How playing computer and tracing a loop techniques are most useful in debugging loops.

In addition, full presentations of the READ and DATA statements as well as INPUT # for data entry combine with output formatting techniques complete with examples for a sales report, graphing an equation, Pascal's triangle, and checkbook balancing.

Input-Output statements used in accessing a cassette tape help you save a program on tape or read a program from tape with the CSAVE and CLOAD statements.

You'll use library functions to make it possible to perform certain calculations that occur very frequently without having to program them separately each time. They are convenient to use and reduce programming effort.

An example of long division illustrates the INTeger function. Another takes advantage of the INT function to round a number.

And there's so much more...subroutines as an aid in writing shorter, more compact programs...conditional and unconditional transfer examples...graphics...examples showing you how when lengthy and time-consuming internal computations are taking place, it is often a good idea to maintain a status message on the screen...strings...binary-to-decimal conversion...video games ...and more.

So why not fill out and mail the enclosed reply card now? See for yourself just how time and work saving Introduction to TRS-80 BASIC and Computer Programming really is.

There's no risk or obligation to buy. You have 15 FREE days to try it out on your TRS-80. Only then need you pay our invoice for the amount indicated on the enclosed postpaid reply card.

Otherwise, simply return it within the FREE 15-day trial period and owe not a penny. Order now!

Sincerely,

Steven T. Landis
Steven T. Landis

P.S. Eliminates guesswork too! The guide's unique two-column format prints one column up in the actual TRS-80 screen display, and the other with explanatory comments. There's no guesswork. All you need do is match your display and the text explains itself!

P.P.S. BE SURE TO CHECK THE TABLE OF CONTENTS ON THE NEXT PAGE!

Introduction to TRS-80 BASIC Level II and Computer Programming

By Michael P. Zabinski

Table of Contents

YOUR TRS-80 COMPUTER:	Getting Started; The Keyboard; Communicating with the Computer.
SPECIFYING INFORMATION:	Numerical Information; Character Information; Variables; Assignment, Exercises 1; Arithmetic Functions; Hierarchy of Arithmetic Operations; Types, Exercises 2.
COMPUTER PROGRAMS:	Writing a Program; Program Clarity, Displaying Messages and Comments, Exercises 3; Keyboard Response: Input; Editing Computer Programs; Debugging Programs; Stop and Continue Execution; Saving a Program on Cassette Tape; Declaring Variable Types, Exercises 4.
DECISIONS:	Relational and Logical Operations; Flowcharts, Exercises 5; Transfer Statements, Exercises 6; ON ERROR GO TO.
LOOPING:	Loop Structure; IF-THEN Loops; FOR-NEXT Loops, Exercises 7; Subscripted Variables; Nested Loops; Multiple Subscripts; Debugging Loops; Tracing and Playing Computer, Exercises 8.
INPUT-OUTPUT:	READ and DATA Statements; Formatting Output; Cassette Input-Output, Exercises 9.
LIBRARY FUNCTIONS:	INT Function; RND Function; More Functions, Exercises 10.
SUBROUTINES:	The Purpose of Subroutines; Unconditional Transfer to Subroutines; Conditional Transfer to Subroutines; A Final Comment, Exercise 11.
GRAPHICS:	Background; Graphing with SET (X,Y); Other Graphics Functions, Exercise 12.
STRINGS:	Review; ASCII Codes and Related Functions (ACS and CHR\$); Character Manipulation Functions (LEN\$, LEFT\$, RIGHT\$, MID\$); Other String Functions, Exercises 13.
APPENDICES:	I. Error Messages II. Reserved Words III. BASIC Glossary

Published July 1980

208 Pages

Illustrated

8 1/2 x 11"

Order your FREE 15-day examination copy from:
PRENTICE-HALL, INC., Englewood Cliffs, N.J. 07632

SHIPPING INFORMATION

The following information is provided in accordance with the requirements set forth in Trade Regulation Rule 435, promulgated by the Federal Trade Commission, effective February 2, 1976.

We normally ship within 72 hours of receipt of your order. On occasion, a book may be temporarily out of stock, in which case we will notify you that there will be a delay. Your order will then be filled as soon as possible, but in no event later than 90 days from receipt of your order.