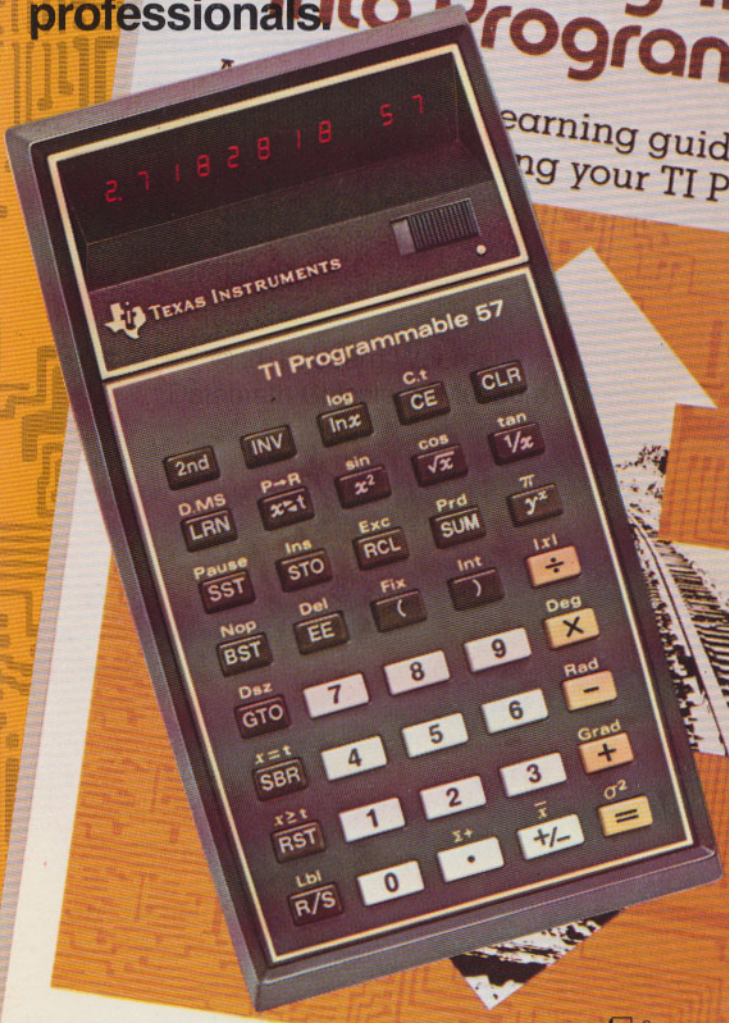
CL-274

TI Programmable 57

The self-teaching programming system for students and professionals.

Making Tr
into Program

earning guide
ng your TI Pr



TEXAS INSTRUMENTS
INCORPORATED

Ideal for high school or college students and professionals new to programming.

The TI Programmable 57 is a powerful slide rule calculator that you can program right from the keyboard. A whole new dimension of problem solving is at your fingertips with the versatile TI Programmable 57, and the graphic learning guide *Making Tracks Into Programming.*

You can quickly learn to do repetitive calculations at the touch of a key. It's fast and accurate. Recall frequently used instruction sequences. Display current results at any point in the problem solution. It's tomorrow's way of problem solving, here today from Texas Instruments.

Eight multi-use memories provide addressable memory locations for you to store and recall data. Powerful program memory stores up to 150 keystrokes as you build your program. Once stored, the program can be executed again and again by supplying new sets of variables instead of reentering all the program keystrokes.

The TI Programmable 57 features complete editing and error correction capabilities. Single-step and back-step keys allow you to easily review and revise your program. Insert and delete keys make it simple to add or remove instructions at any point in the program.

AOS™ – TI's unique algebraic operating system – simplifies problem solving. You enter problems from left-to-right, just as they are usually written.

In addition to its programming capabilities, the TI Programmable 57 is also a powerful super slide rule calculator with the advanced mathematical capabilities you need. From logarithms and trigonometry to more advanced statistical problems, the TI Programmable 57 can handle your complex math problems quickly and easily.

The perfect combination for exploring the ease and power of problem solving with programming.

The TI Programmable 57 comes with a new, illustrated, easy to follow learning guide, *Making Tracks Into Programming.* With over 200-pages, this book takes you into the power and fun of programming right away – with step-by-step instructions and examples. Detailed "how-to" discussions cover:

- Basic programming
- Loops and repetitive calculations
- Editing and documentation
- Decision making
- Home management programs
- Finance and cash planning
- General and advanced math
- Scientific applications
- Games and recreation
- And more

- **Computer-like programming functions.**
- **50 multi-key program steps store up to 150 keystrokes.**
- **8 multi-use memories.**
- **Subroutines and labels.**
- **Advanced slide rule functions.**
- **Statistical functions.**

Some of the advanced features and functions of the TI Programmable 57.

Programming Functions

x=t, x≥t, Dsz } 6 different forms of branching are available.

SBR 2-levels of subroutines eliminate needless keystroke repetition and effectively increase the size of program memory.

GTO Transfers program to new address location.

Pause Displays current value in display register.

Lbl 10 labels for versatile programming.

Ins, Del } Editing functions allow for easy insertion and deletion of program steps.

SST, BST } Moves program counter forward and backward for easy review and troubleshooting of program in memory.

LRN Lets you enter programs for storage and later use.

Nop Provides spacing between program parts.

R/S Begins and halts programs in memory.

RST Resets program and subroutine counters.

Int Discards either integer or fractional part of a number.

|x| Takes absolute value of the display.

Memory Functions

STO Stores data in memory.

RCL Recalls data from memory.

Exc Exchanges the content of memory with the display value.

Prd, SUM } Perform full memory arithmetic.

Statistical Functions

$\bar{x}$ Mean, two variables.

σ^2 Variance, two variables.

σ^2 $\sqrt{x}$ Standard deviation.

Special Functions

x≷t Exchanges the display register x with the T-register value t.

P→R Performs rectangular-to-polar and polar-to-rectangular conversions.

D.MS Converts decimal degrees to degrees/minutes/seconds, and the inverse.

The TI Programmable 57.

A powerful super slide rule calculator.

Supplementing basic addition, subtraction, multiplication, and division functions, the TI Programmable 57 provides many advanced mathematical capabilities to simplify problem solving:

- Functions of x—square, square root, reciprocal, factorial*, y^x, and $\sqrt[x]{y}$.
- Logarithmic functions—common and natural logarithms and their inverses.
- Trigonometric functions and their inverses (solved in degrees, radians, or grads).
- Statistical functions—mean, variance, and standard deviation, operate on two variables.
- Nine levels of parentheses and the ability to store up to 4 pending operations let you handle even complex equations quickly and easily.
- Eight multi-use memories for storing and recalling values and addition, subtraction, multiplication, and division of data to memory.
- AOS™ algebraic operating system. AOS is more than just algebraic entry. It's a system that allows you to enter problems exactly as they are stated algebraically, without rearranging the order of the problem, or resorting to the use of memories to store partial results. This is accomplished by the use of a full algebraic hierachy coupled with multiple levels of pending operations and parentheses. This permits easy left-to-right entry of expressions—both numbers and functions.

AOS provides an incredibly powerful, easy-to-use system for problem solving. And makes the calculator part of the solution—not part of the problem.

This example has only *one* right answer. But not all calculators will give it to you if you enter the problem directly.

$1 + 2 \times (3 - 1/7)^{2.5} = ?$

With AOS, you solve it exactly as it is written:

1 [+] 2 [×] [(] 3 [−] 1 [÷] 7 [)] [y^x] 2.5 [=] 28.596874

*Programmable function.

A versatile key programmable calculator.

Programming is easy.
You already know how to program—or almost. Whenever you perform a series of calculations, then bring them together to get an answer, you're programming. Except you keep most of it in your head, making each decision as you go.

In fact, you can do a great deal of programming and never use more than the four basic functions (add, subtract, multiply, divide). Programming is natural, you can express your personal approach to problem solving. Whether comparing finance costs on an installment purchase, or solving complex statistical problems.

You can do it.

TI's self-teaching system makes it easy for you to learn how to solve problems with the power of programming. Even if you've never programmed before, you can quickly learn to use subroutines, labels, unconditional and conditional branching, loops, and other programming functions to make your problem solving faster and more accurate. The illustrated, step-by-step learning guide, *Making Tracks Into Programming*, was developed in cooperation with leading educators at the University of Denver Mathematics Laboratory. Used in combination with the TI Programmable 57, it lets you begin using and enjoying the benefits of programming immediately.

Specifications

Readout: Bright, 12-character LED display shows 8-digits plus sign in standard format; 8-digit mantissa plus sign, 2-digit exponent plus sign in scientific notation. (Answers calculated to 11 significant digits and rounded for display only; all 11-digits retained internally for use in calculations.) Display provides either fixed, floating, or scientific notation.

Electronics: Texas Instruments manufactured MOS/LSI integrated circuit and other solid-state components.

Power: Rechargeable battery pack can be recharged fully in 4 hours to provide over 3 hours of portable use. Operable while recharging. AC adapter/charger input 115V/60 Hz.

Included: *Making Tracks Into Programming* learning guide. Program record forms. Quick reference guide. AC adapter/charger. Carrying case.

Size: 5.8 x 3.2 x 1.38 inches (147 x 81 x 35 mm).

Weight: Less than 8 ounces (0.23 kg).

Limited Warranty

The TI Programmable 57 is covered by a one-year limited warranty against defects in materials and workmanship.

Due to the difficulty in photographing calculator readouts, displays represented here are simulated.

Texas Instruments reserves the right to make changes in materials and specifications without notice.

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