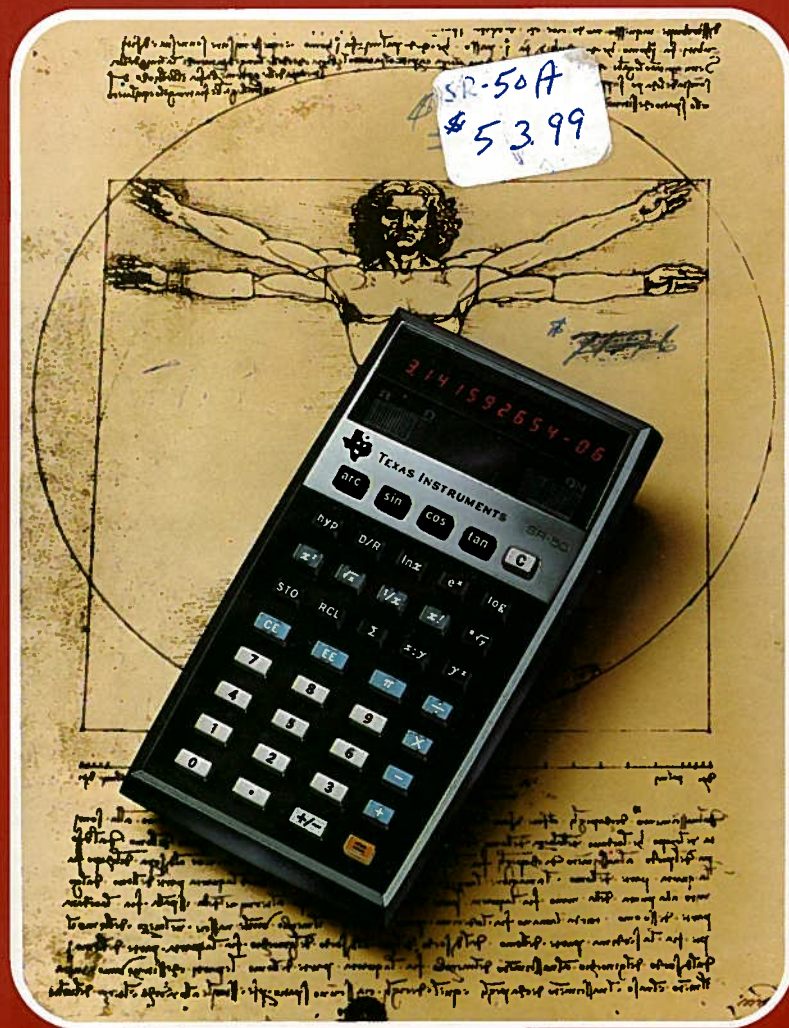


Texas Instruments slide rule calculator SR-50



THE FULL FUNCTION SLIDE RULE CALCULATOR. Performs all classical slide rule functions, features algebraic keyboard. Numbers displayed from $9.999999999 \times 10^{99}$ to $1.000000000 \times 10^{-99}$ in scientific notation.

UNIQUE DATA PROCESSING SEQUENCE. Most key functions process displayed data only — they do not complete previous calculations. This allows separate processing of data before entry in a complex calculation.

VERSATILE ELECTRONIC MEMORY. Memory allows storage and recall of numbers, also features sum mode for accumulation to memory.

TEXAS INSTRUMENTS
INCORPORATED
DALLAS, TEXAS



A quality electronic calculator from Texas Instruments

The SR-50 is the full function portable slide rule calculator. Complex scientific calculations are solved as easily as simple arithmetic problems. The SR-50 features an algebraic keyboard with single function keys for easy problem solving.

On/Off Switch — Located on the top right front surface of the calculator. Sliding it to the right applies power, and sliding it to the left removes power from the calculator. The power-on condition is indicated by a number in the display.

Deg/Rad Switch — Located on the top left front surface of the calculator. The calculator interprets a displayed angle as being in degrees if the switch is to the right (D) and in radians if it is to the left (R).

0 through 9 Digit Keys — Enter numbers 0 through 9 to a limit of a 10-digit mantissa and a 2-digit exponent.

Decimal Point Key — Enters a decimal point.

Pi Key — Enters the value of pi (π) to 13 significant digits (3.141592653590) into a calculation. Display indicates value rounded off to 10 significant digits (3.141592654).

Enter Exponent Key — Instructs the calculator that the subsequent number is to be entered as an exponent of 10. To enter a number in scientific notation, first enter the mantissa, press **EE** and enter the desired exponent of 10. After the **EE** key has been pressed, the calculator will display all further results in scientific notation until the **C** key is pressed.

Change Sign Key — Instructs the calculator to change the sign of the mantissa or exponent appearing in the display. To enter a negative number, first enter the number and then press the **+/-** key. Using this change sign key prior to using the **EE** key changes the sign of the mantissa. If the **+/-** key is pressed after the **EE** key, the sign of the exponent is changed.

Clear Entry Key — Clears the last keyboard entry. Pi is entered as a calculated value and is not cleared by this key. If the **π** key is inadvertently pressed in processing a complex expression, it can be nullified by simply entering the correct number to be processed.

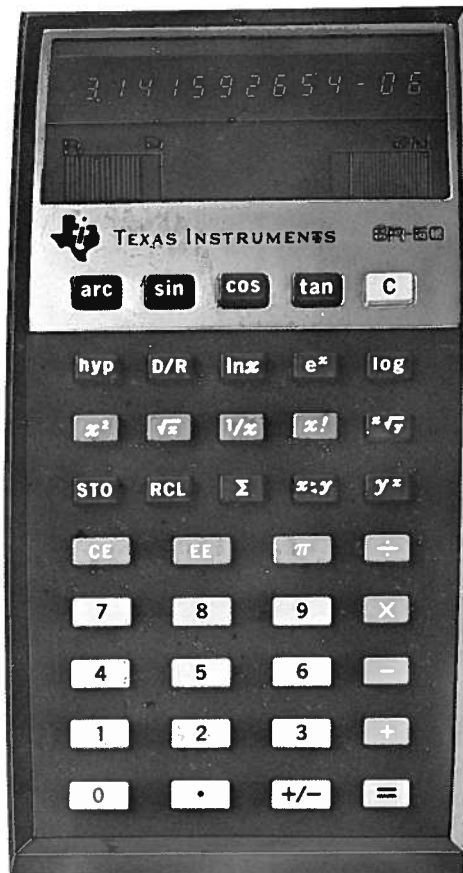
Clear Key — Clears (erases) information in the calculator and display and sets the calculator to zero for the start of a new problem. However, the contents of the memory are not affected by this key. To clear the memory, a zero must be entered in place of the stored data.

Add Key — Instructs the calculator to add to the previous number or result the next entered quantity.

Subtract Key — Instructs the calculator to subtract from the previous number or result the next entered quantity.

Multiply Key — Instructs the calculator to multiply the previous number or result by the next entered quantity.

Divide Key — Instructs the calculator to divide the previous number or result by the next entered quantity.



Equals Key — Instructs the calculator to complete the previously entered operation to provide the desired calculation result.

Square Key — Instructs the calculator to find the square of the number displayed (that is, to multiply the number displayed by itself).

Square Root Key — Instructs the calculator to find the square root of the number displayed (that is, to find the number which multiplied by itself, equals the number displayed).

Reciprocal Key — Instructs the calculator to find the reciprocal of the number displayed (that is, to divide the number displayed into 1).

Factorial Key — Instructs the calculator to find the factorial of the number displayed (that

is, the product of all integer numbers from one through the integer value displayed). The largest factorial the SR-50 can compute without an overflow condition is 69!

Sine Key — Instructs the calculator to determine the sine of the displayed angle.

Cosine Key — Instructs the calculator to determine the cosine of the displayed angle.

Tangent Key — Instructs the calculator to determine the tangent of the displayed angle.

Inverse Trigonometric Key — Instructs the calculator to determine the angle of the selected trig function whose value is the displayed quantity, when pressed as a prefix to the sin, cos, or tan key.

Hyperbolic Function Key — Instructs the calculator to determine the hyperbolic trig function of the displayed angle when pressed as a prefix to the sin, cos, or tan key.

Angle Change Key — If the Deg/Rad switch is set for degrees, pressing the change key instructs the calculator to convert the displayed angle from radians to degrees. If the switch is set for radians, pressing this key instructs the calculator to convert the displayed angle from degrees to radians.

Common Logarithm Key — Instructs the calculator to determine the logarithm to the base 10 of the displayed number.

Natural Logarithm Key — Instructs the calculator to determine the logarithm to the base e of the displayed number.

e to the x Power Key — Instructs the calculator to raise the value of e to the displayed power.

y to the x Power Key — Instructs the calculator to raise y, the first entered quantity, to the power of x, the second entered quantity.

The xth Root of y Key — Instructs the calculator to process y, the first entered quantity, to find the xth root. The value of x is the second entered quantity.

Exchange Key — Instructs the calculator to exchange the x and y quantities in **x^y** or **x^{√y}** before the function is processed. The operands in **x^y** and **x^{√y}** can also be exchanged through the use of this key.

Store Key — Instructs the calculator to store the displayed quantity in the memory.

Recall Key — Instructs the calculator to retrieve stored data from the memory. The **RCL** key does not clear the memory.

Sum and Store Key — Instructs the calculator to algebraically add the displayed number to the number in the memory, and to store the sum in the memory. The use of this key does not affect the displayed quantity nor the previously processed data.

Display description



In addition to power-on indication and numerical information, the display provides indication of a negative number, decimal point, overflow, underflow and error.

Minus Sign — Appears to the left of the 10-digit mantissa to indicate negative numbers, and appears to the left of the exponent (right of mantissa) to indicate negative exponents.

Decimal Point — Automatically assumed to be to the right of any number entered unless positioned in another sequence with the **□** key. When entering numbers, the decimal will not appear until **□** is pressed.

Overflow Indication — The largest number that can be entered in the calculator is $\pm 9.99999999 \times 10^{99}$ without an overflow when a function key is pressed. If a calculation result is larger than this value, the calculator display will flash 9.99999999 99 or $-9.99999999 99$.

Underflow indication — If a number closer to zero than $\pm 1. \times 10^{-99}$ is entered in the calculator, the calculator will flash 1. -99 or $-1. -99$ when a function key is pressed. If a calculation result is closer to zero than $\pm 1. \times 10^{-99}$ the calculator will flash 1. -99 or $-1. -99$.

Additional features

Accuracy — Calculates answers to 13 significant digits and displays answers rounded off to 10 significant digits. For maximum accuracy, the SR-50 uses all 13 significant digits for subsequent calculations.

Versatility — Performs simple arithmetic, reciprocals, factorials, exponentiation, roots, trigonometric and logarithmic functions, all in full floating decimal point or in scientific notation.

Scientific Notation — Computes and displays numbers as large as $\pm 9.99999999 \times 10^{99}$ and as small as $\pm 1.00000000 \times 10^{-99}$. Automatically converts answers to scientific notation — a number (mantissa) times 10 raised to a power (exponent) — when the calculated answer is greater than 10^{10} or less than 10^{-10} .

Ease of Operation — Operations are performed in the same order as the problem is stated. For simple arithmetic operations, numbers and functions are entered in the same sequence that they are written on paper. The value of π (pi) is entered to 13 significant digits by pressing a single key. Automatic clearing is included; no need to use clear key between problems.

Memory — Electronic memory stores numbers or calculation results for later use.

Fully Portable — Extremely lightweight. Battery or AC operated.

Long Life — Solid state components, integrated circuits, and light emitting diode displays provide dependable operation and long life.

Battery Pack — The SR-50 comes complete with a *fast-charge* rechargeable battery pack. Under normal use, the battery pack will provide 4 to 6 hours of operation without recharging. About 3 hours of recharging will restore full charge.

AC Adapter/Charger — Battery pack recharge or direct operation from standard voltage outlets is easily accomplished with the AC Adapter/Charger included with the SR-50. With the AC Adapter/Charger plugged into an outlet and the attached cord plugged into the calculator, the SR-50 can be recharged or operated indefinitely.

Do not attempt to operate the SR-50 with the charger plugged in *unless* battery pack is in place.

SPECIFICATIONS:

READOUT: Bright, easy to read, 14-character LED display; 10-digit mantissa plus sign, and 2-digit exponent plus sign.

OVERFLOW, UNDERFLOW: The display will flash on and off to indicate overflow or underflow. Also, invalid operations will cause the display to flash on and off.

NEGATIVE SIGN: Minus sign appears on display to indicate true value, negative or positive.

ELECTRONICS: Texas Instruments manufactured MOS/LSI integrated circuits and other solid state components.

POWER: Rechargeable battery pack that can be recharged hundreds of times. AC Adapter/Charger input 115 V/60 Hz.

SIZE: 3.2 X 5.8 X 1.25 inches.

WEIGHT: 8.3 ounces.

ONE YEAR WARRANTY:

The Texas Instruments SR-50 electronic calculator is warranted for a period of one year from the original purchase date against defective materials and workmanship to the original purchaser.

OTHER CALCULATORS AVAILABLE FROM TEXAS INSTRUMENTS INCLUDE:

TI-2500 8-digit rechargeable battery portable calculator with constant

TI-2510 8-digit replaceable battery portable calculator with constant

TI-3500 10-digit desk calculator with constant and decimal selector

TI-3510 10-digit desk calculator/electronic digital clock with constant and decimal selector

TI-4000 12-digit desk calculator with memory, constant, percent, and decimal selector

SR-10 electronic slide rule calculator with scientific notation

SR-11 electronic slide rule calculator with scientific notation, pi key and constant

SR-20 engineering desk calculator with scientific notation

SR-22 hexadecimal calculator/converter with scientific notation and memory

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