

**CAUTION:**

Read Rules for Safe Operation and Instructions carefully. If AC Adapter is used, use only the one made specifically for this Calculator.

Sears Service is at Your Service wherever you live or move in the U.S.A.

The Model Number will be found stamped on the bottom of the Calculator. Always mention the Model Number when requesting service or repair for your Calculator.

All parts may be ordered through SEARS, ROEBUCK AND CO.

Your Sears merchandise takes on added value when you discover that Sears has over 2000 Service Units throughout the country. Each is staffed by Sears-trained, professional technicians using Sears approved parts and methods.

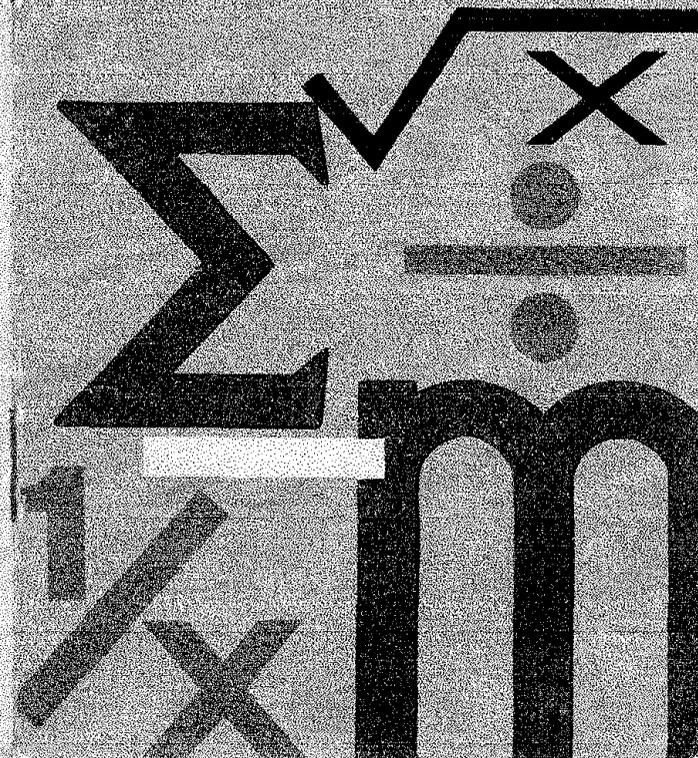
MODEL NO. 728.5825

SEARS, ROEBUCK AND CO.  
CHICAGO, ILL. 60607 U.S.A.

Sears

10m

INSTRUCTION  
MANUAL



## INTRODUCTION

Your Sears Portable Electronic Calculator is light enough and small enough to be used in one hand yet it provides a standard keyboard and a light emitting diode (LED) display that is easily read at home or in the office.

The ten digit display and the full floating decimal allow the calculation of most problems without sacrificing accuracy, and the time-out feature provides longer battery life between charges.

Your calculator has the ability to solve engineering or budget problems, with such features as a switch-selectable accumulative or fully accessible memory, square root, reciprocal, percentage, automatic constant, automatic squaring, and change sign. The calculator operates in "algebraic" mode, which allows you to perform chain or mixed calculations in the order in which they are written. The reciprocal and change sign features are particularly helpful in solving complex problems. We suggest that this programmed Instruction Manual be read with the calculator in hand. Performing the operations as you read them will increase your familiarity with them. For a quick reference, an outline of operations is on the back of the calculator.

### ELECTRONIC CALCULATOR GUARANTEE

We guarantee this calculator to work properly. If it does not, simply return it to our nearest store and we will:

During the first year, repair it,  
free of charge.

(wherever you live in the United States)

SEARS, ROEBUCK AND CO.

## OPERATION:

Your calculator has rechargeable NiCd batteries included in the unit. The following procedure should be followed for A.C. and battery operation:

### AC Operation:

Connect the Charger unit to any standard 120 Volt electrical outlet and plug the connector into the Calculator. After the above connections, the power switch may be turned on and operation started. (While connected to AC, the internal batteries are automatically charged whether the power switch is "ON" or "OFF".)

### Battery Operation:

Disconnect the Charger cord and turn the power switch "ON". With normal use a full battery charge can be expected to supply about 5 hours of working time.

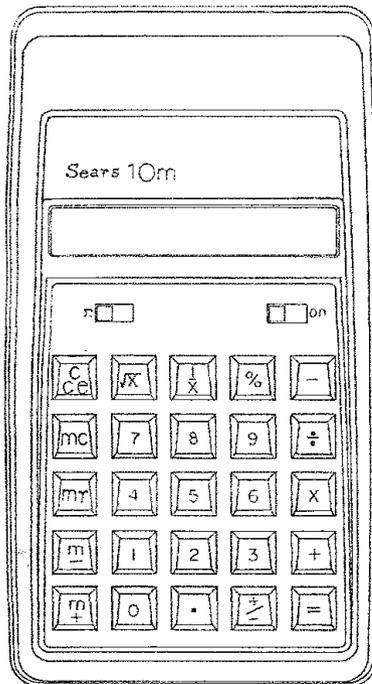
NOTE: When the low battery indicator (L) on the display is lighted, do not continue battery operation. This indicates need for a battery charge.

### Battery Charging:

Simply follow the same procedure as in AC operation. The calculator may be used during the charge period if desired. In order to fully charge a battery which has been completely discharged, 7 hours is required.

NOTE: Although no damage will result from prolonged periods with the Charger connected, it is advisable to remove the Charger cord when the Calculator is not in use after a full recharge cycle.

**CAUTION:** To avoid possible damage, use only the charger provided with the calculator.



## CONTROLS AND INDICATORS

- "ON" Switch** Turns Calculator ON & OFF.
- Key Enters a "subtract" command and performs any possible preceding operation.
- ÷** Key Enters a "divide" command and performs any possible preceding operation.
- X** Key Enters a "multiply" command and performs any possible preceding operation.
- +** Key Enters an "add" command and performs any possible preceding operation.
- =** Key Completes previous operation and retains appropriate function for a constant operation.
- +/-** Key Changes the sign of the contents of the display.
- .** Key Enters a decimal point.
- 0 - 9** Keys Enter digits of a number.
- m+** Key Adds the displayed number to the Memory.
- m-** Key Subtracts the displayed number from the Memory.
- mr** Key Displays memory content without affecting the memory.
- mc** Key Clears memory without altering the information on the display.

**C**  
**CE**

When used once:

- (1) During number entry, clears the last entry and recalls the previous entry if one has been entered.
- (2) During Time-Out, recalls and displays the information on the display without affecting it.
- (3) During overflow, clears the overflow indicator.

During all other conditions and also when touched twice, this key will clear calculator completely except memory register.

**Σ** Switch

When on  $\Sigma$  position, the results provided by using =,  $\sqrt{x}$ ,  $\frac{1}{x}$  & % keys are accumulated into the memory.

**$\sqrt{x}$**  Key

Displays square root of the entered number or completes the preceding operation and displays square root of the result.

**$\frac{1}{x}$**  Key

Displays reciprocal of the entered number or completes the preceding operation and displays reciprocal of the result.

**%** Key

Completes a percent operation and conditions a markup or discount operation.

Decimal Point Indicator

Automatically appears to the right of any number entered, unless inserted in another sequence by use of the Decimal key. With fractional numbers, it will be preceded by a zero, i.e.  $\frac{1}{3}$  will appear as

0.33333333

Minus Sign Indicator

Indicates a negative number and immediately precedes a number.  
Appears as

Memory In Use Indicator

Indicates that data is stored in Memory Register.  
Appears as

Time-Out Indicator

Indicates that while using the calculator the keyboard has been inactive for approximately 30 seconds.  
Appears in the center field as

Low Battery Indicator

Warns of need for battery charging.

Overflow  
Indicator

Indicates a calculation result  
that contains more than ten  
digits.

Appears as 

Note: A negative result of  
more than ten digits can  
indicate overflow as



### Special Battery-Saver Feature

If you do not actuate the keyboard for approximately 30 seconds while performing a calculation, the display will turn off automatically, leaving only the "Time-Out Indicator", previously described, on. This feature decreases unnecessary power consumption, and extends battery life between charges. The displayed information can be recalled by touching the  key once. The information or function mode will not be affected.

### BATTERY NOTES

1. With normal use at room temperature, a full battery charge can be expected to supply about 5 hours of accumulated working time.
2. The Calculator may be used while its battery is charging.
3. Batteries that have been neither used nor charged for as long as 2 or 3 months will suffer substantial loss of operating time through a tendency to self-discharge. As a general rule, batteries lose about 1% charge per day due to self-discharge, at normal temperatures.
4. For optimum performance and long life:
  - a. Alternate frequently between Battery and AC power.
  - b. Operate at or near normal room temperatures.
  - c. Charge as soon as possible upon appearance of the Low-Battery indicator.
5. Recharge time is 7 hours for a fully discharged battery, with the calculator off.
6. The Low-Battery indicator is designed to appear as soon as battery voltage drops to the lowest value that will support optimum performance of the Calculator. Should further discharge occur, through continued operations or self-discharge, the Low-Battery indicator may fail to appear. Do not continue to operate on batteries when this condition is noted, or a damaged battery may result.
7. As a general rule, if improper operation occurs, first try the Calculator with its charger connected. If operation is then normal, this indicates the batteries are low.
8. Do not store the unit in high temperature areas such as the top of radiators or the rear deck of automobiles exposed to the sun. The Calculator will operate satisfactorily over an ambient temperature range of 0° to 50°C (32° to 122°F) and relative humidity to 95%.

## INSTRUCTIONS

### 1. To clear (erase) machine completely for new operation

- A. Touch the **C**/**CE** key twice.
- B. Cleared display will be:

0.

### 2. To enter (write a number)

Example: enter 123.45

- A. First, clear by touching **C**/**CE** twice
- B. Then touch number and decimal keys for 123.45 one at a time. Always start with the left hand digit and progress from left to right.  
Display will then be:

123.45

Note: 1. Enter or obtain answers — whole numbers up to ten digits:

1234567890.

- 2. Enter numbers less than one up to nine digits to right of decimal. (zero always appears to left of decimal if number is less than one.)

0.123456789

- 3. Enter decimal number up to ten digits.

123.4567890

### 3. To clear an incorrect entry

Example:  $48 + 12$  is your calculation

- A. You have already entered 48  
Display is:

48.

- B. You now touch the **+** key  
The display is:

48.

- C. Then you enter 13 by mistake  
The display is:

13.

- D. To clear 13, touch the **C**/**CE** key once.

This erases only the last number entered (i.e. 13) and the previous entry is displayed.

Display will be:

48.

- E. Then enter '12'  
Display will be:

12.

- F. Finally, touch the **=** key for answer  
Display will be:

60.

Note: Use **C**/**CE** during or immediately after entry of a number to clear display. Use of **C**/**CE** key when a result is displayed without overflow clears the display.

## CALCULATIONS

### 1. ADDITION

To calculate  $16.39 + 9.83 + 16 = 42.22$

Do these steps display will be

Touch <b>C</b> <b>CE</b> twice	0.
Enter 16.39	16.39
Touch <b>+</b>	16.39
Enter 9.83	9.83
Touch <b>+</b> subtotal	26.22
Enter 16	16.
Touch <b>=</b> Answer	42.22

### 2. SUBTRACTION

To calculate  $23 - 6 - 5 = 12$

Do these steps display will be

Touch <b>C</b> <b>CE</b> twice	0.
Enter 23	23.
Touch <b>-</b>	23.
Enter 6	6.
Touch <b>-</b> subtotal	17.
Enter 5	5.
Touch <b>=</b> Answer	12.

Note: When adding or subtracting figures with a fixed decimal place, the calculator will hold that decimal place (decimal alignment).

### 3. MULTIPLICATION

To calculate  $29.32 \times 56.5 = 1656.58$

Do these steps display will be

Touch <b>C</b> <b>CE</b> twice	0.
Enter 29.32	29.32
Touch <b>x</b>	29.32
Enter 56.5	56.5
Touch <b>=</b> Answer	1656.58

### 4. DIVISION

To calculate  $6300 \div 14 = 450$

Do these steps display will be

Touch <b>C</b> <b>CE</b> twice	0.
Enter 6300	6300.
Touch <b>÷</b>	6300.
Enter 14	14.
Touch <b>=</b> Answer	450.

### 5. MIXED ARITHMETIC

To calculate  $\frac{(9 + 6 - 5) \times 8}{20} - 8 = -4$

Do these steps	display will be
Touch <b>C</b> twice	0.
Enter 9	9.
Touch <b>+</b>	9.
Enter 6	6.
Touch <b>-</b>	15.
Enter 5	5.
Touch <b>x</b>	10.
Enter 8	8.
Touch <b>÷</b>	80.
Enter 20	20.
Touch <b>-</b>	4.
Enter 8	8.
Touch <b>=</b> Answer	-4.

### 6. PERCENTAGE

(a) Add 5% tax to \$29.95

Do these steps	display will be
Touch <b>C</b> twice	0.
Enter 29.95	29.95
Touch <b>+</b>	29.95
Enter 5	5.
Touch <b>%</b> tax	1.4975
Touch <b>=</b> Answer	31.4475

(b) Take 30%, 6%, and 2% discounts from \$179.95

Do these steps	display will be
Touch <b>C</b> twice	0.
Enter 179.95	179.95
Touch <b>-</b>	179.95
Enter 30	30.
Touch <b>%</b> 30% discount	53.985

Touch	<b>-</b>	subtotal	<b>125.965</b>
Enter		6	<b>6.</b>
Touch	<b>%</b>	6% discount	<b>7.5579</b>
Touch	<b>-</b>	subtotal	<b>118.4071</b>
Enter		2	<b>2.</b>
Touch	<b>%</b>	2% discount	<b>2.368142</b>
Touch	<b>=</b>	Answer	<b>116.038958</b>

**(c) Mark \$42. up by 30%**  
Do these steps

Touch	<b>C</b> <b>ce</b>	twice	<b>0.</b>
Enter		42	<b>42</b>
Touch	<b>+</b>		<b>42.</b>
Enter		30	<b>30.</b>
Touch	<b>%</b>		<b>12.6</b>
Touch	<b>=</b>	Answer	<b>54.6</b>

## 7. AUTOMATIC CONSTANT

**(a) Addition  $6 + 3 + 3 + 3 = 15$**

Do these steps                      display will be

Touch	<b>C</b> <b>ce</b>	twice	<b>0.</b>
Enter		6	<b>6.</b>
Touch	<b>+</b>		<b>6.</b>
Enter		3	<b>3.</b>
Touch	<b>=</b>		<b>9.</b>
Touch	<b>=</b>		<b>12.</b>
Touch	<b>=</b>	Answer	<b>15.</b>

**(b) Multiplication  $6 \times 2 = 12$**   
 $6 \times 5 = 30$   
 $6 \times 12 = 72$

Do these steps                      display will be

Touch	<b>C</b> <b>ce</b>	twice	<b>0.</b>
Enter		6	<b>6.</b>
Touch	<b>x</b>		<b>6.</b>
Enter		2	<b>2.</b>
Touch	<b>=</b>	Answer	<b>12.</b>
Enter		5	<b>5.</b>
Touch	<b>=</b>	Answer	<b>30.</b>

Enter 12 12.

Touch = Answer 72.

**(c) Division**  $36 \div 6 = 6$   
 $456 \div 6 = 76$

Touch c ce twice 0.

Enter 36 36.

Touch ÷ 36.

Enter 6 6.

Touch = Answer 6.

Enter 456 456.

Touch = Answer 76.

**(d) Exponents**  $3^5 = 243$

Do these steps display will be

Touch c ce twice 0.

Enter 3 3.

Touch x 3.

Touch =  $(3^2)$  9.

Touch =  $(3^3)$  27.

Touch =  $(3^4)$  81.

Touch =  $(3^5)$  Answer 243.

## 8. MEMORY

To calculate  $(15 \times 6) - (12 + 11) = 67$   
Do these steps display will be

Touch c ce twice 0.

Enter 15 15.

Touch x 15.

Enter 6 6.

Touch = 90.

Touch m + 90.

Enter 12 12.

Touch + 12.

Enter 11 11.

Touch = 23.

Touch m - 23.

Touch mr Answer 67.

### 9. ACCUMULATING MEMORY ( $\Sigma$ )

QTY	UNIT PRICE	NET AMOUNT
5	\$29.95	\$149.75
12	.79	9.48
5	5.75	28.75
24	1.29	30.96
		\$218.94
Sales Tax 3%		6.57
<b>Total</b>		<b>\$225.51</b>

☞ switch to left position  
Do these steps

display will be

Touch <b>C</b> <b>CE</b> twice	0.
Enter 5	5.
Touch <b>x</b>	5.
Enter 29.95	29.95
Touch <b>=</b>	149.75
Enter 12	12.
Touch <b>x</b>	12.
Enter .79	0.79
Touch <b>=</b>	9.48
Enter 5	5.

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Touch <b>x</b>	5.
Enter 5.75	5.75
Touch <b>=</b>	28.75
Enter 24	24.
Touch <b>x</b>	24.
Enter 1.29	1.29
Touch <b>=</b>	30.96
Touch <b>mr</b> subtotal	218.94
Touch <b>+</b>	218.94
Enter 3	3.
Touch <b>%</b> tax	6.5682
Touch <b>=</b> Total	225.5082

### 10. RECIPROCAL

$$1/20 = .05$$

Do these steps

display will be

Touch <b>C</b> <b>CE</b> twice	0.
Enter 20	20.
Touch <b>1/x</b> Answer	0.05

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### 11. SQUARE ROOT

$$\sqrt{500 + 125} = 25$$

Touch **C** **CE** twice      0.

Enter 500      500.

Touch **+**      500.

Enter 125      125.

Touch **√x** Answer      25.

### 12. CHANGE SIGN

$$4 \times (-3) = -12$$

Touch **C** **CE** twice      0.

Enter 4      4.

Touch **x**      4.

Enter 3      3.

Touch **+/-**      - 3.

Touch **=** Answer      - 12.

### 13. OVERFLOW INTERPRETATION

The overflow symbol will appear when the display capacity of the calculator is exceeded. For example, multiplication of \$12,500,000 x 1,000 will give the following "E" display.

**E** 1.25

The "E" indicates "overflow" or an answer of more than 10 digits. The digits other than 0 are displayed. To obtain the correct decimal location, simply record the displayed number and move the decimal point 10 places to the right. The answer will be:

12,500,000,000.  
    ↑ 10 places ↓

Overflow of a negative number is displayed in a similar manner, with the result preceded by the minus sign. In the case of a negative result of more than ten digits, where none of the trailing digits are zeros, the overflow is indicated as

**E** 426.7629279

This procedure applies to all operations: Addition, subtraction, multiplication, and division.

Use the **C** **CE** key to clear the overflow indicator. The displayed number can then be multiplied or divided by a subsequent entry, but ten decimal places must be added to the result. Operation of the **C** **CE** key the second time will clear the display.

**Notes  
on your special calculation**

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**SPECIFICATIONS**

- Decimal Point: Full floating decimal point
- Capacity: Addition, subtraction, multiplication, division, and omni-constant; percent, square root, reciprocal, Memory, change sign.
- Functions: General add, subtract, multiply, divide and percentage. Chain multiplication and division. Constant multiplication, division, addition, subtraction, percentage, fractions, reciprocals, square root, change sign, Memory.
- Power: Battery operation — NiCd batteries (3) 5 hour operation, 7 hour charge.
- Main Elements: Large scale integrated circuit
- Supplementary Elements: Bipolar ICs, Transistors, Diodes
- Dimensions: Height 1¼", Width 3", Depth 5¾".
- Weight: 9 oz.
- Peripherals: Vinyl Pouch, Instruction Book.

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