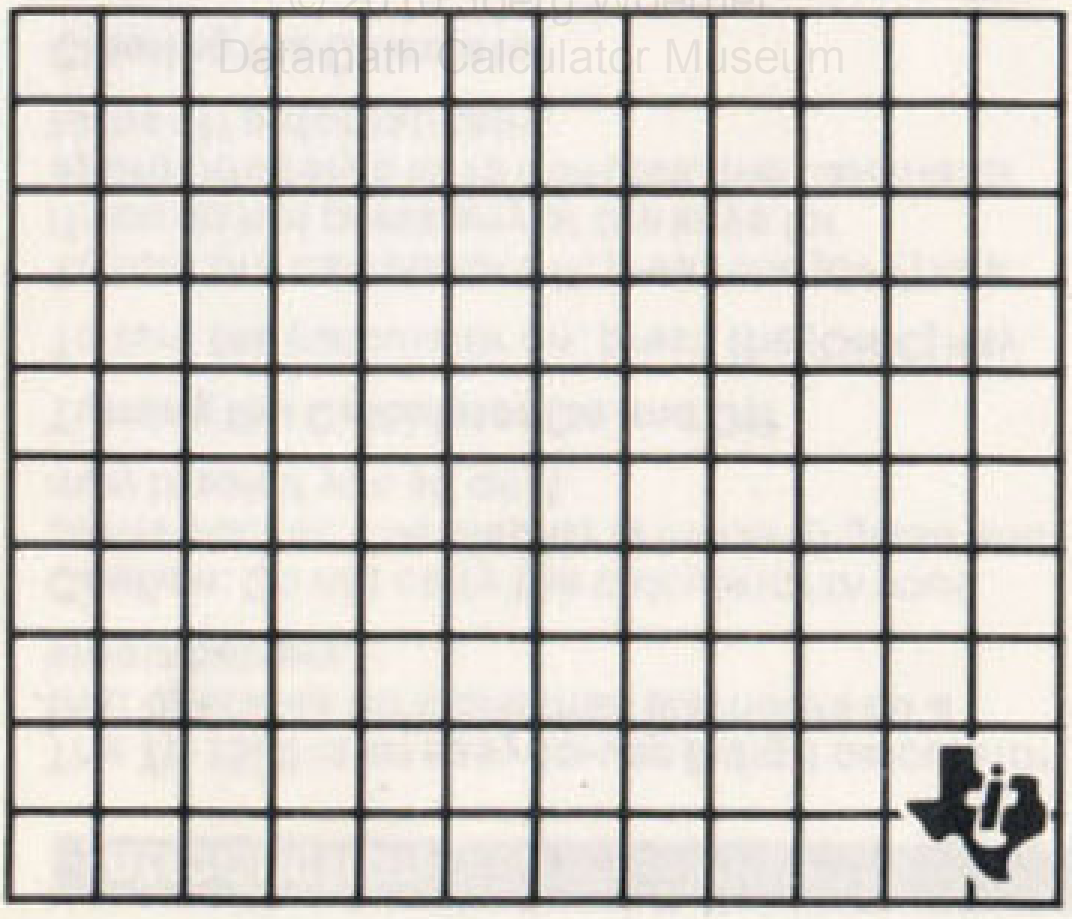
TEXAS INSTRUMENTS
TI-1505 CALCULATOR

QUICK REFERENCE GUIDE



Introduction

The TI-1505 is an easy-to-use 8-digit calculator that operates for more than 800 hours on a single battery.

Caution: Do not carry the calculator in your pants pocket. The display is made of glass and may break if you sit on it.

Turning the Calculator On and Off

To turn the calculator on, press the **[ON/C]** key.

To turn the calculator off, press the **[OFF]** key. If you do not press any of the keys for approximately 5 to 15 minutes, the calculator turns off automatically.

Clearing the Calculator

To clear the calculator, press **[ON/C]** twice. This does not affect the memory.

If you enter an incorrect number, press **[ON/C]** once to clear the display. Then enter the correct number and continue with the calculation.

Note: To clear an incorrect number, be sure to press **[ON/C]** before you press a function key. Pressing **[ON/C]** following a function key clears the calculator.

Arithmetic Calculations

The algebraic entry system of the calculator completes all arithmetic operations in the order they are entered.

To display the result of an arithmetic calculation, press [=]. The calculator is then ready to perform a new calculation.

In the following examples, the → symbol indicates the result displayed after you press the keys that precede the symbol.

Addition and Subtraction

Example: $7.921 + 1.6 - 12.321 = ?$

7.921 [+] 1.6 [−] 12.321 [=] → 2.8 −

Note that negative numbers are indicated by a minus sign on the right side of the display.

Multiplication and Division

Example: $\frac{12 \times 13}{6} = ?$

12 [×] 13 [÷] 6 [=] → 26.

Calculations with a Constant

The constant register is set automatically when you enter the first calculation in a series. When you enter another number and press [=], the calculator completes the problem using the number and function in the constant register.

For addition, subtraction, and division, the constant register uses the **second** number entered (the number you enter following the function key).

For multiplication, the constant register uses the **first** number entered.

Example: $2+3=?$; $4+3=?$

2[+]3[=]	→ 5.
4[=]	→ 7.

Example: $8-6=?$; $3-6=?$

8[−]6[=]	→ 2.
3[=]	→ 3. −

Example: $27\div3=?$; $15\div3=?$

27[÷]3[=]	→ 9.
15[=]	→ 5.

Example: $3\times8=?$; $3\times15=?$

3[×]8[=]	→ 24.
15[=]	→ 45.

Special Functions

Squaring a Number

To find the square of a number (the number multiplied by itself), press [×][=].

Example: $2.5^2 = ?$

2.5 [×][=] → 6.25

Example: $(1.6 \times 2.5)^2 = ?$

1.6 [×] 2.5 [×][=] → 16.

Square Roots

To find the square root of a number, press [√‾].

Example: $\sqrt{144} = ?$

144 [√‾] → 12.

Example: $\sqrt{16^2 + 33} = ?$

16 [×][=][+] 33 [=][√‾] → 17.

Reciprocals

To find the reciprocal of a number (the number divided into 1), press [÷][=].

Example: $\frac{1}{25} = ?$

25 [÷][=] → 0.04

Percentage Calculations

Percentages are calculated immediately when you press [%]. Do not press [=] following the [%] key; otherwise, the calculator may display incorrect results.

Notice that two key sequences are shown in the add-on and discount examples. The first key sequence calculates the result directly, and the second displays the intermediate percentage.

Percentages: 5% of $250 = ?

250 [×] 5 [%] → 12.5

Add-ons: $250 plus 5% tax = ?

250 [+] 5 [%] → 262.5

or

250 [×] 5 [%] → 12.5 [+] [=] → 262.5

Discounts: $250 less 5% discount = ?

250 [−] 5 [%] → 237.5

or

250 [×] 5 [%] → 12.5 [−] [=] → 237.5

Ratios: $600 is what percent of $1,500?

600 [÷] 1500 [%] → 40.

Combinations:

$129 less 25% discount plus 4% tax = ?

129 [−] 25 [%] [+] 4 [%] → 100.62

Memory Operations

The [M +] key adds the displayed number to memory. However, if there is a pending operation, this key completes the operation (acts like the [=] key) and then adds the result to memory.

The [M −] key subtracts the displayed number from memory. However, if there is a pending operation, this key completes the operation and then subtracts the result from memory.

The [MR] key displays the number in memory, and the [MC] key clears the memory.

Before you begin a new problem that does not use the number currently in memory, be sure to clear the memory by pressing [MC].

The letter "M" appears in the upper right corner of the display when the memory contains a number other than zero.

Example: $(4 \times 11.99) - (12 \times 0.98) = ?$

[MC] 4 [×] 11.99 [M +]	→ 47.96
12 [×] .98 [M −]	→ 11.76
[MR]	→ 36.2

Example: $\dfrac{7.9 + 8.1}{-(5.2 + 2.8)} = ?$

[MC] 5.2 [+] 2.8 [M −]	→ 8.
7.9 [+] 8.1 [÷]	→ 16.
[MR] [=]	→ 2. −

Error/Overflow Conditions

An error/overflow condition is indicated by the letter "E" in the lower right corner of the display. Press **[ON/C]** once to clear the condition and twice to clear the calculator.

An error/overflow condition occurs when:

1. The result of a calculation has more than 8 digits to the left of the decimal point. The 8 most significant digits of the result are displayed, with the decimal point appearing 8 places to the left of its correct position. To determine the correct position of the decimal point, mentally move it 8 places to the right, inserting zeros as required.
2. You attempt to add a number to memory such that the result has more than 8 digits to the left of the decimal point. The memory retains the number stored prior to the overflow.
3. You attempt to divide a number by zero.
4. You attempt to find the square root of a negative number.

In Case of Difficulty

If you have difficulty operating the calculator, use the following procedures.

1. Press **[MC] [ON/C] [ON/C]** to clear the memory and the calculator. Then repeat your calculation.
2. If the numbers in the display are dim, erratic, or change very slowly, replace the battery.
3. Review the instructions in this manual to be sure that your calculations are entered correctly.

If the difficulty continues, contact the Consumer Relations Department to discuss the problem and possible solutions. Write to:

Texas Instruments Incorporated
Consumer Relations Department
P.O. Box 53
Lubbock, Texas 79408

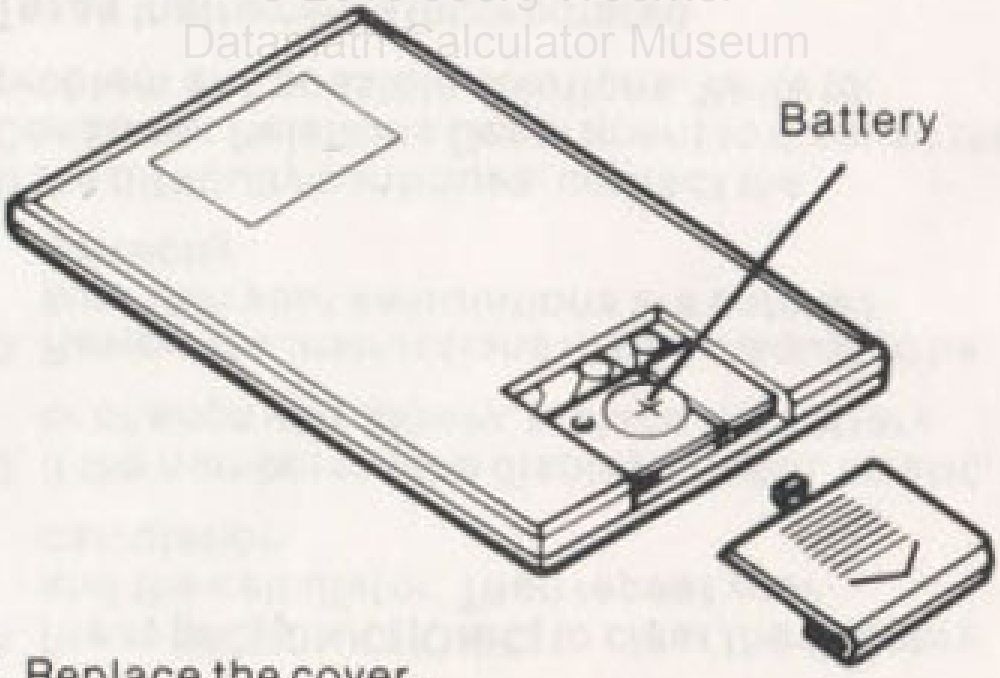
or call toll-free at (800) 842-2737 within the United States. From outside the United States, call (806) 741-4800. (We regret that we cannot accept collect calls at this number.)

Battery Replacement

For approximately 800 hours of operation, use one alkaline battery such as Eveready 189 or Ray-O-Vac RW89. For up to 3000 hours, use one silver oxide battery such as Eveready 389 or Ray-O-Vac RW49.

To replace the battery:

1. Locate the battery compartment cover on the back of the calculator. With the calculator turned off, remove the cover by sliding it in the direction of the arrow.
2. Remove the old battery and install the new one as shown. Be sure the + symbol on the battery is facing upward.



3. Replace the cover.

Caution: Do not incinerate the old battery or leave it within reach of children.

Returning Your Calculator for Service

If you need to return your calculator for service, send the calculator prepaid to the appropriate TI Customer Service Facility listed on page 11. The shipment should be carefully packaged and adequately protected against shock and rough handling. For your protection, the calculator should be sent insured. Texas Instruments cannot assume any responsibility for loss or damage to an uninsured shipment.

Please include information concerning the difficulty experienced with the calculator, and be sure to include your return address—name, address, city, state, and zip code.

In-warranty units will be repaired or replaced under the terms of the Limited Warranty. Out-of-warranty units will be repaired or replaced with reconditioned units (at TI's option), and service rates in effect at the time of return will be charged. Because our service facilities serve the entire United States, it is not feasible to hold units while providing service estimates. For advance information concerning our service charges, call Consumer Relations at the telephone numbers listed on page 8.

TI Customer Service Facilities

U.S. Residents

For United States parcel post shipments:
Texas Instruments Incorporated
P.O. Box 2500
Lubbock, Texas 79408

For other postal carriers:
Texas Instruments Incorporated
2305 N. University
Lubbock, Texas 79415

Customers in California and Oregon may contact the following Texas Instruments offices for additional assistance or information.

Texas Instruments Customer Service Center
19505 Hamilton Street
Building A, Suite 1
Torrance, California 90502
(213) 217-7095

Texas Instruments Customer Service Center
6700 Southwest 105th
Kristin Square, Suite 110
Beaverton, Oregon 97005
(503) 643-6758

Canadian Residents Only

Geophysical Services Incorporated
41 Shelley Road
Richmond Hill, Ontario, Canada L4C 5G4

Exchanging Your Calculator

If your calculator needs service, you can exchange it for a factory-reconditioned calculator of the same model (or equivalent model specified by TI) by taking or mailing the calculator to one of the Customer Service Centers located throughout the United States. In-warranty units will be exchanged under the terms of the Limited Warranty. Out-of-warranty units will be exchanged at the rates in effect at the time of the exchange.

Note: A small handling fee will be charged after 90 days from the date of purchase. If you mail the calculator, a mail-in service fee will also be charged.

Look for "Customer Service Center" under Texas Instruments Incorporated in the white pages of your telephone directory or look under one of the following headings in the yellow pages: "Calculating & Adding Machines & Supplies" or "Computers—Service & Repair."

You can also call or write Consumer Relations for further details and the location of the nearest Customer Service Center. (The Consumer Relations telephone numbers and address are listed on page 8.) Please call the service center to check the availability of your model.

One-Year Limited Warranty

This Texas Instruments electronic calculator warranty extends to the original consumer purchaser of the product.

Warranty Duration: This calculator is warranted to the original consumer purchaser for a period of one (1) year from the original purchase date.

Warranty Coverage: This calculator is warranted against defective materials or workmanship. **This warranty is void if the product has been damaged by accident, unreasonable use, neglect, improper service or other causes not arising out of defects in material or workmanship.**

Warranty Disclaimers: Any implied warranties arising out of this sale, including but not limited to the implied warranties of merchantability and fitness for a particular purpose, are limited in duration to the above one year period. Texas Instruments shall not be liable for loss of use of the calculator or other incidental or consequential costs, expenses, or damages incurred by the consumer or any other user.

Some states do not allow the exclusion or limitations of implied warranties or consequential damages, so the above limitations or exclusions may not apply to you.

Legal Remedies: This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

Warranty Performance: During the above one (1) year warranty period, your TI calculator will be either repaired or replaced with a reconditioned comparable model (at TI's option) when the product is returned, postage prepaid, to one of the Texas Instruments Customer Service Facilities listed on page 11. The repaired or replacement calculator will be in warranty for the remainder of the original warranty period or for six months, whichever is longer. Other than the postage requirement, no charge will be made for such repair or replacement of in-warranty calculators. Texas Instruments strongly recommends that you insure the product for value, prior to mailing.

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