



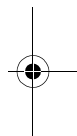
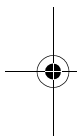
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OWNER'S MANUAL



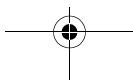
Please read before using this equipment.

EC-252

Metric Conversion Calculator



RadioShack®





INTRODUCTION

Your EC-252 Metric Conversion Calculator conveniently combines an internal battery and a solar panel, so you can use the calculator anywhere. It also has a three-key memory system so you can add, subtract, and recall a calculated figure. In addition to performing standard calculations, your calculator has dual-function keys to perform 20 built-in metric conversion calculations.

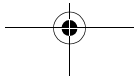
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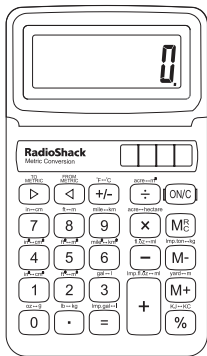
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KEYS AND FUNCTIONS



\blacktriangleright — Converts standard to metric measurements.

\blacktriangleleft — Converts metric to standard measurements.

$+/-$ ($^{\circ}\text{F} \leftrightarrow ^{\circ}\text{C}$) — Changes a displayed number from positive to negative and vice versa. Also converts Fahrenheit to Celsius and vice versa.



÷ (acre ↔ m²) — Performs the division function. Also converts acres to square meters and vice versa.

ON/C — Turns on power. Also clears the last entry when pressed once and clears the whole calculation when pressed twice.

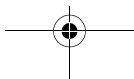
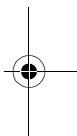
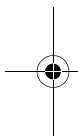
7 (in ↔ cm) — Enters **7**. Also converts inches to centimeters and vice versa.

8 (ft ↔ m) — Enters **8**. Also converts feet to meters and vice versa.

9 (mile ↔ km) — Enters **9**. Also converts miles to kilometers and vice versa.

× (acre ↔ hectare) — Performs the multiplication function. Also converts acres to hectares and vice versa.

MRC — (Memory Recall/Clear) Recalls an answer from memory when you press it once. Clears the memory when you press it twice.





4 (in² ↔ cm²) — Enters **4**. Also converts square inches to square centimeters and vice versa.

5 (ft² ↔ m²) — Enters **5**. Also converts square feet to square meters and vice versa.

6 (mile² ↔ km²) — Enters **6**. Also converts square miles to square kilometers and vice versa.

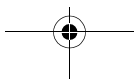
– (fl.ōz ↔ ml) — Performs the subtraction function. Also converts fluid ounces to milliliters and vice versa.

M– (Imp.ton ↔ kg) — Subtracts from and keeps the answer in memory. Also converts imperial tons to kilograms and vice versa.

1 (in³ ↔ cm³) — Enters **1**. Also converts cubic inches to cubic centimeters and vice versa.

2 (ft³ ↔ m³) — Enters **2**. Also converts cubic feet to cubic meters and vice versa.

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3 (gal↔l) — Enters 3. Also converts US gallons to liters and vice versa.

M+ (yard↔m) — Adds and stores a calculation answer in memory. Also converts yards to meters and vice versa.

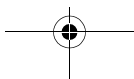
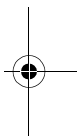
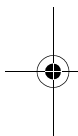
0 (oz↔g) — Enters 0. Also converts ounces to grams and vice versa.

. (**lb↔kg**) — Enters the decimal point. Also converts pounds to kilograms and vice versa.

= (Imp.gal↔l) — Gives the answer to a calculation. Also converts Imperial gallons to liters and vice versa.

+ (Imp.fl.oz↔ml) — Performs the addition function. Also converts Imperial fluid ounces to milliliters and vice versa.

% (KJ↔KC) — Figures percentages. Also converts kiloJoules to kilocalories and vice versa.

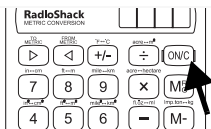




OPERATION

TURNING ON THE EC-252

Press **ON/C** to turn on the calculator.



Notes:

- The calculator turns off automatically if you do not press any key within about 11 minutes.
- When you turn the calculator off, previous entries are cleared.

CORRECTING ENTRY ERRORS

If you enter an incorrect value, press **ON/C** once. Then enter the correct value and continue your calculation.



To clear the display for a new calculation, press **ON/C** twice. **0.** appears, then begin the new calculation.

If you press an incorrect operator key (**+**, **-**, **x**, **÷**), simply press the correct key and continue your calculation.

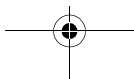
CALCULATION ERRORS

ERROR appears in the upper left corner when:

- A calculation result exceeds 8 digits to the left of the decimal point. This is an overflow error (see “Estimating Calculation Results”).
- A memory calculation result exceeds 8 digits to the left of the decimal point. Memory contents remain unchanged.
- You try to divide by 0.

To clear an error, press **ON/C**.

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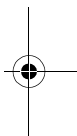
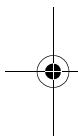




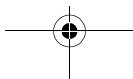
Estimating Calculation Results

If you perform a calculation that results in an overflow error, you can estimate the correct result (to 8 significant digits) by following these steps.

1. Count the number of digits displayed to the left of the decimal point.
2. Remove the decimal point.
3. Add as many zeros to the right of the number as there were digits to the left of the decimal point.



For example, the displayed value **ERROR 1.0142064** is estimated to equal 101,420,640.

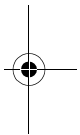
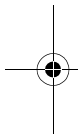




USING THE +/- KEY

Press +/- to change the displayed value from positive to negative or from negative to positive.

Note: MINUS - appears for a negative value.



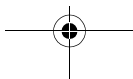
CALCULATION EXAMPLES

Basic

You Press	You See
$256 + 378 =$	634.
$471 - 223 =$	248.
$15.5 \times 2.3 =$	35.65
$17.2 \div 2.5 =$	6.88
24 +	24.



10



You Press	You See
36 -	60.
75 ×	MINUS - 15.
8 ÷	MINUS - 120.
9 =	MINUS - 13.333333

Constants

For multiplication, the first value you enter is the constant. For addition, subtraction, and division, the second value you enter is the constant.

You Press	You See
5 × 7 =	35.
9 =	45.
10 =	50.
100 ÷ 5 =	20.



You Press	You See
200 =	40 .
300 =	60 .

Percentage

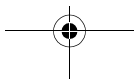
Example: 20% of 720 is 144.

You Press	You See
$720 \times 20 \%$	144

Add-On

Example: 30% added to 540 is 702.

You Press	You See
$540 + 30 \%$	702 .





Discount

Example: 800 discounted by 20% is 640.

You Press	You See
800 - 20 %	640 .

Reciprocal

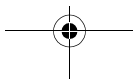
Example: $1/8 = 0.125$

You Press	You See
8 ÷ =	0.125

Exponent

Example: $7^6 = 117649$

You Press	You See
7x=====	117649





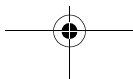
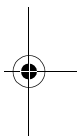
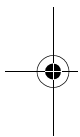
MEMORY CALCULATIONS

To store a value in memory, first press **MRC** (memory recall/clear) twice to clear the memory, then press **ON/C** to clear all calculations.

To add a value to memory, enter the number or calculation you want to add, then press **M+**. The calculator totals the current calculation (if one is pending) and adds that value to memory.

Note: **MEMORY** appears in the upper right to show that a value is stored in memory.

To subtract a value from memory, enter the number or calculation you want to subtract, then press **M-**. The calculator totals the current calculation (if one is pending) and subtracts that value from memory.



To recall the value from memory, press **MRC** once. The memory value appears.

To clear the contents in memory, press **MRC** twice so **MEMORY** disappears.

Example:

$$\frac{2392 + 576}{786 - 432} - 73 = -64.61582$$

You Press	You See
MRC MRC ON/C	0.
786 M+	MEMORY 786.
432 M-	MEMORY 432.
2392 +	MEMORY 2392.
576 ÷	MEMORY 2968.
MRC	MEMORY 354.
-	MEMORY 8.3841807

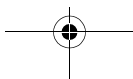
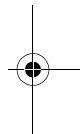
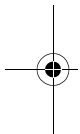


You Press	You See
73 =	MINUS - MEMORY 64.61582

CONVERSION

\triangleright and \triangleleft let you select the conversion direction — to metric or from metric. The symbols above each key show you which conversion each key makes. For example, **in** \leftrightarrow **cm** is printed above 7. To convert 12 inches into centimeters, press **12** \triangleright **7**.

12 inches = 30.48 centimeters. To convert centimeters into inches, use \triangleleft .



Length

Example: 5.5 cm = ? in

You Press	You See
5.5 \triangleleft in \longleftrightarrow cm (7)	2.1653543

Example: $7\frac{5}{8}$ in = ? cm

You Press	You See
$5 \div 8 + 7 = \triangleright$ in \longleftrightarrow cm (7)	19.3675

Example: 12.8 m = ? ft

You Press	You See
12.8 \triangleleft ft \longleftrightarrow m (8)	41.99475



Example: 54 yd = ? m

You Press	You See
54 \triangleright yard \longleftrightarrow m (M+)	49.3776

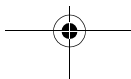
Weight

Example: 630 lb = ? kg

You Press	You See
630 \triangleright lb \longleftrightarrow kg (.)	285.768

Example: 1 lb = ? kg

You Press	You See
1 \triangleright lb \longleftrightarrow kg (.)	0.4536



Volume

Example: $389 \text{ ft}^3 = ? \text{ m}^3$

You Press	You See
389 \triangleright ft ³ \longleftrightarrow m ³ (2)	11.015313

Example: 100 ml = ? (US) fl. oz

You Press	You See
100 \triangleleft fl.oz \longleftrightarrow ml (-)	3.3813484

Example: 245 (US) gal = ? l

You Press	You See
245 \triangleright gal \longleftrightarrow l (3)	927.423

Temperature

Example: $125^{\circ}\text{F} = ?^{\circ}\text{C}$

You Press	You See
125 \triangleright $^{\circ}\text{F}$ \longleftrightarrow $^{\circ}\text{C}$ (+/-)	51.666666

Example: $-35^{\circ}\text{C} = ?^{\circ}\text{F}$

You Press	You See
35 +/- \triangleleft $^{\circ}\text{F}$ \longleftrightarrow $^{\circ}\text{C}$ (+/-)	MINUS - 31.

Area

Example: $245 \text{ ft}^2 = ? \text{ m}^2$

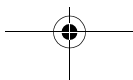
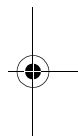
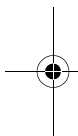
You Press	You See
245 \triangleright ft^2 \longleftrightarrow m^2 (5)	22.7605

20



Example: $1540 \text{ cm}^2 = ? \text{ ft}^2$


You Press	You See
1540 \triangleleft in $\xleftrightarrow{2}$ \leftrightarrow cm (4)	238.70047

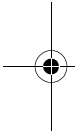




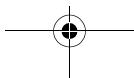
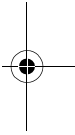
CARE

To enjoy your EC-252 Metric Conversion Calculator for a long time:

- Keep the calculator dry. If it gets wet, wipe it dry immediately.
 - Use and store the calculator only in normal temperature environments.
 - Handle the calculator gently and carefully. Don't drop it.
 - Keep the calculator away from dust and dirt.
 - Wipe the calculator with a damp cloth occasionally to keep it looking new.
- 



Modifying or tampering with the calculator's internal components can cause a malfunction and invalidate its warranty. If your calculator is not performing as it should, take it to your local RadioShack store for assistance.





REPLACING THE BATTERY

Although your calculator uses solar power most of the time, the backup battery will eventually become weak and need replacing. If the display speed slows down in a dimly-lit room, replace the battery with a 389A-type button-cell battery (RadioShack Cat. No. 23-117).

Caution: Use only a fresh battery of the required size and type.

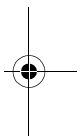
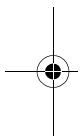
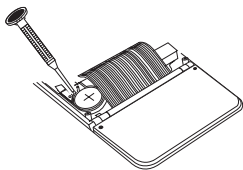
Follow these steps to replace the battery.

1. Use a small Phillips screwdriver and remove the two screws from the lower case.





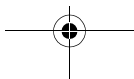
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- Carefully insert a small, flat-blade screwdriver between the lower case halves, then slightly twist the screwdriver to separate the lower front and back case halves.
 - Use a screwdriver to gently pry out the old battery.



Warning: Keep the battery out of reach of children. Swallowing a button-cell battery can be fatal.

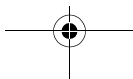
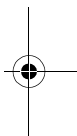
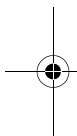
Cautions:

- Always remove an old or weak battery. Batteries can leak chemicals that can destroy electronic parts.





- Dispose of the old battery promptly and properly. Do not burn or bury it.
4. Position the new battery so the positive (+) side is up, then insert it into the battery compartment.
 5. Snap the front and back case halves back together, then replace the screws.





SPECIFICATIONS

Display 8-Digit LCD

Solar Cell

Minimum Illumination 150 LUX

Battery One 389A Button-Cell
(Cat. No. 23-117)

Battery Life About 1 Year

Operation Temperature 32°–104°F
(0°C–40°C)

Dimensions $5 \frac{3}{16} \times 3 \times \frac{9}{32}$ in
(13.2 × 7.6 × 0.7 cm)

Weight (Including Battery) 2 oz
(56.7 g)

Specifications are typical; individual units might vary. Specifications are subject to change and improvement without notice.

Limited One-Year Warranty

This product is warranted by RadioShack against manufacturing defects in material and workmanship under normal use for one (1) year from the date of purchase from RadioShack company-owned stores and authorized RadioShack franchisees and dealers. EXCEPT AS PROVIDED HEREIN, RadioShack MAKES NO EXPRESS WARRANTIES AND ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THE WRITTEN LIMITED WARRANTIES CONTAINED HEREIN. EXCEPT AS PROVIDED HEREIN, RadioShack SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO CUSTOMER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY USE OR PERFORMANCE OF THE PRODUCT OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, INCLUDING, BUT NOT LIMITED TO, ANY DAMAGES RESULTING FROM INCONVENIENCE, LOSS OF TIME, DATA, PROPERTY, REVENUE, OR PROFIT OR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF RadioShack HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow the limitations on how long an implied warranty lasts or the exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

In the event of a product defect during the warranty period, take the product and the RadioShack sales receipt as proof of purchase date to any RadioShack store. RadioShack will, at its option, unless otherwise provided by law: (a) correct the defect by product repair without charge for parts and labor; (b) replace the product with one of the same or similar design; or (c) refund the purchase price. All replaced parts and products, and products on which a refund is made,

(Continued)



(Continued) become the property of RadioShack. New or reconditioned parts and products may be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

This warranty does not cover: (a) damage or failure caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, lightning or other incidence of excess voltage or current; (b) any repairs other than those provided by a RadioShack Authorized Service Facility; (c) consumables such as fuses or batteries; (d) cosmetic damage; (e) transportation, shipping or insurance costs; or (f) costs of product removal, installation, set-up service adjustment or reinstallation.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

RadioShack Customer Relations, 200 Taylor Street, 6th Floor, Fort Worth, TX 76102

We Service What We Sell

4/99

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