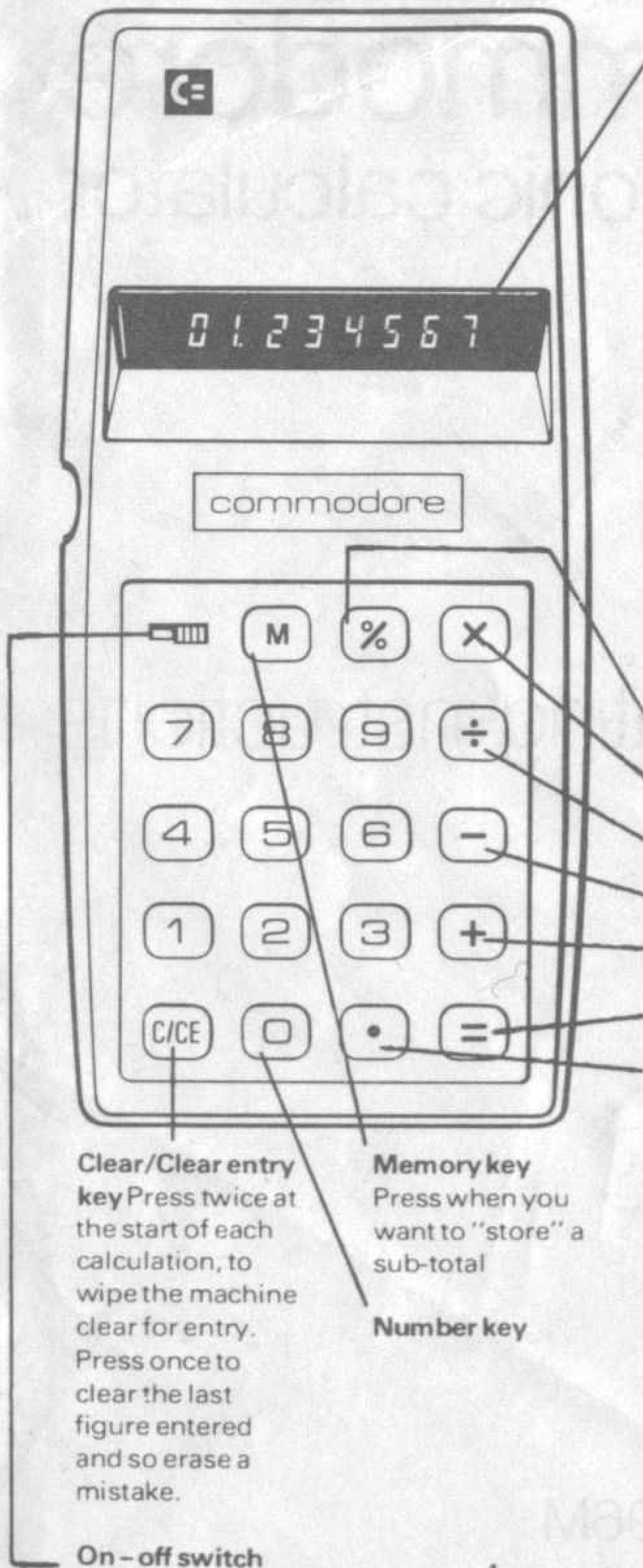


Commodore electronic calculator

Operating instructions

Model 796M

Commodore electronic calculator



Digital display window This is where the answer appears. It also "clocks up" figures as each calculation progresses. If the letter E appears on the left, this means that the answer takes up more than eight figures. Divide by 10 until E disappears. Make a mental note of how many times you had to divide, so that the correct answer can be worked out later.

Per cent key

Multiply key

Divide key

Subtract key

Add key

Answer key

Decimal point Once the decimal point has been entered correctly the calculator will automatically move it to the correct place during every subsequent stage of the calculation. It will insert the decimal point, if necessary, in division sums.

Clear/Clear entry key Press twice at the start of each calculation, to wipe the machine clear for entry. Press once to clear the last figure entered and so erase a mistake.

Memory key Press when you want to "store" a sub-total

Number key

On - off switch

The Commodore Calculator

Congratulations on becoming the owner of this 796M Commodore electronic calculator. Treat it like the precision-made instrument it is, and your reward will be many years of reliable, trouble-free service.

Your new electronic calculator will:

add

subtract

multiply

divide

work out percentages

store figures in its Memory

erase mistakes, on your instructions.

All this it does in milli-seconds, with unfailing accuracy, so long as a few simple operating instructions are followed. As an example of its speed, the calculator can divide two eight figure numbers in 100 milli-seconds.

At its heart is a silicon "chip" – a thin wafer, no more than $\frac{1}{4}$ in. square – on which are printed enough electronic circuits to do the job of 9,000 transistors. It is called a "solid-state" calculator because its circuitry is etched into this single silicon chip.

Only a few years ago, any computer capable of performing the calculations carried out by the 796M would have needed to be about the size of a portable record player.

Pocket-sized electronic calculators were an offshoot of the US Space programme, made possible by techniques of micro-circuitry which were developed to reduce the weight of equipment in Space probes.

The calculator has been designed to think with "people logic", which means that it works out calculations in the same sequence as you do.

For instance, if you want to know 17% of 54, remember that in arithmetic "of" means multiply, and press the following keys:

17 % × 54 =
17 per cent of 54 equals

WHEN TO USE THE CALCULATOR

There are many ways to get value out of your calculator. You can use it to check bills; to help your children with homework; to compare value, weight for weight, at the shops; to find the sterling equivalent of foreign currency; to convert metric weights and measures into ounces and inches; to work out percentages and averages; and for many other purposes.

HOW TO USE IT

A few examples will help you to become familiar with operating the calculator.

TO ADD, SUBTRACT, MULTIPLY OR DIVIDE

The same basic sequence is followed, whatever the operation.

Example: to multiply 25 by 75

	Press	Display window shows
Switch on		0
Clear the machine for entry	C/CE, C/CE	0
Twenty-five	2,5	25
Multiplied by	×	25
Seventy-five	7,5	75
Answer	=	1875

If more than one operation is involved in a single calculation, break the sum down into a series of mini-calculations. Enclose each one in brackets and note the sub-totals as you go along.

Example: to subtract 25 multiplied by 6 from 36 multiplied by 320

Write the calculation as: $(36 \times 320) - (25 \times 6)$. Then:

	Press	Display window shows
Switch on		0
Clear the machine for entry	C/CE, C/CE	0
	3, 6	36
	×	36
	3, 2, 0	320
		<hr/>
Sub-total (Note this sub-total) =		11520
		<hr/>
Clear for entry	C/CE, C/CE	0
	2, 5	25
	×	25
	6	6
		<hr/>
Sub-total (Note this sub-total) =		150
		<hr/>
Clear for entry	C/CE, C/CE	0
Sub-total	1, 1, 5, 2, 0	11520
	-	11520
Sub-total	1, 5, 0	150
		<hr/>
Answer	=	11370
		<hr/>

USING THE MEMORY

If, during the course of a calculation, you want to instruct the machine to store a sub-total which can later be recalled, use the Memory key.

Follow this sequence:

Example: You want to store 12×12 in the Memory, and later add to it 15×9

	Press	Display window shows
First, clear the Memory by pressing $0=M$. This instructs the calculator that it has nothing in its Memory	$0=M$	0
To bring Memory into play, first clear the machine by pressing C/CE twice. Then press the figures you wish to store, followed by $=M$	$12 \times 12=M$. 144
To add to Memory, first clear the machine. Then press the figures you wish to add, followed by $+M$	$15 \times 9+M$. 279
To recall data stored in Memory, complete the calculation, clear the machine of all other data by pressing C/CE twice, then press $+M$		0 . 279

Remember to clear the Memory at the start of every calculation by pressing $0=M$.

TO ERASE A MISTAKE

Press C/CE once. This will cancel the last figure shown in the display window, so that you can go back and press the correct figure.

Example: instead of pressing $39 \div 13$, you press $39 \div 14$ by mistake

Press	Display window shows
$39 \div 14$	14
C/CE	0
13	13
	—
Answer	3
	—

TO WORK OUT PERCENTAGES

Example 1: a settee costs £194 plus 8 per cent VAT. You want to know how much it will cost in total

To work out 8 per cent of £194, remember that in mathematics "of" = multiply. Add the answer to £194 for the total cost.

Switch on, press C/CE twice, then:

Press	Display window shows
8	8
%	0.08
\times	0.08
194	194
+	15.52
194	194
	—
Answer in £s	209.52
	—

Example 2: the price tag on a carpet is £72.50, but the salesman says you can have it for £64 cash – a discount of £8.50. You want to know what this saving amounts to in percentage terms.

The object is to find out what £8.50 represents as a percentage of £72.50. With this kind of percentage sum, multiply the first figure by 100, then divide the answer by the second.

Switch on, press C/CE twice, then:

Press	Display window shows
8.5	8.5
×	8.5
100	100
÷	850
72.5	72.5
Answer	<u>11.724137</u>

(The discount to two decimal places amounts to 11.72 per cent.)

TO COMPARE VALUES AT THE SHOPS

The object is to compare like with like, so find the unit cost of each item.

Example: which is the better bargain – a 10½ oz tin of soup costing 16p or a 14 oz tin of the same soup costing 20½p?

To find the unit cost (in this case the cost per ounce), divide the price by the weight.

Switch on, clear the machine for entry by pressing C/CE twice, then:

	Press	Display window shows
	16	16
	÷	16
	10.5	10.5
Sub-total	=	<u>1.5238095</u>

(The small tin costs 1.52p an ounce to two decimal places.)

Clear for entry

	20.5	20.5
	÷	20.5
	14	14
Sub-total	=	<u>1.4642857</u>

(The large tin costs 1.46p an ounce to two decimal places.)

The larger tin is better value; it costs less per ounce.

TO CONVERT FOREIGN CURRENCY INTO STERLING

Example: a dress in a Paris shop costs 325.50 francs. What is its price in sterling, at an exchange rate of, say, 8.52 f. to the £?

With this kind of conversion, divide the total of francs by the exchange rate. The answer will be in £s.

Switch on, press C/CE twice, then:

	Press	Display window shows
	325.5	325.5
	÷	325.5
	8.52	8.52
The answer, to the nearest penny, is £38.20p.	=	<u>38.204225</u>

TO CONVERT STERLING INTO FOREIGN CURRENCY

Example: you want to change £22.50 into Deutschmarks, and the exchange rate is, say, Dm 4.06 to the £

Multiply the sterling by the exchange rate, and the answer will be in Deutschmarks.

Switch on, press C/CE twice, then:

	Press	Display window shows
	22.5	22.5
	×	22.5
	4.06	4.06
	=	<u>91.35</u>

The answer is Dm 91.35

OTHER USEFUL CONVERSIONS

FAHRENHEIT TO CENTIGRADE

Subtract 32 and divide the result by 1.8

CENTIGRADE TO FAHRENHEIT

Multiply by 1.8 and add 32

PINTS TO LITRES

Multiply by 0.56825

LITRES TO PINTS

Multiply by 1.759788

YARDS TO METRES

Multiply by 0.9144

METRES TO YARDS

Multiply by 1.0936

MILES TO KILOMETRES

Multiply by 1.609344

KILOMETRES TO MILES

Multiply by 0.621371

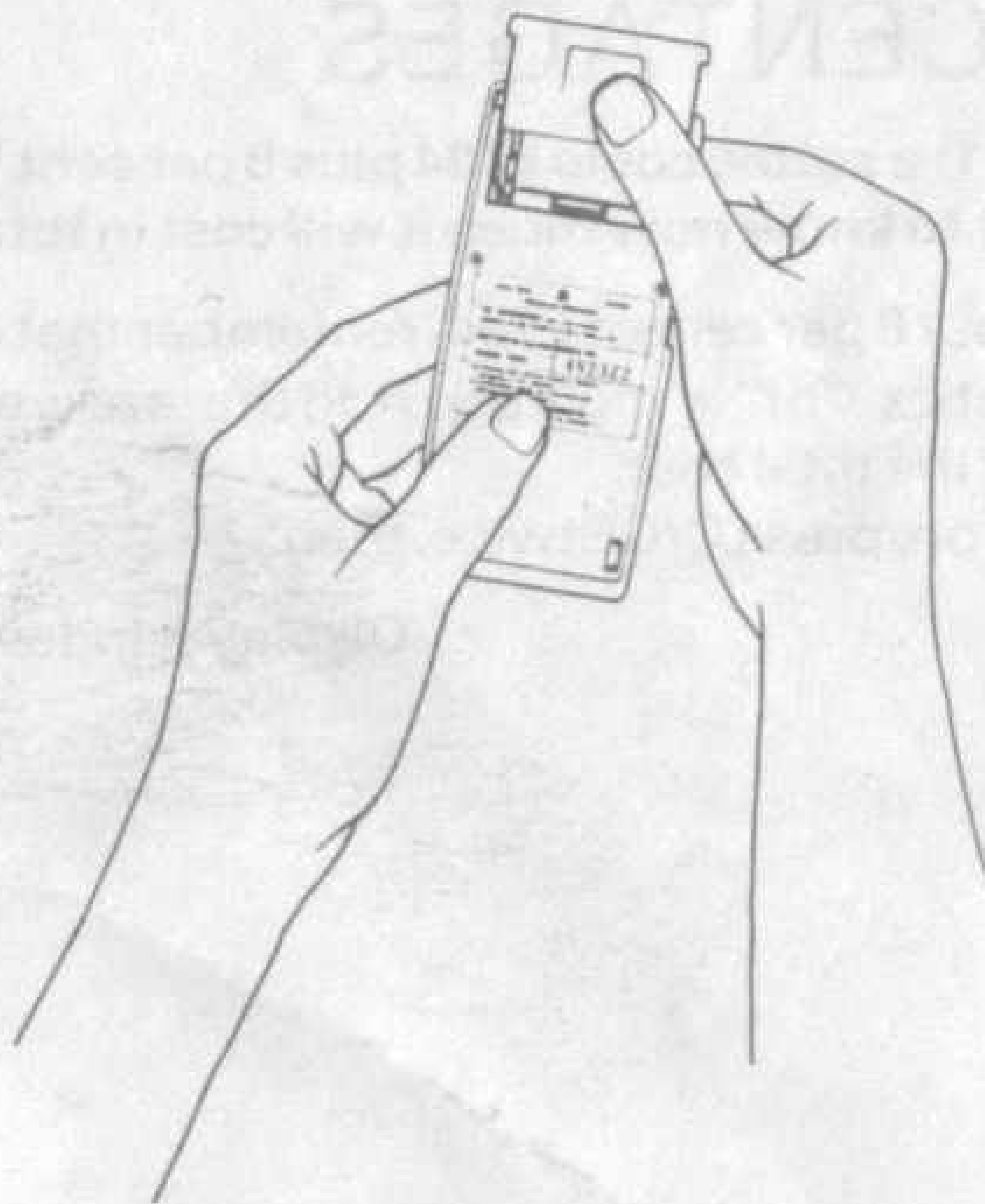
FITTING A NEW BATTERY

How long a battery will last depends mainly on how often you use your calculator. But in any case, even if you use it only sparingly, a normal battery is likely to run flat after a few months.

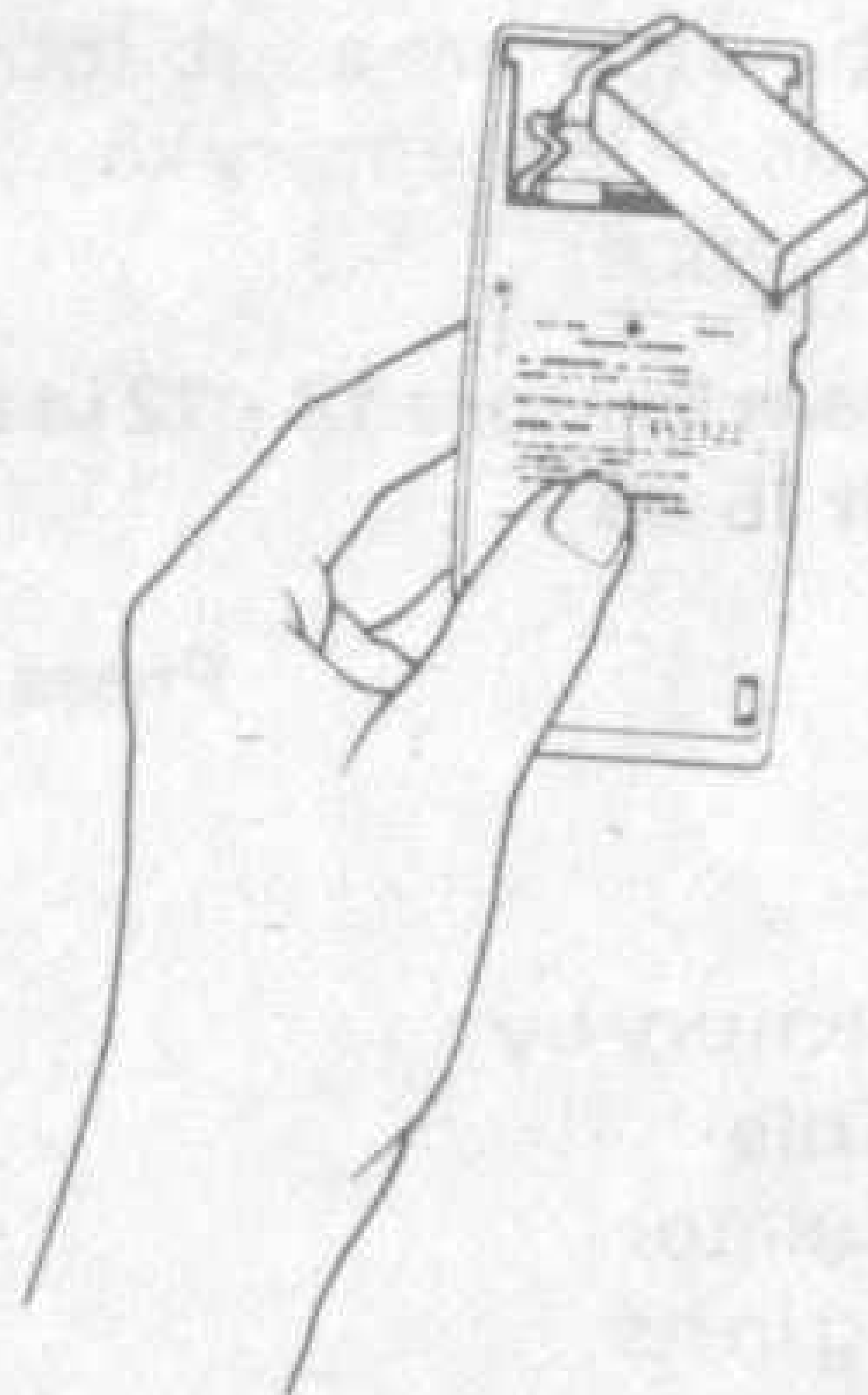
The signs that the battery is running down are dimness in the display unit and errors in the calculations.

New batteries are available at most stores selling electrical goods. Ask for a 9-volt calculator battery. Different makes are known by different initials. The 006P, the PP3 and various other makes will fit your Commodore Calculator. Long-life batteries are also available.

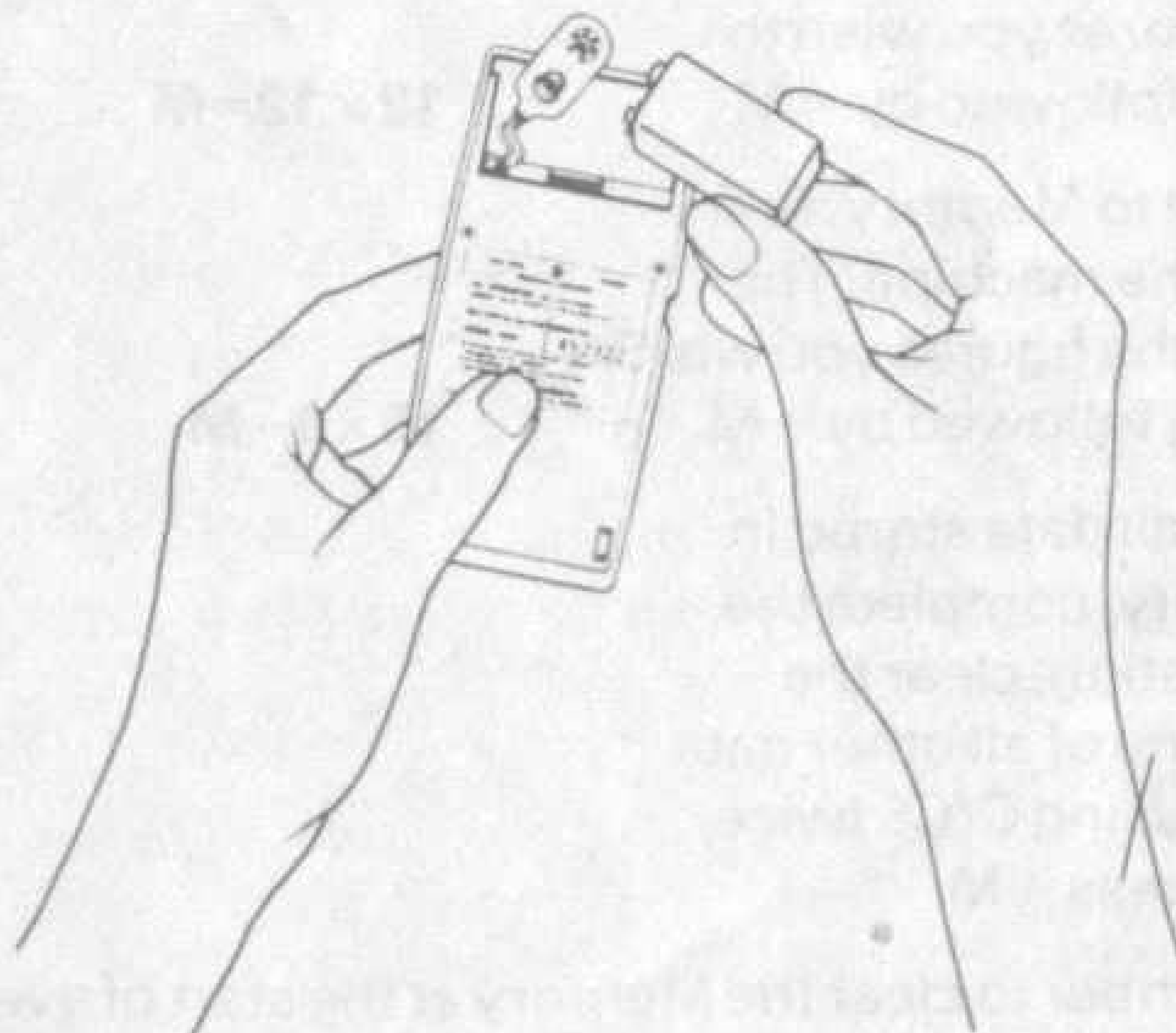
1. Slide the back panel up with your thumb to expose the old battery.



2. Turn the calculator over and shake gently so that the battery, attached to its leads, falls out.



3. Unclip the leads and fit the new battery. The terminals are designed to make it impossible to fit wrongly. Press the terminal cap firmly down and check that a secure contact is made.



4. Fit the new battery into its compartment and slide the back panel into place.

USING THE MAINS

If you make frequent use of your calculator it is a good idea to buy a mains adaptor, so that you can run it off the ordinary household current, and do not keep wearing out the batteries.

The mains adaptor is specially engineered for the calculator, and is obtainable at most electrical stores. It complies with safety standard BS 3861, Part 3, laid down by the British Standards Institute.

Ask for Commodore model MM3.

Fit a plug on the adaptor, to plug into the household electricity supply. The adaptor pin plugs in at the left-hand side of the calculator.



IF THINGS GO WRONG

If the calculator does not work properly, the most likely reason is that the battery is flat.

TRY A NEW BATTERY.

Instructions on how to fit are on pages 11 and 12. In the unlikely event that the calculator still does not work, return it to the nearest Commodore Sales and Service Centre, stating the date of receipt. If the calculator is still under warranty, and the warranty terms have been complied with, it will be repaired free of charge.

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Commodore Business Machines Limited
Eaglescliffe Industrial Estate
Stockton on Tees
Cleveland County
TS16 0PN

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