

CASIO®

014B SA (英)(西) Printed in Japan

**OPERATION MANUAL
MANUAL DE OPERACION**

CASIO AQ-3000

(英)(西)



English	1
Español	15

Dear customer,

Thank you very much for purchasing our electronic calculating-clock. This product offers you the following functions:

A clock (hour, minute, second and am/pm), an alarm and an 8-digit calculator. This booklet will familiarize you with the many ways this highly capable unit can serve you.

**Special care should be taken not to damage the unit by bending or dropping.*

For example, do not carry it in your hip pocket.

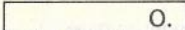
**For calculation examples refer to page 30.*

CAUTION:

Never bend the unit in the opposite direction as shown below. This could split the case, or break internal circuitry.



1 / GENERAL GUIDE

(1)  **Read-out**

The clock shows hour, minute, second and AM/PM.

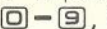
The calculator shows each entry and result, suppressing unnecessary 0's (zeros).


(2)  **Mode switch**


TIME: Time is continuously displayed.


SET: To set time, alarm and hourly time signal.





CAL: To perform calculations.


(3)  **Numeral/decimal point (PM) keys**



Enters numerals. For decimal places, use the  key in its logical sequence.

The  key also operates the "PM" sign for time setting.

(4)  **Function command & equal keys**

Performs the four basic calculations when these keys are pressed in the formula sequence. An incorrect function command (, ,  or ) is automatically cleared by pressing the correct function command key.

The  key obtains answer after entering numerals and function commands.

The  key also activates and deactivates alternately the hourly time signal when pressed after the  key with the mode switch at "SET".

(5)  Adjustment/set button

Press this button to set the clock.

It is also used for seconds adjustment of time (for details refer to page 9).

(6)  Time key

Recalls the present time.

(7)  Alarm key

Presets the alarm time. Also recalls the alarm time for reference.

(8)  Memory recall/memory clear key


Recalls the contents of the memory without clearing.

Also clears them when pressed twice successively.

(9)  () Memory plus (minus) key

Transfers the displayed number to the memory positively (negatively).

Also obtains answer in four basic calculations and automatically accumulates it into the memory positively (negatively).

(10)  Percent key

Performs percentage calculations including add-ons, discounts and mark-ups.

(11)  Clear key

Clears entry for correction, and releases overflow or error check without clearing the memory.

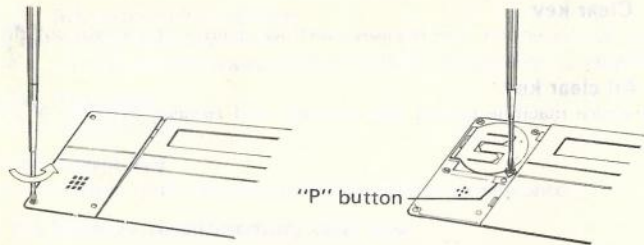
(12)  All clear key

Clears the entire machine except the memory, and releases overflow or error check.

2/BATTERY MAINTENANCE

One lithium battery (Type: CR2025C) gives approximately 12 months continuous operation.

When battery power decreases, the whole display darkens. Battery should then be renewed.



Replacement of battery:

- 1) Open the battery compartment lid by loosening the screws with a screwdriver.
- 2) Open the battery cover by loosening the screw with a screwdriver and remove dead battery.
- 3) Set new battery with the plus terminal (flat side) on top.
- 4) Replace the battery cover. Screw carefully.
- 5) Press the "P" button with a pointed object.
- 6) Replace the battery compartment lid. Screw carefully.

- * Before setting new battery, be sure to thoroughly wipe it off with a dry cloth to maintain good contacts.
- * Never leave dead battery in the battery compartment as it may cause malfunctions.
- * It is recommended that battery be replaced every 2 years to prevent the chance of malfunctions due to battery leakage.

Note:

- * Removing the battery clears all preset data.
- * Original battery supplied with the unit is estimated to last 12 months from the data of installation at the factory, not from the date of purchase.

3/CARE OF YOUR UNIT

- * Since the unit contains precise electronic components, never attempt to disassemble it.
- * Be careful not to drop the unit or handle it roughly.
- * Avoid using the unit in extreme temperatures (below 32° F or 0° C, or above 104° F or 40° C). Also protect the unit from extremely dusty or humid conditions.

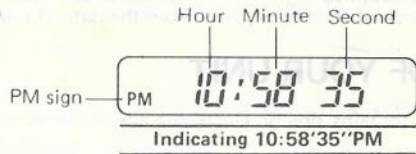
4/USAGE

This unit has functions for regular timekeeping, alarm and calculating functions.

■ Regular timekeeping function

- * This unit maintains accuracy of ± 3 seconds per day (at $15^{\circ}\text{C} - 35^{\circ}\text{C}$ or $59^{\circ}\text{F} - 95^{\circ}\text{F}$).
- * Other functions (alarm or calculations) do not affect the timekeeping function.

● Read-out example



■ Setting time

- * Set the mode switch to "SET" and press the **AC** key prior to setting time.
- * Time can be set by entering hour and minute digits successively according to the 12-hour system.

- * For precise setting, enter a time one or two minutes in advance and press the "ADJ/SET" button with a pointed object (pen, pencil, etc.) when the time arrives at your preset time.

Ex.) Setting 2:00PM

OPERATION		READ-OUT
Mode switch → "SET"		
	AC	0.
1) (Entry of hour)	2	2.
2) (Entry of minute)	00	200.
3) (PM sign)	PM	200.
4) (Press on time signal of 2:00PM)	ADJ/SET	PM 2:00 00


(When entering AM, pressing of **PM** is not required.)

(The moment the "ADJ/SET" button is pressed the clock starts.)


- * To correct a wrong entry, press **AC** and repeat the above operations.
- * After replacing the battery the time has to be reset.
- * The **TIME** key recalls the regular time while in other display.

- Readjusting an error up to ± 30 seconds can be corrected by pressing the adjustment button to match a time signal.



Ex.) Readjusting a gain (when second display is 01 to 29.)

OPERATION	READ-OUT		
Mode switch \rightarrow "TIME", "SET" or "CAL"			
(Time signal of 10:58PM) 	<table border="1"> <tr> <td>PM 10:58 18</td> </tr> <tr> <td>PM 10:58 00</td> </tr> </table>	PM 10:58 18	PM 10:58 00
PM 10:58 18			
PM 10:58 00			
	(18 seconds gain is adjusted to zero.)		


Ex.) Readjusting a loss (when second display is 30 to 59.)

OPERATION	READ-OUT		
Mode switch \rightarrow "TIME", "SET" or "CAL"			
(Time signal of 10:59PM) 	<table border="1"> <tr> <td>PM 10:58 35</td> </tr> <tr> <td>PM 10:59 00</td> </tr> </table>	PM 10:58 35	PM 10:59 00
PM 10:58 35			
PM 10:59 00			
	(25 seconds loss adjusted to zero.)		

■ Hourly time signal










- * The hourly time signal can be set and deactivated by pressing  , alternately, with the mode switch at "SET".
- * When set, "  " will appear on the display and the time signal will be given every hour on the hour.

■ Alarm function

- * Once the alarm is set, an electronic buzzer sounds for 60 seconds at each pre-set time until cleared.
- * Set the mode switch at "SET" and press  prior to setting the alarm.

● Setting alarm

Ex.) Setting the alarm at 7:30AM

OPERATION	READ-OUT		
Mode switch \rightarrow "SET"			
(Entry of time)   	<table border="1"> <tr> <td>0.</td> </tr> <tr> <td>730.</td> </tr> </table>	0.	730.
0.			
730.			
	(Press  for PM setting.)		
	<table border="1"> <tr> <td> AM 7:30 AL</td> </tr> </table>	 AM 7:30 AL	
 AM 7:30 AL			
	(The "  " sign appears indicating alarm is set.)		

- * If the alarm display is left for approximately 6 minutes, the display reverts to regular time.
- * To cut off the buzzer, press **ALARM**.
- * The preset alarm time can be changed by new alarm settings.
- * Electronic buzzer sounds only when " (•••) " sign is on the display. Each time the **ALARM** key is pressed with the mode switch at "SET", " (•••) " sign will be on and off alternately.
- * Electronic buzzer sounds for 15 seconds by pressing **AC** **ALARM** in sequence, with the mode switch at "SET".

■ Calculating function

- * Set the mode switch to "CAL" when calculating.
- * Press the **AC** key, prior to starting calculations.
- * Calculations do not affect the clock.
- * If another function is activated while calculating, calculation is cleared except the contents of the memory.
- * When not calculating for approximately 6 minutes the display reverts to regular time.
- * Overflow is indicated by the "E" sign and stops further calculations.

Overflow occurs:

- a) When the integer part of an answer, whether intermediate or final, exceeds 8 digits. However, the significant 8 digits of the answer is given and the decimal position is 8 digits to the right.
- b) When the integer part of an accumulated total in the memory exceeds 8 digits.

To release the overflow check, press the **AC** or **C** key.

AC clears the entire machine except the memory.

C clears only the "E" sign and the displayed approximate number can be utilized in subsequent calculations.

Memory protection:

The contents of the memory are protected against overflow and the total accumulated so far is recalled by the **MRC** key after the overflow check is released by the **C** or **AC** key.

5/SPECIFICATIONS

■ CLOCK

Accuracy: Within ± 3 seconds per day (at $15^{\circ}\text{C} - 35^{\circ}\text{C}$ or $59^{\circ}\text{F} - 95^{\circ}\text{F}$).
Read-out: 12-hour system digital display of hour, minute, second and AM/PM.

Adjustment: Readjusting an error within ± 30 seconds at one touch.

Hourly time signal: Hourly time signal can be given every hour on the hour.

■ ALARM

Buzzer: Electronic buzzer sounds for 60 seconds.

Sign: "0000"

■ CALCULATOR

Abilities: Four basic calculations, constants for $+/-/x/\div$, memory calculations, and percentage calculations including add-ons/discounts and mark-ups.

Capacity: 8 digits.

Read-out: Suppresses unnecessary 0's (zeros).

Decimal point: Full floating with underflow.

Overflow check: Indicated by the "E" sign, locking the calculator.

■ MAIN COMPONENT

One chip C-MOS-LSI.

■ POWER CONSUMPTION

0.003W

■ POWER SOURCE

One lithium battery (Type: CR2025C).

The unit gives approximately 12 months continuous operation on type CR2025C.

■ AMBIENT TEMPERATURE RANGE

$0^{\circ}\text{C} - 40^{\circ}\text{C}$ ($32^{\circ}\text{F} - 104^{\circ}\text{F}$).

■ DIMENSIONS

5.7mmH x 197mmW x 60mmD ($7/32''\text{H} \times 7\frac{3}{4}''\text{W} \times 2\frac{3}{8}''\text{D}$) open

7.6mmH x 98mmW x 60mmD ($5/16''\text{H} \times 3\frac{7}{8}''\text{W} \times 2\frac{3}{8}''\text{D}$) closed

■ WEIGHT

44g (1.6 oz) including battery.

CALCULATION EXAMPLES EJEMPLOS DE CALCULOS

- * Set the mode switch to "CAL" when calculating.
Be sure to press **AC** prior to starting calculations.
- * Para calcular, coloque el conmutador de modo en "CAL".
No olvide de tocar el botón **AC** antes de comenzar con los cálculos.

- Basic calculations
- Cálculos básicos

EXAMPLE EJEMPLO	OPERATION OPERACION	READ-OUT LECTURA
$(12+3) \times 89 \div 7 = 190.71428$	12 \oplus	12. \oplus
	3 \otimes	15. \otimes
	89 \div	1335. \div
	7 $=$	190.71428

* To perform a problem commencing with a negative figure, press **AC** \ominus ENTRY in sequence.

* Para realizar un problema que comience con una cifra negativa, presione **AC** \ominus ENTRADA en esa secuencia.

$(-8) \times 5 \div 4 = -10$ **AC** \ominus 8 \otimes 5 \div 4 $=$ -10.

- Constant calculations
- Cálculos con constante

$3 + 1.2 = 4.2$

$6 + 1.2 = 7.2$

$4 - 5.6 = -1.6$

$9 - 5.6 = 3.4$

$2.3 \times 12 = 27.6$

$4.5 \times 12 = 54$

1 \ominus 2 \oplus \oplus 3 $=$

6 $=$

5 \ominus 6 $=$ \ominus 4 $=$

9 $=$

1 2 \otimes \otimes 2 \ominus 3 $=$

4 \ominus 5 $=$

4.2 \otimes
7.2 \otimes

-1.6 \otimes
3.4 \otimes

27.6 \otimes
54. \otimes

$$23 \div 4 = 5.75$$

$$56 \div 4 = 14$$

$$2.5^2 = 6.25$$

$$2.5^3 = 15.625$$

$$2.5^4 = 39.0625$$

$$\frac{1}{4} = 0.25$$

$$\frac{1}{4^2} = 0.0625$$

$$\frac{26}{12+45} = 0.4561403$$

$$4 \div \div 23 =$$

$$56 =$$

$$2 \square 5 \times \times =$$

$$=$$

$$=$$

$$4 \div \div 1 =$$

$$=$$

$$12 \div 45 \div \div 26 =$$

5.75

14.

6.25

15.625

39.0625

0.25

0.0625

0.4561403

Memory calculations

Cálculos con memoria

- Be sure to press the **MRC** key twice prior to starting a memory calculation. When a number is stored in the memory, the "M" sign appears on the display.
- Cerciorarse de tocar dos veces la tecla **MRC** antes de comenzar operaciones con la memoria. Cuando un número es retenido en la memoria, la señal "M" aparece en la pantalla.

$$53 + 6 = 59$$

$$23 - 8 = 15$$

$$56 \times 2 = 112$$

$$+) 99 \div 4 = 24.75$$

$$210.75$$

$$\text{MRC} \text{MRC} 53 \div 6 \text{M}+$$

$$23 - 8 \text{M}+$$

$$56 \times 2 \text{M}+$$

$$99 \div 4 \text{M}+$$

$$\text{MRC}$$

59. ^M

15. ^M

112. ^M

24.75 ^M

210.75 ^M

$$8+8+(6\div 5)-(6\div 5)+(6\div 5)=17.2$$

$$\text{MRC} \text{MRC} 8 \text{M+} \text{M+} 6 \div 5 \text{M+} \text{M-} \text{M+} \text{MRC}$$

17.2

$$\begin{array}{r} 12 \times 3 = 36 \\ -) 45 \times 3 = 135 \\ 78 \times 3 = 234 \\ \hline 135 \end{array}$$

$$\text{MRC} \text{MRC} 3 \times \times 12 \text{M+}$$

36.

$$-) 45 \times 3 = 135$$

$$45 \text{M-}$$

135.

$$78 \times 3 = 234$$

$$78 \text{M+}$$

234.

$$\hline 135$$

$$\text{MRC}$$

135.

$$\frac{85+26}{43-18}=4.44$$

$$\text{MRC} \text{MRC} 43 = 18 \text{M+}$$

25.

$$85 \div 26 \div \text{MRC} =$$

4.44

Percentage calculations

Cálculos con porcentaje

12% of 1500

12% en 1500

$$1500 \times 12\%$$

180.

Percentage of 660 against 880

Porcentaje de 660 contra 880

$$660 \div 880 \%$$

75.

* A constant is utilized in these percentage calculations.

* En estos cálculos con porcentaje se utiliza una constante.

15% add-on of 2500

15% de aumento sobre 2500

$$2500 \times 15\% +$$

2875.

25% discount of 3500

25% de descuento sobre 3500

$$3500 \times 25\% -$$

2625.

Mark-up

What will the selling price and profit be when the purchasing price of an item is \$480 and the profit rate to the selling price is 25%?

Recargos

¿Cuál será el precio de venta y la ganancia cuando el precio de compra de un artículo es de \$480 y la relación de ganancia sobre el precio de venta es del 25%?

480 + 25%

Selling price:
Precio de venta: \$640

(Subsequently) -
(Subsecuentemente)

Profit:
Ganancia: \$160

Increase/decrease

If you made \$80 last week and \$100 this week, what is the percent increase?

Subas y bajas

Si la semana anterior Ud. ganó \$80 y esta semana \$100, ¿cual es el porcentaje de suba?

100 - 80%
(%)