

CITIZEN®

Model No. AV3* * * / Cal. No. E27 *

- INSTRUCTION MANUAL
- MANUEL D'INSTRUCTIONS
- MANUAL DE INSTRUCCIONES



Eco-Drive®

CTZ-A8147

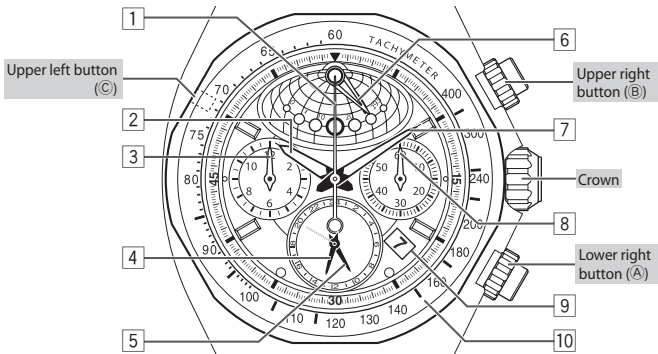
Table of contents

Thank you for your purchase of this Citizen watch.

Before using the watch, read this instruction manual carefully to ensure correct use.

Component identification	2	Troubleshooting	22
Adjusting the time	6	Precautions	26
Adjusting the date	7	Maintenance	34
Adjusting the moon phase	8	Information	35
Adjusting the reference (0) position of the moon phase indicator	12	Specifications	36
Using the chronograph	14		
Using the tachymeter	16		
Recharging your watch	19		

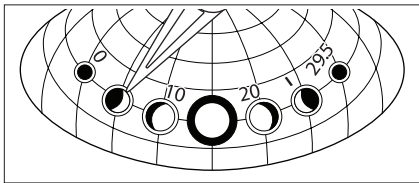
Comoponent identification



-
- | | | | |
|---|-------------------------|----|-------------------------|
| 1 | Chronograph second hand | 6 | Moon phase indicator |
| 2 | Hour hand | 7 | Minute hand |
| 3 | Chronograph hour hand | 8 | Chronograph minute hand |
| 4 | Second hand | 9 | Date indication |
| 5 | 24 hour hand | 10 | Tachymeter |

The illustrations in this instruction manual may differ from the actual appearance of your watch.

How to read the moon phase indicator



The moon phase shows us the number of days since a new moon. This indication is shown between “0” and “29.5” (the number of days it takes for the moon to complete its cycle).





The moon phase indication on this watch should be used as an approximate representation only. It is not intended to provide an exact depiction of the moon as it appears in the sky.

The indication of “5” shown in the illustration above represents 5 days since the “new” moon.

- Refer to page 8 for instructions on setting the moon phase indicator.

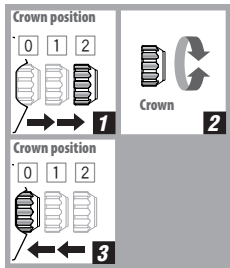
How to use the screw down crown and screw down push button

Some models feature a screw down crown and/or screw down push button. Locking the crown and/or button prevents accidental operation. These must be unlocked prior to using certain features of your watch such as setting the time or date.

	Unlock	Lock
Screw down crown	 <p>Rotate the crown counterclockwise until it releases from the case.</p>	 <p>Push the crown in to the case. With gentle pressure towards the case, rotate the crown clockwise to secure it to the case. Be sure to tighten firmly.</p>
Screw down push button	 <p>Rotate the locking screw counterclockwise, and loosen until it stops.</p>	 <p>Rotate the locking screw clockwise, and tighten firmly.</p>

- Unlocking is not required when a standard crown and button are equipped.

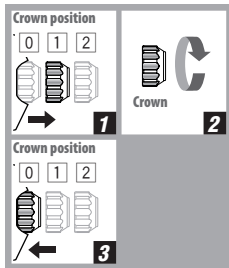
Adjusting the time



- 1. Pull the crown out to position 2 when the second hand indicates "0."**
- 2. Adjust the time by rotating the crown.**
 - The 24-hour, hour and date movement are linked with the minute hand. The date advances only and does not move in a backwards fashion.
 - The moon phase indicator must be adjusted separately as outlined on page **8** of these setting instructions.
- 3. Push the crown in to position 0 to start the watch.**

The second hand starts to move.

Adjusting the date



1. Pull the crown out to position 1.

2. Adjust the date by rotating the crown counterclockwise.

- The date will advance only. If you pass the desired date, continue to rotate the crown until the desired date is shown again.
- The moon phase indicator must be adjusted separately as outlined on page 8 of these setting instructions.

3. Push the crown in to position 0.

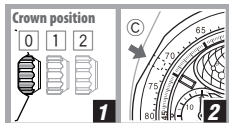
Note

You must manually adjust the date for each month shorter than 31 days.

Adjusting the moon phase

The moon phase is shown between “0” and “29.5.”

- Before commencing, be sure to check the current moon phase (days since a new moon) through your local newspaper, internet, or other source.



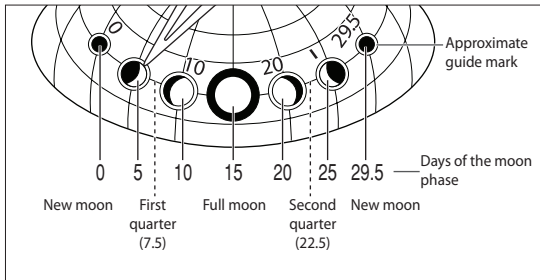
Press and hold the upper left button (C) with a narrow pointed object such as a wooden toothpick.

1. Ensure that the crown is in position **0**.
2. Adjust the moon phase indicator by pressing and releasing the upper left button (C). You may use a small pointed object such as wooden toothpick.

- Each time you press and release the upper left button (C), the moon phase indicator advances the equivalent of approximately 7 hours.
- If you press and hold the upper left button (C), the moon phase indicator will advance rapidly.
- Once the moon phase indicator reaches “29.5,” it will rapidly return to “0.”

- The moon phase indicator operates independently of other hands and/or features of this watch.
- The moon phase indicator will not align perfectly with the “guide mark.” See page **10**.
- To confirm and/or correct the reference (0) position of the moon phase indicator, please refer to pages **12** and **13** of this instruction.

Notes on the moon phase

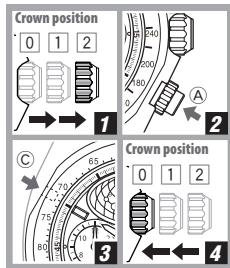


- The moon phase indication on this watch should be used as an approximate representation only. It is not intended to provide an exact depiction of the moon as it appears in the sky.

Adjusting the reference (0) position of the moon phase indicator

Adjust the reference (0) position of the moon phase indicator.

- Be sure to reset the chronograph to “0” as shown on page 15 of this instruction prior adjusting the reference (0) position of the moon phase indicator.



1. Pull the crown out to position 2.
2. Press and hold the lower right button (A) for five or more seconds.

The moon phase indicator moves to indicate the current reference (0) position stored in memory.

3. Adjust the moon phase indicator to the correct reference (0) position by pressing and releasing the upper left button (C).

- Each time you press and release the upper left button (C), the moon phase indicator advances the equivalent of approximately 7 hours.
- If you press and hold the upper left button (C), the moon phase indicator will advance rapidly.
- Once the moon phase indicator reaches “29.5,” it will rapidly return to “0.”

4. Push the crown in to position 0.

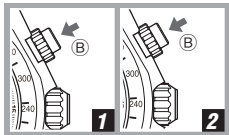
The adjustment of the reference (0) position of the moon phase indicator is complete.

The moon phase indicator hand will now be in the correct reference (0) position and must be adjusted to show the correct moon phase as outlined on page 8 of this instruction.



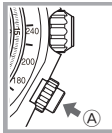
Correct reference (0)
position

Using the chronograph



- Ensure that the crown is in position **0**.
- 1. Press and release the upper right button (B) to start timing.**
 - The button clicks.
- 2. Press and release the upper right button (B) to stop timing.**
 - Pressing and releasing the upper right button (B) again restarts timing from the point of the previously recorded time.

- You can record up to 12 hours increments of 0.2 seconds.
- The chronograph stops automatically 12 hours later.



To reset the chronograph

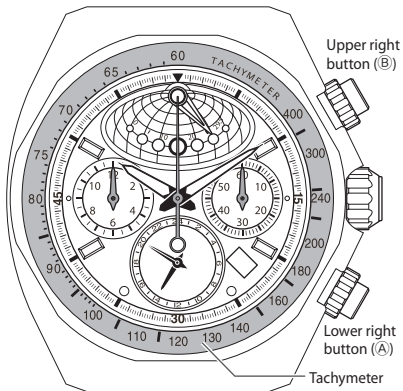
Pressing and releasing the lower right button (A) after stopping the chronograph by pressing and releasing the upper right button (B).

- You must reset the chronograph after timing for using other functions.

Using the tachymeter

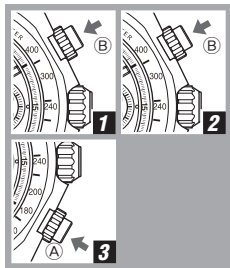
The tachymeter easily brings you the average speed by recording a lap time to go one kilometer.

- You can measure the approximate average speed from 60 km/h up to 400 km/h.
- The illustrations in this instruction manual may differ from the actual appearance of your watch.
- Some models do not feature the tachymeter.



To measure an average speed

Read the value on the tachymeter after recording a lap time.



- Ensure that the crown is in position **0**.

1. Press and release the upper right button (B) to start timing.

The chronograph second hand starts timing.

2. Stop timing at the point one kilometer away from the starting point by pressing and releasing the upper right button (B).

The chronograph second hand indicates the approximate average speed on the tachymeter.

3. Press and release the lower right button (A) to reset the chronograph.



Ex.: When average is 90 km/h

Recharging your watch

This watch has a rechargeable cell which is charged by exposing the dial to light such as direct sunlight or fluorescent lamps.

For optimal performance:

- Expose the watch with the dial towards direct sunlight for several hours at least once a month.
- Place the watch where the dial is exposed to bright light, such as by a window when not using.

When the watch is regularly covered with long sleeves, it may not be charged sufficiently. Try to keep the watch exposed to light sufficient for charging.

Do not charge the watch at a high temperature (about 60°C/140°F or higher).

When the watch reaches a low charge state—insufficient charge warning function

When the power reserve becomes low, the second hand moves once every two seconds—This is the insufficient charge warning function. Charge the watch by exposing the dial to light.

- After the watch is charged, the second hand will move normally.
- If you have not charged the watch for about three days or more since the insufficient charge warning movement began, the watch will run out power and stop.

Caution

When the watch is in a low charge state as indicated by the second hand moving once every two seconds, you cannot use the chronograph and adjust the moon phase/reference (0) position of the moon phase indicator.



Charging time by environment

Below are the approximate times needed for charging when exposing the watch dial to light continuously.

Please use this table as a reference only.

Environment	Illuminance (Lx)	Charging time to work for one day	Charging time to start working normally when the rechargeable cell is empty
Under direct sunlight or cloudy weather (not through a window)	10,000 to 100,000	2 to 12 minutes	45 minutes to 3.5 hours
20 cm under a fluorescent lamp (30 W)	3,000	45 minutes	10 hours
Interior lighting	500	4 hours	70 hours

This watch will run for approximately 12 months from a full charge without further exposure to light.

Troubleshooting

If you have a problem with your watch, check the table below.

Symptoms	Remedies	Page
----------	----------	------

The hands do not work properly.

The second hand moves once every two seconds.	This indicates a low charge state. Fully charge your watch.	19
All hands stop moving.	Push the crown in to position 0 .	–
	Charge the watch by exposing it to direct sunlight (not through a window) for five to six hours.	20

The time and/or date is not correct.

The time and/or date is wrong.	Adjust the time and/or date.	6, 7
--------------------------------	------------------------------	-------------

Symptoms	Remedies	Page
----------	----------	------

The moon phase is not correct.

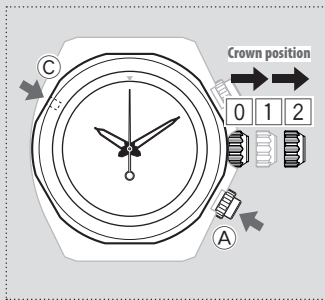
The moon phase indicator is not correct.	Confirm the reference position of the hand.	12, 13
	Adjust the moon phase indicator. Note: The moon phase shows an approximate not exact representation of the moon.	8, 9

Others

The watch does not function, even after fully charging and setting.	Charge the watch by exposing it to direct sunlight for five or six hours. Though the trouble is not solved after charging, contact your nearest Authorized Citizen Service Center.	19
---	---	-----------

Resetting the watch

The watch may not work properly if it is affected by static electricity or shock.



- Be sure to charge the watch fully before resetting.
- Reset the chronograph before resetting the watch. See page 15.
- After resetting the watch, be sure to adjust the reference (0) position of the moon phase indicator, and the time, date and moon phase.

- 1. Pull the crown out to position 2.**
- 2. Press and hold the upper left button (C) and the lower right button (A) simultaneously.**

The moon phase indicator moves slightly indicating the watch has been reset. Be sure to adjust the reference (0) position if needed as shown on pages *12* and *13*.

- 3. Adjust the reference (0) position of the moon phase indicator correctly.**
- 4. Adjust the moon phase indicator.**
See page *8*.
- 5. Adjust the time and date.**
See pages *6* to *7*.

Precautions

Warnings

Handling the rechargeable cell

- Do not remove the rechargeable cell. If it is removed, keep the rechargeable cell out of the reach of children to prevent ingestion.
- If the rechargeable cell is swallowed, consult a doctor and seek medical treatment.

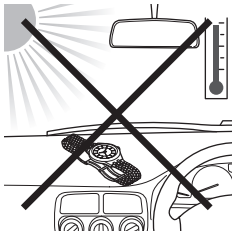
Cautions

About charging

- Excessively high temperature when charging the watch may cause discoloration and deformation of the components, and result in malfunction of the movement.
- Do not charge the watch at a high temperature (about 50°C/122°F or higher).

Example:

- charging the watch too close to light such as an incandescent lamp or halogen lamp (Halogen lights are not recommended for charging due to their high heat output.)
- charging the watch in locations where the temperature may become extremely high—such as on the dashboard of a vehicle



To avoid injury

- DO NOT wear the watch where the temperature becomes extremely high—such as in a sauna. The watch may become hot and burn the skin.

To avoid malfunction

- DO NOT use the watch where the temperature is lower or higher than the operating temperature specified in this manual. Doing so may cause the watch to malfunction or stop.
- DO NOT place the watch nearby any materials generating a strong magnetic field such as:
 - magnetic health equipment such as a magnetic necklace
 - a magnetic latch of a refrigerator door
 - a magnetic clasp on a handbag
 - a magnetic coin tray
 - speakers of a mobile phone
 - electromagnetic cooking devices

They may interfere with function of the movement in the watch causing it to stop or operate erratically.




- DO NOT place the watch on or nearby household appliances that generate static electricity such as Televisions or computer monitors. The timekeeping may be affected.

- DO NOT apply any strong shock, for example, by dropping it onto a hard floor.
- Avoid using the watch where it may be exposed to chemicals or corrosive gases. If solvents, such as thinners or benzine, or substances containing such solvents come in contact with the watch, discoloration, melting, cracking, etc. may occur.

The case, band, or other parts may become discolored if the watch comes into contact with some household chemicals mercury that may be found in thermometers.

Warnings on water-resistance performance

- Water-resistance for daily use: This type of watch is resistant to minor exposure to water such as accidental splashing. For example, you may wear the watch while washing your face; however, it is not designed to be used underwater.
- Upgraded water-resistance for daily use (tested to 5 bar): This type of watch is resistant to moderate exposure to water. You may wear the watch while swimming; however, it is not designed to be used for skin diving.
- Upgraded water-resistance for daily use (tested to 10 or 20 bar): This type of watch may be used for skin diving; however, it is not designed to be used for scuba or saturation diving.
- Before use, confirm the water-resistance level of your watch indicated on the dial and case, referencing the table on the next page. (The unit “bar” is roughly equal to 1 atmosphere.)
- “WATER RESIST(ANT) xx bar” may also be indicated as “W.R. xx bar.”

Names	Indication (Case or back)	Specifications	Examples of use		
			Minor exposure to water (washing face, rain, etc.) 	Moderate exposure to water (washing, kitchen work, swimming, etc.) 	Marine sports (skin diving) 
WATER RESIST(ANT) or no indication	WATER RESIST(ANT)	Water resistant for daily use	YES	NO	NO
WR 50 or WATER RESIST 50	WATER RESIST(ANT) 5 bar	Water resistant to 5 atmospheres	YES	YES	NO
WR 100/200 or WATER RESIST 100/200	WATER RESIST(ANT) 10/20 bar	Water resistant to 10/20 atmospheres	YES	YES	YES

■ Cautions on exposure to water

- Be sure to use the watch with the crown pressed in fully (normal position) to ensure the water resistance. If the crown of your watch is the screw down crown, be sure to tighten it completely.
- Do not operate the crown or buttons when the watch is wet.
- If water has penetrated the watch, or if the inside of the glass is fogged up and does not become clear in a day, take the watch to your dealer or Citizen Service Center for repair. Leaving the watch in such a state will rust the internal parts and cause malfunction.
- If seawater penetrates the watch, place the watch in a box or plastic bag and immediately take it in for repair. Otherwise, the pressure inside the watch will increase, and parts (glass, crown, buttons, etc.) may come off.
- If the watch is used in seawater, rinse with fresh water afterward and wipe with a dry cloth after each use.

■ Keep your watch clean

- Keep your watch clean to prevent rust or dirt building up as this may stain your clothes, damage the watch or appear as black residue on your wrist. Depending on use, occasional cleaning of the exterior of your watch may be necessary.
- Wipe dirt off the leather band with a soft and dry cloth to prevent it from discoloring.

Maintenance

Daily maintenance

- Rotate the crown while it is pressed in fully and press the buttons periodically so they do not become stuck due to accumulations of foreign matter.
- Wipe off dirt, perspiration, and water from the case and glass with a clean soft cloth occasionally.
- To clean a metal, plastic, or rubber watchband, wash away dirt with water. Use a soft brush to remove dust and dirt stuck in the gaps in a metal band.
- Do not use a polishing type of cloth as this may damage the surface and certain treatments.
- Do not use solvents (thinner, benzene, etc.), as they may damage the finish.

Periodical inspections

Your watch needs an inspection once every two or three years for safety and longer usage. To keep your watch water-resistant, the gaskets and other components need to be replaced regularly. Other parts need to be inspected and replaced if necessary.

Always ask for genuine Citizen parts upon replacement.

Information

Luminous dials and hands

The paint on the dial and hands helps you with reading the time in a dark place. The luminous paint stores light (daylight or artificial light) and glows in a dark place.

It is free from any radioactive substance or any other material harmful to a human body or environment.

- The light emission gradually becomes weaker as time passes.
- The duration of the light (“glow”) will vary depending on the brightness, types of and distance from a light source, exposure time, and the amount of the paint.
- The paint may not glow and/or may dissipate quickly if exposure to light was not sufficient.

Specifications

Movement caliber number	E27*	Type	Analog solar-powered watch
Timekeeping accuracy	Within ± 15 seconds per month when worn at normal operation temperatures ($+5^{\circ}\text{C}/41^{\circ}\text{F}$ and $+35^{\circ}\text{C}/95^{\circ}\text{F}$)		
Operating temperature range	$-10^{\circ}\text{C}/14^{\circ}\text{F}$ to $+60^{\circ}\text{C}/140^{\circ}\text{F}$		
Display functions	Time: Hours, minutes, seconds, 24-hours Calendar: Date (not perpetual) Moon phase		
Maximum run time from full charge	<ul style="list-style-type: none">Fully charged to fully discharged: Approximately 12 monthsPower reserve upon insufficient charge warning function: Approximately three days		
Battery	Rechargeable cell, 1pc.		

Additional functions

- Solar power function
- Overcharging prevention function
- Insufficient charge warning function (two-second interval movement)
- Chronograph (up to 12-hours in 0.2 second increments)
- Checking/correcting reference (0) position

Specifications are subject to change without prior notice.

CITIZEN®

CTZ-A8147