

CITIZEN®

INSTRUCTION MANUAL



Eco-Drive®



ENGLISH

FRANÇAIS

ESPAÑOL

DEUTSCH

ITALIANO

PORTUGUÊS

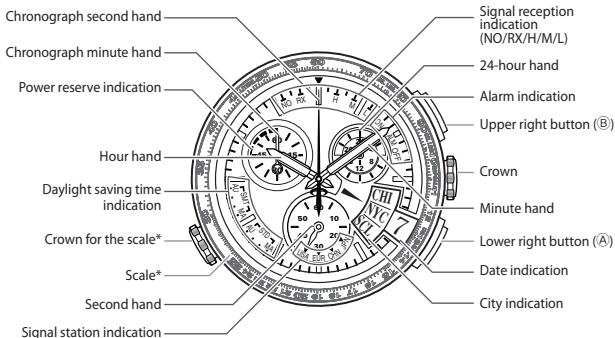
中文(繁体字)

中文(简体字)

Table of contents

Parts identification	2	Notes on the indications for the time signal reception	21
Preparation		Notes on the reception of the time signal.....	22
1: Confirming the time signal reception and power reserve	4	Setting the time/ calendar manually.....	26
2: Checking the reference position of the hands	6	Adjusting the reference position ...	30
3: Setting the city	7	Notes on charging your watch	32
Using the chronograph	10	Troubleshooting	36
Using the world time	11	Precautions	42
Using the alarm.....	12	Maintenance	50
Setting the daylight saving time ...	14	Information.....	51
Notes on the time signal	16	Specifications	54
Receiving the time signal manually (On-demand reception)	20	Using the calculation scales	56

Parts identification



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

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

Some models feature a screw down crown and screw down push button.

Locking the crown and button prevents accidental operation. Unlock them when you want to operate the watch.

	Unlock		Lock	
Screw down crown		Rotate the crown counterclockwise (left) until it releases from the case.		Rotate the crown clockwise (right) while pushing it in, and tighten firmly.
Screw down push button		Rotate the locking screw counterclockwise (left), and loosen until it stops.		Rotate the locking screw clockwise (right), and tighten firmly.

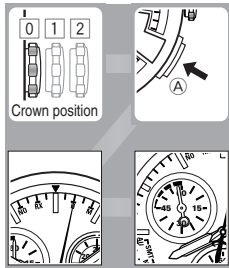
- Unlocking is not required when a standard crown and button are equipped.

* Some models do not feature the scale and the crown for the scale.

Preparation

1: Confirming the time signal reception and power reserve

You must confirm the signal reception result and charge level at first before use.



1. Ensure that the crown is in position 0.
2. Press the lower right button (A).

The chronograph second hand indicates the signal reception result and the chronograph minute hand indicates the current power reserve level.

- See the next page to show the indications.

3. Press the lower right button (A) to return to normal operation.

- Before the operation above, reset the chronograph.

The indication of the signal reception result

Indication			
Result	H	M	L

For in depth information on the receiving, see page 22.

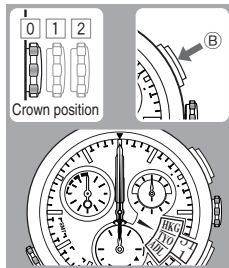
The indication of the power reserve level

Indication				
Power duration	Almost empty	Partially charged	Mostly charged	Fully charged
	Charge the watch at once.			

The indication is not so precisely. Charge the watch frequently . See page 32.

2: Checking the reference position of the hands

If the reference position is incorrect, the time and calendar are not indicated properly.



Correct reference position

1. **Ensure that the crown is in position 0.**
2. **Press and hold the upper right button (B) for ten seconds.**

The hands move quickly to show the current reference position.

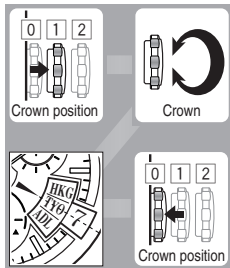
The correct reference position is when;

- all hands are indicating 12:00;
 - the date indication is between “31” and “1”.
- You can select any city for checking the reference position.
- If all the hands are not in the correct reference position, adjust them referring to page 30.
3. **Press the upper right button (B) to complete confirmation.**

- Before the operation above, reset the chronograph.

3: Setting the city

You can select your home or favorite city from 26 cities in the world.



1. Pull the crown out to position 1.

The chronograph second hand indicates the daylight saving time setting.

2. Rotate the crown to select the city.

- Refer to the pages 8 and 9.
- Adjust the position of the city name to the center of the window.
- Each time you change the city, the time of the selected city is shown.

3. Push the crown in to position 0.

Table of the city names

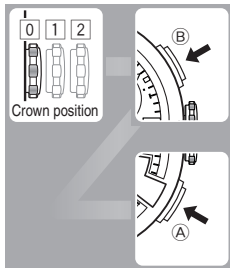
Indication	City name	Time difference	Signal station
UTC	–	0	–
LON	London	0	EUR
PAR	Paris	+1	
CAI	Cairo	+2	
MOW	Moscow	+3	
DXB	Dubai	+4	
KHI	Karachi	+5	CHN
DEL	Delhi	+5.5	
DAC	Dhaka	+6	
BKK	Bangkok	+7	
HKG	Hong Kong	+8	
TYO	Tokyo	+9	JPN
ADL	Adelaide	+9.5	

The signal station is changed depending on the selected city. Some cities cannot receive the signal though the signal station is assigned in the list.

Indication	City name	Time difference	Signal station
SYD	Sydney	+10	JPN
NOU	Noumea	+11	
AKL	Auckland	+12	
MDY	Midway Island	-11	USA
HNL	Honolulu	-10	
ANC	Anchorage	-9	
LAX	Los Angeles	-8	
DEN	Denver	-7	
CHI	Chicago	-6	
NYC	New York	-5	
SCL	Santiago	-4	
RIO	Rio de Janeiro	-3	
FEN	Fernando de Noronha	-2	
PDL	Azores	-1	

Using the chronograph

You can record up to 60 minutes in increments of 0.2 seconds.



1. **Ensure that the crown is in position 0.**
2. **Press the upper right button (B) to start timing.**
The chronograph second hand starts timing.
3. **Press the upper right button (B) to stop timing.**

- Pressing the upper right button (B) restarts timing.
- You have to reset the chronograph after timing for using other functions.

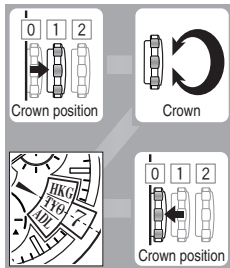
To reset the chronograph

Press the lower right button (A) while stopping.

- While resetting, you can start a new timing by pressing the upper right button (B).
- The chronograph is also reset if you pull the crown out while timing.

Using the world time

You can display a local time among 26 cities or UTC.



1. Pull the crown out to position 1.

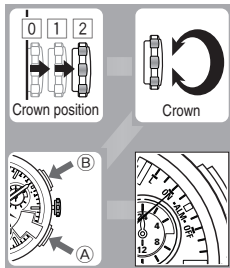
The chronograph second hand indicates the daylight saving time setting.

2. Rotate the crown to select the city.

- Refer to the pages 8 and 9.
- Adjust the position of the city name to the center of the window.
- You can change the daylight saving time setting by pressing the lower right button (A). Refer to page 14.

3. Push the crown in to position 0.

Using the alarm



- 1. Pull the crown out to position 2.**

The chronograph second hand moves to indicate the alarm on/off setting while the hour and minute hands move to indicate the current alarm time setting.
- 2. Rotate the crown to set the alarm time.**
 - The hands start to move continuously by rotating the crown quickly. To stop the rapid movement, rotate the crown.
 - Each time you press the upper right button (B), the "minute" and "hour" of the setting time changes alternately.
- 3. Press the lower right button (A) to turn the alarm "ON".**
 - Each time you press the lower right button (A), the chronograph second hand indicates "ON" and "OFF" alternately.
- 4. Push the crown in to position 0.**
 - The alarm tone does not sound when the crown is pulled out.

■ To stop the alarm tone

Press the upper or lower right button (Ⓐ or Ⓑ).

- The alarm tone sounds for 15 seconds and then stop if a button is not pressed.

■ When using world time

The alarm tone sounds based on the time of the selected city.

- The alarm cannot be set for each city.

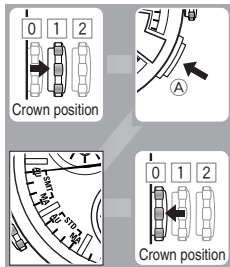
■ To confirm the alarm tone

Pull the crown out to position [2] and press and hold the lower right button (Ⓐ) for two or more seconds.

Setting the daylight saving time

In regions where the daylight saving time (DST) is in effect, the time signal includes the daylight saving time check signal.

- When “UTC” is selected as the city, you cannot change the setting.



- 1. Pull the crown out to position 1.**
The chronograph second hand indicates the daylight saving time setting.
- 2. Press the lower right button (A) to change the daylight saving time setting.**
 - Each time you press the lower right button (A), the chronograph second hand indicates items in the following order:
SMT AU → SMT MA → STD AU → STD MA →
To the beginning
- 3. Push the crown in to position 0.**

About the daylight saving time setting

Select the daylight saving time setting to fit the implementation of the daylight saving time.

Status	Setting		Clock indication
Daylight saving is not performed.	STD MA	manual	The watch always shows the standard time.
Daylight saving starts/ ends out of sync with the time signal.	SMT MA	manual	The watch always shows the daylight saving time. You need change the setting each time the daylight saving starts/ends.
Daylight saving starts/ ends in sync with the time signal.	SMT AU STD AU	auto	The setting changes between “SMT AU” and “STD AU” automatically.

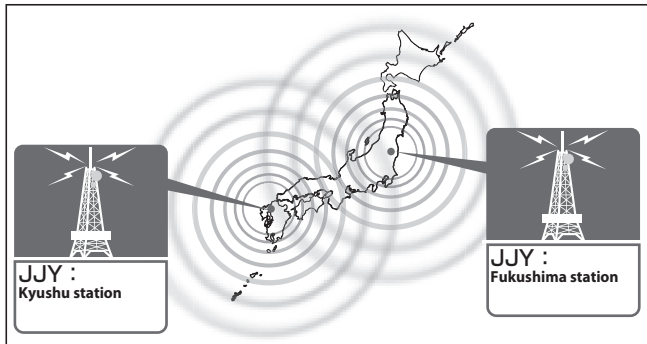
- The period of the daylight saving time varies from countries/areas.
- SMT (summer time), AU (auto), STD (standard), MA (manual)

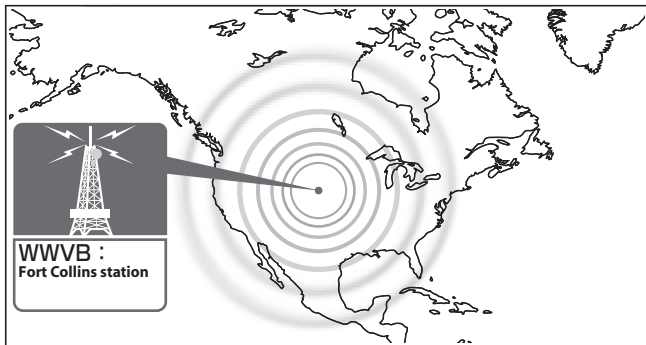
Notes on the time signal

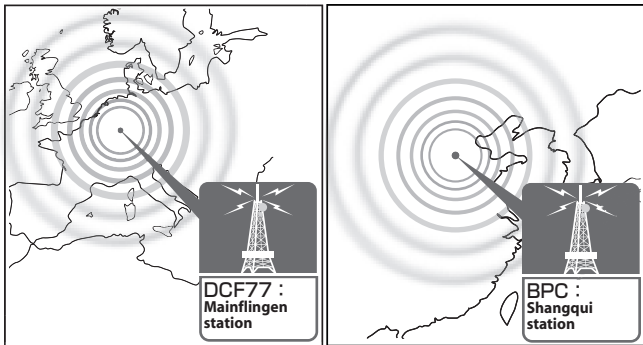
This watch receives the time signal from the five signal stations located in four regions and automatically adjusts the time and calendar. The receivable signal stations are listed as follows:

Signal stations	Kind of the time signal	Signal station indication
Fukushima station, Japan	JJY	JPN
Kyushu station, Japan		
Fort Collins station, Denver, Colorado, USA	WWVB	USA
Mainflingen station, Southeast Frankfurt, Germany	DCF77	EUR
Shangqui station, Henan, China	BPC	CHN

Refer to the maps on pages **17** to **19** to see the locations of the signal stations and their receivable area roughly.



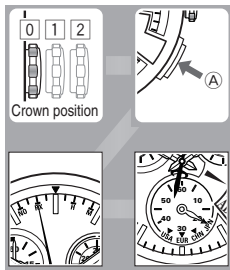




Receiving the time signal manually (On-demand reception)

You can adjust the watch by receiving the time signal any time when the time is not correct or the reception result is “NO”.

- You must be in an area that you can receive a time signal.
- Before attempting on demand reception, be sure to reset the chronograph.



1. **Ensure that the crown is in position 0.**
2. **Press and hold the lower right button (A) for two or more seconds.**

The watch starts to receive the signal with the beep sound, and the chronograph second hand moves to “RX”.

- It takes from two to 15 minutes for updating to complete.
- The watch will not start to receive if the second hand is moving once every two seconds (this is the insufficient charge warning).
- The signal station is changed depending on the selected city.
- You can cancel the reception by pressing the lower right button (A) for two or more seconds.

Notes on indications for the time signal reception

The chronograph second hand shows the current or last status of the reception.

Status	Meanings	
RX	Ready for reception.	
H	Very good condition for reception.	“H”, “M”, and “L” only indicate the condition for reception, and are not related to the performance of the watch.
M	Good condition for reception.	
L	Not good condition for reception. Change the place for reception to indicate “H” or “M”.	
NO	The reception is unsuccessful. Date and calendar are not adjusted.	

Some models shows the station indication in the different way.

Indications				
Stations	JPN	USA	EUR	CHN

Notes on the reception of the time signal

Receiving the time signal

There are three ways to receive the time signal:

Methods	Explanations
Automatic reception	Receives the signal at 2:00 a.m. every day. If reception is unsuccessful, then, the watch tries to receive at 3:00 a.m. and 4:00 a.m.
On demand reception	Receives the signal when you want to adjust the time and calendar. See page 20 .
Recovery automatic reception	Receives the signal automatically after charging when the watch stops due to an insufficient charge.

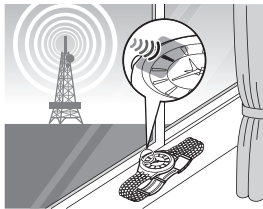
The chronograph second hand indicates the receiving result (success/failure, levels) and the minute hand indicates the receiving station. (See page **21**.)

- Even when this watch receives a time signal successfully, the accuracy of displayed time will be dependent on the reception environment and internal processing.
- If the watch is not able to receive a signal, it will operate normally within an accuracy range of ± 15 seconds per month.

When receiving the time signal

Remove the watch and place it on a stable surface where it can receive the signal better, such as next to a window.

- The reception antenna is located at the 9:00 position of the watch. Place the watch with the 9:00 position facing toward the station.
- Do not move the watch during the time signal reception.
- The watch will not receive a time signal when in a low charge state as indicated by the second hand moving in two second increments (the insufficient charge warning). Charge the watch before reception.



Poor reception areas

It may be difficult to receive the time signal properly under certain environmental conditions or in areas susceptible to radio noise.

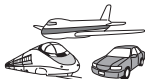
- Extremely hot or cold locations



- Near high-tension electrical lines, railway overhead wires or communication facilities



- Inside vehicles



- Inside reinforced concrete buildings, between tall buildings, mountains, or underground



- Near electrical equipment or office appliances



- Near cellular phones that are in use



■ When signal reception is poor

The surroundings near your house, such as high-tension electrical lines or structures may block the path to the signal location, this can cause a poor environment for receiving the time signal.

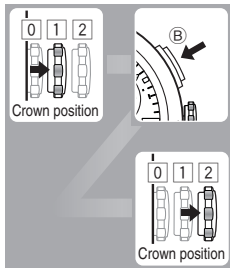
With reference to pages **17** to **24**, search for a better place for reception.

Then, attempt to receive the time signal in the procedure on pages **20**.

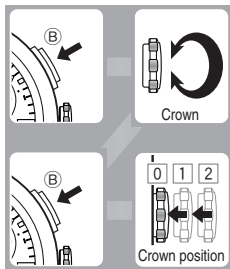
- When the reception result is “L”, place the watch in another location so that “H” or “M” is indicated.

Setting the time/calendar manually

You can adjust the watch manually when the reception fails or you are unable to receive a signal.



- 1. Pull the crown out to position 1.**
The chronograph second hand indicates the daylight saving time setting.
 - You can change the city by rotating the crown. Refer to the pages 8 and 9.
- 2. Press the upper right button (B).**
The chronograph second hand moves to the 30 second position.
- 3. Pull the crown out to position 2.**
Now you can adjust the watch.
- 4. Press the upper right button (B) repeatedly to select the time or calendar for adjustment.**



- Each time you press the upper right button (Ⓑ), the item selection changes in the following order (the selected item moves a little to indicate the selection): **Minute/Second hand** → **Hour/24-hour hand** → **Date** → **Year/Month** → **To the beginning**

5. Rotate the crown to adjust the selected item.

- When selecting the date and time for adjustment, the selected item starts to move continuously by rotating the crown quickly. To stop the rapid movement, rotate the crown.
- When adjusting the date, rotate the crown clockwise (right).
- The year and month are indicated by the chronograph second hand. Refer to the next page to adjust.

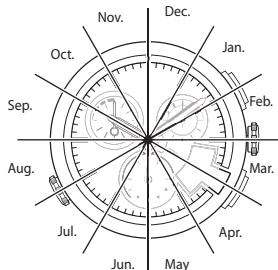
6. Repeat steps 4 and 5 to adjust the other items.

7. Push the crown in to position 0.

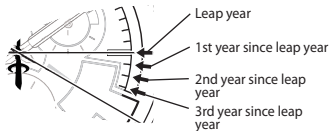
The setting of the time/calendar is complete.

Month and year indications

The year and month are indicated by the chronograph second hand.



The position of the chronograph second hand shows the month.



e.g. When it is March in the leap year

Each minute mark denotes the number of years since a leap year.



The figure shows May in the 1st year from the recent leap year (e.g. 2009).



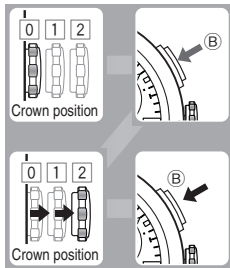
The figure shows September in the 3rd year from the recent leap year (e.g. 2011).

Quick reference chart for number of years passed since leap year

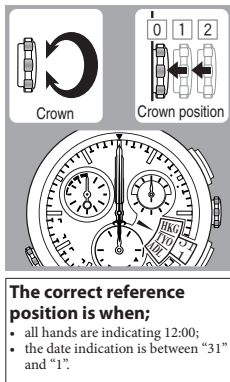
Indication of the chronograph second hand	Passed year	Year
Hour marker	Leap year	2012, 2016, 2020
1st min. marker	1st year	2009, 2013, 2017
2nd min. marker	2nd year	2010, 2014, 2018
3rd min. marker	3rd year	2011, 2015, 2019

Adjusting the reference position

- Before the operation below, be sure to reset the chronograph.
- See the next page to check the correct position for each item.



1. **Ensure that the crown is in position 0.**
2. **Press and hold the upper right button (B) for ten seconds.**
The chronograph second hand starts moving. Then, all hands moves quickly to show the current reference position.
3. **Pull the crown out to position 2.**
The reference position can now be adjusted.
4. **Press the upper right button (B) repeatedly to select the item for adjustment.**



- Each time you press the upper right button (Ⓑ), the item selection changes in the following order (the selected item moves a little to indicate the selection): **Chronograph minute hand/Date → Hour/24-hour hand → Minute/Second hand → Chronograph second hand → To the beginning**

5. Rotate the crown to adjust the selected item.

- The item starts to move continuously by rotating the crown quickly. To stop the rapid movement, rotate the crown.
- When adjusting the date and chronograph minute hand, rotate the crown clockwise (right).

6. Repeat steps 4 and 5 to adjust the other items.

7. Push the crown in to position 0.

8. Press the upper right button (Ⓑ).

You have now completed adjusting the reference position.

Notes on charging 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.
- After taking off the watch, put it in a position so that the dial is exposed to bright light, such as by a window.
- Before storing the watch in a dark place for an extended period of time, be sure to charge it fully.

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).

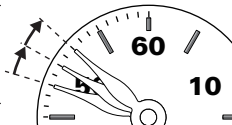
■ When the watch reaches a low charge state—insufficient charge warning function

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. See page 34.
- If you have not charged the watch for six days or more since the insufficient charge warning movement began, the watch will run out power and stop.

Caution

When the second hand moves once every two seconds, you cannot use any functions—chronograph, alarm, etc.—except the time indication.



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	10000 to 100000	3 to 12 minutes	2 to 3 hours
20 cm under a fluorescent lamp (30 W)	3000	45 minutes	6.5 hours
Interior lighting	500	4 hours	35 hours

Your watch will run approximately eight months from a full charge or up to four years with the power save feature engaged.

Power save feature

When the watch is not exposed to light for more than seven days such as when you store it in the dark, all hands automatically stop to save the power.

- When the crown is pulled out, the power save feature will not activate.

To cancel the power save feature

When the watch is exposed to light sufficient for charging, the power save feature is automatically disengaged and normal time indication will resume.

Troubleshooting

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

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

Problems with time signal reception.

Reception is unsuccessful in a receivable area.	Push the crown in to position [0].	—
	Avoid things likely to interfere with a time signal and place the watch with the 9:00 position facing toward the station.	22, 23
	Do not move the watch until the reception is finished.	22
	When the second hand moves once every two seconds, the watch cannot receive the time signal. Charge the watch.	—

Symptoms	Remedies	Page
The correct time and calendar are not indicated after successful reception.	Check the city setting.	–
	Check and correct the reference position.	30

The hands do not work properly.

Some hands moves unintentionally.	Stop the chronograph.	10
The second hand moves once every two seconds.	Charge the watch.	32
All hands stop moving.	Push the crown in to position 0 .	–
	Charge the watch by exposing it to direct sunlight for five or six hours. After charging, the watch starts to receive the time signal automatically (automatic recovery reception).	32

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

The hands do not work properly.

The hands start turning rapidly as you take it out of the case.	The watch is canceling the power save feature. Wait until the rapid movement stops.	35
---	---	-----------

The time and/or date is not correct.

The time and/or date is wrong.	Check the city setting.	—
	Change the daylight saving time setting.	14
	Check and correct the reference position.	30
	Receive the time signal to adjust the time and date.	20
	Set the time and date manually.	26

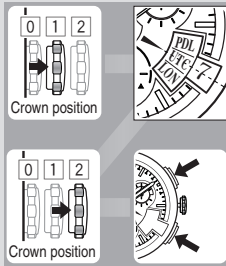
Symptoms	Remedies	Page
The date changes at around 12:00 p.m.	Check and correct the reference position.	30
	Receive the time signal to adjust the time and date.	20
	Adjust the time by 12 hours manually.	26

Others

The watch does not move even if the watch is charged.	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.	32
The alarm tone does not sound on time.	Push the crown in to position [0].	—
	Check the city setting.	11, 12
	Check the power reserve level.	32

Resetting the watch

The watch may not work properly if it is affected by static electricity or shock. In this case, you must reset the watch. Charge the watch before resetting if the power reserve level is low.



- 1. Pull the crown out to position 1.**
The chronograph second hand indicates the daylight saving time setting.
- 2. Rotate the crown to select "UTC".**
 - Adjust the position to the center of the window.
- 3. Pull the crown out to position 2.**
- 4. Press the upper and lower right buttons (A) and (B) simultaneously.**
The confirmation tone sounds and the watch is reset.
The current position of all the hands is set as the new reference position.

After resetting the watch

You must set the watch again in the procedure below.

1. Select a city.

See page **11**.

- You can change the daylight saving time setting. Refer to page **14**.

2. Adjust the reference position correctly.

See page **30**.

3. Adjust the time/calendar.

Refer to page **20** to adjust the watch by receiving the time signal, refer to page **26** to adjust manually.

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.

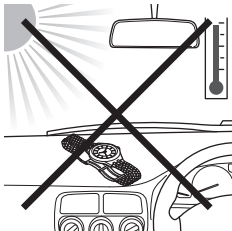
Cautions

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	OK	NO	NO
WR 50 or WATER RESIST 50	WATER RESIST(ANT) 5 bar	Water resistant to 5 atmospheres	OK	OK	NO
WR 100/200 or WATER RESIST 100/200	WATER RESIST(ANT) 10/20 bar	Water resistant to 10/20 atmospheres	OK	OK	OK

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, benzine, 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

The time signal

The time signal is broadcast almost continuously 24-hours a day, but may occasionally be interrupted due to maintenance. The broadcasting conditions of the time signal can be checked on the station web site.

The time signal has no effect on the human body or medical equipment.

■ To avoid hand misalignment by impacts or magnetism

Impact detection function:

This function prevents unwanted movement of the hour, minute and second hands when the watch receives an impact.

Hand correction function (hand reference position auto-correction function):

The reference position of the hands is checked at regular intervals, and if there is any misalignment, the hour, minute and second hands are rapidly corrected to maintain the correct time.

About luminous paints

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

Model	H61*	Type	Analog solar-powered watch
Timekeeping accuracy	Within ± 15 seconds per month on average (when worn at normal temperatures between $+5^{\circ}\text{C}/41^{\circ}\text{F}$ and $+35^{\circ}\text{C}/95^{\circ}\text{F}$ without the time signal reception)		
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, City: Three cities, Calendar: Date, Power reserve level: four degrees, Receiving stations: five stations in four regions (JJY: Japan, WWVB: USA, DCF77: Germany, BPC: China)		
Battery duration without recharging	- Fully charged to fully discharged Approx. four years (from a full charge with power save feature engaged) Approx. eight months (from a full charge without power save feature engaged) - Two seconds interval movement to stopping: Approx. six days		
Battery	Rechargeable cell, 1pc.		

Additional functions

- Power reserve indication
- Overcharging prevention function
- Insufficient charge warning function (two-second interval movement)
- Energy saving function (power save feature)
- Receiving time signal (automatic, on demand, automatic recovery)
- Confirming reception status (RX, H, M, L, and NO)
- Indicating the result of the last reception
- Automatic selection of time signal stations
- Daylight saving time (SMT AU/MA, STD AU/MA)
- Chronograph (up to 60 minutes by 0.2 seconds)
- World time (26 cities and UTC)
- World time alarm
- Perpetual calendar (until February 28th, 2100)
- Correcting reference position

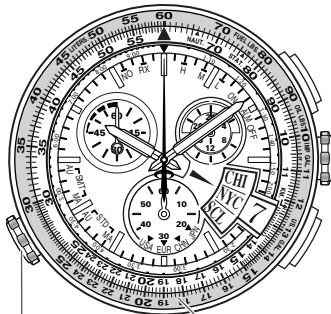
Specifications are subject to change without prior notice.

Using the calculation scales

Using the calculation scales, you can easily calculate the driving distance or general computing, etc.

To rotate the scale, turn the crown for the scale.

- You may need to add a decimal point depending on calculation results.
- The illustration may differ from the actual appearance of your watch.
- Some models do not feature the scale and the crown for the scale.



Crown for the scale

Scale

Calculating the navigation plan

Required time	
Question	How long does it take an airplane flying at 180 knots to fly a distance of 450 nautical miles?
Answer	Align "18" on the scale to "▲". The answer "2:30" (two hours and 30 minutes) corresponds to "45" on the scale.



Speed (ground speed)	
Question	What is the speed (ground speed) of an airplane when it takes 1 hour and 20 minutes to fly a distance of 240 nautical miles?
Answer	Align "24" on the scale to "1:20 (80)". The answer "18" (180 kt) on the scale corresponds to "▲".



Flying distance	
Question	What is the flying distance traveled in 40 minutes at a speed of 210 kt?
Answer	Align “21” on the scale to “▲”. The answer “14” (140 nautical miles) on the scale corresponds to inner “40”.



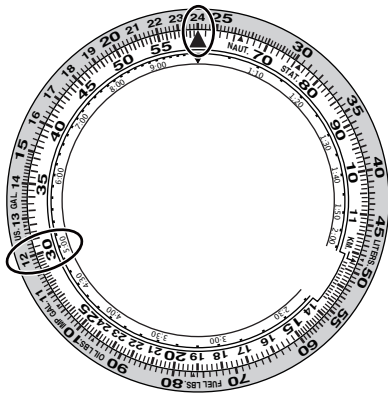
Fuel consumption rate

Question

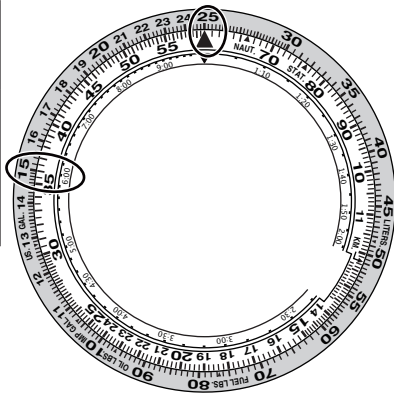
If 120 gallons of fuel are consumed in 30 minutes' flying time, what is the fuel consumption rate?

Answer

Align "12" on the scale to "30". The answer "24" (240 gallons per hour) on the scale corresponds to inner "▲".



Fuel consumption	
Question	How much fuel is consumed in 6 hours at a fuel consumption rate of 250 gallons per hour?
Answer	Align "25" on the scale to "▲". The answer "15" (1500 gallons) on the scale corresponds to inner "6:00".



Maximum flying hours

Question

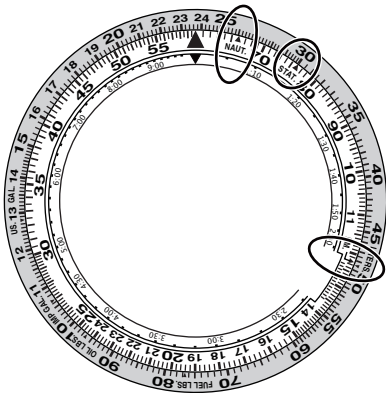
With a fuel consumption rate of 220 gallons per hour and a fuel supply of 550 gallons, what is the maximum number of flying hours?

Answer

Align "22" on the scale to "▲". The answer "2:30" (two hours and 30 minutes) corresponds to "55" on the scale.

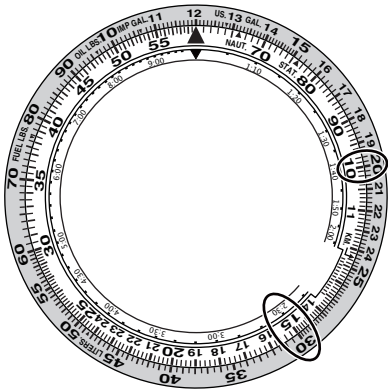


Conversion	
Question	How do you convert 30 miles into nautical miles and kilometers?
Answer	Align "30" on the scale to "STAT. (▲)". The answer "26" (26 nautical miles) on the scale corresponds to "NAUT. (▲)", and the answer "48.2" (48.2 km) on the scale corresponds to "KM. (▲)".

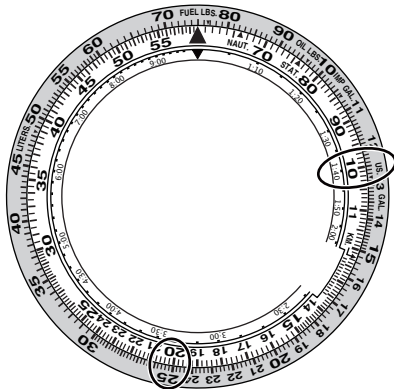


General calculations

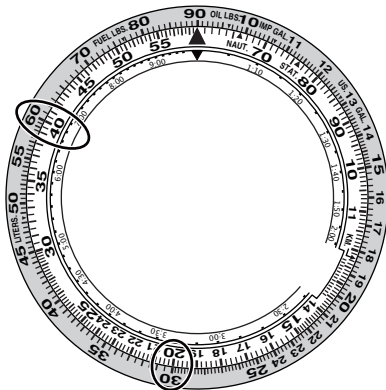
Multiplication	
Question	20×15
Answer	Align “20” on the scale to inner “10”. The answer “30” (300) on the scale corresponds to inner “15”.



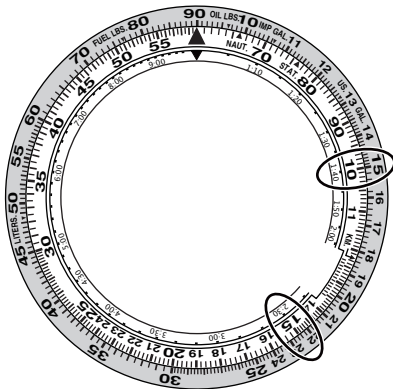
Division	
Question	250 / 20
Answer	Align "25" on the scale to inner "20". The answer "12.5" (125) on the scale corresponds to inner "10".



Ratios	
Question	$30 / 20 = 60 / x$
Answer	Align "30" on the scale to inner "20". The answer "40" (40) corresponds to "60" on the scale. In addition, the ratio of the value on the scale to the inner value is 30:20 at all positions on the scales.



Square root	
Question	225
Answer	Rotate the scale so that an inner value to "22.5" on the scale is equal to a value on the scale to inner "10". The value "15" is the answer.



European Union directives conformance statement



Hereby, CITIZEN WATCH CO.,LTD. declares that this product is in compliance with the essential requirements and other relevant provisions of directive 2014/53/EU and all other relevant EU directives.

You can find your product's Declaration of Conformity at "<http://www.citizenwatch-global.com/>".

Model No.BY0 *

Cal.H61 *

CTZ-B8135