U812 instruction manual

CITIZEN

Thank you for your purchase of this Citizen watch.
Before using the watch, read this instruction manual (PDF) carefully to ensure correct use.
Caliber No. of this watch: **U812**
You can access the web instruction manual in addition by using the two-dimensional code or the URL:
https://www.citizenwatch-global.com/support/html/en/u812/u812.html
Some models may be equipped with enhanced features and functions such as slide rules and tachymeters. To see how to use such features and functions, which is not covered with the instruction manual, and other information, access the CITIZEN support page (**https://www.citizenwatch-global.com/support/**).

Safety precautions — IMPORTANT

This manual contains instructions that should be strictly followed at all times not only for optimal use, but to prevent any injuries to yourself, other persons or property. We encourage you to read the entire booklet (especially, pages **20** - **22**) and understand the meaning of the following symbols:

- Safety advisories are categorized and depicted in this manual as follows:

⚠ **DANGER**	Highly likely to cause death or serious injury
⚠ **WARNING**	Can cause serious injury or death
⚠ **CAUTION**	Can or will cause minor or moderate injury or damage

- Important instructions are categorized and depicted in this manual as follows:
(Following symbols are examples of Pictograms.)

⃠	Warning (caution) symbol followed by prohibited matters.
⚠	Warning (caution) symbol followed by instructions that should be followed or precautions that should be observed.

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Features

Eco-Drive

No periodical battery replacement is needed. This watch is fueled by light.

Analog-digital combination watch

The hands and the liquid crystal display indication show time and other information.

World time

Indicates the time around the world by choosing one of 29 time zones.

Chronograph

Measures up to 24 hours by 0.01 seconds.

Tide graph

Indicates tide information around the world by choosing one of 203 places worldwide.

Race timer

Counts down time until a yacht race start and measures elapsed time since the race started continuously.

Perpetual calendar

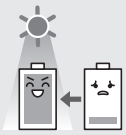
No need for monthly and leap-year date correction until December 31, 2199.

Impact detection function

Prevents the second hand from unwanted movement due to impacts and assists accurate time indication.

• "Eco-Drive" is an original technology of Citizen.

Before using this watch



This watch has a rechargeable cell which is charged by exposing the dial to light.
Expose the dial to direct sunlight regularly to charge the watch. For details of charging, see page 17.

Band adjustment

We recommend seeking the assistance of an experienced watch technician for sizing of your watch. If adjustment is not done correctly, the bracelet may unexpectedly become detached leading to loss of your watch or injury (excluding products containing the band adjustment tool).
Consult an authorized service center. Other shops may charge for, or may not provide, the service.

Protective stickers

Be sure to remove any protective stickers that may be on your watch (case back, band, clasp, etc.). Otherwise, perspiration or moisture may enter the gaps between the protective stickers and the parts, which may result in a skin rash and/or corrosion of the metal parts.

How to use a specially designed crown/button

Some models are equipped with a specially designed crown and/or push button to prevent accidental operation.

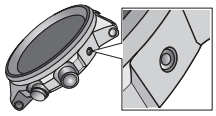
Screw down crown/button

Unlock the crown/button prior to operate your watch.

	Unlock	Lock
Screw down crown	Rotate the crown counterclockwise until it releases from the case.	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.
Screw down push button	Rotate the locking screw counterclockwise, and loosen until it stops.	Rotate the locking screw clockwise, and tighten firmly.

Recessed button

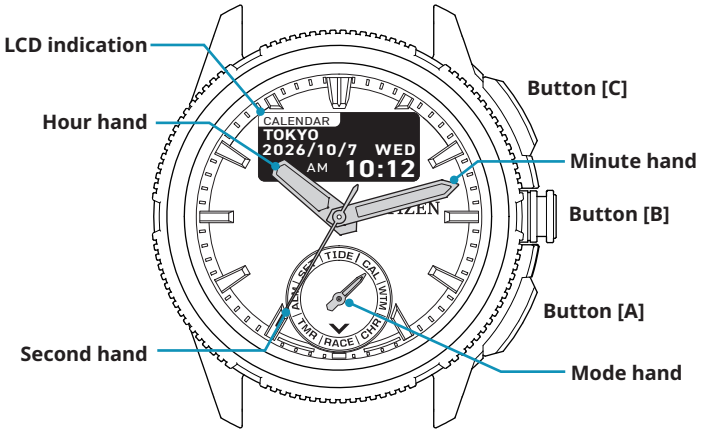
Press the button with a non-marring narrow-tipped object.



• Metal objects may cause marring or scratching of the button.

Component identification

- The illustrations in this instruction manual may differ from the actual appearance of your watch.
- A solar cell is placed under the dial.



Power reserve is not enough when the LCD indication is turned off. Charge immediately. For details of charging, see "Charging your watch" (page 17).

Changing the mode

This watch features the following eight modes.

CAL (time and calendar)	TMR (timer)
WTM (world time)	ALM (alarm)
CHR (chronograph)	SET (settings)
RACE (race timer)	TIDE (tide graph)

Change modes to use functions you want.

Ex.: when changing the mode from CAL (time and calendar) to TMR (timer)

1 Press and release the middle right button [B].

Black and white of the LCD indication is inverted.

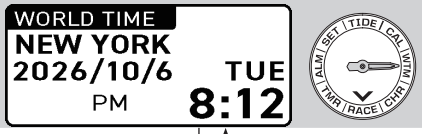
2 Press and release the lower right button [A] or the upper right button [C] repeatedly to indicate a mode you want.

The LCD indication changes and the mode hand points the selected mode.

- **CAL (time and calendar)**

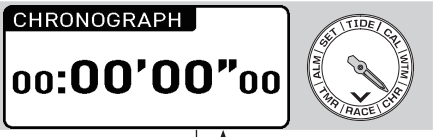
Button [A] ↓ ↑ button [C]

- **WTM (world time) (page 6)**



Button [A] ↓ ↑ button [C]

- **CHR (chronograph) (page 7)**



Button [A] ↓ ↑ button [C]

- **RACE (race timer) (page 8)**

Button [A] ↓ ↑ button [C]

- **TMR (timer) (page 9)**

Button [A] ↓ ↑ button [C]

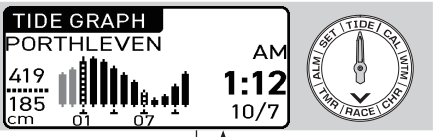
- **ALM (alarm) (page 10)**

Button [A] ↓ ↑ button [C]

- **SET (settings) (page 15)**

Button [A] ↓ ↑ button [C]

- **TIDE (tide graph) (page 11)**



Button [A] ↓ ↑ button [C]

Back to CAL (time and calendar)

3 Press and release the middle right button [B].

Black and white of the LCD indication is inverted and the mode changes to a new one.

- The mode is automatically changed to the one currently indicated in 5 seconds without pressing the button [B].

Turning on the light for the LCD indication

You can use the light for the LCD indication in the following modes.
- CAL (time and calendar)
- WTM (world time)
- TIDE (tide graph)

1 Change the mode to CAL (time and calendar), WTM (world time) or TIDE (tide graph).

2 Press the lower right button [A].

The light for the LCD indication is lit for 2 seconds.

Checking the power reserve

For details of charging, see "Charging your watch" (page 17).

1 Press and release the middle right button [B].
Black and white of the LCD indication is inverted.

2 Press and release the lower right button [A] or the upper right button [C] repeatedly to indicate SET (settings).

3 Press and release the middle right button [B].
The mode change to SET (settings).

The second hand points 45 seconds and stops. The hour and minute hands may stop at positions not to interrupt the view of the LCD indication.

4 Press and release the lower right button [A] or the upper right button [C] repeatedly to choose "BATTERY" and press the middle right button [B].

5 Check power reserve.

The power reserve is indicated as follows.

Level	Example of power reserve indication and approximate duration	
2	**Duration:** 15 months - **Duration:** 4 months Power reserve is OK. It is OK for normal use.	
1	**Duration:** 4 months - **Duration:** 1 month Power reserve is getting low. When the watch is left without any operation for 10 seconds, the LCD indication is turned off. Insufficient charge warning [1] (page 17) starts on this level.	**Charge immediately.**
0	When power reserve is not sufficient, the LCD indication is not turned on and power reserve is not indicated. Insufficient charge warning [2] (page 17) starts on this level. **Duration:** 3 days	

Press any of the buttons to stop power reserve indication.

6 Choose "EXIT" and press the middle right button [B] of the watch.
The mode changes to CAL (time and calendar).
The hands returns to current time.

Insufficient charge warning function

When power reserve is level 1 or level 0, charge warning appears on the LCD indication without checking power reserve. (Insufficient charge warning function)
For details of charging, see "Charging your watch" (page 17).

Switching time and calendar indication

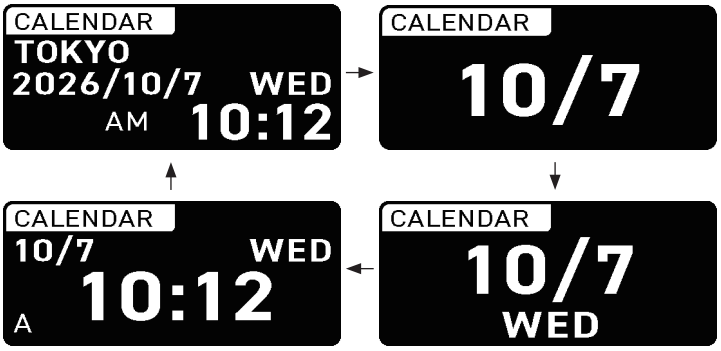
You can switch the LCD indication when the mode is CAL (time and calendar) or WTM (world time).

1 Change the mode to CAL (time and calendar) or WTM (world time).

2 Press and release the upper right button [C].

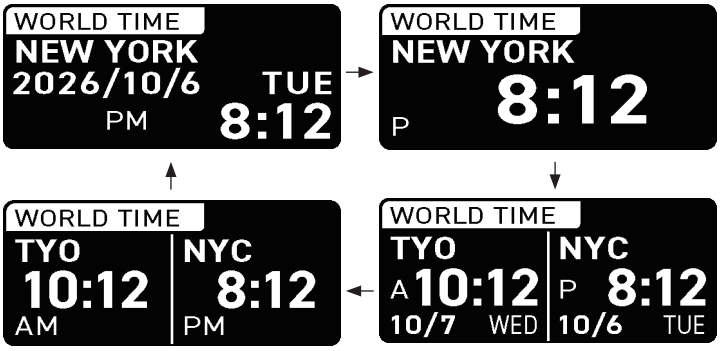
CAL (time and calendar)

Each time you press button [C], the LCD indication changes as follows.



WTM (world time)

Each time you press button [C], the LCD indication changes as follows.



Adjusting the time and calendar

1 Press and release the middle right button [B].
Black and white of the LCD indication is inverted.

2 Press and release the lower right button [A] or the upper right button [C] repeatedly to indicate CAL (time and calendar).

3 Press and release the middle right button [B].
The mode changes to CAL (time and calendar).

4 Press and hold the middle right button [B] for 2 seconds or more.
Black and white of the area name is inverted and it becomes adjustable.

The second hand points 45 seconds and stops. The hour and minute hands may stop at positions not to interrupt the view of the LCD indication.

5 Choose an area.
To choose: use buttons [A] and [C].
To confirm: press button [B].
- Press and hold button [A] or [C] to change area names continuously.
- For areas and time zones you can choose, refer to the table on page 6.

6 Choose summer time or standard time.
To choose: use buttons [A] and [C].
To confirm: press button [B].

DST ON	Summer time (1-hour forward from the standard time)
DST OFF	Standard time

- Summer time (DST, daylight saving time) is a system adopted in some countries/areas to gain an extra daylight during summer.
- Summer time settings are stored separately for each area.

7 Press and release the lower right button [A] or the upper right button [C] in accordance with a reliable time source.
The second is set to 00.

8 Press and release the middle right button [B].
The minute becomes adjustable.

9 Set time and calendar.
Set in the following order.
Minute → hour → year → month → date
To set: use buttons [A] and [C].
To confirm: press button [B] to confirm what you set and proceed to the next item.

- Press and hold button [A] or [C] to change setting values continuously.
- After setting date, “SETTING COMPLETE” appears and the settings are finished. The hands move to the time you set.
- When you set a wrong time or calendar, try again from step **4**.

Customizing indication

Following items are adjustable. Refer to “Adjusting settings” (page 15).
- Calendar notation (order of year/month/day)
- Language for days of week
- 12-hour/24-hour notation

Area and time zone

Indication	Abbreviation	Area	Time zone
UTC	UTC	Coordinated Universal Time	0
LONDON	LON	London	0
MADRID	MAD	Madrid	+1
PARIS	PAR	Paris	+1
ROME	ROM	Rome	+1
BERLIN	BER	Berlin	+1
CAIRO	CAI	Cairo	+2
ATHENS	ATH	Athens	+2
JOHANNESBURG	JNB	Johannesburg	+2
RIYADH	RUH	Riyadh	+3
TEHRAN	THR	Tehran	+3.5
DUBAI	DXB	Dubai	+4
KABUL	KBL	Kabul	+4.5
KARACHI	KHI	Karachi	+5
DELHI	DEL	Delhi	+5.5
DHAKA	DAC	Dhaka	+6
YANGON	RGN	Yangon	+6.5
BANGKOK	BKK	Bangkok	+7
SINGAPORE	SIN	Singapore	+8
HONG KONG	HKG	Hong Kong	+8
BEIJING	BJS	Beijing	+8
TAIPEI	TPE	Taipei	+8
SEOUL	SEL	Seoul	+9
TOKYO	TYO	Tokyo	+9
ADELAIDE	ADL	Adelaide	+9.5
SYDNEY	SYD	Sydney	+10
NOUMEA	NOU	Noumea	+11
AUCKLAND	AKL	Auckland	+12
SUVA	SUV	Suva	+12
MIDWAY	MDY	Midway	–11
HONOLULU	HNL	Honolulu	–10
ANCHORAGE	ANC	Anchorage	–9
VANCOUVER	YVR	Vancouver	–8
LOS ANGELES	LAX	Los Angeles	–8
DENVER	DEN	Denver	–7
MEXICO CITY	MEX	Mexico City	–6
CHICAGO	CHI	Chicago	–6
NEW YORK	NYC	New York	–5
MONTREAL	YMQ	Montreal	–5
MANAUS	MAO	Manaus	–4
R.JANEIRO	RIO	Rio de Janeiro	–3
F.NORONHA	FEN	Fernando de Noronha	–2
AZORES	PDL	Azores	–1
USER	USR	You can assign any time zone you like in the 15-minute increments. Refer to “CITY TIME” on page 16.	

- Values on the “Time zone” column mean time difference between UTC and the standard time of time zones.
- Countries or regions may change time zones for various reasons.

World time

The LCD indication can show a time which is different from that shown with the hands (local time).

1 Change the mode to WTM (world time).

- For the way to change modes, see page 3.

The current time of the area set (local time) appears on the LCD indication.

Setting the local time

1 Change the mode to WTM (world time).

2 Press and hold the middle right button [B] for 2 seconds or more.

Black and white of the area name is inverted and it becomes adjustable.

The second hand points 45 seconds and stops. The hour and minute hands may stop at positions not to interrupt the view of the LCD indication.

3 Choose an area.

To choose: use buttons [A] and [C].
To confirm: press button [B].

- Press and hold button [A] or [C] to change area names continuously.
- For areas and time zones you can choose, refer to the table on the left column.

4 Choose summer time or standard time.

To choose: use buttons [A] and [C].
To confirm: press button [B].

DST ON	Summer time (1-hour forward from the standard time)
DST OFF	Standard time

- “SETTING COMPLETE” appears and the settings are finished. The hands returns to current time.

Interchanging times indicated

The time that the hands show and the local time can be interchanged.

1 Change the mode to CAL (time and calendar) or WTM (world time).

2 Press and release both the lower right button [A] and the upper right button [C] simultaneously.

The time that the hands show and the local time is interchanged.
Ex.:

Time that the hands shows	Local time
UTC 1:12 AM, October 7, 2026	New York 8:12 PM, October 6, 2026

↓

Time that the hands shows	Local time
New York 8:12 PM, October 6, 2026	UTC 1:12 AM, October 7, 2026

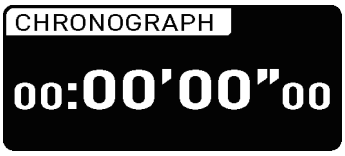
Using the chronograph

The chronograph measures up to 24 hours (by 0.01 seconds) and measurement is shown on the LCD indication.

1 Change the mode to CHR (chronograph).

- For the way to change modes, see page 3.

The LCD indication changes to the measurement screen.



2 Press and release the upper right button [C].

Measurement starts.

Start/stop: press button [C].
Taking a split time/lap time: press button [A]. (up to 999 times)
Reset: press button [A] while the chronograph is stopped.
Measurement result is removed.

- Measurement continues even after changing the mode.
- The 1000th and further split times/lap times are recorded over the oldest ones.

The following operations stop chronograph measurement.
- Changing the mode and its settings

Switching split time measurement and lap time measurement

Change it in "CHRONO MODE" in the SETTING (settings) mode. (page 15)

Checking the measurement result

1 Press and release the upper right button [C] during measurement.

The measurement stops.

2 Press and hold the middle right button [B] for 2 seconds or more.

You can see the latest 60 split/lap times three by three.

The second hand points 45 seconds and stops. The hour and minute hands may stop at positions not to interrupt the view of the LCD indication.

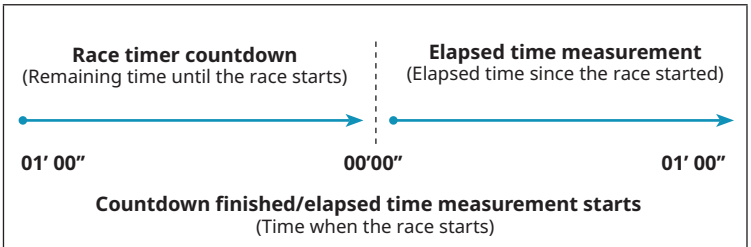
- Press the button [A]/[C] to change pages.
- By pressing button [B], the indicated records are displayed in a two-dimensional code and can be read with your smartphone. To go back to the previous indication, press button [B] again.

3 Press and hold the middle right button [B] for 2 seconds or more.

The LCD indication go back to the measurement screen.

Using the race timer

In a yacht race, countdown begins a few minutes before start of the race and measurement of elapsed time begins as the race starts.
The race timer of this watch can measure both count down time until a race starts and elapsed time since the race starts up to 99 minutes 59 seconds.
Example of 1-minute countdown before start and 1-minute measurement after start:



Using the race timer

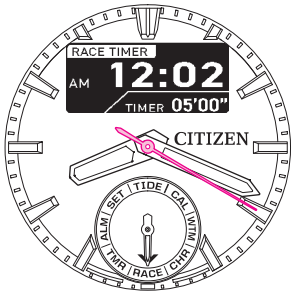
1 Change the mode to RACE (race timer).

• For the way to change modes, see page 3.

Current time

Countdown time (minute and second) (before starting countdown)

The hour and minute hands may stop at positions not to interrupt the view of the LCD indication. The second hand indicates the seconds of current time.
Ex.: when it is 12:02.20.



2 Press and release the upper right button [C].

The race timer start countdown and the indication changes as follows.
• Indication of the current time disappears.

While the race timer is counting down (1 minute or more is remained until the starting time)

Remaining countdown time (minute and second)

Countdown bar (minute)

Countdown arrow (second)

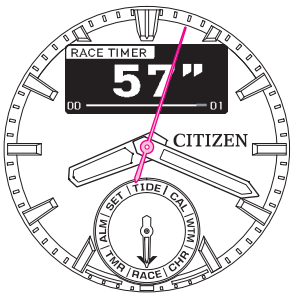
• The second hand may stop at positions not to interrupt the view of the LCD indication.
• The countdown arrow indication changes its form every seconds in 10-second cycle.
• Alarm sound is emitted every minute from 6-minute before the starting time.

While the race timer is counting down (less than 1minute is remained until the starting time)

Remaining countdown time (second)

Countdown bar (minute)

• The second hand moves to the 0-second position as the remaining time comes to 1 minute and the hand moves every second until the starting time.
Ex.: when 57 seconds remain



• During the last 50 seconds, alarm sound is emitted every 10 second; at the last 5 seconds, the sound is emitted every second.

When the race timer countdown finished

Measurement of elapsed time is started. Alarm sound is emitted for 5 seconds since the measurement started.

During measurement of elapsed time

Elapsed time (minute and second)

Measurement-in-progress arrow (second)

• The second hand may stop at positions not to interrupt the view of the LCD indication.
• The measurement-in-progress arrow indication changes its form every seconds in 10-second cycle.

Start/stop: press button [C].
Flyback (start countdown again from the beginning): press button [A] while the race timer is running.
Reset: press button [A] while the race timer is stopped.
• When you stop countdown of the race timer, the current time and remaining countdown time of the race timer are shown on the LCD indication.

• Split/lap time indication is unavailable.
• Elapsed time measurement stops after passing 99 minutes and 59 seconds.
• When you want to change the mode while the race timer is running, press button [C] to stop its running before changing the mode.

Changing the countdown time of the race timer

Setting countdown time you want

1 Change the mode to RACE (race timer).
- For the way to change modes, see page 3.

2 Press and release the upper right button [C] if the race timer is running.
The race timer is stopped.

3 Press and hold the middle right button [B] for 2 seconds or more.
The countdown time becomes adjustable.

The second hand points 45 seconds and stops. The hour and minute hands may stop at positions not to interrupt the view of the LCD indication.

4 Adjust the countdown time.
Set it from the 2nd digit of minute one by one as follows.
2nd digit of minute → 1st digit of minute → 2nd digit of second → 1st digit of second
To choose: use buttons [A] and [C].
To confirm: press button [B] to confirm the choice and proceed to the next item.
- Press and hold button [A] or [C] to change setting values continuously.
- After setting the 1st digit of second, "SETTING COMPLETE" appears and the settings are finished.

Choosing one from preset countdown times

1 Change the mode to RACE (race timer).
- For the way to change modes, see page 3.

2 Reset the race timer when it is running.
- Press button [A] when the race timer stops running.
- When the race timer is running, press button [C] to stop running and press button [A].

3 Press and release the lower right button [A] repeatedly to choose one from the presets.
The preset countdown times switch as follows.
10 minutes → 6 minutes → 5 minutes → 4 minutes → 3 minutes → 2 minutes → 1 minute → (back to the top)

- The countdown time existing before choosing is overwritten with newly chosen one.

Using the timer

You can use a countdown timer up to 99 minutes and 59 seconds in the 1-second increment.
The watch emits sound for 5 seconds as time you set passed.
- Press any button to stop the sound.

1 Change the mode to TMR (timer).
- For the way to change modes, see page 3.

2 Press and release the upper right button [C].
Timer countdown starts.

Start/stop: press button [C].
Reset: press button [A] while the chronograph is stopped.
- The ⧗ icon appears during countdown.
- Countdown continues even after changing the mode.

The following operations stop countdown.
- Changing the mode and its settings
- Starting the race timer

Setting countdown time

1 Change the mode to TMR (timer).

2 Press and release the upper right button [C] if the timer is running.
The timer is stopped.

3 Press and hold the middle right button [B] for 2 seconds or more when timer countdown is stopped.
The countdown time becomes adjustable.

The second hand points 45 seconds and stops. The hour and minute hands may stop at positions not to interrupt the view of the LCD indication.

4 Set countdown time.
Set it from the 2nd digit of minute one by one as follows.
2nd digit of minute → 1st digit of minute → 2nd digit of second → 1st digit of second
To choose: use buttons [A] and [C].
To confirm: press button [B] to confirm the choice and proceed to the next item.
- Press and hold button [A] or [C] to change setting values continuously.
- After setting the 1st digit of second, "SETTING COMPLETE" appears and the settings are finished. The hands returns to current time.

Using alarm

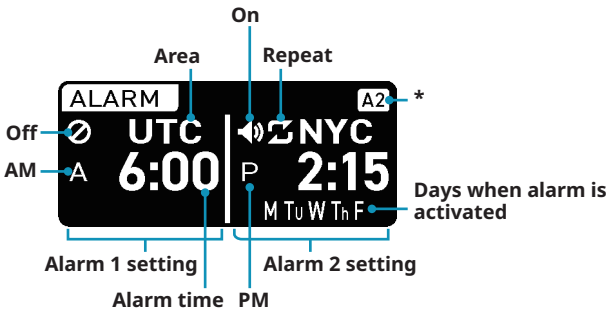
You can set two times for alarm. The alarm is to be set to emit sound once or all assigned days of week.
Alarm emits sound for 15 seconds as the time set comes.
• Press any button to stop the sound.
• The alarm does not sound during the race timer is running.

Checking current alarm settings

1 Change the mode to ALM (alarm).

• For the way to change modes, see page 3.

The current alarm settings are indicated.



*A1/A2: they appear when alarm 1/alarm 2 are activated.

Checking the alarm sound

1 Change the mode to ALM (alarm).

• For the way to change modes, see page 3.

2 Press and hold the lower right button [A] or the upper right button [C].

• Press and hold the lower right button [A] to monitor the sound of alarm 1.
• Press and hold the upper right button [C] to monitor the sound of alarm 2.

Setting alarm

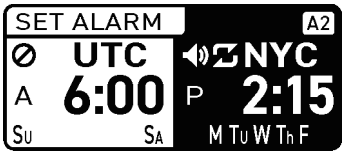
Ex.: When setting alarm 1 to emit sound at 7:20 AM of Tokyo time on every Saturday and Sunday.

1 Change the mode to ALM (alarm).

• For the way to change modes, see page 3.

2 Press and hold the middle right button [B] for 2 seconds or more.

Alarm settings become adjustable.



The second hand points 45 seconds and stops. The hour and minute hands may stop at positions not to interrupt the view of the LCD indication.

3 Choose an alarm to set (alarm 1 or 2).

To choose: use buttons [A] and [C].
To confirm: press button [B].

4 Activate/deactivate the alarm.

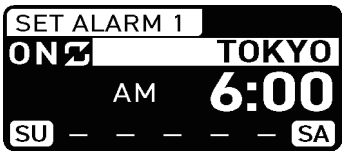
To choose: use buttons [A] and [C].
To confirm: press button [B].

ON	Sound is emitted once.
ON ⇄	Sound is emitted in every assigned day.
OFF	Off

• After choosing “OFF”, “SETTING COMPLETE” appears and the settings are finished.

5 Choose an area (time zone) and set time to emit sound.

To choose: use buttons [A] and [C].
To confirm: press button [B].



• Press and hold button [A] or [C] to change area names/setting values continuously.
• When you chose “ON” in step **4**, “SETTING COMPLETE” appears and the settings are finished.

6 Choose days of week on which you want to activate alarm.

To choose: use buttons [A] and [C].
To confirm: press button [B].

SU	Sunday	**TH**	Thursday
MO (M)	Monday	**FR (F)**	Friday
TU	Tuesday	**SA**	Saturday
WE (W)	Wednesday		

• After choosing setting for Saturday, “SETTING COMPLETE” appears and the settings are finished. The hands returns to current time.

Using the tide graph

Tide information of 203 places around the world can be shown on the LCD indication.
The following information can be shown in addition.
• Time of the place set
• Time of sunrise and sunset at the place set
• Lunar age

CAUTION
- **Use information shown with the tide graph function only as a reference. The information shown does not reflect effects of the terrain and weather and it may include calculation errors. Make sure to check also tide forecast and weather forecast for the place.**
- **The information shown for the tide graph is made based on data of 2025.**
- **Do not rely on it as tide information for navigation on the sea.**
- **Use time of sunrise and sunset on the LCD indication only as a reference.**
- **Use lunar age on the LCD indication only as a reference.**
- **For calculating values for the tide graph, we utilize data on the tables below for harmonic constants:**
  UKHO's "UKHO ADMIRALTY TIDE TABLES",
  Japan Meteorological Agency's "潮位表掲載地点一覧表（2025年）" (List of stations of tide tables (2025)),
  https://www.data.jma.go.jp/kaiyou/db/tide/suisan/station2025.php
  NOAA's "NOAA Tides & Currents website".
  https://tidesandcurrents.noaa.gov/stations.html?type=Harmonic+Constituents

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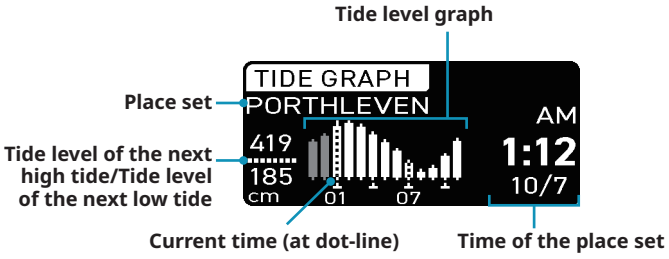
Checking the tide graph

1 Change the mode to TIDE (tide graph).

• For the way to change modes, see page 3.

Tide graph for the place you set is indicated.
Basic indication of tide graph



- Tide level graph shows height of tide by 1 hour (00 minutes of every hour). When a bar of the graph is longer, tide level is nearer that of high tide; when it is shorter, the level is nearer that of low tide.
- Pressing buttons [A] and [C] at the same time stops the second hand at the 45-second position and the hour and minute hands may stop at positions not to interrupt the view of the LCD indication. Press buttons [A] and [C] at the same time again to return the hands to current time. They return to current time automatically in 1 minute without any operation.

Changing indication of the tide graph

1 Press and release the upper right button [C] while tide graph is shown.

Indication of the right side changes as follows.

Basic indication of tide graph

• Time and date of the place you set is indicated.

Button [C] ↓

Time of sunrise and sunset

• Time of sunrise and sunset of the place you set is indicated.

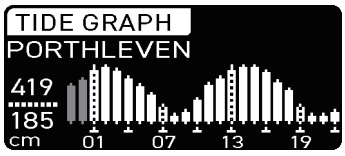
Button [C] ↓

Moon phase indication

• Lunar age are indicated.

Button [C] ↓

24-hour Indication of tide level



• 24-hour change of tide level is indicated.

Button [C] ↓

Back to basic indication of tide graph

Choosing a place where tide information is indicated for

1 Change the mode to TIDE (tide graph).

- For the way to change modes, see page 3.

2 Press and hold the middle right button [B] for 2 seconds or more.

The continent setting becomes adjustable.

The second hand points 45 seconds and stops. The hour and minute hands may stop at positions not to interrupt the view of the LCD indication.

3 Choose a continent.

To choose: use buttons [A] and [C].
To confirm: press button [B].

- For continents you can choose, refer to the table on page 12.
- Press and hold button [A] or [C] to change names of continent continuously.

4 Choose a country or region.

To choose: use buttons [A] and [C].
To confirm: press button [B].

- For countries and regions you can choose, refer to the table on page 12.
- Press and hold button [A] or [C] to change names of countries/regions continuously.

5 Choose a place.

To choose: use buttons [A] and [C].
To confirm: press button [B].

- For places you can choose, refer to the table on page 12.
- Press and hold button [A] or [C] to change names of places continuously.

6 Choose summer time or standard time.

To choose: use buttons [A] and [C].
To confirm: press button [B].

DST ON	Summer time (1-hour forward from the standard time)
DST OFF	Standard time

- "SETTING COMPLETE" appears and the settings are finished. The hands returns to current time.
- When you set a wrong place, try again from step **2**.

Places where tide graph is available

Continent	Country/ region	Place	Time zone	Latitude	Longitude
EUROPE	ENGLAND	BOSTON	0	+52.97	–0.02
		NEWQUAY	0	+50.42	–5.08
		PLYMOUTH	0	+50.37	–4.18
		PORTHLEVEN	0	+50.08	–5.32
		PORTSMOUTH	0	+50.80	–1.12
		SOUTHAMPTON	0	+50.88	–1.40
	SCOTLAND	FRASERBURGH	0	+57.68	–2.00
	WALES	CARDIFF	0	+51.45	–3.17
		NEWPORT	0	+51.55	–2.98
		SWANSEA	0	+51.62	–3.92
	N. IRELAND (NORTHERN IRELAND)	PORTRUSH	0	+55.20	–6.67
	FRANCE	NICE	+1	+43.70	+7.28
		PORT-VENDRES	+1	+42.52	+3.10
	BELGIUM	ANTWERP	+1	+51.33	+4.23
	NETHERLANDS	IJMUIDEN	+1	+52.47	+4.58
		ROTTERDAM	+1	+51.92	+4.50
		SCHEVENINGEN	+1	+52.10	+4.27
	MONACO	MONTE CARLO	+1	+43.73	+7.42
	ITALY	VENEZIA	+1	+45.43	+12.33
	GERMANY	BORKUM	+1	+53.55	+6.75
		BREMEN, OSL. (BREMEN, OSLEBSHAUSEN)	+1	+53.12	+8.72
		BREMERHAVEN	+1	+53.55	+8.57
		BRUNSBUTTEL	+1	+53.88	+9.15
		BUSUM, SCHL. (BUSUM, SCHLEUSE)	+1	+54.12	+8.87
		CUXHAVEN, ST. (CUXHAVEN, STEUBENHOFT)	+1	+53.87	+8.72
		EMDEN, G. S. (EMDEN, GROSSE SEESCHLEUSE)	+1	+53.33	+7.18
		HAMBURG, ST. P. (HAMBURG, ST. PAULI)	+1	+53.55	+9.97
		HELGOLAND	+1	+54.18	+7.88
		HUSUM, SCHL. (HUSUM, SCHLEUSE)	+1	+54.47	+9.02
		NORDERNEY	+1	+53.70	+7.15
		WILH., A. VORH. (WILHELMSHAVEN, ALTER VORHAFEN)	+1	+53.52	+8.15
	MALTA	VALLETTA	+1	+35.88	+14.52
	CYPRUS	LIMASSOL	+2	+34.67	+33.05
	RUSSIA	OSTROV YEKAT. (OSTROV YEKATERININSKIY)	+3	+69.20	+33.47
	AZORES	SANTA CRUZ	–1	+39.45	–31.12
	ICELAND	AKUREYRI	0	+65.68	–18.08
	IRELAND	DUN LAOGHAIRE	0	+53.30	–6.13
		GALWAY	0	+53.27	–9.05

(Continued on the next page)

Places where tide graph is available (continued)

Continent	Country/ region	Place	Time zone	Latitude	Longitude
EUROPE	SPAIN	ALICANTE	+1	+38.33	–0.48
		ALMERIA	+1	+36.83	–2.48
		PALMA (PALMA DE MALLORCA)	+1	+39.55	+2.63
AFRICA	GHANA	TEMA	0	+5.63	+0.02
	NIGERIA	APAPA	+1	+6.45	+3.38
	CAMEROON	DOUALA	+1	+4.05	+9.67
	CONGO	POINTE-NOIRE	+1	–4.78	+11.83
	ANGOLA	POINTE BULA. (POINTE BULABEMBA)	+1	–6.05	+12.45
	LIBYA	TARABULUS	+2	+32.90	+13.18
	SOUTH AFRICA	LAMBERT'S BAY	+2	–32.08	+18.30
		PORT ALFRED	+2	–33.60	+26.90
	EGYPT	MINA' DUMYAT	+2	+31.47	+31.77
	MOZAMBIQUE	MAPUTO	+2	–25.97	+32.57
	SUDAN	SAWAKIN	+2	+19.12	+37.33
	KENYA	KILINDINI	+3	–4.07	+39.65
	MAURITIUS	PORT LOUIS	+4	–20.15	+57.48
	MADEIRA ISLANDS	FUNCHAL	0	+32.65	–16.92
	GAMBIA	BANJUL	0	+13.45	–16.57
	GUINEA	RIO NUNEZ APP. (RIO NUNEZ APPROACHES)	0	+10.52	–14.72
	SIERRA LEONE	FREETOWN	0	+8.50	–13.23
	LIBERIA	SINOE BAY	0	+4.98	–9.03
	MOROCCO	SIDI IFNI	0	+29.37	–10.20
ASIA	LEBANON	JOUNIEH	+2	+34.02	+35.62
	IRAQ	UMM QASR	+3	+30.02	+47.95
	KUWAIT	MINA AL AHMADI	+3	+29.07	+48.17
	SAUDI ARABIA	AD DAMMAM	+3	+26.50	+50.20
		AL-JUBAYL	+3	+27.02	+49.68
		RABIGH	+3	+22.73	+38.97
	BAHRAIN	MINA SALMAN	+3	+26.20	+50.60
	QATAR	DOHA	+3	+25.28	+51.55
	IRAN	BANDAR-E S. R. (BANDAR-E SHAHID RAJAI)	+3.5	+27.10	+56.07
	UAE	DUBAI	+4	+25.25	+55.27
		MINA ZAYID	+4	+24.53	+54.38
		RAS AL KHAIMAH	+4	+25.82	+55.95
		SHARJAH	+4	+25.37	+55.37
	PAKISTAN	KARACHI	+5	+24.80	+66.97
	INDIA	CHILKA MOUTH	+5.5	+19.72	+85.62
		DEVI RIVER ENT.	+5.5	+19.95	+86.37
		KAKINADA	+5.5	+16.93	+82.25
		KOCHI	+5.5	+9.97	+76.25
		KORI CREEK ENT. (KORI CREEK ENTRANCE)	+5.5	+23.50	+68.45
		SACRAMENTO SH. (SACRAMENTO SHOAL APPROACHES)	+5.5	+16.52	+82.35
		SHORTT'S ISLAND	+5.5	+20.78	+87.07
		SUVALI	+5.5	+21.18	+72.62
ASIA	SRI LANKA	COLOMBO	+5.5	+6.95	+79.85
	BANGLADESH	CHATTOGRAM	+6	+22.33	+91.83
	MYANMAR	MYEIK	+6.5	+12.43	+98.60
	KEPULAUAN RIAU	PULAU SAMBU	+7	+1.17	+103.90
		S. KIJANG ENT. (SELAT KIJANG ENTRANCE)	+7	+0.90	+104.67
		SEKUPANG	+7	+1.13	+103.93
	VIETNAM	ILE BACH LONG VI	+7	+20.13	+107.72
	JAVA	PULAU PARI	+7	–5.85	+106.62
		SURABAYA	+7	–7.20	+112.73
	BRUNEI	MUARA	+8	+5.03	+115.07
	BALI	BENOA	+8	–8.75	+115.22
	HONG KONG SAR	HEUNG K. T. WAN (HEUNG KONG TSAI WAN)	+8	+22.25	+114.15
		SAI KUNG HOI	+8	+22.38	+114.28
		TAI O	+8	+22.25	+113.85
		TSIM BEI TSUI	+8	+22.48	+114.00
		TSING SHAN WAN	+8	+22.38	+113.98
		WAGLAN ISLAND	+8	+22.18	+114.30
	CHINA	HUANGPU	+8	+23.08	+113.47
		JIESHI WAN	+8	+22.80	+115.67
		LONGXU WAN	+8	+37.38	+122.67
		MALAN WAN	+8	+37.42	+122.65
		MULAN TOU	+8	+20.17	+110.68
		REN YU	+8	+25.33	+119.60
		SANDU DAO	+8	+26.63	+119.70
		XIAMEN GANG	+8	+24.45	+118.07
		YANGXIAOMAO (YANGXIAOMAO DAO)	+8	+29.90	+122.15
		YUXINGNAO DAO	+8	+30.35	+121.87
		ZHAO'AN WAN	+8	+23.60	+117.28
	TAIWAN REGION	TAICHUNG PORT	+8	+24.28	+120.50
	PHILIPPINES	BALER BAY	+8	+15.77	+121.60
		DAVAO	+8	+7.08	+125.63
		ISLAND BAY	+8	+9.10	+118.12
		LEGAZPI	+8	+13.15	+123.75
		MANILA	+8	+14.58	+120.97
	MALAYSIA	JOHOR BAHRU	+8	+1.47	+103.78
		KUALA TERENG. (KUALA TERENGGANU)	+8	+5.35	+103.13
		PELABUHAN K. (PELABUHAN KUANTAN)	+8	+3.97	+103.43
		TELUK TEKEK	+8	+2.80	+104.13
	JAPAN	ABURATSU	+9	+31.58	+131.42
		FUKUE	+9	+32.70	+128.85
		ISHIGAKI	+9	+24.33	+124.17
		KANNOURA	+9	+33.55	+134.30
		KARATSU	+9	+33.47	+129.97
		KATSUURA	+9	+35.15	+140.32
		KUSHIMOTO	+9	+33.48	+135.77
		MAKURAZAKI	+9	+31.27	+130.30

(Continued on the next page)

Places where tide graph is available (continued)

Continent	Country/ region	Place	Time zone	Latitude	Longitude
ASIA	JAPAN	MIYAKO	+9	+39.65	+141.98
		NAHA	+9	+26.22	+127.67
		ONAHAMA	+9	+36.93	+140.90
		OTARU	+9	+43.20	+141.00
		SHIMODA	+9	+34.68	+138.97
		SHIRAHAMA	+9	+34.92	+139.93
		TOMAKOMAI	+9	+42.63	+141.62
		TOSA-SHIMIZU	+9	+32.78	+132.97
		YOKOHAMA	+9	+35.45	+139.65
		YONAGUNI SHIMA	+9	+24.45	+122.93
OCEANIA	PALAU	MALAKAL HARB. (MALAKAL HARBOUR)	+9	+7.33	+134.47
	MARIANAS ISLAND	SAIPAN	+10	+15.20	+145.72
	PNG (PAPUA NEW GUINEA)	SAMARAI ISLAND	+10	–10.62	+150.67
	AUSTRALIA	AMERICAN RIVER	+9.5	–35.80	+137.77
		HALL POINT	+8	–15.67	+124.40
		HANNIBAL ISLAND	+10	–11.60	+142.93
		KINGSCOTE	+9.5	–35.62	+137.63
		KINGSTON	+9.5	–36.83	+139.85
		L. ELLIOT ISL. (LADY ELLIOT ISLAND)	+10	–24.12	+152.72
		MOLLE ISLAND	+10	–20.25	+148.83
		POINT DANGER	+10	–28.17	+153.55
		SALAM. BAY (SALAMANDER BAY)	+10	–32.73	+152.10
		ST. BEES ISLAND	+10	–20.90	+149.45
		TAPA BAY	+9.5	–12.45	+130.60
	TASMANIA	EDDYSTONE PT.	+10	–41.00	+148.35
	SOLOMONS	BLACKETT STR.	+11	–8.13	+157.13
	NEW CALEDONIA	NOUMEA NUMBO	+11	–22.25	+166.42
	VANUATSU	PORT VILA	+11	–17.75	+168.30
	NEW ZEALAND	CAPE CAMPBELL	+12	–41.73	+174.25
		COLAC BAY	+12	–46.37	+167.90
		MAHANGA	+12	–39.02	+177.87
		MAKARA BEACH	+12	–41.22	+174.70
		NUGGET POINT	+12	–46.45	+169.82
		WAIPAPA POINT	+12	–46.65	+168.85
	FIJI	LEVUKA	+12	–17.68	+178.83
	SAMOA	MULIFANUA	+13	–13.82	–172.00
NORTH AMERICA	HAWAII	F. F. SHOALS (FRENCH FRIGATE SHOALS)	–10	+23.87	–166.28
		SAND ISLAND	–11	+28.22	–177.37
	MEXICO	ACAPULCO	–6	+16.83	–99.92
		ENSENADA	–8	+31.85	–116.63
		LORETO	–7	+26.02	–111.37
		PUERTO CHIAPAS	–6	+14.70	–92.42
NORTH AMERICA	COSTA RICA	QUEPOS	–6	+9.40	–84.17
	PANAMA	BALBOA	–5	+8.95	–79.57
	BAHAMAS	MATTHEW TOWN	–5	+20.95	–73.68
	PUERTO RICO	PUNTA TUNA	–4	+17.98	–65.88
	CAYMAN ISLANDS	GEORGE TOWN	–5	+19.30	–81.38
	USA	ANNAPOLIS	–5	+38.98	–76.48
		ASTORIA	–8	+46.20	–123.77
		BALTIMORE	–5	+39.27	–76.58
		C. H. F. PIER (CAPE HATTERAS FISHING PIER)	–5	+35.22	–75.63
		CHARLESTON	–5	+32.78	–79.92
		G. ISLE, E. PT. (GRAND ISLE, EAST POINT)	–6	+29.27	–89.95
		GALVESTON	–6	+29.32	–94.80
		KEY WEST	–5	+24.55	–81.80
		LA JOLLA	–8	+32.87	–117.27
		MIAMI BISC. BAY	–5	+25.78	–80.18
		MIAMI HARBOR	–5	+25.77	–80.13
		MONTAUK	–5	+41.05	–71.97
		NEW BEDFORD	–5	+41.63	–70.92
		NEWPORT BEACH	–8	+33.60	–117.88
		PENSACOLA	–6	+30.40	–87.22
		SANTA CRUZ	–8	+36.97	–122.02
		SEATTLE	–8	+47.60	–122.33
		VIRGINIA BEACH	–5	+36.85	–75.97
	JAMAICA	PORT ROYAL	–5	+17.95	–76.83
	BERMUDA	BERMUDA	–4	+32.38	–64.68
	TOBAGO	SCARBOROUGH (SCARBOROUGH, TOBAGO)	–4	+11.18	–60.73
SOUTH AMERICA	ECUADOR	SANTA CRUZ	–6	–0.75	–90.30
	PERU	CALLAO	–5	–12.07	–77.17
	COLOMBIA	SANTA MARTA	–5	+11.23	–74.22
	CHILE	ANTOFAGASTA	–4	–23.65	–70.42
	VENEZUELLA	P. CARUPANO (PUERTO CARUPANO)	–4	+10.67	–63.25
	GUYANA	GEORGETOWN	–4	+6.83	–58.17
ANTARCTIC	ANTARCTICA	WIENCKE ISLAND	–3	–64.83	–63.52

- Countries or regions may change time zones for various reasons.
- For latitude, “+” means north and “-” means south; for longitude, “+” means east and “-” means west.

Adjusting settings

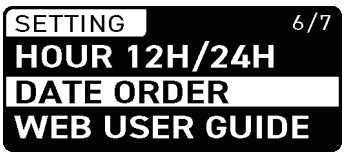
Ex.: when adjusting setting of “DATE ORDER”

1 Change the mode to SET (settings).

• For the way to change modes, see page 3.

The second hand points 45 seconds and stops. The hour and minute hands may stop at positions not to interrupt the view of the LCD indication.

2 Press and release the lower right button [A] or the upper right button [C] repeatedly to indicate an item you want to set.



3 Press and release the middle right button [B].

Setting values become adjustable.

Current setting value

4 Adjust settings.

To set: use buttons [A] and [C].
To confirm: press button [B].

• To cancel adjusting setting, choose “EXIT” and press button [B].

5 Choose “EXIT” and press the middle right button [B] of the watch.

The mode changes to CAL (time and calendar).
The hands returns to current time.

Setting item

BATTERY

Indicates current power reserve. For details, refer to page 4.

LIGHT LEVEL

Use this to check power generation amount of this watch in levels. You can see current amount/hourly amount of the last 24 hours/daily amount of the last 7 days.

• Press button [A]/[C] to change the 3 periods above.

TIDE GRAPH

Use this to set a place for which tide information is shown on the LCD indication. For details, refer to page 12.
(Initial setting: PORTHLEVEN)

HOME TIME

Use this to adjust the time. For details, refer to page 5.
(Initial setting: UTC)

WORLD TIME

Use this to choose an area which the WTM (world time) mode shows time of. For details, refer to page 6.
(Initial setting: NEW YORK)

CHRONO RESULT

Use this to see measurement result of chronograph. For details, refer to page 7.

RACE TIMER

Use this to set countdown time of the race timer. For details, refer to page 9.
(Initial setting: 5 minutes)

TIMER

Use this to set countdown time. For details, refer to page 9.
(Initial setting: 3 minutes)

ALARM

Use this to adjust settings for alarm. For details, refer to page 10.
(Initial settings: 0:00 AM, off for both alarm 1 and alarm 2)

HAND POSITION

Check and correct the reference position of the hands. For details, refer to page 19.

CHRONO MODE

Use this to choose which to take while chronograph measurement, split time or lap time.

SPLIT	Choose this to take and show split time. (Initial setting)
LAP	Choose this to take and show lap time.

DAY LANGUAGE

Use this to set language for showing days of week in the modes of CALENDAR (time and calendar) and WTM (world time).

ENGLISH	English (Initial setting)
JAPANESE	Japanese
SPANISH	Spanish
GERMAN	German
FRENCH	French
ITALIAN	Italian
PORTUGUESE	Portuguese
CHINESE	Chinese

SELECT CITY

Use this to show/hide area names on the area list which appears when choosing an area.
(Initial setting: showing all)

- All the places for the tide graph are always shown regardless of this setting.

CITY TIME

Use this to assign a time zone to “USER (USR)”. You can assign any time zone you like in the 15-minute increments to the standard time and summer time.
(Initial setting: ±0 for both the standard time and summer time)

1 Confirm that “DST OFF” is shown on the LCD indication and choose a time zone of the standard time.

To choose: use buttons [A] and [C].
To confirm: press button [B].

2 Confirm that “DST ON” is shown on the LCD indication and choose a time zone of the summer time.

To choose: use buttons [A] and [C].
To confirm: press button [B].

HOUR 12H/24H

Use this to switch time notation between 12-hour and 24-hour.

12-HOUR	12-hour notation (Initial setting)
24-HOUR	24-hour notation

- The time of sunrise and sunset and the time of tide level graph are always shown in 24-hour notation regardless of this setting.

DATE ORDER

Use this to choose calendar notation (order of year/month/day).

YYYY/MM/DD	Year, month, date (Initial setting)
MM/DD/YYYY	Month, date, year
DD/MM/YYYY	Date, month, year

WEB USER GUIDE

Use this to show the two-dimensional code for accessing the instruction manual PDF through reading it with your smartphone.

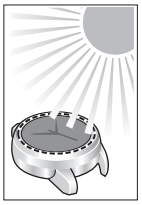
INFORMATION

Use this to see firmware version and other information of this watch.

RESET SETTINGS

Use this to return the setting values of the items above to the initial.

Charging your watch



This watch has a solar cell under the dial and stores the power generated by the cell in its built-in rechargeable cell.
The cell is charged by exposing the dial to light such as direct sunlight or fluorescent lamps.
For optimal performance, be sure to:

- **Put the watch in a location where the dial is exposed to bright light such as by the window even when it is not used.**
- **Expose its dial to direct sunlight for 5 or 6 hours at least every week.**
- **Avoid leaving it in dark places for long periods of time.**

CAUTION
- Do not charge the watch at a high temperature (about 60°C (140°F) or higher) as doing so may cause movement malfunction.
- If the watch is obscured from light by long sleeves frequently, supplemental charging may be needed to ensure continual operation.

- The watch stops charging automatically after finishing (overcharging prevention function). The function prevents damage to performance of the watch and rechargeable cell due to overcharging.

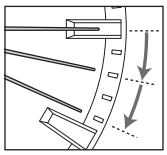
When the watch reaches a low charge state (insufficient charge warning function)

The watch tells you insufficient charge as below. Expose the dial of your watch to light to charge it immediately.

Insufficient charge warning [1]

When the watch is left without any operation for 10 seconds, the LCD indication is turned off. By pressing any button, the LCD indication returns to normal after showing “BATTERY LOW” for 3 seconds.
- The time is indicated correctly. The other functions are also available.

Insufficient charge warning [2]



The LCD indication is turned off. By pressing any button, the LCD indication shows “BATTERY EMPTY” for 3 seconds and is turned off again.
The second hand moves once every 2 seconds (two-second interval movement).
- The time is indicated correctly. However, other functions of the watch will not be available for use.
- If you do not charge the watch for 3 days or longer after the insufficient charge warning [2] has begun, the watch will be depleted of all power and stop.

Charging time by environment

Below are the approximate charging times when exposing to light continuously. Please use this table as a reference only.

Environment	Illuminance (lx)	Charging time (approx.)		
		To work for one day	To start working normally when the cell is discharged	To become fully charged when the cell is discharged
Outdoors (sunny)	100,000	3 minutes	5 hours	16 hours
Outdoors (cloudy)	10,000	25 minutes	35 hours	—
20 cm (7-7/8 inches) away from a fluorescent lamp (30 W)	3,000	1.5 hours	—	—
Interior lighting	500	7.5 hours	—	—

- **Exposing to direct sunlight is recommended to charge your watch.** A fluorescent lamp or interior lighting does not have sufficient illumination to charge the rechargeable cell efficiently.

Duration without additional charging after charging the watch fully

About 1 year

Power save function

The hands stop and the LCD indication is turned off automatically to save power when the watch has been kept in a dark place for a certain period of time and it cannot generate power.
- The watch works normally even while saving power.

Canceling the power save function

The power save status ends and the hands return to normal indication as the watch is operated or the dial is exposed to light and power generation starts.

Troubleshooting

• When your watch still has problems even after trying remedies below, consult an authorized service center.

Movement of a hand seems strange.

Symptom	Remedies	Page
The second hand moves once every two seconds.	Insufficient charge warning function is active. Power reserve of the watch is nearly empty. Charge immediately.	17
The second hand does not move.	The second hand points 45 seconds and stops when the mode is SET (settings) or during time and calendar adjustment. When the race timer is running, the second hand may stop at positions not to interrupt the view of the LCD indication.	—
No hands move.	Charge the watch under direct sunlight until the second hand moves normally.	17
	The second hand points 45 seconds and stops when the mode is SET (settings) or during time and calendar adjustment. The hour and minute hands may stop at positions not to interrupt the view of the LCD indication. When the race timer is running, the second hand may stop at positions not to interrupt the view of the LCD indication.	—
The hands start quick movement suddenly.	After finishing setting, the hands may move quickly until they show the current time.	—
	The power save function is canceled. Wait until the current time is displayed.	17
The second hand starts unexpected movement.	The second hand moves to the 0-second position as the remaining countdown time of the race timer comes to 1 minute. After that, the hand moves every second until the starting time.	8

Time/calendar is abnormal.

Symptom	Remedies	Page
Time/calendar is incorrect.	The second hand points 45 seconds and stops when the mode is SET (settings) or during time and calendar adjustment. The hour and minute hands may stop at positions not to interrupt the view of the LCD indication.	—
	When the mode is RACE (race timer), the hour and minute hands may stop at positions not to interrupt the view of the LCD indication. When the race timer is running, the second hand may stop at positions not to interrupt the view of the LCD indication.	8
	Check the area setting.	5
	Check the summer time (DST) setting. Switching summer time and standard time must be executed manually there.	5
	Adjust the time and calendar.	5
	Check and correct the reference position of the hands.	19
The time indicated with the hands and that shown on the LCD indication are different.	The hands and the LCD indication may show different times when the mode is WTM (world time).	6
	When the mode is RACE (race timer), the hour and minute hands may stop at positions not to interrupt the view of the LCD indication. When the race timer is running, the second hand may stop at positions not to interrupt the view of the LCD indication.	8
	When the place for the tide graph function is chosen from any other time zones than that of the home time, the hands and the LCD indication show different times.	11
	Check and correct the reference position of the hands.	19

LCD indication

Symptom	Remedies	Page
The LCD indication is turned off.	Insufficient charge warning function is active. Power reserve of the watch is nearly empty. Charge immediately.	17

World time

Symptom	Remedies	Page
The area you want to choose is not shown on the list.	Use “SELECT CITY” of settings to show the area you want.	16
What is “USER (USR)”?	To “USER (USR)”, you can assign any time zone you like in the 15-minute increments. Use it when the time zone of your area does not exist on the list.	16

Chronograph

Symptom	Remedies	Page
The chronograph unexpectedly stops.	Changing the mode to SET (settings) to execute settings stops chronograph measurement.	7

Timer

Symptom	Remedies	Page
The timer unexpectedly stops.	Changing the mode to SET (settings) to execute settings stops timer countdown.	9
	Starting the race timer stops the timer countdown.	9

Alarm

Symptom	Remedies	Page
No alarm sound is emitted.	Try alarm sound check. If no sound is emitted, consult an authorized service center.	10
	For checking alarm setting. Check alarm settings. The A1/A2 icons appear when alarm 1/alarm 2 are activated.	10
	While the race timer is running, alarm does not sound even if the alarm time comes.	10
Alarm sound is emitted unexpectedly.	Check area setting of alarm settings.	10

Time/calendar shown in the tide graph is abnormal.

Symptom	Remedies	Page
Time/calendar is incorrect.	Check the place setting.	12
	Check the summer time (DST) setting. Switching summer time and standard time must be executed manually there.	12
	Adjust the time and calendar.	5

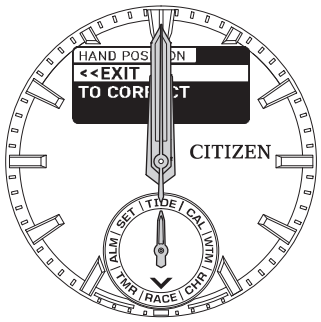
Checking and correcting the reference position

Check whether reference position is correct when the hands and the LCD indication show different time in the CAL (time and calendar) mode .

What is the reference position?
The base position of all hands to indicate time correctly.

- **Mode hand: TIDE**
- **Hour, minute and second hands: 0 hour 00 minute 00 second**

Correct reference positions



1 Change the mode to SET (settings).

- For the way to change modes, see page 3.

2 Press and release the lower right button [A] or the upper right button [C] repeatedly to choose “HAND POSITION” and press the middle right button [B].

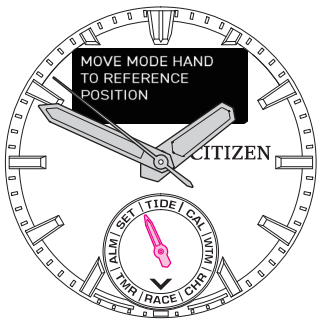
The hands start to move to the current reference positions.

3 Check the reference positions of them referring to the illustration above.

Correct	Press and release the upper right button [B] to finish the procedure.
Wrong	Proceed to step **4** and correct the reference position.

4 Press and release the lower right button [A] or the upper right button [C] repeatedly to choose “TO CORRECT” and press the middle right button [B].

The mode hand slightly moves and the hand becomes adjustable.



5 Press and release the lower right button [A] or the upper right button [C] repeatedly to adjust the reference position of the hand and press the middle right button [B].

- Press and hold button [A] or [C] to move the hand continuously.

6 Repeat step 5.

- Adjust the reference position in the following order.
  Mode hand → hour and minute hands → second hand
- After adjusting the reference position of the second hand, “SETTING COMPLETE” appears and adjustment is finished.

7 Press and release the lower right button [A] or the upper right button [C] repeatedly to choose “EXIT” and press the middle right button [B].

The mode changes to CAL (time and calendar).

All Reset

When the watch does not work properly, you can reset all the settings. If the power reserve is insufficient, charge the watch first.

Be sure to perform the following operations after All Reset.

1 Correct the reference positions.
After All Reset, the watch is in the reference position adjustment mode. Refer to step 5 and after on page 19.

2 Adjust the time and calendar.
See page 5.

1 Press and hold buttons [A], [B] and [C] at the same time for 4 seconds or more and release them.

The LCD indication is turned off and all reset is performed. Wait until movement of the hands stops.

The setting values after All Reset

Time	0 hours 00 minutes 00 seconds
Day, date, month and year	January 1, 2025
Time zone setting	UTC
Summer time/ standard time	Standard time in all areas
World time	New York
Place for tide graph	PORTHLEVEN

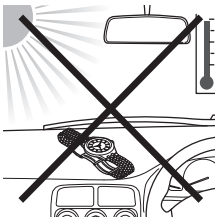
Eco-Drive watch handling precautions

<Always Make Sure to Recharge Frequently>

- **Long sleeves may inhibit light transmission to your watch. This may result in your watch loosing charge. In these cases supplemental charging may be necessary.**
- **When you take off the watch, place it in a bright location to ensure optimal performance.**

⚠CAUTION Recharging Precautions

- Do not charge the watch at a high temperature (about 60°C (140°F) or higher) as doing so may cause the movement to malfunction.
  Ex.:
  -Charging the watch too close to a light source which generates a large amount of heat such as an incandescent lamp or halogen lamp. When charging under an incandescent lamp, be sure to leave 50 cm (20 inches) or more between the lamp and the watch to avoid exposing the watch to excessive heat.
  -Charging the watch in a location where the temperature may become extremely high such as on the dashboard of a vehicle.



<Replacement of Rechargeable Cell>

- This watch utilizes a special rechargeable cell that does not require periodical replacement.
  However power consumption may increase after using the watch for a number of years due to wear of internal components and deterioration of oils. This may cause stored power to be depleted at a faster rate.

⚠WARNING Handling of Rechargeable Cell

- The rechargeable cell should never be removed from the watch. If for any reason it becomes necessary to remove the rechargeable cell from the watch, keep out of the reach of children to prevent accidental swallowing. If the rechargeable cell is accidentally swallowed, consult a doctor immediately.
- Do not dispose of the rechargeable cell with ordinary garbage. Please follow the instructions of your municipality regarding collection of batteries to prevent the risk of fire or environmental contamination.

⚠WARNING Use Only the Specified Battery

- Never use a battery other than the rechargeable cell specified for use in this watch.
  Although the watch structure is designed so that it will not operate when another type of battery is installed, if a conventional watch battery or other type of battery is installed in the watch and the watch is recharged, there is the risk of overcharging which may cause the battery to rupture. This can cause damage to the watch and injury to the wearer. When replacing the rechargeable cell, always make sure to use the designated rechargeable cell.

Water resistance

⚠WARNING Water resistance

- Refer to the watch dial and/or the case back for the indication of the water resistance of your watch. The following chart provides examples of use for reference to ensure that your watch is used properly. (The unit "**1bar**" is roughly equal to 1 atmosphere.)
- **WATER RESIST(ANT) ×× bar** may also be indicated as **W.R.×× bar**.
- Non-water resistant models are not designed to come into contact with any moisture. Take care not to expose a watch with this rating to any type of moisture.
- Water resistance for daily use (to 3 atmospheres) means the watch is water resistant for occasional accidental splashing.
- Upgraded water-resistance for daily use (to 5 atmospheres) means that the watch may be worn while swimming, but is not to be worn while skin diving or scuba diving.
- Upgraded water-resistance for daily use (to 10/20 atmospheres) means that the watch may be worn while skin diving, but not while scuba diving or saturated diving using helium gas.

Name		Non-water resistant	Everyday-use water resistant watch	Upgraded everyday use water resistant watch	
Indication	Dial or Case back	–	**WATER RESIST**	**W. R. 5 bar**	**W. R. 10 bar W. R. 20 bar**
Specification		Non-water resistant	Water-resistant to 3 atmospheres	Water-resistant to 5 atmospheres	Water-resistant to 10 and 20 atmospheres
Water-related use	Minor exposure to water (washing face, rain, etc.)	**NO**	**OK**	**OK**	**OK**
	Swimming and general washing work	**NO**	**NO**	**OK**	**OK**
	Skin diving, marine sports	**NO**	**NO**	**NO**	**OK**
	SCUBA diving using an air tank	**NO**	**NO**	**NO**	**NO**
	Saturation diving using helium gas	**NO**	**NO**	**NO**	**NO**
	Operate the crown or button when the watch is wet	**NO**	**NO**	**NO**	**NO**

Precautionary items and usage limitations

⚠ CAUTION To Avoid Injury

- Be particularly careful when wearing your watch while holding a small child, to avoid injury.
- Be particularly careful when engaged in strenuous exercise or work, to avoid injury to yourself and others.
- Do NOT wear your watch while in a sauna or other location where your watch may become excessively hot, since there is the risk of burns.
- Be careful when putting on and taking off your watch, since there is a risk of damaging your fingernails, depending on the manner in which the band is fastened.
- Take off your watch before going to bed. It may cause an unexpected injury or a rash.

⚠ CAUTION Precautions

- Always use the watch with the crown pushed in (normal position). If the crown is of the screw lock-type, make sure it is securely locked.
- Do not operate (use the crown and/or buttons) the watch when it is wet. Water may enter the watch causing damage to vital components.
- If water enters the watch or the watch fogs up and does not clear up even after a long time, consult your dealer or an authorized service center for inspection and/or repair.
- Even if your watch has a high level of water resistance, please be careful of the following.
  -If your watch is immersed in sea water, rinse thoroughly with fresh water and wipe with a dry cloth.
  -Do not pour water from a tap directly onto your watch.
  -Take off your watch before taking a bath.
- If seawater enters the watch, place the watch in a box or plastic bag and immediately take it in for repair.
  Otherwise, pressure inside the watch will increase, and parts (crystal, crown, push button, etc.) may come off.

⚠ CAUTION When Wearing Your Watch

<Band>

- Leather bands and rubber (urethane) bands will deteriorate over time due to perspiration or dirt.
  In addition, they are made of natural material and will be worn, deformed and discolored over time. It is recommended to replace with a new one periodically.
- The durability of a leather band may be affected when wet (fading, peeling of adhesive), owing to the properties of the material. Moreover, wet leather may cause a rash.
- Do not stain a leather band with substances containing volatile materials, bleach, alcohol (including cosmetics). Discoloration and premature aging may be occurred. Ultraviolet light such as direct sunlight may cause discoloration or deformation.
- It is recommended to take off the watch if it gets wet, even if the watch itself is water-resistant.
- Do not wear the band too tightly. Try to leave enough space between the band and your skin to allow adequate ventilation.
- The rubber (urethane) band may be stained by dyes or soil present in or on clothing or other accessories. Since these stains may not be removable, caution is required when wearing your watch with items that tend to easily transfer color (articles of clothing, purses, etc.). In addition, the band may be deteriorated by solvents or moisture in the air. Replace with a new one when it has lost elasticity or become cracked.
- Please request adjustment or repair of the band in the following cases:
  -You notice an abnormality with the band due to corrosion.
  -The pin of the band is protruding.
- We recommend seeking the assistance of an experienced watch technician for sizing of your watch. If adjustment is not done correctly, the bracelet may unexpectedly become detached leading to loss of your watch or injury (excluding products containing the band adjustment tool).
  Consult an authorized service center. Other shops may charge for, or may not provide, the service.

<Temperature>

- The watch may stop or the function of the watch may be impaired in extremely high or low temperature. Do not use the watch in places where the temperature is outside the operating temperature range as stated in the specifications.

<Magnetism>

- Analog quartz watches are powered by a step motor that uses a magnet. Subjecting the watch to strong magnetism from the outside can cause the motor to operate improperly and prevent the watch from keeping time accurately.
  Do not allow the watch to come into close proximity to magnetic health devices (magnetic necklaces, magnetic elastic bands, etc.) or the magnets used in the latches of refrigerator doors, clasps used in handbags, the speaker of a cell phone, electromagnetic cooking devices and so on.

<Strong Shock>

- Avoid dropping the watch or subjecting it to other strong impact. It may cause malfunctions and/or performance deterioration as well as damage to the case and bracelet.

<Static Electricity>

- The integrated circuits (IC) used in quartz watches are sensitive to static electricity. Please note the watch may operate erratically or not at all if exposed to intense static electricity.

<Chemicals, Corrosive Gasses and Mercury>

- Do not use the watch in environment with chemicals or corrosive gasses. If paint thinner, benzene or other solvents or products containing these solvents (including gasoline, nail-polish remover, cresol, bathroom cleaners and adhesives, water repellent, etc.) are allowed to come into contact with the watch, they may discolor, dissolve or crack the materials. Be careful when handling these chemicals. Contact with mercury such as that used in thermometers may also cause discoloration of the band and case.

<Protective Stickers>

- Be sure to remove any protective stickers that may be on your watch (case back, band, clasp, etc.). Otherwise, perspiration or moisture may enter the gaps between the protective stickers and the parts, which may result in a skin rash and/or corrosion of the metal parts.

⚠CAUTION Always Keep Your Watch Clean

- 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. Rotate the crown at the normal position and press the buttons periodically to remove accumulated foreign matter.
- The case and band of the watch come into direct contact with the skin. Corrosion of the metal or accumulated foreign matter may result in black residue coming from the bracelet when exposed to moisture or perspiration unnoticed soiling such as that caused by perspiration. Be sure to keep your watch clean at all times.
- The case and band of the watch come into direct contact with the skin. In rare circumstances, accumulated dirt, foreign matter may cause irritation with the skin. If you think there is something wrong, discontinue wearing the watch immediately and consult your physician.
  In the case of accumulation of sweat or dirt on a metal band or case, clean thoroughly using a brush and neutral detergent. In the case of a leather or rubber (urethane) band, wipe clean using a dry cloth.
- Leather bands may become discolored by perspiration or dirt. Always keep your leather band clean by wiping with a dry cloth.

Caring for Your Watch

- Wipe any dirt or moisture such as perspiration from the case and crystal with a soft cloth.
- For a metallic, plastic or rubber (urethane) watchband, wash any dirt off with water. Remove the small amounts of dirt trapped between the crevices of the metallic band with a soft brush.
- For a leather band, wipe off dirt using a dry cloth.
- If you will not be using your watch for an extended period of time, carefully wipe off any perspiration, dirt or moisture and store in a proper location, avoiding locations subject to excessively high or low temperatures and high humidity.

When Luminous Paint is used for your watch

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.

Repair

When a caution such as “SERVICE CENTER REPAIR ONLY” or “DON’T OPEN!” is engraved on the case back of the watch, all parts of it, except for the band, are to be repaired only at the authorized service center. This is because special technologies and equipment are required to perform repairs, inspections and adjustments. Please consult the shop where you purchased your watch or service center when having your watch repaired.

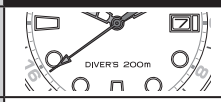
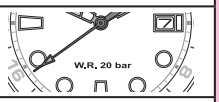
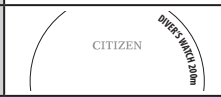
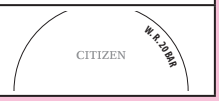
Specifications

Model	U812	**Type**	Solar-powered analog-digital combination watch
Timekeeping accuracy	Average monthly accuracy: ±15 seconds when worn at normal operation temperatures (between +5°C - +35°C (+41°F - +95°F)		
Operating temperature range	−10°C (14°F) to +60°C (140°F)		
Display functions	Analog section • Time: hours, minutes, seconds • Mode: CAL (time and calendar), WTM (world time), CHR (chronograph), RACE (race timer), TMR (timer), ALM (alarm), SET (settings), TIDE (tide graph) Digital section • Time: hours, minutes, seconds, area (time zone) • Calendar: year, month, date, days of week • Chronograph • Race timer • Timer • Alarm • Tide graph • Settings		
Duration	• After charged fully, the watch runs without additional charging: About 1 year When power save functions all the day: About 3 years • Power reserve after insufficient charge warning [2] began: About 3 days		
Battery	Rechargeable cell (manganese dioxide lithium cell), 1pc.		
Additional functions	• Solar power function • Power generation amount indication function • Overcharging prevention function • Insufficient charge warning function • Power reserve indication • Power save function • Perpetual calendar (until December 31, 2199) • World time (43 areas including 29 time zones) • Time difference assigning function • Chronograph (up to 24 hours in 0.01-second increments). • Countdown timer (up to 99 minutes 59 seconds in 1-second decrement) • Alarm function (alarm 1/2) • Alarm monitor function • Tide graph function (203 places) • Time of sunrise and sunset indication function • Lunar age indication function • Race timer (up to 99 minutes 59 seconds in 1-second decrement and increment) • Impact detection function • LED lamp		

Specifications and contents are subject to change without prior notice.

When you use a diver's watch

Indication example

	Diver's watch	Standard watch
Dial		
Case back		

Check if your watch is a diver's watch referring to the indication example below.

When it is a diver's watch, be sure to read through "Precautions to be taken when diving" and "About water depth measurement function" on the following.

A "diver's watch" is the watch for diving. It has water resistance performance enough for SCUBA or other kind of diving and is equipped with special functions for diving. Indication such as "DIVER'S" or "xxx m" is shown on the dial or case back of a diver's watch.

Precautions to be taken when diving

When you use a diver's watch, read through this **"Precautions to be taken when diving"** after checking details of water resistance performance on our company web site.
https://www.citizenwatch-global.com/support/maintenance/wr.html

- Watches which have the name "Water resistant for saturation diving" or "Water resistant for diving" defined on the web page above are diver's watches. Watches other than those should not be used for SCUBA or saturation diving.

⃠ PROHIBITED Do not use this watch while diving when...

- Do not use your watch while diving when the watch stops or exhibits any abnormal operation.
- Do not use your watch for diving when the watch shows insufficient charge warning or low battery warning through moving the second hand every two-second.

⚠ CAUTION Diving with the watch

- Persons using the diver's watch are strongly recommended to receive proper instruction and training pertaining to diving and observe those rules at all times.
- Please use this watch properly only after you fully understand the operating procedures and cautions. Using this watch other than as indicated in this instruction manual may result in failure of the watch to function properly.
- Check the water-resistant indications on the watch face or the case back. Never dive beyond the indicated depth.

⚠ CAUTION Check items before diving

Check the items below before using this watch for diving.

- Make sure that the watch is running correctly (check the movements of the time/calendar).
- Make sure that the watch is powered enough for diving:
  - Mechanical type: check if the mainspring is fully wound.
  - Battery type: check if the low battery warning function is deactivated (when the function is equipped).
  - Solar-powered type: Check if the watch is sufficiently charged and the insufficient charge warning function (2-second interval movement) is deactivated.
- Check to see if the crown is properly pushed in and the screw down push button is securely locked.
- Make sure that the band is firmly anchored to the watch body.
- Make sure that there are no cracks or other damage to the watch band or the glass face.
- Make sure that the rotating bezel (register ring) rotates properly.
  - For details of usage of the rotating bezel, see our company web site.
  https://www.citizenwatch-global.com/support/exterior/index.html

⚠ CAUTION During diving

- Do not push any push buttons or pull out the crown in the water. Operating any of them in water may cause trouble including deterioration of water resistance.
- Be careful not to hit the watch against hard objects such as equipment or rocks.

⚠ CAUTION After diving

- Check to see if the crown is pushed in and the screw down push button is locked before removing the sea water, dirt, and sand attached to the watch with fresh water. Then, wipe the fresh water.

⚠ WARNING To keep water resistance performance

- The packing used for a watch is a consumable part and will deteriorate over long-term use. Deterioration may lead to water penetration, causing the watch to malfunction or stop. Consult an authorized service center for inspection (for a charge) every 2 or 3 years, and replace the packing, glass or other parts as necessary.

Performance for diving of a diver's watch

Indication example on the dial or case back	**• DIVER'S xxx m • AIR DIVER'S xxx m • DIVER'S WATCH xxx m**	**• DIVER'S WATCH xxx m FOR SATURATION DIVING • Professional DIVER'S xxx m • He-GAS DIVER'S xxx m**
Specification example	xxx m water resistant	
Name	Water-resistant watch for SCUBA diving	Water-resistant watch for saturation diving
Performance for diving	SCUBA diving using an air tank	
	You cannot use it for saturation diving using helium gas.	Saturation diving using helium gas

- Diver's watches of our company conform with the standard ISO6425: 1996 or ISO 6425: 2018.
- For water resistance performance or functions in other scenes than diving, refer also to other precautions on the instruction manual.

Indication example on the dial or case back		**• DIVER'S xxx m • AIR DIVER'S xxx m • DIVER'S WATCH xxx m**	**• DIVER'S WATCH xxx m FOR SATURATION DIVING • Professional DIVER'S xxx m • He-GAS DIVER'S xxx m**
Water-related use	Minor exposure to water (washing face, rain, etc.)	**OK**	**OK**
	Swimming and general washing work	**OK**	**OK**
	Skin diving, marine sports	**OK**	**OK**
	SCUBA diving using an air tank	**OK**	**OK**
	Saturation diving using helium gas	**NO**	**OK**
	Operate the crown or button when the watch is wet	**NO**	**NO**

About water depth measurement function

When your watch has the water depth measurement function, be sure to read through articles below.

⚠ DANGER	The water-depth measurement function of this watch is not certified as a measuring instrument by the authorities. Be sure to use a specialized instrument along with this watch when diving. Do not rely solely on this watch's function.
⚠ WARNING	Do not use the water depth measurement function of the watch in the following cases: • When actions or situation judgments involving risks are required. • When the situation requires special treatments. • When charging is not enough or the low battery warning function is activated.

⚠ CAUTION

- Measurement results may be inaccurate in the following cases:
  - When water depth changes sharply.
  - When any foreign object sticks around the hydraulic pressure sensor.

⚠ CAUTION Before measurement

- Before diving, be sure to take instructions and training for safety diving.
- Check the items below.
  - Commercial specialized devices for diving are prepared.
  - The band of the watch is not worn or damaged.
  - No foreign objects stick around the hydraulic pressure sensor or water sensor.
  - The crown and buttons are locked.
  - The watch is charged enough or its battery life is long enough.
  - Indication such as "OVER" which means unavailability of measurement is not shown.
  - Time indicated on the watch is correct.

⚠ CAUTION Diving at high altitude and in fresh water

- Be sure to complete special safety training before diving in fresh water or at high altitude.
- Do not use this watch at altitudes over 4 000 m (13 124 ft), because accurate measurement is not possible.
- The water depth measurement function measures pressure and convert the value into depth in sea water (density 1.025). Therefore, when diving in fresh water (density 1.000), the actual depth will be 2.5 % deeper than the depth displayed on the watch.
  Measurement example in fresh water: 20 m (66 ft) (indicated depth) x 1.025 = 20.5 m (68 ft) (actual depth)

Repair

All parts of this watch, except for the band, are to be repaired only at the authorized service center.
This is because special technologies and equipment are required to perform repairs, inspections and adjustments. Please consult the shop where you purchased your watch or service center when having your watch repaired.