Operation Guide 3214

CASIO

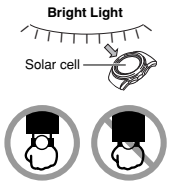
Getting Acquainted

Congratulations upon your selection of this CASIO watch. To get the most out of your purchase, be sure to read this manual carefully.

Warning!

- The measurement functions built into this watch are not intended for taking measurements that require professional or industrial precision. Values produced by this watch should be considered as reasonable representations only.
- The Moon phase indicator and tide graph data that appear on the display of this watch are not intended for navigation purposes. Always use proper instruments and resources to obtain data for navigation purposes.
- This watch is not an instrument for calculating low tide and high tide times. The tide graph of this watch is intended to provide a reasonable approximation of tidal movements only.
- Note that CASIO COMPUTER CO., LTD. assumes no responsibility for any damage or loss suffered by you or any third party arising through the use of this product or its malfunction.

Keep the watch exposed to bright light

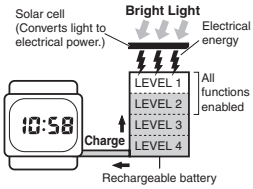


The electricity generated by the solar cell of the watch is stored by a rechargeable battery. Leaving or using the watch where it is not exposed to light causes the battery to run down. Make sure the watch is exposed to light as much as possible.

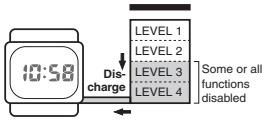
- When you are not wearing the watch on your wrist, position the face so it is pointed at a source of bright light.
- You should try to keep the watch outside of your sleeve as much as possible. Charging is reduced significantly if the face is covered only partially.

- The watch continues to operate, even when it is not exposed to light. Leaving the watch in the dark can cause the battery to run down, which will result in some watch functions to be disabled. If the battery goes dead, you will have to re-configure watch settings after recharging. To ensure normal watch operation, be sure to keep it exposed to light as much as possible.

Battery charges in the light.



Battery discharges in the dark.



- The actual level at which some functions are disabled depends on the watch model.
- Frequent display illumination can run down the battery quickly and require charging. The following guidelines give an idea of the charging time required to recover from a single illumination operation.
  Approximately 5 minutes exposure to bright sunlight coming in through a window
  Approximately about 8 hours exposure to indoor fluorescent lighting
- **Be sure to read "Power Supply" for important information you need to know when exposing the watch to bright light.**

If the display of the watch is blank...

If the display of the watch is blank, it means that the watch's Power Saving function has turned off the display to conserve power.

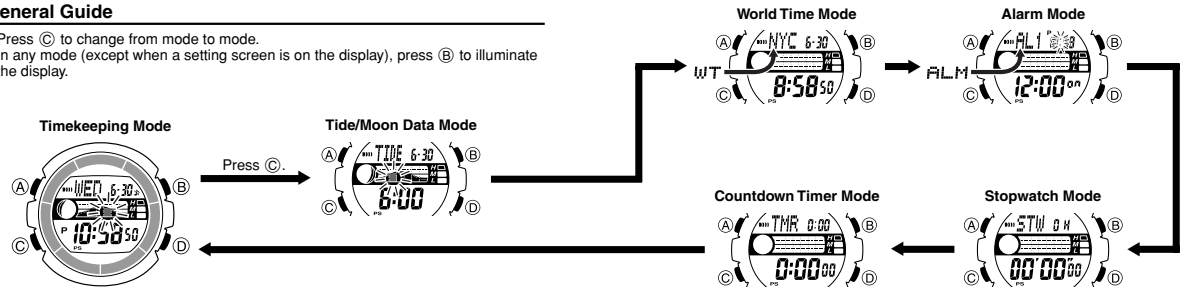
- **See "Power Saving Function" for more information.**

About This Manual

- Button operations are indicated using the letters shown in the illustration.
- Each section of this manual provides you with the information you need to perform operations in each mode. Further details and technical information can be found in the "Reference" section.

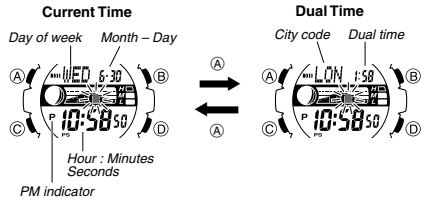
General Guide

- Press Ⓒ to change from mode to mode.
- In any mode (except when a setting screen is on the display), press Ⓑ to illuminate the display.



Timekeeping

Press the Ⓐ button to toggle the upper display between the day of the week and date, and the currently selected World Time city and time (Dual Time).
Use the Timekeeping Mode to set and view the current time and date.



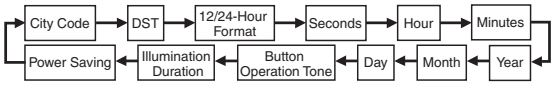
Read This Before You Set the Time and Date!

This watch is preset with a number of city codes, each of which represents the time zone where that city is located. When setting the time, it is important that you first select the correct city code for your Home City (the city where you normally use the watch). If your location is not included in the preset city codes, select the preset city code that is in the same time zone as your location.

- Note that all of the times for the World Time Mode city codes are displayed in accordance with the time and date settings you configure in the Timekeeping Mode.

To set the time and date manually

1. In the Timekeeping Mode hold down Ⓐ until the city code starts to flash, which indicates the setting screen.
2. Use Ⓓ and Ⓑ to select the city code you want.
   - Make sure you select your Home City code before changing any other setting.
   - For full information on city codes, see the "City Code Table".
3. Press Ⓒ to move the flashing in the sequence shown below to select the other settings.



- The following steps explain how to configure timekeeping settings only.

4. When the timekeeping setting you want to change is flashing, use Ⓓ or Ⓑ to change it as described below.

Screen:	To do this:	Do this:
TYO	Change the city code	Use Ⓓ (east) and Ⓑ (west).
ON	Toggle between Daylight Saving Time (ON) and Standard Time (OFF).	Press Ⓓ.
12H	Toggle between 12-hour (12H) and 24-hour (24H) timekeeping	Press Ⓓ.
50	Reset the seconds to 00	Press Ⓓ.
10:58	Change the hour and minutes	Use Ⓓ (+) and Ⓑ (–).
20 10 6-30	Change the year, month, or day	Use Ⓓ (+) and Ⓑ (–).
MUTE / KEY♪	Toggle the button operation tone between KEY♪ (on) and MUTE (off)	Press Ⓓ.
LT1	Toggle the illumination duration between LT1 (approximately 1.5 seconds) and LT3 (approximately 3 seconds).	Press Ⓓ.
PS ON	Toggle between Power Saving on (ON) and off (OFF)	Press Ⓓ.

5. Press Ⓐ to exit the setting screen.

- The day of the week is displayed automatically in accordance with the date (year, month, and day) settings.

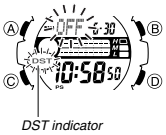
12-hour and 24-hour timekeeping

- With the 12-hour format, the **P** (PM) indicator appears to the left of the hour digits for times in the range of noon to 11:59 p.m. and no indicator appears to the left of the hour digits for times in the range of midnight to 11:59 a.m.
- With the 24-hour format, times are displayed in the range of 0:00 to 23:59, without any indicator.
- The 12-hour/24-hour timekeeping format you select in the Timekeeping Mode is applied in all other modes.

Daylight Saving Time (DST)

Daylight Saving Time (summer time) advances the time setting by one hour from Standard Time. Remember that not all countries or even local areas use Daylight Saving Time.

To change the Daylight Saving Time (summer time) setting



DST indicator

1. In the Timekeeping Mode, hold down Ⓐ until the city code starts to flash, which indicates the setting screen.
2. Press Ⓒ and the DST setting screen appears.
3. Use Ⓓ to cycle through the DST settings in the sequence shown below.

DST off (OFF) → DST on (On)

4. When the setting you want is selected, press Ⓐ to exit the setting screen.

- The **DST** indicator appears to indicate that Daylight Saving Time is turned on.

Tide/Moon Data

In the Tide/Moon Data Mode, you can see the current tide and the current date's Moon phase for your Home City. You can specify a date and view tide and Moon data for that date.

- See "Moon Phase Indicator" for information about the Moon phase indicator and "Tide Graph" for information about the tide graph.
- All of the operations in this section are performed in the Tide/Moon Data Mode.

Note

- It takes about two seconds to calculate tide graph data. You will not be able to display a setting screen while data calculation is in progress.
- Moon age is calculated to an accuracy of ±1 day.

Tide Data

The Tide Graph that appears first when you enter the Tide/Moon Data Mode shows the data at 6:00 a.m. for your currently selected Home City on the current date, according to the Timekeeping Mode. From there you can specify another date or time.

- If the tide data is not correct, check your Timekeeping Mode settings and correct them if necessary.
- If you feel that the information shown by the Tide Graph is different from actual tide conditions, you need to adjust the high tide time. See "Adjusting the High Tide Time" for more information.

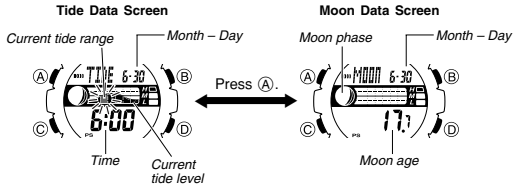
Moon Data

The Moon phase and Moon age information that appears first when you enter the Tide/Moon Data Mode shows the data at noon for your currently selected Home City on the current date, according to the Timekeeping Mode. After that you can specify another date to view data.

- If the Moon data is not correct, check your Timekeeping Mode settings and correct them if necessary.
- If the Moon phase indicator shows a phase that is a mirror image of the actual moon phase in your area, you can use the procedure under "Reversing the Displayed Moon Phase" to change it.

Tide/Moon Data Screens

In the Tide/Moon Data Mode, press Ⓐ to toggle between the tide data screen and the Moon data screen.

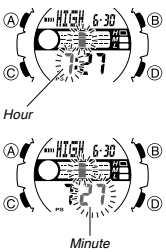


- When you display the Tide Data Screen, it initially shows tide data for 6:00 a.m..
- Use the Tide Data Screen to specify the Tide Data time. You can use Ⓓ (+) to change the displayed time in one-hour increments.
- Use the Moon Data Screen to specify the Tide/Moon Data date. You can use Ⓓ (+) to change the displayed date in one-day increments. Pressing Ⓓ will display the year of the displayed date.

Adjusting the High Tide Time

Use the following procedure to adjust the high tide time within a particular date. You can find out high tide information for your area from a tide table, the Internet, or your local newspaper.

To adjust the high tide time



1. In the Tide/Moon Data Mode, hold down Ⓐ until the hour digits start to flash.
2. Use Ⓓ (+) and Ⓑ (–) to change the hour setting.
3. When the hour is the setting you want, press Ⓒ.
   - This will cause the minute digits to flash.
4. Use Ⓓ (+) and Ⓑ (–) to change the minute setting.
5. When the minute setting is the way you want, press Ⓐ to exit the adjustment screen and return to the Tide/Moon Data Mode screen.

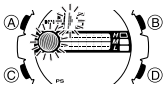
- Pressing Ⓓ and Ⓑ at the same time while the time adjustment screen is displayed (steps 2 through 5 above) will return the high tide time to its initial factory default setting.
- The high tide time setting is not affected by the DST (summer time) setting of the Timekeeping Mode.
- On some days, there are two high tides. With this watch, you can adjust the first high tide time only. The second high tide time for that day is adjusted automatically based on the first high tide time.

Reversing the Displayed Moon Phase

The left-right (east-west) appearance of the Moon depends on whether the Moon is north of you (northerly view) or south of you (southerly view) as you view it.
You can use the procedure below to reverse the displayed Moon phase so it matches the actual appearance of the Moon where you are located.

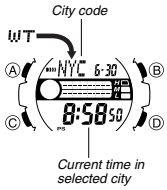
- To determine the viewing direction of the Moon, use a compass to take a direction reading of the Moon at its meridian passage.
- For information about the Moon phase indicator, see "Moon Phase Indicator".

To reverse the displayed Moon phase



1. In the Tide/Moon Data Mode, hold down Ⓐ until the hour digits start to flash.
2. Press Ⓒ twice.
   - This will cause the Moon phase indicator to flash. This is the indicator switching screen.
3. Press Ⓓ to toggle the Moon phase indicator between the southerly view (indicated by NHS) and northerly view (indicated by NHS).
   - Northerly view: Moon is north of you.
   - Southerly view: Moon is south of you.
4. When the Moon phase indicator setting is the way you want, press Ⓐ to exit the switching screen and return to the Tide/Moon Data Mode screen.

World Time



World Time shows the current time in 48 cities (31 time zones) around the world.

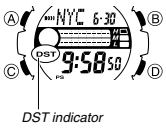
- The times kept in the World Time Mode are synchronized with the time being kept in the Timekeeping Mode. If you feel that there is an error in any World Time Mode time, check to make sure you have the correct city selected as your Home City. Also check to make sure that the current time as shown in the Timekeeping Mode is correct.
- Select a city code in the World Time Mode to display the current time in any particular time zone around the globe. See the "City Code Table" for information about the UTC differential settings that are supported.
- All of the operations in this section are performed in the World Time Mode, which you enter by pressing Ⓒ.

To view the time in another city

While in the World Time Mode, use the Ⓓ (eastward) to scroll through the city codes (time zones).

- Pressing the Ⓓ and Ⓑ at the same time will jump to the UTC time zone.

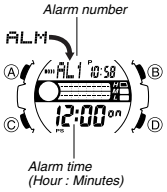
To toggle a city code time between Standard Time and Daylight Saving Time



1. In the World Time Mode, use Ⓓ to display the city code (time zone) whose Standard Time/Daylight Saving Time setting you want to change.
2. Hold down Ⓐ to toggle between Daylight Saving Time (DST indicator displayed) and Standard Time (DST indicator not displayed).

- The DST indicator is shown on the World Time Mode screen while Daylight Saving Time is turned on.
- Note that the Standard Time/Daylight Saving Time setting affects only the currently displayed city code. Other city codes are not affected.
- Note that you cannot switch between Standard Time and Daylight Saving Time while UTC is selected as the city code.

Alarms

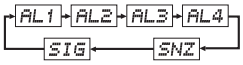


The Alarm Mode gives you a choice of four one-time alarms and one snooze alarm.
Also use the Alarm Mode to turn the Hourly Time Signal (SIG) on and off.

- There are five alarm screens numbered AL1, AL2, AL3 and AL4 for the one-time alarm, and a snooze alarm screen indicated by SNZ. The Hourly Time Signal screen is indicated by SIG.
- All of the operations in this section are performed in the Alarm Mode, which you enter by pressing Ⓒ.

To set an alarm time

1. In the Alarm Mode, use Ⓓ to scroll through the alarm screens until the one whose time you want to set is displayed.



   - To set a one-time alarm, display alarm screen AL1, AL2, AL3 or AL4. To set the snooze alarm, display the SNZ screen.
   - The snooze alarm repeats every five minutes.
2. After you select an alarm, hold down Ⓐ until the hour setting of the alarm time starts to flash, which indicates the setting screen.
   - This operation turns on the alarm automatically.
3. Press Ⓒ to move the flashing between the hour and minute settings.
4. While a setting is flashing, use Ⓓ (+) and Ⓑ (–) to change it.
   - With the 12-hour format, set the time correctly as a.m. or p.m. (**P** indicator).
5. Press Ⓐ to exit the setting screen.

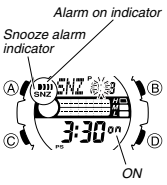
Alarm Operation

The alarm tone sounds at the preset time for 10 seconds, regardless of the mode the watch is in. In the case of the snooze alarm, the alarm operation is performed a total of seven times, every five minutes, until you turn the alarm off.

- Alarm and Hourly Time Signal operations are performed in accordance with the Timekeeping Mode time.
- To stop the alarm tone after it starts to sound, press any button.
- Performing any one of the operations below during a 5-minute interval between snooze alarms cancels the current snooze alarm operation.
  Displaying the Timekeeping Mode setting screen
  Displaying the SNZ setting screen

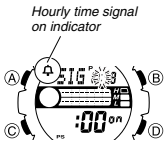
To test the alarm
In the Alarm Mode, hold down Ⓓ to sound the alarm.

To turn an alarm on and off



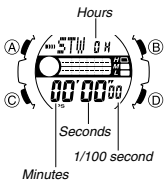
1. In the Alarm Mode, use Ⓓ to select an alarm.
2. Press Ⓐ to toggle it on and off.
- Turning on a alarm (AL1, AL2, AL3, AL4 or SNZ) displays the alarm on indicator on its Alarm Mode screen.
- In all modes, the alarm on indicator is shown for any alarm that currently is turned on.
- The alarm on indicator flashes while the alarm is sounding.
- The snooze alarm indicator flashes while the snooze alarm is sounding and during the 5-minute intervals between alarms.

To turn the Hourly Time Signal on and off



1. In the Alarm Mode, use Ⓓ to select the Hourly Time Signal (SIG).
2. Press Ⓐ to toggle it on and off.
- The Hourly Time Signal on indicator is shown on the display in all modes while this function is turned on.

Stopwatch



The stopwatch lets you measure elapsed time, split times, and two finishes.
- The display range of the stopwatch is 23 hours, 59 minutes, 59.99 seconds.
- The stopwatch continues to run, restarting from zero after it reaches its limit, until you stop it.
- The stopwatch measurement operation continues even if you exit the Stopwatch Mode.
- Exiting the Stopwatch Mode while a split time is frozen on the display clears the split time and returns to elapsed time measurement.
- All of the operations in this section are performed in the Stopwatch Mode, which you enter by pressing Ⓒ.

To measure times with the stopwatch

Elapsed Time

Ⓓ → Ⓓ → Ⓓ → Ⓓ → Ⓐ

Start	Stop	Re-start	Stop	Clear

Split Time

Ⓓ → Ⓐ → Ⓐ → Ⓓ → Ⓐ

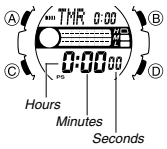
Start	Split (**SPL** displayed)	Split release	Stop	Clear

Two Finishes

Ⓓ → Ⓐ → Ⓓ → Ⓐ → Ⓐ

Start	Split	Stop	Split release	Clear
	First runner finishes. Display time of first runner.	Second runner finishes.	Display time of second runner.	

Countdown Timer

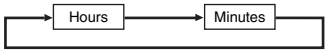


You can set the countdown timer within a range of one minute to 24 hours. An alarm sounds when the countdown reaches zero.
- All of the operations in this section are performed in the Countdown Timer Mode, which you enter by pressing Ⓒ.

Countdown End Beeper
The countdown end beeper lets you know when the countdown reaches zero. The beeper stops after about 10 seconds or when you press any button.

To configure the countdown timer

1. While the countdown start time is on the display in the Countdown Timer Mode, hold down Ⓐ until the current countdown start time starts to flash, which indicates the setting screen.
   - If the countdown start time is not displayed, use the procedure under "To use the countdown timer" to display it.
2. Press Ⓒ to move the flashing in the sequence shown below to select other settings.



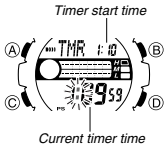
3. When the setting you want to change is flashing, use Ⓓ and Ⓑ to change it as described below.

Setting	Screen	Button Operation
Hours, Minutes	0:00	Use Ⓓ (+) and Ⓑ (–) to change the setting.

- To specify a countdown start time of 24 hours, set 0:00.

4. Press Ⓐ to exit the setting screen.

To use the countdown timer



Press Ⓓ while in the Countdown Timer Mode to start the countdown timer.
- The countdown timer operation continues even if you exit the Countdown Timer Mode.
- Press Ⓓ while a countdown operation is in progress to pause it. Press Ⓓ again to resume the countdown.
- To stop a countdown operation completely, first pause it (by pressing Ⓓ), and then press Ⓐ. This returns the countdown time to its starting value.

Illumination

An LED (light-emitting diode) illuminate the display for easy reading in the dark.

Illumination Precautions
- The illumination provided by the light may be hard to see when viewed under direct sunlight.
- Illumination automatically turns off whenever an alarm sounds.
- Frequent use of illumination runs down the battery.

To illuminate the display manually
In any mode (except when a setting screen is on the display), press Ⓑ to turn on illumination.
- You can use the procedure below to select either 1.5 seconds or 3 seconds as the illumination duration. When you press Ⓑ, the illumination will remain on for about 1.5 seconds or 3 seconds, depending on the current illumination duration setting.

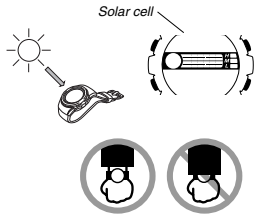
To specify the illumination duration

1. In the Timekeeping Mode, hold down Ⓐ until the display contents start to flash. This is the setting screen.
2. Press Ⓒ 10 times until the current illumination duration setting (LT1 or LT3) appears.
3. Press Ⓓ to toggle the setting between LT1 (approximately 1.5 seconds) and LT3 (approximately 3 seconds).
4. Press Ⓐ to exit the setting screen.

Power Supply

This watch is equipped with a solar cell and a rechargeable battery that is charged by the electrical power produced by the solar cell. The illustration shown below shows how you should position the watch for charging.

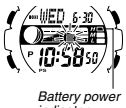
Example: Orient the watch so its face is pointing at a light source.



- The illustration shows how to position a watch with a resin band.
- Note that charging efficiency drops when any part of the solar cell is blocked by clothing, etc.
- You should try to keep the watch outside of your sleeve as much as possible. Charging is reduced significantly if the face is covered only partially.

Important!
- Storing the watch for long periods in an area where there is no light or wearing it in such a way that it is blocked from exposure to light can cause rechargeable battery power to run down. Be sure that the watch is exposed to bright light whenever possible.
- This watch uses a rechargeable battery to store power produced by the solar cell, so regular battery replacement is not required. However, after very long use, the rechargeable battery may lose its ability to achieve a full charge. If you experience problems getting the rechargeable battery to charge fully, contact your dealer or CASIO distributor about having it replaced.
- Never try to remove or replace the watch's rechargeable battery yourself. Use of the wrong type of battery can damage the watch.
- All data stored in memory is deleted, and the current time and all other settings return to their initial factory defaults whenever battery power drops to Level 5 and when you have the battery replaced.
- Turn on the watch's Power Saving function and keep it in an area normally exposed to bright light when storing it for long periods. This helps to keep the rechargeable battery from going dead.

Battery Power Indicator and Recover Indicator
The battery power indicator on the display shows you the current status of the rechargeable battery's power.



Level	Battery Power Indicator	Function Status
1		All functions enabled.
2		All functions enabled.
3	LOW (Charge Soon Alert)	Illumination, and beeper disabled.
4	CHG	Except for timekeeping and the **CHG** (charge) indicator, all functions and display indicators disabled.
5		All functions disabled.

- The flashing LOW indicator at Level 3 tells you that battery power is very low, and that exposure to bright light for charging is required as soon as possible.
- At Level 5, all functions are disabled and settings return to their initial factory defaults. Once the battery reaches Level 2 after falling to Level 5, reconfigure the current time, date, and other settings.
- The watch's Home City code setting will change automatically to **TYO** (Tokyo) whenever the battery drops to Level 5.
- Display indicators reappear as soon as the battery is charged from Level 5 to Level 2.
- Leaving the watch exposed to direct sunlight or some other very strong light source can cause the battery power indicator to show a reading temporarily that is higher than the actual battery level. The correct battery level should be indicated after a few minutes.

- Performing illumination, or beeper operations during a short period may cause (recover) to appear on the display.
  After some time, battery power will recover and (recover) will disappear, indicating that the above functions are enabled again.
- If (recover) appears frequently, it probably means that remaining battery power is low. Leave the watch in bright light to allow it to charge.

Charging Precautions

Certain charging conditions can cause the watch to become very hot. Avoid leaving the watch in the areas described below whenever charging its rechargeable battery. Also note that allowing the watch to become very hot can cause its liquid crystal display to black out. The appearance of the LCD should become normal again when the watch returns to a lower temperature.

Warning!
Leaving the watch in bright light to charge its rechargeable battery can cause it to become quite hot. Take care when handling the watch to avoid burn injury. The watch can become particularly hot when exposed to the following conditions for long periods.

- On the dashboard of a car parked in direct sunlight
- Too close to an incandescent lamp
- Under direct sunlight

Charging Guide

The following table shows the amount of time the watch needs to be exposed to light each day in order to generate enough power for normal daily operations.

Exposure Level (Brightness)	Approximate Exposure Time
Outdoor Sunlight (50,000 lux)	5 minutes
Sunlight Through a Window (10,000 lux)	24 minutes
Daylight Through a Window on a Cloudy Day (5,000 lux)	48 minutes
Indoor Fluorescent Lighting (500 lux)	8 hours

- For details about the battery operating time and daily operating conditions, see the "Power Supply" section of the Specifications.
- Stable operation is promoted by frequent exposure to light.

Recovery Times

The table below shows the amount exposure that is required to take the battery from one level to the next.

Exposure Level (Brightness)	Approximate Exposure Time				
	Level 5	Level 4	Level 3	Level 2	Level 1
Outdoor Sunlight (50,000 lux)	2 hours			22 hours	6 hours
Sunlight Through a Window (10,000 lux)	9 hours			111 hours	30 hours
Daylight Through a Window on a Cloudy Day (5,000 lux)	17 hours			226 hours	61 hours
Indoor Fluorescent Lighting (500 lux)	199 hours			- - - - - - - -	- - - - - - - -

- The above exposure time values are all for reference only. Actual required exposure times depend on lighting conditions.

Reference

This section contains more detailed and technical information about watch operation. It also contains important precautions and notes about the various features and functions of this watch.

Moon Phase Indicator

Moon Phase indicator

The Moon phase indicator of this watch indicates the current phase of the Moon as shown below. It is based on the view of the left side of the moon at meridian transit from the northern hemisphere of the Earth. If the appearance of the Moon phase indicator is reversed from the actual Moon as viewed from your location, you can use the procedure under "To reverse the displayed Moon phase" to change the indicator.

(part you cannot see) — Moon phase (part you can see)

Moon Phase Indicator								
Moon Age	28.7-29.8 0.0-0.9	1.0-2.7	2.8-4.6	4.7-6.4	6.5-8.3	8.4-10.1	10.2-12.0	12.1-13.8
Moon Phase	New Moon				First Quarter (Waxing)			

Moon phase (part you can see) — (part you cannot see)

Moon Phase Indicator								
Moon Age	13.9-15.7	15.8-17.5	17.6-19.4	19.5-21.2	21.3-23.1	23.2-24.9	25.0-26.8	26.9-28.6
Moon Phase	Full Moon				Last Quarter (Waning)			

Tidal Movements

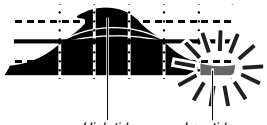
Tides are the periodic rise and fall of the water of oceans, seas, bays, and other bodies of water caused mainly by the gravitational interactions between the Earth, Moon and Sun. Tides rise and fall about every six hours. The Tide Graph of this watch indicates tidal movement based on the Moon's transit over a meridian and the lunitidal interval. The Tide Graph calculates and graphically represents current tide conditions in your Home City or a port city in the vicinity of the Home City based on longitudes, lunar day length, and lunitidal interval preset in watch memory, and on high tide times specified by you.

Tide Graph

The Tide Graph graphically represents the current tide condition using one of three patterns that represent spring tide, intermediate tide, and neap tide, as shown below.

Tide Name	Graph	Description
Spring Tide		Large difference between high tide and low tide. Occurs a few days before and after a New Moon and Full Moon.
Intermediate Tide		Medium difference between high tide and low tide.
Neap Tide		Small difference between high tide and low tide. Occurs a few days before and after the first quarter and last quarter of a half moon.

- The Tide Graph flashes as shown below to indicate the tide range.

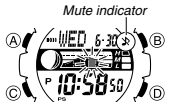


- The segments on either end of the Tide Graph flash during high tide.

Lunitidal Interval

Theoretically, high tide is at the Moon's transit over the meridian and low tide is about six hours later. Actual high tide occurs somewhat later, due to factors such as viscosity, friction, and underwater topography. Both the time differential between the Moon's transit over the meridian until high tide and the time differential between the Moon's transit over the meridian until low tide are known as the "lunitidal interval".

Button Operation Tone



The button operation tone sounds any time you press one of the watch's buttons. You can turn the button operation tone on or off as desired.

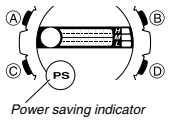
- Even if you turn off the button operation tone, alarms, the Hourly Time Signal, and other beepers all operate normally.

To turn the button operation tone on and off

1. In the Timekeeping Mode, hold down Ⓐ until the city code starts to flash, which indicates the setting screen.
2. Press Ⓒ nine times until the current button operation tone setting (KEY or MUTE) appears.
3. Press Ⓓ to toggle the setting between KEY (tone on) and MUTE (tone off).
4. Press Ⓐ to exit the setting screen.

- The mute indicator is displayed in all modes when the button operation tone is turned off.

Power Saving Function



Power saving indicator

When turned on, the Power Saving function enters a sleep state automatically whenever the watch is left in an area for a certain period where it is dark. The table below shows how watch functions are affected by the Power Saving function.

Elapsed Time in Dark	Display	Operation
60 to 70 minutes	Blank, with Power Saving indicator flashing	All functions enabled, except for the display
6 or 7 days	Blank, with Power Saving indicator not flashing	Beeper tone, illumination, and display are disabled.

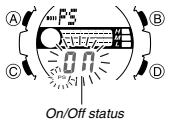
- Wearing the watch inside the sleeve of clothing can cause it to enter the sleep state.
- The watch will not enter the sleep state between 6:00 AM and 9:59 PM. If the watch is already in the sleep state when 6:00 AM arrives, however, it will remain in the sleep state.

To recover from the sleep state

Perform any one of the following operations.

- Move the watch to a well-lit area.
- Press any button.

To turn Power Saving on and off



1. In the Timekeeping Mode, hold down Ⓐ until the city code starts to flash, which indicates the setting screen.
2. Press Ⓒ 11 times until the Power Saving on/off screen appears.
3. Press Ⓓ to toggle Power Saving on (ON) and off (OFF).
4. Press Ⓐ to exit the setting screen.

- The Power Saving indicator is on the display in all modes while Power Saving is turned on.

Auto Return

- If you do not perform any operation for about two or three minutes while a setting screen (with a flashing setting) is on the display, the watch will exit the setting screen automatically.

Scrolling

The Ⓑ and Ⓓ are used in various modes and setting screens to scroll through data on the display. In most cases, holding down these buttons during a scroll operation scrolls at high speed.

Initial Screens

When you enter the World Time Mode or Alarm Mode, the data you were viewing when you last exited the mode appears first.

Timekeeping

- Resetting the seconds to 00 while the current count is in the range of 30 to 59 causes the minutes to be increased by 1. In the range of 00 to 29, the seconds are reset to 00 without changing the minutes.
- The year can be set in the range of 2000 to 2099.
- The watch's built-in full automatic calendar makes allowances for different month lengths and leap years. Once you set the date, there should be no reason to change it except after you have the watch's battery replaced.
- The current time for all city codes in the Timekeeping Mode and World Time Mode is calculated in accordance with the Coordinated Universal Time (UTC) for each city, based on your Home City time setting.

World Time

- The seconds count of the World Time is synchronized with the seconds count of the Timekeeping Mode.

Specifications

Accuracy at normal temperature: ± 30 seconds a month
Timekeeping: Hour, minutes, seconds, p.m. (P), month, day, day of the week
Time format: 12-hour and 24-hour
Calendar system: Full Auto-calendar pre-programmed from the year 2000 to 2099
Other: Home City code (can be assigned one of 48 city codes); Standard Time / Daylight Saving Time (summer time)
Tide/Moon Data:
Moon phase indicator for specific date; Tide level for specific date and time
Other: High tide time adjustment; Moon phase reversal
World Time: 48 cities (31 time zones)
Other: Daylight Saving Time/Standard Time
Alarms: 5 daily alarms (four one-time alarms; one snooze alarm); Hourly Time Signal
Stopwatch:
Measuring unit: 1/100 second
Measuring capacity: 23:59' 59.99"
Measuring modes: Elapsed time, split time, two finishes
Countdown Timer:
Measuring unit: 1 second
Input range: 1 minute to 24 hours (1-minute increments and 1-hour increments)
Illumination: LED (light-emitting diode); Selectable illumination duration
Other: Button operation tone on/off

Power Supply: Solar cell and one rechargeable battery
Approximate battery operating time: 11 months (from full charge to Level 4) under the following conditions:
- Watch not exposed to light
- Internal timekeeping
- Display on 18 hours per day, sleep state 6 hours per day
- 1 illumination operation(1.5 second) per day
- 10 seconds of alarm operation per day

Frequent use of illumination runs down the battery.

City Code Table

City Code	City	UTC Offset/ GMT Differential
PPG	Pago Pago	–11
HNL	Honolulu	–10
ANC	Anchorage	–9
YVR	Vancouver	–8
LAX	Los Angeles	
YEA	Edmonton	–7
DEN	Denver	
MEX	Mexico City	–6
CHI	Chicago	
NYC	New York	–5
SCL	Santiago	–4
YHZ	Halifax	
YYT	St. Johns	–3.5
RIO	Rio De Janeiro	–3
FEN	Fernando de Noronha	–2
RAI	Praia	–1
UTC		0
LIS	Lisbon	
LON	London	
MAD	Madrid	+1
PAR	Paris	
ROM	Rome	
BER	Berlin	
STO	Stockholm	

City Code	City	UTC Offset/ GMT Differential
ATH	Athens	+2
CAI	Cairo	
JRS	Jerusalem	
MOW	Moscow	+3
JED	Jeddah	
THR	Tehran	+3.5
DXB	Dubai	+4
KBL	Kabul	+4.5
KHI	Karachi	+5
DEL	Delhi	+5.5
KTM	Kathmandu	+5.75
DAC	Dhaka	+6
RGN	Yangon	+6.5
BKK	Bangkok	+7
SIN	Singapore	+8
HKG	Hong Kong	
BJS	Beijing	
TPE	Taipei	
SEL	Seoul	+9
TYO	Tokyo	
ADL	Adelaide	+9.5
GUM	Guam	+10
SYD	Sydney	
NOU	Noumea	+11
WLG	Wellington	+12

- Based on data as of December 2009.
- The rules governing global times (UTC offset and GMT differential) and summer time are determined by each individual country.