

Operation Guide 3473/3474

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.

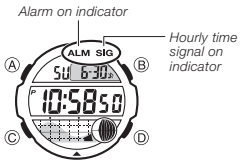
- Be sure to keep all user documentation handy for future reference.

Warning!

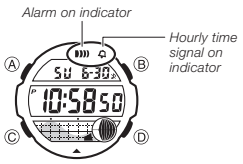
- The longitude, lunitidal interval, Moon phase indicator and tide graph data that appear on the display of this watch are not intended for navigation purposes. Always use proper instruments and resources to obtain data for navigation purposes.
- This watch is not an instrument for calculating low tide and high tide times. The tide graph of this watch is intended to provide a reasonable approximation of tidal movements only.
- CASIO COMPUTER CO., LTD. assumes no responsibility for any loss, or any claims by third parties that may arise through the use of this watch.

About This Manual

- The operational procedures for Modules 3473 and 3474 are identical. All of the illustrations in this manual show Module 3473.
- The module number is engraved on the back cover of the watch case.



Module 3473



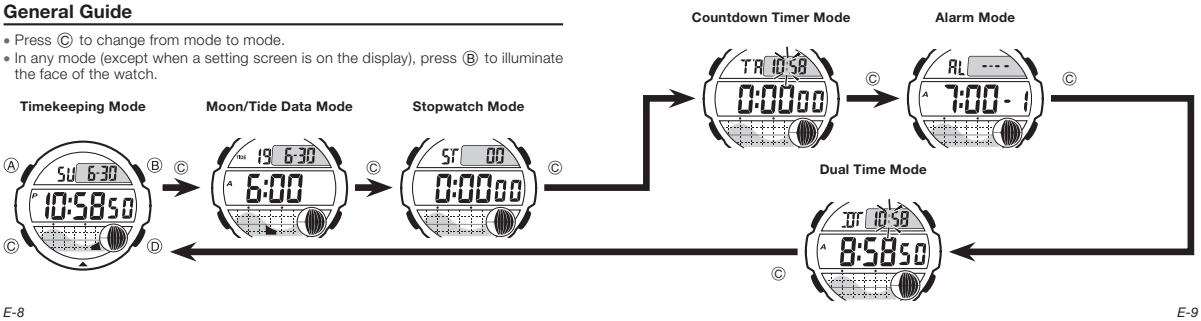
Module 3474

- Button operations are indicated using the letters shown in the illustration.
- Note that the product illustrations in this manual are intended for reference only, and so the actual product may appear somewhat different than depicted by an 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.
- To ensure that this watch provides you with the years of service for which it is designed, be sure to carefully read and follow the instructions under “Operating Precautions“ and “User Maintenance”.

Contents

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 face of the watch.



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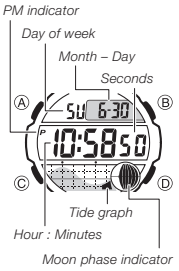
Timekeeping



Use the Timekeeping Mode to set and view the current time and date.

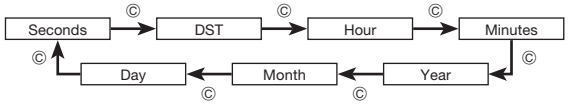
- The Moon phase indicator (page E-42) shows the current Moon phase in accordance with the current date as kept in the Timekeeping Mode.
- The tide graph (page E-44) shows tidal movements for the current date in accordance with the current time as kept in the Timekeeping Mode.

Important!

- Be sure to configure the current time and date, and your Home Site data (data for the site where you use the watch) correctly before using the functions of this watch. See "Home Site Data" (page E-15) for more information.

To set the time and date

1. In the Timekeeping Mode, hold down Ⓐ until the seconds start to flash, which indicates the setting screen.
2. Press Ⓒ to move the flashing in the sequence shown below to select the other settings.



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

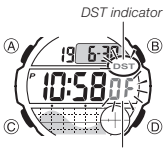
Screen	To do this:	Do this:
50	Reset the seconds to ***00***	Press Ⓓ.
DST OF	Toggle between Daylight Saving Time (**On**) and Standard Time (**OF**)	Press Ⓓ.
P 10:58	Change the hour or minutes	Use Ⓓ (+) and Ⓑ (–).
20 19	Change the year	
6-30	Change the month or day	

4. Press Ⓐ twice to exit the setting screen.
   - The first press of Ⓐ displays the UTC differential setting screen. Pressing Ⓐ again exits the setting screen.
   - See "Daylight Saving Time (DST) Setting" below for details about the DST setting.
   - The day of the week is displayed automatically in accordance with the date (year, month, and day) settings.

Daylight Saving Time (DST) Setting

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 toggle the Timekeeping Mode time between DST and Standard Time



1. In the Timekeeping Mode, hold down Ⓐ until the seconds start to flash, which indicates the setting screen.
2. Press Ⓒ once to display the DST setting screen.
3. Press Ⓓ to toggle between Daylight Saving Time (**On** displayed) and Standard Time (**OF** displayed).
4. Press Ⓐ twice to exit the setting screen.
   - The **DST** indicator appears on the Timekeeping, Moon/Tide Data, and Alarm Mode screens to indicate that Daylight Saving Time is turned on. In the case of the Moon/Tide Data Mode, the **DST** indicator appears on the tide data screen only.

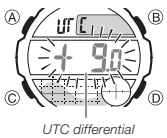
Home Site Data

Moon phase, tide graph data, and Moon/Tide Data Mode data will not be displayed properly unless Home Site data (UTC differential, longitude, and lunitidal interval) is configured correctly.

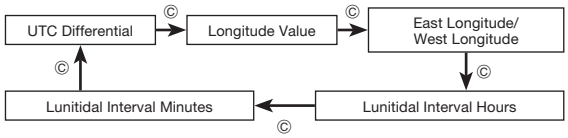
- The UTC differential is a value that indicates the time difference between a reference point in Greenwich, England and the time zone where a city is located.
- The letters "UTC" is the abbreviation for "Coordinated Universal Time", which is the world-wide scientific standard of timekeeping. It is based upon carefully maintained atomic (cesium) clocks that keep time accurately to within microseconds. Leap seconds are added or subtracted as necessary to keep UTC in sync with the Earth's rotation.
- The lunitidal interval is the time elapsing between the Moon's transit over a meridian and the next high tide at that meridian. See "Lunitidal Interval" (page E-45) for more information.
- This watch displays lunitidal intervals in terms of hours and minutes.
- The "Site/Lunitidal Interval Data List" at the back of this manual provides UTC differential and longitude information around the world.

- The following is the initial factory default Home Site data (Tokyo, Japan) when you first purchase the watch, and whenever you have the battery replaced. Change these settings to match the area where you normally use the watch.
  UTC differential (+9.0); Longitude (East 140 degrees); Lunitidal interval (5 hours, 20 minutes)

To configure Home Site data



1. In the Timekeeping Mode, hold down Ⓐ until the seconds start to flash, which indicates the setting screen.
2. Press Ⓐ again to display the UTC differential setting screen.
3. Press Ⓒ to move the flashing in the sequence shown below to select other settings.



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

Setting	Screen	Button Operations
UTC Differential	UTC + 9.0	Use Ⓓ (+) and Ⓑ (–) to change the setting. • You can specify a value in the range of –12.0 to +14.0, in 0.5-hour units.
Longitude Value	LON 140° E	Use Ⓓ (+) and Ⓑ (–) to change the setting. • You can specify a value in the range of 0° to 180°, in 1-degree units.
East Longitude/ West Longitude		Use Ⓓ to switch between east longitude (**E**) and west longitude (**W**).
Lunitidal Interval Hours, Minutes	INT 5:20	Use Ⓓ (+) and Ⓑ (–) to change the setting.

- When the DST setting is on, the UTC differential can be set in a range of –11.0 to +15.0 in 0.5-hour units.

5. Press Ⓐ to exit the setting screen.

To toggle between 12-hour and 24-hour timekeeping

In the Timekeeping Mode, press Ⓓ to toggle between 12-hour timekeeping 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 the **A** (AM) 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.
- The **A** and **P** indicators are not displayed with the Timekeeping Mode time on the Countdown Timer Mode and Dual Time Mode screens.

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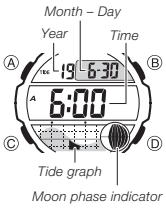
Moon/Tide Data

Tide Data Screen



Moon/tide data lets you view the Moon age and Moon phase for a particular date, and tidal movements for a particular date and time at your Home Site.

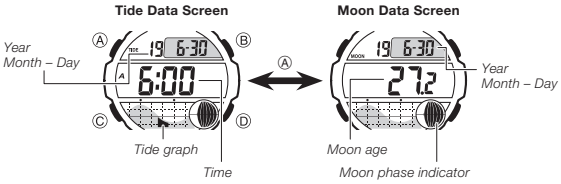
- If you suspect that the current Moon/tide data is wrong for some reason, check the current Timekeeping Mode settings (time, date, and Home Site), and correct them if required.
- See “Moon Phase Indicator” (page E-42) for information about the Moon phase indicator and “Tide Graph” (page E-44) for information about the tide graph.
- All of the operations in this section are performed in the Moon/Tide Data Mode, which you enter by pressing Ⓒ (page E-8).

To view the current Moon/Tide Data Mode data

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

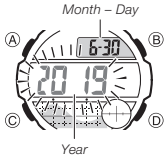
- The tide graph shows the tide for the currently displayed time. The initial tide data screen shows the level for 6:00 a.m. The Moon data screen shows the Moon age and Moon phase for the current date.
- If you are using 12-hour timekeeping, **P** (p.m.) or **A** (a.m.) will be indicated for the times on tide data screens.

Tide Data Screen **Moon Data Screen**



- While the tide data screen is displayed, press Ⓓ to advance to the next hour.
- While the Moon data screen is displayed, press Ⓓ to advance to the next day.
- You can also specify a particular date (year, month, day) to view its tide data and Moon data. See “To specify a date” for more information.
- When you enter the Moon/Tide Data Mode, the screen (tide data or Moon data) that was displayed the last time you exited the mode appears first.

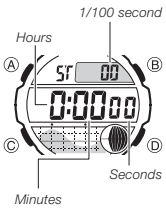
To specify a date



1. In the Moon/Tide Data Mode, hold down Ⓐ until the year setting starts to flash, which indicates the setting screen.
2. Press Ⓒ to move the flashing in the sequence shown below to select the other settings.

3. While a setting is flashing, use Ⓓ (+) or Ⓑ (–) to change it.
   - You can specify a date in the range of January 1, 2000 to December 31, 2099.
4. Press Ⓐ to exit the setting screen.
5. Use Ⓐ to display either the tide data screen or the Moon data screen.

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.
- An ongoing elapsed time measurement operation will continue internally even if you change to another mode. However, if you exit the Stopwatch Mode while a split time is displayed, the split time will not be displayed when you return to the Stopwatch Mode.
- All of the operations in this section are performed in the Stopwatch Mode, which you enter by pressing Ⓒ (page E-8).

To measure times with the stopwatch

Elapsed Time

Ⓓ **Start** → Ⓓ **Stop** → Ⓓ **Resume** → Ⓓ **Stop** → Ⓐ **Clear**

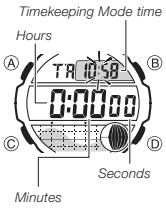
Split Time

Ⓓ **Start** → Ⓐ **Split** (**SPL** displayed) → Ⓐ **Split release** → Ⓓ **Stop** → Ⓐ **Clear**

Two Finishes

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

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.

- You can also select auto-repeat, which automatically restarts the countdown from the original value you set whenever zero is reached.
- All of the operations in this section are performed in the Countdown Timer Mode, which you can enter using Ⓒ (page E-9).

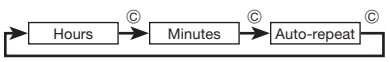
To use the countdown timer

Press Ⓓ while in the Countdown Timer Mode to start the countdown timer.

- When the end of the countdown is reached and auto-repeat is turned off, the alarm sounds for 10 seconds or until you stop it by pressing any button. The countdown time is automatically reset to its starting value after the alarm stops.
- When auto-repeat is turned on, the countdown will restart automatically without pausing when it reaches zero. The alarm sounds in order to signal when the countdown reaches zero.
- The countdown timer measurement 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 completely stop a countdown operation, first pause it (by pressing Ⓓ), and then press Ⓐ. This returns the countdown time to its starting value.

To set up the countdown timer

1. While the countdown start time is on the display in the Countdown Timer Mode, hold down Ⓐ until the hour setting of the 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. While a setting is flashing, use Ⓓ and Ⓑ to change it as described below.

Screen	To do this:	Do this:
0:00	Change the hours or minutes	Use Ⓓ (+) and Ⓑ (–).
↻ On	Toggle auto-repeat on (**On**) and off (**OF**)	Press Ⓓ.

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

4. Press Ⓐ to exit the setting screen.
   - The auto-repeat on indicator (↻) is displayed on the Countdown Timer Mode screen while this function is turned on.
   - Frequent use of auto-repeat and the alarm can run down battery power.

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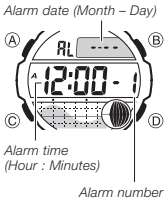
Alarms



You can set up to three independent multi-function alarms with hour, minutes, month, and day. When an alarm is turned on, the alarm tone sounds when the alarm time is reached. One of the alarms has a snooze feature. You can also turn on an Hourly Time Signal that causes the watch to beep every hour on the hour.

- There are three alarms numbered **1** through **3**. The Hourly Time Signal screen is indicated by **:00**.
- All of the operations in this section are performed in the Alarm Mode, which you enter by pressing Ⓒ (page E-9).

Alarm Types

The alarm type is determined by the settings you make, as described below.

- **Daily alarm**
Set the hour and minutes for the alarm time. This type of setting causes the alarm to sound everyday at the time you set.

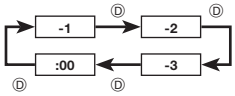
- **Date alarm**
Set the month, day, hour and minutes for the alarm time. This type of setting causes the alarm to sound at the specific time, on the specific date you set.

- **1-Month alarm**
Set the month, hour and minutes for the alarm time. This type of setting causes the alarm to sound everyday at time you set, only during the month you set.

- **Monthly alarm**
Set the day, hour and minutes for the alarm time. This type of setting causes the alarm to sound every month at the time you set, on the day you set.

To set an alarm time

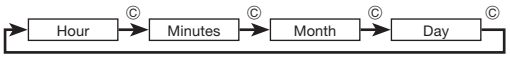
1. In the Alarm Mode, use Ⓓ to scroll through the alarm screens until the one whose time you want to set is displayed.



- Alarm **1** has a snooze feature.
- The snooze alarm operation 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 automatically turns on the alarm.

3. Press Ⓒ to move the flashing in the sequence shown below to select other settings.



4. While a setting is flashing, use Ⓓ (+) and Ⓑ (–) to change it.
- To set an alarm that does not include a month (daily alarm, monthly alarm), set **-** for the month. Use Ⓓ and Ⓑ until the **-** mark appears (between 12 and 1) while month setting is flashing.
- To set an alarm that does not include a day (daily alarm, 1-month alarm), set **- -** for the day. Use Ⓓ and Ⓑ until the **- -** mark appears (between the end of the month and 1) while the day setting is flashing.
- If you are using 12-hour timekeeping, **P** (p.m.) or **A** (a.m.) will be indicated for alarm times.
- When setting an alarm time using 12-hour timekeeping, take care to set the time correctly as a.m. (**A** indicator) 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. While the snooze function is turned on, the alarm operation will repeat every five minutes up to seven times, or until the alarm or snooze function is turned off.

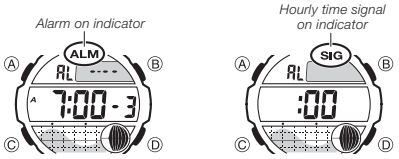
- To stop the alarm tone after it starts to sound, press any button.
- Performing any one of the operations below during a 5-minute interval between snooze alarms cancels the current snooze alarm operation.
Displaying the Timekeeping Mode setting screen (page E-11)
*Displaying the alarm **1** setting screen (page E-32)*

To test the alarm

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

To turn Alarms 2 and 3, and the Hourly Time Signal on and off

1. In the Alarm Mode, use Ⓓ to select alarm number **2** or **3**, or the Hourly Time Signal.
2. Press Ⓐ to toggle it on and off.
- Turning on alarm **2** or **3** displays the alarm on indicator.
- Turning on the Hourly Time Signal displays the hourly time signal on indicator.
- The alarm on (**ALM**) indicator and hourly time signal on (**SIG**) indicator are displayed in all modes.



To select the operation of Alarm 1

1. In the Alarm Mode, use Ⓓ to select Alarm **1**.
2. Press Ⓐ to cycle through the available settings in the sequence shown below.

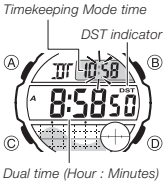
- The applicable alarm on indicator (**SNZ ALM**) is displayed in all modes when an alarm is turned on.
- **SNZ** indicator flashes during the 5-minute intervals between alarms.
- Displaying the Alarm **1** setting screen (page E-32) while the snooze alarm is turned on automatically turns off the snooze feature.

Dual Time

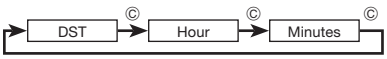
The Dual Time Mode lets you keep track of time in a different time zone. You can select Standard Time or Daylight Saving Time for the Dual Time Mode time.

- In the Dual Time Mode, the seconds count is synchronized with the seconds count of the Timekeeping Mode.

To set the Dual Time



1. Press Ⓒ to enter the Dual Time Mode (page E-9).
2. In the Dual Time Mode, hold down Ⓐ until the DST setting starts to flash, which indicates the setting screen.
3. Press Ⓒ to move the flashing in the sequence shown below to select the other setttings.



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

Screen	To do this:	Do this:
DST OF	Toggle between Daylight Saving Time (**On**) and Standard Time (**OF**)	Press Ⓓ.
A 8:58	Change the hour or minutes	Use Ⓓ (+) and Ⓑ (–).

- If you are using 12-hour timekeeping, **P** (p.m.) or **A** (a.m.) will be indicated for the time.

5. Press Ⓐ to exit the setting screen.
- The **DST** indicator on the Dual Time Mode screen indicates that DST is turned on for the Dual Time Mode time.

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Illumination

The watch has an LED light that you can turn on for reading in the dark.
• See "Illumination Precautions" (page E-48) for more important information.

To illuminate the display

In any mode, 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 seconds start to flash, which indicates the setting screen.
2. While the seconds are flashing, press Ⓑ to toggle the illumination duration between 1.5 seconds (-) and 3 seconds (Ξ).
3. Press Ⓐ twice to exit the setting screen.

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

The Moon phase indicator of this watch indicates the current phase of the Moon as shown below.

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

Moon Phase Indicator								
Moon Age	0.0-1.8 27.7-29.5	1.9-5.5	5.6-9.2	9.3-12.9	13.0-16.6	16.7-20.2	20.3-23.9	24.0-27.6
Moon Phase	New Moon		First Quarter (Waxing)		Full Moon		Last Quarter (Waning)	

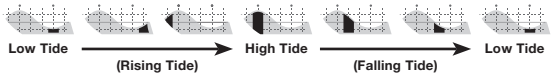
• The Moon phase indicator shows the Moon as viewed at noon from a position in the Northern Hemisphere looking south. Note that at times the image shown by the Moon phase indicator may differ from that of the actual Moon in your area.
• The left-right orientation of the Moon phase is reversed when viewing from the Southern Hemisphere or from a point near the equator.

Moon Phases and Moon Age

The Moon goes through a regular 29.53-day cycle. During each cycle, the Moon appears to wax and wane as the relative positioning of the Earth, Moon, and Sun changes.

Tide Graph

The Tide Graph has six graphic segments, each of which indicates a different tide level. The current tide level is indicated by the displayed graphic segment.



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 lunitidal interval differs according to your current location, so you must specify a lunitidal interval in order to obtain the correct tide graph readings.

• The tide graph displayed by this watch is based on the current Moon age. Remember that the margin for error of the Moon age displayed by this watch is ±1 day. The greater the error in a particular Moon age, the greater the error in the resulting tide graph.

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". When setting the lunitidal interval for this watch, use the time differential between the Moon's transit over the meridian until high tide.

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, the alarm, Hourly Time Signal, and Countdown Timer Mode alarm all operate normally.

To turn the button operation tone on and off

In any mode (except when a setting screen is on the display), hold down Ⓒ to toggle the button operation tone on (not displayed) and off (displayed).
• Holding down Ⓒ to turn the button operation tone on or off also causes the watch's current mode to change.
• The indicator is displayed in all modes when the button operation tone is turned off.

Auto Return Features

• If you leave a screen with flashing digits on the display for two or three minutes without performing any operation, the watch automatically exits the setting screen.
• If you leave the watch in the Moon/Tide Data or Alarm Mode for two or three minutes without performing any operation, it automatically changes to the Timekeeping Mode.

Scrolling

The Ⓑ and Ⓓ buttons 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 through the data at high speed.

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.

Illumination Precautions

• Illumination may be diffi cult to see when viewed under direct sunlight.
• Illumination turns off automatically whenever an alarm sounds.
• Frequent use of illumination runs down the battery.

Specifications

Accuracy at normal temperature: ±30 seconds a month
Timekeeping: Hour, minutes, seconds, a.m. (A)/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: Daylight Saving Time (summer time)/Standard Time; Home Site data settings (UTC differential, longitude, lunitidal interval)
Moon/Tide Data: Tide level for a specified date and time; Moon phase indicator and Moon age for a specified date
Stopwatch
Measuring unit: 1/100 second
Measuring capacity: 23:59'59.99"
Measuring modes: Elapsed time, split time, two finishes

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Countdown Timer
Measuring unit: 1 second
Input range: 1 minute to 24 hours (1-minute increments and 1-hour increments)
Time up alert duration: 10 seconds
Other: Auto-repeat timing

Alarms: 3 Multi-function* alarms (1 with snooze feature);
Hourly Time Signal
** Alarm type: Daily alarm, Date alarm, 1-month alarm, Monthly alarm*
Alert duration: 10 seconds

Dual Time: Hour, minutes, seconds, a.m. (A)/p.m. (P)
Other: Daylight Saving Time (summer time)/Standard Time

Illumination: LED (light-emitting diode); selectable illumination duration (approximately 1.5 seconds or 3 seconds)

Other: Button operation tone on/off

Battery:
Module 3473: One lithium battery (Type: CR2025)
Approximately 10 years on type CR2025 (assuming alarm operation 10 sec./day and one illumination operation 1.5 sec./day)
Module 3474: One lithium battery (Type: CR1620)
Approximately 5 years on type CR1620 (assuming alarm operation 10 sec./day and one illumination operation 1.5 sec./day)

Frequent illumination shortens the battery life.

Specifications are subject to change without notice.

Operating Precautions

Water Resistance

- The information below applies to watches with WATER RESIST or WATER RESISTANT marked on the back cover.

		Water Resistance Under Daily Use	Enhanced Water Resistance Under Daily Use		
			5 Atmospheres	10 Atmospheres	20 Atmospheres
Marking	On watch front or on back cover	No BAR mark	5BAR	10BAR	20BAR
Example of Daily Use	Hand washing, rain	Yes	Yes	Yes	Yes
	Water-related work, swimming	No	Yes	Yes	Yes
	Windsurfing	No	No	Yes	Yes
	Skin diving	No	No	Yes	Yes

- Do not use your watch for scuba diving or other types of diving that requires air tanks.

- Watches that do not have WATER RESIST or WATER RESISTANT marked on the back cover are not protected against the effects of sweat. Avoid using such a watch under conditions where it will be exposed to large amounts of sweat or moisture, or to direct splashing with water.
- Even if a watch is water resistant, note the usage precautions described below. Such types of use reduce water resistance performance and can cause fogging of the glass.
  - Do not operate the crown or buttons while your watch is submersed in water or wet.
  - Avoid wearing your watch while in the bath.
  - Do not wear your watch while in a heated swimming pool, sauna, or any other high temperature/high humidity environment.
  - Do not wear your watch while washing your hands or face, while doing housework, or while performing any other task that involves soaps or detergents.
- After submersion in seawater, use plain water to rinse all salt and dirt from your watch.
- To maintain water resistance, have the gaskets of your watch replaced periodically (about once every two or three years).

- A trained technician will inspect your watch for proper water resistance whenever you have its battery replaced. Battery replacement requires the use of special tools. Always request battery replacement from your original retailer or from an authorized CASIO service center.
- Some water-resistant watches come with fashionable leather bands. Avoid swimming, washing, or any other activity that causes direct exposure of a leather band to water.
- The inside surface of the watch glass may fog when the watch is exposed to a sudden drop in temperature. No problem is indicated if the fogging clears up relatively quickly. Sudden and extreme temperature changes (such as coming into an air conditioned room in the summer and standing close to an air conditioner outlet, or leaving a heated room in the winter and allowing your watch to come into contact with snow) can cause it to take longer for glass fogging to clear up. If glass fogging does not clear up or if you notice moisture inside of the glass, immediately stop using your watch and take it to your original retailer or to an authorized CASIO service center.
- Your water-resistant watch has been tested in accordance with International Organization for Standardization regulations.

Band

- Tightening the band too tightly can cause you to sweat and make it difficult for air to pass under the band, which can lead to skin irritation. Do not fasten the band too tightly. There should be enough room between the band and your wrist so you can insert your finger.
- Deterioration, rust, and other conditions can cause the band to break or come off of your watch, which in turn can cause band pins to fly out of position or to fall out. This creates the risk of your watch falling from your wrist and becoming lost, and also creates the risk of personal injury. Always take good care of your band and keep it clean.
- Immediately stop using a band if you even notice any of the following: loss of band flexibility, band cracks, band discoloration, band looseness, band connecting pin flying or falling out, or any other abnormality. Take your watch to your original retailer or to a CASIO service center for inspection and repair (for which you will be charged) or to have the band replaced (for which you will be charged).

Temperature

- Never leave your watch on the dashboard of a car, near a heater, or in any other location that is subject to very high temperatures. Do not leave your watch where it will be exposed to very low temperatures. Temperature extremes can cause your watch to lose or gain time, to stop, or otherwise malfunction.
- Leaving your watch in an area hotter than +60°C (140°F) for long periods can lead to problems with its LCD. The LCD may become difficult to read at temperatures lower than 0°C (32°F) and greater than +40°C (104°F).

Impact

- Your watch is designed to withstand impact incurred during normal daily use and during light activity such as playing catch, tennis, etc. Dropping your watch or otherwise subjecting it to strong impact, however, can lead to malfunction. Note that watches with shock-resistant designs (G-SHOCK, BABY-G, G-MS) can be worn while operating a chain saw or engaging in other activities that generate strong vibration, or while engaging in strenuous sports activities (motocross, etc.)

Magnetism

- Though a digital watch normally is not affected by magnetism, very strong magnetism (from medical equipment, etc.) should be avoided because it can cause malfunction and damage to electronic components.

Electrostatic Charge

- Exposure to very strong electrostatic charge can cause your watch to display the wrong time. Very strong electrostatic charge even can damage electronic components.
- Electrostatic charge can cause the display to go blank momentarily or cause a rainbow effect on the display.

Chemicals

- Do not allow your watch to come into contact with thinner, gasoline, solvents, oils, or fats, or with any cleaners, adhesives, paints, medicines, or cosmetics that contain such ingredients. Doing so can cause discoloration of or damage to the resin case, resin band, leather, and other parts.

Storage

- If you do not plan to use your watch for a long time, thoroughly wipe it free of all dirt, sweat, and moisture, and store it in a cool, dry place.

Resin Components

- Allowing your watch to remain in contact with other items or storing it together with other items for long periods while it is wet can cause color on resin components to transfer to the other items, or the color of the other items to transfer to the resin components of your watch. Be sure to dry off your watch thoroughly before storing it and make sure it is not in contact with other items.
- Leaving your watch where it is exposed to direct sunlight (ultraviolet rays) for long periods or failure to clean dirt from your watch for long periods can cause it to become discolored.
- Friction caused by certain conditions (strong external force, sustained rubbing, impact, etc.) can cause discoloration of painted components.
- If there are printed figures on the band, strong rubbing of the printed area can cause discoloration.

- Leaving your watch wet for long periods can cause fluorescent color to fade. Wipe the watch dry as soon as possible after it becomes wet.
- Semi-transparent resin parts can become discolored due to sweat and dirt, and if exposed to high temperatures and humidity for long periods.
- Daily use and long-term storage of your watch can lead to deterioration, breaking, or bending of resin components. The extent of such damage depends on usage conditions and storage conditions.

Leather Band

- Allowing your watch to remain in contact with other items or storing it together with other items for long periods while it is wet can cause the color of the leather band to transfer to the other items or the color of the other items to transfer to the leather band. Be sure to dry off your watch thoroughly with a soft cloth before storing it and make sure it is not in contact with other items.

- Leaving a leather band where it is exposed to direct sunlight (ultraviolet rays) for long periods or failure to clean dirt from a leather band for long periods can cause it to become discolored.
  CAUTION: Exposing a leather band to rubbing or dirt can cause color transfer and discoloration.

Metal Components

- Failure to clean dirt from metal components can lead to formation of rust, even if components are stainless steel or plated. If metal components exposed to sweat or water, wipe thoroughly with a soft, absorbent cloth and then place the watch in a well-ventilated location to dry.
- Use a soft toothbrush or similar tool to scrub the metal with a weak solution of water and a mild neutral detergent, or with soapy water. Next, rinse with water to remove all remaining detergent and then wipe dry with a soft absorbent cloth. When washing metal components, wrap the watch case with kitchen plastic wrap so it does not come into contact with the detergent or soap.

Bacteria and Odor Resistant Band

- The bacteria and odor resistant band protects against odor generated by the formation of bacteria from sweat, which ensures comfort and hygiene. In order to ensure maximum bacteria and odor resistance, keep the band clean. Use an absorbent soft cloth to thoroughly wipe the band clean of dirt, sweat, and moisture. A bacteria and odor resistant band suppresses the formation of organisms and bacteria. It does not protect against rash due to allergic reaction, etc.

Liquid Crystal Display

- Display figures may be difficult to read when viewed from an angle.

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 your watch or its malfunction.

User Maintenance

Caring for Your Watch

Remember that you wear your watch next to your skin, just like a piece of clothing. To ensure your watch performs at the level for which it is designed, keep it clean by frequently wiping with a soft cloth to keep your watch and band free of dirt, sweat, water and other foreign matter.

- Whenever your watch is exposed to sea water or mud, rinse it off with clean fresh water.
- For a metal band or a resin band with metal parts, use a soft toothbrush or similar tool to scrub the band with a weak solution of water and a mild neutral detergent, or with soapy water. Next, rinse with water to remove all remaining detergent and then wipe dry with a soft absorbent cloth. When washing the band, wrap the watch case with kitchen plastic wrap so it does not come into contact with the detergent or soap.

- For a resin band, wash with water and then wipe dry with a soft cloth. Note that sometimes a smudge like pattern may appear on the surface of a resin band. This will not have any effect on your skin or clothing. Wipe with a cloth to remove the smudge pattern.
- Clean water and sweat from a leather band by wiping with a soft cloth.
- Not operating a watch crown, buttons, or rotary bezel could lead to later problems with their operation. Periodically rotate the crown and rotary bezel, and press buttons to maintain proper operation.

Dangers of Poor Watch Care

Rust

- Though the metal steel used for your watch is highly rust-resistant, rust can form if your watch is not cleaned after it becomes dirty.
  – Dirt on your watch can make it impossible for oxygen to come into contact with the metal, which can lead to breakdown of the oxidization layer on the metal surface and the formation of rust.

- Rust can cause sharp areas on metal components and can cause band pins to fly out of position or to fall out. If you ever notice any abnormality immediately stop using your watch and take it to your original retailer or to an authorized CASIO service center.
- Even if the surface of the metal appears clean, sweat and rust in crevasses can soil the sleeves of clothing, cause skin irritation, and even interfere with watch performance.

Premature Wear

- Leaving sweat or water on a resin band or bezel, or storing your watch an area subject to high moisture can lead to premature wear, cuts, and breaks.

Skin Irritation

- Individuals with sensitive skin or in poor physical condition may experience skin irritation when wearing a watch. Such individuals should keep their leather band or resin band particularly clean. Should you ever experience a rash or other skin irritation, immediately remove your watch and contact a skin care professional.

Battery Replacement

- Leave battery replacement up to your original retailer or authorized CASIO service center.
- Have the battery replaced only with the type specified in the User's Guide. Use of a different battery type can cause malfunction.
- When replacing the battery, also request a check for proper water resistance.
- Ornamental resin components may become worn, cracked, or bent over time when subjected to normal daily use. Note that if cracking or any other abnormality indicating possible damage is noticed in a watch submitted for battery replacement, your watch will be returned with an explanation of the abnormality, without the requested servicing being performed.

Initial Battery

- The battery that comes loaded in your watch when you purchase it is used for function and performance testing at the factory.
- The test battery may go dead quicker than the normally rated battery life as noted in the User's Guide. Note that you will be charged for replacement of this battery, even if replacement is required within your watch's warranty period.

Low Battery Power

- Low battery power is indicated by large timekeeping error, by dim display contents, or by a blank display.
- Operation while battery power is low can result in malfunction. Replace the battery as soon as possible.

Site/Lunitidal Interval Data List

Site/Lunitidal Interval Data List

Site	UTC Differential Standard Time	Longitude	Lunitidal Interval
Anchorage	–9	149°W	5:40
Bahamas	–5	77°W	7:30
Baja, California	–7	110°W	8:40
Bangkok	+7	101°E	4:40
Boston	–5	71°W	11:20
Buenos Aires	–3	58°W	6:00
Casablanca	+0	8°W	1:30
Christmas Island	+14	158°W	4:00
Dakar	+0	17°W	7:40
Gold Coast	+10	154°E	8:30
Great Barrier Reef, Cairns	+10	146°E	9:40
Guam	+10	145°E	7:40

Site	UTC Differential Standard Time	Longitude	Lunitidal Interval
Hamburg	+1	10°E	4:50
Hong Kong	+8	114°E	9:10
Honolulu	–10	158°W	3:40
Jakarta	+7	107°E	0:00
Jeddah	+3	39°E	6:30
Karachi	+5	67°E	10:10
Kona, Hawaii	–10	156°W	4:00
Lima	–5	77°W	5:20
Lisbon	+0	9°W	2:00
London	+0	0°E	1:10
Los Angeles	–8	118°W	9:20
Maldives	+5	74°E	0:10
Manila	+8	121°E	10:30

Site	UTC Differential Standard Time	Longitude	Lunitidal Interval
Mauritius	+4	57°E	0:50
Melbourne	+10	145°E	2:10
Miami	–5	80°W	7:30
Noumea	+11	166°E	8:30
Pago Pago	–11	171°W	6:40
Palau	+9	135°E	7:30
Panama City	–5	80°W	3:00
Papeete	–10	150°W	0:10
Rio De Janeiro	–3	43°W	3:10
Seattle	–8	122°W	4:20
Shanghai	+8	121°E	1:20
Singapore	+8	104°E	10:20
Sydney	+10	151°E	8:40

Site	UTC Differential Standard Time	Longitude	Lunitidal Interval
Tokyo	+9	140°E	5:20
Vancouver	–8	123°W	5:10
Wellington	+12	175°E	4:50

- The contents of the above table are current as of January 2019.
- The rules governing global times (UTC offset and GMT differential) and summer time are determined by each individual country.