

Operation Guide 3229/3421/3489 CASIO®

ENGLISH

Congratulations upon your selection of this CASIO watch.

To ensure that this watch provides you with the years of service for which it is designed, carefully read and follow the instructions in this manual, especially the information under "Operating Precautions" and "User Maintenance".

E

About This Manual



- Depending on the model of your watch, display text appears either as dark figures on a light background or light figures on a dark background. All sample displays in this manual are shown using dark figures on a light background.
- 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.

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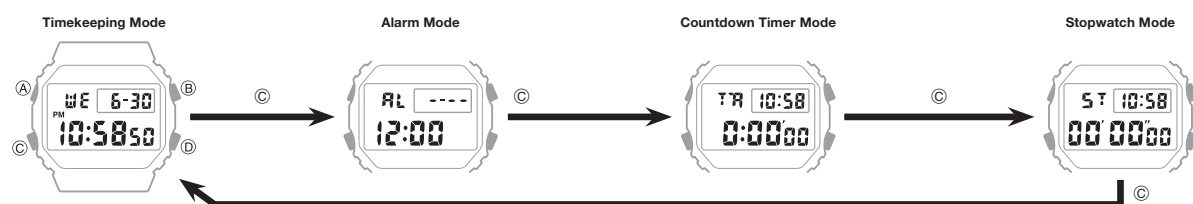
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General Guide

- Press (C) to change from mode to mode.

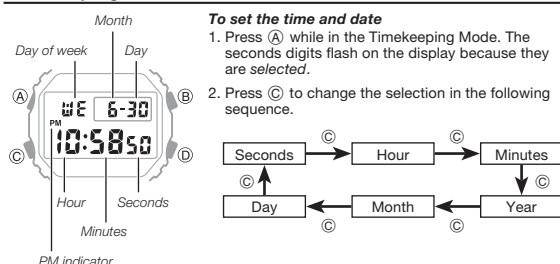
- After you perform an operation in any mode, pressing (C) returns to the Timekeeping Mode.
- Press (D) in any mode to illuminate the display. Illumination turns off about two seconds after you release (D).



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Timekeeping



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Backlight

The backlight illuminates the display. Enabling Flash Alert causes the backlight to flash while the alarm (page E-10), countdown timer alarm, or hourly time signal is sounding.

- Pressing (D) at any time illuminates the display regardless of the Flash Alert enabled/disabled setting.
- The backlight uses an electro-luminescent (EL) light, which loses illuminating power after very long use.
- Frequent use of the backlight shortens battery life.
- The watch will emit an audible sound whenever the display is illuminated. This is caused by a transistor that vibrates while the EL panel is lit, and does not indicate malfunction.
- Illumination provided by the backlight may be hard to see when viewed under direct sunlight.
- Display illumination will automatically turn off if an alarm starts to sound.

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To enable or disable Flash Alert

In the Timekeeping Mode, hold down (B) for about two seconds to toggle Flash Alert between enabled and disabled. An indicator on the display shows when Flash Alert is enabled.

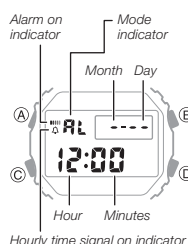


- The Flash Alert indicator is shown in all modes until you disable Flash Alert.
- The above operation controls Flash Alert only. It does not affect operation of audible tones and signals.

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Alarm



You can set an alarm with hour, minutes, month, and day. When the alarm is on, the alarm sounds for 20 seconds at the preset time. When the Hourly Time Signal is on, the watch beeps every hour on the hour.

Alarm Types

The types of alarm you get depends on the information you set.

• To set a daily alarm

Set the hour and minutes for the alarm time. Set “--” for the month and “--” for the day (see step 3 under “To set the alarm time”). This type of setting causes the alarm to sound every day at the time you set.

• To set a 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.

• To set a 1-month alarm

Set the month, hour and minutes for the alarm time. Set “--” for the day (see step 3 under “To set the alarm time”). This type of setting causes the alarm to sound every day at the time you set, only during the month you set.

• To set a monthly alarm

Set the day, hour and minutes for the alarm time. Set “--” for the month (see step 3 under “To set 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 the alarm time

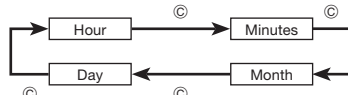
1. Press (A) while in the Alarm Mode until the hour digits start to flash on the display. The hour digits flash because they are selected.

- At this time, the alarm is automatically switched on.

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2. Press (C) to change the selection in the following sequence.



3. Press (B) to increase the selected digits. Holding down (B) changes the number at high speed.

- The format (12-hour and 24-hour) of the alarm time matches the format you select for normal timekeeping.
- When setting the alarm time using the 12-hour format, take care to set the time correctly as morning or afternoon.

4. After you set the alarm time, press (A) to return to the Alarm Mode.

- If you do not operate any button for a few minutes while a selection is flashing, the flashing stops and the watch goes back to the Alarm Mode automatically.

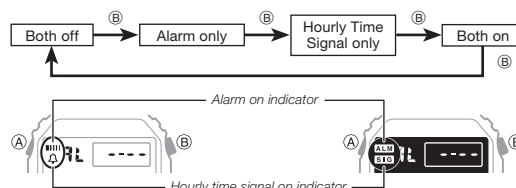
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To stop the alarm

Press any button to stop the alarm after it starts to sound.

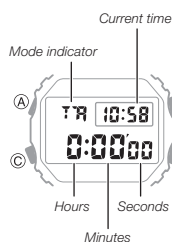
To switch an alarm and Hourly Time Signal on and off

Press (B) while in the Alarm Mode to change the status of an alarm (see “Alarm Types” on page E-10) and Hourly Time Signal in the following sequence.



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Countdown Timer



The countdown timer can be set within a range of 1 second to 24 hours. When the countdown reaches zero, an alarm sounds for 10 seconds or until you press any button.

To set the countdown time

1. Press (A) while in the Countdown Timer Mode. The hours digit flashes on the display because it is selected.
2. Press (C) to change the selection in the following sequence.



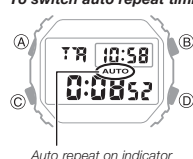
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3. Stop the timer and then press (A) until the countdown time is reset to its starting value.

- When the end of the countdown is reached and auto repeat timing is off, the alarm sounds for 10 seconds or until you stop the alarm by pressing any button. Countdown timing stops, and the countdown time is automatically reset to its starting value after the alarm stops.

To switch auto repeat timing on and off

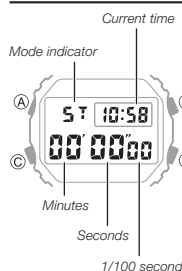


1. Press (A) while in the Countdown Timer Mode. The hours digit flashes on the display because it is selected.
2. Press (D) to switch auto repeat on and off.

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Stopwatch



The Stopwatch Mode lets you measure elapsed time, split times, and two finishes. The range of the stopwatch is 23 hours, 59 minutes, 59 seconds.

To measure elapsed time

1. Press (B) to start the stopwatch.
2. Press (B) to stop the stopwatch.
 - You can resume the measurement operation by pressing (B) again.
3. Press (A) to clear the stopwatch to all zeros.
 - For the first 60 minutes, the display shows minutes, seconds, and 1/100 second. After 60 minutes, the display format changes to show hours, minutes, and seconds.

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To record split times

1. Press (B) to start the stopwatch.
2. Press (A) to display the timing up to that point. Stopwatch timing continues internally.
3. Press (A) to clear the split time and to continue time measurement on the display.
 - You can repeat steps 2 and 3 as many times as you want.
4. Press (B) to stop the time measurement.
5. Press (A) to clear the stopwatch to all zeros.

To time first and second place finishes

1. Press (B) to start the stopwatch.
2. Press (A) when the first finisher crosses the line, and record the time.
3. Press (B) when the second finisher crosses the line.
4. Press (A) to display the finishing time of the second finisher.
5. Press (A) again to clear the stopwatch to all zeros.

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Specifications

Accuracy at normal temperature: ±15 seconds a month

Timekeeping: Hour, minutes, seconds, pm (PM), month, day, the day of the week
Time system: Switchable between 12-hour and 24-hour formats
Calendar system: Auto-calendar pre-programmed from the year 2000 to 2099

Alarm: Multi-function alarm, hourly time signal

Countdown Timer:

Measuring unit: 1 second
Input range: from 1 second to 24 hours
Other: Auto-repeat function

Stopwatch:

Measuring units: 1/100 second (for the first 60 minutes)
1 second (after 60 minutes)
Measuring capacity: 23 hours, 59 minutes, 59 seconds
Measuring modes: Elapsed time, split time and two finishes

Illumination: EL (electro-luminescent) backlight

Battery:

Modules 3229/3421: One lithium battery (Type: CR2016)
Approximately 2 years on type CR2016 (Assuming 3.5 seconds display illumination operation and 20 seconds alarm operation per day, Flash Alert enabled)
Module 3489: One lithium battery (Type: CR1616)
Approximately 2 years on type CR1616 (Assuming 3.5 seconds display illumination operation and 20 seconds alarm operation per day, Flash Alert enabled)

Note: Frequent use of the backlight shortens the battery life noted above.

Specifications are subject to change without notice.

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Operating Precautions

Water Resistance

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

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

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- 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.

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- 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.

- 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).

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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.).

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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.

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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.

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- 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.

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- 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.

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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.

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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.

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- 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.

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- 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.

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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.

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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.

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CASIO®

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