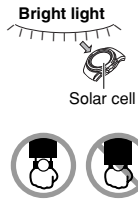


## Getting Acquainted

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

### Keep the watch exposed to bright light

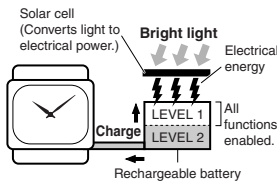


The electricity generated by the solar cell of the watch is stored by a built-in battery. Leaving or using the watch where it is not exposed to light causes the battery to run down. Make sure the watch is exposed to light as much as possible.

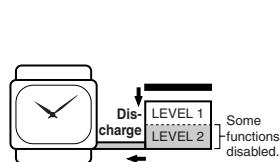
- When you are not wearing the watch on your wrist, position the face so it is pointed at a source of bright light.
- You should try to keep the watch outside of your sleeve as much as possible. Even if the face of the watch is only partially blocked from light, charging will be reduced significantly.

- 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 cause 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.
- **Be sure to read "Power Supply" for important information you need to know when exposing the watch to bright light.**

### If the analog hands aren't moving...

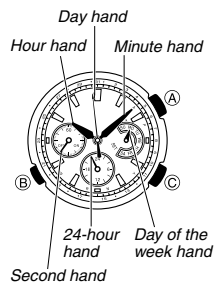
If the analog hands aren't moving, it means that the power saving mode has stopped them to save battery power.

- See "Power Saving" for more information.
- The hands also stop when the watch's battery runs down.

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.

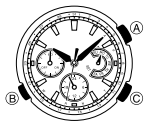
### About This Manual

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

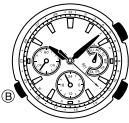


## General Guide

### Manual Receive



### Receive Status Check

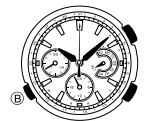


Hold down (B) for about two seconds.

Press (B). Press (B).

### Time/Date Adjustment

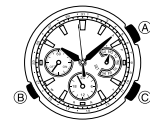
Press any button.



Hold down (B) for about five seconds.

Press (B).

### Timekeeping Mode



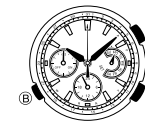
### Timekeeping Mode



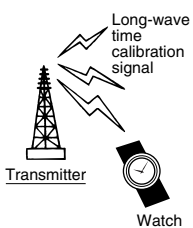
Press (B).

Press (C).

### Stopwatch Mode



## Radio-controlled Atomic Timekeeping



Your watch receives a time calibration signal and updates its time setting accordingly.

- This watch is designed to receive the time calibration signal transmitted from Shangqiu City, Henan Province, China (Call Sign: BPC, Frequency: 68.5 kHz).
- As of July 2007, China does not use Daylight Saving Time (DST). If China does go to the Daylight Saving Time system in the future, some functions of this watch may no longer operate correctly.
- See the information under "Signal Reception Troubleshooting" if you experience problems with time calibration signal reception.

### Chinese Time Calibration Signal

The Chinese time calibration signal (BPC) is maintained by the National Time Service Center (<http://www.ntsc.ac.cn/>) of the Chinese Academy of Sciences, and is transmitted from a transmitter (68.5 kHz) located in Shangqiu. The time data of the Chinese time calibration signal is maintained by the National Time Service Center.

- Note that transmission of the calibration signal may be interrupted occasionally due to maintenance, lightning, etc.

### Current Time Setting

This watch adjusts its time setting automatically in accordance with a time calibration signal. You also can perform a manual procedure to set the time and date, when necessary.

- When using the watch in an area the Chinese time calibration signal does not reach or outside the China time zone (GMT +8), you will need to adjust the watch's time setting manually. For information about adjusting the time setting manually, see "Timekeeping".
- The watch interprets any manual change of the time setting by more than 30 minutes or manual switching between Standard Time and Daylight Saving time as a change to another time zone. At this time the watch turn off auto receive automatically.
- If you successfully perform a manual receive operation after auto receive is turned off automatically by one of the events described above, the watch will turn auto receive back on automatically.
- Even if the time calibration signal is received correctly, there are some times when the analog hands may not indicate the correct time. If this happens, use the procedures under "Adjusting the Home Positions" to check the home positions of the hands, and make adjustments as required.

## Time Calibration Signal Reception

There are two different methods you can use to receive the time calibration signal: auto receive and manual receive.

### • Auto Receive

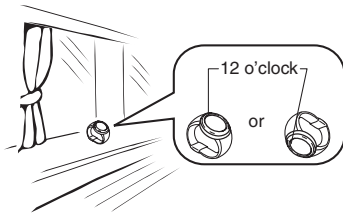
With auto receive, the watch receives the time calibration signal automatically up to five times a day. When any auto receive is successful, the remaining auto receive operations are not performed. For more information, see "About Auto Receive".

### • Manual Receive

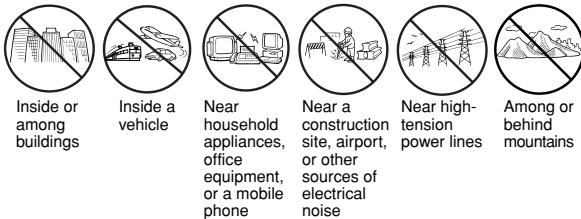
Manual receive lets you start a time calibration receive operation with the press of a button. For more information, see "To perform manual receive".

### Important!

- When getting ready to receive the time calibration signal, position the watch as shown in the nearby illustration, with its 12 o'clock side facing towards a window. This watch is designed to receive a time calibration signal late at night. Because of this, you should place the watch near a window as shown in the illustration when you take it off at night. Make sure there are no metal objects nearby.

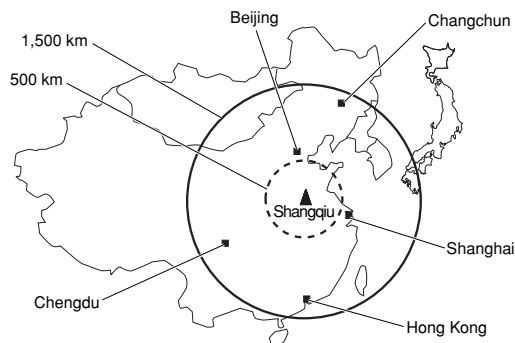


- Make sure the watch is facing the right way.
- Proper signal reception can be difficult or even impossible under the conditions listed below.



- Signal reception normally is better at night than during the day.
- Time calibration signal reception takes from two to seven minutes. Take care that you do not perform any button operations or move the watch during this time.

### Approximate Reception Range



- Even when the watch is within the reception range of a transmitter, signal reception may be impossible at times due to the effects of geographic contours, structures, weather, the season of the year, the time of day, radio interference, etc. Note that the signal becomes weaker at distances of approximately 500 kilometers from the transmitter, which means that the influence of the conditions listed above becomes even greater.
- Signal reception is affected by weather, atmospheric conditions, and seasonal changes.

## About Auto Receive

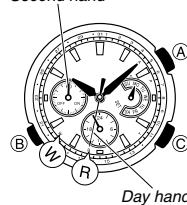
The watch starts to receive the time calibration signal automatically when the time in the Timekeeping Mode reaches 1:00 a.m., 2:00 a.m., 3:00 a.m., 4:00 a.m., and 5:00 a.m. each day (calibration times). When any auto receive is successful, the remaining auto receive operations are not performed.

### Note

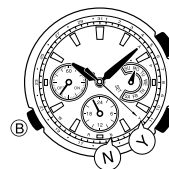
- Auto receive is supported in all modes except while a stopwatch elapsed time operation is in progress.
- Auto receipt of the calibration signal is designed to be performed early in the morning, while you sleep (provided that the Timekeeping Mode time is set correctly). Before going to bed for the night, remove the watch from your wrist, and put it in a location where it can receive the signal easily.
- The watch receives the calibration signal for two to seven minutes every day when the time in the Timekeeping Mode reaches each of the calibration times. Do not perform any button operation within seven minutes before or after any one of the calibration times. Doing so can interfere with correct calibration.
- Remember that reception of the calibration signal depends on the current time in the Timekeeping Mode.

### To perform manual receive

Second hand



Day hand



1. Place the watch on a stable surface so its 12 o'clock side is facing towards a window.
2. In the Timekeeping Mode, hold down **B** for about two seconds until the day hand moves to **R**. This will cause the watch to prepare for signal reception.
  - At this time the second hand will move to **60** and stop.
  - The day hand will move to **W** and stay there while actual reception is in progress.
  - If signal reception is unstable during reception, the day hand may move between **W** and **R**.
  - The hour and minute hands continue to keep time normally during manual receive.
  - Time calibration signal reception takes from two to seven minutes. Take care that you do not perform any button operations or move the watch during this time.
  - If reception is successful, the day hand will move to **Y**. Five seconds later, the hands will move to the correct time.

### Note

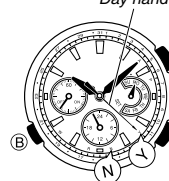
- To interrupt a receive operation and return to the Timekeeping Mode, press any button.
- If reception is not successful, the day hand will move to **N**. Five seconds later, the day hand will resume normal operation, without any adjustment of the hand setting.

### Viewing the Latest Signal Reception Results

You can use the procedure below to check whether or not the last signal receive operation was successful.

### To check the latest signal reception results

Day hand



In the Timekeeping Mode, press **B**.

- If the watch was able to perform a successful signal receive operation since midnight, the day hand will move to **Y**. If the watch has been unable to receive any signal successfully, the day hand will move to **N**.
- The watch will return to the Timekeeping Mode after five seconds or when you press **B**.
- The current receive result is cleared when the first auto receive operation is performed on the following day. This means **Y** indicates successful signal reception since the start of the current day.
- **Y** continues to be indicated even if an attempt at manual receive fails after auto receive is successful.
- If you adjust the time or date setting manually, the day hand will move to **N**.

## Signal Reception Troubleshooting

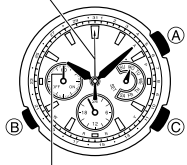
Check the following points whenever you experience problems with signal reception.

Problem	Probable Cause	What you should do
The day hand is pointing at N.	<ul style="list-style-type: none"> <li>You changed the time setting manually.</li> <li>You performed some button operation during the auto receive operation.</li> <li>Signal reception results are reset at midnight each day.</li> <li>Radio interference is often present during the day time, which can interfere with calibration signal reception.</li> </ul>	<ul style="list-style-type: none"> <li>Perform manual signal receive at night or wait until the next auto signal receive operation is performed.</li> <li>Check to make sure the watch is in a location where it can receive the signal.</li> </ul>
The time setting is incorrect following signal reception.	<ul style="list-style-type: none"> <li>If the time is one hour off, the DST setting may be incorrect.</li> </ul>	<ul style="list-style-type: none"> <li>Select the correct DST setting.</li> </ul>

- For further information, see "Important!" under "Time Calibration Signal Reception" and "Radio-controlled Atomic Timekeeping Precautions".

## Stopwatch

Stopwatch second hand



Stopwatch minute hand

The stopwatch lets you measure elapsed time.

- When you enter the Stopwatch Mode, the stopwatch second hand and the stopwatch minute hand move to 0.
- The display range of the stopwatch is 59 minutes, 59 seconds.
- The stopwatch continues to run, restarting from zero after it reaches its limit, until you stop it.
- All of the operations in this section are performed in the Stopwatch Mode.

### To measure elapsed time

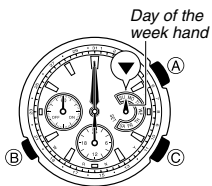
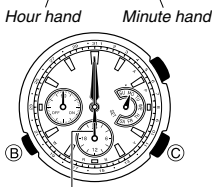
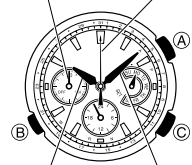
- In the Timekeeping Mode, press (C) to enter the Stopwatch Mode.
  - In the Stopwatch Mode, press (A) to start the stopwatch.
  - Press (A) to stop the stopwatch.
    - You can resume the measurement operation by pressing (A) again.
  - Check the elapsed time.
- Press (C) to reset the stopwatch to all zeros. The stopwatch will reset to all zeros even if you press (C) while elapsed time measurement is in progress.
  - You can return from the Stopwatch Mode to the Timekeeping Mode at any time by pressing (B).

## Adjusting the Home Positions

If the time and date settings are wrong even after the time calibration signal is received normally, use the following procedure to adjust their home positions.

### To adjust the home positions

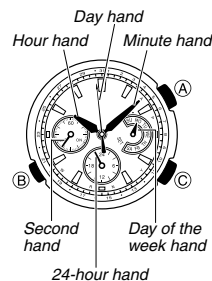
- In the Timekeeping Mode, hold down (A) and (B) for five seconds. This enters the Home Position Adjustment Mode, which you can use to check and adjust the home position of the second hand.
  - The second hand is in the proper home position if it moves to 12 o'clock. If it doesn't, press (C) to move it to 12 o'clock.
- After confirming that the second hand is at the proper home position, press (B). This will switch to hour hand and minute hand home position adjustment.
  - The hour hand and minute hand are at their proper home positions if they both move to 12 o'clock, and if the 24-hour hand is pointing at hour 24. If the hands are not positioned correctly, use (C) (+) to move all three hands to their proper home positions.
- After confirming that the hour hand and minute hand are both at their proper home positions, press (B). This will switch to day hand and day of the week hand home position adjustment.
  - The day hand is at its proper home position if it moves to 12 o'clock. If it doesn't, use (C) (+) to move the hand to 12 o'clock.
  - The day of the week hand is at its proper position if it moves to 12 o'clock (the position where the ▼ mark is located). If it doesn't, use (A) (+) to move the hand to 12 o'clock.



- Press (B) to return to the Timekeeping Mode.

- After you complete the home position adjustment procedure, place the watch in a location that allows good time calibration signal reception, and then perform a manual receive operation. See "To perform manual receive" for more information.

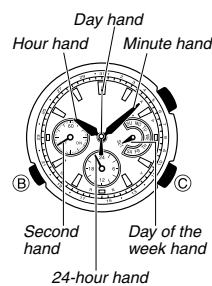
## Timekeeping



Use the Timekeeping Mode to set and view the current time and date, and to switch between Standard Time and Daylight Saving Time (summer time).

- 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.
- The watch interprets any manual change of the time setting by more than 30 minutes or manual switching between Standard Time and Daylight Saving time as a change to another time zone. At this time the watch turn off auto receive automatically.
- If you successfully perform a manual receive operation after auto receive is turned off automatically by one of the events described above, the watch will turn auto receive back on automatically.

### To set the time and date manually



- In the Timekeeping Mode, hold down (B) for about five seconds until the day of the week hand moves to **SET**. This is the Daylight Saving Time (DST) setting mode.
  - At this time the day hand will move to 12 o'clock.

- Use (C) to select the setting you want by moving the second hand to **ON** (Daylight Saving Time) or **OFF** (Standard Time).

- After selecting the setting you want, press (B).
  - If you changed the on/off setting in step 2 above, pressing (B) in step 3 will return to the Timekeeping Mode.

- If you did not change the on/off setting in step 2 above, pressing (B) in step 3 will advance to the day/day of the week setting mode. This is indicated by the day of the week hand and day hand moving to their current settings.

- If you want to change the DST on/off setting and the day, day of the week, and/or time setting, you need to change the DST on/off setting first, and then restart the above procedure from step 1 to change the day, day of the week, and/or time setting.

- Use (A) and (C) to change the day of the week and date setting.

- Each press of (A) advances to the next day of the week.
- Each press of (C) advances to the next day.

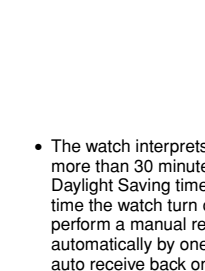
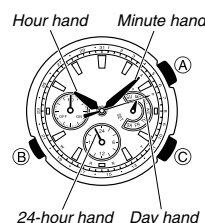
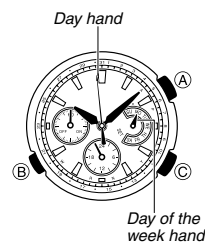
- After selecting the settings you want, press (B) to enter time setting mode.

- This will cause the day hand to move to **A** (AM) or **P** (PM).

- Use (C) to set the time.

- Each press of (C) advances to the time setting by one minute.
- Holding down (C) will advance the time setting at high speed. High speed hand movement will continue until you press any button to stop it. It also stops automatically after the time advances 24 hours.

- After setting the time, press (B) to exit the setting mode and return to the Timekeeping Mode.



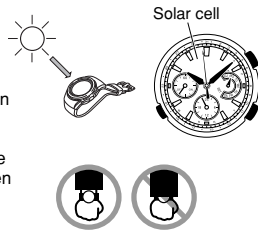
- The watch interprets any manual change of the time setting in step 6 by more than 30 minutes or manual switching between Standard Time and Daylight Saving time in step 2 as a change to another time zone. At this time the watch turn off auto receive automatically. If you successfully perform a manual receive operation after auto receive is turned off automatically by one of the events described above, the watch will turn auto receive back on automatically.

## Power Supply

This watch is equipped with a solar cell and a special rechargeable battery (secondary 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. Even if the face of the watch is blocked from light only partially, charging will be reduced significantly.

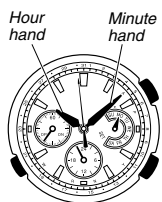


### Important!

- 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. Make sure that the watch is exposed to bright light whenever possible.
- This watch uses a special 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 special rechargeable battery to charge fully, contact your dealer or CASIO distributor about having it replaced.
- The special rechargeable (secondary) battery used by your watch is not intended to be removed or replaced by you. Use of a rechargeable battery other than the special one specified for this watch can damage the watch.
- The current time and all other settings return to their initial factory defaults whenever battery power drops to Level 3 and when you have the battery replaced.
- Keep the watch 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 Levels

The movement of the analog hands indicates the current battery power level.



Level	Hand Movement	Function Status
1	Normal.	All functions enabled.
2	<ul style="list-style-type: none"> <li>• All hands, except for the hour and minute hands, stopped.</li> <li>• The hour and minute hands continue to operate until the next 12:00 hour (noon or midnight) is reached.</li> </ul>	All functions disabled, except for analog timekeeping and stopwatch.
3	All hands stopped.	All functions disabled.

- When battery power is at Level 2, time calibration signal reception is disabled.
- At Level 3, all functions are disabled and settings return to their initial factory defaults. Functions are enabled once again after the rechargeable battery is charged, but you need to set the time and date, after the battery reaches Level 1 from Level 3.

## 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.

### 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

After a full charge, timekeeping remains enabled for up to about four months.

- 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)	9 minutes
Sunlight through a window (10,000 lux)	32 minutes
Daylight through a window on a cloudy day (5,000 lux)	51 minutes
Indoor fluorescent lighting (500 lux)	8 hours

- Since these are the specs, we can include all the technical details.
  - Watch is not exposed to light
  - Internal timekeeping
  - Analog hands operational 18 hours per day, sleep state 6 hours per day
  - 6 minutes of signal reception per day
- Stable operation is promoted by frequent charging.

## 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 3	Level 2	Level 1
Outdoor sunlight (50,000 lux)	3 hours	19 hours	
Sunlight through a window (10,000 lux)	9 hours	68 hours	
Daylight through a window on a cloudy day (5,000 lux)	14 hours	110 hours	
Indoor fluorescent lighting (500 lux)	146 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.

### Auto Return Features

- If you leave the watch in the Home Position Adjustment Mode for two or three minutes without performing any operation, it returns to the Timekeeping Mode automatically.
- If you do not perform any operation for about two or three minutes while a setting mode is selected, the watch will exit the setting mode automatically.

### High-Speed Movement

- The **C** button is used to change the hand setting in various setting modes. In most cases, holding down this button will start high-speed movement of the applicable hand(s).
- High-speed movement of hands will continue until you press any button, or until the moving hand(s) finishes one complete cycle. One complete cycle for the hands is 24 hours.
- The watch will not respond to button operations while high-speed hand movement is being performed. You will be able to perform button operations again after high-speed operation is stopped.
- High-speed hand movement also is triggered by changing from one mode to another.

### Radio-controlled Atomic Timekeeping Precautions

- Strong electrostatic charge can result in the wrong time being set.
- The time calibration signal bounces off the ionosphere. Because of this, such factors as changes in the reflectivity of the ionosphere, as well as movement of the ionosphere to higher altitudes due to seasonal atmospheric changes or the time of day may change the reception range of the signal and make reception temporarily impossible.
- Even if the time calibration signal is received properly, certain conditions can cause the time setting to be off by up to one second.
- The current time setting in accordance with the time calibration signal takes priority over any time settings you make manually.
- The watch is designed to update the date and day of the week automatically for the period January 1, 2001 to December 31, 2099. Setting of the date by the time calibration signal cannot be performed starting from January 1, 2100.
- This watch can receive signals that differentiate between leap years and non-leap years.
- Though this watch is designed to receive both time data (hour, minutes, seconds) and date data (year, month, day), certain signal conditions can limit reception to time data only.
- If you are in an area where proper time calibration signal reception is impossible, the watch keeps time within  $\pm 20$  seconds a month at normal temperature.

## Timekeeping

- The year can be set in the range of 2001 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 or when battery power drops to Level 3.
- The date will change automatically when the current time reaches midnight. The date change at the end of the month may take more time than normal.

## Power Saving

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

- There are actually two sleep state levels: "second hand sleep" and "function sleep".

Elapsed Time in Dark	Operation
60 to 70 minutes (second hand sleep)	Second hand only is stopped, all other functions are enabled.
6 or 7 days (function sleep)	<ul style="list-style-type: none"><li>• All functions, including analog timekeeping, disabled</li><li>• Internal timekeeping maintained</li></ul>

- 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.