

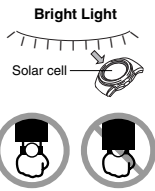
# Operation Guide 2972 2973

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 and keep it on hand for later reference when necessary.

### Keep the watch exposed to bright light

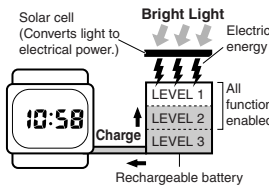


The electricity generated by the solar cell of the watch is stored by a built-in battery. Leaving or using the watch where it is not exposed to light causes the battery to run down. Make sure the watch is exposed to light as much as possible.

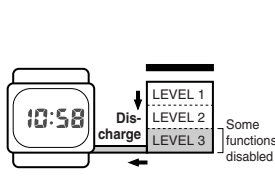
- When you are not wearing the watch on your wrist, position the face so it is pointed at a source of bright light.
- You should try to keep the watch outside of your sleeve as much as possible. Charging is reduced significantly if the face is only partially covered.

- 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.



## General Guide

- Press (C) to change from mode to mode.
- In any mode, press (L) to illuminate the display.

### Timekeeping Mode



### World Time Mode



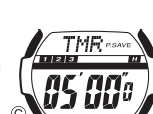
### Alarm Mode



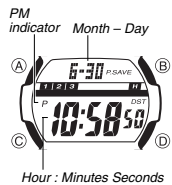
### Stopwatch Mode



### Countdown Timer Mode



## Radio-controlled Timekeeping



This watch receives a time calibration signal and updates its time setting accordingly. The time calibration signal includes both Standard Time and Daylight Saving Time (summer time) data.

- This watch is designed to pick up the time calibration signal transmitted from Rugby, England and the signal from Mainflingen, Germany.

### Current Time Setting

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

- The first thing you should do after purchasing this watch is to set your Home City, which is the city where you will use the watch normally. For more information, see "To set your Home City" below.
- When using the watch outside the ranges of the time signal transmitters, you have to adjust the current time setting manually as required. See "Timekeeping" for more information about manual time setting.

### To set your Home City



1. In the Timekeeping Mode, hold down (A) until the city code starts to flash, which indicates the setting screen.
2. Use (D) (east) and (B) (west) to select the city code you want to use as your Home City.
  - The following are the city codes for major cities in the Western Europe time zones.

City Code	City	Other major cities in same time zone
LON	London	Dublin, Lisbon, Casablanca, Dakar, Abidjan
PAR	Paris	Milan, Rome, Madrid, Amsterdam, Algiers, Hamburg, Frankfurt, Vienna, Stockholm
BER	Berlin	
ATH	Athens	Cairo, Jerusalem, Helsinki, Istanbul, Beirut, Damascus, Cape Town

3. Press (A) to exit the setting screen.

### Important!

- Normally, your watch should show the correct time as soon as you select your Home City code. If it does not, it should adjust automatically after the next auto receive operation (in the middle of the night). You can also perform manual receive or you can set the time manually.
- If you are in an area that does not use Daylight Saving Time (summer time), turn off the DST setting.

- The actual level at which some functions are disabled depends on the watch model.
- Frequent display illumination can quickly run down the battery and require charging. The following guidelines give an idea of the charging time required to recover from a single illumination operation.

Approximately 5 minutes exposure to bright sunlight coming in through a window  
Approximately 50 minutes exposure to indoor fluorescent lighting

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

### If the display of the watch is blank...

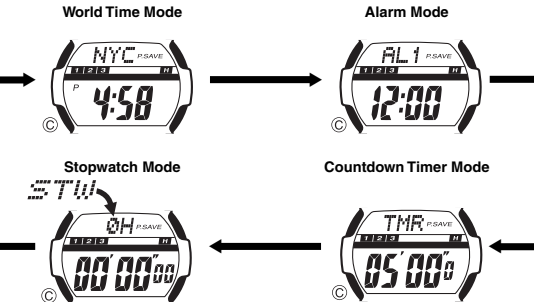
If the display of the watch is blank, it means that the watch's Power Saving function has turned off the display to conserve power.

- See "Power Saving Function" for more information.

### About This Manual



- 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.
- 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.



## 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

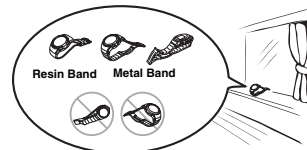
With auto receive, the watch receives the time calibration signal automatically five or six times a day. When any auto receive is successful, the remaining auto receive operations are not performed. For more information, see "About Auto Receive".

### Manual Receive

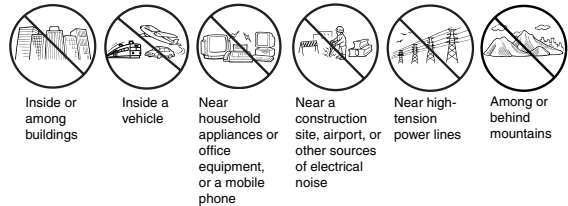
Manual receive lets you start a time calibration receive operation with the press of a button. For more information, see "To perform manual receive".

### 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. Make sure there are no metal objects nearby.



- The watch should not be on its side or facing the wrong way.
- Proper signal reception can be difficult or even impossible under the conditions listed below.



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

- When within range of the applicable transmitter, this watch can receive either the Germany (Mainflingen) or England (Rugby) time calibration signals. See "Transmitters" for more information.



- This watch is designed to receive the time calibration signal transmitted from Rugby, England and the signal from Mainflingen, Germany. Signal reception is possible within the area represented by a circle with a radius of about 1,500 kilometers.
- At distances further than about 500 kilometers from a transmitter, signal reception may not be possible during certain times of year or times of day. Radio interference may also cause problems with reception.
- See the information under "Signal Reception Troubleshooting" if you experience problems with time calibration signal reception.

### About Auto Receive

With auto receive, the watch receives the time calibration signal automatically five or six times a day. When the second or third receive is successful, the remaining auto receive operations are not performed. The reception schedule (calibration times) depends on your currently selected Home City Code, and whether standard time or Daylight Saving Time is selected for your Home City Code.

### Note

- Auto receive is turned on whenever LON, PAR, BER, or ATH is selected as the Home City code. For information about turning off auto receive, see "To select the transmitter mode".

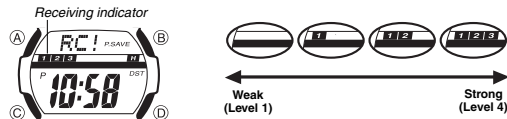
Your City Code		Auto Receive Start Times					
		1	2	3	4	5	6
LON (GMT +0)	Standard Time	1:00 am	2:00 am	3:00 am	4:00 am	5:00 am	Midnight
	Daylight Saving Time	2:00 am	3:00 am	4:00 am	5:00 am	Midnight	1:00 am next day
PAR, BER (GMT +1)	Standard Time	2:00 am	3:00 am	4:00 am	5:00 am	Midnight	1:00 am next day
	Daylight Saving Time	3:00 am	4:00 am	5:00 am	Midnight	1:00 am next day	2:00 am next day
ATH (GMT +2)	Standard Time	3:00 am	4:00 am	5:00 am	Midnight	1:00 am next day	2:00 am next day
	Daylight Saving Time	4:00 am	5:00 am	Midnight	1:00 am next day	2:00 am next day	3:00 am next day

### Note

- Auto receive works only while the watch is in the Timekeeping Mode or World Time Mode. Auto receive is not performed if an auto receive time is reached while an alarm is sounding, while a countdown timer operation is in progress, or if a setting screen (a screen with a flashing setting) is on the display.
- 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.
- When auto receive is turned on, the watch receives the calibration signal for two to six minutes everyday when the Timekeeping Mode time reaches each of the calibration times. Do not perform any button operation within six 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 time kept in the Timekeeping Mode. The receive operation will be performed whenever the display shows any one of the calibration times, regardless of whether or not the Timekeeping Mode time is actually the correct time.
- If more than one auto receive is successful, the watch uses the data from the last successful receive to adjust settings. When only one reception is successful, the watch uses the data of the successful reception.

### About the Receiving Indicator

The receiving indicator shows the strength of the calibration signal being received. For best reception, be sure to keep the watch in a location where signal strength is strongest.



- Even in an area where signal strength is strong, it takes about 10 seconds for signal reception to stabilize enough for the receiving indicator to indicate signal strength.
- Use the receiving indicator as a guide for checking signal strength and for finding the best location for the watch during signal receive operations.
- Following reception of the time calibration signal and calibration of the watch's time setting, the Level 4 receiving indicator will remain on the display in all modes. The Level 4 receiving indicator will not be displayed if signal reception was unsuccessful or after you adjust the current time setting manually.
- The Level 4 receiving indicator is displayed only when the watch is able to receive both time and date data successfully. It does not appear when only time data is received.
- The Level 4 receiving indicator indicates that at least one of the auto calibration signal receive operations was successful. Note, however, that the Level 4 receiving indicator is cleared from the display at the next successful reception each day.

### To perform manual receive

#### Receiving indicator



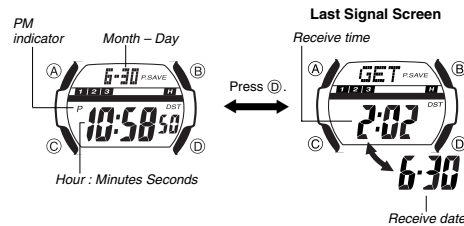
- Place the watch on a stable surface so its top (12 o'clock side) is facing towards a window.
- In the Timekeeping Mode, hold down (D) for about two seconds until the watch beeps.
  - Release (D) and the message RC! appears to indicate that signal reception has started.
  - Time calibration signal reception takes from two to six minutes. Take care that you do not perform any button operations or move the watch during this time.
  - After signal reception is complete, the display of the watch changes to the Last Signal screen.

### Note

- To interrupt a receive operation and return to the Timekeeping Mode, press (D).
- If the receive operation is unsuccessful, the message ERR appears on the display for about one or two minutes. After that, the watch returns to the Timekeeping Mode.
- You can also change from the Last Signal or ERR screen to the normal timekeeping screen by pressing (D).

### To display the Last Signal screen

In the Timekeeping Mode, press (D) to display the Last Signal screen (indicated by GET). The Last Signal screen shows the date and time of the last successful time calibration signal reception.



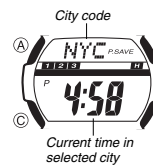
### Signal Receive Troubleshooting

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

Problem	Probable Cause	What you should do
Cannot perform manual receive.	<ul style="list-style-type: none"> <li>The watch is not in the Timekeeping Mode.</li> <li>Your current Home City is not one of the following city codes: LON, PAR, BER, or ATH.</li> </ul>	<ul style="list-style-type: none"> <li>Enter the Timekeeping Mode and try again.</li> <li>Select LON, PAR, BER, or ATH as your Home City.</li> </ul>
Auto receive is turned on, but the Level 4 receiving indicator does not appear on the display.	<ul style="list-style-type: none"> <li>You changed the time setting manually.</li> <li>The watch was not in the Timekeeping or World Time Mode, or you performed some button operation during the auto receive operation.</li> <li>Even if receive is successful, the Level 4 receiving indicator disappears when the second auto receive time is reached each day.</li> <li>Time data (hour, minutes, seconds) only was received during the last receive operation. The Level 4 receiving indicator appears only when time data and date data (year, month, day) are both received.</li> </ul>	<ul style="list-style-type: none"> <li>Perform manual signal receive 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>
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> <li>The Home City code setting is not correct for the area where you are using the watch.</li> </ul>	<ul style="list-style-type: none"> <li>Change the DST setting to Auto DST.</li> <li>Select the correct Home City code.</li> </ul>

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

### World Time



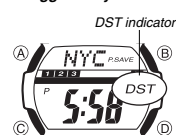
- The World Time Mode shows you the current time in 30 cities (29 time zones) around the world.
- If the current time shown for a city is wrong, check your Home City time settings and make the necessary changes.
  - All of the operations in this section are performed in the World Time Mode, which you enter by pressing (C).

#### To view the time in another city

While in the World Time Mode, press (D) to scroll eastward through the city codes (time zones) or (B) to scroll westward.

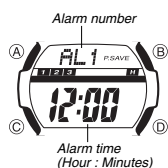
- For full information on city codes, see the "City Code Table".

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



- In the World Time Mode, use (B) and (D) to display the city code (time zone) whose Standard Time/Daylight Saving Time setting you want to change.
  - Hold down (A) to toggle Daylight Saving Time (DST indicator displayed) and Standard Time (DST indicator not displayed).
- Note that you cannot switch between Standard Time and Daylight Saving Time while 34HT is selected as the city code.
  - The DST indicator will appear whenever you display a city code for which Daylight Saving Time is turned on.
  - Note that the DST/Standard Time setting affects only the currently displayed city code. Other city codes are not affected.

## Alarms



### To set an alarm time



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

- There are five alarms numbered AL1 through AL4, and SNZ. You can configure SNZ as a snooze alarm only. Alarms AL1 through AL4 can be used as one-time alarms only.
- All of the operations in this section are performed in the Alarm Mode, which you enter by pressing C.

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



2. After you select an alarm, hold down A until the hour setting of the alarm time starts to flash, which indicates the setting screen.
  - This operation turns on the alarm automatically.
3. Use C to move the flashing between the hour and minute settings.

4. While a setting is flashing, use D (+) and B (-) to change it.
  5. Press A to exit the setting screen.
- When setting the alarm time using the 12-hour format, take care to set the time correctly as a.m. (no indicator) or p.m. (P indicator).

### Alarm Operation

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

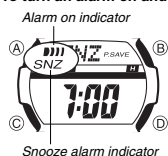
- Pressing any button stops the alarm tone operation.
- Performing any one of the following operations during a 5-minute interval between snooze alarms cancels the current snooze alarm operation.

Displaying the Timekeeping Mode setting screen  
Displaying the snooze alarm setting screen

### To test the alarm

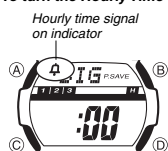
In the Alarm Mode, hold down D to sound the alarm.

### To turn an alarm on and off



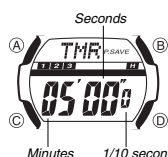
1. In the Alarm Mode, use D to select an alarm.
  2. Press B to toggle it on and off.
- Turning on a one-time alarm (AL1, AL2, AL3, AL4) displays the alarm on indicator on its Alarm Mode screen. Turning on the snooze alarm (SNZ) displays the alarm on indicator and snooze alarm indicator on its Alarm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

### To turn the Hourly Time Signal on and off



1. In the Alarm Mode, use D to select the Hourly Time Signal (SIG) on and off.
  2. Press B to toggle it on (Hourly Time Signal on indicator displayed) and off (Hourly Time Signal on indicator not displayed).
- The Hourly Time Signal on indicator is displayed in all modes when the Hourly Time Signal is turned on.

## Countdown Timer



You can set the countdown timer within a range of one to 60 minutes. An alarm sounds when the countdown reaches zero.

- All of the operations in this section are performed in the Countdown Timer Mode, which you enter by pressing C.

### To set the countdown start time

1. While the countdown start time is on the display in the Countdown Timer Mode, hold down A until the current countdown start time starts to flash, which indicates the setting screen.

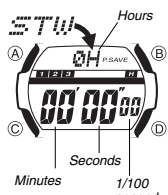
- If the countdown start time is not displayed, use the procedure under "To use the countdown timer" to display it.

2. While a setting is flashing, use D (+) and B (-) to change it.
3. Press A to exit the setting screen.

### To use the countdown timer

- Press D while in the Countdown Timer Mode to start the countdown timer.
- When the end of the countdown is reached, the alarm sounds for 10 seconds or until you stop it by pressing any button. The countdown time is reset automatically to its starting value after the alarm stops.
  - Press D while a countdown operation is in progress to pause it. Press D again to resume the countdown.
  - To stop a countdown operation completely, first pause it (by pressing D), and then press B. This returns the countdown time to its starting value.

## Stopwatch

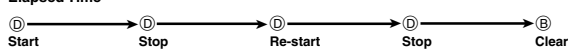


The stopwatch lets you measure elapsed time, split times, and two finishes.

- 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.
- Exiting the Stopwatch Mode while a split time is frozen on the display clears the split time and returns to elapsed time measurement.
- The stopwatch measurement operation continues even if you exit the Stopwatch Mode.
- All of the operations in this section are performed in the Stopwatch Mode, which you enter by pressing C.

### To measure times with the stopwatch

#### Elapsed Time



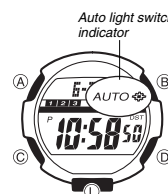
#### Split Time



#### Two Finishes



## Illumination



The watch has an EL (electro-luminescent) panel that causes the entire display to glow for easy reading in the dark. The watch's auto light switch illuminates the display automatically when you angle the watch towards your face.

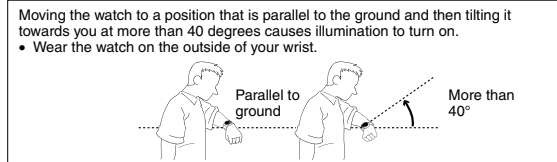
- The auto light switch must be turned on (indicated by the auto light switch indicator) for it to operate.
- See "Illumination Precautions" for other important information.

### To turn on illumination manually

- In any mode, press L to illuminate the display.
- You can specify 1.5 seconds or 2.5 seconds as the illumination duration. See "To set the time and date" for more information.
  - The above operation turns on illumination regardless of the current auto light switch setting.

### About the Auto Light Switch

Turning on the auto light switch causes illumination to turn on whenever you position your wrist as described below in any mode. Note that this watch features a "Full Auto EL Light," so the auto light switch operates only when available light is below a certain level. It does not illuminate the display under bright light.



### Warning!

- Always make sure you are in a safe place whenever you are reading the watch using the auto light switch. Be especially careful when running or engaged in any other activity that can result in accident or injury. Also take care that sudden illumination by the auto light switch does not startle or distract others around you.
- When you are wearing the watch, make sure that its auto light switch is turned off before riding on a bicycle, or operating a motorcycle or any other motor vehicle. Sudden and unintended operation of the auto light switch can create a distraction, which can result in a traffic accident and serious personal injury.

### To turn the auto light switch on and off

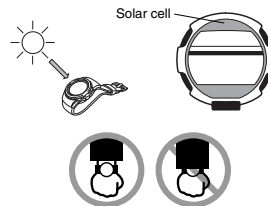
- In any mode, hold down L for about two seconds to toggle the auto light switch on (auto light switch indicator displayed) and off (auto light switch indicator not displayed).
- The auto light switch indicator remains in all modes while the auto light switch is turned on.

## 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. Charging is reduced significantly if the face is only partially covered.



### 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 normally 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.
- Never try to remove or replace the watch's special battery yourself. Use of the wrong type of battery can damage the watch.
- The current time and all other settings return to their initial factory defaults whenever battery power drops to Level 4 and when you have the battery replaced.
- Turn on the watch's Power Saving function and keep it in an area normally exposed to bright light when storing it for long periods. This helps to keep the rechargeable battery from going dead.

### Battery Power Indicator and Recover Indicator

The battery power indicator shows you the current power level of the rechargeable battery.

Recover indicator



Battery power indicator

Level	Battery Power Indicator	Function Status
1		All functions enabled.
2		All functions enabled.
3		Alarm, hourly time signal, illumination, auto light switch, and display disabled. (Charge Soon Alert)
4		All functions, including timekeeping, disabled and initialized.

- The flashing charge indicator (CHG) at Level 3 tells you that battery power is very low, and that exposure to bright light for charging is required as soon as possible.
- At Level 4, 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 3 (indicated by the flashing charge indicator) from Level 4. You will not be able to configure any of the other settings until the battery reaches Level 2 (no charge indicator) after dropping to Level 4.
- Leaving the watch in direct sunlight or some other very strong light source can cause the battery power indicator to show a reading that is momentarily higher than the actual battery level. The correct battery power indicator should appear after a few minutes.
- If you use the light or alarms a number of times during a short period, the recover indicator (RECOV) appears and the following operations become disabled until battery power recovers.

#### Illumination Beeper tone

After some time, battery power will recover and the recover indicator will disappear, indicating that the above functions are enabled again.

### Charging Precautions

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

#### Warning!

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

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

### Charging Guide

- After a full charge, timekeeping remains enabled for up to about 11 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)	5 minutes
Sunlight Through a Window (10,000 lux)	24 minutes
Daylight Through a Window on a Cloudy Day (5,000 lux)	48 minutes
Indoor Fluorescent Lighting (500 lux)	8 hours

- Since these are the specs, we can include all the technical details.
  - Display on 18 hours per day, sleep state 6 hours per day
  - 1 illumination operation (1.5 seconds) per day
  - 10 seconds of alarm operation per day
  - 16 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.

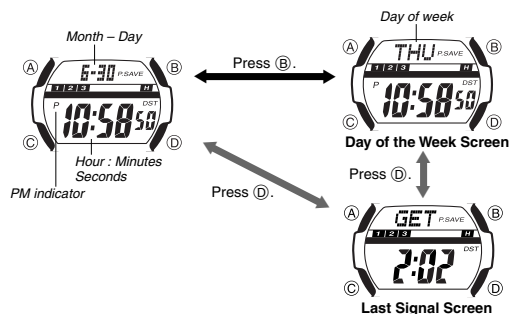
Exposure Level (Brightness)	Approximate Exposure Time		
	Level 4	Level 3	Level 2
Outdoor Sunlight (50,000 lux)	2 hours	22 hours	6 hours
Sunlight Through a Window (10,000 lux)	5 hours	109 hours	30 hours
Daylight Through a Window on a Cloudy Day (5,000 lux)	9 hours	222 hours	61 hours
Indoor Fluorescent Lighting (500 lux)	101 hours	---	---

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

### Timekeeping

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

- When setting the time, you can also configure settings for the illumination duration, the 12/24-hour format, and power saving on/off.
- In the Timekeeping Mode, you can press (B) to change the display format as shown below.
- Pressing (D) in the Timekeeping Mode will display the Last Signal screen.

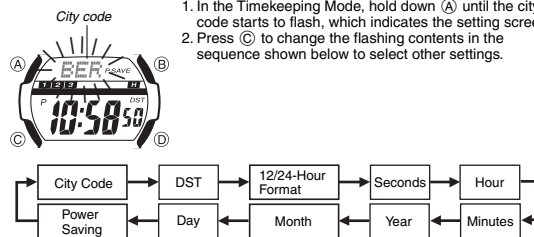


### Setting the Time and Date

Make sure you select your Home City code before you change the current time and date settings. World Time Mode times are all displayed in accordance with the Timekeeping Mode settings. Because of this, World Time Mode times will not be correct if you do not select the proper Home City code before setting the time and date in the Timekeeping Mode.

#### To set the time and date

1. In the Timekeeping Mode, hold down (A) until the city code starts to flash, which indicates the setting screen.
2. Press (C) to change the flashing contents in the sequence shown below to select other settings.



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

Screen:	To do this:	Do this:
BER	Change the city code	Use (D) (east) and (B) (west).
R DST	Cycle between auto DST (R), Standard Time (BF), and Daylight Saving Time (BR)	Press (D).
12H	Toggle between 12-hour (12H) and 24-hour (24H) timekeeping	Press (D).
50	Reset the seconds to 00	Press (D).
50	Toggle the illumination duration setting between 1.5 seconds (+) and 2.5 seconds (*)	Press (B).
10:58	Change the hour, minutes, or year	Use (D) (+) and (B) (-).
6:30	Change the month or day	
ON PS	Toggle Power Saving on (BR) and off (BF)	Press (D).

- See "City Code Table" for a complete list of available city codes.
- Auto DST (R) can be selected only while L I S, L O N, E C N, M A C, F A R, M I L, R O H, B E R, S T O, or A T H is selected as the Home City code. For more information, see "Daylight Saving Time (DST)" below.
- For information about settings other than the time and date, see the following.
  - Illumination duration: Illumination
  - Power Saving: Power Saving Function

4. Press (A) to exit the setting screen.

### Daylight Saving Time (DST)

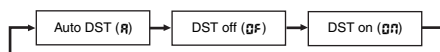
Daylight Saving Time (summer time) advances the time setting by one hour from Standard Time. Remember that not all countries or even local areas use Daylight Saving Time.

The time calibration signals transmitted from Rugby and Mainfingens includes both Standard Time and DST data. When the Auto DST setting is turned on, the watch switches between Standard Time and DST (summer time) automatically in accordance with the Rugby and Mainfingens signals.

- The default DST setting is Auto DST (R) whenever you select L O N, F A R, B E R, or A T H as your Home City code.
- If you experience problems receiving the time calibration signal in your area, it is probably best to switch between Standard Time and Daylight Saving Time (summer time) manually.

#### To change the Daylight Saving Time (summer time) setting

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



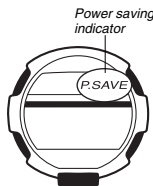
4. When the setting you want is selected, press (A) to exit the setting screen.
- The DST indicator appears to indicate that Daylight Saving Time is turned on.



## 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.

### Power Saving Function



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

Elapsed Time in Dark	Display	Operation
60 to 70 minutes	Blank, with Sleep indicator (P.SAVE) flashing	All functions enabled, except for the display
6 or 7 days	Blank, with Sleep indicator (P.SAVE) not flashing	Beeper tone, backlight, and display are disabled.

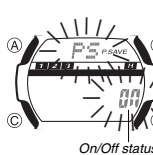
- Wearing the watch inside the sleeve of clothing can cause it to enter the sleep state.
- The watch will not enter the sleep state between 6:00 AM and 10:59 PM. If the watch is already in the sleep state when 6:00 AM arrives, however, it will remain in the sleep state.

### To recover from the sleep state

Perform any one of the following operations.

- Move the watch to a well-lit area.
- Press any button.
- Angle the watch towards your face for reading.

### To turn Power Saving on and off



- In the Timekeeping Mode, hold down (A) until the city code starts to flash, which indicates the setting screen.
  - Press (C) nine times until the Power Saving on/off screen appears.
  - Press (D) to toggle Power Saving on (ON) and off (OFF).
  - Press (A) to exit the setting screen.
- The Power Saving indicator (P.SAVE) is on the display in all modes while Power Saving is turned on.

### Auto Return Features

- If you leave the watch in the Alarm Mode for two or three minutes without performing any operation, it returns to the Timekeeping Mode automatically.
- If you leave the watch with a flashing setting on the display for two or three minutes without performing any operation, the watch exits the setting screen automatically.

### Scrolling

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

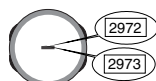
### Initial Screens

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

### Radio-controlled Timekeeping Precautions

- Strong electrostatic charge can result in the wrong time being set.
- Even when the watch is within the reception range of the transmitter, signal reception is impossible if the signal is blocked by mountains or other geological formations between the watch and signal source.
- Signal reception is affected by weather, atmospheric conditions, and seasonal changes.
- The time calibration signal is bounced 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.
- The watch is designed to update the date and day of the week automatically for the period January 1, 2000 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.
- Normally, the signal reception date shown by the Last Signal screen is the date data included in the received time calibration signal. When only time data is received, however, the Last Signal screen shows the date as kept in the Timekeeping Mode at the time of signal reception.
- If you are in an area where proper time calibration signal reception is impossible, the watch keeps time within  $\pm 15$  seconds a month at normal temperature.
- If you have problems with proper time calibration signal reception or if the time setting is wrong after signal reception, check your current city code, DST (summer time), and auto receive settings. The following are the initial factory defaults for these settings.

Setting	Initial Factory Default
City code	LON (London) (Module 2972) BER (Berlin) (Module 2973)
DST (summer time)	A EST (Auto switching)
Auto receive	AUTO (Automatic selection)



- To find out the module number of your watch, look at its back cover. The Module number (2972 or 2973) will be engraved inside the box on the back cover.

### Transmitters

This watch is designed to receive the time calibration signal transmitted from Rugby, England and the signal from Mainflingen, Germany. You can configure the watch to automatically select the transmitter that has the strongest signal.

### Module 2972

In this case:	The watch does this:
The first signal auto search operation after factory default settings are in effect, or after the city code has been changed	1. Checks the Rugby signal first. 2. If the Rugby signal cannot be received, checks the Mainflingen signal.
Any case other than the above.	1. Checks the last successfully received signal first. 2. If the last successfully received signal cannot be received, checks the other signal.

### Module 2973

In this case:	The watch does this:
The first signal auto search operation after factory default settings are in effect, or after the city code has been changed	1. Checks the Mainflingen signal first. 2. If the Mainflingen signal cannot be received, checks the Rugby signal.
Any case other than the above.	1. Checks the last successfully received signal first. 2. If the last successfully received signal cannot be received, checks the other signal.

- Auto receive is turned on whenever the transmitter mode is AUTO, DCF, or MEF. Auto receive is turned off when the transmitter mode setting is OFF.
- Note that you can change the transmitter mode setting when LON, PAR, BER, or FTH is selected as the Home City code.
- See "To select the transmitter mode" below.

### To select the transmitter mode



- In the Timekeeping Mode, press (D) to display the last signal screen.
- Hold down (A) until the transmitter mode setting starts to flash, which indicates the setting screen.
  - If holding down (A) does not display the setting screen, check the current Home City code setting. Press (D) to return to the Timekeeping Mode screen and then refer to "To set your Home City" for information about city codes that support signal reception.
- Press (D) to select the transmitter mode setting you want to use.

- The following are the available transmitter mode settings.
  - AUTO: Automatic selection of the Mainflingen or Rugby signal
  - DCF: Reception of the Mainflingen signal
  - MEF: Reception of the Rugby signal
  - OFF: Auto receive off

- Press (A) to exit the setting screen and return to the last signal screen.
- If you want to return to the Timekeeping Mode screen, press (D).
- Signal reception can take up to 12 minutes when the AUTO option is selected.

### 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 day of the week is displayed automatically in accordance with the date (year, month, and day) settings.
- 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 or when battery power drops to Level 4.
- The current time for all city codes in the Timekeeping Mode and World Time Mode is calculated in accordance with the Greenwich Mean Time (GMT) differential for each city, based on your Home City time setting.
- GMT differential is calculated by this watch based on Universal Time Coordinated (UTC\*) data.
 

\* UTC 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 reference point for UTC is Greenwich, England.

### 12-hour/24-hour Timekeeping Formats

- The 12-hour/24-hour timekeeping format you select in the Timekeeping Mode is also applied in all other modes.
- With the 12-hour format, the PM indicator (P) appears on the display for times in the range of noon to 11:59 p.m. and no indicator appears 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.

### Illumination Precautions

- The electro-luminescent panel that provides illumination loses power after very long use.
- Illumination may be hard to see when viewed under direct sunlight.
- The watch may emit an audible sound whenever the display is illuminated. This is due to vibration of the EL panel used for illumination, and does not indicate malfunction.
- Illumination turns off automatically whenever an alarm sounds.
- Frequent use of illumination runs down the battery.

### Auto light switch precautions

- The auto light switch is turned off automatically whenever battery power is at Level 3.
- Wearing the watch on the inside of your wrist, movement of your arm, or vibration of your arm can cause frequent activation of the auto light switch and illumination of the display. To avoid running down the battery, turn off the auto light switch whenever engaging in activities that might cause frequent illumination.
- Note that wearing the watch under your sleeve while the auto light switch is turned on can cause frequent illumination of the display and can run down the battery.



- Illumination may not turn on if the face of the watch is more than 15 degrees above or below parallel. Make sure that the back of your hand is parallel to the ground.
- Illumination turns off after the preset illumination duration (see "To set the time and date"), even if you keep the watch pointed towards your face.
- Static electricity or magnetic force can interfere with proper operation of the auto light switch. If illumination does not turn on, try moving the watch back to the starting position (parallel with the ground) and then tilt it back towards you again. If this does not work, drop your arm all the way down so it hangs at your side, and then bring it back up again.

- Under certain conditions, illumination may not turn on until about one second after you turn the face of the watch towards you. This does not necessarily indicate malfunction of the auto light switch.
- You may notice a very faint clicking sound coming from the watch when it is shaken back and forth. This sound is caused by mechanical operation of the auto light switch, and does not indicate a problem with the watch.

### City Code Table

City Code	City	GMT Differential	Other major cities in same time zone
		-11.0	Pago Pago
HNL	Honolulu	-10.0	Papeete
ANC	Anchorage	-09.0	Nome
LAX	Los Angeles	-08.0	San Francisco, Las Vegas, Vancouver, Seattle/Tacoma, Dawson City, Tijuana
DEN	Denver	-07.0	El Paso, Edmonton, Culiacan
CHI	Chicago	-06.0	Houston, Dallas/Fort Worth, New Orleans, Mexico City, Winnipeg
NYC	New York	-05.0	Montreal, Detroit, Miami, Boston, Panama City, Havana, Lima, Bogota
CCS	Caracas	-04.0	La Paz, Santiago, Port Of Spain
RIO	Rio De Janeiro	-03.0	Sao Paulo, Buenos Aires, Brasilia, Montevideo
--		-02.0	
--		-01.0	Praia
GMT		+00.0	Dublin, Lisbon, Casablanca, Dakar, Abidjan
LON	London		
PAR	Paris	+01.0	Milan, Rome, Madrid, Amsterdam, Algiers, Hamburg, Frankfurt, Vienna, Stockholm
BER	Berlin		
ATH	Athens		Helsinki, Istanbul, Beirut, Damascus, Cape Town
CAI	Cairo	+02.0	
JRS	Jerusalem		
JED	Jeddah	+03.0	Kuwait, Riyadh, Aden, Addis Ababa, Nairobi, Moscow
THR	Tehran	+03.5	Shiraz
DXB	Dubai	+04.0	Abu Dhabi, Muscat
KBL	Kabul	+04.5	
KHI	Karachi	+05.0	Male
DEL	Delhi	+05.5	Mumbai, Kolkata
DAC	Dhaka	+06.0	Colombo
RGN	Yangon	+06.5	
BKK	Bangkok	+07.0	Jakarta, Phnom Penh, Hanoi, Vientiane
HKG	Hong Kong	+08.0	Singapore, Kuala Lumpur, Beijing, Taipei, Manila, Perth, Ulaanbaatar
SEL	Seoul	+09.0	Pyongyang
TYO	Tokyo		
ADL	Adelaide	+09.5	Darwin
SYD	Sydney	+10.0	Melbourne, Guam, Rabaul
NOU	Noumea	+11.0	Port Vila
WLG	Wellington	+12.0	Christchurch, Nadi, Nauru Island

- Based on data as of December 2004.