

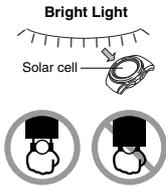
# Operation Guide 4361

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.

### Keep the watch exposed to bright light

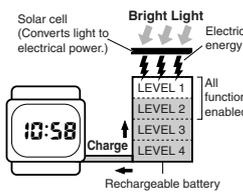


The electricity generated by the solar cell of the watch is stored by a built-in battery. Leaving or using the watch where it is not exposed to light causes the battery to run down. Make sure the watch is exposed to light as much as possible.

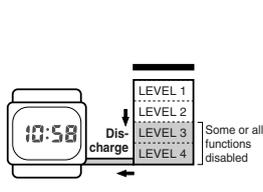
- When you are not wearing the watch on your wrist, position the face so it is pointed at a source of bright light.
- You should try to keep the watch outside of your sleeve as much as possible. Charging is reduced significantly if the face is only partially covered.

- 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 result in some watch functions to be disabled. If the battery goes dead, you will have to re-configure watch settings after recharging. To ensure normal watch operation, be sure to keep it exposed to light as much as possible.

### Battery charges in the light.

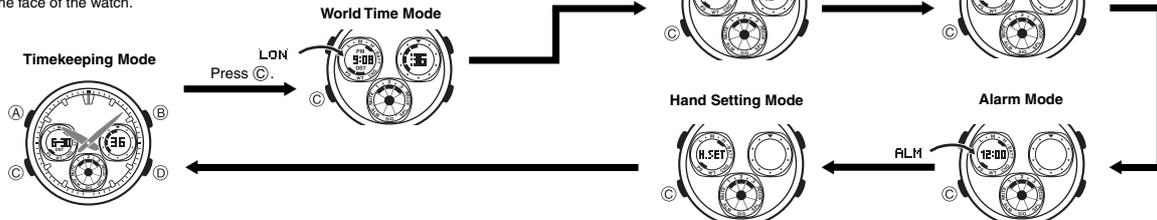


### Battery discharges in the dark.

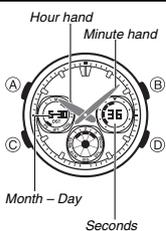


## General Guide

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



## 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.

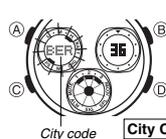
- This watch is designed to pick up the time calibration signal transmitted from Mainflingen, Germany and the signal from Rugby, England.

### Current Time Setting

This watch automatically adjusts its time setting 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 normally use the watch. For more information, see "To set your Home City" below.
- When using the watch outside the ranges of the time signal transmitter, you have to adjust the current time setting manually as required. See "Timekeeping" for more information about manual time setting.
- The analog time of this watch is synchronized with the digital time. Because of this, the analog time setting is automatically adjusted whenever you change the digital setting. See "Analog Timekeeping" for more information.

### To set your Home City



- In the Timekeeping Mode, hold down **(A)** until the city code starts to flash, which indicates the setting screen.
- Use **(D)** (east) and **(B)** (west) to scroll through the city codes until the one you want to use as your Home City is displayed.
  - 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
LIS	Lisbon	Dublin, Casablanca, Dakar, Abidjan
LON	London	
BCN, MAD	Barcelona Madrid	
PAR	Paris	
MIL, ROM	Milan Rome	Amsterdam, Algiers, Hamburg, Frankfurt, Vienna
BER	Berlin	
STO	Stockholm	
ATH	Athens	Helsinki, Istanbul, Beirut, Damascus, Cape Town

- Press **(A)** to exit the setting screen.

- 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 (in the middle of the night). You can also perform manual receive or you can set the time manually.

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

Approximately 5 minutes exposure to bright sunlight coming in through a window  
Approximately 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.

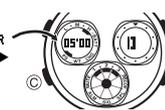
- See "Power Saving Function" for more information.

### About This Manual

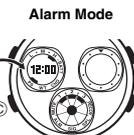
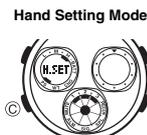
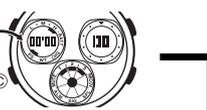


- Depending on the model of your watch, display text appears either as dark figures on a light background, or light figures on a dark background. All sample displays in this manual are shown using dark figures on a light background.
- Button operations are indicated using the letters shown in the illustration.
- Most of the display examples in this manual show only the digital display, without the analog hands.
- 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.

### Countdown Timer Mode



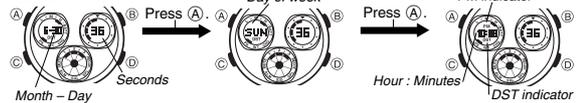
### Stopwatch Mode



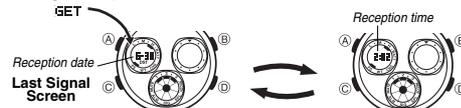
- If you are in an area that does not use Daylight Saving Time (summer time), turn off the DST setting.

### To display the digital time and last signal screen

- In the Timekeeping Mode, press **(A)** to cycle through the digital time screens as shown below.



- In the Timekeeping Mode, press **(D)** to display the last signal screens as shown below. The last signal screen shows the time and date of the last successful time calibration signal reception.



### 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

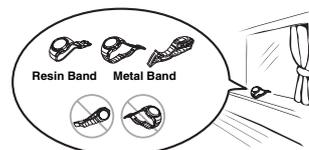
With auto receive, the watch receives the time calibration signal automatically five or six times a day. When any auto receive is successful, the remaining auto receive operations are not performed. For more information, see "About Auto Receive".

#### Manual Receive

Manual receive lets you start a time calibration signal reception 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.



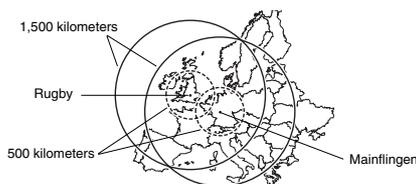
- The watch should not be on its side or facing the wrong way.

- Proper signal reception can be difficult or even impossible under the conditions listed below.



Inside or among buildings    Inside a vehicle    Near household appliances, office equipment, or a mobile phone    Near a construction site, airport, or other sources of electrical noise    Near high-tension power lines    Among or behind mountains

- Signal reception is normally better at night than during the day.
- Time calibration signal reception takes from two to seven minutes, but in some cases it can take as long as 14 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 Mainflingen, Germany and the signal from Rugby, England. 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.
- Even when the watch is within the reception range of the transmitter, signal reception will be 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.
- See the information under "Signal Receive 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 LIS, LON, BCN, MAD, PAR, MIL, ROM, BER, STO, or ATH is selected as the Home City code.

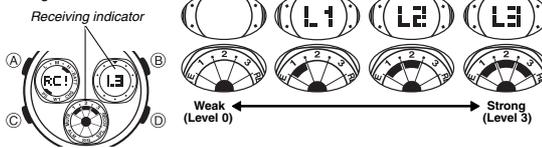
Your City Code	Auto Receive Start Times						
	1	2	3	4	5	6	
LIS, LON (GMT +0)	Standard Time	1:00 am	2:00 am	3:00 am	4:00 am	5:00 am	Midnight
	Daylight Saving Time	2:00 am	3:00 am	4:00 am	5:00 am	Midnight	1:00 am next day
BCN, MAD PAR, MIL ROM, BER STO (GMT +1)	Standard Time	2:00 am	3:00 am	4:00 am	5:00 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 reception.
- Following reception of the time calibration signal and calibration of the watch's time setting, the Level 3 receiving indicator will remain on the display in all modes. The Level 3 receiving indicator will not be displayed if signal reception was unsuccessful or after you adjust the current time setting manually.
- The Level 3 receiving indicator remains on the display in all modes following reception of the time calibration signal and calibration of the watch's time setting. The Level 3 receiving indicator is not displayed if signal reception was unsuccessful or after manual adjustment of the current time setting.
- The Level 3 receiving indicator indicates that at least one of the five calibration signal receive operations was successful. Note, however, that the Level 3 receiving indicator is cleared from the display each day when the first auto receive operation of the day is performed.

#### To perform manual receive

1. Place the watch on a stable surface so its top (12 o'clock side) is facing towards a window.
2. In the Timekeeping Mode, hold down (D) for about two seconds until the watch beeps.
3. After you release (D) the display will show the current time and the letters RC!. This indicates that signal reception is in progress.

- Time calibration signal reception normally takes from two to seven 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 reception and return to the Timekeeping Mode, press (D).
- If reception is unsuccessful, the message EFR appears on the display for one or two minutes. After that, the watch returns to the Timekeeping Mode.
- You can also change from the last signal or EFR screen to the normal timekeeping screen by pressing (D).
- Calibration signal reception is disabled while a countdown timer operation is in progress.

#### To turn auto receive on and off

1. In the Timekeeping Mode, press (D) to display the last signal screen.
  - The watch will automatically return to the Timekeeping Mode if you do not perform any button operation for one or two minutes after displaying the last signal screen.
2. Hold down (A) until the current auto receive setting flashes on the display. This is the setting screen.
  - If the auto receive setting does not appear when you hold down (A), it means that the city code currently selected for the Home City is for an area that does not support calibration signal reception. You cannot turn auto receive on or off in this case.
3. Use (D) to turn auto receive on (ON) or off (OFF).

4. Press (A) to exit the setting screen.
- To return to the Timekeeping Mode from the last signal screen, press (D).
- For information about city codes that support signal reception, see "To set your Home City".

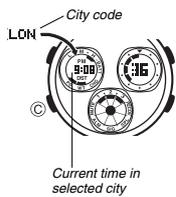
#### Signal Receive Troubleshooting

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: LIS, LON, BCN, MAD, PAR, MIL, ROM, BER, STO, or ATH.</li> </ul>	<ul style="list-style-type: none"> <li>• Enter the Timekeeping Mode and try again.</li> <li>• Select LIS, LON, BCN, MAD, PAR, MIL, ROM, BER, STO, or ATH as your Home City.</li> </ul>
Auto receive is turned on, but the Level 3 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 3 receiving indicator disappears from the display each day when the first auto receive operation of the day is performed.</li> <li>• Time data (hour, minutes, seconds) only was received during the last receive operation. The Level 3 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 digitally displays the current time in 48 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.
- The watch will perform a signal reception even if it is in the World Time Mode when a calibration time is reached. If this happens, the World Time Mode time settings will be adjusted in accordance with the Timekeeping Mode's Home City time.
- All of the operations in this section are performed in the World Time Mode, which you enter by pressing **C**.

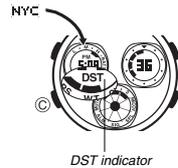
### To view the time in another city

While in the World Time Mode, press **D** to scroll through the city codes (time zones) to the east.

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

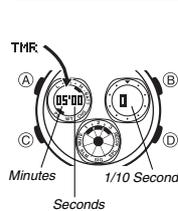
### To toggle a city code time between Standard Time and Daylight Saving Time

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



- Note that you cannot use the World Time Mode to change the DST setting of the Home City code you currently have selected in the Timekeeping Mode. See "To change the Daylight Saving Time (summer time) setting" for information about turning the Home City code DST setting on and off.
- The DST indicator will appear on the display 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.

## Countdown Timer



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

- Calibration signal reception (both auto and manual) is disabled while a countdown timer operation is in progress.
- All of the operations in this section are performed in the Countdown Timer Mode, which you enter by pressing **C**.

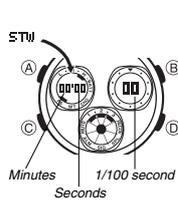
### To set the countdown start time

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 automatically reset 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 completely stop a countdown operation, first pause it (by pressing **D**), and then press **A**. This returns the countdown time to its starting value.

## Stopwatch



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

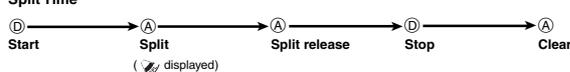
- The display range of the stopwatch is 59 minutes, 59.99 seconds.
- The stopwatch continues to run, restarting from zero after it reaches its limit, until you stop it.
- Exiting the Stopwatch Mode while a split time is frozen on the display clears the split time and returns to elapsed time measurement.
- 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



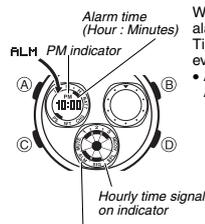
#### Split Time



#### Two Finishes



## Alarm



When the alarm is turned on, the alarm sounds when the alarm time is reached. You can also turn on an Hourly Time Signal, which will cause the watch to beep twice every hour on the hour.

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

### Alarm on indicator

#### To set the alarm time

1. In the Alarm Mode, hold down **A** until the hour setting of the alarm time starts to flash, which indicates the setting screen.
  - This operation automatically turns on the alarm.
2. Press **C** to move the flashing between the hour and minute settings.
3. While a setting is flashing, use **D** (+) and **B** (-) to change it.
  - 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. (PM indicator).
4. Press **A** to exit the setting screen.

### Alarm Operation

The alarm sounds at the preset time for about 10 seconds, regardless of the mode the watch is in.

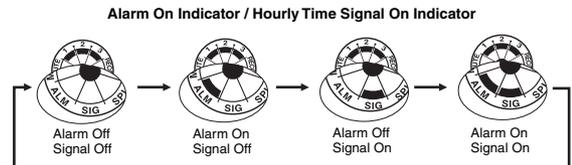
- To stop the alarm tone after it starts to sound, press any button.

### To test the alarm

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

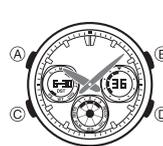
### To turn the Daily alarm and the Hourly Time Signal on and off

In the Alarm Mode, press **D** to cycle through the settings shown below.



- The alarm on indicator and the Hourly Time Signal on indicator are shown on the display in all modes while these functions are turned on.

## Illumination



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

- See "Illumination Precautions" for other important information.

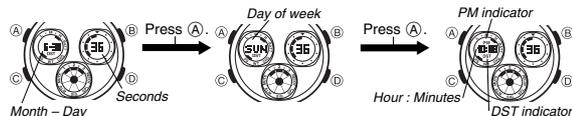
### To turn on illumination

In any mode (except when a setting is on the display), press **B** to illuminate the display.

## Timekeeping

Use the Timekeeping Mode to set and view the current time and date. This section also explains how to manually set the current date and time.

- When setting the time, you can also configure settings for the illumination duration and the 12/24-hour format.
- All of the operations in this section are performed in the Timekeeping Mode, which you can enter by pressing **C**.

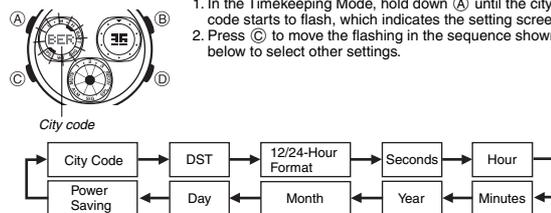


### Setting the Digital Time and Date Manually

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 current digital time and date manually

1. In the Timekeeping Mode, hold down **A** until the city code starts to flash, which indicates the setting screen.
2. Press **C** to move the flashing 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 <b>(D)</b> (east) and <b>(B)</b> (west).
DST A	Cycle between Daylight Saving Time (ON), Standard Time (OFF), and Auto DST (R)	Press <b>(D)</b> .
12H	Toggle between 12-hour (12H) and 24-hour (24H) timekeeping	Press <b>(D)</b> .
SE	Reset the seconds to 00	Press <b>(D)</b> . Press <b>(B)</b> .
PM 10:08	Change the hour or minutes	Use <b>(D)</b> (+) and <b>(B)</b> (-).
6-30 05	Change the year	
	Change the month or day	
PS ON	Toggle Power Saving on (ON) and off (OFF)	Press <b>(D)</b> .

- See "City Code Table" for a complete list of available city codes.
  - Auto DST (R) can be selected only while LIE, LON, ECN, MAD, FAR, MIL, ROM, BER, STO, or ATH 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.  
*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 Mainflingen and Rugby 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 Mainflingen and Rugby signals.

- The default DST setting is Auto DST (R) whenever you select LON, FAR, BER, or ATH 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)** once 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 (DST) appears on the display to indicate that Daylight Saving Time is turned on.

### Analog Timekeeping

The analog time of this watch is synchronized with the digital time. The analog time setting is adjusted automatically whenever you change the digital time.

#### Note

- The hands for the analog timepiece move to adjust to a new setting whenever any of the following occurs.

*When you change the digital time setting manually*

*When the digital time setting is changed by time calibration signal reception*

*When you change the Home City code and/or DST setting*

- If the analog time does not match the digital time for any reason, use the procedure described under "To adjust the analog time" to match the analog setting to the digital setting.
- Whenever you need to adjust both the digital and the analog time settings manually, make sure you adjust the digital setting first.
- Depending on how much the hands have to move in order to adjust to the digital time, it may take some time before they stop moving.

### To adjust the analog time

1. In the Timekeeping Mode, press **(C)** five times to enter the Hand Setting Mode.
2. Hold down **(A)** until the current digital time starts to flash, which indicates the setting screen.
3. Use **(D)** and **(B)** to adjust the analog setting as described below.



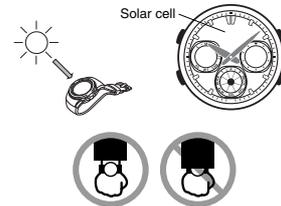
When you want to do this:	Perform this button operation:
Move the hand setting forward 20 seconds	• Press <b>(D)</b> .
Move the hand setting a short way forward at high speed	• Hold down <b>(D)</b> . • Release <b>(D)</b> when the hands reach the setting you want.
Move the hand setting a long way forward at high speed	• While holding down <b>(D)</b> to move the hands at high speed, press <b>(B)</b> to lock the high-speed hand movement. • To stop the hand movement, press any button. • Hand movement stops automatically if the hour hand makes one full (12-hour) revolution.

4. Press **(A)** to exit the setting screen.
- The minute hand will be adjusted slightly to match the seconds when you exit the setting screen.
  - To return to the Timekeeping Mode, press **(C)**.

### 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.

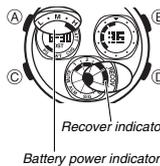
#### Important!

- 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 5 and when you have the battery replaced.
- Turn on the watch's Power Saving function and keep it in an area normally exposed to bright light when storing it for long periods. This helps to keep the rechargeable battery from going dead.

### Battery Power Indicator and Recover Indicator

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

Level	Battery Power Indicator	Function Status
1		All functions enabled.
2		All functions enabled.
3	 (Charge Soon Alert)	Alarm, hourly time signal and illumination disabled.
4	 (Charge Soon Alert)	All functions disabled.
5		Display disabled and initialized.



- The **LOW** indicator flashes on the display in the Timekeeping Mode when battery is at Level 3.
- The **LOW** indicator at Level 3 and the flashing charge indicator (CHG) at Level 4 tell you that battery power is very low, and that exposure to bright light for charging is required as soon as possible.
- At Level 5, all functions are disabled and settings return to their initial factory defaults. 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 4 (indicated by the flashing charge indicator) from Level 5. You will not be able to configure any of the other settings until the battery reaches Level 3 (no charge indicator) after dropping to Level 5.
- 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 (A) 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 6 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)	8 minutes
Sunlight Through a Window (10,000 lux)	30 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 exposure to light.

## Recovery Times

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

Exposure Level (Brightness)	Approximate Exposure Time				
	Level 5	Level 4	Level 3	Level 2	Level 1
Outdoor Sunlight (50,000 lux)	2 hours		21 hours		5 hours
Sunlight Through a Window (10,000 lux)	6 hours		80 hours		18 hours
Daylight Through a Window on a Cloudy Day (5,000 lux)	9 hours		129 hours		30 hours
Indoor Fluorescent Lighting (500 lux)	99 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.

### Power Saving Function



Power saving indicator

When turned on, the Power Saving function enters a sleep state automatically whenever the watch is left in an area 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 (☹) flashing	All functions enabled, except for the display
6 or 7 days	Blank, with Sleep indicator (☹) not flashing	Beeper tone, illumination, and display are disabled.

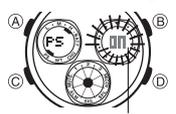
- Wearing the watch inside the sleeve of clothing can cause it to enter the sleep state.
- The watch will not enter the sleep state between 6:00 AM and 9:59 PM. If the watch is already in the sleep state when 6:00 AM arrives, however, it will remain in the sleep state.

### To recover from the sleep state

Perform any one of the following operations.

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

### To turn Power Saving on and off



ON/Off status

- 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 (☹) is on the display in all modes while Power Saving is turned on.

### Button Operation Tone

In any mode (except when a setting screen is on the display), hold down (C) for about three seconds to toggle the button operation tone on and off. The button operation tone off indicator (⏸) is displayed while the tone is turned off.

- Even if the button operation tone is turned off, the daily alarm and countdown timer alarm continue to sound when required.

### Auto Return Features

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

### Scrolling

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

### Initial Screens

When you enter the World Time 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 will be 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 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 automatically update the date and day of the week 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	BER (Berlin)
DST (summer time)	H (Auto switching)
Auto receive	ON (Auto receive)

### Transmitters

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

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.

### 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 automatically displayed 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 5.
- 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.
- The times for the Timekeeping Mode and all the city codes of the World Time Mode are calculated in accordance with each city's UTC differential.
- The UTC differential is a value that indicates the time difference between a reference point in Greenwich, England and the time zone where a city is located.
- The letters "UTC" is the abbreviation for "Universal Time Coordinated", which is the world-wide scientific standard of timekeeping. It is based upon carefully maintained atomic (cesium) clocks that keep time accurately to within microseconds. Leap seconds are added or subtracted as necessary to keep UTC in sync with the Earth's rotation.

### 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 (PM) 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

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

## City Code Table

City Code	City	GMT Differential	Other major cities in same time zone
PPG	Pago Pago	-11.0	
HNL	Honolulu	-10.0	Papeete
ANC	Anchorage	-09.0	Nome
YVR	Vancouver	-08.0	San Francisco, Las Vegas, Seattle/Tacoma, Dawson City, Tijuana
LAX	Los Angeles		
YEA	Edmonton		
DEN	Denver	-07.0	El Paso, Culiacan
MEX	Mexico City		
YWG	Winnipeg	-06.0	Houston, Dallas/Fort Worth, New Orleans
CHI	Chicago		
MIA	Miami		
YTO	Toronto	-05.0	Montreal, Detroit, Boston, Panama City, Havana, Lima, Bogota
NYC	New York		
CCS	Caracas	-04.0	La Paz, Santiago, Port Of Spain
YHZ	Halifax		
YYT	St. Johns	-03.5	
RIO	Rio De Janeiro	-03.0	Sao Paulo, Buenos Aires, Brasilia, Montevideo
RAI	Prais	-01.0	
LIS	Lisbon		
LON	London	+00.0	Dublin, Casablanca, Dakar, Abidjan
BCN	Barcelona		
MAD	Madrid		
PAR	Paris		
MIL	Milan	+01.0	Amsterdam, Algiers, Hamburg, Frankfurt, Vienna
ROM	Rome		
BER	Berlin		
STO	Stockholm		
ATH	Athens		
CAI	Cairo	+02.0	Helsinki, Istanbul, Beirut, Damascus, Cape Town
JRS	Jerusalem		
MOW	Moscow	+03.0	Kuwait, Riyadh, Aden, Addis Ababa, Nairobi
JED	Jeddah		
THR	Tehran	+03.5	Shiraz
DXB	Dubai	+04.0	Abu Dhabi, Muscat
KBL	Kabul	+04.5	
KHI	Karachi	+05.0	Mate
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		
TYO	Tokyo	+09.0	Pyongyang
ADL	Adelaide	+09.5	Darwin
GUM	Guam		
SYD	Sydney	+10.0	Melbourne, Rabaul
NOU	Noumea	+11.0	Port Vila
WLG	Wellington	+12.0	Christchurch, Nadi, Nauru Island

• Based on data as of June 2005.