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 panel of the watch is stored by a rechargeable 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 covered only partially.

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” (page E-67) for more information.

Note that CASIO COMPUTER CO., LTD. assumes no responsibility for any damage or loss suffered by you or any third party arising through the use of this product or its malfunction.

About This Manual

• Depending on the model of your watch, display test appears either as dark figures on a light background or light figures on a dark background. All samples 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.

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Procedure Lookup

The following is a handy reference list of all the operational procedures contained in this manual:

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To perform manual receive ........................................... E-26
To turn auto receive on and off ................................ E-28
To check the latest signal reception results .............. E-29
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To perform manual receive ........................................... E-26
To configure the countdown timer ............................ E-44
To turn the Hourly Time Signal on and off ............. E-40
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To illuminate the display manually ......................... E-47
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To change the Daylight Saving Time (summer time) setting E-63
To turn the button operation tone on and off .......... E-66
To recover from the sleep state ............................... E-68
To turn Power Saving on and off ............................. E-68

General Guide

• Press  to change from mode to mode.
• In any mode (except when a setting screen is on the display), press  to illuminate the display.

Timekeeping Mode

World Time Mode

Alarm Mode

Countdown Timer Mode

Stopwatch Mode
Radio-controlled Atomic Timekeeping

This watch receives a time calibration signal and updates its time setting accordingly. This watch is designed to pick up the time calibration signals transmitted in Germany (Mainflingen), England (Anthorn), the United States (Fort Collins), China (Shangqiu), and Japan (Fukuoka/Saga, Fukuoka/Sage).

Current Time Setting

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

- The first thing you should do after purchasing this watch is to specify your Home City (the city where you normally will use the watch). For more information, see “To specify your Home City” (page E-12).

- When using the watch outside the areas covered by the time signal transmitters, you will have to adjust the current time setting manually as required. See “Timekeeping” (page E-58) for more information about manual time settings.

Time Calibration Signal Reception

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

- Auto Receive

With auto receive, the watch receives the time calibration signal automatically up to six times a day (five times a day for the Chinese calibration signal). When any auto receive is successful, the remaining auto receive operations are not performed. For more information, see “About Auto Receive” (page E-21).

- 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” (page E-26).

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 fields
- Near high-tension power lines
- Among or behind mountains

Signal reception normally is 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.

Approximate Reception Ranges

The Anthorn signal can be received in the following areas.

- U.S. Signal
- Japan Signals
- China Signal

- The U.S. time calibration signal can be picked up by the watch while in North America. The term “North America” in this manual refers to the area that consists of Canada, the continental United States, and Mexico.

- As of June 2013, China does not use Daylight Saving Time (DST). If China does go to the Daylight Saving Time system in the future, some functions of this watch may no longer operate correctly.

- Using this watch in a country covered by a time calibration that is different from the countries it supports may result in incorrect time indication due to local application of summer time, etc.

Important!

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

- The time calibration signal the watch will attempt to pick up depends on its current Home City code as shown below.

- Calibration signal reception is disabled while a countdown timer operation is in progress.

To specify your Home City

1. In the Timekeeping Mode, hold down until the city code starts to flash, which indicates the setting screen.
2. Press (east) and (west) to select the city code you want to use as your Home City.
3. Press 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 operation (in the middle of the night). You also can perform manual receive (page E-26) or you can set the time manually (page E-59).

- Under factory default settings, auto receive is turned off for all of the following city codes: MOW (Moscow), HNL (Honolulu), and ANC (Anchorage). For details about turning on auto receive for these city codes, see “To turn auto receive on and off” on page E-28.

- The watch will receive the time calibration signal automatically from the applicable transmitter (in the middle of the night) and update its settings accordingly. For information about the relationship between city codes and transmitters, see page E-17 and “Transmitters” (page E-70).

- The watch will receive the time calibration signal automatically from the applicable transmitter (in the middle of the night) and update its settings accordingly. For information about the reception ranges of the watch, see page E-17 and “Transmitters” (page E-70).
• Signal reception may not be possible at the distances noted below during certain times of the year or day. Radio interference also may cause problems with reception. Mainflingen (Germany) or Anthorn (England) transmitters: 500 kilometers (310 miles). Fort Collins (United States) transmitter: 600 miles (1,000 kilometers). Fukuoka or Fukuoka/Saga (Japan) transmitters: 500 kilometers (310 miles).

• Even where 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 Reception Troubleshooting” (page E-30) if you experience problems with time calibration signal reception.

About the Signal Strength Indicator

The signal strength 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. The signal strength indicator is displayed while an auto or manual receive operation is in progress.

Receiving indicator

- Weak (Level 1)
- Level 2
- Level 3
- Strong (Level 3)

• Even in an area where signal strength is strong, it takes about 10 seconds for signal reception to stabilize enough for the signal strength indicator to indicate signal strength.

To perform manual receive

1. Enter the Timekeeping Mode (page E-8).
2. Hold down \( \text{D} \) for about two seconds until the receiving indicator starts to flash on the display. This indicates that manual receive is in progress.
3. Time calibration signal reception takes from two to seven minutes. Take care that you do not perform any button operations or move the watch during this time.
4. If the receive operation is successful, the reception data and time appear on the display, along with the GET indicator.
5. After manual receive is complete, press \( \text{D} \) to return to normal timekeeping.
6. The watch also will return to normal timekeeping if you do not perform any button operation for about one or two minutes.

To turn auto receive on and off

1. In the Timekeeping Mode, press \( \text{D} \) to display the last successful receive time and date screen (page E-29).
2. Hold down \( \text{D} \) until the current auto receive setting \( \text{ON} \) or \( \text{OFF} \) starts to flash. This is the setting screen.
3. Note that the setting screen will not appear if the currently selected Home City is one that does not support time calibration reception.
4. Press \( \text{D} \) to toggle auto receive on \( \text{ON} \) and off \( \text{OFF} \).
5. Press \( \text{D} \) to exit the setting screen.

To check the latest signal reception results

1. In the Timekeeping Mode, press \( \text{D} \) to view the last successful receive time and date. Press \( \text{D} \) again to return to the previous screen.
2. The watch also will return to normal timekeeping if you do not perform any button operation for about one or two minutes.

About Auto Receive

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

### About Auto Receive

- Press \( \text{D} \) to turn auto receive on and off.
- Press \( \text{D} \) to check the latest signal reception results.
- Press \( \text{D} \) to view the last successful receive time and date.
- Press \( \text{D} \) again to return to the previous screen.
- The watch also will return to normal timekeeping if you do not perform any button operation for about one or two minutes.

### Your Home City Auto Receive Start Times

<table>
<thead>
<tr>
<th>Your Home City</th>
<th>Auto Receive Start Times</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>LSE Standard Time</td>
<td>2:00 am</td>
</tr>
<tr>
<td>LON Standard Time</td>
<td>2:00 am</td>
</tr>
<tr>
<td>Daylight Saving Time</td>
<td>1:00 am</td>
</tr>
<tr>
<td>Daylight Saving Time</td>
<td>12:00 am</td>
</tr>
<tr>
<td>Daylight Saving Time</td>
<td>12:00 am</td>
</tr>
<tr>
<td>Daylight Saving Time</td>
<td>12:00 am</td>
</tr>
</tbody>
</table>

Note:

- When a calibration time is reached, the watch will receive the calibration signal only if it is in either the Timekeeping Mode or World Time Mode. Reception is not performed if a calibration time is reached while you are configuring settings.

- Auto receive of the calibration signal is designed to be performed early in the morning, while you sleep (provided that the Timekeeping Mode time is set correctly).

- Before going to bed for the night, remove the watch from your wrist, and put it in a location where it can receive the signal easily.

- The watch receives the calibration signal for two to seven minutes everyday when the time in the Timekeeping Mode reaches a calibration time. Do not perform any button operation within seven minutes before or after the calibration times. Doing so can interfere with correct calibration.

- Remember that reception of the calibration signal depends on the current time in the Timekeeping Mode. The receive operation will be performed whenever the display shows any one of the calibration times, regardless of whether or not the displayed time actually is the correct time.

- Use the signal strength 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 receiving indicator will remain on the display in all modes. The receiving indicator will not be displayed if signal reception was unsuccessful or after you adjust the time setting.

- When a calibration time is reached, the watch will receive the calibration signal only if it is able to receive both time and date data successfully. It does not appear when only time data is received.

- The receiving indicator also disappears from the display each day when the first auto receive operation of the day is performed.

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

- Remember that reception of the calibration signal depends on the current time 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 displayed time actually is the correct time.

- Use the signal strength 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 receiving indicator will remain on the display in all modes. The receiving indicator will not be displayed if signal reception was unsuccessful or after you adjust the current time setting manually.

- The watch receives the calibration signal for two to seven minutes everyday when the time in the Timekeeping Mode reaches a calibration time. Do not perform any button operation within seven minutes before or after the calibration times. Doing so can interfere with correct calibration.

- Remember that reception of the calibration signal depends on the current time in the Timekeeping Mode. The receive operation will be performed whenever the display shows any one of the calibration times, regardless of whether or not the displayed time actually is the correct time.

- Use the signal strength 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 receiving indicator will remain on the display in all modes. The receiving indicator will not be displayed if signal reception was unsuccessful or after you adjust the current time setting manually.

- The watch receives the calibration signal for two to seven minutes everyday when the time in the Timekeeping Mode reaches a calibration time. Do not perform any button operation within seven minutes before or after the calibration times. Doing so can interfere with correct calibration.

- Remember that reception of the calibration signal depends on the current time in the Timekeeping Mode. The receive operation will be performed whenever the display shows any one of the calibration times, regardless of whether or not the displayed time actually is the correct time.

- Use the signal strength 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 receiving indicator will remain on the display in all modes. The receiving indicator will not be displayed if signal reception was unsuccessful or after you adjust the current time setting manually.

- The watch receives the calibration signal for two to seven minutes everyday when the time in the Timekeeping Mode reaches a calibration time. Do not perform any button operation within seven minutes before or after the calibration times. Doing so can interfere with correct calibration.

- Remember that reception of the calibration signal depends on the current time in the Timekeeping Mode. The receive operation will be performed whenever the display shows any one of the calibration times, regardless of whether or not the displayed time actually is the correct time.
### Signal Reception Troubleshooting

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

<table>
<thead>
<tr>
<th>Problem</th>
<th>Probable Cause</th>
<th>What you should do</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receive is not being performed</td>
<td>The watch is not in the Timekeeping Mode. See “Auto receive” (page E-15).</td>
<td>Enter the Timekeeping Mode again.</td>
</tr>
<tr>
<td>The receiving indicator does not turn on, or the receiving indicator disappears from the display</td>
<td>You pressed a button while the receiving indicator was on.</td>
<td>Select the correct Home City code.</td>
</tr>
<tr>
<td>The receiving indicator appears only when time data with coding is received during the last receive operation.</td>
<td>The receiving indicator appears only when time data with code is received during the last receive operation.</td>
<td>Select the correct Home City code.</td>
</tr>
</tbody>
</table>

### World Time

<table>
<thead>
<tr>
<th>Problem</th>
<th>Probable Cause</th>
<th>What you should do</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannot perform manual receive.</td>
<td>The watch is not in the Timekeeping Mode.</td>
<td>Enter the Timekeeping Mode.</td>
</tr>
<tr>
<td>The receiving indicator does not turn on, but the receiving indicator does not appear on the display.</td>
<td>You pressed a button while the receiving indicator was on.</td>
<td>Select the correct Home City code.</td>
</tr>
</tbody>
</table>

### Alarms

<table>
<thead>
<tr>
<th>Alarm time (Hour : Minutes)</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current time (Hour : Minutes)</td>
<td>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.</td>
</tr>
</tbody>
</table>

### Alarm Operation

1. 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, until you turn the alarm off (page E-35). |
2. 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. |

### To set an alarm time

1. In the Alarm Mode, use (page to scroll through the alarm screens until the one whose time you want to set is displayed. |
2. To set a one-time alarm, display alarm screen RL1, RL2, RL3, or RL4. To set the snooze alarm, display the SNZ screen. |
3. To turn an alarm on and off

1. Turn on a alarm (RL1, RL2, RL3, RL4, or SNZ) displays the alarm on indicator on its Alarm Mode screen. |
2. The alarm on indicator flashes while the alarm is sounding. |
3. The snooze alarm indicator flashes while the snooze alarm is sounding and during the 5-minute intervals between alarms.
To turn the Hourly Time Signal on and off
1. In the Alarm Mode, use \( \text{(} \) to select the Hourly Time Signal (STG).
2. Press \( \text{(} \) to toggle it on (on) and off (off).

*The Hourly Time Signal on indicator is shown on the display in all modes while this function is turned on.

To measure times with the stopwatch
1. While the countdown start time is on the display in the Countdown Timer Mode, hold down \( \text{(} \) until the current countdown start time starts to flash, which indicates the setting screen.
2. Press \( \text{(} \) to move the flashing between the hour and minute settings.
3. When a setting is flashing, use \( \) (+) and \( \) (–) to change it.
4. Press \( \) (A) to exit the setting screen.

To configure the countdown timer
1. In the Timekeeping Mode, hold down \( \text{(} \) until the current countdown start time starts to flash, which indicates the setting screen.
2. Press \( \text{(} \) to move the flashing between the hour and minute settings.
3. When a setting is flashing, use \( \) (+) and \( \) (–) to change it.
4. To specify a countdown start time of 24 hours, set the 24-hour clock setting.

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.
- The stopwatch measurement operation continues even if you exit the Stopwatch Mode.
- Exiting the Stopwatch Mode while a split time is frozen displays the split time and returns to elapsed time measurement.
- All of the operations in this section are performed in the Stopwatch Mode, which you enter by pressing \( \) (page E-9).

Stopwatch measurement operation continues even if you exit the Stopwatch Mode.

Illumination
This watch has an EL (electro-luminescent) panel that causes the display to glow for easy reading in the dark. The watch auto light switch turns on illumination automatically when you angle the watch towards 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 turn on the backlight under bright light.

Moving the watch to a position that is parallel to the ground and then tilting it towards you more than 40 degrees causes illumination to turn on.

- Wear the watch on the outside of your wrist.

Warning!
- Always make sure you are in a safe place whenever you are reading the display of the watch using the auto light switch. Be especially careful when running or engaged in any 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 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:
  1. In the Timekeeping Mode, hold down \( \) for about three seconds to toggle the auto light switch on (auto light switch on indicator displayed) and off (auto light switch on indicator not displayed).
  2. The auto light switch on indicator is on the display in all modes while the auto light switch is turned on.

To configure the countdown timer
1. While the countdown start time is on the display in the Countdown Timer Mode, hold down \( \text{(} \) until the current countdown start time starts to flash, which indicates the setting screen.
2. Press \( \text{(} \) to move the flashing between the hour and minute settings.
3. When a setting is flashing, use \( \) (+) and \( \) (–) to change it.
4. Press \( \) (A) to exit the setting screen.

To use the countdown timer
Press \( \) (B) while in the Countdown Timer Mode to start the countdown timer.
- The countdown timer operation continues even if you exit the Countdown Timer Mode.
- Press \( \) (B) while a countdown operation is in progress to pause it. Press \( \) (B) again to resume the countdown.
- To stop a countdown operation completely, first pause it (by pressing \( \) (B)), and then press \( \) (C). This returns the countdown timer to its starting value.

To specify the illumination duration
1. In the Timekeeping Mode, hold down \( \) until the display contents start to flash. This is the setting screen.
2. Press \( \) (C) 10 times until the current illumination duration setting (LT1 or LT3) appears.
3. Press \( \) (D) to toggle the setting between LT1 (approximately 1.5 seconds) and LT3 (approximately 3 seconds).
4. Press \( \) (E) to exit the setting screen.

To turn the auto light switch on and off
In the Timekeeping Mode, hold down \( \text{(} \) for about three seconds to toggle the auto light switch on (auto light switch on indicator displayed) and off (auto light switch on indicator not displayed).

To illuminate the display manually
In any mode, press \( \) (F) to turn on illumination.
- The above operation turns on illumination regardless of the current auto light switch setting.
- You can use the procedure below to select either 1.5 seconds or 3 seconds as the illumination duration. When you press \( \) (F), the illumination will remain on for about 1.5 seconds or 3 seconds, depending on the current illumination duration setting.

To specify the illumination duration
1. In the Timekeeping Mode, hold down \( \) until the display contents start to flash. This is the setting screen.
2. Press \( \) (G) 10 times until the current illumination duration setting (LT1 or LT3) appears.
3. Press \( \) (H) to toggle the setting between LT1 (approximately 1.5 seconds) and LT3 (approximately 3 seconds).
4. Press \( \) (I) to exit the setting screen.

Warning!
- Always make sure you are in a safe place whenever you are reading the display of the watch using the auto light switch. Be especially careful when running or engaged in any 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 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:
  1. In the Timekeeping Mode, hold down \( \) for about three seconds to toggle the auto light switch on (auto light switch on indicator displayed) and off (auto light switch on indicator not displayed).
  2. The auto light switch on indicator is on the display in all modes while the auto light switch is turned on.

About the Auto Light Switch
Moving the watch to a position that is parallel to the ground and then tilting it towards you more than 40 degrees causes illumination to turn on.

- Wear the watch on the outside of your wrist.
Power Supply
This watch is equipped with a solar panel and a rechargeable battery that is charged by the electrical power produced by the solar panel. The illustration shown below shows how you should position the watch for charging.

Example: Orient the watch so its face is painting 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 panel is blocked by clothing, etc.
- You should try to keep the watch outside of your sleeves as much as possible. Charging is reduced significantly if the face is covered only partially.

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 the rechargeable battery power to run down. Be sure that the watch is exposed to bright light whenever possible.
- This watch uses a rechargeable battery to store power produced by the solar panel, 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 rechargeable battery to charge fully, contact your dealer or CASIO distributor, or about having it replaced.
- Never try to remove or replace the watch’s rechargeable battery yourself. Use of the wrong type of battery can damage the watch.
- All data stored in memory is deleted, and the current time and all other settings return to their initial factory defaults whenever battery power drops to Level 5 (page E-52) and when you have the battery replaced.
- Turn off the watch’s Power saving function (page E-67) 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 on the display shows you the current status of the rechargeable battery’s power.

Battery Power Indicator

<table>
<thead>
<tr>
<th>Level</th>
<th>Battery Power Indicator</th>
<th>Function Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>All functions enabled</td>
</tr>
<tr>
<td>2</td>
<td>Low (LOW)</td>
<td>All functions enabled</td>
</tr>
<tr>
<td>3</td>
<td>LL</td>
<td>Auto and manual receive, illumination, and beeper disabled.</td>
</tr>
<tr>
<td>4</td>
<td>Charge Soon Alert</td>
<td>Except for timekeeping and the charge indicator, all functions and display indicators disabled.</td>
</tr>
<tr>
<td>5</td>
<td>All function disabled</td>
<td>All function disabled.</td>
</tr>
</tbody>
</table>

If you use the light or alarms a number of times during a short period, all segments of the battery power indicator flash and the following operations become temporarily disabled as battery power recovers.
- Display illumination
- Alarm and hourly time signal
- Time calibration signal reception

After some time, the battery power indicator should stop flashing to indicate that battery power is back to normal. At this time the watch should return to normal operation.

If the battery power indicator frequently flashes, it means that battery power is low. Leave the watch in bright light to allow it to charge.

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
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.

<table>
<thead>
<tr>
<th>Exposure Level (Brightness)</th>
<th>Approximate Exposure Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor Sunlight (60,000 lux)</td>
<td>5 minutes</td>
</tr>
<tr>
<td>Sunlight Through a Window (10,000 lux)</td>
<td>15 minutes</td>
</tr>
<tr>
<td>Daylight Through a Window on a Cloudy Day (5,000 lux)</td>
<td>48 minutes</td>
</tr>
<tr>
<td>Indoor Fluorescent Lighting (500 lux)</td>
<td>8 hours</td>
</tr>
</tbody>
</table>

For details about the battery operating time and daily operating conditions, see the “Power Supply” section of the Specifications (page E-77).

Stable operation is promoted by frequent exposure to light.

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

<table>
<thead>
<tr>
<th>Exposure Level (Brightness)</th>
<th>Approximate Exposure Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 5</td>
<td>2 hours</td>
</tr>
<tr>
<td>Level 4</td>
<td>19 hours</td>
</tr>
<tr>
<td>Level 3</td>
<td>10 hours</td>
</tr>
<tr>
<td>Level 2</td>
<td>18 hours</td>
</tr>
<tr>
<td>Level 1</td>
<td>158 hours</td>
</tr>
</tbody>
</table>

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.

In the Timekeeping Mode, press (B) to toggle between date (Date screen), and the currently selected World Time city and time (Dual Time).

To set the time and date manually
1. In the Timekeeping Mode, hold down (C) until the city code starts to flash, which indicates the setting screen.
2. Use (A) and (B) to select the city code you want.
3. Make sure you select your Home City code before changing other city codes.
4. For full information on city codes, see the “City Code Table” at the back of this manual.
5. Press (C) to move the flashing in the sequence shown below to select other settings.

Read This Before You Set the Time and Date!
This watch is preset with a number of city codes, each of which represents the time zone where that city is located. When setting the time, it is important that you first select the correct city code for your Home City (the city where you normally use the watch). If your location is not included in the preset city codes, select the preset city code that is in the same time zone as your location.

- Note that all of the times for the World Time Mode city codes (page E-33) are displayed in accordance with the time and date settings you configure in the Timekeeping Mode.
4. When the timekeeping setting you want to change is flashing, use or to change it as described below.

<table>
<thead>
<tr>
<th>Screen:</th>
<th>To do this:</th>
<th>Do this:</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYO OFF</td>
<td>change the city code</td>
<td>use (east) and (west)</td>
</tr>
<tr>
<td>12H</td>
<td>Cycle between Auto DST [PST/PDT], Daylight Saving Time [ON], and Standard Time [OFF]</td>
<td>Press</td>
</tr>
<tr>
<td>10580</td>
<td>Toggle between 12-hour [12H] and 24-hour [24H] timekeeping</td>
<td>Press</td>
</tr>
</tbody>
</table>
| 6 & 30 | change the hour and minutes | use (+) and (-)
| 6 & 30 | change the year, month, or day | use (+) and (-)

5. Press (off) to exit the setting screen.
- Auto DST [PST/PDT] can be selected only while LUS, LON, MAD, PAR, ROM, BER, STD, ATH, MOW, TPE, SEL, TYO, HNL, ANC, YVR, LAX, YEA, DEN, MEX, CHI, NYC, YHZ, or YVR is selected as the Home City code. For more information, see "Daylight Saving Time (DST)" (page E-62).
- The day of the week is displayed automatically in accordance with the date (year, month, and day) settings.

12-hour and 24-hour timekeeping
- With the 12-hour format, the P (PM) indicator appears to the left of the hour digits for times in the range of noon to 11:59 p.m. and no indicator appears to the left of the hour digits for times in the range of midnight to 11:59 a.m.
- With the 24-hour format, times are displayed in the range of 0:00 to 23:59, without any indicator.
- The 12-hour/24-hour timekeeping format you select in the Timekeeping Mode is applied in all other modes.

Daylight Saving Time (DST)
Daylight Saving Time (summer time) advances the time setting by one hour from Standard Time.

The current time setting in accordance with the time calibration signal takes priority over any time settings you make manually.

- Though the time calibration signals transmitted by the Fukushima and Fukuoka/ Saga, Japan transmitters include summer time data, summer time currently is not implemented in Japan (as of 2010).
- The default DST setting is Auto DST [PST/PDT] whenever you select LUS, LON, MAD, PAR, ROM, BER, STD, ATH, MOW, TPE, SEL, TYO, HNL, ANC, YVR, LAX, YEA, DEN, MEX, CHI, NYC, YHZ, or YVR as your Home City code.
- If you experience problems receiving the time calibration signal in your area, it probably is best to switch between Standard Time and Daylight Saving Time (summer time) manually.

To change the Daylight Saving Time (summer time) setting

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

Button Operation Tone
The button operation tone sounds any time you press one of the watch’s buttons. You can turn the button operation tone on or off.
- Even if you turn off the button operation tone, alarms, the Hourly Time Signal, and other beepers all operate normally.

To turn the button operation tone on and off
1. In the Timekeeping Mode, hold down until the city code starts to flash, which indicates the setting screen.
2. Press (on) times until the current button operation tone setting (KEY) or MUTE) appears.
3. Press to toggle the setting between KEY (tone on) and MUTE (tone off).
4. Press to exit the setting screen.
- The mute indicator is displayed in all modes when the button operation tone is turned off.

Power Saving Function
When turned on, the Power Saving function enters a sleep data automatically whenever the watch is left in an area for a certain period on or off as described below. The table below shows how watch functions are affected by the Power Saving function.

<table>
<thead>
<tr>
<th>Elapsed Time in Dark</th>
<th>Display</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 to 70 minutes</td>
<td>Blank, with Power Saving indicator flashing</td>
<td>Auto receive, beeper tone, illumination, and display are disabled</td>
</tr>
<tr>
<td>6 or 7 days</td>
<td>Blank, with Power Saving indicator not flashing</td>
<td>All functions enabled, except for the display</td>
</tr>
</tbody>
</table>

Radio-controlled Atomic Timekeeping Precautions
- Strong electrostatic charge can result in the wrong time being set.
- The time calibration signal bounces off the ionosphere. Because of this, such factors as changes in the reflectivity of the ionosphere, as well as movement of the ionosphere to higher altitudes due to seasonal atmospheric changes or the time of day may change the reception range of the signal and make reception temporarily impossible.
- Even if the time calibration signal is received properly, certain conditions can cause the time setting to be off by up to one second.
- The current time setting is not updated with the time calibration signal because time settings depend on the current time setting.
- This watch can receive signals that differ by section years and non-section 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.
You may notice a very faint clicking sound coming from the watch when it is shaken.

Transmitters
The time calibration signal received by this watch depends on the currently selected Home City code (page 12).
- When a U.S. time zone is selected, the watch receives the time calibration signal transmitted from the United States (Fort Collins).
- When a Japanese time zone is selected, the watch receives the time calibration signal transmitted from Japan (Fukushima and Fukushima-Saga).
- When a European time zone is selected, the watch receives the time calibration signals transmitted from Germany (Mainflingen) and England (Anthorn).

Timekeeping
- The current time for all city codes in the Timekeeping Mode and World Time Mode is calculated in accordance with the Coordinated Universal Time (UTC) for each city based on your Home City time setting.
- When your Home City is LIS, LON, MAD, PAR, ROM, BER, STO, ATH, or MOW (which can receive both the Anthorn and Mainflingen signals), the watch first tries to pick up the signal it last successfully received. If that fails, it tries the other signal. For the first receive after you select your Home City, the watch tries the nearest signal first (Anthorn for LIS, LON, Mainflingen for MAD, PAR, ROM, BER, STO, ATH, and MOW).

Auto Return
- If you do not perform any operation for about two or three minutes while a setting screen (with a flashing setting) is on the display, the watch will exit the setting screen automatically.
- The watch returns to the Timekeeping Mode automatically if you do not perform any button operation for two or three minutes in the Alarm Mode.

Scrolling
- Press and hold buttons 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 at high speed.

World Time
- The seconds count of the World Time is synchronized with the seconds count of the Timekeeping Mode.

Illumination Precautions
- The electro-luminescent panel that provides illumination loses power after very long use.
- Illumination may be difficult 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
- Avoid wearing the watch on the inside of your wrist. Doing so causes the auto light switch to operate when it is not needed, which shortens battery life. If you want to wear the watch on the inside of your wrist, turn off the auto light switch feature.

Specifications
- Accuracy at normal temperature: ±15 seconds a month (with no signal calibration)
- Timekeeping: Hour, minutes, seconds, p.m. (P), month, day, day of the week
- Time format: 12 hour and 24 hour
- Calendar system: Full Auto-calender pre-programmed from the year 2000 to 2099
- Other: Home City code (can be assigned one of 49 city codes); Standard Time / Daylight Saving Time (summer time)
- Receiving Time Calibration Signals: 6 times a day (5 times a day for the Chinese calibration signal) (Remaining auto receives cancelled as soon as one is successful) Manual receive
- Power Supply: Solar panel and one rechargeable battery
- Approximate battery operating time: 9 months (from full charge to Level 4) under the following conditions:
  - Watch not exposed to light
  - Internal timekeeping
  - 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

City Code Table

More than 15 degrees
- If you are in an area where proper time calibration signal reception is impossible, the watch keeps the time with the precision noted in “Specifications”.
- 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) (page 59), and auto receive settings (page 28).
- The Home City setting reverts to the initial default of TYO (Tokyo) whenever the battery power level drops to Level 5 or when you have the rechargeable battery replaced. If this happens, change the Home City to the setting you want (page 12).

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

Resetting the seconds to 00 while the current count is in the range of 30 to 59 when you last exited the mode appears first.
- If you do not perform any operation for about two or three minutes while a setting screen (with a flashing setting) is on the display, the watch will exit the setting screen automatically.
- The watch returns to the Timekeeping Mode automatically if you do not perform any button operation for two or three minutes in the Alarm Mode.

Scrolling
- Press and hold buttons 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 at high speed.

World Time
- The seconds count of the World Time is synchronized with the seconds count of the Timekeeping Mode.

Illumination Precautions
- The electro-luminescent panel that provides illumination loses power after very long use.
- Illumination may be difficult 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
- Avoid wearing the watch on the inside of your wrist. Doing so causes the auto light switch to operate when it is not needed, which shortens battery life. If you want to wear the watch on the inside of your wrist, turn off the auto light switch feature.

Specifications
- Accuracy at normal temperature: ±15 seconds a month (with no signal calibration)
- Timekeeping: Hour, minutes, seconds, p.m. (P), month, day, day of the week
- Time format: 12 hour and 24 hour
- Calendar system: Full Auto-calender pre-programmed from the year 2000 to 2099
- Other: Home City code (can be assigned one of 49 city codes); Standard Time / Daylight Saving Time (summer time)
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  - Watch not exposed to light
  - Internal timekeeping
  - 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

City Code Table

More than 15 degrees
- 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 toward 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.

World Time
- 48 cities (31 time zones) Other: Daylight Saving Time/Standard Time
- Alarms: 5 daily alarms (four one-time alarms; one snooze alarm); Hourly Time Signal
- Stopwatch:
  - Measuring unit: 1/100 second
  - Measuring capacity: 23:59' 59.99''
  - Measuring modes: Elapsed time, split time, two finishes
- Countdown Timer:
  - Measuring unit: 1 second
  - Input range: 1 minute to 24 hours (1-minute increments and 1-hour increments)
- Illumination: EL (electro-luminescent panel); Full Auto Light Switch; Selectable illumination duration
- Other: Button operation tone on/off

Power Supply: Solar panel and one rechargeable battery
- Approximate battery operating time: 9 months (from full charge to Level 4) under the following conditions:
  - Watch not exposed to light
  - Internal timekeeping
  - 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
  - Approximately 4 minutes of signal reception per day

Frequent use of illumination runs down the battery. Particular care is required when using the auto light switch.

City Code Table
### City Code Table

<table>
<thead>
<tr>
<th>City Code</th>
<th>City</th>
<th>UTC Offset</th>
<th>GMT Differential</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPG</td>
<td>Pago Pago</td>
<td>–11</td>
<td>–11</td>
</tr>
<tr>
<td>HNL</td>
<td>Honolulu</td>
<td>–10</td>
<td>–10</td>
</tr>
<tr>
<td>ANC</td>
<td>Anchorage</td>
<td>–9</td>
<td>–9</td>
</tr>
<tr>
<td>YVR</td>
<td>Vancouver</td>
<td>–8</td>
<td>–8</td>
</tr>
<tr>
<td>LAX</td>
<td>Los Angeles</td>
<td>–7</td>
<td>–7</td>
</tr>
<tr>
<td>MLA</td>
<td>Melbourne</td>
<td>–6</td>
<td>–6</td>
</tr>
<tr>
<td>MEX</td>
<td>Mexico City</td>
<td>–5</td>
<td>–5</td>
</tr>
<tr>
<td>ORH</td>
<td>Chicago</td>
<td>–4</td>
<td>–4</td>
</tr>
<tr>
<td>HZG</td>
<td>Hanover</td>
<td>–3</td>
<td>–3</td>
</tr>
<tr>
<td>YVR</td>
<td>Vancouver</td>
<td>–2</td>
<td>–2</td>
</tr>
<tr>
<td>ANC</td>
<td>Anchorage</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>LON</td>
<td>London</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>MAD</td>
<td>Madrid</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>RIO</td>
<td>Rio</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>MIL</td>
<td>Milan</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>HAIFA</td>
<td>Haifa</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>SCL</td>
<td>Santiago</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>JER</td>
<td>Jerusalem</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>YHH</td>
<td>Yarmouth</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>JED</td>
<td>Jeddah</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>DUB</td>
<td>Dublin</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>BKK</td>
<td>Bangkok</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>SIN</td>
<td>Singapore</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

*The above is current as of June 2012. This watch does not reflect the change in the Moscow (MOW) time offset to +4. Because of this, you should leave the summer time setting turned on (which advances the time by one hour) for Moscow (MOW).*

- This table shows the city codes of this watch.
- The rules governing global times (UTC offset and GMT differential) and summer time are determined by each individual country.