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.

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.

The first thing you should do after purchasing this watch is to specify your Home City. You also can perform a manual procedure to set the time and date, when necessary.

This watch adjusts its time setting automatically in accordance with a time calibration signal. You should try to keep the watch 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 even 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.

For normal watch operation, be sure to keep it exposed to light as much as possible.

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 the watch is 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 even 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.

For normal watch operation, be sure to keep it exposed to light as much as possible.

Battery charging in the light.

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.

For normal watch operation, be sure to keep it exposed to light as much as possible.

Keep the watch exposed to bright light

About This Manual

• This watch is designed to pick up the time calibration signals transmitted in Germany (Mainflingen), England (Wilton), the United States (Fort Collins), China (Shanghai), and Japan (Fukuoka, Fukuoka/Saga).

• See the information under “Signal Reception Troubleshooting” if you experience problems with time calibration signal reception.

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 frequent 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 10 minutes exposure to indoor fluorescent lighting

See “Power Saving Function” for more information.

Radio Controlled Atomic Timekeeping

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

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.”

When using the watch outside the areas covered by the time signal transmitters, you will have to adjust the current time manually as required. See “To set the time and date manually” for more information about manual time settings.

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.

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

General Guide

• Press (C) to change from mode to mode.
• In any mode (except a setting mode), press (D) to illuminate the display for about one second.

Timekeeping Mode World Time Mode Stopwatch Mode Countdown Timer Mode Alarm Mode

To specify your Home City

1. In the Timekeeping Mode, hold down (C) for about five seconds until the left dial hand points to T1 and the city code flashes on the upper display. This is the setting mode.

2. Press (C) (east) and (D) (west) to select the city code you want to use as your Home City.

Battery discharges in the dark.

Some or all functions disabled

Press (D) to illuminate the display for about one second.

Approximately about 8 hours exposure to indoor fluorescent lighting

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

Approximately 10 minutes exposure to indoor fluorescent lighting

See “Power Saving Function” for more information.

Battery discharges in the dark.

Some or all functions disabled

1. In the Timekeeping Mode, hold down (C) for about five seconds until the left dial hand points to T1 and the city code flashes on the upper display. This is the setting mode.

2. Press (C) (east) and (D) (west) to select the city code you want to use as your Home City.

LIS, LON : Lisbon, London
ATH : Athens
MOW : Moscow
HKG, BJS, TPE : Hong Kong, Beijing, Taipei
SEL, TYO : Seoul, Tokyo
HNL : Honolulu
ANC : Anchorage
YYC, LAX : Vancouver, Los Angeles
YEA, DEN : Edmonton, Denver
MEX, CHI : Mexico City, Chicago
MIA, YTO, NYC : Miami, Toronto, New York
YHZ : Halifax
YYZ : St. Johns

About This Manual

• This watch is designed to pick up the time calibration signals transmitted in Germany (Mainflingen), England (Wilton), the United States (Fort Collins), China (Shanghai), and Japan (Fukuoka, Fukuoka/Saga).

• See the information under “Signal Reception Troubleshooting” if you experience problems with time calibration signal reception.

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 frequent 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 10 minutes exposure to indoor fluorescent lighting

See “Power Saving Function” for more information.

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 (Wilton), the United States (Fort Collins), China (Shanghai), and Japan (Fukuoka, Fukuoka/Saga).

See the information under “Signal Reception Troubleshooting” if you experience problems with time calibration signal reception.

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.”

When using the watch outside the areas covered by the time signal transmitters, you will have to adjust the current time manually as required. See “To set the time and date manually” for more information about manual time settings.

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.

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

General Guide

• Press (C) to change from mode to mode.
• In any mode (except a setting mode), press (D) to illuminate the display for about one second.

Timekeeping Mode World Time Mode Stopwatch Mode Countdown Timer Mode Alarm Mode

To specify your Home City

1. In the Timekeeping Mode, hold down (C) for about five seconds until the left dial hand points to T1 and the city code flashes on the upper display. This is the setting mode.

2. Press (C) (east) and (D) (west) to select the city code you want to use as your Home City.

LIS, LON : Lisbon, London
ATH : Athens
MOW : Moscow
HKG, BJS, TPE : Hong Kong, Beijing, Taipei
SEL, TYO : Seoul, Tokyo
HNL : Honolulu
ANC : Anchorage
YYC, LAX : Vancouver, Los Angeles
YEA, DEN : Edmonton, Denver
MEX, CHI : Mexico City, Chicago
MIA, YTO, NYC : Miami, Toronto, New York
YHZ : Halifax
YYZ : St. Johns
3. Press \( \text{A} \) twice to exit the setting mode.

- 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 or you can set the time manually.
- 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 “Home City Code” and “Transmitters”.
- See the maps under “Approximate Reception Ranges” for information about the reception ranges of the watch.

### 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 for the China signal). When any auto receive is successful, remaining auto receive operations are not performed. For more information, see “About Auto Receive”.
- **Manual Receive**
  - Manual receive lets you start a time calibration receive operation with the press of a button. For more information, see “To perform manual receive”.

#### Important!

- When getting ready to receive the time calibration signal, position the watch as shown in the nearby illustration, with its 12 o’clock side 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.
- Make sure the watch is facing the right way.

#### Signal Reception

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

- Signal reception normally is better at night than during the day.
- Time calibration signal reception takes from two to seven minutes, 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.
- The time calibration signal the watch will attempt to pick up depends on your currently selected Home City, and whether standard time or Daylight Saving Time is selected for your Home City.

#### Approximate Reception Ranges

<table>
<thead>
<tr>
<th>UK and German Signals</th>
<th>U.S. Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthorn</td>
<td>2,000 miles (3,000 kilometers)</td>
</tr>
<tr>
<td>500-kilometer point</td>
<td>600 miles (1,000 kilometers)</td>
</tr>
<tr>
<td>1,500-kilometer point</td>
<td>1,500 kilometers</td>
</tr>
<tr>
<td>The Anthorn signal is receivable within this area.</td>
<td></td>
</tr>
</tbody>
</table>

#### Japanese Signals

- Fukushima/Saga: 500 kilometers
- Fukushima: 500 kilometers

#### Chinese Signal

- Shanghai: 500 kilometers
- Beijing: 500 kilometers
- Hong Kong: 1,500 kilometers

Signals are receivable in the Taiwan area when reception conditions are good.

- Signal reception may not be possible at the distances that are noted below due to interference and geographical formations between the watch and signal source.
  - Maitingen (Germany) or Anthorn (England) transmitters: 500 kilometers (310 miles)
  - Fort Collins (United States) transmitter: 600 miles (1,000 kilometers)
  - Fukushima or Fukushima/Saga (Japan) transmitters: 500 kilometers (310 miles)
  - Shanghai (China) transmitter: 1,500 kilometers (910 miles)

- 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.

#### About Auto Receive

The watch receives the time calibration signal automatically up to six times a day (five times for the China signal). When any auto receive is successful, 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.

#### 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 14 minutes everyday when the time in the Timekeeping Mode reaches a calibration time. Do not perform any button operation within 14 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 your Home City, as kept in the Timekeeping Mode.

### To perform manual receive

1. Place the watch on a stable surface so its 12 o’clock side is facing towards a window.
2. In the Timekeeping Mode, hold down \( \text{A} \) for about two seconds until the watch beeps.
3. The digital display will go blank, and the left dial hand will move to R (READY). This indicates that the watch is getting ready for time calibration signal reception.
4. See the information under “Signal Reception Troubleshooting” if you experience problems.
5. The left dial hand will move to W (WORK) and stay there while actual reception is in progress.
6. If signal reception is unstable during reception, the left dial hand may move between W (WORK) and R (READY).
7. The hour and minute hands continue to keep time normally.
To check the latest signal reception results
In the Timekeeping Mode, press A (1) to view the last successful receive time and date. Press A (1) again to return to the previous screen.

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>I can’t receive a time calibration signal.</td>
<td>• You performed some button operation during signal reception.</td>
<td>• Perform manual reception at right time. Please refer to page 39 for operation details.</td>
</tr>
<tr>
<td>The watch is not in the Timekeeping Mode or World Time Mode.</td>
<td>• The watch is in a location where the signal cannot be received for some reason.</td>
<td>• Change the watch to the correct World Time Mode.</td>
</tr>
<tr>
<td>A countdown timer operation is in progress.</td>
<td>• Radio interference is often present during the day time, which can interfere with signal reception.</td>
<td>• Check to make sure the watch is in a location where it can receive the signal.</td>
</tr>
<tr>
<td>The home positions of the hands are off.</td>
<td>• The Home City code setting is not correct for the area where you are using the watch.</td>
<td>• Enter the correct Home City code.</td>
</tr>
<tr>
<td>The time setting is incorrect following signal reception.</td>
<td>• The DST setting may be incorrect.</td>
<td>• Enter the Home City code.</td>
</tr>
<tr>
<td>The Home City code setting is not correct for the area where you are using the watch.</td>
<td>• The home positions are off.</td>
<td>• Adjust the home positions.</td>
</tr>
</tbody>
</table>

Note
• To interrupt a receive operation and return to the Timekeeping Mode, press any button.

World Time
World Time digitally displays the current time in one of 48 cities (29 time zones) around the world. A simple operation swaps your Home City with the currently selected World Time City.
• When you enter the World Time Mode, the current month and day of the World Time City appear first. After about one second, the current time appears.
• The times kept in the World Time Mode are synchronized with the time being kept in the Timekeeping Mode. If you feel that there is an error in any World Time Mode time, check to make sure you have the correct city selected as your Home City. Also check to make sure that the current time as shown in the Timekeeping Mode is correct.
• Times in the World Time Mode are based on UTC offsets. For further information, see “Important!” and “Radio-controlled Atomic Timekeeping Precautions.”

Stopwatch
The stopwatch lets you measure elapsed time, split times, and two finishes.
• The digital display range of the stopwatch is 23 hours, 59 minutes, 59.99 seconds.
• You can use the procedure below to swap your Home City and World Time City. This changes your Home City to your World Time City, and your World Time City to your Home City.
• This capability can come in handy when you frequently travel between two cities in different time zones.
• If your current World Time City supports receipt of a time calibration signal, making it your Home City enables calibration signal reception.
• For information about which cities support time calibration signal reception, see “To specify your Home City.”

Stopwatch

To use the countdown timer
Press B (2) while in the Countdown Timer Mode to start the countdown timer.
• When the end of the countdown is reached and auto-repeat is turned off, the alarm will sound for 10 seconds or until you stop it by pressing any button. The countdown time is reset to its starting value automatically after the alarm stops.
• When auto-repeat is turned on, the countdown will restart automatically without pausing when it reaches zero. The alarm sounds to signal when the countdown reaches zero. The countdown is repeated up to eight times, and then stops.
• The number of the current repeat (1 to 8) is shown in the lower display.
• The countdown timer measurement operation continues even if you exit the Countdown Timer Mode.
• To stop a countdown timer operation completely, first pause it (by pressing B (2)), and then press A (1). This returns the countdown time to its starting value.
To configure countdown start time and auto-repeat settings

1. While the countdown start time is on the display in the Countdown Timer Mode, hold down \( \text{A} \) for about three seconds until the minute setting of the countdown start time starts to flash. This is the setting mode.

2. Press \( \text{C} \) to move the flashing in the sequence shown below, and select the setting you want to change.

3. Perform the following operations, depending on which setting currently is selected on the display:
   - While the start time setting is flashing, use \( \text{A} \) (+) and \( \text{B} \) (–) to change it.
   - While the auto-repeat on/off setting (ON/OFF) is flashing on the display, press \( \text{D} \) to toggle auto-repeat on \( \text{ON} \) and off \( \text{OFF} \).

4. Press \( \text{C} \) to exit the setting mode.
   - The auto-repeat on indicator \( \text{SIG} \) will appear in the upper display while this function is turned on.
   - Frequent use of auto-repeat and the alarm can run down battery power.

Alarms

When an alarm is turned on, the alarm tone will sound when its alarm time is reached. One of the alarms is a snooze alarm, while the other four are one-time alarms.

You can turn on an Hourly Time Signal that causes the watch to beep twice every hour on the hour.

- There are five alarm screens numbered AL1, AL2, AL3, AL4, and SNZ for one-time alarms, and a snooze alarm screen indicated by SNZ.
- The Hourly Time Signal screen is indicated by \( \text{SIG} \).
- All of the operations in this section are performed in the Alarm Mode, which you enter by pressing \( \text{A} \).

To set an alarm time

1. In the Alarm Mode, use \( \text{A} \) to scroll through the alarm screens until the one whose time you want to set is displayed.

2. After you select an alarm, hold down \( \text{A} \) for about three seconds until the hour setting of the alarm time starts to flash. This is the setting mode.

3. In this operation, the alarm automatically.

4. While a setting is flashing, use \( \text{A} \) (+) and \( \text{B} \) (–) to change it.

5. Press \( \text{C} \) to exit the setting mode.

Alarm Operation

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

The alarm time appears on the display when its alarm time is reached.

- All of the following operations during a 5-minute interval between alarms.
- The snooze alarm repeats every five minutes.
- Press \( \text{A} \) to toggle the snooze alarm on \( \text{AL} \) and off \( \text{OFF} \).
- Use \( \text{A} \) to move the flashing between the hour and minute settings.

About the Auto Light Switch

Turning on the auto light switch causes illumination to turn on, whenever you position your wrist as described below in any mode.

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.

- Note that this watch features a “Full Auto LED Light”, so the auto light switch operates only when there is enough light or a certain level. It does not illuminate the display under bright light.

- 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.

- Turn the auto light switch on and off

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

- The auto light switch on indicator is on the display in all modes while the auto light switch is turned on.

Power Supply

This watch is equipped with a solar cell and a special rechargeable battery (secondary battery) that is charged by the electrical power produced by the solar cell. The illustration shown below shows how you should position the watch for charging.

Example: Orient the watch so its face is pointing at a light source.

- The illustration shows how to position a watch with a resin band.
- Note that charging efficiency drops when any part of the solar cell is blocked from light.
- You should try to keep the watch outside of your sleeve as much as possible. Charging is reduced significantly if the face is even 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. Be sure that the watch is exposed to bright light whenever possible.

- This watch uses a special rechargeable battery to store power produced by the solar cell, so regular battery replacement is not required. However, after very long use, the rechargeable battery may lose its ability to achieve a full charge. If you experience problems getting the special rechargeable battery to charge fully, contact your dealer or CASIO distributor about having it replaced.

- 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 \( \text{C} \) (Charge) 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 Power Recovery Mode indicator
The battery power indicator indicates you the current status of the rechargeable battery's power.

<table>
<thead>
<tr>
<th>Level</th>
<th>Battery Power Indicator</th>
<th>Function Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>(Low)</td>
<td>All functions enabled</td>
</tr>
<tr>
<td>M</td>
<td>(Mid)</td>
<td>All functions enabled</td>
</tr>
<tr>
<td>C</td>
<td>(Charge)</td>
<td>All and manual hand rewinding, illumination, and beeper disabled</td>
</tr>
<tr>
<td>R</td>
<td>(Recharge)</td>
<td>Except for timekeeping, all functions and display indicators disabled</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All functions disabled</td>
</tr>
</tbody>
</table>

• The flashing LOW indicator at Level 3 (L) tells you that battery power is very low, and that exposure to bright light for charging is required as soon as possible.
• At Level 5 (C, Charge), all functions are disabled and settings return to their initial factory defaults. Once the battery reaches Level 2 (M) after falling to Level 5 (C, Charge), reconfigure the current time, date, and other settings.
• Display indicators reappear as soon as the battery is charged from Level 5 (C, Charge) to Level 2 (M).
• The watch’s Home City code setting will change automatically to TYO (Tokyo) whenever the battery drops to Level 2 (M). With this Home City code setting, the watch is configured to receive the time calibration signals of Japan. If you are using the watch in North America or Europe, or China you will need to change the Home City code setting to match your location whenever the battery drops to Level 2 (M).
• Leaving the watch exposed to direct sunlight or some other very strong light source can cause the battery power indicator to show a reading temporarily that is higher than the actual battery level. The correct battery level should be indicated after a few minutes.

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 break down. 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 six months.
• The following table shows the amount of time the watch needs to be exposed to bright 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 (500,000 lux)</td>
<td>6 minutes</td>
</tr>
<tr>
<td>Sunlight through a window (70,000 lux)</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Daylight through a window on a cloudy day (5,500 lux)</td>
<td>30 minutes</td>
</tr>
<tr>
<td>Indoor fluorescent lighting (500 lux)</td>
<td>106 hours</td>
</tr>
</tbody>
</table>

- For details about the battery operating time and daily operating conditions, see the “Power Supply” section of the Specifications.
- 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 1</td>
<td>Level 2</td>
</tr>
<tr>
<td>Outdoor sunlight (500,000 lux)</td>
<td>2 hours</td>
</tr>
<tr>
<td>Sunlight through a window (70,000 lux)</td>
<td>6 hours</td>
</tr>
<tr>
<td>Daylight through a window on a cloudy day (5,500 lux)</td>
<td>10 hours</td>
</tr>
<tr>
<td>Indoor fluorescent lighting (500 lux)</td>
<td>106 hours</td>
</tr>
</tbody>
</table>

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

Timekeeping
You can adjust the Home City time and date in the Timekeeping Mode manually. You can also simultaneously display the current time in one other time zone, by specifying a Dual Time City.
• For information about selecting a Dual Time City, see “To specify the Dual Time City.”
• Pressing ( in the Timekeeping Mode will cycle the lower display between the screens shown below:

Home City Date

Dual Time

Read This Before You Set the Time and Date!
This watch is pre-set 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 City codes and Dual Time City are displayed in accordance with the time and date settings you configure for the Timekeeping Mode.

To set the time and date manually
1. In the Timekeeping Mode, hold down (for about five seconds until the left dial hand points to 11 and the city code flashes on the upper display. This is the setting mode.
2. Use ( and ) to select the city code you want.
3. Make sure you select your Home City code before changing any other setting.
4. For full information on city codes, see the “City Code Table.”

screen: To do this: Do this:
----- -------
TYO | Change the city code. Use [east] and [west] |
OFF | Cycle between Auto DST (AUTO) and Standard Time (OFF). Press |
12h | Toggle between 12-hour (12h) and 24-hour (24h) timekeeping. Press |
50 | Reset the seconds to 00. Press |
* 10-09 | Change the hour and minutes. Use [+] and [–]. |
1011 | Change the year, month, or day. |
M-50 | Toggle between Power Saving on and off (M-50). Press |

Press ( twice to exit the setting mode.
1. For details about the Daylight Saving Time setting, see “To change the Daylight Saving Time (summer time) setting.” For information about Power Saving, see “To turn Power Saving on and off.”
2. Auto DST (AUTO) can be selected only while LIS, LON, MAD, PAR, ROM, BER, IST, ATH, MOU, TPE, SEL, YTO, NNL, ANC, YVR, LAX, YEA, DEN, MEX, CHI, MIA, YPO, NYC, YZH, or YTT is selected as the Home City code. For more information, see “Daylight Saving Time (DST)” below.
3. 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 PM (P) 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 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. Remember that not all countries or even local areas use Daylight Saving Time.

The time calibration signals transmitted from Mainflingen (Germany), Anthorn (England), and Fort Collins (the United States) include both Standard Time and DST data. When the Auto DST setting is turned on, the watch switches between Standard Time and DST (Daylight Saving Time) automatically in accordance with the signals.

To change the Daylight Saving Time (summer time) setting

1. In the Timekeeping Mode, hold down for about five seconds until the left dial hand points to T1 and the city code flashes on the upper display. This is the setting mode.
2. Press . This will display the DST setting screen.
3. Use and to cycle through the DST settings in the sequence shown below.

- Auto DST (FAULT)
- DST on (ON)
- DST off (OFF)
4. When the setting you want is selected, press twice to exit the setting mode.

Dual Time

Dual Time lets you display the current time in another time zone called your “Dual Time City”, in addition to your Home City’s current time. This feature is very handy for business professionals and others who need to keep track of the current time in two different time zones.

For information about how to display the current time in the Dual Time City in the lower display, see “Timekeeping”.

To specify the Dual Time City

1. In the Timekeeping Mode, hold down for about five seconds until the left dial hand points to T1 and the city code flashes on the upper display. This is the setting mode.
2. Press . The left dial hand will move to T2 and the current Dual Time City code will start to flash on the upper display. This is the Dual Time City selection screen.
3. Use (east) and (west) to scroll through the available city codes.
   - See the “City Code Table” for information about city codes.
4. Press to exit the setting mode.

Correction of Hand Home Positions

The hour and minute hands of the watch can be adjusted off by exposure to strong magnetism or impact. The watch is designed to perform hour and minute hand correction automatically every hour in order to correct variation within the range of –55 minutes to +5 minutes.

- You can trigger auto hour and minute hand position correction manually, if you want.
- If the variation is greater than –55 minutes to +5 minutes, you can trigger auto hand position correction manually or perform correction of the hour and minute hand positions manually.
- If the dial hand is off, you will need to readjust their home positions manually.

To trigger auto correction of hand home positions

In the Timekeeping Mode, hold down for about six seconds until H-SET starts flashing on the upper display.

- Note that H-SET will appear on the upper display about three seconds after you depress , but you should not release the button until H-SET starts flashing. The flashing H-SET indicates that auto hour and minute hand home position correction has started.
- Auto hour and minute hand home position correction takes about three to four seconds to complete. Do not perform any other watch operation during that time.

- The watch will return to the Timekeeping Mode automatically after auto correction is complete.
- You will not be able to trigger auto correction while the watch is in the Countdown Timer Mode or while a countdown timer operation is in progress.
- To interrupt an ongoing auto correction, press . This will return to the Timekeeping Mode.

To change the home position manually

Correct dial hand positions

1. In the Timekeeping Mode, hold down for about three seconds until H-SET appears on the upper display and “ sluggish” flashes on the lower display.
   - The dial hands are in their correct home positions when the left dial hand moves to (charge) and the right dial hand moves to if they don’t, use to adjust the left dial hand position and to adjust the right dial hand position.
   - If the dial hand is off, you will need to readjust their home positions manually.
2. After confirming that both dial hands are in their correct home positions, press .
   - This will change to hour hand and minute hand home position manual correction.
   - The hour and minute hands are in their correct home positions if they are at 12 o’clock. If they are not, use and to adjust their positions as required.
3. After everything is the way you want, press to return to the Timekeeping Mode.

Reference

This section contains more detailed and technical information about watch operation. It also contains important precautions and notes about the various features and functions of this watch.

Power Saving Function

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

<table>
<thead>
<tr>
<th>Hands and Display</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left dial hand; PS; Other</td>
<td>Hand movement disabled; except for displays</td>
</tr>
<tr>
<td>Right dial hand; PS; Other</td>
<td>Hand movement disabled; except for displays</td>
</tr>
</tbody>
</table>

- Wear the watch inside the sleeve of clothing can cause it to enter the sleep state.
- The watch will not enter the sleep state between 9:00 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 of the following operations.

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

To turn Power Saving on and off

1. In the Timekeeping Mode, hold down for about five seconds until the left dial hand points to T1 and the city code flashes on the upper display. This is the setting mode.
2. Press (nine times) until FS appears in the upper display and a flashing (ON) or (OFF) appears in the lower display. This is the Power Saving (ON) or (OFF) screen.
3. Press (to toggle Power Saving on (ON) and off (OFF)).
4. Press twice to exit the setting mode.

Radio-controlled Atomic Timekeeping Precautions

- Strong electrostatic charge can cause the time setting to be thrown off.
- The time calibration signal bounces off the ionosphere. Because of this, such factors as changes in the reflectivity of the ionosphere, as well as movement of the ionosphere to higher altitudes due to seasonal atmospheric changes or the time of day may change the reception range of the signal and make reception temporarily impossible.
- Even if the time calibration signal is received properly, certain conditions can cause the time setting to be off by up to one second.
- The current time setting in accordance with the time calibration signal takes priority over any time settings you make manually.

- The watch is designed to update the date and day of the week automatically for the period January 1, 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.
- This watch is designed to receive both time data (hour, minutes, seconds) and date data (year, month, day), certain signal conditions can limit reception to time data only.
- If you are in an area where proper time calibration signal reception is impossible, the watch keeps 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, and DST (Daylight Saving Time) settings.
- The Home City setting reverts to the initial default of Tokyo (Japan) whenever the battery power drops to Level 3 (Charge) or when you replace the rechargeable battery. If this happens, change the Home City to the setting you want.
Transmitters
The time calibration signal received by this watch depends on the currently selected Home City.
- 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 signals transmitted from Japan (Fukushima and Fukukoku/Saga).
- When a European time zone is selected, the watch receives the time calibration signal transmitted from Germany (Mainflingen) and England (Anthorn).
- When a China time zone is selected, the watch receives the time calibration signal transmitted from China (Shangqiu City).
- When your Home City is LIS, LON, MAD, PAR, ROM, BER, STO, ATH, and MOW, the watch always receives the time calibration signal from the Anthorn and Mainflingen transmitters.

Auto Return Features
- If you leave the watch with a flashing setting on the display for two or three minutes without performing any operation, the watch will exit the setting mode automatically.
- The watch will return to the Timekeeping Mode automatically if you do not perform any operation for two or three minutes in the Alarm Mode.

High-Speed Movement
- The and buttons are used to change the hand setting in various setting modes. In most cases, holding down these buttons will start high-speed movement of the applicable hand(s).

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

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 without changing the minutes.
- 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 when battery power drops to Level 5 (C). Charge the watch as described in the instructions.
- 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.

Illumination Precautions
- Illumination may be hard to see when viewed under direct sunlight.
- Illumination may not turn on if the face of the watch is more than 15 degrees above or below parallel. Make sure that the back of your hand is parallel to the ground.
- Illumination may turn off in about one second, even if you keep the watch pointed towards your face.
- Static electricity or magnetic force can interfere with proper operation of the auto light switch. If illumination does not turn on, try moving the watch back to the starting position (parallel with the ground) and then tilt it back toward you. 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.

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)

Digital 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 48 city codes); Standard Time/Daylight Saving Time (summer time are determined by each individual country.).

Analog Timekeeping
- Hour, minutes (hand moves every 10 seconds)

Time Calibration Signal Reception
- Auto receive 6 times a day (Remaining auto receives cancelled as soon as one is successful) (5 times a day for the China signal); Manual receive
- Based on data as of December 2009
- The rules governing global times (UTC offset and GMT differential) and summer time are determined by each individual country.

City Code Table

<table>
<thead>
<tr>
<th>City Code</th>
<th>City Code</th>
<th>City</th>
<th>UTC Offset/GMT Differential</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>MOW Moscow</td>
<td>+3</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>HAN Warsaw</td>
<td>+2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>ANK Ankara</td>
<td>+1</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>MUS Kuala Lumpur</td>
<td>+2</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>CHE Bucharest</td>
<td>+1</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>CUN Havana</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>BJS Beijing</td>
<td>-8</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>JAX Jakarta</td>
<td>-10</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>MUM Mumbai</td>
<td>-9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>SGN Singapore</td>
<td>-6</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>LON London</td>
<td>-5</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>BKK Bangkok</td>
<td>-4</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>BNE Brisbane</td>
<td>-3</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>DAV Mombasa</td>
<td>-2</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>HAN Warsaw</td>
<td>-1</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>BUE Bucharest</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>JAX Jakarta</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>MUM Mumbai</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>SGN Singapore</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>LON London</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>BKK Bangkok</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>BNE Brisbane</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>DAV Mombasa</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>HAN Warsaw</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>BUE Bucharest</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>JAX Jakarta</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>MUM Mumbai</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>SGN Singapore</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>LON London</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>BKK Bangkok</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>BNE Brisbane</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>DAV Mombasa</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>HAN Warsaw</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>BUE Bucharest</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>JAX Jakarta</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>MUM Mumbai</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>SGN Singapore</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>LON London</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>BKK Bangkok</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>BNE Brisbane</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>DAV Mombasa</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>HAN Warsaw</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>BUE Bucharest</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>JAX Jakarta</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>MUM Mumbai</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>SGN Singapore</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>LON London</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>BKK Bangkok</td>
<td>32</td>
<td></td>
</tr>
</tbody>
</table>

Alarms
- Four one-time alarms; one snooze alarm; Hourly Time Signal

Illumination
- LED (light-emitting diode); Auto Light Switch (Full Auto LED Light operates only in the dark)

Power Supply
- Solar cell and one rechargeable battery
- Approximate battery operating time: 6 months (from full charge to Level 5 (C-Charge) under the following conditions
  - Watch not exposed to light
  - Internal timekeeping
  - Display on 18 hours per day, sleep state 6 hours per day
  - Illumination operation (1.5 seconds) per day
  - 10 seconds of alarm operation per day
  - 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.