

CASIO®

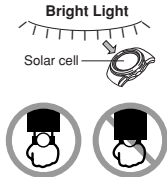
Module No. 4359

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.

- Be sure to keep all user documentation handy for future reference.

Keep the watch exposed to bright light

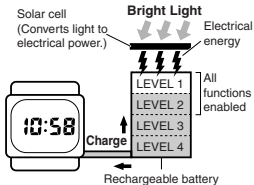


The electricity generated by the solar cell of the watch is stored by a built-in battery. Leaving or using the watch where it is not exposed to light causes the battery to run down. Make sure the watch is exposed to light as much as possible.

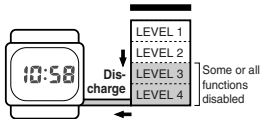
- When you are not wearing the watch on your wrist, position the face so it is pointed at a source of bright light.
- You should try to keep the watch outside of your sleeve as much as possible. Charging is reduced significantly if the face is even only partially covered.

- 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. To ensure normal watch operation, be sure to keep it exposed to light as much as possible.

Battery charges in the light.



Battery discharges in the dark.



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

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

Approximately 50 minutes exposure to indoor fluorescent lighting

- **Be sure to read “Power Supply” (page E-48) for important information you need to know when exposing the watch to bright light.**

If the display of the watch is blank...

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

- **See “Power Saving” (page E-55) 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 text appears either as dark figures on a light background, or light figures on a dark background. All sample displays in this manual are shown using dark figures on a light background.
- Button operations are indicated using the letters shown in the illustration.
- Most of the display examples in this manual show only the digital display, without the analog hands.
- Each section of this manual provides you with the information you need to perform operations in each mode. Further details and technical information can be found in the "Reference" section.
- To ensure that this watch provides you with the years of service for which it is designed, be sure to carefully read and follow the instructions under "Operating Precautions" and "User Maintenance".

Contents

General Guide	E-8
Radio-controlled Timekeeping	E-10
World Time	E-28
Countdown Timer	E-31
Stopwatch	E-33
Alarm	E-35
Illumination	E-38
Timekeeping	E-39
Power Supply	E-48
Reference	E-55
Specifications	E-64
Operating Precautions	E-66
User Maintenance	E-75

Procedure Lookup

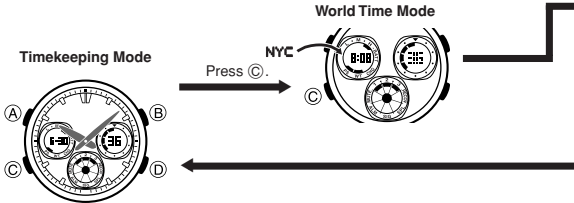
The following is a handy reference list of all the operational procedures contained in this manual.

<i>To specify your Home City</i>	<i>E-12</i>
<i>To display the digital time</i>	<i>E-13</i>
<i>To display the last signal screen</i>	<i>E-14</i>
<i>To perform manual receive</i>	<i>E-23</i>
<i>To toggle auto receive on or off</i>	<i>E-24</i>
<i>To view the time in another city</i>	<i>E-29</i>
<i>To select standard time or Daylight Saving Time for a World Time City</i>	<i>E-29</i>
<i>To set the countdown start time</i>	<i>E-32</i>
<i>To use the countdown timer</i>	<i>E-32</i>

<i>To measure times with the stopwatch</i>	<i>E-34</i>
<i>To set the alarm time</i>	<i>E-36</i>
<i>To test the alarm</i>	<i>E-36</i>
<i>To turn the Daily alarm and the Hourly Time Signal on and off</i>	<i>E-37</i>
<i>To turn on illumination</i>	<i>E-38</i>
<i>To set the current digital time and date manually</i>	<i>E-40</i>
<i>To change the Daylight Saving Time (summer time) setting</i>	<i>E-44</i>
<i>To adjust the analog time</i>	<i>E-46</i>
<i>To recover from the sleep state</i>	<i>E-56</i>
<i>To turn Power Saving on and off</i>	<i>E-57</i>

General Guide

- Press (C) to change from mode to mode.
- In any mode (except a setting mode), press (B) to illuminate the face of the watch.



Countdown Timer Mode

TMR



Stopwatch Mode

STW



Hand Setting Mode

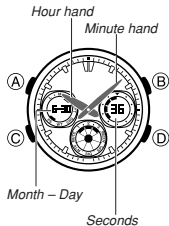


Alarm Mode

ALM



Radio-controlled Timekeeping



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

- This watch is designed to pick up the time calibration transmitted in Japan (Fukuoka/Saga and Fukushima) and the United States (Fort Collins, Colorado).
- See the information under “Signal Receive Troubleshooting” (page E-26) 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” on 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 “To set the current digital time and date manually” (page E-40) 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.

To specify your Home City

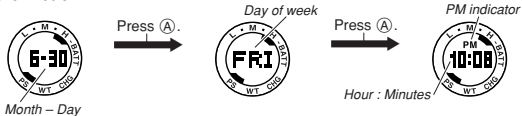


1. In the Timekeeping Mode, hold down (A) until the currently set city code starts to flash in the upper left display. This is the Home City setting mode.
2. Use (D) (eastward) and (B) (westward) to scroll through the city codes until the one you want is displayed.
SEL, TYO : Seoul, Tokyo
YVR, LAX : Vancouver, Los Angeles
YEA, DEN : Edmonton, Denver
MEX, YWG, CHI : Mexico City, Winnipeg, Chicago
MIA, YTO, NYC : Miami, Toronto, New York
YHZ : Halifax
YYT : St. Johns
3. Press (A) 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 (in the middle of the night). You also can perform manual receive (page E-23) or you can set the time manually (page E-40).
- If you are in an area that does not use Daylight Saving Time (summer time), turn off the DST setting (page E-44).

To display the digital time

- In the Timekeeping Mode, press (A) to cycle the contents of the upper left display as shown below.



To display the last signal screen

- In the Timekeeping Mode, press (D) to toggle the upper left display between the last signal information shown below. These screens show the time and date of the last successful time calibration signal reception.



Time Calibration Signal Reception

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

- **Auto Receive**

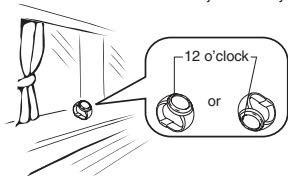
With auto receive, the watch receives the time calibration signal automatically six times a day. When any auto receive is successful, remaining auto receive operations are not performed. For more information, see “About Auto Receive” (page E-20).

- **Manual Receive**

Manual receive lets you start a time calibration signal reception with the press of a button. For more information, see “To perform manual receive” on page E-23.

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.

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



Inside or
among
buildings



Inside a
vehicle



Near
household
appliances,
office
equipment,
or a mobile
phone



Near a
construction
site, airport, or
other sources
of electrical
noise



Near high-
tension
power lines



Among or
behind
mountains

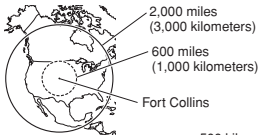
- Signal reception normally is better at night than during the day.
- Time calibration signal reception takes from two to seven minutes, but in some cases it can take as long as 14 minutes. Take care that you do not perform any button operations or move the watch during this time.

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

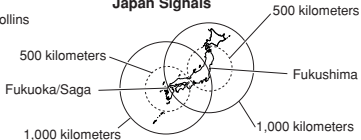
Home City Code	Transmitter	Frequency
SEL, TYO	Fukushima (Japan)	40.0 kHz
	Fukuoka/Saga (Japan)	60.0 kHz
YVR, LAX, YEA, DEN, MEX, YWG, CHI, MIA, YTO, NYC, YHZ, YYT	Fort Collins, Colorado (the United States)	60.0 kHz

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

Approximate Reception Ranges U.S. Signal



Japan Signals



- Signal reception may not be possible at the distances that are further than those noted below during certain times of the year or day. Radio interference also may cause problems with reception.
 - Fort Collins (United States) transmitter: 600 miles (1,000 kilometers)
 - Fukushima or Fukuoka/Saga (Japan) transmitters: 500 kilometers (310 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

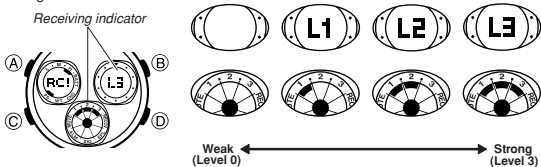
With Auto Receive, the watch performs the receive operation each day automatically up to six times between the hours of midnight and 5 a.m. (according to the Timekeeping Mode time). When any receive operation is successful, none of the other receive operations for that day are performed.

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.
- Remember that reception of the calibration signal depends on the current time in your Home City, as kept in the Timekeeping Mode.

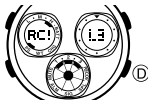
About the Receiving Indicator

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



- Even in an area where signal strength is strong, it takes about 10 seconds for signal reception to stabilize enough for the receiving indicator to indicate signal strength.
- Use the receiving indicator as a guide for checking signal strength and for finding the best location for the watch during signal reception.

To perform manual receive



1. Place the watch on a flat surface so its top (12 o'clock) is pointed toward an outside window (page E-16).
2. In the Timekeeping Mode, hold down (D) for about two seconds until the watch beeps.
3. Release (D) when the watch beeps. The upper left display will show RC! to indicate that signal reception is in progress.

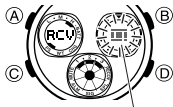
- To interrupt a reception and return to the Timekeeping Mode, press (D).

About the manual receive result indicator

- When signal reception is successful, GET appears in the upper left display and the watch adjusts its time setting accordingly. After that, the last signal screen will appear in the upper left display (page E-14).
- After signal reception is successful, the Level 3 indicator (page E-22) will be displayed in the bottom display in all modes. The Level 3 indicator will remain displayed until the first signal receive operation of the following day.

- **ERR** will appear momentarily in the upper left display if the signal receive operation fails. The watch will not adjust its time setting in this case. After that, the upper left display will change to the last signal screen, which shows the time and date of the last successful signal receive operation (page E-14).
- To return to the Timekeeping Mode while the last signal screen is displayed in the upper left display, press **(D)**. The watch will return to the Timekeeping Mode automatically if you do not press any button for two or three minutes.
- Signal reception is disabled while a countdown timer operation is in progress.

To toggle auto receive on or off



On/Off status

1. In the Timekeeping Mode, press **(D)** to display the last signal screen in the upper left display (page E-14).
 - The upper left display will return to normal timekeeping if you press **(D)** or if you do not perform any button operation for two or three minutes.
2. Hold down **(A)** until the current auto receive setting (**ON** for on or **OFF** for off) flashes in the upper right display. This is the setting mode.

- If the auto receive setting does not appear when you hold down Ⓐ, it means that the city code currently selected for the Home City is for an area that does not support calibration signal reception. You cannot turn auto receive on or off in this case.
3. Use Ⓓ to turn auto receive on (**ON**) or off (**OFF**).
 4. Press Ⓐ to exit the setting mode.
- To return to the Timekeeping Mode from the last signal screen, press Ⓓ.
 - For information about city codes that support signal reception, see “To specify your Home City” on page E-12.

Signal Receive Troubleshooting

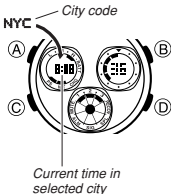
Check the following points whenever you experience problems with calibration signal reception.

Problem	Probable Cause	What you should do
Cannot perform manual receive.	• The watch is not in the Timekeeping Mode. • Your Home City is a city code that does not support signal reception.	• Enter the Timekeeping Mode and try again (page E-23). • Select one of the following city codes as your Home City (page E-12): SEL, TYO, YVR, LAX, YEA, DEN, MEX, YWG, CHI, MIA, YTO, NYC, YHZ, YYT.
Auto receive is turned on, but the Level 3 indicator does not appear on the display.	• You changed the time setting manually. • The watch was not in the Timekeeping or World Time Mode, or you performed some button operation during auto receive.	• Perform manual signal receive or wait until the next auto receive is performed.

Problem	Probable Cause	What you should do
Auto receive is turned on, but the Level 3 indicator does not appear on the display.	• Even if receive is successful, the Level 3 indicator disappears from the display each day when the first auto receive of the day is performed. • Time data (hour, minutes, seconds) only was received during the last receive operation. The Level 3 indicator appears only when time data and date data (year, month, day) are both received.	• Perform manual signal receive or wait until the next auto receive is performed. • Check to make sure the watch is in a location where it can receive the signal (page E-16).
The time setting is incorrect following signal reception.	• If the time is one hour off, the DST setting may be incorrect. • The Home City code setting is not correct for the area where you are using the watch. • The home positions of the hands are off.	• Change the DST setting to Auto DST (page E-44). • Select the correct Home City code (page E-12). • Enter the Hand Setting Mode and adjust the home positions (page E-46).

- For further information, see page E-16 (“Important!”) and “Radio-controlled Timekeeping Precautions” (page E-59).

World Time



The World Time Mode digitally displays the current time in 48 cities (29 time zones) around the world.

- If the current time shown for a city is wrong, check your Home City time settings and make the necessary changes (page E-40).
- The watch will perform signal reception even if it is in the World Time Mode when a calibration time is reached. If this happens, the World Time Mode time settings will be adjusted in accordance with the Timekeeping Mode's Home City time.
- All of the operations in this section are performed in the World Time Mode, which you enter by pressing (C) (page E-8).

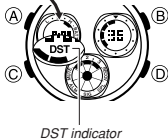
To view the time in another city

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

- For full information on city codes, see the "City Code Table" at the back of this manual.

To select standard time or Daylight Saving Time for a World Time City

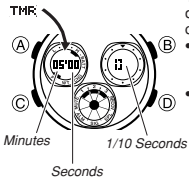
NYC



1. In the World Time Mode, use (D) to display the city code you want in the upper left display.
2. Hold down (A) to toggle the displayed city code between Daylight Saving Time (DST indicator displayed at the bottom of the upper left display) and standard time (DST indicator not displayed).

- Note that you cannot use the World Time Mode to change the DST setting of the Home City code you currently have selected in the Timekeeping Mode. See page E-44 for information about turning the Home City code DST setting on and off.
- The DST indicator will appear on the display whenever you display a city code for which Daylight Saving Time is turned on.
- Note that the DST/Standard Time setting affects only the currently displayed city code. Other city codes are not affected.

Countdown Timer



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

- Calibration signal reception (both auto and manual) is disabled while a countdown timer operation is in progress.
- All of the operations in this section are performed in the Countdown Timer Mode, which you enter by pressing **C** (page E-9).

To set the countdown start time

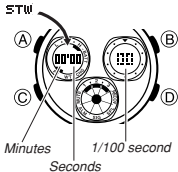
1. While the countdown start time (1 to 60) is shown in the upper left display in the Countdown Timer Mode, hold down **(A)** until the start time value starts to flash. This is the setting mode.
 - If the countdown start time is not displayed, use the procedure under "To use the countdown timer" to display it.
2. While a setting is flashing, use **(D)** (+) and **(B)** (–) to change it.
3. Press **(A)** to exit the setting mode.

To use the countdown timer

Press **(D)** while in the Countdown Timer Mode to start the countdown timer.

- When the end of the countdown is reached, the alarm 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.
- Press **(D)** while a countdown operation is in progress to pause it. Press **(D)** again to resume the countdown.
- To stop a countdown operation completely, first pause it (by pressing **(D)**), and then press **(A)**. This returns the countdown time to its starting value.

Stopwatch

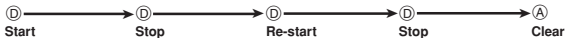


The stopwatch lets you measure elapsed time, split times, and two finishes.

- The display range of the stopwatch is 59 minutes, 59.99 seconds.
- The stopwatch continues to run, restarting from zero after it reaches its limit, until you stop it.
- Exiting the Stopwatch Mode while a split time is frozen on the upper left and upper right displays will clear the split time and return the stopwatch to elapsed time measurement.
- The stopwatch measurement operation continues even if you exit the Stopwatch Mode.
- All of the operations in this section are performed in the Stopwatch Mode, which you enter by pressing © (page E-9).

To measure times with the stopwatch

Elapsed Time



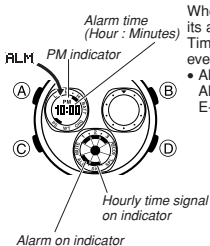
Split Time



Two Finishes



Alarm



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

- All of the operations in this section are performed in the Alarm Mode, which you enter by pressing © (page E-9).

To set the alarm time

1. In the Alarm Mode, hold down (A) until the hour setting of the alarm time start to flash in the upper left display. This is the setting mode.
 - This operation turns on the alarm automatically.
2. Press (C) to move the flashing between the hour and minute settings.
3. Use (D) (+) and (B) (-) to change the flashing setting.
 - When setting the alarm time using the 12-hour format, take care to set the time correctly as a.m. (no indicator) or p.m. (**PM** indicator).
4. Press (A) to exit the setting mode.

Alarm Operation

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

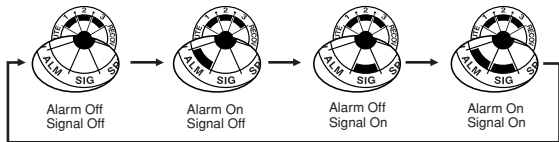
- To stop the alarm tone after it starts to sound, press any button.

To test the alarm

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

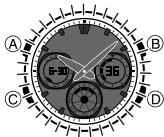
To turn the Daily alarm and the Hourly Time Signal on and off

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



- The alarm on indicator (when the alarm is on) and the hourly time signal on indicator (when the hourly time signal is on) are displayed in the lower display in all modes.

Illumination



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

- See "Illumination Precautions" on page E-63 for other important information.

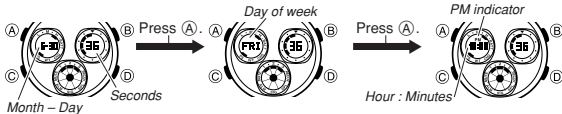
To turn on illumination

In any mode (except a setting mode), press (B) to illuminate the face of the watch.

Timekeeping

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

- When setting the time, you also can configure settings for the illumination duration and the 12/24-hour format.
- All of the operations in this section are performed in the Timekeeping Mode, which you can enter by pressing **(C)** (page E-8).



Setting the Digital Time and Date Manually

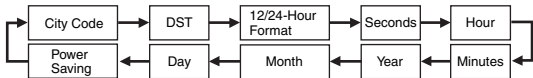
Make sure you select your Home City code before you change the current time and date settings. World Time Mode times are all displayed in accordance with the Timekeeping Mode settings. Because of this, World Time Mode times will not be correct if you do not select the proper Home City code before setting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

To set the current digital time and date manually



City code

1. In the Timekeeping Mode, hold down (A) until the city code of the currently selected Home City flashes in the upper left display. This is the setting mode.
2. Press (C) to change the flashing screen in the sequence shown below to select other settings.



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

Screen:	To do this:	Do this:
TYO	Change the city code	Use Ⓓ (east) and ⓑ (west).
DST A	Cycle between Daylight Saving Time (D), Standard Time (F), and Auto DST (A)	Press Ⓓ.
12H	Toggle between 12-hour (12H) and 24-hour (24H) timekeeping	Press Ⓓ.

Screen:	To do this:	Do this:
36	Reset the seconds to 00	Press D .
PM 10:08	Change the hour or minutes	Use D (+) and B (-).
6-30 09	Change the year	
	Change the month or day	
PS 001	Toggle Power Saving on (011) and off (01F)	Press D .

- See “City Code Table” at the back of this manual for a complete list of available city codes.
- Auto DST (**F**) can be selected only while **SEL**, **TYO**, **YVR**, **LAX**, **YEA**, **DEN**, **MEX**, **YWG**, **CHI**, **MIA**, **YTO**, **NYC**, **YHZ** or **YYT** is selected as the Home City code. For more information, see “Daylight Saving Time (DST)” below.

- For information about settings other than the time and date, see “Power Saving” (page E-55)
4. Press **(A)** to exit the setting mode.

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.

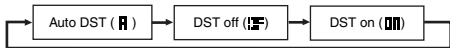
The time calibration signal transmitted from Fort Collins (the United States) includes both Standard Time and DST data. When the Auto DST setting is turned on, the watch switches between Standard Time and DST (summer time) automatically in accordance with the signal.

- 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 2008).
- The default DST setting is Auto DST **(A)** whenever you select **TYO, YVR, LAX, YEA, DEN, MEX, YWG, CHI, MIA, YTO, NYC, YHZ** or **YYT** 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

1. In the Timekeeping Mode, hold down (A) until the city code of the currently selected Home City flashes in the upper left display. This is the setting mode.
2. Press (C) once. This will display the DST setting screen.
3. Use (D) to cycle through the DST settings in the sequence shown below.



4. When the setting you want is selected, press (A) to exit the setting mode.
- The DST indicator (_{DST}) is shown at the bottom of the upper left display when Daylight Saving Time is on.

Analog Timekeeping

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

Note

- The analog hands move to a new setting whenever any of the following occurs.
 - When you change the digital time setting manually*
 - When the digital time setting is changed by time calibration signal reception*
 - When you change the Home City code and/or DST setting*
- If the analog time does not match the digital time for any reason, use the procedure described under “To adjust the analog time” to match the analog setting to the digital setting.
- Whenever you need to adjust both the digital and the analog time settings manually, make sure you adjust the digital setting first.
- Depending on how much the hands have to move in order to adjust to the digital time, it may take some time before they stop moving.

To adjust the analog time



1. In the Timekeeping Mode, press (C) five times to enter the Hand Setting Mode (page E-9).
2. Hold down (A) until the current digital time starts to flash. This is the setting mode.
3. Use (D) and (B) to adjust the analog setting as described below.

When you want to do this:	Perform this button operation:
Move the hand setting forward 20 seconds	• Press (D).
Move the hand setting a short way forward at high speed	• Hold down (D). • Release (D) when the hands reach the setting you want.

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

4. Press Ⓐ to exit the setting mode.

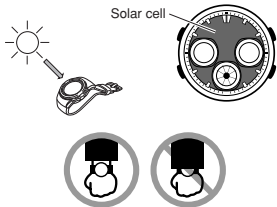
- The minute hand will be adjusted slightly to match the seconds when you exit the setting mode.
- To return to the Timekeeping Mode, press Ⓒ.

Power Supply

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

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

- The illustration shows how to position a watch with a resin band.
- Note that charging efficiency drops when any part of the solar cell is blocked by clothing, etc.
- You should try to keep the watch outside of your sleeve as much as possible. Charging is reduced significantly if the face is even only partially covered.

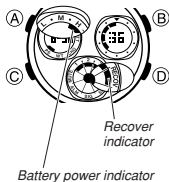


Important!

- 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. Make sure that the watch normally 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 (page E-50) and when you have the battery replaced.
- Turn on the watch's Power Saving function (page E-55) and keep it in an area normally exposed to bright light when storing it for long periods. This helps to keep the rechargeable battery from going dead.

Battery Power Indicator and Recover Indicator

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



Level	Battery Power Indicator	Function Status
1 (H)		All functions enabled.
2 (M)		All functions enabled.
3 (L)	 (Charge Soon Alert)	Auto and manual receive, illumination, and beeper disabled.
4 (CHG)	 (Charge Soon Alert)	All functions disabled.
5		Display disabled and all functions initialized.

- The **LOW** indicator at Level 3 (**L**) and the flashing charge indicator (**CHG**) at Level 4 tell you that battery power is very low, and that exposure to bright light for charging is required as soon as possible.
- At Level 5, all functions are disabled and settings return to their initial factory defaults. Functions are enabled once again after the rechargeable battery is charged, but you need to set the time and date, after the battery reaches Level 4 (**CHG**) (indicated by the flashing charge indicator) from Level 5. You will not be able to configure any of the other settings until the battery reaches Level 3 (**L**) (no charge indicator) after dropping to Level 5.
- Leaving the watch in direct sunlight or some other very strong light source can cause the battery power indicator to show a reading that is momentarily higher than the actual battery level. The correct battery power indicator should appear after a few minutes.
- Frequent use of illumination or the alarm over a short period will cause the recover indicator () to appear in the lower display, indicating that the following operations are disabled until battery power recovers.

Illumination

Beeper tone

Time calibration signal reception

Normal operation will resume after the battery recovers and the recover indicator disappears.

Charging Precautions

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

Warning!

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

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

Charging Guide

After a full charge, timekeeping remains enabled for up to about 6 months.

- The following table shows the amount of time the watch needs to be exposed to light each day in order to generate enough power for normal daily operations.

Exposure Level (Brightness)	Approximate Exposure Time
Outdoor Sunlight (50,000 lux)	8 minutes
Sunlight Through a Window (10,000 lux)	30 minutes
Daylight Through a Window on a Cloudy Day (5,000 lux)	48 minutes
Indoor Fluorescent Lighting (500 lux)	8 hours

- For details about the battery operating time and daily operating conditions, see the “Power Supply” section of the Specifications (page E-65).
- Stable operation is promoted by frequent exposure to light.

Recovery Times

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

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

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

Reference

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

Power Saving



*Power saving
indicator*

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

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

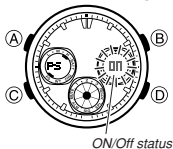
- Wearing the watch inside the sleeve of clothing can cause it to enter the sleep state.
- The watch will not enter the sleep state between 6:00 AM and 9:59 PM. If the watch is already in the sleep state when 6:00 AM arrives, however, it will remain in the sleep state.

To recover from the sleep state

Perform any one of the following operations.

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

To turn Power Saving on and off



1. In the Timekeeping Mode, hold down (A) until the city code of the currently selected Home City flashes in the upper left display. This is the setting mode.
 2. Press (C) nine times until **PS** appears in the left display and on or off flashes in the right display. This is the Power Saving on/off screen.
 3. Press (D) to toggle Power Saving on (01) and off (01=).
 4. Press (A) to exit the setting mode.
- The Power Saving indicator (PS) is displayed in the upper left display in all modes while Power Saving is turned on.

Button Operation Tone

Holding down (C) in any mode will toggle the button operation tone on or off. A button operation tone off indicator (01) is shown in the lower display while button operation tone is off.

- The alarm and hourly time signal continue to sound normally even while the button operation tone is off.

Auto Return Features

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

Scrolling

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

Initial Screens

When you enter the World Time Mode, the data you were viewing when you last exited the mode will appear first.

Radio-controlled Timekeeping Precautions

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

- The watch is designed to update the date and day of the week automatically for the period January 1, 2000 to December 31, 2099. Setting of the date by the time calibration signal cannot be performed starting from January 1, 2100.
- This watch can receive signals that differentiate between leap years and non-leap years.
- Though this watch is designed to receive both time data (hour, minutes, seconds) and date data (year, month, day), certain signal conditions can limit reception to time data only.
- Normally, the signal reception date shown by the Last Signal screen is the date data included in the received time calibration signal. When only time data is received, however, the Last Signal screen shows the date as kept in the Timekeeping Mode at the time of signal reception.
- If you are in an area where proper time calibration signal reception is impossible, the watch keeps time 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 E-44), and auto receive settings (page E-24). The following are the initial factory defaults for these settings.

Setting	Initial Factory Default
City code	TYO (Tokyo)
DST (summer time)	fi (Auto switching)
Auto receive	iii (Auto receive)

Transmitters

The time calibration signal received by this watch depends on the currently selected Home City code (page E-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 signals transmitted from Japan (Fukushima and Fukuoka/Saga).

Timekeeping

- Resetting the seconds to **00** while the current count is in the range of 30 to 59 causes the minutes to be increased by 1. In the range of 00 to 29, the seconds are reset to **00** without changing the minutes.
- The day of the week is displayed automatically in accordance with the date (year, month, and day) settings.
- The year can be set in the range of 2000 to 2099.
- The watch's built-in full automatic calendar makes allowances for different month lengths and leap years. Once you set the date, there should be no reason to change it except after you have the watch's battery replaced or when battery power drops to Level 5.
- The times for the Timekeeping Mode and all the city codes of the World Time Mode are calculated in accordance with each city's UTC offset.
- The UTC offset is a value that indicates the time difference between a reference point in Greenwich, England and the time zone where a city is located.

- The letters “UTC” is the abbreviation for “Universal Time Coordinated”, which is the world-wide scientific standard of timekeeping. It is based upon carefully maintained atomic (cesium) clocks that keep time accurately to within microseconds. Leap seconds are added or subtracted as necessary to keep UTC in sync with the Earth’s rotation.

12-hour/24-hour Timekeeping Formats

The 12-hour/24-hour timekeeping format you select in the Timekeeping Mode also is applied in all other modes.

- When you are using 12-hour timekeeping, a PM indicator (**PM**) appears in the upper left display between noon and 11:59 p.m. No indicator is displayed between midnight and 11:59 a.m.
- With the 24-hour format, times are displayed in the range of 0:00 to 23:59, without any indicator.

Illumination Precautions

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

Specifications

Accuracy at normal temperature: ± 15 seconds a month (with no signal calibration)

Digital Timekeeping: Hour, minutes, seconds, p.m., month, day, day of the week

Time system: Switchable between 12-hour and 24-hour formats

Calendar system: Full Auto-calendar pre-programmed from the year
2000 to 2099

Other: Home city code (can be assigned one of 48 city codes); Daylight
Saving Time (summer time)/Standard Time

Time Calibration Signal Reception: Auto receive up to six times a day (Remaining
auto receives cancelled as soon as one is successful); Manual receive

Receivable Time Calibration Signals: Fort Collins, Colorado, the United States
(Call Sign: WWVB, Frequency: 60.0 kHz); Fukushima, Japan (Call Sign:
JJY, Frequency: 40.0 kHz); Fukuoka/Saga, Japan (Call Sign: JJY,
Frequency: 60.0 kHz)

Analog Timekeeping: Hour, minutes (hand moves every 20 seconds)

World Time: 48 cities (29 time zones)

Other: Standard Time/Daylight Saving Time (summer time)

Alarms: Daily alarms; Hourly Time Signal

Countdown Timer:

Measuring unit: 1/10 second

Input range: 1 to 60 minutes (1-minute increments)

Stopwatch:

Measuring unit: 1/100 second

Measuring capacity: 59' 59.99"

Measuring modes: Elapsed time, split time, two finishes

Illumination: LED (light-emitting diode)

Other: Battery power indicator; Power Saving; Button operation tone on/off

Power Supply: Solar cell and a rechargeable battery

Approximate Battery Operating Time

6 months (from full charge to Level 4 (**CHG**) when the watch is not exposed to light) under the following conditions:

- 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
- 10 minutes of signal reception per day

Frequent use of illumination can shorten battery operating time.

Operating Precautions

Water Resistance

- The following applies to watches with WATER RESIST or WATER RESISTANT marked on the back cover.

		Water Resistance Under Daily Use	Enhanced Water Resistance Under Daily Use		
			5 Atmospheres	10 Atmospheres	20 Atmospheres
Marking	On watch front or on back cover	No BAR mark	5BAR	10BAR	20BAR
Example of Daily Use	Hand washing, rain	Yes	Yes	Yes	Yes
	Water-related work, swimming	No	Yes	Yes	Yes
	Windsurfing	No	No	Yes	Yes
	Skin diving	No	No	Yes	Yes

- Do not use this watch for scuba diving or other types of diving that requires air tanks.

- Watches that do not have WATER RESIST or WATER RESISTANT marked on the back cover are not protected against the effects of sweat. Avoid using such a watch under conditions where it will be exposed to large amounts of sweat or moisture, or to direct splashing with water.
- Even if a watch is water-resistant, do not operate its buttons or crown while it is submersed in water or wet.
- Even if a watch is water-resistant, avoid wearing it in the bath or in areas where detergents (soap, shampoo, etc.) are being used. Such conditions can reduce water resistance.
- After submersion in seawater, use plain water to rinse all salt and dirt from the watch.
- In order to maintain water resistance, have the gaskets of your watch replaced periodically (about once every two or three years).
- A trained technician will know how to check your watch for proper water resistance whenever you have its battery replaced. Battery replacement requires the use of special tools. Always request battery replacement from your original retailer or from an authorized CASIO Service Center.

- Some water-resistant watches come with fashionable leather bands. Avoid swimming, washing, or any other activity that causes direct exposure of a leather band to water.
- The inside surface of the watch glass may fog when the watch is exposed to a sudden drop in temperature. No problem is indicated if the fogging clears up relatively quickly. If the fogging does not clear or if water has gotten into the watch, take the watch in for repair immediately.
- Continued use of the watch with water inside can result in damage to electronic and mechanical components, the face of the watch, etc.
- Your water-resistant watch has been tested in accordance with the International Organization for Standardization regulations ISO2281 and FTC (USA) "GUIDE FOR THE WATCH INDUSTRY." Guide 5.

Band

- Tightening the band too tightly can cause you to sweat and make it hard for air to pass under the band, which can lead to skin irritation. Do not fasten the band too tightly. There should be enough room between the band and your wrist so you can insert your finger.

- Deterioration, rust, or corrosion of the band can cause it to break, which may result in the watch falling off your wrist and becoming lost. Be sure to take good care of the band and keep it clean. Should you notice any breakage, discoloration, looseness or other problem with the band, immediately contact your original retailer or an authorized CASIO Service Center to have it checked, repaired, or replaced. Note that you will be charged for any repair or replacement of the band.

Temperature

- Never leave the watch on the dashboard of a car, near a heater, or in any other location that is subject to very high temperatures. Do not leave the watch where it will be exposed to very low temperatures, either. Temperature extremes can cause the watch to lose or gain time, to stop, or otherwise malfunction.
- Leaving the watch in an area hotter than +60°C (140°F) for long periods can lead to problems with its LCD. The LCD may become difficult to read at temperatures lower than 0°C (32°F) and greater than +40°C (104°F).

Impact

- Your watch is designed to withstand impact incurred during normal daily use and light activity such as playing catch, tennis, etc. Dropping the watch or otherwise subjecting it to strong impact, however, can lead to malfunction.
Note that watches with shock-resistant designs (G-SHOCK, Baby-G, G-ms) can be worn while operating a chain saw or engaging in other activities that generate strong vibration, or while engage in strenuous sports activities (motocross, etc.).

Magnetism

- The hands of analog and combination (analog-digital) watches are moved by a motor that uses magnetic force. When such a watch is close to a device (audio speakers, magnetic necklace, cell phone, etc.) that emits strong magnetism, the magnetism can cause timekeeping to slow down, speed up, or stop, resulting in the incorrect time being displayed.

Electrostatic Charge

- Exposure to very strong electrostatic charge can cause the watch to display the wrong time. Very strong electrostatic charge even can damage electronic components.
- Electrostatic charge can cause the display to go blank momentarily or cause a rainbow effect on the display.

Chemicals

- Do not allow the watch to come into contact with thinner, gasoline, solvents, oils, or fats, or with any cleaners, adhesives, paints, medicines, or cosmetics that contain such ingredients. Doing so can cause discoloration of or damage to the case, resin band, leather band, and other parts.

Storage

- If you do not plan to use the watch for a long time, wipe it thoroughly free of all dirt, sweat, and moisture, and store it in a cool, dry place.

Resin Components

- Allowing the watch to remain in contact with other items or storing it together with other items for long periods while it is wet can cause the color of the other items to transfer to the resin components of the watch. Be sure to dry off the watch thoroughly before storing it and make sure it is not in contact with other items.
- Leaving the watch where it is exposed to direct sunlight (ultraviolet rays) for long periods or failure to clean dirt from the watch for long periods can cause it to become discolored.
- Friction caused by certain conditions (frequent external force, sustained rubbing, impact, etc.) can cause discoloration of painted components.
- If there are printed figures on the band, strong rubbing of the printed area can cause discoloration.
- Failure to clean dirt from the watch for long periods can cause fluorescent color to fade. Wash dirt off with water as soon as possible and then dry the watch.
- Semi-transparent resin parts can become discolored due to sweat and dirt, and if exposed to high temperatures for long periods.
- Contact an authorized CASIO Service Center to have resin components replaced. Note that you will be charged for replacement costs.

Natural Leather and Imitation Leather Bands

- Allowing the watch to remain in contact with other items or storing it together with other items while it is wet for long periods can cause the color of the other items to transfer to the natural leather or imitation leather band of the watch. Be sure to dry off the watch thoroughly before storing it and make sure it is not in contact with other items.
- Leaving a leather band where it is exposed to direct sunlight (ultraviolet rays) for long periods or failure to clean dirt from a leather band for long periods can cause it to become discolored.

Important!

- Subjecting a natural leather or imitation leather band to rubbing or dirt can cause color transfer and discoloration.

Metal Components

- Failure to clean dirt from a metal band can lead to formation of rust, even if the band is stainless steel or plated. If the watch is exposed to sweat or water, wipe it thoroughly with a soft, absorbent cloth and then store it in a well-ventilated location to dry.

- To clean the band, use a soft toothbrush or similar tool to scrub it with a weak solution of water and a mild neutral detergent. Take care to avoid getting solution on the watch case.

Bacteria and Odor Resistant Band

- The bacteria and odor resistant band protects against odor generated by the formation of bacteria from sweat, which ensures good comfort and hygiene. In order to ensure maximum bacteria and odor resistance, keep the band clean. Use an absorbent soft cloth to wipe the band clean of dirt, sweat, and moisture. The bacteria and odor resistant band suppresses the formation of organisms and bacteria. It does not protect against rash due to allergic reaction, etc.

Display

- Display figures may be difficult to read when viewed from an angle.

User Maintenance

Caring for Your Watch

- A dirty or rusty case or band can soil the sleeve of your clothing, cause skin irritation, and even interfere with watch performance. Be sure to keep the case and band clean at all times. Rust tends to form easily after the watch is exposed to seawater and then left without cleaning.
- Sometimes a smudge like pattern may appear on the surface of a resin band. This will not have any affect on your skin or clothing. Wipe the band with a cloth to clean it.
- Keep a leather band clean by wiping it with a dry cloth. Both resin bands and leather band can become worn and cracked over time when subjected to normal daily use.
- Should your band become badly cracked or worn, be sure to have it replaced with a new one. Request band replacement from your original retailer or an authorized CASIO Service Center. Note that you will be charged for band replacement costs, even if your watch is still covered by its warranty.

- Remember that you wear your watch next to your skin, just like a piece of clothing. Because of this, you should always keep your watch clean. Use a soft, absorbent cloth to wipe off any dirt, sweat, water, or other foreign matter from the case and band.

Dangers of Poor Watch Care

Rust

- Though the stainless steel used for the watch is highly rust-resistant, rust can form if the watch is not cleaned after it becomes dirty. Failure of oxygen to come into contact with the metal because it is dirty causes breakdown of the oxidization layer on the metal surface, which leads to the formation of rust.
- Even if the surface of the metal appears clean, sweat and rust in crevasses can soil the sleeves of clothing, cause skin irritation, and even interfere with watch performance.

Premature Wear

- Leaving sweat or water on a resin band or storing it in an area subject to high moisture can lead to premature wear, cuts, and breaks.

Skin Irritation

- Individuals with sensitive skin or in poor physical condition may experience skin irritation when wearing a watch. Such individuals should keep their leather band or resin band particularly clean, or switch to a metal band. Should you ever experience a rash or other skin irritation, immediately remove the watch and contact a skin care professional.

Battery

- The special rechargeable (secondary) battery used by your watch is not intended to be removed or replaced by you. Use of a rechargeable battery other than the special one specified for this watch can damage the watch.
- The rechargeable battery is charged when the solar cell is exposed to light, and so regular periodic replacement is not required. However, charging and discharging of the battery over the years leads naturally to a loss in its ability to sustain a charge and shortens its operating time. If this happens, contact your original retailer or authorized CASIO Service Center.



City Code Table



City Code Table

City Code	City	UTC Offset/ GMT Differential
PPG	Pago Pago	-11
HNL	Honolulu	-10
ANC	Anchorage	-9
YVR	Vancouver	-8
LAX	Los Angeles	
YEA	Edmonton	-7
DEN	Denver	
MEX	Mexico City	-6
YWG	Winnipeg	
CHI	Chicago	
MIA	Miami	-5
YTO	Toronto	
NYC	New York	

City Code	City	UTC Offset/ GMT Differential
CCS*	Carcas	-4
YHZ	Halifax	
YYT	St. Johns	-3.5
RIO	Rio De Janeiro	-3
RAI	Praia	-1
LIS	Lisbon	0
LON	London	
BCN	Barcelona	+1
MAD	Madrid	
PAR	Paris	
MIL	Milan	
ROM	Rome	
BER	Berlin	
STO	Stockholm	

City Code	City	UTC Offset/ GMT Differential
ATH	Athens	+2
CAI	Cairo	
JRS	Jerusalem	
MOW	Moscow	+3
JED	Jeddah	
THR	Tehran	+3.5
DXB	Dubai	+4
KBL	Kabul	+4.5
KHI	Karachi	+5
DEL	Delhi	+5.5
DAC	Dhaka	+6

City Code	City	UTC Offset/ GMT Differential
RGN	Yangon	+6.5
BKK	Bangkok	+7
HKG	Hong Kong	+8
SEL	Seoul	+9
TYO	Tokyo	
ADL	Adelaide	+9.5
GUM	Guam	+10
SYD	Sydney	
NOU	Noumea	+11
WLG	Wellington	+12

- Based on data as of June 2008.
- The rules governing global times (GMT differential and UTC offset) and summer time are determined by each individual country.
- * In December 2007, Venezuela changed its offset from -4 to -4.5 . Note however, that this watch displays an offset of -4 (the old offset) for the CCS (Carcas, Venezuela) city code.