

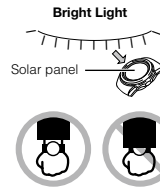
Operation Guide 3440 3441

CASIO®

Getting Acquainted

Congratulations upon your selection of this CASIO watch. To get the most out of your purchase, be sure to read this manual carefully.

Keep the watch exposed to bright light

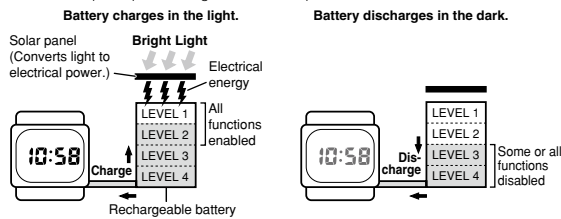


The electricity generated by the solar panel of the watch is stored by a rechargeable battery. Leaving or using the watch where it is not exposed to light causes the battery to run down. Make sure the watch is exposed to light as much as possible.

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

E-1

- 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.



E-2

- The actual level at which some functions are disabled depends on the watch model.
- **Be sure to read "Power Supply" (page E-40) for important information you need to know when exposing the watch to bright light.**

If the display of the watch is blank...

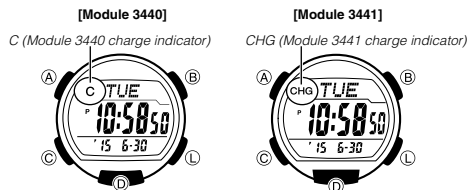
If the display of the watch is blank, it means that the watch's Power Saving function has turned off the display to conserve power.

- See "Power Saving Function" (page E-53) for more information.

About This Manual

- The operational procedures for Modules 3440 and 3441 are identical. All of the illustrations in this manual show Module 3440.
- Button operations are indicated using the letters shown in the illustration.
- Each section of this manual provides you with the information you need to perform operations in each mode. Further details and technical information can be found in the "Reference" section.

E-3



E-4

Contents

General Guide	E-8
To exit the demo mode	E-10
Timekeeping	E-11
To set the time and date	E-12
To change the Daylight Saving Time (summer time) setting	E-16
Stopwatch	E-17
To measure times with the stopwatch	E-18
To position the lap time and split time on the display	E-20
Recall Mode	E-22
To recall stopwatch records	E-22
To delete a log	E-24
To delete all logs	E-25

E-5

Countdown Timer	E-26
To configure the countdown timer	E-27
To use the countdown timer	E-29
World Time	E-30
To view the time in another city	E-31
To toggle a city code time between Standard Time and Daylight Saving Time	E-32
Alarms	E-33
To set an alarm time	E-34
To test the alarm	E-35
To turn an alarm on and off	E-36
To turn the Hourly Time Signal on and off	E-37
Illumination	E-38
To illuminate the display manually	E-38
To specify the illumination duration	E-39

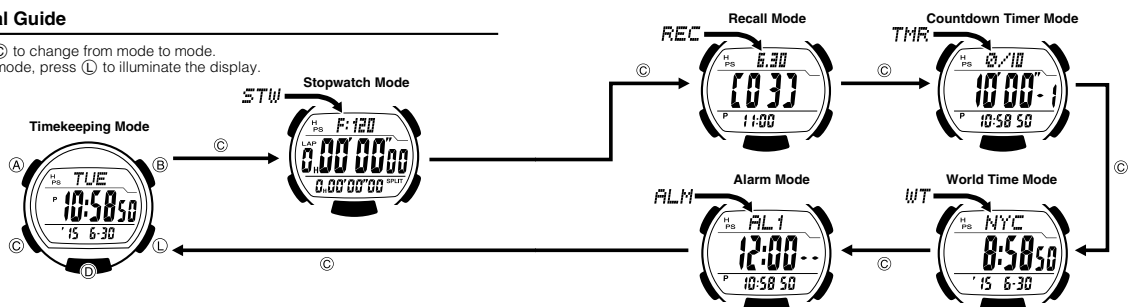
E-6

Power Supply	E-40
Reference	E-48
To turn the button operation tone on and off	E-52
To recover from the sleep state	E-54
To turn Power Saving on and off	E-54
Specifications	E-57

E-7

General Guide

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



E-8

E-9

Demo Mode

In the Timekeeping Mode, holding down **C** for about three seconds will enter the demo mode. In the demo mode, the screen cycles through the normal timekeeping, stopwatch, and World Time screens in five-second intervals.

To exit the demo mode

Press any button.

E-10

Timekeeping

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



Read This Before You Set the Time and Date!

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

* Note that all of the times for the World Time Mode city codes (page E-30) are displayed in accordance with the time and date settings you configure in the Timekeeping Mode.

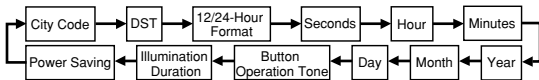
E-11

To set the time and date



- In the Timekeeping Mode, hold down **A** until the city code starts to flash, which indicates the setting screen.
 - Use **D** and **B** to select the city code you want.
 - Make sure you select your Home City code before changing any other setting.
 - For full information on city codes, see the "City Code Table" at the back of this manual.

- Press **C** to move the flashing in the sequence shown below to select the other settings.



E-12

* The following steps explain how to configure timekeeping settings only.

- When the timekeeping setting you want to change is flashing, use **D** or **B** to change it as described below.

Screen:	To do this:	Do this:
TYO	Change the city code	Use D (east) and B (west).
OFF	Toggle between Daylight Saving Time (ON) and Standard Time (OFF)	Press D .
12H	Toggle between 12-hour (12H) and 24-hour (24H) timekeeping	Press D .
50	Reset the seconds to 00	Press D .
10:58	Change the hour and minutes	Use D (+) and B (-).
20 15 6-30	Change the year, month, or day	Use D (+) and B (-).

E-13

Screen:	To do this:	Do this:
MUTE / KEY	Toggle the button operation tone between KEY (on) and MUTE (off)	Press D .
LT1	Toggle the illumination duration between LT1 (approximately 1.5 seconds) and LT3 (approximately 3 seconds)	Press D .
PS 00	Toggle between Power Saving on (00) and off (OFF)	Press D .

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

* The day of the week is displayed automatically in accordance with the date (year, month, and day) settings.

E-14

12-hour and 24-hour timekeeping

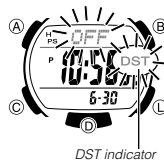
- With the 12-hour format, the **P** (PM) indicator appears to the left of the hour digits for times in the range of noon to 11:59 p.m. and no indicator appears to the left of the hour digits for times in the range of midnight to 11:59 a.m.
- With the 24-hour format, times are displayed in the range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

Daylight Saving Time (DST)

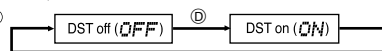
Daylight Saving Time (summer time) advances the time setting by one hour from Standard Time. Remember that not all countries or even local areas use Daylight Saving Time.

E-14

To change the Daylight Saving Time (summer time) setting



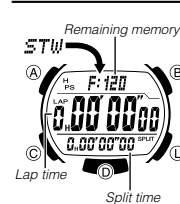
- In the Timekeeping Mode, hold down **A** until the city code starts to flash, which indicates the setting screen.
- Press **C** and the DST setting screen appears.
- Use **D** to cycle through the DST settings in the sequence shown below.



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

E-16

Stopwatch



The 1/100-second stopwatch can measure elapsed time and lap/split times. Stopwatch times are stored in memory.

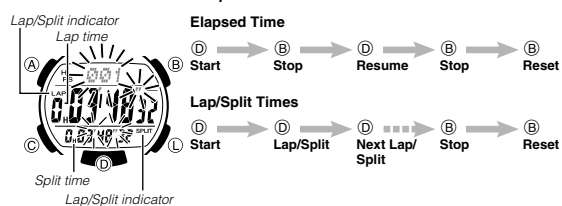
- The stopwatch measurement operation continues even if you exit the Stopwatch Mode.
- Exiting the Stopwatch Mode while a lap/split time is frozen on the display clears the lap/split time and returns to elapsed time measurement.
- All of the operations in this section are performed in the Stopwatch Mode, which you enter by pressing **C** (page E-8).

Note

- See page E-50 for information about the type of data the watch stores in memory when you use the stopwatch.
- Use the Recall Mode (page E-22) to view data stored in memory.

E-17

To measure times with the stopwatch



E-18

Note

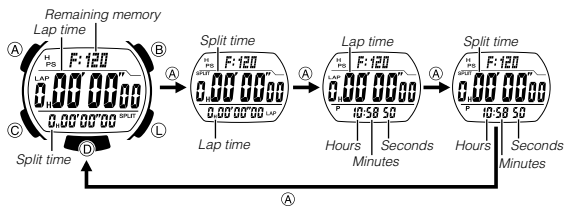
- Pressing **D** to perform a lap/split time operation freezes the lap/split time at that point on the display for about eight seconds. After that, the display returns to normal stopwatch time measurement.
- During a stopwatch time measurement operation, the current lap/split number is shown at the top of the display, and the lap time and split time are shown in the middle and at the bottom. You can change the positions of the lap time and split time by pressing **A** while a stopwatch operation is in progress or stopped. For details, refer to "To position the lap time and split time on the display" (page E-20).

E-19

To position the lap time and split time on the display

Each press of (A) cycles the lap time and split time positions in the sequence shown below.

- You can perform the above operation while stopwatch operation is ongoing or stopped.



E-20

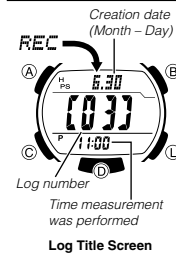
More than 10 hours



- Whenever the elapsed time exceeds 10 hours, the measurement changes from 1/100-second units to 1-second units.

E-21

Recall Mode



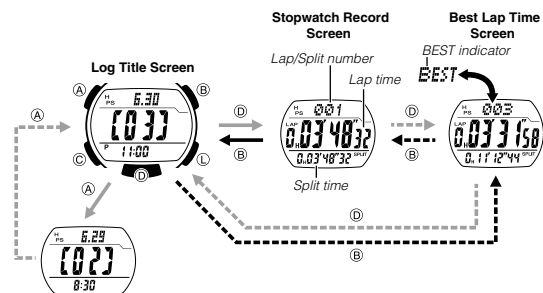
Use the Recall Mode to recall and delete records stored by the Stopwatch Mode.

- Stopwatch records are stored in "logs" that are created automatically by the watch. See "Memory Management" on page E-48 for more information.
- The title screen of the newest log appears first whenever you enter the Recall Mode.
- Log numbers are automatically assigned in sequence, starting from 01.
- All of the operations in this section are performed in the Recall Mode, which you enter by pressing (C) (page E-9).

To recall stopwatch records

In the Recall Mode, use (A) to scroll through the log title screens, starting from the newest one, as shown below. When the title screen of the log you want is displayed, use (D) (+) and (B) (-) to cycle through the records contained in the log.

E-22



E-23

- The locations of the lap time and split time in the Stopwatch Record screen are determined by the display format you last selected in the Stopwatch Mode (page E-17).
- The BEST indicator identifies the record that contains the best lap time in the log.
- If a best lap time record is deleted automatically when the log becomes full, the BEST indicator will not be transferred to the record with the next best lap time. See "Memory Management" on page E-48 for more information about automatic deletion of records.

To delete a log

- In the Recall Mode, display the title screen or one of the records of the log you want to delete.
- While holding down (B), hold down (D) for about two seconds until the watch beeps. "CLR" will flash on the display for two seconds and then the watch will beep. Release (B) and (D) at this time.
- You cannot delete the log of an ongoing elapsed time measurement operation.

E-24

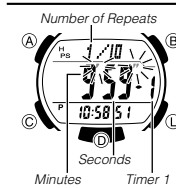
To delete all logs

While holding down (B), hold down (D) for about five seconds until the watch beeps once and then a second time.

- "CLR" will flash on the display for two seconds and then the watch will beep once. Keep (B) and (D) depressed and "ALL" will flash on the display for three seconds, and then the watch will beep again. This indicates that all log data is cleared.
- You cannot delete logs while an elapsed timing operation is in progress.

E-25

Countdown Timer



Dual timers can be set with two different starting times. The watch can be configured so the two timers alternate, so when one reaches the end of its countdown, the other timer starts. You can specify a "number of repeats" value, which controls how many times the two-timer countdown operation is performed (1 = once, 2 = twice, etc.). The starting time of each timer can be set in five-second steps up to 99 minutes, 55 seconds.

You can specify up to 10 repeats. The watch emits a short beep whenever either of the timers reaches the end of its countdown during an ongoing timer operation. The watch emits a 5-second beep when the end of the final timer operation (specified by the number of repeats) is reached.

Countdown End Beeper

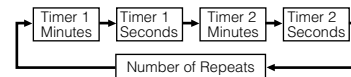
The countdown end beeper lets you know when the countdown reaches zero. The beeper stops after about 5 seconds or when you press any button.

E-26

To configure the countdown timer



- While the countdown start time is on the display in the Countdown Timer Mode, hold down (A) until the current countdown start time starts to flash, which indicates the setting screen.
 - If the countdown start time is not displayed, use the procedure under "To use the countdown timer" (page E-29) to display it.
- Press (C) to move the flashing in the sequence shown below to select other settings.



E-27

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

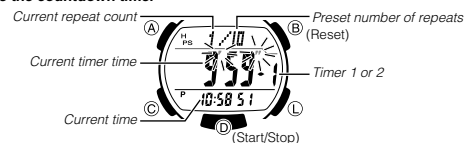
Setting	Screen	Button Operation
Minutes, Seconds	00:00	Use (D) (+) and (B) (-) to change the setting.
Number of Repeats	1/10	Use (D) (+) and (B) (-) to change the setting.

- To disable either timer, set 00'00" as its countdown start time.

- Press (A) to exit the setting screen.

E-28

To use the countdown timer

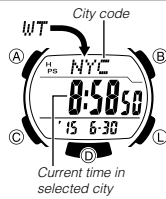


Press (D) while in the Countdown Timer Mode to start the countdown timer.

- The countdown is performed by alternating between Timer 1 and Timer 2. A short beep is emitted to signal a changeover from one timer to the other.
- Press (D) to pause a countdown. Press (D) again to resume.
- Pressing (B) while a countdown timer is stopped resets it to the start time specified by you.
- The watch emits a 5-second beep when the end of the final timer operation (specified by the number of repeats) is reached.
- Even if you exit the Countdown Timer Mode, the countdown timer operation continues and the watch beeps as required.

E-29

World Time



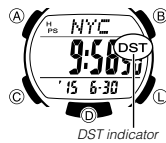
World Time shows the current time in 48 cities (31 time zones) around the world.

- 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.
- Select a city code in the World Time Mode to display the current time in any particular time zone around the globe. See the "City Code Table" at the back of this manual for information about the UTC differential settings that are supported.
- All of the operations in this section are performed in the World Time Mode, which you enter by pressing **C** (page E-9).

E-30

E-31

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



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

E-32

E-33

To set an alarm time



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

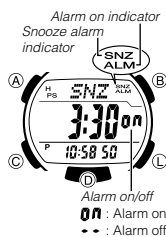
- To set an alarm time, display the applicable alarm screen (**AL1** through **AL4**, or **SNZ**).
- The snooze alarm operation repeats every five minutes.

- After you select an alarm, hold down **A** until the hour setting of the alarm time starts to flash, which indicates the setting screen.
 - This operation turns on the alarm automatically.
- Press **C** to move the flashing between the hour and minute settings.
- While a setting is flashing, use **D** (+) and **B** (-) to change it.
 - With the 12-hour format, set the time correctly as a.m. or p.m. (**P** indicator).
- Press **A** to exit the setting screen.

E-34

E-35

To turn an alarm on and off

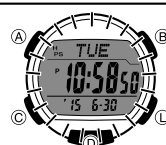


- In the Alarm Mode, use **D** to select an alarm.
- Press **B** to toggle it on and off.
 - Turning on an alarm (**AL1**, **AL2**, **AL3**, **AL4** or **SNZ**) displays the alarm on indicator on its Alarm Mode screen.
 - In all modes, the alarm on indicator is shown for any alarm that currently is turned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

E-36

E-37

Illumination



A LED (light-emitting diode) illuminate the display for easy reading in the dark.

Illumination Precautions

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

To illuminate the display manually

In any mode, press **L** to turn on illumination.

- You can use the procedure below to select either 1.5 seconds or 3 seconds as the illumination duration. When you press **L**, the illumination will remain on for about 1.5 seconds or 3 seconds, depending on the current illumination duration setting.

E-38

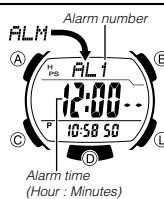
E-39

To view the time in another city

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

- Pressing **D** and **B** at the same time will jump to the UTC time zone.

Alarms



The Alarm Mode gives you a choice of five daily alarms, one of which is a snooze alarm.

Also use the Alarm Mode to turn the Hourly Time Signal (**SIG**) on and off.

- The snooze alarm screen is indicated by **SNZ**, while the other alarm screens are numbered **AL1** through **AL4**. The Hourly Time Signal screen is indicated by **SIG**.
- All of the operations in this section are performed in the Alarm Mode, which you enter by pressing **C** (page E-9).

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, until you turn the alarm off (page E-36).

- Alarm and Hourly Time Signal operations are performed in accordance with the Timekeeping Mode time.
- To stop the alarm tone after it starts to sound, press any button.
- Performing any one of the operations below during a 5-minute interval between snooze alarms cancels the current snooze alarm operation.
- Displaying the Timekeeping Mode setting screen (page E-12)
- Displaying the **SNZ** setting screen (page E-34)

To test the alarm

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

To turn the Hourly Time Signal on and off



- In the Alarm Mode, use **D** to select the Hourly Time Signal (**SIG**).
- Press **B** to toggle it on and off.
 - The Hourly Time Signal on indicator is shown on the display in all modes while this function is turned on.

To specify the illumination duration



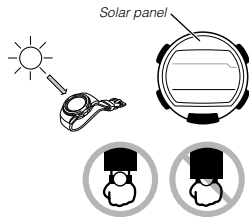
- In the Timekeeping Mode, hold down **A** until the display contents start to flash. This is the setting screen.
- Press **C** 10 times until the current illumination duration setting (**LT1** or **LT3**) appears.
- Press **D** to toggle the setting between **LT1** (approximately 1.5 seconds) and **LT3**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

Power Supply

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

Example: Orient the watch so its face is 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 panel 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 covered only partially.



E-40

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 rechargeable battery to store power produced by the solar panel, so regular battery replacement is not required. However, after very long use, the rechargeable battery may lose its ability to achieve a full charge. If you experience problems getting the rechargeable battery to charge fully, contact your dealer or CASIO distributor about having it replaced.
- Never try to remove or replace the watch's rechargeable battery yourself. Use of the wrong type of battery can damage the watch.
- All data stored in memory is deleted, and the current time and all other settings return to their initial factory defaults whenever the battery is replaced.
- Turn on the watch's Power Saving function (page E-53) 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.

E-41

Battery Power Indicator and Recover Indicator

The battery power indicator on the display shows you the current status of the rechargeable battery's power.

Battery power indicator	Level	Battery Power Indicator	Function Status
	1		All functions enabled.
	2		All functions enabled.
	3		Illumination, and beeper disabled.
	4		Except for timekeeping and the C (charge) indicator, all functions and display indicators disabled. Module 3441 charge indicator is flashing CHG .

E-42

Level	Battery Power Indicator	Function Status
5		All functions disabled.

- The flashing **L** and **LOW** indicators at level 3 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. Once the battery reaches Level 2 after falling to Level 5, reconfigure the current time, date, and other settings.
- The watch's Home City code setting will change automatically to **TYO** (Tokyo) whenever the battery drops to Level 5.
- Display indicators reappear as soon as the battery is charged from Level 5 to Level 2.
- 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.

E-43



- Performing illumination, or beeper operations during a short period may cause **HML** (recover) to appear on the display. After some time, battery power will recover and **HML** (recover) will disappear, indicating that the above functions are enabled again.
- If **HML** (recover) appears frequently, it probably means that remaining battery power is low. Leave the watch in bright light to allow it to charge.

E-44

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

E-45

Charging Guide

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

Exposure Level (Brightness)	Approximate Exposure Time
Outdoor Sunlight (50,000 lux)	5 minutes
Sunlight Through a Window (10,000 lux)	24 minutes
Daylight Through a Window on a Cloudy Day (5,000 lux)	48 minutes
Indoor Fluorescent Lighting (500 lux)	8 hours

- For details about the battery operating time and daily operating conditions, see the "Power Supply" section of the Specifications (page E-59).
- Stable operation is promoted by frequent exposure to light.

E-46

Recovery Times

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

Exposure Level (Brightness)	Approximate Exposure Time			
	Level 5	Level 4	Level 3	Level 1
Outdoor Sunlight (50,000 lux)	3 hours (Module 3440) 2 hours (Module 3441)	26 hours (Module 3440) 22 hours (Module 3441)	7 hours (Module 3440) 6 hours (Module 3441)	7 hours (Module 3440) 6 hours (Module 3441)
Sunlight Through a Window (10,000 lux)	10 hours (Module 3440) 9 hours (Module 3441)	130 hours (Module 3440) 109 hours (Module 3441)	35 hours (Module 3440) 29 hours (Module 3441)	35 hours (Module 3440) 29 hours (Module 3441)
Daylight Through a Window on a Cloudy Day (5,000 lux)	19 hours (Module 3440) 16 hours (Module 3441)	263 hours (Module 3440) 221 hours (Module 3441)	71 hours (Module 3440) 59 hours (Module 3441)	71 hours (Module 3440) 59 hours (Module 3441)
Indoor Fluorescent Lighting (500 lux)	228 hours (Module 3440) 190 hours (Module 3441)	---	---	---

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

E-47

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.

Stopwatch

- You can use lap time measurement to time how long it takes to complete a specific portion (such as a single lap) of a race.
- You can use split time measurement to time how long it takes to get from the start to a specific point in a race.

Memory Management

Each time you press **(D)** to start a new elapsed time or lap/split operation in the Stopwatch Mode (page E-17), the watch automatically creates a new "log" in its memory. The log remains open for data storage until you permanently close it by pressing **(B)** to reset the stopwatch to all zeros. The watch has enough memory to hold up to 121 records. Each log title screen (start date and time) and lap/split time uses up one record.

E-48

- A log title screen identifies a single elapsed time operation, from the start up to the point the stopwatch is reset to all zeros.
- A lap/split time record is stored under a log title screen each time you perform a lap/split operation.

Example 1

Single elapsed time measurement
Log title screen + 120 lap records = 121 records

Example 2

Multiple elapsed time measurements
Measurement 1 log title screen + 60 lap records = 61 records
Measurement 2 log title screen + 59 lap records = 60 records

- Use the Recall Mode to view stopwatch records (page E-22).
- If watch memory is already full when you perform a stopwatch button operation that creates a new log, the oldest log in memory and all of its records are deleted automatically to make room for the new log.
- If you are adding records to the only log in memory and watch memory becomes full, adding another record causes the oldest record in the log to be deleted automatically to make room for the new record.

E-49

- If you are adding records to a log when there are multiple logs in memory and watch memory becomes full, adding another record causes the oldest log in memory and all of its records to be deleted automatically to make room for new records.

How Stopwatch Data is Stored

The following table describes how data is stored when you perform the various button operations described on page E-18.

Stopwatch Button Operation	Data Store Operation
(A) Start (from all zeros)	Creates a new log for the current date. (The log is updated as timing progresses.)
(B) Stop	Time measurement stops, without storing data in memory.
(D) Resume	Time measurement resumes, without storing data in memory.
(D) Lap/Split	Creates new record: displayed lap/split times
(B) Reset	Creates new record: displayed lap/split times (Stopwatch display is reset to all zeros.)

E-50

Button Operation Tone



The button operation tone sounds any time you press one of the watch's buttons. You can turn the button operation tone on or off as desired.

- Even if you turn off the button operation tone, alarms, the Hourly Time Signal, and other beepers all operate normally.

E-51

To turn the button operation tone on and off

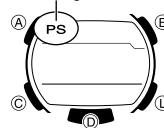


1. In the Timekeeping Mode, hold down (A) until the city code starts to flash, which indicates the setting screen.
2. Press (C) nine times until the current button operation tone setting (**KEY** or **MUTE**) appears.
3. Press (D) to toggle the setting between **KEY** (tone on) and **MUTE** (tone off).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

E-52

Power Saving Function

Power saving indicator



When turned on, the Power Saving function enters a sleep state automatically whenever the watch is left in an area for a certain period where it is dark. 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 Power Saving indicator flashing	All functions enabled, except for the display
6 or 7 days	Blank, with Power Saving 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.

E-53

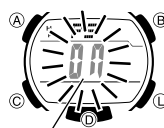
- The watch will not enter the sleep state between 6:00 AM and 9:59 PM. If the watch is already in the sleep state when 6:00 AM arrives, however, it will remain in the sleep state.

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 starts to flash, which indicates the setting screen.
2. Press (C) 11 times until the Power Saving on/off screen appears.
3. Press (D) to toggle Power Saving on (ON) and off (OFF).
4. Press (A) to exit the setting screen.
 - The Power Saving indicator is on the display in all modes while Power Saving is turned on.

E-54

E-55

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 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.
- 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.

World Time

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

E-56

Specifications

Accuracy at normal temperature: ±30 seconds a month

Timekeeping: Hour, minutes, seconds, p.m. (P), year, month, day, day of the week

Time format: 12-hour and 24-hour

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); Standard Time / Daylight Saving Time (summer time)

Stopwatch: Time measurements

Measuring unit: 1/100 for the first 10 hours, and then 1 second after 10 hours

Measuring capacity: 99:59:59

Measuring accuracy: ±0.0012%

Measuring modes: Elapsed time, lap/split times

Memory capacity: 121 records (used by lap/split time records and log title screens)

E-57

Countdown Timer:

Number of timers: 2 (one set)

Setting unit: 5 seconds

Range: 99 minutes 55 seconds each timer

Countdown unit: 1 second

Number of repeats: 1 to 10

Other: 5-second time up beeper

World Time: 48 cities (31 time zones)

Other: Daylight Saving Time/Standard Time

Alarms: 5 daily alarms (with 1 snooze alarm); Hourly Time Signal

Illumination: LED (light-emitting diode); Selectable illumination duration

Other: Button operation tone on/off

Power Supply: Solar panel and one rechargeable battery

Approximate battery operating time:

Module 3440: 13 months

Module 3441: 11 months

(from full charge to Level 4) under the following conditions:

- Watch not exposed to light
- Internal timekeeping
- Display on 18 hours per day, sleep state 6 hours per day
- 1 illumination operation (1.5 second) per day
- 10 seconds of alarm operation per day

Frequent use of illumination runs down the battery.

E-58

E-59



City Code Table



L-1

City Code Table

City Code	City	UTC Offset/ GMT Differential	City Code	City	UTC Offset/ GMT Differential
PPG	Pago Pago	-11	RIO	Rio De Janeiro	-3
HNL	Honolulu	-10	FEN	Fernando de Noronha	-2
ANC	Anchorage	-9	RAI	Praia	-1
YVR	Vancouver	-8	UTC		0
LAX	Los Angeles	-8	LIS	Lisbon	0
YEA	Edmonton	-7	LON	London	0
DEN	Denver	-7	MAD	Madrid	0
MEX	Mexico City	-6	PAR	Paris	0
CHI	Chicago	-6	ROM	Rome	+1
NYC	New York	-5	BER	Berlin	+1
SCL	Santiago	-4	STO	Stockholm	+1
YHZ	Halifax	-4			
YYT	St. Johns	-3.5			

L-2

City Code	City	UTC Offset/ GMT Differential	City Code	City	UTC Offset/ GMT Differential
ATH	Athens	+2	BKK	Bangkok	+7
CAI	Cairo	+2	SIN	Singapore	+7
JRS	Jerusalem	+2	HKG	Hong Kong	+8
MOW	Moscow	+3	BJS	Beijing	+8
JED	Jeddah	+3	TPE	Taipei	+8
THR	Tehran	+3.5	SEL	Seoul	+9
DXB	Dubai	+4	TYO	Tokyo	+9
KBL	Kabul	+4.5	ADL	Adelaide	+9.5
KHI	Karachi	+5	GUM	Guam	+10
DEL	Delhi	+5.5	SYD	Sydney	+10
KTM	Kathmandu	+5.75	NOU	Noumea	+11
DAC	Dhaka	+6	WLG	Wellington	+12
RGN	Yangon	+6.5			

- This table shows the city codes of this watch. (As of December 2014)
- The rules governing global times (UTC offset and GMT differential) and summer time are determined by each individual country.

L-3