

Operation Guide 3319/3781

About This Manual



Module 3319

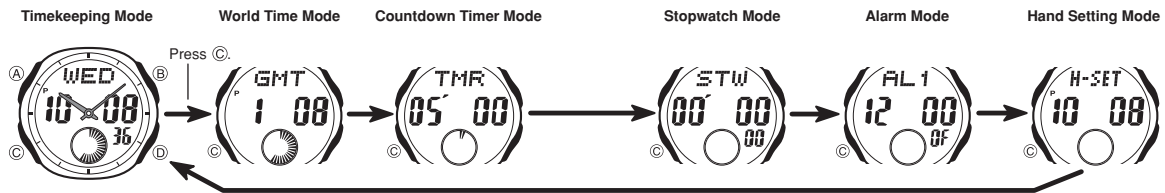


Module 3781

- The operational procedures for Modules 3319 and 3781 are identical. All of the illustrations in this manual show Module 3319.
- Button operations are indicated using the letters shown in the illustration.
- All of the displays in this manual show black-on-white.
- For the sake of simplicity, the sample displays in this manual do not show the analog hands of the watch.
- 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.

General Guide

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

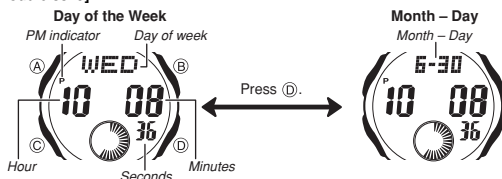


Timekeeping

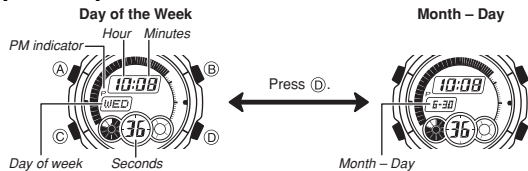
This watch features separate digital and analog timekeeping. The procedures for setting the digital time and analog time are different.

- In the Timekeeping Mode, you can press (D) to change the display format as shown below.

[Module 3319]



[Module 3781]



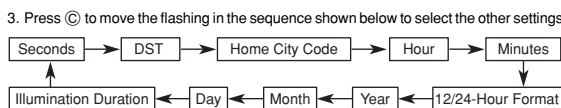
Digital Time and Date

Use the Timekeeping Mode to set and view a digital display of the current time and date. When setting the digital time, you can also configure settings for summer time (Daylight Saving Time or DST), your Home City code (the code for the city where you normally use the watch), the 12/24-hour format, and the illumination duration.

- 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 digital time, it is important that you select the correct city code for your Home City. 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 are displayed in accordance with the digital time and date settings you configure in the Timekeeping Mode.
- After you correctly set your Home City time and date, you can set the watch up for timekeeping with a different city code simply by changing the Home City code in the Timekeeping Mode.

To set the digital time and date

1. In the Timekeeping Mode, hold down (A) until the seconds start to flash, which indicates the setting screen.
2. Press (C) twice to move the flashing to the Home City code setting (see the illustration below), and then use (B) and (D) to select the 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".



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

Screen	To do this:	Do this:
36	Reset the seconds to 00	Press (D).
0F	Toggle between Daylight Saving Time (0A) and Standard Time (0F)	Press (D).
TYO	Change the Home City code	Use (D) (east) and (B) (west).
10:08*1	Change the hour or minutes	Use (D) (+) and (B) (-).
12H	Toggle between 12-hour (12H) and 24-hour (24H) timekeeping	Press (D).
2004	Change the year	Use (D) (+) and (B) (-).
6-30	Change the month or day	Press (D).
LT	Select three seconds or one second as the illumination duration	Press (D).

*1 Some models display the time as "10:00".

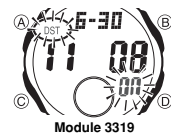
5. Press (A) to exit the setting screen.
 - Resetting the seconds only (without changing the DST, Home City code, hour, or minute setting) causes the analog minute hand setting to be adjusted automatically.
 - See "Digital Time Daylight Saving Time (DST) Setting" below for details about the DST setting.
 - The 12-hour/24-hour timekeeping format you select in the Timekeeping Mode is applied in all modes.
 - For details about illumination duration, see "Display Illumination".

Digital Time Daylight Saving Time (DST) Setting

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

To toggle the Timekeeping Mode digital time between DST and Standard Time

1. In the Timekeeping Mode, hold down (A) until the seconds start to flash, which indicates the setting screen.
2. Press (C) once to display the DST setting screen.
3. Press (D) to toggle between Daylight Saving Time (0A displayed) and Standard Time (0F displayed).
4. Press (A) to exit the setting screen.
 - The DST indicator appears on the Timekeeping, Alarm, and Hand Setting Mode to indicate that Daylight Saving Time is turned on.



Module 3319



Module 3781

Setting the Analog Time

Perform the procedure below when the time indicated by the analog hands does not match the time of the digital display.

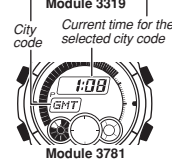
To adjust the analog time



- In the Timekeeping Mode, press **C** five times to enter the Hand Setting Mode.
- Hold down **A** until the current digital time starts to flash, which indicates the analog setting screen.
- Press **D** to advance the analog time setting by 20 seconds.
 - Holding down **D** advances the analog time setting at high speed.

- If you need to advance the analog time setting a long way, hold down **D** until the time starts advancing at high speed, and then press **B**. This locks the high-speed hand movement, so you can release the two buttons. High-speed hand movement continues until you press any button. It will also stop automatically after the time advances 12 hours or if an alarm (daily alarm, Hourly Time Signal, or countdown beeper) starts to sound.
- Press **A** to exit the setting screen.
- The watch will automatically adjust the minute hand slightly to match its internal second count when you exit the setting screen.
- To return to the Timekeeping Mode, press **C**.

World Time



World Time digitally displays the current time in 27 cities (29 time zones) around the world.

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

To view the time in another city

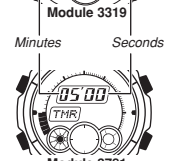
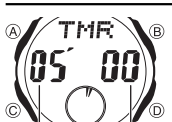
- In the World Time Mode, press **D** to scroll eastwardly through city codes.
- For full information about city codes, see the "City Code Table".
- If the current time shown for a city is wrong, it probably means there is a problem with your Timekeeping Mode time and/or Home City code settings. Go to the Timekeeping Mode and make the necessary adjustments.

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



- In the World Time Mode, use **D** to display the city code whose Standard Time/Daylight Saving Time setting you want to change.
- Hold down **A** for about two seconds to toggle between Daylight Saving Time (**DST** displayed) and Standard Time (**DST** not displayed).
- The **DST** indicator is 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.
- Note that you cannot switch between Standard Time and Daylight Saving Time while **GMT** is selected as the city code.

Countdown Timer



The countdown timer can be set within a range of one minute to 60 minutes. An alarm sounds when the countdown reaches zero. The countdown timer also has an auto-repeat feature and a progress beeper that signals the progress of the countdown.

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

Configuring the Countdown Timer

- The following are the settings you should configure before actually using the countdown timer.
- Countdown start time; Auto-repeat on/off; Progress beeper on/off
 - See "To configure the countdown timer" for information about setting up the timer.

Auto-repeat

When auto-repeat is turned on, the countdown automatically restarts from the countdown start time when it reaches zero. If left running, the countdown is repeated a total of eight times, after which it stops automatically.

When auto-repeat is turned off, the countdown stops when it reaches zero and the display shows the original countdown start time.

- Pressing **D** while an auto-repeat countdown is in progress pauses the current countdown. You can resume the auto-repeat countdown by pressing **D**, or you can press **A** to reset to the countdown time starting value.

Countdown Timer Beeper Operations

The watch beeps at various times during a countdown so you can keep informed about the countdown status without looking at the display. The following describes the types of beeper operations the watch performs during a countdown.

Countdown End Beeper

- The countdown end beeper lets you know when the countdown reaches zero.
- When the progress beeper is turned off, the countdown end beeper sounds for about 10 seconds, or until you press any button to stop it.
 - When the progress beeper is turned on, the countdown end beeper sounds for about one second.

Progress Beeper

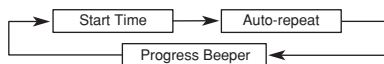
When the progress beeper is turned on, the watch uses beeps to signal countdown progress as described below.

- Starting from five minutes before the end of the countdown, the watch emits four short beeps at the top of each countdown minute.
- 30 seconds before the end of the countdown, the watch emits four short beeps.
- The watch emits a short beep for each of the last 10 seconds of the countdown.
- If the countdown start time is six minutes or greater, the watch emits a short beep for each second of the final 10 seconds before the five-minute point is reached. Four short beeps are emitted to signal when the five-minute point is reached.

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



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

Setting	Screen	Button Operation
Start Time	05:00	Use D (+) and B (-) to change the setting. • You can set a start time in the range of 1 to 60 minutes in 1-minute increments.
Auto-repeat	ON	Press D to toggle auto-repeat on (ON displayed) and off (OFF displayed).
Progress Beeper	ON	Press D to toggle the progress beeper on (ON) and off (OFF).

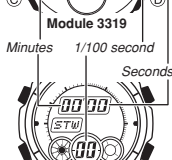
- Press **A** to exit the setting screen.
- You can also perform steps 1 and 2 of the above procedure whenever you need to view the current auto-repeat and progress beeper settings.

To use the countdown timer



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

Stopwatch



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

- The display range of the stopwatch is 59 minutes, 59.99 seconds.
- The stopwatch continues to run, restarting from zero after it reaches its limit, until you stop it.
- The stopwatch measurement operation continues even if you exit the Stopwatch Mode.
- Exiting the Stopwatch Mode while a split time is frozen on the display clears the split time and returns to elapsed time measurement.
- All of the operations in this section are performed in the Stopwatch Mode, which you enter by pressing **C**.

To measure times with the stopwatch

Elapsed Time



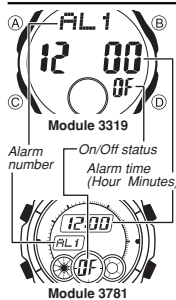
Split Time



Two Finishes



Alarms



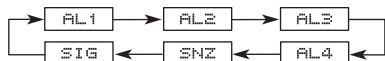
You can set five independent Daily Alarms. When an alarm is turned on, the alarm tone sounds when the alarm time is reached. One of the alarms is a snooze alarm, while the other four are one-time alarms. You can turn on an Hourly Time Signal that causes the watch to beep twice every hour on the hour.

- There are six screens in the Alarm Mode. Four are for one-time alarms (indicated by numbers from AL 1 through AL 4), one is for a snooze alarm (indicated by SNZ), and one is for the Hourly Time Signal (indicated by SIG).
- All of the operations in this section are performed in the Alarm Mode, which you enter by pressing C.

To set an alarm time



1. 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 a one-time alarm, display one of the screens indicated by an alarm number from AL 1 through AL 4. To set the snooze alarm, display the screen indicated by SNZ.
 - The snooze alarm 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 automatically turns on the alarm.
 - Press C to move the flashing between the hour and minute settings.
 - While a setting is flashing, use D (+) and B (-) to change it.
 - When setting the alarm time using the 12-hour format, take care to set the time correctly as a.m. (no indicator) or p.m. (P indicator).
 - Press A to exit the setting screen.

Alarm Operation

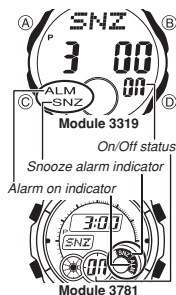
The alarm sounds at the preset time for about 20 seconds, regardless of the mode the watch is in. In the case of the snooze alarm, the alarm operation is performed a total of seven times, every five minutes, or until you turn the alarm off.

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

To test the alarm

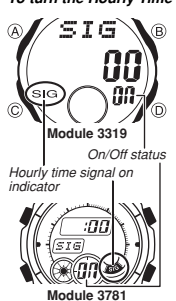
In the Alarm Mode, hold down D to sound the alarm.

To turn an alarm on and off



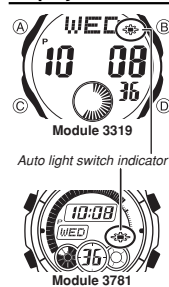
- In the Alarm Mode, use D to select an alarm.
- Press A to toggle it on (ON displayed) and off (OFF displayed).
 - Turning on a one-time alarm (AL 1 through AL 4) displays the alarm on indicator on its Alarm Mode screen.
 - Turning on the snooze alarm (SNZ) displays the alarm on indicator and snooze alarm indicator on the Alarm Mode snooze alarm screen, and in all other modes.
 - In all modes (except for the Alarm Mode), the alarm on indicator is shown for any alarm that is currently turned on.
 - The alarm on indicator flashes while the alarm is sounding.
 - The snooze alarm indicator flashes during the 5-minute intervals between alarms.

To turn the Hourly Time Signal on and off



- In the Alarm Mode, use D to select the Hourly Time Signal (SIG).
- Press A to toggle it on (ON displayed) and off (OFF displayed).
 - The Hourly Time Signal on indicator is shown on the display on the Alarm Mode Hourly Time Signal screen, and in all other modes while the Hourly Time Signal is turned on.

Display Illumination



Display illumination uses an EL (electro-luminescent) panel that causes the entire display to glow for easy reading in the dark. The watch's auto light switch automatically turns on display illumination when you angle the watch for reading towards your face.

- The auto light switch must be turned on (indicated by the auto light switch indicator) for it to operate.
- See "Illumination Precautions" for more important information.

To illuminate the display

In any mode (except when a setting screen is on the display), press B to turn on illumination.

- The above operation turns on illumination regardless of the current auto light switch setting.
- You can use the procedure below to select either one second or three seconds as the illumination duration. When you press B, the illumination will remain on for about one second or three seconds, depending on the current illumination duration setting.

To specify the illumination duration

- In the Timekeeping Mode, hold down A until the seconds start to flash, which indicates the setting screen.
- Press C nine times so the illumination duration setting screen is on the display.
- While the illumination duration setting is flashing, press D to toggle the setting between one second (-) and three seconds (*).
- Press A to exit the setting screen.

About the Auto Light Switch

While the auto light switch is enabled, illumination turns on for about one second or three seconds, whenever you position your wrist as described below in any mode.

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



Warning!

- Always make sure you are in a safe place whenever you are reading the watch using the auto light switch. Be especially careful when running or engaged in any other activity that can result in accident or injury. Also take care that sudden illumination by the auto light switch does not surprise or distract others around you.
- When you are wearing the watch, make sure that its auto light switch is turned off before riding on a bicycle or operating a motorcycle or any other motor vehicle. Sudden and unintended operation of the auto light switch can create a distraction, which can result in a traffic accident and serious personal injury.

To turn the auto light switch on and off

- In any mode, hold down B for about two seconds to toggle the auto light switch on (auto light switch indicator displayed) or off (auto light switch indicator not displayed).
- The auto light switch indicator is on the display in all modes while the auto light switch is turned on.
 - In order to protect against running down the battery, the auto light switch automatically turns off approximately six hours after you turn it on.

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.

Graphic Area

The following describes the information indicated by the graphic area in each mode.

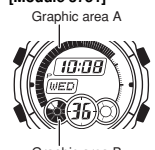
[Module 3319]



Graphic area

Mode	Graphic Area
Timekeeping	Timekeeping Mode seconds
World Time	Timekeeping Mode seconds
Countdown Timer	Countdown time minutes
Stopwatch	Stopwatch time seconds
Alarm	No indication
Hand Setting	No indication

[Module 3781]



Graphic area B

Mode	Graphic Area A	Graphic Area B
Timekeeping	Timekeeping Mode seconds	Timekeeping Mode minutes
World Time	Timekeeping Mode seconds	Timekeeping Mode minutes
Countdown Timer	Countdown time minutes	Countdown time seconds
Stopwatch	Stopwatch time seconds	Stopwatch time 1/10 seconds
Alarm	No indication	No indication
Hand Setting	No indication	No indication

Auto Return Feature

If you leave a screen with flashing digits on the display for two or three minutes without performing any operation, the watch automatically exits the setting screen.

Scrolling

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

Initial Screens

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

Timekeeping

- Resetting the seconds to 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 without changing the minutes.
- With the 12-hour format, the P (PM) indicator appears on the display for times in the range of noon to 11:59 p.m. and no indicator appears for times in the range of midnight to 11:59 a.m.
- With the 24-hour format, times are displayed in the range of 0:00 to 23:59, without any indicator.
- The year can be set in the range of 2000 to 2039.
- 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 batteries replaced.

World Time

- The World Time Mode times are calculated from the current Home City time setting in the Timekeeping Mode, using the Greenwich Mean Time (GMT) differentials associated with each city code.
- The GMT differential is a value that indicates the time difference between Greenwich Mean Time and the time zone where a city is located.
- GMT differential is calculated by this watch based on Universal Time Coordinated (UTC) data.

Illumination Precautions

- The electro-luminescent panel that provides illumination loses power after very long use.
- Display illumination may be hard to see when viewed under direct sunlight.
- The watch may emit an audible sound whenever the display is illuminated. This is due to vibration of the EL panel used for illumination, and does not indicate malfunction.
- Illumination automatically turns off whenever an alarm sounds.
- Frequent use of the light shortens the battery life.

Auto light switch precautions

More than 15 degrees too high



- Avoid wearing the watch on the inside of your wrist. Doing so causes the auto light switch to operate when it is not needed, which shortens battery life. If you want to wear the watch on the inside of your wrist, turn off the auto light switch feature.
- Illumination may not turn on if the face of the watch is more than 15 degrees above or below parallel. Make sure that the back of your hand is parallel to the ground.

- Illumination turns off in about one second or three seconds, even if you keep the watch pointed towards your face.
- Static electricity or magnetic force can interfere with proper operation of the auto light switch. If illumination does not turn on, try moving the watch back to the starting position (parallel with the ground) and then tilt it back towards you again. If this does not work, drop your arm all the way down so it hangs at your side, and then bring it back up again.
- Under certain conditions, illumination may not turn on until about one second after you turn the face of the watch towards you. This does not necessarily indicate malfunction of the auto light switch.
- You may notice a very faint clicking sound coming from the watch when it is shaken back and forth. This sound is caused by mechanical operation of the auto light switch, and does not indicate a problem with the watch.

City Code Table

City Code	City	GMT Differential	Other major cities in same time zone
---		-11.0	Pago Pago
HNL	Honolulu	-10.0	Papeete
ANC	Anchorage	-09.0	Nome
LAX	Los Angeles	-08.0	San Francisco, Las Vegas, Vancouver, Seattle/Tacoma, Dawson City
DEN	Denver	-07.0	El Paso, Edmonton
CHI	Chicago	-06.0	Houston, Dallas/Fort Worth, New Orleans, Mexico City, Winnipeg
NYC	New York	-05.0	Montreal, Detroit, Miami, Boston, Panama City, Havana, Lima, Bogota
CCS	Caracas	-04.0	La Paz, Santiago, Port Of Spain
RIO	Rio De Janeiro	-03.0	Sao Paulo, Buenos Aires, Brasilia, Montevideo
---		-02.0	
---		-01.0	Praia
GMT			
LON	London	+00.0	Dublin, Lisbon, Casablanca, Dakar, Abidjan
PAR	Paris	+01.0	Milan, Rome, Madrid, Amsterdam, Algiers, Berlin, Hamburg, Frankfurt, Vienna, Stockholm
CAI	Cairo	+02.0	Athens, Helsinki, Istanbul, Beirut, Damascus, Cape Town
JRS	Jerusalem		
JED	Jeddah	+03.0	Kuwait, Riyadh, Aden, Addis Ababa, Nairobi, Moscow
THR	Tehran	+03.5	Shiraz
DXB	Dubai	+04.0	Abu Dhabi, Muscat
KBL	Kabul	+04.5	
KHI	Karachi	+05.0	Male
DEL	Delhi	+05.5	Mumbai, Kolkata
DAC	Dhaka	+06.0	Colombo
RGN	Yangon	+06.5	
BKK	Bangkok	+07.0	Jakarta, Phnom Penh, Hanoi, Vientiane
HKG	Hong Kong	+08.0	Singapore, Kuala Lumpur, Beijing, Taipei, Manila, Perth, Ulaanbaatar
TYO	Tokyo	+09.0	Seoul, Pyongyang
ADL	Adelaide	+09.5	Darwin
SYD	Sydney	+10.0	Melbourne, Guam, Rabaul
NOU	Noumea	+11.0	Port Vila
WLG	Wellington	+12.0	Christchurch, Nadi, Nauru Island

*Based on data as of December 2004.