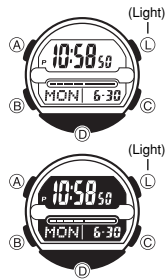


Operation Guide 3100

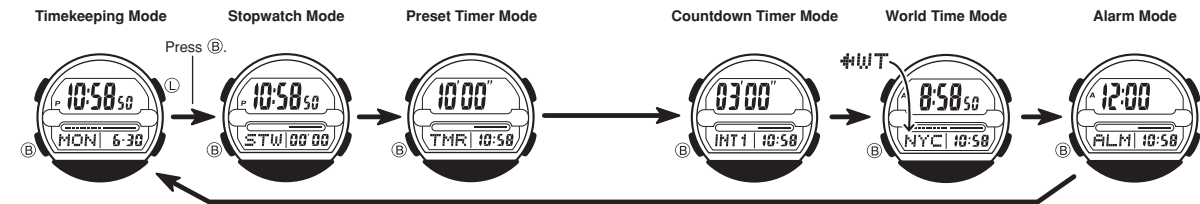
About This Manual



- 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.
- 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.

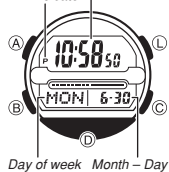
General Guide

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



Timekeeping

Hour : Minutes : Seconds
PM indicator



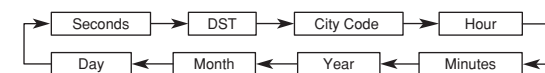
To set the time and date



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

Read This Before You Set the Time and Date !
The times displayed in the Timekeeping Mode and World Time Mode are linked. Because of this, make sure you select a Home City code before you set the time and date.

- In the Timekeeping Mode, hold down **(A)** until the seconds start to flash, which indicates the setting screen.
- Press **(B)** to move the flashing in the sequence shown below to select other settings.



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

Screen	To do this:	Do this:
50	Reset the seconds to 00	Press (D) .
0FF	Toggle between Daylight Saving Time (0FF) and Standard Time (0FF)	Press (D) .
TYO	Change the city code	Use (D) (east) and (C) (west).
10:58	Change the hour or minutes	Use (D) (+) and (C) (-).
2008	Change the year	
6-30	Change the month or day	

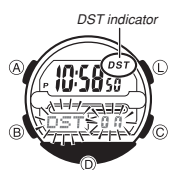
- For details about city codes, see the "City Code Table".
- See "Daylight Saving Time (DST)" for details about DST setting.

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

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.

To toggle the Timekeeping Mode time between DST and Standard Time



- In the Timekeeping Mode, hold down **(A)** until the seconds start to flash, which indicates the setting screen.
 - Press **(B)** to display the DST setting screen.
 - Press **(D)** to toggle between Daylight Saving Time (DST displayed) and Standard Time (0FF displayed).
 - Press **(A)** to exit the setting screen.
- The **DST** indicator appears on the display to indicate that Daylight Saving Time is turned on.

To toggle between 12-hour and 24-hour timekeeping

In the Timekeeping Mode, press **(D)** to toggle between 12-hour timekeeping and 24-hour timekeeping.

- 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 the **A** (AM) indicator appears for times in the range of midnight to 11:59 a.m.
- With the 24-hour format, times are displayed in the range of 0:00 to 23:59, without any indicator.
- The 12-hour/24-hour timekeeping format you select in the Timekeeping Mode is applied in all other modes.
- The **A** and **P** indicators are not displayed when the current time is displayed in other modes.

Stopwatch

Current Timekeeping Mode time



The Stopwatch Mode lets you time a game or event. The upper display shows non-stop total elapsed time, while the lower display shows event elapsed time, which can be paused as required for time outs, half time, etc.

- The measurement limit of the upper display (total time) is 99 minutes 59 seconds.
- The measurement limit of the lower display (event time) is 59 minutes 59 seconds.
- A stopwatch measurement operation continues to run until you stop it. If either time reaches its measurement limit, it will restart from zero.
- A stopwatch measurement operation continues even if you exit the Stopwatch Mode.
- Starting event timing will cause the display to change to the Elapsed Time Screen from the initial screen shown on this page.

- All of the operations in this section are performed in the Stopwatch Mode, which you enter by pressing **(B)**.

Elapsed Time Screen

Total time minutes, seconds, 1/100 second
* Once started, this time measurement cannot be paused. It shows total time since the stopwatch measurement operation started.



Event time minutes, seconds
* The time measurement in this display can be paused and restarted by pressing **(B)**.

Basic Event Timing Operation

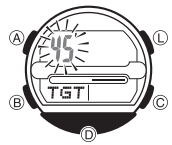


* Total time measurement in upper display continues.

Using the Stopwatch Mode to Time a Sporting Event

You can time a sporting event with the Stopwatch Mode either with or without presetting the duration of the event. If you do, the watch will beep when the total time in the upper display reaches the preset event duration. If the event is interrupted for timeouts or some other reason, press **(D)** to pause and restart event time measurement in the lower display. Since total time measurement continues in the upper display, you can calculate the time that play was interrupted (lost time) by subtracting the time in the lower display from the time in the upper display.

To preset the duration of the event



- In the Stopwatch Mode, hold down (A) until the current event duration setting starts flashing in the upper display. This is the setting screen.
 - If the current event duration setting does not appear when you hold down (A), it means that an ongoing elapsed time operation is in progress. Use the procedure under "To stop an elapsed time operation and reset the stopwatch" to reset.
- Use (D) (+) and (C) (-) to change the current event duration setting.
 - You can set a duration in the range of 1 to 60 minutes, in one-minute units.
- After setting the duration, press (A) to exit the setting screen.

To start timing of an event

- Press (D) to start event timing.
- Initially, the same elapsed time will appear in both the upper and lower displays.

To pause timing

- Press (D).
- This will stop event time measurement in the lower display, but total time measurement in the upper display will continue.
- To restart event time measurement in the lower display, press (D) again.

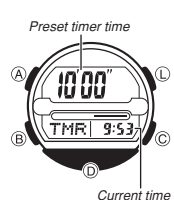
When the preset event duration is reached

- The watch will beep for 10 seconds when the total elapsed time in the upper display reaches the preset event duration.
- Event timing continues even after the preset event duration is reached.

To stop an elapsed time operation and reset the stopwatch

- Press (D) to stop event time measurement in the lower display.
 - Total time measurement in the upper display continues.
- Hold down (C) until the initial Stopwatch Mode screen appears.

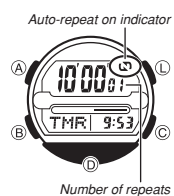
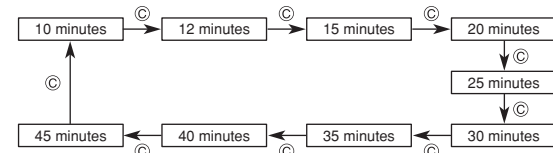
Preset Timer



- The watch includes a number of different preset times that you can select for the countdown start times. An alarm sounds when the countdown reaches zero.
- The following are the preset start times, all in minutes: 10, 12, 15, 20, 25, 30, 35, 40, 45.
 - You also can turn on auto-repeat, which automatically will restart the timer from the currently selected preset time whenever it reaches zero.
 - All of the operations in this section are performed in the Preset Timer Mode, which you enter by pressing (B).

To perform a preset timer operation

- In the Preset Timer Mode, use (C) to scroll through the preset times until the one you want to use is displayed.



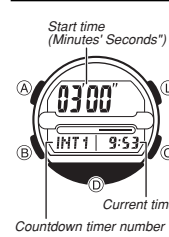
- To turn on auto-repeat, hold down (A) while a start time selection screen is displayed. The number of repeats will appear near the timer time.
- Frequent use of auto-repeat and the alarm can run down battery power.



- Press (D) to start the countdown.
 - Press (D) while a countdown operation is in progress to pause it. Press (D) again to resume the countdown.
 - When the end of the countdown is reached (regardless of whether auto-repeat is on or off), the alarm sounds for 10 seconds or until you stop it by pressing any button.
 - Auto-repeat off: When the end of the countdown is reached, an elapsed time operation starts and the upper display shows how much time has elapsed since the end of the countdown. The elapsed time operation will stop automatically when it reaches 60 minutes. At that time the countdown timer start time selection screen will appear.

- Auto-repeat on: When the end of the countdown is reached, a new countdown starts from the preset start time. The number of repeats is displayed next to the timer time. The number of repeats display changes to "--" when the count reaches 100.
- To stop a countdown operation completely, first pause it (by pressing (D)), and then press (C). This will display the initial Preset Timer Mode screen.

Countdown Timer



With the countdown timer, you can set up to nine start times, which are counted down in sequence one after the other.

Example 1: Interval Training

3-minute run (INT 1), 1-minute rest (INT 2), 5-minute run (INT 3)

Example 2: Game Timing

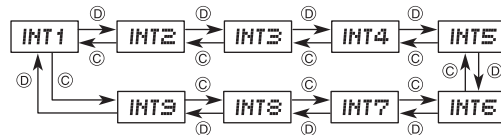
45-minute period (INT 1), 15-minute halftime (INT 2), 45-minute period (INT 3)

- The watch beeps when any countdown timer reaches zero.
- An alarm sounds for about five seconds when the last countdown timer reaches zero.

- You can turn on an auto-repeat feature that restarts the timer sequence from the beginning when the end of the last countdown timer is reached.
- All of the operations in this section are performed in the Countdown Timer Mode, which you enter by pressing (B).

To configure countdown timer settings

- In the Countdown Timer Mode, hold down (A) until the countdown timer number starts flashing. This is the setting screen.
- Use (D) and (C) to scroll through the countdown timer numbers until the one you want to set is displayed.



- Press (B) to move the flashing in the sequence shown below to select other settings.



- While a setting is flashing, use (D) and (C) to change it as described below.

Screen	To do this:	Do this:
INT 1	Change the countdown timer number	Use (D) (+) and (C) (-).
03:00	Change the minutes	Use (D) (+) and (C) (-).
03:00	Change the seconds (5-second units)	Use (D) (+) and (C) (-).
☐	Toggle auto-repeat off and on (☐)	Press (D).

- Any timer whose start time is 00:00 will not be used during countdown timer operation.
- There is no auto-repeat for individual countdown timers. In the Countdown Timer Mode, auto-repeat repeats the entire set of timers.

Auto-repeat on indicator

- Set the times of all of the countdown timers that you want.
- Press (A) to exit the setting screen.
 - When auto-repeat is turned on, the number of repeats will appear next to the timer time.
 - Frequent use of auto-repeat and the alarm can run down battery power.

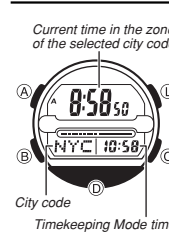


Number of repeats

To perform a countdown timer operation

- In the Countdown Timer Mode, press (D) to start the countdown timer.
- To pause a countdown timer operation, press (D). Press (D) again to restart.
 - While auto-repeat is turned off, the watch beeps when each countdown timer reaches zero. An alarm will sound for about five seconds when the final countdown timer reaches zero.
 - While auto-repeat is turned on, the watch beeps when each countdown timer reaches zero. An alarm will sound for about five seconds when the final countdown timer reaches zero. The timing restarts from the first timer when the final countdown timer reaches zero. The number of repeats is displayed next to the timer time. The number of repeats display changes to "--" when the count reaches 100.
 - An ongoing countdown timer operation continues to be performed even if you exit the Countdown Timer Mode.
 - To stop the countdown timer, first press (D) to pause it, and then press (C). This returns the countdown time to its starting value.

World Time



World Time shows the current time in 48 cities (29 time zones) around the world.

- When you enter the World Time Mode, the data you were viewing when you last exited the mode appears first.
- All of the operations in this section are performed in the World Time Mode, which you enter by pressing (B).

To view the time for another city code

- In the World Time Mode, press (D) to scroll eastward through city codes or (C) to scroll westward.
- For full information about city codes, see the "City Code Table".
 - If the current time for a city is wrong, check your Timekeeping Mode time and city code settings and make necessary changes.

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

1. In the World Time Mode, use (D) and (C) to display the city code whose Standard Time/Daylight Saving Time setting you want to change.
2. Hold down (A) for about one second to toggle Daylight Saving Time (DST displayed) and Standard Time (DST not displayed).
 - The DST indicator appears 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.

Alarm

When the Daily Alarm is turned on, the alarm sounds for 10 seconds at the preset time each day. When the Hourly Time Signal is turned on, the watch beeps every hour on the hour.

- All of the operations in this section are performed in the Alarm Mode, which you enter by pressing (B).
- To set the alarm time**
1. Hold down (A) while in the Alarm Mode until the hour digits start to flash on the display. The hour digits flash because they are selected.
 - This operation turns on the alarm automatically.



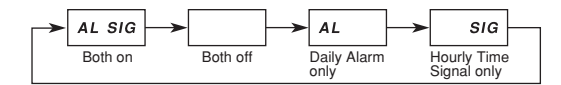
2. Press (B) to change the selection in the following sequence.
3. While a setting is flashing, use (D) and (C) to change it as described below.

Screen	To do this:	Do this:
12:00	Change the hour and minutes	Use (D) (+) and (C) (-). • With the 12-hour format, set the time correctly as a.m. (A indicator) or p.m. (P indicator).

4. After you set the alarm time, press (A) to return to the Alarm Mode.

To stop the alarm
Press any button to stop the alarm after it starts to sound.

To switch the Daily Alarm and Hourly Time Signal on and off
Press (D) while in the Alarm Mode to change the status of the Daily Alarm and Hourly Time Signal in the following sequence.



To test the alarm
Hold down (D) while in the Alarm Mode to sound the alarm.

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.

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, the alarms, the Hourly Time Signal, the countdown alarm, and the event timer alarm all operate normally.

To toggle the button operation tone on and off
In any mode (except when a setting screen is on the display), hold down (B) to toggle the button operation tone on (⌘ not displayed) and off (⌘ displayed).

- Holding down (B) to toggle the button operation tone on or off also causes the watch's current mode to change.
- ⌘ is displayed in all modes when the button operation tone is turned off.

Scrolling

The (C) and (D) 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 at high speed. This is true except when the countdown timer number is flashing on the Countdown Timer Mode screen.

Auto Return Features

- If you leave the watch in the Alarm Mode for two or three minutes without performing any operation, it changes to the Timekeeping Mode automatically.
- If you leave a screen with flashing digits on the display for two or three minutes without performing any operation, the watch exits the setting screen automatically.

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.

World Time

- The seconds count of the World Time is synchronized with the seconds count of the Timekeeping Mode.
- All World Time Mode times are calculated from the current Home City time in the Timekeeping Mode using UTC time differential values.
- The UTC differential 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.

Illumination Precautions

An LED (light-emitting diode) illuminates the display for easy reading in the dark. In any mode (except when a setting screen is on the display), press (L) to turn on illumination for about two seconds.

- 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.

City Code Table

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

*Based on data as of December 2006.