## Operation Guide 3450

## About This Manual



- Note that the product illustrations in this manual are intended for reference only and so the actual product may appear somewhat different than depicted by an illustration.


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Procedure Lookup
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## General Guide

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


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Timekeeping

Day of week | Use the Timekeeping Mode to set and view the current |
| :--- |
| time and date. |

To set the time and date


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

| Screen | To do this: | Do this: |
| :---: | :---: | :---: |
| 54 | Reset the seconds to 0 d | Press (D). |
| 075 | Toggle between Daylight Saving Time (fff) and Standard Time (ff f) | Press (D). |
| + 90 | Specify your Home Time zone | Use (D) (eastward) and (B) (westward). |
| 10:58 | Change the hour or minutes | Use ( ${ }^{\text {( }}$ (+) and (B) ( - ). |
| 는11 | Change the year |  |
| 6-36 | Change the month or day |  |

- For details about time zones, see the "City Code Table" at the back of this
- See "Daylight Saving Time (DST)" on page E-11 for details about DST setting.

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4. 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.


## 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 Timekeoping Mode hold dow A seconds start to flash, which indicates the setting
screen.
3. Press (D) to toggle between Daylight Saving Time (ff displayed) and Standard Time (ef f displayed).
4. Press (A) to exit the setting screen.

- The DST indicator appears on the display to indicate that Daylight Saving Time is turned on.

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

- With the 12-hour format, the $\mathbf{P}$ (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 $23: 59$, withou
any indicator.
- The 12 -hour/24-hour timekeeping format you select in the Timekeeping Mode is applied in all other modes.
- The $\mathbf{P}$ indicator is not displayed when the current time is displayed in other modes.
Stopwatches
Timekeeping Mode time Your watch has two stopwatch modes:Stopwatch During stopwatch elapsed Mode (ST1) and Stopwatch Mode (ST2). Both number of hours elapsed. number of hours elapsed.

(A) ST (B) $\quad$| includes Auto-Start. |
| :--- |
| A display range of the stopwatch is 999 hours, |
| 59 minutes, 59.99 seconds. | 59 minutes, 59.99 seconds

A stopwatch continues to run, restarting from zero after it reaches its limit, until you stop it.
An ongoing elapsed time measurement operation mode. However, if you exit the Stopwatch Mode while a split time is displayed, the split time will not be displayed when you return to the Stopwatch Mode.

- All of the operations in this section are performed in the Stopwatch Mode (ST1) or Stopwatch Mode (ST2), which you enter by pressing (C) (page E-6).
(Stopwatch Mode (ST1) and Stopwatch Mode (ST2))
Elapsed Time



About Auto-Start (Stopwatch Mode (ST1))
With Auto-Start, the watch performs a 5 -second countdown, and stopwatch operation starts automatically when the countdown reaches zero.
During the final three seconds of the countdown, a beeper sounds with each second.

## To use Auto-Start (ST1)



1. While the stopwatch screen is showing all zeros in the Stopwatch Mode, press (B).
cond countdown screen.

- To return to the all zeros screen, press (B) again
-When the countdown reaches zero, a tone sounds and stopwatch timing operation starts automatically. - Pressing (D) while the Auto-Start countdown is in progress starts the stopwatch immediately.


## Countdown Timer



The countdown timer can be set within a range of one minute to 24 hours. 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) (page E-7).

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" (page E-20) for information about setting up the timer.

## Auto-repeat

When auto-repeat is turned on, the countdown restarts automatically from the countdown start time when it reaches zero.
When auto-repeat is tured of, the countdown stops when it reaches zero and the
display shows the origina countdown start time
Preunto (1) You auto-repeat countdown is in progress pauses the current countdown. You can resume the auto-repeat countdown by pressing (D), or you can Countdown Timer Beeper Operations
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 fo 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 secon
Progress Beeper
When the progress beeper is turned on, the watch uses beeps to signal countdown progress as described below.
 short beeps at the top of each countdown minute,
- The watch emits a short beep for each of the last 10 seconds of the short beeps.
- 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.


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## 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 $\mathrm{E}-22$ ) to display it.

2. Press (C) to move the flashing in the sequence shown below to select other settings

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

| Setting | Screen | Button Operation |
| :---: | :---: | :---: |
| Hours, Minutes | 0:00 | Use (D) (+) and (B) ( - ) to change the setting. |
| Auto-repeat |  | Press (D) to toggle auto-repeat on (든.. displayed) and off ( $-\frac{i}{T}$ displayed). |
| Progress Beeper |  | Press (D) to toggle the progress beeper on (init) and off ( (nifi). |

To specify a countdown start time of 24 hours, set 0:80
he 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 th 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 stop a countdown operation completely, first pause it (by pressing (D), and then press (B). This returns the countdown time to its starting value.


## Alarms



## Alarm Types

The alarm type is determined by the settings you make, as described below

- Daily alarm

Set the hour and minutes for the alarm time. This type of setting causes the alarm to sound everyday at the time you set.

- Date alarm

Set the month, day, hour and minutes for the alarm time. This type of setting causes the alarm to sound at the specific time, on the specific date you set.

- 1-Month alarm

Set the month, hour and minutes for the alarm time. This type of setting causes the alarm to sound everyday at the time you set, only during the month you set

- Monthly alarm

Set the day, hour and minutes for the alarm time. This type of setting causes the alarm to sound every month at the time you set, on the day you set

To set an alarm time


1. In the Alarm Mode, use (D) and (B) to scroll through the alarm screens until the one whose time you want to set is displayed.


- The snooze alarm operation repeats every five minutes.

2. After you select an alarm screen, hold down (A) until the hour setting of the alarm ime starts to flash, which indicates the setting screen.
selarm automatically.
3. Press (C) to move the flashing in the sequence shown below to select other settings.

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

| Screen | To do this: | Do this: |
| :---: | :--- | :--- |
| $\mathbf{I 2 : E O}$ | Change the hour and <br> minutes | Use (D) (+) and (B) ( - ). <br> - With the 12-hour format, set the time correctly as a.m. <br> or p.m. (P indicator). |
| $\ldots .$. | Change the month <br> and day | To set an alarm that does not include a month and/or <br> and |

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## 5. Press (A) to exit the setting screen.

## Alarm Operation

The alarm tone sounds at the preset time for 20 seconds, regardless of the mode the watch is in. In the case of the snooze alarm, the alarm operation is performed a total seven times, every five

- Alarm and Hourly Time Signal operations are performed in accordance with the

Timekeeping Mode time.

- 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 (page E-9)
Displaying the ENFI.' setting screen (page E-25)
To test the alarm
In the Alarm Mode, hold down (D) to sound the alarm


## To turn an alarm on and off

Snooze alarm indicator 1. In the Alarm Mode, use (D) and (B) to select an alarm screen
2. Press (A) to toggle the selected alarm between on and - Turnin

Turning on an alarm displays the alarm on indicator on its Alarm Mode screen (FLII, FILE, FLE, FL4, or SH|I).
 that is currently 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 alarm operations.


## To turn the Hourly Time Signal on and off

Hourly time signal on indicator 1. In the Alarm Mode, use (D) and (B) to select the Hourly Time Signal (EItie)
2. Press (A) to toggle it on and off.

Thes (A) Time Sig and
ondicator (SIG) is shown on the display in all modes while this function is turned on.

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World Time


To toggle a city code time between Standard Time and Daylight Saving Time (A) (A) $6-30$ (B) 1. In the World Time Mode, use (D) and (B) to display the city code (time zone) whose Standard Tine
2. Hold down (A) for about one second to toggle 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.

Illumination


This watch has an EL (electro-luminescent) panel that causes the entire display to glow for easy reading in the dark. The auto light turns on illumination automatically when you angle the watch towards your face for reading. - Auto light must be enabled (page E-35) for it to operate - See "Illumination Precautions" (page E-42) for more important information.

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

- The above operation illuminates the display regardless of whether auto light is enabled or disabled.
- You can use the procedure below to select either 3 seconds or 5 seconds as the illumination duration. When you press (L), the illumination will remain on for abou 3 seconds or 5 seconds, depending on the current illumination duration setting.


## To specify the illumination duration



1. In the Timekeeping Mode, hold down (A) until the
seconds start to flash, which indicates the setting screen.
2. While the seconds are flashing, press (B) to toggle the setting between 3 seconds ( $\%$ ) and 5 seconds (\%). 3. Press (A) to exit the setting screen

About auto light
While auto light is enabled, illumination turns on 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 at more than 40 degrees causes illumination to turn on.

- Wear the watch on the outside of your wrist.



## Warning!

- Always make sure you are in a safe place whenever you are reading the watch using auto light. 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 auto light does not startle or distract others around you.
- When you are wearing the watch, make sure that auto light is disabled before

Sudden and unintended operation of auto light can create a distraction, which can result in a traffic accident and serious personal injury.
To enable or disable auto light
In the Timekeeping Mode, hold down (B) for about three seconds to toggle auto light between enabled (LT shown on the display) and disabled (LT not displayed)

- The auto light enabled indicator (LT) is on the display in all modes while auto light is enabled.
- Auto light remains enabled for about six hours. After that it becomes disabled automatically.


## 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 Areas
There are three graphic areas named A, B, and C. The information shown in each graphic area depends on the current mode


- The following table shows the information that appears in graphic area A

| Mode | Graphic Area A |
| :---: | ---: |


| Mode | G |
| :--- | :--- |
| Timekeeping | Current time seconds |

World Time $\quad$ Current time seconds

| Stopwatch (ST1 and ST2) | Elapsed time seconds |
| :--- | :--- |

Countdown Timer $\quad$ Countdown seconds

Alarm $\quad$ No indication

- In all modes, graphic area B shows the Stopwatch Mode (ST1) minutes (one segmes
segment (ST2) minutes (one segment each for 5 minutes, 10 minutes, etc.)

Flash Alert


When Flash Alert is turned on, the illumination flashes for the alarms, the Hourly Time Signal, the countdown alarm, and stopwatch (ST1) auto start.
To turn Flash Alert on and off
In the Timekeeping Mode, hold down (D) for about three econds to toggle Flash Alert on (Far not displayad). displayed) or off (Flash Alert indicator not displayed) - Illumination flashes twice when you turn Flash Alert on - While Flash Alert is turned on, the Flash Alert indicator remains on the display in all modes.

- Note that pressing (D) to toggle Flash Alert on or off will also switch timekeeping between 12-hour and 24 -hour format.


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 stopwatch auto start all operate normally.

To turn the button operation tone on and off In any mode (except when a setting screen is on the display), hold down (C) to toggle the button operation tone on ( $\mathcal{X}$ not displayed) and off ( $\mathcal{X}$ displayed).

- Holding down (C) to turn the button operation tone on or off also causes the watch's current mode to change
- The mute indicator is displayed in all modes when the button operation tone is turned off.


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## Auto Return Features

- If you leave the watch in the Alarm Mode for two or three minutes without performing any operation, it automatically changes to the Timekeeping Mode
- 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 (B) 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 scrol operation scrolls at high speed.

## nitial 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 $\boldsymbol{\theta} \boldsymbol{\theta}$ 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 $0 f$ 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

All World Time Mode times are calculated from the current Home City time in the Timekeeping Mode using UTC time differential values.

- The seconds count of the World Time is synchronized with the seconds count of the Treekeeping Mode.
ial 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 "Coordinated Universal Time", which is the world-wide scientific standard of timekeeping. It is based upon carefully maintained world-wide scientific standard of timekeeping. It is based upon carefully maintain seconds are added or subtracted as necessary to keep UTC in sync with the Earth's rotation.

Illumination Precautions

- The electro-luminescent panel that provides illumination loses power after very long use.
- 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 turns off automatically whenever an alarm sounds.
- Frequent use of illumination runs down the battery.


## Auto light precautions



- 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 degrees above or the ground.
-lllumination turns off in about
watch pointed towards your face second, even if you keep the Static electricity or magnetic force
operation of auto light. If illumination does not wurn proper 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 you turn the face of the
- 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 auto light, and does not indicate a problem with the watch.


## Specifications

Accuracy at normal temperature: $\pm 15$ seconds a month
Timekeeping: Hour, minutes, seconds, p.m. (P), month, day, day of the week Time format: 12-hour and 24-hour
Calendar system. Fur Auto-calendar pre-programmed from the year 2000 to 2099 . 0 . 14.0); Daylight Saving Time (summer time)/Standard Time

Stopwatch (ST1)
Measuring unit: $1 / 100$ second
Measuring capacity: 999:59' 59.99
Measuring modes
Other: Auto-Start
Stopwatch (ST2)
Measuring unit: $1 / 100$ second
Measuring capacity: 999:59' 59.99
Measuring modes: Elapsed time, split time, two finishes
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Countdown Timer
Measuring unit: 1 second
Input range: 1 minute to 24 hours (1-minute increments and 1 -hour increments)
Other: Auto-repeat timing; Progress beeper
Alarms: 5 multi-function alarms (with 1 snooze alarm); Hourly Time Signal
World Time: 48 cities ( 29 time zones)
Other: Daylight Saving Time/Standard Time
Illumination: EL (electro-luminescent panel); Selectable illumination duration;
sh alert
Battery: One lithium battery (Type: CR2025)
Approximately 3 years on type CR2025 ( 20 seconds of alarm operation per day
(with flash alert), one countdown timer operation (with progress beeper and flash
alert) per week, one stopwatch operation (with auto start and flash alert) per week, 5 seconds of illumination per day)

Specifications are subject to change without notice.

City Code Table

| City <br> Code | City | UTC <br> Differential | Other major cities in same time zone |
| :---: | :---: | :---: | :--- |
| PPG | Pago Pago | -11 |  |
| HNL | Honolulu | -10 | Papeete |
| ANC | Anchorage | -9 | Nome |
| LAX | Los Angeles | -8 | San Francisco, Las Vegas, Vancouver, Seattle/ <br> Tacoma, Dawson City |
| DEN | Denver | -7 | El Paso, Edmonton |
| MEX | Mexico City | -6 | Winnipeg, Houston, Dallas/Fort Worth, New Orleans |
| CHI | Chicago | -6 |  |
| NYC | New York | -5 | Montreal, Detroit, Miami, Boston, Panama City, <br> Havana, Lima, Bogota |
| CCS | Caracas | -4 | La Paz, Santiago, Port Of Spain |
| YYT | St. Johns | -3.5 |  |
| RIO | Rio De Janeiro | -3 | Sao Paulo, Brasilia, Montevideo |
| BUE | Buenos Aires | -3 |  |
| RAI | Praia | -1 |  |

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| City Code | City | UTC Differential | Other major cities in same time zone |
| :---: | :---: | :---: | :---: |
| LON | London | 0 | Dublin, Lisbon, Casablanca, Abidjan |
| DKR | Dakar | 0 | Dubin, Lisbon, Casablanca, Abidan |
| MAD | Madrid | +1 | Milan, Amsterdam, Algiers, Hamburg, Frankfurt, Vienna |
| PAR | Paris |  |  |
| MCM | Monte Carlo |  |  |
| ROM | Rome |  |  |
| BER | Berlin |  |  |
| ATH | Athens | +2 | Istanbul, Beirut, Damascus, Cape Town |
| JNB | Johannesburg |  |  |
| ANK | Ankara |  |  |
| NIC | Nicosia |  |  |
| HEL | Helsinki |  |  |
| CAI | Cairo |  |  |
| JRS | Jerusalem |  |  |

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| City Code | City | UTC Differential | Other major cities in same time zone |
| :---: | :---: | :---: | :---: |
| MOW | Moscow | + 3 | Kuwait, Riyadh, Aden, Addis Ababa, Nairobi |
| JED | Jeddah |  | Kuwait, Riyadn, Aden, Addis Ababa, Nairobi |
| THR | Tehran | +3.5 | Shiraz |
| DXB | Dubai | +4 | Abu Dhabi, Muscat |
| KBL | Kabul | +4.5 |  |
| KHI | Karachi | +5 | Male |
| DEL | Delhi | +5.5 | Mumbai, Kolkata |
| DAC | Dhaka | +6 | Colombo |
| RGN | Yangon | +6.5 |  |
| BKK | Bangkok | +7 | Jakarta, Phnom Penh, Hanoi, Vientiane |
| SIN | Singapore | +8 | Kuala Lumpur, Taipei, Manila, Ulaanbaatar |
| HKG | Hong Kong |  |  |
| BJS | Beijing Perth |  |  |
| SEL | Seoul | +9 | Pyongyang |
| TYO | Tokyo |  |  |


| City <br> Code | City | UTC <br> Differential | Other major cities in same time zone |
| :---: | :---: | :---: | :--- |
| ADL | Adelaide | +9.5 | Darwin |
| SYD | Sydney | +10 | Melbourne, Guam, Rabaul |
| NOU | Noumea | +11 | Port Vila |
| WLG | Wellington | +12 | Christchurch, Nadi, Nauru Island |

* As of January 2016, the official UTC offset for Caracas, Venezuela (CCS) has been changed from -4 to -4.5 , but this watch still uses an offset of -4 (the old offset) for CCS.
- This table shows the city codes of this watch
- The rules governing global times (UTC offset and GMT differential) and summer time are determined by each individual country.

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