## Operation Guide 3160

## 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.


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

Approximately 5 minutes exposure to bright suniight coming in through a window Approximately about 8 hours exposure to indoor fluorescent lighting

- Be sure to read "Power Supply" 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" for more information

About This Manual

- Depending on the model of your watch, display text appears either as dark figures - Depending on the model of your watch, display text appears either as dark figures 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


Alarm Mode



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. 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 are displayed in accordance with the time and date settings you configure in the Timekeeping Mode.
To set the time and date manually

1. In the Timekeeping Mode hold down (A) until the city code starts to flash, which indicates the setting screen.
2. 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".

3. Press (c) to move the flashing in the sequence shown below to select the other setting.


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

4. 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: |
| :---: | :---: | :---: |
|  | Change the city code | Use (D) (east) and (B) (west). |
| $\cdots$ | Toggle between Daylight Saving Time (5ा) and Standard Time ( FF ). | Press (D). |
| \| | Toggle between 12-hour ( $\ddagger=H$ ) and 24hour ( $\mathbf{\Xi} \boldsymbol{4} \mathrm{H}$ ) timekeeping | Press (D). |
| $517$ | Reset the seconds to $\boldsymbol{\theta} \boldsymbol{A}$ | Press (D). |
| P7:5I | Change the hour and minutes | Use (D) (+) and (B) (-). |
|  | Change the year, month, or day | Use (D) (+) and (B) (-). |
| F=- | Toggle between Power Saving on $(\boldsymbol{f} \boldsymbol{f} \boldsymbol{f})$ and off ( $\boldsymbol{f} \boldsymbol{F F}$ ) | Press (D). |


5. 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.

12-hour and 24-hour 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 $11: 59 \mathrm{p} . \mathrm{m}$. 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 Dayligh Saving Time.
To change the Daylight Saving Time (summer time) setting

1. In the Timekeeping Mode, hold down (A) until the city

indicator displayed) and Standard Time (DST indicator not displayed)
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.

World Time
World Time shows the current time in 48 cities (29 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" 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).


World Time Moder

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To view the time in another city
While in the World Time Mode, use the (D) to scroll through the city codes (time zones).

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

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


DST indicator 1. In the World Time Mode, use (D) to display the city cod (time zone) whose Standard Time/Daylight Saving Time setting you want to change.
2. 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. setting affects only the currently displayed city code. Other city codes are not affected.
dote city coyight Saving Time while UTC is selected as the city code.

Alarms


- To set a one-time alarm, display an alarm screen FLI $1, F L E, F L \Xi$ and $F L 4$. To set the snooze alarm, display the $=1 \mathbf{Z}$ screen.
- The snooze alarm repeats every five minutes.

2. After you select an alarm, hold down (A) until the hour setting of the alarm time This fash, which indicates the setting screen
3. Press (C) to move the flashing between the hour and minute settin
4. 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).

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

## 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
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
Displaying the $=\mathrm{N} \mathrm{Z}$ setting screen
To test the alarm
In the Alarm Mode, hold down (D) to sound the alarm.
To turn an alarm on and off
(A) (B) 1. In the Alarm Mode, use (D) to select an alarm.
 1F:HAAf $=1$ Mode screen.
- In all modes, the alarm on indicator is shown for any alarm that is currently turned on.
Snooze ON - The alarm on indicator flashes while the alarm is
alarm sounding.
The snooze alarm indicator $(\overline{\mathrm{sNz}})$ flashes while the snooze alarm is sounding and during the 5 -minute intervals between alarms.

To turn the Hourly Time Signal on and off
 Hourly time signal
on indicator
Stopwatch



Countdown Timer


You can set the countdown timer within a range of one minute to 24 hours. An alarm sounds when the countdown reaches zero.
All of the perations 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.

See "To configure the countdown timer" for information about setting up the timer.

## Countdown End Beeper

The countdown end beeper lets you know when the countdown reaches zero. The beeper stops after about 10 seconds or when you press any button.
To configure the countdown timer

1. While the countdown start time is on the display in the


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 (D) and (B) to change it as described below.

| Setting | Screen | Button Operation |
| :---: | :---: | :---: |
| Hours, Minutes | M19 | Use (D) (+) and B ( - ) to change the setting. |

- To specify a countdown start time of 24 hours, set $\boldsymbol{0}: \mathrm{ft}$.

4. Press (A) to exit the setting screen.

To use the countdown timer
Timer start time Press (D) while in the Countdown Timer Mode to start the
 - The countdown timer operation con 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 (A). This returns the countdown time to its starting value.

Illumination


This watch has an EL (electro-luminescent) panel that causes the entire display to glow for easy reading in the automatically when you angle the watch towards your automa
face.

- The
the auto light switch must be turned on (indicated by the auto light switch on indicator) for it to operate. See "lllumination Precautions" for other important information about using illumination.
To illuminate the display manually
In any mode, press (B) to turn on illumination.
The above operation turns on illumination regardless of the current auto light switch setting.


## About the Auto Light Switch

Turning on the auto light switch causes illumination to turn 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 more than 40 degrees causes illumination to turn on

- Wear the watch on the outside of your wrist



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Warning!
Always make sure you are in a safe place whenever you are reading the display of 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 startle or distract others around you.

- When you are wearing the watch, make sure that its auto light switch is turned off before riding 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 the Timekeeping Mode, hold down (B) for about three seconds to toggle the auto In the Timekeeping Mode, hold down B for about three seco
light switch on (A.EL displayed) and off (A.EL not displayed).
- The auto light switch on indicator (A.EL) is on the display in all modes while the auto light switch is turned.


## Power Supply

This watch is equipped with a solar cell and a special rechargeable battery (secondary battery) that is charged by the electrical power produced by the solar cell. The illustration shown below shows how you should position the watch for charging.
Example: Orient the watch so its face is
pointing at a light source.
The illustration shows how to position a
Note that charging efficiency drops when any part of the solar cell is blocked by clothing, etc.

- You should try to keep the watch outside of your sleeve as much as possible. Charging
is reduced significantly if the face is
covered only partially.


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 special rechargeable battery to store power produced by the solar cell, so regular battery replacement is not required. However, after very long use, the rechargeable battery may lose its ability to achieve a full charge. If you experience problems getting the special rechargeable battery to charge fully, contact your dealer or CASIO distributor about having it replaced.
- Never try to remove or replace the watch's special battery yourself. Use of the wrong type of battery can damage the watch.
and the current time and all other settings return to their initial factory defaults whenever battery power drops to Level 5 and
Turn on the watch's Powery replaced.
to bright light when storing it for battery from going dead.
Battery Power Indicator and Recover Indicator
The battery power indicator on the display shows you the current status of the rechargeable battery's powe

|  | Level | Battery Power Indicator | Function Status |
| :---: | :---: | :---: | :---: |
|  | 1 | $\square$ | All functions enabled. |
|  | 2 | $\xrightarrow[L-\bar{M} \cdot \mathrm{H}]{\text { L }}$ | All functions enabled. |
|  | 3 | $\begin{aligned} & \begin{array}{l} \text { M111111/ } 111111 \\ \text { (Charge Soon Alert) } \end{array} \\ & \hline 11 \end{aligned}$ | Illumination and beeper disabled. |
| Battery power indicator | 4 | $\underset{\substack{\mathrm{CHG} \\ 11 /}}{\square_{\mathrm{LOMOH}}}$ | Except for timekeeping and the CHG (charge) indicator, all functions and display indicators disabled. |
|  | 5 | $\xrightarrow[L \text { L.M.H }]{ }$ | All functions disabled. |

- The flashing L.Let indicator at Level 3 tells 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.
- 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

- Performing illumination, or beeper operations during a short period may cause $\stackrel{-\cdots \cdot \vec{H}}{ }$ (recover) to appear on the display.
After some time, battery power will recover and $-\overrightarrow{L \cdot \omega \cdot \vec{H}}$ (recover) will disappear, indicating that the above
functions are enabled again.
means that remaining battery power is low. Leave the watch in bright light to allow it to charge.


## 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

- Under direct sunlight

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 <br> 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.
- Stable operation is promoted by frequent exposure to light.

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

| Exposure Level (Brightness) | Approximate Exposure Time |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Level 5 | Level 4 | Level 3 | Level 2 | Level 1 |
| Outdoor Sunlight (50,000 lux) | 2 hours |  |  | 20 hours | 6 hours |
| Sunlight Through a Window ( 10,000 lux) | 8 hours |  |  | 99 hours | 27 hours |
| Daylight Through a <br> Window on a Cloudy <br> Day (5,000 lux) | 15 hours |  |  | 201 hours | 54 hours |
| Indoor Fluorescent Lighting (500 lux) | 171 hours |  |  | ------- | ------- |

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


## Reference

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

Button Operation Tone


The button operation tone sounds any time you press on 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, normally.
To turn the button operation tone on and off
In any mode (except when a setting screen is on the display), hold down © to toggle the button operation tone on ( $\&$ not displayed) and off ( $\&$ displayed).

- Holding down (C) to turn the button operation tone on or off also causes the watch's The $x$ indicator is displa
dicator is displayed in all modes when the button operation tone is turned

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 Saving function.

| Elapsed Time <br> in Dark | Display | Operation |
| :---: | :---: | :--- |
| 60 to 70 minutes | Blank, with Power Saving <br> indicator (PS) flashing | All functions enabled, except for the <br> display |
| 6 or 7 days | Blank, with Power Saving <br> indicator (PS) not flashing | Beeper tone, illumination, and display <br> are disabled. |

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

To recover from the sleep state
Perform any one of the following operations.
Perform any one of the following op

- Press any button
- Angle the watch towards your face for reading

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 © nine times until the Power Saving on/of screen appears.
2. Press (D) to toggle Power Saving on ( $\boldsymbol{H} \boldsymbol{f} \boldsymbol{f}$ ) and off ( $\boldsymbol{\theta} \boldsymbol{f F}$ )

Press (A) to exit the setting screen.
modes while Power Saving is turned on the display in all

## On/Off status

 modes while Power Saving is turned on.
## Auto Return Features

- flyou 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.


## Scrolling

The (B) and (D) 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.

## Initial Screens

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

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Timekeeping

- Resetting the seconds to $4 \boldsymbol{f}$ 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 $\mathbf{A E}$ without changing the minutes.
- 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
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. Frequent use of off automatically whenever an alarm sounds
.

Auto light switch precautions
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

More than 15 degrees
too high
 more than 15 degrees above or below parallel. Make
sure that the back of your hand is parallel to the ground.
Illumination turns off after a preset amount of time ( 1.5 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 toward 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


## Specifications

Accuracy at normal temperature: $\pm 15$ seconds a month
Tmekeeping: Hour, minutes, seconds, p.m. (P), month, day, day of the week Time format. 12-hour and 24-hour
anlendar system: Full Auto-calendar pre-programmed from the year 2000 to 2099 . Home City code (can be assigned one of 48 city codes); Standard Time Daylight Saving Time (summer time)
World Time: 48 cities ( 29 time zones)
Other: Daylight Saving Time/Standard Time
Alarms: 5 daily alarms (four one-time alarms; one snooze alarm); Hourly Time Signal
Stopwatch:
Measuring unit: 1/100 second
Measuring capacity: $23: 59^{\prime} 59.99^{\prime \prime}$
Measuring modes:
Measuring unit: 1 second
Input range: 1 minute to 24 hours (1-minute increments and 1-hour increments)
Illumination: EL (electro-luminescent panel); Auto Light Switch
Other: Button operation tone on/off
Power Supply: Solar cell and one rechargeable battery
Approximate battery operating time: 11 months (from full charge to Level 4) under
he following conditions.

- Watch not exposed to light

Internal timekeeping
Display on 18 hours per day, sleep state 6 hours per day
10 seconds of alarm operation per day day
Frequent use of illumination runs down the battery. Particular care is required when using the auto light switch.

City Code Table

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


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

Based on data as of June 2008 ind time are determined by each individual country.
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