

Operation Guide 5269

CASIO®

ENGLISH

Congratulations upon your selection of this CASIO watch.

Warning!

- The measurement functions built into this watch are not intended for taking measurements that require professional or industrial precision. Values produced by this watch should be considered as reasonable representations only.
- Note that CASIO COMPUTER CO., LTD. assumes no responsibility for any damage or loss suffered by you or any third party arising through the use of this product or its malfunction.

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- To ensure correct direction readings by this watch, be sure to perform bidirectional calibration before using it. The watch may produce incorrect direction readings if you do not perform bidirectional calibration. For more information, see "To perform bidirectional calibration" (page E-36).
- Keep the watch away from audio speakers, magnetic necklace, cell phone, and other devices that generate strong magnetism. Exposure to strong magnetism can magnetize the watch and cause incorrect direction readings. If incorrect readings continue even after you perform bidirectional calibration, it could mean that your watch has been magnetized. If this happens, contact your original retailer or an authorized CASIO Service Center.

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About This Manual

- Depending on the model of your watch, digital 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.
- 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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Things to check before using the watch**1. Check the Home City and the daylight saving time (DST) setting.**

Use the procedure under "Configuring Home City Settings" (page E-17) to configure your Home City and daylight saving time settings.

Important!

Proper World Time Mode, Sunrise/Sunset Mode, and Moon Age Mode data depend on correct Home City, time, and date settings in the Timekeeping Mode. Make sure you configure these settings correctly.

2. Configure latitude and longitude settings for your current location.

See "To select a Home City by configuring latitude and longitude settings" (page E-20).

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3. Set the current time.

See "Configuring Current Time and Date Settings" (page E-22).

The watch is now ready for use.

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Mode Reference Guide

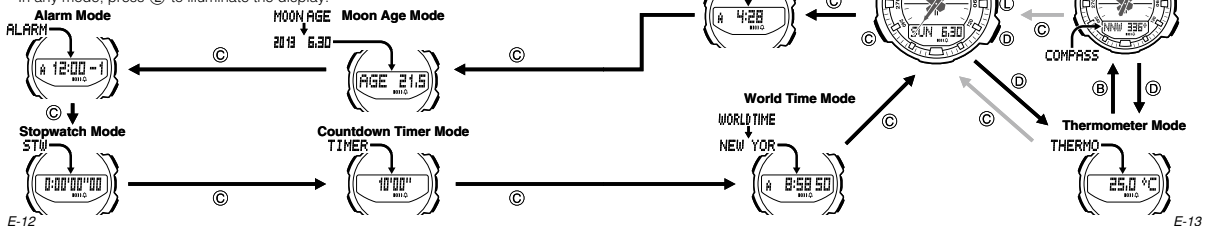
Your watch has 9 "modes". The mode you should select depends on what you want to do.

To do this:	Enter this mode:	See:
<ul style="list-style-type: none"> View the current time and date in the Home City Configure Home City and daylight saving time (DST) settings Configure current location latitude and longitude settings Configure time and date settings 	Timekeeping Mode	E-16
<ul style="list-style-type: none"> Determine your current bearing or the direction from your current location to a destination as a direction indicator and angle value Determine your current location using the watch and a map 	Digital Compass Mode	E-29
Determine the temperature at your current location	Thermometer Mode	E-43
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View the current time in one of 48 cities (31 time zones) around the globe	World Time Mode	E-63

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Selecting a Mode

- The illustration below shows which buttons you need to press to navigate between modes.
- To return to the Timekeeping Mode from any other mode, hold down (C) for about two seconds.
- In any mode, press (L) to illuminate the display.



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General Functions (All Modes)

The functions and operations described in this section can be used in all of the modes.

Auto Return Features

- If you do not perform any operation for a certain amount of time in certain modes as shown in the table below, the watch will automatically return to the Timekeeping Mode.

Mode	No operation time
Digital Compass, Thermometer	1 to 2 minutes
Sunrise/Sunset, Moon Age, Alarm	2 to 3 minutes

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

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Initial Screens

When you enter the Sunrise/Sunset Mode, Digital Compass Mode, Alarm Mode, or World Time Mode, the data you were viewing when you last exited the mode will appear first.

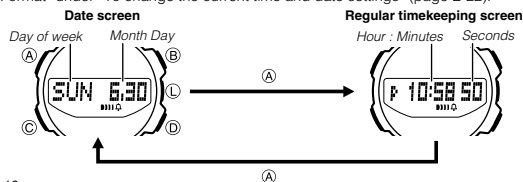
Scrolling

The (B) and (D) buttons are used on the setting screen to scroll through available settings on the digital display. In most cases, holding down these buttons during a scroll operation scrolls through the data at high speed.

Timekeeping

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

- Each press of (A) in the Timekeeping Mode toggles the digital display between the current date and the current time.
- You can select one of the two following Date Screen display formats: SUN 6.30 or SUN 30.6. For information about how to select the format, see "Date Display Format" under "To change the current time and date settings" (page E-22).



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Configuring Home City Settings

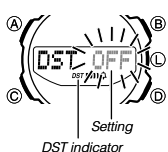
There are two Home City settings: actually selecting the Home City and selecting either standard time or daylight saving time (DST).

To configure Home City settings

- In the Timekeeping Mode, hold down (A) for at least two seconds until **ADJUST** appears on the digital display. This is the setting mode. Release (A) after **ADJUST** appears.
 - The city name of the currently selected Home City data will appear on the digital display with an arrow (▶) flashing to the left.
 - The watch will exit the setting mode automatically if you do not perform any operation for about two or three minutes.
 - For details about city data, see the "City Data Table" at the back of this manual.

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- Press (D) (East) and (B) (West) to scroll through city names until the one you want to use as your Home City data is displayed.
- Press (C) to display the DST setting screen.
- Press (D) to toggle between Daylight Saving Time (**DST ON**) and Standard Time (**DST OFF**).



- When the setting is the way you want, press (A) twice to return to the Timekeeping Mode.
 - The **DST** indicator appears to indicate that Daylight Saving Time is turned on.

Note

- After you specify city data, the watch will use UTC* offsets to calculate the current time for other time zones based on the current time in your Home City.
 - * *Coordinated Universal Time, the world-wide scientific standard of timekeeping.*
 - The reference point for UTC is Greenwich, England.*

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To change the Daylight Saving Time (summer time) setting

- In the Timekeeping Mode, hold down (A) for at least two seconds until **ADJUST** appears on the digital display. Release (A) after **ADJUST** appears.
 - The name of the city currently selected as your Home City will appear on the digital display with an arrow (▶) flashing to the left.
- Press (C) to display the DST setting screen.
- Press (D) to toggle between Daylight Saving Time (**DST ON**) and Standard Time (**DST OFF**).
- When the setting is the way you want, press (A) twice to return to the Timekeeping Mode.
 - The **DST** indicator appears to indicate that Daylight Saving Time is turned on.



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Configuring Latitude and Longitude Settings for Your Current Location

You can ensure correct display of sunrise and sunset time settings, and of moon ages by configuring latitude and longitude settings for your current location.

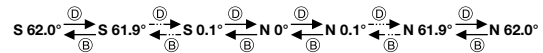
To select a Home City by configuring latitude and longitude settings



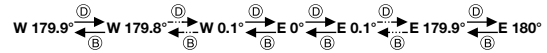
- In the Timekeeping Mode, hold down (A) for at least two seconds until **ADJUST** appears on the digital display. This is the setting mode. Release (A) after **ADJUST** appears.
 - Your current Home City data will appear on the digital display with an arrow (▶) flashing to the left.
- Press (A) to display the latitude setting screen with the current latitude setting flashing.

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- Use (D) (+) and (B) (-) to change the flashing value in 0.1° increments.
 - Holding down (D) or (B) while the latitude or longitude setting screen is displayed will scroll the value to the left of the decimal point (the value to the right does not change) at high speed.



- When the latitude is the value you want, press (C) to display the longitude setting screen with the current longitude setting flashing.
- Use (D) (+) and (B) (-) to change the flashing value in 0.1° increments.



- When the settings are the way you want, press (A) to return to the Timekeeping Mode.

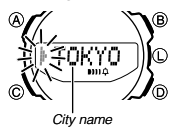
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Configuring Current Time and Date Settings

You can use the procedure below to adjust the current time and date settings if they are not correct.

Changing the digital Home City data should cause the analog time setting to change accordingly. If the analog time does not indicate the digital time, check the home positions of the hands and make adjustments if necessary (page E-26).

To change the current time and date settings

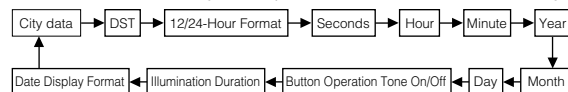


- In the Timekeeping Mode, hold down (A) for at least two seconds until **ADJUST** appears on the digital display. This is the setting mode. Release (A) after **ADJUST** appears.
 - The name of the city currently selected as your Home City will appear on the digital display with an arrow (▶) flashing to the left.

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- Use (D) and (B) to select the city data you want.
 - Select your Home City data before changing any other setting.
 - For full information on city data, see the "City Data Table" at the back of this manual.

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



- The following steps explain how to configure timekeeping settings only.
- When the timekeeping setting you want to change is flashing, use (B) and/or (D) to change it as described below.

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Screen	To do this:	Do this:
TOKYO	Change the city name	Use (D) (East) and (B) (West).
DST OFF	Toggle between Daylight Saving Time (DST ON) and Standard Time (DST OFF).	Press (D).
12H	Toggle between 12-hour (12H) and 24-hour (24H) timekeeping.	Press (D).
10:58 50	Reset the seconds to 00	Press (D).
2013 6.30	Change the hour or minute	Use (D) (+) and (B) (-).
0/M/Y	Change the year, month, or day	Use (D) (+) and (B) (-).
0/M/Y	Select the date display format (DMY, YMD, MDY)	Press (D).

- When the settings are the way you want, press (A) twice to return to the Timekeeping Mode.

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Note

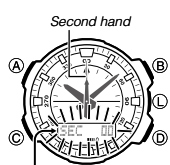
- For information about selecting a Home City and configuring the DST setting, see "Configuring Home City Settings" (page E-17).
- The watch's built-in full automatic calendar makes allowances for different month lengths and leap years. Once you set the date, there should be no reason to change it except after you have the watch's battery replaced.
- Changing your Home City setting will initialize the latitude and longitude settings to the location of the Home City.

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Hand Home Position Adjustment

The hour, minute, and second hands of this watch can be put out of position by strong magnetism or strong impact. When this happens, you can use the procedure below to adjust the hand positions.

To adjust home positions

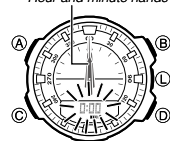


- In the Timekeeping Mode, hold down (A) for at least four seconds until **HAND SET** appears on the digital display. This is the setting mode. Release (A) after **HAND SET** appears.
 - This will cause **SEC 00** to flash on the digital display, indicating the second hand adjustment mode.

HAND SET

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Hour and minute hands



Correct hour and minute hand positions

- Check the position of the second hand.
 - If the second hand is pointing to 12 o'clock, it is in the correct home position. If it isn't, use (D) (forward) and (B) (back) to adjust the second hand position so it points to 12 o'clock.
 - Holding down either button will cause the second hand to move at high speed.
- Press (C). This will cause **0:00** to flash on the digital display, indicating the hour and minute adjustment mode.
- Check the positions of the hour and minute hands.
 - The hands are in the correct home positions if they are pointing to 12 o'clock. If they aren't, use (D) (forward) and (B) (back) to adjust their positions.
 - Holding down either button will cause the hour and minute hands to move at high speed.

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- Press (A) to exit the setting screen.
 - This will cause the hour and minute hands to move to the current Timekeeping Mode time.

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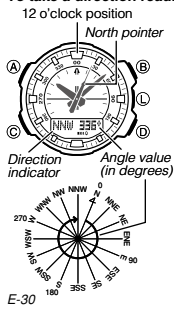
Taking Direction Readings

The watch has a magnetic sensor that makes it possible to take digital compass readings. You can use the digital compass to find the direction to a specific objective and to determine your current position.

- See "Magnetic North and True North" (page E-40) for information about the two types of north. For information about maximizing digital compass accuracy, see "Calibrating Direction Readings" (page E-34) and "Digital Compass Precautions" (page E-40).

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To take a direction reading



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- Point the 12 o'clock position of the watch in the direction you want to read.
 - In the Timekeeping Mode or Thermometer Mode, keep the watch horizontal as you press **(B)**.
 - COMPASS** will appear on the digital display and then direction reading will start.
 - After the watch completes a reading, the second hand will indicate north. The direction indicator will show a literal indicator (abbreviation) for the direction where 12 o'clock of the watch is pointed. A direction angle will also be displayed.
- Starting a digital compass direction reading causes consecutive readings to be taken each second for 20 seconds. After a series of consecutive readings is complete, --- appears in place of the literal direction indicator on the display.
- See "Digital Compass Readings" (page E-31) for information about what appears on the digital display.

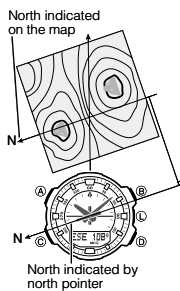
- Press **(C)** to return to the Timekeeping Mode.
 - If you do not perform any button operation for one or two minutes, the watch will automatically return to the Timekeeping Mode.

Digital Compass Readings

- The following table shows the meanings of each of the direction abbreviations that appear on the digital display.

Direction	Meaning	Direction	Meaning	Direction	Meaning	Direction	Meaning
N	North	NNE	North-northeast	NE	Northeast	ENE	East-northeast
E	East	ESE	East-southeast	SE	Southeast	SSE	South-southeast
S	South	SSW	South-southwest	SW	Southwest	WSW	West-southwest
W	West	WNW	West-northwest	NW	Northwest	NNW	North-northwest

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Example: Determining your current position and your objective on a map

Having an idea of your current location and the direction to your destination is important when mountain climbing or hiking. In this example, we show you how to plot directions on a map and determine your current location using direction measurements taken by the watch.

- In the Timekeeping Mode or Thermometer Mode, press **(B)**.

- Rotate the map (without moving the watch) until north on the map is aligned with north as indicated by the watch's second hand. Depending on how the watch is set up, it may be indicating magnetic north or true north.
 - Magnetic north:** Indicates north in accordance with the Earth's magnetic field.
 - True north:** Indicates the direction to the North Pole.
- For information about setting the watch up to indicate magnetic north or true north, see "Magnetic Declination Correction" (page E-37).
- Determine your location and destination by checking the map and the geographic contours around you.

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Calibrating Direction Readings

You can use the information in this section to calibrate direction readings, which helps to improve digital compass accuracy.

Direction Reading Calibration Methods

Important!

- To ensure correct direction readings by this watch, be sure to perform bidirectional calibration before using it. The watch may produce incorrect direction readings if you do not perform bidirectional calibration.
- Keep the watch away from audio speakers, magnetic necklace, cell phone, and other devices that generate strong magnetism. Exposure to strong magnetism can magnetize the watch and cause incorrect direction readings. If incorrect readings continue even after you perform bidirectional calibration, it could mean that your watch has been magnetized. If this happens, contact your original retailer or an authorized CASIO Service Center.

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Bidirectional Calibration

- Use this method when using the watch to take readings in an area where magnetic force is present, or if you notice that the readings produced by the watch are different from another compass.

Magnetic Declination Calibration

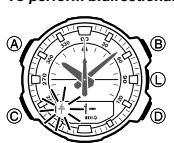
- You can use this method to specify a magnetic declination value, which sets the digital compass up to take magnetic north or true north readings.

Precautions about bidirectional calibration

- You can use any two opposing directions for bidirectional calibration. You must, however, make sure that they are 180 degrees opposite each other. Remember that if you perform the procedure incorrectly, you will get wrong bearing sensor readings.
- Do not move the watch while calibration of either direction is in progress.
- You should perform bidirectional calibration in an environment that is the same as that where you plan to be taking direction readings. If you plan to take direction readings in an open field, for example, calibrate in an open field.

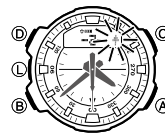
E-35

To perform bidirectional calibration



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- In the Digital Compass Mode, hold down **(A)** for two seconds.
 - This will cause the bidirectional calibration screen to appear on the digital display.
 - The second hand will move to 12 o'clock. This causes an arrow (➔) symbol to flash on the left side of the digital display and -1- to be displayed to indicate that the watch is ready for calibration of the first direction.
- Place the watch on a level surface facing any direction you want, and press **(B)** to calibrate the first direction.
 - will remain on the digital display while calibration is in progress. **OK** will appear when first direction calibration is complete. About one second after that, the flashing arrow will change to point downwards (⬇) and -2- will be displayed. This means that the watch is ready for calibration of the second direction.



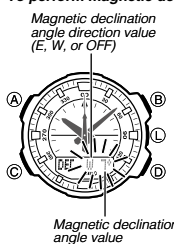
- Rotate the watch 180 degrees.
- Press **(B)** again to calibrate the second direction.
 - will remain on the digital display while calibration is in progress. **OK** will appear when second direction calibration is complete.
 - If **ERR** appears on the digital display, press **(B)** again to restart calibration.

Magnetic Declination Correction

With magnetic declination correction, you input a magnetic declination angle (difference between magnetic north and true north), which allows the watch to indicate true north. You can perform this procedure when the magnetic declination angle is indicated on the map you are using. Note that you can input the declination angle in whole degree units only, so you may need to round off the value specified on the map. If your map indicates the declination angle as 7.4°, you should input 7°. In the case of 7.6° input 8°, for 7.5° you can input 7° or 8°.

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To perform magnetic declination correction



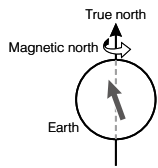
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- In the Digital Compass Mode, hold down **(A)** for two seconds.
 - This will cause the bidirectional calibration screen to appear on the digital display.
- Press **(C)** to display the magnetic declination setting screen (**DEC**).
- Use **(D)** (East) and **(B)** (West) to change the settings.
 - The following explains magnetic declination angle direction settings.
 - OFF:** No magnetic declination correction performed. The northerly magnetic declination setting (**DEC**) will be 0°.
 - E:** When magnetic north is to the east (east declination)
 - W:** When magnetic north is to the west (west declination)

- You can select a value within the range of W 90° to E 90° with these settings.
 - You can turn off (**OFF**) magnetic declination correction by pressing **(B)** and **(B)** at the same time.
 - The illustration, for example, shows the value you should input and the direction setting you should select when the map shows a magnetic declination of 7° West.
- When the setting is the way you want, press **(A)** to exit the setting screen.

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Digital Compass Precautions Magnetic North and True North



- The northerly direction can be expressed either as magnetic north or true north, which are different from each other. Also, it is important to keep in mind that magnetic north moves over time.
- Magnetic north is the north that is indicated by the needle of a compass.
 - True north, which is the location of the North Pole of the Earth's axis, is the north that is normally indicated on maps.
 - The difference between magnetic north and true north is called the "declination". The closer you get to the North Pole, the greater the declination angle.

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Storage

- The precision of the bearing sensor may deteriorate if the watch becomes magnetized. Because of this, you should store the watch away from magnets or any other sources of strong magnetism, including: permanent magnets (magnetic necklaces, etc.) and household appliances (TVs, personal computers, washing machines, freezers, etc.).
- Whenever you suspect that the watch may have become magnetized, perform the procedure under "To perform bidirectional calibration" (page E-36).

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Temperature

- Temperature is displayed in units of 0.1°C (or 0.2°F).
- The displayed temperature value changes to -- °C (or °F) if a measured temperature falls outside the range of -10.0°C to 60.0°C (14.0°F to 140.0°F). The temperature value will reappear as soon as the measured temperature is within the allowable range.

Display Units

You can select either Celsius (°C) or Fahrenheit (°F) for the displayed temperature value. See "To specify temperature unit" (page E-47) for more information.

Temperature Sensor Calibration

The watch's temperature sensor is calibrated at the factory and normally requires no further adjustment. If you notice serious errors in the temperature readings produced by the watch, you can calibrate the sensor to correct the errors.

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- Use (A) (+) and (B) (-) to calibrate the temperature value with the reading of another instrument.
 - Each press of a button changes the temperature value in units of 0.1°C (0.2°F).
 - To return the currently flashing value to its initial factory default setting, press (B) and (D) at the same time. **OFF** will appear at the flashing location for about one second, followed by the initial default value.
- Press (A) to return to the Thermometer Mode.

Thermometer Precautions

- Temperature measurements are affected by your body temperature (while you are wearing the watch), direct sunlight, and moisture. To achieve a more accurate temperature measurement, remove the watch from your wrist, place it in a well ventilated location out of direct sunlight, and wipe all moisture from the case. It takes approximately 20 to 30 minutes for the case of the watch to reach the actual surrounding temperature.
- When taking temperature readings, it is best to remove the watch from your wrist in order to eliminate the effects of body heat. Remove the watch from your wrist and allow it to hang freely from your bag or in another location where it is not exposed to direct sunlight.

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- Press (D) to toggle the temperature unit between °C (Celsius) and °F (Fahrenheit).
- After the setting is the way you want, press (A) to exit the setting screen.

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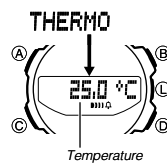
Location

- Taking a direction reading when you are near a source of strong magnetism can cause large errors in readings. Because of this, you should avoid taking direction readings while in the vicinity of the following types of objects: permanent magnets (magnetic necklaces, etc.), concentrations of metal (metal doors, lockers, etc.), high tension wires, aerial wires, household appliances (TVs, personal computers, washing machines, freezers, etc.).
- Accurate direction readings are impossible while in a train, boat, air plane, etc.
- Accurate readings are also impossible indoors, especially inside ferroconcrete structures. This is because the metal framework of such structures picks up magnetism from appliances, etc.

Thermometer

This watch uses a temperature sensor to take temperature readings.

To enter and exit the Thermometer Mode



- In the Timekeeping Mode or Digital Compass Mode, press (D).
 - **THERMO** will appear on the digital display for about one second indicating that temperature readings are being taken. After that, the measurement result will appear.
 - The watch will take temperature readings every five seconds for one or two minutes.
 - To restart temperature readings, press (D).
- Press (C) to return to the Timekeeping Mode.
 - If you do not perform any button operation for one or two minutes after temperature measurement is complete, the watch will automatically return to the Timekeeping Mode.

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Important!

- Incorrectly calibrating the temperature sensor can result in incorrect readings. Carefully read the following before doing anything.
 - Compare the readings produced by the watch with those of another reliable and accurate thermometer.
 - If adjustment is required, remove the watch from your wrist and wait for 20 or 30 minutes to give the temperature of the watch time to stabilize.

To correct the temperature value



- You can correct the temperature readings displayed by the watch in accordance with another measuring instrument for more accurate readings.
- In the Thermometer Mode, hold down (A) until the current temperature value flashes on the digital display. This is the setting screen.

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Specifying Temperature Unit

Use the procedure below to specify the temperature unit to be used in the Thermometer Mode.



- Important!**
When **TOKYO** is selected as the Home City, the temperature unit is set automatically to Celsius (°C). These settings cannot be changed.

To specify the temperature unit

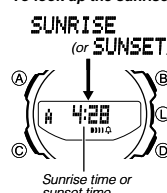
- Enter the Thermometer Mode and then hold down (A) for about two seconds until the current temperature value flashes on the digital display. This is the setting screen.
- Press (C) to display the temperature unit setting screen with either °C or °F (the current setting) flashing.

E-47

Looking up Sunrise and Sunset Times

You can use the Sunrise/Sunset Mode to look up the sunrise and sunset times for a particular date (year, month, day) and location.

To look up the sunrise and sunset times on a specific date



- Use (C) to select the Sunrise/Sunset Mode as shown on page E-13.
- **SUNRISE TIME** or **SUNSET TIME** will appear on the digital display for about one second. After that the current year, month, and day will appear for about one second.
 - Next, **CALC** will appear to indicate that calculation is in progress. After the calculation is complete, the sunrise time or sunset time for the current date will appear.
 - What appears first when the enter the Sunrise/Sunset Mode (either the sunrise time or sunset time) will be the time that was displayed when you last exited the Sunrise/Sunset Mode.

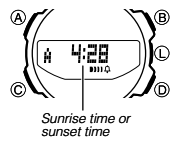
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Note

- Sunrise and sunset times are calculated in accordance with the current date based on the currently specified Home City, latitude, and longitude.
- Before trying to use the Sunrise/Sunset Mode, you need to configure settings for the Home City, longitude, and latitude for the location whose sunrise and sunset times you want to view.

To toggle between sunrise time and sunset time
Press (A).

To view the sunrise/sunset time for a particular date



- While the sunrise time or sunset time is displayed in the Sunrise/Sunset Mode, use (B) (+) and (D) (-) to scroll through the dates.
- The sunrise time or sunset time for the currently selected date will appear on the digital display.
 - You can select any date between January 1, 2000 and December 31, 2099.

Note

- If you think that the sunrise and/or sunset times are not correct for some reason, check the watch's Home City, longitude and latitude settings.
- The sunrise and sunset times displayed by this watch are times at sea level. Sunrise and sunset times are different at altitudes other than sea level.

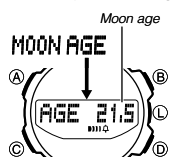
E-50

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Using Moon Data

The Moon Age Mode displays a value that indicates the Moon age at noon on the current date.

To look up the Moon age on a specific date



1. Use (C) to select the Moon Age Mode (MOON AGE) as shown on page E-12.
 - MOON AGE will appear on the digital display for about one second. After that the current year, month, and day will appear for about one second.
 - Next, CALC will appear on the digital display indicating that Moon age calculation is in progress. After the calculation is complete, the Moon age value for the current date will appear.

2. While a Moon age value is displayed you can use the (D) (+) and (B) (-) buttons to scroll from day to day.
 - Scrolling to another day will cause CALC to appear on the digital display for one second indicating that Moon age calculation is in progress. The Moon age for the selected date will appear when calculation is complete.
 - Hold down (C) for two seconds to return to the Timekeeping Mode.

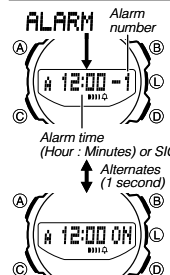
Note

- Moon age is calculated to an accuracy of ± 1 day.
- If the Moon data is not correct, check your Timekeeping Mode settings and correct them if necessary.

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Using the Alarm



You can set five independent daily alarms. When a daily alarm is turned on, an alarm tone will sound for about 10 seconds each day when the time in the Timekeeping Mode reaches the preset alarm time. This is true even if the watch is not in the Timekeeping Mode. You can also turn on an Hourly Time Signal, which will cause the watch to beep twice every hour on the hour.

To enter the Alarm Mode

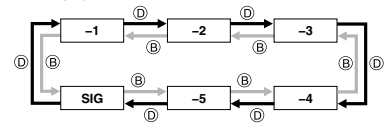
- Use (C) to select the Alarm Mode (ALARM) as shown on page E-12.
- ALARM will appear on the digital display for about one second. After that, the digital display will show the current alarm time and alarm number (-1 to -5), or the hourly time signal setting. In the case of an alarm, the digital display alternates at one-second intervals between the alarm number and the on/off setting screen.

- The alarm number indicates an alarm screen. SIG is shown when the Hourly Time Signal screen is on the digital display.
- When you enter the Alarm Mode, the data you were viewing when you last exited the mode appears first.

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.



2. Hold down (A) until the alarm time starts to flash. This is the setting screen.

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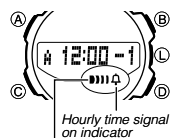
E-55

3. Press (C) to move the flashing between the hour and minute settings.
4. 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. or p.m.
5. Press (A) to exit the setting screen.

To test the alarm

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

To turn an alarm and the Hourly Time Signal on and off



1. In the Alarm Mode, use (D) and (B) to select an alarm or the Hourly Time Signal.
2. When the alarm or the Hourly Time Signal you want is selected, press (A) to toggle it between on and off.
 - The alarm on indicator (when any alarm is on) and the Hourly Time Signal on indicator (when the Hourly Time Signal is on) are shown on the digital display in all modes.

To stop the alarm
Press any button.

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Using the Stopwatch

The stopwatch measures elapsed time and split times.

To enter the Stopwatch Mode

- Use (C) to select the Stopwatch Mode (STW) as shown on page E-12.
- STW will appear on the digital display for about one second. Next, the digital display will change to show the stopwatch time.

To perform an elapsed time operation



To pause at a split time



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- Digital display alternates between SPL and the 1/100-second value at one-second intervals.

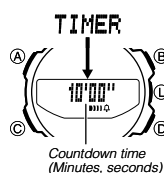
Note

- The Stopwatch Mode can indicate elapsed time up to 23 hours, 59 minutes, 59.99 seconds.
- Once started, stopwatch timing continues until you press (B) to reset it, even if you exit the Stopwatch Mode to another mode and even if timing reaches the stopwatch limit defined above.
- Exiting the Stopwatch Mode while a split time is frozen on the digital display clears the split time and returns to elapsed time measurement.

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Using the Countdown Timer

The countdown timer can be configured to start at a preset time and sound an alarm when the end of the countdown is reached.



To enter the Countdown Timer Mode
Use (C) to select the Countdown Timer Mode (TIMER) as shown on page E-12.

• **TIMER** will appear on the digital display for about one second. Next, the digital display will change to show the countdown time.

To specify the countdown start time

1. Enter the Countdown Timer Mode.
 - If a countdown is in progress (indicated by the seconds counting down), press (D) to stop it and then press (B) to reset to the current countdown start time.

- If a countdown is paused, press (B) to reset to the current countdown start time.
2. Hold down (A) until the minute setting of the current countdown start time starts to flash. This is the setting screen.
 3. Press (C) to move the flashing between the minute and second settings.
 4. Use (D) (+) and (B) (-) to change the flashing item.
 - To set the starting value of the countdown time to 100 minutes, set **00'00"**.
 5. Press (A) to exit the setting screen.

To perform a countdown timer operation



- Before starting a countdown timer operation, check to make sure that a countdown operation is not already in progress (indicated by the seconds counting down). If it is, press (D) to stop it and then (B) to reset to the countdown start time.

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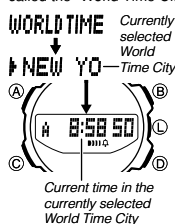
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• An alarm sounds for ten seconds when the end of the countdown is reached. This alarm will sound in all modes. The countdown time is reset to its starting value automatically after the alarm sounds.

To stop the alarm
Press any button.

Checking the Current Time in a Different Time Zone

You can use the World Time Mode to view the current time in one of 31 time zones (48 cities) around the globe. The city that is currently selected in the World Time Mode is called the "World Time City".



To enter the World Time Mode
Use (C) to select the World Time Mode (WORLD TIME) as shown on page E-13.

• **WORLD TIME** will appear on the digital display for about one second. Next, the name of the currently selected World Time city will scroll across the digital display. Finally, the current time in the World Time city will appear.

• To display the World Time city name again, press (A).

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To view the time in another time zone

In the World Time Mode, use (B) (East) and (D) (West) to scroll through World Time cities and view the current time in displayed city.

To specify standard time or daylight saving time (DST) for a city

1. In the World Time Mode, use (B) (East) and (D) (West) to display the world time city (time zone) whose Standard Time/Daylight Saving Time setting you want to change.
2. Hold down (A) for at least two seconds to toggle between Daylight Saving Time (DST ON) and Standard Time (DST OFF).
 - Changing the DST setting of your Home City in the World Time Mode will also change the DST setting of the Timekeeping Mode time.

- Note that you cannot switch between standard time/daylight saving time (DST) while **UTC** is selected as the World Time City.
- Note that the standard time/daylight saving time (DST) setting affects only the currently selected time zone. Other time zones are not affected.

E-64

E-65

To change the illumination duration

1. In the Timekeeping Mode, hold down (A) for at least two seconds until **ADJUST** appears on the digital display. This is the setting mode. Release (A) after **ADJUST** appears.
 - The name of the city currently selected as your Home City will appear on the digital display with an arrow (▶) flashing to the left.
2. Press (C) 10 times until **LIGHT 1** or **LIGHT 3** is displayed.
 - See step 3 under "To change the current time and date settings" (page E-22) for information about how to scroll through setting screens.
3. Press (D) to toggle the illumination duration between three seconds (**LIGHT 3** displayed) and 1.5 seconds (**LIGHT 1** displayed).
4. When the setting is the way you want, press (A) twice to return to the Timekeeping Mode.

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Illumination



The display of the watch is illuminated for easy reading in the dark.

To turn on illumination

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

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

Illumination Precautions

- Illumination may be hard to see when viewed under direct sunlight.
- Illumination turns off automatically whenever an alarm sounds.
- Illumination will not turn on while an alarm is sounding, while high-speed hand movement is in progress, while a sensor is taking a reading, or while the watch is performing calculation (**CALC** displayed). Illumination will turn on if (L) is pressed between sensor reading operations.
- Frequent use of illumination runs down the battery.

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 alarm, Hourly Time Signal, and Countdown Timer Mode alarm all operate normally.

To turn the button operation tone on and off

1. In the Timekeeping Mode, hold down (A) for at least two seconds until **ADJUST** appears on the digital display. This is the setting mode. Release (A) after **ADJUST** appears.
 - The name of the city currently selected as your Home City will appear on the digital display with an arrow (▶) flashing to the left.



2. Use (C) to cycle through settings on the digital display until the current button operation tone setting (**MUTE** or **KEY ♪**) is displayed.
 - See step 3 under "To change the current time and date settings" (page E-22) for information about how to scroll through setting screens.
3. Press (D) to toggle the button operation tone between on (**KEY ♪**) and off (**MUTE**).
4. When the setting is the way you want, press (A) twice to return to the Timekeeping Mode.

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Troubleshooting

Time Setting

Why is the current time setting off by a couple of hours?

Your Home City setting may be wrong (page E-17). Check your Home City setting and correct it, if necessary.

Why is the current time setting off by one hour?

You may need to change your Home City's standard time/daylight saving time (DST) setting. Use the procedure under "To change the current time and date settings" (page E-22) to change the standard time/daylight saving time (DST) setting.

Sensor modes

Why can't I change the temperature unit setting?

The temperature unit setting is always Celsius (°C) whenever TOKYO is selected as the Home City. In this case, the setting cannot be changed.

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Why does "ERR" appear while a sensor operation is in progress?

Subjecting the watch to strong impact can cause sensor malfunction or improper contact of internal circuitry. When this happens, ERR (error) will appear on the digital display and sensor operations will be disabled.

Direction Reading and Temperature Measurement



- If ERR appears while a measurement operation is being performed in a sensor mode, restart the measurement. If ERR appears on the digital display again, it can mean there is something wrong with the sensor.
- If ERR keeps appearing during measurement, it can mean there is a problem with the applicable sensor.

Why does "ERR" appear on the digital display following bidirectional calibration?

If - - - appears and then changes to ERR (error) on the calibration screen, it means that there is something wrong with the sensor.

- If ERR disappears after about one second, try performing the calibration again.
- If ERR keeps appearing, contact your original dealer or nearest authorized CASIO distributor to have the watch checked.

Whenever you have a sensor malfunction, take the watch to your original dealer or nearest authorized CASIO distributor as soon as possible.

What causes incorrect direction readings?

- Incorrect bidirectional calibration. Perform bidirectional calibration (page E-36).
- Nearby source of strong magnetism, such as a household appliance, a large steel bridge, a steel beam, overhead wires, etc., or an attempt to perform direction measurement on a train, boat, etc. Move away from large metal objects and try again.

E-72

What causes different direction readings to produce different results at the same location?

Magnetism generated by nearby high-tension wires is interfering with detection of terrestrial magnetism. Move away from the high-tension wires and try again.

Why am I having problems taking direction readings indoors?

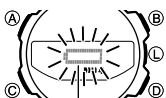
A TV, personal computer, speakers, or some other object is interfering with terrestrial magnetism readings. Move away from the object causing the interference or take the direction reading outdoors. Indoor direction readings are particularly difficult inside ferro-concrete structures. Remember that you will not be able to take direction readings inside of trains, airplanes, etc.

E-71

Battery

Why is the low battery alert flashing?

Battery power is low. Watch operations are disabled while the low battery alert is flashing on the digital display. If the low battery alert disappears after battery power recovers but then starts to flash again after a short while, it means that you need to have the watch's battery replaced.



Low battery alert

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Specifications

Accuracy at normal temperature: ±30 seconds a month

Digital Timekeeping: Hour, minutes, seconds, a.m. (A)/p.m. (P), month, day, day of the week

Time format: 12-hour and 24-hour

Calendar system: Full Auto-calendar pre-programmed from the year 2000 to 2099

Other: Home City (can be assigned one of 48 city codes); Standard Time / Daylight Saving Time (summer time)

Analog Timekeeping: Hour, minutes (hand moves every 10 seconds), seconds

Digital Compass: North indicated by second hand; 20 seconds continuous readings;

Calibration (bidirectional); Magnetic declination correction; Magnetic north indication; display of one of 16 direction indicators; Angle value 0° to 359°

Thermometer:

Measurement and display range: -10.0 to 60.0°C (or 14.0 to 140.0°F)

Display unit: 0.1°C (or 0.2°F)

Reading timing: 5-second intervals for 1 to 2 minutes

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Bearing Sensor Precision:

Direction: Within ±15°

Values are guaranteed for a temperature range of -10°C to 40°C (14°F to 104°F).

Temperature Sensor Precision:

±2°C (±3.6°F) in range of -10°C to 60°C (14.0°F to 140.0°F)

Moon Age: Display of Moon age values for specific dates

Sunrise/Sunset: Sunrise time and sunset time for specific date

Alarms: 5 daily alarms; hourly time signal

Stopwatch:

Measuring unit: 1/100 second

Measuring capacity: 23:59 59.99

Measuring modes: Elapsed time, split time

Countdown Timer:

Measuring unit: 1 second

Countdown start time setting range: 1 second to 100 minutes (1-minute increments and 1-second increments)

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World Time: 48 cities (31 time zones)

Other: Daylight Saving Time/Standard Time

Illumination: LED (Light-emitting diode); Selectable illumination duration (approximately 1.5 seconds or 3 seconds)

Other: Button operation tone on/off

Battery: Two silver oxide batteries (Type: SR927W)

Approximate battery operating time: 2 years under the following conditions:

- 1 illumination operation (1.5 seconds) per day
- 20 seconds of continuous direction readings, 20 times per month
- 2 minutes of continuous temperature readings (5-second intervals), once per week
- 20 seconds of alarm operation per day

Frequent use of illumination runs down the battery.

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City Code Table

UTC Offset/ GMT Differential	City Name	Latitude (°) North Latitude +, South Latitude -	Longitude (°) East Longitude +, West Longitude -
0.0	UTC	51.5	0
0.0	Lisbon	38.7	-9.1
0.0	London	51.5	-0.1
1.0	Madrid	40.4	-3.7
1.0	Paris	48.9	2.4
1.0	Rome	41.9	12.5
1.0	Berlin	52.5	13.4
1.0	Stockholm	59.3	18.1
2.0	Athens	38.0	23.7
2.0	Cairo	30.0	31.2

L

UTC Offset/ GMT Differential	City Name	Latitude (°) North Latitude +, South Latitude -	Longitude (°) East Longitude +, West Longitude -
2.0	Jerusalem	31.8	35.2
3.0	Moscow	55.8	37.6
3.0	Jeddah	21.5	39.2
3.5	Tehran	35.7	51.4
4.0	Dubai	25.3	55.3
4.5	Kabul	34.5	69.2
5.0	Karachi	24.9	67.0
5.5	Delhi	28.6	77.2
5.75	Kathmandu	27.7	85.3
6.0	Dhaka	23.7	90.4
6.5	Yangon	16.8	96.2
7.0	Bangkok	13.7	100.5

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UTC Offset/ GMT Differential	City Name	Latitude (°) North Latitude +, South Latitude -	Longitude (°) East Longitude +, West Longitude -
8.0	Singapore	1.3	103.8
8.0	Hong Kong	22.4	114.1
8.0	Beijing	39.9	116.4
8.0	Taipei	25.1	121.6
9.0	Seoul	37.6	127.0
9.0	Tokyo	35.7	139.7
9.5	Adelaide	-34.9	138.6
10.0	Guam	13.4	144.8
10.0	Sydney	-33.9	151.2
11.0	Noumea	-22.3	166.5
12.0	Wellington	-41.3	174.8
-11.0	Pago Pago	-14.3	-170.7

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UTC Offset/ GMT Differential	City Name	Latitude (°) North Latitude +, South Latitude -	Longitude (°) East Longitude +, West Longitude -
-10.0	Honolulu	21.3	-157.9
-9.0	Anchorage	61.2	-149.9
-8.0	Vancouver	49.3	-123.1
-8.0	Los Angeles	34.1	-118.2
-7.0	Edmonton	53.5	-113.5
-7.0	Denver	39.7	-105.0
-6.0	Mexico City	19.4	-99.1
-6.0	Chicago	41.9	-87.6
-5.0	New York	40.7	-74.0
-4.0	Santiago	-33.4	-70.6
-4.0	Halifax	44.6	-63.6
-3.5	St. Johns	47.6	-52.7

L-3

UTC Offset/ GMT Differential	City Name	Latitude (°) North Latitude +, South Latitude -	Longitude (°) East Longitude +, West Longitude -
-3.0	Rio De Janeiro	-22.9	-43.2
-2.0	Fernando de Noronha	-3.8	-32.4
-1.0	Praia	14.9	-23.5

- UTC Offset/GMT Differential: Based on data for June 2012
- The rules governing global times (GMT differential and UTC offset) and summer time are determined by each individual country.

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