Congratulations upon your selection of this CASIO watch.

Applications
The built-in sensors of this watch measure direction, barometric pressure, temperature and altitude. Measured values are then shown on the display. Such features make this watch useful when hiking, mountain climbing, or when engaging in other such outdoor activities.

Important!
• Your watch’s Altimeter Mode calculates relative altitude based on changes in barometric pressure measurement by its pressure sensor. For more information, see page E-36 and E-48.
• Immediately before embarking or otherwise taking altitude readings, be sure to specify a reference altitude. If you don’t the readings produced by the watch probably will not be very accurate. For more information, see “To specify a reference altitude value” (page E-44).

Your watch’s Altimeter Mode calculates relative altitude based on changes in barometric pressure measurement by its pressure sensor. 
For more information, see page E-36 and E-48.
• 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.
• When engaging in mountain climbing or other activities in which losing your way can create a dangerous or life-threatening situation, always use a second compass to confirm direction readings.
• 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.

Things to check before using the watch
1. Check the battery power level.

Determine if the battery power indicator (page E-11) is H or M indicated by the battery power indicator (page E-11)?

NO
Determine if any one of the following conditions exist?
• Battery power indicator indicates L and LOW is flashing on the display.
• CHG is flashing on the display.
• The face is blank.

YES
Power is low. Charge the watch by placing it in a location where it is exposed to light. For details, see “Charging the Watch” (page E-10).

YES
The watch is charged sufficiently. For manual manual charging, see “Charging the Watch” (page E-10).

NEXT
Go to step 2.

2. Check the Home City and the daylight saving time (DST) setting.

To set the time manually
To set the time using a time calibration signal
Proper time calibration signal reception, and World Time Mode and Sunrise/Sunset Mode data depend on correct Home City, time, and date settings in the Timekeeping Mode. Make sure you configure these settings correctly.

3. Set the current time.

• To set the time using a time calibration signal
See “To get ready for a receive operation” (page E-17).
• To set the time manually
See “Configuring Current Time and Date Settings Manually” (page E-33).

The watch is now ready for use.

For details about the watch’s radio-controlled timekeeping feature, see “Radio Controlled Atomic Timekeeping” (page E-15).

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 examples 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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Charging the Watch
The face of the watch is a solar panel that generates power from light. The generated power charges a built-in rechargeable battery, which powers watch operations. The watch charges whenever it is exposed to light.

Charging Guide
Whenever you are not wearing the watch, leave it in a location where it is exposed to light.

• Best charging performance is achieved by exposing the watch to the strongest light available.

When wearing the watch, make sure the face is not blocked from light by your clothing.

• The watch may enter a sleep state (page E-14) if its face is blocked by your sleeve even partially.

Warning
Leaving the watch in bright light for charging 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.

Leaving the watch in bright light for charging can cause it to become quite hot.

• Too close to a fluorescent lamp
• On the dashboard of a car parked in direct sunlight
• By an incandescent lamp, and sensor operations disabled.

The face of the watch is a solar panel that generates power from light. The generated power charges a built-in rechargeable battery, which powers watch operations. The watch charges whenever it is exposed to light.

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• By an incandescent lamp, and sensor operations disabled.
To turn auto receive on or off
1. Enter the Receive Mode (page E-26).
2. Hold down © until RC Hold appears on the display.
3. Press © to toggle auto receive between on (©) and off (©).
Mode Reference Guide

Your watch has 11 "modes": The mode you should select depends on what you want to do.

To do this: Enter this mode: See:
- View the current date in the Home City
- Configure Home City and daylight saving time (DST) settings
- Configure time and date settings manually
- Record the current date and time

Timekeeping Mode E-29

- View your watch's typical daily routine (initial screens)
- Select a mode

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 the Timekeeping Mode, press A to enter the StopWatch Mode (page E-77).

Auto Return Features
- The watch will automatically return to the Timekeeping Mode if you do not perform any button operation for a particular amount of time in each mode.

General Functions (All Modes)
The functions and operations described in this section can be used in all of the modes.

Auto Return Features
- The watch will automatically return to the Timekeeping Mode if you do not perform any button operation for a particular amount of time in each mode.

Timekeeping Mode
- Timekeeping Mode
- Use the Timekeeping Mode (TIME) to set and view the current time and date.
- Each press of A in the Timekeeping Mode will change screen contents as shown below.
- Day of the Week Screen
- Barometric Pressure
- Digital Compass
- Thermometer
- Receive
- Data Recall
- Alarm
- SunRISE/Sunset

Using Date/Time Records
- You can use the procedure in this section to create a date/time record of the current date (month, day, year) and time (minute/second). You can later recall a record to view it.

Important!
- The watch has memory for storage of up to 40 records of various types. If you perform an operation that creates a new record while there are already 40 records in memory, the oldest record is deleted automatically to make room for the new one (page E-70).

1. In the Timekeeping Mode, hold down C until the watch beeps (about 0.5 seconds). REC will appear on the display, indicating that a record of the current date and time was created.

2. To view a record, enter the Date/Time Mode (page E-26) and use the A and B buttons to scroll. See "Viewing Memory Records" (page E-70) for more information.

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 and summer time settings
1. In the Timekeeping Mode, hold down C for at least two seconds. SET and HOLD will appear on the display first, and then HOLD will disappear. Release C after Hold disappears.
   - 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 codes, see the "City Code Table" at the back of this manual.

2. Use A (East) and C (West) to scroll through the available city codes.
   - Keep scrolling until the city code you want to select as your Home City is displayed.

3. Press B to display the DST-setting screen.

4. Use A to cycle through the DST settings in the sequence shown below.
   - DST off (OFF)
   - DST on (ON)

Auto DST [AUTO]
5. After all of the settings are the way you want, press \( \text{E-38} \) twice to exit the setting screen.

• Daylight Saving Time is turned on when the DST indicator is on the display.

Note

• After you specify a city code, the watch will use UTC offsets in the World Time Mode to calculate the current time for other time zones based on the current time in your Home City.

• The reference point for UTC is Greenwich, England.

• Selecting some city codes automatically makes it possible for the watch to receive the time calculation signal for the corresponding area. See page E-15 for details.

### Configuring Current Time and Date Settings Manually

You can configure current time and date settings manually when the watch is unable to receive a time calculation signal.

Important!

• Before configuring current time and date settings, be sure you have set your Home City (page E-31).

To change the current time and date settings manually

1. In the Timekeeping Mode, hold down \( \text{SET} \) for at least two seconds. SET and Hold will appear on the display first, and then Hold will disappear. Release \( \text{SET} \) after Hold disappears.

2. Press \( \text{E-38} \) to move the flashing in the sequence shown below to select the other settings.

- Hold the seconds to 00
  - If the current seconds count is between 30 and 59, use \( \text{ALT} \) to change the unit for displayed altitude values to either meters (m) or feet (ft).

- Change the hour or minutes

- Change the month, year, or day

3. When the timekeeping setting you want to change is flashing, use \( \text{ALT} \) and/or \( \text{ALT} \) to change it as described below.

| Screen 1 | To do this: | Do this:
|----------|-------------|--------------|
| \( \text{SET} \) | Toggles between 12-hour (AM/PM) and 24-hour (00-24) timekeeping. | Press \( \text{ALT} \).
| 00 \( \text{AM} \) | Press \( \text{ALT} \) twice to exit the setting screen. | Press \( \text{ALT} \).

- The day of the week changes automatically when the date changes.

- While the 12-hour format is selected for timekeeping, a \( \text{P} \) (PM) indicator will appear for times from noon to 11:59 p.m. No indicator appears for times from midnight to 11:59 a.m. With 24-hour format, time is displayed from 00:00 to 23:59, without any \( \text{P} \) (PM) indicator.

- If you perform any button operation while in the Altimeter Mode, the watch will return to the Timekeeping Mode automatically after 12 hours (altitude auto reading interval 200'0). After one hour (altitude auto reading interval 0'05).

- If you perform any button operation while in the Altimeter Mode, the watch will return to the Timekeeping Mode automatically after 12 hours (altitude auto reading interval 200'0) or after one hour (altitude auto reading interval 0'05).

To select the altitude screen format

1. Enter the Altimeter Mode (page E-27).

2. Use \( \text{ALMT} \) to toggle the setting between the two screens.

Selecting the altitude auto reading interval

You can select either of the following two altitude auto reading intervals.

- 0'05: Readings at one-second intervals for the first three minutes, and then every five seconds for approximately the next hour.

- 200': Readings at one-second intervals for the first three minutes, and then every two minutes for approximately the next 12 hours.

Note

• If you do not perform any button operation while in the Altimeter Mode, the watch will return to the Timekeeping Mode automatically after 12 hours (altitude auto reading interval 200'0) or after one hour (altitude auto reading interval 0'05).

To select the altitude auto reading interval

1. In the Altimeter Mode, hold down \( \text{SET} \) for at least two seconds. You can release \( \text{SET} \) after ALMT appears.

2. Hold \( \text{ALT} \) twice to exit the setting screen.

3. Press \( \text{SET} \) to toggle the altitude auto reading interval setting.

4. Release \( \text{SET} \) after 0'05 or 200' appears.

4. After all of the settings are the way you want, press \( \text{E-38} \) twice to exit the setting screen.

### Using the Altimeter Mode

The watch takes altitude readings and displays results based on air pressure measurements taken by a built-in pressure sensor. It also saves various types of altitude records and data.

#### Getting Ready

Before actually taking an altitude reading you need to select an altitude screen format and select an altitude screen reading interval.

#### Selecting the Altitude Screen Format

You can select either of two screen formats for the Altimeter Mode.

<table>
<thead>
<tr>
<th>Screen 1</th>
<th>Screen 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altitude</td>
<td>Current time</td>
</tr>
<tr>
<td>Relative altitude</td>
<td>Altitude</td>
</tr>
</tbody>
</table>

Altitude tendency graph contents are updated each time you take an altitude reading.

To take readings of the difference between the altitude at your current location and the altitude at a reference point, select Screen 2. See "Using an Altitude Differential Value" (page E-42) for more information.

#### Specifying Temperature, Barometric Pressure, and Altitude Display Units

Use the procedure below to specify the temperature, barometric pressure, and altitude display units to be used in the Barometer/Thermometer Mode and the Altimeter Mode.

Important!

• Whether TYO (Tokyo) is selected as the Home City, the altitude unit is set automatically to meters (m), the barometric pressure unit to hectopascals (hPa), and the temperature unit to Celsius (°C). These settings cannot be changed.

To specify temperature, barometric pressure, and altitude display units

1. In the Timekeeping Mode, hold down \( \text{SET} \) for at least two seconds. SET and Hold will appear on the display first, and then Hold will disappear. Release \( \text{SET} \) after Hold disappears.

2. Press \( \text{E-38} \) as many times as necessary until \( \text{UNIT} \) appears on the display (page E-33).

3. Perform the operations below to specify the display units you want.

To specify this unit:

Press this key:

- To toggle between these settings:
  - Altitude
  - Temperature
  - Barometric Pressure

- \( \text{m} \) (meters) and \( \text{ft} \) (feet)

- hPa (hectopascals) and inHg (inches of mercury)

- °C (Celsius) and °F (Fahrenheit)

4. After all of the settings are the way you want, press \( \text{E-38} \) twice to exit the setting screen.

### Taking Altitude Readings

Use the procedure below to take basic altitude readings.

- See "Using Reference Altitude Values" (page E-44) for information about how to make altimeter readings more accurate.

- See "How does the altimeter work?" (page E-48) for information about how the watch measures altitude.

#### To take an altitude reading

1. Enter the Altimeter Mode (page E-27).

2. Hold \( \text{ALT} \) twice to exit the setting screen.

Note

• After you are finished, press \( \text{E-38} \) to return to the Timekeeping Mode and stop auto altimeter readings.

- The watch will return to the Timekeeping Mode automatically if you do not perform any operation (page E-28).

- The measurement range for altitude is –700 to 10,000 meters (–2,300 to 32,800 feet).

- The displayed altitude value changes to \( \pm \) if an altitude reading falls outside the measurement range. An altitude value will reappear as \( \pm \) if an altitude reading falls outside the measurement range. An altitude value will reappear as

- Normally, displayed altitude values are based on the watch's preset conversion values. You also can specify a reference altitude value, if you want. See "Using Reference Altitude Values" (page E-44).

- You can change the unit for displayed altitude values to either meters (m) or feet (ft). See "To specify temperature, barometric pressure, and altitude display units" (page E-35).
Using an Altitude Differential Value

The Altimeter Mode screen has an altitude differential value that shows the change in altitude from a reference point you specify. The altitude differential value is updated each time the watch takes an altitude reading.

- The range of the altitude differential value is –3,000 meters to 3,000 meters (9,995 feet).
- * • • • • is displayed in place of the altitude differential value whenever the measured value is outside the allowable range.
- See “Using the Altitude Differential Value While Mountain Climbing or Hiking” (page E-43) for some real-life examples of how to use this feature.

To specify the altitude differential start point

1. In the Altimeter Mode, select Screen 2 as the Altimeter Mode display (page E-37).
2. Press \( \odot \).
   - The watch will take an altitude reading and register the result as the altitude differential value start point. The altitude differential value will be reset to zero at this time.

Using Reference Altitude Values

To minimize the chance of reading error, you should update the reference altitude value before setting off on a trek or any other activity where you plan to take altitude readings. During a trek, keep checking the readings produced by the watch against altitude information provided by markers and other information, and update the reference altitude value as required.

- Reading error can be caused by changes in barometric pressure, atmospheric conditions, and elevation.
- Before performing the procedure below, look up the altitude of your current location on a map, the Internet, etc.

To specify a reference altitude value

1. In the Altimeter Mode, hold down \( \odot \) for at least two seconds. You can release \( \odot \) after ALTI appears.
   - The current altitude reading value will appear at this time.
2. Use \( \odot \) or \( \odot \) to change the current reference altitude value in 1-meter (3-foot) increments.
   - Change the reference altitude value to an accurate altitude reading that you get from a map or other source.
   - You can set the reference altitude value within the range of –10,000 to 10,000 meters (–32,800 to 32,800 feet).
   - Pressing \( \odot \) and \( \odot \) at the same time returns to OFF (no reference altitude value), so the watch performs air pressure to altitude conversions based on preset data only.
3. Press \( \odot \) to exit the setting screen.

Using the Altitude Differential Value While Mountain Climbing or Hiking

After you specify the altitude differential start point while mountain climbing or hiking, you can easily measure the change in the altitude between that point and other points along the way.

To use the altitude differential value

1. In the Altimeter Mode, check to make sure that an altitude reading is on the display.
   - If an altitude reading is not displayed, press \( \odot \) to take one. See “To take altitude readings” (page E-39) for details.
2. Use the contour lines on your map to determine the difference in altitude between your current location and your destination.
3. In the Altimeter Mode, press \( \odot \) to specify your current location as the altitude differential start point.
   - The watch will take an altitude reading and register the result as the altitude differential value start point. The altitude differential value will be reset to zero at this time.
4. While comparing the altitude difference you determined on the map and the watch’s altitude differential value, advance towards your destination.
   - If the map shows that the difference in altitude between your location and your destination is +80 meters for example, you know you will be nearing your destination when the displayed altitude differential value shows +80 meters.

Types of Altitude Data

Your watch stores two types of altitude data: altitude records and historical altitude values.

Manually Saved Records

Each altitude reading you take manually is stored along with the date and time of the reading as an “altitude record.” You can later recall an altitude record to view it.

Important!
- The watch has memory for storage of up to 40 records of various types. If you perform an operation that creates a new record while there are already 40 records in memory, the oldest record is deleted automatically to make room for the new one (page E-70). Note that altitude differential graph and altitude tendency graph information is not stored as part of an altitude record.

To save a reading manually

1. In the Altimeter Mode, hold \( \odot \) for at least two seconds.
   - REC and Hold will appear on the display first, and then Hold will disappear. Release \( \odot \) after Hold disappears.
   - The watch will create a record of the current altitude reading along with the date and time, and then return automatically to the altitude measurement screen.
2. To view a record, enter the Data Recall Mode (page E-26) and use the \( \odot \) and \( \odot \) buttons to scroll. See “Viewing Memory Records” (page E-70) for more information.

Auto Save Values

The watch automatically keeps track of the four types of values below, and updates them as required along with the time and date of the reading.

High Altitude (MAX)
Low Altitude (MIN)
Cumulative Ascent (ASC)
Cumulative Descent (DSC)

For detailed information about each value, see page E-47.

For information about viewing these values, see “Viewing Memory Records” (page E-70).

These values are checked and updated automatically as the watch takes altitude measurements.

Auto save is performed while the watch is in the Altimeter Mode.

How Cumulative Ascent and Cumulative Descent Values Are Updated

The total ascent and total descent values produced by an Altimeter Mode reading operation session during the example climb illustrated above are calculated as follows:

- Cumulative ascent and cumulative descent values are updated whenever there is a difference of at least ±15 meters (±49 feet) from one reading to the next.
- ASC and DSC values are retained in memory without being reset even if you exit the Altimeter Mode.
- When you re-enter the Altimeter Mode, accumulation resumes from the value where it last stopped. See page E-74 for information about how to reset the ASC and DSC values to zero.
How does the altimeter work?

Generally, air pressure decreases as altitude increases. This watch bases its altitude reading on International Standard Atmosphere (ISA) values stipulated by the International Civil Aviation Organization (ICAO). These values define relationships between altitude and air pressure.

When you measure altitude based on preset values

Data produced by the watch’s barometric pressure sensor is converted to approximate altitude based on ISA (International Standard Atmosphere) conversion values stored in watch memory.

When you measure altitude using a reference altitude specified by you

After you specify a reference altitude, the watch uses that value to convert barometric pressure readings to altitude (page E-44).

• When mountain climbing, you can specify a reference altitude value in accordance with a marker along the way or altitude information from a map. After that, the altitude readings produced by the watch will be more accurate than they would without a reference altitude value.

Altimeter Precautions

• This watch estimates altitude based on air pressure. This means that altitude readings for the same location may vary if air pressure changes.

• Do not rely upon this watch for altitude reading or perform button operations while sky diving, hang gliding, or paragliding, while riding a gyroscopter, glider, or any other aircraft, or while engaging in any other activity where there is the chance of sudden altitude changes.

• Do not use this watch for measuring altitude in applications that demand professional or industrial level precision.

• Remember that the air inside of a commercial aircraft is pressurized. Because of this, the readings produced by this watch will not match the altitude readings announced or indicated by the flight crew.

Precautions Concerning Simultaneous Altitude and Temperature Readings

For the more accurate altitude readings, leaving the watch on your wrist is recommended in order to maintain the watch at a constant temperature.

• When taking temperature readings, keep the watch as stable as possible. Changes in temperature can affect temperature readings. See product specifications (page E-100) for sensor information.

Taking Direction Readings

You can use the watch to take direction readings to determine a direction (north, south, east, west) or to find out your bearing to a destination.

• For information about what you can do to ensure direction readings are accurate, see “Magnetic Declination Correction” (page E-58) and “Digital Compass Precautions” (page E-59).

Correcting Direction Reading Error (2-point Calibration)

Use 2-point calibration to correct for measurement error due to local magnetism or other causes.

Important!

• Keep the watch level during the calibration process.

• Keep the watch away from electrical household appliances and office equipment, cellphones, and other sources of strong magnetism during calibration. Such items can make proper calibration impossible.

To perform 2-point calibration

1. Enter the Digital Compass Mode (page E-27).

2. Hold down the button for at least two seconds. Release the button when “-1-” appears on the display.

3. Press the button. This starts calibration of point 1. After calibration of point 1 is complete, “TURN 180°” appears on the display, followed by “-2-”.

4. Rotate the watch as precisely as possible 180 degrees from point 1.

5. Press the button. This starts calibration of point 2. “OK” appears on the display after calibration is complete. After one second, the watch will return to the direction reading screen.

• If “ERR” appears on the display, press the button and then perform calibration of point 1 again.

To take a direction reading

Important!

• To ensure accuracy, be sure to perform 2-point calibration under actual measurement conditions before taking direction readings.

1. Enter the Digital Compass Mode (page E-27).

• The watch will automatically start taking direction readings. Readings will be taken and the display will be updated every second for about 60 seconds. At this point you can check the direction (north, south, east, west) reading.

2. During the approximately 60 seconds that the above reading operation is in progress, point 12 o’clock on the watch in the direction of the bearing you want to read.

• About one second later, the direction and bearing to your objective will appear on the display. If 60 seconds elapse before you can take a bearing reading, press the button to restart the direction reading operation.

• Note that the following conditions will prevent you from obtaining accurate readings:

  - When air pressure changes because of changes in the weather
  - When the watch itself is subjected to strong impact

There are two standard methods of expressing altitude: absolute altitude, which expresses an absolute height above sea level, and relative altitude, which expresses the difference between the altitudes of two different places. This watch expresses altitudes as relative altitude.

How the Altimeter Measures Altitude

The altimeter can measure altitude based on its own preset values (initial default method) or using a reference altitude specified by you.

When air pressure changes, barometric pressure readings are affected. To ensure accuracy, be sure to perform 2-point calibration under actual measurement conditions before taking direction readings.

To perform 2-point calibration

1. Enter the Digital Compass Mode (page E-27).

2. Hold down the button for at least two seconds. Release the button when “-1-” appears on the display.

3. Press the button. This starts calibration of point 1. After calibration of point 1 is complete, “TURN 180°” appears on the display, followed by “-2-”.

4. Rotate the watch as precisely as possible 180 degrees from point 1.

5. Press the button. This starts calibration of point 2. “OK” appears on the display after calibration is complete. After one second, the watch will return to the direction reading screen.

• If “ERR” appears on the display, press the button and then perform calibration of point 1 again.

Note

• The north indicated by the watch is magnetic north (page E-59).

• If only north is indicated on the display (without south, east, or west), it means that bearing memory contents are displayed. Press the button to clear bearing memory contents (page E-56).

• You can return to the Timekeeping Mode by pressing the button any time a reading operation is in progress or stopped.
Example: Positioning a map in accordance with actual surroundings (setting a map)
You can align a map with the northerly direction indicated by the watch, and then compare what is shown on the map with your actual surroundings. This is helpful for checking your current location and the location of your objective. This process is called “setting a map.”

Saving a Bearing (Bearing Memory)
You can save the bearing to a particular destination in bearing memory and use it to ensure you are headed in the correct direction.

1. While the direction and bearing to your objective (page E-54) are displayed, press .
   • This saves the objective information in bearing memory, and displays it as shown below. Now, any time you are in the Digital Compass Mode, you can check the objective information currently stored in bearing memory.

Example: Advancing to an objective while monitoring your bearing
Even if you lose sight of your objective, you can use a map to store the required bearing in bearing memory and refer to the memorized information to advance to your objective.

E-46

Magnetic Declination Correction
When magnetic declination correction is enabled, 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 74°, you should input 7°. In the case of 7.6° input 8°, for 7.5° you can input 7° or 8°.

To perform magnetic declination correction
1. In the Digital Compass Mode, hold down the watch’s button for at least two seconds. Release after 1-tap appears.
2. Press .
   • DEC will appear on the display and then the current magnetic declination angle setting will flash on the display.
3. Use (East) and (West) to change the settings.
   • The following explains magnetic declination angle direction settings:
     OFF: No magnetic declination correction performed. The magnetic declination angle with this setting is 0°.
     W: When magnetic north is to the west (east 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 and at the same time.

E-58

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 your watch may have become magnetized, perform the procedure under “To perform magnetic declination correction” (page E-52).

E-60

Taking Barometric Pressure and Temperature Readings
This watch uses a pressure sensor to measure air pressure (barometric pressure) and a temperature sensor to measure temperature.

To take barometric pressure and temperature readings
Enter the Barometer/Thermometer Mode (page E-27).
• This will automatically start a barometric pressure/temperature reading operation, and the results will appear on the display in about one minute.
• Readings will continue to be taken about every two minutes thereafter.
• You can restart the reading operation from the beginning at any time by pressing .

Note
• Press to return to the Timekeeping Mode.
• Accurate readings are also impossible indoors, especially inside ferromagnetic structures. This is because the metal framework of such structures picks up magnetism from appliances, etc.

E-59

Barometric Pressure
Barometric pressure is displayed in units of 1 hPa (or 0.05 inHg).
• The displayed barometric pressure value changes to if a measured barometric pressure falls outside the range of 260 hPa to 1100 hPa (7.65 inHg to 32.45 inHg). The barometric pressure value will reappear as soon as the measured barometric pressure is within the allowable range.

Temperature
• Temperature is displayed in units of °C (or °F).

Barometric Pressure Graph
Barometric Pressure indicates changes in the atmosphere. By monitoring these changes you can predict the weather with reasonable accuracy. This watch takes barometric pressure readings automatically every two hours. Readings are used to produce barometric pressure graph and barometric pressure differential pointer readings.

Reading the Barometric Pressure Graph
The barometric pressure graph shows a chronological history of pressure readings.
• When display of the barometric change indicator is disabled, the graph shows the results of up to 21 barometric pressure readings (42 hours).
• When display of the barometric change indicator is enabled, the graph shows the results of up to 11 barometric pressure readings (22 hours).

The following shows how to interpret the data that appears on the barometric pressure graph.

Not visible on Not visible on

Rising barrometric pressure indicates that upcoming weather will improve.
• If there are sudden changes in weather or temperature, the graph line of past readings may drop to the lower axis of the display. The entire graph will become visible once barometric conditions stabilize.

E-61

E-63
Barometric Pressure Change Indicators

Your watch displays past barometric pressure readings and uses a barometric pressure change indicator to inform you about changes in pressure. The watch will beep to let you know when a significant change in barometric pressure is detected. This means you could start taking barometric pressure readings after reaching a lodge or camp area, and then check the watch the next morning for changes in pressure, and plan you day's activities accordingly. Note that you can enable or disable display of the barometric pressure change indicator as desired.

Reading the Barometric Pressure Change Indicator

Indicator | Meaning
--- | ---
| | Sudden fall in pressure.
| | Sudden rise in pressure.
| | Sustained rise in pressure, changing to a fall.
| | Sustained fall in pressure, changing to a rise.

* The barometric pressure change indicator is not displayed if there has been no noteworthy change in barometric pressure.

Using Barometric Pressure and Temperature Records

You can use the procedure in this section to create a barometric pressure and temperature record of your current readings, along with the date and time of the reading. You can later recall a record to view it.

Important!

* The watch has memory for storage of up to 40 records of various types. If you perform an operation that creates a new record while there are already 40 records in memory, the oldest record is deleted automatically to make room for the new one (page E-70).

1. While barometric pressure and temperature readings are in progress, hold down \( \text{BARO} \) for at least two seconds.
   - \( \text{REC} \) and \( \text{Hold} \) will appear on the display first, and then \( \text{Hold} \) will disappear. Release \( \text{REC} \) after \( \text{Hold} \) disappears.
   - The watch will create a record of the current barometric pressure and temperature, along with the date and time, and then return automatically to the barometric pressure/temperature reading screen.

2. To view a record, enter the Data Recall Mode (page E-26) and use the \( \text{REC} \) and \( \text{Hold} \) buttons to scroll. See “Viewing Memory Records” (page E-70) for more information.

Pressure Sensor and Temperature Sensor Calibration

The pressure sensor and temperature sensor built into the watch are calibrated at the factory and normally require no further adjustment. If you notice serious errors in the pressure readings and temperature readings produced by the watch, you can calibrate the sensor to correct the errors.

Important!

* Incorrectly calibrating the barometric pressure sensor can result in incorrect readings. Before performing the calibration procedure, compare the readings produced by the watch with those of another reliable and accurate barometer.

Barometer and Thermometer Precautions

* The pressure sensor built into this watch measures changes in air pressure, which you can then apply to your own weather predictions. It is not intended for use as a precision instrument in official weather prediction or reporting applications.

* Sudden temperature changes can affect pressure sensor readings. Because of this, there may be some error in the readings produced by the watch.

* Temperature readings are affected by your body temperature, direct sunlight, and moisture. To achieve a more accurate temperature reading, 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 watch to return to the surrounding temperature.

Viewing Memory Records

You can use the Data Recall Mode to recall and view the following type of data in watch memory.

- Date/Time Records (page E-30)
- Altitude Records (page E-45)
- Historical altitude values (page E-46)
- Direction Records (page E-46)
- Barometric Pressure and Temperature Records (page E-67)

To view data in watch memory

1. Use \( \text{REC} \) to select the Data Recall Mode (REC) as shown on page E-26.
   - About one second after \( \text{REC} \) appears on the display, the display will change to show the first record of the memory area you were viewing when you last exited the Data Recall Mode.

2. Use \( \text{A} \) and \( \text{B} \) to scroll through the screens for an area and display the one you want.
   - Records are assigned numbers in the sequence they are recorded. If you create a new record (by saving data) while there are already 40 records in memory, record number 01 (the oldest record) will be deleted automatically to make room for the new record.
   - If you attempt to recall a record while there are no records in memory, a blank record will appear on the display.
   - Holding the \( \text{A} \) or \( \text{B} \) button will scroll through the records at high speed.
To delete all saved data

Important!
• A delete operation cannot be undone! Make sure you do not need data before you delete it.

In the Data Recall Mode, hold down [E] for at least five seconds. Hold will flash on the display first for about two seconds and then disappear. Keep [E] depressed. Hold will start flashing again and then it will disappear about after five seconds. Release [E] at this time, ••• will appear on the display to indicate that all the data was deleted.

To delete a specific record

Important!
• A delete operation cannot be undone! Make sure you do not need data before you delete it.

1. In the Data Recall Mode, use [A] and [C] to scroll through records in watch memory until the one you want to delete is displayed.

CAUTION!
• Holding down [E] for more than about five seconds will delete all data currently in watch memory.

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

1. In the World Time Mode, use [A] (East) and [C] (West) to scroll through the available city codes.
2. Hold down [E] for at least two seconds. DST and Hold will appear on the display first, and then Hold will disappear. Release [E] after Hold disappears.

• This will toggle summer time on and off.
• The DST indicator is displayed while summer time is turned on.
• Use the World Time Mode to change the DST setting of the city code that is selected as your Home City also will change the Timekeeping Mode time DST setting.

• 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 city. Other cities are not affected.

Checking the Current Time in a Different Time Zone

You can use the Timekeeping 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 [STW] to select the World Time Mode (WT) as shown on page E-26.

Using the Stopwatch

The stopwatch measures elapsed time, split times, and two finishes.

To enter the Stopwatch Mode

Use [STW] to select the Stopwatch Mode (STW) as shown on page E-26.

To perform an elapsed time operation

1. Press [Start] to start timing.
2. Press [Stop] to stop the timer and record the elapsed time.

To pause at a split time

1. Hold down [Split] ([SPLIT] appears in the upper part of the display.)
2. Release [Split].
3. Press [Stop] to stop the timer and record the elapsed 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 [Reset] to stop it and then press [Cancel] to reset to the current countdown start time.
• If a countdown is paused, press [Reset] to reset to the current countdown start time.

2. Hold down [E] for at least two seconds.

• SET Hold will flash on the display and then the current start time setting will start to flash. Keep [E] depressed until the start time setting starts to flash.

3. Press [Cancel] to move the flashing between the hour and minute settings.
4. Use [A] (+) and [C] (-) to change the flashing item.
• To set the starting value of the countdown timer to 24 hours, set DH 00/00.

5. Press [Cancel] to exit the setting screen.

To measure two finishes

1. Press [Start] to start timing.
2. Press [Stop] to stop the timer and record the elapsed time.
3. Press [Split] to start timing the second finisher.
4. Press [Stop] to stop the timer and record the elapsed time.

Note
• The Stopwatch Mode can indicate elapsed time up to 999 hours, 59 minutes, 59.99 seconds.
• Once started, stopwatch timing continues until you press [Stop] to stop it, even if you exit the Stopwatch Mode to another mode and even if timing reaches the stopwatch limit defined above. A paused timing operation will remain paused until you press [Stop] to resume it or [Reset] to reset.
• Exiting the Stopwatch Mode while a split time is frozen on the display clears the split time and returns to elapsed time measurement.
• While [SPLIT] is shown in the display, it alternates with the hour digits of the split time at one-second intervals.
• You can directly access the Stopwatch Mode from the Timekeeping Mode by pressing the [STW] button. If the stopwatch is reset to all zeros when you enter the Stopwatch mode, the watch will beep twice and an elapsed time operation will start automatically. You can check whether the stopwatch is reset by looking at the Timekeeping Mode graphic (page E-29).
To perform a countdown timer operation

1. In the Timekeeping Mode, hold down (Hold) for at least two seconds. SET Hold appears on the display and then the current settings start to flash.
2. While a setting is flashing, use (+) and (-) to change it.
3. Press (Hold) to move the flashing between the hour and minute settings.
4. When setting the alarm time using the 12-hour format, take care to set the time correctly as a.m. (no indicator) or p.m. (p indicator).

To set an alarm time

1. In the Alarm Mode, use (Hold) to scroll through the alarm screens until the one whose time you want to set is displayed.
2. Hold down (Hold) until SET Hold appears on the display and then the current settings start to flash.
3. Press (Hold) to move the flashing between the hour and minute settings.
4. When setting the alarm time using the 12-hour format, take care to set the time correctly as a.m. (no indicator) or p.m. (p indicator).
5. Press (Hold) to exit the setting screen.

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

1. In the Alarm Mode, use (Hold) to select an alarm or the Hourly Time Signal.
2. When the alarm or the Hourly Time Signal you want is selected, press (Hold) to turn it on and off.

Using the Alarm

You can set five independent daily alarms. When an alarm is turned on, an alarm 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. One of the daily alarms is a snooze alarm. The other four are one-time alarms. The snooze alarm will sound every five minutes up to seven times or until it is turned off. 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 (Hold) to select the Alarm Mode (ALM) as shown on page E-26.

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 view sunrise and sunset times

Use (Hold) to select the Sunrise/Sunset Mode (SUN) as shown on page E-26.

To view the sunrise/sunset time for a particular date

1. Enter the Sunrise/Sunset Mode.
2. Press (Hold) to move the flashing between the hour and minute settings.
3. Press (Hold) to return to the Timekeeping Mode.

Note

- 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.

To view the sunrise/sunset time for a particular location

1. Enter the Sunrise/Sunset Mode.
2. While the sunrise/sunset time are on the display, use (Hold) to scroll through the dates.
3. Pressing either of the above buttons causes a date (month and day) to appear on the display.
4. When you release the button, the sunrise time of the selected date will be shown in the middle display, while the sunset time will be shown in the lower display.
5. 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 city code, longitude and latitude settings.
- The sunrise and sunset times displayed by this watch are at sea level. Sunrise and sunset times are different at altitudes other than sea level.
Illumination

The display of the watch is illuminated for easy reading in the dark. The watch’s auto light switch turns on illumination automatically when you angle the watch towards your face.

The auto light switch must be turned on (page E-90) for it to operate.

To turn on illumination manually

Press (A) in any mode to illuminate the display.

- You can use this procedure to select either 1.5 seconds or three seconds as the illumination duration. When you press (A), the display will remain illuminated for about 1.5 seconds or three seconds, depending on the current illumination duration setting.
- The auto light operation turns on illumination regardless of the current auto light switch setting.
- Illumination is disabled during time calibration signal reception, while configuring sensor measurement mode settings, and during bearing sensor calibration.

To change the illumination duration

1. In the Timekeeping Mode, hold down (B) for at least two seconds. SET and Hold will appear on the display first, and then Hold will disappear. Release (B) after Hold disappears.
2. Use (B) to cycle through the setting screens until LIGHT appears in the display.

- The current illumination duration setting (1 or 3) will be flashing in the middle display.
- See the sequence in step 2 of the procedure under “To change the current time and date settings manually” (page E-39) for information about how to scroll through setting screens.

3. Press (A) to toggle the illumination duration between three seconds (3 displayed) and 1.5 seconds (1 displayed).

4. After all of the settings are the way you want, press (A) twice to exit the setting screen.

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.

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 engaging 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 while riding a bicycle, the auto light switch is turned off before riding on a bicycle or operating a motorcycle or any other motor vehicle. Sudden and unintended operation of the auto light switch can create a distraction, which can result in a traffic accident and serious personal injury.

Other Settings

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, barometric pressure change alert, and Countdown Timer Mode alarm all operate normally.

To turn the button operation tone on and off

1. In the Timekeeping Mode, hold down (D) for at least three seconds to toggle the auto light switch on (LT displayed) and off (LT not displayed).
2. The auto light switch turns off automatically whenever battery power drops to Level 4 (page E-11).

Illumination Precautions

- The LED that provides illumination loses power after very long use.
- Illumination may be hard to see when viewed under direct sunlight.
- Illumination turns off automatically whenever an alarm sounds.
- Frequent use of illumination runs down the battery.

Auto light switch precautions

- Wearing the watch on the inside of your wrist, movement of your arm, or vibration of your arm can cause frequent activation of the auto light switch and illumination of the display. To avoid running down the battery, turn off the auto light switch whenever engaging in activities that might cause frequent illumination of the display.
- Note that wearing the watch under your sleeve while the auto light switch is turned on can cause frequent illumination of the display and can run down the battery.

- Illumination may not turn on if the face of the watch is more than 15 degrees above or below parallel. Make sure that the back of your hand is parallel to the ground.
- Illumination turns off after the preset illumination duration (page E-88), even if you keep the watch pointed towards your face.
- Static electricity or magnetic force can interfere with proper operation of the auto light switch. If illumination does not turn on, try moving the watch back to the starting position (parallel with the ground) and then tilt it back towards your face again. If it does not work, drop your arm all the way down so it hangs at your sides, and then bring it back up again.
- 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.

Power Saving

For details about Power Saving, see page E-14.

To turn Power Saving on or off

1. In the Timekeeping Mode, hold down (B) for at least two seconds. SET and Hold will appear on the display first, and then Hold will disappear. Release (B) after Hold disappears.
2. Use (A) to cycle through the setting screens until the current power saving setting (On or Off) is displayed.
- Power Saving will scroll across the upper display at this time.
- See the sequence in step 2 of the procedure under “To change the current time and data settings manually” (page E-39) for information about how to scroll through setting screens.
3. Press (A) to toggle Power Saving on (On) and off (OFF).
4. After all of the settings are the way you want, press (A) twice to exit the setting screen.

Note

- The Power Saving indicator (PS) is on the display in all modes while Power Saving is turned on.

Troubleshooting

Time Setting

See “Radio Controlled Atomic Timekeeping” (page E-15) for information about adjusting the time setting according to a time calibration signal.

The current time setting is off by hours.

Your Home City setting may be wrong (page E-31). Check your Home City setting and correct it if necessary.

The current time setting is off by one hour.

If you are using the watch in an area where time calibration signal reception is possible, see “To configure Home City and summer time settings” (page E-31).

If you are using the watch in an area where time calibration signal reception is not possible, you may need to change your Home City setting (page E-93) to match your time zone. You can do this by setting the time zone and time setting on the home city display (page E-93) and setting the current time on the home city display (page E-95).

Sensor modes

- I can’t change the temperature, barometric pressure, and altitude display units.

If TYO (Tokyo) is selected as the Home City, the altitude unit is set automatically to meters (m), the barometric pressure unit to hectopascals (hPa), and the temperature unit to Celsius (°C). These settings cannot be changed.

- “ERR” appears on the display while I am using a sensor.

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

Altitude reading

- The altitude reading is displayed when the altitude sensor is active (on) and the current time and sensor mode are set.

ERR appears while a reading operation is being performed in a sensor mode. Restart the operation. If ERR appears on the display again, it can mean there is something wrong with the sensor.

ERR keeps appearing during a reading operation, it could mean there is a problem with the applicable sensor.
Time Calibration Signal:
The information in this section applies only when LUS, LON, MAD, PAR, ROM, BER, STO, ATH, NOW, HKG, BJS, HNL, ANC, YVR, LAX, YEA, DEN, MEX, CHI, NYC, HONG, JPN, TPE, SF, or TYO is selected as the Home City. You need to adjust the current time manually when any other city is selected as the Home City.

The display shows the ERR indicator when you check the result of the latest receive operation.

Possible Cause Remedy Page
- You are not receiving or missing the signal, or you are performing other tasks during signal receive operation.
  - Keep the watch in an area where reception conditions are good and the signal receive operation is performed.
  - E-17
- The watch is in an area with poor reception conditions.
  - See “Approximate Reception Ranges.”
  - E-16

The time and/or day is incorrect.
- The time calibration signal receive: 4 minutes/day
  - E-17
- Time is not in the Timekeeping Mode or World Time Mode.
  - E-26
- Switch to either of these two modes.
- The time for my World Time City is off in the World Time Mode.
  - E-31
- The DST setting may have failed for some reason.
  - E-33
- Possible Cause Remedy Page
  - Time is not in the Timekeeping Mode or World Time Mode. Switch to either of these two modes.
  - E-26
  - The time setting will be adjusted automatically as soon as signal reception is performed successfully.
  - E-17
- There is not enough power for signal reception.
  - E-31
- You are unable to receive the time calibration signal. Change the standard time/daylight saving time (DST) setting manually.
  - E-33
- Your Home City setting is wrong.
  - E-31
- Check your Home City setting and correct it, if necessary.
- The time setting will be adjusted automatically as soon as signal reception is performed successfully.
- E-26
- The DST setting may have failed for some reason.
- E-33
- Check your Home City setting and correct it, if necessary.
- E-31
- Change the DST setting to Auto DST.
- E-31
- Possible Cause Remedy Page
  - Auto receive is not performed or you cannot perform manual receive.
  - E-31
  - Your Home City setting is wrong.
  - E-31
  - Check your Home City setting and correct it, if necessary.
- Auto receive is performed only while the watch is in the Timekeeping Mode or World Time Mode. Switch to either of these two modes.
- E-26
- Time Calibration Signal Reception: Auto receive 6 times a day (5 times a day for the Chinese calibration signal). Remaining auto receives canceled as soon as one is successful. Manual receive: Receive Mode
  - E-16
  - Receiving Time Calibration Signals: Mainfring, Germany (Call Sign: DCF77, Frequency: 77.5 kHz), Anthro, England (Call Sign: MSF, Frequency: 60.0 kHz), Fort Collins, Colorado, the United States (Call Sign: WWVB, Frequency: 60.0 kHz), Fukushima, Japan (Call Sign: JJJY, Frequency: 40.0 kHz), Fukuoka/Saga, Japan (Call Sign: JJJY, Frequency: 60.0 kHz), Shanghui City, Hainan Province, China (Call Sign: BPC, Frequency: 68.5 kHz)
- Altimeter:
  - Measurement range: –700 to 10000 m or –2300 to 32800 ft.
  - Negative values can be caused by readings produced based on a reference altitude or due to atmospheric conditions.
  - Display unit: 1 m (or 5 ft.)
- Possible Cause Remedy Page
  - Auto receive is not performed or you cannot perform manual receive.
  - E-31
  - Your Home City setting is wrong.
  - E-31
  - Check your Home City setting and correct it, if necessary.
- Auto receive is performed only while the watch is in the Timekeeping Mode or World Time Mode. Switch to either of these two modes.
- E-26
- Possible Cause Remedy Page
  - The time is incorrect.
  - E-17
  - Time setting will be adjusted automatically as soon as signal reception is performed successfully.
  - E-13
- The watch is not in the Timekeeping Mode or World Time Mode.
  - Switch to either of these two modes.
- E-26
- Possible Cause Remedy Page
  - There is not enough power for signal reception.
  - E-31
  - Expose the watch to light to charge it.

Specifications

Accurancy at normal temperature: ±15 seconds a month (within signal transmission)

Timekeeping: Hour, minutes, seconds, p.m. (P), year, month, day of the week, Time: 12-hour and 24-hour Calendar system: Full Auto calendar pre-programmed from the year 2000 to 2099
Date/Time Records: Up to 40 records (shared storage with altitude, bearing, and barometric pressure/ time temperature records)
Other: Two display formats (day of the week screen, barometric pressure graph screen); Home City code (can be assigned one of 48 city codes); Standard Time / Daylight Saving Time (summer time records)

Temperature Sensor Precisions:
- ±0.5°C (±2°F) in range of –20°C to 60°C (14°F to 140°F)
- ±0.2°C in range of –10°C to 60°C (14°F to 140°F)
- ±0.1°C (0.1°F) in range of –1°C to 0°C
- ±0.2°C in range of –20°C to 0°C

Beeper: 10 seconds/day
Light: 1.5 seconds/day
Display range: 10 minutes to 24 hours
Display unit: 1 m (or 5 ft.)

Thermometer:
- Measuring range and display range: –10.0 to 60.0°C (or 14.0 to 140.0°F)
- Accuracy: ±0.5°C (±1.0°F) at 20°C
- Setting unit: 1 minute
- Reading timing: Every five seconds in the Barometer/Thermometer Mode

Barometer:
- Measurement range: 260 to 1,100 hPa or 7.65 to 32.45 inHg
- Display unit: 1 hPa (or 0.05 inHg)
- Reporting interval: Daily from midnight, at two hour intervals (12 times per day); Every five seconds in the Barometer/Thermometer Mode

Barometric Pressure/Temperature Records: Up to 40 records (shared storage with date/time, altitude, and bearing records)
Other: Calibration; Manual reading (button operation); Barometric pressure graph; Barometric pressure differential indicator; Barometric pressure change indicator

Power Supply:
- Solar panel and one rechargeable battery
- Approximate battery operating time: 8 months (from full charge to Level 4) under the following conditions:
  - Light: 1.55 seconds/day
  - Bleeper: 10 seconds/day
  - Direction readings: 20 times/month
  - Climbs: Once (approximately 1 hour of altitude readings/month)
  - Barometric pressure change indicator readings: Approximately 24 hours/month
  - Barometric pressure readings: Every 2 hours

- Time calibration signal receive: 4 minutes/day

Countdown Timer:
- Measuring unit: 1 second
- Countdown range: 24 hours
- Setting unit: 1 minute
- Alarms: All-time alarms (four one-time alarms; one snooze alarm); Hourly time signal

Sunrise/Sunset:
- Sun rise/sunset time display; selectable date
Illumination:
- LED light: Selectable illumination duration (approximately 1.5 seconds or 3 seconds); Auto Light Switch (Full Auto light operates only in the dark)
- Other: Battery power indicator; Power Saving; Low temperature resistance (-10°C to +24°C); Button operation (on/off button)

World Time Mode:
- The time for your World Time City is off in the World Time Mode.
- This could be due to incorrect switching between standard time and daylight saving time. See “To specify standard time or daylight saving time (DST) for a city” (page E-76) for more information.

Charging:
- The watch does not resume operation after I expose it to light.
- This can happen after the power level drops to Level 5 (page E-11). Continue exposing the watch to light until the battery power indicator shows H or M.

Other:
- Two display formats (day of the week screen, barometric pressure graph screen); Home City code (can be assigned one of 48 city codes); Standard Time / Daylight Saving Time (summer time records)
- Historical Altitude Values: 1 record of high altitude, low altitude, cumulative ascent, cumulative descent
- Other: Reference altitude setting; Altitude differential; Altitude auto reading interval (0S or 20S)
- Other: Digital Differential Graph
- Digital Compass: 60 seconds continuous reading; 16 directions; Angle value 0° to 359°; Four direction readings: 20 times/month
- Barometric Pressure/Temperature Records: Up to 40 records (shared storage with date/time, altitude, and bearing records)
- Barometer:
  - Measurement and display range: 260 to 1,100 hPa or 7.65 to 32.45 inHg
  - Display unit: 1 hPa (or 0.05 inHg)
  - Reporting interval: Daily from midnight, at two hour intervals (12 times per day); Every five seconds in the Barometer/Thermometer Mode

Barometric Pressure/Temperature Records: Up to 40 records (shared storage with date/time, altitude, and bearing records)
Other: Calibration; Manual reading (button operation); Barometric pressure graph; Barometric pressure differential indicator; Barometric pressure change indicator

Current Altitude Data: Every second for the first 3 minutes, followed by every 5 seconds for approximately 1 hour (800); every second for the first 3 minutes, followed by every 2 minutes for approximately 12 hours (2W0)

Altitude Records: Up to 40 records (shared storage with date/time, bearing, and barometric pressure/ temperature records)

Barometric Pressure/Temperature Records: Up to 40 records (shared storage with date/time, altitude, and bearing records)
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<tr>
<th>City Code</th>
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<th>UTC Offset/GMT Differential</th>
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<td>11</td>
</tr>
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</table>

As of December 2012, the official UTC offset for Moscow, Russia (MOW) was changed from +3 to +4, but this watch still uses an offset of +3 (the old offset) for MOW. Because of this, you should leave the summer time setting turned on (which advances the time by one hour) for the MOW time.

The rules governing global times (GMT differential and UTC offset) and summer time are determined by each individual country.