Getting Acquainted

Congratulations upon your selection of this CASIO watch. To get the most out of your purchase, be sure to read this manual carefully.

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.
- The Moon phase indicator and tide graph data that appear on the display of this watch are not intended for navigation purposes. Always use proper instruments and resources to obtain data for navigation purposes.
- This watch is not an instrument for calculating low tide and high tide times. The measurement functions built into this watch are not intended for navigation purposes. Always use proper instruments and resources to obtain data for navigation purposes.
- The Moon phase indicator and tide graph data that appear on the display of this watch are not intended for navigation purposes. Always use proper instruments and resources to obtain data for navigation purposes.
- 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.

Timekeeping Mode

Battery charges in the light.

Solar cell

Bright Light

The electricity generated by the solar cell of the watch is stored by a rechargeable battery. Leaving or using the watch where it is not exposed to light causes the battery to run down. Make sure the watch is exposed to light as much as possible.

- When you are not wearing the watch on your wrist, position the face so it is pointed at a source of bright light.
- You should try to keep the watch outside of your sleeve as much as possible. Charging is reduced significantly if the face is covered only partially.

Battery discharges in the dark.

Solar cell

Bright Light

The watch continues to operate, even when it is not exposed to light. Leaving the watch in the dark can cause the battery to run down, which will result in some watch functions to be disabled. If the battery (gas) level is low, you will have to re-configure watch settings after recharging. To ensure normal watch operation, be sure to keep it exposed to light as much as possible.

General Guide

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

Radio-controlled Atomic Timekeeping

This watch receives a time calibration signal and updates its time setting accordingly. The watch is designed to pick up the time calibration signals transmitted in Germany (Mainfelden), England (Atherstone), the United States (Fort Collins), China (Shangqiu), and Japan (Fukushima, Fukuoka/Saga).

Current Time Setting

This watch adjusts its time setting automatically in accordance with a time calibration signal. You also can perform a manual procedure to set the time and date, when necessary.

- The first thing you should do after purchasing this watch is to specify your Home City (the city where you normally will use the watch). For more information, see “To specify your Home City” below.
- When using the watch outside the areas covered by the time signals transmitters, you will have to adjust the current time setting manually as required. See “Timekeeping” for more information about manual timing settings.
- The U.S. time calibration signal can be picked up by the watch while in North America. The term “North America” in this manual refers to the area that consists of Canada, the continental United States, and Mexico.

To specify your Home City

1. In the Timekeeping Mode, hold down the City code starts to flash, which indicates the setting screen.
2. Press A ( Leah ) and B ( tsu ) to select the city code you want to use as your Home City.
3. Press A to exit the setting screen.

About This Manual

- Depending on the model of your watch, display text appears either as dark figures on a light background (Module 3193), or light figures on a dark background (Module 3200). All of the illustrations in this manual show Module 3193.
- Button operations are indicated using the letters shown in the illustration.
- Each section of this manual provides you with the information you need to perform operations in each mode. Further details and technical information can be found in the “Reference” section.

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.

Warning!
- The actual level at which some functions are disabled depends on the watch model.
- Frequent display illumination can run down the battery quickly and require charging. The following guidelines give an idea of the charging time required to recover from a single illumination operation.
- Approximately 5 minutes exposure to bright sunlight coming in through a window
- Approximately 8 hours exposure to indoor fluorescent lighting
- Be sure to read “Power Supply” for important information you need to know when exposing the watch to bright light.

If the display of the watch is blank... If the display of the watch is blank, it means that the watch’s Power Saving function has turned off the display to conserve power.

- See “Power Saving Function” for more information.

About This Manual

- Depending on the model of your watch, display text appears either as dark figures on a light background (Module 3193), or light figures on a dark background (Module 3200). All of the illustrations in this manual show Module 3193.
- Button operations are indicated using the letters shown in the illustration.
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Auto Receive Start Times

The time calibration signal the watch will attempt to pick up depends on its current location. Time calibration signal reception takes from two to seven minutes, but in some cases it can take as long as 14 minutes. Take care that you do not perform any button operations or move the watch during this time.

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- Signal reception normally is better at night than during the day.
- The calibration signal reception takes from two to seven minutes, but in some cases it can take as long as 14 minutes. Take care that you do not perform any button operations or move the watch during this time.
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Important:

- When getting ready to receive the time calibration signal, position the watch as shown in the nearby illustration, with its 12 o’clock side pointing towards a window. This watch is designed to receive a time calibration signal late at night. Because of this, you should place the watch near a window as shown in the illustration when you take it off at night. Make sure there are no metal objects nearby.
- Make sure the watch is facing the right way.
- Proper signal reception can be difficult or even impossible under the conditions listed below.

- Inside a vehicle Near household appliances, office equipment, or a mobile phone Near a construction site, airport, or other sources of electrical noise Near high-tension power lines Among or behind mountains Inside a building or among buildings

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Note:

- When a calibration time is reached, the watch will receive the time calibration signal only if it is in either the Timekeeping Mode or World Time Mode. Reception is not performed if a calibration time is reached while you are configuring settings.

- Auto receive of the calibration signal is designed to be performed early in the morning, while you sleep (provided that the Timekeeping Mode is set correctly). Before going to bed for the night, remove the watch from your wrist, and put it in a location where it can receive the signal such as near a window.

- Even in an area where signal strength is strong, it takes about 10 seconds for signal reception to stabilize enough for the signal strength indicator to indicate signal strength.

- The signal strength indicator shows the strength of the calibration signal being received. For best reception, be sure to keep the watch in a location where signal strength is strongest. The signal strength indicator is displayed while an auto or manual receive operation is in progress.

About Auto Receive

The watch receives the time calibration signal automatically up to 6 times a day (5 times a day for the Chinese time calibration signal). When any auto receive is successful, the remaining auto receive operations are not performed. The reception schedule (calibration time) depends on your currently selected Home City, and whether standard time or Daylight Saving Time is selected for your Home City.

Important:

- When getting ready to receive the time calibration signal, position the watch as shown in the nearby illustration, with its 12 o’clock side pointing towards a window. This watch is designed to receive a time calibration signal late at night. Because of this, you should place the watch near a window as shown in the illustration when you take it off at night. Make sure there are no metal objects nearby.
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About the Signal Strength Indicator

The signal strength indicator shows the strength of the calibration signal being received. For best reception, be sure to keep the watch in a location where signal strength is strongest. The signal strength indicator is displayed while an auto or manual receive operation is in progress.

- Even in an area where signal strength is strong, it takes about 10 seconds for signal reception to stabilize enough for the signal strength indicator to indicate signal strength.

- The signal strength indicator is designed as a guide for checking signal strength and for finding the best location for the watch during signal receive operations.

- Following reception of the time calibration signal and calibration of the watch’s time and date, the signal strength indicator will remain on the display in all modes. The Settings updated indicator will not be displayed if signal reception was unsuccessful or if you adjust the current time setting manually.

- The Settings updated indicator is displayed only when the watch is able to receive both time and date data successfully. It does not appear when only time data is received.

- The Settings updated indicator indicates that at least one of the auto calibration signal receive operations was successful. Note, however, that the Settings updated indicator disappears from the display each day when the first auto receive operation of the day is performed.

To perform manual receive

1. Enter the Timekeeping Mode.
2. Hold down  for about two seconds until starts to flash on the display. This indicates that manual receive is in progress.
3. The watch signal calibration signal takes from two to seven minutes. Take care that you do not perform any button operations or move the watch during this time.
4. The receive operation is successful, the reception date and time appear on the display, along with the SET indicator.
5. After manual receive is complete, press  to return to normal timekeeping.

Signals are receivable in the Taiwan area when reception conditions are good.

- Signals may not be possible at the distances noted below during certain times of the year or day. Radio interference also may cause problems with reception.
- The frequency of the signals is the same as that used by the U.S. Signal Synchronization Service.
- Even when the watch is within the reception range of the transmitter, signal reception will be impossible if the signal is blocked by mountains or other geological formations between the watch and signal source.
- Signal reception is affected by weather, atmospheric conditions, and seasonal changes.
- See the information under “Signal Reception Troubleshooting” if you experience problems with time calibration signal reception.
Receive failed

- If the latest reception fails but a previous reception was successful, an indicator (●) will be on the display.
- If you always perform your button operation for about one or two minutes.

If there was a previously successful reception

Note

- To interrupt a reception operation and return to normal timekeeping, press D.

If no reception was successful

Tide/Moon Data

- Moon age is calculated to an accuracy of ±1 day.
- In the Tide/Moon Data Mode, you can see the current tide and the current date's tide data screen. You can use the procedure under “Reversing the Displayed Moon Phase” to change it.

To turn auto receive on and off

1. In the Timekeeping Mode, press D to display the last successful received time and date screen.
2. Held down D until the current auto receive setting (ON or OFF) starts to flash. This is the setting screen.
3. Press D to toggle auto receive on (ON) and off (OFF).
4. Press D to exit the setting screen.
5. For information about city codes that support signal reception, see “City Codes Supporting Manual Signal Reception”.

To check the latest signal reception results

Press D to view the last successful receive time and date. Press D again to return to the previous screen.

Signal Reception Troubleshooting

- Check the following points whenever you experience problems with signal reception.
- Signal Reception Troubleshooting
- To check the latest signal reception results

Moon Data

- The Moon phase and Moon age information that appears first when you enter the Tide/Moon Data Mode shows the data at noon for your currently selected Home City on the current date, according to the Timekeeping Mode. After that you can specify another date to view data.
- If the Moon data is not correct, check your Timekeeping Mode settings and correct them if necessary.
- If the Moon phase indicator shows a phase that is a mirror image of the actual moon phase in your area, you can use the procedure under “Reversing the Displayed Moon Phase” to change it.

Tide/Moon Data Screens

In the Tide/Moon Data Mode, press D to toggle between the tide data screen and the Moon data screen.

To adjust the high tide time

1. In the Tide/Moon Data Mode, hold down D until the hour digits start to flash.
2. Use (+) and (-) to change the hour setting.
3. When the hour is the setting you want, press D:
   - This will cause the minute digits to flash.
4. Use (+) and (-) to change the minute setting.
5. When the minute setting is the way you want, press D to exit the adjustment screen and return to the Tide/Moon Data Mode screen.
6. Pressing D and D at the same time while the time adjustment screen is displayed will return the high tide time to its initial factory default setting.
7. The times kept in the World Time Mode are the indicator switching screen.

Reversing the Displayed Moon Phase

The left-right (east-west) appearance of the Moon depends on whether the Moon is north of you (northerly view) or south of you (southerly view) as you view it. You can use the procedure below to reverse the displayed Moon phase so it matches the actual appearance of the Moon where you are located.

- To determine the viewing direction of the Moon, use a compass to take a direction reading of the Moon at its meridian passage.
- For information about the Moon phase indicator, see “Moon Phase Indicator”.

To reverse the displayed moon phase

1. In the Tide/Moon Data Mode, hold down D until the hour digits start to flash.
2. Press D twice.
3. This will cause the Moon phase indicator to flash. This is the indicator switching screen.
4. Press D to toggle the Moon phase indicator between the southerly view (indicated by (+) Y) and northerly view (indicated by (-) Y).
5. Northerly view: Moon is north of you.
6. Southerly view: Moon is south of you.
7. When the Moon phase indicator setting is the way you want, press D to exit the switching screen and return to the Tide/Moon Data Mode screen.

World Time

- World Time shows the current time in 48 cities (31 time zones) around the world.
- The times kept in the World Time Mode are synchronized with the time being kept in the Timekeeping Mode. If you feel that there is an error in any World Time Mode time, check to make sure you have the correct city selected as your Home City. Also, check to make sure the current time as shown in the Timekeeping Mode is correct.
- Select a city code in the World Time Mode to display the current time in any particular time zone around the world. See the “City Code Table” for information about the UTC differentials that are included.
- All of the operations in this section are performed in the World Time Mode, which you enter by pressing D.

To view the time in another city

While in the World Time Mode, use the (+) (eastward) and (-) (westward) to scroll through the city codes (time zones).

Pressing D and D at the same time will jump to the UTC time zone.

Tide Data

The Tide Graph that appears first when you enter the Tide/Moon Data Mode shows the data at 12:00 a.m. on the first high tide time. Press D to select another Home City on the current date, according to the Timekeeping Mode. From there you can specify another date or time.

- If the tide data is not correct, check your Timekeeping Mode settings and correct them if necessary.
- If you feel that the information shown by the Tide Graph is different from actual tide conditions, you need to adjust the high tide time. See “Adjusting the High Tide Time” for more information.
To set an alarm time

1. In the Alarm Mode, use \( \text{AL1} \) to scroll through the alarm screens until the one whose time you want to set is displayed.

- To set a one-time alarm, display alarm screen AL1, AL2, AL3, or AL4.
- To set the snooze alarm, display the SNZ screen.
- The snooze alarm repeats every five minutes.
- After you select an alarm, hold down \( \text{AL1} \) until the hour setting of the alarm time starts to flash, which indicates the setting screen.
- This operation turns on the alarm automatically.
- Press \( \text{AL1} \) to move the flashing between the hour and minute settings.
- While a setting is flashing, use \( \text{AL} \) and \( \text{AL} \) to change it.
- With the 12-hour format, set the time correctly as a.m. or p.m. (P indicator).
- Press \( \text{AL} \) to exit the setting screen.

Alarms

The Alarm Mode gives you a choice of four one-time alarms and one snooze alarm.

- Also use the Alarm Mode to turn the Hourly Time Signal (SIS) on and off.
- There are five alarm screens numbered AL1, AL2, AL3, or AL4, and one snooze alarm screen indicated by SNZ. (The Hourly Time Signal screen is indicated by SIS.)
- All of the operations in this section are performed in the Alarm Mode, which you enter by pressing \( \text{AL1} \), \( \text{AL} \), or \( \text{AL} \).

To use the countdown timer

1. While the countdown start time is on the display in the Countdown Timer Mode, hold down \( \text{AL1} \) until the current countdown start time starts to flash, which indicates the setting screen.
2. If the countdown start time is not displayed, use the procedure under “To use the countdown timer” to display it.
3. Press \( \text{AL1} \) to move the flashing in the sequence shown below to select other settings.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Screen Display</th>
<th>Button Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours</td>
<td>Minutes</td>
<td>Use ( \text{AL} ) and ( \text{AL} ) to change the setting.</td>
</tr>
</tbody>
</table>

Using illumination

- To illuminate the display manually:
  - Press \( \text{AL1} \) to turn on illumination.
  - The above operation turns on illumination regardless of the current auto light switch setting.
  - You can use the procedure below to select either 1.5 seconds or 3 seconds as the illumination duration. When you press \( \text{AL1} \), the illumination will remain on for about 1.5 seconds or 3 seconds, depending on the current illumination duration setting.

To specify the illumination duration

1. In the Timekeeping Mode, hold down \( \text{AL1} \) until the display contents start to flash. This is the setting screen.
2. Press \( \text{AL1} \) 10 times until the current illumination duration setting \( \text{LT} \) appears.
3. Press \( \text{AL} \) to toggle the setting between \( \text{LT} \) (approximately 1.5 seconds) and \( \text{LT} \) (approximately 3 seconds).
4. Press \( \text{AL1} \) 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 at an angle exceeding any in the mode. Note that this watch features a "Full Auto EL Light," so the auto light switch operates only when available light is below a certain level. It does not turn on the backlight under bright light.

Moving the watch to a position that is parallel to the ground and then tilting it towards you more than 40 degrees causes illumination to turn on.

- Wear the watch on the outside of your wrist.

Warning!

Always make sure you are in a safe place whenever you are reading the display of the watch using the auto light switch. Be especially careful when running or engaged in any other activity that can result in accident or injury. Also, take care to ensure that illumination by the auto light switch does not startle or distract others around you.

- When you are wearing the watch, make sure that its auto light switch is turned off before riding a bicycle or operating a motorcycle or any other motor vehicle. Sudden and unintended operation of the auto light switch can create a distraction, which can result in a traffic accident and serious personal injury.

To turn the auto light switch on and off

In the Timekeeping Mode, hold down ( for about three seconds to toggle the auto light switch on or off (auto light switch on indicator displayed) and off (auto light switch off indicator not displayed).

The auto light switch on indicator or the display in all modes while the auto light switch is turned on.

Power Supply

This watch is equipped with a solar cell and a rechargeable battery that is charged by the solar cell. The illustration shown below shows how you should position the watch for charging.

Example: Orient the watch so its face is pointing at a light source.

The illustration shows how to position a watch with a resin band.

- Note that charging efficiency drops when any part of the solar cell is blocked by clothing.

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

Important!

- Storing the watch for long periods in an area where there is no light or wearing it in such a way that it is blocked from exposure to light can cause rechargeable battery power to run down. Be sure that the watch is exposed to light whenever possible.

- This watch uses a rechargeable battery to store power produced by the solar cell, so regular battery replacement is not required. However, after very long use, the rechargeable battery may lose its ability to achieve a full charge. If you experience problems getting the rechargeable battery to charge fully, contact your dealer or CASIO Distributor about having it replaced.

- Never try to remove or replace the watch’s rechargeable battery yourself. Use of the wrong type of battery can damage the watch.

- All data stored in memory is deleted, and the current time and all other settings return to their initial factory defaults whenever battery power drops to Level 5 and when the watch returns to a lower temperature.

- On the dashboard of a car parked in direct sunlight, the watch can become particularly hot. Take care when handling the watch to avoid burn injury.

- The watch can become quite hot when exposed to the following conditions for long periods.

- On the dashboard of a car parked in direct sunlight

- Too close to an incandescent lamp

- Under direct sunlight

ChargingGuide

The following table shows the amount of time the watch needs to be exposed to light each day in order to generate enough power for normal daily operation.

<table>
<thead>
<tr>
<th>Exposure Level</th>
<th>Approximate Exposure Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>5 minutes</td>
</tr>
<tr>
<td>Level 2</td>
<td>24 minutes</td>
</tr>
<tr>
<td>Level 3</td>
<td>48 minutes</td>
</tr>
<tr>
<td>Level 4</td>
<td>72 minutes</td>
</tr>
<tr>
<td>Level 5</td>
<td>96 minutes</td>
</tr>
</tbody>
</table>

- For details about the battery operating time and daily operating conditions, see the “Power Supply” section of the Specifications.
- Stable operation is promoted by frequent exposure to light.

RecoveryTimes

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

<table>
<thead>
<tr>
<th>Exposure Level</th>
<th>Approximate Exposure Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>2 hours</td>
</tr>
<tr>
<td>Level 2</td>
<td>18 hours</td>
</tr>
<tr>
<td>Level 3</td>
<td>5 hours</td>
</tr>
<tr>
<td>Level 4</td>
<td>24 hours</td>
</tr>
<tr>
<td>Level 5</td>
<td>48 hours</td>
</tr>
</tbody>
</table>

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

CurrentTime

- Day of week
- Month
- Day
- Hour
- Minute

Press the button to toggle the lower display between the day of the week and date, and the currently selected World Time city and time (Dual Time). Use the Timekeeping Mode to set and view the current time and date.

ReadThis Before You Set the Time and Date

This watch is preset with a number of city codes, each of which represents the time zone where that city is located. When setting the time, it is important that you first select the correct city code for your Home City (the city where you normally use the watch), if your location is not included in the preset city codes, select the preset city code that is in the same time zone as your location.

- Note that all of the times for the World Time/Mode city codes are displayed in accordance with the time and date settings you configure in the Timekeeping Mode.

To set the time and date manually

1. In the Timekeeping Mode hold down ( until the city code starts to flash, which indicates the setting screen.
2. Use ( and ) to select the city code you want.
3. Make sure you select your Home City code before changing any other setting.
4. For full information on city codes, see the “City Code Table”.

- The flashing LOF indicator at Level 3 tells you that battery power is very low, and that exposure to bright light for charging is required as soon as possible.

- At Level 5, all functions are disabled and settings return to their initial factory defaults. Once the battery reaches Level 2 after falling to Level 5, reconfigure the current time, date, and other settings.

- The watch’s Home City code setting will change automatically to TJO (Tokyo) whenever the battery drops to Level 5. With this Home City code setting, the watch is configured to receive the time calibration signals of Japan. If you are using the watch in North America, Europe, or China you will need to change the Home City code setting to match your location whenever the battery drops to Level 5.

- Display indicators reappear as soon as the battery is charged from Level 5 to Level 2.

- Leaving the watch exposed to direct sunlight or some other very strong light source can cause the battery power indicator to show a reading temporarily that is higher than the actual battery level. The correct battery level should be indicated after a few minutes.

- The correct battery level should be displayed after a few minutes.

- If ( recover) appears frequently, it probably means that remaining battery power is low. Leave the watch in bright light to allow it to charge.

ChargingPrecautions

Certain charging conditions can cause the watch to become very hot. Avoid leaving the watch in the areas described below whenever charging its rechargeable battery. Also note that allowing the watch to become very hot can cause its liquid crystal display to black out. The appearance of the LCD should become normal again when the watch returns to a lower temperature.

Warning

Leaving the watch in bright light to charge its rechargeable battery can cause it to become quite hot. Take care when handling the watch to avoid burn injury.

The watch can become particularly hot when exposed to the following conditions for long periods.

- On the dashboard of a car parked in direct sunlight

- Too close to an incandescent lamp

- Under direct sunlight

- If the battery power indicator or beeper operation during a short period may cause ( recover) to appear on the display.

- After some time, battery power will recover and ( recover) will disappear, indicating that too strong light source may have caused the battery power indicator to show a reading temporarily that is lower than the actual battery level. The correct battery level indicator should be displayed after a few minutes.
To do this:

1. Press £ to exit the setting screen.
   - Auto DST (PTST) can be selected only while LIS, LON, MAD, PAR, ROM, BER, STO, ATH, MOS, TPE, SEL, TYO, HNL, ANC, YVR, LAX, YEA, DEN, MEX, CHI, NYC, HOU, and YVR are selected as the Home City code. For more information, see “Daylight Saving Time (DST)” below.
   - If you change your Home City to one that is within the same transmitter area, the current DST setting will be retained. If you change to a city that is outside your current transmitter area, DST will be turned off automatically.

Daylight Saving Time (DST)

Daylight Saving Time (summer time) advances the time setting by one hour from Standard Time. Remember that not all countries or even local areas use Daylight Saving Time.

- The 12-hour/24-hour timekeeping format you select in the Timekeeping Mode is implemented in Japan (as of 2008).

12-hour and 24-hour timekeeping

- With the 12-hour format, the P (PM) indicator appears to the left of the hour digits for times in the range of noon to 11:59 p.m. and no indicator appears to the left of the hour digits for times in the range of midnight to 11:59 a.m.
- With the 24-hour format, times are displayed in the range of 0:00 to 23:59, without any indicator.

- The 12-hour/24-hour timekeeping format you select in the Timekeeping Mode is applied in all other modes.

To change the Daylight Saving Time setting (summer time) setting

1. In the Timekeeping Mode, hold down £, until the city code starts to flash, which indicates the setting screen.
2. Press £ and the DST setting screen appears.
3. Use (•) to cycle through the DST settings in the sequence shown below.

- DST indicator:
  - If you change your Home City to one that is within the same transmitter area, the current DST setting will be retained. If you change to a city that is outside your current transmitter area, DST will be turned off automatically.

Tidal Movements

Tides are the periodic rise and fall of the water of oceans, seas, bays, and other bodies of water caused mainly by the gravitational interactions between the Earth, Moon, and Sun. Tides rise and fall about every six hours. The Tide Graph of this watch indicates tidal movement based on the Moon’s transit over a meridian and the lunitidal interval. The Tidal Graph calculates and graphically represents current tide conditions in your Home City or a port city in the vicinity of the Home City based on longitudes, lunar day length, and lunitidal interval preset in watch memory, and on high tide times specified by you.

- The Tide Graph graphically represents the current tide condition using one of three patterns that represent spring tide, intermediate tide, and neap tide, as shown below.

Tidal Graph

- The Tide Graph flashes as shown below to indicate the tide range.
- The segments on either end of the Tide Graph flash during high tide.
- The Moon phase indicator indicates the current phase of the Moon as shown below. It is based on the position of the Moon in the sky at different times throughout the month. If the appearance of the Moon phase is reversed from the actual Moon as viewed from your location, you can use the procedure under “To reverse the displayed Moon phase” to change the indicator.
- The button operation tone sounds any time you press one or more of the watch’s buttons. You can turn the button operation tone on or off as desired.
  - Even if you turn off the button operation tone, alarms, the Hourly Time Signal, and other beepers all operate normally.

To turn the button operation tone on and off

1. In the Timekeeping Mode, hold down £, until the city code starts to flash, which indicates the setting screen.
2. Press £ nine times until the current button operation tone setting (G) of (Note) appears.
3. Press (•) to toggle the setting between (on) and (off) (tone off).
4. Press £ to exit the setting screen.
- The mute indicator is displayed in all modes when the button operation tone is turned off.

Reference

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

Moon Phase Indicator

The Moon phase indicator of this watch indicates the current phase of the Moon as shown below. It is based on the position of the Moon in the sky at different times throughout the month. If the appearance of the Moon phase is reversed from the actual Moon as viewed from your location, you can use the procedure under “To reverse the displayed Moon phase” to change the indicator.
When your Home City is
• When a China time zone is selected, the watch receives the time calibration signals
• When a Japanese time zone is selected, the watch receives the time calibration

Scrolling
If you do not perform any operation for about two or three minutes while a setting

Auto Return
• If you do not perform any operation for about two or three minutes while a setting

Radio-controlled Atomic Timekeeping Precautions
• Strong electromagnetic charge can result in the wrong time being set.
• The time calibration signal bounces off the ionosphere. Because of this, such factors as
• Even if the time calibration signal is received properly, certain conditions can cause the
time setting to be off by up to one second.
• The current time setting in accordance with the time calibration signal takes priority over
time settings you make manually.

Transmitters
The time calibration signal received by this watch depends on the currently selected Home City code.
• When a U.S. time zone is selected, the watch receives the time calibration signal transmitted from the United States (Fort Collins).
• When a Japanese time zone is selected, the watch receives the time calibration signal transmitted from Japan (Fukushima and Fukuoka/Saga).
• When a European time zone is selected, the watch receives the time calibration signals transmitted from Germany (Mainflingen) and England (Arthingham).

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

Timekeeping
• Resetting the seconds to 00 while the current count is in the range of 30 to 59 causes the minutes to be increased by 1. In the range of 0 to 29, the seconds are reset to 0 without changing the minutes.
• The year can be set in the range of 2000 to 2099.
• The watch is set in full automatic calendar makes allowances for different month lengths and leap years. Once you set the date, there should be no reason to change it except after you have the watch’s battery replaced.
• The currently receivable time zones in the Timekeeping Mode and World Time Mode is calculated in accordance with the Coordinated Universal Time (UTC) for each city, based on your Home City time setting.

World Time
• The seconds count of the World Time is synchronized with the seconds count of the

Illumination Precautions
• The electroluminescent panel that provides illumination loses power after very long use.
• Illumination may be difficult to see when viewed under direct sunlight.
• The watch may emit an audible sound whenever the display is illuminated. This is due to vibration of the EL panel used for illumination, and does not indicate malfunction.
• Illumination turns off automatically whenever an alarm sounds.
• Frequent use of illumination runs down the battery.

Auto light switch precautions
• Avoid wearing the watch on the inside of your wrist. Doing so causes the auto light switch to operate when it is not needed, which shortens battery life. If you want to

Power Supply: Solar cell and one rechargeable battery
Approximate battery operating time: 5 months (from full charge to Low 4) under the following conditions:
• Watch not exposed to light
• Internal timekeeping
• Display on 16 hours per day, sleep state 6 hours per day
• 1 illumination operation(1.5 seconds per day)
• Approximately 4 minutes at signal reception per day

Frequent use of illumination runs down the battery. Particular care is required when using the auto light switch.
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</table>

*Based on data as of December 2008.*

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