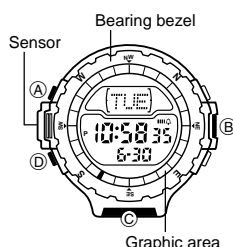


GETTING ACQUAINTED

Congratulations upon your selection of this CASIO watch. To get the most out of your purchase, be sure to carefully read this User's Guide and keep it on hand for later reference when necessary.

About this User's Guide

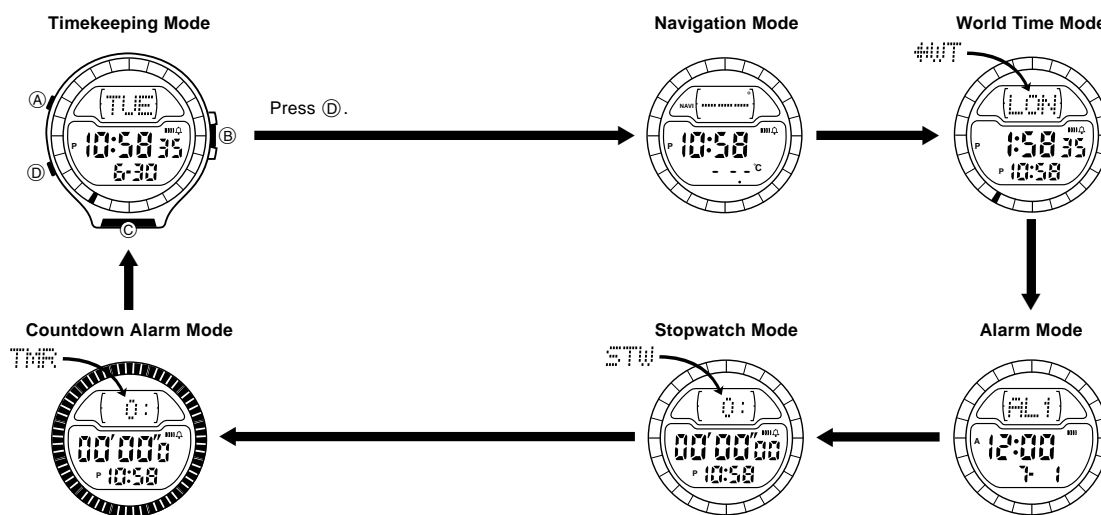


- Button operations are indicated using the letters shown in the illustration.
- Each section of this User's Guide provides you with the information you need to perform operations in each mode. Further details and technical information can be found in the "REFERENCE" section.

- 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 be sure to use a second compass to confirm direction readings.
- CASIO COMPUTER CO., LTD. assumes no responsibility for any loss, or any claims by third parties that may arise through the use of this watch.

GENERAL GUIDE

Press **D** to change from mode to mode. Each mode is explained on the following pages.



BACKLIGHT

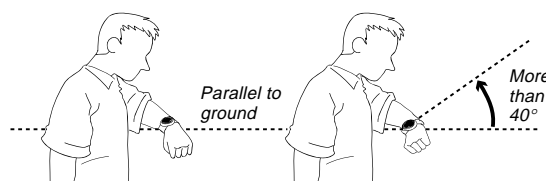
Auto light switch on indicator



The backlight uses an EL (electro-luminescent) panel that causes the entire display to glow for easy reading in the dark. The watch's auto light switch automatically turns on the backlight when you angle the watch towards your face.

- The auto light switch must be turned on (indicated by the auto light switch on indicator) for it to operate.

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



Turning on the Backlight manually

In any mode (except for the World Time Mode), press **B** to illuminate the display for about two seconds.

- The above operation turns on the backlight regardless of the current auto light switch setting.

About the Auto Light Switch

Turning on the auto light switch causes the backlight to turn on for about two seconds, whenever you position your wrist as described below in any mode.

- See "Backlight Precautions" for other important information about using the backlight.

Warning!

- Never try to read your watch when mountain climbing or hiking in areas that are dark or in areas with poor footing. Doing so is dangerous and can result in serious personal injury.
- Never try to read your watch when running where there is danger of accidents, especially in locations where there might be vehicular or pedestrian traffic. Doing so is dangerous and can result in serious personal injury.
- Never try to read your watch when riding on a bicycle or when operating a motorcycle or any other motor vehicle. Doing so is dangerous and can result in a traffic accident and serious personal injury.
- When you are wearing the watch, make sure that its 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.

To turn the auto light switch on and off

In the Timekeeping Mode, hold down (B) for two seconds to turn the auto light switch on (Auto light switch on indicator displayed) and off (Auto light switch on indicator not displayed).

- In order to protect against running down the batteries, the auto light switch is automatically turned off approximately six hours after you turn it on. Repeat the above procedure to turn the auto light switch back on if you want.
- The auto light switch on indicator is on the display in all modes while the auto light switch is turned on.

TIMEKEEPING MODE

Use the Timekeeping Mode to set the current time and date, to take direction and temperature readings, to select the temperature unit of measurement, and to calibrate the temperature sensor.

Calibrating the Seconds Count



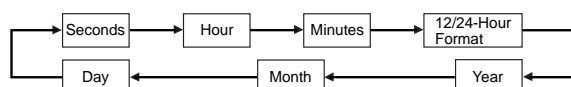
Use the following procedure to calibrate the seconds count on a time signal from a radio, TV, or other source.

- In the Timekeeping Mode, hold down (A) until the seconds digits start to flash on the display.
- Press (C) to set the seconds count to 00 when the time signal you are calibrating to sounds.
 - Pressing (C) while the seconds count is in the range of 30 to 59 resets the seconds to 00 and adds 1 to the minutes. If the seconds count is in the range of 00 to 29, the minutes count is unchanged.
- Press (A) to return to the current time display.

Setting the Current Time



- In the Timekeeping Mode, hold down (A) until the seconds digits start to flash on the display.
 - The seconds digits are flashing because they are selected.
- Press (D) to move the flashing in the sequence shown below to select other digits and settings.

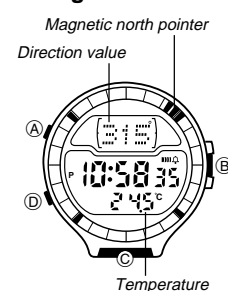


- While hour, minutes, year, month, or day is selected (flashing), press (C) to increase the setting or (B) to decrease it.
 - When the 12/24-hour setting is selected, use (C) to toggle between 12-hour (12H) and 24-hour (24H) timekeeping.
- After the time and date are set the way you want them, press (A) to return to the current time screen.

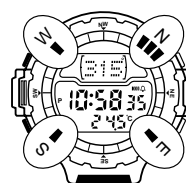
Notes

- The year can be set in the range of 1995 to 2039.
- The day of the week is automatically displayed in accordance with the month and day setting.
- The watch's built-in full automatic calendar automatically make allowances for different month lengths and leap years. Once you set the date, there should be no reason to change it except after the replacement of the watch's batteries.

Taking a Direction and Temperature Reading



- In the Timekeeping Mode, place the watch on a flat surface or (if you are wearing the watch), make sure that your wrist is horizontal (in relation to the horizon).
 - After about one second, the current temperature, the direction pointers and direction value appear on the display.
- You can repeat steps 1 through 2 as many times as you like.



- Next, you can adjust the rotary direction bezel so that the "N" or "▼" mark is aligned with the magnetic north pointer. This aligns all of the markings on the bezel with their applicable directions.
 - After you are finished taking direction readings, press (D) to return to the current time and date screen.
 - The watch automatically returns to the current time and date screen if you do not perform any operation for about 60 minutes.

Notes

- To take a temperature reading only, simply press (C) in the Timekeeping Mode. This also performs a direction reading, but the pointers and direction value will not be accurate if the watch is not oriented correctly.
- The direction value shows the direction that the 12 o'clock position of the watch is pointing as an angle value. See "Direction Values" for details.
- After you take a direction and temperature reading in the Timekeeping Mode, temperature readings continue to be performed every two minutes.
- See "Temperature and Direction Reading Precautions" and "Digital Compass Precautions" for other important information about taking direction and temperature readings.

Changing the Temperature Measurement Unit



- In the Timekeeping Mode, press (C) to perform a direction and temperature reading.
- Hold down (A) until the temperature value starts to flash on the display.
- While the temperature value is flashing, press (D) to toggle it between Celsius (°C) and Fahrenheit (°F).
- When the measurement unit you want is displayed, press (A) to return to the measurement result screen.
 - To return to the current time and date screen, press (D).

Calibrating the Temperature Reading

The temperature sensor of this watch is calibrated at the factory before shipment and further adjustment is normally not required. If you notice significant error in the temperature readings produced by this watch, you can adjust it to correct the error.

Important!

Incorrectly calibrating the temperature reading of this watch can result in incorrect readings. Carefully read the following before doing anything.

- Compare the readings produced by the watch with those of another reliable, accurate thermometer.
- If adjustment is required, remove the watch from your wrist and wait for 20 or 30 minutes to give the temperature of the watch time to stabilize.

To calibrate the temperature reading

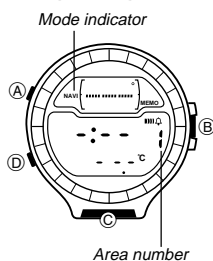


- In the Timekeeping Mode, press (C) to perform a direction and temperature reading.
- Hold down (A) until the temperature value starts to flash on the display.
- Press (C) to increase the displayed temperature by 0.1°C. Pressing (B) decreases it.
 - To return the temperature reading to its initial factory default calibration, press (B) and (C) at the same time.
- If you have selected Fahrenheit as your unit of measurement, the above operations change the reading by 0.2°F.
- You can change the displayed temperature value by ±9.9°C (18.0°F). The overall temperature reading adjustment range is -10.0°C to 60.0°C (14.0°F to 140.0°F).
- After calibrating the temperature, press (A) to return to the measurement result screen.
 - To return to the current time and date screen, press (D).

NAVIGATION MODE

The Navigation Mode provides you with storage for up to five sets of direction and temperature data. Each set of data includes direction, temperature, and the time the readings were taken.

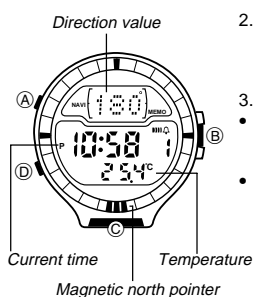
Taking Navigation Mode readings



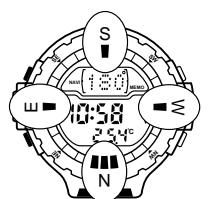
1. In the Navigation Mode, use (A) to select the memory area where you want to store the data. Each time you press (A), the selected memory area changes in the following sequence.



- Each memory area is identified by a number from 1 through 5. The Initial Screen shows the current time without a memory number.
- Navigation Mode data is not stored in memory if you perform the following steps while the Initial Screen is on the display.



2. Place the watch on a flat surface or (if you are wearing the watch), make sure that your wrist is horizontal (in relation to the horizon).
 3. Press (C) to take a reading.
- After about one second, the current temperature, direction pointers, and a direction value appear on the display.
 - You can repeat steps 1 through 3 as many times as you like.

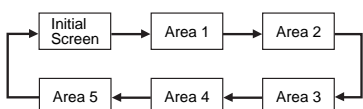


4. Next, you can adjust the rotary direction bezel so that the "N" or "▼" mark is aligned with the magnetic north pointer. This correctly aligns all of the markings on the bezel.
- See "Temperature and Direction Reading Precautions" and "Digital Compass Precautions" for other important information about taking direction and temperature readings.

Recalling Navigation Mode Data



While in the Navigation Mode, use (A) to scroll through the data in the following sequence.

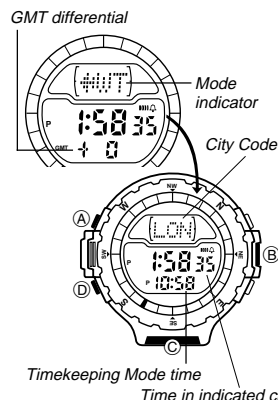


Deleting All Navigation Mode Data

While in the Navigation Mode, hold down (A) and (C) for about two seconds, until the direction value changes to ---. This indicates all Navigation Mode memory data is deleted.

- You cannot delete individual memory area contents.

WORLD TIME MODE

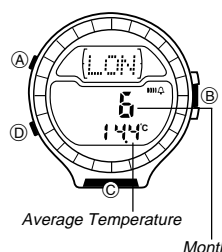


The World Time Mode shows you the current time and average temperatures in 27 cities (29 time zones) around the world.

- For full information on city codes, see the "CITY CODE TABLE".
- The time settings of the Timekeeping Mode and the World Time Mode are independent from each other, so you must make separate settings for each.
- Whenever you change the time setting for any city in the World Time Mode, the settings of all other cities are changed accordingly.

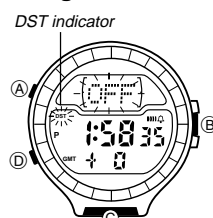
Selecting a World Time City and Viewing Its Time and Temperature Information

[Average Temperature Display]

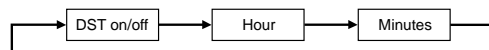


1. In the World Time Mode, press (C) to scroll forward through the city codes (time zones) and (B) to scroll back.
- When you display the screen of a city, its time and GMT differential appear first. Next, the GMT differential display changes to the current Timekeeping Mode time.
- Press (A) to display the average temperature in the displayed city for the currently selected month.
- Press (C) to scroll forward through the months and (B) to scroll back.
- No average temperature data is shown when GMT or --- is indicated as the city.
- Press (A) to return to the current time screen for the selected city.

Setting the World Time



1. In the World Time Mode, use (B) and (C) to scroll through the city codes and find the one you want.
- Hold down (A) until the DST On/Off setting starts to flash on the display.
- The DST On/Off setting is flashing because it is selected.
- Press (D) to move the flashing in the sequence shown below to select other settings.



- While DST setting is selected (flashing), press (C) to toggle Daylight Saving Time on (EST) and off (CFF).
 - While hour or minutes is selected (flashing), press (C) to increase the setting or (B) to decrease it.
4. After you set the time, press (A) to return to the World Time screen.

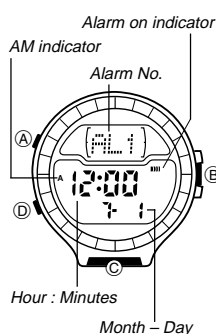
Daylight Saving Time (DST)

Daylight Saving Time automatically advances the time setting by one hour from Standard Time. You can make individual Daylight Saving Time settings for each city code (time zone). Remember that not all countries or even local areas use Daylight Saving Time.

To switch between Standard Time and Daylight Saving Time

1. In the World Time Mode, use (B) and (C) to display the city code (time zone) whose standard time/daylight saving time setting you want to change.
 - Hold down (A) until the DST On/Off setting starts to flash on the display.
 - Press (C) to toggle between Daylight Saving Time (EST) and Standard Time (CFF).
 - After you are finished making the setting you want, press (A) to return to the World Time screen.
- The DST indicator is on the display whenever you display a city code for which daylight saving time is turned on.

ALARM MODE



You can use the Alarm Mode to set three independent alarms with hour, minutes, month, and day. You can also turn on an Hourly Time Signal that causes the watch to beep twice every hour on the hour.

Alarm Types

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

• Daily alarm

Set the hour and minutes for the alarm time. Set - for the month and -- for the day (see step 4 under "Setting Alarms"). This type of setting causes the alarm to sound everyday at the time you set.

• Date alarm

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

• 1-Month alarm

Set the month, hour and minutes for the alarm time. Set -- for the day (see step 4 under "Setting Alarms"). This type of setting causes the alarm to sound everyday at the time you set, only during the month you set.

• Monthly alarm

Set the day, hour and minutes for the alarm time. Set - for the month (see step 4 under "Setting Alarms"). This type of setting causes the alarm to sound every month at the time you set, on the day you set.

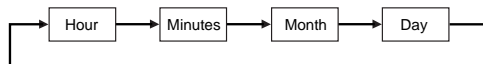
Setting Alarms

- Press **(C)** while in the Alarm Mode to select the alarm whose time you want to set.



- After you select an alarm, hold down **(A)** until the hour digits of the alarm time start to flash on the display.

- The hour digits are flashing because they are *selected*.
 - This operation automatically turns on the alarm.
- Press **(D)** to move the flashing in the sequence shown below to select other digits.



- While hour, minutes, month, or day is selected (flashing), press **(C)** to increase the setting or **(B)** to decrease it.
- To set an alarm that does not include a month (Daily alarm, Monthly alarm), set - for the month. Press **(B)** or **(C)** until the - mark appears (between 12 and 1) while the month setting is flashing.
- To set an alarm that does not include day (Daily alarm, 1-Month alarm), set -- for the day. Press **(B)** or **(C)** until the -- mark appears (between 31 and 1) while the day setting is flashing.
- When setting the alarm time using the 12-hour format, take care to set the time correctly as morning (**A** indicator) or afternoon (**P** indicator).
- After the alarm time is the way you want it, press **(A)** to return to the alarm display screen.

Alarm Operation

The alarm sounds at the preset time for about 20 seconds, or until you stop it by pressing any button.

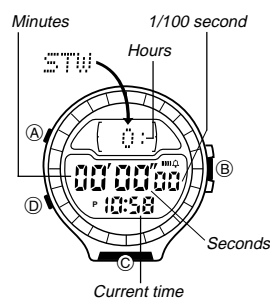
To test the alarm

Hold down **(C)** to sound the alarm.

Turning an Alarm and Hourly Time Signal on and Off

- In the Alarm Mode, press **(C)** to select an alarm or the Hourly Time Signal.
- When the alarm or Hourly Time Signal you want to is selected, press **(A)** to turn it on and off.
 - ▣▣▣▣ Indicates alarm is ON.
 - ⏰ Indicates Hourly Time Signal is ON.
- The alarm on indicator (▣▣▣▣) and the Hourly Time Signal on indicator (⏰) are shown on the display in all modes while these functions are turned on.
- If any alarm is on, the Alarm On Indicator is shown on the display when you change to another mode.

STOPWATCH MODE

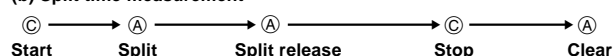


The Stopwatch Mode lets you measure elapsed time, split times, and two finishes. The range of the stopwatch is 23 hours, 59 minutes, 59.99 seconds.

(a) Elapsed time measurement



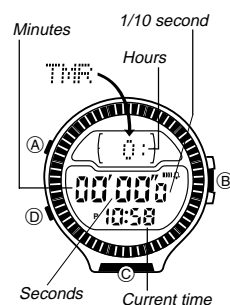
(b) Split time measurement



(c) Split time and 1st-2nd place times



COUNTDOWN ALARM MODE

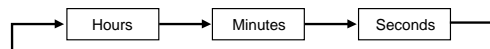


The countdown timer can be set within a range of 1 second to 24 hours. When the countdown reaches zero, an alarm sounds.

- You can also select auto-repeat, which automatically restarts the countdown from the original value you set whenever zero is reached.

Setting the Countdown Time

- In the Countdown Alarm Mode, hold down **(A)** until the hour digits of the countdown time start to flash on the display.
 - The hour digits are flashing because they are *selected*.
- Press **(D)** to move the flashing in the sequence shown below to select other settings.

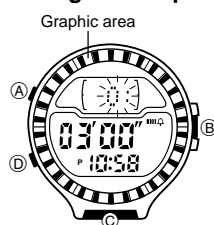


- While hours, minutes, or seconds digits are selected (flashing), press **(C)** to increase the setting.
 - To set the starting value of the countdown time to 24 hours, set **(C)** : **24 00**.
- After the countdown time is the way you want it, press **(A)** to return to the countdown alarm display screen.

Using the Countdown Timer

- Press **(C)** while in the Countdown Alarm Mode to start the countdown timer.
- When the end of the countdown is reached and auto-repeat is turned off, the alarm sounds for 10 seconds or until you stop it by pressing any button. The countdown time is automatically reset to its starting value after the alarm stops.
 - Press **(C)** while a countdown operation is in progress to pause it. Press **(C)** again to resume the countdown.
 - To completely stop a countdown operation, first pause it (by pressing **(C)**), and then press **(A)**. This returns the countdown time to its starting value.

Turning Auto-repeat On and Off



[Auto-repeat On]

- In the Countdown Alarm Mode, hold down **(A)** until the hour digits of the countdown time start to flash on the display.
- Press **(B)** to turn auto-repeat on and off.
 - When you turn on auto-repeat, a pattern of bars appear in the graphic area. Turning off auto-repeat causes the graphic area to go blank.
- Press **(A)** to return to the countdown alarm display screen.

Notes

- The auto-repeat on and off status indicators in the graphic area are not shown in the countdown alarm display screen. To check whether auto-repeat is on or off, perform step 1 of the above procedure to change to the setting screen. Then you can check the status of the graphic area to see if auto-repeat is on or off. After you are finished, press (A) to return to the countdown alarm display screen.
- When the end of the countdown is reached and auto-repeat is turned on, the alarm sounds, but the countdown starts again automatically whenever the countdown reaches zero. You can stop timing by pressing (C), and manually reset to the starting countdown time by pressing (A).
- Normally, an alarm tone sounds for 10 seconds when the end of the countdown is reached. If you use auto-repeat with start time of 10 seconds or less, the alarm tone sounds for only one second.

REFERENCE

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

Warning Indicators

Warning indicators appear whenever any of the conditions described below occur. Appearance of a warning indicator causes any measurement operation that is currently underway to stop. Warning indicators appear in the upper display, and this causes ----- to replace any direction or temperature values on the display.

- There may be cause where the ERR or EFT message is cleared once you change modes. In this case, you can continue using the watch normally unless the error warning message reappears.
- Whenever there is a sensor malfunction, be sure to take the watch to an authorized CASIO distributor or service center as soon as possible.

Abnormal Magnetic Field Indicator



This indicator appears whenever the watch has a problem obtaining a correct direction reading. This condition could indicate that the watch is within a very high magnetic field, and so you should try moving to another location. Also, see "Digital Compass Precautions" for further information on conditions that cause errors.

Low Battery Indicator



This message indicates that batteries power is too low to perform the measurement. It appears whenever batteries power drops below a certain level, or when you try to use this watch under very cold conditions (below about $-10^{\circ}\text{C}/14^{\circ}\text{F}$).

If the EFT message appears because of use under cold conditions, it should clear (and normal operation should return) after the watch is brought back to normal temperature.

If batteries power is low (indicated EFT appears under normal temperatures), you should have the batteries replaced as soon as possible. Note that replacement of the batteries causes all memory contents to be cleared.

Sensor Malfunction Indicator



This message indicates malfunction of sensor circuitry. Whenever a sensor malfunction initially occurs, the ERR messages flashes on the display. Note that calibrating the Digital Compass may cause the ERR message to appear. In this case, the message does not indicate sensor malfunction, and should be corrected if you re-calibrate the Digital Compass.

Auto Return Operations

- After you perform an operation in any mode, pressing (D) returns to the Timekeeping Mode.
- If you leave a screen with flashing digits on the display for two or three minutes without performing any operation, the watch automatically saves anything you have input up to that point and exits the setting screen.

Data and Setting Scrolling

The (B) and (C) buttons are used in various modes and screens to scroll through data on the display. In most cases, holding down these buttons during a scroll operation scrolls through the data at high speed.

12-hour/24-hour Timekeeping Formats

The 12-hour/24-hour timekeeping format you select in the Timekeeping Mode is also applied in the Navigation, World Time, and Alarm Modes.

Backlight Precautions

- The electro-luminescent panel loses illuminating power after very long use.
- The illumination provided by the backlight may be hard to see when viewed under direct sunlight.
- The watch will emit an audible sound whenever the display is illuminated. This is caused by a transformer that vibrates when the EL panel lights up. It does not indicate malfunction of the watch.
- The backlight automatically turns off whenever an alarm sounds.

Auto light switch precautions

- Avoid wearing the watch on the inside of your wrist. Doing so causes the auto light switch to operate when it is not needed, which shortens battery life.
- The backlight turns off in about two seconds, even if you keep the watch pointed towards your face.
- The backlight may not light if the face of the watch is more than 15 degrees off the parallel as shown below. Make sure that the back of your hand is parallel to the ground.



- Static electricity or magnetic force can interfere with proper operation of the auto light switch. If the backlight does not light, try moving the watch back to the starting position (parallel with the ground) and then tilt it back toward you again. If this does not work, drop your arm all the way down so it hangs at your side, and then bring it back up again.
- Under certain conditions the backlight may not light until about one second or less after turn the face of the watch towards you. This does not necessarily indicate malfunction of the backlight.

World Time Mode

- The seconds count of the World Time is synchronized with the seconds sound of the Timekeeping Mode.
- GMT differential is calculated by this watch based on Universal Time Coordinated (UTC) data.
- Average monthly temperature values displayed by this watch are based on the "WORLD CLIMATE TABLE" published by the Japanese government's Meteorological Agency.

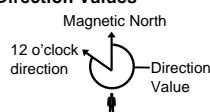
Temperature and Direction Reading Precautions

- The direction and temperature reading operation is automatically interrupted whenever an alarm or Hourly Time Signal sounds. If this happens, start the reading operation again from the beginning.
- Taking a direction reading while the watch is not horizontal (in relation to the horizon) can result in large error.
- If the Navigation Mode memory area you select to store a reading already contains data, the data of the new reading replaces the existing data.

Digital Compass Precautions

This watch features a built-in magnetic bearing sensor that detects terrestrial magnetism. This means that north indicated by this watch is magnetic north, which is somewhat different from true polar north. The magnetic north pole is located in northern Canada, while the magnetic south pole is in southern Australia. Note that the difference between magnetic north and true north as measured with all magnetic compasses tends to be greater as one gets closer to either of the magnetic poles. You should also remember that some maps indicate true north (instead of magnetic north), and so you should make allowances when using such maps with this watch.

Direction Values



The direction values displayed by this watch represent the clockwise angle formed between magnetic north (which is 0 degrees) and the direction that the 12 o'clock position of the watch is pointing.

Location

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

Storage

- The precision of the bearing sensor may deteriorate if the watch becomes magnetized. Because of this, you should be sure to store the watch away from magnets or any other sources of strong magnetism, including: permanent magnets (magnetic necklaces, etc.) and household appliances (TVs, personal computers, washing machines, freezers, etc.).
- Whenever you suspect that the watch may have become magnetized, perform one of the calibration procedures under "Calibrating the Bearing Sensor" below.

Calibrating the Bearing Sensor

Whenever you suspect that direction readings produced by the watch are wrong, you should calibrate it. You can use either one of two calibration procedures: *bidirectional calibration* or *northerly calibration*.

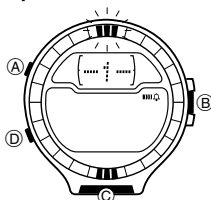
Use bidirectional calibration when you want to take readings within an area exposed to magnetic force. This type of calibration should be used if the watch become magnetized for any reason.

With northerly calibration, you "teach" the watch which way is north (which you have to determine with another compass or some other means). You could use this calibration procedure, for example, to set the watch to indicate true north instead of magnetic north.

Important!

- If you want to perform both bidirectional and northerly calibration, be sure to perform bidirectional calibration first, and then perform northerly calibration. This is necessary because bidirectional calibration cancels any previously set northerly calibration setting.
- The more correctly you perform bidirectional calibration, the better the accuracy of the bearing sensor readouts. You should perform bidirectional calibration whenever you change environments where you use the bearing sensor, and whenever you feel that the bearing sensor is producing incorrect readings.

To perform bidirectional calibration



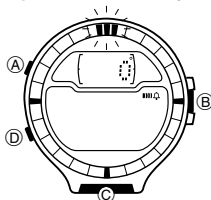
- While in the Navigation Mode, hold down **(A)** until the upper display changes to show $\overline{\text{---}}$.
 - At this time, the magnetic north pointer flashes at the 12 o'clock position to indicate that the watch is ready to calibrate the first direction.
- Place the watch on a level surface facing any direction you want, and press **(C)** to calibrate the first direction.

- When the calibration procedure is complete, the message $\overline{\text{---}}$ appears in the upper display. This soon changes to $\overline{\text{---}}$ and the magnetic north pointer flashes at the 6 o'clock position to indicate that the watch is ready for the second direction.
- Rotate the watch 180 degrees.
- Press **(C)** again to calibrate the second direction.
- When the calibration procedure is complete, the message $\overline{\text{---}}$ appears in the upper display. After a short while, the watch automatically returns to the Navigation Mode's initial screen.

Precautions about bidirectional calibration

- You can use any two opposing directions for bidirectional calibration. You must, however, make sure that they are 180 degrees opposite each other. Remember that if you perform the procedure incorrectly, you will get wrong bearing sensor readings.
- Do not move the watch during the one or two seconds (from the point you press **(C)** up to the point that $\overline{\text{---}}$ appears in the upper display) that the calibration of each direction is in progress. If you do, the message $\overline{\text{---}}$ appears in the upper display, which means you have to restart the bidirectional calibration procedure from the beginning.
- The appearance of $\overline{\text{---}}$ during bidirectional calibration can also be caused by local interference. If you suspect that this is the case, move to another location and try the procedure again.
- You should perform bidirectional calibration in an environment that is the same as that where you plan to be taking direction readings. If you plan to use it in an open field, for example, calibrate in an open field.

To perform northerly calibration



- While in the Navigation Mode, hold down **(A)** until the upper display changes to show $\overline{\text{---}}$.
- Press **(D)** to start the northerly calibration procedure.
 - At this time, the indicator $\overline{\text{---}}$ appears in the upper display.
- Place the watch on a level surface, and position it so that its 12 o'clock position points north (as measured with another compass).

- Press **(C)** to start the calibration operation.
 - When the calibration procedure is complete, the message $\overline{\text{---}}$ appears in the upper display. After a short while, the watch automatically returns to the Navigation Mode's initial screen.

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

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

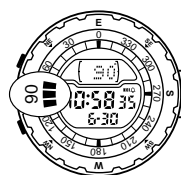
Question: What does it mean when $\overline{\text{---}}$ appears in place of a direction value?

Answer: This is the abnormal magnetic field indicator. It means that strong magnetism is being generated nearby. Move away from the source of strong magnetism and try again.

Question: Why am I having problems taking direction readings indoors?

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

Question: What do the numbers on the watch mean?



Answer: The face of this watch is marked with values that increase in a counterclockwise direction. These values represent degrees. When you take a direction reading, you can use these values to find out how many degrees the 12 o'clock position of this watch differs from magnetic north.

For example, when the Magnetic North pointer is pointing at "90" on the watch's face, it means that the 12 o'clock position is 90 degrees from magnetic north (which means that 12 o'clock is pointing due east).

CITY CODE TABLE

City Code	City	GMT Differential	Other major cities in same time zone
---		-11	PAGO PAGO
HNL	HONOLULU	-10	PAPEETE
ANC	ANCHORAGE	-09	NOME
LAX	LOS ANGELES	-08	SAN FRANCISCO, LAS VEGAS, VANCOUVER, SEATTLE, DAWSON CITY
DEN	DENVER	-07	EL PASO, EDMONTON
CHI	CHICAGO	-06	HOUSTON, DALLAS/FORT WORTH, NEW ORLEANS, MEXICO CITY, WINNIPEG
NYC	NEW YORK	-05	MONTREAL, DETROIT, MIAMI, BOSTON, PANAMA CITY, HAVANA, LIMA, BOGOTA
CCS	CARACAS	-04	LA PAZ, SANTIAGO, PORT OF SPAIN
RIO	RIO DE JANEIRO	-03	SAO PAULO, BUENOS AIRES, BRASILIA, MONTEVIDEO
---		-02	
---		-01	PRAIA
GMT		+00	DUBLIN, LISBON, CASABLANCA, DAKAR, ABIDJAN
LON	LONDON		
PAR	PARIS	+01	MILAN, ROME, MADRID, AMSTERDAM, ALGIERS, HAMBURG, FRANKFURT, VIENNA, STOCKHOLM, BERLIN
CAI	CAIRO	+02	ATHENS, HELSINKI, ISTANBUL, BEIRUT, DAMASCUS, CAPE TOWN
JRS	JERUSALEM		
JED	JEDDAH	+03	KUWAIT, RIYADH, ADEN, ADDIS ABABA, NAIROBI
THR	TEHRAN	+3.5	SHIRAZ
MRU	MAURITIUS	+04	DUBAI, ABU DHABI, MUSCAT
KBL	KABUL	+4.5	
KHI	KARACHI	+05	
DEL	DELHI	+5.5	MUMBAI, CALCUTTA
DAC	DHAKA	+06	COLOMBO
RGN	YANGON	+6.5	
BKK	BANGKOK	+07	JAKARTA, PHNOM PENH, HANOI, VIENTIANE
HKG	HONG KONG	+08	SINGAPORE, KUALA LUMPUR, BEIJING, TAIPEI, MANILA, PERTH, ULAANBAATAR
TYO	TOKYO	+09	SEOUL, PYONGYANG
ADL	ADELAIDE	+9.5	DARWIN
SYD	SYDNEY	+10	MELBOURNE, GUAM, RABAU
NOU	NOUMEA	+11	PORT VILA
WLG	WELLINGTON	+12	CHRISTCHURCH, NADI, NAURU ISLAND

* Based on data as of June 1998.

Questions & Answers About Direction Readings

Question: What causes incorrect direction readings?

Answer:

- Incorrect bidirectional calibration. Perform bidirectional calibration. Remember that bidirectional calibration is required whenever batteries are replaced.
- Nearby source of strong magnetism, such as a household appliance, a large steel bridge, a steel beam, overhead wires, etc., or an attempt to perform direction measurement on a train, boat, etc. Move away from large metal objects and try again. Note that digital compass operation cannot be performed inside a train, boat, etc.

WORLD CLIMATE TABLE

City Code	1		2		3		4		5		6		7		8		9		10		11		12	
	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
WLG	16	61	17	62	15	60	13	56	11	52	10	49	9	47	9	48	10	50	12	53	13	56	15	59
NOU	26	78	26	78	25	78	24	75	22	72	21	69	20	67	20	67	21	69	22	72	23	74	25	76
SYD	23	73	23	73	21	71	19	66	16	60	13	56	12	54	13	56	16	60	18	64	20	67	22	71
ADL	22	71	22	71	20	68	17	62	14	57	12	53	11	52	12	53	13	56	16	60	18	65	20	68
TYO	5	41	6	42	9	47	14	57	19	65	22	71	25	77	27	81	23	74	18	64	13	55	8	46
HKG	16	60	16	61	19	65	22	72	26	79	28	82	29	84	28	83	28	82	25	77	21	71	18	64
BKK	27	80	28	83	29	85	31	87	30	86	29	85	29	84	29	84	28	83	28	83	27	81	26	79
RGN	25	77	26	79	29	84	30	86	29	85	27	81	27	80	27	81	27	81	28	82	27	81	25	76
DAC	18	65	22	71	26	79	28	83	29	83	29	83	29	83	29	84	29	84	28	82	24	76	20	68
DEL	14	58	17	62	22	72	29	84	32	90	34	92	31	88	30	85	29	85	26	79	21	69	16	60
KHI	18	65	21	69	25	76	28	83	31	87	31	88	30	86	29	84	29	84	28	82	24	75	20	67
KBL	-2	29	0	31	7	44	13	56	18	64	23	73	25	77	24	76	20	68	14	57	7	44	1	34
MRU	26	79	26	79	26	78	25	77	23	74	22	71	21	70	21	69	21	70	22	72	24	75	25	77
THR	3	38	6	42	10	50	16	61	22	72	27	81	30	86	29	84	25	77	19	65	11	53	6	42
JED	23	73	23	74	26	78	28	82	29	85	31	87	32	90	32	89	31	87	29	84	27	81	25	77
JRS	8	47	9	49	12	53	16	60	19	67	22	71	23	73	23	74	22	71	20	67	15	59	10	50
CAI	14	57	15	60	18	64	22	71	25	77	28	82	28	82	28	82	27	80	24	75	19	67	15	59
PAR	4	38	4	40	7	44	10	49	13	56	16	61	18	65	18	64	15	60	11	53	7	44	4	40
LON	4	39	4	39	6	42	8	46	11	52	14	58	17	62	16	61	14	57	11	51	7	44	5	40
RIO	26	79	27	80	26	79	25	76	23	73	22	71	21	70	22	71	22	72	23	73	24	75	25	78
CCS	24	76	25	76	25	77	26	78	27	80	27	80	27	80	27	81	28	82	27	81	27	80	25	78
NYC	0	32	1	33	5	42	11	51	17	62	22	71	25	76	24	75	20	68	14	57	9	47	3	37
CHI	-6	21	-3	26	3	37	9	49	16	60	21	70	24	74	23	73	19	65	12	53	5	41	-2	28
DEN	-1	30	1	33	4	39	9	48	14	57	19	67	23	73	22	71	17	62	11	51	4	39	-1	31
LAX	14	57	15	59	15	59	16	62	18	65	20	68	23	73	24	75	23	73	21	69	17	62	14	57
ANC	-10	15	-7	19	-4	26	2	36	8	47	13	55	15	58	13	56	9	48	1	35	-6	21	-9	16
HNL	23	73	23	73	24	74	24	76	25	78	26	79	27	81	28	82	27	81	27	80	25	77	23	74