## USER'S GUIDE 2556

About This Manual


General Guide


## Timekeeping

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

- Pressing (D) displays the Last Signal screen (date and time the time calibration signal was last received) in the Timekeeping Mode.


Day orweek


Last Signal Screen

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

- Before using the watch in the Continental United States, first use the procedure under "Setting Up the Watch for Use in the Continental United States" to set the time
in accordance with a time calibration signal.
- Note that after you set your Home City (the city where you normally use the watch) code, you must also turn on the watch's time calibration signal receiver if you want to enable auto the calibration. See Abou"

Setting Up the Watch for Use in the Continental United States
You need to make the following three settings before using this watch in the
You need to make the following three settings before using this watch in the
Continental United States. The following provides a general overview of the setting Continental United States. The following provides a general overview of the setting
procedure. For full details, see "Setting the Time and Date Manually" and "Time Calibration Signal Reception".

- Specify the city code for your Home City (the city where you will normally use the watch).
- Select the auto summer time (DST) setting.
- Perform the manual time calibration signal receive operation to set the current time.

To set up the watch for use in the Continental United States


1. In the Timekeeping Mode, hold down (A) until the current auto receive on/off setting to flash, which indicates the setting screen.
2. Press (C) twice to move the flashing to the city code
3. Use (D) (+) and (B) (-) to select the city code you want to use as your Home City.

- The following are the city codes for major cities in the Continental United States time zones.
LAX: Los Angeles, San Francisco, Las Vegas, Seattle DEN: Denver, EI Paso
CHI: Chicago, Houston, Dallas/Fort Worth, New Orleans

4. Press (C) to display the sumia, Boston
screen.
5. Use (D) to select A (auto DST).

Auto DST specifies auto swith Saving Time and Standard Time
6. Press (A) to exit the setting screen
7. Hold down (D) for about two seconds until the watch beeps.

- Release (D) and the message RC! appears to indicate that signal reception has started.
- Time calibration signal reception takes from two to six during this time
- If the watch is indoors, we recommend that you place the watch near a window to allow better signal reception.
- After signal reception is complete, the display of the watch changes to the Last Signal screen.

Time Calibration Signal Reception
This watch is designed to pick up a time calibration signal and update its time setting in accordance with the signal. There are two different methods you can use to receive the signal: Auto Receive and Manual Receive. With Auto Receive, the watch automatically receives the calibration signal three times each day and makes appropriate adjustments. With Manual Receive, you perform a specific button operation to receive the calibration signal.
Before performing a signal receive operation, remove the watch from your wrist and

- If your watch has a resin band pass the end
pland through the band loop and place the watch on a stable surface.


Pass through band loop.
Note

- If you are using the time calibration signal to set the time for this watch, be sure to correctly set your Home City. Otherwise, there is the chance that the watch will not set the correct time. See "Setting the Time and Date Manually" for details.
- Note that signal reception is possible only when the watch is within range of a time calibration signal transmitter, and a city code that supports signal reception is selected as the Home City code.
- The current time setting in accordance with the time calibration signal takes priority over any time settings you make.
- Auto receive is turned on when the watch is shipped from the factory. See the information under "Time Calibration Signal Reception" if you experience problems with time calibration signal reception.

To perform manual time calibration signal reception

1. Place the watch on a stable surface so its top ( 12 o'clock side) is facing in the general direction of the signal transmitter.

- Note that signal reception is poor if the watch is on its back or side.


2. In the Timekeeping Mode, hold down (D) for about two seconds until the watch beeps
that signal reption has stars appears to indicate
Time calibration signal reception.
Time calibration signal reception takes from two six minutes. Take care that you do not move the watch during this time.
Afer signal reception is complete, the display of the
watch changes to the Last Signal screen.
The receive indicator indicates that the time calibration reception attempt was successful.

Note

- To interrupt a receive operation and return to the Timekeeping Mode, press (D). - If the receive operation is unsuccessful, the message ERR appears on the display for about one or two minutes. After that, the watch returns to the Timekeeping Mode
- You can also change from the Last Signal or ERR screen to the normal timekeeping screen by pressing (D).


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About the Receive Indicator
The receive indicator shows the strength of the calibration signal being received. For best The receive indicator shows the strength of the calibration signal being received. For
reception, be sure to keep the watch in a location where signal strength is strongest.


- Even in an area where signal strength is strong, it takes about 10 seconds for signal reception to stabilize enough for the receive indicator to indicate signal strength. - Use the receive indicator as a guide for checking signal strength and for finding the best location for the watch during signal receive operations.
The recelive indicator remains time calibration signal and calibration of the watch's time setting. The receive adjustment of the current time setting.


## About Auto Receive

When auto receive is turned on, the watch automatically starts to receive the time calibration signal when the time in the Timekeeping Mode reaches 2:00 AM, 4:00 AM and 6:00 AM each day (calibration times).
Note

- The auto receive operation is performed only if the watch is in the Timekeeping World Time Mode when one of the calibration times is reached.
It is not performed if a calibration time is reached while you are making setting (while settings are flashing on the display), while an alarm is sounding.
Auto receipt of the calibration signal is designed to be performed early in the morning, while you sleep (provided that the Timekeeping Mode time 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 easily receive the signal.
- The receive indicator indicates that either the 2:00 AM, 4:00 AM, or 6:00 AM calibration signal reception was successful. Note, however, that the receive indicator is cleared from the display at 3:00 AM each day.
If you do not see the rece the indicator except for the above reason, it means there was some problem with the calibration reception operation. Either perform reception manually, or make sure the watch is set up properly to receive the time calibration
- Though this watch is designed to receive both time data (hour, minutes, seconds) and date data (year, month, day), certain signal conditions can limit reception to time data only.
- The receive indicator ( $\underset{\text { ² }}{\text { ² }}$ ) appears only when the watch is able to successfully receive both time and date data. It does not appear when only time data is received When time and date data is received: Receive indicator (큰) appears.
- Normally, the signal reception date shown by the Last Signal screen is the date data included in the received time calibration signal. When only time data is received, however, the Last Signal screen shows date as kept in the Timekeeping Mode at the time of signal reception.
- When auto receive is turned on, the watch receives the calibration signal for two to six minutes each day when the Timekeeping Mode time reaches 2:00 AM, 4:00 AM and 6:00 AM. Do not operate any of the watch's buttons within six minutes prior to or following the calibration times. Doing so can interfere with correct calibration.
- Remember that reception of the calibration signal depends on the time kept in the Timekeeping Mode. The receive operation will be performed whenever the display shows 2:00 AM, 4:00 AM and 6:00 AM, regardless of whether or not the
Timekeeping Mode time is actually the correct time,
Wheption for calibration. When of the last
 data of the successul reception.

To turn auto receive on and off


1. In the Timekeeping Mode, hold down (A) until the current auto receive on/off setting to flash, which indicates the setting screen.
2. Press (D) to toggle auto receive on ( $\boldsymbol{H} \boldsymbol{F}$ ) and off ( $\boldsymbol{H F}$ ).

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

Setting the Time and Date Manually
Make sure you select your Home City code (the city code whose time and date you are setting) before change the current time and date settings. World Time Mode times are all displayed in accordance with the Timekeeping Mode settings. Because of this, World Time Mode times will not be correct if you do not select the proper Home City code before setting the time and date in the Timekeeping Mode
To set the current time and date manually

3. When the setting you want to change is flashing, use (B) and/or (D) to change it as described below.

| Setting | Screen | Button Operations |
| :---: | :---: | :---: |
| Auto Receive | $77$ | Press (D) to toggle auto receive on and off. |
| Frequency | U FB | When NYC, CHI, DEN, LAX, ANC, or HNL is selected as Home City Code, USA flashes. When one of the other city codes is selected as Home City Code, --- flashes. |
| City code | $\mathrm{NH}=$ | Use (D) (+) and (B) ( - ) to change the setting. |


| Setting | Screen | Button Operations |
| :---: | :---: | :---: |
| DST | IF | Press (D) to toggle between Daylight Saving Time (If) and standard time ( $\mathbf{H} \mathbf{F}$ ). <br> - Pressing (D) performs a different operation when NYC, CHI, DEN, LAX, ANC or HNL is selected as Home City Code. See "Auto Summer Time (DST) Switching". |
| 12/24-Hour format | $1 \pm H$ | Press (D) to toggle between 12 -hour (12H) and 24 -hour ( $\mathbf{2 4 H}$ ) timekeeping. |
| Hour, Minutes | $19.5 \pi 5 \pi$ | Use (D) (+) and (B) ( - ) to change the setting. |
| Seconds |  | Press (D) to reset the seconds to 00. |
| Year | " | Use (D) (+) and (B) (-) to change the setting. |
| Month, Day | $6 \cdot 30$ |  |

4. Press (A) to exit the setting screen. - The auto receive setting is

- See "City Code Table" for a complete list of available city codes.
- 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 00 to 29 , the seconds are reset to 00 without changing the minutes.

World Time


The World Time shows the current time in 30 cities (29 time zones) around the world.
DST indicator
 Timekeeping Mode time and Home City settings and make the necessary changes.

- You can change the DST (Daylight Saving Time)/ Standard Time settings for each city code in the Timekeeping Mode.
it is in the world perform a signal receive operation even if it is in the World Time Mode when a calibration time is
reached. If this happens, the World Time Mode time reached. If this happens, the World Time Mode tim Timekeeping Mode's Home City time.
All of the operations in this section are performed in the World Time Mode, which you enter by pressing (C).

To view the time in another city code
In the World Time

- For full information on city codes, see the "City Code Table"

Alarms


Alarm time (Hour : Minutes) Countdown (Hours : Minutes Seconds)

arget alarm screen
To set an alarm time


The Alarm Mode gives you a choice of four one-time alarms functions as a "target alarm", which counts the time remaining from the current Timekeeping Mode time to the target alarm time. Also use the Alarm Mod ( TIE) on and off.
There are five alarms numbered $\#$ $T H L$, and $=H$. You can configure $=\mathbb{Z}$ as a snooze alarm only. Alarms $\operatorname{FiL}$. I through THi... (target alarm) can be used as one-time alarms only. Alarm settings (and Hourly Time Signal settings) are pressing (©).

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

. After you select an alarm, hold down (A) until the hour setting of the alarm time starts to flash, which indicates the setting screen.

- This operation automatically turns on the alarm. 3. Use (C) to move the flashing in the sequence shown


4. While a setting is flashing, use (D) and (B) to change it. - While the hour or minute setting is flashing, use (D) $(+)$ and (B) $(-)$ to change it.
flashing use (D) to toggle it snooze on/off setting is flashing, use (D) to toggle it on (ETF) and off (EF).

- 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).


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Alarm Operation
The alarm tone sounds at the preset time for 10 seconds, regardless of the mode the watch is in. In the case of the snooze alarm, the alarm repeats up to seven times every five minutes until you turn the alarm off.
If any alarm bperation (operation.
operation is in progress, the receiverm, snooze) occurs while a signal receive
operation is in progress, the receive operation is canceled.
snooze alarms stops the current setting screen during a 5 -minute interval between as the alarm type setting).
The snooze on indicator (sNz)

- The alarm on indicator ( $\operatorname{AlM}$ ) flashes during the 5 -minute intervals between alarms.

The alarm on indicator (AMM), snooze on indicator ( ${ }^{\text {SNZ }}$ ), and Hourly Time Signal on
indicator (5ig) are displayed in all modes.

- In all modes the alarm on indicator is she
- In all modes, the alarm on indicator is shown for any alarm ( Alarm, operations and the Houly Time Sign.

To test the alarm

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

To turn an alarm on and off


To turn the Hourly Time Signal on and off

1. In the Alarm Mode, use (D) to scroll through the alarm screens until the Hourly Time Signal screen is


Date Alert
Date Alert helps you to remember an important date. After you set an alert date (month and day), a date alert indicator (!) and the current date flash for 24 hours after alerts.


To set the alert date

1. Use (C) to enter the Date Alert Mode. 2. Use (D) to scroll through the alert screens until the one whose date you want to set is displayed.

2. After you select an alert, hold down (A) until the month setting of the alert date starts to flash, which indicate the setting screen.

- This operation automatically turns on the alert. below.


5. While a setting is flashing, use (D) and (B) to change it. - While the month or day setting is flashing, use (D) (+) and (B) $(-)$ to change it.
While the date alert on/off setting is flashing, use (D) to toggle it on ( $\mathbf{E f}$ ) and off ( $\mathbf{E F}$ ).

Time Recorder
The Time Recorder Mode lets you store up to 50 time entries (hour, minutes, seconds) with the touch of a button One way you can use the Time Recorder Mode is to record with the touch of a button. One way you can use the

To record a Time Recorder time
Home city In the Time Recorder Mode, press (D) to record the Home $\begin{array}{ll}\begin{array}{l}\text { Home city } \\ \text { time }\end{array} & \begin{array}{l}\text { Recorded time } \\ \text { (Hour: }\end{array} \text { Minutes }\end{array}$ Inty Time Recorder Mode, press (ime (hour, minutes, seconds).

Home city | Recorded time |
| :--- |
| (Hime |
| (Hocor: Minutes |

seconds)

To recall Time Recorder times
In the Time Recorder Mode, press (A) to scroll through times stored in memory.

- Each press of (A) scrolis through time records from higher numbered (newer)
records to lower numbered records.
- Whenever you enter the Time Recorder Mode, the newest (highest numbered) record appears first.

To delete all Time Recorder times
In the Time Recorder Mode, press (A) and (D) at the same time to delete all Time Recorder times.

## Stopwatch



To measure times with the stopwatch


## 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.

## Auto Return Features

- If you leave the watch in the Alarm or Date Alert Mode for two or three minutes without performing any operation, it automatically changes to the Timekeeping Mode.
- If you leave a screen with flashing digits or a cursor 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 (A), (B), and (D) buttons are used in various modes and setting screens to scroll through data on the display. In most cases, holding down these buttons during a scroll operation scrolls through the data at high speed

## Initial Screens

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

## Time Calibration Signal Reception

 1,200 miles $\begin{aligned} & \text { - This watch is able to receive the time calibration signal } \\ & \text { transmitted from Fort Collins, Colorado. Signal reception } \\ & \text { is possible within a radius of about 2,000 miles }(3,000 \\ & \text { kilometers) from the Fort Collins transmitter. }\end{aligned}$
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General Precautions

- The watch is designed to automatically update the date and day of the week for the period January 12000 to December 31, 2039. Setting of the date by the time calibration signal cannot be performed starting from January 1, 2040.
- This watch can receive signals that differentiate between leap years and non-leap years.
ansmiter, signal reception is impossible if the signal is blocked by mountains or other geologica
formations between the watch and signal source.
- Signal reception is affected by weather, atmospheric conditions, and seasonal changes.
- The time calibration signal is bounced off the ionosphere. Because of this, such factors as changes in the reflectivity of the ionosphere, as well as movement of the
ionosphere to higher altitudes due to seasonal atmospheric changes or the time of day may change the reception range of the signal and make reception temporarily day may change the reception range of the signal and make reception temporarily
Rpossible
facing in the general direction of the signal transmitter. Note, however, that moving the watch while the time calibration signal receive operation is taking place will make stable reception impossible.
- Think of the watch as acting like a TV or radio when it is receiving the calibration signal. When receiving indoors, move to a location as near as possible to a window. - Proper signal reception can be difficult or even impossible under the conditions listed below.
Near TVs, refrigerators, computers, or other household appliances
Far away from broadcasting stations among ferro-concrete structures or near mountains
Near high-tension wires, neon signs, or radio stations with interfering frequencies Near railroads, highways or airports
In trains or cars
- Radio interference can make signal reception impossible
- Strong electrostatic charge can result in the wrong time being set.

Troubleshooting

| Problem | Probable Cause | What you should do |
| :---: | :---: | :---: |
| Cannot perform manual receive. | - The watch is not in the Timekeeping Mode. <br> - You do not select one of the following City Codes as your Home City Code: NYC, CHI, DEN, or LAX. | - Enter the Timekeeping Mode and try again. <br> - Select the correct Home City Code. |
| Auto receive is turned on, but the receive indicator does not appear on the display. | - You changed the time setting manually. <br> - The watch was not in the Timekeeping or World Time Mode, or you were performing some button operation during the auto signal receive operation was performed. <br> - Even if receive is successful, the receive indicator disappears every day at 3am. <br> - Time data (hour, minutes, seconds) only was received during the last receive operation. The receive indicator appears only when time data and date data (year, month, day) are both received. | - Perform manual signal receive or wait until the next auto signal receive operation is performed. <br> - Check to make sure the watch is in a location where it can receive the signal. <br> - Put the watch in a location that is suitable for good reception. |
| $\begin{aligned} & \text { Time setting is } \\ & \text { incorrect } \\ & \text { following signal } \\ & \text { reception. } \end{aligned}$ | - If the time is one hour off, the DST setting may be incorrect. <br> - The Home City Code setting is not correct for the area where you are using the watch. | - Change the DST setting to Auto DST. <br> - Select the correct Home City Code. |

Auto Summer Time (DST) Switching
The time calibration signal transmitted from Fort Collins, Colorado includes both standard time and summer time (Daylight Saving Time) data. When auto summer time (DST) switching is turned on, the watch switches between standard time and summer time (DST) automatically in accordance with the Fort Collins signal.

- Daylight Saving Time (DST) advances the time setting by one hour from Standard

Time. Remember that not all countries or even local areas use Daylight Saving Time

- When using the watch in the Continental United States, select Auto DST for the auto summer time setting.
- The default auto summer time settings is Auto DST whenever you select one of the - If you experience problems receiving the time calibration signal in your area, it is probably best to turn off auto time switching.


## To select the auto summer time setting

1. In the Timekeeping Mode, hold down (A) until the current auto receive on/off setting to flash, which indicates the setting screen
(DST) setting screen appears.

$$
\rightarrow \text { Auto DST }(\mathbf{n}) \rightarrow \text { DST off }(\boldsymbol{\text { ff }}) \rightarrow \text { DST on }(\mathbf{I f})
$$

4. When the setting you want is selected, press (A) to exit the setting screen.

## Timekeeping

- The day of the week is automatically displayed in accordance with the date (year, month, and day) settings.
- The year can be set in the range of 2000 to 2039

The watch's built-in full automatic calendar automatically makes allowances for different month lengths and leap years. Once you set the date, there should be no

- The current time for all city codes in the Timekeeping Mode and World T calculated in accordance with the Greenwich Mean Time (GMT) differential fore is city, based on the your Home City time setting
GMT differential is calculated by this watch ba
(UTC*) data.
*The letters "UTC" stands for "Universal Time Coordinated," which is the world-wide scientific standard of timekeeping. It is based upon carefully maintained atomic (cesium) clocks that keep accurate to within microseconds. Leap seconds are The reference point for UTC is Greenwich, England.

12-hour/24-hour Timekeeping Formats
The 12-hour/24-hour timekeeping format you select in the Timekeeping Mode is also applied in all other modes (except for the World Time Mode and Time Recorder
Mode).

- With the 12 -hour format, the $\mathbf{P}(\mathrm{PM})$ indicator appears on the display for times in the range of noon to 11:59 p.m. and the no indicator appears for times in the range o
- With the 24-hour format, times are displayed in the range of 0:00 to 23:59, with 24 indicator.
- The Word Time Mode and Time Recorder Mode always display times using 24-hour format, regardless of the 12-hour/24-hour format setting in the Timekeeping Mode. - In all modes besides the Timekeeping Mode, the current Home City time in the upper left corner of the display is always displayed using 24 -hour format


## Backlight Precautions

The backlight uses an EL (electro-luminescent) panel that causes the entire display to glow for easy reading in the dark.

- The electro-luminescent panel that provides illumination loses power after very long use.
- The illumination provided by the backlight may be hard to see when viewed under
- 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.
- The backlight automatically turns off whenever an alarm sounds.
- Frequent use of the backlight shortens the battery life.

City Code Table

| City Code | City | GMT Differential | Other major cities in same time zone |
| :---: | :---: | :---: | :---: |
|  |  | -11 | PAGO PAGO |
| HNL | HONOLULU | -10 | PAPEETE |
| ANC | ANCHORAGE | -9 | NOME |
| LAX | LOS ANGELES | -8 | SAN FRANCISCO, LAS VEGAS, VANCOUVER, SEATTLE DAWSON CITY |
| DEN | DENVER | -7 | EL PASO, EDMONTON |
| CHI | CHICAGO | -6 | HOUSTON, DALLAS/FORT WORTH, NEW ORLEANS MEXICO CITY, WINNIP |
| NYC | NEW YORK | -5 | MONTREAL, DETROIT, MIAMI, BOSTON, |
| CCS | CARACAS | -4 | LA PAZ, SANTIAGO, PORT OF SPAIN |
| RIO | RIO DE JANEIRO | -3 | SAO PAULO, BUENOS AIRES, BRASILIA, MONTEVIDEO |
| --- |  | -2 |  |
|  |  | -1 | PRAIA |
| GMT |  | +00 | DUBLIN, LISBON, CASABLANCA, DAKAR, |
| LON | LONDON | +00 | MILAN, ROME, MADRID. AMSTERDAM, ALGIERS, |
| BER | BERLIN | +01 | HAMBURG, FRANKFURT, VIENNA, STOCKHOLM |
| ATH | ATHENS |  | HELSINKI, ISTANBUL, BEIRUT, DAMASCUS, |
| CAI | CAIRO | +02 | CAPE TOWN |
| JRS | JERUSALEM |  |  |
| JED | JEDDAH | +03 | KUWAIT, RIYADH, ADEN, ADDIS ABABA, NAIROBI, MOScow |
| THR | TEHRAN | +3.5 | SHIRAZ |
| DXB | DUBAI | +04 | ABU DHABI, MUSCAT |
| KBL | KABUL | +4.5 |  |
| KHI | KARACHI | +05 | MALE |
| DEL | DELHI | +5.5 | MUMBAI, KOLKATA |
| 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 | PYONGYANG |
| SEL | OUL | +09 |  |
| ADL | ADELAIDE | +9.5 |  |
| SYD | SYDNEY | +10 | MELBOURNE, GUAM, RABAUL |
| NOU | NOUMEA | +11 +12 | PORT VILA |
| WLG | WELLINGTON | +12 | CHRISTCHURCH, NADI, NAURUISLAND |

- Based on data as of December 2001

