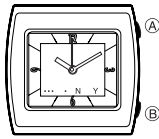


Operation Guide 3779 4306

CASIO®

Getting Acquainted

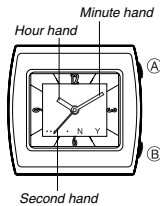
Congratulations upon your selection of this CASIO watch. To get the most out of your purchase, be sure to read this manual carefully and keep it on hand for later reference when necessary.



Before using the watch for the first time...

Some watches are sent from the factory with the second hand stopped at 12 o'clock. Press the (A) button to start the second hand.

About This Manual

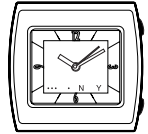


- Button operations are indicated using the letters shown in the illustration.
- Each section of this manual provides you with the information you need to perform operations in each mode. Further details and technical information can be found in the "Reference" section.

General Guide

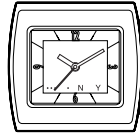
- This watch is designed so the function of a button is executed when you release the button, not when you press it.
- Use (A) and (B) to change from mode to mode as shown below.

Manual Setting Screen



Hold down (B) for about five seconds, then press (B) twice.

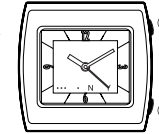
Timekeeping Mode



Press (A).

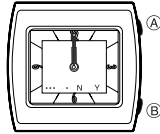
Hold down (A) and (B) for about five seconds.

Receive Result Mode



Press (B).

Home Position Adjustment Mode



Radio-controlled Timekeeping

This watch receives a time calibration signal and updates its time setting accordingly. The time calibration signal includes both Standard Time and Daylight Saving Time (summer time) data.

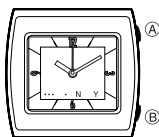
- This watch is designed to pick up the time calibration signal transmitted in Germany (Mainflingen), England (Rugby), and the United States (Fort Collins).

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 when necessary.

- The first thing you should do after purchasing this watch is to specify your Home Time Zone, which is the time zone where you normally will use the watch. For more information, see "To specify your Home Time Zone" below.
- When using the watch outside the range of the time signal transmitters, you will have to adjust the current time setting manually as required. See "Timekeeping" for more information about manual time settings.

To specify your Home Time Zone



1. In the Timekeeping Mode, hold down (B) for about five seconds until the second hand moves to the hour marker that corresponds to the currently selected time zone (see below) and stops. This is the setting mode.
 - The GMT differential indicates the time difference in hours between Greenwich Mean Time and the applicable time zone, as described in the table below.
2. Press (A) to move the second hand to the hour marker for the time zone you want to select as your Home Time Zone.

To select this time zone:	Move the second hand to here:
London (GMT+0)*1	12 o'clock
Paris, Berlin, Milan, Rome, Amsterdam, Hamburg, Frankfurt, Vienna, Barcelona, Madrid (GMT +1)*1	1 o'clock
Athens (GMT +2)*1	2 o'clock
Tokyo, Seoul, Pyongyang (GMT +9)	9 o'clock
New York, Detroit, Miami, Boston (GMT -5)*2	5 o'clock
Chicago, Houston, Dallas/Fort Worth, New Orleans (GMT -6)*2	6 o'clock
Denver, El Paso, Culiacan (GMT -7) *2	7 o'clock
Los Angeles, San Francisco, Las Vegas, Seattle/Tacoma, Tijuana (GMT -8) *2	8 o'clock
None (auto receive disabled)	11 o'clock

*1 Also enables reception of European time calibration signals (Germany and U.K.)
*2 Also enables reception of North American time calibration signal.

3. Press (B) three times to exit the setting mode.
 - The watch will also return to the Timekeeping Mode if you do not perform any operation for about three minutes.
 - Normally, your watch should show the correct time as soon as you exit the Home Time Zone setting screen. If it does not, it should adjust automatically after the next auto receive operation (in the middle of the night). You can also perform manual receive or you can set the time manually.
 - Even if the time calibration signal is received correctly, there are some times when the analog hands may not indicate the correct time. If this happens, use the procedures under "Adjusting the Home Positions" to check the home positions of the hands, and make adjustments as required.
 - The watch will receive the time calibration signal automatically from the applicable transmitter (in the middle of the night) and update its settings accordingly. For information about the relationship between time zones (GMT differential values) and transmitters, see "Transmitters".
 - See the maps under "Reception Ranges" for information about the reception ranges of the watch.
 - You can disable time signal reception, if you want. See "To turn off time calibration signal reception" for more information.

Time Calibration Signal Reception

There are two different methods you can use to receive the time calibration signal: auto receive and manual receive.

• Auto Receive

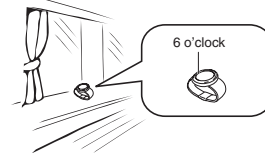
With auto receive, the watch receives the time calibration signal automatically up to five times a day. When any auto receive is successful, the remaining auto receive operations are not performed. For more information, see "About Auto Receive".

• Manual Receive

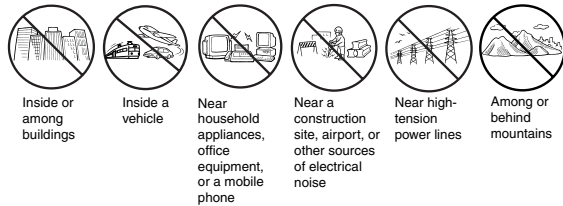
Manual receive lets you start a time calibration receive operation with the press of a button. For more information, see "To perform manual receive".

Important!

- When getting ready to receive the time calibration signal, position the watch as shown in the nearby illustration, with its 6 o'clock side facing towards a window. Make sure there are no metal objects nearby.

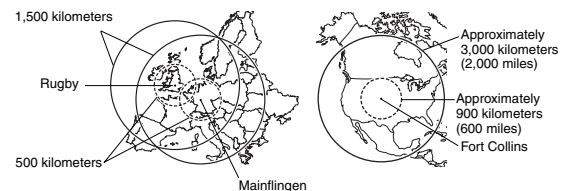


- The watch should not be facing the wrong way.
- Proper signal reception can be difficult or even impossible under the conditions listed below.



- Signal reception is normally better at night than during the day.
- Time calibration signal reception takes from two to seven minutes, but in some cases it can take as long as 10 minutes. Take care that you do not perform any button operations or move the watch during this time.
- In Europe, this watch can receive either the Germany (Mainflingen) or England (Rugby) time calibration signal. See "Transmitters" for more information.

Reception Ranges



- Under good conditions, the signal reception range is approximately 1,500 km (930 miles) from the German or U.K. transmitter, and approximately 3,000 km (2,000 miles) from the U.S. transmitter.
- At distances greater than 500 km (310 miles) from the German or U.K. transmitter, and approximately 900 km (600 miles) from the U.S. transmitter, signal reception may not be possible at certain times of the day and during certain periods of the year. Radio interference may also cause problems with reception.
- See the information under "Signal Reception Troubleshooting" if you experience problems with time calibration signal reception.

About Auto Receive

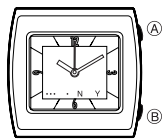
With auto receive, the watch receives the time calibration signal automatically up to five times a day. When any auto receive is successful, the remaining auto receive operations are not performed. The reception schedule (calibration times) depends on your currently selected Home Time Zone, and whether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

Your Home Time Zone		Auto Receive Start Times				
		1	2	3	4	5
GMT +0	Standard Time	1:00 am	2:00 am	3:00 am	4:00 am	5:00 am
	Daylight Saving Time	2:00 am	3:00 am	4:00 am	5:00 am	Midnight
GMT +1	Standard Time	2:00 am	3:00 am	4:00 am	5:00 am	Midnight
	Daylight Saving Time	3:00 am	4:00 am	5:00 am	Midnight	1:00 am next day
GMT +2	Standard Time	3:00 am	4:00 am	5:00 am	Midnight	1:00 am next day
	Daylight Saving Time	4:00 am	5:00 am	Midnight	1:00 am next day	2:00 am next day
GMT -5, -6, -7, -8	Standard Time and Daylight Saving Time	Midnight	1:00 am	2:00 am	3:00 am	4:00 am

Note

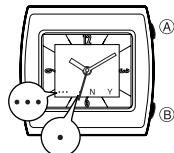
- When a calibration time is reached, the watch will automatically receive the calibration signal only if it is in either the Timekeeping Mode or Receive Result Mode. Auto receive is not performed if a calibration time is reached while you are configuring settings.
- Auto receipt of the calibration signal 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 receive the signal easily.
- The watch receives the calibration signal for two to seven minutes everyday when the time in the Timekeeping Mode reaches each of the calibration times. Do not perform any button operation within seven minutes before or after any one of the calibration times. Doing so can interfere with correct calibration.
- Remember that reception of the calibration signal depends on the current time in the Timekeeping Mode. The receive operation will be performed whenever the display shows any one of the calibration times, regardless of whether or not the displayed time is actually the correct time.

To turn off time calibration signal reception



- In the Timekeeping Mode, hold down (B) for about five seconds until the second hand moves to the currently selected time zone and stops. This is the setting mode.
- Press (A) a many times as required to move the second hand to 11 o'clock.
 - Time calibration signal reception is turned off when the second hand is pointing to 11 o'clock.
- Press (B) three times to exit the setting mode.
 - If you turn off signal reception and then select a home time zone that supports signal reception again, be sure to perform a manual receive operation to adjust the time setting.

To perform manual receive



Start of Signal Reception

- Place the watch on a stable surface so its 6 o'clock side is facing towards a window.
- In the Timekeeping Mode, hold down (A) for about two seconds until the second hand moves to the area along the bottom of the face marked "*" (33 seconds).
 - This will start manual calibration signal reception.
- The second hand indicates one of the following conditions described below during signal reception.

If the second hand is pointing here:	It means this:
"*" area (33 seconds)	Getting ready to receive
"***" area (38 seconds)	Receiving

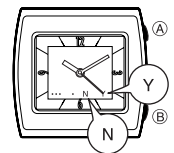
- The hour and minute hands continue to keep time normally.

- Time calibration signal reception takes from two to seven minutes, but in some cases it can take up to 10 minutes. Take care that you do not perform any button operations or move the watch during this time.
- The watch will enter the Receive Result Mode automatically after signal reception is complete.
- To interrupt a receive operation and return to the Timekeeping Mode, press (A).

Viewing the Latest Signal Reception Results

You can use the Receive Result Mode to check if signal reception was performed correctly.

To check the latest signal reception results



- Enter the Receive Result Mode.
- The watch will enter the Receive Result Mode automatically after you perform a manual receive operation.
- The position of the second hand indicates the result of the latest receive operation, as shown below.
 - "Y" area (22 seconds) : Receive successful
 - "N" area (27 seconds) : Receive failed

- The hour and minute hands continue to keep time normally in the Receive Result Mode.
- The watch will not enter the Receive Result Mode when you press (A) if calibration signal reception is turned off.
- To return to the Timekeeping Mode, press (A).
- Manually changing the hour and minute hand setting clears the current receive result. This is indicated by the second hand pointing to the "N" area (27 seconds).
- The second hand will point to the "N" area (27 seconds) if the last receive operation was interrupted for some reason.

Signal Reception Troubleshooting

Check the following points whenever you experience problems with signal reception.

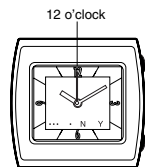
Problem	Probable Cause	What you should do
Cannot perform manual receive.	<ul style="list-style-type: none"> The watch is not in the Timekeeping Mode or Receive Result Mode. Signal reception is turned off. 	<ul style="list-style-type: none"> Enter the Timekeeping Mode or Receive Result Mode and try again. Select a time zone that enables calibration signal reception.
The second hand is pointing to the "N" area (27 seconds).	<ul style="list-style-type: none"> You changed the time setting manually. You were adjusting the watch settings when the auto receive start times were reached. You pressed (A) while signal receive was in progress. 	<ul style="list-style-type: none"> Perform manual signal receive or wait until the next auto signal receive operation is performed. Check to make sure the watch is in a location where it can receive the signal.
Time setting is incorrect following signal reception.	<ul style="list-style-type: none"> The Home Time Zone setting is not correct for the area where you are using the watch. The home position of the hands is off. 	<ul style="list-style-type: none"> Select the correct Home Time Zone. Enter the Home Position Adjustment Mode and adjust the home position.

- For further information, see "Important!" under "Time Calibration Signal Reception" and "Radio-controlled Timekeeping Precautions".

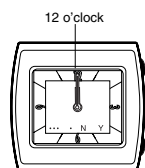
Adjusting the Home Positions

If the time settings are wrong even after the time calibration signal is received normally, use the following procedure to adjust their home positions.

To adjust the home positions



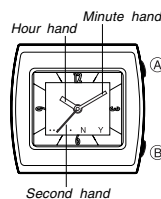
Correct second hand home position



Correct hour and minute hand home position

- Enter the Home Position Adjustment Mode.
 - If the home position of the second hand is currently correct, it will move to the 12 o'clock position.
 - The analog hands do not keep time during home position adjustment.
- Check the position of the second hand.
 - The second hand home position is correct if it is pointing at 12 o'clock.
 - If the second hand is not pointing at 12 o'clock, it means that its home position is off. If this happens, press (A) to move the second hand clockwise in one-second steps, until it points at 12 o'clock.
- Press (B) to advance to hour and minute hand home position adjustment.
 - If current hour and minute hand alignment is correct, they will both move to 12 o'clock.
- Check the position of the hour and minute hands.
 - If the hour and minute hands are not pointing at 12 o'clock, it means that their home position is off. If this happens, press (A) to move the hour and minute hands clockwise in 20-second steps, until they point at 12 o'clock.
- Press (B) to exit home position adjustment.
 - This will cause the watch to return to the Timekeeping Mode. The hour, minute, and second hands will indicate the current time.

Timekeeping



Second hand

Use the Timekeeping Mode to set and view the current time. This section also explains how to set the current time manually.

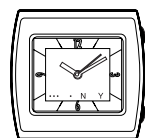
- If you become confused and lose your way during the following procedures, simply put the watch down and do not perform any button operation for about three minutes. This will cause the watch to enter the Timekeeping Mode (indicated by normal one-second movement of the second hand) automatically. After that, you can try performing the manual setting procedure again from the beginning.

Setting the Time

You can use the Timekeeping Mode to change the hand setting and to switch between Standard Time and Daylight Saving Time.

- You can also change the Home Time Zone setting in the Timekeeping Mode.

To change the time setting



- In the Timekeeping Mode, hold down (B) for about five seconds until the second hand moves to the currently selected time zone and stops. This is the setting mode.
- Press (B) twice.
 - This will cause the second hand to the 8-second position.
- Press (A) to move the time setting forward by one minute.
 - Holding down (A) for about two seconds starts high-speed hand movement. High-speed hand movement will continue until the hands complete a 12-hour cycle, or until you stop them by pressing (A).

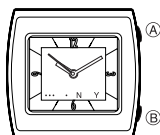
- Coordinating with a time signal on the radio or TV, press (B) to restart normal timekeeping. The second hand will move to 12 o'clock at the start of timekeeping.
- If you did not change any of the time settings (hour, minute), pressing (B) will cause the second hand to move to the seconds for the current time and resume timekeeping from there.
- If you manually change the time setting between midnight and noon, the watch will perform auto receive starting from noon. After that, auto receive will be performed at the normal times (starting from midnight) each day. If you manually change the time setting between noon and midnight, the watch will start performing normal auto receive starting from midnight.

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 time calibration signal includes both Standard Time and Daylight Saving Time data. If you select AUTO for the DST setting, the watch will switch between Standard Time and Daylight Saving time automatically as required.

- Changing the Home Time Zone (GMT differential) setting to anything besides 9 o'clock (GMT +9) or 11 o'clock (receive off) will change the DST setting to AUTO. Selecting 9 o'clock (GMT +9) or 11 o'clock (receive off) will change the DST setting to OFF. See "To specify your Home Time Zone" for details about time zones.

To switch between Daylight Saving Time and Standard Time



1. In the Timekeeping Mode, hold down (B) for about five seconds until the second hand moves to the currently selected time zone and stops. This is the setting mode.
2. Press (B) once.
 - This will cause the second hand to move to the 47, 52, or 57 seconds position. The hand position indicates the current DST setting.
3. Press (A) to cycle through the DST settings.
 - The following shows how the second hand indicates the DST settings.
4. When the setting is the way you want, press (B) twice to exit the setting mode.

47 seconds	OFF
52 seconds	AUTO
57 seconds	DST ON

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.

Back Cover

The back cover of the watch is marked with the relative positions of each time zone city code. The position of "LAX" on the back of the watch, for example, indicates that the "LAX" (Los Angeles) city code is located at 8 o'clock on the face of the watch.

Auto Return Features

The watch will return to the Timekeeping Mode automatically if you do not perform any operation for about three minutes while it is in the Receive Result Mode, the Home Position Adjustment Mode, or a setting mode.

Button Operation Timing

This watch is designed so the function of a button is executed when you release the button, not when you press it.

Scrolling

- The (A) button is used to change the hand setting in various setting modes. In most cases, holding down the (A) button will start high-speed movement of the applicable hand(s).
- High-speed movement of the hands will continue until it completes a 12-hour cycle, or until you press (A) to stop it.

Radio-controlled Timekeeping Precautions

- Strong electrostatic charge can result in the wrong time being set.
- 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.
- The time calibration signal bounces 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 impossible.
- 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 any time settings you make manually.
- If you are in an area where proper time calibration signal reception is impossible, the watch keeps time within ± 20 seconds a month at normal temperature.
- If you have problems with proper time calibration signal reception or if the time setting is wrong after signal reception, check your Home Time Zone (GMT differential) setting.

The following are the initial factory defaults for this setting.

Module 3779: GMT +1
Module 4306: GMT +0



- To find out the module number of your watch, look at its back cover. The Module number (3779 or 4306) is engraved inside the box on the back cover.

Transmitters

The time calibration signal received by this watch depends on the currently selected home time zone.

- When a U.S. time zone is selected, the watch receives the time calibration signal transmitted from the United States (Fort Collins).
- When a European time zone is selected, the watch receives the time calibration signals transmitted from Germany (Mainflingen) and England (Rugby). The following tables show the reception priority for the European signals.

When time zone GMT+1 or GMT+2 is selected:

In this case:	The watch does this:
The first signal search operation after the Home Time Zone has been changed	1. Checks the Mainflingen signal first. 2. If the Mainflingen signal cannot be received, checks the Rugby signal.
The second and subsequent signal searches	1. Checks the signal of the transmitter of the first receive operation (Rugby or Mainflingen). 2. If the checked signal cannot be received, checks the other signal.

When time zone GMT+0 is selected:

In this case:	The watch does this:
The first signal search operation after the Home Time Zone has been changed	1. Checks the Rugby signal first. 2. If the Rugby signal cannot be received, checks the Mainflingen signal.
The second and subsequent signal searches	1. Checks the signal of the transmitter of the first receive operation (Rugby or Mainflingen). 2. If the checked signal cannot be received, checks the other signal.

Timekeeping

- The current time for all time zones in the Timekeeping Mode is calculated in accordance with the Greenwich Mean Time (GMT) differential of each zone, based on your Home Time Zone time setting.
- GMT differential is calculated by this watch based on Universal Time Coordinated (UTC*) data.
 - * UTC is the world-wide scientific standard of timekeeping. It is based upon carefully maintained atomic (cesium) clocks that keep time accurately to within microseconds. Leap seconds are added or subtracted as necessary to keep UTC in sync with the Earth's rotation. The reference point for UTC is Greenwich, England.