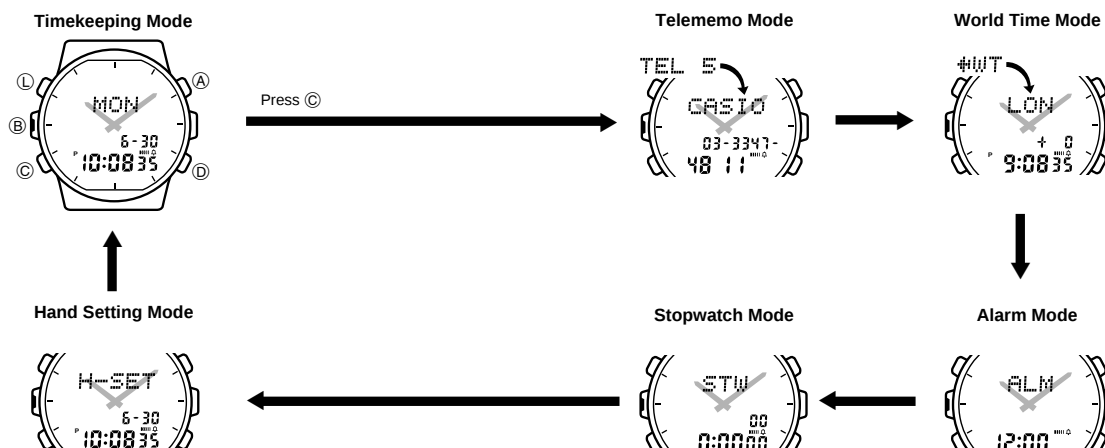


GENERAL GUIDE

- Press **(C)** to change from mode to mode. After you perform an operation in any mode, pressing **(C)** returns to the Timekeeping Mode.

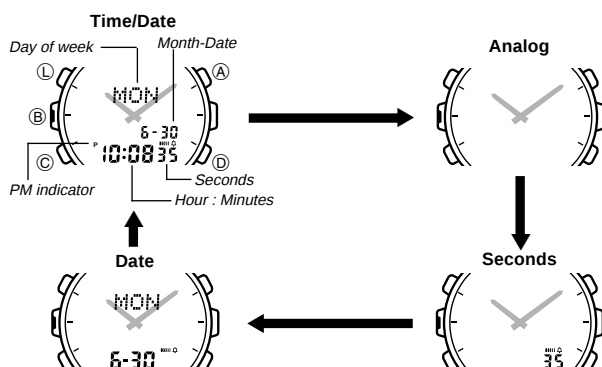
- Press **(L)** in any mode to illuminate the display for about two seconds.



TIMEKEEPING MODE

In addition to time and date settings, the Timekeeping Mode also lets you adjust the contrast of the digital display.

- The Timekeeping Mode is actually made up to four sub-modes. Press **(D)** to switch between the sub-modes.

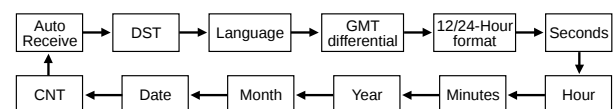
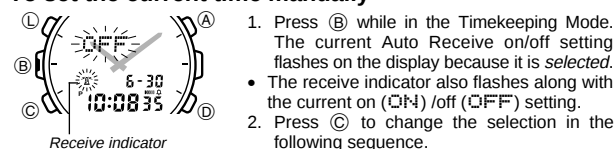


- This watch displays text for the day of the week in any one of the five different languages (English, German, French, Italian, and Spanish).
- See the "Day of the Week List" at the back of this manual for information on abbreviations used.

About Manual Time Setting and Time Calibration Signal Reception

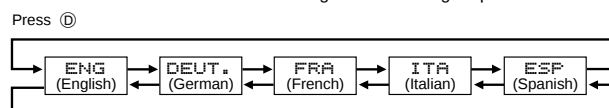
The current time for this watch can be set by inputting the time and date you want (manual setting) or by a time calibration signal. Note that the time calibration signal is available only in certain areas in Europe. For details on time calibration reception and the areas in which the time calibration signal is available, see the section of this manual titled: "TIME CALIBRATION SIGNAL RECEPTION."

To set the current time manually



- The Auto Receive, DST, and GMT differential settings are used for time calibration signal reception only. For details on these settings, see the section of this manual titled: "TIME CALIBRATION SIGNAL RECEPTION."
- See the section of this manual titled "To adjust the display contrast" for details on using the CNT (contrast) setting.

- Press **(C)** until the language indicator is flashing on the display.
- The language indicator shows the language currently set for the day of the week.
- The day of the week is set automatically in accordance with the date.
- Use **(A)** and **(D)** to change the language setting in the following sequence.



- Press **(C)** until the 12/24-hour indicator is flashing on the display.
- 12H** indicates 12-hour format, while **24H** indicates 24-hour format.
- Press **(D)** to toggle between the 12-hour (**12H**) and 24-hour (**24H**) formats.
- With the 12-hour format, the **P** (PM) indicator appears to the left of the digital time for times in the range of noon to 11:59 pm. Times from midnight to 11:59 am are shown without any indicator.
- With the 24-hour format, times are indicated in the range of 00:00 to 23:59, with a **24** indicator to the left of the digital time.
- Press **(C)** until the seconds digits are flashing on the display.
- Press **(D)** to reset the seconds to **00**.
- If you press **(D)** while the seconds count is in the range of 30 to 59, the seconds are reset to **00** and 1 is added to the minutes. If the seconds count is 00 to 29, the minutes count is unchanged.
- Press **(C)** until the hour digits are flashing on the display.
- Press **(D)** to increase the setting or **(A)** to decrease it. Holding down either button changes the setting at high speed.
- Repeat steps 9 and 10 to set the minutes, year, month, and date.
- After you make the settings you want, press **(B)** to return to the Timekeeping Mode.
- When you use the above procedure to set the digital display time, the hands of the analog timepiece normally adjust according to your setting. If, for any reason, the digital time does not match the analog time, use the procedure described under "HAND SETTING MODE" to match the analog setting with the digital display.
- The date can be set within the range of January 1, 1995 to December 31, 2039.
- If you do not operate any button for a few minutes while a selection is flashing, the flashing stops and the watch goes back to the Timekeeping Mode automatically.

To adjust the display contrast

- Press **(B)** while in the Timekeeping Mode. The current Auto Receive on/off setting flashes on the display because it is selected.
- Press **(C)** 11 times until the **CNT** (contrast) indicator is flashing on the display.
- The value to the right of the **CNT** indicator shows the current contrast setting. You can set the contrast to a value from 1 (lightest) to 7 (darkest).

- Use **(D)** to increase the contrast value and **(A)** to decrease it.
- After you make the setting you want, press **(B)** to return to the Timekeeping Mode.

About the backlight

In any mode, press **(L)** to illuminate the display for about two seconds.

- The backlight of the watch employs an electro-luminescent (EL) panel, which 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 transistor 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.
- The backlight remains lit for about two seconds from the point you press **(L)**, even if it is already lit when you press **(L)**. If you keep **(L)** depressed for about 15 seconds, the backlight will automatically turn off.

TIME CALIBRATION SIGNAL RECEPTION

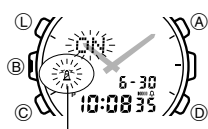
This watch is designed to pick up a time calibration signal that is being transmitted from Mainflingen, Germany and update its time setting in accordance with the signal. There are two different methods you can use to receive the signal: **auto receive** and **manual receive**. With **auto receive**, the watch automatically receives the calibration signal twice each day and makes appropriate adjustments. With **manual receive**, you perform a specific button operation to receive the calibration signal.

Important!

- 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 the "To set your home city data" for details.
- Time calibration reception is limited to specific geographic areas in Europe. See "Time calibration signal reception precautions" for details.
- The current time setting in accordance with the time calibration signal takes priority over any time settings you make.
- The watch is designed to automatically update the date and day of the week for the period January 1, 1995 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.
- After the watch successfully receives time calibration signal data, it first applies it to adjust the digital time setting and then adjusts the analog setting to match the digital time. If, for any reason, the digital time does not match the analog time, use the procedure described under "HAND SETTING MODE" to match the analog setting with the digital display.
- Auto receive is turned on when the watch is shipped from the factory.

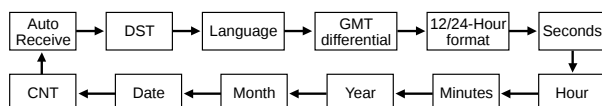
To set your home city data

You can make Auto Receive on/off, DST (daylight saving time), and GMT differential settings for your home city (the city where you normally use the watch). This data can be changed any time you move to another geographic area.



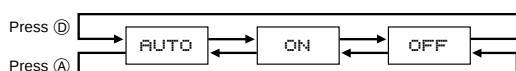
Receive indicator

- Press **(B)** while in the Timekeeping Mode. The current Auto Receive on/off setting flashes on the display because it is selected.
- The receive indicator flashes along with the current on (**ON**) / off (**OFF**) setting.
- Press **(D)** to toggle Auto Receive on and off.
- Pressing **(C)** changes to another selection in the following sequence.



- Press **(C)** until the **DST** indicator is flashing on the display along with the current auto receive setting (**AUTO**, **ON**, or **OFF**).
- AUTO** Setting
Daylight saving time is activated and cancelled automatically in accordance with time calibration signal data. Use this setting if you plan to use the watch in an area where the daylight saving time period starts and ends on the dates used in Germany.
- ON** Setting
One hour is added to the current time indicated by the time calibration signal and adjusted in accordance with the GMT time differential setting you make.
- OFF** Setting
Daylight saving time is not applied.

- Use the **(A)** and **(D)** buttons to change the DST setting in the sequence shown below.



- After making the setting you want, press **(C)** until the **GMT** indicator appears on the display.
- The value to the right of the **GMT** indicator is the time differential from Greenwich Mean Time. This value is based on standard times only, and it does not allow for daylight saving time (summer time).

- Use the **(A)** and **(D)** buttons to change the GMT differential setting in the sequence shown below.



- After making all the home city settings you want, press **(B)** to return to the Timekeeping Mode.

Time calibration signal reception precautions



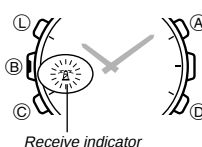
Frankfurt

- This watch is able to receive the time calibration signal being transmitted from Mainflingen, Germany (located 25 kilometers southeast of Frankfurt). Signal reception is possible within the area represented by a circle with a radius of about 1200 kilometers.
- Even when the watch is within the reception range, signal reception is 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.
- At long distances that are out of the line of sight of the signal transmitter, the signal is bounced off of 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.

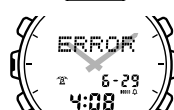


- This watch is designed to receive the signal transmitted from Mainflingen. This means that reception is best when the antenna built into the 12 o'clock edge of the watch is facing towards Mainflingen. Note, however, that moving the watch while the time calibration signal receive operation is taking place will make stable reception impossible.
- Proper signal reception can be difficult or even impossible under the conditions listed below. When receiving indoors, move to a location as near as possible to a window. Think of the watch as acting like a TV or radio when it is receiving the signal.
- Nearby TVs, refrigerators, computers, or other household appliances
- Far away from broadcasting stations, among ferro-concrete structures or near mountains.
- Underground, in tunnels or in ferro-concrete buildings.
- Near high-tension wires, neon signs, or radio stations with interfering frequencies.
- Near railroads, highways or airports.
- In trains or cars.
- Radio interference can cause incorrect signal reception.
- Strong electrostatic charge can result in the wrong time being set.
- The analog hands do not move during signal reception. The analog hand setting is changed based on the digital time setting after the time calibration signal is successfully received.
- The daily alarm and hourly time signal do not operate during signal reception.
- The receive indicator (**A**) flashes on the digital display while a signal receive function is in progress.
- The watch initially changes the digital time setting to match the data (German time) received in the time calibration signal. Next, it adjusts the received time in accordance with the GMT differential setting. Finally, the analog hands are adjusted in accordance with the digital time setting.

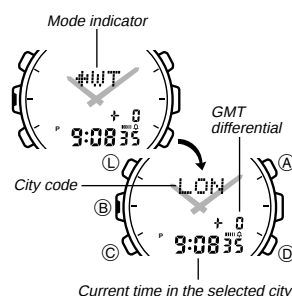
To perform manual time calibration signal reception



Receive indicator



- In the Timekeeping Mode, hold down **(A)** until the figures in the digital display are cleared (about three seconds).
- Release **(A)** to start time calibration signal reception, which is indicated by the flashing receive indicator.
- Time calibration signal reception takes from 8 to 15 minutes.
- When the receive operation is successful, the message **LAST RECEIPT** appears on the display together with the received time and date for about one or two minutes. Next, the watch returns to the Timekeeping Mode.
- When the receive operation is unsuccessful, the message **ERROR** appears on the display together with the date and time of the last successful receipt for about one or two minutes. Next, the watch returns to the Timekeeping Mode.
- Pressing **(A)** while the **LAST RECEIPT** or **ERROR** message is on the display returns to the Timekeeping Mode.
- To interrupt a receive operation and return to the Timekeeping Mode, press **(A)**.



How time is kept in the World Time Mode

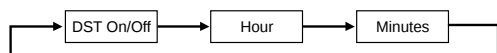
When you set the time for any time zone, all other zones are adjusted accordingly. The World Time Mode time setting can be made manually or by Auto Receive of the time calibration signal. When Auto Receive is turned on in the Timekeeping Mode, successful receipt of the time calibration signal causes all World Time Mode times to be adjusted in accordance with Berlin time.

The manual time setting procedure can also be used to turn daylight saving time (DST) on and off. When daylight saving time is turned on, time settings are automatically advanced one hour.

- With daylight saving time, clocks are set one hour later in order to better take advantage of daylight hours during the summer, when days are longer. Whether or not daylight saving time is used depends on the country you are in.
- See "TIME CALIBRATION SIGNAL RECEPTION" for details on automatic time signal reception.

To set the World Time manually

1. In the World Time Mode, press (A) or (D) to scroll through the time zones and find the one you want.
2. Press (B) and the DST On/Off setting flashes on the display because it is selected.
 - The DST indicator flashes along with the current on/ off setting.
3. Press (C) to change the selection in the following sequence.

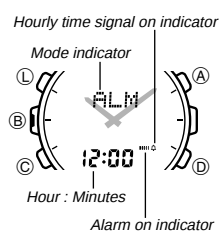


4. While DST On/Off setting is selected (flashing), press (D) toggle Daylight Saving Time on (ON) and off (OFF). While the hour or minutes digits are selected, press (D) to increase the setting and (A) to decrease it.
- Holding down either button while the hour or minutes digits are selected changes the setting at high speed.
- The 12-hour/24-hour format of the World Time matches the format you select in the Timekeeping Mode.
5. After you set the time, press (B) to return to the World Time Mode.

To switch between standard time and daylight saving time

1. In the World Time Mode, use (A) or (D) to display the time zone whose standard/daylight saving time setting you want to change.
- You can make separate daylight saving time settings for each individual city.
2. Press (B) and the DST On/Off setting flashes on the display because it is selected.
 - The DST indicator flashes along with the current on/ off setting.
3. Press (D) toggle Daylight Saving Time on (ON) and off (OFF).
4. After you are finished making the setting you want, press (B) to return to the World Time Mode.
- The DST indicator is on the display whenever you display a city for which daylight saving time is turned on.

ALARM MODE



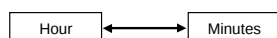
When the Daily Alarm is turned on, the alarm sounds for 20 seconds at the preset time each day. Press any button to stop the alarm after it starts to sound.

When the Hourly Time Signal is on, the watch beeps every hour on the hour.

- If you do not operate any button for a few minutes while in the Alarm Mode, the watch automatically goes back to the Timekeeping Mode.

To set the alarm time

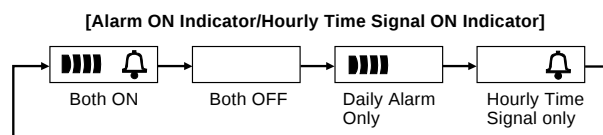
1. Press (B) while in the Alarm Mode. The hour digits flash on the display because they are selected.
- This operation will turn the Daily Alarm on automatically.
2. Press (C) to change the selection in the following sequence.



3. Press (D) to increase the selected digits or (A) to decrease them. Holding down either button changes the selection at high speed.
- The format (12-hour and 24-hour) of the alarm time matches the format you select for normal timekeeping.
- When setting the alarm time using the 12-hour format, take care to set the time correctly as morning (no indicator) or afternoon (P).
4. After you set the alarm time, press (B) to return to the Alarm Mode.

To turn the Daily Alarm and Hourly Time Signal on and off

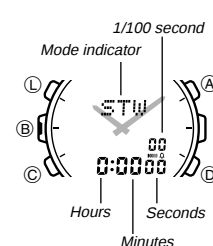
Press (D) while in the Alarm Mode to change the status of the Daily Alarm and Hourly Time Signal in the following sequence.



To test the alarm

Hold down (A) while in the Alarm Mode to sound the alarm.

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

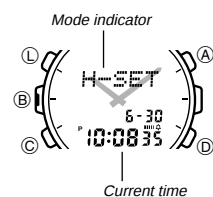
Start (D) → Stop (D) → Re-start (D) → Stop (D) → Clear (A)
- (b) Split time measurement

Start (D) → Split (A) → Split release (A) → Stop (D) → Clear (A)
- (c) Split time and 1st-2nd place times

Start (D) → Split (A) → Stop (D) → Split release (A) → Clear (A)

First runner finishes. Second runner finishes. Record time of first runner. Record time of second runner.

HAND SETTING MODE



Use the following procedure to correct the analog time whenever it does not match the digital time.

- If you do not operate any button for a few minutes while in the Hand Setting Mode, the watch automatically goes back to the Timekeeping Mode.

To set the analog time

1. Press (B) while in the Hand Setting Mode, and the mode indicator will start to flash on the display.
2. Press (D) to move the hands of the analog timepiece forward or (A) to move them back.
- Holding down either button moves the hands at high speed.
3. After you set the analog time, press (B) to return to the Hand Setting Mode.

ABOUT THE DIGITAL DISPLAY AREA



If the figures in the digital display area seem to be continually changing, hold down (C) for about three seconds until you hear the watch beep. At this time the watch should return to the Timekeeping Mode.

Day of the Week List

ENG : (English)	SUN (Sunday), MON (Monday), TUE (Tuesday), WED (Wednesday), THU (Thursday), FRI (Friday), SAT (Saturday)
DEUT : (Deutsch)	SO (Sonntag), MO (Montag), DI (Dienstag), MI (Mittwoch), DO (Donnerstag), FR (Freitag), SA (Samstag)
FRA : (Français)	DIM (Dimanche), LUN (Lundi), MAR (Mardi), MER (Mercredi), JEU (Jeudi), VEN (Vendredi), SAM (Samedi)
ITA : (Italiano)	DOM (Domenica), LUN (Lunedì), MAR (Martedì), MER (Mercoledì), GIO (Giovedì), VEN (Venerdì), SAB (Sabato)
ESP : (Español)	DOM (Domingo), LUN (Lunes), MAR (Martes), MIE (Miércoles), JUE (Jueves), VIE (Viernes), SAB (Sábado)

Character List

1	(space)	11	J	21	T	31	3	41	:
2	A	12	K	22	U	32	4	42	5
3	B	13	L	23	V	33	5		
4	C	14	M	24	W	34	6		
5	D	15	N	25	X	35	7		
6	E	16	O	26	Y	36	8		
7	F	17	P	27	Z	37	9		
8	G	18	Q	28	0	38	-		
9	H	19	R	29	1	39	.		
10	I	20	S	30	2	40	/		

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	AZORES, PRAIA
GMT	GMT	+00	DUBLIN, LISBON, CASABLANCA, DAKAR, ABIDJAN
LON	LONDON	+01	MILAN, ROME, MADRID, AMSTERDAM, ALGIERS, HAMBURG, FRANKFURT, VIENNA, STOCKHOLM
PAR	PARIS		
BER	BERLIN		
CAI	CAIRO	+02	ATHENS, HELSINKI, ISTANBUL, BEIRUT, DAMASCUS, CAPE TOWN
JRS	JERUSALEM	+03	KUWAIT, RIYADH, ADEN, ADDIS ABABA, NAIROBI
JED	JEDDAH		
THR	TEHRAN	+3.5	SHIRAZ
DXB	DUBAI	+04	ABU DHABI, MUSCAT
KBL	KABUL	+4.5	
KHI	KARACHI	+05	
DEL	DELHI	+5.5	MUMBAI/BOMBAY, 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 December 1996.