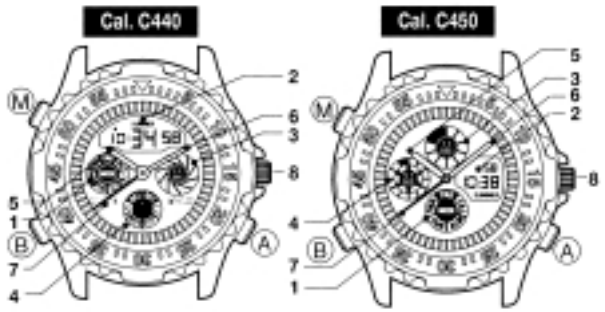
CITIZEN QUARTZ
YACHTING MAGIC LIGHT

Model No. JQ2XXX/
Cal. No. C440

• INSTRUCTION MANUAL

CTZ-B6805



1. Main Features

This is an analog and digital combination watch equipped with Race Timer for marine sports (Cal. C440), Chronograph for timing race events, Timer and other functions.
EL (electro-luminescence) Light illuminates display in the dark.

2. Parts Name and Functions
(When reading this instruction manual, please keep the diagram above in view.)

Cal. C440

Parts name		Time mode	Calendar mode	Alarm-1/Alarm-2 mode	Chronograph mode	Race Timer mode	Timer mode
Ⓐbutton	Press once	EL illuminated		Switching On/Off	Start/stop (EL illuminated)	Start/stop	Start/stop
	Hold 2 secs.			Alarm sound monitor			
Ⓑbutton	Press once	Adjustment mode changed			Split time (EL illuminated), Reset	Race Timer set	Timer set (EL illuminated)
	Hold 2 secs.	Adjust Time	Adjust Calendar	Adjust Alarm			
Ⓜbutton	Press	To Calendar mode	To Alarm mode	To Chronograph mode	To Race Timer mode	To Timer mode	To Time mode
①Mode marks		TME	CAL	AL-1/AL-2	CHR	RACE	TMR
②Digital display		Hours, Minutes, Seconds, AM/PM, Summertime	Month, Date, Day	Hours, Minutes, AM/PM, ON/OFF	Min, Sec.,1/100 Sec. (Hours, Minutes, Seconds)	Race Timer set time (min.) Remaining time (min., sec.)	Timer set time (min.) Remaining time (min., sec.)
③Seconds graphic dispay		Seconds graphic display		Seconds graphic display	1/10 second graphic display	Race Timer remaining time (sec.) graphic display	Timer remaining time (sec.) graphic display
				Alarm sound graphic display			
④ⒶandⒷbuttons function indicators		SEL, SET			STA, STP, RES, SPL	STA, STP, RES	STA, STP, RES
⑤Hour hand		Always shows hours			Always shows hours		
⑥Minute hand		Always shows minutes			Always shows minutes		
⑦Second hand		Always shows seconds			Always shows seconds		
⑧Crown		Use to set analog display			Use to set analog display		

Cal. C450

Parts name		Time mode	Calendar mode	Alarm mode	Chronograph mode	Timer mode
Ⓐbutton	Press once	EL illuminated		Switching On/Off	Start/stop (EL illuminated)	Start/stop
	Hold 2 secs.			Alarm sound monitor		
Ⓑbutton	Press once	Adjustment mode changed			Split time (EL illuminated),reset	Timer set (EL illuminated)
	Hold 2 secs.	Adjust Time	Adjust Calendar	Adjust Alarm		
Ⓜbutton	Press	To Calendar mode	To Alarm mode	To Chronograph mode	To Timer mode	To Time mode
①Mode marks		TME	CAL	ALM	CHR	TMR
②Digital display		Hours, Minutes, Seconds., AM/PM, Summertime	Month, Date, Day	Hours, Minutes, AM/PM, ON/OFF	Minutes, Seconds.,1/100 Sec. (Hours, Minutes, Seconds)	Timer set time (minutes) Remaining time (min., sec.)
③1/1 second graphic display		1/1 second graphic display		1/1 second graphic display	1/10 second graphic display	Timer remaining time (seconds) graphic display
				Alarm sound graphic display		
④5/1 second graphic display		5/1 second graphic display		5/1 second graphic display	5/1 second graphic display	Timer remaining time (min., sec.) graphic display
				Alarm sound graphic display		
⑤Hours hand		Always shows hours			Always shows hours	
⑥Minutes hand		Always shows minutes			Always shows minutes	
⑦Seconds hand		Always shows seconds			Always shows seconds	
⑧Crown		Use to set analog display			Use to set analog display	

3. Setting Analog Time Display

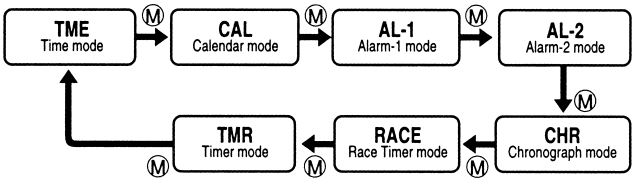
1) Pull out the crown and second hand stops.
2) Turn the crown and set hands to the correct time.
3) Push the crown back in to restart the watch.

To set the watch to the correct time:
Stop seconds hand at “0”. Move minutes hand a few minutes ahead of the time you want to set, then move it back to the correct time and push crown back synchronising with the time tone or time casting.
*** Analog and digital displays can be set to different times to use as a dual time watch.**

4. Mode Selection

Cal. C440

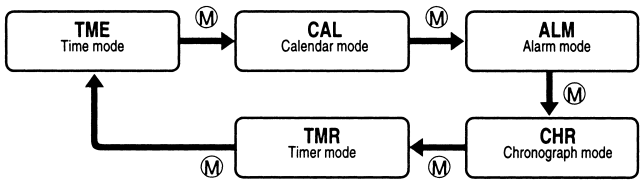
In addition to Time display, Cal. C440 has 6 functions of Calendar, Alarm-1, Alarm-2, Chronograph, Race Timer and Timer. Mode of watch changes each time Ⓜ button is pressed. See Mode Indicator to check the present mode.



Auto-Return:
Display will return automatically to normal Time display mode if left in Alarm-1 or Alarm-2 for more than 2 minutes without any operation.

Cal. C450

In addition to Time display, Cal. C450 has 4 functions of Calendar, Alarm, Chronograph and Timer. Mode of watch changes each time Ⓜ button is pressed. See Mode Indicator to check the present mode.

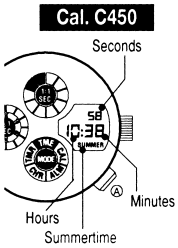


Auto-Return:
The watch will return automatically to Time mode if left in Alarm mode for more than 2 minutes without any operation.

5. Using Digital Functions

A Setting Digital Time Display

- EL light is illuminated when Ⓐ button is pressed in normal Time display mode.

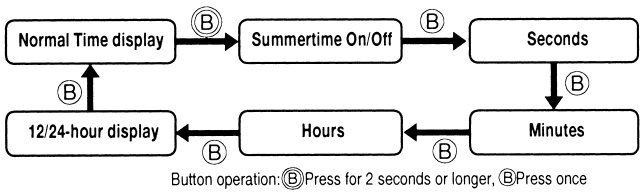


To set for Summertime
1) Press Ⓑ button for more than 2 seconds in normal Time display mode. “SUMMER, ON/OF” flashes.
2) Press Ⓐ button to set for summertime. Indicator changes to On or Off each time this button is pressed.

- “SUMMER” is on display when set to summertime. The watch shows the time one hour earlier than the regular time when it is set to summertime.

To adjust Seconds
1) Press Ⓑ button in adjustment mode. (“SUMMER” is flashing). Seconds flashes.
2) Press Ⓐ button while Seconds are flashing. Digits return to “00”, and restarts.

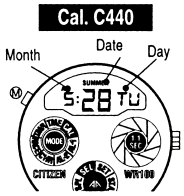
To adjust Time display
1) Press Ⓑ button in adjustment mode (Seconds are flashing). Flashing digits change in order as shown on diagram each time button is pressed.
2) Press Ⓐ button to adjust flashing digits. Press and hold Ⓐ button for rapid advancement.



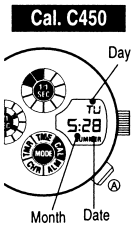
- Summertime On/Off is changed each time Ⓐ button is pressed.
- 12/24-hour display is changed each time Ⓐ button is pressed.
- Be sure to set AM/PM mark correctly when using 12-hour display system.
- Auto-return to normal Time display will activate when the watch is left in adjustment mode for more than 2 minutes.
- If Ⓜ button is pressed in adjustment mode, display will return directly to normal Time.

Linkage with Summertime:
Setting of Alarm 1&2 (Cal. C440) or Alarm (Cal. C450) does not change when Summertime is set in Time display mode.

B Setting Calendar

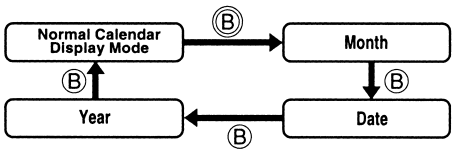


- Calendar shows Month, Date and Day.
- EL Light is illuminated while Ⓐ button is pressed and held in Calendar display mode.



To set Calendar

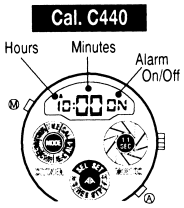
1) Press Ⓑ button in Calendar mode for more than 2 seconds. Month flashes.
2) Flashing digits change in order as shown in the diagram each time Ⓑ button is pressed.
3) Press Ⓐ button to adjust flashing digits. Press and hold Ⓐ button for rapid advancement.



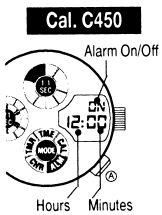
- Year can be set from 1996-2099.
- Auto-return to normal Calendar display will activate when the watch is left in adjustment mode for more than 2 minutes
- When Calendar is set to a non existent date (e.g., February 30) , display will show automatically first day of next month when returned to normal mode.
- Month-end adjustments are not necessary as Calendar is programmed to be set automatically.
- If Ⓜ button is pressed in adjustment mode, display will return directly to normal Calendar display mode.

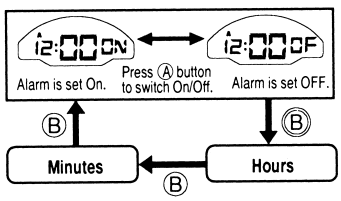
C Setting Alarm-1 (Cal. C440) /Alarm(Cal. C450)

To set Alarm-1 (Cal. C440) /Alarm-2 (Cal. C450)



1) Press Ⓑ button in Alarm mode for more than 2 seconds. Hours flash.
2) Press Ⓑ button as necessary to select digits to be adjusted. Press Ⓐ button to set Alarm.
- If Time display is set to 12-hour display system, it is linked to Alarm. Make sure that AM/PM is set correctly.
- Alarm setting does not change when Summertime is set in Time display mode.





To switch Alarm On/Off

- Press Ⓐ button in Alarm mode to switch Alarm On/Off.

Alarm Sound

- Alarm buzzer will sound for about 20 seconds. Press any button to stop Alarm sound.

Alarm Monitor

- Alarm will sound while Ⓐ button is pressed in Alarm mode.

Auto-Return

- Display will return automatically to normal Alarm display mode if left in Alarm adjustment mode for more than 2 minutes without any operation.
- Display will return automatically to Time display mode when 2 minutes have elapsed in normal Alarm display mode.

Instant Manual Return

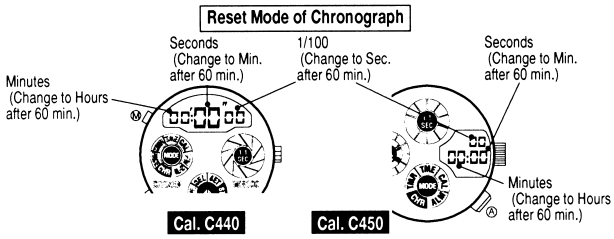
- Press Ⓜ button in Alarm adjustment mode to return instantly to normal Alarm display.

D Setting Alarm-2 (Cal. C440)

- Alarm-2 can be set and operated in same way as Alarm-1. Alarm-2 has a different sound.

E Using Chronograph

Chronograph measures up to 23 hours 59 minutes 59 seconds in 1/100 second. It will stop at next second when it reaches exactly 24 hours and reset to 00 minute 00 second 00. Chronograph also has Split Time measurement function.



[Display of Time Measurement]

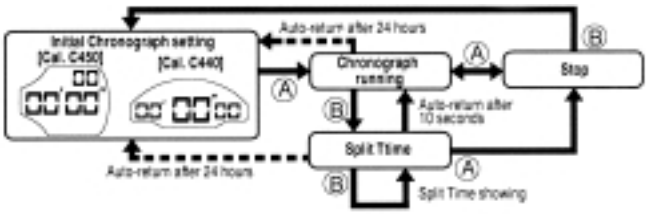
- Chronograph shows Minutes, Seconds and 1/100 Second up to 60 minutes and will change to Hours, Minutes and Seconds after 60 minutes.

To Measure Total Elapsed Time

1) Press Ⓐ button to start/stop Chronograph.
   - Start/stop can be repeated for any number of times by pressing Ⓐ button.
   - EL Light will turn ON for 4 seconds when counting is stopped by pressing Ⓐ button.
2) Press Ⓑ button when counting is stopped to reset chronograph.

To Measure Split Time

1) Press Ⓐ button to start/stop Chronograph.
2) Press Ⓑ button while Chronograph is counting. Split Time will appear for 10 seconds
   - "SPL" will flash when Split Time is shown.
   - EL light will turn ON for 4 seconds when Ⓑ button is pressed.
3) Press Ⓑ button when counting is stopped to reset Chronograph.



* If switched to another mode while Chronograph is running and then returned to Chronograph mode, the watch will show time measurement going on at time of mode switching. (If switched while Split Time is shown, the watch will return to Chronograph running mode.) However, if Chronograph counting has exceeded 24 hours, the watch will return to Chronograph reset mode.

F Using Race Timer (Cal. C440)

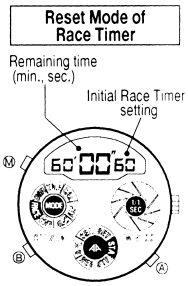
- Race Timer can be set to 15 different duration of countdown in 60, 55, 50, 45, 40, 35, 30, 25, 20, 15, 10, 6, 5, 3 and 1 minute. Use this function by setting to one of these countdown lengths as desired.
- When Race Timer countdown is finished, Time-up signal will sound for 5 seconds and the watch will be automatically set to Chronograph mode (Auto-Chrono) and start counting from 00 hour 00 minute 00 second.

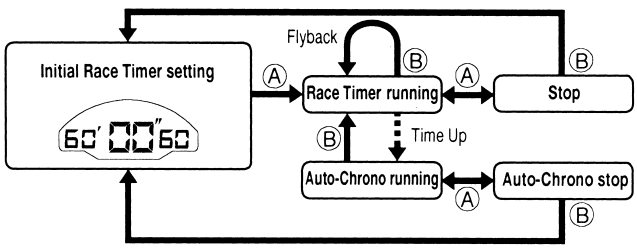
To Set Race Timer

Press Ⓑ button in Race Timer mode. Length of time countdown will change 15 times starting from 60 minutes to 1 minute. Set Race Timer to desired length. Press and hold Ⓑ button for rapid advancement.

To Use Race Timer

1) Press Ⓐ button in Race Timer mode. Timer starts countdown from the time set.
2) Press Ⓐ button stop/start countdown.
3) Press Ⓑ button when countdown is stopped. Race Timer display returns to initial setting.
4) If Ⓑ button is pressed while countdown is continuing, Race Timer returns to initial setting and automatically restarts countdown.
5) When Race Timer countdown is finished, Time-Up signal will sound for 5 seconds and the watch will be automatically set to Chronograph mode (Auto-Chrono) and start counting from 00 hour 00 minute 00 second.





- Buzzer will sound to mark remaining time at 10, 5, 3, 1 minute and 50, 40, 30, 30, 10, 5, 4, 3, 2, 1 second.

Auto-Chrono Measurement

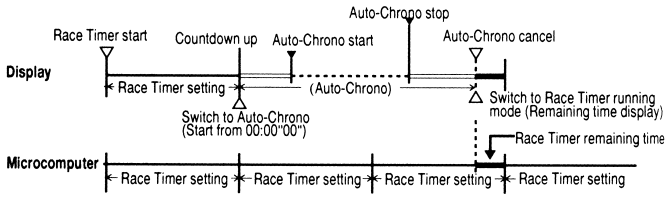
- When Race Timer countdown is finished, Time-Up signal will sound and the watch will be automatically set to the Chronograph running mode (Auto-Chrono).
- Auto-Chrono will start counting from 00 hour 00 minute 00 second.

Using Auto-Chrono

1) To stop Auto-Chrono, press Ⓐ button while Auto-Chrono is running. To restart Auto-Chrono, press Ⓐ button while Auto-Chrono is stopped.
2) To switch to Race Timer running mode, press Ⓑ button while Auto-Chrono is running.

Display after switching to Race Time/Auto-Chrono

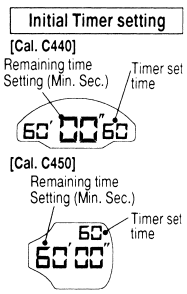
* When Race Timer and Auto-Chrono are running, microcomputer in the watch keeps repeating Race-Timer countdown as shown in diagram.
  If switched to Race Timer from Auto-Chrono, the watch will show Race Timer countdown in progress. (Countdown of microcomputer does not stop even if Auto-Chrono is stopped.)



3) To return to initial Race Timer setting, press Ⓑ button in Auto-Chrono stop mode.

- The watch will return to Time display mode if Ⓜ button is pressed in Race Timer or Auto-Chrono mode.
- If switched to another mode from initial Race Timer setting, Race Timer running, Race Timer stop, Auto-Chrono running or Auto-Chrono stop mode and then reset to Race Timer, function will return to the mode set at the time of switching. However, if Auto-Chrono counting has exceeded 24 hours, the watch will return to initial Race Timer setting Mode.

G Using Timer



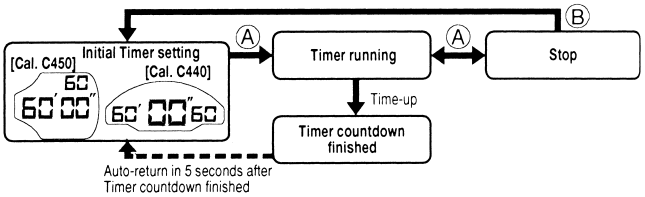
- Timer can be set up to 60 minutes in unit of one minute. Buzzer will sound for 5 seconds when countdown is up and display will return to initial set time.

To set Timer

Press Ⓑ button in Timer mode when set time is flashing. Set time digits decrease in units of one minute. Press and hold Ⓑ button from the rapid change of digits.

To use Timer

1) Press Ⓐ button. Timer starts countdown from set time.



2) Press Ⓐ button to stop/restart Timer. EL Light turns On when Ⓑ button is pressed while Timer is running.
3) Press Ⓑ button when Timer is stopped to return to initial set time.

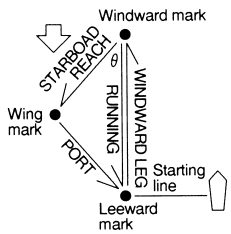
• If switched to another mode from initial Timer setting, Timer running or Timer stop mode and then reset to Timer, function will return to the mode set at the time of switching. However, if Timer countdown is finished, the watch will return to initial Timer setting.

6. EL Light
EL Panel
El (electro-luminescence) panel is a fluorescent panel which becomes illuminant when voltage is applied to it.
EL Illumination
EL panel will illuminate:
1) When Ⓐ button is pressed and held in normal Time or Calendar mode.
2) When Ⓑ button is pressed to display Split Time or Ⓐ button is pressed to stop Chronograph counting in Chronograph mode.
3) When Ⓑ button is pressed and held in TImer countdown mode.

7. All-Reset Function
Use All-Reset function when battery has been replaced or the watch indicates or operates abnormally.
1) Pull out crown
2) Press Ⓐ, Ⓑ and Ⓜ buttons simultaneously. All digital displays disappear.
3) Release three buttons. All digital displays are shown.
4) Push back crown. Buzzer sounds in confirmation. After completing all-reset procedures, adjust displays in each mode.

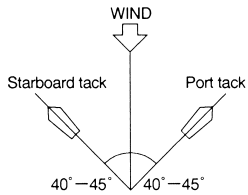
8. How To Use The Rotating Bezel
(Some models are not equipped with the rotating bezel).
Many yacht races are set in triangulated course layouts such as the one described here where the winner is the boat that navigates the designated course around the marks in the fastest time.

Direction: Navigational bearings are most often given in terms of degrees.
North: 0° East: 90° South: 180° West: 270°
Starboard: The right-hand side of a yacht looking forward.
Port: The left-hand side of a yacht looking forward.

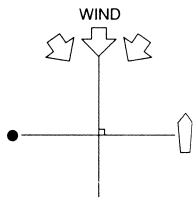


Using the rotating bezel (1)
1) Before a race, determine the direction of the wind from the direction and position of the windward marker. Line up the number representing the wind direction (in degrees) on the bezel with the triangle (Δ) mark at 12 o'clock.
(Ex.: northeasterly wind at 45°)
2) The course bearing from the windward mark to the wing mark (starboard reach) is read off the bezel, in degrees, at the green triangle (Δ) on the bottom of the left side of the dial.
3) The course bearing from the wing mark to the leeward mark (port reach) is read off the bezel, in degrees, at the red triangle (Δ) on the bottom right.
4) When sailing from the windward mark to the leeward mark, the small, white triangle at the bottom of the watch dial becomes the reference point for determining course bearings.
Note that the above explanation is only valid for times when the θ angle is 45°. At 60°, use the values lying above the red and green triangles; at 30°, use the values lying below the two triangles.

Using the rotating bezel (2)
Most present-day yachts are capable of sailing at 45° to the wind.
To be in a position of being able to read the wind shift after the start of a race, make several runs before the race matching your course as close as possible to the red (or green) bars on the left (or right) upper portion of the watch face.



Using the rotating bezel (3)
By using the rotating bezel in the following way you can determine the angle between the start/finish line and the direction from which the wind is blowing.
The start/finish line is usually set at right angles to the direction of the wind, but because the wind is always shifting direction, it is a rare occasion when a true 90° angle is met.
In this case, line up the white triangle at the 12 o'clock position on the watch with the direction from which the wind is blowing. Sail from one end of the start/finish line to the other, using the white lines marked (at 3 or 9 o'clock) on the watch to site your destination. If the course steered falls on the plus (+) side of the white line, you are on a favourable heading to start the race when you cross the start/finish line.
If the course steered falls to the minus (–) side of the white line on this watch, you know it is favourable to cross the start/finish line on a heading from the opposite direction.



• Use any one or a combination of the three methods described above to help you manoeuvre your boat into and maintain the position you feel is the most advantageous during a race.

9. Precautions

1) Resistance to water

Refer to the table for water-resistance performance after checking the water-resistance characteristics inscribed on the face and the back of the watch.

- Always set the crown in the normal position.
- While working with water and using as a water-resistance sports watch, when the watch is dipped in seawater or after a lot of sweat, please rinse it well in fresh water and dry it well with a cloth.
- Leather belts have characteristics that may affect durability after getting wet.
- Because there is always moisture inside the watch, when the air temperature, is lower than inside the watch, the surface of the glass may fog. If fog remains temporarily there is no problem, but if it doesn't disappear after a long period of time please consult the shop you purchased it from or a shop dealing with Citizen Watch.

Check the chart to determine the water resistant properties of this watch.

Indication		Water related use				
Watch face	Caseback	Light spray, perspiration, light rain, bathing etc.	Swimming etc.	Skin diving (without air tank)	Scuba diving (Diving with air tank)	Pulling the crown out when the watch is wet.
–	WATER RESIST	OK	NO	NO	NO	NO
WATER RESISTANT (5bar)	WATER RESIST	OK	OK	NO	NO	NO
WATER RESISTANT (10－20bar)	WATER RESIST	OK	OK	OK	NO	NO
"WATER RESISTANT" may sometimes be abbreviated "WATER RESIST"				● Always set the crown in the normal position.		

2) Avoid temperature extremes

Avoid leaving your watch in direct sunlight or in extremely warm locations for long periods of time.

- This will cause malfunctioning and shorten the life of the battery. Do not leave your watch for long periods of time in extremely cold places.
- This may cause your watch to gain or lose time.
- Place your watch on your wrist to restore its original accuracy should it begin to gain or lose time.

3) Avoid wet conditions

Do not operate the buttons when your watch is wet.

4) Avoid strong shock

This watch will withstand the bumps and jars normally incurred while playing and during sports activities. Avoid dropping your watch on the ground or otherwise imparting severe shock to it.

5) Avoid strong magnetic fields

Keep your watch out of the immediate vicinity of strong magnets. Generally, your watch is not affected by magnetic fields from such household appliances as television sets and stereo equipment.

6) Static Electricity

The integrated circuits used in the watch are sensitive to static electricity. If exposed to intense static electricity, the watches display may lose its accuracy.

7) Avoid harmful chemicals

Avoid wearing your watch in the presence of strong chemicals, solvents and gases. If your watch comes in contact with materials such as gasoline, benzine, paint thinner, alcohol, spray cosmetics, nail polish, nail polish remover, adhesives or paint, discolouration, deterioration or damage to the case, band and other components may occur.

8) Photosensitive eyeglasses

The watch digital display can become difficult to read clearly when wearing glasses. This problem can be corrected by turning your wrist slightly to change the angle between the eye and watch providing a clear view of the display.

9) Keep your watch clean
Wipe off any water and moisture that adheres to the case, glass and band with a soft, clean cloth. Any dirt left on the case or band may cause skin rash. A watchband will easily become soiled with dust and perspiration because it is in direct contact with the skin. Even a stainless or goldplated band may begin to corrode if it has not been cleaned for a long period of time. Mesh bands, because the meshes are very fine, will lose their particular “flexibility” if they are left soiled for a long time. Metal watchbands are usually washed with a brush in mild, soapy water and wiped with a soft, absorbent cloth to make sure all water is removed. Pay attention to prevent any water from getting inside your watch when the band is washed.

10) Periodic inspection
Getting your watch checked once every year or two is recommended to ensure long use and trouble-free operation.

11) Watch bands
Metal bands: Metal watch bands can be cleaned with a toothbrush, soap and water.
Leather bands: Wipe off the front side of the band with a soft dry cloth, and remove stains on the back side of the band with a cloth moistened with alcohol.
Plastic or rubber bands: Wash in water. (Avoid using solvents as they may cause the band to dissolve.)

12) Be sure to keep the batteries out of reach of infants and small children. Should accidental ingestion occur, consult a doctor at once.

10.SPECIFICATIONS

- Caliber No.: C440/C450
- Type: Analog/digital combination display quartz watch
- Accuracy:± 20 seconds/month at 5-35°C (41-95°F)
- Operating temperature range: 0-55°C (32-131°)
- Display functions
  Time: Hours, Minutes, Seconds, Summertime
  Calendar: Month, Date, Day
  Alarm: Hours, Minutes (Alarm-1/Alarm-2 (Cal.C440 only))
  Chronograph: 24-hour measurement (in 1/100 sec.), Split time measurement
  Race Timer: 15 different lengths of setting (Cal.C440 only)
  Timer: 60-minute countdown (in 1 minute)
- Additional function: EL (electroluminescence) panel
- Battery: 280-44 (SR927W)
- Battery life: Approx. 2 years based on assumed use of Alarm-1 and Alarm-2 buzzer each 20 sec./day, Race Timer buzzer 5 sec./week, Timer buzzer 5 secs./week and EL light 3 secs./day.

This watch will keep specified accuracy for about 2 years when used under normal conditions after a new battery has been installed. However, battery life will vary depending on frequency of use of alarm, chronograph and EL light.

* These specifications are subject to change for product improvement without prior notice.