

## §1. OUTLINE

This watch is a small-size woman's solar-powered watch with two hands, provided with a solar cell beneath the dial that converts light energy into electrical energy to power the watch.

## §2. SPECIFICATIONS

Caliber No.		G620M-00/G670M-00
Type		Analog solar power watch
Movement size (mm)		ø9.0 x 13.2 x ø13.5 x 2.17t
Accuracy (At normal temperature)		Within ±15 sec/month (5°C to 35°C/41°F to 95°F)
IC		1 unit of C/MOS-LSI
Operating temperature		-10°C to +60°C (14°F to 140°F)
Converter		Bipolar step motor
Time adjustment		No adjustment terminal for use in market
Measurement gate		10 sec.
Display function		Hours, minutes (2 hands)
Additional functions		Insufficient charge warning function
		Time setting warning function
		Overcharging prevention function
Continuous Operating time	From fully charged to stopped	Approx. 8 months
	From the insufficient charge warning display to stopped	Approx. 8 days
Battery		Secondary battery 1 pc.

\* Specifications are subject to change without notice.

### <Difference between Cal. G620M and Cal. G670M>

Cal. G670M is based on Cal. G620M. The former has a different distance between the hands and better inside appearance of the movement, however. The methods of handling and basic structures of the movements of these models are the same.

### §3. BEFORE USING

**This watch is a solar-powered watch.**

**Before using it, charge the watch sufficiently by exposing it (the face) to light.**

**\* In the case the watch has stopped moving due to an insufficient charge, charge the watch by exposing it to sun light or other intense light.**

This watch uses a secondary battery to store electrical energy. This secondary battery is a clean energy battery that does not contain mercury or other harmful substances. Once fully charged, the watch will continue to run for about eight months without recharging.

#### <For Optimum Use of this Watch>

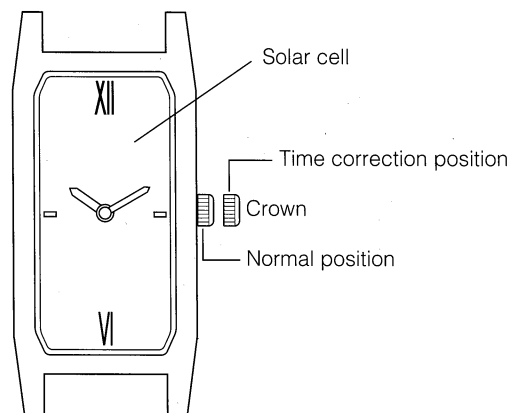
In order to use this watch comfortably, try to keep the watch charged at all times. There is no risk of overcharging no matter how often the watch is charged.

It is recommended to try to charge the watch every day.

### §4. HANDLING OF WATCH

#### A. Setting the Time

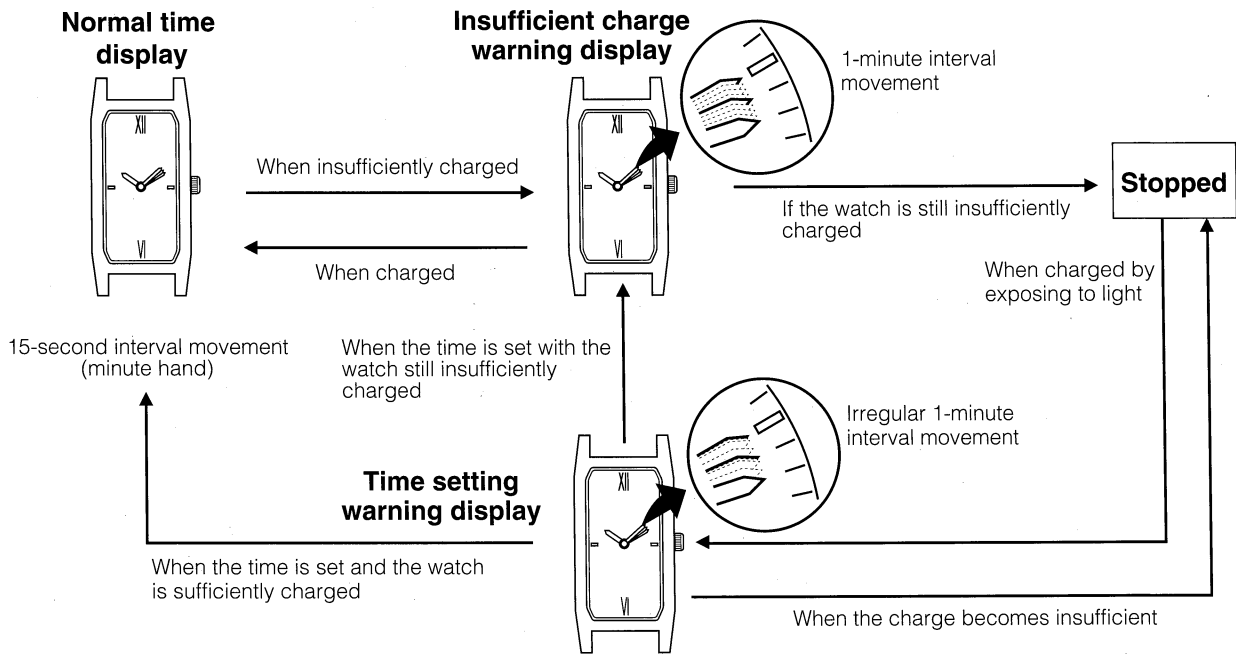
- (1) Pull the crown out to the time correction position.
- (2) Turn the crown to set the time.
- (3) The watch will start to run when the crown is securely pushed in to the normal position.



The design may differ according to the model.

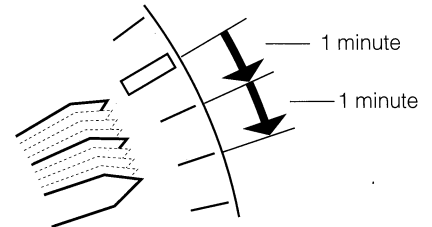
## B. Unique Functions of Solar-Powered Watches

This watch is provided with a function that causes a warning function to be activated when the watch is insufficiently charged that alters the display to inform the wearer of insufficient charge.



### <Insufficient Charge Warning Function>

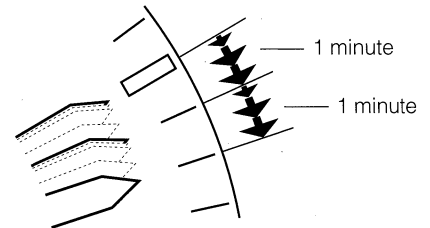
The minute hand moves by 1-minute interval movement (in which the minute hand moves regularly every minute) to indicate that the watch is insufficiently charged. Although the watch will keep the correct time at this time, after about 8 days have passed since the start of 1-minute interval movement, the watch ends up stopping as a result of being insufficiently charged. Sufficiently recharge the watch by exposing to light so that the minute hand returns to normal movement (in which the minute hand moves every 15 seconds).



**[1-minute interval movement]**  
Minute hand moves regularly once every minute

### <Time Setting Warning Function>

Although the watch hands will begin to move when again exposed to light after the watch has stopped, since the time is incorrect, the minute hand moves in irregular 1-minute interval movement (in which the minute hand moves irregularly every minute) to indicate that the time is incorrect. Reset the time and sufficiently recharge the watch. Irregular 1-second interval movement will continue until the time has been reset even if the watch is sufficiently recharged.



**[Irregular 1-minute interval movement]**  
Minute hand moves irregularly once every minute

### <Overcharge Prevention Function>

When the secondary battery becomes fully charged, the overcharging prevention function is activated to prevent the battery from being charged further, enabling the watch to be recharged without worrying about overcharging.

## C. General Reference for Charging Times

Recharging time varies according to the watch model (such as the color of the dial). The times in the table below should therefore only be used as a rough reference.

\* Charging time refers to the amount of time during which the watch is continuously exposed to light.

Illuminance (lx)	Environment	Charging time		
		One day usage	Charging time from the stopped state to normal hand movement (15-second interval movement)	Full charge time
500	Inside an ordinary office	3 hours	35 hours	—
1,000	Under a fluorescent lamp (30 W) at a distance of 60-70 cm (24-28 in)	1.5 hours	15 hours	—
3,000	Under a fluorescent lamp (30 W) at a distance of 20 cm (8 in)	30 minutes	5 hours	120 hours
10,000	Outdoors, cloudy	8 minutes	1.5 hours	35 hours
100,000	Outdoors, summer and sunny under direct sunlight	2 minutes	13 minutes	6 hours

Full charge time: Time to fully recharge the watch after it has stopped.

One day usage : Time required for recharging the watch to run for 1 day with normal hand movement (15-second interval movement).

## D. Handling Precautions

### <Try to Keep the Watch Charged at All Times>

Please note that if you wear long sleeves, the watch can easily become insufficiently charged as a result of the watch being covered and not being exposed to light. The watch will continue to run properly if it is placed in as bright a location as possible even when not being worn.

### Charging Precautions

Allowing the watch to reach high temperatures during recharging can damage the watch. Avoid recharging in locations that can reach high temperatures (about 60°C /140°F or higher).

- Examples**
- Charging by placing the watch in close proximity to a light source that easily becomes hot such as an incandescent lamp or halogen lamp.
  - Charging the watch in a location that can easily become hot such as on an automobile dashboard
  - When charging using the light from an incandescent lamp, charge while being careful that the watch does not become excessively hot by placing at a distance of at least 50 cm (20in) from the lamp.

## E. Replacing the Secondary Battery

Unlike ordinary batteries, the secondary battery used in this watch can be repeatedly charged and discharged and is not required to be periodically replaced.

### CAUTION

Never use another battery different from the secondary battery used in this watch.

The watch structure is so designed that a different kind of battery other than that specified cannot be used to operate it. In case a different kind of battery such as a silver battery is used by some chance, there is a danger that it will be overcharged to burst, causing damage to the watch and even to the human body.