

# ADEC QUARTZ

Model No. HC0  
Cal No. 5A80

## • INSTRUCTION MANUAL

### ADC-9704

#### 1. FEATURES

This is an analogue solar-powered watch that is equipped with a solar cell incorporated in its face to convert solar energy into electricity

#### 2. BEFORE USING

Sufficient Recharge by Placing in Light Before Use

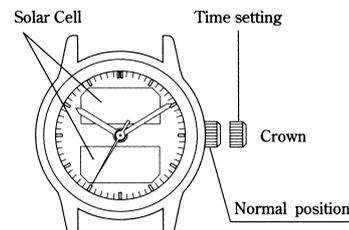
A secondary battery is used in this watch to store electrical energy. This secondary battery is a clean energy that does not contain mercury or other toxic substances. Once fully charged, the watch will continue to run for about 5 months without charging.

#### <How to Use this Solar Watch Properly>

To use this watch comfortably, make sure to recharge the watch before it stops running completely. Since there is no risk of overcharging (Overcharging Prevention Feature), it is recommended that the watch be recharged everyday.

#### 3. SETTING THE TIME

In the case of a screw lock-type crown, first release the crown screw lock, and then retighten when setting has been completed.

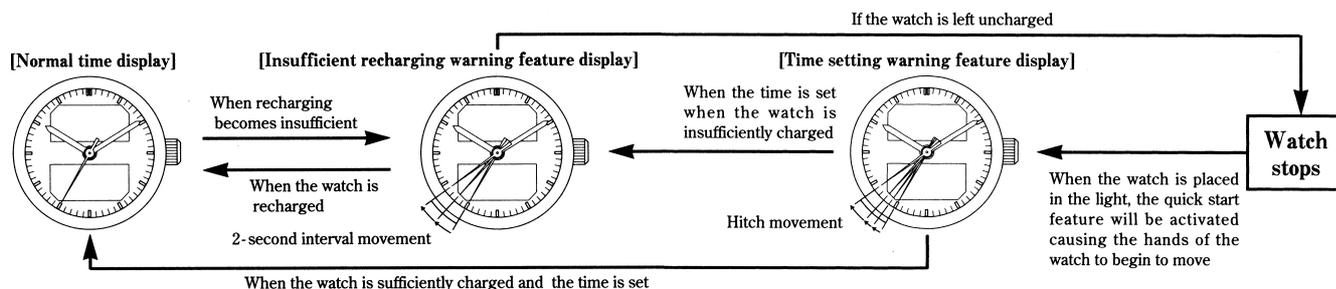


#### <Setting the Time>

- 1) Pull the crown out so that the second hand stops at the 0-position.
- 2) Turn the crown to set the time.
- 3) After setting the time, push the crown back into the normal position.

#### 4. SPECIAL 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 Recharging Warning Feature

The second hand changes to two-second interval movement to inform the wearer of insufficient recharging. Although the watch will keep the correct time when this happens, the watch will stop when two-second interval movement continues for 3 days. Place the watch in light to recharge. The watch will return to one-second interval movement.

#### Time Setting Warning Feature

Although the watch hands will begin to move when the quick start feature is activated, since the time will be incorrect, the second hand moves with a hitch movement to indicate that the displayed time is incorrect. When this happens, fully recharge the watch and reset the time. The second hand will continue to move with a hitch movement until the time is reset.

## Quick Start Feature

The watch will stop when it is completely discharged. When placed in light, the hands will begin to move after about 10 seconds. (The time until the hands begin to move varies according to the model and brightness of the light.) Please note that if the light is blocked, the watch may stop again as a result of being insufficiently recharged.

## Overcharging Prevention Feature

When the secondary battery is fully charged, the overcharging prevention feature is activated to prevent further recharging. This enables the wearer to recharge without risk or damage to the watch.

## 5. CHARGING TIMES

The time required for charging varies to the model of watch (colour of the watch face, etc). The following table provides a general reference for determining charging times.

\* **Time required for full charge:** Time from the state in which the watch has stopped until fully charges.

\* **Time required for one day's use:** Time required for the watch to run at one-second intervals for one day.

Illuminance (lux)	Environment	Charging Time		
		After stopping until one-second movement	For one day's use	For full charge
500	Interior lamp 	40 hours	2 hours	345 hours
1,000	60-70 cm away from fluorescent desk lamp (30W) 	19 hours	1 hour	166 hours
3,000	20 cm away from fluorescent desk lamp (30W) 	7 hours	23 min.	62 hours
10,000	Outside, cloudy conditions 	2.5 hours	8 min.	23 hours
100,000	Outside, sunny conditions 	1.5 hours	5 min.	12 hours

## 6. NOTES REGARDING HANDLING OF SOLAR-POWERED WATCHES

### <Always make sure to recharge frequently>

- Please note that if you wear long sleeves, the watch may stop as a result of being covered by your sleeve and blocked from the light.

### Recharging Precautions

- The watch will be damaged during recharging if it becomes excessively hot (60°C/140°F and above). Avoid recharging when the watch is hot. Examples: Recharging when the watch is in close proximity to an incandescent lamp, halogen lamp or other light source that generates considerable heat, or recharging the watch while placed on the dashboard of an automobile or other locations subject to excessively high temperatures. When you charge the watch by an incandescent lamp, take a distance about 50cm from the light source to prevent extremely high temperature.

### Handling of Secondary Battery

- The secondary battery should never be removed from the watch.
- If for any reason it becomes necessary to remove the secondary battery from the watch, keep out of the reach of children to prevent accidental swallowing.
- If the secondary battery is swallowed, consult a doctor immediately.

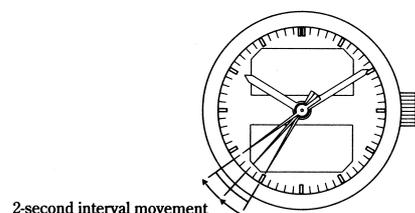
## Use Only the Specified Battery

Never use a battery other than the secondary battery for use in this watch. Although the watch structure is designed so that it will not operate when another type of battery is installed, if a silver battery or other type of battery is installed in the watch and the watch is recharged, there is the risk of overcharging which may cause the battery to rupture. This can cause damage to the watch and injury to the wearer. When replacing the secondary battery, always make sure to use the designated secondary battery.

## 7. HELPFUL HINTS

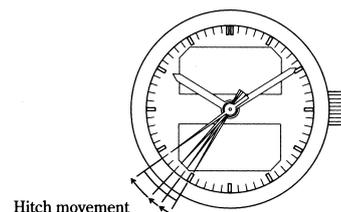
### <The second hand is moving in two-second interval movement>

This indicates that the insufficient recharging warning feature has been activated. When this happens, recharge the watch promptly so that it returns to one-second interval movement.



### <The second hand is moving with a hitch movement>

This indicates that the time setting warning feature has been activated. Sufficiently recharge the watch and reset it to the correct time.



## 8. PRECAUTIONS (AND USAGE LIMITATIONS)

Indication			Water-related use				
Dial	Case back	Specifications					
No indication	WATER RESISTANT (ANT)	3 bar water resistant watch	Washing face or getting wet in the rain, that (when splashed over it and no water pressure is applied to it).	Swimming and general washing work (kitchen work/car washing etc.)	Water sports and skin diving. (without air tank).	Scuba diving. (with air tank).	Pulling out the crown when the watch is wet.
WATER RESIST 5 bar or no indication	WATER RESISTANT(ANT) 5 bar	5 bar water resistant watch	OK	NO	NO	NO	NO
WATER RESIST 10 bar/20 bar or no indication	WATER RESISTANT(ANT) 10 bar/20 bar	10 bar/20 bar water resistant watch	OK	OK	NO	NO	NO

### Water resistance

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

- \* Always set the crown in the normal position.
- \* While working with water and using as a water-resistant sports watch, when the watch is dipped in sea water or after a lot sweat, please rinse it well in fresh water and dry it well with a cloth.
- \* Leather straps have characteristics that may affect their 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 only temporarily there is no problem, but if it doesn't disappear after a long period of time, please consult the shop from which you purchased it.

### Temperature

- This watch is designed to withstand external shocks such as those associated with golfing or playing ball.
- Avoid dropping it or subjecting it to other strong jolts.

### Magnetic fields

This watch is antimagnetic up to 60 gauss and is not affected by the magnetic fields produced by ordinary household electrical appliances. If used in the immediate vicinity of strong magnetism, however, the watch's functions may be affected temporarily.

### Chemicals, gas and mercury

Do not expose it to chemicals or gases. Be careful when using chemicals. Solvents such as benzine and paint thinner (and products containing solvents such as gasoline, nail polish remover, certain cleaners and adhesives) may cause discolouration, melting and or cracking of the watch case.

Do not expose the watch to mercury, such as that from a broken thermometer, since mercury could discolour the case, face and band of the watch.

### Static electricity

The integrated circuits used in the watch are sensitive to static electricity, the watch's display may lose its accuracy.

### Keep your watch clean

- Wipe off any dust and moisture on the glass case with a soft cloth.
- Since the band is in constant contact with your skin, always keep it clean.  
A dirty band may cause a slight reaction in people with sensitive skin.
- Always keep the band clean of any dust or dirt.  
Dust and dirt on the band may stain the shirt sleeve.
- Remove any stains on the band from time to time.  
It may become difficult to pull the crown out due to dirt and dust getting caught between the crown and the watch case. Turn the crown back and forth occasionally while it is in the normal position.

**Metal watch 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 moisture with alcohol.

**Plastic or rubber bands:** Wash in water. (Avoid using solvents as they may cause the band to dissolve.)

## 9. SPECIFICATIONS

- 1. Type:** Analog solar-powered watch.
- 2. Quartz oscillation frequency:** 32,768 Hz  
(Hz = number of oscillations in 1 second)
- 3. Accuracy:**  $\pm 30$  seconds per month on average  
(when worn at normal temperatures of 5-35°C (41-95°F))
- 4. Operating temperature range:** -10 to +60°C (14-140°F).
- 5. Additional function:**  
Insufficient recharging warning feature  
Quick start feature  
Time setting warning feature  
Overcharging prevention feature

**6. Secondary battery used:** Secondary battery, 1pc.

Specifications are subject to change without notice.