Thank you for purchasing our product. In order to ensure that you can patronize this watch for a long period of time, please carefully read this instruction manual and the warranty regulations to use it correctly.

After reading this instruction manual, keep it at hand and refer to it when necessary.

**PRODUCT FEATURES**

The light received by the solar cell located under the face is turned into electrical energy to operate this watch.

1. No need to replace the battery. It is not necessary to replace the battery because it does not use a silver oxide battery used for general quartz watches.
2. Even if the watch is left intact for a long time, it starts operating by exposing it to the light.
3. Provided with a residual energy notifying function. When the battery is running out, the second hand advances by two seconds to inform you of a need to charge the battery. After starting two-second step movement, the watch may stop operating within about three days.
4. Provided with a quick start function. When the watch is motionless, it immediately starts operating by exposing it to the light.

**PRODUCT SPECIFICATIONS**

1. Crystal oscillator frequency: 32,768 Hz
2. Driving system: Step motor system
3. Accuracy: Monthly rate of -15 to 15 seconds (When worn on the arm)
4. Additional functions: Residual energy notifying function
   - Reset switch
   - Quick start function
   - Overcharge preventive function
5. Drive duration time: From two-second step movement to a stop: Approx. 6 months
6. Operating temperature range: -10°C to +60°C
7. Timing system: Quartz crystal
8. Driving system: Step motor system
9. Crystal oscillator frequency: 32,768 Hz
10. Driving system: Step motor system
11. Accuracy: Weekly rate of +/- 15 seconds
12. Additional functions: Residual energy notifying function
   - Reset switch
   - Quick start function
   - Overcharge preventive function

**PRIOR TO USING THE WATCH**

Prior to using the watch, check the following.

1. Some types of products use a screw type crown mechanism. If this is the case, turn the crown to the left to return it to a setting position before setting the time or calendar. After setting is completed, turn the crown to the right to tighten it securely.
2. When you want to start the motionless watch or the battery is running out, expose the watch to the light to charge the battery. If the motionless watch is exposed to the light of the sun or any strong light (1,000 luxes or more), it will start moving by two seconds. Quick start function
   - Even if the quick start function is activated to allow two-second step movement, the battery is not sufficiently charged yet. Expose the watch to a stronger light to charge it.
   - If the light is shut off in the quick start condition, the watch may stop.
   - Taking into account the standard charging time, charge the battery until one-second movement is secured.
   - It is not necessary to fully charge it at any time. Initially, however, it is recommended to fully charge it.
   - Precaution for Charging
     - When charging the battery, note that if the watch is put too close to a photo-flood lamp, spotlight, or incandescent electric lamp, the internal parts may be damaged due to a high temperature.
     - Even when charging the watch by the light of the sun, note that the it will be very hot on the dashboard of the car.
     - See that the temperature of the watch will not be 60°C or higher.

**BATTERY USED**

- It is not necessary to replace the battery because this watch uses an exclusive secondary battery different from general ones.
- This secondary battery is environment-friendly.
- Never use a general silver oxide battery because it could result in bursting, heat generation, or ignition. Even if it is used, the watch is structured not to allow power continuity.

**WHEN TWO-SECOND STEP MOVEMENT STARTS**

When the residual energy notifying function is activated, the watch starts two-second step movement. If this is the case, charge the watch because it may stop operating within about three days. Taking into account the standard charging time, charge the battery sufficiently.

**STANDARD CHARGING TIME**

<table>
<thead>
<tr>
<th>Illuminance (lux)</th>
<th>Light Source</th>
<th>Environment (Standard)</th>
<th>Full Charging Time</th>
<th>Charging Time to Secure 1-sec. Step Movement</th>
<th>Charging Time Required for 1-day Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>Incandescent electric lamp</td>
<td>60W 66cm</td>
<td>Approx. 250 hours</td>
<td>Approx. 15 hours</td>
<td>Approx. 70 minutes</td>
</tr>
<tr>
<td>700</td>
<td>Fluorescent lamp</td>
<td>In general office</td>
<td>Approx. 175 hours</td>
<td>Approx. 11 hours</td>
<td>Approx. 50 minutes</td>
</tr>
<tr>
<td>1000</td>
<td>Fluorescent lamp</td>
<td>Approx. 120 hours</td>
<td>Approx. 6 hours</td>
<td>Approx. 30 minutes</td>
<td></td>
</tr>
<tr>
<td>3000</td>
<td>Fluorescent lamp</td>
<td>30W 20cm</td>
<td>Approx. 40 hours</td>
<td>Approx. 2 hours</td>
<td>Approx. 10 minutes</td>
</tr>
<tr>
<td>5000</td>
<td>Fluorescent lamp</td>
<td>30W 12cm</td>
<td>Approx. 22 hours</td>
<td>Approx. 80 minutes</td>
<td>Approx. 6 minutes</td>
</tr>
<tr>
<td>10000</td>
<td>Fluorescent lamp</td>
<td>Put very close to 30W</td>
<td>Approx. 10 hours</td>
<td>Approx. 30 minutes</td>
<td>Approx. 3 minutes</td>
</tr>
<tr>
<td>10000</td>
<td>Sunshine</td>
<td>Approx. 10 hours</td>
<td>Approx. 30 minutes</td>
<td>Approx. 3 minutes</td>
<td></td>
</tr>
<tr>
<td>100000</td>
<td>Sunshine</td>
<td>Approx. 3 hours</td>
<td>Approx. 8 minutes</td>
<td>Approx. 1 minutes</td>
<td></td>
</tr>
</tbody>
</table>

* The numerals in the table above should be used as a yardstick.
* The numerals in this column indicate the charging time required for one-second step movement to be secured following two-second step movement after the motionless watch is exposed to the light. One-second step movement is activated before the end of this charging time, but in this condition, two-second step movement could be immediately resumed again. Therefore, charge the battery according to this time.

* The charging time above varies slightly from one model to another.

**SETTING THE TIME AND CALENDAR**

1. Pull out the crown; it can be pulled out in two steps.
2. Turn the crown to the right to set to the date one day before.
3. When the second hand comes to a position of zero second, pull out the crown to the second step.
4. Turn the crown to the right to set the time. It is 12:00 a.m. when the date changes. Make sure of this and set the time, not mistaking a.m. for p.m. and vice versa.
5. Push in the crown simultaneously with a time signal. Make sure that the watch starts operating.