CHARACTERISTICS

This watch is driven by light energy:

- A solar cell under dial is used to convert light energy into electrical energy and save at the secondary battery to power the watch.
- It is different from normal quartz watch that regular battery exchange is not required.
- The charging time required depends on your type of watch. Check the case back of your watch to identify the type of watch.

- Several type of watch have below function too.
  → Please refer to the "GUIDELINE OF CHARGING TIME/ACCURACY" for details.

"Energy depletion forewarning function"

- When the secondary battery begins to lose energy, the second hand will advance at two-second intervals.
- When the second hand starts advance at two-second intervals, the watch will led to stoppage within 3 days. Please kindly charge watch accordingly.

"Quick Start function"

- Even after being completely drained of its energy, the watch recharges and start soon after exposed to light.

- The hour, minute, second, 24-hour, date and day are all indicated by hands. (V14J VS3J only)
  → As the hour hand moves, the 24-hour hand also moves correspondingly. The 24-hour hand cannot be set independently of the other hands.
  → The day hand cannot be adjusted independently of the other hands. Before setting the time, set the day by turning the hour and minute hands. Please refer to the "HOW TO USE".
CROWN

There are two types of crown, a normal crown and a screw-lock type crown. Please check the type of the crown of your watch.

![Diagram of crown types](image)

- Normal crown
  - Pull out the crown and operate it.

- Screw-lock type crown
  - Unlock the crown before operating it.
  - After operating the crown, lock it.

- Be careful not to screw the crown in by force as it may damage the slots of the crown.

ABOUT CHARGING

How To Charge the Watch

Expose the dial to light to charge the watch.

To ensure optimal performance of the watch, make sure that the watch is kept sufficiently charged at all time.

Under the following situations, the energy of the watch is likely to be depleted, resulting in stoppage of the watch:
- The watch is concealed under a sleeve.
- The watch is used or stored under conditions where it cannot be exposed to light for a long time.

- When charging the watch, make sure that the watch is not heated to a high temperature. (Please refer to the table on the right for the operational temperature range.)
- When first using the watch or starting to use the watch after it has stopped because of the energy depletion, sufficiently charge the watch referring to the table on the right.

When the second hand moves in two seconds interval (models with Energy depletion forewarning function)

- Energy depletion forewarning function
  - When the energy depletion forewarning function is activated, the second hand starts moving at two-second intervals. In that case, charge the watch as soon as possible.
  - To charge the watch sufficiently, refer to CHARGING TIME.
  - Immediately expose your watch to light when the second hand starts moving at two-second intervals.

- When the watch is stopped or the second hand starts moving at two-second intervals (for models with a second hand), charge the watch by exposing it to light.
  - (The two-second interval movement of the second hand is a signal of energy depletion.)
  - The time required for charging the watch varies depending on the calibers. Check the caliber of your watch engraved on the back cover.
  - Even if the watch is partially charged for a period shorter than the time specified on the page on the left, it will start moving. However, it is recommended that the watch be charged as seen in column.
**SPECIFICATIONS**

1. Frequency of crystal oscillator: 32.768 Hz (Hz = Hertz = Cycles per second)
2. Loss / gain: Please refer to Guideline of charging time/accuracy
3. Operational temperature range: Please refer to Guideline of charging time/accuracy
4. Driving system: Step motor
5. Battery: Secondary battery, 1 piece.
6. Running time: Please refer to Guideline of charging time/accuracy
7. IC: C-MOS-IC 1 Unit

*The above specifications are subject to change without notice.*

Each of the calibers is prevented from overcharging.

There is no need to worry about damage caused by overcharging no matter how much the secondary battery is charged in excess of the "time required for fully charging the watch".

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**TO PRESERVE THE QUALITY OF YOUR WATCH**

**WARNING**

- Immediately stop wearing the watch in the following cases:
  - if corrosion appears on the watch body or band, etc.
  - if the pins protrude from the band
  - Immediately consult the retailer from whom the watch was purchased or a SEIKO CUSTOMER SERVICE CENTER.

- Keep the watch and accessories out of the reach of babies and children.
  Care should be taken to prevent a baby or a child accidentally swallowing any accessories.
  Do not remove the secondary battery from the watch.
  - About the secondary battery → Please refer to REMARKS ON THE BATTERY

- Replacement of the secondary battery requires professional knowledge and skill.
  Please ask a watch retailer for replacement of the secondary battery.

- Installation of an ordinary silver oxide battery can generate heat that can cause bursting and ignition.
  Do not use the watch for scuba diving or saturation diving.

- The various inspections under simulated harsh environments, which are usually required for watches designed for scuba diving or saturation diving, have not been conducted on a water-resistant watch with a BAR (barometric pressure) display. For diving, use special watches.

**CAUTION**

- Avoid wearing or storing the watch in the following places:
  - Places where volatile agents (cosmetics such as polish remover, insect repellant, thinners etc.) are vaporizing
  - Places where the temperature drops below 5 °C or rises above 35 °C for a long time
  - Places of high humidity
  - Places affected by strong magnetism or static electricity
  - Dusty places
  - Places affected by strong vibrations

- If you observe any allergic symptoms or skin irritation, stop wearing the watch immediately and consult a specialist such as a dermatologist or an allergist.

- Do not let running water from a faucet hit the watch.
  The water pressure of tap water from a faucet is high enough to degrade the water resistant performance of a water resistant watch for everyday use.

- Do not turn or pull out the crown when the watch is wet:
  water may get inside of the watch.
  - If the inner surface of the glass is clouded with condensation or water droplets appear inside of the watch for a long time, the water resistant performance of the watch is deteriorated. Immediately consult the retailer from whom the watch was purchased or a SEIKO CUSTOMER SERVICE CENTER.

- Do not leave moisture, sweat and dirt on the watch for a long time.
  Be aware of the risk that a water resistant watch may have its water resistant performance lessened because of deterioration of the adhesive on the glass or gasket or the development of rust on stainless steel.

- Do not wear the watch while taking a bath or a sauna.
  Steam, soap or some components of a hot spring may accelerate the deterioration of the water resistant performance of the watch.

- Other cautions:
  - Do not disassemble or tamper with the watch.
  - Keep the watch out of the reach of babies and children. Extra care should be taken to avoid risk of injury or allergic rash or itching that may be caused when they touch the watch.
  - When disposing of used batteries, follow the instructions of your local authorities.
  - If your watch is of the fob or pendant type, the strap or chain attached to the watch may damage your clothes, or injure the hand, neck, or other parts of your body.
Magnetic resistance
Affected by nearby magnetism, a watch may temporarily gain or lose time or stop operating.

<table>
<thead>
<tr>
<th>Indication on the case back</th>
<th>Condition of use</th>
</tr>
</thead>
<tbody>
<tr>
<td>No indication</td>
<td>Keep the watch more than 10 cm away from magnetic products.</td>
</tr>
<tr>
<td></td>
<td>Keep the watch more than 5 cm away from magnetic products, (JIS level-1 standard)</td>
</tr>
<tr>
<td></td>
<td>Keep the watch more than 1 cm away from magnetic products, (JIS level-2 standard)</td>
</tr>
</tbody>
</table>

If the watch becomes magnetized and its accuracy deteriorates to an extent exceeding the specified rate under normal use, the watch needs to be demagnetized. In this case, you will be charged for demagnetization and accuracy readjustment even if it happens within the guarantee period.

The reason why the watch is affected by magnetism is due to the magnetic field applied to the watch. The built-in motor is provided with a magnet, which may be affected by a strong external magnetic field.

Examples of common magnetic products that may affect watches
- Cellular phone (speaker)
- AC adapter
- Bag (with metal buckle)
- AC-powered shaver
- Magnetic cooking device
- Portable radio (speaker)
- Magnetic necklace
- Magnetic health pillow

Daily care
The watch requires good daily care.
- Do not wash the watch when the crown is pulled out.
- Wipe away moisture, sweat or dirt with a soft cloth.
- After soaking the watch in seawater, be sure to wash the watch in clean pure water and wipe it dry carefully.
- If your watch is rated as “non-water resistant” or “water resistant for daily use,” do not wash the watch.

Turn the crown
- To prevent rusting of the crown, please sometimes turning the crown.
- Please do the same for screw-lock type crown.

Water resistance
Refer to the table below for the description of each degree of water resistant performance of your watch before using.

<table>
<thead>
<tr>
<th>Indication on the case back</th>
<th>Water resistant performance</th>
<th>Condition of use</th>
</tr>
</thead>
<tbody>
<tr>
<td>No indication</td>
<td>Non-water resistance</td>
<td>Avoid drops of water or sweat</td>
</tr>
<tr>
<td>WATER RESISTANT</td>
<td>Water resistance for everyday use</td>
<td>The watch can withstand accidental contact with water in everyday life, <strong>WARNING</strong> Not suitable for swimming</td>
</tr>
<tr>
<td>WATER RESISTANT 5 BAR</td>
<td>Water resistance for everyday use at 5 barometric pressures,</td>
<td>The watch is suitable for sports such as swimming,</td>
</tr>
<tr>
<td>WATER RESISTANT 10/200BAR</td>
<td>Water resistance for everyday use at 10/200 barometric pressures,</td>
<td>The watch is suitable for diving not using an air cylinder,</td>
</tr>
</tbody>
</table>

Band
The band touches the skin directly and becomes dirty with sweat or dust. Therefore, lack of care may accelerate deterioration of the band or cause skin irritation or stain on a sleeve cuff. The watch requires a lot of attention for long usage.

Metallic band
- Moisture, sweat or soil will cause rust even on a stainless steel band if they are left for a long time.
- Lack of care may cause a yellowish or gold stain on a sleeve cuff of shirts.
- Wipe off moisture, sweat or soil with a soft cloth as soon as possible.
- To clean the soil around the joint gaps of the band, wipe it out and then brush it off with a soft toothbrush. (Protect the watch body from water splashes by wrapping it in plastic wrap, etc.)
- Because some titanium bracelets use pins made of stainless steel, which has outstanding strength, rust may form in the stainless steel parts.
- If rust advances, pins may poke out or drop out, and the watch case may fall off the bracelet, or the clasp may not open.
- If a pin is poking out, personal injury may result. In such a case, refrain from using the watch and request repair.

Leather band
- A leather band is susceptible to discoloration and deterioration from moisture, sweat and direct sunlight.
- Wipe off moisture and sweat as soon as possible by gently blotting with a dry cloth.
- Do not expose the watch to direct sunlight for a long time.
- Please take care when wearing a watch with a light-colored band, as dirt or stains are likely to show.
- Refrain from wearing a leather band watch other than Aqua Free bands while bathing, swimming, and when working with water even if the watch itself is water-resistant enforced for daily use (10/200 BAR water resistant).
Polyurethane band
- A polyurethane band is susceptible to discoloration from light, and it may be deteriorated by solvent or atmospheric humidity.
- Especially a translucent, white, or pale-colored band easily absorbs other colors, resulting in color smears or discoloration.
- Wash off dirt in water and clean the band with a dry cloth.
- (Protect the watch body from water splashes by wrapping it in plastic wrap, etc.)
- When the band becomes less flexible, have the band replaced with a new one. If you continue to use the band as it is, the band may develop cracks or become brittle over time.

Note on skin irritation and allergy:
Skin irritation caused by a band has various reasons such as an allergy to metals or leather, or skin reactions against friction or dust or the band itself.

Notes on the length of the band
Adjust the band to allow a little clearance with your wrist to ensure proper airflow. When wearing the watch, leave enough room to insert a finger between the band and your wrist.

LUMIBRITE

If your watch has Lumibrite
Lumibrite is a luminous paint that absorbs the light energy of the sunlight and lighting apparatus in a short time and stores it to emit light in the dark.
For example, if exposed to a light of more than 500 lux for approximately 10 minutes, Lumibrite can emit light for 3 to 5 hours.
Please note, however, that, as Lumibrite emits the light it stores, the luminance level of the light decreases gradually over time. The duration of the emitted light may also differ slightly depending on such factors as the brightness of the place where the watch is exposed to light and the distance from the light source to the watch.
- In general, when coming from a place that is bright to a place that is dark, it takes human eyes some time to adapt to the darkness making it difficult to see objects initially. (Dark adaptation)
- Lumibrite is luminous paint that stores and emits light, which is harmless to human beings and the environment, containing no toxic materials such as radioactive substances.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Illumination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunlight</td>
<td>Fine weather: 100,000 lux</td>
</tr>
<tr>
<td>Indoor (Window-sidering daytime)</td>
<td>Fine weather: more than 3,000 lux</td>
</tr>
<tr>
<td>Lighting apparatus (40-60 watt daylight fluorescent light)</td>
<td>Distance to the watch: 1m: 1,000 lux, Distance to the watch: 3m: 500 lux (average room luminance), Distance to the watch: 4m: 250 lux</td>
</tr>
</tbody>
</table>

REMARKS ON THE BATTERY

The battery used in this watch is a special secondary battery, which is totally different from ordinary silver oxide batteries.
Unlike other disposable batteries such as dry-cell batteries or button cells, this secondary battery can be used over and over again by repeating the cycles of discharging and recharging.
However, for various reasons such as long-term use or usage conditions, the capacity or recharging efficiency of the secondary battery may gradually deteriorate. Worn or contaminated mechanical parts, or degraded oils may also shorten recharging cycles. If the efficiency of the secondary battery decreases, have the watch repaired.

WARNING
- Remarks on replacing the secondary battery
  - Do not remove the secondary battery yourself.
  - Replacement of the secondary battery requires professional knowledge and skill. Please ask a watch retailer for repair.
  - Installation of an ordinary silver oxide battery can generate heat that can cause bursting or ignition.

- Overcharge prevention function
  - When the secondary battery is fully charged, the overcharge prevention function is automatically activated to avoid further charging. There is no need to worry about damage caused by overcharging no matter how much the secondary battery is charged in excess of the "time required for fully charging the watch".
- Refer to "Guideline of charging time" to check the time required for fully charging the watch.

WARNING
- Notes on charging the watch
  - When recharging the watch, do not place it too close to incandescent light or other light sources as the watch temperature will become extremely high, causing damage to the parts inside the watch.
  - When exposing the watch to sunlight to recharge it, do not leave it on the dashboard of a car, etc. for a long time, as the watch temperature becomes extremely high.
  - Always keep the watch temperature under 50°C.
AFTER-SALES SERVICE

Notes on guarantee and repair
- Contact the retailer the watch was purchased from or a SEIKO CUSTOMER SERVICE CENTER for repair.
- Within the guarantee period, present the certificate of guarantee to receive repair services.
- Guarantee coverage is provided in the certificate of guarantee. Read it carefully and retain it.
- For repair services after the guarantee period has expired, if the functions of the watch can be restored by repair work, we will undertake repair services upon request and payment.

Replacement parts
- SEIKO makes it a policy to typically keep a stock of replacement parts for this watch for 7 years. Replacement parts are those which are essential for maintaining the functional integrity of the watch.
- When repairing your watch, please keep in mind that if original parts are not available, parts may be replaced with substitutes whose outward appearance may differ from the originals. Also note that the complete set of parts with the case or band may be replaced, or if repair is difficult, the watch may be replaced with one of equal quality.