

## CHARACTERISTICS

1. Driven by light energy: A solar cell is used to convert light energy into electrical energy to power the watch.
2. No need for battery replacement: As a means of storing and releasing electrical energy, a secondary battery is used instead of the conventional silver battery.
3. Energy depletion forewarning function: When the secondary battery begins to lose energy, the second hand will advance at two-second intervals, indicating the need to charge the watch.
4. Quick start function: Even after being completely drained of its energy, the watch recharges and will start soon after exposed to light.

## HOW TO PREVENT DEPLETION

While in use, the watch should be exposed to some light, at least partially. For instance shirt or jacket cuff should not totally obstruct the light from reaching the dial.

When not in use, try to keep the watch in a bright place. These precautions will ensure your watch will run constantly at one-second intervals.

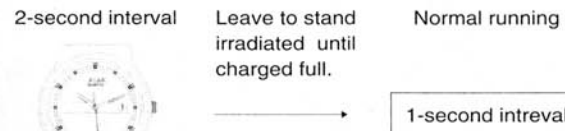
Before going to bed, if your watch is running at two-second intervals, be sure to charge it until it runs at one-second intervals.

\* Keep the temperature below 50°C.

## ALBA QUARTZ WATCH WITH SOLER CELL

Hold your watch up to the light occasionally, and it will run constantly.

- When charged to full capacity, your watch will operate for 6 months on the average.
- If totally kept away from light, your watch will run down in less than 6 months.
- When exposed to strong light (sunlight or fluorescent light at close contact) for several seconds, your watch will start running at two-second intervals. Keep charging until the watch begins to run at one-second intervals.



※ Even if the watch is not recharged for the time specified in the table at below, the second hand may temporarily move at one-second intervals. But it will soon resume moving at two-second intervals, and therefore, recharge the watch for more than the specified period.

## NOTES ON THE SECONDARY BATTERY

- The watch uses a secondary battery instead of a silver oxide battery, and therefore, the battery replacement procedures are completely eliminated.
- The secondary battery installed in the watch is a clean energy source, having no adverse effect on the natural environment.

### CAUTION

Never insert a conventional silver battery in your watch as it may explode, generate an intense heat or catch fire. The watch is so designed that even if the battery is installed in the watch, the electrical energy of the battery is not supplied to the watch circuit.

## CHARGING TIME

The charging time required depends on the intensity of the light. Refer to the chart below for charging times.

Light intensities (LUX)	Light source	Environments	CHARGING & RECHARGING CAPABILITY		
			For full charge	To move second hand (1-second interval)	For daily maintenance
500	Incandescent lamp	60W 60cm	approx. 250 hours	approx. 15 hours	approx. 60 minutes
700	Flourescent lamp	Office in general	approx. 175 hours	approx. 11 hours	approx. 50 minutes
1000		30W 70cm	approx. 120 hours	approx. 6 hours	approx. 30 minutes
3000	30W 20cm	approx. 40 hours	approx. 2 hours	approx. 10 minutes	
5000	30W 12cm	approx. 22 hours	approx. 80 minutes	approx. 6 minutes	
10000	30W 3cm	approx. 10 hours	approx. 30 minutes	approx. 3 minutes	
10000	Sunlight	Cloudy day	approx. 10 hours	approx. 30 minutes	approx. 3 minutes
100000		Direct sunlight at noon (vertical)	approx. 3 hours	approx. 8 minutes	approx. 1 minutes

### CAUTION

Avoid charging if under a photographing spotlight, or incandescent lamp, or where the temperature can exceed 50°C. The high temperature may adversely affect the watch performance. Flourescent lamp suits for charging.

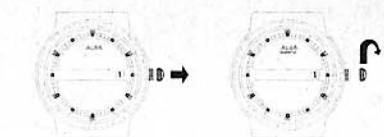
- The charging times may vary from watch to watch.
- You are advised to charge your watch every day to some degree to make up for any energy loss, rather than after it is completely depleted.

\* Immediately expose your watch to light, when the second hand starts moving at two-second intervals.

When the second hand begins to move from one-second intervals to two-second intervals, this indicates that approximately 3 day remains before the energy stored is depleted. Full recharge is recommended at this time. (Note: even at two-second intervals, the watch is keeping accurate time.)

\* Keep the temperature below 50°C

## HOW TO USE TO SET THE DATE



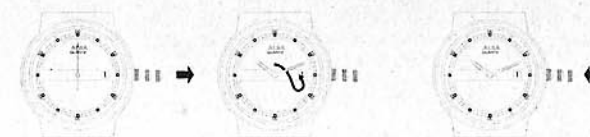
1. Pull the crown, out to the first click.
2. Turn the crown clockwise to set the date before designated date.

\* The crown be can pulled out all the way to the second click.

\* Do not set the date when the hands are pointing to the time between 9 P.M. and 4 A.M. If the setting of the date is made when the hands are pointing to the time between 9 P.M. and 4 A.M., the date will not change to the next date. Please set the date after turning the hands except during the above period.

\* Date adjustment at the end of the month. It is necessary to adjust the date at the end of February and 30-day months or on the first day of March and a month following a 30-day month. Please adjust the date.

## TO SET THE TIME



1. Pull the crown out all the way to the second click and the second hand stops moving. Stop the second hand at the 12 o'clock Position.
2. Turn the crown counterclockwise to set the time.
3. Push the crown back to the normal position in accordance with a time signal.

\* While setting the time, be sure to check that the correct A.M. or P.M. period is set. (The date will change automatically once every 24 hours)

\* The mechanisms of the quartz watch and the mechanical watch are different. When you set the time, first set the minute hand to a properly advanced time, then return the minute hand to the correct time.

\* Telephone time casting service (tel.117) might be helpful when you set the time.

## TO PRESERVE THE QUALITY OF YOUR WATCH

### CAUTION

#### WATER RESISTANCE

- Check the dial or case back of your watch for the water resistant quality, and then see the table below.
- Do not turn or pull out the crown when the watch is wet, as water may get inside the watch.

	Designed and manufactured to withstand the water usually experienced in a daily living such as splashes and rain.	Designed and manufactured for swimming and kitchen work.	Skindiving without scuba.	Genuine diving using scuba or heliungas.	Crown operation when the watch is wet.
"WATER RESISTANT" is not inscribed on the back of your watch case.	×	×	×	×	×
"WATER RESISTANT" is inscribed on the back of your watch case.	○	×	×	×	×
"WATER RESISTANT 5 - 10 - 15 - 20 BAR.", "WATER RESISTANT" and marks inscribed on the back of your watch case.	5 BAR.	○	×	×	×
	10 - 15 - 20 BAR.	○	○	×	×

## CARE OF YOUR WATCH

### WARNING

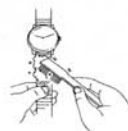
- If your watch is 3 bar water resistant, do not use it in water.
- If your watch is 5 bar water resistant, do not use it in any type of diving including skin diving.
- If your watch is 10 or 20 bar water resistant, do not use it in saturation diving or scuba diving.

### CAUTION

#### CARE OF YOUR WATCH

- The case and bracelet touch the skin directly just as underwear. If they are left dirty, the edge of a sleeve may be stained with rust of those who have a delicate skin may have a rash.
- After removing the watch from your wrist, wipe perspiration or moisture with a soft cloth. This will prevent the watch from being soiled, adding to the life of the gasket.

#### METAL BRACELET



- Clean the watch bracelet with a soft toothbrush dipped in water or soapy water. If your watch is not water-resistant, be careful not to get the case wet when cleaning.

#### LEATHER BAND



- When removing moisture from a leather band, do not rub the band with the cloth as this may discolor it or reduce its gloss. Be sure to blot up the moisture using a soft dry cloth.

#### SOFT PLASTIC BRACELET

- If your watch has a soft plastic band such as urethane band, do not leave the watch under a fluorescent lamp or direct sunlight for a long time, or do not leave the band soiled. Otherwise, the band may be discolored, hardened or broken. Also, do not keep the watch in a place where it is exposed to high humidity, or do not leave the band wet with perspiration or water. Otherwise, the band may be discolored in a very short time.

- When the band is soiled, rinse it in soapy water. Do not use solvents for cleaning as some solvents may deteriorate the band. If your watch has a semitransparent urethane band, which is easily discolored, special care should be taken to keep it clean. Depending on the condition of use, the semitransparent band may be discolored after several months of use.
- If your watch is not water-resistant, be careful not to get wet with water or sweat. When it gets wet with water or sweat, wipe it thoroughly dry with a hygroscopic cloth.
- If your watch is 5, 10 or 20 bar water resistant, rinse it in a bowl of fresh water after used in seawater. Do not use chemicals to wash it.
- If your watch has a rotating bezel, clean the bezel regularly. Otherwise, dust will gather under it, making the rotation harder.

### CAUTION

#### RASH AND ALLERGY

- Adjust the bracelet or band so that there will be a little clearance between the bracelet or band and your wrist to avoid accumulation of perspiration.
- If you are constitutionally predisposed to rash, the band may cause you to develop a rash or an itch depending on your physical condition.
- The possible causes of the rash are as follows:
  1. Allergy to metals or leathers
  2. Rust, dust or perspiration on the watch or band
- If you develop any skin reactions, take off the watch and consult a doctor immediately.

#### PLACES TO KEEP YOUR WATCH



- If the watch is left in a temperature below -5°C or above +50°C for a long time it may function improperly or stop operating.
- Do not leave the watch in a place where it is subjected to strong magnetism or static electricity.
- This watch is so adjusted that it will maintain stable time accuracy in normal temperatures. (5°C ~ 35°C) It will lose or gain slightly, but it will regain high time accuracy when it returns to normal temperature.

- Do not leave the watch where there is strong vibration.
- Do not leave the watch in a dusty place.

- Do not leave the watch to gases or chemicals. (Ex.: Organic solvents such as benzine and thinner, gasoline, nail polish, cosmetic spray, detergent, adhesives, mercury, and iodine antiseptic solution.)
- Do not leave the watch in a hot spring, or do not keep it in a drawer having insecticides inside.

## PRECAUTIONS ON WEARING YOUR WATCH

Take utmost care in the following cases:

- When clasping and unclasping the band, you may damage your nail, depending on the type of clasp used with the band.
- In case you tumble and fall or bump into others with the watch worn on your wrist, you may be injured by the reason of the fact that you wear the watch.
- When you make contact with children, especially with infants, they may get injured or develop a rash caused by allergy.

### CAUTION

- 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.

## PERIODIC CHECK



- We suggest that you have your watch checked by the ALBA DEALER every 2 or 3 years for oil condition, or damage due to water or sweat. After checking the watch, adjustment and repair may be required.
- When the replacing the parts, please specify "ALBA GENUINE PARTS".
- Be sure to have the gasket and push-pin replaced with new ones by the ALBA DEALER when checking the watch.

## LUMIBRITE

#### [IF YOUR WATCH HAS LUMIBRITE]

- LumiBrite uses externally-energized luminous material which doesn't contain any radioactive substance. LumiBrite is a newly-developed 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.

## SPECIFICATIONS

1. Frequency of crystal oscillator ..... 32,768Hz (Hz=Hertz—Cycles per second)
  2. Loss / gain ..... Average monthly rate: ±20 seconds. (in temperatures of between 5°C and 35°C on your wrist)
  3. Operational temperature range ..... -5°C ~ +50°C
  4. Driving system ..... Step motor
  5. Battery ..... Titanium-lithium ion secondary battery, one piece.
  6. Running time ..... A fully-charged-watch keeps on running for approximately 6 months. When the second hand begins to move at two-second intervals, the watch will stop in about 3 day.
  7. Quick start function, energy depletion forewarning function.
  8. IC ..... C-MOS-IC ..... 1 Unit
- \* The above specifications are subject to change without notice.

## NOTES ON THE REPLACEMENT PARTS

- (1) ALBA makes it a policy to usually keep a stock of spare parts for its watches for 7 years. In principle, your watch can be reconditioned within this period if used normally. (Replacement parts are those which are essential to maintaining the functional integrity of the watch.)
- (2) The number of years that a watch is considered repairable may vary greatly depending on the condition under which it was used, and normal accuracy may not be achieved in some cases. We recommend, therefore, that you consult the retailer from whom the watch was purchased, when having them repair your watch.
- (3) The case, dial, hands, glass, bracelet, or parts thereof may be replaced with substitutes if the originals are not available.