

 **WARNING**

- Do not attempt to dive using this watch unless you have been properly trained in diving. For your safety, please abide by the rules of diving.
- Do not use the watch for saturation diving using helium gas.
- Before diving, make sure that the watch operates normally.

 **CAUTION**

- Please read and observe the instructions described in this booklet to ensure the proper functioning of your diver's watch.
- Do not operate the crown when the watch is wet or in water.
- Do not operate the buttons when the watch is wet or in water.
- Avoid hitting the watch against hard objects such as rocks.



WARNING notes indicate any condition or practice which, if not strictly observed, could result in severe personal injury or possible death.



CAUTION notes indicate any condition or practice which, if not strictly observed, may result in personal injury or property damage.

PRECAUTIONS ON USING THE WATCH FOR DIVING

Before diving, make sure that the watch operates normally and be sure to observe the precautions described below.

BEFORE DIVING

- Do not use the watch for saturation diving using helium gas.
- To measure the elapsed time while you are underwater, always use the rotating bezel.
- Check that:
 - the second hand is moving at one-second intervals.
 - the “•” mark on the case back indicates the expected life limit of the battery. (See “BATTERY CHANGE” on page 22.)
 - the crown is locked tightly in place.
 - the buttons are locked tightly in place.
 - there are no visible cracks in the crystal or the watch band.
 - the strap or bracelet is securely fastened to the watch case.
 - the buckle keeps the strap or bracelet firmly secured to the wrist.
 - the rotating bezel turns counterclockwise smoothly (the rotation must not be too loose or too tight) and the “⌚” mark aligns with the minute hand.
 - the time and calendar are appropriately set.

If there are any malfunctions, we recommend that you contact an AUTHORIZED SEIKO SERVICE CENTER.

WHILE DIVING

- Do not operate the crown and the buttons when the watch is wet or in water.
- Take care not to hit the watch against hard objects such as rocks.
- Bezel rotation may become slightly stiffer underwater. This is not a malfunction.

AFTER DIVING

- Rinse the watch in fresh water after diving and wash out all seawater, soil, sand, etc.
- Wipe the watch thoroughly dry to prevent possible rust on the case after cleaning the watch in fresh water.

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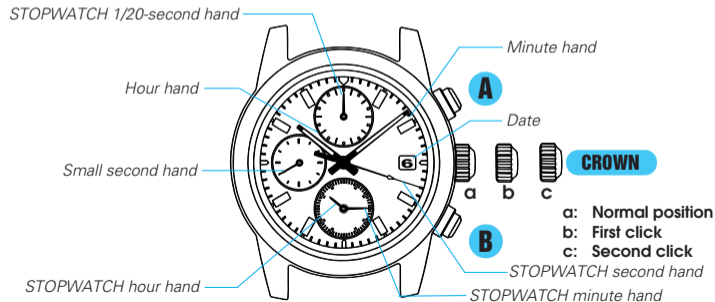
☆ For the care of your watch, see "TO PRESERVE THE QUALITY OF YOUR WATCH" in the attached Worldwide Guarantee and Instruction Booklet.

SEIKO CAL. 7T92

■ TIME/CALENDAR

■ STOPWATCH

Measures up to 12 hours in 1/20 second increments.
Split time measurement is possible.



SETTING THE TIME AND ADJUSTING THE STOPWATCH HAND POSITION

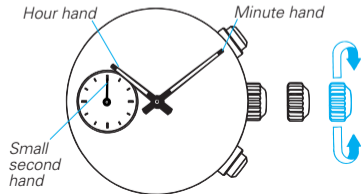
- This watch is so designed that the following are all made **with the crown at the second click position**:

- 1) time setting
- 2) stopwatch hand position adjustment

Once the crown is pulled out to the second click, be sure to check and adjust the time. If needed, the position of the stopwatch hands should also be adjusted then.

CROWN Pull out to second click when the second hand is at the 12 o'clock position.

1. TIME SETTING

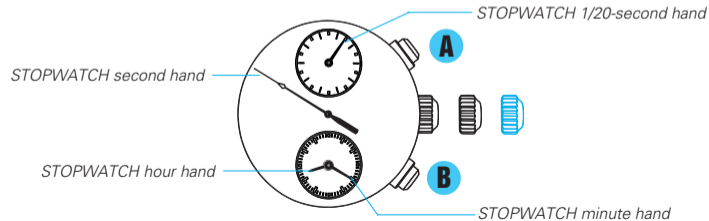


CROWN Turn to set the hour and minute hands.

1. When the stopwatch is measuring or has been measuring and is now stopped, pulling the crown out to the second click will automatically reset the stopwatch hands to "0".
2. If it is recommended that the hands be set to the time a few minutes ahead of the current time, taking into consideration the time required to adjust the STOPWATCH hand position if necessary.
3. When setting the hour hand, be sure to check that AM/PM is correctly set. The watch is so designed that the date changes once in 24 hours.
4. When setting the minute hand, first advance it 4 to 5 minutes ahead of the desired time and then turn it back to the exact minute.

2. STOPWATCH HAND POSITION ADJUSTMENT

☆ If the stopwatch hands are not in the "0" position, follow the procedure below to set them to the "0" position.



A

Press for 2 seconds to select the stopwatch hand(s) to be adjusted.

- Selection of the hand(s) can be made in the following order by pressing button **A** for 2 seconds.



* The selected hand(s) turn(s) a full circle.

B

Press repeatedly to set the selected stopwatch hand(s) to the "0" position.

* The hand(s) move(s) quickly if button B is kept pressed.

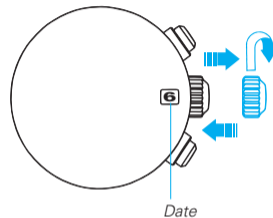
* After all the adjustments are completed, check that the hour and minute hands for time display indicate the current time.

CROWN

Push back into normal position in accordance with a time signal.

SETTING THE DATE

- Before setting the date, be sure to set the main time.

**CROWN**

Unscrew the crown and pull out to first click position.

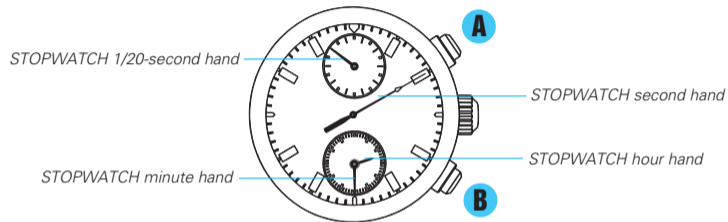
Turn clockwise until the desired date appears.

Screw the crown all the way in until it is locked.

1. It is necessary to adjust the date at the end of February and 30-day months.
2. Do not set the date between 9:00 p.m. and 1:00 a.m. Otherwise, the date may not change properly.

STOPWATCH

- The stopwatch can measure up to 12 hours in 1/20-second increments.
- When the measurement reaches 12 hours, the stopwatch automatically stops counting.



(Ex.: 2 hours, 30 minutes and 10.85 seconds)

Movement of the stopwatch 1/20-second hand

- After the stopwatch is started, the stopwatch 1/20-second hand moves for about 10 minutes and automatically stops at the "0" position.
- When the measurement is stopped or split time is measured, it moves to indicate the elapsed 1/20 seconds.

- After the stopwatch is restarted or split time is released, the stopwatch 1/20-second hand moves for about 10 minutes and stops automatically.
- In the same manner, if the stopwatch is stopped and restarted repeatedly or split time is measured and released repeatedly, the stopwatch 1/20-second hand moves for about 10 minutes and stops automatically.

☆ Before using the stopwatch, be sure to check that the crown is set at the normal position and that the stopwatch hands are reset to the "0" position.

* If the stopwatch hands do not return to the "0" position when the stopwatch is reset to "0", follow the procedure in "SETTING THE TIME AND ADJUSTING THE STOPWATCH HAND POSITION".

Standard measurement



Accumulated elapsed time measurement



* Restart and stop of the stopwatch can be repeated by pressing button A.

Split time measurement

* Measurement and release of split time can be repeated by pressing button B.

Measurement of two competitors

TACHYMETER

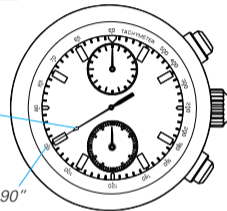
(for models with tachymeter scale on the dial)

To measure the hourly average speed of a vehicle

- 1 Use the stopwatch to determine how many seconds it takes to go 1 km or 1 mile.
- 2 Tachymeter scale indicated by the stopwatch second hand gives the average speed per hour.

Ex. 1

STOPWATCH
second hand:
40 seconds



Tachymeter scale: "90"

"90" (tachymeter scale figure) x 1 (km or mile)
= 90 km/h or mph

- Tachymeter scale can be used only when the time required is less than 60 seconds.

Ex. 2: If the measuring distance is extended to 2 km or miles or shortened to 0.5 km or miles and the stopwatch second hand indicates "90" on tachymeter scale:

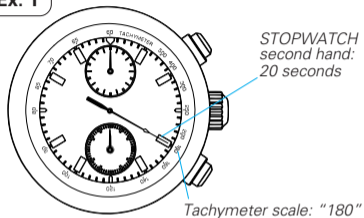
"90" (tachymeter scale figure) x 2 (km or mile) = 180 km/h or mph

"90" (tachymeter scale figure) x 0.5 (km or mile) = 45 km/h or mph

To measure the hourly rate of operation

- 1 Use the stopwatch to measure the time required to complete 1 job.
- 2 Tachymeter scale indicated by the stopwatch second hand gives the average number of jobs accomplished per hour.

Ex. 1



"180" (tachymeter scale figure) x 1 job
= 180 jobs/hour

Ex. 2: If 15 jobs are completed in 20 seconds:

"180" (tachymeter scale figure) x 15 jobs = 2700 jobs/hour

TELEMETER (for models with telemeter scale on the dial)

- The telemeter can provide a rough indication of the distance to the source of light and sound.
- The telemeter indicates the distance from your location to an object that emits both light and sound. For example, it can indicate the distance to the place where lightning struck by measuring the time elapsed after you see a flash of lightning until you hear the sound.
- A flash of lightning reaches you almost immediately while the sound travels to you at a speed of 0.33 km/second. The distance to the source of the light and sound can be calculated on the basis of this difference.
- The telemeter scale is so graduated that the sound travels at a speed of 1 km in 3 seconds.*

*Under the condition of temperature of 20°C(68°F).



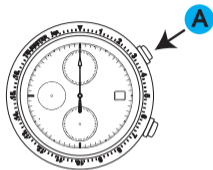
The telemeter provides only a rough indication of the distance to the place where lightning struck, and therefore, the indication cannot be used as the guideline to avoid the danger of lightning. It should also be noted that the speed of the sound differs depending on the temperature of the atmosphere where it travels.

HOW TO USE THE TELEMETER

Before beginning, check that the stopwatch has been reset.

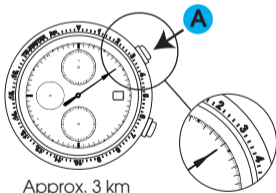
START

(Flash of light)



STOP

(Crash of thunder)



- 1 Press button A to start the stopwatch as soon as you see the light.
- 2 When you hear the sound, press button A to stop the stopwatch.
- 3 Read the telemeter scale that the stopwatch second hand points to.

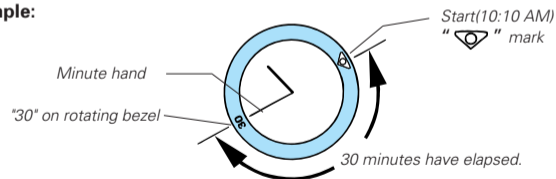
Please note that the stopwatch second hand moves in 1 second increments and does not always point exactly to the graduations of the telemeter scale. The telemeter scale can be used only when the measured time is less than 60 seconds.

ROTATING BEZEL

The rotating bezel can show the elapsed time up to 60 minutes. By setting it before diving, you can know how many minutes you are underwater.

- To prevent accidental rotation, the rotating bezel is so designed that rotation becomes harder in water. Also for safety's sake, it rotates only counterclockwise, so that the time measured is never shorter than the actual elapsed time.
1. Turn the rotating bezel to align its "⌚" mark with the minute hand.
* The rotating bezel rotates with clicks. With each click, it turns half a minute.
 2. To know the elapsed time, read the number on the rotating bezel that the minute hand points to.

Example:



Bezel rotation may become slightly stiffer underwater. This is not a malfunction.

SCREW DOWN CROWN

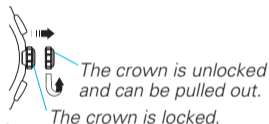
- Your watch has a screw down crown to prevent accidental operation and help maintain water-resistant quality.
- To use the crown, it is necessary to unlock the crown first before pulling it out, and it is important to securely screw the crown in after each use.

HOW TO OPERATE THE SCREW DOWN CROWN

The crown must be securely locked in the case except when you use it to set the watch.

<How to unlock the crown>

Turn the crown counterclockwise to unscrew it. The crown is released and projected outward from its original position.



<How to lock the crown>

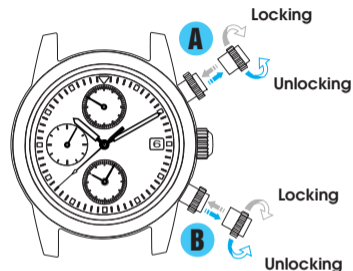
Turn the crown clockwise while pressing it to the case until it is screwed all the way in and locked.



- Before diving, make sure that the crown is locked tightly in place.
- Do not operate the crown when the watch is wet or in water.
- When screwing the crown in, ensure that the crown is correctly aligned and turn it gently. If it is hard to turn, unscrew it first, and then rewind it. Do not screw it in by force as it may damage the thread of the screw or the case.

SECURITY LOCK BUTTON OPERATION

SECURITY LOCK OF PUSH-BUTTONS A & B



Unlocking the push-buttons

- Turn Security Lock Buttons counterclockwise until you no longer feel the threads turning.
- The buttons can be pushed in.

Locking the push-buttons

- Turn Security Lock Buttons clockwise until you no longer feel the threads turning.
- The buttons cannot be pushed in.

- Before diving, make sure that both buttons are locked tightly in place.
- Do not operate the buttons when the watch is wet or in water.

BATTERY CHANGE

**3
Years**

The miniature battery which powers your watch should last approximately **3 years**. However, because the battery is inserted at the factory to check the function and performance of the watch, its actual life once in your possession may be less than the specified period. When the battery expires, be sure to replace it as soon as possible to prevent any malfunction. For battery replacement, we recommend that you contact an **AUTHORIZED SEIKO DEALER** and request **SEIKO SR927SW** battery.

* If the stopwatch is used for more than 2 hours a day, the battery life may be less than the specified period.

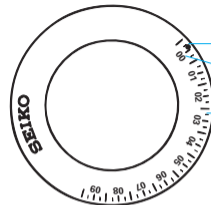
* After the battery is replaced with a new one, set the time/calendar and adjust the stopwatch hand position.

Battery life indicator

When the battery nears its end, the small second hand moves at two-second intervals instead of normal one-second intervals. In that case, have the battery replaced with a new one as soon as possible.

* The watch remains accurate while the small second hand is moving at two-second intervals.

- Be sure to replace the battery as soon as it runs down, and not to leave a discharged battery inside the watch.
- To show when the battery must be replaced, the expected time (month and year) for the first battery replacement is inscribed on the case back as shown in the illustration below.



"•" mark showing the expected time for battery replacement.

Year (2000)

Each graduation of the scale represents three months.

Note: The form of inscription on the case back specifying expected time of battery replacement may differ from model to model.

- When replacing the battery, we recommend that you contact an **AUTHORIZED SEIKO SERVICE CENTER**. In that case, after every battery change, a new "●" mark will be inscribed on the case back at the position corresponding to the next battery replacement time. Be sure to check the mark before using your watch again.



WARNING

- Do not remove the battery from the watch.
- If it is necessary to take out the battery, keep it out of the reach of children. If a child swallows it, consult a doctor immediately.

**CAUTION**

- Never short-circuit, heat or otherwise tamper with the battery, and never expose it to fire. The battery may burst, become very hot or catch fire.
- The battery is not rechargeable. Never attempt to recharge it, as this may cause battery leakage or damage to the battery.

TO PRESERVE THE QUALITY OF YOUR WATCH

- Repair of diver's watches requires special expertise and equipment. If you find that your diver's watch is malfunctioning, therefore, never attempt to repair it but immediately send it to a nearby SEIKO Service Center.

■ TEMPERATURES

Your watch works with stable accuracy within a temperature range of 5° C and 35° C (41° F and 95° F). Temperatures over 60° C (140° F) may cause battery leakage or shorten the battery life. Do not leave your watch in very low temperatures below -10° C (+14° F) for a long time since the cold may cause a slight time loss or gain. However, the above conditions will be corrected when the watch returns to normal temperature.

■ MAGNETISM

Your watch will be adversely affected by strong magnetism. Keep it away from close contact with magnetic objects.

■ CHEMICALS

Be careful not to expose the watch to solvents, mercury, cosmetic spray, detergents, adhesives or paints. Otherwise, the case, bracelet, etc. may become discolored, deteriorated or damaged.

■ PERIODIC CHECK

It is recommended that the watch be checked once every 2 to 3 years by an AUTHORIZED SEIKO DEALER or SERVICE CENTER to ensure that the case, crown, gasket and crystal seal remain intact.

■ CARE OF CASE AND BRACELET

To prevent possible rusting of the case and bracelet, wipe them periodically with a soft dry cloth.

■ SHOCKS & VIBRATION

Be careful not to drop your watch or hit it against hard surfaces.

■ PRECAUTION REGARDING CASE BACK PROTECTIVE FILM

If your watch has a protective film and/or a sticker on the case back, peel them off before using your watch.

LUMIBRITE™

LumiBrite is a luminous paint that is completely harmless to human beings and the natural environment, containing no noxious materials such as radioactive substances.

LumiBrite is a newly-developed luminous paint that absorbs the light energy of sunlight or artificial light 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 5 to 8 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.

When you make a dive in dark water, LumiBrite may not emit light unless it has absorbed and stored light sufficiently.

Before diving, therefore, be sure to expose the watch to light under the conditions specified above, so that it fully absorbs and stores light energy. Otherwise, use the watch together with an underwater flashlight.

< Reference data on luminance >

(A) Sunlight

[Fine weather]: 100,000 lux

[Cloudy weather]: 10,000 lux

(B) Indoor (Window side during daytime)

[Fine weather]: more than 3,000 lux

[Cloudy weather]: 1,000 to 3,000 lux

[Rainy weather]: less than 1,000 lux

(C) Lighting apparatus (40-watt daylight fluorescent light)

[Distance to the watch: 1 m]: 1,000 lux

[Distance to the watch: 3 m]: 500 lux (average room luminance)

[Distance to the watch: 4 m]: 250 lux

* "LUMIBRITE" is a trademark of SEIKO HOLDINGS CORPORATION.

SPECIFICATIONS

- | | | |
|---|---------------------------------------|--|
| 1 | Frequency of crystal oscillator | 32,768 Hz (Hz = Hertz ... Cycles per second) |
| 2 | Loss/gain (monthly rate) | ±15 seconds at normal temperature range (5° C ~ 35° C) (41° F ~ 95° F) |
| 3 | Operational temperature range | -10° C ~ +60° C (14° F ~ 140° F) |
| 4 | Driving system | Step motor, 4 pieces |
| 5 | Display system | |
| | Time/calendar | Hour, minute and small second hands Date is displayed in numerals. |
| | Stopwatch | Measures up to 12 hours. Stopwatch hour, minute, second and 1/20-second hands |
| 6 | Battery | SEIKO SR927SW, 1 piece |
| 7 | IC (Integrated Circuit) | C-MOS-IC, 1 piece |

* The specifications are subject to change without prior notice for product improvement.