

Cal. 7T85

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You are now the proud owner of a SEIKO Analogue Quartz Watch Cal. 7T85. For best results, please read the instructions in this booklet carefully before using your SEIKO Analogue Quartz Watch. Please keep this manual handy for ready reference.

Sie sind jetzt Besitzer einer SEIKO Analog-Quarzuhr Kal. 7T85. Bitte lesen Sie diese Bedienungsanleitung vor Verwendung der Uhr sorgfältig durch und heben Sie sie gut auf.

Vous voici l'heureux propriétaire d'une montre quartz analogique SEIKO Cal. 7T85. Pour obtenir d'excellentes performances de cet article SEIKO, veuillez lire attentivement cette brochure que vous conserverez pour toute référence ultérieure.

Grazie di aver acquistato questo orologio SEIKO Analogico al Quarzo Cal. 7T85. Per ottenere i migliori possibili risultati da questo orologio, leggere attentamente le istruzioni di questo manuale prima di utilizzare l'orologio stesso. Conservare poi il manuale stesso per ogni qualsiasi eventuale futura consultazione.

Enhorabuena por su adquisición de un reloj SEIKO analógico de cuarzo Cal. 7T85. Para óptimo resultado, lea detenidamente las instrucciones de este folleto antes de usar el reloj. Guarde este manual para consulta posterior.

Você pode sentir-se orgulhoso de possuir um Relógio SEIKO Quartz Análogo Cal. 7T85. Para obter os melhores resultados, leia atentamente as instruções contidas neste opúsculo antes de usar o seu Relógio SEIKO Quartz Análogo. Queira conservar este manual para referências futuras.

閣下現在已經擁有一隻，機件編號為 7T85 的精工牌指針式石英錶。在使用您的精工牌指針式石英錶以前，務請注意閱讀這本小冊子中的各項說明，並請將手冊妥加保管，以便隨時參考。

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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. 7T85**FEATURES**■ **TIME/CALENDAR**

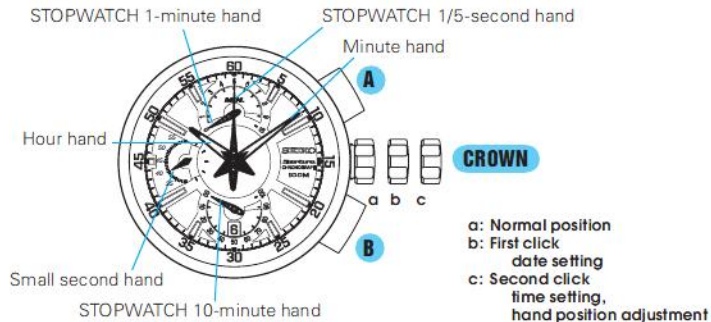
- Hour, minute and small second hands
- Date displayed in numerals

■ **STOPWATCH**

- 100-minute stopwatch in 1/5-second increments, consecutively measurable up to 300 minutes (5 hours)

The second and minute STOPWATCH hands continue counting after the 10-minute hand reaches 100 minutes. So you can even measure accurate time up to 109 minutes 59.8 seconds. After that, the minute and 10-minute STOPWATCH hands instantaneously return to the 0 or 10 minute position respectively and continue counting again up to 300 minutes.

- 3 STOPWATCH hands
 - 1/5-second, 1-minute, and 10-minute hands
 - Minute counting is displayed by two types of STOPWATCH minute hands, which move in reciprocating motion respectively.
- Split time measurement on demand
- Demonstration Function
 - Demonstration of the stopwatch hand movement is available.

DISPLAY & BUTTONS

- * Some models may have a screw lock type crown. If your watch has a screw lock type crown, refer to "SCREW LOCK TYPE CROWN."
- * The "0" position of each stopwatch hand may differ depending on the model. In particular, in some models, the retrograde display in the 12 o'clock / 6 o'clock position may be oppositely oriented from the illustration above. In such cases, however, the method of operating the stopwatch according to this manual can be applied.

SCREW LOCK TYPE CROWN

- ◆ Some models may have a screw-lock mechanism that can securely lock the crown by screw when they are not being operated.
- ◆ Locking the crown will help to prevent any operational errors and enhance the water resistant quality of the watch.
- ◆ It is necessary to unlock the screw lock type crown before operating it. Once you have finished operating the crown, make sure to relock it.

● How to use the screw lock type crown

Keep the crown securely locked unless you need to operate it.

[How to unlock the screw lock type crown]

Turn the crown counterclockwise.

The crown is unlocked and can be operated.

[How to lock the screw lock type crown]

Once you have finished operating the crown, turn it clockwise while gently pressing it in toward the watch body until it stops.

* When locking the crown, turn it slowly with care, ensuring that the screw is properly engaged. Be careful not to forcibly push it in, as doing so may damage the screw hole in the case.



SETTING THE TIME AND ADJUSTING THE STOPWATCH HAND POSITION

- This watch is designed so that the following adjustments are made with the crown at the second click position:
 - 1) time setting
 - 2) stopwatch hand position adjustment

1) time setting

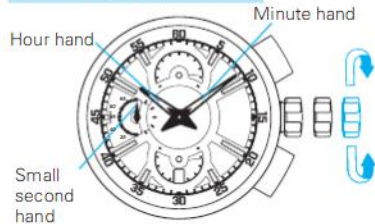
2) stopwatch hand position adjustment

Once the crown is pulled out to the second click, be sure to make both the above adjustments 1) and 2) at the same time.

CROWN

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

1. TIME SETTING



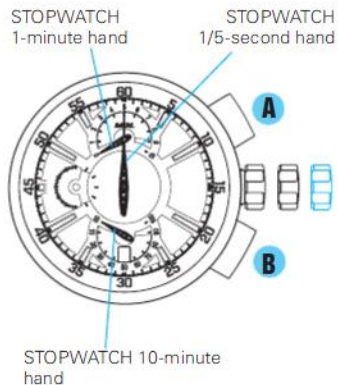
CROWN

Turn to set the hour and minute hands.

1. When the stopwatch is or has been measuring, if the crown is pulled out to the second click, it will automatically reset the STOPWATCH hands to "0".
2. 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 or longer.
* STOPWATCH 1-minute hand turns a full circle.
- B** Press repeatedly to set STOPWATCH 1-minute hand to the 0 position.
* The hand moves quickly if button B is kept pressed.
* STOPWATCH 1-minute hand turns a full circle passing the 10-minute marker only during the STOPWATCH hand position adjustment.
- A** Press for 2 seconds or longer.
* STOPWATCH 1/5-second hand turns a full circle.
- B** Press repeatedly to set STOPWATCH 1/5-second hand to the 0 position.
* The hand moves quickly if button B is kept pressed.

- A** Press for 2 seconds or longer.
* STOPWATCH 10-minute hand turns a full circle.
- B** Press repeatedly to set STOPWATCH 10-minute hand to the "0" position.
* The hand moves quickly if button B is kept pressed.
* STOPWATCH 10-minute hand turns a full circle passing the 100-minute marker only during the STOPWATCH hand position adjustment.

- STOPWATCH hands can be readjusted in the following order by pressing button for 2 seconds or longer.

STOPWATCH 1-minute hand

* STOPWATCH 1-minute hand turns a full circle.

STOPWATCH 1/5-second hand

* STOPWATCH 1/5-second hand turns a full circle.

STOPWATCH 10-minute hand

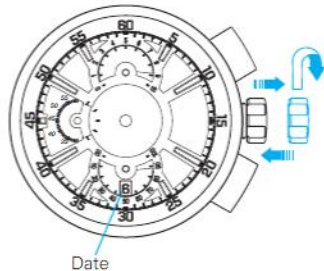
* STOPWATCH 10-minute hand turns a full circle.

CROWN

After all the adjustments are completed, push back in to normal position in accordance with a time signal.

SETTING THE DATE

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



CROWN

Pull out to first click.

Turn clockwise until the desired date appears.

Push back in to normal position.

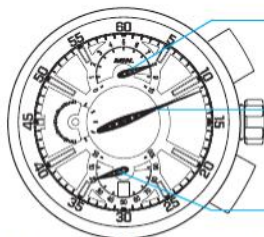
1. Date setting should always be carried out after the time is correctly set.
2. Manual date adjustment is required on the first day after a month that has less than 31 days: February, April, June, September and November.
3. Do not set the date during any time between 9:00 P.M. and 1:00 A.M. Date setting during this time period may cause failure of date change on the following day.

STOPWATCH

- The measured time can be read up to 109 minutes 59.8 seconds in 1/5-second increments.
- When the measurement reaches 300 minutes (5 hours), the stopwatch automatically stops counting.
- Split time measurement is possible.

<How to read the stopwatch hands>

The measured time is indicated by the three stopwatch hands below.



[28 minutes 11.4 seconds]

STOPWATCH 1-minute hand
(Measured minute until 10 minutes
can be read in 1-minute incre-
ments.)

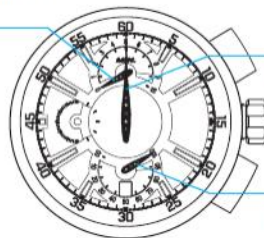
STOPWATCH 1/5-second hand

STOPWATCH 10-minute hand
(Measured minute can be read in
10-minute increments.)

<Remarks on the STOPWATCH 1-minute hand and STOPWATCH 10-minute hand>

- When the STOPWATCH 1-minute hand reaches the 10-minute graduation, it instantaneously returns to the 0-minute position. At the same time, the STOPWATCH 10-minute hand advances to the next graduation.
- When the measurement reaches 110 minutes (or 210 minutes), the STOPWATCH 10-minute hand instantaneously returns to the 10-minute position.
- When the measurement reaches 300 minutes (5 hours), the stopwatch automatically stops counting. The final position of the STOPWATCH hands, after completing 300 minutes (5 hours) of counting, is illustrated below. Before starting to use the stopwatch again, make sure to reset the stopwatch by pressing Button B.

STOPWATCH 1-minute
hand



STOPWATCH 1/5-second
hand

STOPWATCH 10-minute
hand

<How to reset the stopwatch>

While the STOPWATCH hands are moving

1. Press Button A to stop the stopwatch.
2. Press Button B to reset the stopwatch.

While the STOPWATCH hands are stopped

[When the stopwatch is stopped]

1. Press Button B to reset the stopwatch.

[When the split time measurement is displayed while the stopwatch is measuring.]

1. Press Button B to release the split time display and return to the normal display
2. Press Button A to stop the stopwatch
3. Press Button B to reset the stopwatch

[When the split time measurement is displayed and the stopwatch is stopped]

1. Press Button B to release the split time display.
2. Press Button B to reset the stopwatch.

☆ 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."

STOPWATCH OPERATION

<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.

* If the time measured reaches 300 minutes (5 hours) while the split time is being displayed, the stopwatch automatically stops counting and releases the split time display, showing "100'00"00." Before starting the next measurement, make sure to reset the stopwatch by pressing Button B.

<MEASUREMENT OF TWO COMPETITORS>



DEMONSTRATION FUNCTION OF THE STOPWATCH HAND MOVEMENT

- The demonstration function allows you to view the movement of the three STOPWATCH hands.
- Each of the three STOPWATCH hands demonstrates high-speed movements and when the demonstration is finished, they return to the original position.

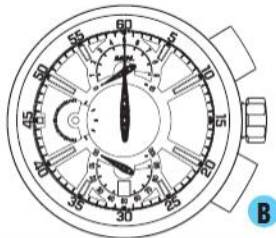
How to view the demonstration

1. Reset the stopwatch.

* Refer to "STOPWATCH" section of this manual.

2. Press Button B for 3 seconds or longer.

* The stopwatch second hand moves at high speed, and the STOPWATCH 1-minute hand and STOPWATCH 10-minute hand move in reciprocating motion respectively.



* After approximately 7 seconds, the demonstration finishes, and the stopwatch is reset for the next use.

* If either Button A or B is pressed during a demonstration, the demonstration will be stopped and the stopwatch will be reset.

TACHYMETER

(for models with tachymeter scale)

To measure the hourly average speed of a vehicle

- Use the stopwatch to determine how many seconds it takes to go 1 km or 1 mile.
- Tachymeter scale indicated by STOPWATCH 1/5-second hand gives the average speed per hour.

Ex. 1

STOPWATCH
1/5-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 STOPWATCH second hand indicates "90" on tachymeter scale:

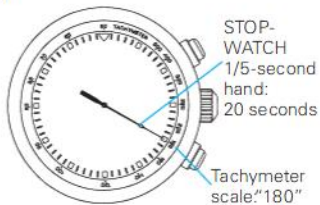
"90" (tachymeter scale figure) x 2 (km or mile) = 180 km/h or mph

"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 STOPWATCH 1/5-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)

- 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).

CAUTION

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

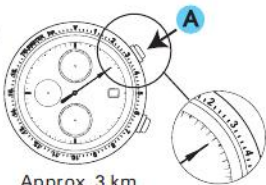
(Flash of light)



- 1 Press button A to start the stopwatch as soon as you see the light.

STOP

(Crash of thunder)



Approx. 3 km

- 2 When you hear the sound, press button A to stop the stopwatch.
- 3 Read the telemeter scale that the stopwatch 1/5-second hand points to.

* Please note that the stopwatch second hand moves in 1/5-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.

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 more than 5 hours per day, the battery life may be less than the specified period.

● 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.

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

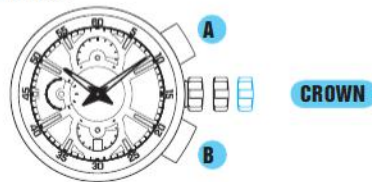
- Never short-circuit, tamper with or heat the battery, and never expose it to fire. The battery may burst, become very hot or catch fire.
- The battery is not rechargeable. Never attempt to recharge it, as this may cause battery leakage or damage to the battery.

NECESSARY PROCEDURE AFTER BATTERY CHANGE

After the battery is replaced with a new one, or when an abnormal display appears, follow the procedures below to reset the built-in IC. The watch will resume its normal operation.

● HOW TO RESET THE IC

1. Pull out the crown to the second click.
2. Press button A and B at the same time for 2 seconds or longer.
3. Push the crown back in to normal position and check if the small second hand moves as normal.



* Resetting the IC will initialize the watch. Before starting to use the watch, it will be necessary to set the time and adjust the STOPWATCH hands to the 0 position. Refer to "SETTING THE TIME AND ADJUSTING THE STOPWATCH HAND POSITION" section of this manual.

TROUBLESHOOTING

Trouble	Possible causes
The watch stops operating.	The battery has run down.
The small second hand moves in 2-second increments.	The battery nears its end.
The watch temporarily gains or loses time.	The watch has been left or worn in extremely high or low temperatures.
	The watch has been left close to an object with a strong magnetic field.
	You drop the watch, hit it against a hard surface, or wear it while playing active sports. The watch is exposed to strong vibrations.
The STOPWATCH hands do not return to the "0" position when the stopwatch is reset.	The watch has been affected by magnetism or exposed to strong shocks or vibrations.
The inner surface of the glass is clouded.	Moisture has entered the watch because the gasket has deteriorated.
The date changes at 12 o'clock noon.	AM/PM is not properly set.

Solutions
Have the battery replaced with a new one immediately by the retailer from whom the watch was purchased.
Return the watch to a normal temperature so that it works accurately as usual, and then reset the time. The watch has been adjusted so that it works accurately when it is worn on your wrist under a normal temperature range between 5 °C and 35 °C.
Correct this condition by moving and keeping the watch away from the magnetic source. If this action does not correct the condition, contact the retailer from whom the watch was purchased.
Reset the time. If the watch does not return to its normal accuracy after resetting the time, contact the retailer from whom the watch was purchased.
Adjust the STOPWATCH hands to the "0" position by following the instructions in "SETTING THE TIME AND ADJUSTING THE STOPWATCH HAND POSITION".
Contact the retailer from whom the watch was purchased.
Advance the hour hands for 12 hours to correctly set the time and date.

* In the event of any other problem, please contact the retailer from whom the watch was purchased.

SPECIFICATIONS

1	Frequency of crystal oscillator	32,768 Hz (Hz = Hertz...Cycles per second)
2	Loss/gain (Monthly rate)	Less than 15 seconds when used on the wrist within normal temperature range (5 °C ~35 °C)
3	Operational temperature range.....	Between -10 °C and +60 °C
4	Driving system	Step motor 4 pieces
5	Display system	
	Time.....	Hour, minute and small second hands in 1-second increments
	Stopwatch.....	Stopwatch 1/5-second hand in 1/5-second increments (60 seconds/ 360 degrees)
		Stopwatch 1-minute hand in 1-minute increments(40 minutes/ 240 degrees)
		Stopwatch 10-minute hand in 10-minute increments(100 minutes/ 240 degrees)
6	Battery.....	SEIKO SR927SW, 1 piece
7	Battery life.....	Approximately 3 years If the stopwatch is used less than 5 hours per day
8	IC (Integrated Circuit)	C-MOS-IC: 1 piece

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