

SEIKO

DIGITAL STOPWATCH

CAL. W073

You are now the proud owner of a SEIKO Digital Stopwatch Cal. W073. For best results, please read the instructions in this booklet carefully before using your SEIKO Digital Stopwatch. Please keep this manual handy for ready reference.

WARNING

NOTES ON THE BATTERY

- Do not remove the battery from the stopwatch.
- 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.
- 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.

NOTES ON THE STRAP

- The stopwatch has a strap for wearing the stopwatch around your neck. Take good care lest it should be caught by something near you or wind around your neck.
- Please also note that the strap may damage your clothes, or injure your hands, neck or other parts of your body.

TO PRESERVE THE QUALITY OF YOUR STOPWATCH



● WATER RESISTANCE (3 bar)

Your stopwatch is designed and manufactured to withstand up to 3 bar, such as accidental contact with splashes of water or rain, but it is not designed for swimming or diving. Do not operate the buttons when the stopwatch is wet or in water.



● TEMPERATURES

If the stopwatch is left in direct sunlight for a long time, the display may become black, but this condition will be corrected when the stopwatch returns to normal temperature.

Do not leave your stopwatch in very low temperatures below -5°C ($+23^{\circ}\text{F}$) for a long time since the cold may cause:

- a slight time loss or gain.
- the change of digits to become slow.
- the display light to dim.

However, the above conditions will be corrected when the stopwatch returns to normal temperature.



● SHOCKS

Do not subject it to violent shocks.



● MAGNETISM

Your stopwatch will not be affected by magnetism.



● CHEMICALS

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



● PERIODIC CHECK

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



● PRECAUTION REGARDING CASE BACK PROTECTIVE FILM

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



● STATIC ELECTRICITY

The IC (Integrated Circuit) used in your stopwatch will be affected by static electricity which may disturb the display. Keep your stopwatch away from close contact with objects such as TV screens which emit strong static electricity.



● LIQUID CRYSTAL PANEL

The normal life expectancy for a liquid crystal panel is approximately 5 years. After that it may decrease in contrast, becoming difficult to read. Please contact your AUTHORIZED SEIKO DEALER or SERVICE CENTER if you wish to have a new panel fitted (guaranteed one year).

FEATURES

STOPWATCH

- Measures up to 100 hours in 1/100 seconds for the first hour and in seconds thereafter.
- Lap time and split time measurements are available.

MEMORY RECALL

- Up to 10 newest lap times and split times can be stored in memory. They can be recalled either during or after the measurement.

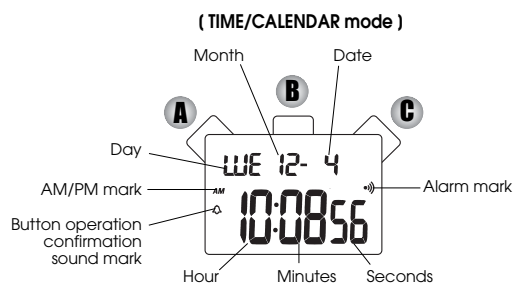
TIME/CALENDAR

- Month, day, date, hour, minutes and seconds are displayed. The calendar automatically adjusts for odd and even months including February of leap years from January 1, 2003 up to December 31, 2052.
- Changeover between 12- and 24-hour indications

ALARM

- Can be set to ring once daily at a designated time.

MODE CHANGE



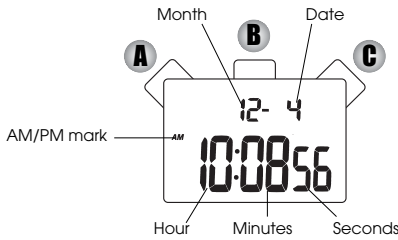
- B** With each press, the mode changes in the following order.



- ◆ When the button operation confirmation sound is switched on, a beep sounds with each press of button B. As a reference aid, the tone is different when the TIME/CALENDAR mode appears.

- ◆ If " " is displayed in the TIME/CALENDAR, MEMORY RECALL or ALARM mode, the measurement is in progress in the STOPWATCH mode.

TIME/CALENDAR SETTING

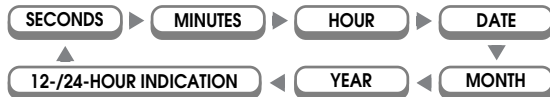


B Press to show the TIME/CALENDAR mode.

A Press and hold for 2 seconds to show the TIME/CALENDAR SETTING display.

* The day disappears and the second digits start flashing.

C Press repeatedly to select the digits (flashing) to be adjusted.



A Press to set the flashing digits or reset the seconds to "00".

* The digits move quickly if button A is kept pressed.

12-/24-hour indication setting:

Changeover between 12- and 24-hour indications is made alternately with each press of button A.

B After all the adjustments are completed, press to return to the TIME/CALENDAR mode.

- ◆ The calendar automatically adjusts for odd and even months including February of leap years from the year 2003 up to the end of 2052.
- ◆ Once the year, month and date have been set, the day of the week is automatically set.
- ◆ In setting the seconds, when the seconds read any number from "30" to "59" and button A is pressed, one minute is added and the seconds are reset to "00".
- ◆ When setting the hour digits in the 12-hour indication, check that AM/PM mark is correctly set. In the 24-hour indication, no mark is displayed.
- ◆ If the watch is left untouched in the TIME/CALENDAR SETTING display with the digits flashing, it will automatically return to the TIME/CALENDAR mode in 2 to 3 minutes.

When all the segments light up:

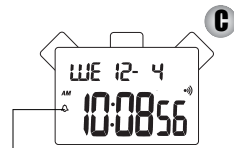
If buttons A and C are pressed at the same time in the TIME/CALENDAR SETTING display, all the segments of the display will light up as shown at right. This is not a malfunction.



Press any of the three buttons to return to the TIME/CALENDAR mode.

TURNING ON/OFF OF THE BUTTON OPERATION CONFIRMATION SOUND

- ◆ When the button operation confirmation sound mark is displayed, the operation confirmation sound beeps with each press of the buttons.



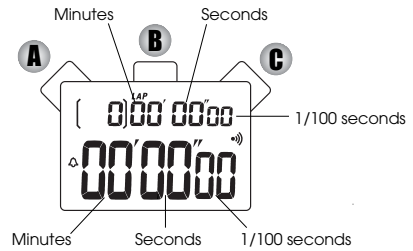
Button operation confirmation sound mark

C With each press in the TIME/CALENDAR mode, the button operation confirmation sound is turned on and off alternately.

STOPWATCH

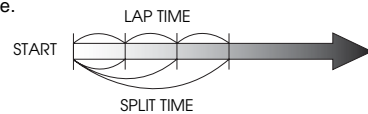
- The stopwatch measures up to 100 hours in 1/100 second increments for the first 1 hour and in 1 second increments thereafter.
* After 100 hours, the stopwatch is automatically reset to "00'00"00".
- The newest 10 lap times and split times are automatically stored in memory.

B Press to show the STOPWATCH mode.



* The running mark "▲" is shown while the measurement is in progress.

- "Lap time" is the time that has elapsed from the start of one stage of an activity to that of the next stage.
- "Split time" is the time that has elapsed from the start of an activity to any given stage.



STOPWATCH OPERATION

- ◆ Before using the stopwatch, be sure to reset the digits to "00".

When the stopwatch is stopped, press button A.

When it is counting, press button C to stop the measurement and then press button A.

Standard Measurement

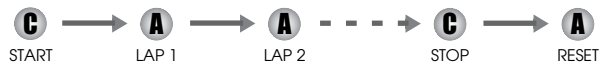


Accumulated Elapsed Time Measurement



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

Lap/ Split Time Measurement

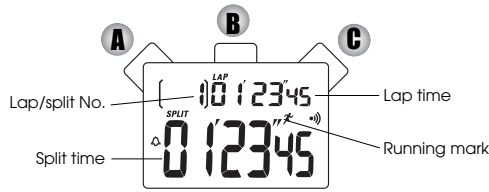


* Measurement of lap times and split times can be repeated by pressing button A.
* The lap times and split times are shown on the upper and lower rows, respectively.

- ◆ When button A is pressed to measure a lap time and split time, the times measured and lap/split No. remain displayed for 10 seconds and then, the display automatically returns to the measurement in progress.
- ◆ The lap/split No. counts up to "99". After "99", the number is displayed in two digits such as "00" for 100, "01" for 101, and so on.
- ◆ Even if the STOPWATCH mode is changed to another while the measurement is in progress, it continues counting properly. After the stopwatch is used, however, be sure to reset it to prevent the overconsumption of battery energy that would shorten the battery life.

MEMORY RECALL FUNCTION

- Up to 10 newest sets of lap times and split times can be stored and recalled either during or after the measurement.



* The running mark is shown while the measurement is in progress.

- B** Press to show the MEMORY RECALL mode.

* In memory recall after measurement, the oldest measurement stored in memory is displayed first.
 In memory recall during measurement, the newest one is displayed first.
 * The lap/split No. assigned during measurement is shown in the MEMORY RECALL mode.

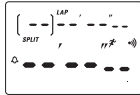
- C** With each press, the stored data are recalled successively from the oldest to the newest.

or

- A** With each press, the stored data are recalled successively from the newest to the oldest.

- B** Press to go to the ALARM mode.

- If no lap time/split time measurement is made in the STOPWATCH mode and no data is stored in memory, the display shown at right will appear when the mode is changed over to the MEMORY RECALL.
- Even if the stopwatch is reset to "00", stored data is not erased and can be recalled unless a new measurement is started.
- The stopwatch can measure the lap time/split time as many times as necessary, but only the 10 newest sets of lap/split times are stored in memory.



BATTERY CHANGE

2
Years

The miniature battery which powers your stopwatch should last approximately **2 years**. However, because the battery is inserted at the factory to check the function and performance of the stopwatch, 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 CR2025 battery.

- * The battery life may be less than 2 years if:
- the alarm is used more than once a day, and/or
 - the confirmation sound is used more than 50 times a day.

Necessary procedure after battery change

After the battery is replaced with a new one, or an abnormal display (broken digits, etc.) appears, follow the procedure below to reset the IC.

Press and hold buttons A, B and C at the same time for 2 to 3 seconds.

- * The display shown at right appears when the buttons are released.
 * Before using the stopwatch, set the time/calendar and then the alarm.



SPECIFICATIONS

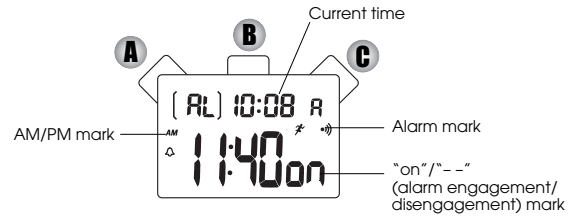
1	Frequency of crystal oscillator	32,768 Hz (Hz = Hertz ... Cycles per second)
2	Loss/gain (monthly rate)	Less than 30 seconds at normal temperature range (5° C ~ 35° C) (41° F ~ 95° F)
3	Operational temperature range	-5° C ~ +50° C (23° F ~ 122° F)
	Desirable temperature range of use	0° C ~ +40° C (32° F ~ 104° F)
4	Display system	
	TIME/CALENDAR mode	Year (only in the TIME/CALENDAR SETTING display), month, date, day of the week, hour, minutes and seconds AM/PM mark in the 12-hour indication (Alarm mark and button operation confirmation sound mark)
	STOPWATCH mode	Measures up to 100 hours. Hour, minutes, seconds and 1/100 seconds (for the first 1 hour). Lap/split No., "LAP" and "SPLIT" marks. (Alarm mark and button operation confirmation sound mark)
	MEMORY RECALL mode	Hour, minutes, seconds and 1/100 seconds. Lap/split No., "LAP" and "SPLIT" marks. (Alarm mark and button operation confirmation sound mark)
	ALARM mode	Alarm time (hour and minutes), alarm mark and "on"/"--" mark. AM/PM mark in the 12-hour indication
5	Display medium	Nematic Liquid Crystal, FEM (Field Effect Mode)
6	Battery	CR2025, 1 piece
7	IC (Integrated Circuit)	C-MOS-LSI, 1 piece

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

ALARM

- The alarm can be set to ring on a 24-hour basis.
- At the designated time, the alarm rings for 20 seconds.

ALARM TIME SETTING



- B** Press to show the ALARM mode.

- A** Press and hold for 2 seconds to show the ALARM SETTING display.

- C** Press repeatedly to select the digits (flashing) to be adjusted.



- A** Press to set the flashing digits.

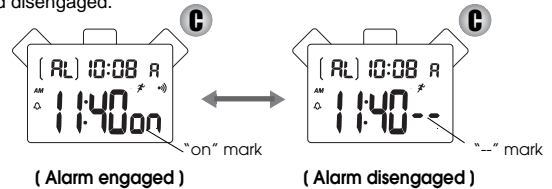
- B** Press to return to the ALARM mode.

* The alarm and "on" marks are displayed and the alarm is automatically engaged.

- In the alarm time setting, the flashing digits move quickly if button A is kept pressed.
- When the time function is displayed in the 24-hour indication, the alarm is also displayed in the 24-hour indication.
- When setting the hour digits in the 12-hour indication, check that AM/PM is properly set.
- If the watch is left untouched in the ALARM SETTING display with the digits flashing, it will automatically return to the ALARM mode in 2 to 3 minutes.

ALARM ENGAGEMENT/DISENGAGEMENT

- C** With each press in the ALARM mode, the alarm is alternately engaged and disengaged.



- * At the designated time the alarm rings for 20 seconds. To stop it manually, press any of the three buttons. The alarm can be stopped manually in any mode by pressing a button.

SOUND DEMONSTRATION

- A** & **C** The alarm sound can be demonstrated by keeping buttons A and C pressed at the same time in the TIME/CALENDAR mode.