1. FEATURES

SEIKO Digital Stopwatch Cal. S149 is a time measuring device that can record the measurements with the use of the built-in printer. In addition, used with the stopwatch Cal. S143 or a grip switch, Cal. S149 can perform various functions.

- Cal. S149 is suitable for measuring massive time date in a road race, marathon race, etc.
- With the use of the built-in printer, the measured time data can be printed out as soon as they are obtained.
- Year, month, date, and time when the measurement is started can be printed out, and therefore, it is easy to file and keep the data.
- An alarm start function is provided. By presetting the time when the measurement is started, the stopwatch starts measuring automatically at the designated time.
- Memory recall function: Up to 300 measurement data can be stored in memory. Measurement data obtained from the start to finish of the measurement is recorded as a block without erasing the data in the previous block, and up to 100 blocks of data can be stored in memory. This function is very useful for separately keeping the data measured at different time and date.
- Besides, the stopwatch is equipped with such convenient functions as ID No. function useful for keeping the data of individual users separately, and memory capacity indicator and fastest lap time recall function.
- An antibacterial agent is applied to the case surface of the stopwatches.
- It loses its antibacterial effect gradually over time and the effective period differs depending on the conditions of use.
- Used with optional devices, the stopwatch can perform various functions.
- By connecting the stopwatch to SEIKO Digital Stopwatch Cal. S143, etc., more than two stopwatches can start measuring simultaneously at a fixed time. Therefore, it is possible to measure the time in a road race or marathon at different checkpoints more accurately.
- Connected with a grip switch (optional accessory), the stopwatch can be operated more easily.
- With the use of a paper extension holder (optional accessory), massive time data (approximately 2,500 data) can be measured successively at a time.

2. DISPLAY AND BUTTON/SWITCH OPERATION
3. TIME/CALANDER

1. Press mode selection button ③ (TIME) to set the time to the **Time/calendar mode**.

![Display in the time/calendar mode](image)

*Time displayed in the 24-hour indication

2. Press mode selection button ① (STOP, W) to set the stopwatch to the **Stopwatch mode**.

![Display in the stopwatch mode](image)

*With each press of button ①, the third line display changes over between accumulated elapsed time and lap time measurement in progress alternately.

3. Now measurement starts. (Use the buttons ④, ⑤)

### Standard measurement

(Start)

Press the buttons in the following order: **④→⑤→⑥**

(Stop)

(Reset to "00")

The new block number for the next measurement is displayed with the digits reset to "00".

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4. HOW TO USE THE STOPWATCH

Notes on the block of data in memory

- The SEIKO Stopwatch Cal. S149 features a "Block Memory" stopwatch operation system. The data obtained from start till finish of a race is recorded as a block and stored in memory.
- The time and date of starting the measurement of a block of data are automatically stored in memory.
- Before the measurement is started, the block number is assigned to the block of data to be measured.
- Up to 300 data can be stored in memory.
- A block of data includes at least three data. If more than one block is used to store the data, the memory become full even before the number of lap time/split time measurements in memory amounts to 300.
**Accumulated elapsed time measurement**

Press the buttons in the following order: A → A → A → ... → A → B

(Start) → (Stop) → (Restart)

The new block number for the next measurement is displayed with the digits reset to "00".

**How to measure lap time/split time (When the accumulated elapsed time display of the stopwatch mode is used, for example, in a marathon race)**

Press the buttons in the following order: A → B → B → ... → A → B

(Start) → (Stop) → (5km point) → (10km point)

No. of split / lap time

Section 1: Split time 14'56'08
Lap time 14'56'08

Accumulated elapsed time

Section 2: Split time 29'57'21
Lap time 15'01'13

The new block number for the next measurement is displayed with the digits reset to "00".

(Reset to "00") → (Stop) → (40km point)

Section 8: Split time 2'01'14'12
Lap time 1'64'2'33

**How to measure lap time/split time (When the lap time measurement in progress mode is used)**

Press the buttons in the following order:

A → B → B → ... → A → B

Lap time measurement in progress display... While a lap time is being measured, the measurement in progress is displayed.

LAP 1  |  LAP 2  |  LAP 3  |  ...  |  LAP n

Start  |  Finish

Press mode selection button ① (STOP.W) to show the lap time measurement in progress display of the stopwatch mode.

(Start) → (Lap/Split measurement) → (10km point)

It indicates that the lap time measurement in progress display is shown.

The lap time measurement in progress is displayed. Each time button B is pressed to measure the lap time/split time, the digits are reset to "00" and the stopwatch starts counting from "00".

When the lap time measurement in progress exceeds 1 hour, the hour digit appears in place of the mark for lap time in progress mark.
When the grip switch is used:

1. Changeover to the grip switch
   - Connect the grip switch to the stopwatch.
   - Slide up the grip switch selector located on the right side of the stopwatch.

2. Time measurement
   - The measurement is started by pressing the grip switch once. Split time and lap time can be measured repeatedly with each press of the grip switch.
   - While the grip switch selector is set at the upper position, button A and B will not work, and the stopwatch is operated solely by the grip switch.
   - By pressing the grip switch, split time and lap time can be measured, but the measurement cannot be stopped. After the final split or lap time is measured, follow the steps in 3. End of measurement to stop the measurement.

3. Printout of lapse of time (Only when in the time/calendar mode and the power switch of the printer is on)
   - The stopwatch can printout the time a lap time is measured in the same manner as you press the grip switch in the stopwatch mode.

4. End of measurement
   - After the measurement is over, slide down the grip switch selector.
   - After sliding down the selector, press button A to stop the measurement and then press button B to reset the stopwatch.

How to use the lock lever

To prevent any mistaken operation of button A (start/stop of the stopwatch) during the measurement, it is recommended that button A be locked with the lock lever after the measurement is started.

5. HOW TO USE THE MEMORY FUNCTION

- The memory recall function
  - The data obtained in the measurement can be recalled and displayed.
  - Up to 100 blocks of data or 300 data can be stored and recalled.
  - Besides being recalled and displayed, the data in memory can also be printed out. (Refer to "8. HOW TO PRINT OUT")
  - The stored data is recalled by pressing recall button. The data is recalled successively if the button is kept pressed.
  - The stored data can be recalled while the stopwatch is measuring.
  - The data can be stored in memory even while printing out the data during the measurement.

- Order of recalling the stored data

<table>
<thead>
<tr>
<th>Display before recall</th>
<th>Button A</th>
<th>Button B</th>
<th>Button C (STOP)</th>
<th>Mode selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reset</td>
<td>Returning to the display before recall</td>
<td>Clearing the data in memory</td>
<td>Returning to the display before recall</td>
<td></td>
</tr>
<tr>
<td>Stopped</td>
<td>Returning to the display before recall</td>
<td>Returning to the display before recall</td>
<td>Returning to the display before recall</td>
<td></td>
</tr>
<tr>
<td>Measuring</td>
<td>Stopping the measurement</td>
<td>Measuring lap/split time</td>
<td>Returning to the display before recall</td>
<td></td>
</tr>
</tbody>
</table>

- Button operation while the stored data is recalled

<table>
<thead>
<tr>
<th>Display before recall</th>
<th>Button A</th>
<th>Button B</th>
<th>Button C (STOP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>When the stopwatch is stopped</td>
<td>The data is recalled starting from the oldest one.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When the stopwatch is in use</td>
<td>The data is recalled starting from the newest one.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
When the stopwatch is reset or stopped:
The data is recalled starting from the first data in block "1".
<Ex.) When the display is reset to "00" in block "4">

When the stopwatch is measuring:
The data is recalled starting from the newest one.
(ex.) When the measurement of the third lap / split time in block "4" has been completed.)

How to clear the stored data (All clear of data)
- The memory clear function is useful in the following cases.
  a) When the stored data becomes unnecessary.
  b) When the residual memory is not sufficient for a new measurement.
- Once the following steps are taken to clear the data, all the stored data is erased from memory. The stored data cannot be erased one by one or block by block.
  1) While the stopwatch is measuring or when the digits are not reset after the end of the measurement, the stored data cannot be erased from memory.
  2) In that case, end the measurement and reset the stopwatch.

Press recall button
In the memory recall display, the stored data can be erased irrespective of which data is displayed.

Keep button pressed for more than 1.5 seconds.
While button is kept pressed, the display below is shown with warning beeps.
After 1.5 seconds, the stored data is erased from memory with a long beep.
All the data is erased from memory and the initial measurement display is shown.

Unless button is kept pressed for more than 1.5 seconds, the stored data will not be erased from memory.
6. HOW TO PRINT OUT

1. How to set the paper in the printer
   ~ Besides the thermal paper S950 included with this model, the thermal paper S951 is available for printing out the stored data. It is a long-life thermal paper that can print out up to 2,800 lines and sold for Y378. To use S951, the paper holder SVA2007 for exclusive use with it is necessary. It is sold separately for Y3,980.
   ~ Cut the first pasted position of the paper straight.
   ~ Open the paper cover as shown in the illustration.
   ~ Slide the power switch to “ON”. At this time, the motor runs for approximately 1 second to indicate that the power is supplied.
   ~ Insert the end of the paper into the paper insertion slot.
       (Be sure to set the paper with the right side up. It can only be printed on one side.)

2. Printout during the measurement
   ~ Turn on the power switch for printer before starting the measurement. When the switch is turned on, the roll paper is advanced by one line.
   ~ Operate print mode selection switch to select the printout from “lap time only” and “both split time and lap time”.

   - LAP (split time only)
   - SPLIT (both split time and lap time)

   - When the memory reaches its full capacity:
     ~ All the segments of the bar are displayed.
     ~ The 301st data and those measured thereafter will be displayed but will not be stored in memory for later recall.

   ~ Keep the paper advancing switch pressed until the end of the paper is advanced out 2 to 3 cm from the printer.
     (Do not pull out the paper by force.)

   ~ Put the roll paper into the holder and close the paper cover.
     (If the roll paper gets out of shape, make it round before inserting it into the holder.)

   Notes 1: Do not pull the paper in the reverse direction (opposite to the direction of advancing the paper), as this will damage the printer. When replacing the remaining roll paper with a new one, first cut the paper in the holder, then remove the rest of it by pressing the paper advancing switch, or pull it out in the direction of advancing the paper.
   2: Be sure to use the roll paper S950 for exclusive use with this model. Otherwise, poor printing or malfunction will be caused.

<table>
<thead>
<tr>
<th>Example of printout</th>
<th>Block number</th>
<th>Year/Month/Date</th>
<th>Start time</th>
<th>Split time</th>
<th>Lap time</th>
<th>Finish time</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAP</td>
<td>SPLIT</td>
<td>SPLIT</td>
<td>SPLIT</td>
<td>SPLIT</td>
<td>SPLIT</td>
<td>SPLIT</td>
</tr>
<tr>
<td>Both split time</td>
<td></td>
<td>Both split</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and lap time</td>
<td></td>
<td>time and</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>lap time</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Example of</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>printout</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* When the power switch of the printer is turned on after the measurement is started, the data is printed out starting from the next measurement data.
Printout after the measurement

1. Turn on the power switch.
2. Press memory recall button (RECALL).
   - The time data stored in memory are printed out.
   - When all the stored data are printed out, the printer automatically stops.

- The stored data can be printed out as many times as necessary.
- Printout can be selected from only the desired block of data and all the blocks of data.

"Printout of the desired block of data"
① Memory recall
   - Show the memory recall display, and select the block of data you wish to print out.
② Turn on the power switch of the printer.
③ Keep recall button pressed.
   - When the stopwatch confirms the "Power on" of the printer, flashing "Print" is displayed.
   - Block No. for the block of data to be printed.
   - If recall button is released immediately after flashing "Print" is displayed, the printout will be canceled and the display returns to the memory recall display.
④ Keep recall button pressed for 1 second, and then release it as "Print" stops flashing and remains displayed.
   - The data in the selected block is displayed quickly one after another, and then printout is started.
   - (While the data in the block is displayed quickly one after another, the stopwatch checks for the fastest lap time in the selected block.)

   - The total elapsed time of the block is displayed.

"To print out the data in all the blocks in memory"
① Turn on the power switch of the printer.
② Show the memory recall display, and keep recall button pressed. Flashing "Print" is displayed.
③ Printout of all the blocks of data
   - Keep recall button pressed further until "Print All" is displayed.
④ Then, release recall button. The data in all the blocks is displayed quickly one after another starting from Block "1", and will be printed out at a stretch.
   - (While the data is displayed quickly one after another, the stopwatch checks for the fastest lap time in each block.)

Notes:
① While the printout is under way, none of the stopwatch buttons will work.
② Once started, the printout cannot be canceled halfway.
③ Even if the power switch of the printer is turned off while the printout is in progress, the button operation of the stopwatch is nullified until entire data to be printed is shown on the display.

Printout of lapse of time

- In addition to the elapsed time, the stopwatch can print out the time when the lap time is measured.
- The time a lap time is measured is not stored in memory.
① Turn on the power switch for printer and then press mode selection button ② (TIME) to set the stopwatch to the time/calendar mode.

- Please note that the time of measurement cannot be printed out unless the stopwatch is reset to "00".

1. Turn on the power switch.
2. Press mode selection button (TIME) to set the stopwatch to the time/calendar mode.

Stopwatch mode

Time/calendar mode
7. HOW TO USE THE AUTO START FUNCTION

Auto start function: By presetting the time when the measurement is started, the stopwatch automatically starts measuring at the designated time. This function is very convenient for a competition like marathon, where the race starts at a fixed time. In addition, the designated starting time can be transferred to other stopwatches such as Cal. S143, S123, S124 and thus the measurement can be started simultaneously at different checkpoints.

1. Auto start time setting (how to set the starting time)

   1. Press the mode selection button (A/S) to set the stopwatch to the auto start setting mode.

   2. After setting the auto start time, press button again until the digits stop flashing and the auto start time set has been entered in memory.

   3. Enter the auto start time.

   4. After the auto start time is entered in memory, press button (STOP, W) to return to the stopwatch mode.

   5. Set the auto start time.

   6. Return to the stopwatch mode.

   7. Be sure to confirm the third line display changes to the current time. If not, auto start function doesn’t become effective.

   8. The stopwatch starts measuring at the designated auto start time with three beeps.

   9. To cancel the auto start time set in the procedure above, press mode selection button (A/S) SET.

Identification number is printed when it is set

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

* The time is printed out in the 24-hour indication.

NOTE: When you press button to start setting the auto start time, all the stored data is cleared.
2. Transfer of the designated auto start time to other stopwatch (Cal. S143, S123, S124)

By transferring the designated auto start time to stopwatches Cal. S143, they can start the measurement at the same time.

(Ex.) The stopwatch Cal. S149 and the three stopwatches Cal. S143 will start measuring simultaneously at 10:05.

How to transfer the auto start time

1. Insert the transfer cord into the jack for auto start to connect the stopwatch Cal. S149 to the stopwatches.

2. Press the mode buttons of the stopwatches in stopwatch mode. The auto start time will be automatically transferred to them.
   1. Reset the stopwatch, and clear all the stored data. If not the auto start time can not be set.
   2. Press the mode button, the auto start time is transferred.

3. Remarks in transferring the auto start time.
   The error display is shown. If the auto start time is not transferred properly, the error display is shown. In that case, press mode button again.

The auto start time cannot be transferred even if the mode button is pressed.
The designated auto start time will not be transferred to stopwatches if Cal. S149 remains in the auto start setting mode. Return Cal. S149 to the stopwatch mode, and then resume the transfer.

To stop and resume the auto start

Keep the lap/split button of the stopwatches pressed for approximately 2 seconds. The auto start function will be deactivated.

Keep the lap/split button pressed for approximately 2 seconds.
8. HOW TO INSERT BATTERIES INTO THE PRINTER

Use four SUM-3 (R6P) dry batteries.

1. Slide the power switch to "OFF" and then remove the battery hatch.
2. Insert the batteries into the battery compartment as shown in the illustration below, checking that the (+) and (-) terminals are properly set.
3. Close the battery hatch.

Put the hatch toward you while pushing the portion indicated by the arrow.

Slide the battery hatch along the grooves of the battery compartment.

9. TIME • CALENDAR SETTING

Caution ! Time/calendar setting and identification number setting can be made only when the stopwatch is reset.

1. Press mode selection button ③ (TIME) to set the time to the time/calendar mode.

2. Seconds setting

Press ④ and the second digits will flash.
Press ④ in accordance with a time signal to reset the second digits to "00".
When the second digits count any number from "30" to "59" and ④ is pressed, one minute is added and the second digits are reset to "00".

Button ⑦ Selection of the digits to be adjusted.

Button ⑦ Setting the digits to be adjusted. (The digits can be advanced quickly by keeping the button pressed.)

Mode selection button ③ (TIME)

Minutes setting

Press ③ and the minute digits will flash.
With each press of ③, one minute is advanced.

Hour setting

Press ③ and the hour digits will flash.
With each press of ③, one hour is advanced.

Year setting

Press ③ and the year digits will flash.
With each press of ③, one year is advanced.

Finish of time/calendar setting

After all the adjustment are completed, press ③.

ID setting

When button ③ is pressed, the identification number digits start flashing.
With each press of button ③, one digit is advanced. "OFF" means that no identification number is set.

Date setting

Press ③ and the date digits will flash.
With each press of ③, one day is advanced.

Month setting

Press ③ and the month digits will flash.
With each press of ③, one month is advanced.
3 Adjustment of the contrast on the display
   - The contrast of the display can be adjusted.
   - Press recall button to show the contrast adjustment display.
     The contrast can be adjusted for 10 levels from level "1" to "10".
     The display is the lightest at level "1" and the darkest at level "10".
     Contrast adjustment display
     Button A: Increasing the level (darker)
     Button B: Decreasing the level (lighter)

10. PRECAUTIONS

1. When the power switch of the printer is turned on during the measurement, the data measured thereafter will be printed out.
2. While the printer is printing out, do not pull out the roll paper or do not pull it back. Also, do not operate the stopwatch without installing the roll paper on the printer, as this will cause a malfunction of the printer.
3. When the printer is not used, be sure to turn the power switch of the printer "OFF".
4. The optional parts (such as grip switch) is not used, be sure to put the cap on the jack.

Remarks on roll paper (thermal paper)
Since this model is a thermal printer, which prints on thermal paper by heating it, it is not necessary to replace the ink. Be sure to observe the following.
- Do not touch the printing surface of the thermal paper, as the sweat or oil on the palm will cause poor printing.
- Besides the thermal paper S950 included with the printer, the thermal paper S951 is available for printing out the stored data. It is a long-type thermal paper that can print out up to 2,800 lines, and sold for ¥578 (include Tax). To use S951, the paper holder SVAZ007 for exclusive use with it is necessary. It is sold separately for ¥3,990 (include Tax).
- To preserve the printed thermal paper, be sure to observe the following.
[1] Do not expose thermal paper to bright light for a long time. Printed digits or letters may be faded.

* Be sure to use the roll paper S-950 or S-951 for exclusive use with this model. Otherwise, defective printing or damage of the printer will be caused.

[2] Keep the thermal paper away from high temperature, high humidity, or direct sunlight. The roll paper may be discolored.
[3] In case the printed paper are kept attached on a pasteboard, etc., do not use the paste or adhesives containing volatile organic solvent. Also, do not use cellophane adhesive tape. The thermal paper may be discolored. It is recommended that the starch or synthetic paste be used.
[4] Do not place the thermal paper near the copies reproduced by the copier using ammonia. The thermal paper may be discolored.
[5] Do not leave the thermal paper in contact with vinyl chloride films for a long time. It may be discolored, or the printed digits or letters may be faded.
11. REMARKS ON THE BATTERIES

(1) Battery life
When a new normal battery is installed, the stopwatch will operate approximately 3 years.

1. If the stopwatch is used for more than 3 hours a day, the battery life may be reduced to less than 2 years.

When four new and normal SUM-3 manganese dry batteries are installed, the printer can print approximately 10,000 lines (approx. 14 rolls of paper) if it continuously operates at 24°C. When alkaline manganese batteries are used, it can print approximately 20,000 lines (approx. 28 rolls).

When the printed is used at extremely low temperatures, the battery power may be reduced. It is recommended that you print at normal temperature range. It is recommended, therefore, that alkaline manganese batteries be used at low temperatures.

When the following conditions occur with the power switch set at “ON”, replace the batteries with new ones as soon as possible following the procedure in “How to insert the batteries into the printer”.

(2) Monitor the battery
The battery in your watch may run down in less than the specified period after the date of purchase, as it is a monitor battery which is inserted at the factory to check the function and performance of the watch.

3. Battery change
- For battery replacement, be sure to have the battery replaced by a new one at an authorized SEIKO DEALER, and request the battery for exclusive use with the SEIKO watches.
- If the old battery is left in the watch for a long time, a malfunction may be caused due to battery leakage, etc.

12. REPLACEMENT OF THE LIQUID CRYSTAL PANEL

The normal life expectancy for the liquid crystal panel of the watch is approximately 7 years. After that, it may decrease in contrast, becoming difficult to read. Please contact the retailer from whom the watch was purchased to have the liquid crystal panel replaced with a new one.

It will be made at cost.

13. CARE OF YOUR WATCH

PERIODIC CHECK
- We suggest that you have your watch checked by the retailer from whom the watch was purchased every 2 or 3 years or when the battery is replaced for any condition, battery electrolyte leakage or damage due to water or sweat. After checking the watch adjustment and repair may be required.

REMARKS ON REPLACEMENT PARTS
- SEIKO makes it 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.)
- The number of years that a watch is considered repairable may vary greatly depending on the conditions 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.
- The case, dial, hands glass and bracelet, or parts thereof may be replaced with substitutes if the originals are not available.

REMARKS ON AFTER-SALES SERVICING
- If the watch requires service, take it to the retailer from whom the watches for 7 years. 3 years, or when the battery was purchased or the "CUSTOMER SERVICE DEPARTMENT" of SEIKO CORPORATION or the "SEIKO SERVICE CENTER CO., LTD."
- Guarantee coverage is spoiled out in certificate of guarantee. Please read it carefully and keep the certificate for ready reference.
### 14. Trouble Shooting Guide

Before requesting service, please check your stopwatch following the table below.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause</th>
<th>Solution</th>
</tr>
</thead>
</table>
| The motor does not run even if the power switch of the printer is turned “ON”. | ● Weak batteries.  
● The batteries are not installed properly.  
● The paper is stuck. | ● Weak batteries.  
● Replace the batteries with new ones.  
● Install the batteries properly.  
● Remove the paper. |
| The paper is not advanced by pressing the paper advancing switch. | ● Weak batteries.  
● The paper is stuck.  
● The roll paper gets out of shape. | ● Weak batteries.  
● Replace the batteries with new ones.  
● Remove the paper.  
● Make the roll paper round. |
| By pressing the start button, the paper is advanced, but the printed digits or letters are defective or the data are not printed at all. | ● The cord is not connected properly.  
● Water or foreign matters are sticking to the cord plug.  
● The paper is not set properly. | ● Connect the cord correctly.  
● Wipe off the water or foreign matters.  
● Install the paper properly. |

### 15. Specifications

**Stopwatch**

1. Frequency of crystal: 32,768 Hz (Hz = Hertz) — Cycles per second.
2. Loss/gain: (monthly rate) — Less than 15 seconds at normal temperature range (5°C—35°C).
3. Operational temperature range: — 10°C—+60°C.
4. Desirable temperature range of use: — 0°C—+50°C.
5. Display system: — Stopwatch display: Measures up to 1 hour, four minutes, seconds, 1/100 seconds, three-row display of split time/lap time/total elapsed time or lap time in process. No. of blocks, no. of split times (0—9999); 300 memory recall, BLOCK, SPLIT, LAP, STOP, RECALL, stopwatch marks, memory indicator, BATT.
7. Alarm start display: AS, OFF, ON: hour, minutes, seconds, 1/100 seconds, auto start set mark.
8. Display medium: — Nematic Liquid Crystal, FEM (Field Effect Mode).
10. Battery Life: — A new normal battery will last approximately three years.
12. Battery life indicator: — “BATT” mark start flashing when the battery life nears its end.

**Printer**

1. Printer: — Model: MTP102
   - Printing system: Thermal serial dot printing system.
   - Printing method: One-way printing (from left to right).
   - Printing speed: Approx. 1.5 lines/sec. (DC 5.0V, at 25°C).
   - Number of digits printed: 13 digits/line (including space).
2. Recording paper: — Roll paper 5/650 (38mm (width) (+0 0.5mm), overall length 2,400 mm or more (approx. 700 lines can be printed per roll).
3. Power supply: — DC 6.0V (SUM-3 or AM3 dry battery, 4 pieces).
   - With power switch turned “ON” (No printing): Approx. 0.02W (DC 6.0V).
5. Battery life: — Manganese battery: Approx. 10,000 lines can be printed. (Equivalent to approx. 14 rolls).
   - Alkaline manganese battery: Approx. 20,000 lines can be printed. (Equivalent to approx. 28 rolls).
6. Operational temperature range: — -0°C—+40°C. (The depth of printout does not change even if the temperature changes.)

*For the solution of trouble other than the above, contact the retailer from whom the watch was purchased.*

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