# PARTS CATALOGUE/TECHNICAL GUIDE

## Cal. 7T62A, 7T92A

### [SPECIFICATIONS]

<table>
<thead>
<tr>
<th>Item</th>
<th>Cal. No.</th>
<th>7T62A</th>
<th>7T92A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Movement</strong></td>
<td></td>
<td>![Illustration](Cal. 7T62A. (x 1.0))</td>
<td></td>
</tr>
<tr>
<td>Movement size</td>
<td></td>
<td>Ø27.6 mm</td>
<td>Ø27.0 mm</td>
</tr>
<tr>
<td>Casing diameter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td></td>
<td>3.3 mm</td>
<td></td>
</tr>
<tr>
<td><strong>Time indication</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main time</td>
<td></td>
<td>Hour, minute and small second hands</td>
<td></td>
</tr>
<tr>
<td>Stopwatch</td>
<td></td>
<td>Minute hand</td>
<td>Hour and minute hands</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1/5-second hand</td>
<td>Second hand</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Moves at 0.2-second intervals.)</td>
<td>1/20-second hand</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Moves at 0.05-second intervals.)</td>
</tr>
<tr>
<td>Alarm</td>
<td></td>
<td>Hour and minute hands</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Minute hand moves at 1-minute intervals.)</td>
<td></td>
</tr>
<tr>
<td><strong>Driving system</strong></td>
<td></td>
<td>Step motor (Load compensated driving pulse type, 4 pcs.)</td>
<td></td>
</tr>
<tr>
<td>Additional mechanism</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Electronic circuit reset switch</td>
<td>• Stopwatch function</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Train wheel setting device</td>
<td>• Measures up to 12 hours in 1/20 second increments.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Date calendar</td>
<td>• Accumulated elapsed time measurement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Instant setting device for date calendar</td>
<td>• Split time measurement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Battery life indicator</td>
<td>• Single-time alarm function</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loss/gain</td>
<td></td>
<td>Monthly rate at normal temperature range: less than 15 seconds</td>
<td></td>
</tr>
<tr>
<td>Regulation system</td>
<td></td>
<td>Nil</td>
<td></td>
</tr>
<tr>
<td>Measuring gate by quartz tester</td>
<td></td>
<td>Use 10-second gate.</td>
<td></td>
</tr>
<tr>
<td>Battery</td>
<td></td>
<td>SEIKO SR927W, SONY SR927W, Maxell SR927W, Matsushita SR927W</td>
<td>SEIKO SR927SW, SONY SR927SW, Maxell SR927SW, Matsushita SR927SW</td>
</tr>
<tr>
<td>Battery No.</td>
<td></td>
<td>SEIKO SR927W, SONY SR927W, Maxell SR927W, Matsushita SR927W</td>
<td>SEIKO SR927SW, SONY SR927SW, Maxell SR927SW, Matsushita SR927SW</td>
</tr>
<tr>
<td>Voltage</td>
<td></td>
<td>1.55 V</td>
<td></td>
</tr>
<tr>
<td>Battery life</td>
<td></td>
<td>Approx. 3 years</td>
<td></td>
</tr>
<tr>
<td>Jewels</td>
<td></td>
<td>0 jewels</td>
<td></td>
</tr>
</tbody>
</table>
REMARKS ON REPAIRING CAL. 7T62A AND 7T92A

Unlike the other Cal. 7T Series watches, which have two crowns and three buttons, Cal. 7T62A and Cal. 7T92A have one crown and two buttons. But, their basic movement structure is similar in other respects, and the knowledge and technique you have gained in handling the previous Cal. 7T Series watches will come in handy when you repair Cal. 7T62A/7T92A.

When repairing, however, you are requested to have the full knowledge of the features characteristic of these watches and strictly observe the repairing and checking instructions provided in this guide so that the watches will be repaired correctly.

FEATURES

As Cal. 7T62A/7T92A has fewer crowns and buttons, the operating procedures for alarm setting (for Cal. 7T62A only), time setting and stopwatch hand position adjustment differ from those of the other Cal.7T Series watches.

As a result of this structure change, the battery life of Cal. 7T62A/7T92A has increased by one year to 3 years as compared with that of the other Cal. 7T series watches.

1. STOPWATCH FUNCTION

- **Measurement performance**
  - Cal. 7T62A: Measures up to 60 minutes in 1/5 second increments. Displays the elapsed time with the stopwatch minute and 1/5-second hands.
  - Cal. 7T92A: Measures up to 12 hours in 1/20 second increments. Displays the elapsed time with the stopwatch hour, minute, second and 1/5-second hands.

- **Button operation**
  - **Standard Measurement**
    - A Start → A Stop → B Reset
  - **Accumulated Elapsed Time Measurement**
    - A Start → A Stop → A Restart → A Stop → B Reset
  - **Split Time Measurement**
    - A Start → B Split → B Split release → A Stop → B Reset
  - **Measurement of Two Competitors**
    - A Start → B Finish time of 1st competitor → A 2nd competitor finishes → B Finish time of 2nd competitor → B Reset
2. ALARM FUNCTION (For Cal. 7T62A only)

- Single-time alarm: Can be set to ring only once within the coming 12 hours. Alarm engaged with the crown at the normal position.

- Alarm setting operation

  ![Diagram showing alarm setting operation]

PARTS CATALOGUE

<table>
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<th>Disassembling procedures Figs.</th>
<th>1 → 55</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reassembling procedures Figs.</td>
<td>55 → 1</td>
</tr>
</tbody>
</table>

Lubricating:

- Moebius A
- Moebius F
- SEIKO Watch Oil S-6

Oil quantity:

- Normal quantity
- Liberal quantity

The illustration refers to both Cal. 7T62A and 7T92A.

Remarks on removing the winding stem

To remove the winding stem when taking out the movement from the case or while disassembling the parts during repair work, be sure to pull out the crown to the first click, and then, remove the winding stem while pushing the setting lever.

![Diagram showing part numbers and descriptions]

Please see the page shown after the part name. Lubricating of some parts is shown in “III. REMARKS ON DISASSEMBLING AND REASSEMBLING”.

3
The illustration refers only to Cal. 7T62A.

Please see the page shown after the part name.
Lubricating of some parts is shown in “III. REMARKS ON DISASSEMBLING AND REASSEMBLING”. 
The illustration refers only to Cal. 7T62A.

- 4002 711: Coil block for alarm
- 4002 700: Coil block (A)
- 4002 700: Coil block for chronograph second
- 4002 711: Coil block for chronograph
- 4146 710: Step rotor
- 4146 710: Alarm rotor
- 4146 710: Chronograph rotor for second
- 4450 703: Switch lever (A)
- 0384 582: Yoke
- 0381 580: Setting wheel
- 0351 583: Winding stem
- 0221 583: Center wheel & pinion
- 0391 591: Train wheel setting lever
- 4239 710: Rotor stator
- 4239 712: Rotor stator for alarm
- 4239 713: Rotor stator for chronograph
- 4450 701: Switch lever (B)
- 0100 586: Main plate

Please see the page shown after the part name.

Lubricating of some parts is shown in “III. REMARKS ON DISASSEMBLING AND REASSEMBLING”.

The type of the part is determined based on the case design.
The illustration refers only to Cal. 7T92A.

Please see the page shown after the part name.

Lubricating of some parts is shown in “III. REMARKS ON DISASSEMBLING AND REASSEMBLING”.
Please see the page shown after the part name.

Lubricating of some parts is shown in “III. REMARKS ON DISASSEMBLING AND REASSEMBLING”.

The illustration refers only to Cal. 7T92A.
Remarks:

- Holding ring for dial  0866 650
- Date dial  0878 527
- Winding stem  0351 583

The types of the parts are determined based on the design of cases. Check the case number, and refer to "Casing Parts Catalogue" to choose corresponding parts.

1 Pin for date dial guard  0027 973
18 Pin for train wheel bridge  0027 974

• Point of distinction

![Pin for date dial guard](image1)

![Pin for train wheel bridge](image2)

15 Circuit block

The circuit blocks of Cal. 7T62A and 7T92A have a hole for discrimination as shown in the illustrations below.

* The holes for discrimination are intended to discriminate between the circuit blocks for Cal. 7T62A and Cal. 7T92A only.
TECHNICAL GUIDE

• The explanation here is only for the particular points of Cal. 7T62A and 7T92A.
• For the repairing, checking and measuring procedures, refer to the “TECHNICAL GUIDE, GENERAL INSTRUCTIONS”.

I. STRUCTURE OF THE CIRCUIT BLOCK

II. NECESSARY PROCEDURE AFTER BATTERY CHANGE

After installing the battery, set the time and reset the stopwatch hands to the “0” position following the procedure below.

CAL. 7T62A

Crown Pull out to the 2nd click when the small second hand is at the 12 o’clock position.

Turn to set the time hands to the current time.
* Check that AM/PM is correctly set.

CAL. 7T62A

Press for 2 seconds.
* The stopwatch minute hand turns a full circle.

Press to set the alarm hands to the current time.

CAL. 7T92A

Press for 2 seconds.
* The stopwatch 1/20 second hand turns a full circle.

Press to set the stopwatch 1/20 second hand to the “0” position.
### III. REMARKS ON DISASSEMBLING AND REASSEMBLING

- **Hands**
  
  - **Caution for disassembling**
    The hour wheel is made of engineering plastics. When pulling out the hour hand, take care not to damage the hour wheel.
  
  - **How to install**
    1) Pull out the crown with winding stem to the second click. Then, turn the crown clockwise to turn the time hands also clockwise.
    2) Stop turning the hands when the date changes to the next.
    3) Install the small second, hour and minute hands so that they point exactly to the 12 o’clock position.
    4) Install the stopwatch hands so that they point exactly to the “0” position of the stopwatch scale.
      * After installing the hands, be sure to check that they move smoothly without interfering with one another.

- **Dial**
  
  - **Caution for disassembling**
    When disassembling the dial, take care not to bend the dial leg. Raise the portions around the dial leg by turns gradually to remove the dial.
1 Pin for date dial guard

- How to remove
  
  Turn the pin 90° counterclockwise to loosen the pin.

- How to install
  
  Set the pin securely into the groove. Then, turn it 90° clockwise to fix the pin.

Notes:
* Do not turn the pin more than 90° in either direction.
* Do not turn the pin forcibly.

- Lubricating
  
  Lubricate the wheel edge of both the date driving wheel and date dial.

8 Hour wheel

When installing the hour wheel, check that it engages with the pinion of the minute wheel.

10 Battery clamp

When installing the battery clamp, set it securely to the two hooking portions of the movement.

13 Circuit block cover

- How to remove
  
  1) Loosen the four circuit block cover screws.
  2) Release the four hooking portions of the circuit block cover. (Indicated by the arrows in the illustration at right)
• How to install

1) Have the four hooking portions of the circuit block cover (indicated by the arrows in the illustration at right) catch the movement securely. In doing so, check if the circuit block is set properly to guide posts “a” and “b”, and reset it in position if necessary.

2) Tighten the four circuit block cover screws. When tightening the screws, take care not to cut the coil.

• Setting position

To set the friction spring for second counting, slip it into the gap under the train wheel bridge.

• Caution for disassembling

The circuit block is fixed to the train wheel bridge with the guide pins (“a”, “b”, “c”, “d” and “e” in the illustration shown at right). When removing the circuit block from the guide pins, take care not to damage the circuit block.

• How to install

Have the guide holes of the circuit block (“a”, “b”, “c”, “d” and “e” portions in the illustration) securely caught by the guide pins of the train wheel bridge and the guide tubes of the main plate.

• How to remove

Turn the pin 90° counterclockwise with a screwdriver to loosen the pin.

• How to install

Set the pin in the direction as shown at right. Then, turn it 90° clockwise with a screwdriver to fix the pin.
• Lubricating

After installing the pin, lubricate the upper pivot of the following parts:

- Chronograph rotor for second, chronograph rotor for minute, alarm rotor and step rotor (for Cal. 7T62A)
- Chronograph rotor for second (1/20), chronograph rotor for second, chronograph rotor for minute and step rotor (for Cal. 7T92A)
- Minute wheel
- Small second wheel
- Minute counting wheel (for Cal. 7T62A)
  Second counting wheel (1/20) (for Cal. 7T92A)
- Minute wheel for alarm (for Cal. 7T62A)
  Minute counting wheel (1/20) (for Cal. 7T92A)

• How to install

Before installing the train wheel bridge, carefully check the setting positions of the wheels and rotors. Be sure to check that each rotor has a lower pivot attached securely.

If the wheels and rotors are all set in position with the winding stem with crown at the first click, the train wheel bridge can be installed smoothly. There is no need to press down the train wheel bridge. If the train wheel bridge will not be seated in position smoothly, the other parts must be set in the wrong position. Check their setting positions.

• Wheels and pinions

Notes:
* Intermediate minute counting wheel and intermediate alarm wheel can be used interchangeably.
* The following four rotors for each calibre can be used interchangeably:

<table>
<thead>
<tr>
<th>CAL. 7T62A</th>
<th>CAL. 7T92A</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Chronograph rotor for second</td>
<td>• Chronograph rotor for second (1/20)</td>
</tr>
<tr>
<td>• Chronograph rotor for minute</td>
<td>• Chronograph rotor for second</td>
</tr>
<tr>
<td>• Alarm rotor</td>
<td>• Chronograph rotor for minute and</td>
</tr>
<tr>
<td>• Step rotor</td>
<td>• Step rotor</td>
</tr>
</tbody>
</table>

• Setting position

See the illustration on the next page.
The illustrations refer only to Cal. 7T62A.
The illustrations refer only to Cal. 7T92A.

- 0270 582 Minute counting wheel
- 0050 590 Intermediate minute counting
- 4146 710 Chronograph rotor for minute
- 0261 582 Intermediate wheel for hour counting
- 0231 580 Third wheel & pinion
- 0241 583 Fourth wheel & pinion
- 4146 710 Step rotor
- 0701 580 Fifth wheel & pinion
- 0240 580 Small second wheel
- 0885 594 First intermediate wheel for second counting
- 4146 710 Chronograph rotor for second
- 0950 590 Intermediate wheel for second counting (1/20)
- 0885 595 Second intermediate wheel for second counting
- 0885 582 Second counting wheel
- 4283 581 Spacer for center wheel & pinion
- 0281 580 Setting wheel
- 0902 580 Second counting wheel (1/20)
- 4146 710 Chronograph rotor for second (1/20)
Cal. 7T62A, 7T92A

IV. VALUE CHECKING

- **Coil block resistance**
  - Coil block (A)  
    1.70 KΩ ~ 2.60 KΩ
  - Coil block for chronograph second  
    1.70 KΩ ~ 2.60 KΩ
  - Coil block for chronograph minute (Cal. 7T62A) 
    1.80 KΩ ~ 2.40 KΩ
    - Coil block for second counting (1/20) (Cal. 7T92A) 
    1.80 KΩ ~ 2.40 KΩ

- **Upconverter coil resistance**: 150 Ω ~ 180 Ω
Current consumption

<table>
<thead>
<tr>
<th></th>
<th>For the whole movement</th>
<th>Less than 1.10 µA (with 1.55 V supplied from a battery) (when the stopwatch is not used)</th>
</tr>
</thead>
<tbody>
<tr>
<td>For the circuit block alone</td>
<td>Less than 0.20 µA (with 1.55 V supplied from a battery)</td>
<td></td>
</tr>
</tbody>
</table>

When measuring the current consumption with SEIKO Multi-Tester S-860, select the measurement range as follows:

<table>
<thead>
<tr>
<th></th>
<th>For the whole movement</th>
<th>Use the range of 40 µA of SUPPLY V (= 1.55 V) &amp; GATE TIME (2 S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>For the circuit block alone</td>
<td>Use the range of 4 µA of SUPPLY V (= 1.55 V) &amp; GATE TIME (2 S)</td>
<td></td>
</tr>
</tbody>
</table>

V. FUNCTION CHECKING

TIME SETTING AND STOPWATCH HAND POSITION ADJUSTMENT

Follow the procedure in “II. NECESSARY PROCEDURE AFTER BATTERY CHANGE” to set the time hands and reset the stopwatch hands to the “0” position.

STOPWATCH FUNCTION

* Before checking the stopwatch function, reset the stopwatch hands to the “0” position following the procedure in “II. NECESSARY PROCEDURE AFTER BATTERY CHANGE”.

* Check that the crown is at the normal position. Otherwise, the stopwatch operation cannot be made.

1. Checking for Standard Measurement / Accumulated Elapsed Time Measurement

   CAL. 7T62A

   A  Press repeatedly to check if the stopwatch 1/5 second hand starts and stops with each press. ▼
   Check if the stopwatch minute hand starts moving as the accumulated elapsed time exceeds one minute.
   ▼

   A  Press to stop the measurement.

   B  Press to check if all the stopwatch hands return to the “0” position.

   CAL. 7T92A

   A  Press repeatedly to check if the stopwatch 1/20 second hand starts and stops with each press. ▼
   Check if the stopwatch hour and minute hands start moving as the accumulated elapsed time exceeds one minute.
   ▼

   A  Press to stop the measurement.

   B  Press to check if all the stopwatch hands return to the “0” position.

2. Checking for Split Time Measurement

   A  Press to start the measurement.

   B  Press to check if the stopwatch hands stop to indicate the split time.

   B  Press to check if the split time is released and if the hands move quickly to indicate the elapsed time.

   B  Press repeatedly to check if the split time is measured and released with each press.

   A  Press to stop the measurement.

   B  Press to check if all the stopwatch hands return to the “0” position.
Note for the stopwatch 1/20 second hand for Cal. 7T92A:
* After the stopwatch is started, the stopwatch 1/20-second hand automatically stops and stays at the “0” position if the measurement exceeds 10 minutes. When the measurement is stopped or split time is measured, it moves to indicate the elapsed 1/20 seconds. Also, after the stopwatch is restarted or split time is released, the stopwatch 1/20-second hand automatically stops and stays at the “0” position if the measurement exceeds 10 minutes.

**ALARM FUNCTION (Only for Cal. 7T62A)**

* Before checking the alarm function, set the time and alarm hands to the current time following the procedure in “II. NECESSARY PROCEDURE AFTER BATTERY CHANGE”.

1. **Alarm Time Setting**

   **Crown** Pull out to the 1st click.

   **B** Press repeatedly to set the **alarm hands**.
   * With each press, they move one minute. They move quickly if the button is kept pressed. They stop as they reach the current time. Release and press the button, and the hands will start moving again.

2. **Alarm Engagement**

   **Crown** Push back in to the normal position.
   * At the designated alarm time the alarm rings for 20 seconds and stops. To stop it manually, press button “A” or “B”.
   * After the alarm rings, the alarm minute hand starts moving at one-minute intervals as the alarm hands indicate the current time.

3. **To Cancel or Readjust the Designated Alarm Time**

   **Crown** Pull out to the 1st click.

   **B** To cancel: Press repeatedly to set the **alarm hands** to the desired alarm time.
   **To readjust:** Press repeatedly to set the **alarm hands** to the desired alarm time.

   **Crown** Push back in to the normal position.