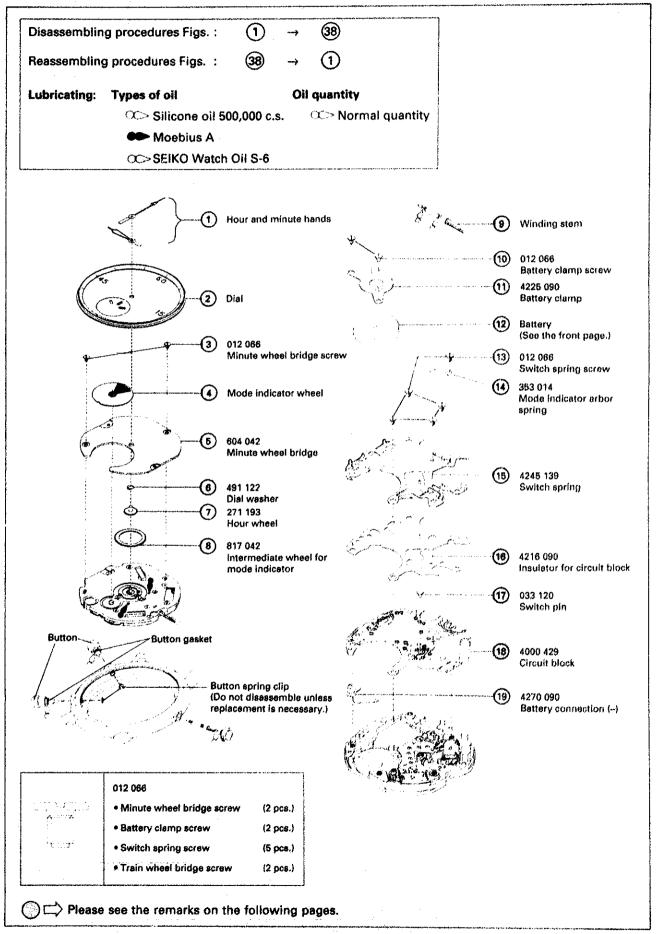
# PARTS CATALOGUE/TECHNICAL GUIDE Cal. V692A

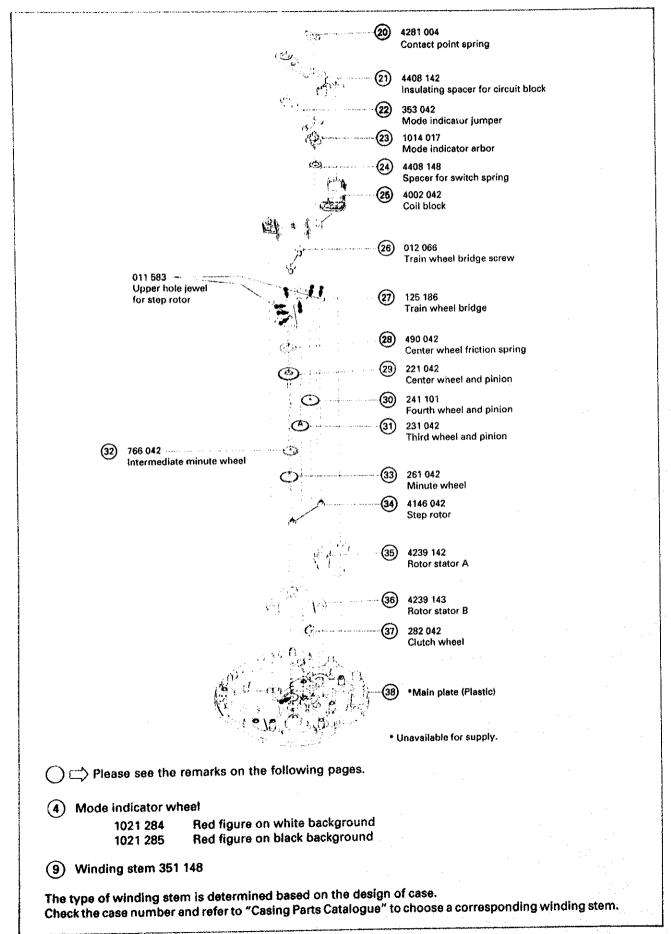
|                                 | Cal. No.         | V 692A   |  |  |
|---------------------------------|------------------|--|--|--|
| Item                            |                  | V 03ZA   |  |  |
| Movement                        |                  | The day is the state of the sta |  |  |
|                                 |                  | (x 1.0)  |  |  |
| Movement size                   | Outside diameter | 24.0mm between 6 o'clock and 12 o'clock sides<br>24.0mm between 3 o'clock and 9 o'clock sides  |  |  |
|                                 | Casing diameter  | ø25.5mm  |  |  |
|                                 | Height           | 3.0mm (including the battery portion)  |  |  |
| Time indication                 |                  | 2 hands and mode indicator   |  |  |
| Driving system                  |                  | Step motor (Fixed-width pulse system, 2 pcs.)  |  |  |
| Additional mechanism            |                  | Electronic circuit reset switch     Stopwatch (Up to 60 minutes in 1/5 seconds)     Hands 0-reset adjustment function     Demonstration movement of the hands  |  |  |
| Loss/gain                       |                  | Monthly rate at normal temperature range: less than 20 seconds   |  |  |
| Regulation system               |                  | Trimmer condenser  |  |  |
| Measuring gate by quartz tester |                  | Use 60-second gate.  |  |  |
| Battery                         |                  | SEIKO SR920W, Maxell SR920W, SONY SR920W<br>Battery life is approximately 2.5 years.<br>Voltage: 1.55V   |  |  |
| Jewels                          |                  | 4 jewels   |  |  |

## HATTORI SEIKO CO., LTD.

**PARTS CATALOGUE** 

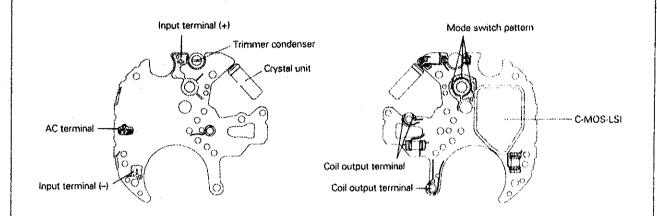
Cal. V692A





## **TECHNICAL GUIDE**

#### I. STRUCTURE OF THE CIRCUIT BLOCK

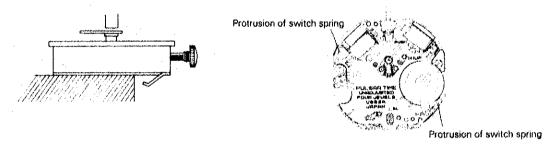


#### II. REMARKS ON DISASSEMBLING AND REASSEMBLING

(1) Hands

Since a plastic main plate is used, place the movement on a flat metal plate or the like, and then install the hands at the 12 o'clock position.

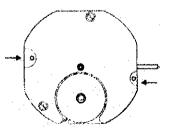
In doing so, check that the two protrusions of the switch spring are not pressed down as they protrude toward the case back side.



(4) Dial

#### How to remove

Pry up the dial at the two recessed parts indicated in the illustration using a screwdriver.



- (6) Dial washer
- (28) Center wheel friction spring
- How to distinguish the two parts

(Dial washer)



- Bent
- With the smaller diameter

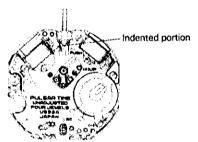
[Center wheel friction spring]



- Ren
- With the larger diameter

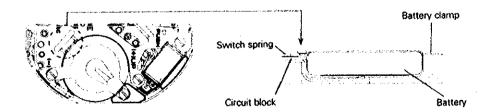
- (9) Winding stem
- How to remove

Fremove the winding stem while pushing the indented portion of the switch spring (marked with " ( PUSH").



- (11) Battery clamp
- How to instail

Slip the tip of the battery clamp into a gap under the switch spring.

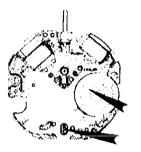


## **TECHNICAL GUIDE**

(12) Battery

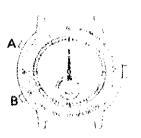
A necessary step after Installing the battery

After the battery is replaced with a new one, or after the battery is removed and re-installed following the repairing procedures, be sure to short-circuit the AC terminal of the circuit block and the battery clamp twice with conductive tweezers to reset the circuit. (When checking the current consumption, short-circuit with the power supplied from external source.)



Short-circuit twice with tweezers.

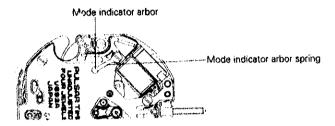
- \* The circuit can be reset with a complete watch. Follow the procedure below.
- [1] Turn the crown to set the mode indicator to " $\rightarrow \emptyset \leftarrow$ ".
- [2] Pull out the crown to the first click.
- [3] Keep buttons "A" and "B" pressed at the same time for approximately 3 seconds. When the buttons are released, a beep sounds and the hour and minute hands start moving counterclockwise and clockwise, respectively.
- [4] Press button "A" or "B" once to stop the hands.
- [5] Press button "A" and "B" repeatedly but separately to reset the minute and hour hands respectively to the "0" position (12 o'clock position).
- [6] Turn the crown to set the mode indicator to "TIME". Then, pull out the crown to the first click, and press button "A" and "B" repeatedly but separately to set the minute and hour hands respectively to the desired time.



#### Mode indicator arbor spring

#### How to install

Set the mode indicator arbor spring right on the mode indicator arbor so that they are in contact with each other.

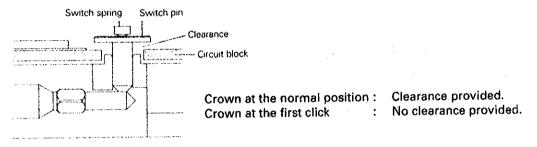


(16) Insulator for circuit block

The insulator for circuit block is colorless and transparent. Therefore, make sure that it is installed without fail.

(17) Switch pin

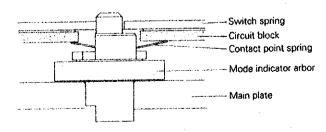
If failure of time setting or hands 0-reset adjustment function occurs with the crown at the first click, check if proper clearance is provided between the switch pin and circuit block.



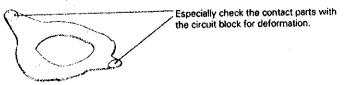
- (18) Circuit block
- (20) Contact point spring

If a malfunction occurs in any of the modes, check the following points.

[1] Check if the following parts are set as shown below.



[2] Check if the contact point spring is deformed.



## **TECHNICAL GUIDE**

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### (22) Mode indicator jumper

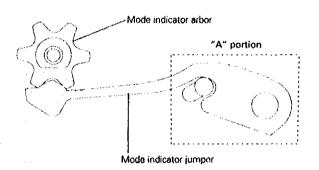
Take care not to deform the mode indicator jumper when disassembling or reassembling it, as extremely high pressure is applied to it.

#### How to remove

Release the tip of the mode indicator jumper from the mode indicator arbor, and then lift up "A" portion in the illustration.

#### • How to install

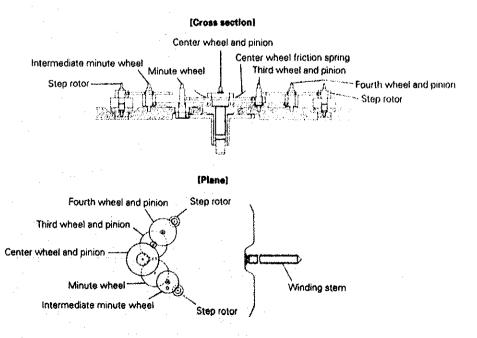
Reverse the procedures for disassembling.



(25) Coil block

Two coil blocks can be used interchangeably.

- (27) Train wheel bridge
- (28) Center wheel friction spring
- (34) Step rotor
- Setting position of the train wheel



## **TECHNICAL GUIDE**

Cal. V692A

- Do not deform the center wheel friction spring, as this will cause the watch to stop or lose.
- Two step rotors can be used interchangeably.
- Distinction of wheels

| Name                | Center wheel and pinion | Third wheel and pinioin | Fourth wheel and pinion               | Intermediate<br>minute wheel | Minute wheel |
|---------------------|-------------------------|-------------------------|---------------------------------------|------------------------------|--------------|
| Shape               |                         | na digita di            | emong <mark>ell</mark> e, more<br>typ | A                            |              |
| Distinctive feature | Tall in height          | Short pinion            | Long pinion                           | A hole on wheel              | No pivot     |

#### III. VALUE CHECKING

• Coil block resistance

 $1.2K\Omega \sim 1.6K\Omega$ 

• Measuring time accuracy

Turn the crown to set the mode indicator to "TIME".

Since the minute hand moves at 12-second intervals, use 60-second gate of the quartz tester to measure accuracy.

\* Time accuracy can also be measured with the mode indicator set at "STOPW.". In this case, any gate of the quartz tester can be used to measure the daily rate.

• Current consumption

For the whole of the movement :

less than 2.5μA

For the circuit block alone

less than 1.6uA

Note:

Before measuring current consumption, it is necessary to reset the circuit with the power supplied from an external source. Therefore, follow the procedures below to measure the current consumption.

Measure the current consumption for the whole of the movement. (Make sure that the battery clamp screw is securely tightened.)

- [1] Install the dial and mode indicator, and turn the crown to set the mode indicator to "TIME".
- [2] Short-circuit the "AC" pattern of the circuit block and the switch spring twice to reset the circuit.
- [3] Press button "A" or "B" once.
- [4] The minute hand starts moving at 12-second intervals. Read the maximum value of the current consumption, and calculate the current consumption per second.

  Note that measurement obtained while the hands are not moving corresponds to the current consumption for the circuit block alone.

  (For details, refer to Chapter 5 "MEASUREMENT" of the "TECHNICAL GUIDE, GENERAL INSTRUCTIONS".)