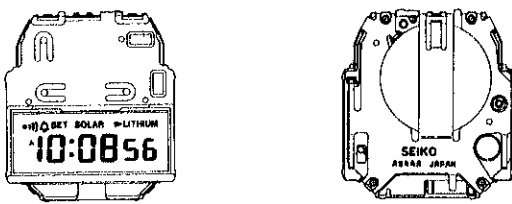


PARTS CATALOGUE/ TECHNICAL GUIDE

Cal. A944A

[SPECIFICATIONS]

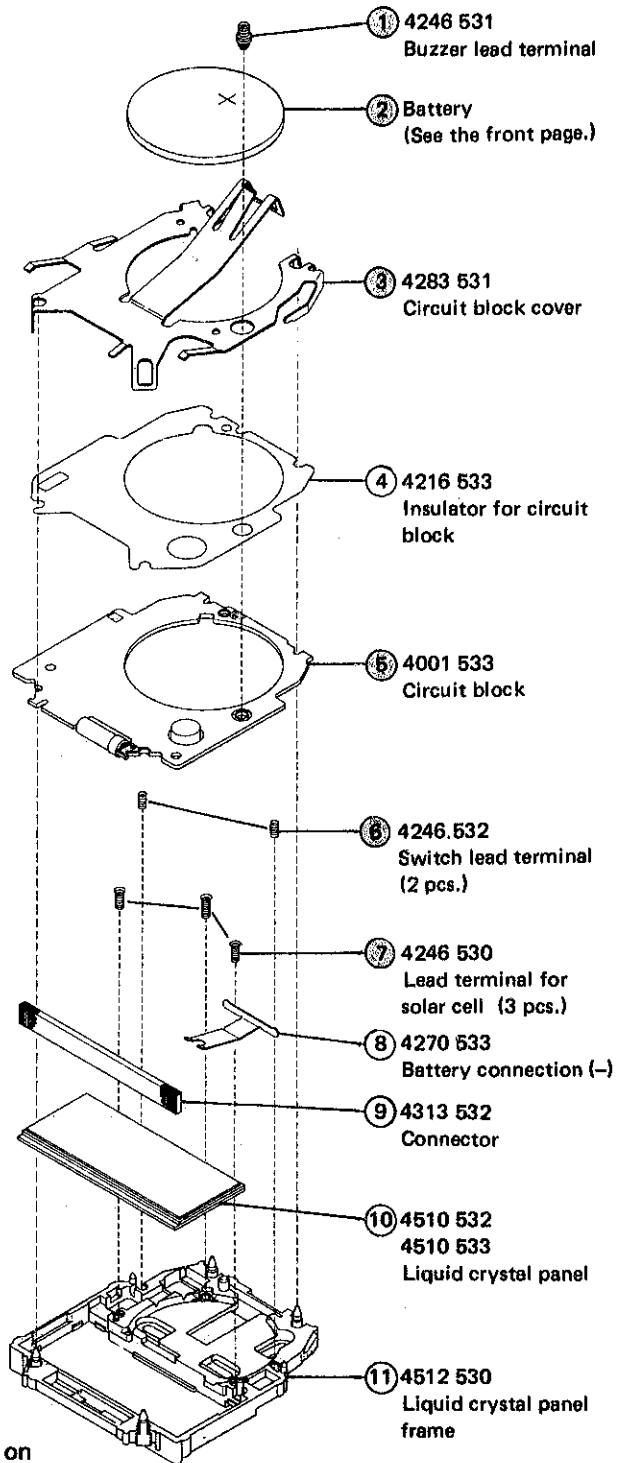
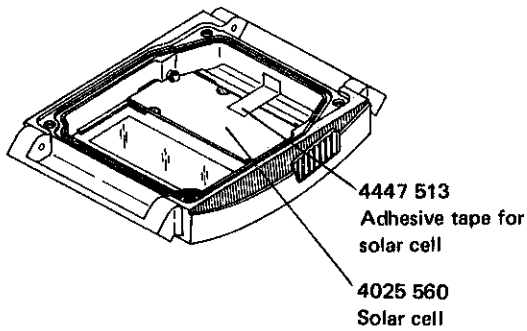
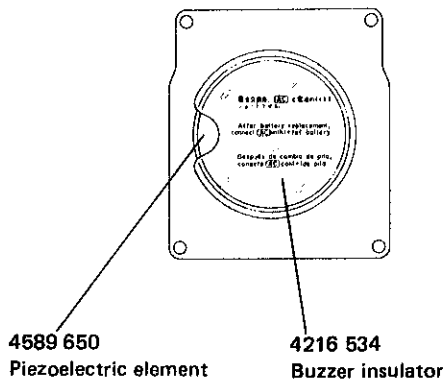
Item		Cal. No.	A944A
Module		 <p style="text-align: right;">(x 1.0)</p>	
Module size	Outside diameter	24.5 mm between 3 o'clock and 9 o'clock sides 27.5 mm between 6 o'clock and 12 o'clock sides	
	Casing diameter	—	
	Height	4.3 mm	
Display medium		Nematic Liquid Crystal, FEM (Field Effect Mode)	
Liquid crystal driving system		Multiplex driving system	
Display system		<ul style="list-style-type: none"> • Time display (12- or 24-hour indication) • Stopwatch display • Alarm display • Power source indicator 	
Additional mechanism		<ul style="list-style-type: none"> • Alarm test system • Hourly time signal • Automatic calendar • Dual power supply 	
Loss/gain		Monthly rate at normal temperature range: less than 20 seconds	
Regulation system		Nil	
Measuring gate by quartz tester		Any gate can be used.	
Battery		SEIKO CR1616 Matsushita CR1616 Battery life is approximately 7 years. (5 years if the watch is operated by the lithium battery only.) Voltage: 3.0V	

HATTORI SEIKO CO., LTD.

PARTS CATALOGUE

Cal. A944A

Disassembling procedures Figs.: ① → ⑪
 Reassembling procedures Figs.: ⑪ → ①



Remarks:

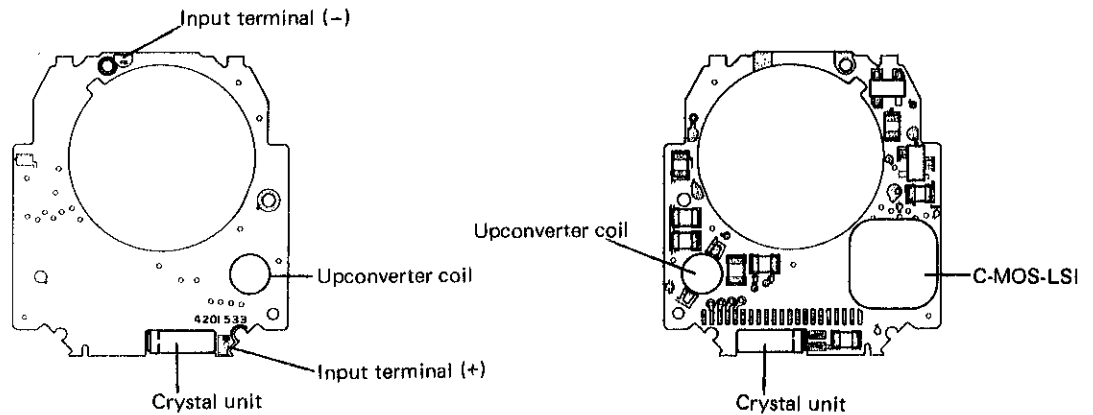
⑩ Liquid crystal panel

The type of liquid crystal panel is determined based on the design of cases. Refer to "SEIKO Casing Parts Catalogue" to choose a corresponding liquid crystal panel.

➡ Please see the remarks on the following pages.

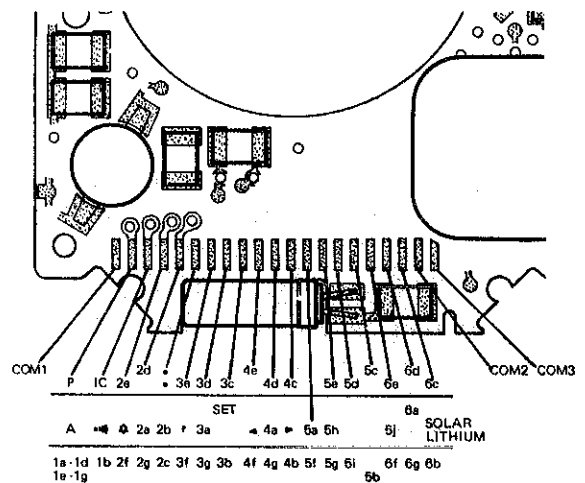
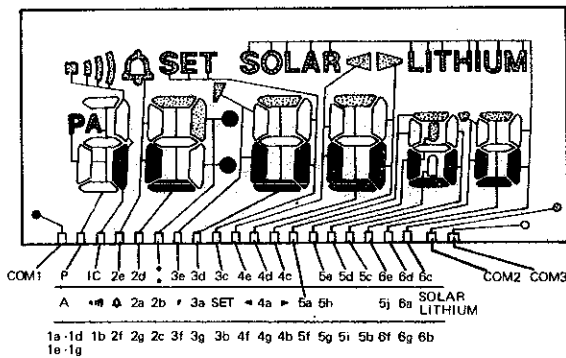
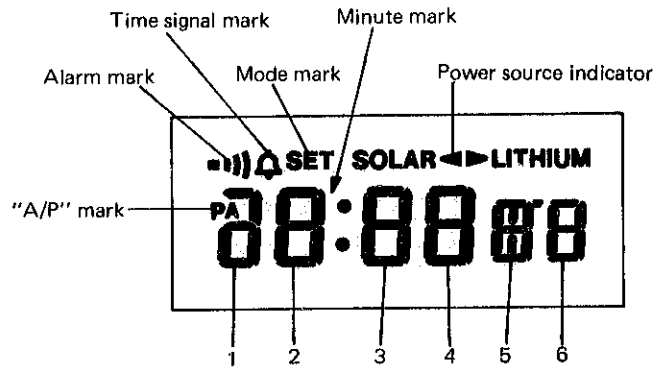
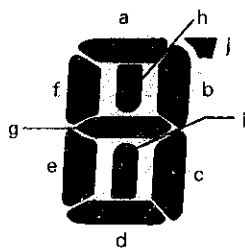
- The explanation here is only for the particular points of Cal. A944A.
- For the repairing, checking and measuring procedures, refer to the "TECHNICAL GUIDE, GENERAL INSTRUCTIONS".

I. STRUCTURE OF THE CIRCUIT BLOCK



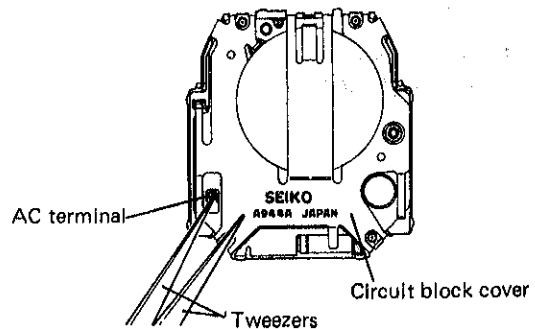
II. RELATIONSHIP BETWEEN THE SEGMENT (LIQUID CRYSTAL PANEL ELECTRODE) AND THE C-MOS-LSI OUTPUT TERMINAL

- Designation of the segment



III. REMARKS ON INSTALLING THE BATTERY

After the battery is replaced with a new one, or after the battery is re-installed following the repairing procedures, be sure to short-circuit the AC terminal of the circuit block and the circuit block cover with conductive tweezers as illustrated at right to reset the circuit.



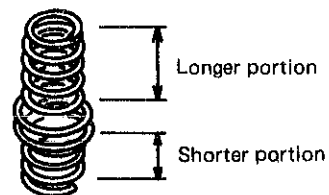
IV. REMARKS ON DISASSEMBLING AND REASSEMBLING

Use the universal movement holder for disassembling and reassembling.

① Buzzer lead terminal

• How to install

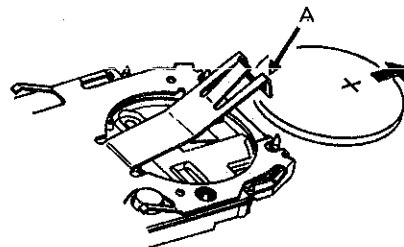
After the module is installed in the case, press in the buzzer lead terminal with the shorter portion down.



② Battery

• How to remove

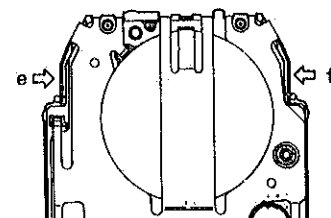
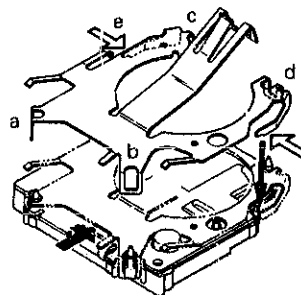
To remove the battery, release the hook portion "A" of the circuit block cover.



③ Circuit block cover

• How to install

- 1) Have the hook portions "a" and "b" of the circuit block cover catch the protrusions of the liquid crystal panel frame.
- 2) Move the circuit block cover toward the 12 o'clock side from the 6 o'clock side (in the direction indicated by the arrow ↑ in the illustration).
- 3) Push the parts "e" and "f" inward (in the direction indicated by the arrows ⇨ ⇩ in the illustrations) to set them to the indented portions of the liquid crystal panel frame.
- 4) Have the hook portions "c" and "d" catch the protrusions of the liquid crystal panel frame.



⑤ Circuit block

• How to install

When installing the circuit block, check that none of the switch lead terminals are missing and that the connector is not bending.

⑥ Switch lead terminal

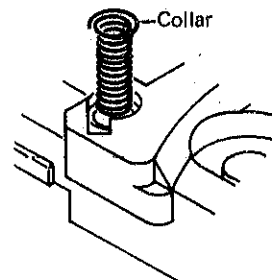
• How to install

The switch lead terminals can be installed without making distinction between the top and bottom.

⑦ Lead terminal for solar cell

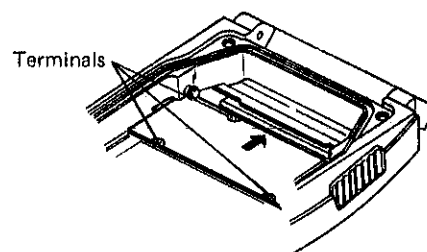
• How to install

Set the three lead terminals for solar cell with their collared portions up.

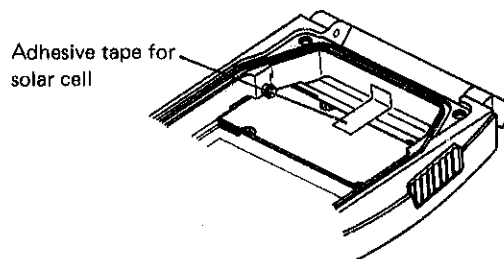


* Remarks on replacing the solar cell

1) Install the solar cell with the terminals positioned as shown in the illustration, and slide it in the direction indicated by the arrow to set it in position.



2) Apply the adhesive tape to the solar cell as shown in the illustration to fix it.



V. VALUE CHECKING

• Upconverter coil resistance

80Ω ~ 120Ω

• Current consumption

For the whole of the module: less than 0.8μA

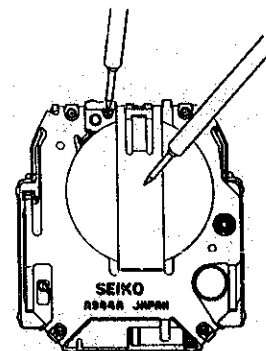
For the circuit block alone : less than 0.5μA

* Measuring current consumption for the whole of the module:

Apply probes to the places indicated in the illustration with the battery installed.

Note: Before measuring current consumption, be sure to reset the circuit. (Refer to the "REMARKS ON INSTALLING THE BATTERY".)

Otherwise, all the segments will light up or the display will become disordered, and as a result, current consumption cannot be measured correctly.



- Checking the power source indicator

Place the watch complete 60 cm right below a fluorescent lamp (15W), and check if the power source indicator indicates "LITHIUM" ("SOLAR ► LITHIUM") when the solar cell unit is covered with a hand and that it indicates "SOLAR" ("SOLAR ◄ LITHIUM") when the hand is removed.