

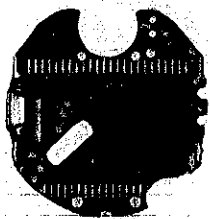
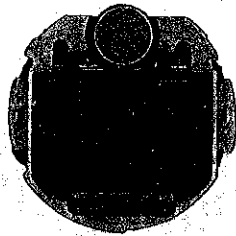
SEIKO

DIGITAL QUARTZ

Cal. A359A

PARTS LIST

Cal. A359A



4001 531



4242 530



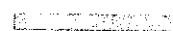
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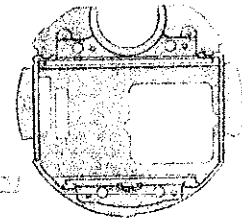
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4313 530



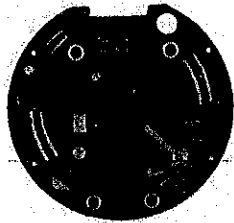
4313 531



4398 530



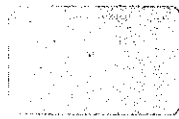
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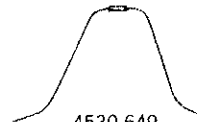
4410 535



4510 540



4521 580



4530 649



4540 530



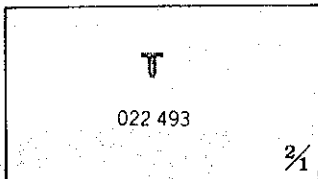
4540 860



4580 530



☆ Maxell SR1120W



Cal. A359A

Characteristics

Casing diameter: ϕ 30.2 mm
 Maximum height: 4.8 mm without battery
 Frequency of quartz crystal oscillator: 32,768 Hz (Hz=Hertz Cycles per second)
 Time and calendar display: Digital Display System showing hour, minute, second, A.M./P.M., month, date and day of the week.
 Alarm display: Can be set to operate at any desired hour and minute.
 Timer display: Can be set to countdown any number of minutes from 1 to 100.
 Stopwatch display: Digital Display System showing 1/2-hour, minute, second and 1/100 second. The lap time is displayed in the upper row and the accumulated elapsed time is displayed in the lower row at the same time by simply depressing a button.
 Display medium: Nematic Liquid Crystal, FE-Mode
 Regulation system: Trimmer condenser
 Time signal: It can be set to ring every hour on the hour.
 Illuminating light: Illuminates the display in the dark.
 Battery life indicator: All the digits in the display begin flashing.

PART NO.	PART NAME	PART NO.	PART NAME
4001 531	Circuit block		
4242 530	Plus terminal of battery connection		
4242 531	Speaker block lead terminal		
4245 530	Switch spring		
4313 530	Connector A		
4313 531	Connector B		
4398 530	Liquid crystal panel frame		
4408 530	Bulb rest		
4410 535	Circuit cover		
4510 540	Liquid crystal panel		
4521 580	Reflecting mirror		
4530 649	Bulb		
4540 530	Liquid crystal panel holder A		
4540 860	Liquid crystal panel holder B		
4580 530	Speaker block		
022 493	Liquid crystal panel holder screw		
☆Maxell SR1120W } ☆U.C.C.391 }	Silver oxide battery		

Remarks:

Battery

☆U.C.C.391 } The applied battery for this calibre might be added the substitutive in the future. In
 ☆Maxell SR1120W } that case, please refer to sparate "BATTERIES FOR SEIKO QUARTZ
WATCHES".

☆⇨ Please see remarks.

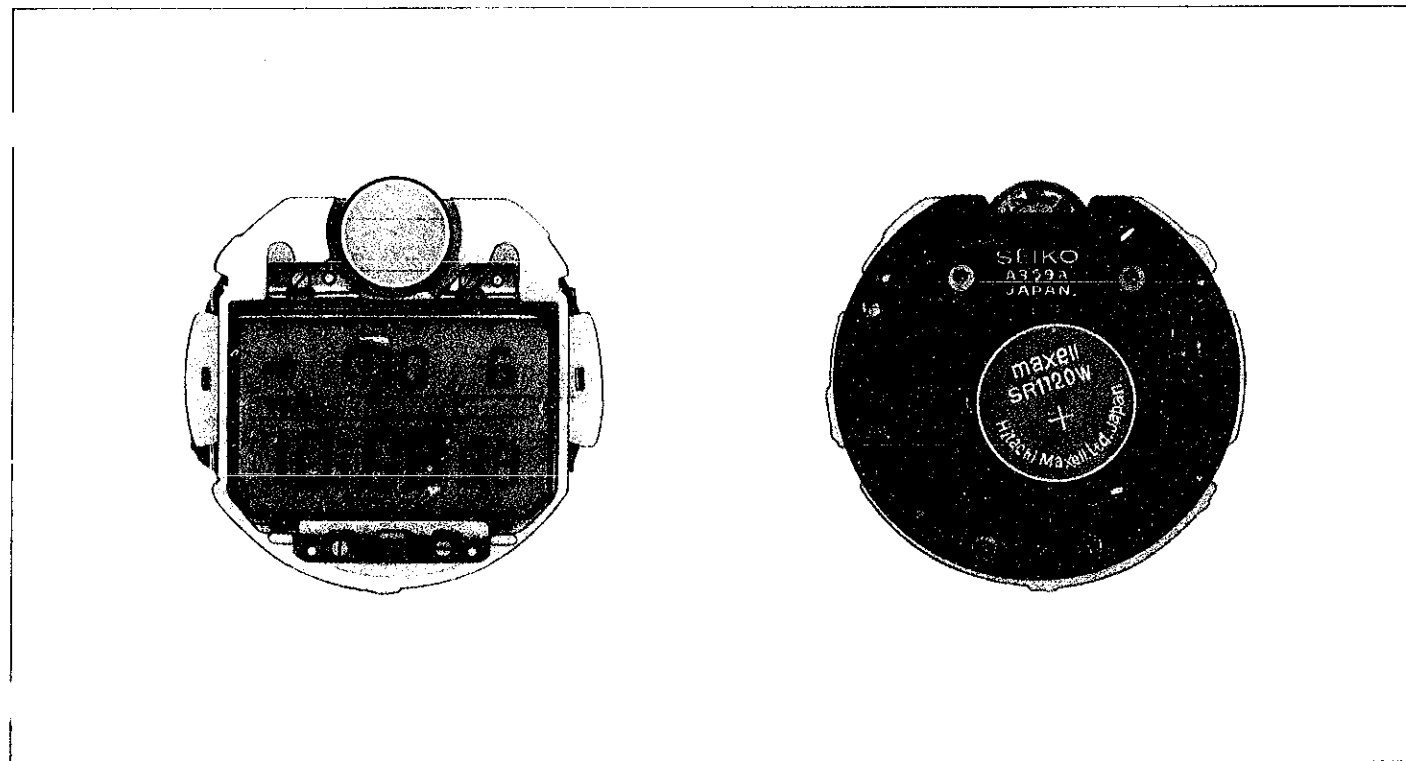
Part numbers in light letters are not shown in photos.

TECHNICAL GUIDE

SEIKO

DIGITAL QUARTZ

CAL. A359A



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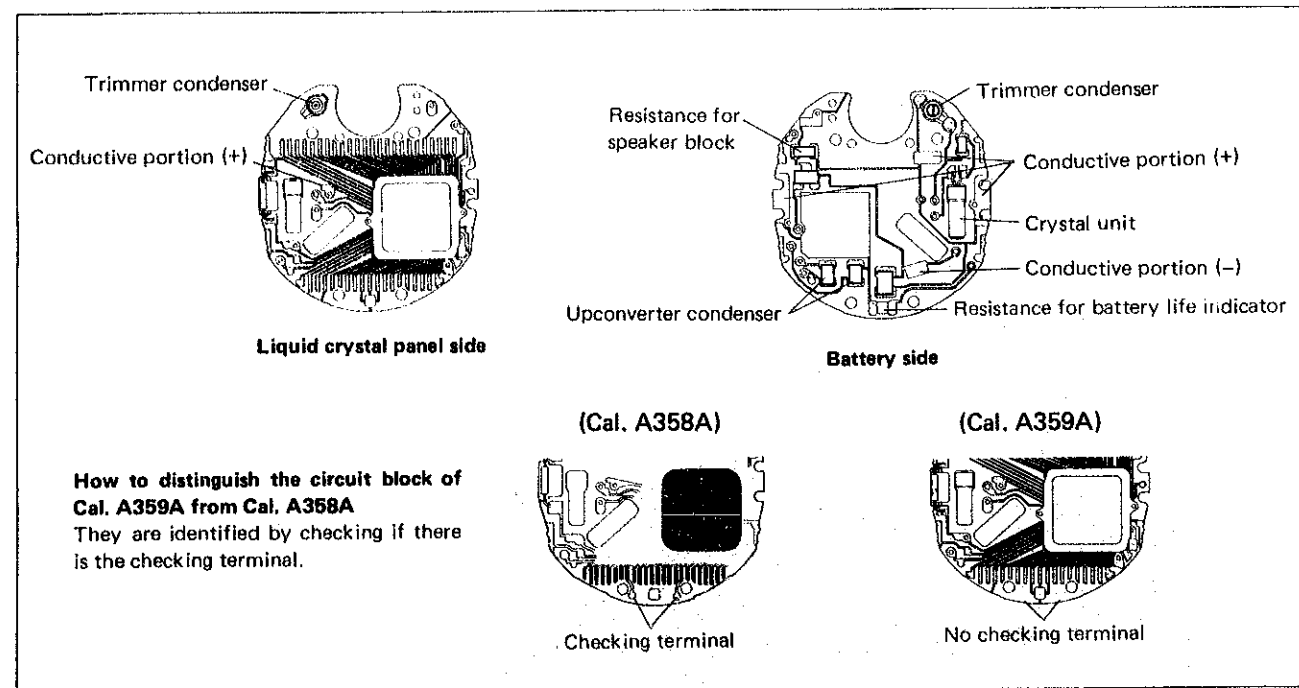
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IV. RELATIONSHIP BETWEEN THE SEGMENT (LIQUID CRYSTAL PANEL ELECTRODE) AND THE C-MOS-LSI OUTPUT TERMINAL	3

The repairing procedures for Cal. A359A are the same as those for Cal. A358A with some exceptions. In repairing this calibre, refer to the "Technical Guide of Cal. A358A" and the "SEIKO WATCH CASING GUIDE" by calibre.

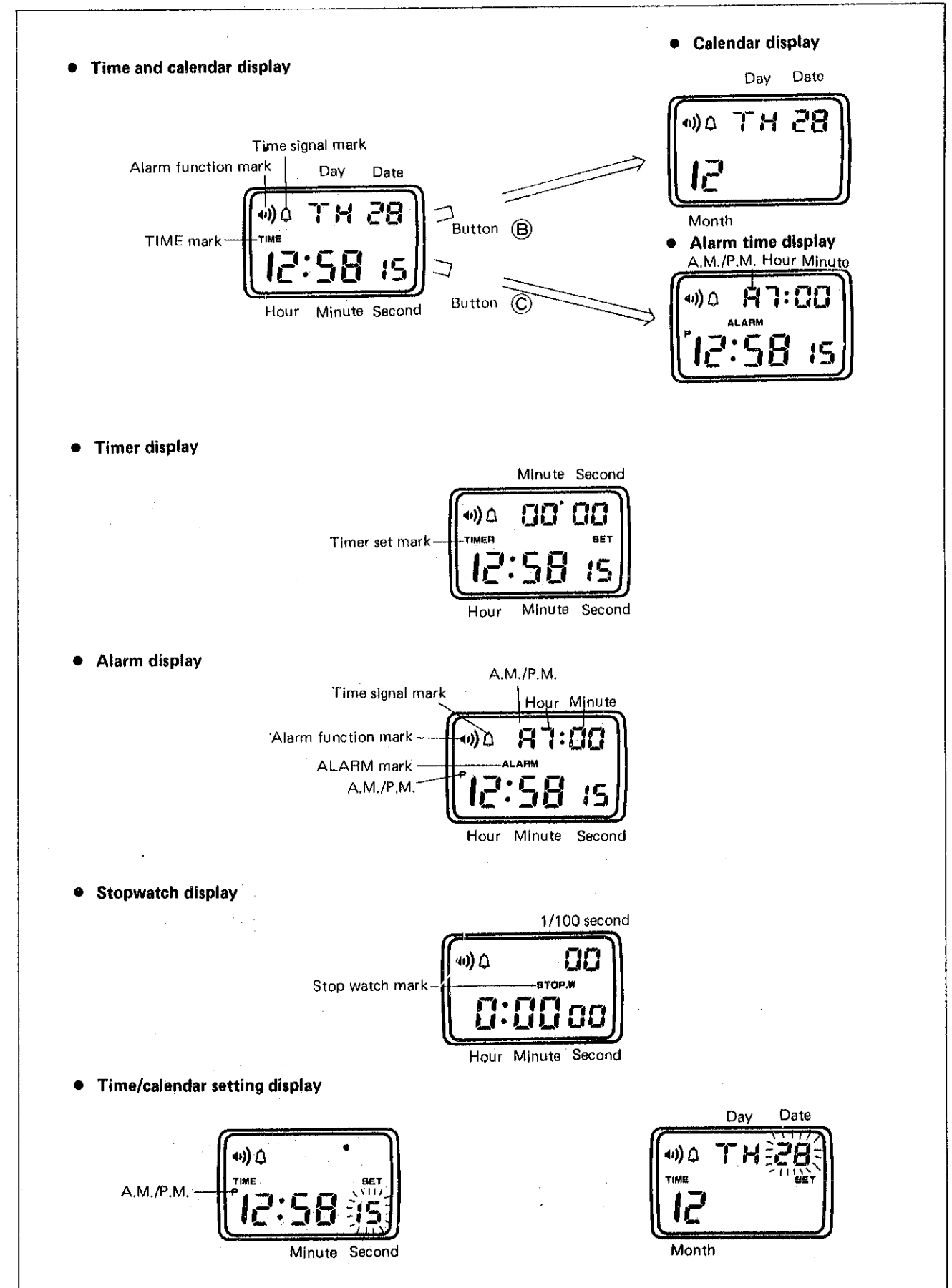
I. SPECIFICATIONS

Item	Cal. No	A359A
Display medium		Nematic Liquid Crystal, FEM (Field Effect Mode)
Display system		<ul style="list-style-type: none"> • Time and calendar function • Timer function • Alarm time setting function • Stopwatch function • Time/calendar setting function
Additional mechanism		<ul style="list-style-type: none"> • Alarm test system • Time signal • Illuminating light • Battery life indicator • Pattern segment checking system (also transmits the signal for measuring the daily rate.)
Loss/gain		Loss/gain at normal temperature range Mean monthly rate : less than 10 seconds (Annual rate : less than 2 minutes)
Casing diameter		φ30.2 mm
Height		4.8 mm (5.0 mm with battery)
Liquid crystal driving system		Multiplex driving system
Regulation system		Trimmer condenser
Measuring gate by Quartz Tester		Any gate is available.
Battery power		U.C.C. 391 or Maxell SR1120W Battery life is approximately 2 years. Voltage: 1.55V

II. STRUCTURE OF THE CIRCUIT BLOCK



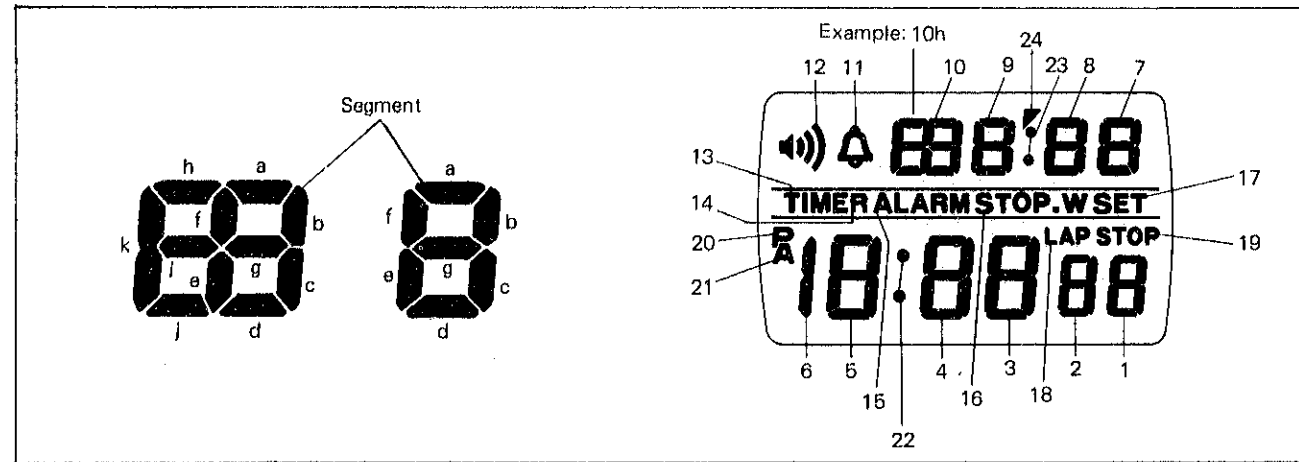
III. DISPLAY FUNCTION



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

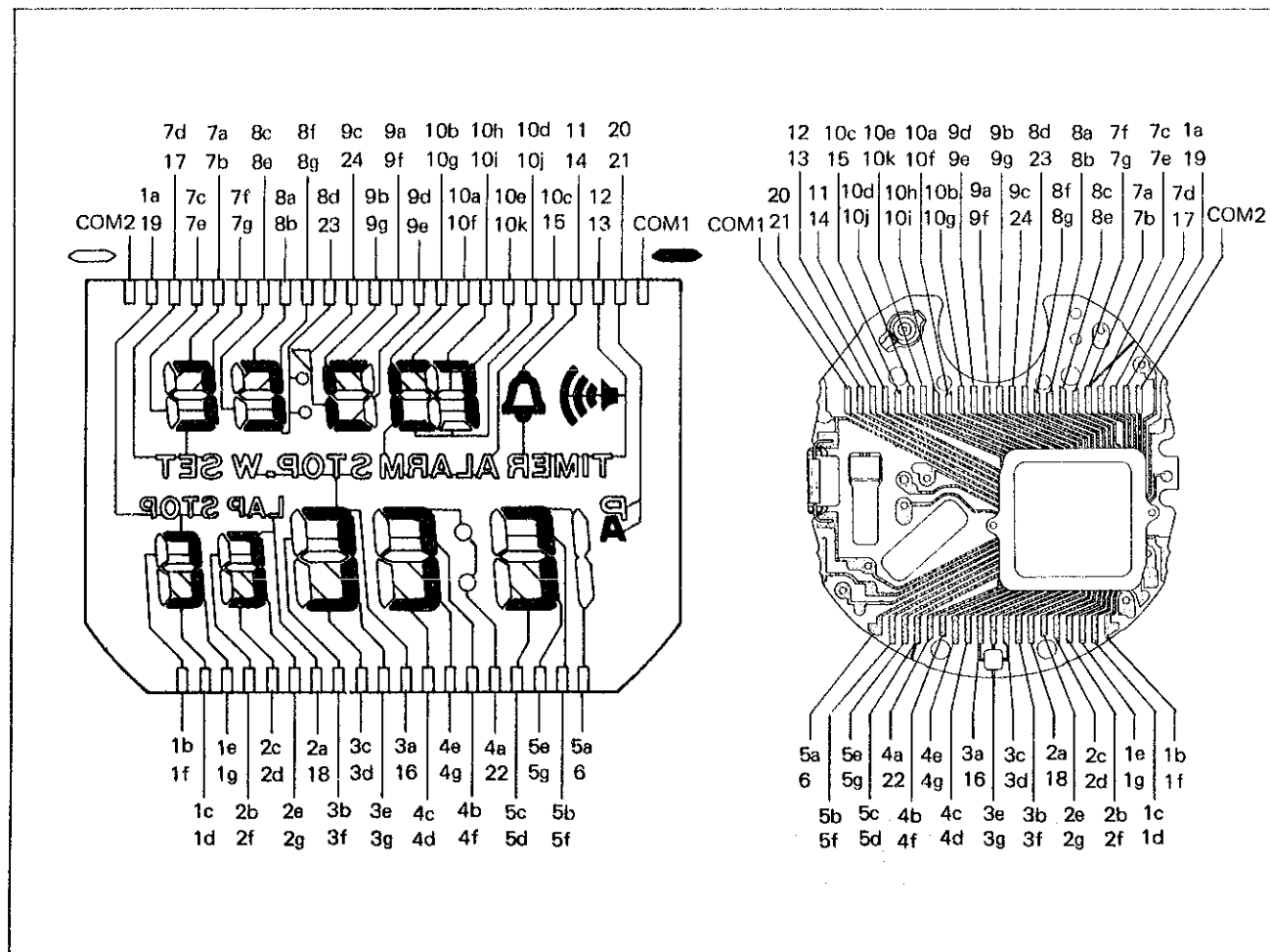
A complete knowledge of how the segment (Liquid Crystal Panel Electrode) works with the C-MOS-LSI output terminal will provide the proper procedures for checking and adjustment.

- Designation of segment



- Relationship between the segment and the C-MOS-LSI output terminal

The liquid crystal panel electrode is connected electrically with each segment which forms a digital figure as shown in the illustration on the panel pattern below. (The panel pattern can be seen if the panel is slightly tilted and looked at in an angular position.) Also, the liquid crystal panel electrode is connected electrically with the C-MOS-LSI output terminal by the connector.



All procedures of Disassembling, Reassembling, Checking and Adjustment are completed.