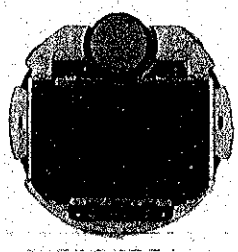
SEIKO

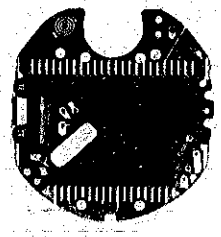
DIGITAL QUARTZ

Cal. A354A

PARTS LIST

Cal. A354A





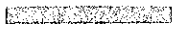
4001 532

4242 530

4242 531

4245 530

4313 530



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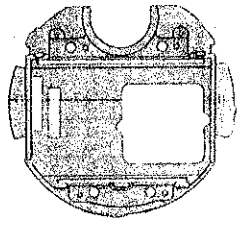

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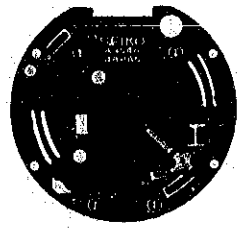

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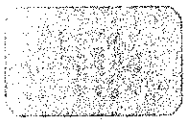
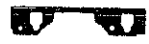
4510 550



4521 580

4530 649

4540 530



4540 860

4580 530

☆Maxell SR1120W

T

022 493

2/1

☆⇨Please see remarks on the next page.

Cal. A354A

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 : Hour, minute, second and the monthly calendar of the present month (the present date is flashing). date is flashing). Month and year is displayed by depressing the button.
Monthly calendar display : Month, year and date for the designated month are displayed. It can be displayed for any desired month within the 200 years period from January, 1900 to December, 2099.
Alarm display : Can be set to ring at any desired hour and minute.
Display medium : Nematic Liquid Crystal, FE-Mode
Regulation system : Trimmer condenser
Time signal and quarter-hour signal : Time signal can be set to ring every hour on the hour and the quarter-hour signal can be set to ring every fifteen minutes.
Illuminating light : Illuminates the display in the dark by depressing the light button.
Battery life indicator : All the digits in the display begin flashing.

PART NO.	PART NAME	PART NO.	PART NAME
4001 532	Circuit bloock		
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 538	Circuit cover		
4510 550	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		
☆U.C.C. 391 ☆Maxell SR1120W	Silver oxide battery		

Remarks :

Battery

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

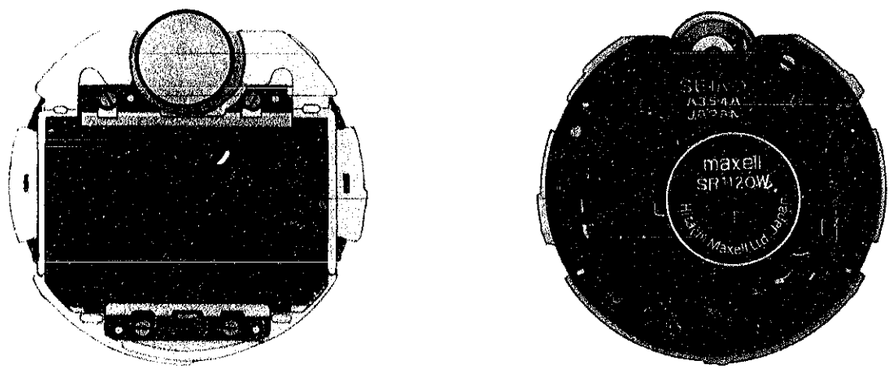
☆ ⇨ Please see remarks.
Part numbers in light letters are not shown in photos.

TECHNICAL GUIDE

SEIKO

DIGITAL QUARTZ

CAL. A354A



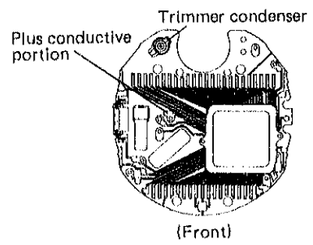
CONTENTS

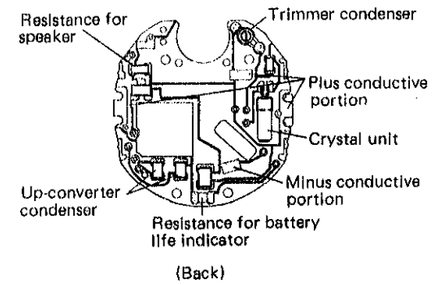
The reparing procedures of Cal. A354A are the same as those of Cal. A358A with some exceptions. Refer to the Technical Guide of Cal. A358A and the "SEIKO WATCH CASING GUIDE" for repairing.

I. SPECIFICATIONS

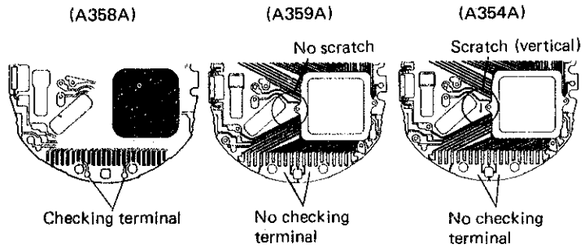
Item / Cal. No.	A354A
Display medium	Nematic Liquid Crystal, FEM (Field Effect Mode)
Display system	• Time/calendar function • Alarm setting function • Monthly calendar function • Time/calendar setting function
Additional mechanism	• Battery life indicator (All the digits in the display begin flashing when the battery life nears its end.) • Illuminating light • Alarm test system • Time signal (It can be set to ring every hour on the hour.) • Quarter-hour signal (It can be set to ring every fifteen minutes.) • Monthly calendar display device • Pattern segment checking system (also transmits the signal of 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	ϕ30.2mm
Height	4.8mm (5.0mm with battery)
Driving system	Multiplex driving system
Regulation system	Trimmer condenser
Measuring gate by Quartz Tester	Any gate is available.
Battery	U.C.C. 391, Maxell SR1120W or Toshiba SR1120W Battery life is approximately 2 years. Voltage: 1.55V

II. STRUCTURE OF CIRCUIT BLOCK



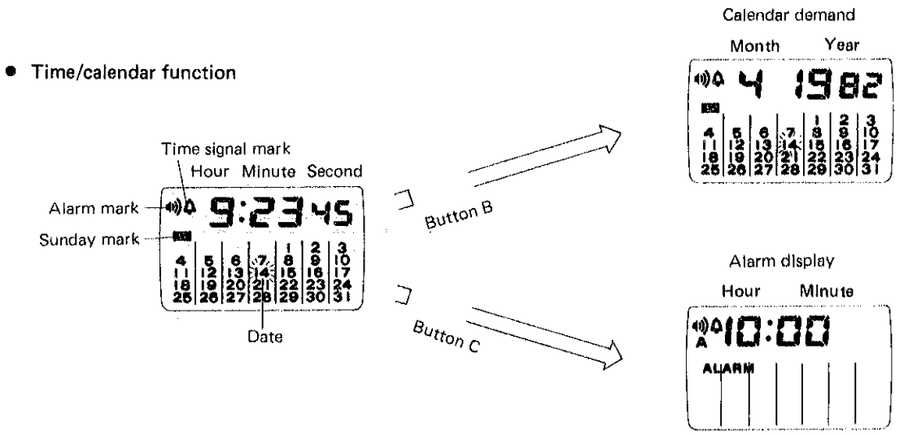


* How to identify Cal. A358A, Cal. A359A and Cal. A354A
They are identified by checking if there is the checking terminal or if there is an identification line.

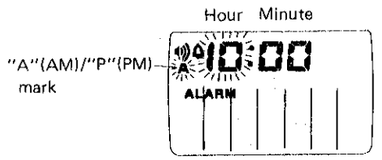


III. DISPLAY FUNCTION

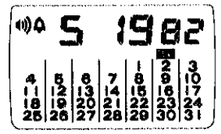
- Time/calendar function



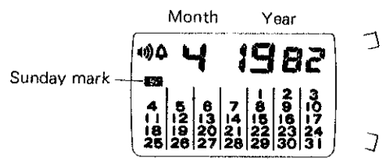
- Alarm setting function



How to display the monthly calendar in the future
(It is available up to December, 2099.)

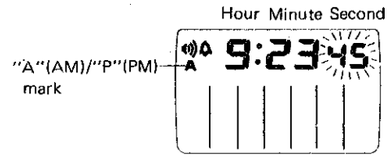


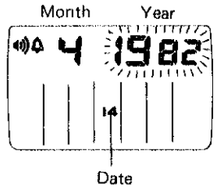
- Monthly calendar function



How to display the monthly calendar in the past
(It is available back to January, 1900.)

- Time/calendar setting function

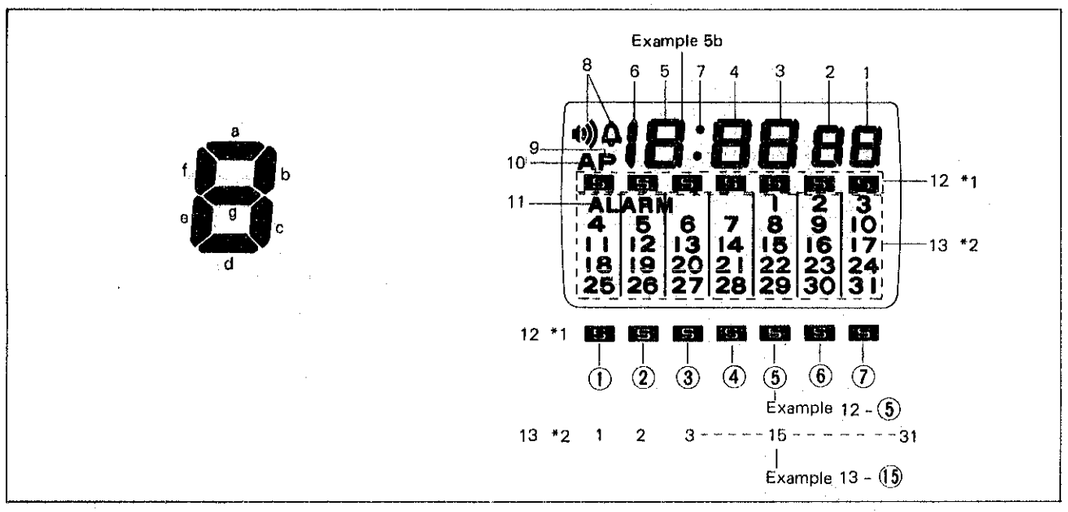




IV. RELATIONSHIP BETWEEN THE SEGMENT (LIQUID CRYSTAL PANEL ELECTRODE) AND THE C-MOS-LSI OUTPUT TERMINAL

A complete knowledge of how the segment (Liquid Crystal Panel Electrode) works with tne 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 of 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.