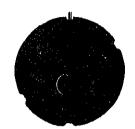
# SEIKO

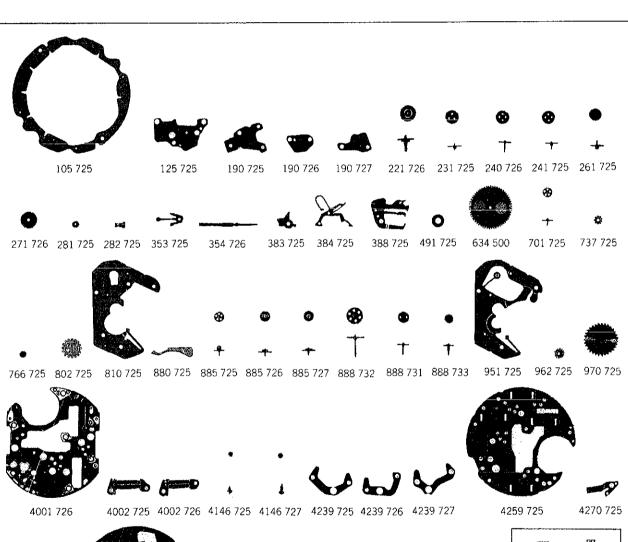
QUARTZ

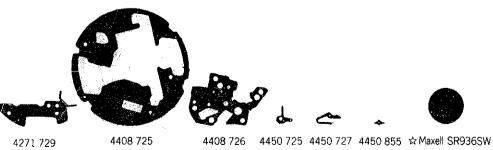
Cal. 7A48A

### Cal. 7A48A









022 234

022 424

022 235

⅔

022 286 022 341

## Cal. 7A48A

#### Characteristics

Casing diameter:

∮ **29**.0 mm

Maximum height:

4.4 mm without battery

Jewels :

15 i

Frequency of quartz crystal oscillator : 32,768 Hz (Hz=Hertz . . . . Cycles per second) Driving system : Step motor (2 poles)

Regulation system : Step motor (2 poles)

Regulation system : Rotary step switch

Train wheel setting

Date and moon phase display

Chronograph

Chronograph test system

Battery life indicator

PART NO.	PART NAME	PART NO.	PART NAME		
105 725	Dial seat	4146 727	Step rotor B (for second)		
125 725	Train wheel bridge	4239 725	Rotor stator A (for time)		
190 725	Chronograph second bridge	4239 726	Rotor stator C (for chronograph		
190 726	Chronograph minute bridge		minute)		
190 727	Chronograph 5/100 second bridge	4239 726	Rotor stator D		
221 726	Center wheel & pinion		(for chronograph 5/100 second)		
231 725	Third wheel & pinion	4239 727	Rotor stator B (for chronograph second)		
240 726	Small second wheel				
241 725	Fourth wheel & pinion	4259 725	Anti-magnetic shield plate		
261 725	Minute wheel	4270 725	Battery connection (-)		
271 726	Hour wheel	4271 729	Battery connection (+)		
281 725	Setting wheel	4408 725	Circuit block spacer		
282 725	Clutch wheel	4408 726	Setting wheel spacer		
353 725	Friction spring for second counting	4450 725	Change-over switch lever Switch lever		
254 794	wheel	4450 855	Rotary step switch		
354 726	Winding stem Setting lever	022 235	Dial screw		
383 725	Yoke	022 234	Moon phase jumper screw		
384 725 388 725	Setting lever spring	022 286	Anti-magnetic shield plate screw		
491 725	Dial washer	022 286	Battery connection (+) screw		
634 500	Moon phase indicator	022 341	Chronograph second bridge screw		
701 725	Fifth wheel & pinion	022 424	Train wheel bridge screw		
737 725	Date corrector setting wheel	022 424	Chronograph minute bridge screw		
766 725	Intermediate minute wheel	022 424	Chronograph 5/100 second bridge		
802 725	Date driving wheel		screw		
810 725	Date jumper	022 424	Coil block screw		
880 725	Day corrector	022 424	Setting lever spring screw		
885 725	Second-counting intermediate wheel	011 151	Lower hole jewel for 5/100 second		
885 726	Minute-counting intermediate wheel		counting wheel		
885 727	5/100 second-counting intermediate wheel	011306	Upper hole jewel for minute counting wheel		
888 732	Second counting wheel	011 306	Upper hole jewel for 5/100 second		
888 731	Minute counting wheel		counting wheel		
888 733	5/100 second counting wheel	011 542	Upper hole jewel for fifth wheel		
951 725	Moon phase jumper	011542	Upper hole jewel for 5/100 second counting intermediate wheel		
962 725	Intermediate wheel for calendar	011549			
070 705	Corrector	011542	Lower hole jewel for 5/100 second		
970 725	Date star Circuit block	011552	counting intermediate wheel Lower hole jewel for step rotor		
4001 726		011 552	Lower hole jewel for step rotor		
4002 725 4002 725	Coil block A (for time indication)  Coil block B (for chronograph second)		(chronograph minute)		
4002 726	Coil block C (for chronograph minute)	011 552	Lower hole jewel for step rotor		
4002 726	Coil block D		(chronograph second)		
7001 / 60	(for chronograph 5/100 second)	011 552	Lower hole jewel for step rotor		
4146 725	Step rotor A (for time)		(chronograph 5/100 second)		
4146 725	Step rotor C (for chronogroph minute)	011 568	Upper hole jewel for rotor stator		
4146 725	Step rotor D (for 5/100 second)	011300	Opportione jewer for fotor stator		

 $<sup>\</sup>label{eq:problem} \Leftrightarrow \text{Please see remarks on the reverse page}.$  Part numbers in light letters are not shown in photos.

### Cal. 7A48A

PART NO.	PART NAME	PART NO.	PART NAME		
011 568	Upper hole jewel for rotor stator		screw (B)		
	(chronograph minute)	☆027 144	Tube for anti-magnetic shield		
011 568	Upper hole jewel for stee rotor		plate (C)		
	(Chronograph second)	027 146	Tube for chronograph second bridge		
011 568	Upper hole jewel for step rotor	☆027 153	Tube for train wheel bridge A		
	(Chronograph 5/100 second)	027 153	Tube for chronograph minute bridge		
011 739	Upper hole jewel for center minute wheel	027 153	Tube for chronograph 5/100 second bridge		
023 337	Tube for setting lever spring screw	☆027 154	Tube for anti-magnetic shield plate		
023 351	Guide tube for setting lever spring	il i	screw (D)		
	screw	027 758	Setting lever pin		
☆027 138	Tube for train wheel bridge B	027 768	Switch lever axle		
027 139	Tube for setting lever spring screw	027 760	Tube for setting lever		
027 140	Tube for coil block screw	027 761	Switch pin		
☆027 141	Tube for anti-magnetic shield plate screw (A)	027 769	Pin for intermediate wheel for calendar correction		
027 141	Tube for battery connection (+)	027 770	Pin for calendar corrector setting		
1	screw (A)		wheel		
☆027 143	Tube for anti-magnetic shield	027 966	Date star pin		
	plate (B)	☆ Maxell SR936SW	,		
027 143	Tube for battery connection (+)	☆U.C.C. 394	Silver oxide battery		

#### Remarks:

#### Winding stem

\$354 726 ·····Refer to the photograph on the front page.

·····Refer to the illustration below.

If the combination of the winding stem and case is unknown, check the case number and refer to "SEIKO Quartz Casing Parts Catalogue" to choose a corresponding winding stem.

#### Tube for train wheel bridge (A), (B), Tube for anti-magnetic shield plate (A), (B), (C)

ŵ027 138

☆027 141

**≈027 143** 

**☆027 144** 

☆027 153

**☆027** 154



**☆027 138** 



**☆027 141** 



**☆027 143** 



**☆027 144** 



☆027 153



≈027 154

**B**attery

☆ Maxell SR936SW )

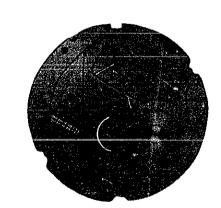
☆ U.C.C. 394

......The substitutive battery might be added to the applied battery in the future. In that case, please refer to separate "BATTERY LIST FOR SEIKO QUARTZ WATCHES."

# TECHNICAL GUIDE

# SEIKO

**CAL. 7A48A** 





#### CONTENTS

II. CALENDARS	1
III. DISASSEMBLING, REASSEMBLING, AND LUBRICATING	2
IV. CHECKING AND ADJUSTMENT	3

#### I. SPECIFICATIONS

Item	Cal. No.	7A48A	~~~
Time Indication		Hour, minute and small second hands	
Additional mechanism		<ul> <li>Stopwatch function (Minute, second and 5/100 second hands)</li> <li>Calendar (date) function</li> <li>Lunar calendar function</li> <li>Counter function</li> <li>Electronic circuit reset switch</li> <li>Train wheel setting device</li> <li>Battery life indicator</li> </ul>	
Loss/gain		Monthly rate at normal temperature range: less than 15 seconds	
	Outside diameter	φ31.1 mm	
Movement	Casing diameter	φ29.0 mm	
size	Height	4.4 mm without battery	j'
Regulation s	ystem	Rotary step switch	Ţ,
Measuring ga	•	Use the 10-second gate.	
Battery		U.C.C. 394, Maxell SR936SW Battery life is approximately 2 years. Voltage: 1.55V	
Jewels		15 jewels	

#### II. CALENDARS

#### Date

The date is indicated by the date hand. Read the numeral or the dot between numerals on the dial that the date hand points to.

#### How to adjust the date

- 1. Pull the crown out to the 1st click position.
- 2. Turn the crown clockwise and set the date hand.

#### Moon phase

The phases (waxing and waning) of the moon are displayed by those shapes which a circle (the moon) and the dual-mountain-shaped opening on the dial combine to form.

The illustration on the right does not show the exact shapes of the moon.

Age of the moon	0 (New Moon)	7	15 (Full Moon)	22
Moon phase				

Moon phase

#### How to adjust the moon phase

Refer to a newspaper for the age of the moon. Round off fractions if any.

Ex.: Age of the moon:  $25.4 \rightarrow 25.0$ 

- 1. Pull the crown out to the 1st click position.
- 2. Turn the crown counterclockwise and set the moon on the position as shown in the illustration on the right.
- 3. Then advance the moon to the 25th step position by turning the crown counter-clockwise.

#### Age of the moon: 1

Moon phase



(The moon peers slightly over the left moon.)

#### III. DISASSEMBLING, REASSEMBLING, AND LUBRICATING

#### • List of the screws used (Calendar mechanism only)

Shape	Part No.	Name	Shape	Part No.	Name
	022 235	Dial screw (2 pcs.)	T	022 234	Moon phase jumper screw (3 pcs.)

#### Lubricating:

Moebius A, Normal quantity

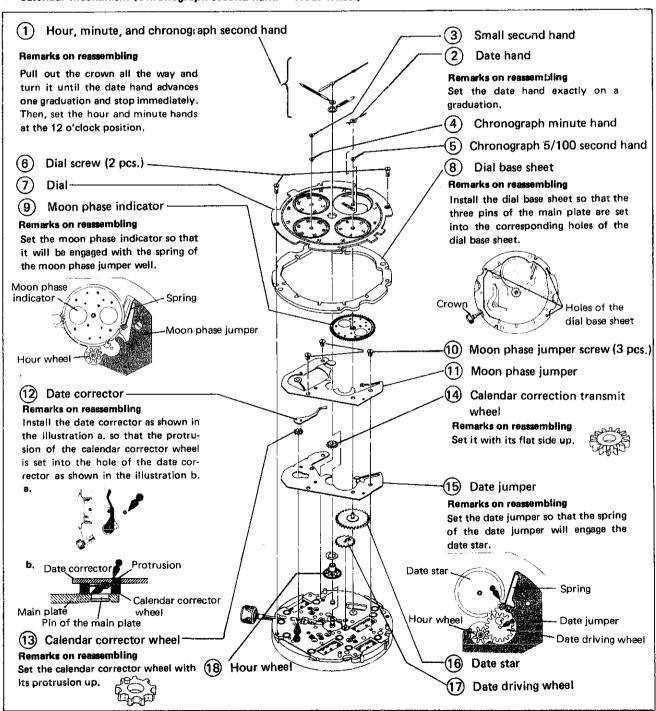
Disassembling procedures Figs.:

) → (18

Reassembling procedures Figs.:

18) →

● Calendar mechanism (Chronograph second hand ~ Hour wheel)



#### IV. CHECKING AND ADJUSTMENT

• The explanation here is only for the particular points of Cal. 7A48A. Refer to the "TECHNICAL GUIDE, Cal. 7A28A" and the "TECHNICAL GUIDE, GENERAL INSTRUCTION" for SEIKO Analogue Quartz for details.

#### **Procedure**

#### **CHECK SETTING AND CALENDAR MECHANISM**

Note: Do not adjust the calendars while the

calendars malfunction.

watch indicates around 10:00 p.m. to

around 4:00 a.m., since it may cause the

• With the crown at the 1st clock position, check to see if the date hand can be adjusted by turning the crown clockwise.

#### Result:

Normal: The date hand advances by one gradua-

Defective: The date hand does not advance by one

graduation.

Proceed to check the date star cogs.

Neither cog break nor scratch: Check the date

corrector.

Either cog break or scratch: Replace the date star

with a new one.

• With the crown at the 1st click position, check to see if the moon phase indicator can be adjusted by turning the crown counterclockwise.

#### Result:

Normal: The moon phase indicator advances

by one step.

Defective: The moon phase indicator does not

advance by one step.

Proceed to check the moon phase indicator cogs. Neither cog break nor scratch: Check the calendar

correction transmit wheel,

Either cog break or scratch: Replace the moon

phase indicator with a new one.

• With the crown at the 2nd click position, turn it to advance the hour and minute hands to see if the date hand and the moon phase indicator are geared to change properly.

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