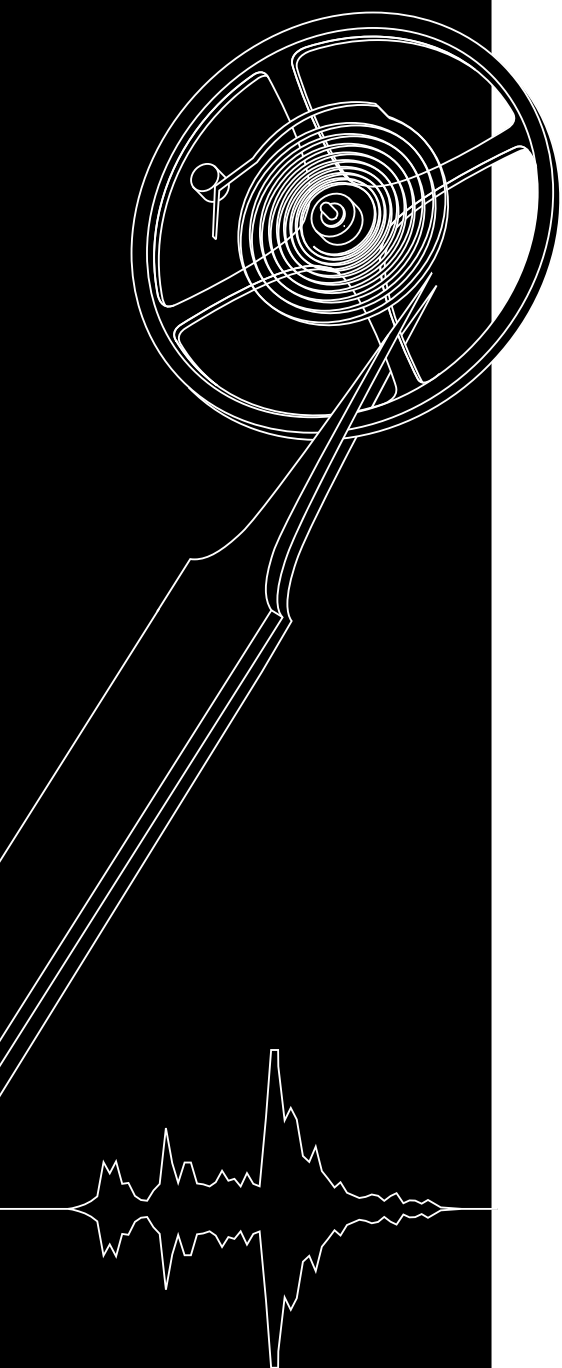


**SEIKO**

# WATCH REPAIRING TOOLS 2016



# Quartz Tester QT-2400

QT-2400 is a digital rate measuring device which contains a microcomputer.

This quartz tester measures high-precision quartz watches such as annual-equation watches to an accuracy of 1/1000 sec.

The task is easily handled by this device because the reference quartz oscillator has an accuracy of  $10^{-8}$



## [Major functions and features]

- The rates of quartz watches are measured and displayed up to an accuracy of 1/1000 sec. The measuring range is  $\pm 9.999$  sec/day
- The rates of most SEIKO quartz watches can be measured.
- The front panel is large and easy to read thanks to a fluorescent display tube and buttons using LED.
- This model is lighter than the previous tester (QT-2300).

## [Specifications]

Measuring time (gate time)	Quartz(analog and digital) 1,2,4,5,6,10,20,30,60,120 sec
Display units	1/1000 sec/day
Measuring range	$\pm 9.999$ sec/day
Measuring accuracy	1/1000 sec/day or less, standard quartz oscillator total accuracy $\pm 1 \times 10^{-8}$
Power consumption	30W or less
Operating temperature range	0°C to 50°C, 20 - 80%RH
Main body dimensions	W : 184mm H : 140mm D : 151mm
Weight	Main body 1.3kg, Microphone 0.3kg

# Water resistance watch tester

## Water Pressure Tester

**S-480S**

### SEIKO Water Resistance Tester

Aerial-Compression Underwater-Decompression system  
Up to three watches can be tested simultaneously.

- **No water is admitted into the watch even if its sealing is defective.**  
A watch to be tested is pressurized in the air using the mini gas cartridge (98ml, carbon dioxide gas) for exclusive use and then depressurized in the water to avoid entry of water into the watch.
- **Direct visual verification**  
The watch can be observed directly through a transparent acrylic water tank. If it is defective, you will see bubbles being sent up from it.
- **Easy to operate**  
Attach a watch to the internal operating lever, and fix it in the head space of the tank. Using the mini gas cartridge, pressurize the watch to a specified value in the head space, and then plunge the watch into the water by pressing the internal operating lever. Then, depressurize the tank to check whether the watch leaks or not.

#### SPECIFICATIONS

Overall dimensions	: $\phi$ 150mm 320mm In height (max 430mm when the internal operating lever is raised)
Inner volume.	: approx. 885ml
Shell	: Welded stainless steel pipe, w/spacer for reducing the gas consumption
Inner lining	: Transparent acrylic resin casting Inside diameter : $\phi$ 70mm Thickness : 10mm Height : 215mm
Capacity	: Up to three watches can be tested simultaneously. (The spacer cannot be used when two watches or more are tested simultaneously)
Pressure resistance	: More than 15 kgf/cm <sup>2</sup>
Regulator	: Operating pressure range... 0-9.0 $\pm$ <sub>0.3</sub> <sup>1.0</sup> kgf/cm <sup>2</sup> (100m, 10 bar)
Pressure gauge.	: 15 kgf/cm <sup>2</sup> max.
*Mini gas cartridge (not included to S-480S)	: Carbon dioxide gas, 98 ml for 40-50 operations (when the spacer is used with a new cartridge).
Safety system	: Bursting disk, pressure regulator (primary, secondary), Joint (w/check valve), mini gas cartridge (w/safety sealing cap)
Cartridge tube	: 4mm, Nylon tube, w/quick joint
Total weight	: approx. 8.0 kg (not including mini gas cartridge and water)



#### SPARE PARTS

**S-480-02**

**Cartridge Tube**

**S-480-03**

**Gasket**

**S-480-04**

**Watch Hanger**

#### IMPORTANT

Mini gas cartridge is not included to S-480S SEIKO Water Resistance Tester as exportation of this item is prohibited. Mini gas cartridge will be available from NTG CO. LTD. (<http://www.ntg.co.jp/>). We suggest that you contact them by email or fax.

**NIPPON TANSAN GAS CO., LTD.**

12-15, 3-CHOME AOI ADACHI-KU, TOKYO 120-0012, JAPAN

Attention: International Sales Department Sales & Marketing Division

Fax : +81-3-3880-6829

Email: Tsutomu.Haraguchi@ntg.co.jp

Naomi.Nakamura@ntg.co.jp

as of March 2011

# Multi tester and battery tester

## Digital Multi-Tester

### S-860 SEIKO Digital Multi-Tester



This new multi tester (for watches only) is developed as the successor of current model S-850. This innovative tester can measure more easily and more accurately the battery voltage, resistant of the coil block or light segmentation, and the current consumption of the circuit block or movement module.

#### SPARE PARTS

S-860-01

Test Probes

S-860-02

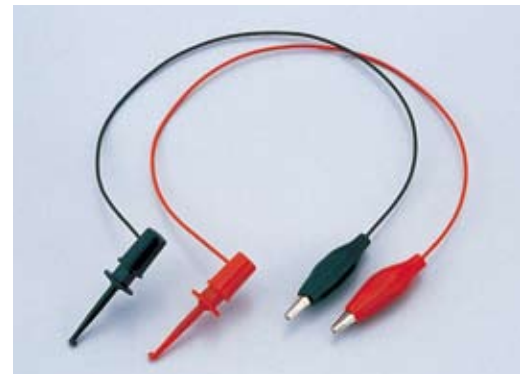
Spare Fuse

#### Features

- **Power-supply function is built-in inside its body**  
It can supply the voltage of Silver oxide battery and lithium battery for watches, and made it needless to use the outer power supply when current consumption measurement. (It also can use the outer power-supply as usual)
- **Current consumption measurement in accordance with the second-hand step**  
Gate time can be sent according to second-hand steps. It made it possible to direct measurement for the watches which second-hand steps other than every second.  
(Example: 20 seconds steps watches) It was impossible for other conventional testers.
- **Accurate low-current measurement**  
It can measure as small accuracy as  $1/100 \mu\text{A}$
- **Improvement in handling**  
In any measurement, it became unnecessary to change the wiring, which sometimes felt burdensome.

### S-842

#### Alligator Clip Adapter for Multi-Tester



## Battery Tester

### A-MC73101

#### Battery Tester



#### Features

- You can measure the battery voltage without taking the battery out from the blister package.
- Pocket size & ideal for carrying
- Surface is protected by clear front cover

# Charger

## Energy Supplier

### YT02A-A & YT02A-E

#### SEIKO Kinetic Energy Supplier



Note: This tool is for the service centers and the dealers who service and/or sell the SEIKO Kinetic watches but NOT FOR CONSUMERS.

The tool numbers YT02A-A and YT02A-E are determined by the plug type of the AC adapter. When you order the Kinetic Energy Supplier, be sure to check the plug type.

### Features

- SEIKO YT02A is a battery charger to charge SEIKO KINETIC watches from an external power source.
- No need to remove the watchband when charging.
- The position of the crown for each model is shown by illustration for the best positioning of the watch for charging.
- Equipped with timer function to power the charger down automatically after a certain time of operation (for 30 minutes or 3 hours and a half).

#### YT02A-A Plug type A



(For USA)

#### YT02A-E Plug type E



(For Europe etc.)

### SPECIFICATIONS

Drive system	: Alternating current magnetic field transmission
Dimensions	: D135 x W125 x H32mm
Weight	: 190 g
Operating temperature range	: 0°C to 40°C (for storage -5°C -±50°C )
Rating	: Direct current 9V (for SEIKO AC adaptor only)
Timer time	: Approximately 30 minutes or approximately 3 hours and a half can be selected by a sliding switch
AC Adapter 7530029	: Input : AC 100 - 240V 50/60 Hz Output : DC9V 0.5A

# Tools for movement repair

## Watchmakers Eyeglasses

**A-MS15710-02**

Watchmakers Eyeglasses 2x



**A-MS15710-03**

Watchmakers Eyeglasses 3x



## Screwdrivers

**A-MS39000**

Slotted Head(-) Screwdrivers Assortment  
(Set of 5 Pieces)



⊖2, 1.6, 1.4, 1, 0.7mm

**A-MS3360A**

Slotted Head(-) Screwdriver 1.6MM



⊖1.6mm

**S-921**

Phillips Head(+) Screwdriver 0.98MM



⊕ φ0.98

**A-KDK19**

Phillips Head(+) Screwdriver 2.0MM



⊕ φ2.0

# Tools for movement repair

## Tweezers

**A-TP13AA**

Tweezers (Stainless Steel)



**A-E02201**

Tweezers (Antimagnetic Steel)



**A-SA001**

Tweezers (Polypropylene)



**A-SA905**

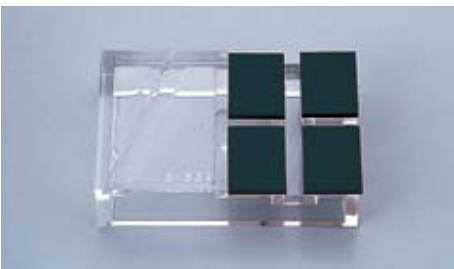
Tweezers (Bamboo)



## Movement Holders

**S-682**

SEIKO Universal Movement Holder



This Universal Movement Holder is made of plastic so as not to damage a movement, and is used for repairing any type of movement.

**S-680**

Exclusive Movement Holder Set for Cal. 4F and 8F Series



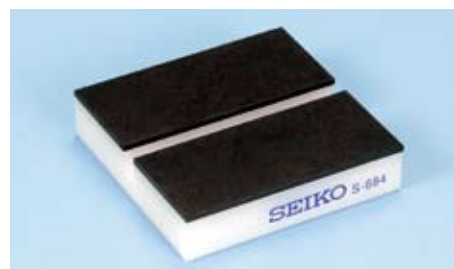
**S-683**

SEIKO Movement Holder Round Type



**S-684**

SEIKO Movement Holder Square Type

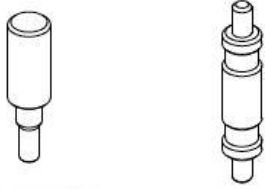


# Tools for movement repair

## Movement Holders

### 7D48A-JP

Positioning Pin Set (Set of 2 Pins) for Cal. 7D Series



Positioning Pin A      Positioning Pin B

(The actual size of the above parts are about 2~3mm)

### H-G001

Dummy Plate for Cal.5D88



How to use the plate is shown on the Parts list/  
Technical Guide Cal.5D88

## Pin Vice And Other Tools

### A-MS12000

Pin Vices for Pins up to 2.0 MM Diameter



### S-912

Battery Remover for Cal.4F and 8F Series



## Cleaning Tools

### A-MS26810

Rubber Blower With Brush



### S-903

SEIKO Hyper Finger Cots (Set of 10 Pieces)



### A-KTZ003

Anti-Static Work Mat



200x300mm

### H-Q002-\*

\* Size Code L or M (see the chart below for the sizes and code numbers)

Single-Use Finger Cot (1bag=1000pcs.)



Size	Tool Code	
	L size	M size
	H-Q002-L	H-Q002-M
Length (mm)	65	65
Width (mm)	29	27
Thickness (mm)	0.13	0.13



# Tools for movement repair

**H-Q001-W\* & H-Q001-B\***

\* Size Code

**ESD coat (with cap)**

(see the chart below for the sizes and code numbers)



Very small components of a watch movement are affected by dust/lint. Since a wristwatch is a precision instrument, fine dust/lint and rust are fatal.

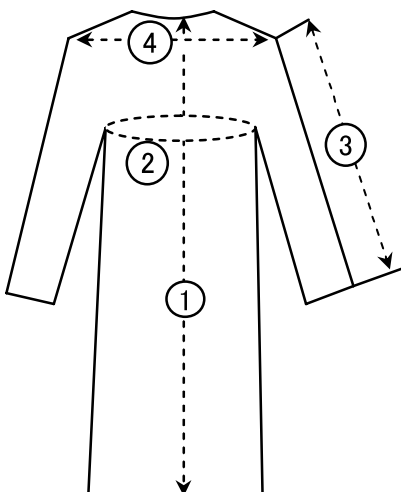
Watchmakers preferably wear an ESD coat and cap before walking into the workshop for the purpose of keeping a dust/lint, particle-free and antistatic controlled working area.

Note: \* Minimum order quantity=12 pcs.

## Features

- Colour : White / Blue
- Stand collar, Zip front
- Cap : Free Size
- Prevent static electricity
- Material : Nylon
- About washing : Water only/No detergent

## Measurements



Size	Center back length	Chest	Sleeve length	Shoulder width	Fit for users in height (cm)	Tool code	
	(cm)	(cm)	(cm)	(cm)		White	Blue
	①	②	③	④			
S	87	108	53	43	156-162	H-Q001-WS	H-Q001-BS
M	90	114	55	45	162-168	H-Q001-WM	H-Q001-BM
L	95	120	57	47	168-174	H-Q001-WL	H-Q001-BL
XL	100	126	59	49	174-180	H-Q001-WXL	H-Q001-BXL
XXL	105	132	61	51	180-186	H-Q001-WXXL	H-Q001-BXXL

Note:

\* When you order the ESD coat, after making sure of the size and color, please use the tool code numbers listed above

\* Minimum order quantity=12 pcs. Combination of different sizes in one color per order is acceptable

\* If embroidery, such as a company name etc. is required, please consult with Seiko Hong Kong Ltd., Parts Department.

# Tools for exterior repair

## Casing Tools

### S-261

#### SEIKO Easy Snap Caseback Opener



The opener and case vise are combined into one unit, making it easy to open all kinds of snap casebacks. With the use of the posts with/without caps and rotatable case vise, the caseback can be opened without removing the band.

#### SPARE PARTS

##### S-261-01

Spare Blades  
(Set of 2 Blades)



##### S-261-02

Spare Posts  
without Cap  
(Set of 2 Pieces)



##### S-261-03

Spare Posts  
with Cap  
(Set of 2 Pieces)



### A-MS19400

#### Case Opener for Screw Caseback



Used to remove the screw-type case back and bayonet-type case back.



### S-212

#### SEIKO Multiple Case Holder



**Suitable for chronograph watches.**

Adjustable chucks reducing the risk of damaging crowns and push buttons.

**Speedy**

The battery can be changed quickly without removing the band.

**Non-slip base cover**

Allows for use with one hand, even on a glass surface.

A pin pusher is also provided

#### SPARE PARTS

##### S-212-01

Bracelet Sizing  
Bit Sets  
(Set of 2 Bits)

##### S-212-02

Post Covers  
(Set of 4 Pieces)

##### S-212-03

Rubber Base

# Tools for exterior repair

## Casing Tools

**S-282**

SEIKO Snap Back Case Opener  
(Large, Pink)



Used to remove the case back with a wide opening notch.

**S-283**

SEIKO Snap Back Case Opener  
(Medium, Yellow)



Used to remove the case back with a narrow opening notch.

**S-284**

SEIKO Snap Back Case Opener  
(Small, Red)



Used to remove the small case back with a narrow opening.

**A-MS30610**

Snap Back Case Opener (Blade)



**S-822**

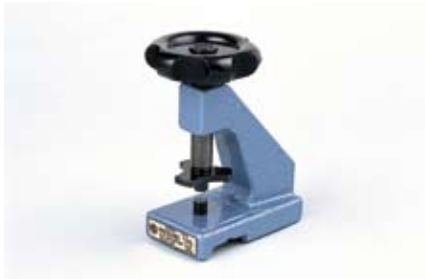
SEIKO Battery Hatch Opener



Used to open and close the battery hatch.

**A-F20288**

Screw Type Pressing Tool



\*It is used for fastening the case back and glass attachment/removal.

\*When using it, it needs to be attached to the plastic holder of A-F249530.

**A-F249530**

11 pcs. of plastic holder for A-F20288



# Tools for exterior repair

## Hand Setting And Removing Tools

**A-MS21100**

Hand Remover



**A-HNHR01**

Hand Remover



## Band Sizing Tools

**S-926**

SEIKO Multiple Band Sizing Tool



Sizing of various types of bracelets including the C-ring type bracelet, which requires much time to adjust, can be easily done with this tool.

### SPARE PARTS

**S-92601**

Bit Set  
(Set of 6Bits)



**S-92602**

Blade Set  
(Set of 4 Blades)



**S-92603**

Bit Set  
(Short type, Set of 3Bits)



**S-92604**

Bracelet Fixing Attachment



**S-918B**

SEIKO Band Sizing Tool



### SPARE PARTS

**S-91801**

Bit Set (2 A Type & 1 B Type Pins)



# Tools for exterior repair

## Band Sizing Tools

**S-914**

Bracelet Adjusting Screwdriver



Used to remove and fix the bracelet or to adjust the length.

**A-F219900**

Pin Extractor Double-head Type



**A-MS46000**

Spring Bar Tool



**A-SA14301**

Awl (for Sizing Clip Spring Type Bracelets)



### SPARE PARTS

**S-914-01**

Blade Set  
(Set of 5 Blades)



**S-914-02**

Exclusive Oscillating Weight Fixing Bit  
for Cal.4S Series (Attachment to S-914)



**A-F26825**

Spring Bar



**A-F26825 F**

Spare Lead of A-F26825 (Regular size)

**A-F26825FF**

Spare Lead of A-F266825 (Fine size)



# Tools for exterior repair

## Band Sizing Tools

**S-919**

Pliers  
(for Sizing Clip Spring Type Bracelets)



**S-927**

Band Sizing Tool  
(for Expansion Type Bracelets)



## Cleaning Tools

**A-MY910**

Nylon Cloth



**A-MYW07**

Chamois-Leather (Sheep skin)



**A-KRA03**

Nylon Brush



# Return Container

**H-X001**

## ANANTA Exclusive Return Container



Dimensions D95 x W93 x H83mm

When maintenance service is needed for the high-class watches including ANANTA, this container protects the watch from shock during transportation. The customer will be satisfied that his/her watch has been handled gently and safely.



The container includes a cushion.

# Consumables

## Watch Oils And Greases

### AO-2

#### Low-viscosity Watch Oil (AO-2)



Lubricants for pivots and holes of rotor.

(substitution for MS-F)

### AO-3

#### Medium-viscosity Watch oil (AO-3)



Lubricants for train wheels and escapement.

(substitution for MS-A, MS-V)

\* AO oils have superior temperature characteristics and they are also chemically stable.

### S-3

#### SEIKO Watch Grease



Oil for slipping attachment of automatic winding watches that use self-lubricating mainspring.

### S-4

#### SEIKO Watch Grease



Lubricants for pawl lever and second reduction wheel of automatic winding mechanism, mainspring.

### S-6

#### SEIKO Watch Grease



Lubricants for pawl lever and second reduction wheel of automatic winding mechanism, mainspring.



# Consumables

## Adhesives

**S-314**

SEIKO UV Cure Watch Glass Adhesive



No hardener required.

**S-312**

SEIKO Silicone Adhesive for Screws



## Silicon Greases

**A-MY451**

SEIKO Silicon Grease 500,000cs



Silicon oil for gaskets.

**S-916**

SEIKO Greasing Pad



Silicon oil can be applied on gaskets without touching your fingers.

# Demagnetizer and magnetometer

## Demagnetizer

### A-MS37500

#### Demagnetizer



#### Features

- Auto power-off recovery switch
- Thermo sensor switch (80°C - Off, 65°C - On)

#### SPECIFICATIONS

Power source	: AC 100V (50/60HZ)
Power consumption	: 90W (for coil) 5w (for lamp)
Overall dimensions	: φ80X70m/m(250g)

## Magnetometer

### A-EDTM20

#### Magnetometer



#### Features

- Fully portable, compact and lightweight magnetometer/gaussmeter weighing only 300g.
- The miniaturized sensor(φ8mm)is ideal for watch applications.
- Measures DC fields.
- Indicates the remaining battery capacity.

#### SPECIFICATIONS

Measurement Method	: Hall effect type
Scale of the Meter	: Dual scale of ±2 and ±4 mT
Measurement Range	: Can be changed
Over-range	: Is protected by the internal over- range protection circuit
Polarity	: Can be automatically changed
Battery Voltage	: Is indicated on the CELL CHECK of the A-EDTM20
Operating Temperature Range and Relative Humidity	: 0 °C to 35 °C and 80% RH or less (non-condensing)
Storage Temperature Relative Humidity	: -10 °C to 50 °C and 70% RH or less (non-condensing)
Current Consumption	: 7 mA
Overall Dimensions	: 80(W)X150(H)X50(D)mm

# Paper for stopwatches

## S-950

Thermal Paper (5 rolls)  
for Stopwatch with Printer



stop-watch printer / thermal roll paper for Cal. S149 (stop-watch unified with printer), Cal.SP12(printer)

## S-951

Thermal Paper (3 rolls)  
for Stopwatch with Printer



stop-watch printer / thermal roll paper for Cal. S149 (stop-watch unified with printer), Cal.SP12(printer), use with paper holder SVAZ007