

DUO-DISPLAY QUARTZ

Cal. H601 / H801

ALARM CHRONOGRAPH

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You are now the proud owner of a SEIKO Duo-Display Watch Cal. H601/H801. For best results, please read the instructions in this booklet carefully before using your SEIKO Duo-Display Watch. Please keep this manual handy for ready reference.

Vous voici l'heureux propriétaire d'une montre SEIKO double affichage Cal. H601/H801. Pour en obtenir d'excellentes performances, veuillez lire attentivement les explications suivantes avant d'utiliser la montre et conserver cette brochure pour toute référence ultérieure.

Usted es ahora un honrado poseedor del reloj SEIKO de indicación doble Cal. H601/H801. Para obtener de él óptimos resultados, lea las instrucciones de este panfleto con cuidado antes del uso de su reloj SEIKO de indicación doble. Guarde este manual para pronta referencia.

Sie sind nun stolzer Besitzer einer SEIKO Zwei-Anzeige-Uhr Kal. H601/H801. Bevor Sie nun Ihre SEIKO Zwei-Anzeige-Uhr in Gebrauch nehmen, lesen Sie bitte die Anleitungen in diesem Heftchen sorgfältig durch, damit Sie die Uhr optimal nutzen können. Verwahren Sie dieses Heftchen, um sich jederzeit wieder informieren zu können.

Siete ora in possesso di un orologio SEIKO a doppio quadrante Cal. H601/H801. Per ottenerne i migliori risultati, leggete attentamente le istruzioni contenute in questo manuale prima di iniziare ad utilizzare l'orologio. Conservate poi il manuale per ogni eventuale futuro riferimento.

Você pode sentir-se orgulhoso de possuir um Relógio SEIKO Duo-Display Cal. H601/H801. Para obter os melhores resultados, leia atentamente as instruções contidas neste opúsculo antes de usar o seu Relógio SEIKO Duo-Display. Conserve este manual para consultas futuras.

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SEIKO DUO-DISPLAY QUARTZ

Cal. H601, H801

FEATURES

SEIKO Duo-Display Alarm Chronographs Cal. H601 and Cal. H801 combine an analogue and digital display and feature alarm and stopwatch functions.

ANALOGUE DISPLAY

■ Time

Three hand indication

DIGITAL DISPLAY

■ Time

■ Calendar

Calendar automatically adjusts for odd and even months except February of leap years.

■ Alarm and hourly time signal

Alarm and hourly time signal are provided.

■ Stopwatch

Measures up to 60 minutes.

■ Changeover between 12-hour and 24-hour indications

■ Tachymeter

Some models are provided with a tachymeter with a graduated dial.

■ Illuminating light

The light illuminates the digital calendar and time displays in the dark.

Note: Be sure to set the digital time first (see page 7). Then, set the analogue time (see page 9).

DIGITAL DISPLAY

There are two buttons and a crown as indicated in the illustration below.

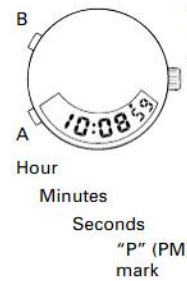
CALENDAR Display



The display changes with each press of "A" in the CALENDAR display.

- | | | |
|----------------|---|-----------------------|
| 1. Press once | → | TIME |
| 2. Press again | → | STOPWATCH |
| 3. Press again | → | ALARM |
| 4. Press again | → | TIME/CALENDAR SETTING |
| 5. Press again | → | CALENDAR |

DIGITAL TIME/CALENDAR SETTING



1. Press "A" to show the TIME/CALENDAR SETTING display, and HOUR, MINUTES and SECONDS digits all flash.
2. Press "B" repeatedly to select the digits (flashing) to be adjusted in the following order.



3. Press "A" to reset the SECONDS to "00" or to set the other digits.
* If "A" is kept pressed, the digits advance quickly.

4. Press "B" to show the TIME/CALENDAR SETTING display. To return to the CALENDAR display, press "A".

* If the watch is left untouched with digits flashing, the display will automatically return to the CALENDAR display after 1 to 2 minutes.

- Notes:**
1. When the flashing SECONDS digits read any number from "30" to "59" and "A" is pressed, one minute is added.
 2. When setting the HOUR, check that AM/PM is set properly in the 12-hour indication. Only "P" (PM) is displayed. For the AM setting, there is no indication.
 3. When the digital time is set in the 24-hour indication, the alarm time will also be displayed in the 24-hour indication.

ANALOGUE TIME SETTING

- Before setting the analogue time, be sure to set the digital time.



Crown

1. Pull out the crown when the second hand is at the 12 o'clock position.* The second hand stops on the spot.
* If the crown is of the screw lock type, unscrew the crown by turning it counterclockwise, and then pull it out.
2. Turn the crown to set the desired hour and minutes. When setting the minute hand, advance it a few minutes ahead and then turn it back to the exact time.
3. Push the crown back in to the normal position in accordance with a time signal.*
* If the crown is of the screw lock type, screw it in completely by turning it clockwise while pressing it.

ALARM AND HOURLY TIME SIGNAL

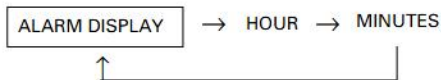
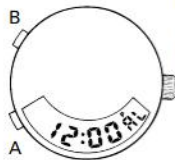


3. Press "A" to set the digits.
* If "A" is kept pressed, the digits advance quickly.
4. Press "B" to return to the ALARM display.
* If the watch is left untouched in the ALARM display or with digits flashing, the display will automatically return to the CALENDAR display after 1 to 2 minutes.

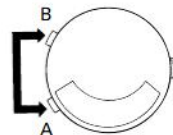
Note: Check that AM/PM is set properly in the 12-hour indication. Only "P" (PM) is displayed. For the AM setting, there is no indication.

Alarm time setting

1. Press "A" to show the ALARM display, and then press "B" to activate the ALARM SETTING function. HOUR digits flash.
2. Press "B" repeatedly to select the digits to be adjusted in the following order.



Alarm and hourly time signal engagement



With each press of both "A" and "B" in the CALENDAR or TIME display, the alarm and hourly time signal marks appear and disappear in the following order.

🔊 Alarm

🔔 Hourly time signal

1	🔊🔔	Both engaged
2	🔔	Hourly time signal engaged
3	🔊	Alarm engaged
4		Neither engaged

* The alarm can be tested by pressing "A" and "B" at the same time for several seconds.
The alarm rings for 20 seconds. To stop it manually, press "A" or "B".

STOPWATCH

Press "A" to show the STOPWATCH display.

The stopwatch can measure up to 60 minutes. After 60 minutes, it will start counting again from "00'00"00".

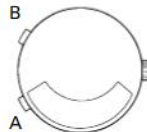
- Before use, be sure to press "B" to reset the digits to "00'00"00".



Minutes

Seconds

1/100 second



Standard measurement

To start	:	Press "B"
To stop	:	Press "B"
To reset	:	Press "B"

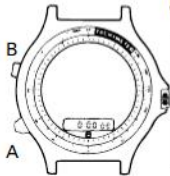
Note: When measuring a long period of time, press "A" to return the STOPWATCH to the CALENDAR or TIME display after the stopwatch starts. This will prevent any possible mistaken operation.

HOW TO USE THE TACHYMETER

(For those models which include a tachymeter with a graduated dial)

Note: Some models have a dial with 12 graduations. To read, multiply the number shown by 5.

Ex. "3" → "15"
"6" → "30"



First, press button A to show stopwatch display.
Press button B to start and stop.
Set "60" on the rotating bezel to the 12 o'clock position.

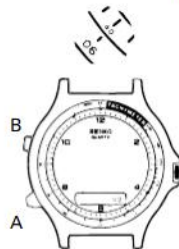
The tachymeter can be used for the following purpose.

- (1) To measure the hourly average speed of a vehicle with the stopwatch display to determine how many seconds it takes to go one kilometer (or mile).

Ex. 1)

The tachymeter scale gives the average speed per hour using a maximum of 60 seconds as the standard. For instance, if it takes 40 seconds to go one kilometer (or mile), look at "40" on the dial and the figure outside the "40" indicates 90 on the tachymeter scale. This means the average speed of the automobile is 90 kilometers (or miles) per hour.

$$90 \text{ (40 seconds position)} \times 1 \text{ km} = 90 \text{ Km/h (mph)}$$



Ex. 2)

If the measuring distance is extended to two kilometers (or miles) or shortened to 500 meters (or half a mile), double the scale figure or reduce it by half, respectively. The tachymeter is particularly suited for use in a rally, speedway or circuit race.

$$90 \text{ (40 seconds position)} \times 2 \text{ km} = 180 \text{ Km/h (mph)}$$

$$90 \text{ (40 seconds position)} \times 0.5 \text{ km} = 45 \text{ Km/h (mph)}$$

- (2) To measure work accomplished in an hour.
The tachymeter is extremely useful in calculating factory operation efficiency and measuring machine production capacity.

Ex. 1)

For example, if it takes 20 seconds to complete one job, the figure outside "20" on the dial indicates 180 on the tachymeter scale. This means that 180 jobs will be completed in one hour.

$$180 \text{ (20 seconds position)} \times 1 \text{ job} = 180 \text{ jobs per hour}$$

Ex. 2)

If 15 jobs are accomplished in 20 seconds, multiply the scale figure of 180 (showing 15 jobs in 20 seconds) by 15 and the work amount in one hour is 2700.

$$180 \text{ (20 seconds position)} \times 15 \text{ jobs} = 2700 \text{ jobs per hour}$$

ILLUMINATING LIGHT

Pressing "B" in the TIME or CALENDAR display illuminates the display for easy viewing in the dark.

BATTERY CHANGE

The miniature battery which powers your watch should last approximately 2 years. However, because the battery is inserted at the factory to check the function and performance of the watch, its actual life once in your possession may be less than the specified period. When the battery expires, be sure to replace it as soon as possible to prevent any possible malfunction. For battery replacement, we recommend that you contact an **AUTHORIZED SEIKO DEALER** and request **SEIKO SR920W** battery.

Note: If the light is used for more than 5 seconds a day, and/or the alarm for more than 20 seconds a day, the battery life may be less than the specified period.

TO PRESERVE THE QUALITY OF YOUR WATCH

■ WATER RESISTANCE

- **Non-water resistance**

If "WATER RESISTANT" is not inscribed on the case back, your watch is not water resistant, and care should be taken not to get it wet as water may damage the movement. If the watch becomes wet, we suggest that you have it checked by an AUTHORIZED SEIKO DEALER or SERVICE CENTER.

- **Water resistance (3 bar)**

If "WATER RESISTANT" is inscribed on the case back, your watch is designed and manufactured to withstand up to 3 bar, such as accidental contact with splashes of water or rain, but it is not designed for swimming or diving.

- **Water resistance (5 bar)***

If "WATER RESISTANT 5 BAR" is inscribed on the case back, your watch is designed and manufactured to withstand up to 5 bar and is suitable for swimming, yachting and taking a shower.

- **Water resistance (10 bar/15 bar)***

If "WATER RESISTANT 10 BAR" or "WATER RESISTANT 15 BAR" is inscribed on the case back, your watch is designed and manufactured to withstand up to 10 bar/15 bar and is suitable for taking a bath and shallow diving, but not for scuba diving. We recommend that you wear a SEIKO Diver's watch for scuba diving.

- * Before using the water resistance 5, 10, or 15 bar watch in water, be sure the crown is pushed in completely.

Do not operate the crown and buttons when the watch is wet or in water.

If used in sea water, rinse the watch in fresh water and dry it completely.

- * When taking a shower with the water resistance 5 bar watch, or taking a bath with the water resistance 10 or 15 bar watch, be sure to observe the following:

- Do not operate the crown or push the buttons when the watch is wet with soapy water or shampoo.

- If the watch is left in warm water, a slight time loss or gain may be caused. This condition, however, will be corrected when the watch returns to normal temperature.

NOTE:

Pressure in bar is a test pressure and should not be considered as corresponding to actual diving depth since swimming movement tends to increase the pressure at a given depth. Care should also be taken on diving into water.

■ TEMPERATURES

Your watch works with stable accuracy between a temperature range of 5°C and 35°C (41°F and 95°F).

Temperatures over 60°C (140°F) may cause battery leakage or shorten the battery life.

If the watch is left in direct sunlight for a long time, the display may become black, but this condition will be corrected when the watch returns to normal temperature.

Do not leave your watch in very low temperatures below -10°C ($+14^{\circ}\text{F}$) for a long time since the cold may cause:

- a. a slight time loss or gain.
- b. the change of digits to become slow.
- c. the alarm sound to become faint.
- d. the display light to dim.

However, the above conditions will be corrected when the watch returns to normal temperature.

■ SHOCKS & VIBRATION

Light activities will not affect your watch, but be careful not to drop your watch or hit it against hard surfaces, as this may cause damage.

■ MAGNETISM

The analogue unit of your watch will be adversely affected by strong magnetism, though the digital unit will not be affected. Keep your watch away from close contact with magnetic objects.

■ CHEMICALS

Be careful not to expose the watch to solvents (e.g., alcohol and gasoline), mercury (i.e., from a broken thermometer), cosmetic spray, detergents, adhesives or paints. Otherwise, the case, bracelet, etc. may become discolored, deteriorated or damaged.

■ STATIC ELECTRICITY

The IC (Integrated Circuit) used in your watch will be affected by static electricity which may disturb the display. Keep your watch away from close contact with object such as TV screens which emit strong static electricity.

■ CARE OF CASE AND BRACELET

To prevent possible rusting of the case and bracelet caused by dust, moisture and perspiration, wipe them periodically with a soft dry cloth.

■ PRECAUTION REGARDING CASE BACK PROTECTIVE FILM

If your watch has a protective film and/or a sticker on the case back, be sure to peel them off before using your watch. Otherwise, perspiration getting in under them may rust the case back.

■ PERIODIC CHECK

It is recommended that the watch be checked once every 2 to 3 years. Have your watch checked by an AUTHORIZED SEIKO DEALER or SERVICE CENTER to ensure that the case, crown, buttons, gasket and crystal seal remain intact.

■ LIQUID CRYSTAL PANEL

The normal life expectancy for a liquid crystal panel is approximately 7 years. After that it may decrease in contrast, becoming difficult to read. Please contact your AUTHORIZED SEIKO DEALER or SERVICE CENTER if you wish to have a new panel fitted (guaranteed one year).

SPECIFICATIONS

- 1. Frequency of crystal oscillator 32,768 Hz (Hz = Hertz ... Cycles per second)
- 2. Loss/gain (monthly rate) Less than 15 seconds at normal temperature range (5°C ~ 35°C) (41°F ~ 95°F)
- 3. Operational temperature range -10°C ~ +60°C (14°F ~ 140°F)
Desirable temperature range
of use 0°C ~ +50°C (32°F ~ 122°F)
- 4. Driving system Step motor
- 5. Analogue display system
Time display Three hands
- 6. Digital display system
Calendar display Month, date and day of the week.
Time display Hour, minutes, seconds and "P" mark.
Stopwatch display Minutes, seconds and 1/100 second.
The stopwatch can measure up to 60 minutes.
Alarm display Hour, minutes, "P" mark and "AL" mark.

- 7. Digital display medium Nematic Liquid Crystal, FEM (Field Effect Mode)
- 8. Battery SEIKO SR920W, 1 piece
- 9. IC (Integrated Circuit) C-MOS-LSI, 1 piece
Bipolar IC, 1 piece
- 10. Illuminating light

* The specifications are subject to change without prior notice, for product improvement.