株式会社　服部時計店
本　　社　〒104 東京都中央区京橋2丁目6番21号　☎(03)563-2111

A628(DZP)

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A628(DZP)

SEIKO
セイコーデジタル

太陽電池付
アラームクロノグラフ

A628(DZP)

取扱説明書

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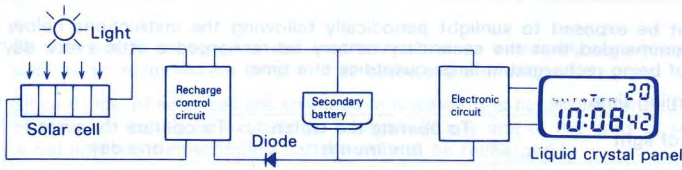
■ FEATURES OF THE SEIKO DIGITAL CAL. A628

1. Solar cell: It lengthens the battery life of the secondary battery.
2. Time and calendar function: Hour (12-hour or 24-hour indication), minute, second, date and day of the week. "A" (A.M.)/"P" (P.M.) and month are displayed only when the specific setting is made. The calendar adjusts automatically for odd and even months (except February of leap years).
3. Alarm function: The alarm can be set to ring at any desired hour and minute every day.
4. Stopwatch function: Hour, minute, second, 1/100 second up to 12 hours, lap mark and stopwatch function mark.
5. Hourly time signal: The time signal can be set to ring every hour on the hour with a single "peep".
6. Alarm test: The alarm will ring by depressing button "C" when the colon isn't flashing in the time and calendar display.
7. Water resistant: When "WATER RESISTANT" is shown on the back of your watch case, the watch is water resistant.
8. Illuminating light: Illuminates the display in the dark.

9. Battery:
   Primary battery..... Silicon solar cell
   Secondary battery ..... Use a miniature battery, Maxell XR9527W.
10. Recharge control circuit: Over-voltage recharging control device.

SEIKO QUARTZ WATCH WITH SOLAR POWERED CELL



● Solar cell

The solar cell on the dial converts light energy such as sunlight energy into electrical energy, and the electrical energy thus obtained charges a silver oxide battery through the recharge control circuit.

The silver oxide battery supplies constant electrical energy to the module to operate the watch. The recharge control circuit functions to operate the watch by controlling the amount of energy needed to recharge the silver oxide battery from the solar cell. Thus the recharge control circuit controls recharging and over-charging most effectively.

BATTERY CHARGING

Before the watch is first used, it should be charged for 4—5 hours by exposing the solar cell to sunlight. If the watch is frequently used in a room or covered by the cuff of a jacket or a shirt, to maintain the charge, the watch face (solar

cell) must be exposed to sunlight periodically following the instructions below. It is recommended that the secondary battery be recharged a little every day instead of being recharged in large quantities at a time.

Recharging time

Type of light	To operate the watch one month	To operate the watch one day
Direct sunlight (Fine day)	2~3 hours	4~6 minutes
Outside on a cloudy day	4~8 hours	8~16 minutes
At a window (Fine day)	15 hours	30 minutes

- Be sure to recharge the secondary battery by exposing the watch face (solar cell) to sunlight for 4 — 5 hours in autumn and spring as it is difficult to recharge the battery in winter.
- Be sure not to recharge under a light that has an extremely high temperautre such as an incandescent lamp. It may cause a malfunction.
- Since 6 pcs. of solar cell are arranged in a series, it is necessary for all the units of the solar cell to be exposed to sunlight. (If any one of the units of solar cell is not lighted, the secondary battery will not be recharged.)
- If the secondary battery is recharged after the watch stops operating, it will require a longer recharging time of 8 — 10 hours by exposing the solar cell to direct sunlight since a small amount of recharging will not operate the watch.

* Be sure not to recharge under a light that has an extremely high temperature such as an incandescent lamp. It may cause a malfunction.
* Since 6 pcs. of solar cell are arranged in a series, it is necessary for all the units of the solar cell to be exposed to sunlight. (If any one of the units of solar cell is not lighted, the secondary battery will not be recharged.)
* If the secondary battery is recharged after the watch stops operating, it will require a longer recharging time of 8—10 hours by exposing the solar cell to direct sunlight since a small amount of recharging will not operate the watch.

BATTERY CHANGE

The secondary battery (Maxell SR 9527W) which powers your watch should last approximately seven years by recharging periodically.
However, because it is inserted at the factory, the actual life of the battery once in your possession may be less than the specified period. Be sure to replace the battery as soon as possible to prevent any possible malfunction and we recommend that you contat an AUTHORIZED SEIKO DEALER.

Note: If use of the light is more frequent than 5 times a day and the alarm is used more than once a day, the battery life may be shortened to less than the specified period.

CARE OF YOUR WATCH

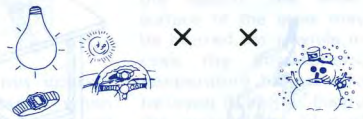
VARIATION OF TEMPERATURE

This watch is so adjusted that it will maintain stable time accuracy in the normal temperatures (5°C ~ 35°C) when it is worn on a wrist.

Your watch contains a highly precise electronic circuit and crystal oscillator, and to maintain its high accuracy, you should not subject it to violent shocks or extreme temperatures. Be sure to avoid recharging the secondary battery under the conditions mentioned below.

1. Recharging the secondary battery by exposing the watch face to a light with a high temperature such as incandescent lamp.
2. Recharging the secondary battery by placing the watch on the dash-board of a car parked under extremely intense sunlight.
3. Recharging the secondary battery by placing the watch directly on the hot sand of a beach.
4. Be careful not to leave the watch in direct sunlight for more than five days.

Note: The digital display may become black in high temperatures, but it will return to normal when the temperature drops to a moderate range.



Do not leave your watch in a cold place for a long time.

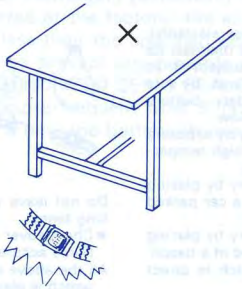
- Changeover of digital display may become dull. (Time accuracy is not affected.)

All the above symptoms return to normal if the watch is placed in the normal temperature.

* It will lose or gain slightly, but it will regain high time accuracy when it is worn on a wrist.
* Be sure to note that if your watch is left in a place where the temperature is below −10°C or over +60°C, it will malfunction, and the battery electrolyte leakage will shorten the battery life.

ANTI-SHOCK

Your watch can be worn while participating in most sports.
But be careful not to drop or hit the watch against hard objects or otherwise subject the watch to violent shocks.



ANTI-MAGNETIC

Your watch will not be affected by the magnetism.

TO PRESERVE THE WATER-RESISTANT QUALITY OF YOUR WATCH

WATER RESISTANT WATCH FOR ORDINARY USE

Your water-resistant watch is designed and manufactured to withstand the water usually experienced in daily living such as splashes and rain.

Do not use the watch while swimming or taking a bath.

Do not operate the button when the watch is wet as water may enter the movement.

If the speaker block gets wet, the volume of alarm sound may sometimes be reduced. Swing the watch several times strongly with the speaker block facing down to force the water out (Be careful not to strike other objects) or dry it thoroughly, and the watch will restore its normal volume of alarm sound.

With a small amount of moisture included inside the watch, the inner surface of the glass may be blurred for a while in case the atmospheric temperature happens to be lower than that inside the watch. The blurred glass will soon clear. If the blurred glass does not clear, we suggest that you have the watch checked by a SEIKO DEALER.

Please note that the watch case and metal bracelet will be discolored by chemicals, gas or mercury.

Remarks :
The watch case is made of plastic. If solvents such as alcohol, gasoline, cosmetic sprays, cleaners, adhesives and paints come in contact with it, the case and the band may be discolored, or damaged by chemical action. Please handle with care.

REMARKS FOR SPEAKER HOLE

Speaker hole

The speaker hole is shown in the illustration above.
Do not put anything with a sharpened tip into it or the speaker may malfunction.

DISPLAY AND BUTTON OPERATION

Button Ⓑ

- The setting function of each display is activated by depressing button "B" in the time/calendar display and the alarm display.

Button Ⓐ

- Changeover to and from each display.
- Selection of the digits to be adjusted is made by depressing button "A" in the time/calendar display and the alarm display.

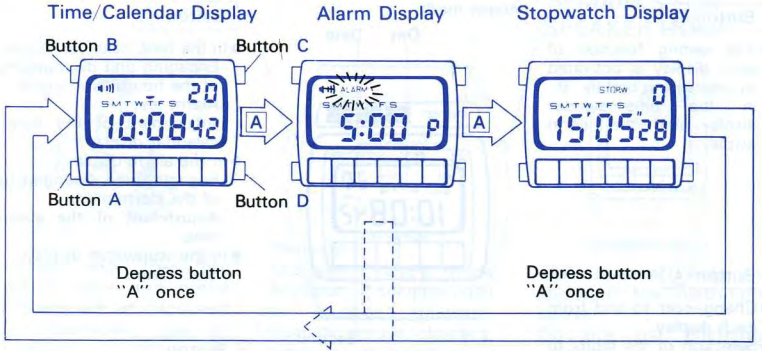
Button Ⓒ

- In the time/calendar display
  - ·Engaging and disengaging of the hourly time signal
  - ·Alarm test
  - ·Adjustment of the time/calendar display
- In the alarm display
  - ·Engaging and disengaging of the alarm mark
  - ·Adjustment of the alarm time
- In the stopwatch display
  - ·Start/Stop

Button Ⓓ

- The illuminating light is activated.
- In the stopwatch display Lap/Reset

A INDICATES THE DEPRESSION OF BUTTON A



* If the alarm display is continued for two to three minutes, it will automatically return to the time and calendar display.

HOW TO ENGAGE AND DISENGAGE THE TIME SIGNAL

In the time and calendar display, depress button "C" once, it will ring with a single "peep" and the colon starts flashing. Depress button "C" again and the colon in continuously displayed.
When the colon is flashing the hourly time signal will ring every hour on the hour with a single "peep".

ALARM TEST

When the colon isn't flashing in the time and calendar display depress button "C" continuously and the alarm will ring "peep", "peep", This will also engage the hourly time signal.

■ HOW TO SET THE TIME AND CALENDAR

(Refer to the following pages for the setting.)

Time/Calendar Display

Depress button "B" once (B) (B) Depress button "B" once

Time/Calendar Setting

Button B

Button A
Selection of the digits to be adjusted.

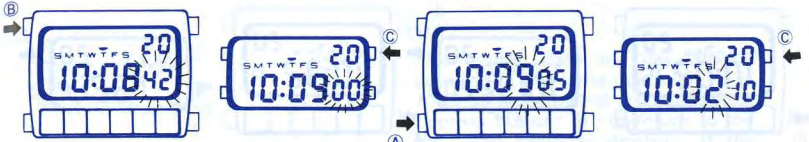
- Second
- 1-minute
- 10-minute
- Hour (12 hr. or 24 hr.)
- Month
- Date
- Day

Button C
Setting the digits.

Button D
The illuminating light is activated by depressing button "D".

If button "B" is not depressed the time and calendar display will automatically return after two to three minutes.

SECOND SELECT → SET → 1 MINUTE SELECT → SET



Depress button "B" to activate the time and calendar setting function. The second digits start flashing. *

Depress button "C" in accordance with a time signal. The seconds are reset to "00" and start immediately. **

Depress button "A". The 1-minute digit starts flashing.

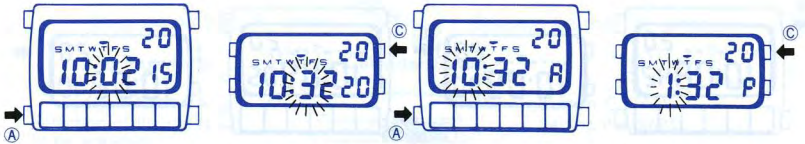
One digit (1-minute) is advanced by each depression of button "C".

* In the time and calendar display, even when the alarm set mark and the stopwatch mark are activated, they will disappear while time and calendar adjustments are being made.

** When the seconds count any numbers from "30" to "59" and button "C" is depressed, one minute is added and the seconds are immediately reset to "00".

10-MINUTE ⟹ HOUR, A.M./P.M. mark ⟹

SELECT SET SELECT SET



Depress button "A". The 10-minute digit starts flashing.

One digit (10-minutes) is advanced by each depression of button "C".

Depress button "A". The hour digits start flashing.

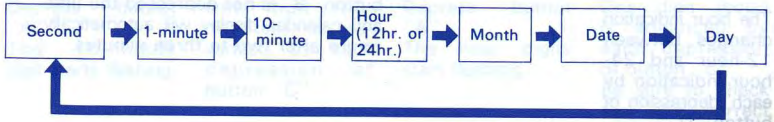
One digit (hour) is advanced by each depression of button "C". Be sure to check that the correct "A" (A.M.)/"P" (P.M.) period is set in the 12-hour indication.

12-HOUR OR 24-HOUR INDICATION SET ⟹ MONTH ↓ DATE ↓ DAY

The hour indication changes between 12-hour and 24-hour indication by each depression of button "D". Button "D" also activates the illuminating light.

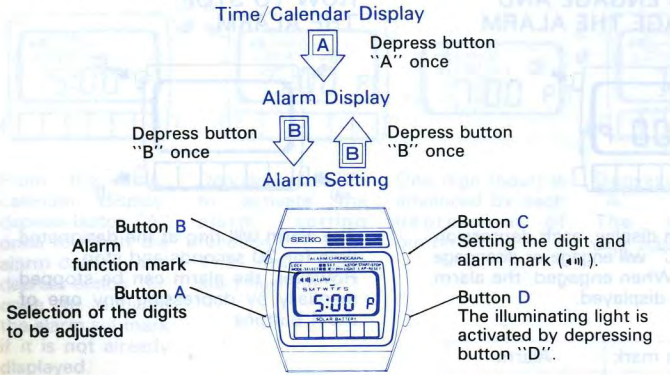
The month, date and day can be adjusted in the same operation. After all adjustments are completed, depress button "B" to return to the time and calendar display. If the button "B" is not depressed the time and calendar display will automatically return after two to three minutes.

- Depress button "B" and the time/calendar display is shown.
- If button "B" is not depressed the time/calendar display will return wihtin 3 minutes.
- Select the digits to be adjusted by depressing button "A" and adjust the digits by depressing button "C".
  Depress button "B" and the time/calendar display will return from any setting function.
- Selection of the digits to be adjusted is made in the following order by each depression of button "A".



HOW TO SET THE ALARM TIME

(Refer to the following pages for the setting.)

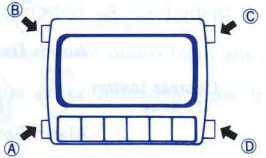


HOW TO ENGAGE AND DISENGAGE THE ALARM

In the alarm display, each depression of button "C" will engage or disengage the alarm. When engaged, the alarm set mark is displayed.

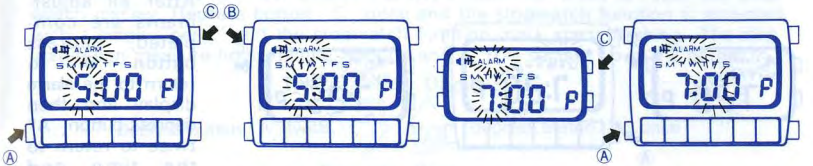
Alarm set mark	Alarm
	Disengaged
◂))	Engaged

HOW TO STOP THE ALARM



The alarm will ring at the designated time for 20 seconds and stop. However, the alarm can be stopped manually by depressing any one of the 4 buttons.

PREPARATION ⇨ HOUR SELECT ⟶ SET ⟶ 10-MINUTE SELECT



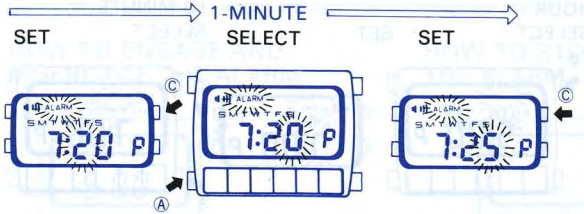
From the time/calendar display, depress button "A" once to reach the alarm display, and depress button "C" once to activate the alarm set mark if it is not already displayed.

Depress button "B" to activate the alarm setting function. The hour digit start flashing. *

One digit (hour) is advanced by each depression of button "C".

Depress button "A". The 10-minute digit starts flashing.

*When the time and calendar is displayed in the 24-hour indication, the alarm will also automatically be set in the 24-hour indication. In the 24-hour indication A.M./P.M. mark is not displayed.



One digit (10-minutes) is advanced by each depression of button "C".

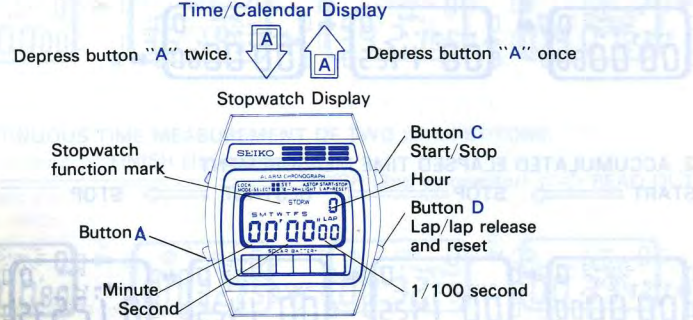
Depress button "A". The 1-minute digit starts flashing.

One digit (1-minute) is advanced by each depression of button "C".

After all adjustments are completed, depress button "B" to return to the alarm display and then depress button "A" twice to return to the time and calendar display. If the button "A" is not depressed the time and calendar display will automatically return after two to three minutes.

STOPWATCH FUNCTION

From the time and calendar display depress button "A" twice to reach the stopwatch display. Depress button "C" once and the stopwatch function is activated with a single "peep" and the stopwatch function mark starts flashing. The stopwatch can measure hour, minute, second and 1/100 second up to 12 hours.



* While measuring the lap time, "LAP" mark is displeyed with the minute and second marks flashing.

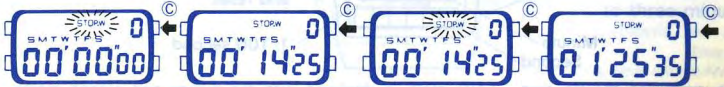
HOW TO USE THE STOPWATCH

1. STANDARD STOPWATCH MEASUREMENT

START ⟹ STOP ⟹ RESET

2. ACCUMULATED ELAPSED TIME MEASUREMENT

START ⟹ STOP ⟹ RESTART ⟹ STOP



3. LAP TIME MEASUREMENT *

START ⟹ LAP TIME ⟹ LAP RELEASE ⇒ STOP

4. CONTINUOUS TIME MEASUREMENT OF TWO COMPETITORS

START ⟹ FINISH (1st competitor)

⟹ FINISH (2nd competitor) ⟹ READ OUT

* When the stopwatch display is changed to the other displays while measuring the lap time, the lap time measurement is released.

CHECK

CHECK REQUIRED

We suggest that you have your watch checked by a SEIKO DEALER, every 2 or 3 years or when the battery is replaced, for oil condition, battery electrolyte leakage or damage due to water or sweat.
After checking the watch, adjustment and repair may be required.

* Be sure to have the gasket and push-pin replaced with new ones by a SEIKO DEALER after the watch is adjusted or repaired.
* Specify "SEIKO GENUINE PARTS" when replacing the parts.

REPLACEMENT OF THE LIQUID CRYSTAL PANEL

There will be dim contrast or blur of the digital display after the liquid crystal panel is used for about seven years. Contact a SEIKO DEALER for replacement in such case. This is available at the owner's expense.

CARE OF THE CASE AND METAL BRACELET

Stains or water will rust the watch case and metal bracelet. Wipe them off with a soft cloth.

Adjust the metal bracelet so that there will be a little clearance between the metal bracelt and your wrist to reduce accumulation of dirt and sweat. Clean the metal bracelet with a soft toothbrush dipped in water or soapy water.

SPECIFICATIONS

1. Frequency of crystal oscillator ... 32,768 Hz (Hz=Hertz — Cycles per second)
2. Loss/gain ..... Loss/gain in normal temperatures of between 5°C and 35°C
   Monthly rate : less than ± 15 seconds
3. Operational temperature range... 0°C~+50°C
4. Display system :
   - Time/calendar display : ..... Hour (12-hour or 24-hour indication), minute, second, date, day (day mark is displayed above the day initial.), (A/P(A.M./P.M.) mark is displayed only when the hour is being adjusted.), alarm set mark and stopwatch mark (it is displayed only when the stopwatch function is activated.)
   - Alarm time display ..... Hour, minute, A(A.M.)/P(P.M.) (in the 12-hour indication), alarm set mark.
   - Stopwatch display : ..... 12-hour indication, Hour, minute, second, 1/100 second (up to 12-hours), LAP mark, Stopwatch mark.
5. Display medium ..... Nematic Liquid Crystal, FEM (Field Effect Mode)
6. Battery ..... Primary battery : Silicon solar cell
   Secondary battery : Silver oxide battery (especially manufactured for Cal. A628). 1 battery
7. IC (Integrated circuit) ..... C-MOS-LSI ..... 3 unit
8. Illuminating light ..... Illuminates the display in the dark.

* The above specifications are subject to change without notice.