

# PULSAR

## CAL. W170 DIGITAL QUARTZ

- Time/calendar
- 100-hour stopwatch
- Countdown timer
- Regular alarm
- Dual time
- Illuminating light (electroluminescent panel)

## MODE CHANGE



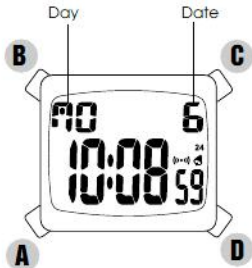
**A** With each press, the mode changes in the following order:



\* The design of the liquid crystal panel differs depending on the model.

## TIME/CALENDAR MODE

### TIME/CALENDAR SETTING



**A** Press to show TIME/  
CALENDAR mode.



**B** Press for 2 seconds.



▶ **C** Select the digits to be  
adjusted.\*



**D** Set the flashing digits.



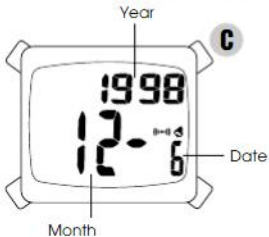
**B** Return to TIME/CALENDAR  
mode.

**\* Selection of the digits**

Seconds → Minutes → Hour → Year → Month → Date

↑ \_\_\_\_\_ 12-/24-hour indication ← \_\_\_\_\_

**SHOWING THE CALENDAR DISPLAY**



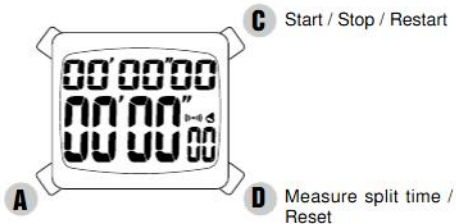
**C** Press and hold in TIME/  
CALENDAR mode.

*\* While the button is kept pressed,  
the year, month and date are  
displayed.*

## STOPWATCH MODE

- The stopwatch measures up to 100 hours in 1/100 second increments for the first hour and in 1 second increments thereafter.

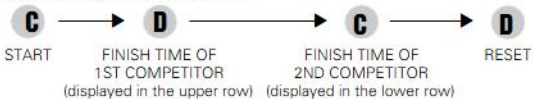
**A** Press to show STOPWATCH mode.



### Split time measurement



### Measurement of two competitors

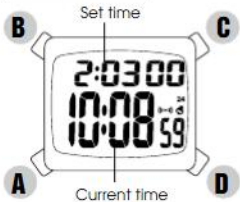


## TIMER MODE

- The timer can be set up to 99 hours and 59 minutes in minute increments.
- After the set time is up, the timer counts up the time up to 59 minutes and 59 seconds.
- The remaining time is displayed in seconds.

**A** Press to show TIMER mode.

### TIMER SETTING



**B** Press for 2 seconds.



**C** Select the digits to be adjusted (hour/minutes).

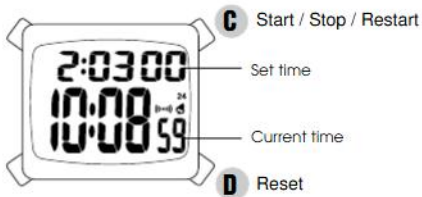


**D** Set the flashing digits.



**B** Return to TIMER mode.

## TIMER OPERATION



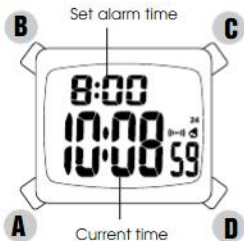
\* When the set time is up, a warning sound beeps for 20 seconds.  
To stop it manually, press any of the buttons.

## ALARM MODE

- The alarm can be set to ring on a 24-hour basis

**A** Press to show ALARM mode.

### ALARM TIME SETTING



**B** Press for 2 seconds.



**C** Select the digits to be adjusted (hour/minutes).



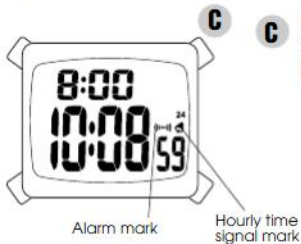
**D** Set the flashing digits.



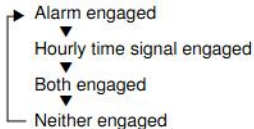
**B** Return to ALARM mode.

\* The alarm mark is automatically displayed and the alarm is engaged.

## ENGAGEMENT/DISENGAGEMENT OF ALARM AND HOURLY TIME SIGNAL



**C** With each press, the engagement/disengagement of the alarm and hourly time signal are made as follows:



\* At the designated time, the alarm rings for 20 seconds. To stop it manually, press any of the buttons.

\* Checking the set alarm time:

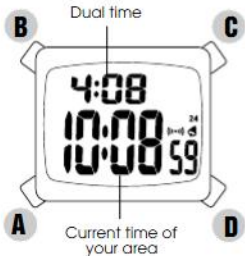
Press and hold button D in the TIME/CALENDAR mode. While the button is kept pressed, the alarm time that has been set is displayed. When the alarm is disengaged, the set alarm time will not be displayed.

## DUAL TIME MODE

- The time of a different time zone can be displayed.

**A** Press to show DUAL TIME mode.

### DUAL TIME SETTING



**B** Press for 2 seconds.



▶ **C** Select the digits to be adjusted (hour/minutes).



▶ **D** Set the flashing digits.



**B** Return to DUAL TIME mode.

## ILLUMINATING LIGHT (Electroluminescent panel)



**E** Turn on the illuminating light.

\* The display panel is evenly illuminated for 4 seconds.

## VIVIDIGI

- **VIVIDIGI** is a new type of liquid crystal panel that makes possible various colors and high contrast.
  - Excellent light reflection and transmission make the display bright and clear.
  - Various color options are available.
  - Either the whole panel or the displayed data only can be illuminated.

## NOTES ON USING THE WATCH

### TIME/CALENDAR MODE

#### [TIME/CALENDAR SETTING]

- The calendar automatically adjusts for odd and even months including February of leap years from 1998 to 2048.
- Once the year, month and date have been set, the day of the week is automatically set.
- **Setting the seconds:**
  - With the second digits flashing, press button D in accordance with a time signal. The second digits are reset to "00".
  - When the seconds count any number from "30" to "59" and button D is pressed, one minute is added and the seconds are reset to "00".
- The flashing digits except the seconds and 12-/24-hour indication move quickly if button D is kept pressed.
- When setting the hour digits in the 12-hour indication, check that AM/PM is properly set. Only the "PM" mark is displayed. For the AM setting, there is no indication. In the 24-hour indication, "24" is displayed.
- If the watch is left untouched with the digits flashing, it will automatically return to the TIME/CALENDAR mode in 1 to 2 minutes.
- **Note on unusual display:**

While setting the time/calendar, all the segments of the display will light up if both buttons C and D are pressed at the same time. This is not a malfunction. Press button A, B, C or D to return to the TIME/CALENDAR mode, and then set the time/calendar again.

## **STOPWATCH MODE**

- Restart and stop of the stopwatch can be repeated by pressing button C.
- Split time measurement can be repeated by pressing button D.
- When measuring a long period of time, press button A to return the STOPWATCH mode to the TIME/CALENDAR mode after the stopwatch starts. This will prevent any possible malfunction.
- Even if the STOPWATCH mode is changed to another while the measurement is in progress, it continues counting properly. After the stopwatch is used, however, be sure to reset it as the battery energy is consumed enormously to shorten the battery life.

## **TIMER MODE**

- In the timer setting, the flashing digits move quickly if button D is kept pressed.
- If the watch is left untouched with the digits flashing, it will automatically return to the TIMER mode in 1 to 2 minutes.
- Once the timer is set, the set time is retained and can be used repeatedly unless it is readjusted.
- Restart and stop of the timer can be repeated by pressing button C.
- After the set time is up, the timer counts up the time up to 59 minutes and 59 seconds. Restart and stop of the counting can be repeated by pressing button C.
- Even if the TIMER mode is changed to another while the measurement is in progress, it continues counting properly. After the timer is used, however, be sure to reset it as the battery energy is consumed enormously to shorten the battery life.

## ALARM MODE

### [ALARM TIME SETTING]

- The flashing digits move quickly if button D is kept pressed.
- If the watch is left untouched with the digits flashing, it will automatically return to the ALARM mode in 1 to 2 minutes.
- When the time function is displayed in the 24-hour indication, the alarm is also displayed in the 24-hour indication.
- When setting the hour digits in the 12-hour indication, check that AM/PM is properly set. Only the "PM" mark is displayed. For the AM setting, there is no indication. In the 24-hour indication, "24" is displayed.
- **Alarm test:** The alarm can be tested by keeping button C pressed in the ALARM mode. After the alarm is tested, press button C to engage/disengage the alarm/hourly time signal as desired.

## DUAL TIME MODE

- The flashing digits move quickly if button D is kept pressed.
- If the watch is left untouched with the digits flashing, it will automatically return to the DUAL TIME mode in 1 to 2 minutes.
- When the time function is displayed in the 24-hour indication, the dual time is also displayed in the 24-hour indication.
- When setting the hour digits in the 12-hour indication, check that AM/PM is properly set. Only the "PM" mark is displayed. For the AM setting, there is no indication. In the 24-hour indication, "24" is displayed.

### **ILLUMINATING LIGHT (Electroluminescent panel)**

- The electroluminescent panel loses its luminance as the battery voltage gets lowered. Also, its luminance level decreases gradually with use. After 120 hours of use, the level decreases by about half.
- When the illuminating light becomes dim, replace the battery with a new one. If the light remains dim after the battery is replaced, have the electroluminescent panel replaced with a new one by the retailer from whom the watch was purchased. It will be replaced at cost.
- While the illuminating light is used, the watch gives out a slight noise. However, this is not a malfunction.

## BATTERY CHANGE

**2  
Years**

**Battery life : Approx. 2 years**

**Battery : SEIKO CR1620**

- *The battery life may be less than 2 years if the alarm is used for more than 10 seconds a day and/or the illuminating light more than once a day.*
- *As 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 malfunction.*
- *We recommend that you contact an AUTHORIZED PULSAR DEALER for battery replacement.*

### ● **Necessary procedure after battery change**

After the battery is replaced with a new one or if an abnormal display (broken digits, etc.) appears, follow the procedure below to reset the IC.

**Press and hold buttons A, B, C and D at the same time for 2 to 3 seconds. The display will become blank, and "12:00'00", Jan. 1st, 1998, TH" will be displayed when the buttons are released.**

*\* Before using the watch, set the time/calendar and then, the alarm.*



## **WARNING**

- Do not remove the battery from the watch.
- If it is necessary to take out the battery, keep it out of the reach of children. If a child swallows it, consult a doctor immediately.
- Never short-circuit, tamper with or heat the battery, and never expose it to fire. The battery may burst, become very hot or catch fire.



## **CAUTION**

- The battery is not rechargeable. Never attempt to recharge it, as this may cause battery leakage or damage to the battery.

# TO PRESERVE THE QUALITY OF YOUR WATCH

## WATER RESISTANCE

### ● Non-water resistant



- If the watch becomes wet, have it checked by an **AUTHORIZED PULSAR DEALER** or **SERVICE CENTER**.

### ● Water resistant 5/10/15/20 bar



- Do not operate the 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 resistant 5 bar watch, or taking a bath with the water resistant 10, 15 or 20 bar watch, be sure to observe the following:
  - \* Do not operate 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.

- \* 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.
- \*\* We recommend that you wear a PULSAR Diver's Watch for scuba diving.

## TEMPERATURES



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

Temperatures over 50° C (122° F) or below -5° C (+23° F) may cause a slight time loss or gain or battery leakage or shorten the battery life. However, the above conditions will be corrected when the watch returns to normal temperature.

## MAGNETISM



Your watch will not be affected by magnetism.

## 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.

## 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.

## CHEMICALS



Be careful not to expose the watch to solvents, mercury, cosmetic spray, detergents, adhesives or paints. Otherwise, the case, bracelet, etc. may become discolored, deteriorated or damaged.

## PERIODIC CHECK



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

## 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.

## STATIC ELECTRICITY



The IC (Integrated Circuit) used in your watch will be affected by static electricity which may disturb the

display. Keep the watch away from close contact with objects such as TV screens which emit strong static electricity.

## LIQUID CRYSTAL PANEL



The normal life expectancy for the liquid crystal panel of the watch is approximately 5 years. After that it may decrease in contrast, becoming difficult to

read. Please contact your **AUTHORIZED PULSAR DEALER** or **SERVICE CENTER** if you wish to have a new panel fitted (guaranteed one year).