

# PULSAR

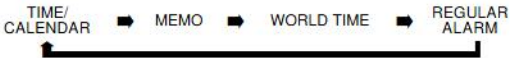
## CAL. W522 DIGITAL QUARTZ

- Dot-matrix liquid crystal panel
- Time/calendar
- 8-channel memo function
- World time
- Regular alarm and single-time alarm
- Illuminating light (electroluminescent panel)

## MODE CHANGE



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

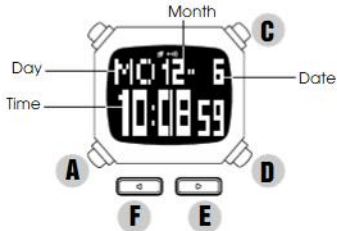


**C** Press in TIME/CALENDAR mode to show SINGLE-TIME ALARM mode.

## TIME/CALENDAR MODE

- Once the time/calendar of your area is set in the TIME/CALENDAR mode, the times of the 24 cities covered in the WORLD TIME mode will be set automatically.
  - \* To display the times of the cities covered in the WORLD TIME mode properly, it is necessary to select the city representing your area and set the correct time in the TIME/CALENDAR mode.
- The contrast on the liquid crystal display can be adjusted in 16 steps.

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



## TIME/CALENDAR SETTING

**A** Press for 2 to 3 seconds to show TIME/CALENDAR SETTING display.

**E** or **F** Press to select the digits to be adjusted.

Selection of the digits

Seconds ↔ Minutes ↔ Hour ↔ Year ↔ Month



12-/24-hour indication ↔ Contrast level ↔ City ↔ Day ↔ Date

**C** Set the flashing digits. (Increasing digits)

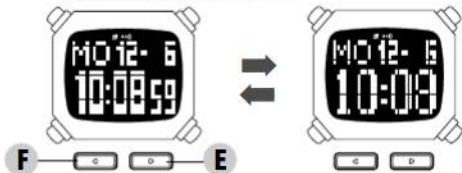
or

**D** Set the flashing digits. (Decreasing digits)

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

## CHANGEOVER BETWEEN TWO TIME DISPLAY SYSTEMS

- E** or **F** With each press in TIME/CALENDAR mode, the time indication in the lower row of the display changes alternately between "HOUR, MINUTES and SECONDS" and "HOUR and MINUTES".



## DEMONSTRATION FUNCTION

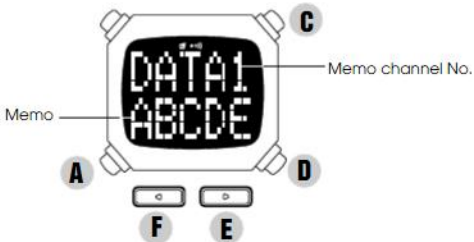
- D** Press in TIME/CALENDAR mode to start the demonstration.

- \* The watch shows the displays in each mode.
- \* To stop the demonstration, press button A, C, D, E or F.

## MEMO MODE

- A memo of up to 40 characters can be stored in each of the 8 memo channels.

**A** Press to show MEMO mode.



**C** or **D** Press to select the desired memo channel.

## SCROLL DISPLAY OF MEMOS

- If the memo stored in a memo channel has more than 6 characters, the display scrolls to show the rest of the characters.
- The display scrolls to show 5 characters at a time. The scrolling display can be stopped or moved back as desired.

**C** or **D** Press to select the desired memo channel.



**F** With each press, the next 5 characters are shown.

or

**E** With each press, the previous 5 characters are shown.

\* After the last characters are shown, the first 5 characters will appear again.

\* As the first 5 characters are shown by pressing button E repeatedly, button E will no longer work.

## HOW TO INPUT THE MEMO

**C** or **D** Press to select the desired memo channel.



**A** Press for 2 to 3 seconds to show MEMO INPUT display.



**C** With each press, the flashing character changes in order.

or

**D** With each press, the flashing character changes in reverse order.



**E** When the desired character is shown, press to register it.

*\* The flashing position moves rightward for the input of the next character.*

or

**F** When the desired character is shown, press to register it.

*\* The flashing position moves leftward.*



**A** Return to MEMO mode.

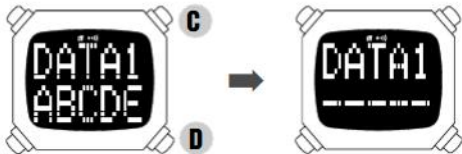
\* To correct the characters already registered, press button E or F to move the flashing position so that the character you wish to correct flashes. Then, press button C or D to show the desired character, and press button E or F to register it.

## HOW TO ERASE A MEMO

**C** or **D** Press to select the desired memo channel.

▼  
**A** Press for 2 to 3 seconds to show MEMO INPUT display.

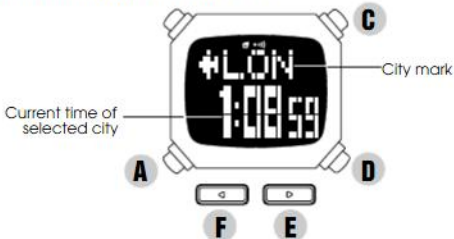
▼  
**C** and **D** Press at the same time for 2 to 3 seconds.



## WORLD TIME MODE

- The time of 24 cities in different time zones throughout the world can be displayed.
- Daylight saving time can be set for each city.

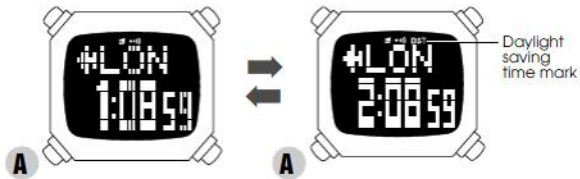
**A** Press to show WORLD TIME mode.



**E** or **F** Press to select the desired city.

## CHANGEOVER BETWEEN STANDARD TIME AND DAYLIGHT SAVING TIME

- A** Press for 2 to 3 seconds. With each press, the standard time and daylight saving time of the selected city are alternately shown.



## TIME DIFFERENCES

GMT = Greenwich Mean Time

(As of April 2000)

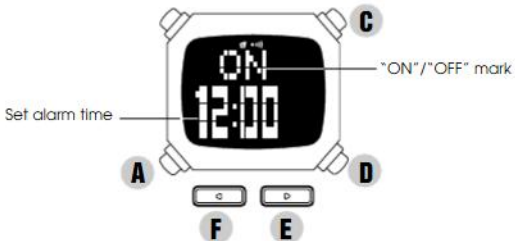
City mark	City name	GMT ± (hours)	City mark	City name	GMT ± (hours)
LON	London*	± 0	SYD	Sydney*	+ 10
PAR	Paris*	+ 1	NOU	Noumea	+ 11
ROM	Rome*	+ 1	WLG	Wellington*	+ 12
BER	Berlin*	+ 1	HNL	Honolulu	- 10
IST	Istanbul*	+ 2	ANC	Anchorage*	- 9
MOW	Moscow*	+ 3	LAX	Los Angeles*	- 8
DXB	Dubai	+ 4	DEN	Denver*	- 7
KHI	Karachi	+ 5	CHI	Chicago*	- 6
DAC	Dhaka	+ 6	NYC	New York*	- 5
BKK	Bangkok	+ 7	CCS	Caracas	- 4
BJS	Beijing	+ 8	RIO	Rio de Janeiro*	- 3
TYO	Tokyo	+ 9	PDL	Azores Is.*	- 1

\* The cities marked with "\*" use daylight saving time (summer time).

## REGULAR ALARM MODE

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

**A** Press to show REGULAR ALARM mode.



## REGULAR ALARM SETTING

**A** Press for 2 to 3 seconds to show REGULAR ALARM SETTING display.



**E** or **F** Press to select the digits to be adjusted (hour/minutes).



**C** Set the flashing digits. (Increasing digits)

or

**D** Set the flashing digits. (Decreasing digits)



**A** Return to REGULAR ALARM mode.

\* "ON" and the alarm mark are automatically displayed and the regular alarm is engaged.

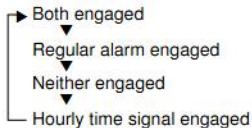
## ENGAGEMENT/DISENGAGEMENT OF REGULAR ALARM AND HOURLY TIME SIGNAL

Hourly time signal mark  
Regular alarm mark



**C**

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

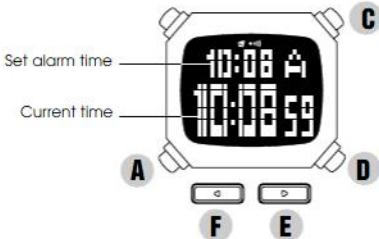


\* At the designated time, the regular alarm rings for 20 seconds. To stop it manually, press any of the buttons.

## SINGLE-TIME ALARM MODE

- The single-time alarm can be set to ring only once at the designated time. As it rings, it is automatically disengaged.
- The single-time alarm can be set in minute increments starting from the current time.

**C** Press in TIME/CALENDAR mode to show SINGLE-TIME ALARM mode.



## SINGLE-TIME ALARM SETTING

**C** Press to set the desired alarm time. (Increasing digits)

or

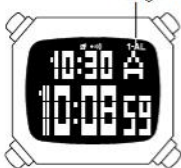
**D** Press to set the desired alarm time. (Decreasing digits)



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

*\* The single-time alarm mark "1-AL" remains displayed to indicate that the single-time alarm has been set.*

Single-time alarm mark

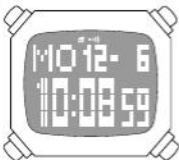


*\* At the designated time, the single-time alarm rings for 20 seconds. To stop it manually, press any of the buttons.*

- To cancel the single-time alarm you have set, press buttons C and D at the same time in the SINGLE-TIME ALARM mode, or press button C or D to set the alarm time to the current time.

## ILLUMINATING LIGHT (Electroluminescent panel)

**B**



**B**

Turn on the illuminating light.

\* The display panel is evenly illuminated for 3 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

### MODE CHANGE

- The design of the liquid crystal panel differs depending on the model.
- When the mode is changed over, the display of the selected mode scrolls from right to left.

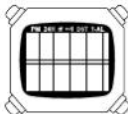
### TIME/CALENDAR MODE

#### [TIME/CALENDAR SETTING]

- The calendar automatically adjusts for odd and even months including February of leap years from 2000 to 2050.
- **Setting the seconds:**
  - With the second digits flashing, press button C or 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 C or D is pressed, one minute is added and the seconds are reset to "00".
- Be sure to select the city representing your area. For the city marks and cities they represent, see "TIME DIFFERENCES" on page 12.
- The contrast on the liquid crystal display can be adjusted in 16 steps from level "0" to "15". The contrast becomes higher as the digits indicating the contrast level increases and becomes lower as they decrease.
- Changeover between 12- and 24-hour indications are made alternately with each press

of button C or D while the hour and minute digits are flashing. In the 12-hour indication, only "PM" mark is displayed and there is no indication for the AM setting. In the 24-hour indication, "24H" is displayed.

- The flashing digits except the seconds and 12-/24-hour indication move quickly if button C or D is kept pressed.
- 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, C, D, E or F to return to the TIME/CALENDAR mode, and then set the time/calendar again.



#### [CHANGEOVER BETWEEN TWO TIME DISPLAY SYSTEMS]

- If one time display system is selected in the TIME/CALENDAR mode, the time indication in the other modes will be set accordingly.

## MEMO MODE

#### [HOW TO INPUT THE MEMO]

- If the watch is left untouched with the digits flashing, it will automatically return to the MEMO mode in 1 to 2 minutes.
- The flashing character changes quickly if button C or D is kept pressed.

- **Characters for the memo input and the order of appearance:**

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z 1 2 3 4 5 6  
7 8 9 0 ! ? @ # + \* / = % ♥ ~ \$ & ' ( ) - \_ : ; , . (space)

## **WORLD TIME MODE**

- To display the times of the cities covered in the WORLD TIME mode properly, it is necessary to select the city representing your area and set the correct time in the TIME/CALENDAR mode.

### **[CHANGEOVER BETWEEN STANDARD TIME AND DAYLIGHT SAVING TIME]**

- When the daylight saving time is set for the city selected in the TIME/CALENDAR mode, the current time is advanced by one hour. When the standard time is set, the current time is moved back by one hour.

## **REGULAR ALARM MODE**

### **[REGULAR ALARM SETTING]**

- The flashing digits move quickly if button C or 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, "24H" is displayed.
- If the watch is left untouched with the digits flashing, it will automatically return to the REGULAR ALARM mode in 1 to 2 minutes.
- When the time function is displayed in the 24-hour indication, the regular alarm is also displayed in the 24-hour indication.
- **Regular alarm test:** The regular alarm can be tested by keeping button C pressed in the REGULAR ALARM mode. After the alarm is tested, press button C to engage/disengage the regular alarm/hourly time signal as desired.

## **SINGLE-TIME ALARM MODE**

- When button C or D is pressed to set the single-time alarm, the single-time alarm mark "1-AL" is displayed and the single-time alarm is automatically engaged.
- If the watch is left untouched in the SINGLE-TIME ALARM mode, it will automatically return to the TIME/CALENDAR mode in 1 to 2 minutes.
- The single-time alarm rings differently from the regular alarm.

## **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 CR2025**

- *The battery life may be less than 2 years if the alarm is used for more than 10 seconds a day, the timer warning sound 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 the watch will return to the initial setting of "12:00'00"a.m., January 1st, 2000, SA (Saturday), LON (London), 7 for the contrast

level, and hour and minute display in the TIME/CALENDAR mode\* when the buttons are released.

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



## 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).