

# PULSAR

INSTRUCTION MANUAL FOR WATCH CALIBRE  
W440



**WARNING**



**THIS PRODUCT CONTAINS A BUTTON BATTERY**

If swallowed or placed inside any part of the body, the battery can cause severe or fatal injuries within 2 hours or less.

Button batteries are hazardous whether new or used. Keep batteries out of reach of children.

If you think the battery may have been swallowed or placed inside any part of the body, seek immediate medical attention. Contact the Australian Poisons Information Centre immediately on 13 11 26 (New Zealand 0800 764 766) for 24 / 7 fast, expert advice.

# PULSAR

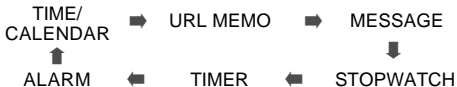
## CAL. W440 DIGITAL QUARTZ

- Time/calendar
- URL memo function
- Message function
- 10-hour stopwatch
- Countdown timer  
with preset and adjustable timer functions
- Regular alarm and 3-channel single-time alarm
- Illuminating light (electroluminescent panel)

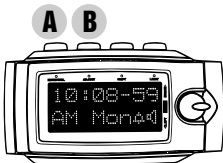
ENGLISH

# MODE CHANGE

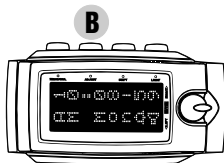
**A** With each press, the mode changes in the following order:



English



[horizontal]



[vertical]

**B** With each press in TIME/CALENDAR mode, the display changes between horizontal and vertical alternately.

# TIME/CALENDAR MODE

## TIME/CALENDAR SETTING



**Clockwise turning:**  
Digits decrease.

**Counterclockwise turning:** Digits increase.

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

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

**E** Turn clockwise or counterclockwise to set the flashing digits.

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

### Selection of the digits

Seconds  $\triangleright$  Minutes  $\triangleright$  Hour  
 $\blacktriangle$   $\nabla$  Date  
 $\nabla$  Month  
12-/24-hour indication  $\triangleleft$  Year  $\triangleleft$  Month

## SHOWING CALENDAR DISPLAY

- E** Turn clockwise or counterclockwise to show CALENDAR display instead of TIME display.

## TURNING ON/OFF OF HOURLY TIME SIGNAL AND BUTTON OPERATION CONFIRMATION SOUND

English



Hourly time signal mark

- C** With each press, the hourly time signal and sound for button operation confirmation are alternately switched on and off.

*\* When the hourly time signal mark is displayed, the hourly time signal rings every hour on the hour and the confirmation sound beeps with each press of the buttons.*



## DISPLAYING MESSAGES



**E** Press to show a message.

*\* A message appears and scrolls three times.*

- *If you have recorded any messages, such message alone will be displayed.*
  - *If no message is recorded, the built-in messages will be displayed one by one with each press of button E.*
- The watch also displays a message automatically every 10 minutes. The message scrolls three times.
- *If you have recorded any messages, such message alone will be displayed.*
  - *If no message is recorded, the built-in messages will be displayed one by one in random order.*
- \* On January 1 and December 25, "A happy new year." and "Merry Xmas!" are displayed, respectively.*

# STOPWATCH MODE

- The stopwatch measures up to 10 hours in 1/100 second increments.

**C** Split / Split release / Reset



**E** (Press the button.)  
Start / Stop / Restart

Split time measurement



Measurement of two competitors

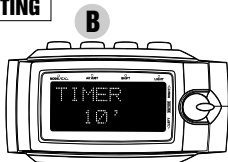




## TIMER MODE

- Two types of timer are available: 10-channel preset timer and adjustable timer.
- The adjustable timer can be set up to 9 hours and 59 minutes in minute increments.

### PRESET TIMER SETTING



**Clockwise turning:**  
Digits decrease.

**Counterclockwise turning:** Digits increase.

English

- E** Turn clockwise or counterclockwise to select the preset time.

Selection of the preset time/adjustable timer

1 min. ↔ 2 min. ↔ 3 min. ↔ 4 min. ↔ 5 min. ↔ 10 min.

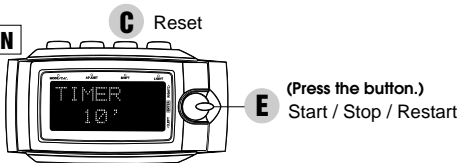
↕  
Adjustable timer ↔ 30 min. ↔ 25 min. ↔ 20 min. ↔ 15 min. ↕

## ADJUSTABLE TIMER SETTING

- E** Turn clockwise or counterclockwise to select the adjustable timer.  
(See the previous page)
- B** Press for 2 to 3 seconds to show ADJUSTABLE TIMER SETTING display.
- E** Press to select the digits to be adjusted (hour/minutes).
- E** Turn clockwise or counterclockwise to set the flashing digits.
- B** Return to TIMER mode.

English

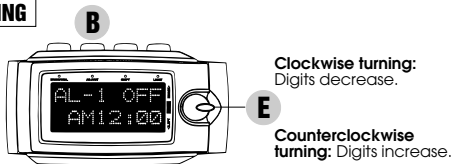
## TIMER OPERATION



# ALARM MODE

- Regular alarm and 3-channel single-time alarm are available.
- Each of the three single-time alarms can be set to ring only once at the designated time. As it rings, it is automatically disengaged.

## ALARM TIME SETTING



English

- E** Turn clockwise or counterclockwise to select the desired alarm channel.

Selection of the regular alarm/single-time alarm

Regular alarm

**AL-D**



Single-time  
alarm-1

**AL-1**



Single-time  
alarm-2

**AL-2**



Single-time  
alarm-3

**AL-3**



- B** Press for 2 to 3 seconds to show ALARM SETTING display.
- E** Press to select the digits to be adjusted (hour/minutes).
- E** Turn clockwise or counterclockwise to set the flashing digits.
- B** Return to ALARM mode.

*\* "ON" mark appears and the alarm is automatically engaged.*

## ALARM ENGAGEMENT/DISENGAGEMENT

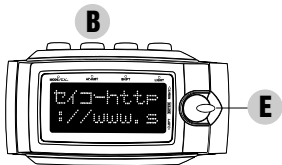
- The alarms can be engaged and disengaged independently of one another.



- E** Turn clockwise or counterclockwise to select the desired alarm channel.
- C** With each press, the selected alarm is engaged and disengaged alternately.

## URL MEMO MODE

- Up to 100 URL memos such as Internet homepage address and electronic mail address can be registered for display.
- Up to 60 characters can be entered for each URL memo.
- The residual memory capacity can also be indicated.



## ENTERING A NEW DATA

**B** Press for 2 to 3 seconds to show MENU display.



NEW EDIT  
DEL CLR

**E** Turn clockwise or counterclockwise to select the data entry operation (NEW).



**E** While "NEW" is flashing, press to activate NEW DATA ENTRY function.



Enter a new data by operating the buttons as explained in "HOW TO ENTER CHARACTERS" on pages 17 - 18.

**E** After the data is entered, press to deactivate NEW DATA ENTRY function.

\* The data you have just entered is registered in memory.

## CORRECTING THE DATA

**E** Turn clockwise or counterclockwise to select the data to be corrected.



**B** Press for 2 to 3 seconds to show MENU display.

NEW EDIT  
DEL CLR

**E** Turn clockwise or counterclockwise to select the data correction operation (EDIT).



**E** While "EDIT" is flashing, press to activate DATA CORRECTION function.

→ 12/13-300  
CARD. SE

Correct the data by operating the buttons as explained in "HOW TO ENTER CHARACTERS" on pages 17 - 18.



**E** After the data is corrected, press to deactivate DATA CORRECTION function.

*\* The data you have just corrected is registered in memory.*

## DELETING ONE DATA

English

**E** Turn clockwise or counterclockwise to select the data to be deleted.



**B** Press for 2 to 3 seconds to show MENU display.

NEW EDIT  
DEL CLR



**E** Turn clockwise or counterclockwise to select the single data deletion operation (DEL).



**E** While "DEL" is flashing, press to activate SINGLE DATA DELETION function.

DELETE?  
(YES/NO)



**E** Press while "YES" is flashing.



**E** Press and hold for 4 seconds to delete the selected data.

DELETE  
COMPLETE

*\* A confirmation sound beeps and "DELETE COMPLETE" is displayed for 2 seconds. Then, the display returns to URL MEMO mode.*



## DELETING THE ENTIRE DATA

**B** Press for 2 to 3 seconds to show MENU display.

NEW EDIT  
DEL CLR

**E** Turn clockwise or counterclockwise to select the all data clear operation (CLR).

**E** While "CLR" is flashing, press to activate ALL DATA CLEAR function.

ALL CLR?  
(YES/NO)

**E** Press while "YES" is flashing.

**E** Press and hold for 4 seconds to delete all the data.

ALL CLR  
COMPLETE

*\* A confirmation sound beeps and "ALL CLR COMPLETE" is displayed for 2 seconds. Then, the display returns to URL MEMO mode.*



## DISPLAYING THE URL MEMO

- Selection of the URL memo

**E** Turn clockwise or counterclockwise.

- \* With each turn, the first 16 characters of a stored URL memo are displayed.
- \* The stored data is displayed one by one starting from the last to the first or the first to the last according to the data arrangement in memory by turning button E counterclockwise or clockwise, respectively.

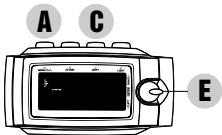
- Scroll display of the selected URL memo

**E** Press after selecting a desired URL memo.

- \* When the selected URL memo has 15 or more characters, it will scroll three times and then remain displayed.
- \* When the selected URL memo has 14 or less characters, it will not scroll but will be displayed with "▶" at its beginning and "◀" at its end.

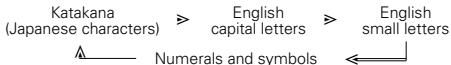


## HOW TO ENTER CHARACTERS



- Selection of type of characters

**A** Press to select the type of characters.



- Selection of characters in Japanese syllabary, alphabetical or numerical order

**E** Turn counterclockwise.

- Selection of characters in reverse Japanese syllabary, alphabetical or numerical order  
**E** Turn clockwise.
- Character entry / rightward advancement of cursor  
**E** Press to enter the character indicated by the cursor.
- Space insertion  
**A & C** Press at the same time.
- Deletion of one character  
**C & E** Press button E while keeping button C pressed.
- Rightward advancement of the cursor  
**C & E** Turn button E counterclockwise while keeping button C pressed.
- Leftward movement of the cursor  
**C & E** Turn button E clockwise while keeping button C pressed.

## MEMORY CAPACITY INDICATION

**C**



Residual memory capacity / Total memory capacity

**C**

Press to show the residual memory capacity for URL MEMO mode.

*\* The residual memory capacity is displayed for 2 seconds, and the watch automatically returns to the display previously shown.*

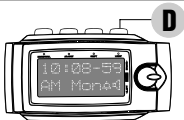
*\* The watch will also return to the display previously shown by pressing button B, C or E.*

## MESSAGE MODE

- Up to 10 messages, each of which contains up to 60 characters, can be registered and displayed together with the date when they are to be displayed.
- On the designated date, the registered message scrolls on the display every 10 minutes.
- The scrolling message also appears by pressing button E in the TIME/CALENDAR mode. (See "DISPLAYING MESSAGES" on page 5)
- The residual memory capacity can also be indicated.

\* For using the MESSAGE mode, follow the procedures described in "URL MEMO MODE".

## ILLUMINATING LIGHT (Electroluminescent panel)



- D** Turn on the illuminating light.

\* The display panel is evenly illuminated for 3 seconds.

# NOTES ON USING THE WATCH

## MODE CHANGE

- When the confirmation sound is turned on, a beep sounds with each press of button A to change over the mode. It sounds in a different tone when the TIME/CALENDAR mode appears, so that you can easily know the mode shown.

- **Note on button E operation:**

To operate the watch with button E, push it, turn it clockwise or counterclockwise.

- Turning clockwise: Set the knob to the leftmost position.
- Turning counterclockwise: Set the knob to the rightmost position.

\* *Do not apply undue force to button E.*



English

## TIME/CALENDAR MODE

### [TIME/CALENDAR SETTING]

- The calendar automatically adjusts for odd and even months including February of leap years from 1998 to 2047.
- 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, turn button E clockwise or counterclockwise 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 E is turned, 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 E is kept at the rightmost or leftmost position.
- If the watch is left untouched with the digits flashing, it will automatically return to the TIME/CALENDAR mode in 2 to 3 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 any one of the buttons to return to the TIME/CALENDAR mode, and then set the time/calendar again.

#### **[DISPLAYING MESSAGES]**

- If button B is pressed while the message is displayed, the message function will be deactivated.
- If button E is turned in either direction while the message scrolls, the display will change to the CALENDAR and then to the TIME.

#### **STOPWATCH MODE**

- After 10 hours have been measured, the stopwatch continues measuring from "00". If it is left counting for more than 100 hours, it will automatically be stopped and reset to "00".
- Restart and stop of the stopwatch can be repeated by pressing button E.
- Measurement and release of the split time can be repeated by pressing button C.



## TIMER MODE

### [PRESET TIMER SETTING]

- The selection of the preset time is made quickly if button E is kept at the rightmost or leftmost position.

### [ADJUSTABLE TIMER SETTING]

- The flashing digits move quickly if button E is kept at the rightmost or leftmost position.
- If the watch is left untouched with the digits flashing, it will automatically return to the TIMER mode in 2 to 3 minutes.
- Once the time is set for the adjustable timer, it will be retained in memory and can be used repeatedly unless it is readjusted.

### [TIMER OPERATION]

- Restart and stop of the timer can be repeated by pressing button E.
- When the set time is up, a warning sound beeps for 5 seconds as the message "Time up!" scrolls twice. To stop them manually, press any one of the buttons.



## ALARM MODE

### [ALARM TIME SETTING]

- The flashing digits move quickly if button E is kept at the rightmost or leftmost position.
- If the watch is left untouched with the digits flashing, it will automatically return to the ALARM mode in 2 to 3 minutes.
- When the time function is displayed in the 24-hour indication, the alarms are also displayed in the 24-hour indication.

## [ALARM ENGAGEMENT/DISENGAGEMENT]

- When any one of the alarms is engaged, the alarm mark is displayed in the TIME/CALENDAR mode.
- At the designated time, the regular alarm rings for 20 seconds as the message "Wake up!" scrolls. To stop them manually, press any one of the buttons.
- At the designated time, the single-time alarm rings for 20 seconds as the message "Let's go!" scrolls. To stop them manually, press any one of the buttons.
- The regular alarm rings differently from the single-time alarm.
- **Alarm test:** The regular alarm can be tested by keeping buttons C and D pressed in the TIME/CALENDAR mode.



12:04-00  
Wake up



12:04-00  
Let's go

## URL MEMO MODE

- If no URL memo is stored in memory, "NO Memo!" is displayed when button A is pressed to show the URL MEMO mode.
- **Notes on entering new data:**
  - When no residual memory capacity is left for a new data, "MEMORY FULL!" is displayed when button E is pressed to activate the NEW DATA ENTRY function. Then, the watch returns to the URL MEMO mode.
  - When the battery voltage gets low, "BATTERY LOW!" is displayed, and the entered data will not be registered in memory, as the entered characters cannot be written into the nonvolatile memory.
  - If the watch is left untouched with the NEW DATA ENTRY function activated, it will automatically return to the URL MEMO mode in 2 to 3 minutes. In that case, the data

you have entered will not be registered in memory.

● **Notes on correcting the data:**

- If the corrected data contains no character, that is, if all the characters of the data are deleted and button B is pressed, "DELETE? (YES/NO)" is displayed. After you choose "YES" or "NO" by turning button E, the watch returns to the URL MEMO mode.
- When the battery voltage gets low, "BATTERY LOW!" is displayed, and the corrected data will not be registered in memory, as the entered characters cannot be written into the nonvolatile memory.
- If the watch is left untouched with the DATA CORRECTION function activated, it will automatically return to the URL MEMO mode in 2 to 3 minutes. In that case, the data you have corrected will not be registered in memory.



● **Notes on deleting one data:**

- When you delete the selected data, if button E is kept pressed for less than 4 seconds, "DELETE? (YES/NO)" will be displayed again.
- If you do not want to delete the selected data, turn button E to select "NO" while "DELETE? (YES/NO)" is displayed, and press button E. The watch will return to the MENU display.
- If button B is pressed while "DELETE? (YES/NO)" is displayed, the selected data will not be deleted and the watch will return to the URL MEMO mode.

● **Notes on clearing all data:**

- When you clear all the data, if button E is kept pressed for less than 4 seconds, "ALL CLR? (YES/NO)" will be displayed again.
- If you do not want to clear the entire data, turn button E to select "NO" while "ALL

CLR? (YES/NO)" is displayed, and press button E. The watch will return to the MENU display.

- If button B is pressed while "ALL CLR? (YES/NO)" is displayed, the data will not be cleared and the watch will return to the URL MEMO mode.

#### **[DISPLAYING THE URL MEMO]**

- When button E is turned clockwise or counterclockwise while a URL memo is scrolling, it will stop on the spot.

Turning button E again clockwise or counterclockwise will put back or advance the URL memo by one character, respectively. It moves quickly if button E is turned and kept at the rightmost or leftmost position.

#### **[HOW TO ENTER THE CHARACTERS]**

- When the NEW DATA ENTRY function is activated by pressing button E, "katakana" is automatically selected as the characters to enter data.
- In selecting the characters of the selected language, the characters move quickly if button E is kept at the rightmost or leftmost position.
- In entering the characters, when the 60th character is selected, pressing button E will not move the cursor and the displayed character will be entered.
- The cursor moves quickly to the right if button E is kept pressed. It stops at the 60th character.
- In inserting spaces, when the 60th character is selected, no space is inserted by pressing buttons A and C at the same time.
- Spaces are inserted in succession if both buttons A and C are kept pressed at the same time.
- The characters are deleted in succession if both buttons C and E are kept pressed at the same time.
- The cursor moves right/left quickly if button E is kept at the rightmost/leftmost position

while keeping button C pressed.

● **Types of characters:** The following characters can be used to enter the data.

- Katakana : アイウエオカキクケコサシスセソタチツテトナニヌネノ  
ハヒフヘホマミムメモヤユヨラリルレロワヲンァィゥ  
エォヤユョッーゝ。。
- English capital letters : 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
- English small letters : 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
- Numerals and symbols : 0 1 2 3 4 5 6 7 8 9 - ( ) . ' / : @ ~ ^ ! Â \_ # & ? (Telephone mark) (Cellular phone mark) (Fax mark) (Zip mark) (Heart mark)

## ILLUMINATING LIGHT (Electroluminescent panel)

- The electroluminescent panel loses its luminance as the battery voltage gets lowered. Also, its luminance level decreases gradually with use.

## NOTES ON DATA PROTECTION

- The watch is equipped with a nonvolatile memory that can retain the registered URL memos/messages even after the battery runs down. In the following cases, however, the stored URL memos/messages may be erased or damaged.
  - When the watch is disassembled.
  - When the watch is out of order or repaired.
  - When the watch is subjected to strong static electricity or shocks.
  - When the watch is used in extremely high or low temperatures.
  - When the battery is replaced in an improper manner.

- To protect the registered URL memos/messages from damage or loss in case of accident, malfunction, repair, loss or theft of the watch, be sure to keep data sources such as business cards or note down important URL memos/messages in a notebook or the like.

Please note that we are not liable for any damage or lost profits resulting from the use of this watch and the loss or change of the registered data caused by malfunction or repair of the watch. We will not accept any claim for recovery of such damage or lost profits made by any third party.

## 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 20 seconds a day, the timer more than once a day, the confirmation sound more than 50 times a day, and/or the illuminating light more than 3 times 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.*

### ● Battery life indicator

When all the digits start flashing, have the battery replaced with a new one immediately. If the following occur while the URL MEMO/MESSAGE function is in use, also replace the battery as soon as possible. The URL MEMO/MESSAGE function cannot be used until a new battery is installed.

- 1) "BATTERY LOW!" is displayed.

*\* The message is also displayed in the TIME/CALENDAR mode.*

- 2) "SYSTEM ERROR 0" is displayed.
- 3) The display becomes blank.

● Necessary procedure after battery change

After the battery is replaced with a new one, 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 shown at right appears.



12:00-00  
AM Thu

\* Before using the watch, perform the following in the order below by referring to the corresponding sections of this manual.

- 1) Time/calendar setting
- 2) Checking of the URL memos stored in memory
- 3) Checking of the messages stored in memory
- 4) Alarm setting



**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.

# TROUBLESHOOTING

English

Trouble	Cause	Solution
<b>The display becomes blank.</b>	<ul style="list-style-type: none"> <li>•The battery has run down.</li> </ul>	<b>Have the battery replaced with a new one immediately by the retailer from whom the watch was purchased.</b>
<b>“BATTERY LOW!” is displayed or all the digits are flashing.</b>	<ul style="list-style-type: none"> <li>•The battery nears its end.</li> </ul>	<b>Have the battery replaced with a new one by the retailer from whom the watch was purchased.</b>
<b>“SYSTEM ERROR 0” is displayed, the watch does not indicate the time correctly, or an abnormal display appears.</b>	<ul style="list-style-type: none"> <li>•The watch was exposed to static electricity or to strong shocks.</li> <li>•The battery has run down.</li> </ul>	<ol style="list-style-type: none"> <li><b>1) Press and hold buttons A, B, C and D at the same time for 2 to 3 seconds.</b> * “12:00’00” AM” will be displayed.</li> <li><b>2) Before using the watch, set the time/calendar.</b> * In case “12:00’00” AM” is not shown even if the four buttons are operated as indicated in step 1), or the trouble occurs frequently, consult the retailer from whom the watch was purchased.</li> </ol>

\* Even if the battery is replaced with a new one or if the built-in IC is reset, the URL memos and messages you have registered in memory will not be erased.

# 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).