

PULSAR

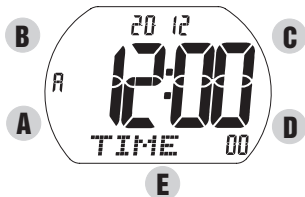
CAL. W864 DIGITAL QUARTZ

- Full-panel dot-matrix liquid crystal panel
- Time/calendar
- Stopwatch with data function
- Countdown timer
- Regular alarm
- World time
- Illuminating light (EL panel)

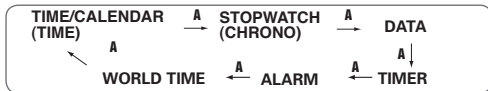
ENGLISH

MODE CHANGE

- Selection of a desired mode can be made by pressing button A.



- A** With each pressing, the mode in the digital display changes in the following order:



ILLUMINATING LIGHT (EL PANEL)

- D** Press to turn on the EL light.

The display panel is evenly illuminated for 3 seconds.

KEY SOUND SETTING

- C** In the Time mode, press to turn the key sound on or off.



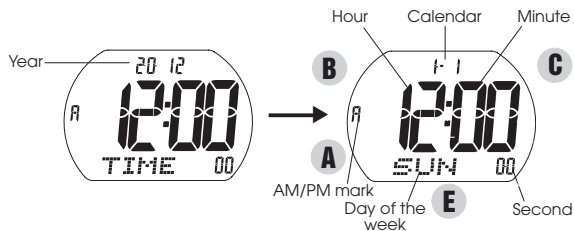
Key sound mark

TIME/CALENDAR MODE (TIME)

- Once the time/calendar of your area is set in the TIME/CALENDAR mode, the times of the 44 cities in the WORLD TIME mode will be set automatically.

- A** Press until the watch enters TIME/CALENDAR mode.

"TIME" is shown, and the watch enters the TIME/CALENDAR display in 2 seconds.



SHOWING THE CITY MARK

- E** Press to show the city mark.

The city mark currently set is shown instead of the day of the week for 2 seconds.

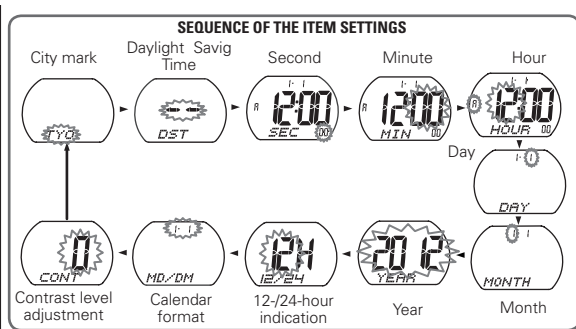


E

TIME/CALENDAR SETTING

- B** Press and hold for 2 seconds to show TIME/CALENDAR SETTING display.
- C** Set the flashing item or digits (forward or increasing).
- or
- E** Set the flashing item or digits (backward or decreasing).
- A** Press to select the item to be adjusted.

I

**Calendar format**

Select either "Date-Month" format or "Month-Date" format.

B Return to TIME/CALENDAR mode.

STOPWATCH MODE (CHRONO)

- The stopwatch measures up to 9 hours, 59 minutes and 59.99 seconds in 1/100 second increments.
- Up to 100 sets of lap/split times can be recorded.

A Press until the watch enters STOPWATCH mode.

"CHRONO" is shown, and the watch enters the STOPWATCH display in 2 seconds.

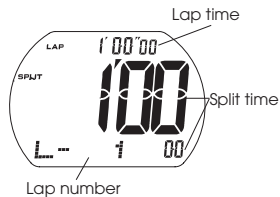


C Start / Stop / Restart

E Measure lap & split time / Reset

STOPWATCH OPERATION

- C** Press to start the stopwatch.
- ▼
- E** **LAP/SPLIT 1**
- ▼ Press to take a lap time.
- E** **LAP/SPLIT 2**
- ⋮
- C** Press to stop the stopwatch.
- ▼
- E** Press to reset the stopwatch.

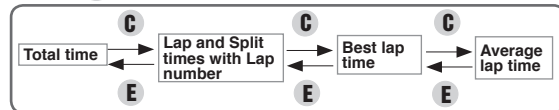
**DATA MODE**

- A** Press until the watch enters DATA mode.

"DATA" is shown, and the watch enters the DATA display in 2 seconds.



- C** or **E** Press to view the contents of the selected data.



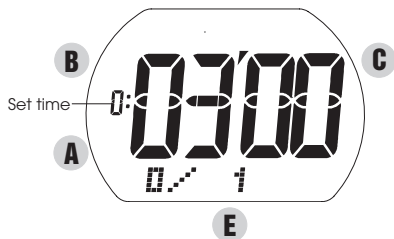
When the best lap time is displayed, "BEST" and "L-**" (the lap number of the best lap time) are alternately displayed.

TIMER MODE

- The timer can be set from 10 seconds up to 9 hours, 59 minutes and 59 seconds in one-second increments.

- A** Press to show TIMER mode.

"TIMER" is shown, and the watch enters the TIMER display in 2 seconds.



English

10

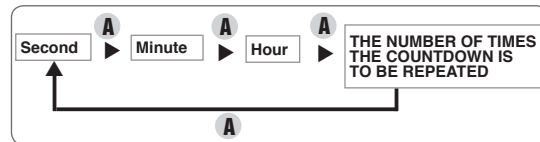
TIMER SETTING

- B** Press for 2 seconds to show TIMER SETTING display.

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

- E** Set the flashing digits. (Decreasing digits)

- A** Press to select the digits to be adjusted.

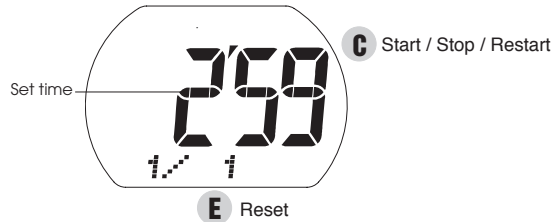


- B** Return to TIMER mode.

English

11

TIMER OPERATION



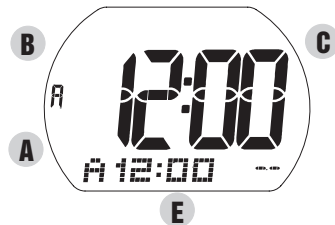
When the set time is up, a warning sound beeps for 3 seconds. To stop it manually, press any of the buttons.

ALARM MODE

- The alarm can be set to ring once a day at a designated time.

- A** Press until the watch enters ALARM mode.

"ALARM" is shown, and the watch enters the ALARM display in 2 seconds.



ALARM TIME SETTING

B Press for 2 seconds to show ALARM SETTING display.

C Set the flashing digits. (Increasing digits)

or
E Set the flashing digits. (Decreasing digits)

A Press to select the digits to be adjusted (hour/minute).

B Return to ALARM mode.

"ON" and the alarm marks appear and the alarm is automatically engaged.

English

ALARM ENGAGEMENT/DISENGAGEMENT

C With each pressing, the alarm is engaged and disengaged alternately.

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

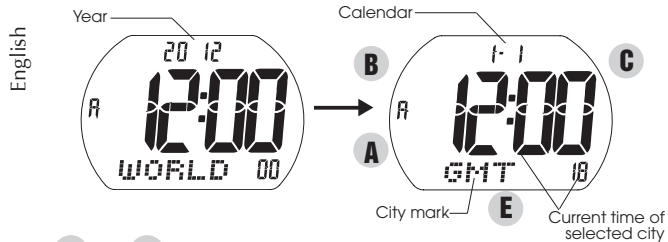


English

WORLD TIME MODE

- The time of 44 cities in different time zones throughout the world can be displayed.

A Press to show WORLD TIME mode.



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

CHANGEOVER BETWEEN STANDARD TIME AND DAYLIGHT SAVING TIME

- B** If the daylight saving time is effective in the selected city, press to show the daylight saving time.

With each press of button B, the standard time and daylight saving time of the city are alternatively shown.

TIME DIFFERENCES

(As of November 2014)

GMT = Greenwich Mean Time

GMT± (hours)	City mark	City name	Country name
0	G M T	Greenwich	United Kingdom
0	L I S	Lisbon*	Portugal
0	L O N	London*	United Kingdom
+ 1	P A R	Paris*	France
+ 1	R O M	Rome*	Italy

GMT± (hours)	City mark	City name	Country name
+ 1	B E R	Berlin*	Germany
+ 2	A T H	Athens*	Greece
+ 2	C A I	Cairo	Egypt
+ 3	M O W	Moscow	Russia
+ 3	J E D	Jeddah	Saudi Arabia
+ 3	B G W	Baghdad	Iraq
+ 3.5	T H R	Tehran*	Iran
+ 4	D X B	Dubai	United Arab Emirates
+ 4.5	K B L	Kabul	Afghanistan
+ 5	K H I	Karachi	Pakistan
+ 5.5	D E L	Delhi	India
+ 6	D A C	Dhaka	Bangladesh
+ 6.5	R G N	Yangon	Myanmar
+ 7	B K K	Bangkok	Thailand
+ 7	J K T	Jakarta	Indonesia
+ 8	S I N	Singapore	Singapore

GMT ± (hours)	City mark	City name	Country name
+ 8	H K G	Hong Kong	China
+ 8	B J S	Beijing	China
+ 9	S E L	Seoul	Republic of Korea
+ 9	T Y O	Tokyo	Japan
+ 9.5	A D L	Adelaide*	Australia
+ 10	G U M	Guam	U.S.A.
+ 10	S Y D	Sydney*	Australia
+ 10	O O L	Gold Coast	Australia
+ 11	N O U	Noumea	New Caledonia
+ 12	W L G	Wellington*	New Zealand
- 10	H N L	Honolulu	U.S.A.
- 9	A N C	Anchorage*	U.S.A.
- 8	Y V R	Vancouver*	Canada
- 8	L A X	Los Angeles*	U.S.A.
- 7	D E N	Denver*	U.S.A.
- 6	C H I	Chicago*	U.S.A.

GMT ± (hours)	City mark	City name	Country name
- 5	NYC	New York*	U.S.A.
- 5	YMQ	Montreal*	Canada
- 5	BOS	Boston*	U.S.A.
- 4	SCL	Santiago*	Chile
- 3	BUE	Buenos Aires	Argentina
- 3	RIO	Rio de Janeiro*	Brazil
- 1	PDL	Azores Is.*	Azores Islands

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

Notice on change of Santiago time zone

Santiago had previously been in a time zone that was 4 hours behind GMT. However, since 2015, Santiago has shifted to a time zone that is 3 hours behind GMT.

NOTES ON USING THE WATCH

TIME/CALENDAR MODE

- The alarm sound can be heard by pressing and holding buttons C and E at the same time.

[TIME/CALENDAR SETTING]

- The calendar automatically adjusts for odd and even months including February of leap years from 2012 to 2061.
- 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 C or E 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 E 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 C or E is kept pressed.
- 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 E are pressed at the same time. This is not a malfunction. Press button B twice to return to the TIME/CALENDAR mode, and then set the time/calendar again.

STOPWATCH MODE

- After 9 hours, 59 minutes and 59.99 seconds have been measured, the stopwatch stops. Press button E to reset the stopwatch.
- Restart and stop of the stopwatch can be repeated by pressing button C.
- Measurement of the lap time and split time can be repeated by pressing button E.
- The lap time and split time measured remain displayed for 7 seconds together with the flashing lap number. Then, the display automatically returns to the measurement in progress.
- Even if the digits are reset to "00" in the stopwatch measurement, stored data is not erased and can be recalled unless a new measurement is started.
- Even if the STOPWATCH mode is changed to another while the measurement is in progress, it continues counting properly. After using the stopwatch function, be sure to stop the stopwatch to avoid unnecessary battery usage.

DATA mode

- If no measurement is made, " - - - - " mark will be displayed when button A is pressed to show the DATA display.

TIMER MODE**[TIMER SETTING]**

- The flashing digits move quickly if button C or E is kept pressed.
- If the watch is left untouched with the digits flashing, it will automatically return to the TIMER mode in 2 to 3 minutes.

[TIMER OPERATION]

- Restart and stop of the timer can be repeated by pressing button C.

ALARM MODE**[ALARM TIME SETTING]**

- The flashing digits move quickly if button C or E is kept pressed.
- 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 alarm is also displayed in the 24-hour indication.

[ALARM ENGAGEMENT/DISENGAGEMENT]

- When the alarm is engaged, the alarm mark is displayed.

WORLD TIME MODE

- The time differences and use of daylight saving time may change in some areas or countries.

ILLUMINATING LIGHT (EL panel)

- The EL panel (electroluminescent panel) loses its luminance as the battery voltage gets lowered. Also, its luminance level decreases gradually with use.
- The luminance level of EL may decrease if it is left in low temperature.
- If the watch is exposed to low temperatures while the battery is nearing the end of its life, the EL illumination time may become shorter than normal. This shorter EL illumination will allow the watch to maintain timekeeping functionality prior to battery replacement.

BATTERY CHANGE

**3
Years**

Battery life : Approx. 3 years

Battery : CR2016

- *The battery life may be less than 3 years if the alarm sounds more than 20 seconds a day.*
- *As the battery is inserted at the factory to check the functions 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 the battery voltage becomes low, the battery mark starts flashing on the display. In such a case, have the battery replaced with a new one as soon as possible.

● **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. When the buttons are released, time/calendar display will appear and "SUN 12:00'00" 2012 1-1" will be displayed.

- *Before using the watch, set the time/calendar and 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 "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 PULSAR 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/20 bar)*



If "WATER RESISTANT 10 BAR", "WATER RESISTANT 15 BAR" or "WATER RESISTANT 20 BAR" is inscribed on the case back, your watch is designed and manufactured to withstand up to 10 bar/15 bar/20 bar and is suitable for taking a bath, shallow diving, but not for scuba diving. We recommend that you wear a PULSAR Diver's watch for scuba diving.

- * Before using the water resistance 5, 10, 15 or 20 bar watch in water, be sure the crown is pushed in completely. Do not operate the crown 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, 15 or 20 bar watch, be sure to observe the following:
 - Do not operate the crown when the watch is wet.
 - 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.

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.

TEMPERATURES

Operational temperature range: Between -5°C (+23°F) and 50°C (122°F)



Display temperature range: Between 0°C (+32°F) and 40°C (+104°F)



Functional temperature range of alarm and LED light: Between 5°C (+41°F) and 50°C (+122°F)

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.