

PULSAR

CAL. VR42/VR43 Solar Chronograph

SOLAR FUNCTIONS

- Solar charging function
- Power reserve indicator function
- Energy depletion forewarning function

TIME/CALENDAR

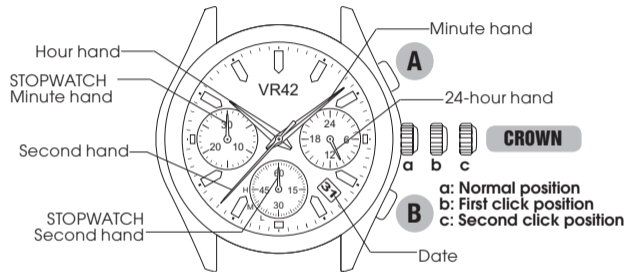
- 24-hour, hour, minute and second hands
- Date displayed in numerals

STOPWATCH

- Two Stopwatch hands: second and minute hands
- The stopwatch can measure up to 29 minutes and 59 seconds in one second increments.
- Split time measurement is available.

ENGLISH

DISPLAY AND CROWN/BUTTONS



While the position of the 24-hour sub dial may differ depending on the model, the method of operation is the same.



SCREW DOWN CROWN

[for models with screw down crown]

Unlocking the crown

- 1 Turn Crown counterclockwise until you no longer feel the threads turning.
- 2 Crown can be pulled out.



Locking the crown

- 1 Push Crown back in to normal position.
- 2 Turn Crown clockwise while pressing it lightly until tight.



SETTING THE TIME AND ADJUSTING THE STOPWATCH HAND POSITION

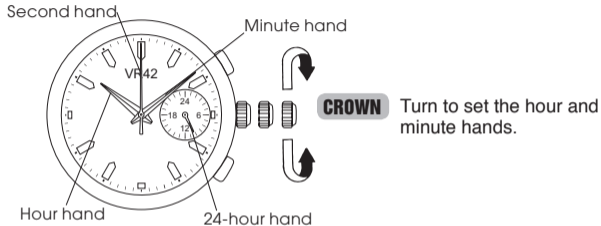
This watch is designed so that:

- 1) time setting and
- 2) stopwatch hand position adjustment

are both made with the crown at the second click position. Once the crown is pulled out to the second click, be sure to make the above adjustments at the same time.

CROWN Pull out to second click when the second hand is at the 12 o'clock position.

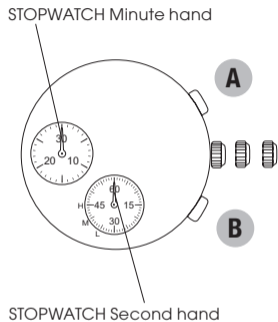
1) TIME SETTING



- The 24-hour hand moves correspondingly with the hour and minute hands.
- It is recommended that the hands be set to the time a few minutes ahead of the current time, taking into consideration the time required to adjust the STOPWATCH hand position if necessary.

2) STOPWATCH HAND POSITION ADJUSTMENT

- If the STOPWATCH hands are not in the "0" position, follow the procedure below to set them to the "0" position.



A
OR
B

Press repeatedly to set the STOPWATCH hands to the "0'00" position.

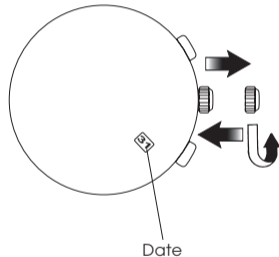
- With each pressing of button A, the STOPWATCH second hand advances by one second.
- With each pressing of button B, the STOPWATCH second hand moves back by one second.
- The STOPWATCH minute hand moves correspondingly with the STOPWATCH second hand.
- The hands move quickly if button A or B is kept pressed.

CROWN

Push back in to normal position in accordance with a time signal.

SETTING THE DATE

- Before setting the date, be sure to set the time.



CROWN

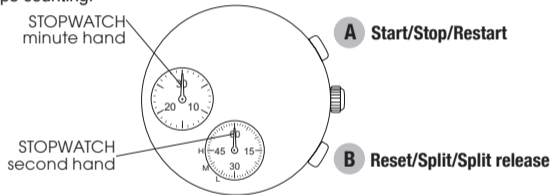
Pull out to first click.

Turn counterclockwise until the desired date appears.

Push back to the normal position.

STOPWATCH

- The stopwatch can measure up to 29 minutes and 59 seconds in one second increments.
- When the measurement reaches 30 minutes, the stopwatch automatically stops counting.



- Before using the stopwatch, be sure to check that the crown is set at the normal position and that the STOPWATCH hands are reset to the "0" position.

If the STOPWATCH hands do not return to the "0" position when the stopwatch is reset to "0", follow the procedure in "SETTING THE TIME AND ADJUSTING THE STOPWATCH HAND POSITION".

Standard measurement



Split time measurement



Measurement of two competitors



NOTES ON OPERATING THE WATCH

SETTING THE TIME AND ADJUSTING THE STOPWATCH HAND POSITION

- When the stopwatch is or has been measuring or is stopped, if the crown is pulled out to the second click, it will automatically reset the STOPWATCH hands to "0".

[TIME SETTING]

- When setting the hour hand, be sure to check that AM/PM is correctly set. The watch is designed so that the date changes once in 24 hours.
- When setting the minute hand, first advance it 4 to 5 minutes ahead of the desired time and then turn it back to the exact minute.

SETTING THE DATE

- It is necessary to adjust the date at the end of February and 30-day months.
- Do not set the date between 9:00 p.m. and 1:00 a.m., as the date may not change properly.

STOPWATCH

- Restart and stop of the stopwatch can be repeated by pressing button A.
- Measurement and release of split time can be repeated by pressing button B.

HOW TO CHARGE AND START THE WATCH



When you start the watch or when the energy in the rechargeable battery is reduced to an extremely low level, charge it sufficiently by exposing the watch to light.

NOTE

- *It is not necessary to charge the watch fully. It is important, however, to charge the watch sufficiently, especially in case of initial charge.*

GUIDELINES FOR CHARGING TIME

| Illumination (Lux) | Light source | Environment | Time required (approx.) | | |
|--------------------|------------------|----------------|-------------------------|-------------|-------------|
| | | | A (Hours) | B * (Hours) | C (Minutes) |
| 700 | Fluorescent lamp | Inside office | - | 24 | 108 |
| 3,000 | | 30W 20 cm | 83 | 6 | 27 |
| 10,000 | Sunlight | Cloudy weather | 25 | 2 | 8 |
| 100,000 | | Fine weather | 3 | 12 minutes | 1 |

The above table provides only general guidelines.

- <Reference>** Condition A: Time required for full charge
 Condition B: Time required for steady operation
 Condition C: Time required for 1 day's charge

* *The values in this column represent the charging times required until the second hand moves constantly at 1-second intervals after the watch starts operating with the second hand moving at 2-second intervals.*

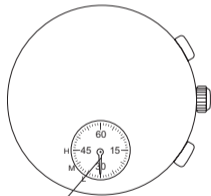
- *Even if the watch is not charged for the time specified in the column, the second hand may temporarily move at 1-second intervals. But it will soon resume moving at 2-second intervals, and therefore, charge the watch for more than the specified period.*
- *When the watch is fully charged, it will continue to operate for about 4 months.*

CAUTION

- When charging the watch, do not place it too close to a hot light source such as a photoflash light, spotlight or incandescent light as this can greatly raise the watch temperature.
- When charging the watch by sunlight, do not leave it exposed to the sun for a long time, on the dashboard of a car, etc., as this can greatly raise the watch temperature.
- Make sure the watch temperature does not exceed 50°C while charging, to avoid damage to the parts inside.

POWER RESERVE INDICATOR

- The STOPWATCH second hand can be used to check the power reserve amount (continuous operating time).
- Before checking, make sure that the stopwatch is reset (for resetting the stopwatch, see "STOPWATCH").



STOPWATCH
second hand

B Press for more than 2 seconds.

The STOPWATCH second hand is set at the 30-second position, and then will move to indicate the power reserve amount for 3 seconds.

| | Low (35 seconds) | Middle (40 seconds) | High (45 seconds) |
|--|---------------------|---------------------------|----------------------|
| QUICK MOVEMENT OF STOPWATCH SECOND HAND* | | | |
| POWER RESERVE AMOUNT | Less than 30 days | Between 30 and 90 days | More than 90 days |

The above table provides only general guidelines.

* The STOPWATCH second hand will automatically return to the 0 second position after indicating the power reserve amount.

ENERGY DEPLETION FOREWARNING FUNCTION

- When the energy stored in the rechargeable battery is reduced to an extremely low level, the second hand starts moving at 2-second intervals instead of the normal 1-second intervals.
 - In that case, recharge the watch as soon as possible by exposing it to light. Otherwise, the watch may stop operating in about 1 day.
- ◆ **To prevent the energy depletion**
- When you wear the watch, try not to keep it covered by your clothes.
 - When the watch is not in use, leave it in a bright place as long as possible.

Make sure that the watch temperature does not exceed 50°C.

NOTES ON POWER SUPPLY

- This watch is provided with a rechargeable battery for exclusive use with the watch. Unlike conventional battery-powered watches, therefore, battery replacement is not necessary.
- The solar cell is a clean energy source, having no adverse effect on the natural environment.

CAUTION

- **Never insert a conventional silver oxide battery in your watch as it may explode, generate an intense heat or catch fire. The watch is designed not to operate even if the battery is installed in it.**

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.

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) may cause battery leakage or

shorten the battery life. Do not leave your watch in very low temperatures below -5°C (+23°F) for a long time since the cold may cause a slight time loss or gain. However, the above conditions will be corrected when the watch returns to normal temperature.

MAGNETISM

Your watch will be adversely affected by strong magnetism. Keep it away from close contact with magnetic objects.

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.

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.

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, crown, 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.