

# PULSAR

## CAL. V653 CHRONOGRAPH

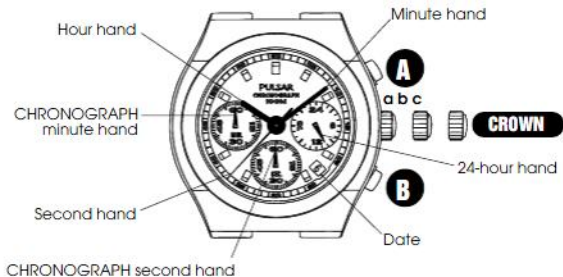
### TIME/CALENDAR

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

### CHRONOGRAPH

- Measures up to 60 minutes in 1 second increments.
- Split time measurement

# DISPLAY AND CROWN/BUTTONS



## 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

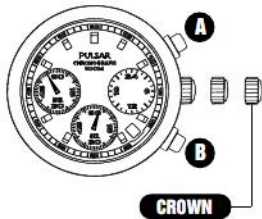
- 1 Push Crown back in to normal position.
- 2 Turn Crown clockwise while pressing it lightly until tight.



## ADJUSTING CHRONOGRAPH HAND POSITION

- Before setting the time, be sure to check that the CHRONOGRAPH hands are in "0" position when the chronograph is reset. (For resetting the chronograph, see "CHRONOGRAPH" on page 6)

*\* If either of the CHRONOGRAPH hands does not return to "0" position, follow the procedure below to reset the hands.*



**CROWN**

Pull out to second click.

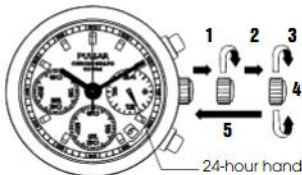
**A** or **B**

Press repeatedly to reset CHRONOGRAPH hands to "0" position.

**CROWN**

Push back in to normal position.

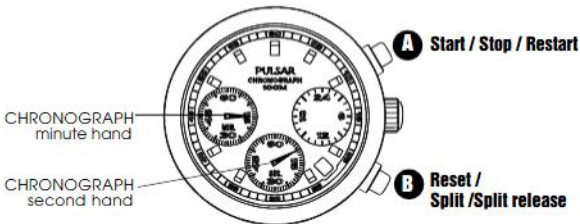
## TIME/CALENDAR SETTING



### CROWN

- 1 Pull out to first click, and turn clockwise until the previous day's date appears.
- 2 Pull out to second click when Second hand is at the 12 o'clock position.
- 3 Turn clockwise until the desired date appears.
- 4 Turn to set Hour and Minute hands.
- 5 Push back in to normal position in accordance with a time signal.

# CHRONOGRAPH



Ex.: 15 minutes and 10 seconds

# TACHYMETER

[for models with tachymeter scale on the dial]

## To measure the hourly average speed of a vehicle

Ex. 1

Tachymeter  
scale: "90"

CHRONOGRAPH  
second hand:  
40 seconds



"90" (tachymeter scale figure) x  
1 (km or mile) = 90 km/h or mph

**1** Use the chronograph to determine how many seconds it takes to go 1 km or 1 mile.



**2** Locate the second marker on the main dial that corresponds to the measured seconds, and the tachymeter scale it indicates gives the average speed per hour.

*Tachymeter scale can be used only when the time required is less than 60 seconds.*

Ex. 2: If the measuring distance is extended to 2 km or miles or shortened to 0.5 km or miles and CHRONOGRAPH second hand indicates "90" on

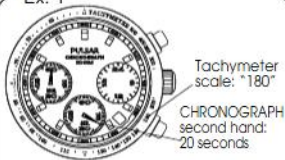
tachymeter scale:

"90" (tachymeter scale figure) x 2 (km or mile) = 180 km/h or mph

"90" (tachymeter scale figure) x 0.5 (km or mile) = 45 km/h or mph

## To measure the hourly rate of operation

Ex. 1



"180" (tachymeter scale figure) x  
1 job = 180 jobs/hour

1 Use the chronograph to measure the time required to complete 1 job.



2 Locate the second marker on the main dial that corresponds to the measured seconds, and the tachymeter scale it indicates gives the average number of jobs accomplished per hour.

Ex. 2: If 15 jobs are completed in 20 seconds:

"180" (tachymeter scale figure) x 15 jobs = 2700 jobs/hour

## NOTES ON OPERATING THE WATCH

### ADJUSTING CHRONOGRAPH HAND POSITION

- The CHRONOGRAPH minute hand moves correspondingly with the CHRONOGRAPH second hand.
- The hands move quickly if the respective buttons are kept pressed.
- The CHRONOGRAPH hands turn counterclockwise by pressing button "A" and clockwise by pressing button "B".

### TIME/CALENDAR SETTING

- Before setting the time/calendar, be sure to reset the chronograph.
- Do not set the date between 9:00 p.m. and 1:00 a.m. Otherwise, the date may not change properly.
- When setting the hour hand, be sure to check that AM/PM is correctly set. The watch is so designed that the date changes once in 24 hours.
  - \* *Turn the hands past the 12 o'clock marker to determine whether the watch is set for the A.M. or P.M. period. If the date changes, the time is set for the A.M. period. If not, the time is set for the P.M. period.*
- When setting the minute hand, first advance it 4 to 5 minute ahead of the desired time and then turn it back to the exact minute.
- The 24-hour hand moves correspondingly with the hour hand.

- While the crown is at the second click, do not press the buttons. Otherwise, the CHRONOGRAPH hands will move. To reset them to "0" position, see "ADJUSTING CHRONOGRAPH HAND POSITION" on page 4.

## CHRONOGRAPH

- While the chronograph is counting, do not pull out the crown to set the time. Otherwise, the chronograph operation cannot be made.

## BATTERY CHANGE

**2**  
**Years**

**Battery life : Approx. 2 years**

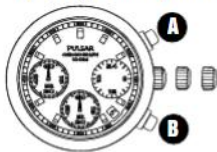
**Battery : SEIKO SR920SW**

- *If the chronograph is used for more than 60 minutes a day, the battery life may be less than the specified period.*
- *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 in case any of the hands should move improperly, follow the procedure below to reset the hands to "0" position.



**CROWN** Pull out to second click.

▼  
**A and B** Press and hold at the same time for 2 seconds.\*

▼  
**A or B** Press repeatedly to reset CHRONOGRAPH second and minute hands to "0" position.\*\*

▼  
**CROWN** Turn to set the time.

▼  
**CROWN** Push back in to normal position.

\* The CHRONOGRAPH second hand turns half a circle counterclockwise and then returns where it was.

\*\* The hands turn counterclockwise by pressing button "A" and clockwise by pressing button "B". The hands move quickly if the respective buttons are kept pressed.



## **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



- Before using in water, be sure the crown is pushed in completely.
- Do not operate the crown and 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 crown or push 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) 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.

## 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, 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.