

(E.F.S.G.I.P.)

EFSGI – A17

ANALOGUE TYPE **Series GC & WF (Cal. N944, N945)**

INSTRUCTIONS AND GUARANTEE
FOR EUROPE / OCEANIA
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PULSAR ANALOGUE QUARTZ WATCH WITH ALARM CHRONOGRAPH TIMER

Cal. N944, N945

FEATURES

This is a multi-display analogue watch featuring alarm, stopwatch, countdown timer and dual time functions. The mode changes simply by turning the crown.

■ TIME

Hour, minute and 24-hour hands

■ CALENDAR

Date is indicated by date indicator.

■ ALARM

The alarm is set on a 24-hour basis.

■ STOPWATCH (CHRONOGRAPH)

It can measure up to 12 hours in 1/10 seconds.

Split time measurement is also possible.

■ COUNTDOWN TIMER

Up to 60 minutes can be set with a preset function.

■ DUAL TIME

The time of a different time zone can be displayed on a 24-hour basis.

MODES AND DISPLAYS

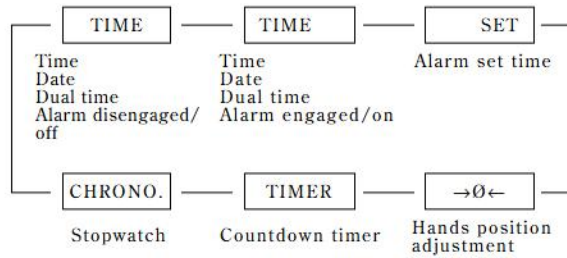
There are two buttons and a crown as indicated in the illustration below.

["TIME" mode]

Hour hand	Normal position	[Cal. N944]
24-hour hand	First click	
Date	Second click	
Center hand	Crown	
(date indicator)	Dual time hand	
Center hand	Mode indicator	
(stopwatch/timer	Stopwatch	
second hand)	1/10 second hand	
Minute hand		


The mode changes by turning the crown at normal position clockwise or counterclockwise, and the mode indicator shows the mode selected. The hands move and perform different functions in each mode.

MODE INDICATOR



In each mode the hands perform the following functions.

N/F: Not functional. Disregard the display or movement.
 *1: Alarm can be set to ring on a dual time basis.
 *2: Special movement.



Functions of the crown and buttons in each mode


ADJUSTING THE HAND POSITION

Before setting the time or calendar, or after the battery is replaced, be sure to adjust the hand position using "→0←" mode.

- Turn the crown to set the mode indicator to "→0←". If all the hands other than the dual time hand at the 3 o'clock position do not return to the 12 o'clock position, follow the procedure below.

Second click
Crown
Mode indicator

N/F : Not functional.
* : Please do not set the dual time in this mode.



1. Pull out the crown to the first click.
2. Press "A" or "B" repeatedly but separately to reset the stopwatch second (center hand) and stopwatch 1/10 second hands, which are mechanically engaged. Both the hands move simultaneously and return to the 12 o'clock position at the same time.
 - * Be sure to reset the pointed tip of the center hand to the 12 o'clock position.
 - * The hands move quickly if the button is kept pressed.
3. Pull out the crown to the second click.
Press "A" or "B" repeatedly but separately to reset the hour, minute and 24-hour hands, which are mechanically engaged. All of the three hands return to the 12 o'clock position at the same time.
 - * Please note that it is not necessary to adjust the dual time hand.
 - * The hands move quickly if the button is kept pressed.
4. Push the crown back in to the normal position.

TIME SETTING

- Turn the crown to set the mode indicator to either "TIME" (alarm disengaged) or "TIME " (alarm engaged).
The hour, minute and 24-hour hands move to indicate the time set previously. Disregard the movement of the stopwatch 1/10 second hand, center hand and dual time hand during the time setting.

Hour hand
Minute hand
24-hour hand
Second click
Crown
Mode indicator
Time shown is 10:08 PM or 22:08.

1. Pull out the crown to the second click.
The minute hand may advance to the next minute.
2. Press "A" or "B" repeatedly but separately to set the hour, minute and 24-hour hands, which are mechanically engaged.
* All the three hands can be set at the same time.
* The hands move quickly if the button is kept pressed.
* Please make sure that AM/PM is correctly set by noting the 24-hour hand.

7:15 AM
7:15 PM (19:15)
Midnight
Noon
AM
PM
[24-hour hand]

3. Push the crown back in to the normal position to start the watch.

CALENDAR SETTING

Cal. N944 has date numerals printed on the lower half of the dial starting from the 3 o'clock.
Cal. N945 has date numerals printed on the whole dial starting from the 12 o'clock position.
All the calendar setting operations are the same for both calibres.

[Cal. N944]
[Cal. N945]
Mode indicator
First click
Crown
Both indicate the 1st of the month.
Date indicator

- Turn the crown to set the mode indicator to either "TIME" or "TIME".
The hands move to indicate the time and calendar set previously.

1. Pull out the crown to the first click.
2. Press "A" or "B" repeatedly but separately to set the calendar.
 - * Be sure to set the date indicator (forked tip of the center hand) to the desired date printed on the dial.
 - * The hands move quickly if the button is kept pressed.
 - * Disregard the movement of the stopwatch 1/10 second hand at the 12 o'clock position.
3. Push the crown back in to the normal position.
 - * While the crown is kept at the first click, the hands stop, and when the crown is pushed back to the normal position, the hands move and catch up with the current time.

DUAL TIME

- Turn the crown to set the mode indicator to either "TIME" or "TIME".
The hands move to indicate the time, calendar and dual time set previously.

Minute hand
Dual time hand
The dual time shown is 11:08 AM.
First click
Mode indicator
Crown

How to read the dual time

The dual time hand indicates the hour of the dual time while the regular minute hand indicates the minutes of the dual time.

Dual time setting

1. Pull out the crown to the first click.
2. Turn the crown clockwise or counterclockwise to set the dual time hand.
 - * Please make sure that AM/PM of the dual time is correctly set.
3. Push the crown back in to the normal position.
 - * While the crown is kept at the first click, the hands stop, and when the crown is pushed back to the normal position, the hands move and catch up with the current time.

The alarm is set to ring at 7:00 AM.

Hour hand
Minute hand
24-hour hand
Crown
Mode indicator
Second click

ALARM

The alarm can be set on a 24-hour basis in one-minute increments.

Alarm setting

- Turn the crown to set the mode indicator to “ SET”. The hour, minute and 24-hour hands move to indicate the alarm time set previously.

1. Pull out the crown to the second click.
2. Press “A” or “B” repeatedly but separately to set the hour, minute and 24-hour hands.
 - * All of the three hands are mechanically engaged and can be set at the same time.
 - * The hands move quickly if the button is kept pressed.
 - * Please make sure that AM/PM of the alarm time is correctly set.
3. Push the crown back in to the normal position.

Alarm engagement/disengagement

- To engage the alarm, turn the crown to set the mode indicator to "TIME" (alarm engaged).
- The alarm rings at the designated alarm time only when "TIME" mode is selected.
- The alarm rings for 15 seconds and stops automatically. To stop it manually, press "A" or "B", or turn the crown and change the mode.
- The alarm can be tested by continuously pressing both "A" and "B" at the same time when "TIME" is selected.

Note: It is possible to set the alarm to ring at the time of a different time zone, using the dual time hand.

STOPWATCH (CHRONOGRAPH)

The stopwatch measures in 1/10 seconds, seconds, minutes and hour up to 12 hours.

Stopwatch operation

- Turn the crown to set the mode indicator to "CHRONO".
The hour, minute, stopwatch second and stopwatch 1/10 second hands return to the 12 o'clock ("0") position.
The 24-hour hand returns to the 24 o'clock or 12 o'clock position.

Ex.) Elapsed time measured is 1 hour, 24 minutes and 37.2 seconds:

Stopwatch 1/10 second hand
Stopwatch second hand
Hour hand
Minute hand
Crown
Mode indicator

The 24-hour hand indicates 1 hour if it has been reset to the 12 o'clock position.

1. Standard measurement

To start : Press "A".
To stop : Press "A".
To reset to "0" : Press "B".

A A A A A A A A B B B B B B B B

2. Accumulated elapsed time measurement

To start : Press "A".
To stop : Press "A".
To restart : Press "A".
To stop : Press "A".
To reset to "0" : Press "B".

3. Split time measurement

To start : Press "A".
To measure split time : Press "B".
To release split time : Press "B".
To stop : Press "A".
To reset to "0" : Press "B".

4. Measurement of two competitors

To start : Press "A".
To measure the finish time of the first competitor : Press "B".
When the second competitor finishes:
Press "A".

To display the finish time of the second competitor : Press "B".
To reset to "0" : Press "B".

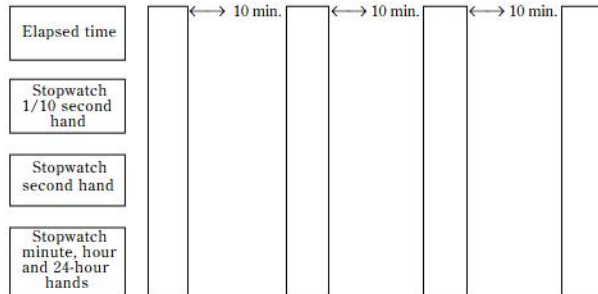
Hands' movement during measurement

In order to save the energy, 10 minutes after the stopwatch is started, the stopwatch second hand stops at the 12 o'clock position, and the stopwatch 1/10 second hand shows special swing motion to indicate that the stopwatch is in operation.

As well as the first 10 minutes of the measurement, the stopwatch 1/10 second and stopwatch second hands show the normal movement for 10 minutes after each operation, such as RESTART, SPLIT RELEASE or returning to "CHRONO" mode.

* However, when "A" or "B" is pressed, the stopwatch 1/10 second and stopwatch second hands advance and show measurement time in 1/10 seconds and seconds.

Ex.)



START
* STOP / RESTART
* SPLIT / SPLIT RELEASE
* STOP / RESET

Normal movement

Swing motion

Stop at the 12 o'clock position

Notes:

- Even if the mode is changed from "CHRONO" to another while the stopwatch is running, it continues measurement. However, if "→0←" mode is selected and the crown is pulled out, the measurement is canceled and the hands return to "0" position. If the mode is changed while split time is displayed, the stopwatch continues measuring but the split time is released.
- It is possible to start the stopwatch while the hands are returning to the 12 o'clock position by selecting "CHRONO" mode, or stopping and resetting the stopwatch.
- When measurement exceeds 12 hours, the hands stop at the 12 o'clock position.

COUNTDOWN TIMER

- The countdown timer indicates the time remaining of the time period set previously. It can be set to count down from 1 to 60 minutes in one-minute increments. The remaining time is displayed in one-second increments.
- Once the countdown time is set, it can be used repeatedly as preset time.

Timer setting

- Turn the crown to set the mode indicator to "TIMER". The hour, minute, 1/10 second and timer second hands return to the 12 o'clock position. Disregard the 24-hour and dual time hands.

Ex.) 40 minutes is set for
countdown.

Ex.) The remaining time is 21
minutes and 43 seconds.

Timer second hand
1/10 second hand
Minute hand
Crown
Mode indicator
Second click

Timer second hand
1/10 second hand
Minute hand
Crown
Mode indicator

1. If the timer has been set previously, press "B". The minute hand moves to indicate the time set previously.
2. If you want to change the set time, or the timer has not been set previously, pull out the crown to the second click.
3. Press "A" for clockwise setting of the minute hand or "B" for counterclockwise setting.
* With each press of the button, the hand moves one minute.
* The hand moves quickly if the button is kept pressed.
4. Push the crown back in to the normal position.

Timer operation

To start : Press "A".
To stop : Press "A".
To restart : Press "A".
To reset : Press "B".

Notes:

- In order to save the energy, until the remaining time becomes less than 5 minutes, the timer second hand stops at the 12 o'clock position and the 1/10 second hand shows special swing motion to indicate that the timer is in operation. When the remaining time becomes less than 5 minutes, the timer second hand shows normal counterclockwise movement for each second. When the countdown timer is stopped, the timer second hand moves and shows the remaining time in minutes even if the remaining time is greater than 5 minutes.
- A short beep sounds at each of the last 3 seconds before the countdown is over, and a long beep sounds when the countdown is over.
- Even if the mode is changed from "TIMER" to another while the timer is counting down, the short beeps and long beep sound with the crown kept at the normal position.

NECESSARY OPERATION AFTER BATTERY CHANGE

When the battery is replaced, the time information stored in the built-in IC and the time indicated by the hands do not correspond with each other. Before using the watch, therefore, be sure to adjust the hand position, following the procedure in "ADJUSTING THE HAND POSITION".

RESETTING THE BUILT-IN IC

In case any of the hands should move improperly, follow the procedure below to adjust the hand movement.

1. Turn the crown to set the mode indicator to "TIME".
2. While pressing "A" and "B" simultaneously, turn the crown to change the mode to "TIME" or "CHRONO".
3. Turn the crown to set the mode indicator to "→0←". Then adjust the hand position, following the procedure in "ADJUSTING THE HAND POSITION".

TO PRESERVE THE QUALITY OF YOUR WATCH

Your watch contains a highly precise electronic circuit and a crystal oscillator, and to maintain its high accuracy you should not subject it to violent shocks or extreme temperatures.

Your watch is classified into one of the following four groups by the degree of water resistance. Please read the appropriate item below for proper use.

If your watch is water resistant, "WATER RESISTANT" is shown on the back of your watch case. If your watch is 100 m or 50 m water resistant, it is so indicated on the dial. If your watch is non-water resistant, there is no such indication.

Water resistant: These watches are designed to withstand accidental contact with water, for example, splashes or rain, but should not be worn while swimming or diving.

Water resistant (50 m/5 BAR): These watches are suitable for swimming and can be worn in the shower, but not for diving. If the watch is exposed to salt water, rinse it in fresh water and then wipe it thoroughly dry. Do not press any buttons or turn the crown when the watch is wet.

Water resistant (100 m/10 BAR): These watches are suitable for swimming or skin diving (without heavy breathing apparatus), but not for scuba diving. If the watch is exposed to salt water, rinse it in fresh water and then wipe it thoroughly dry. Do not press any buttons or turn the crown when the watch is wet.

Non-water resistant: Care should be taken not to get your watch wet as water may damage the movement.

- Have your Pulsar watch checked by a PULSAR DEALER periodically to be sure that the case, buttons, crown, gasket, crystal seal and push pins remain intact.

BATTERY CHANGE

The miniature battery SEIKO SR927W which powers your watch should last approximately 2 years. However, because the battery is inserted at the factory, its actual life once in your possession may be less than the specified period.