

***TECHNICAL
INFORMATION***

CITIZEN QUARTZ

Cal. No. 959※

 **CITIZEN**

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■1. OUTLINE



This is a full-scale sport-type digital watch with multiple functions and developed from Cal.No.944** which is precedently marketed as one of the leaders among Citizen sport-type digital watches.

■2. FEATURES

- 1) A full-scale sport watch with multiple functions:
 - A pacemaker, a stopwatch and a LAP counter are incorporated in addition to the functions of the time display and alarm.
 - Setting of desired time (with previous alarm)
A desired time is previously set, and thus the previous alarm is produced with each second and for 9 seconds before the set time.
 - Call-out of LAP time record
The call-out is possible for the maximum 6 different types of lap time and stop time.
- 2) Lifetime of about 5 years for power cell:
A long lifetime is assured for the power cell thanks to the use of a lithium cell.
- 3) No adjustment of time rate carried out on the market:
Owing to adaption of the DFC (digital frequency control), a perfect adjustment is already carried out for the time rate at the factory side. Accordingly no adjustment of time rate is carried out on the market.

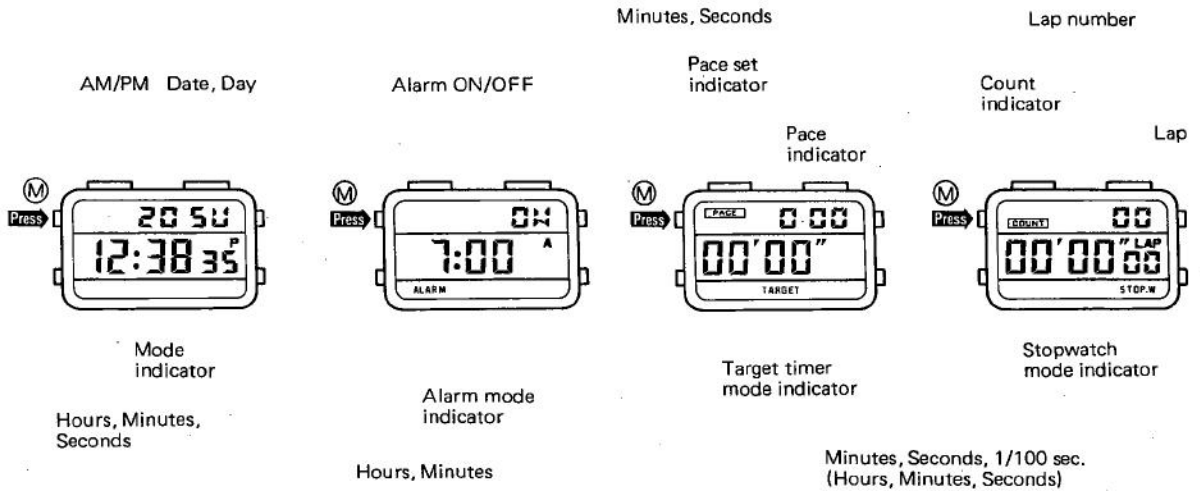
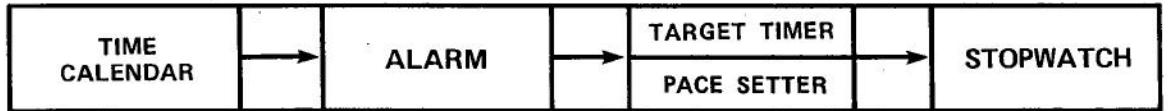
■3. SPECIFICATIONS

Caliber No.	9590
Type	C/MOS-LSI (1 unit)
Module Size	Outer dia. : 27.00φmm Thickness : 4.98 ^t mm (Inc. power cell part)
Accuracy	±20 sec./month at normal temperatures
Oscillation	32,768Hz
Method of display	FE (Field Effect) type nematic LC plus split multiplex driving
Integrated circuit	C/MOS-LSI (1 unit)
Effective temperature range	±0°C ~ +55°C (32°F ~ 131°F)
Adjustment of time rate	DFC method (Unit time of measurement 10 sec. with no terminal for adjustment)
Display functions: Time (Calendar) Alarm Pace setter Target timer Stopwatch	Push-button operated change-over display Hours, Minutes, Seconds, AM/PM, Day, Date, (Under adjustment) Year, Month, 12/24-hour switching Hours, Minutes, AM/PM, Alarm, ON/OFF 0 – 239/minute Minutes, Seconds (up to 79'59'') Measurement of Minutes, Seconds, 1/100 second Stopwatch (up to 59'59''99) 12 hours Hours, Minutes, Seconds Stopwatch (up to 11:59'59'')
Additional functions	<ul style="list-style-type: none"> ●Alarm monitor ●Illumination lamp ●Instant manual return ●Fully automatic calendar (up to the year 2019) ●Warning buzzer (9 secs. before the target time) ●Lap time marker (up to 99 laps) ●Lap time memory unit (up to 6 LAP records) ●12/24-hour switching ●Auto return system
Power cell (Lithium)	Parts No. : 280-204 (1 unit)/280-202 Maker code : CR2016 (Li/MnO ₂)/BR2016 (Li/(CF)n) Size : 20.0φmm x 1.6 ^t mm Nominal voltage: 3V Capacity : 65mAH Lifetime : Approx. 5 years based on the assumed daily use of the Alarm 30 secs; Illumination 3 secs; and Pace Setter 15 sec/week

■4. HANDLING INSTRUCTIONS

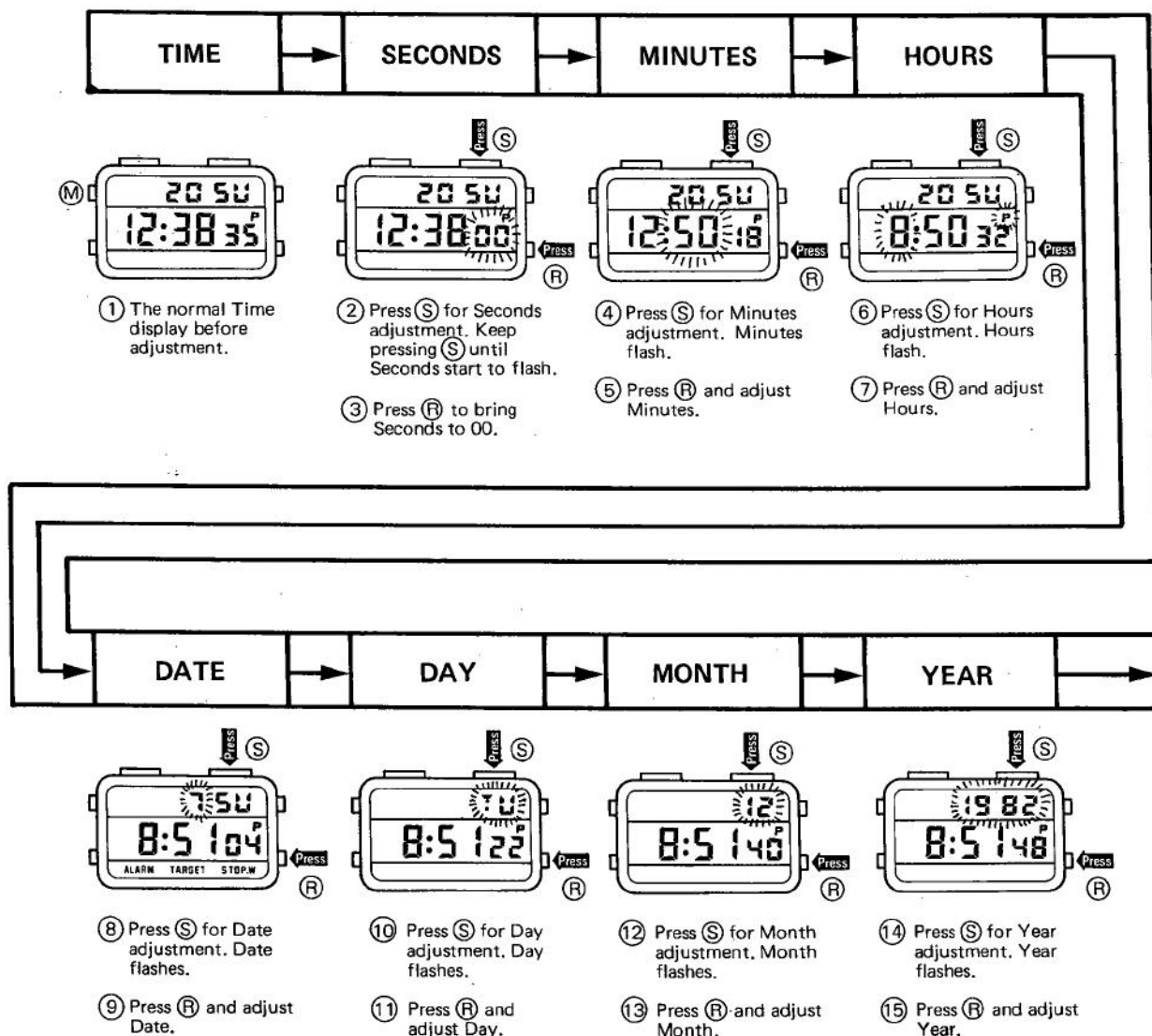
4-1. Selecting basic functions

- Press (M) button to select functions.



- The mode indicator will flash when the watch is set to a desired function.
- If the watch is left in the ALARM or TARGET TIMER mode for 1–2 minutes, the AUTO RETURN SYSTEM will activate and the watch will return to the normal TIME display.
- The TIME display can be changed from 12-HOUR to 24-HOUR DISPLAY or vice versa (see p.5). The 12/24-HOUR display of the ALARM will coincide with that of the TIME.
- The static mode indicators which will appear when the watch is set to the normal TIME display shown the functions set in operation.
- The CALENDAR function is programmed up to the year 2019, including the leap years.

4-2. Adjusting the time & calendar



4-3. Setting the alarm

- The ALARM can be set by following the same procedure as that for TIME & CALENDAR adjustment. The ALARM can be set only to HOURS and MINUTES.
- The ALARM can be set ON/OFF by pressing A button when the watch is set on the normal ALARM display.
- The ALARM buzzer will sound for 30 seconds at the set time.
- The ALARM buzzer can be stopped by pressing any button.
- The static ALARM mode indicator in the normal TIME display shows that the ALARM is being set "ON".



4-4. 12-hour/24-hour



- ⑩ Press (S) for 12/24-hour display adjustment. The Hour display flashes.
- ⑪ Press (R) and select the 12-hour or 24-hour display.
- ⑫ Press (S) or (M) to finalize adjustment.

- INSTANT MANUAL RETURN to the normal TIME display can be made at any stage of adjustment by pressing (M) button.
- RAPID ADVANCEMENT of any of the digits can be made by pressing (R) button. For digit-by-digit advancement, press (R) button on and off.
- If the watch is left in the adjustment mode for 1–2 minutes without operating any buttons, the AUTO RETURN SYSTEM will activate and the watch will be set to the normal TIME display.
- When adjustment is not needed for any digits, press continuously (S) button to move to the next stage of adjustment.
- If a non-existent date is set during adjustment, the CALENDAR will show the 1st day of the next month when the watch is reset to the normal TIME display.

4-5. Using the pace setter

1) Buttons:

- Ⓛ (ON/OFF): The beep goes ON/OFF each time this button is pressed.
- Ⓡ (Pace Up): Press this button to increase the pace indicator digits (0 – 239). Keep pressing for rapid digital advancement.
- Ⓟ (Pace Down): Press this button to decrease the pace indicator digits (239 – 0). Keep pressing for rapid digital subtraction.



2) The Beep

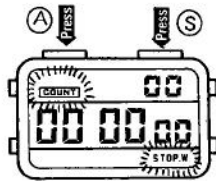
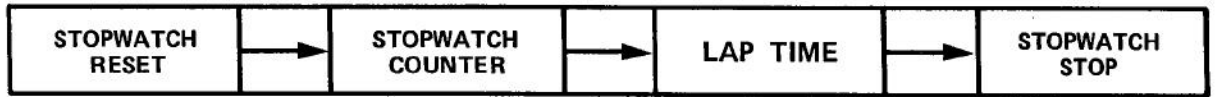
- The beep will sound at the pace set when Ⓛ button is pressed to start.
- The PACE SETTER can be set at a desired number (0 – 239) of pace per minute.
- The PACE SETTER can be operated both in the TARGET TIMER and STOPWATCH modes. The beep will continue even if the watch is set to the TIME or ALARM mode, but it cannot be started when the watch is in these modes. To stop the beep, press Ⓛ button in any mode.

4-6. Setting the timer

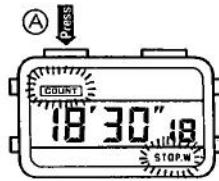
- The TIMER can be set by following the same procedure as that for TIME & CALENDAR adjustment.
- TIMER can be set to MINUTES and SECONDS up to 79'59\"/>



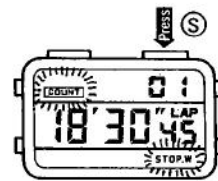
4-7. Using the stopwatch



- ① Press (A) and (S) simultaneously to reset the Stopwatch display at 00'00''00.



- ② Press (A) to start the Stopwatch Counter.



- ③ Press (S) to take the LAP time. The LAP number is indicated on the upper right corner.



- ④ Press (A) to stop the Stopwatch Counter.
⑤ Press (S) to retrieve the lap time records stored in the Memory unit.

- The STOPWATCH will count up to 11:59'59'' and the display will change automatically from MINUTES/SECONDS/1/100 SECOND to HOURS/MINUTES/SECONDS at 80 minutes.
- Each time the buttons are pressed, the buzzer will sound a short signal in confirmation.
- When (S) button is pressed, the display will change to show the LAP time for approx. 5 seconds. The LAP time can be taken up to 99 times.
- The first five and last LAPs, and the finish time are stored in the memory unit. To retrieve these seven records, press (S) button after finalizing the STOPWATCH COUNTER. Repeated memory retrievals are possible.
The LAPs are indicated with the LAP number, the finish time by FIN.
- The TARGET TIMER and the STOPWATCH COUNTER can be used simultaneously if the TIMER has been set in advance. Thus, you can keep track of the target time and lap time at the same time. The TIMER will start from the original setting each time (S) button is pressed.
- When the stopwatch is used after the replacement of power cell, both (A) and (S) buttons must be simultaneously pushed for one or more seconds (resetting operation) before the use of the stopwatch although the stopwatch is in the reset mode (00'00''00).

4-8. Alarm monitor

ALARM MONITORING can be conducted to check the sounding of the buzzer by pressing (R) and (PD) buttons at the same time when the watch is set to the normal Time/Calendar display.

4-9. Display illumination

The display will be illuminated when the (L) button is pressed.