

***TECHNICAL
INFORMATION***

**CITIZEN QUARTZ
Cal.No.922※※**

 **CITIZEN**

§1. OUTLINE

This is a digital quartz crystal watch with LC display, featuring multiple functions including the stopwatch, count-down and dual time displays in addition to the time and calendar displays.

In response to the requirements of the customer, the watch is characterized especially by the easiness in handling.

§2. MAIN FEATURES

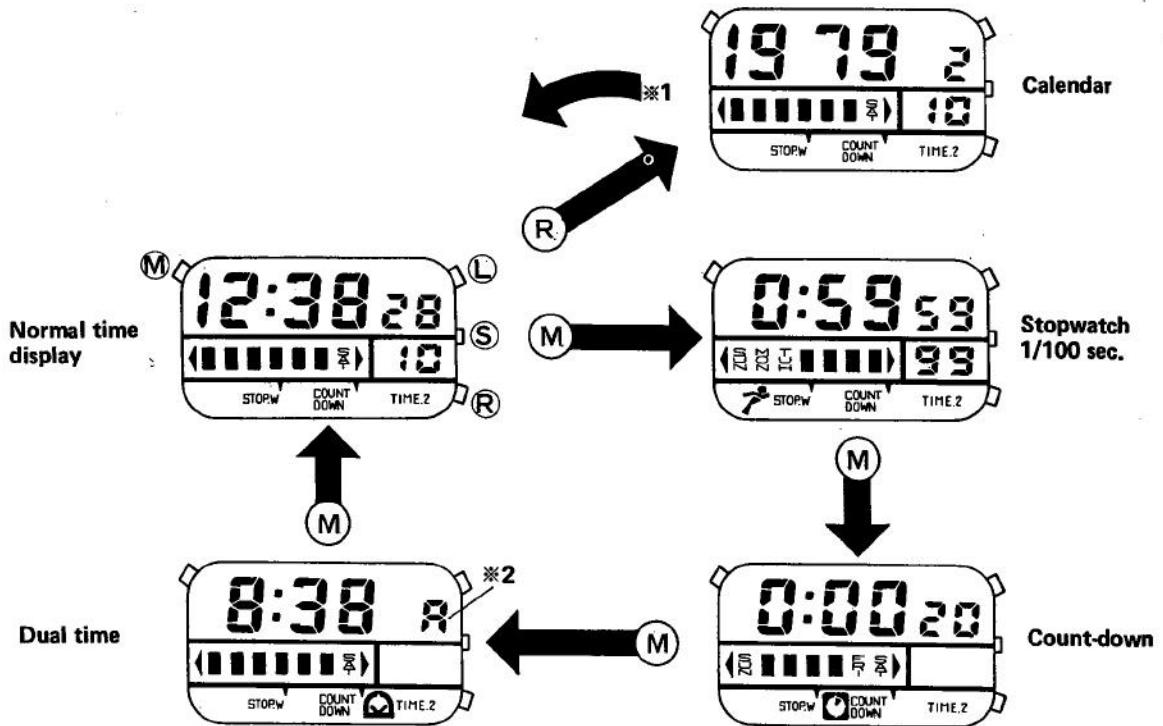
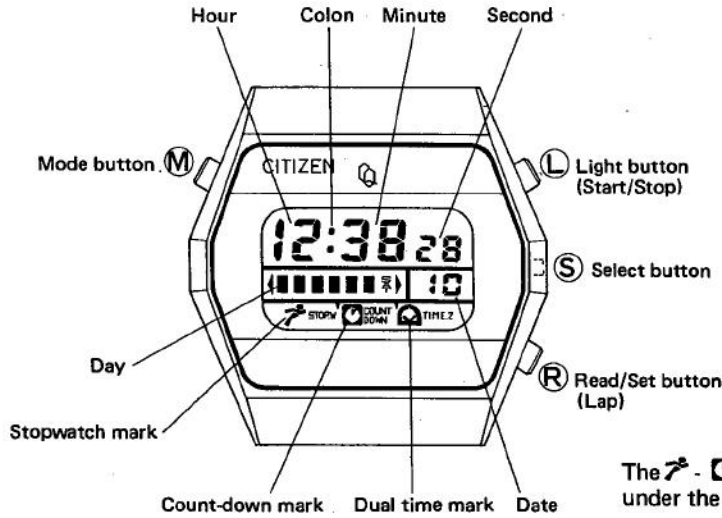
- 1) In addition to the time and calendar displays, the multiple functions are incorporated such as the stopwatch (measurable down to 1/100 sec.), count-down and dual time displays.
- 2) The "mode mark" indicates distinctly the function of under the present use, and the segment of "day" runs in the case of timing under the stopwatch and the count-down functions.
- 3) An internal illumination lamp is built in to facilitate an easy readout of the display information even in a dark place.
- 4) The calendar is set automatically after being once set correctly, eliminating the trouble to set each time.
- 5) The power cell life indicating device indicates the time to replace the power cell through flashing of the colon on the screen.
- 6) One unit of the small-size silver oxide power cell ensures correct time keeping about 2 years.

§3. SPECIFICATIONS

Caliber No.	9220A	
Type	Digital-type quartz crystal watch with LC display	
Movement	Diameter: 25.7 mm ϕ	
	Thickness: 5.0mm	
Oscillation	32,678Hz	
Accuracy	± 10 sec./month (in normal temperatures)	
Display method	FE twist-type nematic LC display	
Display information	Time	"Hour", "minute", "second", "date" and "day" (Constant display)
	Calendar	"Year", "month", "date" and "day" (By display switch)
	Stopwatch	"Hour", "minute", "second" and "1/100 sec." (By function switch)
	Count-down	"Hour", "minute" and "second" (By function display)
	Dual time	"Hour", "minute", "A/P" and "day" (By function switch)
Correction of display	Independent correction of each digit by operation of push-buttons	
Effective temperature range	0°C ~ +60°C (32°F ~ 140°F)	
Integrated circuit	C/MOS-LSI (1 unit)	
Additional mechanisms	<ul style="list-style-type: none"> ●Stopwatch ●Count-down ●Dual time ●Illumination lamp 	<ul style="list-style-type: none"> ●Automatic calendar setting ●Power cell life indicating device ●Quick resetting device
Power cell	Small-size silver oxide power cell (1 unit) Parts No. : 280-15 Voltage : 1.5V Capacity : 60mAH Size : 11.6mm ϕ × 3.0mm Life : About 2 years	

§ 4. HANDLING INSTRUCTIONS

1) Push-buttons and switch of functions

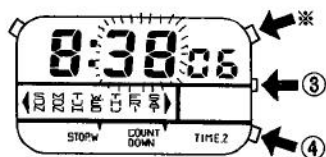


- ※1. The display switch between the time and the calendar is possible only while (R) button is pushed. With release of (R) button, the normal time display is recovered.
- ※2. The a.m. and p.m. are displayed in A, P at the place of the 1-second digit display. The A, P is displayed constantly under the dual time mode and only when the "hour" is set under the normal time display mode respectively.

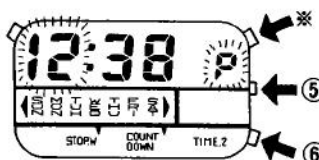
2) Time and calendar setting



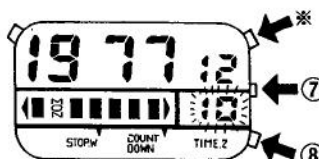
"Second" setting



"Minute" setting



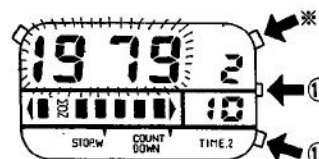
"Hour" setting



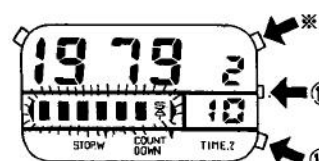
"Date" setting



"Month" setting



"Year" setting



"Day" setting



① With push of **S** button under the state of the normal time display, the "second" begins to flash to be set.

② With push of **R** button, the "second" is reset to "00" second to start then. (One "minute" is carried when the "second" is within the range of 30~59.)

③ With push of **S** button after "second" setting, the "minute" begins flashing to be set.

④ The "minute" is carried one by one with every push of **R** button, so correct "minute" can be set.

⑤ The "hour" and "A/P" begin to flash.

⑥ The "hour" and "A/P" are set. (Make sure A (a.m.) or P (p.m.) when setting "hour".)

⑦ The "date" begins to flash.

⑧ The "date" is set.

⑨ The "month" begins flashing.

⑩ The "month" is set.

⑪ The "year" begins to flash.

⑫ The "year" is set. (The year can be set up to 1999.)

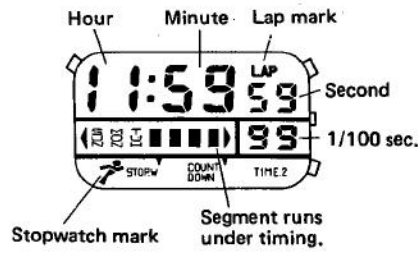
⑬ The "day" begins to flash.

⑭ The "day" is set.

⑮ The normal time display is recovered.

*With push of **L** button, the normal time display can be secured from any display mode (Quick resetting device).

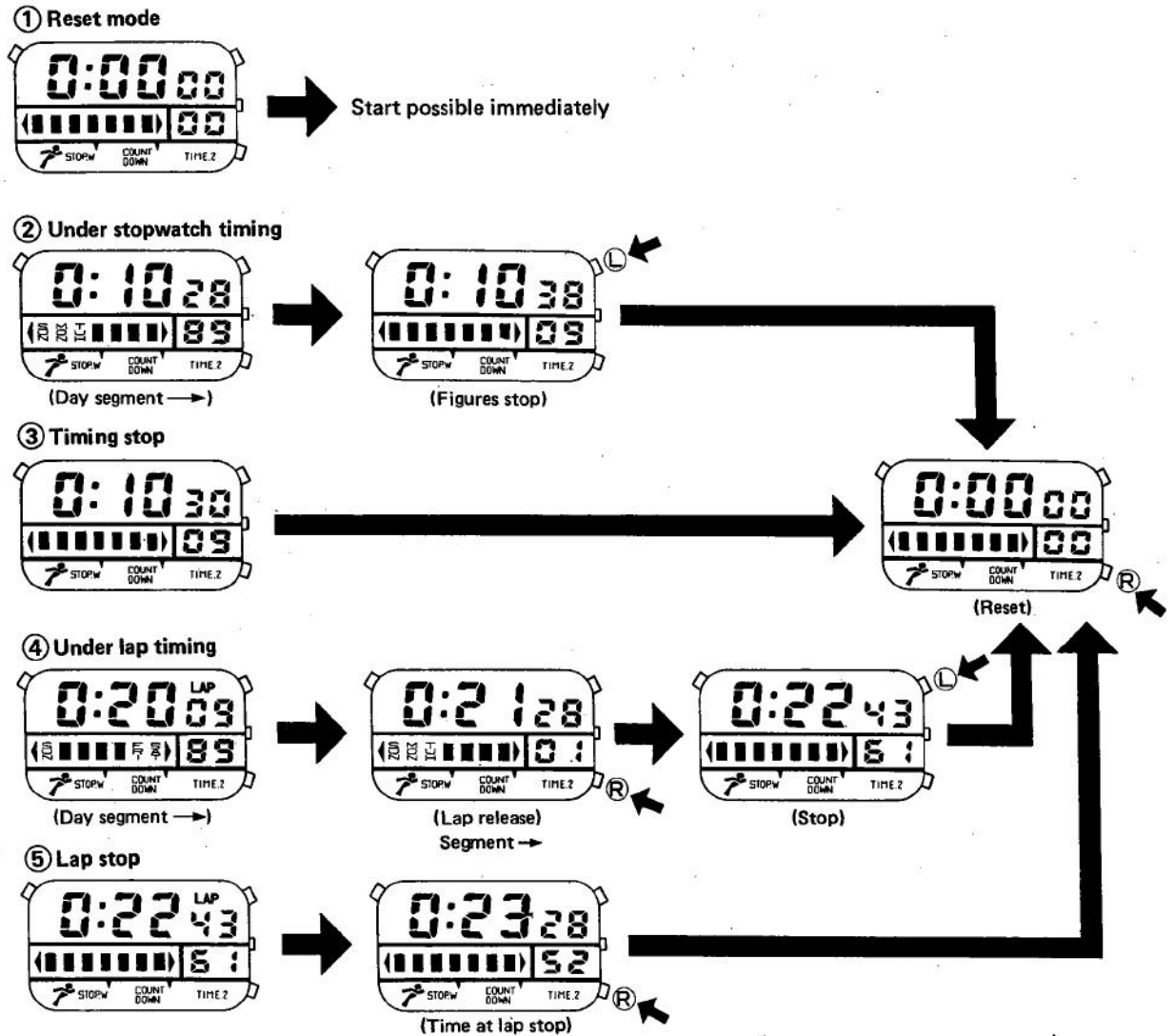
3) Operation of stopwatch function



*The illumination lamp does not light up under the operation of the stopwatch function even though **L** button is pushed.

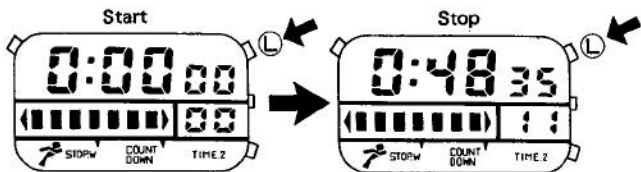
*The segment of the "day" runs from left to right under timing (stopwatch/lap).

(1) Resetting method (available in ① ~ ⑤)

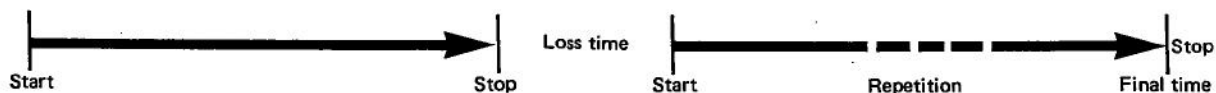
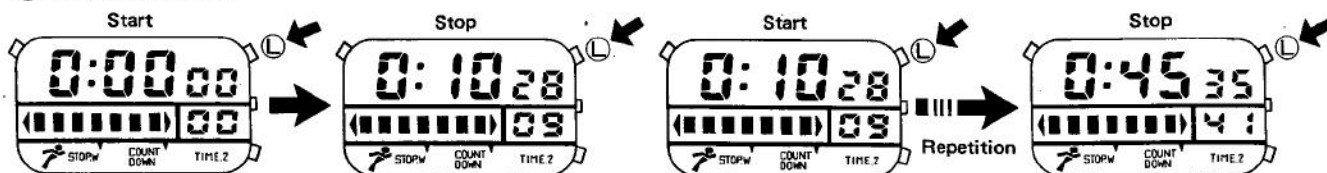


(2) Timing method

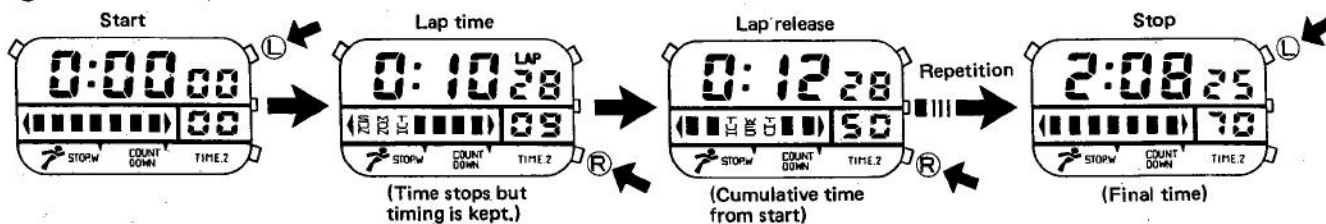
① Simple timing



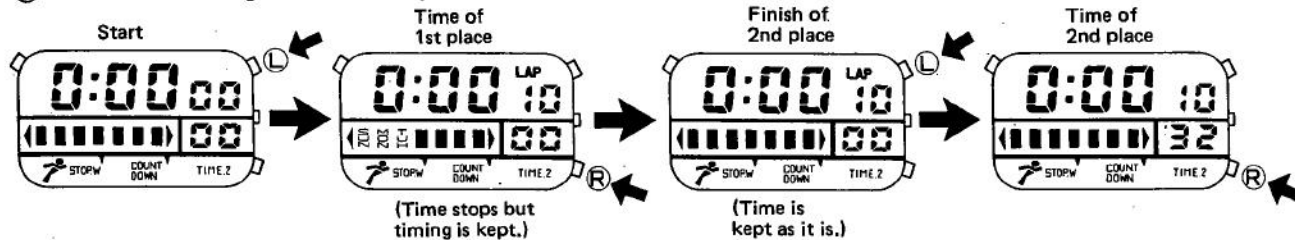
② Integrating timing



③ Lap time



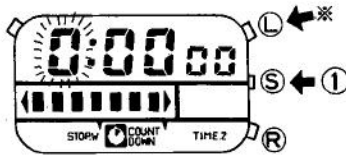
④ Simultaneous timing of 1st and 2nd places



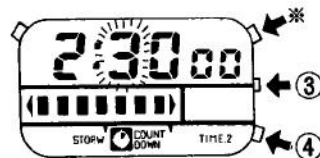
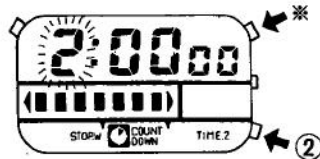
The timing is continued yet even if the display is switched to another mode under the stopwatch timing.

4) Operation of count-down function

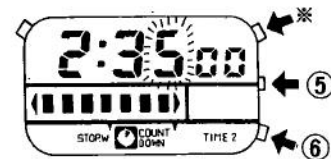
(1) Setting of time



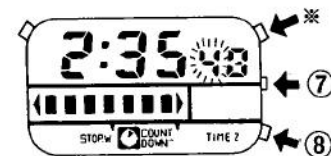
"Hour" setting



"10-min. digit" setting



"1-min. digit" setting



"10-sec. digit" setting



"1-sec. digit" setting



"1-sec. digit" setting

*The illumination lamp does not light up under the operation of the count-down function even if L button is pushed.

① With push of S button after switching to the count-down display (either of the under-timing and stop states), the display is stopped and reset. Then "hour" begins to flash.

② One "hour" is carried with every push of R button.

③ Only the 10-digit of the "minute" begins to flash.

④ The 10-digit of the "minute" is set.

⑤ Only the 1-digit of the "minute" begins to flash.

⑥ The 1-digit of the "minute" is set.

⑦ Only the 10-digit of the "second" begins to flash.

⑧ The 10-digit of the "second" is set.

⑨ Only the 1-digit of the "second" begins to flash.

⑩ The 1-digit of the "second" is set.

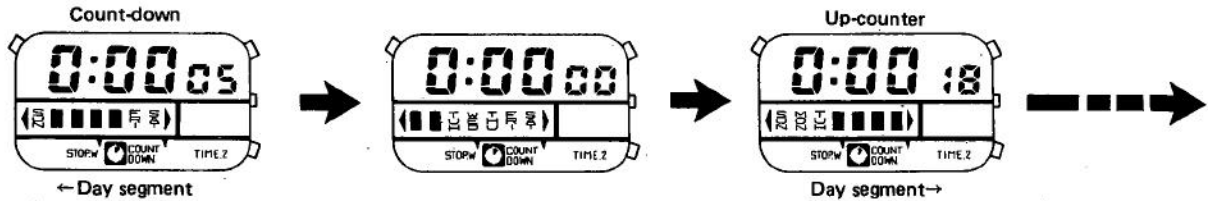
⑪ The time setting mode is secured. (The time setting is over.)

*With push of L button, the time setting mode can be secured from any setting mode.

(2) Start/stop

After the time setting, the timing is started with push of **L** button. The segment of the "day" runs from right to left simultaneously with the start of the timing. The timing can be stopped with push of **L** button.

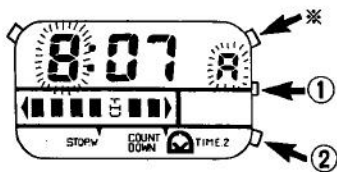
*When the time shows " 0:00:00 " after the start of the count-down, the integration is started immediately as an up-counter.



In this case, the running direction of the day segment changes from right-to-left to left-to right.

Timing is continued yet even if the display is switched to another mode under the count-down timing.

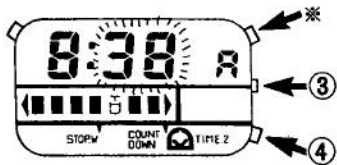
5) Operation of dual time function



"Hour" setting

① With push of **S** button under the normal dual time display, the "hour" and "A/P" begin to flash.

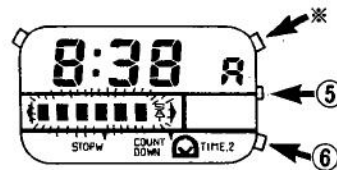
② The "hour" and "A/P" are set.



"Minute" setting

③ The "minute" begins to flash.

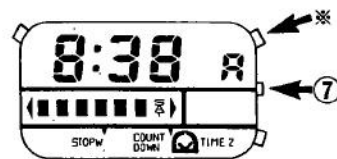
④ The "minute" is set.



"Day" setting

⑤ The "Day" begins to flash.

⑥ The "Day" is set.



⑦ The normal dual time display is secured.

*The normal dual time display can be secured with push of **L** button from any display mode.