

TECHNICAL INFORMATION

CITIZEN QUARTZ

Cal. No. C820

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§1. OUTLINE

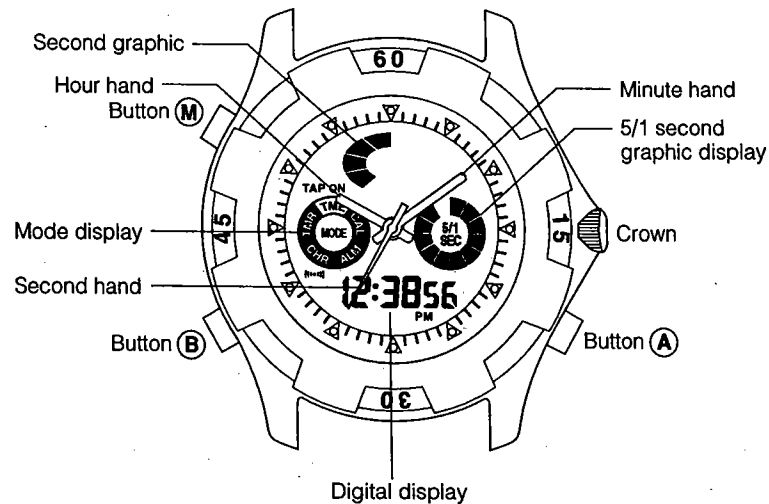
This is a combination quartz watch with a full range of features such as Time, Calendar, Alarm, Chronograph, and Timer, plus the taplight function, which illuminates the face when you tap the watch face gently. The display can be switched easily, so that the entire digital display is cleared, leaving only the time and calendar characters, or the entire digital display appears, or some other configuration. An EL light is included, which can be switched on using the tap switch.

§2. SPECIFICATION

Caliber No.		C820	
Type		Combination quartz watch	
Movement size (mm)		ø30.8 x 6.41t	
Time accuracy (At normal temperature)		Within ±20 sec/month (+5°C ~ +35°C / 41°F ~ 95°F)	
IC		1 unit of C/MOS-LSI	
Operating temperature		0°C ~ +55°C (32°F ~ 131°F)	
Converter		Bipolar step motor	
Time adjustment		No adjustment terminal for in the market	
Measurement gate		10 sec.	
Display function	Analog time		Hour, Minute, Second
	Digital	Time	Hours, Minutes, Seconds, Normal time/switch to summertime (daylight saving time), AM/PM
		Calendar	Month, Date, Day, (Year)
		Alarm	Hours, Minutes, ON/OFF, Alarm Monitor
		Chronograph	24-hour measurement (in 1/100 second units), Split time Measurement
		Timer	60-minute countdown (in 1 minute increments)
Additional function		Tap switch function EL light function	
Battery	Parts No. / Code	280-74/SR936W	
	Life time	About 2 years. (Based on assumed use of alarm buzzer 20 seconds/day, timer buzzer 5 seconds/week and EL light 18 seconds/day.)	

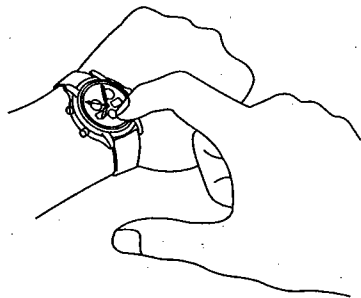
* These specifications are subject to change, for product improvement, without prior notice.

§3. NAME OF PARTS



§4. HOW TO SWITCH THE DIGITAL DISPLAY

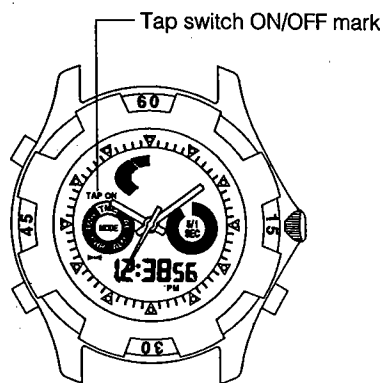
- Use the tap switch or button to switch the time and calendar modes between three digital displays. Set the time and calendar displays according to their respective adjustment methods.



(1) How to switch the display by tap switch (by tapping the watch gently)

- When the tap switch is on, tap the face of the watch (the glass or somewhere else) gently with your fingernail to light the EL light and switch the display.
- ☆ Do not tap on the glass face with any sharp or metallic object as these could scratch or break the glass.
- ☆ If the watch is strapped tightly to your wrist, it may become difficult to switch the tap switch on. For best results, adjust the strap to deep some slack.

<How to Switch the Tap Switch "ON" and "OFF"



- When the watch is in time adjustment mode, press button (A) to switch the tap switch ON and OFF alternately. When the tap switch is ON, "ON" appears next to the TAP mark.

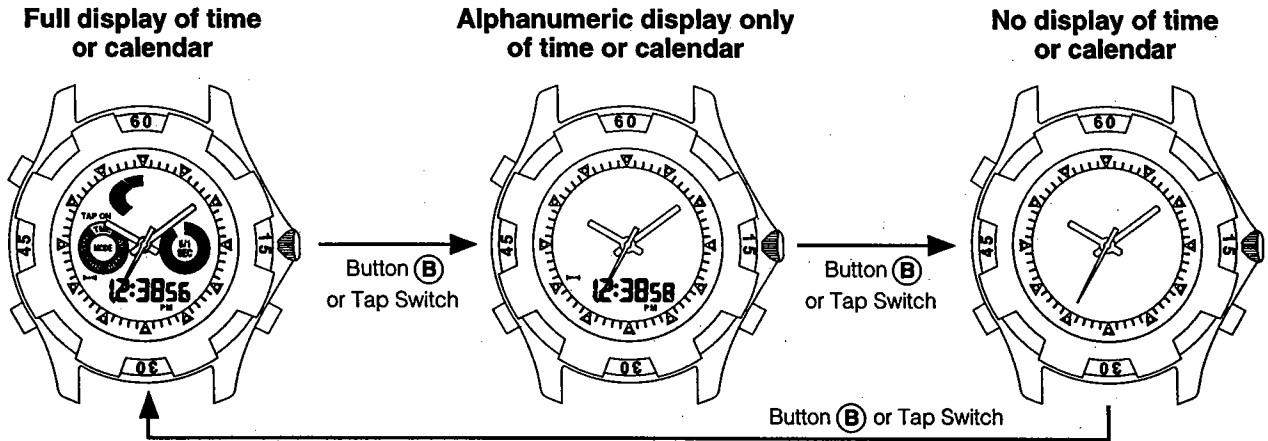
- (1) Press button (M) to switch to time mode.
- (2) Press button (B) for 2 seconds or longer to put the watch in time adjustment mode.
- (3) Press button (A) while both "TAP" and "TME" are flashing to switch ON and OFF.
(Note) Each time you press button (B), the adjustment position shifts through summertime, seconds, minutes, hours, 12H/24H.

- (4) Press button (M) to return to normal Time display.

(2) How to switch the display by pressing buttons

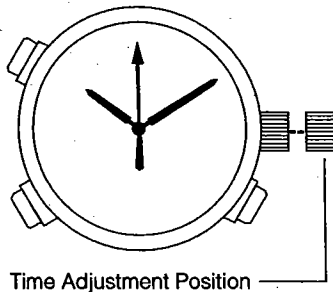
- Regardless of whether the tap switch is ON or OFF, the display changes each time you press button **(B)** during normal Time or Calendar display.

(3) Switching the digital display



§5. SETTING THE ANALOG TIME

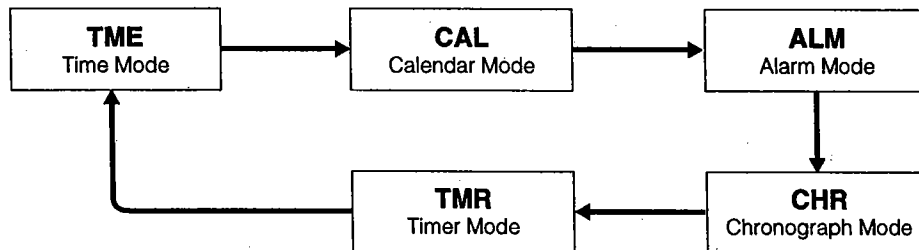
You may also set the analog and digital displays for different times as a dual time display.



- (1) Pull the crown out so that the second hand stops at the "0" position.
 - (2) Turn the crown and set the hands to the correct time.
 - (3) After setting the time, press the crown back in to start the watch.
- ☆ Stop the second hand at the "0" position and then press the crown when the digital display reaches zero seconds. The second hand will start moving in synchronization with the digital display.

§6. SWITCHING DIGITAL FUNCTIONS (MODES)

In addition to Time mode, this watch has 4 other modes; Calendar, Alarm, Chronograph and Timer. Each time you press button **(M)**, mode changes.



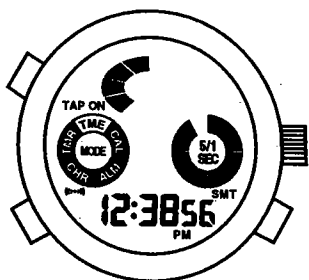
Auto-Return

- When the watch is left in Alarm mode (normal display) for more than 2 minutes without any button operation, the display will automatically return to Time mode.

§7. USING DIGITAL FUNCTIONS (MODES)

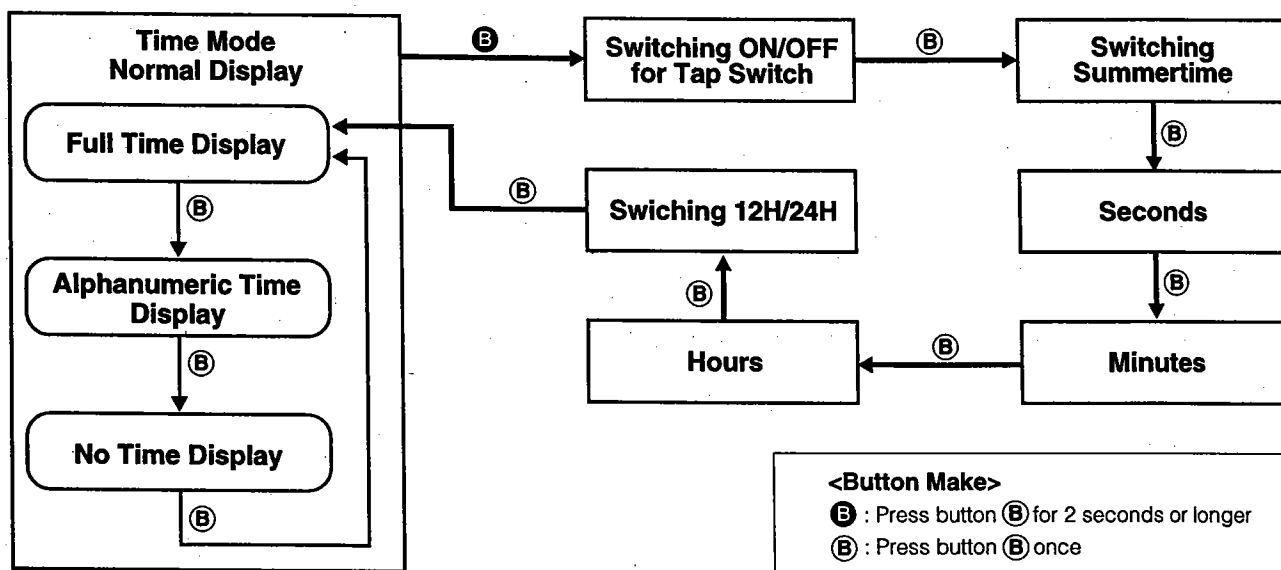
A. TIME MODE

- Press the button **(A)** (or kept pressing) while the watch is in normal Time display to switch the EL light on.



<To Set Time>

- (1) Press button **(B)** for 2 seconds or longer during Time mode (normal display) to change to adjustment mode. The time display and graphic display will disappear and "TAP" and "TME" will flash.
- (2) Press button **(A)** while "TAP" and "TME" are flashing to switch the tap switch ON and OFF.
- (3) Press button **(B)** while "TAP" and "TME" are flashing to change the area of the display that is flashing. Press button **(B)** until the position you want to adjust is flashing.
- (4) Press button **(A)** to adjust flashing section.
 - Press and hold button **(A)** for rapid advancement. Summertime and 12H/24H change each time the button is pressed. There is no rapid advancement for these functions.
- (5) Press button **(A)** while seconds are flashing, seconds will return to "00" and restart.
 - If seconds show 30 through 59, minutes display will advance one minute.
- (6) Press button **(M)** to return to normal Time display.



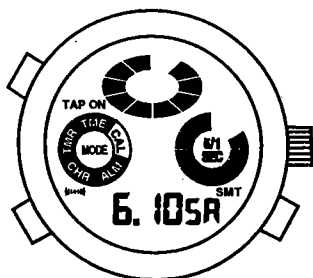
<Button Make>

- (B)** : Press button **(B)** for 2 seconds or longer
- (b)** : Press button **(B)** once

- Auto-Return to the normal Time display (Full Time Display) will be activated when the watch is left in the adjustment mode for about 2 minutes.
- Make sure that the AM/PM indication is correct when setting the time in the 12-hour display system.
- Instant Manual Return to normal Time display (Full Time Display) can be made by pressing button **(M)** in Time adjustment mode.

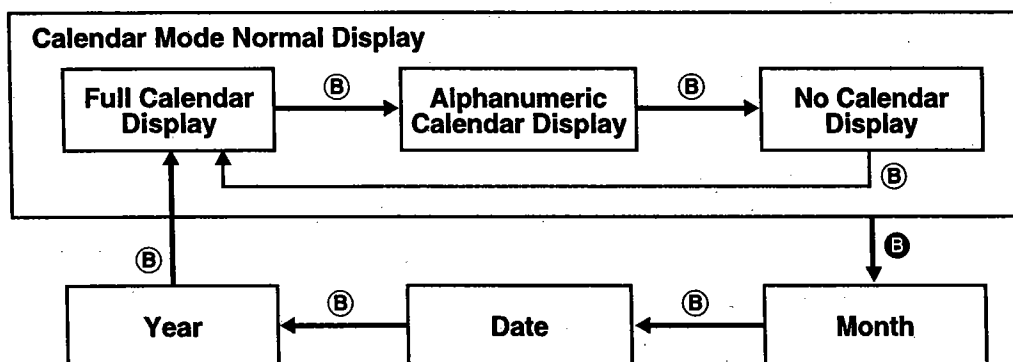
B. CALENDAR MODE

- If you press button **(A)** (or kept pressing) while the watch is in normal Calendar mode, the EL light will flash.



<To Set Calendar>

- If you press and hold button **(B)** for 2 seconds or longer while the watch is in Calendar mode (normal display), the "Month" will start flashing, indicating that the watch is in adjustment mode.
 - Each time you press button **(B)**, flashing position changes as shown below. Flash the part you want to adjust.
 - Press button **(A)** to adjust flashing position. (Press and hold button **(A)** for rapid advancement.)
 - Press button **(M)** to return to normal Calendar display.
- ☆ Day of the week is automatically set with adjustment of Year, Month and Date.

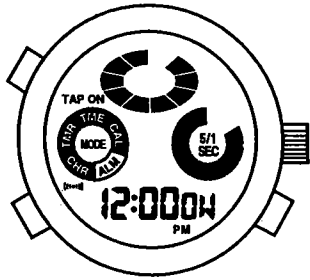


- Calendar can be set from 1999 through 2099.
- Auto-Return to normal Calendar display will be activated when the watch is left in Calendar adjustment mode (flashing display) for about 2 minutes.
- When Calendar is set to a non-existent date (e.g., February 30), display will automatically show the first day of next month when returned to normal mode.
- Month-end adjustments are not necessary since calendar is programmed to set automatically.
- Instant Manual Return to normal Calendar display (Full Calendar Display) can be made by pressing button **(M)** in Calendar adjustment mode.

C. ALARM MODE

- When the tap switch is ON, tap the watch gently to light the EL light.

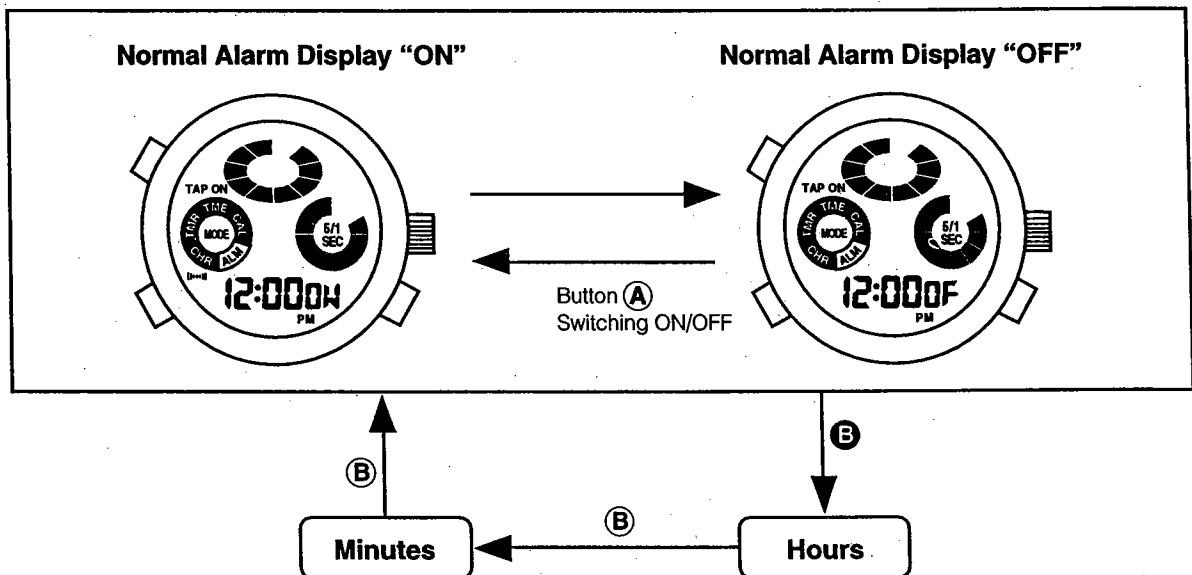
[Normal Alarm Display]



<To Set Alarm>

- (1) Press and hold button **(B)** in Alarm mode (normal display) for 2 seconds or longer, "Hour" starts flashing and may be adjusted.
- (2) Each time you press button **(B)**, flashing position changes. Flash the part you want to adjust.
- (3) Press button **(A)** to set the time you want the alarm to sound. (Press and hold button **(A)** for rapid advancement.)
- (4) Press button **(M)** to return to Alarm mode (normal display).

Note) If the watch is set to 12-hour display (AM-PM) in Time mode, Alarm will also be set to 12-hour display.



<To Switch Alarm ON/OFF>

- Press button **(A)** in Alarm mode (normal display) to switch the alarm ON or OFF.

<Duration of Alarm Sounding and How to Stop the Alarm Sound>

- Alarm will sound for 15 seconds.
- Press any button to stop Alarm sound.

<Alarm Sound Monitor>

- Press and hold button **(A)** in Alarm mode to make the alarm monitor sound.

<Auto-Return>

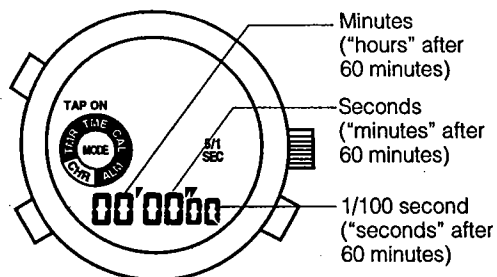
- The display will return to normal Alarm display "ON" in Alarm adjustment mode if no buttons are pressed for 2 minutes or longer. The display will return to normal Time mode if no buttons are pressed for 2 minutes or longer in normal Alarm display.

<Instant Manual Return>

- Press button **(M)** in Alarm adjustment mode to return to Alarm mode (normal display).

D. CHRONOGRAPH MODE

[Chronograph Reset Position]



- Chronograph measures in units of 1/100 of a second, up to "23 hours, 59 minutes 59 seconds". On reaching 24 hours of elapsed time, it resets to "00 minutes 00 seconds and 00" hundredths and stops.
- When the tap switch is ON, tap the watch gently to light the EL light.

Display of Time Measurement

- Chronograph shows "Minutes", "Seconds" and "1/100 second" and will change to "Hours", "Minutes" and "Seconds" after 60 minutes.

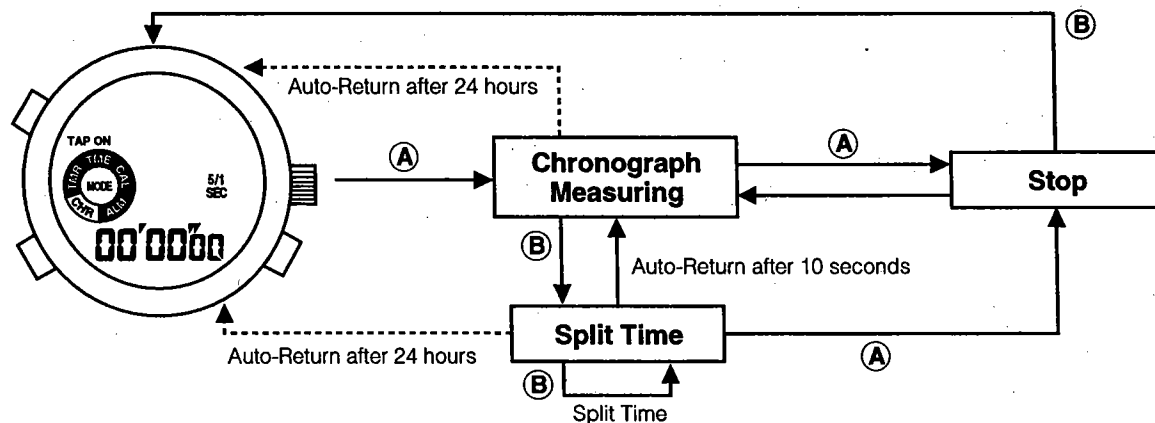
<Elapsed Time Measurement>

- Press button **(A)** to start/stop Chronograph.
 - Each time you press button **(A)** while in time measurement, start/stop is repeated.
 - EL light is turned ON for 3 seconds when counting is stopped.
- Press button **(B)** when counting is stopped reset Chronograph.

<Split Time Measurement>

- Press button **(A)** to start/stop Chronograph.
- Press button **(B)** while in time measurement. Split time will appear for 10 seconds.
 - "SPL" will flash while split time is displayed.
 - EL Light is turned on for 3 seconds at the time of split time operation.
- Press button **(B)** when counting is stopped reset Chronograph.

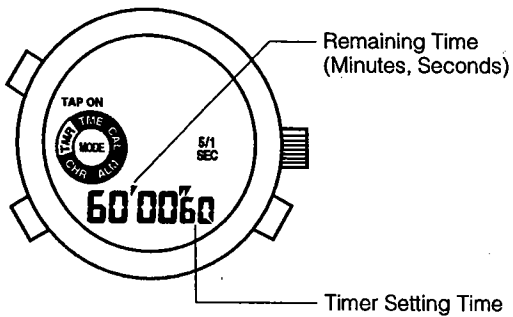
[Initial Chronograph Setting]



- ☆ If switched to another mode while Chronograph is running and then returned to Chronograph mode again, the watch will return to countdown counting at the time of switching. (If switched while Split Time is shown, the watch will return to Chronograph running mode.)
 However, if Chronograph counting has exceeded 24 hours, the watch will return to initial Chronograph reset display.

E. TIME MODE

[Initial Timer Setting]



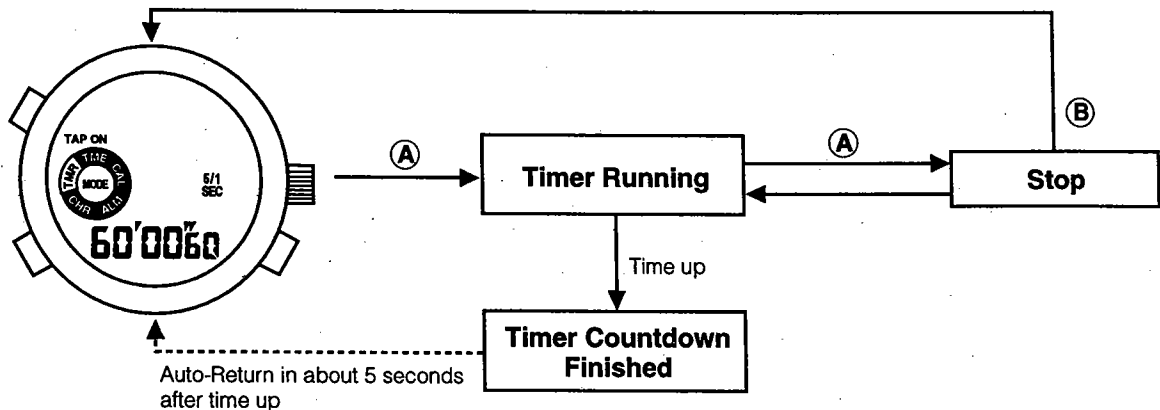
- Timer can be set in units of 1 minute up to 60 minutes. When Timer countdown is finished, buzzer will sound for about 5 seconds and return to the Timer set time.
- When the tap switch is ON, tap the watch gently to light the EL light.

<To Set Timer>

- (1) If you press button **(B)** while the set time is flashing in timer mode, the set time will be reduced by one minute for each time you press and release the button. Continue until you reach the set time you want.
(Press and hold button **(B)** to make rapid adjustment to the set time.)

<To Use Timer>

- (1) Press button **(A)**. Timer starts countdown from set time.
- (2) Press button **(A)** to stop Timer during in the measurement. Press button **(A)** to start it again while in the "Stop" position.
 - Press button **(B)**, while Timer is in operation, to return to the initial set time, and start the countdown again.
- (3) If you press button **(B)** while Timer is stopped, Timer will return to the initial set time.
 - The confirmation tone will sound when you press the button.



☆ If the watch is switched to another mode while Timer is in operation and then returned to Timer mode again, the watch will return to countdown continuing at the time of switching, However, if countdown has been completed, the watch will return to initial Timer setting.

§8. ALL RESET FUNCTION

Use All Reset function to reset the watch after replacing the battery or if the watch is showing abnormal operation or display. All Reset function can be performed as follows:

- (1) Pull crown out.
- (2) Press buttons **(A)**, **(B)** and **(M)** simultaneously. (All digital displays will disappear while pressing)
- (3) Release three buttons. (All digital displays are shown.)
- (4) Push crown in. (At this point, buzzer sounds in confirmation.)
This completes the All-Reset operation. Set each mode correctly before using the watch.

§9. DISASSEMBLY AND ASSEMBLY OF MOVEMENT/ TROUBLESHOOTING AND ADJUSTMENT

Basic structure of movement is same to CAL. C810.

Refer to CAL. C810 Technical Information for disassembly and assembly of movement troubleshooting and adjustment.
