# CITIZEN

## Setting Instructions for
## Movement Caliber 6820

**Contents -** (click on  topic)

## §1. OUTLINE

This analog multi-function quartz watch has eight modes each of which can be set with the push button.

## §2. SPECIFICATIONS

| | |
|---|---|
| Caliber No. | 6820A-00 |
| Type | Analog quartz multi-hand |
| Oscillation | 32,768 Hz (Hz: Frequency in 1 sec) |
| Accuracy | ±20 sec at normal temperature (5°C – 35°C) |
| Effective temperature range | -10°C – +60°C (14°F – 140°F) |
| Converter | Bipolar step motor |
| Integrated circuit | C-MOS-LSI (1 unit) |
| Adjustment of time rate | D.F.C. (No adjustment terminals) |
| Additional functions | • Hand-type calendar<br>Year (Recognition of leap year), month, date (Can be set quickly, except recognition of leap year.), no need of adjustment at end of month in leap year.<br><br>• Alarm 1 (Quick set alarm)<br>Maximum setting range: Up to 23 hours 59 minutes by 1 minute after the next minute at current time.<br><br>• Alarm 2 (Daily alarm)<br><br>• Stopwatch<br>Minute, second, 1/20 second (Maximum measuring range: 60 minutes)<br>Measurement of split time.<br>With latest split memo/stop memo function and memo calling function.<br><br>• Timer<br>Maximum setting range: 60 minutes by 1 minute.<br><br>• Local time<br>Hour and minute (Set by 30 minutes. Second cannot be adjusted.)<br><br>Other functions<br>• Calendar monitor<br>• Daily alarm set time monitor<br>• Zero second return function |
| Power cell | Small-sized silver battery 1 piece.<br>Cell no.: 280-44 (SR927W)<br>Nominal capacity: 60mH<br>Size (mm)        : ø9.45 x 2.7 |
| Lifetime of power cell | Approx. 2 years<br>Condition: Total alarm using time: 25 sec/day<br>            (Alarm 1: 10 sec)<br>            (Alarm 2: 15 sec)<br>            Timer: 1 time/day<br>            Chronograph: 60 minutes/day |

# §3. OPERATION METHOD

## A. Main Componets

Minute hand
Minute
Date
Chronograph second } Hand
Timer second

B button

Second hand
- Small second hand
- Number of years after leap year
- Alarm ON/OFF
- 1/20 second hand of chronograph
- Time indicator of timer

A button

Hour hand
Hour
Month
Chronograph minute } Hand
Timer minute

- Normal position
- Push Mode change-over switch

- One-step out position
Time
Calendar
Daily alarm } Correction mode
0 position
Local time

C button
- Items indicated within boxes show the functions of each hand.

Mode hand

M button

## B. Mode Change-over

**The mode will change in the following order when PUSHING the Ⓜ button in its normal position.**

| **TME** (Normal time mode) | → | **CAL.** (Calendar mode) | → | **AL-1** (Quick setting alarm mode) | → | **AL-2** (Daily alarm mode) |
| --- | --- | --- | --- | --- | --- | --- |
| ↑ | | | | | | ↓ |
| **L-TM** (Local time mode) | ← | **TMR** (Timer mode) | ← | **CHR** (Stop watch mode) | ← | **►0◄** (Zero position confirmation mode) |
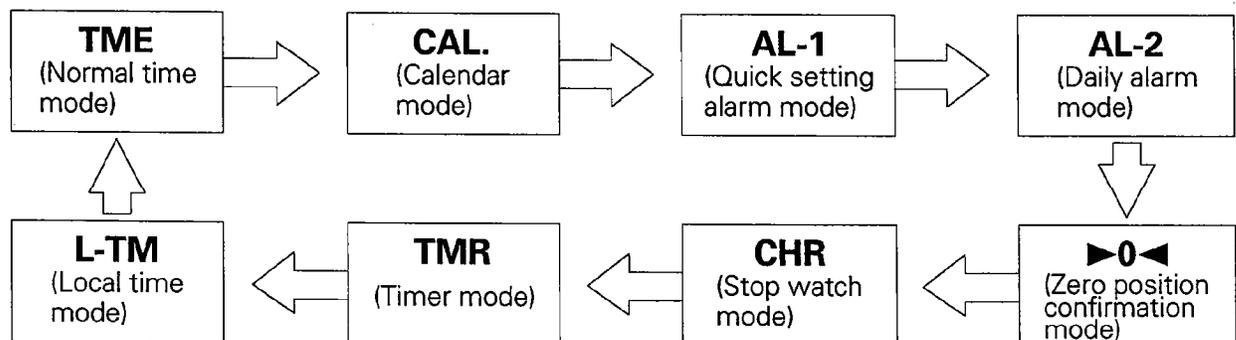
### Precaution in use

Without realizing it, the Ⓜ button may be pressed in.
Use the proper mode after positively confirming the position of the mode hand.

## C. Before Use

Before use, confirm that each function operates properly by the methods indicated below: **Confirm the zero position.**

Set to " **0** " mode. (Zero position confirmation mode)

Push!
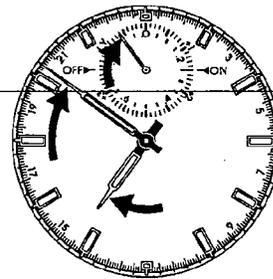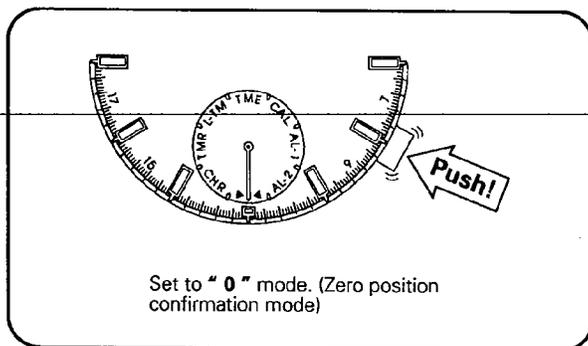
- The hour, minute, and second hands should return to the 0 position.
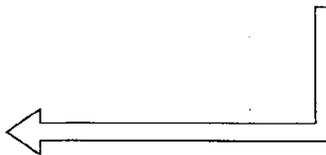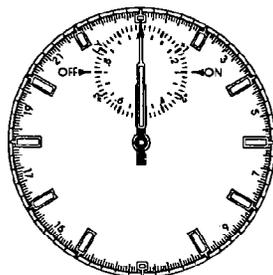
- At this time, when each hand is at the position indicated below, the position of the zero setting is correct.

**Hour hand .............** 0 hour
**Minute hand .........** 0 minute
**Second hand .........** 00 second

If the hands are not at the positions indicated above, perform the **Zero position setting.**

### Zero position setting
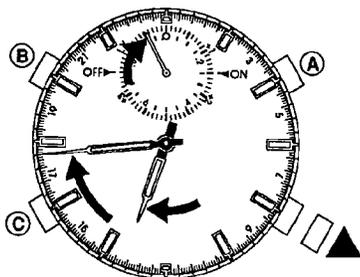
1) Pull the Ⓜ button out one step.
   Push the Ⓐ button, and set the second hand to the 00 second position (top).
   Push the Ⓑ button, and set the hour hand to the 0 hour position (top).
   Push the Ⓒ button, and set the minute hand to the 0 minute position (top).
2) Be sure to push the Ⓜ button back to its normal position. This completes the 0 position setting.
☆ A strong shock may cause the zero position to shift. In this case, reset to the correct zero position.
☆ Quick advance can be performed by holding down any one of the Ⓐ, Ⓑ, or Ⓒ buttons.

## D. How to Set and Operate Each Mode

### 1. Demonstration operation of the watch hands

Set to " **0** " mode. (Zero position confirmation mode)
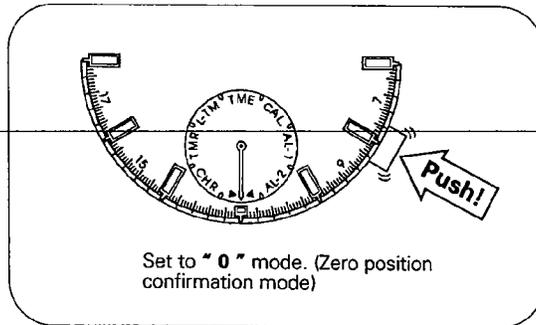
When any one of the button Ⓐ, Ⓑ, or Ⓒ is pushed while in the normal zero position mode, the hour, minute and second hands will move in the following manner:

- Hour hand: ① + 1 hour → ② -2 hours → ③ + 1 hour
- Minute hand: ① + 5 minutes → ② -10 minutes → ③ + 5 minutes
- Second hand: ① + 5 seconds → ② -10 seconds → ③ + 5 seconds afther which each will stop at the 0 position. (see illustrations)
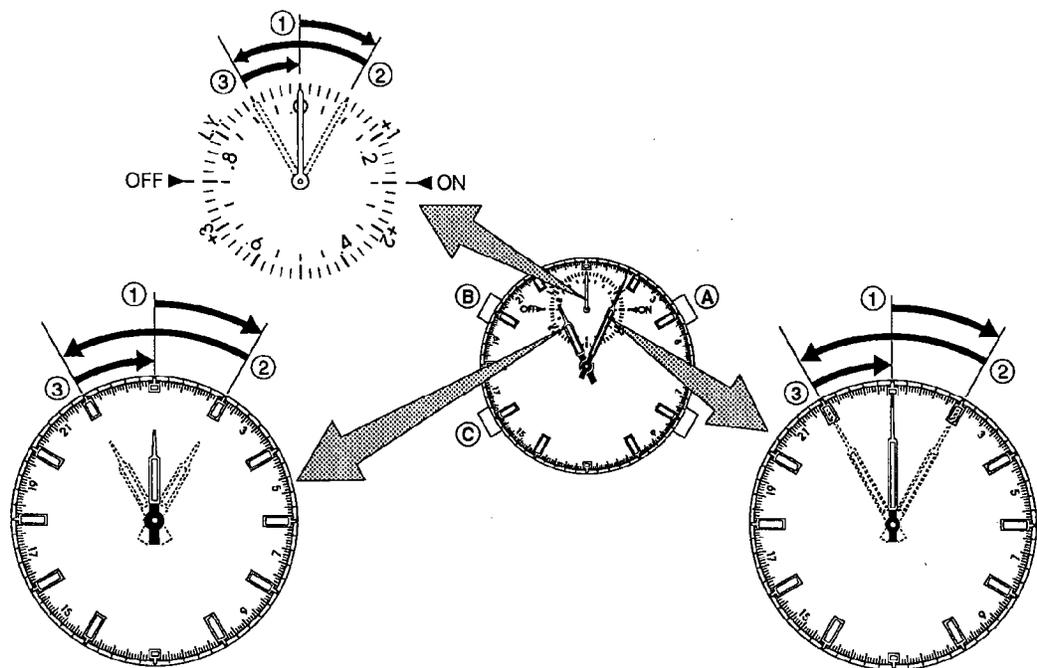
## 2. Setting the timer

### Set 10:00'00" to 19:20'00"

| "TME" mode time display state. | Normal state | Correction state |
|---|---|---|
| | 12-hour system | 24-hour system |
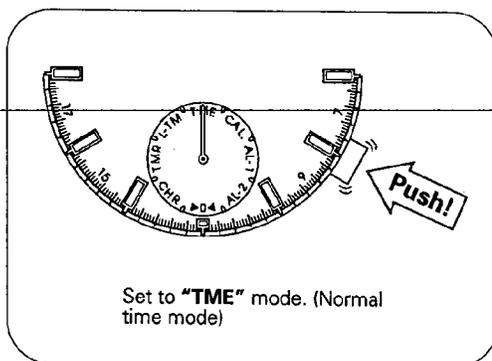
### Ⓜ button in normal position.

> The hour hand displays the 12-hour system
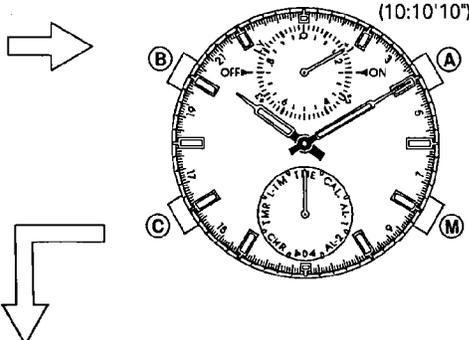
Set to **"TME"** mode. (Normal time mode)

Push!

(10:10'10")

## When the Ⓜ button is pulled out one step,

> The hour hand displays the 24-hour system

(10:10'10")
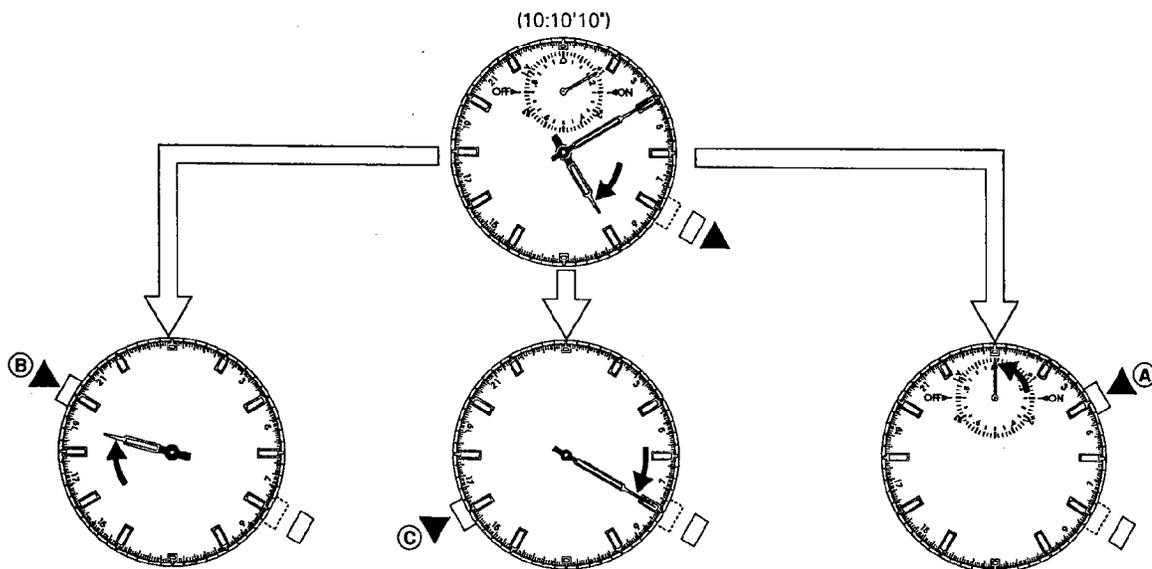
**< Hour hand set >**
(19 hours)

**< Minute hand set >**
(20 minutes)

**< Correction of second hand >**
● Reset to 00 second position.

● When correcting the minute hand, the hour hand will also move synchronously, but it will not advance to next hour.

**Second reset**

If the position of the second hand is between 0-29 seconds when Ⓐ button is pushed, the minute hand will maintain its position. If between 30-59 seconds, 1 minute will be added.

☆ Hour, minute, and second are corrected individually.
☆ Quick-forward movement can be performed by holding down either of the buttons Ⓑ or Ⓒ.
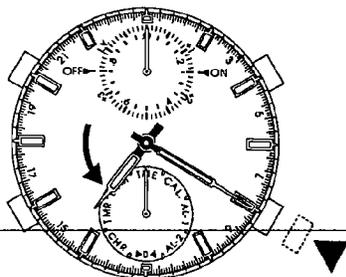
**Push down the Ⓜ button to normal position and the hour hand will return**

| To 12-hour system display |

(The procedure is completed by setting the time to 19:20'00" hours.)

## 3. Setting the calendar

### To set from May 5, 1990 to September 9, 1992

Change to **"CAL"** mode.
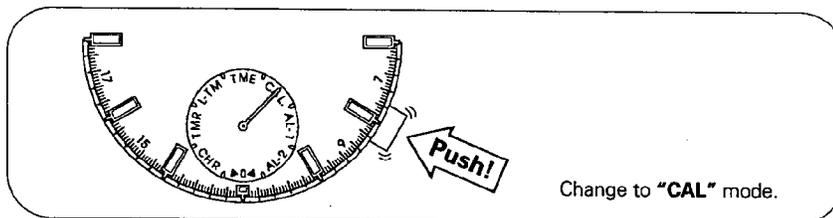
### Leap Year Chart

| L.Y. | 1988 | L.Y. | 1992 | L.Y. | 1996 | L.Y. | 2000 | L.Y. | 2004 | L.Y. | 2008 |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 1989 | 1 | 1993 | 1 | 1997 | 1 | 2001 | 1 | 2005 | 1 | 2009 |
| 2 | 1990 | 2 | 1994 | 2 | 1998 | 2 | 2002 | 2 | 2006 | 2 | 2010 |
| 3 | 1991 | 3 | 1995 | 3 | 1999 | 3 | 2003 | 3 | 2007 | 3 | 2011 |

### < How to read the chart >

The years indicated by L.Y. are leap years, and 1, 2, and 3 indicate the number of years that have passed since the previous leap year.
**Example:** 1992 is a leap year, and 1993 will be the first year after the previous leap year.

### From the leap year chart

- 1990 is the second year after the previous leap year.
- 1992 will be a leap year.

**< Normal position of the Ⓜ button >**

(May 5, 1990)

(2nd year after the last leap year)
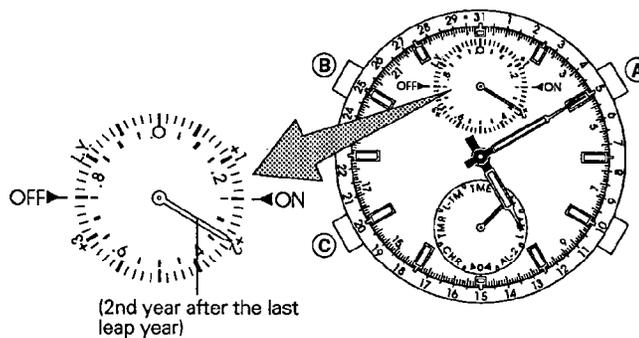
## Calendar Mechanism not Requiring Month-end and Leap Year Corrections

As the calendar of this watch does not have to be corrected for month-end and leap year, it can be used normally without making corrections.

**< The Ⓜ button is pulled out one step >**

**<Year hand set>**
(1992–leap year)

**<Month hand set>**
(September)

**<Date hand set>**
(9th)
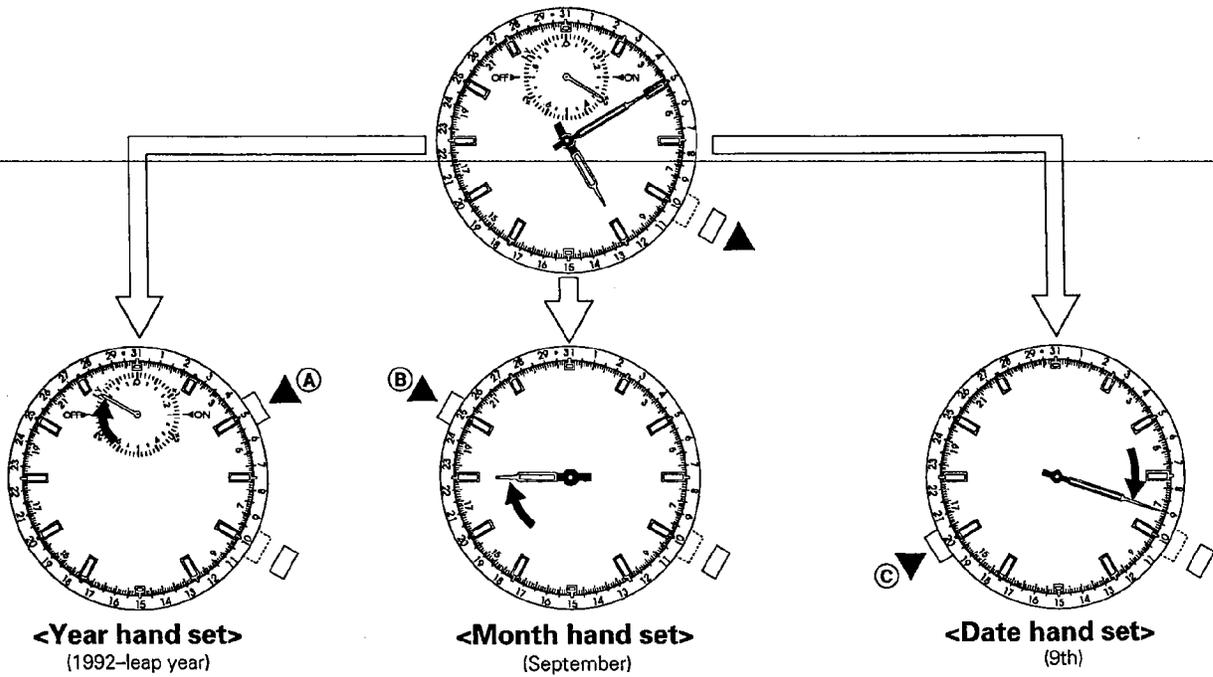
☆ Year, month, date are individually corrected.
☆ Quick forward movement is possible by holding down either of the buttons Ⓑ or Ⓒ.

**Automatic function for correcting the date at the end of a short month.**

By returning the Ⓜ button to the normal position, the date will automatically be corrected to the 1st of the following month, even if mistakenly set to a nonexistent date (**for example:** Feb 30 → March 1).

28th
29th
30th
31st
1st
2nd

**<Push down the Ⓜ button to the normal position>**
(September 9, 1992)

•1st-29th .....2 graduations
•29th-31st ...1 graduation
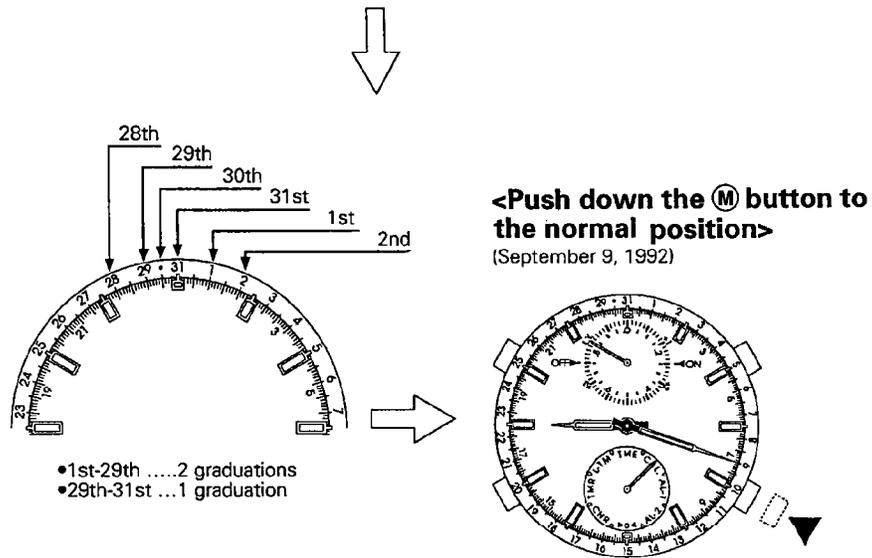
## 4. Setting the quick setting alarm (AL-1)

**To set the alarm at 20:10 hours (50 minutes from the current time of 19:20 hours)**

| "AL-1" mode time display state | Nromal state | Correction state |
|---|---|---|
| | 24-hour system | 24-hour system |

Change to **"AL-1"** mode.

Push!
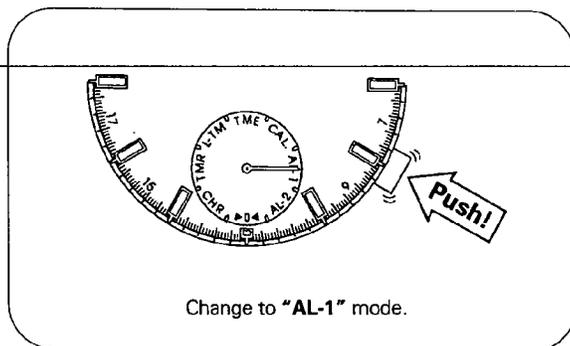
### Quick setting alarm function

With the alarm OFF, the watch indicates the current time in hours, minutes, and seconds. Accordingly, alarm setting can be performed easily from the current time to the desired time (up to a maximum of 23 hours and 59 minutes later) with Ⓜ button in normal position. When an alarm finishes sounding once, the alarm setting is automatically cancelled, and the hour, minute, second all return to normal current time operation. The alarm sounds for 10 seconds.

### The alarm can be set with the "Ⓜ button in normal position."

The hour hand displays the 24 hour-system

(19:20)
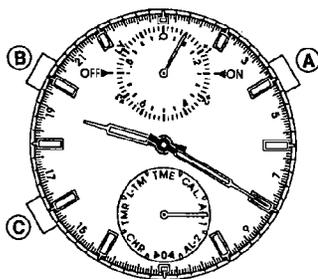
**< Sound monitor>**

(for 5 seconds)
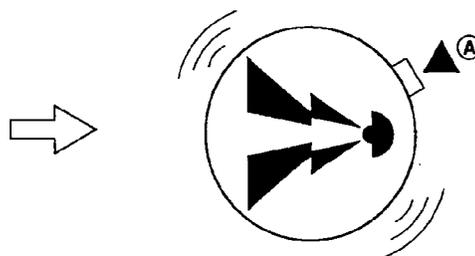
- Push Ⓐ button when the quick setting alarm is OFF.

## < Hour hand setting >

(20 hours)
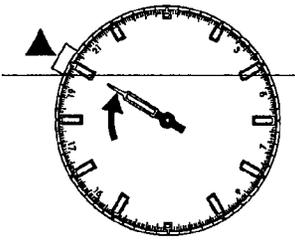
## < Minute hand setting >

(10 minutes)
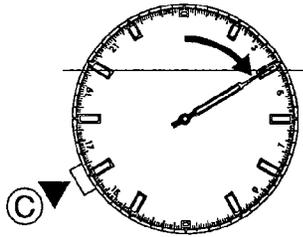
● When correcting the minute hand, the hour hand will also move synchronously, but it will not advance to next hour.

☆ Hour and minute can be individually set.
☆ When either the Ⓑ or Ⓒ button is held down, quick advance can be performed.

## < Quick setting alarm (AL-1) auto ON function >

● Simultaneously with the correction of either the hour or minute hand, the small second hand will move quickly to the 0 second position and stop.
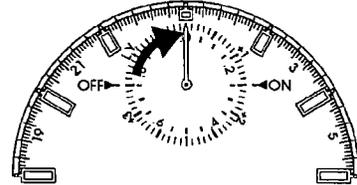
**Alarm ON state:**
The small second hand stops at the 0 position.

**Alarm OFF state:**
The hour, minute, and second hands display the current time.

## < Completion of the setting of the quick setting alarm >

(20:10 hours)
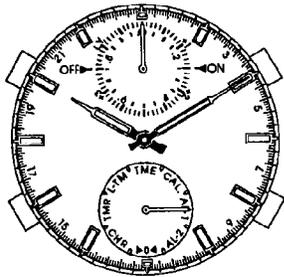
## < How to cancel the quick setting alarm >
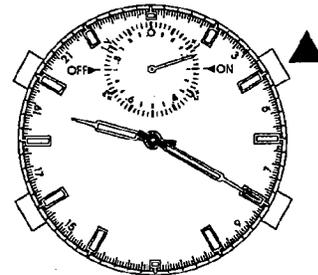
● After setting the quick setting alarm When the Ⓐ button is pushed, the hour, minute, and second hands display the current time, and the quick setting alarm is turned OFF.

## 5. Daily alarm (AL-2) setting

### To set the daily alarm at 15:00 daily

Change to **"AL-2"** mode.
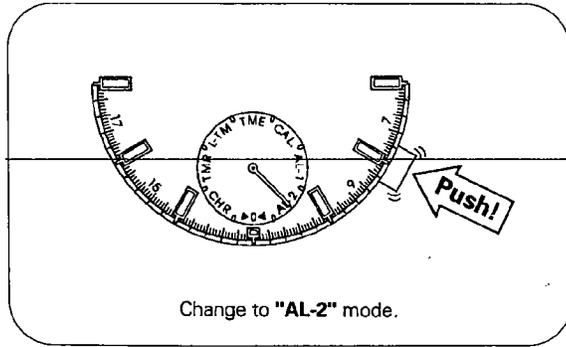
| "AL-2" mode time display state | Normal state | Correction state |
|---|---|---|
| | 24-hour system | 24-hour system |

### Daily alarm function

Once the alarm time is set, the alarm will sound every day at the same time. The alarm will sound for 15 seconds.

### Normal position of Ⓜ button

The hour hand displays the 24-hours system

(Alarm OFF 19:20)
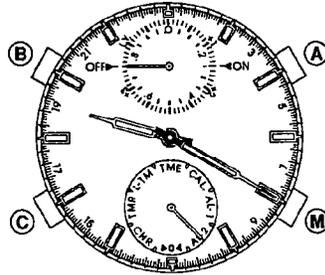
**< Sound monitor >**

(for 5 seconds)
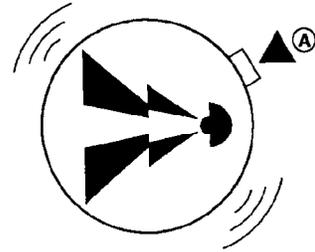
● Sound is monitored by pressing the Ⓐ button for either turning ON or OFF the daily alarm.

### The Ⓜ button is pulled out one step

the hour hand displays the 24-hours system

**<Hour hand setting>**
(15 hour)

**<Daily alarm auto ON function>**

OFF ► ◄ ON
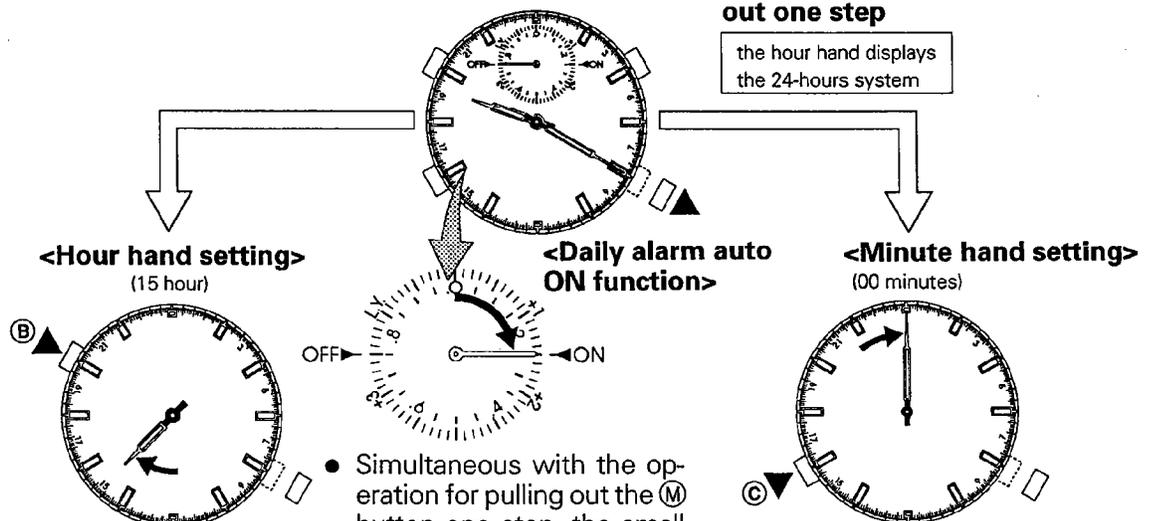
● Simultaneous with the operation for pulling out the Ⓜ button one step, the small second hand will switch over to alarm ON display.

**<Minute hand setting>**
(00 minutes)

● When correcting the minute hand, the hour hand will also move synchronously, but it will not advance to next hour.

**< Alarm cancel >**

**<When the M button is pushed in to normal position. >**
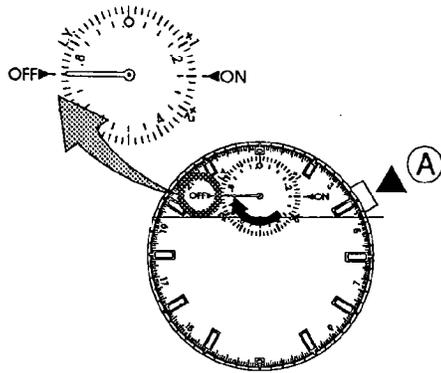
Daily alarm setting is completed.

(15:00)
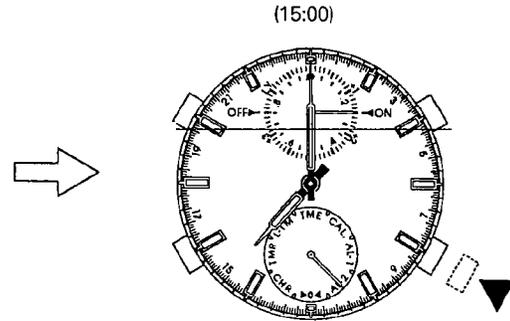
- After daily alarm setting, the daily alarm can be changed to OFF when the Ⓐ button is pushed.
- Alarm ON/OFF switch-over can be performed by the Ⓐ button when Ⓜ button is pulled out one step.

☆ The hour hand, minute hand and alarm ON/OFF can be set individually.
☆ Quick advance can be performed by holding down the Ⓑ or Ⓒ button.

## 6. Stopwatch operation

Change to "CHR" mode.
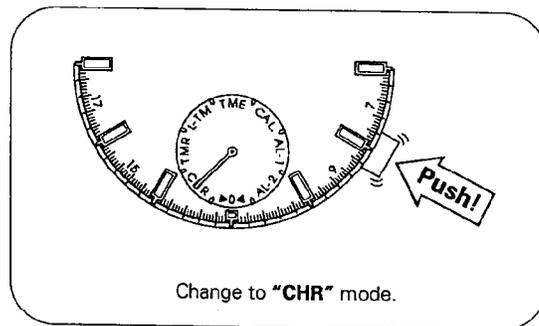
- **Stopwatch measurement range:** Maximum 60 minutes in units of 1/20 second.
- Starting from the stopwatch reset state, the small 1/20 second hand will move for 1 minute. When it is started again from the stopwatch position to run condition, the small 1/20 second hand will move for only 10 seconds.
- The latest split time and the stop time are automatically memorized.

☆ To read 20 ths of a second, observe position of small second hand in relation to the markers on the inside scale. The scale is numbered: 0, 2, 4, 6 and 8 with a heavier marker halfway between representing 1, 3, 5, 7 and 9. The smaller markers represent 0.5 or 1/20 th of a second. Illustration shows 6.5 or 13/20 of a second.

**Reset**

**Start**

**Stop**
(10 minutes 39 seconds 65)

**Reset**

**Auto return**
(after 10 seconds)

**Split**

**Stop**
(0 minute 10 seconds 65)

**Memo call**

**Auto return** (after 10 seconds)

**Reset**

**Latest split memo**
(0 minute 02
seconds 25)

**Stop memo**
(0 minute 10
seconds 65)

**Reset**

**Reset**
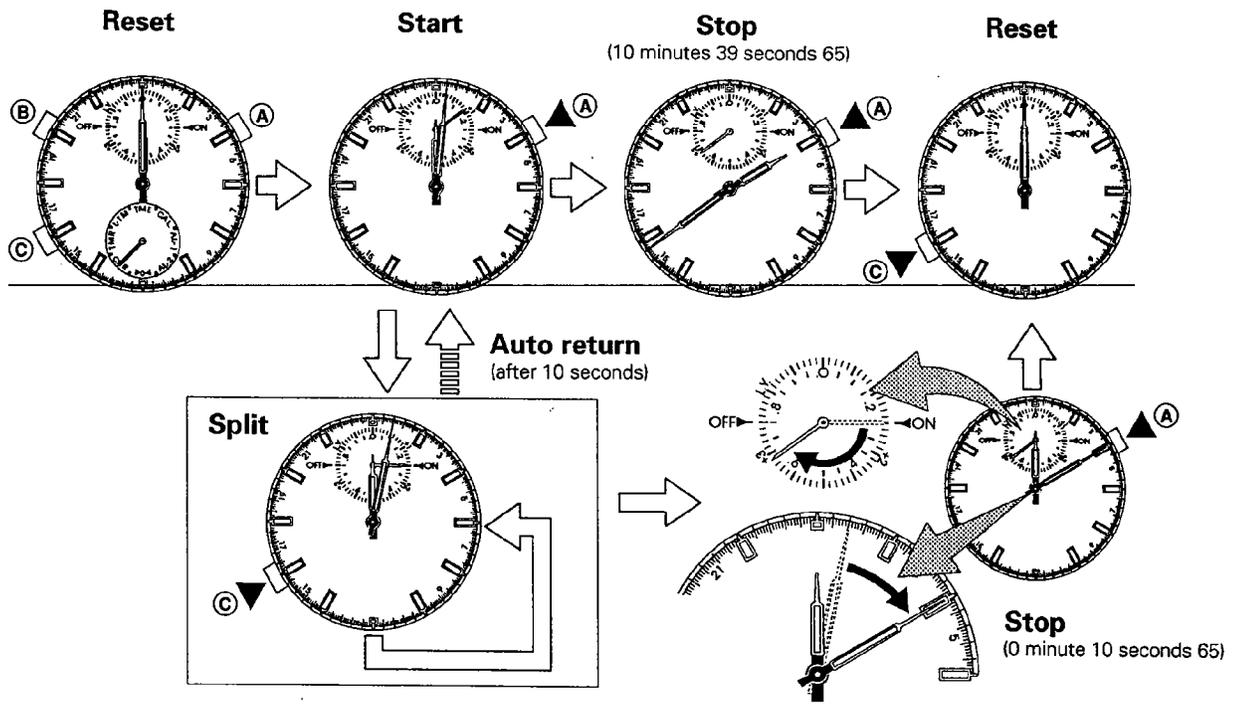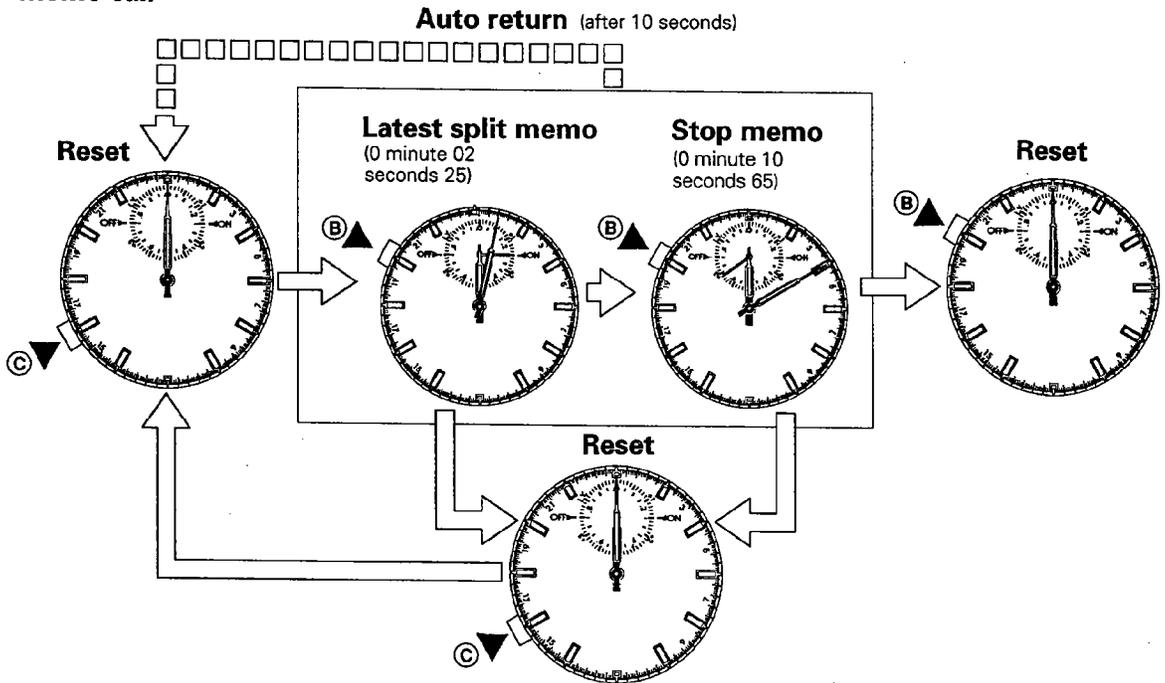
## 7. Timer setting

### Set the timer to 10 minutes



Change to **"TMR"** mode.
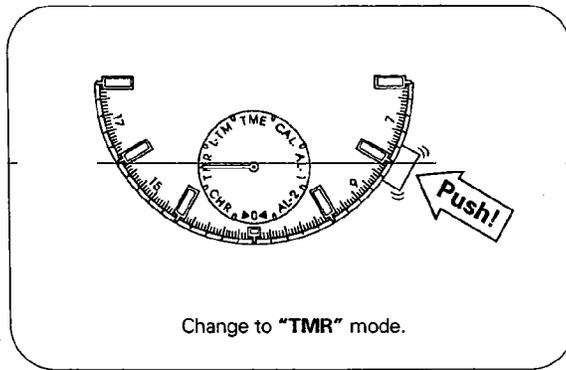
- **Timer setting range:** Maximum 60 minutes, to be set in units of 1 minute.
- **Fly-back function**
  If the ⓒ button is pressed after the timer starts to count down, the watch returns to the timer set time, and count down is automatically restarted.

**Timer setting**

**Start**

**Fly back**

**Time up!**

Sounds for 5 seconds

**Stop**

**Reset** (will return to initial timer setting time)

- The hour hand and the small second hand are synchronized at time set time.
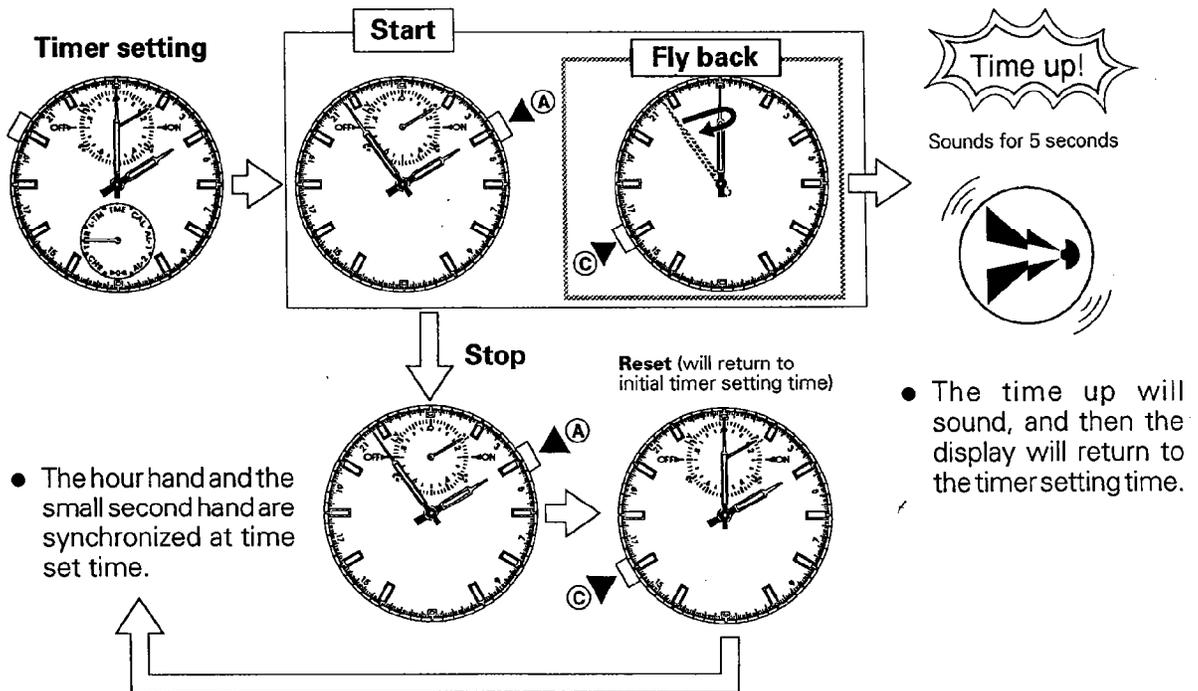
- The time up will sound, and then the display will return to the timer setting time.

☆ Quick forward movement is possible by holding down the Ⓑ button.
☆ During count down, the small second hand stays at the timer set time.

## 8. How to set the local time
### Setting 20:20 to 15:20
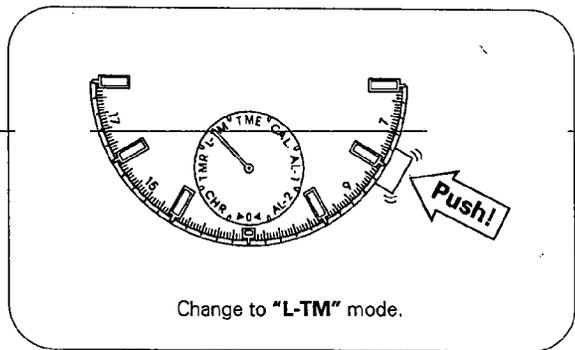
| "L-TM" local time mode display state | Normal state | Correction state |
|---|---|---|
| | 24-hour system | 24-hour system |

Change to "**L-TM**" mode.

Push!

- Local time means the time at your actual location.
This can be used to set your watch to the local time when you make a business trip.

### Normal position of Ⓜ button

| hour hand displays the 24-hour system |

(20:20)

### Ⓜ button pulled out one step

| hour hand displays the 24-hour system |
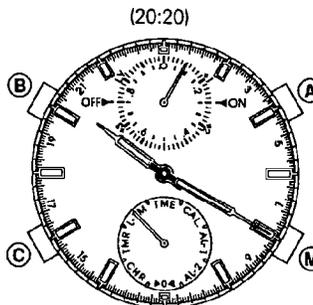
☆ Hour and minute hand are corrected individually. The second can not be corrected.
☆ Quick forward movement is possible by holding down button Ⓑ.

### <Hour hand set>

### <Minute hand set>
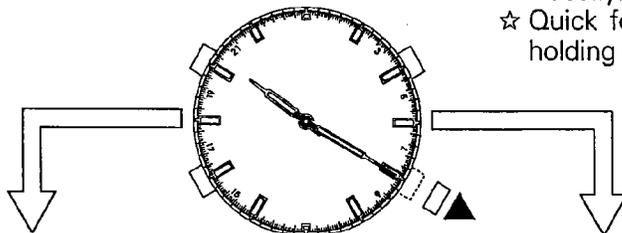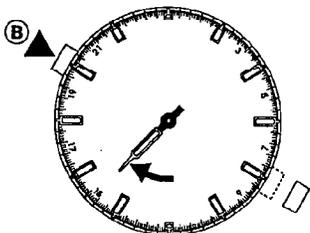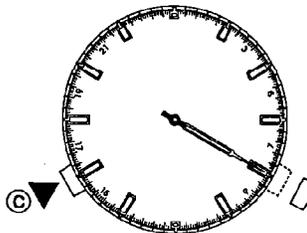
- Minute hand advances 30 minutes each time Ⓒ button is pressed.
- The hour hand is also moved synchronously, but it does not advance to next hour.

### The Ⓜ button is pushed to the normal position

| the hour hand displays the 24-hour system |

(The procedure is completed by setting the watch to 15:20)
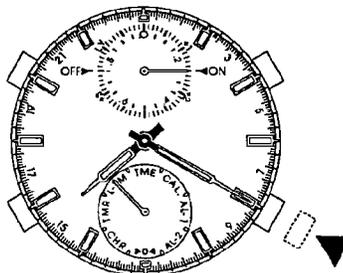
## 9. Monitor function at normal time display (TME)

After monitoring, the watch automatically returns to the normal time display after 10 seconds. **(Auto return)**

### a. Calendar monitor

**Normal time**    **Auto return** (after 10 seconds)    **Calendar monitor** (Leap year September 9)

The monitor can be manually cancelled by pushing button Ⓐ or Ⓒ.

### b. Daily alarm (AL-2) set time monitor

**Current time**    **Auto return** (after 10 seconds)    **Daily alarm (AL-2) set time monitor** (alarm ON at 15:00)

The monitor can be cancelled by pushing either button Ⓑ or Ⓒ.
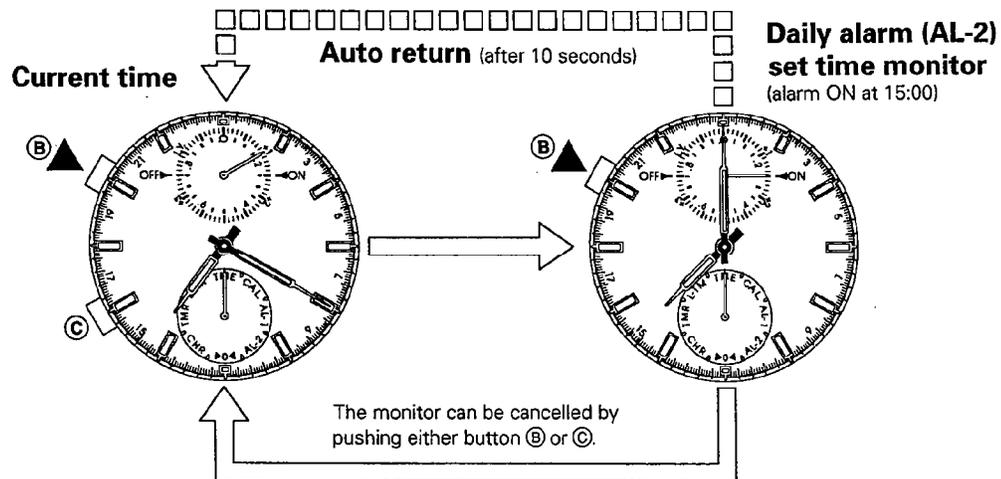
☆ If the Ⓑ button is pressed from the calendar monitor, the watch changes to the daily alarm (AL-2) set time monitor.

☆ If the Ⓐ button is pressed from the daily alarm (AL-2) set time monitor, the watch changes to the calendar monitor.

## 10. All reset function

**Perform all rest procedure after replacing the battery or when the watch does not operate properly.**



**All reset** affects all modes.
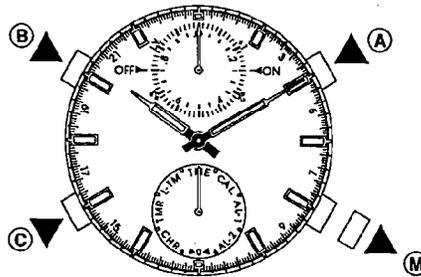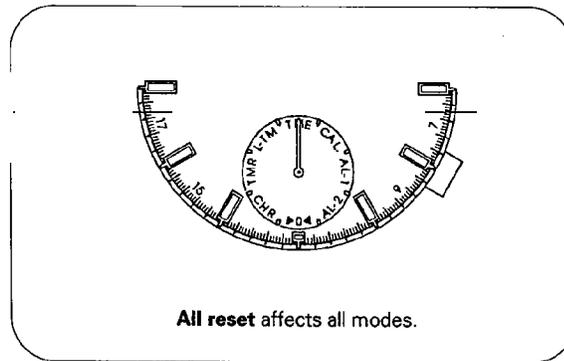


1) Pull out the Ⓜ button one step.
2) Simultaneously push and hold down all 3 buttons, Ⓐ, Ⓑ and Ⓒ, more than 2 seconds.

- When buttons Ⓐ, Ⓑ and Ⓒ are released, the second hand, minute hand, and the hour hand will move slightly and the alarm will beep.
  When the above is confirmed, return the Ⓜ button to its normal position and perform zero position setting in the zero position confirmation mode.
  **(Refer to Zero Position Setting)**

# PRECAUTIONS ABOUT CARE AND HANDLING OF WATCHES

**CITIZEN** ®

## TEMPERATURE CARE

Avoid temperature extremes. Exposing your watch to high temperatures, such as placing it on the dashboard of a vehicle or use in a hot tub, may cause the watch to malfunction, shorten battery life or damage certain components. Leaving the watch in extreme cold temperatures may cause irregular timekeeping until the watch returns to normal operating temperature.

## SHOCK-RESISTANT

The watch may be worn while playing golf or other activities, but avoid severe shocks such as dropping it on a hard surface.

## MAGNETIC-RESISTANT

No problem should occur from using the watch around ordinary household electric appliances such as TV sets or stereos.  Keep away from magnets.

## CHEMICAL/GAS RESISTANT

Do not expose the watch to chemicals or gases for long periods.

## WATCH CLEANING

Stains, waterspots and accumulated dirt on the case, crystal or band should be removed with a soft cloth to prevent damage and premature wear.

## HANDLING OF WATER-RESISTANT WATCHES

Although water-resistant watches are warranted, steps should be taken to avoid damage that may result from accidents or mishandling:

■ Do not operate the crown or push-button in the water or while the watch is wet. Tighten screw lock crown completely.

■ Should the watch become immersed in water, dry it off right away. If the watch comes in contact with salt water, be sure to rinse it thoroughly in warm fresh water to remove any trace of salt.

■ If a watch is wet from cleaning or by accident, never store it in a closed container. It should be dried immediately or taken to a watchmaker or jeweler if moisture is inside the case to prevent damage from rust.

■ Vital components necessary to resist the entrance of moisture deteriorate with time and use. Gaskets, crowns and other materials should be replaced every year or two to ensure that water resistant quality remains at factory specifications.

## CARE FOR METAL BRACELETS

To extend the life and maintain the good appearance of the metal watch bracelet, the following recommendations are given:

■ Be aware that since the watch and bracelet is worn next to the skin, it collects dust and perspiration and becomes soiled if not cleaned regularly. This is particularly true of the inner parts of the links or mesh of the bracelet.

■ Soil and rust, when present in a bracelet, are dissolved by perspiration and can cause staining of cuffs and irritation of the skin in some instances.

■ Heavy perspiration should be wiped off the watch and bracelet with a soft dry cloth. The bracelet should be cleaned occasionally by using an old toothbrush and warm soapy water after which the soap is thoroughly rinsed with clear water and the bracelet dried completely. The foregoing manner of cleaning should not be done if the watch is not water-resistant but  should instead be done by your jeweler.

## CARE FOR STRAPS

### LEATHER

■ Heavy perspiration, if not removed from a leather strap, can wash out the natural oils and cause the leather to become dry and deteriorate. Any moisture should be blotted with a soft dry cloth or paper towel and the strap allowed to dry naturally.

■ Salt residue and soil can be removed from the leather by cleaning with a dampened soft cloth and mild soap or saddle soap.

■ Occasionally, the inside surface of the strap should be cleaned by using a soft cloth dampened with alcohol.

■ The strap should always be worn a little loosely (one finger space between wrist and strap) to allow air to circulate thus causing any moisture to evaporate.

### RUBBER

■ Rubber straps should be washed frequently with mild soap and warm water using a soft brush.

■ Thorough cleaning, using the same method, should especially be done after use in salt water.

■ Solvents, oils, perspiration, tanning lotion and salt can cause rubber to deteriorate if not removed.

| Marking on the Dial | Marking on the Caseback | Face washing, splashes, sweat, raindrops, etc. | Swimming | Skin diving (diving without air tanks) | Scuba diving (diving with air tanks) | Water-resistant characteristics |
|---|---|---|---|---|---|---|
| NONE | NONE | NO | NO | NO | NO | Non water-resistant watch and must be kept away from water. |
| NONE | WATER RESIST | OK | NO | NO | NO | An ordinary water-resistant watch and can withstand splashes, sweat, rain-drops and etc. for daily life use. |
| WR100M WR10bar WR150M | WATER RESIST | OK | OK | OK | NO | For frequent use with water. It is not specially designed for scuba diving. |
| WR200M | WATER RESIST | OK | OK | OK | OK | For skin and scuba diving. Usable up to the respective indicated depths. |

# Water Resistance

The water-resistant quality of our timepieces is offered in varying degrees depending on the model. This ranges from non-water resistant models to those suitable for SCUBA diving. Water resistance of our timepieces is measured in BAR or Barometric Pressure. Each BAR of pressure is equal to 14.5 pounds per square inch of pressure.

Water resistance is measured when the watch is at a static, or motionless state. As the watch is moved in water, such as from the motion of swimming, pressure is added from velocity. While you may be swimming in a pool at surface level, the watch may be experiencing forces equal to that of 100 feet of water pressure (3 BAR). Diving into a pool can cause forces on the watch to exceed those pressures. As such, you should always allow a margin of safety when exposing your watch to moisture. Never "push the limit" of the degree of water resistance of your timepiece.

A primary factor to keep in mind about water resistance is that periodic maintenance is needed to maintain original factory specifications for water resistance. When a watch is new, it meets specifications for water resistance as indicated on the case back. However, as the watch ages, the gaskets that seal the watch become dry and brittle, diminishing its water resistant quality. Exposure to environments such as chlorinated pools, salt water or soaps from showering can accelerate drying of the gaskets. We recommend that the gaskets be changed at least every 18 to 24 months to maintain the water resistant quality of your timepiece. If the watch is frequently exposed to chlorinated pools, soaps salt water, etc., we recommend that the gaskets be changed on a yearly basis.

From time to time, you may notice condensation that appears then goes away after a short period of time. This is a normal occurrence and happens primarily from sudden temperature changes. When there are sudden temperature changes such as entering a cool building from the hot out of doors, or jumping into pool on a hot day the watch may fog. Conversely, if you go to the cold outdoors from a warm building, fogging may occur. As long as the fogging clears in a short period of time, there is no need for concern.

Be sure the crown is completely pushed in prior to any contact with moisture. If your model is equipped with a screw down crown, be sure it is properly seated against the case. Do not operate the crown or any push button when the watch is wet as this may allow the entrance of moisture. . If at anytime, you notice moisture in your timepiece that does not clear in a short period of time, you should send your timepiece as soon as possible to the nearest Authorized Service Center for inspection.

You can determine the level of water resistance of our watches from the markings on your case-back. Additionally, models that are water resistant to 100 or 200 meters have an indication on the dial as well. The case-backs and dials are normally marked as follows:

**The case back has no indication of water resistance**
This indicates the watch is a non water-resistant model and is not designed for contact with moisture at all. Caution should be exercised to avoid any contact with moisture, such as when washing your hands or from a rainstorm.

**"Water Resist"**
This watch is designed to withstand water from accidental splashing, such as from washing your hands or rain. Any submersion into water may result in the entrance of moisture.

**"Water Resist 10BAR" or "W.R. 10BAR", Dial marked "WR100"**
This watch is designed to withstand water pressure up to 333 feet. This includes water exposure from accidental splashing and rain, but also from showering, swimming in a pool and snorkeling. Be sure to rinse the watch with fresh water after exposure to a chlorinated pool, salt water, soaps, etc. After rinsing with fresh water, be sure to dry the exterior with a soft cloth.

**"Water Resist 20BAR" or "W.R. 20BAR", Dial marked "WR200"**
This watch is designed to withstand water pressure up to 666 feet. This includes all exposure to water up to and including recreational SCUBA diving. Be sure to rinse the watch with fresh water after exposure to a chlorinated pool, salt water, soaps, etc. After rinsing with fresh water, be sure to dry the exterior with a soft cloth.

**Special Note about Jacuzzis and Hot Tubs**
The various components used in the manufacture and assembly of your watch expand at various rates. This results in a loss of the sealing capabilities of gaskets, which may allow moisture to enter. In addition, heat from these sources can cause deformation of certain materials leading to mechanical failures. For these reasons, you should remove your watch before entering a hot tub or Jacuzzi.