

### Setting Instructions for Movement Caliber 6800

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#### 1. Outline

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

#### Main Functions

#### Calendar

Recognition of leap year, month and date

#### Quick Set Alarm

Can be easily set from the current time to a desired time. Alarm setting is automatically reset after sounding is completed.

#### Daily Alarm

Alarm sounds at a fixed time every day

#### Timer

24-Hours maximum. With fly-back function.

#### Local Time

Dual-time function for setting another time zone. This is useful when traveling.

Local time alarm Alarm sounds at a fixed local time every day. This is useful when traveling.



# Recurn to Table



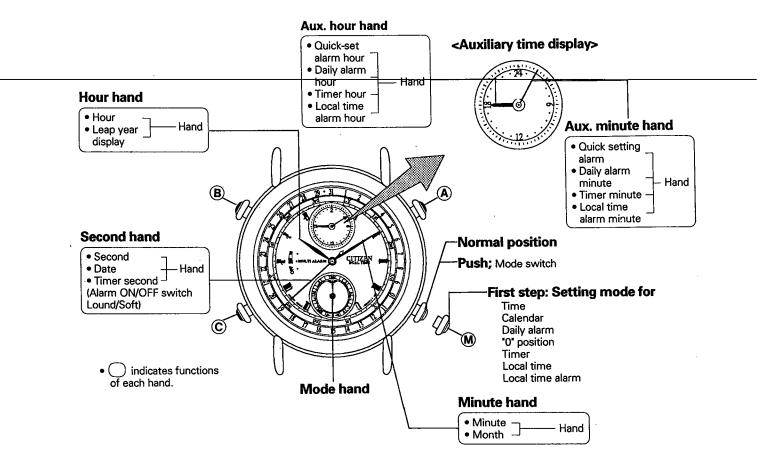
<b>2</b> SPECIFICATION	<b>IS</b>
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Caliber No.	Cal. 6800					
Туре	Analog quartz multi-hand					
Oscillation	32,768 Hz (Hz: Frequency in 1 sec)					
Accuracy	±20 sec at normal temperature (5°C – 35°C)					
Effective temperature range	-10°C – +60°C (14°F – 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	<ul> <li>Hand-type calendar Year (Recognition of leap year), month, date, no need of adjustment at end of month in leap year.</li> </ul>					
	<ul> <li>Alarm 1 (Quick set alarm) Maximum setting range: Up to 23 hours 59 minutes by 1 minute after the next minute at current time.</li> </ul>					
	Alarm 2 (Daily alarm)					
	<ul> <li>Timer Maximum setting range: 24 hours by 1 minute.</li> </ul>					
	<ul> <li>Local time Hour and minute (Set by 30 minutes. Second cannot be adjusted.)</li> </ul>					
	Other functions <ul> <li>Calendar monitor</li> <li>Daily alarm set time monitor</li> <li>Local time alarm set time monitor</li> </ul>					
Power cell	Small-sized silver battery 1 piece. Power cell No.: 280-44 (SR927W)					
Lifetime of power cell	Approx. 2 years Condition: Total alarm using time: 40 sec/day (Alarm 1: 10 sec) (Alarm 2: 15 sec) (Local time alarm: 15 sec) Timer: 1 time/day					

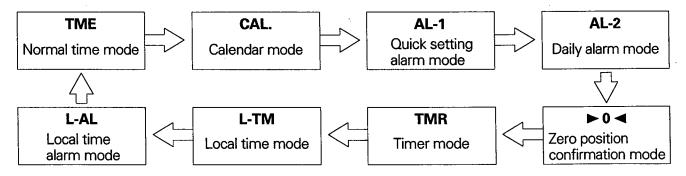
## **3-1 OPERATING METHOD CAL 6800**

### **§1 MAIN COMPONENTS**



### **§2 MODE CHANGE-OVER**

Push the M button in the normal position to switch between modes as shown below.



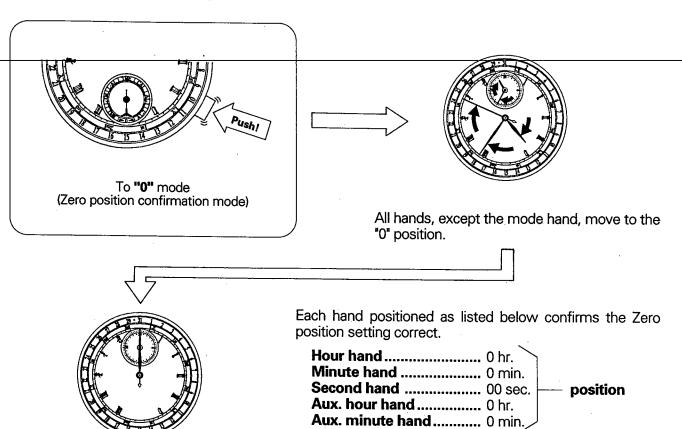
#### Note:

Check the mode hand to ensure the watch is set in the desired mode during use, since pressing the Mbutton unconsciously during operation may occur.

#### **§3 BEFORE USE**

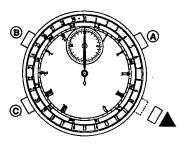


Before use, follow the procedure below to ensure that all watch components are in proper working order: Confirm the Zero position setting.



If the watch hands are not positioned as above, follow the **Zero position setting** procedures to ensure proper use.

#### **ZERO POSITION SETTING**



1) Pull the M button out to the first step

Push the (A) button to set the second hand to the 0 sec position.

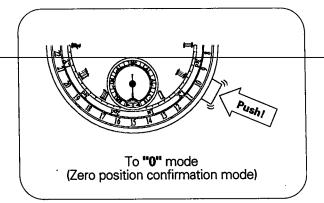
Push the Bbutton to set the Aux. hour/minute hands to the 0 hr./0 min. position.

Push the  $\bigcirc$  button to set the hour/minute hands to the 0 hr./0 min. position.

- 2) Push the Moutton in to the normal position to complete the setting procedure,
- ☆ Press and hold down either of the (A), (B), (C) button for the quick-advance feature.
- ☆ A strong shock may cause the zero position to shift. In this case, reset to the correct zero position.

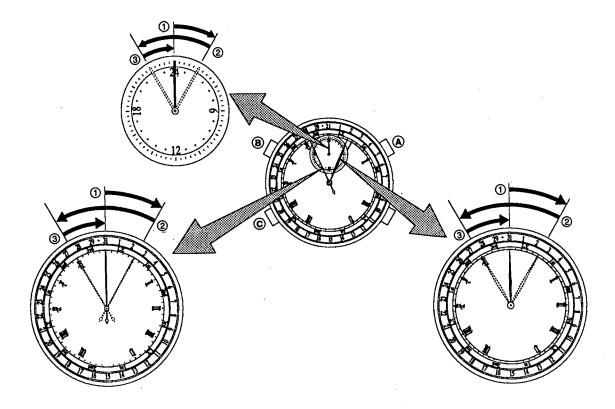
#### **§4 HOW TO SET AND OPERATE EACH MODE**

#### **1. HAND MOVEMENT DEMONSTRATION**



The (A), (B) and (C) buttons when each pushed once will cause the second, minute and auxiliary minute hands to stop in the "0" position after moving through the following stages.

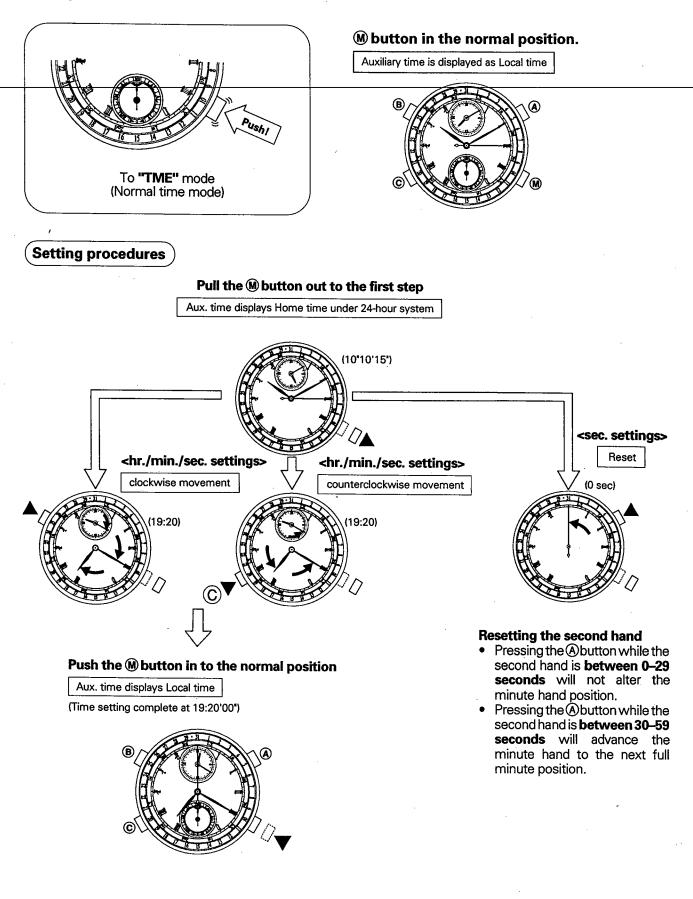
- Second hand:  $(1 + 5 \text{ sec.} \rightarrow (2 10 \text{ sec.} \rightarrow (3 + 5 \text{ sec.}))$  Minute hand:  $(1 + 5 \text{ min.} \rightarrow (2 10 \text{ min.} \rightarrow (3 + 5 \text{ min.}))$  Aux. minute hand:  $(1 + 5 \text{ min.} \rightarrow (2 10 \text{ min.} \rightarrow (3 + 5 \text{ min.}))$



#### 2. SETTING THE TIME



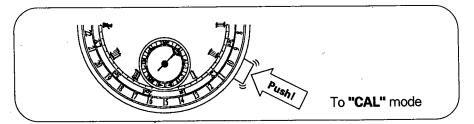
Setting the hands from 10:10'15" to 19:20'00".



- ☆ The hour/minute hands and auxiliary hour/minute hands are synchronized.
- ☆ Press and hold down either the Bor © button to use the quick-advance feature.
- ☆ Hand movement is about twice as fast after the first revolution. (clockwise movement only).

#### **3. SETTING THE CALENDAR (CAL)**

#### Setting the calendar from May 5, 1990 to September 9, 1992.



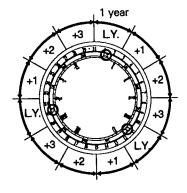
#### Leap Year Chart

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 >

Leap years are indicated by L.Y.. The numbers 1, 2, 3 indicate the number of years that have passed since the last leap year.

**Example:** The year 1992 will be a leap year, and 1993 will be the first year after the leap year.



#### Leap year display

From the leap year quick reference chart:

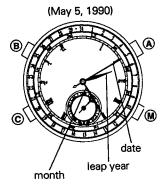
- 1990 is the second year following the leap year.
- 1992 is a leap year.
- On this watch 1 hour = 1 year when figuring the number of years since a leap year. There are three groupings of L.Y., +1, +2, +3 on the watch dial indicating the leap year and following years.

When setting the leap year, as in the example at 1992, the hour hand need only be positioned over the closest L.Y. marking to complete the setting.

#### Adjustment-free calendar

The calendar feature on this watch requires no adjustment at the end of the month or for leap years. Under normal conditions, this feature provides the user with a complete adjustment-free calendar.

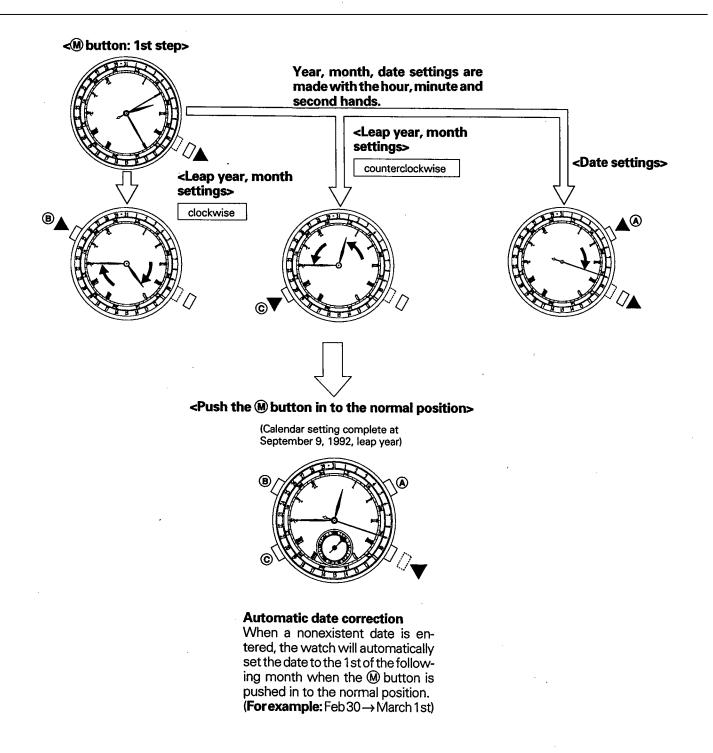
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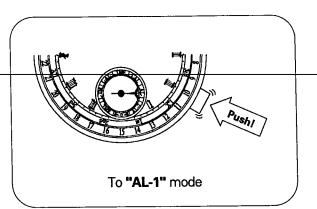
### Setting procedures

 $rac{1}{2}$  The year and month are synchronized; the date must be independently set.  $rac{1}{2}$  Press and hold down any of the (A), (B), (C) buttons for the quick-advance feature.

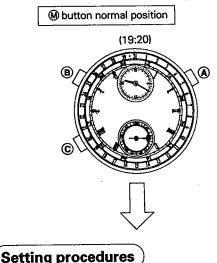


#### 4. SETTING THE QUICK-SETTING ALARM (AL-1)

Setting the alarm to ring after 50 minutes from the current time, (19:20'00") at 20:10'00".



#### Alarm can be set in this position



#### Use the auxiliary hour, minute, second hand display to set the quick setting alarm

When the alarm is OFF the auxiliary time display shows the current time.

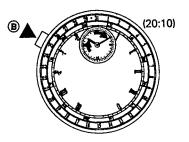
This features allows the alarm to be easily set to the desired time within the 23 hour 59 minute maximum limit. Following one ring of the alarm (10 seconds) the alarm setting is automatically cleared from memory and the auxiliary time display returns to the current time.



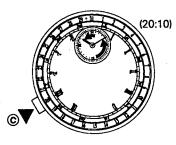
Sound can be monitored by pressing the (A) button when the alarm is OFF.

#### <Aux. hour, minute settings>

clockwise



### <Aux. hour, minute settings> counterclockwise

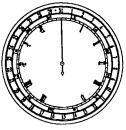


Alarm ON: second hand stops in the "0" position. Alarm OFF: auxiliary time hands display the current time.

- $\Rightarrow$  Hour and minute hands display the current time (home time).
- ☆ Press and hold down either the B or C button for the quickadvance feature.
- Auxiliary hour and minute hand movement is about twice as fast after the first revolution (clockwise movement only).
- $\Rightarrow$  The auxiliary time display is a 24-hour system.







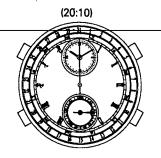
After adjusting the hour and minutes, the second hand returns to the "0" position and stops, regardless of whether the watch hands were turned clockwise or counterclockwise during setting procedures. At this point, the alarm is now ON.



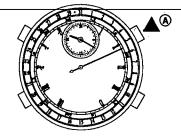


# $\sum_{j \in I}$

#### <Canceling the quick-set alarm setting>



<Setting of the quick-set alarm is complete>



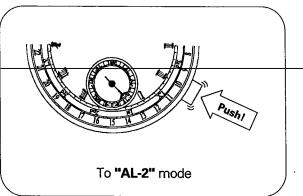
• Press the (a) button after setting the alarm and the auxiliary time hands will display the current time and **the quick-set alarm will be turned OFF.** 



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#### 5. SETTING THE DAILY ALARM (AL-2)

Setting the daily alarm to ring everyday at 15:00.



#### < >M button normal position>

Setting procedures

# • Use the auxiliary hour, minute, second hands to set the alarm

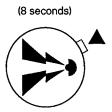
After the alarm time has been set, the alarm will sound everyday at the same time for 15 second.

#### Alarm sound switch

Use the second hand to set the alarm ON and OFF.

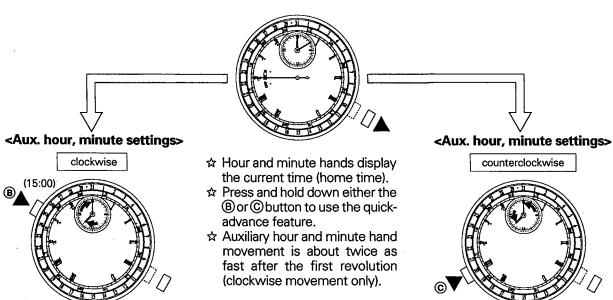
This switch lets you choose between 2 sounds (loud or soft) for the alarm.

<Sound monitor>



• Sound can be monitored by pressing the (A) button when the daily alarm is ON or OFF.

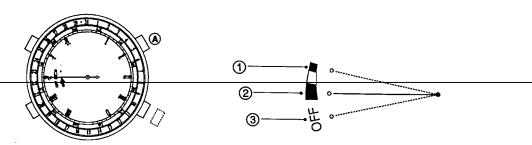
# <Pull the M button out to the 1st step>



☆ The auxiliary time display is a 24hour system.



#### Daily alarm auto ON Daily alarm sound selector

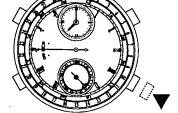


- Pull the (1) button out to the first step; the second hand moves to the (2)nd position and the alarm is turned ON.
- Press the (A) button to switch the sound ON and OFF. (The level of the alarm sound in position (1) is softer than position (2).)



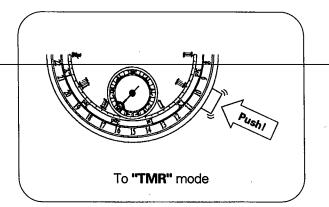
#### [Push the (M) button into the normal position] Daily alarm setting is complete

(15:00)



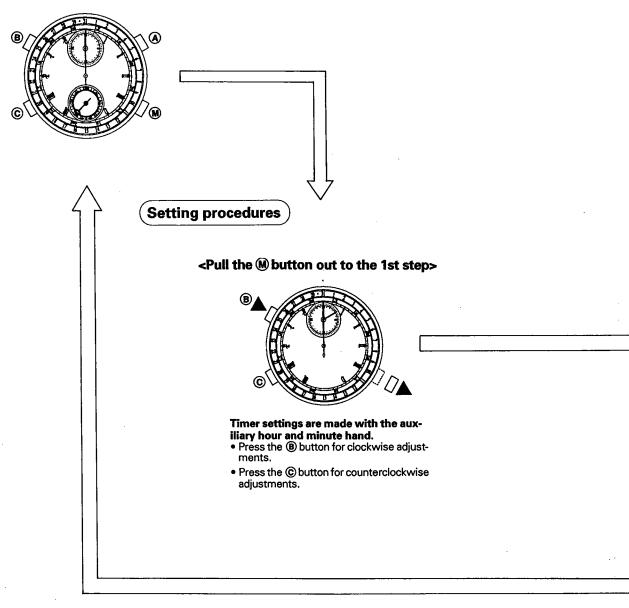
#### 6. SETTING THE TIMER (TMR)

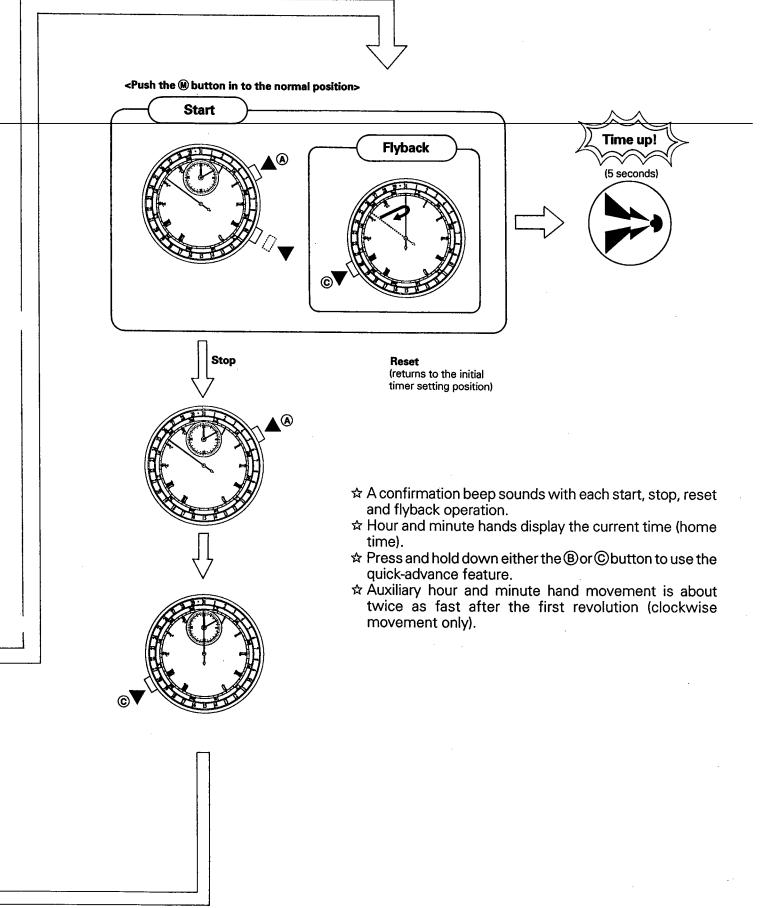
#### Setting the timer to 10 minutes.



- Timer range: 24 hours in 1-minute intervals.
- Flyback feature: This feature allows you to press the © button after the timer countdown has started to return the watch to the initial timer setting and automatically start the countdown over again.

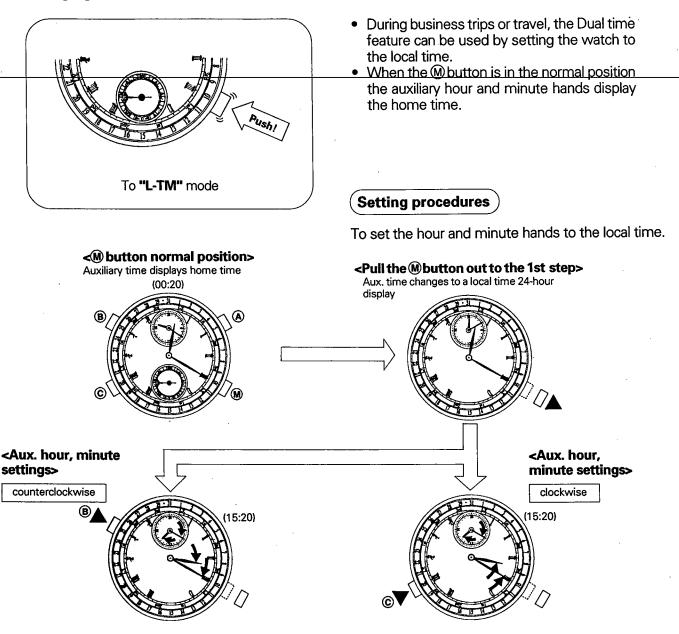
#### < >M button normal position>





#### 7. SETTING THE LOCAL TIME (L-TM)

Changing the local time from 00:20'00" to 15:20'20".



- ☆ Hour/minute/auxiliary hour/minute hands are synchronized.
- ☆ Minute hand is adjustable in 30-minute increments only. Second hand is not adjustable.
- ☆ The auxiliary time display is a 24-hour system. Use it to select correct AM or PM.
- ☆ Press and hold down either the (B) or (C) button to use the quick-advance feature.

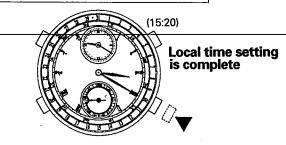






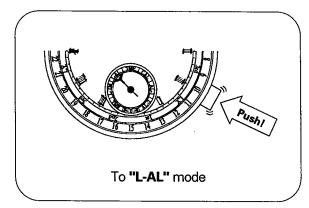
#### <Push the M button in to the normal position>

Auxiliary time returns to a home time display



# 8. SETTING THE LOCAL TIME ALARM (L-AL)

Setting the local time alarm to ring everyday at 16:00.



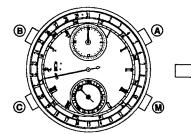
# • Use the auxiliary hour and minute hands to set the local time alarm.

After the alarm time has been set once, the alarm will sound everyday at the same time according to the local time for 15 seconds.

#### • Alarm sound switch

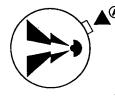
This switch lets you choose between 2 sounds (soft or loud) for the alarm.

#### < > button normal position>



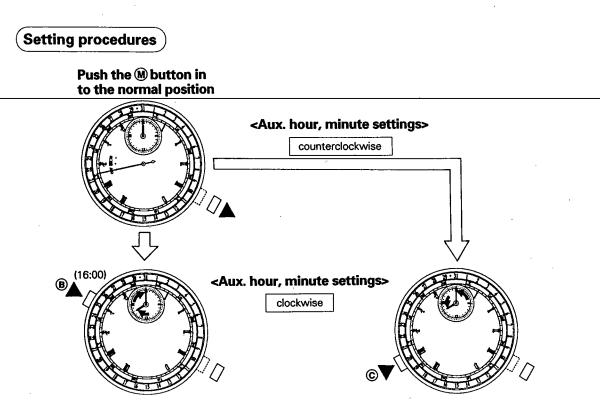
Sound monitor

(8 seconds)



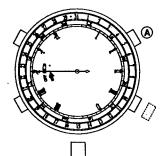
 Sound can be monitored by pressing (a) button when the local time alarm is ON or OFF. Return to Table of Contents



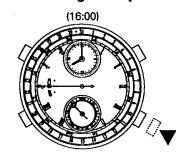


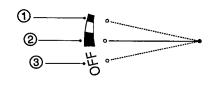
- Hour and minute hands display the local time.
- Press and hold down either the B or C button to use the quick-advance feature.
- Auxiliary hour and minute hand movement is about twice as fast after the first revolution (clockwise movement only.)

#### Alarm auto ON function Alarm sound selector



Push the (M) button in to the normal position Alarm setting is complete

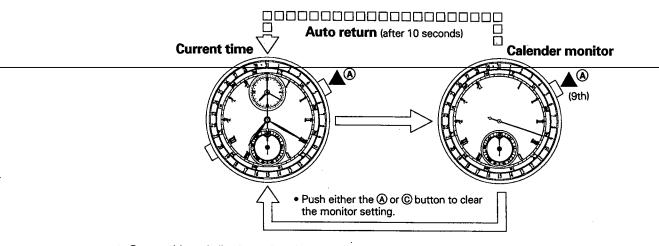




- Pull the M button out to the first step, the second hand moves to position 2 and the alarm is turned ON.
- Press the button to adjust the sound between soft/loud. (The level of the alarm sound in position is softer than position ②.)

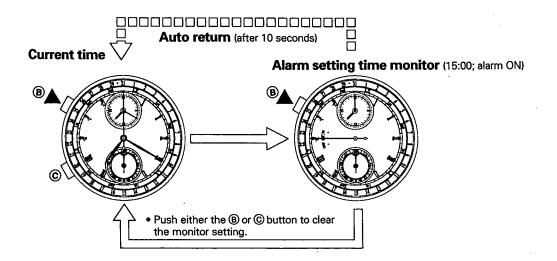
#### Return to Table of Contents 9. MONITORING IN THE NORMAL TIME MODE

#### a. Calendar Monitor



☆ Second hand displays the date. The leap years and months are not displayed.

#### b. Daily alarm (AL-2) Set Monitor

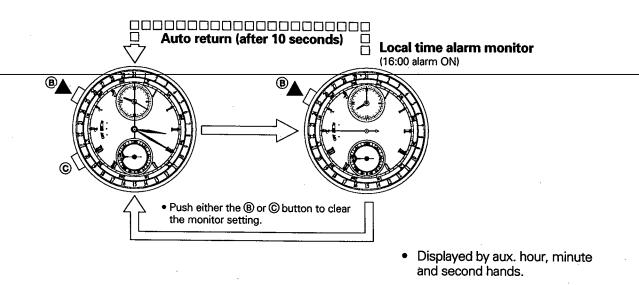


- ☆ Press the <sup>®</sup> button while monitoring the calendar to monitor the alarm (AL-2) settings.
- ☆ Press the @ button while monitoring the alarm (AL-2) settings to monitor the calendar setting.

☆ Both of the above monitor modes return automatically (auto return) to the current time after 10 seconds.

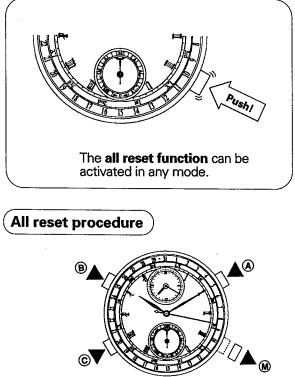
### Return to Table of Contents **10. MONITORING IN THE LOCAL TIME MODE**

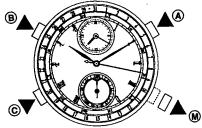
#### Local time alarm Monitor



#### **11. ALL RESET FUNCTION**

The all reset function is used following battery replacement of abnormal watch movement.





- 1. Pull the M button out to the first step.
- 2. Push and hold down the (A), (B), (C) buttons simultaneously for more than 2 seconds.
- 3. Release all three buttons and a confirmation beep will sound and the minute, auxiliary minute and second hands will move slightly. Push the M button in to the normal position after the above procedures have been completed and then set the watch to 0. (See BEFORE USE: "Zero position setting" and then reset the time.)

# PRECAUTIONS ABOUT CARE AND HANDLING OF WATCHES



#### 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	ок	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	ок	ок	ок	NO	For frequent use with water. It is not specially designed for scuba diving.
WR200M	WATER RESIST	ок	ОК	ок	ок	For skin and scuba diving. Usable up to the respective indicated depths.

# Return to Table of Contents 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.