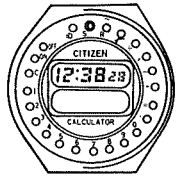
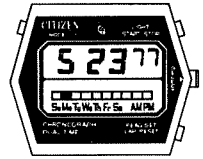
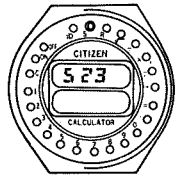
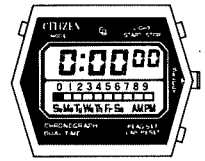
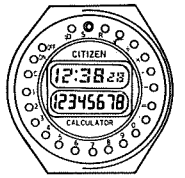
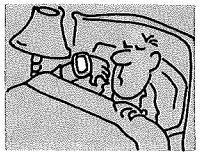
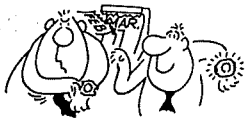
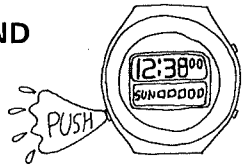
# INTRODUCTION OF CITIZEN QUARTZ CRYSTRON EACH CALIBERS

# CITIZEN QUARTZ CRYSTRON LC

| DISPLAY | WITH ALARM 9021※ | 50-3※※※ 9025A | 50-5※※※ 9050A | 50-1※※※ 9060A | 50-6※※※ 9070A | WITH CHRONOGRAPH 9080A | WITH CALCULATOR 9090A |
|---|---|---|---|---|---|---|---|
| NORMAL TIME |  |  |  |  |  |  |  |
| SECOND | | |  | | | | |
| CALENDAR | |  | |  |  |  |  |
| ALARM |  | | | | | | |
| CHRONOGRAPH | | | | | |  | |
| DUAL TIME | | | | | |  | |
| CALCULATOR | | | | | | |  |

# CITIZEN QUARTZ CRYSTRON

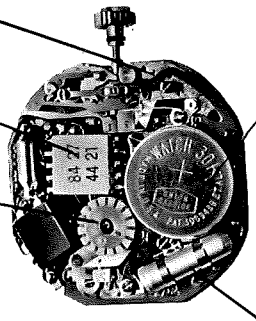
| ADDITIONAL MECHANISMS | WITH ALARM 9021※ | 50-3※※※ 9025A | 50-5※※※ 9050A | 50-1※※※ 9060A | 50-6※※※ 9070A | WITH CHRONOGRAPH 9080A | WITH CALCULATOR 9090A |
|---|---|---|---|---|---|---|---|
| ILLUMINATION LAMP  | ○ | ○ | | ○ | ○ | ○ | ○ |
| AUTOMATIC CALENDAR SETTING AT THE END OF EACH MONTH  | | ○ | | ○ | ○ | ○ | ○ |
| LEAP-YEAR SETTING  | | | | ○ | | ○ | |
| ONE-TOUCH ZERO-SECOND RESETTING   | | | | ○ | | | |
| POWER CELL LIFE INDICATOR  | | | | ○ | | ○ | |
| POWER CELL | SMALL-SIZE SILVER OXIDE POWER CELL 280-21 | 280-21 | 280-13 (11) | 280-21 | 280-13 | 280-21 | WATCH: 1 PIECE CALCULATOR: 2 PIECES 280-21 |
| POWER CELL LIFE | 2 YEARS | 2 YEARS | 1 YEAR | 2 YEARS | 1 YEAR | 2 YEARS | WATCH: 2 YEARS CALCULATOR: 330 HOURS |

# Citizen Quartz Crystron LC

# 901※※

The Citizen Quartz Crystron LC is an all solid state, electronic watch manufactured by Citizen and commercialized for the first time in the world.





① The price is quite reasonable for a digital quartz watch.

② The fashionable up-to-date design totally changed the image of a wristwatch.

③ Easy-to-see digital display of liquid crystal with a long life.

④ "Time" and "calendar" can be set by "change-lever" system.

⑤ The power conservation switch contributes to prolongation of power cell life.

⑥ "Hour", "minute", "second (colon)", "AM/PM", "second/date" and "day" are always indicated on the time screen.

⑦ The cumulative time error caused by a long period of use can be instantly corrected by "0-second" reset mechanism.

⑧ You can select either "date" or "second" to display at all times just by pushing the crown.

⑨ Thin and Compact design — 26.0mm x 26.4mm, 7.4mm thick.

⑩ Reliable high-performance is maintained forever by two C/MOS-LSI's.

⑪ Time adjustment is very easy due to the trimer capacitor (regulator). Please adjust the time while measuring by the quartz timer.

⑫ One small-size silver oxide power cell ensures highly accurate operation for one or two years.
Parts No.: 280-01
Voltage: 1.5V
Life:

| | |
|---|---|
| Cal No. 9010 | . 1 year |
| Cal No. 9011 | . 2 years |
| Cal No. 9012 | . 2 years |

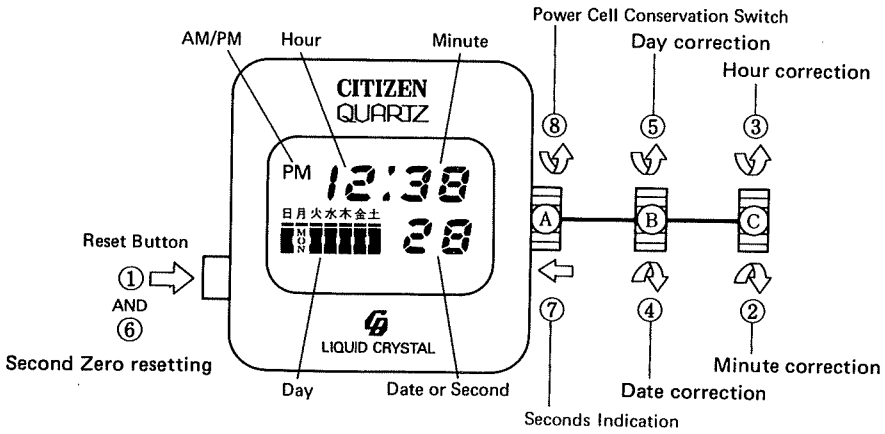
⑬ Owing to high oscillation of 32.768Hz of the quartz crystal, a high accuracy of ±15 sec per month.

**9010** When the crown is pushed, the "date" indication is switched to "second", which will return to "date" again by releasing the crown.

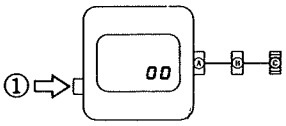
**9012** This is a more economical model without "day" indication.

All other models, except the above two, have the same features as the Cal No. 9011 model.

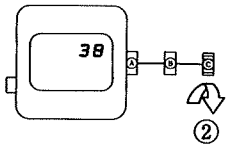
## Setting Procedures



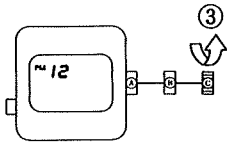

**1. Second resetting:**



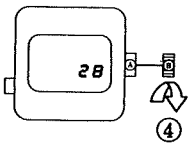

**2. Minute correction:**



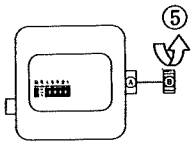

**3. Hour correction:**



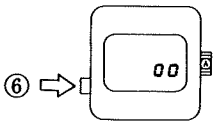

**4. Date correction:**



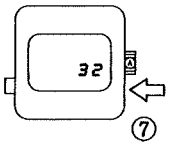

**5. Day correction:**



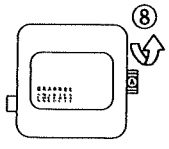

**6. Second Zero resetting:**




**7. Seconds indication:**




**8. Power Cell Conservation Switch:**



# Citizen Quartz Crystron LC

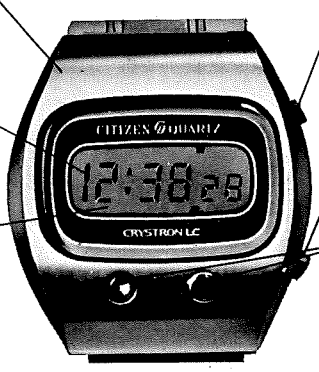
**902※※**

This is the world's first digital quartz crystal watch with an alarm, and was developed and commercialized through Citizen's superb electronics technology and a long experience in manufacturing precision watches.

① This multi-functional digital watch with a compact and smart design will appeal to everyone.

② Easy-to-see time screen. "Hour", "minute" and "second" are always displayed on the time screen.

③ The liquid crystal panel of this watch has an especially long life, along with excellent contrast.



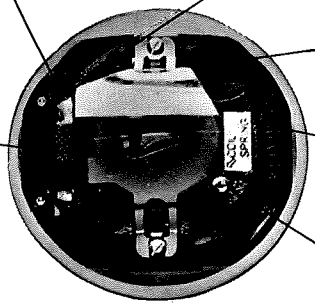

④ The illumination lamp provides easy reading of the digital display even in the dark.

⑤ The world's first electronic alarm will never fail to remind you of an appointment.

⑥ "Time" and "0-second reset" can easily be performed by the push-operation of the two buttons.

⑦ A high-frequency quartz crystal oscillator and temperature compensation circuit together provide a stable, high accuracy for a wide range of temperatures. The accuracy is less than ±10 sec. per month.

⑧ One small-size silver oxide power-cell ensures highly accurate operation for two years.
Voltage: 1.5V
Parts No.: 280-21



⑨ Time adjustment is very easy due to the trimer condenser (regulator). Please adjust the time while operating the quartz timer.

⑩ The coil for buzzer sounds softly every second for one minute.

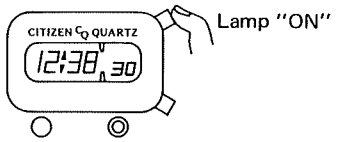
⑪ C/MOS-LSI assembled into one chip provides a stable high-performance forever.

⑫ The movement is compactly assembled into one ceramic base plate, so that assembly and disassembly is very simple.
Dimensions: 27.0mm x
Thickness: 22.6mm
Thickness: 9.04mm

Cal. No. 9025 provides "month" and "date" indications with one-touch operation.
A smart watch with "month" and "date" indications instead of electronic alarm.

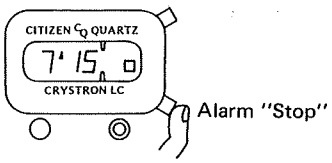
## SETTING INSTRUCTIONS (CAL. 9021※)

**1. Lamp "ON"**

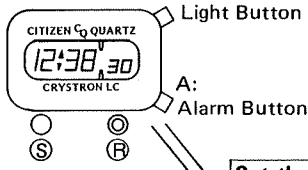



S : Select button R : Read/set button

**2. Alarm Stop**

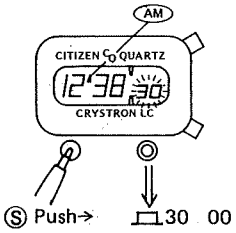



Ⓢ : Select Button
Ⓡ : Read/Set Button

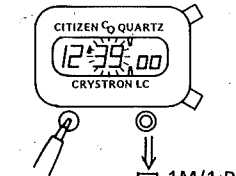



**Set the Time**

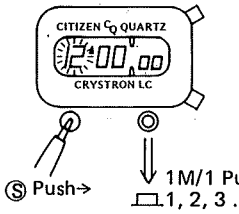
1) "O" Second resetting




2) Minute correction

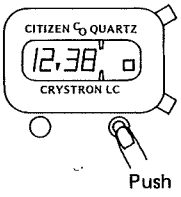



3) Hour correction

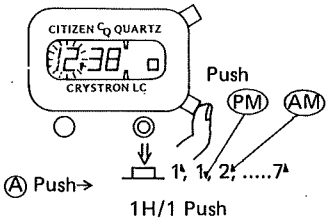



**Set the Alarm Time**

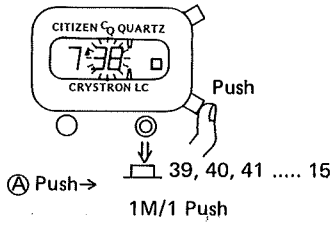
1) Alarm set time desplay



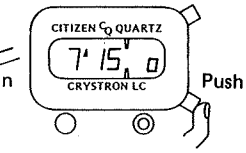

2) Hour setting

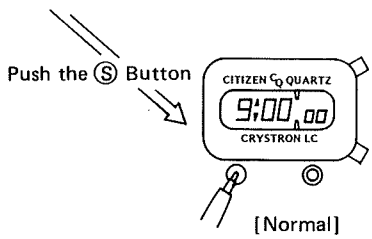



3) Munite setting

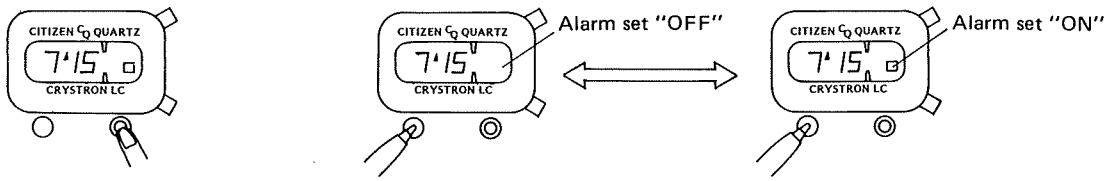



4) Alarm set time



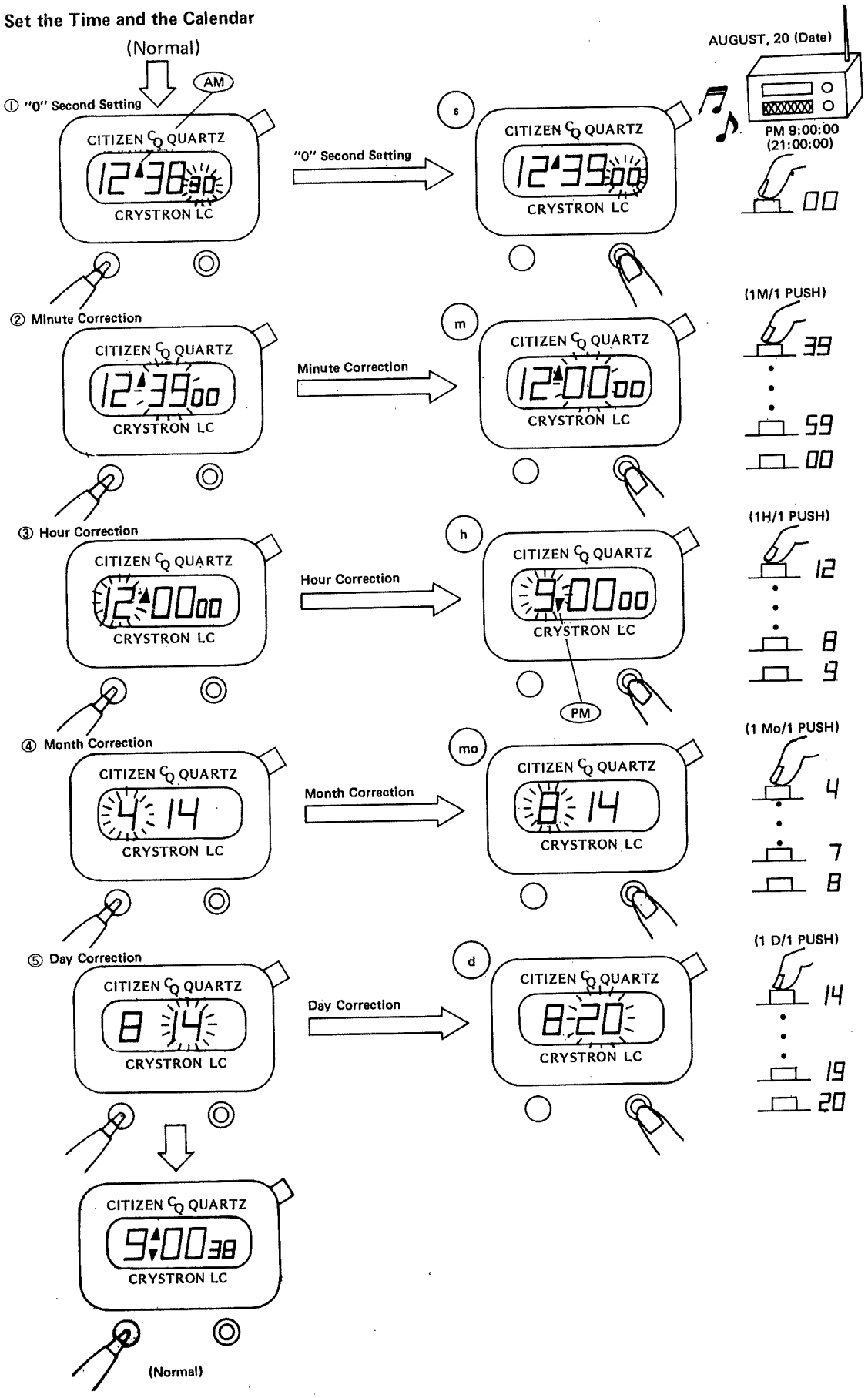




**Alarm Set "ON" or "OFF"**

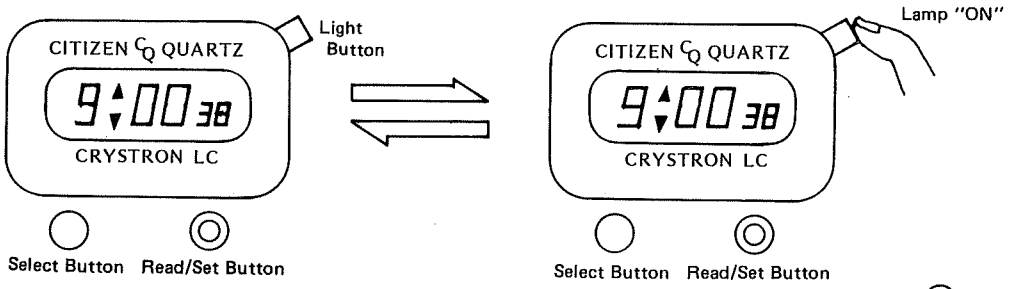


## SETTING INSTRUCTIONS (CAL. 9025※)

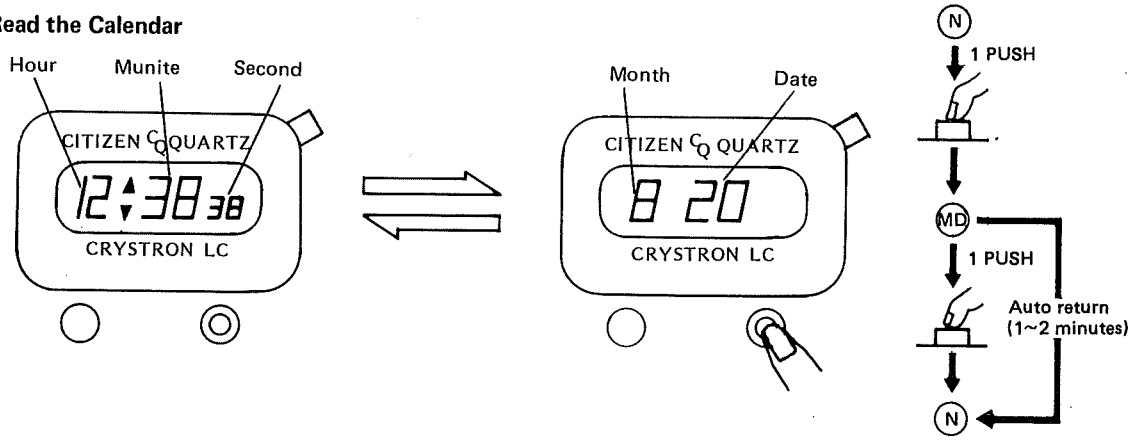
### 1. Set the Time and the Calendar



2. Lamp "ON"




3. Read the Calendar



This is a digital quartz crystal watch for ladies with a very thin and compact design, which was developed through Citizen's superb electronics technology that made possible for the first time in the world the completion of a digital quartz crystal watch.

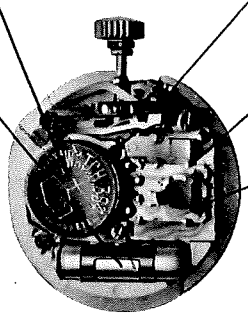
① An all electronic watch with extremely thin and compact design — 15.8mm x 17.6mm, 5.97mm thick.

② The unique Citizen-original indication method has such excellent features as high contrast, long life, small power consumption, etc.

⑦ Owing to a high oscillation of 32,768Hz of the quartz crystal, a high accuracy of ±15 sec. per month is assured under normal temperatures.

⑥ One small-size silver oxide power-cell ensures highly accurate operation for one year.
Voltage: 1.5V
Parts No.: 280-11



③ Easy-to-see time screen. "Hour", "minute" and "second colon" are always displayed on the time screen.

④ The time setting can easily be performed by a simple "change-lever" system.

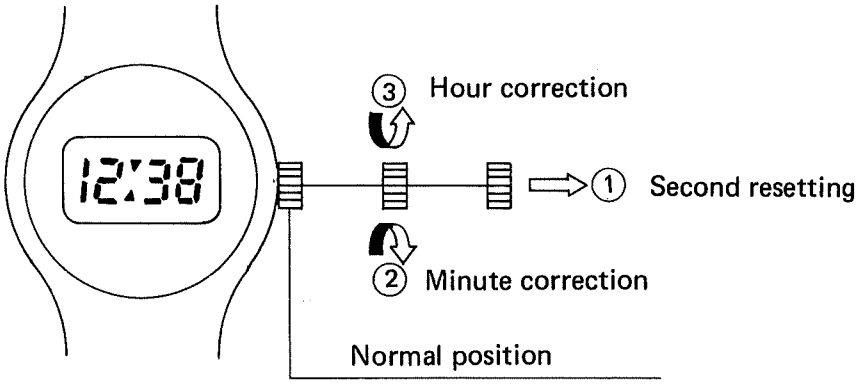
⑤ "0-second" reset can be performed easily by one-touch operation of the crown. (pulling out)

⑧ The component parts are integrated into some blocks for easy disassembly and assembly.

⑨ C/MOS/LSI assembled into two chips provides a stable high performance forever.

⑩ Time adjustment is very easy due to the trimer capacitor (regulator). Please adjust the time while measuring by the quartz timer.

**Setting Procedures**



This is truly a popular-type digital quartz crystal watch, which has been developed and commercialized through Citizen's superb electronics technology and experience of manufacturing precision watches.

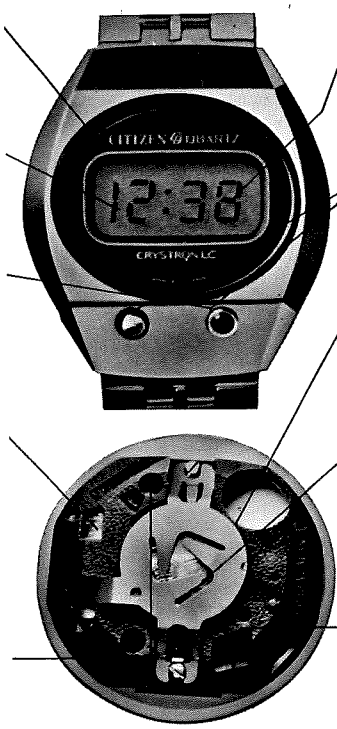
① The LC digital display is compact and smart looking to appeal to everyone.

② The liquid crystal panel of the watch has an especially long life, along with excellent contrast.

③ Easy-to-see time screen. "Hour" and "minute" are always displayed on the time screen.

④ The "second" can instantly be displayed by one-touch operation of a reading button.

⑤ "Time setting" and "0-second reset" can easily be performed by the push-operation of the two buttons.



⑥ Owing to high oscillation of 32,768Hz of the Quartz crystal, a high accuracy of ±15 sec per month.

⑦ Time adjustment is very easy due to the trimer condenser (regulator).
Please adjust the time while operating the quartz timer.

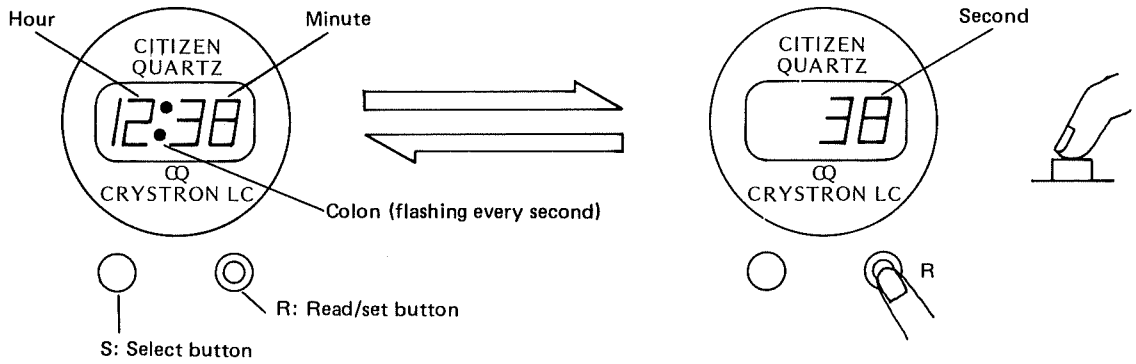
⑧ C/MOS-LSI assembled into one chip provides a stable high performance forever.

⑨ One small-size silver oxide power-cell ensures highly accurate operation for two years.
Voltage: 1.5V
Parts No.: 280-01

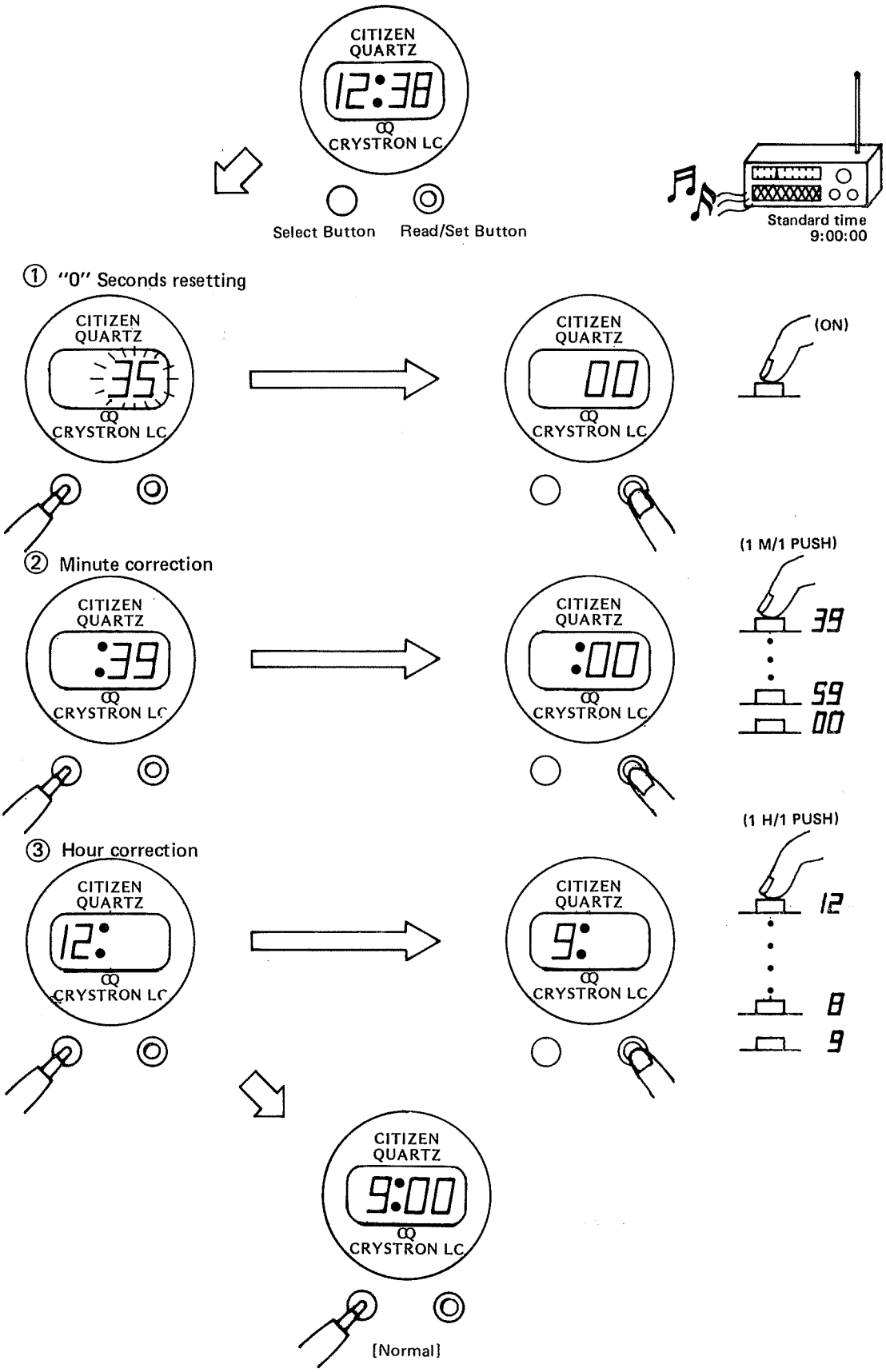
⑩ The movement is compactly assembled into one ceramic base plate, so that assembly and disassembly is very simple.
Dimensions: 27.0mm x 22.6mm
Thickness: 8.92mm

## SETTING INSTRUCTIONS

### 1. Read the second

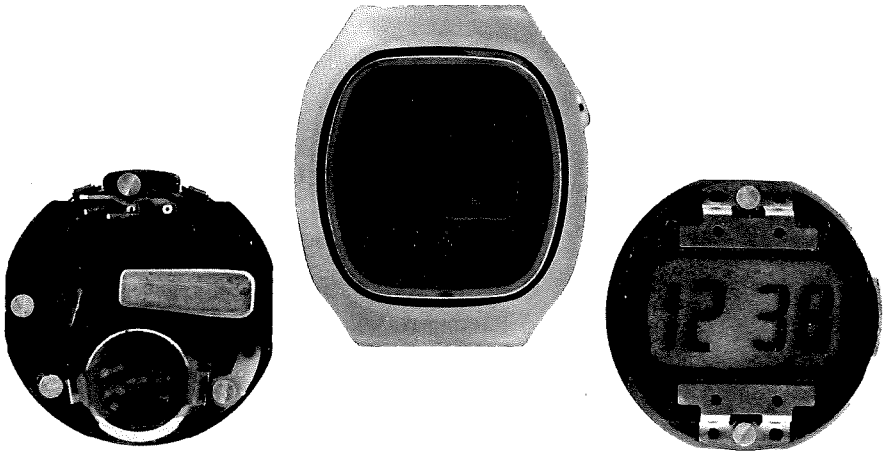


## 2. Set the Time



## OUTLINE

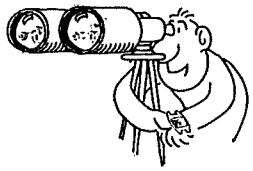
This is a standarized type of the Citizen Quartz Crystron LC (Cal. 905※※), which has been developed through Citizen's superb technology and a long experience in the manufacture of liquid crystal watches. To better meet a varsatile requirements of customers, more reasearch and analysis have been conducted. on both quality and design.
As a result, a dressy-looking appearance watch has been completed with a thinner and more compact design, which can also be owned by gentlemen.



Movement
(Quartz crystal oscillator side)

Movement
(LC display panel side)

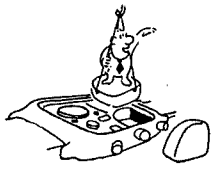
## FEATURES



**1. "Seconds" read-out**
Besides read-out the "hour" and "minutes" (Normal display), direct read-out of the "seconds" can be made by the one-touch push button method.




**2. Easy time adjustment**
Time adjustment is easy since the "hour", "minutes" and "seconds" are adjusted separately by the push-button method.

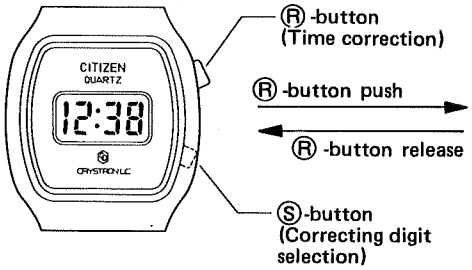


**3. Simplified block movements construction**
Citizen has developed new, extremely thin and miniaturized IC's and quartz crystal oscillators, making it possible to design this watch very efficiently for reliable performance and easy after-sale service.

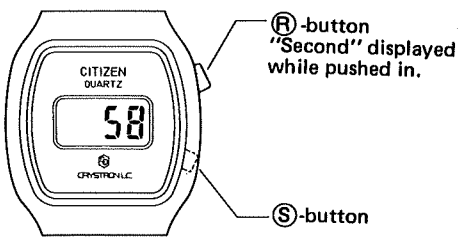
**4. Attractive, fashionable design.**

## HANDLING INSTRUCTION

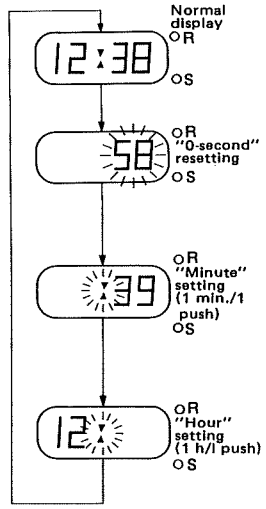
**Normal Display**




**Second Display**



First call for the function you want to correct by Ⓢ -button. Then, perform correction by advancing digits with operation of Ⓡ -button. However, in the case of "second" correction, push Ⓡ -button simultaneously with the standard time signal sounded on the TV, radio, etc. Thus, the time will be 0-second reset.
The following procedure should be observed for the time setting.




Push Ⓢ-button, and only "second" will be displayed by flashing. Then, push Ⓡ -button, and the time will be 0-second reset.*
In case the "second" reads between 30—59 seconds, the "minute" digit will be advanced.

Push further Ⓢ-button, and the "minute" will be displayed by flashing of colon. Then, push Ⓡ -button, and the "minute" will be corrected by one minute with every puch.

Push further Ⓢ-button, and the "hour" will be displayed by colon flashing. Then, push Ⓡ -button, and the "hour" will be corrected by one hour with every push.

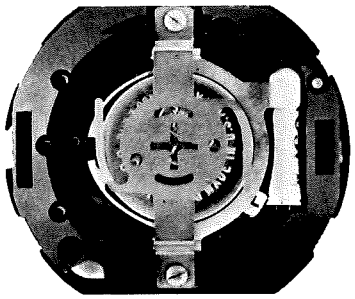
When finished all the above settings, never fail to push Ⓢ -button to return the time screen to the normal display.

## SPECIFICATIONS

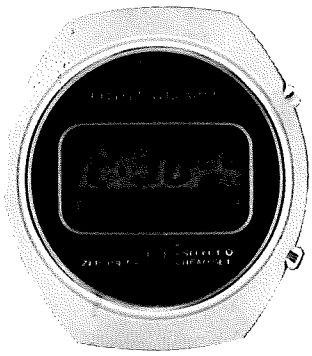
| | |
|---|---|
| Caliber No. | 9050A |
| Type | Quartz crystal watch with LC digital display |
| Movement | Diameter: 18.2 X 17.2mm<br>Thickness: 5.22mm |
| Oscillation | 32,768Ha |
| Accuracy | ±15 sec./month under normal temperatures |
| Display system | FE twist type nematic liquid crystal digital display |
| Display information | Constant digital display of "hour", "minutes".<br>Digital display of "seconds" by display switch. operation (7 segment system). |
| Effective temperature range | 0°C (32°F) to + 60°C (140°F) |
| Semiconductor | C/MOS-LSI |
| Power cell | Small-size silver oxide power cell<br>Parts. No. : 280-11 (13)<br>Voltage : 1.5V<br>Capacity : 35mAH<br>Size : 7.87mmϕ X 3.63mm<br>Life : More than 1 year |

## OUTLINE

The Citizen Quartz Crystron LC (Cal. No. 906※※) is a full-function liquid crystal watch featuring a bright-as-day display of the time in hours, minutes and seconds. The day, date. And AM and PM indication. Furthermore, a number of convenient additional mechanism are completely incorporated such as the power cell life indicator system, illumination lamp, 0-second resetting mechanism and so on. Thus, the watch will be able to better meet the diversified requirements of customers in terms of both workability and overall watch design.



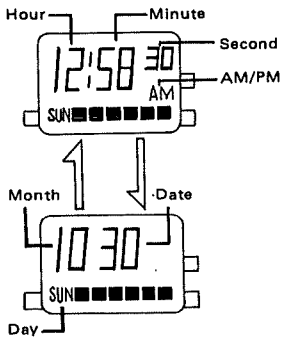
Movement
(Quartz crystal oscillator side)





Movement
(LC display panel side)

## FEATURES

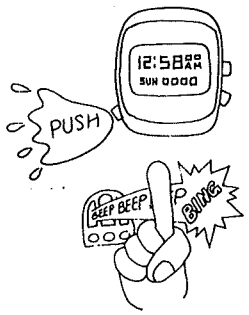



**1. Full-function degital desplay time screen.**
Hour, minute, second, "AM" and "PM" are displayed on the time screen as well as the month, day and date.

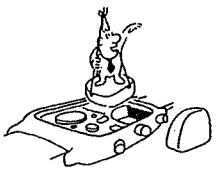
- The display switch facilitates automatic switchover from date/month/day to hour/minute/second.
- Day/date needs no correction for 2,000 years and remembers leap years.



- Battery replacement with flashing display (Power cell life indicator mechanism)
- Built-in illumination lamp




- One-touch zero-second resetting.
- Easy-to-see, independent display correction system with no digit increase.





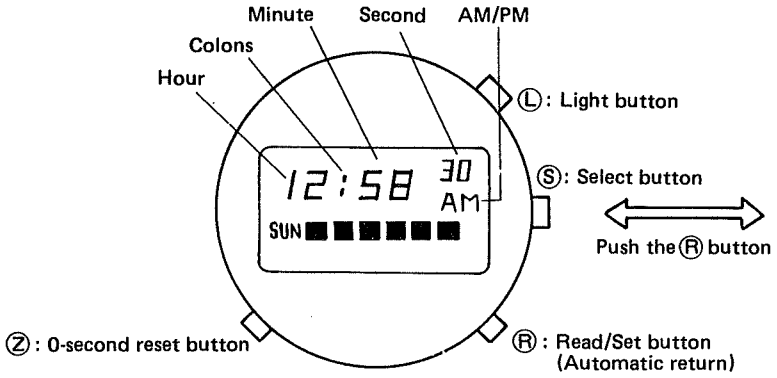
**2. Simplified block movement construction.**
Since the movement construction is simplified, reliability and after-sale services are greatly improved. The watch incorporates only 16 parts.

**3. More than 2-years battery life**
A small-size silver oxide power cell makes watch operation possible for more than two years.

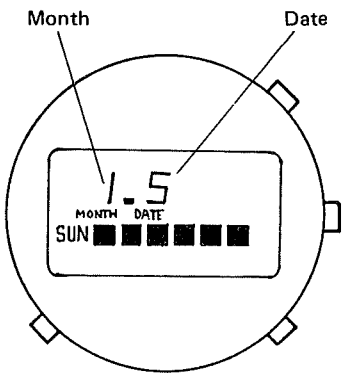
**4. Versatile functional styling**
A variety of attractive and functional styles in Citizen's digital electronic watches give you a wide selection for every mood and taste.

## HANDLING INSTRUCTION

### 1) How to read time and calendar




Normal display




Calendar display

(1) With each push of Ⓡ-button, you can change over the display from normal time to calendar, alternately.

(2) The display switch from calendar to normal time can automatically be performed in one or two minutes.

### 2) How to correct time and calendar

(1) The display area you want to correct can be corrected independently through operation of Ⓡ and Ⓢ-button.

(2) You can easily distinguish the digit to be corrected by its flashing.

(3) With each push of Ⓢ-button, the display area possible to be corrected will vary by the following sequent order:

Second → minute → hour → month → date → day → leap year.

(4) With a push of Ⓛ-button, the display will be changed from display-correction state to normal time display.

(5) When correcting calendar display by means of a push-button, the 31-day months will have the sequent order of "1–31–1" and the 30-day month "1–30–1" (February: "1–29–1").

**Normal display**

**Second setting**

With a push of Ⓢ-button, second will be ready to be set.
With a push of Ⓡ-button simultaneously with standard time signal, second will be 0-reset.

**Minute setting**

With another push of Ⓢ-button, miunute will be ready to be corrected.
The minute display will increase by one minute with every push of Ⓡ-button. Push and release Ⓡ-button, and repeat until minute coincides with the standard time.

**Hour setting**

With another push of Ⓢ-button, hour will be ready to be corrected.
Push and release Ⓡ-button, and repeat until hour coincides with the standard time.

**Month setting**

With another push of Ⓢ-button, month will be ready to be corrected.
Push and rease Ⓡ-button, and repeat until the desired month is set.

**Date setting**

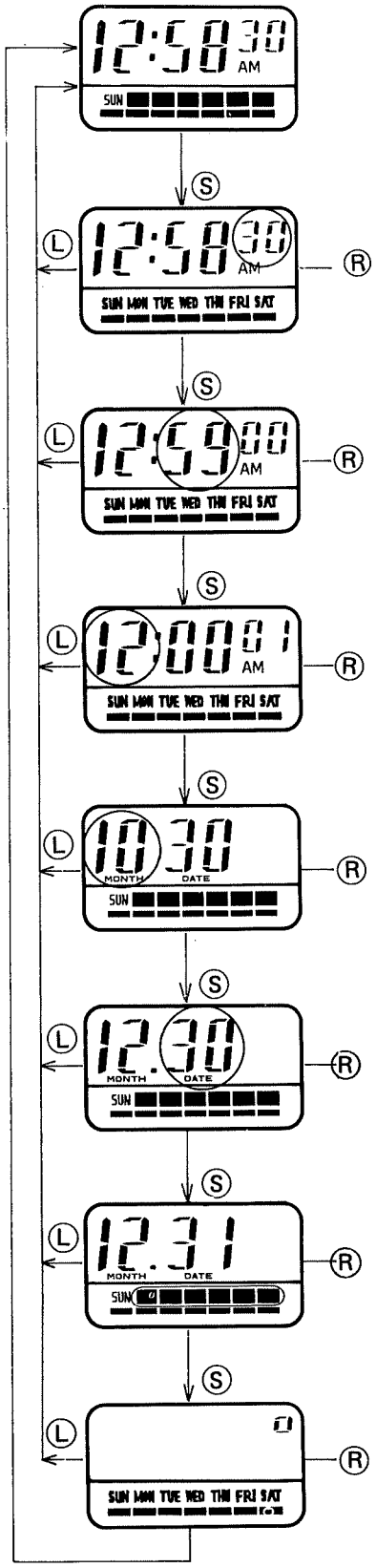
With another push of Ⓢ-button, date will be ready to be corrected.
Push and release Ⓡ-button, and repeat until the desired date is set.

**Day setting**

With another push of Ⓢ-button, day will be ready to be corrected.
Push and release Ⓡ-button, and repeat until the desired day is set.

**Leap-year setting**

With another push of Ⓢ-button, it will be possible to conduct a leap-year setting.
Push Ⓡ-button and set of for the leap year.




**Note:** If Ⓡ-button is pushed when second reads 30 to 59 sec., minute display will be increased by a minute.

Conduct hour setting marking sure AM or PM.

**Note:** "0" indicates the leap year, and "1", "2" and "3" show lst, 2nd and 3rd year from the leap year respectively.

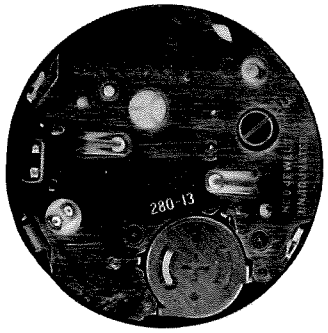
## SPECIFICATIONS

| | |
|---|---|
| Caliber No. | 9060A |
| Type | Quartz crystal watch with LC digital display |
| Movement | Diameter: 27.0mm X 22.6mm<br>Thickness: 7.43mm |
| Oscillation | 32,768Hz |
| Accuracy | ±10 sec./month under normal temperature |
| Display information | Normal display: hour, minute, second, day and colon<br>Calendar display: month, date and day |
| Display system | FE twist-type nematic LC display |
| Display correction | • Independent correction of each digit by operation of push-button<br>• 0-second resetting by operation of push-button |
| Effective temperature range | 0°C (32°F) to +60°C (140°F) |
| Semiconductor | C/MOS-LSI |
| Temperature compensation circuit | Temperature compensation condenser |
| Additional mechanisms | • Power cell life indicator mechanism<br>• Illumination lamp<br>• Automatic calendar setting at the end of each month<br>• Leap-year setting mechanism<br>• One touch 0-second resetting mechanism |
| Power cell | Small-size silver oxide power cell<br>Parts No. : 280-21<br>Voltage : 1.5V<br>Capacity : 120mAH<br>Size : 11.6mmφ X 4.2mm<br>Life : More than 2 years |

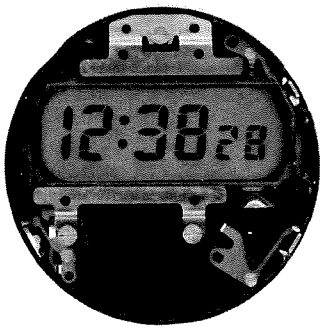
## OUTLINE

The ultra-thin Citizen Quartz Crystron LC (Cal. No. 907※※) is designed to meet all the demands of the customer. This is watch that reflects in full Citizen's advanced technology as well modern and attractive styling.



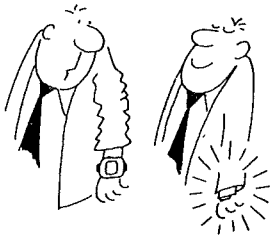


Movement
(Power cell side)

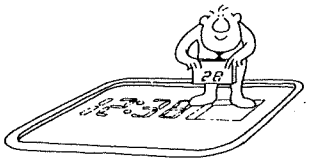



Movement
(LC display panel side)

## FEATURES



1. Attractive styling results from an ultra thin, ultra compact movement.



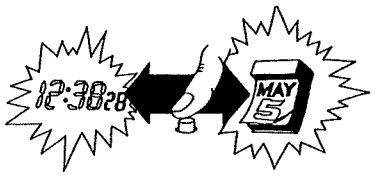
2. Direct readout of seconds in addition to the hour and minutes.




3. No correction needed at each end of month with calendar device (except February 29 in leap year).



4. Built-in illumination lamp for easy reading of time information in the dark.




5. Normal time display (hour/minute/second) switched to month/date display with one touch of the push-button.



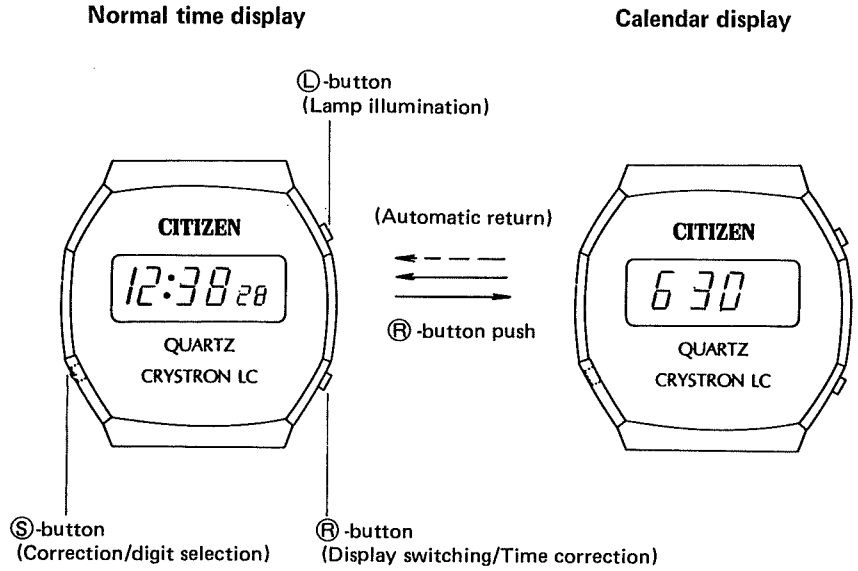
6. Simplified movement construction achieves outstanding reliability and ease of servicing.



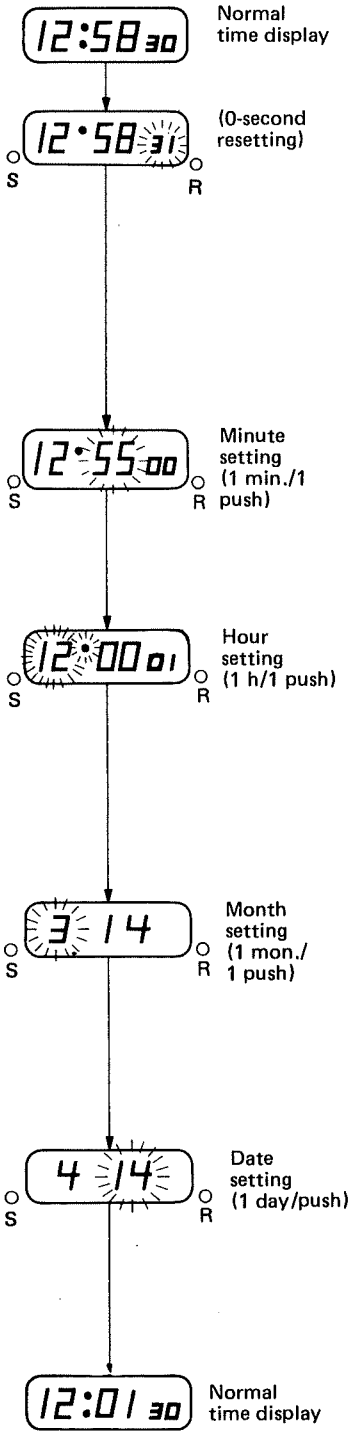

7. The calendar display (month and date) will automatically change to normal time display in one or two minutes.

## HANDLING INSTRUCTION

Refer to the figures below, and suppose we are going to set the time to 12:01$^{30}$ /AM and the calendar to April 20 respectively. Normally, the time screen displays "hour", "minute" and "second". But if Ⓡ -button is pushed, the time screen will change to "month" and "date" indications.




First push Ⓢ -button. Function to be corrected will flash, and perform correction by advancing digits with operation of R -button. However, in the case of "second" correction, push Ⓡ -button simultaneously with the standard time signal sounded on the TV radio, etc. Thus, the time will be set to 0-second. The following procedure should be observed for time and calendar setting.




Push Ⓢ-button, and the "second" will flash. At the same time, either AM or PM colon will disappear.
After this, push Ⓡ-button to make "second" 0-reset.

In case the second reads between 30—59 seconds, the "minute" digit will be advanced.

Push further Ⓢ-button, and "minute" will flash. Then, push Ⓡ-button, and the minute will be corrected by one minute with every push.

Push further Ⓢ-button, and "hour" and "AM/PM" colon will flash. Then, push Ⓡ-button, and the "hour" will be corrected by one hour with every push by noting "AM" or "PM".

Push further Ⓢ-button, and the display will be switched to the calendar indication and month" will flash. Then push Ⓡ-button, and the "month" will be corrected by one month with every push.

Push further Ⓢ-button, and date will flash. Then, push Ⓡ-button, and the "date" will be corrected by one day with every push.

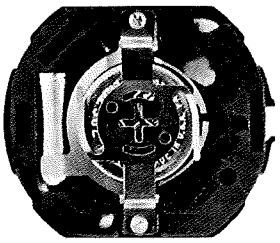
When finished all the above settings push further Ⓢ-button to return the time screen to the normal time display.
Push Ⓛ-button, and the illumination lamp will light up.

## SPECIFICATIONS

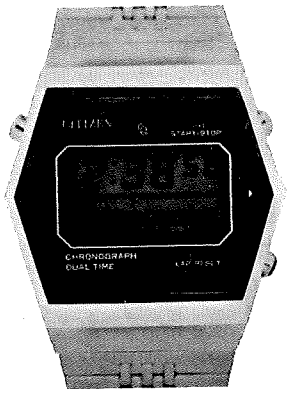
| | |
|---|---|
| Caliber No. | 9070A |
| Type | Quartz crystal watch with LC digital display |
| Movement | Diameter: 23.7mmϕ<br>Thickness: 4.27mm |
| Oscillations | 32,768Hz |
| Accuracy | ±10 sec./month (under normal temperatures; with temperature compensation condenser) |
| Display | FE twist-type nematic liquid crystal display |
| Display system | 7-segment system<br>Constant digital display of "hour", "minute" and "second"<br>"date" and "month" digital display by display switching operation through push-button |
| Time & calender setting | Independent correction/setting system by operation of pushbutton |
| Effective temperature range | 0°C (32°F) to +60°C (140°F) |
| Semi conductor | C/MOS-LSI |
| Additional mechanisms | • Built-in illumination lamp<br>• Automatic calendar correction/setting at the end of month |
| Power cell | Small-size silver oxide power cell<br>Parts No. : 280-13<br>Voltage : 1.50V<br>Capacity : 38mAH<br>Size : 7.87mmϕ × 3.56mm<br>Life : 1 year or more |

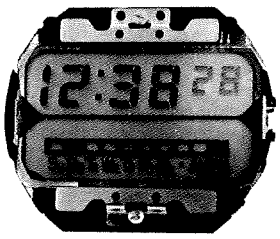
## OUTLINE

The Citizen Quartz Crystron LC Chronograph (Cal. 908※※ ) is an all-inclusive time indication divice that offers many exclusive features such as chronograph function, dual time function, power sell life indicator, forced manual return, or interior illumination mechanism in addition to the normal time display that can give 'year', 'month', 'day', 'date', 'minute' and 'second' displays. Well calculated functional styling and improved operation make the Citizen Quartz Crystron LC Chronograph the supreme timepiece of all quartz crystal mechanisms available today.



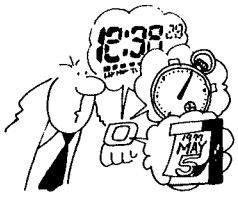
MOVEMENT
(Power cell side)





MOVEMENT
(LC display panel side)

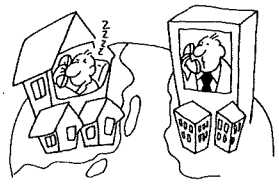
## FEATURES



**1. Multifunctional Quartz Watch**
In addtion to general watch functions such as hour, minute, second, AM/PM day, this watch also offers calendar display (month, date, year, day), chronograph display (maximum span 12 hours, and possibility of time accumulation) and dual time display.



**2. Convenient and Easy-to-operate Chronograph Function**
Starting, stopping and resetting can be made easily by pressing buttons. When the chronograph function is activated, a unique linear time counter will indicate the time lapse per tens of a second.



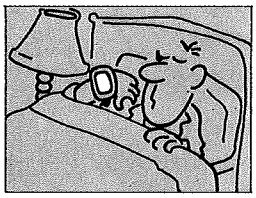
**3. Dual Time Indication with a Simple Touth of a Button**
The watch can give two different time indications. With a simple button operation, you can switch to and from one time indications to another instantly. Once the dual time circuit is set to one time zone, you can always recall the current time indication in that zone wherever you are.



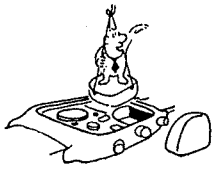
**4. Automatic Adjustment at End of the Month**
This watch not only makes normal end-of-month adjustment by itself, but also it adjusts to leap year calendar differences.



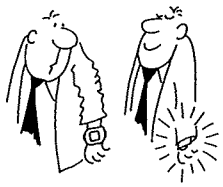
**5. Power Cell Life Indicator**
A built-in light indicator flashes on when the power cell is close to its end indicating immediate replacement.



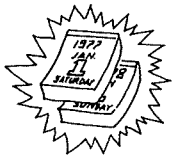
**6. International Illumination Device**
The watch is equipped with an internal illumination device for easy reading of the display in dark places.



**7. Easy Disassembly and Assembly of the Movement**
Made up of an extremely limited number of component parts, the movement can be easily disassembled and reassembled for servicing.

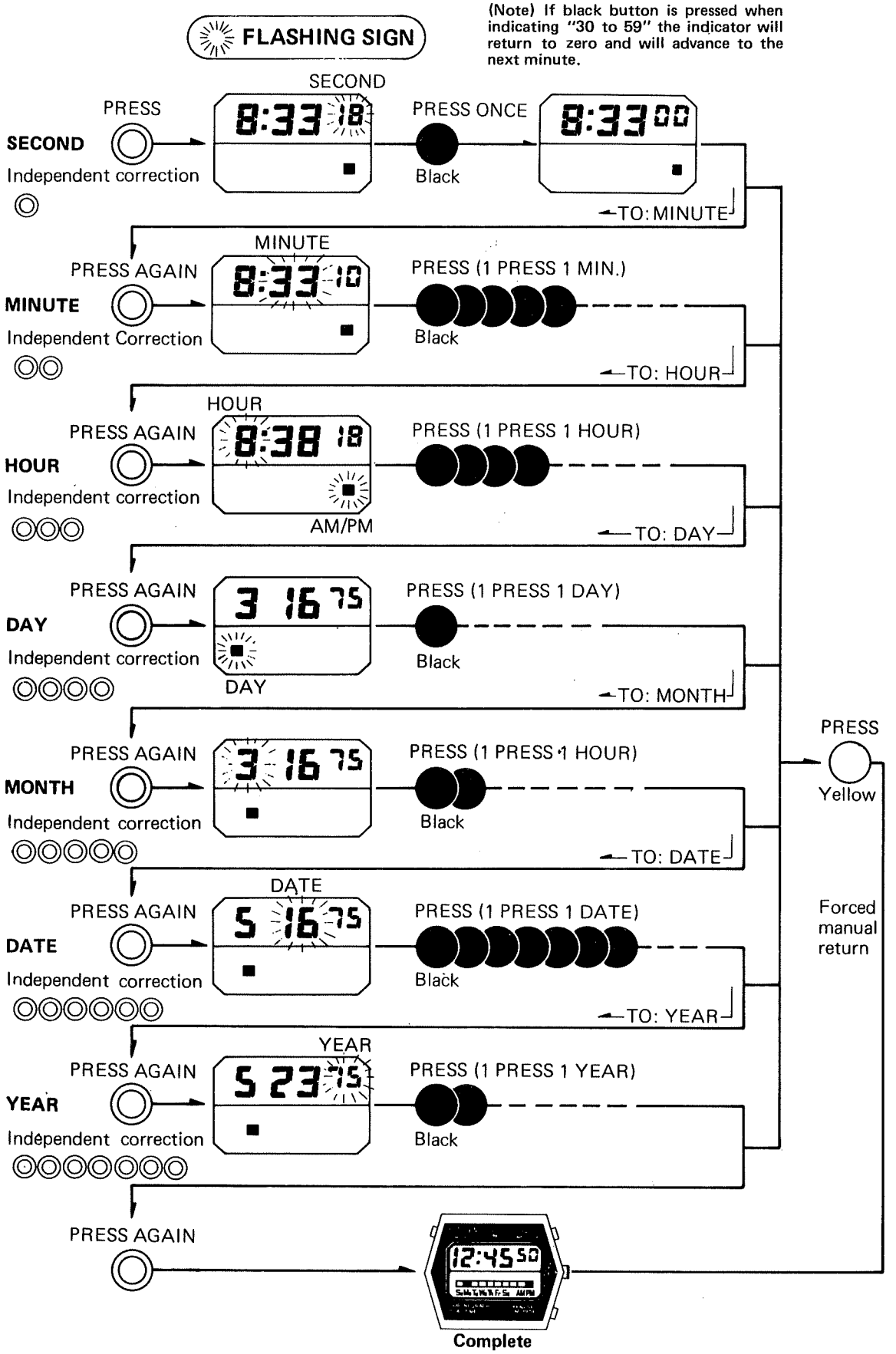


**8. Attractive Styling Due to Compactness**
With the use of a compactly structured movement, the case is very attractively styled.



**9. Continuous Operations for Two Years on a Single Silver-Oxide Power Cell**
Because of the power saving electronic circuit, the watch runs continuously for over two years on a single small silver-oxide power cell.

# HOW TO ADJUST TIME CALENDAR

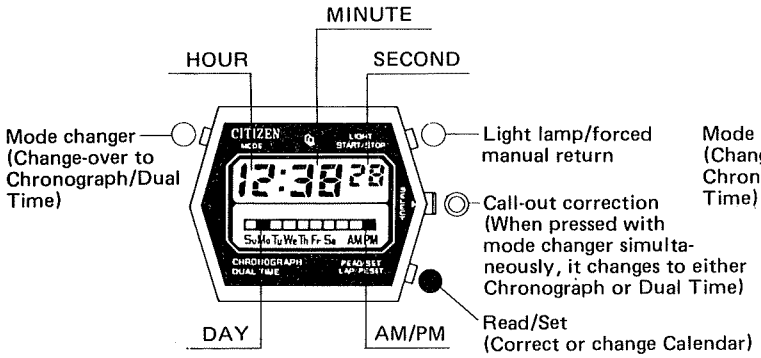


# HANDLING INSTRUCTION

## 1) BASIC FUNCTIONS AND USE OF BUTTONS

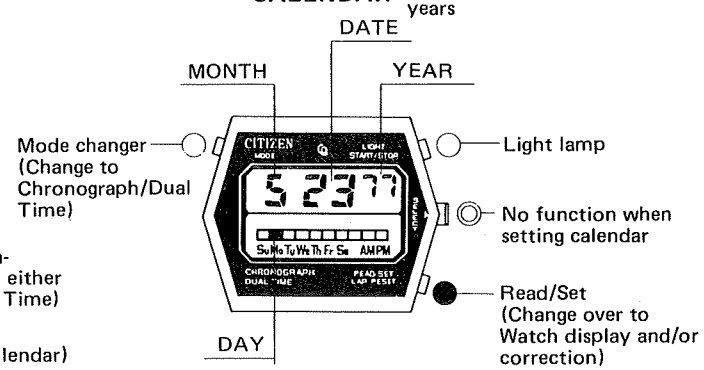
Respective operating buttons are identified by different colors

### WATCH

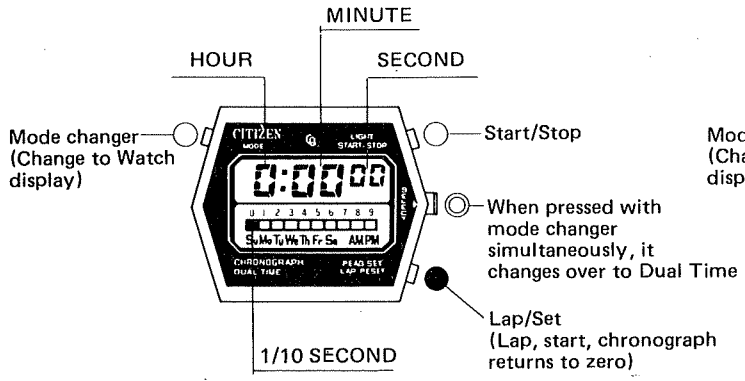



### CALENDAR

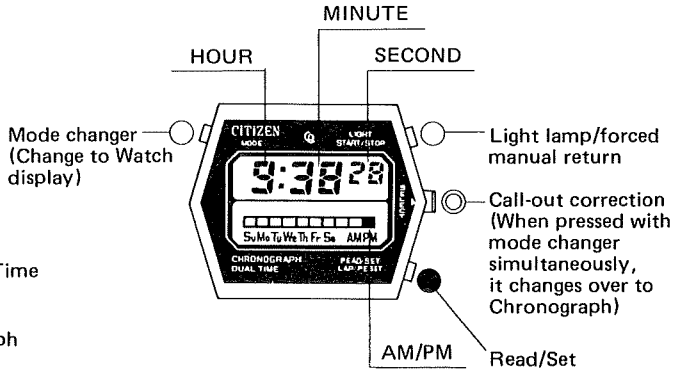
No correction is necessary regardless 28-, 30- or 31-day months or even leap years



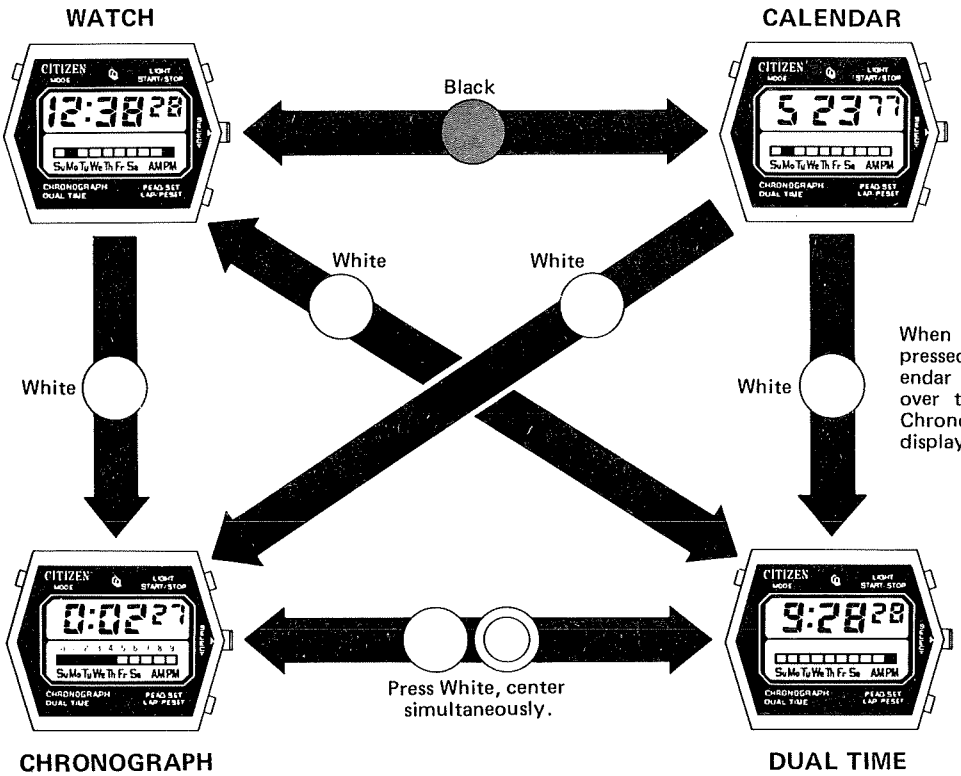

### CHRONOGRAPH



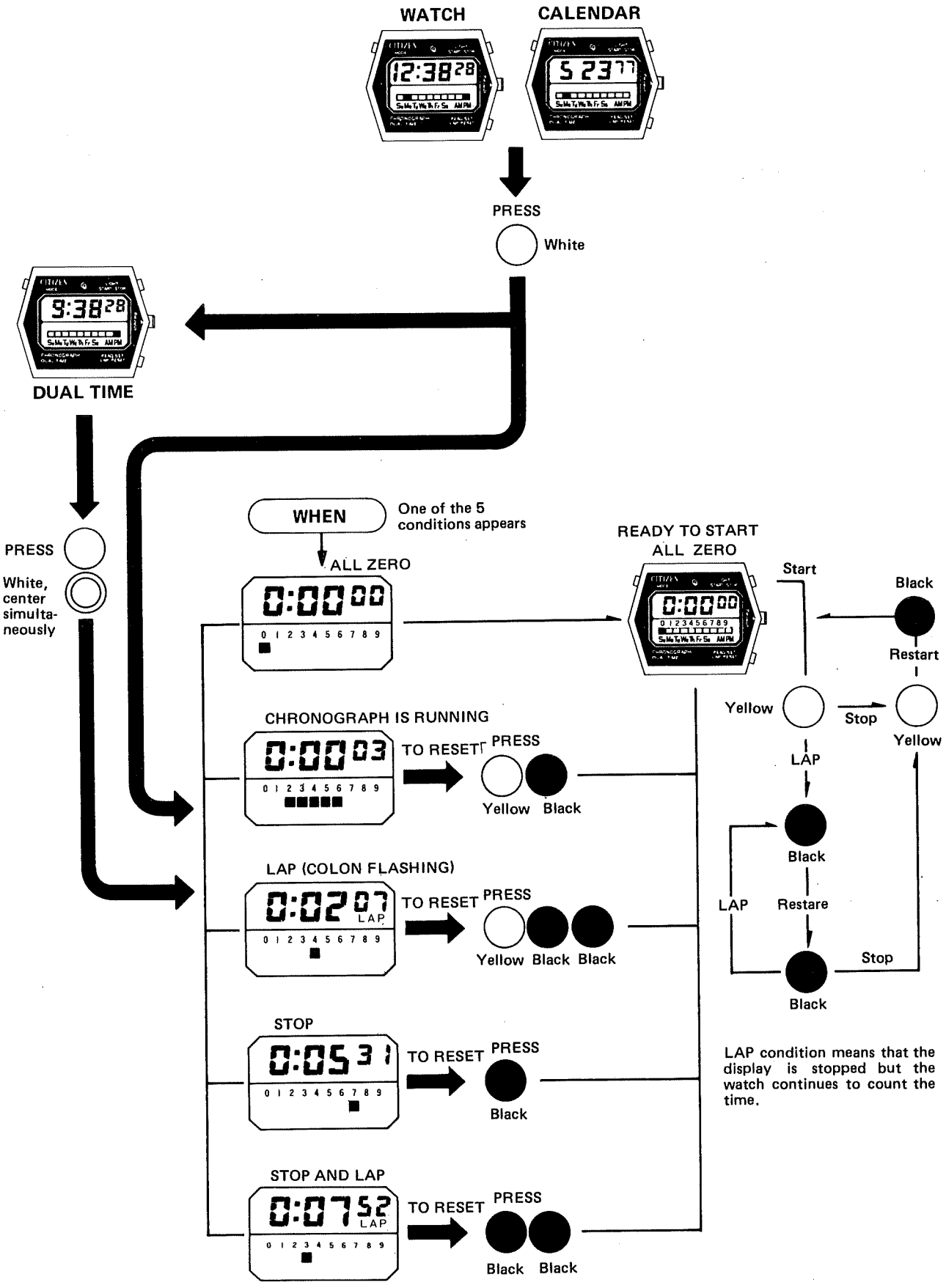

### DUAL TIME (No day indication)



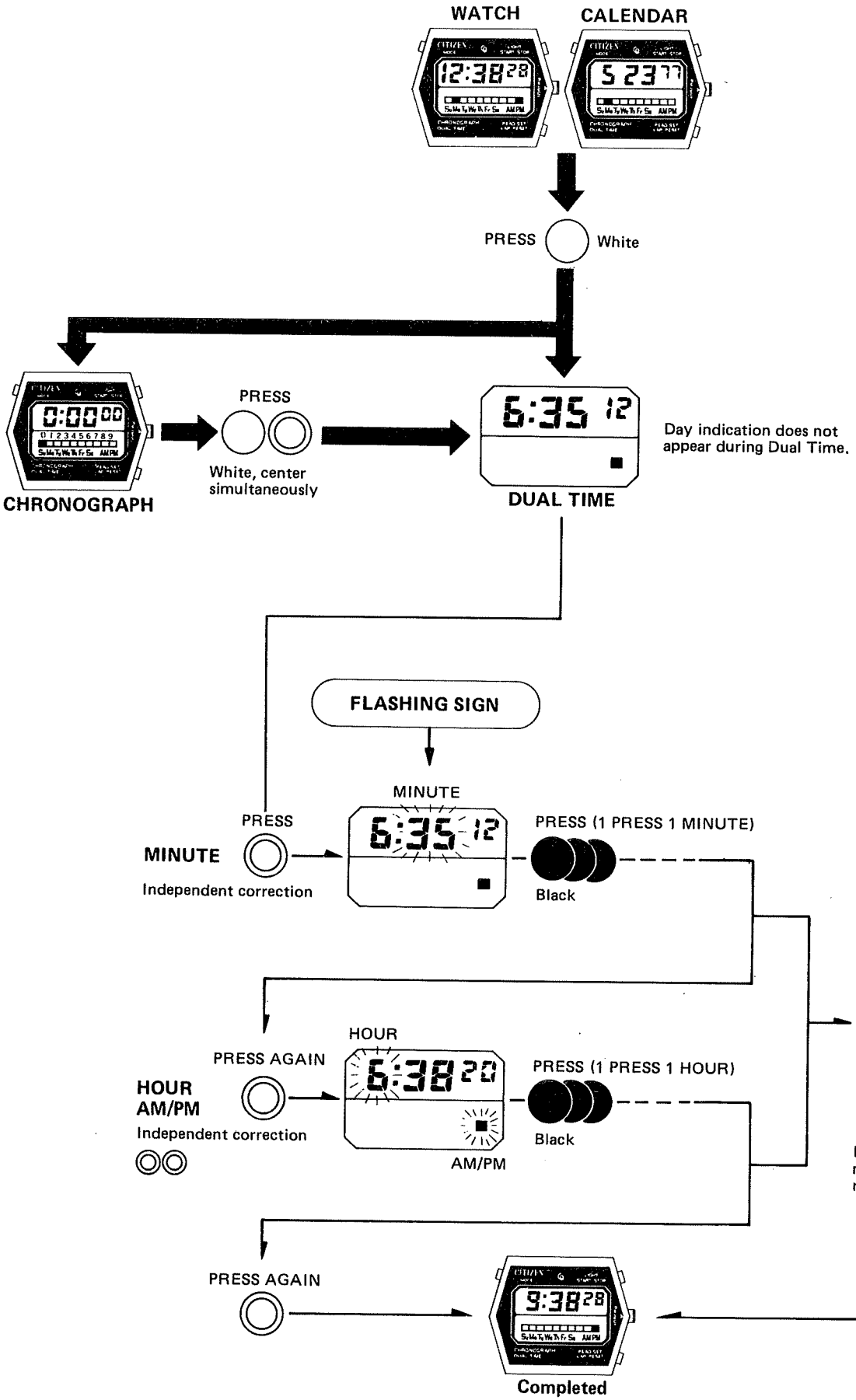

## 2) HOW TO CHANGE FUNCTIONS



# CHRONOGRAPH: HOW TO RESET AND START



## DUAL TIME: HOW TO RESET

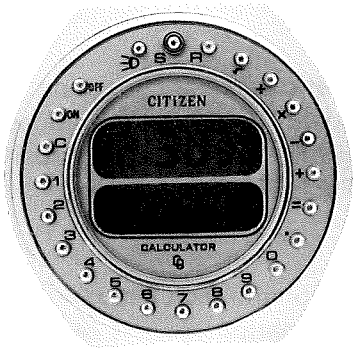


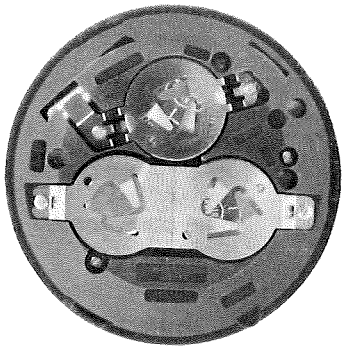
## SPECIFICATIONS

| | |
|---|---|
| Caliber No. | 9080A |
| Type | Quartz crystal watch with LC digital display |
| Movement | Diameter: 27.0mm X 22.6mm<br>Thickness: 7.43mm |
| Oscillation | 32,768Hz |
| Accuracy | ±10 sec./month under normal temperature |
| Display information | Normal display: hour, minute, second, AM/PM, day and colon<br>Calendar display: month, date, day and year<br>Chronograph display: hour, minute, second and 1/10 second<br>Dual time display: hour, minute, second and AM/PM |
| Display system | FE twist-type nematic LC display |
| Display correction | • Independent correction of each digit by operation of push-button |
| Effective temperature range | 0°C (32°F) to +60°C (140°F) |
| Semiconductor | C/MOS-LSI |
| Temperature compensation circuit | Temperature compensation condenser |
| Additional mechanisms | • Power cell life indicator mechanism<br>• Illumination lamp<br>• Automatic calendar setting at the end of each month<br>• Leap-year setting mechanism |
| Power cell | Small-size silver oxide power cell<br>Parts No. : 280–21<br>Voltage : 1.5V<br>Capacity : 120mAH<br>Size : 11.6mmφ X 4.2mm<br>Life : More than 2 years |

## OUTLINE

This is the CITIZEN QUARTZ CRYSTRON LC Calculator (CAL. 909※※) which is most recently developed by Citizen – one of the world leading manufacturers of the quartz crystal watches.
The Citizen's most advanced technology and wealthy experience in watch manufacture has been best concentrated to complete this world's first calculator watch. It is so to speak a truly compact "computer" with digital time display by liquid crystal. Its mechanical features are exactly based on the Cal. No. 9070A watch, which is already on the market with an excellent users' reputation.
Make full and habitual use of this compact design calculator watch on your wrist.



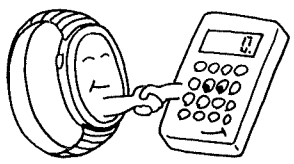



Movement
(Quartz crystal oscillator side)




Movement
(LC display panel side)

## FEATURES








1. **Simple-to-operate quartz crystal watch with calculator:**
   By manual operation of push-buttons arranged along the outer circumference of the display screen, calculations of addition, subtraction, multiplication and division plus constant, root, power, continuation and reciprocal are easily perfomed including the decimal point.

2. **World's first simultaneous LC display of watch and calulator:**
   The simultaneous LC display of both watch and calculator was made possible for the first time in the world by Citizen-developed matrix driving process.

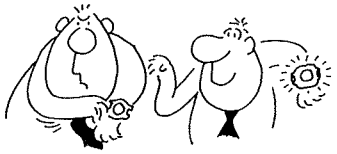
3. **Compact design movement:**
   All necessary functions for both watch and calculatior are incorporated into a highly dependable C/MOS-LSI's, thus ensuring a high efficiency as well as a compact design of the movement.



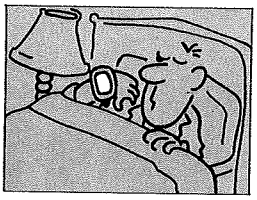
**4. Highly mechanical design:**
All necessary push-buttons are arranged along the outer circumference of the display screen. Accrodingly the operation is very easy and simple.



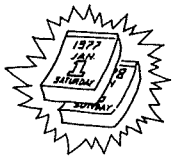

**5. Hour, minute and second plus date and month display:**
The watch's constant display of "hour", "minute" and "second" can be switched to "date" and "month" display be one-touch operation.



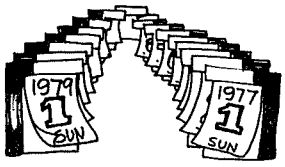
**6. Automatic calendar correction:**
The "date" and "month" are automatically corrected at the end of each month. (However, manual correction is required for the leap year February 29.)



**7. Built-in illumination lamp:**
An illumination lamp is built into the watch for correct and clear readout of the time even in the dark.



**8. Two-year uninterrupted operation by a small-size silver oxide power cell:**
Thanks to a low power consumption of the electronic circuit, only one small-size silver oxide power cell is capable of performing an accurate watch operation for more than two years.

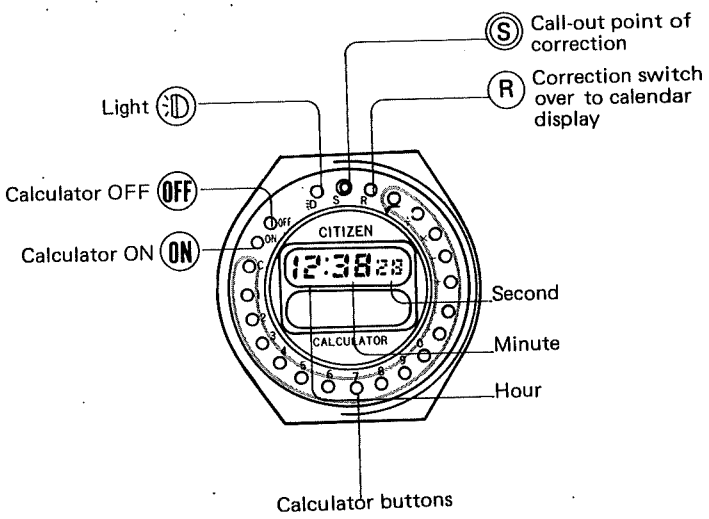



**9. More than 330-hour life of calculator power cell:**
Two power cells for calculator can operate nearly two years in case the calculator is used for half an hour every day.

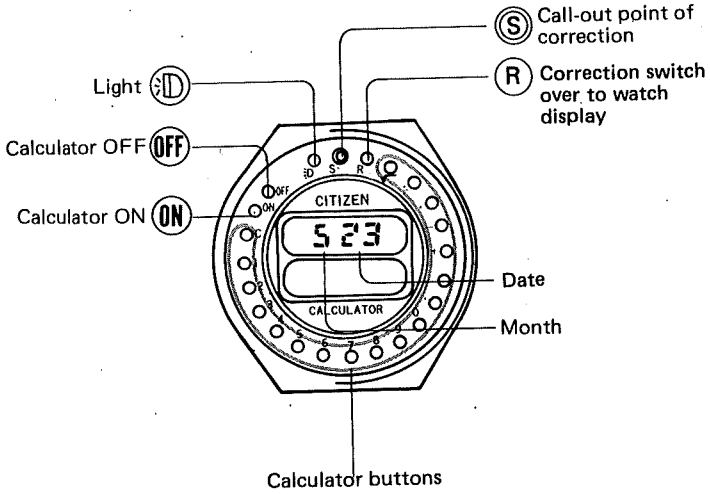
# HANDLING INSTRUCTION

## 1) Instruction in use of buttons

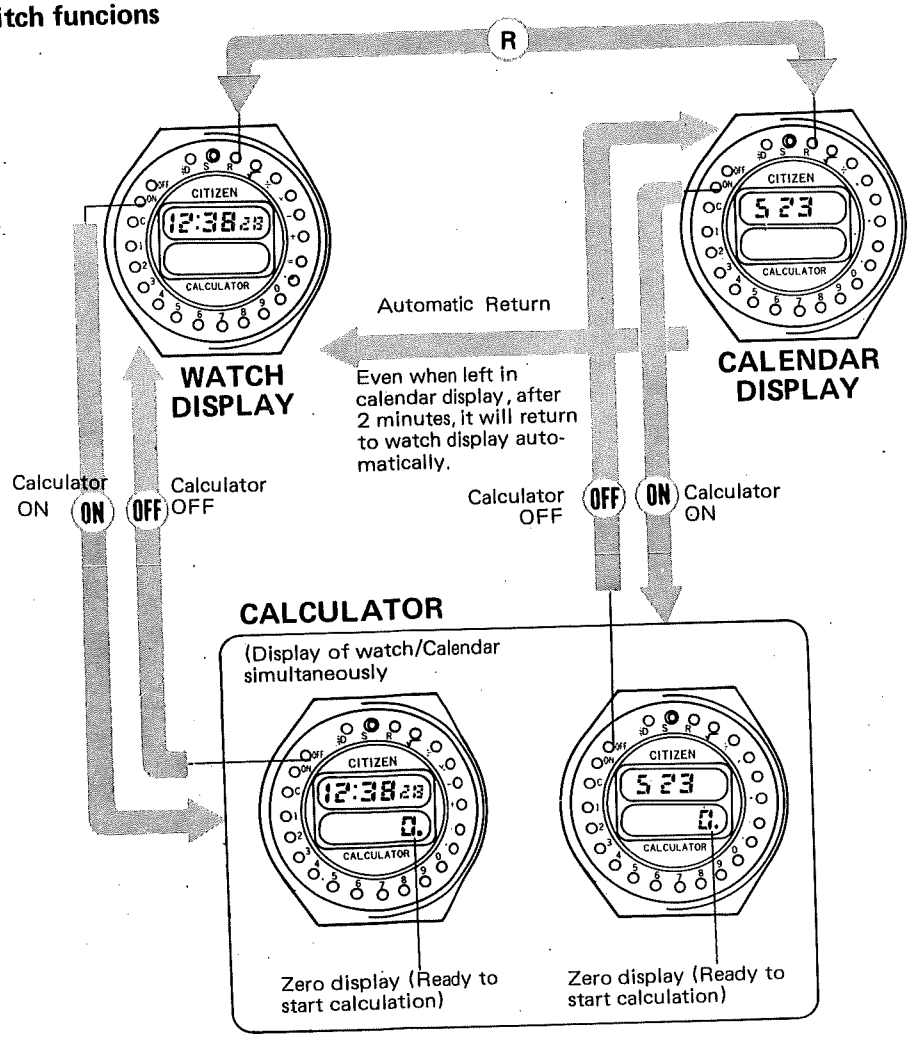
### WATCH DISPLAY



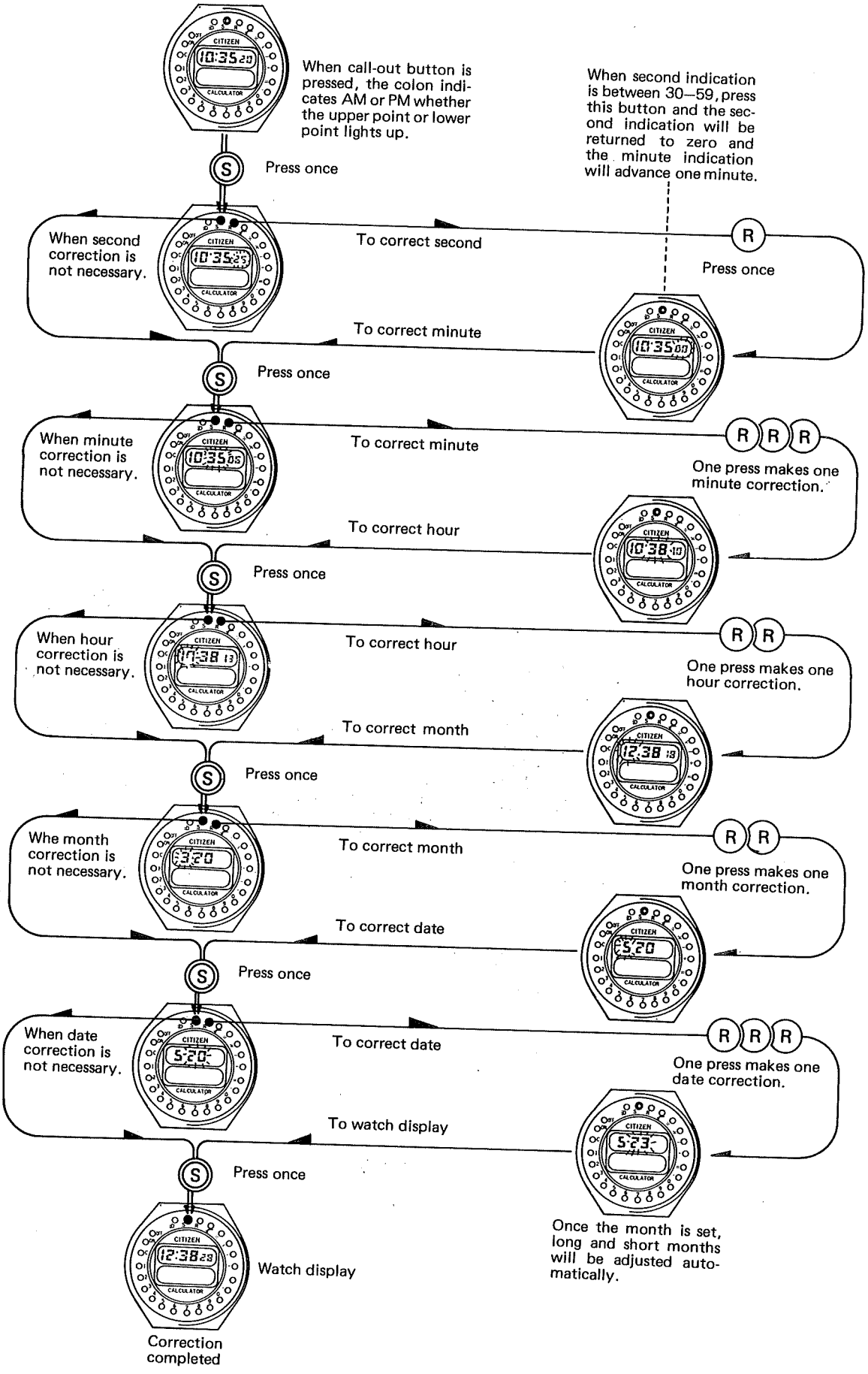

### CALENDAR DISPLAY




## 2) How to switch funcions



### 3) How to adjust time and calendar



## SPECIFICATIONS

| | |
|---|---|
| Caliber No. | 9090A |
| Type | Quartz crystal watch with LC digital display |
| Movement | Diameter: 38.6mmϕ<br>Thickness: 9.0mm |
| Oscillation | 32,768Hz |
| Accuracy | ±10 sec./month under normal temperature |
| Display system | FE twist-type nematic LC display |
| Display information | •Normal display: hour, minute, second<br>•Calendar display: month, date<br>•Operation value display up to 8-digits |
| Display correction | Independent correction of each digit by push-button operation (watch) |
| Effective tempterature range | +5°C (41°F) ~ +50°C (122°F) |
| Integrated circuit | C/MOS-LSI: 3 units (1 for watch: 2 for calculator) |
| Additional mechanisms | •Calculating mechanism: Calculation is possible for the four rules arithmetic, square root, power, continuation and reciprocal with calculating down to the decimal place.<br>•Automatic calendar setting at the end of each month<br>•Illumination lamp |
| Power cells | Small-size silver oxide power cell:<br>3 pieces (1 for watch, 2 for calculator)<br>Parts No. : 280–21<br>Voltage : 1.5V<br>Capacity : 120mAH<br>Size : 11.6mmϕ × 4.2mm<br>Life : Watch: More than 2 years<br>Calculator: 330 hours or more |

# Citizen Quartz Crystron LED

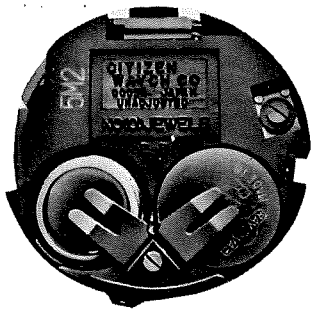
**9002※**

The Citizen Quartz Crystron LED is a quartz crystal watch with an LED digital display. This is a newly developed product of Citizen's superb electronics technology which made possible the advent of the Citizen Quartz Crystron LED.

① The unique mechanical design has totally changed the image of a wristwatch.

③ Automatic brilliance control system assures a high-contrast display at all times.



② The high-brilliant, long-life LED (Light Emitting Diode) has been developed especially to use for this watch in fascinating ruby color.

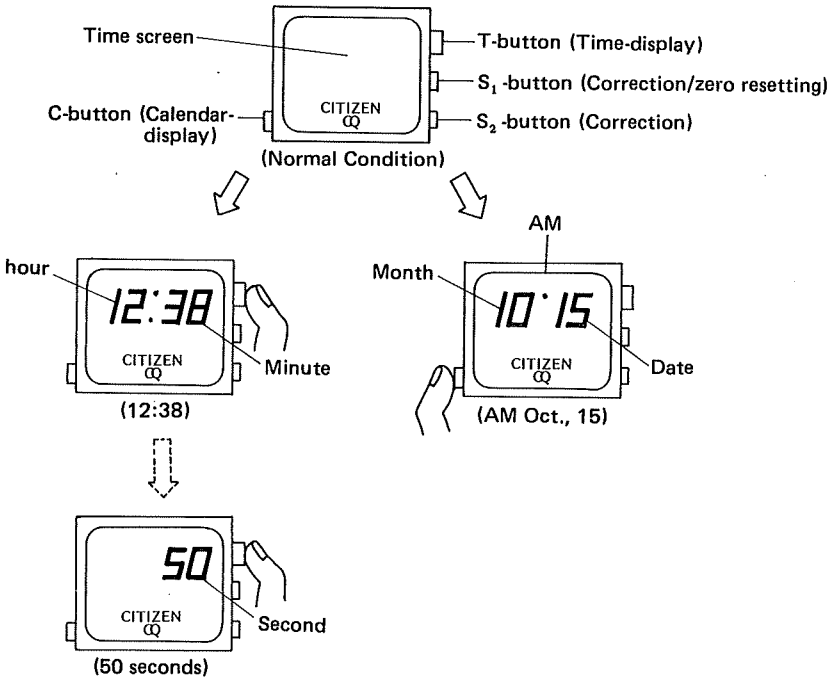
④ This is an all solid state electronic watch, which display all information "hour", "minute", "second", "month", "date" and "AM/PM" on the time screen by the operation of two setting buttons.

⑤ "Time" and "calendar" can easily be set by the operation of four setting buttons.

⑥ Automatic calendar setting system completely eliminates the trouble of date setting at the end of each month.

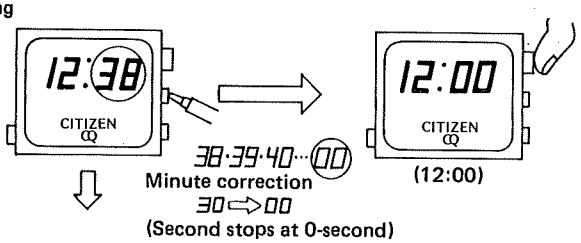
## SETTING PROCEDURE

### 1. Read the time

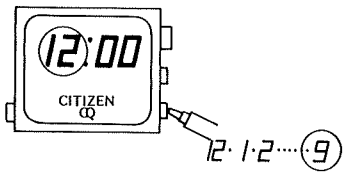



### 2. Set the Time

- Minute Correction
- Second resetting

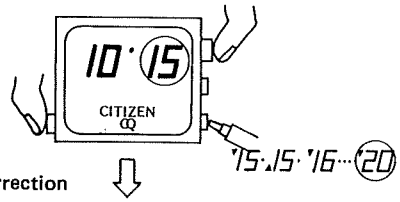



- Hour correction

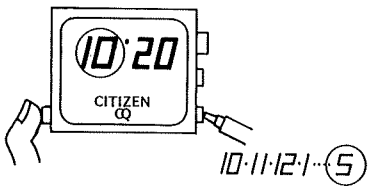



### 3. Set the calendar

- Date and AM/PM correction



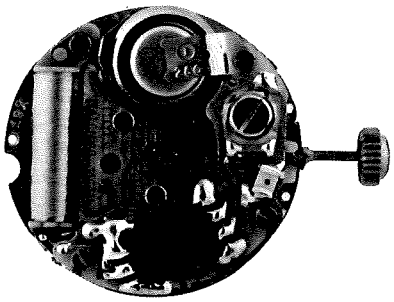

- Month correction



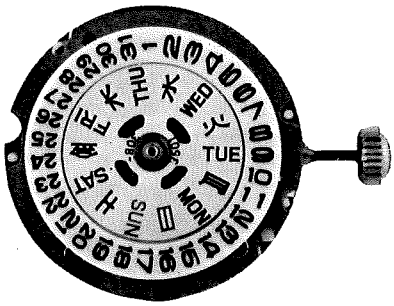
## OUTLINE

This is a thin compact quartz crystal watch with hand indication. It was developed by Citizen through its technological experience that made possible the completion of Cal. No. 86※※※ watches, with a view to better respond to the market requirements.



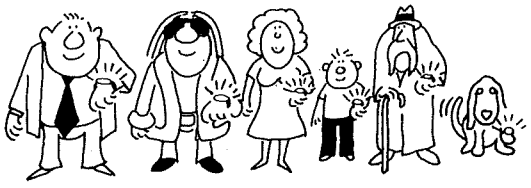
Movement
(Quartz crystal oscillator side)



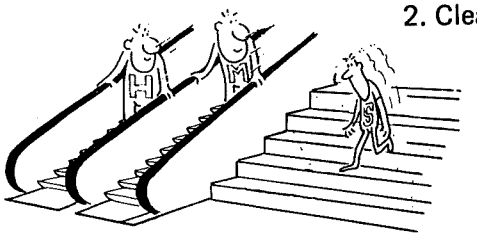

Movement
(Dial side)

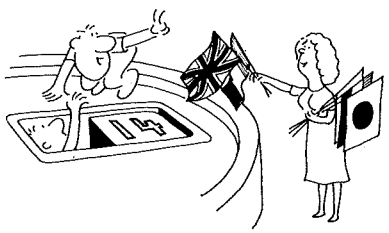
## FEATURES

1. Thin and compact styling for wide selection with additional day/date mechanism.

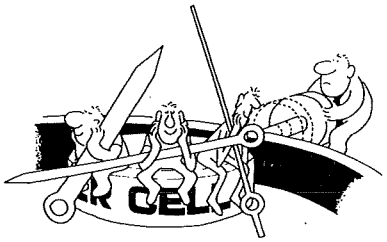


2. Clear step-by-step movement of second hand.

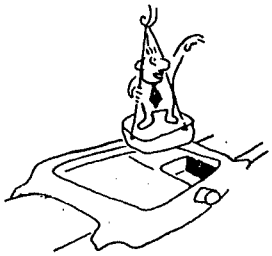




3. Bilingual day indication sytem.

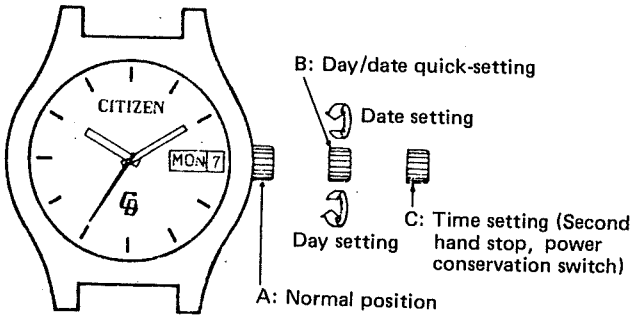


4. Second hand stopping device stops at any optional position, when the crown is pulled out. The crown serves as a power conservation switch.



5. Simplified movement construction achieves outstanding reliability and ease of servicing.

## HANDLING INSTRUCTION




1. Time setting
   Pull out the crown to C-position and set the time by turning the crown, insuring the correct AM or PM relation. When the date changes at 12 o'clock, this indicates that the setting is 12 o'clock midnight.

2. Next, push the crown back in lightly and the watch will begin operation.

3. Day/date setting
   If you turn the crown counterclockwise at the B-position, the date will be changed. If you turn it clockwise, the day will be changed. The day can be indicated either of two languages alternately. Selecting either language of indication automatically sets the watch to that language for indication thereinafter.

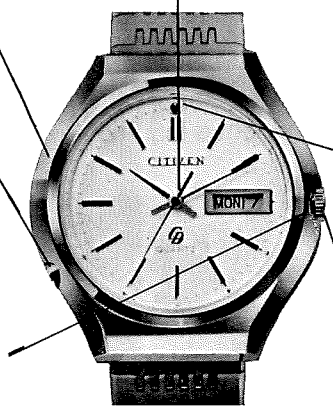
4. Set the crown completely back to position. The day/date will automatically change during use.
   If day/date correction is made during the 10:00 PM to 2:00 AM period, there are times when the day/date may not be changed after the watch reads 12:00 midnight. If this is the case, turn the hands in either direction beyond the above-mentioned hours and afterwards set to the day/date.

## SPECIFICATIONS

| | | | | |
|---|---|---|---|---|
| Caliber No. | | 8500A | 8520A | 8550A |
| Type | | Analog quartz crystal watch (centre second) | | |
| Movement | Diameter | 19.3ϕmm | 19.3ϕmm | 23.7ϕmm |
| | Thickness | 4.62mm | 3.95mm | 4.62mm |
| Oscillation | | 32,768Hz | | |
| Accuracy | | ±5.0, ±10, ±15, sec./month under normal temperatures | | |
| Effective temperature range | | −10°C (14°F) to +60°C (140°F) | | |
| Converter | | Step motor type (second hand step movement) | | |
| Integrated circuit | | C/MOS−LSI | | |
| Additional mechanisms | Date | ○ | × | ○ |
| | Day | ○ | × | ○ |
| | Bilingual day indication | ○ | × | ○ |
| | Date quick correction | ○ | × | ○ |
| | Day quick correction | ○ | × | ○ |
| | Second hand stopping at optional position | ○ | ○ | ○ |
| | Power conservation switch | ○ | ○ | ○ |
| Power Cell | | Small-size silver oxide power cell<br>Parts No. : 280−11 (13)<br>Voltage : 1.50V<br>Capacity : 38mAH<br>Size : 7.87ϕmm × 3.63mm<br>Life : More than 1 year | | |

## OUTLINE AND FEATURES

The Citizen Quartz Crystron has been developed by Citizen with special consideration both for distributors and users, based on an idea that with an electronic watch which inevitably has a must factor of "accuracy" it must be possible to set the time with great ease.




① This watch is so compactly designed to better suit the quartz movement, and so it fits your wrist quite comfortably.

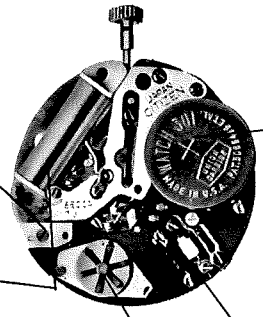
② Owing to Citizen's exclusive method, the second hand can easily be set to the correct standard time by one-touch button operation.

③ When pulled out two steps, the crown serves as a power conservation switch to extend the power cell life. The Quartz oscillator maintains steady oscillation and so from the instant you turn it on, it ticks off accurate time.

④ The second hand has dynamic step-by-step movements (one step every second) operated by a step motor, which has an excellent "conversion efficiency".

⑤ The LED signal lamp flashes every second to indicate the watch is operating correctly. At the same time, the signal lamp is a good accent for the total design of the dial.

⑥ The calendar can be set just by pulling out the crown by one step and turning it.
The day can be indicated in one of either two languages selected by the customer.



⑦ C/MOS-LSI assemble into one chip provides a stable high performance forever.

⑧ One small-size silver oxide power-cell ensures highly accurate operation for one or two years.

⑨ Owing to high oscillation of 32,768Hz of the quartz crystal, a high accuracy of ±15 sec. per month is assured under normal temperatures.

⑩ Time adjustment is very easy due to the trimer capacitor (regulator).
Please adjust the time while measuring by the quartz timer.

⑪ The coil unit is safe from any breakage as it is covered with plastic film.

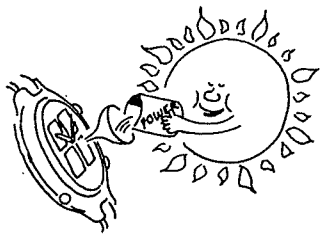
# 86※※※ Citizen Quartz Crystron Solar Cell

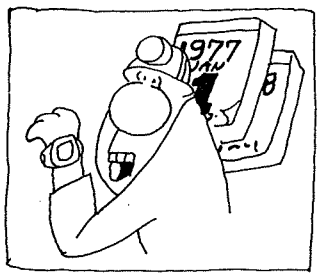
## OUTLINE

The Citizen Quartz Crystron Solar Cell Watch (CAL. 8629※) is a crowing achievement in wristwatch design and functioning, and the newest addition to Citizen's deversified line of precision electronic time-pieces. The Citizen Quartz Crystron Solar Cell is the world's first analogue type quartz crystal solar watch that uses a solar cell and silver oxide power cell. The solar cell placed on the dial converts clean sunlight energy into electrical energy.
For the first two years, the new sliver oxide power cell will supply enegy even in the complete absence of any light.
The solar cells of a high energy conversion rate plus a high performance silver oxide power cell can provide stabilized power to assure accurate performance for more than 5 years under normal conditions of use.
The unique design of the dial featuring eight neatly arranged silver-gray solar cells made of silicon crystal makes the Quartz Crystron Solar Cell one of the most attractive electronic writ-watches that assures the wearer of a total lack of maintenance requirements.




## FEATURES



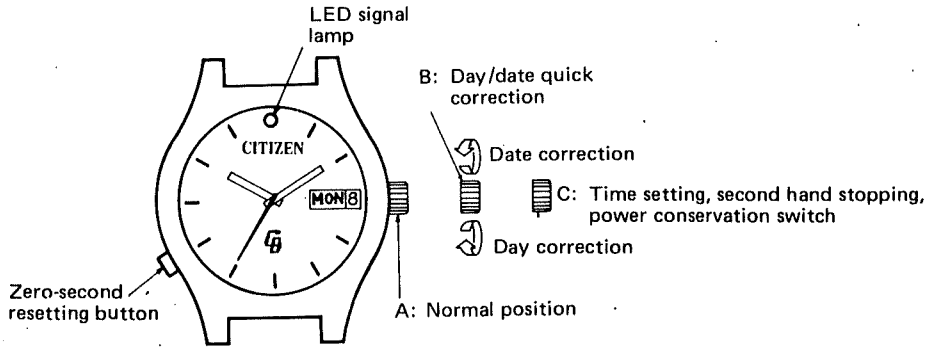




**1. Light energy source.**
The solar cells of a high energy convesion rate plus a high performance Silver oxide power cell can provide stabilized power to assure accurate performance for more than 5 years under normal conditions of use.

**2. Silver oxide power cell for keeping operation darkness.**
For the first two years, the new silver oxide power cell will supply energy even in the complete absence of any light.

**3. Handsome and functional.**
The unique design of the dial features eight silver-gray solar cells made of silicon crystals.

# HANDLING INSTRUCTIONS




**1. Setting the time**

- Pull out the crown two steps to position C (second hand stops).
- Set the second hand at the 0-second position.
- Note AM and PM indications, and set the time.
- To zero-set, press the reset button when the time signal sounds on radio, television or telephone.

**2. Set the calendar**

- Set the crown to the "B" position by pulling out the crown one step.
- Turn the crown up to change the day.
- Turn the crown down to change the date.

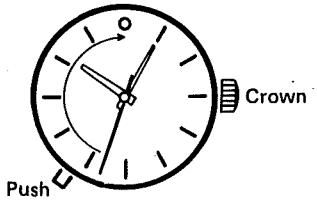
NOTE: The day indication appears alternately in two languages, but once you set the day in the desired language, it will continue to appear automatically in that language.
Also note that the calendar changes between 9:00 P.M. and 12:00 midnight, so avoid changing the calendar during this time, because it may not change on the following day.

**3. Push in the crown fully to position "A".**

**How to handle second-hand resetting (electronic zero-return)**

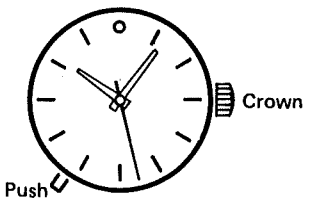
A cumulative gain or loss over a long time of use – an error within −30 seconds to +29 seconds – can be corrected down to the second by merely pressing the reset button simultaneous with a 0-second hourly time signal.

**To correct a loss**




- The second hand is quickly advanced to the correct time.

**To correct a gain**




- The second hand waits in the stand-by position, and starts again when the second hand position synchronizes with the correct time.

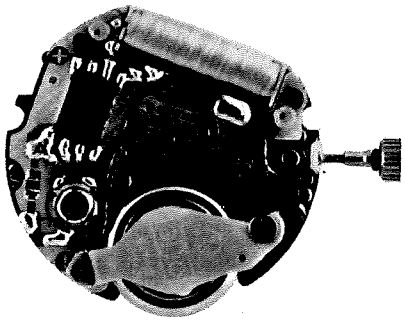
## SPECIFICATIONS

| Caliber No. | | 8600A | 8610A | 8620A | 8630A | 8640A | 8629A |
|---|---|---|---|---|---|---|---|
| Type | | Analog quartz crystal watch (center second) | | | | | |
| Movement | | Diameter: 26.4mmϕ | | | | | |
| | | Thickness: 5.17mm | | | Thickness 5.10mm | Thickness 4.82mm | Thickness 5.17mm |
| Oscillation | | 32,768Hz | | | | | |
| Accuracy | | ±15 sec./month under normal temperatures | | | | | |
| Effective temperature range | | −10°C (14°F) to +60°C (140°F) | | | | | |
| Converter | | Step motor type (Second hand step movement) | | | | | |
| Integrated circuit | | C/MOS-LSI | | | | | |
| Additional mechanisms | Date | ○ | ○ | ○ | ○ | × | ○ |
| | Day | ○ | × | ○ | × | × | ○ |
| | Bilingual day indication | ○ | × | ○ | × | × | ○ |
| | Date quick correction | ○ | ○ | ○ | ○ | × | ○ |
| | Day quick correction | ○ | × | ○ | × | × | ○ |
| | One touch 0-second resetting | ○ | ○ | × | × | × | × |
| | LED signal lamp | ○ | ○ | × | × | × | × |
| | Second hand stopping at optional position | ○ | ○ | ○ | ○ | ○ | ○ |
| | Power conservation switch | ○ | ○ | ○ | ○ | ○ | ○ |
| Power cell | | Small-size silver oxide power cell<br>Parts No. : 280–01 (8629A:280-16)<br>Voltage : 1.50V<br>Capacity : 100mAH<br>Size : 11.6mmϕ × 4.2mm | | | | | |
| | | Life: more than 1 year | | Life: more than 2 years | | | Life: 5 years |

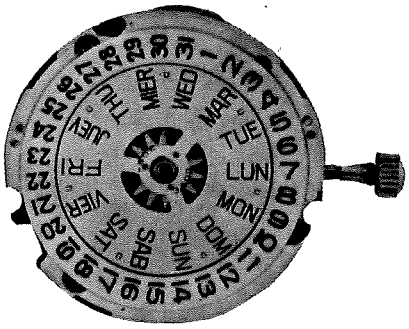
## OUTLINE

With a view to better meet the diversified requirements of customers, the Citizen Quartz Cryston — Cal. No. 8700A has been developed on the basis of the technical know-how which has ever successfully made possible the production of Cal. No. 86※※※ and 85※※※ watches. This is one of Citizen's standardized analog-type quartz crystal waches for gentlemen.



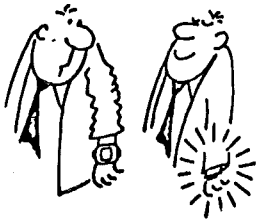



Movement
(Quartz crystal oscillator side)

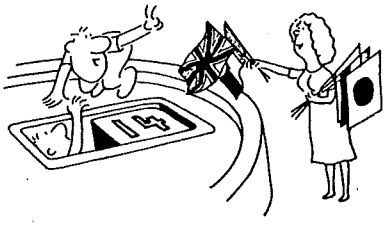



Movement
(Dial side)

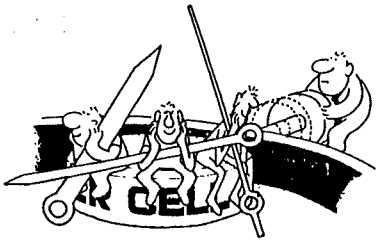
## FEATURES



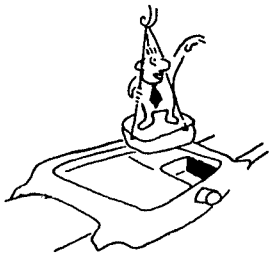
1. Compact, modern styling satisfies today's modern tastes in a quartz crystal watch for men.



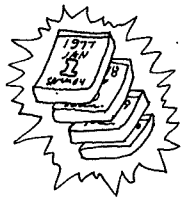
2. Bilingual day indication mechanism.



3. Second hand stopping device stops at any optional position, when the crown is pulled out. The crown serves as a power conservation switch.

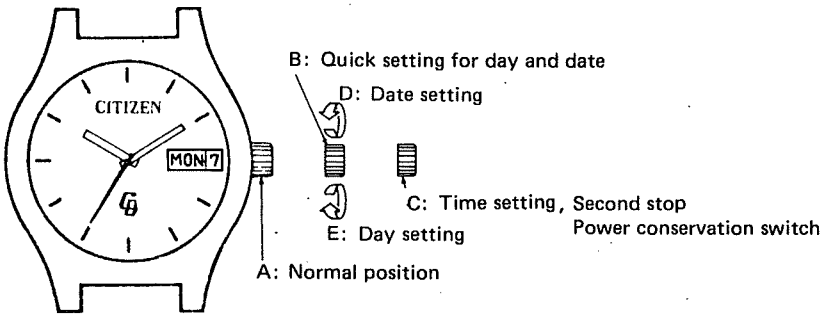


4. Simplified movement construction achieves outstanding reliability and ease of servicing.



5. About 4 years battery life
   A small-size silver oxide power cell makes watch operation possible for about 4 years.

## HANDLING INSTRUCTION




**1. Time setting**
Pull out the crown to C position and turn the hands to set the correct time, at the same time making sure AM or PM. If the date changes at 12 o'clock, it indicates 12 midnight.

**2. Softly push the crown to make the watch start operating.**

**3. How to set day and date**
Set the crown to B position, and turn it clockwise to change the date and counterclockwise to change the day respectively.

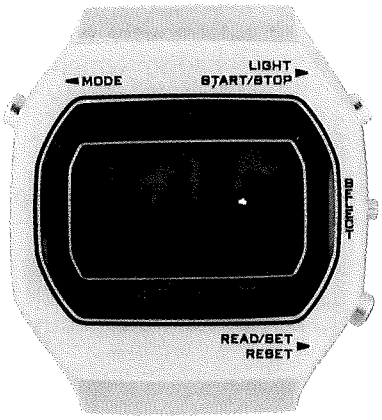
**Note:** If you conduct quick calendar setting while the watch reads between 9:00PM and 2:00AM, the calendar may not sometimes change on the following day. To avoid this inconvenience, turn once the hands to indicate a time other than the above mentioned hours and then set the calendar again.

**4. Push the crown back completely to A position**
During use of the watch, the day and date will automatically change.

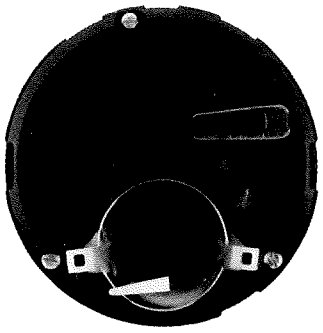
# Citizen Quartz Multi Alarm

910※※

## 1. Outline




This is a digital quartz crystal watch with LC display, which features multiple functions including alarm 1 and 2, time signal, reverse operation timer and stop watch, in addition to the ordinary display of "hour", "minute", "second" and "AM/PM" plus the calendar display of "month", "date" and "day" respectively. Thus, it excels both in the design and performance.



MOVEMENT
(Power cell side)



MOVEMENT
(LC display panel side)

## 2. FEATURES

**1) Digital quartz crystal watch with muti-function:**
In addition to the normal display ("hour", "minute", "second", "AM/PM") and calendar display ("month", "date", "day"), the following functions are added: alarm-I and alarm-II which can be set independently with each other; chime which gives alarm sound twice simultaneously with the time signal; timer mechanism which can set down to second; and stop watch mechanism which is capable of continuous measurement.

**2) High accuracy secured by quartz crystal oscillator:**
Such a high accuracy as ±10 sec./month under normal temperature be maintained thanks to highly stabilized frequency of 32,768Hz as well as the temperature compensation circuit.

**3) Alarm monitor:**
The electronic sound can be confirmed by pushing both Ⓡ and Ⓛ buttons simultaneously under the normal display.

**4) Mode mark indication:**
The mode marks are used to indicate the setting state for the following functions for quick confirmation: alarm-I, alarm-II, chime, timer mechanism and stop watch mechanism.

**5) Built-in illumination lamp:**
An illumination lamp in the watch facilitates an easy and clear time readout even in the dark.

**6) Correction-free calendar setting system:**
The date/month setting is automatically performed at the end of each month. (This is possible even for the "leap year".) Therefore, there will be no need to carry out calendar correction again at the end of each month as long as the calendar is once correctly set.

**7) Power cell life indicator mechanism:**
When the power cell capacity becomes very small, the whole mark of the colons will begin flashing to indicate replacement of the power cell.

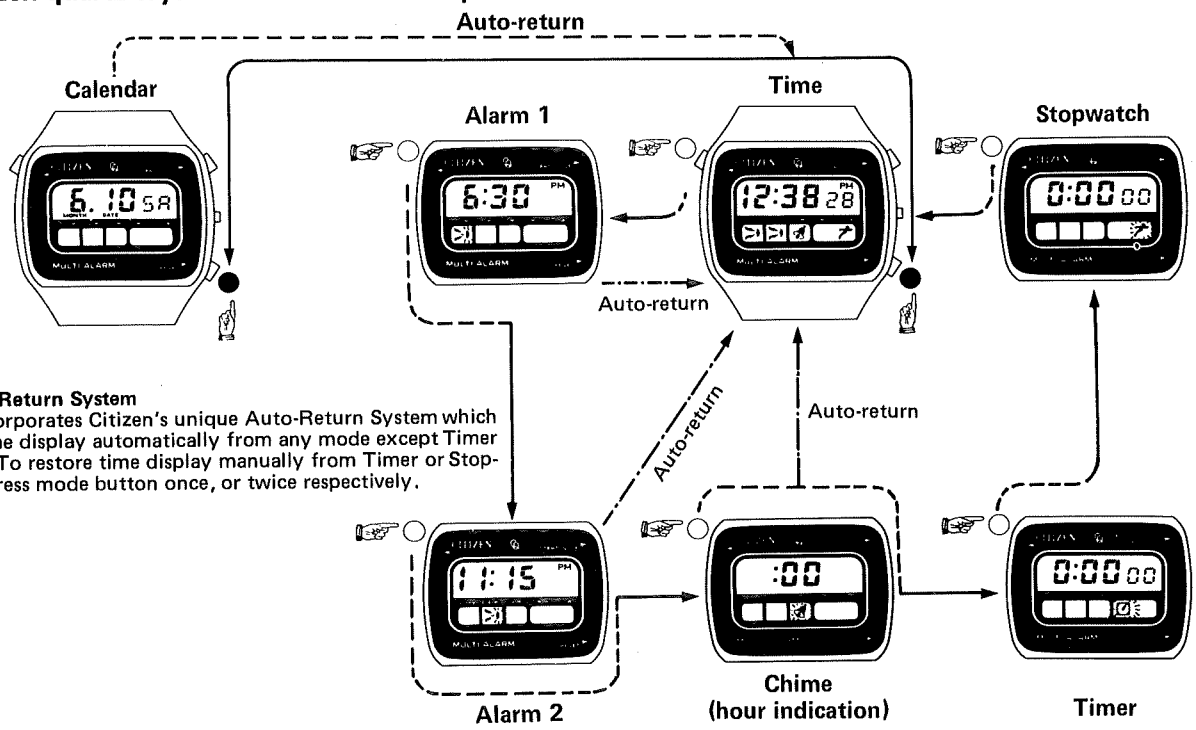
**8) Compact and thin structure:**
All the necessary functions are incorporated into one unit of C/MOS-LSI, thus compact and thin movement being realized.

**9) Easy disassembly and assembly:**
Thanks to much reduction of component parts, the disassembly and assembly become very simple.

**10) Uniterrupted operation for about two years by a small-size silver oxide power cell:**
The reduction of power consumption at electronic circuit makes it possible to operate the watch accurately for about two years with a small-size silver oxide power cell.

## 3. HANDLING INSTRUCTIONS

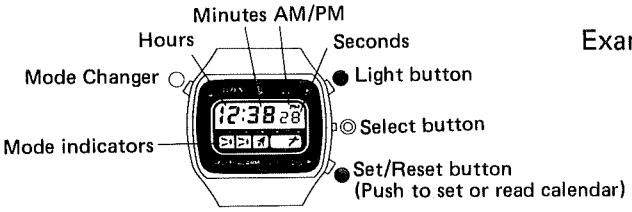
### 1) Citizen quartz crystron LC multi alarm operational modes




**Citizen's Auto-Return System**
This watch incorporates Citizen's unique Auto-Return System which restores the time display automatically from any mode except Timer or Stopwatch. To restore time display manually from Timer or Stopwatch mode, press mode button once, or twice respectively.

### TIME

*The time indicated is 12:38 P.M. + 28 Seconds.
*Graphic indications represent only those modes set, or currently in operation.




Example:  Alarm 1 and Chime set.

 Only Chime and Timer set.

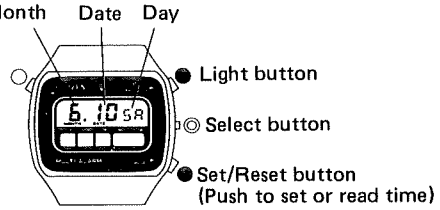
*Time is set in the order of seconds — minutes — hours (AM/PM)

ALARM I ALARM II CHIME TIMER STO-W



### CALENDAR

*Date shown in June 10th (Saturday)
*No indications will appear in the windows of the display panel when calendar is being read or set.
*Normal time display will return automatically to display panel within several minutes after reading or setting calendar, without pressing reset (black) button. Press reset button to restore time display instantaneously.
*Days of the week will appear on the display panel abbreviated as follows.

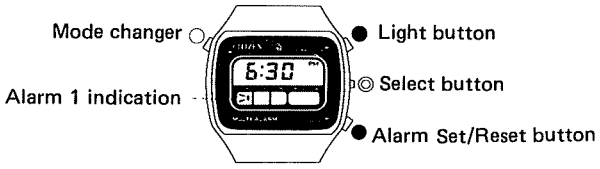



| MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|---|---|---|---|---|---|
| SU | MO | TU | WE | TH | FR | SA |
| SUNDAY | | | | | |

## ALARM 1

Once set, Alarm 1 will sound every day at the hour and minute selected.

*Alarm 1 is set for 6:30 P.M. (No other mode indications will appear in the windows of the display panel while Alarm 1 is being set).
*Alarm 1 & Alarm 2 allow setting of hours and minutes only, no seconds.
*Set each alarm in the order of hours (AM/PM) and minutes.
*Normal time display will return automatically to display panel within several seconds after setting.



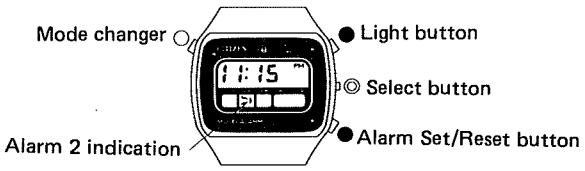



**Alarm set to sound at present time.**
To suppress alarm, push reset (black) button; the flashing part of the graphic indication will leave the display panel (see below), and no alarm will sound when the specified time has been reached. To restore alarm, push reset (black) button a second time.
**Alarm suppressed.**

## ALARM 2

Alarm 2 is a space alarm provided for added convenience.

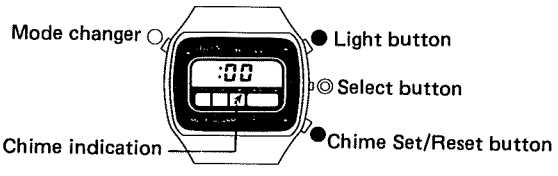
*Here Alarm 2 is set to sound at 11:15 P.M.
*Other functions same as Alarm 1.




## CHIME

The Chime feature provides a handy reminder of the time, every hour on the hour.

*When Chime is set, two abrupt sound bursts will occur every hour on the hour. When hourly (e.g., no minutes) alarm settings have been made, the alarm will replace Chime which would normally sound at that time. Chime will sound as usual on the other hours.

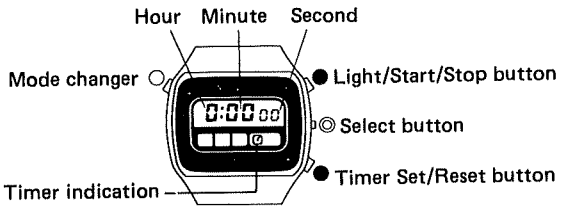





**Chime set to sound every hour on the hour.**
When chime is not desired, push reset (black) button in chime mode. Suppressed Chime will be indicated by the absence of the striker portion of the bell on the chime status indication. No chime will sound once this setting has been made. To rest chime, push reset (black) button in Chime mode.
**Chime suppressed.**

## TIMER

Count down. A timer that indicates the time still remaining. Set it for any time period . . . a beep that tells you when that period is up.



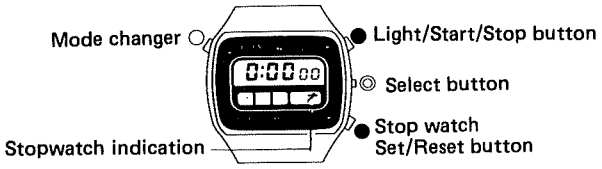

*Timer can be set to time intervals up to 11 hours 59 minutes 59 seconds.
*Countdown can be stopped or started as often as desired. Unless reset by pushing the Set/Reset (black) button, Timer count always resumes from point at which stopped.
*Alarm will buzz sharply once when Timer is started; alarm will sound a full minute when Timer count reaches 00 hours 00 minutes 00 seconds.

Example: 1:00 00 Alarm sounds when Timer is started by pushing Start (yellow) button.
0:59 59
0:59 58
0:00 01
0:00 00 Alarm sounds intermittently for one minute after time is up.

Timer setting is made in the order of hours → minutes → seconds.
**Note:** If setting was intended in timer mode, but indication flashes, and no numerals appear on the screen, the stopwatch mode is in operation. Make setting again according to the diagram, "Setting and Adjustment of Timer."

## STOPWATCH

For speed races, car rallies, etc.
A single alarm will sound when stopwatch is started or stopped.




*Stopwatch can be used to time intervals from 00 hours 00 minutes 00 seconds up to 11 hours 59 minutes 59 seconds.
*A single alarm burst will sound when stopwatch is started or stopped.
*Stopwatch indication returns instantly to 0:00 00 when reset (black) button is pressed.
*Stopwatch can be stopped and started as often as desired. Stopwatch time display always resumes from point at which started unless reset by pushing the Set/Reset (black) button.

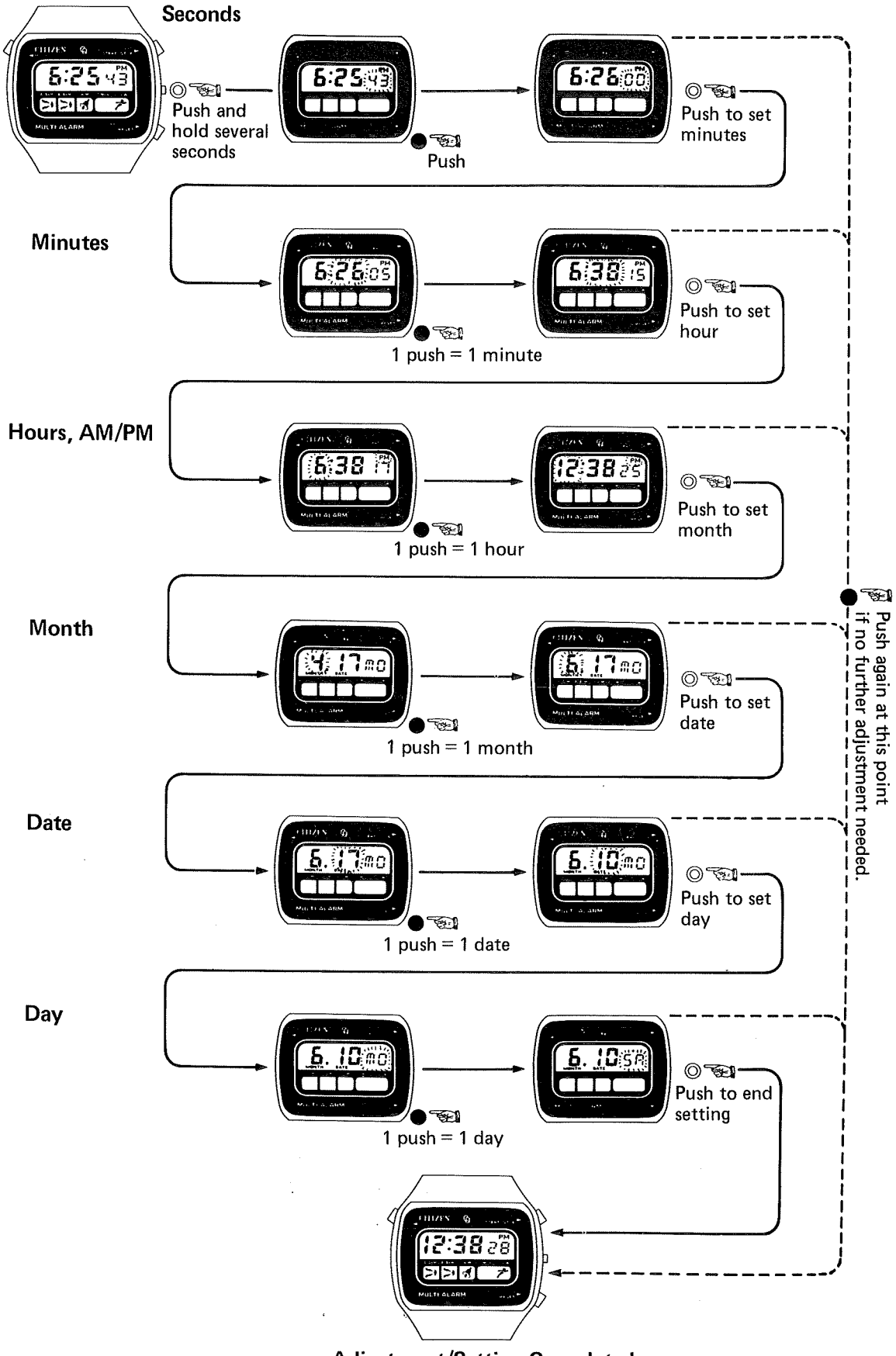
**Note:** If setting was intended in Stopwatch mode, but indication flashes and no numerals appear on the display panel, the Timer mode is in operation. Make setting again according to the diagram, "Setting and Adjustment of Stopwatch".

## Alarm Monitor

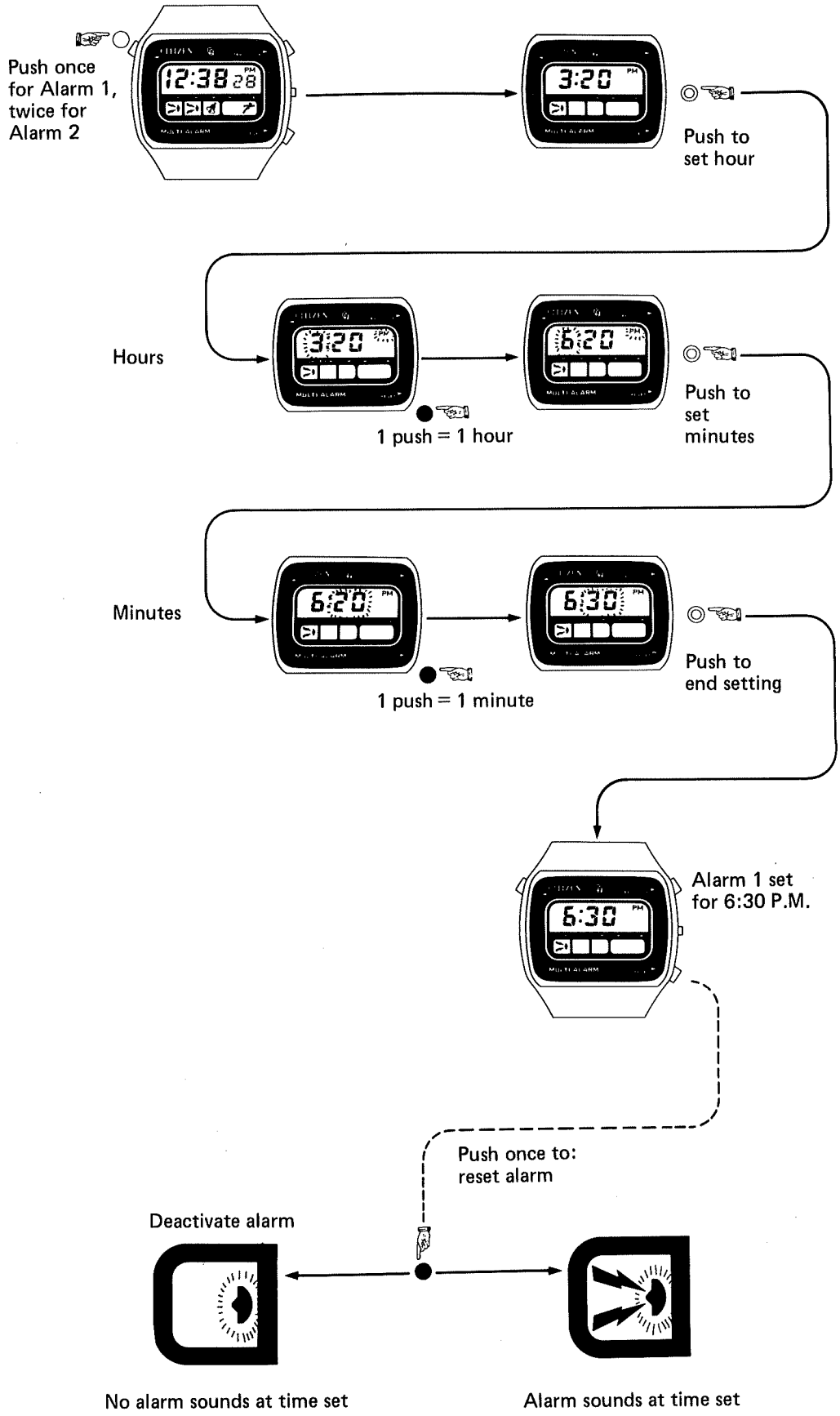
When the timer mode and the calendar mode are on the display, one will hear the alarm, ring if the Light (Yellow) button and the Reset (black) button are pushed at the same time.

## How to setting time, calendar and each modes

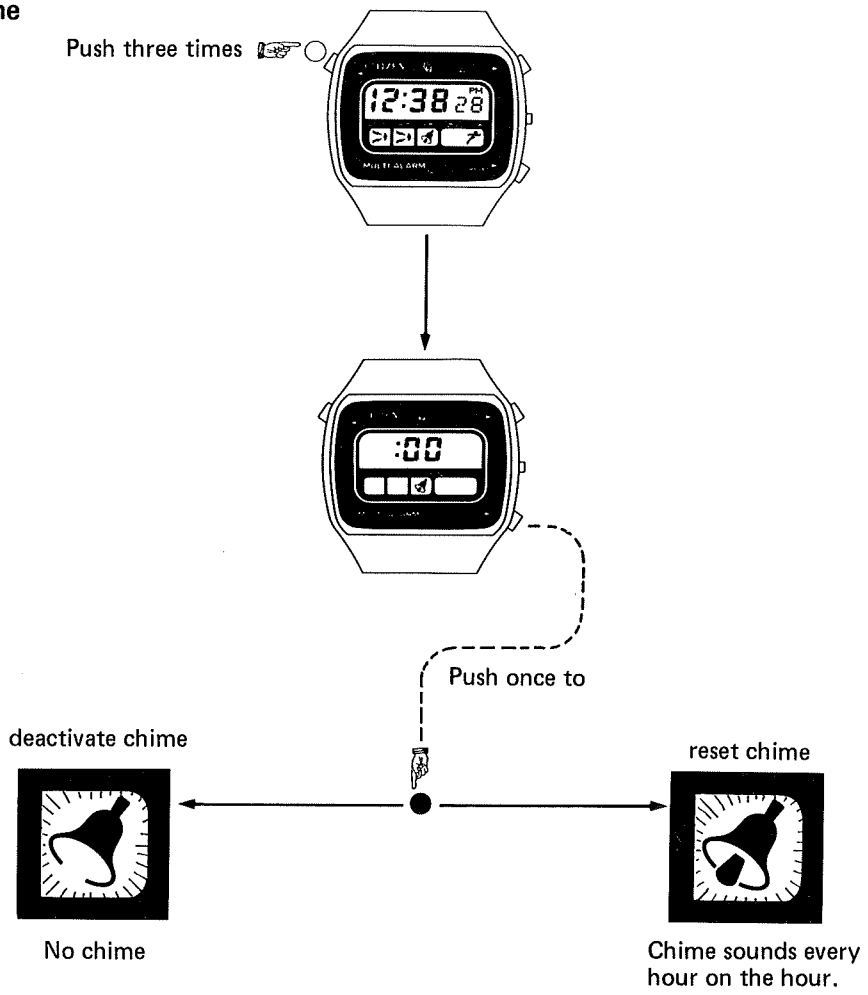
### Adjustment and setting of time and date



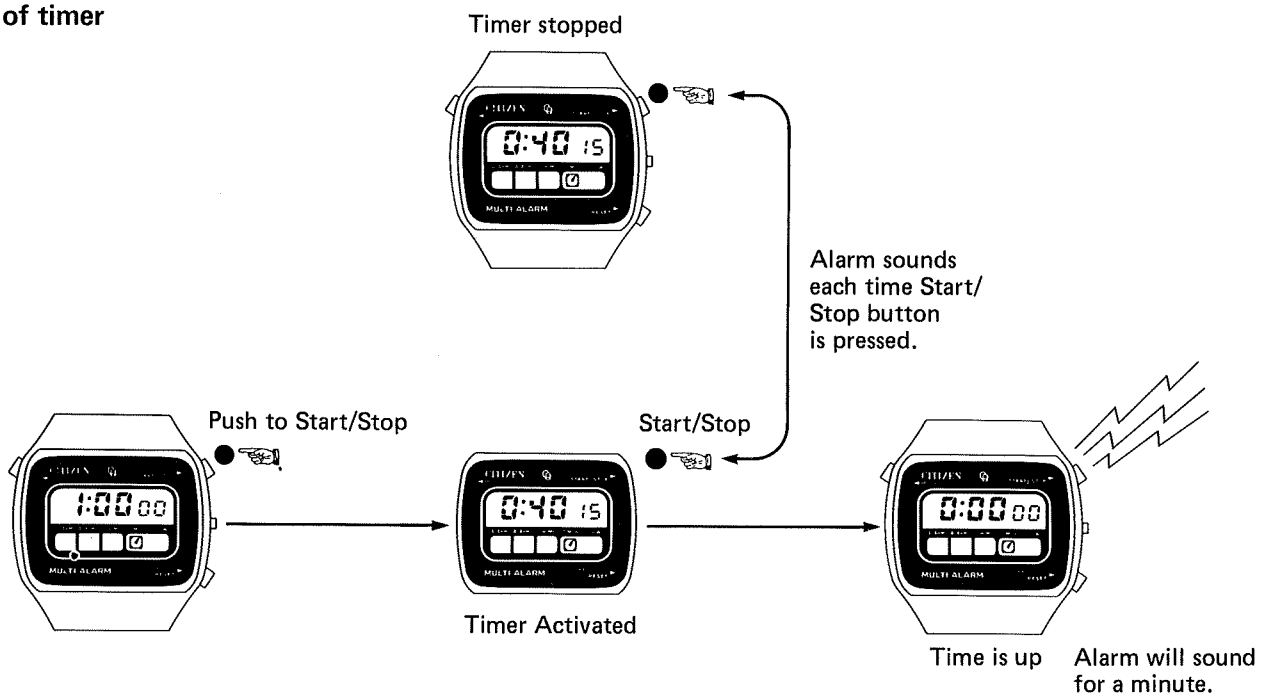
## Setting and adjustment of alarms (procedure identical for Alarm 1 & Alarm 2)



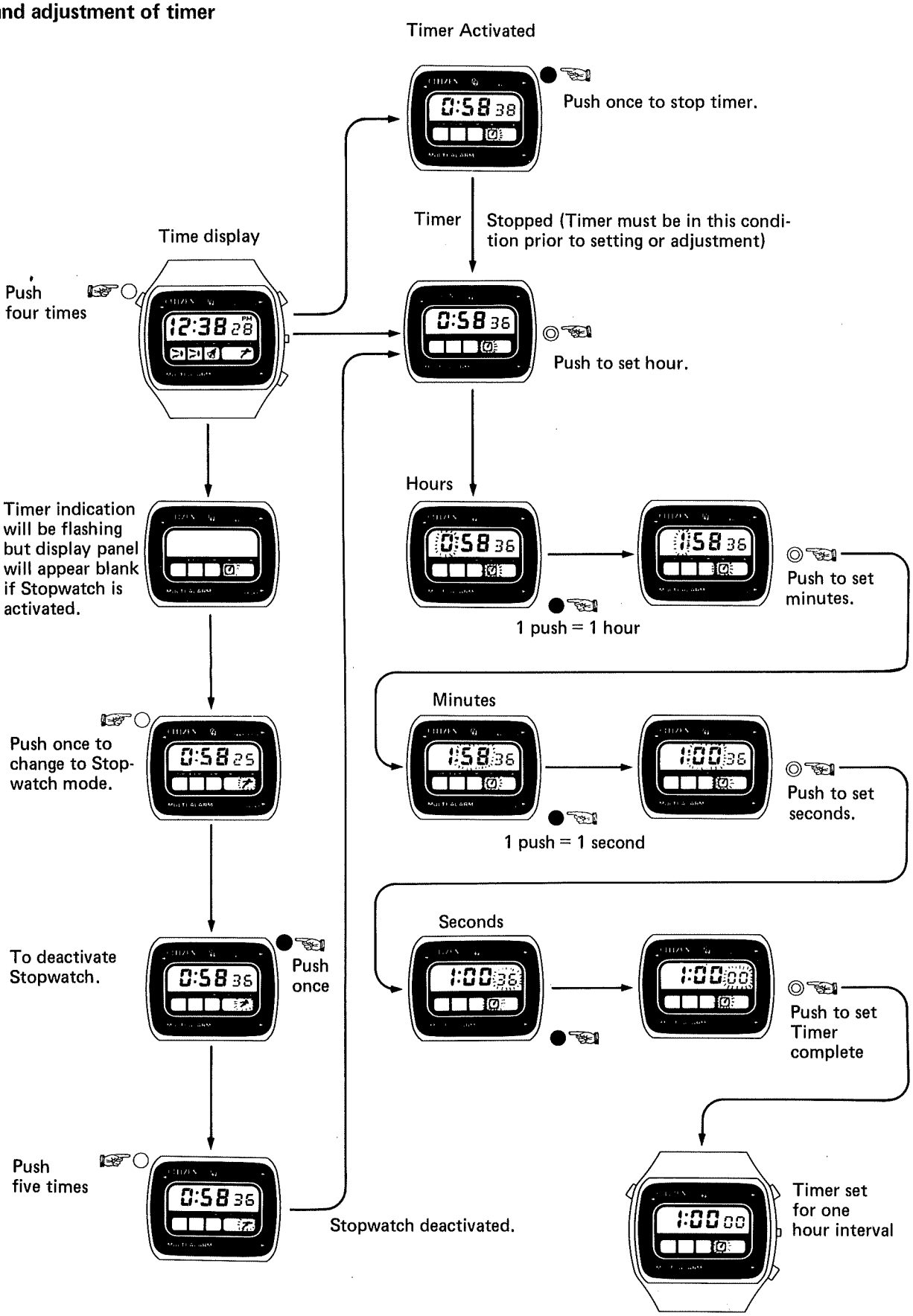
## Setting of chime



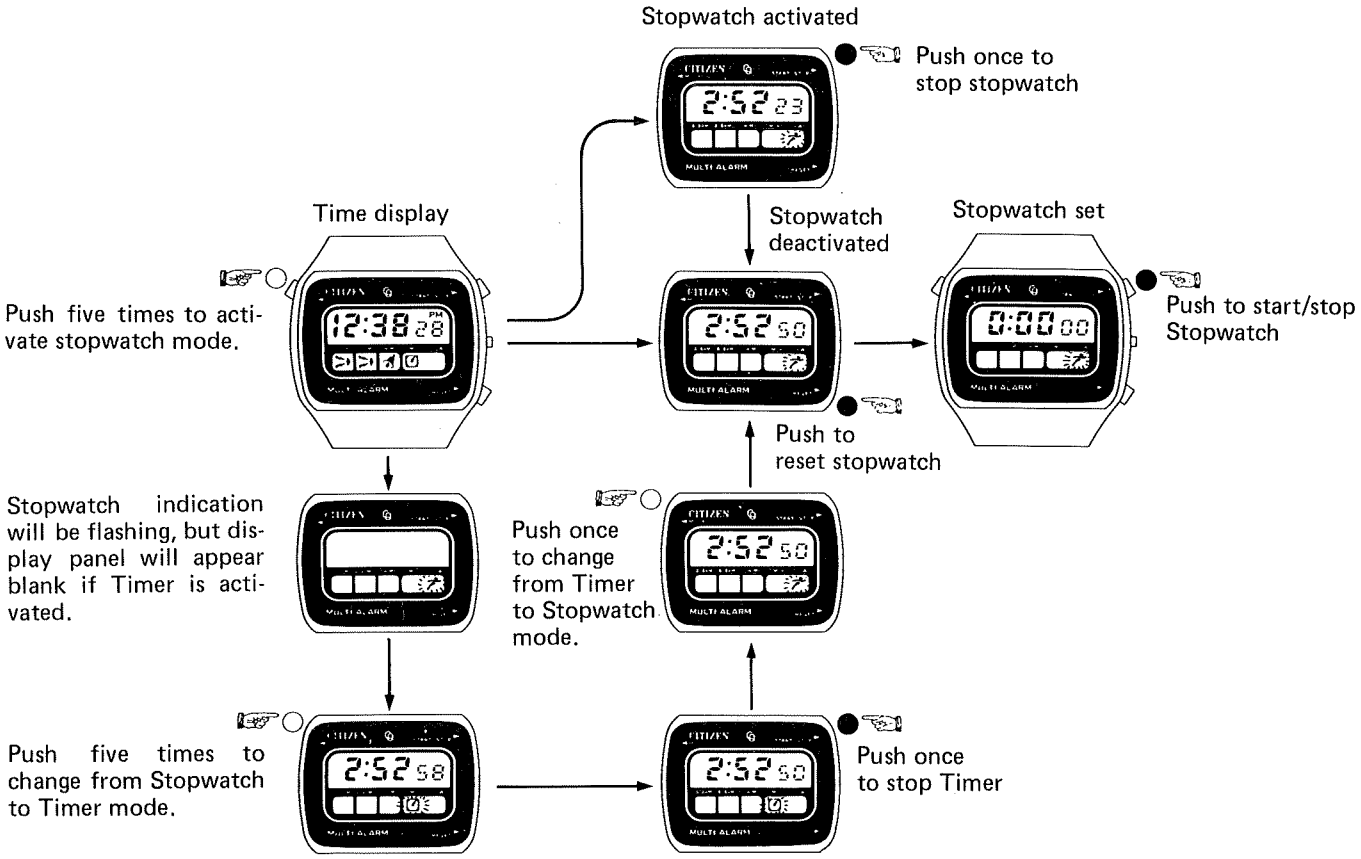

## Use of timer

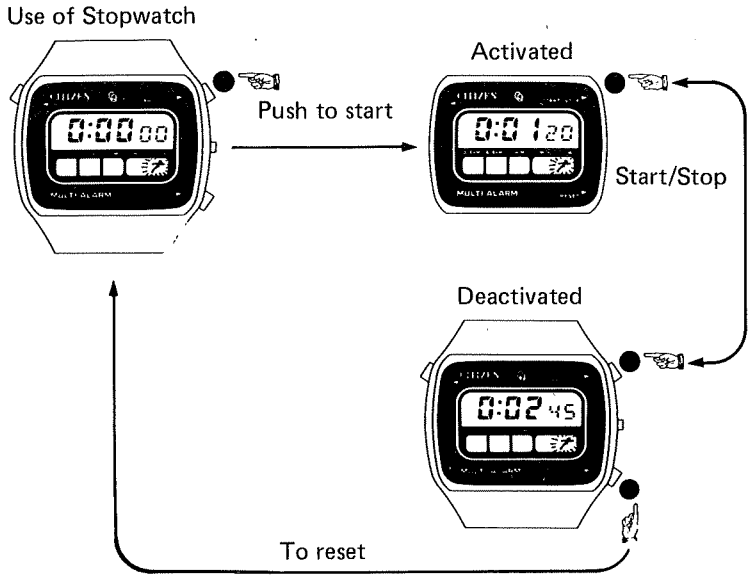


## Setting and adjustment of timer



## Setting and adjustment of stopwatch



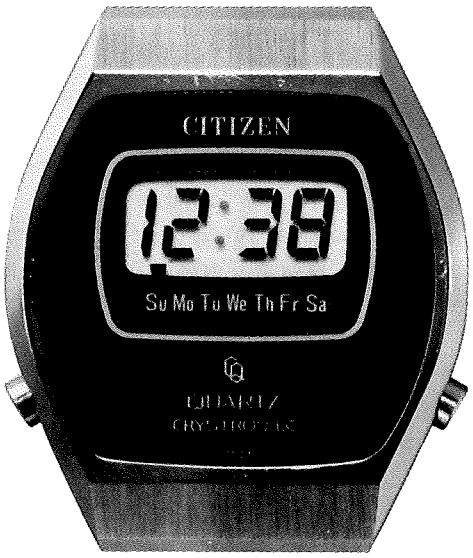
## 5. SPECIFICATIONS

| | | | |
|---|---|---|---|
| Model | | | Citizen Quartz Multi Alarm |
| Cal. No. | | | 9100A |
| Movement | | Diameter | 27.2mmϕ |
| | | Thickness | 6.06mm |
| Oscillation | | | 32,768Hz |
| Accuracy | | | ±10 sec./month under normal temperature |
| Display information | Normal display | | "hour", "minute", "second" and "AM/PM" |
| | Calendar display | | "month", "date" and "day" |
| | Alarm display | | "hour" and "minute" |
| | Chime display | | ":00" |
| | Timer display | | "hour", "minute" and "second"<br>Set time: 1 lh. 59 min. 59 sec. |
| | Stopwatch display | | Measurement range: 0 sec. – 1 lh. 59 min. 59 sec. Cumulative count possible |
| Correction system | Time correction | | Independent correction of "hour" and "minute" by pushbutton operation 0-second reset by pushbutton operation |
| | Calendar correction | | Independent correction of "month", "date" and "day" by pushbutton operation |
| | Alarm correction | | Independent correction of "hour" and "minute" by pushbutton operation |
| | Chime correction | | Chime "on/off" switch by pushbutton operation |
| Display system | | | FE twist-type nematic LC display |
| Effective temperature range | | | 0°C (32°F) – +60°C (140°F) |
| Semiconductor | | | C/MOS-LSI |
| Temperature compensation circuit | | | Temperature compensation condenser |
| Additional mechanisms | | | Alarm-I, Alarm-II<br>Chime<br>Timer<br>Stop watch<br>Alarm monitor<br>Illumination lamp<br>Power cell life indicator |
| Power cell | | | Small-size silver oxide power cell<br>Parts No. 280–15 (1 unit)<br>Voltage : 1.5V<br>Capacity : over 60mAH<br>Size : 11.56mmϕ × 3.0mm<br>Life : about 2 years |

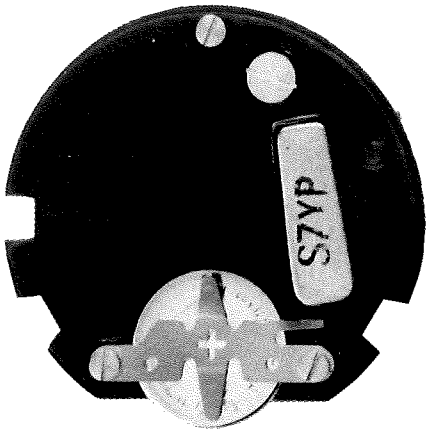
# Citizen Quartz Crystron LC

**911※※**

## 1. OUTLINE




This is a compact and thin type quartz crystal watch for ladies with digital liquid crystal display system.
It can display "month", "date" and "day" and then "second" through switching operation in addition to the normal display of "hour", "minute" and "day". Furthermore, such functions are newly added as the perpetual calendar including the "leap year" setting, watch internal illumination device, and others, completing a multiple function watch in a compact structure.




**Movement**
**(Quartz crystal oscillator side)**




**Movement**
**(LC display panel side)**

## 2. FEATURES

1) **Thin and compact standardized type of LC display watch for ladies**
Thanks to a thin and compact structure of quartz crystal oscillator, IC and other component parts, a watch with a very thin design has been completed with a unique external appearance.

2) **Display of "hour", "minute", "second", "month", "date" and "day" plus calendar automatic return mechanism:**
The "hour", "minute" and "day" are usually displayed. And "month", "date" and "day" are displayed through switching operation, and also "second" is displayed by further switching operation. The display switching from "month", "date" and "day" to "hour", "minute" and "day" can be automatically performed in about 2 seconds. (However, switching from "second" display to "hour", "minute" and "day" must be carried out through switch operation.)

3) **Easy-to-see, independent display correction system with no digit increase**
Each display factor to be corrected such as "hour", "minute", "second", "day", "date", "month" and "leap year" can independently be displayed flashing on the time screen. As a result, the customer can easily understand which display factor is being corrected.

4) **Correction-free calendar setting system**
The date/month setting is automatically performed at the end of each month. (This is possible even for the "leap year".) Therefore, there will be no need to carry out calendar correction again at the end of each month as long as the calendar is once correctly set.

5) **Built-in illumination lamp**
To facilitate an easy and clear time readout in the dark, an illumination lamp is incorporated inside the watch.

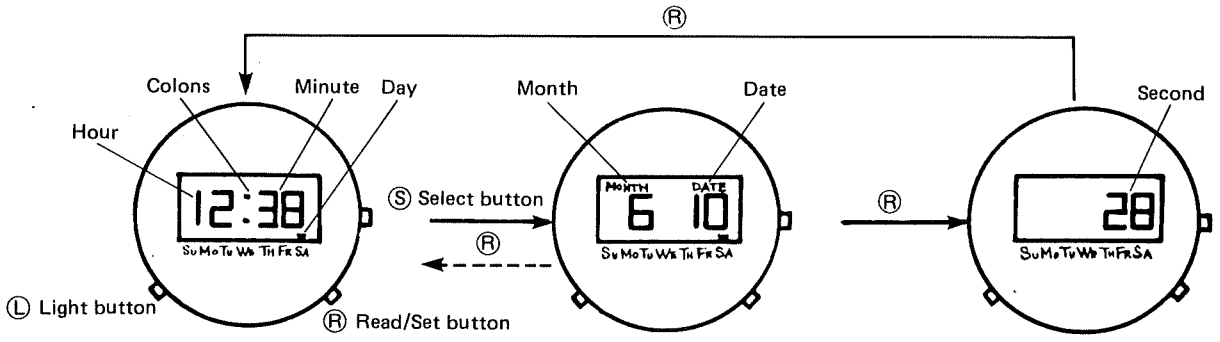
6) **Excellent workability ensured by switching mechanism of push-button type**
The display switch, display correction and watch internal illumination can easily be performed through operation of 3 kinds of push-buttons.

7) **Easy disassembly and assembly**
Thanks to much reduction of component parts, the disassembly and assembly become very simple.

8) **Uninterrupted operation for 1 year by a small-size silver oxide power cell**
The reduction of power consumption at electronic circuit makes it possible to operate the watch accurately for 1 year with a small-size silver oxide power cell (7.9mm$\phi$).

## 3. HANDLING INSTRUCTIONS

### 1) How to read time and calendar




**Normal display** **Calendar display** **Second display**

Ⓡ- button (Read/Set button):Display switch/Time & calendar correction
Ⓢ- button (Select button): Digit selection for correction
Ⓛ- button (Light button): Lamp glow and compulsive return

**Display switch**
The normal display switches to the calendar display with push of Ⓡ -button, and further switches to "second" display with push of Ⓡ -button prior to the automatic returning.
The automatic return is possible to the normal display in about 2 seconds from the calendar display (Automatic Return System). However, no automatic return is secured for the switch from "second" to the normal display. In this case, Ⓡ -button must be pushed again to have the normal display.

### 2) How to correct time and calendar

(1) The display area you want to correct can be corrected independently through operation of Read/Set and Select button.
(2) You can easily distinguish the digit to be corrected by its flashing.
(3) With each push of Select button, the display area possible to be corrected will vary by the following sequent order:
Second → minute → hour → month → date → day → leap year.
(4) With a push of Light button, the display will be changed from display-correction state to normal time display.
(5) When correcting calendar display by means of a push-button, the 31-day months will have the sequent order of "1–31–1" and the 30-day month "1–30–1" (February: "1–29–1").

**Normal display**

**Second setting**

Ⓢ With a push of Select button, second will be ready to be set.
Ⓡ With a push of Read/Set button simultaneously with standard time signal, second will be 0-reset.

**Minute setting**

Ⓢ With another push of Select button, minute will be ready to be corrected.
Ⓡ The minute display will increase by one minute with every push of Read/Set button. Push and release Ⓡ -button, and repeat until minute coincides with the standard time.

**Hour setting**

Ⓢ With another push of Select button, hour will be ready to be corrected.
Ⓡ Push and release Read/Set button, and repeat until hour coincides with the standard time.

**Month setting**

Ⓢ With another push of Select button, month will be ready to be corrected.
Ⓡ Push and release Read/Set button, and repeat until the desired month is set.

**Date setting**

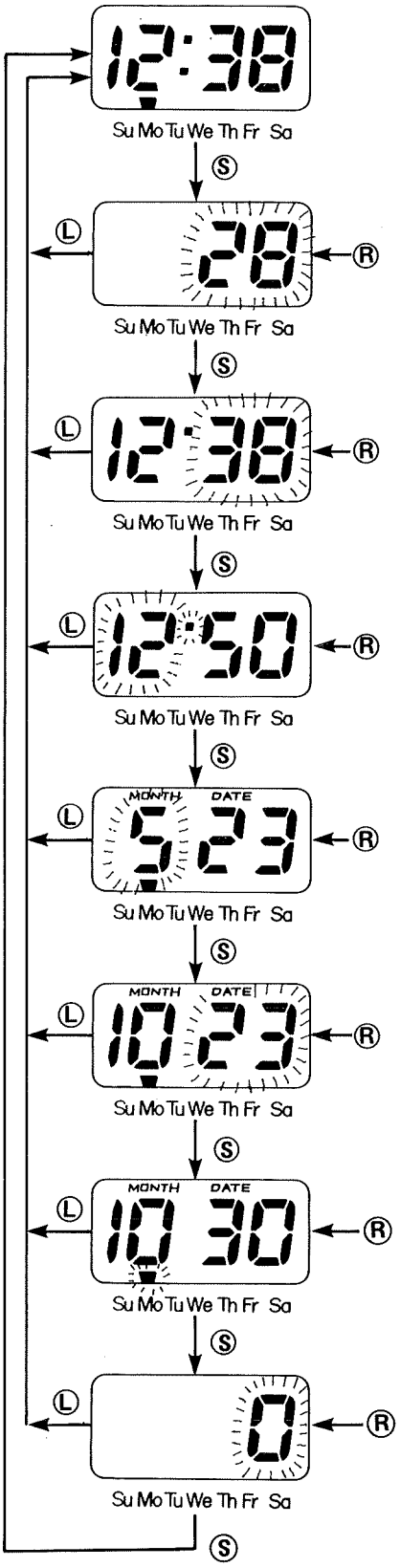
Ⓢ With another push of Select button, date will be ready to be corrected.
Ⓡ Push and release Read/Set button, and repeat until the desired date is set.

**Day setting**

Ⓢ With another push of Select button, day will be ready to be corrected.
Ⓡ Push and release Read/Set button, and repeat until the desired day is set.

**Leap-year setting**

Ⓢ With another push of Select button, it will be possible to conduct a leap-year setting.
Ⓡ Push Read/Set button and set for the leap year.




**Note:** If Ⓡ-button is pushed when second reads 30 to 59 sec., minute display will be increased by a minute.

Conduct hour setting marking sure AM (upper colon) or PM (lower colon).

**Note:** "0" indicates the leap year, and "1", "2" and "3" show 1st, 2nd and 3rd year from the leap year respectively.

## 5. SPECIFICATIONS

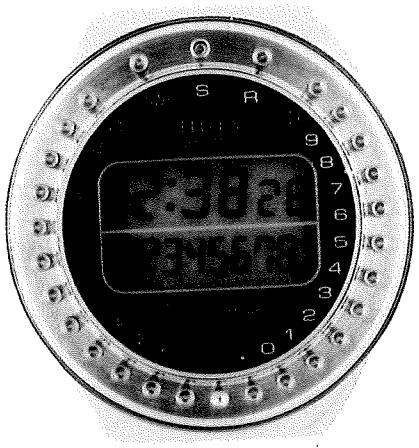
| | |
|---|---|
| Model | Citizen Quartz Crystron LC for Ladies |
| Cal. No. | 9110A |
| Movement | Diameter: 20.9ϕmm<br>Thickness: 4.5mm |
| Oscillation | 32,768Hz |
| Accuracy | ±15 sec./month under normal temperature |
| Display system | FE twist-type nematic LC display |
| Display information | Normal display: hour, minute, day and colon<br>Calendar display: month, date and day<br>Second display: second |
| Display correction | •Independent correction of each digit by operation of push-button |
| Effective temperature range | 0°C (32°F) to +60°C (140°F) |
| Semiconductor | C/MOS-LSI |
| Additional mechanisms | •Illumination lamp<br>•Automatic calendar setting at the end of each month<br>•Leap-year setting mechanism |
| Power cell | Small-size silver oxide power cell<br>Parts No. : 280–13<br>Voltage : 1.5V<br>Capacity : 38mAH<br>Size : 7.9ϕmm × 3.6mm<br>Life : 1 year |

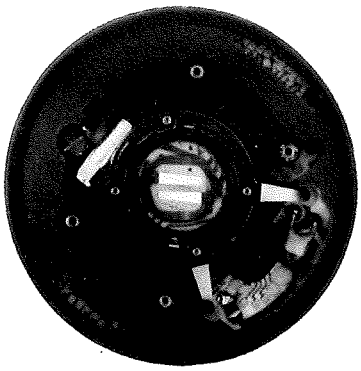
# Citizen Quartz Calculator

**913※※**

## 1. OUTLINE

This is a digital quartz crystal watch equipped with calculator function, which has been completed through modification of existing digital quartz crystal watch Cal. No. 9090 into more compact size with some functional improvements.





MOVEMENT
(Power cell side)



MOVEMENT
(LC display panel side)

## 2. FEATURE

**(1) Thin-type quratz crystal watch with Calculator function:**
Maximum appearance thickenss 10.84mm and movement thickenss 6.67mm.

**(2) Uniterrupted operation for more than three years with one small-size silver oxide power cell:**
Under the conditions of 5 sec. lamp grow and 10 min. calculator operation per day.

**(3) Multi-function calculator:**
Memory Ⓜ+ and Ⓜ− , clear entry CE and other keys.

**(4) Automatic ON/OFF switch of calculator:**
The calculator is turned off automatically after use.

**(5) Hour, minute and second plus date and month display:**
The Watch's constant display of "hour", "minute" and "second" can be switched to "date" and "month" display by one-touch operation.

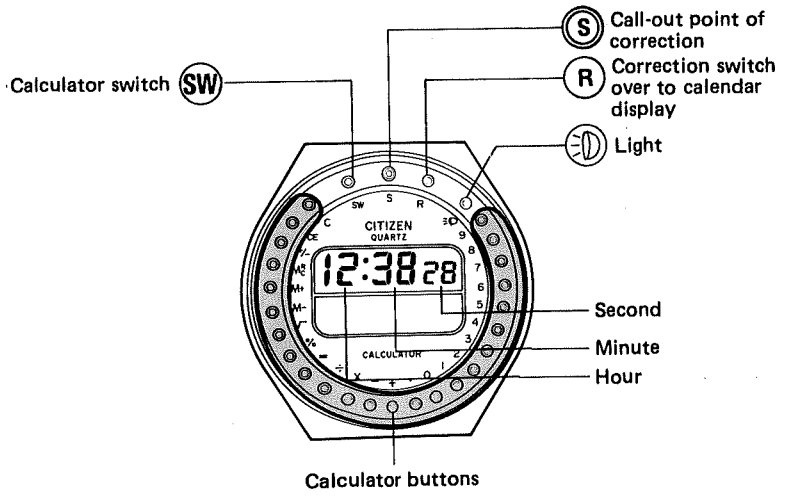
**(6) Automatic calendar correction:**
The "date" and "month" are automatically corrected at the end of each month. (However, manual correction is required for the leap year February 29.)

**(7) Built-in illumination lamp:**
An illumination lamp is built into the watch for correct and clear readout of the time even in the dark.

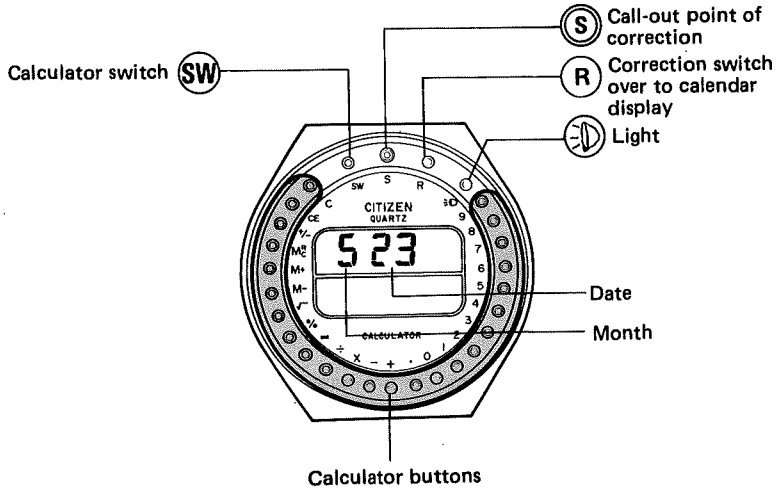
## 3. HANDLING INSTRUCTIONS

### 1) How to read time and calendar

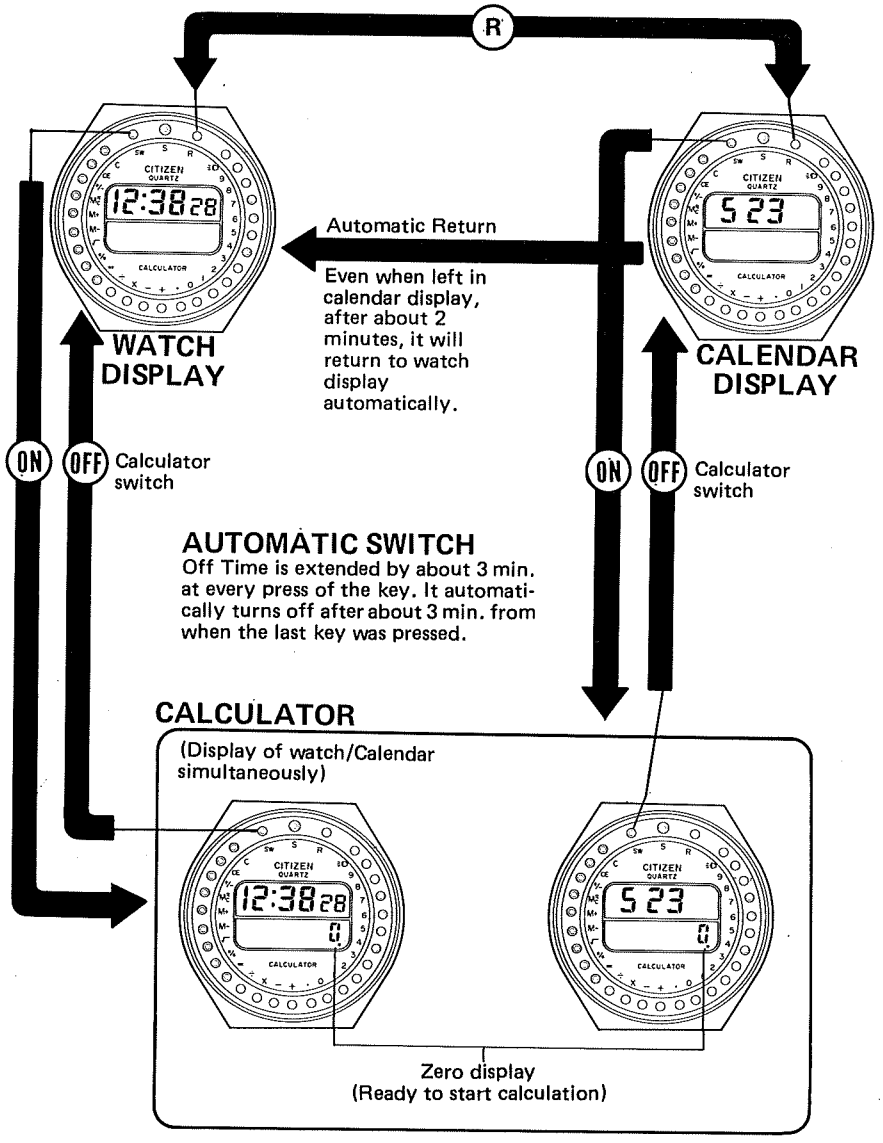
WATCH DISPLAY



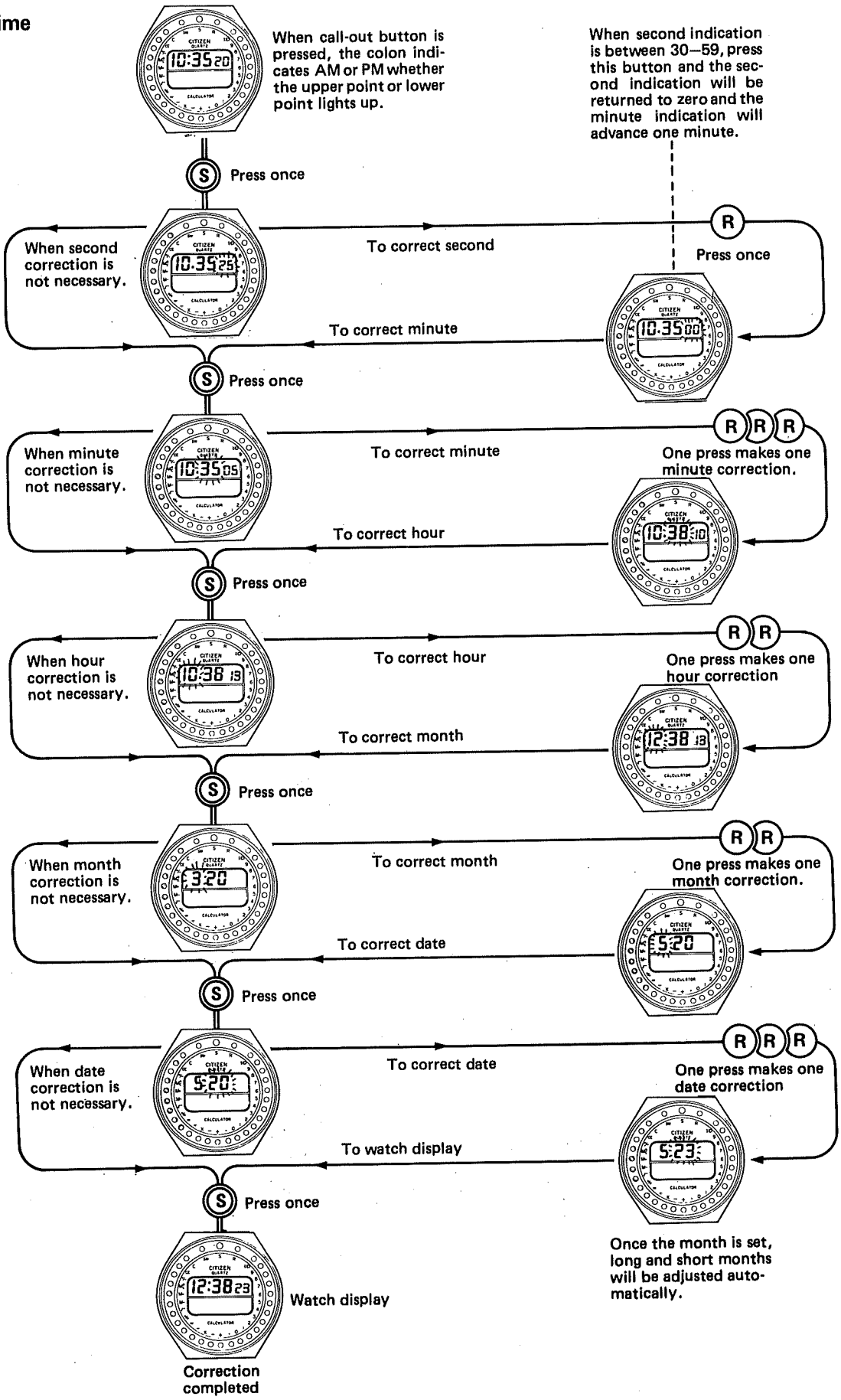

CALENDAR DISPLAY



## 2) How to switch functions



## 3) How to set time and calendar



## 4) Handling Instructions for calculator

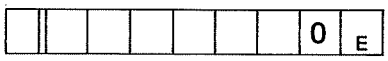
1. Press (SW) key once to start calculation. Start calculating after confirming the appearance of 0.
2. After finishing your calculation, press (SW) key again to switch off the power and to clear the display. If the (SW) key is not pressed, the power will switch off automatically after about 3 minutes.
3. Use your finger tips or an eversharp (with lead not extended) to operate the keys.
4. Press the keys lightly.
5. Press (C) key before the next calculation to confirm the 0 display.
6. To erase an incorrect entry from the display in case of all 4 functions, simply press the correct keys again.
   Example 123 + 4 = 123 (×) (+) 4 (=) 127
7. The letter "E" is displayed when the calculation is out of the calculator's capability (overflow), and calculations cannot be continued unless the (C) key is pressed.
   - Dividing a number by 0
   - Calculation of root of a negative number
   - Calculation results are outside the range of the calculator's 8 digits. This will produce an overflow.

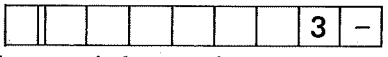
## 4)-1. Key definitions

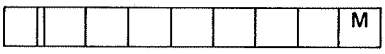



| Keys | Names | Function/Operation |
|---|---|---|
| SW | On/Off key | |
| 0–9 | Digit keys | Pressing these keys enters data into the calculator. |
| · | Decimal point key | Numbers up to 8 digits in length can be entered. |
| + − × ÷ | 4 fundamental calculation keys | Press the keys as explained.<br>When pressed in sequence the one pressed last is set in operation. |
| = | Equals key | Pressing this key completes the calculation. It's used to obtain final results. |
| % | Percent key | This converts the displayed number from a decimal to a percentage. |
| √ | Square root key | This key is used to obtain a square root. |
| M+ | Memory plus key<br>Memory minus key | — When you set the numbers in the memory function, press digit keys first, then M+ key. |
| M− | | — When the calculation results are added on the memory, press M+ key instead of = key.<br>— When the numbers or calculation results are subtracted press M− key. (In case of an overflow, no addition or subtraction to the memory can be made. But the numbers stored in the memory do not change.) |
| MRC | Memory recall key (press once) | This retrieves stored data |
| | Memory Clear key (press twice) | This clears stored data |
| +/− | Symbol changing key | It is used to change the symbol from + to − or from − to +. |
| C | Clear key | Pressing this key clears all the numbers displayed and calculation orders except for stored data in the memory.<br>"E" Error display is clear only by pressing this key. Then "E" disappears and you can calculate again. |
| CE | Clear entry key | When a key is pressed incorrectly, press CE key and then the digit keys. Thus you can continue the calculation without going back to the beginning. |

## 4)-2. Symbol notation

E..... Indicates an error 
When the divider is 0, the calculation results are outside the range of the calculator's 8 digits, or a square root is negative.
Example 5 ÷ 0 = 2 − 5 = √

−..... indicates a minus 
when the calculation result is negative
Example 2 − 5 =

M..... indicates memory 
when the numbers are stored in the memory
Example 23 M+ 23 M−

## 4)-3. Examples of calculator operation

| | Equation | Key Operation | Display (Answer) |
|---|---|---|---|
| Addition and Subtraction | 123 + 456 = | 123 (+) 456 (=) | 579 |
| | 123 − 456 = −333 | 123 (−) 456 (=) | 333− |
| | 123 + 45 − 6 | 123 (+) 45 (−) 6 (=) | 162 |
| Multiplication and division | 123 × 4 = | 123 (×) 4 (=) | 492 |
| | 12 ÷ 4 = | 12 (÷) 4 (=) | 3 |
| | 12 × 3 ÷ 4 = | 12 (×) 3 (÷) 4 (=) | 9 |
| Constant multiplication and division | 12 × 3 = | 12 (×) 3 (=) | 36 |
| | 12 × 4 = | 4 (=) | 48 |
| | 12 ÷ 3 = | 12 (÷) 3 (=) | 4 |
| | 24 ÷ 3 = | 24 (=) | 8 |
| Square root | $\sqrt{12}$ = | 2 ($\sqrt{}$) | 1.4142135 |
| | $2+\sqrt{2}$ = | 2 ($\sqrt{}$) (+) 2 (=) | 3.4142135 |
| | $2\times\sqrt{2}$ = | 2 ($\sqrt{}$) (×) 2 (=) | 2.828427 |
| Powers | $2^2$ = | 2 (×) (=) | 4 |
| | $2^3$ = | 2 (×) (=) (=) | 8 |
| | $2^n$ = | 2 (×) (=) $n-1$ (=) | $2^n$ |
| | $2^4$ = | 2 (×) (=) (×) (=) | 16 |
| | $2^8$ = | 2 (×) (=) (×) (=) (×) (=) | 256 |
| Sequence | $\frac{(12+3)\times 4}{5}$ | 12 + 3 × 4 ÷ 5 = | 12 |
| Reciprocal | $\frac{5}{2\times 3+4}$ | 2 (×) 3 (+) 4 (÷) (=) 5 (=) | 0.5 |
| Percentage | 55 × 20% = | 55 (×) 20 (%) | 11 |
| | 20 ÷ 100 = 20% | 20 (÷) 100 (%) | 20 |
| Extra discount | 55 + (55×20%) = | 55 (×) 20 (%) (+) (=) | 66 |
| | 55−(55×20%) = | 55 (×) 20 (%) (−) (=) | 44 |

**Memory usage** (Before starting memory function, press (MC) key twice to clear the memory)

| | | |
|---|---|---|
| 24 + 5 = 29 | 24 (+) 5 (M+) | 29M |
| 22 − 8 = 14 | 22 (−) 8 (M+) | 14M |
| 12 × 3 = 36 | 12 (×) 3 (M+) | 36M |
| 48 ÷ 6 = 8 | 48 (÷) 6 (M+) | 8M |
| Total = 87 | (MR) | 87M |

| | | |
|---|---|---|
| (8×3÷6)−(5×4) = −16 | 8 (×) 3 (÷) 6 (M+) 5 (×) 4 (M−) (MR) | 16M |
| $\sqrt{4^2+3^2}=5$ | 4 (×) (M+) 3 (×) (M+) (MR) (√) | 5M |
| $\sqrt{5^2-4^2}=3$ | 5 (×) (M+) 4 (×) (M−) (MR) (√) | 3M |
| (2×3) + (−4×5) = −14 | 2 (×) 3 (M+) 4 (+/−) (×) 5 (M+) (MR) | 14M |

**Clear and entry operation**

| | | |
|---|---|---|
| 123 + 45 + 67 = (46 → 45) | 123 (+) 46 (CE) 45 (+) 67 (=) | 235 |

**Practice**

Capital 100,000 Yen 7% Interest rate over 5 years term Simple interest

100,000 (1 + 0.07 × 5) = .07 (×) 5 (+) 1 (×) 100,000 (=) 135,000

Compound interest

| | | |
|---|---|---|
| $100{,}000\,(1+0.07)^5$ | = .07 (+) 1 (×) (=) (=) (=) (=) (×) 100,000 (=) | 140,225.17 |

**Sales rate**

| | (Sales) | (Rate) | | |
|---|---|---|---|---|
| Dept. A | 760,000 | 16% | 76 (+) 228 (+) 171 (=) | 475 |
| Dept. B | 2,280,000 | 48% | (÷) (=) 76 (%) | 16 |
| Dept. C | 1,710,000 | 36% | 228 (%) | 48 |
| Total | 4,750,000 | 100% | 171 (%) | 36 |

## 5. SPECIFICATIONS

| | |
|---|---|
| Caliber No. | 9130A |
| Type | Quartz crystal watch with LC digital display |
| Movement | Diameter : 38.0mmϕ<br>Thickness : 6.67mm |
| Oscillation | 32.768Hz |
| Accuracy | ±10 sec./month under normal temperature |
| Display system | FE twist–type nematic LC display |
| Display information | •Normal display : hour, minute, second<br>•Calendar display : month, date<br>•Operation value display up to 8-digits |
| Display correction | Independent correction of each digit by operation of push button |
| Effective temperature range | 0°C (+32°F) ~ +50°C (+122°F) |
| Semiconductor | C/MOS–LSI 3 pcs. (For watch 1 pce. For calculator 2 pcs.) |
| Additional mechanisms | •Fully equipped calculator functions:<br>8-digit display with matrix driving, with following calculations possible: decimal point, ⊜, ⊕, ⊖, ⊗, ⊘, √, %, M−, M+, MRC, and +/−. Keys of C and CE also equipped.<br>•Automatic calendar setting at the end of each month<br>•Illumination lamp |
| Power cell | Small-size silver oxide power cell<br>Parts No. : 280-21 1 pce.<br>Voltage : 1.5V<br>Capacity : 120mAH<br>Size : 11.6mmϕ x 4.2mm<br>Life : 3 years or more.<br>(Under a condition of 5 sec/day lamp glow plus 10min/day calculator actuation respectively.) |

## Power Cell List for CITIZEN Electronic

| Watches | | Power Cells | | | |
|---|---|---|---|---|---|
| Code No. | CAL. No. | Part No. | Type | Voltage | Life (year) |
| 40-0 ※※※ | 9062A | 280-21 | Silver oxcide | 1.5V | 2 |
| ↑ | 9064A | 280-15 | ↑ | ↑ | 2 |
| 40-1 ※※※ | 9100A | ↑ | ↑ | ↑ | 2 |
| 40-2 ※※※ | 9120A | ↑ | ↑ | ↑ | 2 |
| 40-3 ※※※ | 9121A | ↑ | ↑ | ↑ | 2 |
| 40-4 ※※※ | 9180A | ↑ | ↑ | ↑ | 2 |
| 41-0 ※※※ | 9080A | 280-21 | ↑ | ↑ | 2 |
| ↑ | 9081A | 280-15 | ↑ | ↑ | 2 |
| 42-0 ※※※ | 9110A | 280-13 | ↑ | ↑ | 1 |
| 42-1 ※※※ | 9111A | ↑ | ↑ | ↑ | 1 |
| 43-0 ※※※ | 8560A | 280-11 (13) | ↑ | ↑ | 1 |
| 43-1 ※※※ | 7310A | 280-16 | ↑ | ↑ | 5 |
| 44-1 ※※※ | 7300C | ↑ | ↑ | ↑ | 5 |
| 44-5 ※※※ | 7102C | 280-17 | ↑ | ↑ | 2 |
| 46-0 ※※※ | 7530A | 280-18 | ↑ | ↑ | 2 |
| 46-4 ※※※ | 8532A | ↑ | ↑ | ↑ | 1 |
| 46-5 ※※※ | 7120B | 280-20 | ↑ | ↑ | 2 |
| 46-7 ※※※ | 7130B | ↑ | ↑ | ↑ | 2 |
| 47-0 ※※※ | 8510A | 280-11 (13) | ↑ | ↑ | 1 |
| 47-5 ※※※ | 8520A | ↑ | ↑ | ↑ | 1 |
| 47-7 ※※※ | 8300A | 280-13 | ↑ | ↑ | 2 |
| 49-0 ※※※ | 8300A | 280-13 | ↑ | ↑ | 2 |
| 49-9315 | 9130A | 280-21 | ↑ | ↑ | 3 |
| 49-9323 | 9130A | ↑ | ↑ | ↑ | 3 |
| 50-0 ※※※ | 8629A | 280-16 | ↑ | ↑ | (5) |
| 50-0518 | 9069A | 280-19 | ↑ | ↑ | (5) |
| 50-1 ※※※ | 9060A | 280-21 | ↑ | ↑ | 2 |
| ↑ | 9063A | 280-15 | ↑ | ↑ | 2 |
| 50-2 ※※※ | 9021B | 280-21 | ↑ | ↑ | 2 |
| 50-3 ※※※ | 9025A | ↑ | ↑ | ↑ | 2 |
| 50-4 ※※※ | 9040A | 280-01 | ↑ | ↑ | 2 |
| 50-5 ※※※ | 9050A | 280-11 | ↑ | ↑ | 1 |
| 50-6 ※※※ | 9070A | 280-13 | ↑ | ↑ | 1 |
| 50-7 ※※※ | 8520A | 280-11 (13) | ↑ | ↑ | 1 |
| ↑ | 8522A | 280-18 | ↑ | ↑ | 1 |
| 50-8 ※※※ | 8550A | 280-11 (13) | ↑ | ↑ | 1 |
| 59-9 ※※※ | 8500A | ↑ | ↑ | ↑ | 1 |
| 59-0 ※※※ | 8710A | 280-01 | ↑ | ↑ | 4 |
| 59-1 ※※※ | 9080A | 280-21 | ↑ | ↑ | 2 |
| 59-2 ※※※ | 9090A | ↑ | ↑ | ↑ | 2 |
| 59-9 ※※※ | 9061A | 280-16 | ↑ | ↑ | 3 |
| 60-0 ※※※ | 8620A | 280-01 | ↑ | ↑ | 2 |
| 60-1 ※※※ | 9011A | ↑ | ↑ | ↑ | 2 |
| 60-1012 | 9010A | ↑ | ↑ | ↑ | 1 |
| 60-1110 | 9012A | ↑ | ↑ | ↑ | 2 |
| 60-1527 | 9002A | 280-41 | ↑ | ↑ | 1 |
| 60-2 ※※※ | 8600A | 280-01 | ↑ | ↑ | 1 |

| Watches | | Power Cells | | | |
|---|---|---|---|---|---|
| Code No. | CAL. No. | Part No. | Type | Voltage | Life (year) |
| 60-2400 | 8650※ | 280-08 | Silver oxcide | 1.5V | 1 |
| 60-3※※※ | 0840-12j | ↑ | ↑ | ↑ | 1 |
| 60-4※※※ | 4840-12j | ↑ | ↑ | ↑ | 1 |
| 60-5※※※ | 7803-08A | 280-06 | Mercury | 1.3V | 2 |
| 60-6※※※ | 7804-08A | ↑ | ↑ | ↑ | 2 |
| 60-7※※※ | 9040A | 280-01 | Silver oxcide | 1.5V | 2 |
| 60-8※※※ | 5810-17j | 280-02 | Mercury | 1.3V | 1 |
| ↑ | 5835-16j | ↑ | ↑ | ↑ | 1 |
| 60-9※※※ | 9030A | 280-11 | Silver oxcide | 1.5V | 1 |
| 69-1※※※ | 8630A | 280-01 | ↑ | ↑ | 2 |
| 88-0※※※ | 8300A | 280-13 | ↑ | ↑ | 2 |
| | | | | | |
| | 8810※ | 280-08 | ↑ | ↑ | 1 |
| | 8811※ | ↑ | ↑ | ↑ | 1 |
| | 8821※ | ↑ | ↑ | ↑ | 1 |

# CITIZEN WATCH CO., LTD.

Tokyo, Japan

'78 Edition
CTZ-6151 (E) Printed in Japan